Analytical Resources, LLC
Analytical Chemists and Consultants

17 July 2023

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

RE: AOC5 MR Phase 1

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

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

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

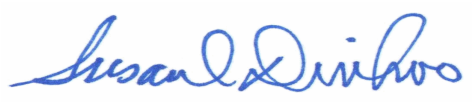
Associated Work Order(s)	Associated SDG ID(s)
23E0009	N/A

Susan Dunnihoo
Digitally signed by Susan Dunnihoo
Date: 2023.07.17 14:30:49 -07'00'

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

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

Analytical Resources, LLC



Susan Dunnihoo, Director, Client Services

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 4061

Project/Client Name: AOCS MR Phase I
Project Number: 210075.01.02
Contact Name: A. Vandervort
Sampled By: Windward

Ship to: ARL
Attn: Sue Dunnihoo
Shipper: courier
Form filled out by: TDO

Shipping Date: 05.01.23
Airbill Number: —
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) PCBs	SVS/SVOCs	TAL/TS	SMS metals	DIF	Arsenic		Comments / Instructions [Jar tag number(s)]
042823	1038	LDW23-SS1811	4	SEDIMENT	X	X	X	X		X		
	1230	LDW23-SC1811	4	SEDIMENT	X		X			X		
	1615	LDW23-SS1805	4	SEDIMENT	X	X	X	X		X		
	1625	LDW23-SC1805	4	SEDIMENT	X		X			X		
042923	1010	LDW23-SS1800	4	SEDIMENT	X	X	X	X		X		
	1015	LDW23-SC1800	4	SEDIMENT	X		X			X		
	1400	LDW23-SC1820	4	SEDIMENT	X	X	X	X		X		
	1410	LDW23-IT1820	4	SEDIMENT	X	X	X	X		X		
		Total Number of Containers	32	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Amara Vandervort	Matthew Daniel	Print name:	
Signature:		Signature:	
Company: Windward	Company: ARLLC	Company:	Company:
Date/Time: 5/1/23 0942	Date/Time: 5/1/23 0942	Date/Time:	Date/Time:

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

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

To be completed by Laboratory upon sample receipt:

Date of receipt:: 5/1/23	Laboratory W.O. #: 23E0009
Condition upon receipt: good	Time of receipt: 9:42
Cooler temperature: −2.3 °C	Received by: Matthew Daniel

Edited COC for today's samples

Amara Vandervort <amarav@windwardenv.com>

Mon 5/1/2023 10:24 AM

To: Sue Dunnihoo <limsadm@arilabs.com>;Jacob Walter <jacob.walter@arilabs.com>

1 attachments (164 KB)

AOC5_Phase1_ARL_UnderStructure_042823and042923.pdf;

Hello,
We noticed that one of the samples was mis-labeled on the COC. The second to the last sample should be LDW23-**SS**1820 instead of **SC**1820.

I have attached an updated COC.

Kind regards,

Amara Vandervort

Associate

Direct line: 206-812-5415

E-mail: amarav@windwardenv.com | www.windwardenv.com

200 First Avenue West, Suite 500 | Seattle, WA 98119


<< AOC5_Phase1_ARL_UnderStructure_042823and042923.pdf >>

1 of 1

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 4061

Project/Client Name: ADCS MR Phase 1
Project Number: 210075.01.02
Contact Name: A. Vandervoort
Sampled By: Windward

Ship to: ARL
Attn: Sue Dinnihoo
Shipper: courier
Form filled out by: TDO

Shipping Date: 05.01.23
Airbill Number: —
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) PCBs	SMS/SVOC	TBT/TS	SMS metals	DIE	Arsenic		Comments / Instructions [Jar tag number(s)]
042823	1038	LDW23-SS1811	4	SEDIMENT	X	X	X	X		X		
↓	1230	LDW23-SC1811	4	SEDIMENT	X		X			X		
	1615	LDW23-SS1805	4	SEDIMENT	X	X	X	X		X		
↓	1625	LDW23-SC1805	4	SEDIMENT	X		X			X		
042923	1510	LDW23-SS1800	4	SEDIMENT	X	X	X	X		X		
↓	1015	LDW23-SC1800	4	SEDIMENT	X		X			✓		
	1400	LDW23-SS1820	4	SEDIMENT	X	X	X	X		X		
↓	1410	LDW23-IT1820	4	SEDIMENT	X	X	X	X		X		
		Total Number of Containers	32	Purchase Order / Statement of Work #								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Amara Vandervoort	Print name: Allison Daniels	Print name:	
Signature:	Company: ARI LLC	Signature:	Company:
Company: Windward		Company:	
Date/Time: 5/1/23 0942	Date/Time: 5/1/23 0942	Date/Time:	Date/Time:

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

Wind Ward environmental LLC

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

206.378.1364

To be completed by Laboratory upon sample receipt:

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

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor / Windward
Project Name: 210075.01.02 AOCS MR phase 1
COC No(s): 4061 NA
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Assigned ARI Job No: 23E0009 JJ~ 05/01/23
Tracking No: NA

Preliminary Examination Phase:

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

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

Time 1126 -0.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: IR#97d8

Cooler Accepted by: MD Date: 05/01/23 Time: 0942

Complete custody forms and attach all shipping documents

Log-In Phase:

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

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

Samples Logged by: PIB Date: 5/1/23 Time: 12:45 Labels checked by: PIB

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

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

Additional Notes, Discrepancies, & Resolutions:

Per client sample LDW23-SC1820 on COC should be LDW23SS1820

By: P+P Date: PIO 5/1 ~~5/1~~ 5/1/23

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle, WA 98101	Project Manager: Ali Judkins	07/17/2023 12:55

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
23E0009-01	LDW23-SS1811	Solid	04/28/23 10:38	05/01/23 09:42
23E0009-02	LDW23-SC1811	Solid	04/28/23 12:30	05/01/23 09:42
23E0009-03	LDW23-SS1805	Solid	04/28/23 16:15	05/01/23 09:42
23E0009-04	LDW23-SC1805	Solid	04/28/23 16:25	05/01/23 09:42
23E0009-05	LDW23-SS1800	Solid	04/29/23 10:10	05/01/23 09:42
23E0009-06	LDW23-SC1800	Solid	04/29/23 10:15	05/01/23 09:42
23E0009-07	LDW23-SS1820	Solid	04/29/23 14:00	05/01/23 09:42
23E0009-08	LDW23-IT1820	Solid	04/29/23 14:10	05/01/23 09:42

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	17-Jul-2023 12:55

Case Narrative

Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Work Order: 23E0009

Sample receipt

Samples as listed on the preceding page were received 01-May-2023 09:42 under ARI work order 23E0009. For details regarding sample receipt, please refer to the Cooler Receipt Form. Samples were frozen on receipt to preserve holding times.

One sample ID was corrected per the enclosed ROC of 05/01/2023.

Semivolatiles - EPA Method SW8270E

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

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

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits except for 2-Fluorophenol in sample LDW23-SS1805, flagged on the summary sheet.

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

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

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

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

Semivolatiles - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times for samples stored frozen.
Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits except for 2-Fluorophenol in sample LDW23-SS1805, flagged on the summary sheet.

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

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

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

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

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	17-Jul-2023 12:55

Case Narrative

Polynuclear Aromatic Hydrocarbons (cPAH) - EPA Method SW8270E-SIM

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

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recovery for d14-dibenzo[a,h]anthracene was high of limits in LDW23-IT1820 and flagged on the summary sheet.

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

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

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

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

The analyst noted extracts with a yellow color were run at a 3x dilution to mitigate matrix effect.

Pesticides - EPA Method SW8081B (Hexachlorobenzene)

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

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

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

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

PCB Aroclors - EPA Method SW8082A

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

Aroclor 1260 failed high in SLE0328-CV2 on the ZB35 column. All data is reported from the ZB5 column as primary.

Aroclor 1254 failed low in SLE0373-ICV1 on the ZB35 column, and associated positive data is reporte from the ZB5 column as primary. Aroclor 1260 failed high in SLE0373-ICV2 on the ZB5 column and associated data is reported from the ZB35 column as primary.

The recovery for tetrachlorometaxylene (TCMX) on the ZB35 column was low of control limits in SLE0373-CCV3. As TCMX is not required by the method, no corrective action was taken.

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	17-Jul-2023 12:55

Case Narrative

Internal standard areas for hexabromobiphenyl were low of limits in samples LDW23-SS1805 and LDW23-SS1820 on the ZB5 column. Associated data is reported from the ZB35 column as primary.

The surrogate percent recoveries were within control limits.

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

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

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

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

Total Metals - EPA Method 6020B

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

Initial and continuing calibrations were within method requirements, except for SLE0358-CAL5 which showed indium-1 to be noisy and was rerun with passing results. SLE0358-IFA noted chromium-53 to be high.

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

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

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

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

Total Mercury - EPA Method 7471B

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

Initial and continuing calibrations were within method requirements.

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

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

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

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

Wet Chemistry (Total Organic Carbon and Total Solids)

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

Initial and continuing calibrations were within method requirements.

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

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	17-Jul-2023 12:55

Case Narrative

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

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

The batch BLF0522 matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits, reported under work order 23D0136.

The batch BLF0523 matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits, reported under work order 23E0219.

Revised 07/17/2023 to correct target list for LDW23-SS1820

QUALIFIERS AND NOTES

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

Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

ICP-MS Metals

Analyzed with Secondary Isotopes

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

These results were reported from a secondary ion:

Labnumber	SampleName	Analyte
23E0009-07	LDW23-SS1820	Zinc-67

LDW23-SS1811

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-01 A	SDG:	23E0009
Sampled:	04/28/23 10:38	Prepared:	05/05/23 11:23	File ID:	NT1706012333.D
% Solids:	69.29	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 07:54
Batch:	BLE0148	Sequence:	SLF0008	Initial/Final:	14.44 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00065
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	30.9		4.4	20.0
106-44-5	4-Methylphenol	1	20.0	U	7.4	20.0
91-20-3	Naphthalene	1	14.9	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	13.1	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	5.2	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	43.2		8.7	20.0
120-12-7	Anthracene	1	10.7	J	7.2	20.0
206-44-0	Fluoranthene	1	79.5		6.1	20.0
129-00-0	Pyrene	1	95.8		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	34.2		6.0	20.0
218-01-9	Chrysene	1	45.4		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	19.8	J	5.5	50.0
	Benzofluoranthenes, Total	1	75.2		10.0	40.0
50-32-8	Benzo(a)pyrene	1	32.7		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	22.3		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	27.5		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.59	227	30.3	27 - 120	
Phenol-d5	749.59	296	39.4	29 - 120	
2-Chlorophenol-d4	749.59	377	50.3	31 - 120	
1,2-Dichlorobenzene-d4	499.73	247	49.5	32 - 120	
Nitrobenzene-d5	499.73	272	54.3	30 - 120	
2-Fluorobiphenyl	499.73	340	68.0	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1811

Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270E
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-01 A	SDG:	23E0009
Sampled:	04/28/23 10:38	Prepared:	05/05/23 11:23	File ID:	NT1706012333.D
% Solids:	69.29	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 07:54
Batch:	BLE0148	Sequence:	SLF0008	Initial/Final:	14.44 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00065
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.59	670	89.4	24 - 134	
p-Terphenyl-d14	499.73	449	89.9	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

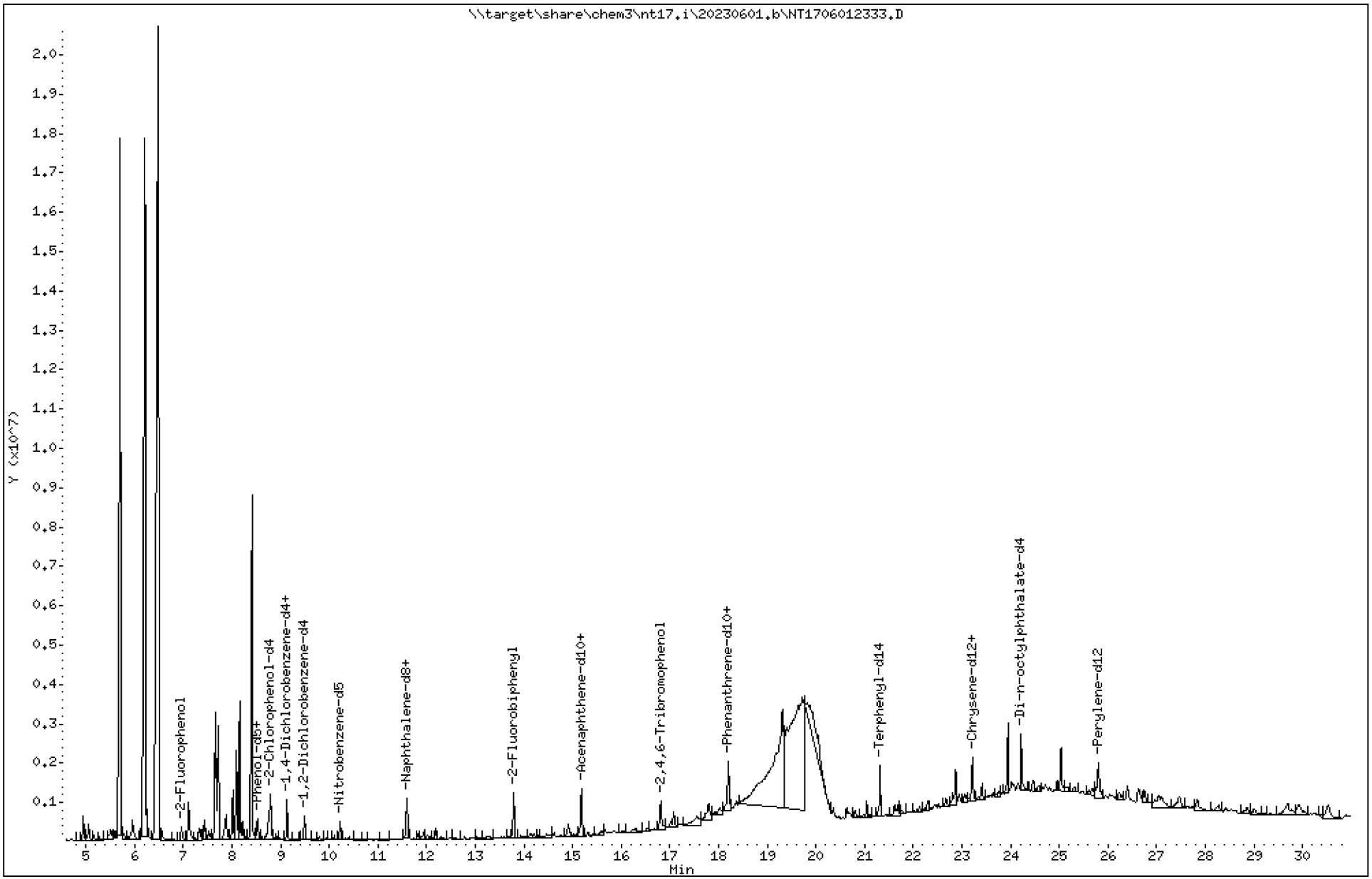
Instrument: nt17.i

Sample Info: 23E0009-01

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

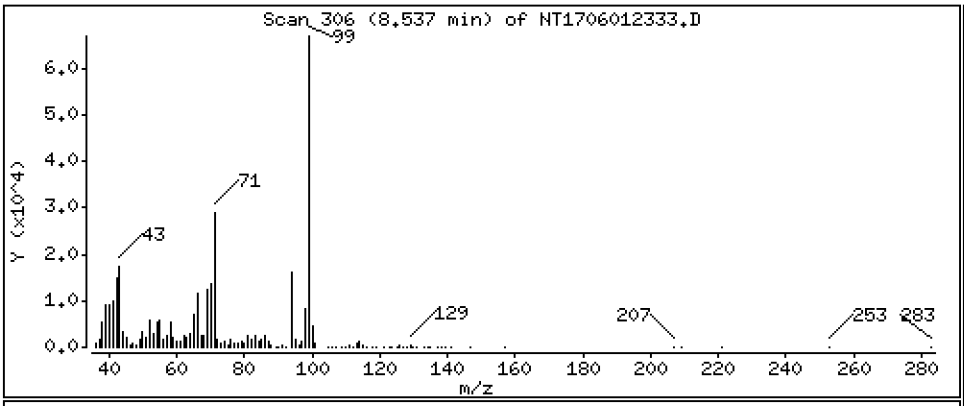
Operator: VTS

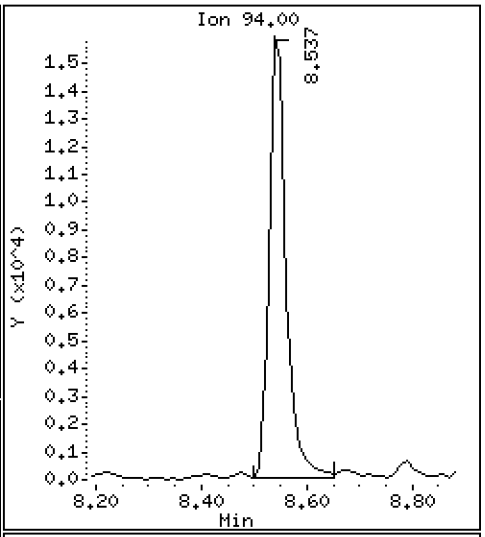
Column phase: ZB-5msi

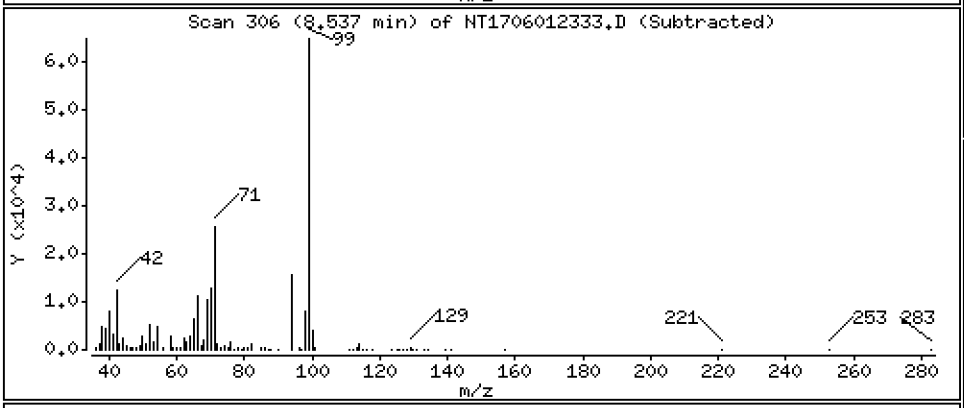
Column diameter: 0.25

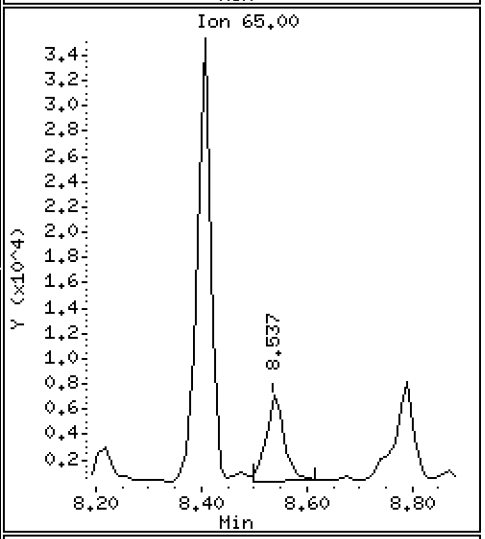
3 Phenol

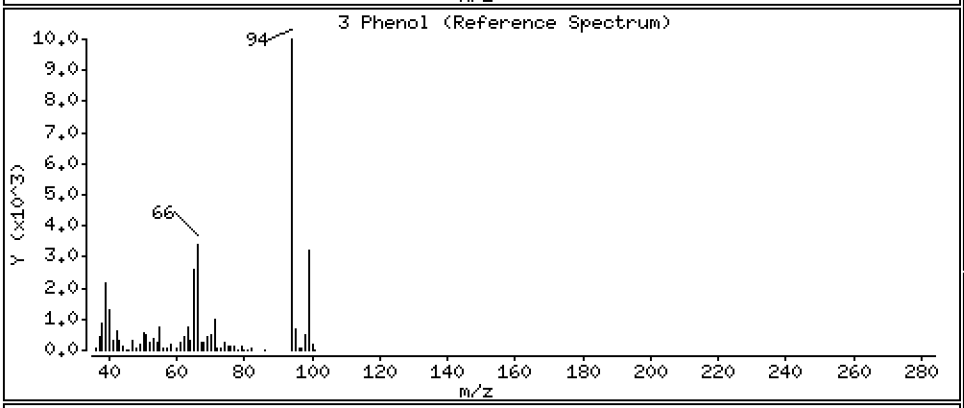
Concentration: 0.3093 ug/mL

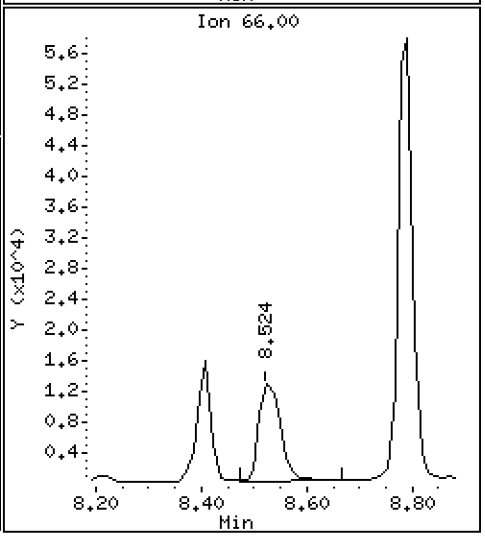


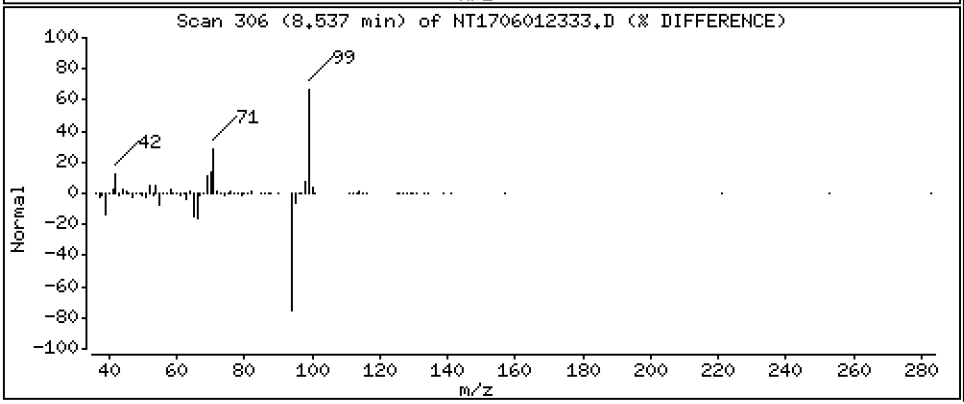












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

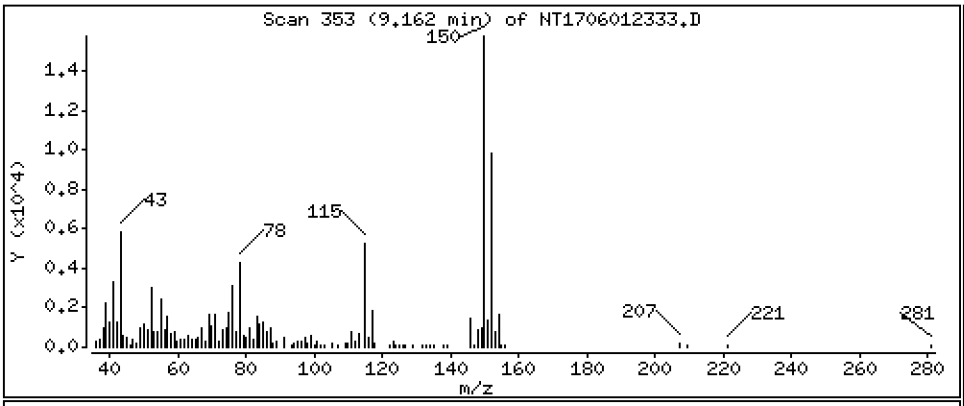
Operator: VTS

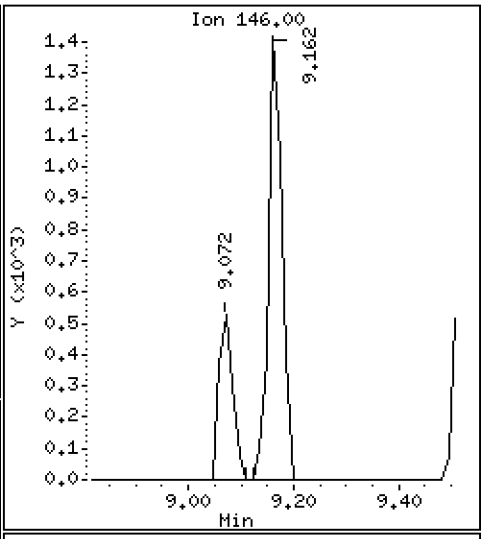
Column phase: ZB-5msi

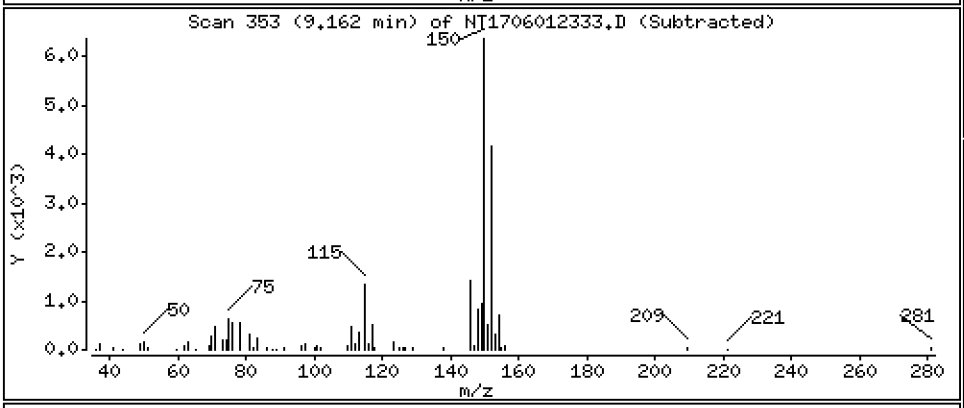
Column diameter: 0.25

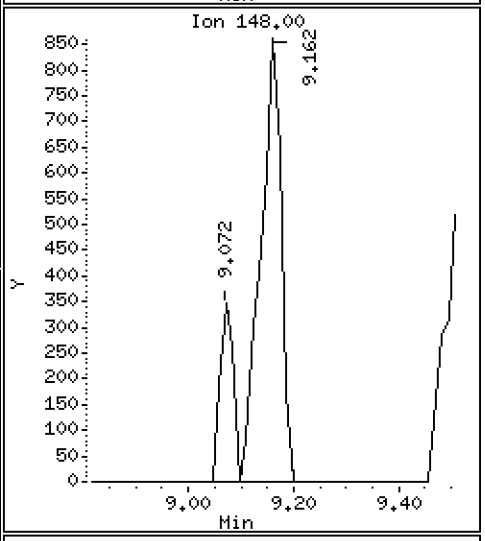
9 1,4-Dichlorobenzene

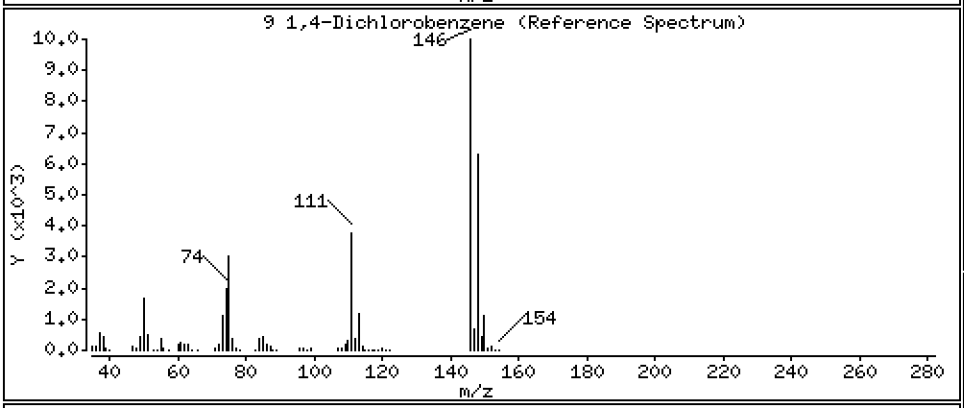
Concentration: 0.02574 ug/mL

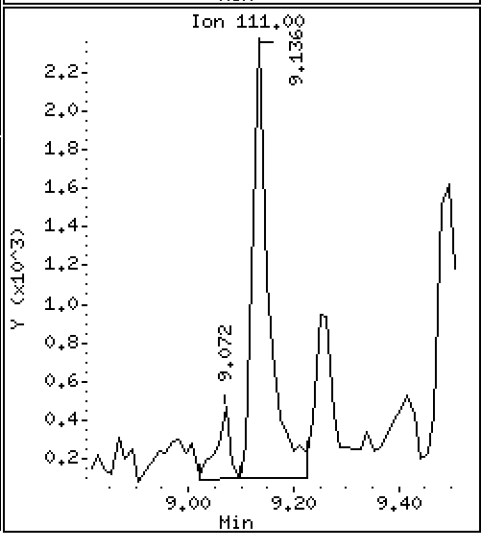


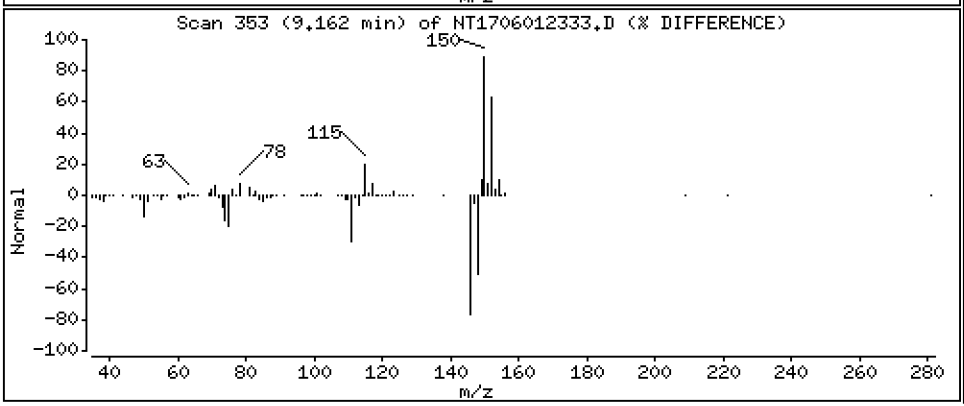












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

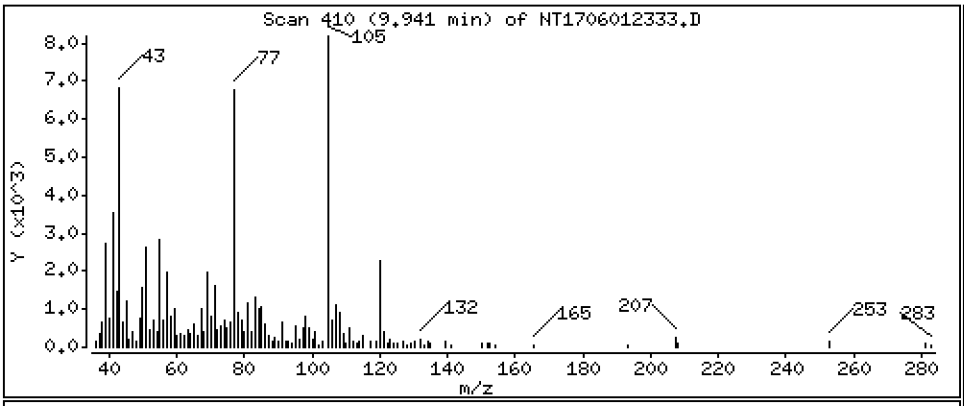
Operator: VTS

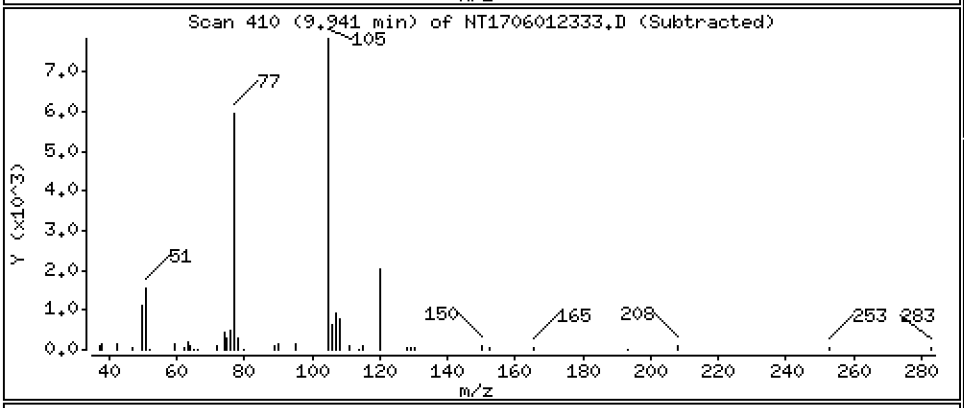
Column phase: ZB-5msi

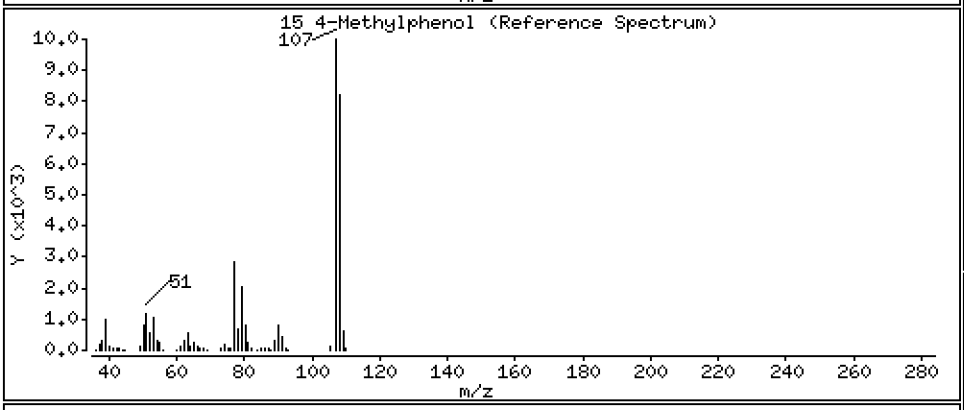
Column diameter: 0.25

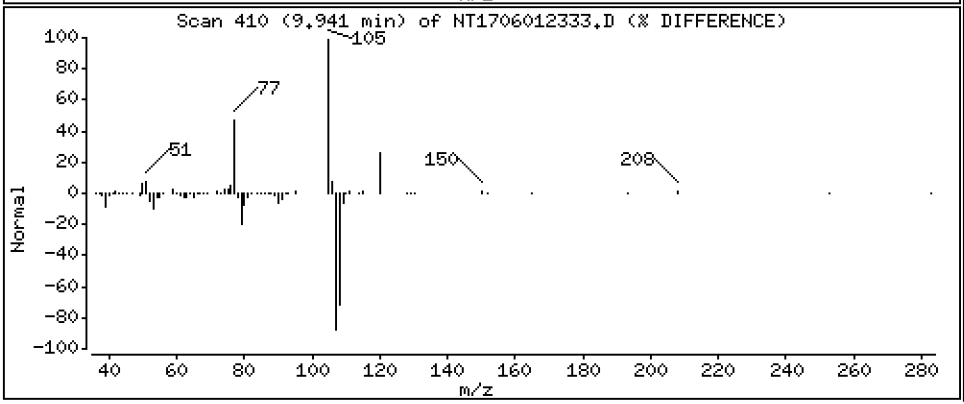
15 4-Methylphenol

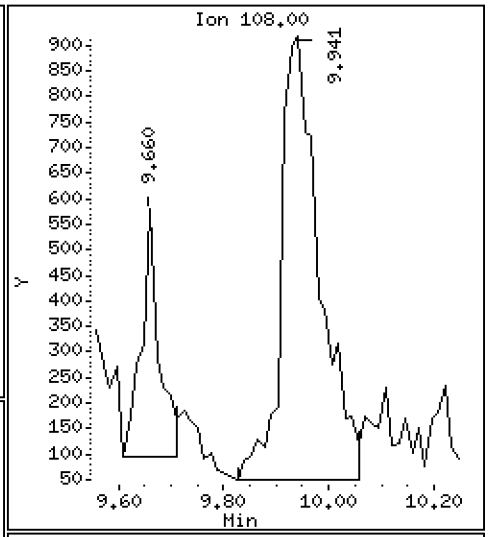
Concentration: 0.05042 ug/mL

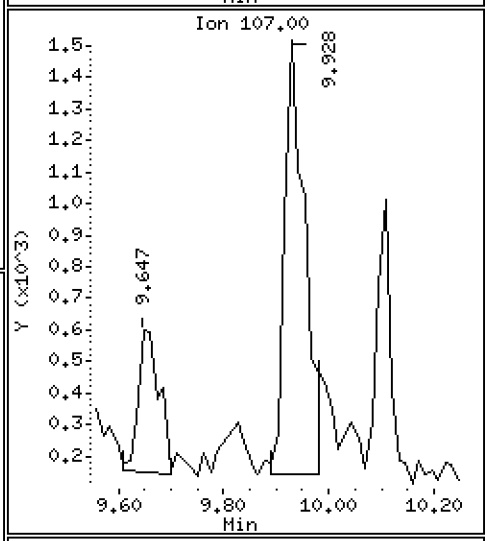


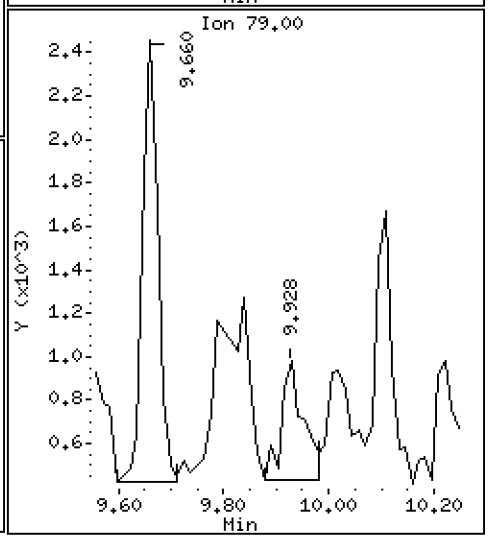












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

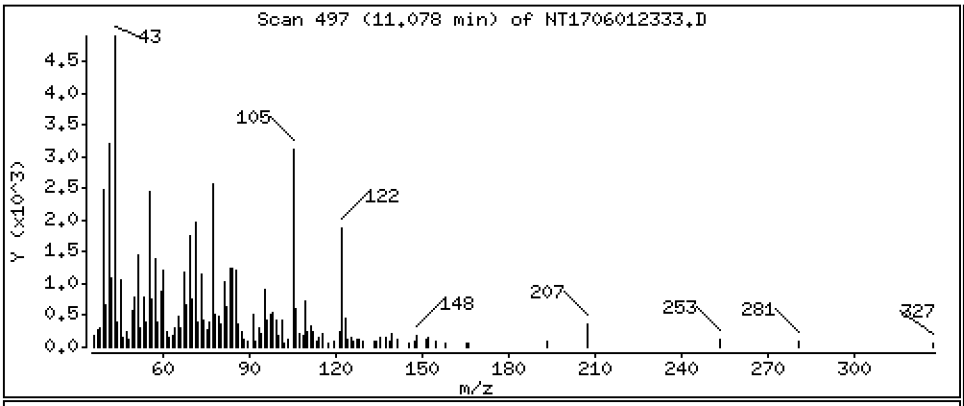
Operator: VTS

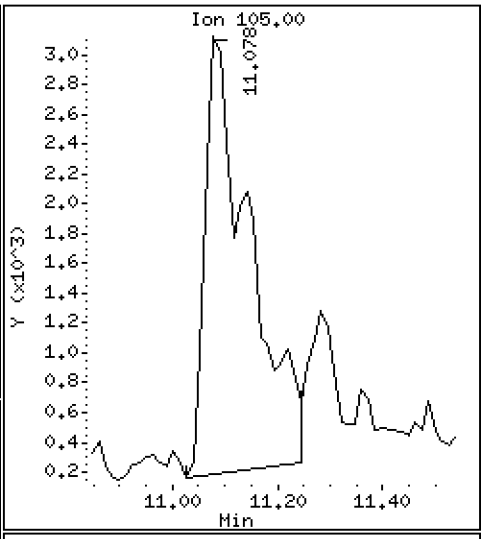
Column phase: ZB-5msi

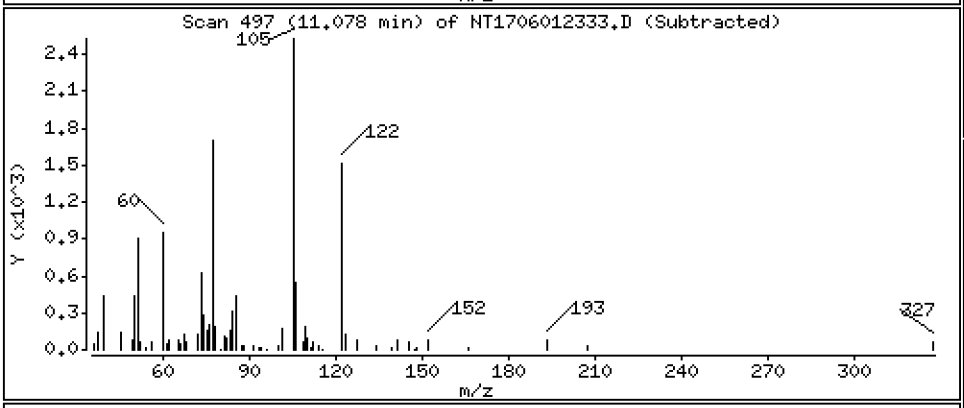
Column diameter: 0.25

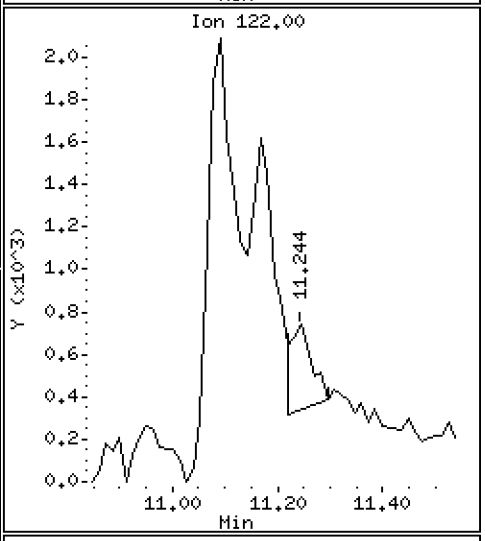
24 Benzoic acid

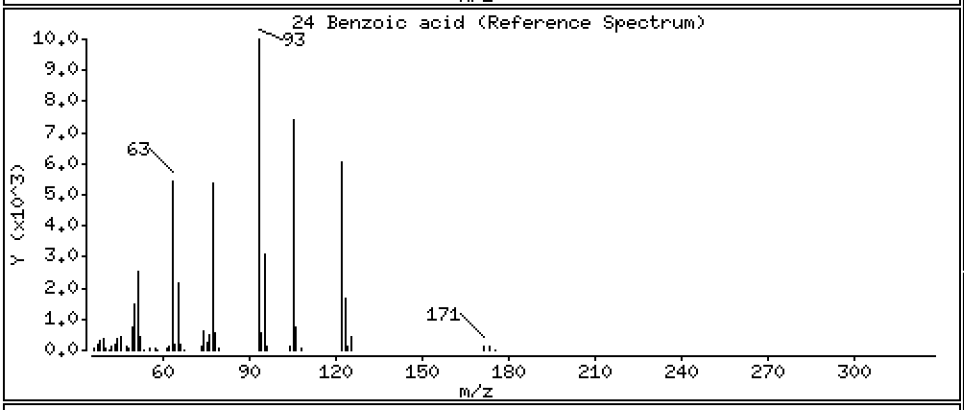
Concentration: 0.2708 ug/mL

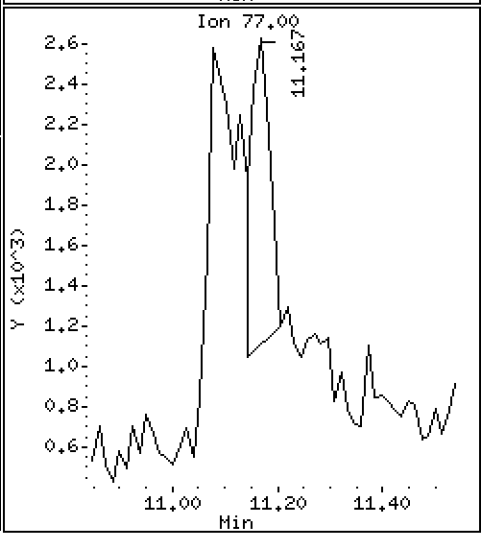


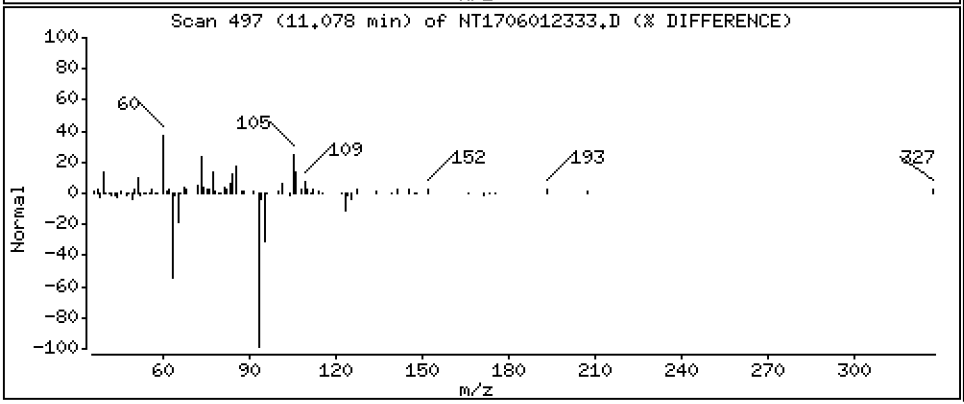












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

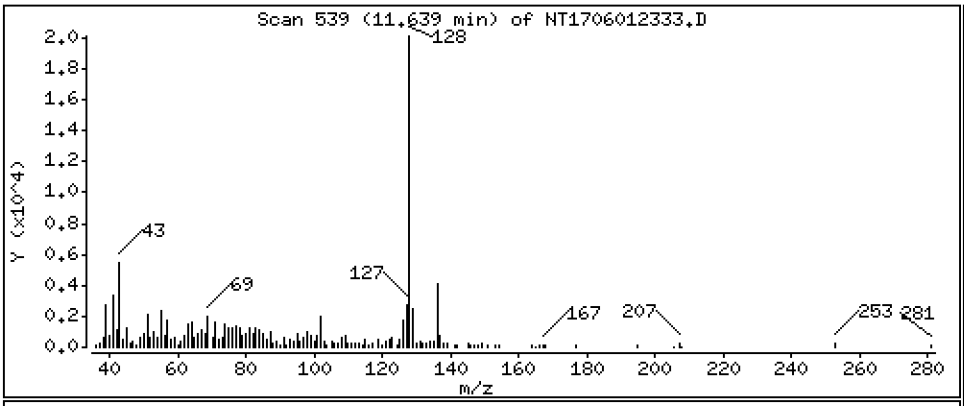
Operator: VTS

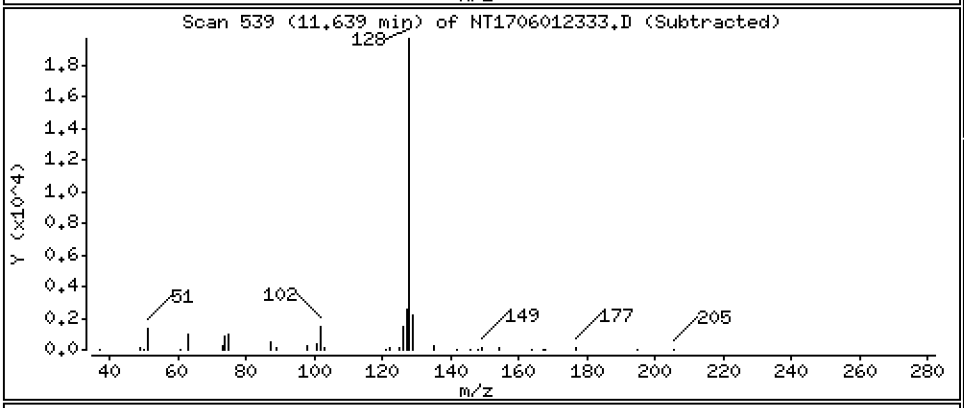
Column phase: ZB-5msi

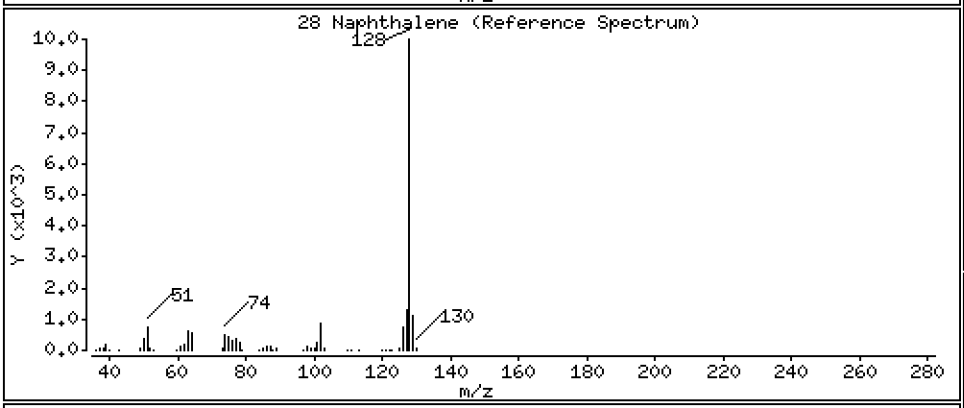
Column diameter: 0.25

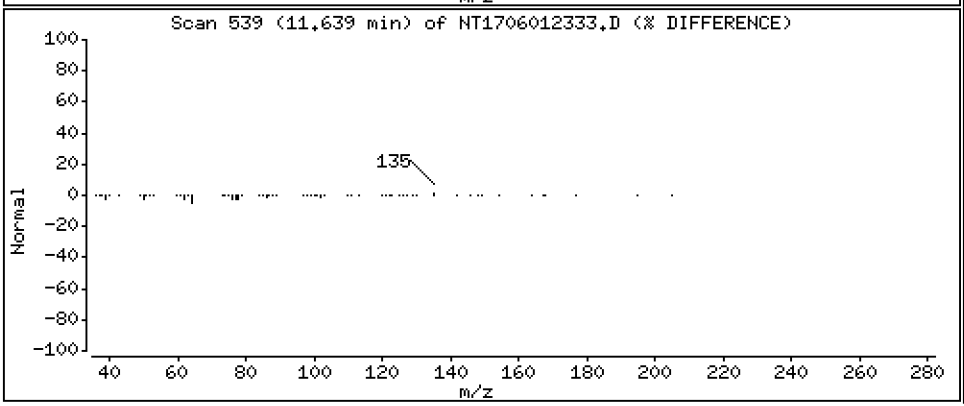
28 Naphthalene

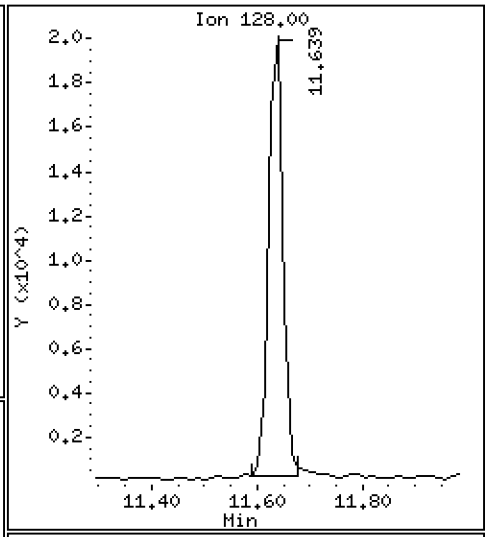
Concentration: 0.1488 ug/mL

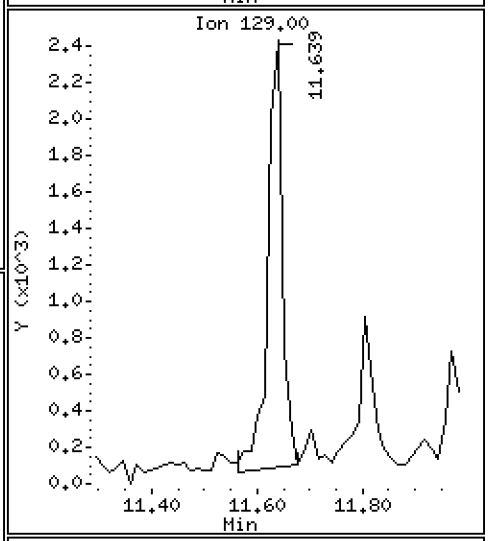


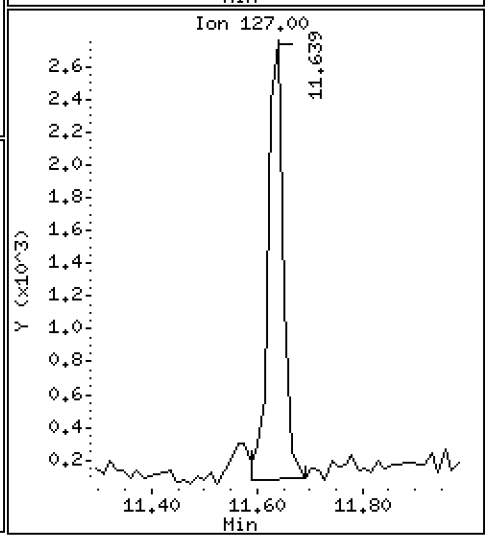












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

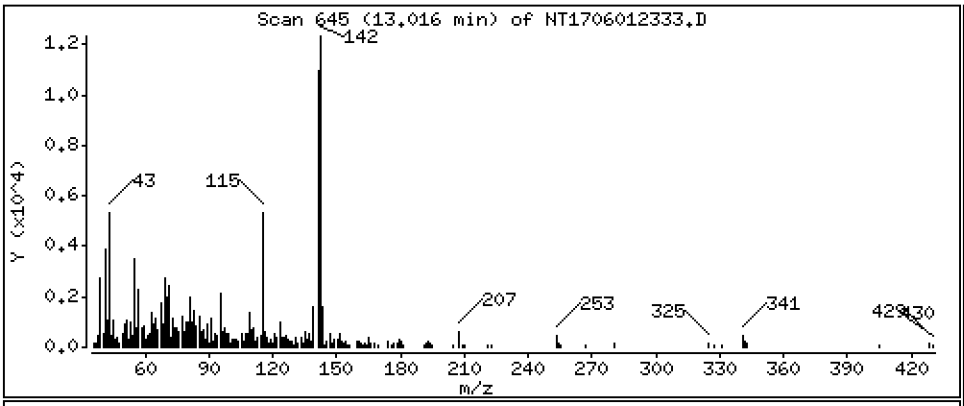
Operator: VTS

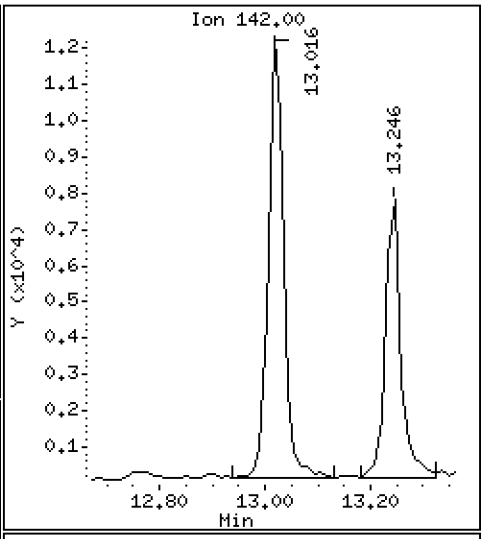
Column phase: ZB-5msi

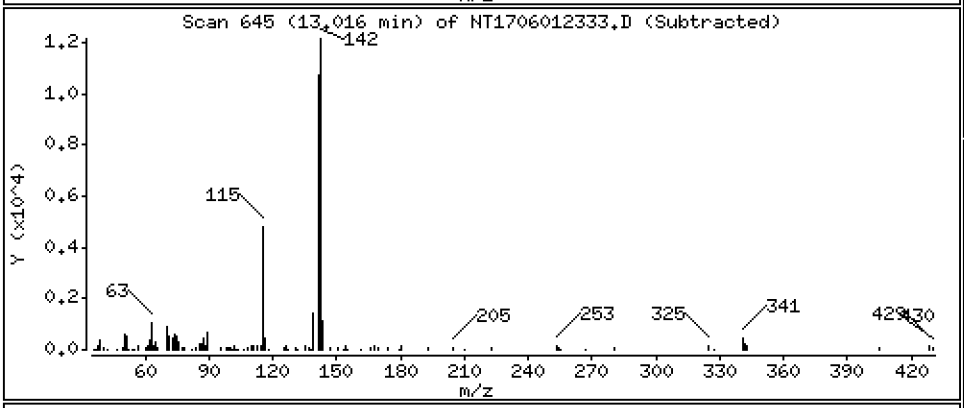
Column diameter: 0.25

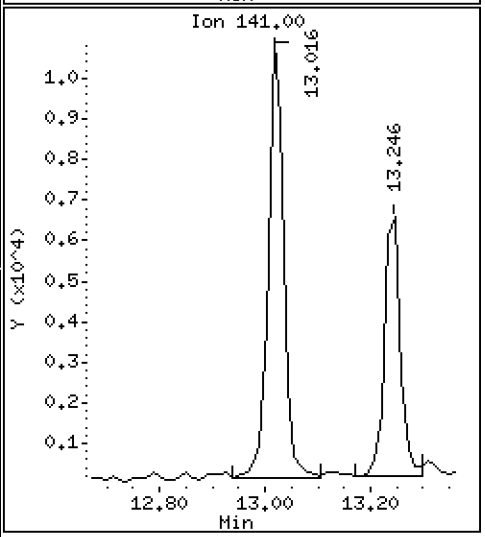
32 2-Methylnaphthalene

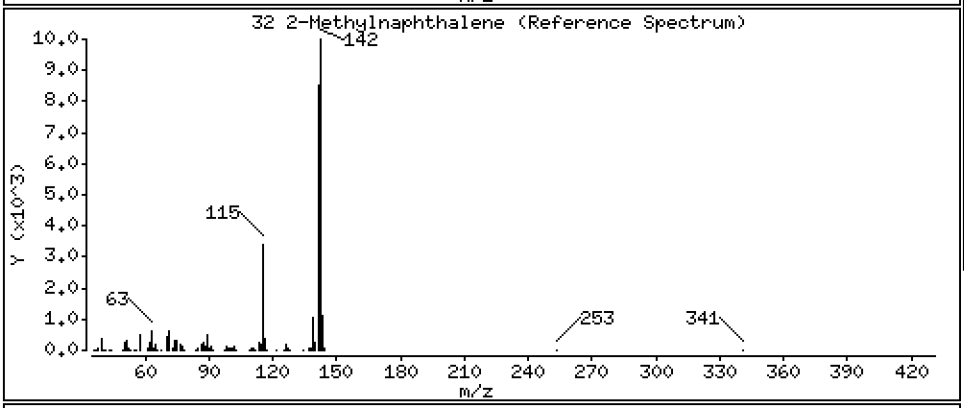
Concentration: 0.1312 ug/mL

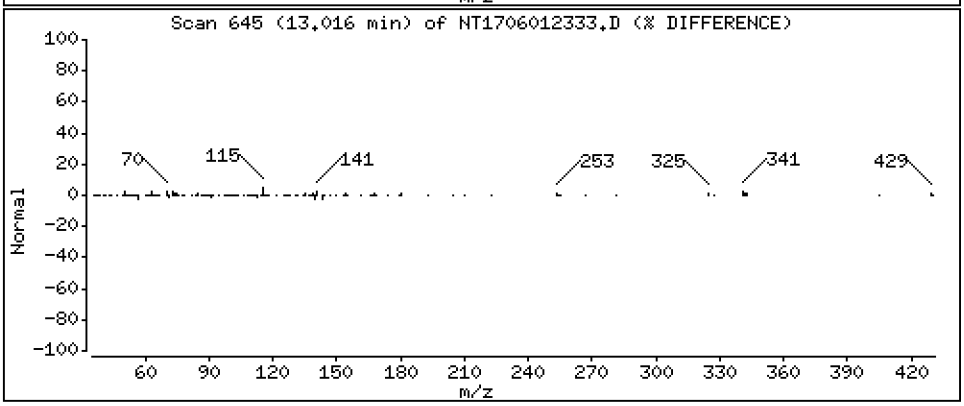












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

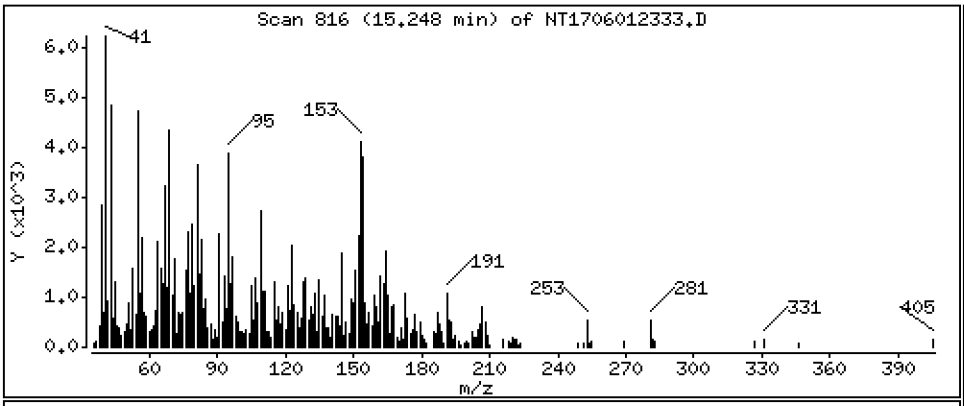
Operator: VTS

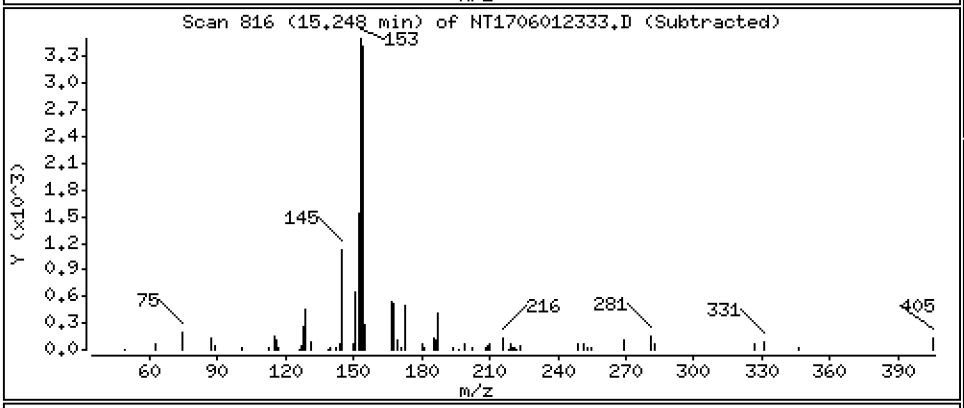
Column phase: ZB-5msi

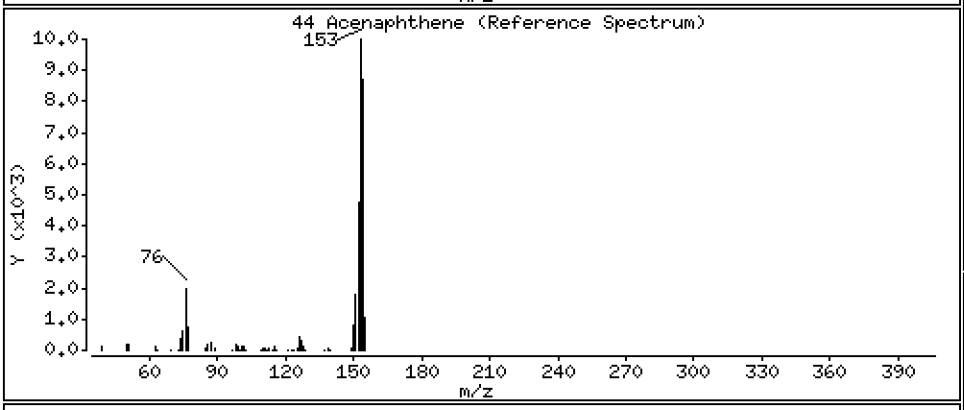
Column diameter: 0.25

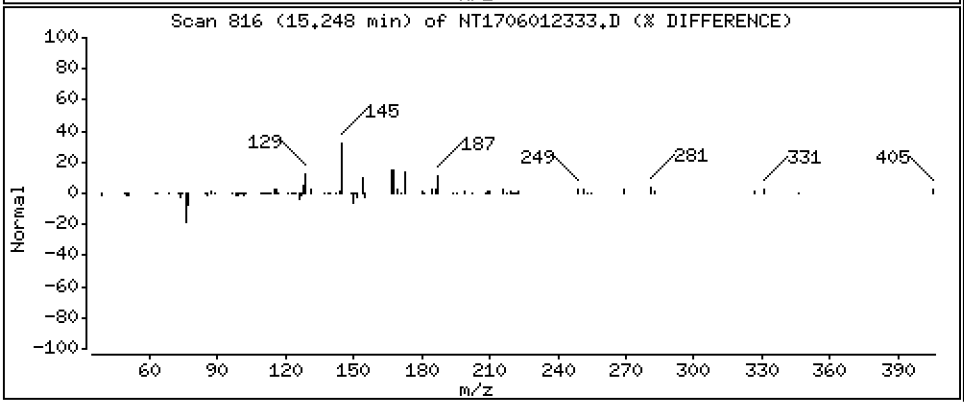
44 Acenaphthene

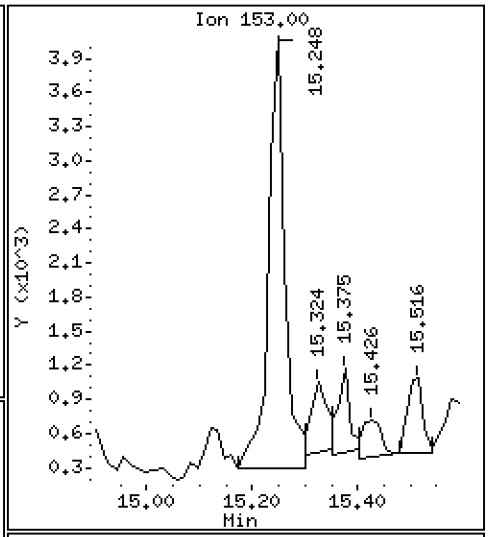
Concentration: 0.05252 ug/mL

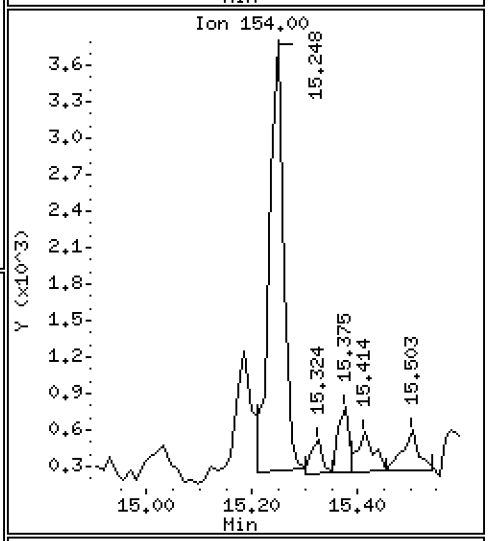


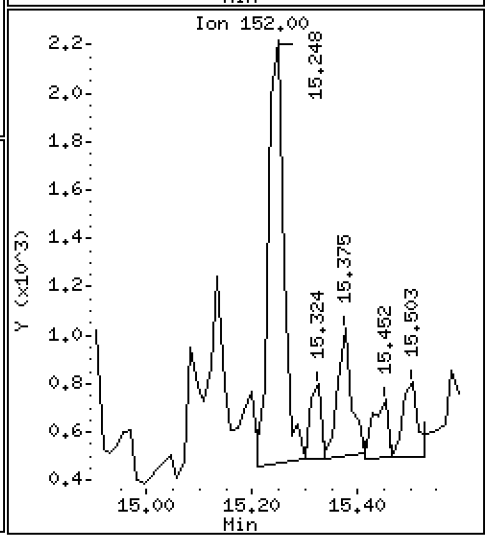












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

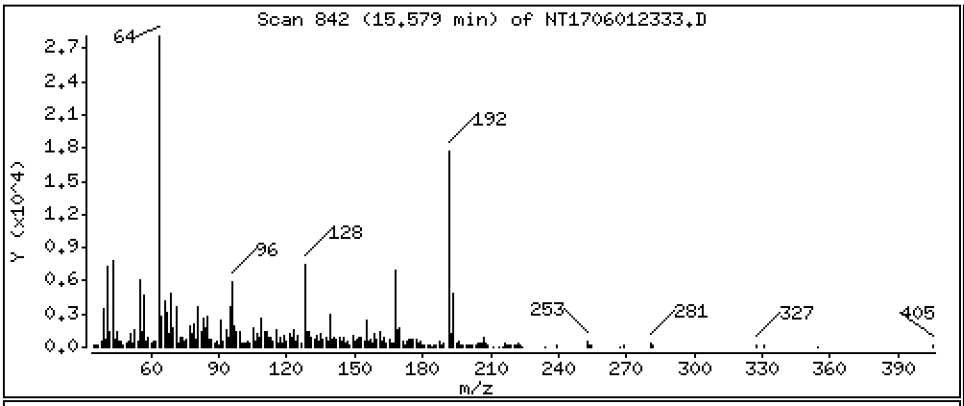
Operator: VTS

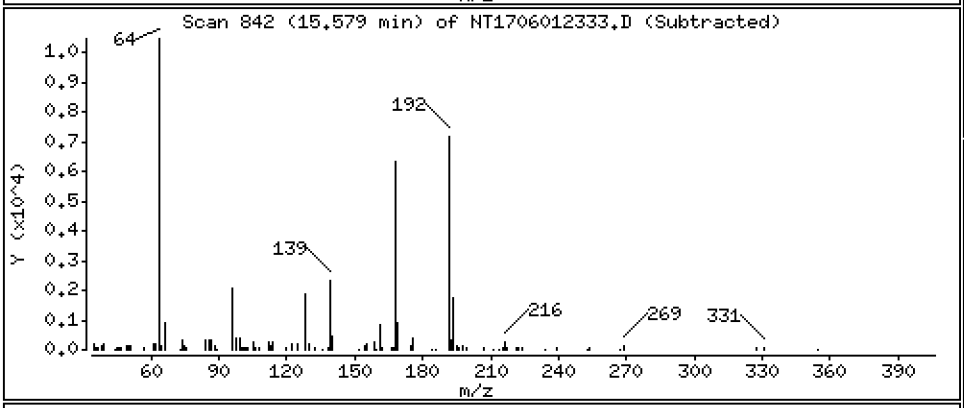
Column phase: ZB-5msi

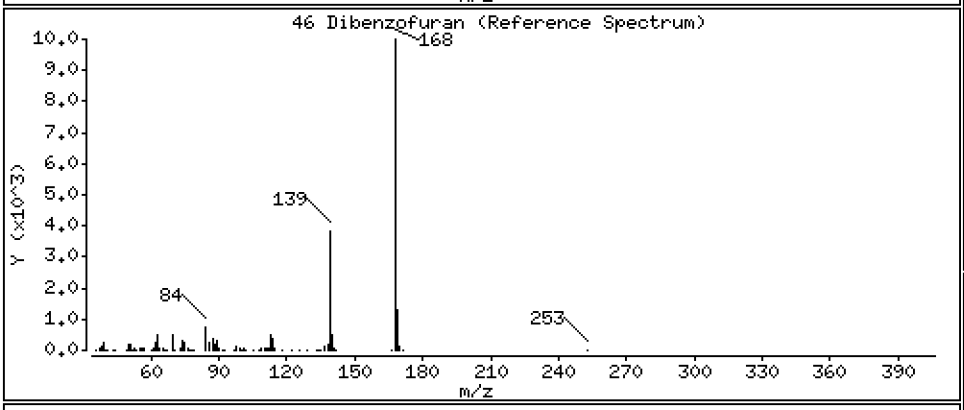
Column diameter: 0.25

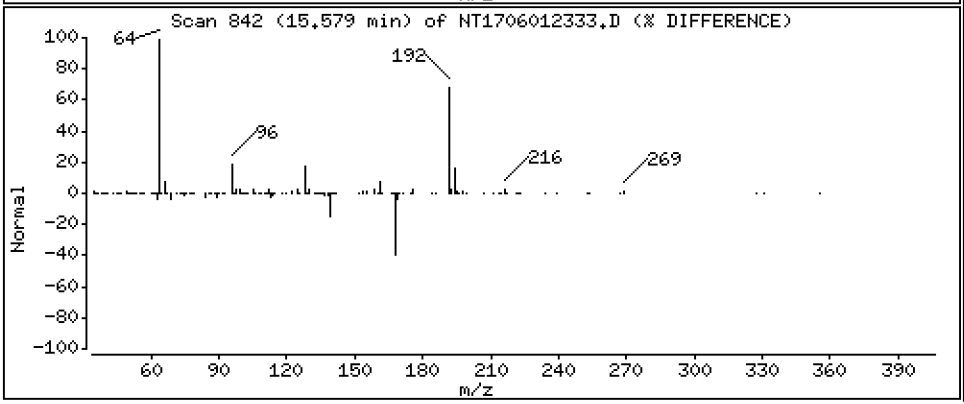
46 Dibenzofuran

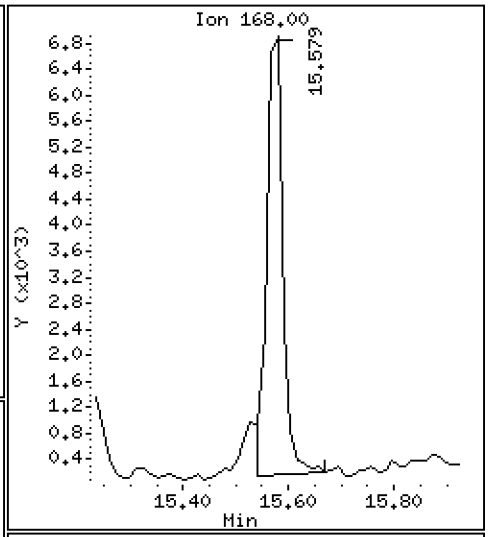
Concentration: 0.06733 ug/mL

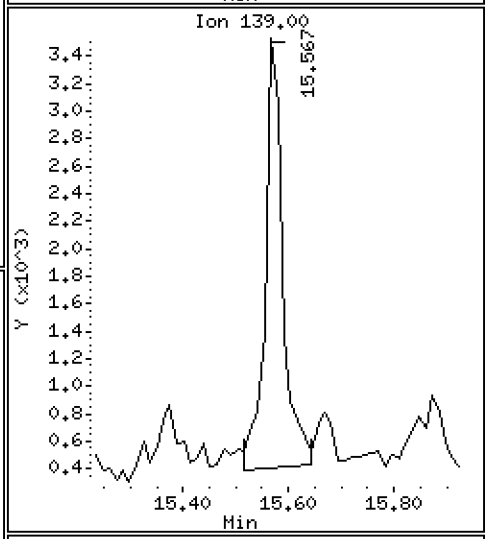


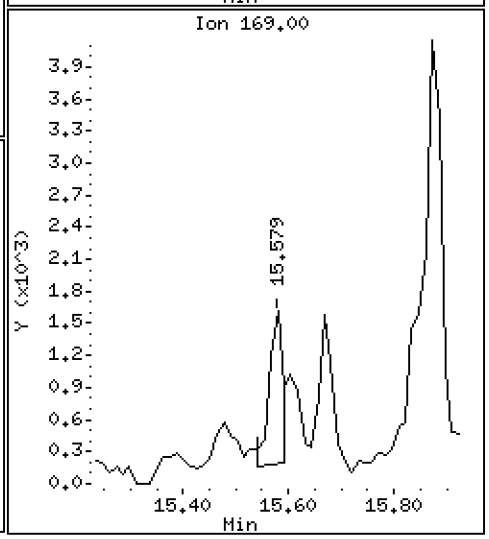












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

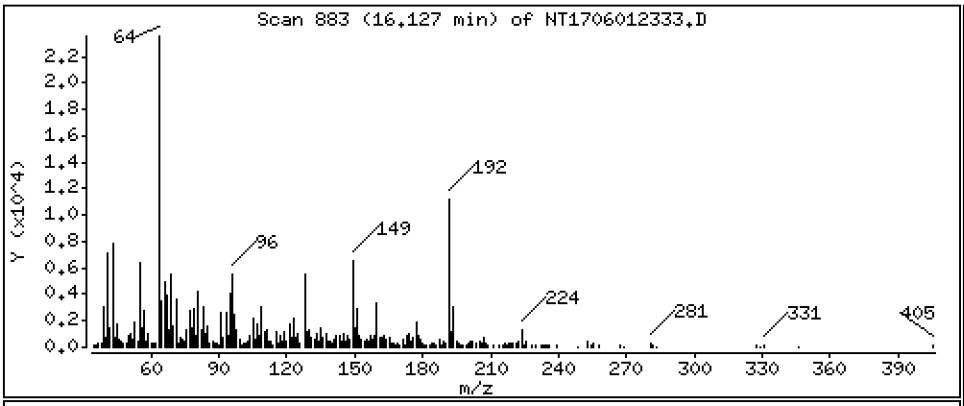
Operator: VTS

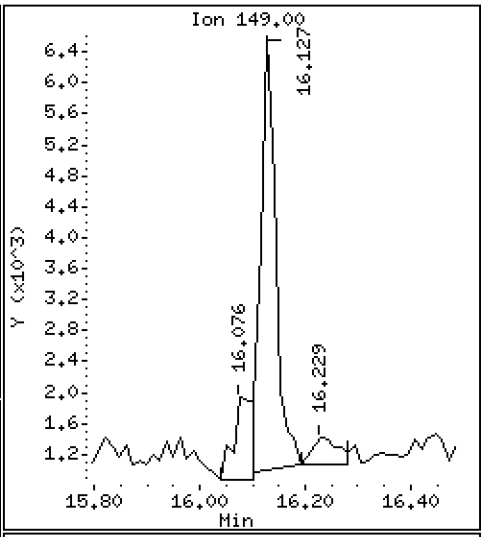
Column phase: ZB-5msi

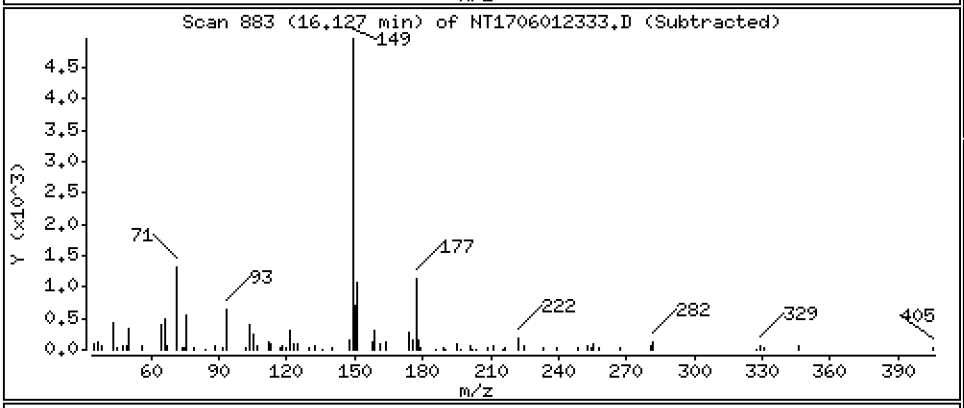
Column diameter: 0.25

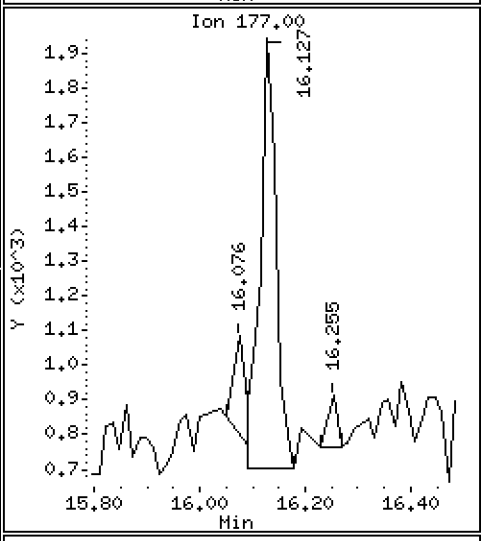
50 Diethylphthalate

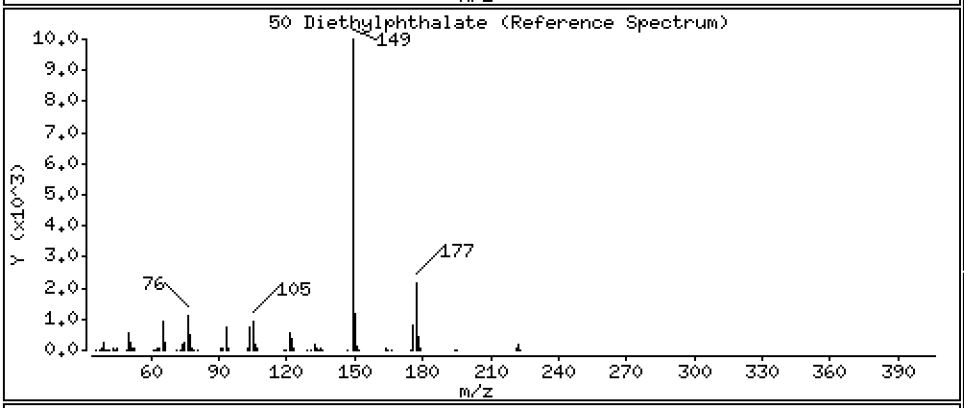
Concentration: 0.06788 ug/mL

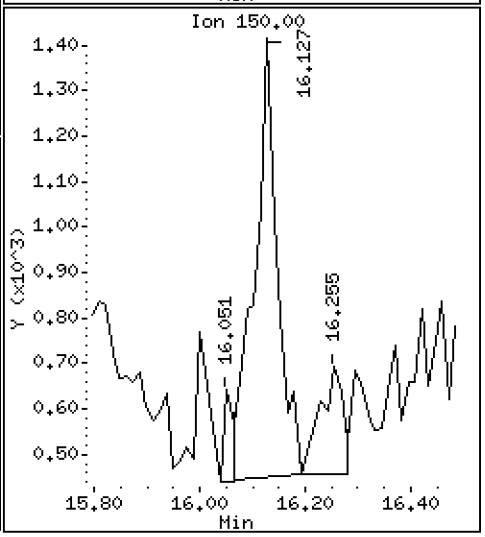


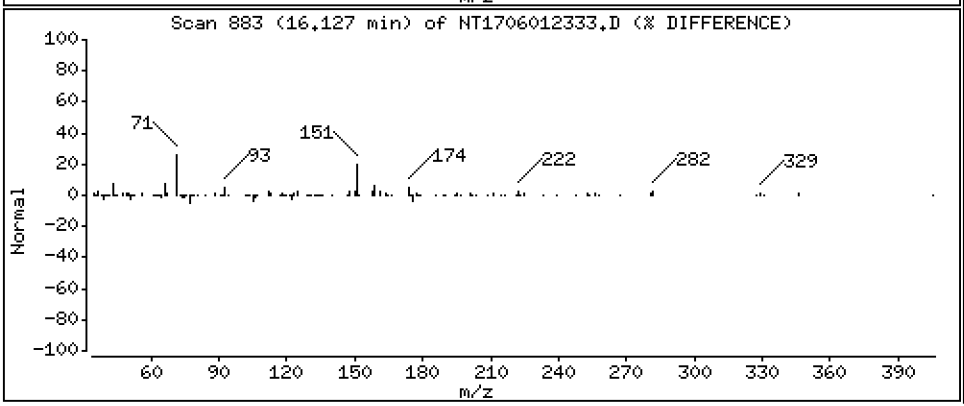












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

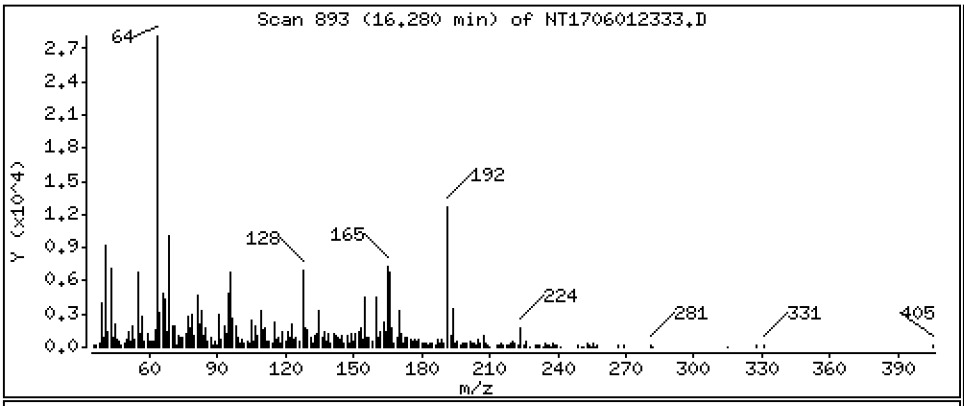
Operator: VTS

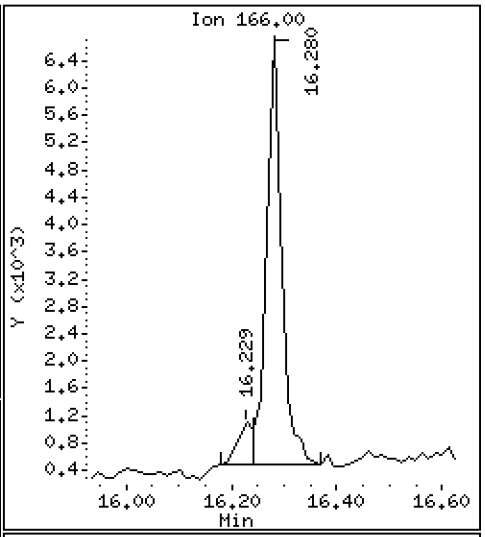
Column phase: ZB-5msi

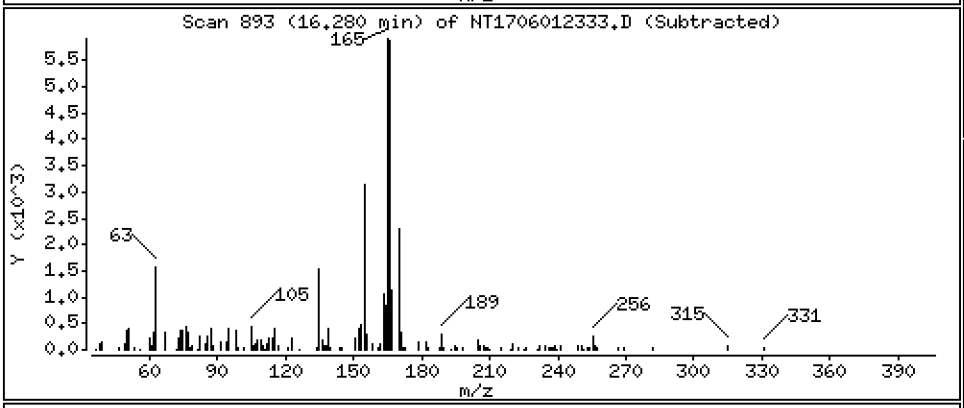
Column diameter: 0.25

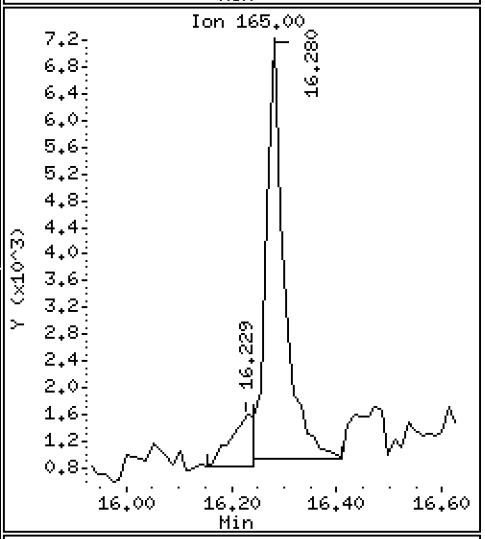
49 Fluorene

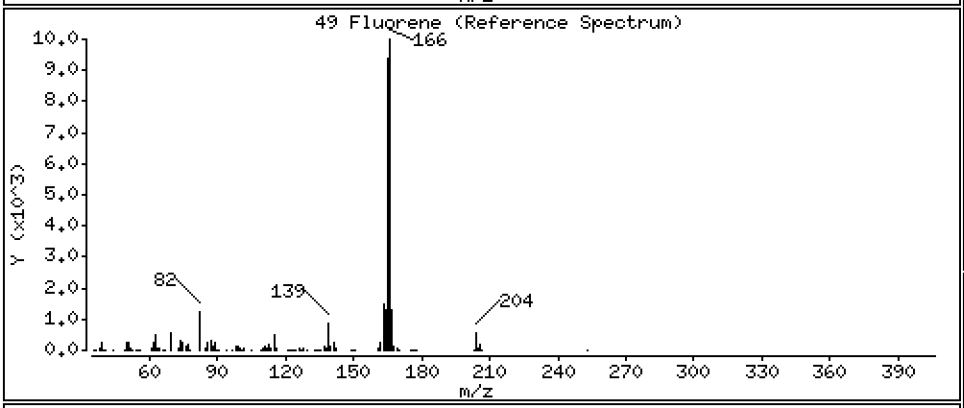
Concentration: 0.06021 ug/mL

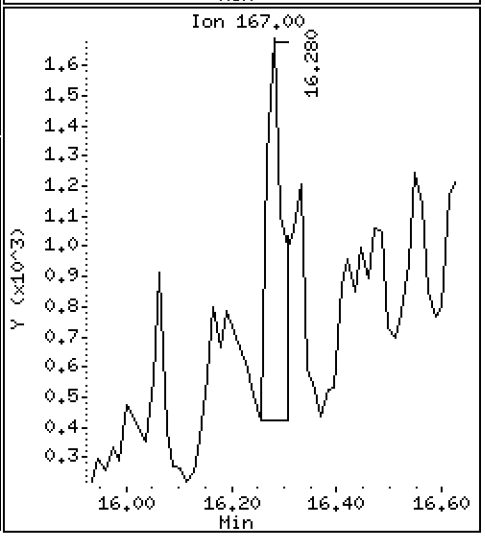


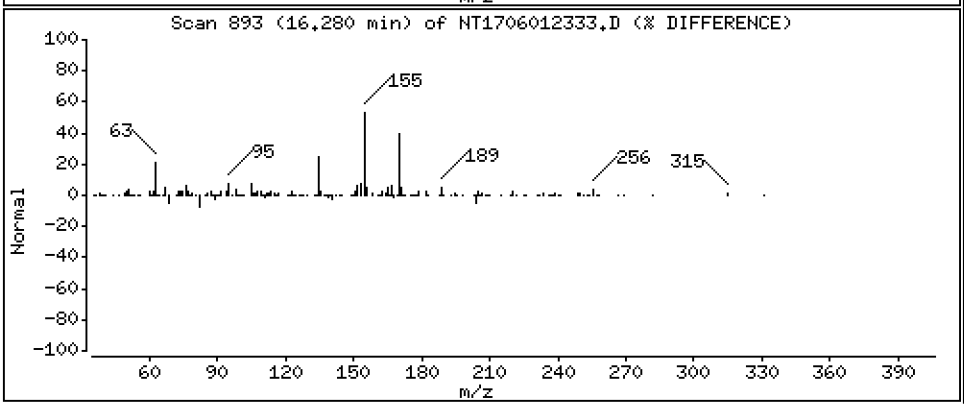












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

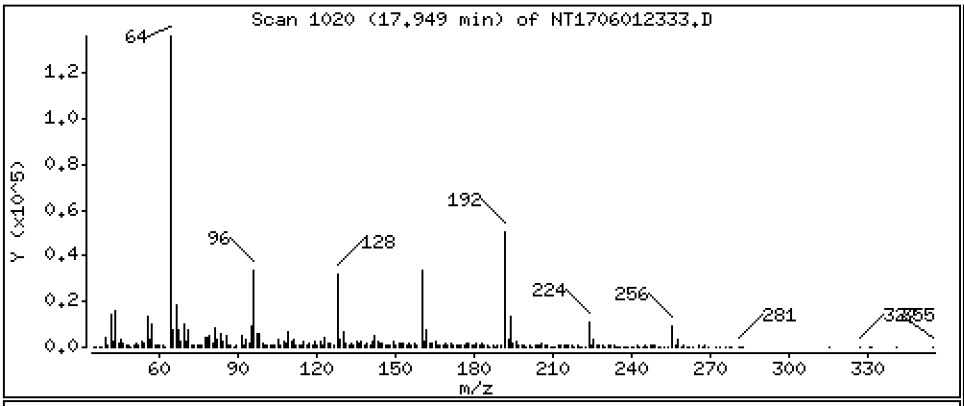
Operator: VTS

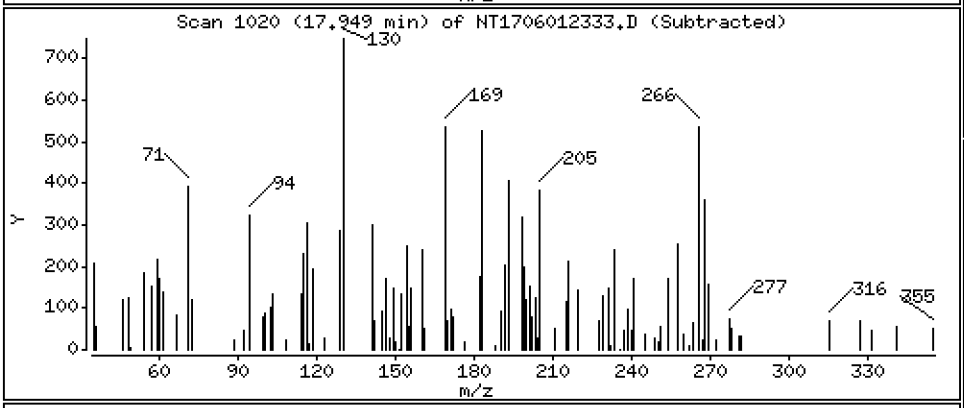
Column phase: ZB-5msi

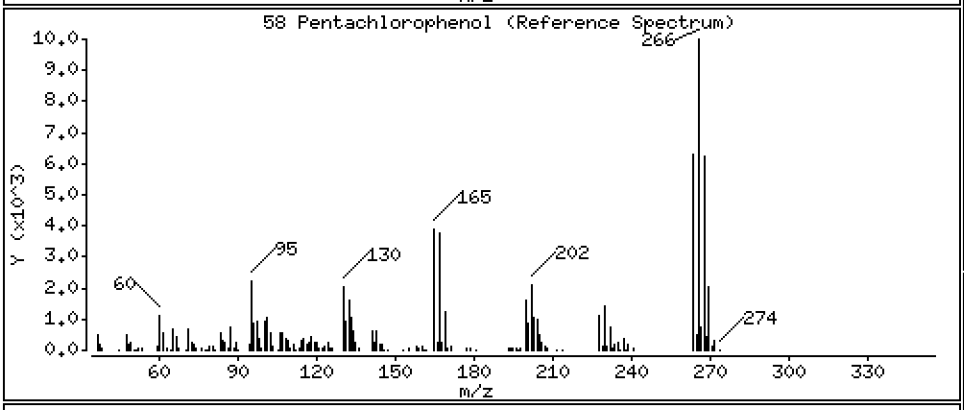
Column diameter: 0.25

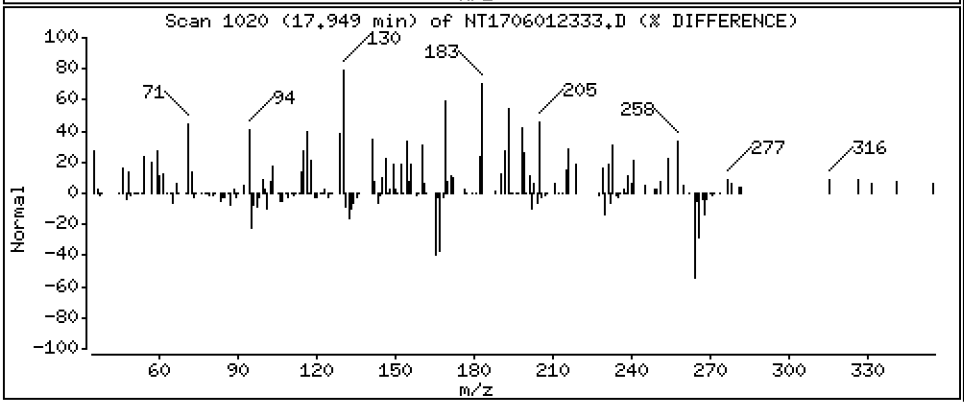
58 Pentachlorophenol

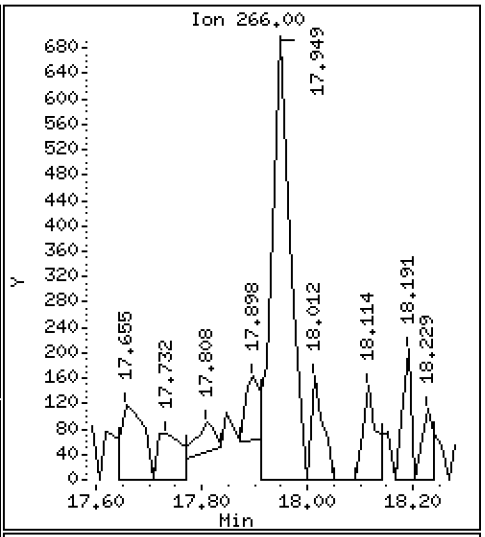
Concentration: 0.06725 ug/mL

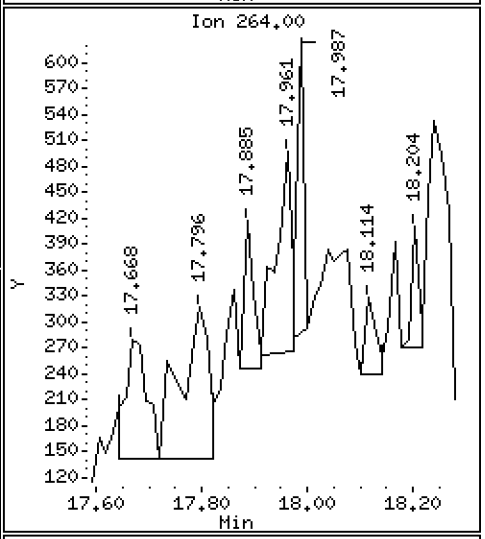


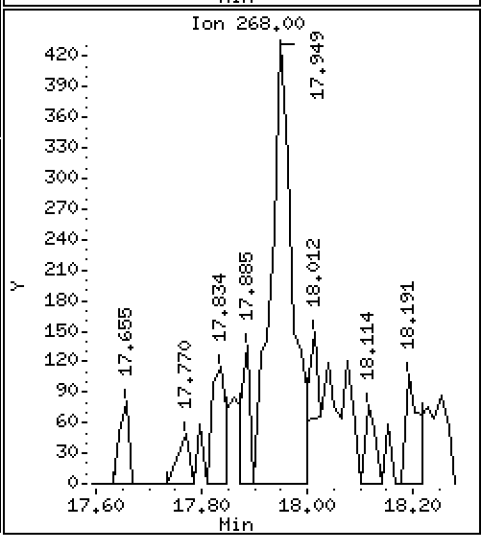












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

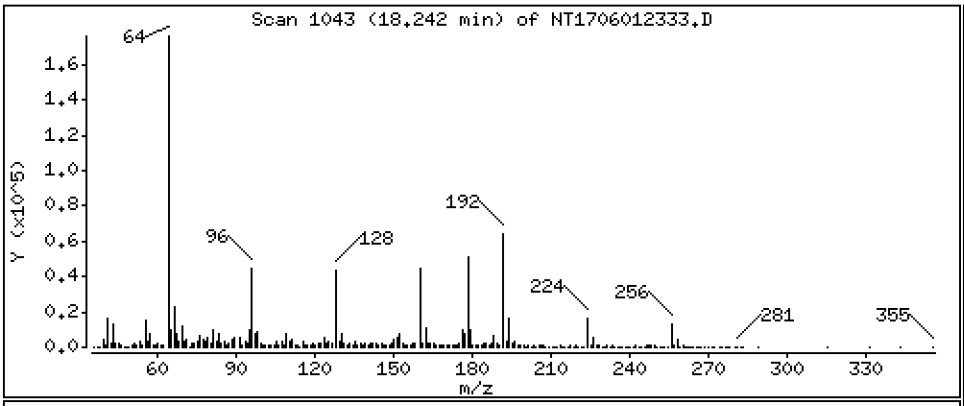
Operator: VTS

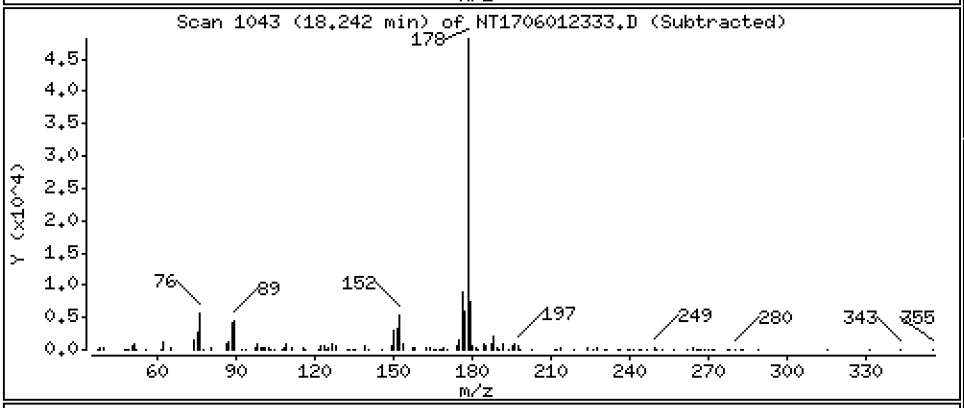
Column phase: ZB-5msi

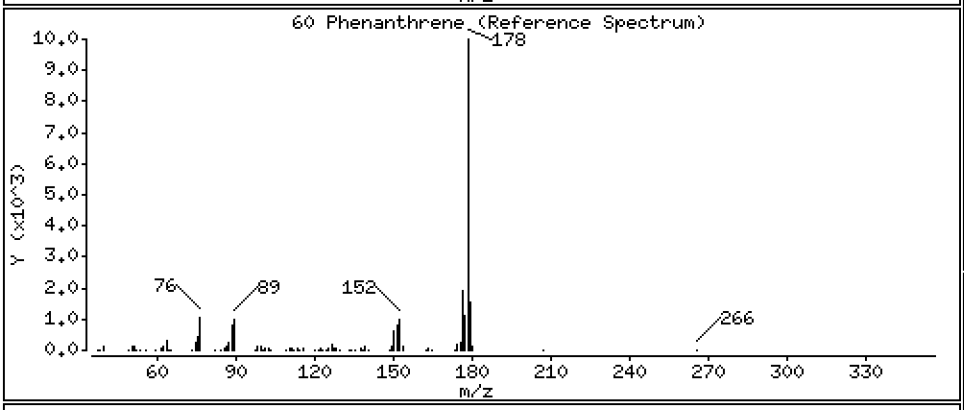
Column diameter: 0.25

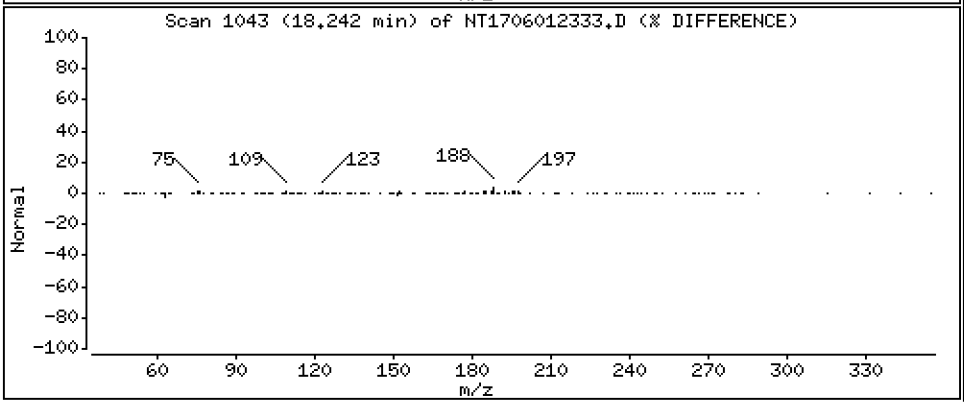
60 Phenanthrene

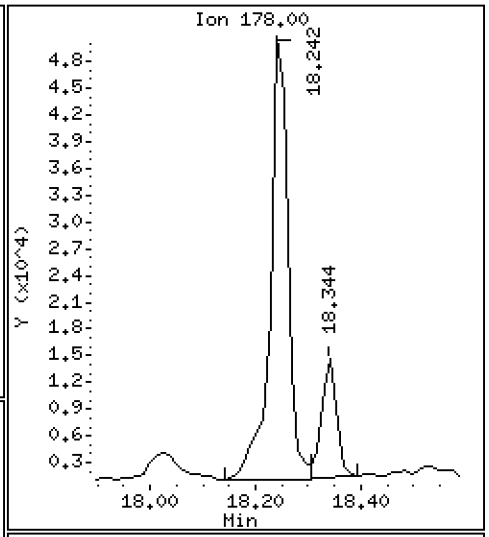
Concentration: 0.4324 ug/mL

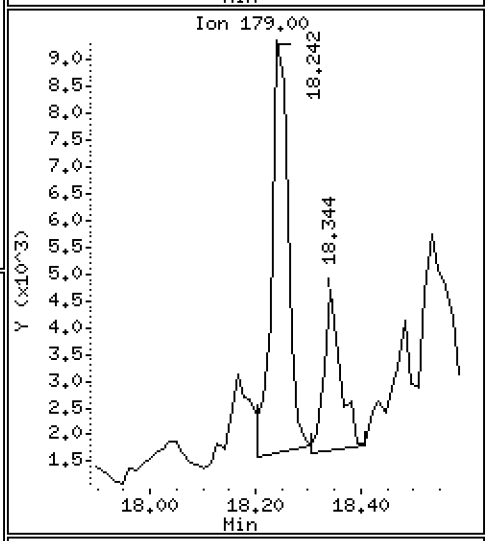


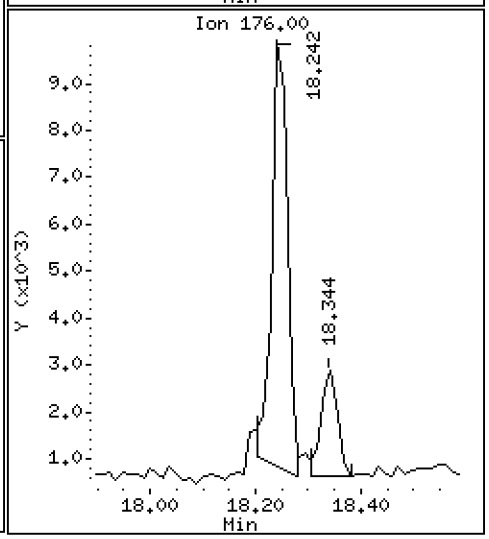












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

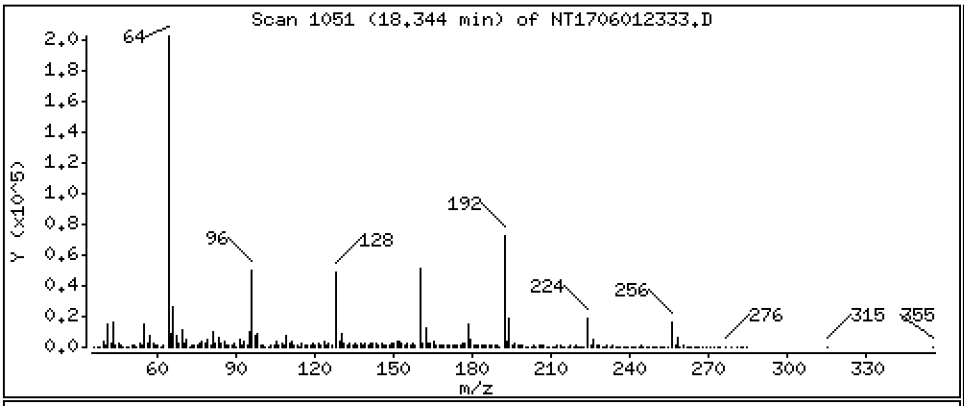
Operator: VTS

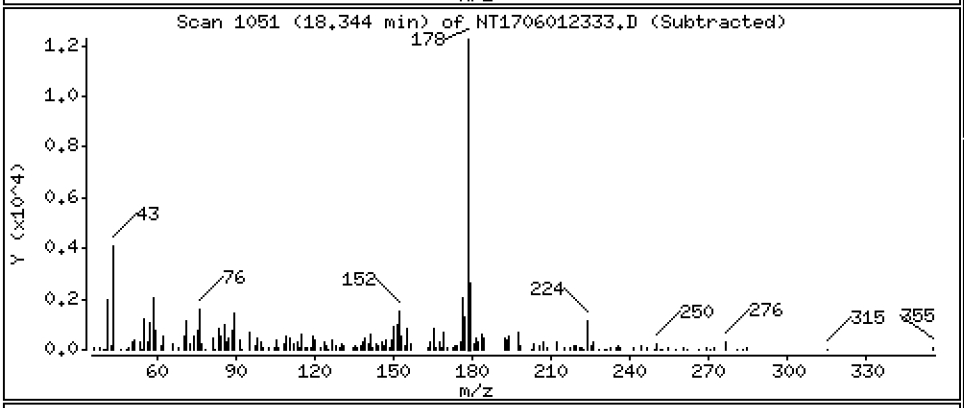
Column phase: ZB-5msi

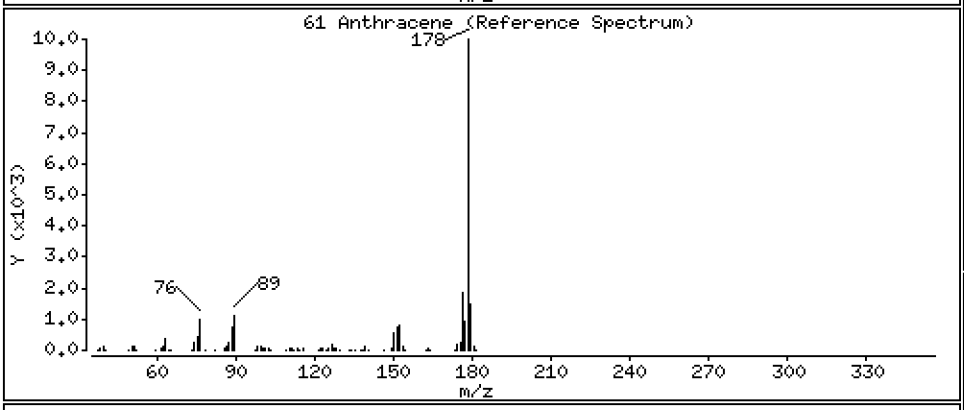
Column diameter: 0.25

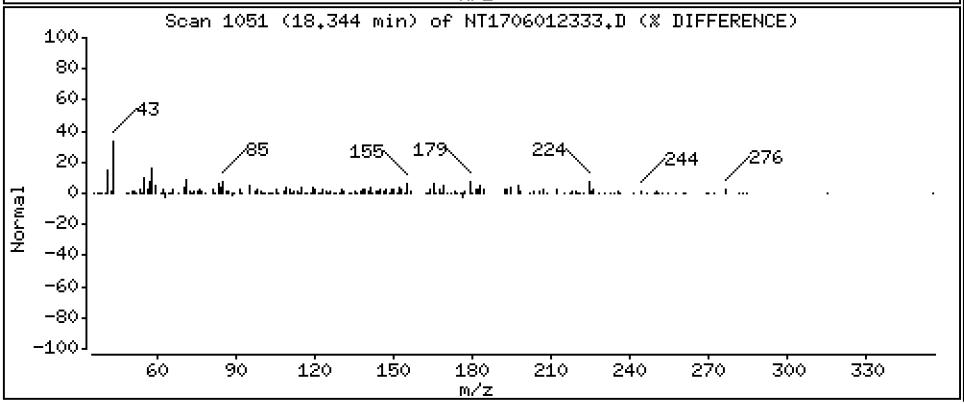
61 Anthracene

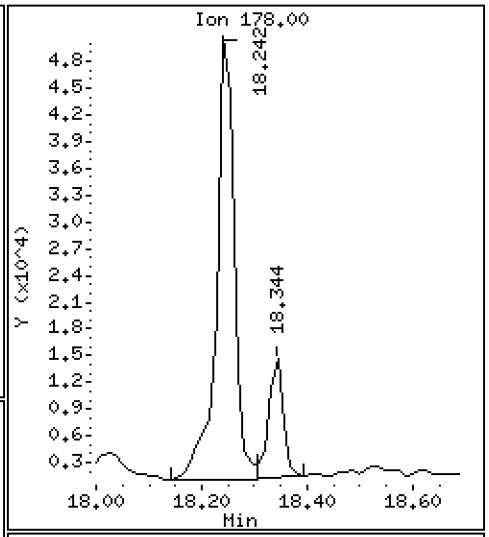
Concentration: 0.1068 ug/mL

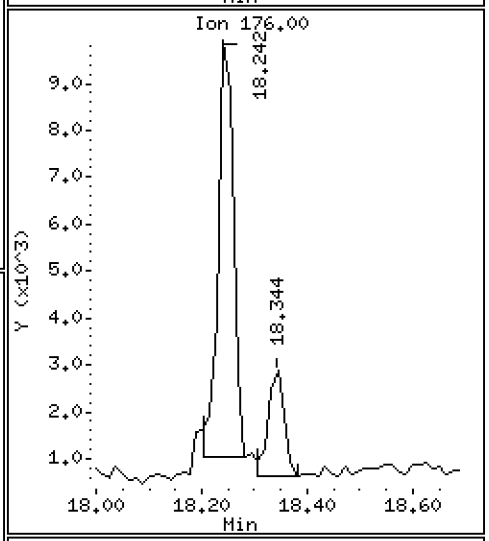


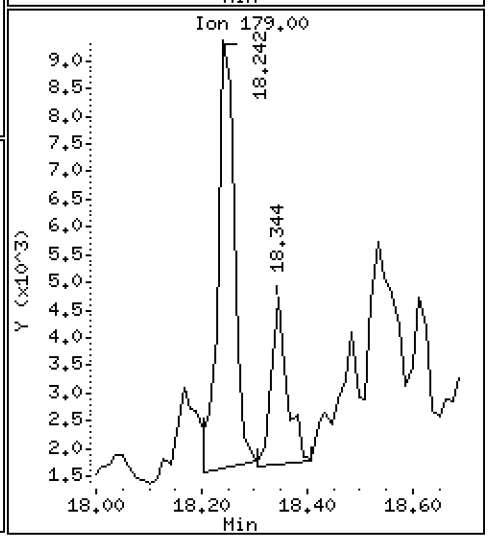












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

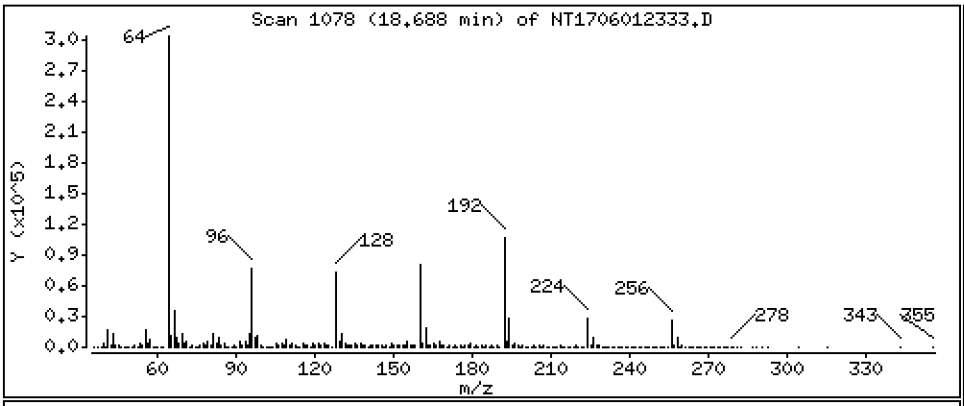
Operator: VTS

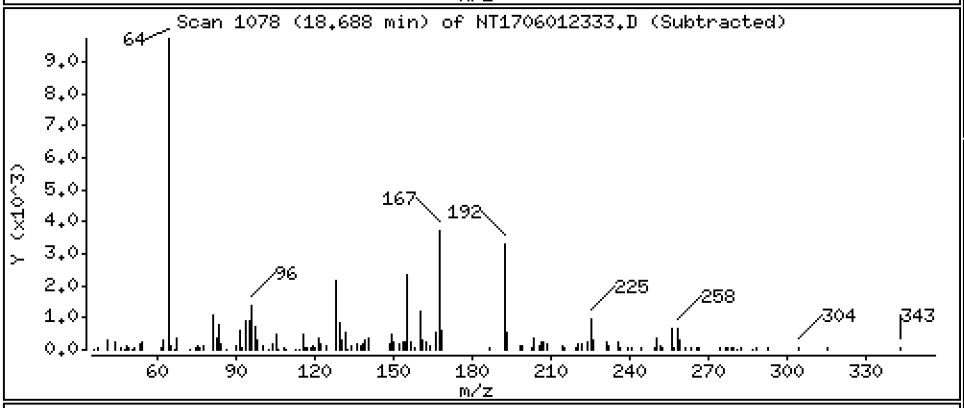
Column phase: ZB-5msi

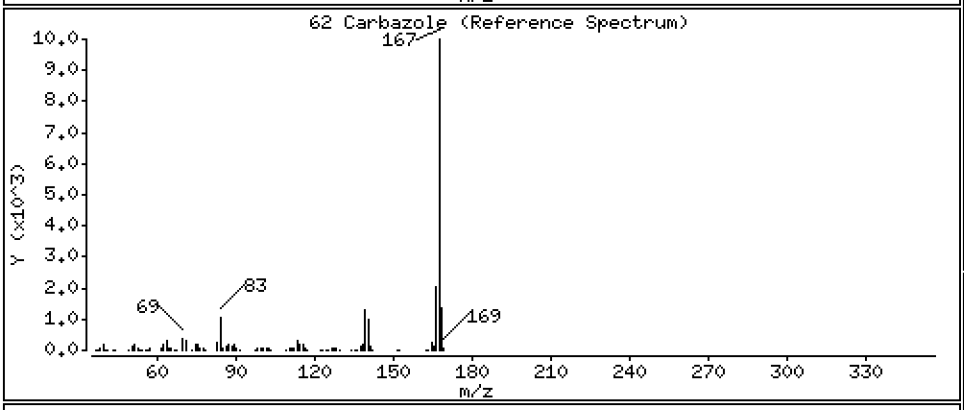
Column diameter: 0.25

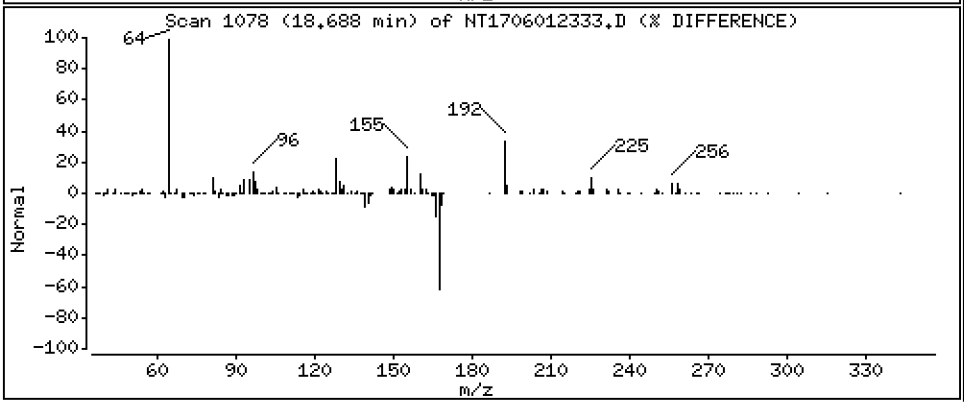
62 Carbazole

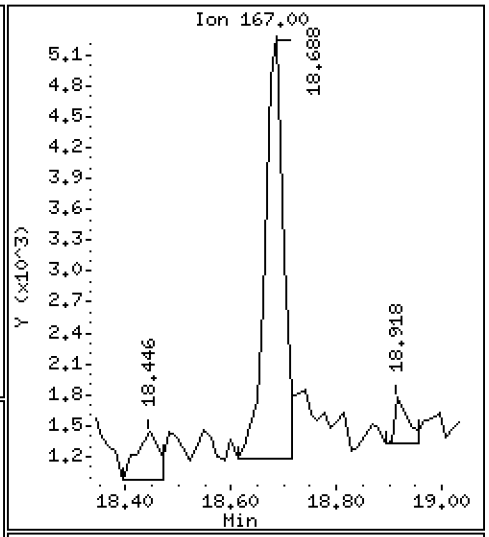
Concentration: 0.06577 ug/mL

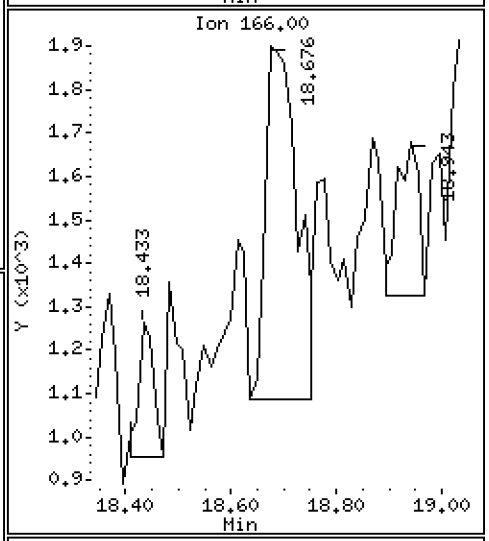


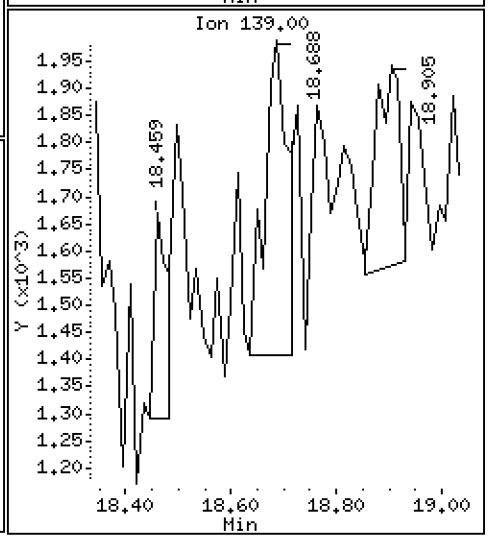












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

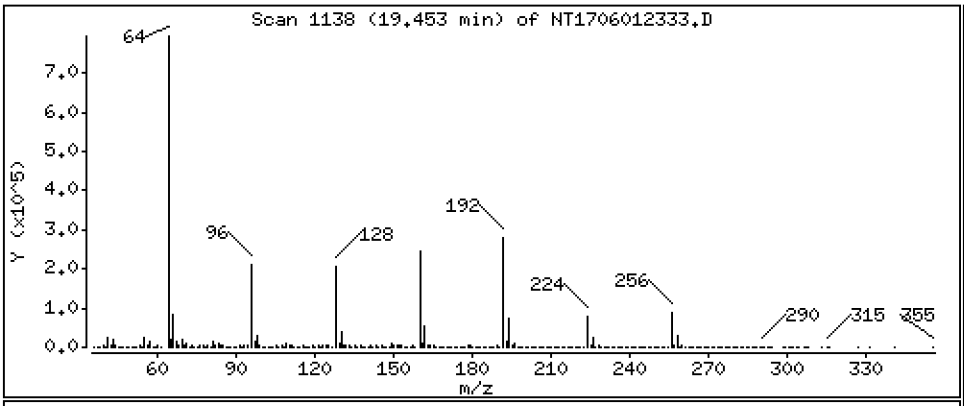
Operator: VTS

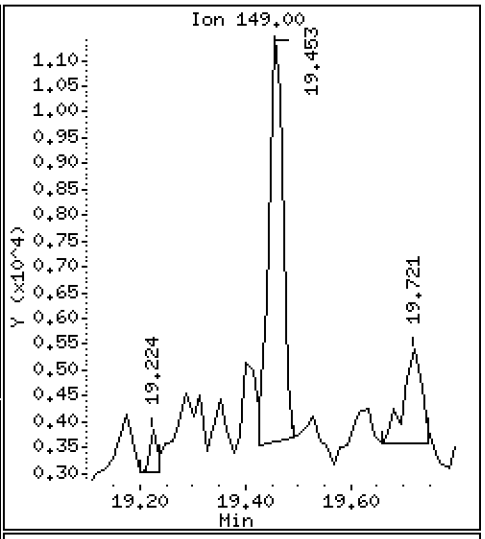
Column phase: ZB-5msi

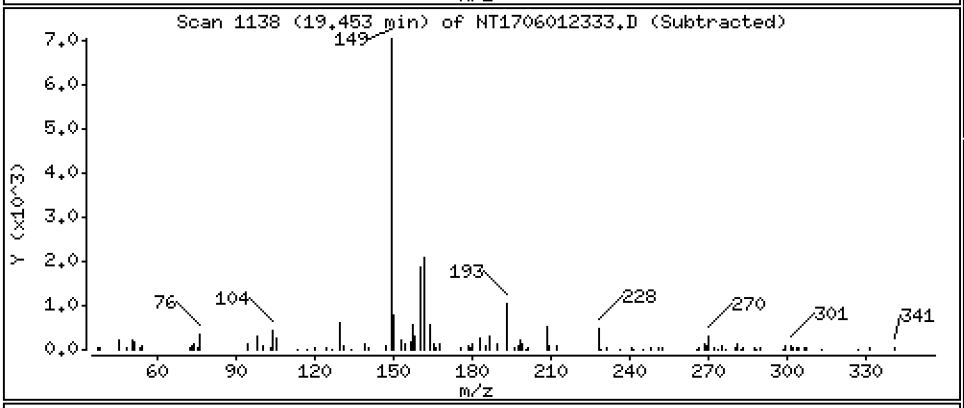
Column diameter: 0.25

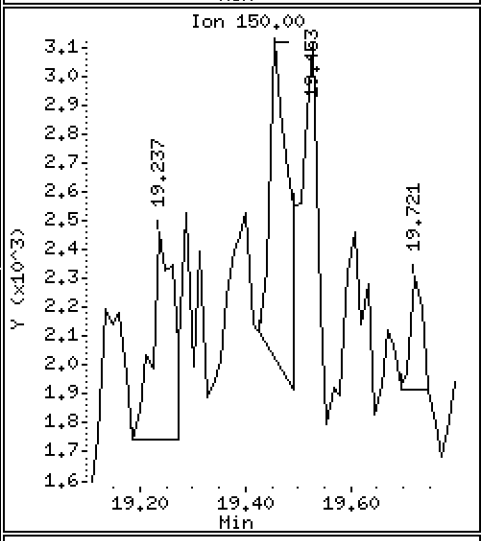
63 Di-n-butylphthalate

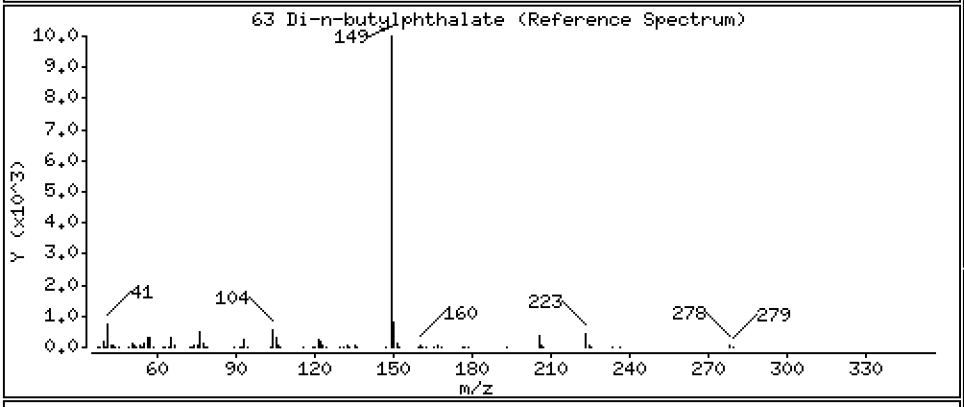
Concentration: 0.04907 ug/mL

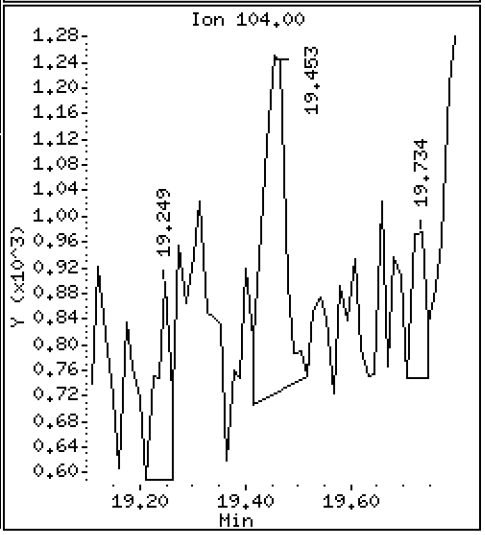


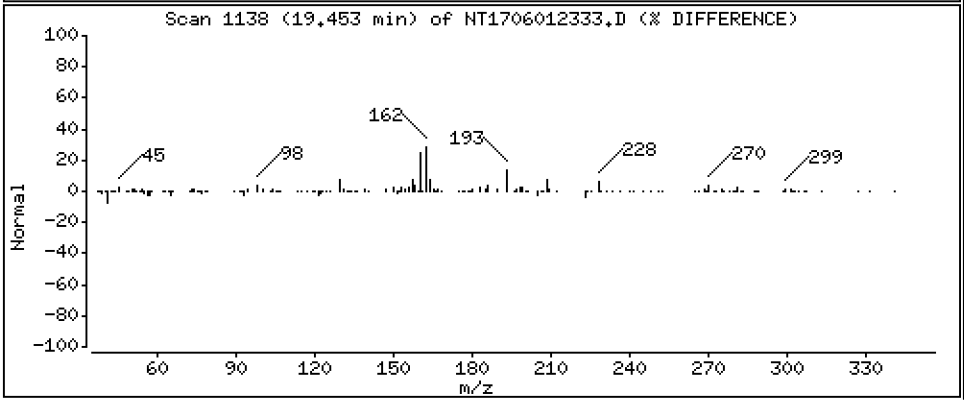












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

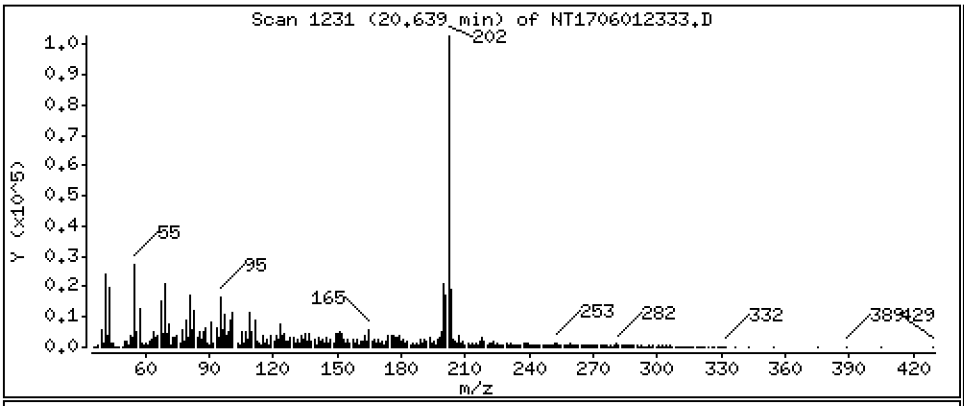
Operator: VTS

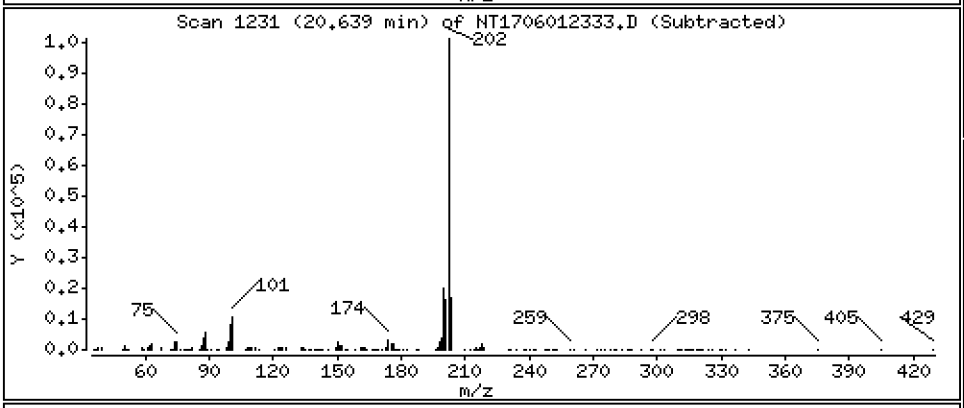
Column phase: ZB-5msi

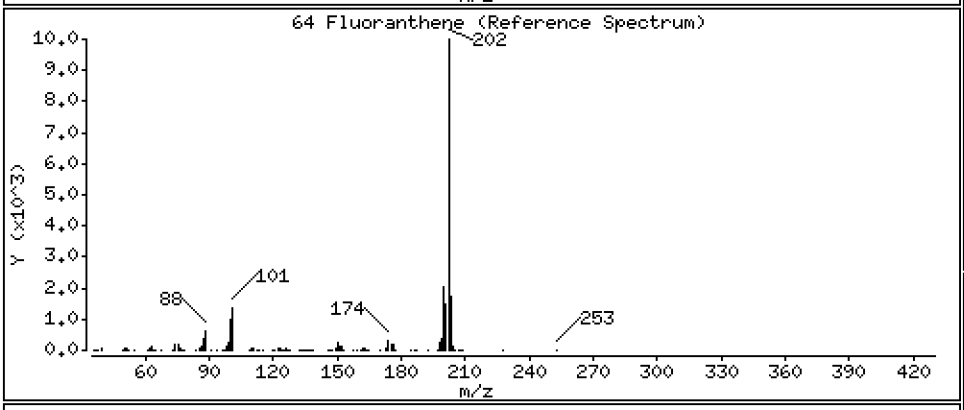
Column diameter: 0.25

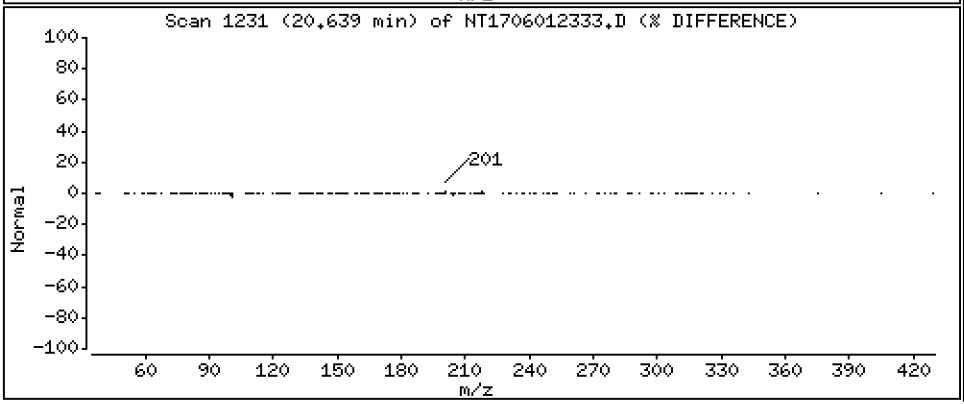
64 Fluoranthene

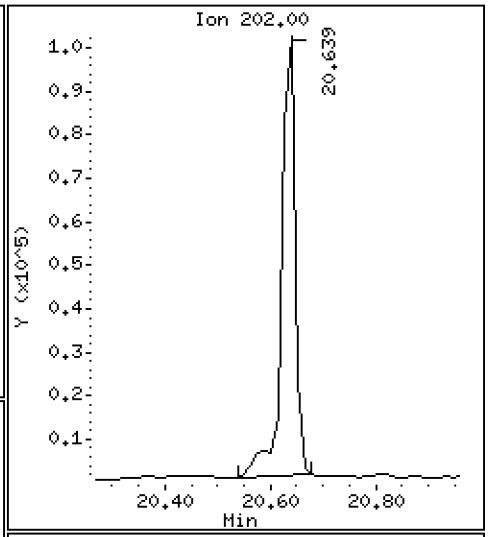
Concentration: 0.7956 ug/mL

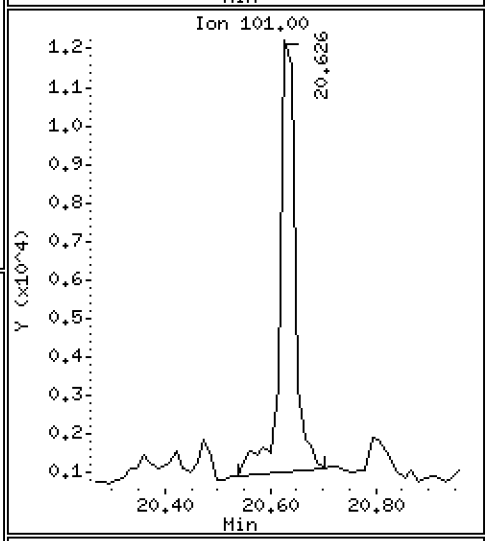


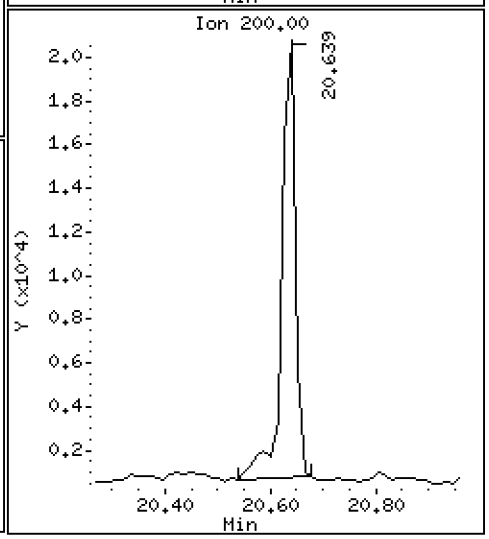












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

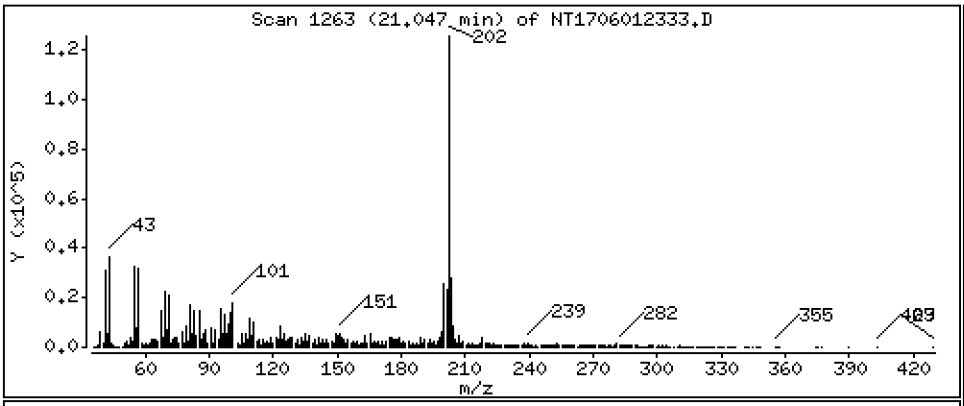
Operator: VTS

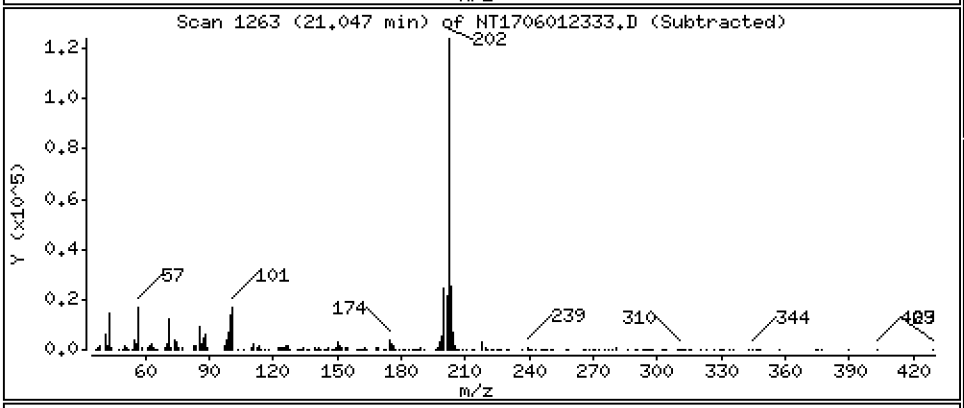
Column phase: ZB-5msi

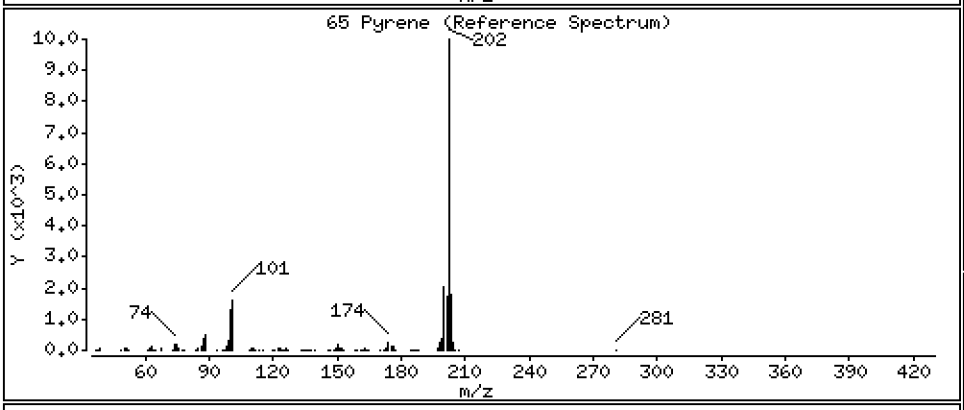
Column diameter: 0.25

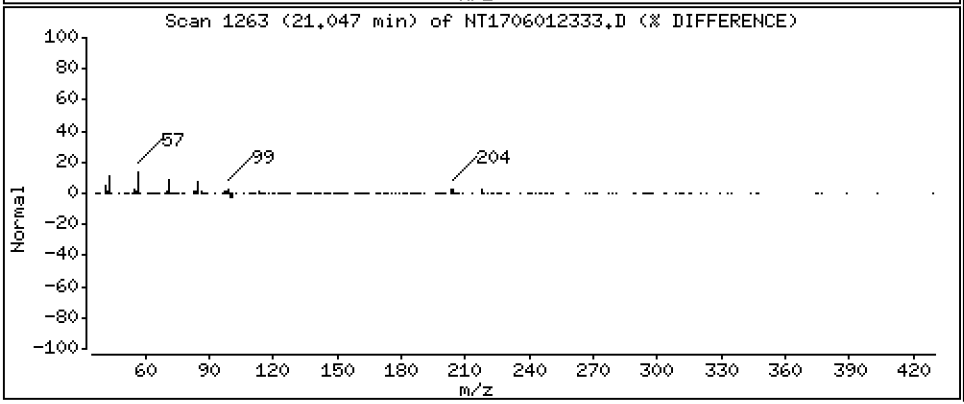
65 Pyrene

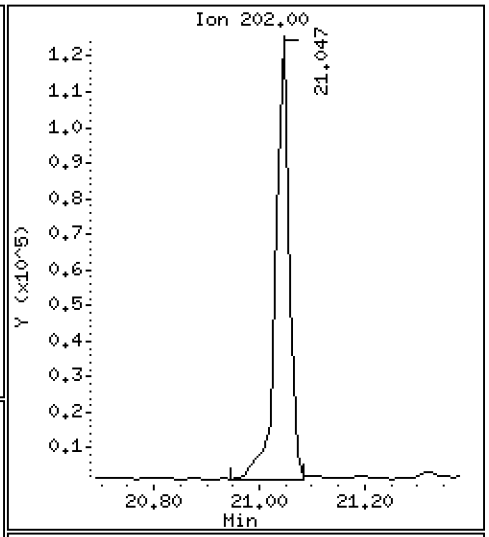
Concentration: 0.9583 ug/mL

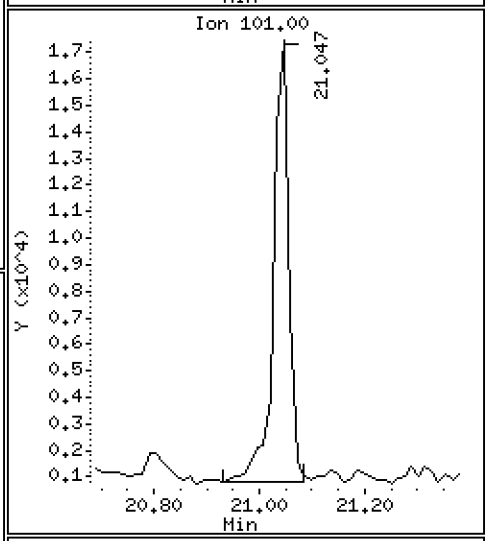


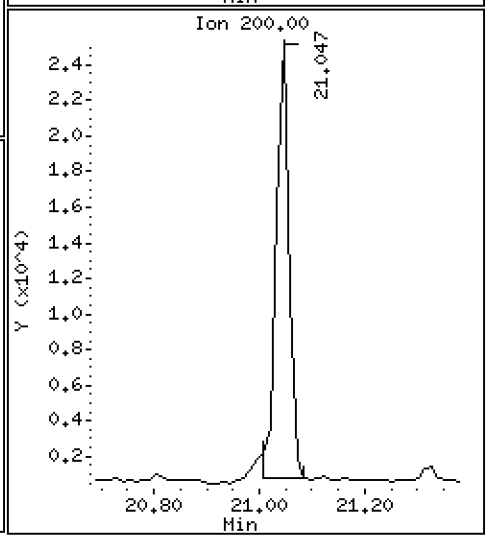












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

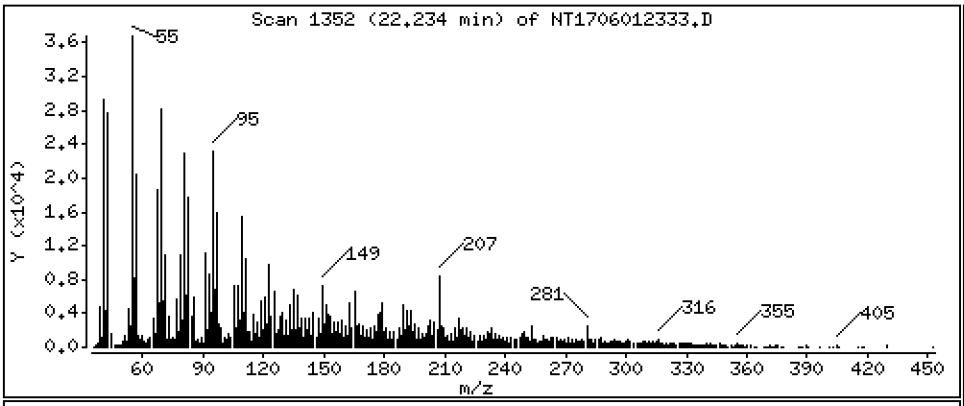
Operator: VTS

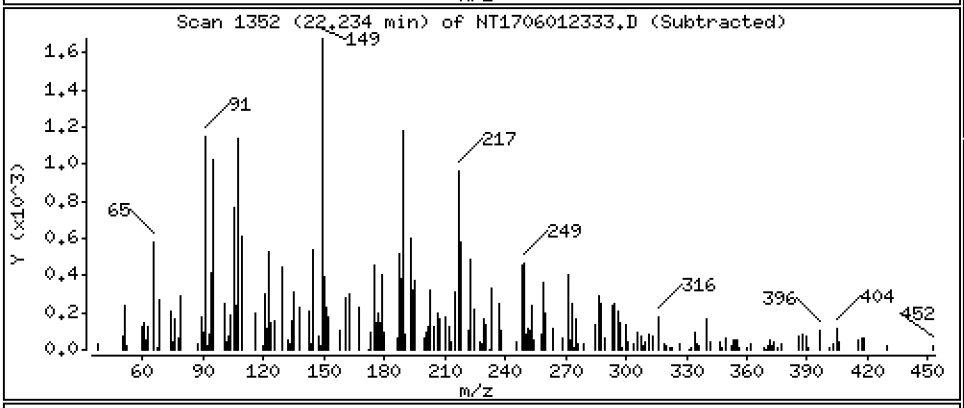
Column phase: ZB-5msi

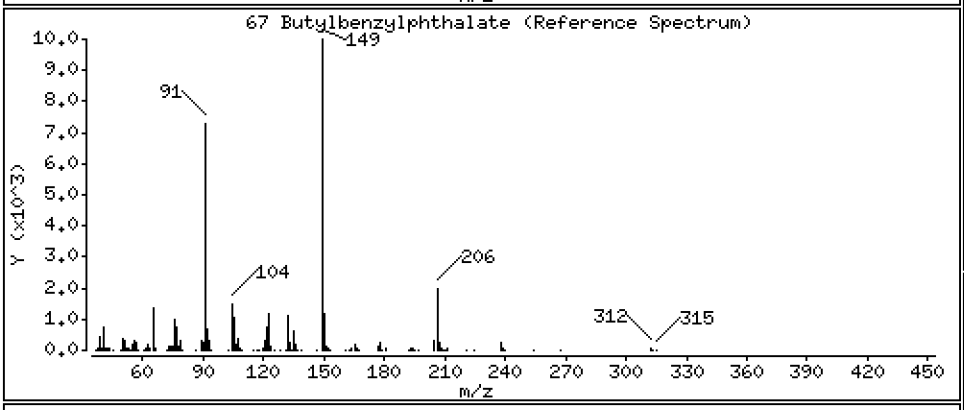
Column diameter: 0.25

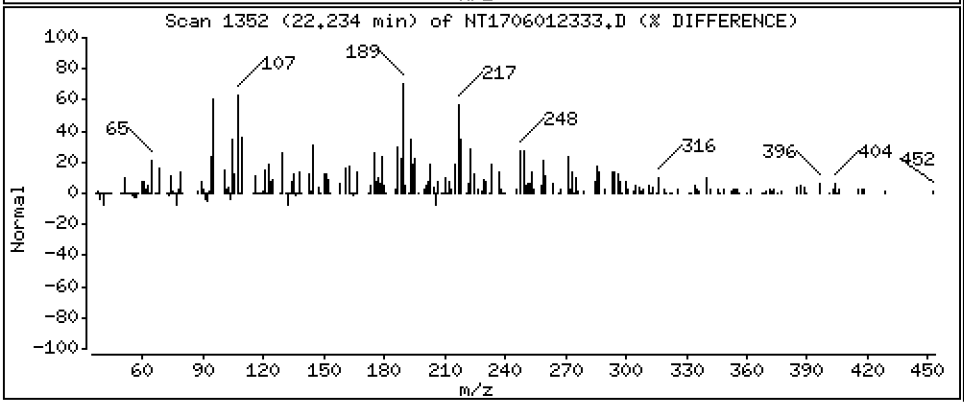
67 Butylbenzylphthalate

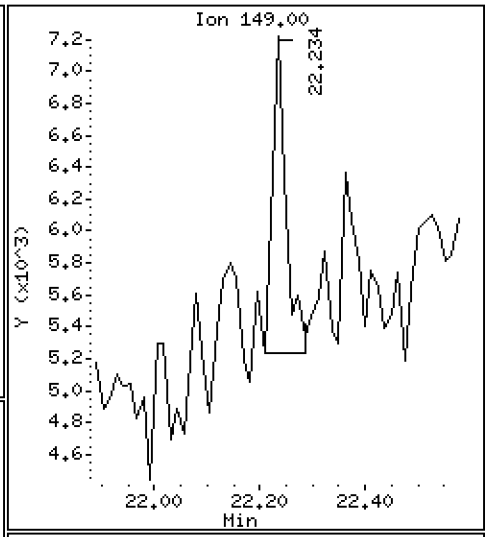
Concentration: 0.03420 ug/mL

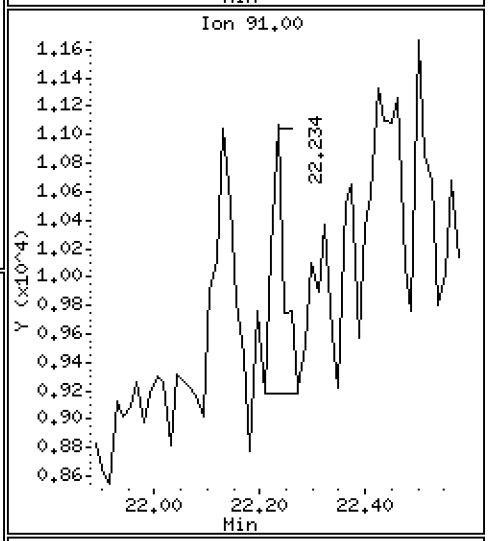


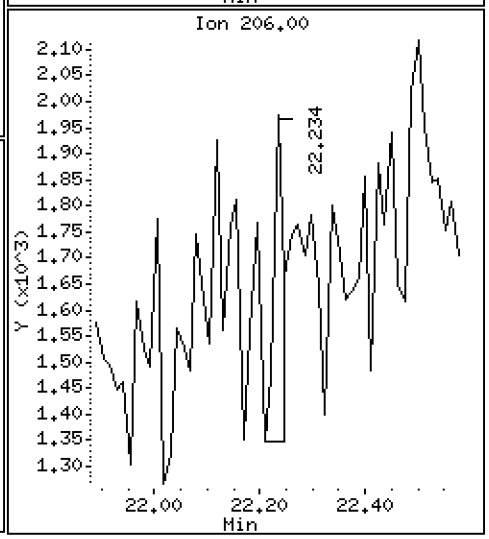












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

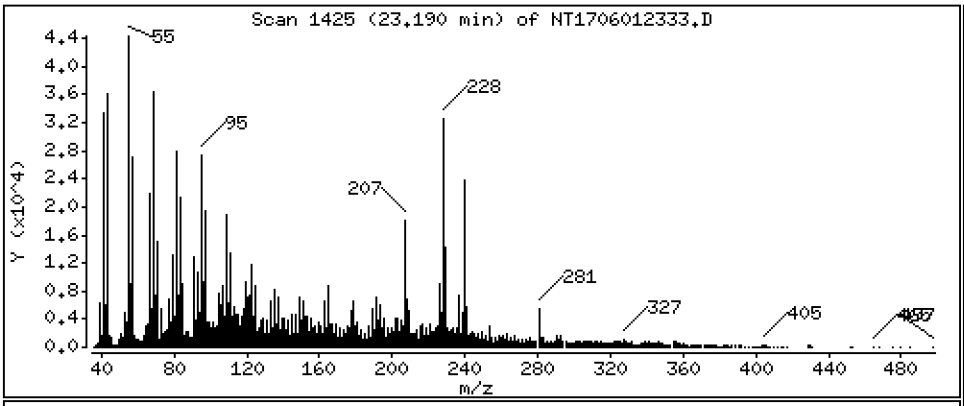
Operator: VTS

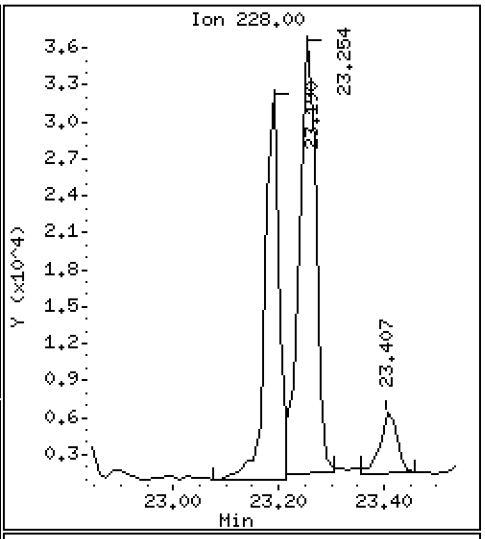
Column phase: ZB-5msi

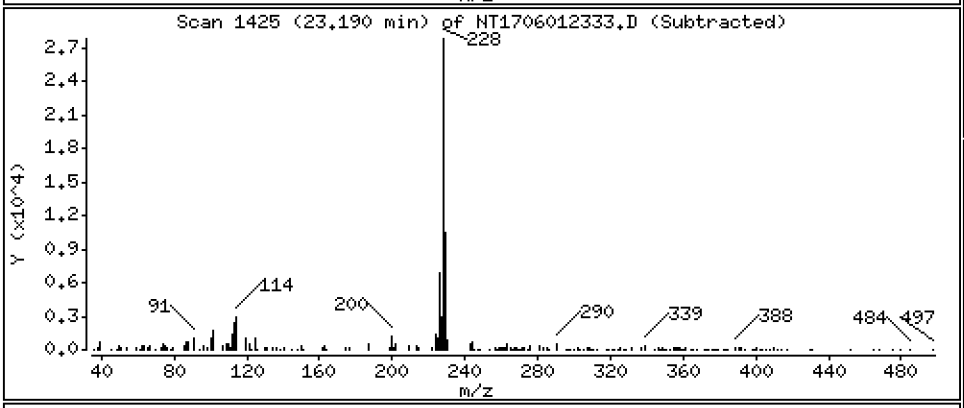
Column diameter: 0.25

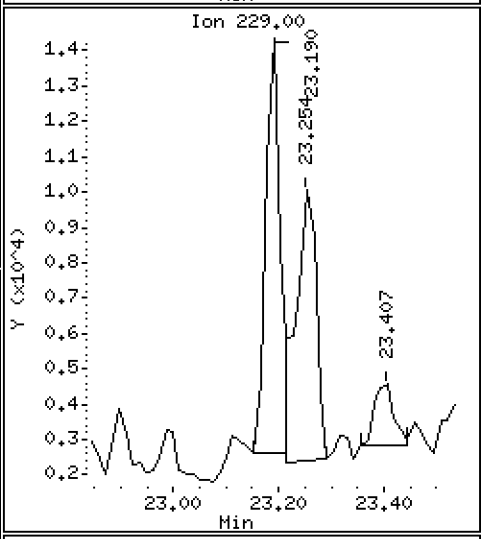
68 Benzo(a)anthracene

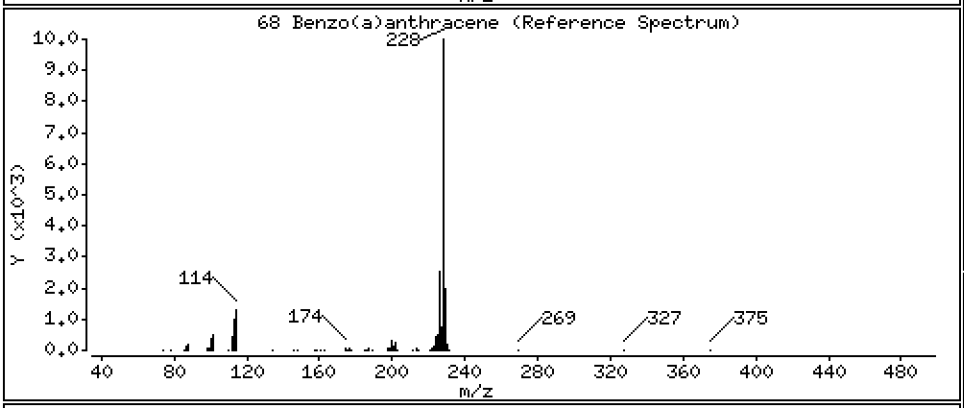
Concentration: 0.3423 ug/mL

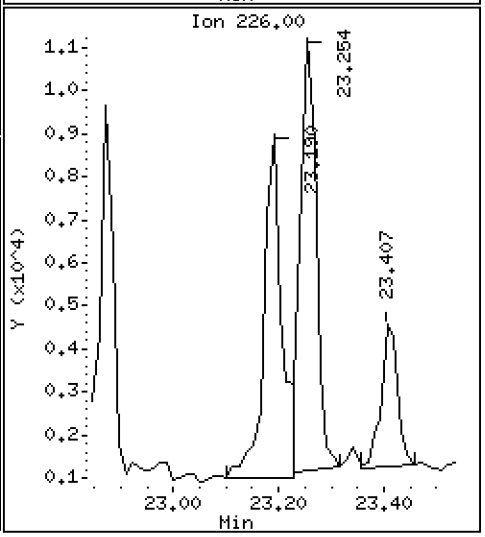


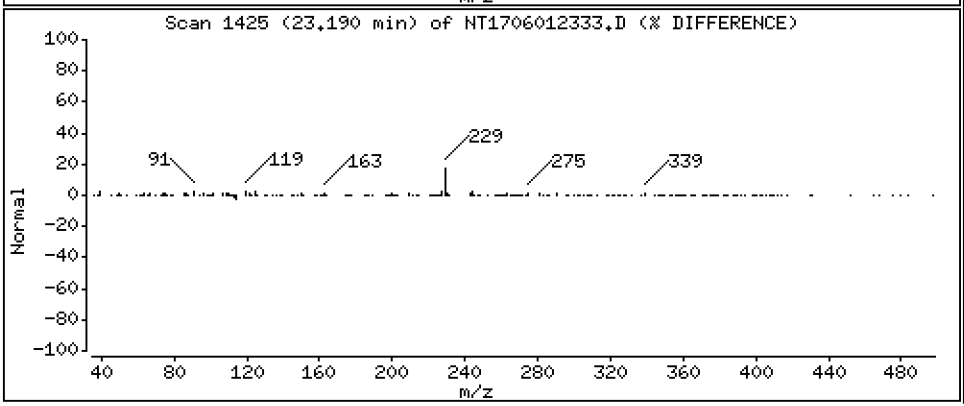












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

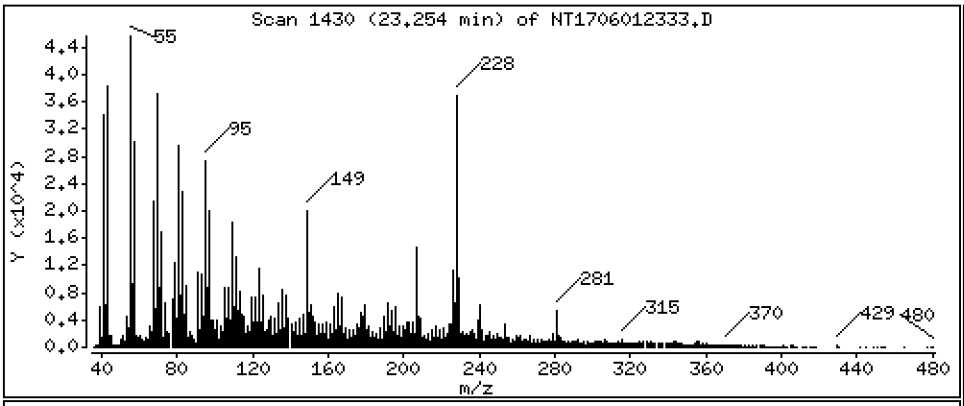
Operator: VTS

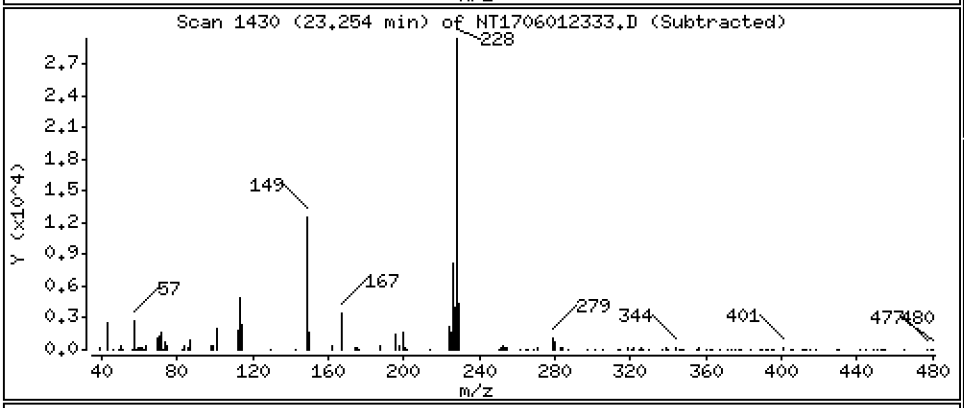
Column phase: ZB-5msi

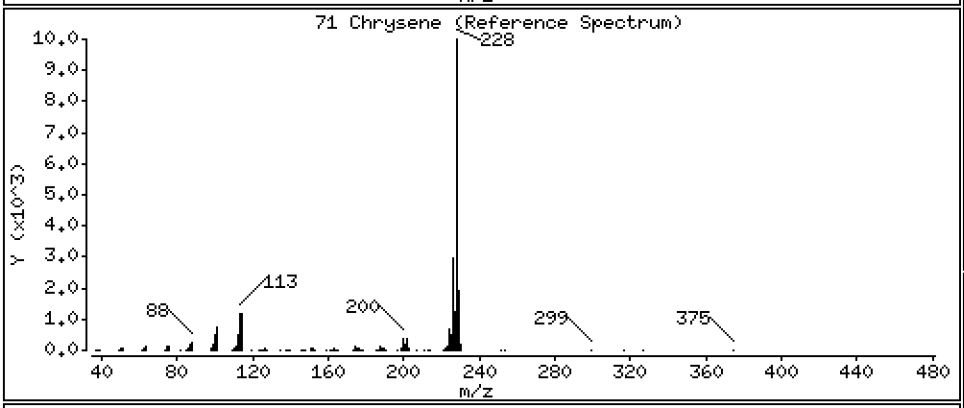
Column diameter: 0.25

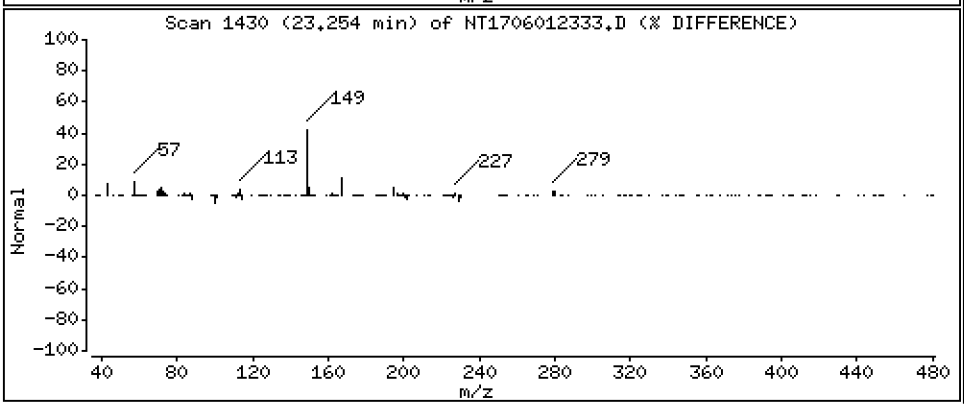
71 Chrysene

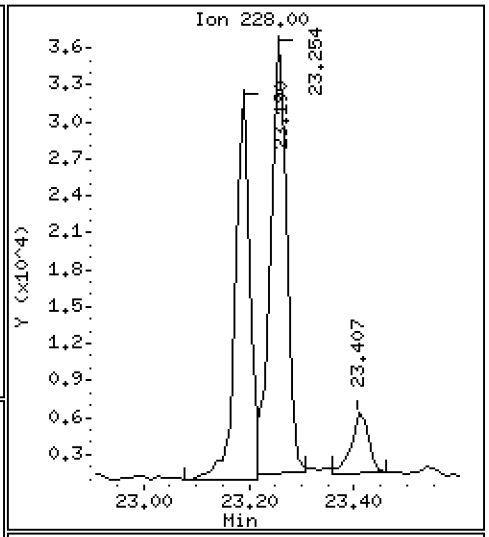
Concentration: 0.4541 ug/mL

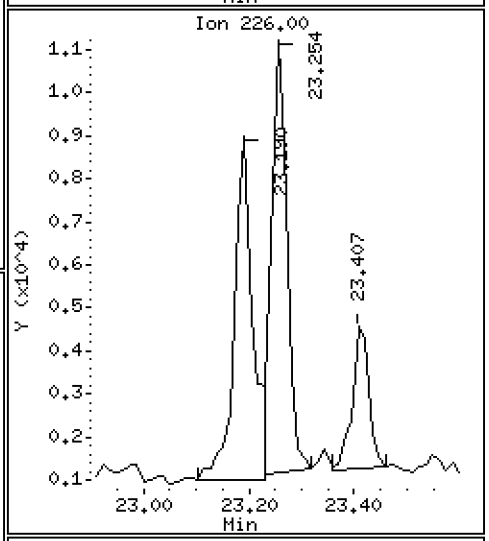


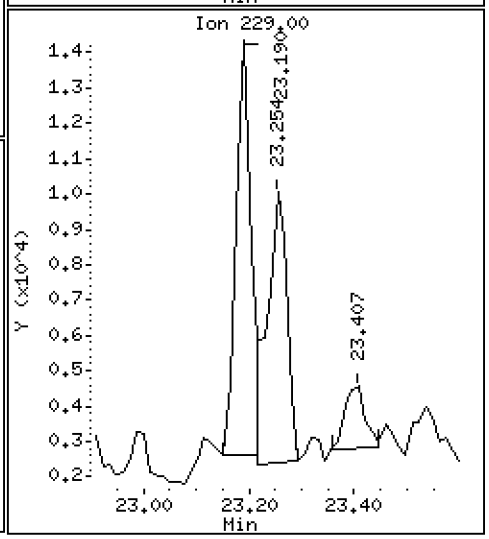












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

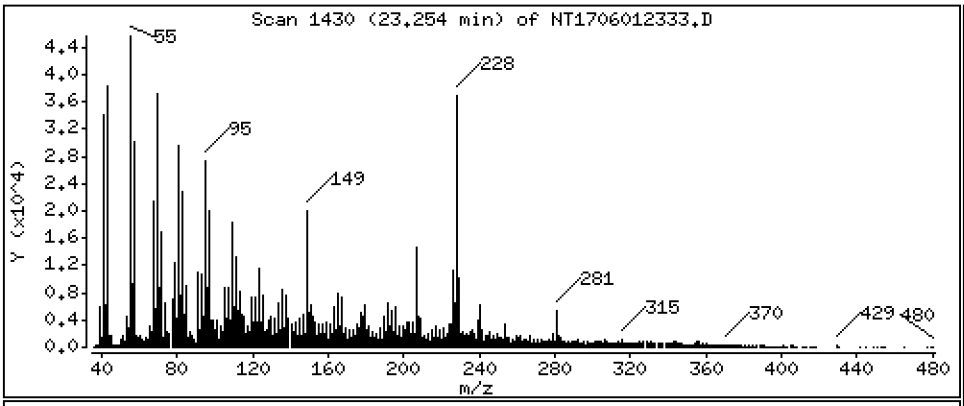
Operator: VTS

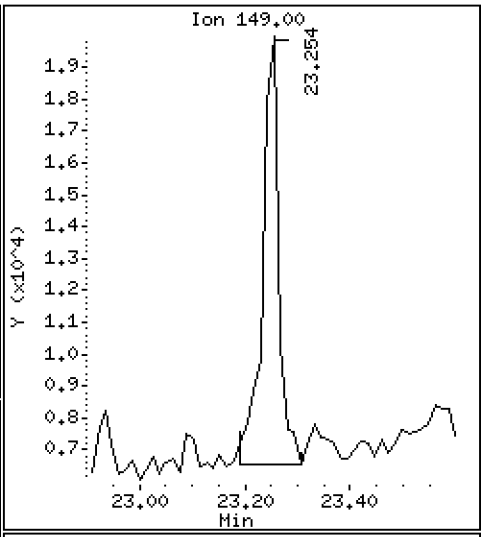
Column phase: ZB-5msi

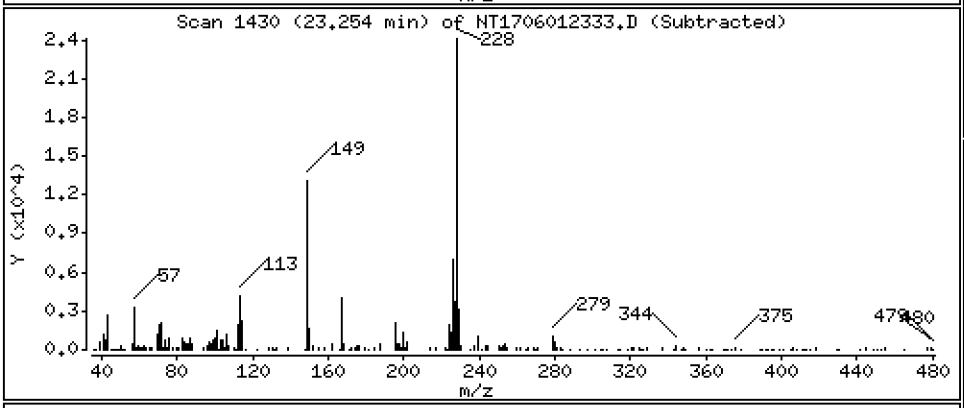
Column diameter: 0.25

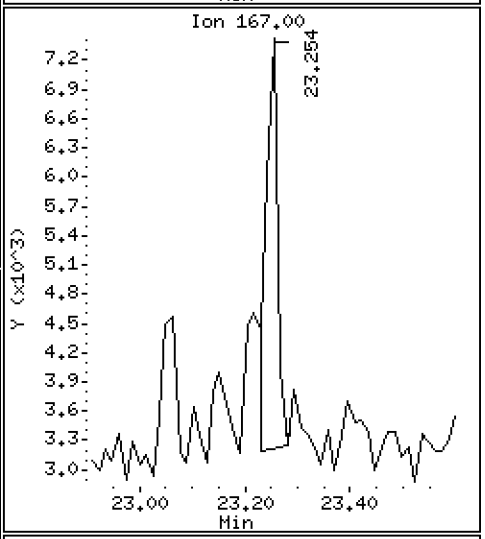
72 bis(2-Ethylhexyl)phthalate

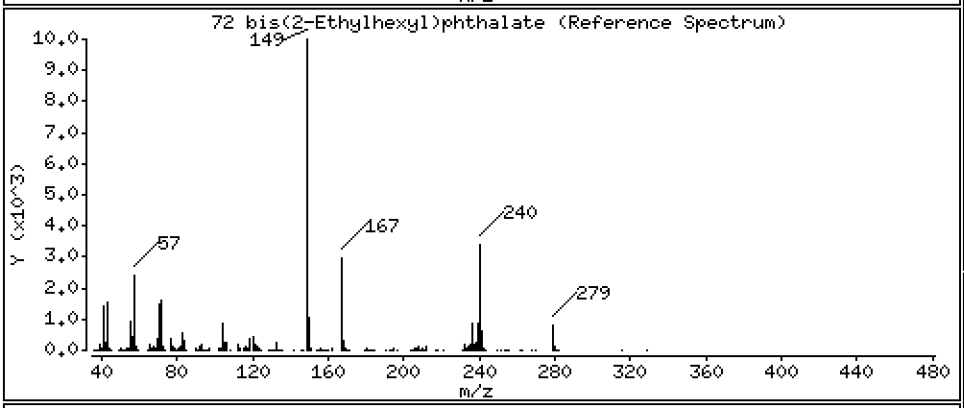
Concentration: 0.1982 ug/mL

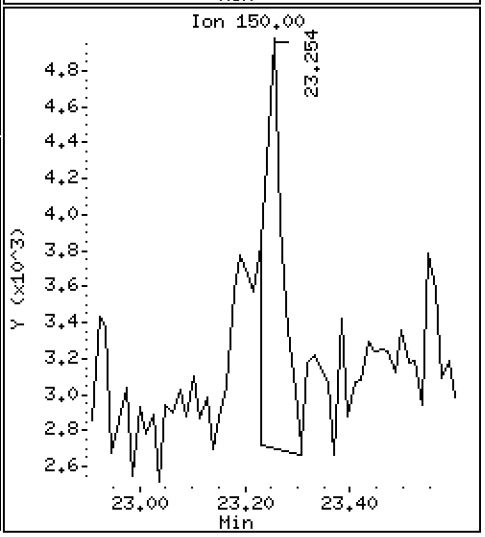


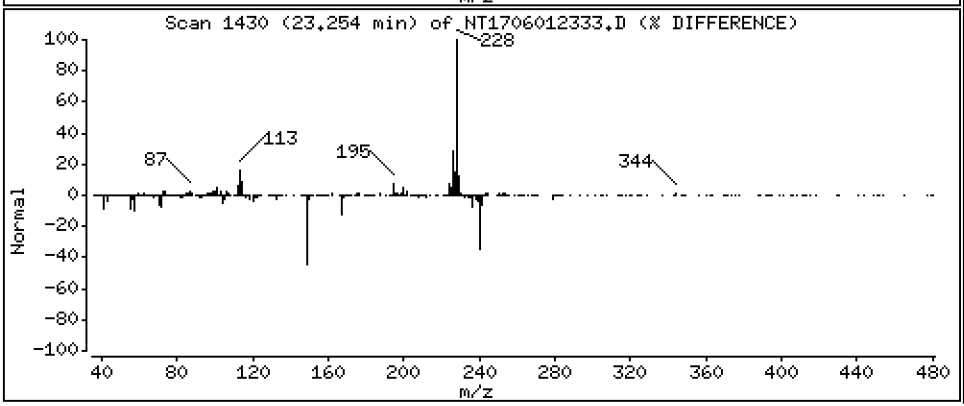












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

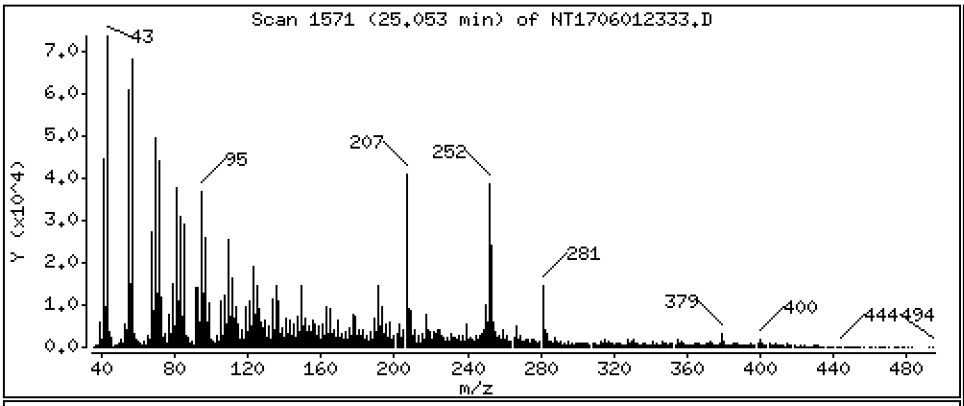
Operator: VTS

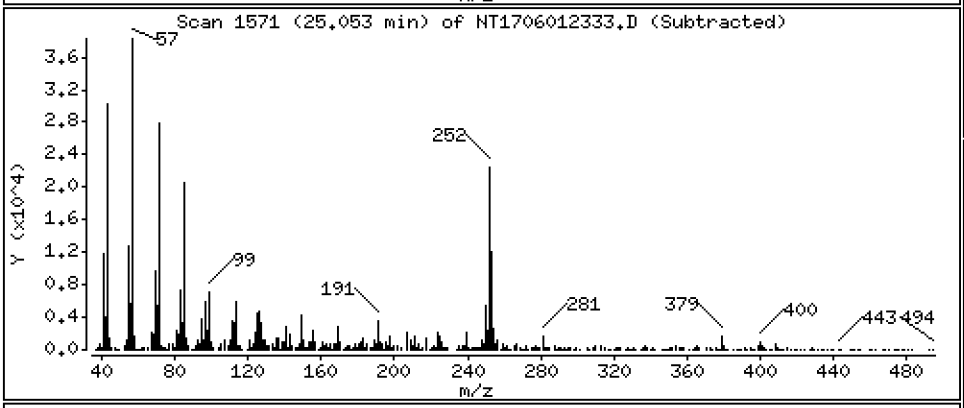
Column phase: ZB-5msi

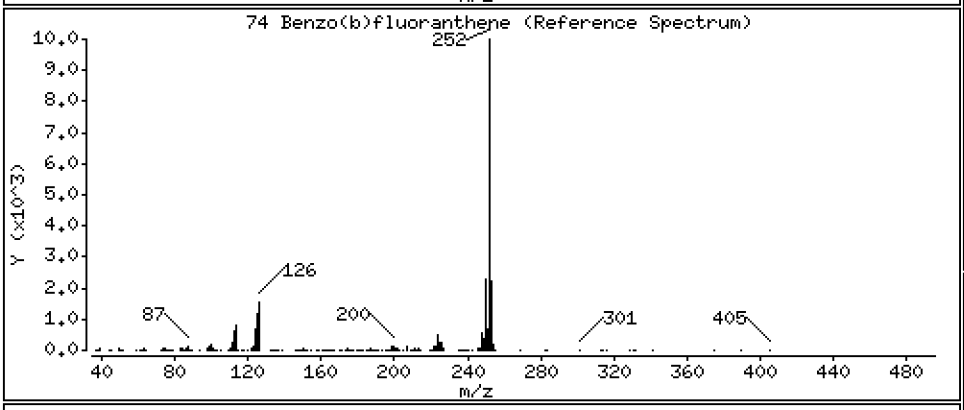
Column diameter: 0.25

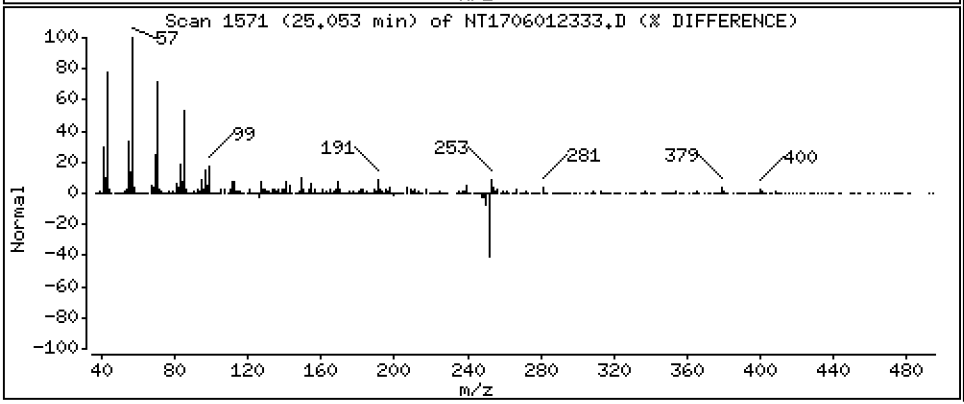
74 Benzo(b)fluoranthene

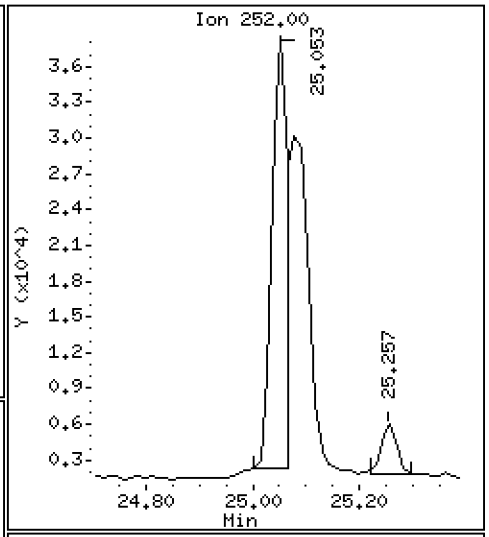
Concentration: 0.3520 ug/mL

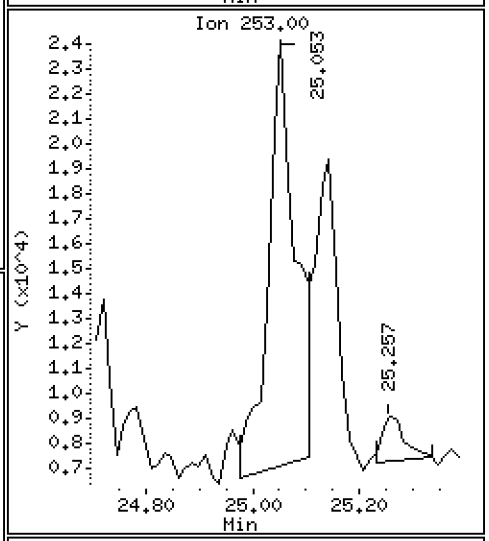


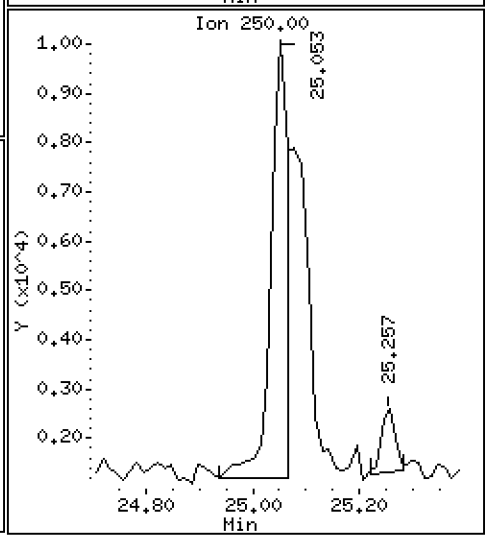












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

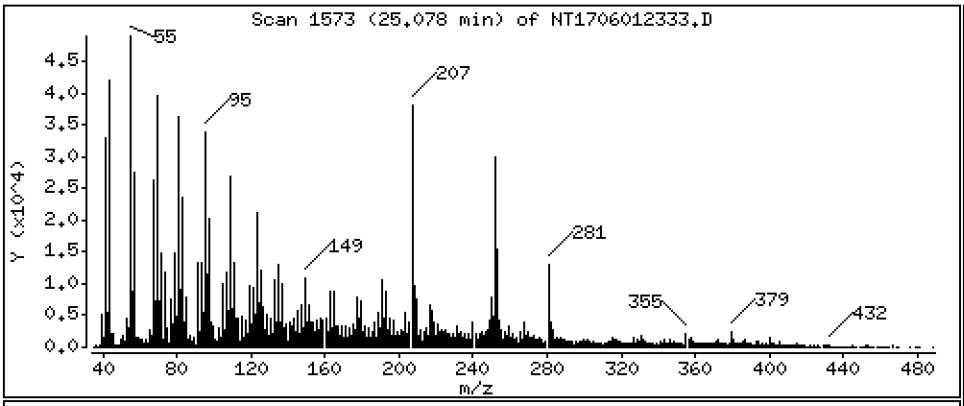
Operator: VTS

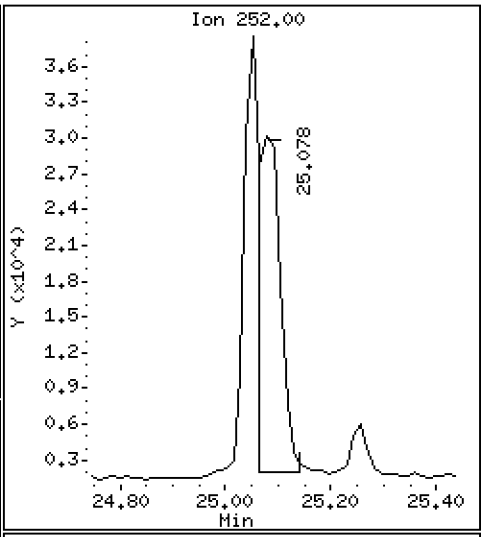
Column phase: ZB-5msi

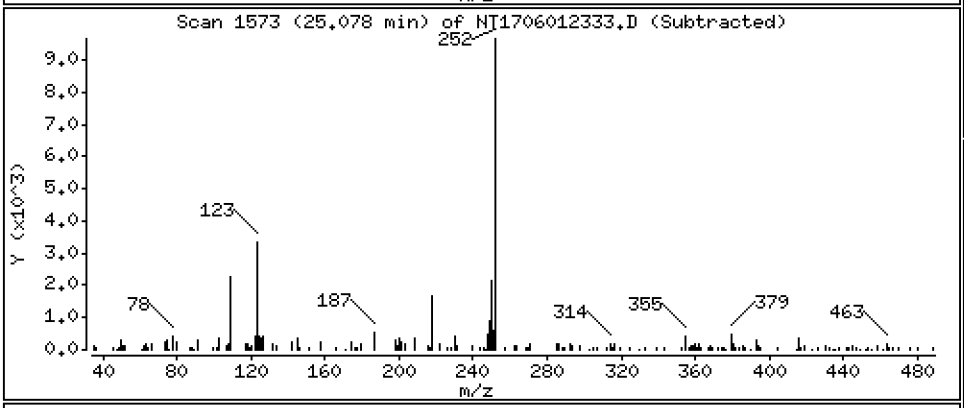
Column diameter: 0.25

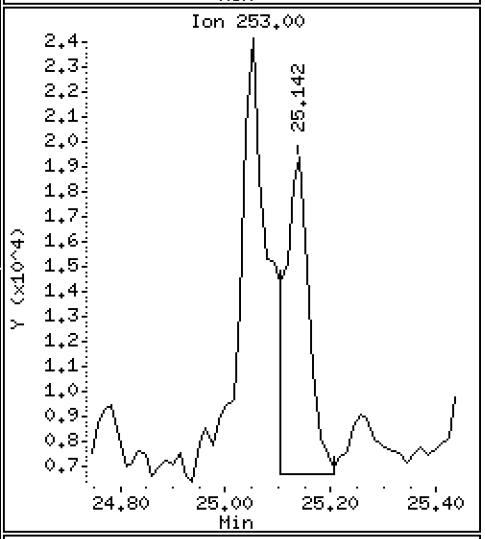
75 Benzo(k)fluoranthene

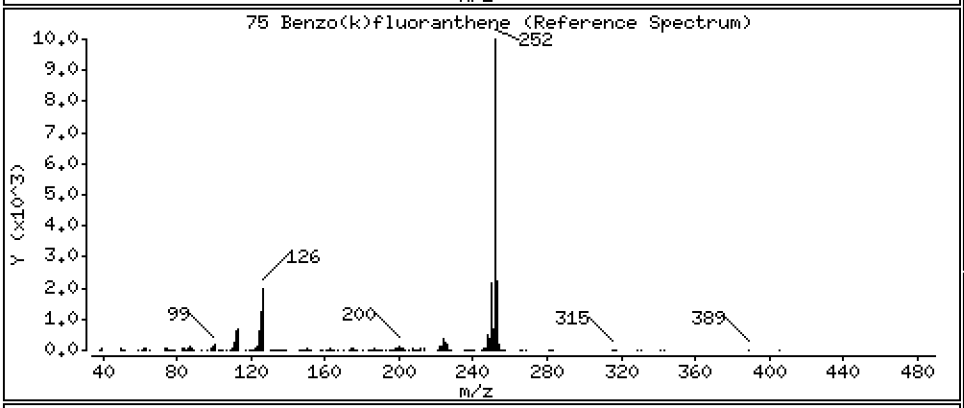
Concentration: 0.3990 ug/mL

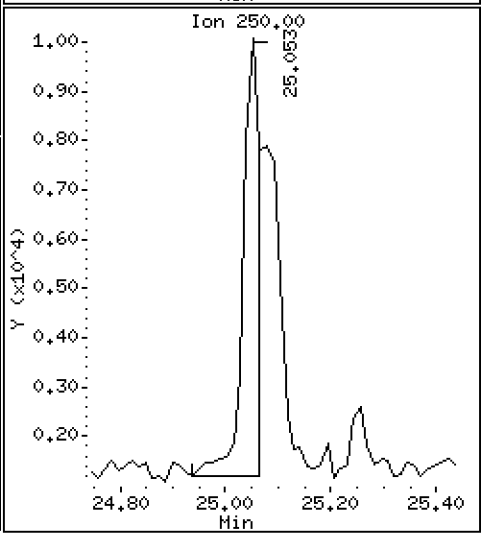


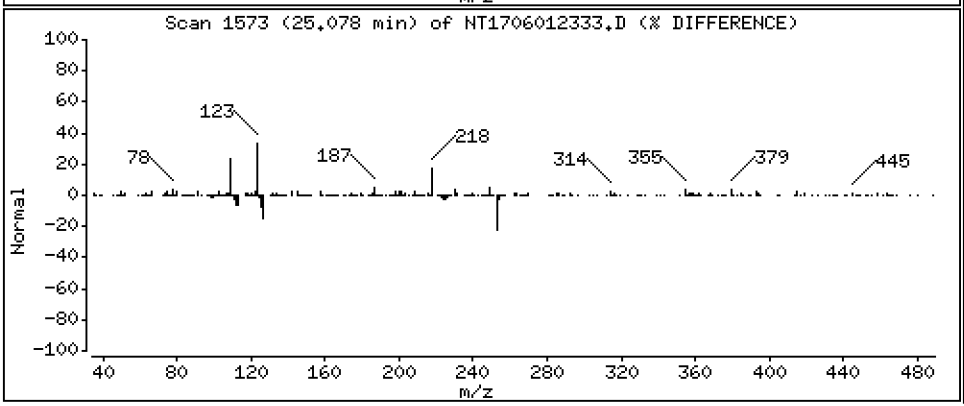












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

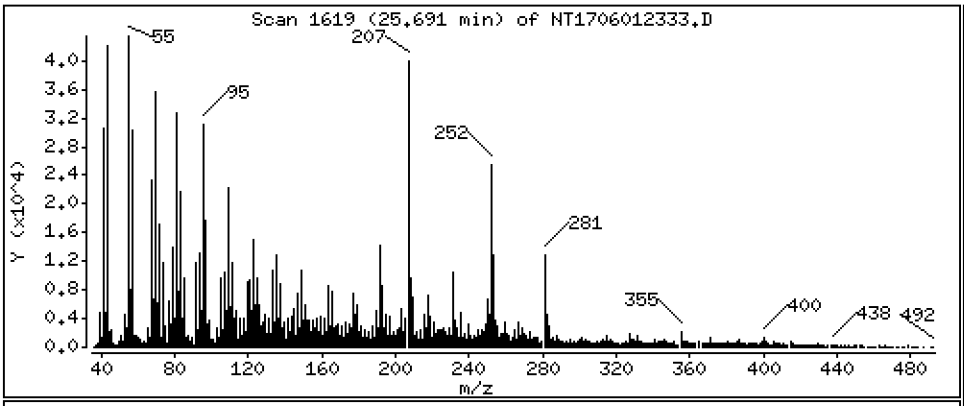
Operator: VTS

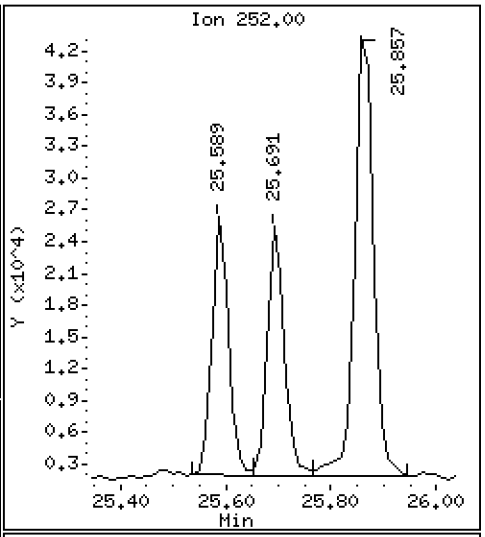
Column phase: ZB-5msi

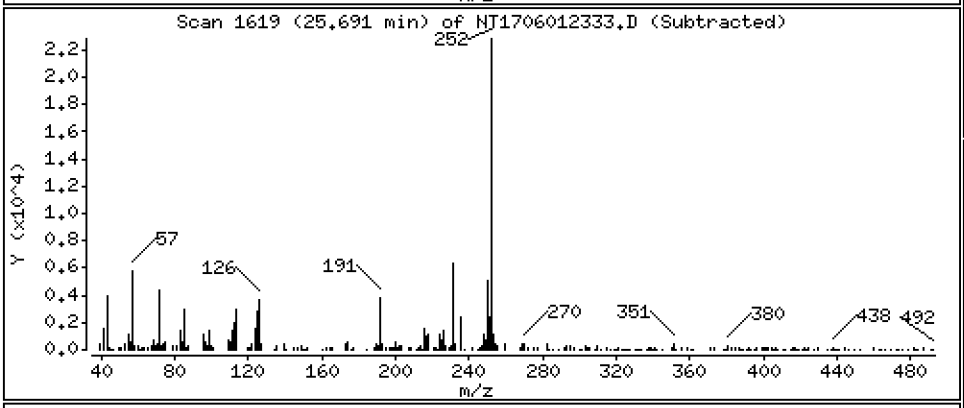
Column diameter: 0.25

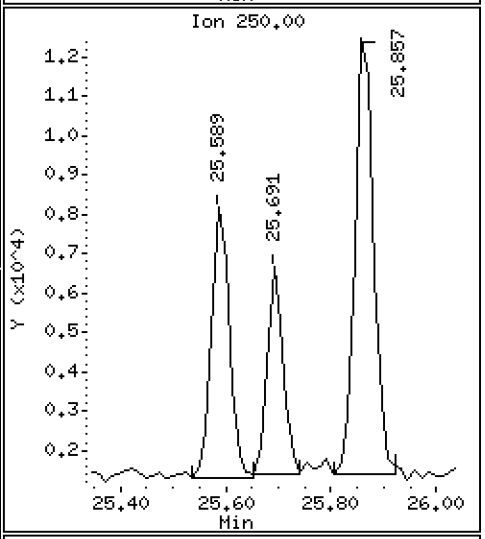
76 Benzo(a)pyrene

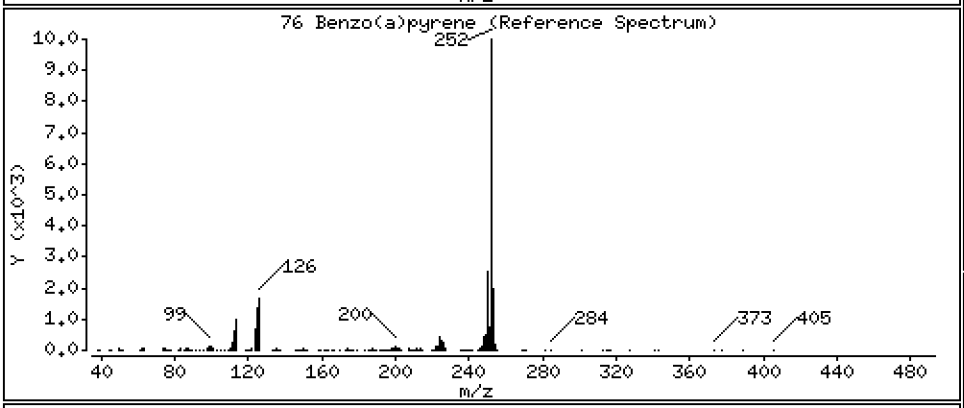
Concentration: 0.3274 ug/mL

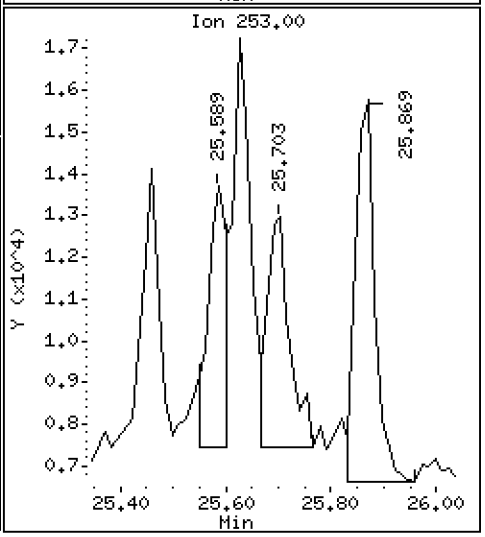


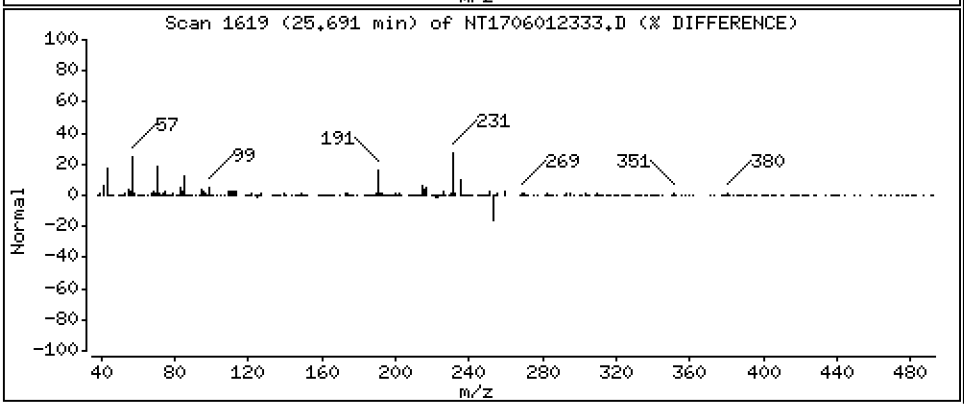












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

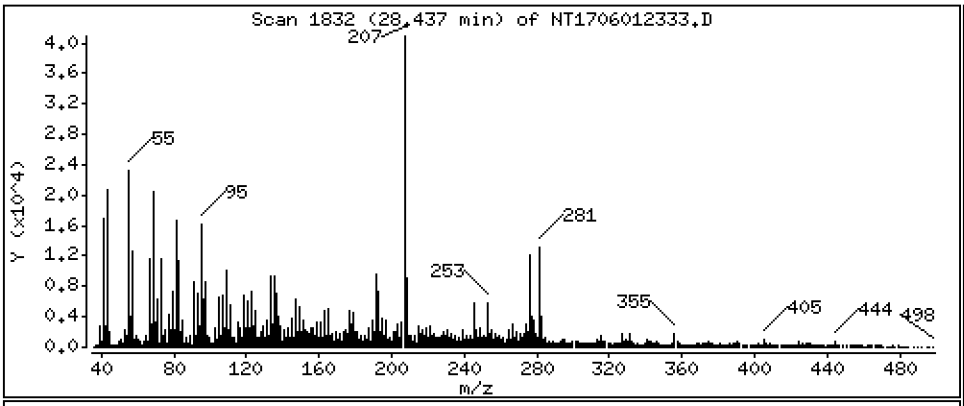
Operator: VTS

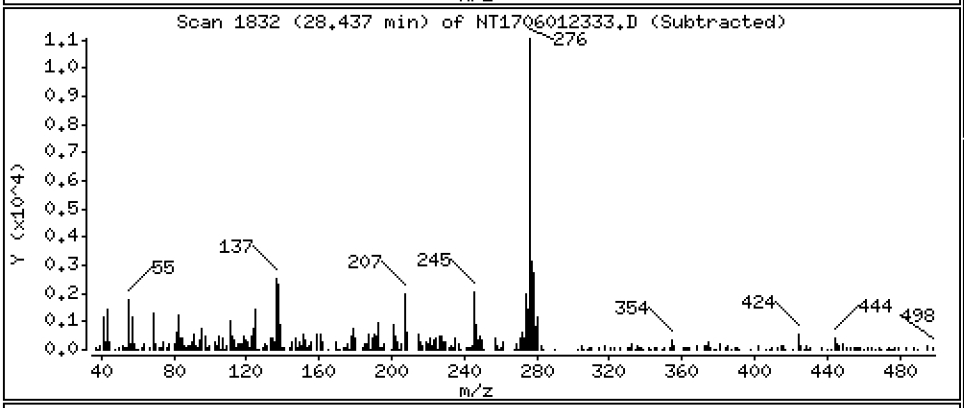
Column phase: ZB-5msi

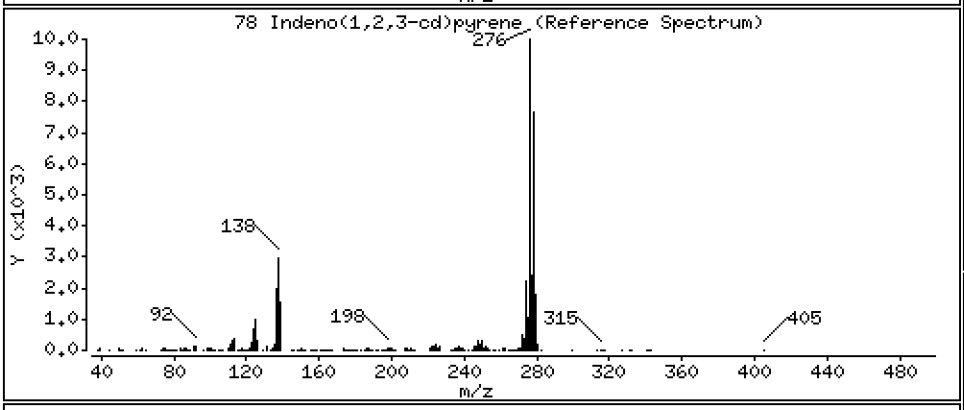
Column diameter: 0.25

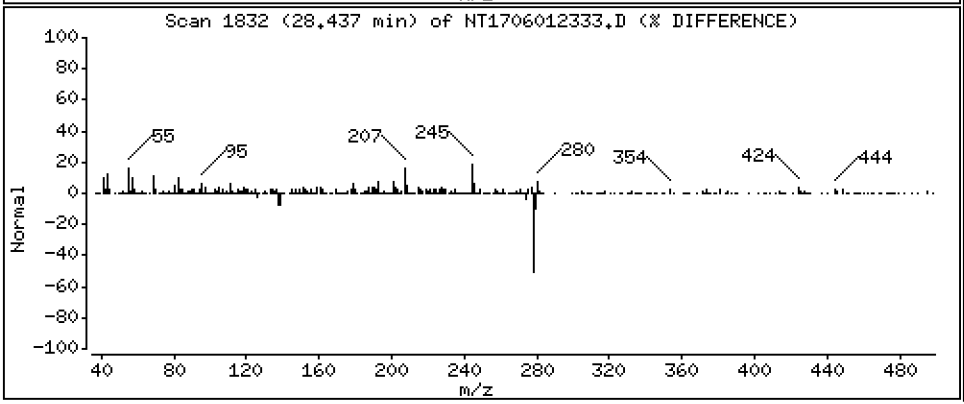
78 Indeno(1,2,3-cd)pyrene

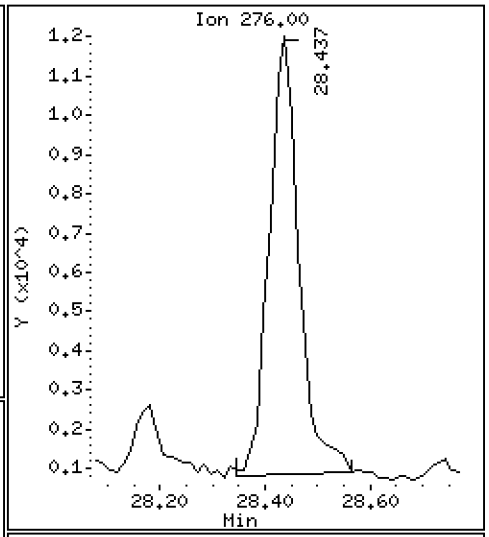
Concentration: 0.2235 ug/mL

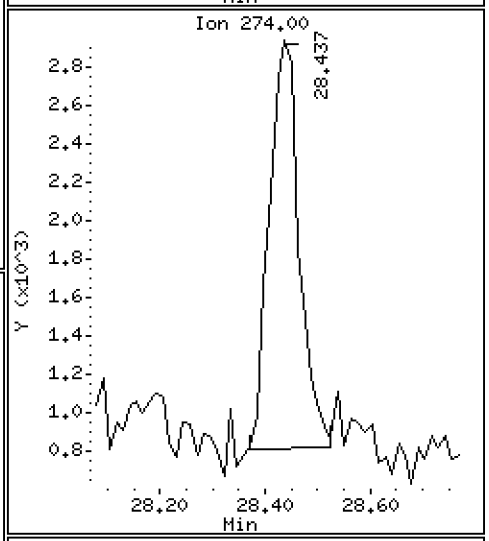


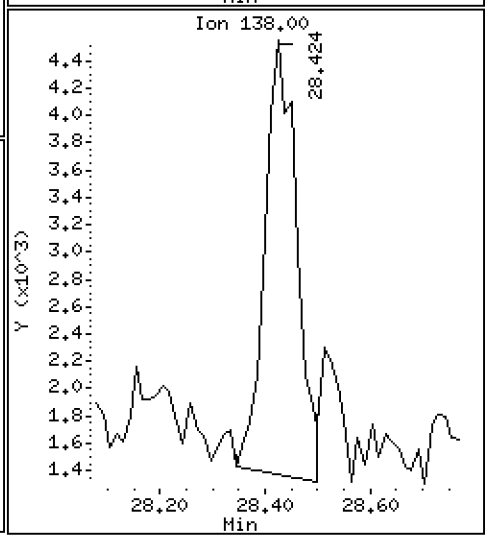












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

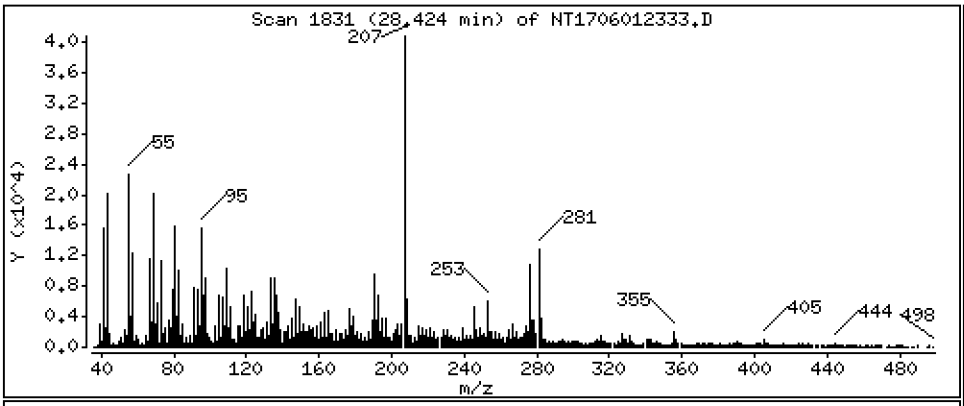
Operator: VTS

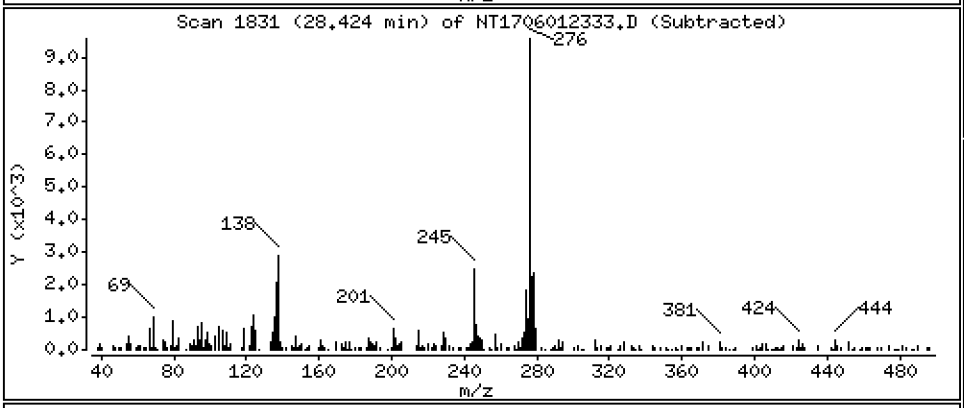
Column phase: ZB-5msi

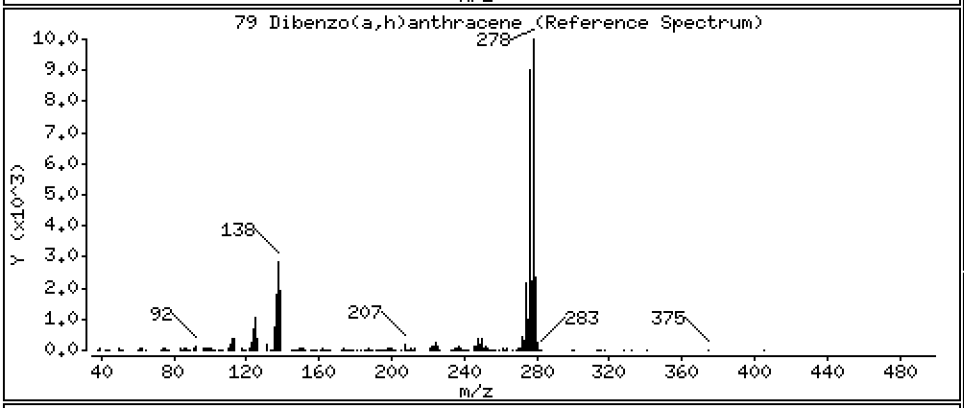
Column diameter: 0.25

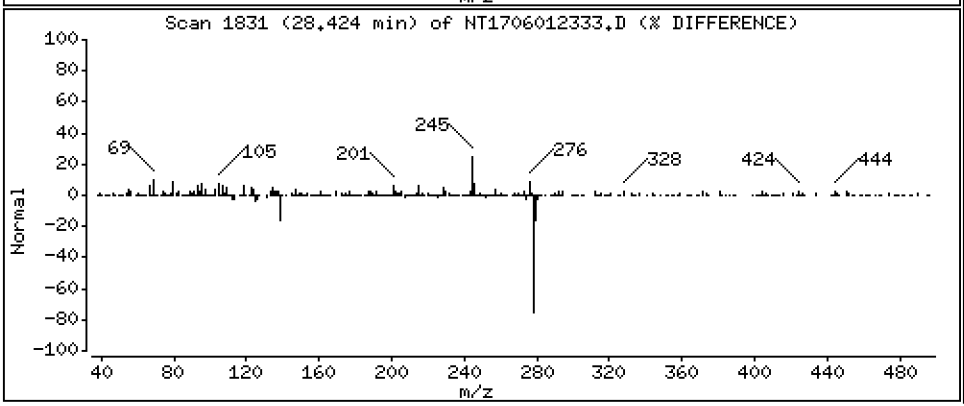
79 Dibenzo(a,h)anthracene

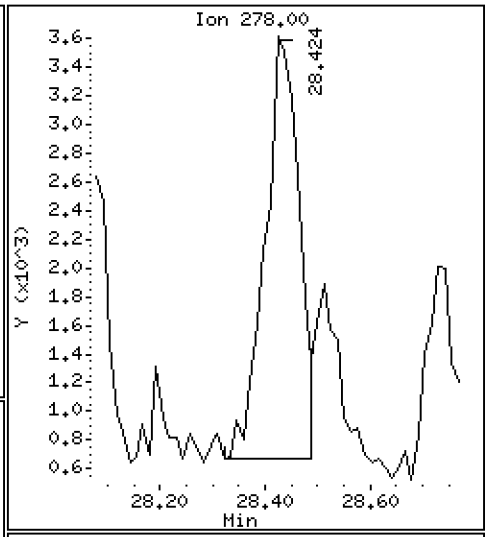
Concentration: 0.08048 ug/mL

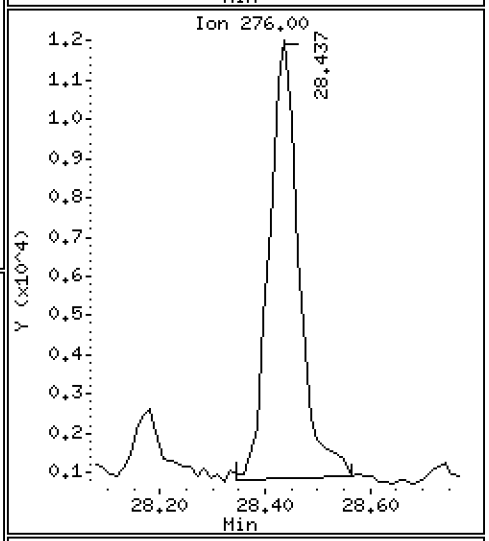


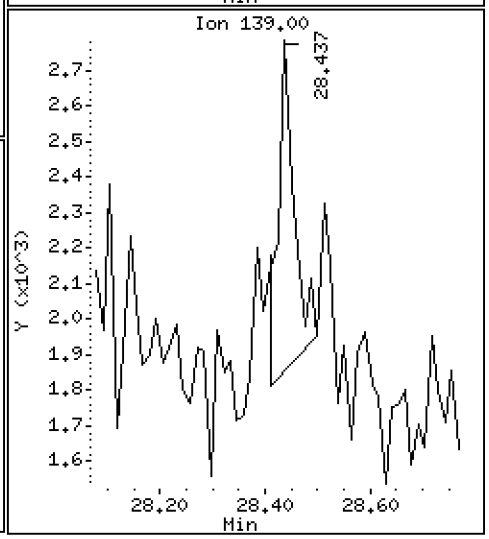












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

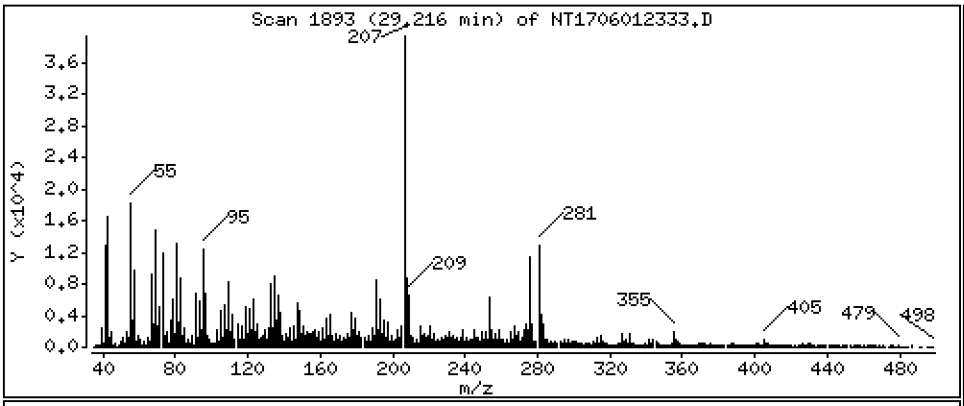
Operator: VTS

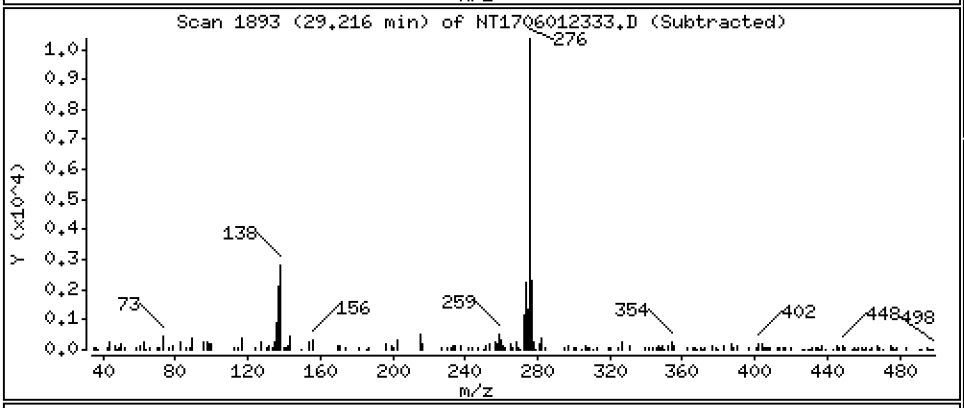
Column phase: ZB-5msi

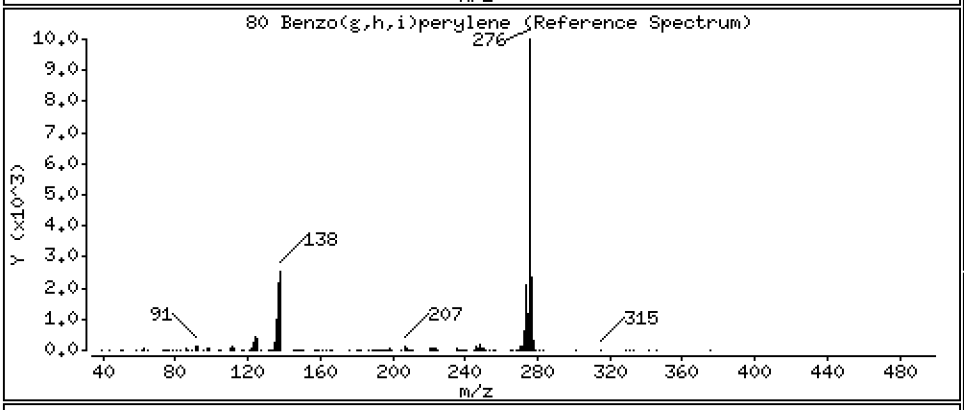
Column diameter: 0.25

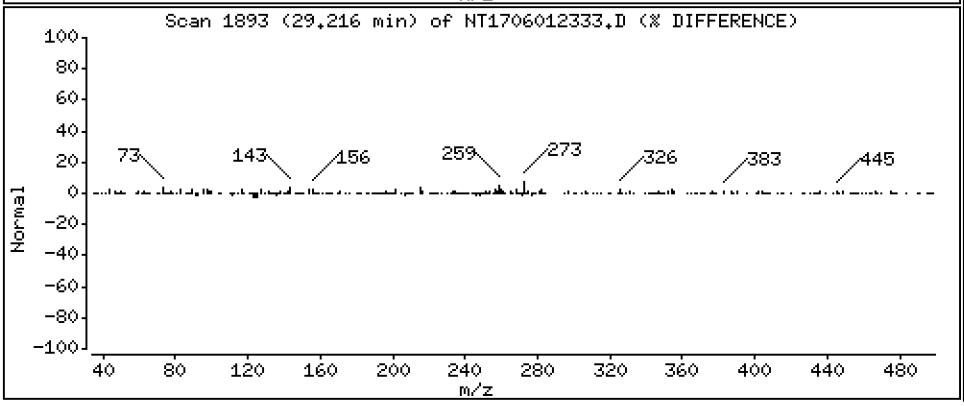
80 Benzo(g,h,i)perylene

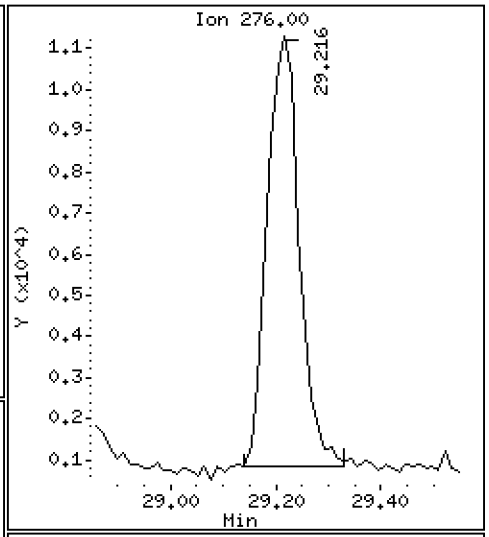
Concentration: 0.2754 ug/mL

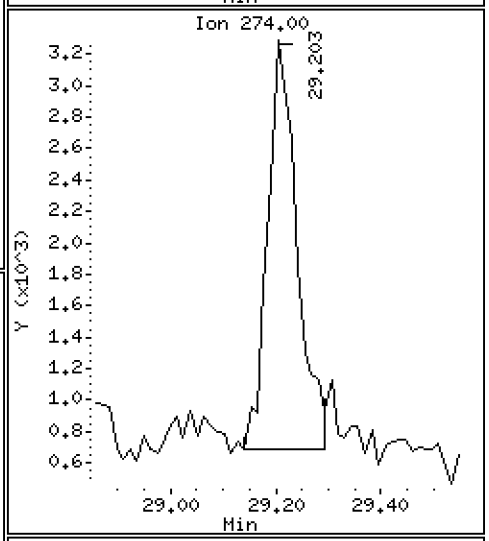


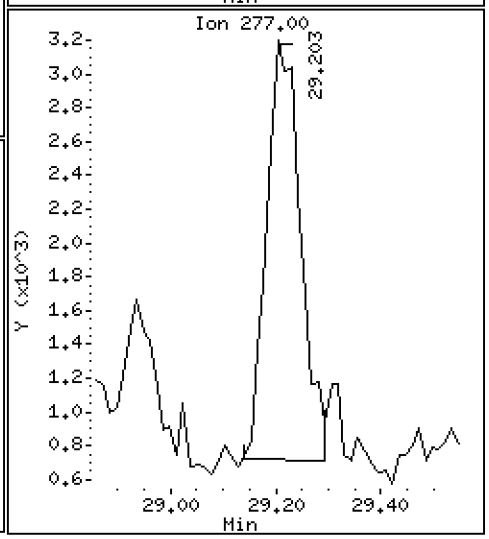












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

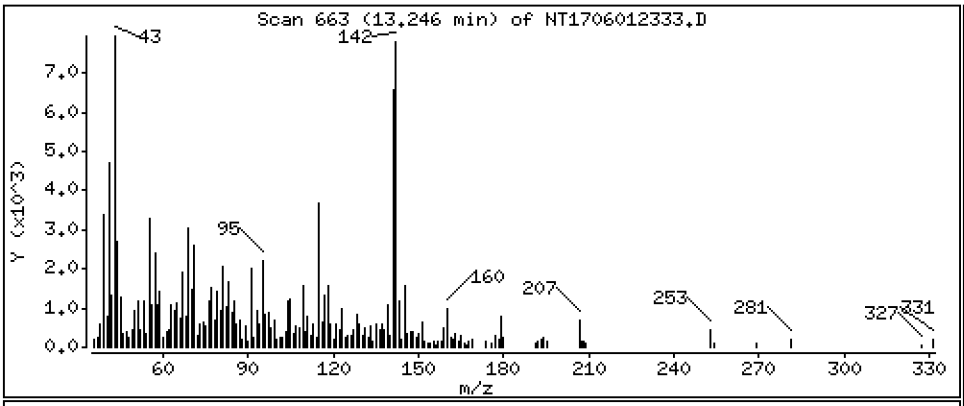
Operator: VTS

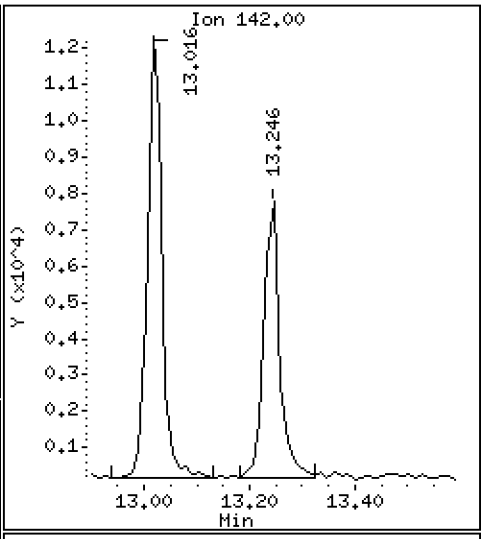
Column phase: ZB-5msi

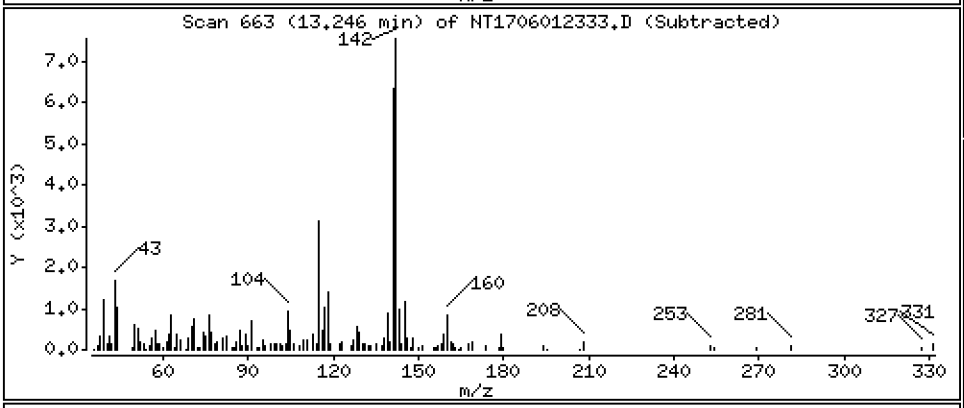
Column diameter: 0.25

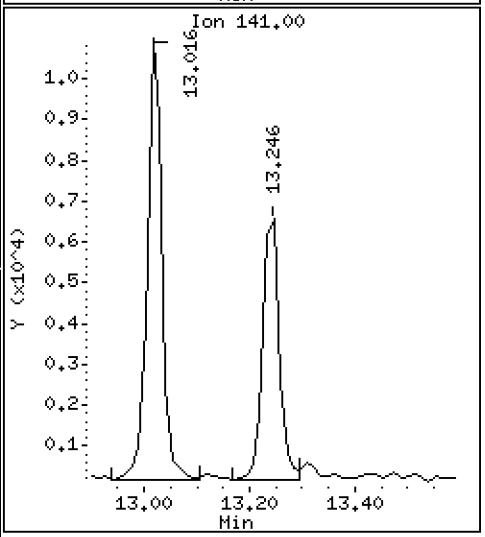
105 1-methylnaphthalene

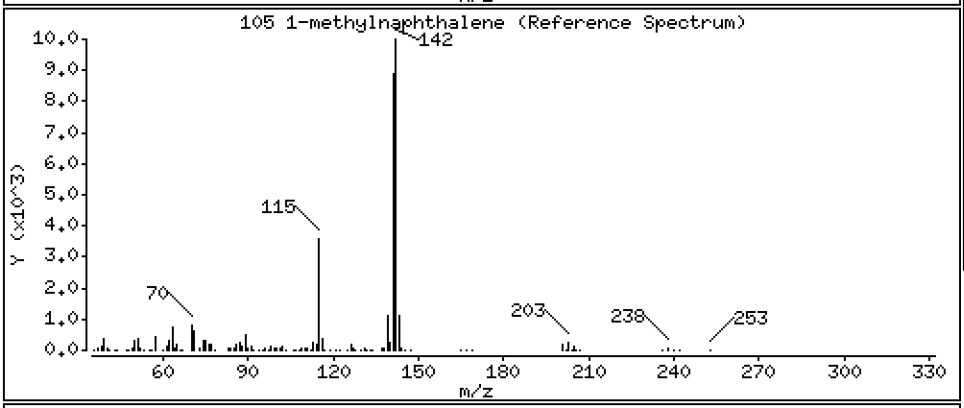
Concentration: 0.09171 ug/mL

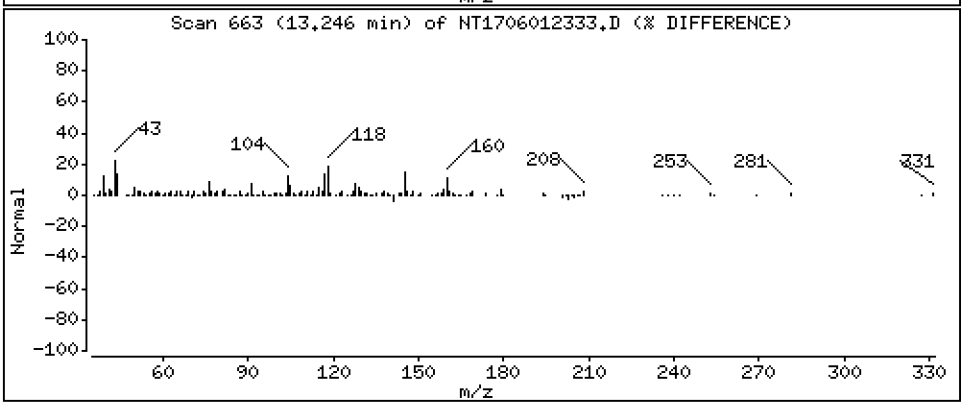












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

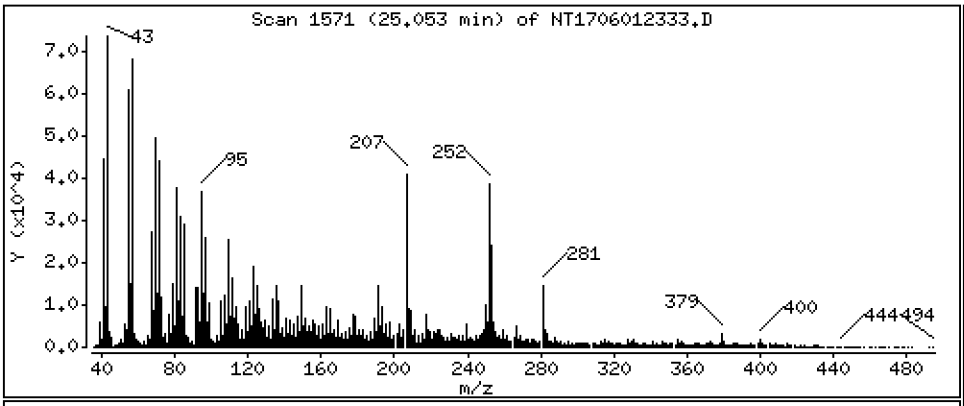
Operator: VTS

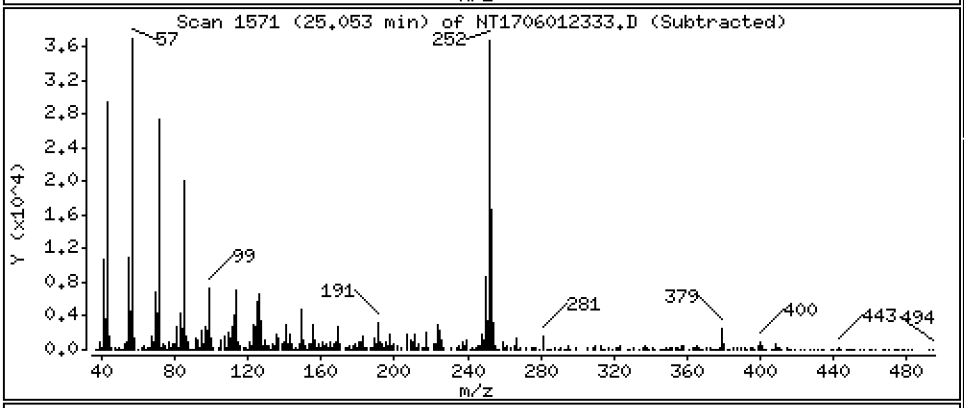
Column phase: ZB-5msi

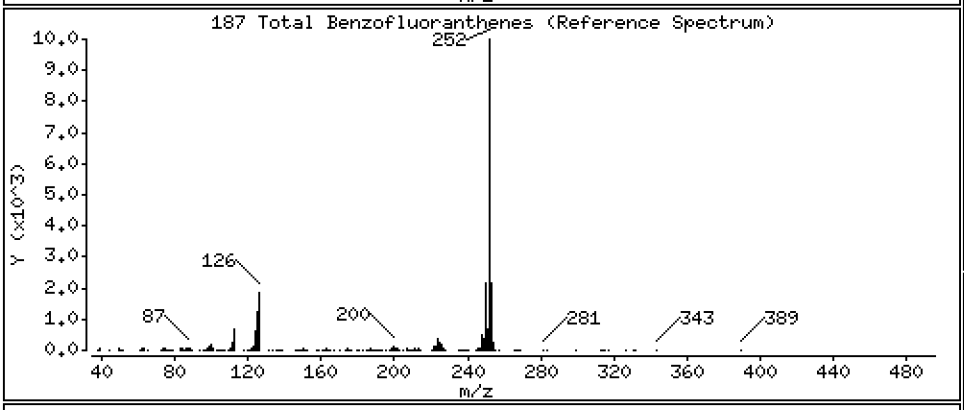
Column diameter: 0.25

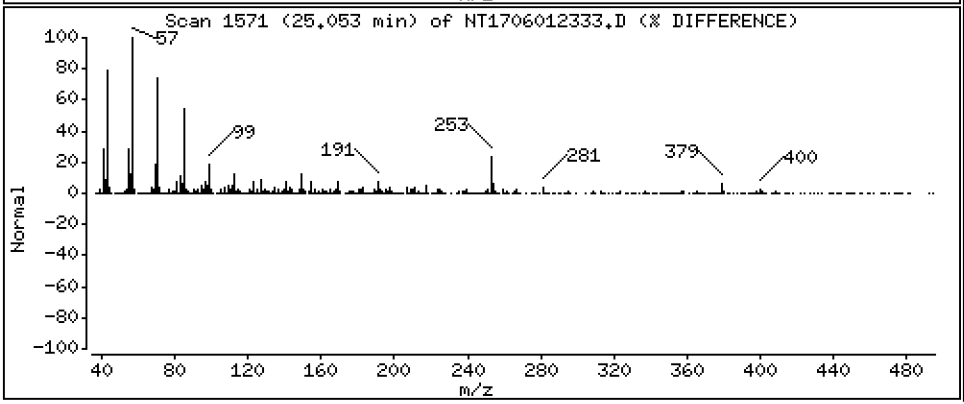
187 Total Benzofluoranthenes

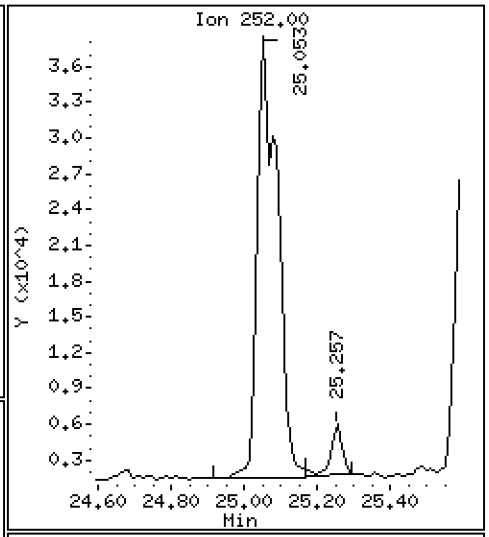
Concentration: 0.7521 ug/mL

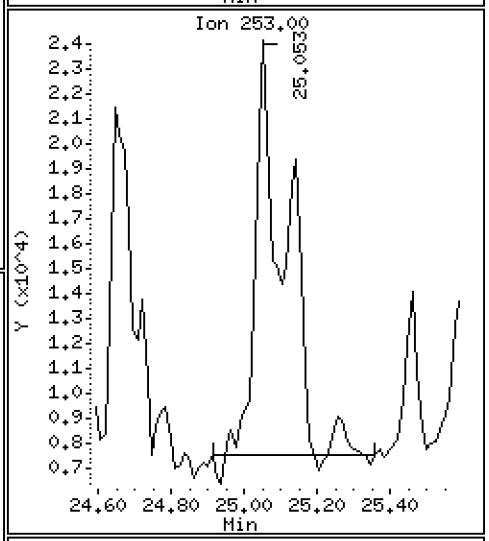


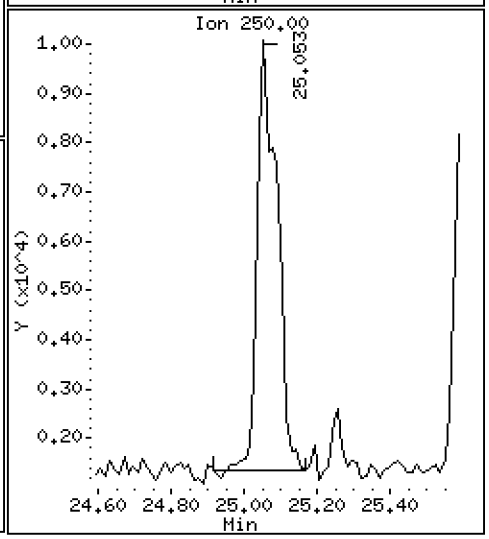












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012333.D
Lab Smp Id: 23E0009-01
Inj Date : 02-JUN-2023 07:54
Operator : VTS Inst ID: nt17.i
Smp Info : 23E0009-01
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 28
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.969	6.944	(0.763)	190516	2.27409	2.274
$	2 Phenol-d5	99	8.524	8.511	(0.933)	327841	2.95705	2.957
	3 Phenol	94	8.537	8.536	(0.934)	36320	0.30929	0.3093
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	335118	3.77363	3.774
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	255925	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	2548	0.02574	0.02574
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	154413	2.47382	2.474
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.941	9.902	(1.088)	4431	0.05042	0.05042
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	289369	2.71679	2.717
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.077	11.192	(0.955)	17318	0.27079	0.2708(M)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	935857	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	38302	0.14883	0.1488
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.016	13.016	(1.122)	24170	0.13117	0.1312
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.794	13.793	(0.908)	671920	3.40153	3.402
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.184	15.184	(1.000)	501417	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.247	15.247	(1.004)	8355	0.05252	0.05252
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.579	15.579	(1.026)	14950	0.06733	0.06733
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.127	16.140	(1.062)	11421	0.06788	0.06788
	49	Fluorene	166	16.280	16.280	(1.072)	12709	0.06021	0.06021
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	146698	6.70723	6.707
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	17.948	17.935	(0.986)	1763	0.06725	0.06725
*	59	Phenanthrene-d10	188	18.203	18.203	(1.000)	904715	4.00000	
	60	Phenanthrene	178	18.241	18.241	(1.002)	114145	0.43240	0.4324
	61	Anthracene	178	18.343	18.343	(1.008)	26470	0.10680	0.1068
	62	Carbazole	167	18.688	18.688	(1.027)	9857	0.06577	0.06577
	63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	14684	0.04907	0.04907
	64	Fluoranthene	202	20.639	20.613	(0.889)	182352	0.79556	0.7956(M)
	65	Pyrene	202	21.047	21.034	(0.907)	222665	0.95828	0.9583
$	66	Terphenyl-d14	244	21.315	21.315	(0.918)	742294	4.49384	4.494
	67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	3557	0.03420	0.03420
	68	Benzo(a)anthracene	228	23.190	23.190	(0.999)	61760	0.34228	0.3423
*	69	Chrysene-d12	240	23.215	23.215	(1.000)	490011	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.254	23.254	(1.002)	77103	0.45411	0.4541
	72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	29060	0.19820	0.1982
*	134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1013383	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.052	25.052	(0.971)	75028	0.35201	0.3520
	75	Benzo(k)fluoranthene	252	25.078	25.091	(0.972)	80343	0.39898	0.3990(M)
	76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	54965	0.32737	0.3274
*	77	Perylene-d12	264	25.805	25.805	(1.000)	537585	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.436	28.423	(1.102)	43533	0.22353	0.2235
	79	Dibenzo(a,h)anthracene	278	28.423	28.423	(1.101)	13154	0.08048	0.08048
	80	Benzo(g,h,i)perylene	276	29.216	29.203	(1.132)	44275	0.27544	0.2754
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.245	13.245	(1.142)	15677	0.09171	0.09171
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.052	25.091	(0.971)	143897	0.75209	0.7521
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012333.D
Lab Smp Id: 23E0009-01
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	255925	-0.42
27 Naphthalene-d8	932905	466453	1865810	935857	0.32
42 Acenaphthene-d10	509574	254787	1019148	501417	-1.60
59 Phenanthrene-d10	912749	456375	1825498	904715	-0.88
69 Chrysene-d12	578011	289006	1156022	490011	-15.22
134 Di-n-octylphthala	1181490	590745	2362980	1013383	-14.23
77 Perylene-d12	513683	256842	1027366	537585	4.65

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012333.D

Lab ID: 23E0009-01
nt17.i, ABN.m, 02-JUN-2023 07:54

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.955	0.965	-0.0099	Benzoic acid

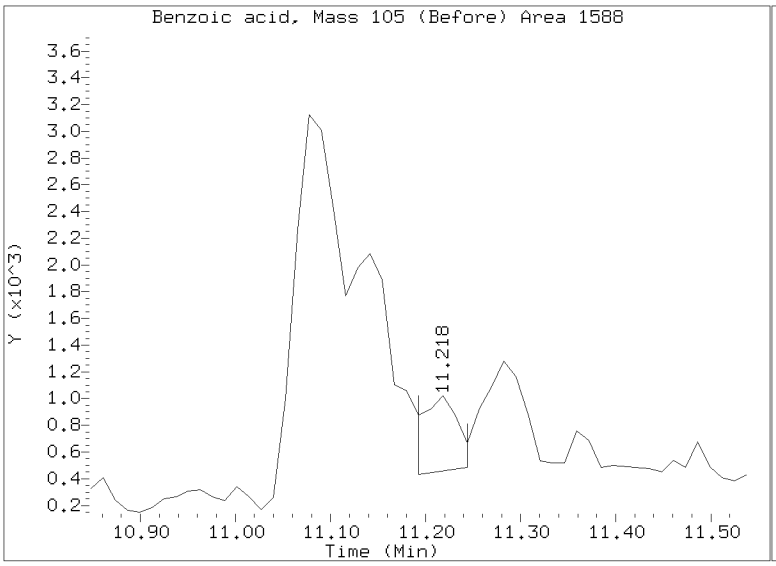
RRT check based on Ccal File: NT1706012320.D

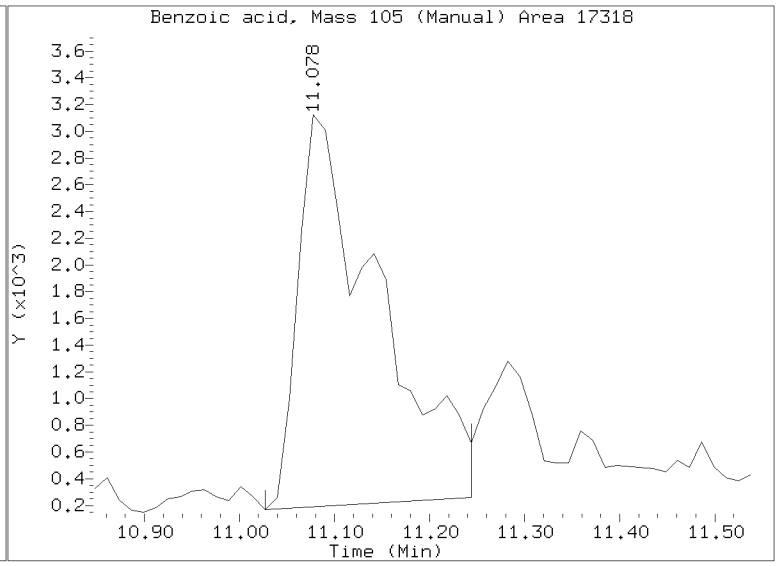
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

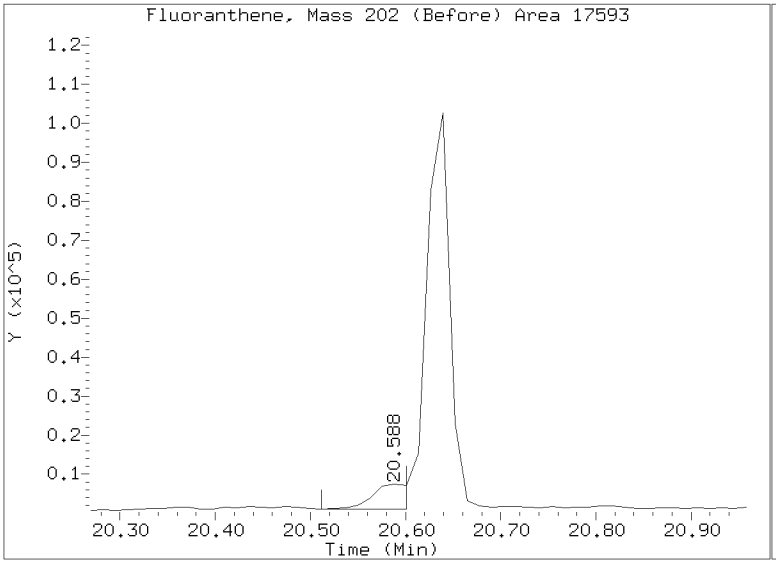
* Only compounds listed in the work order have been verified by the analyst *

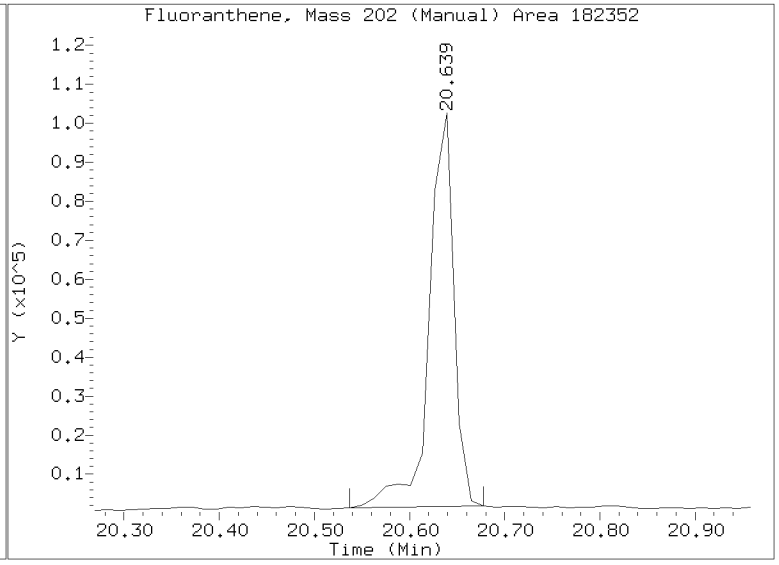
Quant Ion Manual Peak Adjustment Report

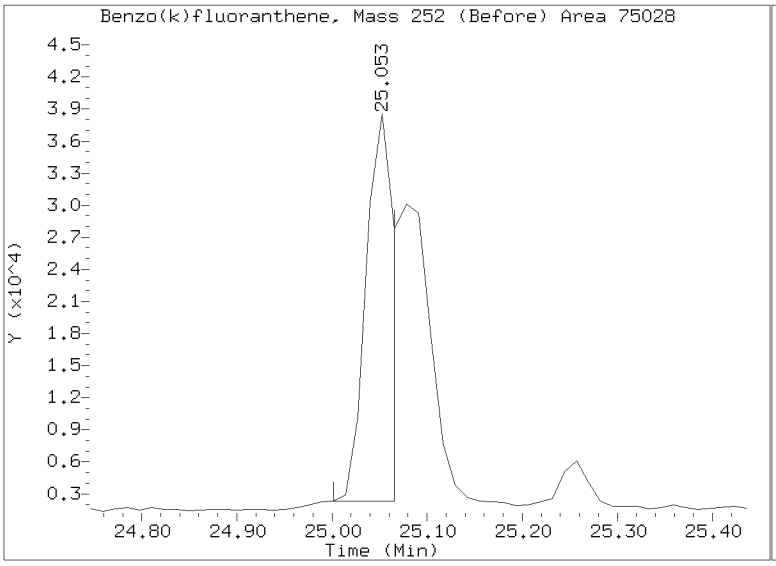
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012333.D
Injection Date: 02-JUN-2023 07:54
Lab ID:23E0009-01 Client ID:
Report Date: 06/03/2023 10:35

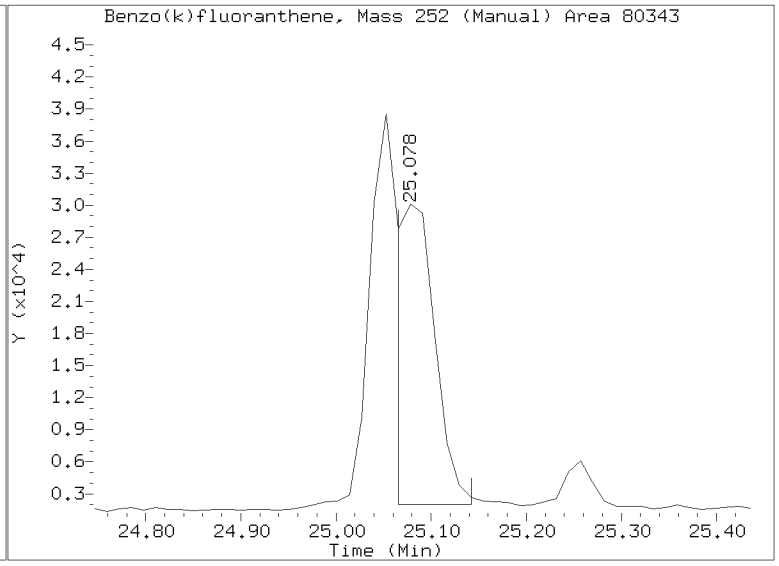












LDW23-SS1805

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-03 A	SDG:	23E0009
Sampled:	04/28/23 16:15	Prepared:	05/05/23 11:23	File ID:	NT1706012334.D
% Solids:	50.79	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 08:32
Batch:	BLE0148	Sequence:	SLF0008	Initial/Final:	19.69 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00065
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	510		4.4	20.0
106-44-5	4-Methylphenol	1	46.0		7.4	20.0
91-20-3	Naphthalene	1	301		4.2	20.0
91-57-6	2-Methylnaphthalene	1	39.7		4.5	20.0
208-96-8	Acenaphthylene	1	25.2		6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	41.2		5.2	20.0
132-64-9	Dibenzofuran	1	17.3	J	14.1	20.0
86-73-7	Fluorene	1	31.9		14.6	20.0
85-01-8	Phenanthrene	1	191		8.7	20.0
120-12-7	Anthracene	1	121		7.2	20.0
206-44-0	Fluoranthene	1	439		6.1	20.0
129-00-0	Pyrene	1	442		5.7	20.0
85-68-7	Butylbenzylphthalate	1	9.5	J	9.4	20.0
56-55-3	Benzo(a)anthracene	1	330		6.0	20.0
218-01-9	Chrysene	1	541		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	58.3		5.5	50.0
	Benzofluoranthenes, Total	1	691		10.0	40.0
50-32-8	Benzo(a)pyrene	1	334		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	204		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	75.7		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	214		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.96	187	24.9	27 - 120	*
Phenol-d5	749.96	276	36.8	29 - 120	
2-Chlorophenol-d4	749.96	340	45.4	31 - 120	
1,2-Dichlorobenzene-d4	499.97	232	46.3	32 - 120	
Nitrobenzene-d5	499.97	259	51.9	30 - 120	
2-Fluorobiphenyl	499.97	328	65.6	35 - 120	

LDW23-SS1805

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-03 A	SDG:	23E0009
Sampled:	04/28/23 16:15	Prepared:	05/05/23 11:23	File ID:	NT1706012334.D
% Solids:	50.79	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 08:32
Batch:	BLE0148	Sequence:	SLF0008	Initial/Final:	19.69 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00065
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.96	646	86.1	24 - 134	
p-Terphenyl-d14	499.97	405	81.0	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Page 1

Date : 02-JUN-2023 08:32

Client ID:

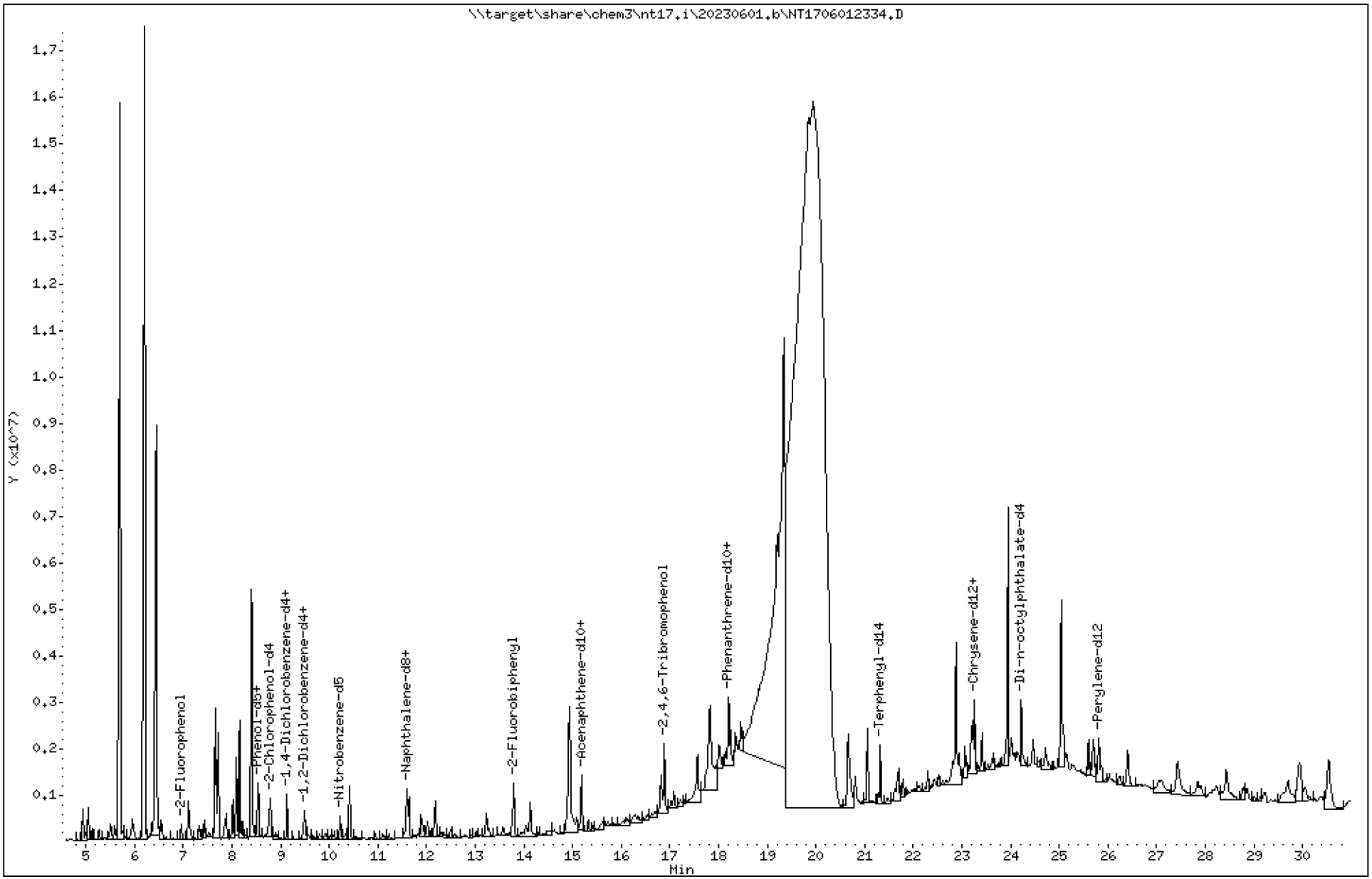
Instrument: nt17.i

Sample Info: 23E0009-03

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

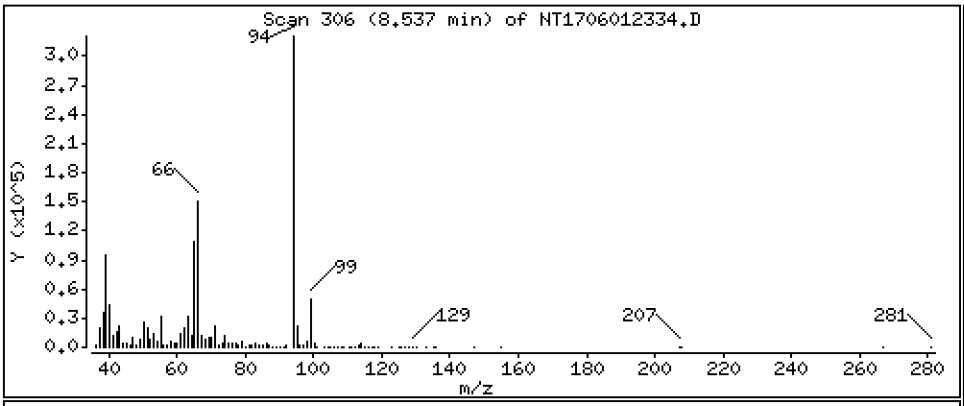
Operator: VTS

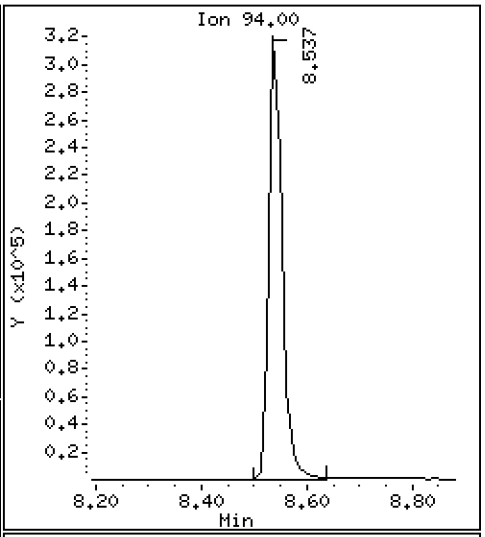
Column phase: ZB-5msi

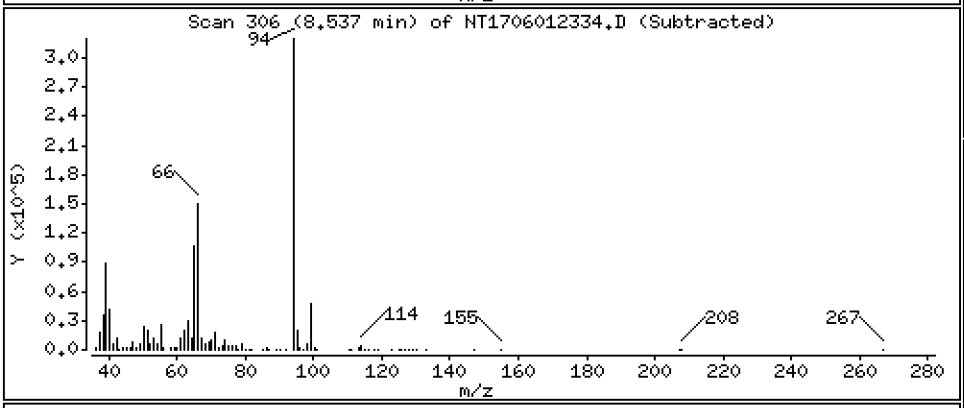
Column diameter: 0.25

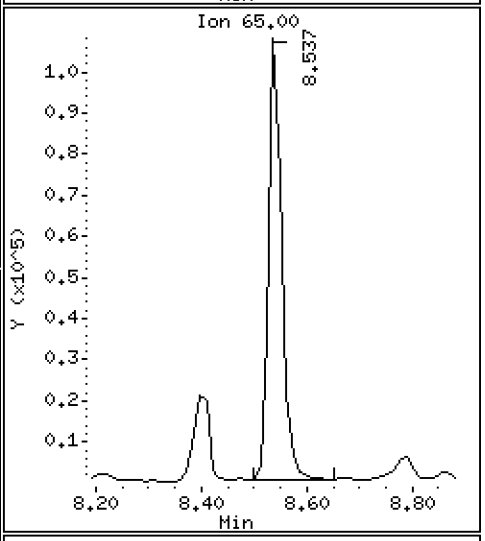
3 Phenol

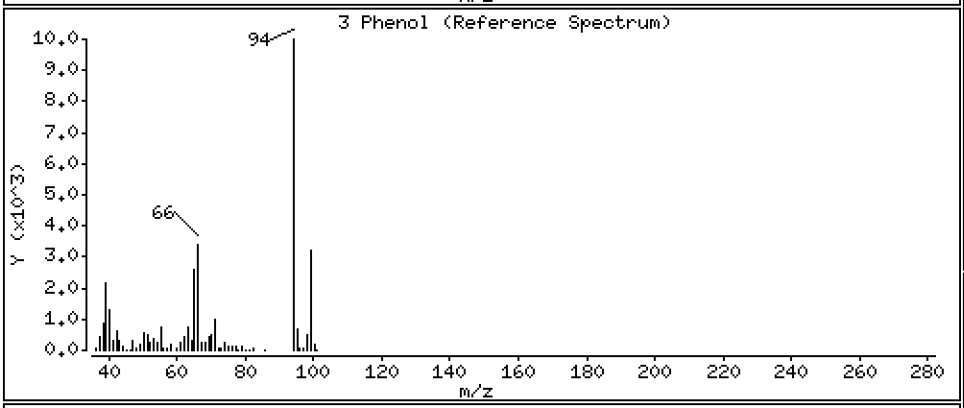
Concentration: 5.104 ug/mL

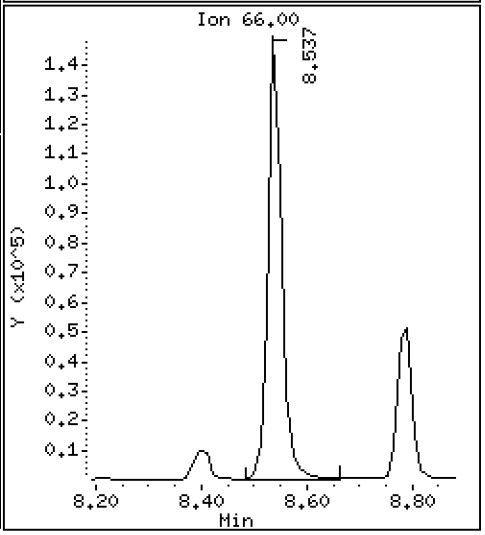


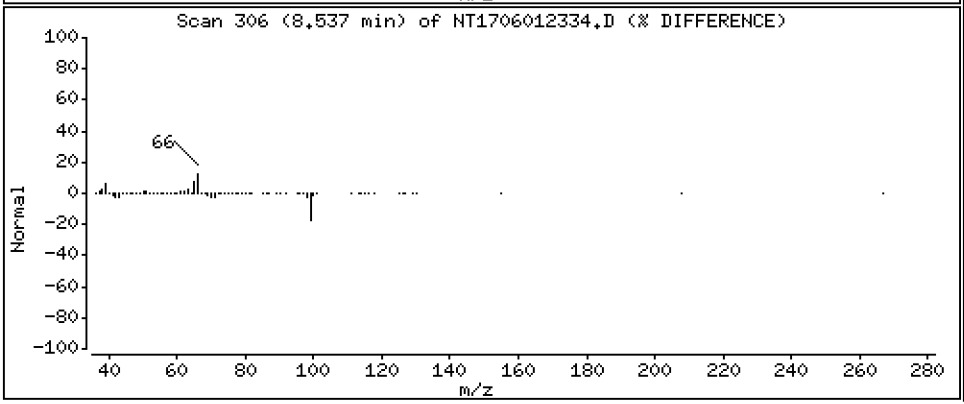












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

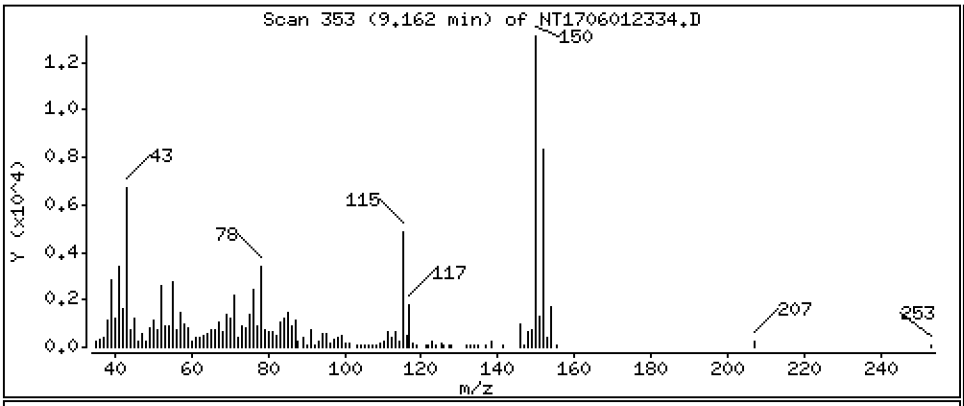
Operator: VTS

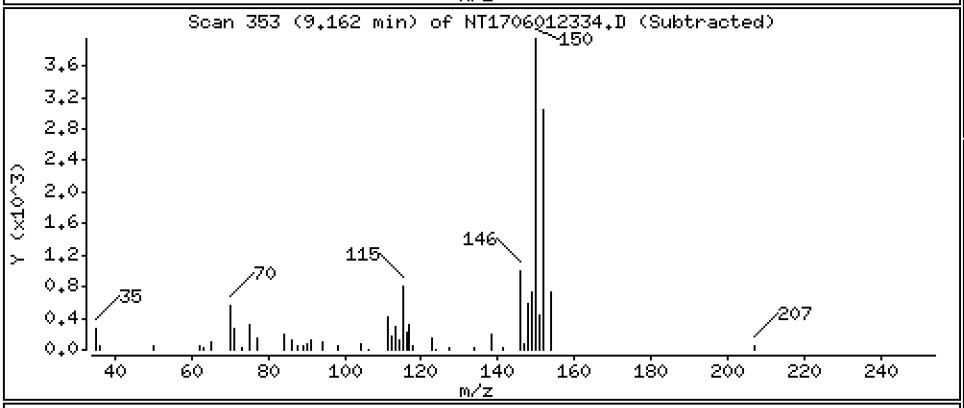
Column phase: ZB-5msi

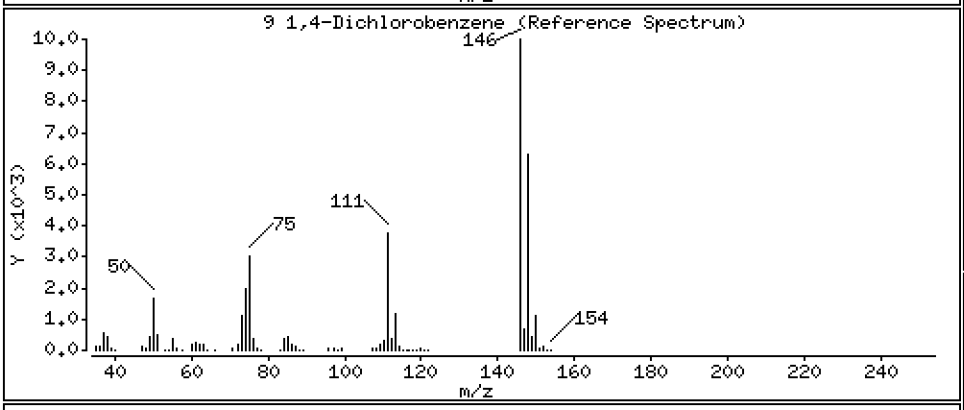
Column diameter: 0.25

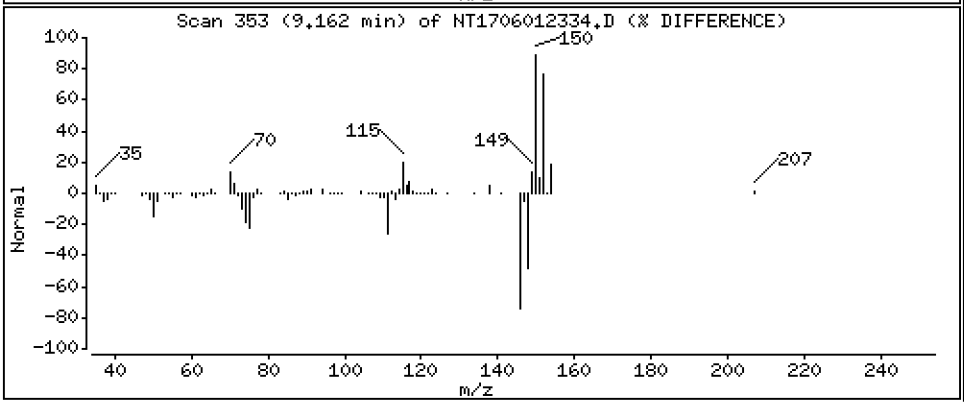
9 1,4-Dichlorobenzene

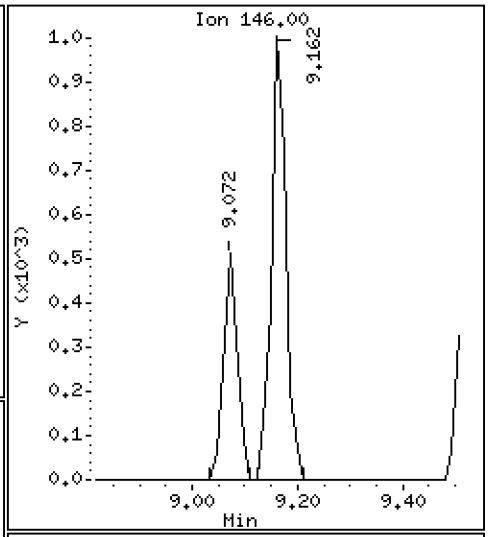
Concentration: 0.02030 ug/mL

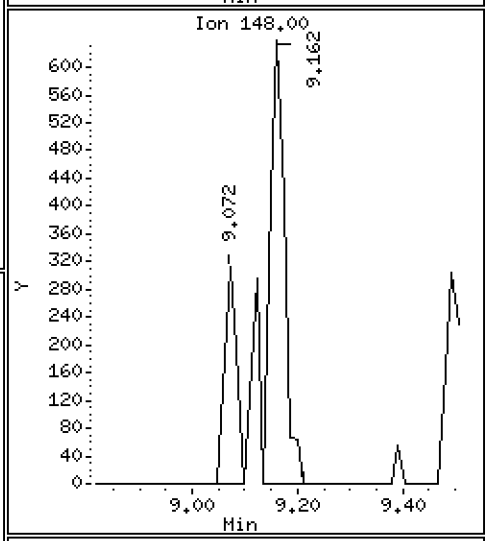


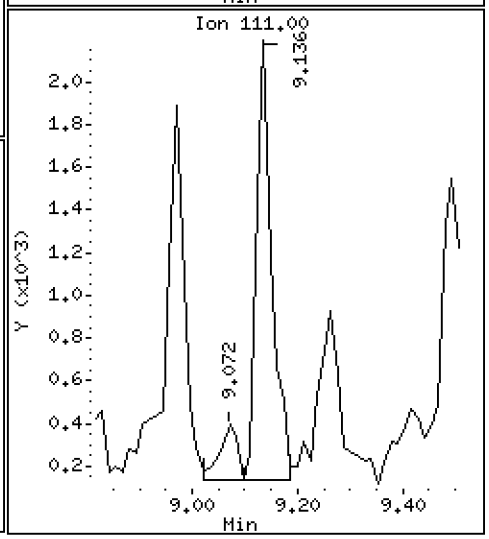












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

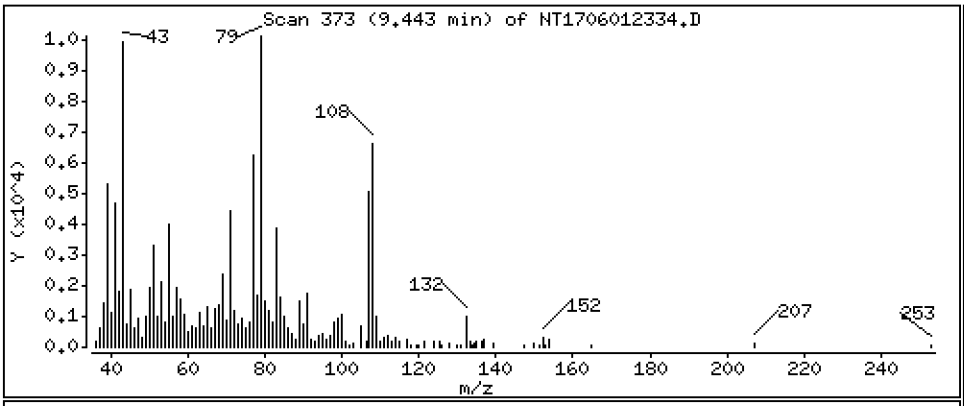
Operator: VTS

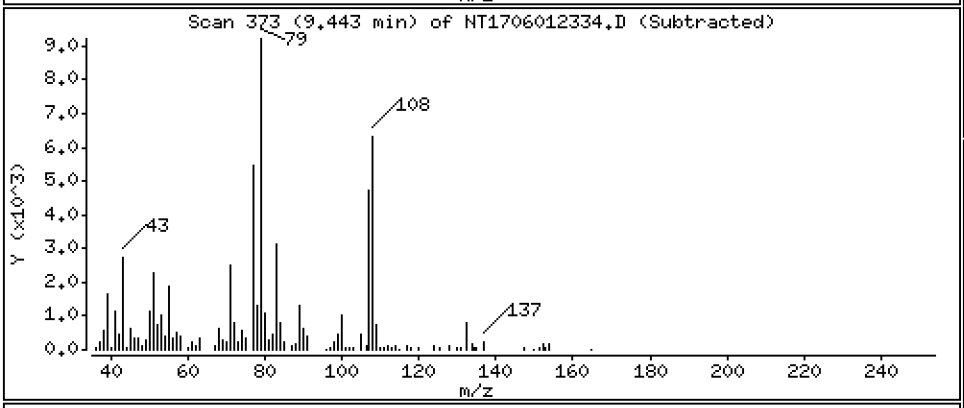
Column phase: ZB-5msi

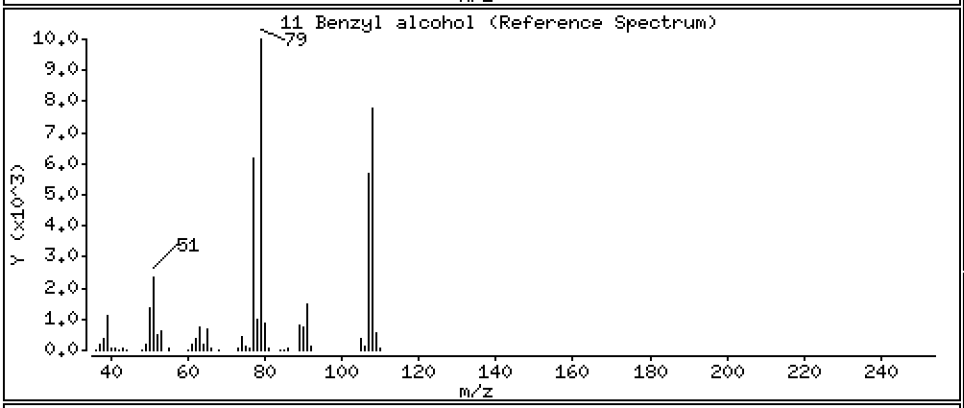
Column diameter: 0.25

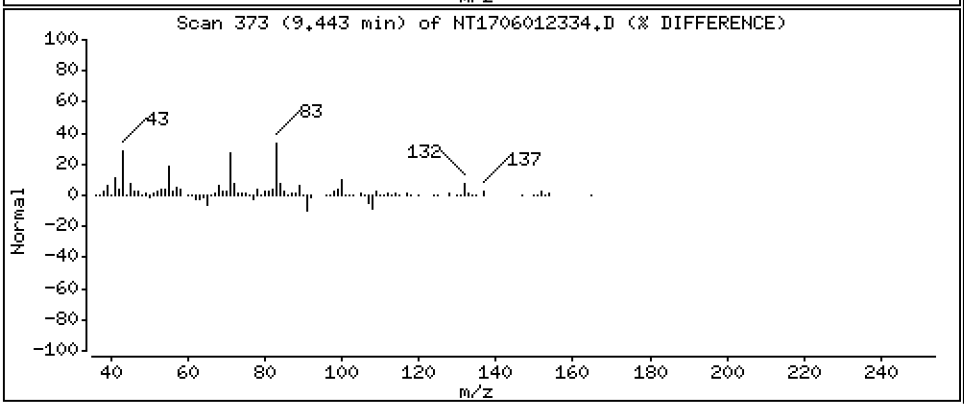
11 Benzyl alcohol

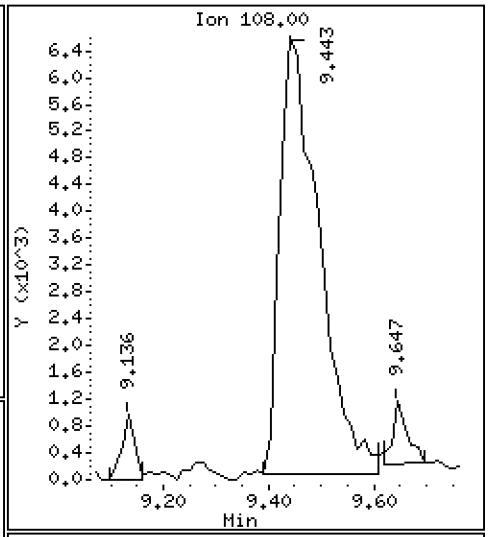
Concentration: 0.6460 ug/mL

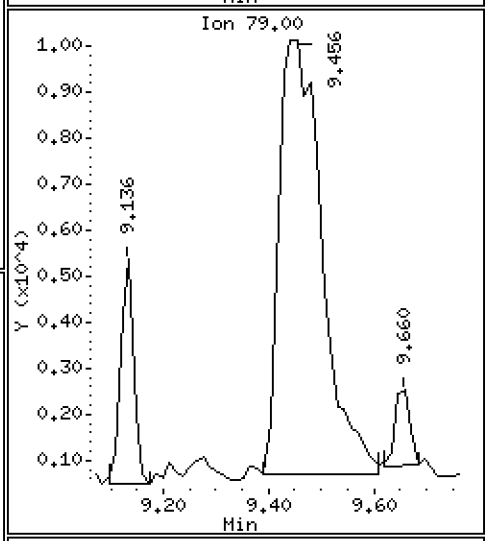


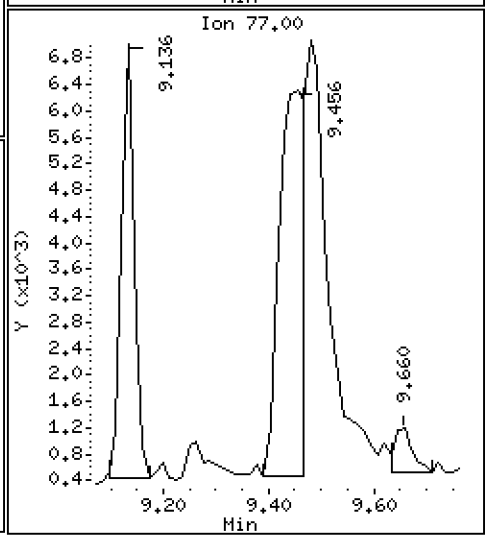












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

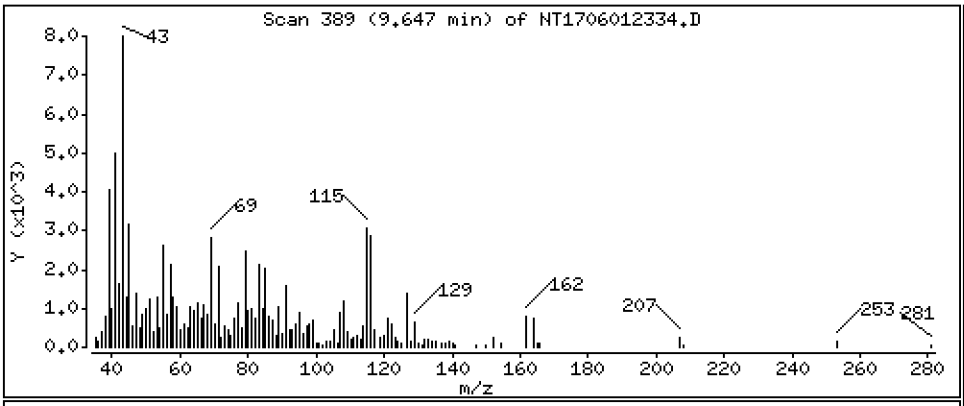
Operator: VTS

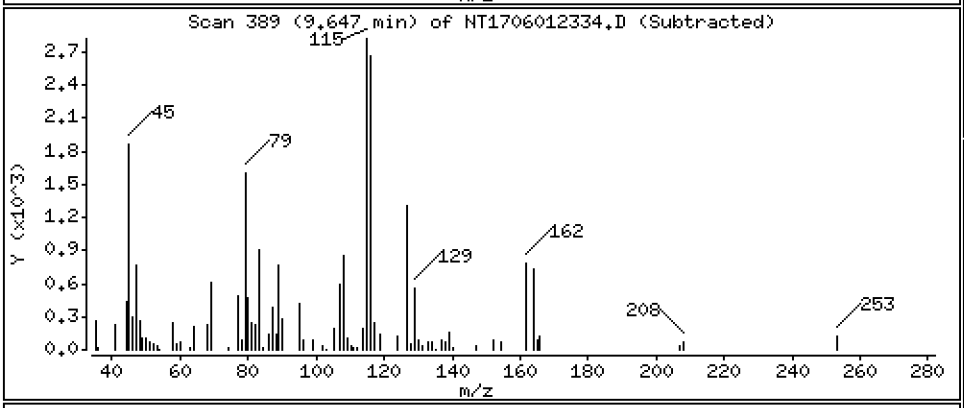
Column phase: ZB-5msi

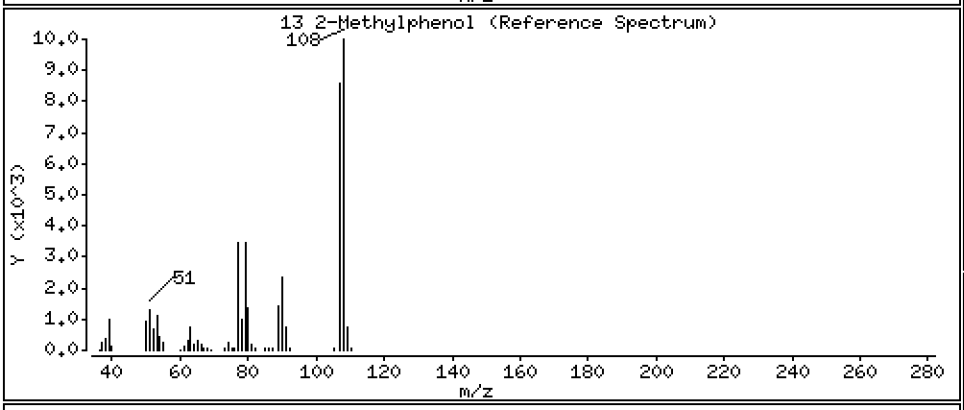
Column diameter: 0.25

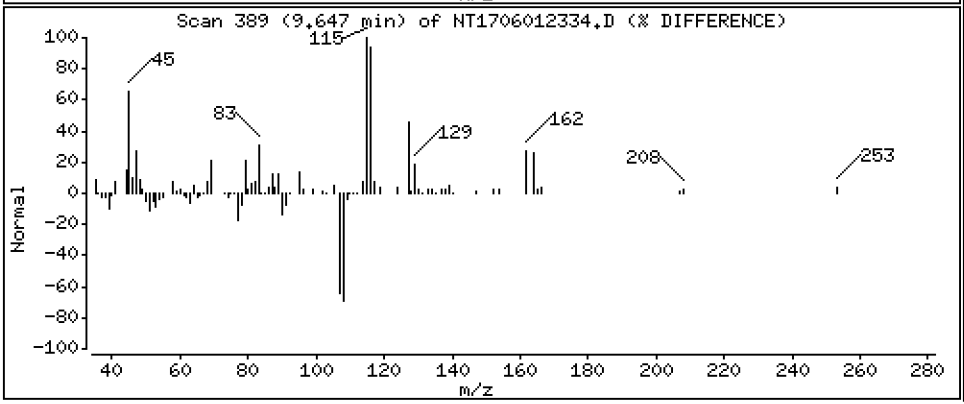
13 2-Methylphenol

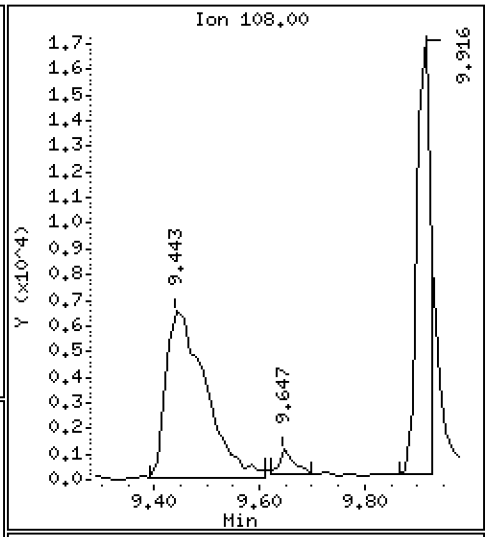
Concentration: 0.02295 ug/mL

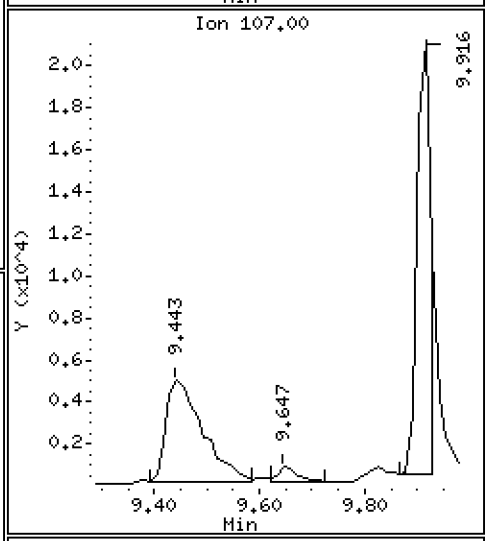


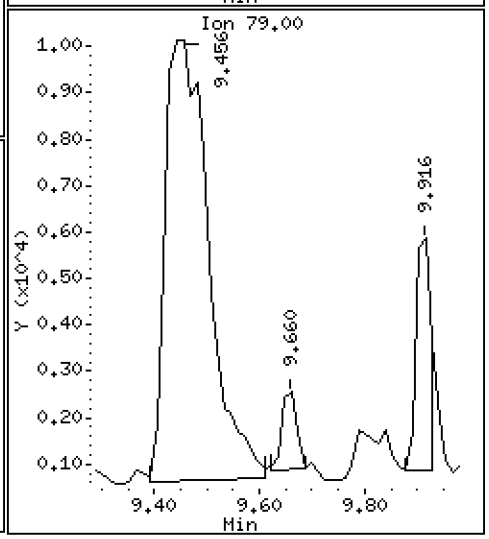












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

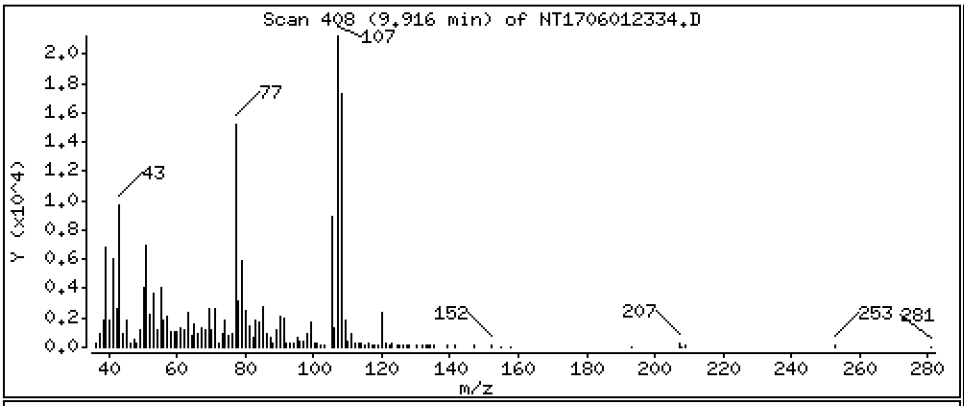
Operator: VTS

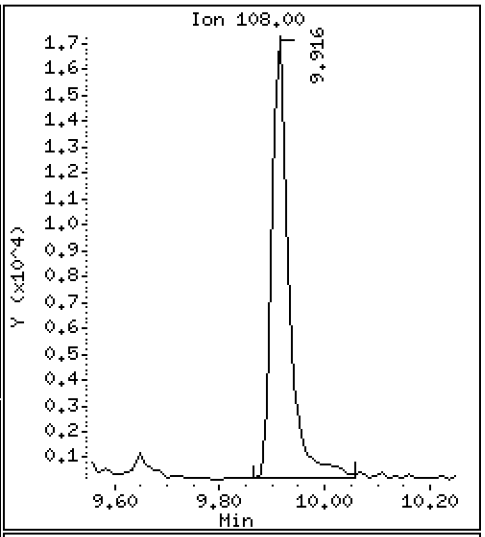
Column phase: ZB-5msi

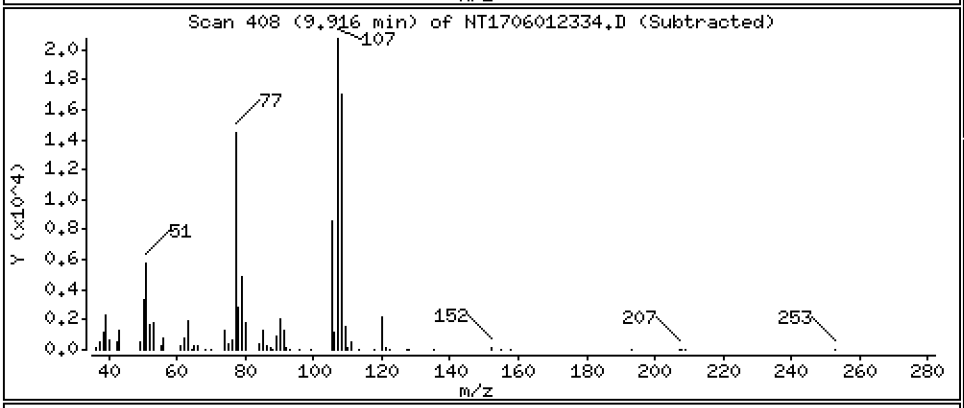
Column diameter: 0.25

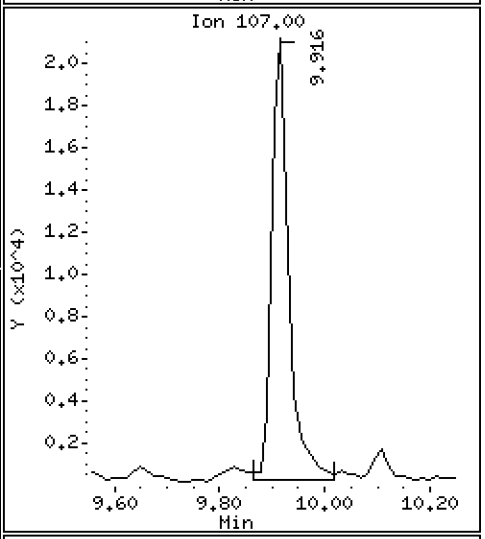
15 4-Methylphenol

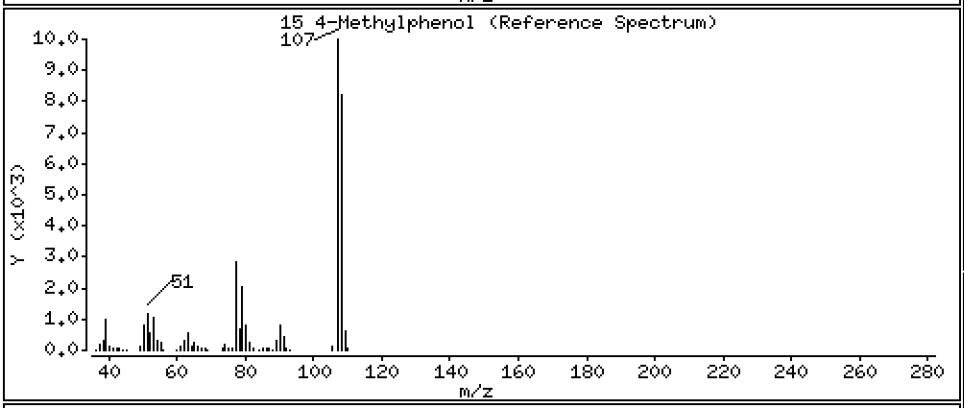
Concentration: 0.4605 ug/mL

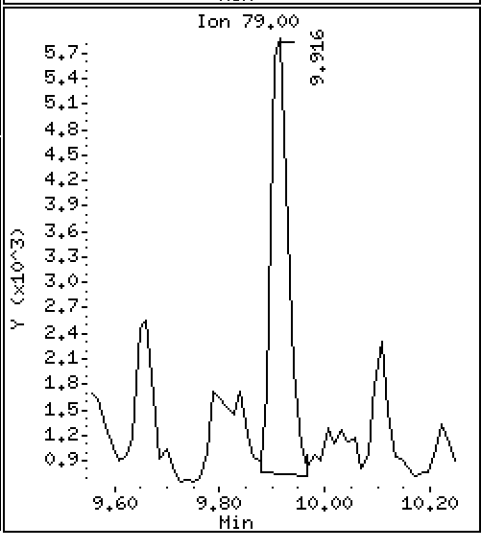


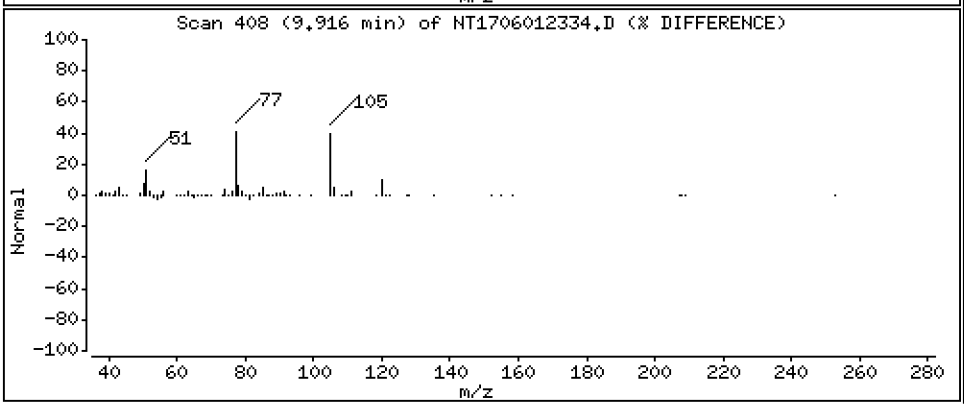












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

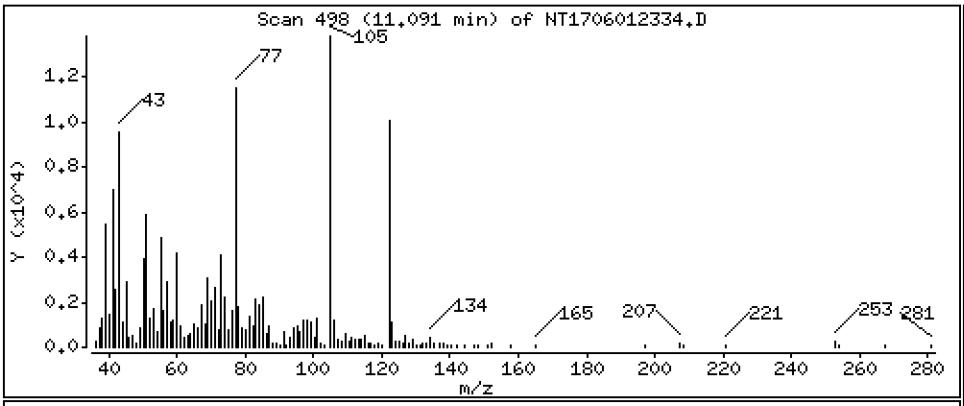
Operator: VTS

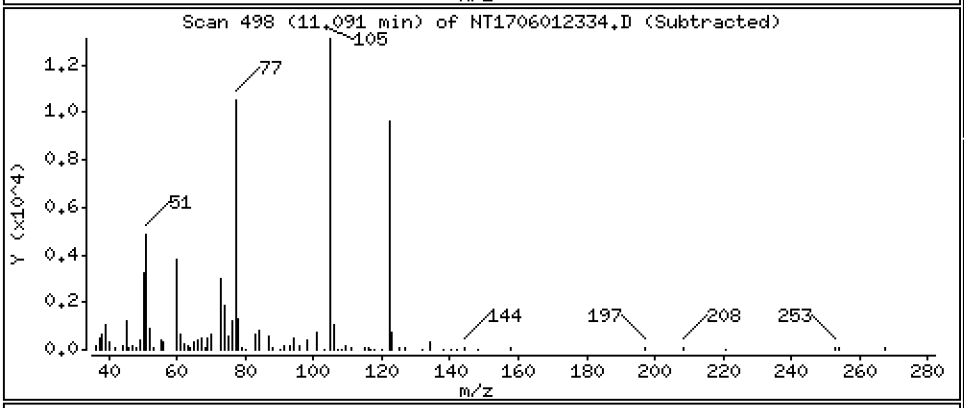
Column phase: ZB-5msi

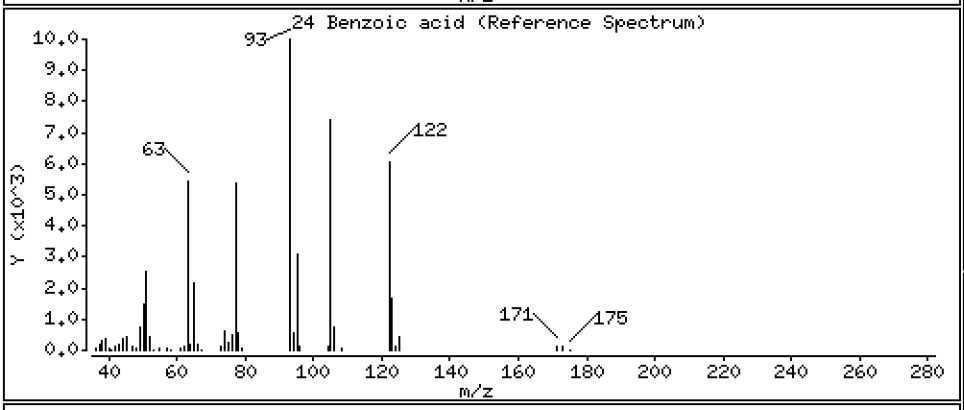
Column diameter: 0.25

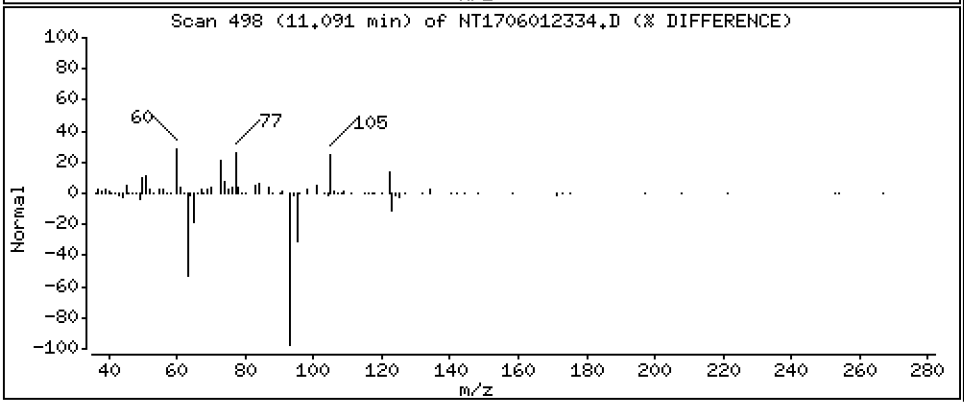
24 Benzoic acid

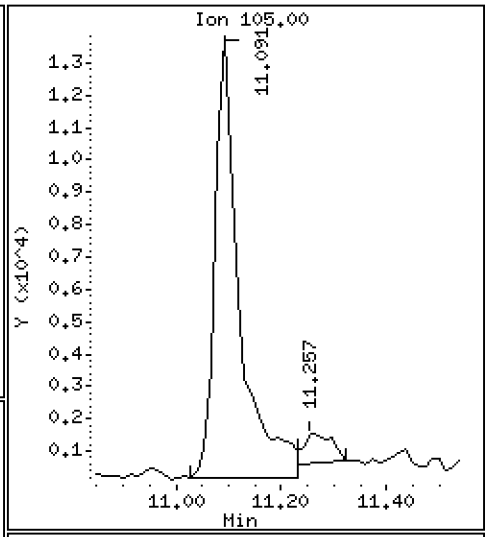
Concentration: 0.7195 ug/mL

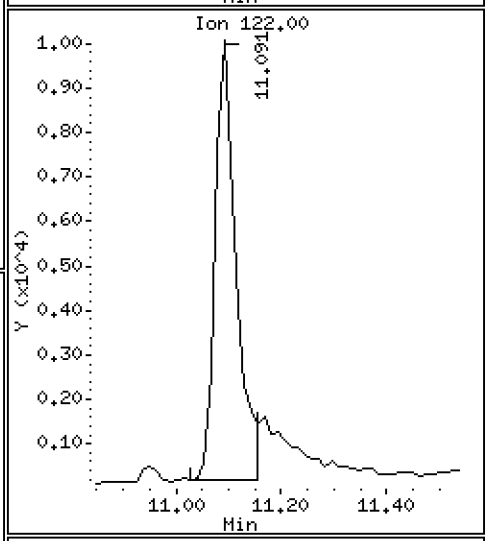


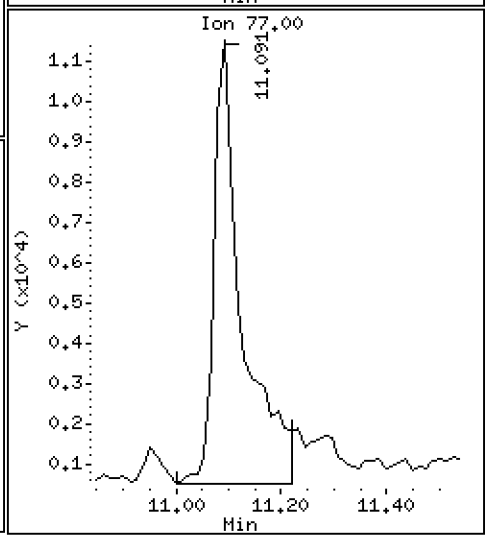












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

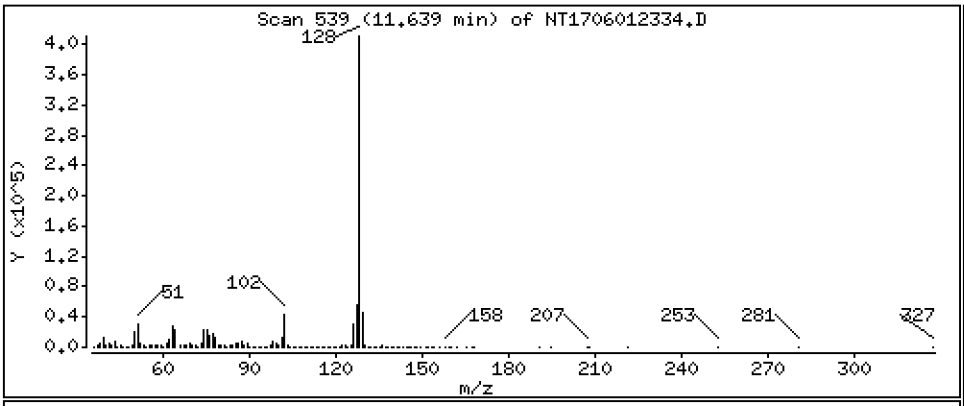
Operator: VTS

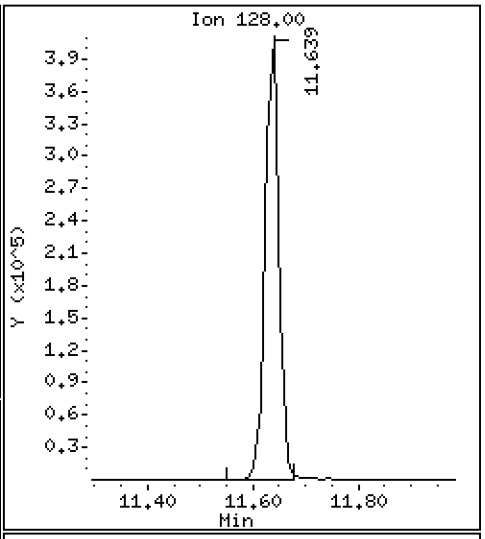
Column phase: ZB-5msi

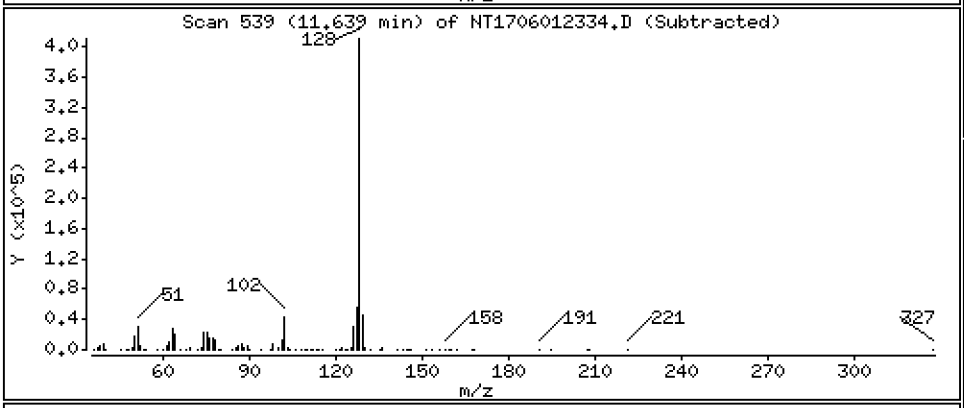
Column diameter: 0.25

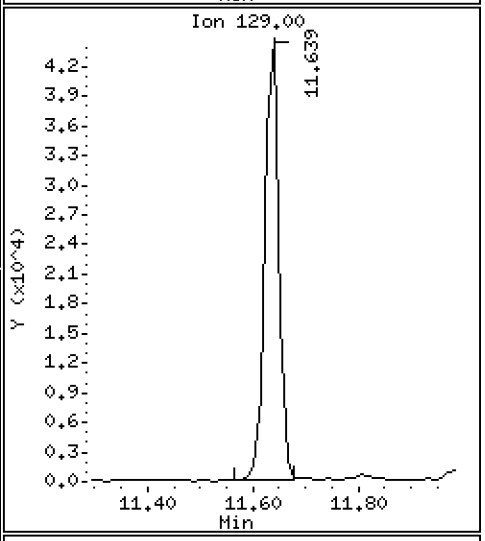
28 Naphthalene

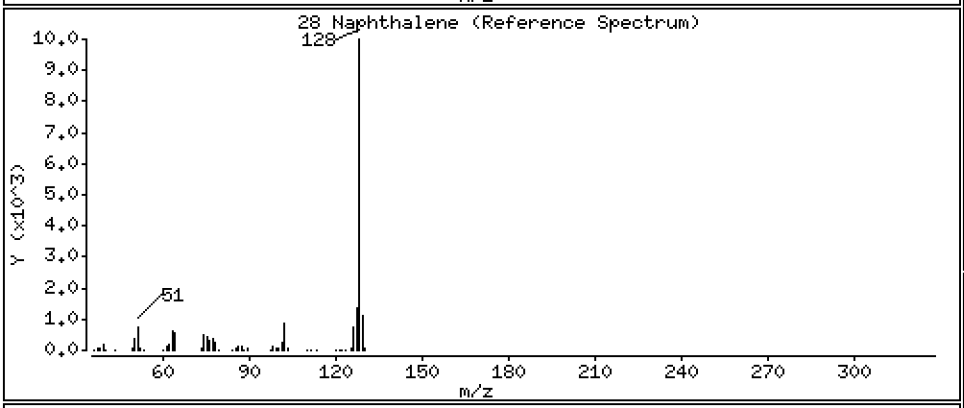
Concentration: 3.008 ug/mL

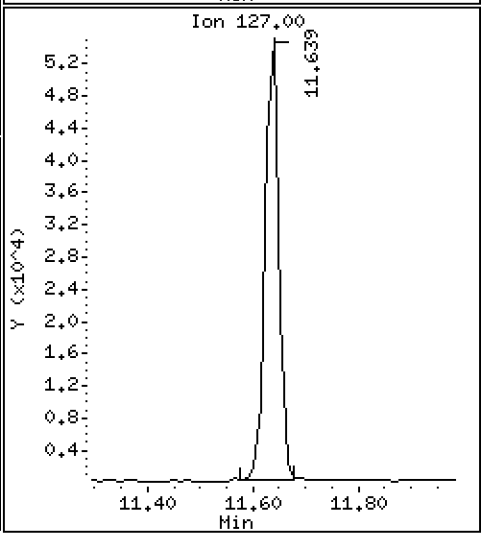


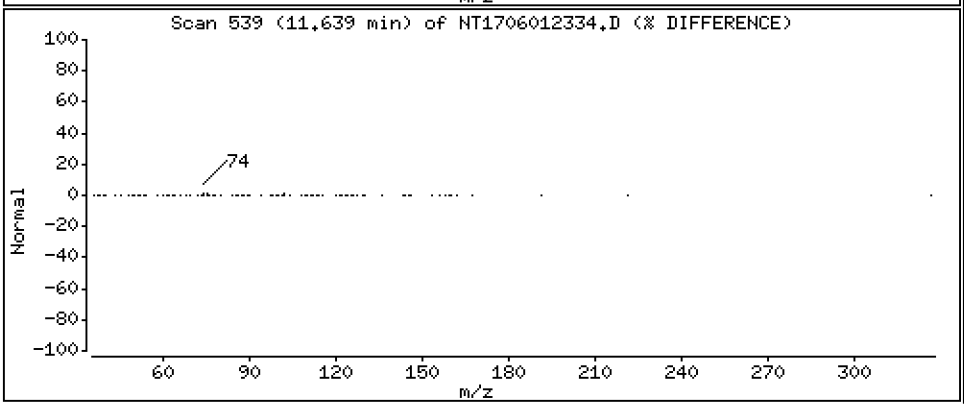












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

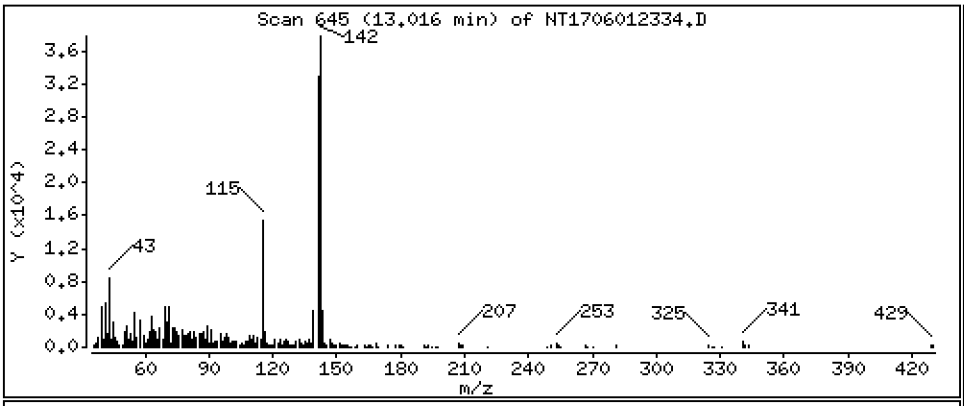
Operator: VTS

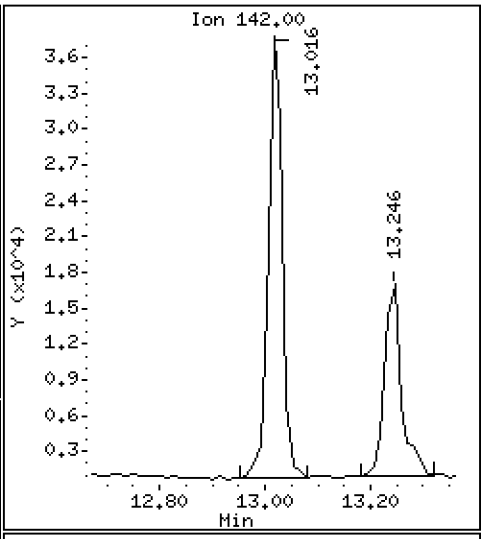
Column phase: ZB-5msi

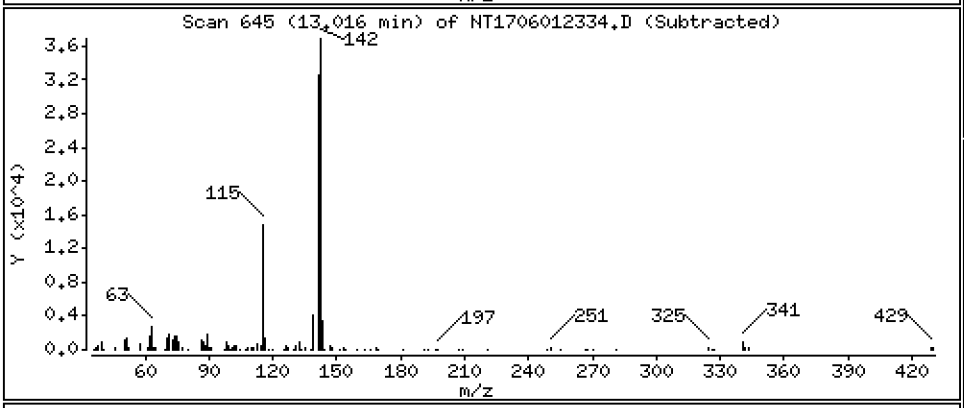
Column diameter: 0.25

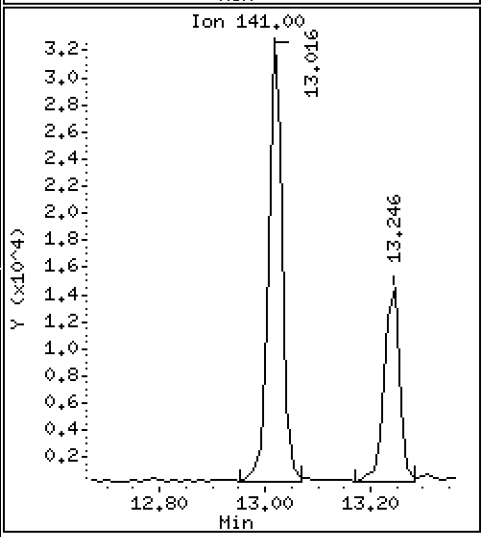
32 2-Methylnaphthalene

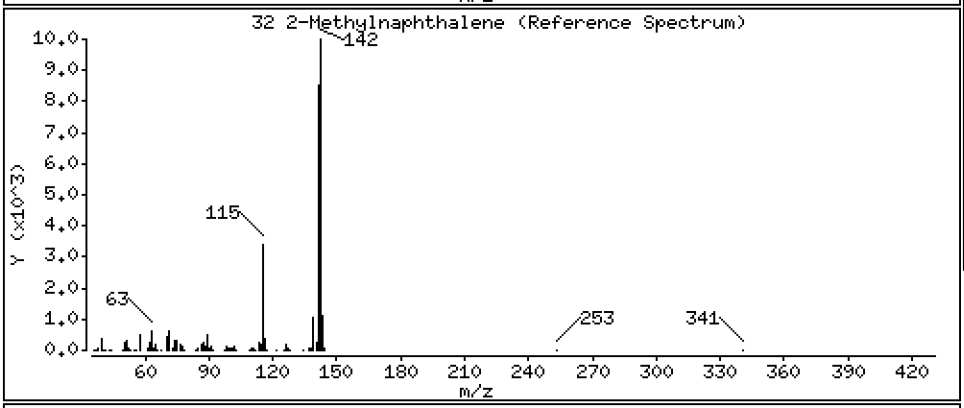
Concentration: 0.3969 ug/mL

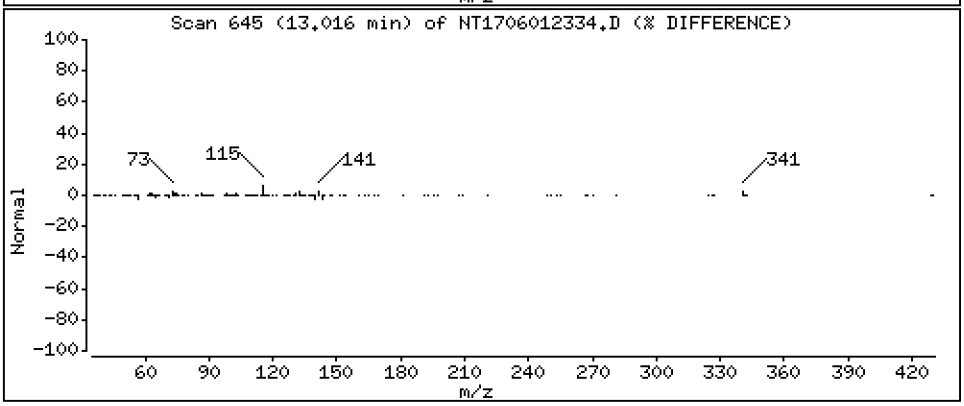












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

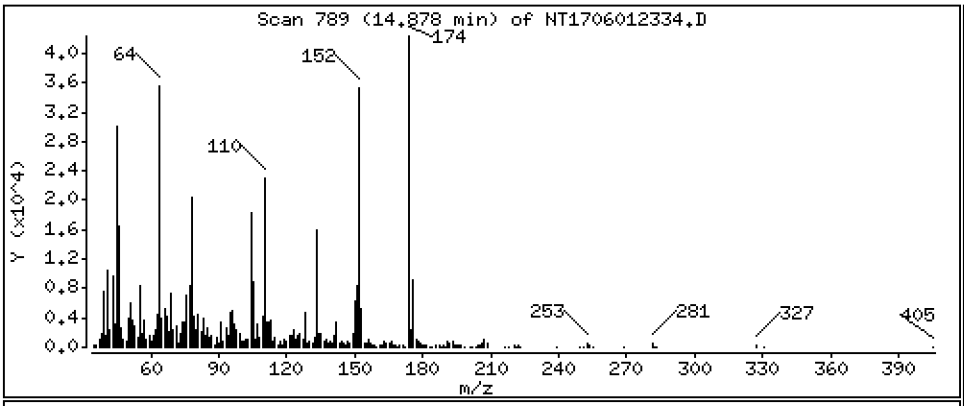
Operator: VTS

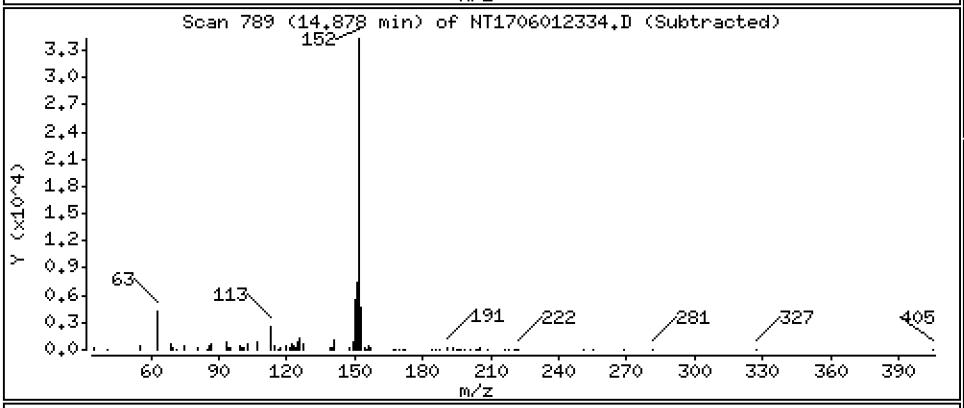
Column phase: ZB-5msi

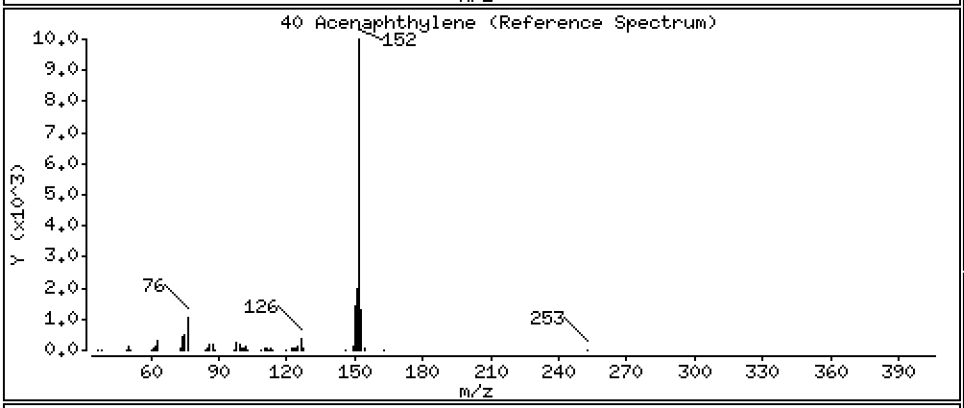
Column diameter: 0.25

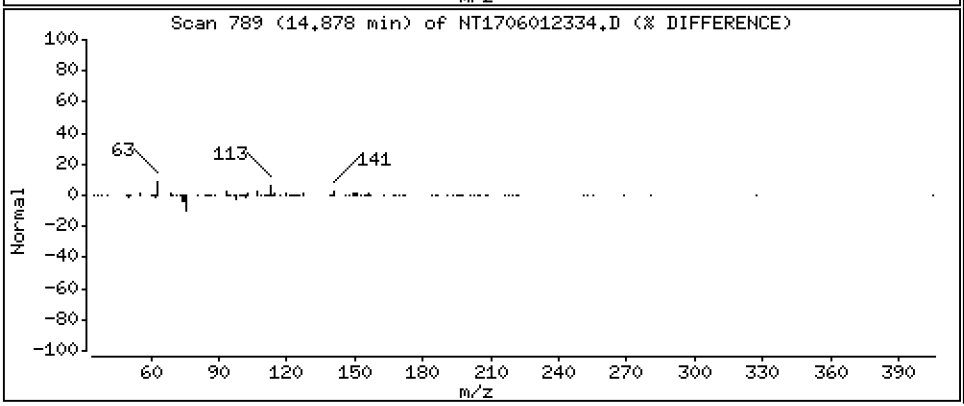
40 Acenaphthylene

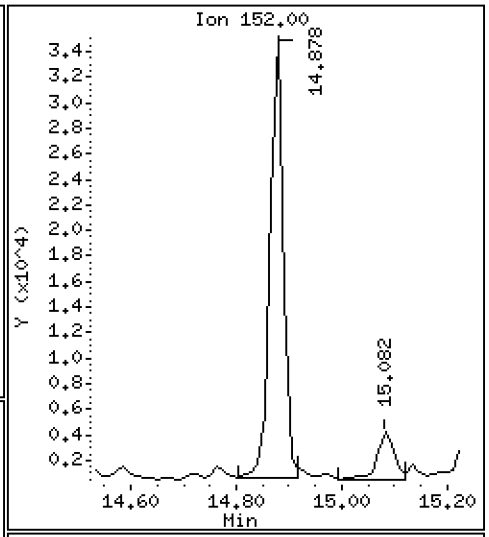
Concentration: 0.2517 ug/mL

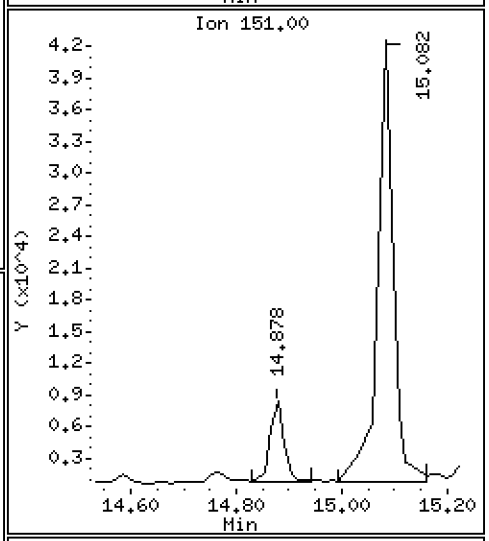


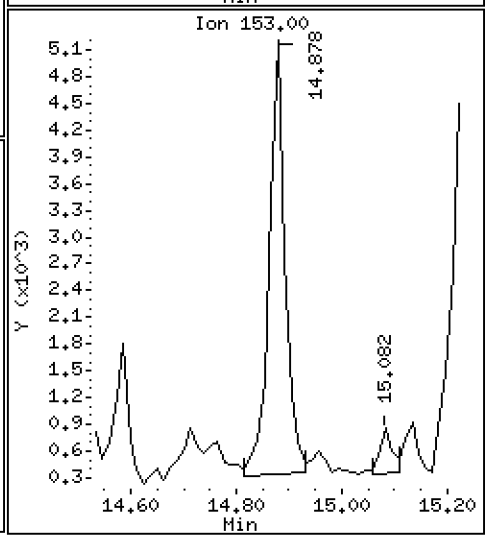












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

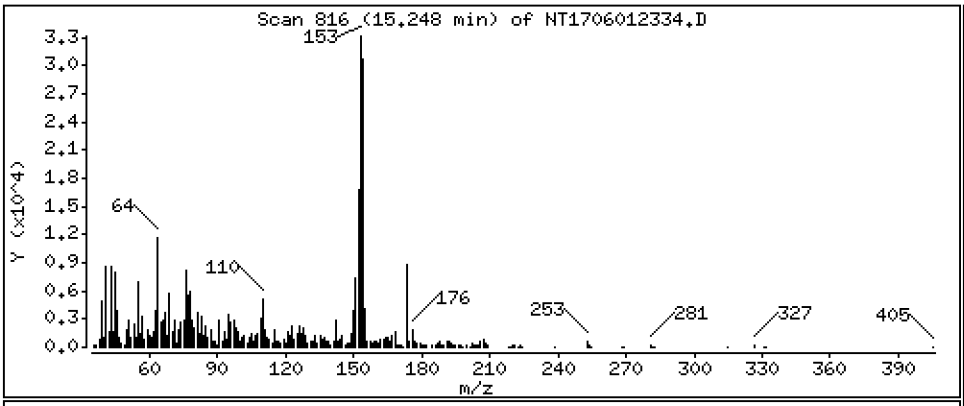
Operator: VTS

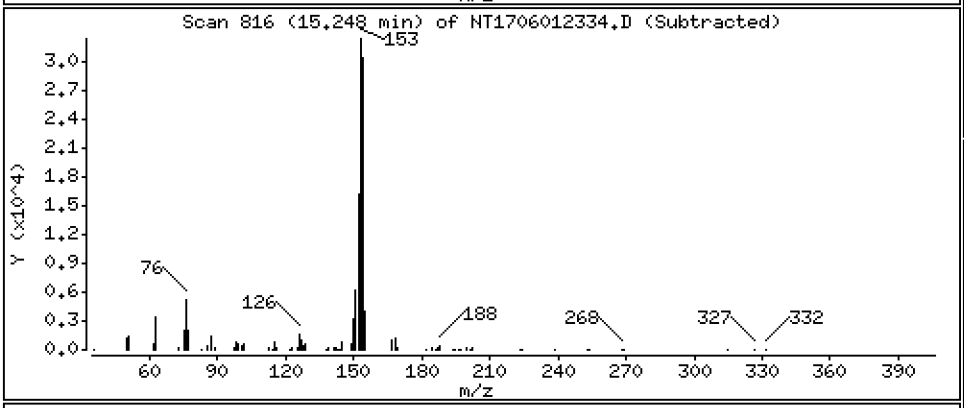
Column phase: ZB-5msi

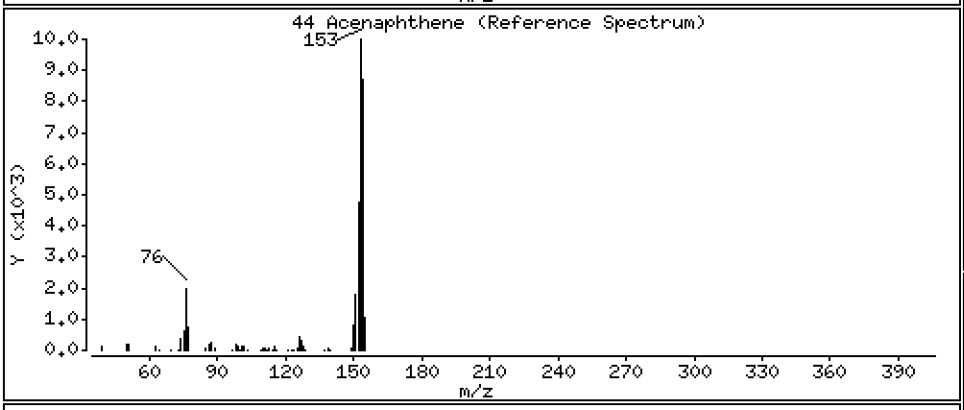
Column diameter: 0.25

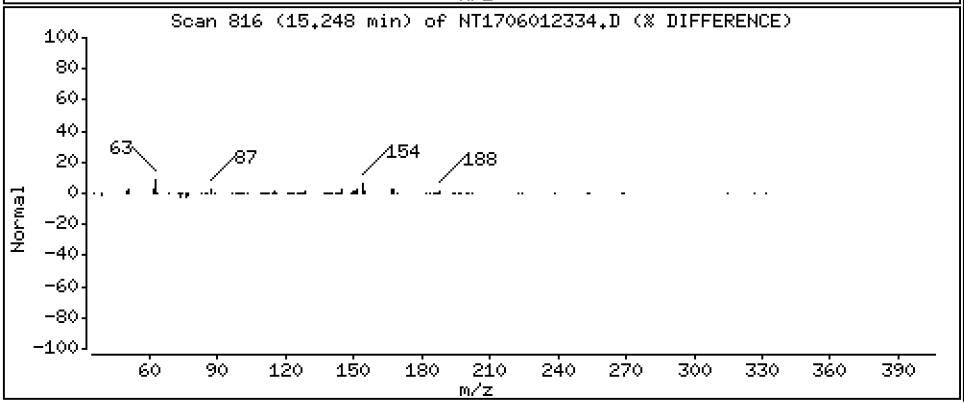
44 Acenaphthene

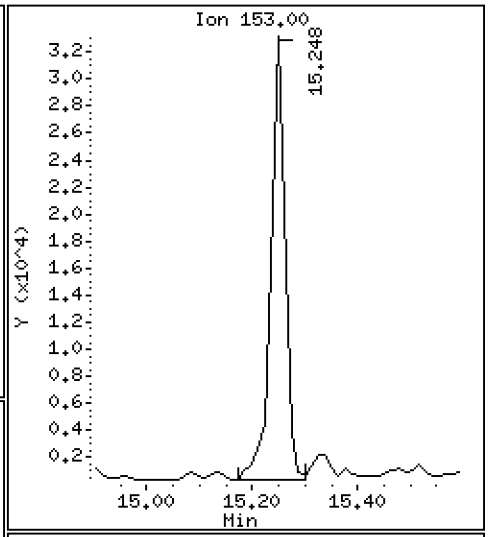
Concentration: 0.4116 ug/mL

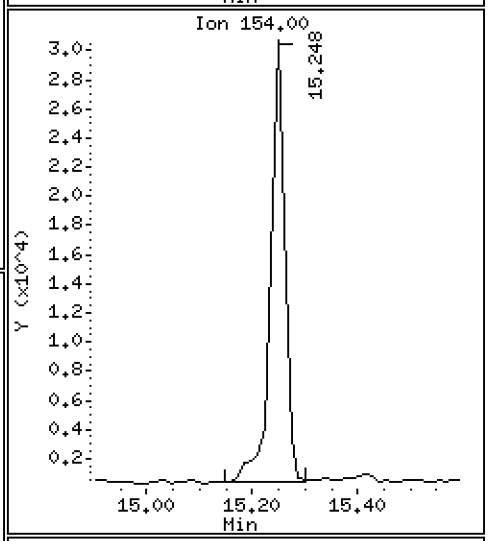


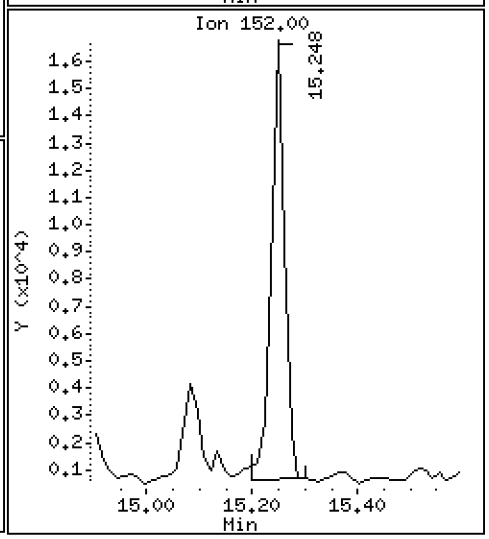












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

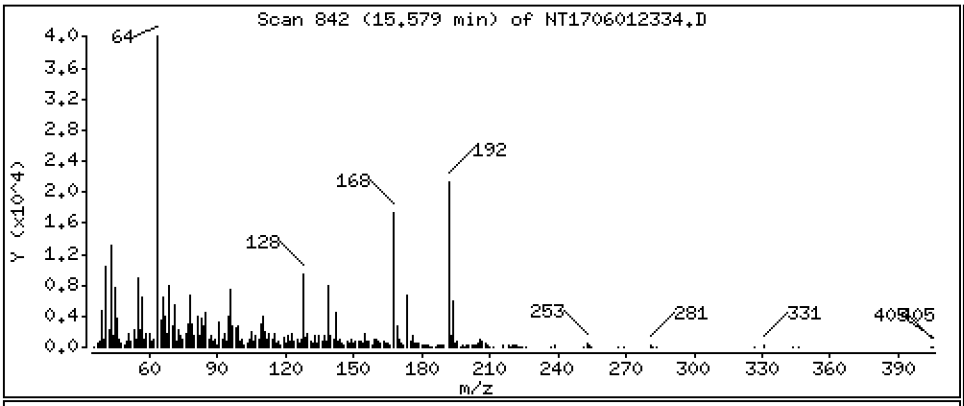
Operator: VTS

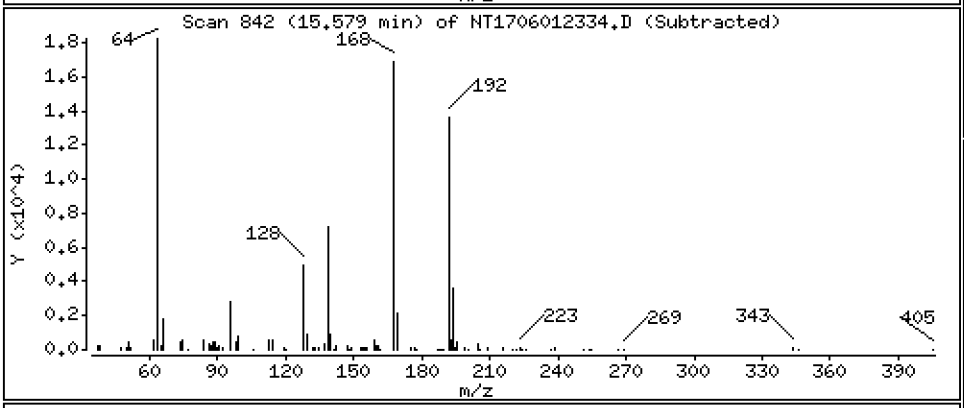
Column phase: ZB-5msi

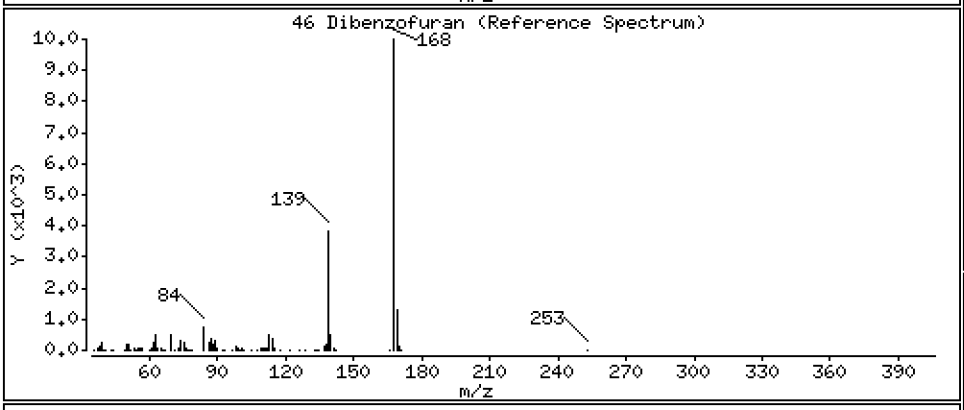
Column diameter: 0.25

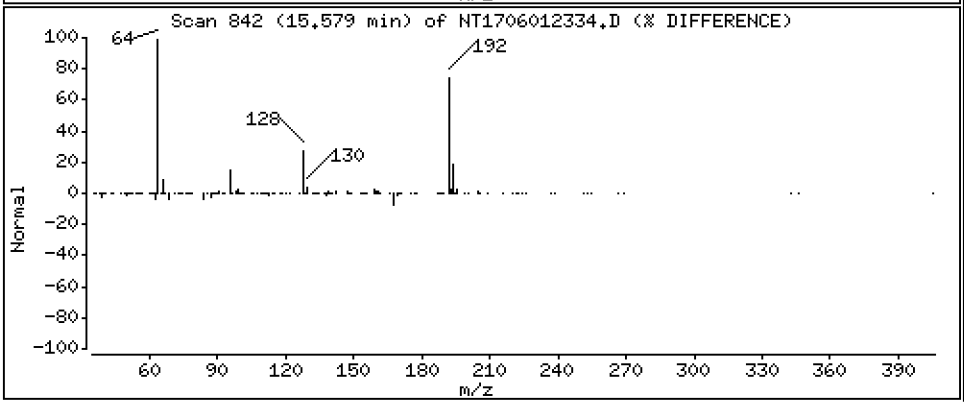
46 Dibenzofuran

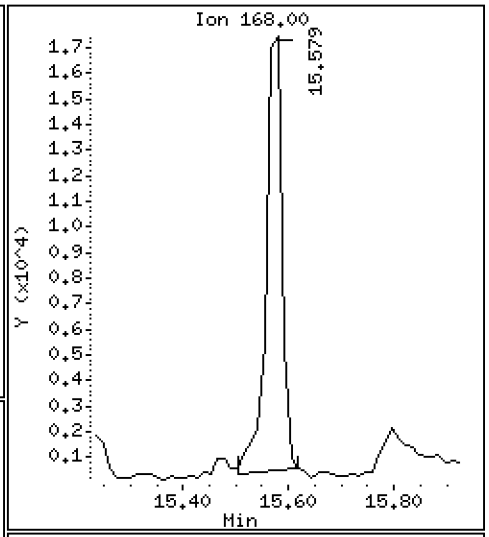
Concentration: 0.1728 ug/mL

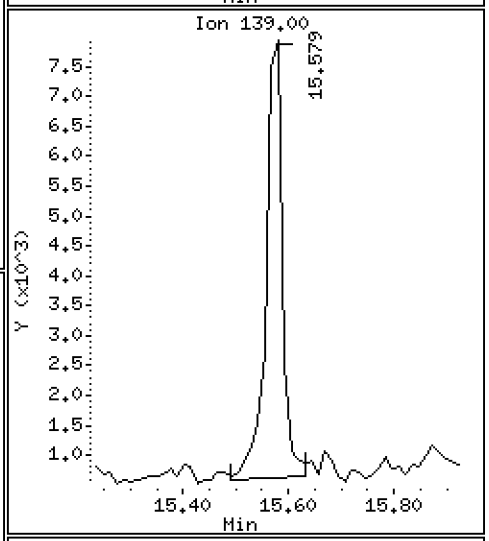


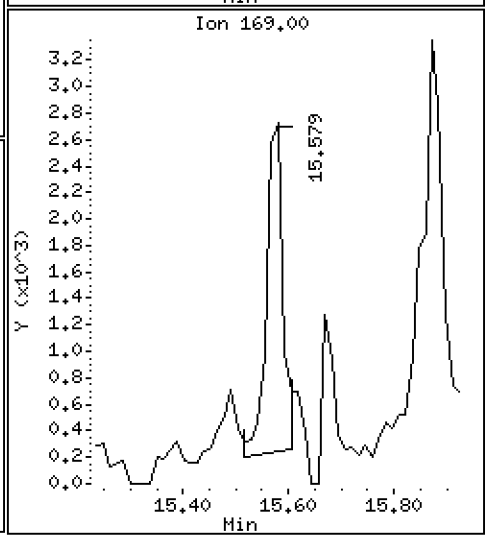












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

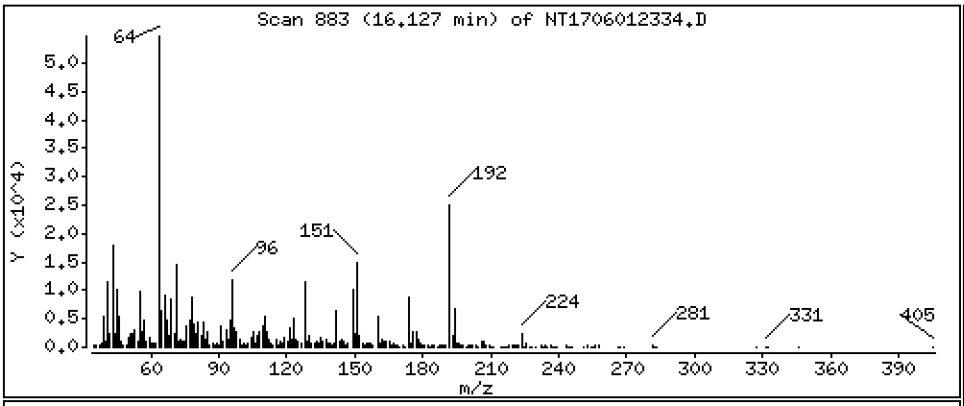
Operator: VTS

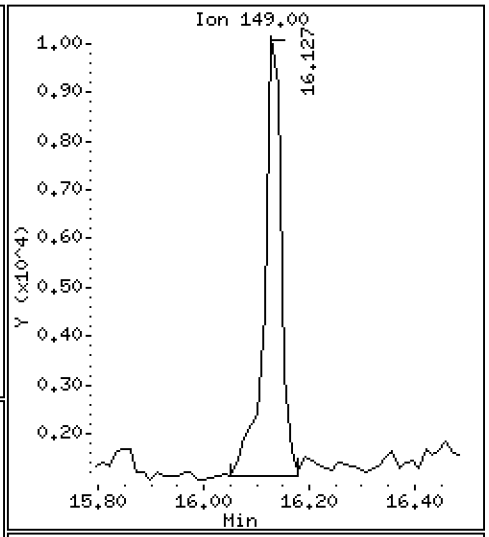
Column phase: ZB-5msi

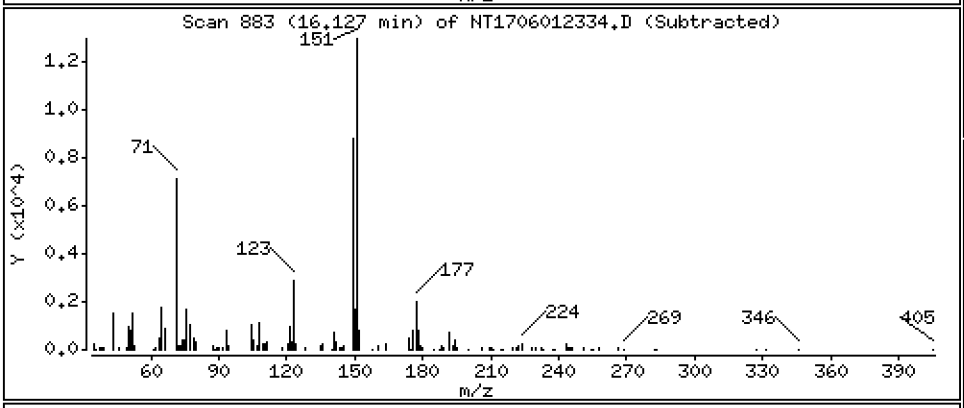
Column diameter: 0.25

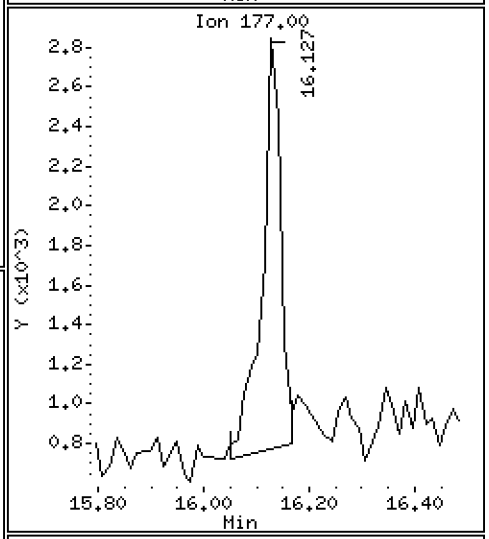
50 Diethylphthalate

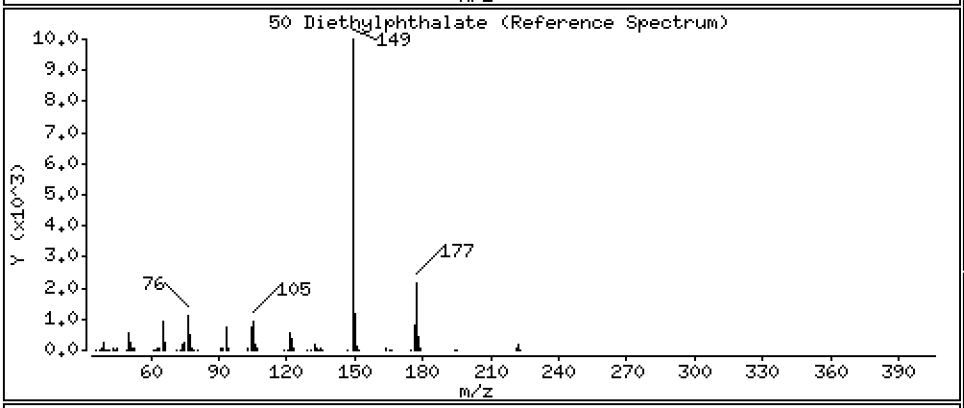
Concentration: 0.1270 ug/mL

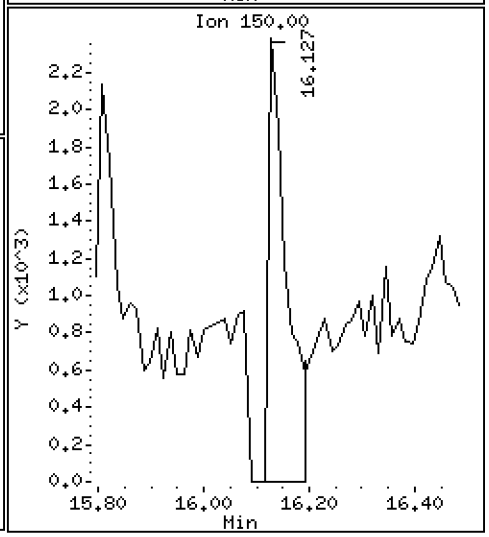


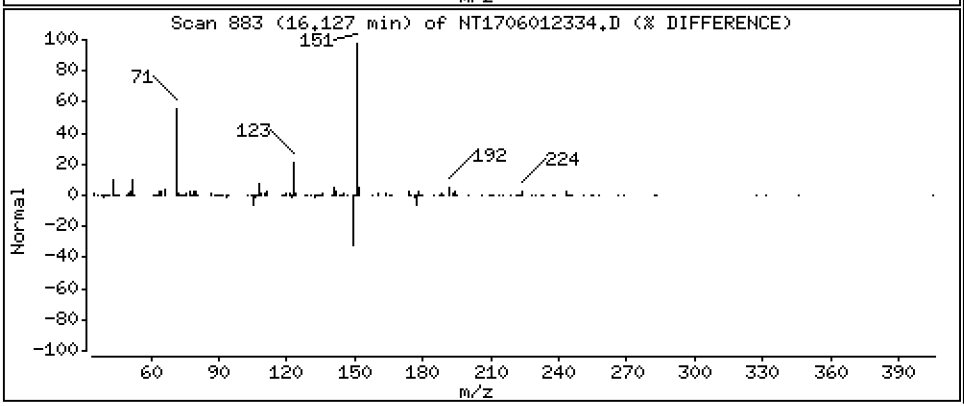












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

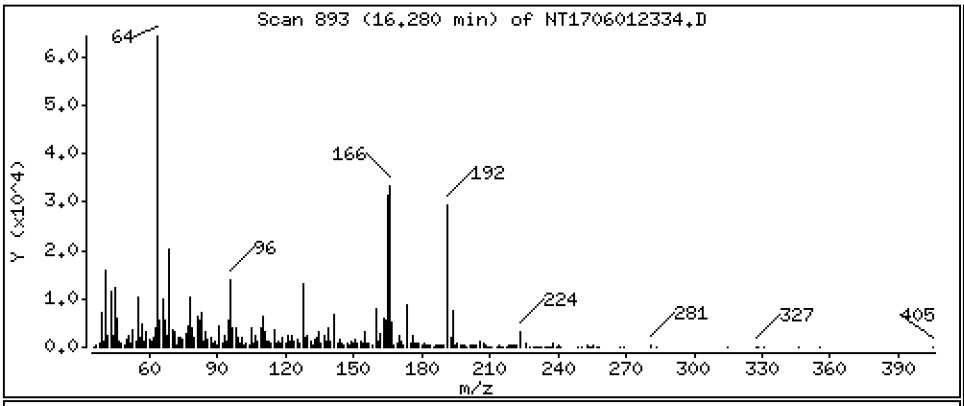
Operator: VTS

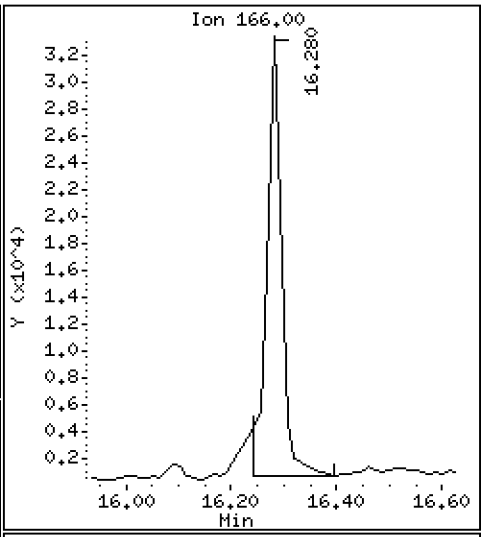
Column phase: ZB-5msi

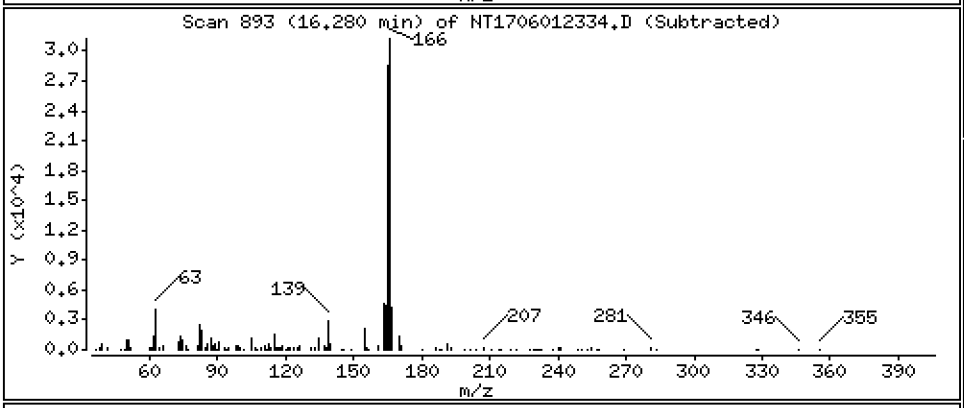
Column diameter: 0.25

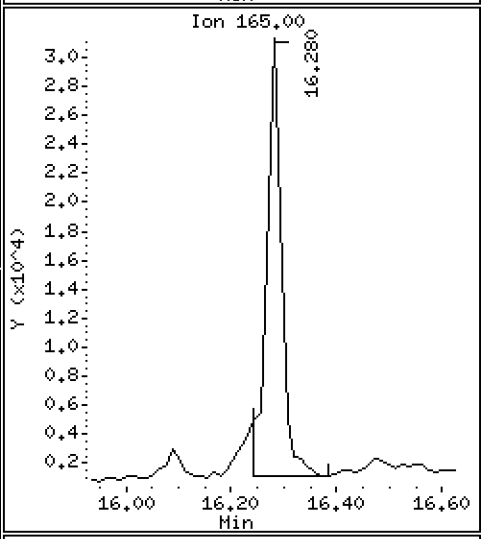
49 Fluorene

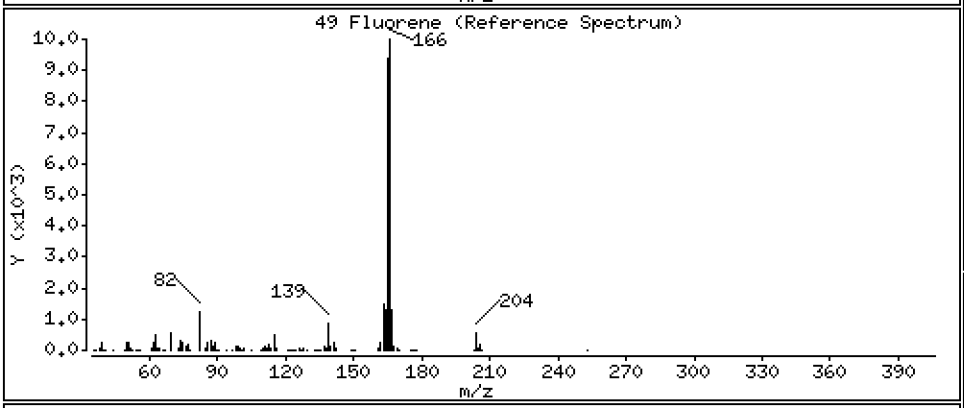
Concentration: 0.3190 ug/mL

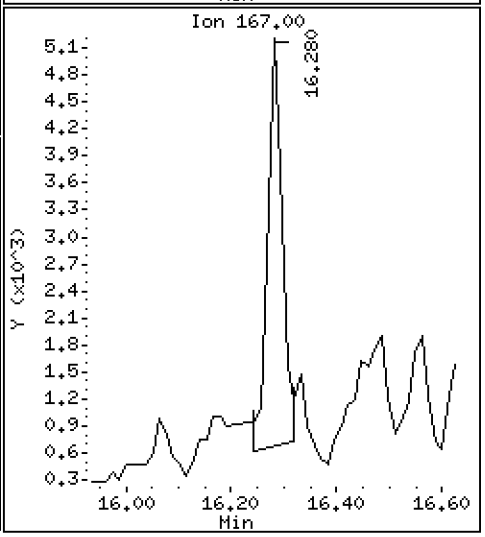


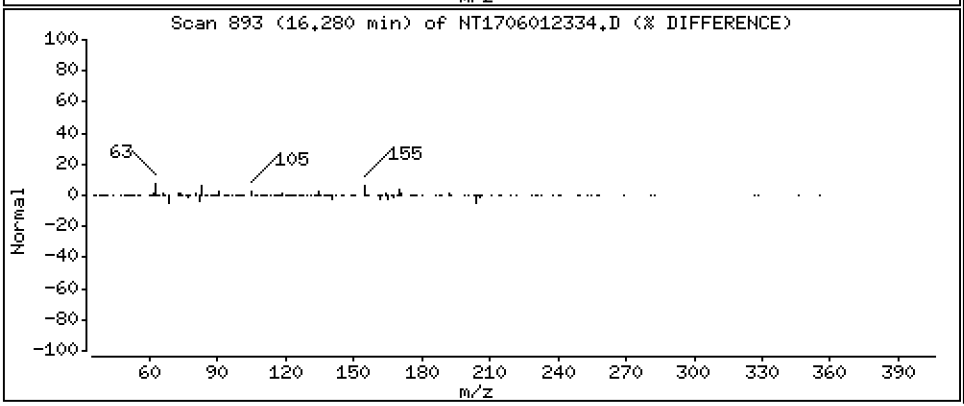












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

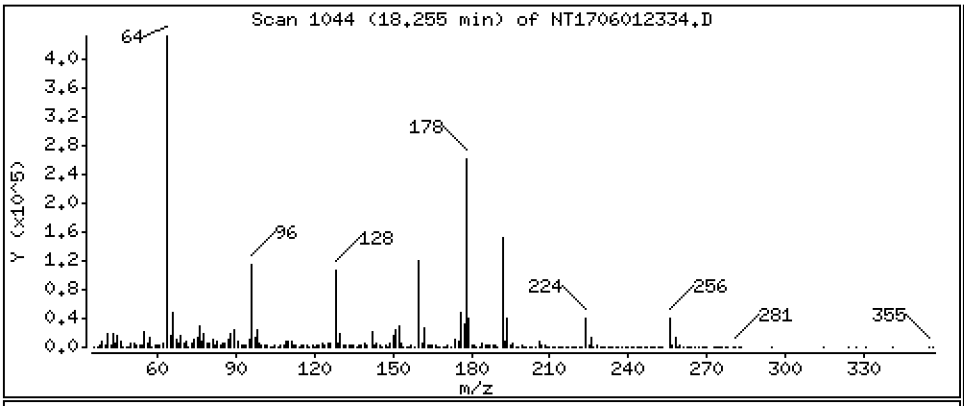
Operator: VTS

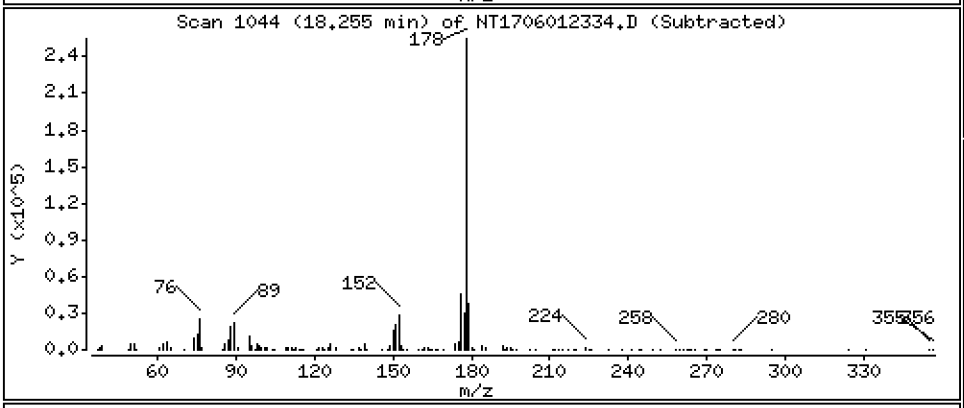
Column phase: ZB-5msi

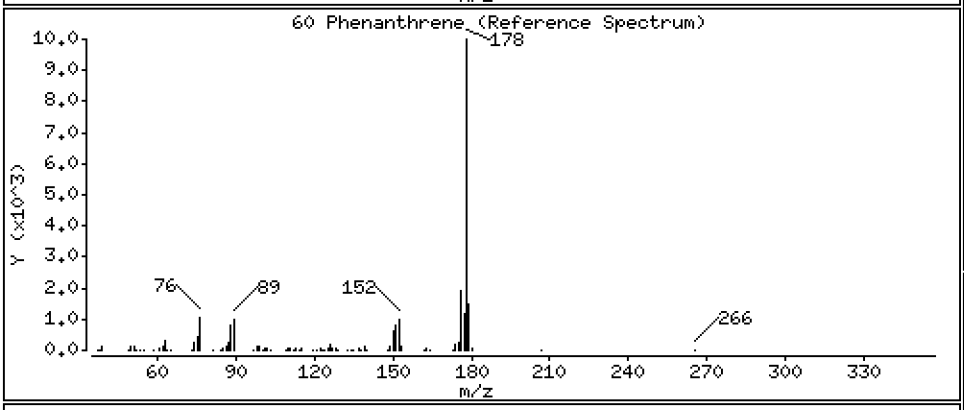
Column diameter: 0.25

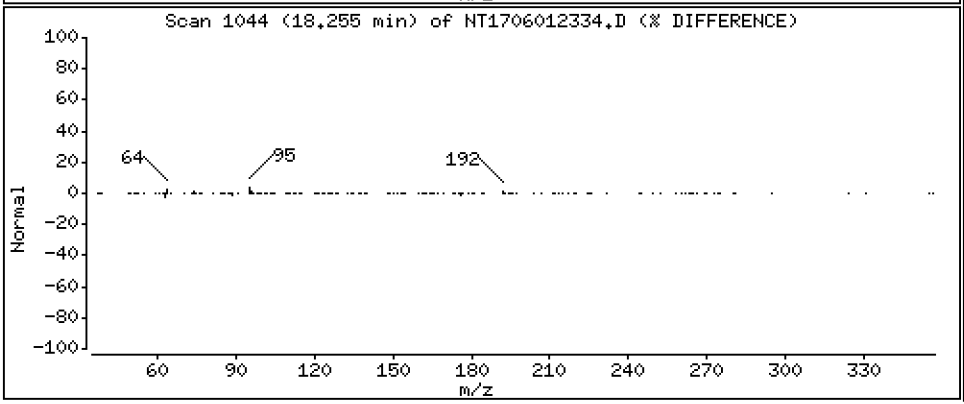
60 Phenanthrene

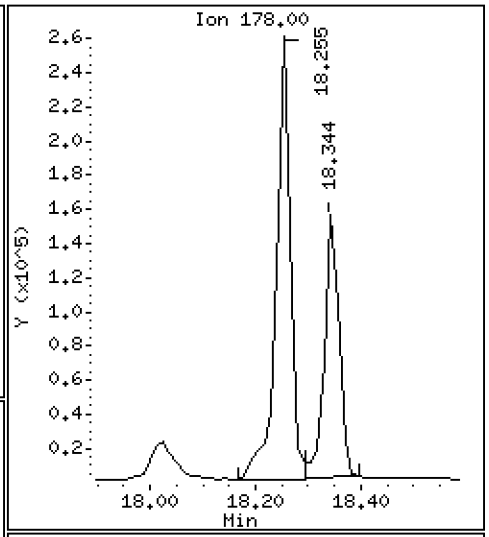
Concentration: 1.914 ug/mL

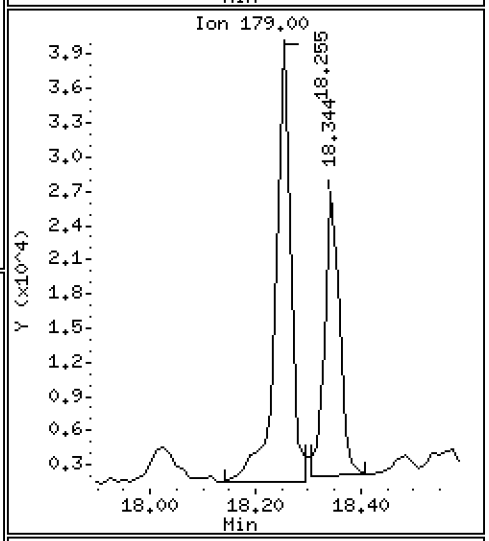


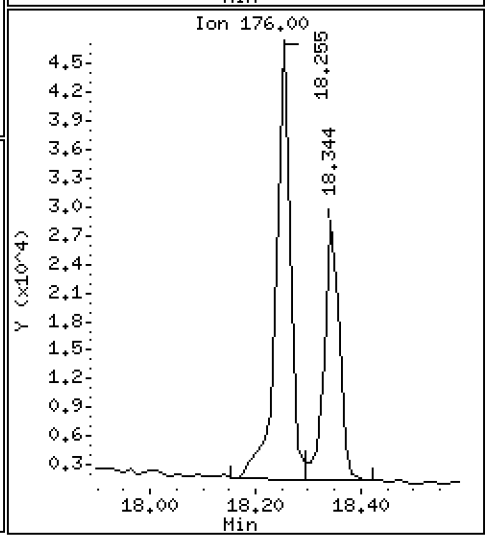












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

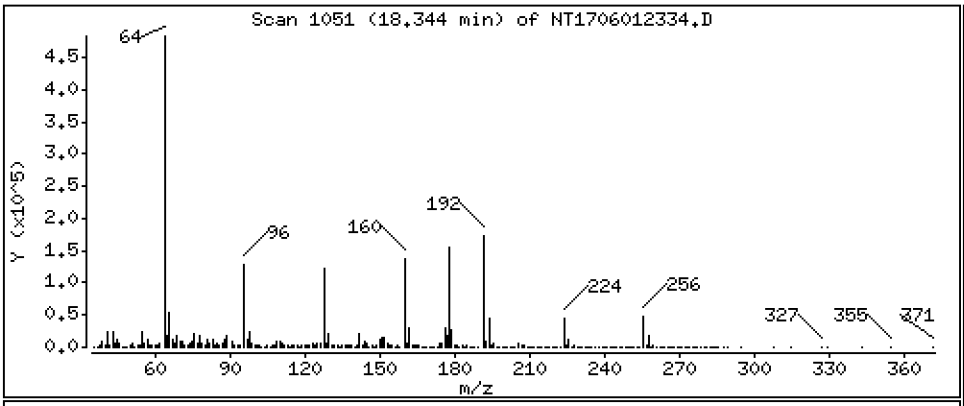
Operator: VTS

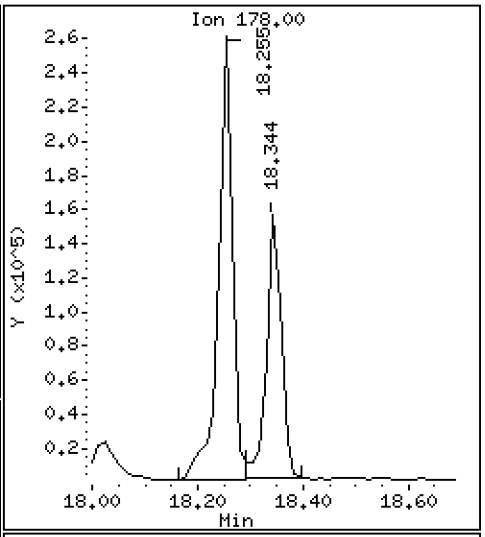
Column phase: ZB-5msi

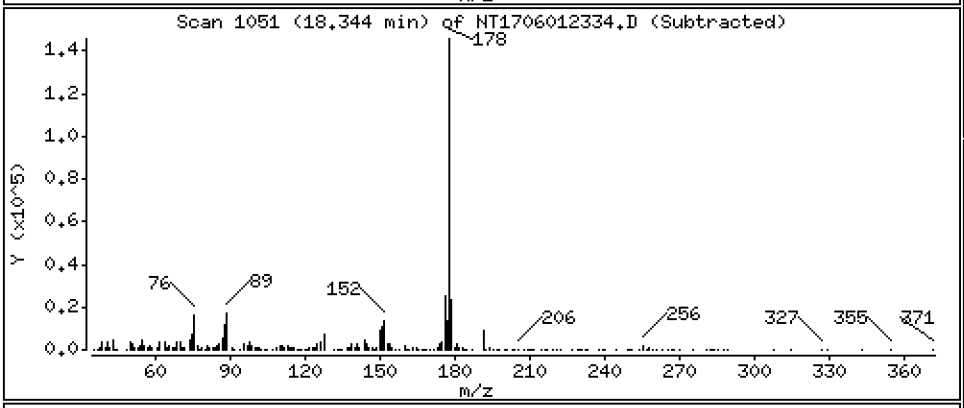
Column diameter: 0.25

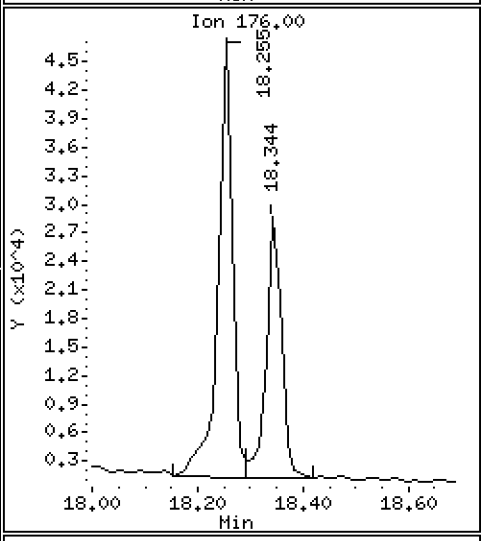
61 Anthracene

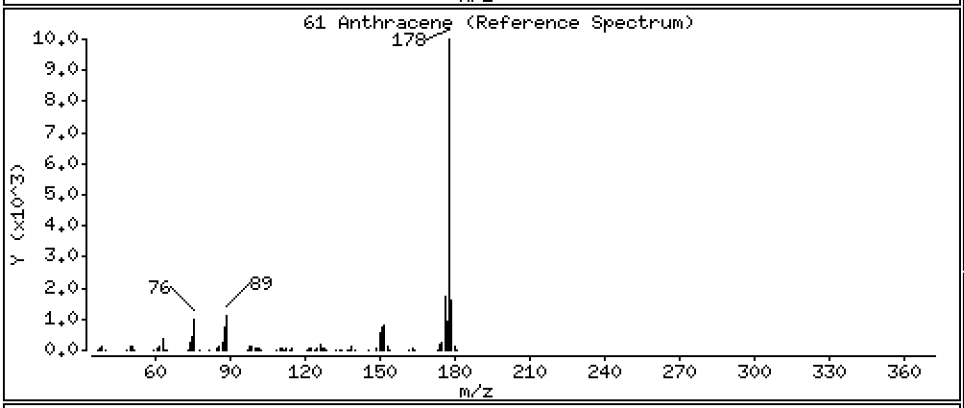
Concentration: 1.209 ug/mL

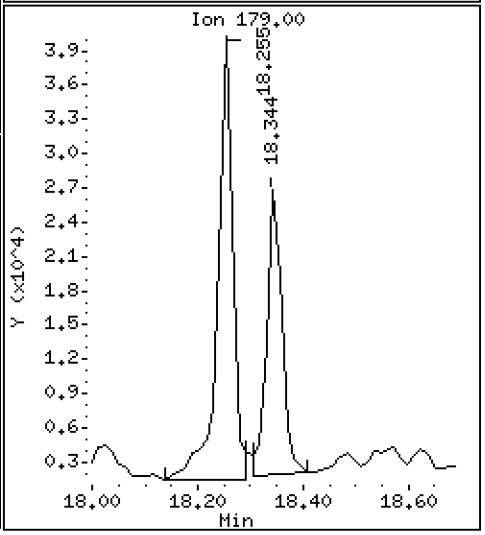


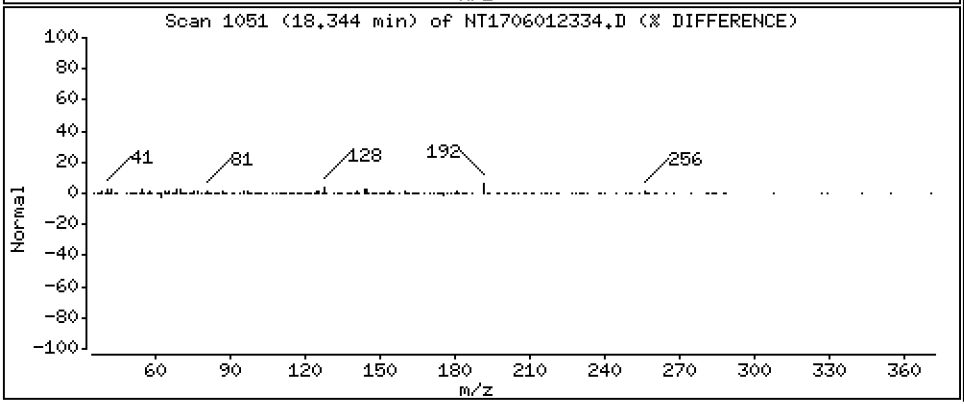












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

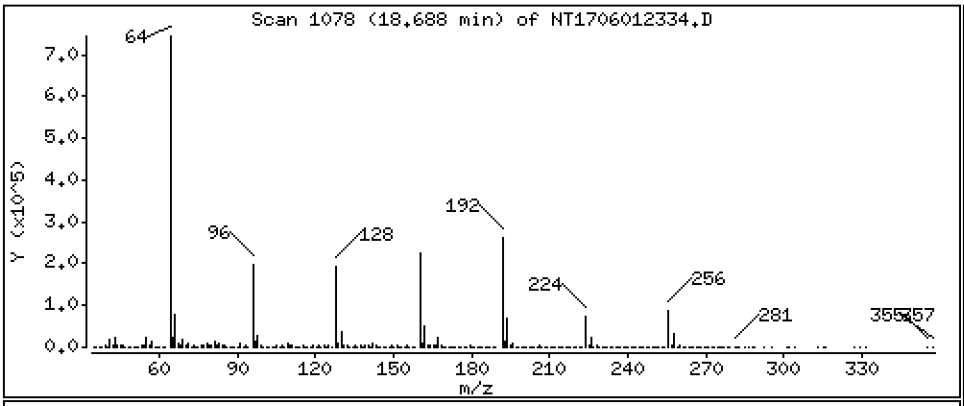
Operator: VTS

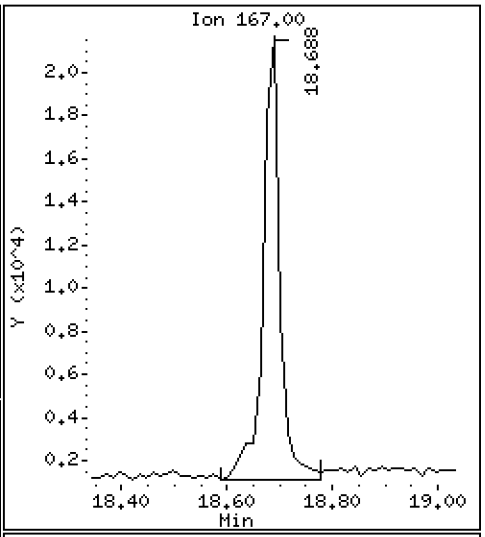
Column phase: ZB-5msi

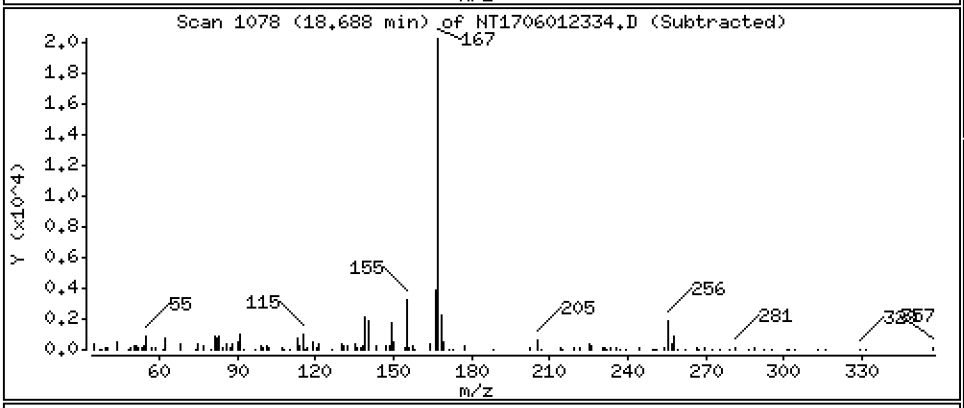
Column diameter: 0.25

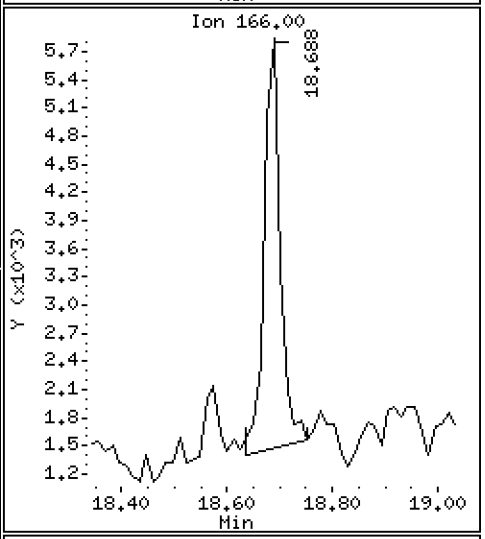
62 Carbazole

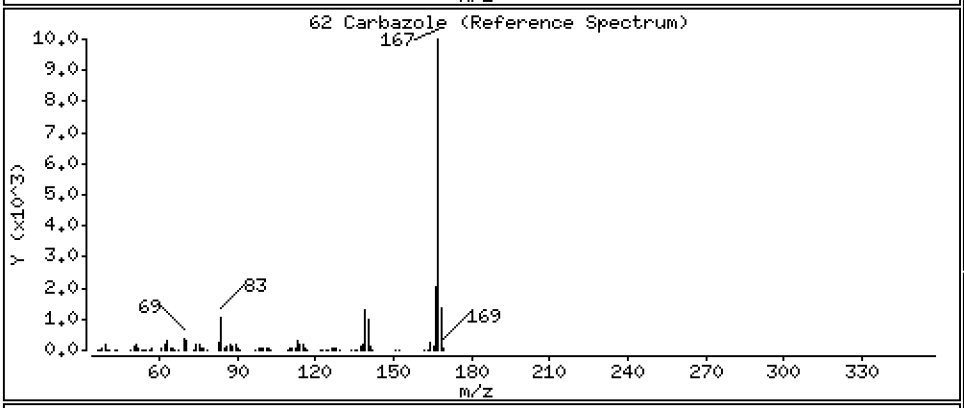
Concentration: 0.3175 ug/mL

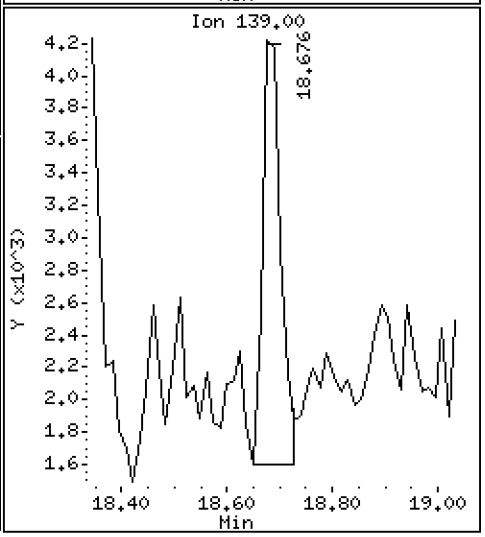


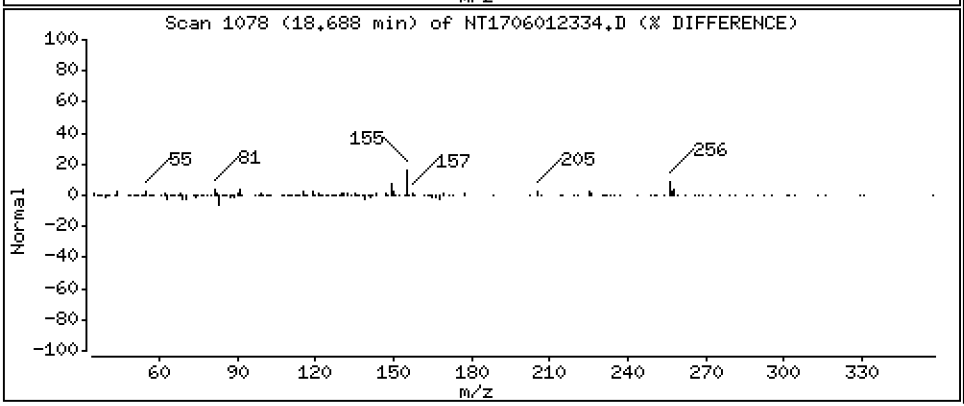












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

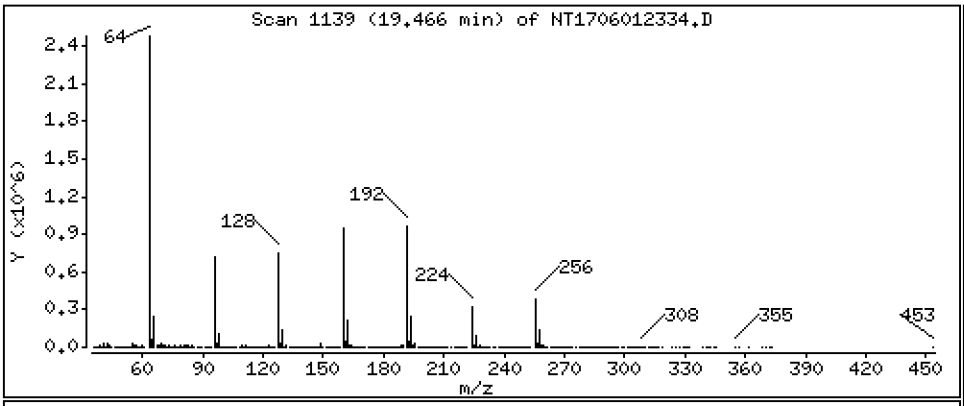
Operator: VTS

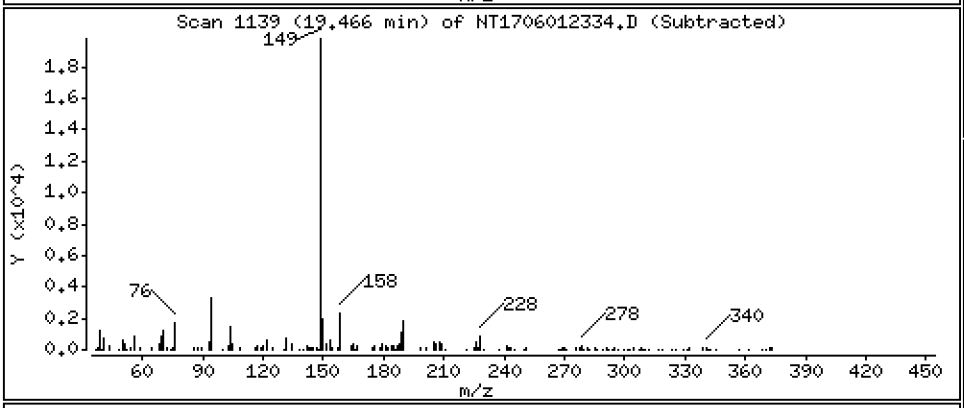
Column phase: ZB-5msi

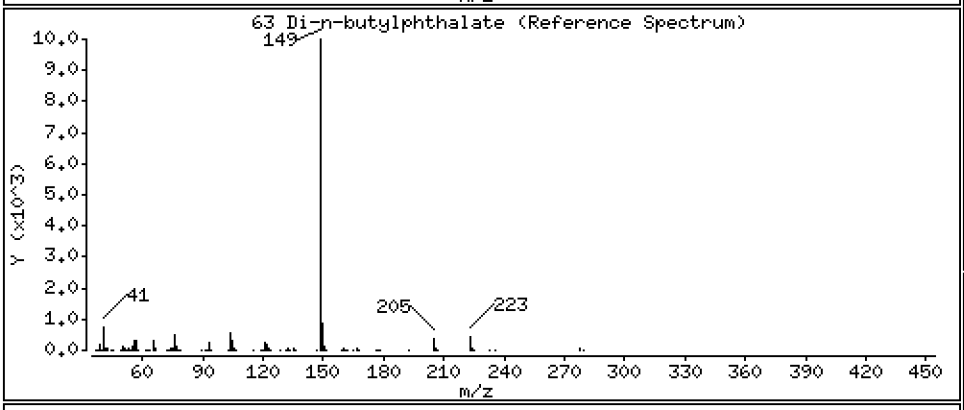
Column diameter: 0.25

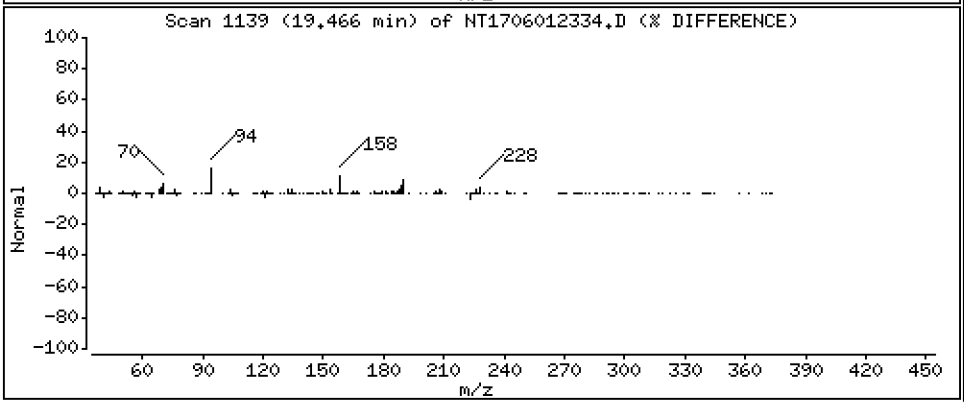
63 Di-n-butylphthalate

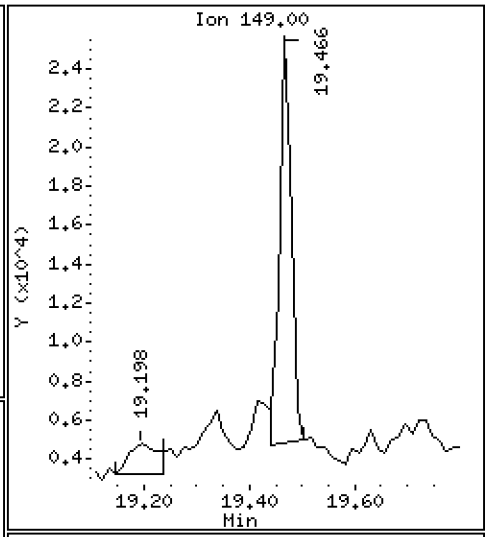
Concentration: 0.1213 ug/mL

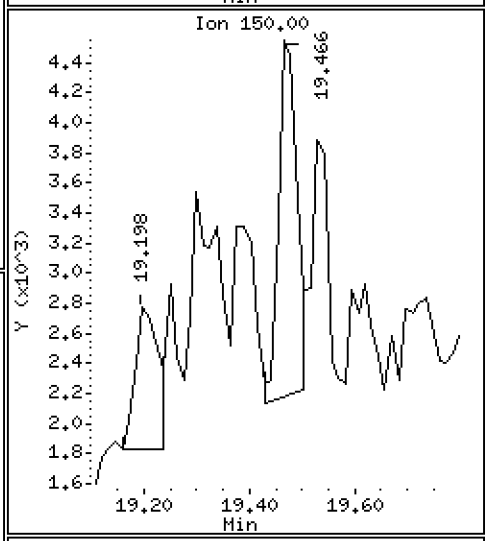


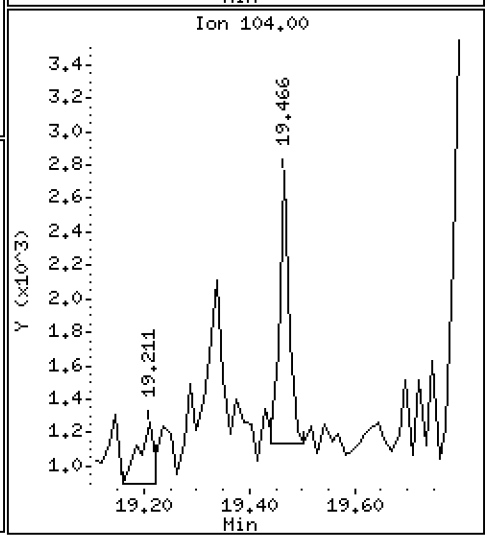












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

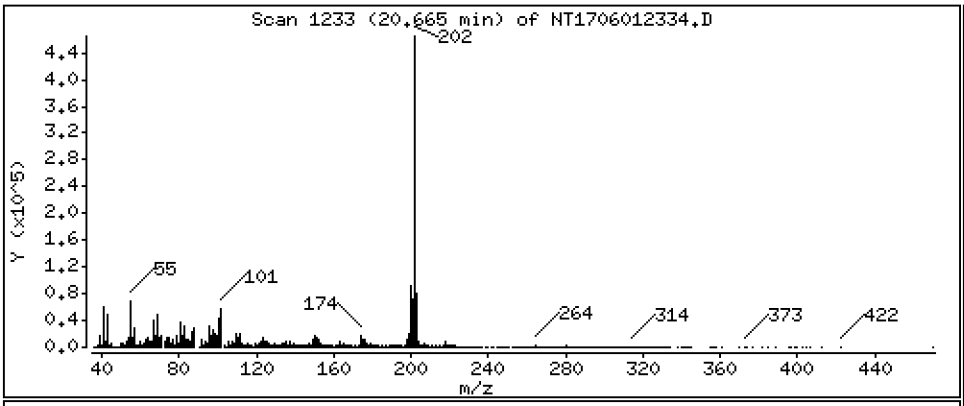
Operator: VTS

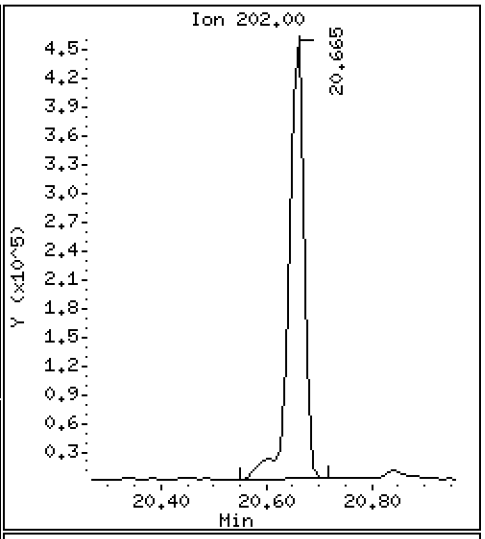
Column phase: ZB-5msi

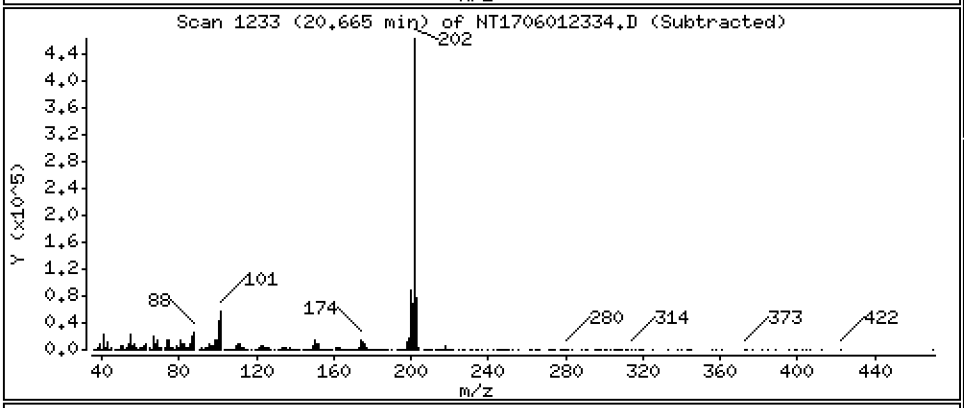
Column diameter: 0.25

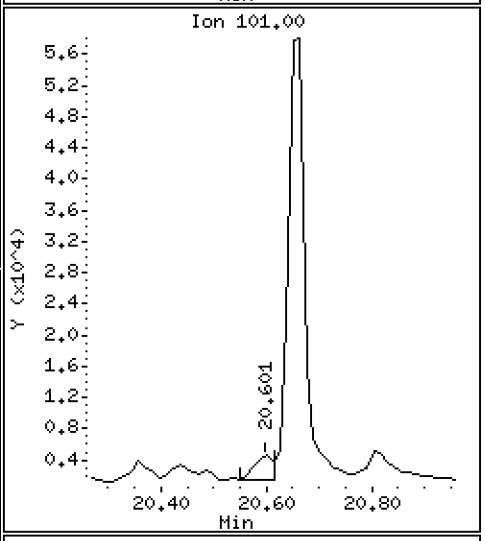
64 Fluoranthene

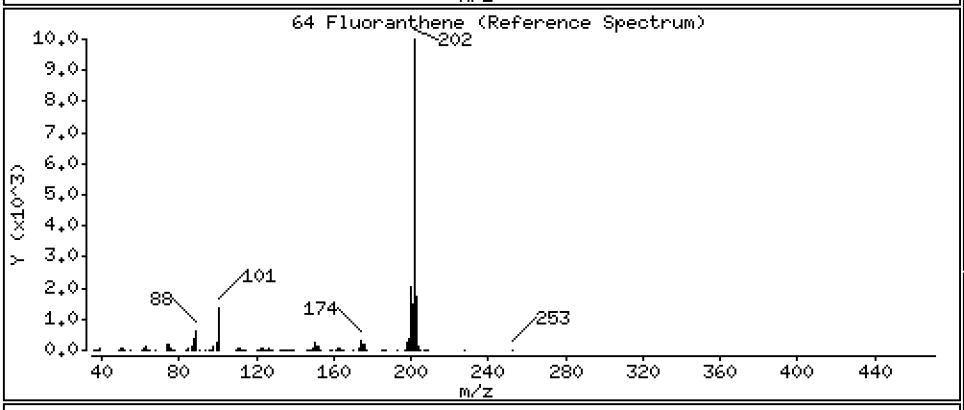
Concentration: 4.386 ug/mL

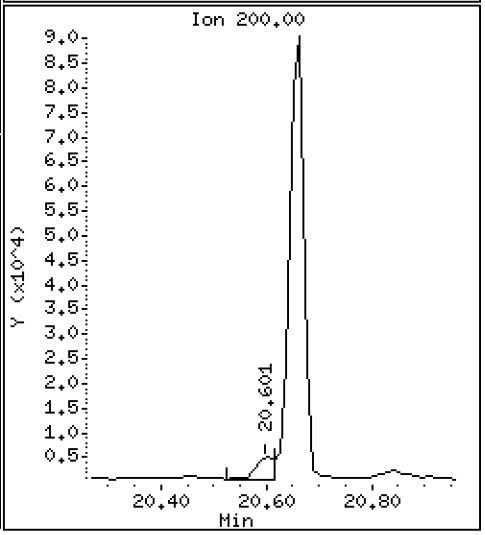


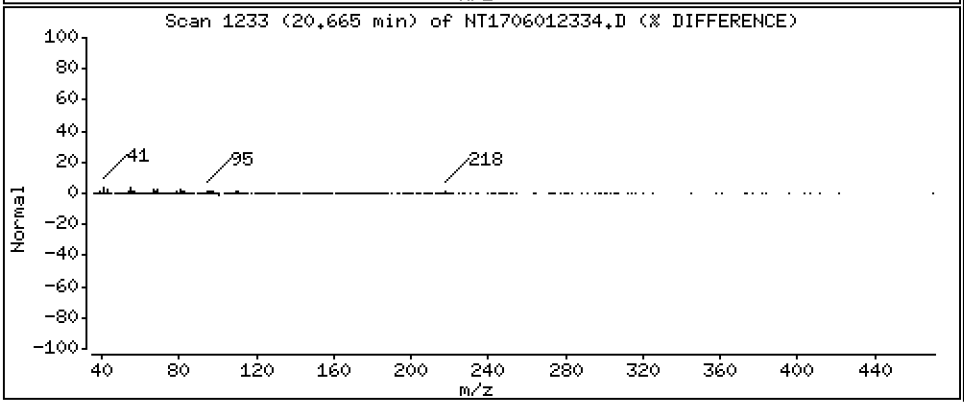












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

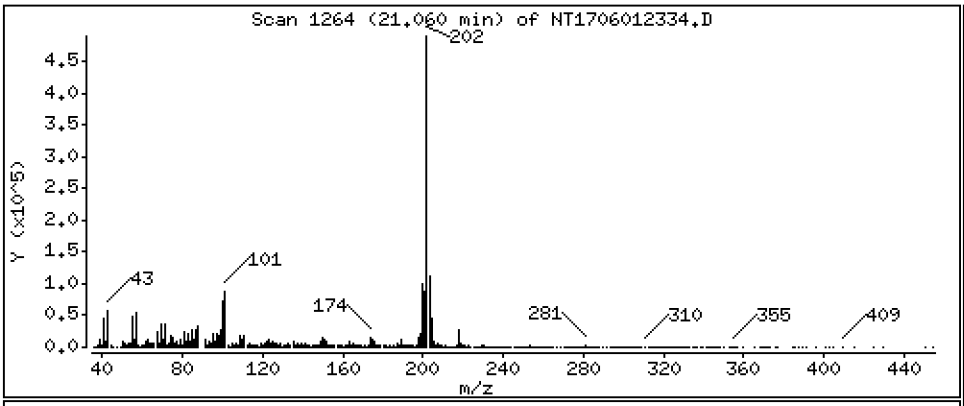
Operator: VTS

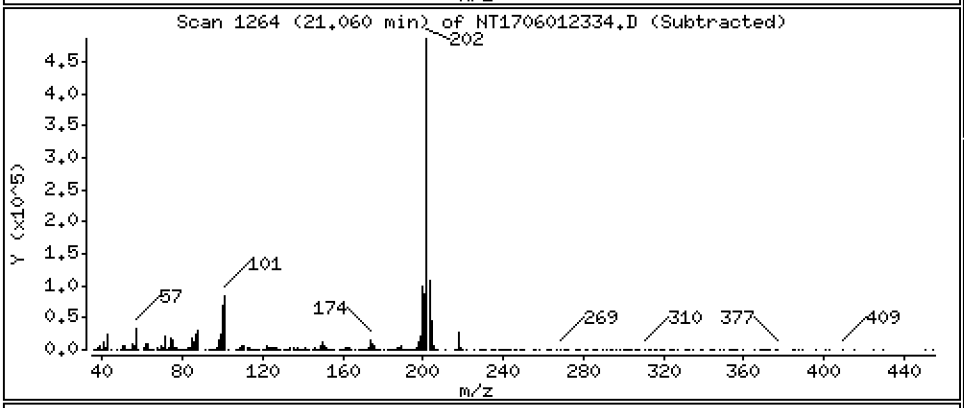
Column phase: ZB-5msi

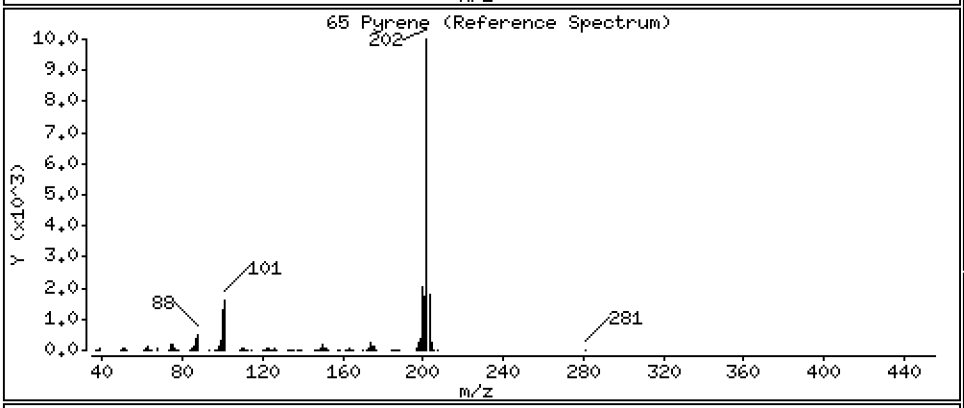
Column diameter: 0.25

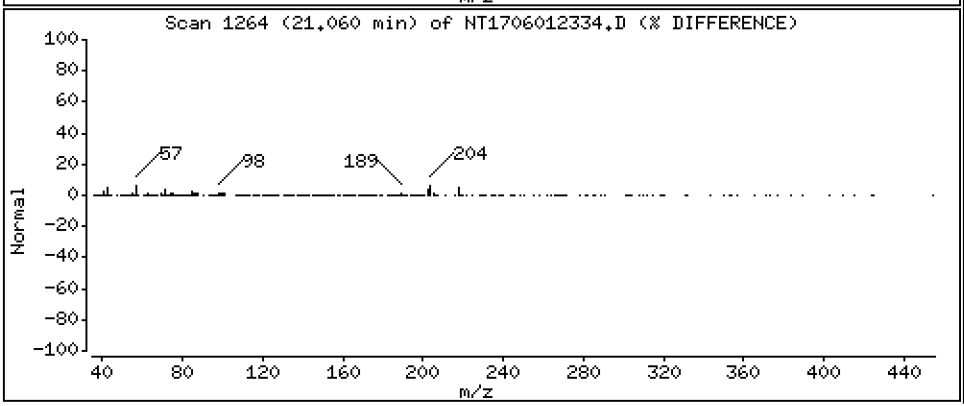
65 Pyrene

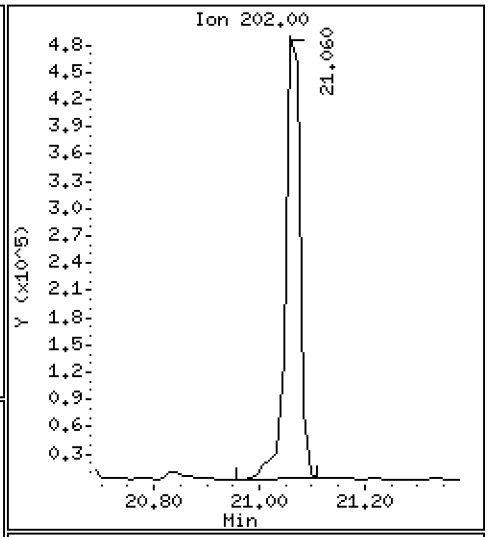
Concentration: 4.418 ug/mL

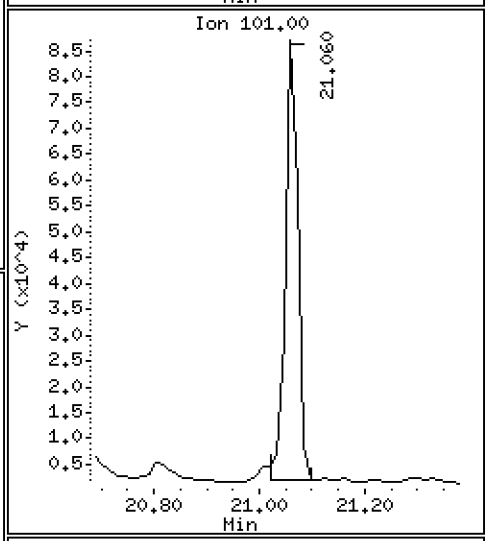


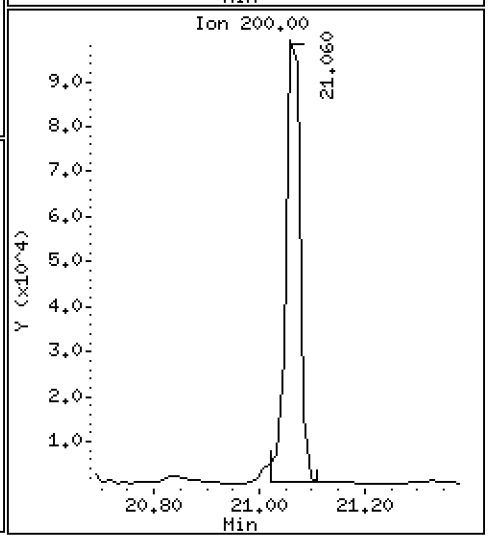












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

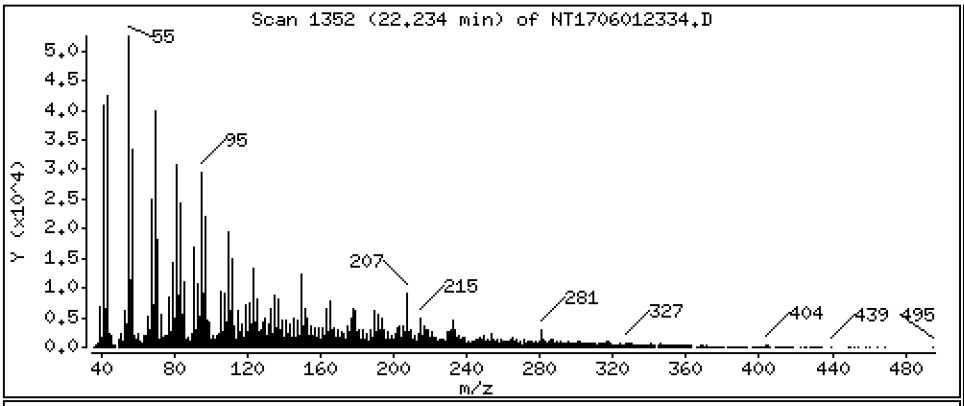
Operator: VTS

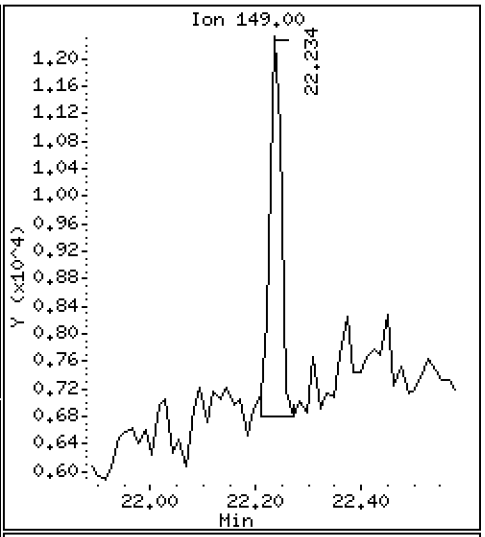
Column phase: ZB-5msi

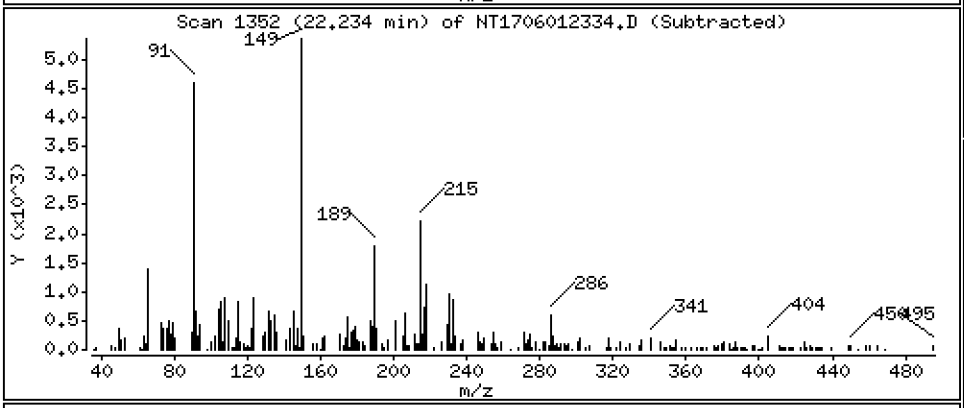
Column diameter: 0.25

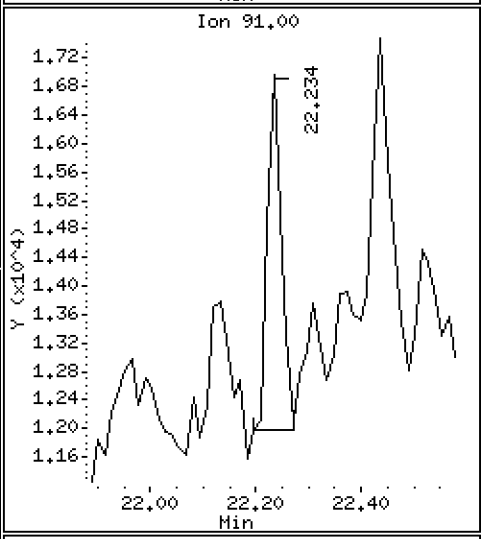
67 Butylbenzylphthalate

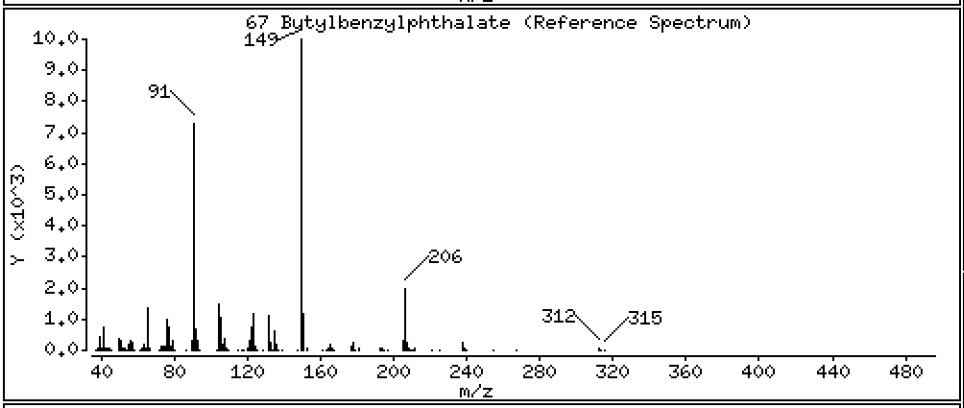
Concentration: 0.09477 ug/mL

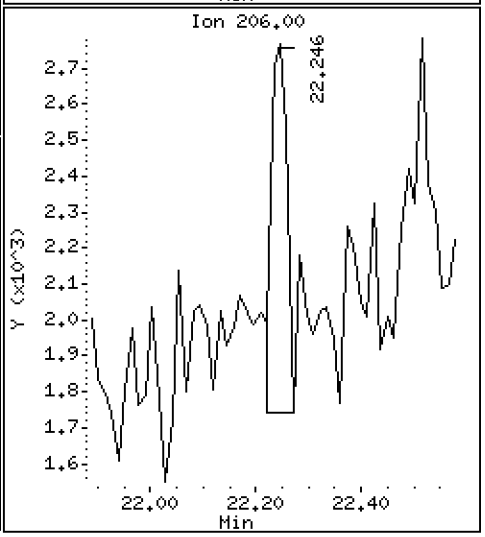


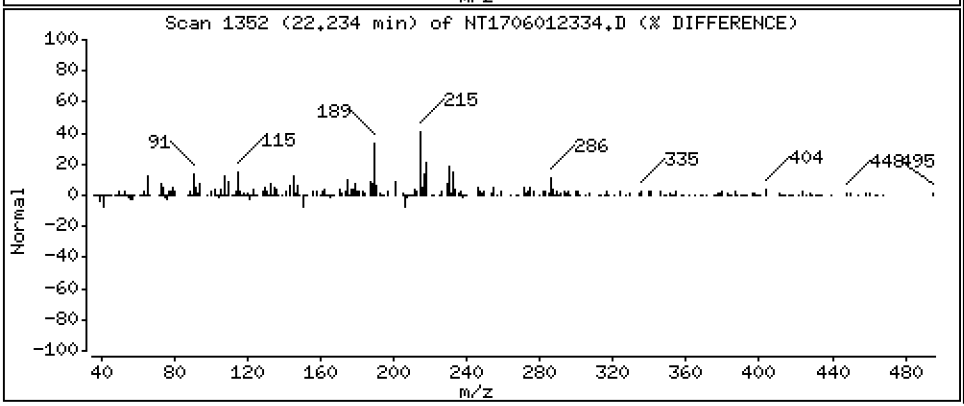












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

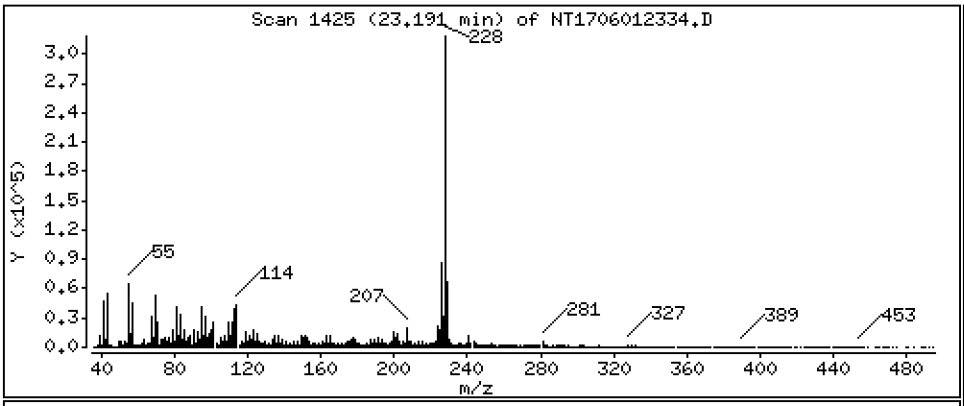
Operator: VTS

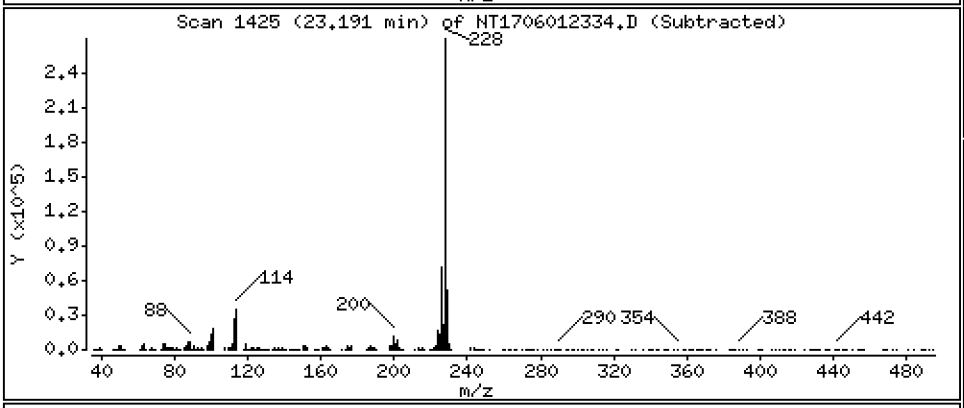
Column phase: ZB-5msi

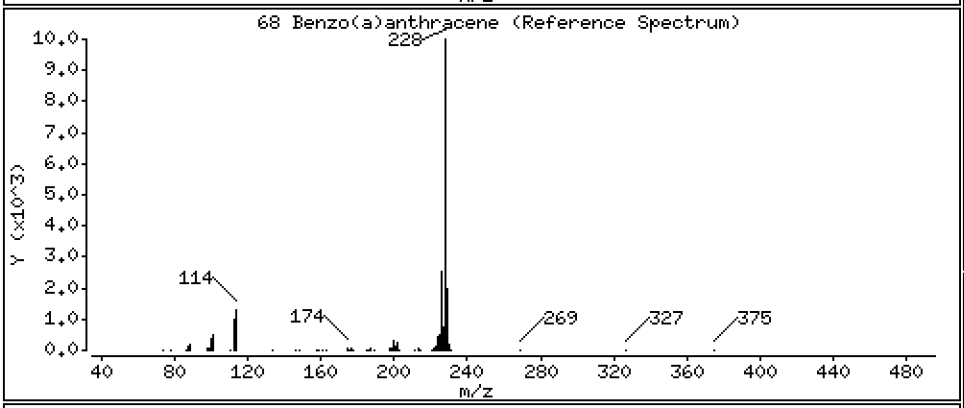
Column diameter: 0.25

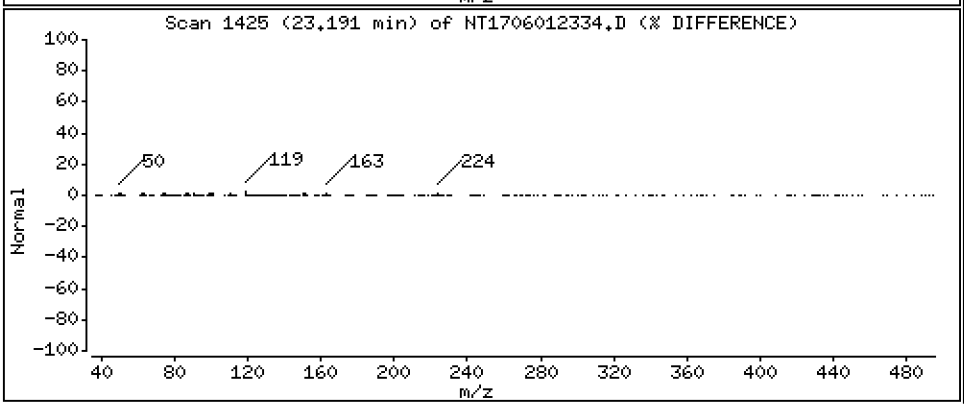
68 Benzo(a)anthracene

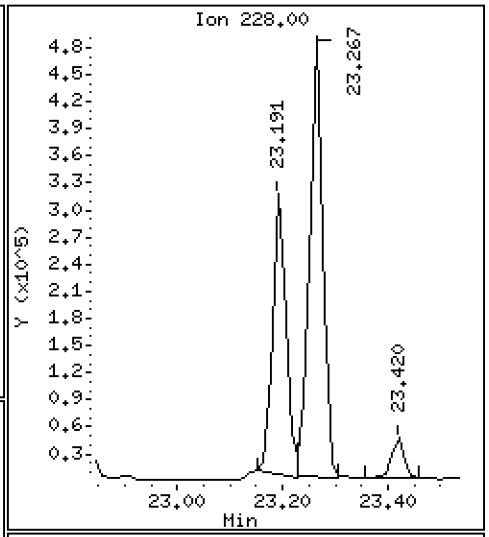
Concentration: 3.304 ug/mL

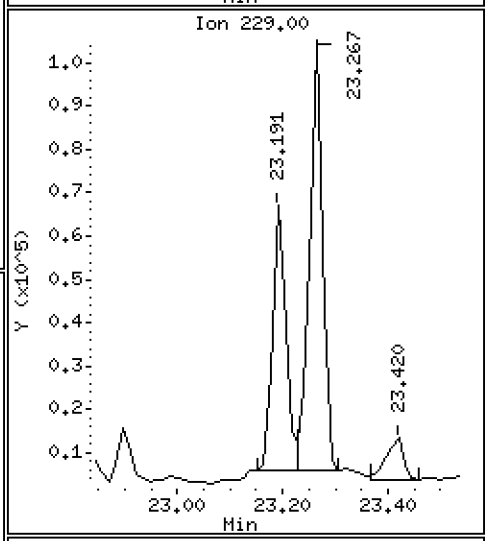


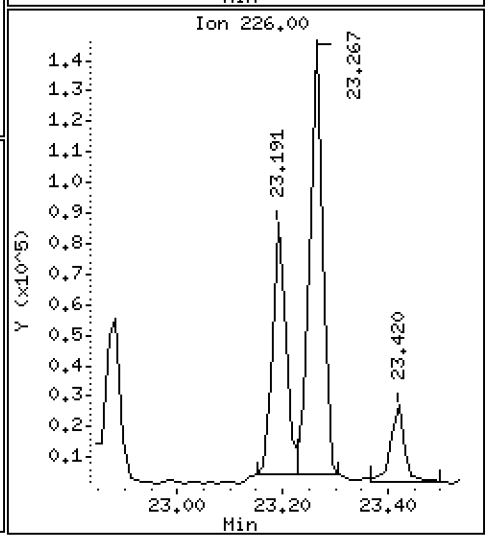












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

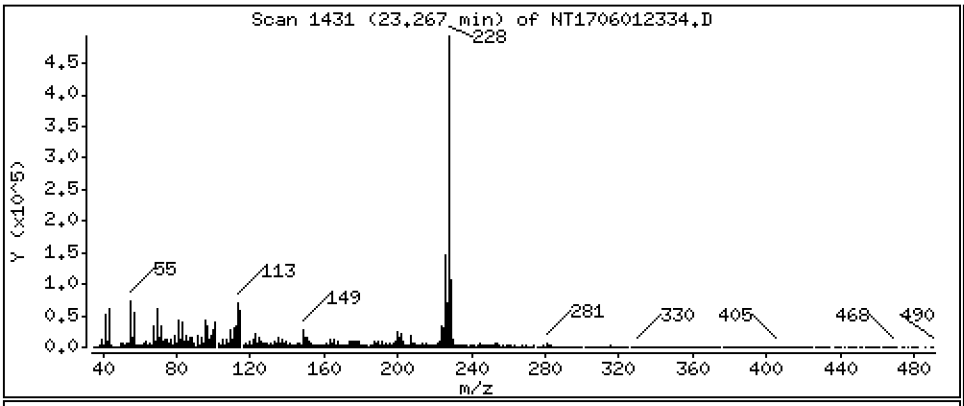
Operator: VTS

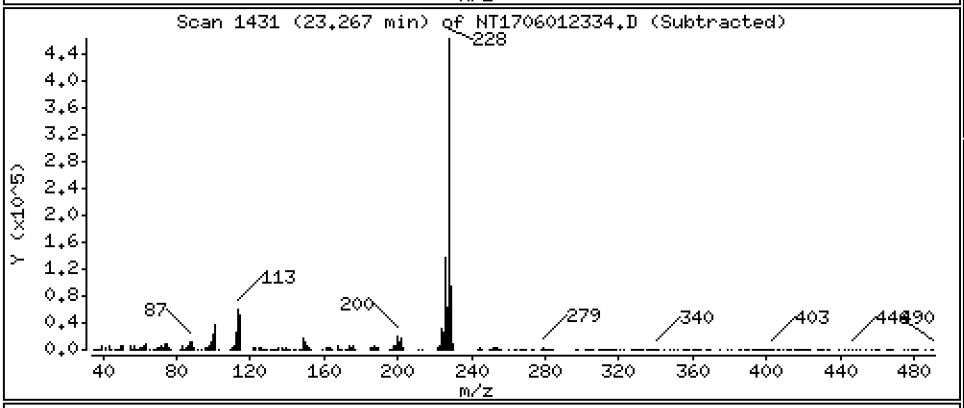
Column phase: ZB-5msi

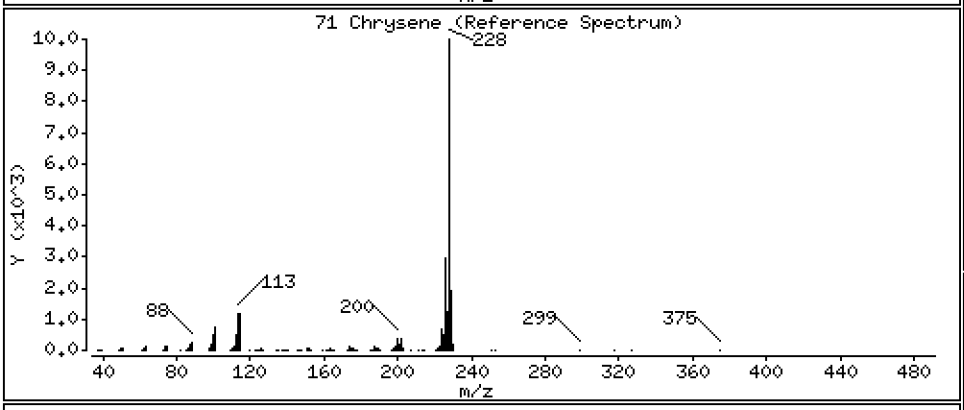
Column diameter: 0.25

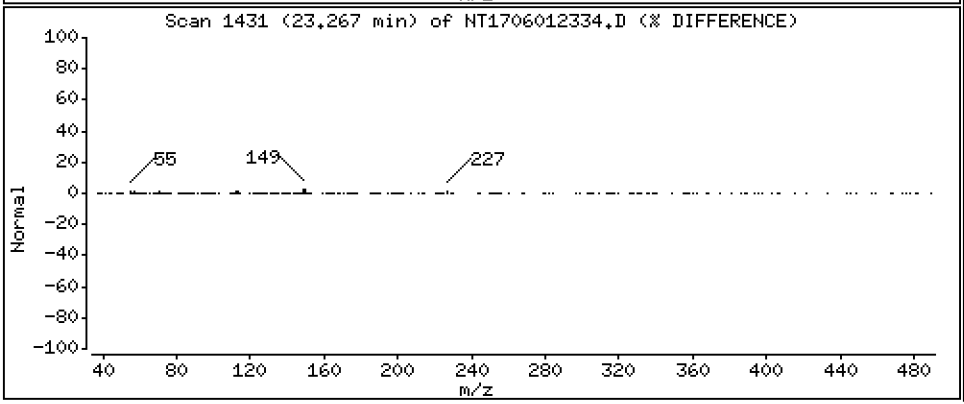
71 Chrysene

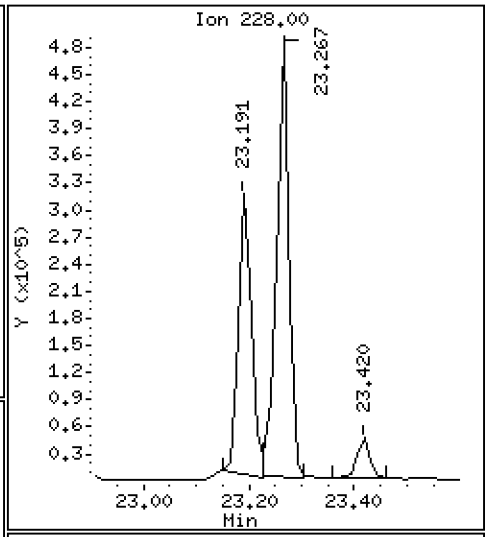
Concentration: 5.408 ug/mL

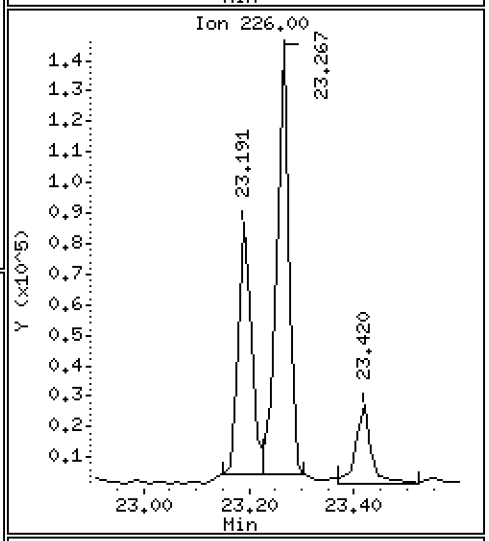


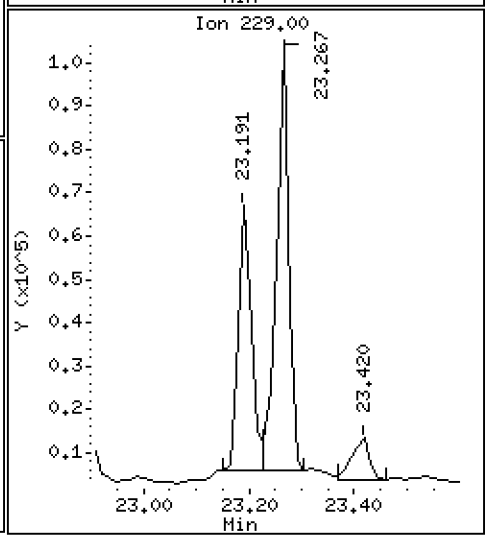












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

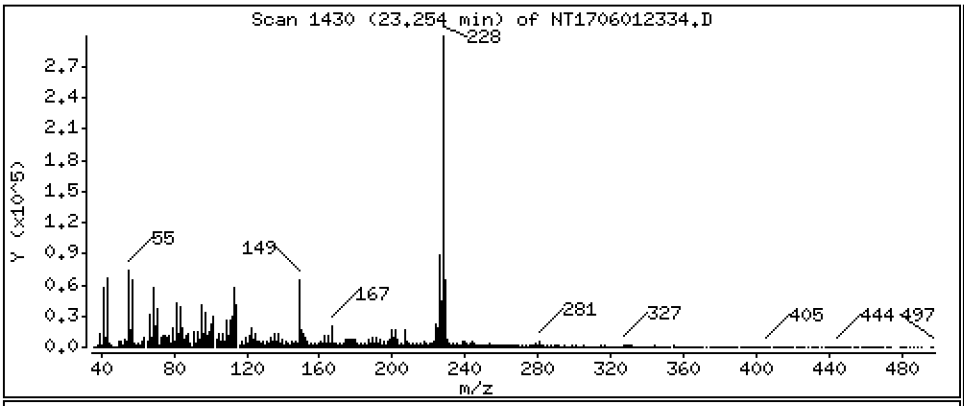
Operator: VTS

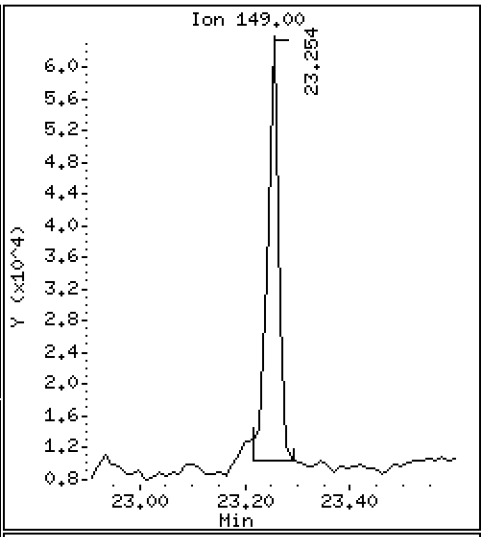
Column phase: ZB-5msi

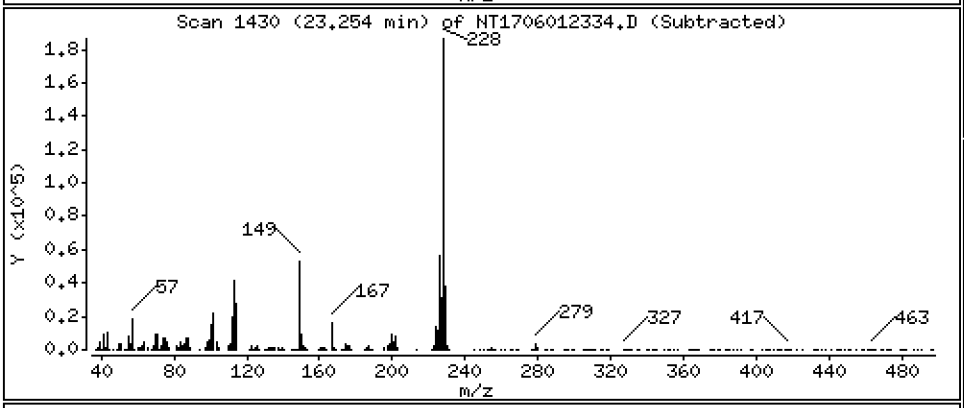
Column diameter: 0.25

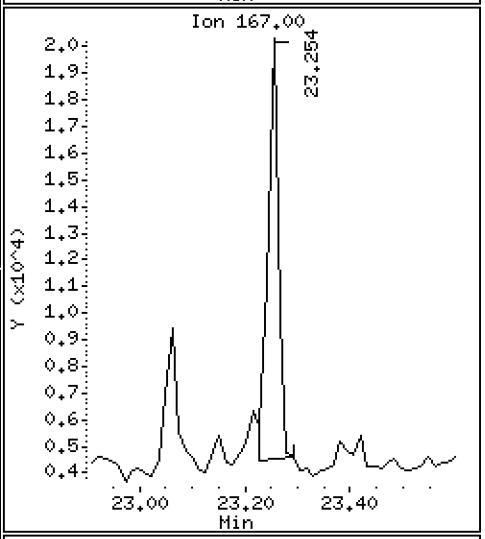
72 bis(2-Ethylhexyl)phthalate

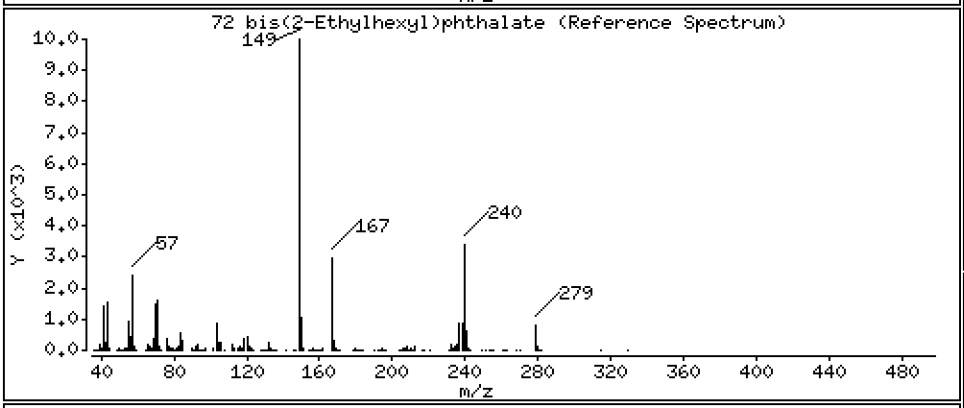
Concentration: 0.5835 ug/mL

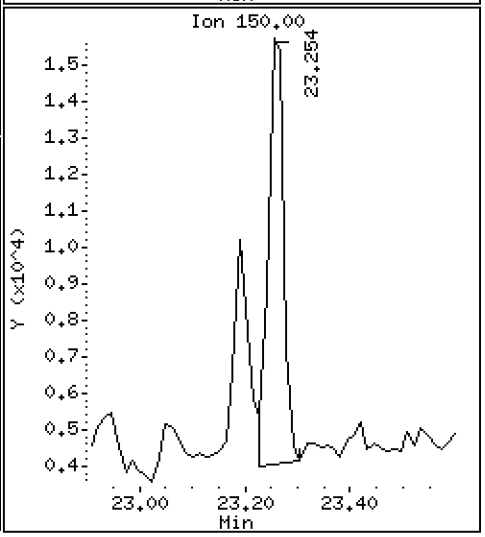


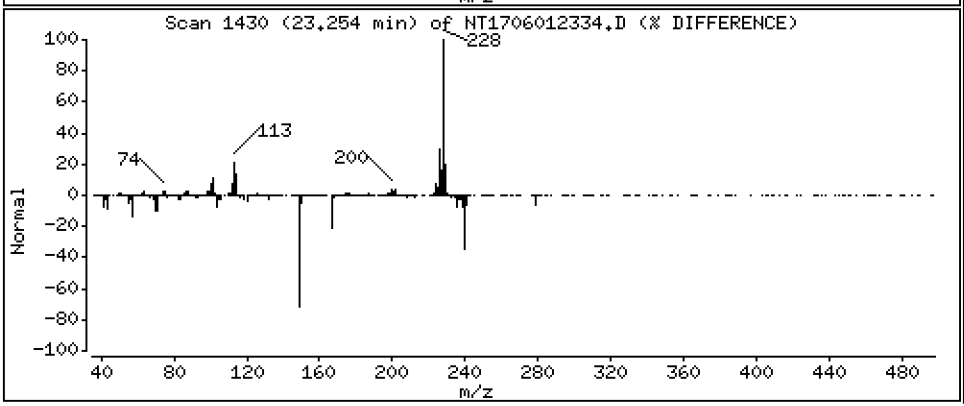












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

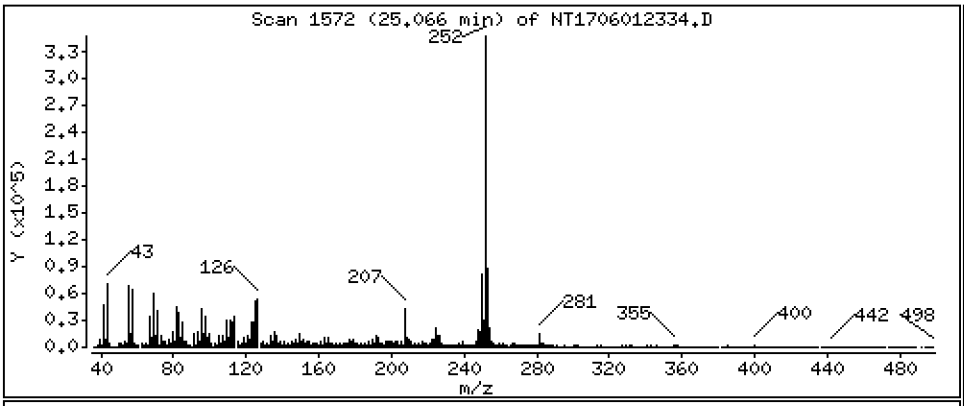
Operator: VTS

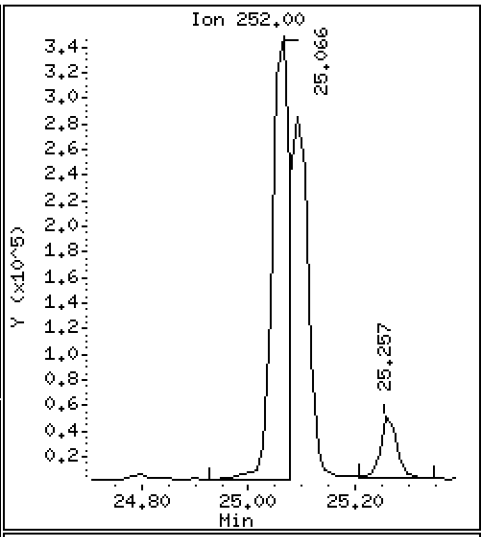
Column phase: ZB-5msi

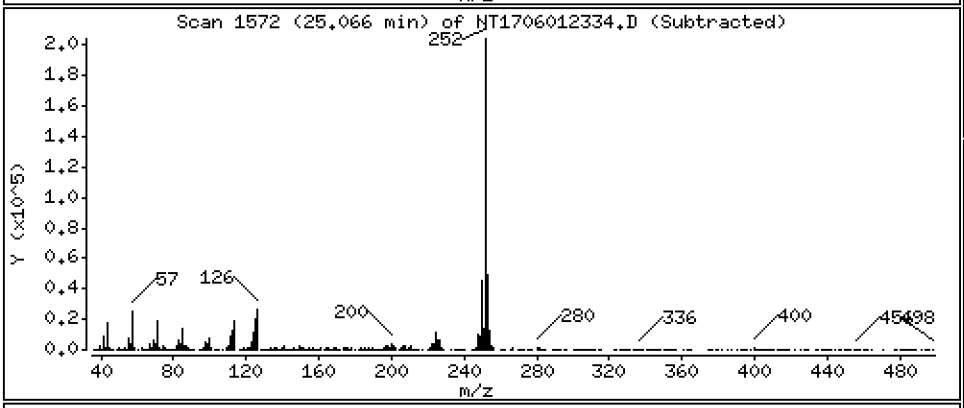
Column diameter: 0.25

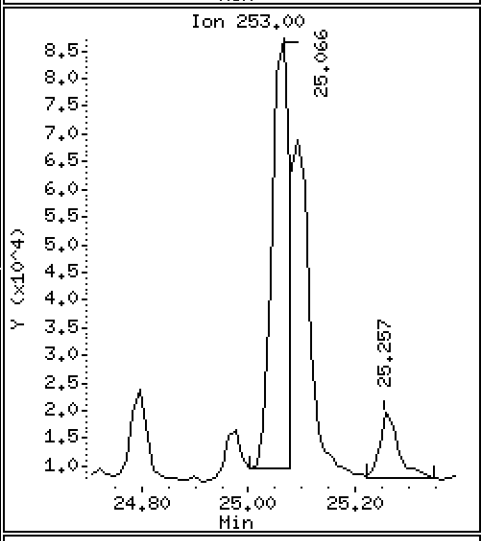
74 Benzo(b)fluoranthene

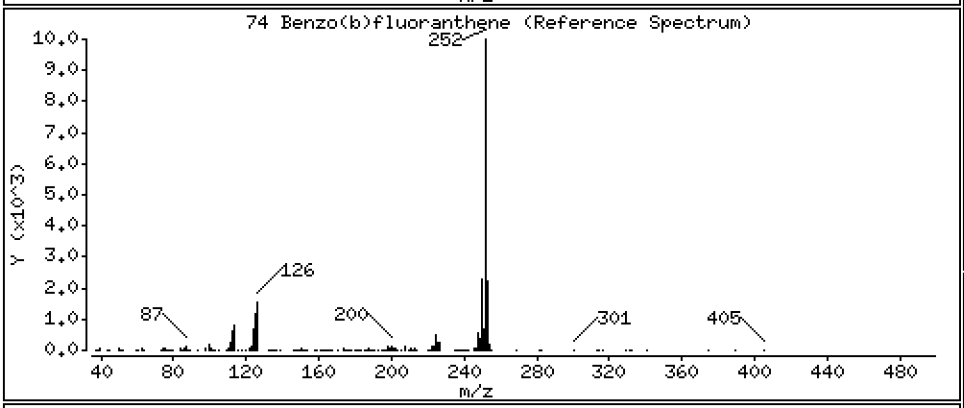
Concentration: 3.845 ug/mL

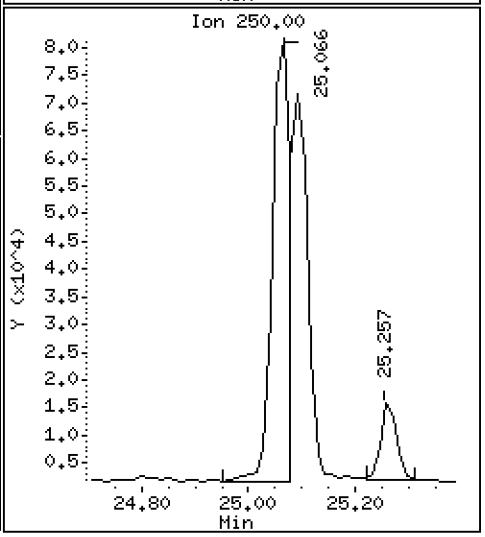


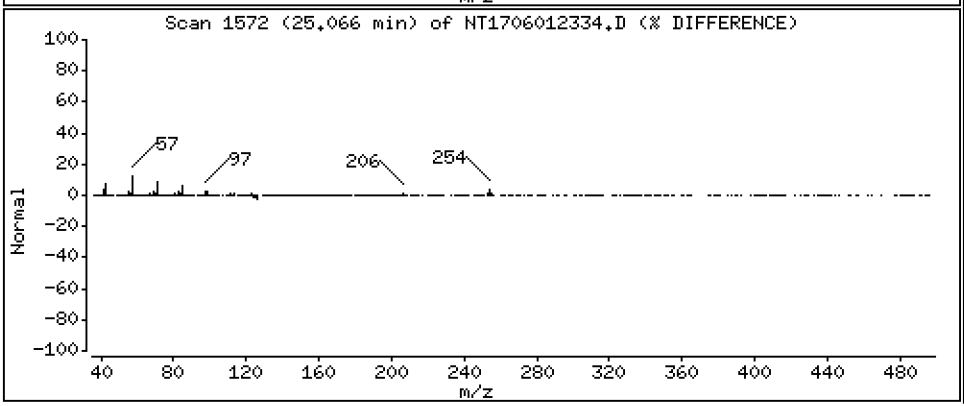












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

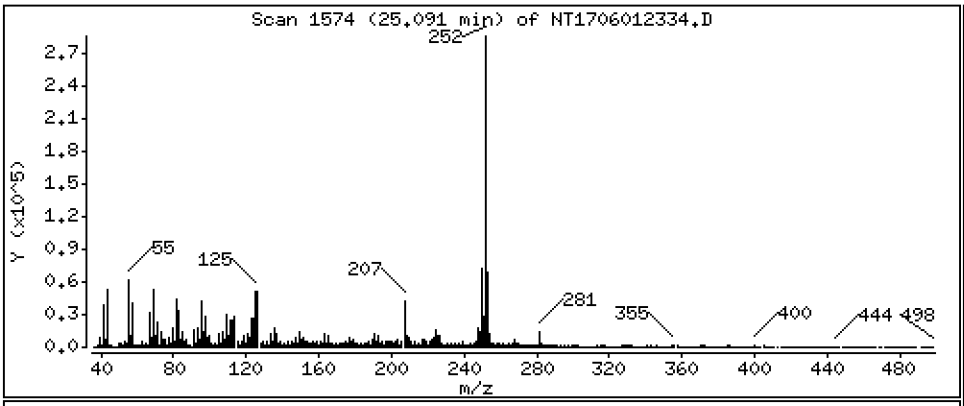
Operator: VTS

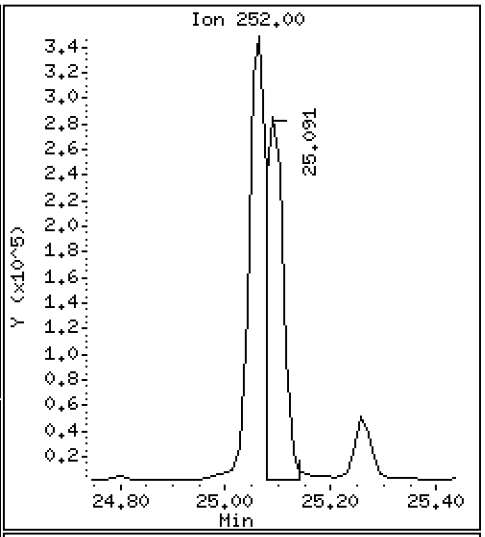
Column phase: ZB-5msi

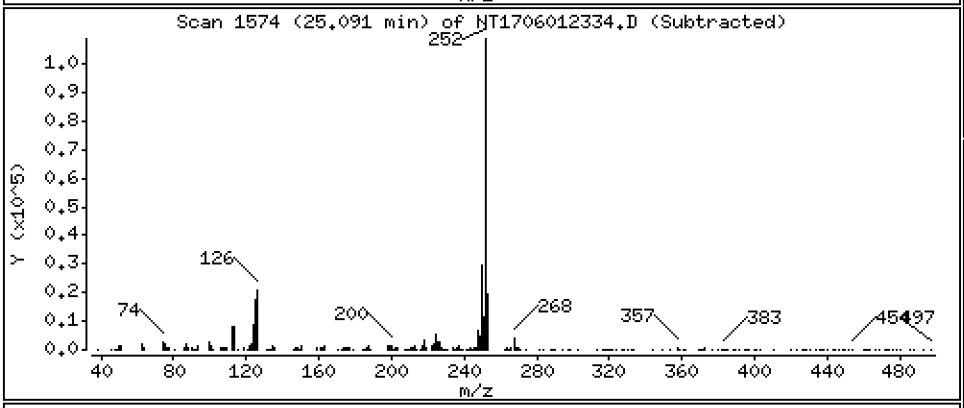
Column diameter: 0.25

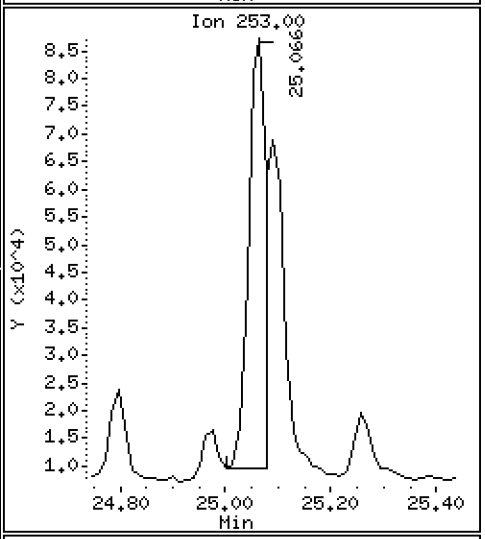
75 Benzo(k)fluoranthene

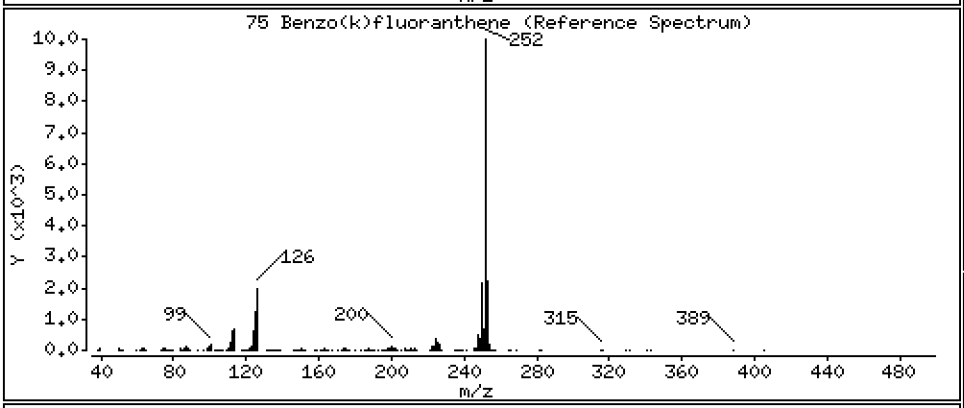
Concentration: 3.343 ug/mL

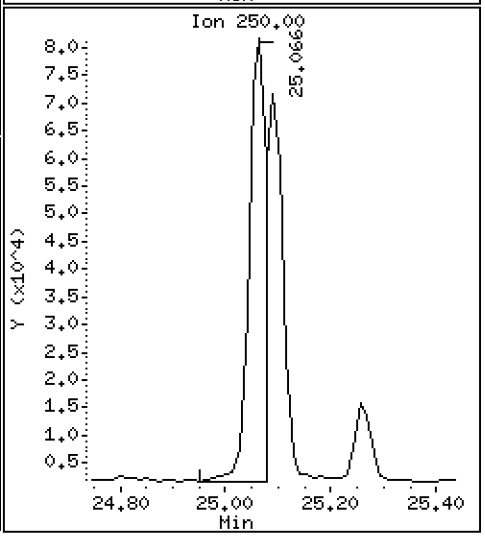


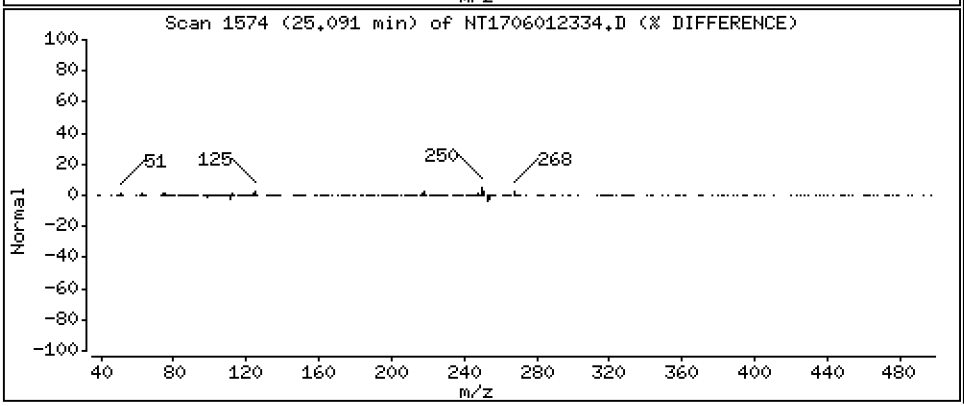












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

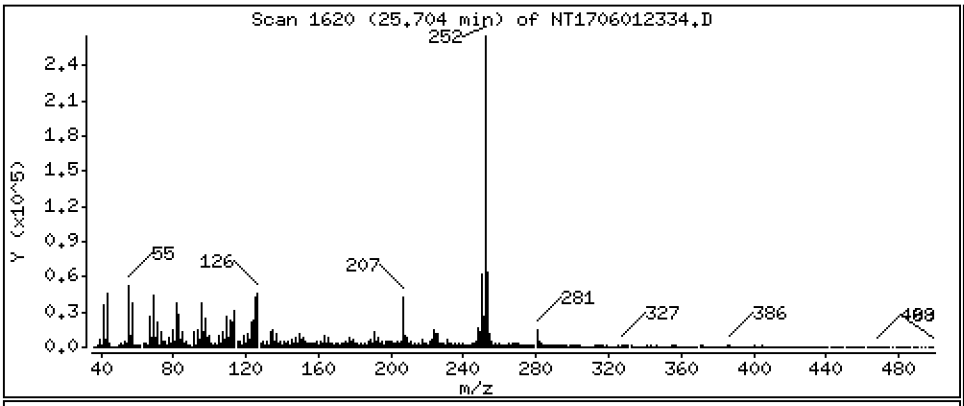
Operator: VTS

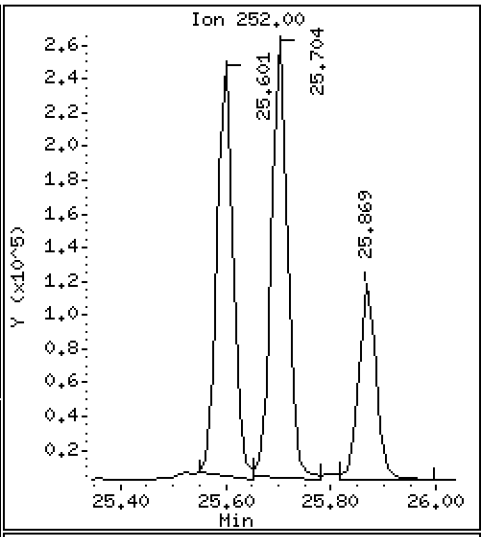
Column phase: ZB-5msi

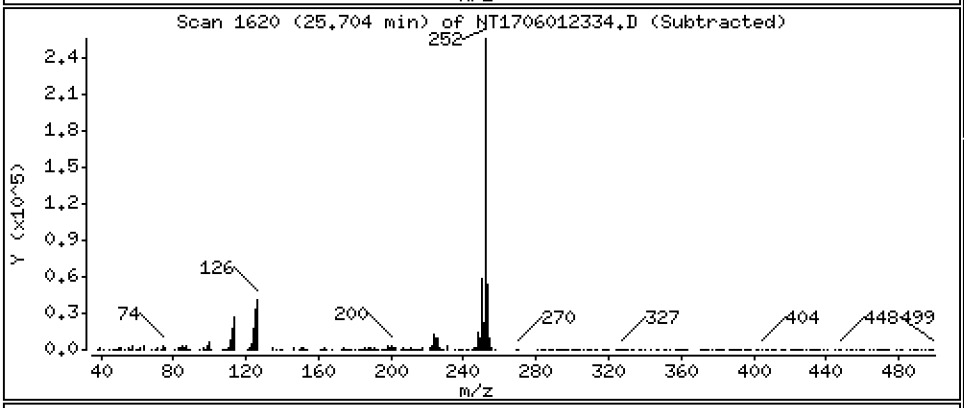
Column diameter: 0.25

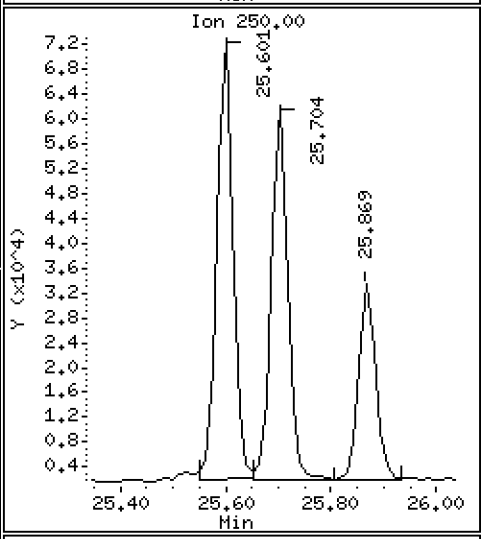
76 Benzo(a)pyrene

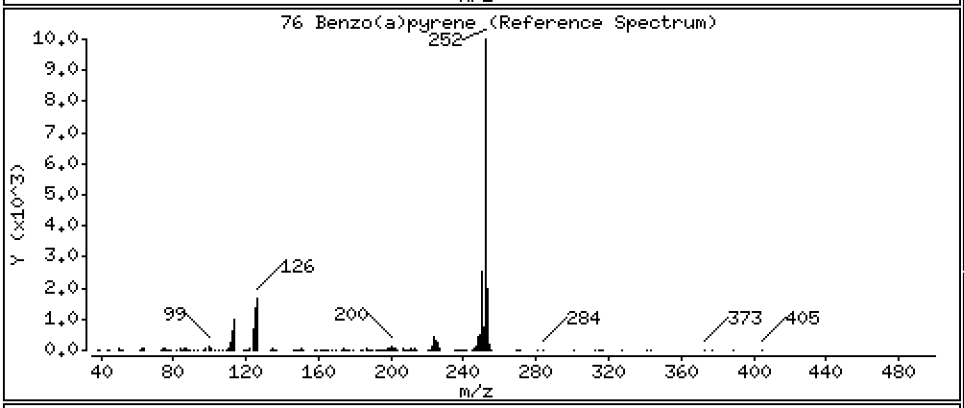
Concentration: 3.340 ug/mL

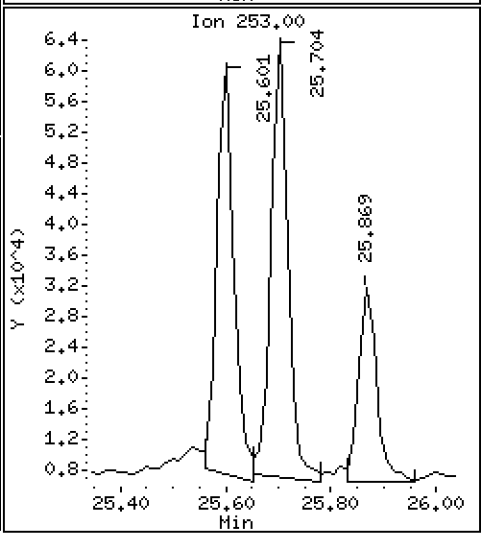


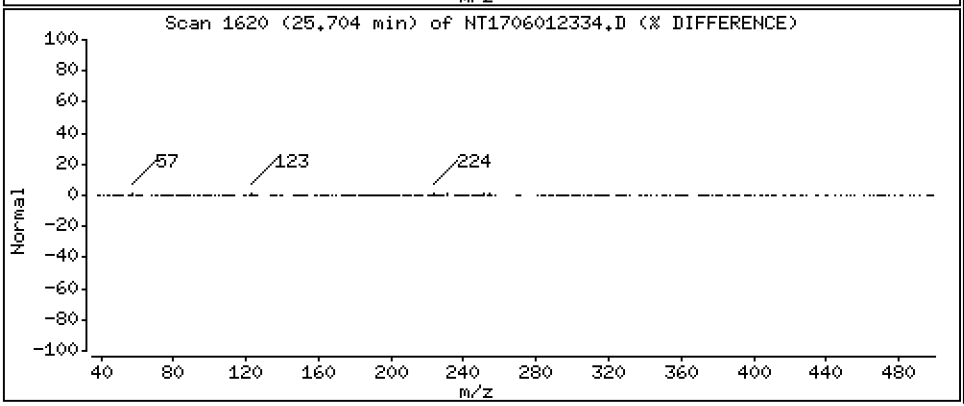












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

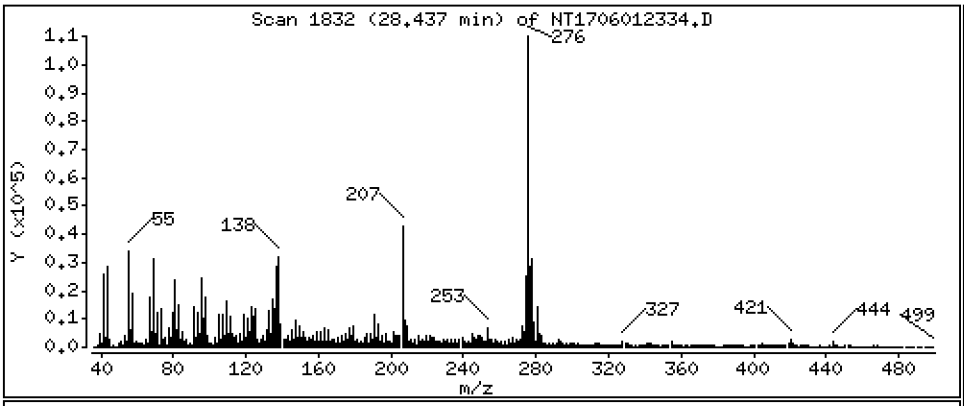
Operator: VTS

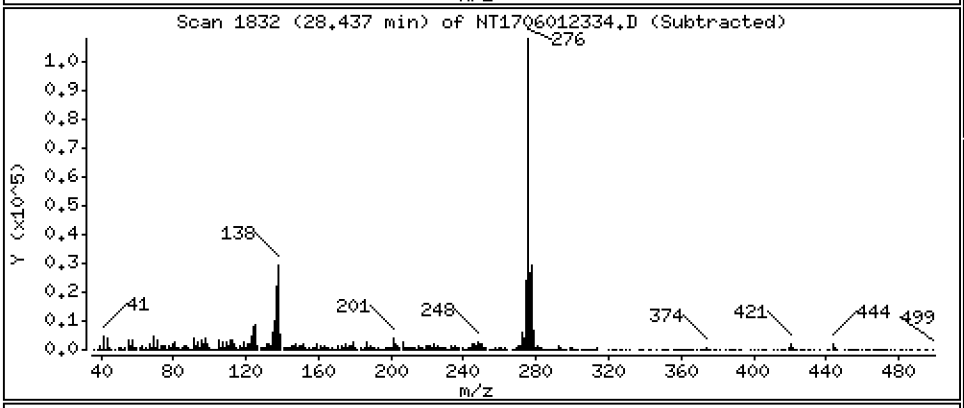
Column phase: ZB-5msi

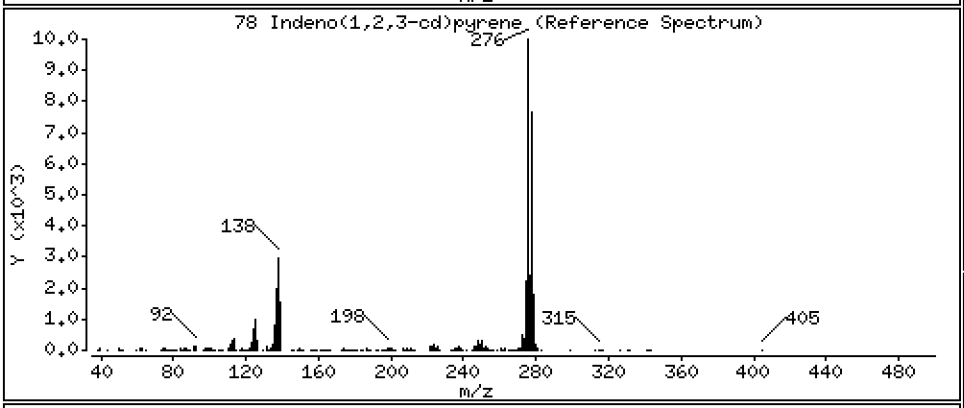
Column diameter: 0.25

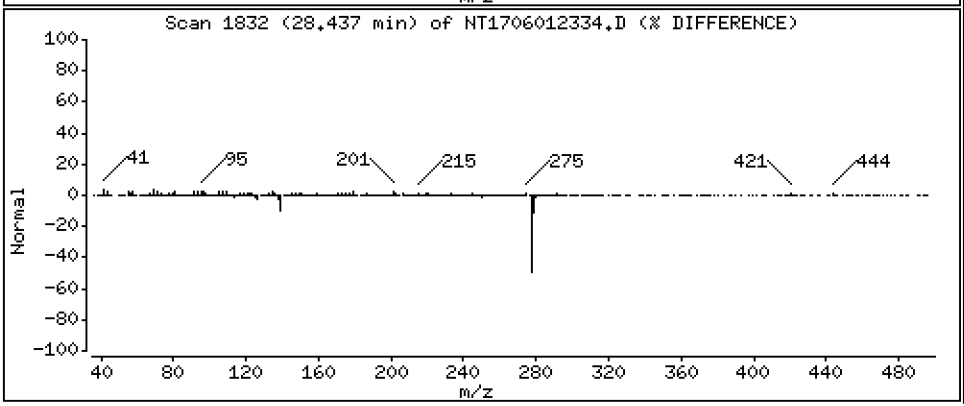
78 Indeno(1,2,3-cd)pyrene

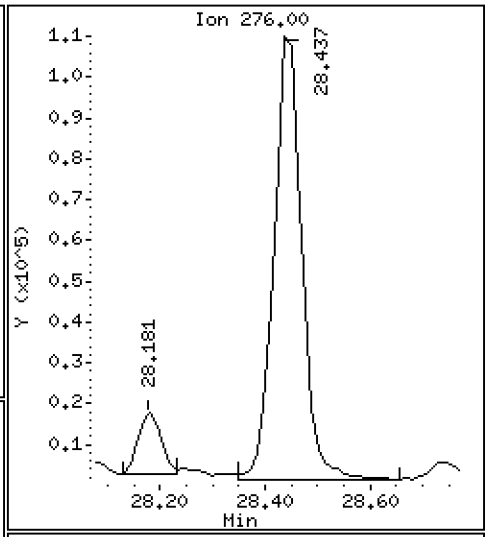
Concentration: 2.041 ug/mL

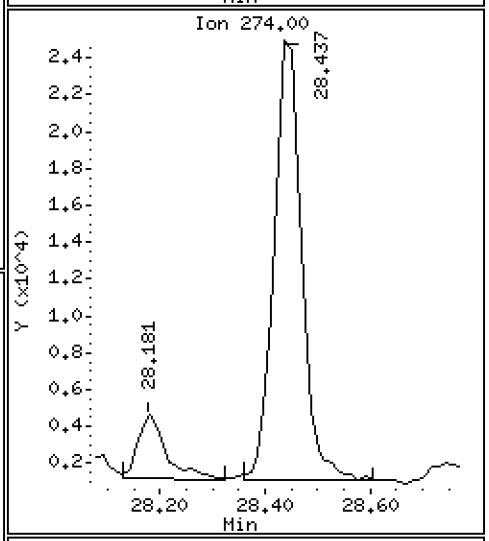


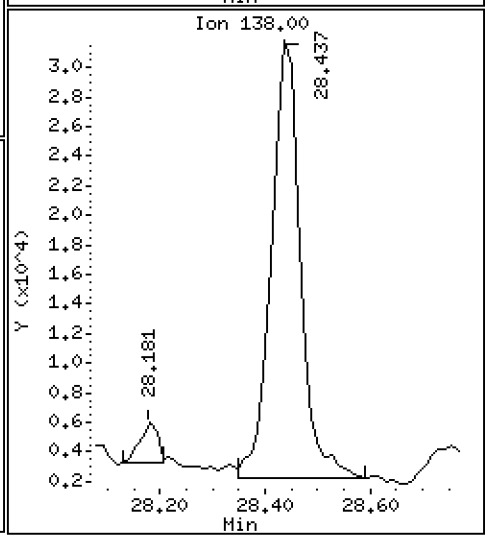












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

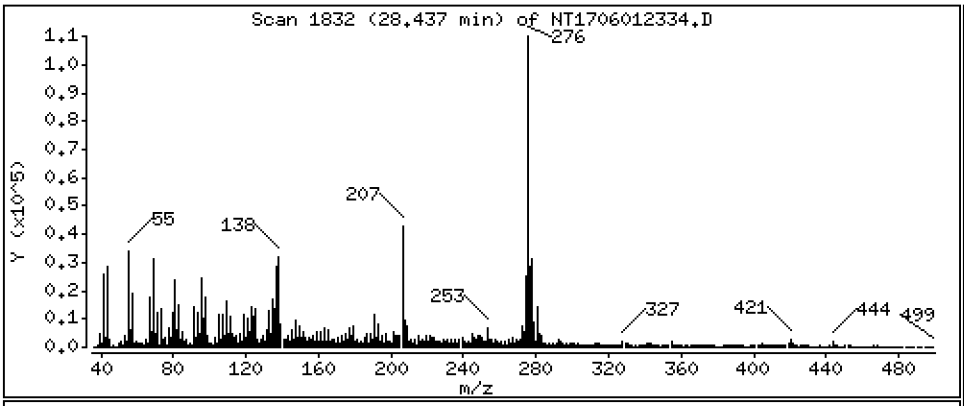
Operator: VTS

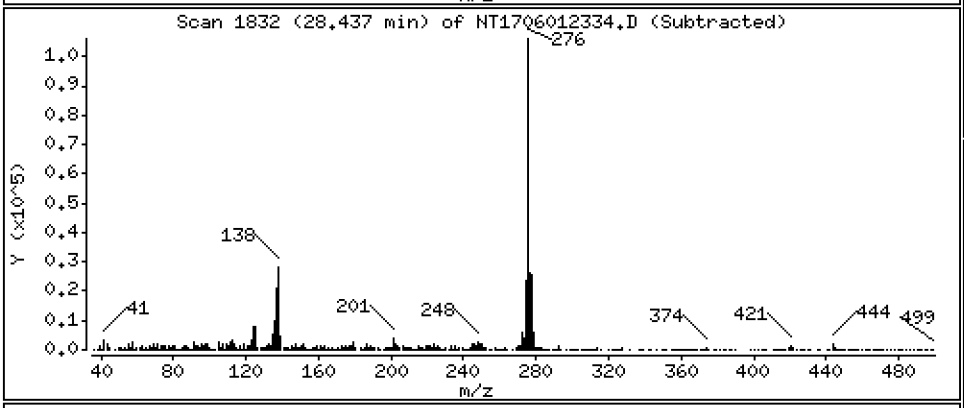
Column phase: ZB-5msi

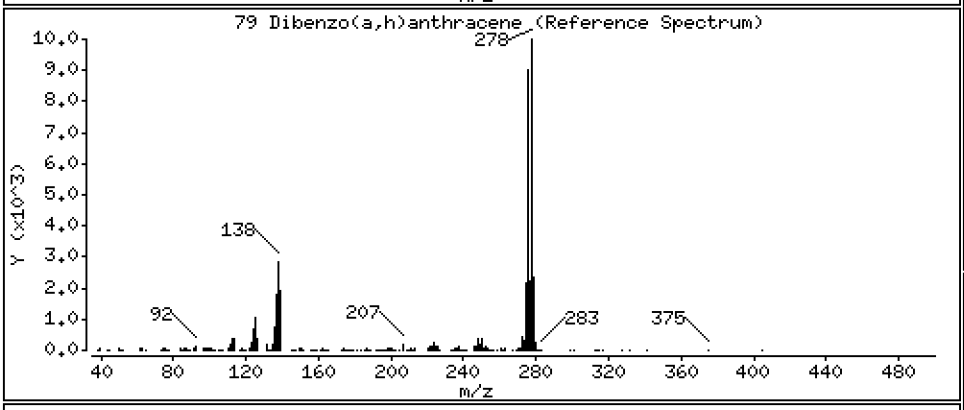
Column diameter: 0.25

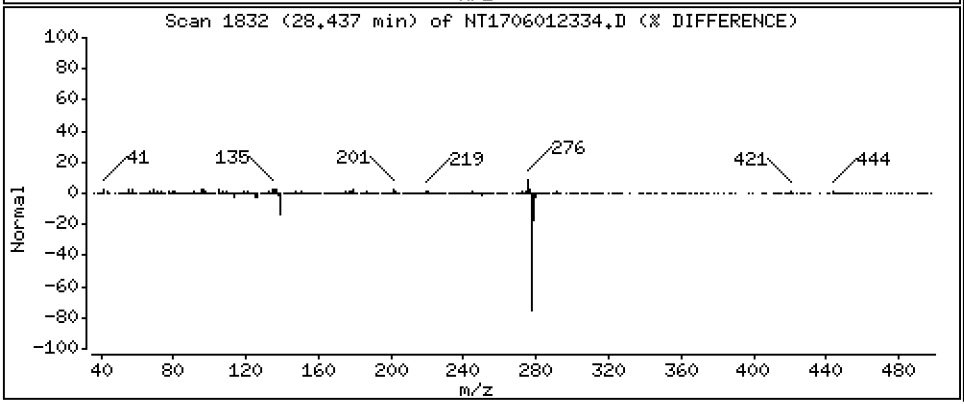
79 Dibenzo(a,h)anthracene

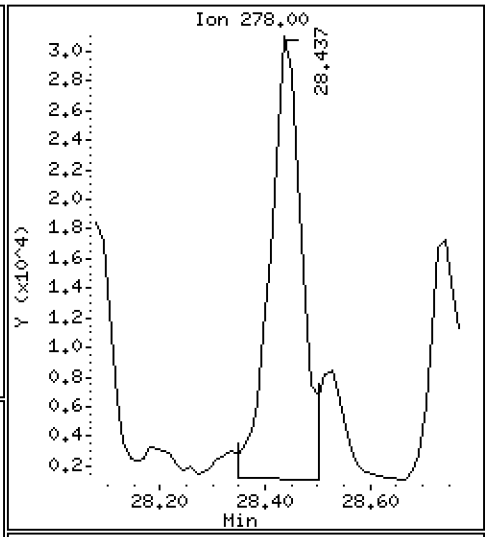
Concentration: 0.7572 ug/mL

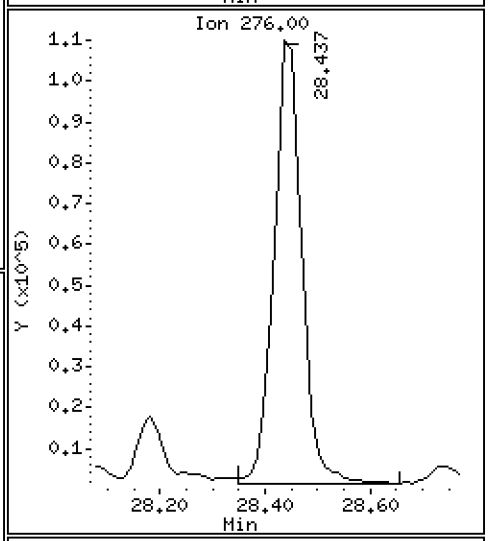


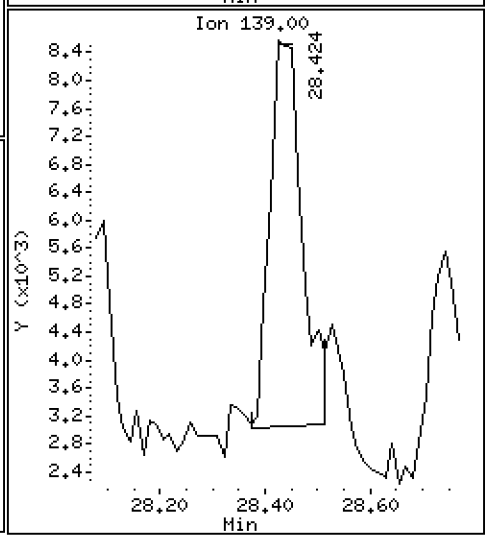












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

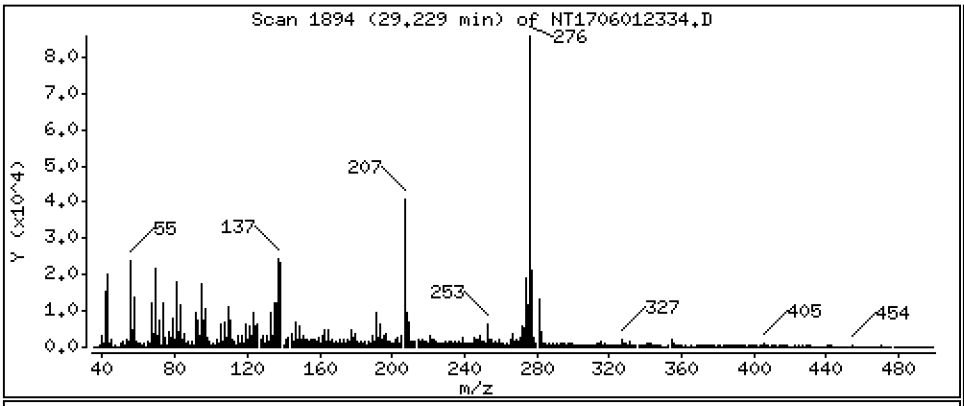
Operator: VTS

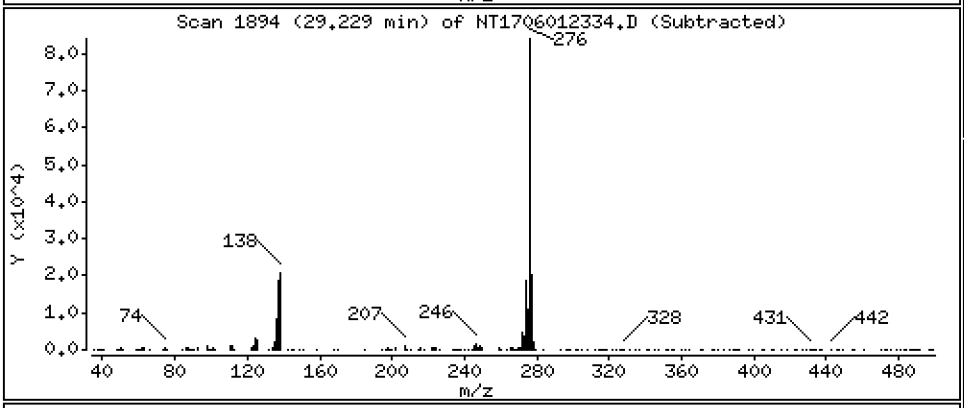
Column phase: ZB-5msi

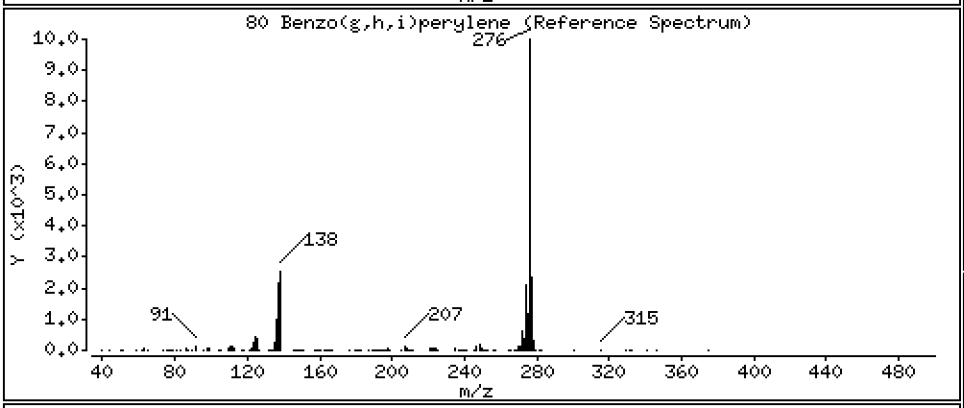
Column diameter: 0.25

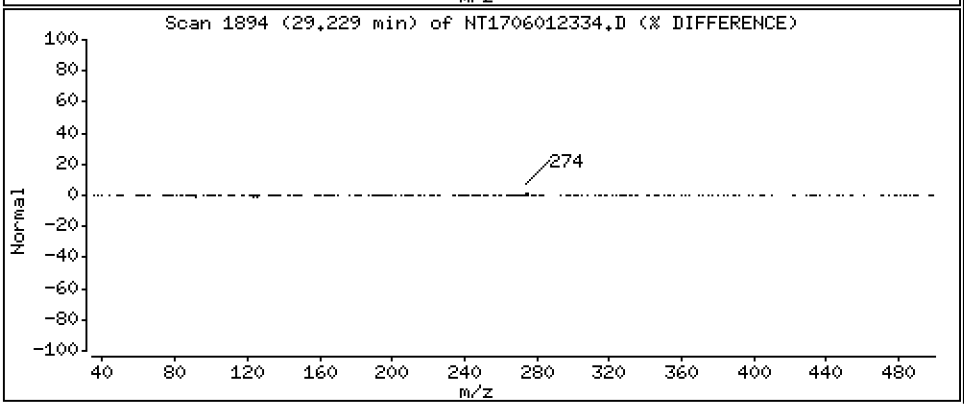
80 Benzo(g,h,i)perylene

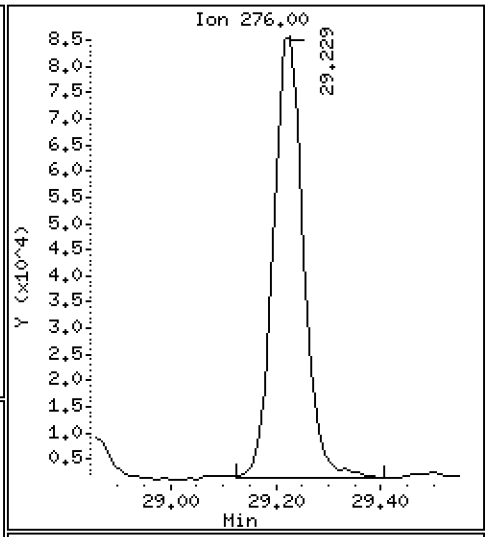
Concentration: 2.136 ug/mL

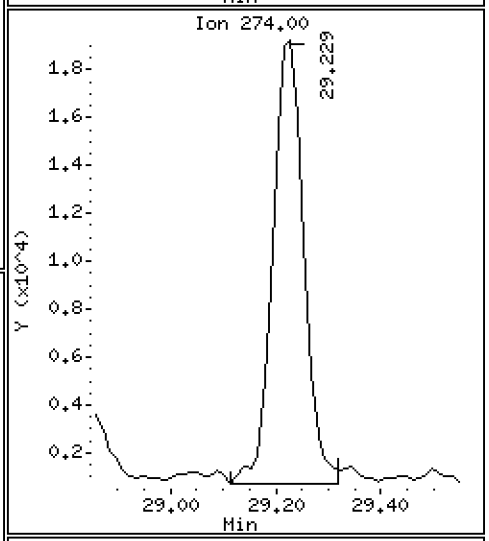


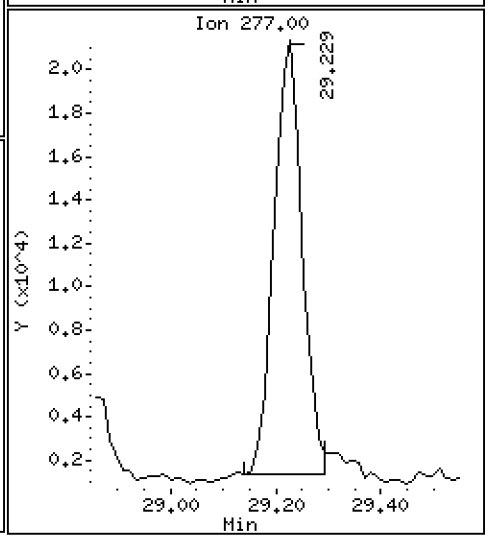












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

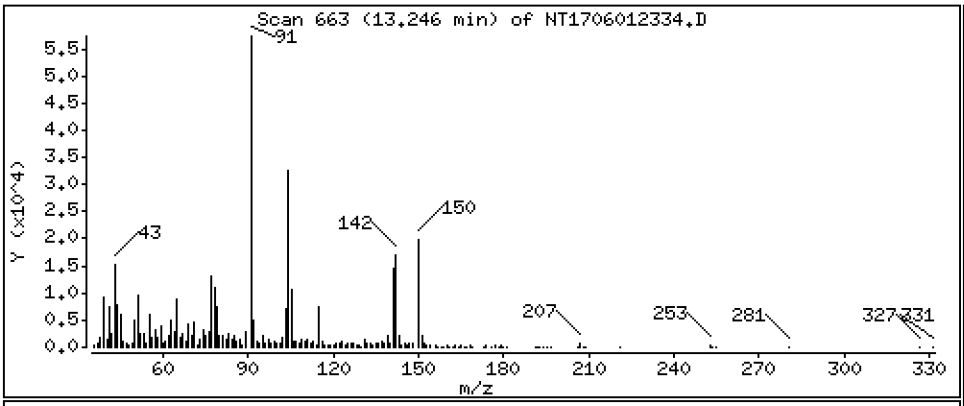
Operator: VTS

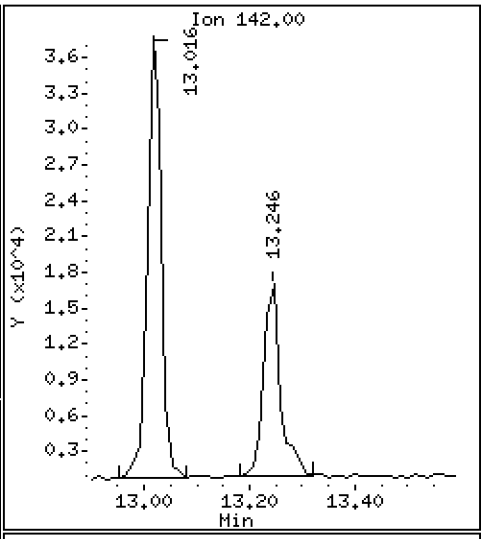
Column phase: ZB-5msi

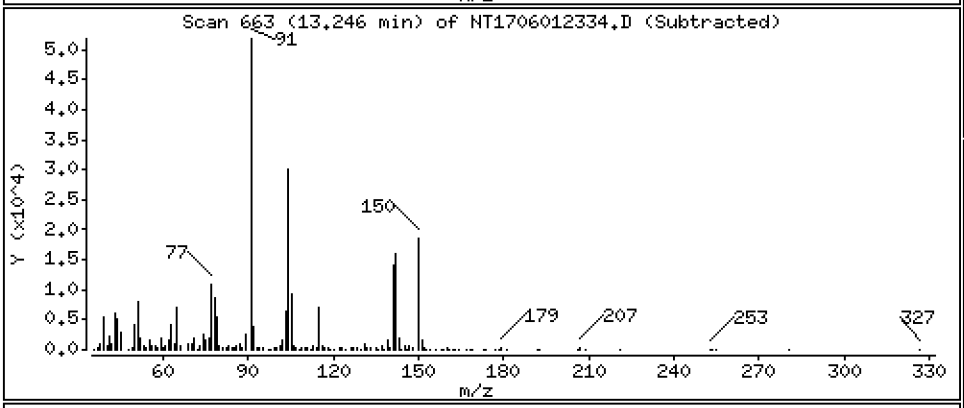
Column diameter: 0.25

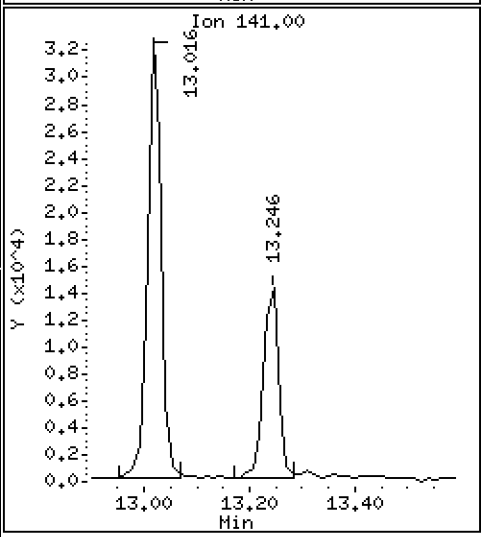
105 1-methylnaphthalene

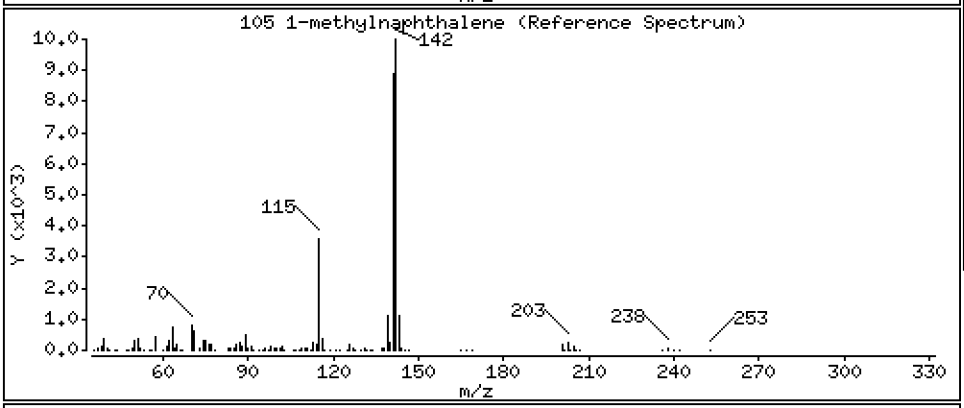
Concentration: 0.2163 ug/mL

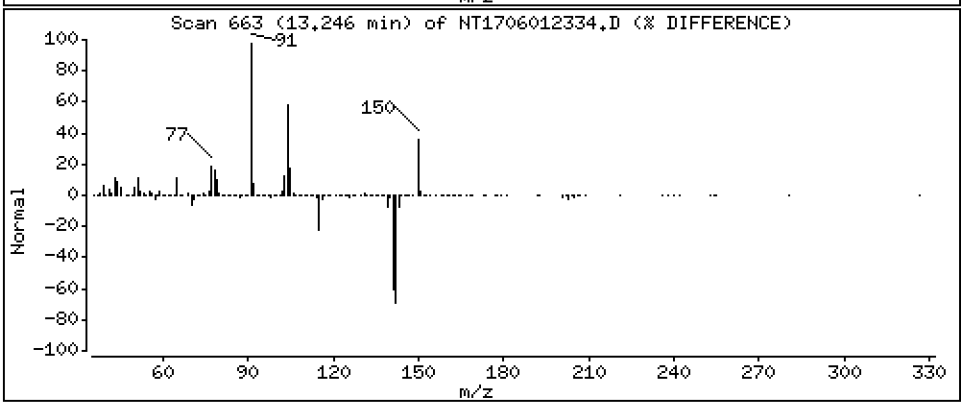












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

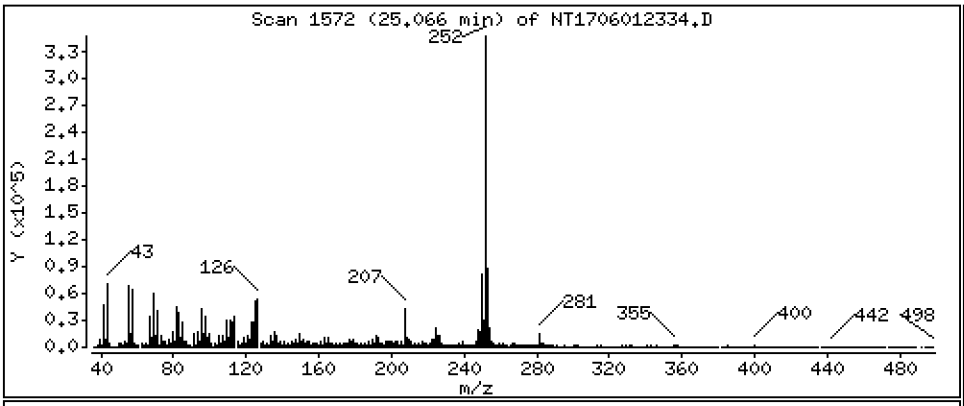
Operator: VTS

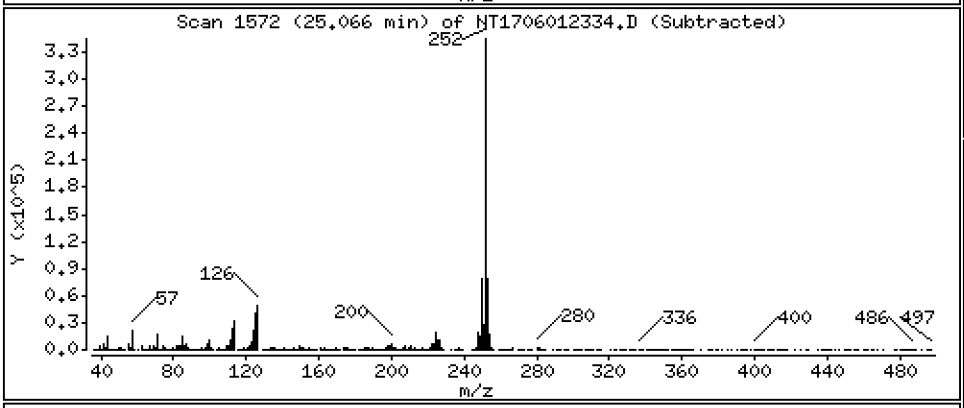
Column phase: ZB-5msi

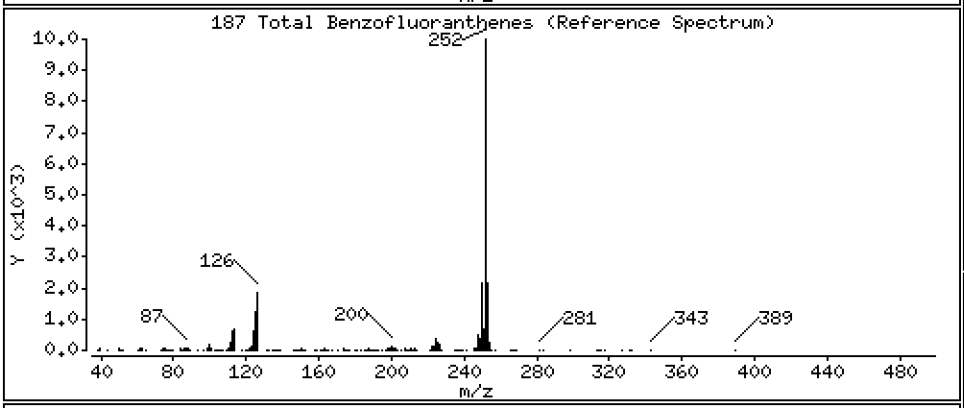
Column diameter: 0.25

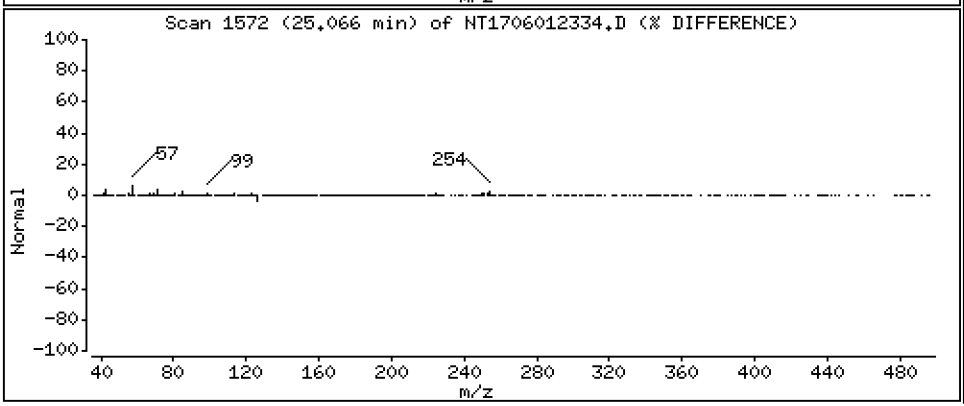
187 Total Benzofluoranthenes

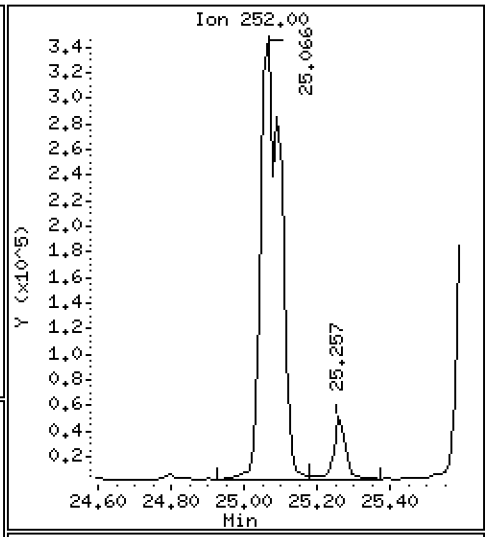
Concentration: 6.907 ug/mL

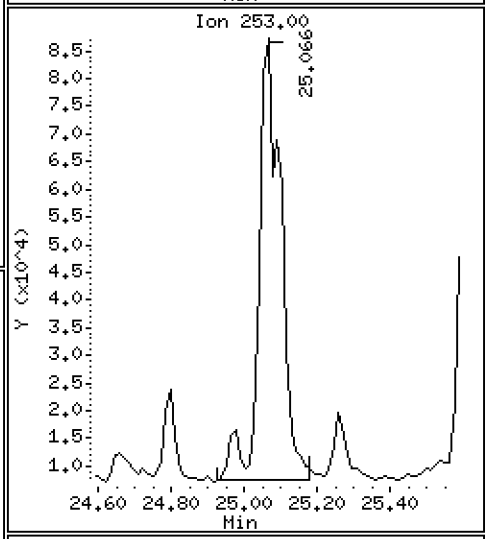


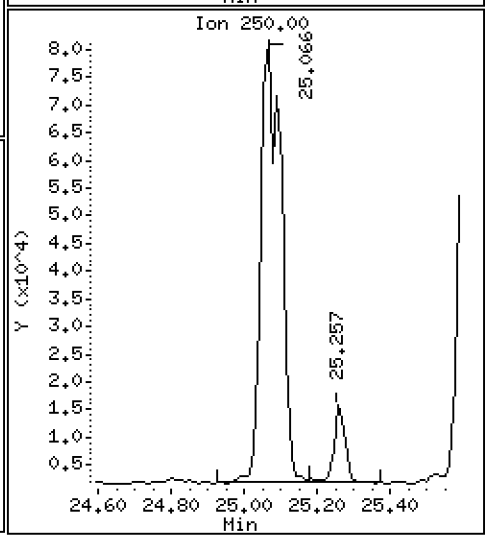












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012334.D
Lab Smp Id: 23E0009-03
Inj Date : 02-JUN-2023 08:32
Operator : VTS Inst ID: nt17.i
Smp Info : 23E0009-03
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.944	(0.761)	150925	1.86892	1.869
$	2 Phenol-d5	99	8.524	8.511	(0.933)	294669	2.75729	2.757
	3 Phenol	94	8.537	8.536	(0.934)	577747	5.10399	5.104
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	291170	3.40142	3.401
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	246695	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	1937	0.02030	0.02030
$	10 1,2-Dichlorobenzene-d4	152	9.494	9.493	(1.039)	139438	2.31749	2.317
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.442	9.417	(1.034)	34043	0.64596	0.6460
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	9.647	9.634	(1.056)	1909	0.02295	0.02295
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.915	9.902	(1.085)	39005	0.46048	0.4605
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	267877	2.59267	2.593
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.090	11.192	(0.956)	44635	0.71947	0.7195(H)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.601	11.600	(1.000)	907825	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	750999	3.00820	3.008
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.016	13.016	(1.122)	70943	0.39689	0.3969
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.794	13.793	(0.908)	614592	3.28242	3.282
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	14.878	14.878	(0.980)	60714	0.25170	0.2517
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.184	15.184	(1.000)	475279	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.248	15.247	(1.004)	62059	0.41157	0.4116
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.579	15.579	(1.026)	36370	0.17282	0.1728
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.127	16.140	(1.062)	20254	0.12700	0.1270
	49	Fluorene	166	16.280	16.280	(1.072)	63817	0.31896	0.3190
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	133883	6.45796	6.458
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.203	18.203	(1.000)	876698	4.00000	
	60	Phenanthrene	178	18.254	18.241	(1.003)	489687	1.91428	1.914
	61	Anthracene	178	18.344	18.343	(1.008)	290454	1.20940	1.209
	62	Carbazole	167	18.688	18.688	(1.027)	46236	0.31751	0.3175
	63	Di-n-butylphthalate	149	19.466	19.453	(1.069)	35171	0.12128	0.1213
	64	Fluoranthene	202	20.664	20.613	(0.890)	920608	4.38603	4.386(M)
	65	Pyrene	202	21.060	21.034	(0.907)	940015	4.41784	4.418(M)
$	66	Terphenyl-d14	244	21.327	21.315	(0.918)	612764	4.05108	4.051
	67	Butylbenzylphthalate	149	22.233	22.233	(0.957)	9025	0.09477	0.09477
	68	Benzo(a)anthracene	228	23.190	23.190	(0.998)	545925	3.30403	3.304
*	69	Chrysene-d12	240	23.228	23.215	(1.000)	448714	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.267	23.254	(1.002)	840818	5.40792	5.408
	72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	79646	0.58347	0.5835
*	134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	943475	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.065	25.052	(0.971)	824866	3.84462	3.845
	75	Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	677721	3.34341	3.343(M)
	76	Benzo(a)pyrene	252	25.703	25.690	(0.996)	564453	3.33976	3.340
*	77	Perylene-d12	264	25.818	25.805	(1.000)	541143	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.436	28.423	(1.101)	400199	2.04143	2.041
	79	Dibenzo(a,h)anthracene	278	28.436	28.423	(1.101)	124588	0.75723	0.7572
	80	Benzo(g,h,i)perylene	276	29.229	29.203	(1.132)	345697	2.13646	2.136
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.245	13.245	(1.142)	35867	0.21629	0.2163
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.065	25.091	(0.971)	1330206	6.90676	6.907
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012334.D
Lab Smp Id: 23E0009-03
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	246695	-4.01
27 Naphthalene-d8	932905	466453	1865810	907825	-2.69
42 Acenaphthene-d10	509574	254787	1019148	475279	-6.73
59 Phenanthrene-d10	912749	456375	1825498	876698	-3.95
69 Chrysene-d12	578011	289006	1156022	448714	-22.37
134 Di-n-octylphthala	1181490	590745	2362980	943475	-20.15
77 Perylene-d12	513683	256842	1027366	541143	5.35

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.23	0.06
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.82	0.05

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

REVIEW SUMMARY FOR FILE - NT1706012334.D

Lab ID: 23E0009-03
nt17.i, ABN.m, 02-JUN-2023 08:32

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.956	0.965	-0.0088	Benzoic acid

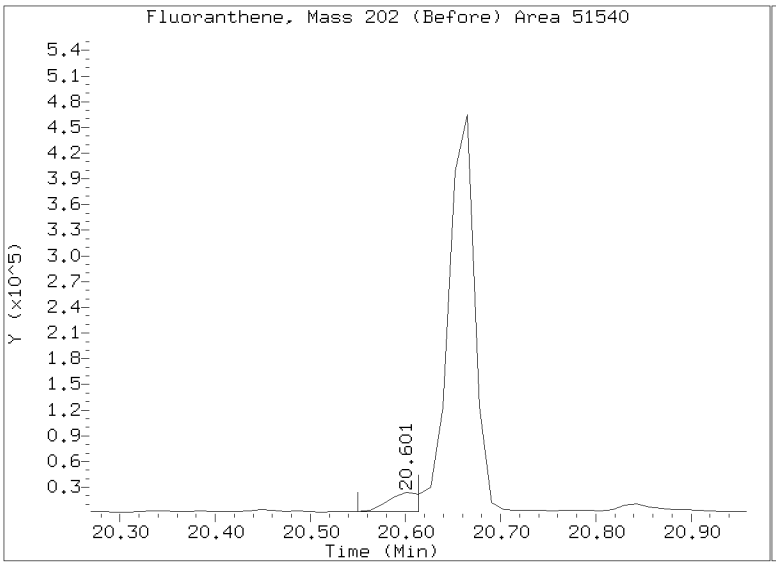
RRT check based on Ccal File: NT1706012320.D

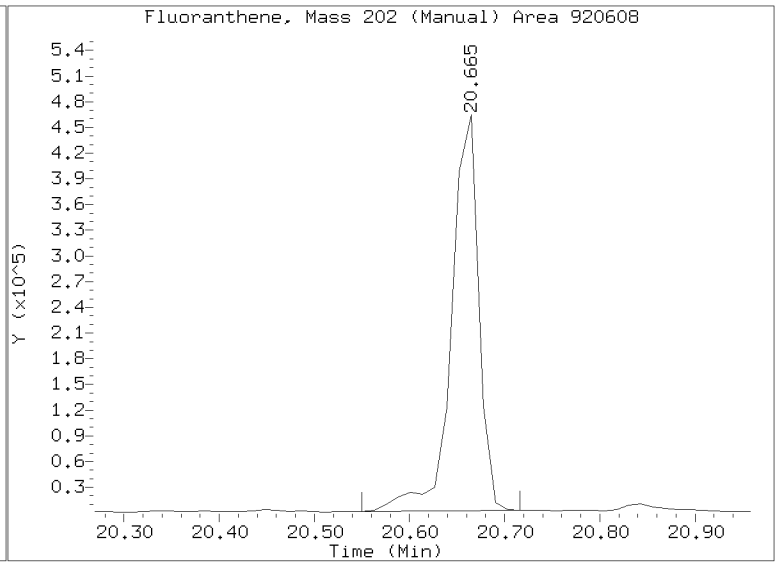
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

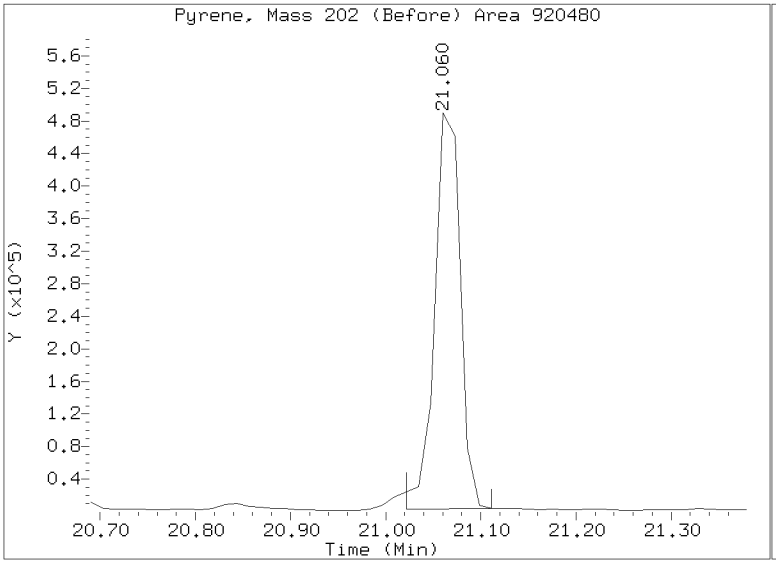
* Only compounds listed in the work order have been verified by the analyst *

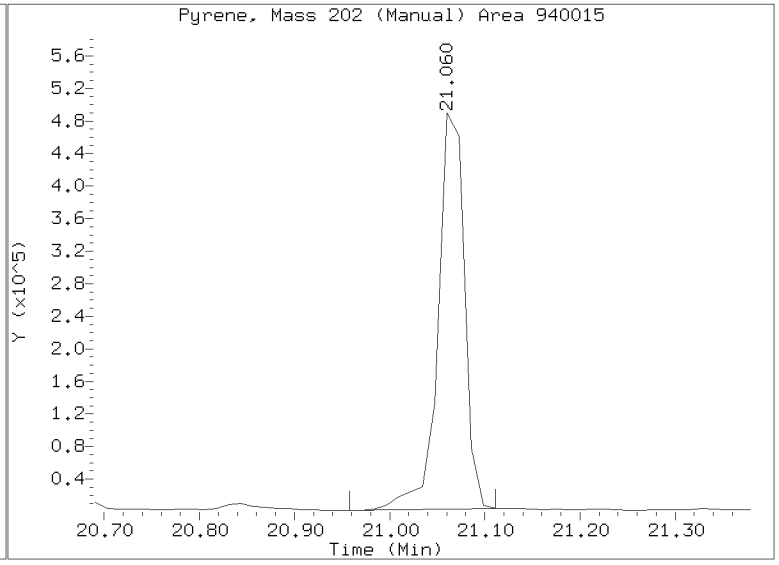
Quant Ion Manual Peak Adjustment Report

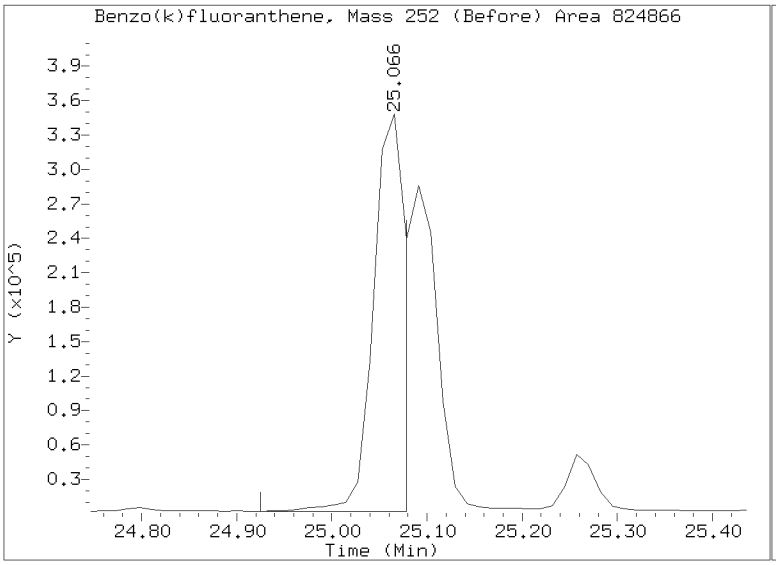
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012334.D
Injection Date: 02-JUN-2023 08:32
Lab ID:23E0009-03 Client ID:
Report Date: 06/03/2023 10:35

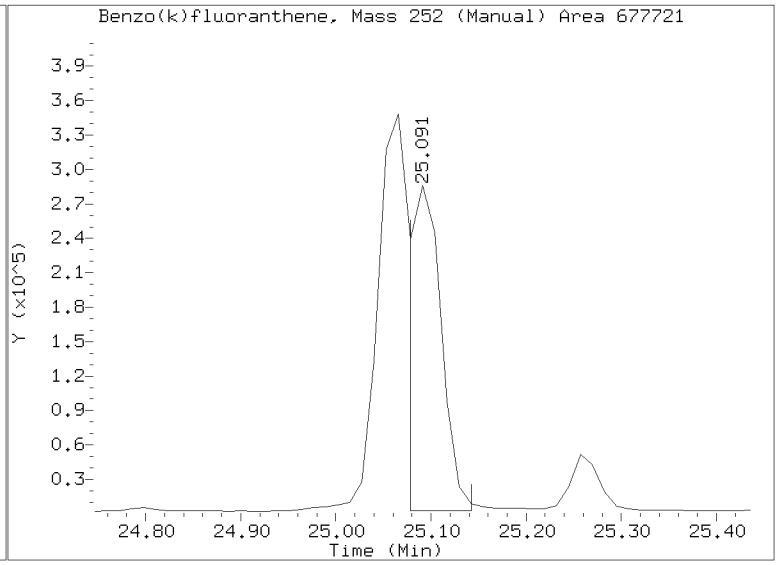












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1800

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-05 A	SDG:	23E0009
Sampled:	04/29/23 10:10	Prepared:	05/05/23 11:23	File ID:	NT1706012335.D
% Solids:	47.45	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 09:09
Batch:	BLE0148	Sequence:	SLF0008	Initial/Final:	21.14 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00065
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	396		4.4	19.9
106-44-5	4-Methylphenol	1	29.9		7.4	19.9
91-20-3	Naphthalene	1	23.4		4.2	19.9
91-57-6	2-Methylnaphthalene	1	11.9	J	4.5	19.9
208-96-8	Acenaphthylene	1	8.8	J	6.2	19.9
131-11-3	Dimethylphthalate	1	19.9	U	4.4	19.9
83-32-9	Acenaphthene	1	29.7		5.2	19.9
132-64-9	Dibenzofuran	1	19.3	J	14.1	19.9
86-73-7	Fluorene	1	24.0		14.5	19.9
85-01-8	Phenanthrene	1	89.5		8.7	19.9
120-12-7	Anthracene	1	54.5		7.2	19.9
206-44-0	Fluoranthene	1	267		6.1	19.9
129-00-0	Pyrene	1	246		5.7	19.9
85-68-7	Butylbenzylphthalate	1	15.3	J	9.4	19.9
56-55-3	Benzo(a)anthracene	1	130		5.9	19.9
218-01-9	Chrysene	1	208		6.0	19.9
117-81-7	bis(2-Ethylhexyl)phthalate	1	68.5		5.4	49.8
	Benzofluoranthenes, Total	1	312		10.0	39.9
50-32-8	Benzo(a)pyrene	1	119		4.2	19.9
193-39-5	Indeno(1,2,3-cd)pyrene	1	73.5		14.6	19.9
53-70-3	Dibenzo(a,h)anthracene	1	26.7		17.2	19.9
191-24-2	Benzo(g,h,i)perylene	1	87.1		13.5	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.69	208	27.8	27 - 120	
Phenol-d5	747.69	287	38.4	29 - 120	
2-Chlorophenol-d4	747.69	351	46.9	31 - 120	
1,2-Dichlorobenzene-d4	498.46	240	48.2	32 - 120	
Nitrobenzene-d5	498.46	270	54.2	30 - 120	
2-Fluorobiphenyl	498.46	332	66.7	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1800

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

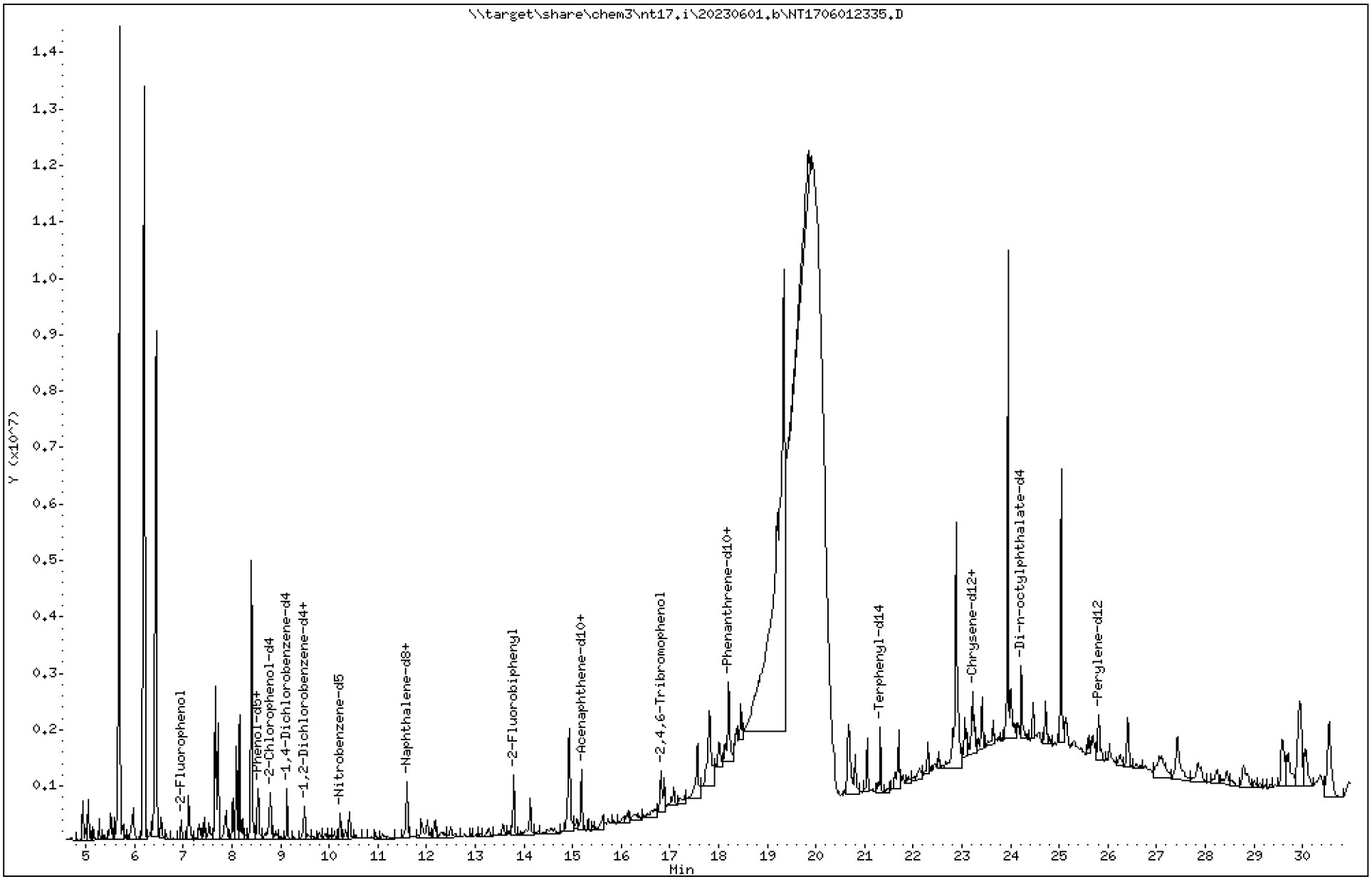
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-05 A	SDG:	23E0009
Sampled:	04/29/23 10:10	Prepared:	05/05/23 11:23	File ID:	NT1706012335.D
% Solids:	47.45	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 09:09
Batch:	BLE0148	Sequence:	SLF0008	Initial/Final:	21.14 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00065
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	747.69	610	81.6	24 - 134	
p-Terphenyl-d14	498.46	387	77.6	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D
Date : 02-JUN-2023 09:09
Client ID:
Sample Info: 23E0009-05

Instrument: nt17.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

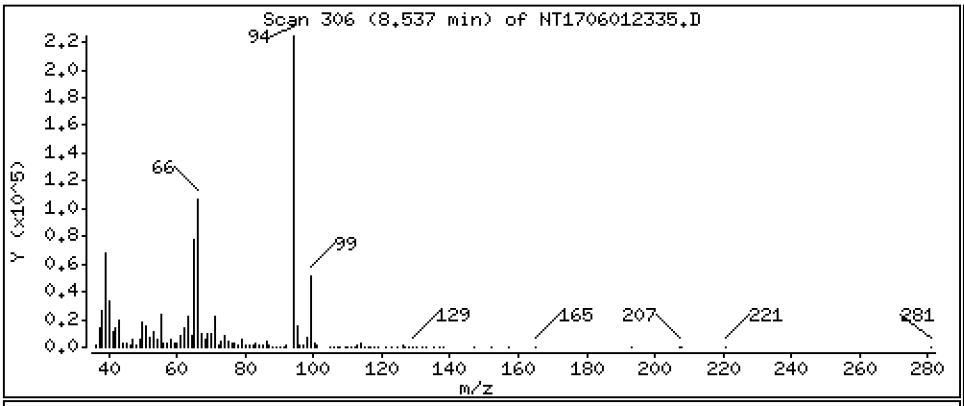
Operator: VTS

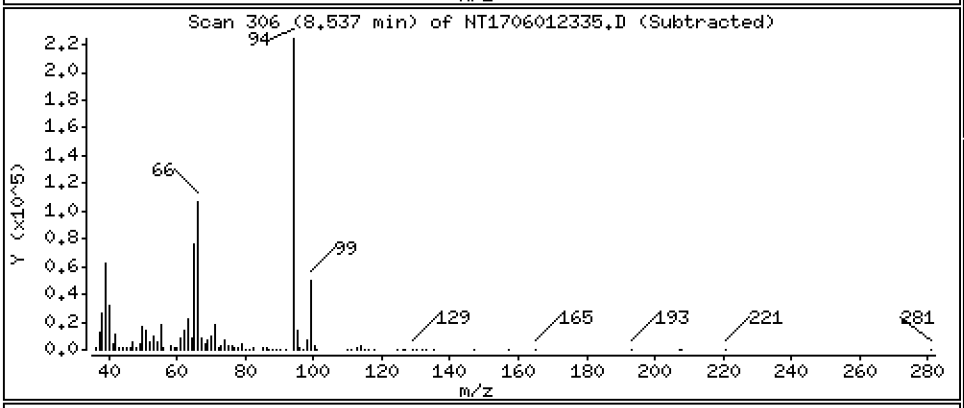
Column phase: ZB-5msi

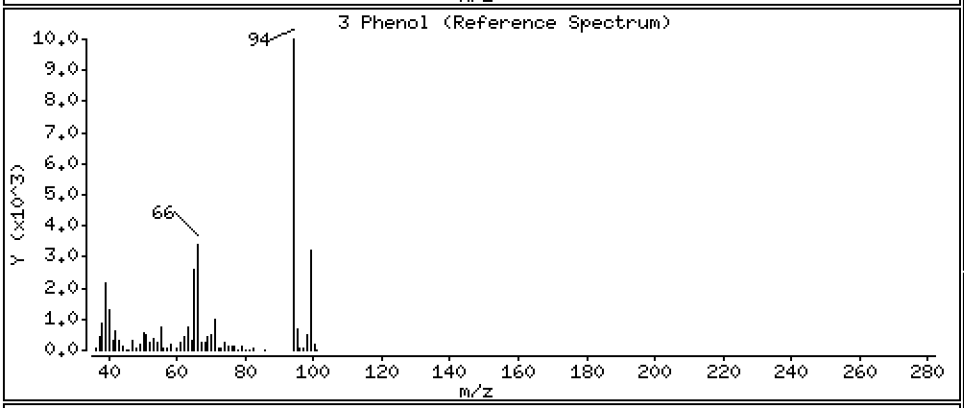
Column diameter: 0.25

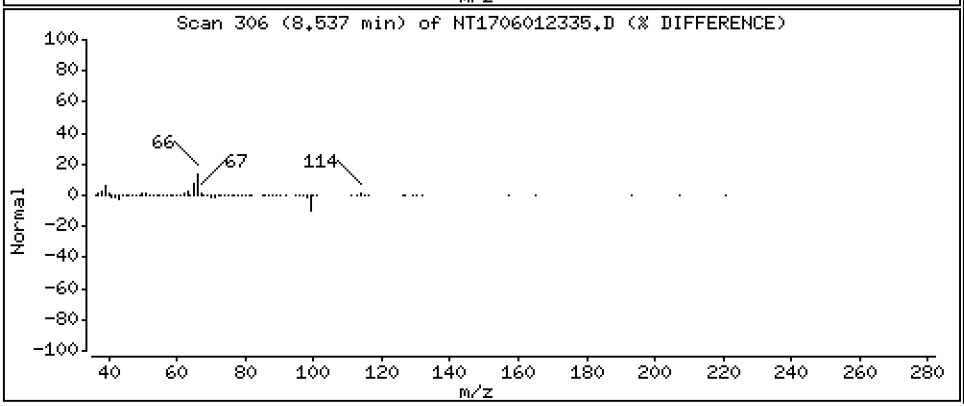
3 Phenol

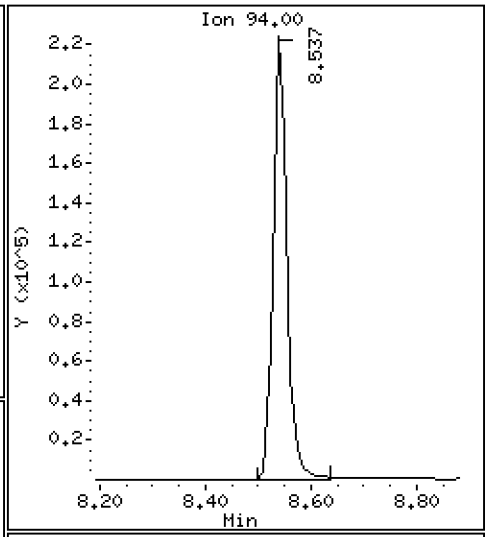
Concentration: 3.974 ug/mL

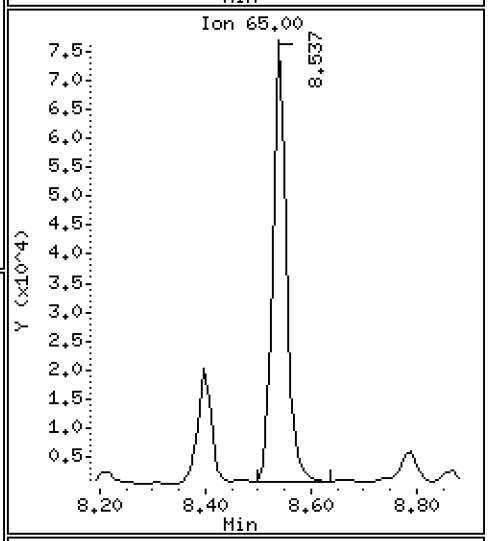


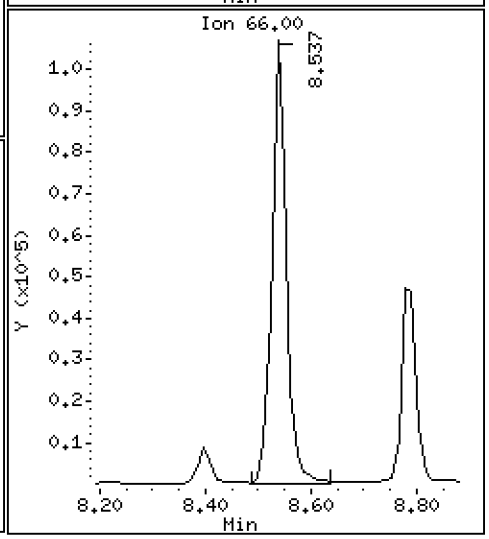












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

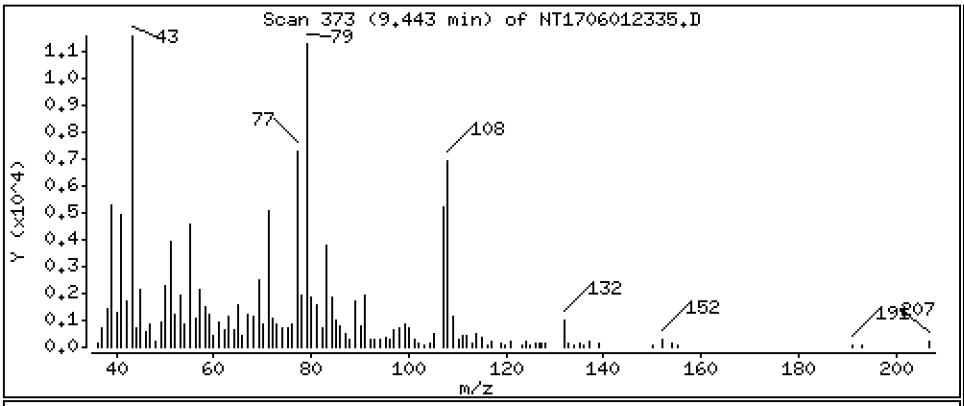
Operator: VTS

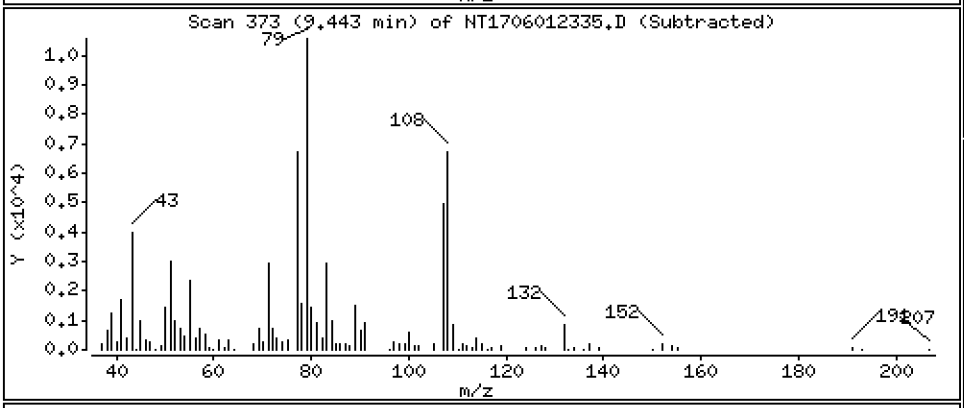
Column phase: ZB-5msi

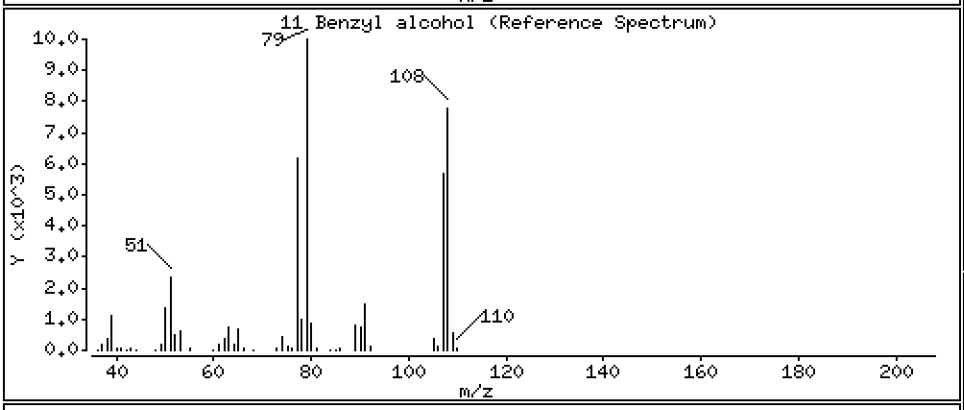
Column diameter: 0.25

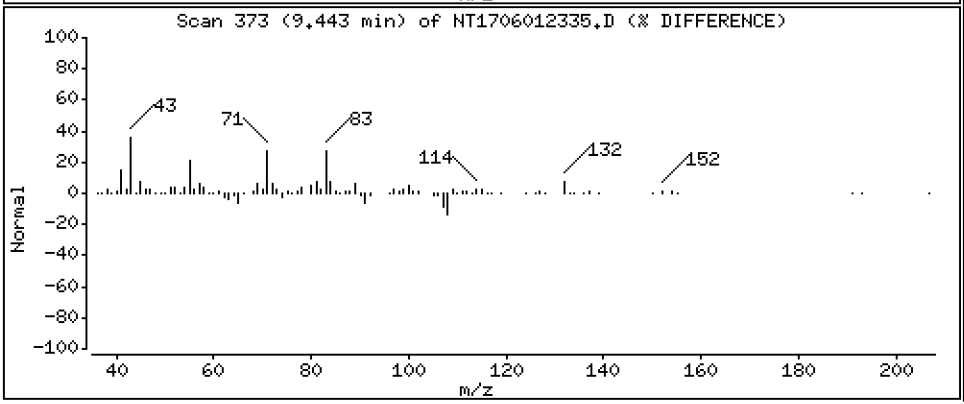
11 Benzyl alcohol

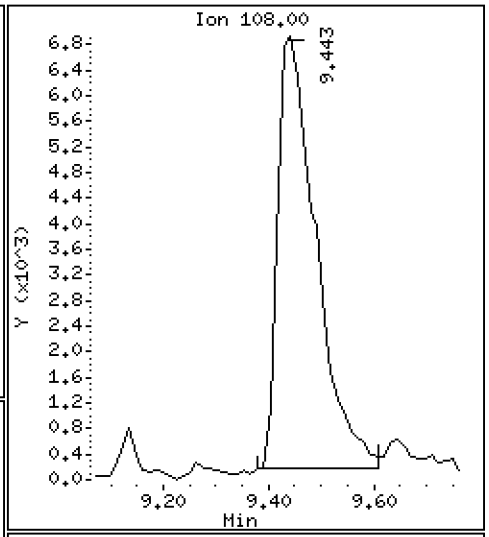
Concentration: 0.7029 ug/mL

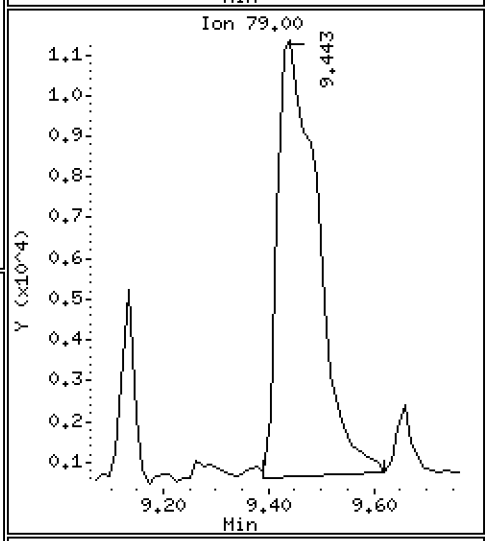


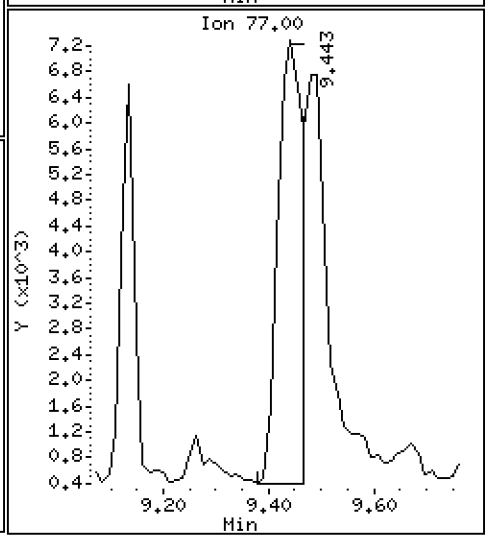












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

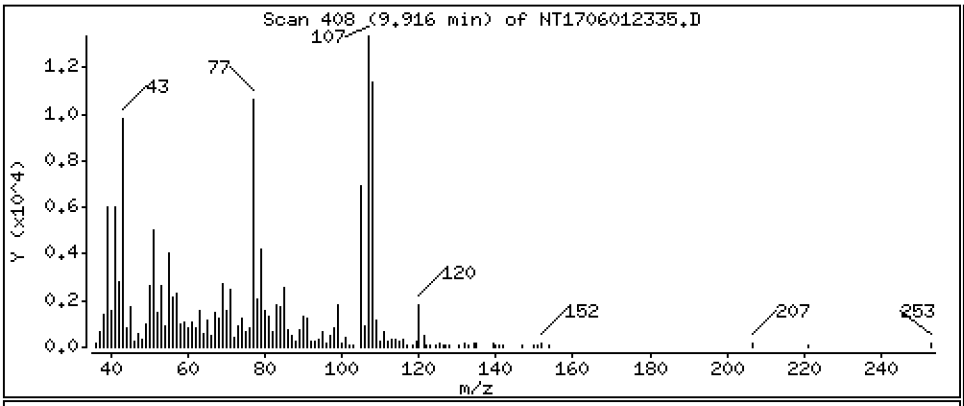
Operator: VTS

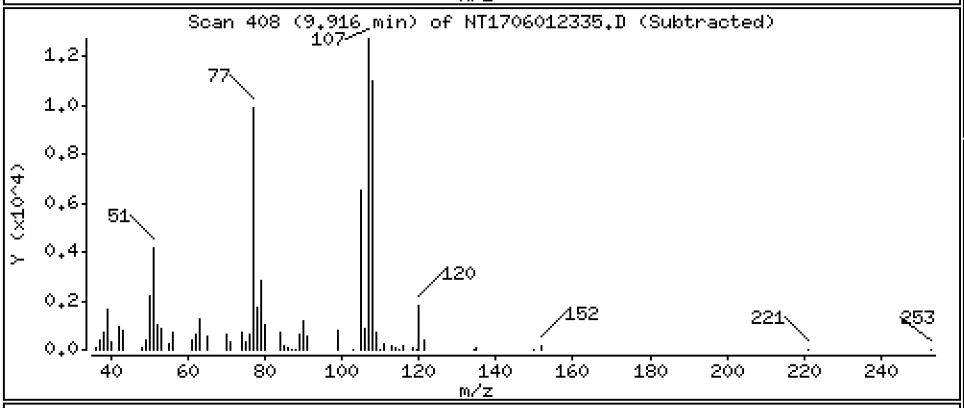
Column phase: ZB-5msi

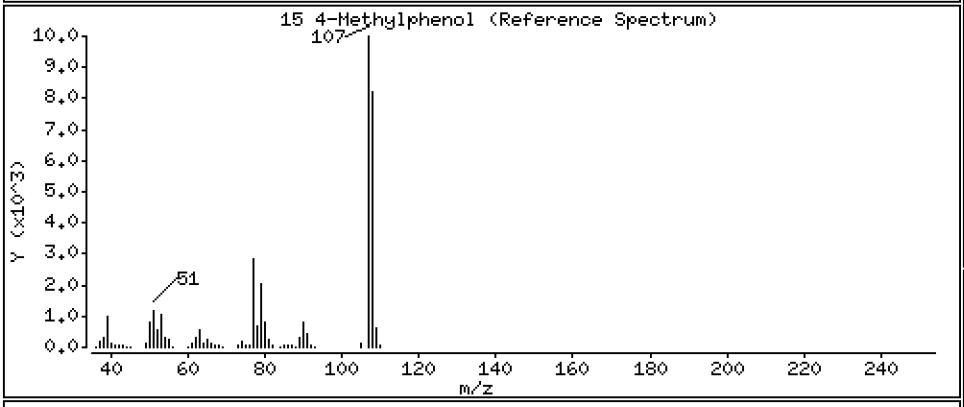
Column diameter: 0.25

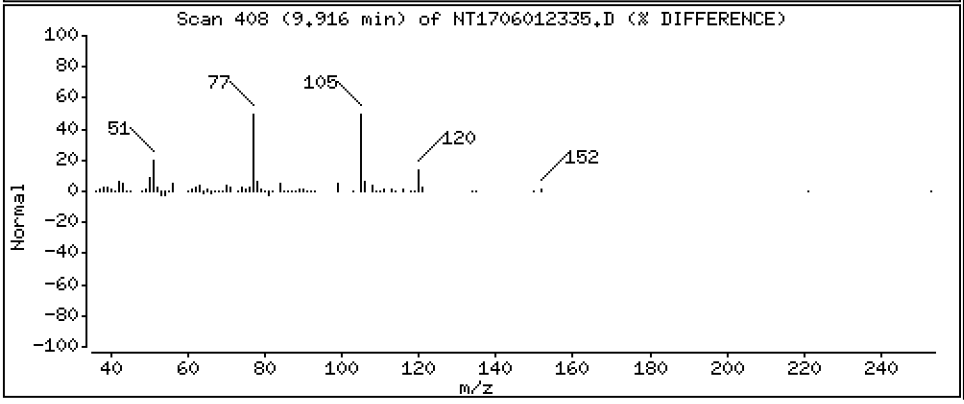
15 4-Methylphenol

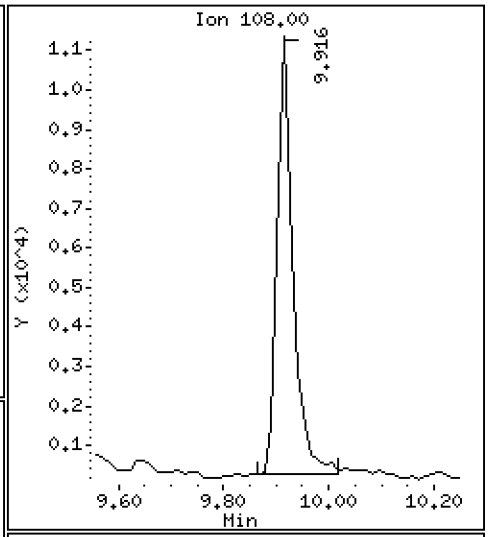
Concentration: 0.2998 ug/mL

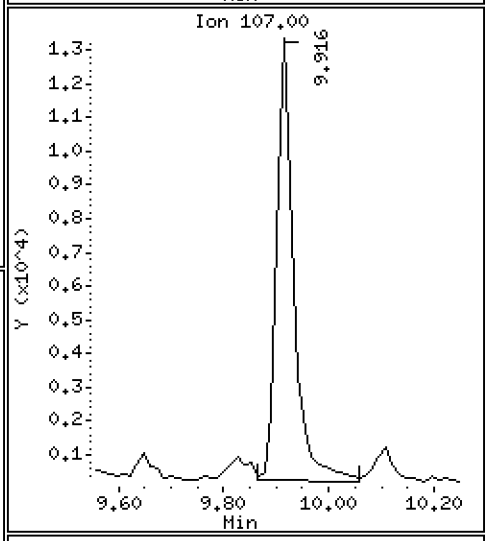


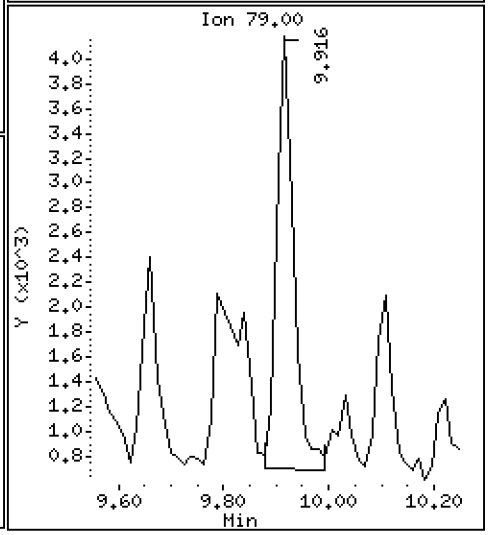












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

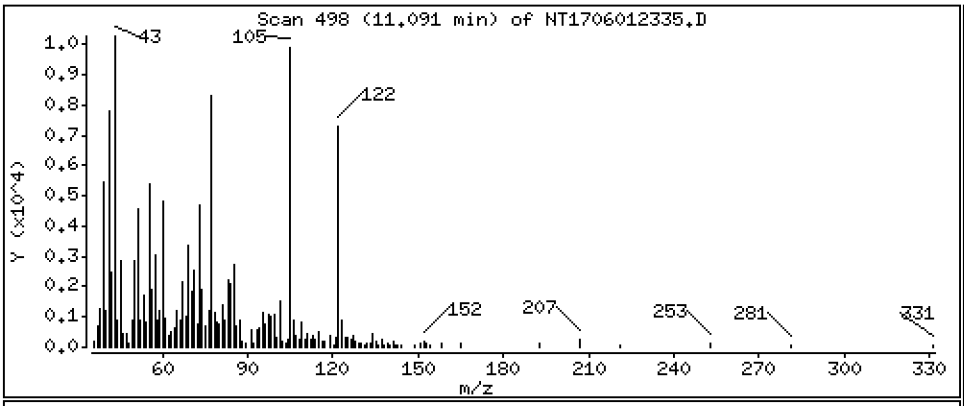
Operator: VTS

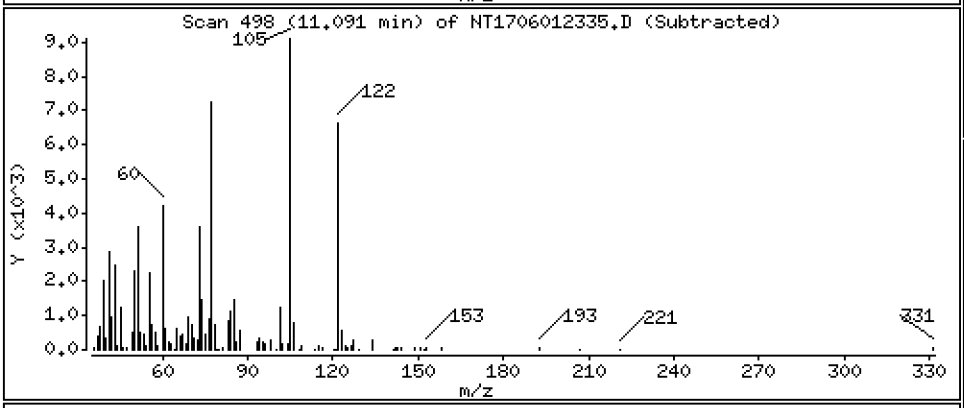
Column phase: ZB-5msi

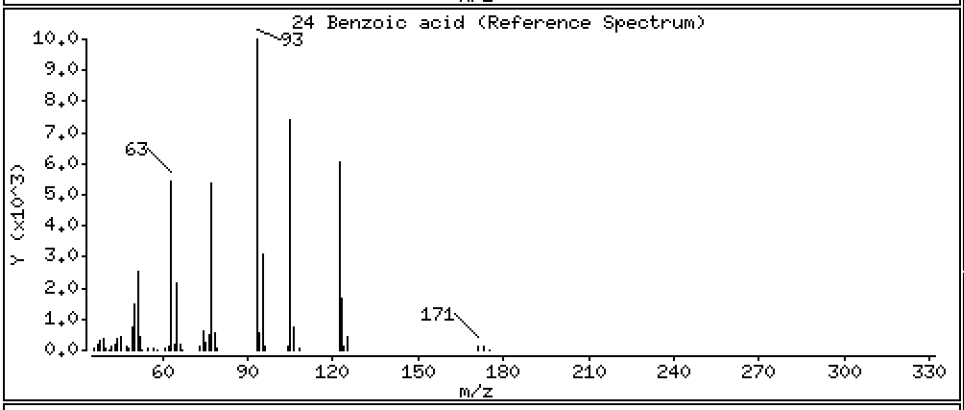
Column diameter: 0.25

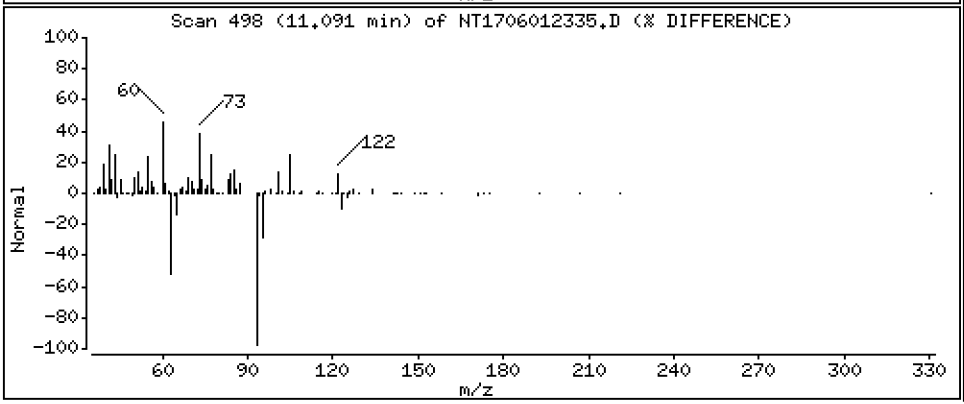
24 Benzoic acid

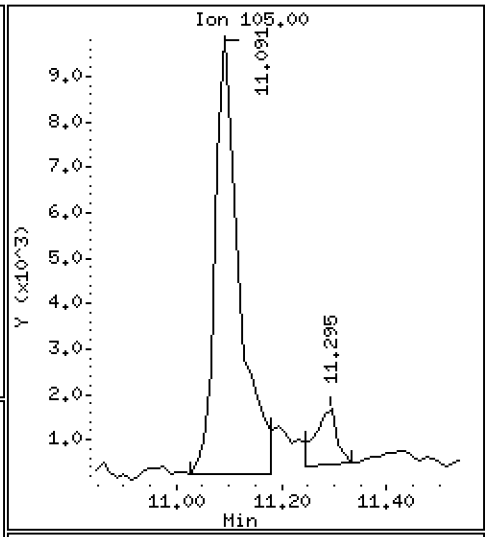
Concentration: 0.5375 ug/mL

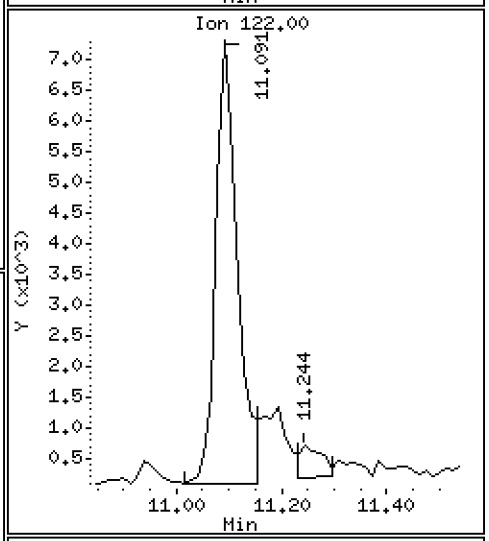


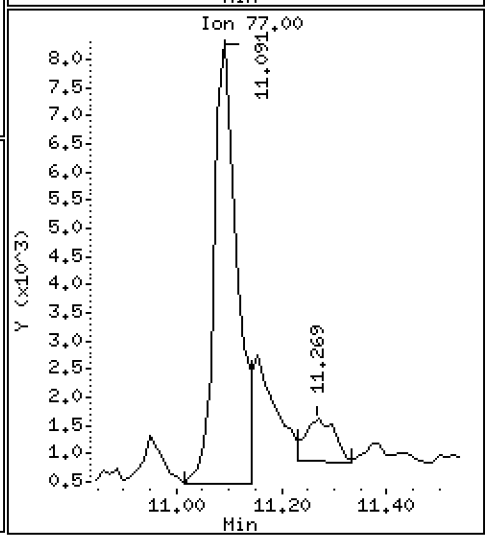












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

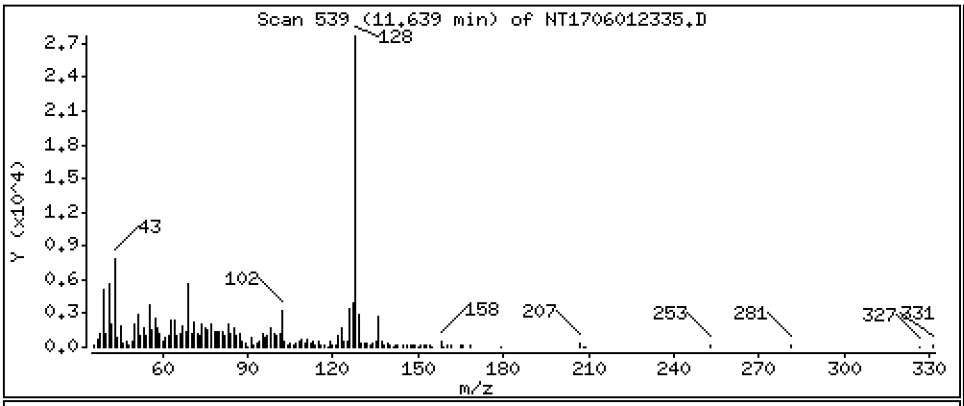
Operator: VTS

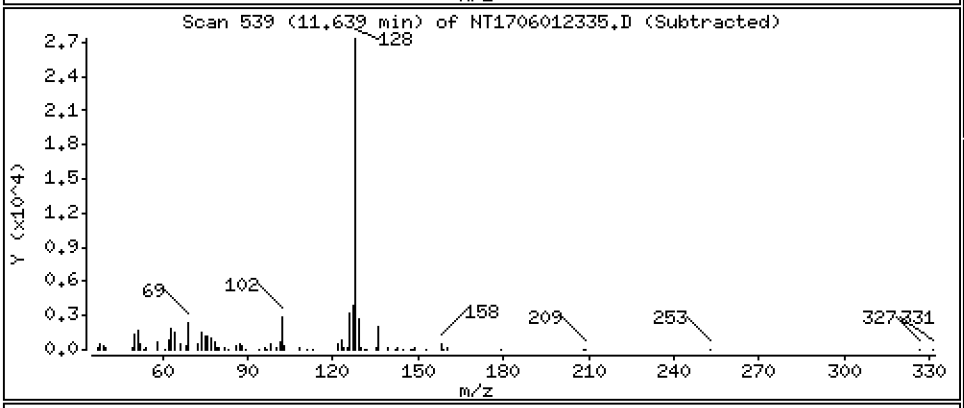
Column phase: ZB-5msi

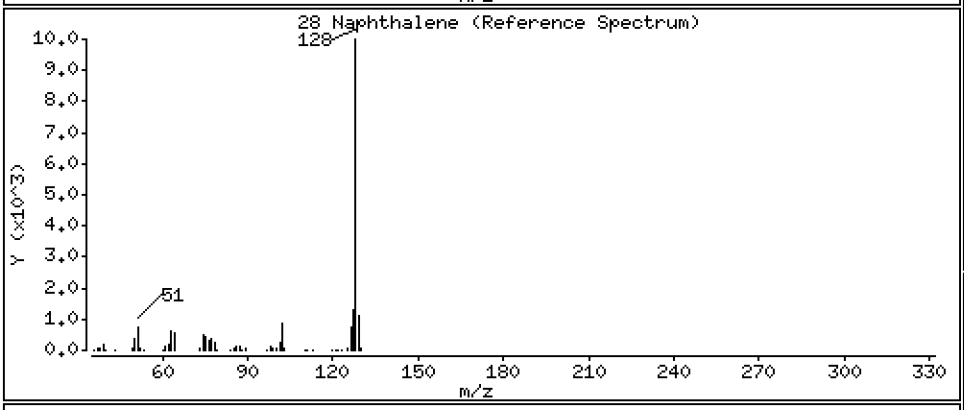
Column diameter: 0.25

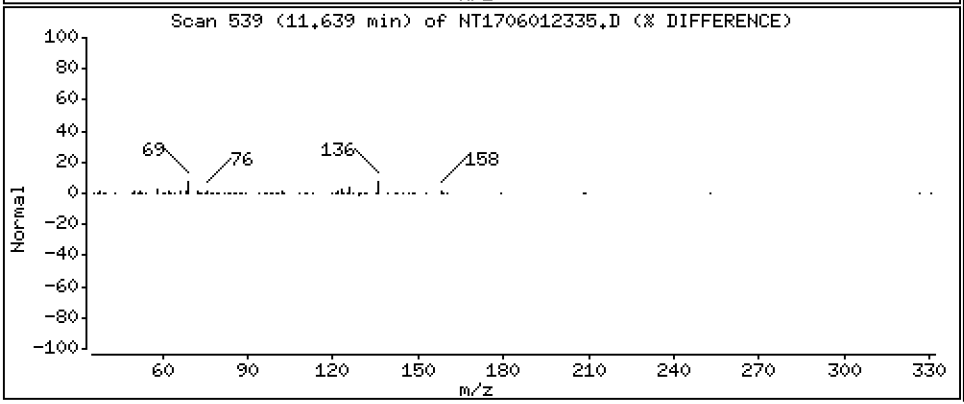
28 Naphthalene

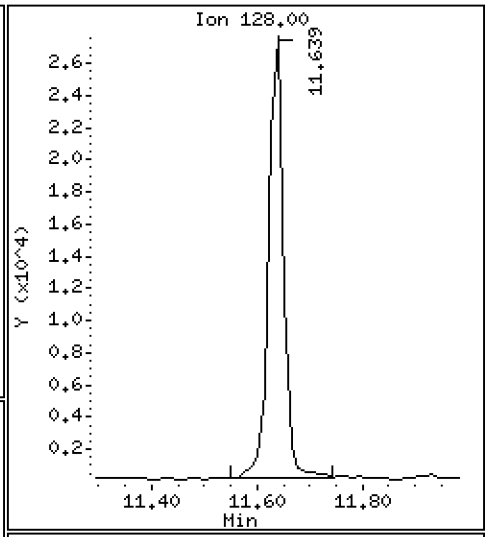
Concentration: 0.2350 ug/mL

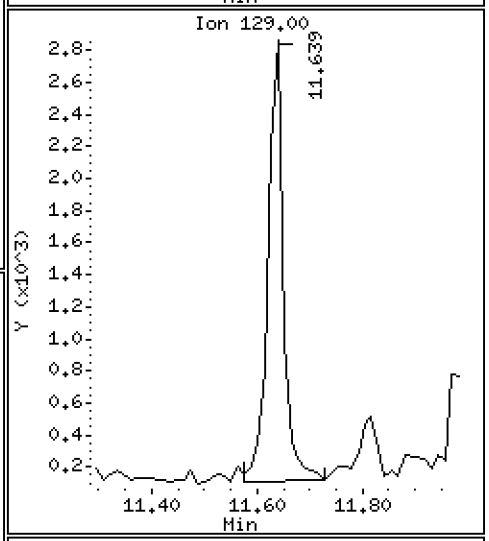


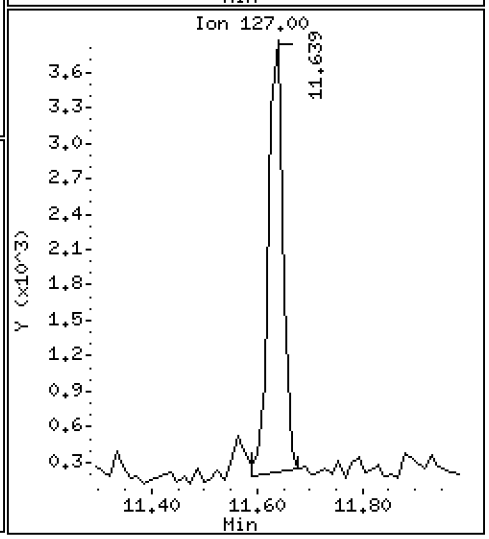












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

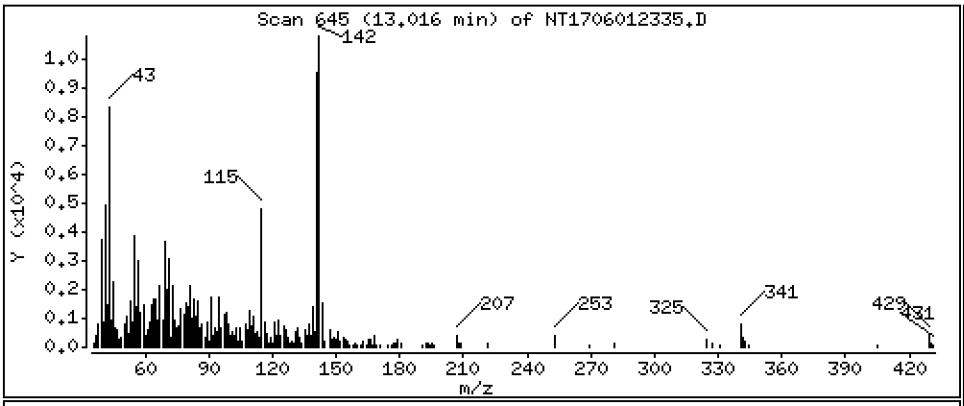
Operator: VTS

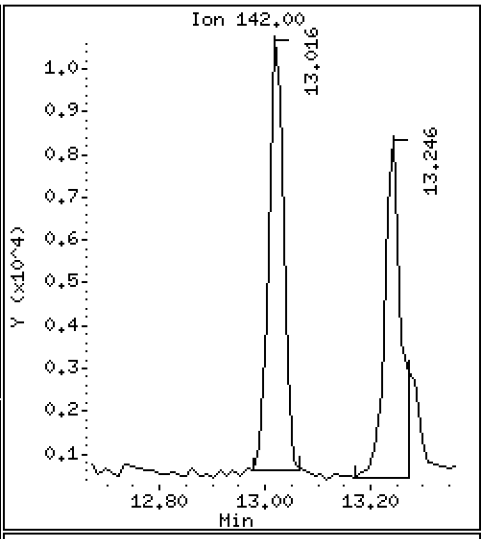
Column phase: ZB-5msi

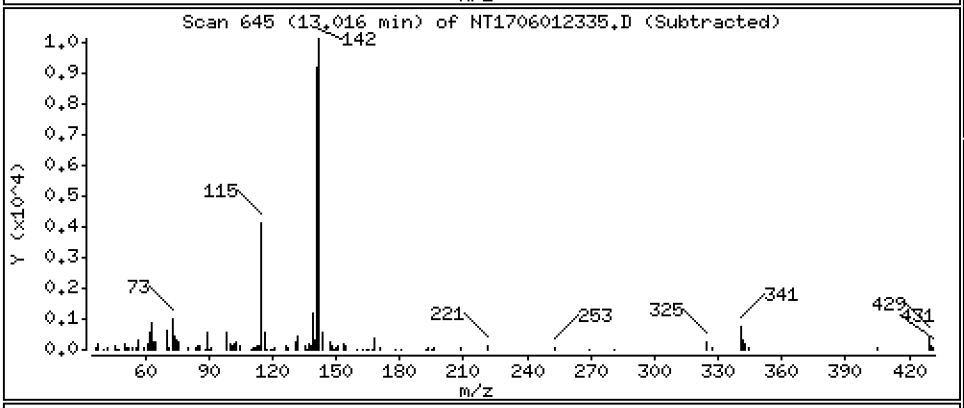
Column diameter: 0.25

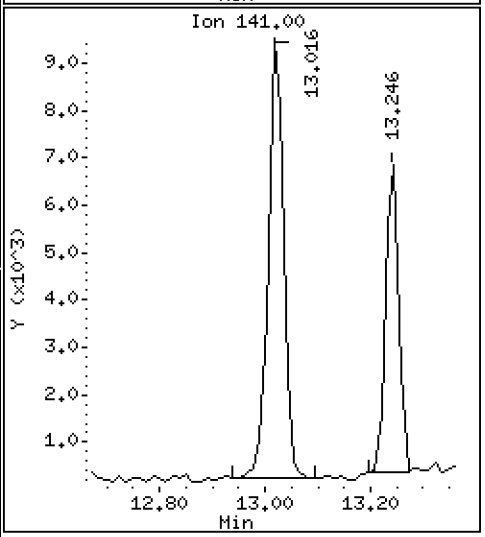
32 2-Methylnaphthalene

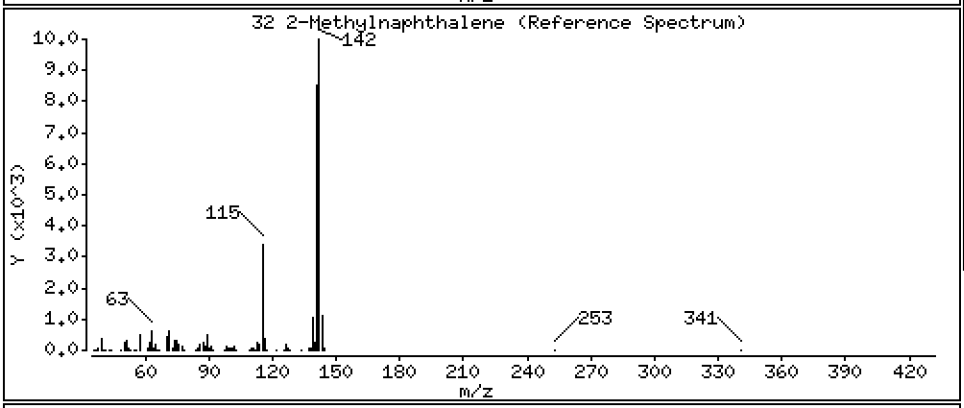
Concentration: 0.1189 ug/mL

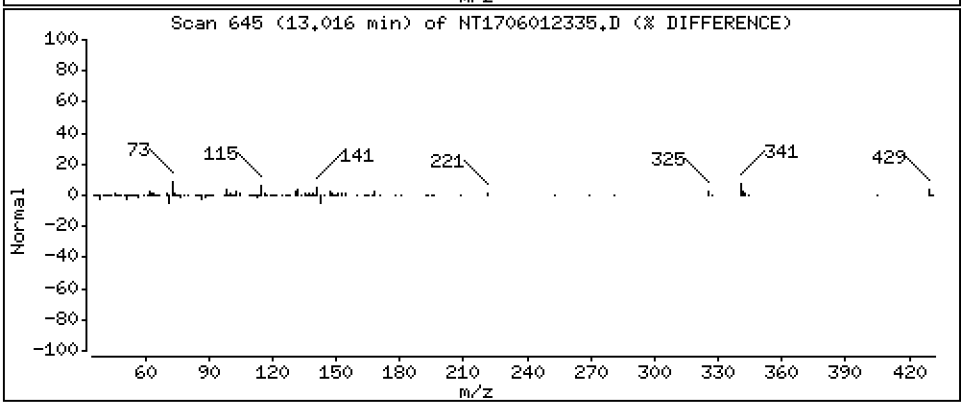












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

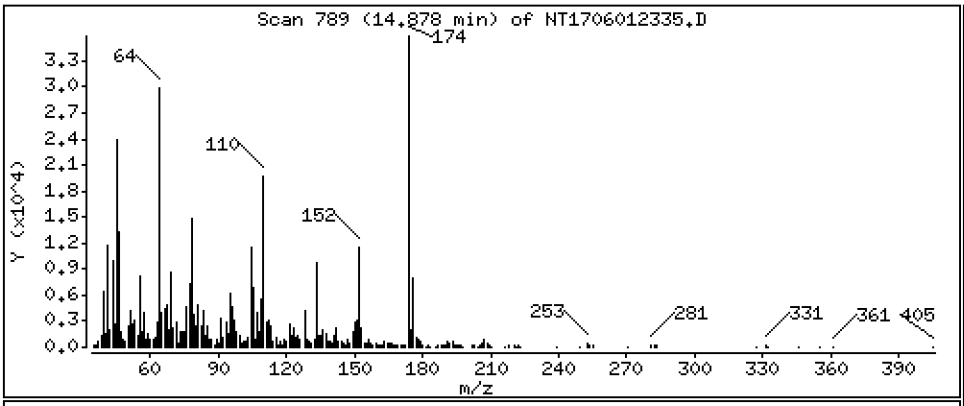
Operator: VTS

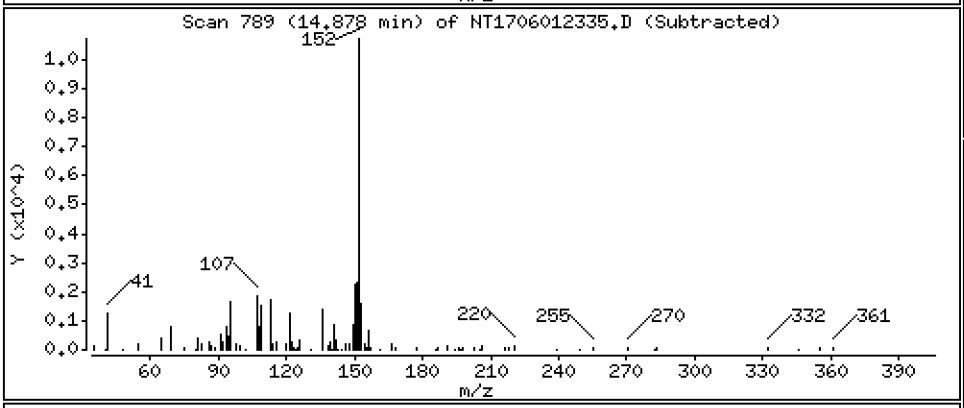
Column phase: ZB-5msi

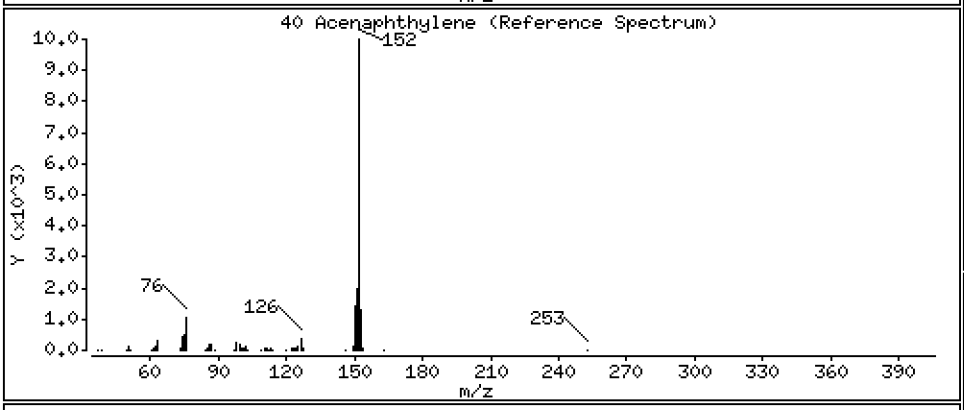
Column diameter: 0.25

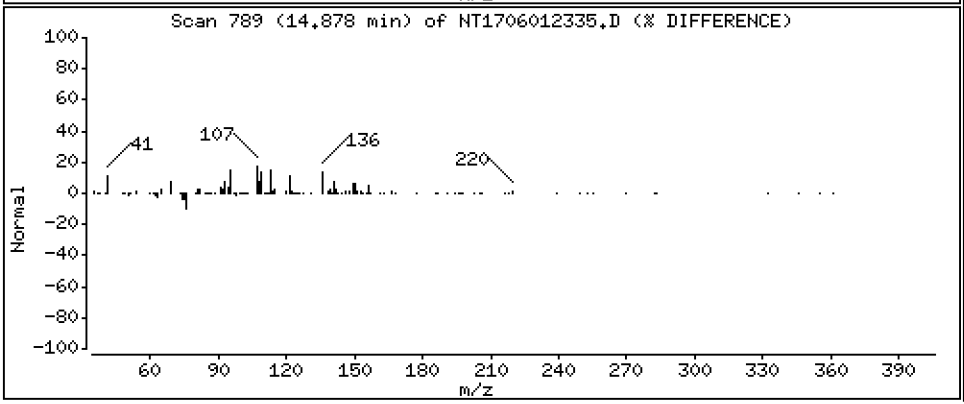
40 Acenaphthylene

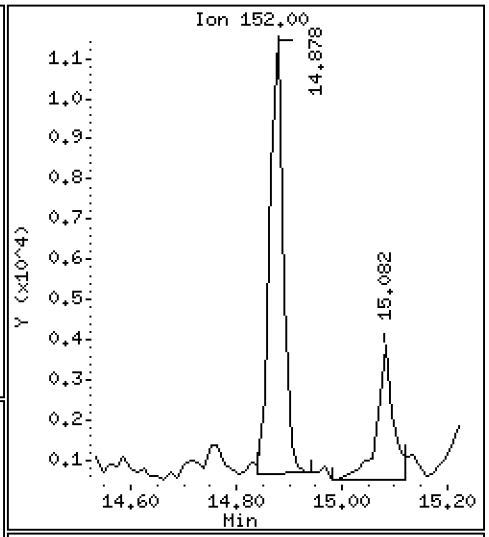
Concentration: 0.08837 ug/mL

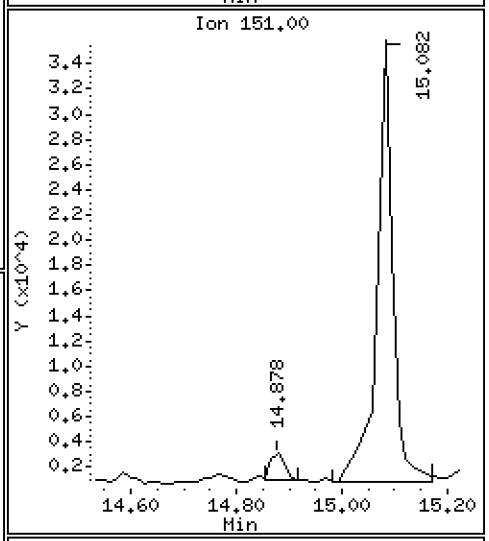


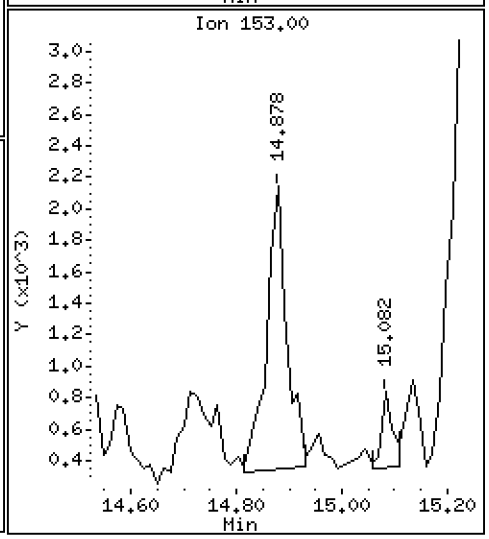












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

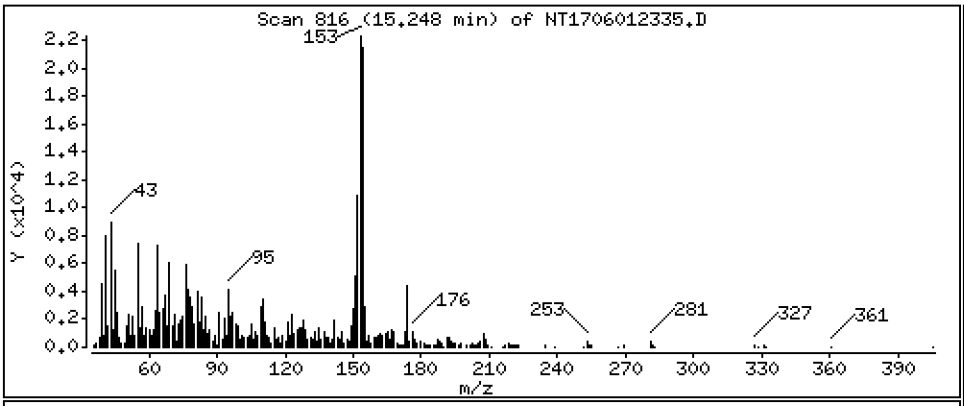
Operator: VTS

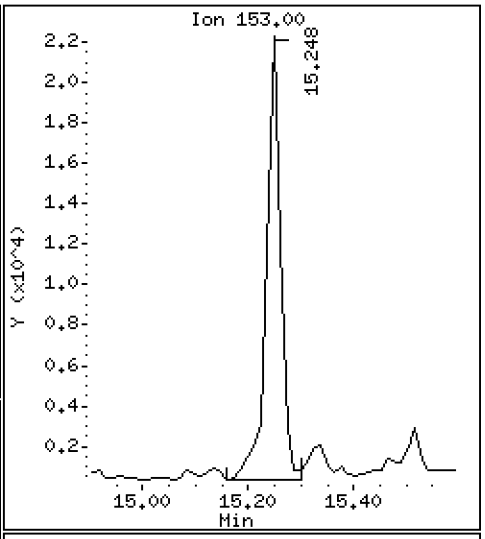
Column phase: ZB-5msi

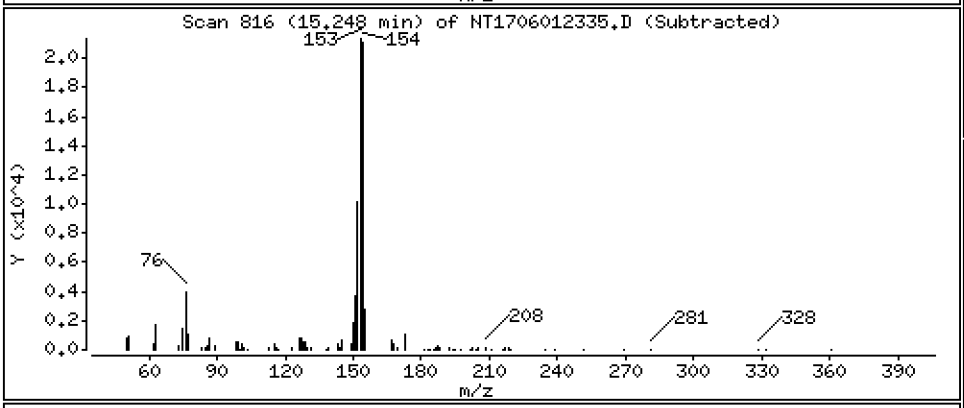
Column diameter: 0.25

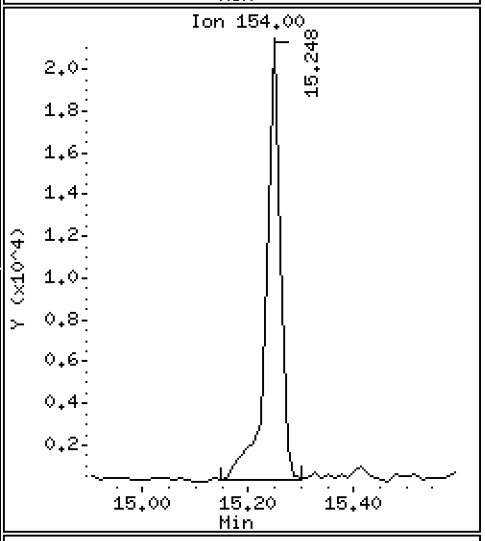
44 Acenaphthene

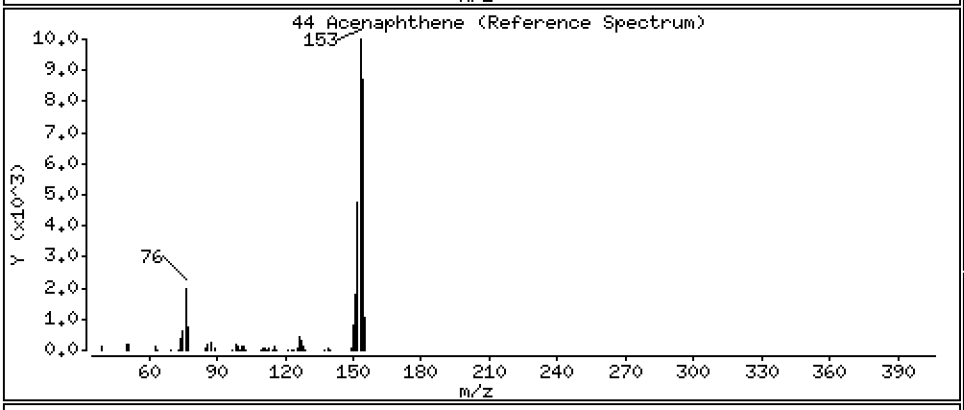
Concentration: 0.2979 ug/mL

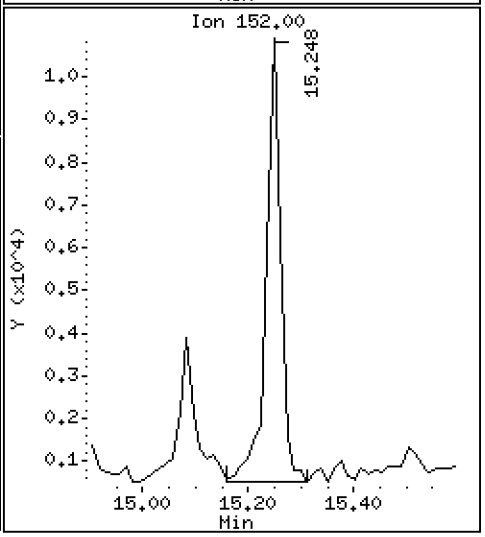


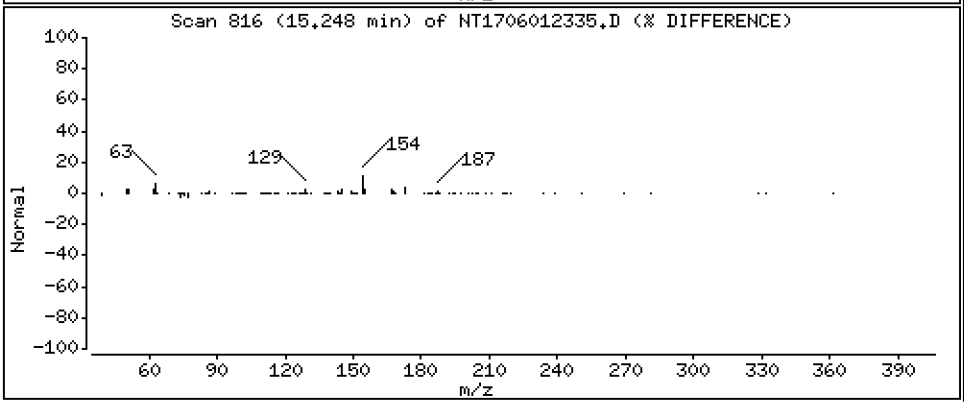












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

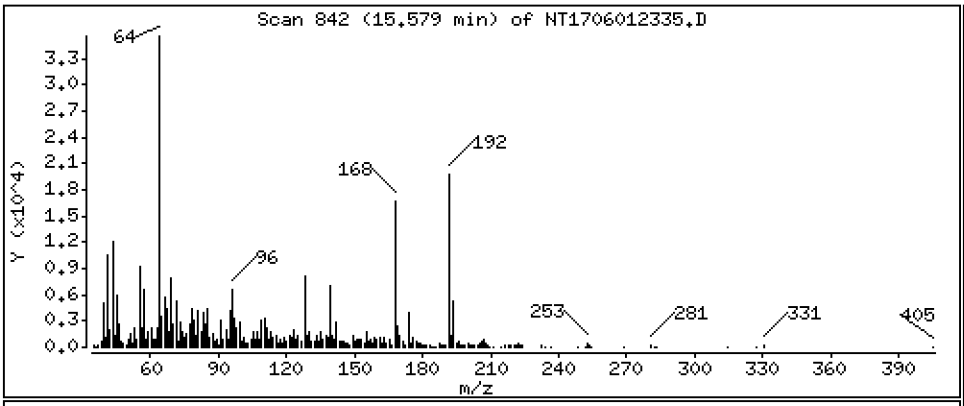
Operator: VTS

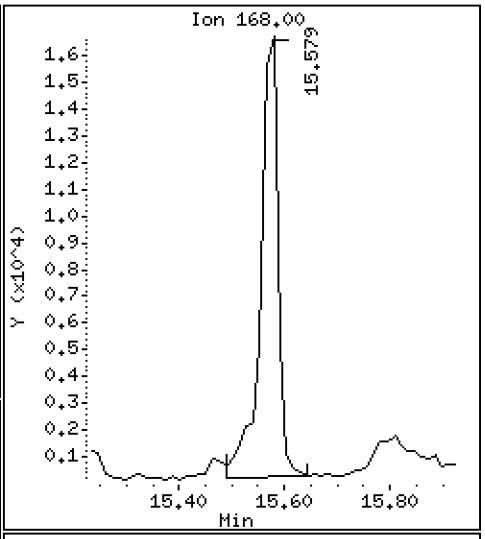
Column phase: ZB-5msi

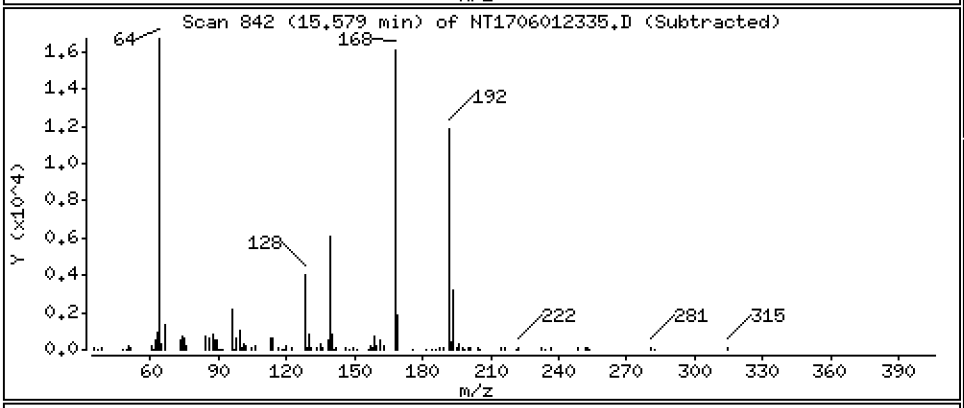
Column diameter: 0.25

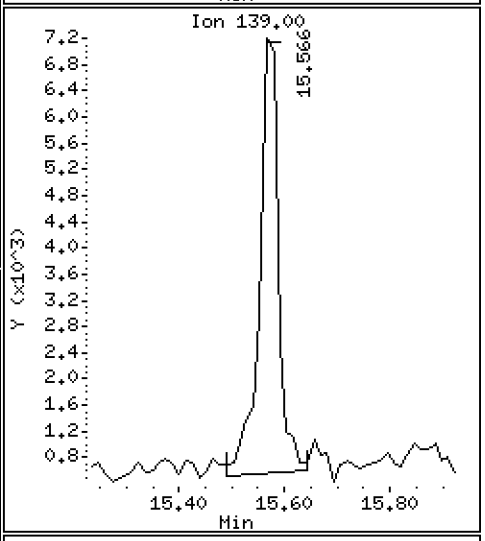
46 Dibenzofuran

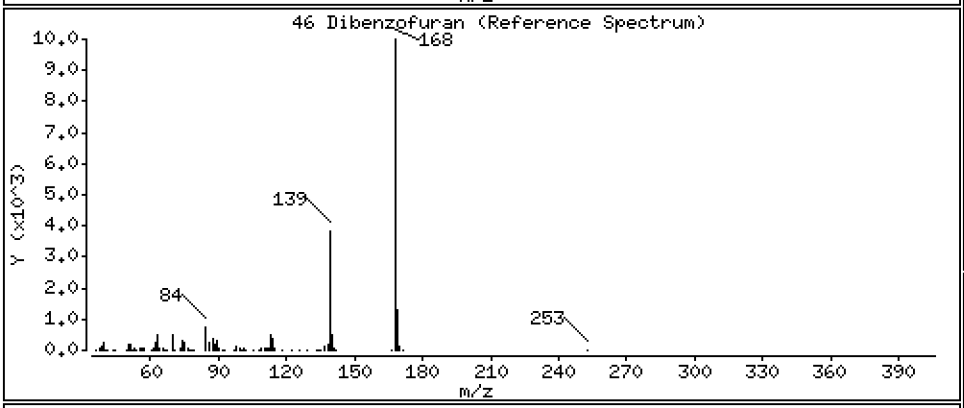
Concentration: 0.1934 ug/mL

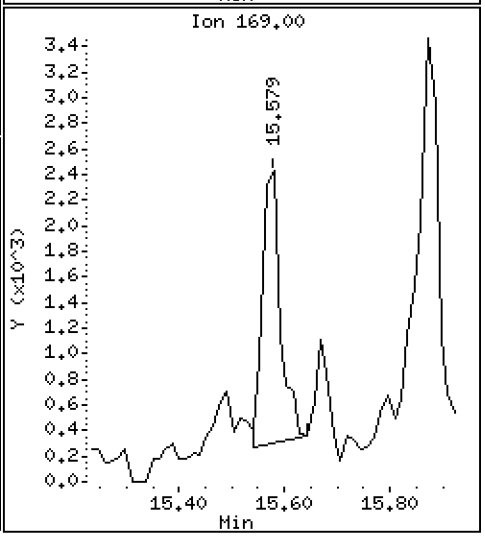


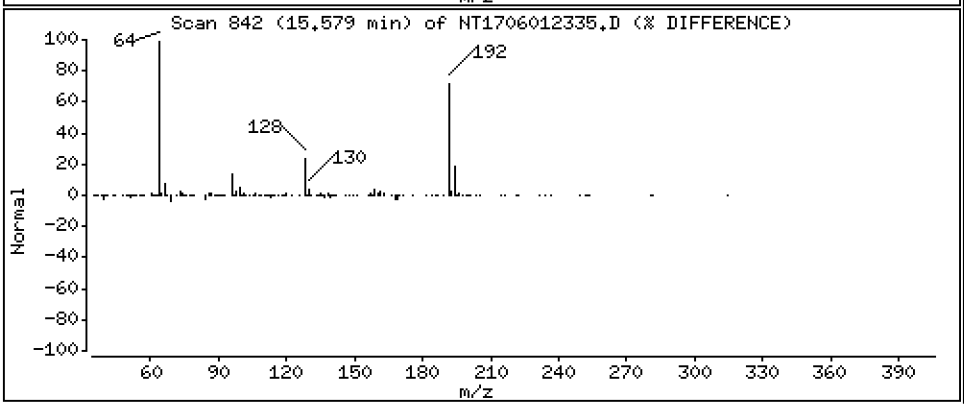












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

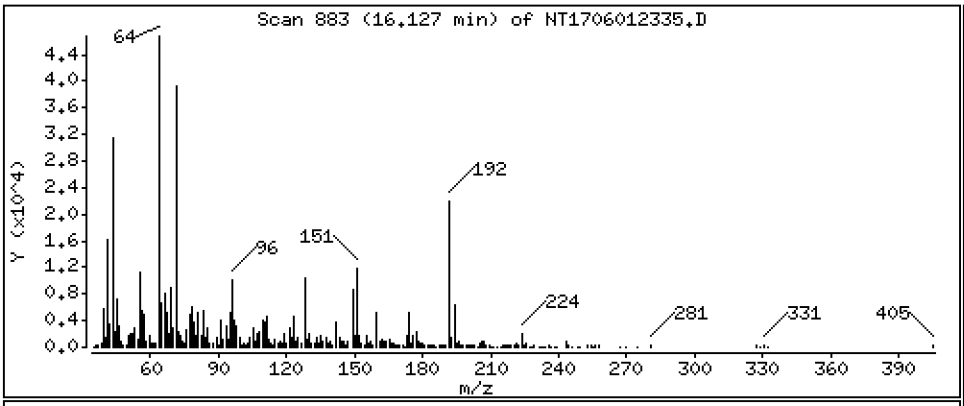
Operator: VTS

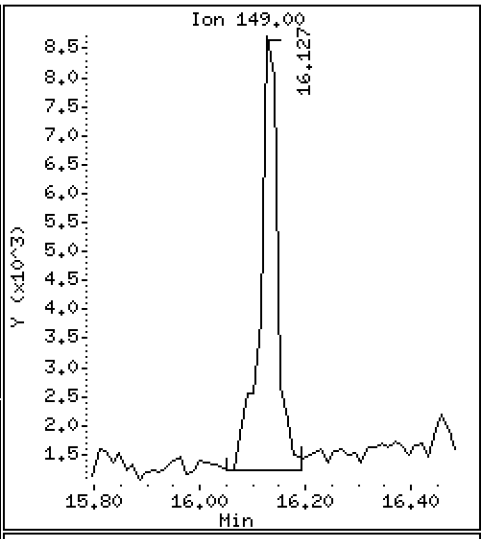
Column phase: ZB-5msi

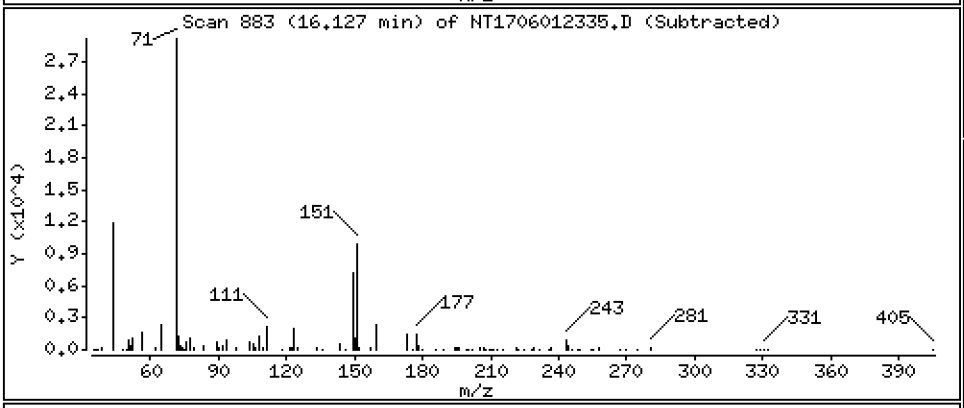
Column diameter: 0.25

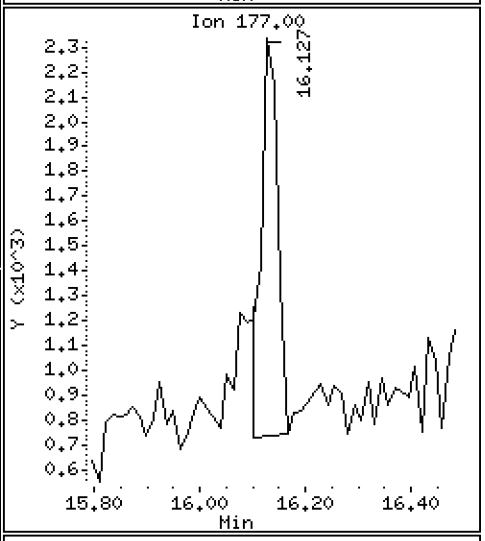
50 Diethylphthalate

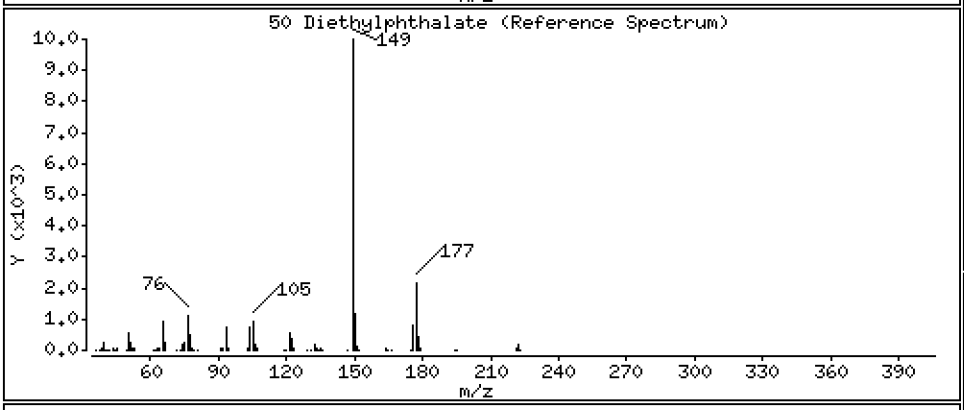
Concentration: 0.1187 ug/mL

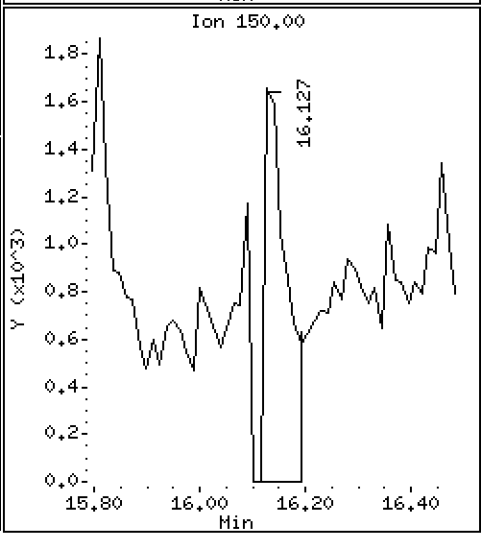


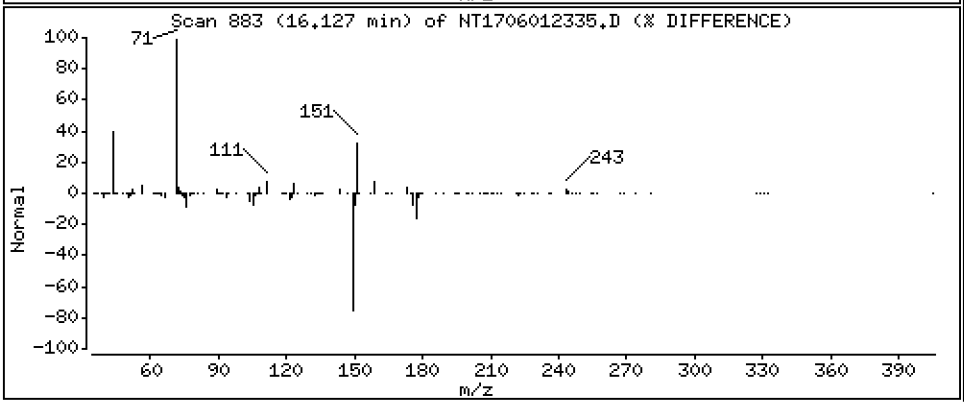












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

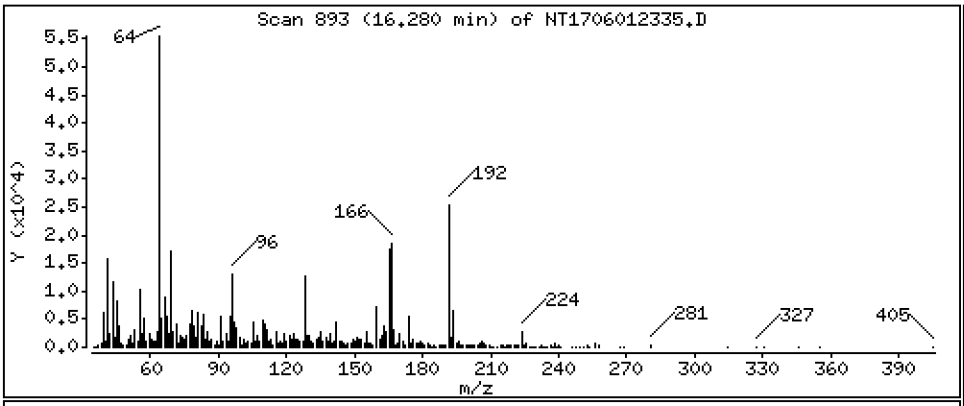
Operator: VTS

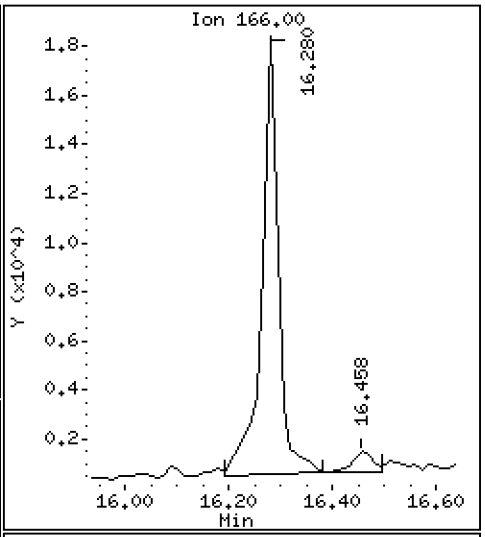
Column phase: ZB-5msi

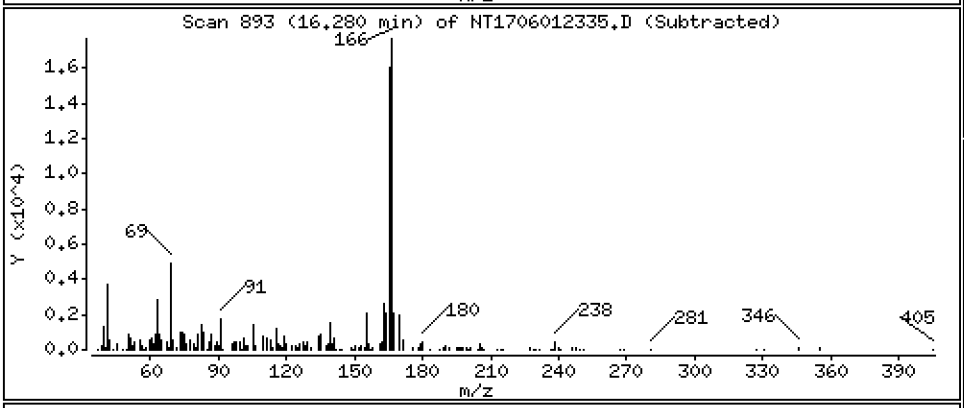
Column diameter: 0.25

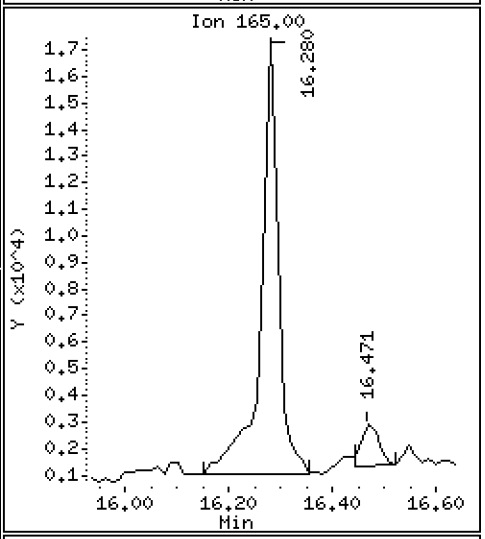
49 Fluorene

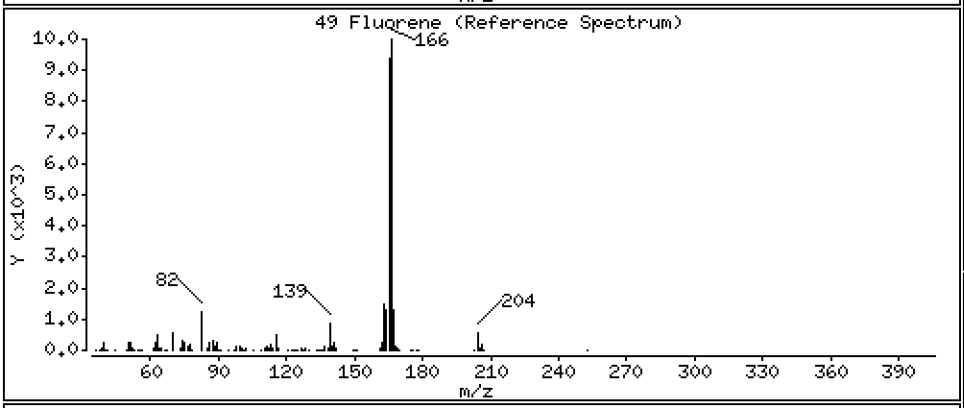
Concentration: 0.2408 ug/mL

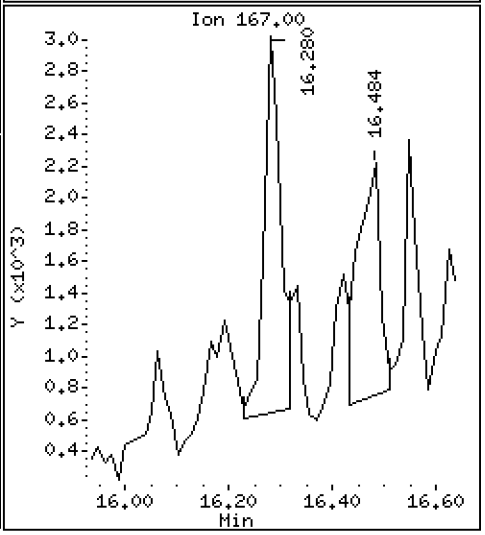


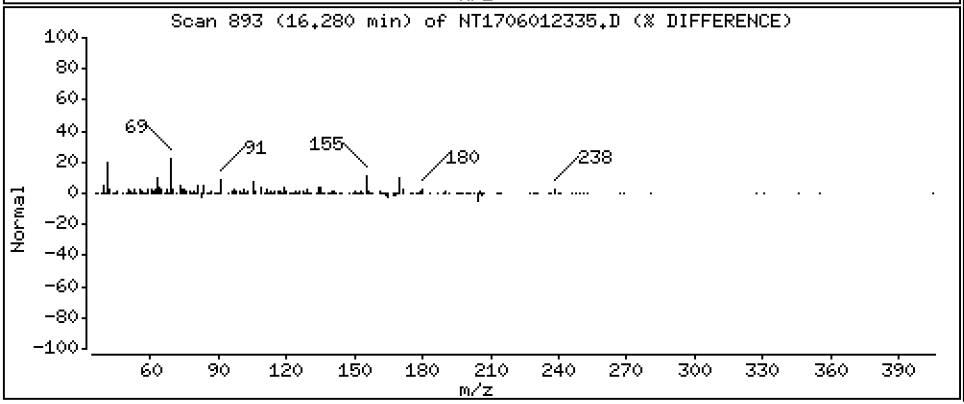












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

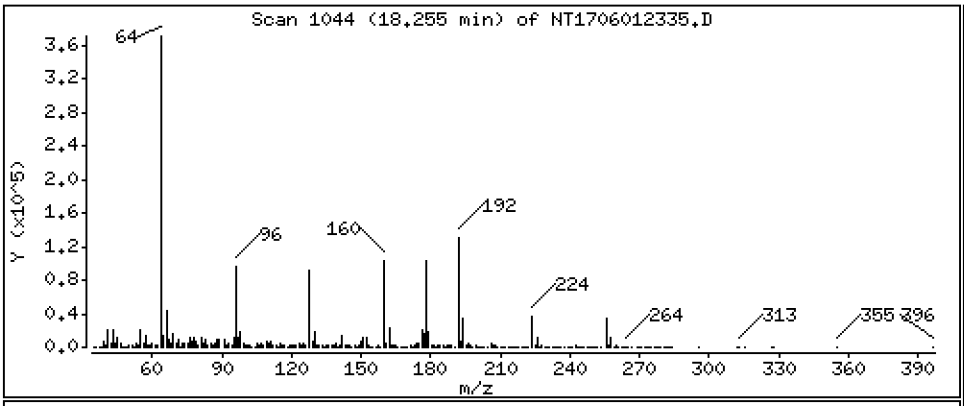
Operator: VTS

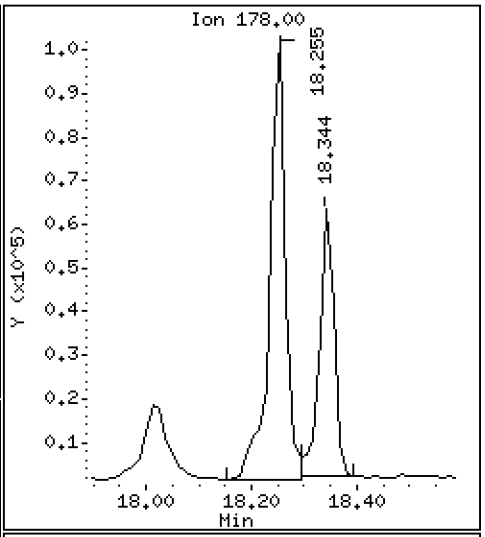
Column phase: ZB-5msi

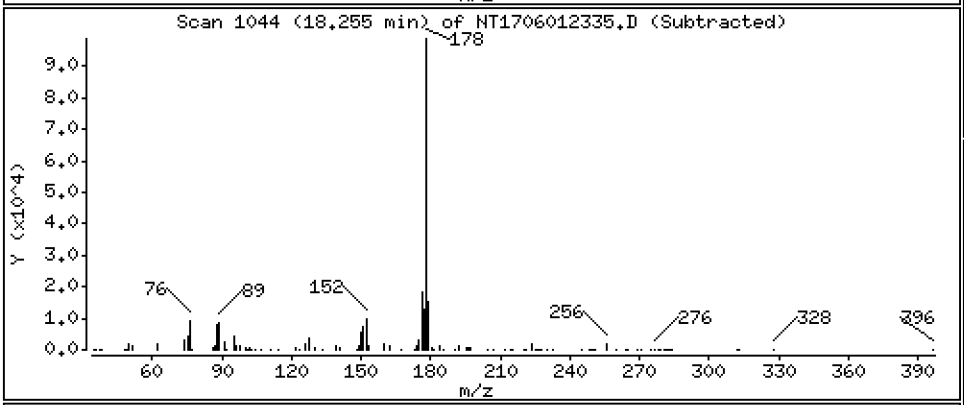
Column diameter: 0.25

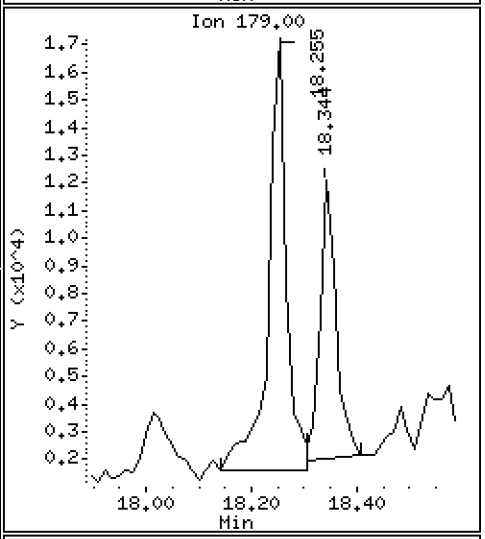
60 Phenanthrene

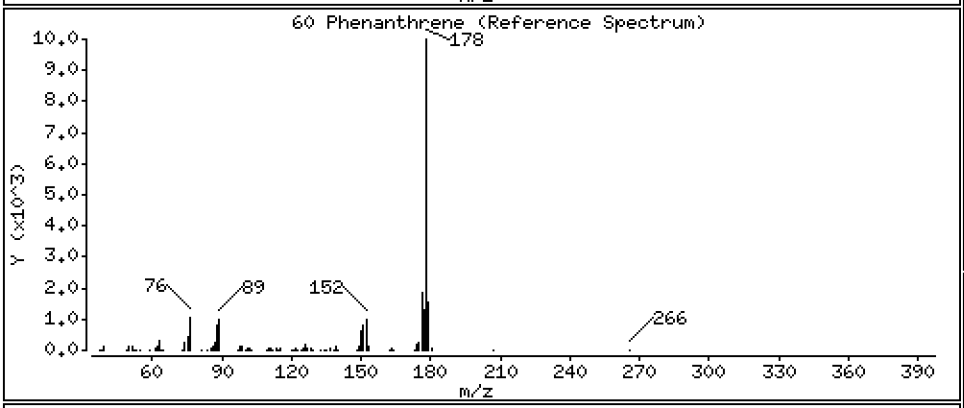
Concentration: 0.8980 ug/mL

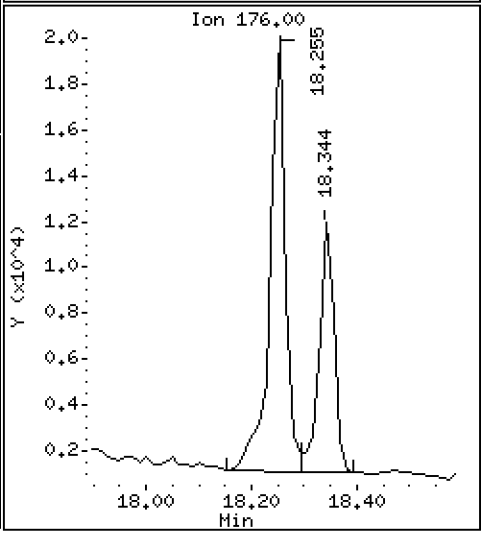


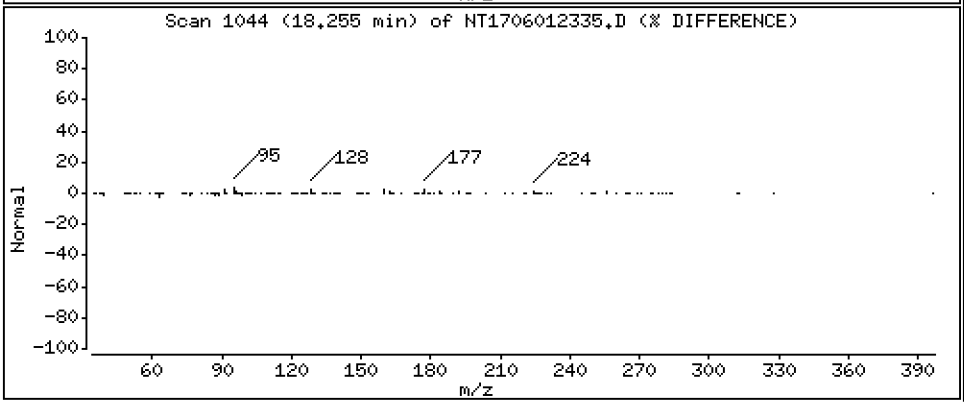












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

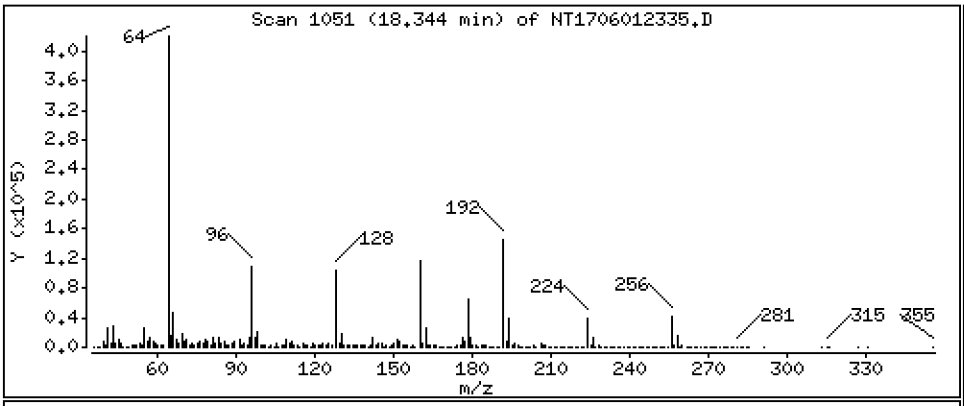
Operator: VTS

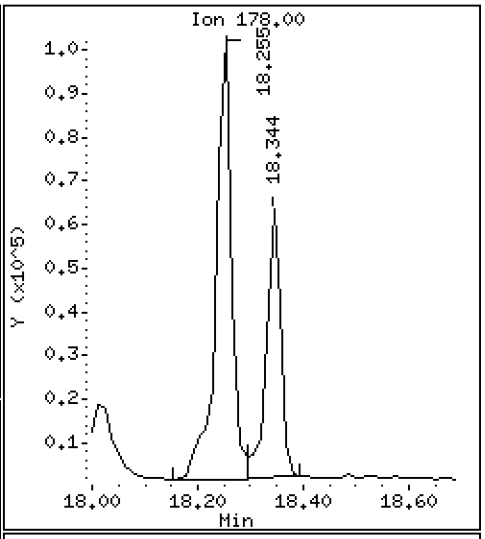
Column phase: ZB-5msi

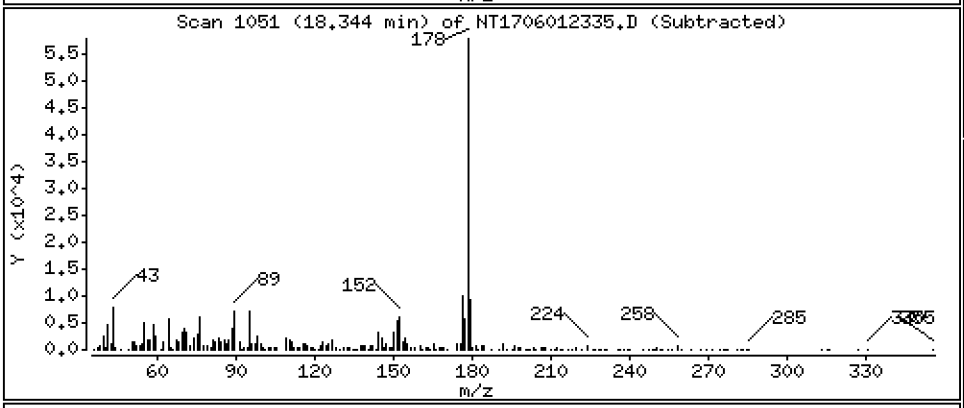
Column diameter: 0.25

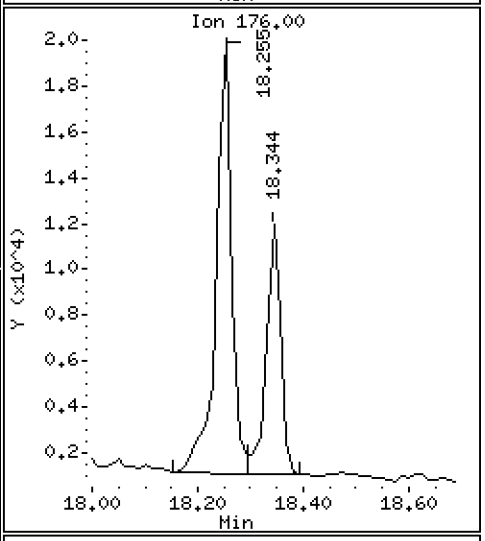
61 Anthracene

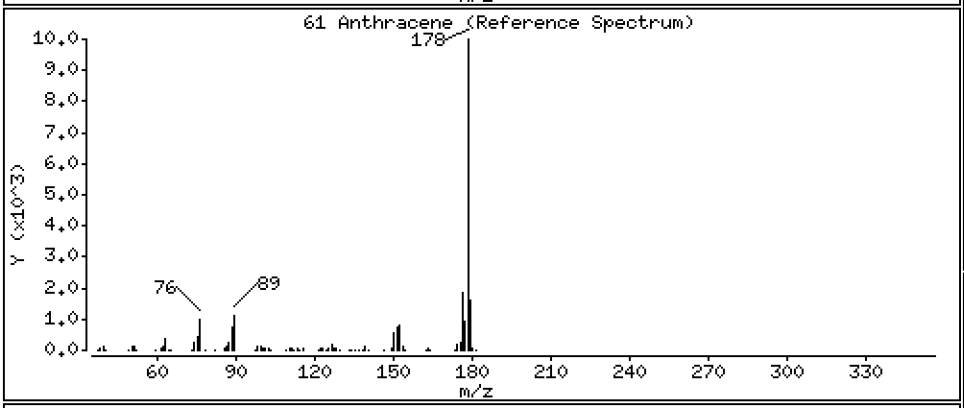
Concentration: 0.5463 ug/mL

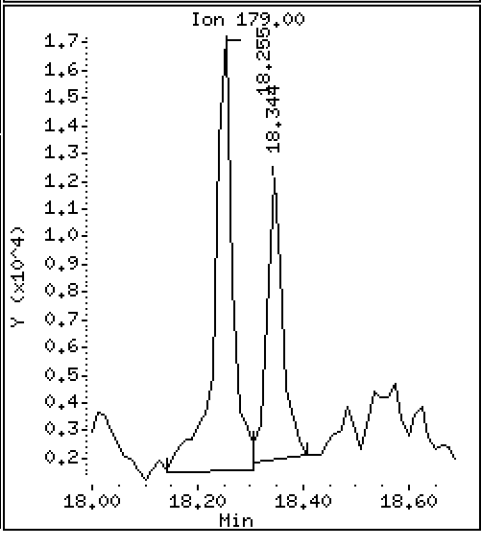


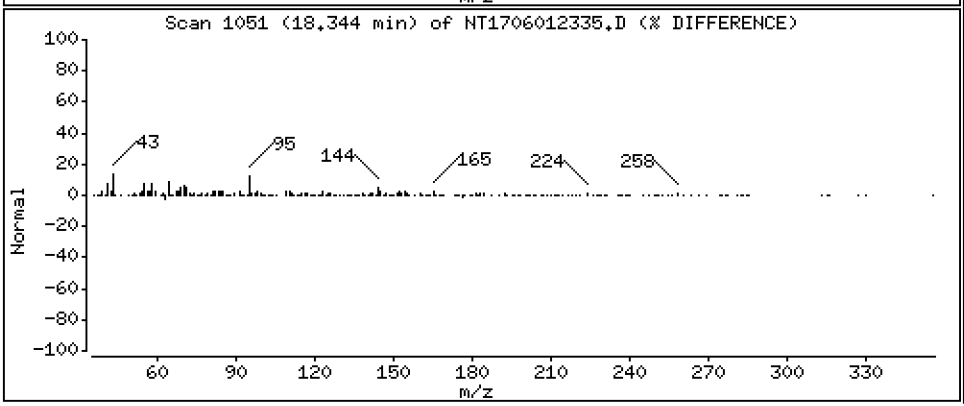












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

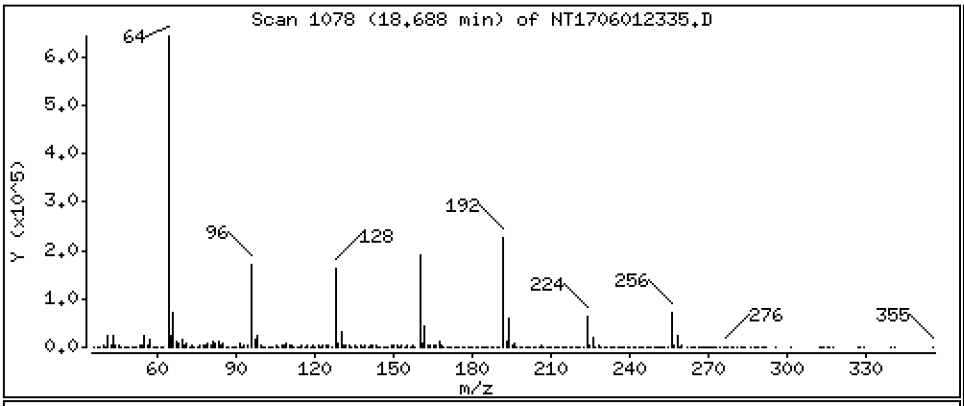
Operator: VTS

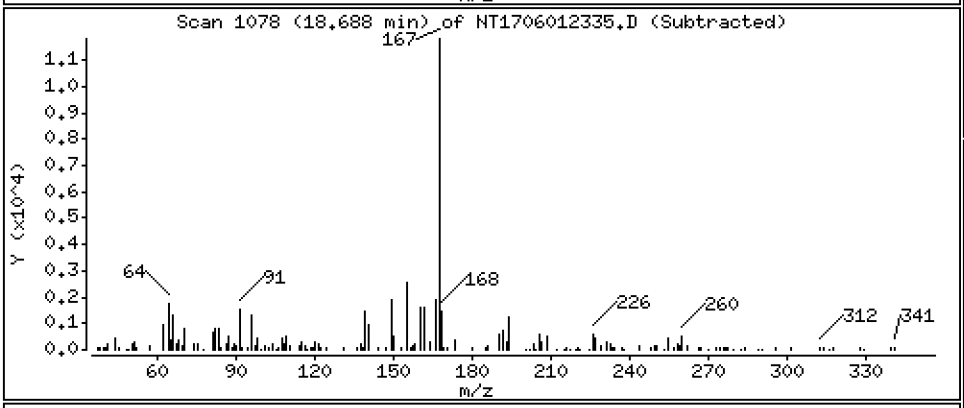
Column phase: ZB-5msi

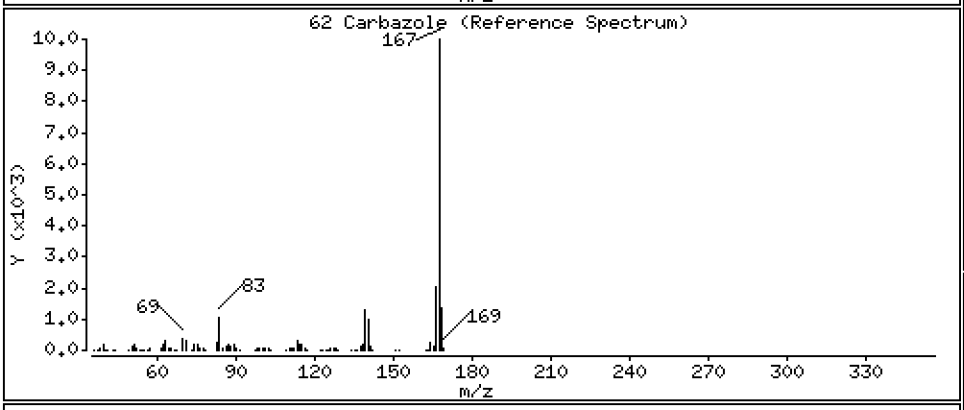
Column diameter: 0.25

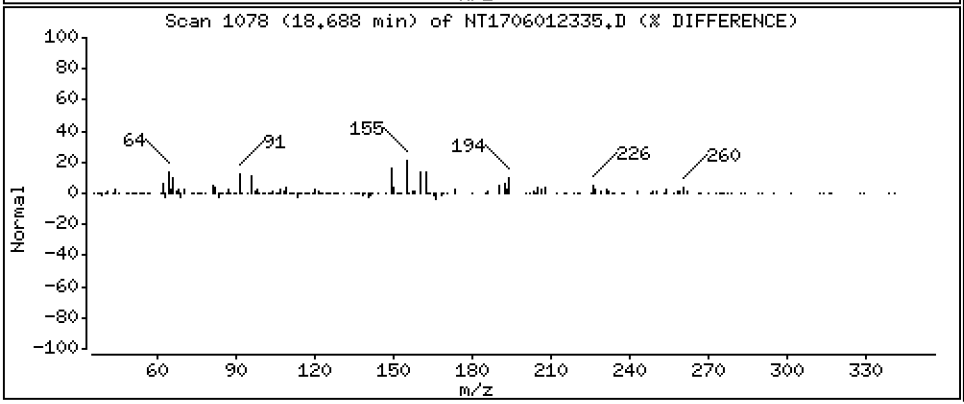
62 Carbazole

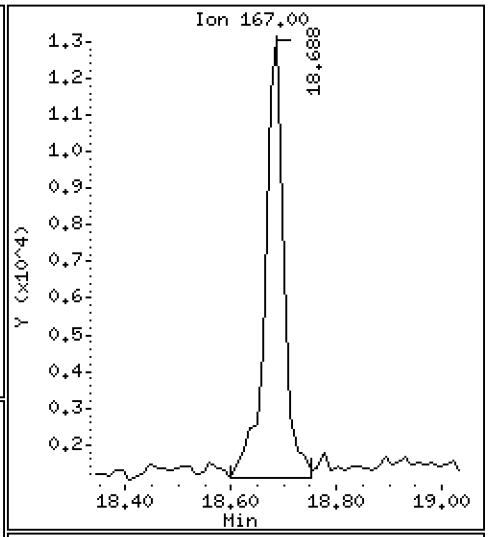
Concentration: 0.2208 ug/mL

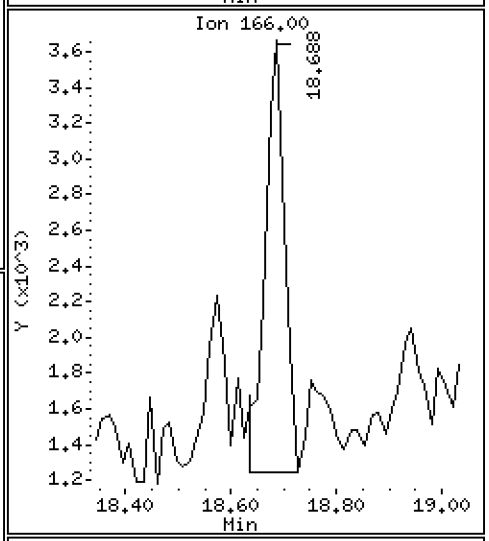


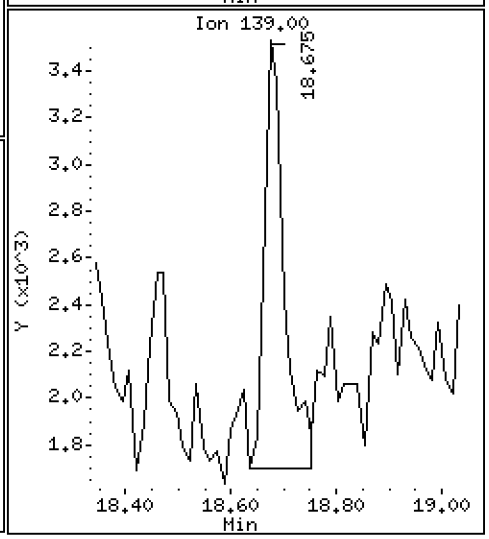












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

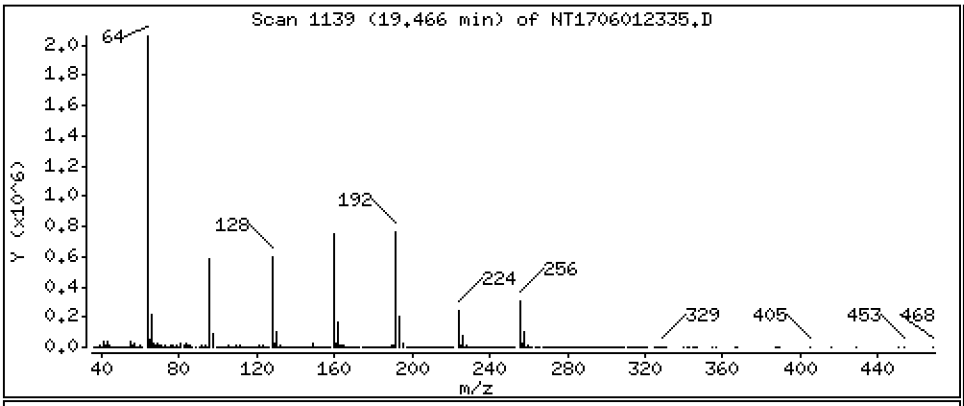
Operator: VTS

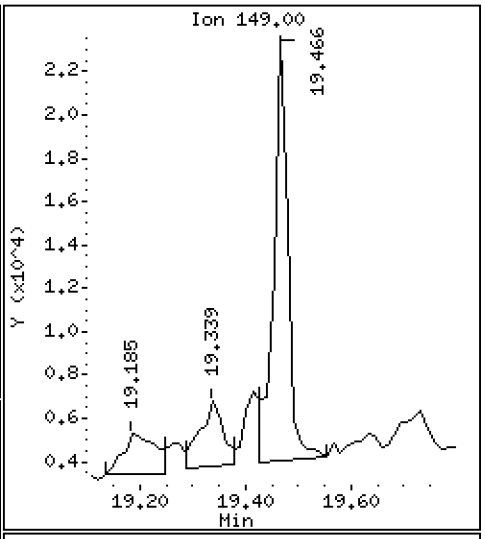
Column phase: ZB-5msi

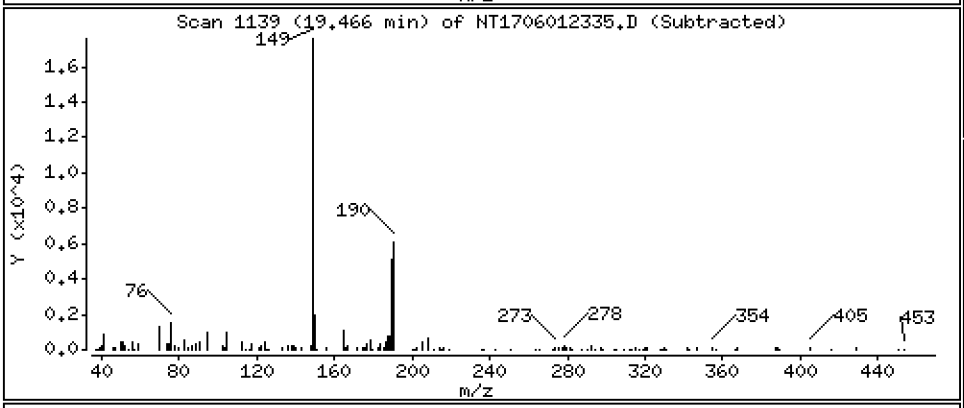
Column diameter: 0.25

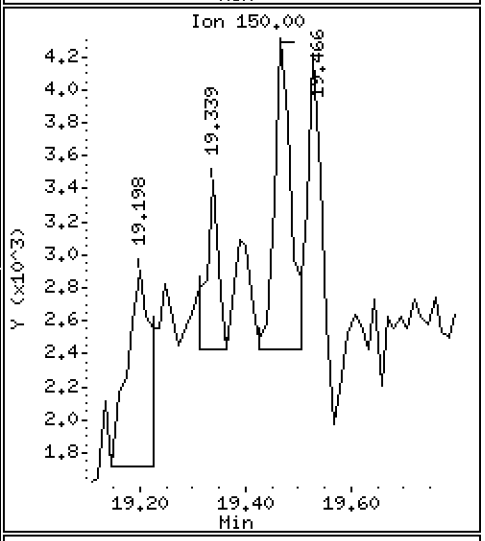
63 Di-n-butylphthalate

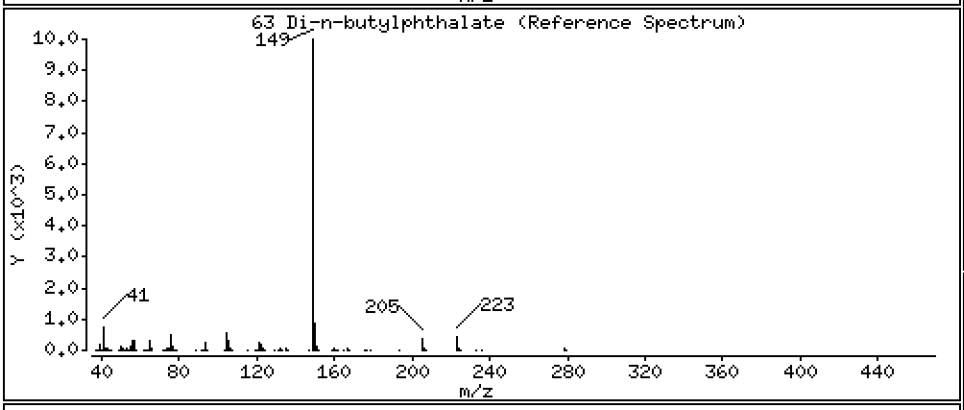
Concentration: 0.1378 ug/mL

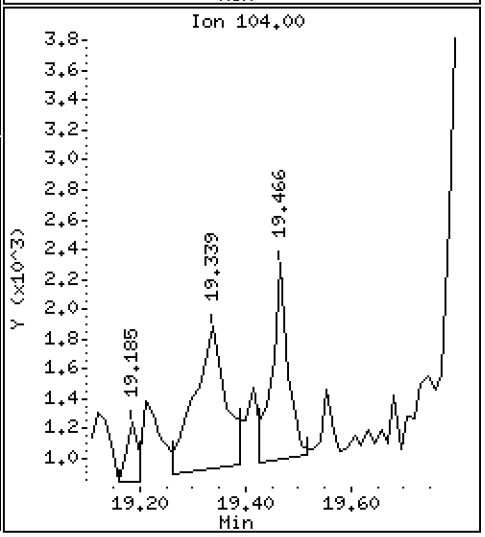


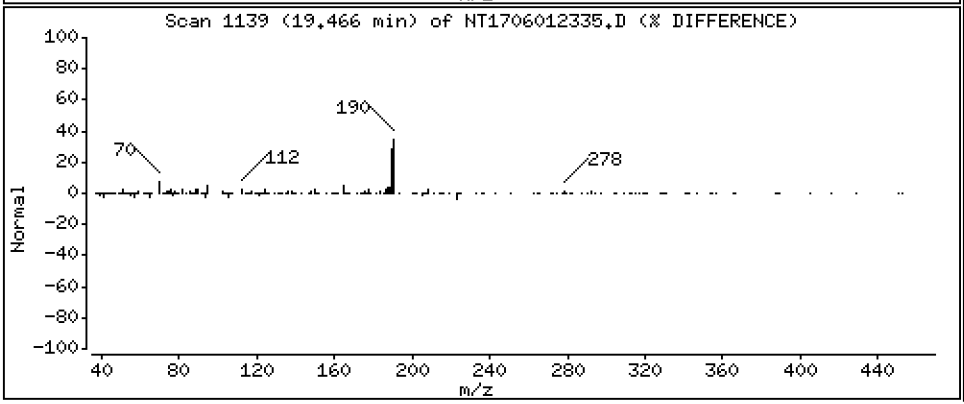












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

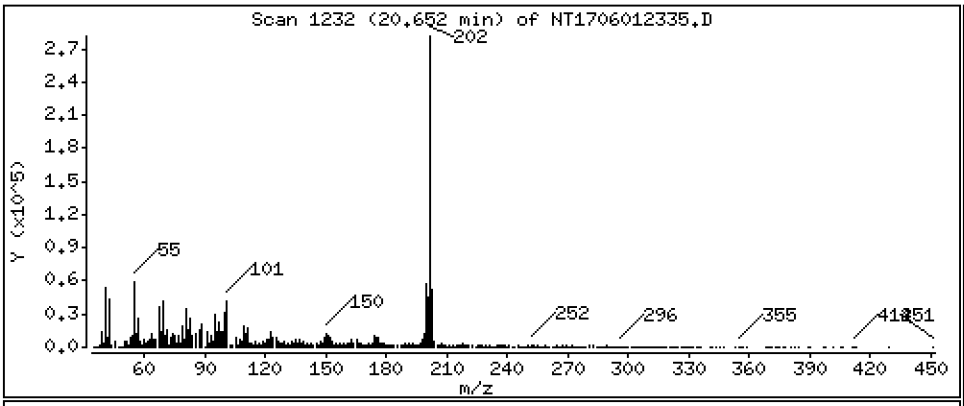
Operator: VTS

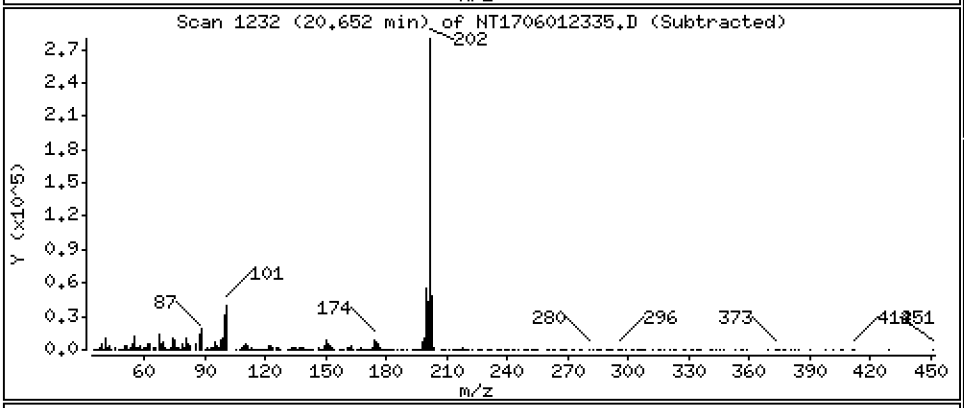
Column phase: ZB-5msi

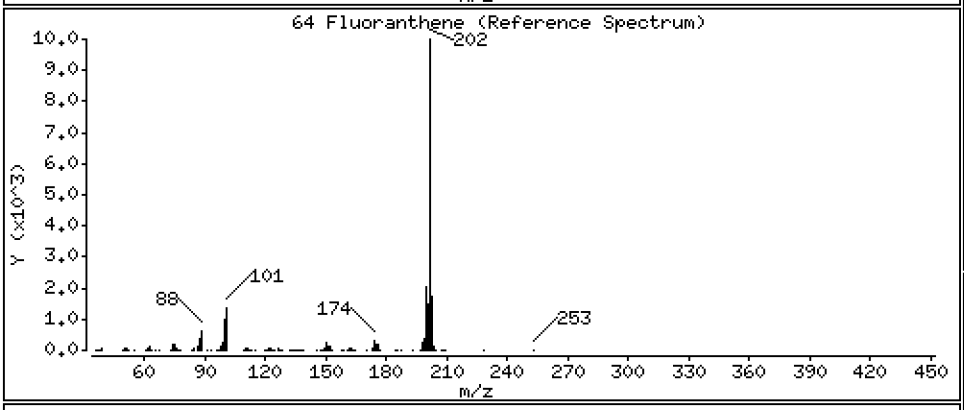
Column diameter: 0.25

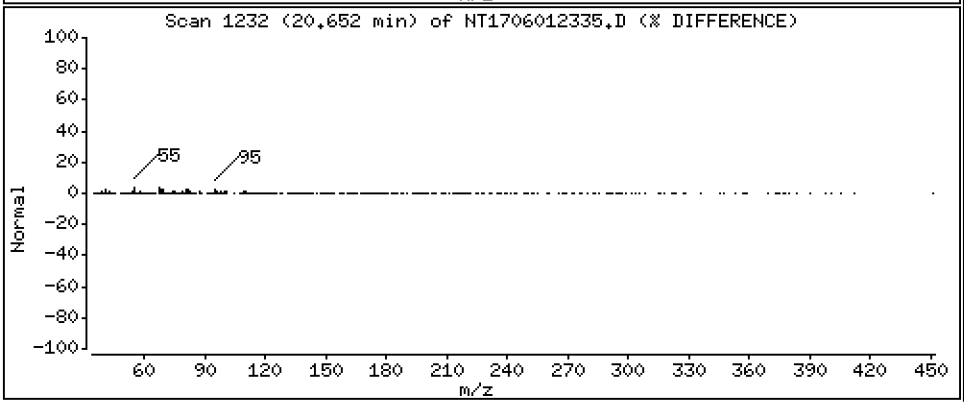
64 Fluoranthene

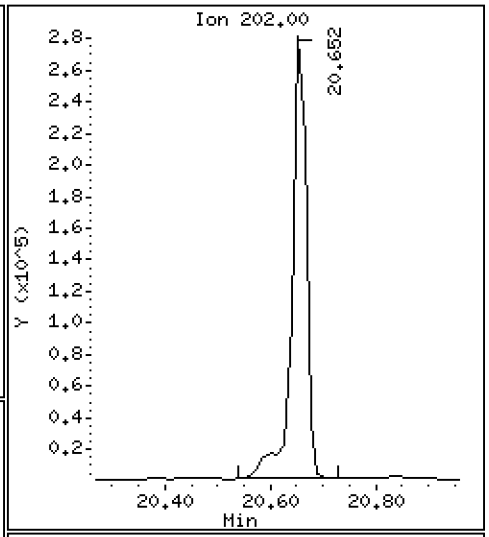
Concentration: 2.677 ug/mL

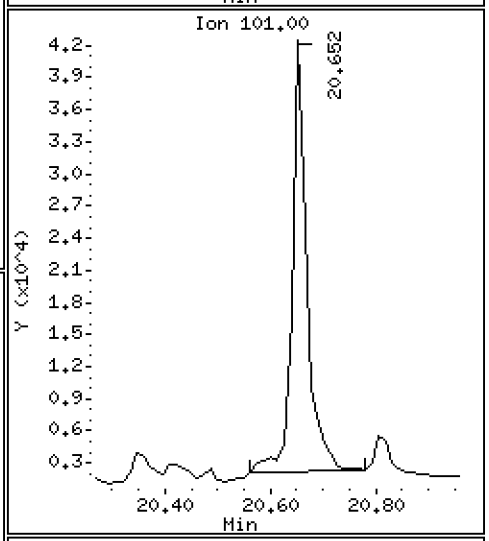


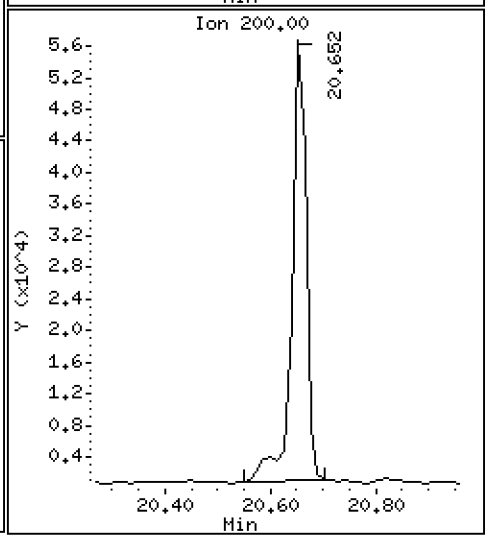












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

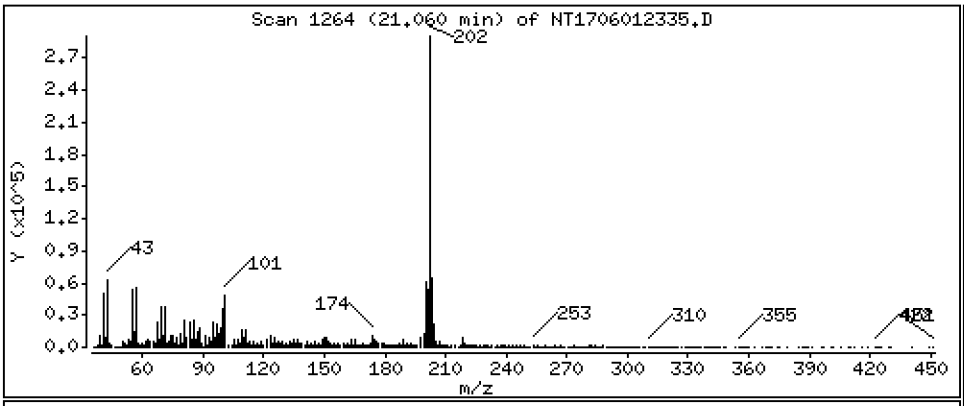
Operator: VTS

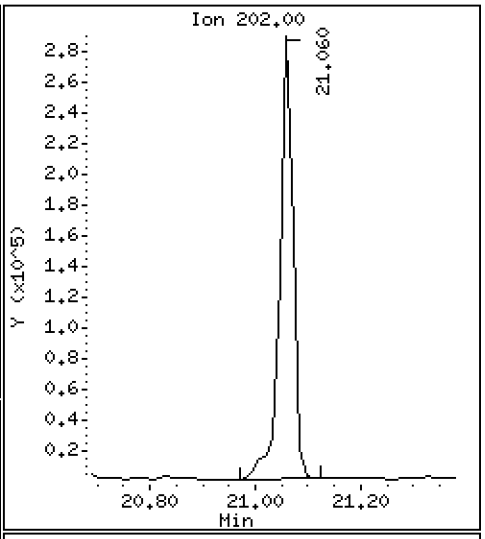
Column phase: ZB-5msi

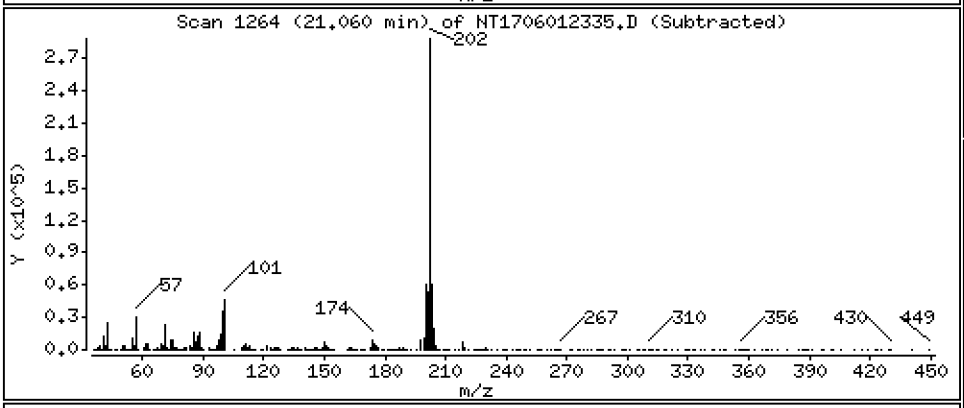
Column diameter: 0.25

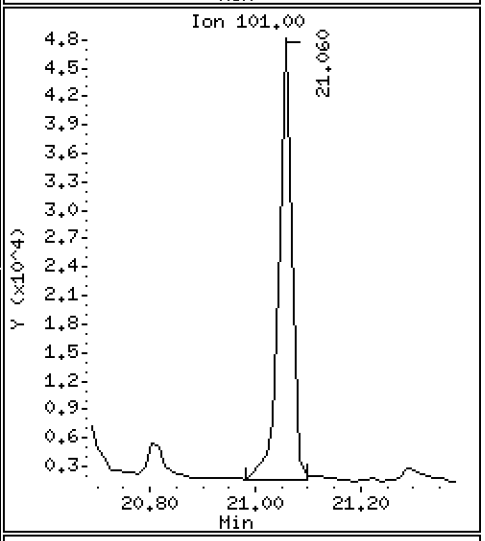
65 Pyrene

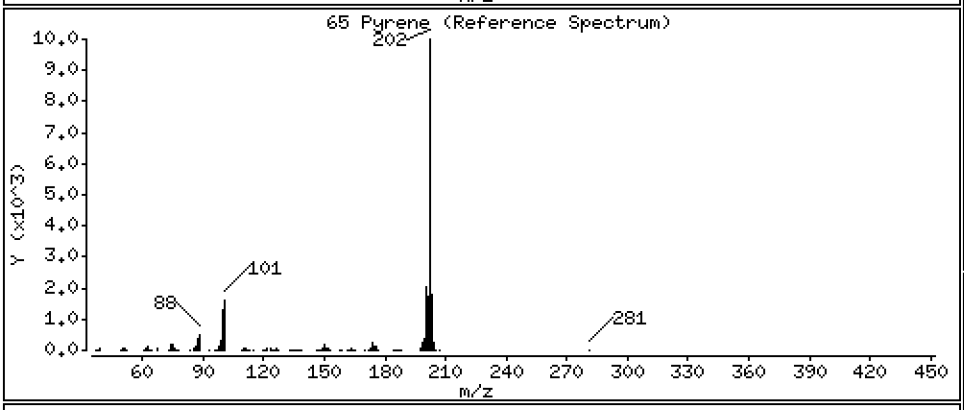
Concentration: 2.471 ug/mL

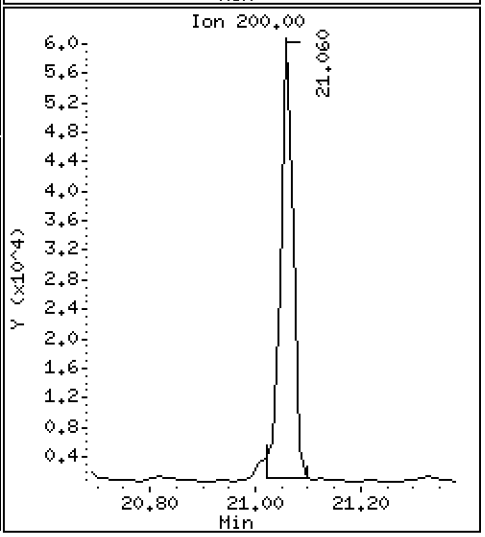


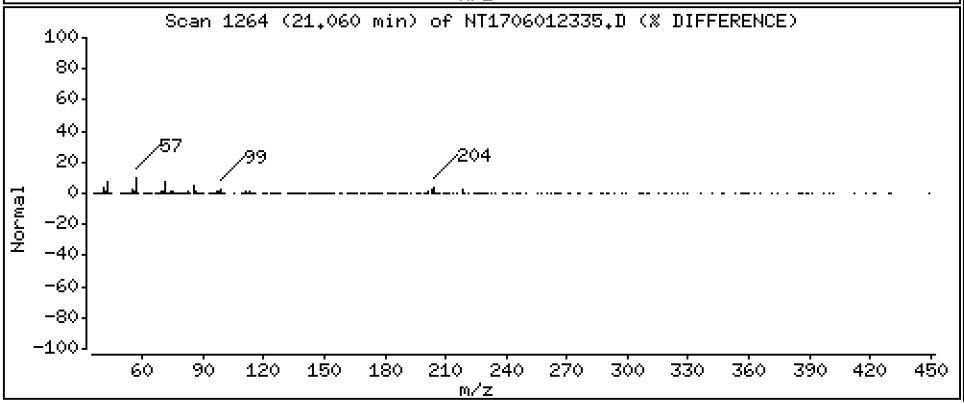












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

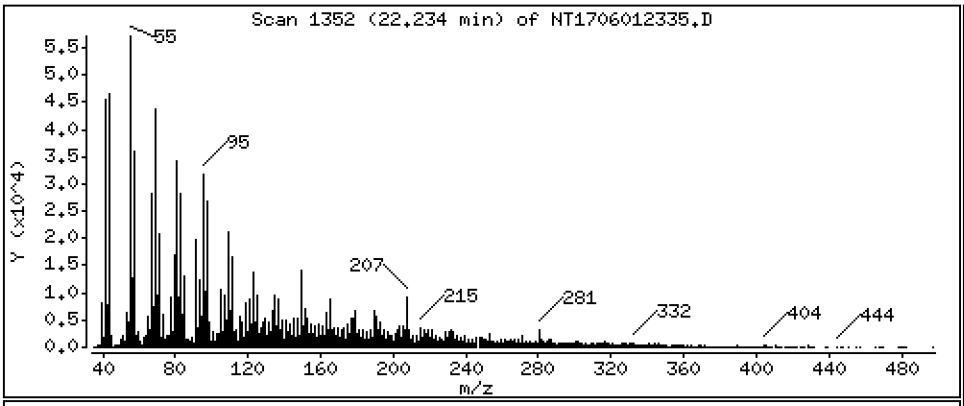
Operator: VTS

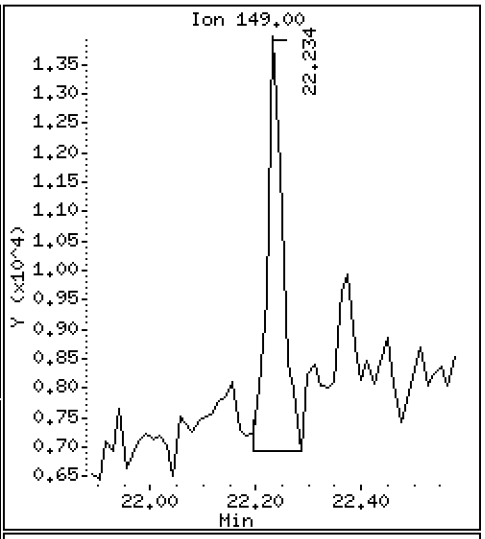
Column phase: ZB-5msi

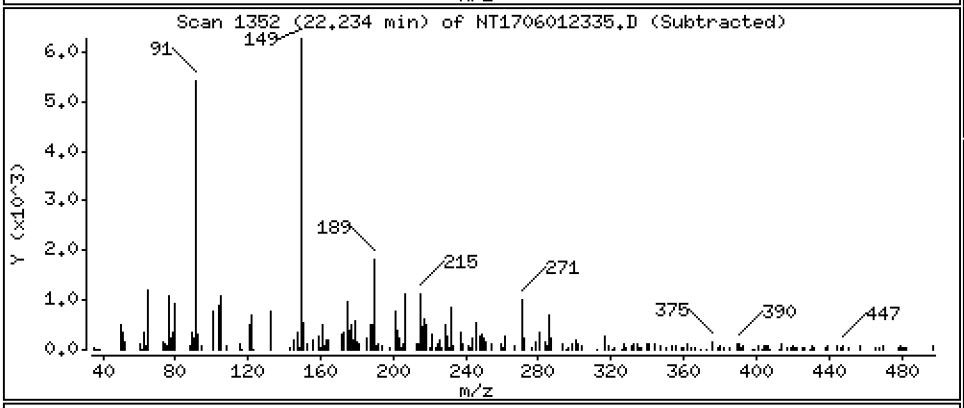
Column diameter: 0.25

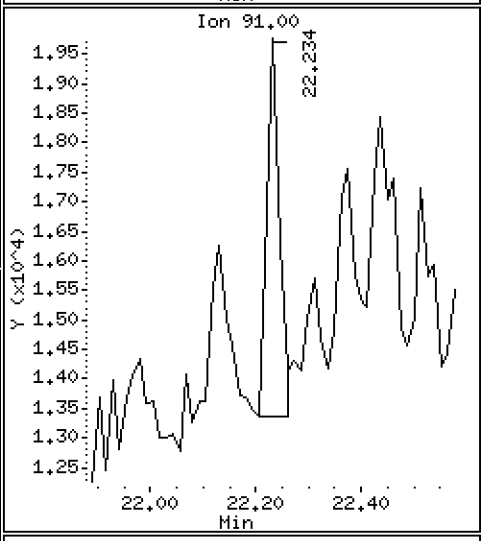
67 Butylbenzylphthalate

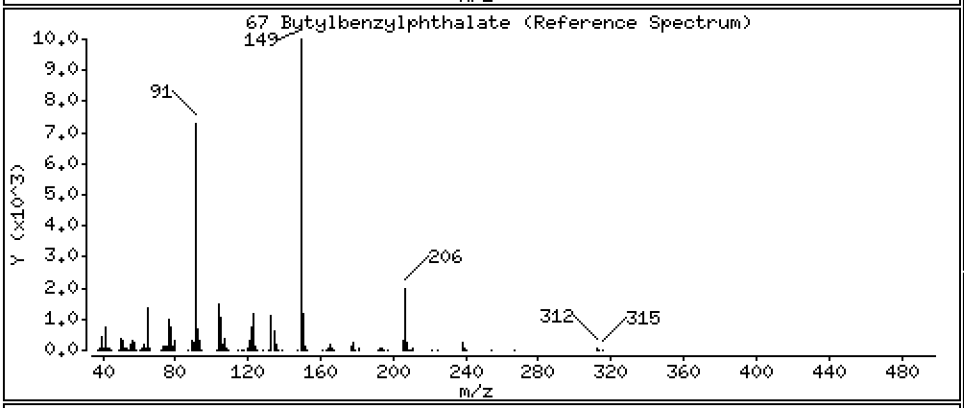
Concentration: 0.1536 ug/mL

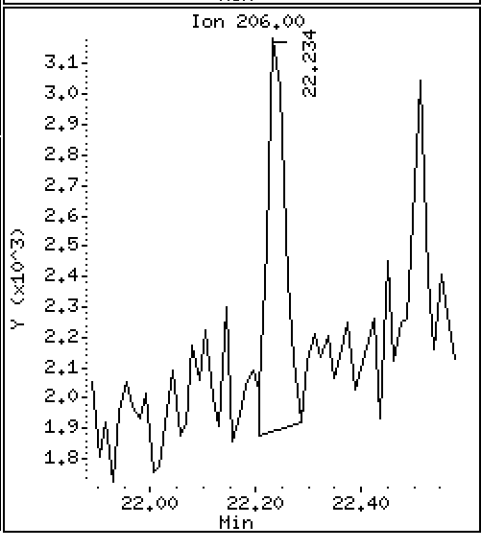


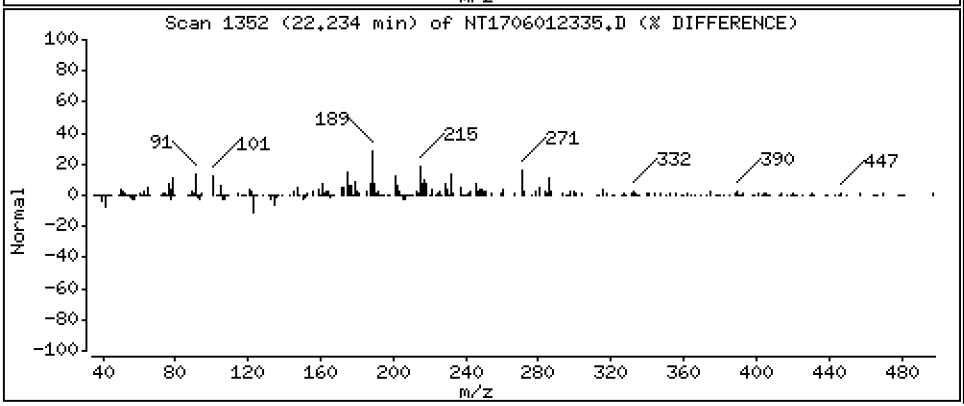












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

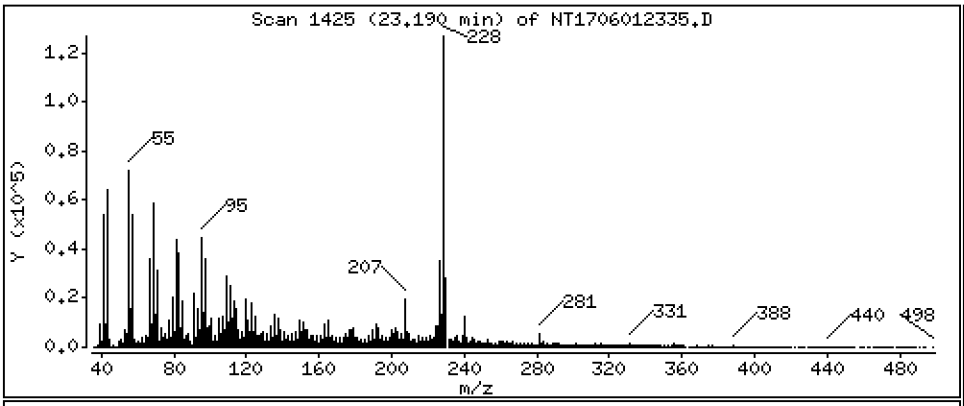
Operator: VTS

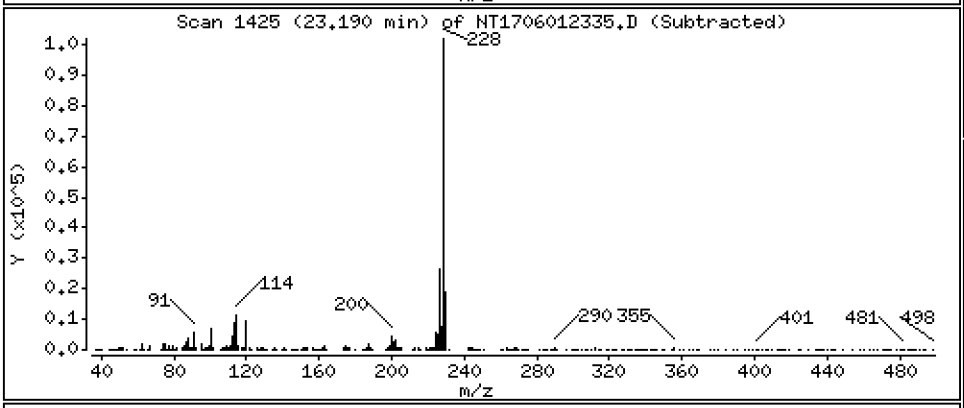
Column phase: ZB-5msi

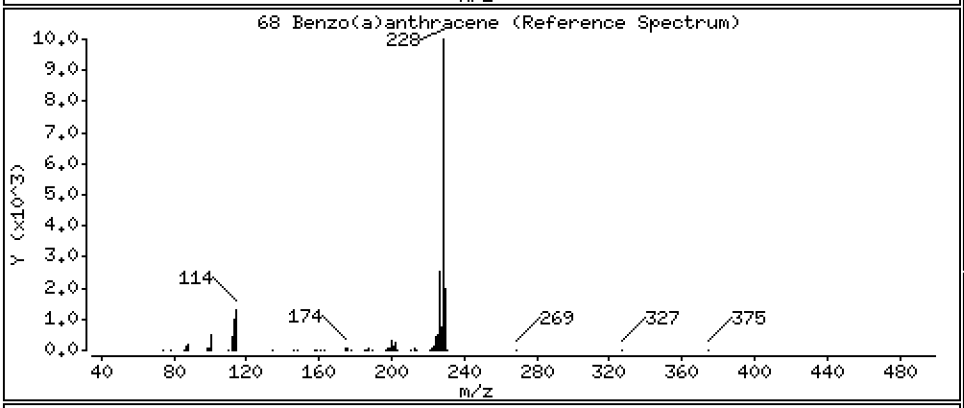
Column diameter: 0.25

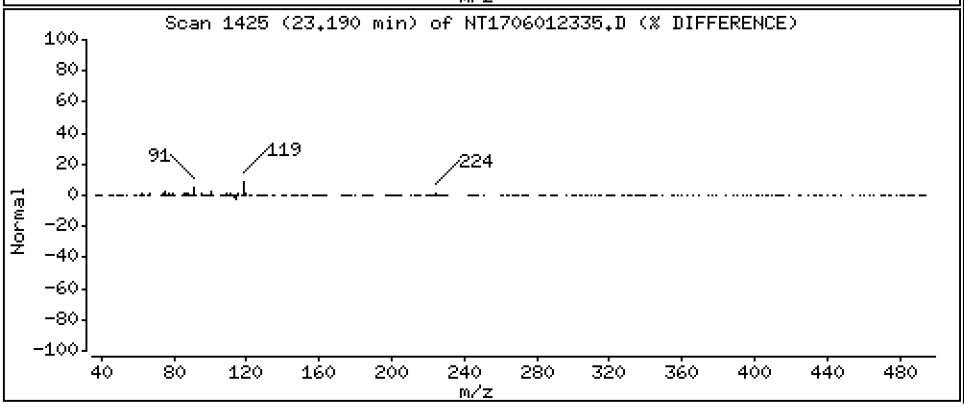
68 Benzo(a)anthracene

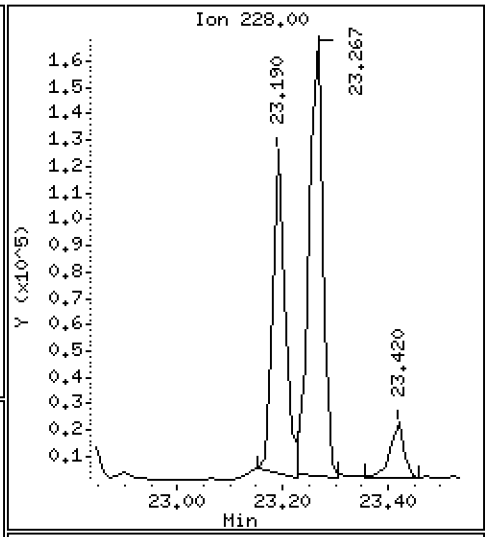
Concentration: 1.303 ug/mL

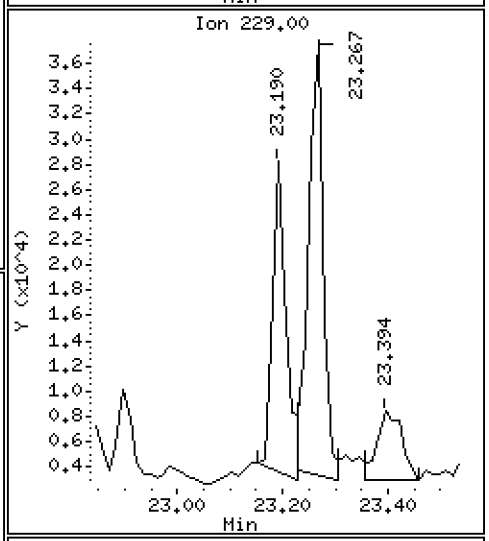


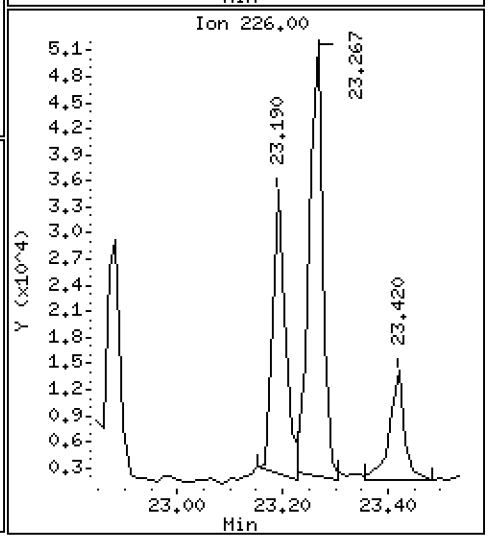












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

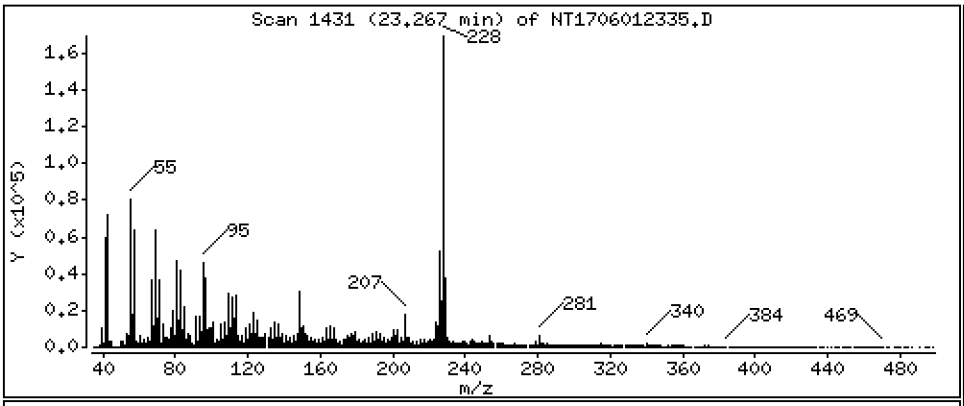
Operator: VTS

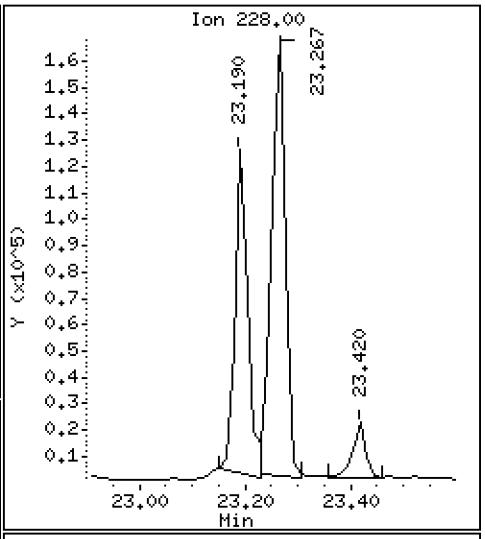
Column phase: ZB-5msi

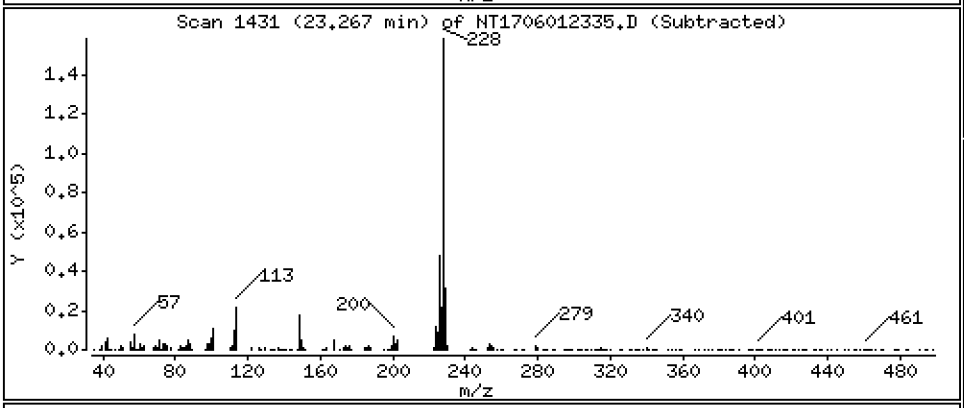
Column diameter: 0.25

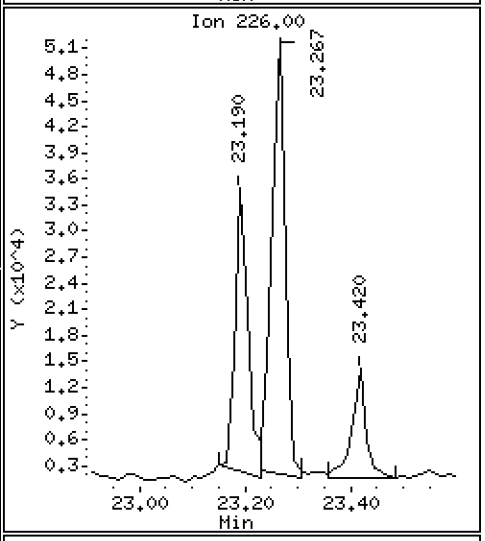
71 Chrysene

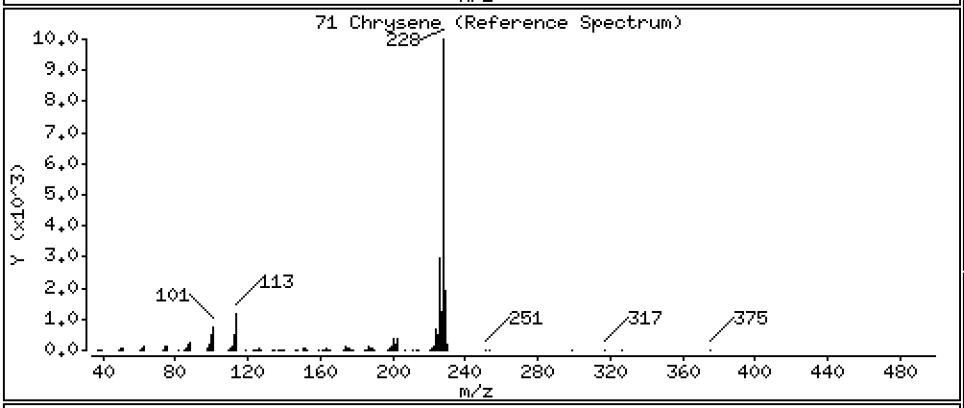
Concentration: 2.088 ug/mL

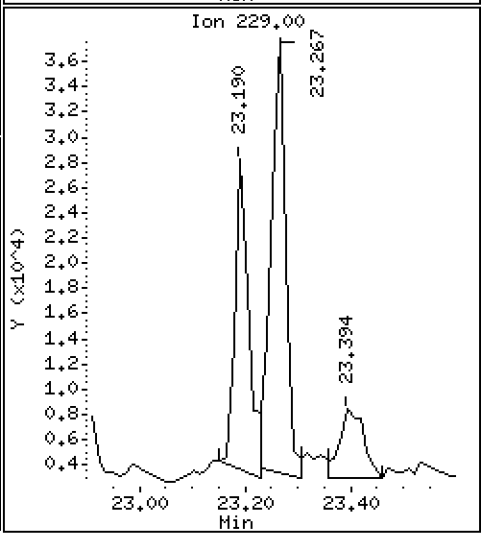


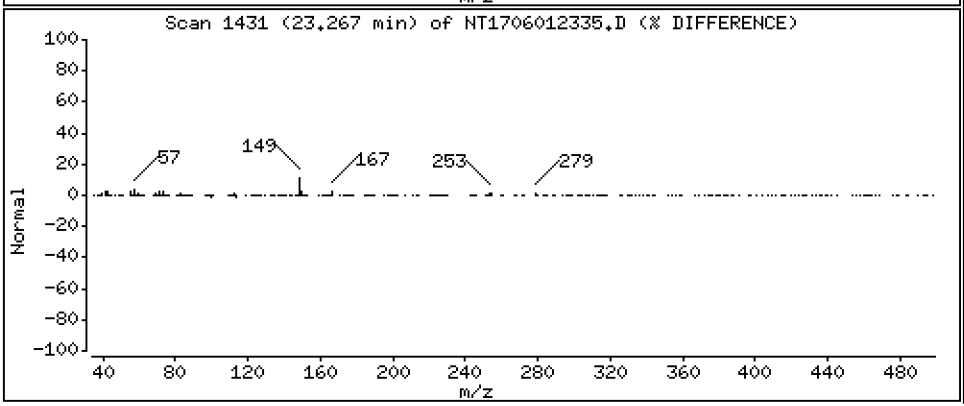












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

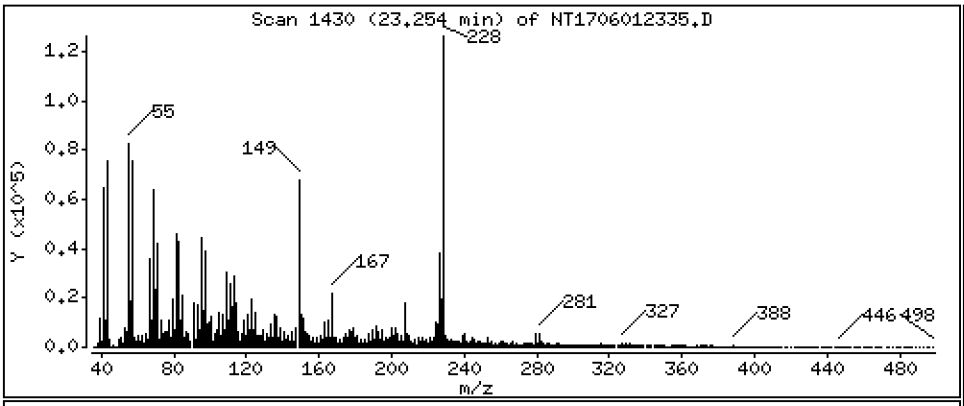
Operator: VTS

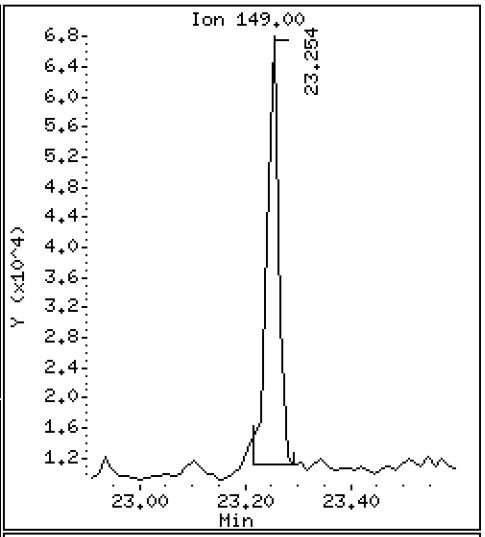
Column phase: ZB-5msi

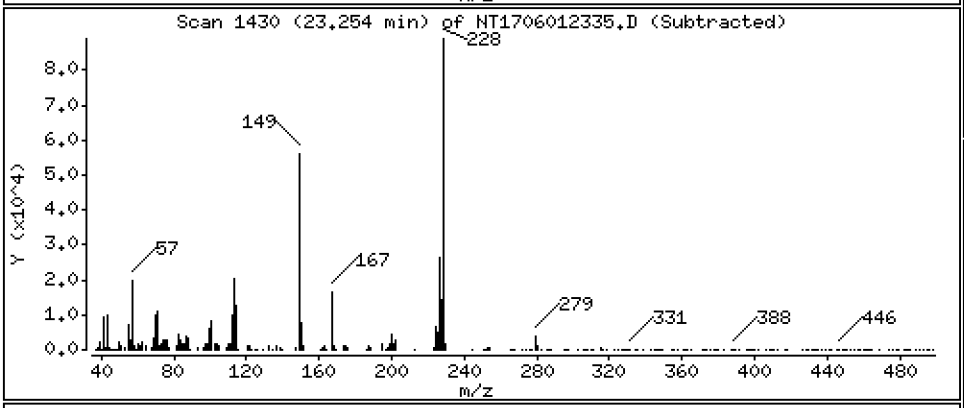
Column diameter: 0.25

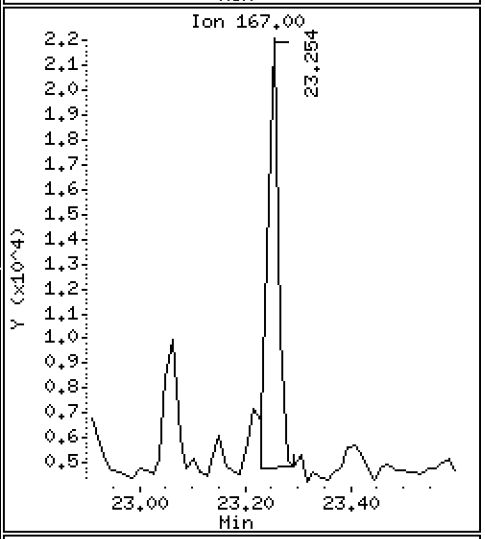
72 bis(2-Ethylhexyl)phthalate

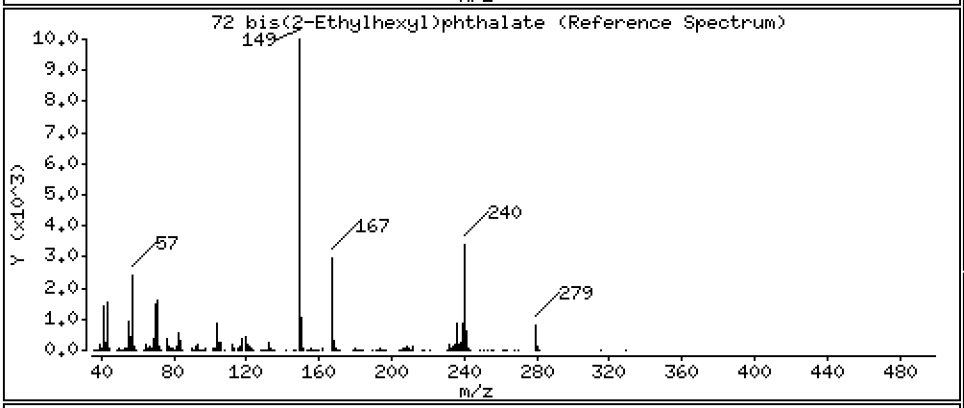
Concentration: 0.6872 ug/mL

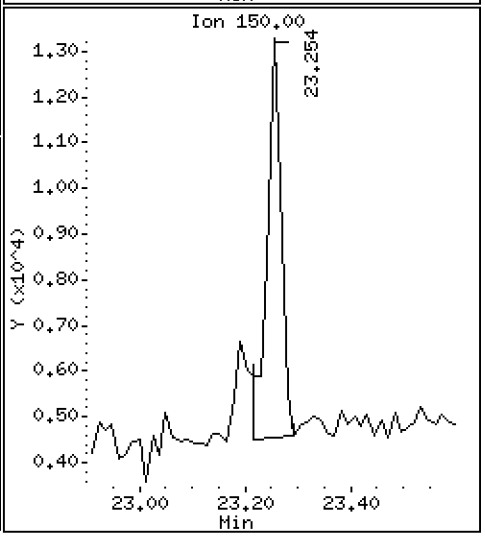


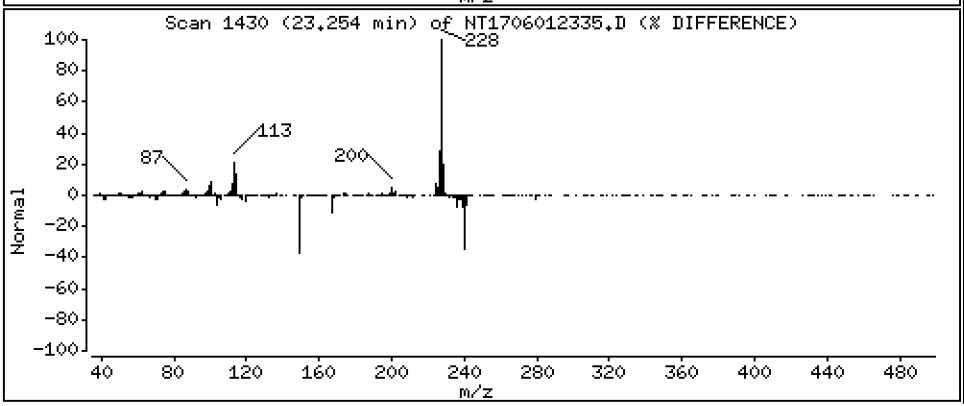












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

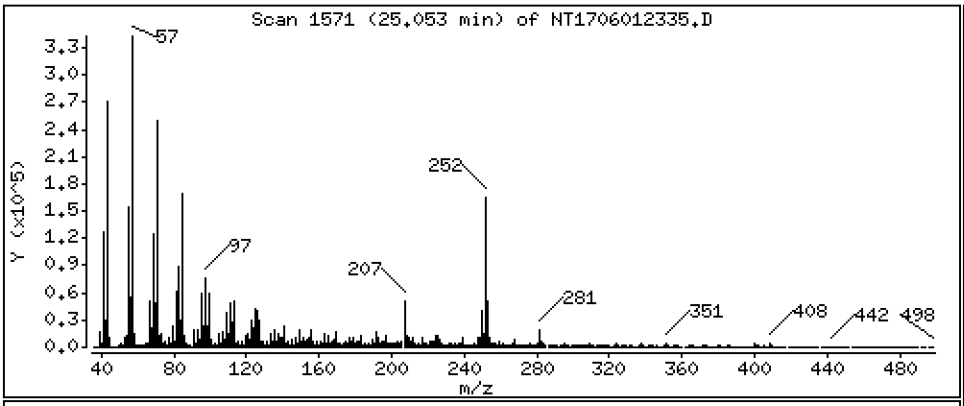
Operator: VTS

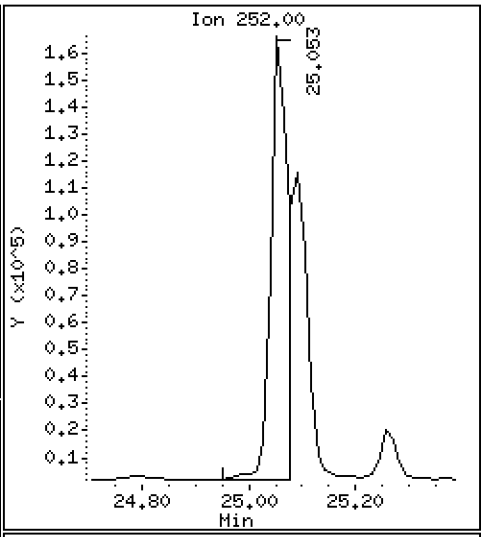
Column phase: ZB-5msi

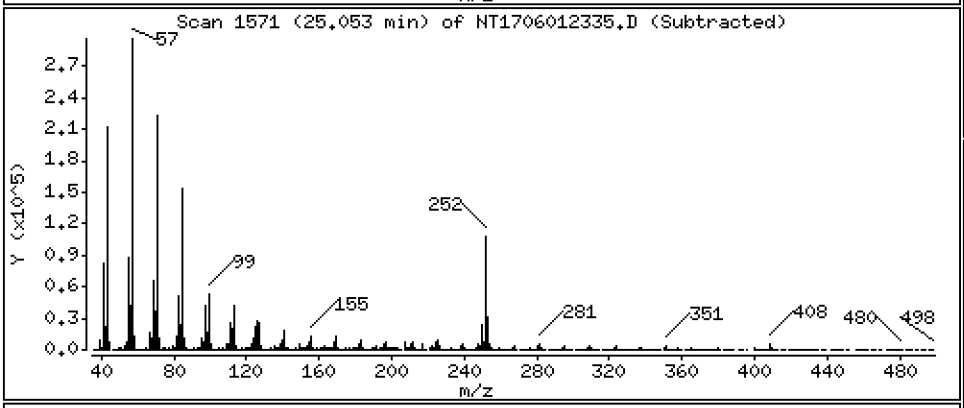
Column diameter: 0.25

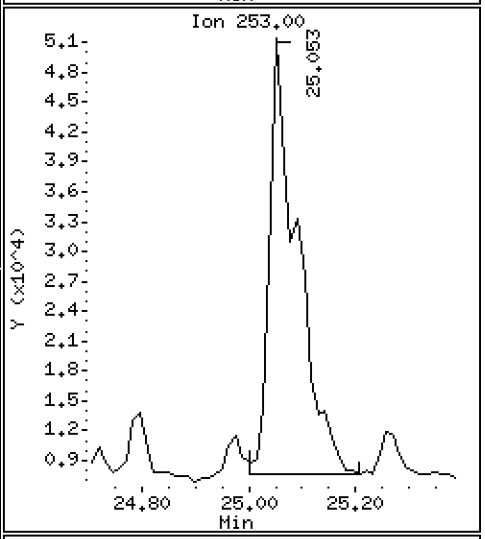
74 Benzo(b)fluoranthene

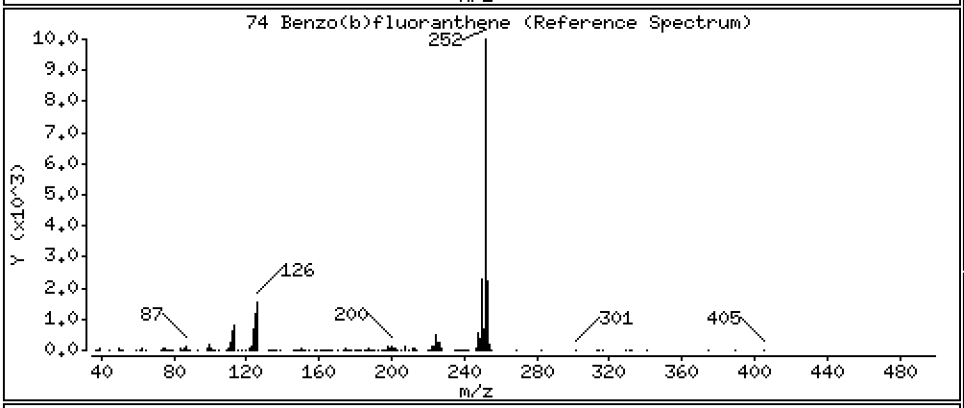
Concentration: 1.859 ug/mL

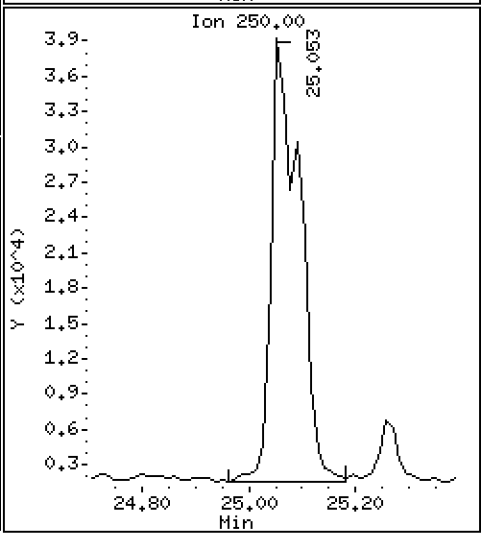


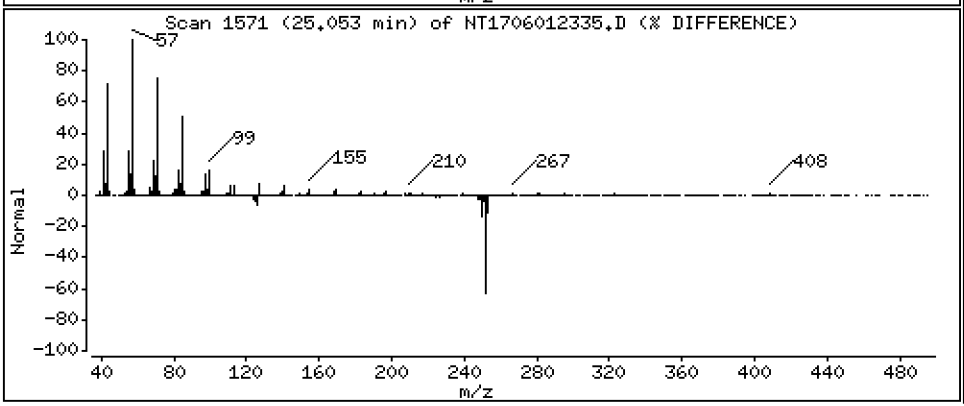












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

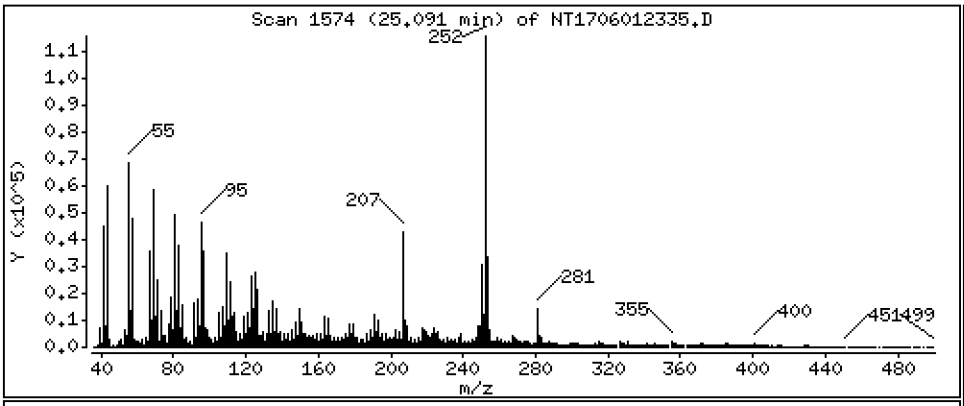
Operator: VTS

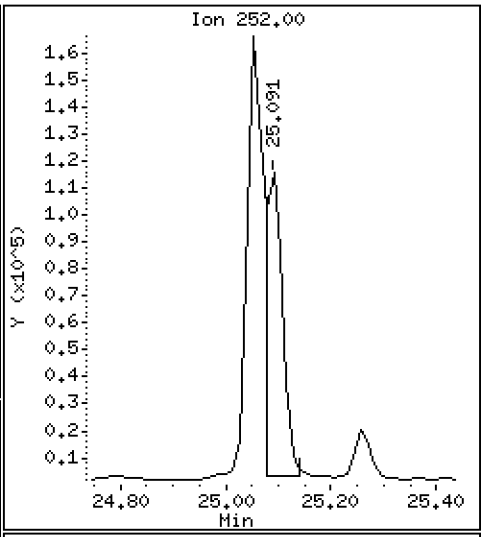
Column phase: ZB-5msi

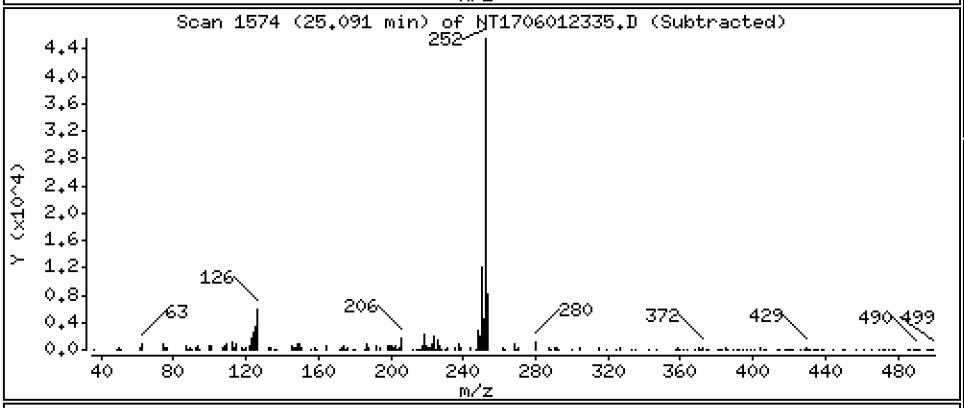
Column diameter: 0.25

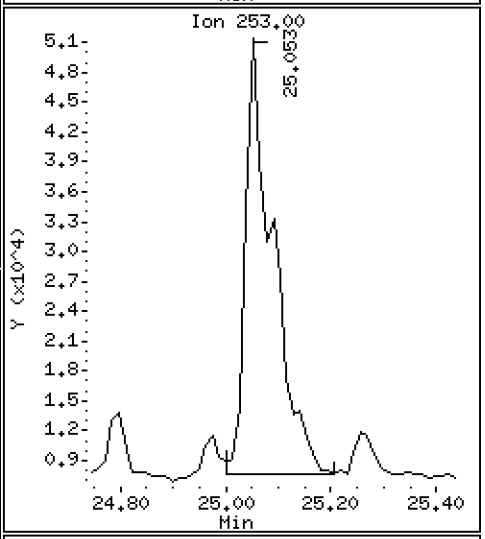
75 Benzo(k)fluoranthene

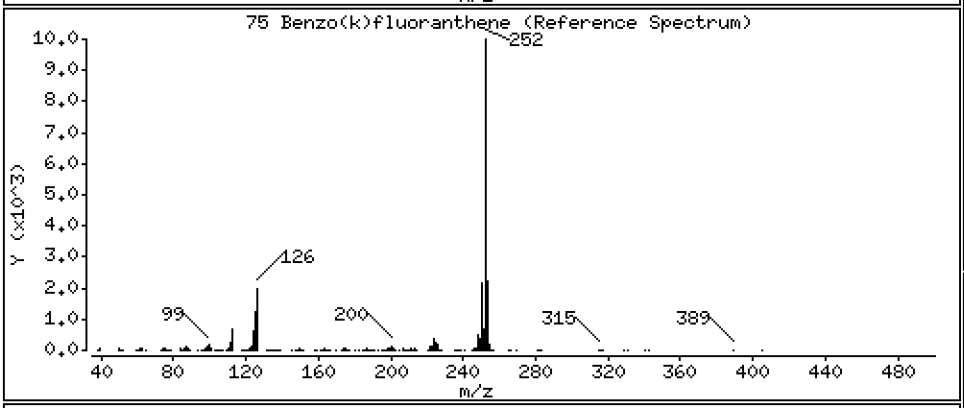
Concentration: 1.341 ug/mL

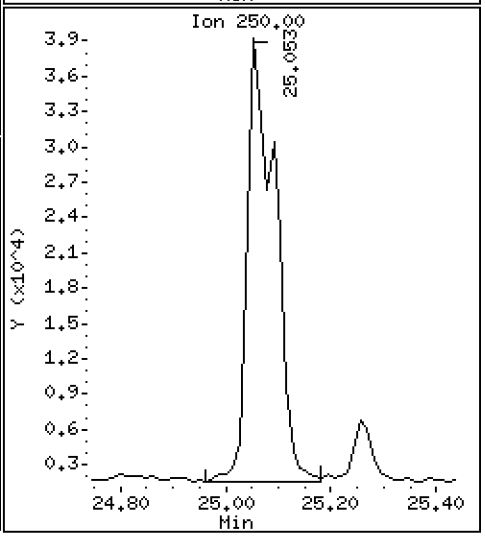


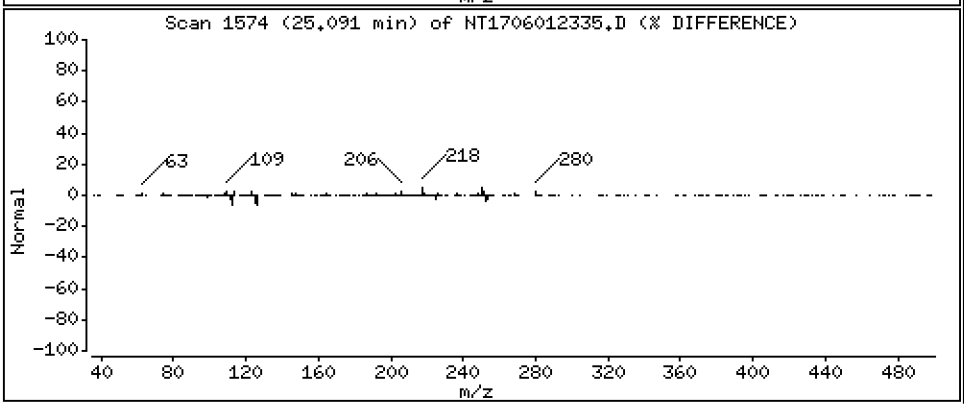












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

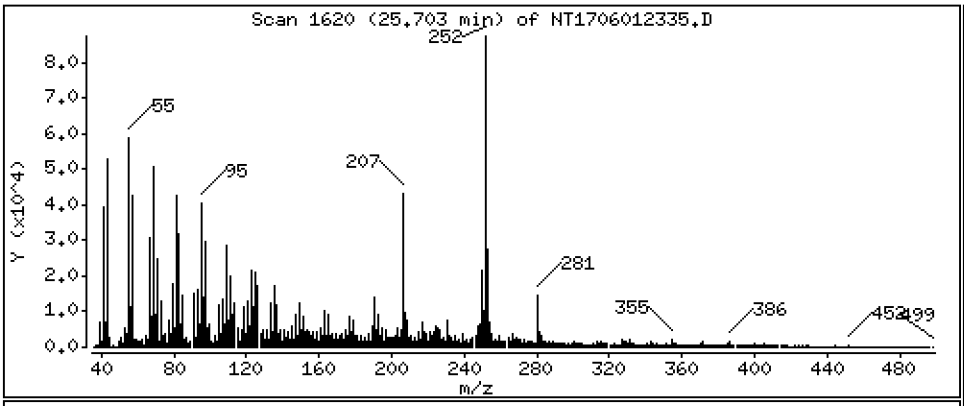
Operator: VTS

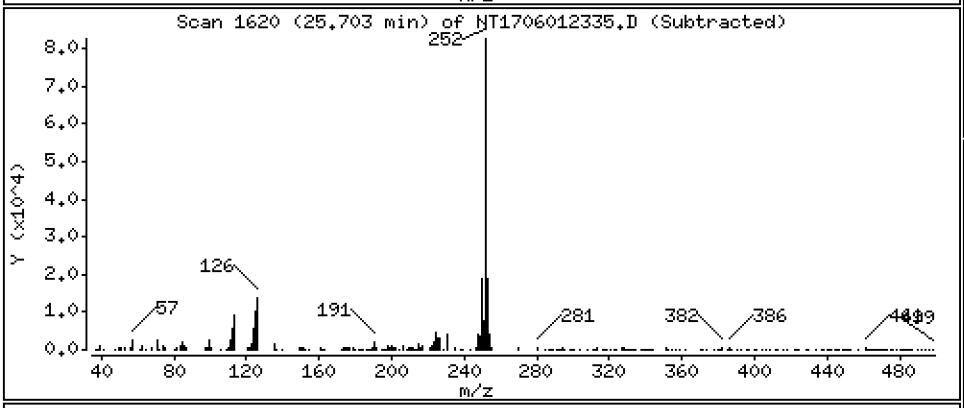
Column phase: ZB-5msi

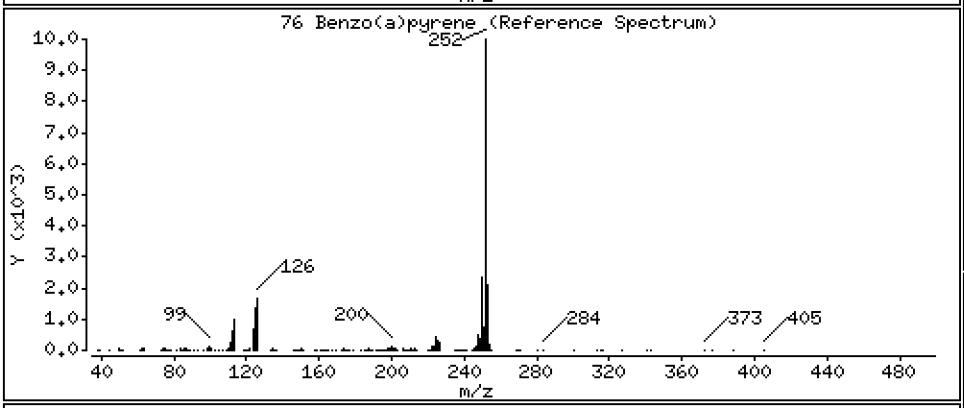
Column diameter: 0.25

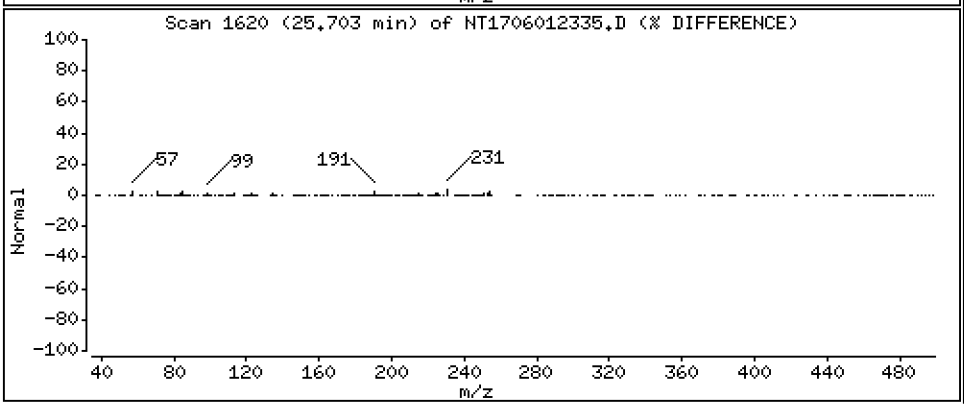
76 Benzo(a)pyrene

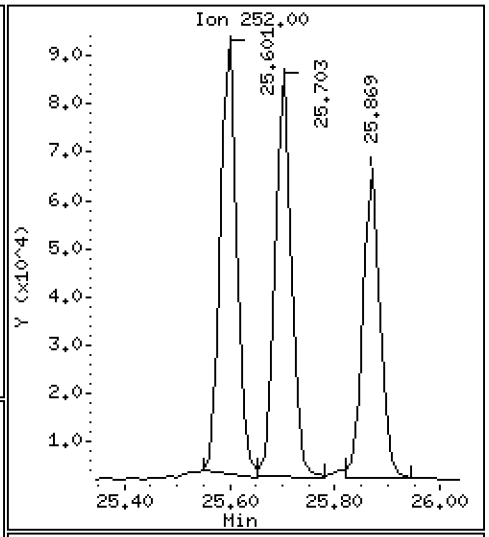
Concentration: 1.189 ug/mL

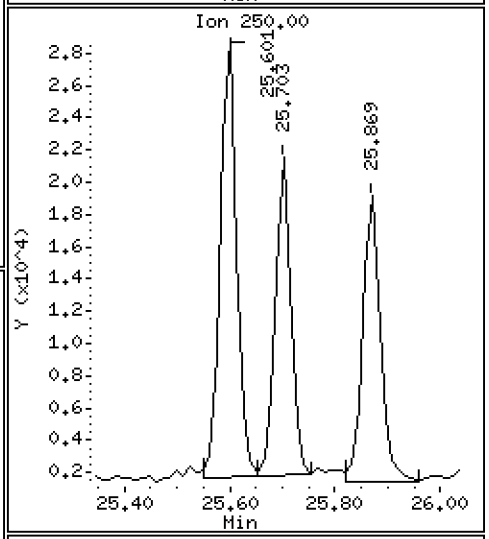


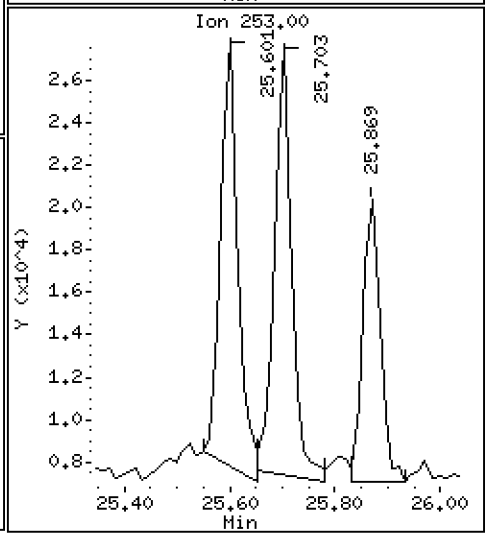












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

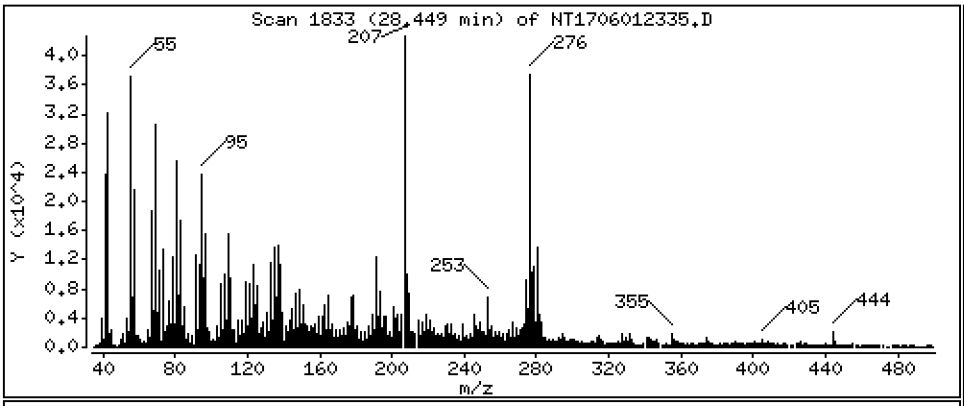
Operator: VTS

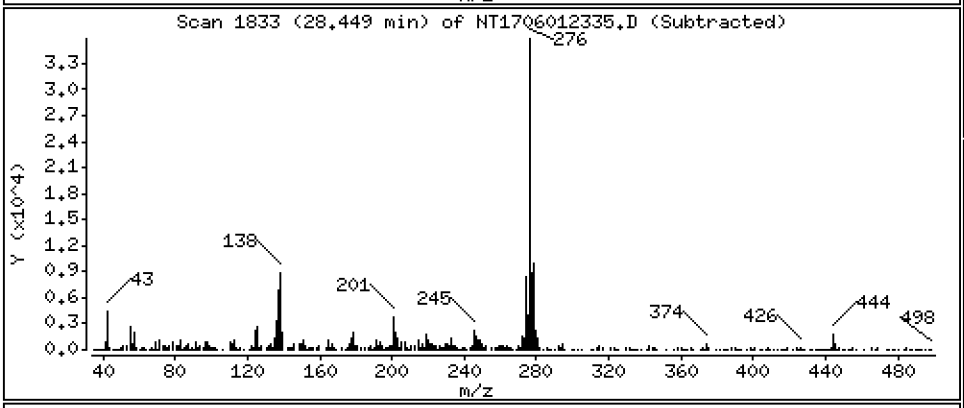
Column phase: ZB-5msi

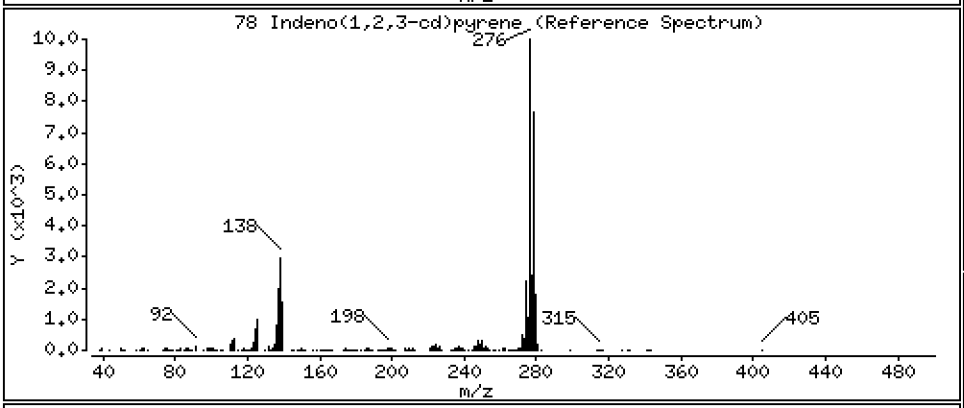
Column diameter: 0.25

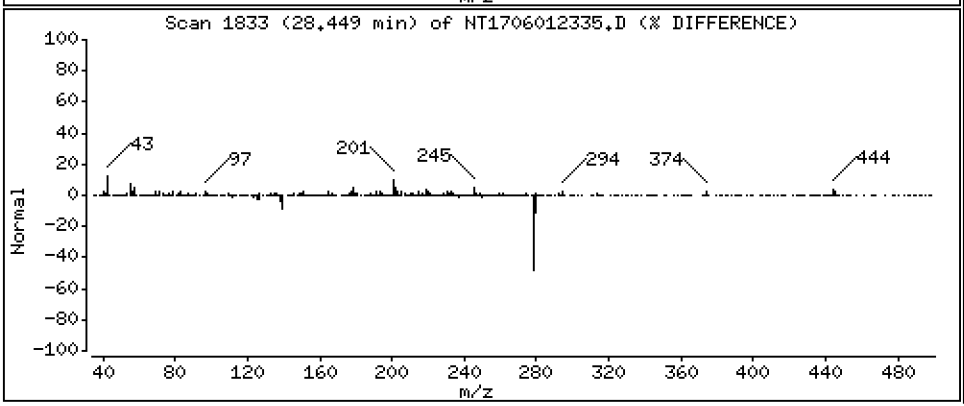
78 Indeno(1,2,3-cd)pyrene

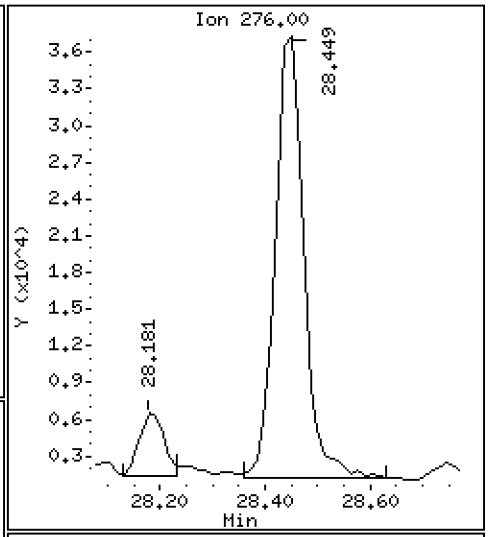
Concentration: 0.7371 ug/mL

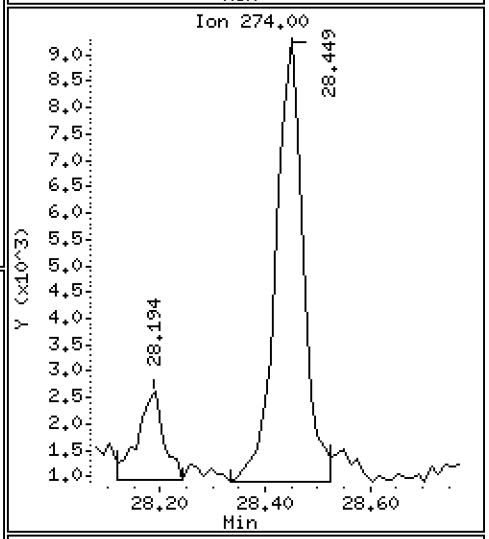


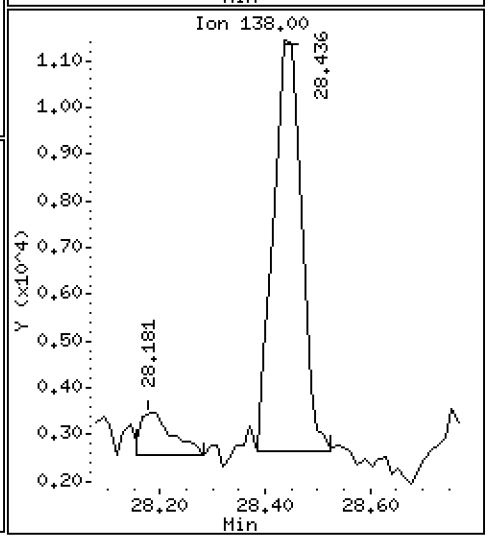












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

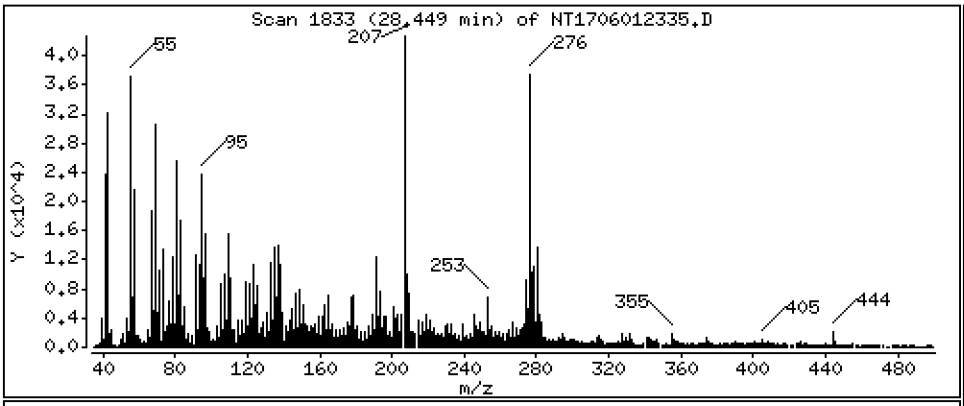
Operator: VTS

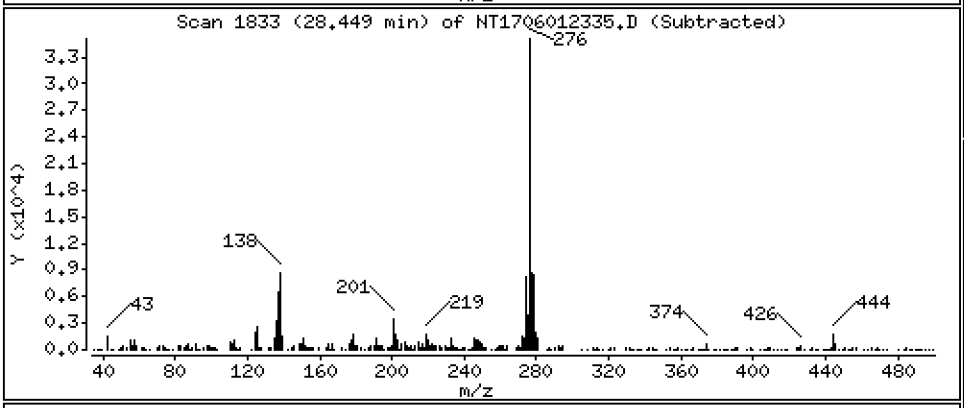
Column phase: ZB-5msi

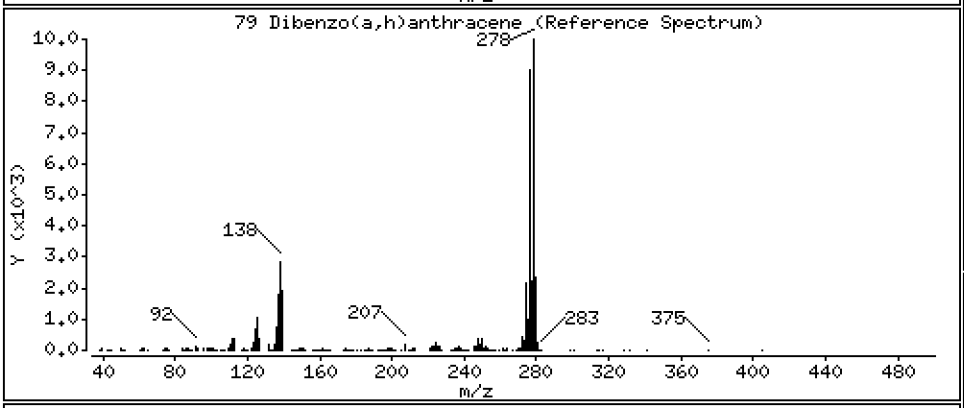
Column diameter: 0.25

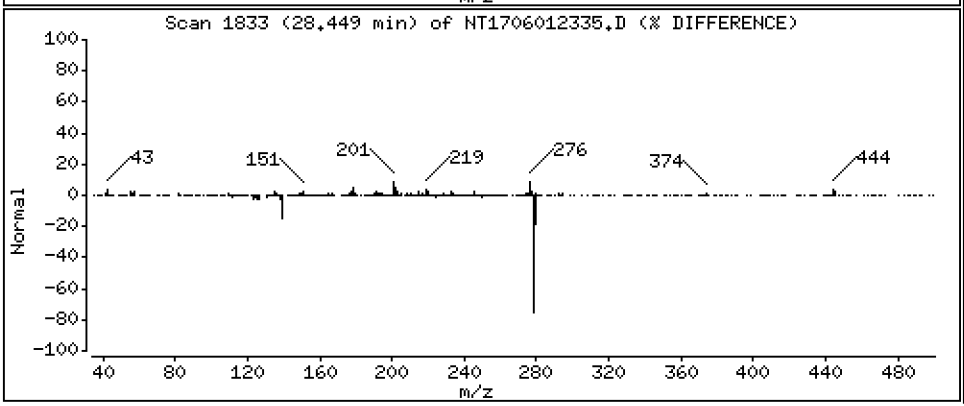
79 Dibenzo(a,h)anthracene

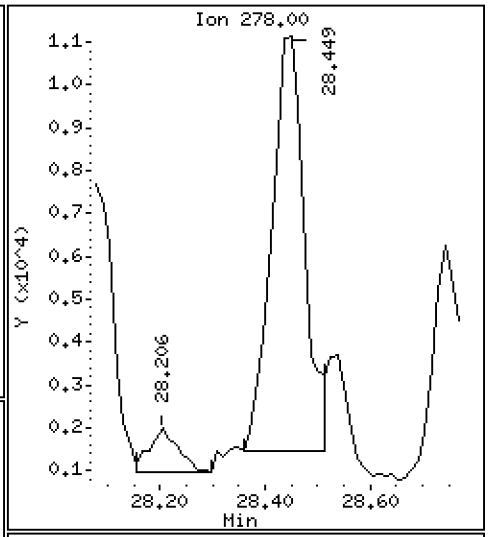
Concentration: 0.2681 ug/mL

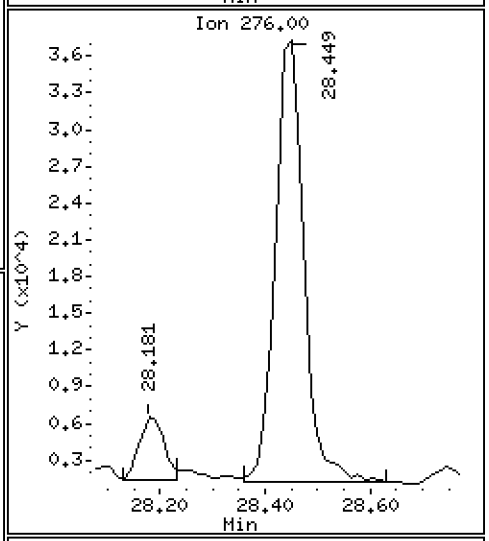


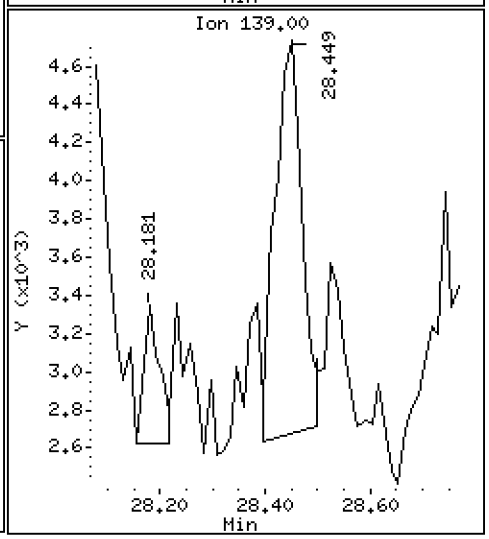












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

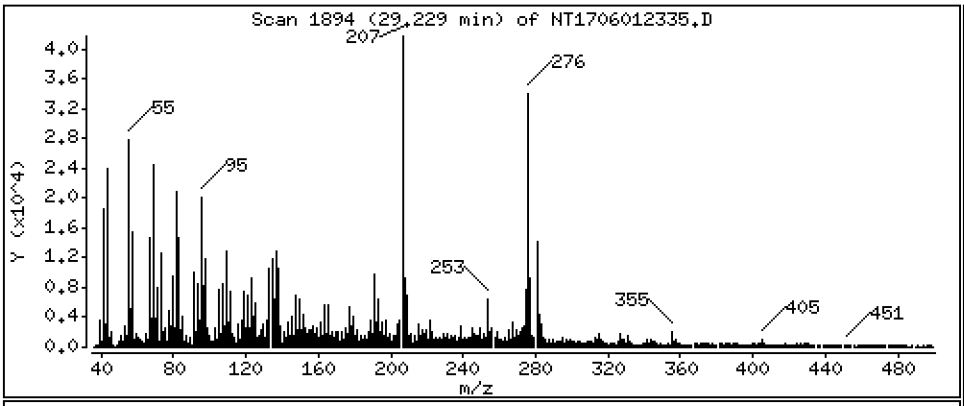
Operator: VTS

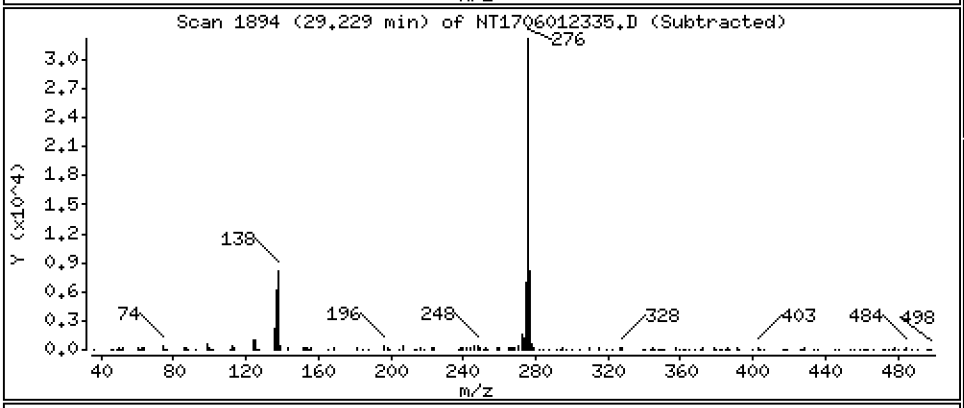
Column phase: ZB-5msi

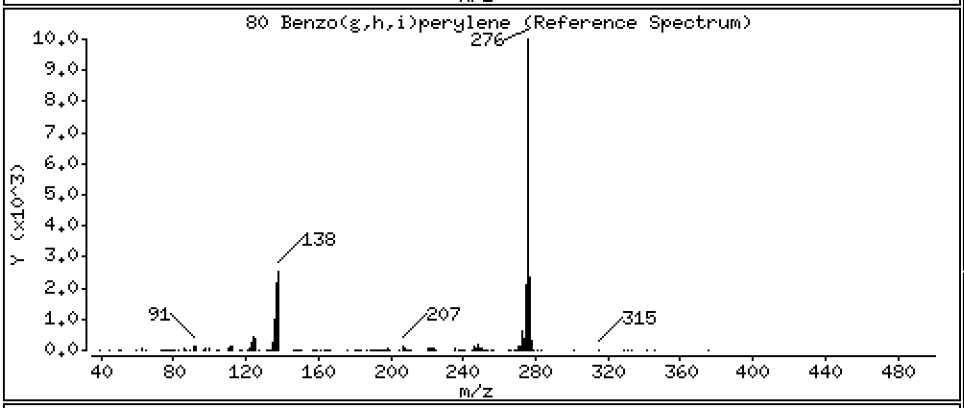
Column diameter: 0.25

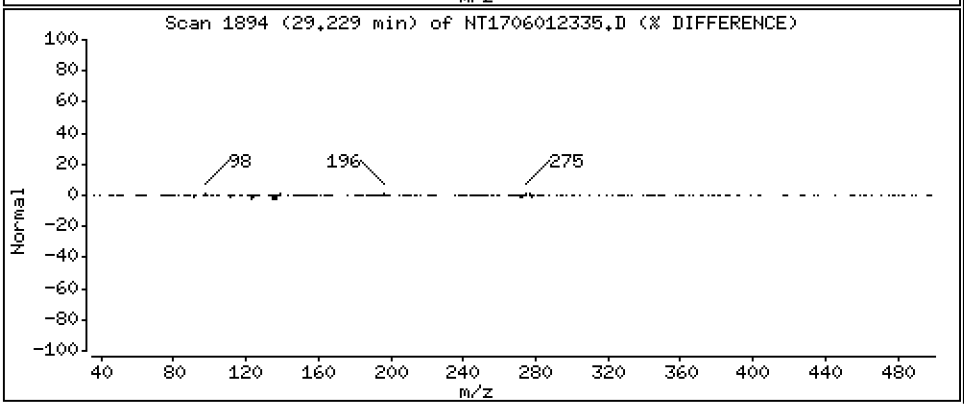
80 Benzo(g,h,i)perylene

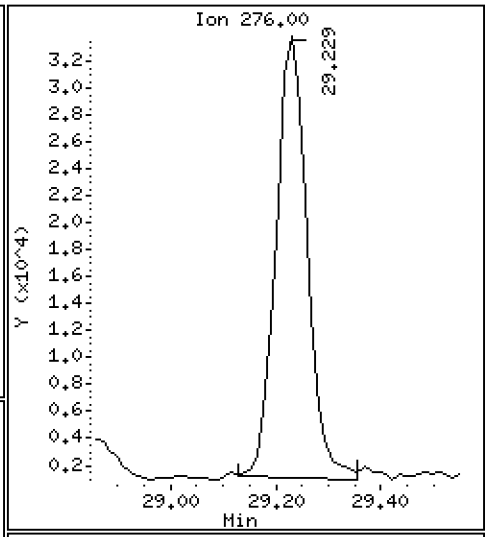
Concentration: 0.8735 ug/mL

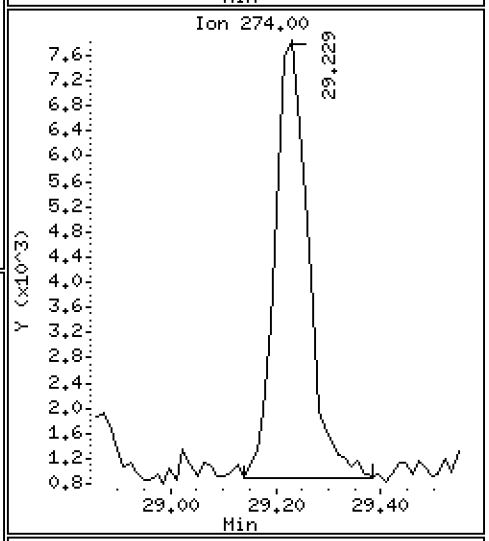


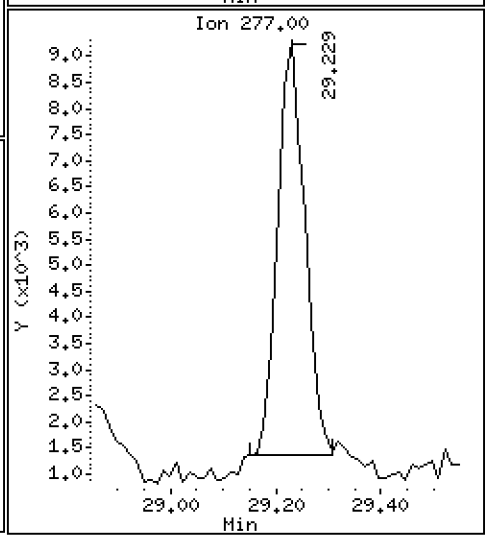












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

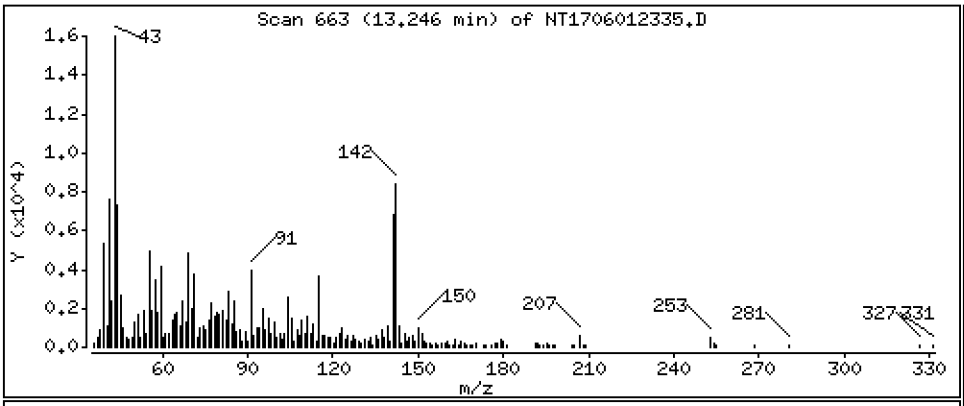
Operator: VTS

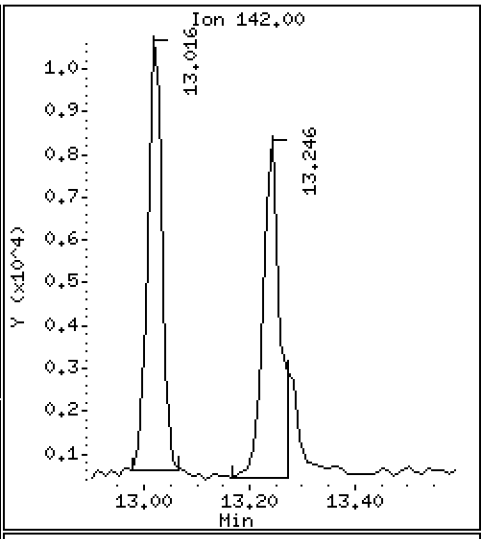
Column phase: ZB-5msi

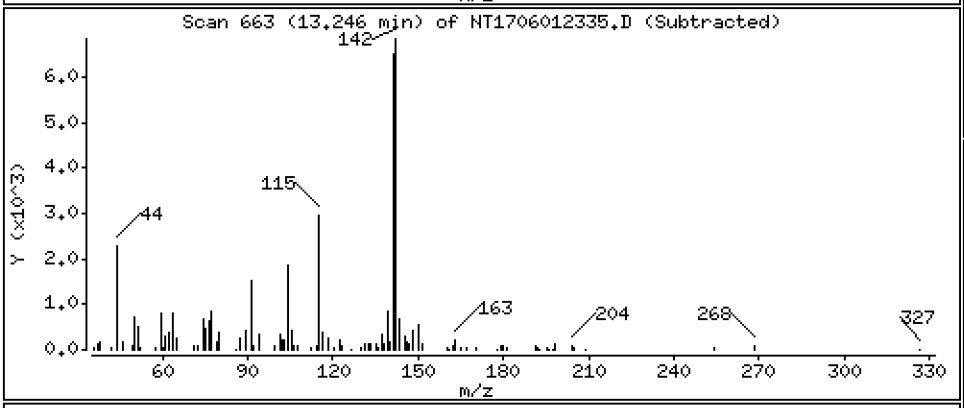
Column diameter: 0.25

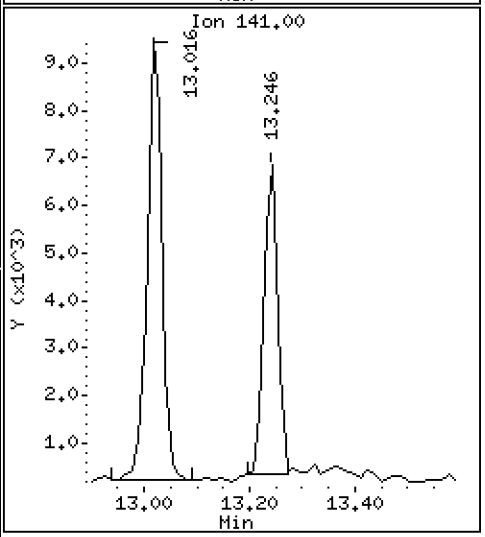
105 1-methylnaphthalene

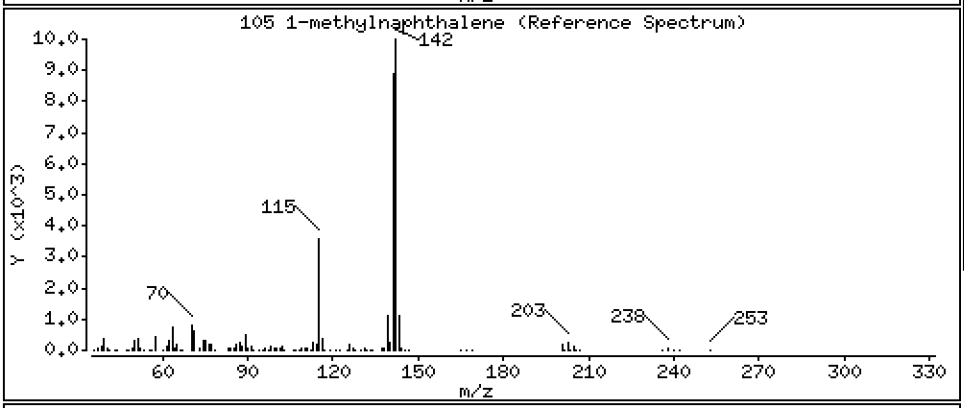
Concentration: 0.1133 ug/mL

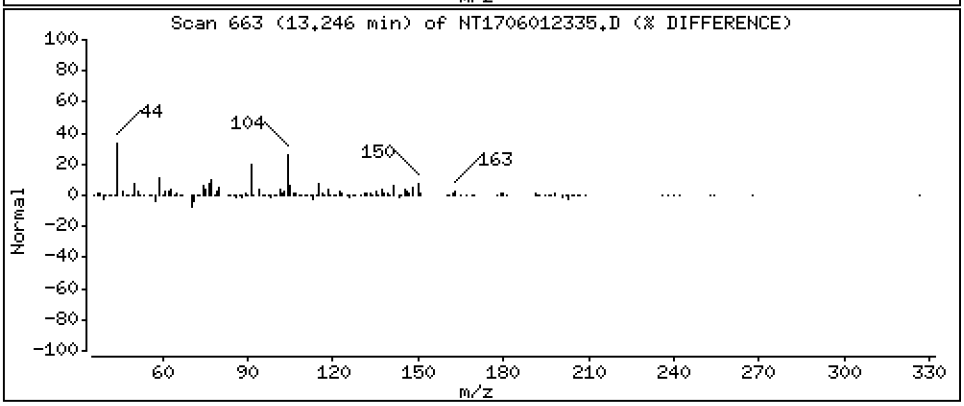












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

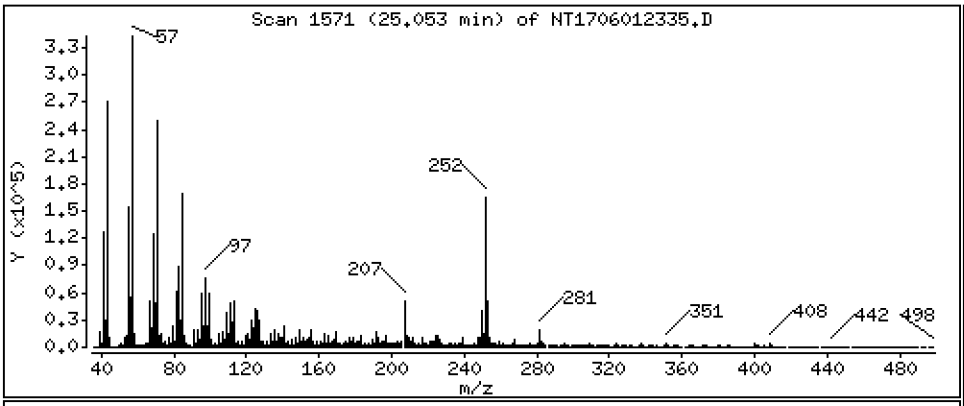
Operator: VTS

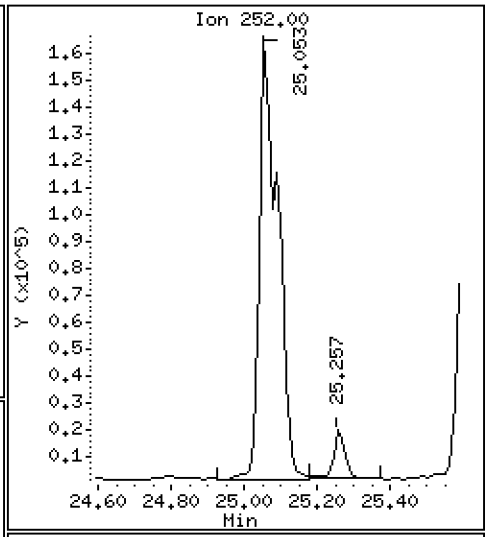
Column phase: ZB-5msi

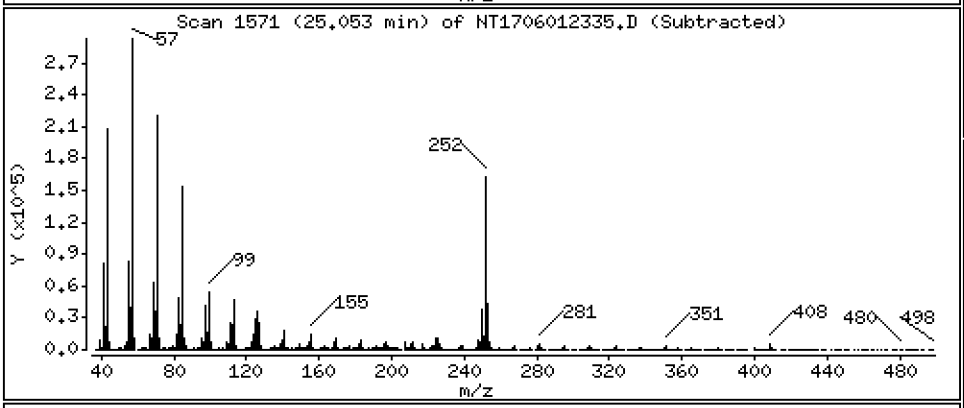
Column diameter: 0.25

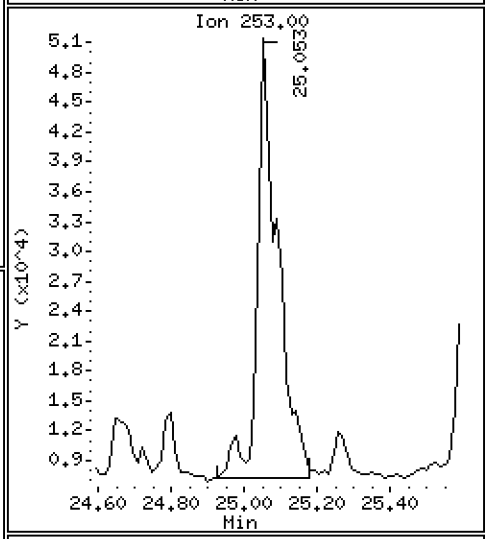
187 Total Benzofluoranthenes

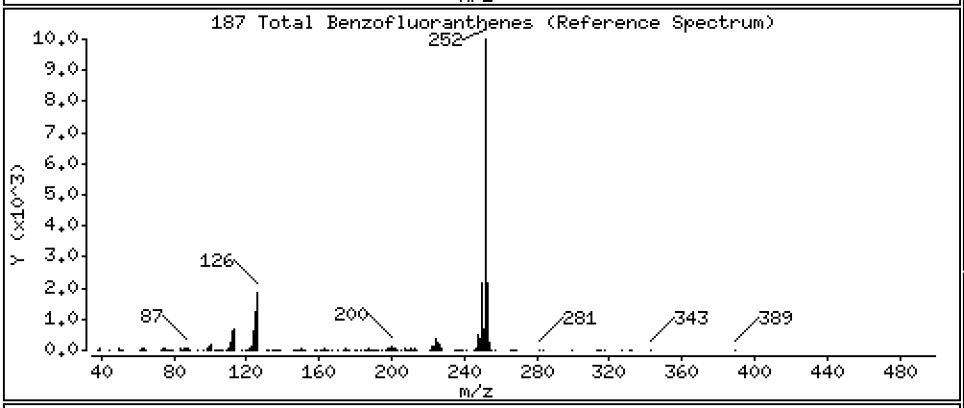
Concentration: 3.128 ug/mL

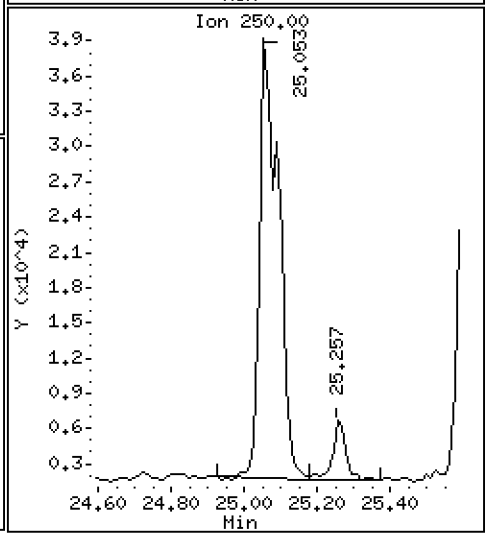


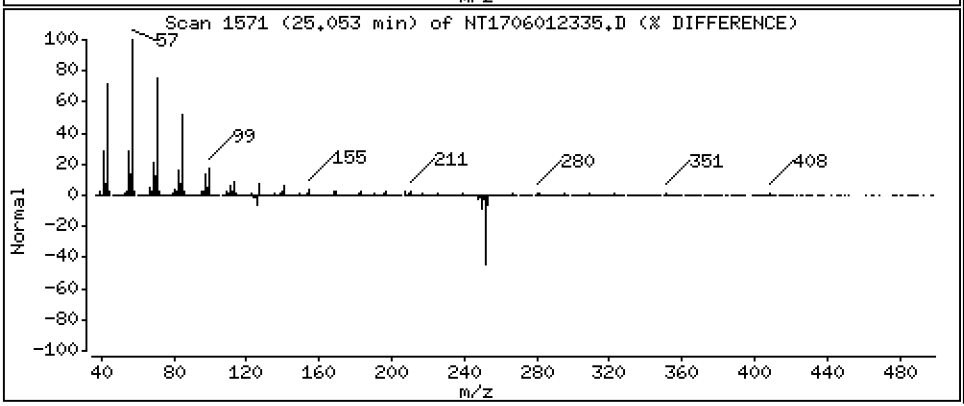












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012335.D
Lab Smp Id: 23E0009-05
Inj Date : 02-JUN-2023 09:09
Operator : VTS Inst ID: nt17.i
Smp Info : 23E0009-05
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 30
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.944	(0.761)	156596	2.08760	2.088
$	2 Phenol-d5	99	8.524	8.511	(0.933)	286219	2.88325	2.883
	3 Phenol	94	8.536	8.536	(0.934)	417824	3.97377	3.974
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	279973	3.52101	3.521
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	229152	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	134661	2.40943	2.409
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.442	9.417	(1.034)	34408	0.70287	0.7029
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.915	9.902	(1.085)	23591	0.29983	0.2998
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	259771	2.71071	2.711
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.090	11.192	(0.956)	30930	0.53752	0.5375(H)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	842018	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	54425	0.23504	0.2350
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.016	13.016	(1.122)	19715	0.11891	0.1189
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.793	13.793	(0.908)	578938	3.33489	3.335
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	14.878	14.878	(0.980)	19763	0.08837	0.08837
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.184	15.184	(1.000)	440663	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.247	15.247	(1.004)	41654	0.29795	0.2979
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.579	15.579	(1.026)	37738	0.19340	0.1934
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.127	16.140	(1.062)	17557	0.11874	0.1187
	49	Fluorene	166	16.280	16.280	(1.072)	44679	0.24085	0.2408
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	117618	6.11907	6.119
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.203	18.203	(1.000)	812309	4.00000	
	60	Phenanthrene	178	18.254	18.241	(1.003)	212852	0.89803	0.8980
	61	Anthracene	178	18.343	18.343	(1.008)	121566	0.54630	0.5463
	62	Carbazole	167	18.688	18.688	(1.027)	29764	0.22082	0.2208
	63	Di-n-butylphthalate	149	19.466	19.453	(1.069)	37033	0.13782	0.1378
	64	Fluoranthene	202	20.651	20.613	(0.890)	538313	2.67737	2.677(M)
	65	Pyrene	202	21.059	21.034	(0.907)	503716	2.47136	2.471(M)
$	66	Terphenyl-d14	244	21.327	21.315	(0.919)	562054	3.87911	3.879
	67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	14016	0.15364	0.1536
	68	Benzo(a)anthracene	228	23.190	23.190	(0.999)	206227	1.30296	1.303
*	69	Chrysene-d12	240	23.215	23.215	(1.000)	429827	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.266	23.254	(1.002)	311003	2.08818	2.088
	72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	88387	0.68725	0.6872
*	134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	888918	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.052	25.052	(0.970)	380204	1.85892	1.859(M)
	75	Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	259143	1.34108	1.341(M)
	76	Benzo(a)pyrene	252	25.703	25.690	(0.996)	191621	1.18934	1.189
*	77	Perylene-d12	264	25.818	25.805	(1.000)	515866	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.449	28.423	(1.102)	137758	0.73714	0.7371
	79	Dibenzo(a,h)anthracene	278	28.449	28.423	(1.102)	42051	0.26810	0.2681
	80	Benzo(g,h,i)perylene	276	29.228	29.203	(1.132)	134741	0.87352	0.8735
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.245	13.245	(1.142)	17429	0.11332	0.1133
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.052	25.091	(0.970)	574376	3.12843	3.128
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012335.D
Lab Smp Id: 23E0009-05
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	229152	-10.84
27 Naphthalene-d8	932905	466453	1865810	842018	-9.74
42 Acenaphthene-d10	509574	254787	1019148	440663	-13.52
59 Phenanthrene-d10	912749	456375	1825498	812309	-11.00
69 Chrysene-d12	578011	289006	1156022	429827	-25.64
134 Di-n-octylphthala	1181490	590745	2362980	888918	-24.76
77 Perylene-d12	513683	256842	1027366	515866	0.42

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.82	0.05

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

REVIEW SUMMARY FOR FILE - NT1706012335.D

Lab ID: 23E0009-05
nt17.i, ABN.m, 02-JUN-2023 09:09

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.956	0.965	-0.0088	Benzoic acid

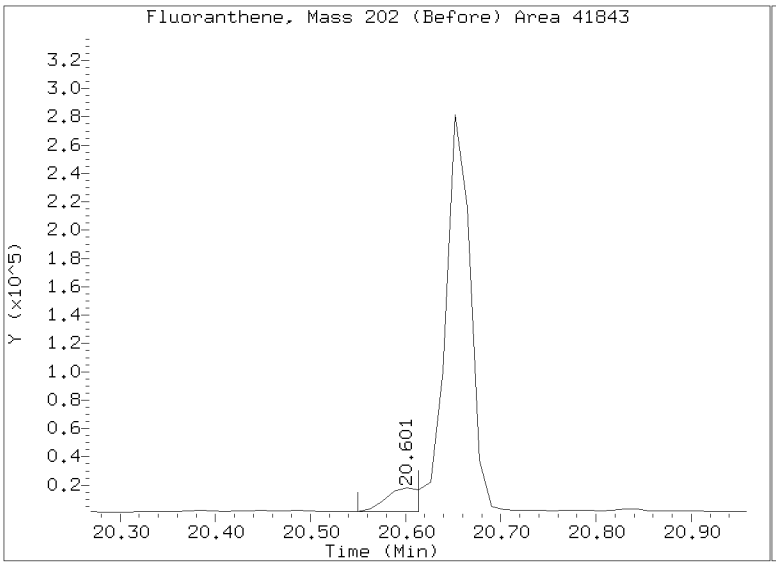
RRT check based on Ccal File: NT1706012320.D

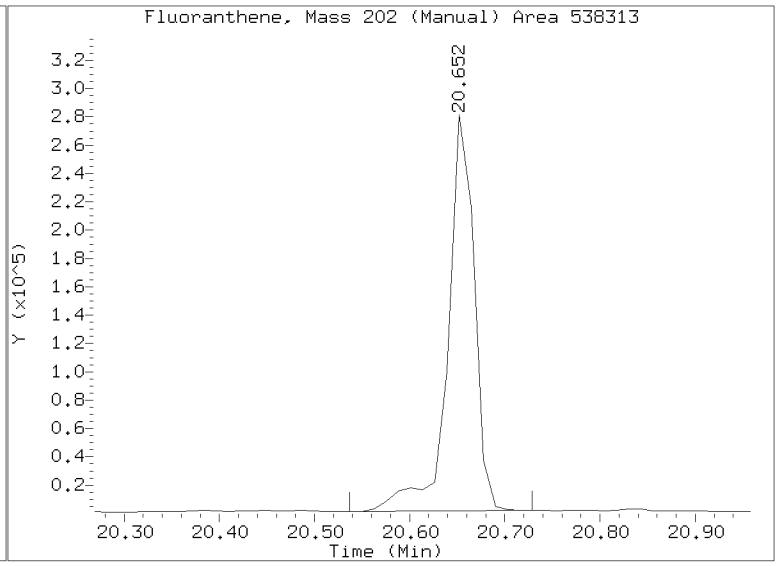
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

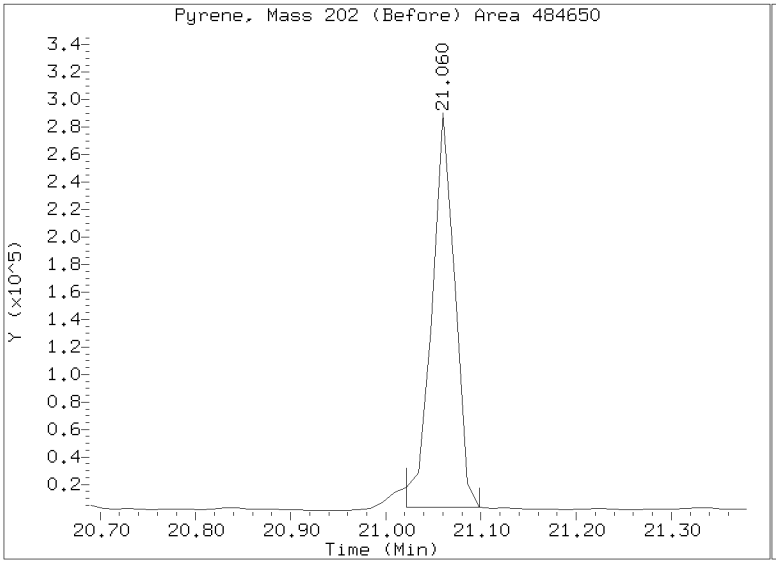
* Only compounds listed in the work order have been verified by the analyst *

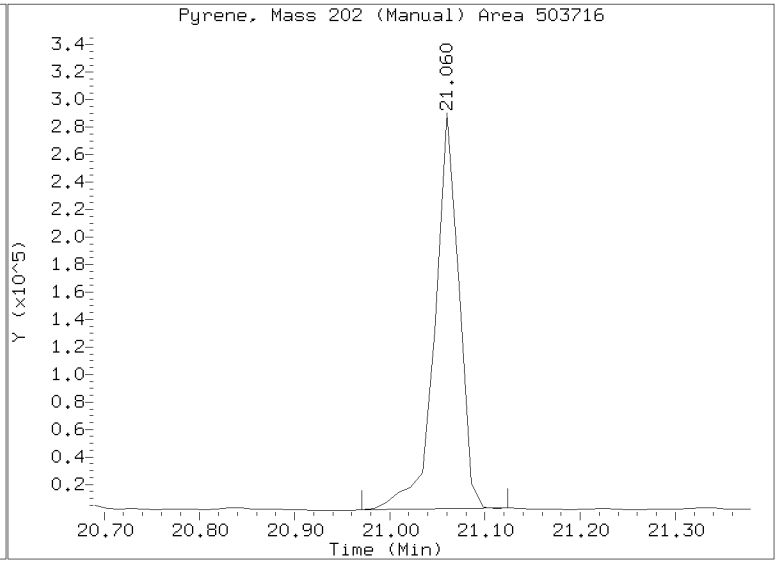
Quant Ion Manual Peak Adjustment Report

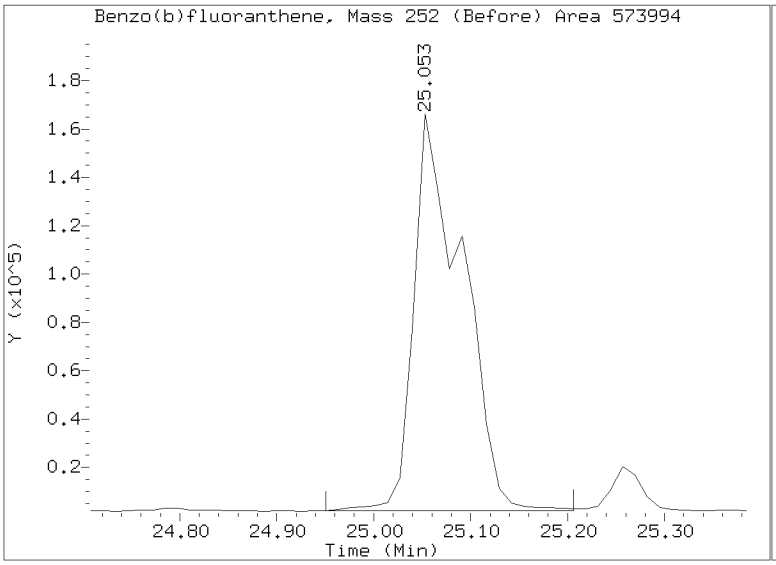
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012335.D
Injection Date: 02-JUN-2023 09:09
Lab ID:23E0009-05 Client ID:
Report Date: 06/03/2023 10:35

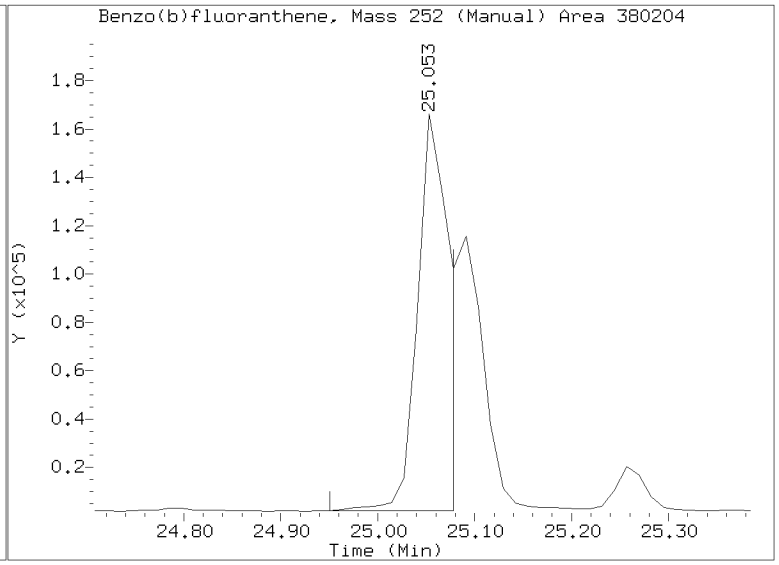






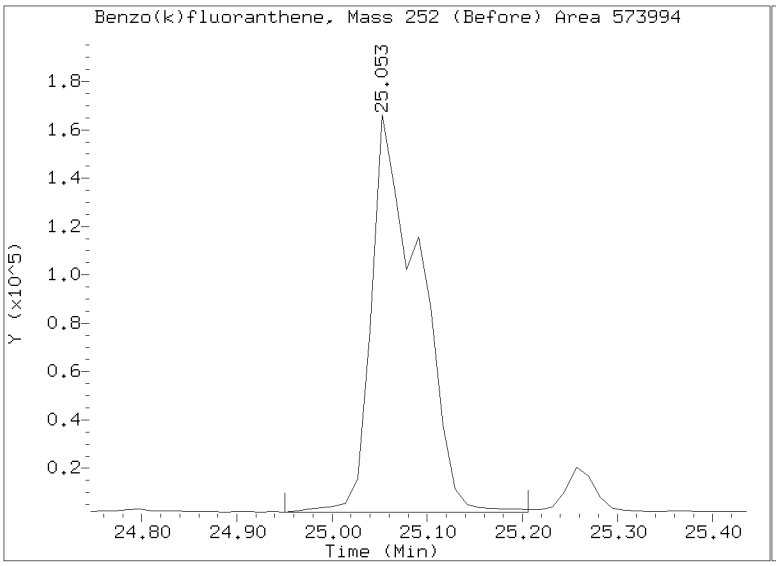


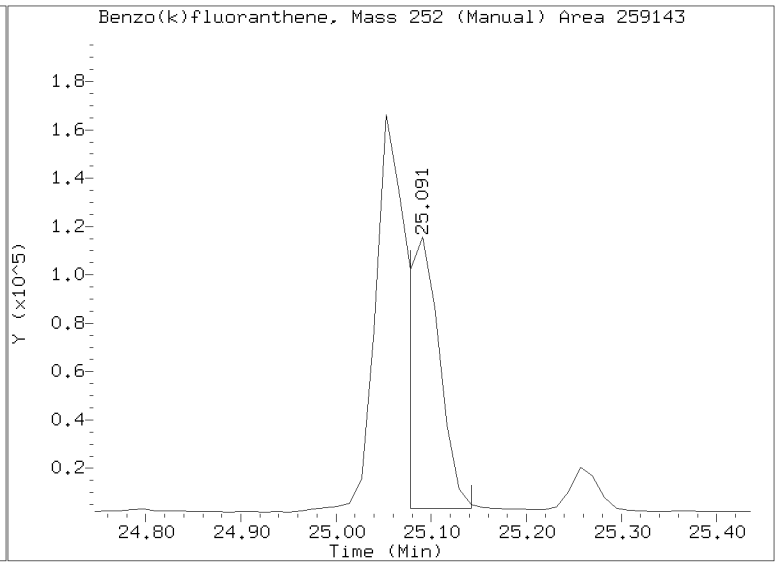




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012335.D
Injection Date: 02-JUN-2023 09:09
Lab ID:23E0009-05 Client ID:
Report Date: 06/03/2023 10:35





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1820

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-07 A	SDG:	23E0009
Sampled:	04/29/23 14:00	Prepared:	05/05/23 11:23	File ID:	NT1706012336.D
% Solids:	53.18	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 09:47
Batch:	BLE0148	Sequence:	SLF0008	Initial/Final:	18.85 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00065
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	131		4.4	20.0
106-44-5	4-Methylphenol	1	10.7	J	7.4	20.0
91-20-3	Naphthalene	1	14.7	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	8.6	J	4.5	20.0
208-96-8	Acenaphthylene	1	17.1	J	6.2	20.0
131-11-3	Dimethylphthalate	1	8.2	J	4.4	20.0
83-32-9	Acenaphthene	1	8.7	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	110		8.7	20.0
120-12-7	Anthracene	1	26.3		7.2	20.0
206-44-0	Fluoranthene	1	295		6.1	20.0
129-00-0	Pyrene	1	266		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	137		5.9	20.0
218-01-9	Chrysene	1	182		6.0	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	58.0		5.4	49.9
	Benzofluoranthenes, Total	1	327		10.0	39.9
50-32-8	Benzo(a)pyrene	1	135		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	104		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	35.4		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	110		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.17	263	35.1	27 - 120	
Phenol-d5	748.17	348	46.6	29 - 120	
2-Chlorophenol-d4	748.17	412	55.1	31 - 120	
1,2-Dichlorobenzene-d4	498.78	273	54.8	32 - 120	
Nitrobenzene-d5	498.78	296	59.3	30 - 120	
2-Fluorobiphenyl	498.78	344	68.9	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1820

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

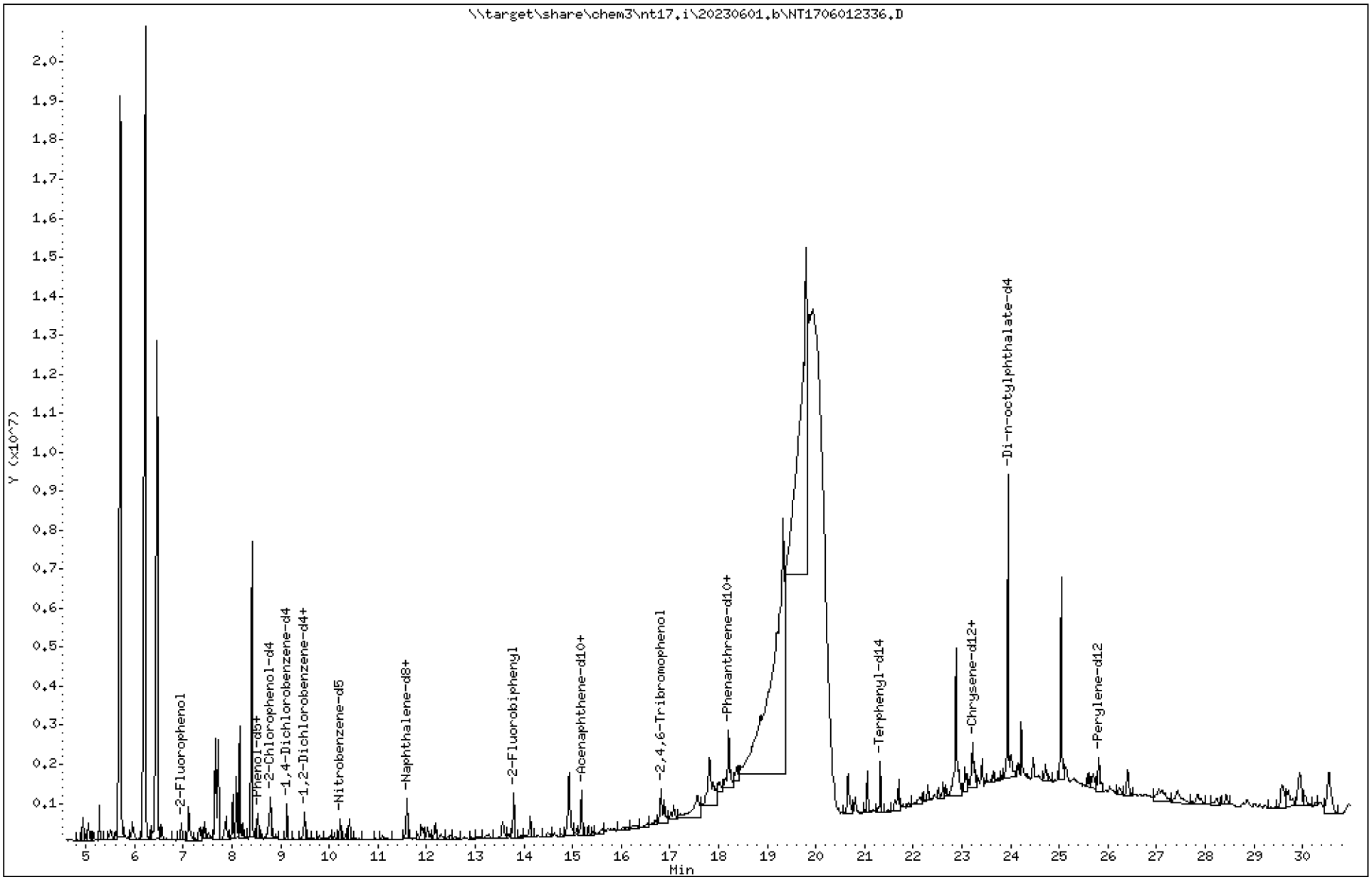
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-07 A	SDG:	23E0009
Sampled:	04/29/23 14:00	Prepared:	05/05/23 11:23	File ID:	NT1706012336.D
% Solids:	53.18	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 09:47
Batch:	BLE0148	Sequence:	SLF0008	Initial/Final:	18.85 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00065
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.17	667	89.2	24 - 134	
p-Terphenyl-d14	498.78	386	77.5	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D
Date : 02-JUN-2023 09:47
Client ID:
Sample Info: 23E0009-07

Instrument: nt17.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

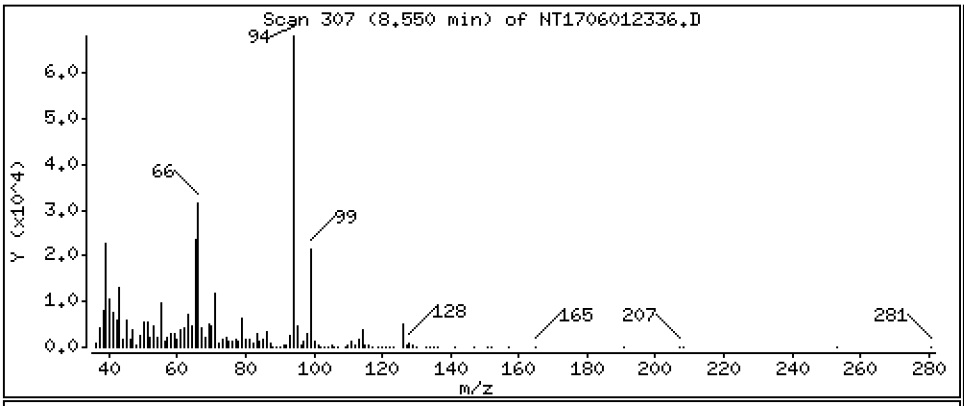
Operator: VTS

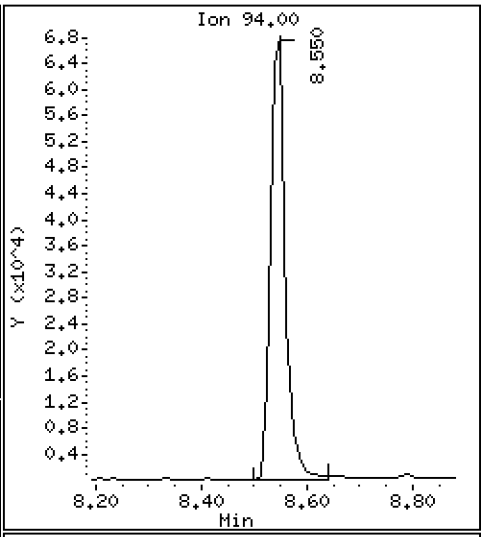
Column phase: ZB-5msi

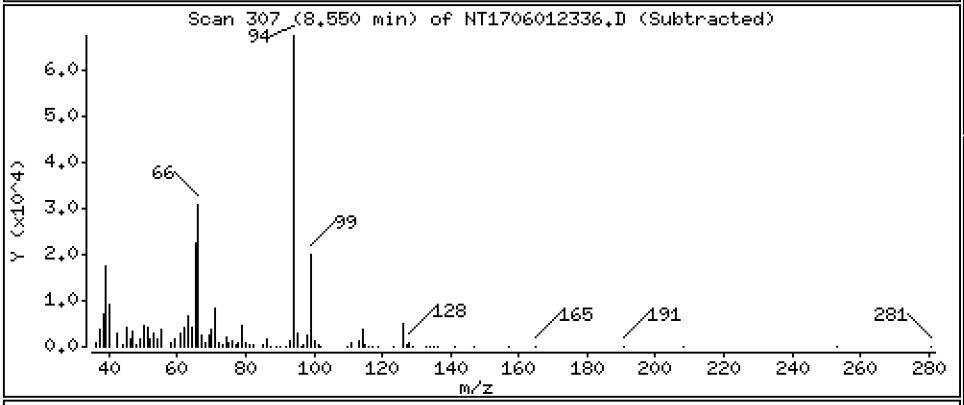
Column diameter: 0.25

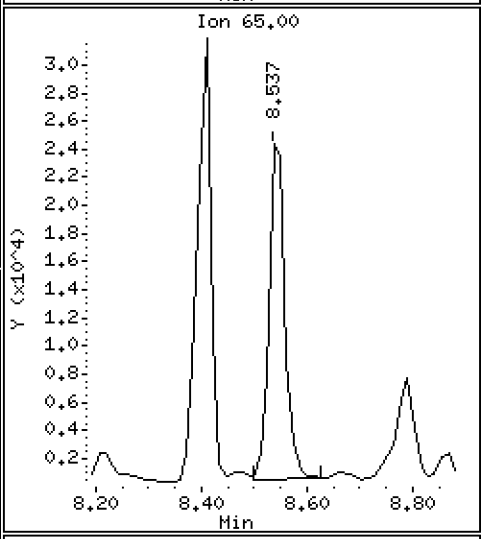
3 Phenol

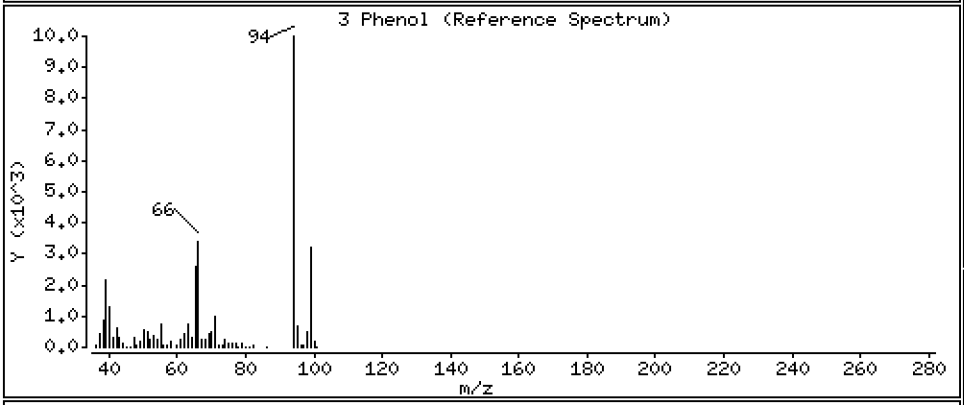
Concentration: 1.316 ug/mL

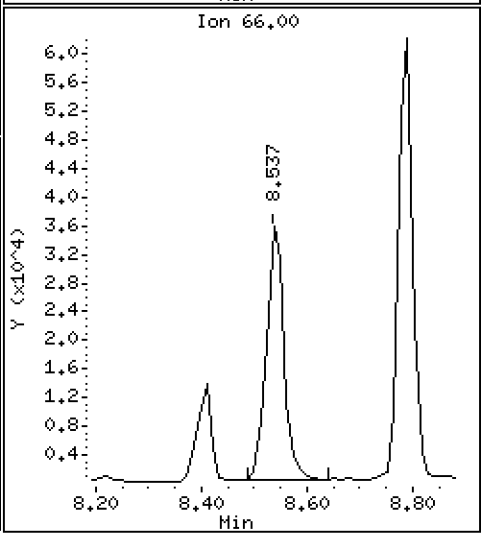


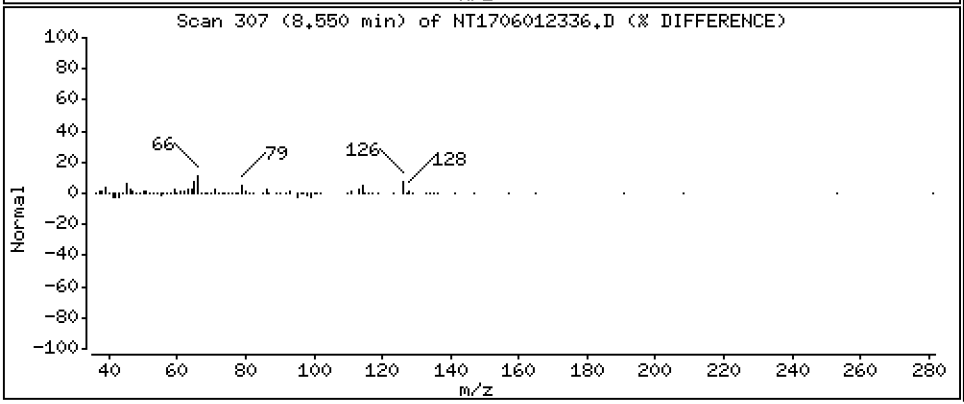












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

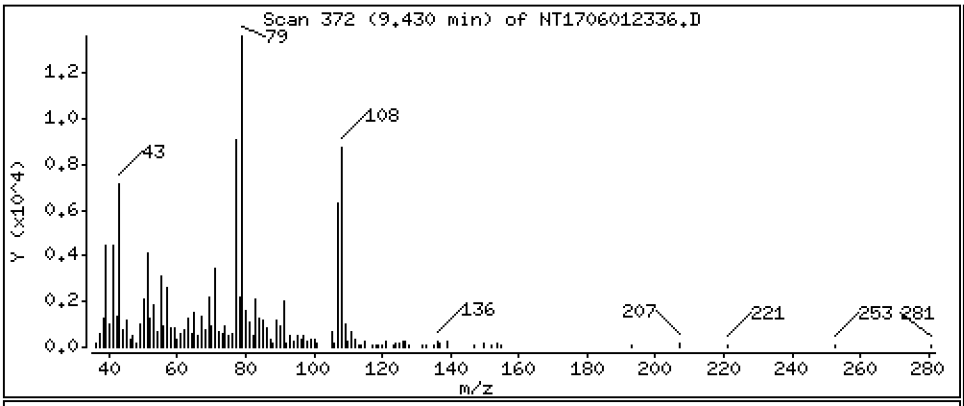
Operator: VTS

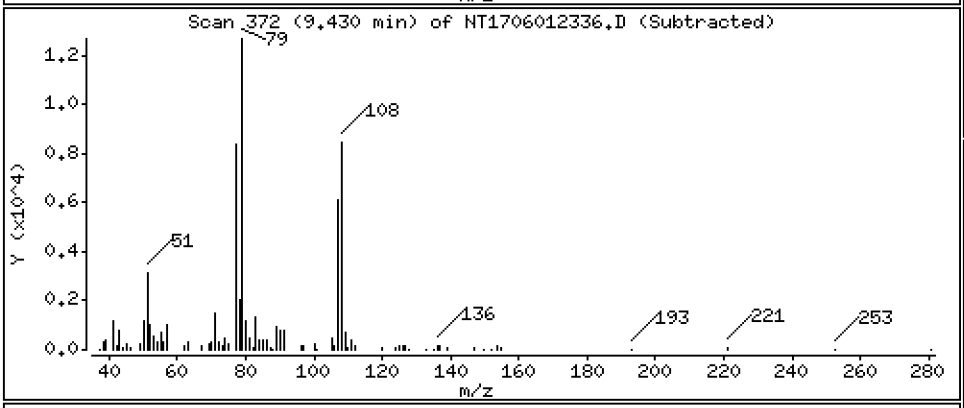
Column phase: ZB-5msi

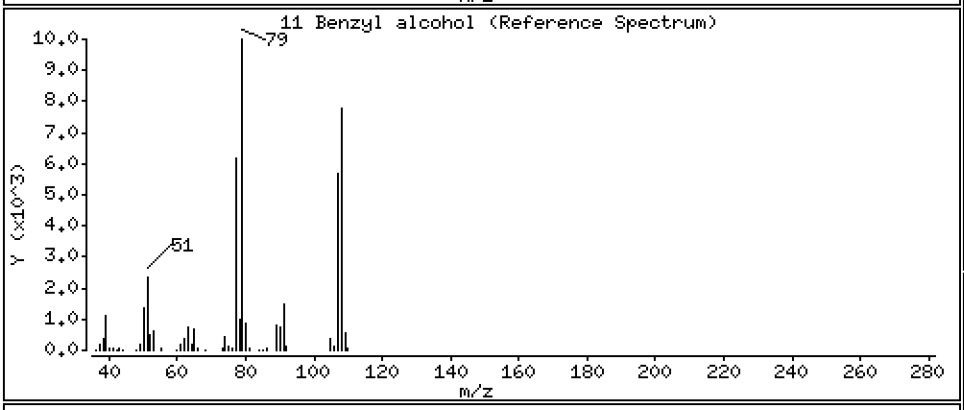
Column diameter: 0.25

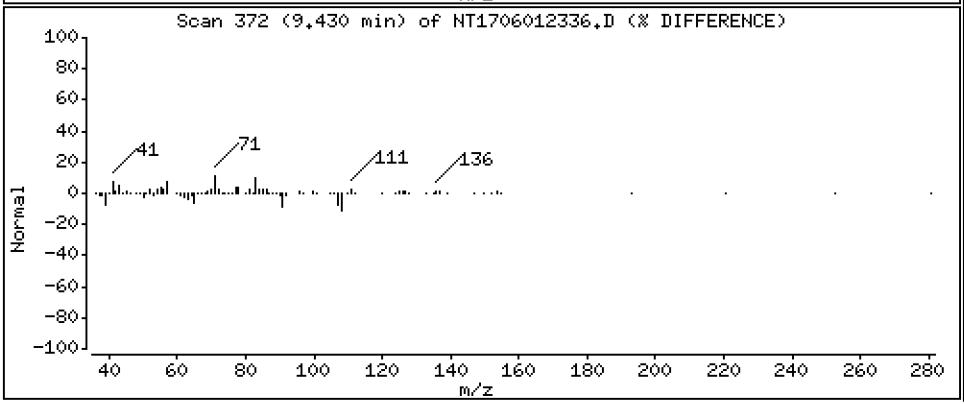
11 Benzyl alcohol

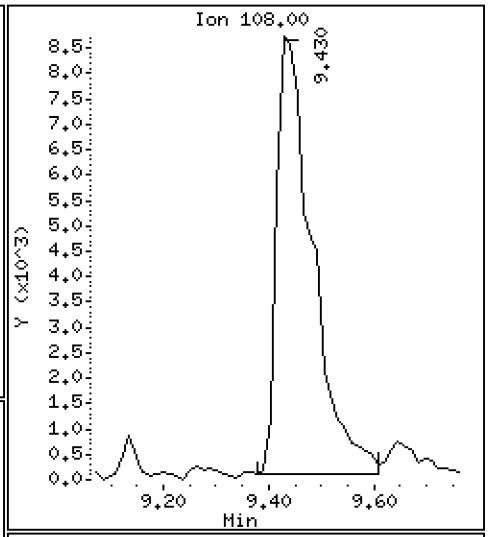
Concentration: 0.8228 ug/mL

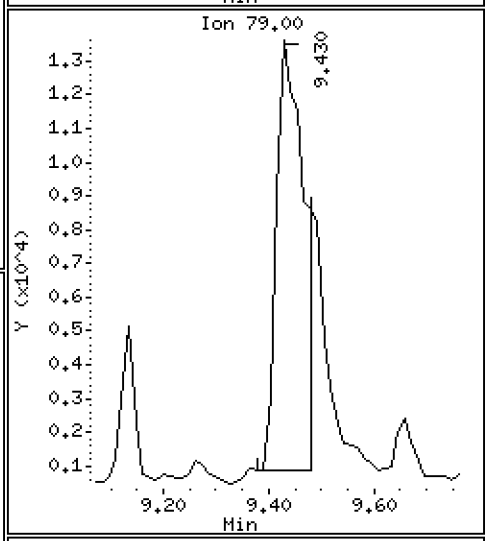


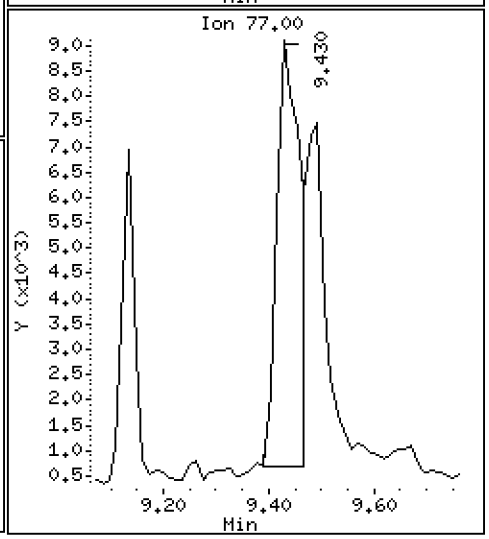












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

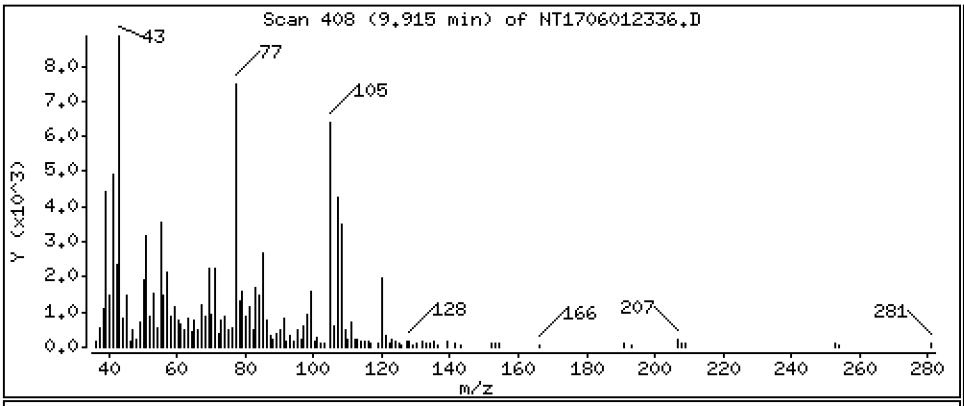
Operator: VTS

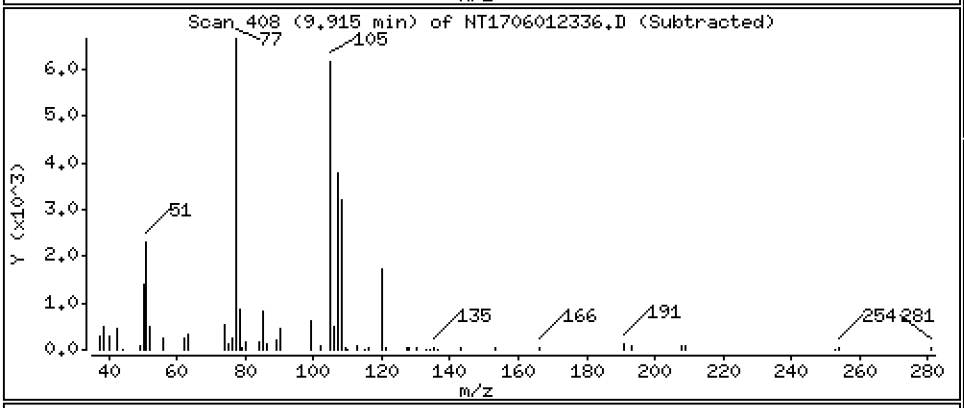
Column phase: ZB-5msi

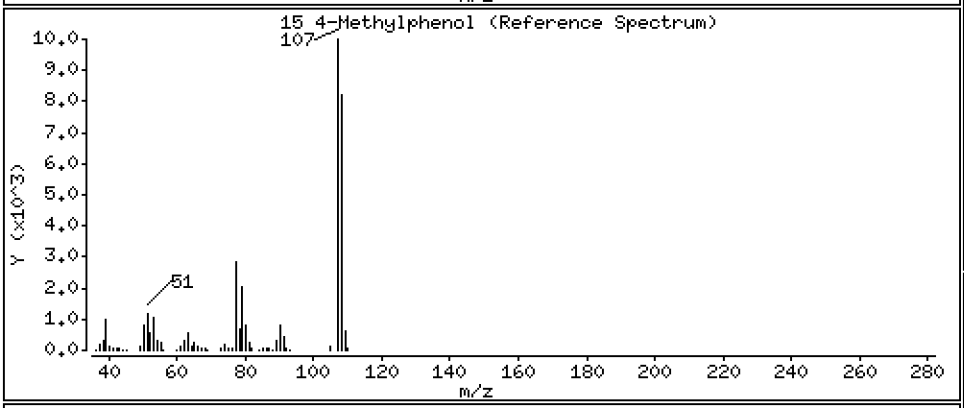
Column diameter: 0.25

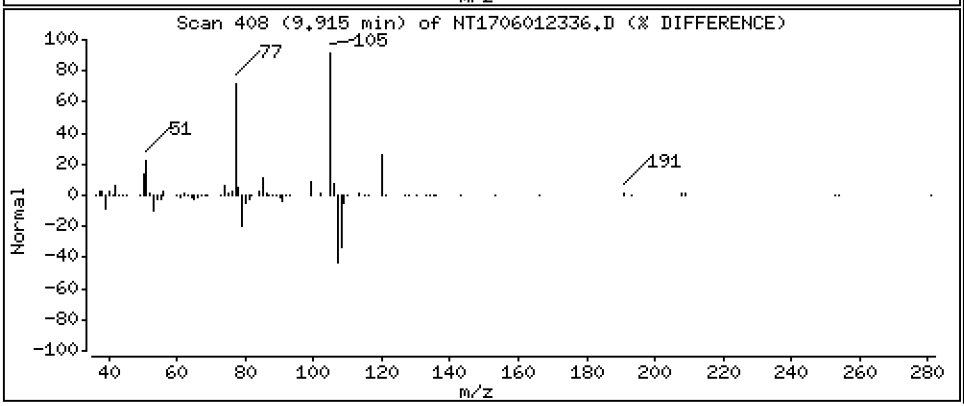
15 4-Methylphenol

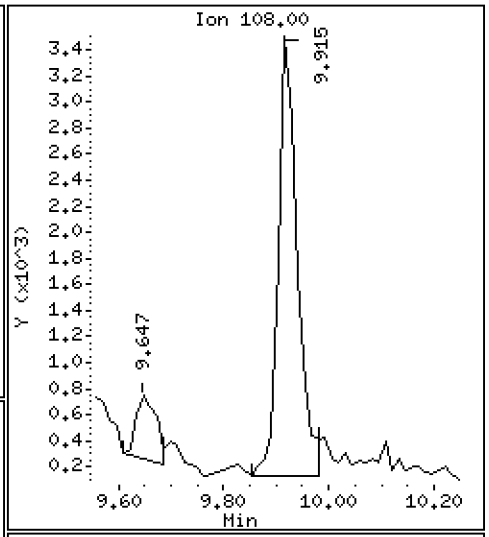
Concentration: 0.1068 ug/mL

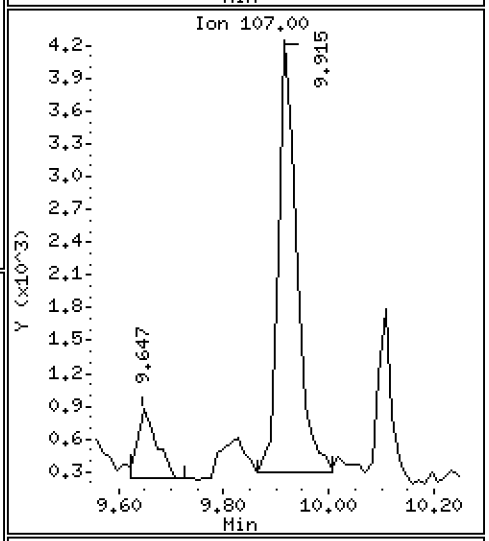


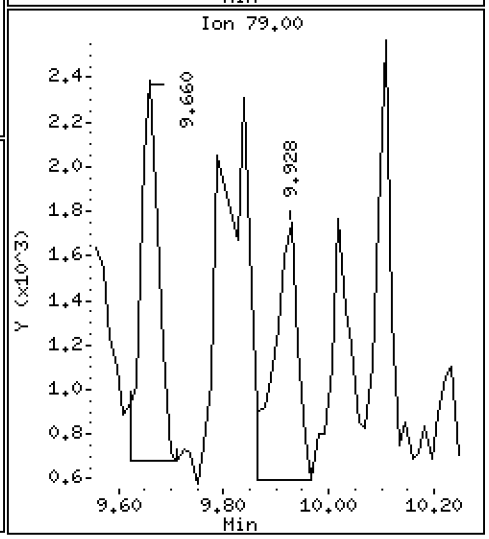












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

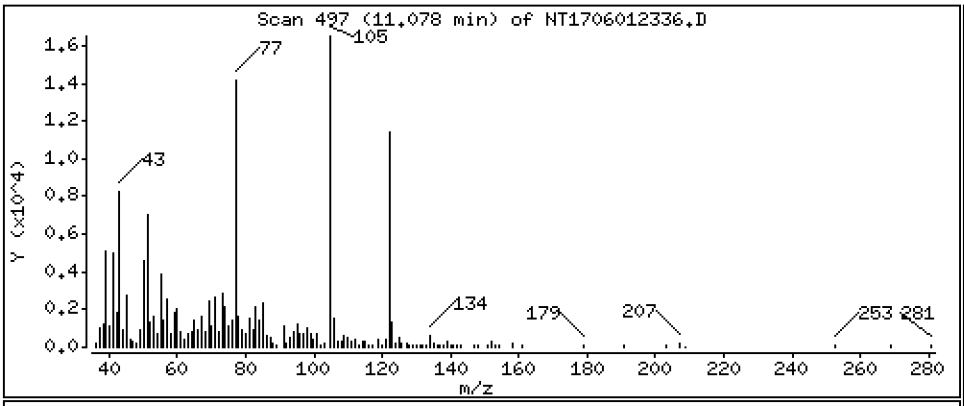
Operator: VTS

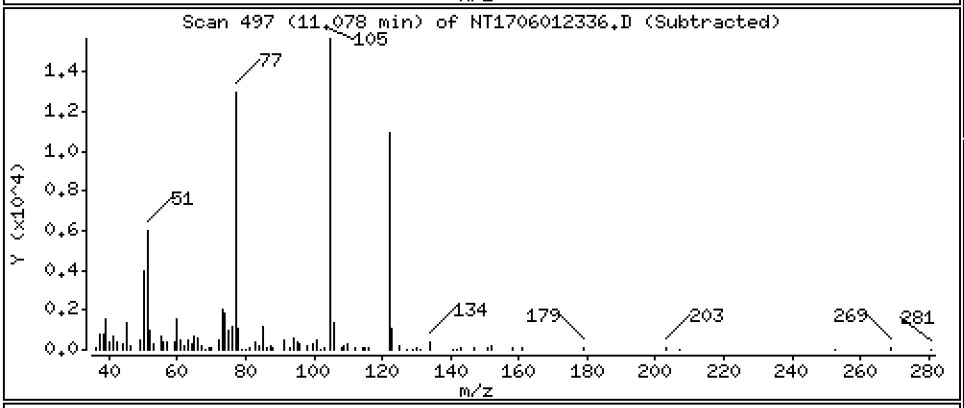
Column phase: ZB-5msi

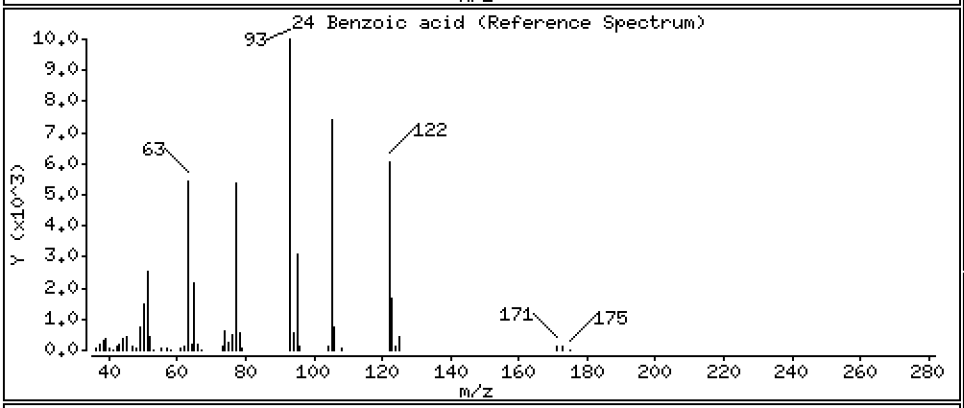
Column diameter: 0.25

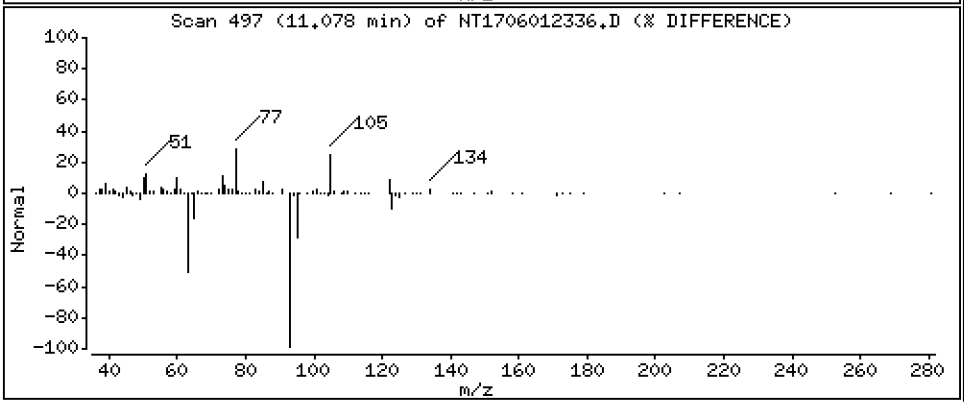
24 Benzoic acid

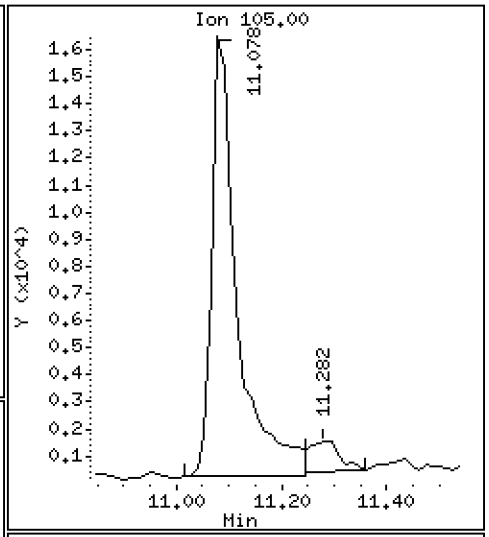
Concentration: 0.9277 ug/mL

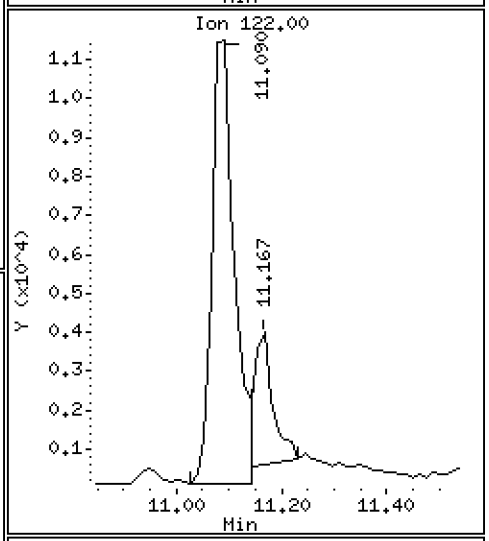


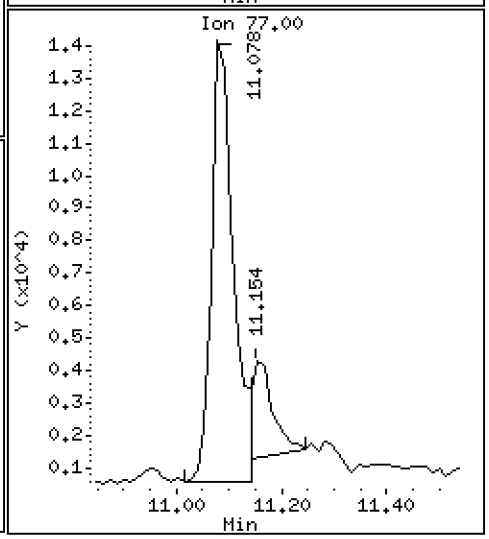












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

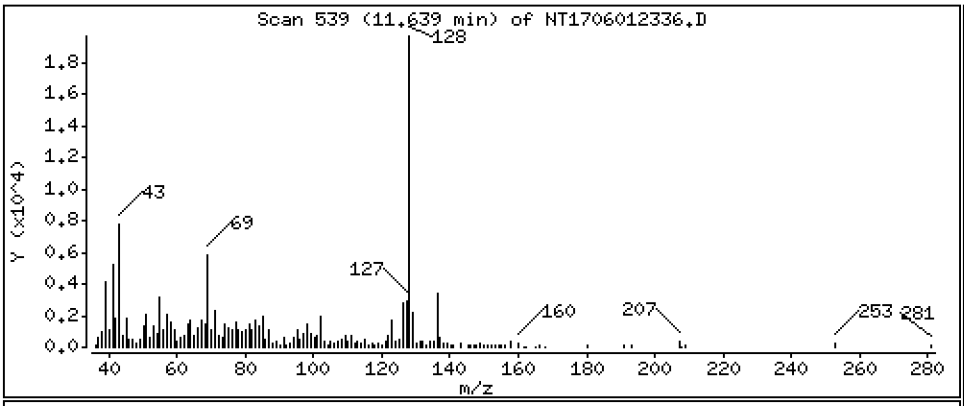
Operator: VTS

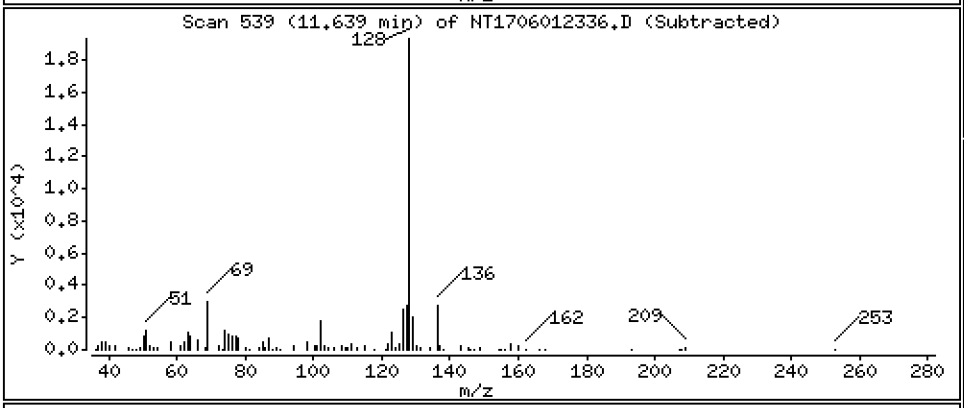
Column phase: ZB-5msi

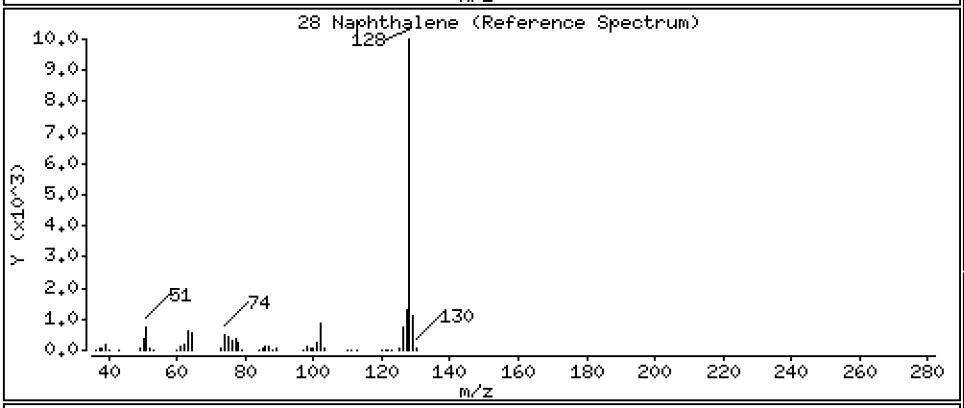
Column diameter: 0.25

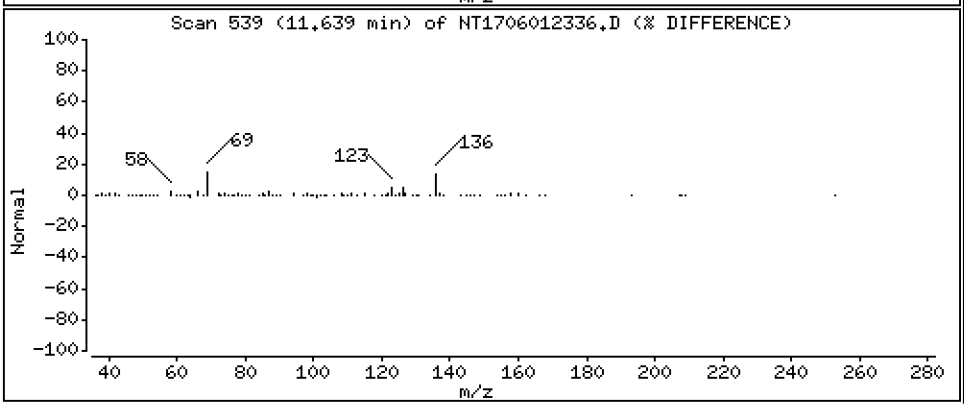
28 Naphthalene

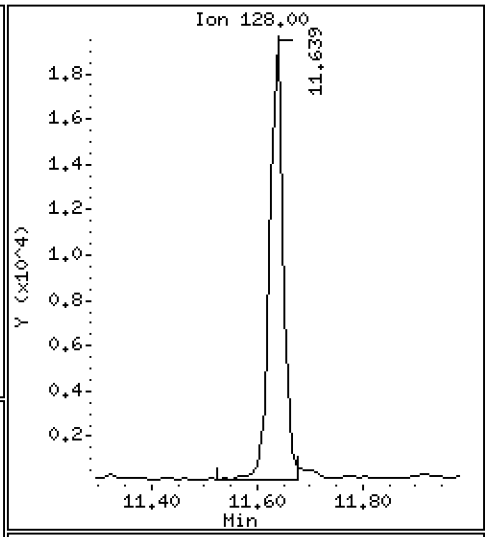
Concentration: 0.1471 ug/mL

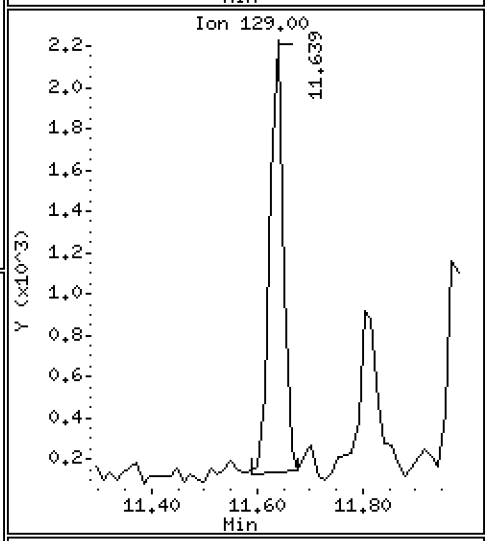


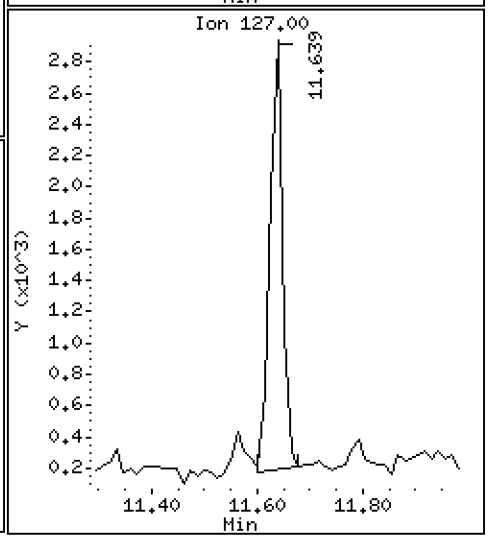












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

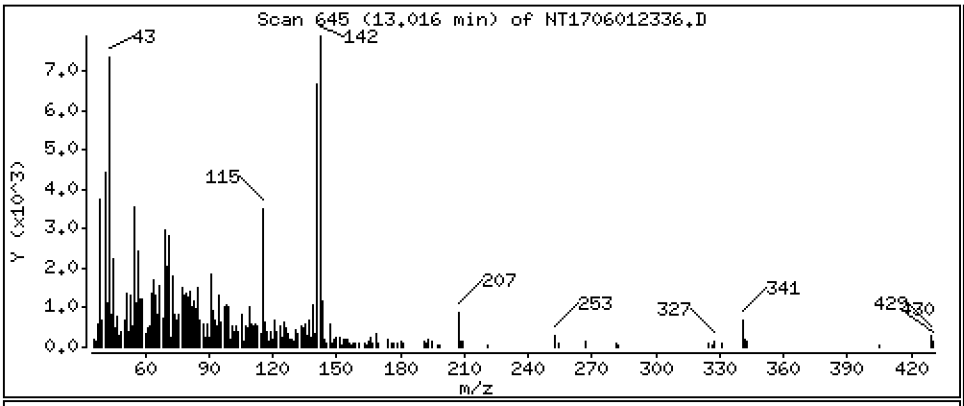
Operator: VTS

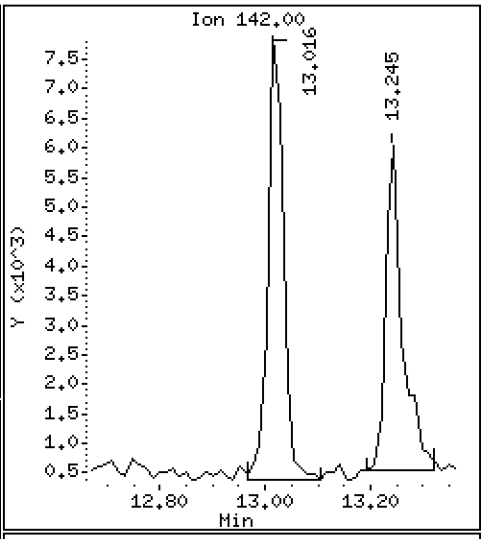
Column phase: ZB-5msi

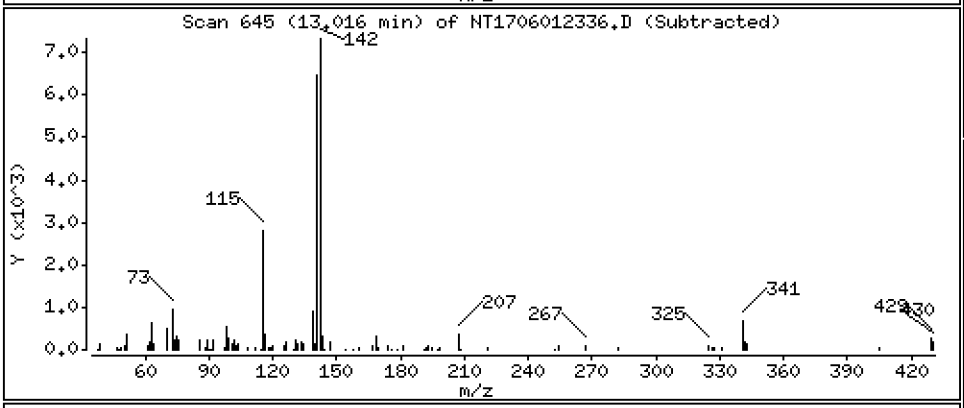
Column diameter: 0.25

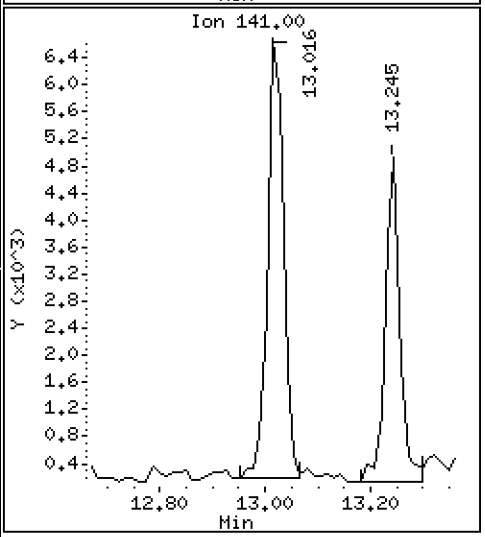
32 2-Methylnaphthalene

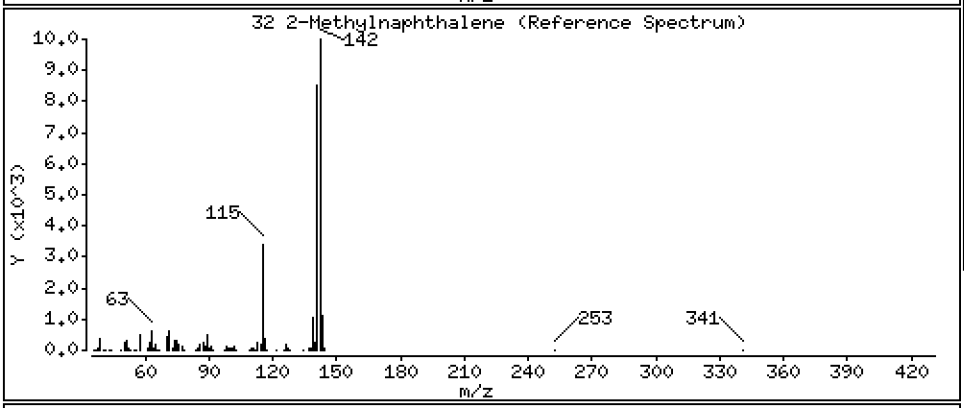
Concentration: 0.08622 ug/mL

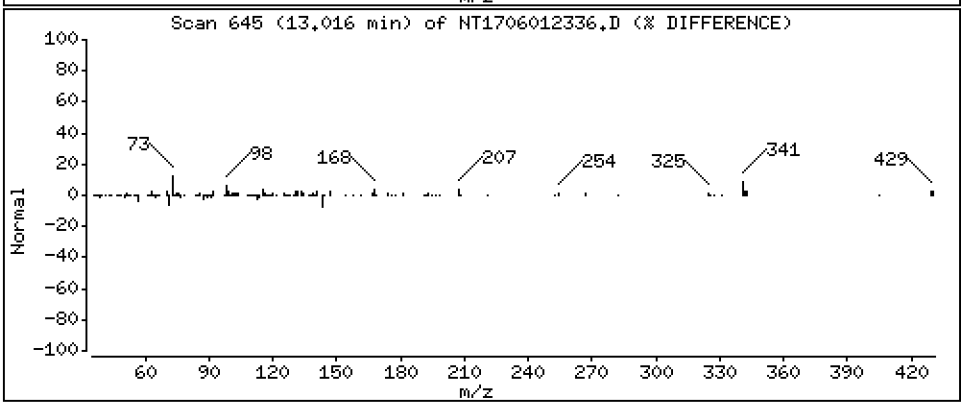












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

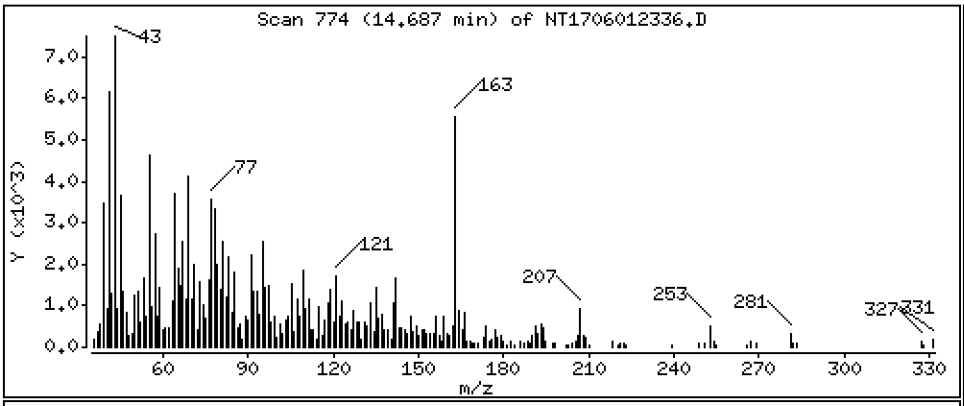
Operator: VTS

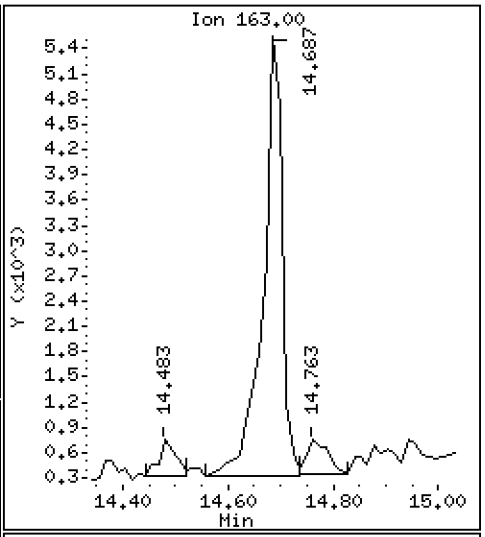
Column phase: ZB-5msi

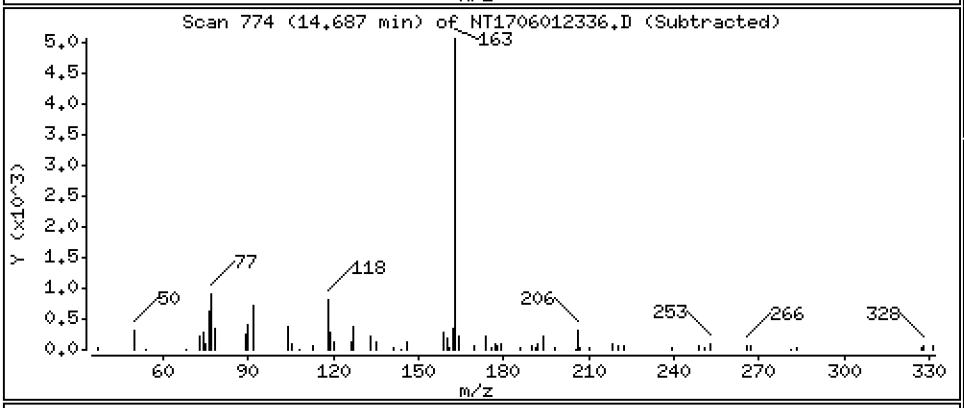
Column diameter: 0.25

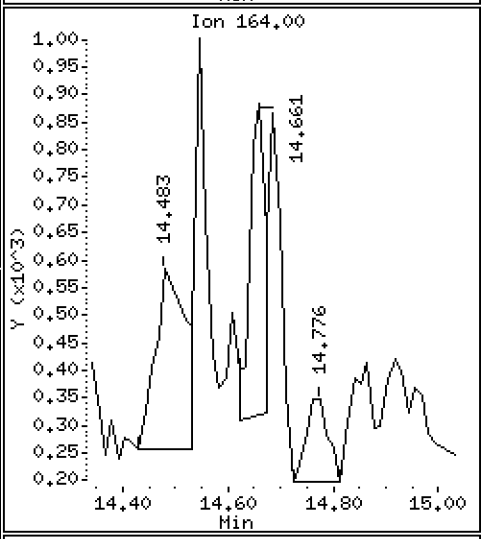
39 Dimethylphthalate

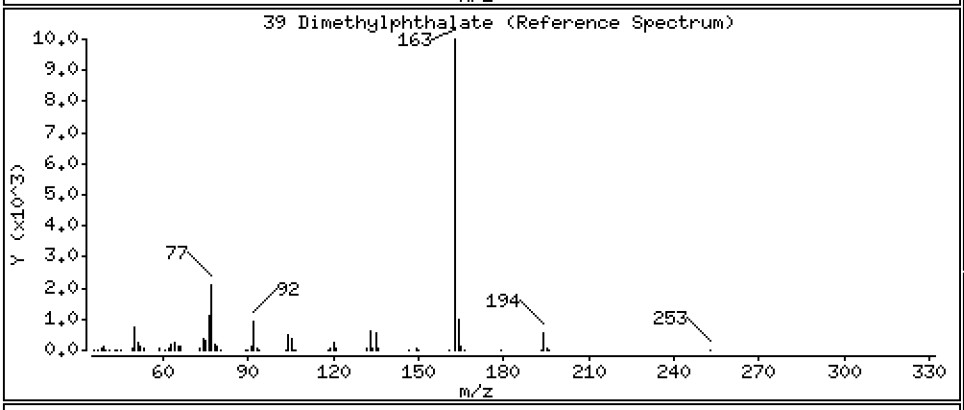
Concentration: 0.08243 ug/mL

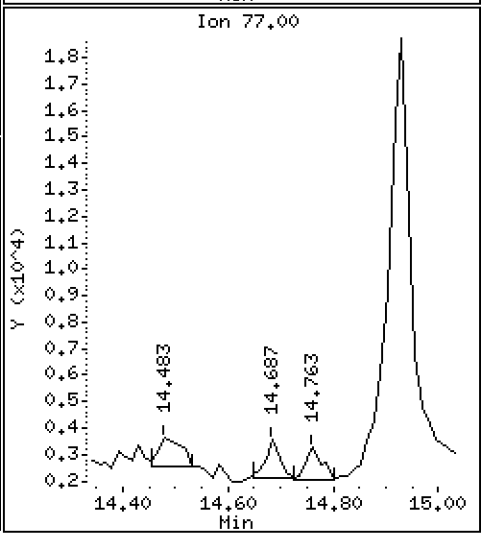


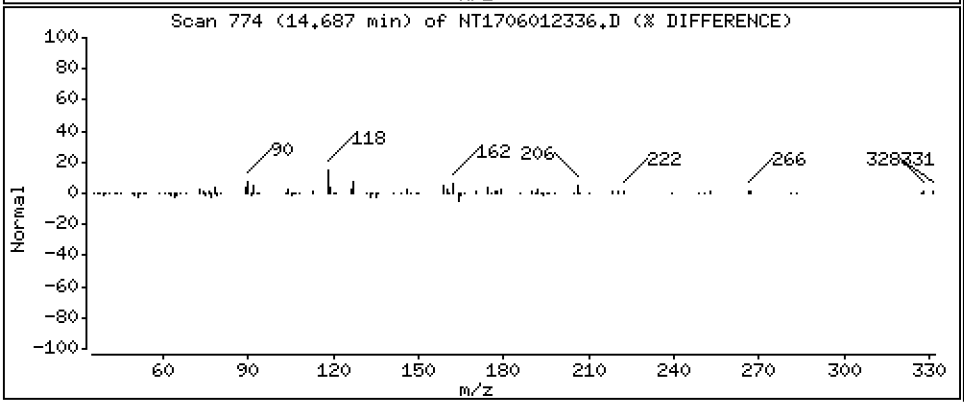












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

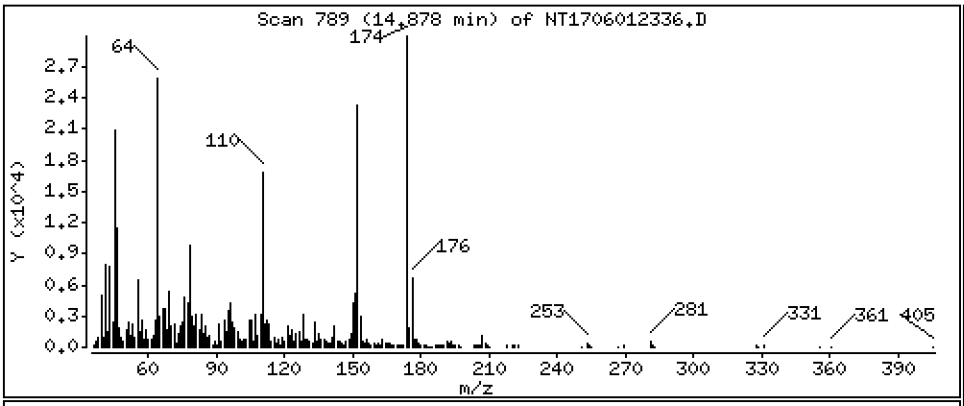
Operator: VTS

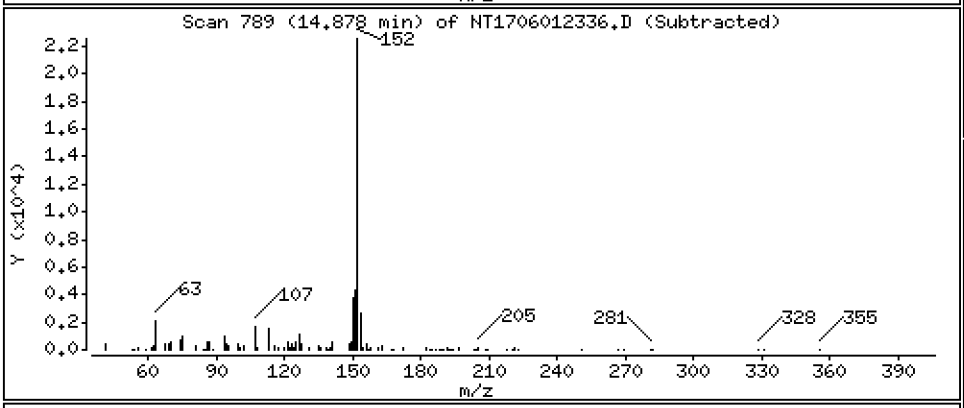
Column phase: ZB-5msi

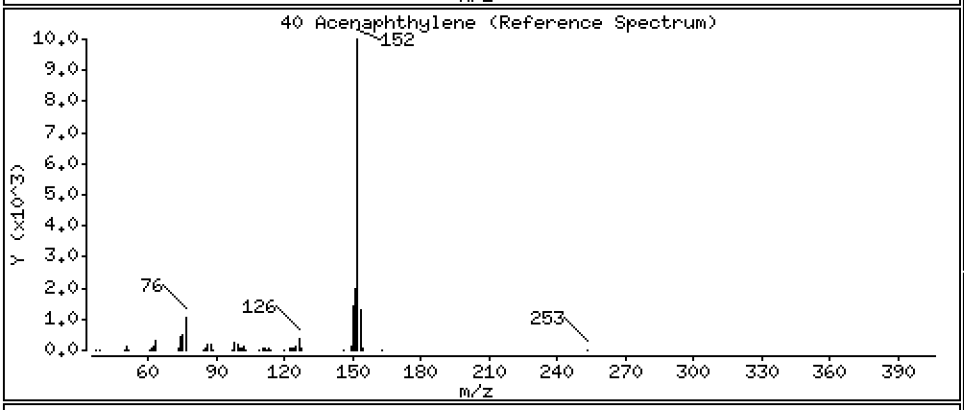
Column diameter: 0.25

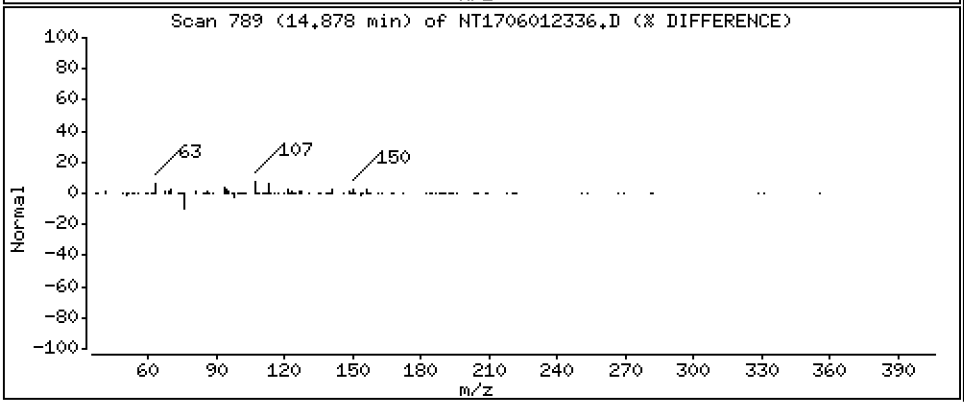
40 Acenaphthylene

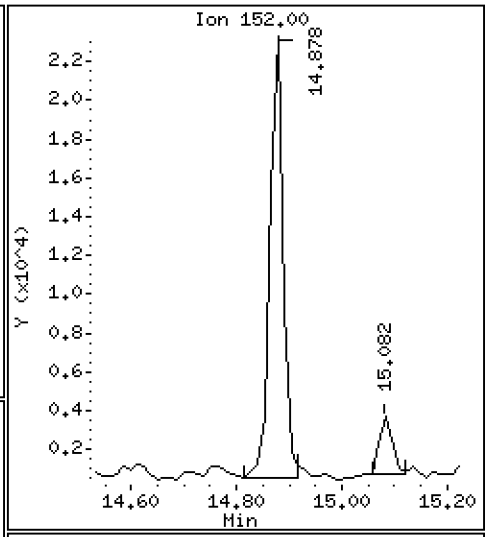
Concentration: 0.1712 ug/mL

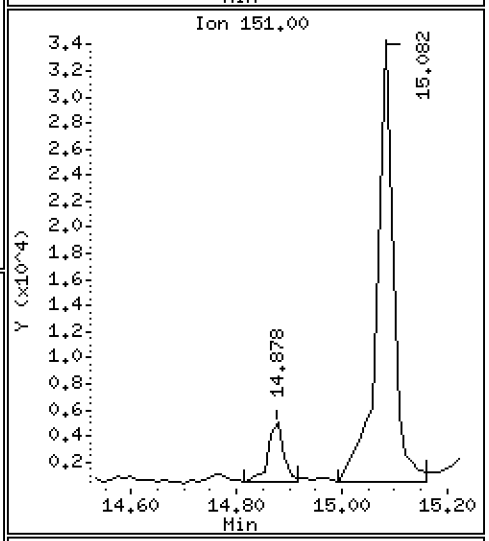


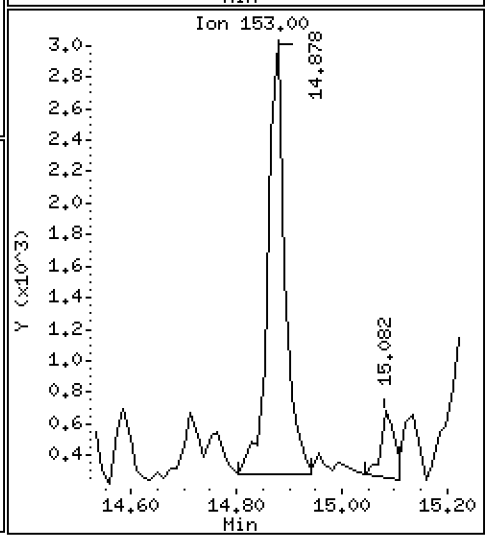












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

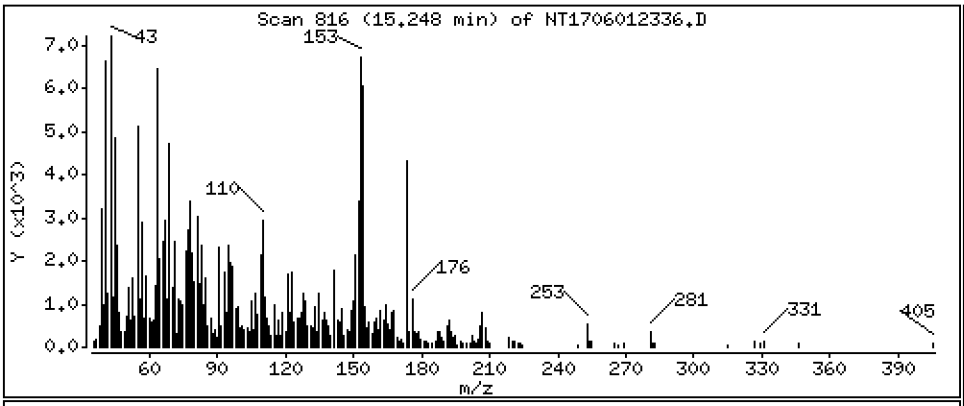
Operator: VTS

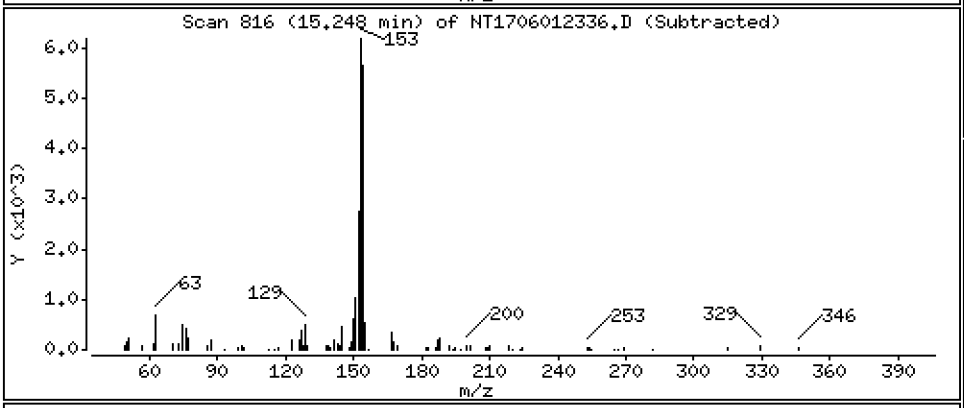
Column phase: ZB-5msi

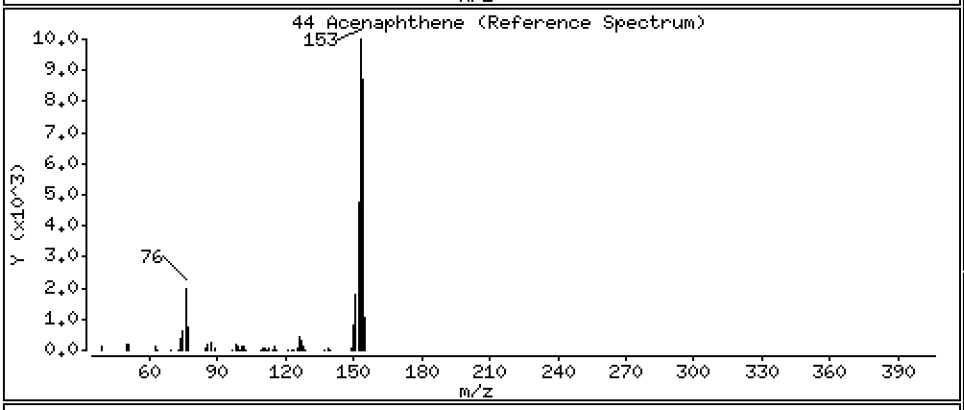
Column diameter: 0.25

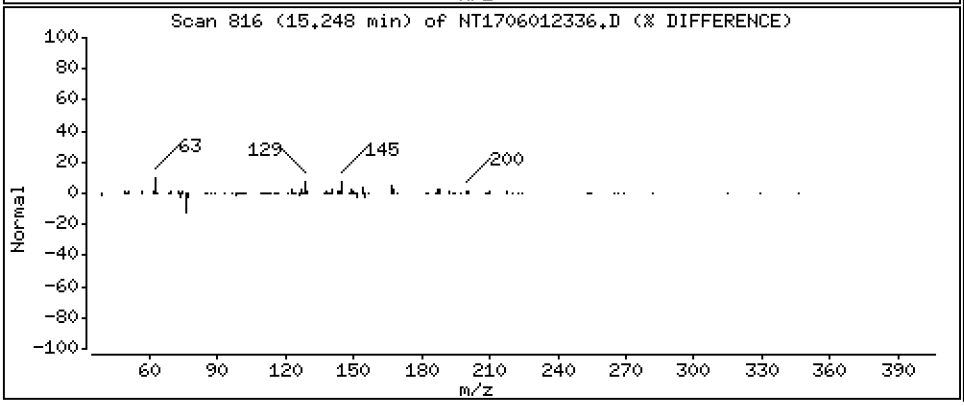
44 Acenaphthene

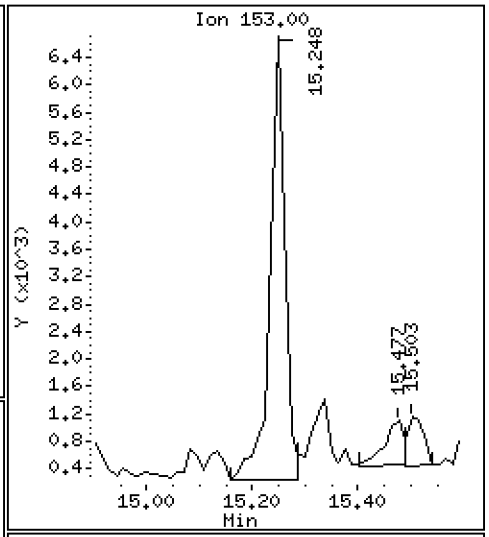
Concentration: 0.08750 ug/mL

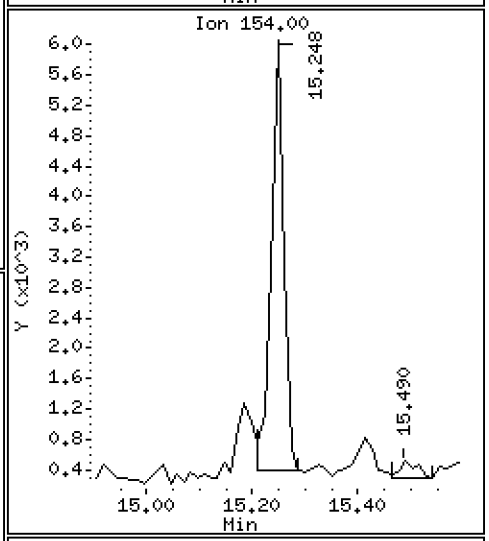


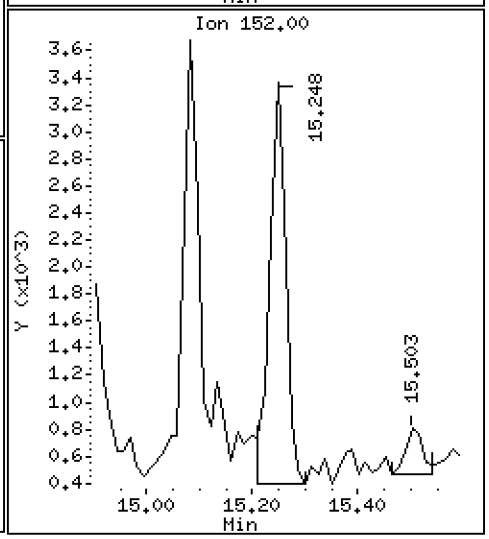












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

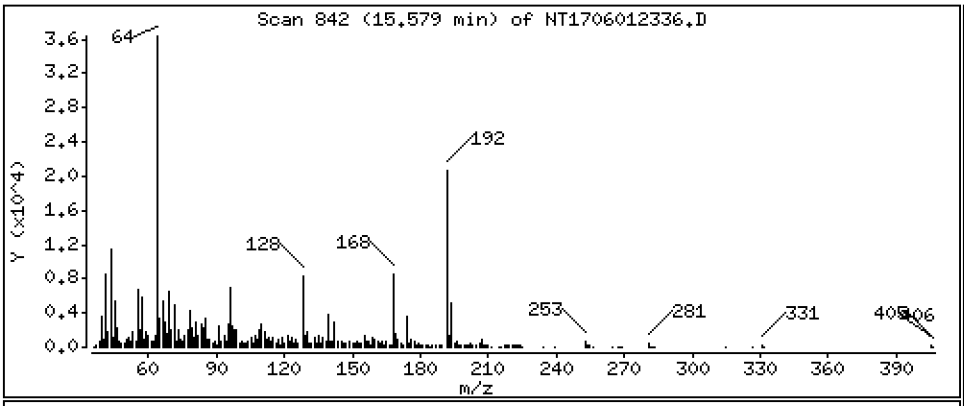
Operator: VTS

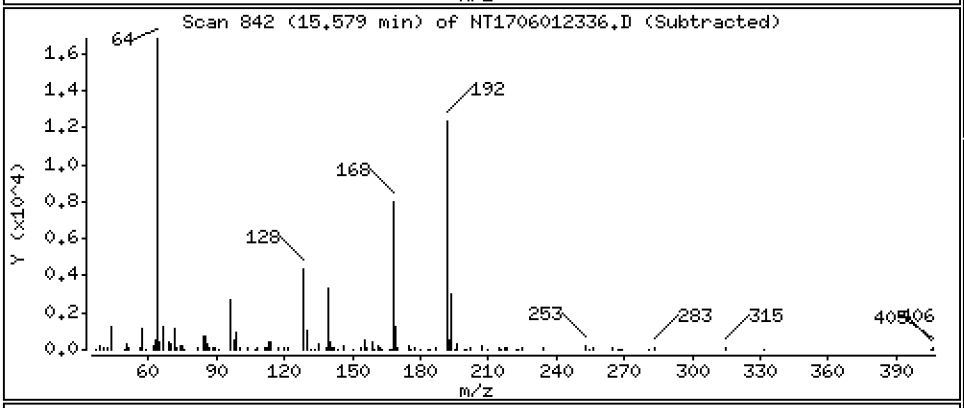
Column phase: ZB-5msi

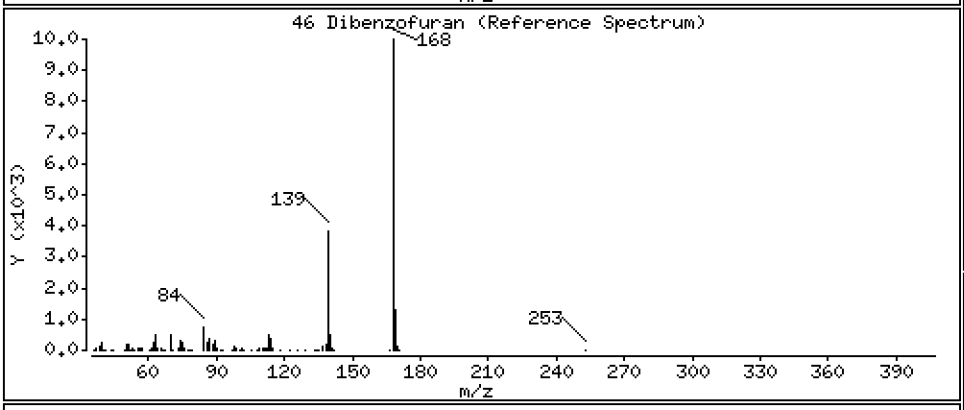
Column diameter: 0.25

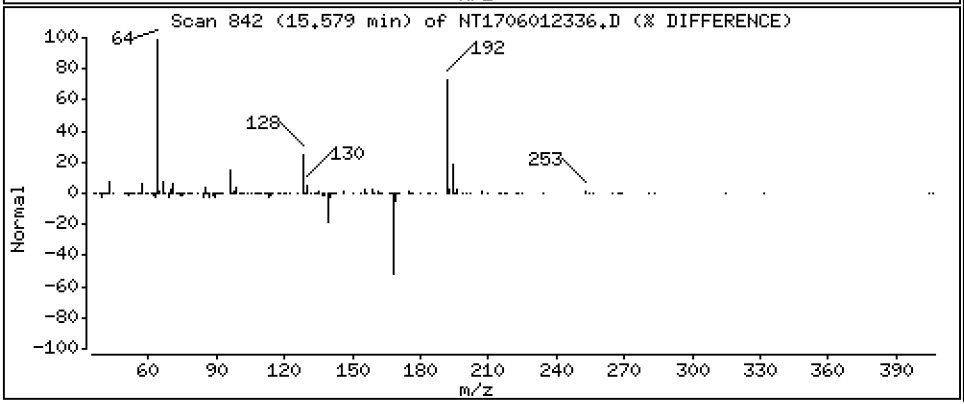
46 Dibenzofuran

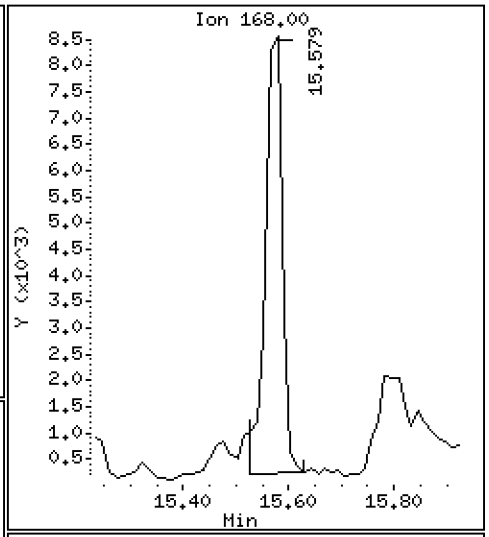
Concentration: 0.08994 ug/mL

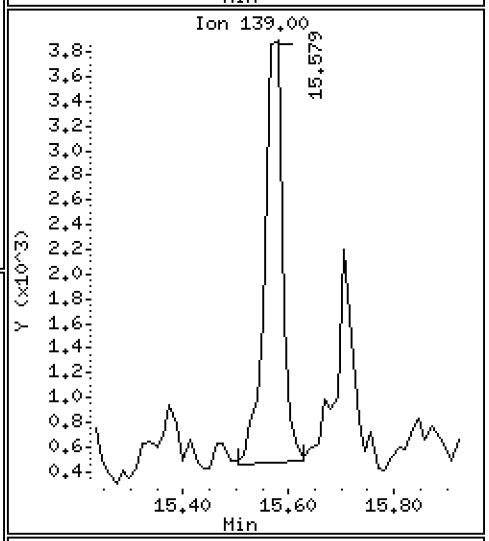


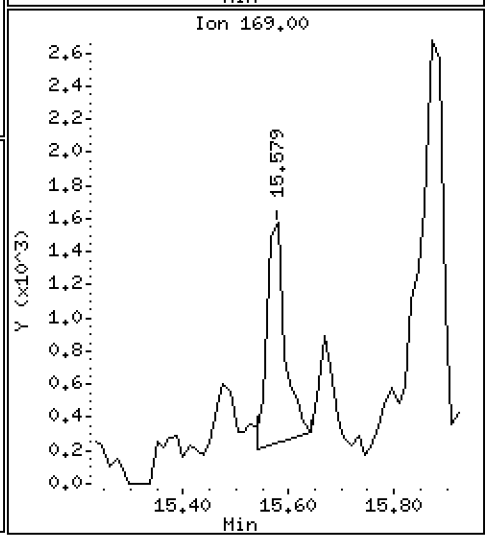












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

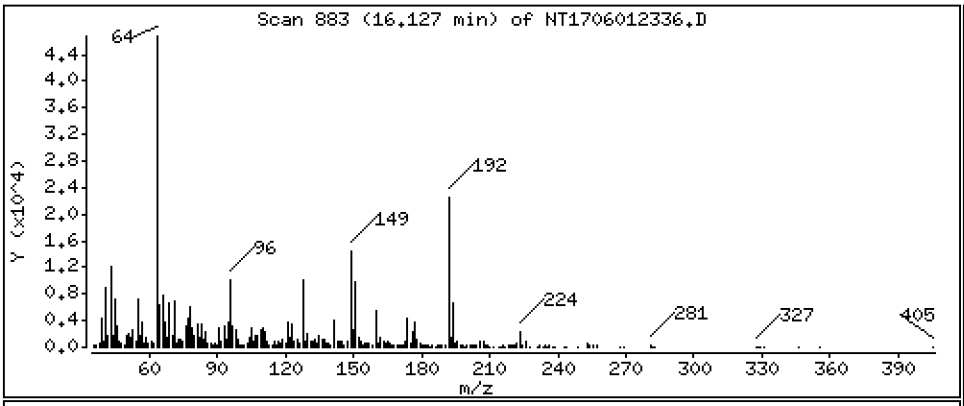
Operator: VTS

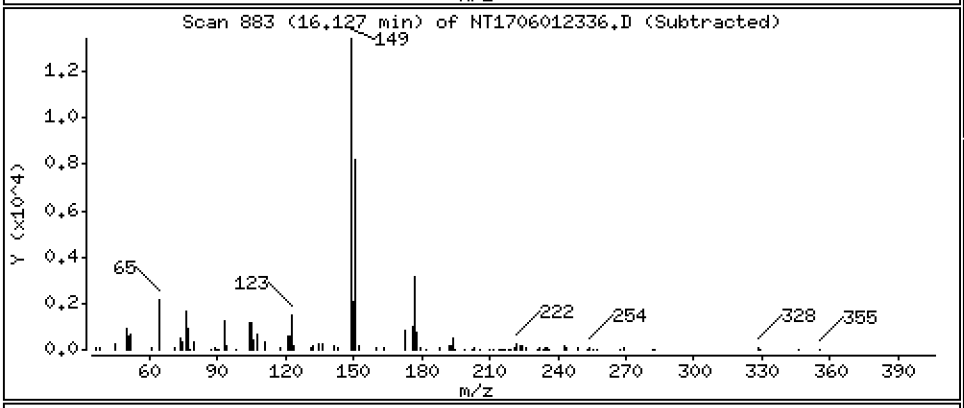
Column phase: ZB-5msi

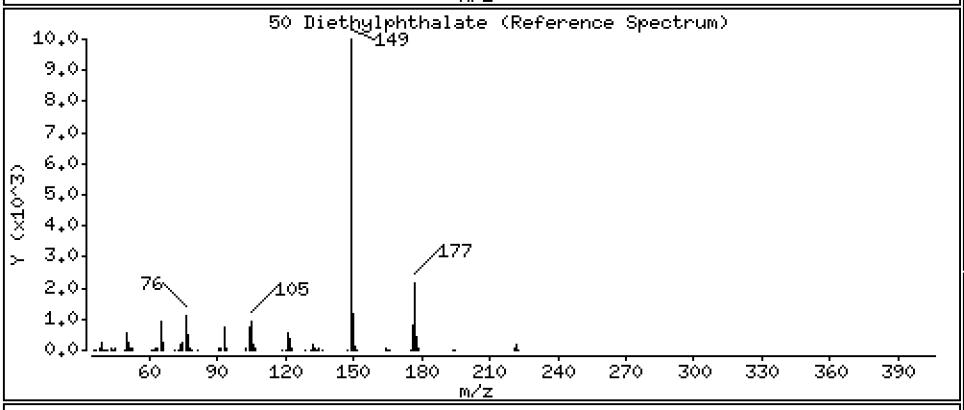
Column diameter: 0.25

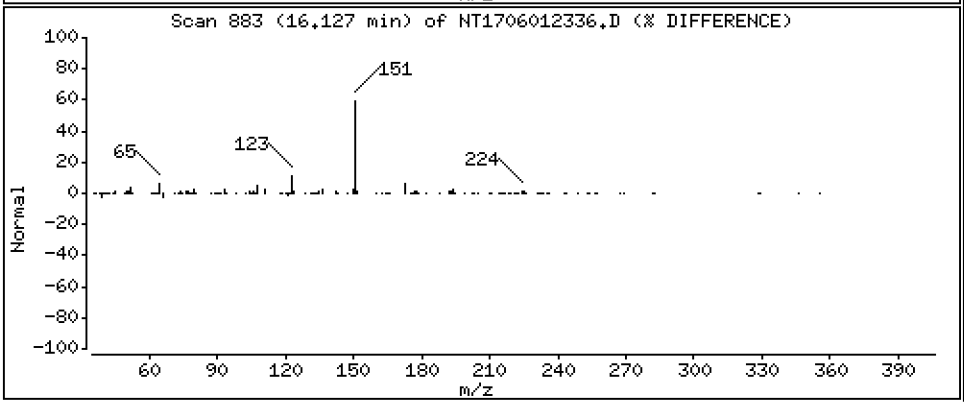
50 Diethylphthalate

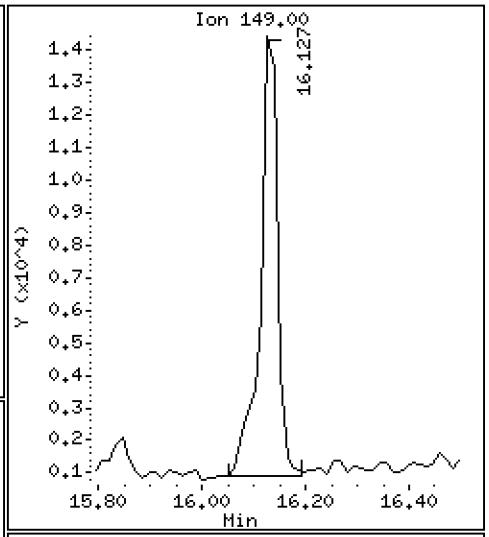
Concentration: 0.2034 ug/mL

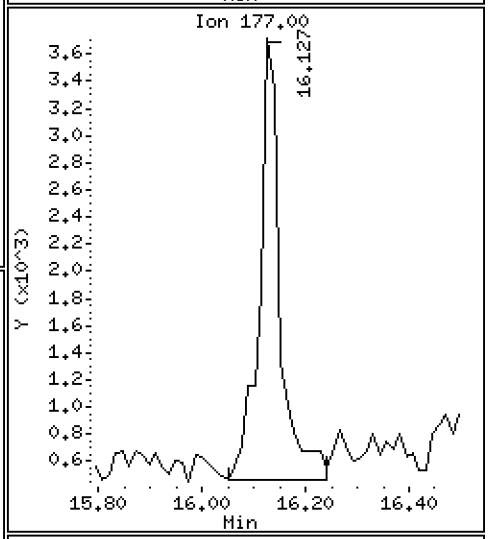


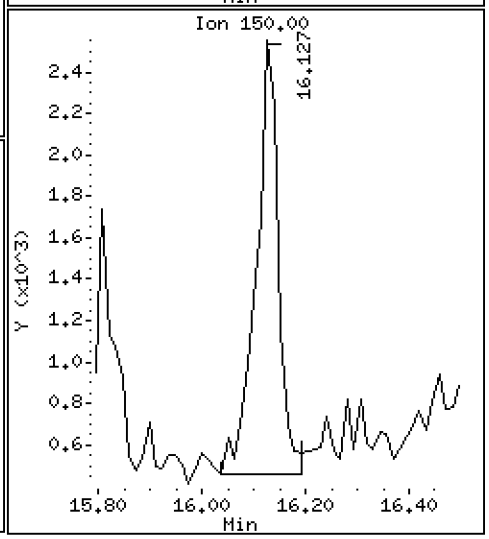












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

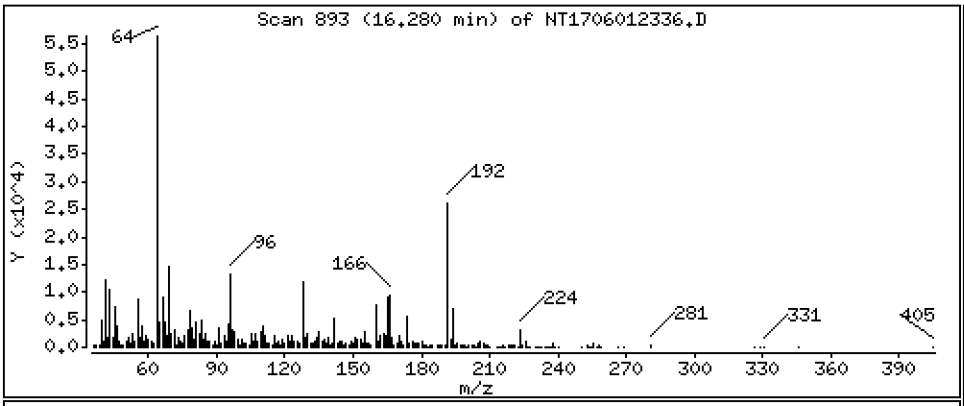
Operator: VTS

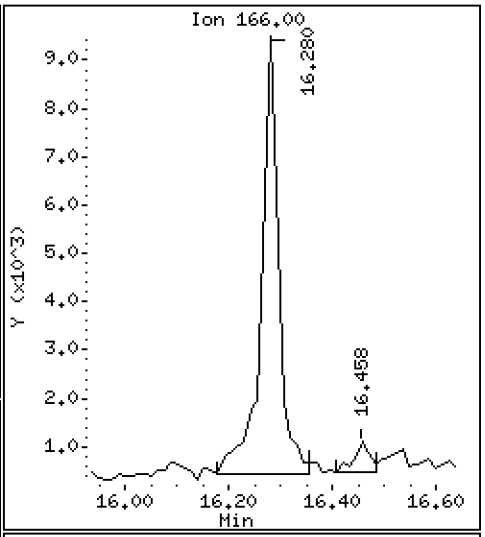
Column phase: ZB-5msi

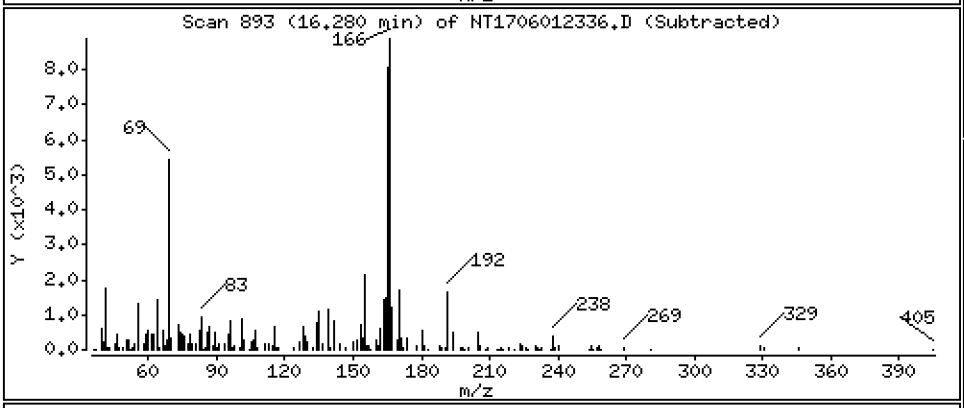
Column diameter: 0.25

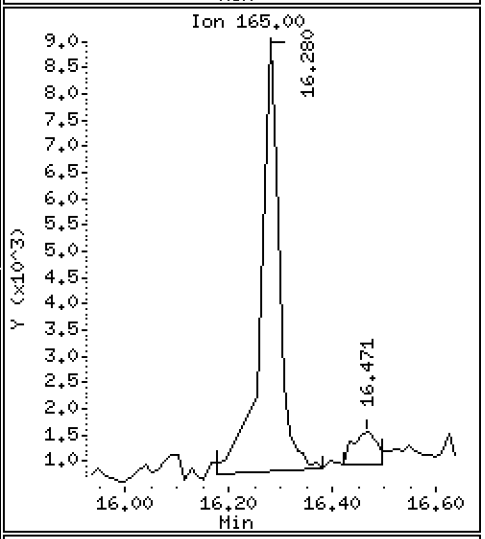
49 Fluorene

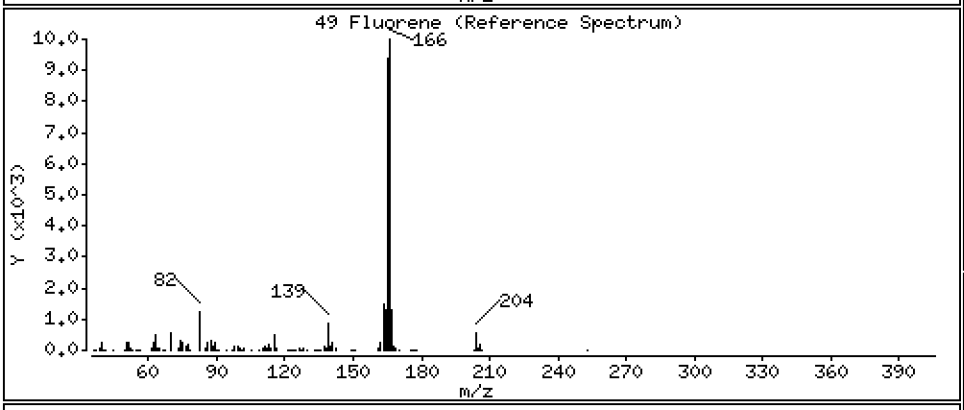
Concentration: 0.1216 ug/mL

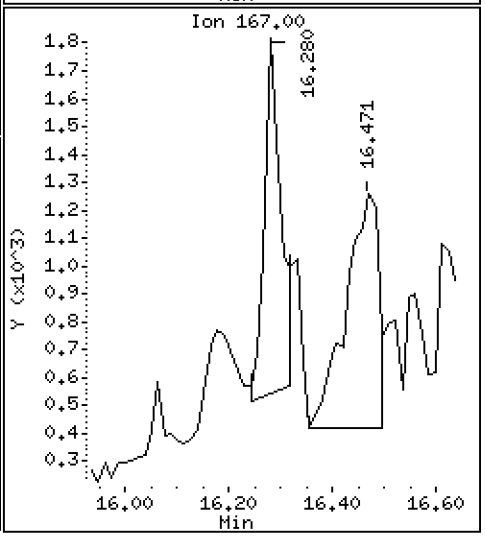


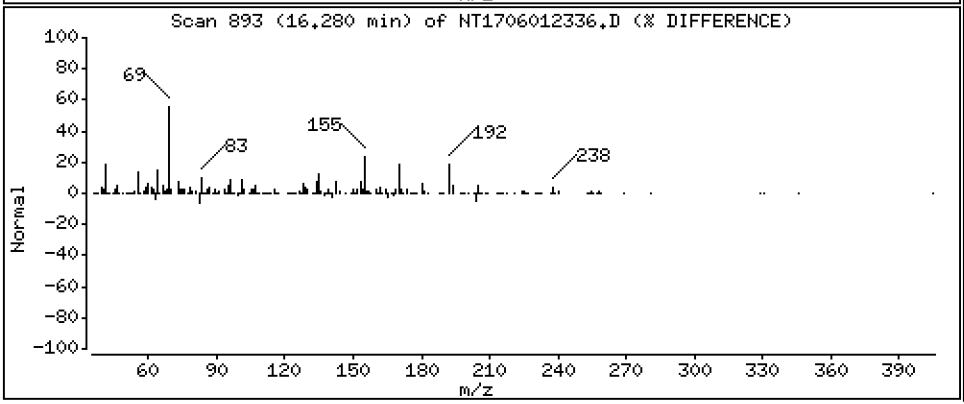












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

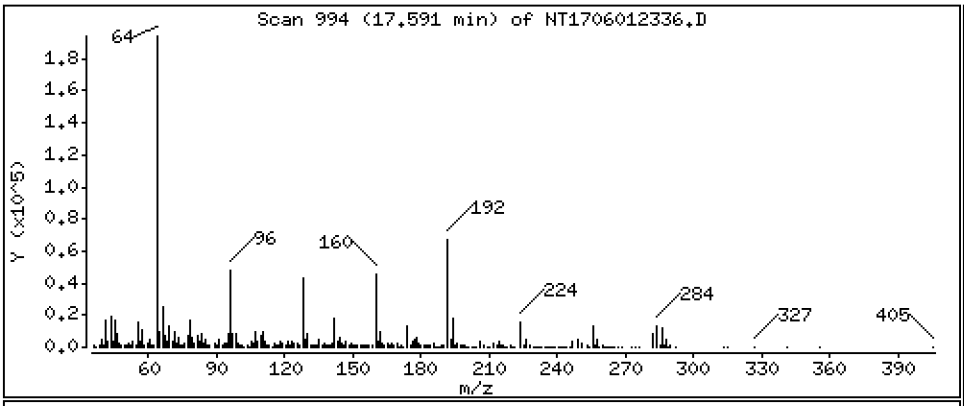
Operator: VTS

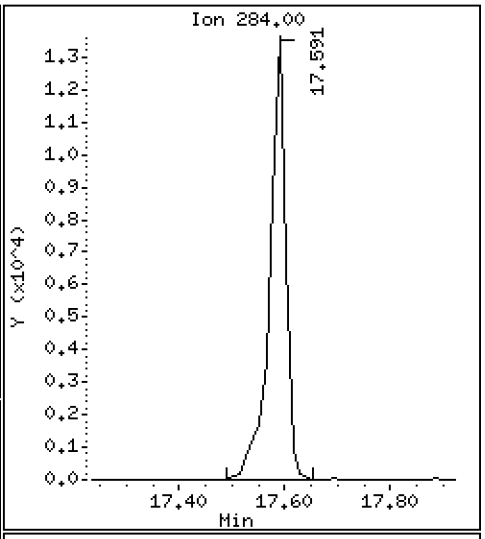
Column phase: ZB-5msi

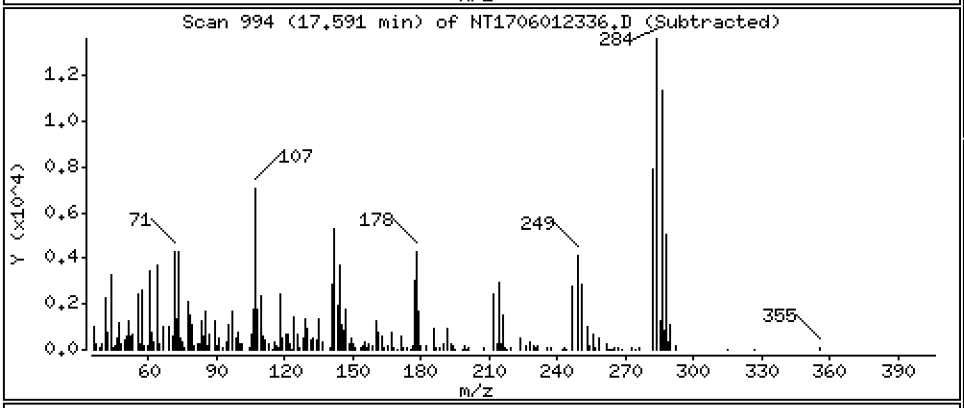
Column diameter: 0.25

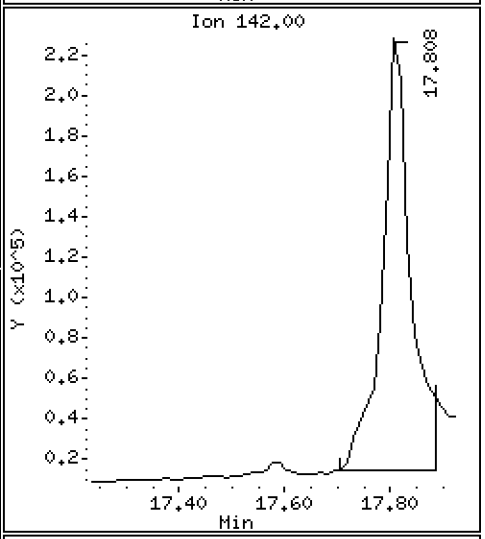
57 Hexachlorobenzene

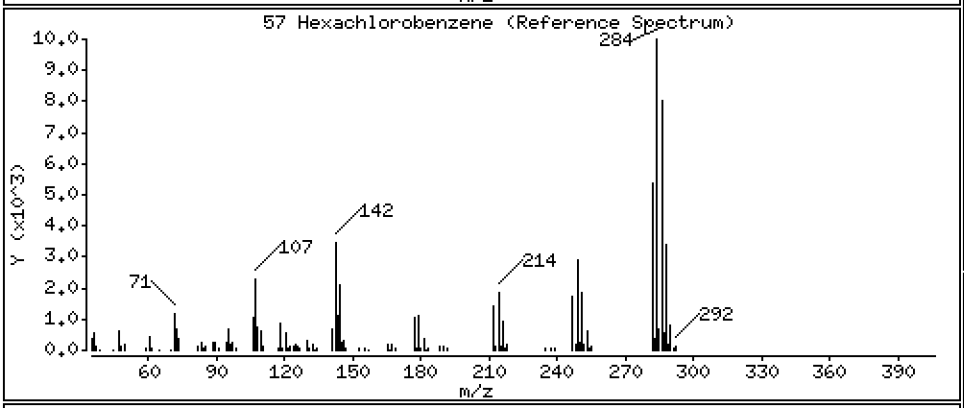
Concentration: 0.6821 ug/mL

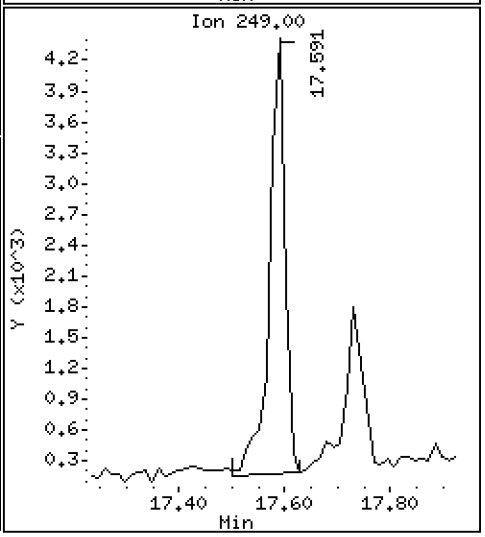


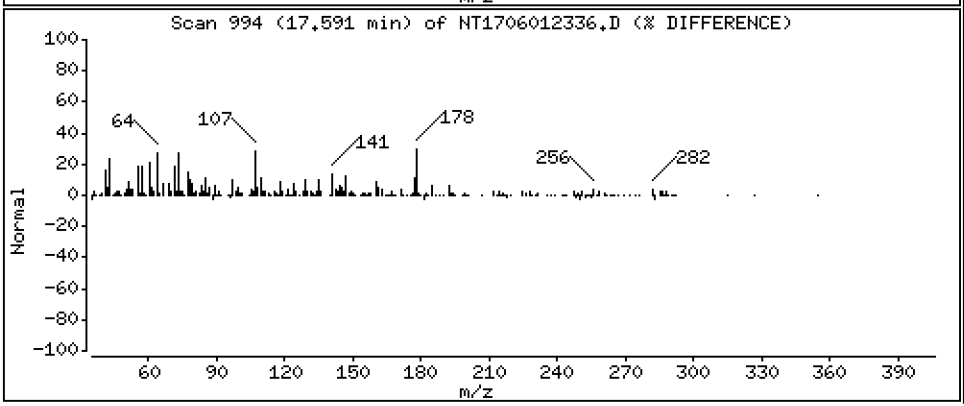












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

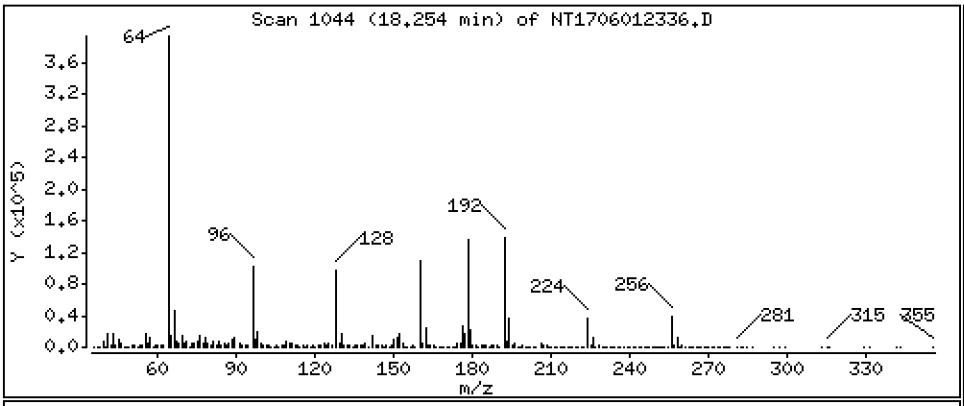
Operator: VTS

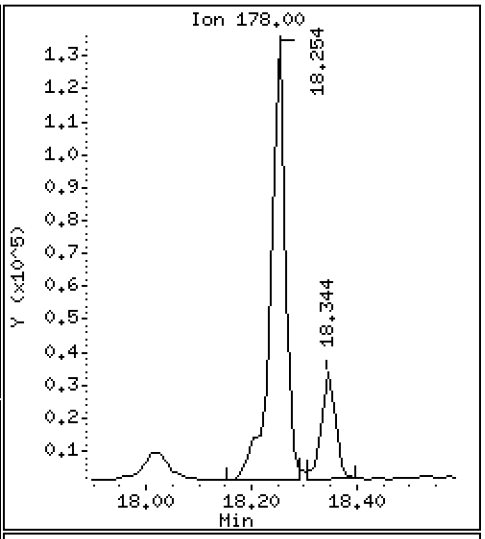
Column phase: ZB-5msi

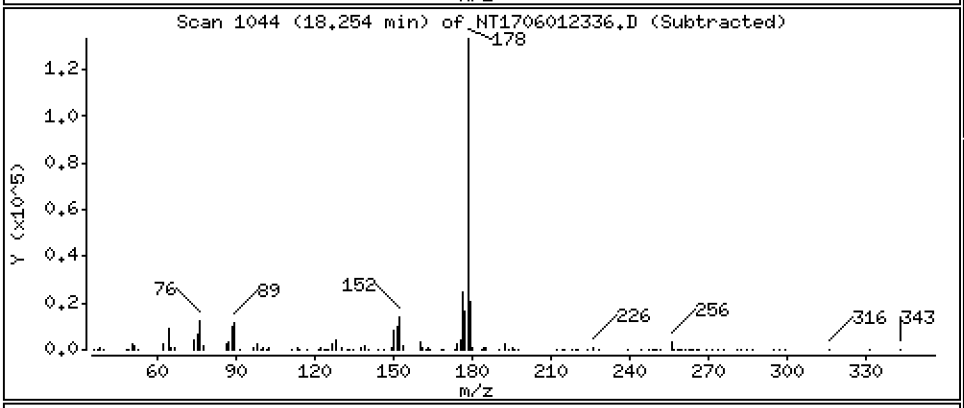
Column diameter: 0.25

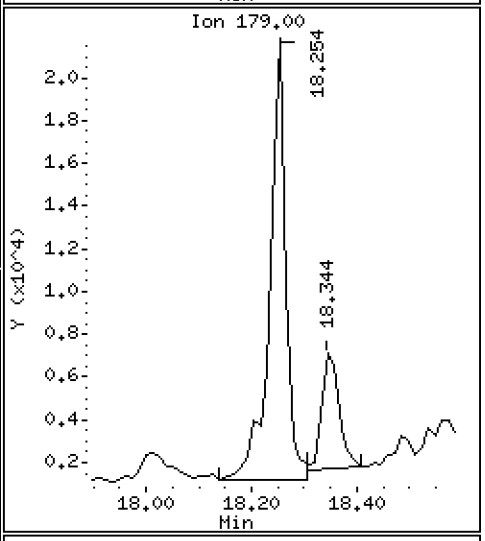
60 Phenanthrene

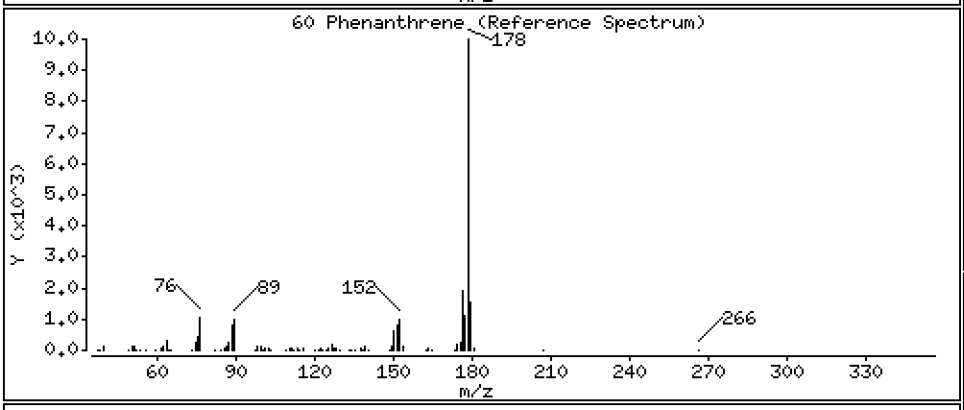
Concentration: 1.107 ug/mL

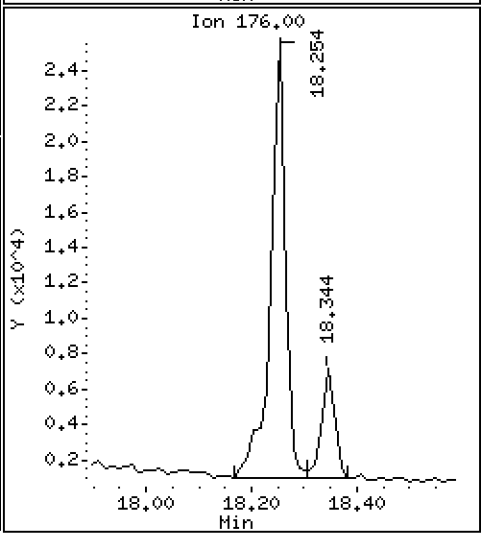


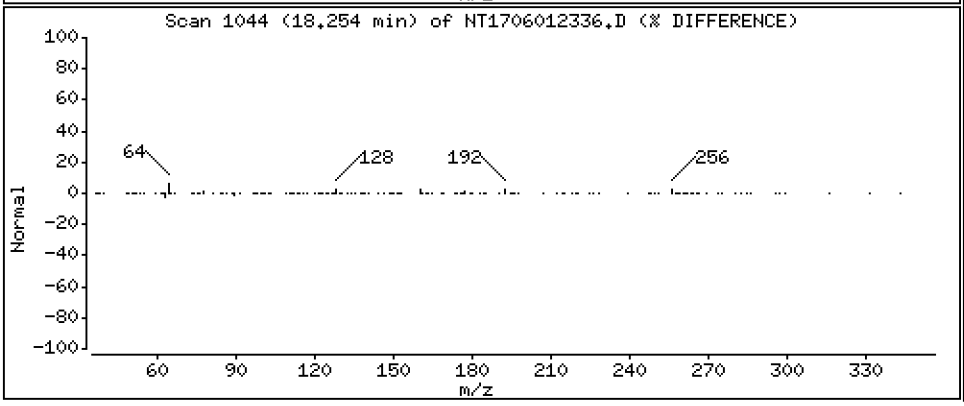












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

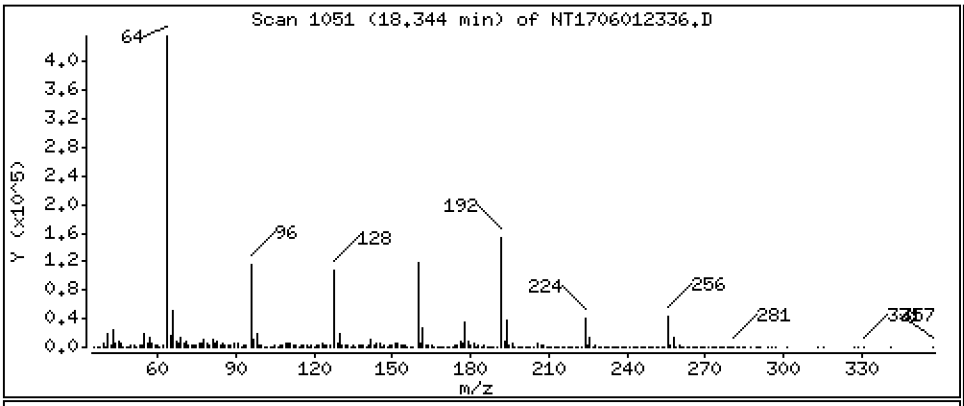
Operator: VTS

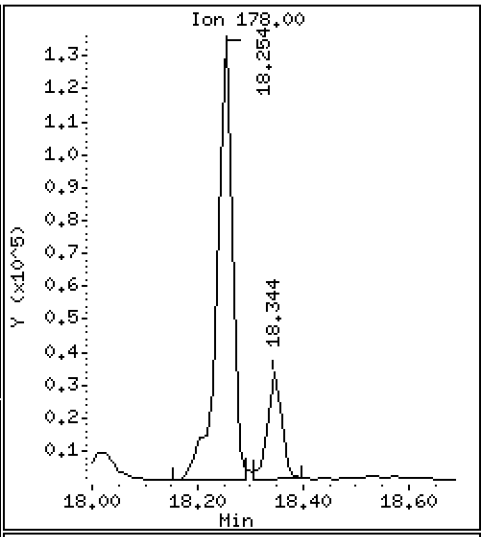
Column phase: ZB-5msi

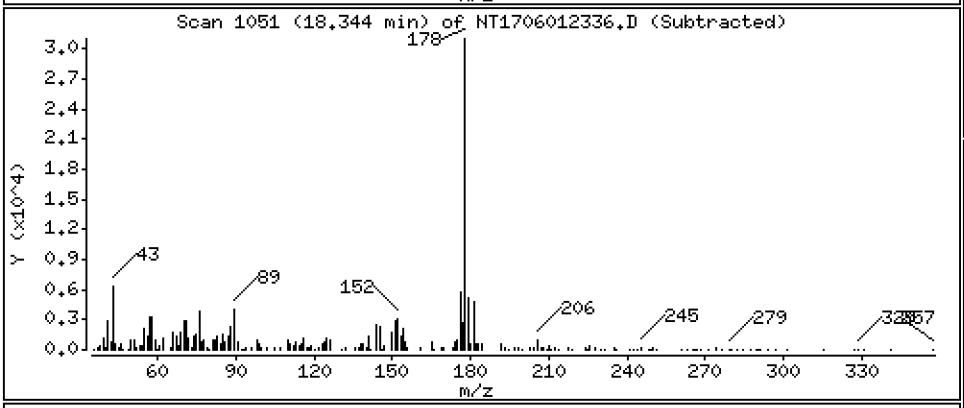
Column diameter: 0.25

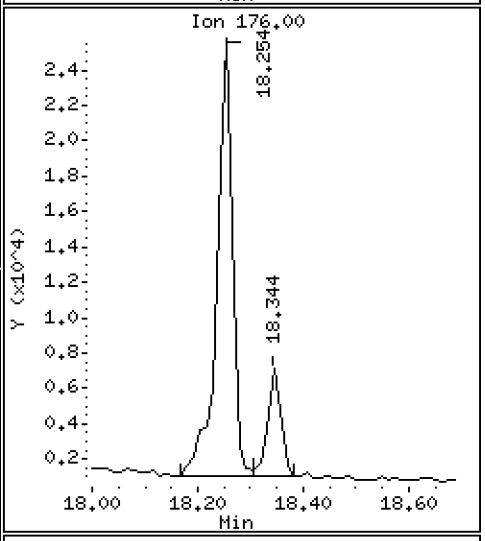
61 Anthracene

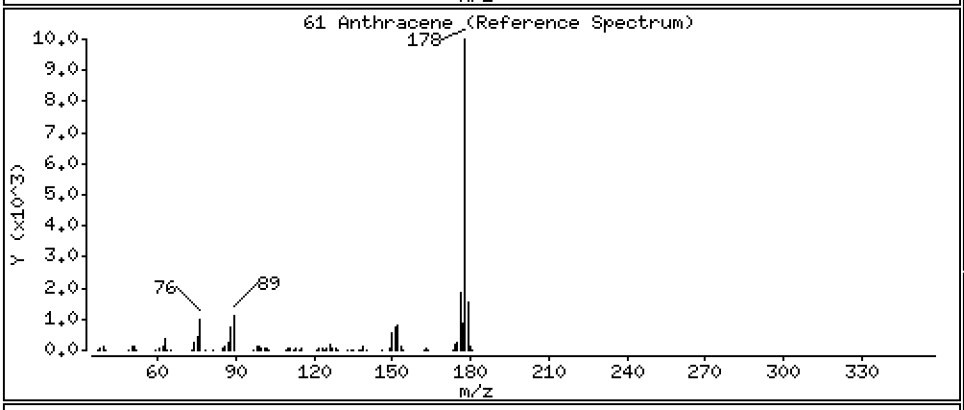
Concentration: 0.2634 ug/mL

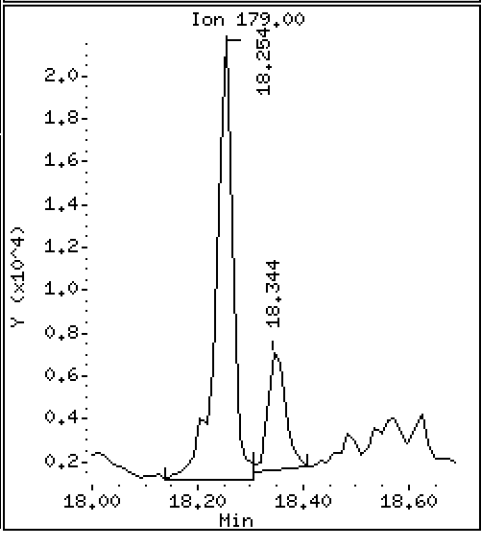


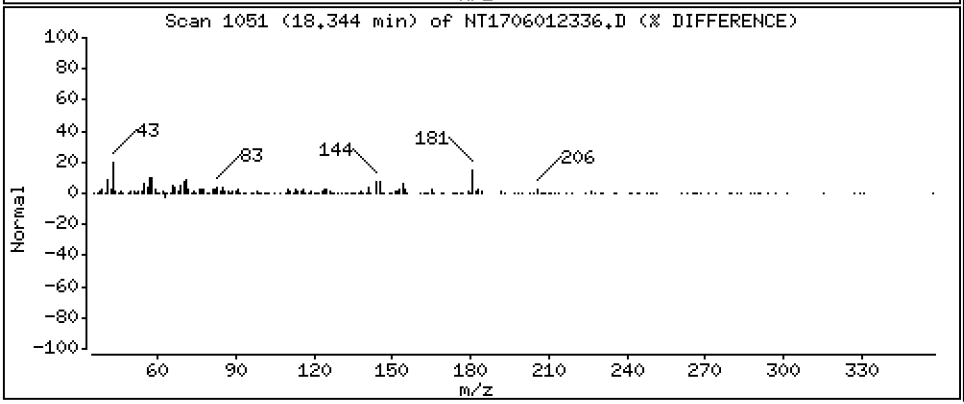












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

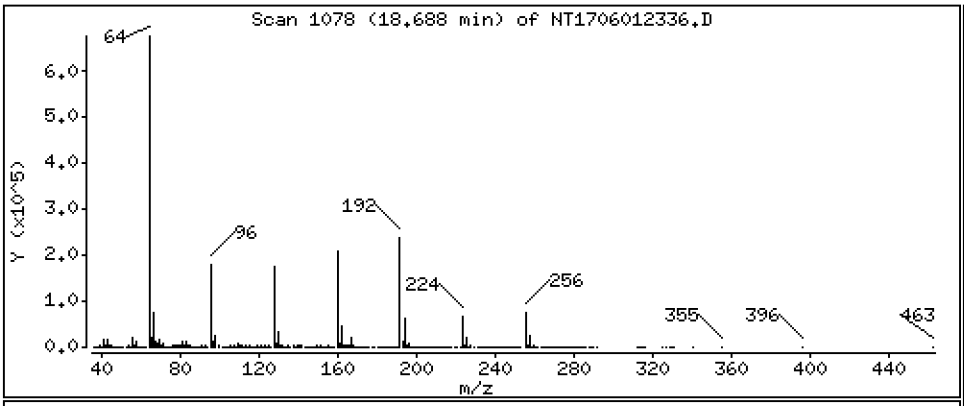
Operator: VTS

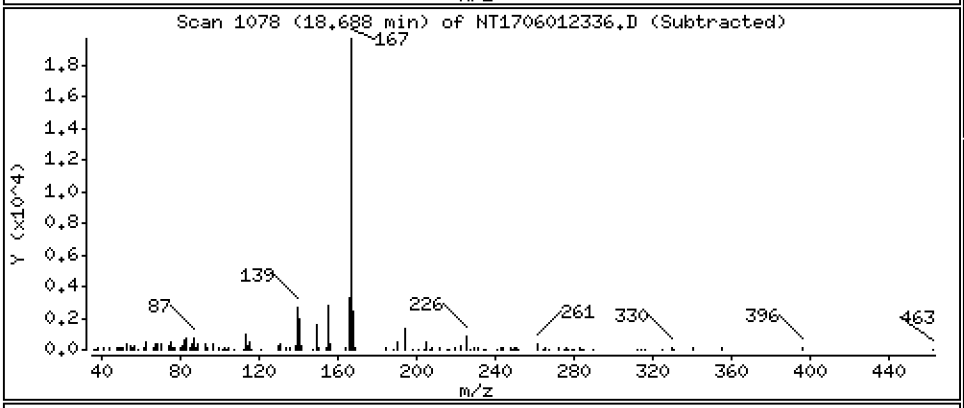
Column phase: ZB-5msi

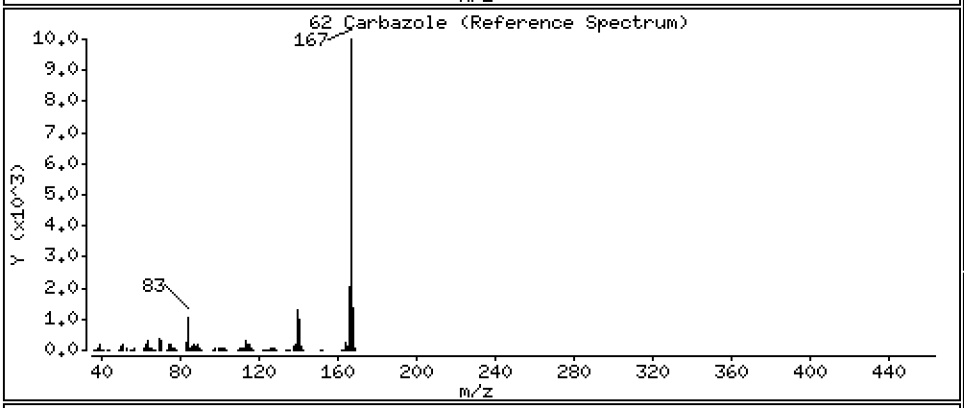
Column diameter: 0.25

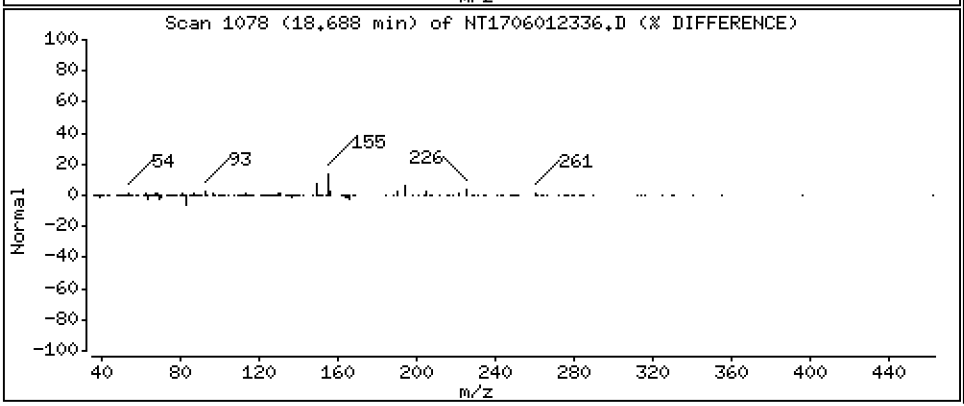
62 Carbazole

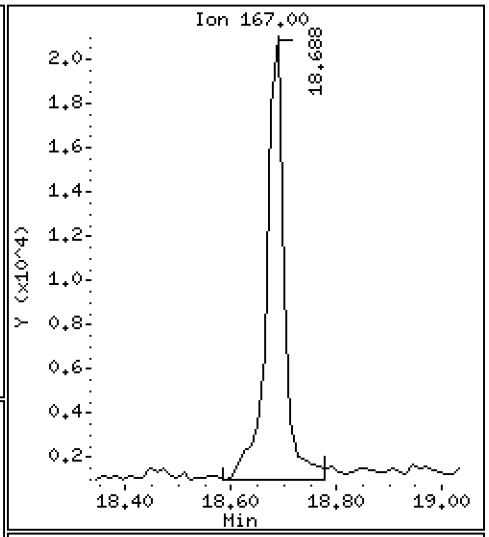
Concentration: 0.3420 ug/mL

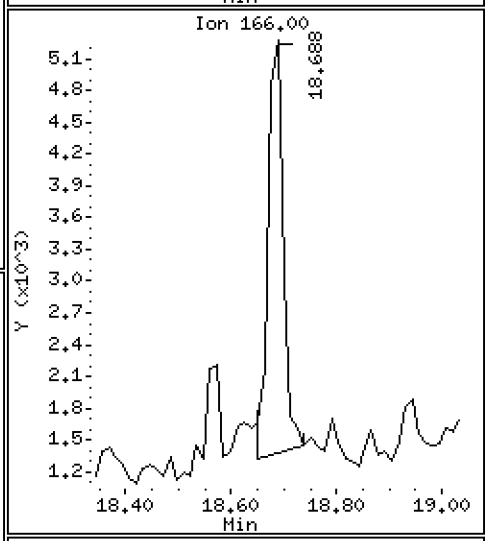


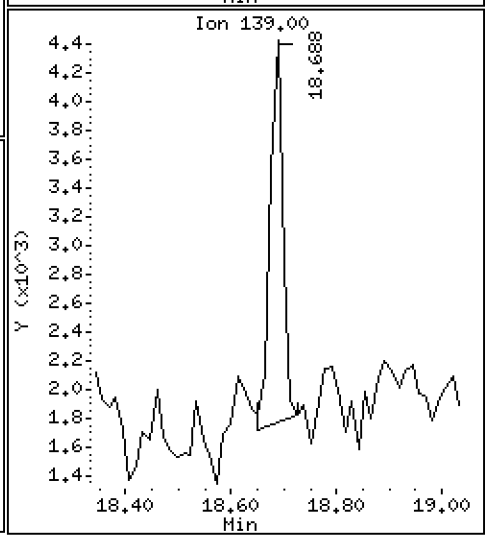












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

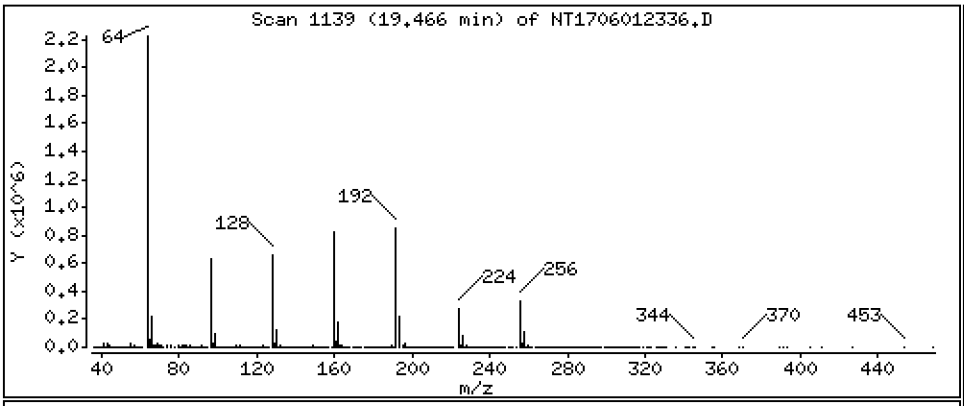
Operator: VTS

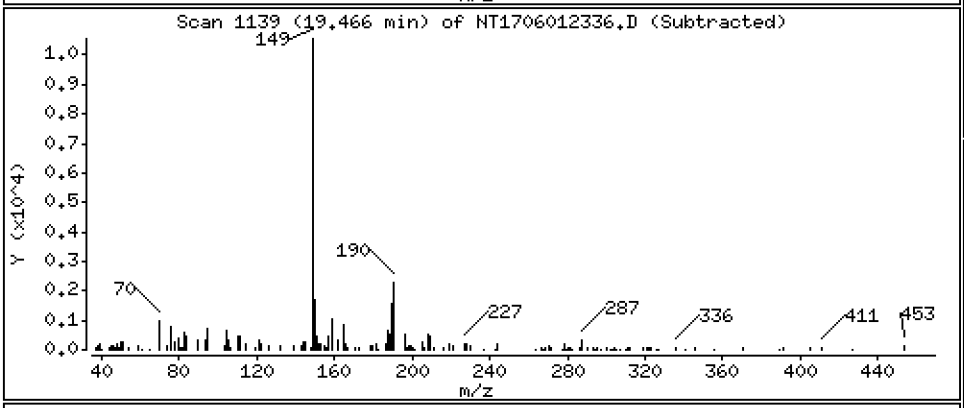
Column phase: ZB-5msi

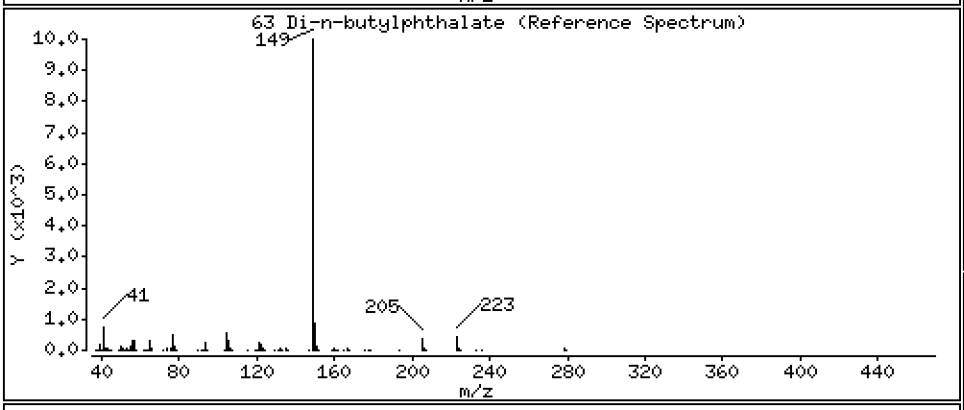
Column diameter: 0.25

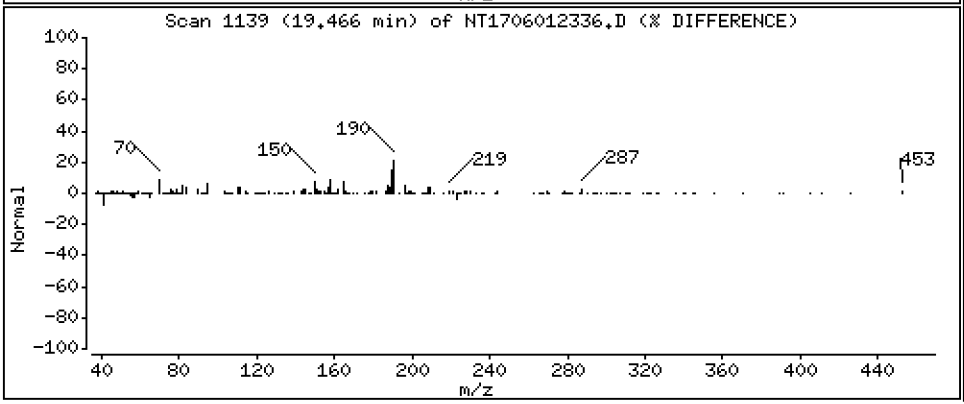
63 Di-n-butylphthalate

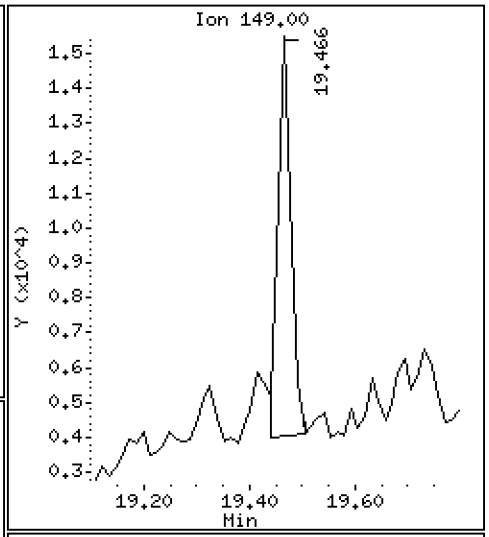
Concentration: 0.07109 ug/mL

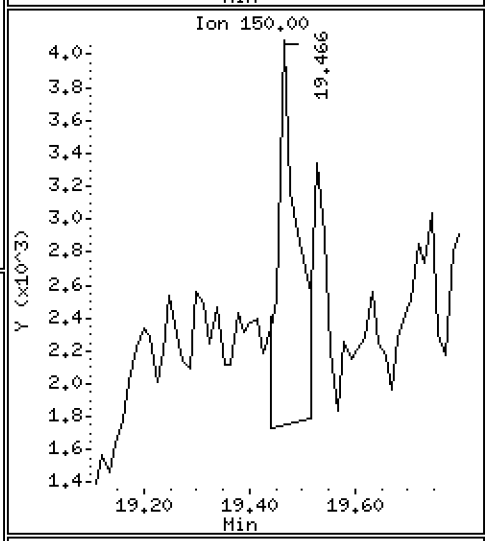


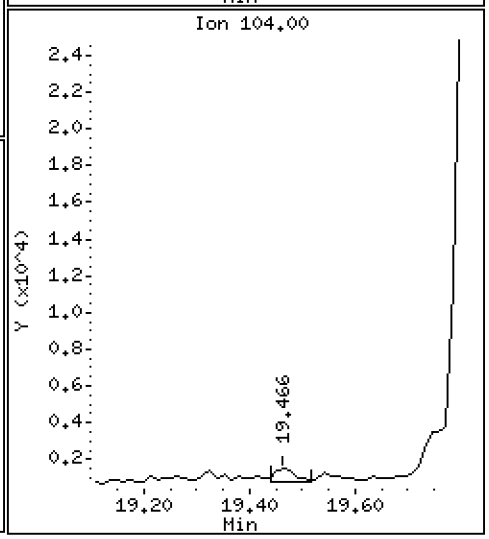












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

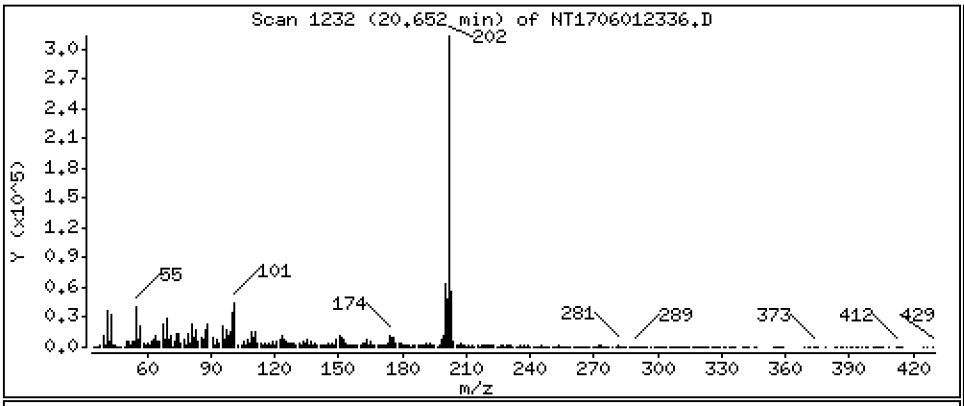
Operator: VTS

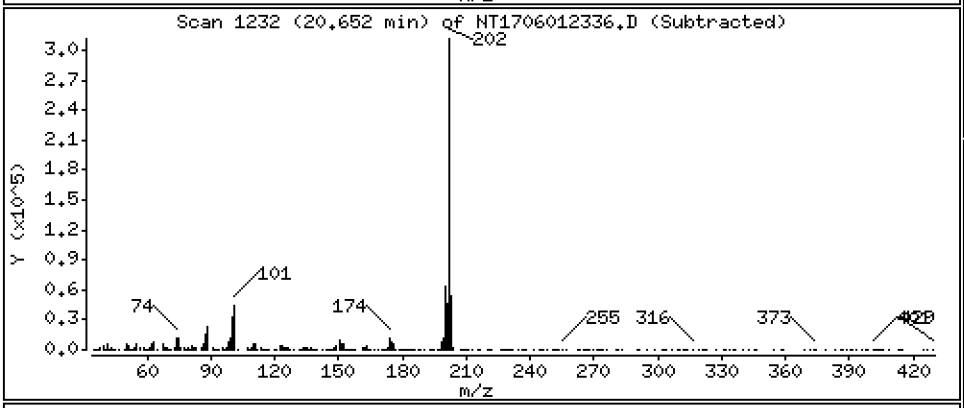
Column phase: ZB-5msi

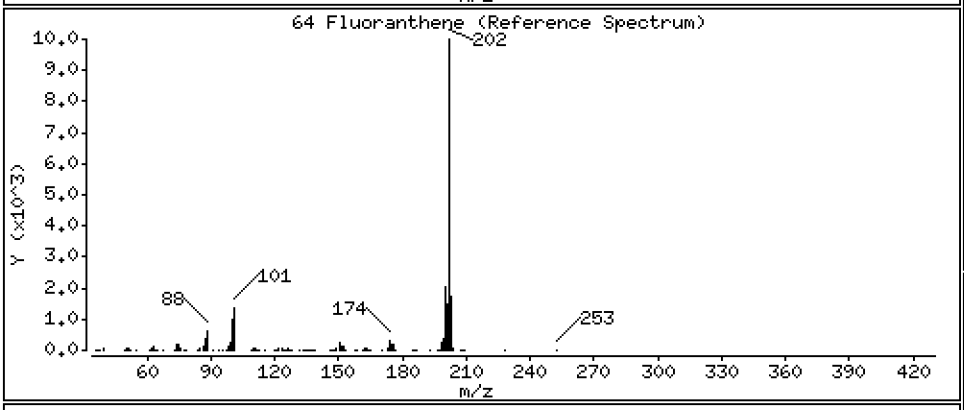
Column diameter: 0.25

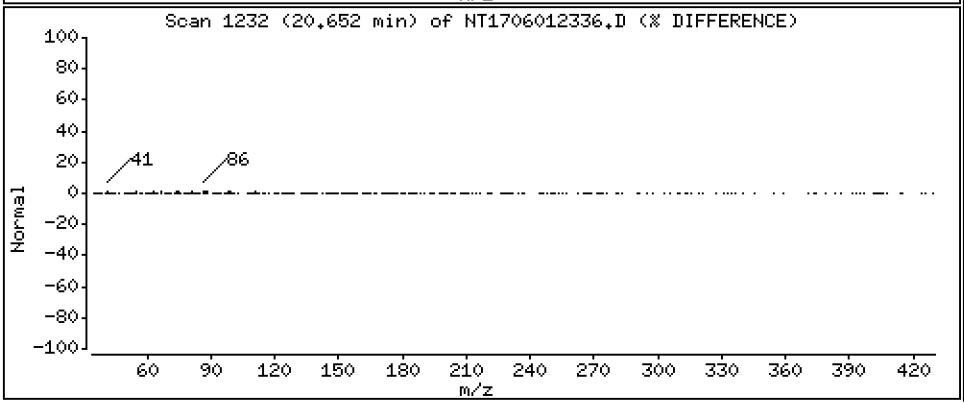
64 Fluoranthene

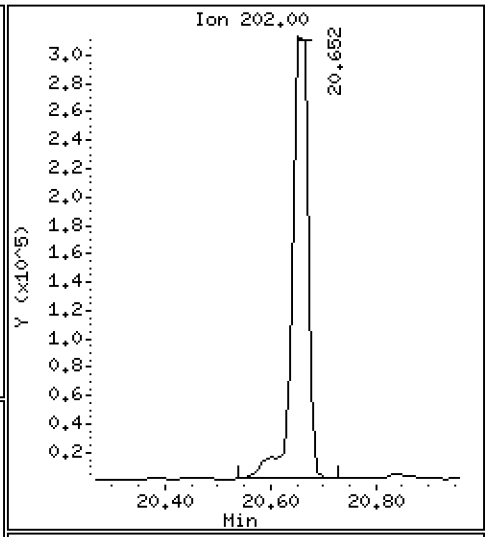
Concentration: 2.962 ug/mL

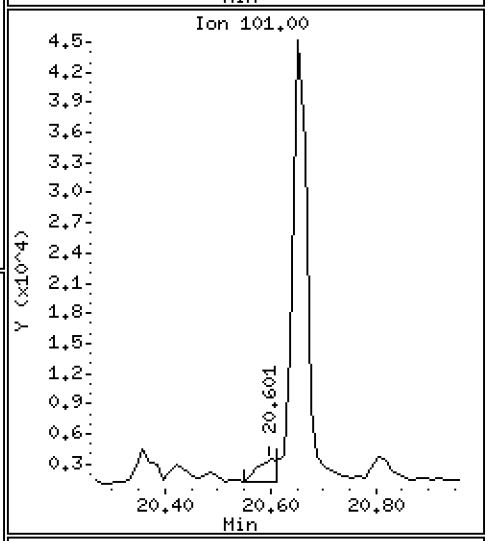


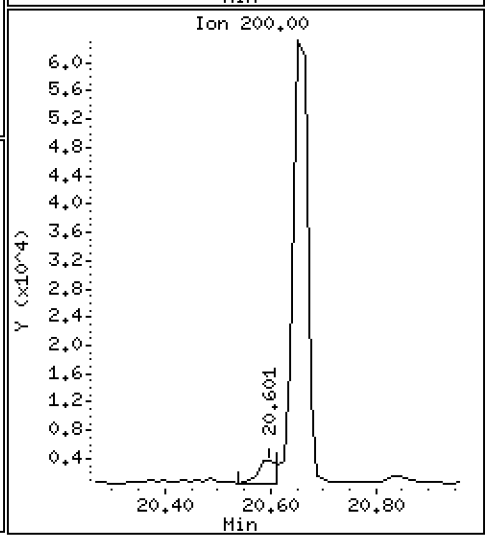












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

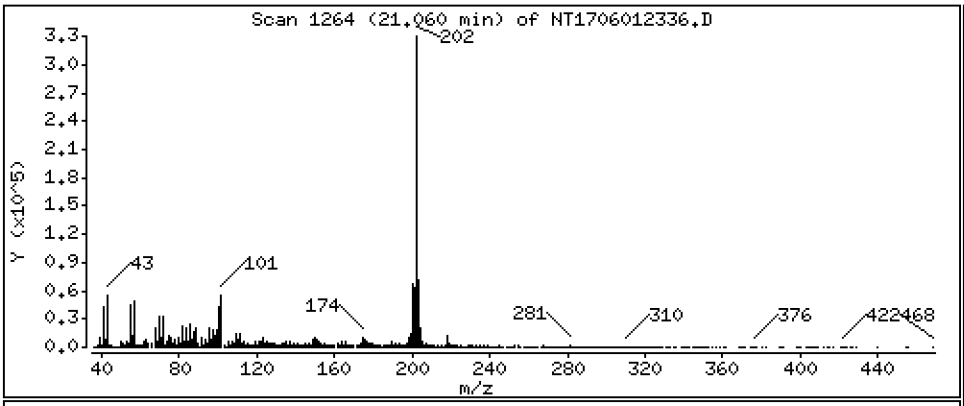
Operator: VTS

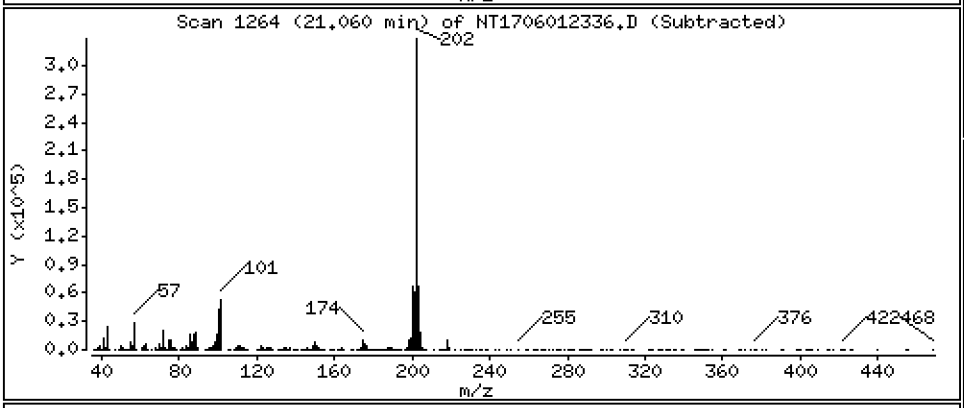
Column phase: ZB-5msi

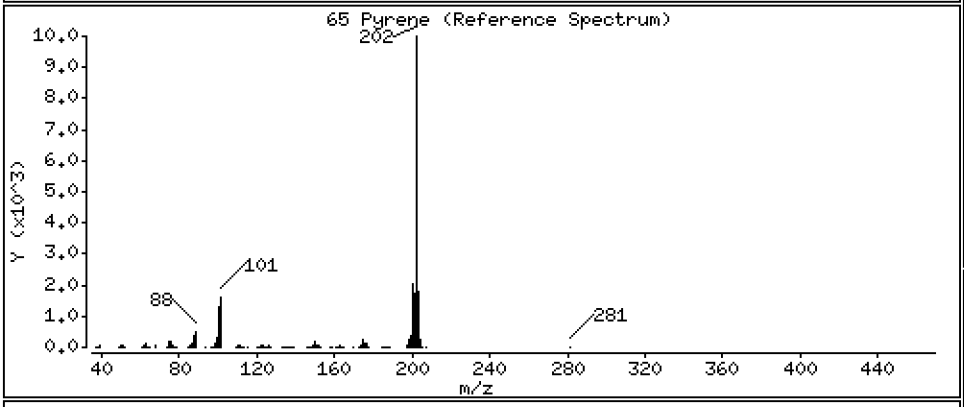
Column diameter: 0.25

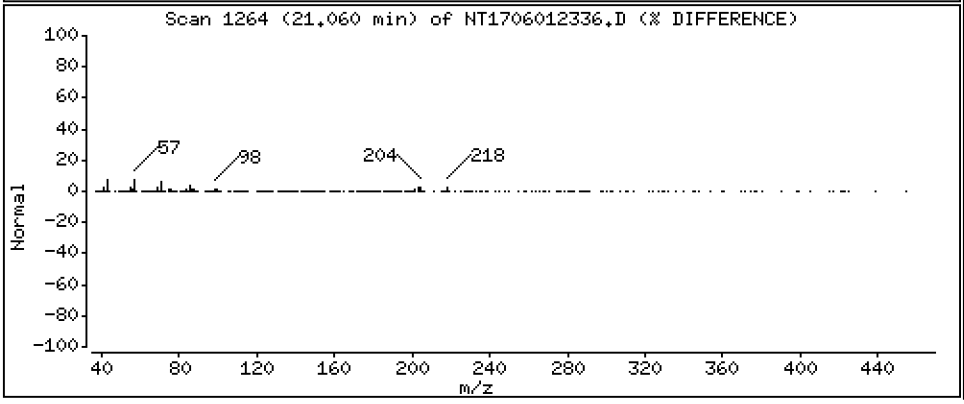
65 Pyrene

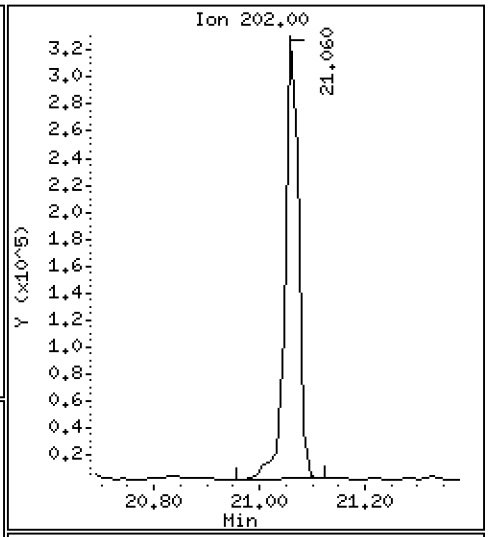
Concentration: 2.665 ug/mL

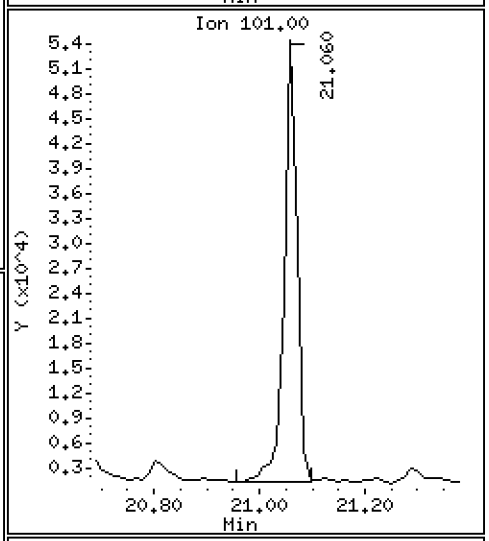


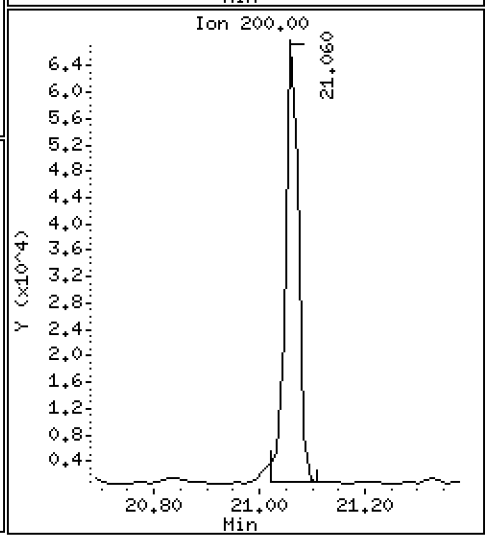












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

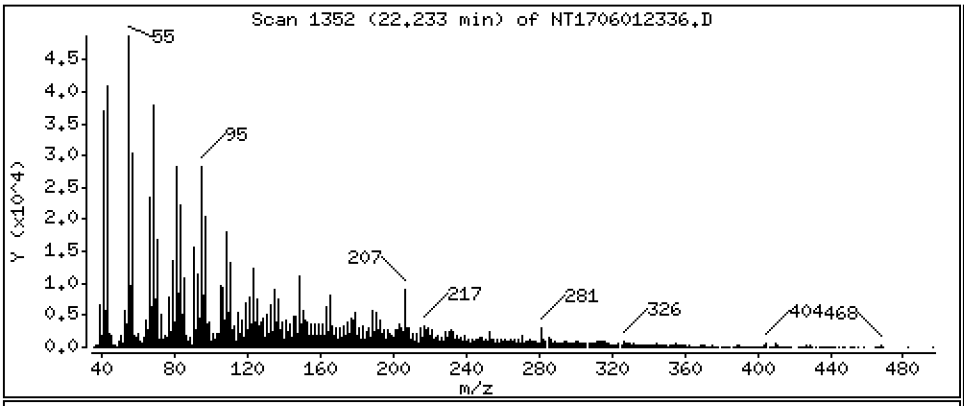
Operator: VTS

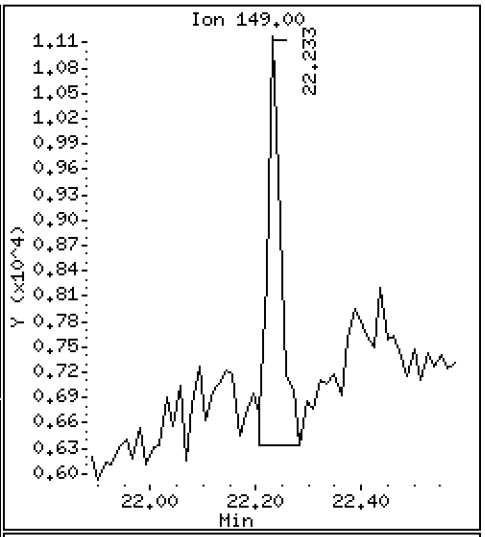
Column phase: ZB-5msi

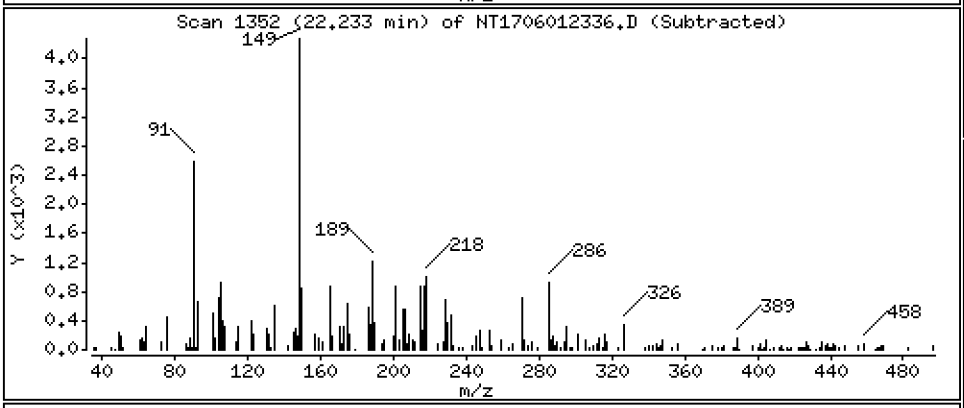
Column diameter: 0.25

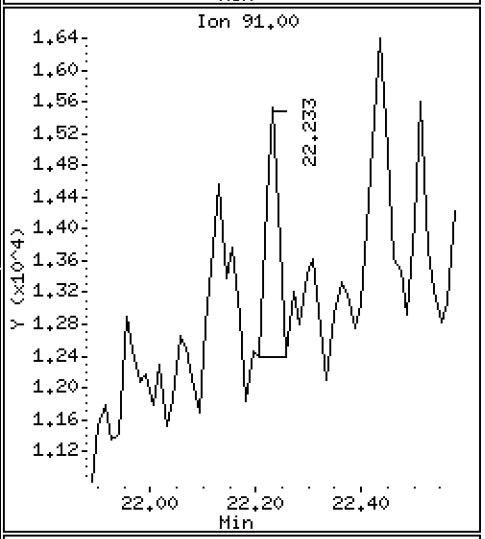
67 Butylbenzylphthalate

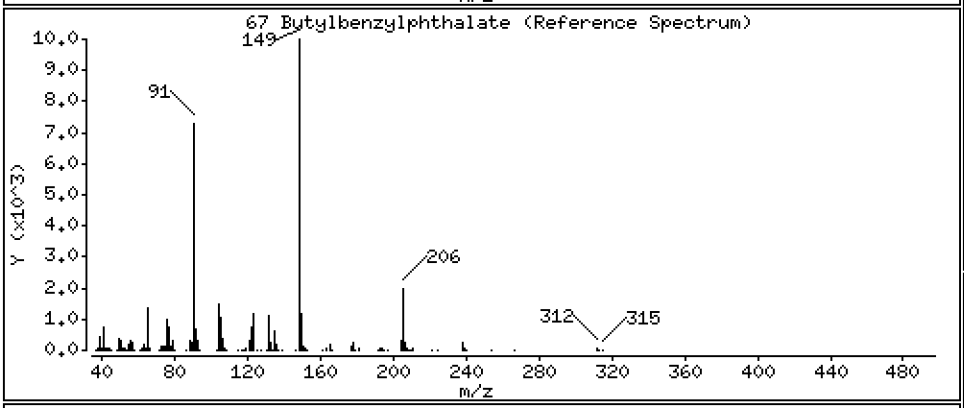
Concentration: 0.08851 ug/mL

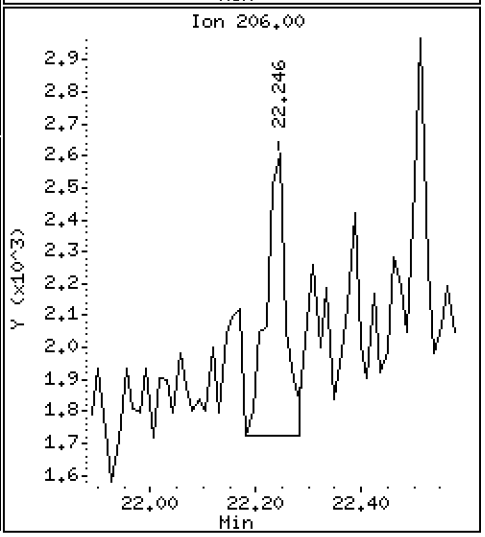


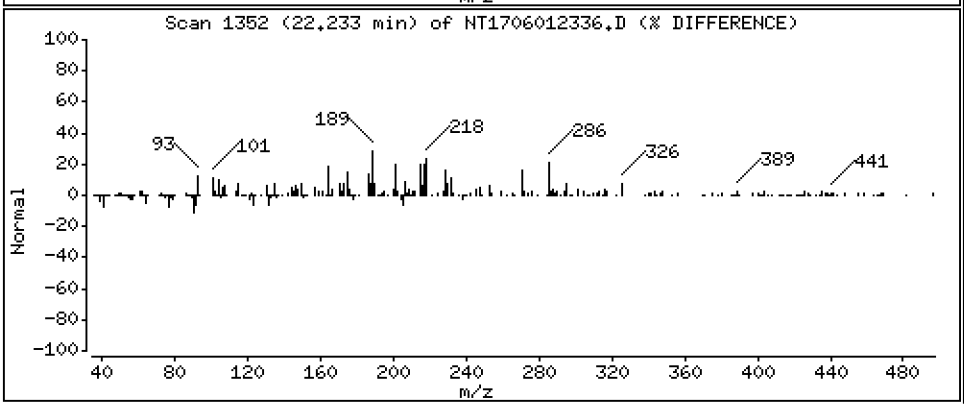












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

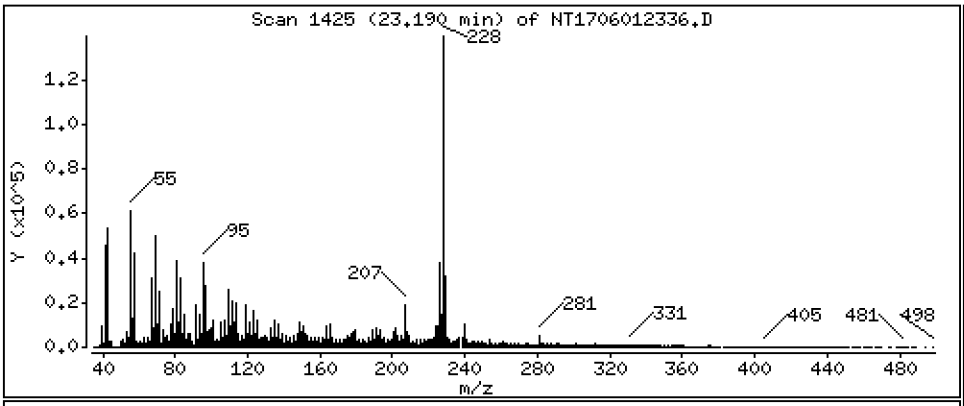
Operator: VTS

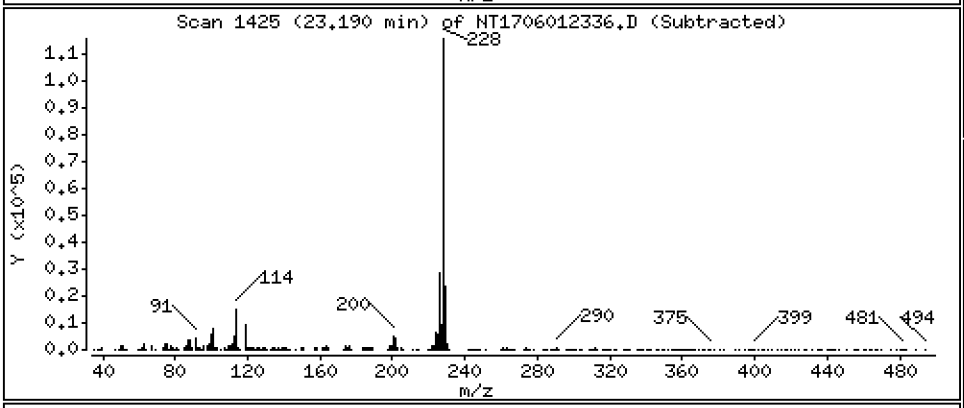
Column phase: ZB-5msi

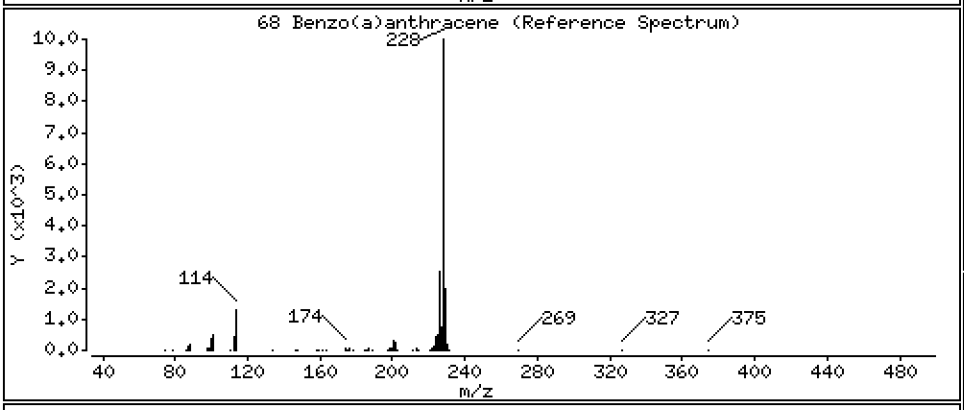
Column diameter: 0.25

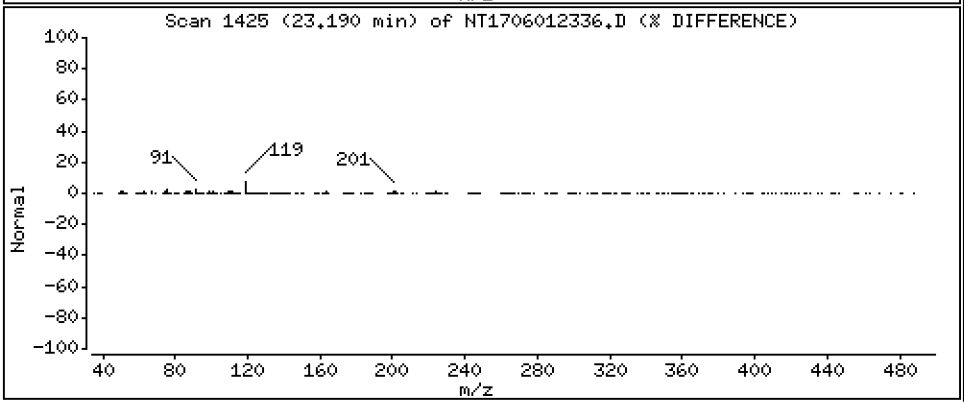
68 Benzo(a)anthracene

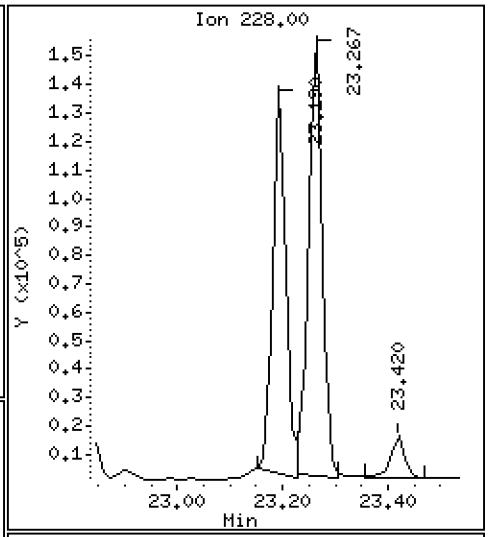
Concentration: 1.372 ug/mL

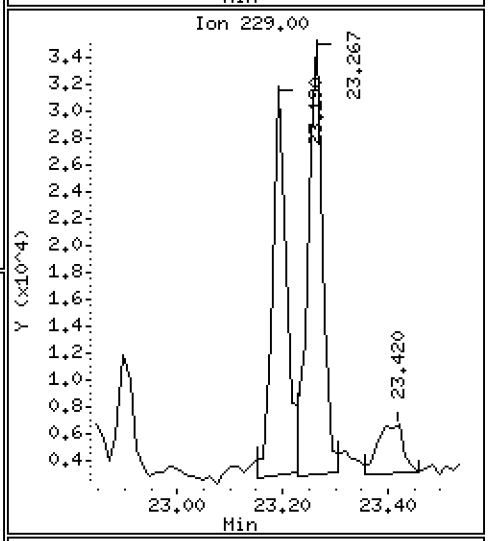


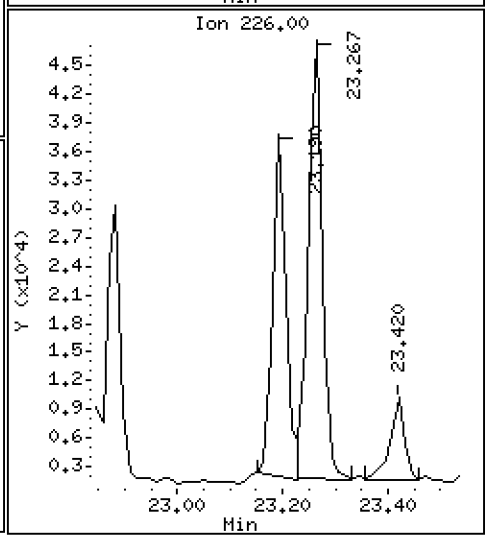












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

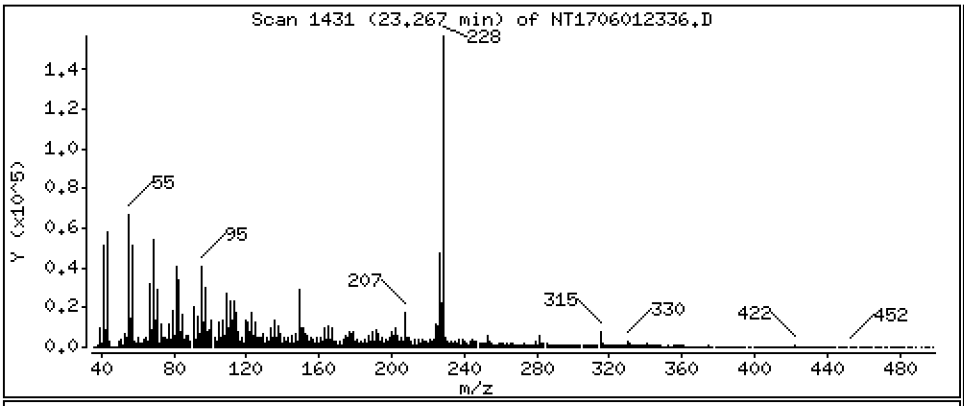
Operator: VTS

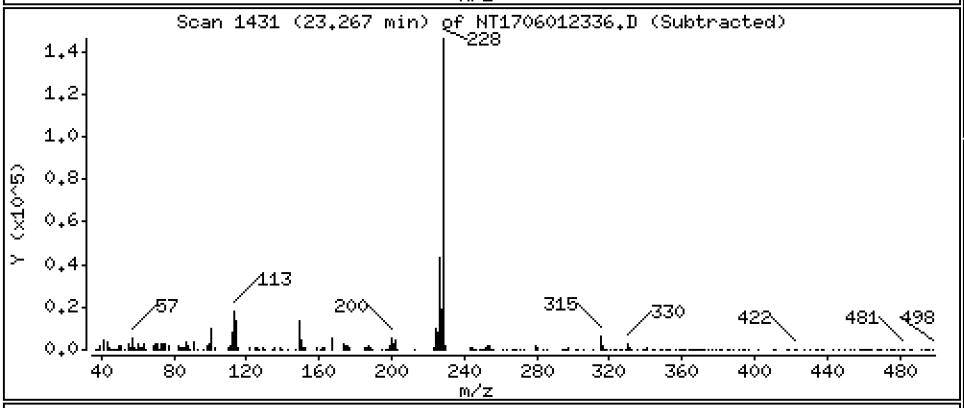
Column phase: ZB-5msi

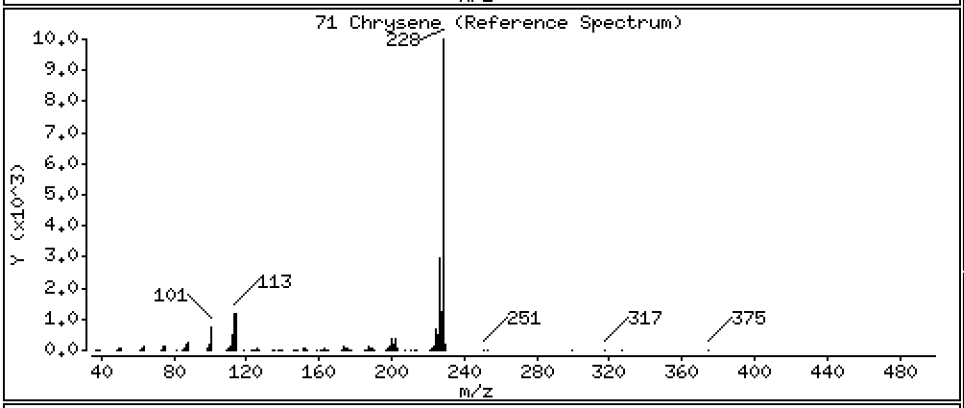
Column diameter: 0.25

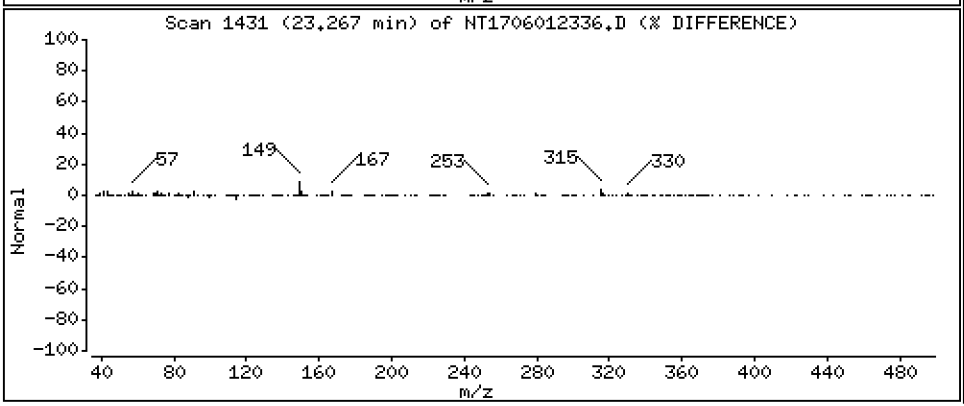
71 Chrysene

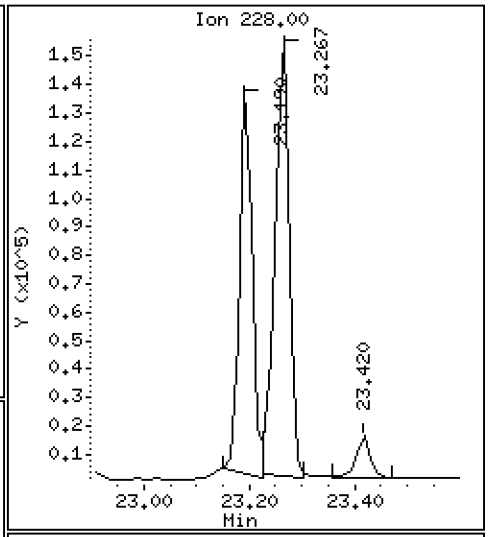
Concentration: 1.823 ug/mL

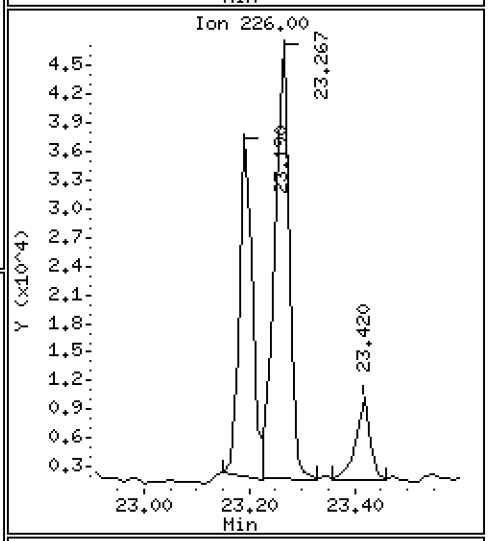


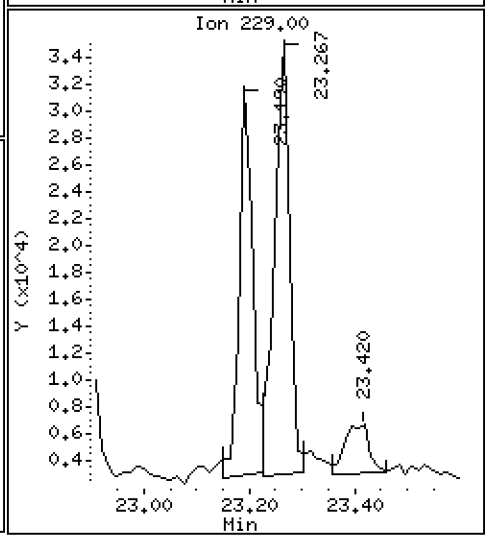












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

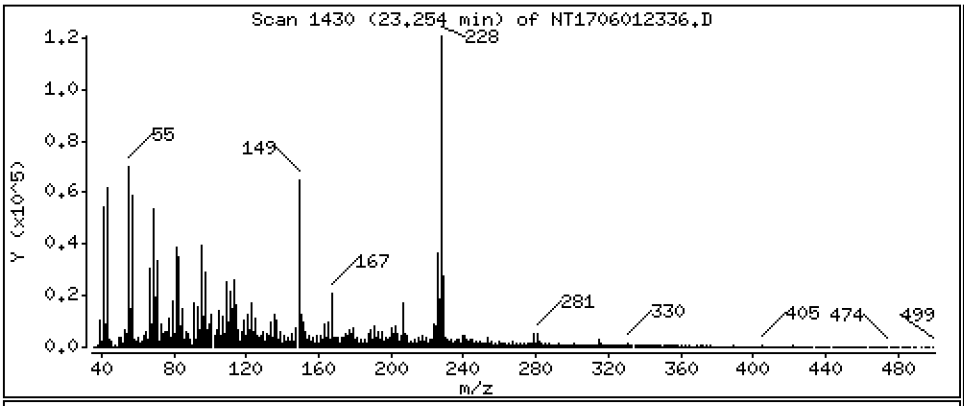
Operator: VTS

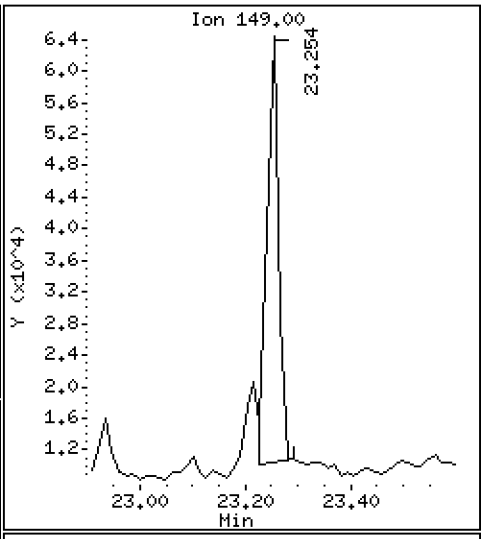
Column phase: ZB-5msi

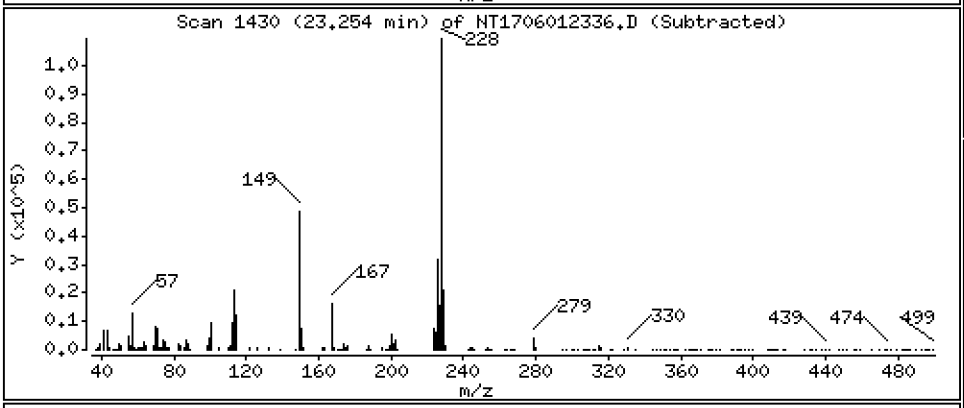
Column diameter: 0.25

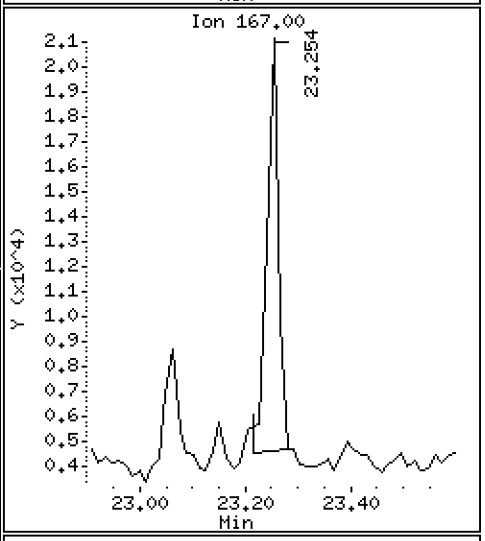
72 bis(2-Ethylhexyl)phthalate

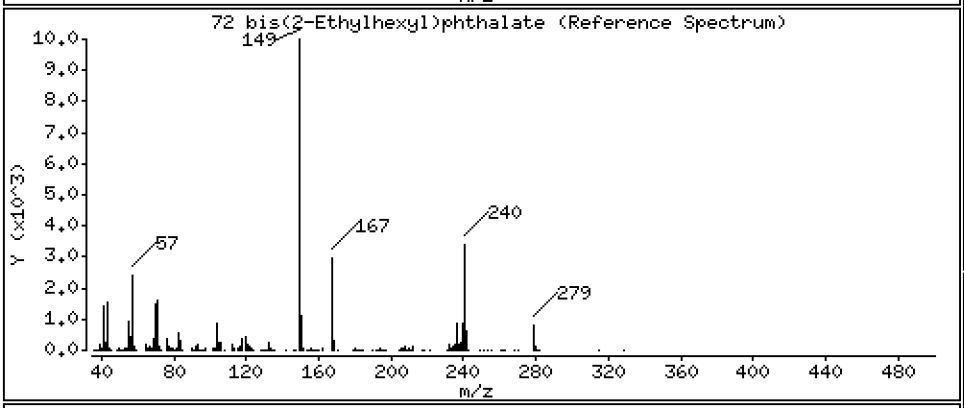
Concentration: 0.5818 ug/mL

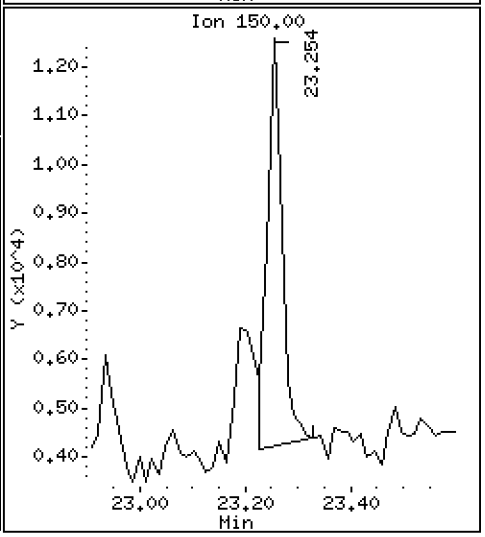


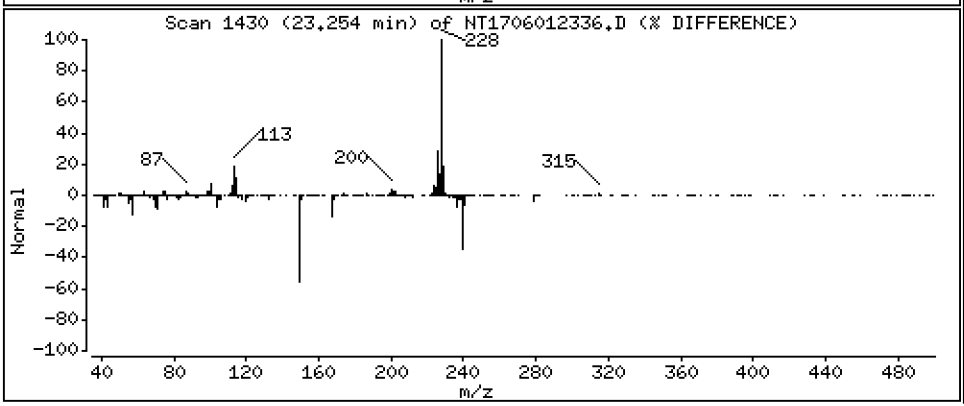












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

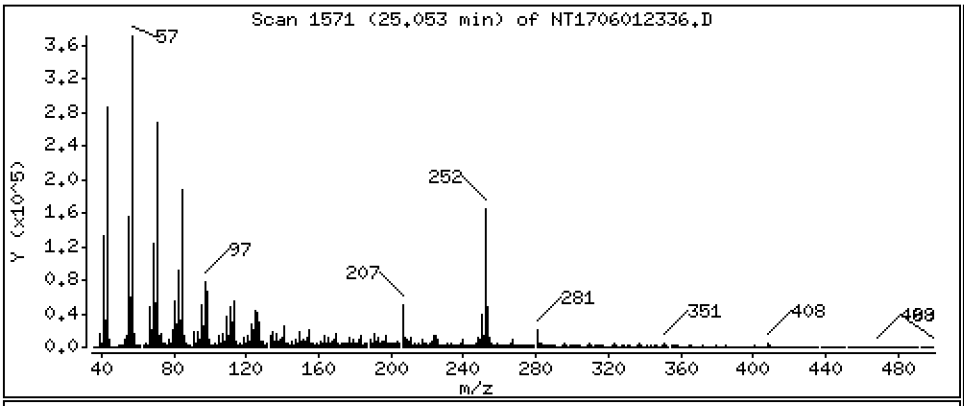
Operator: VTS

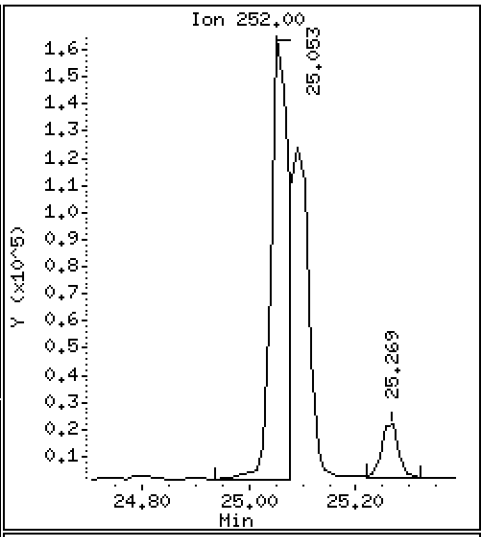
Column phase: ZB-5msi

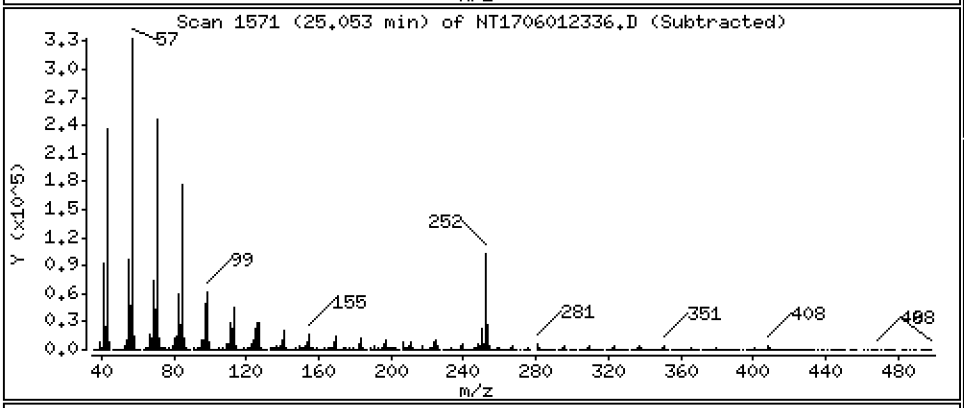
Column diameter: 0.25

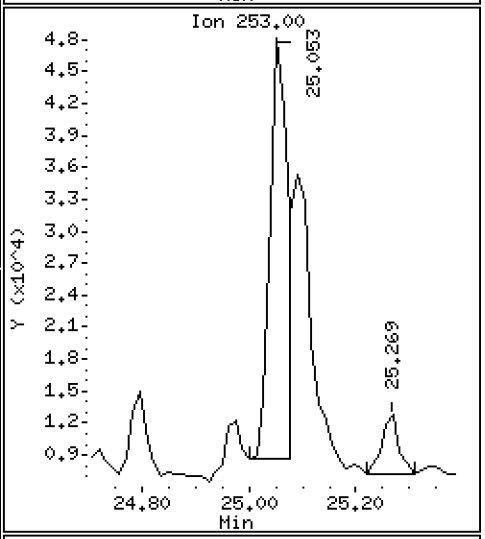
74 Benzo(b)fluoranthene

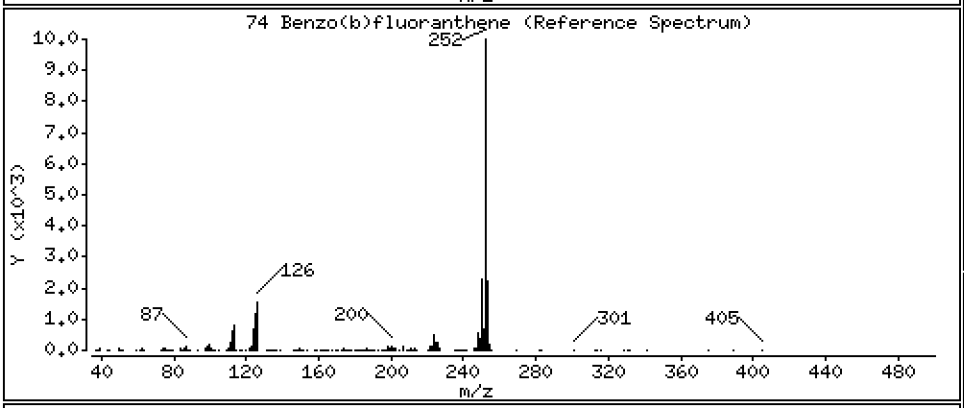
Concentration: 1.863 ug/mL

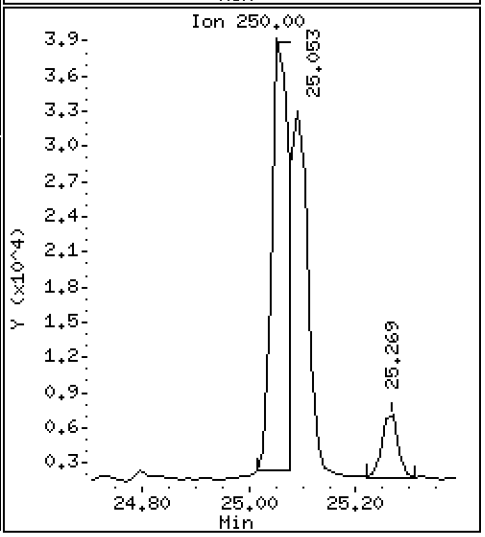


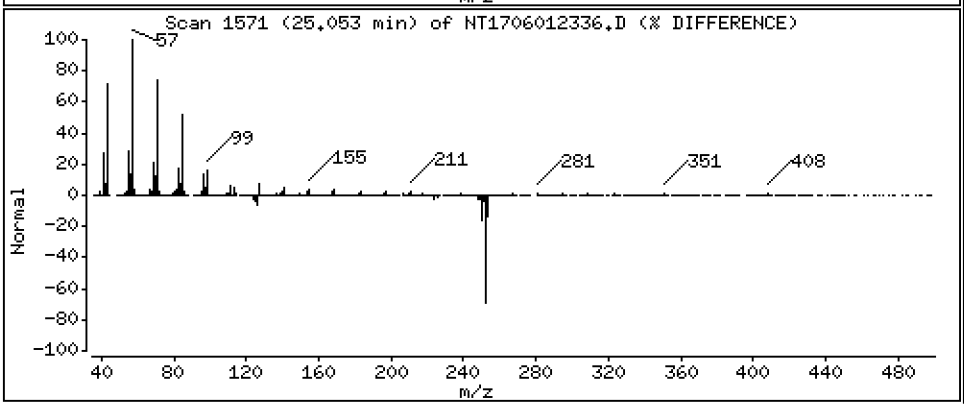












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

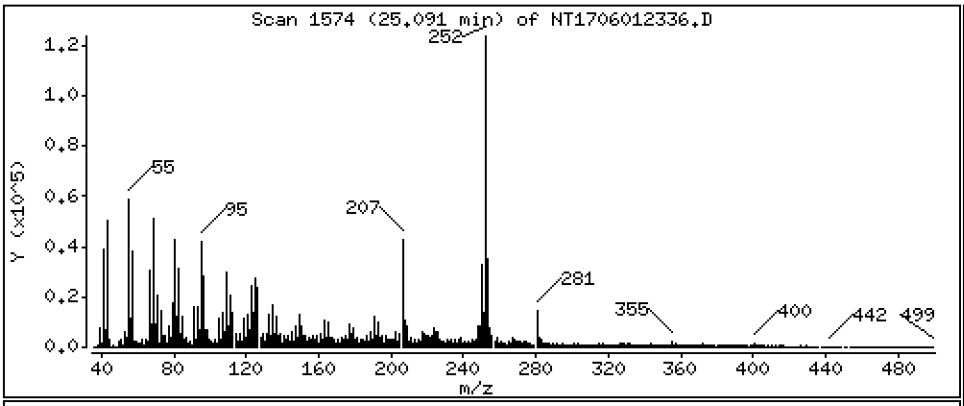
Operator: VTS

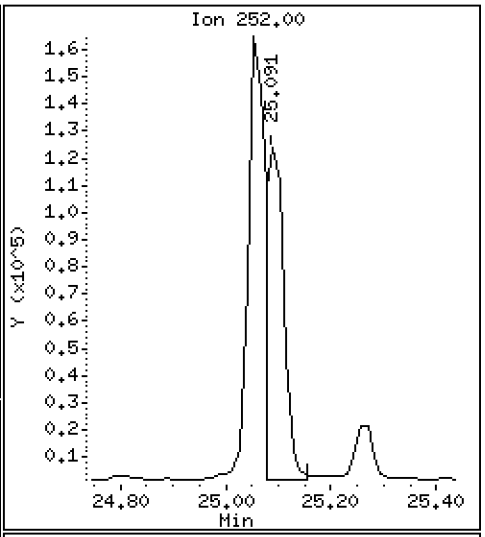
Column phase: ZB-5msi

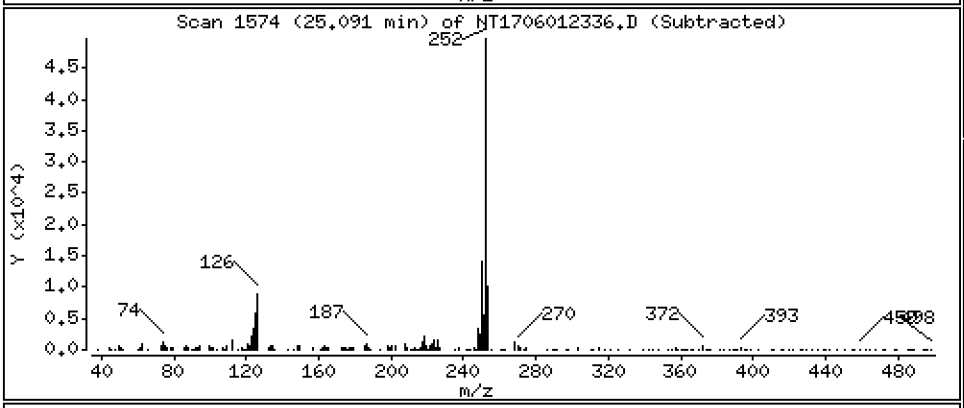
Column diameter: 0.25

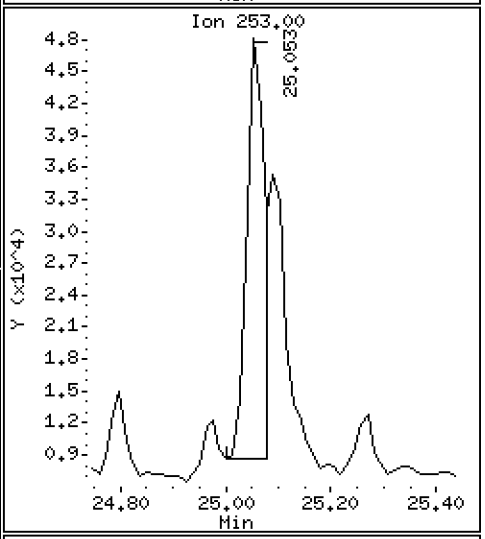
75 Benzo(k)fluoranthene

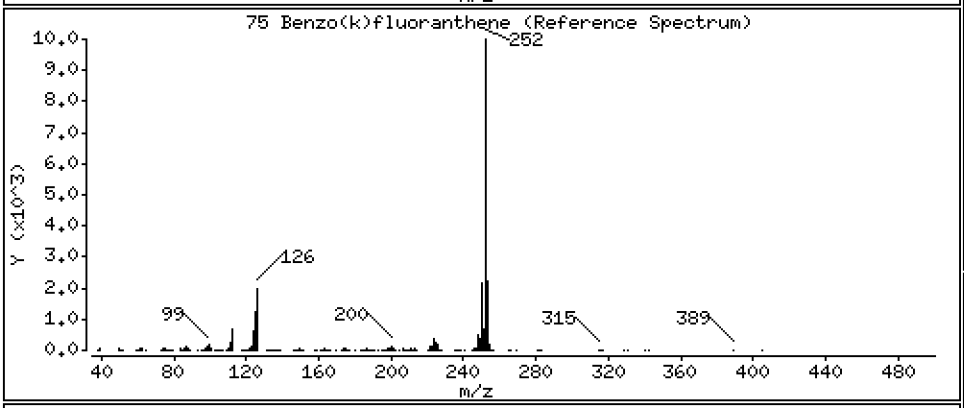
Concentration: 1.557 ug/mL

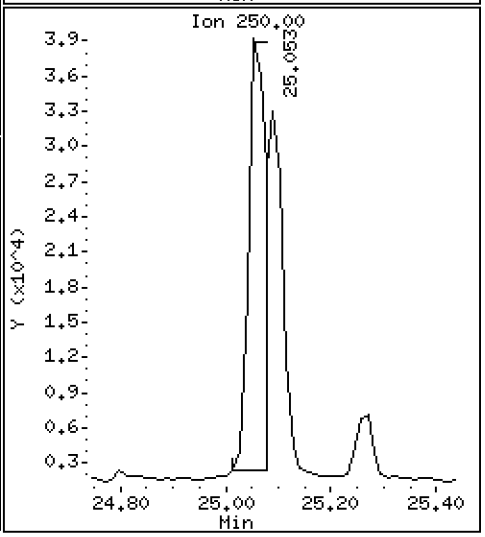


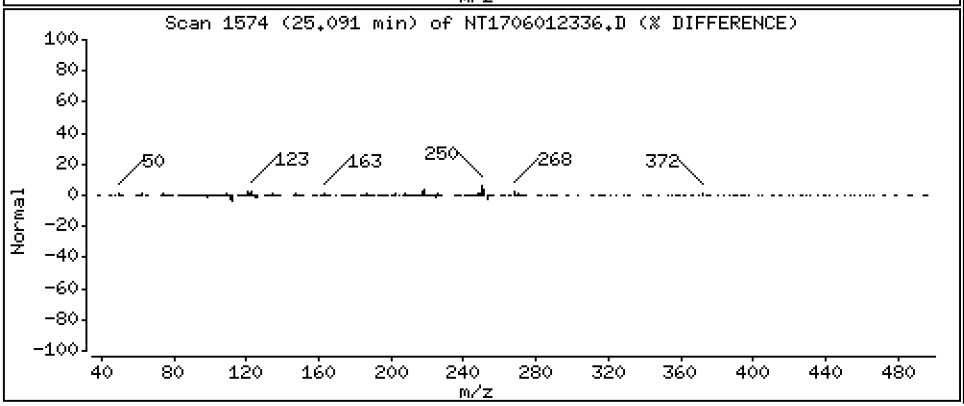












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

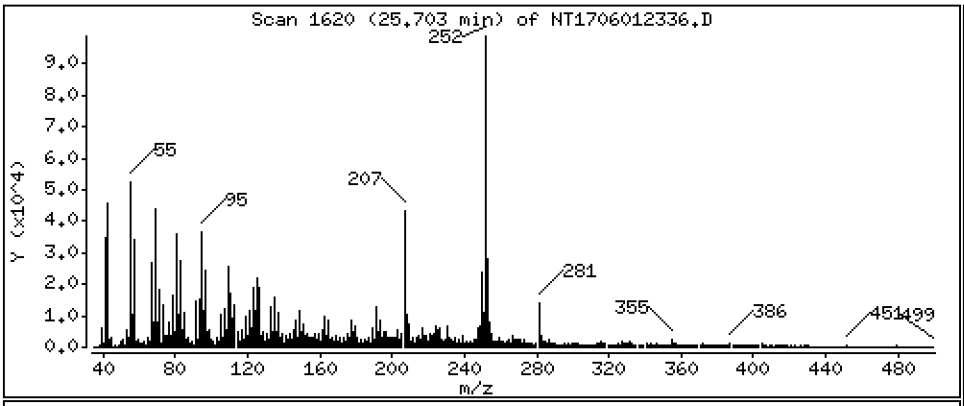
Operator: VTS

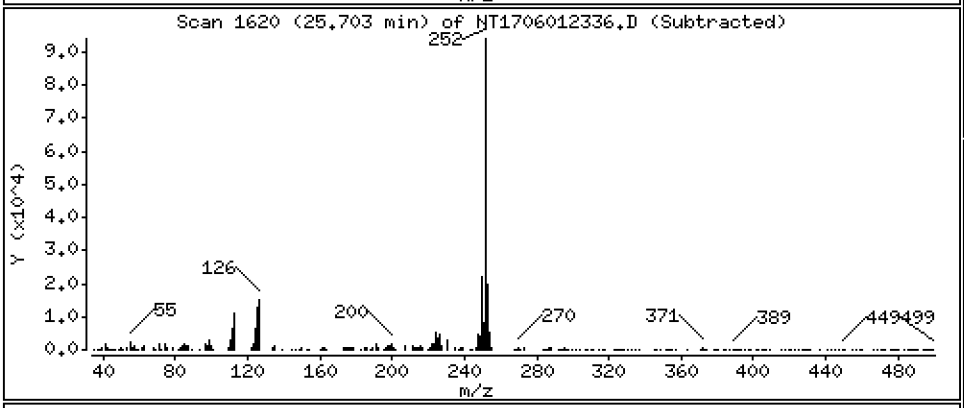
Column phase: ZB-5msi

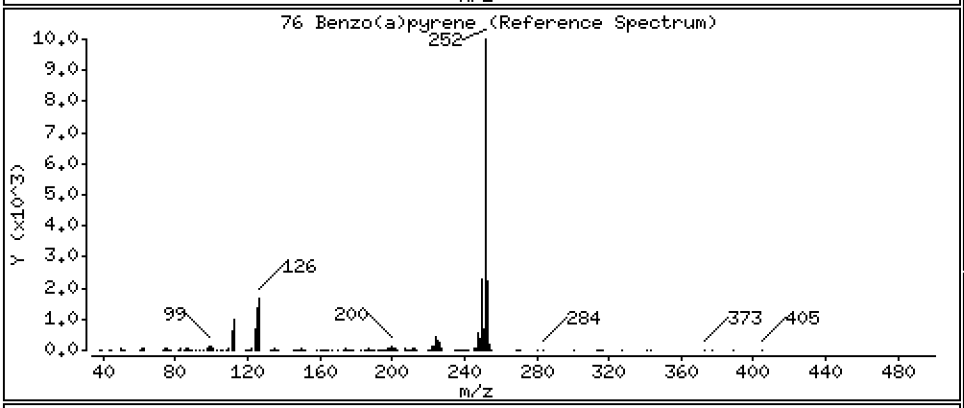
Column diameter: 0.25

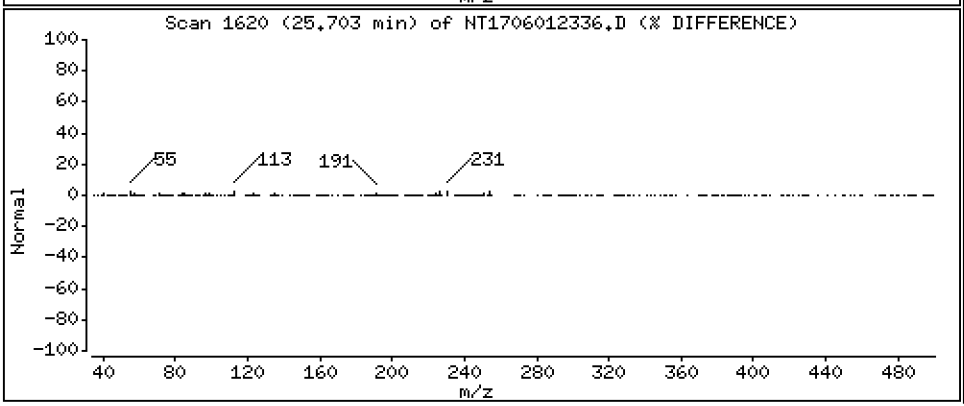
76 Benzo(a)pyrene

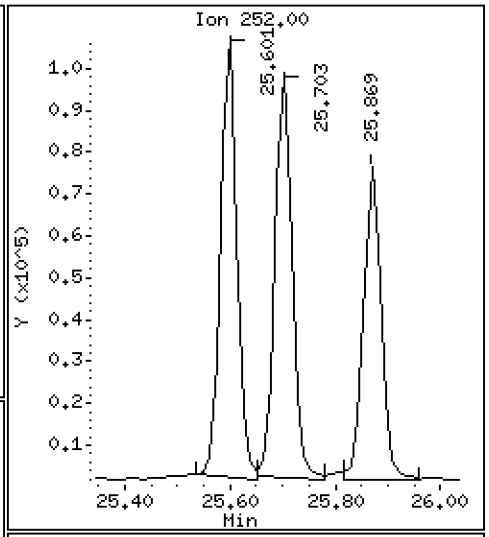
Concentration: 1.352 ug/mL

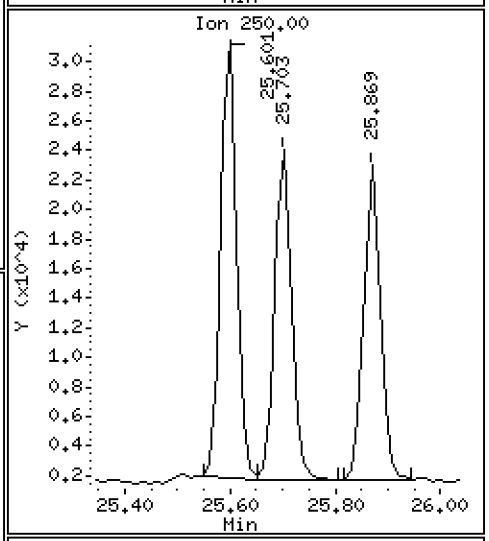


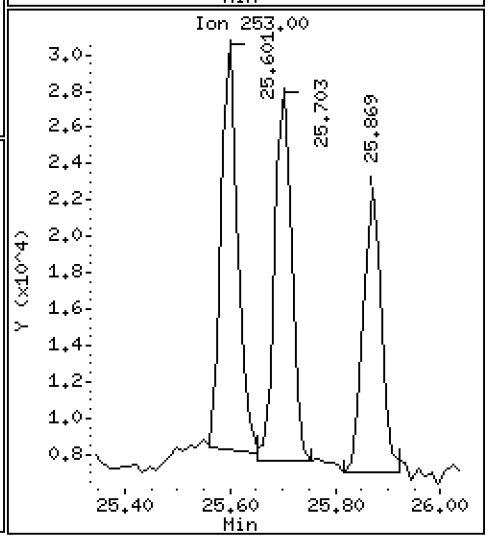












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

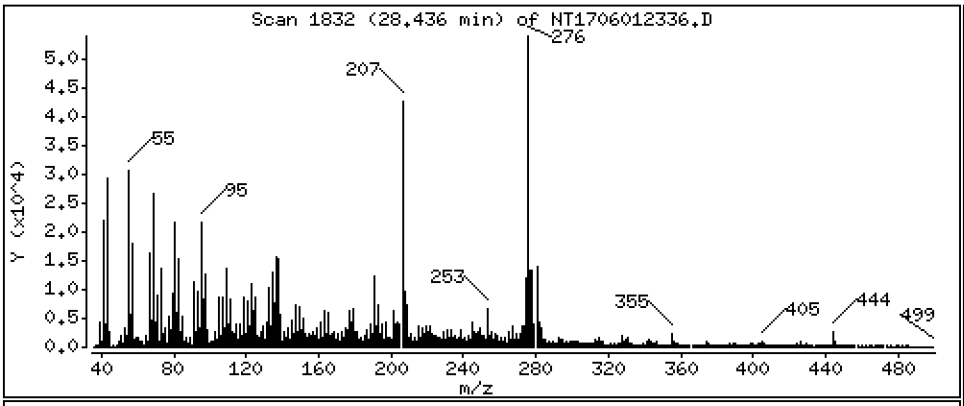
Operator: VTS

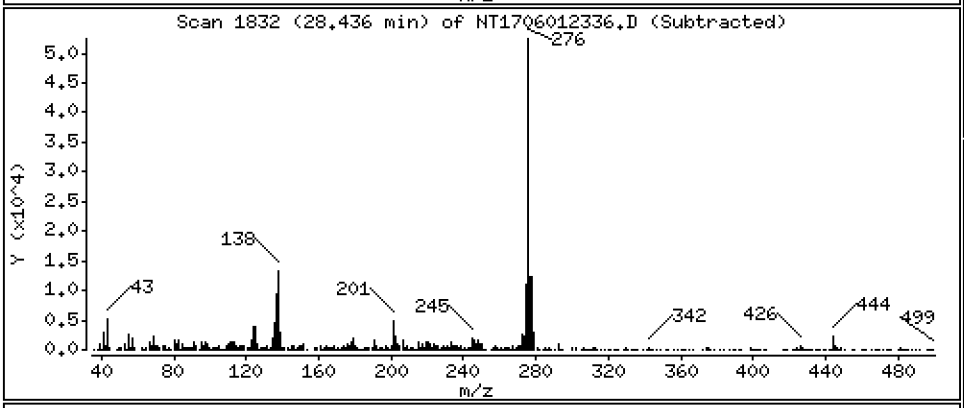
Column phase: ZB-5msi

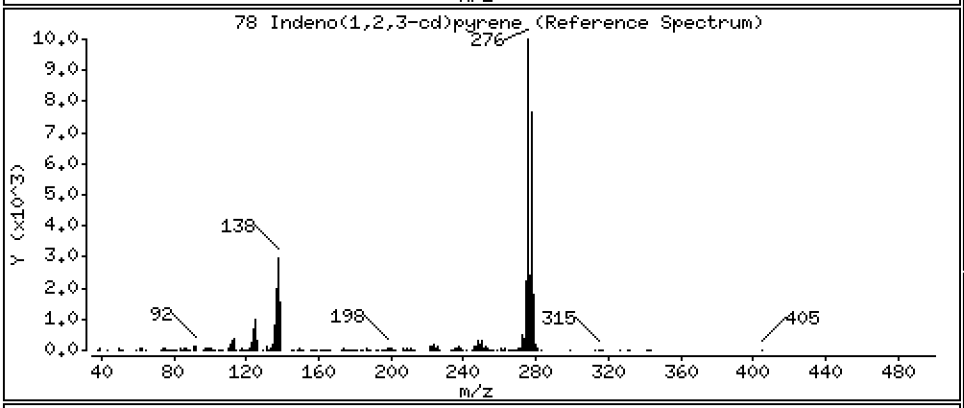
Column diameter: 0.25

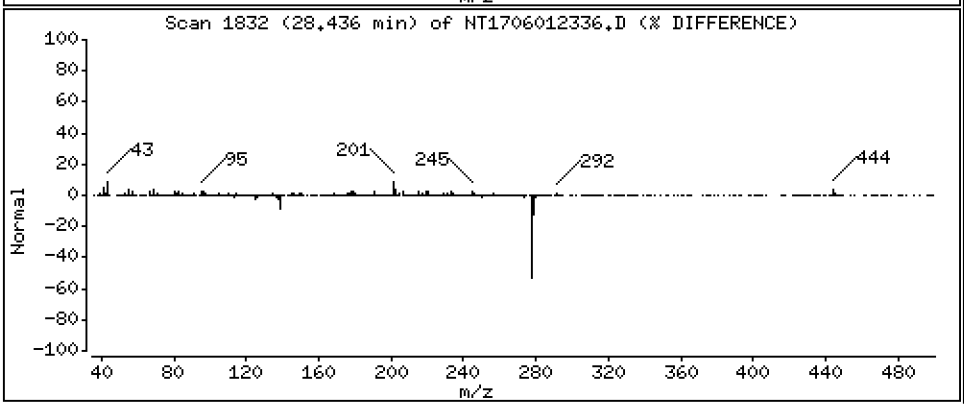
78 Indeno(1,2,3-cd)pyrene

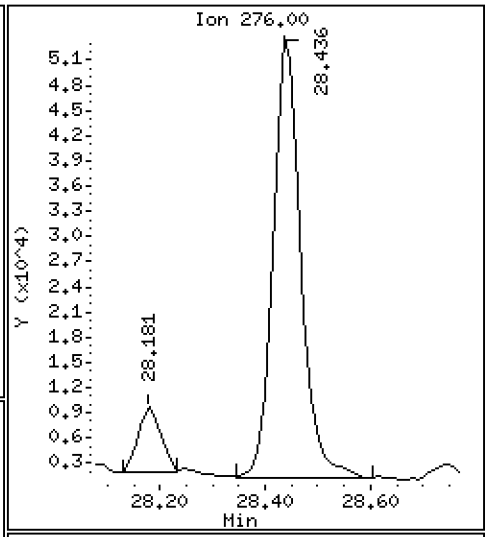
Concentration: 1.041 ug/mL

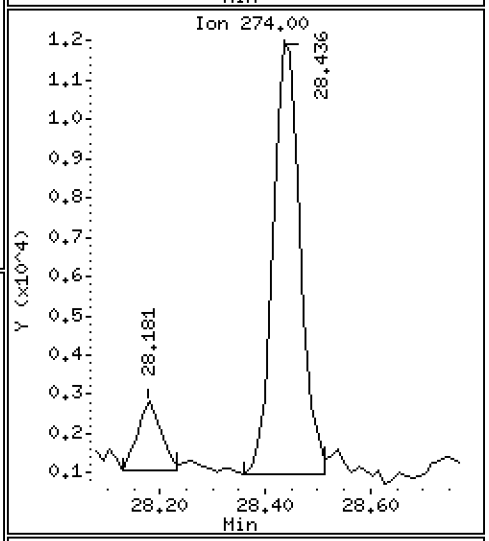


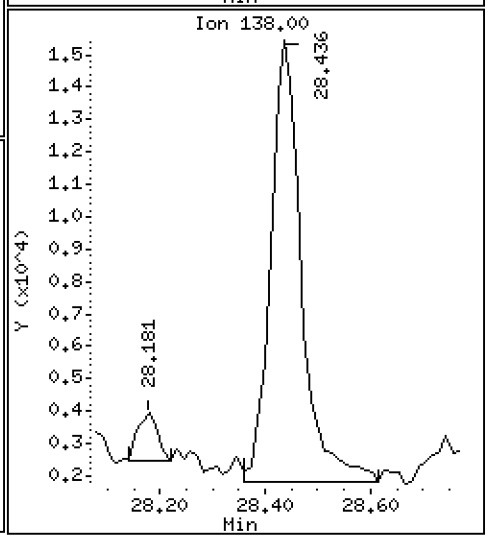












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

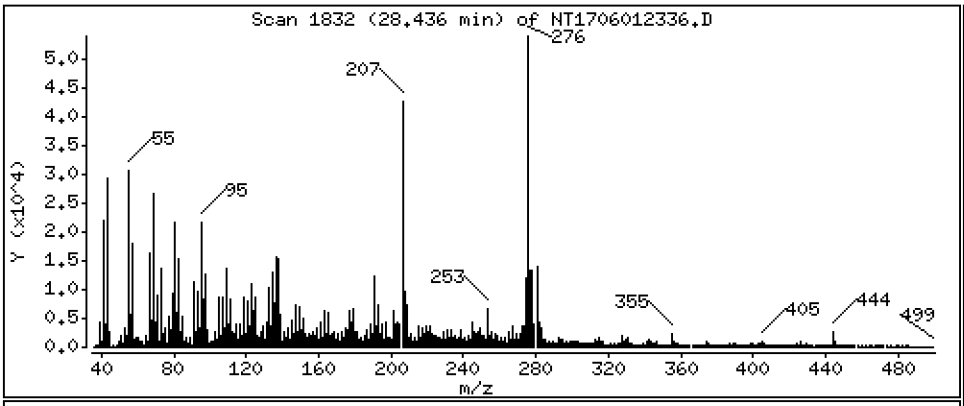
Operator: VTS

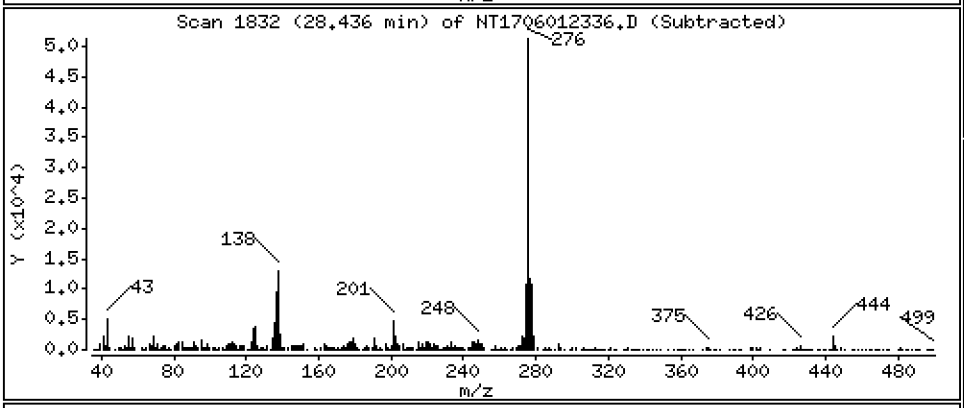
Column phase: ZB-5msi

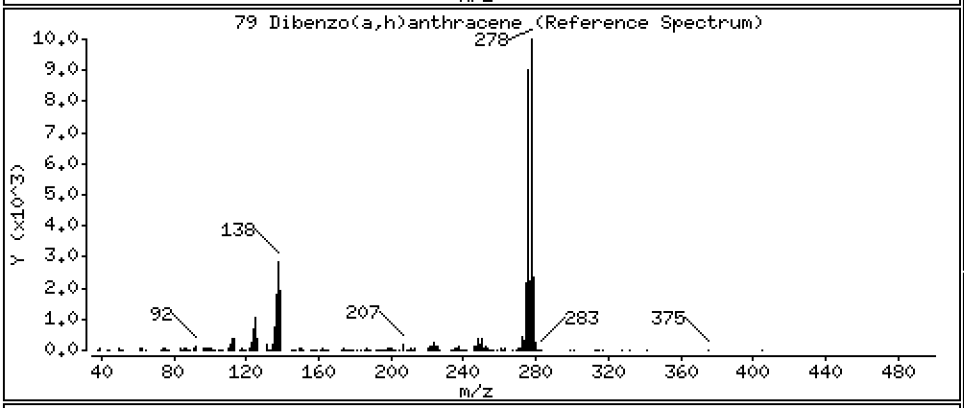
Column diameter: 0.25

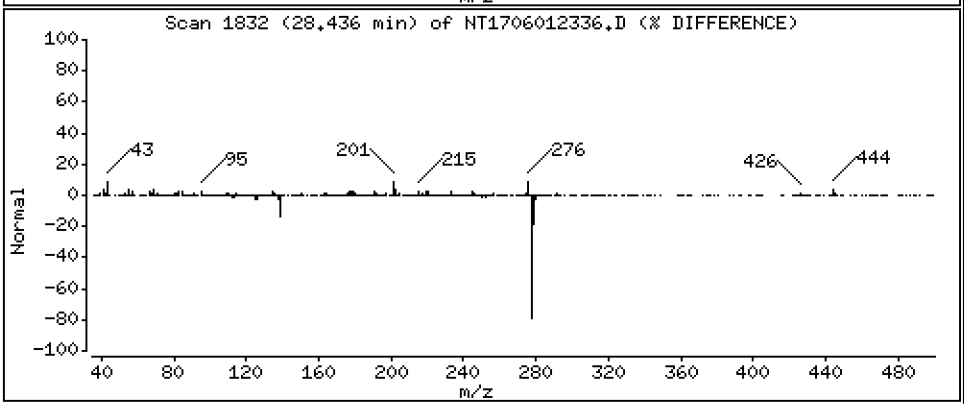
79 Dibenzo(a,h)anthracene

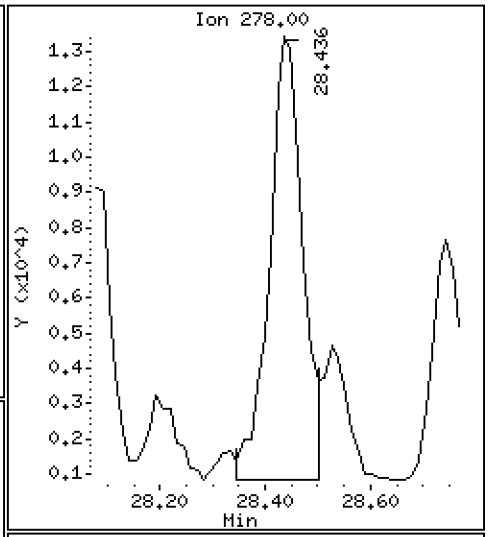
Concentration: 0.3544 ug/mL

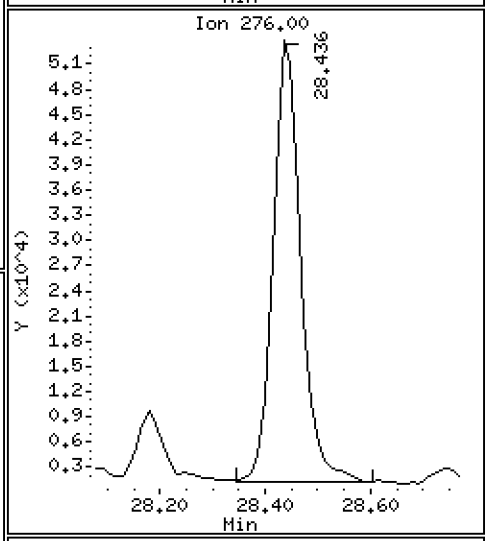


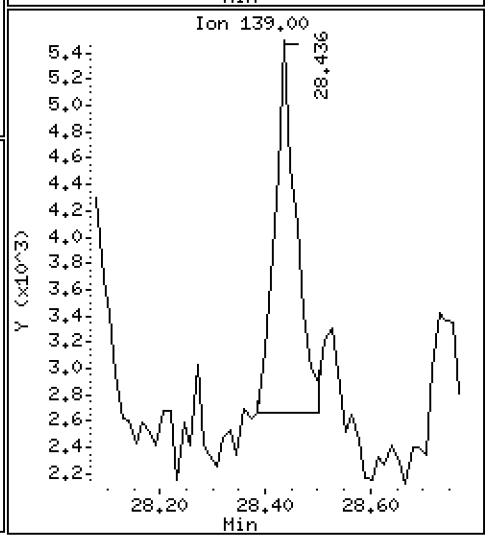












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

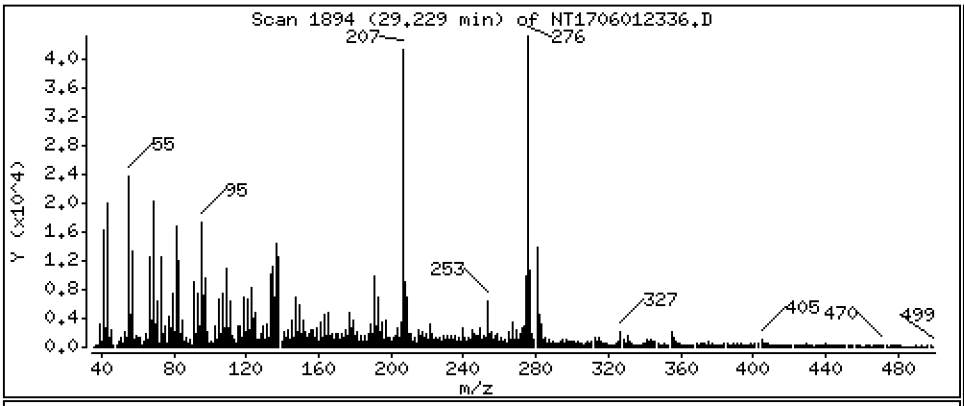
Operator: VTS

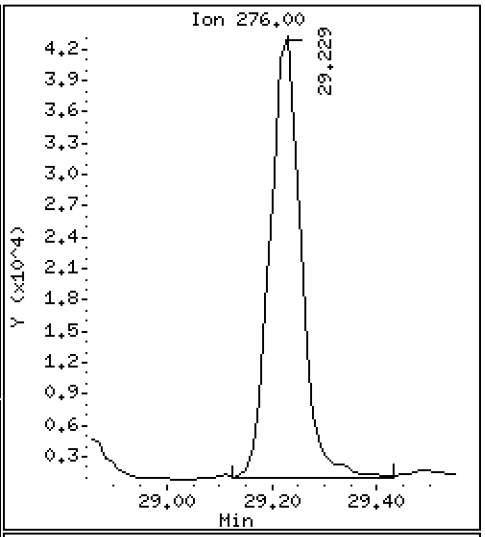
Column phase: ZB-5msi

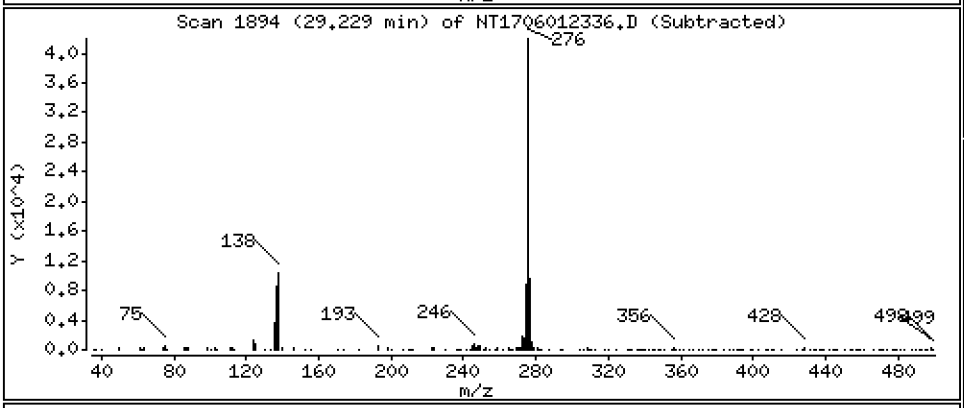
Column diameter: 0.25

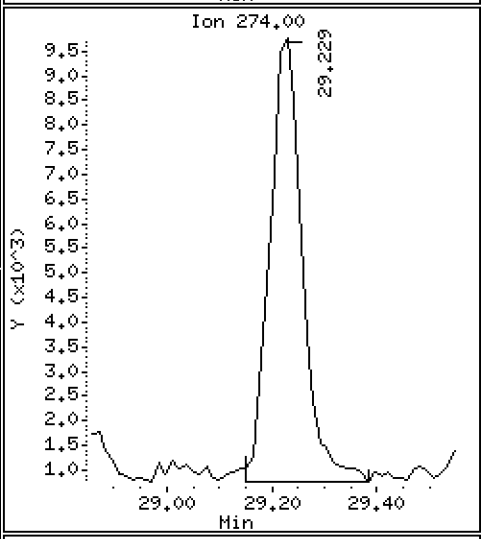
80 Benzo(g,h,i)perylene

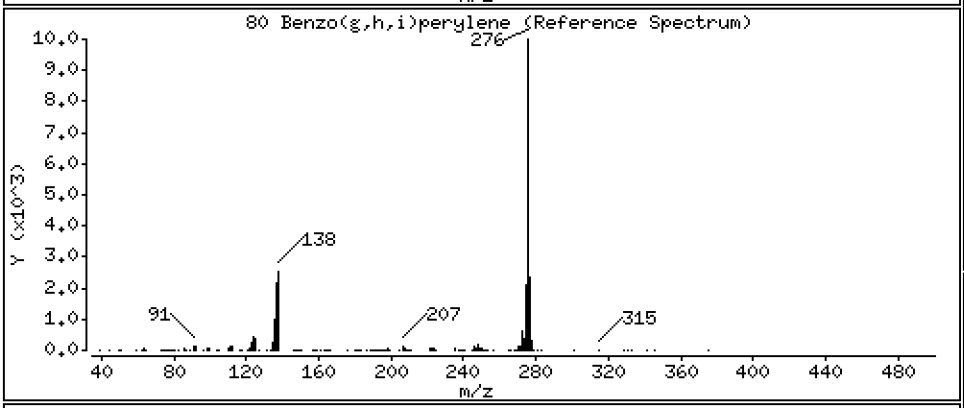
Concentration: 1.107 ug/mL

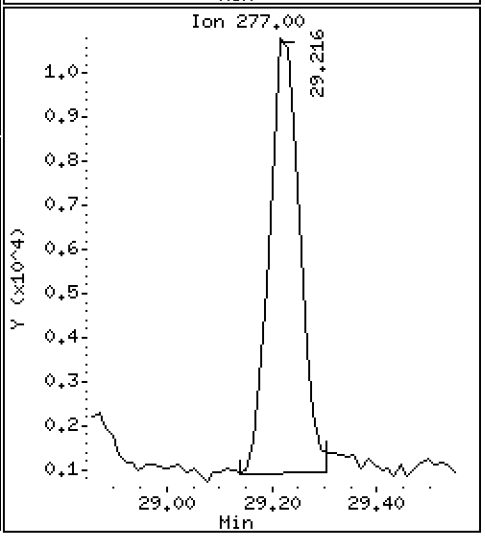


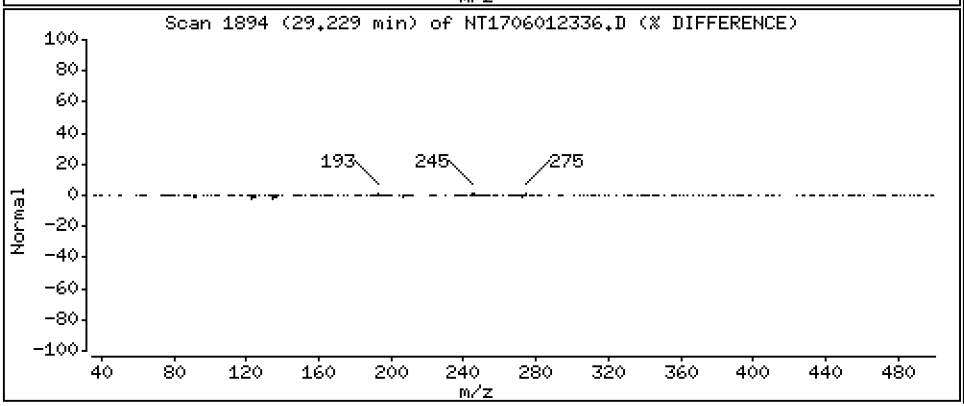












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

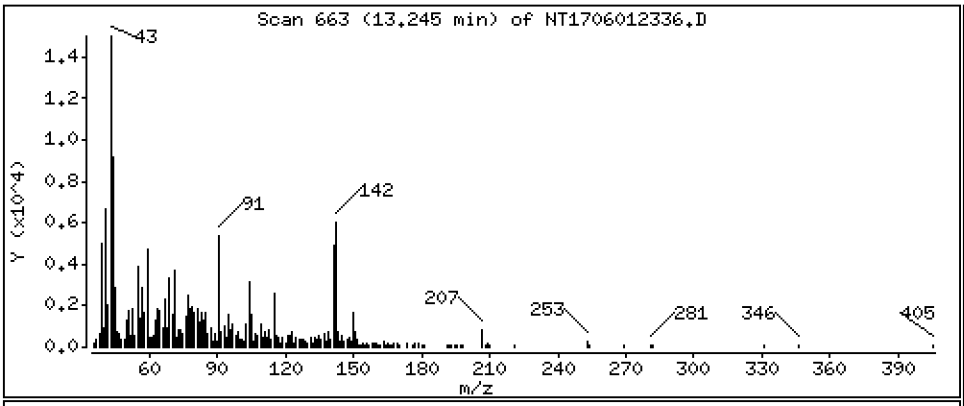
Operator: VTS

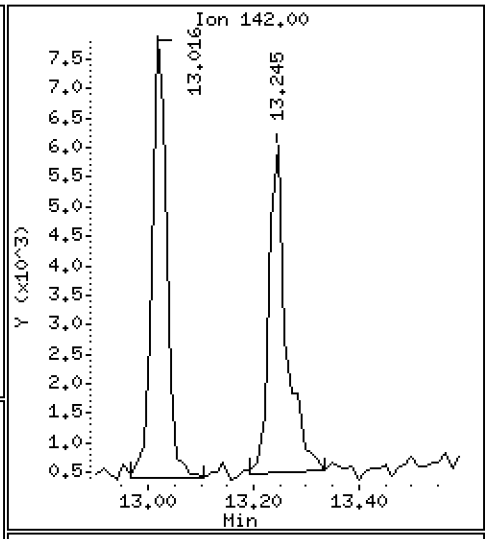
Column phase: ZB-5msi

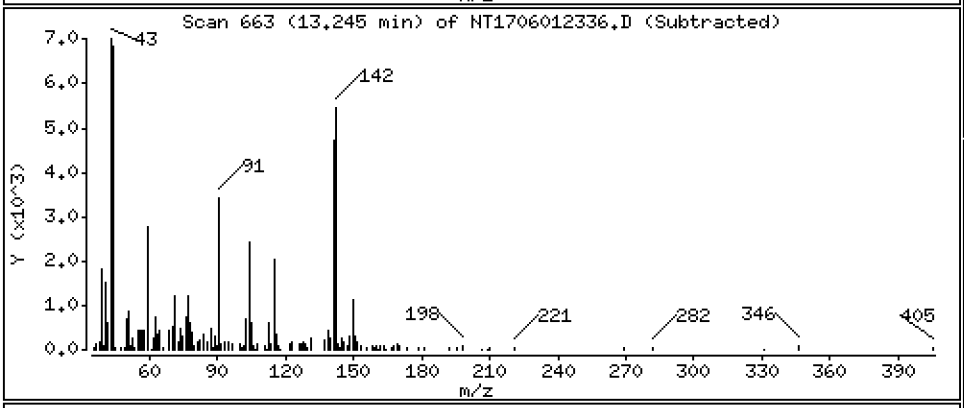
Column diameter: 0.25

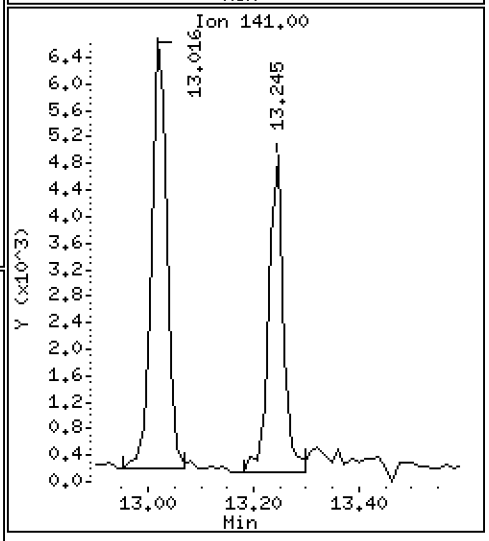
105 1-methylnaphthalene

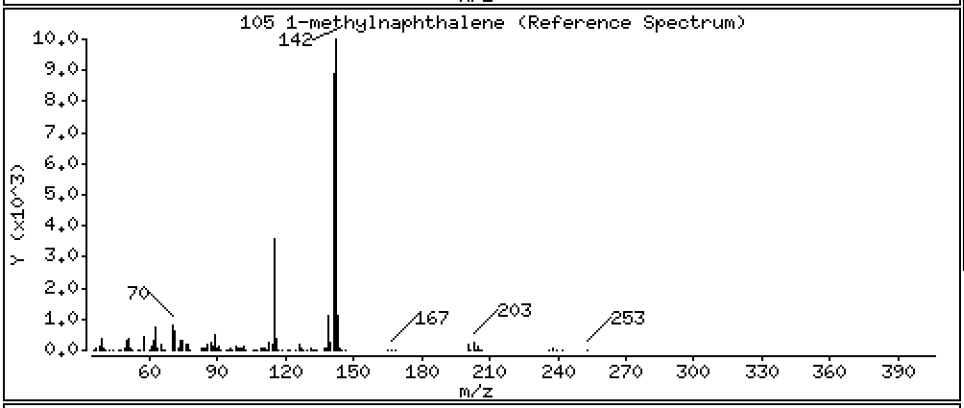
Concentration: 0.08052 ug/mL

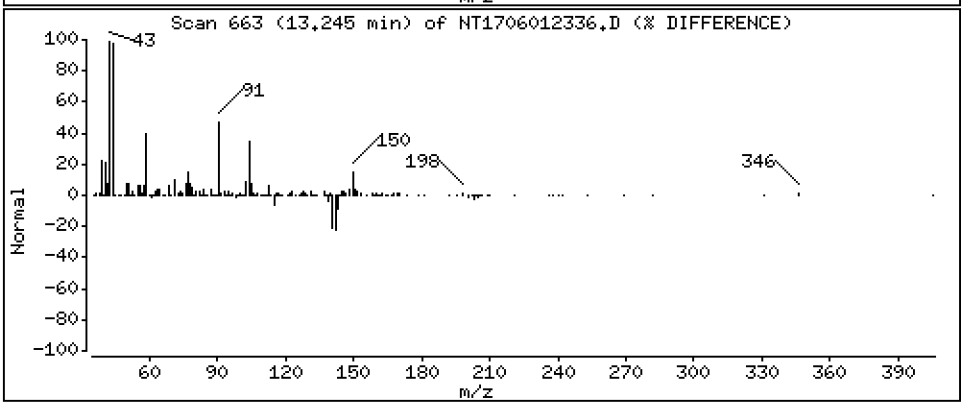












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

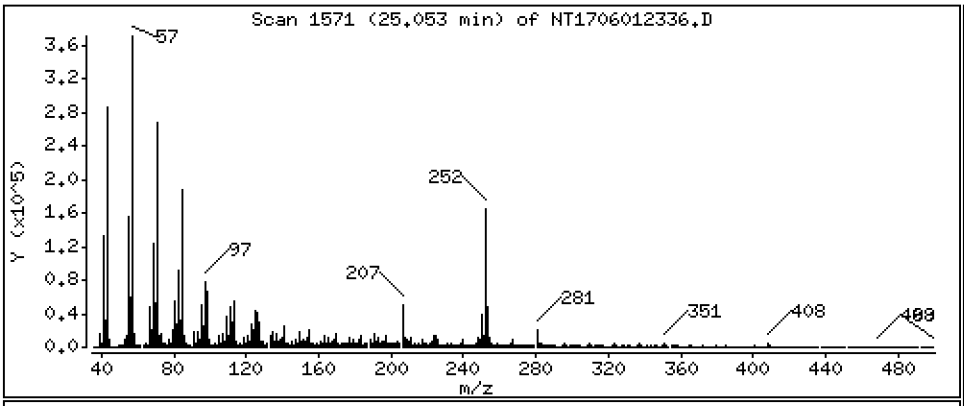
Operator: VTS

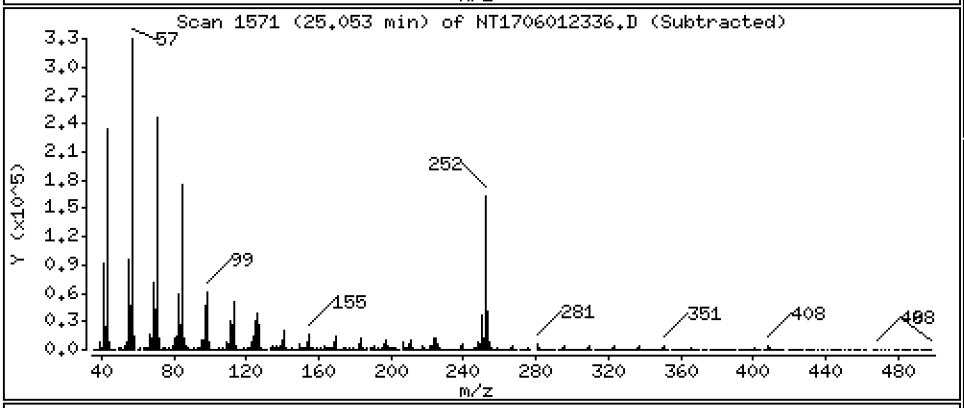
Column phase: ZB-5msi

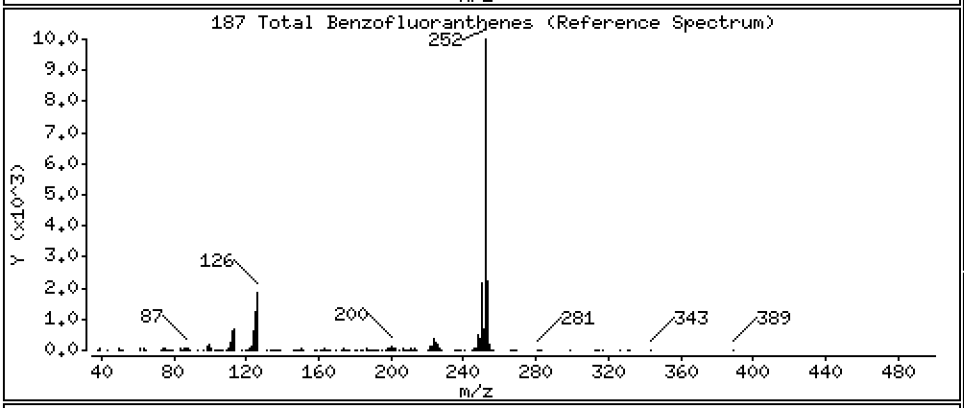
Column diameter: 0.25

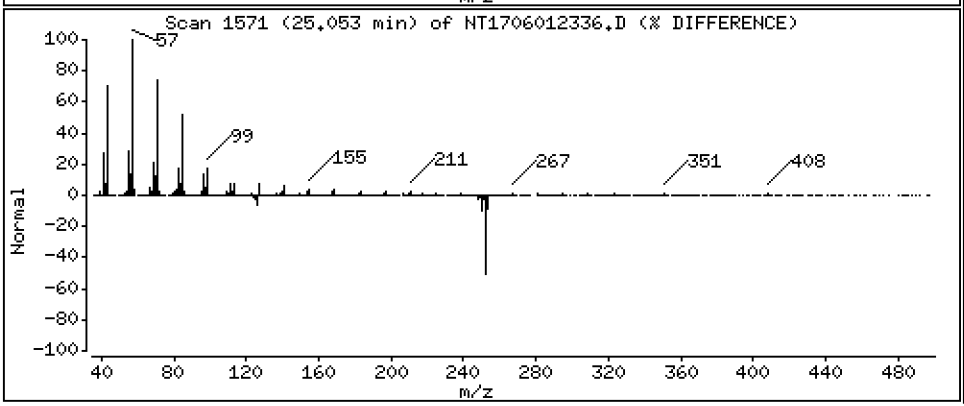
187 Total Benzofluoranthenes

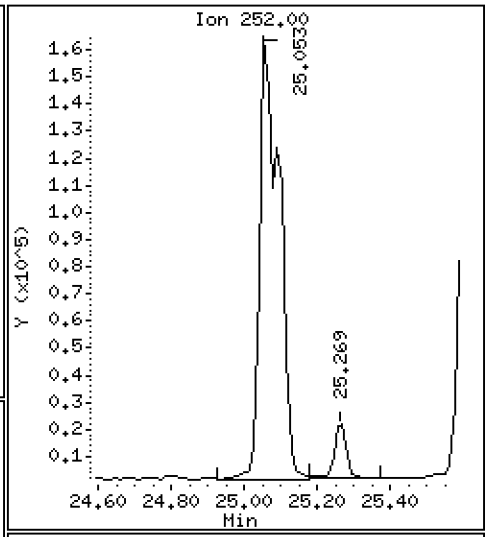
Concentration: 3.282 ug/mL

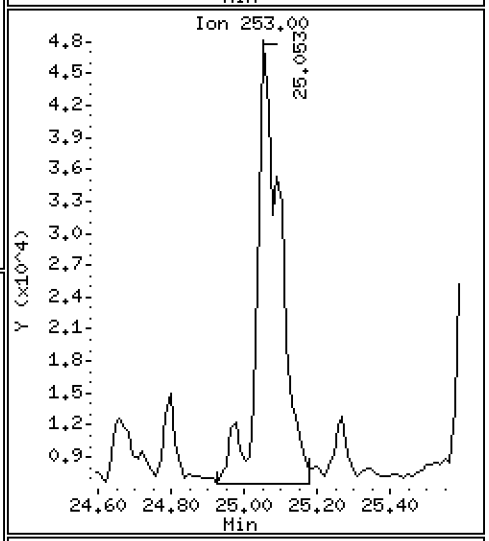


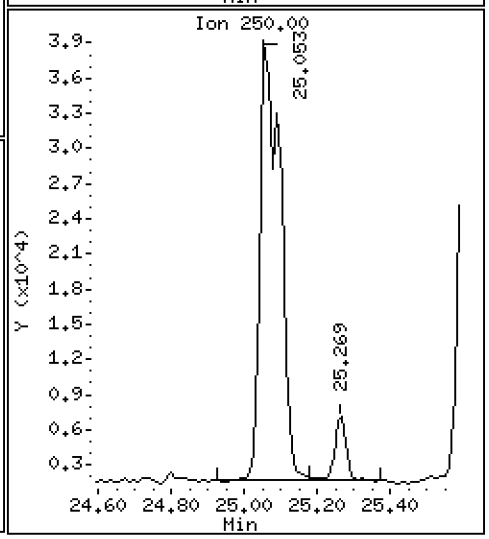












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012336.D
Lab Smp Id: 23E0009-07
Inj Date : 02-JUN-2023 09:47
Operator : VTS Inst ID: nt17.i
Smp Info : 23E0009-07
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 31
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.956	6.944	(0.761)	200128	2.63453	2.635
$	2 Phenol-d5	99	8.524	8.511	(0.933)	351170	3.49326	3.493
	3 Phenol	94	8.549	8.536	(0.936)	140163	1.31635	1.316
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	332660	4.13124	4.131
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	232057	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	155013	2.73886	2.739
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.429	9.417	(1.032)	40791	0.82282	0.8228
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.915	9.902	(1.085)	8508	0.10678	0.1068
$	18 Nitrobenzene-d5	82	10.221	10.222	(0.881)	294611	2.96319	2.963
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.077	11.192	(0.955)	55381	0.92768	0.9277(H)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	873581	4.00000	
	28 Naphthalene	128	11.638	11.639	(1.003)	35349	0.14714	0.1471
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.015	13.016	(1.122)	14831	0.08622	0.08622
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.793	13.793	(0.908)	630625	3.44542	3.445
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.686	14.686	(0.967)	13177	0.08243	0.08243
	40	Acenaphthylene	152	14.877	14.878	(0.980)	40377	0.17123	0.1712
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.183	15.184	(1.000)	464606	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.247	15.247	(1.004)	12898	0.08750	0.08750
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.579	15.579	(1.026)	18503	0.08994	0.08994
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.127	16.140	(1.062)	31712	0.20341	0.2034
	49	Fluorene	166	16.280	16.280	(1.072)	23785	0.12161	0.1216
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	135535	6.68783	6.688
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	17.591	17.578	(0.966)	29024	0.68206	0.6821
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.203	18.203	(1.000)	850863	4.00000	
	60	Phenanthrene	178	18.254	18.241	(1.003)	274735	1.10660	1.107
	61	Anthracene	178	18.343	18.343	(1.008)	61386	0.26336	0.2634
	62	Carbazole	167	18.688	18.688	(1.027)	48341	0.34195	0.3420
	63	Di-n-butylphthalate	149	19.465	19.453	(1.069)	20008	0.07109	0.07109
	64	Fluoranthene	202	20.651	20.613	(0.890)	639706	2.96191	2.962(M)
	65	Pyrene	202	21.059	21.034	(0.907)	583547	2.66530	2.665(M)
$	66	Terphenyl-d14	244	21.327	21.315	(0.919)	602906	3.87367	3.874
	67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	8673	0.08851	0.08851
	68	Benzo(a)anthracene	228	23.190	23.190	(0.999)	233257	1.37196	1.372
*	69	Chrysene-d12	240	23.215	23.215	(1.000)	461716	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.266	23.254	(1.002)	291650	1.82299	1.823
	72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	82061	0.58181	0.5818
*	134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	974858	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.052	25.052	(0.970)	387354	1.86277	1.863
	75	Benzo(k)fluoranthene	252	25.090	25.091	(0.972)	305896	1.55702	1.557(M)
	76	Benzo(a)pyrene	252	25.703	25.690	(0.996)	221516	1.35230	1.352
*	77	Perylene-d12	264	25.818	25.805	(1.000)	524482	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.436	28.423	(1.101)	197715	1.04059	1.041
	79	Dibenzo(a,h)anthracene	278	28.436	28.423	(1.101)	56514	0.35440	0.3544
	80	Benzo(g,h,i)perylene	276	29.228	29.203	(1.132)	173657	1.10732	1.107
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.245	13.245	(1.142)	12849	0.08052	0.08052
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.052	25.091	(0.970)	612642	3.28204	3.282
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012336.D
Lab Smp Id: 23E0009-07
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	232057	-9.71
27 Naphthalene-d8	932905	466453	1865810	873581	-6.36
42 Acenaphthene-d10	509574	254787	1019148	464606	-8.82
59 Phenanthrene-d10	912749	456375	1825498	850863	-6.78
69 Chrysene-d12	578011	289006	1156022	461716	-20.12
134 Di-n-octylphthala	1181490	590745	2362980	974858	-17.49
77 Perylene-d12	513683	256842	1027366	524482	2.10

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	-0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	-0.00
77 Perylene-d12	25.81	25.31	26.31	25.82	0.05

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

REVIEW SUMMARY FOR FILE - NT1706012336.D

Lab ID: 23E0009-07
nt17.i, ABN.m, 02-JUN-2023 09:47

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.955	0.965	-0.0099	Benzoic acid

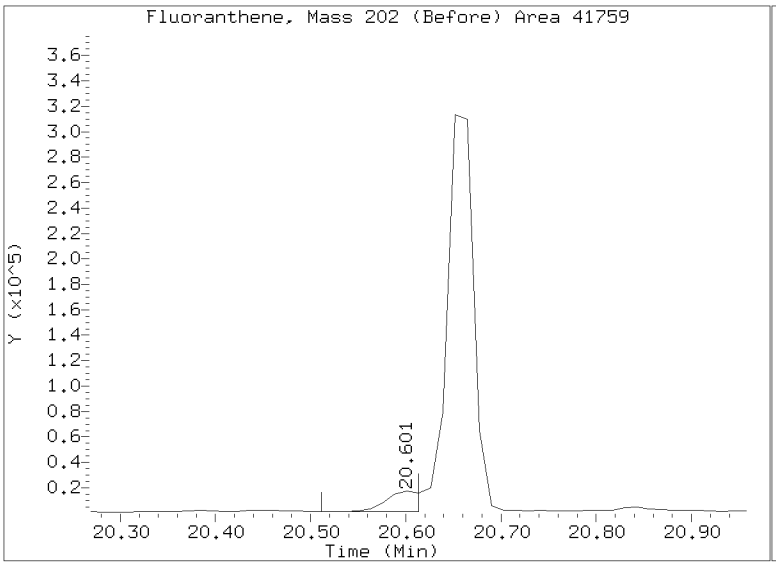
RRT check based on Ccal File: NT1706012320.D

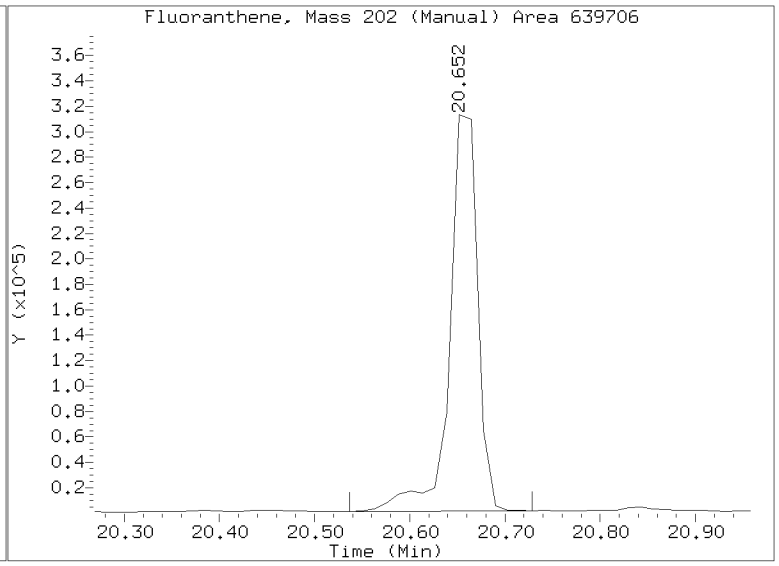
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

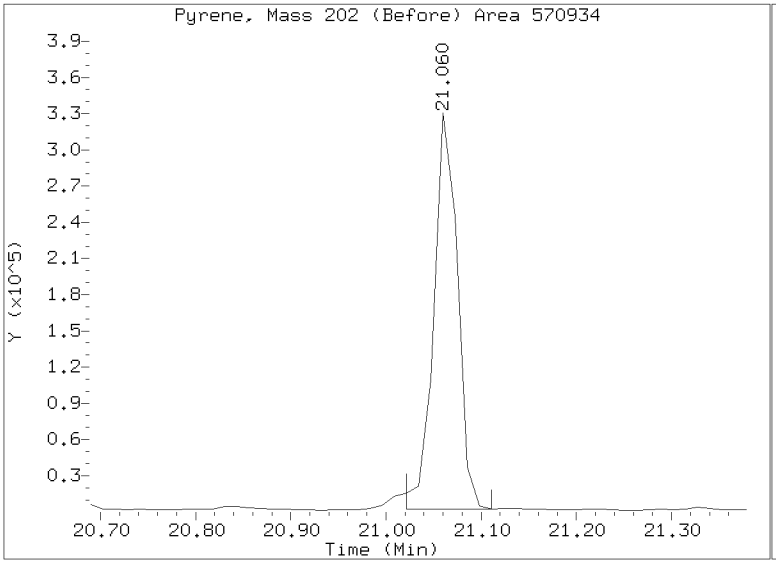
* Only compounds listed in the work order have been verified by the analyst *

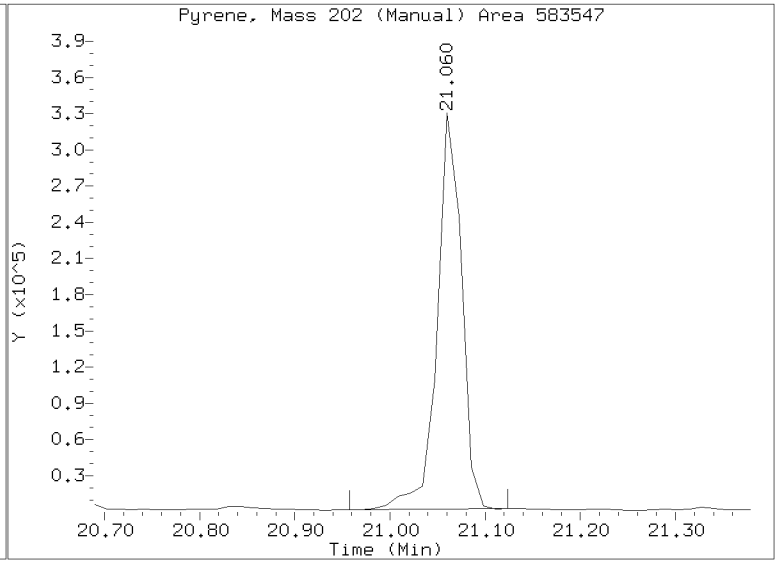
Quant Ion Manual Peak Adjustment Report

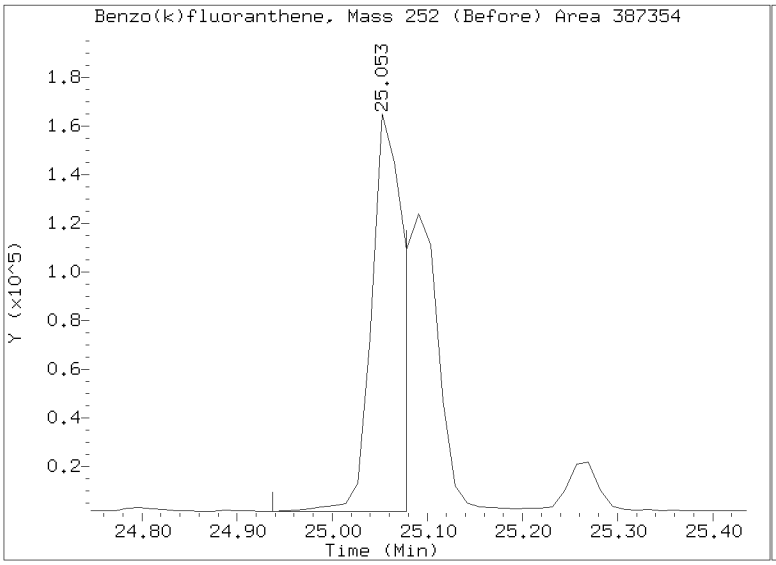
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012336.D
Injection Date: 02-JUN-2023 09:47
Lab ID:23E0009-07 Client ID:
Report Date: 06/03/2023 10:35

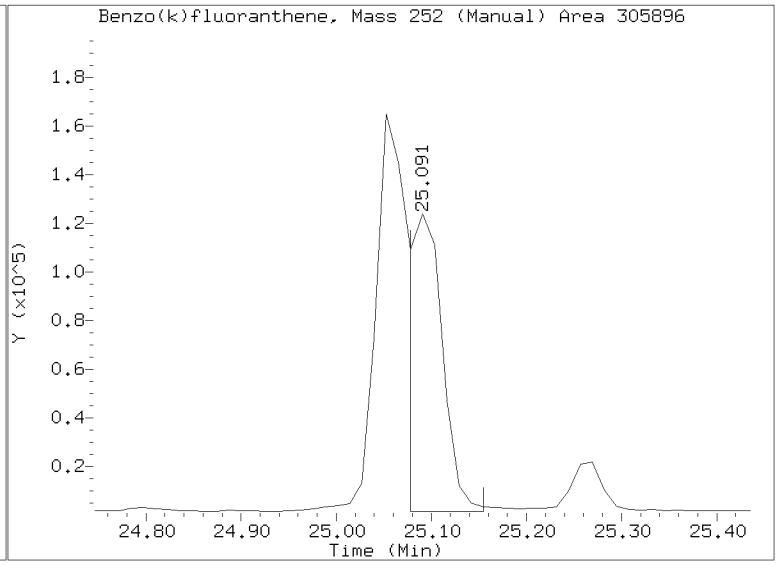












PREPARATION BATCH SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Batch: BLE0148 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01	NT1706012333.D	05/05/23 11:23	
LDW23-SS1805	23E0009-03	NT1706012334.D	05/05/23 11:23	
LDW23-SS1800	23E0009-05	NT1706012335.D	05/05/23 11:23	
LDW23-SS1820	23E0009-07	NT1706012336.D	05/05/23 11:23	
Blank	BLE0148-BLK1	NT1706012325.D	05/05/23 11:23	
LCS	BLE0148-BS1	NT1706012326.D	05/05/23 11:23	
LCS Dup	BLE0148-BSD1	NT1706012327.D	05/05/23 11:23	
LDW23-SS1805	BLE0148-MS1	NT1706012328.D	05/05/23 11:23	
LDW23-SS1805	BLE0148-MSD1	NT1706012329.D	05/05/23 11:23	
Reference	BLE0148-SRM1	NT1706012330.D	05/05/23 11:23	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0148

Prepared using: EPA 3546 (Microwave)

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

Matrix: Solid **Date Prepared:** 05/12/23 **Balance ID:** B146462614 **Set Up By:** GD 5/11/23

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)
23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

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

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

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23D0394-07 A	87.2	(11.47) 11.48	(1:1)	1mL	1 ____	0.5 ____	
23D0394-13 A	76.5	(13.08) 13.08	(1:1)	1mL	1 ____	0.5 ____	
23E0009-01 A	69.3	(14.43) 14.44	(1:1)	1mL	1 ____	0.5 ____	
23E0009-03 A	50.8	(19.69) 19.69	(1:1)	1mL	1 ____	0.5 ____	
23E0009-05 A	47.5	(21.08) 21.12	(1:1)	1mL	1 ____	0.5 ____	
23E0009-07 A	53.2	(18.80) 18.85	(1:1)	1mL	1 ____	0.5 ____	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLE0148-BLK1	100.0	(10.00) 10.00	(1:1)	1mL	1 ____	0.5 ____	Use 5g Neutral Sodium Sulfate for Blanks
BLE0148-BS1	100.0	(10.00) 10.00	(1:1)	1mL	1 ____	0.5 ____	Use 5g Neutral Sodium Sulfate for Blanks
BLE0148-BSD1	100.0	(10.00) 10.00	(1:1)	1mL	1 ____	0.5 ____	Use 5g Neutral Sodium Sulfate for Blanks
BLE0148-MS1	50.8	()(19.69) 19.69	(1:1)	1mL	1 ____	0.5 ____	Use 23E0009-03
BLE0148-MSD1	50.8	()(19.69) 19.69	(1:1)	1mL	1 ____	0.5 ____	Use 23E0009-03
BLE0148-SRM1	100.0	~~(10.00)~~(1.00) 1.00	(1:1)	1mL	1 ____	0.5 ____	Use K003477

+1g DI WATER

05/12/23 — Client ID verified By — Date

MKS 5/31/23 — Preparation Reviewed By — Date

05/12/23 11:23 — Extraction Date and Time

Printed: 5/4/2023 2:02:16PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0148

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
0 (1) 2 3
CG 5/12/23
Analyst/Date

Pre-GPC KD
100°C
Exchange to Hexane
(add 10 mL to KD)
(0) 2 4 (5) 6
RT 5/25
Analyst/Date

TurboVap
Pre GPC
1 2 3 (4) 5
TWC 5/27/23
Analyst/Date

Post GPC KD
80-85°C
0 (2) 4 5 (6)
RT 5/30/23
Analyst/Date

TurboVap
1 2 3 (4) 5
MKS 5/31/23
Analyst/Date

Water Wash
MKS 5/31/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CG Date: 5/12/23	
Anhydrous Sodium Sulfate	L005016
1:1 Methylene Chloride/Acetone	L004178
Methylene Chloride	K005441
Pre-Deactivated Glass Wool	L004626
Pre GPC KD Analyst: RT Date: 5/25/23	
Pre-Deactivated Glass Wool	L004626
Anhydrous Sodium Sulfate	L005016
Methylene Chloride	K005441
Hexane	L003500
GPC Filter Prep Analyst: TWC Date: 5/27/23	
Methylene Chloride	K005441
GPC Filter	L001799
GPC Analyst: TWC Date: 5/27/23	
Methylene Chloride	K005441
GPC Calibration File	CL0059-GPC2
Post GPC KD Analyst: RT Date: 5/30/23	
Methylene Chloride	K005441
Vialing Analyst: MKS Date: 5/30/23	
Methylene Chloride	K005441

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 100/150µg/mL	A L001153 Exp L005075 Date: 5/8/2024	50µL	CG	
Full List Spike (Freezer) 100µg/mL	7 L001812 (V) Exp L001731 Date: 3/4/2023	50µL	CG	
Base Spike 200µg/mL	56 L001812 (V) Exp L001778 Date: 3/24/2023	50µL	CG	
Acid Spike 100/200µg/mL	38 L001812 (V) Exp L001799 Date: 3/24/2023	50µL	CG	

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0148

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SVOA Extraction Batch BLE0148

Total Solids Batch: BLE0018 Work Order(s): 23E0009

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= φ1, φ3 – φ8.	φ5/φ2/23
☒ Standing Water Decanted (Not shared)= φ1, φ2 – φ8.	φ5/φ2/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 1 in 5% = φ2.	φ5/φ2/23
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y (N)	φ5/φ2/23
☒ Multiple Jars Y / (N)	φ5/φ2/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLF0085	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Matrix Spike	BLE0148-MS1	NT1706012328.D	05/31/2023	
Blank	BLE0148-BLK1	NT1706012325.D	05/31/2023	
LCS Dup	BLE0148-BSD1	NT1706012327.D	05/31/2023	
LDW23-SS1820	23E0009-07	NT1706012336.D	05/31/2023	
LDW23-SS1811	23E0009-01	NT1706012333.D	05/31/2023	
LDW23-SS1805	23E0009-03	NT1706012334.D	05/31/2023	
LDW23-SS1800	23E0009-05	NT1706012335.D	05/31/2023	
LCS	BLE0148-BS1	NT1706012326.D	05/31/2023	
Matrix Spike Dup	BLE0148-MSD1	NT1706012329.D	05/31/2023	
Reference	BLE0148-SRM1	NT1706012330.D	05/31/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLF0085

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLC0092-GPC2** **Printed: 6/9/2023 10:12:27AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0394-07	A	LDW23-IT1087	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23D0394-07	A	LDW23-IT1087	A 02	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23D0394-13	A	LDW23-IT1806	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23D0394-13	A	LDW23-IT1806	A 02	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23E0009-01	A	LDW23-SS1811	A 01	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23E0009-01	A	LDW23-SS1811	A 01	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23E0009-03	A	LDW23-SS1805	A 01	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23E0009-03	A	LDW23-SS1805	A 01	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23E0009-05	A	LDW23-SS1800	A 01	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23E0009-05	A	LDW23-SS1800	A 01	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23E0009-07	A	LDW23-SS1820	A 01	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23E0009-07	A	LDW23-SS1820	A 01	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
BLE0148-BLK1	-	Blank	-	1	1	-	5/31/2023	NRB	
BLE0148-BLK2	-	Blank	-	1	1	-	5/31/2023	NRB	
BLE0148-BS1	-	LCS	-	1	1	-	5/31/2023	NRB	
BLE0148-BS2	-	LCS	-	1	1	-	5/31/2023	NRB	
BLE0148-BSD1	-	LCS Dup	-	1	1	-	5/31/2023	NRB	
BLE0148-BSD2	-	LCS Dup	-	1	1	-	5/31/2023	NRB	
BLE0148-MS1	-	Matrix Spike	-	1	1	-	5/31/2023	NRB	
BLE0148-MS2	-	Matrix Spike	-	1	1	-	5/31/2023	NRB	
BLE0148-MSD1	-	Matrix Spike Dup	-	1	1	-	5/31/2023	NRB	
BLE0148-MSD2	-	Matrix Spike Dup	-	1	1	-	5/31/2023	NRB	

CLEANUP BENCH SHEET

CLF0085

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLC0092-GPC2** **Printed: 6/9/2023 10:12:27AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLE0148-SRM1	-	Reference	-	1	1	-	5/31/2023	NRB	
BLE0148-SRM2	-	Reference	-	1	1	-	5/31/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLE0148-BLK1	File ID:	NT1706012325.D
Sampled:	N/A	Prepared:	05/05/23 11:23	Analyzed:	06/02/23 02:57
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLE0148	Sequence:	SLF0008	Calibration:	GE00065
Instrument:	NT17	Column:	ZB-5MS	Cleanups:	GPC

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

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	427	56.9	27 - 120	
Phenol-d5	750.00	425	56.7	29 - 120	
2-Chlorophenol-d4	750.00	503	67.0	31 - 120	
1,2-Dichlorobenzene-d4	500.00	353	70.5	32 - 120	
Nitrobenzene-d5	500.00	364	72.9	30 - 120	
2-Fluorobiphenyl	500.00	355	71.0	35 - 120	
2,4,6-Tribromophenol	750.00	447	59.7	24 - 134	
p-Terphenyl-d14	500.00	420	83.9	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012325.D

Date : 02-JUN-2023 02:57

Client ID:

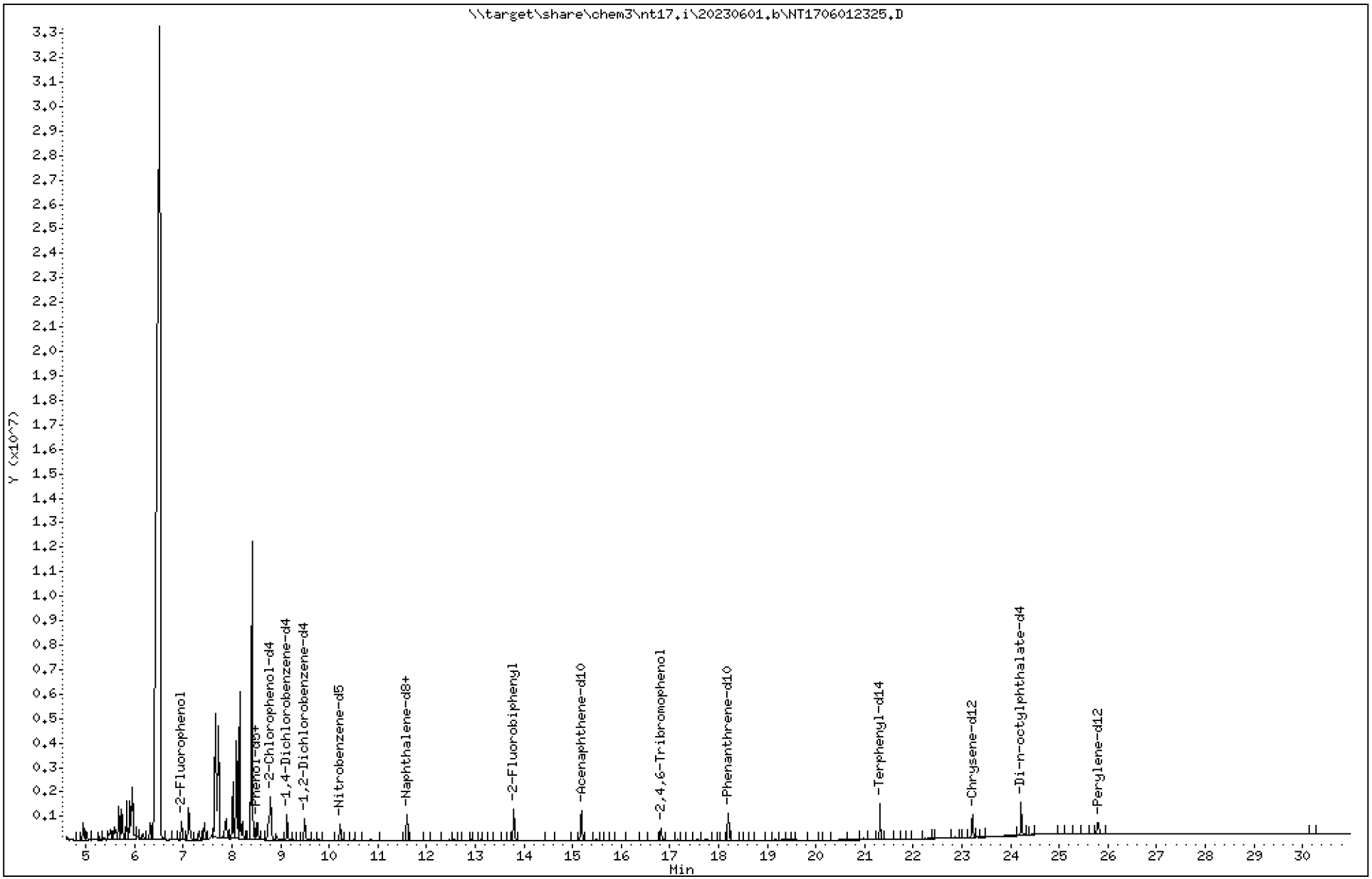
Instrument: nt17.i

Sample Info: BLE0148-BLK1

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012325.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK1

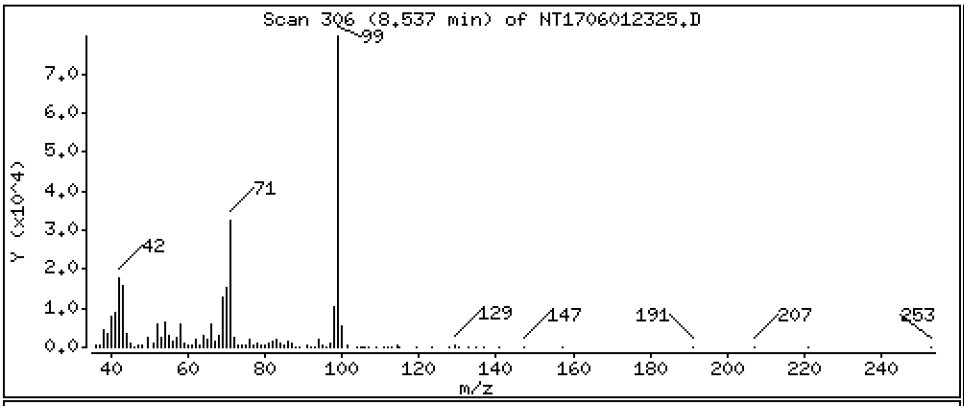
Operator: VTS

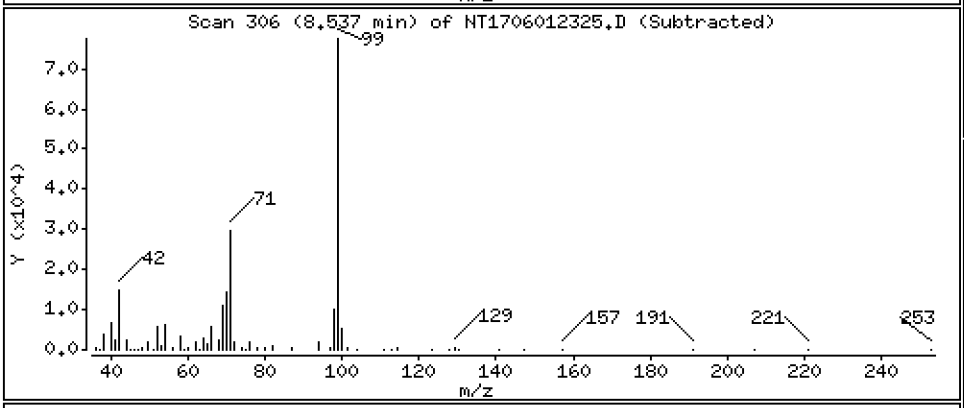
Column phase: ZB-5msi

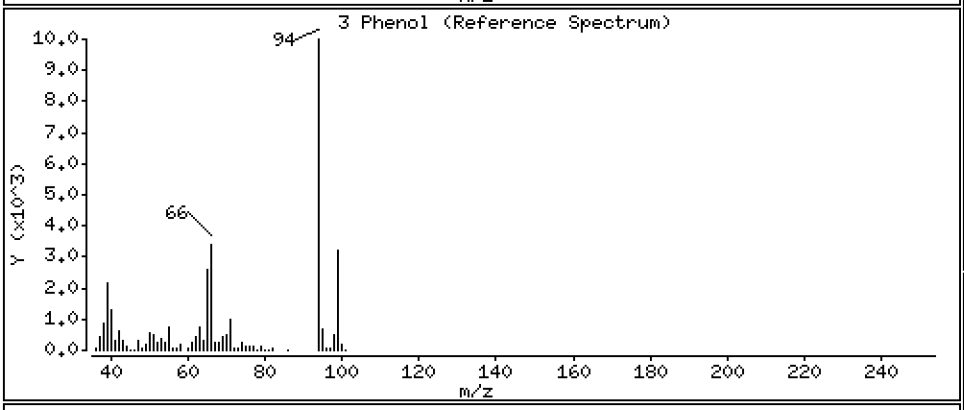
Column diameter: 0.25

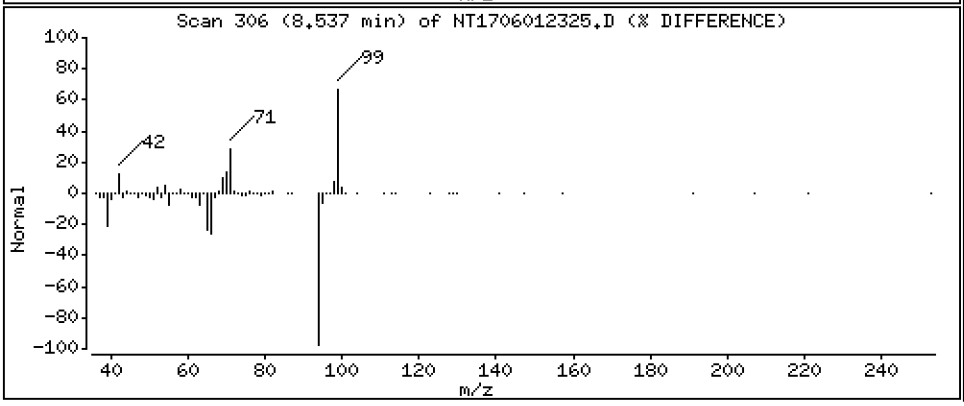
3 Phenol

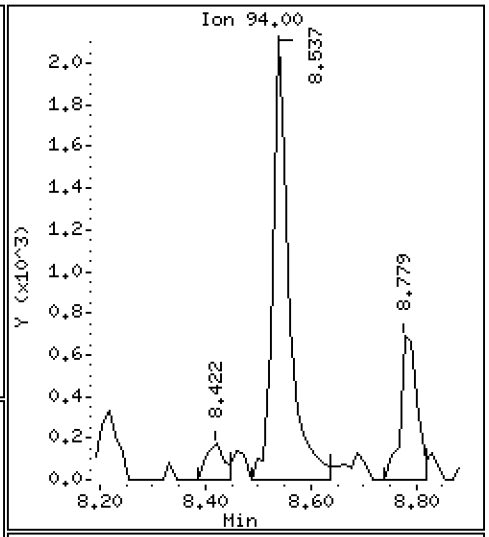
Concentration: 0.03965 ug/mL

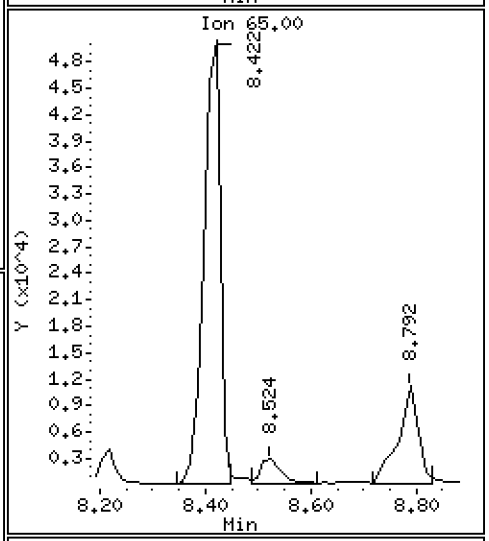


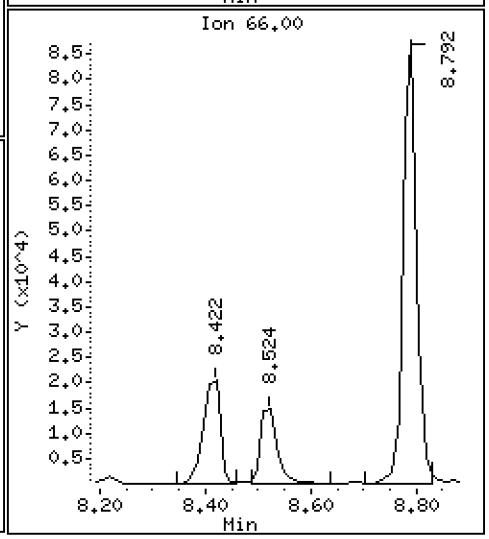












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012325.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK1

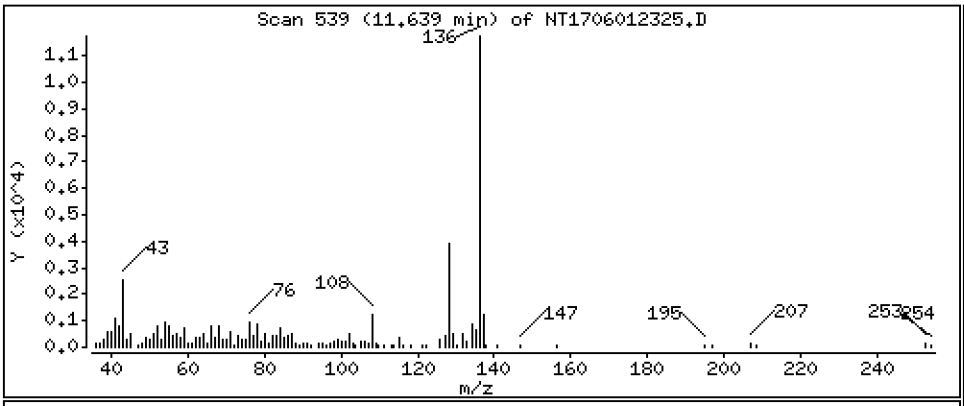
Operator: VTS

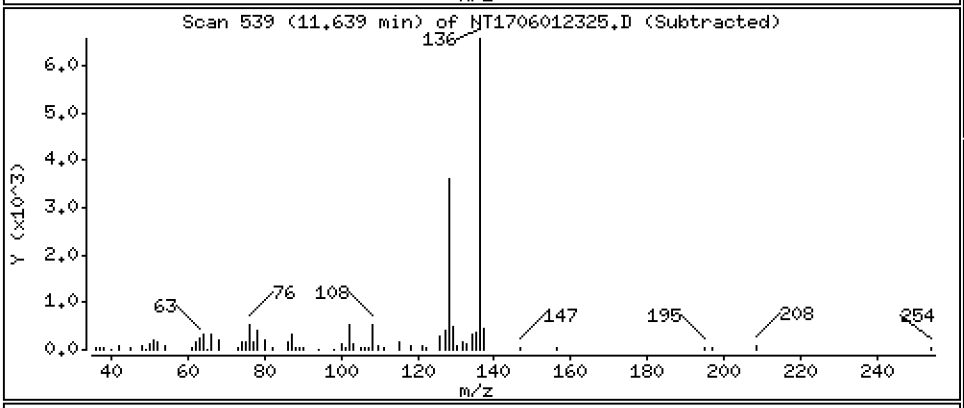
Column phase: ZB-5msi

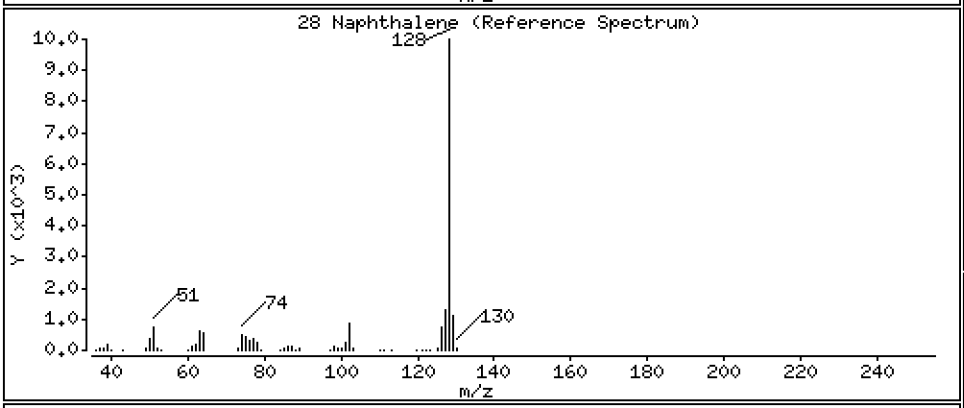
Column diameter: 0.25

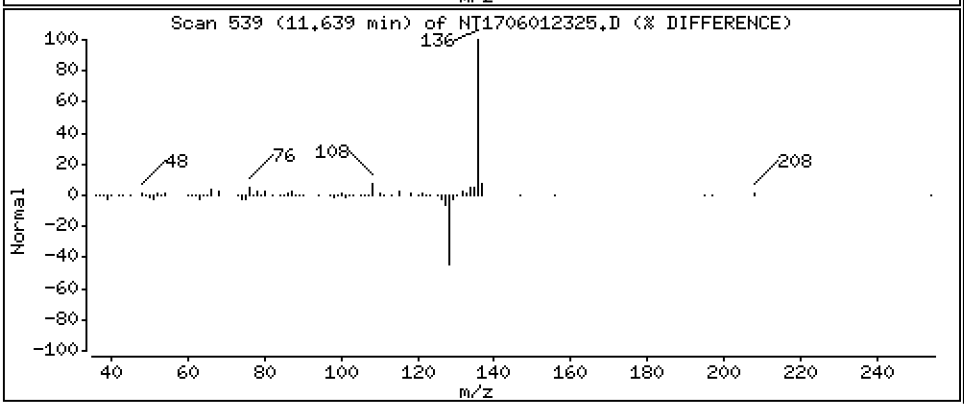
28 Naphthalene

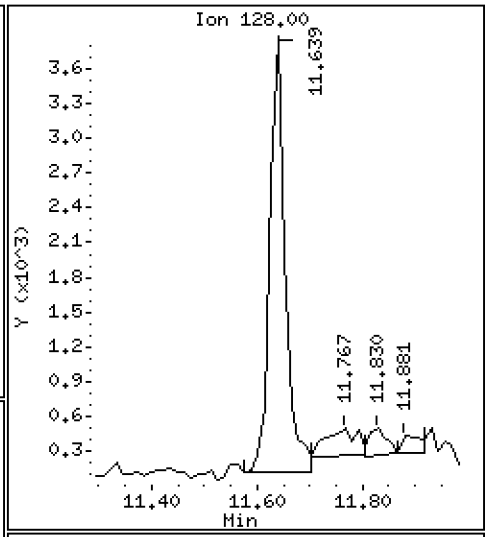
Concentration: 0.02877 ug/mL

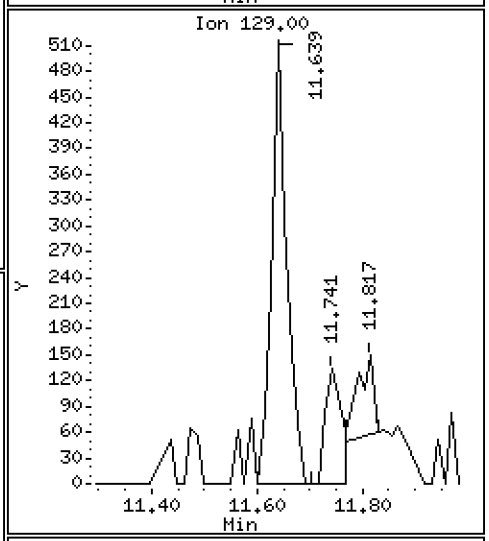


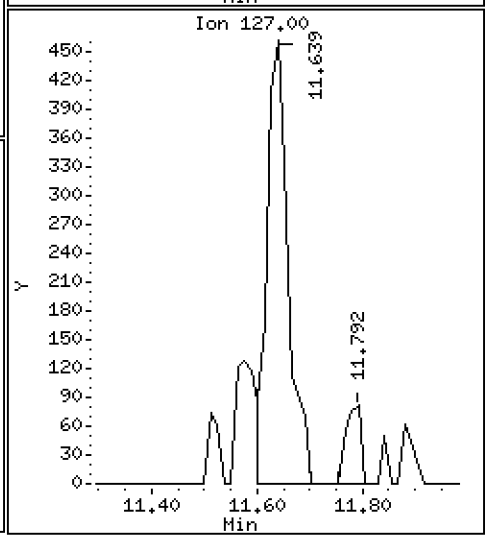












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012325.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK1

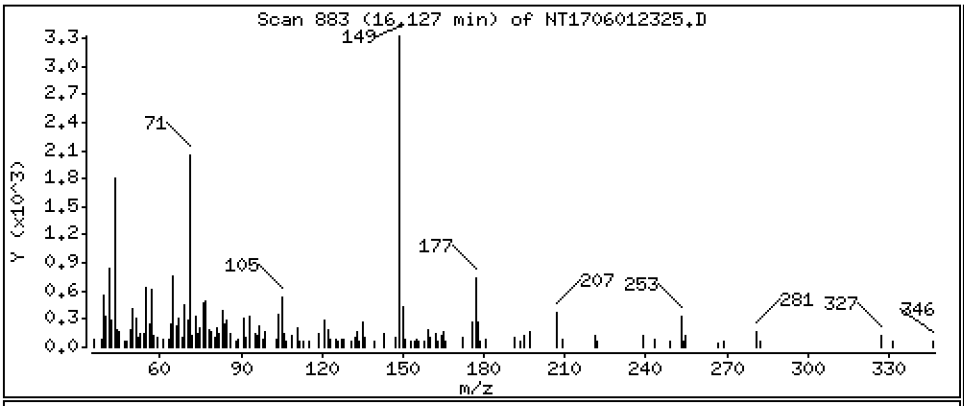
Operator: VTS

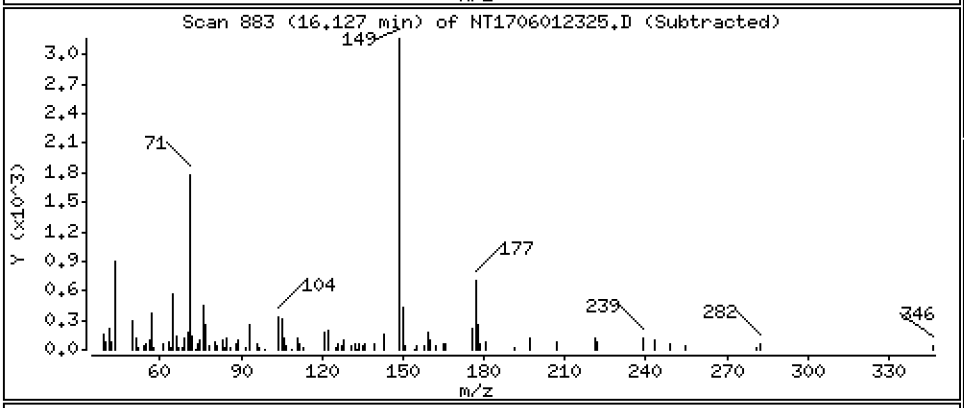
Column phase: ZB-5msi

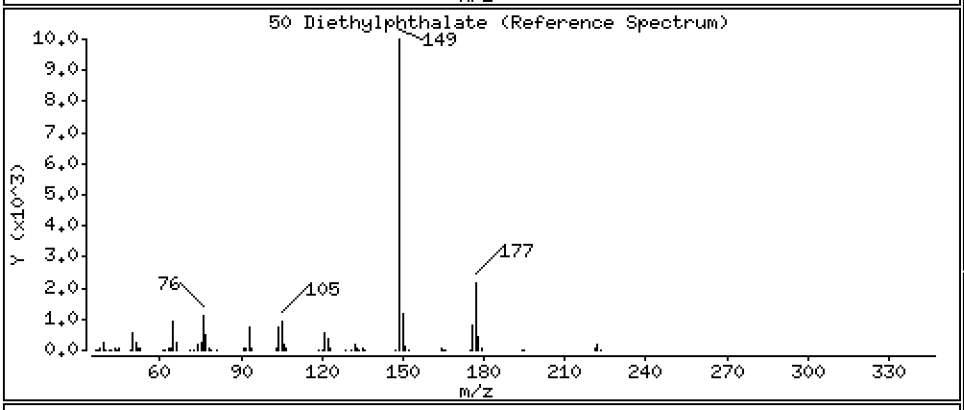
Column diameter: 0.25

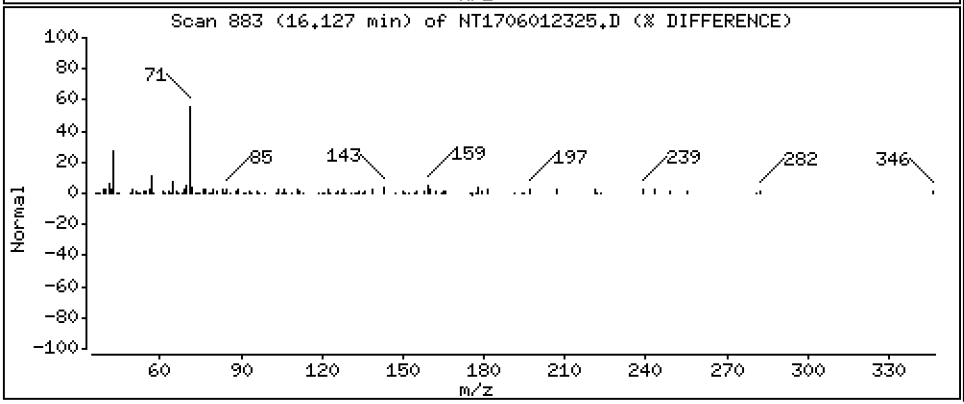
50 Diethylphthalate

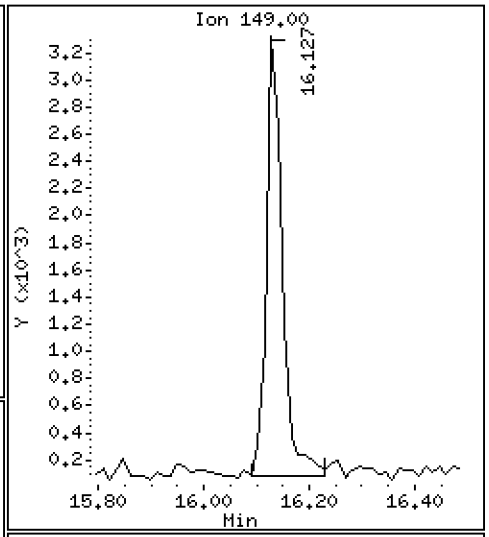
Concentration: 0.04828 ug/mL

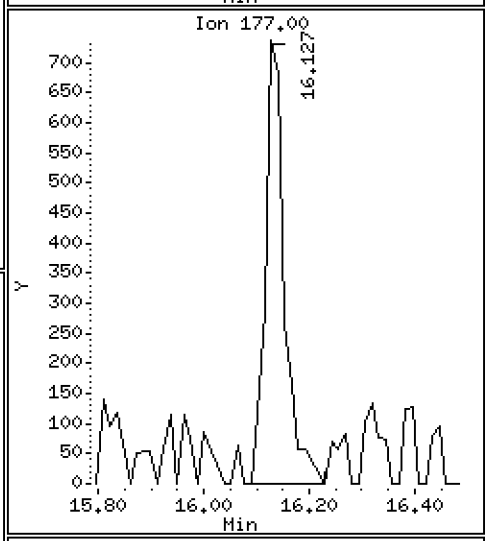


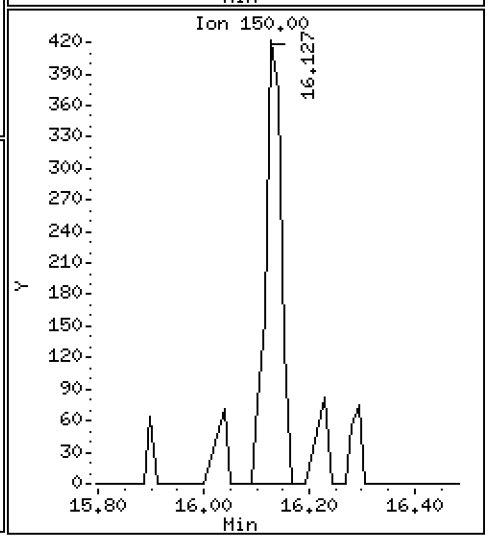












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012325.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK1

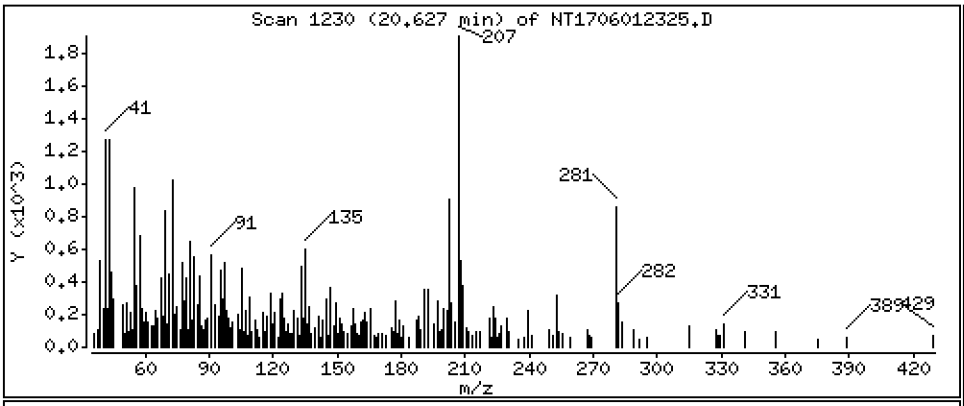
Operator: VTS

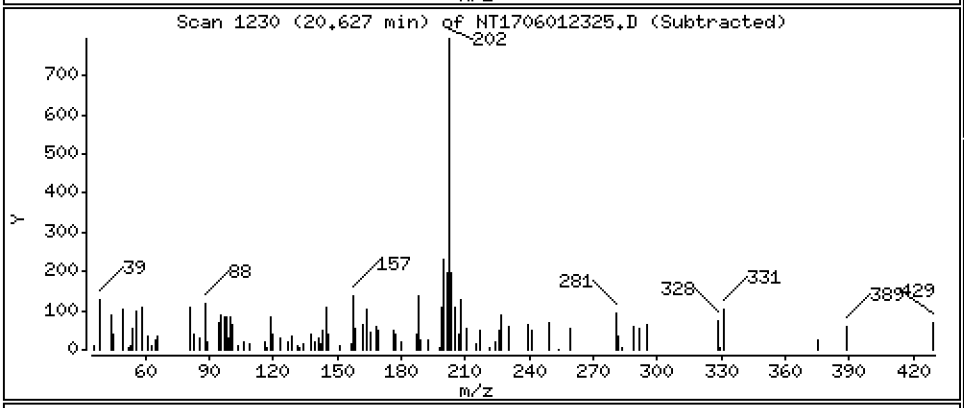
Column phase: ZB-5msi

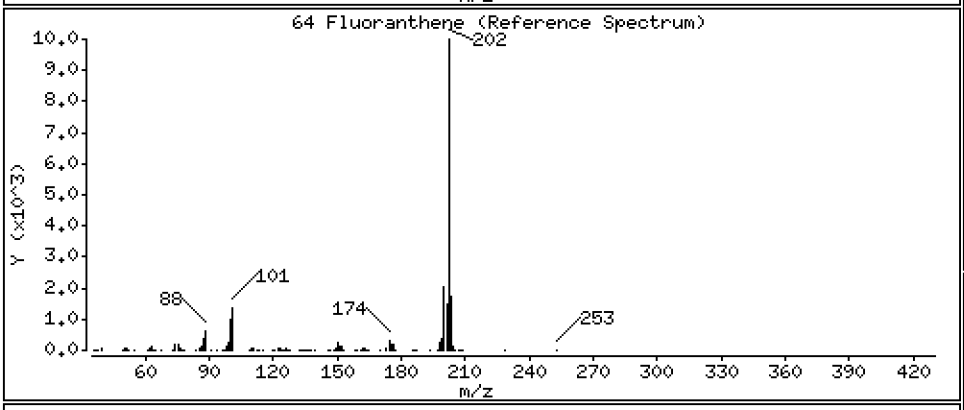
Column diameter: 0.25

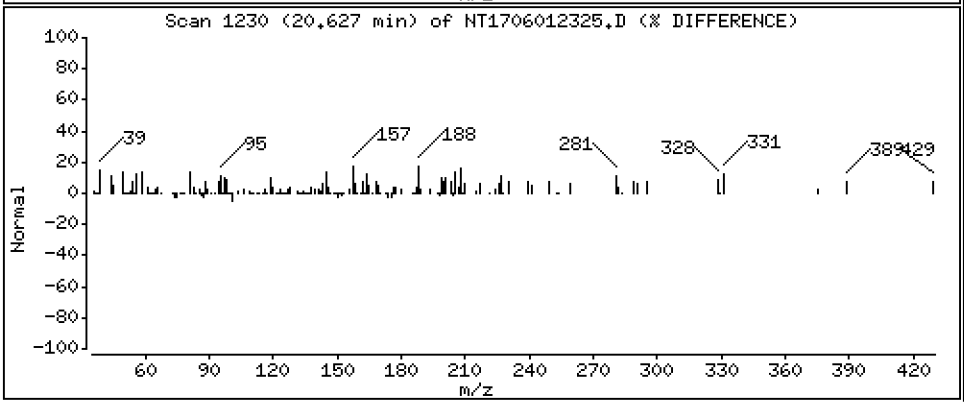
64 Fluoranthene

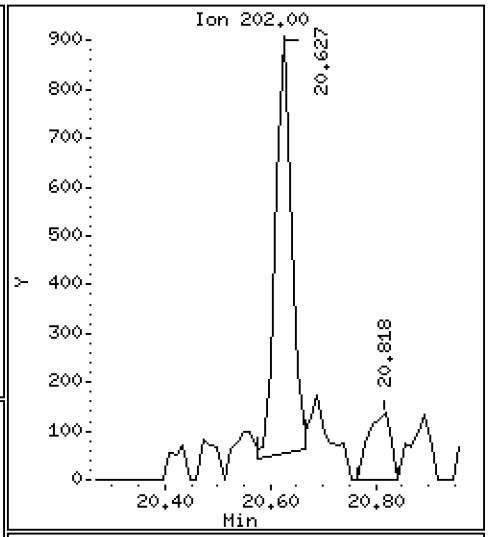
Concentration: 0.006958 ug/mL

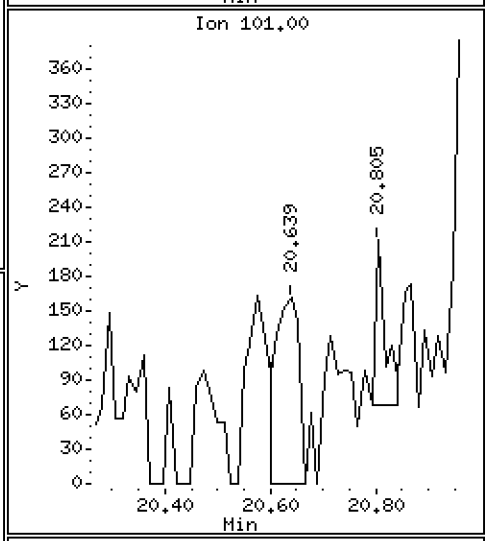


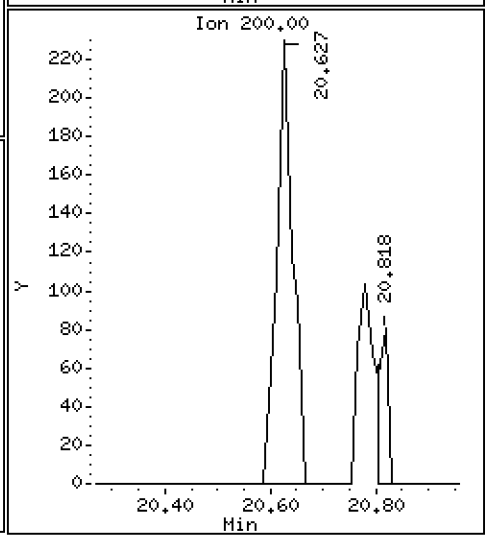












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012325.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK1

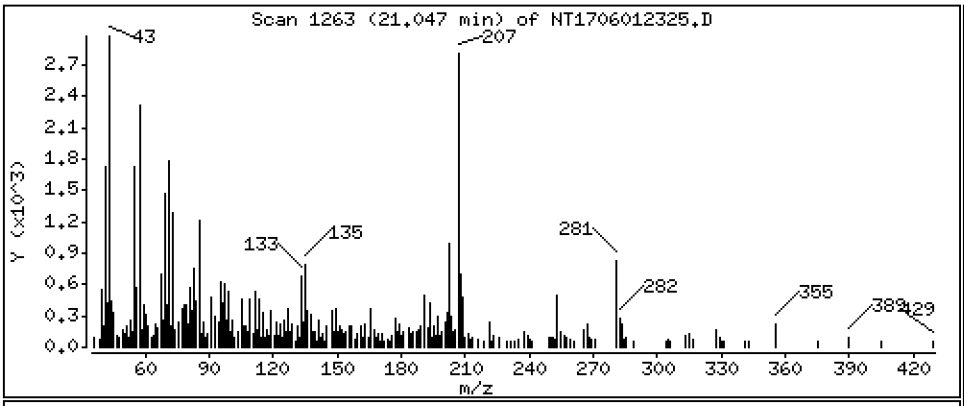
Operator: VTS

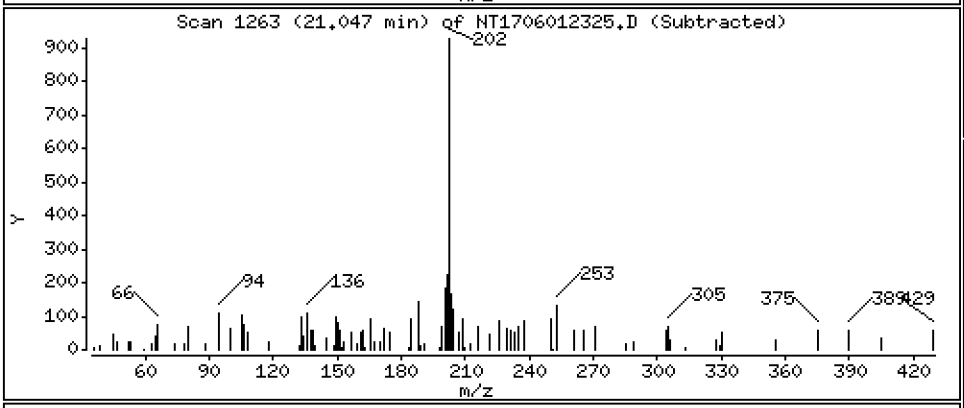
Column phase: ZB-5msi

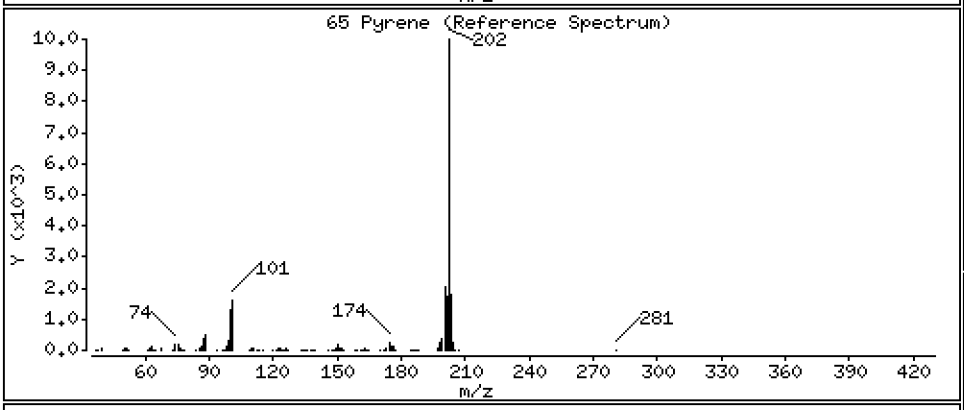
Column diameter: 0.25

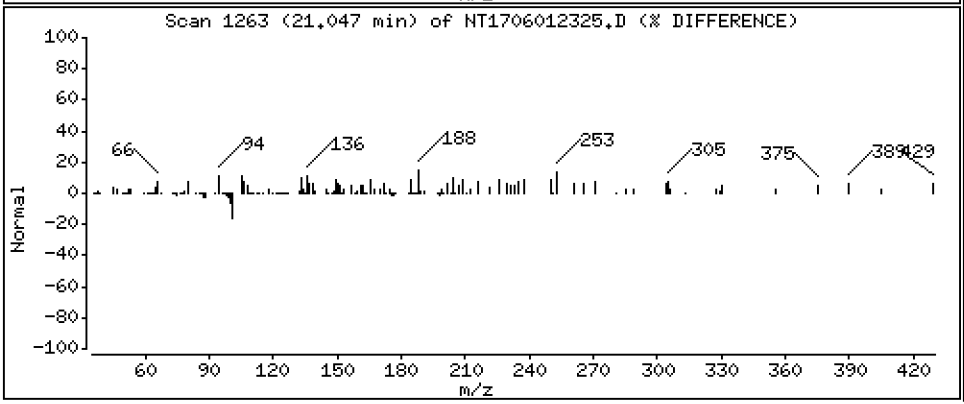
65 Pyrene

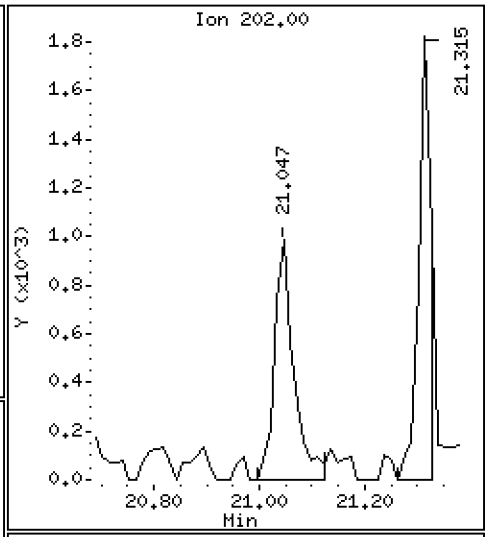
Concentration: 0.009934 ug/mL

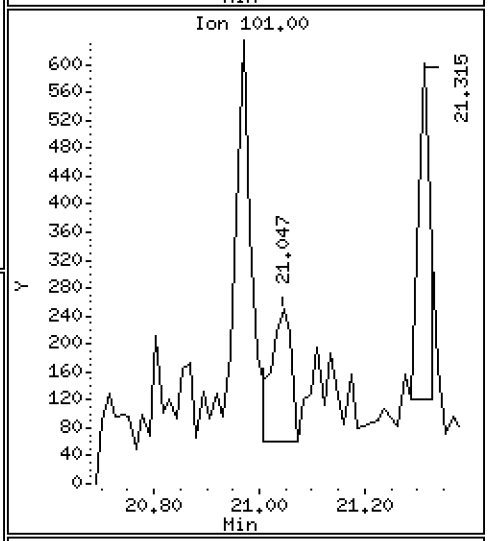


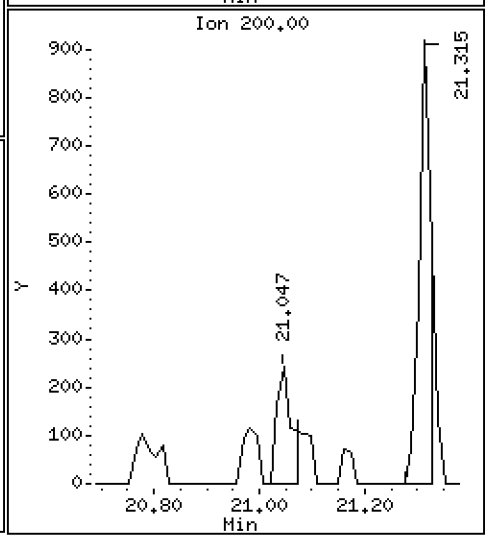












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012325.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK1

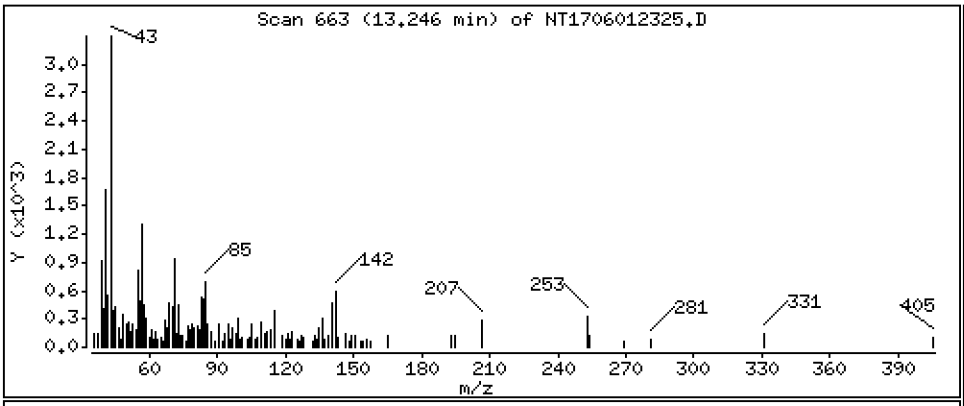
Operator: VTS

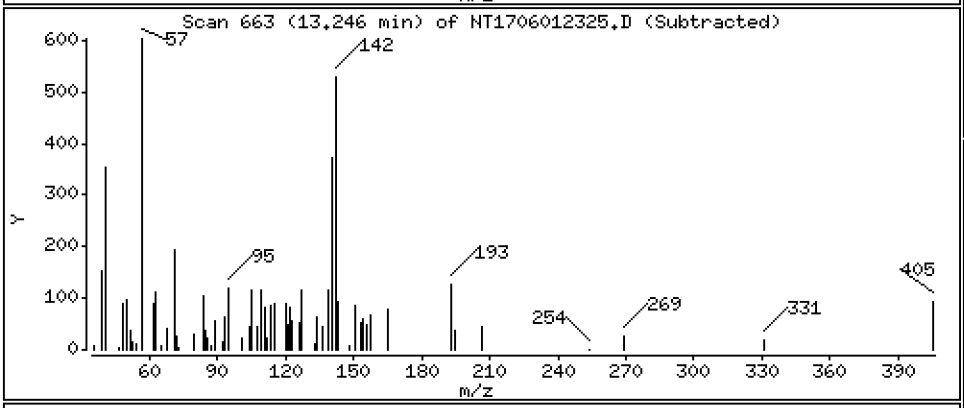
Column phase: ZB-5msi

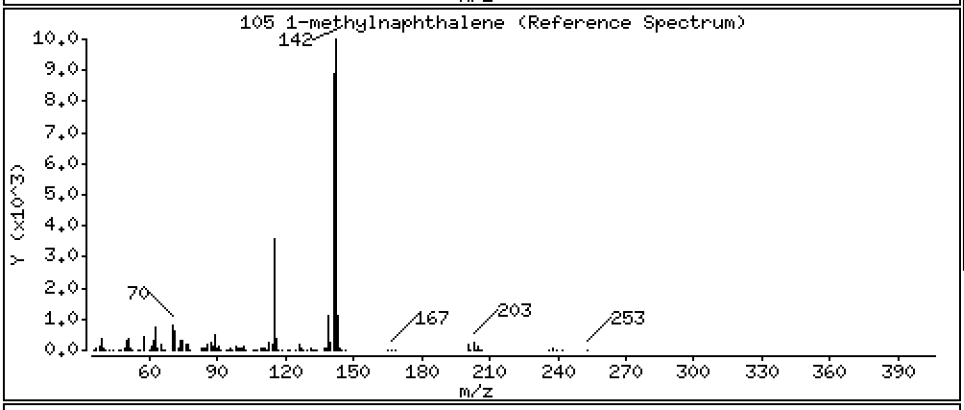
Column diameter: 0.25

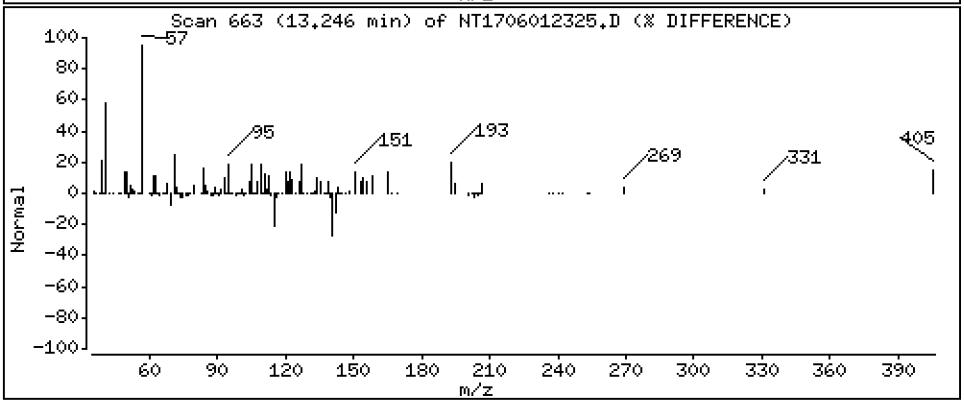
105 1-methylnaphthalene

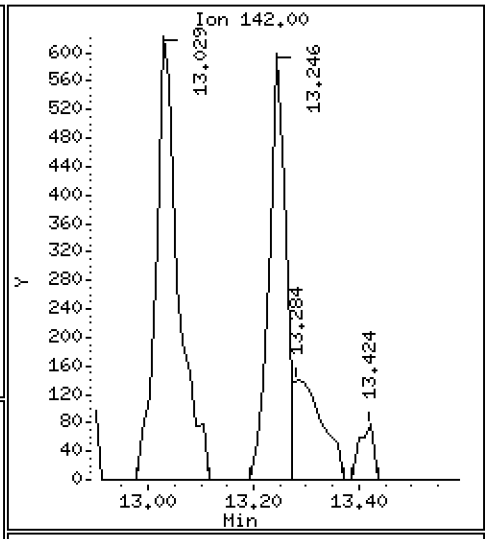
Concentration: 0.007265 ug/mL

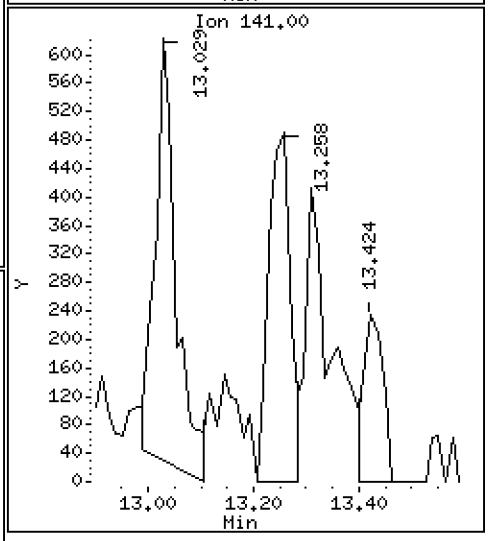












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012325.D
Lab Smp Id: BLE0148-BLK1
Inj Date : 02-JUN-2023 02:57
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-BLK1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.969	6.944	(0.763)	363175	4.26585	4.266
$	2 Phenol-d5	99	8.524	8.511	(0.933)	478864	4.25030	4.250
	3 Phenol	94	8.537	8.536	(0.934)	4732	0.03965	0.03965
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	453777	5.02825	5.028
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	260076	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	223606	3.52516	3.525
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	400306	3.64396	3.644
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	965235	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	7637	0.02877	0.02877
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$ 36	2-Fluorobiphenyl	172	13.794	13.793	(0.908)	709048	3.55236	3.552
37	2-Chloronaphthalene	162	Compound Not Detected.					
38	2-Nitroaniline	65	Compound Not Detected.					
39	Dimethylphthalate	163	Compound Not Detected.					
40	Acenaphthylene	152	Compound Not Detected.					
41	2,6-Dinitrotoluene	165	Compound Not Detected.					
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	506657	4.00000	
43	3-Nitroaniline	138	Compound Not Detected.					
44	Acenaphthene	153	Compound Not Detected.					
45	2,4-Dinitrophenol	184	Compound Not Detected.					
46	Dibenzofuran	168	Compound Not Detected.					
47	4-Nitrophenol	109	Compound Not Detected.					
48	2,4-Dinitrotoluene	165	Compound Not Detected.					
50	Diethylphthalate	149	16.127	16.140	(1.062)	8208	0.04828	0.04828
49	Fluorene	166	Compound Not Detected.					
51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
52	4-Nitroaniline	138	Compound Not Detected.					
53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	98894	4.47481	4.475
56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					
58	Pentachlorophenol	266	Compound Not Detected.					
* 59	Phenanthrene-d10	188	18.203	18.203	(1.000)	872094	4.00000	
60	Phenanthrene	178	Compound Not Detected.					
61	Anthracene	178	Compound Not Detected.					
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	20.626	20.613	(0.888)	1739	0.00696	0.006958
65	Pyrene	202	21.047	21.034	(0.907)	2517	0.00993	0.009934
$ 66	Terphenyl-d14	244	21.315	21.315	(0.918)	755906	4.19678	4.197
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	23.215	23.215	(1.000)	534317	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	Compound Not Detected.					
72	bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
* 134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	984393	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	Compound Not Detected.					
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	25.805	25.805	(1.000)	444241	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	1281	0.00727	0.007265
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012325.D
Lab Smp Id: BLE0148-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	260076	1.19
27 Naphthalene-d8	932905	466453	1865810	965235	3.47
42 Acenaphthene-d10	509574	254787	1019148	506657	-0.57
59 Phenanthrene-d10	912749	456375	1825498	872094	-4.45
69 Chrysene-d12	578011	289006	1156022	534317	-7.56
134 Di-n-octylphthala	1181490	590745	2362980	984393	-16.68
77 Perylene-d12	513683	256842	1027366	444241	-13.52

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012325.D

Lab ID: BLE0148-BLK1
nt17.i, ABN.m, 02-JUN-2023 02:57

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1706012320.D

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

LCS / LCS DUPLICATE RECOVERY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 03:34
Batch:	BLE0148	Laboratory ID:	BLE0148-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Phenol	500	270		54.0	34 - 120
4-Methylphenol	500	264		52.8	29 - 120
Naphthalene	500	305		61.1	43 - 120
2-Methylnaphthalene	500	310		61.9	43 - 120
Acenaphthylene	500	310		62.0	42 - 120
Dimethylphthalate	500	409		81.8	43 - 120
Acenaphthene	500	337		67.3	45 - 120
Dibenzofuran	500	343		68.6	43 - 120
Fluorene	500	381		76.3	45 - 120
Phenanthrene	500	364		72.8	49 - 120
Anthracene	500	305		60.9	45 - 120
Fluoranthene	500	409		81.8	53 - 145
Pyrene	500	393		78.6	52 - 134
Butylbenzylphthalate	500	414		82.7	45 - 132
Benzo(a)anthracene	500	385		77.1	49 - 120
Chrysene	500	405		81.1	47 - 120
bis(2-Ethylhexyl)phthalate	500	185		37.0	34 - 130
Benzofluoranthenes, Total	1000	850		85.0	30 - 160
Benzo(a)pyrene	500	351		70.2	42 - 120
Indeno(1,2,3-cd)pyrene	500	331		66.3	42 - 163
Dibenzo(a,h)anthracene	500	347		69.4	30 - 133
Benzo(g,h,i)perylene	500	272	Q	54.4	46 - 148

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	500	319		63.9	16.8	30	34 - 120
4-Methylphenol	500	321		64.2	19.5	30	29 - 120
Naphthalene	500	363		72.7	17.3	30	43 - 120
2-Methylnaphthalene	500	376		75.3	19.5	30	43 - 120
Acenaphthylene	500	366		73.2	16.5	30	42 - 120
Dimethylphthalate	500	478		95.5	15.5	30	43 - 120
Acenaphthene	500	401		80.1	17.3	30	45 - 120

* Indicates values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 04:11
Batch:	BLE0148	Laboratory ID:	BLE0148-BSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS Dup
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dibenzofuran	500	421		84.2	20.3	30	43 - 120
Fluorene	500	443		88.6	15.0	30	45 - 120
Phenanthrene	500	413		82.6	12.6	30	49 - 120
Anthracene	500	333		66.6	8.92	30	45 - 120
Fluoranthene	500	470		93.9	13.9	30	53 - 145
Pyrene	500	447		89.4	12.8	30	52 - 134
Butylbenzylphthalate	500	492		98.5	17.4	30	45 - 132
Benzo(a)anthracene	500	432		86.5	11.5	30	49 - 120
Chrysene	500	462		92.3	13.0	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	215		43.1	15.2	30	34 - 130
Benzofluoranthenes, Total	1000	966		96.6	12.8	30	30 - 160
Benzo(a)pyrene	500	370		73.9	5.14	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	377		75.4	12.8	30	42 - 163
Dibenzo(a,h)anthracene	500	391		78.2	12.0	30	30 - 133
Benzo(g,h,i)perylene	500	305		60.9	11.2	30	46 - 148

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

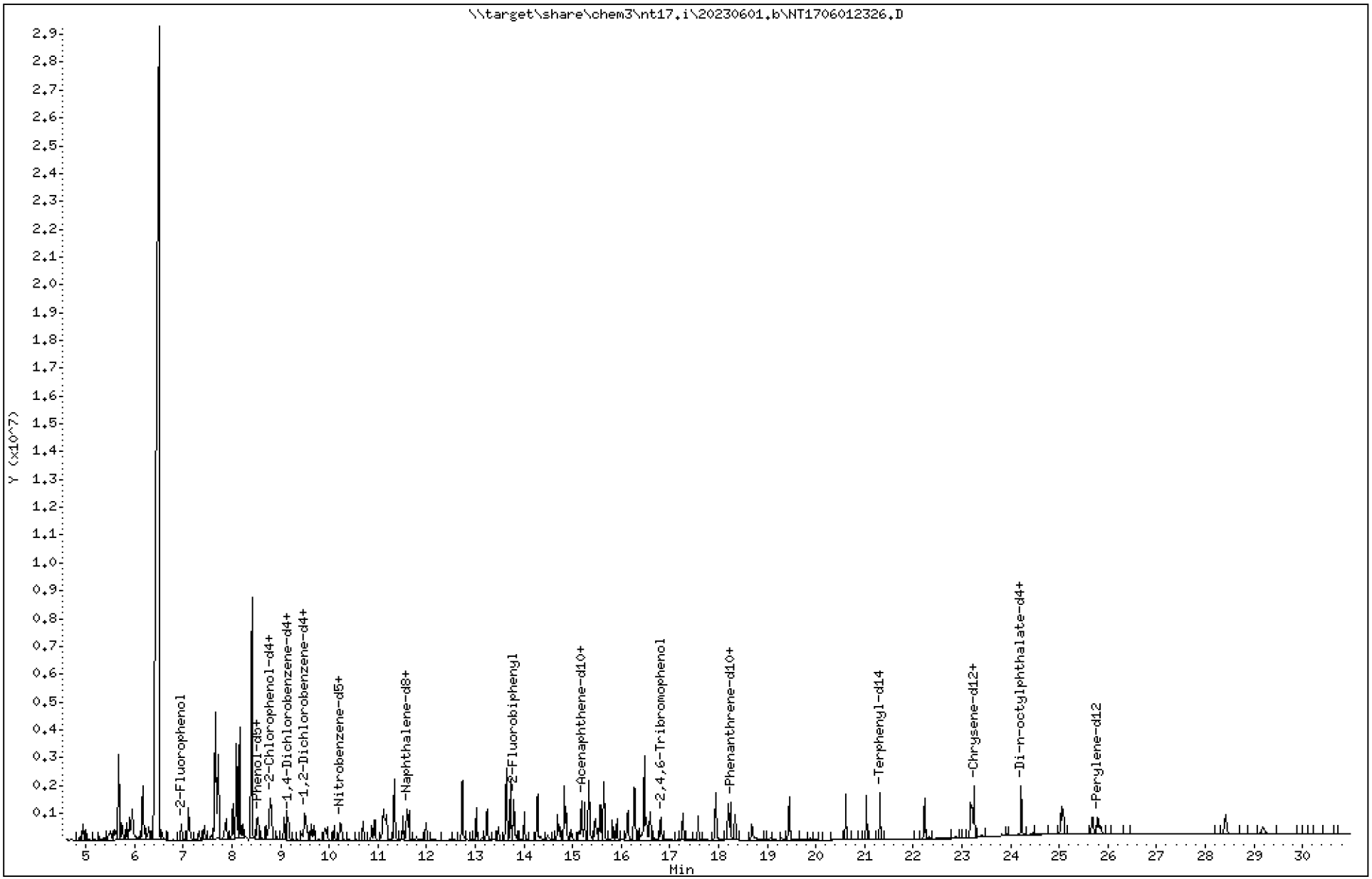
Instrument: nt17.i

Sample Info: BLE0148-BS1

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

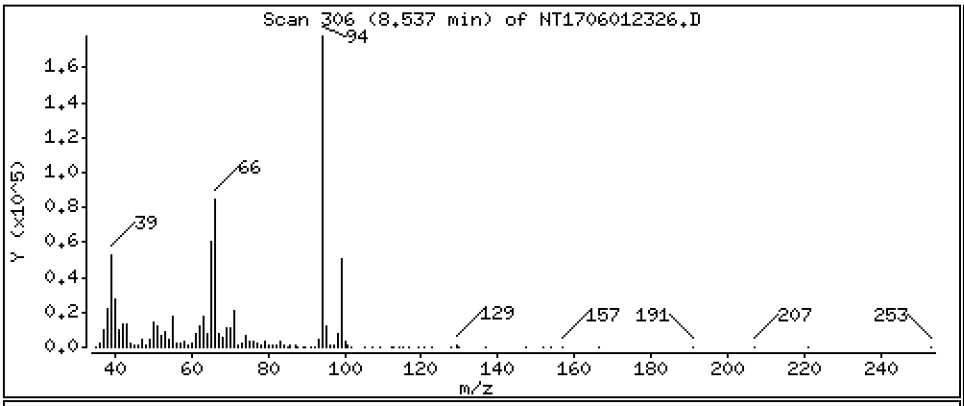
Operator: VTS

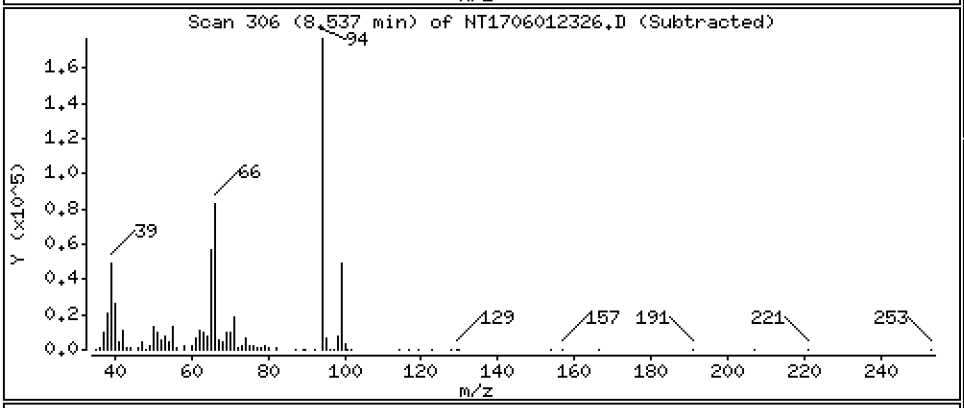
Column phase: ZB-5msi

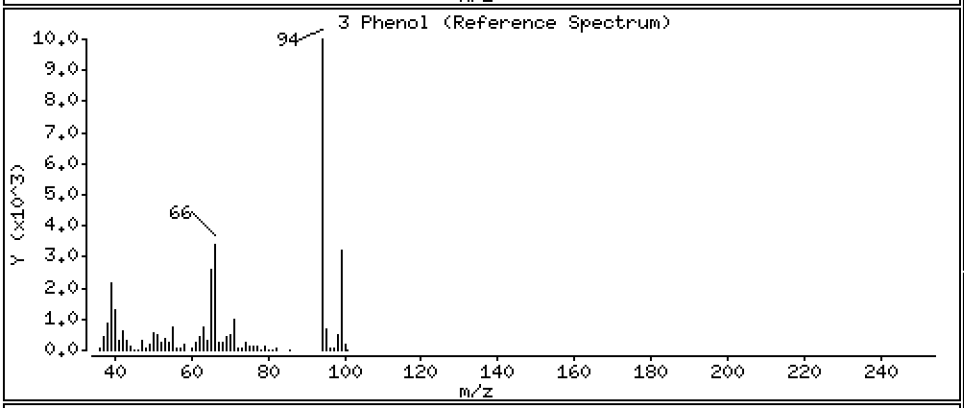
Column diameter: 0.25

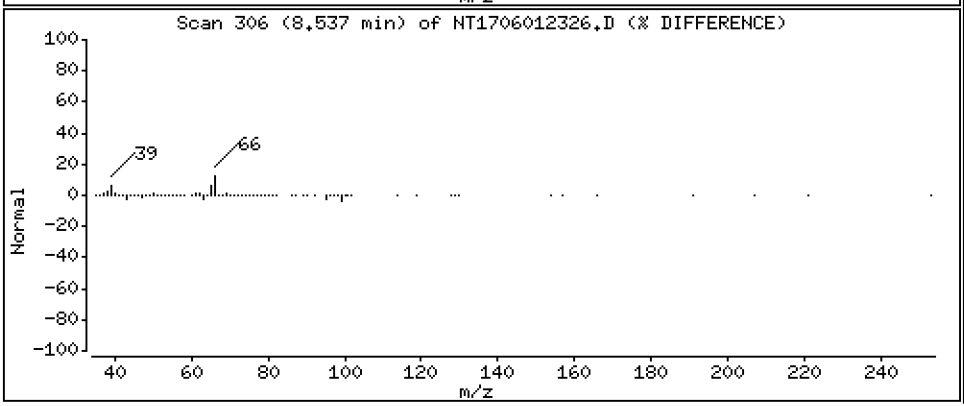
3 Phenol

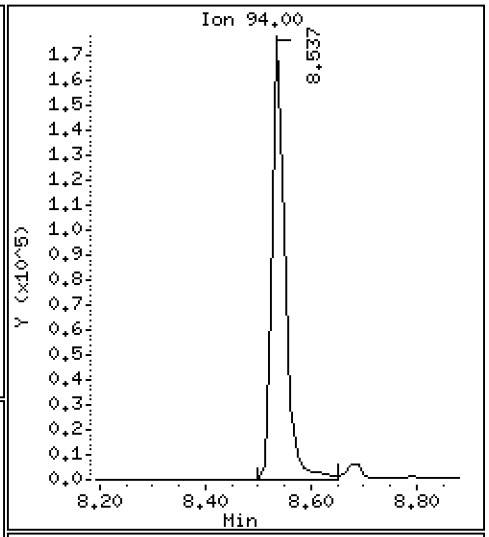
Concentration: 2.699 ug/mL

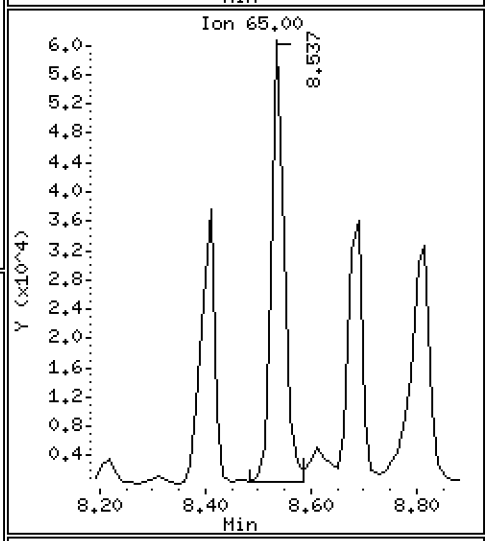


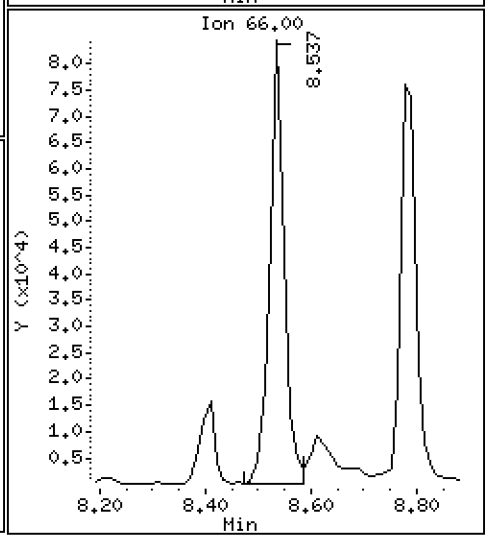












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

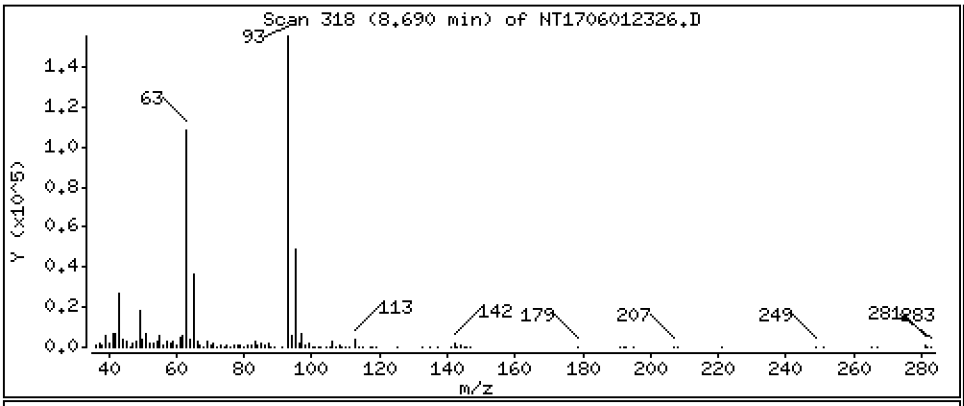
Operator: VTS

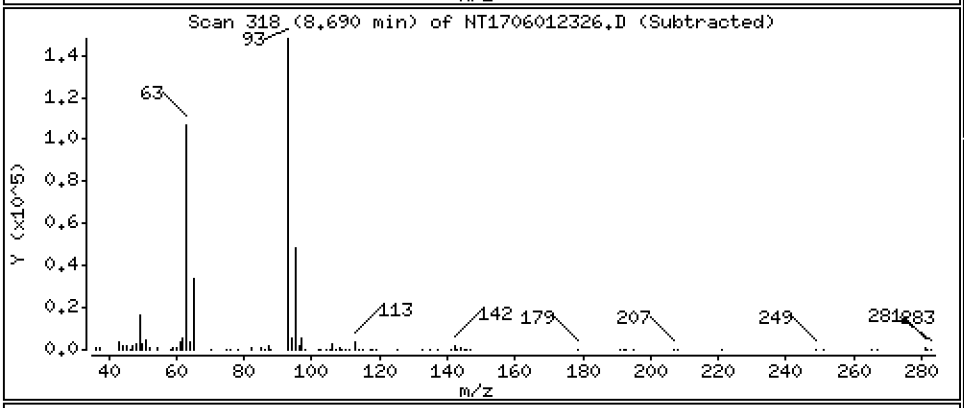
Column phase: ZB-5msi

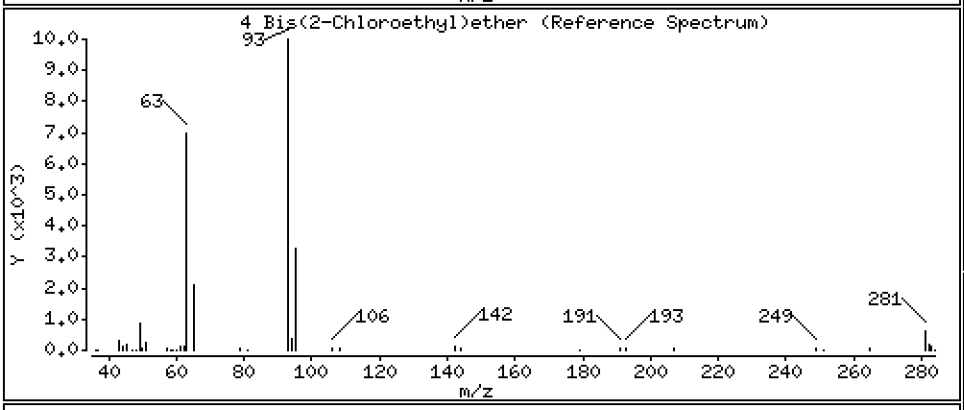
Column diameter: 0.25

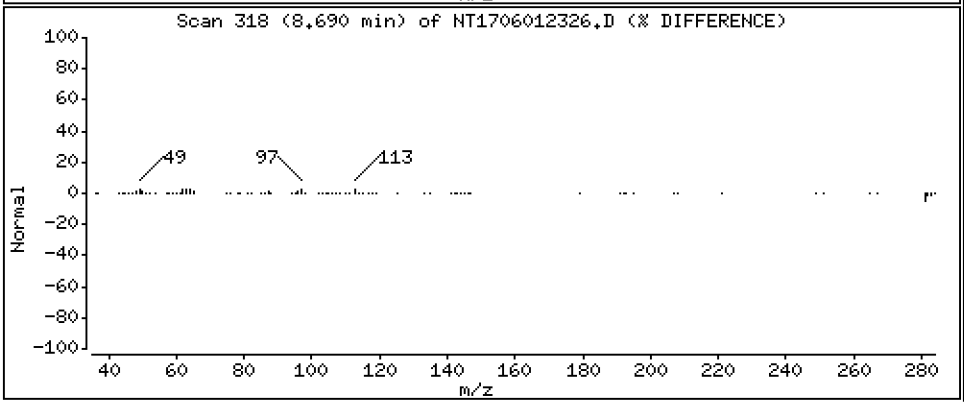
4 Bis(2-Chloroethyl)ether

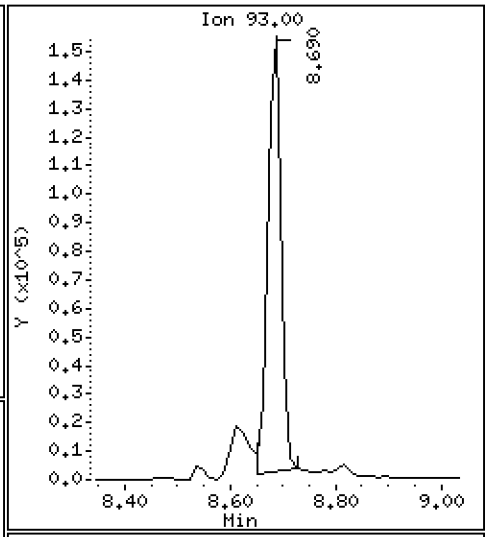
Concentration: 3.155 ug/mL

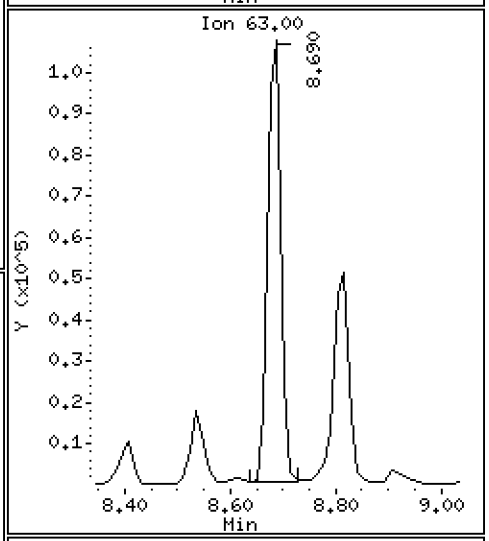


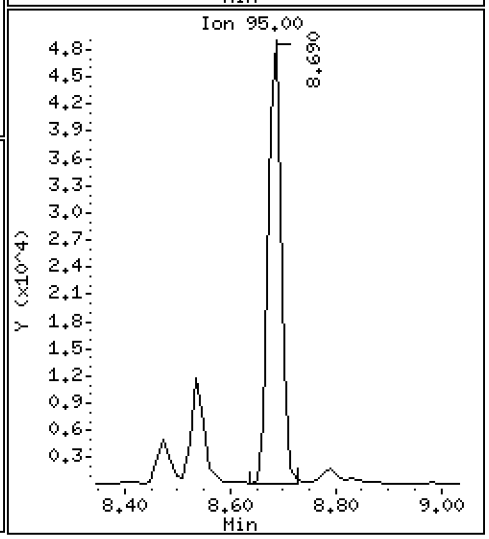












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

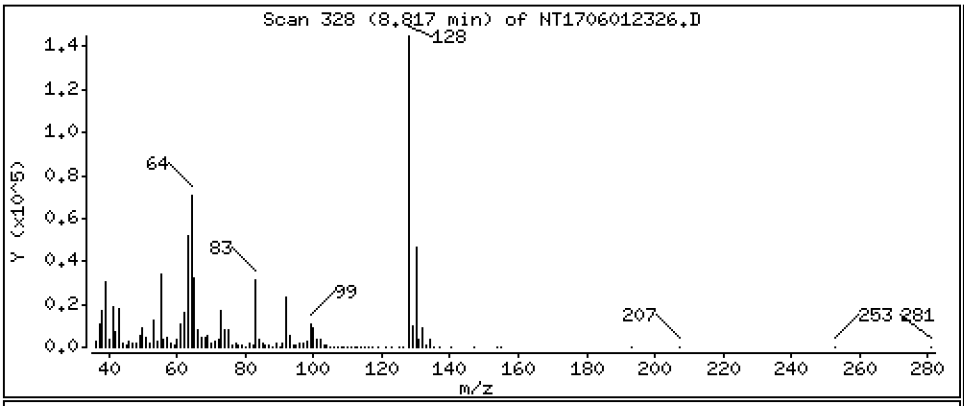
Operator: VTS

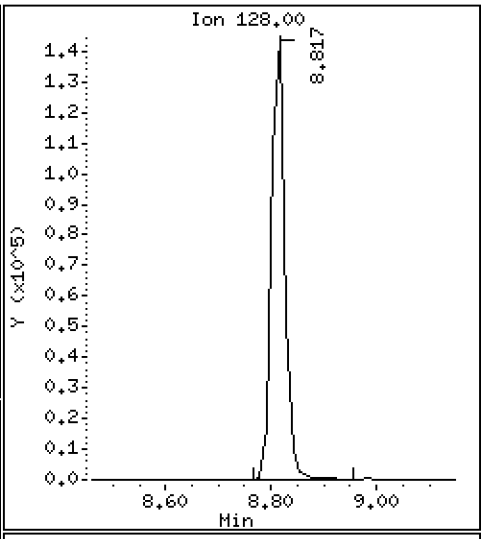
Column phase: ZB-5msi

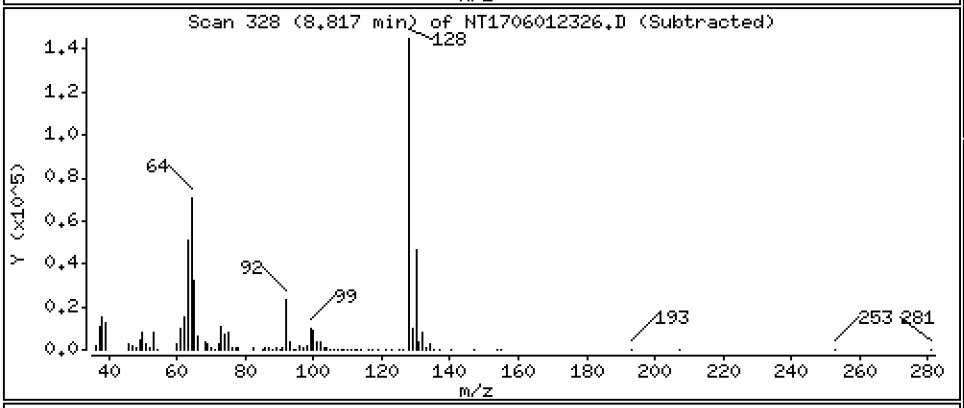
Column diameter: 0.25

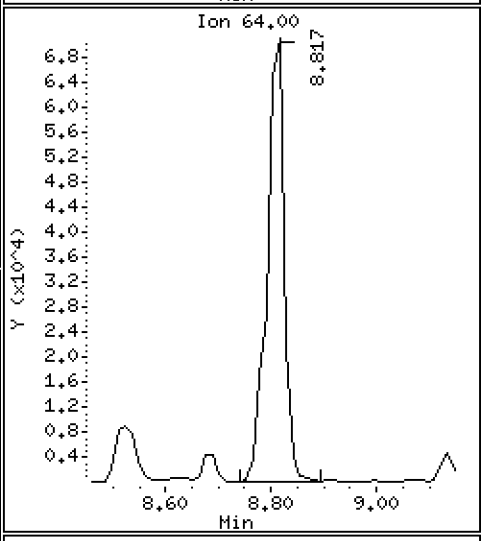
6 2-Chlorophenol

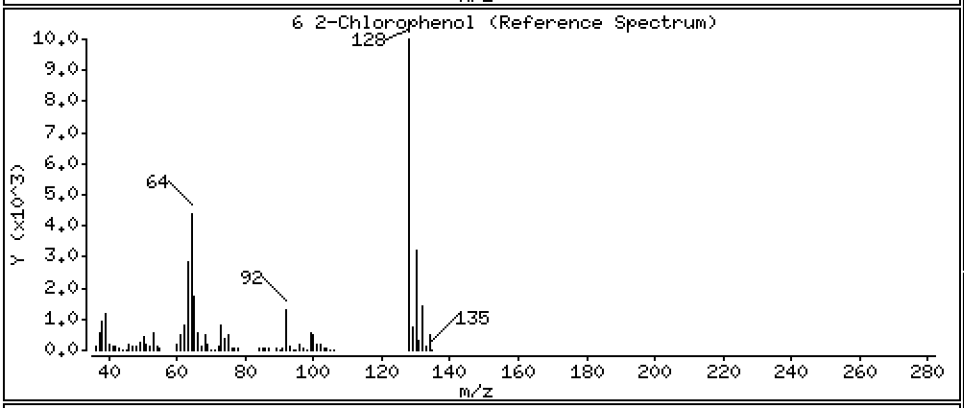
Concentration: 3.056 ug/mL

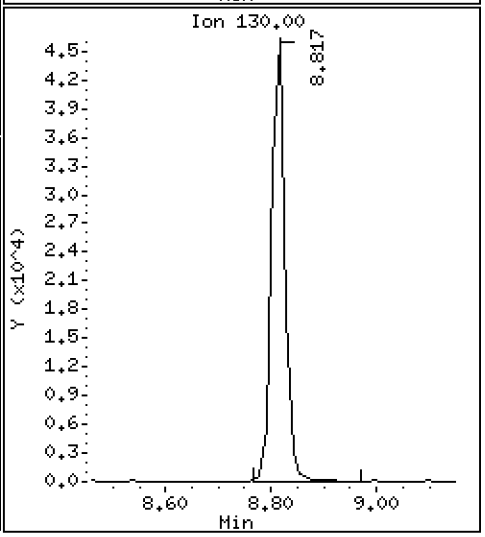


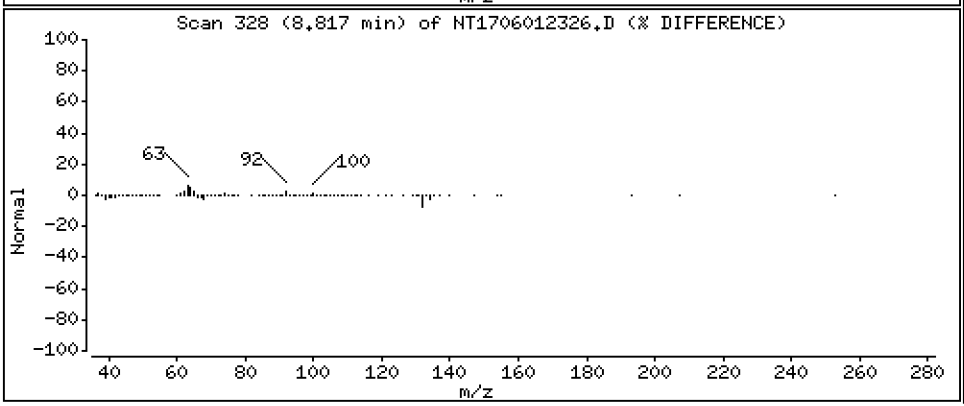












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

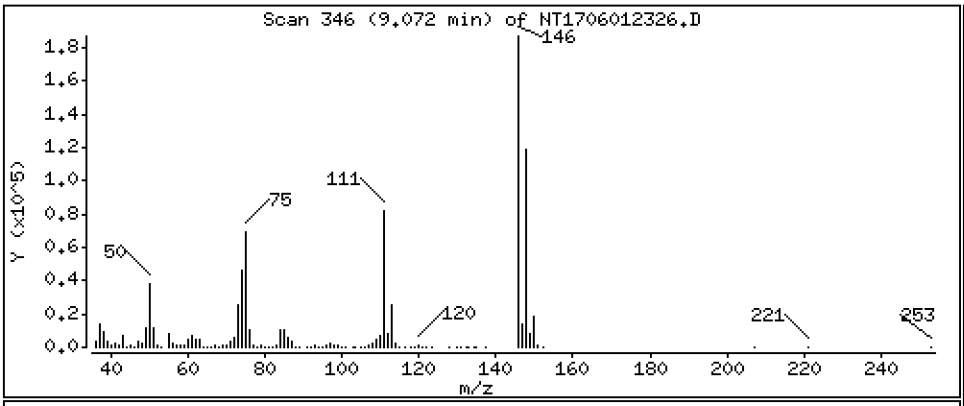
Operator: VTS

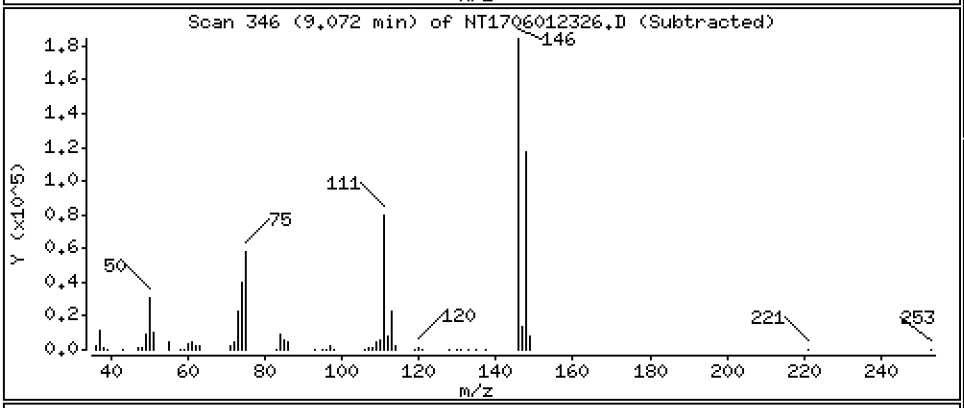
Column phase: ZB-5msi

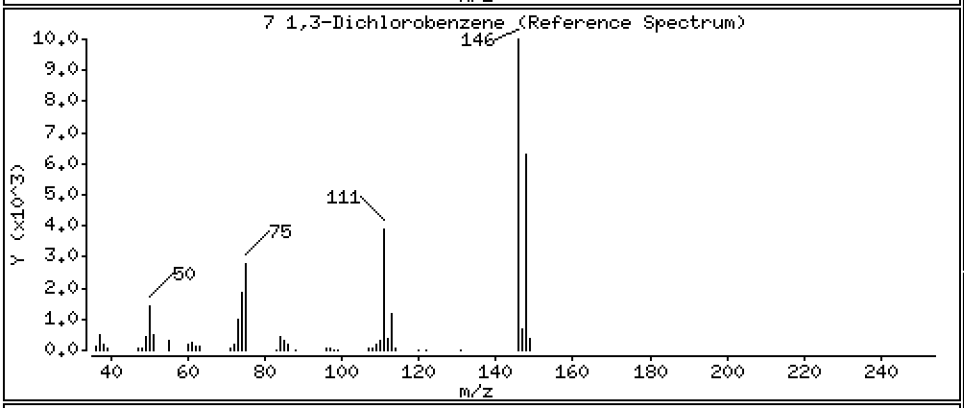
Column diameter: 0.25

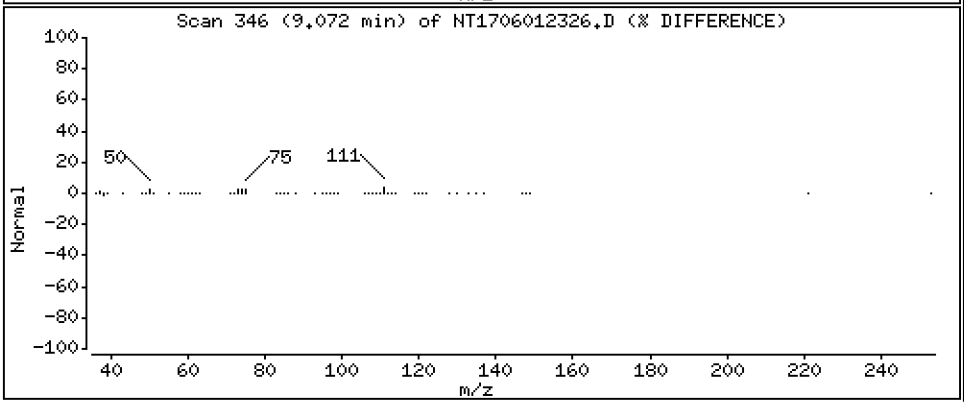
7 1,3-Dichlorobenzene

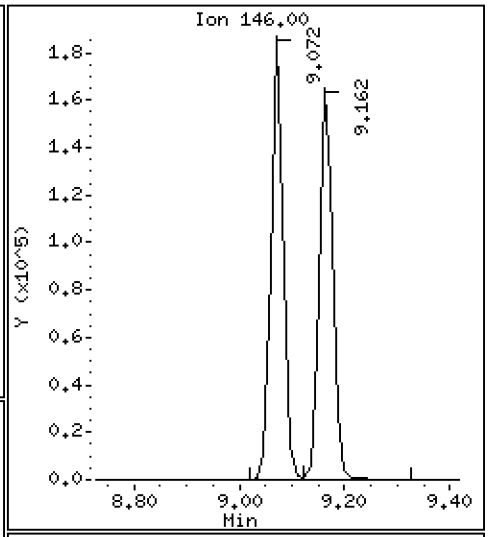
Concentration: 3.049 ug/mL

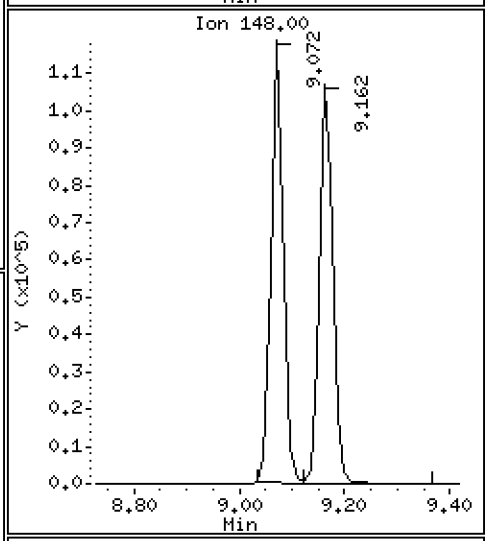


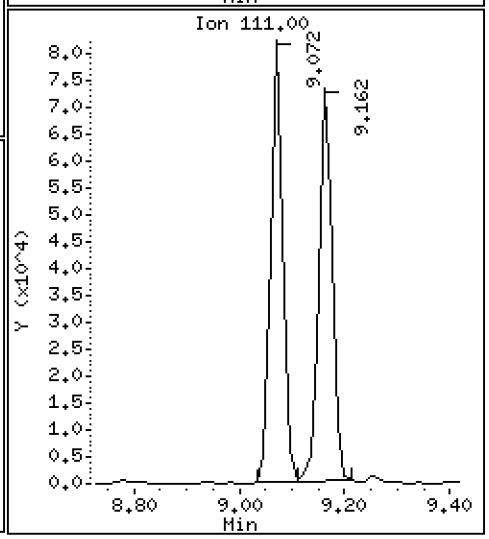












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

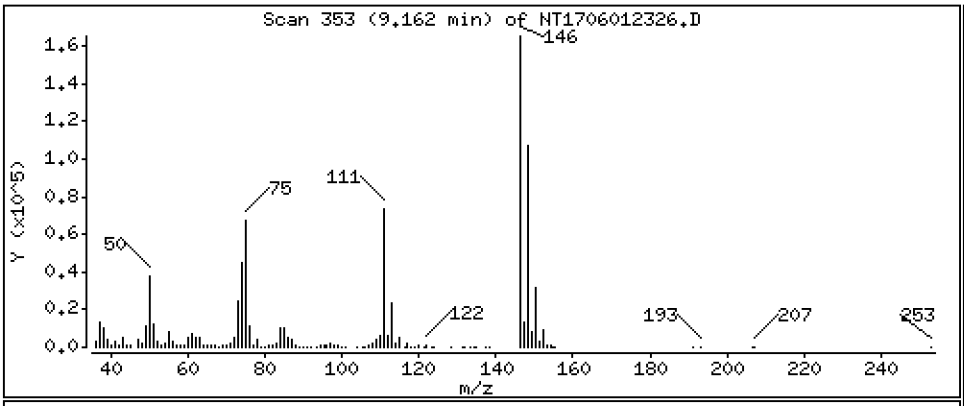
Operator: VTS

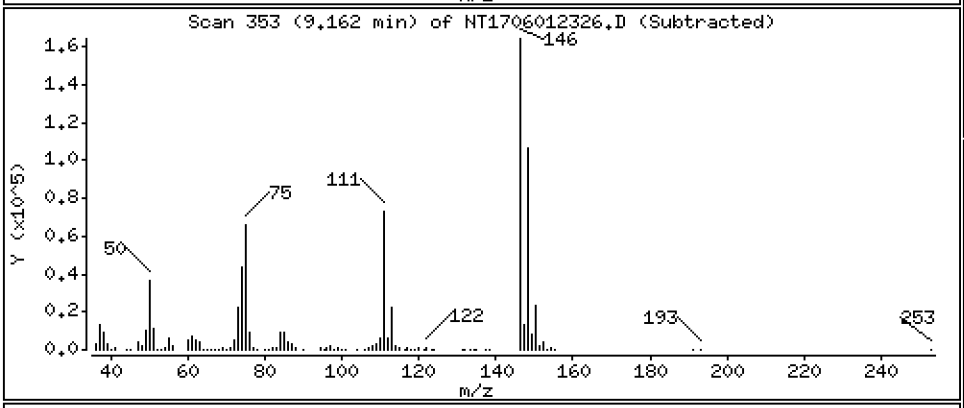
Column phase: ZB-5msi

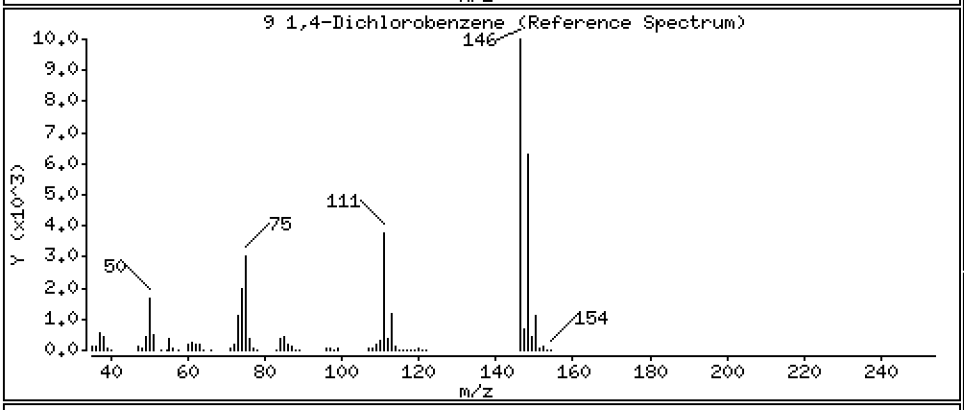
Column diameter: 0.25

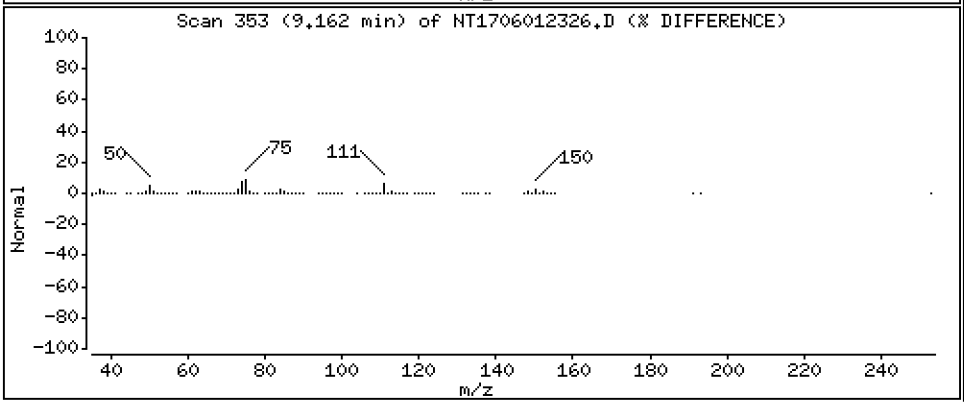
9 1,4-Dichlorobenzene

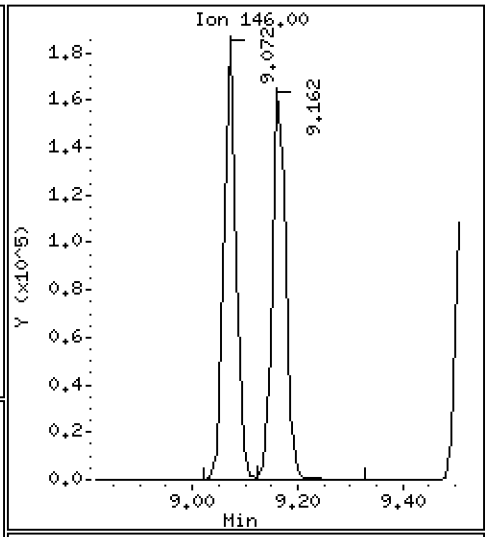
Concentration: 3.433 ug/mL

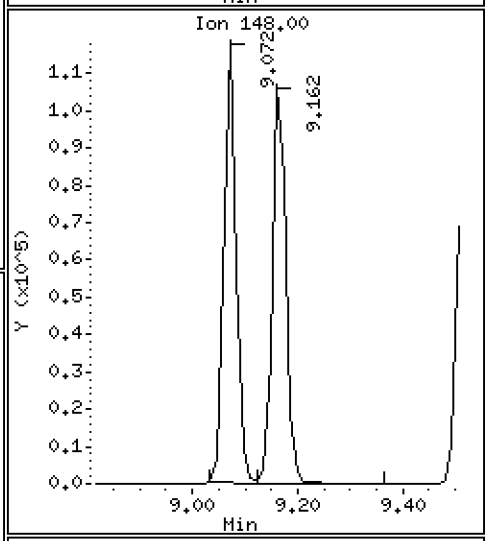


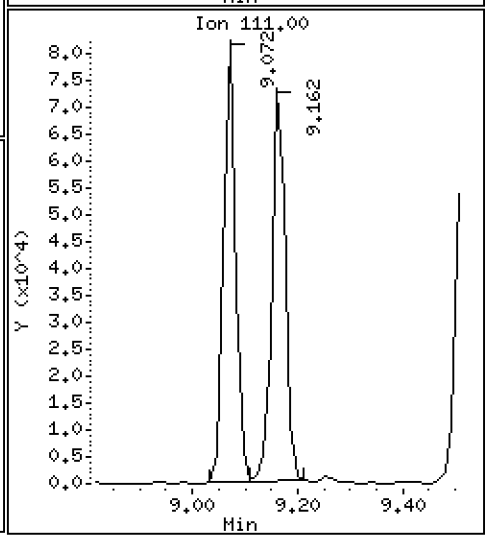












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

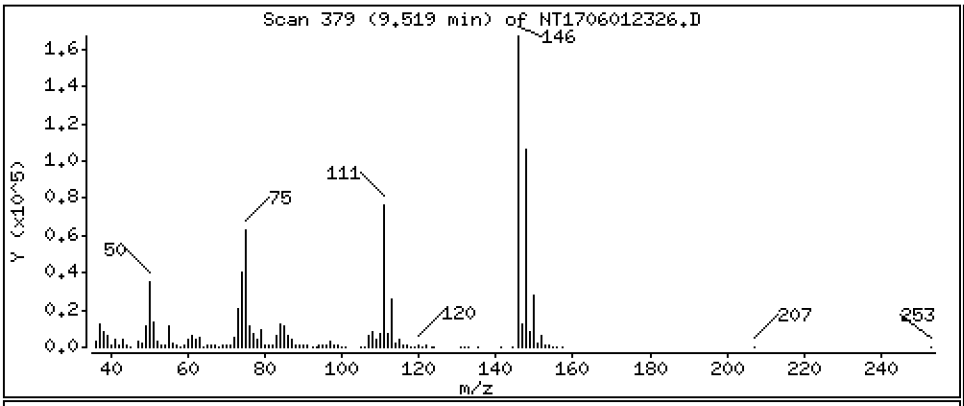
Operator: VTS

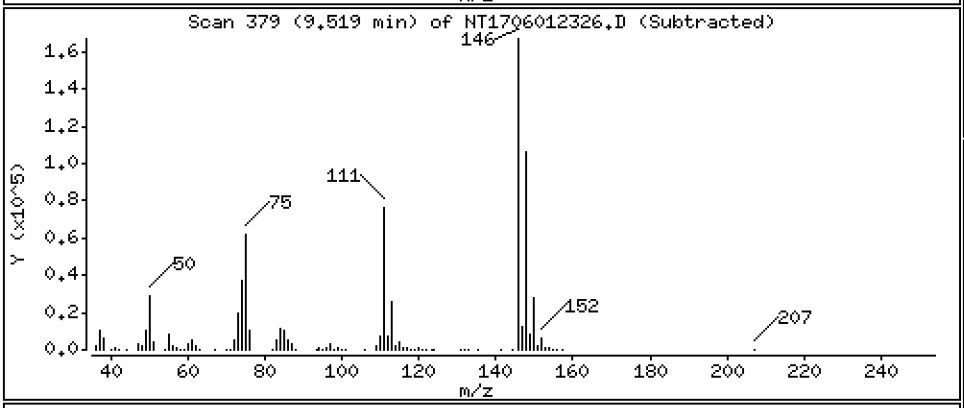
Column phase: ZB-5msi

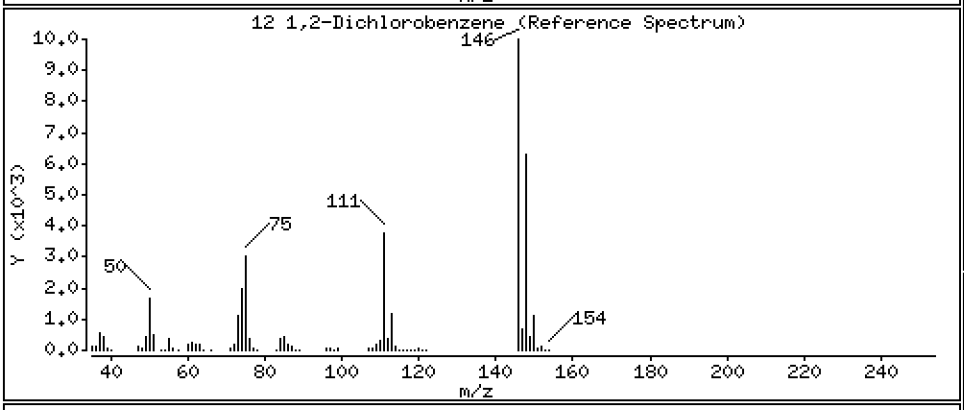
Column diameter: 0.25

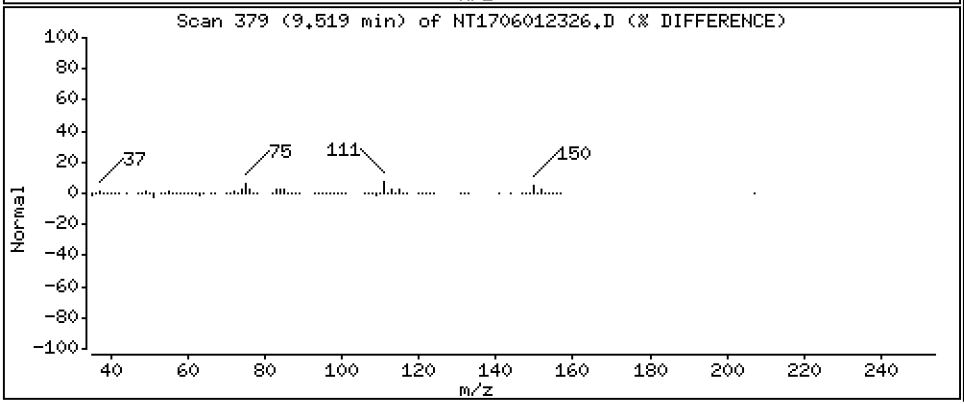
12 1,2-Dichlorobenzene

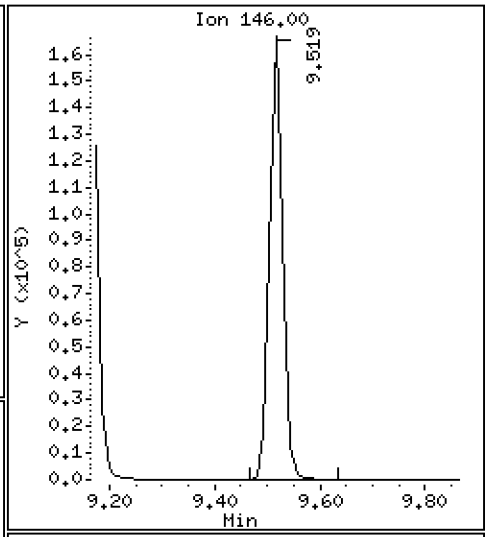
Concentration: 3.152 ug/mL

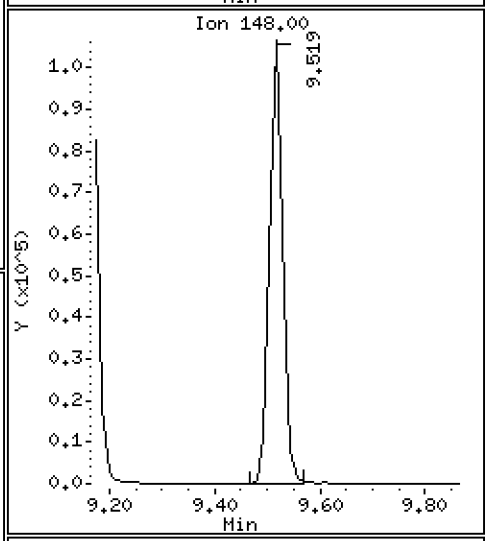


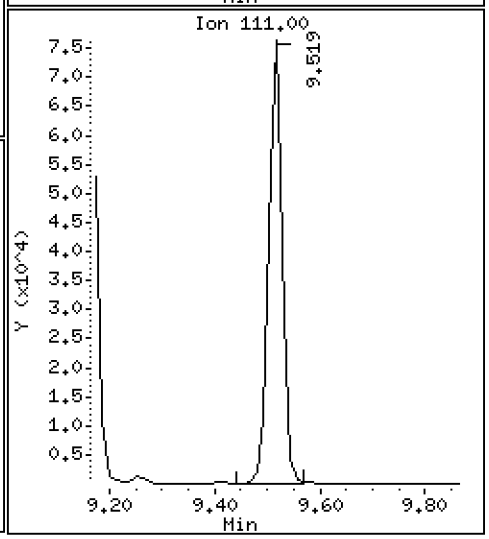












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

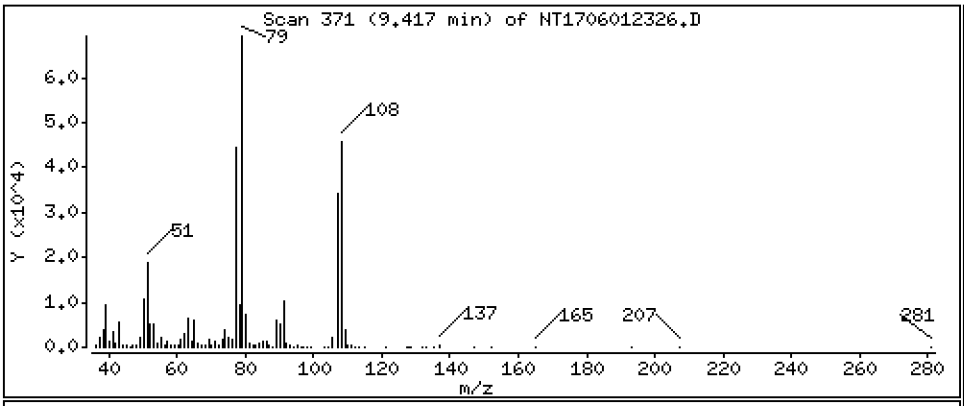
Operator: VTS

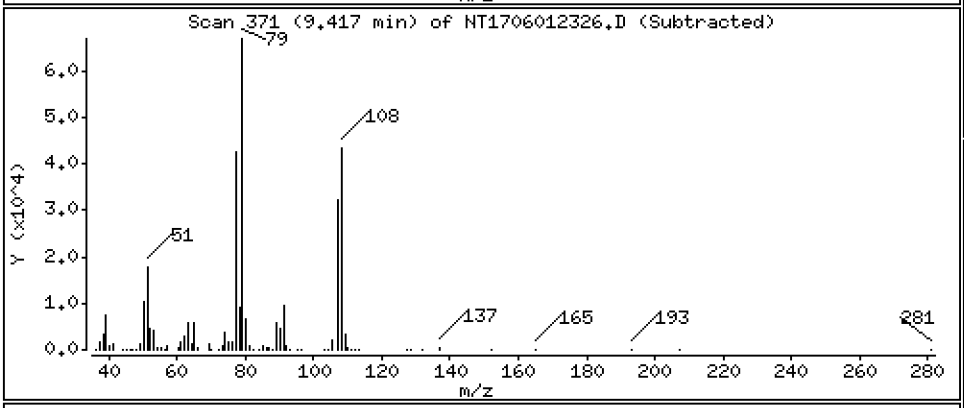
Column phase: ZB-5msi

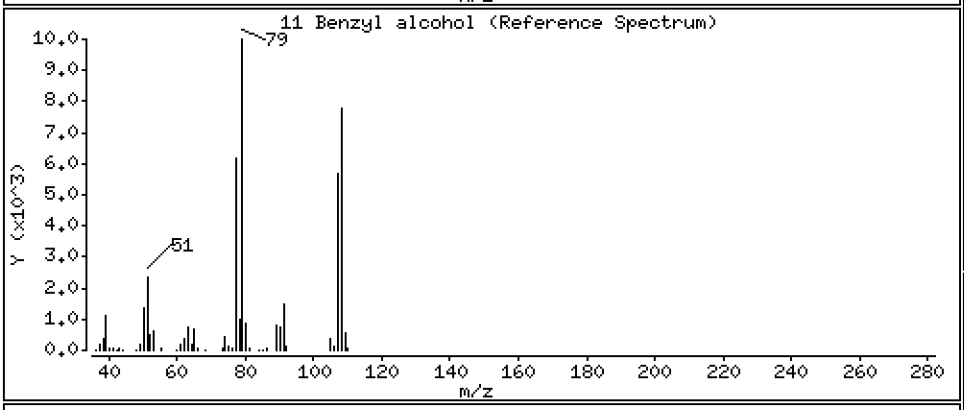
Column diameter: 0.25

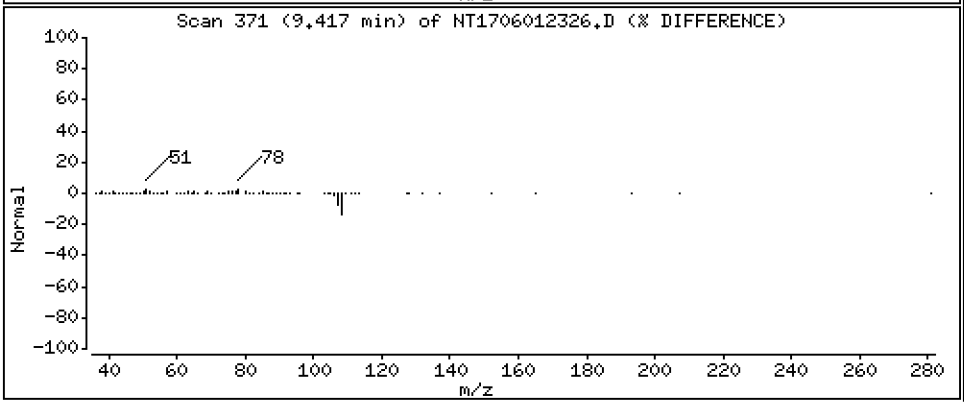
11 Benzyl alcohol

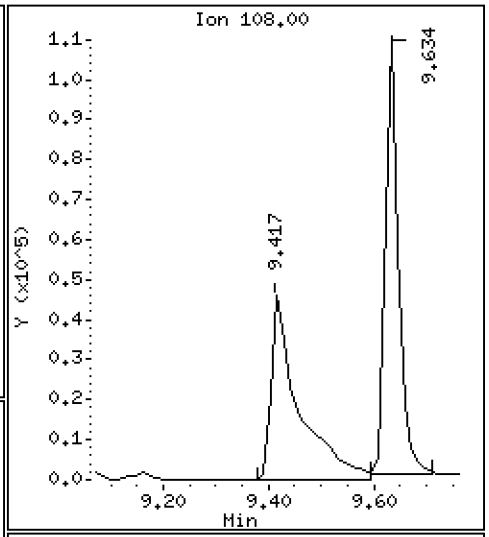
Concentration: 3.077 ug/mL

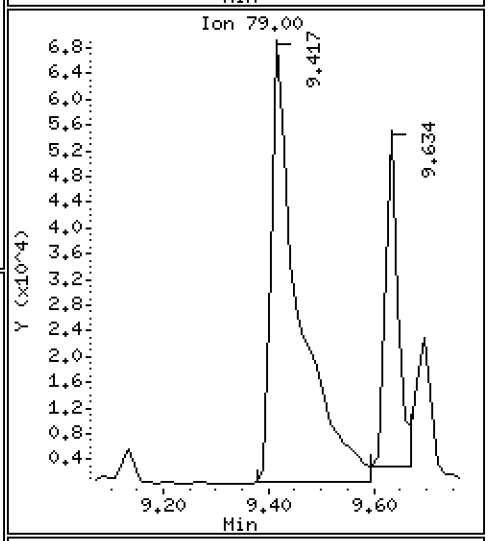


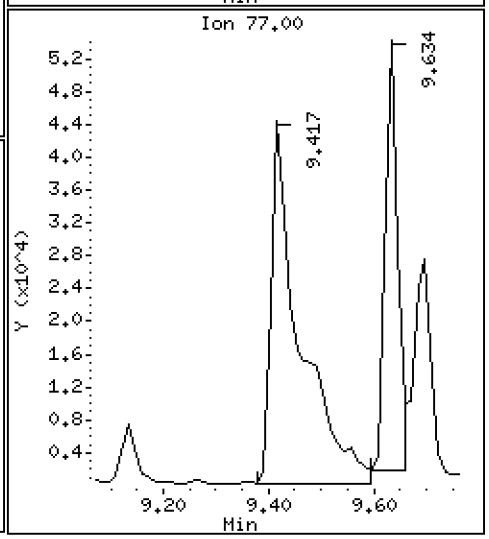












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

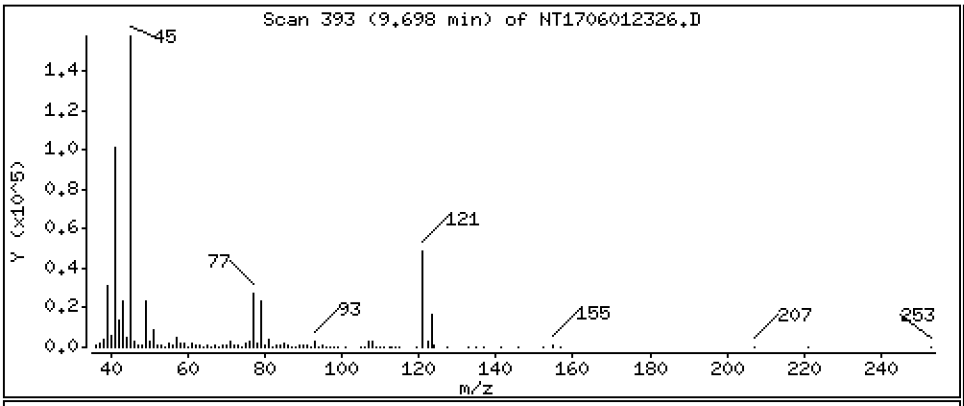
Operator: VTS

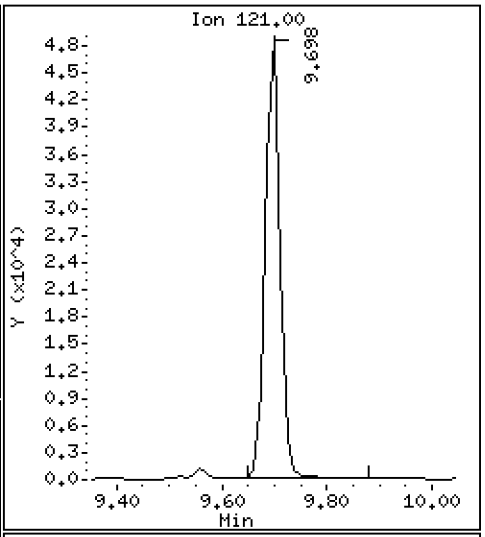
Column phase: ZB-5msi

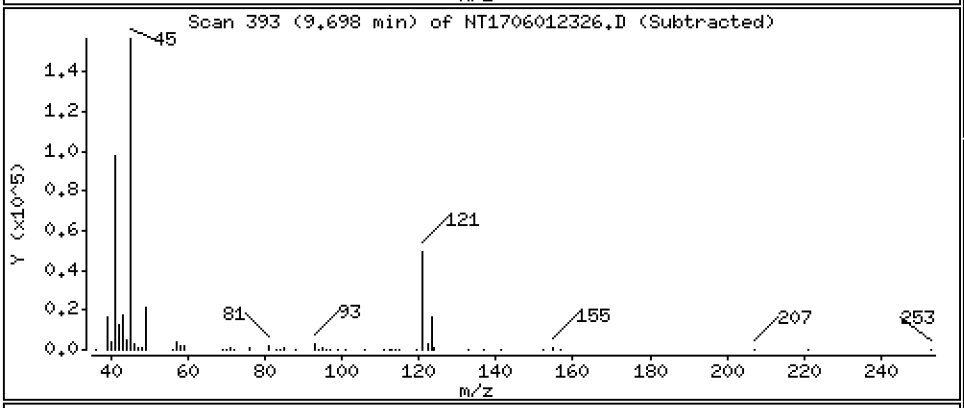
Column diameter: 0.25

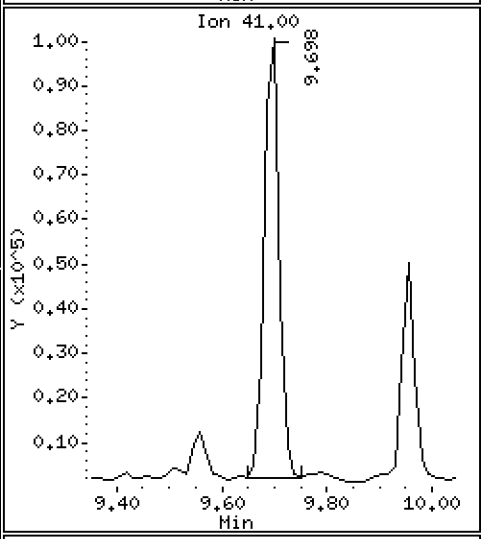
14 2,2'-oxybis(1-Chloropropane)

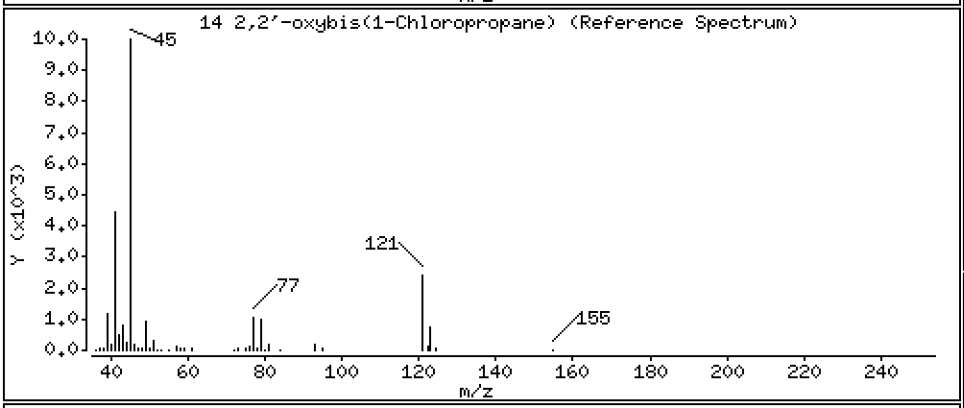
Concentration: 4.152 ug/mL

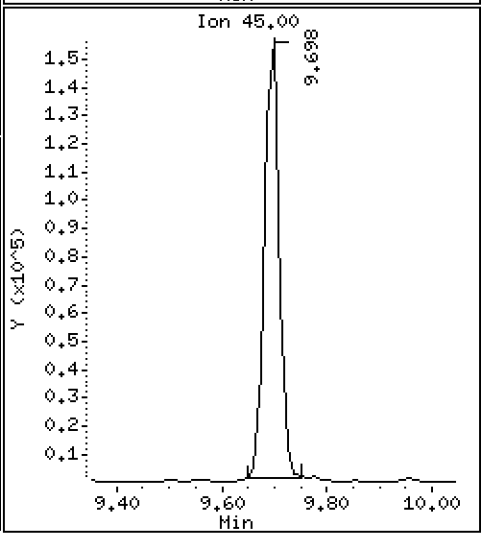


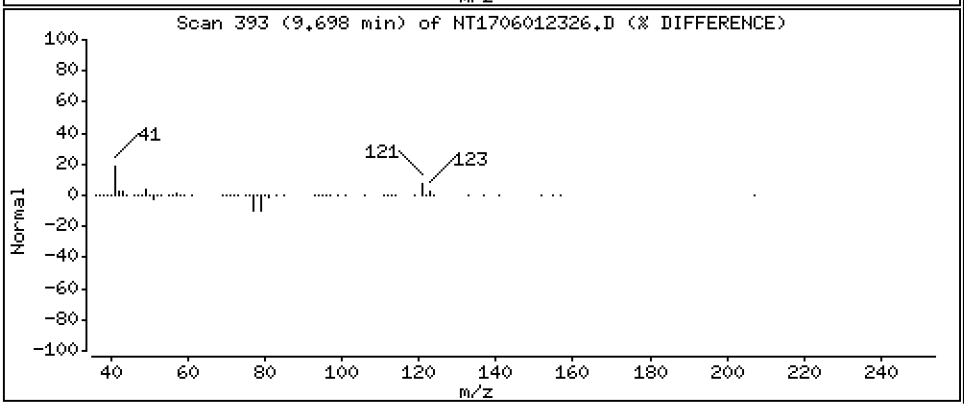












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

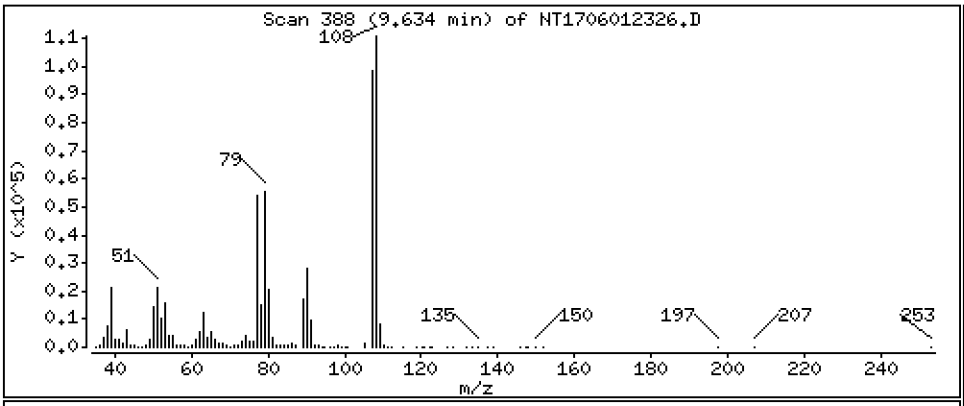
Operator: VTS

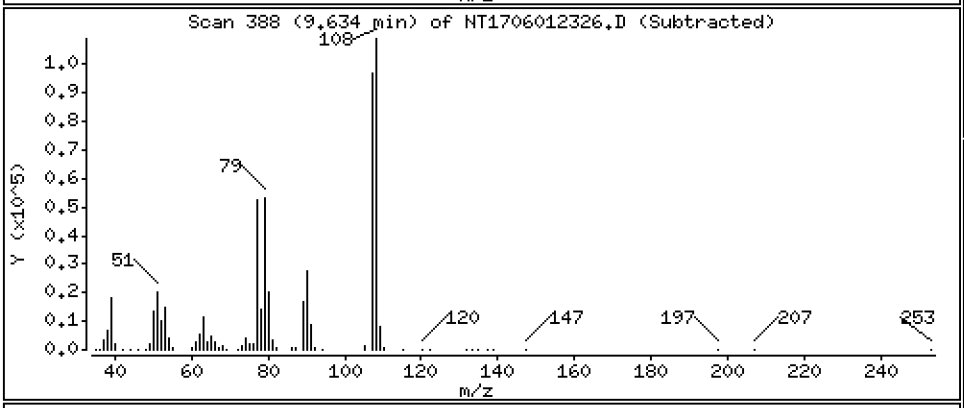
Column phase: ZB-5msi

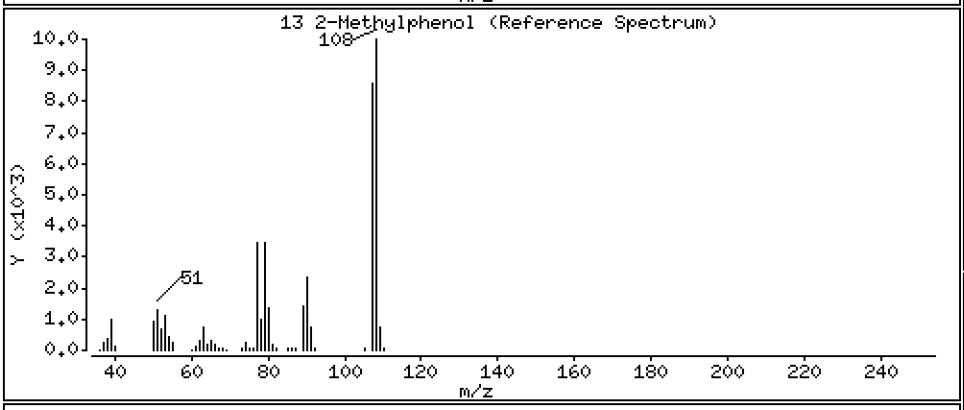
Column diameter: 0.25

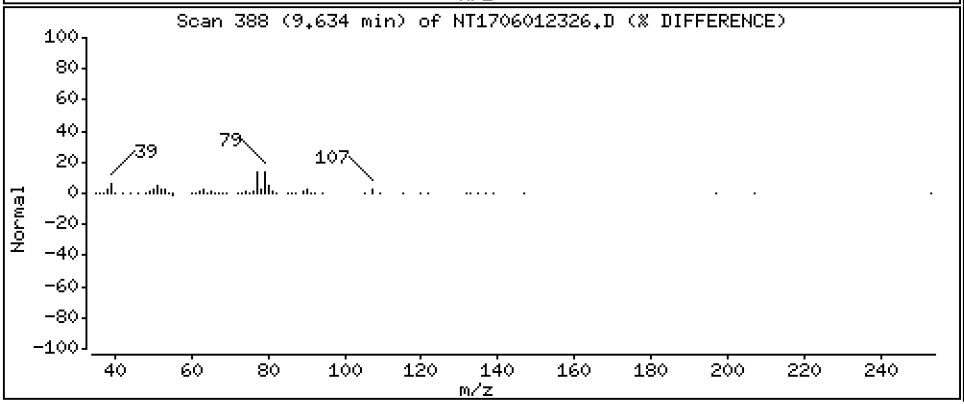
13 2-Methylphenol

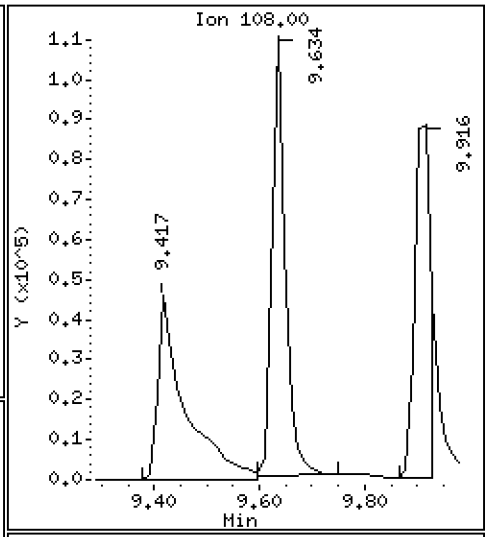
Concentration: 2.266 ug/mL

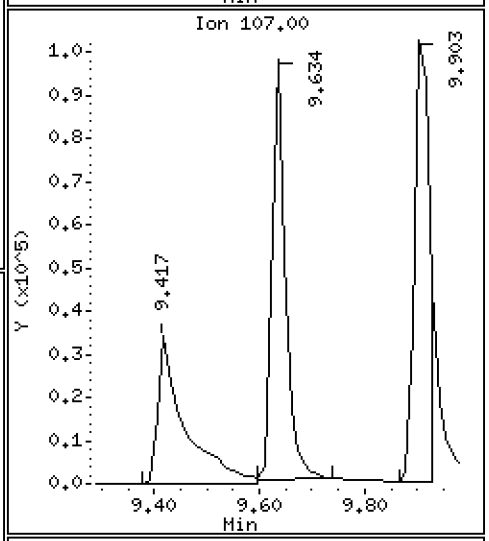


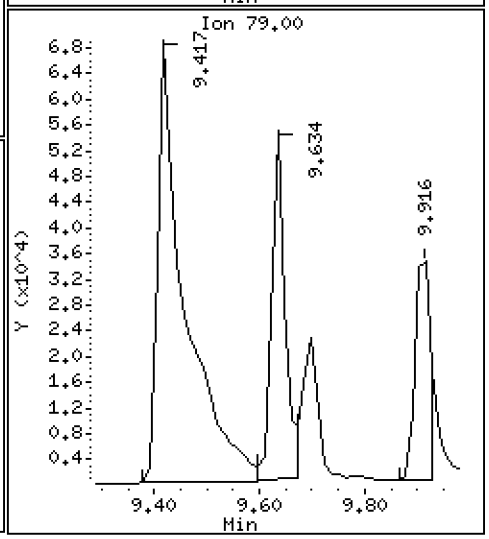












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

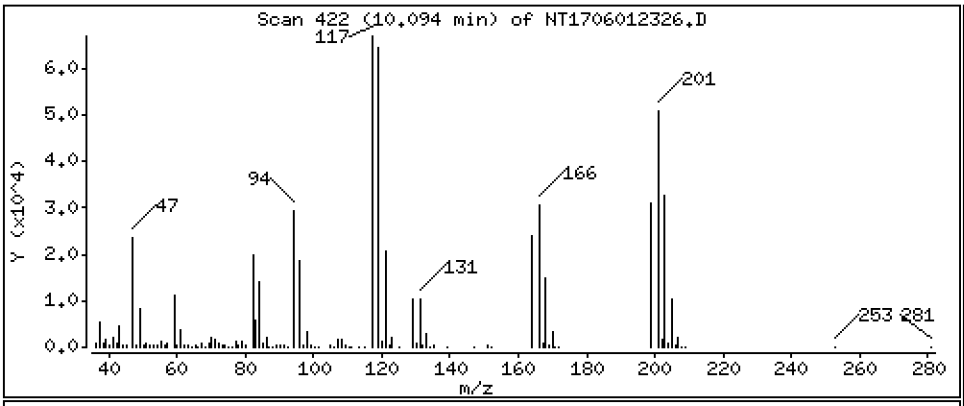
Operator: VTS

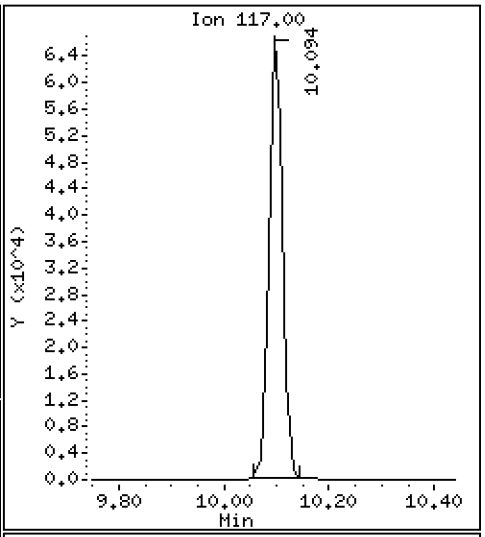
Column phase: ZB-5msi

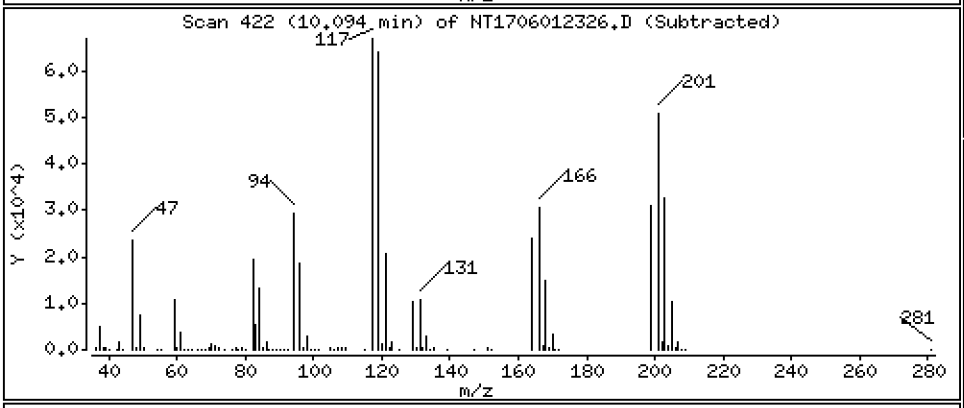
Column diameter: 0.25

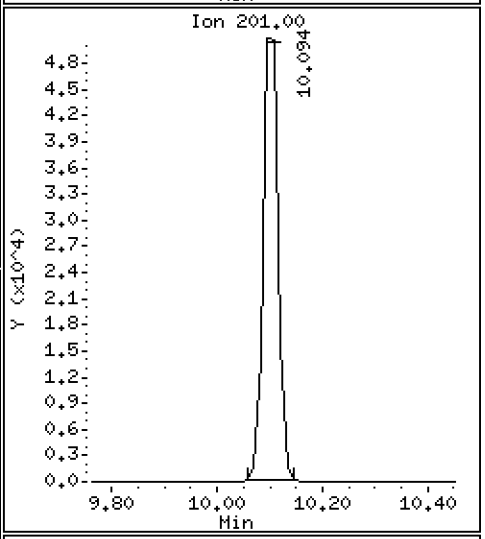
17 Hexachloroethane

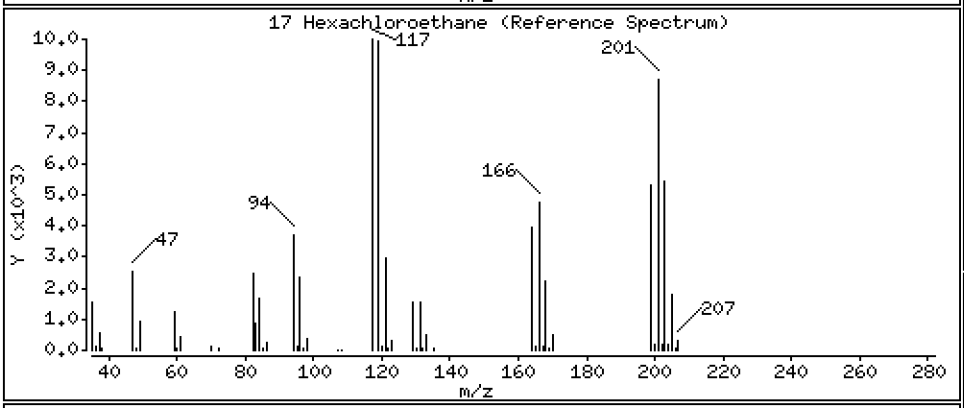
Concentration: 3.165 ug/mL

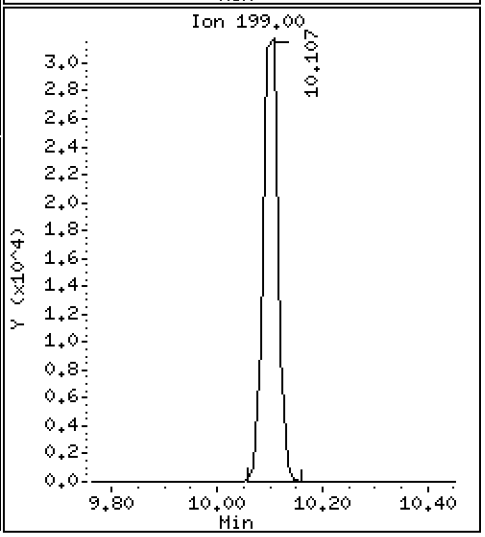


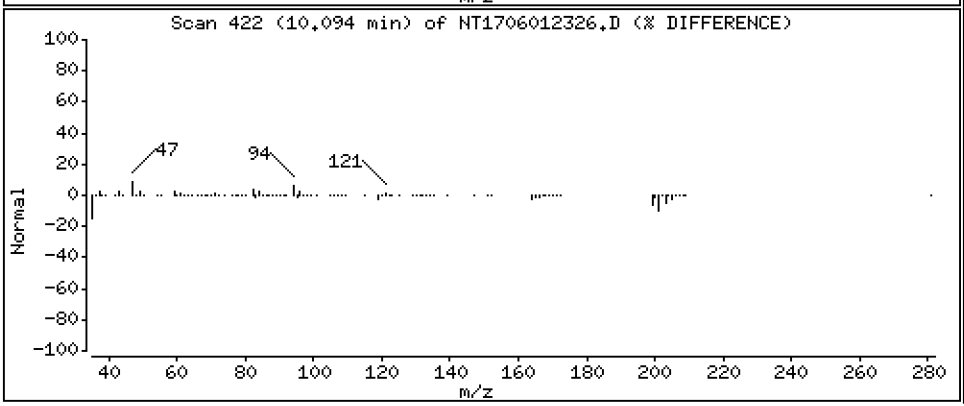












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

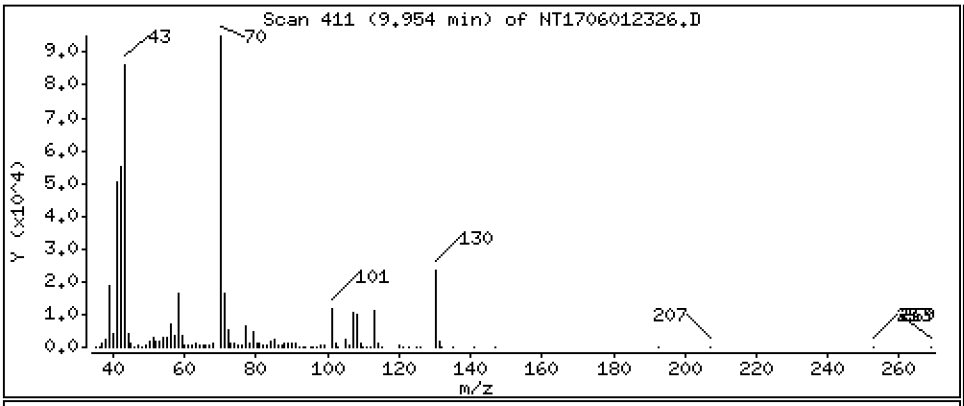
Operator: VTS

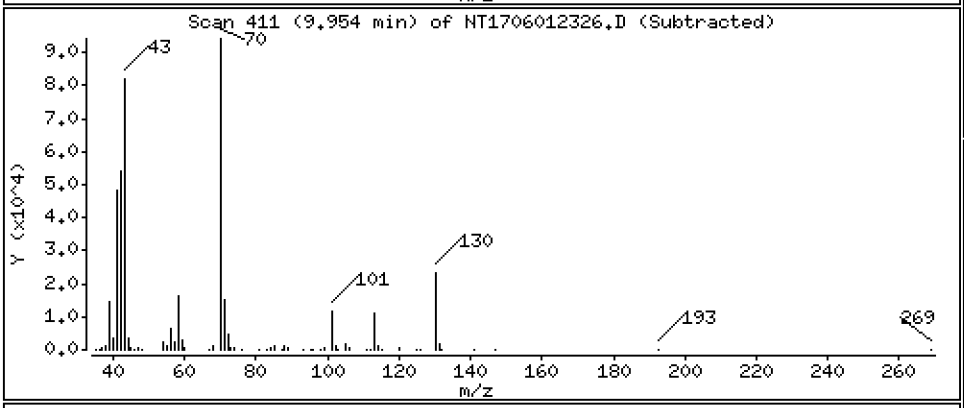
Column phase: ZB-5msi

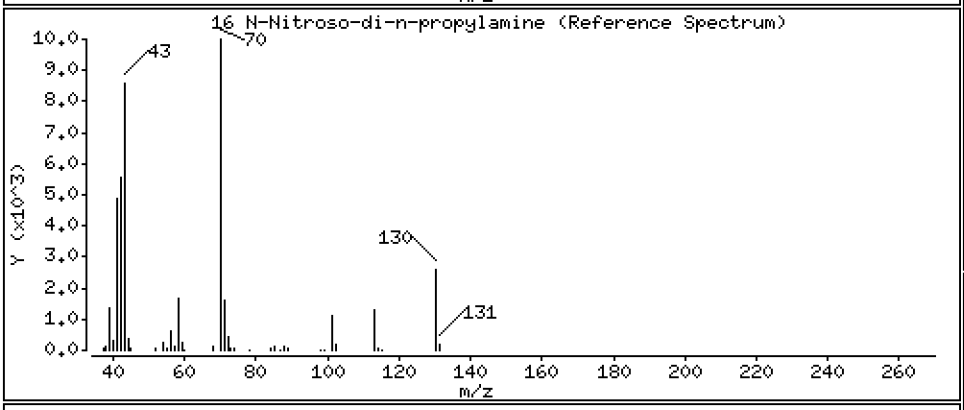
Column diameter: 0.25

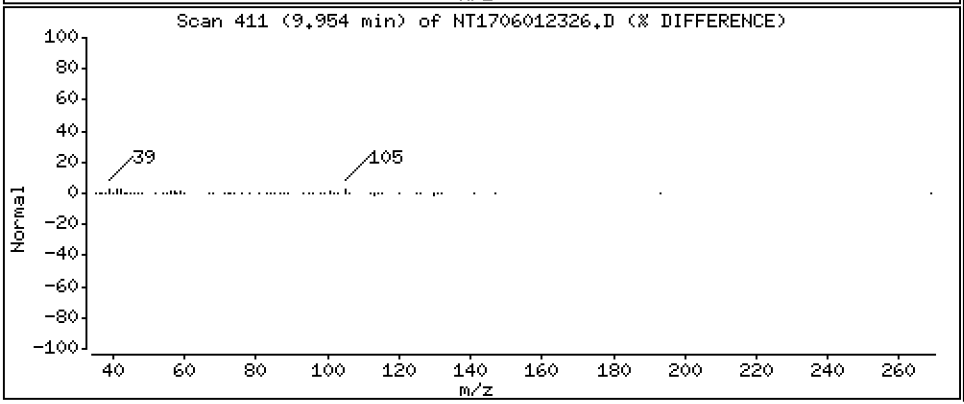
16 N-Nitroso-di-n-propylamine

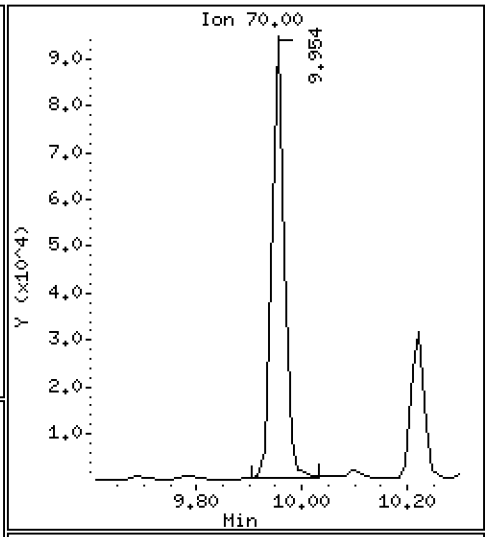
Concentration: 2.397 ug/mL

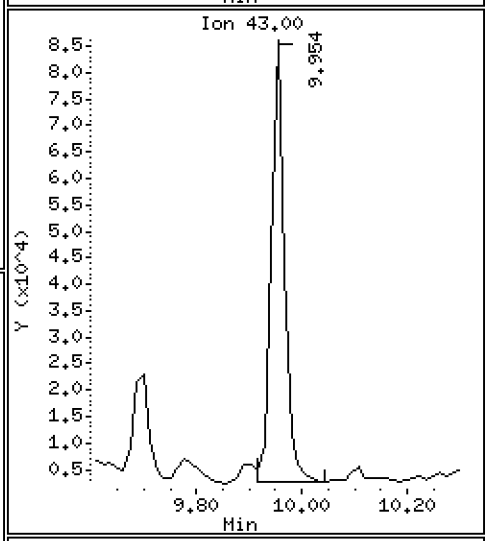


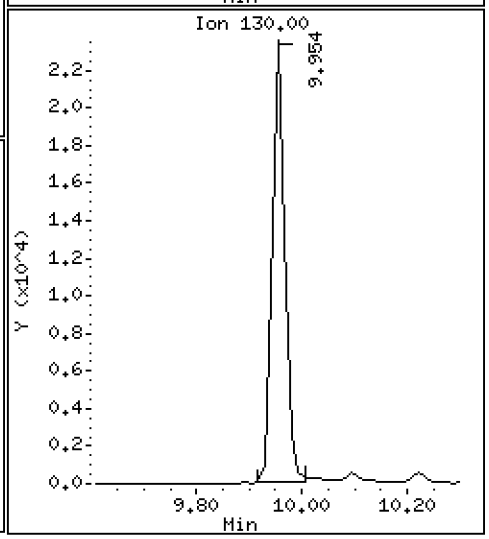












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

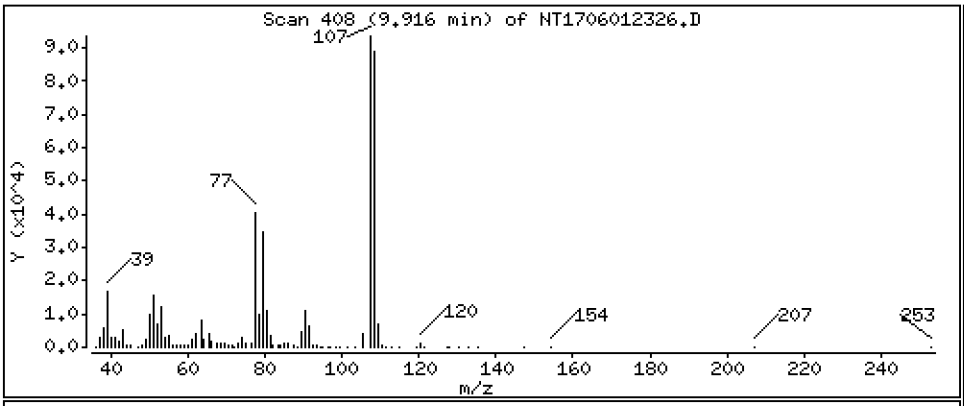
Operator: VTS

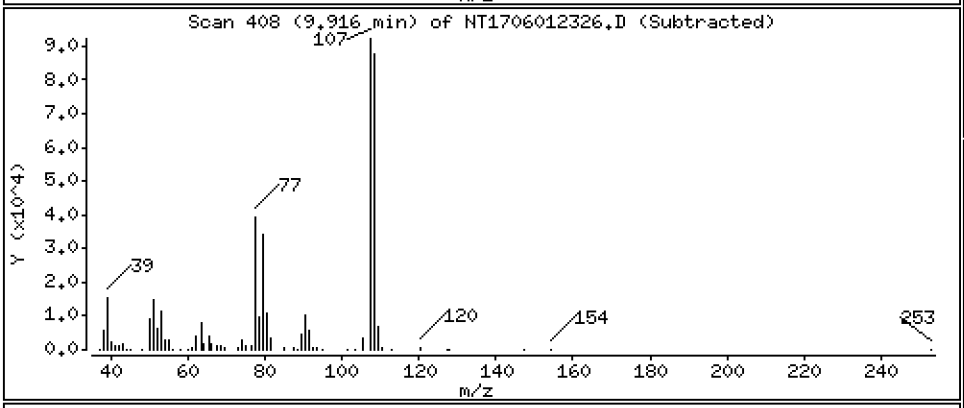
Column phase: ZB-5msi

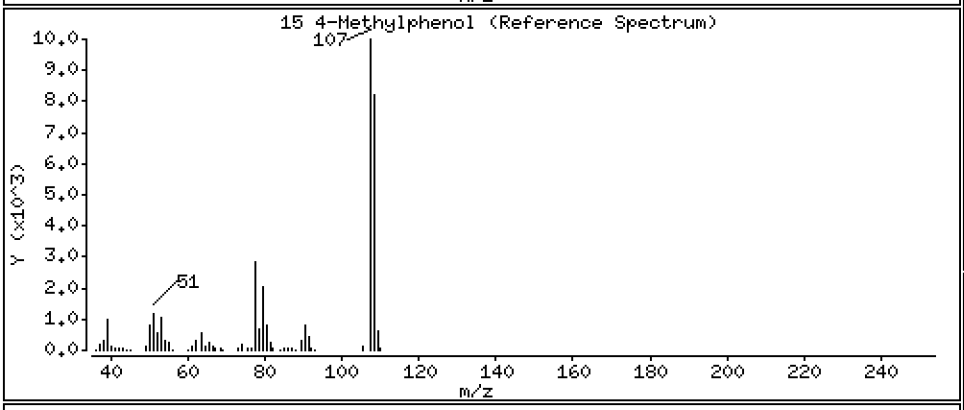
Column diameter: 0.25

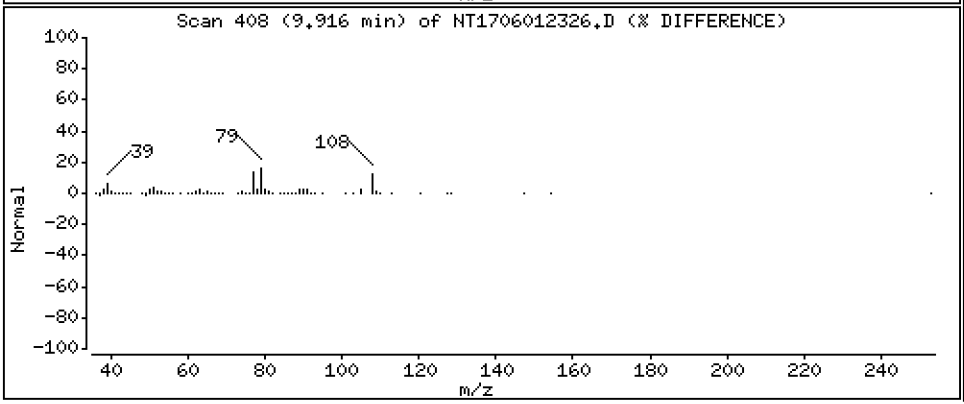
15 4-Methylphenol

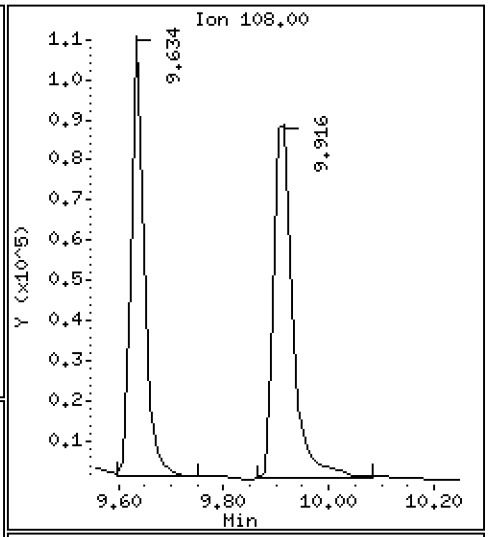
Concentration: 2.641 ug/mL

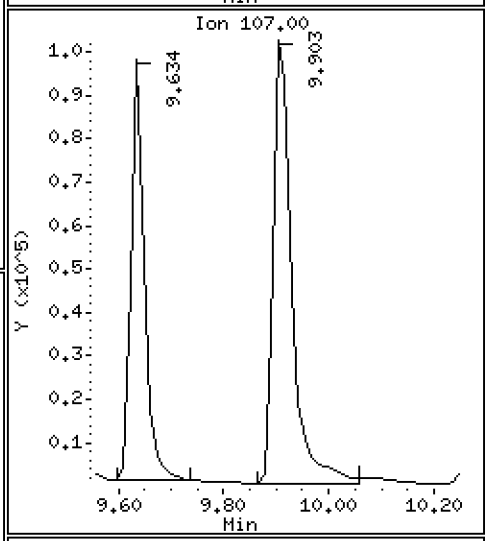


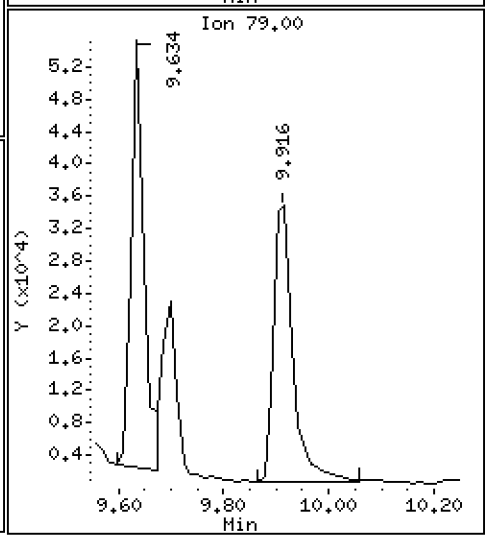












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

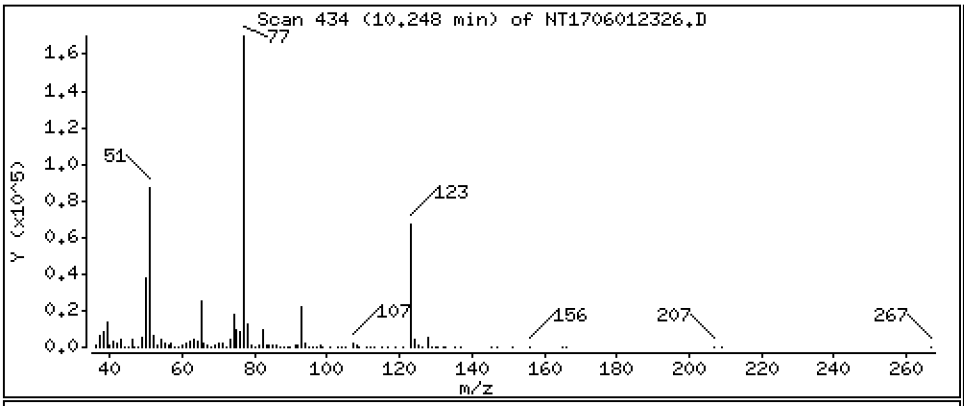
Operator: VTS

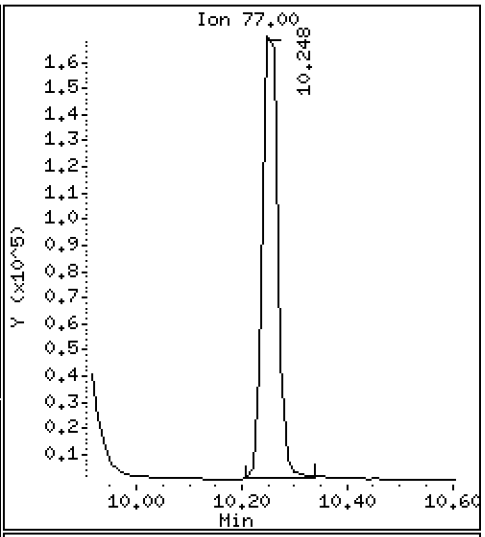
Column phase: ZB-5msi

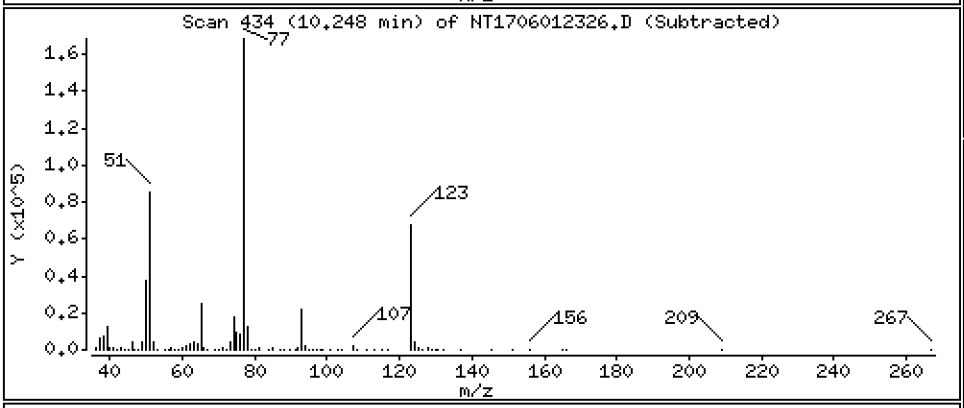
Column diameter: 0.25

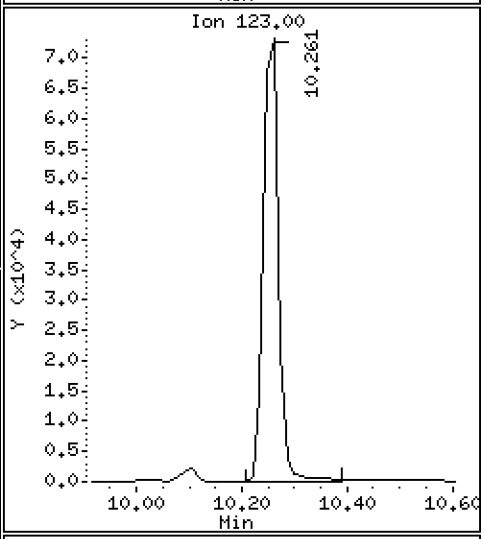
19 Nitrobenzene

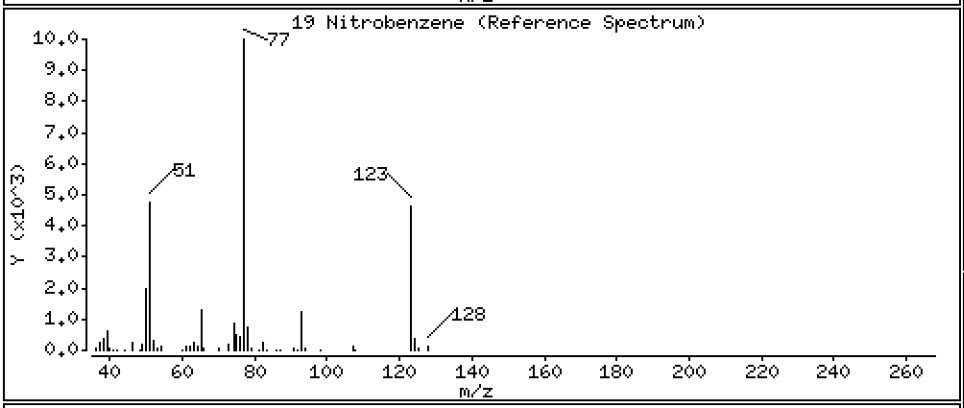
Concentration: 3.208 ug/mL

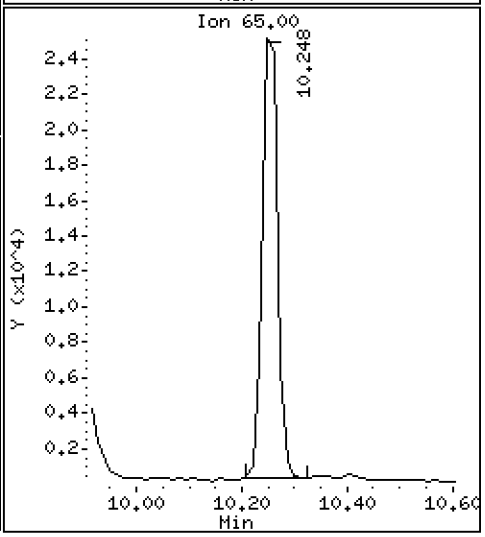


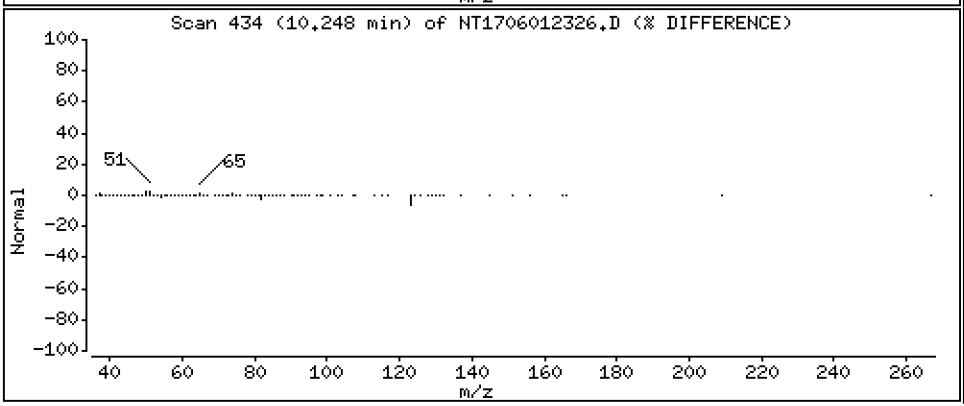












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

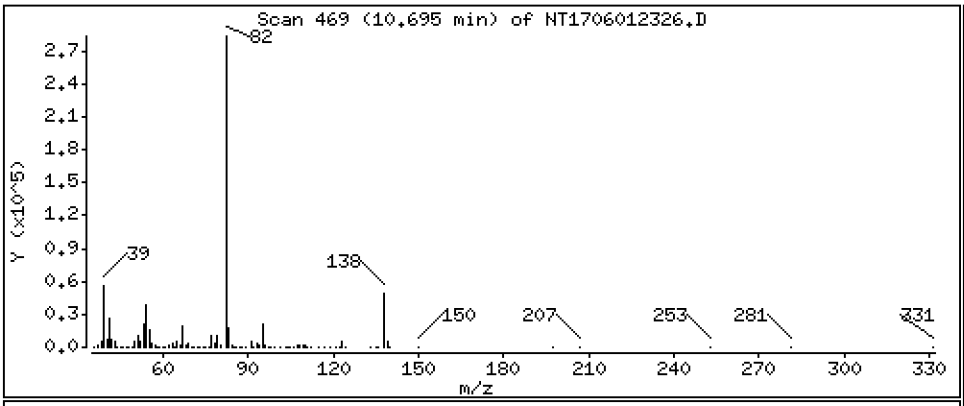
Operator: VTS

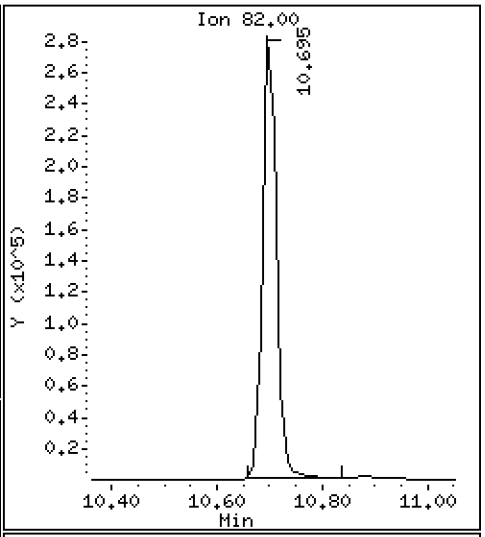
Column phase: ZB-5msi

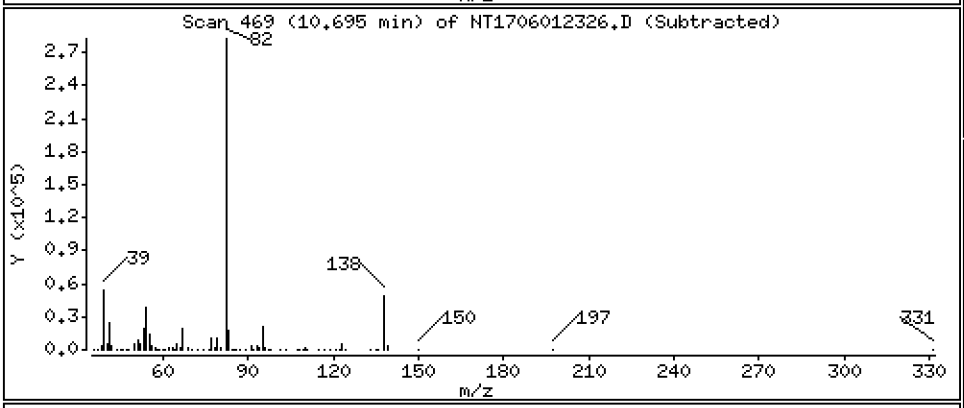
Column diameter: 0.25

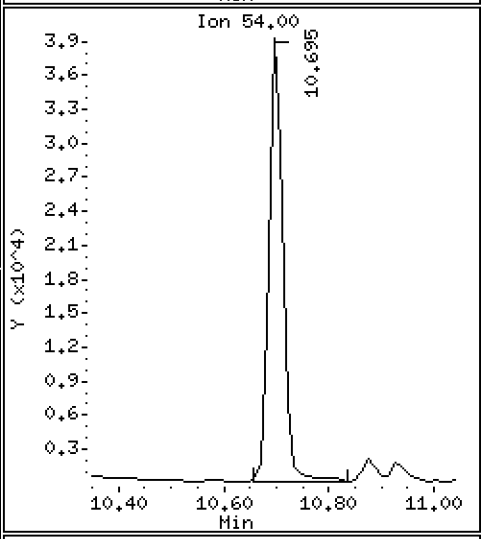
20 Isophorone

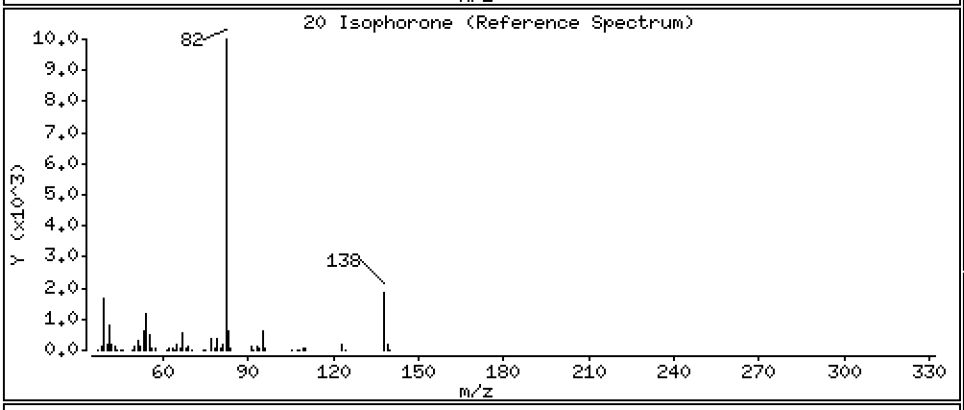
Concentration: 4.325 ug/mL

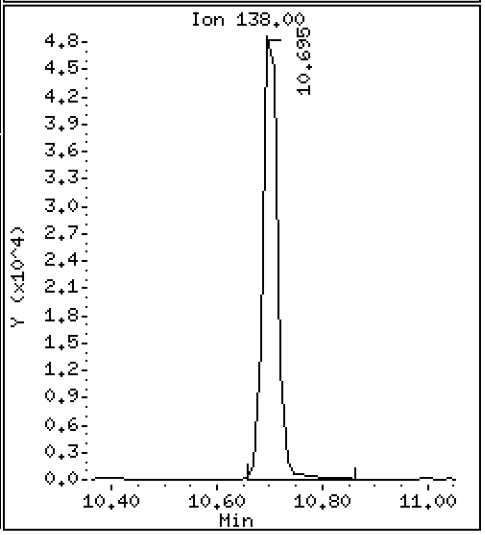


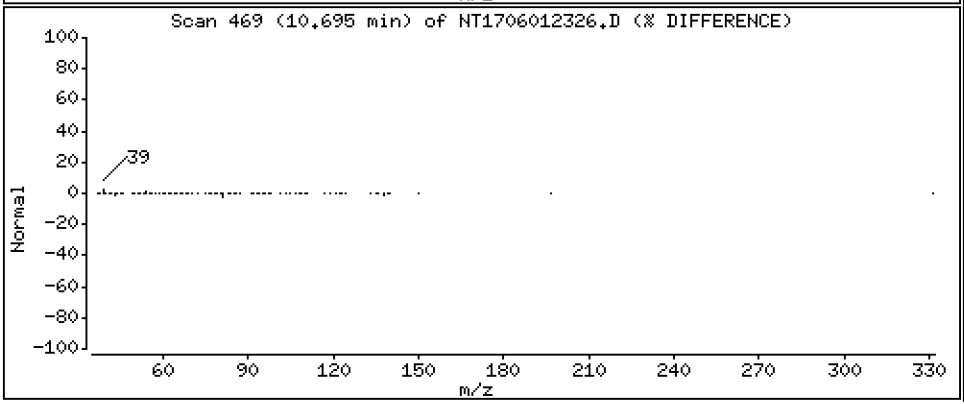












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

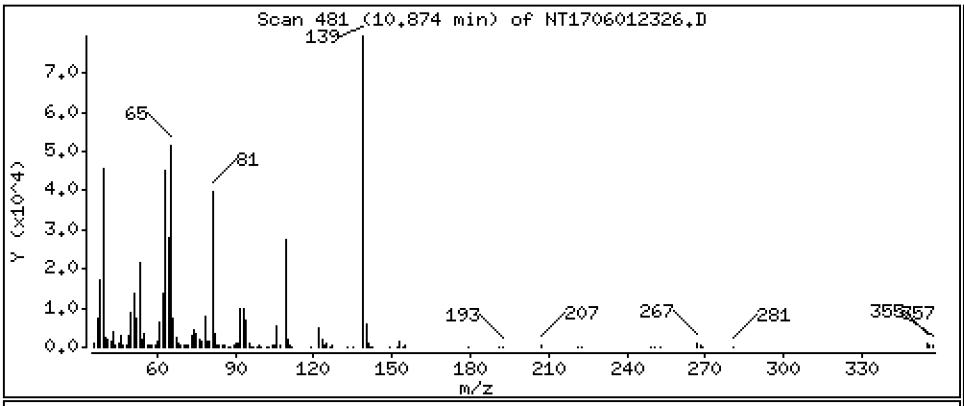
Operator: VTS

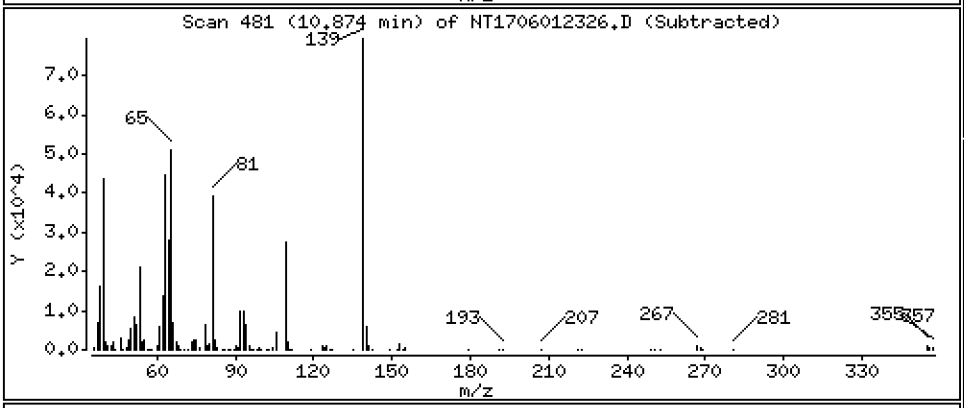
Column phase: ZB-5msi

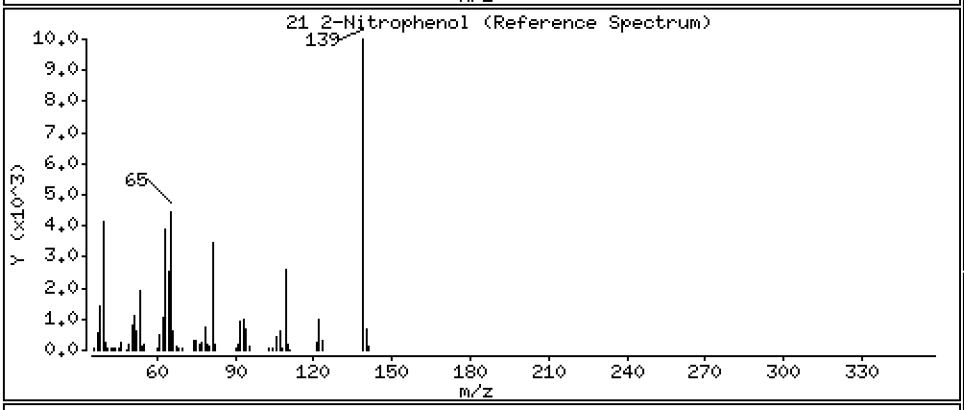
Column diameter: 0.25

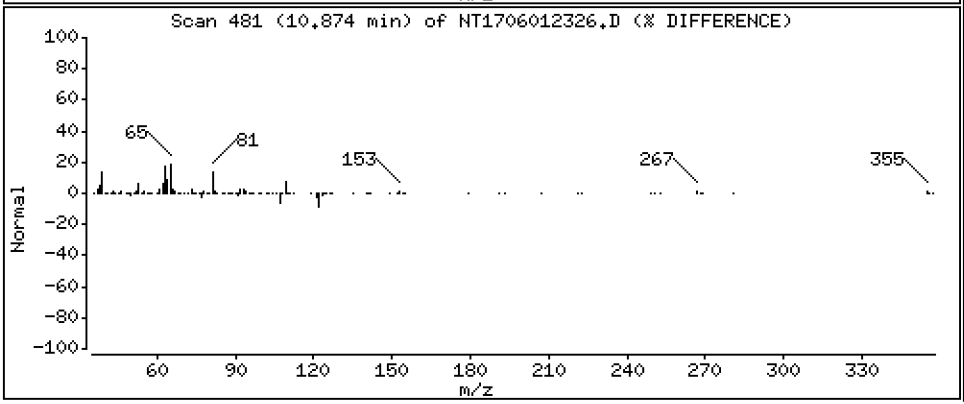
21 2-Nitrophenol

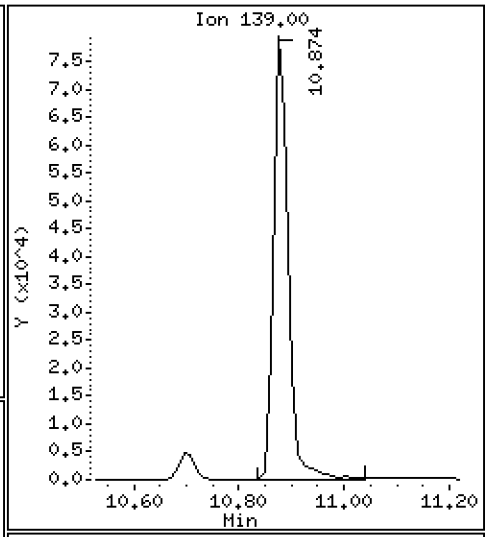
Concentration: 3.092 ug/mL

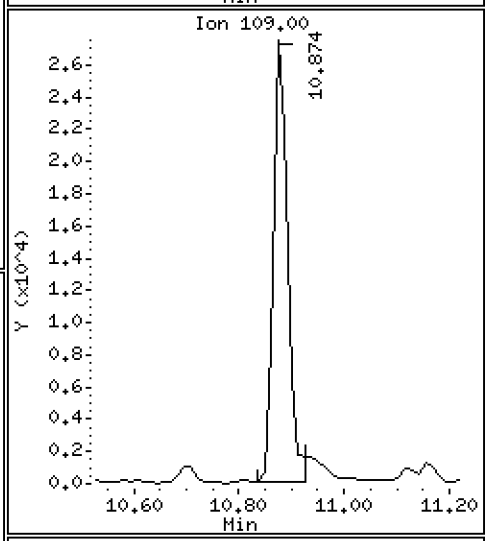


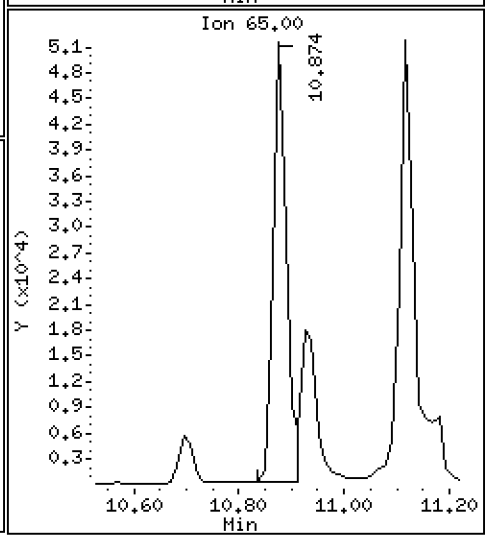












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

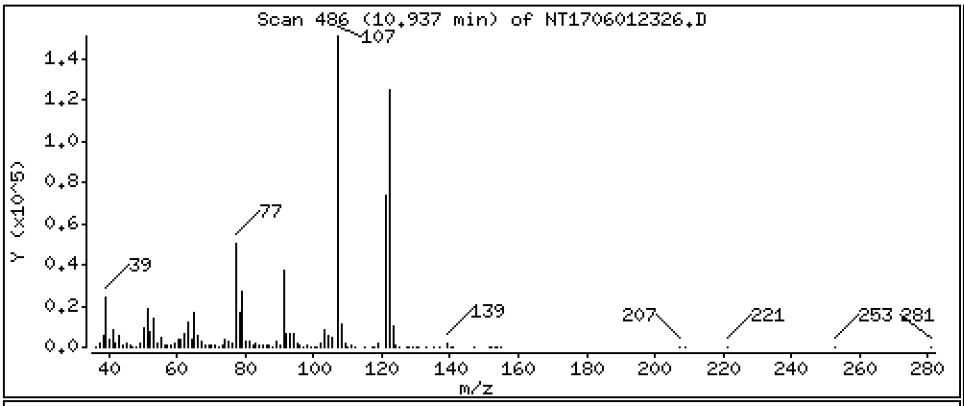
Operator: VTS

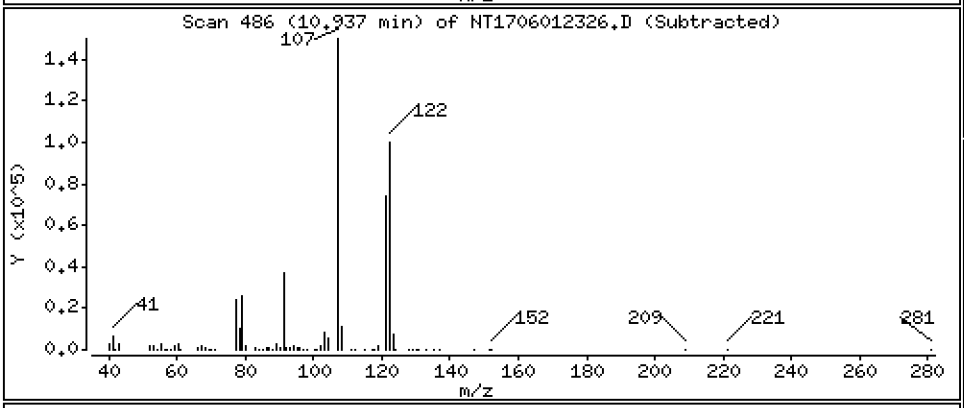
Column phase: ZB-5msi

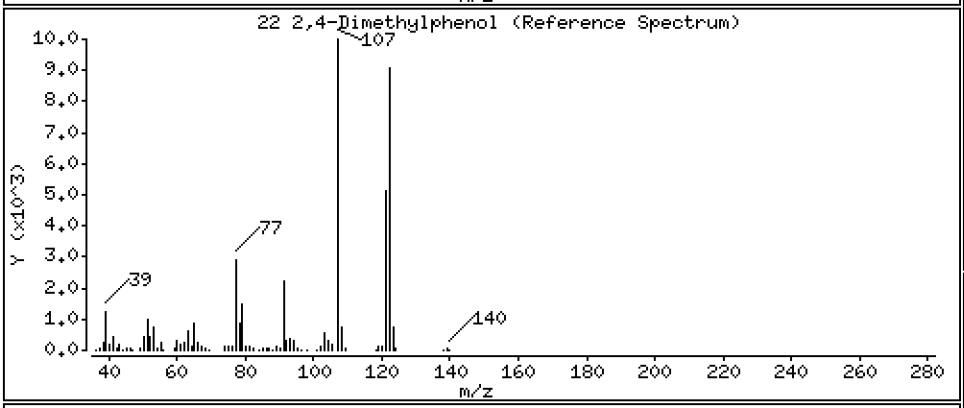
Column diameter: 0.25

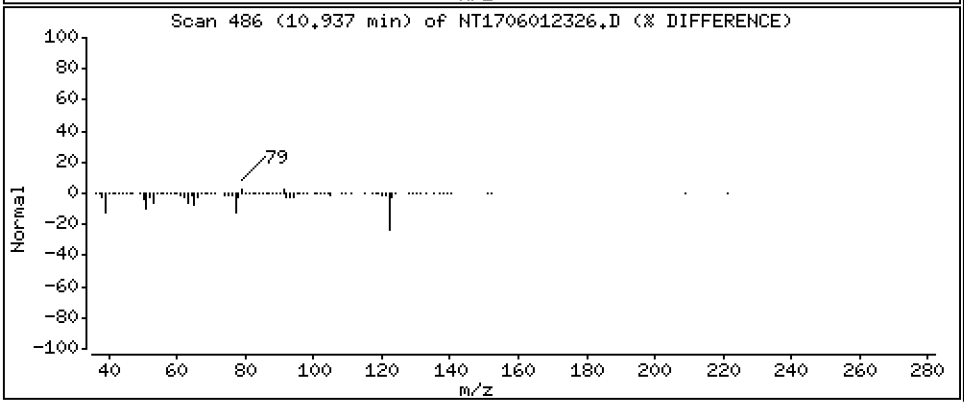
22 2,4-Dimethylphenol

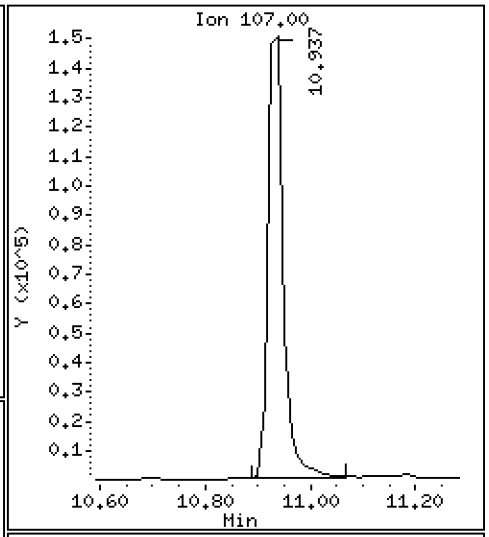
Concentration: 3.257 ug/mL

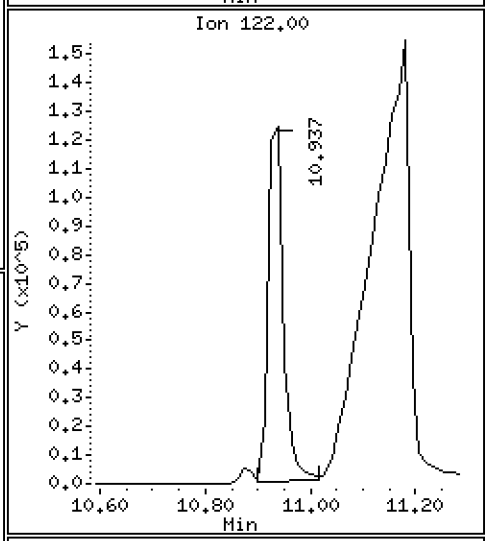


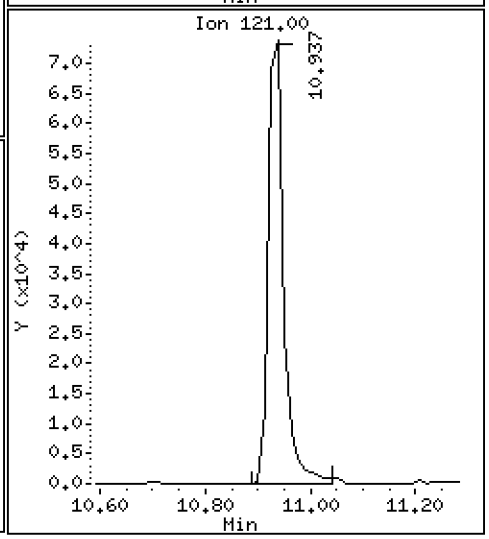












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

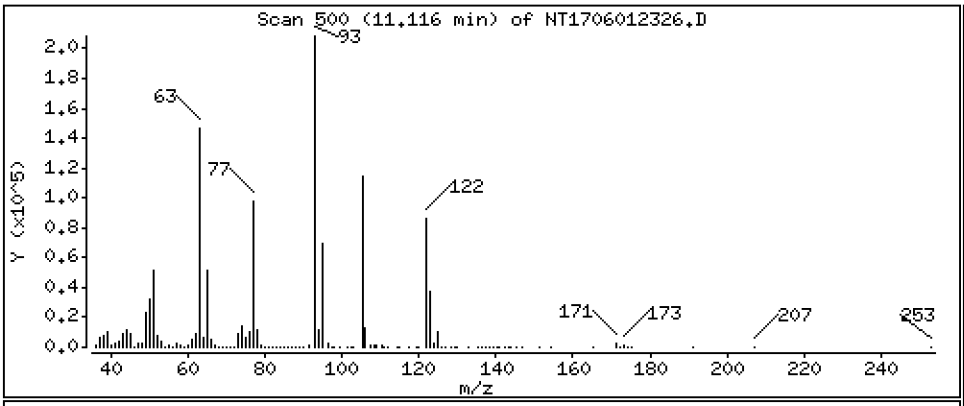
Operator: VTS

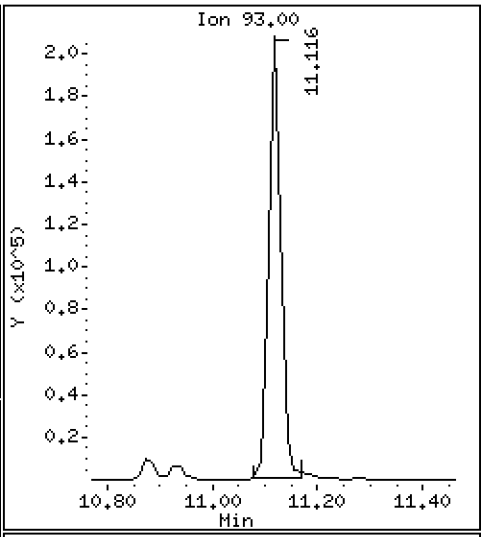
Column phase: ZB-5msi

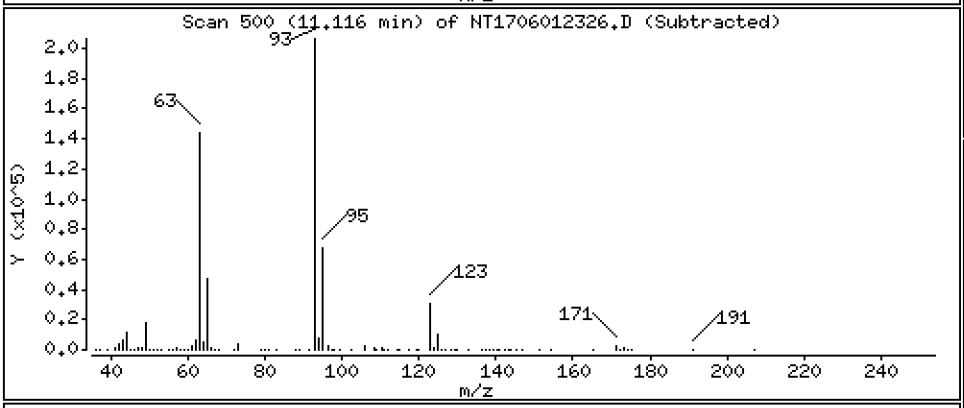
Column diameter: 0.25

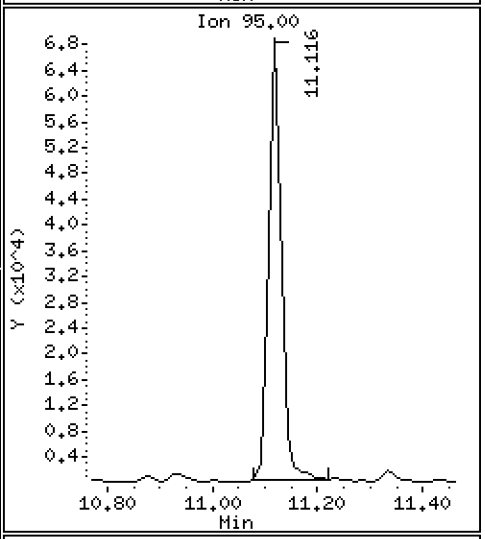
23 Bis(2-Chloroethoxy)methane

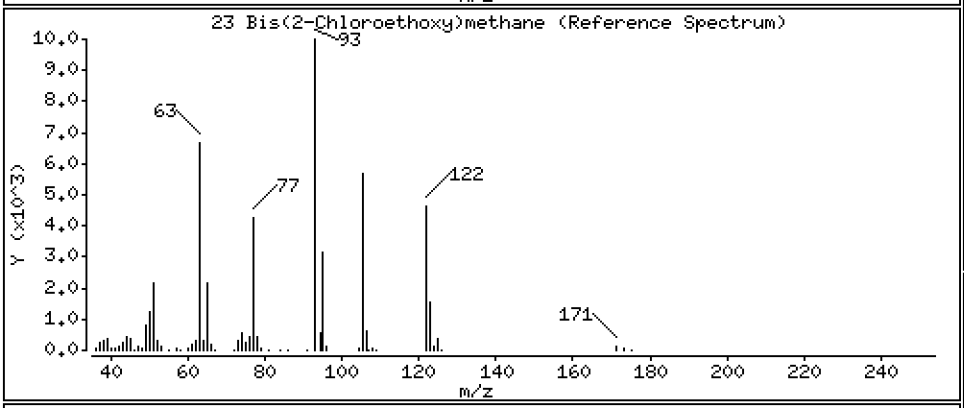
Concentration: 3.847 ug/mL

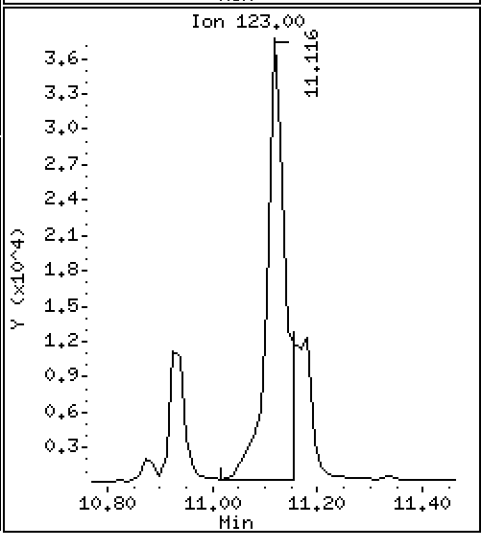


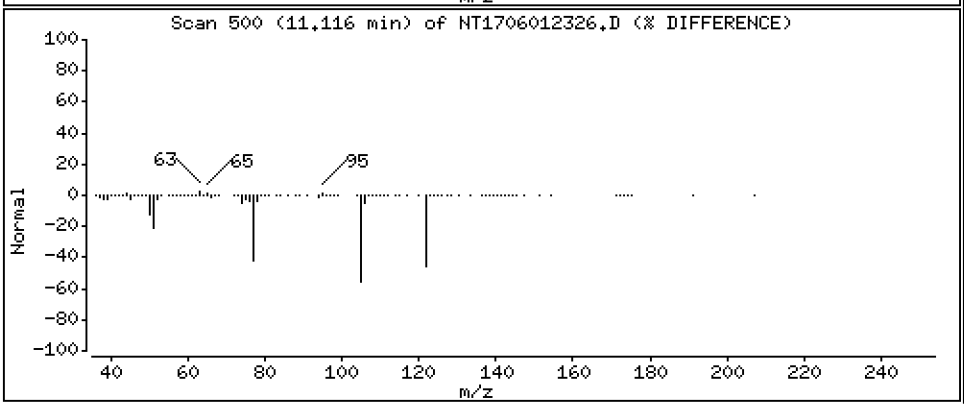












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

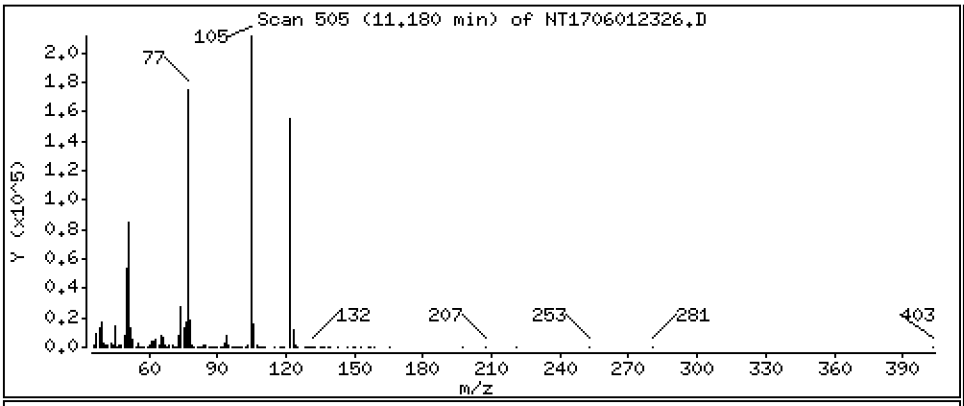
Operator: VTS

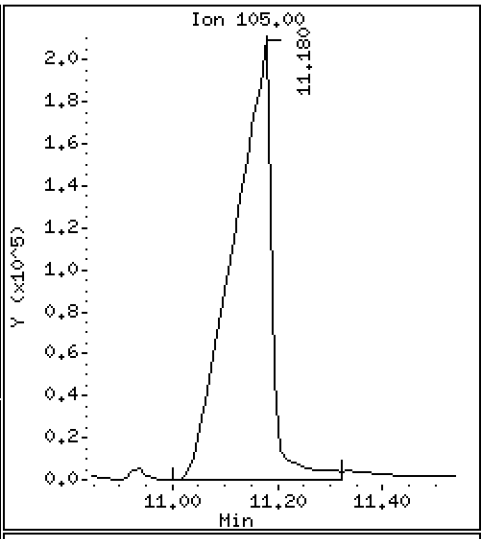
Column phase: ZB-5msi

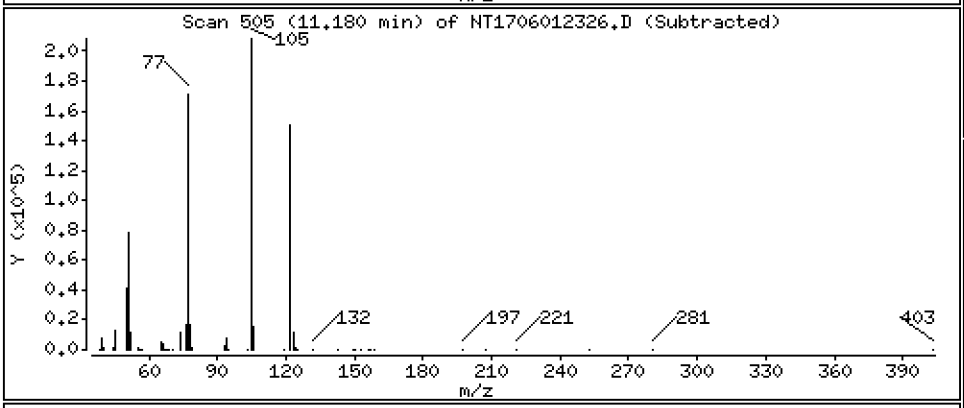
Column diameter: 0.25

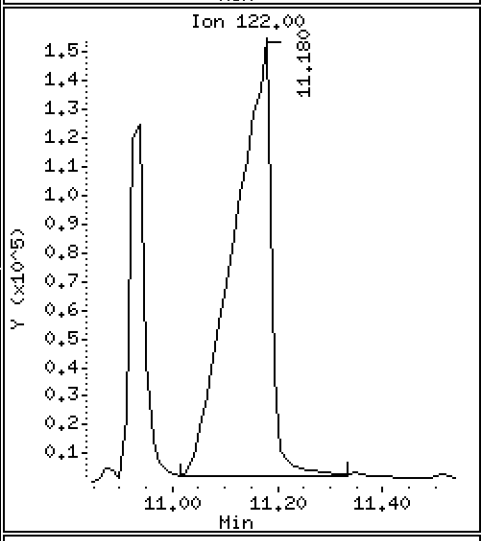
24 Benzoic acid

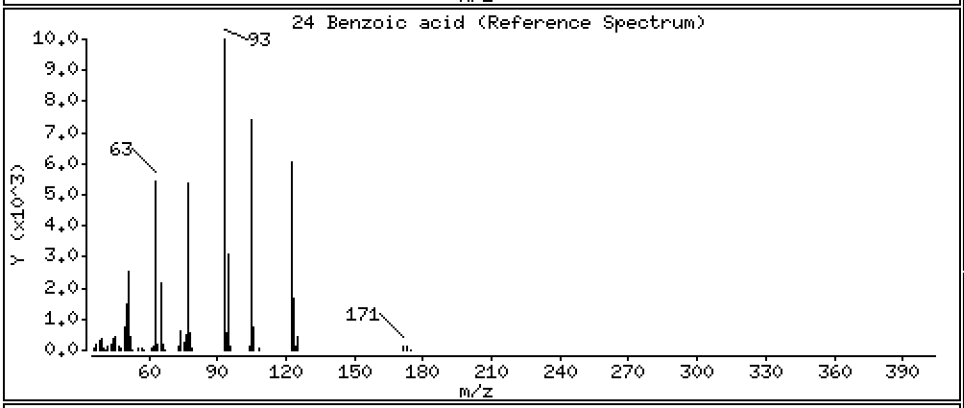
Concentration: 16.50 ug/mL

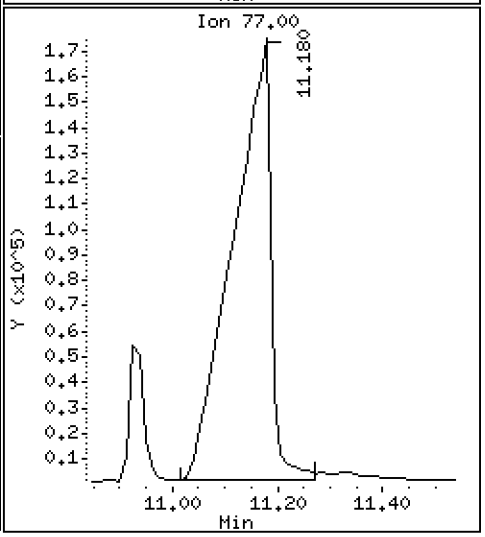


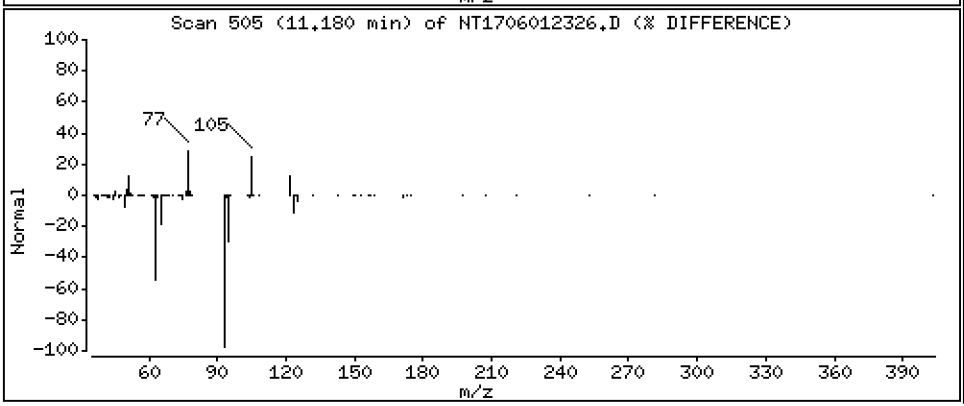












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

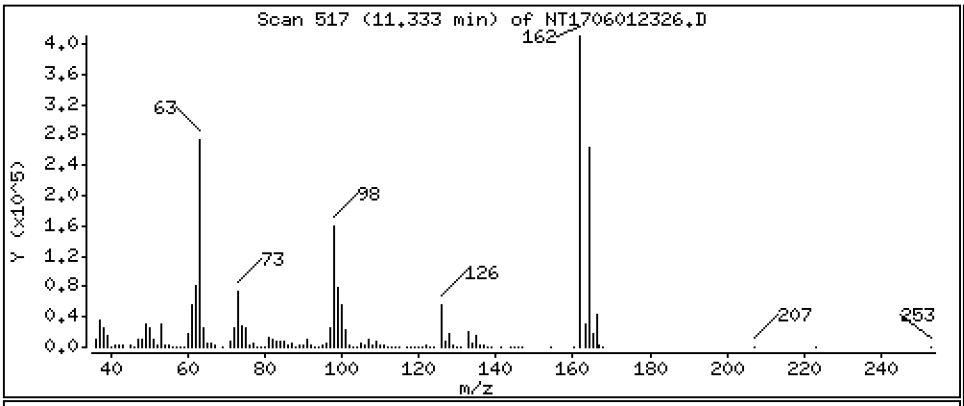
Operator: VTS

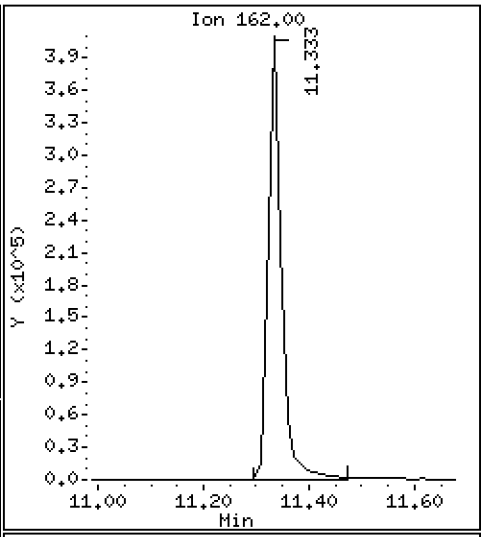
Column phase: ZB-5msi

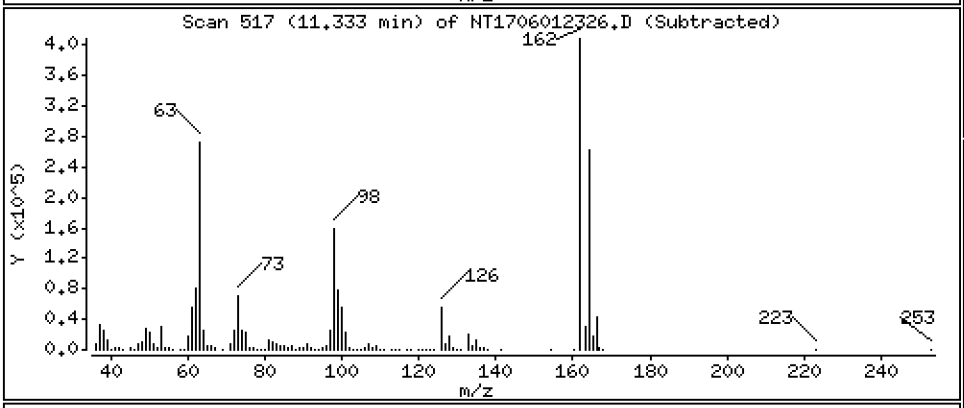
Column diameter: 0.25

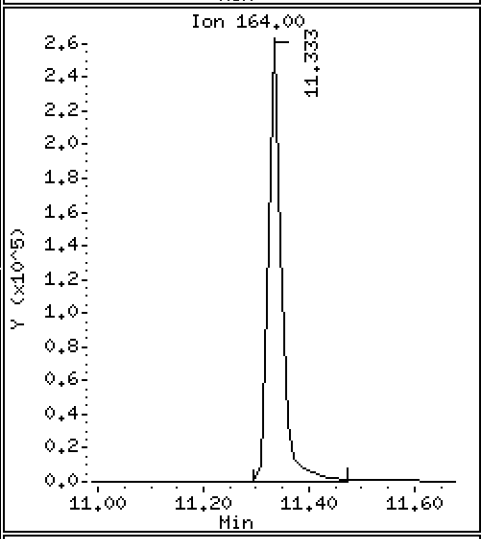
25 2,4-Dichlorophenol

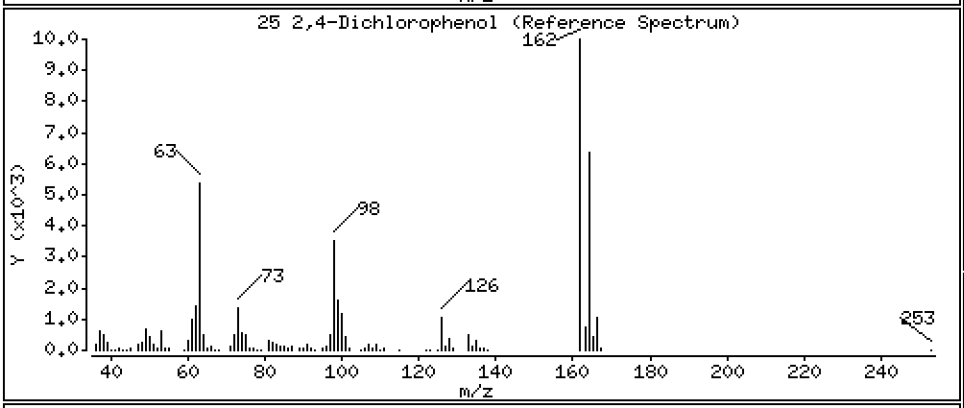
Concentration: 10.65 ug/mL

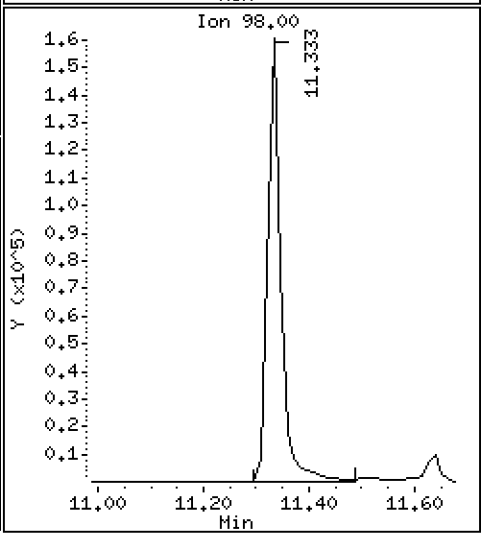


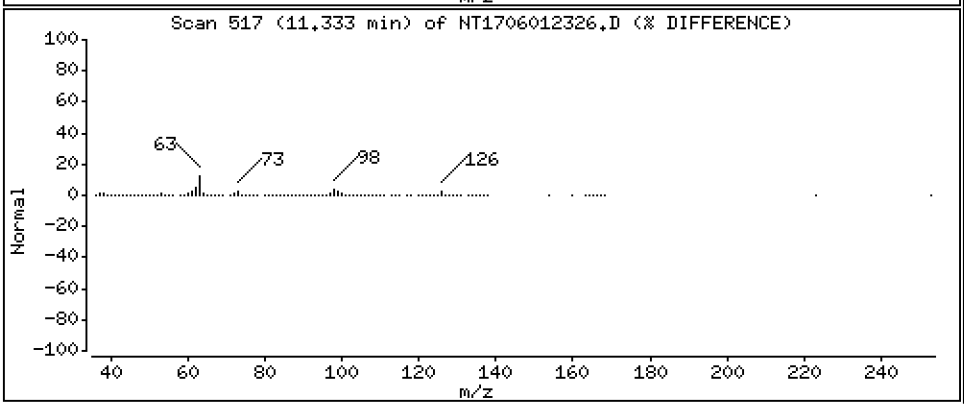












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

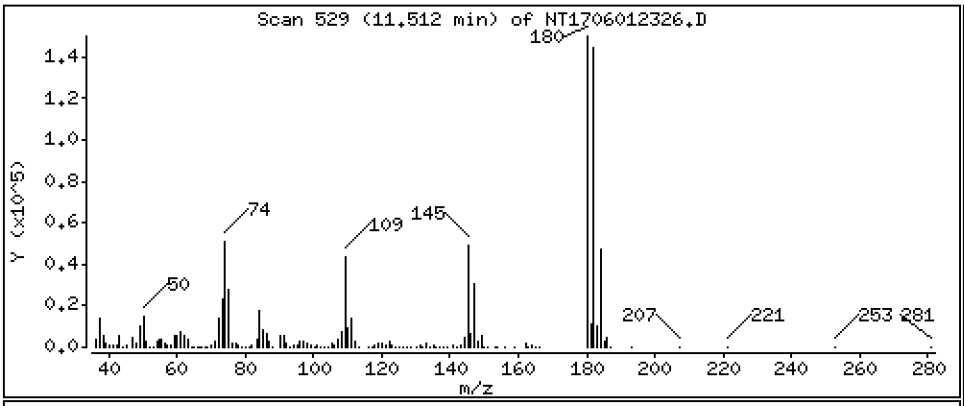
Operator: VTS

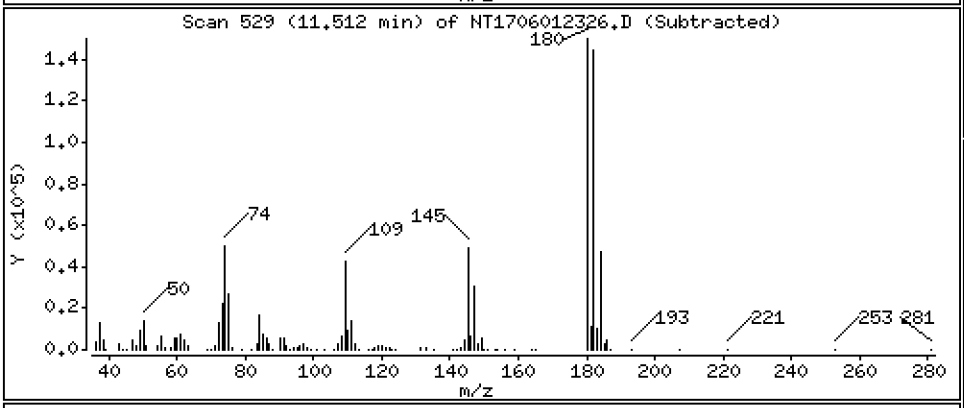
Column phase: ZB-5msi

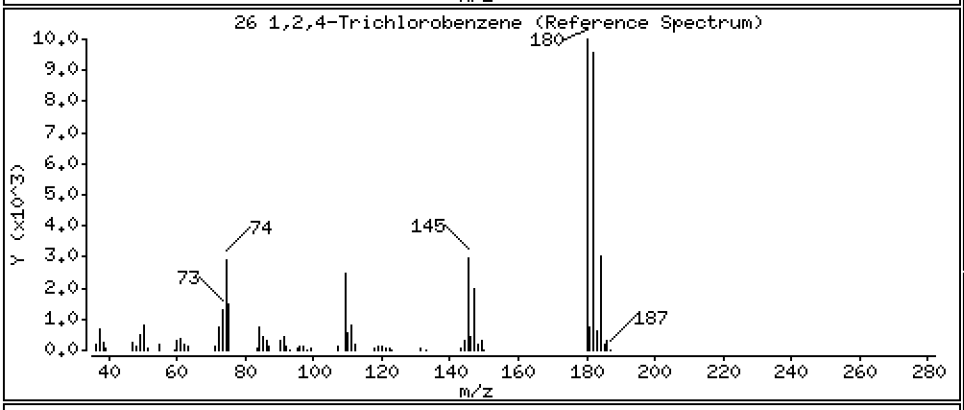
Column diameter: 0.25

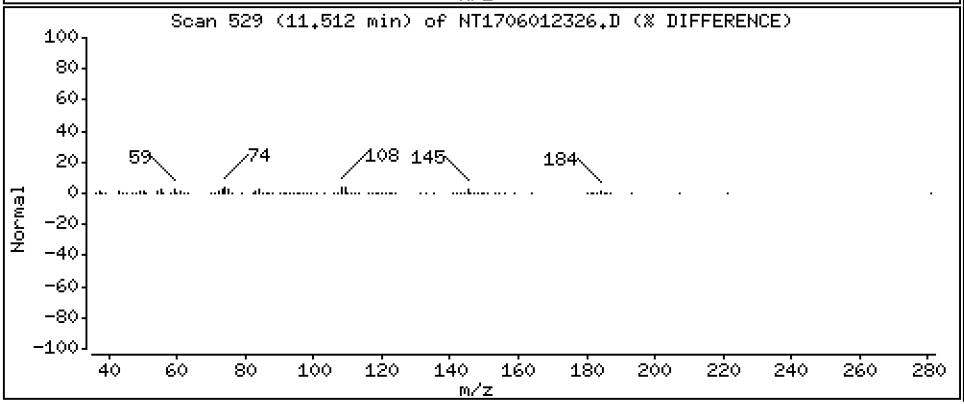
26 1,2,4-Trichlorobenzene

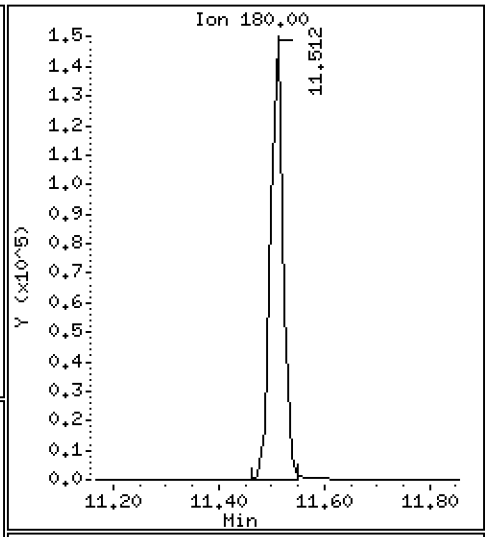
Concentration: 2.970 ug/mL

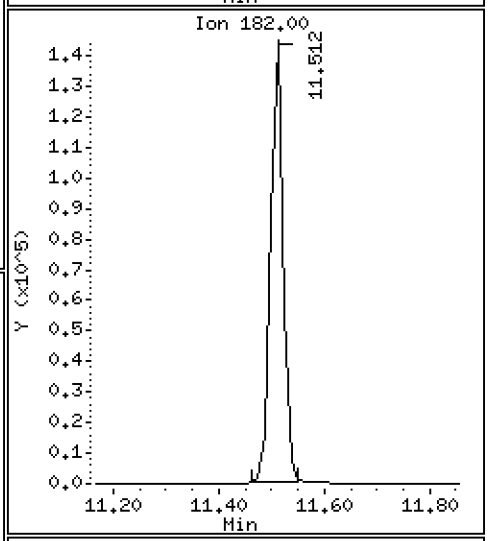


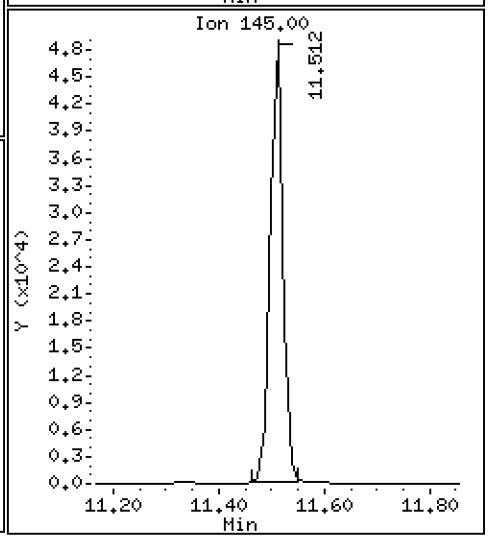












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

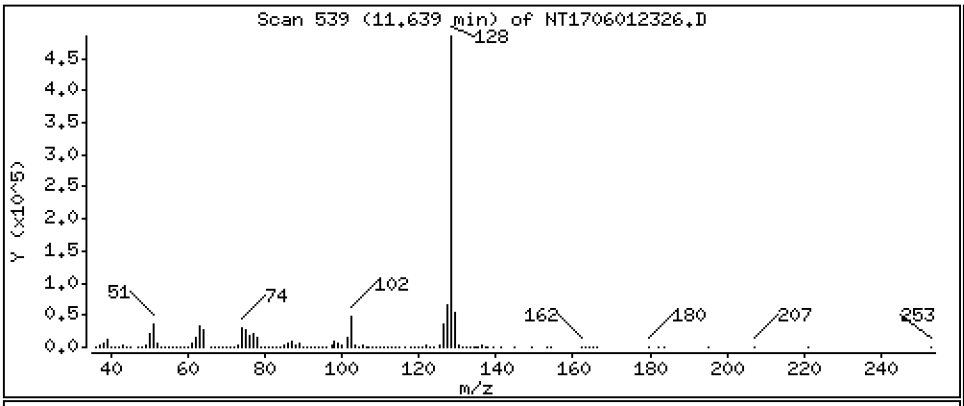
Operator: VTS

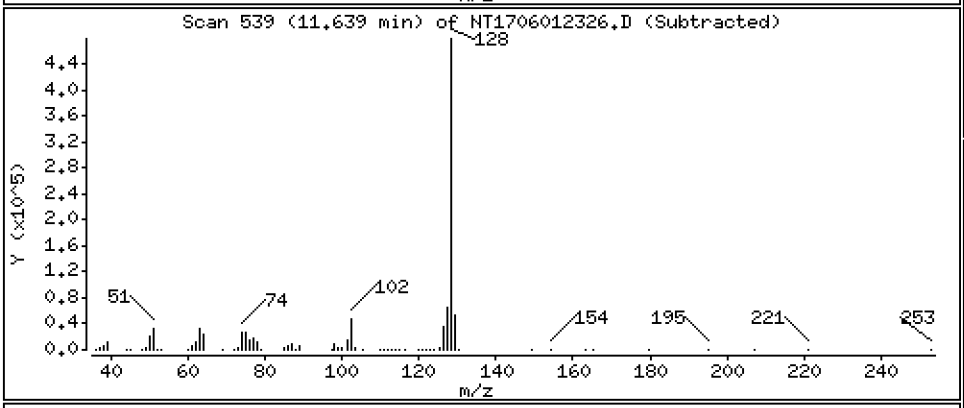
Column phase: ZB-5msi

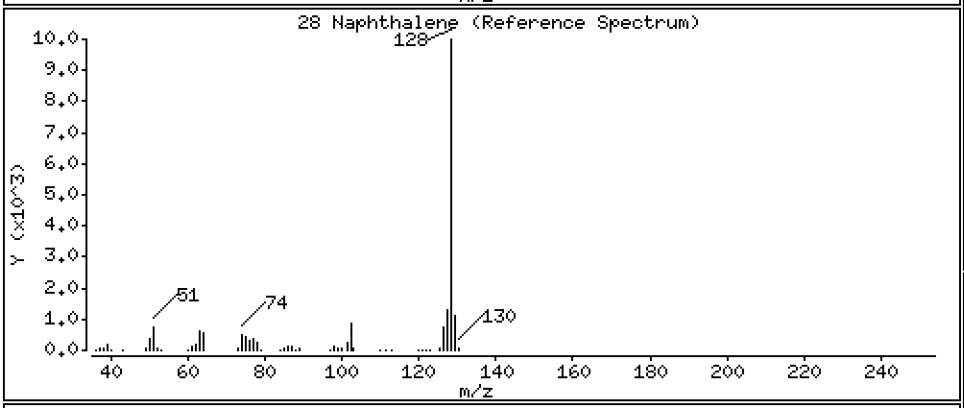
Column diameter: 0.25

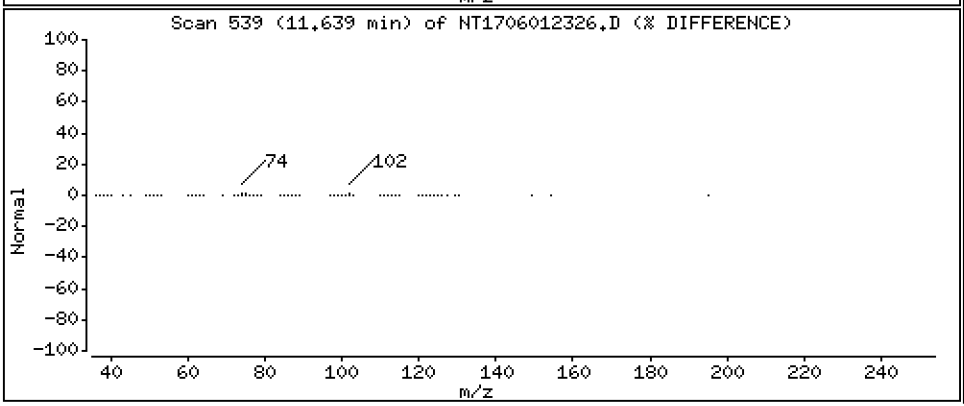
28 Naphthalene

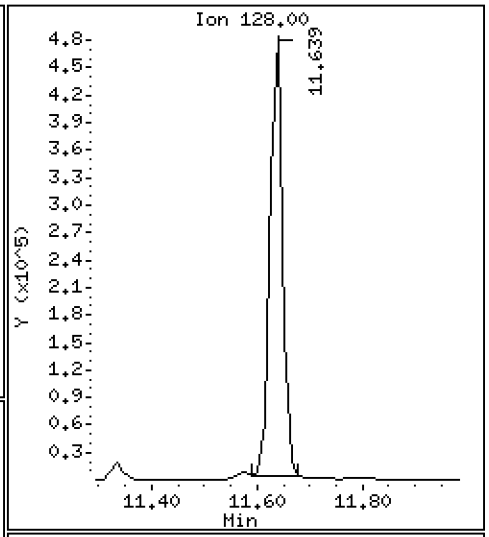
Concentration: 3.054 ug/mL

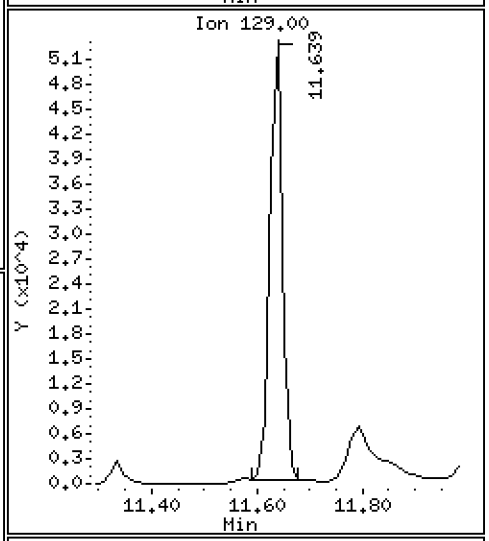


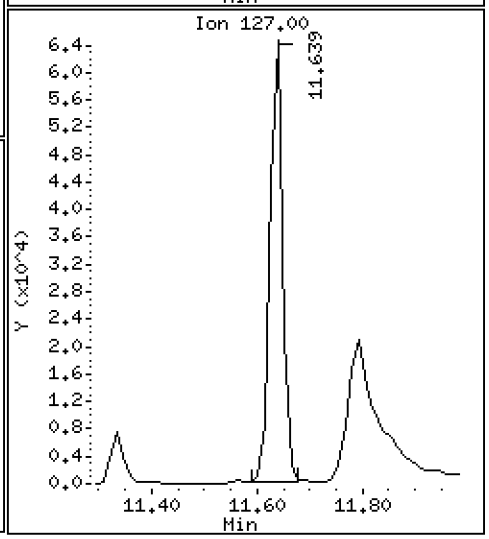












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

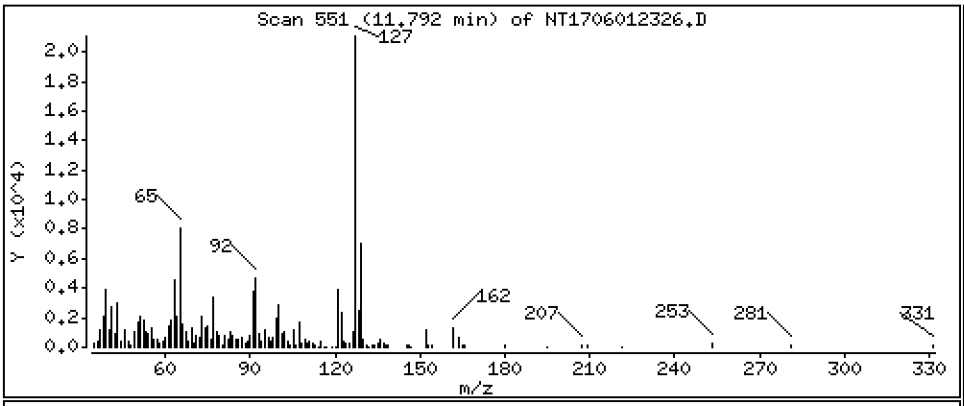
Operator: VTS

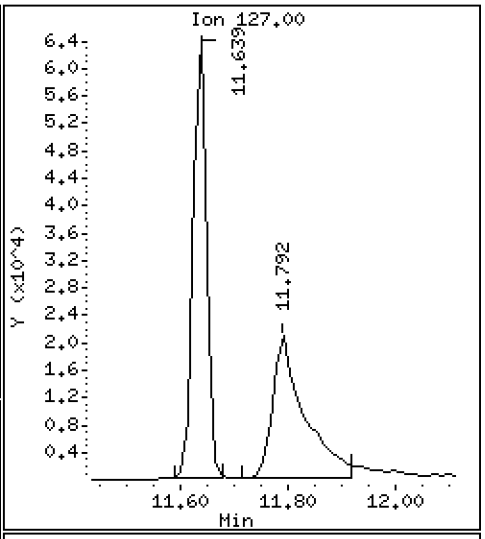
Column phase: ZB-5msi

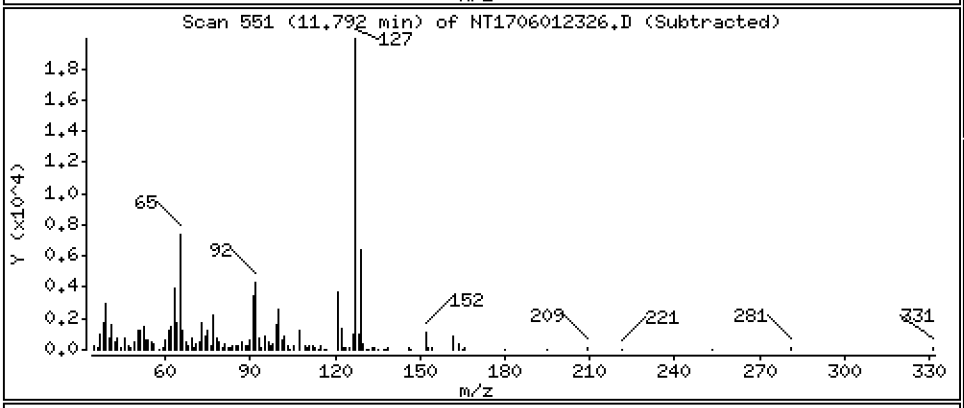
Column diameter: 0.25

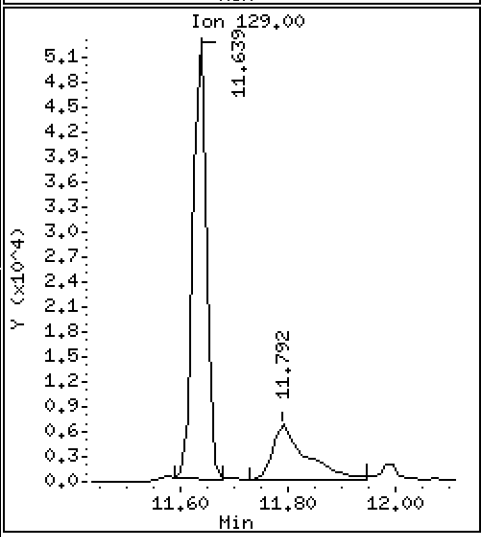
29 4-Chloroaniline

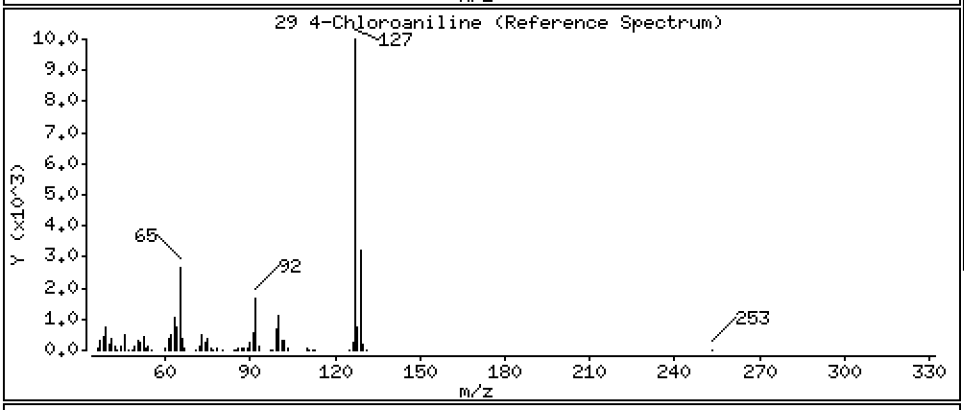
Concentration: 0.9142 ug/mL

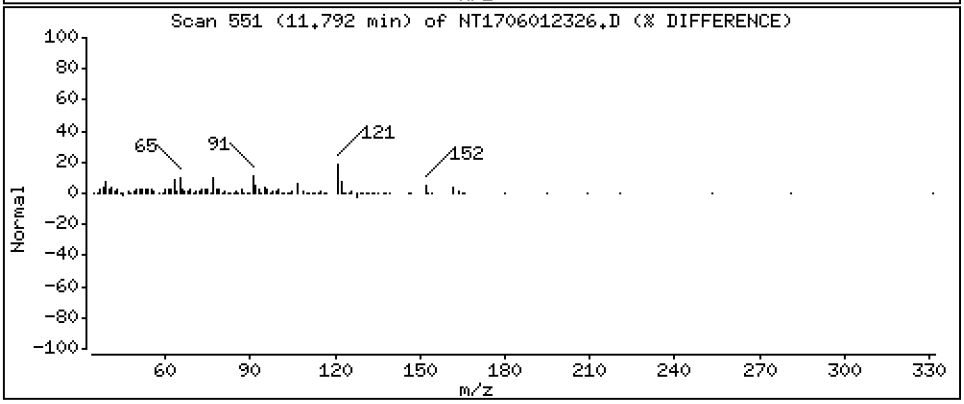












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

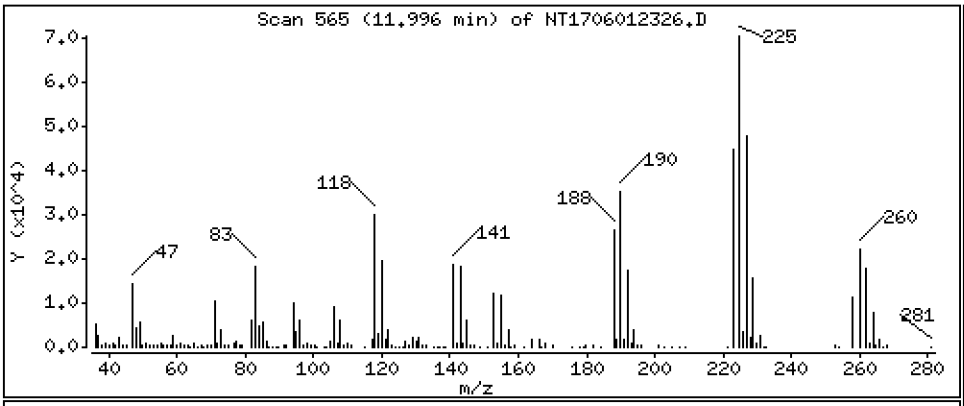
Operator: VTS

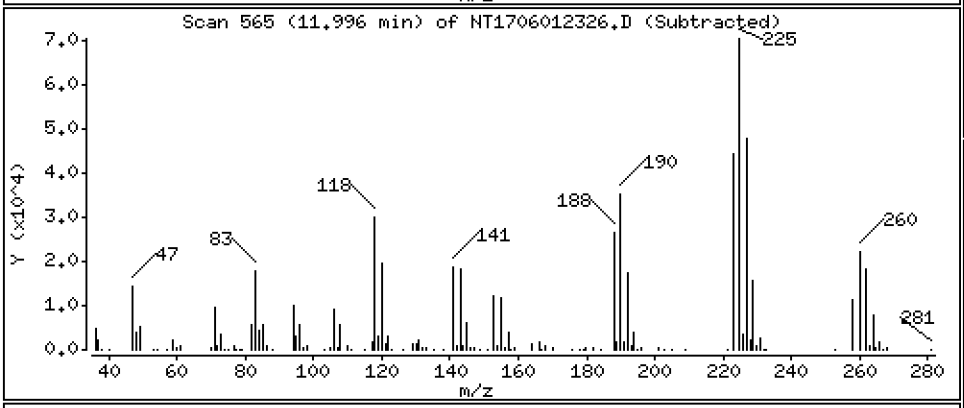
Column phase: ZB-5msi

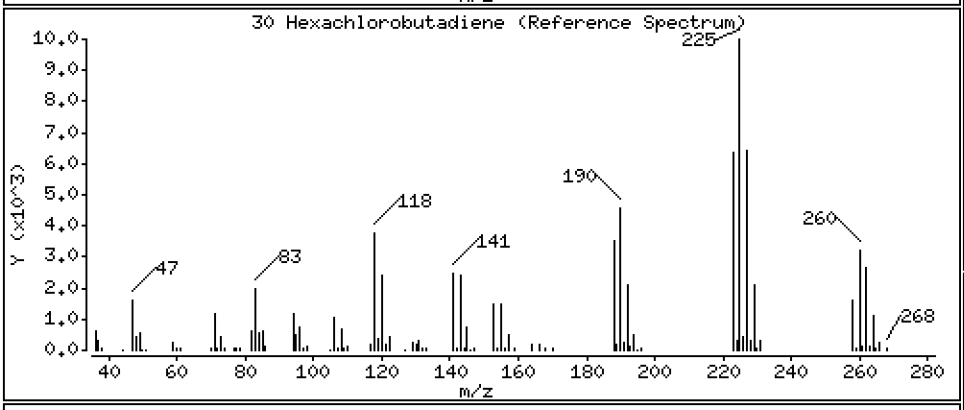
Column diameter: 0.25

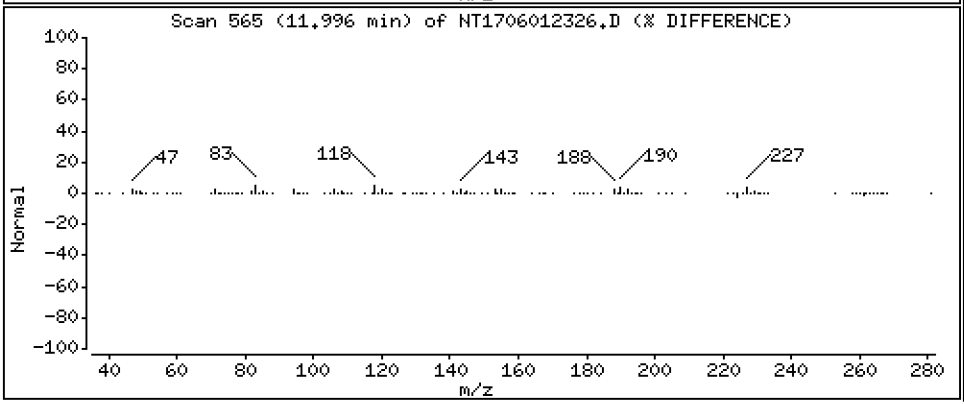
30 Hexachlorobutadiene

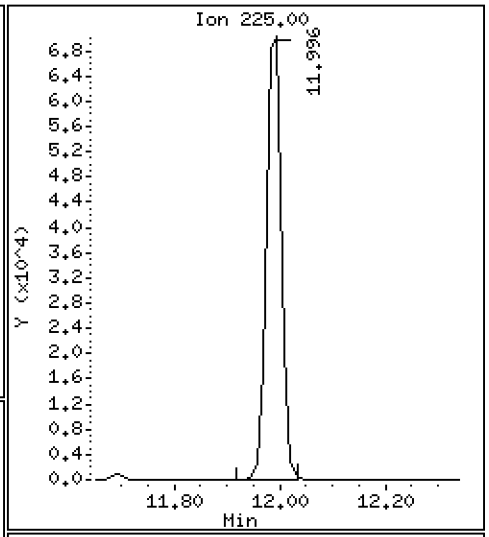
Concentration: 3.361 ug/mL

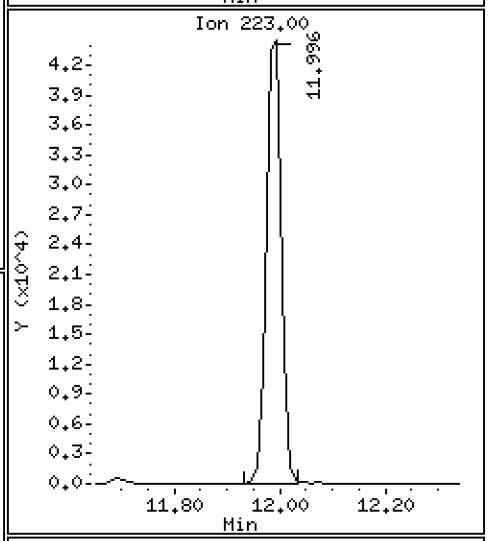


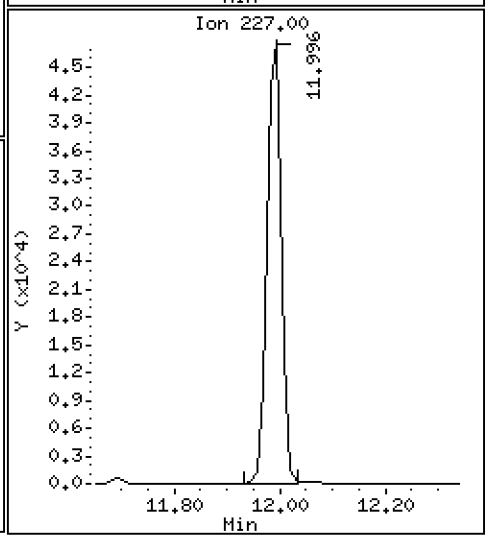












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

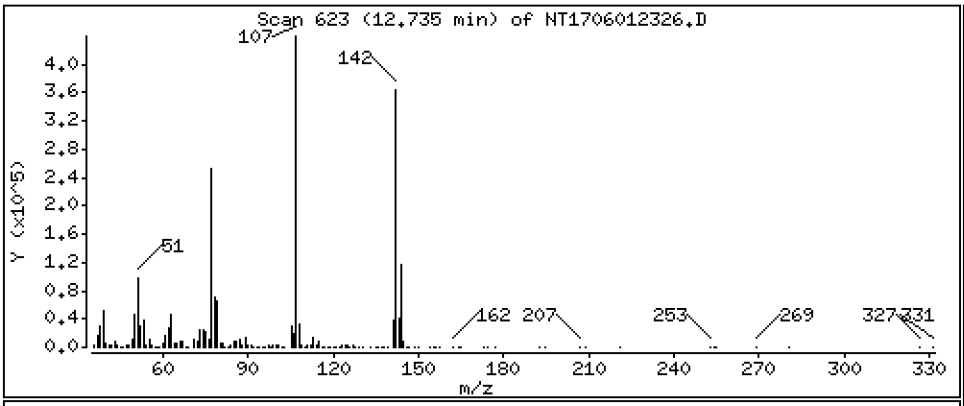
Operator: VTS

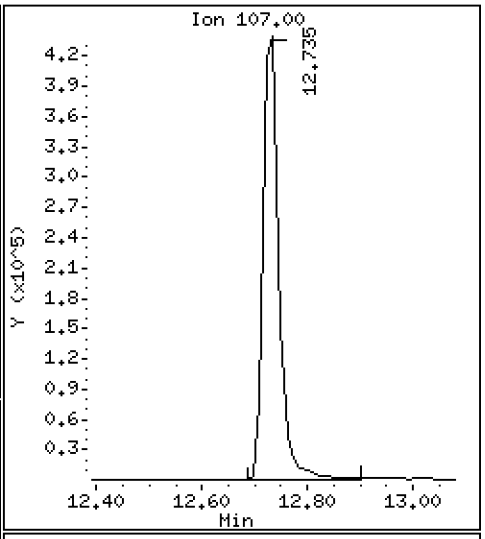
Column phase: ZB-5msi

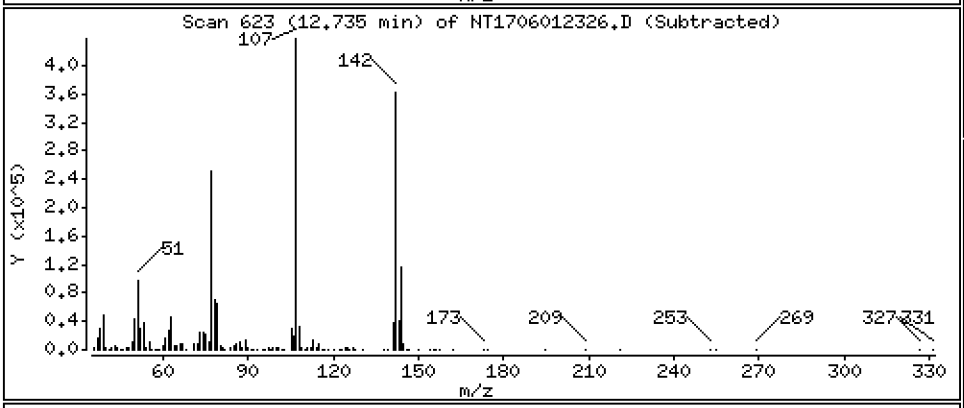
Column diameter: 0.25

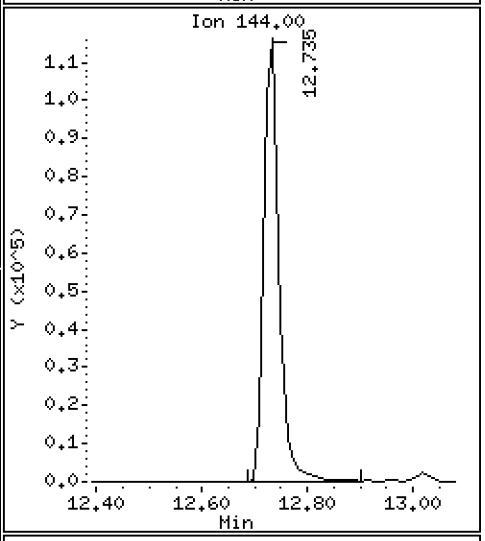
31 4-Chloro-3-methylphenol

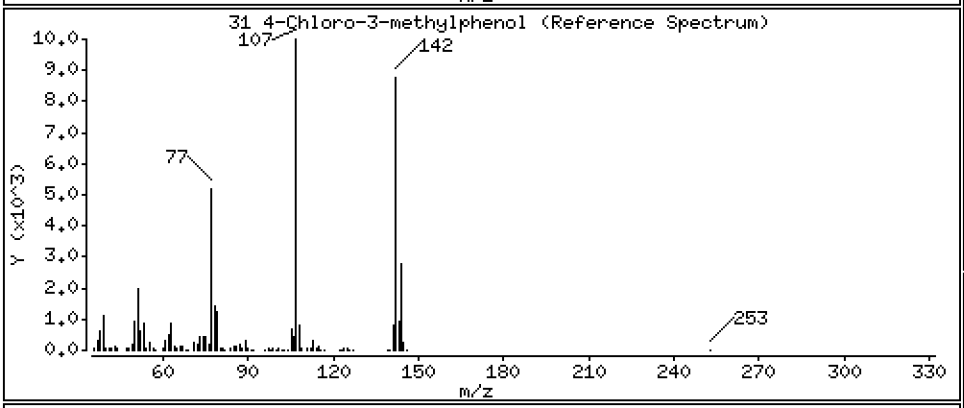
Concentration: 10.92 ug/mL

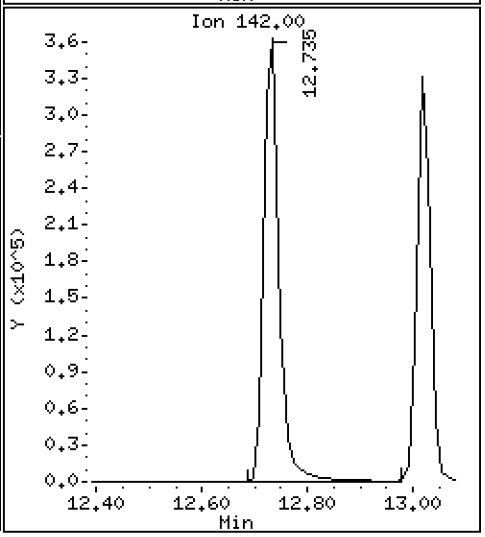


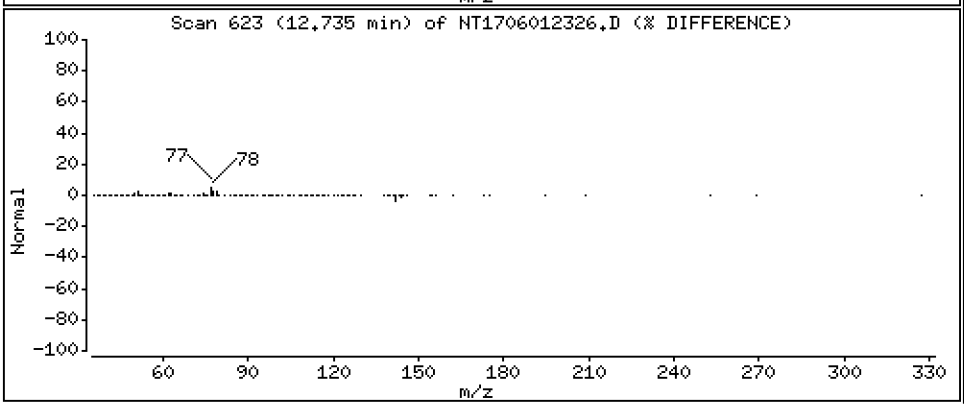












Date : 02-JUN-2023 03:34

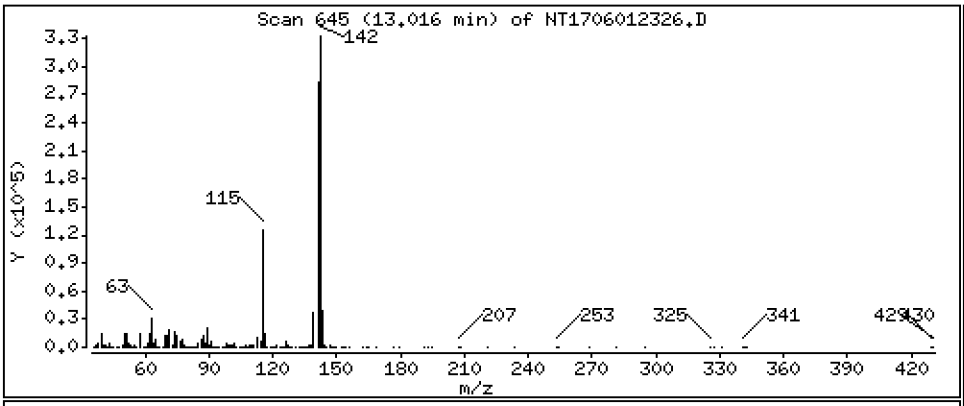
Client ID: Instrument: nt17.i

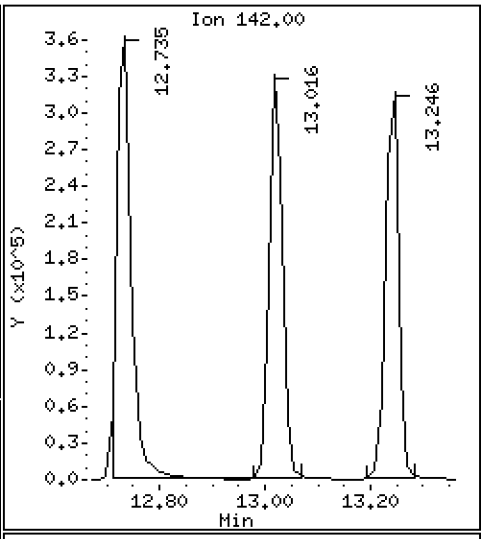
Sample Info: BLE0148-BS1

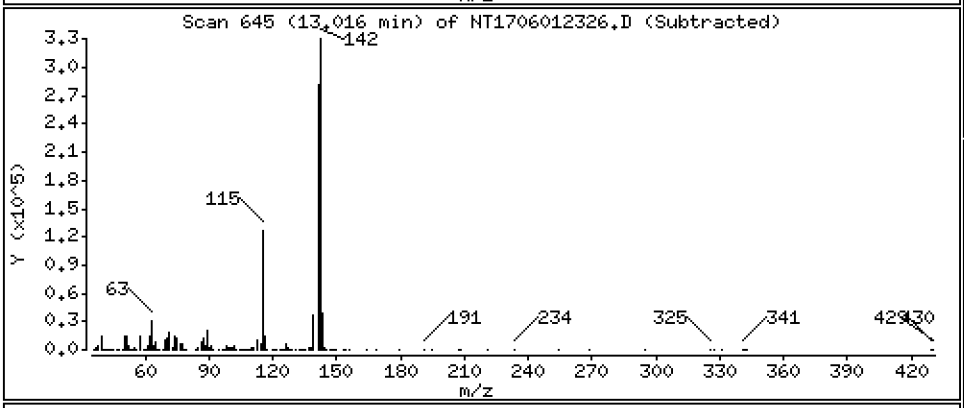
Operator: VTS

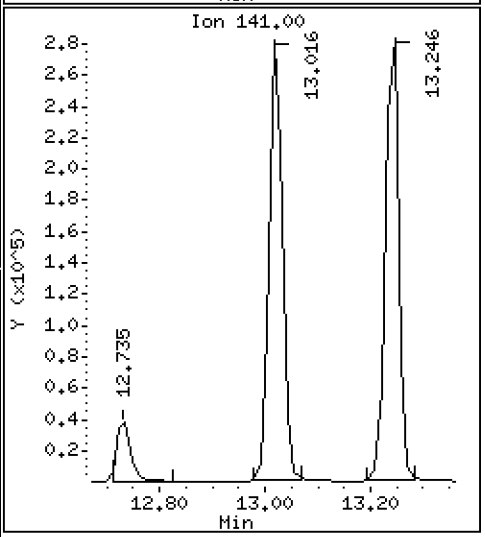
Column phase: ZB-5msi Column diameter: 0.25

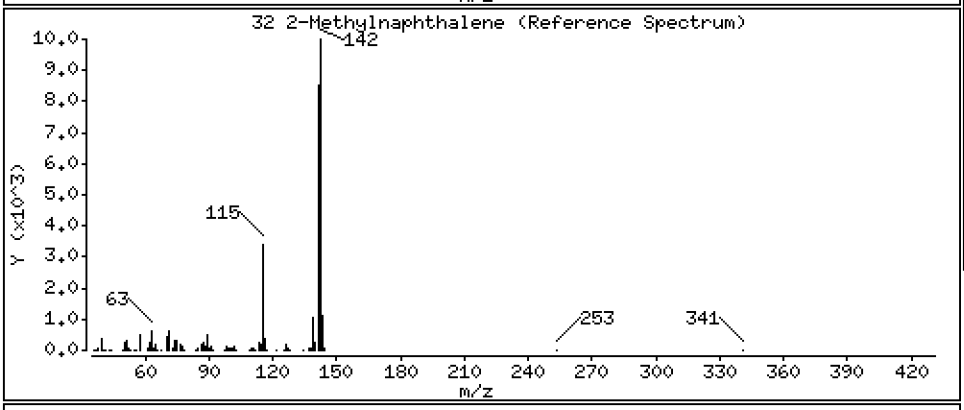
32 2-Methylnaphthalene Concentration: 3.097 ug/mL

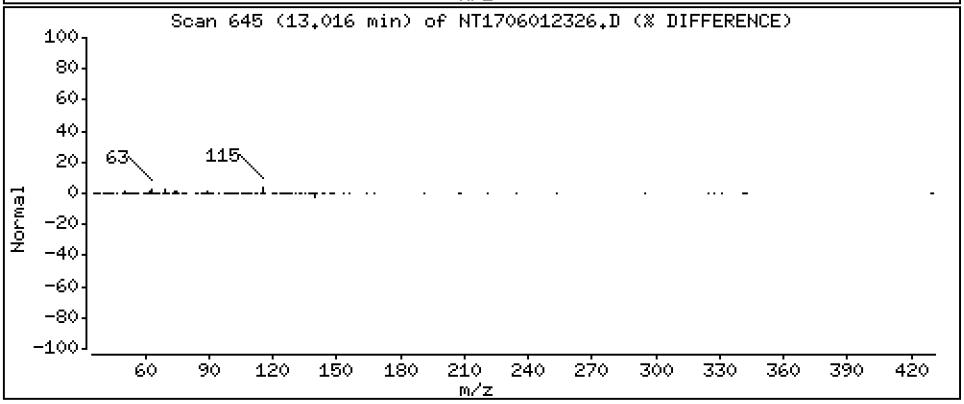












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

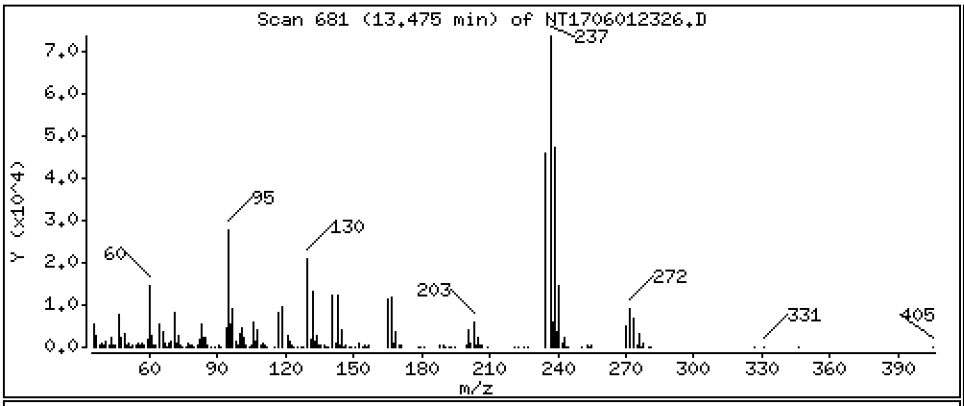
Operator: VTS

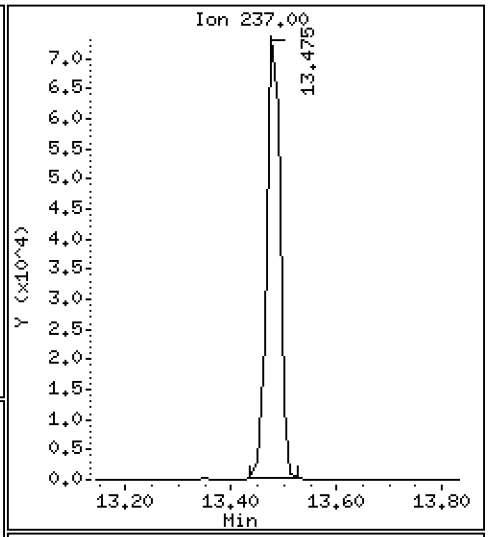
Column phase: ZB-5msi

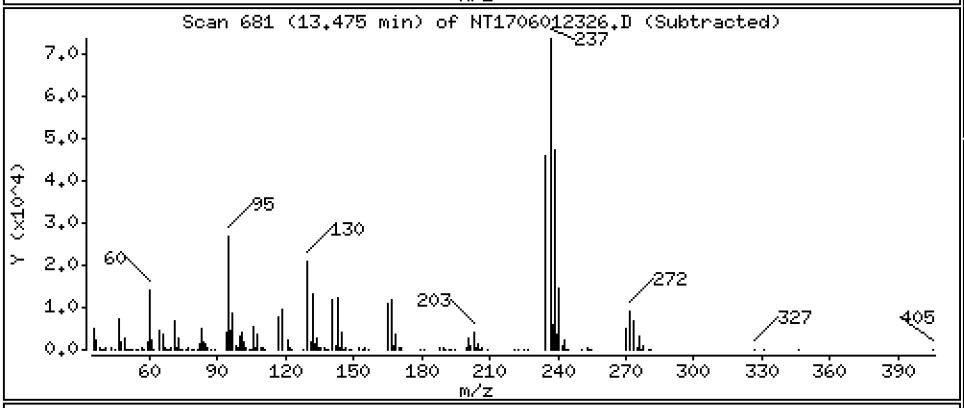
Column diameter: 0.25

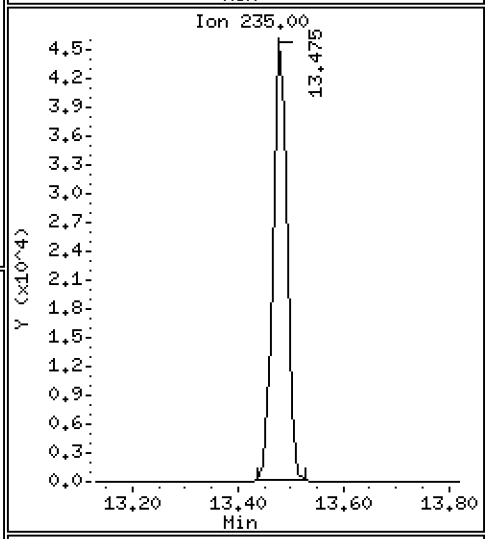
33 Hexachlorocyclopentadiene

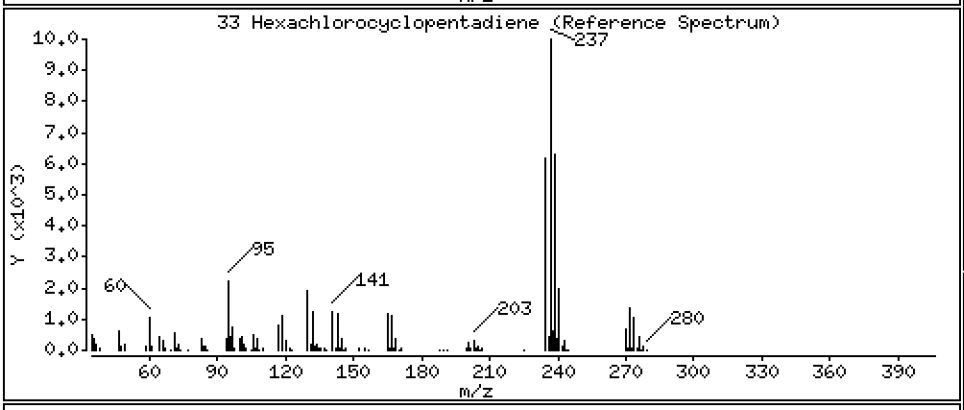
Concentration: 2.719 ug/mL

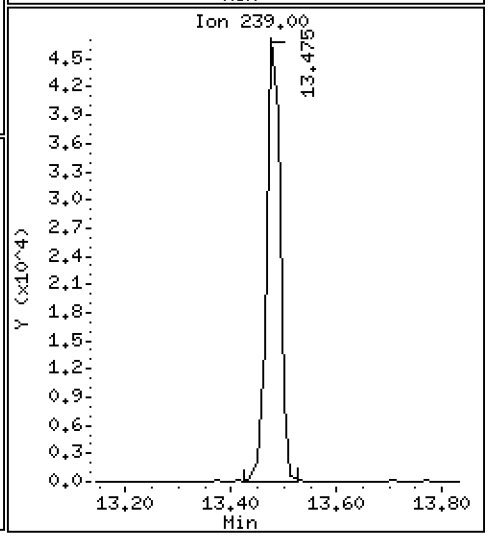


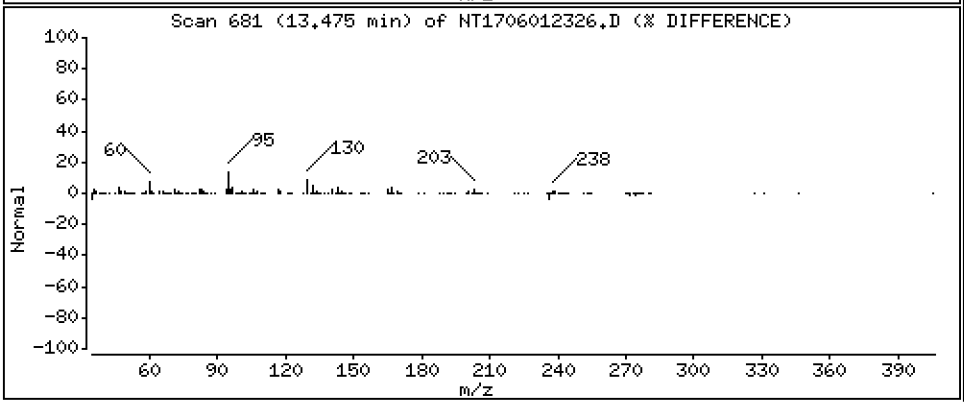












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

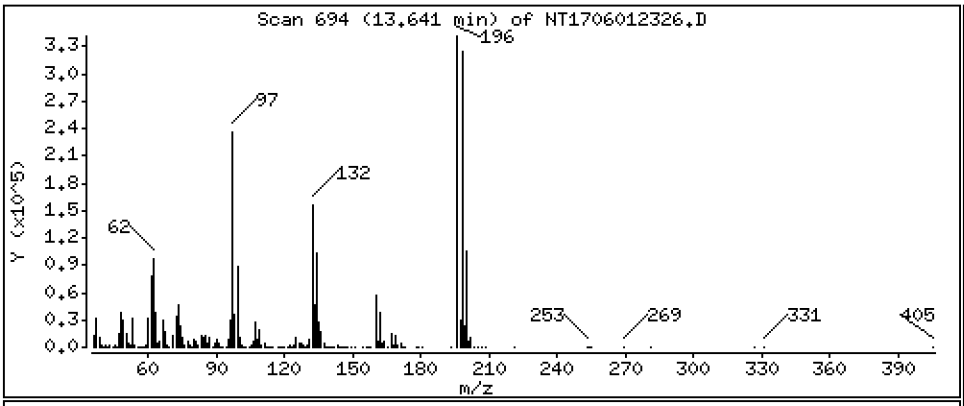
Operator: VTS

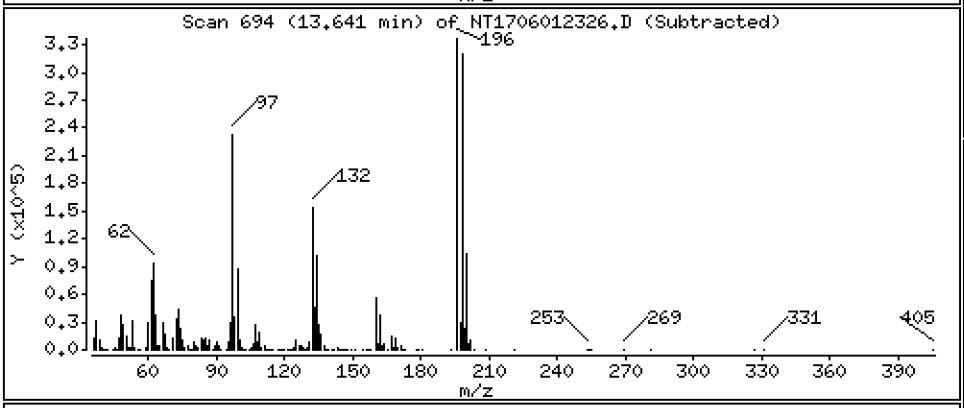
Column phase: ZB-5msi

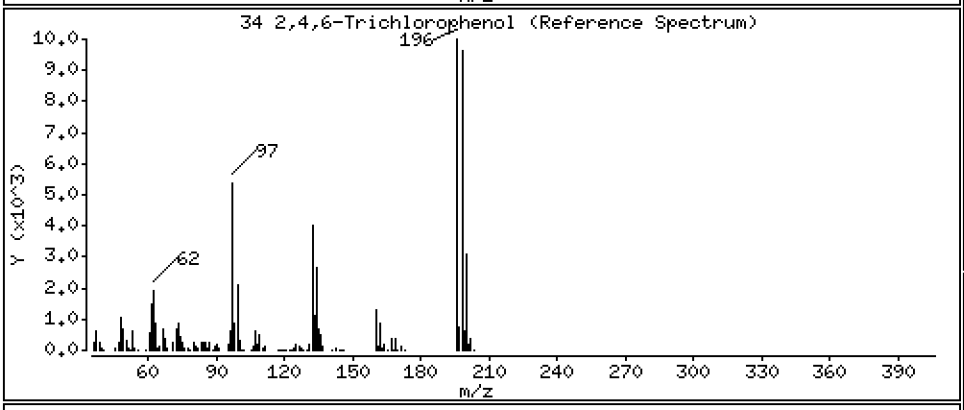
Column diameter: 0.25

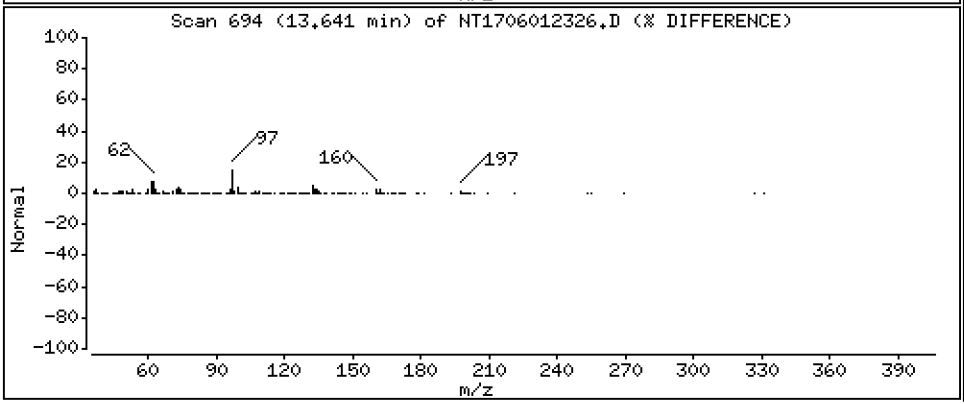
34 2,4,6-Trichlorophenol

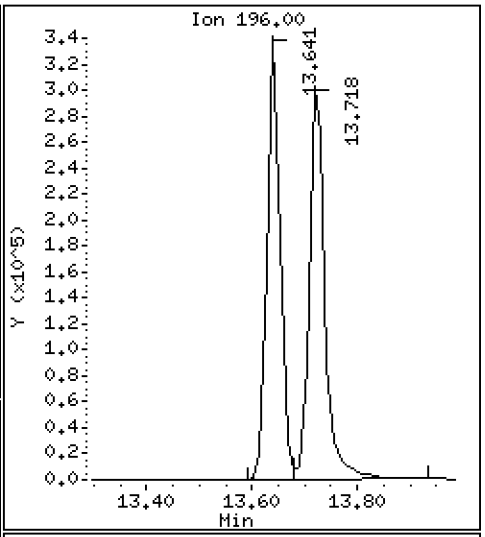
Concentration: 10.33 ug/mL

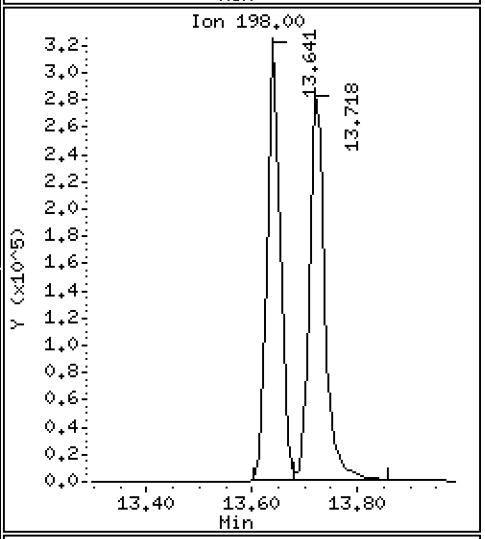


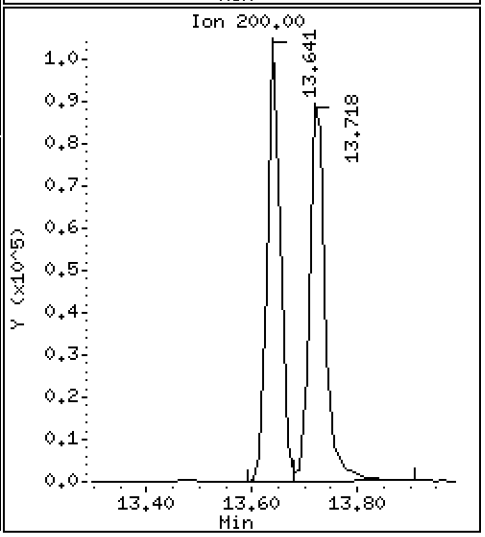












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

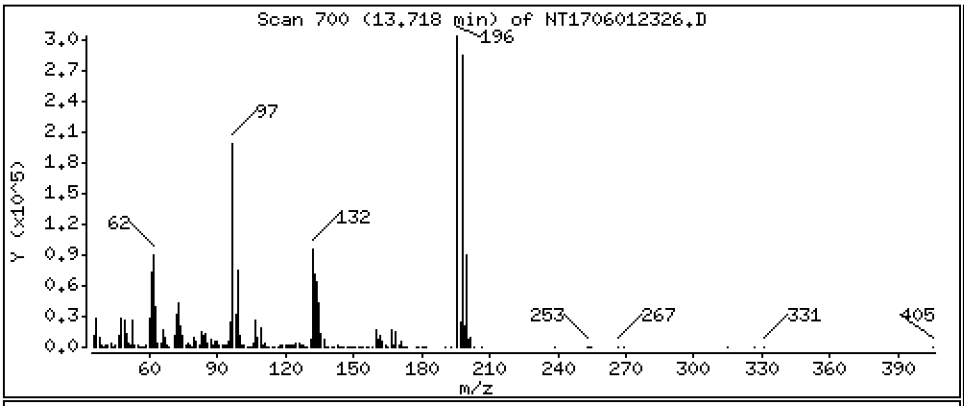
Operator: VTS

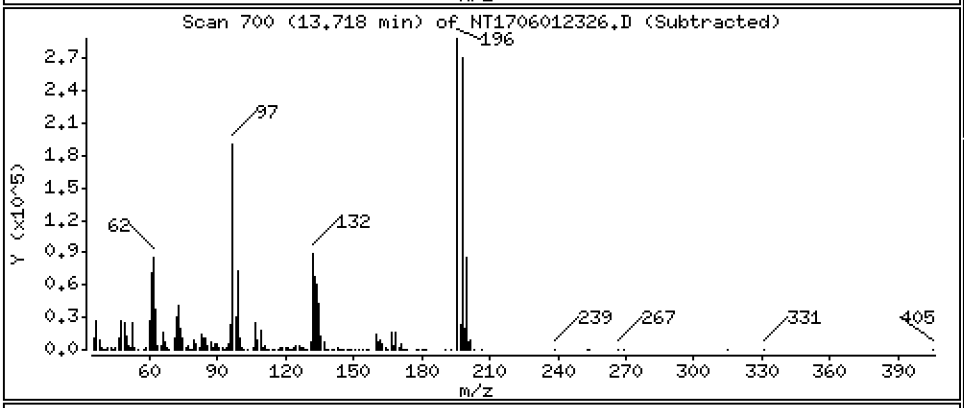
Column phase: ZB-5msi

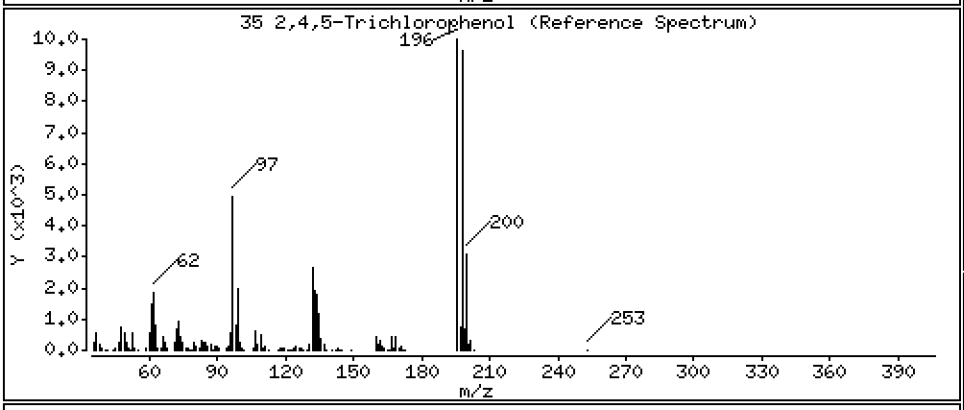
Column diameter: 0.25

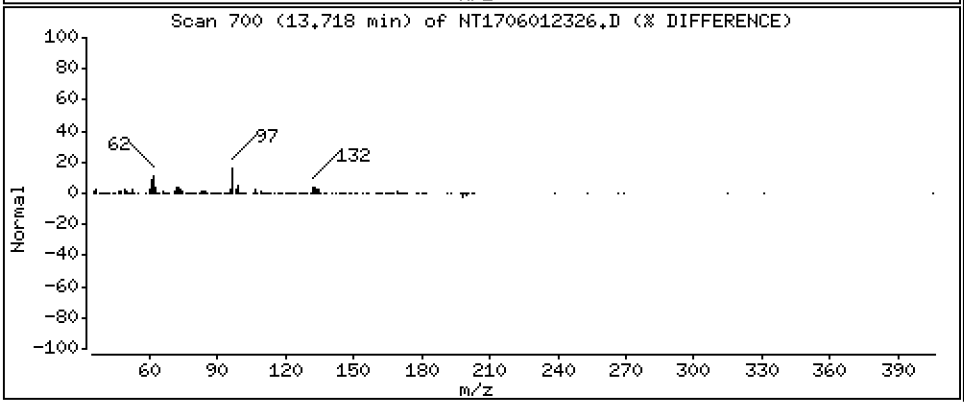
35 2,4,5-Trichlorophenol

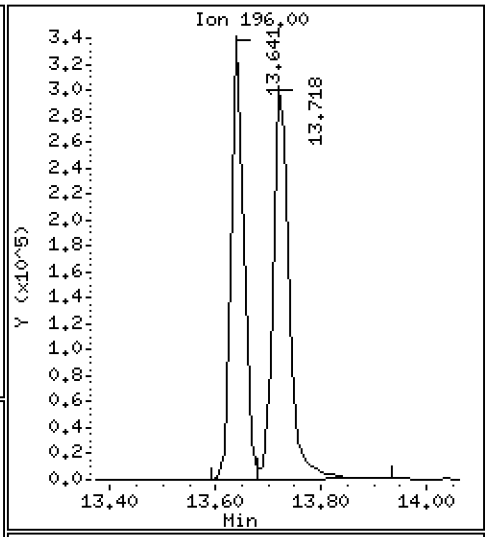
Concentration: 10.91 ug/mL

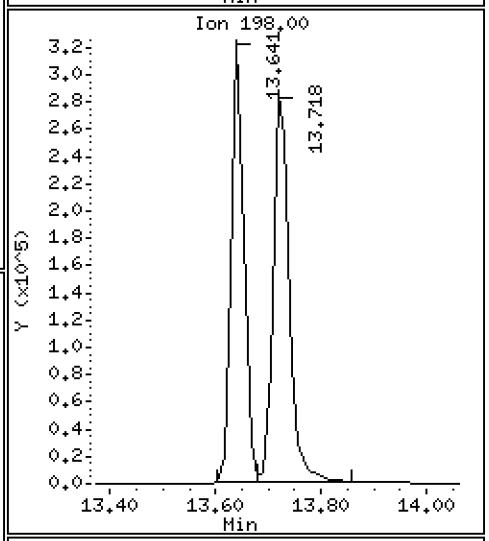


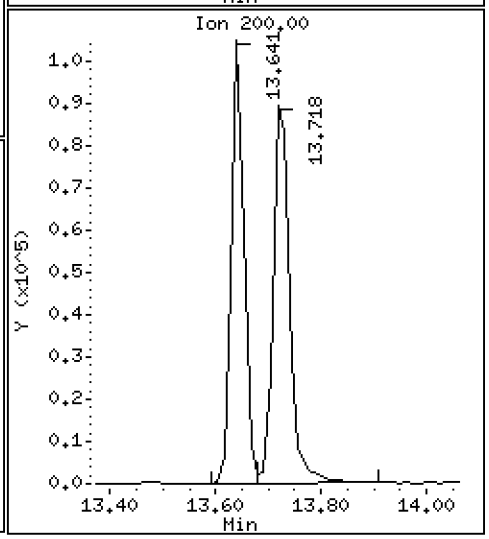












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

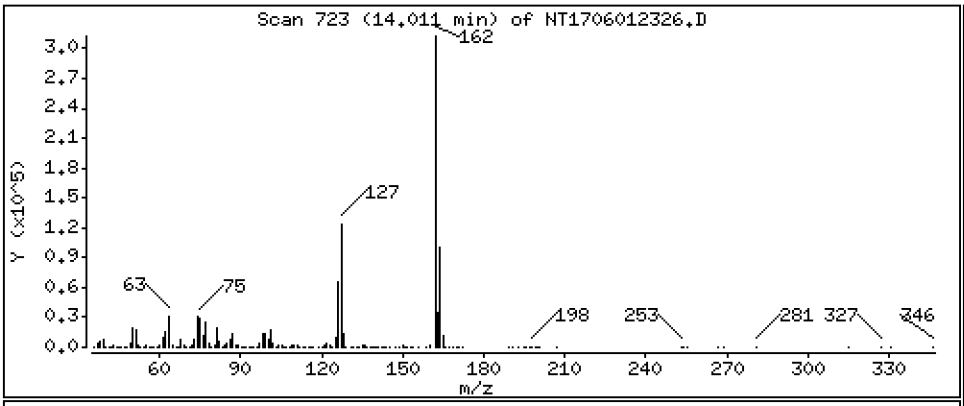
Operator: VTS

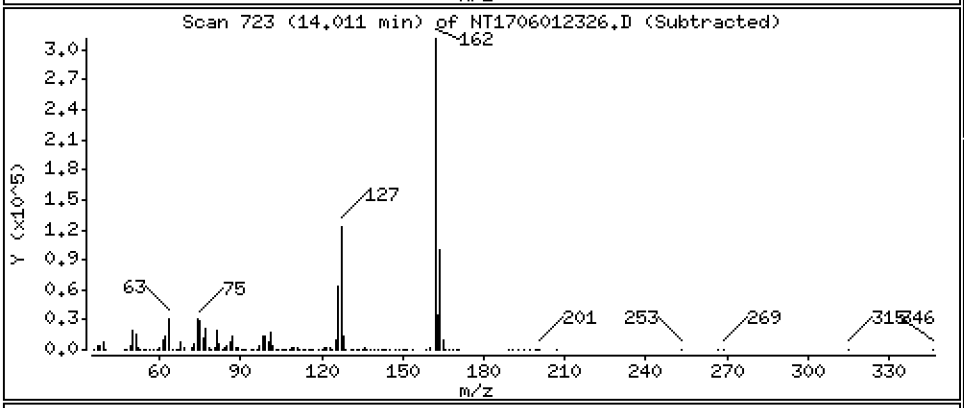
Column phase: ZB-5msi

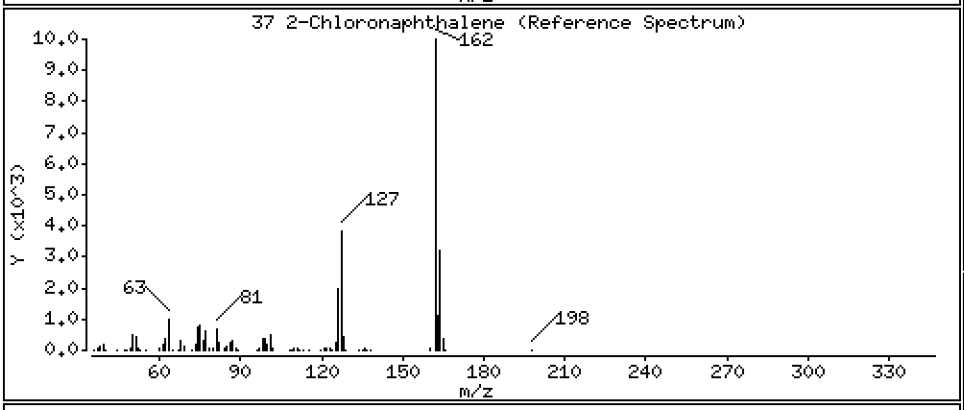
Column diameter: 0.25

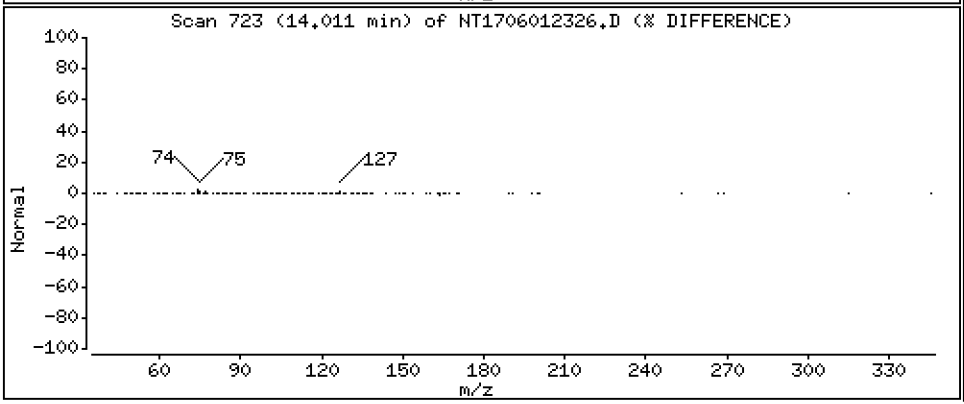
37 2-Chloronaphthalene

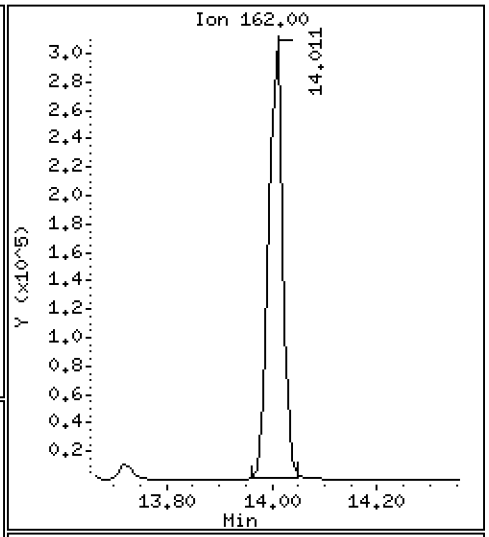
Concentration: 3.288 ug/mL

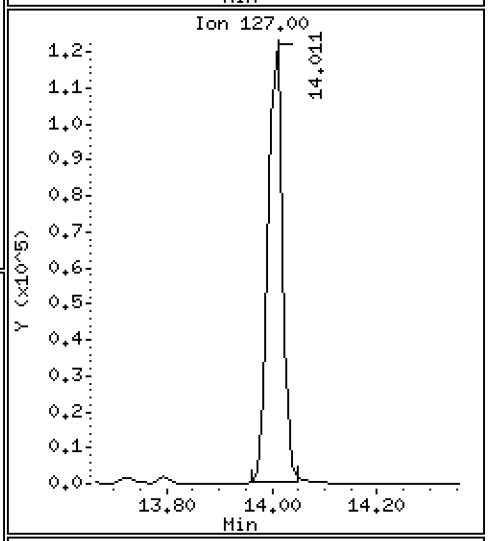


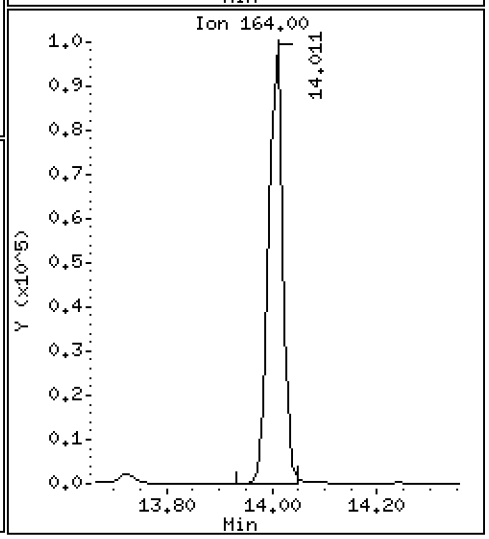












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

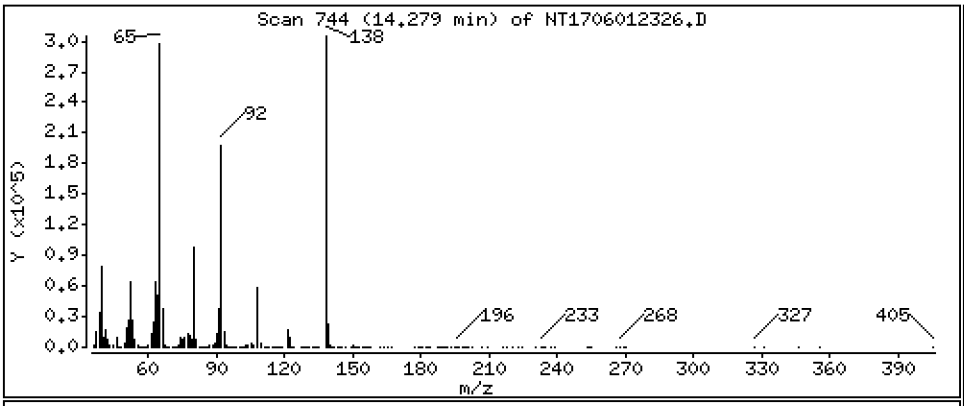
Operator: VTS

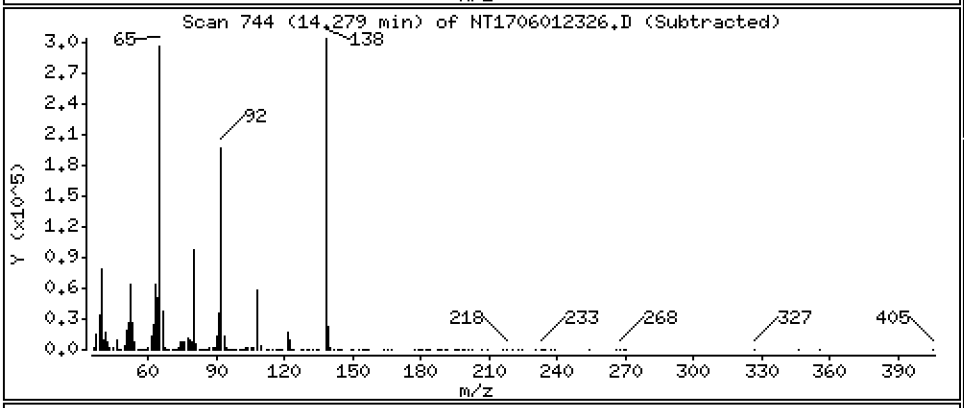
Column phase: ZB-5msi

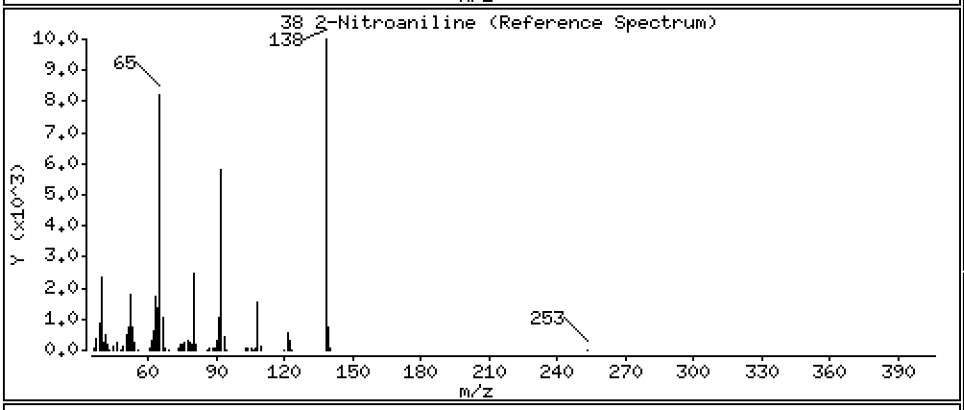
Column diameter: 0.25

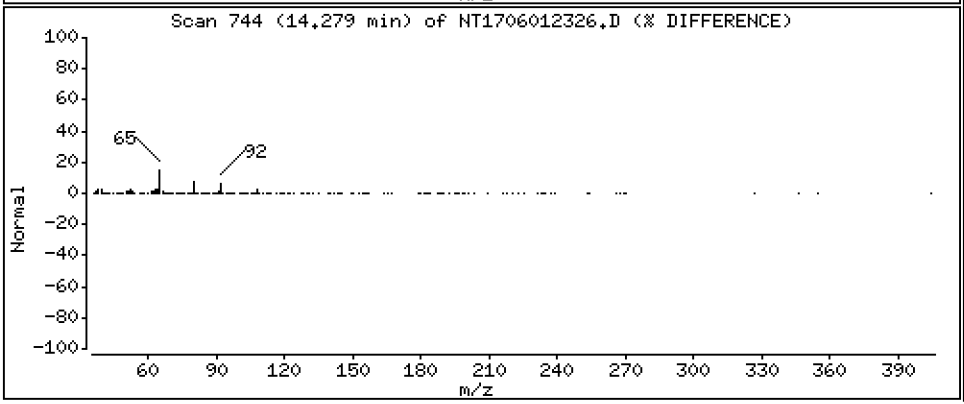
38 2-Nitroaniline

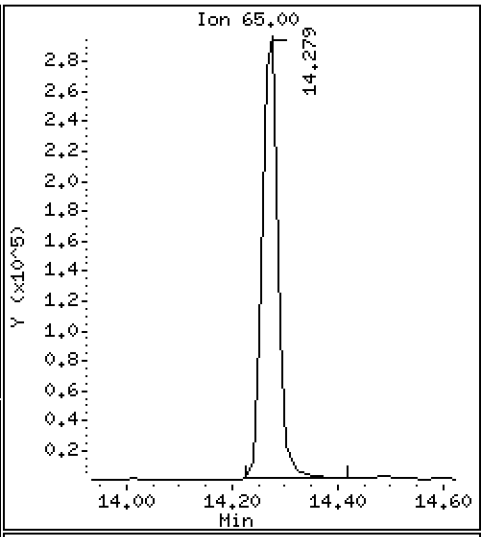
Concentration: 11.03 ug/mL

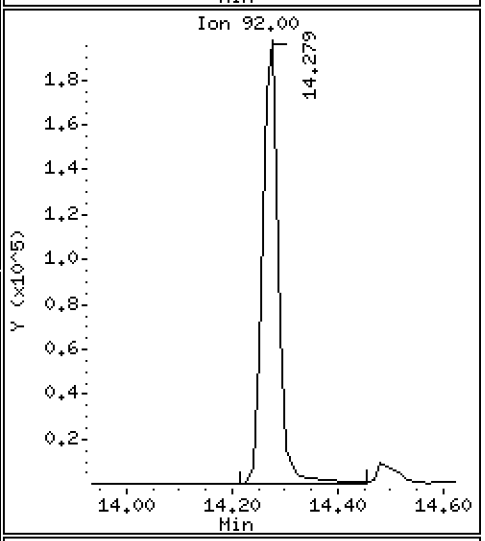


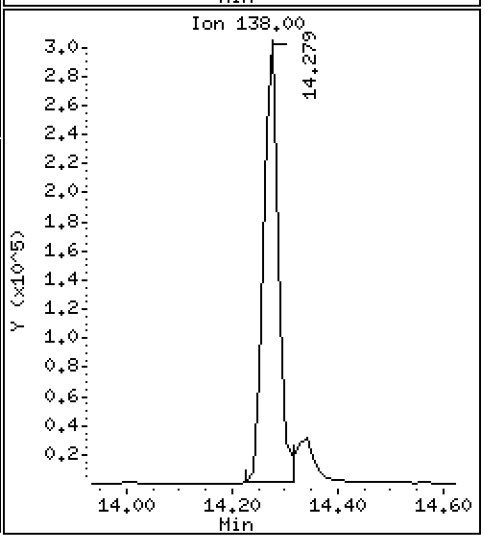












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

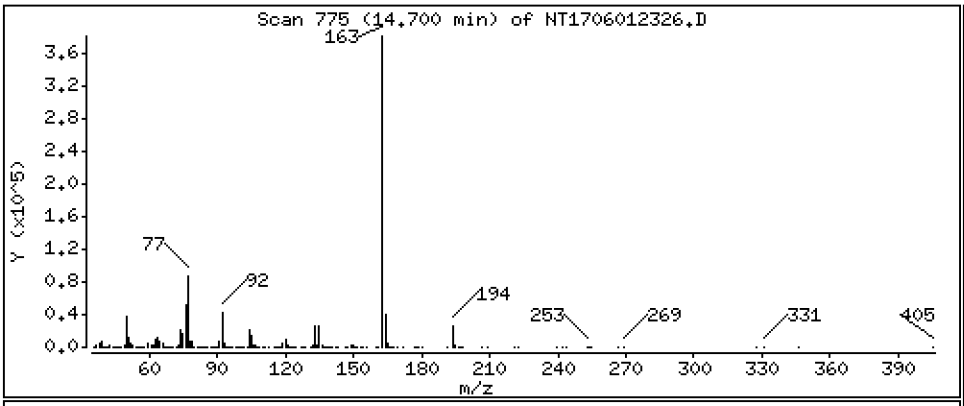
Operator: VTS

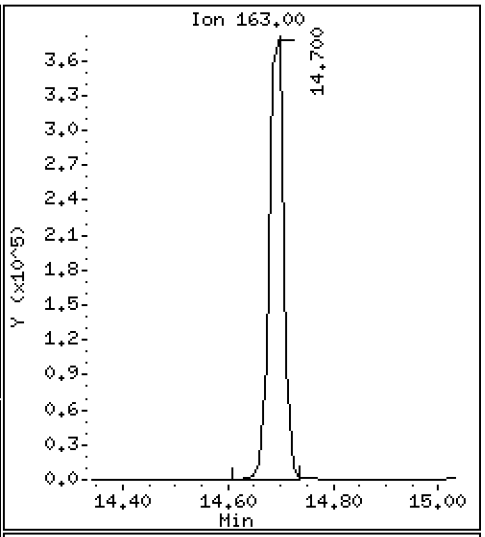
Column phase: ZB-5msi

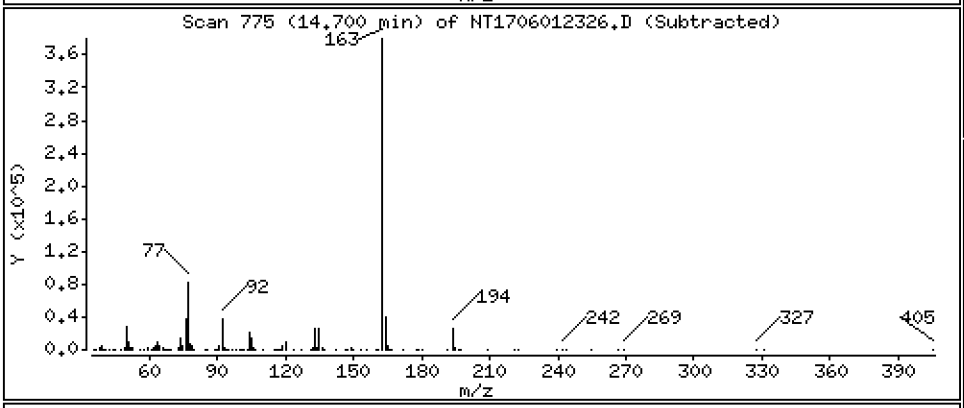
Column diameter: 0.25

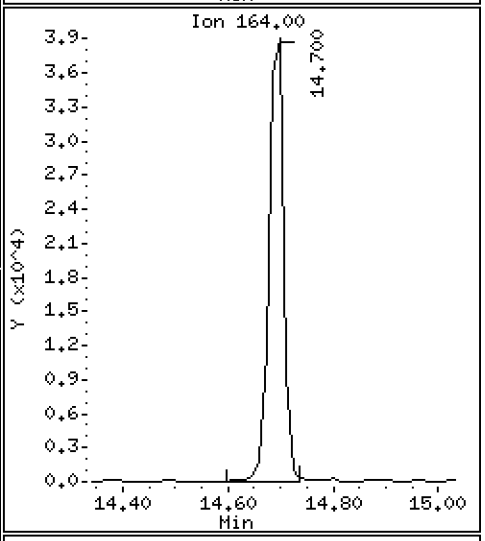
39 Dimethylphthalate

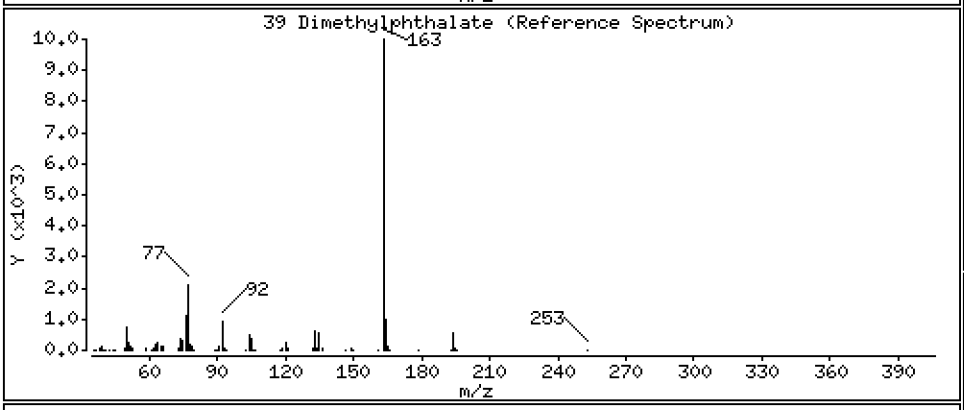
Concentration: 4.089 ug/mL

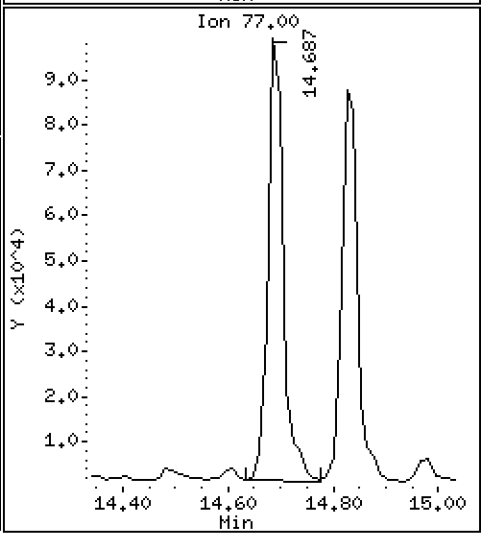


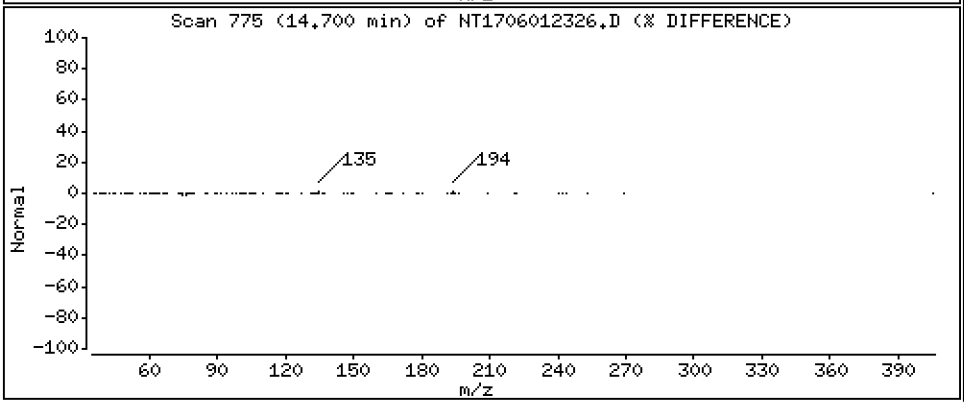












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

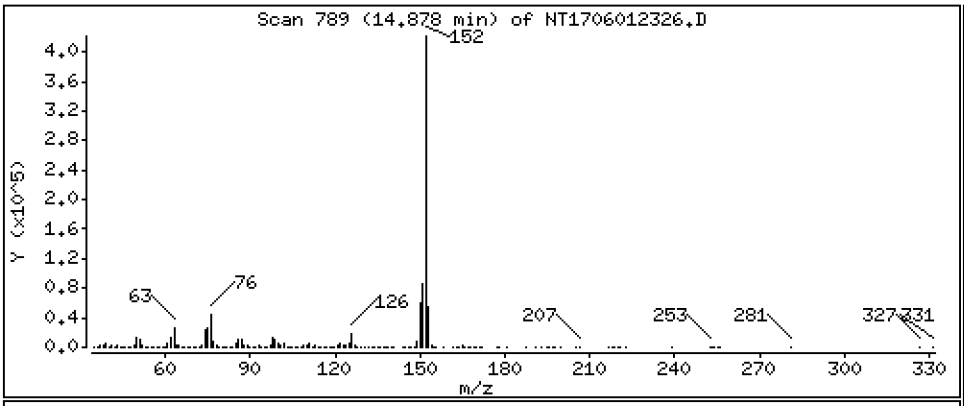
Operator: VTS

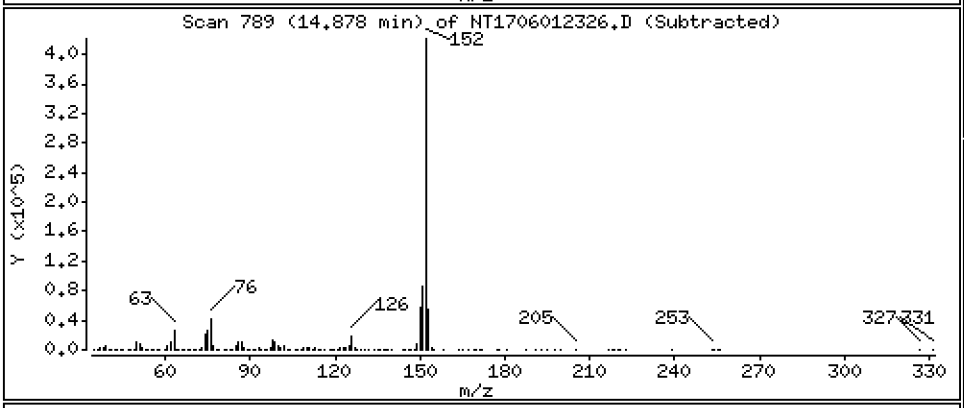
Column phase: ZB-5msi

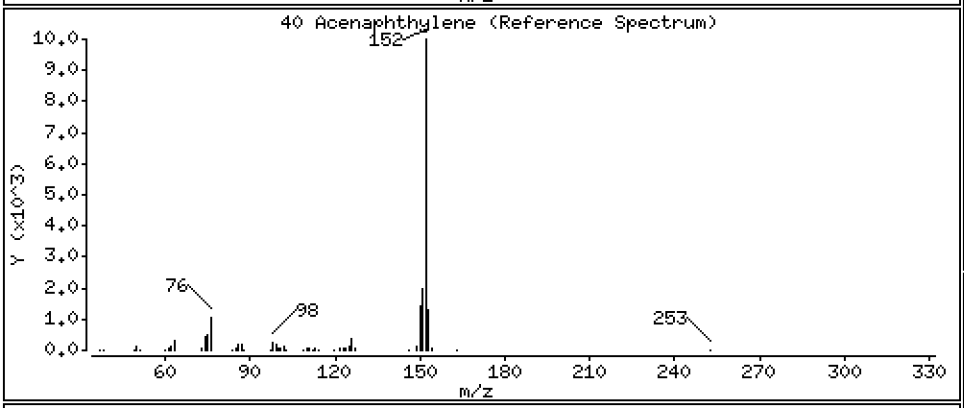
Column diameter: 0.25

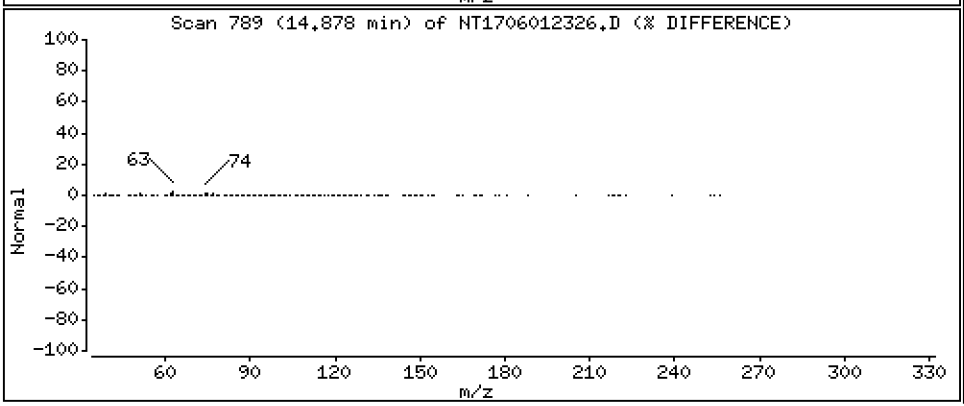
40 Acenaphthylene

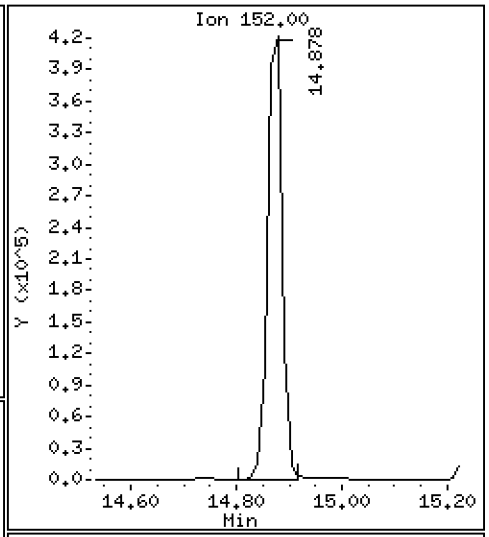
Concentration: 3.102 ug/mL

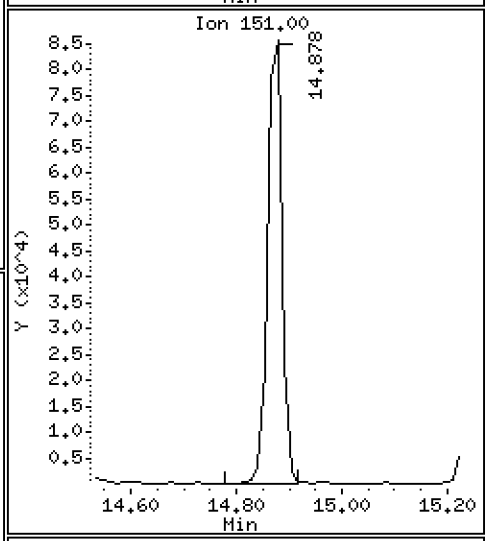


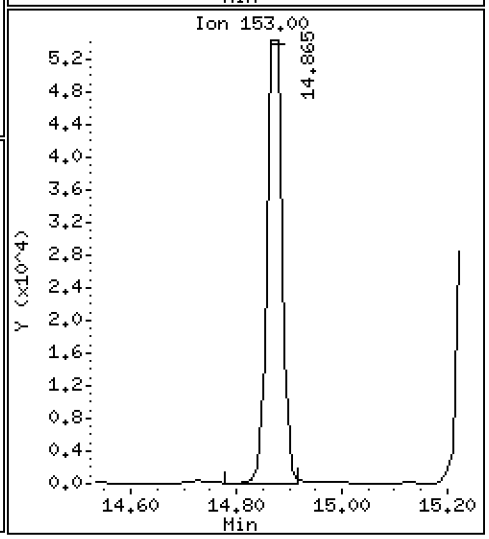












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

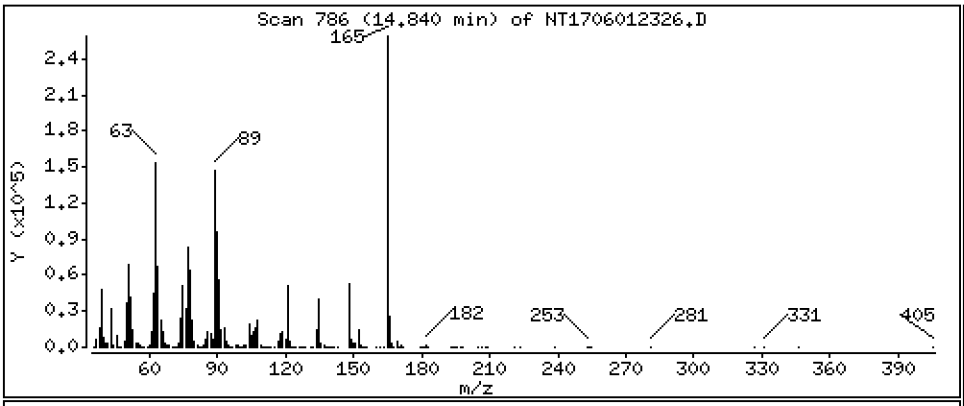
Operator: VTS

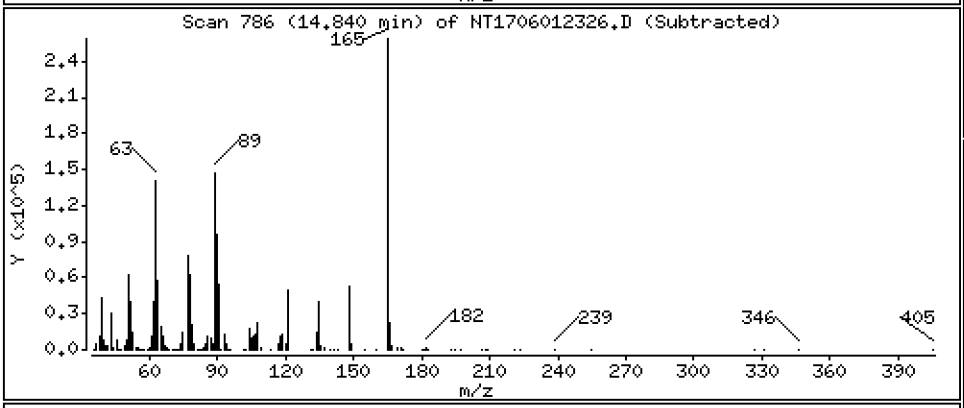
Column phase: ZB-5msi

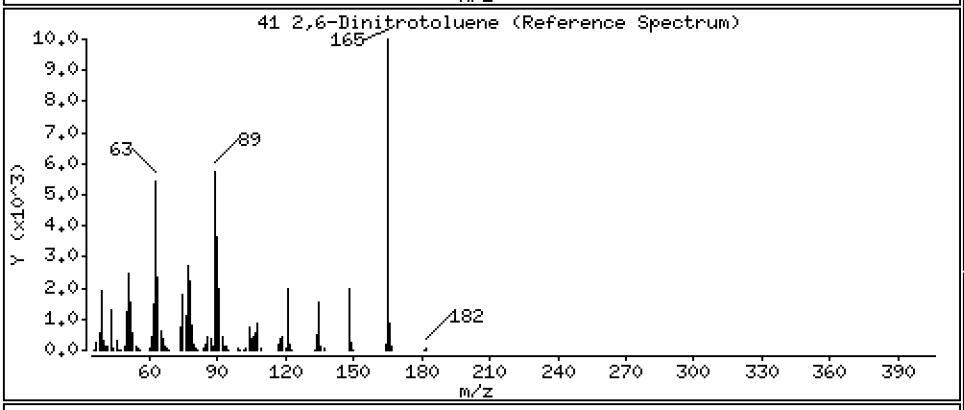
Column diameter: 0.25

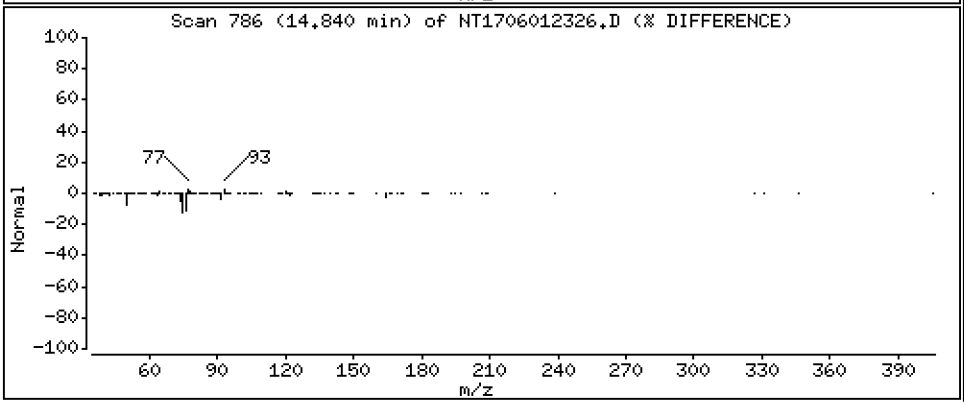
41 2,6-Dinitrotoluene

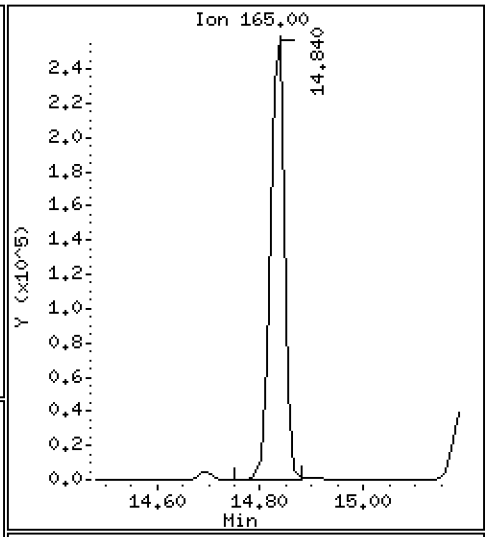
Concentration: 11.45 ug/mL

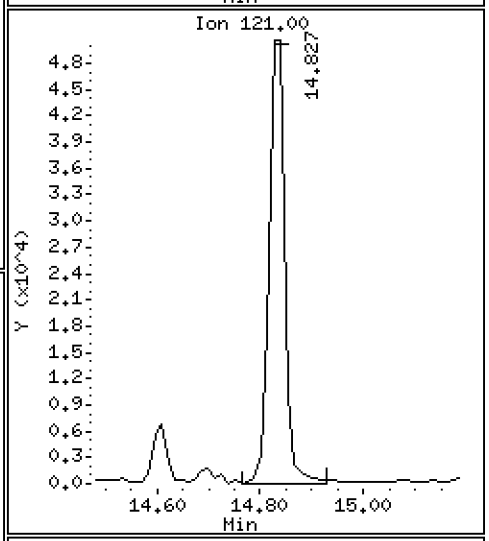


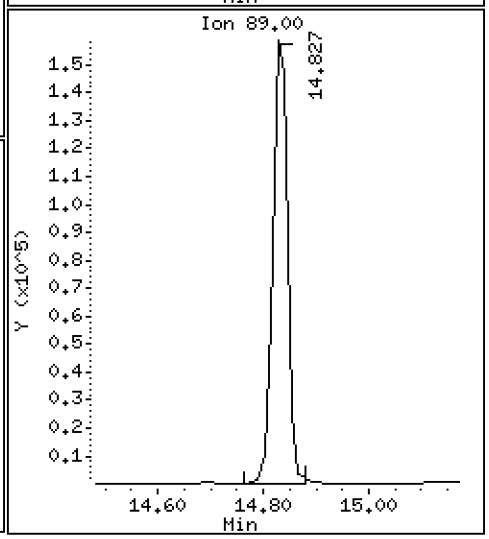












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

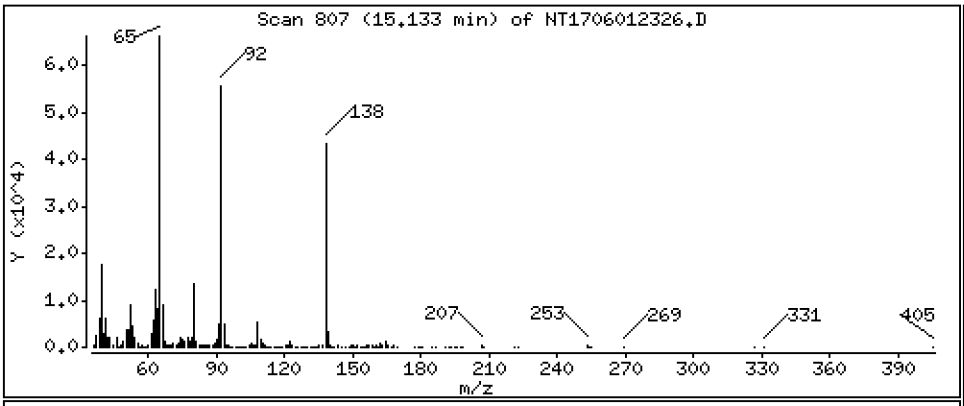
Operator: VTS

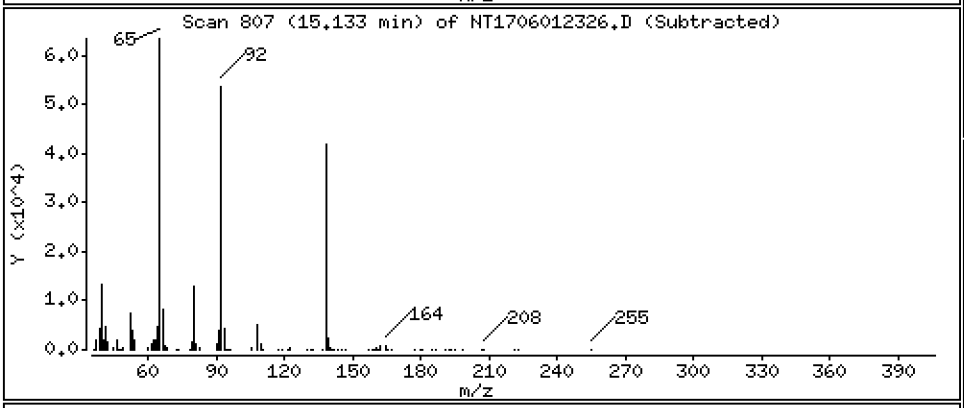
Column phase: ZB-5msi

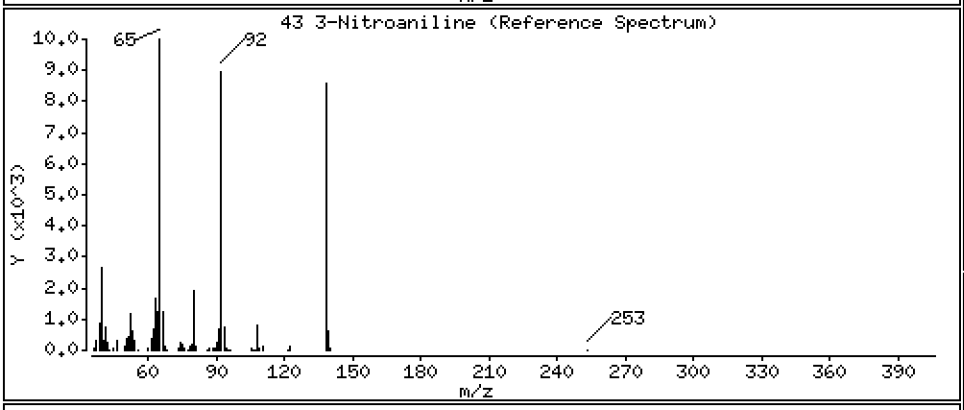
Column diameter: 0.25

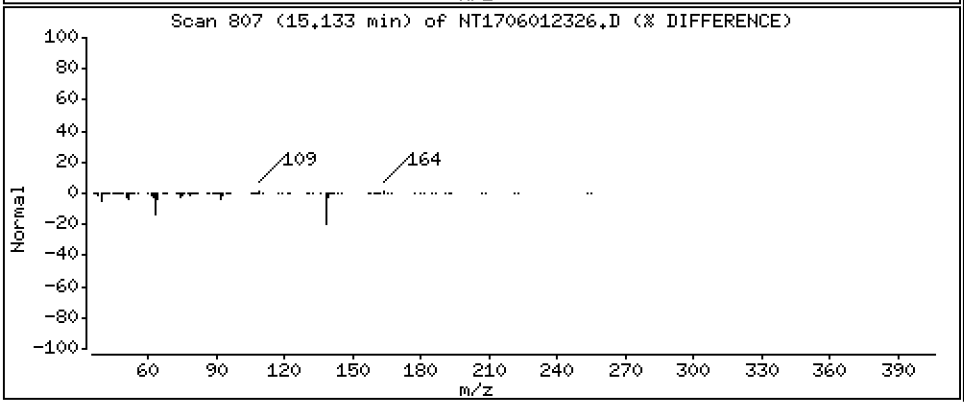
43 3-Nitroaniline

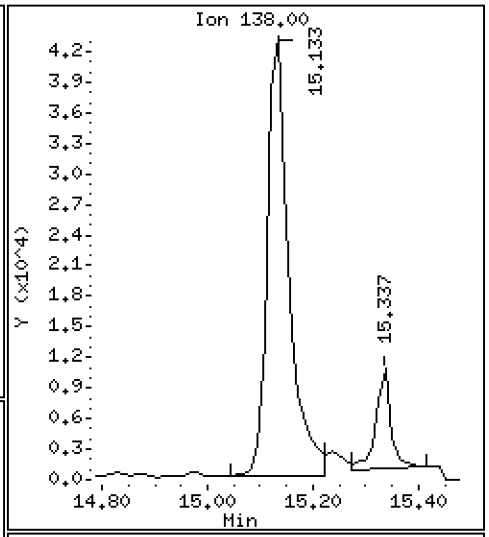
Concentration: 3.161 ug/mL

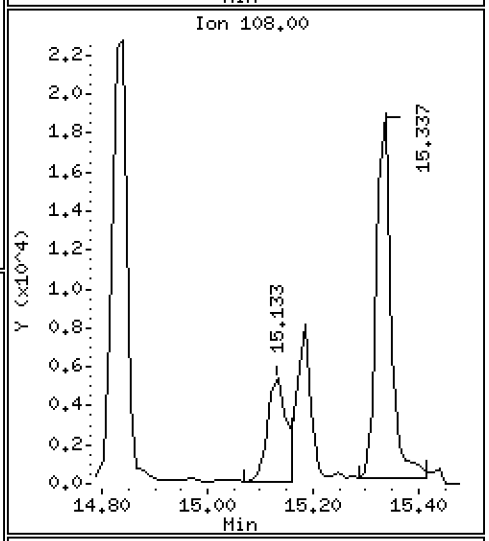


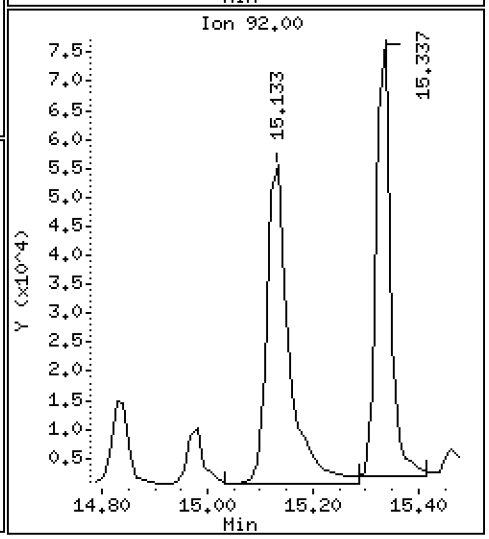












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

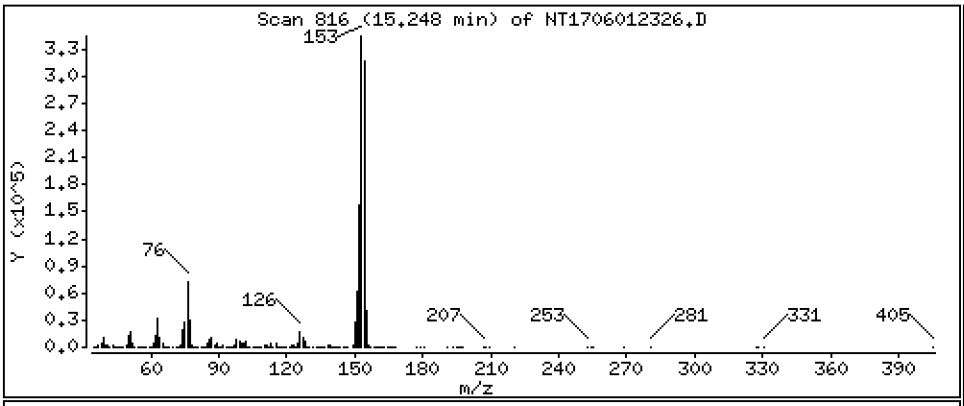
Operator: VTS

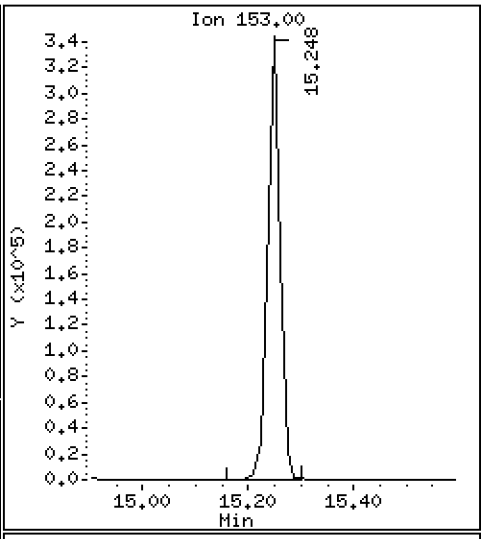
Column phase: ZB-5msi

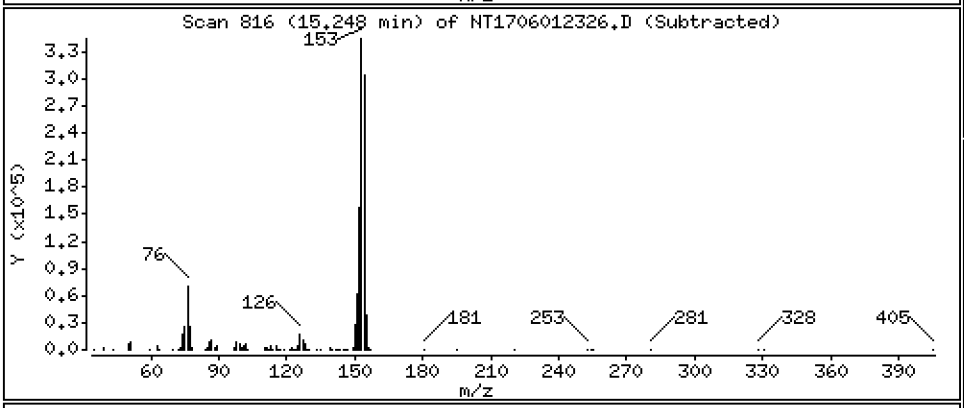
Column diameter: 0.25

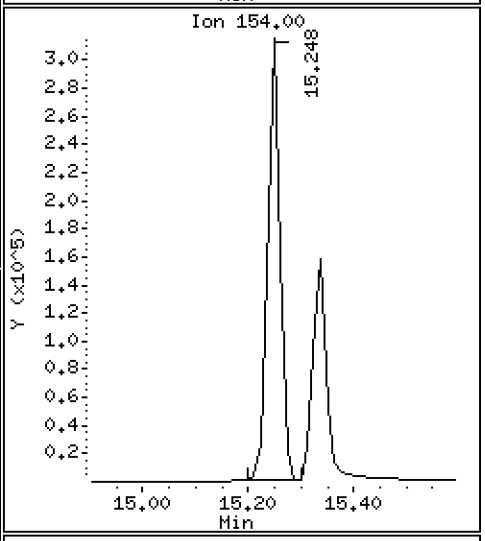
44 Acenaphthene

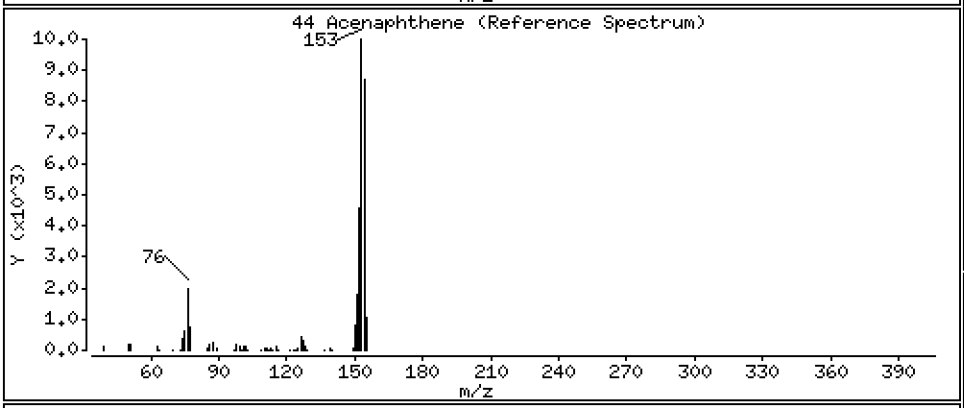
Concentration: 3.367 ug/mL

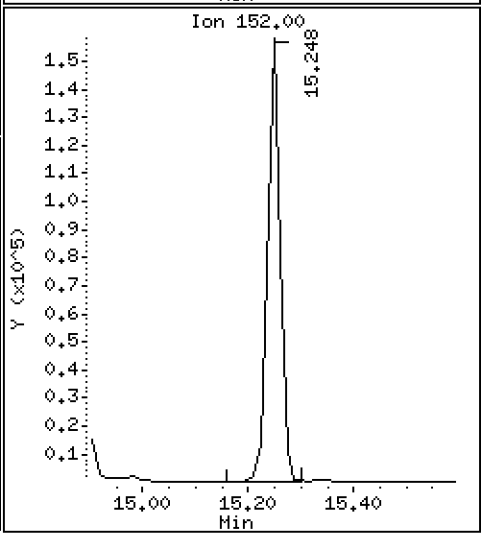


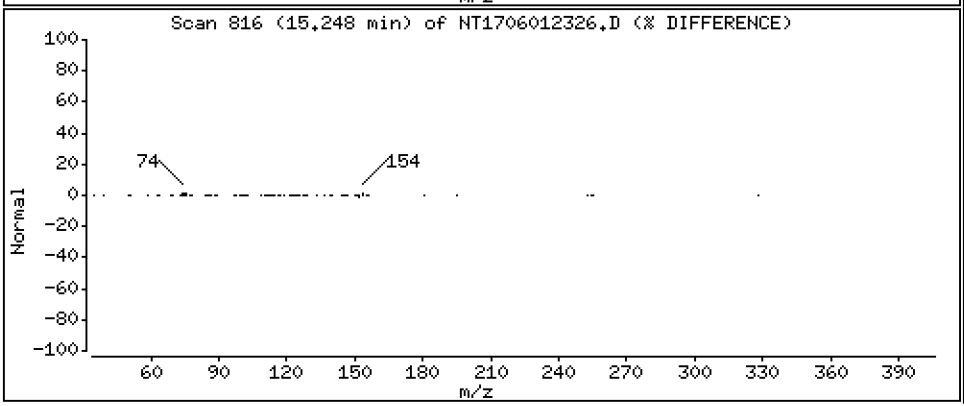












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

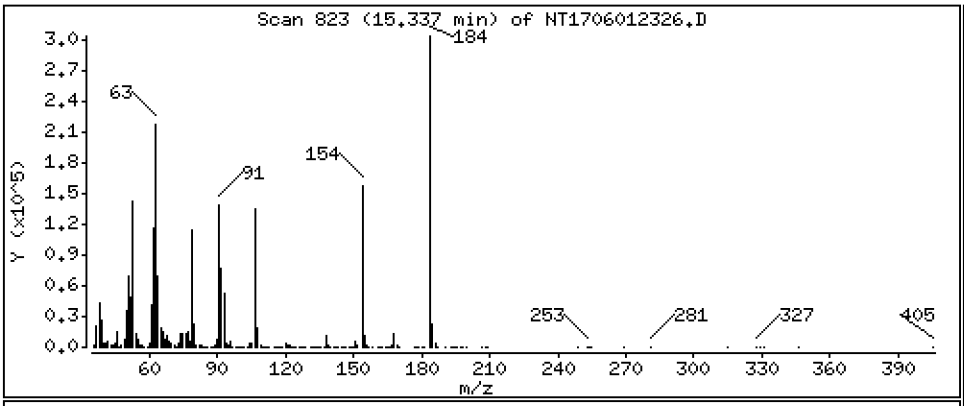
Operator: VTS

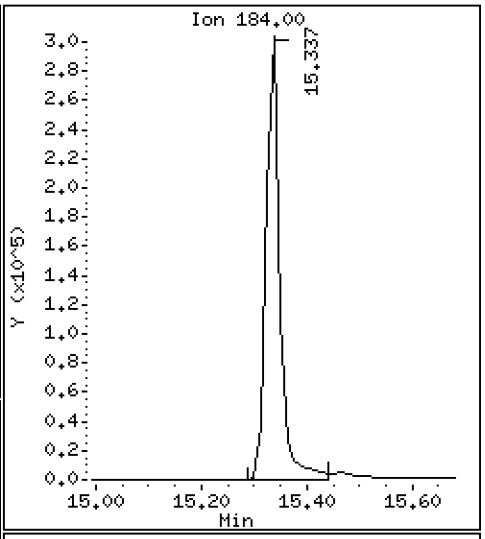
Column phase: ZB-5msi

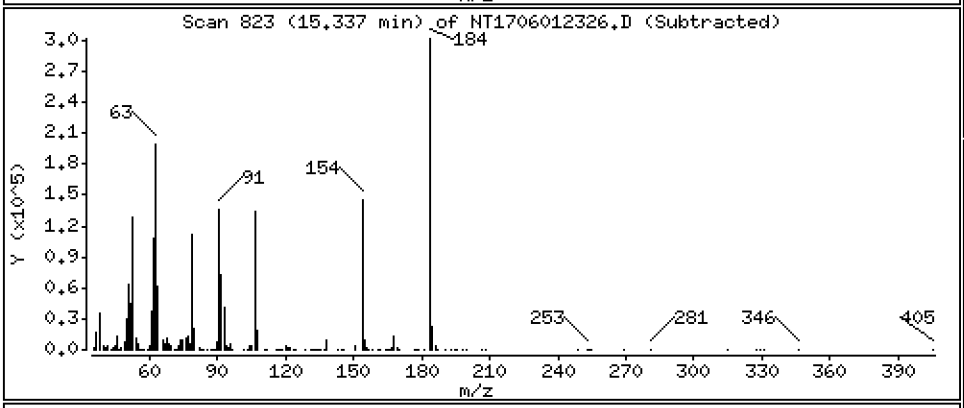
Column diameter: 0.25

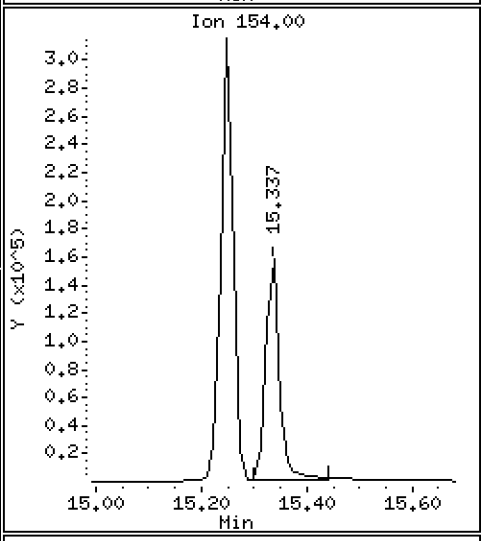
45 2,4-Dinitrophenol

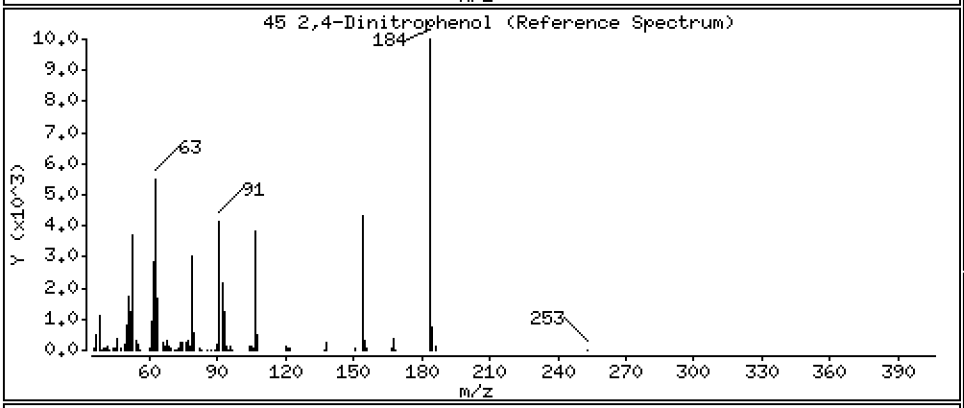
Concentration: 20.77 ug/mL

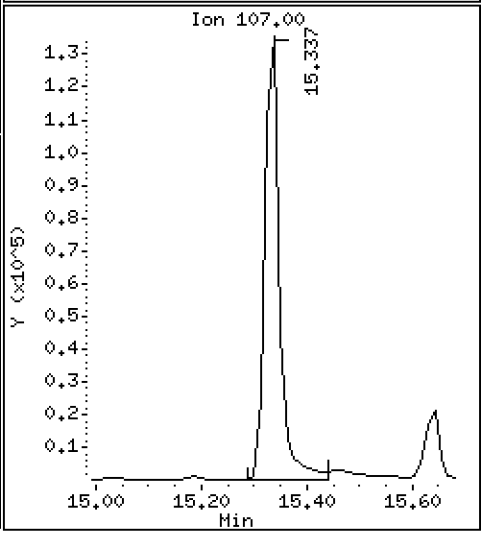


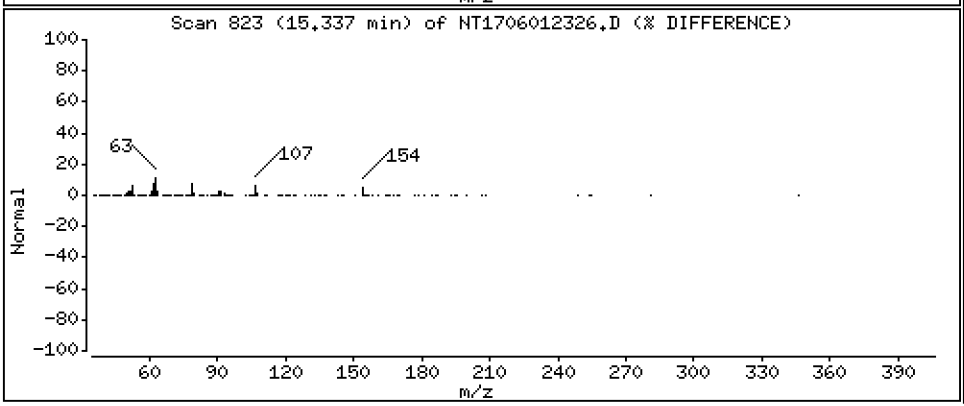












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

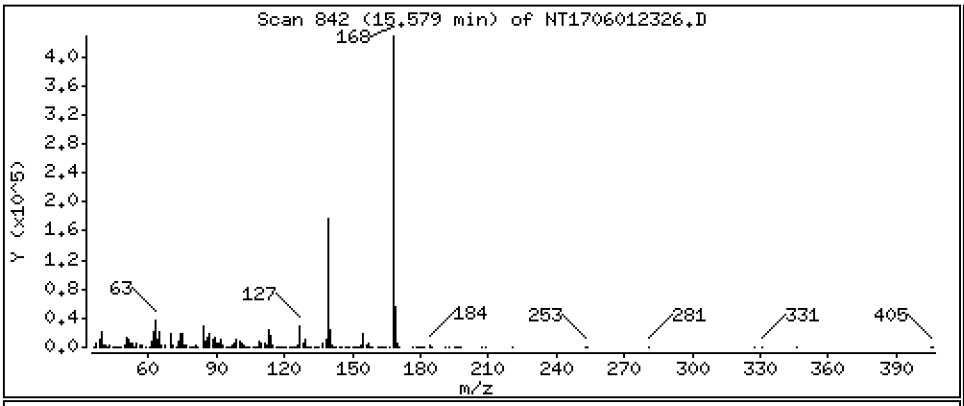
Operator: VTS

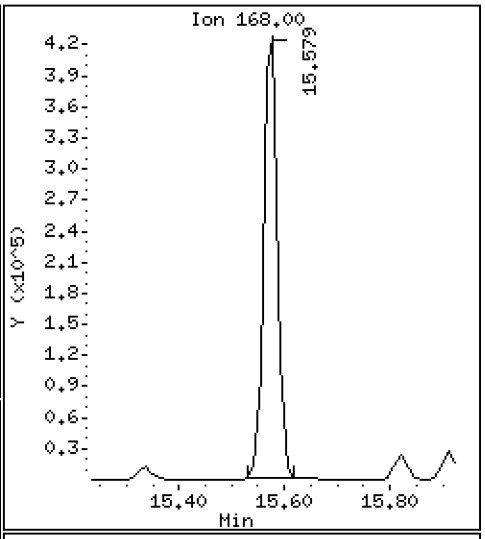
Column phase: ZB-5msi

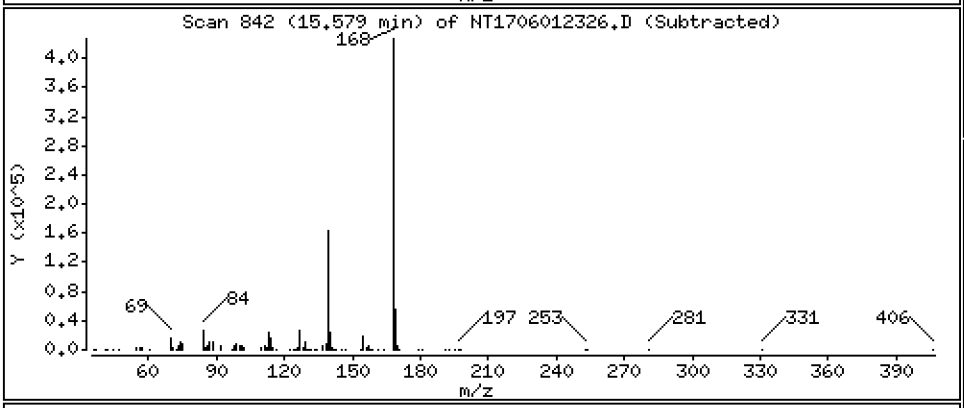
Column diameter: 0.25

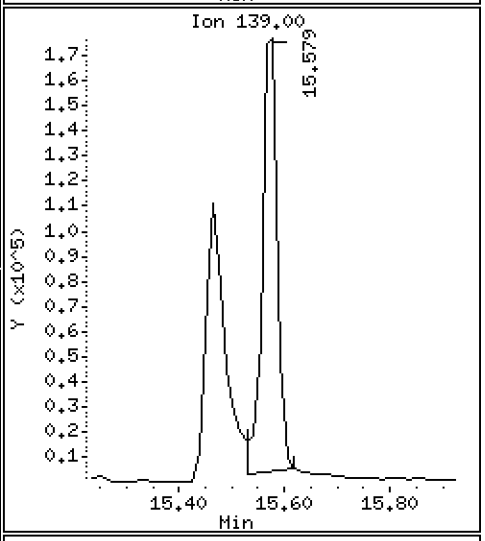
46 Dibenzofuran

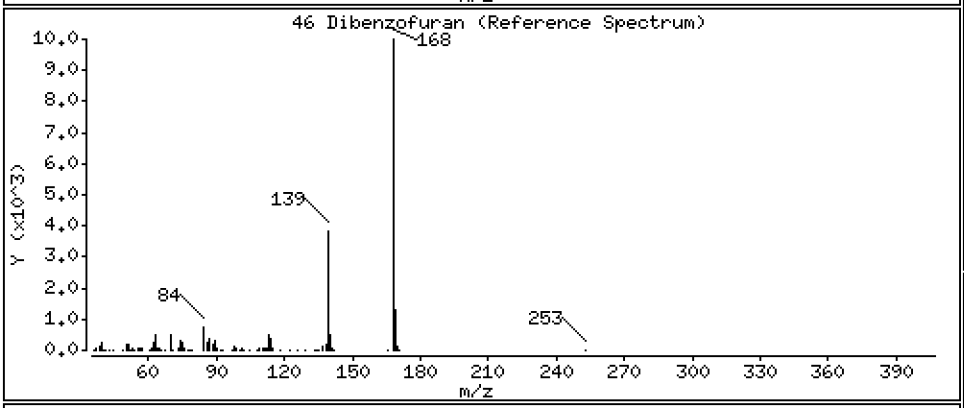
Concentration: 3.432 ug/mL

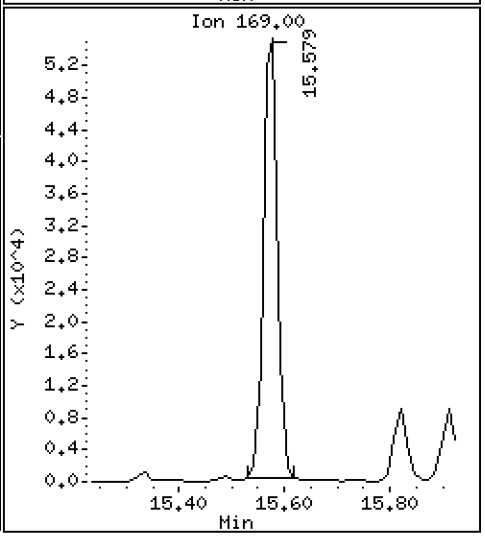


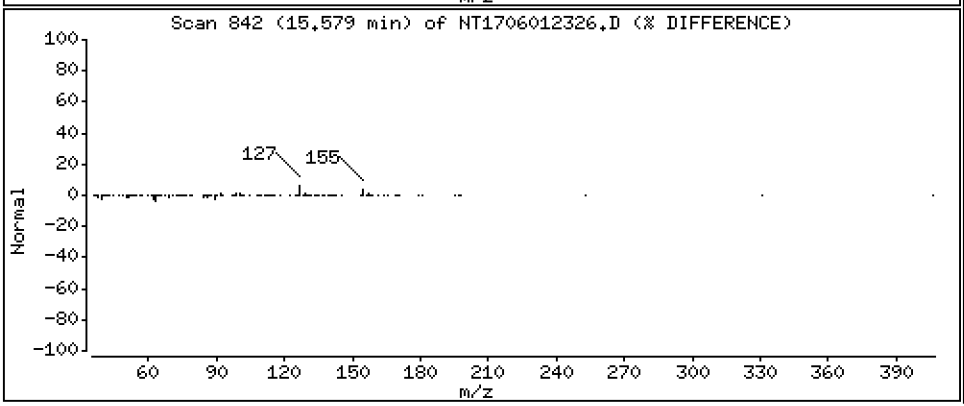












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

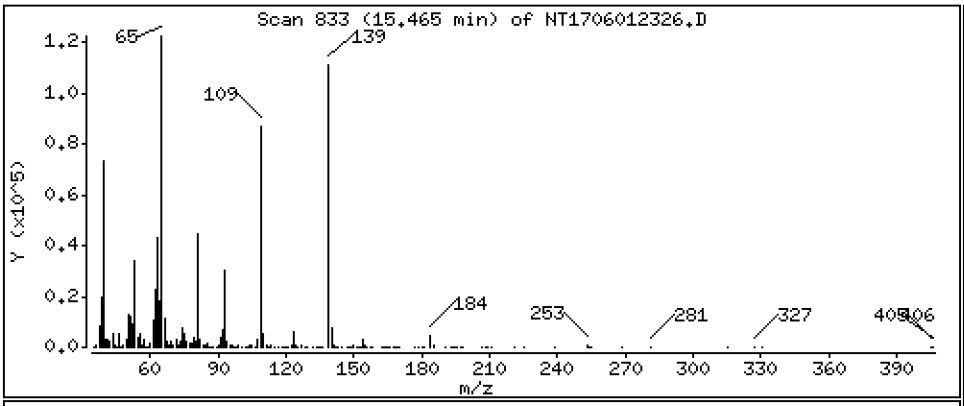
Operator: VTS

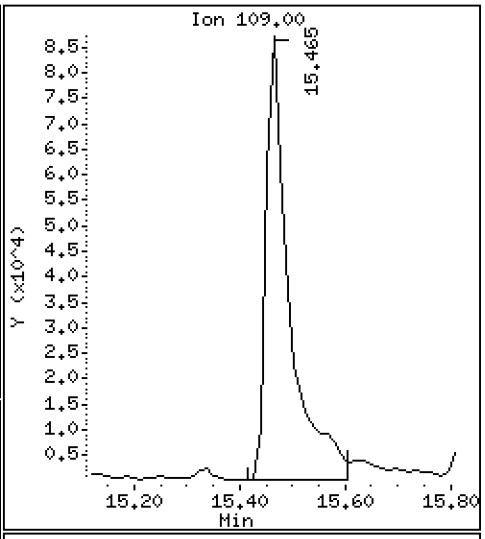
Column phase: ZB-5msi

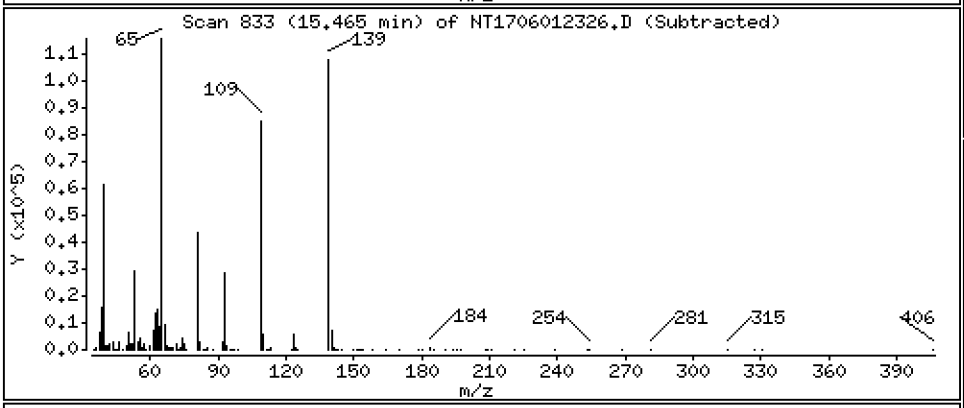
Column diameter: 0.25

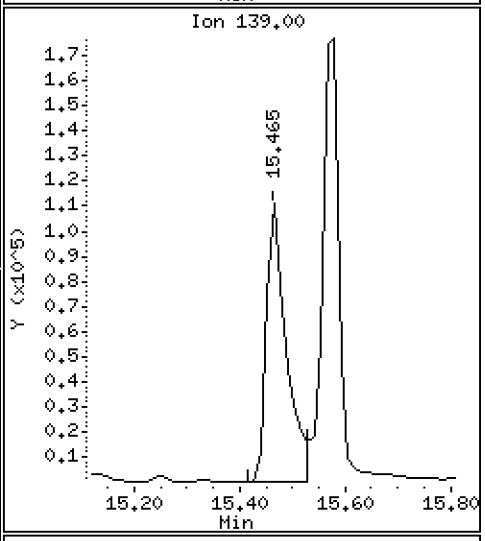
47 4-Nitrophenol

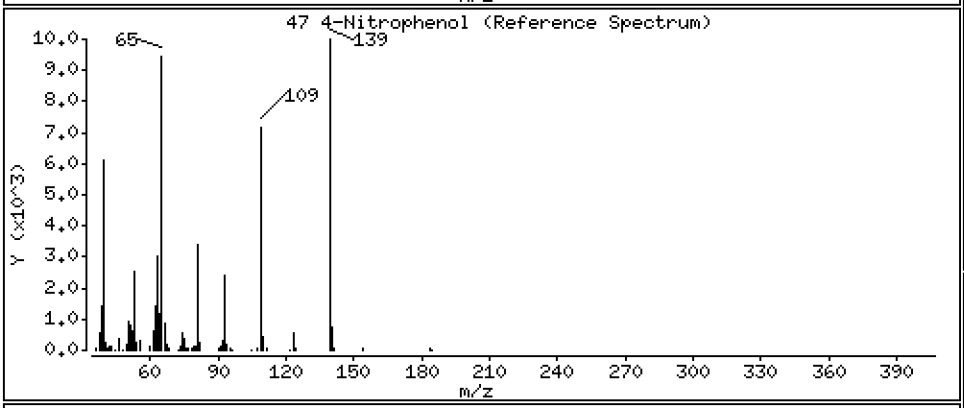
Concentration: 10.29 ug/mL

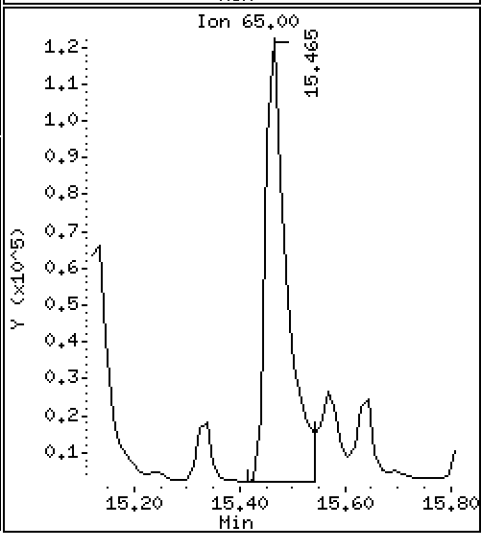


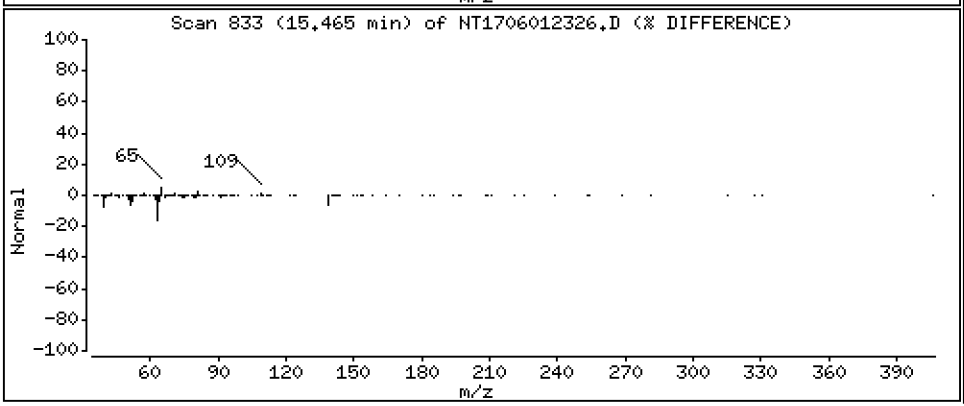












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

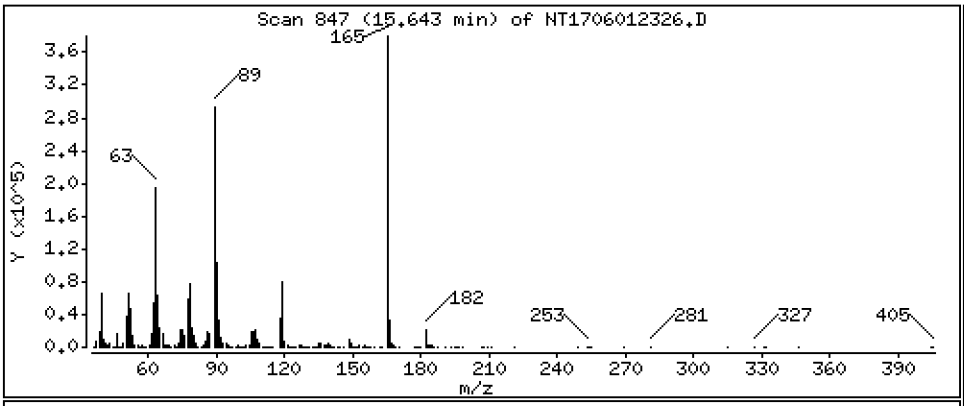
Operator: VTS

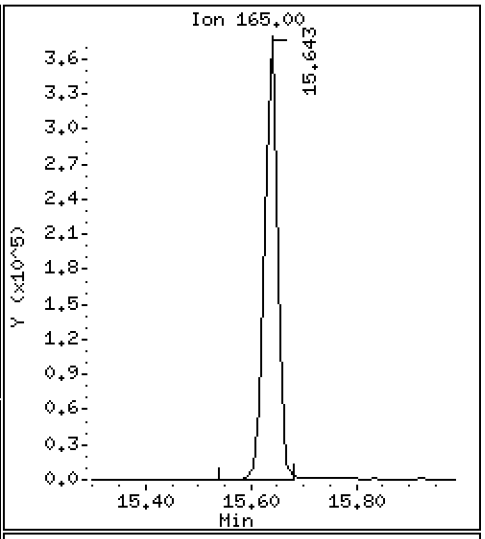
Column phase: ZB-5msi

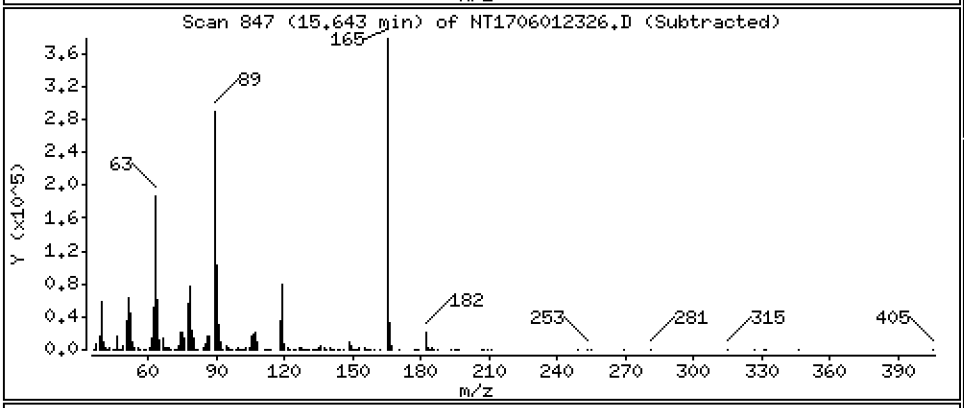
Column diameter: 0.25

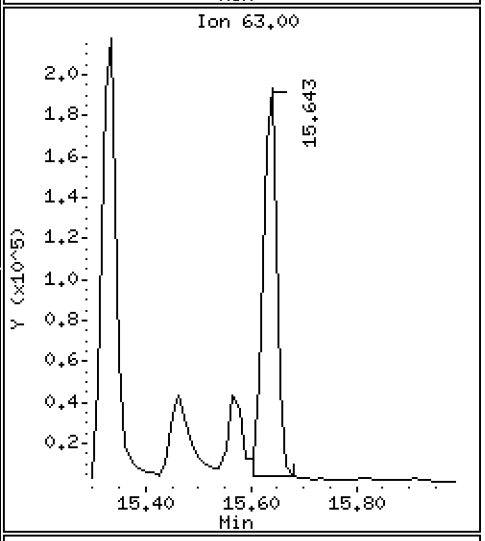
48 2,4-Dinitrotoluene

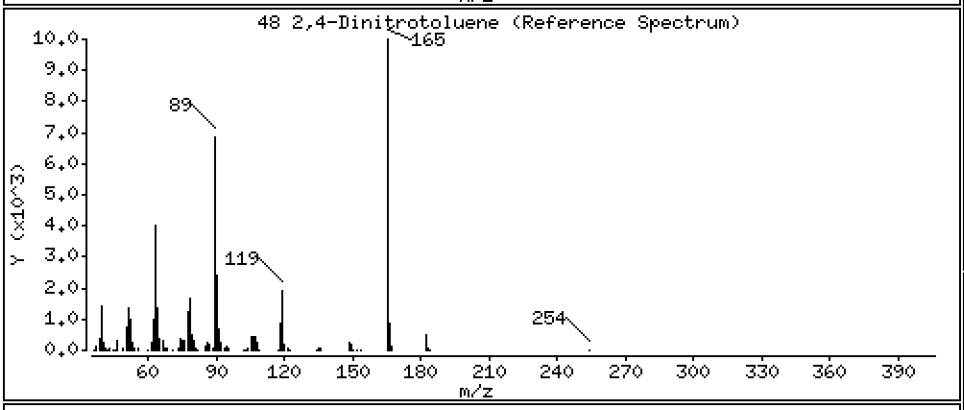
Concentration: 11.81 ug/mL

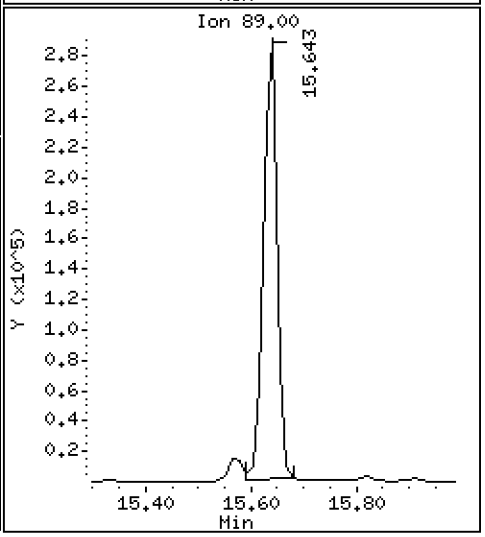


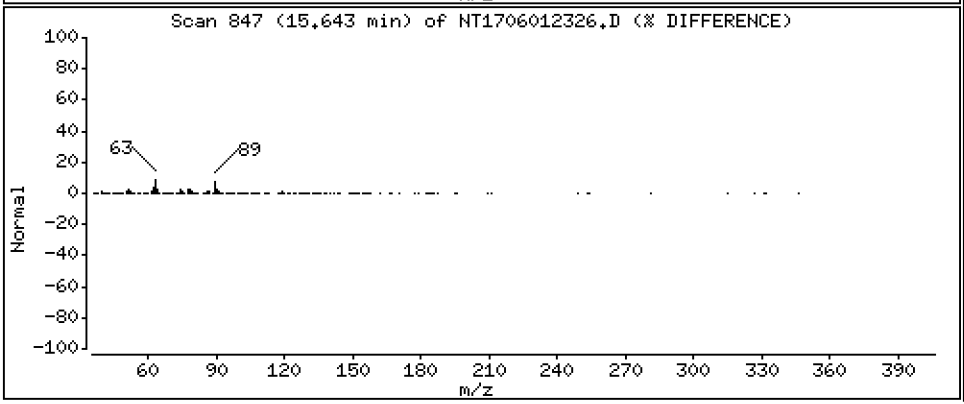












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

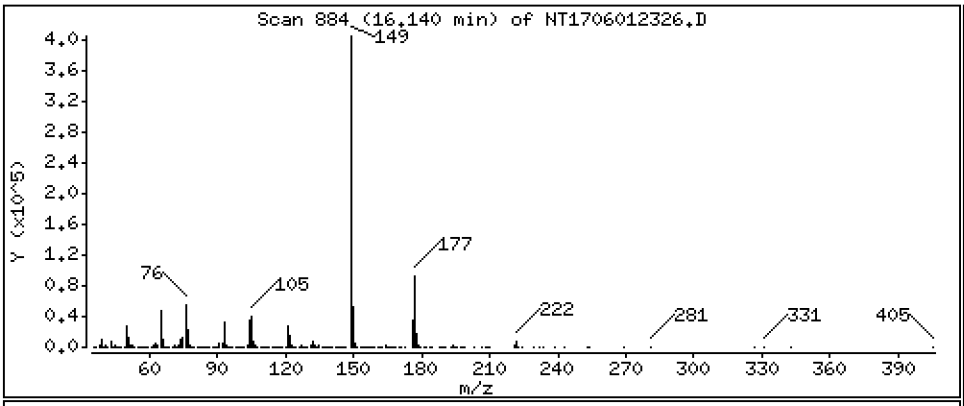
Operator: VTS

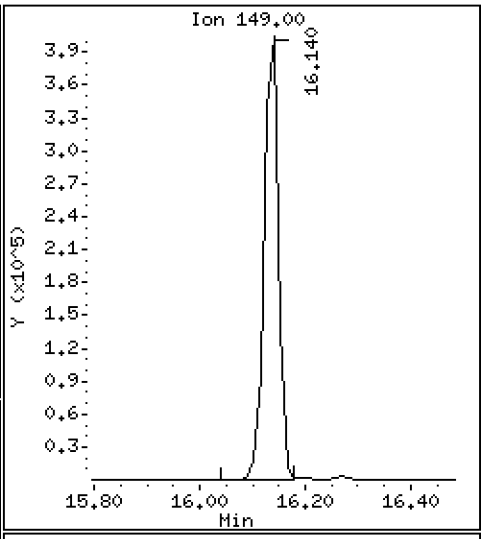
Column phase: ZB-5msi

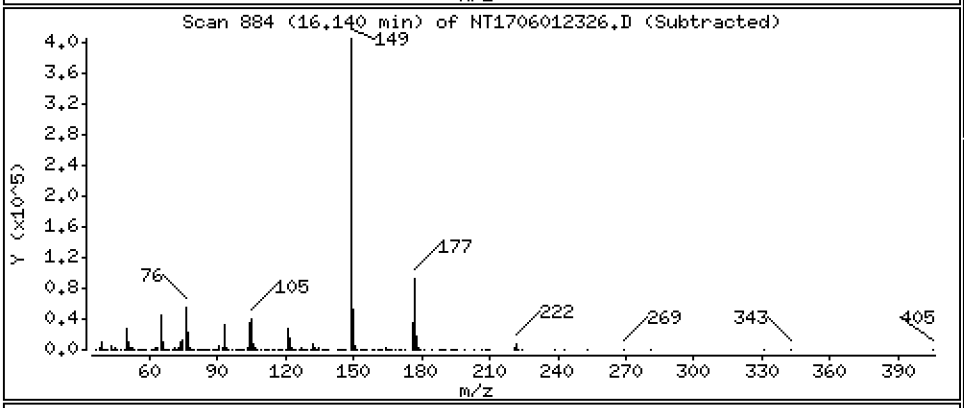
Column diameter: 0.25

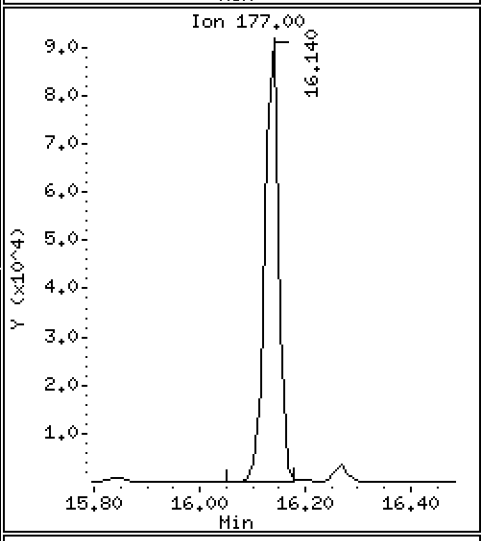
50 Diethylphthalate

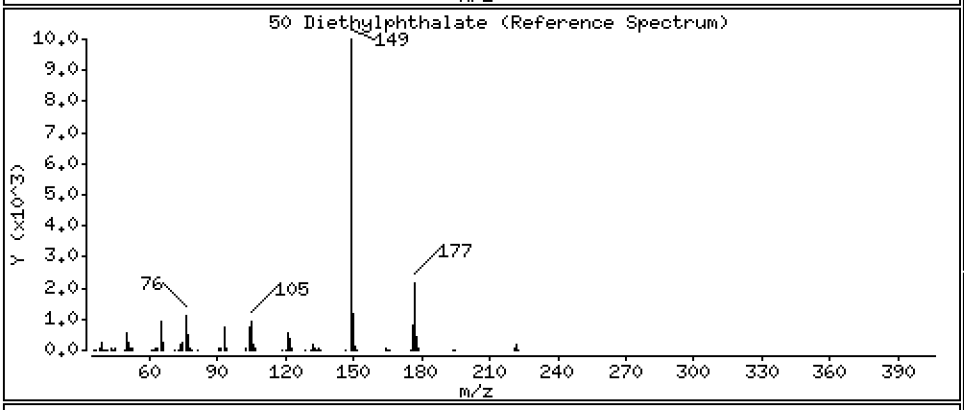
Concentration: 4.381 ug/mL

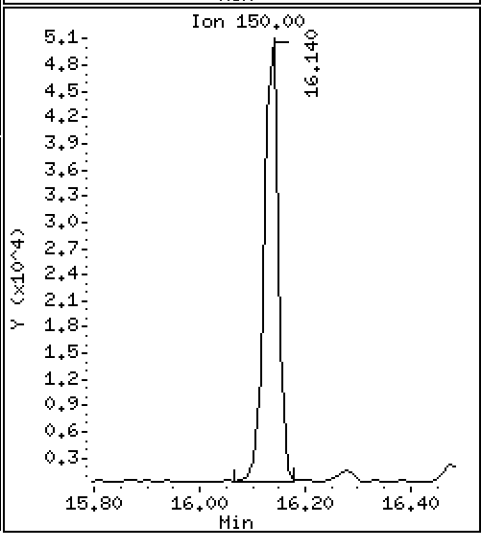


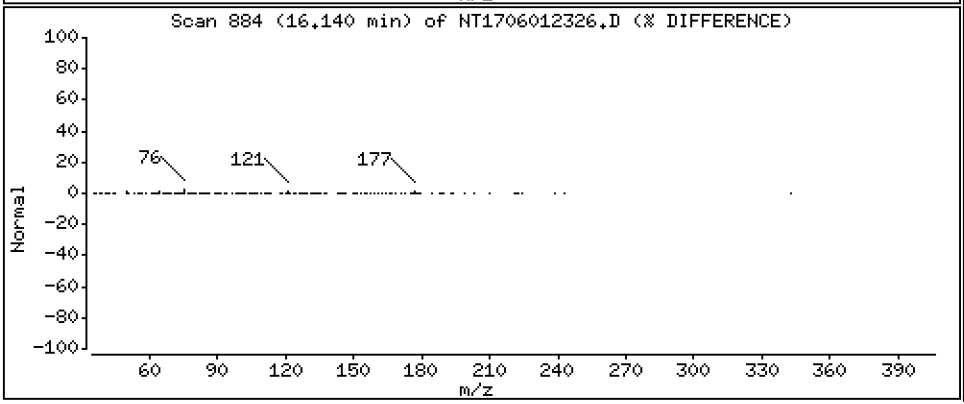












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

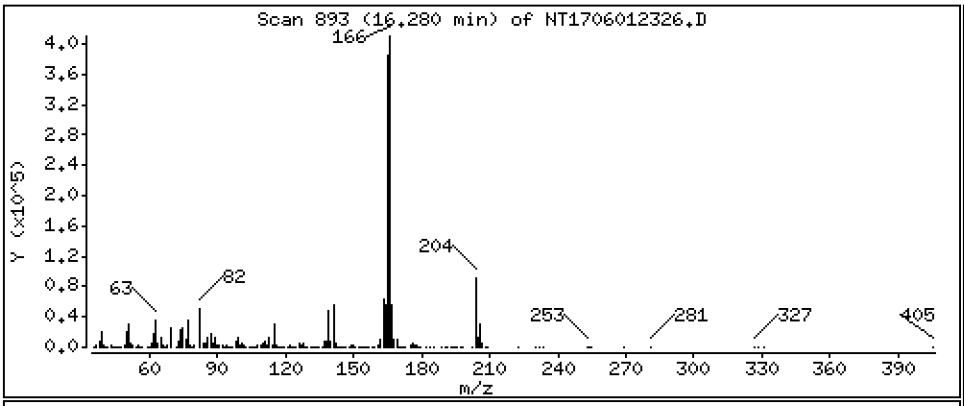
Operator: VTS

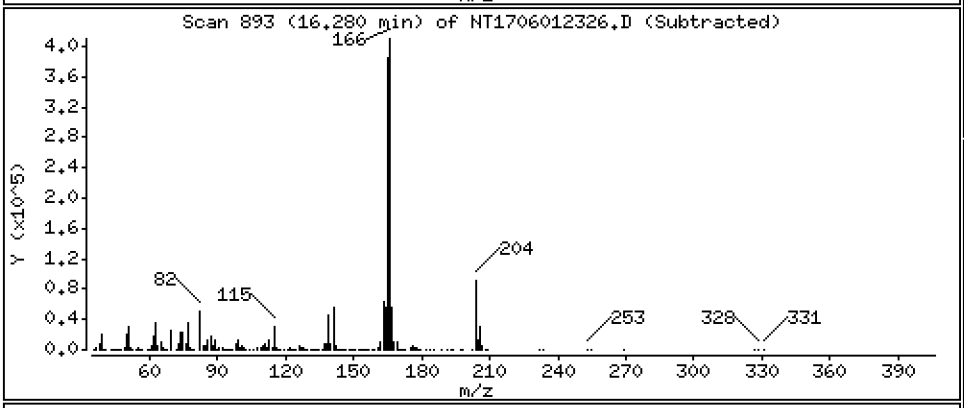
Column phase: ZB-5msi

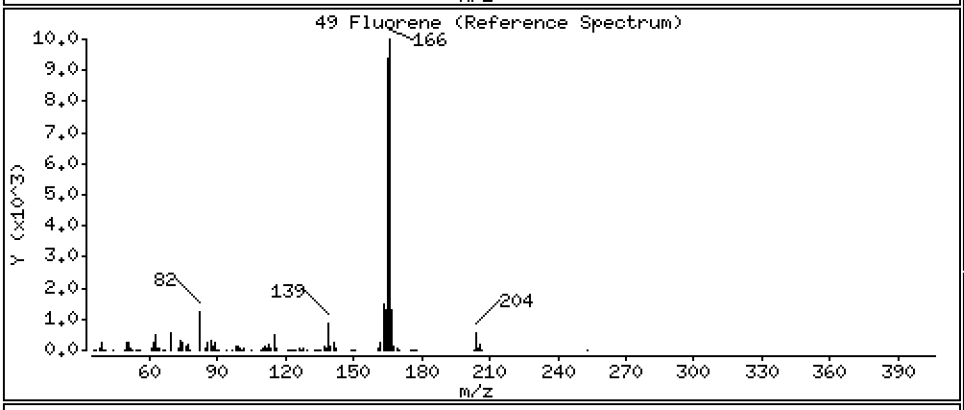
Column diameter: 0.25

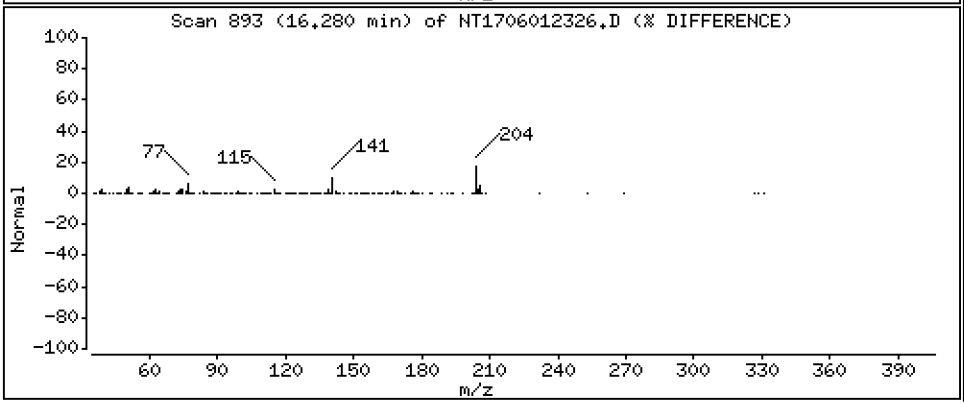
49 Fluorene

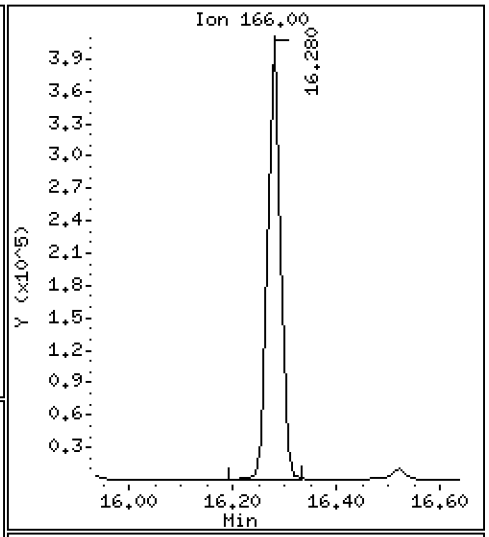
Concentration: 3.815 ug/mL

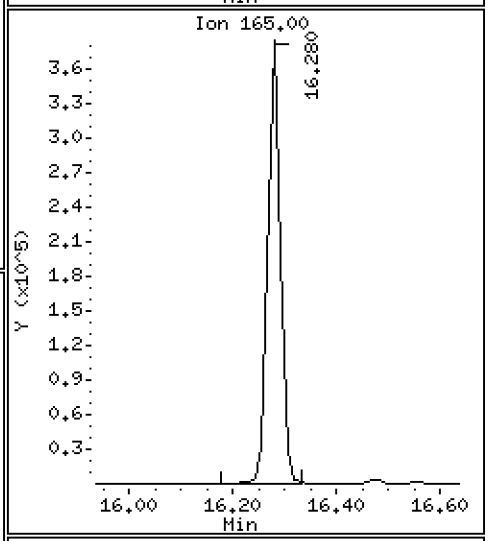


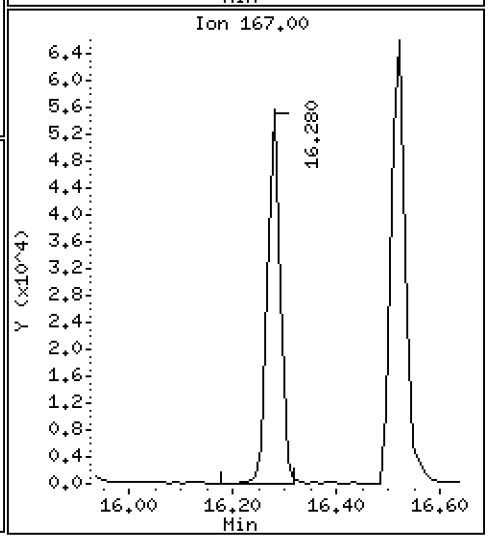












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

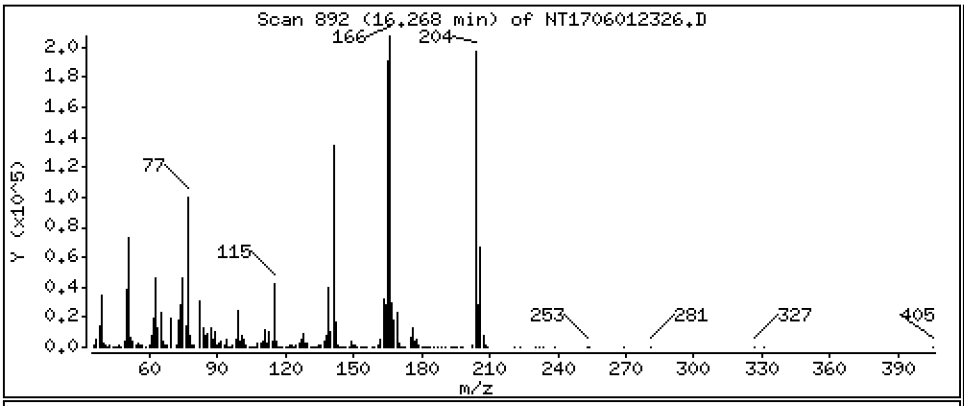
Operator: VTS

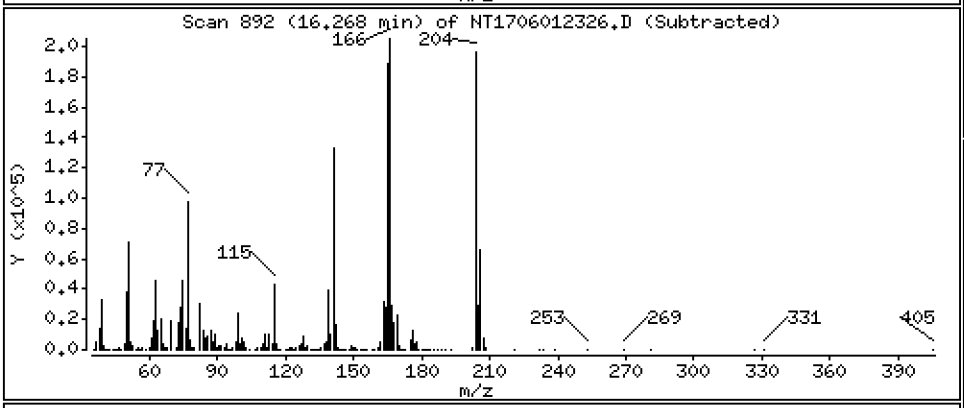
Column phase: ZB-5msi

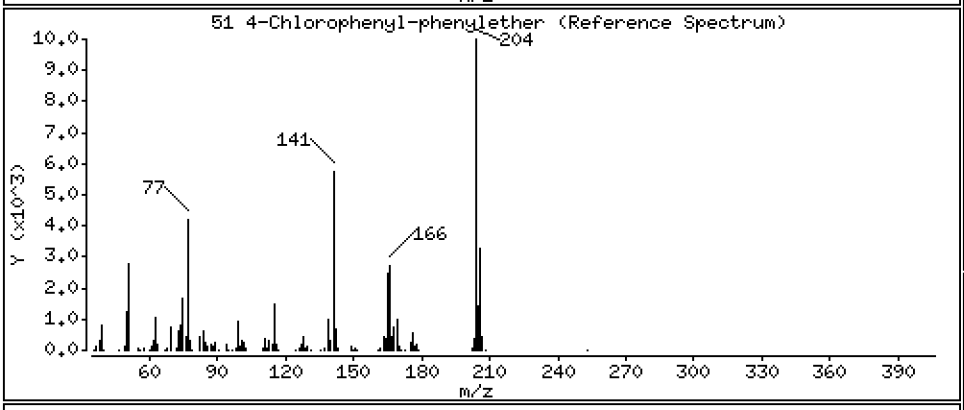
Column diameter: 0.25

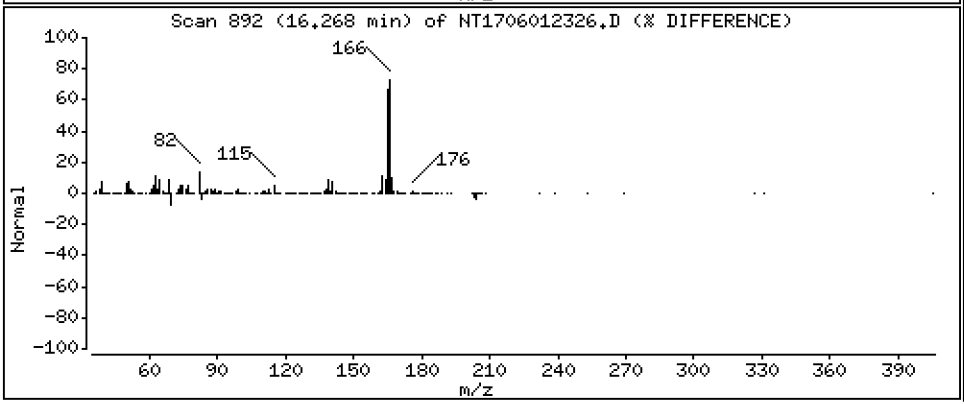
51 4-Chlorophenyl-phenylether

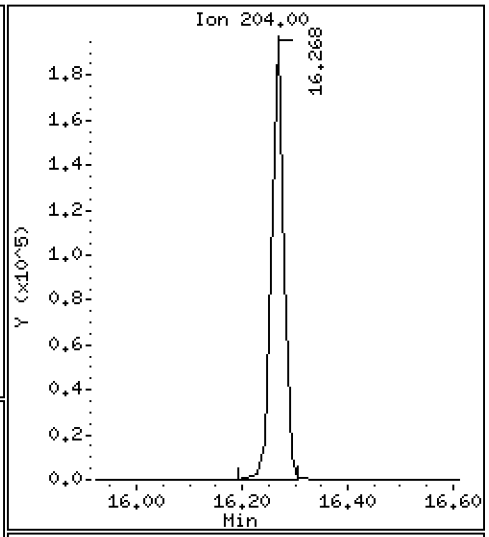
Concentration: 4.013 ug/mL

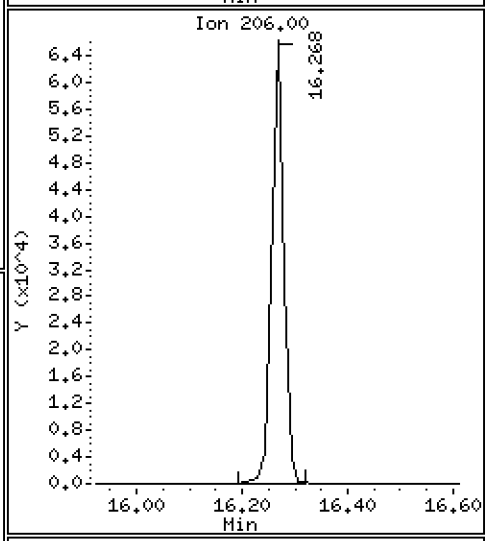


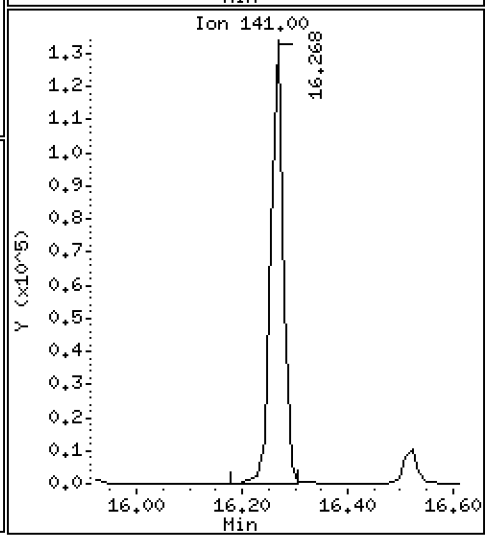












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

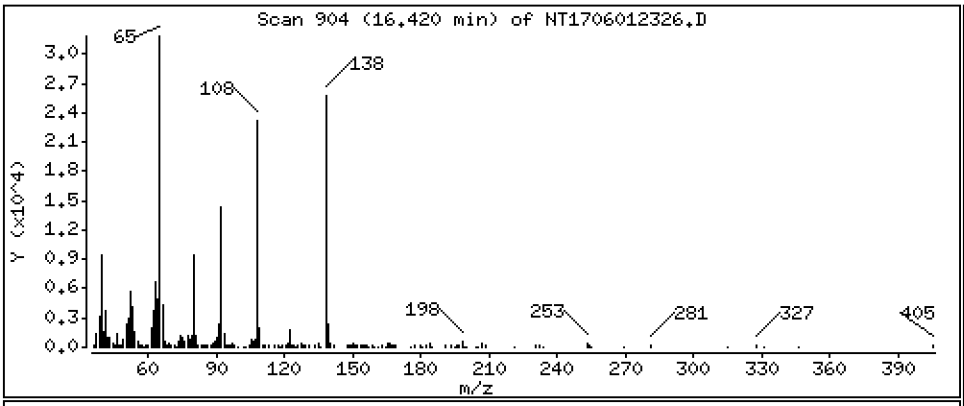
Operator: VTS

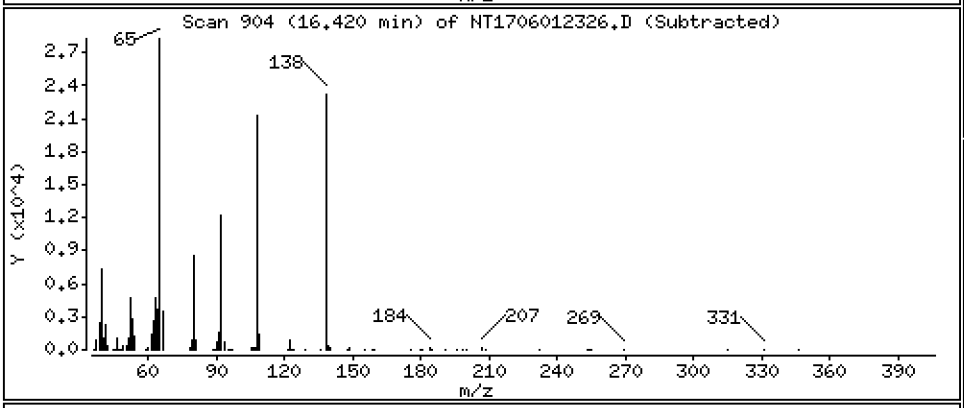
Column phase: ZB-5msi

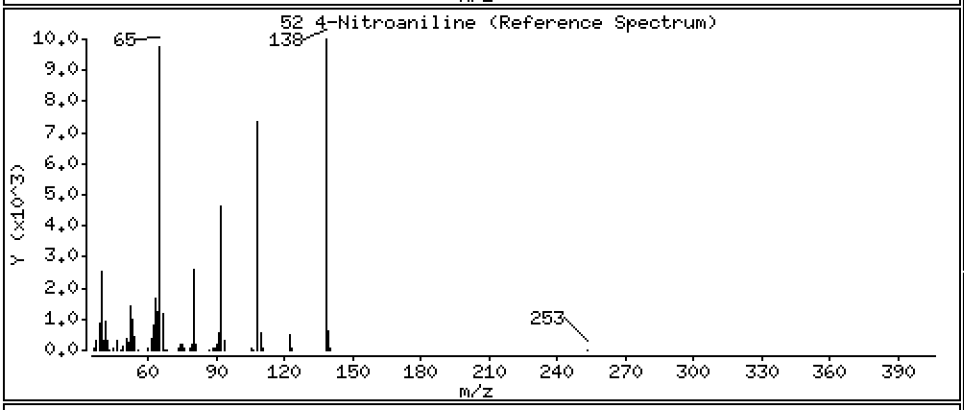
Column diameter: 0.25

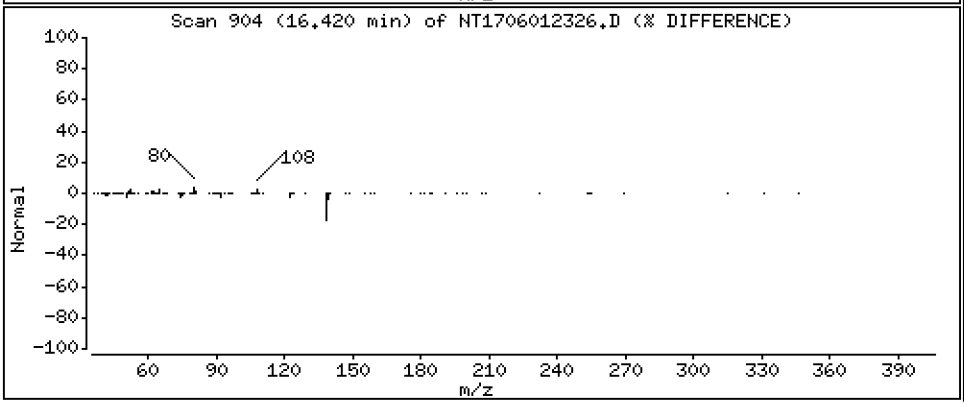
52 4-Nitroaniline

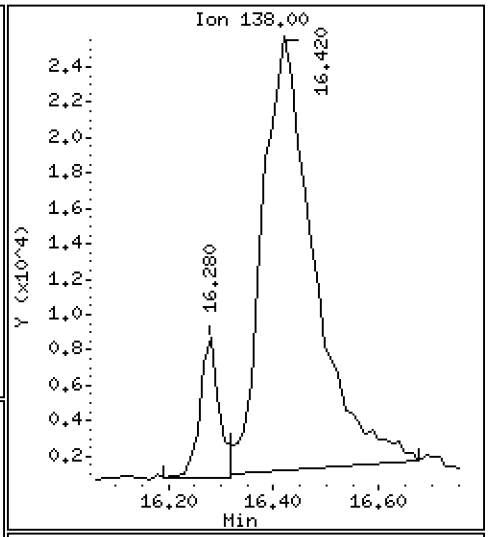
Concentration: 4.538 ug/mL

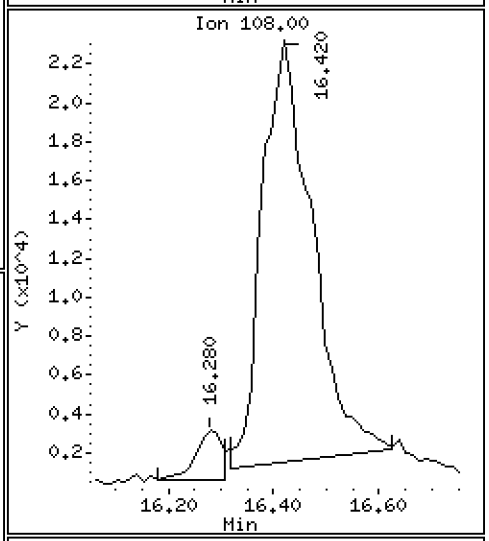


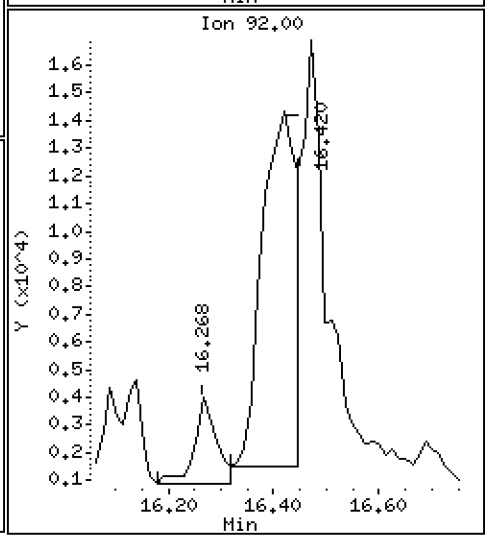












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

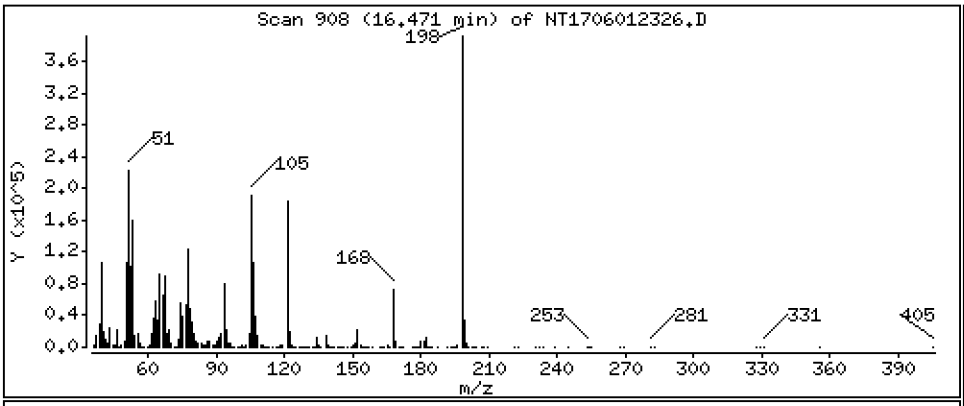
Operator: VTS

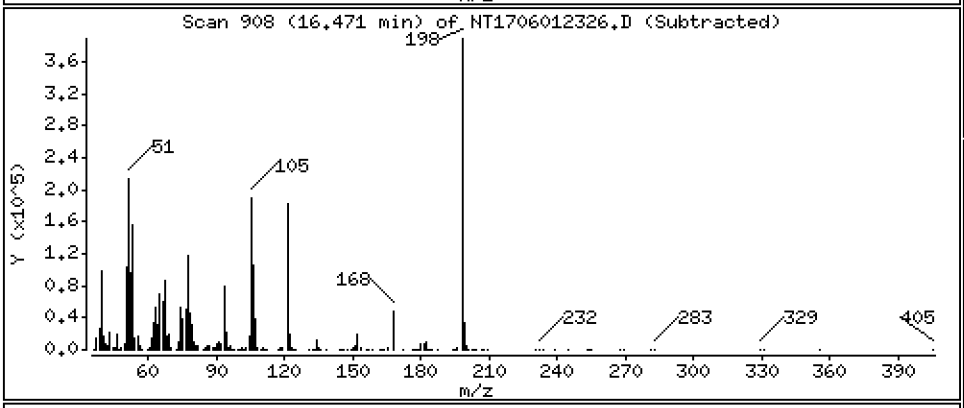
Column phase: ZB-5msi

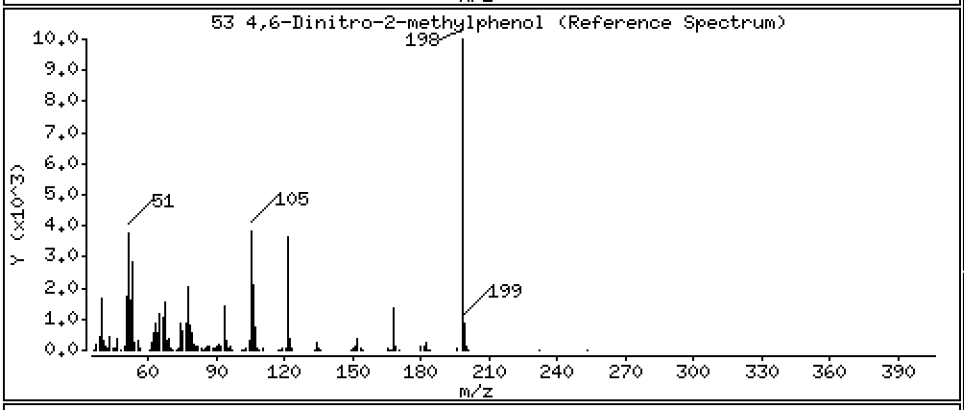
Column diameter: 0.25

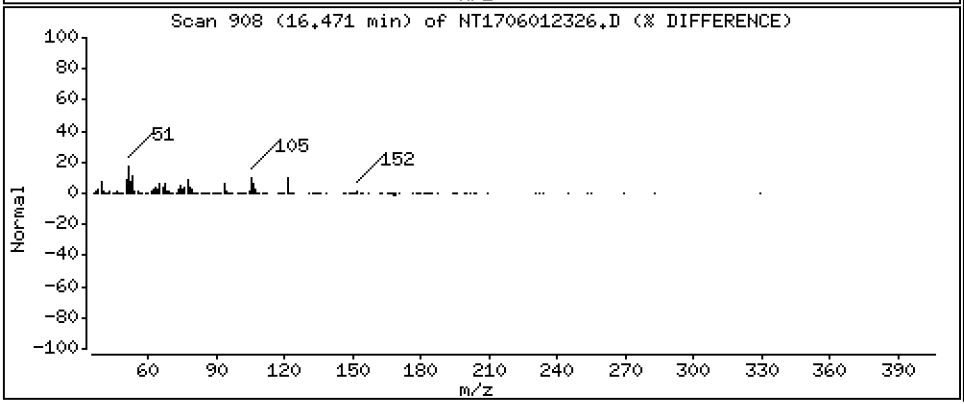
53 4,6-Dinitro-2-methylphenol

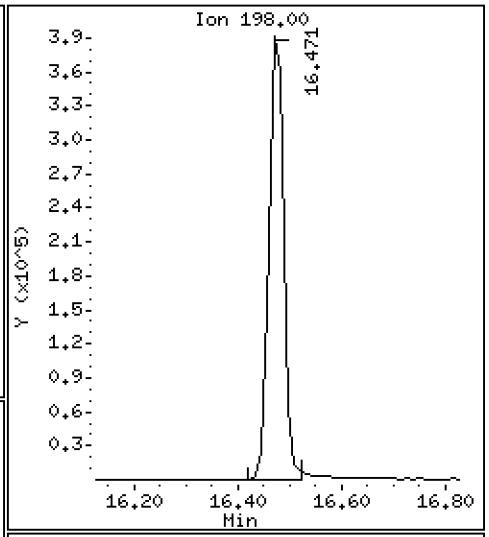
Concentration: 21.53 ug/mL

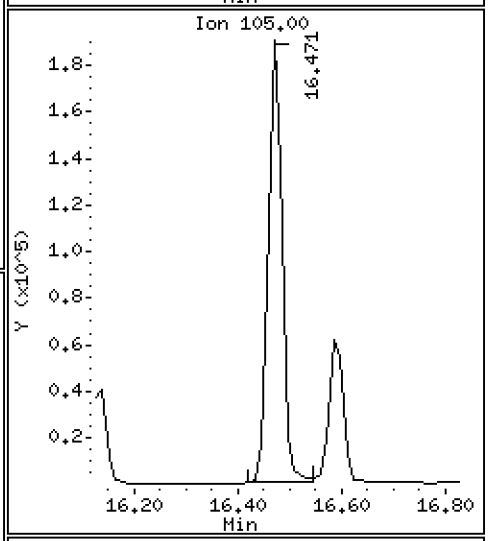


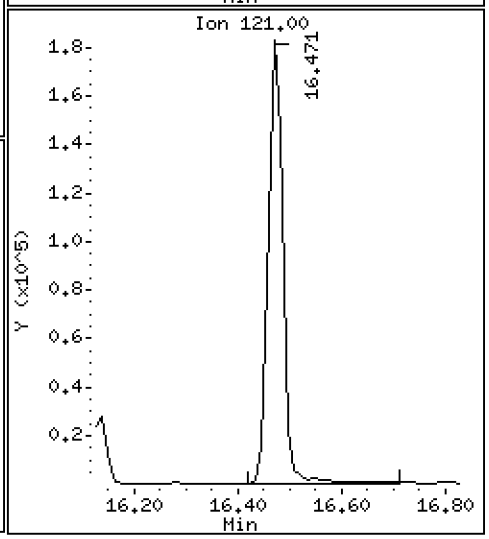












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

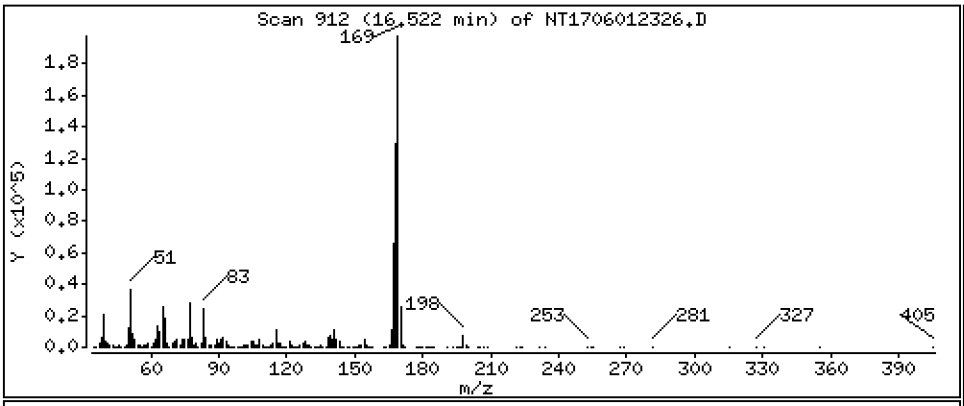
Operator: VTS

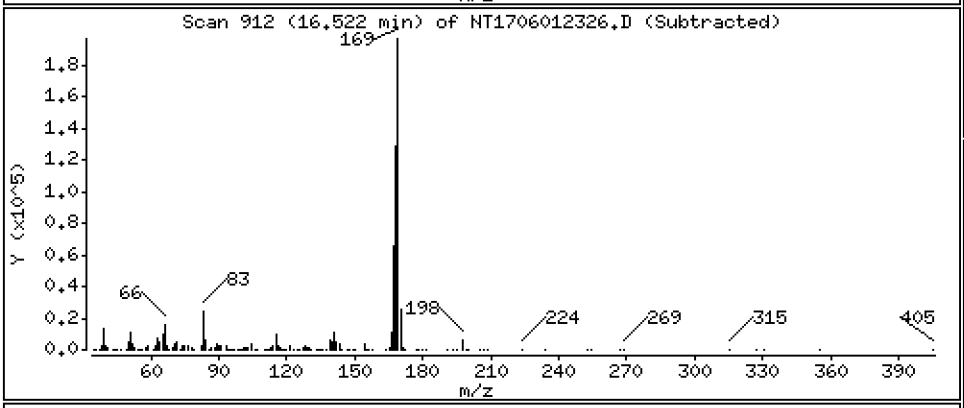
Column phase: ZB-5msi

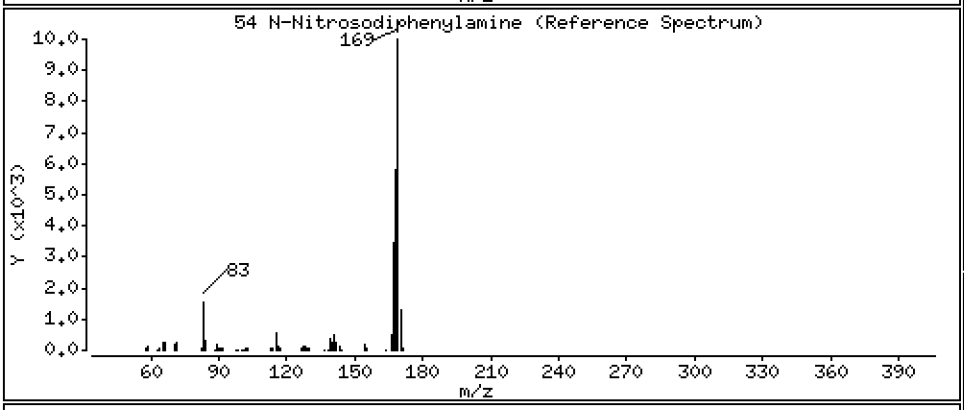
Column diameter: 0.25

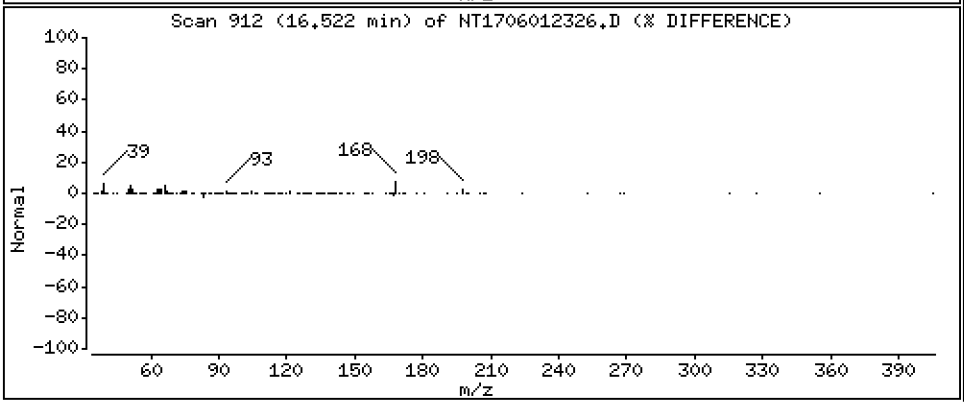
54 N-Nitrosodiphenylamine

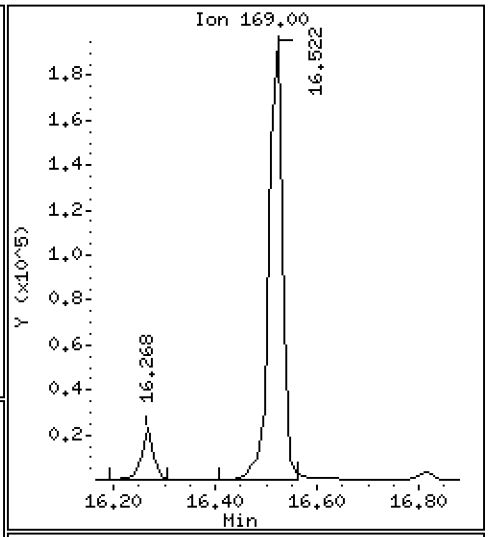
Concentration: 2.913 ug/mL

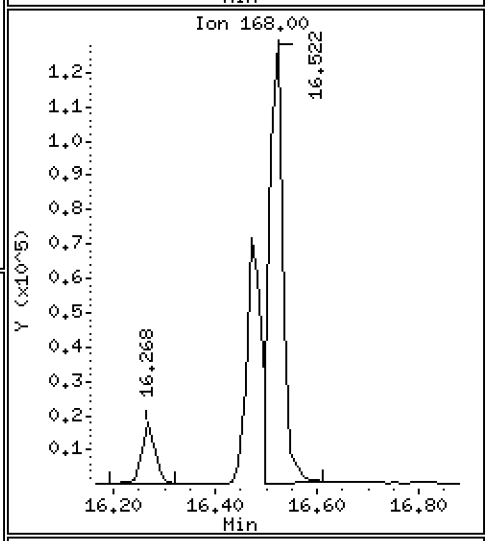


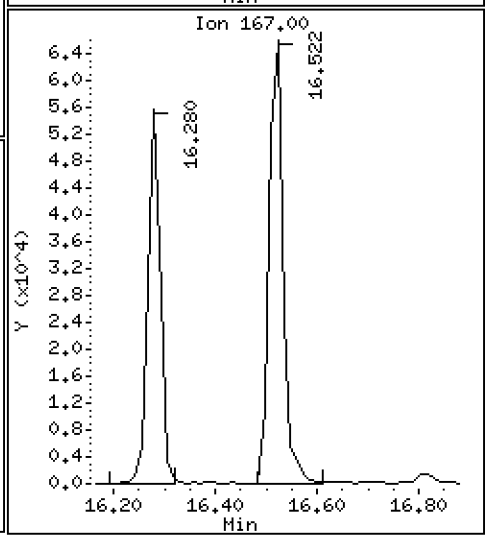












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

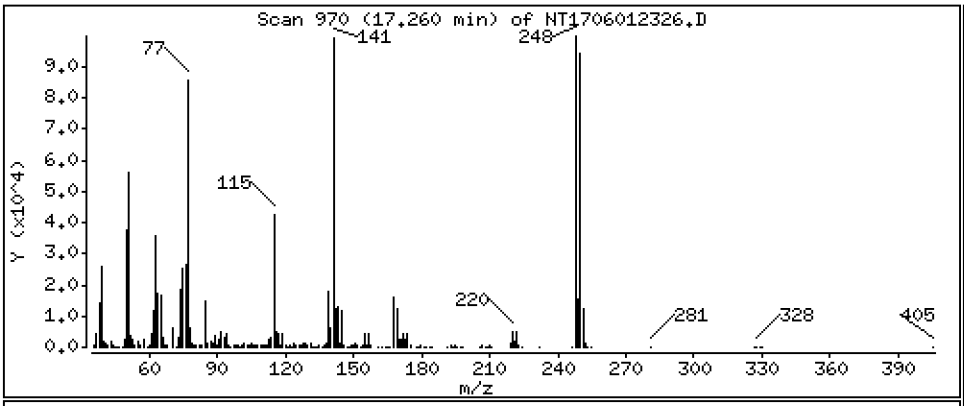
Operator: VTS

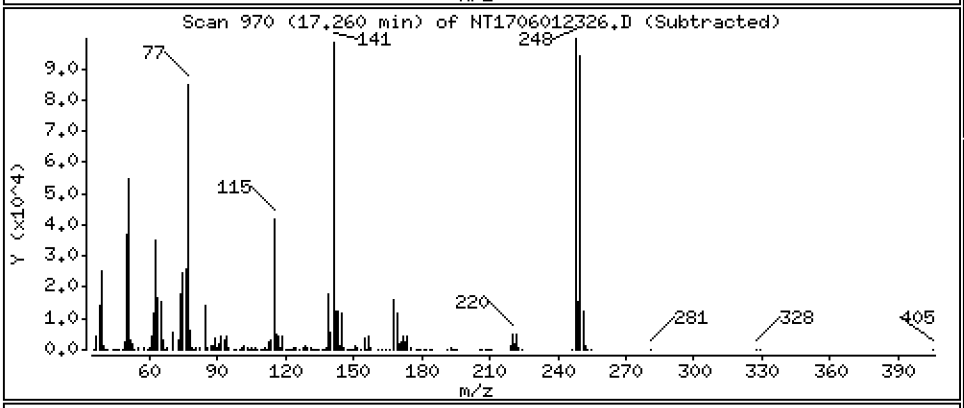
Column phase: ZB-5msi

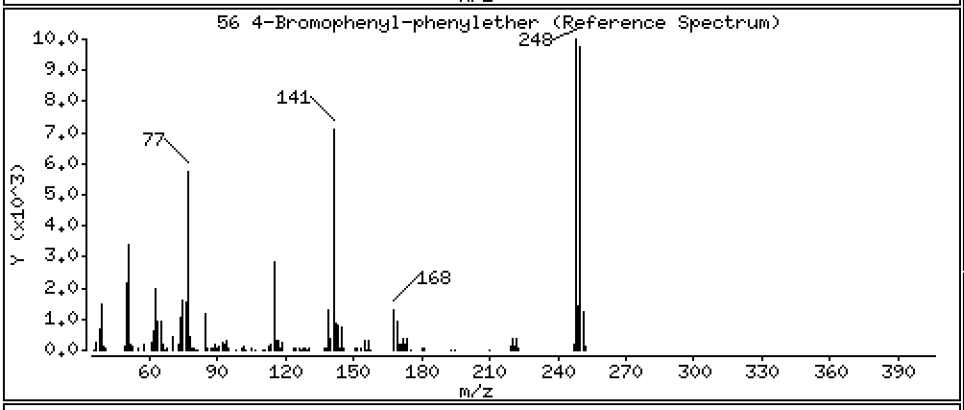
Column diameter: 0.25

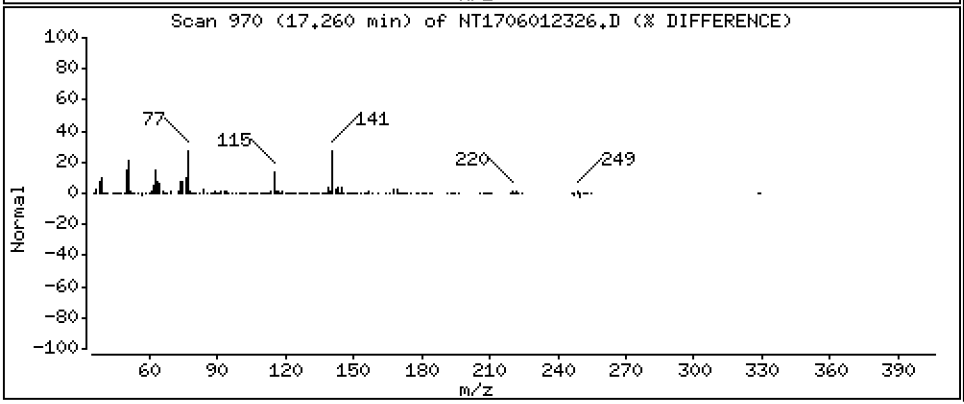
56 4-Bromophenyl-phenylether

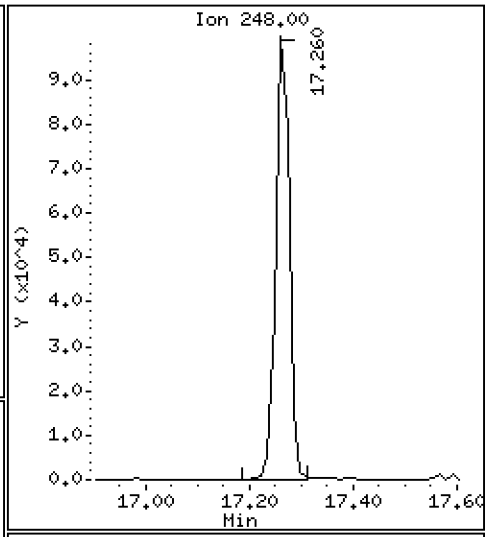
Concentration: 4.153 ug/mL

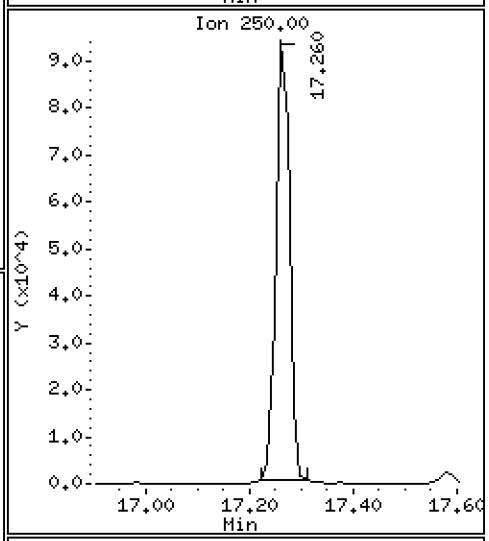


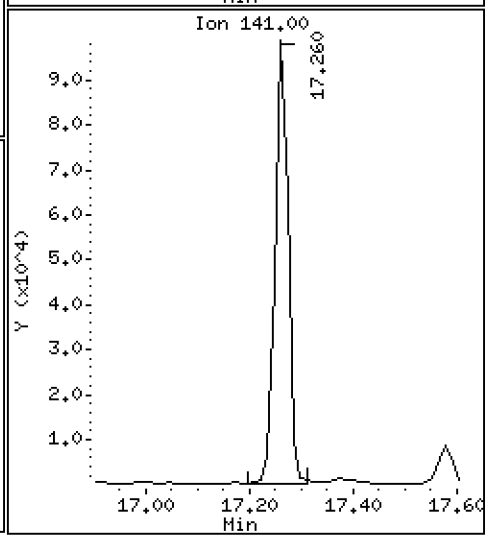












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

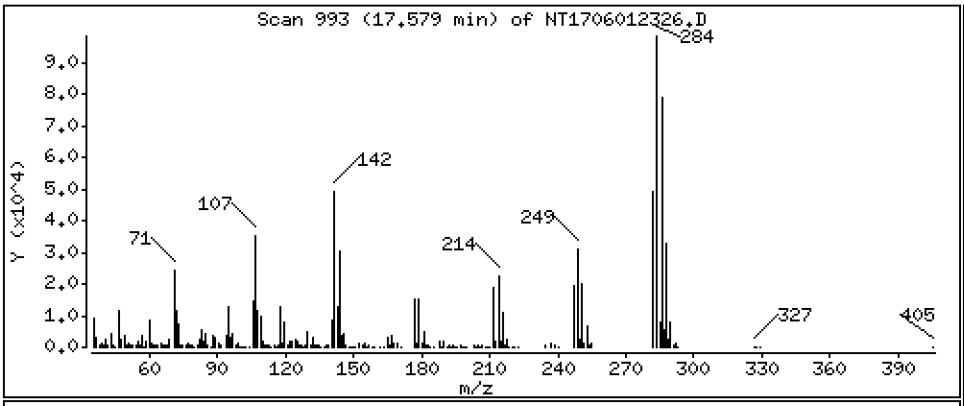
Operator: VTS

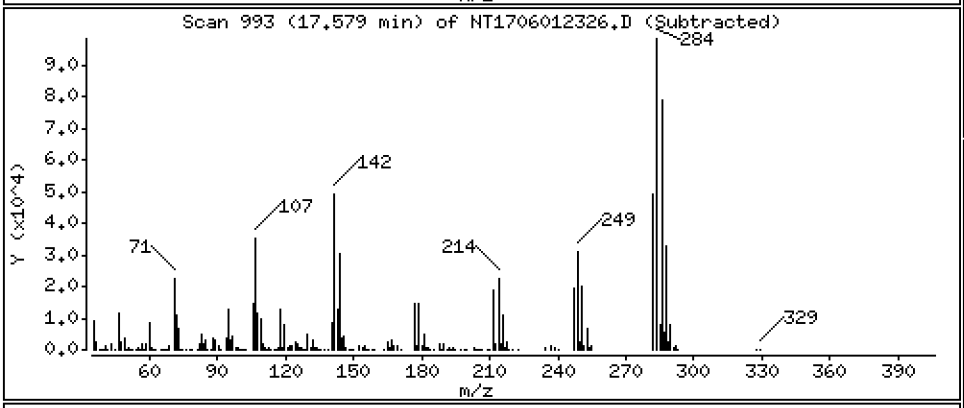
Column phase: ZB-5msi

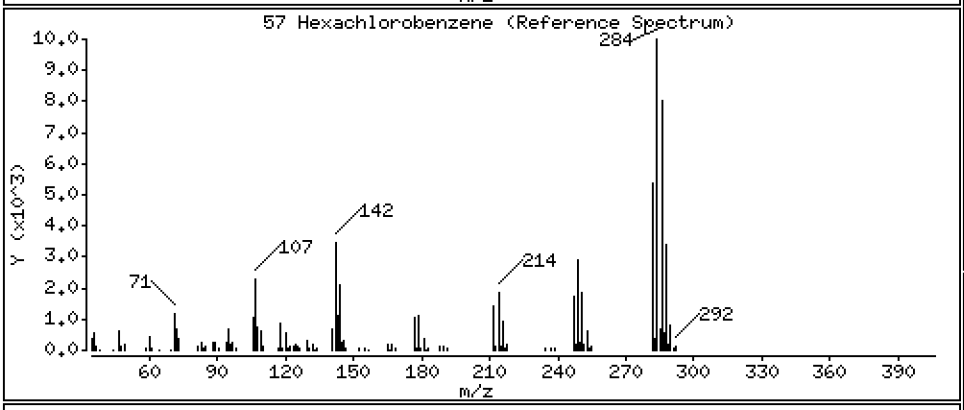
Column diameter: 0.25

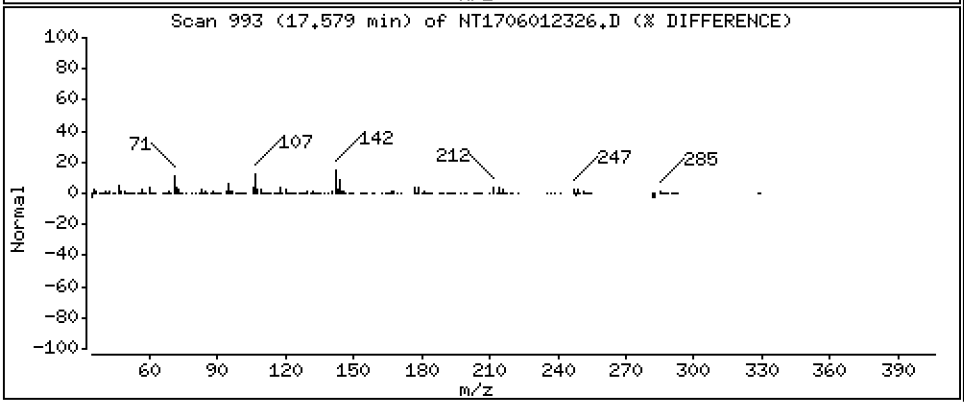
57 Hexachlorobenzene

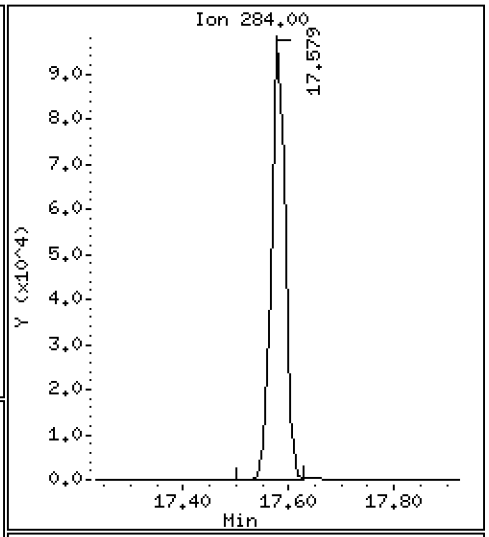
Concentration: 4.019 ug/mL

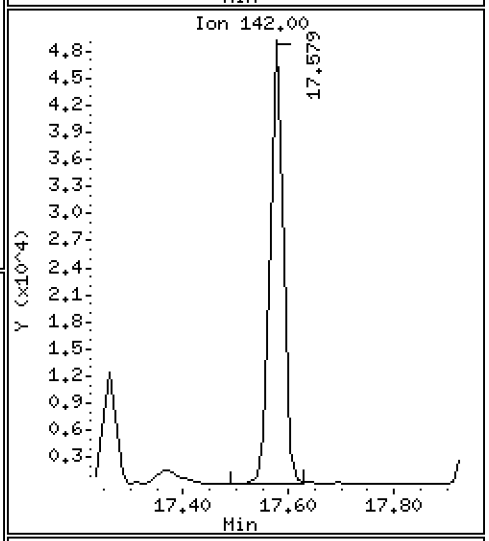


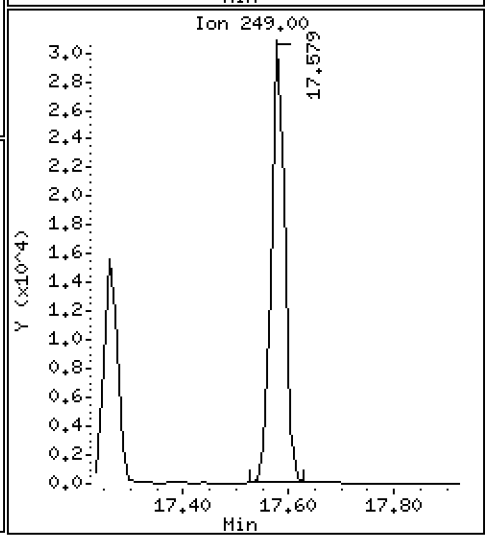












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

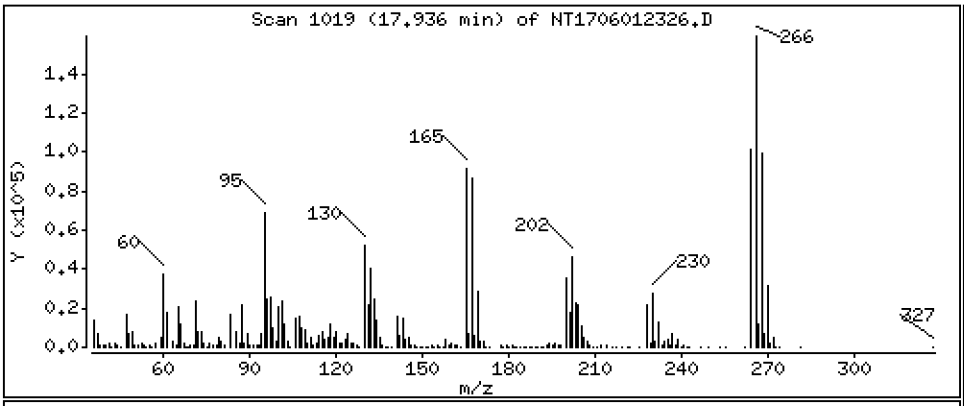
Operator: VTS

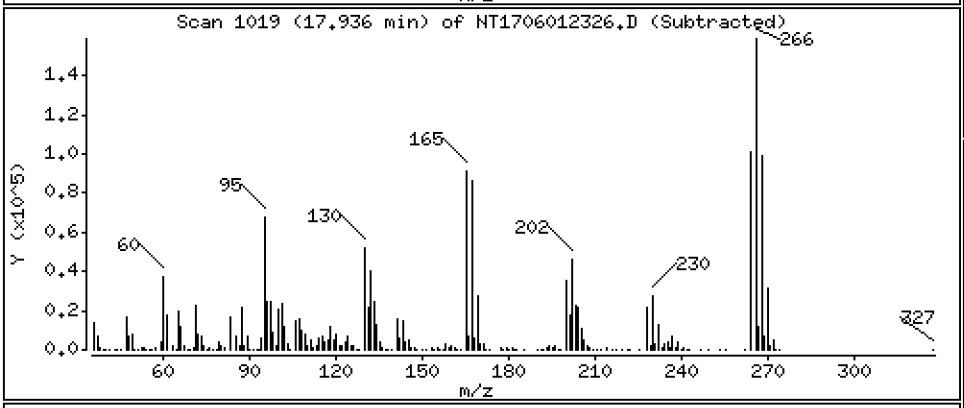
Column phase: ZB-5msi

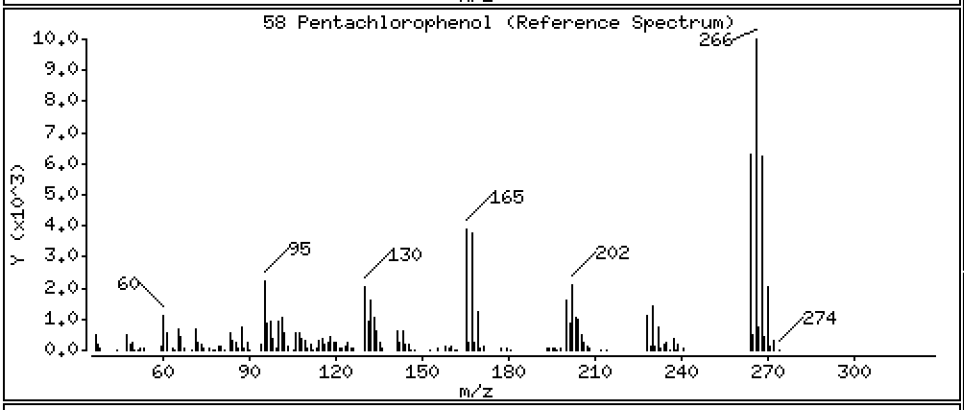
Column diameter: 0.25

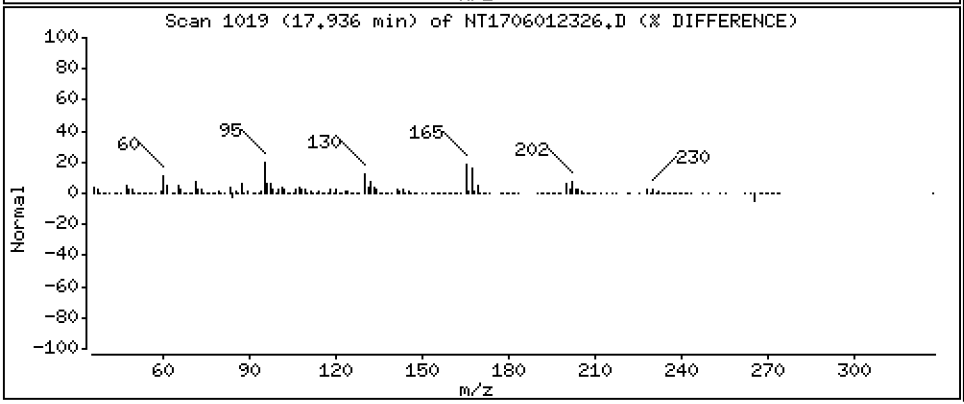
58 Pentachlorophenol

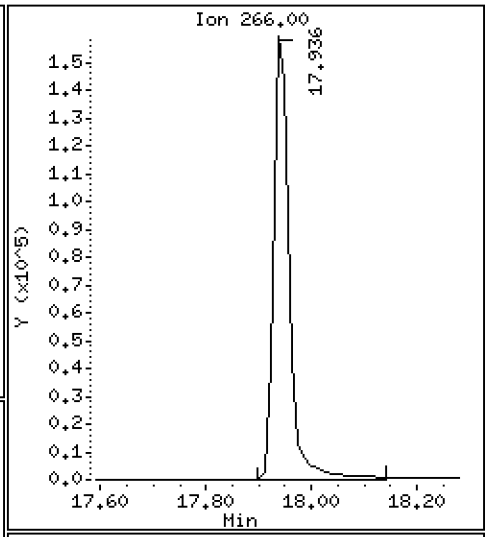
Concentration: 11.99 ug/mL

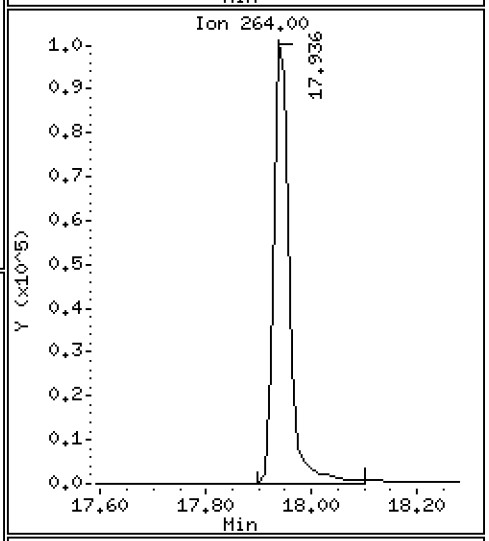


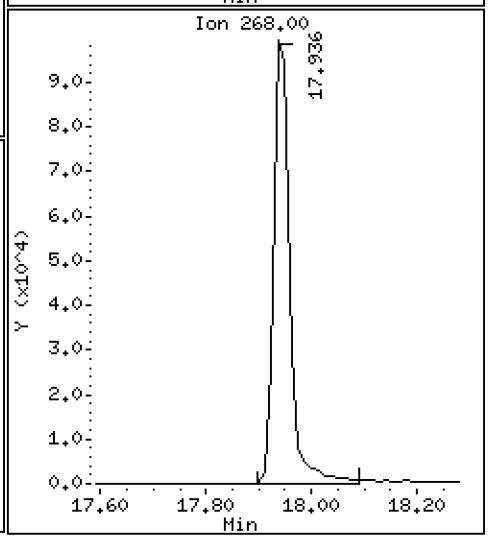












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

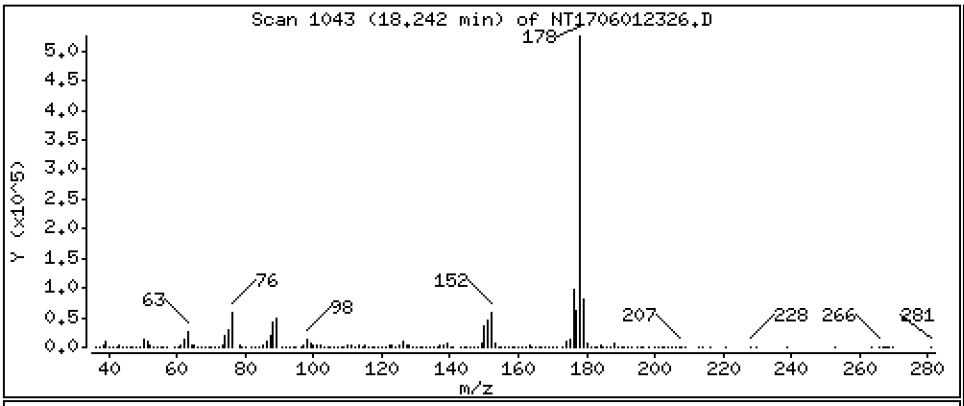
Operator: VTS

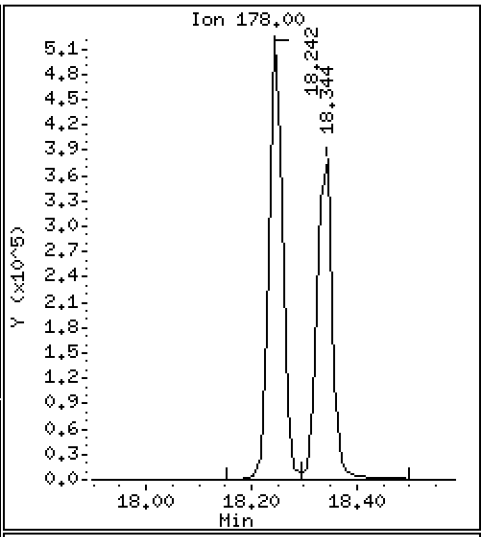
Column phase: ZB-5msi

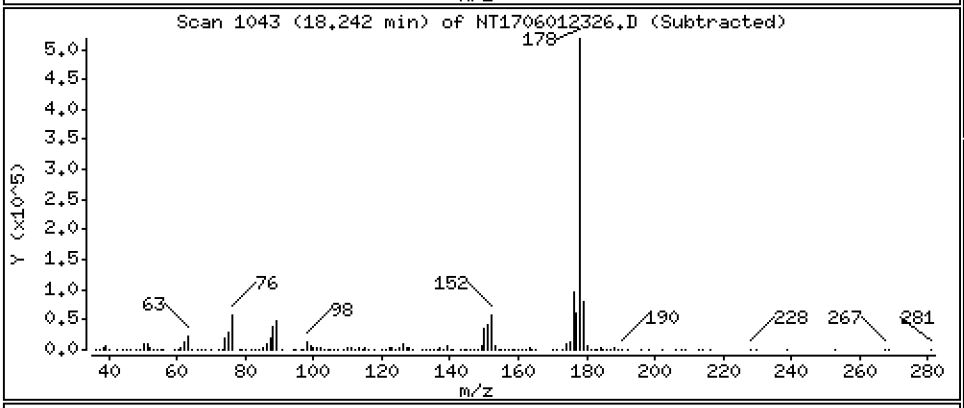
Column diameter: 0.25

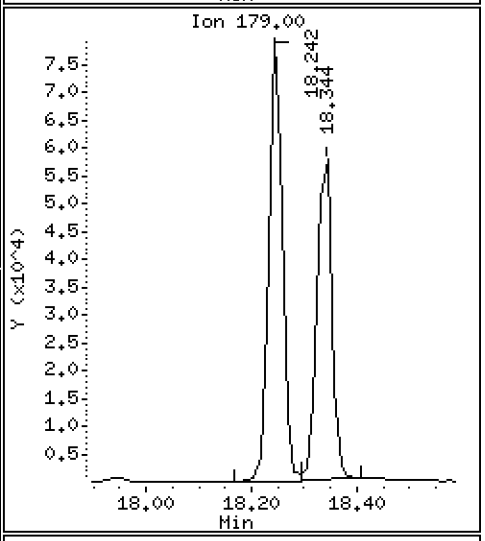
60 Phenanthrene

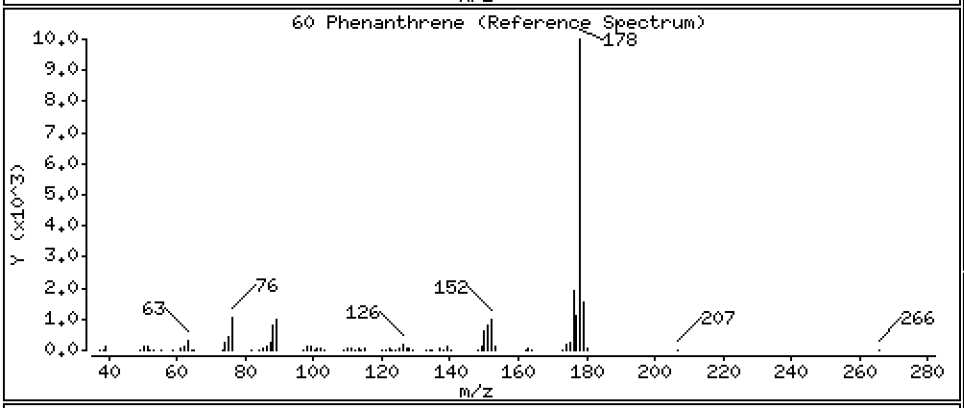
Concentration: 3.639 ug/mL

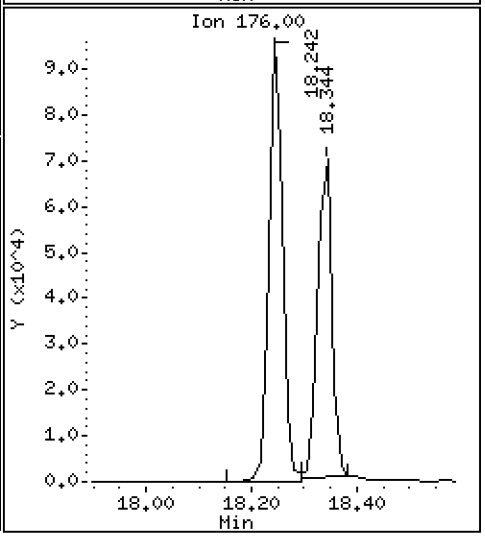


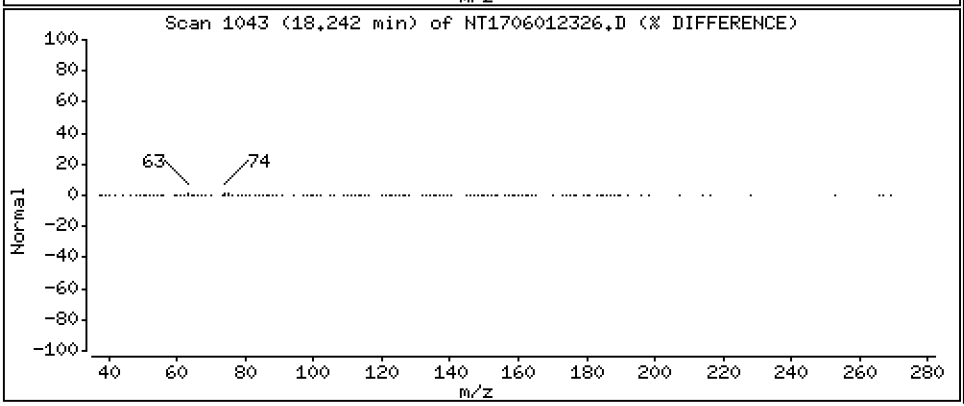












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

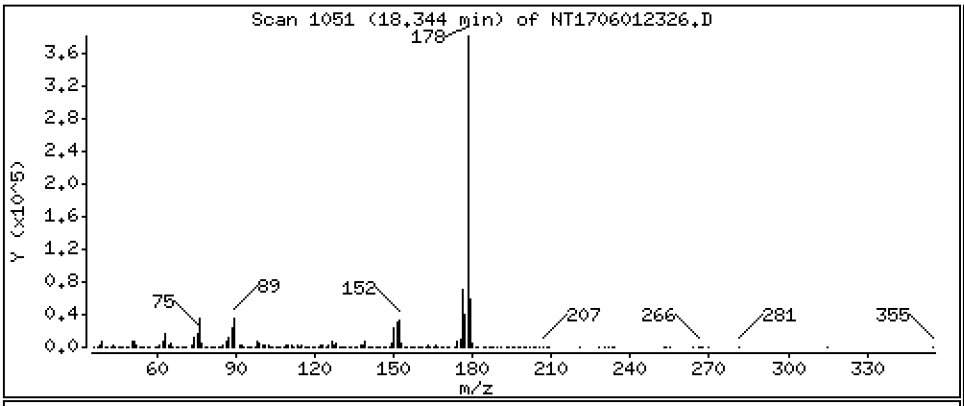
Operator: VTS

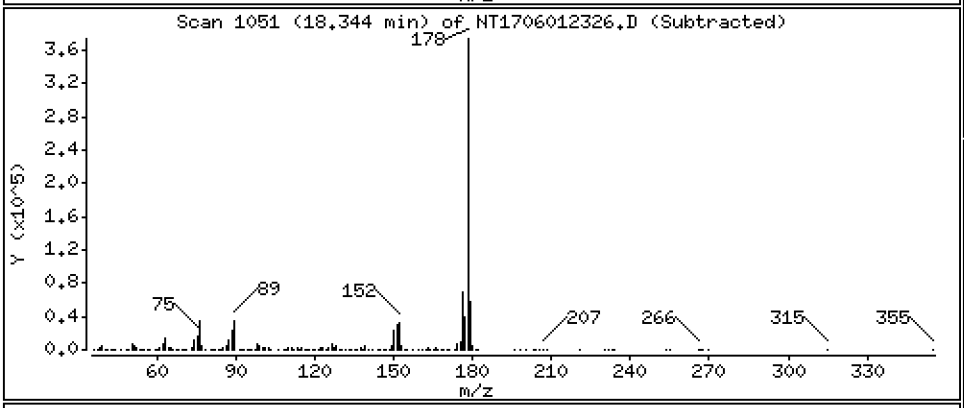
Column phase: ZB-5msi

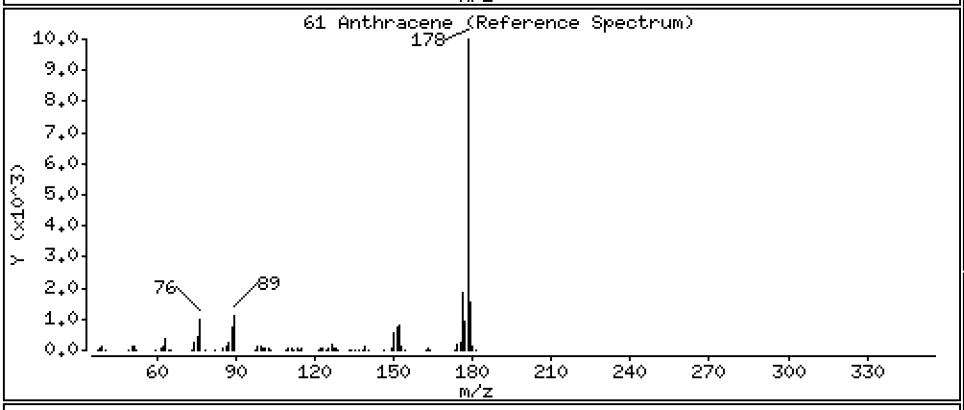
Column diameter: 0.25

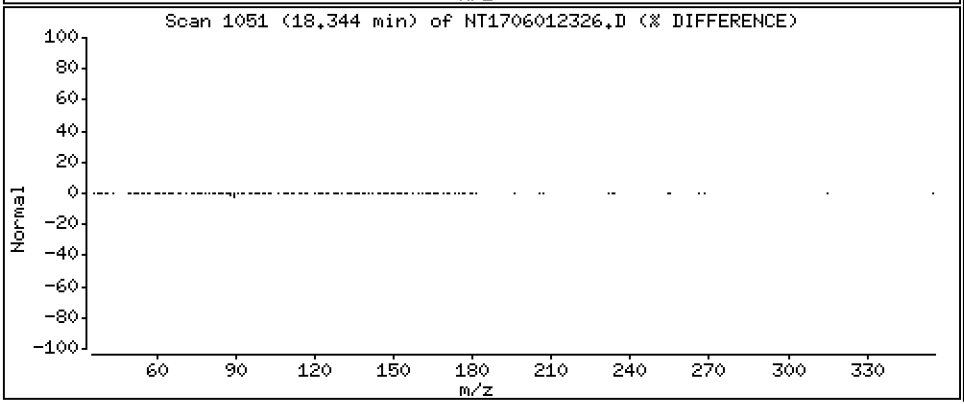
61 Anthracene

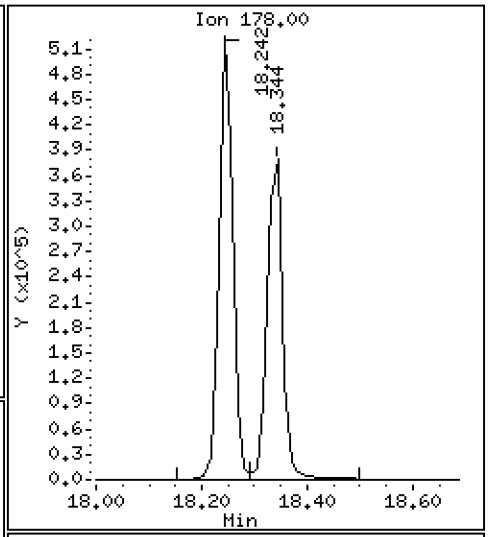
Concentration: 3.047 ug/mL

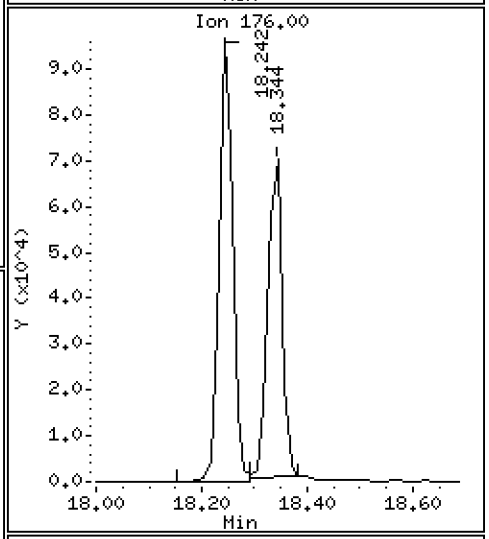


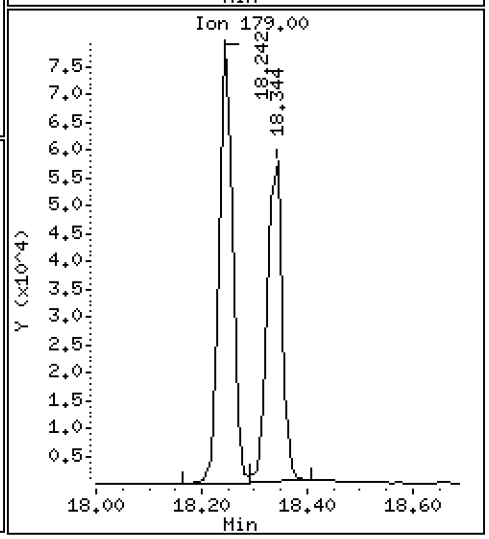












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

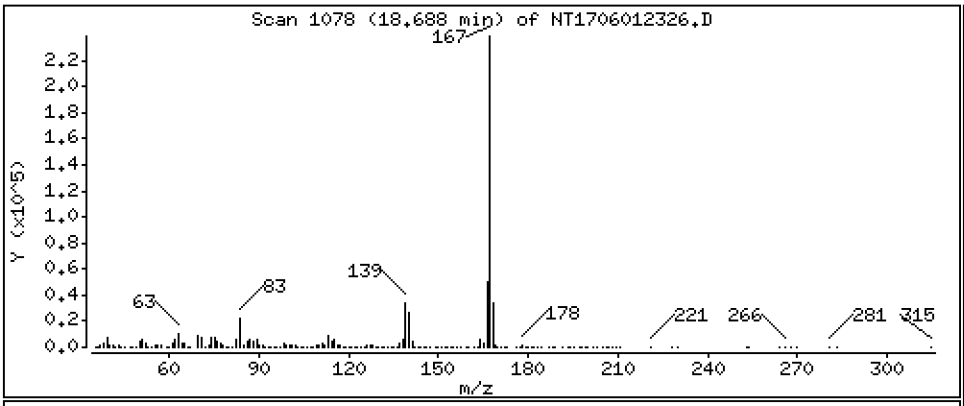
Operator: VTS

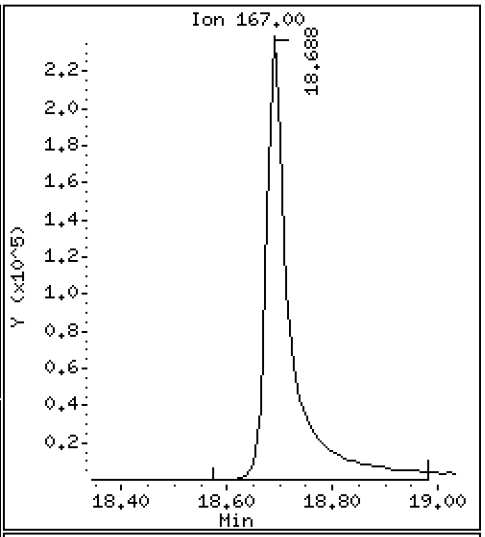
Column phase: ZB-5msi

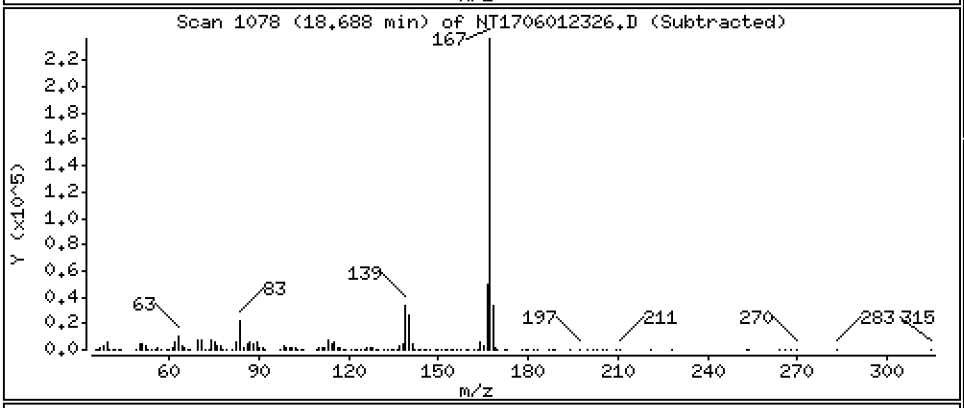
Column diameter: 0.25

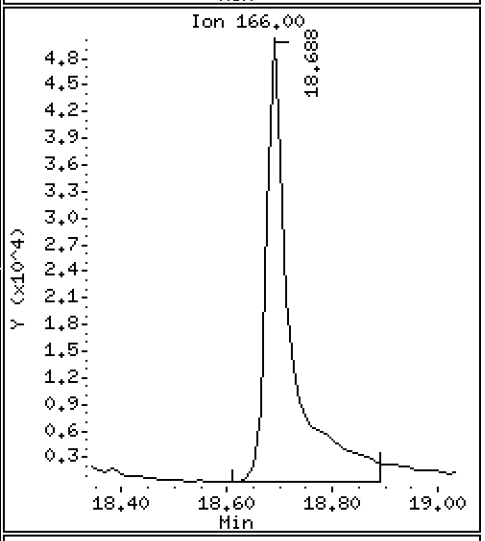
62 Carbazole

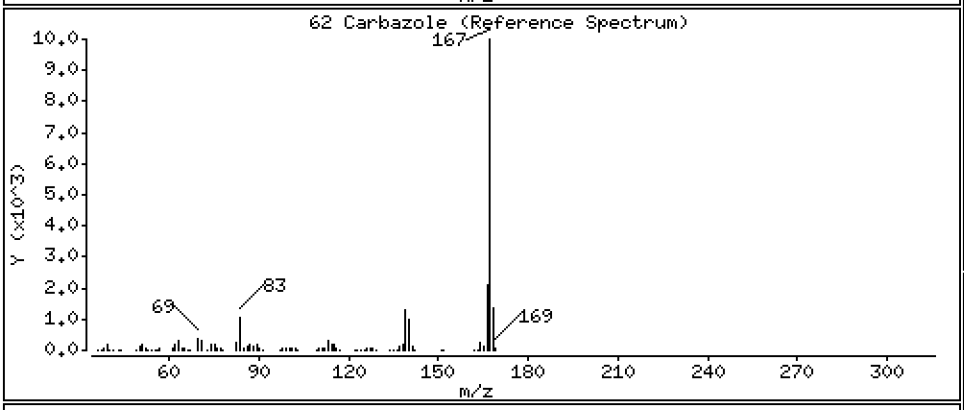
Concentration: 5.033 ug/mL

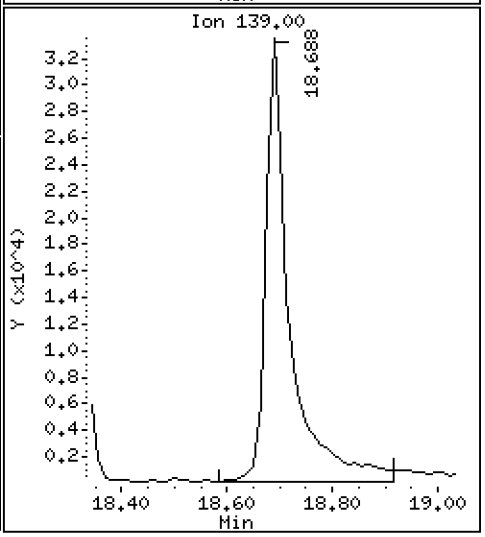


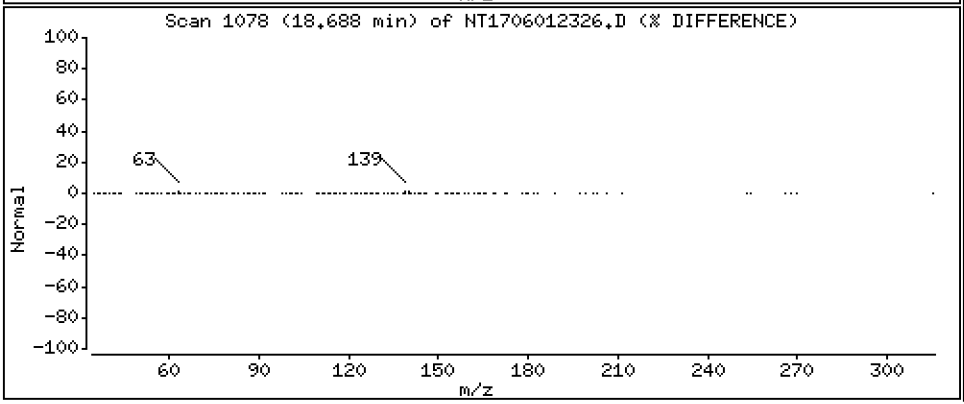












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

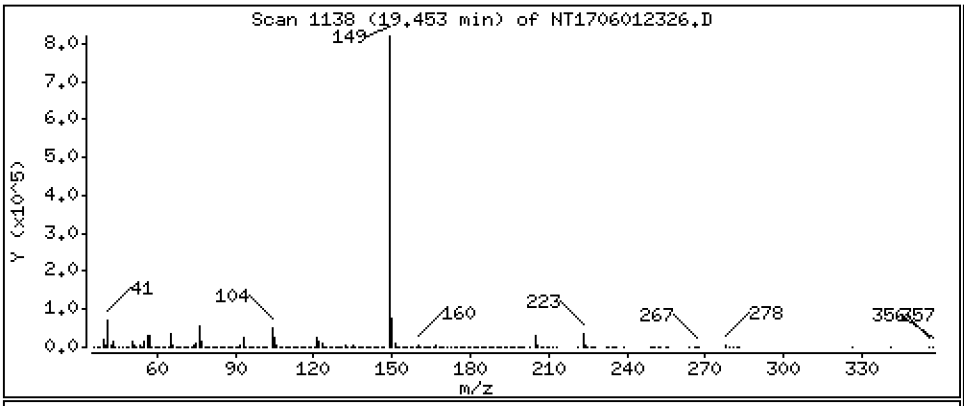
Operator: VTS

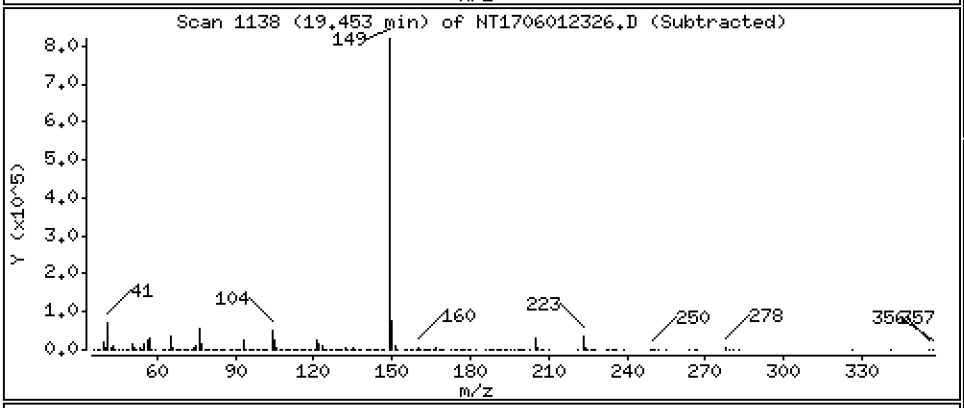
Column phase: ZB-5msi

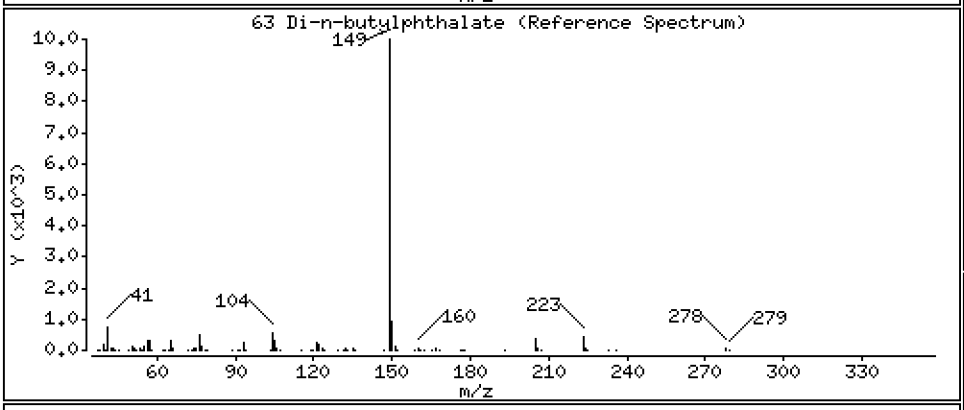
Column diameter: 0.25

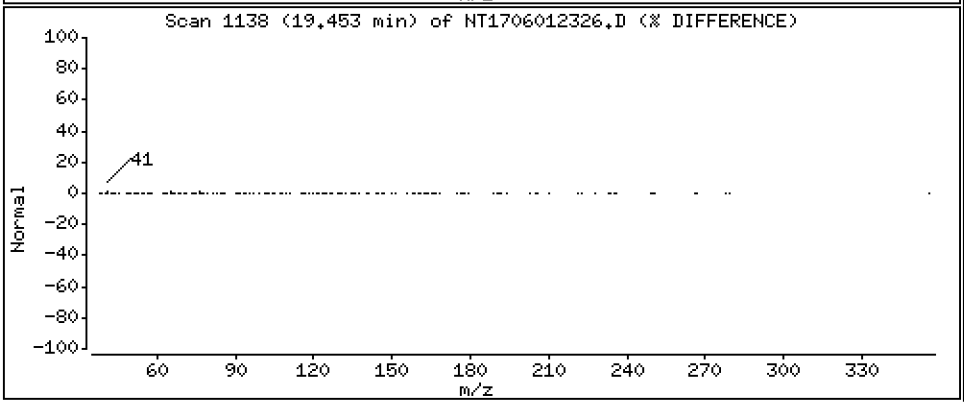
63 Di-n-butylphthalate

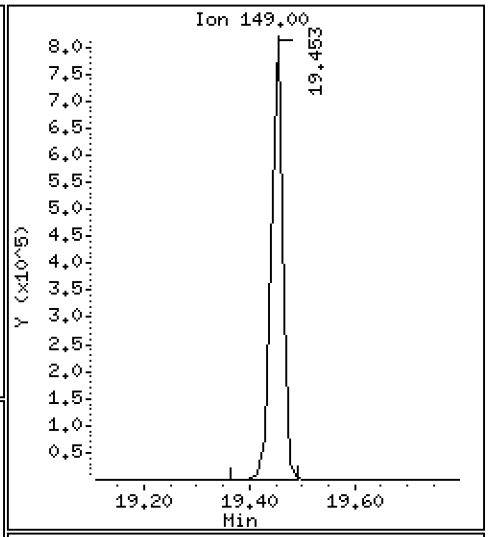
Concentration: 4.339 ug/mL

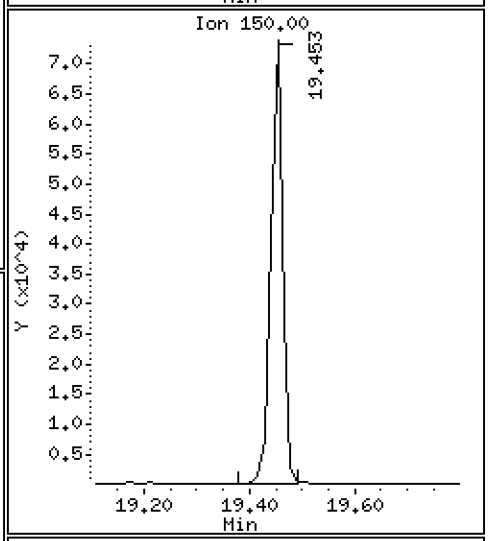


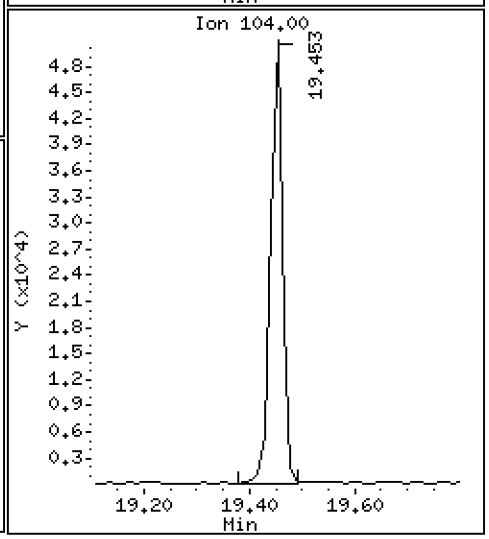












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

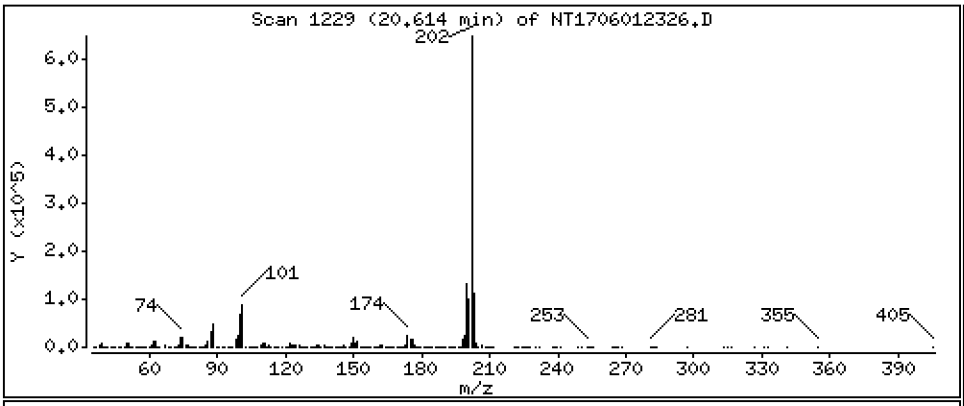
Operator: VTS

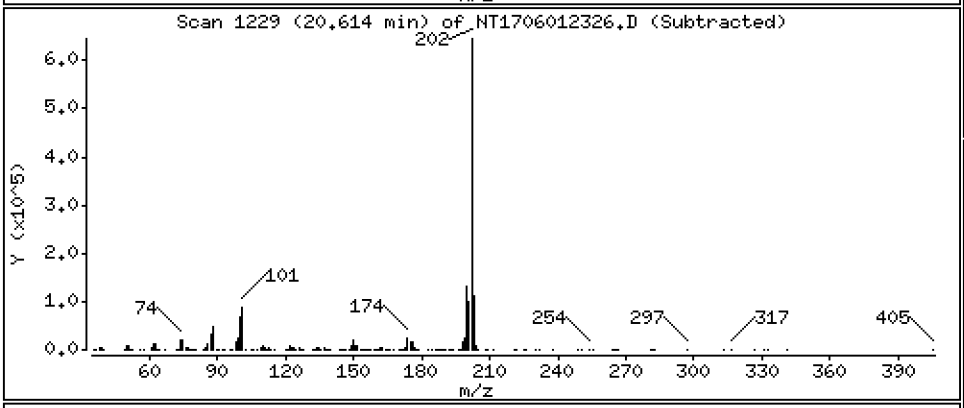
Column phase: ZB-5msi

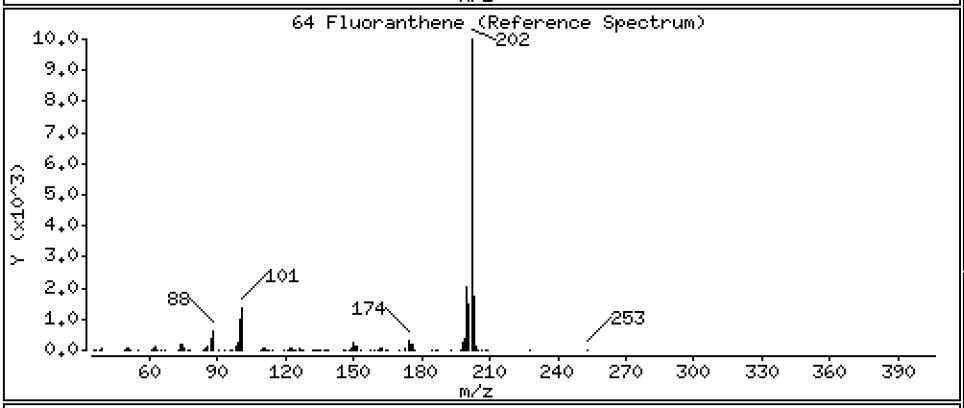
Column diameter: 0.25

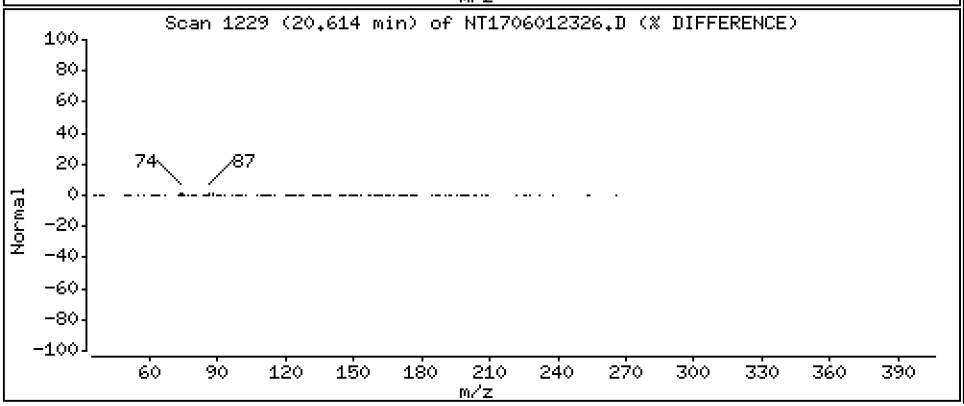
64 Fluoranthene

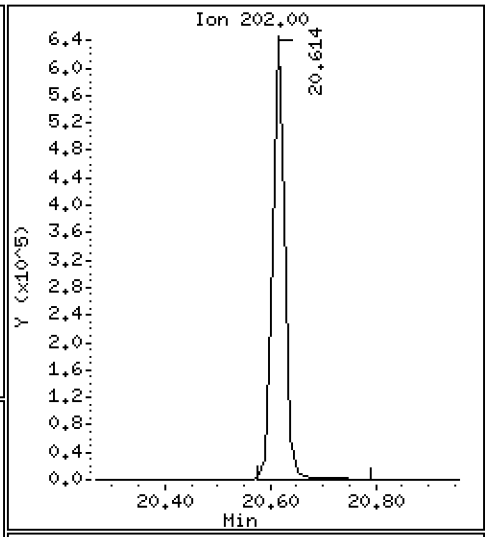
Concentration: 4.088 ug/mL

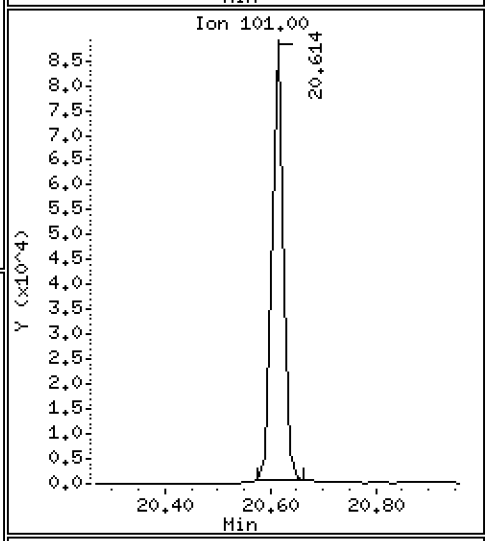


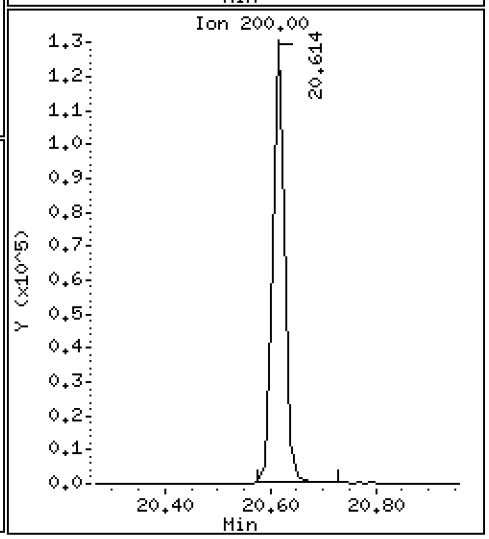












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

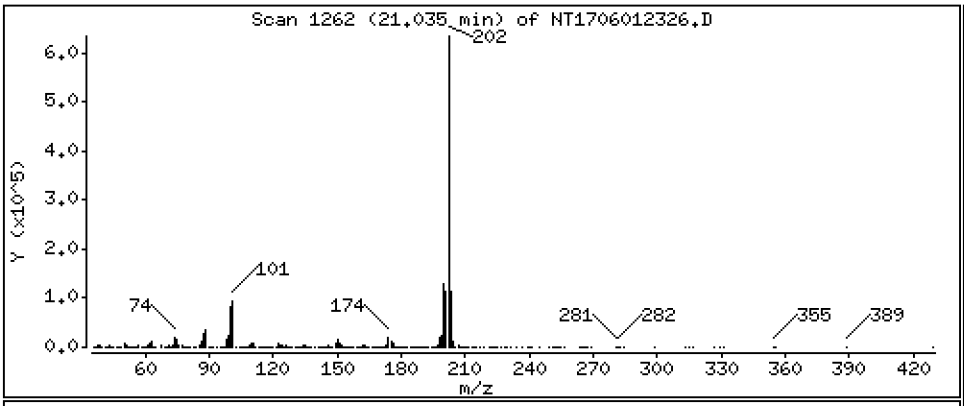
Operator: VTS

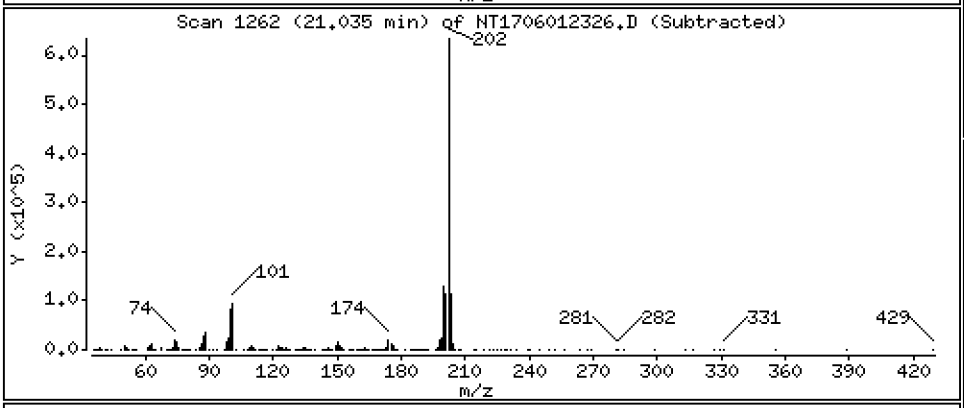
Column phase: ZB-5msi

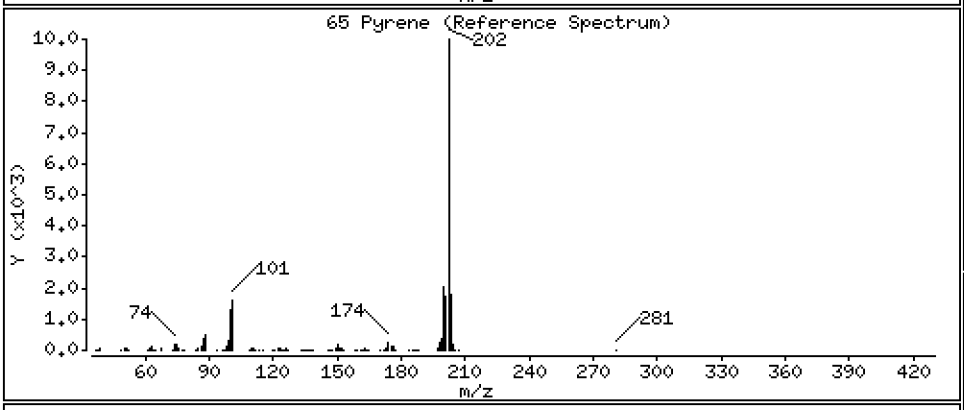
Column diameter: 0.25

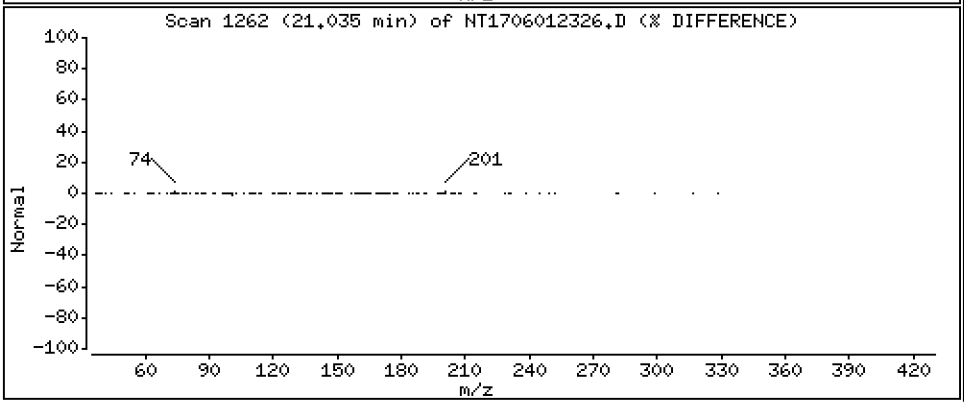
65 Pyrene

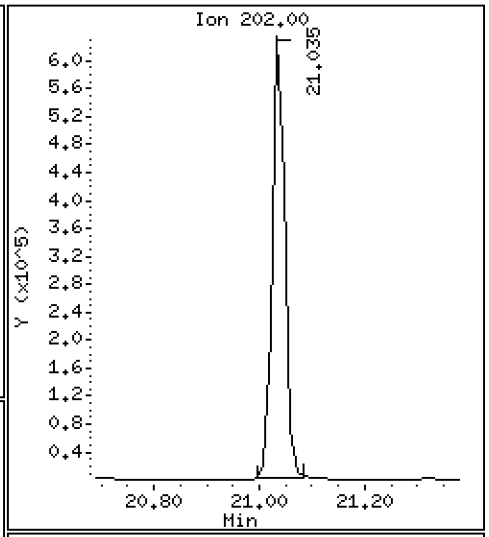
Concentration: 3.930 ug/mL

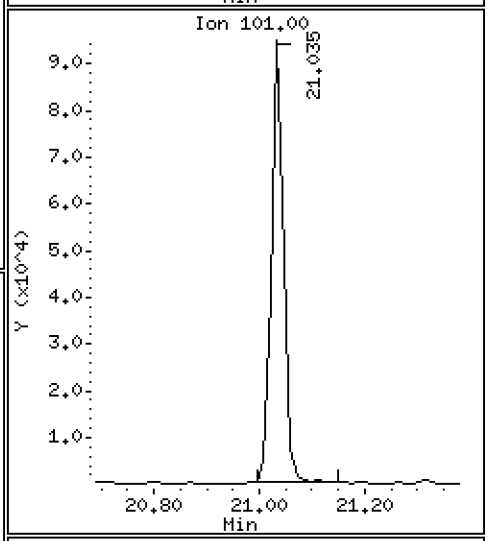


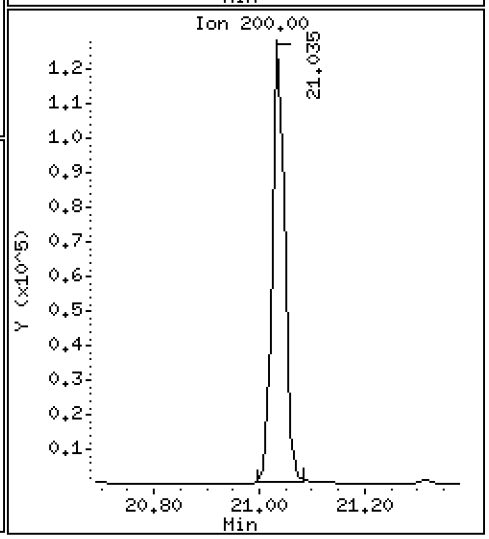












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

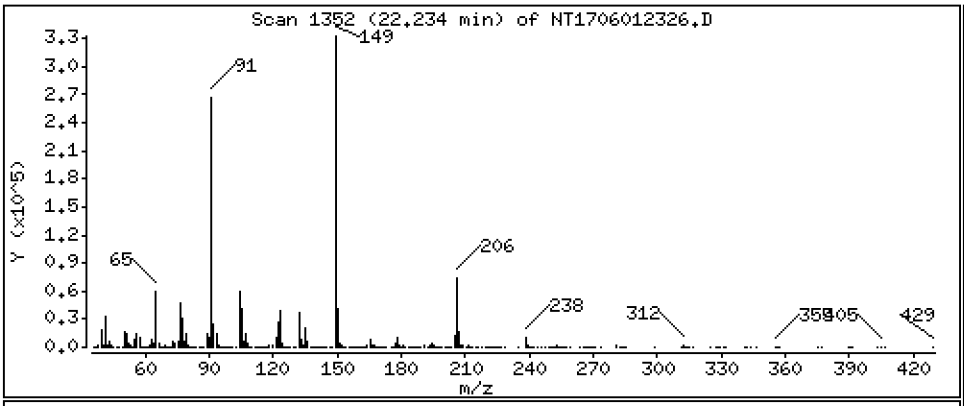
Operator: VTS

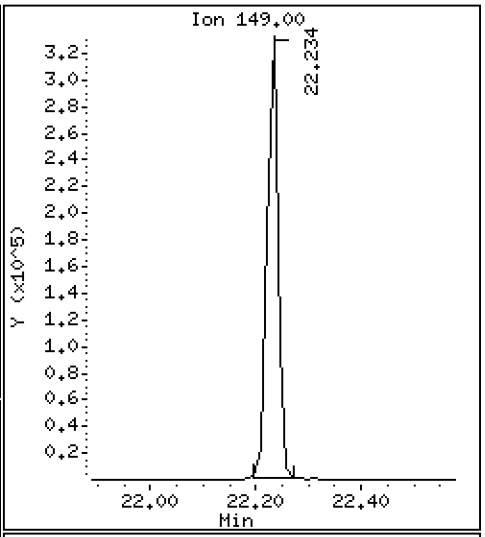
Column phase: ZB-5msi

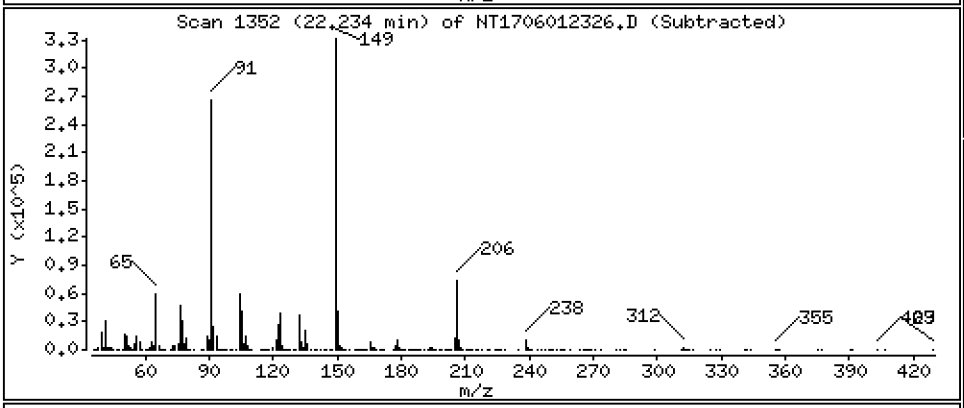
Column diameter: 0.25

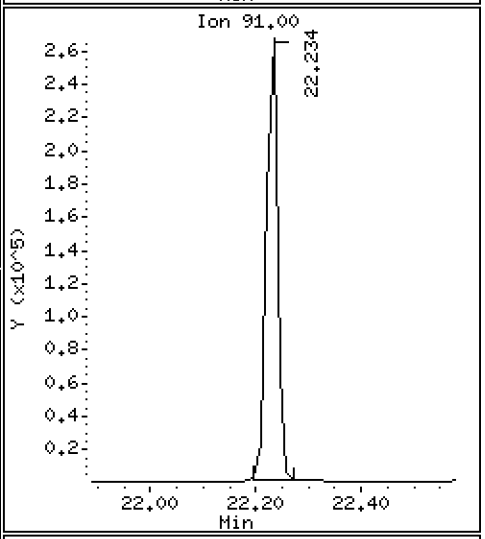
67 Butylbenzylphthalate

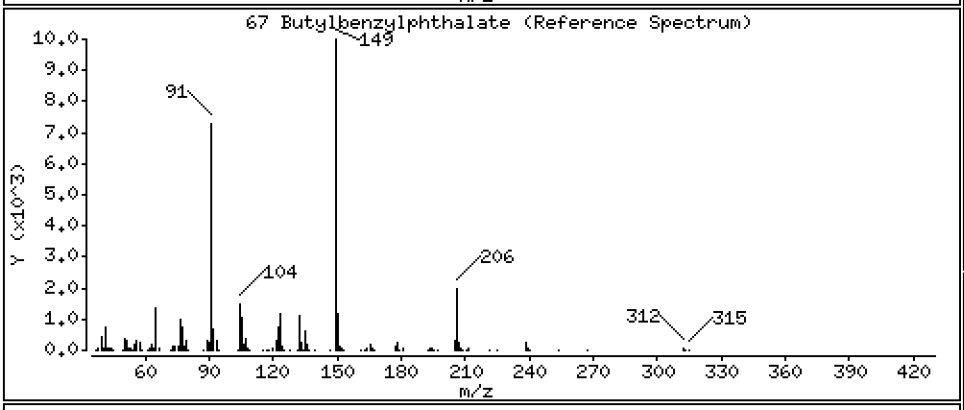
Concentration: 4.137 ug/mL

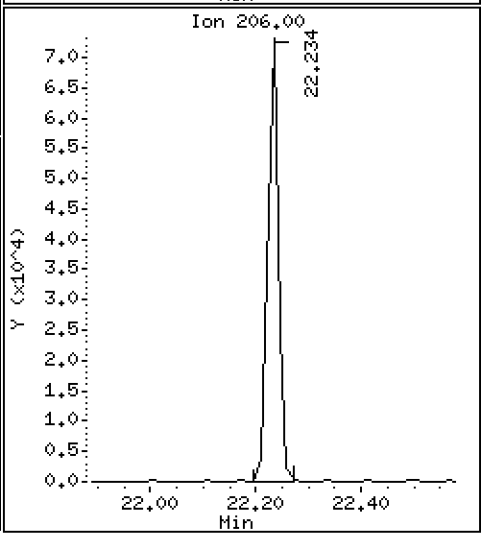


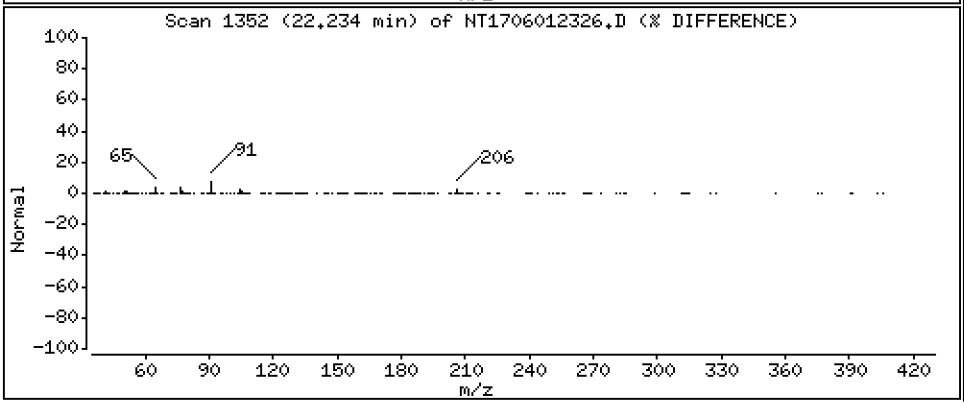












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

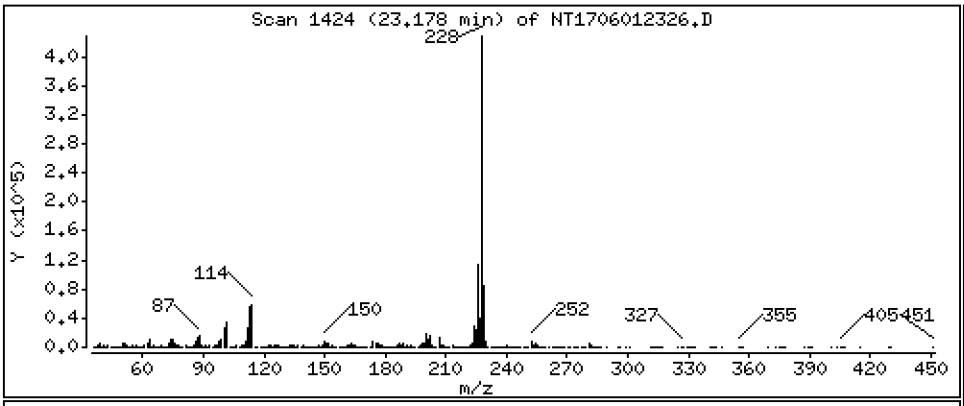
Operator: VTS

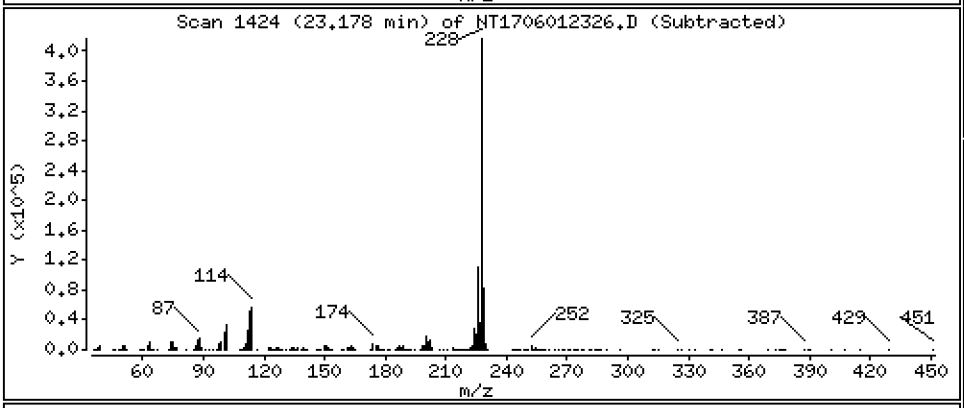
Column phase: ZB-5msi

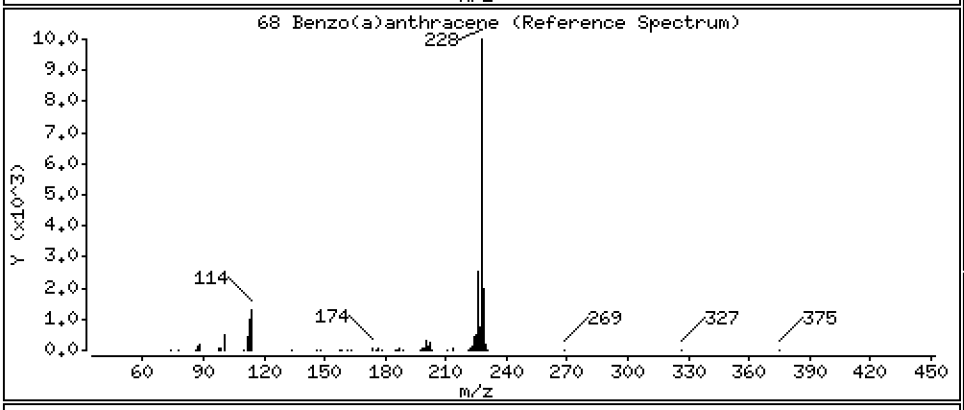
Column diameter: 0.25

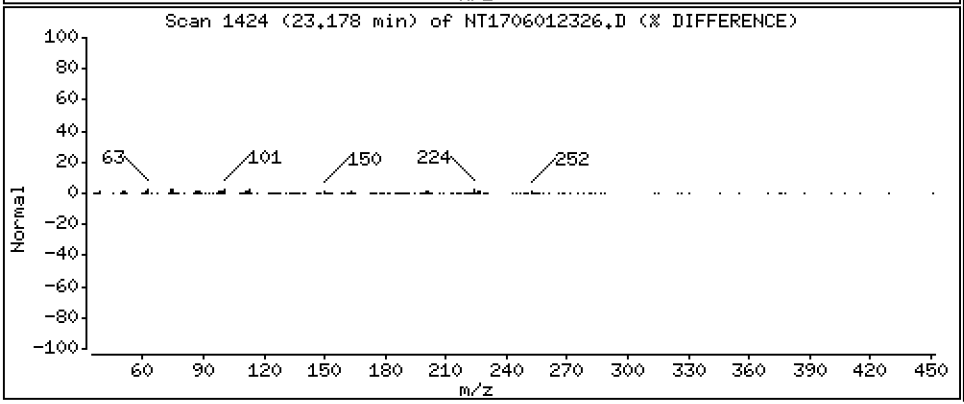
68 Benzo(a)anthracene

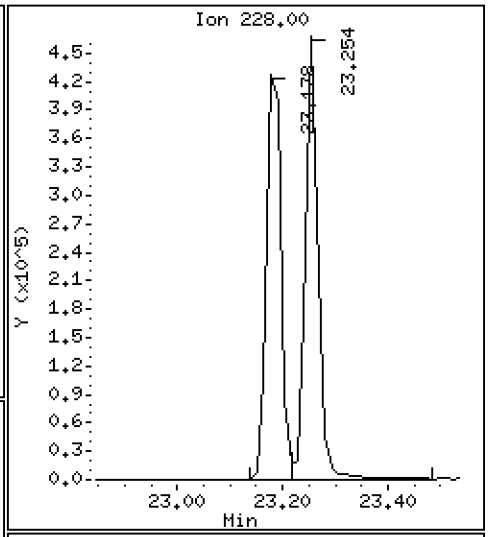
Concentration: 3.853 ug/mL

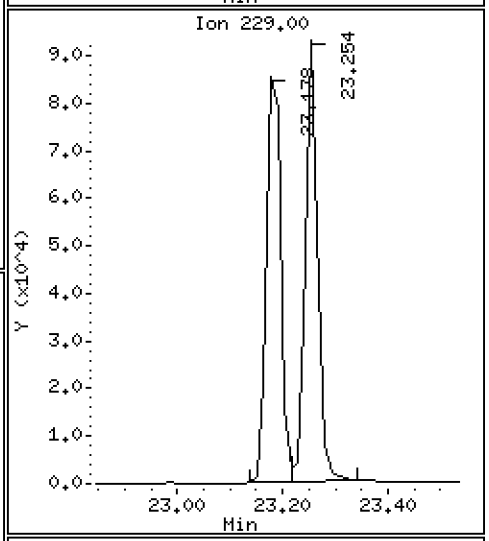


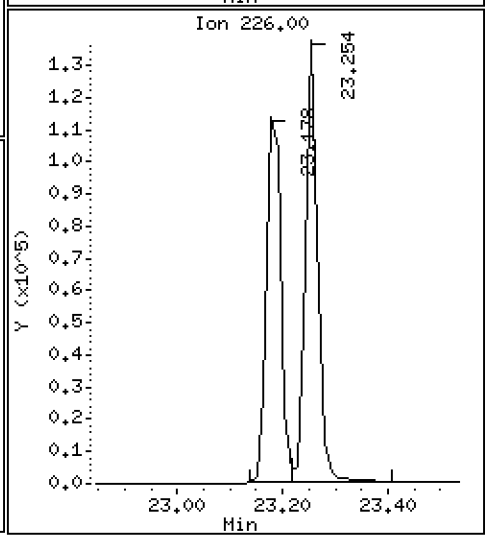












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

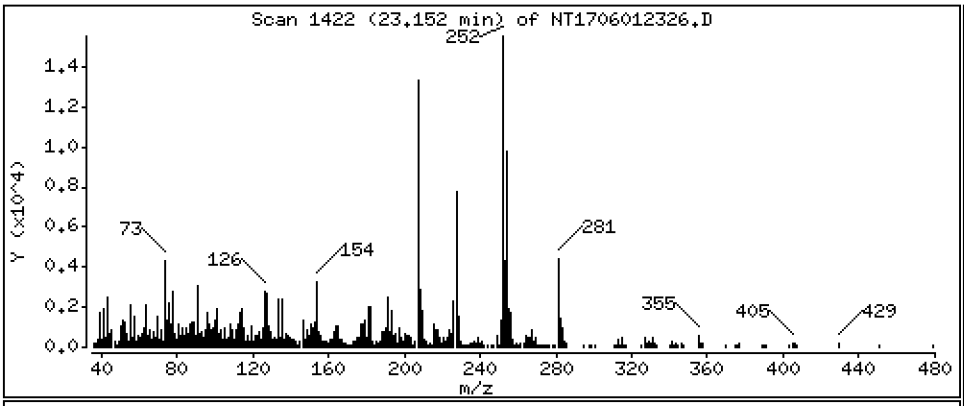
Operator: VTS

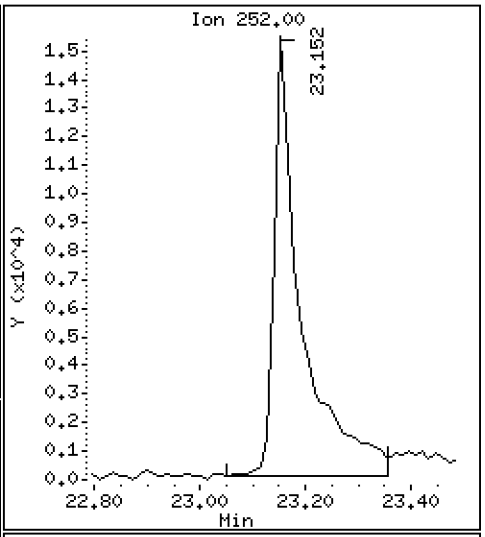
Column phase: ZB-5msi

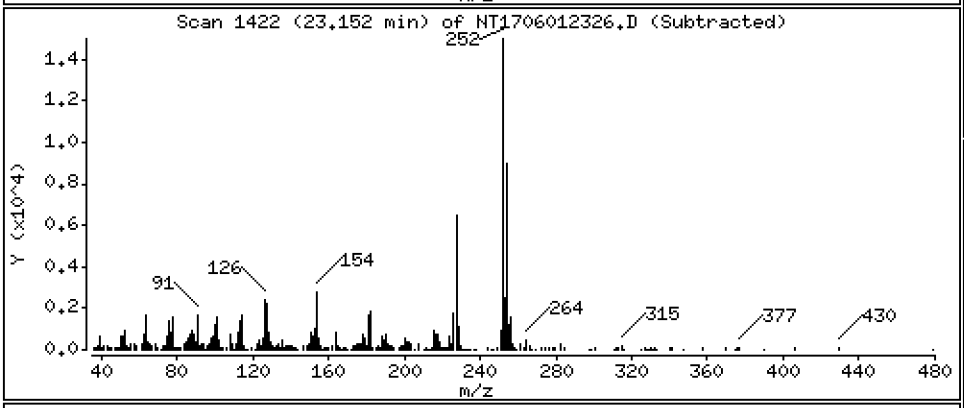
Column diameter: 0.25

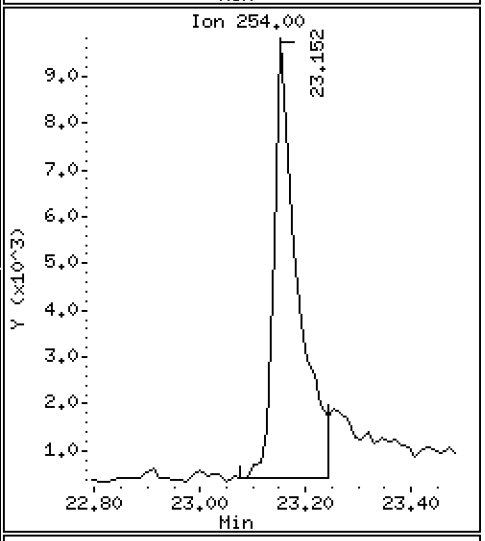
70 3,3'-Dichlorobenzidine

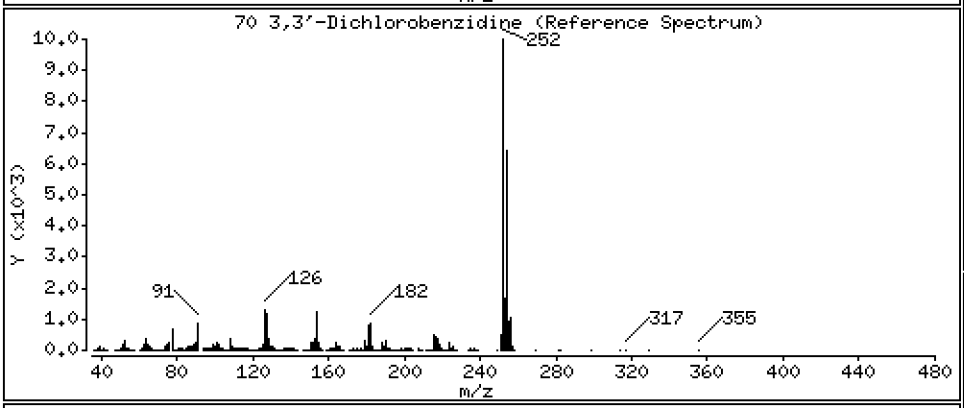
Concentration: 1.388 ug/mL

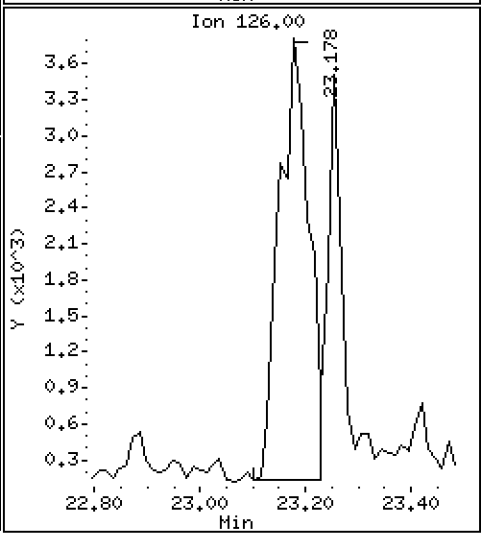


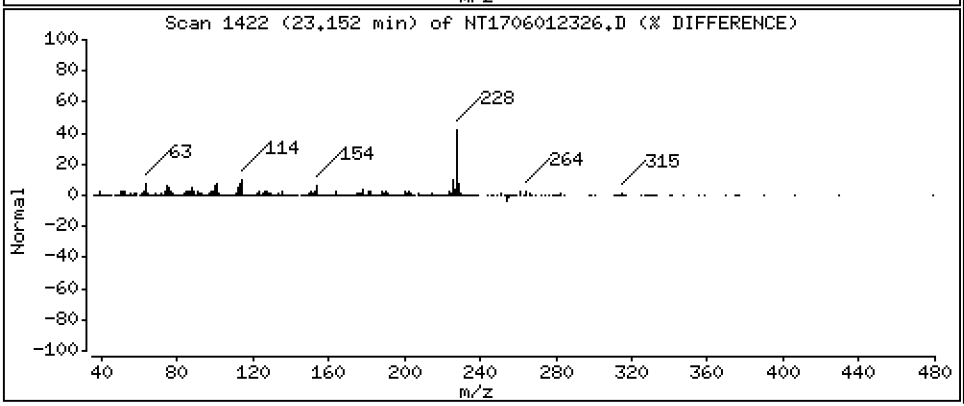












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

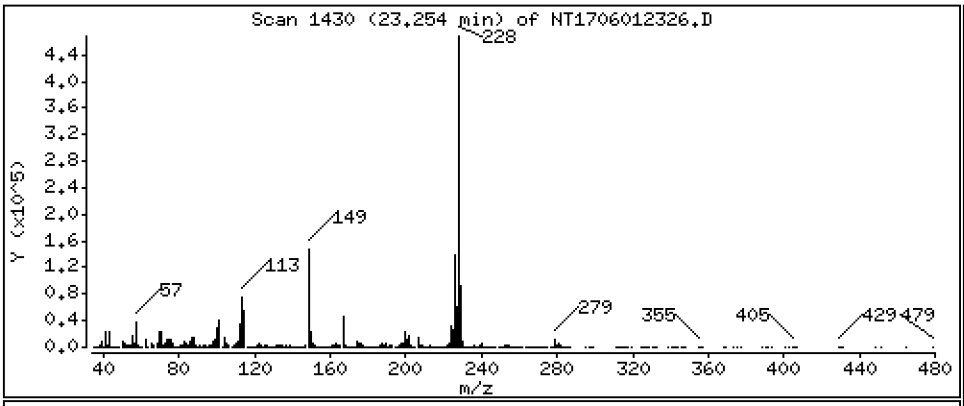
Operator: VTS

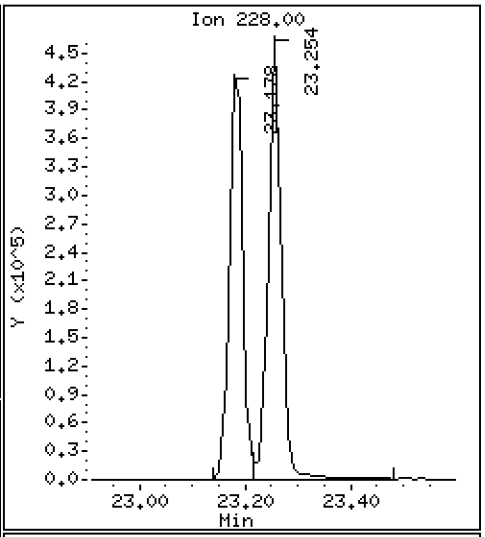
Column phase: ZB-5msi

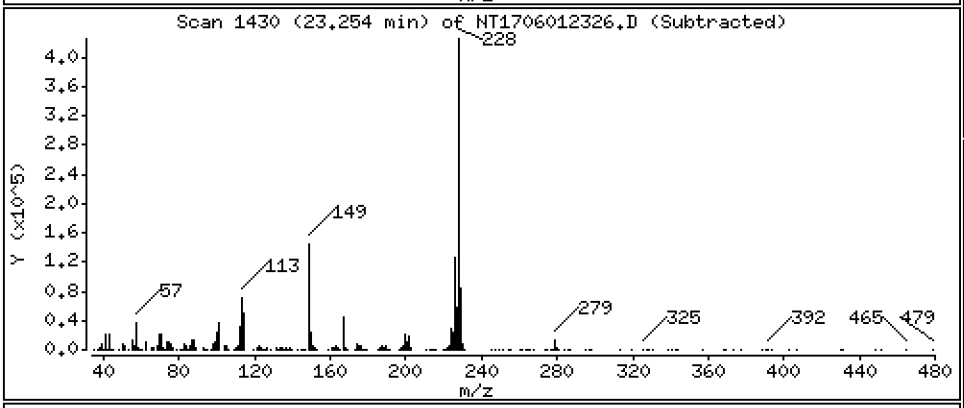
Column diameter: 0.25

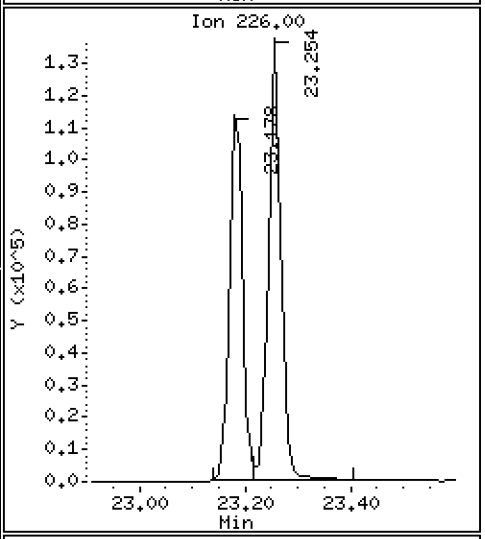
71 Chrysene

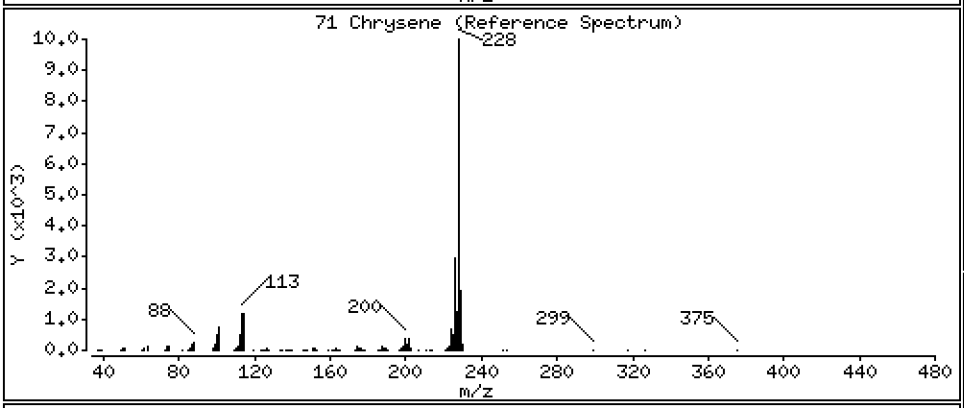
Concentration: 4.055 ug/mL

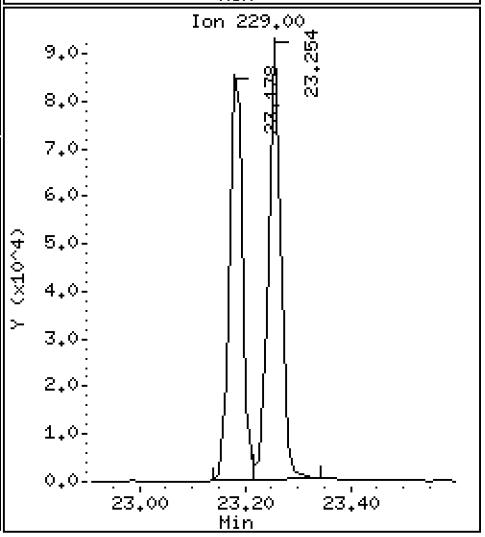


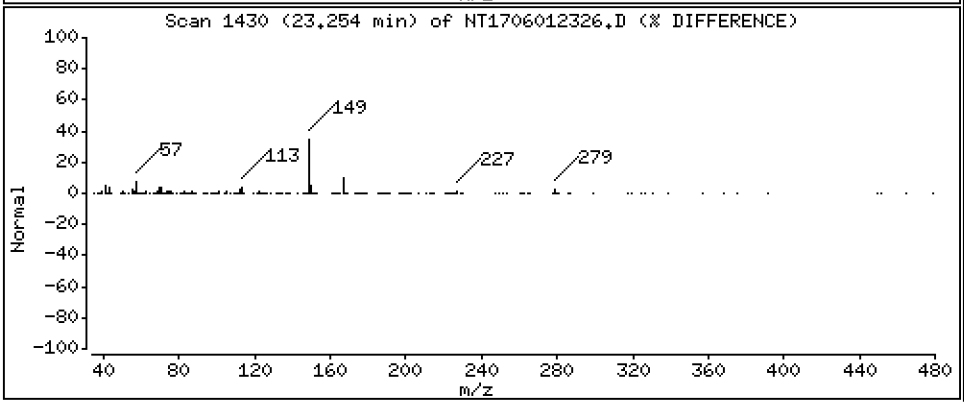












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

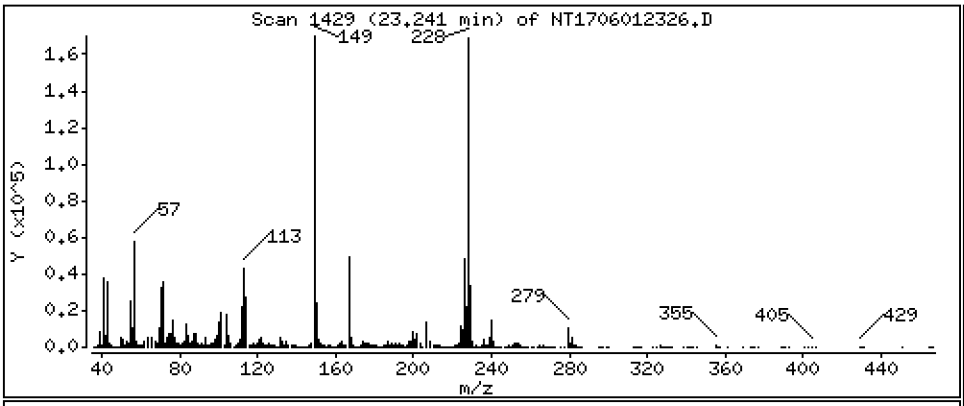
Operator: VTS

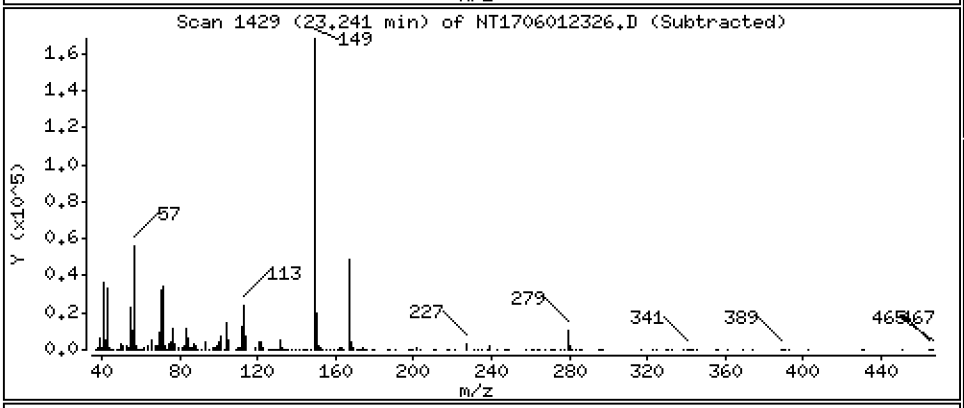
Column phase: ZB-5msi

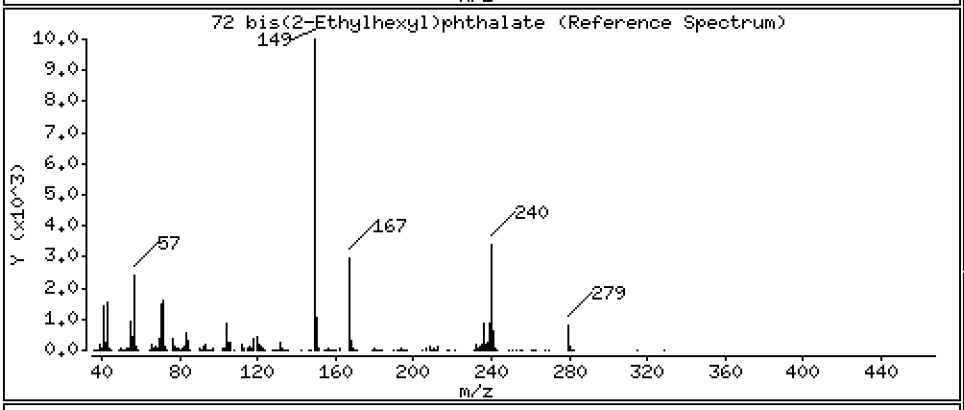
Column diameter: 0.25

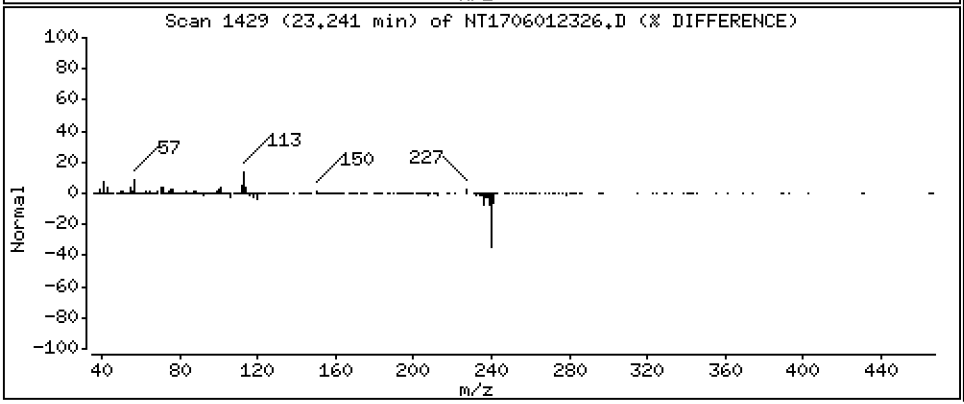
72 bis(2-Ethylhexyl)phthalate

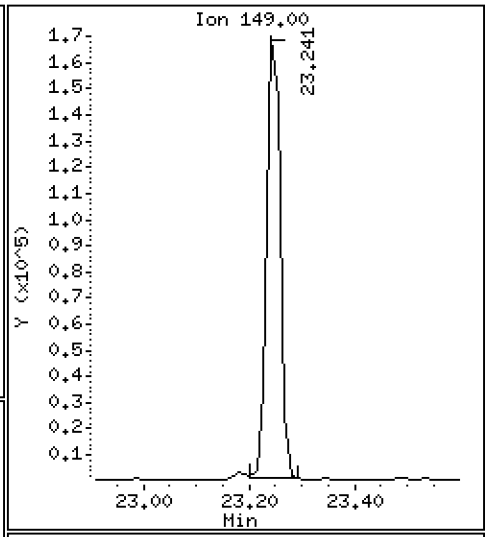
Concentration: 1.849 ug/mL

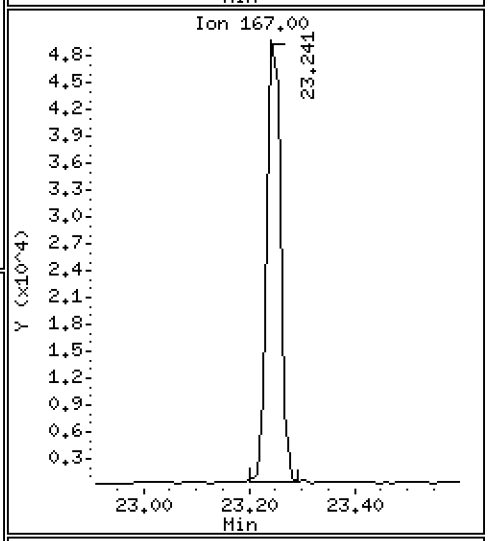


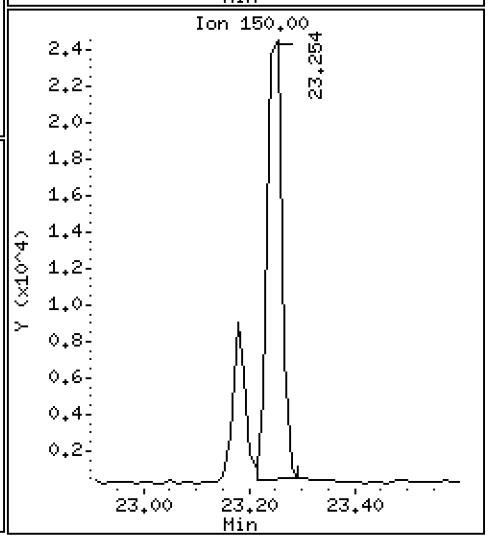












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

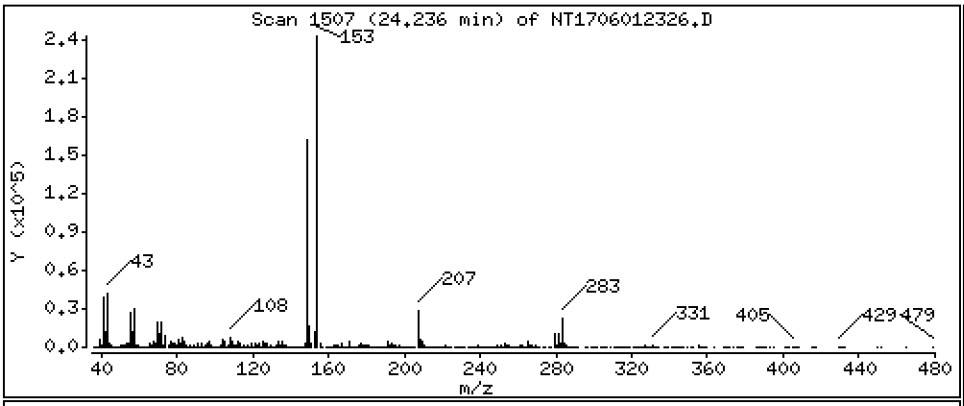
Operator: VTS

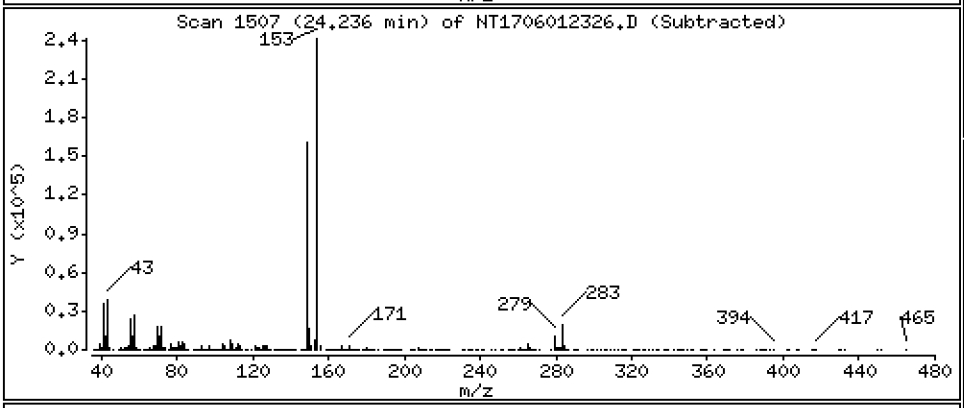
Column phase: ZB-5msi

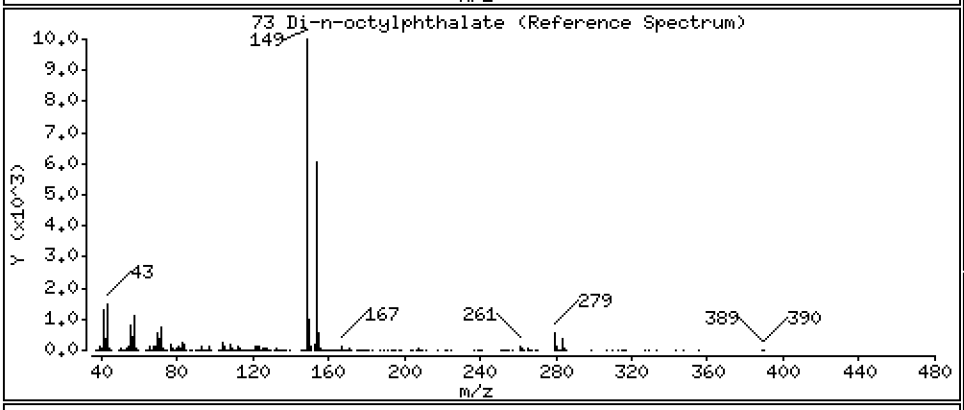
Column diameter: 0.25

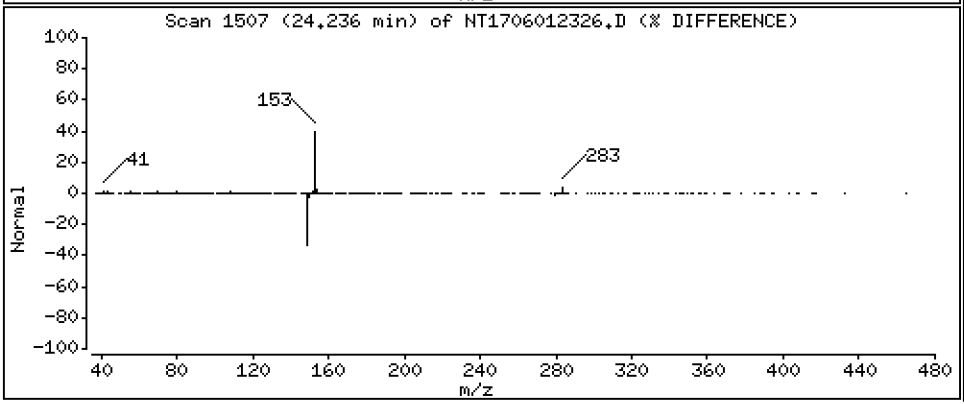
73 Di-n-octylphthalate

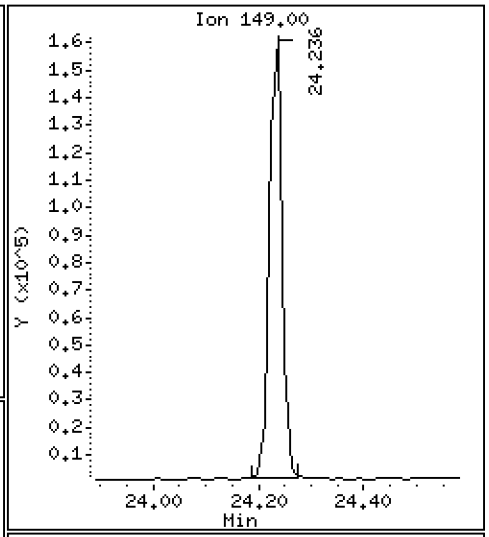
Concentration: 0.9951 ug/mL

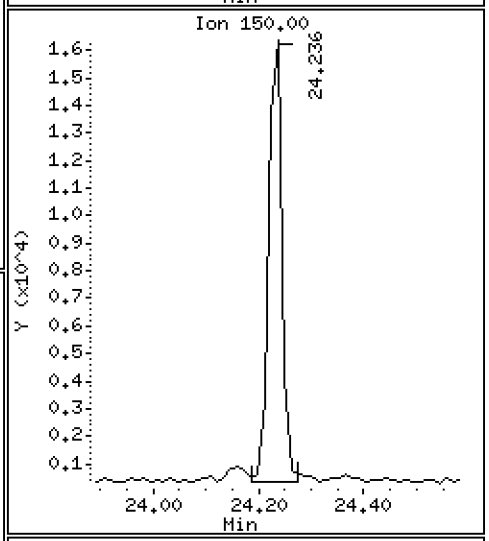


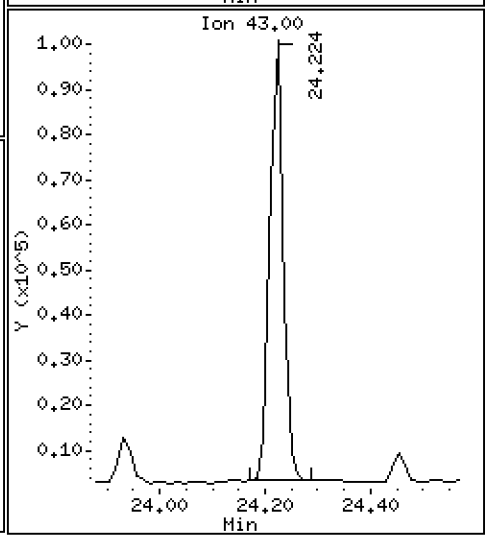












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

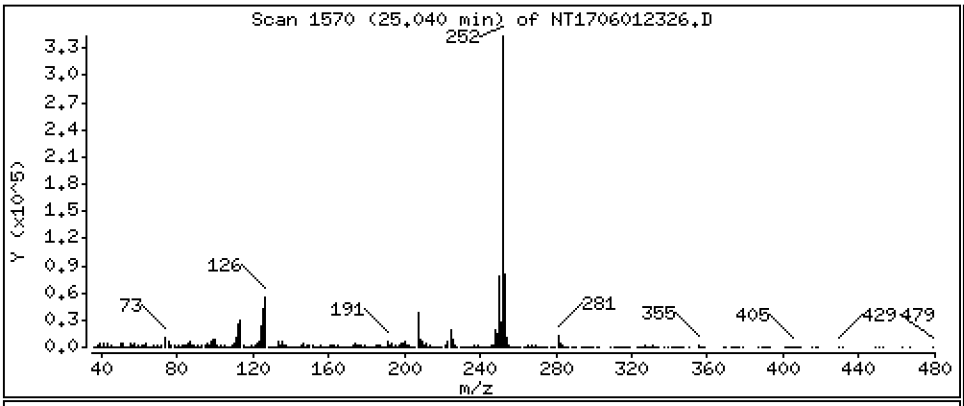
Operator: VTS

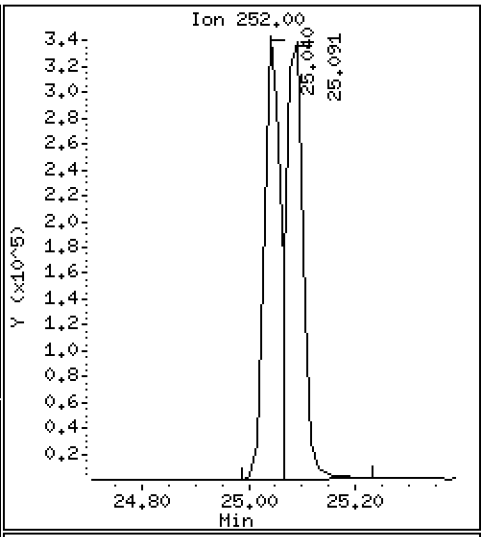
Column phase: ZB-5msi

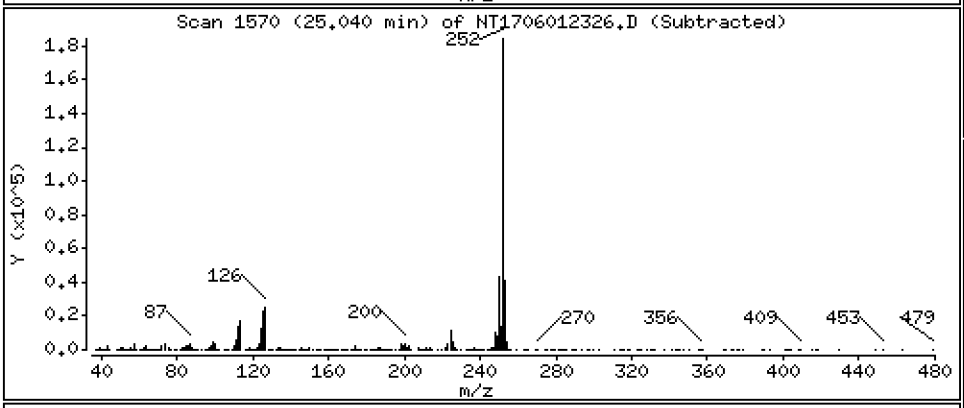
Column diameter: 0.25

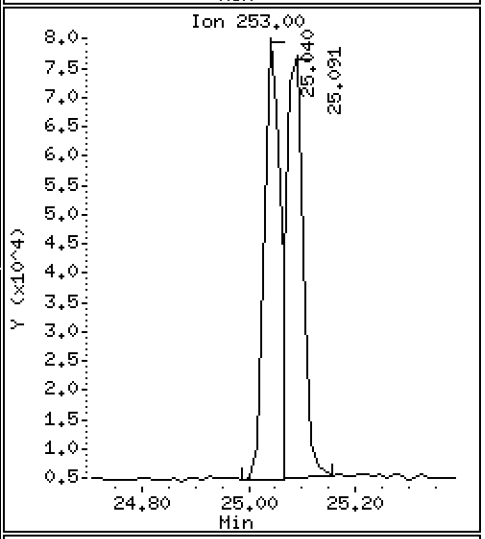
74 Benzo(b)fluoranthene

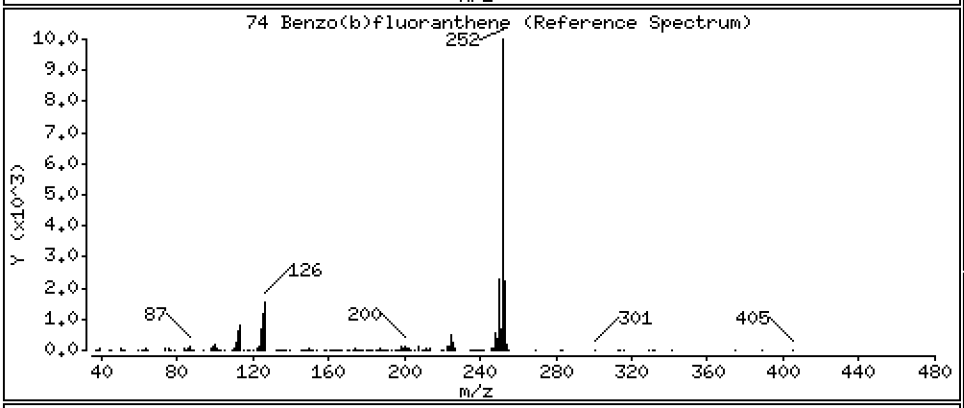
Concentration: 4.103 ug/mL

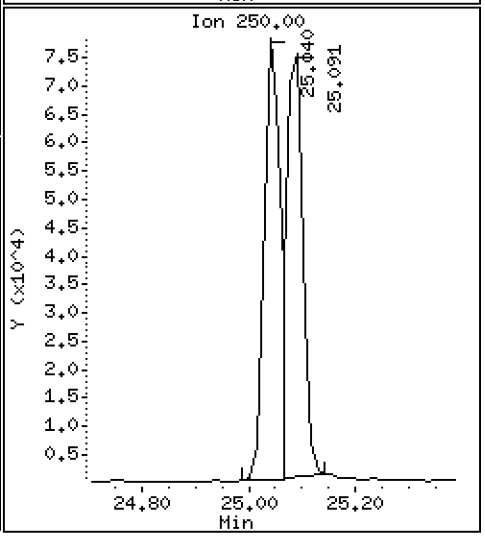


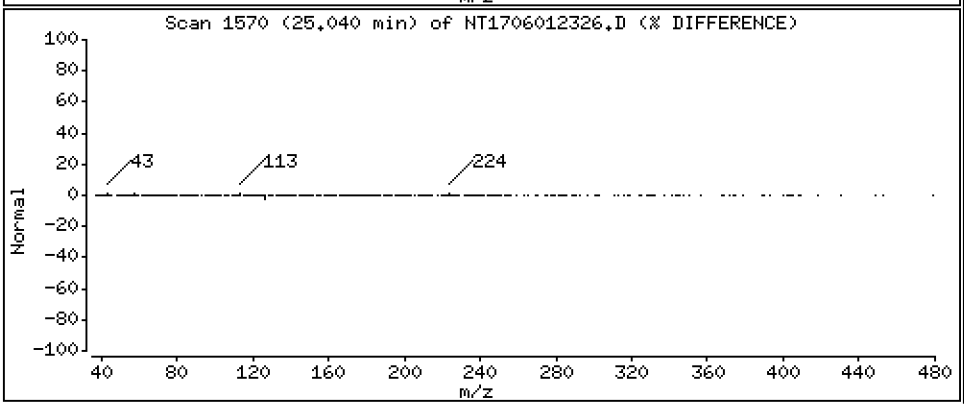












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

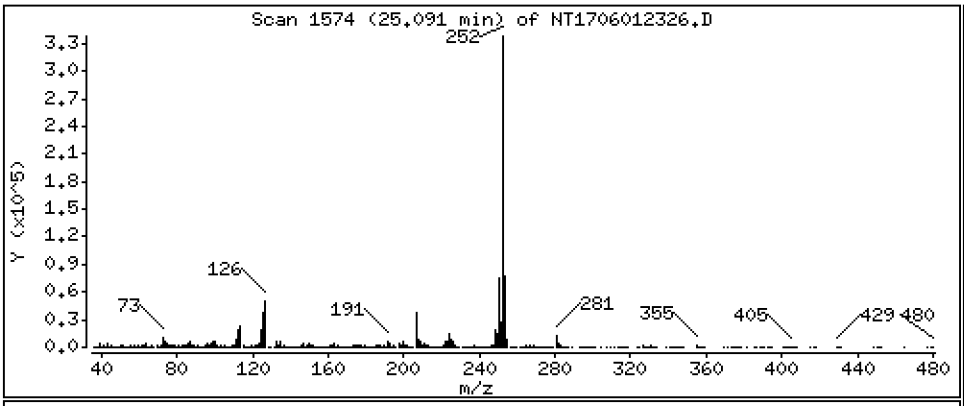
Operator: VTS

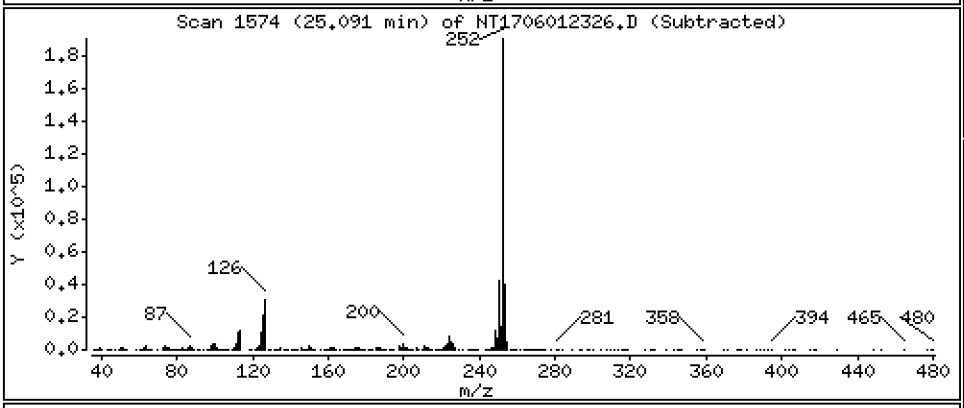
Column phase: ZB-5msi

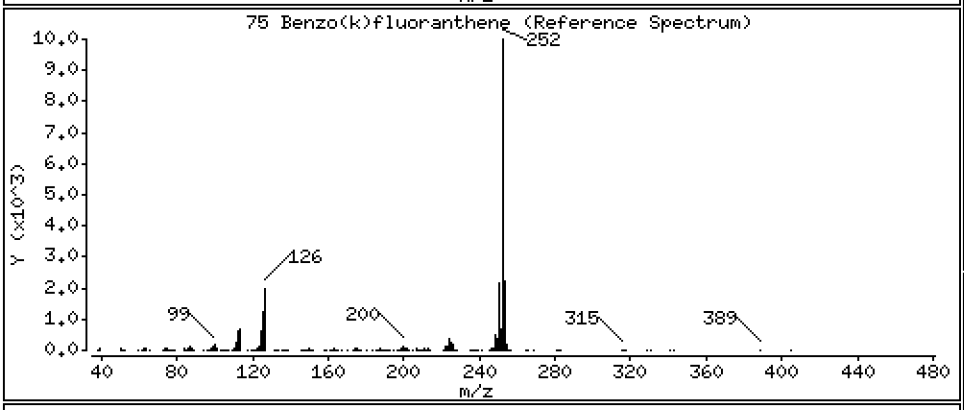
Column diameter: 0.25

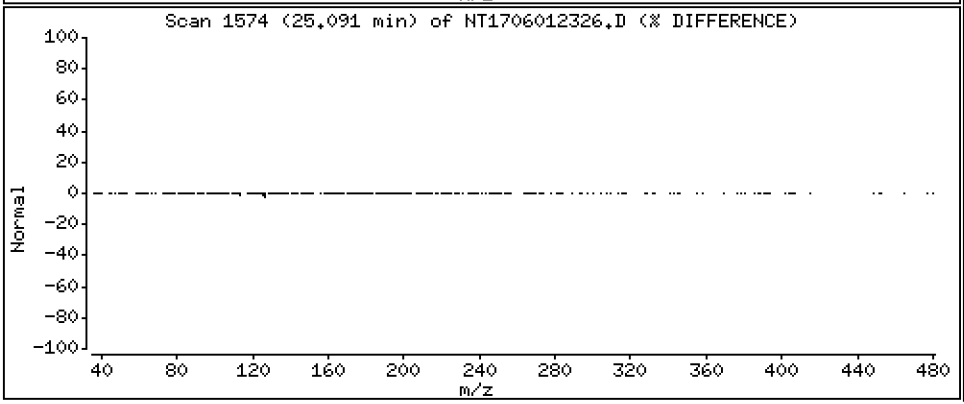
75 Benzo(k)fluoranthene

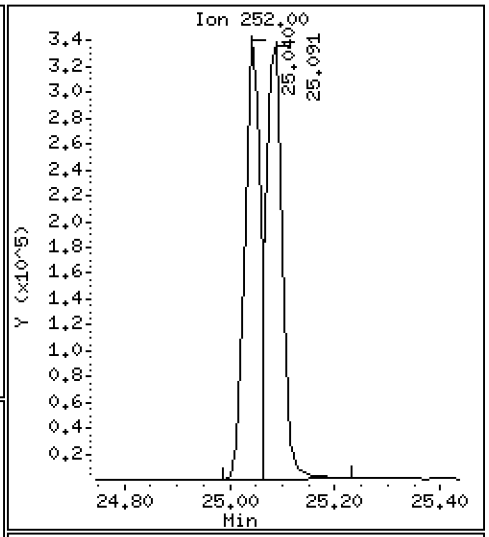
Concentration: 4.393 ug/mL

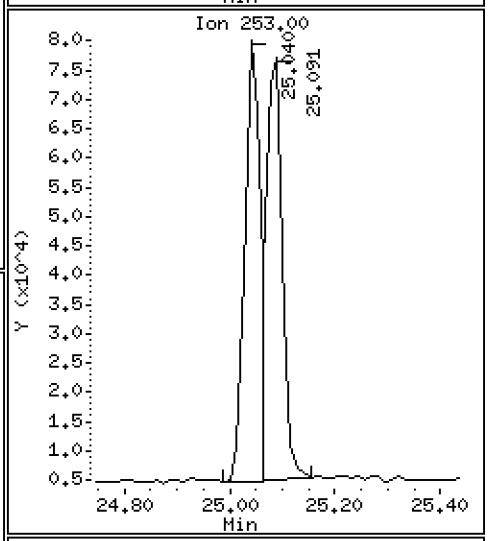


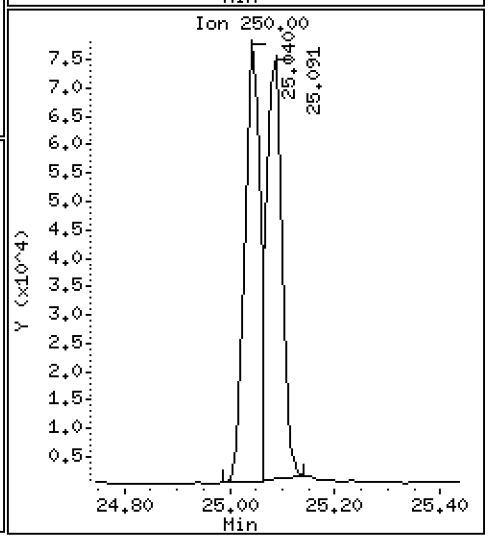












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

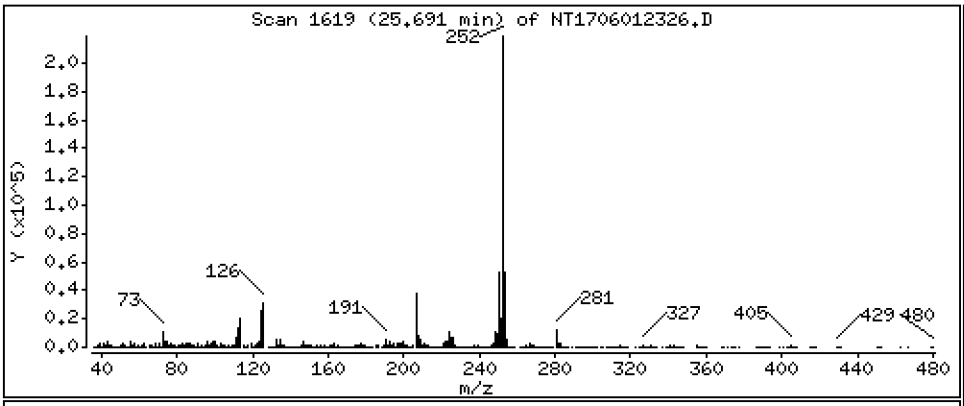
Operator: VTS

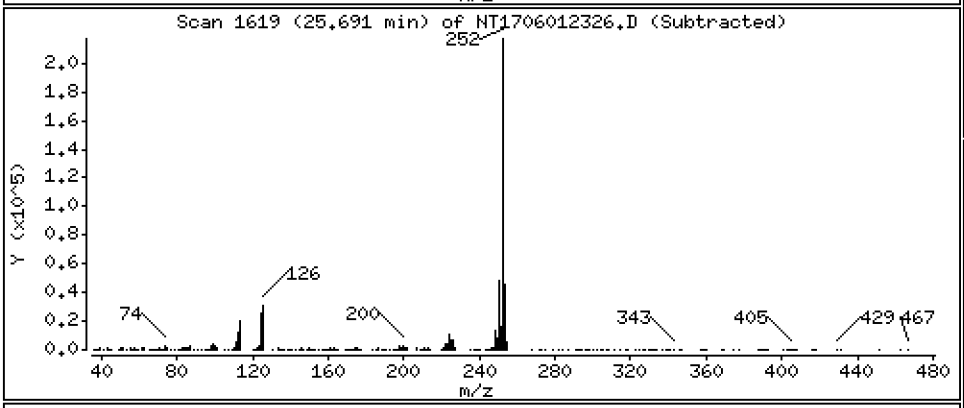
Column phase: ZB-5msi

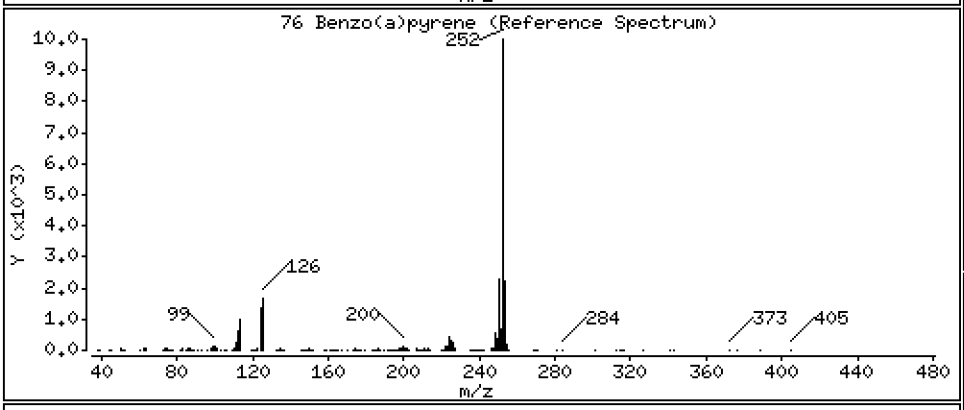
Column diameter: 0.25

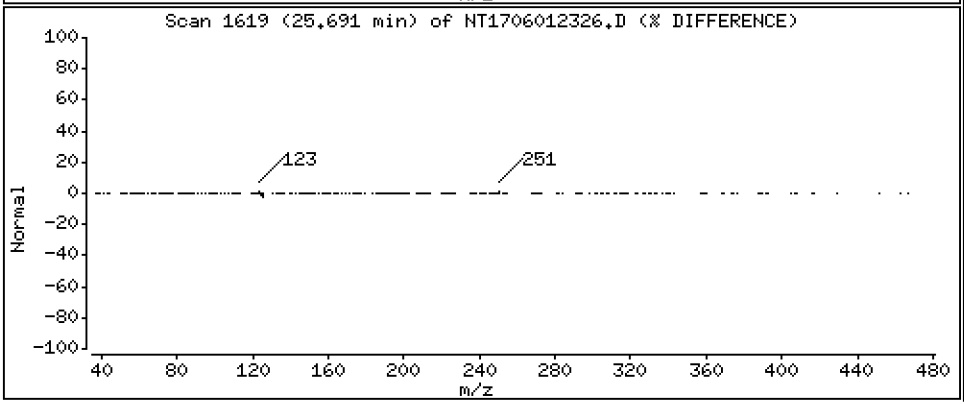
76 Benzo(a)pyrene

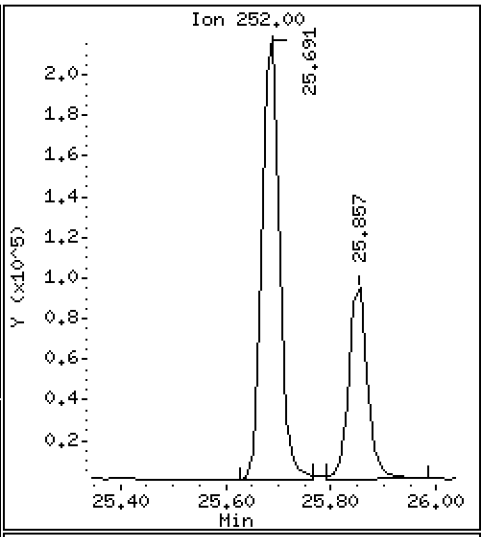
Concentration: 3.510 ug/mL

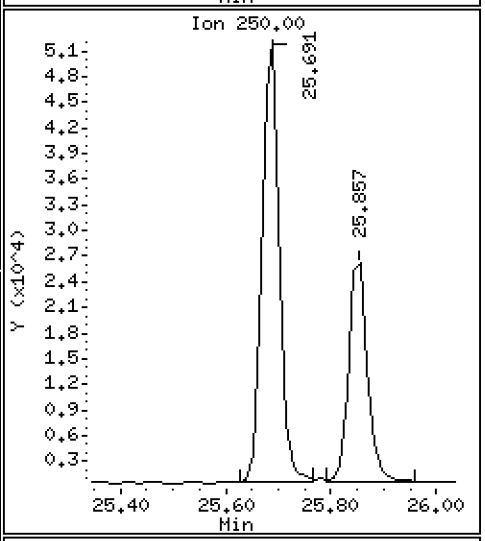


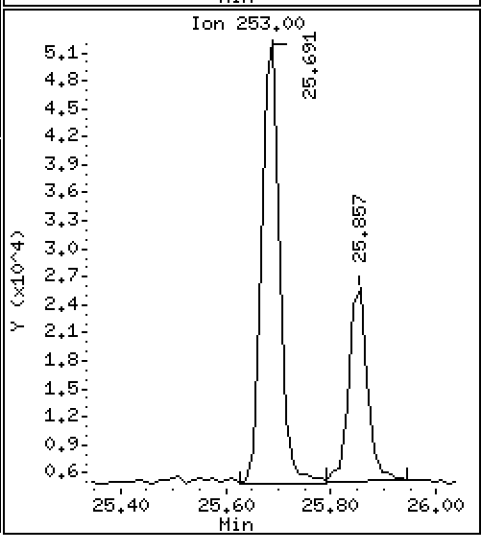












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

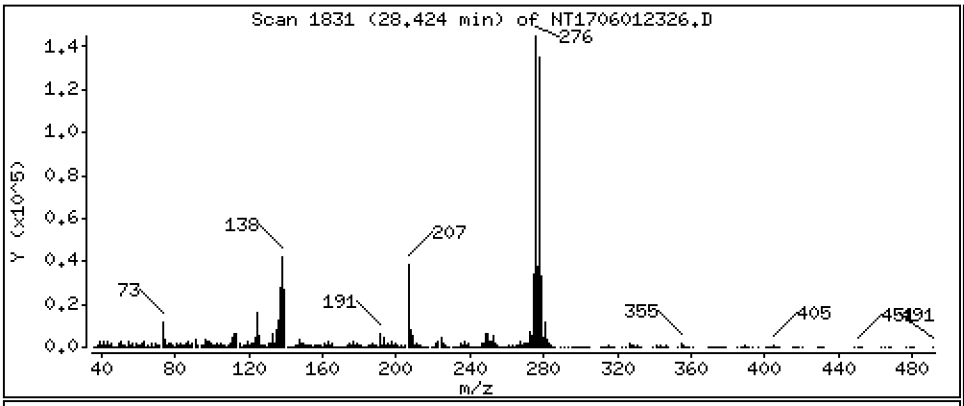
Operator: VTS

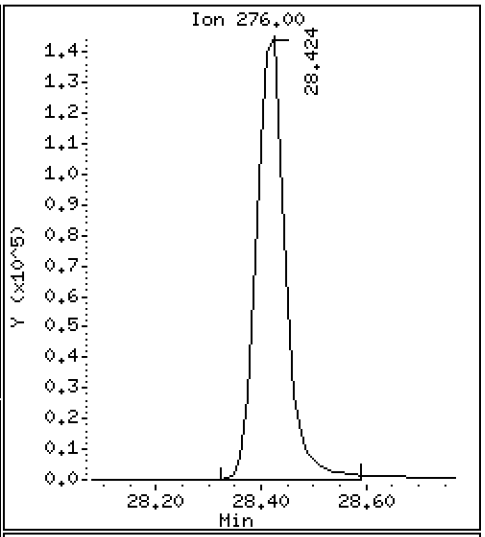
Column phase: ZB-5msi

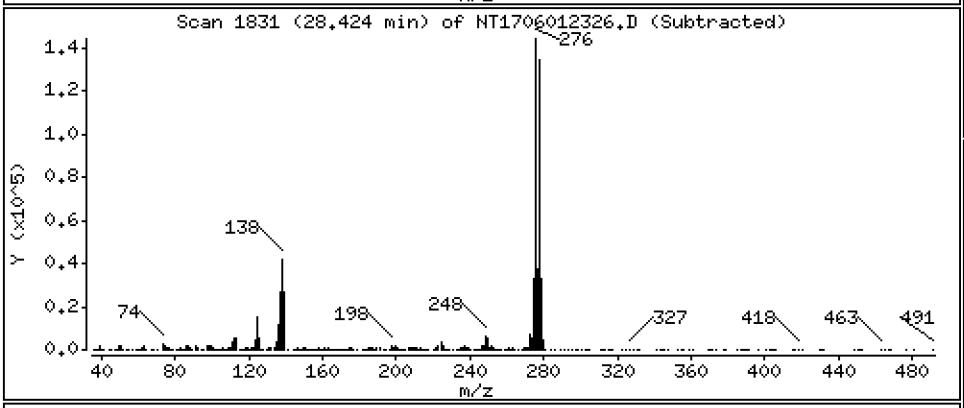
Column diameter: 0.25

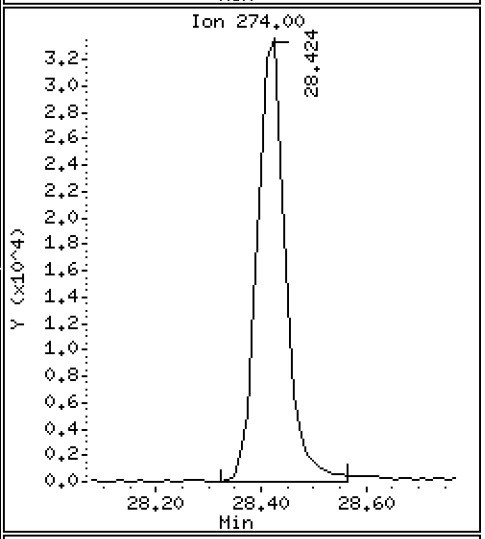
78 Indeno(1,2,3-cd)pyrene

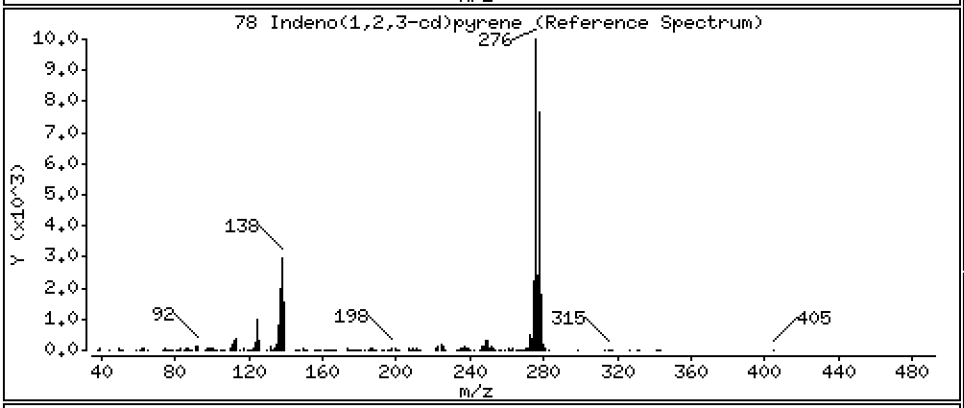
Concentration: 3.314 ug/mL

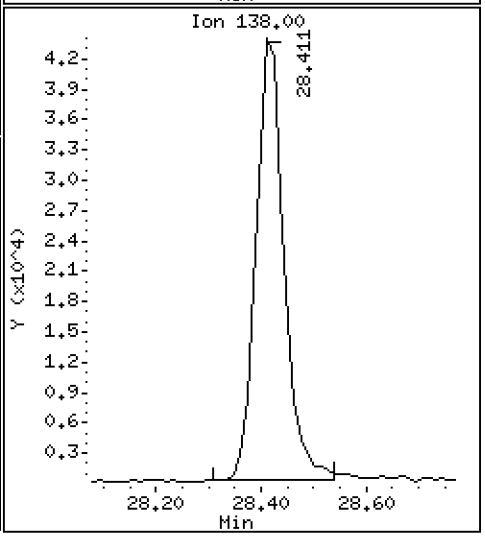


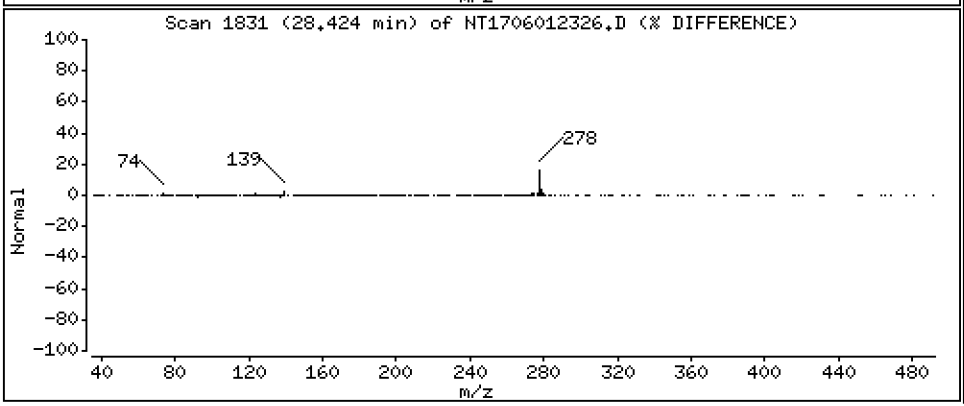












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

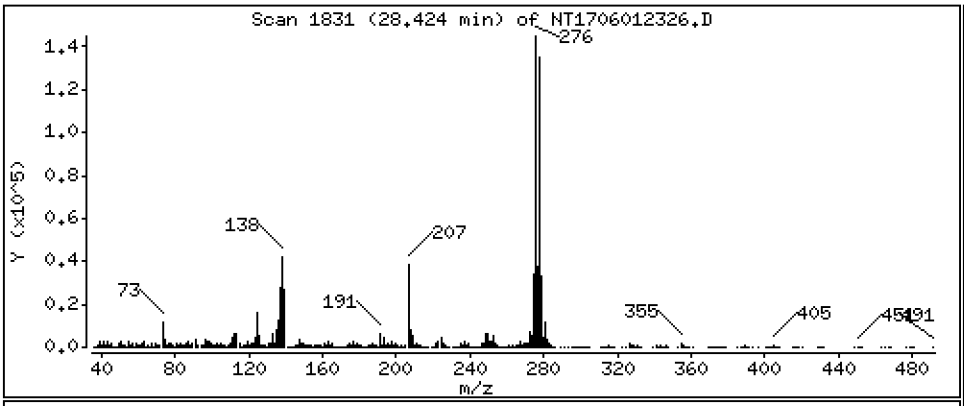
Operator: VTS

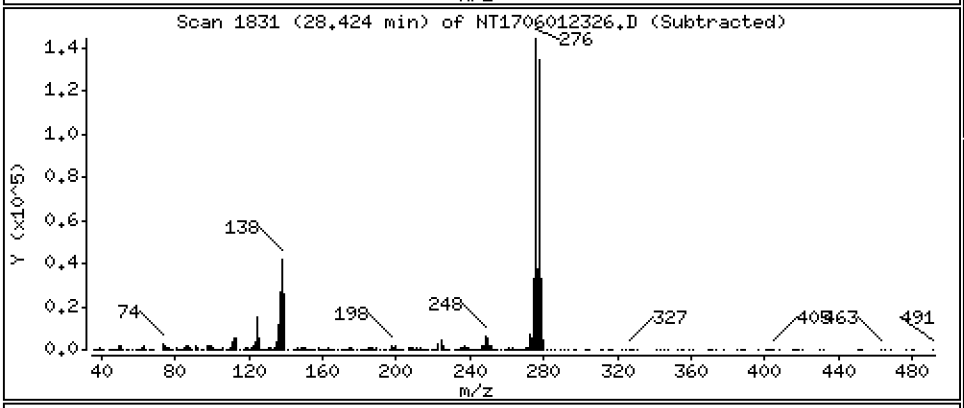
Column phase: ZB-5msi

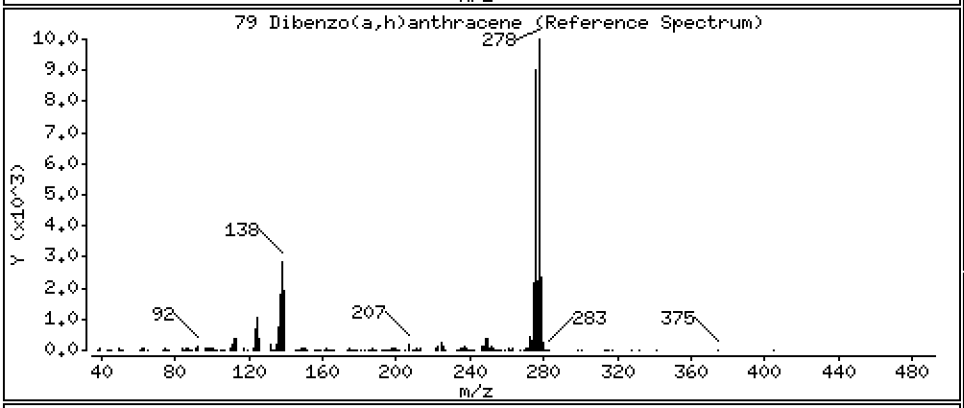
Column diameter: 0.25

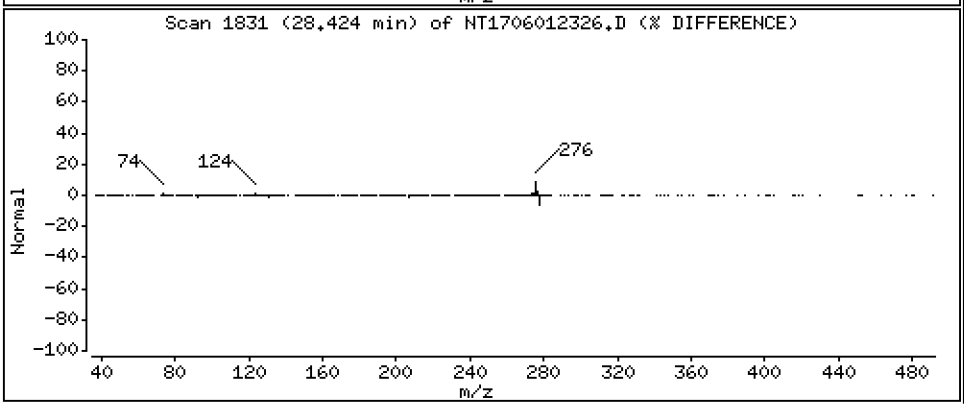
79 Dibenzo(a,h)anthracene

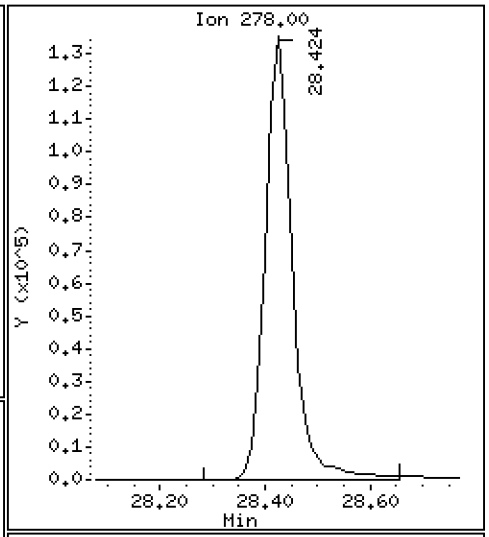
Concentration: 3.470 ug/mL

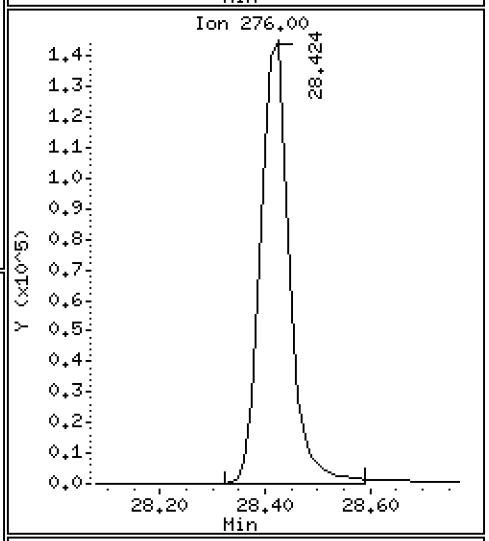


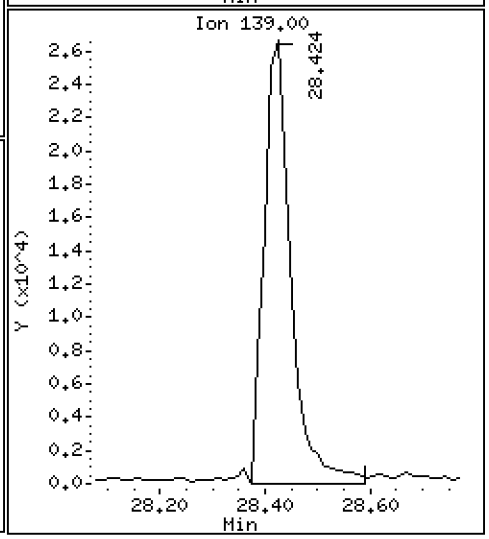












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

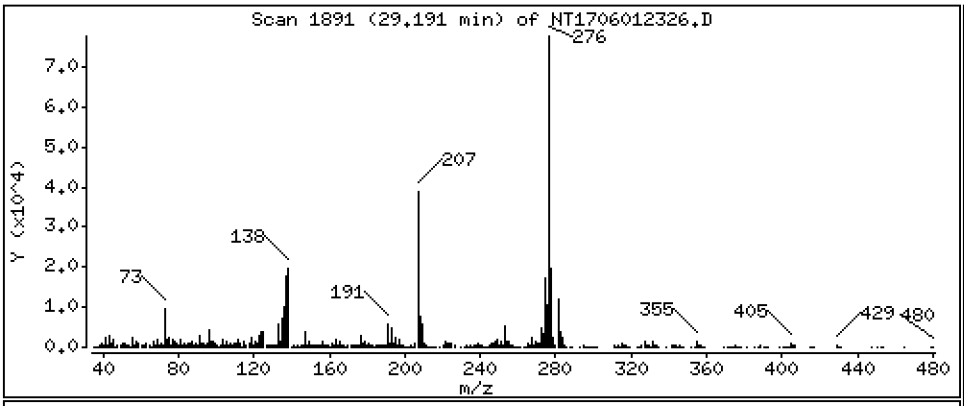
Operator: VTS

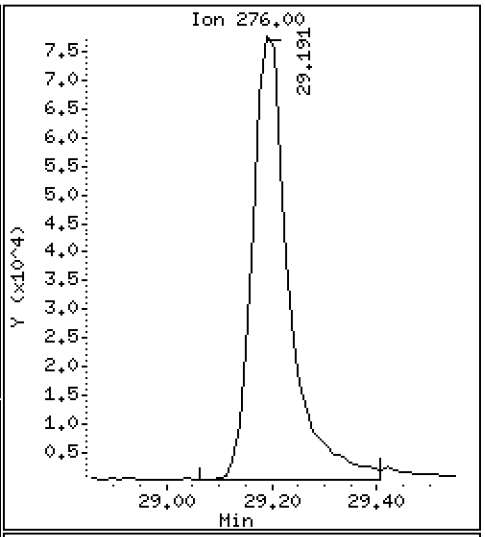
Column phase: ZB-5msi

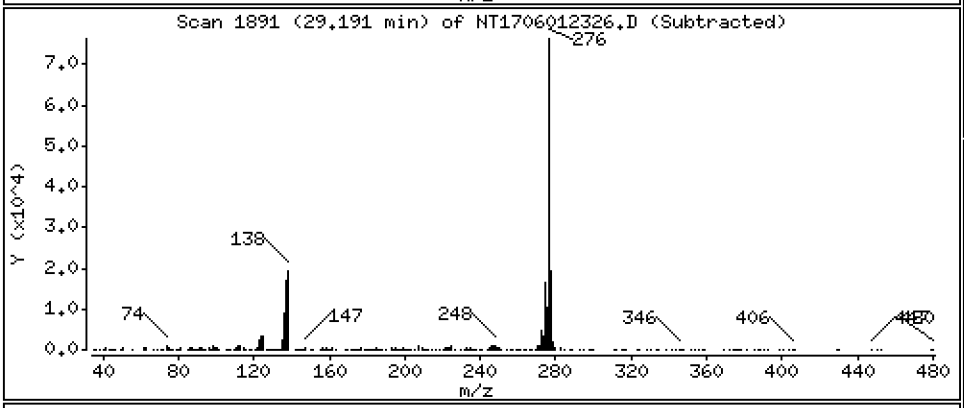
Column diameter: 0.25

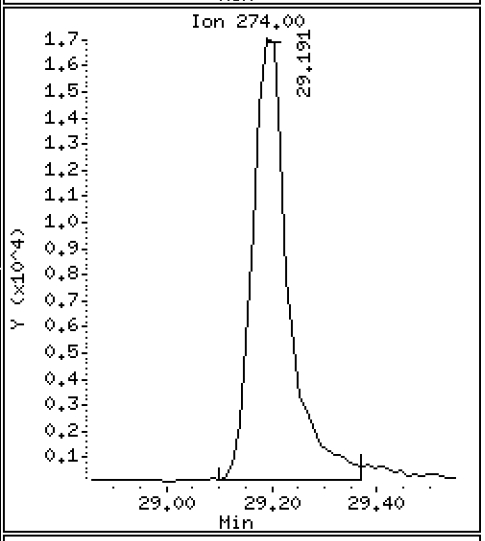
80 Benzo(g,h,i)perylene

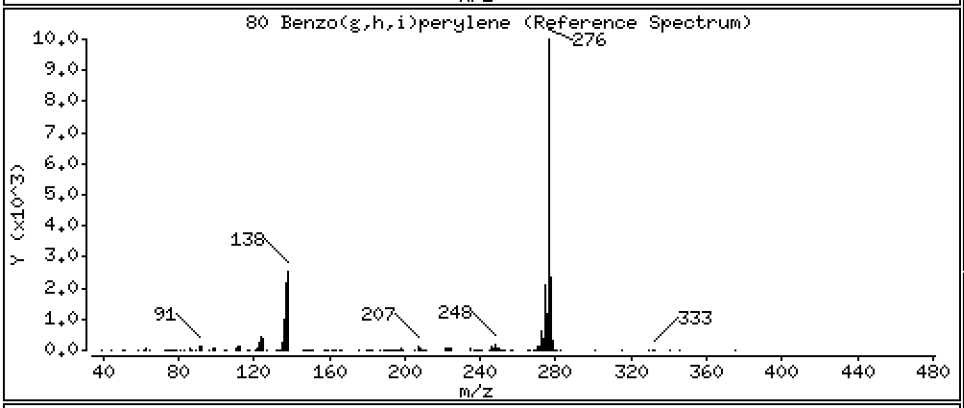
Concentration: 2.722 ug/mL

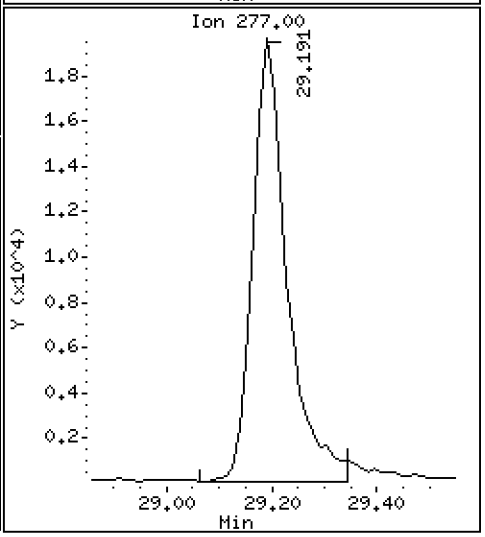


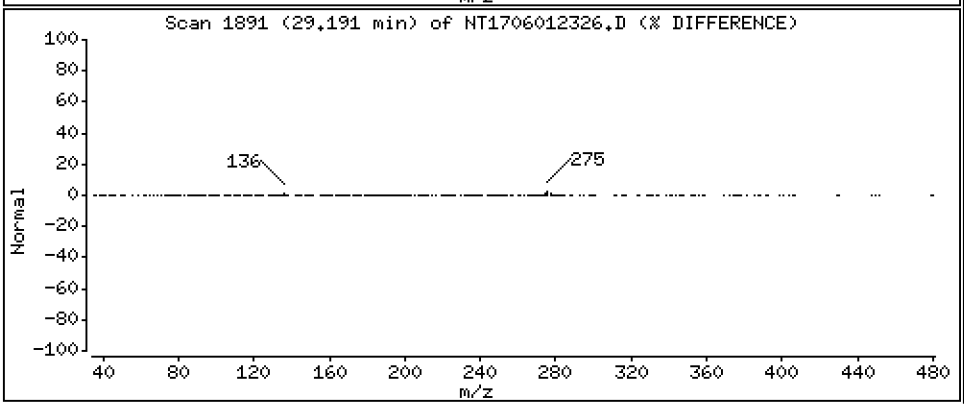












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

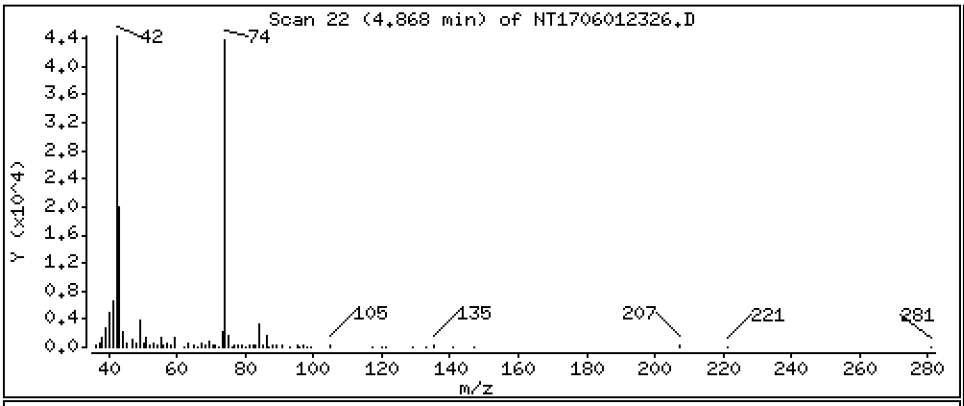
Operator: VTS

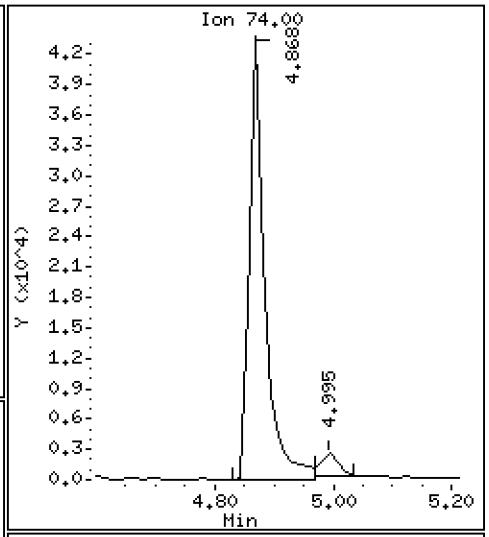
Column phase: ZB-5msi

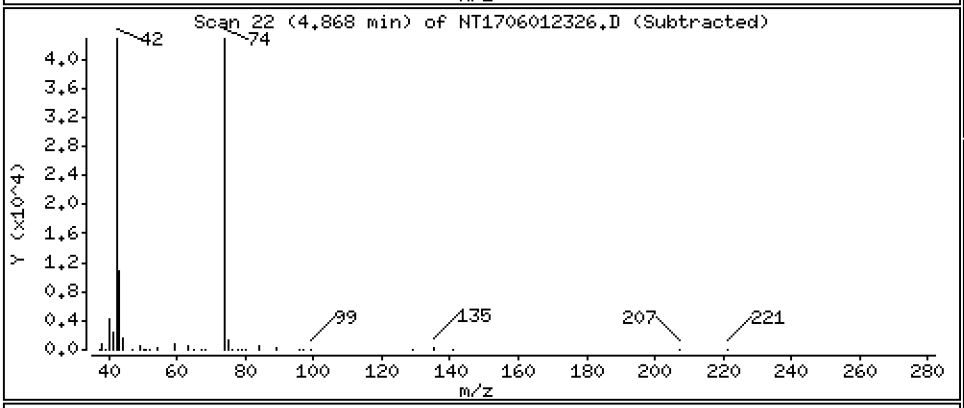
Column diameter: 0.25

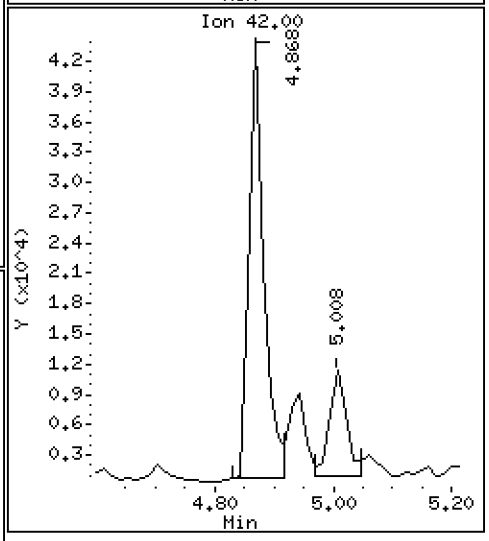
90 N-Nitrosodimethylamine

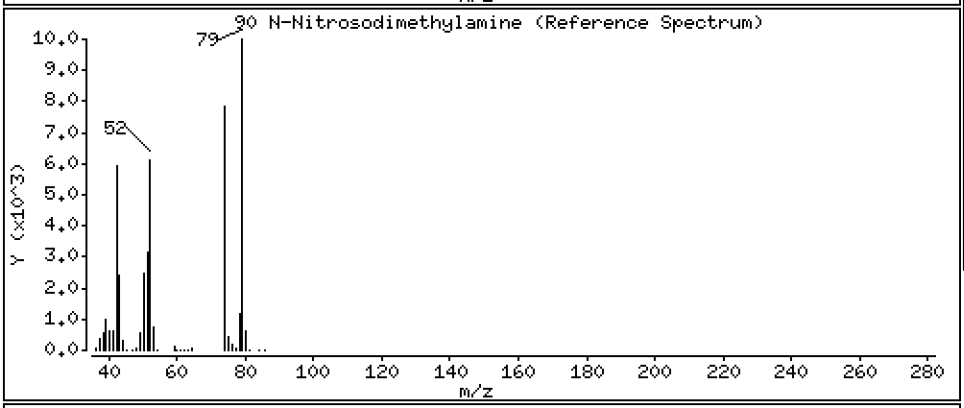
Concentration: 1.416 ug/mL

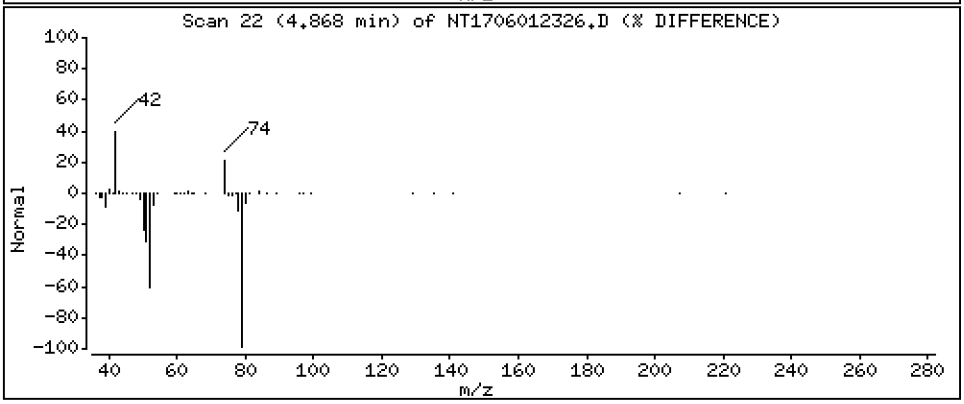












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

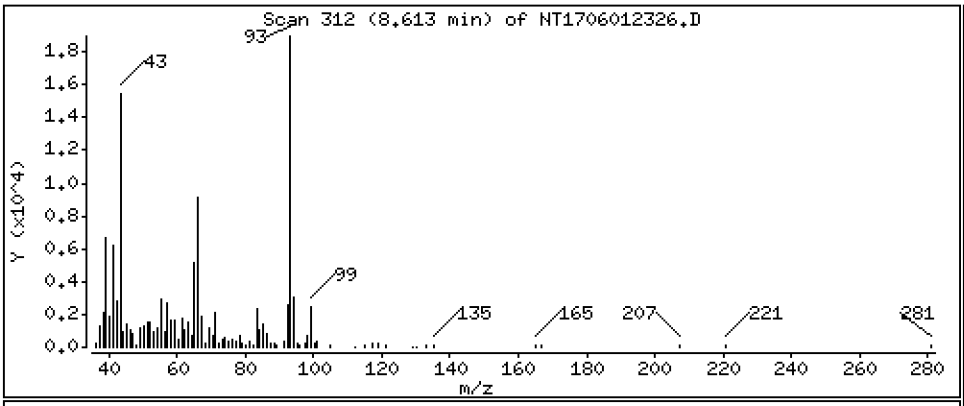
Operator: VTS

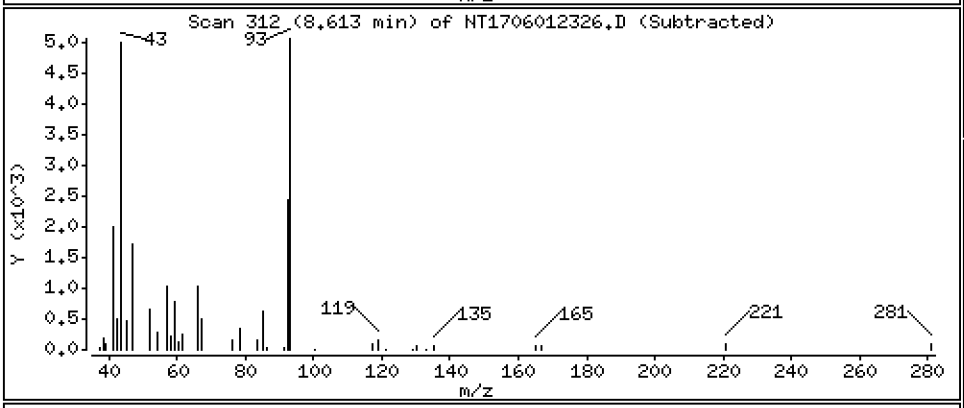
Column phase: ZB-5msi

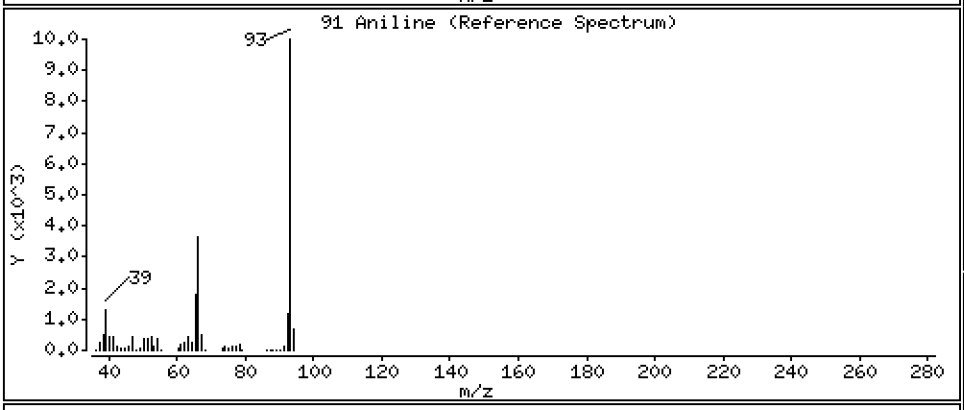
Column diameter: 0.25

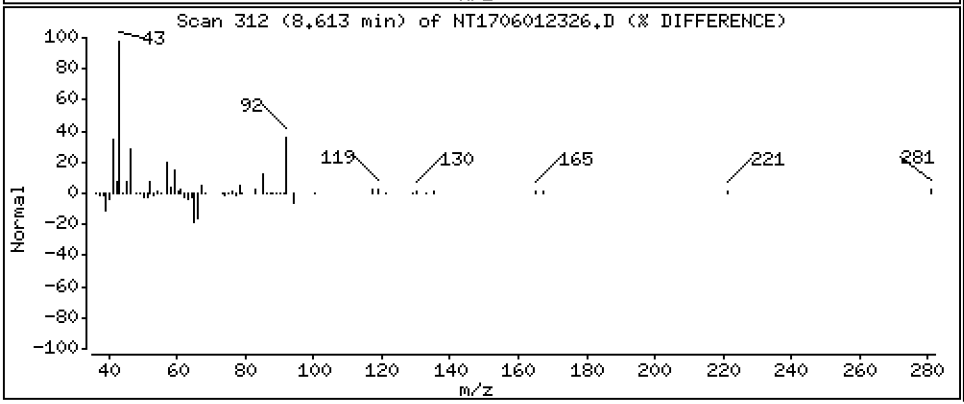
91 Aniline

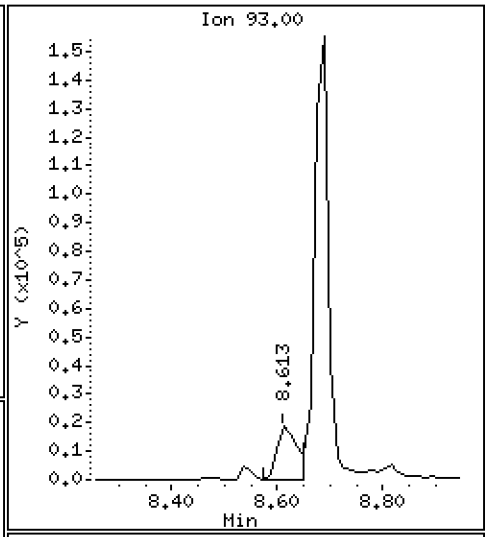
Concentration: 0.5347 ug/mL

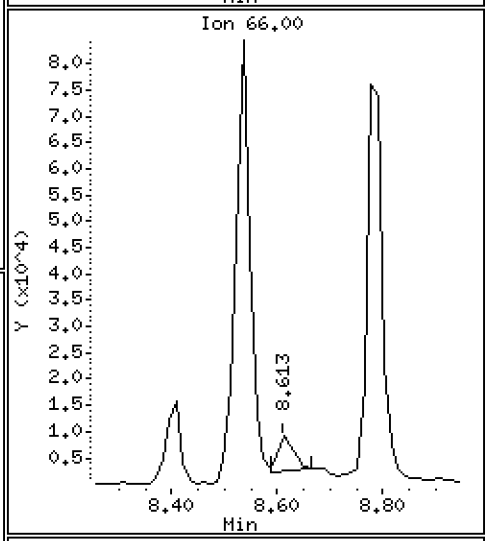


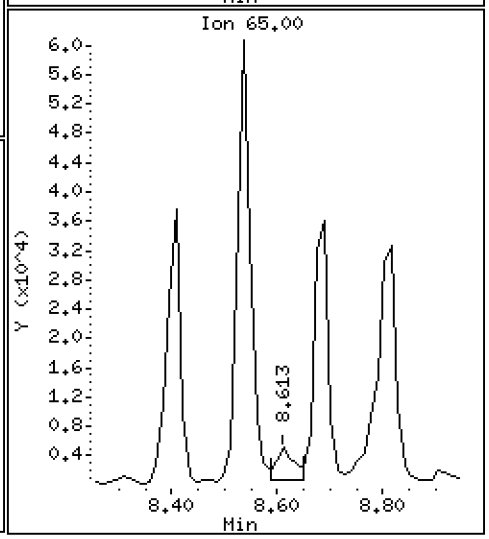












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

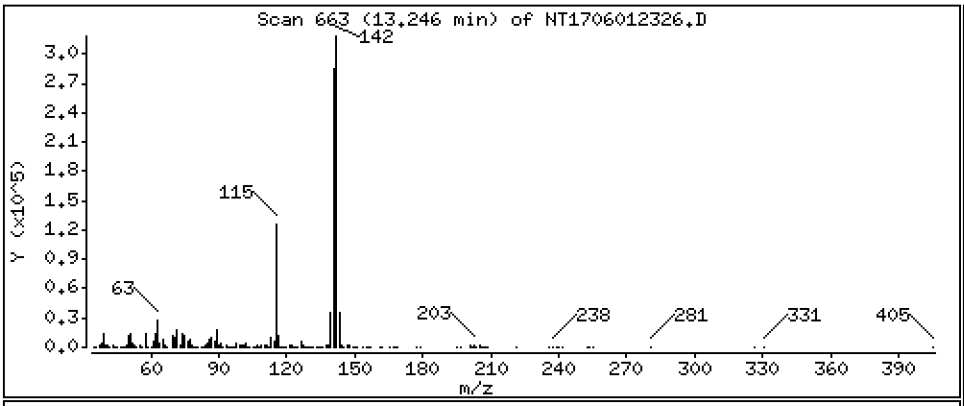
Operator: VTS

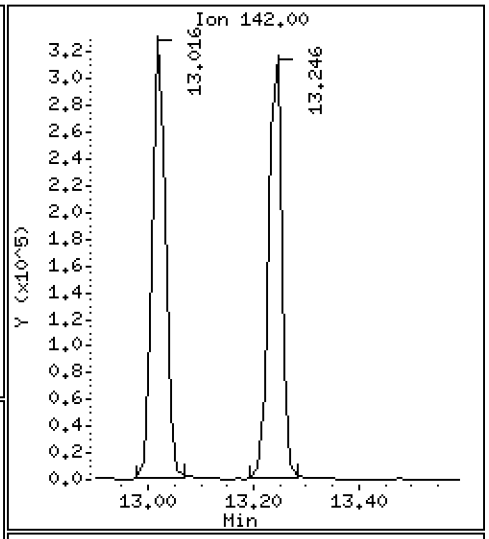
Column phase: ZB-5msi

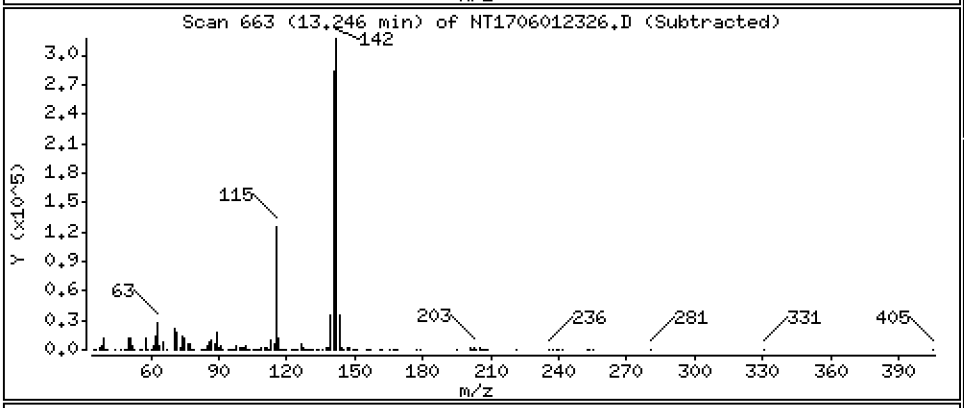
Column diameter: 0.25

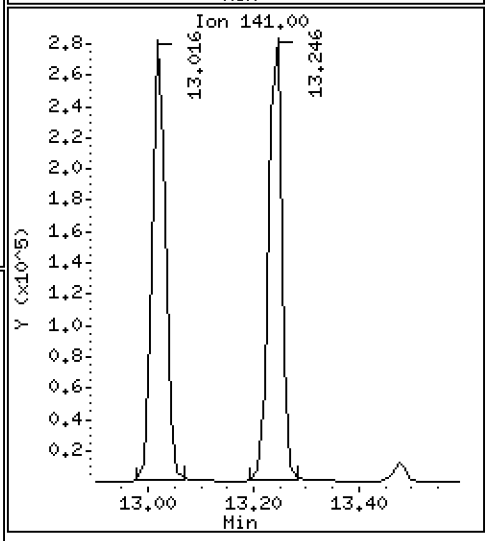
105 1-methylnaphthalene

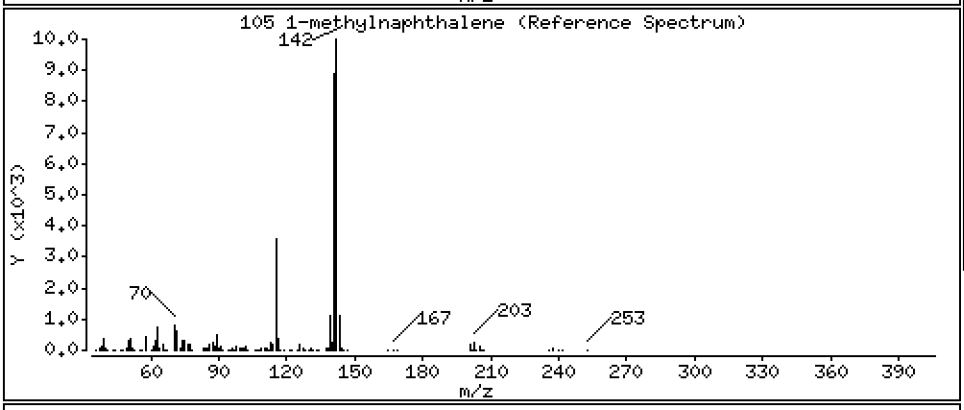
Concentration: 3.272 ug/mL

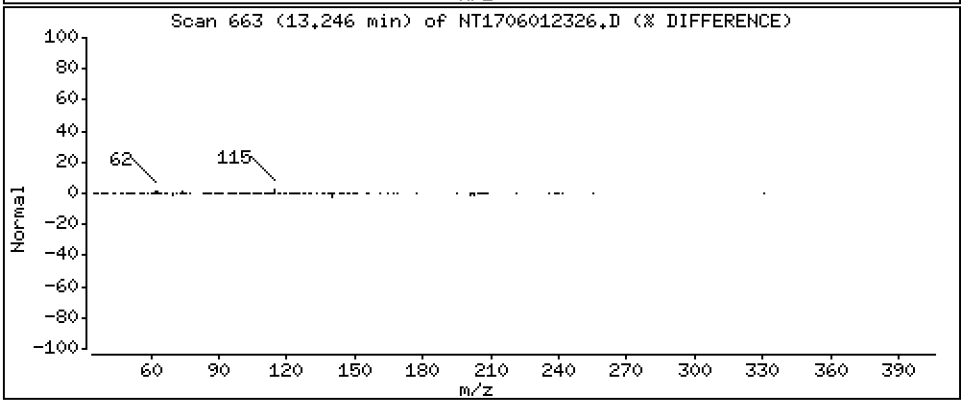












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

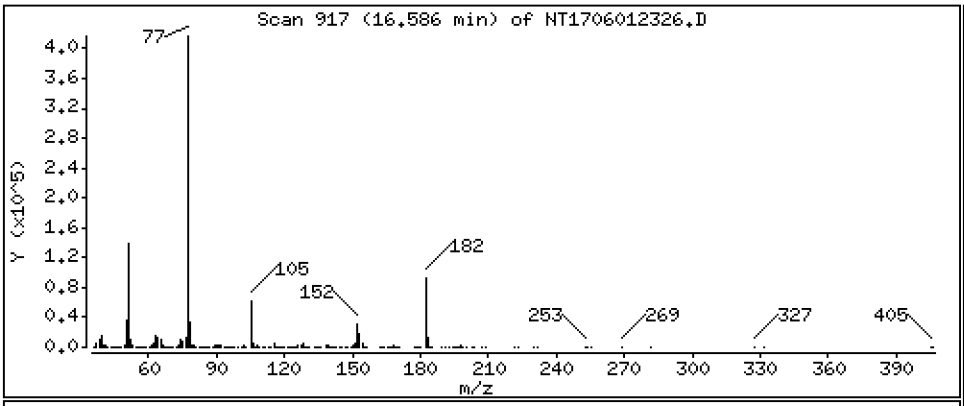
Operator: VTS

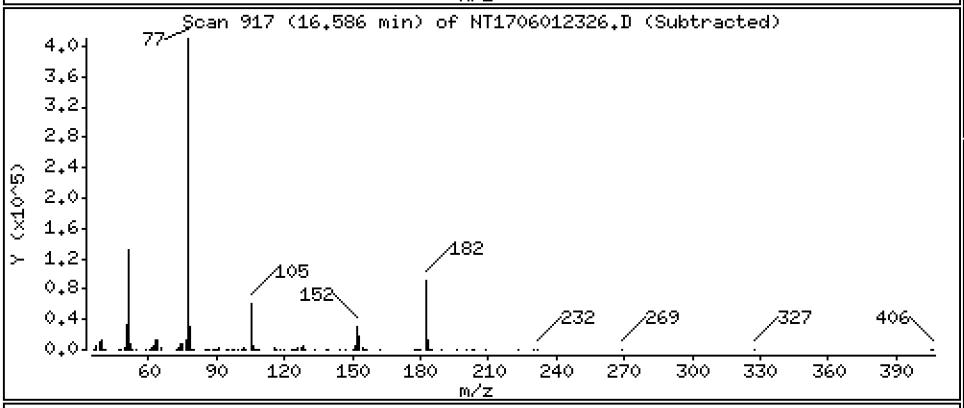
Column phase: ZB-5msi

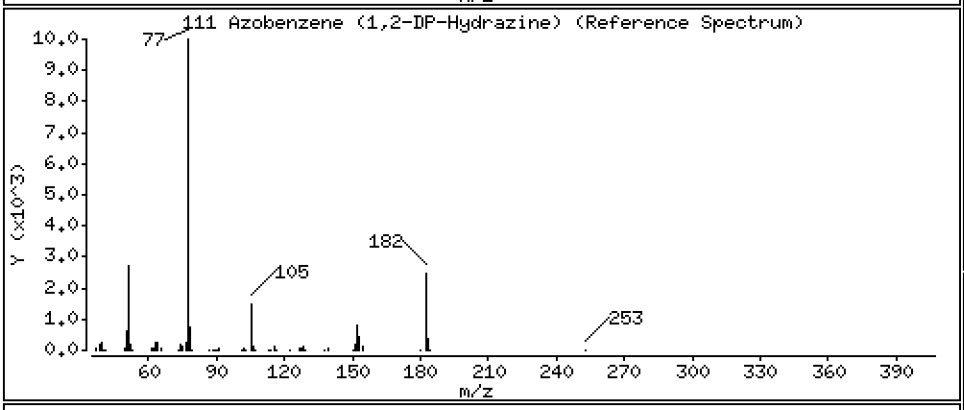
Column diameter: 0.25

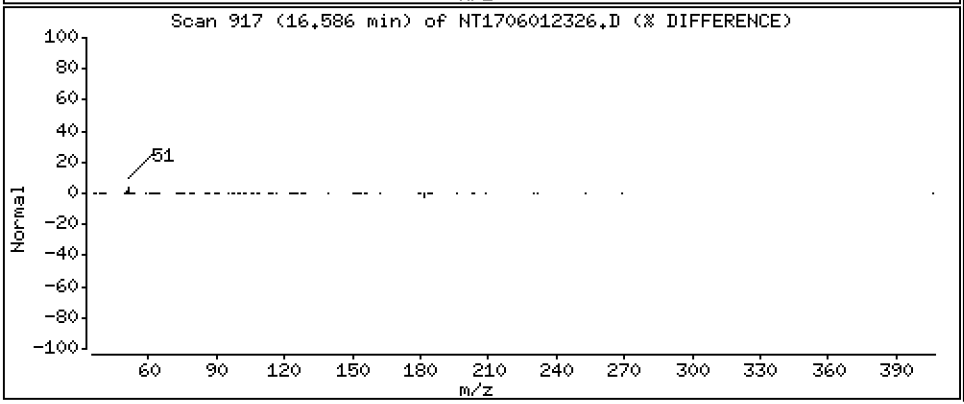
111 Azobenzene (1,2-DP-Hydrazine)

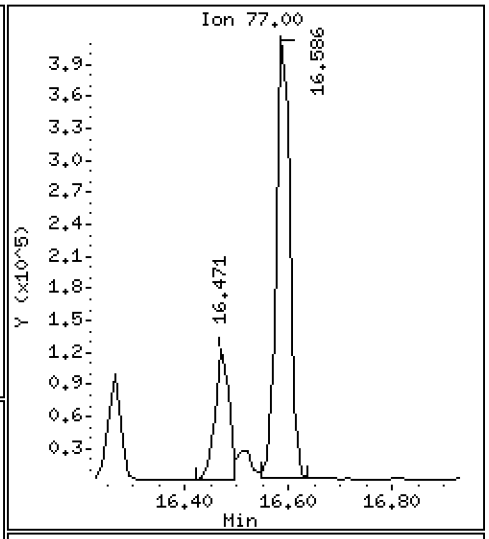
Concentration: 3.651 ug/mL

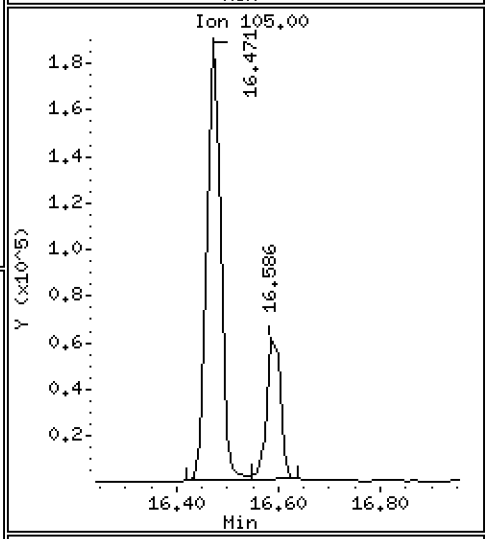


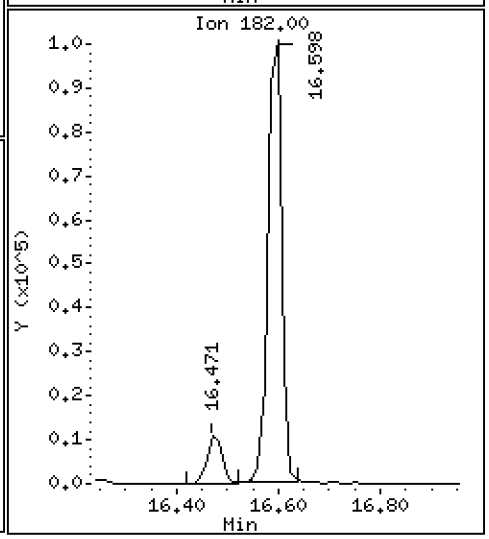












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

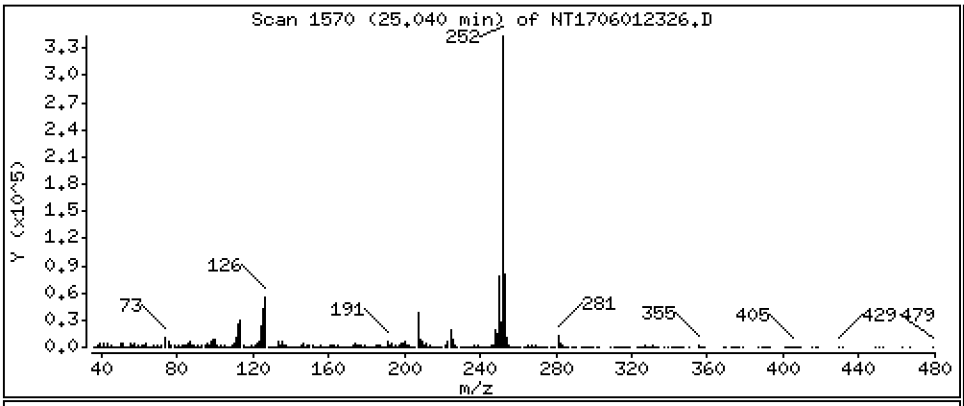
Operator: VTS

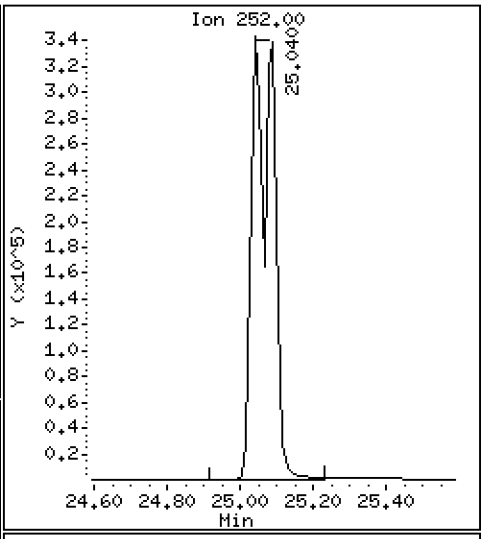
Column phase: ZB-5msi

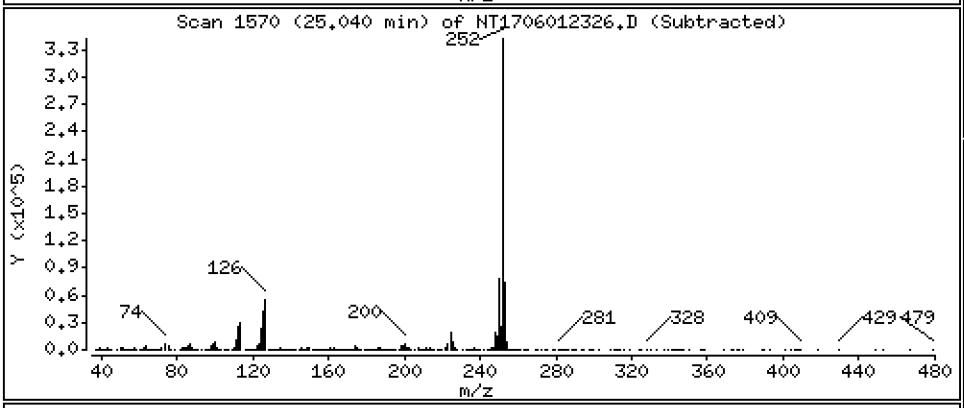
Column diameter: 0.25

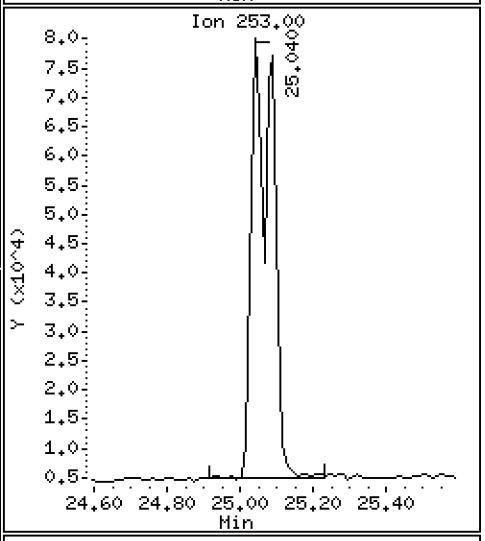
187 Total Benzofluoranthenes

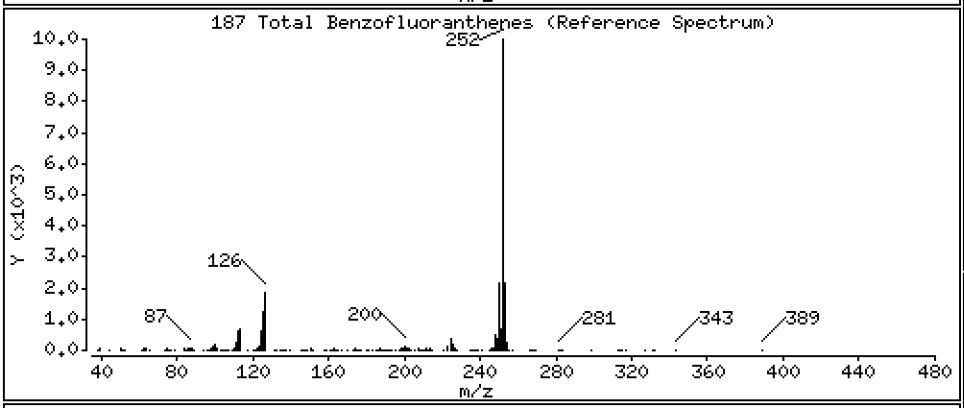
Concentration: 8.499 ug/mL

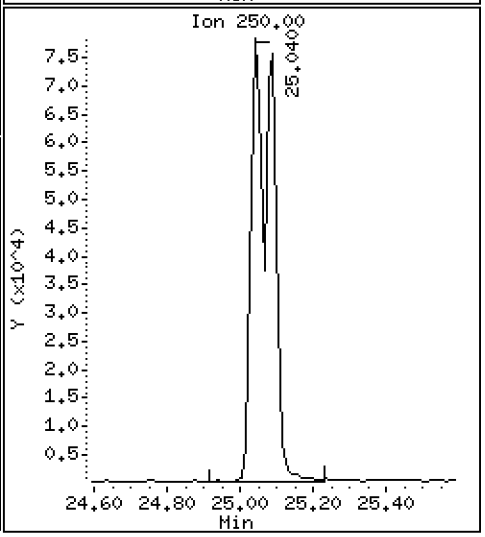


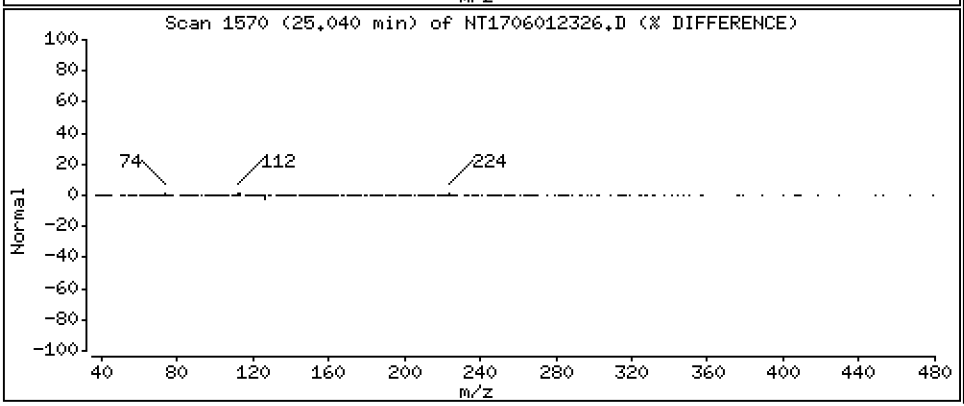












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS1

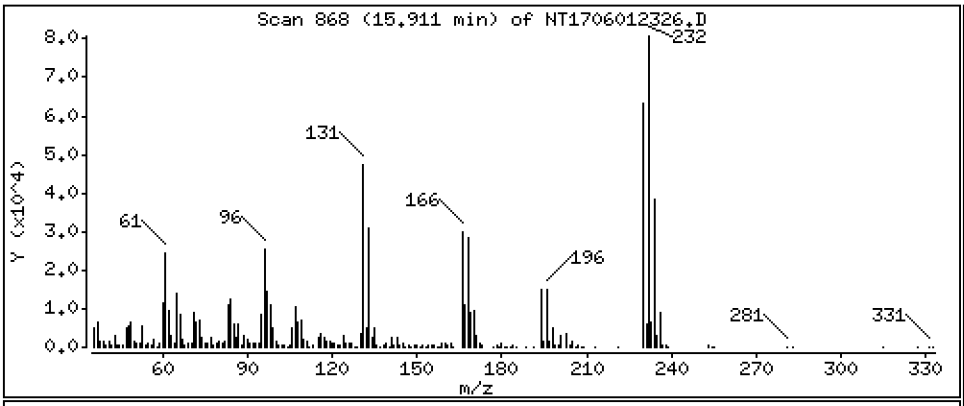
Operator: VTS

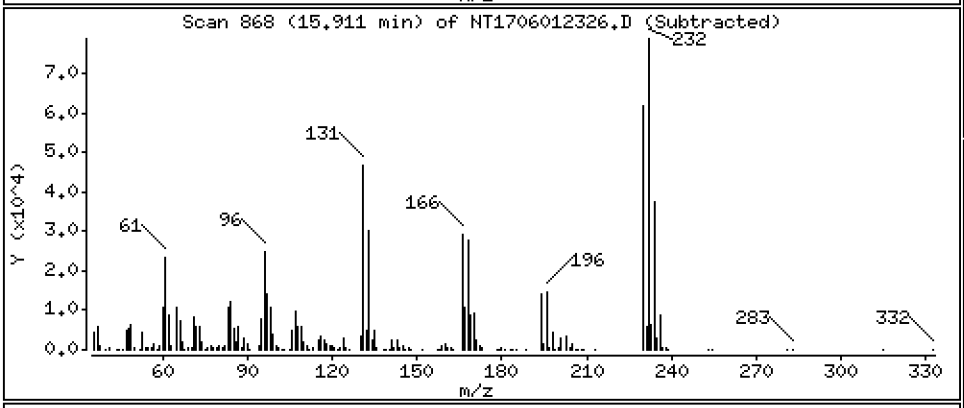
Column phase: ZB-5msi

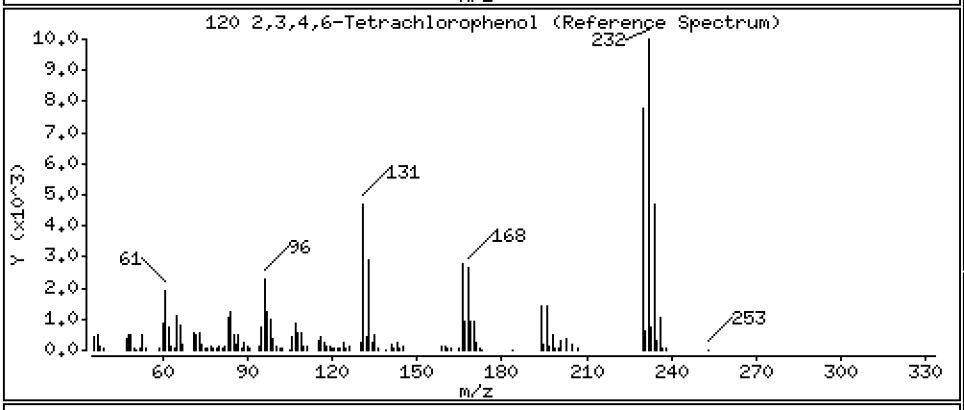
Column diameter: 0.25

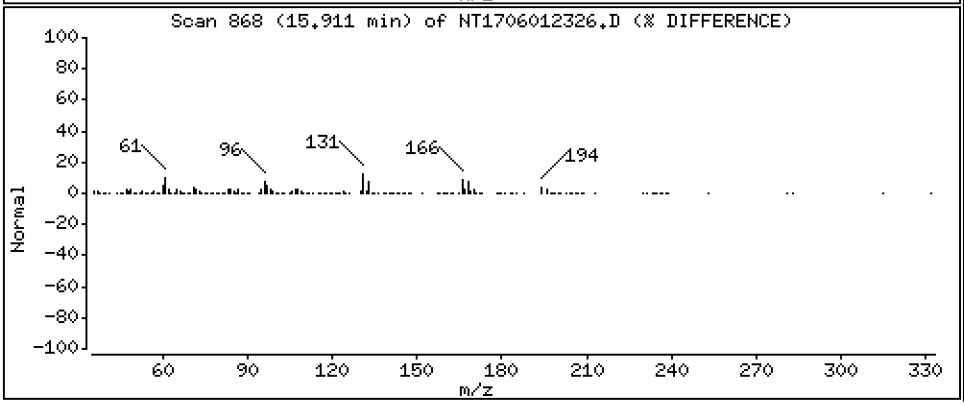
120 2,3,4,6-Tetrachlorophenol

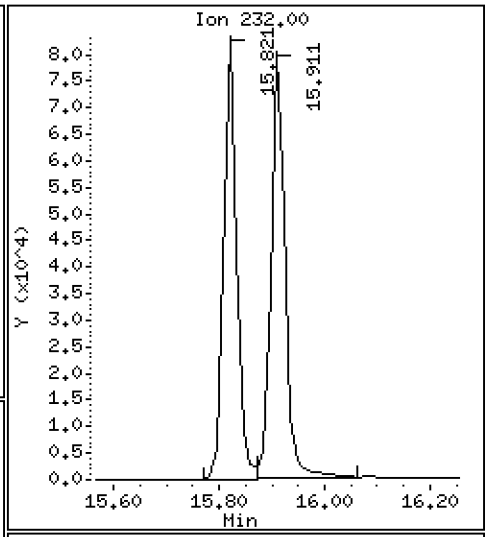
Concentration: 2.570 ug/mL

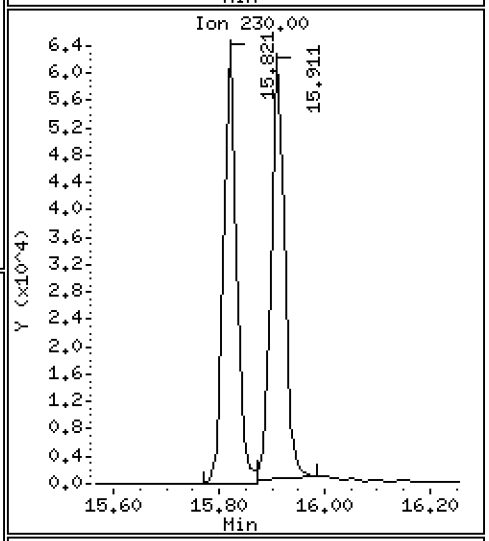


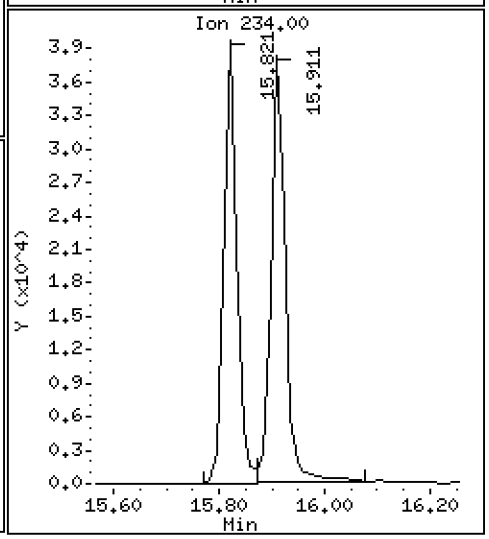












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012326.D
Lab Smp Id: BLE0148-BS1
Inj Date : 02-JUN-2023 03:34
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-BS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.944	(0.761)	292293	3.52872	3.529
$	2 Phenol-d5	99	8.511	8.511	(0.932)	433332	3.95310	3.953
	3 Phenol	94	8.537	8.536	(0.934)	313326	2.69860	2.699
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	427022	4.86333	4.863
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	267041	3.15497	3.155
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	296274	3.05566	3.056
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	299147	3.04851	3.049
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	253041	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	335973	3.43293	3.433
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	200284	3.24528	3.245
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	289946	3.15156	3.152
	11 Benzyl alcohol	108	9.417	9.417	(1.031)	166356	3.07741	3.077
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	107673	4.15219	4.152
	13 2-Methylphenol	108	9.634	9.634	(1.055)	193324	2.26557	2.266
	17 Hexachloroethane	117	10.094	10.094	(1.105)	123904	3.16493	3.165
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	156481	2.39686	2.397
	15 4-Methylphenol	108	9.915	9.902	(1.085)	229446	2.64082	2.641
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	363780	3.36978	3.370
	19 Nitrobenzene	77	10.247	10.260	(0.883)	330359	3.20750	3.208
	20 Isophorone	82	10.694	10.707	(0.922)	609835	4.32541	4.325
	21 2-Nitrophenol	139	10.873	10.873	(0.937)	153454	3.09193	3.092
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	313853	3.25703	3.257
	23 Bis(2-Chloroethoxy)methane	93	11.116	11.116	(0.958)	332426	3.84712	3.847
	24 Benzoic acid	105	11.180	11.192	(0.964)	1069480	16.4991	16.50
	25 2,4-Dichlorophenol	162	11.333	11.333	(0.977)	824289	10.6452	10.65
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	249789	2.97022	2.970
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	948532	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	796646	3.05410	3.054
	29 4-Chloroaniline	127	11.791	11.766	(1.016)	93995	0.91417	0.9142
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	140032	3.36144	3.361
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	910114	10.9158	10.92
	32 2-Methylnaphthalene	142	13.016	13.016	(1.122)	578441	3.09717	3.097
	33 Hexachlorocyclopentadiene	237	13.475	13.487	(0.887)	132959	2.71906	2.719

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.640	13.640	(0.898)	568586	10.3341	10.33
35	2,4,5-Trichlorophenol	196	13.717	13.717	(0.903)	635301	10.9074	10.91
$ 36	2-Fluorobiphenyl	172	13.794	13.793	(0.908)	717072	3.46131	3.461
37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	552565	3.28779	3.288
38	2-Nitroaniline	65	14.278	14.278	(0.940)	627783	11.0294	11.03
39	Dimethylphthalate	163	14.699	14.686	(0.968)	739795	4.08866	4.089
40	Acenaphthylene	152	14.878	14.878	(0.980)	827821	3.10170	3.102
41	2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	485105	11.4514	11.45
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	525869	4.00000	
43	3-Nitroaniline	138	15.133	15.133	(0.997)	124012	3.16071	3.161
44	Acenaphthene	153	15.247	15.247	(1.004)	561751	3.36712	3.367
45	2,4-Dinitrophenol	184	15.337	15.337	(1.010)	552116	20.7739	20.77
46	Dibenzofuran	168	15.579	15.579	(1.026)	799104	3.43179	3.432
47	4-Nitrophenol	109	15.464	15.464	(1.018)	268237	10.2926	10.29
48	2,4-Dinitrotoluene	165	15.642	15.642	(1.030)	654898	11.8099	11.81
50	Diethylphthalate	149	16.140	16.140	(1.063)	773113	4.38132	4.381
49	Fluorene	166	16.280	16.280	(1.072)	844552	3.81498	3.815
51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	408422	4.01292	4.013
52	4-Nitroaniline	138	16.420	16.407	(1.081)	168535	4.53811	4.538
53	4,6-Dinitro-2-methylphenol	198	16.471	16.471	(0.905)	769911	21.5324	21.53
54	N-Nitrosodiphenylamine	169	16.522	16.521	(0.908)	365629	2.91318	2.913
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	140932	6.14399	6.144
56	4-Bromophenyl-phenylether	248	17.260	17.260	(0.948)	182616	4.15271	4.153
57	Hexachlorobenzene	284	17.578	17.578	(0.966)	180102	4.01931	4.019
58	Pentachlorophenol	266	17.935	17.935	(0.985)	329918	11.9851	11.99
* 59	Phenanthrene-d10	188	18.203	18.203	(1.000)	895969	4.00000	
60	Phenanthrene	178	18.241	18.241	(1.002)	951323	3.63891	3.639
61	Anthracene	178	18.343	18.343	(1.008)	747770	3.04662	3.047
62	Carbazole	167	18.688	18.688	(1.027)	791513	5.03309	5.033
63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	1286091	4.33943	4.339
64	Fluoranthene	202	20.613	20.613	(0.888)	1068738	4.08828	4.088
65	Pyrene	202	21.034	21.034	(0.906)	1041516	3.93019	3.930
$ 66	Terphenyl-d14	244	21.315	21.315	(0.918)	857283	4.55066	4.551
67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	490646	4.13673	4.137
68	Benzo(a)anthracene	228	23.177	23.190	(0.998)	792972	3.85337	3.853
* 69	Chrysene-d12	240	23.215	23.215	(1.000)	558853	4.00000	
70	3,3'-Dichlorobenzidine	252	23.152	23.139	(0.997)	55405	1.38763	1.388
71	Chrysene	228	23.254	23.254	(1.002)	785168	4.05474	4.055
72	bis(2-Ethylhexyl)phthalate	149	23.241	23.254	(0.959)	288039	1.84949	1.849
* 134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1076428	4.00000	
73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	271501	0.99505	0.9951
74	Benzo(b)fluoranthene	252	25.040	25.052	(0.970)	752988	4.10314	4.103
75	Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	761735	4.39341	4.393
76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	507417	3.51003	3.510
* 77	Perylene-d12	264	25.805	25.805	(1.000)	462864	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.423	28.423	(1.101)	555709	3.31409	3.314
79	Dibenzo(a,h)anthracene	278	28.423	28.423	(1.101)	488300	3.46975	3.470
80	Benzo(g,h,i)perylene	276	29.190	29.203	(1.131)	376793	2.72245	2.722
90	N-Nitrosodimethylamine	74	4.867	4.867	(0.533)	78252	1.41625	1.416
91	Aniline	93	8.613	8.600	(0.943)	52026	0.53471	0.5347
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	566982	3.27239	3.272
111	Azobenzene (1,2-DP-Hydrazine)	77	16.585	16.585	(1.092)	752119	3.65144	3.651

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.040	25.091	(0.970)	1400059	8.49886	8.499
120 2,3,4,6-Tetrachlorophenol	232	15.910	15.910	(1.048)	169160	2.56963	2.570

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012326.D
Lab Smp Id: BLE0148-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	253041	-1.54
27 Naphthalene-d8	932905	466453	1865810	948532	1.68
42 Acenaphthene-d10	509574	254787	1019148	525869	3.20
59 Phenanthrene-d10	912749	456375	1825498	895969	-1.84
69 Chrysene-d12	578011	289006	1156022	558853	-3.31
134 Di-n-octylphthala	1181490	590745	2362980	1076428	-8.89
77 Perylene-d12	513683	256842	1027366	462864	-9.89

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012326.D

Lab ID: BLE0148-BS1
nt17.i, ABN.m, 02-JUN-2023 03:34

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

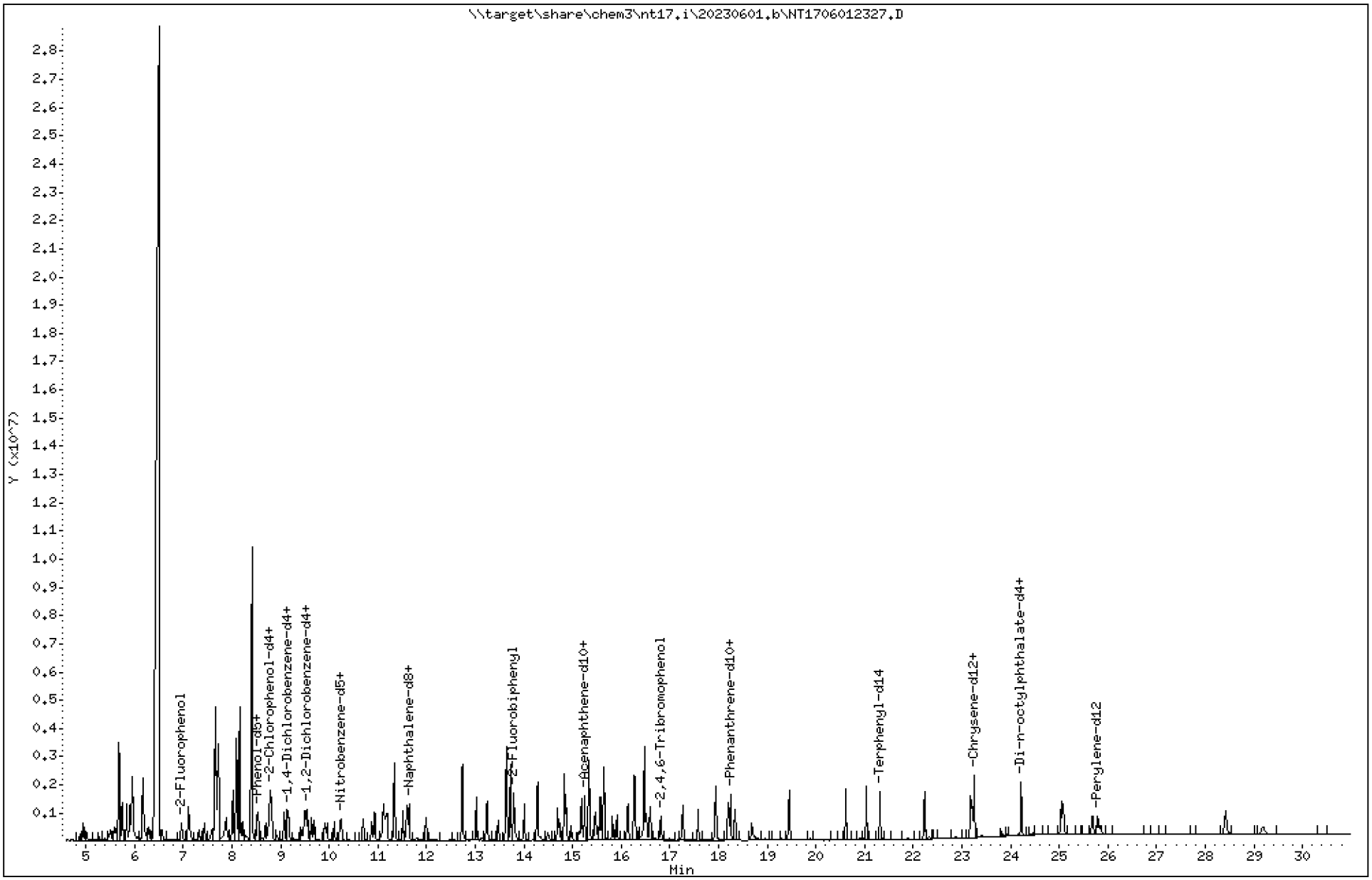
RRT check based on Ccal File: NT1706012320.D

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D
Date : 02-JUN-2023 04:11
Client ID:
Sample Info: BLE0148-BSD1

Instrument: nt17.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

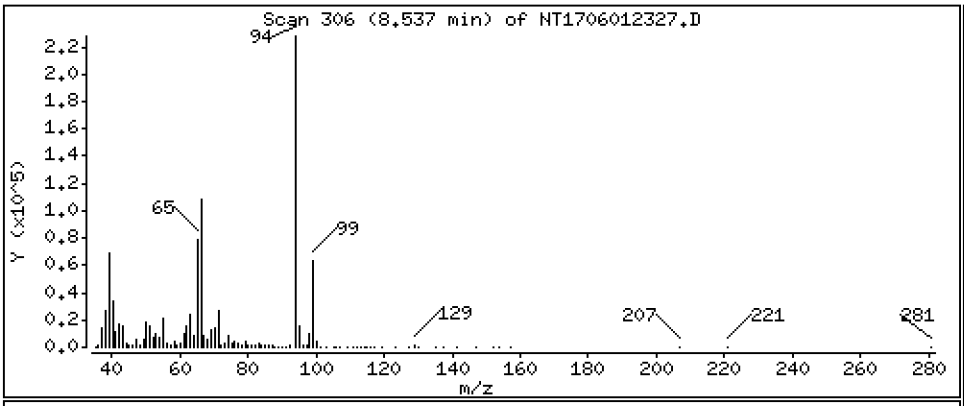
Operator: VTS

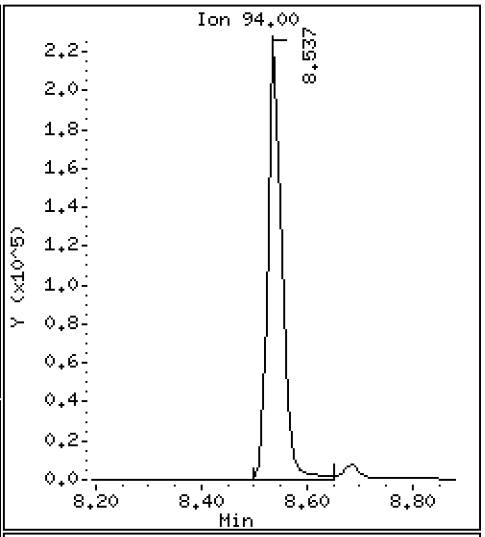
Column phase: ZB-5msi

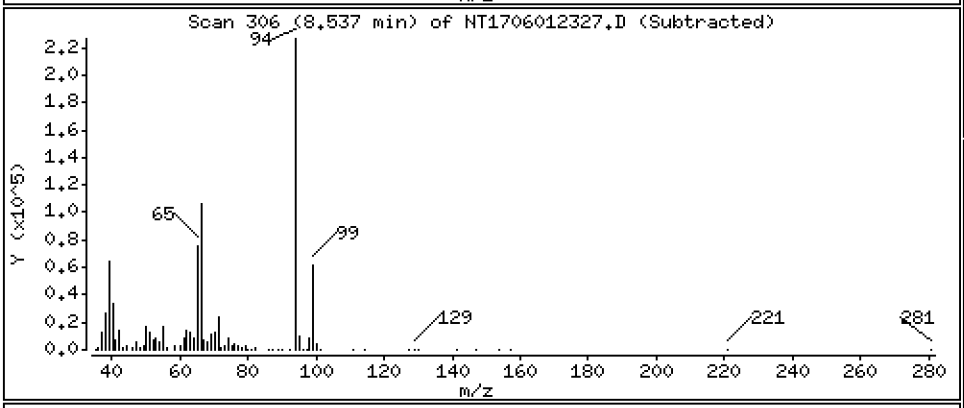
Column diameter: 0.25

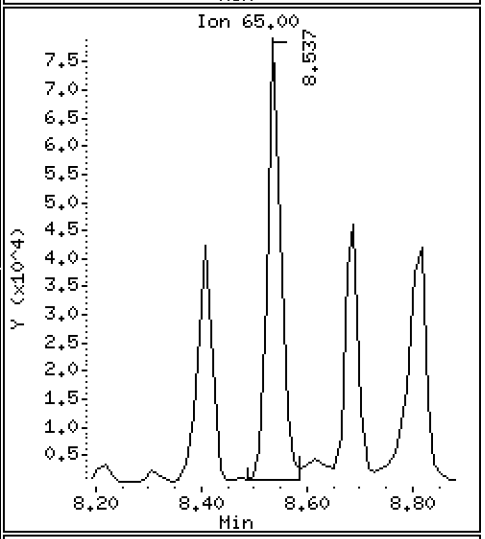
3 Phenol

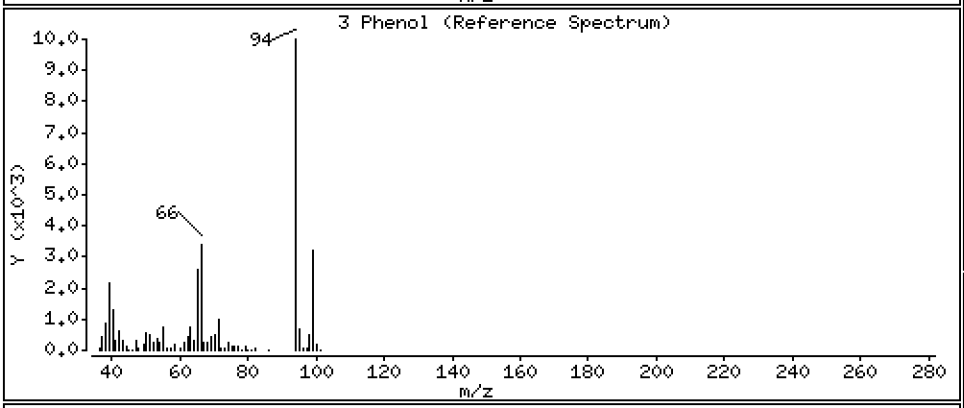
Concentration: 3.194 ug/mL

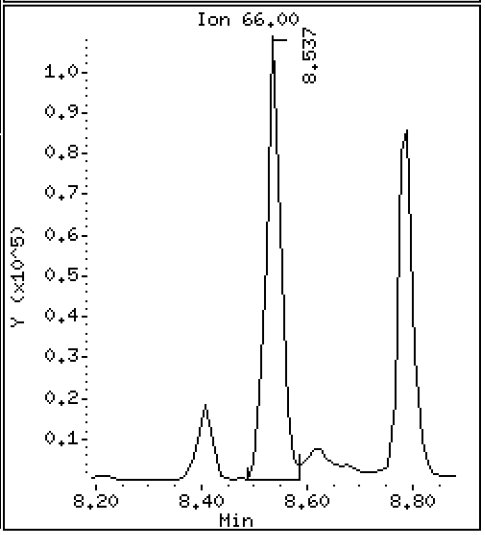


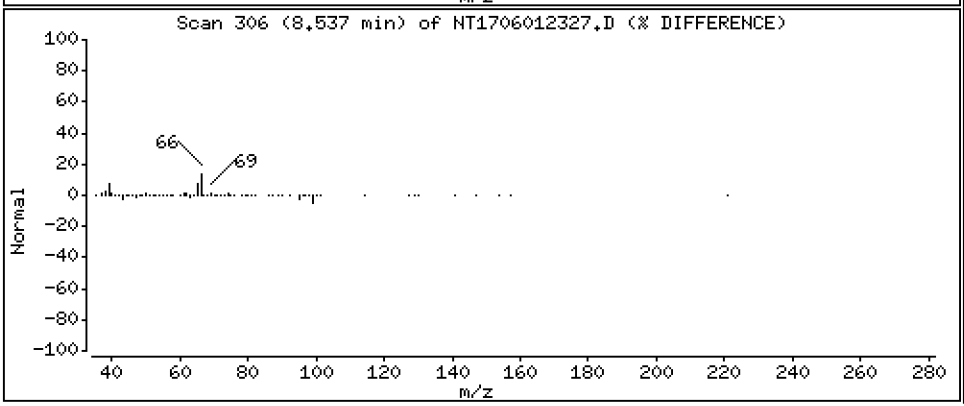












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

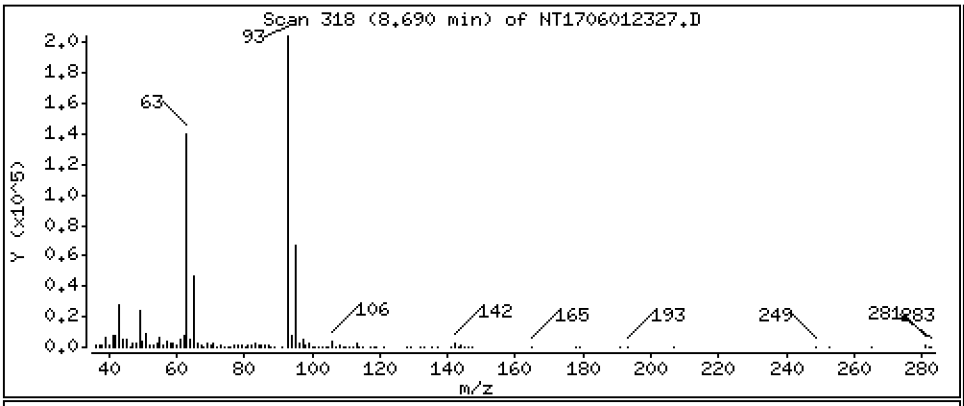
Operator: VTS

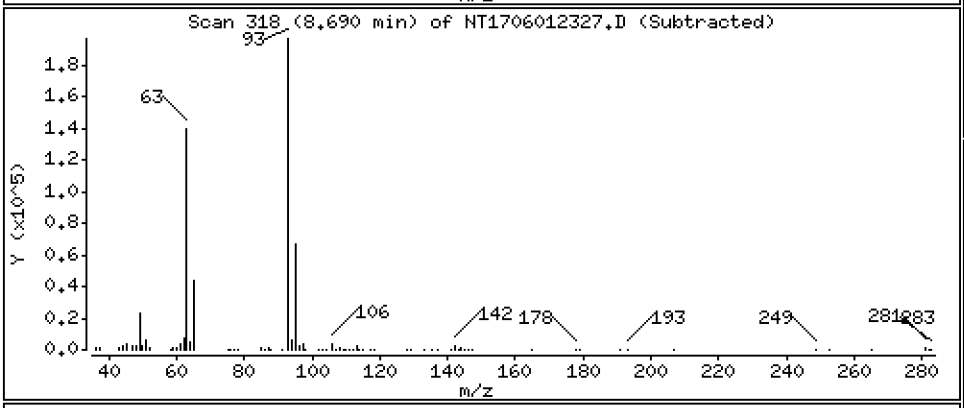
Column phase: ZB-5msi

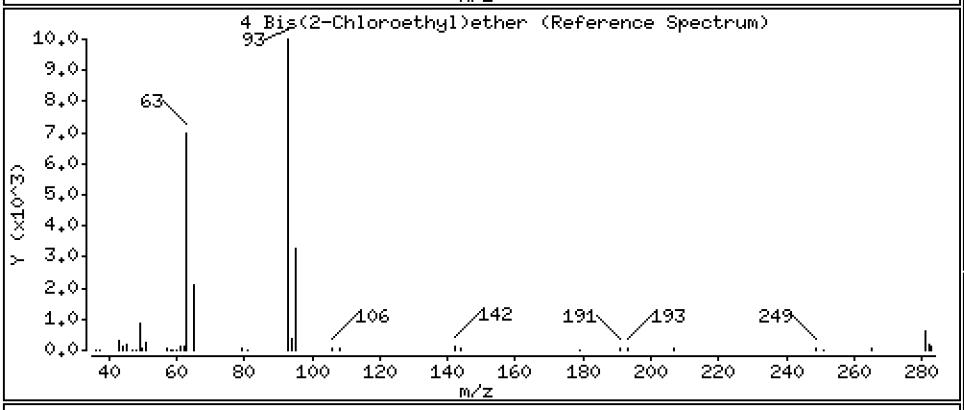
Column diameter: 0.25

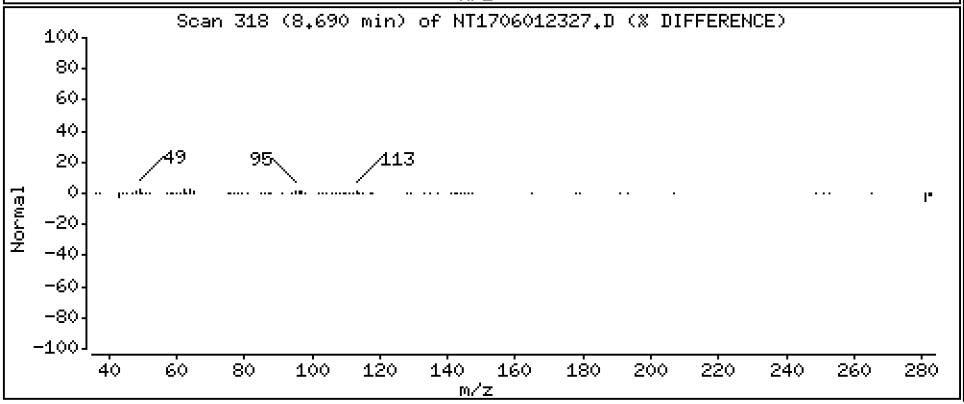
4 Bis(2-Chloroethyl)ether

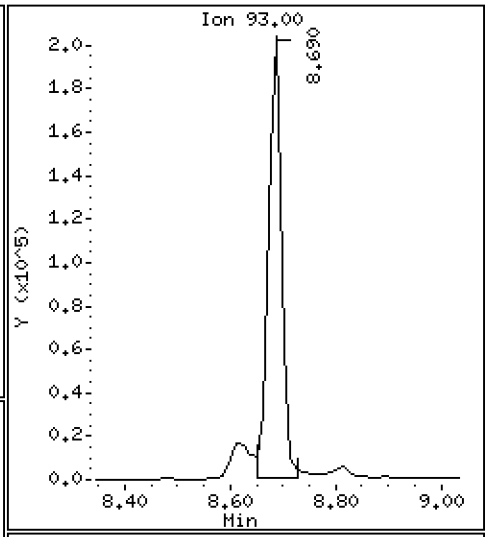
Concentration: 3.861 ug/mL

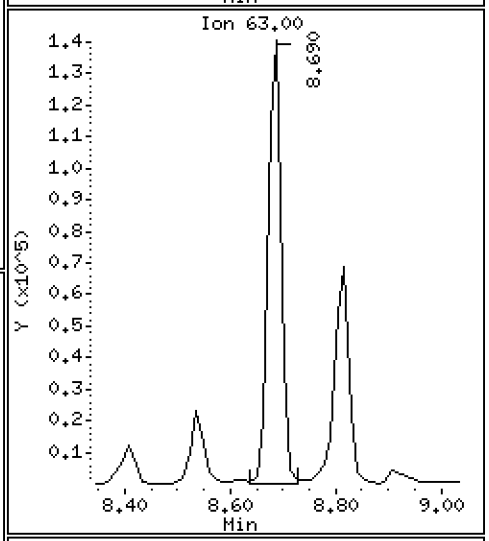


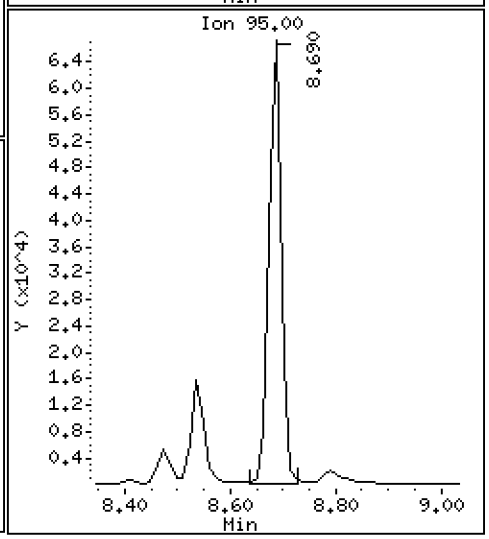












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

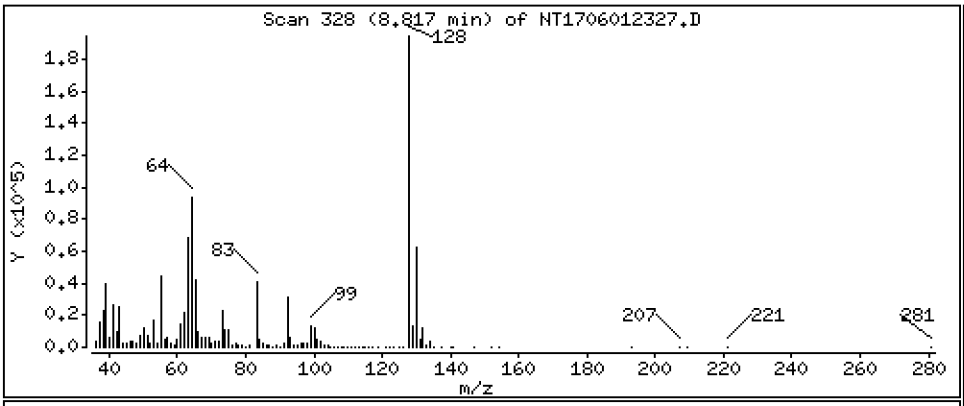
Operator: VTS

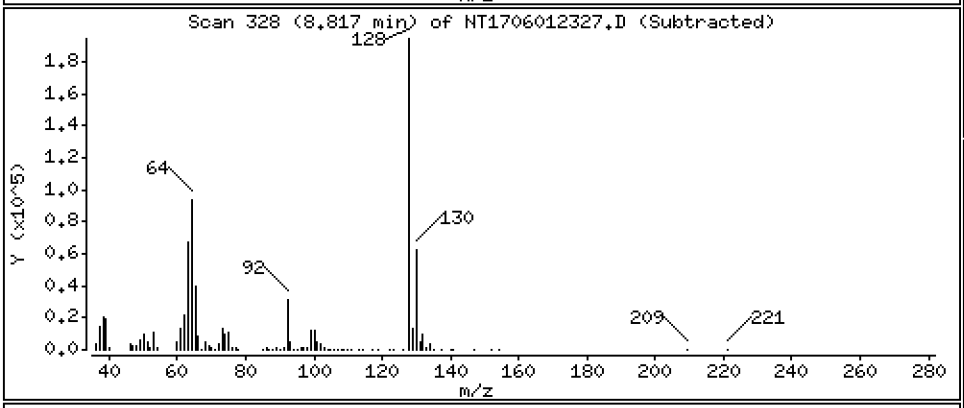
Column phase: ZB-5msi

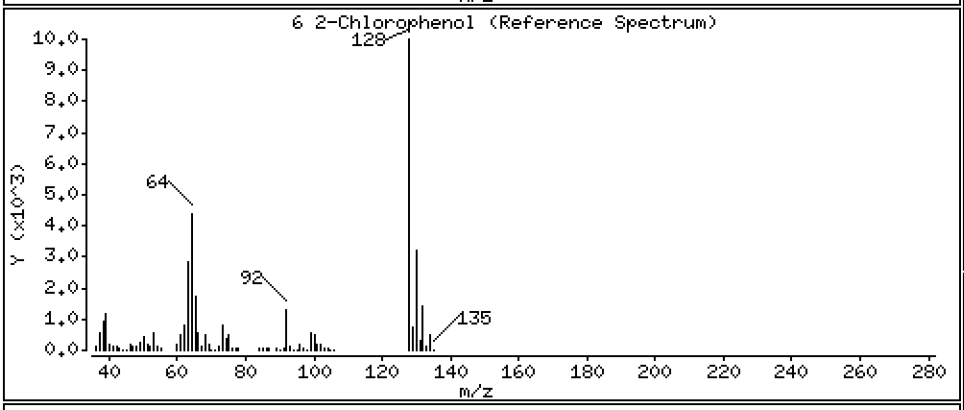
Column diameter: 0.25

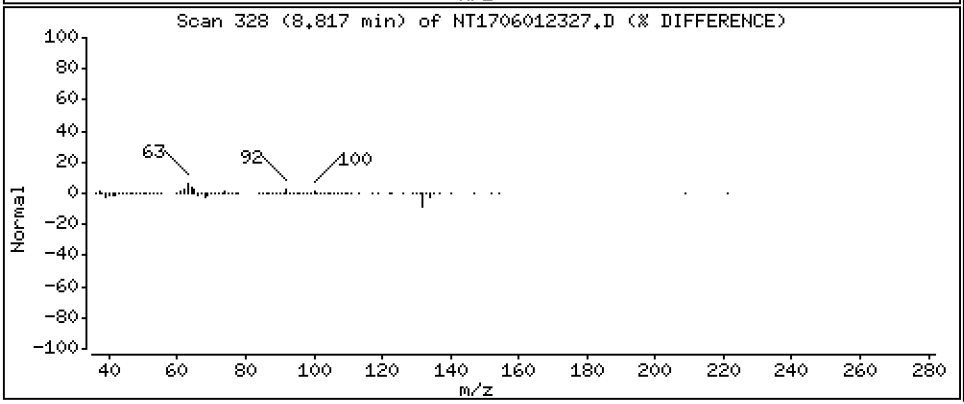
6 2-Chlorophenol

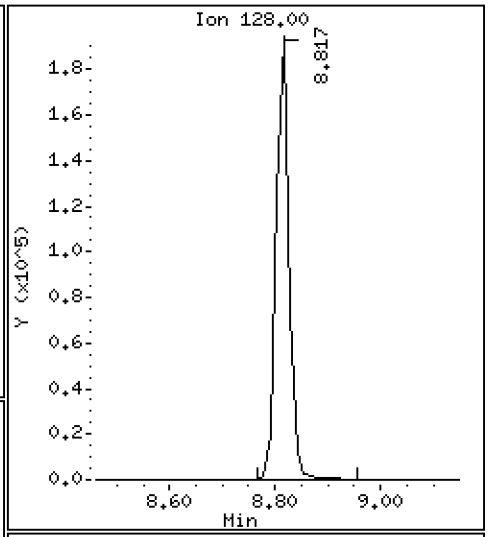
Concentration: 3.621 ug/mL

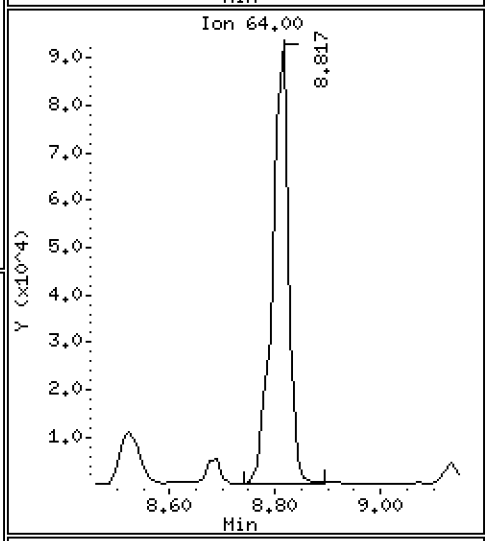


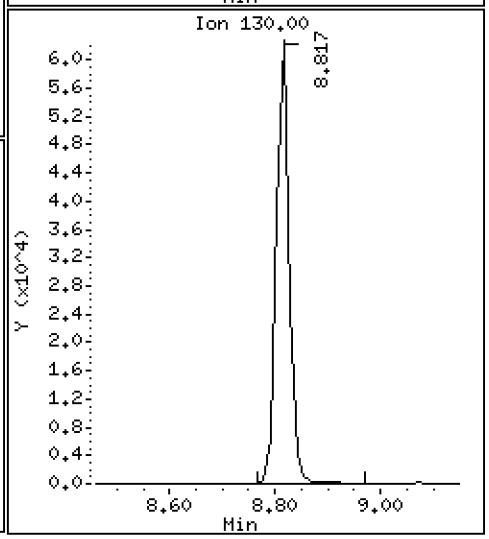












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

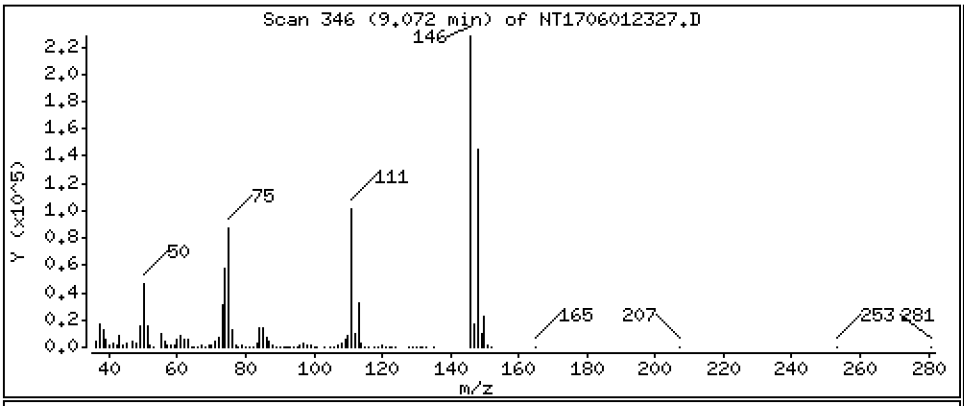
Operator: VTS

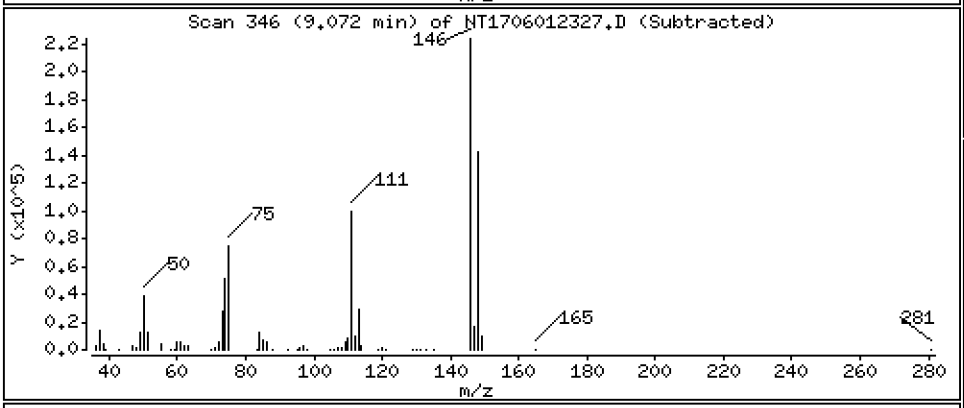
Column phase: ZB-5msi

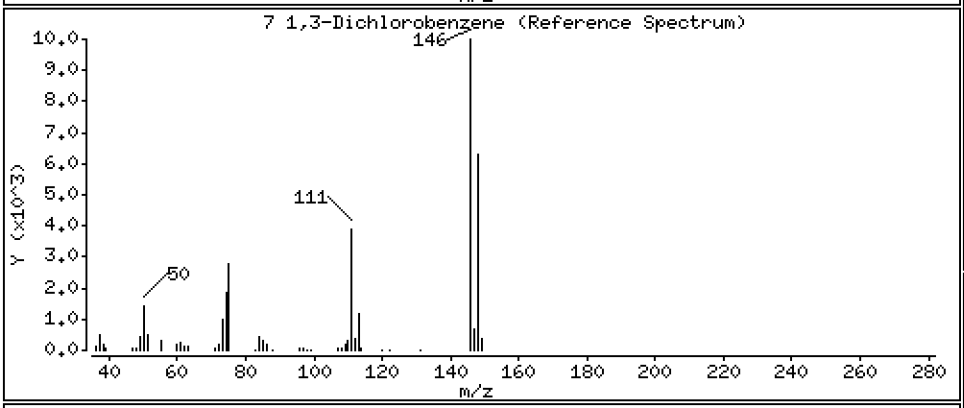
Column diameter: 0.25

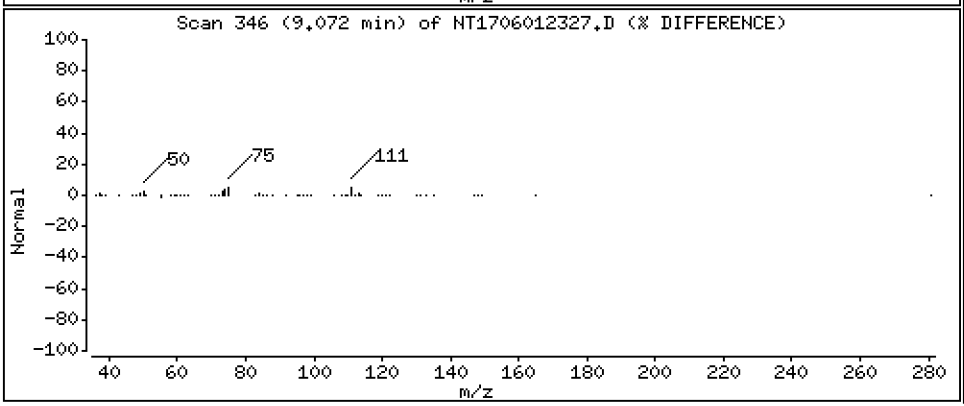
7 1,3-Dichlorobenzene

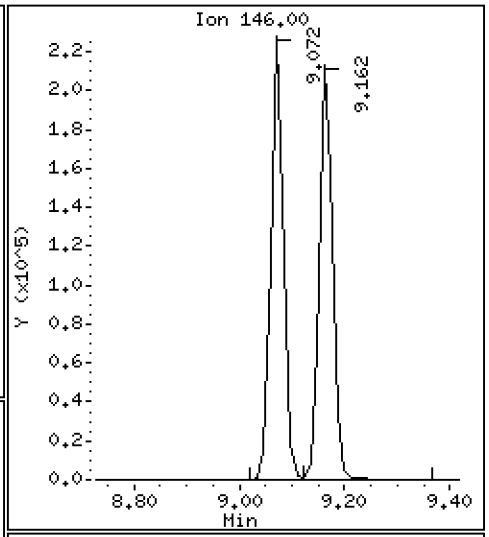
Concentration: 3.533 ug/mL

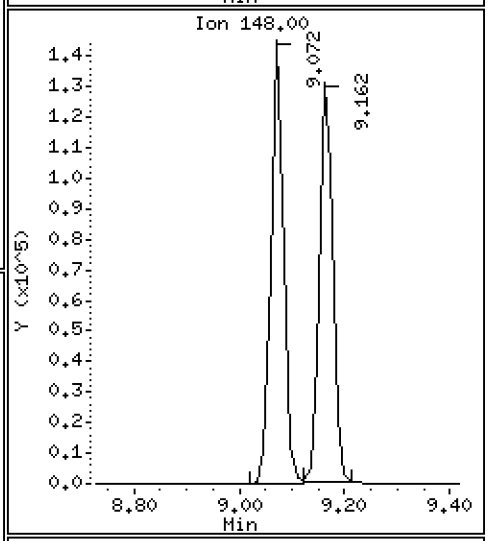


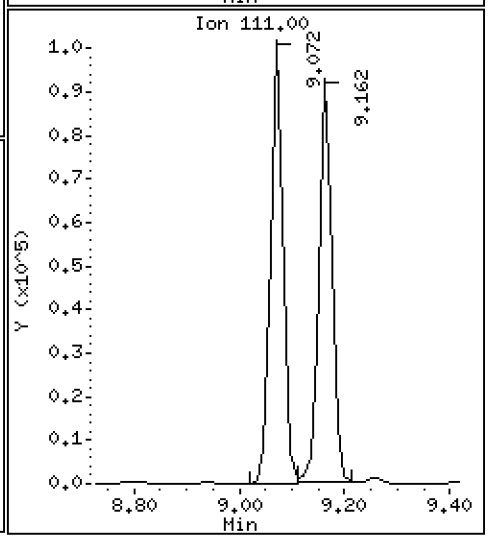












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

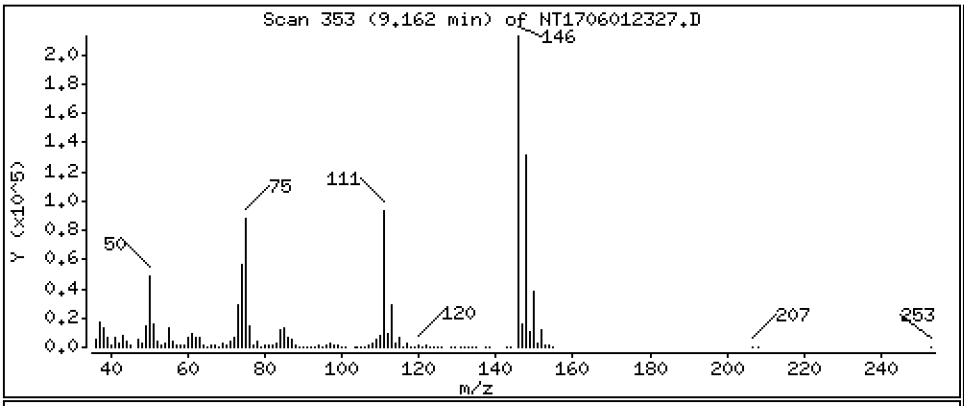
Operator: VTS

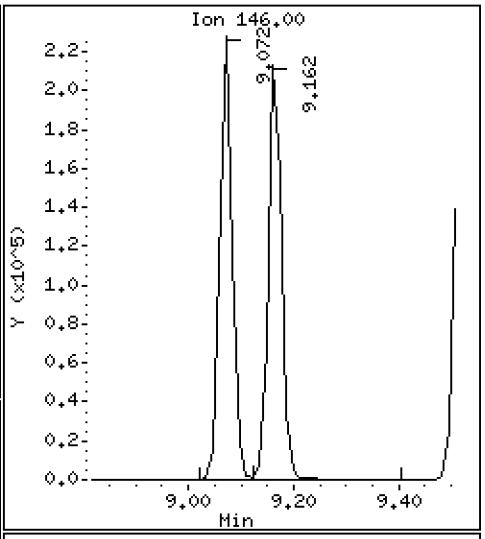
Column phase: ZB-5msi

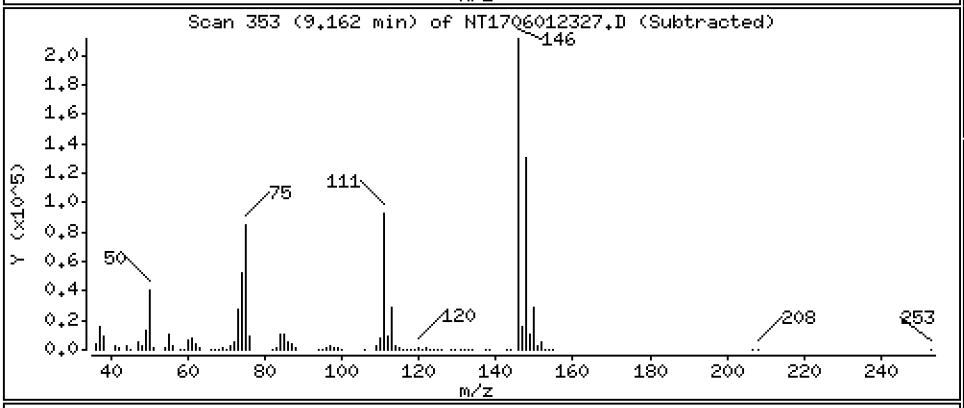
Column diameter: 0.25

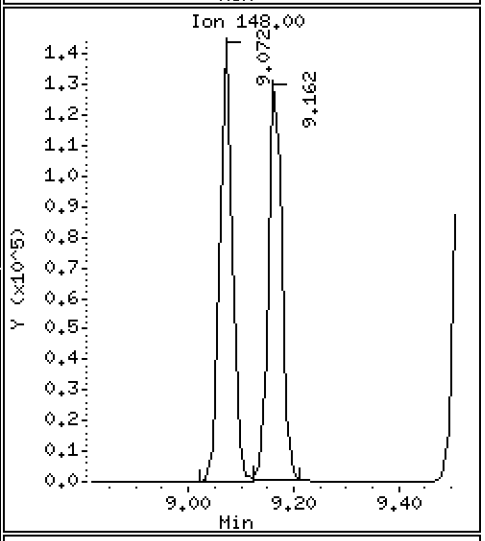
9 1,4-Dichlorobenzene

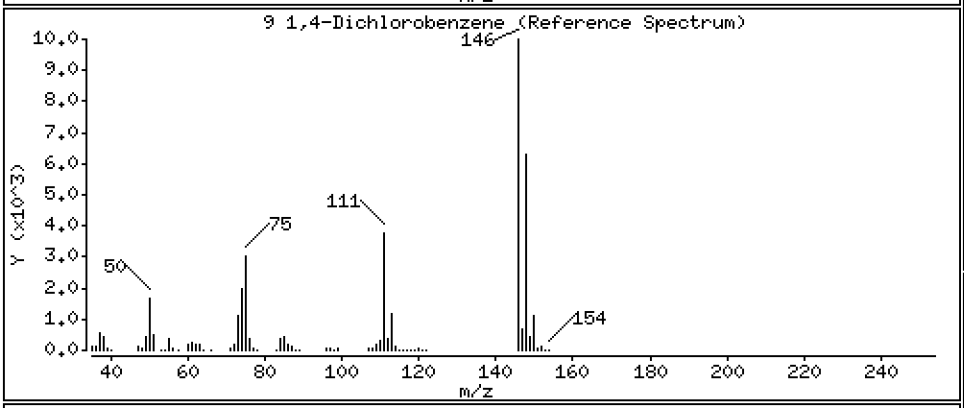
Concentration: 3.901 ug/mL

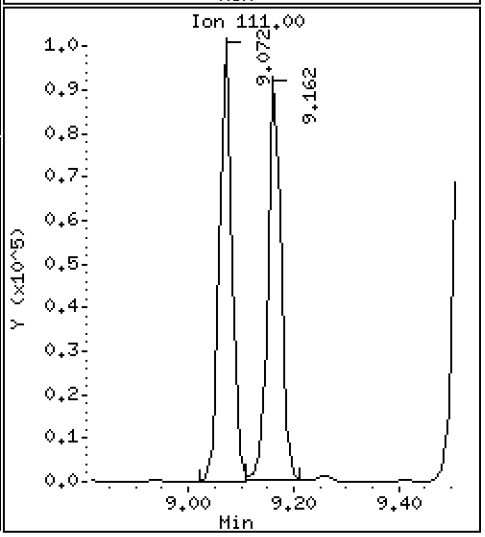


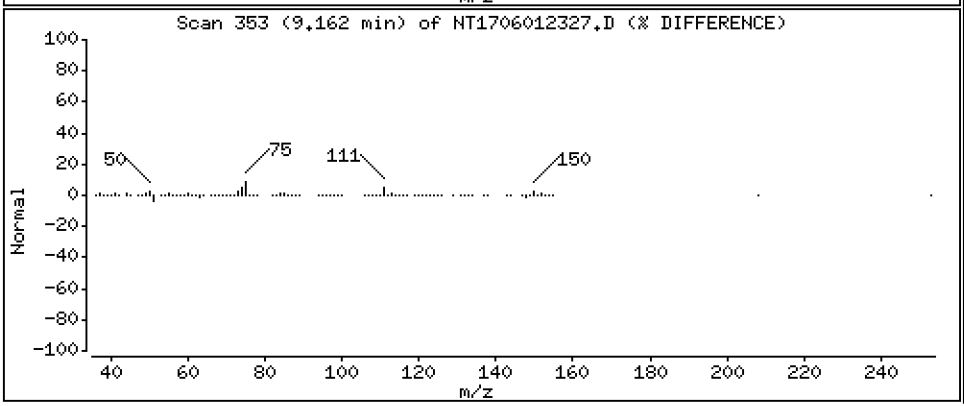












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

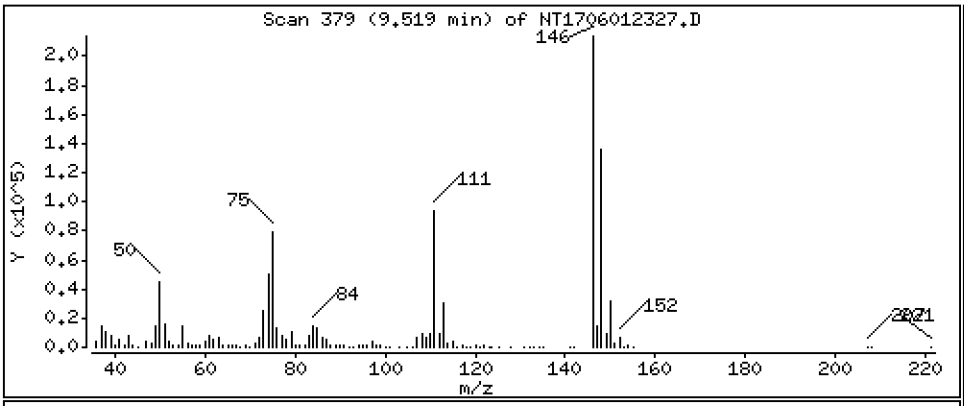
Operator: VTS

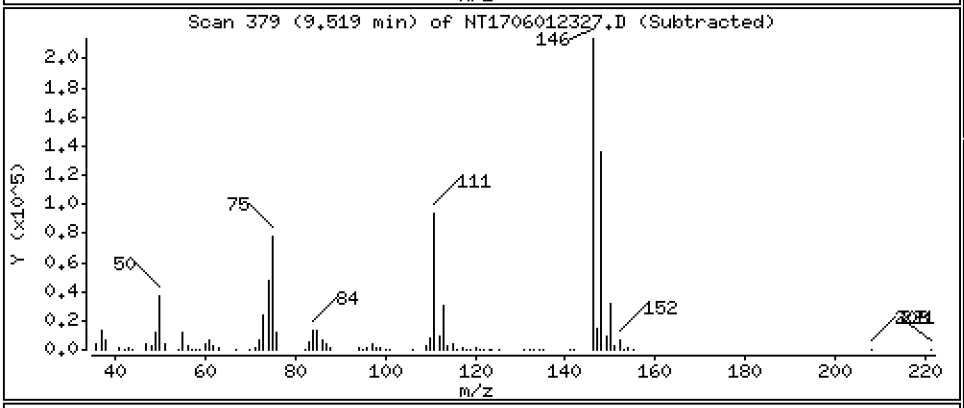
Column phase: ZB-5msi

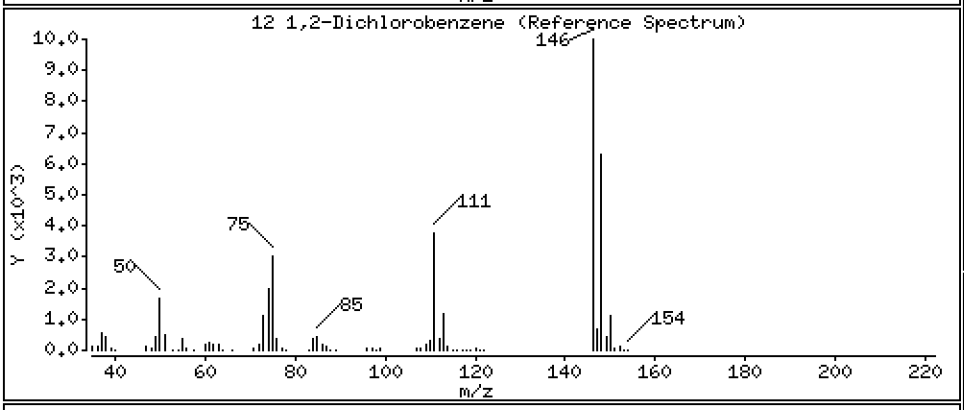
Column diameter: 0.25

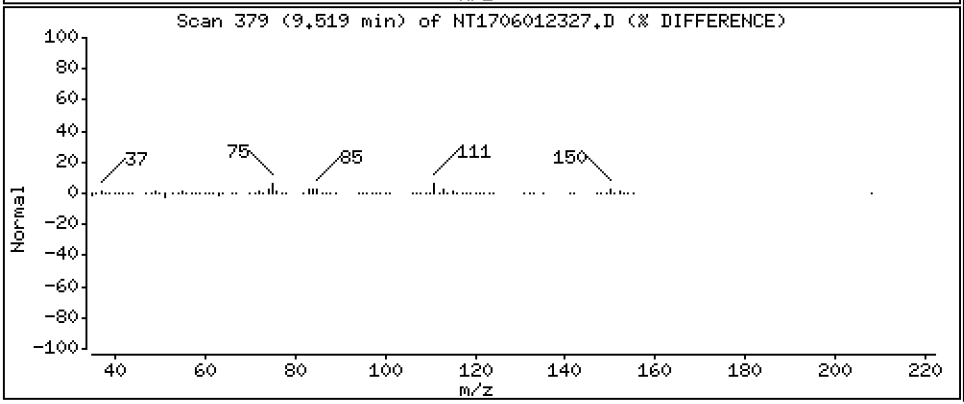
12 1,2-Dichlorobenzene

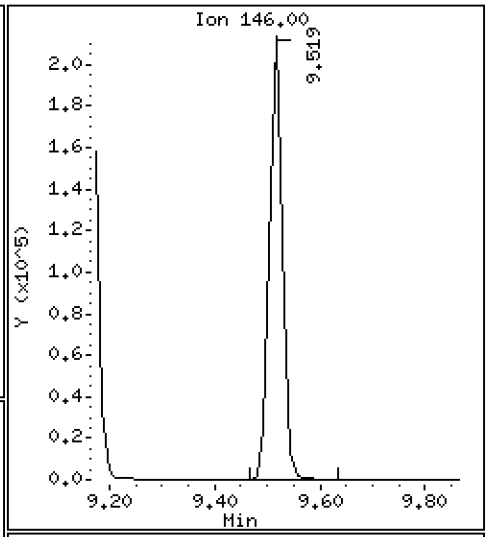
Concentration: 3.696 ug/mL

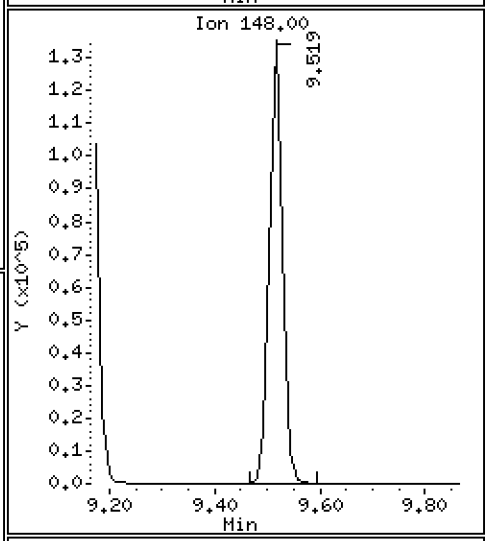


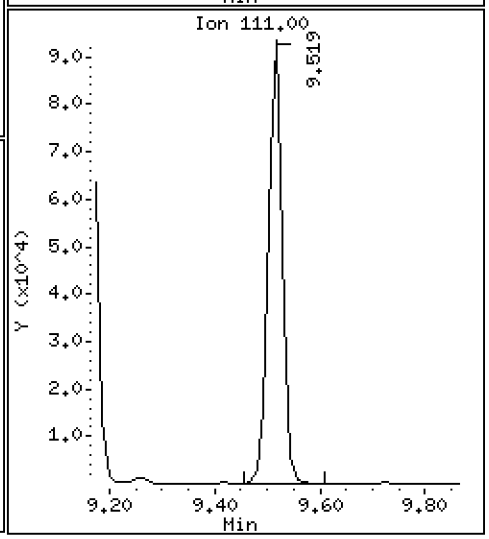












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

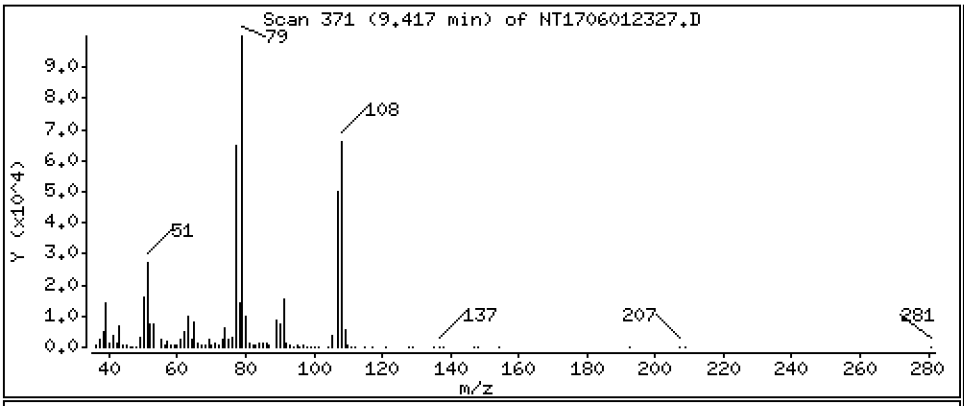
Operator: VTS

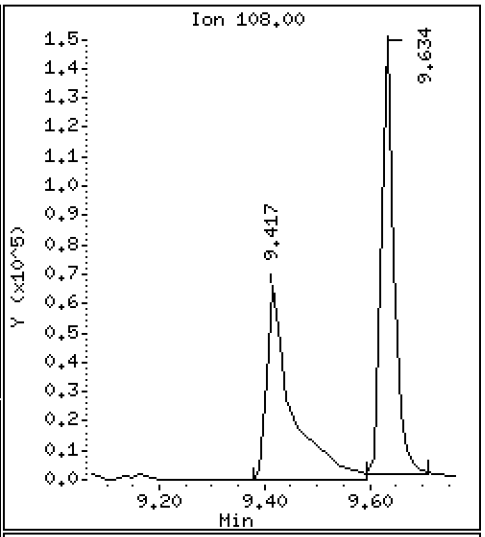
Column phase: ZB-5msi

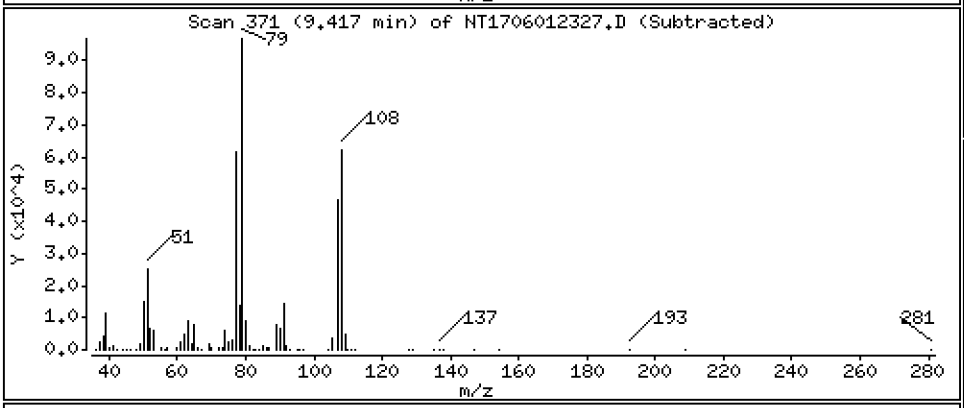
Column diameter: 0.25

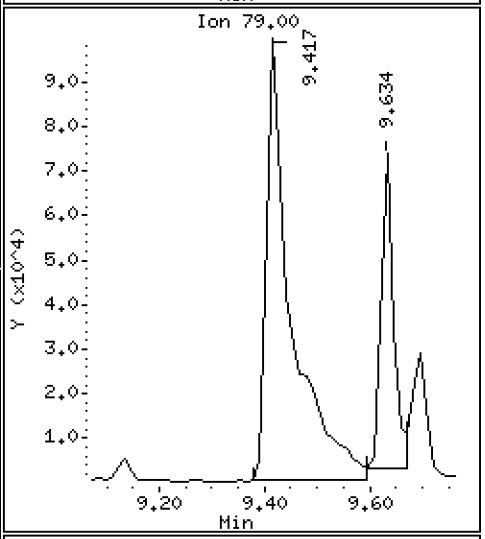
11 Benzyl alcohol

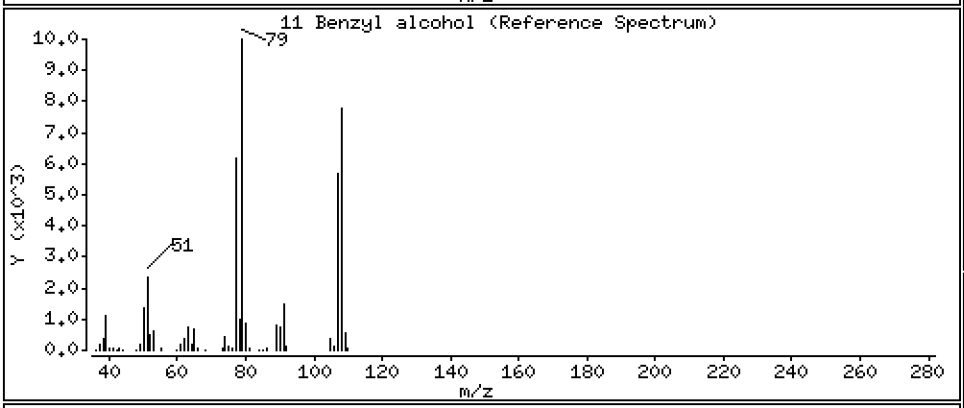
Concentration: 3.722 ug/mL

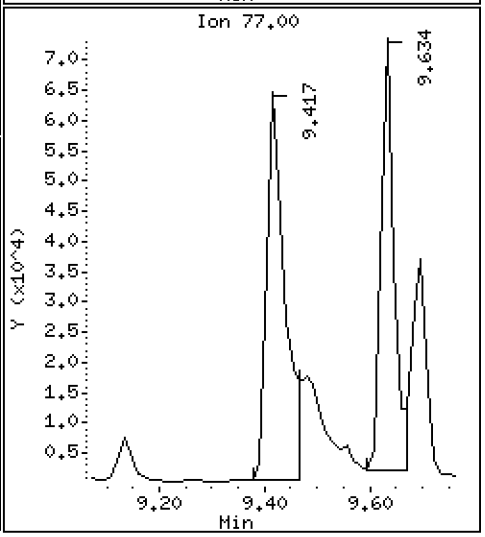


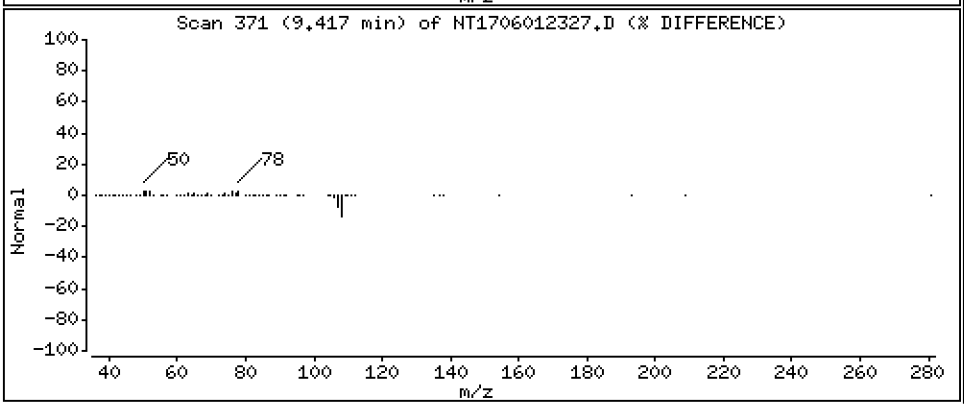












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

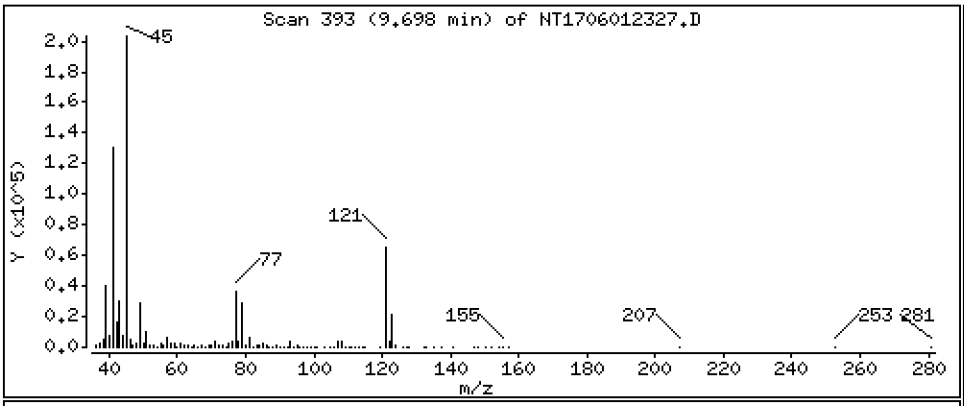
Operator: VTS

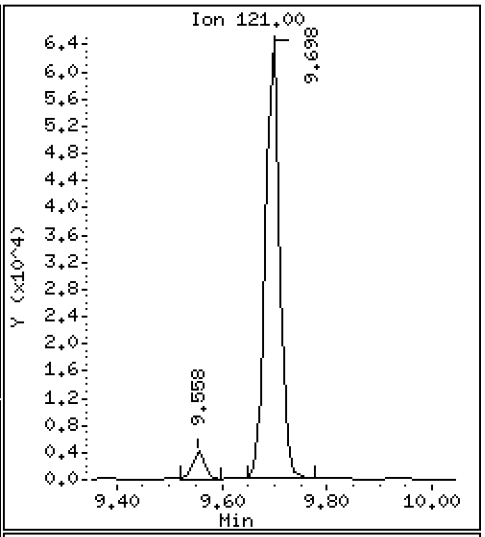
Column phase: ZB-5msi

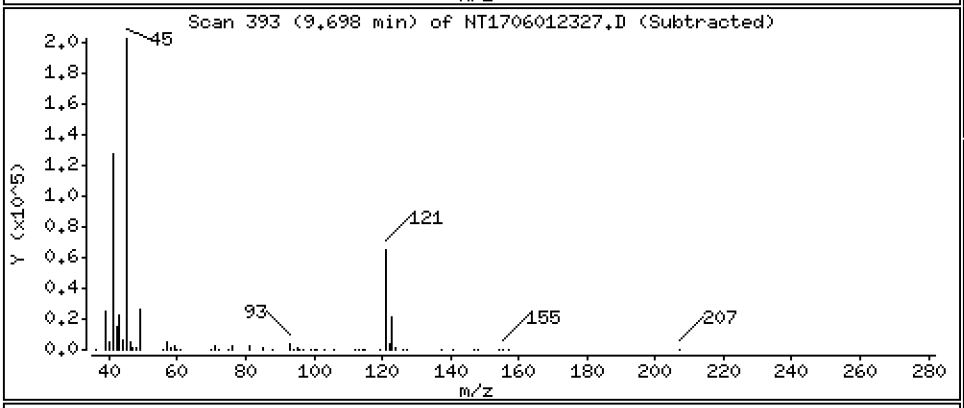
Column diameter: 0.25

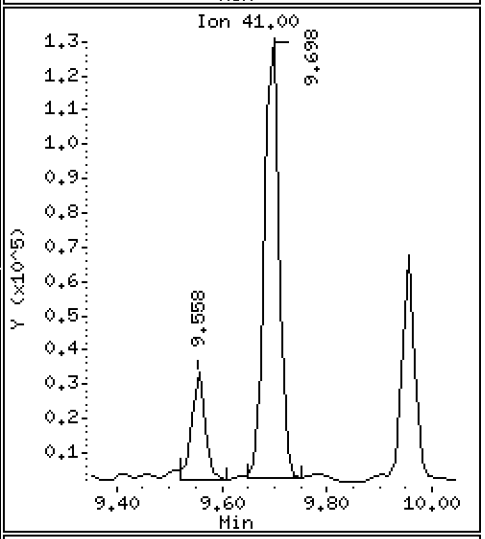
14 2,2'-oxybis(1-Chloropropane)

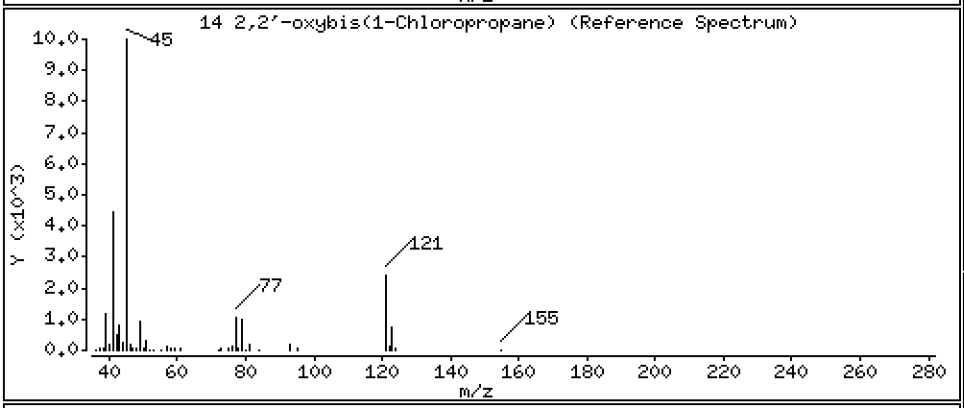
Concentration: 4.362 ug/mL

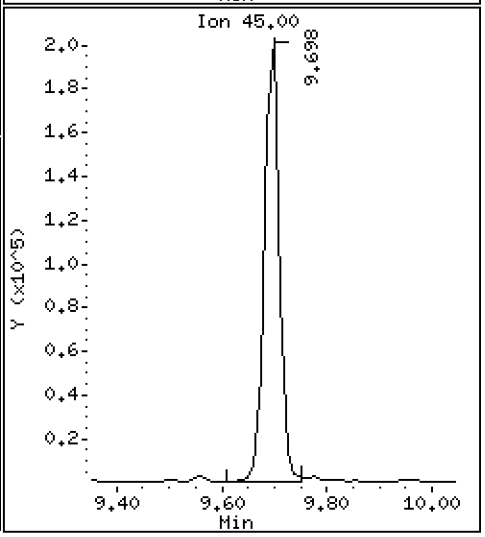


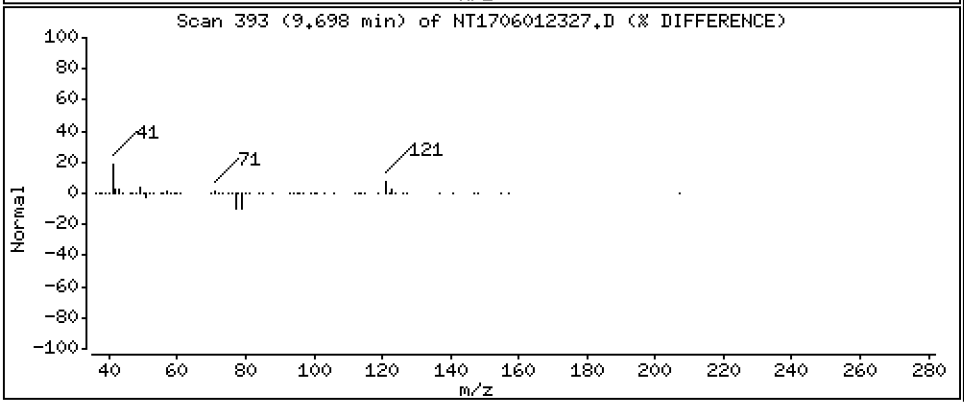












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

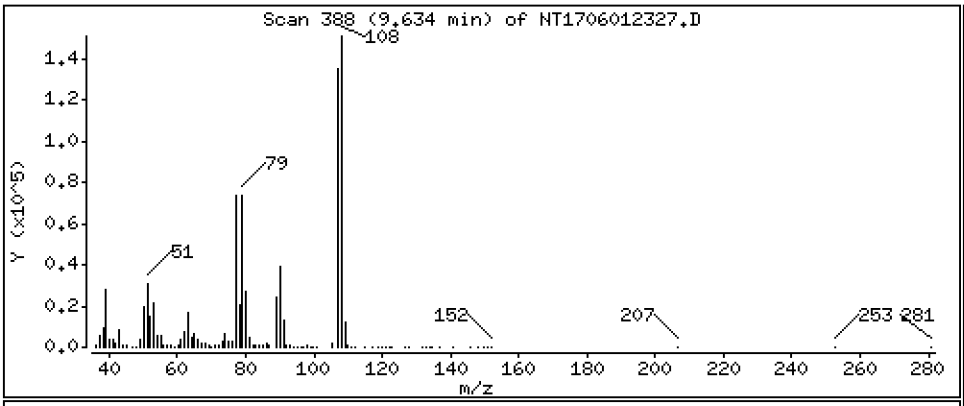
Operator: VTS

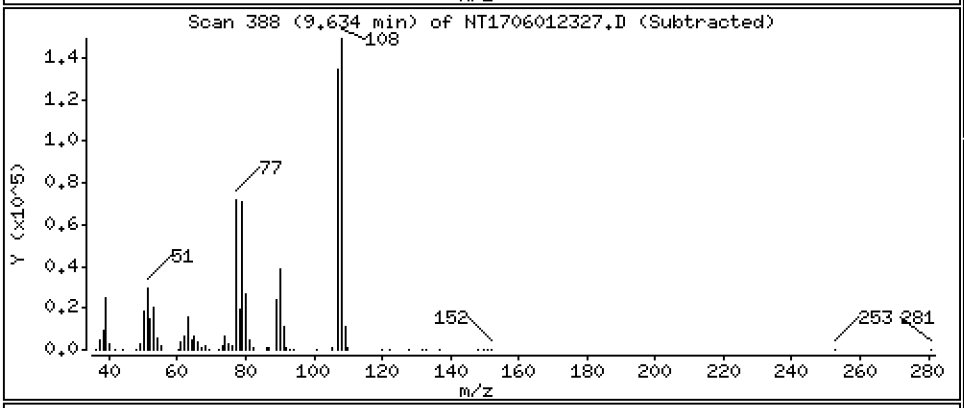
Column phase: ZB-5msi

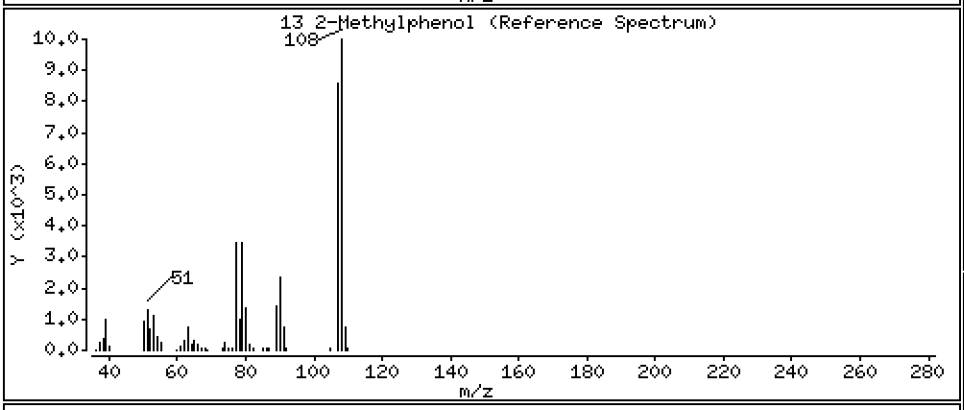
Column diameter: 0.25

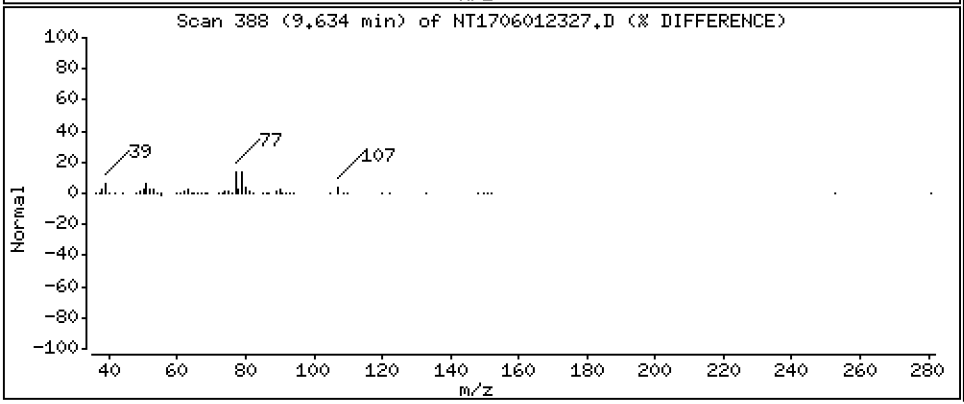
13 2-Methylphenol

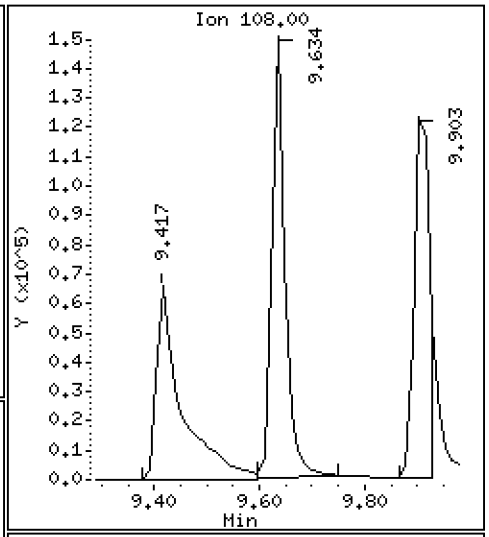
Concentration: 2.789 ug/mL

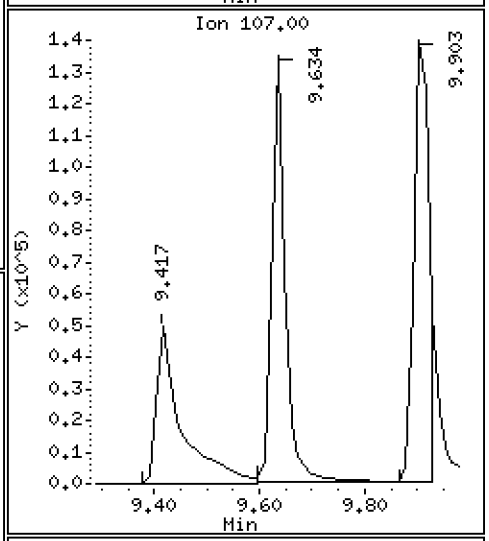


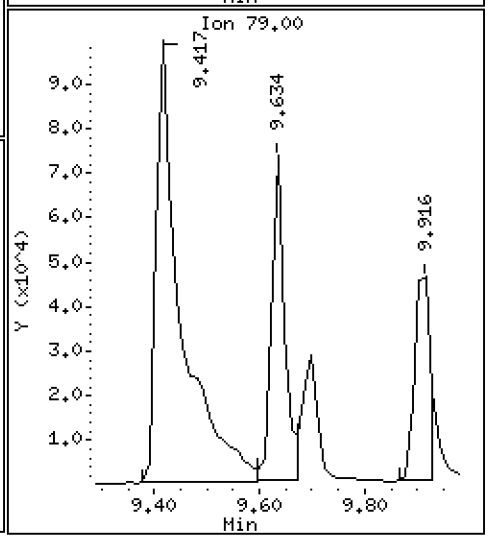












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

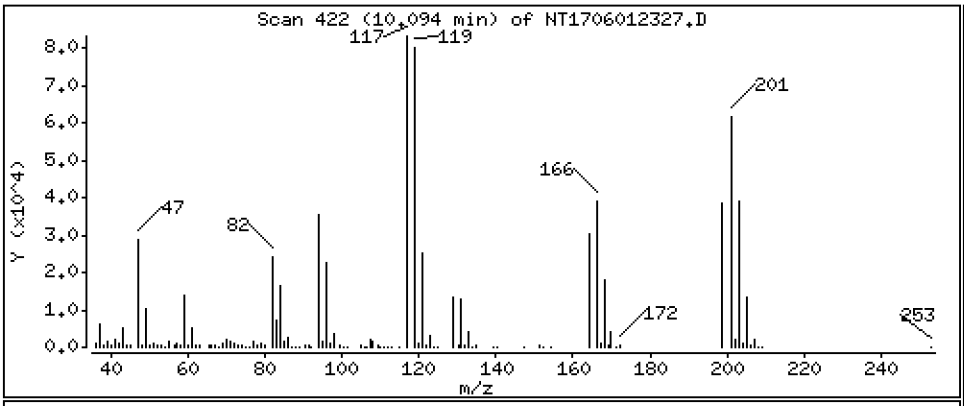
Operator: VTS

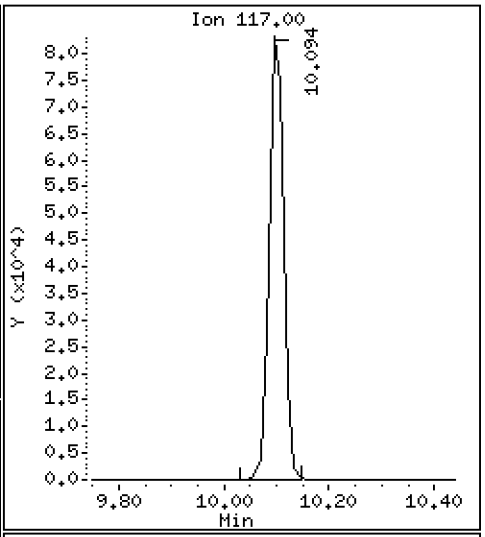
Column phase: ZB-5msi

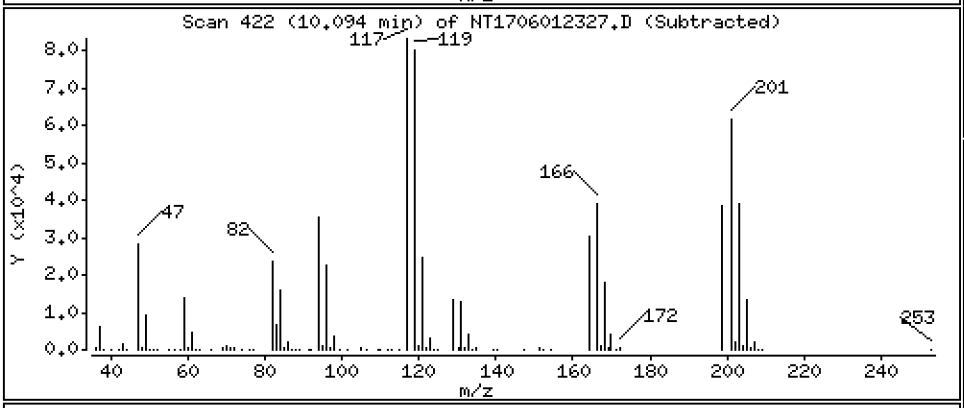
Column diameter: 0.25

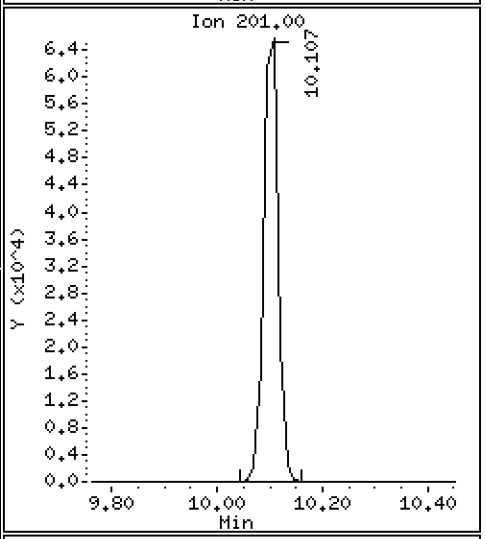
17 Hexachloroethane

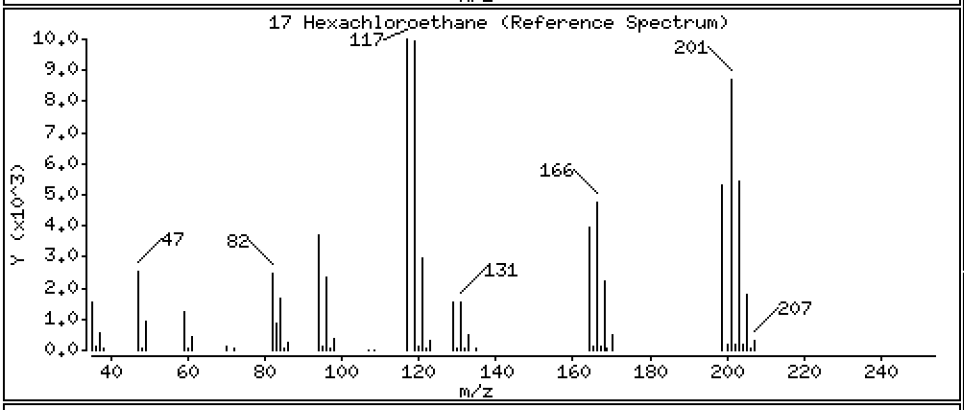
Concentration: 3.792 ug/mL

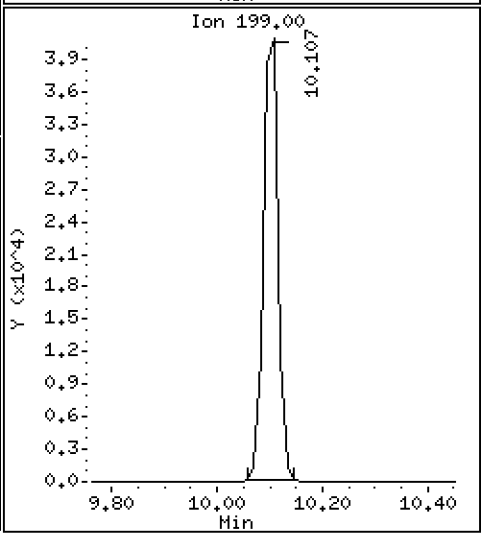


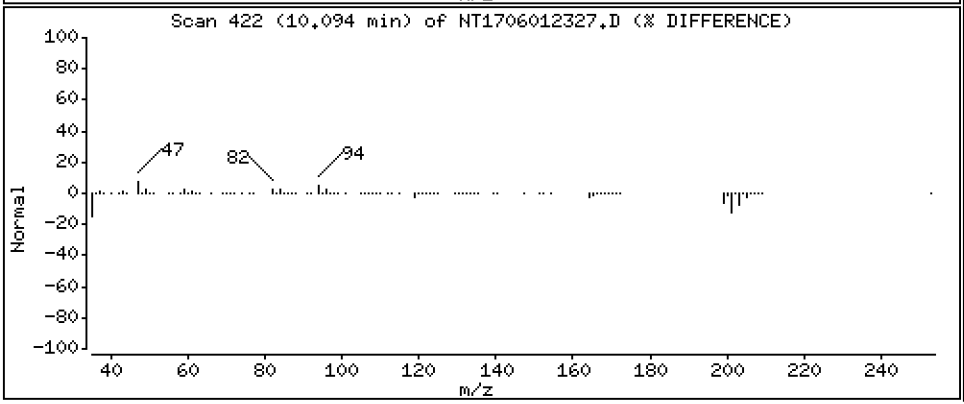












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

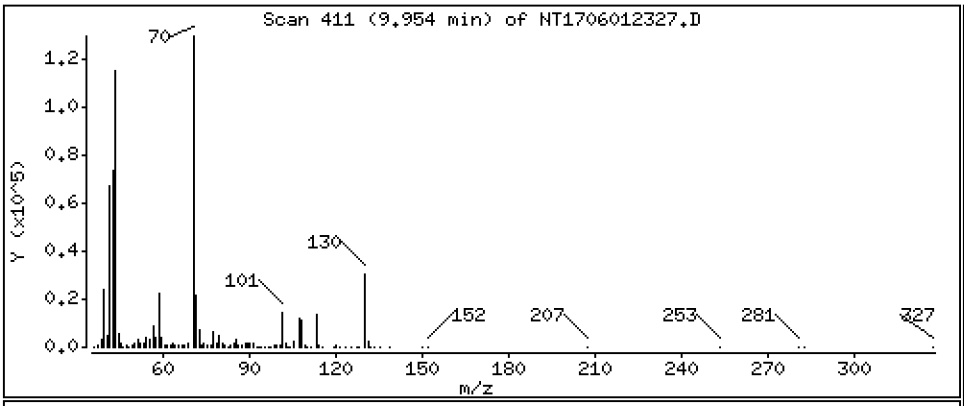
Operator: VTS

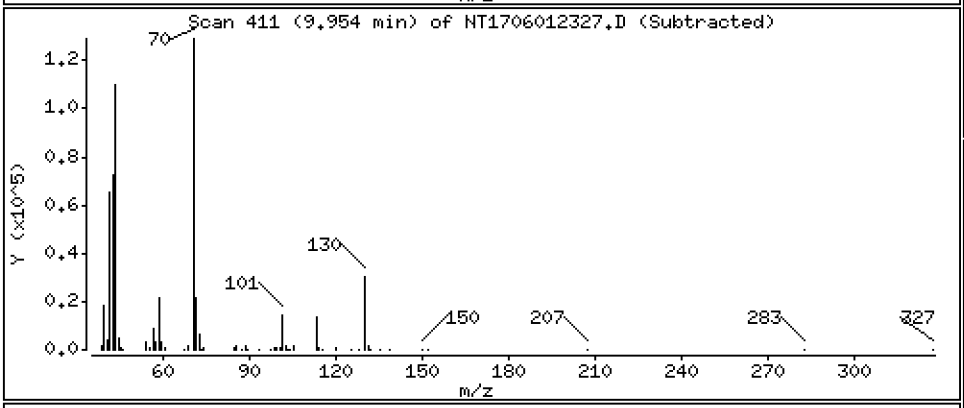
Column phase: ZB-5msi

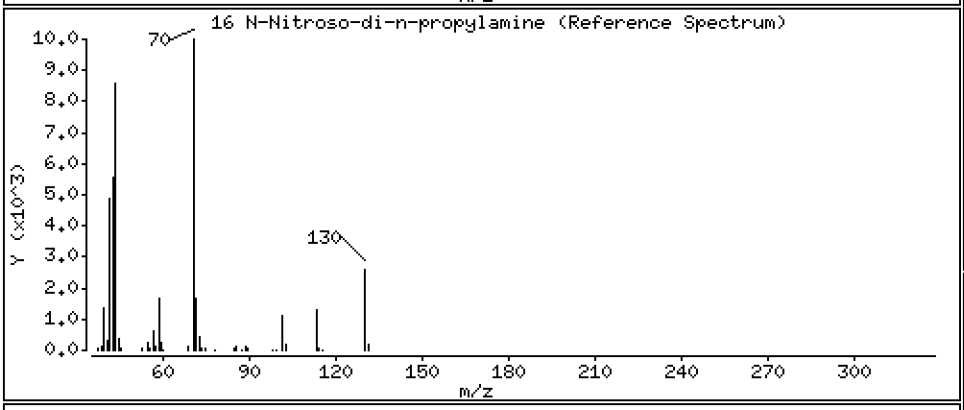
Column diameter: 0.25

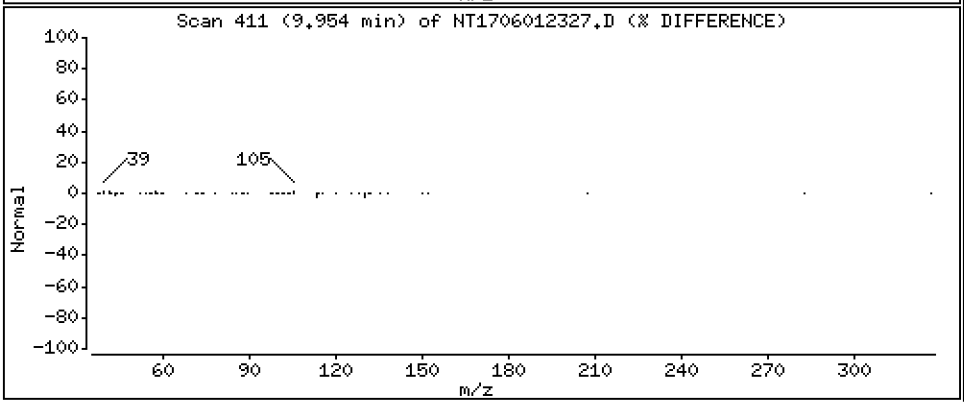
16 N-Nitroso-di-n-propylamine

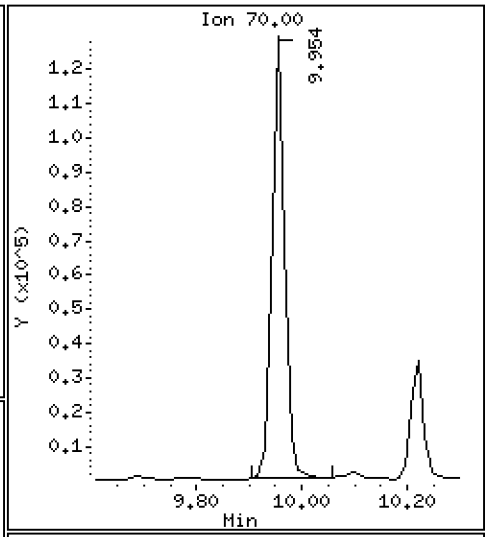
Concentration: 3.045 ug/mL

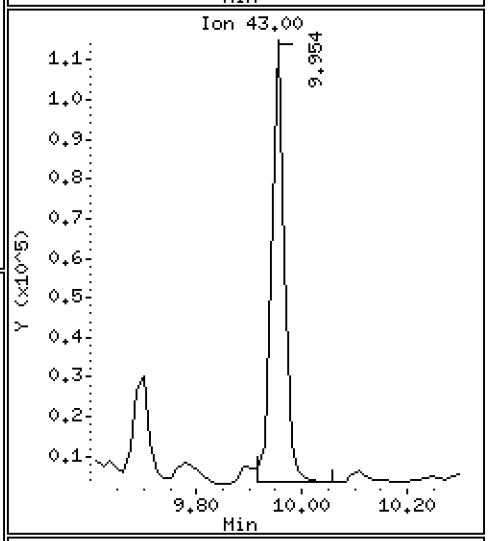


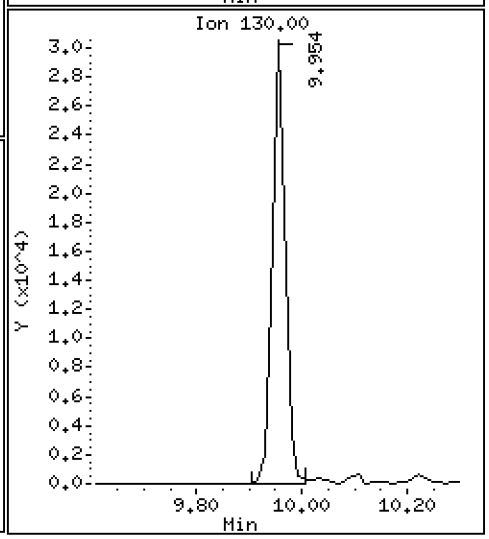












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

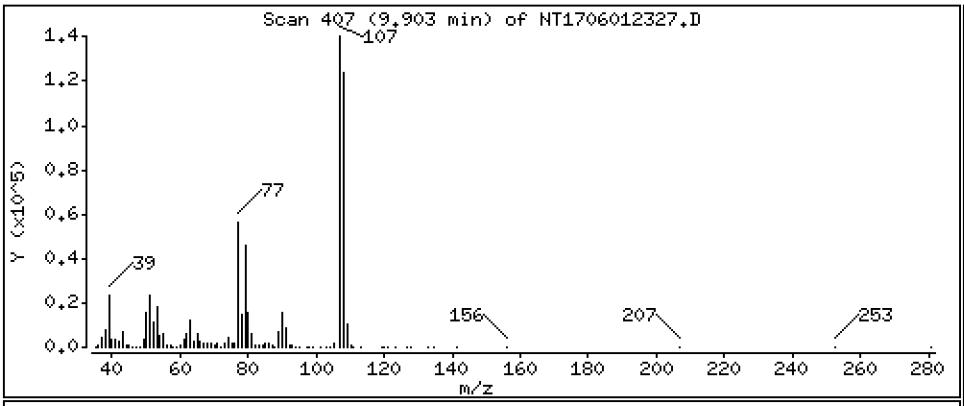
Operator: VTS

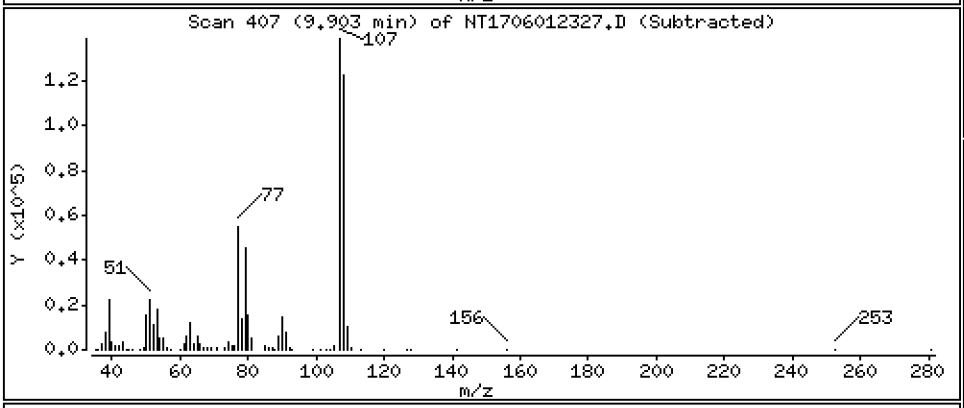
Column phase: ZB-5msi

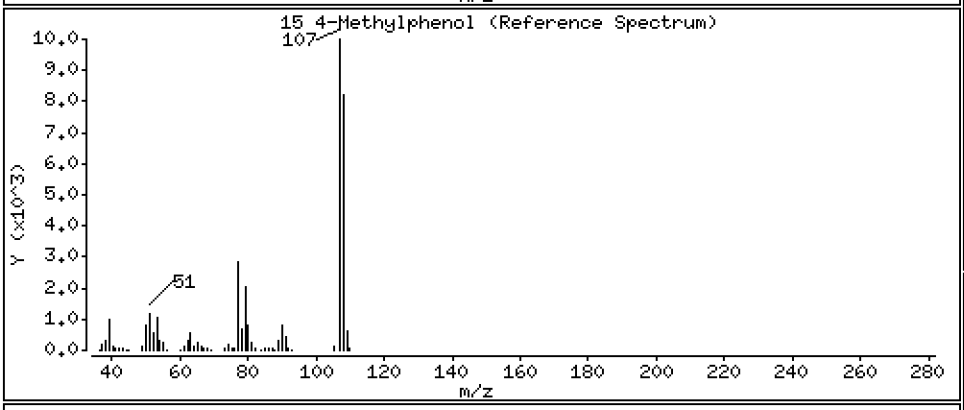
Column diameter: 0.25

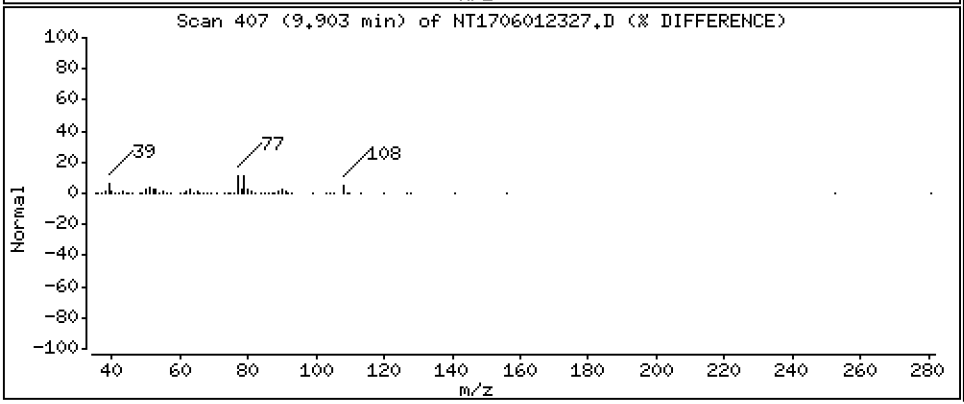
15 4-Methylphenol

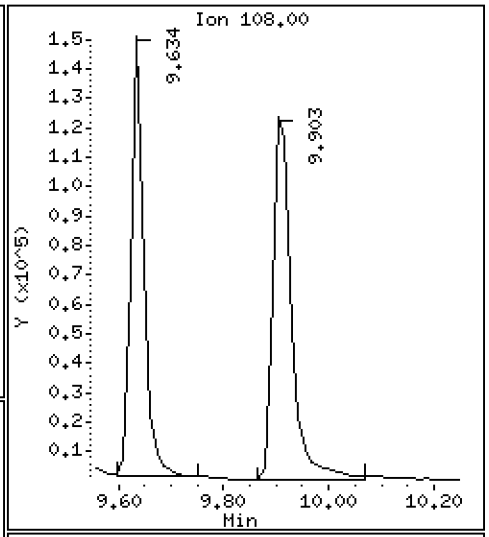
Concentration: 3.212 ug/mL

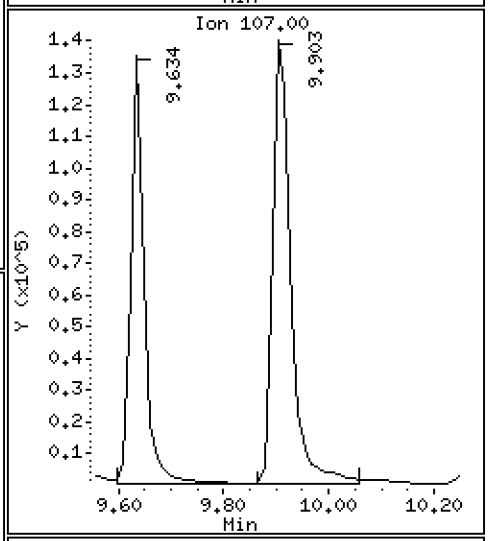


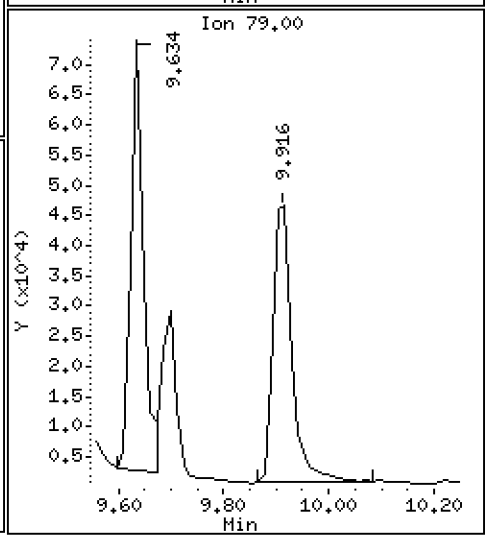












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

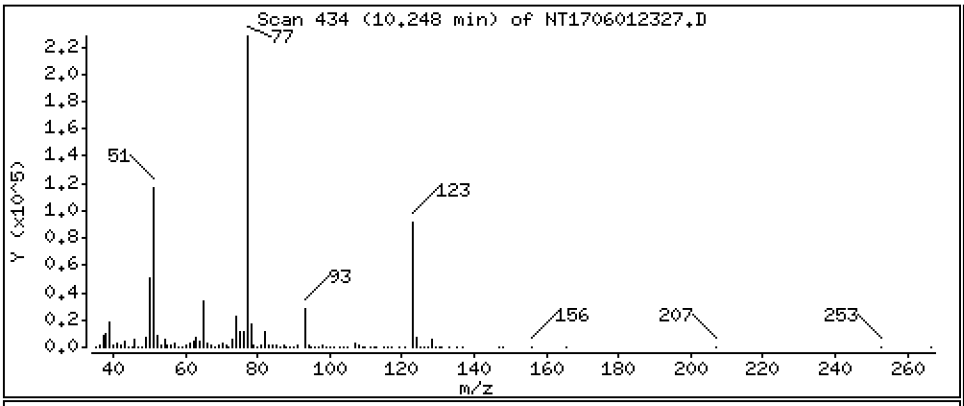
Operator: VTS

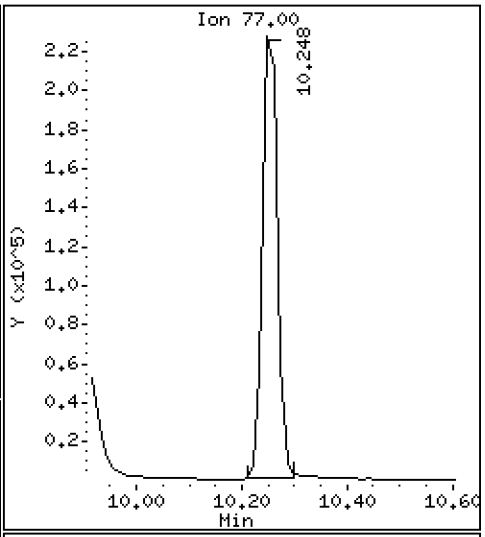
Column phase: ZB-5msi

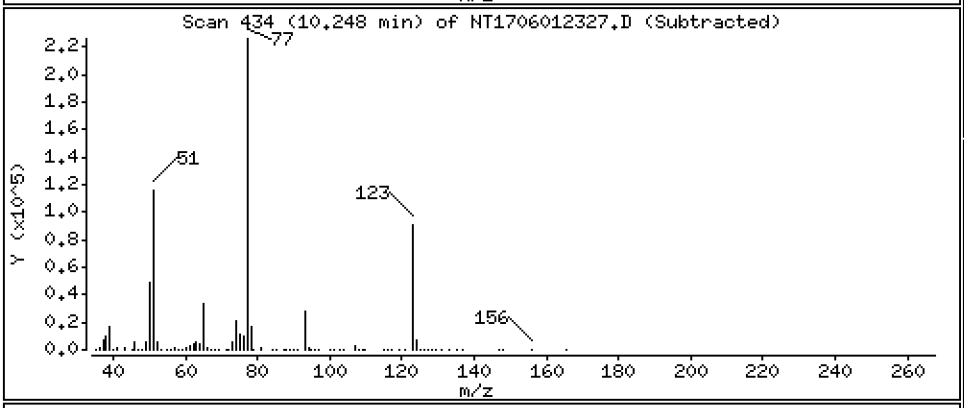
Column diameter: 0.25

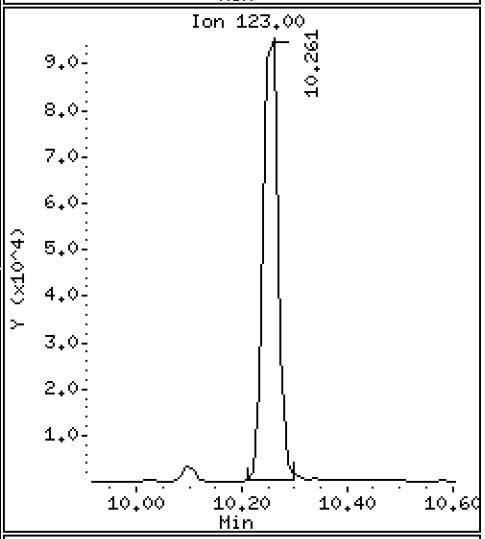
19 Nitrobenzene

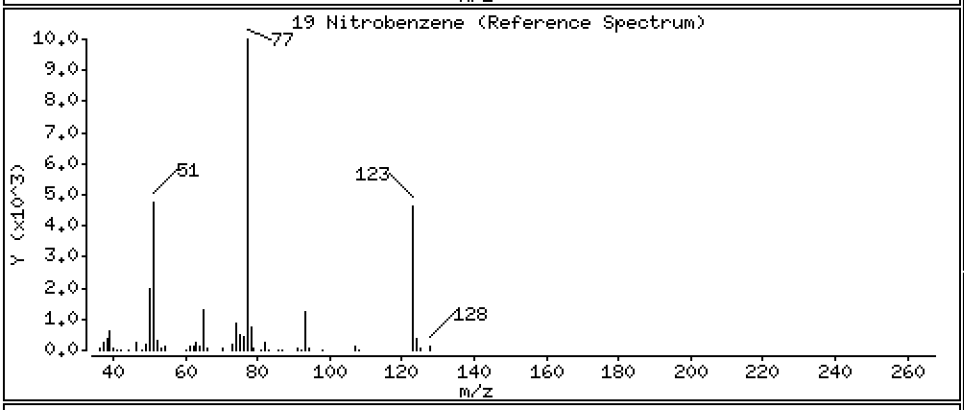
Concentration: 3.919 ug/mL

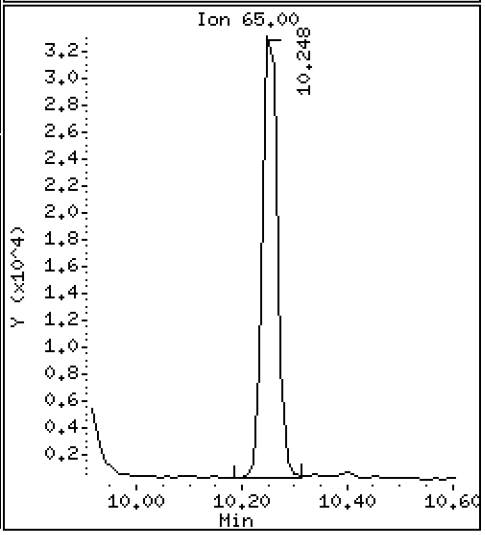


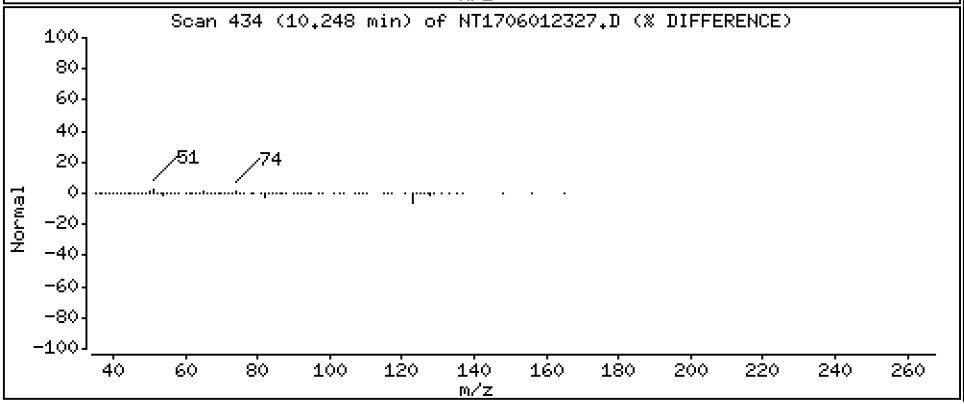












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

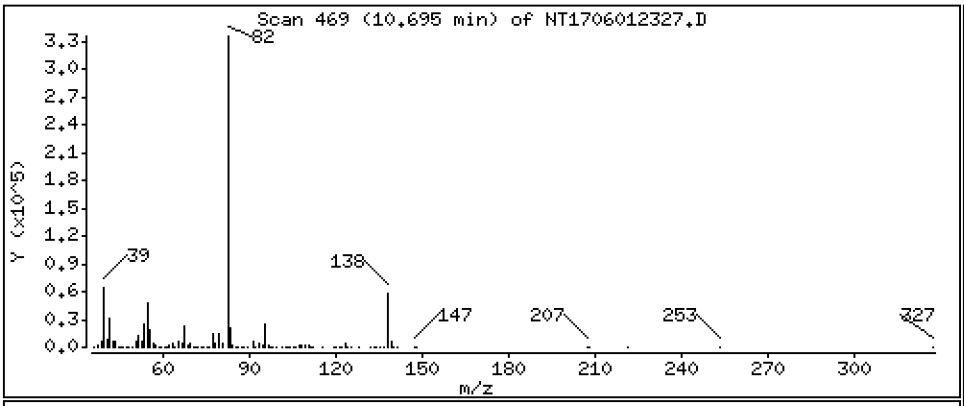
Operator: VTS

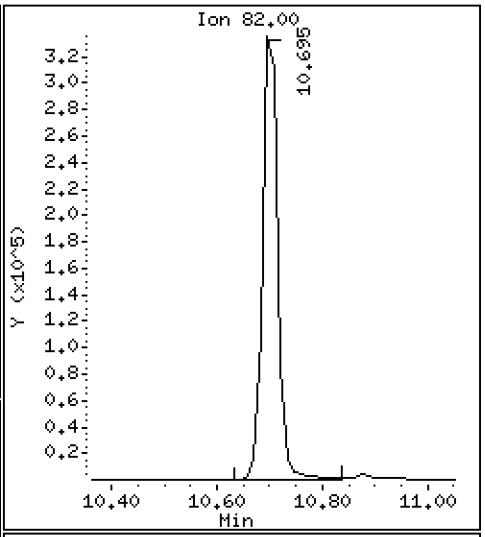
Column phase: ZB-5msi

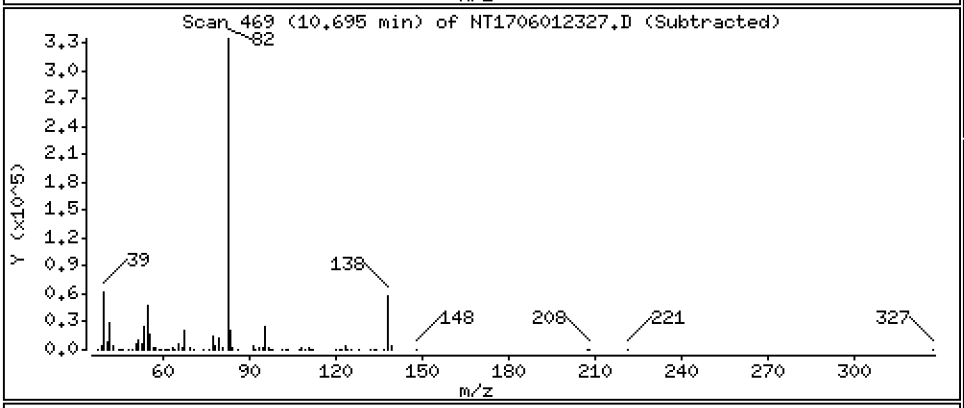
Column diameter: 0.25

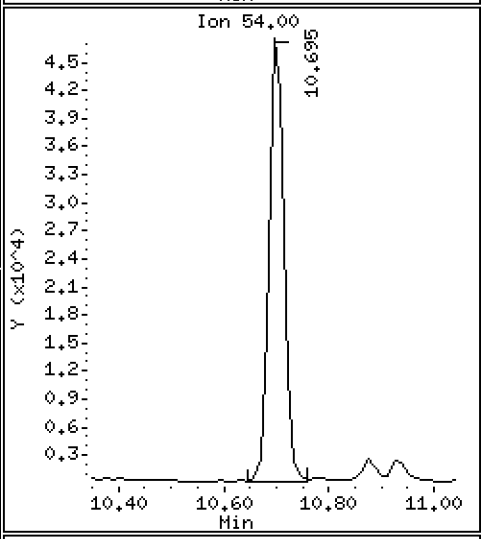
20 Isophorone

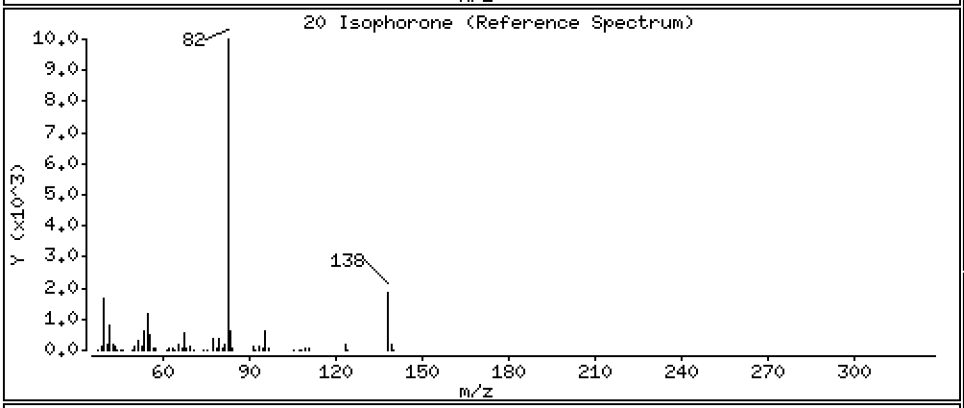
Concentration: 5.172 ug/mL

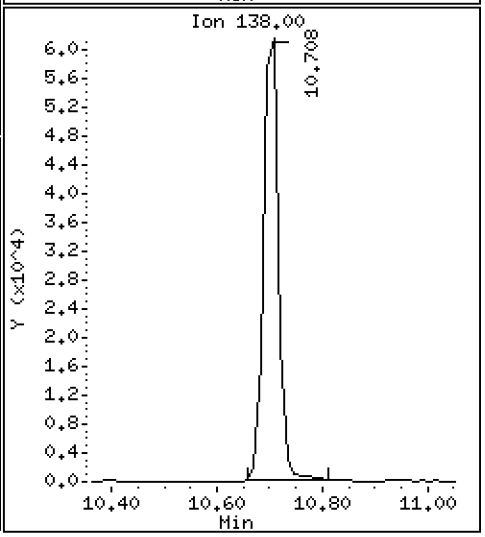


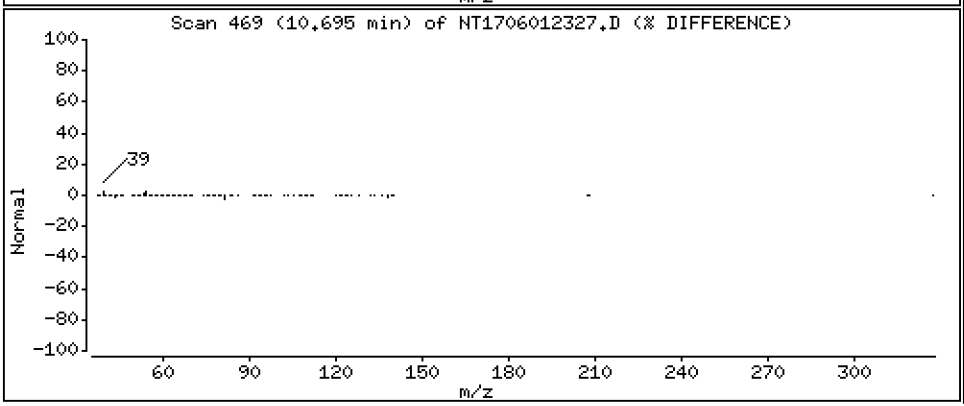












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

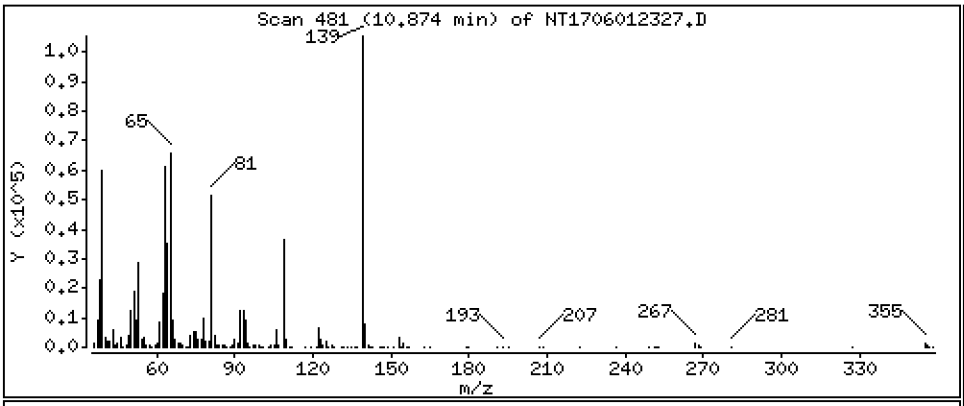
Operator: VTS

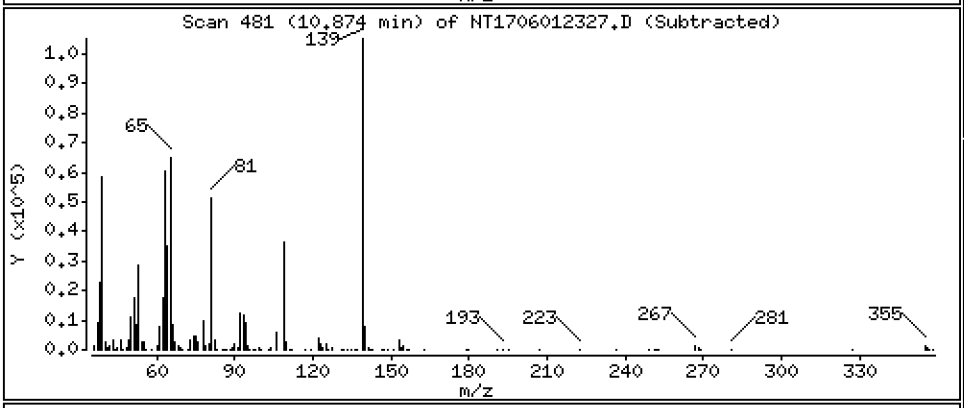
Column phase: ZB-5msi

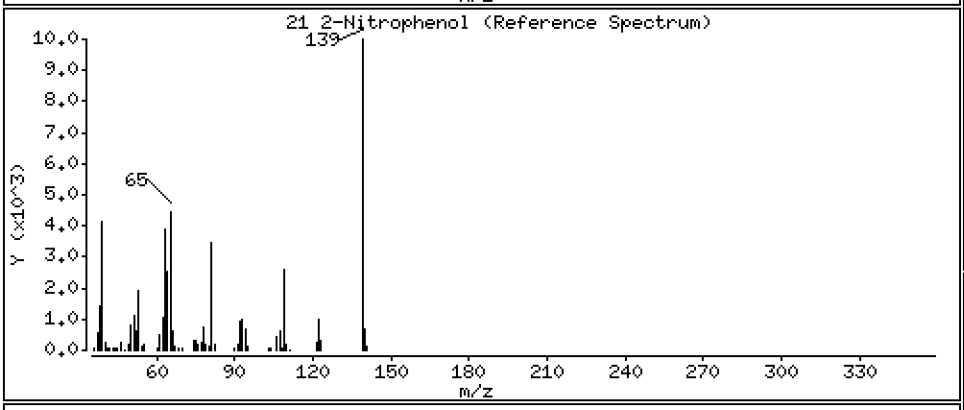
Column diameter: 0.25

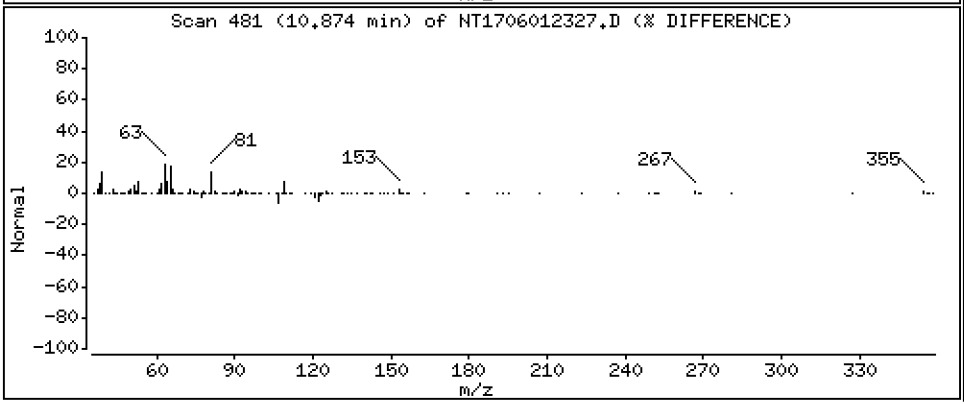
21 2-Nitrophenol

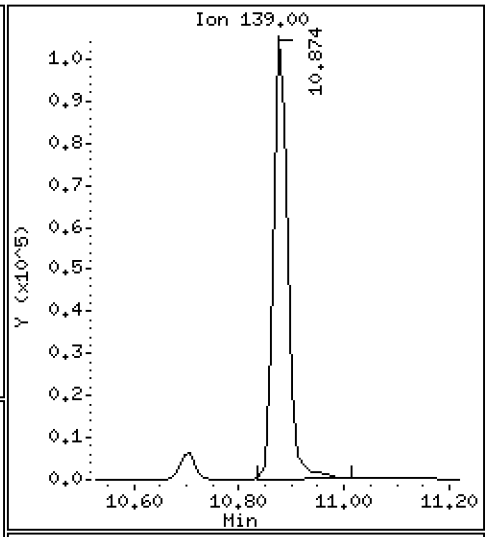
Concentration: 3.774 ug/mL

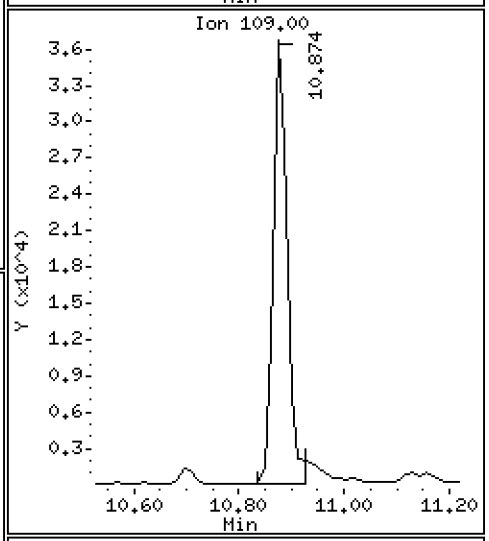


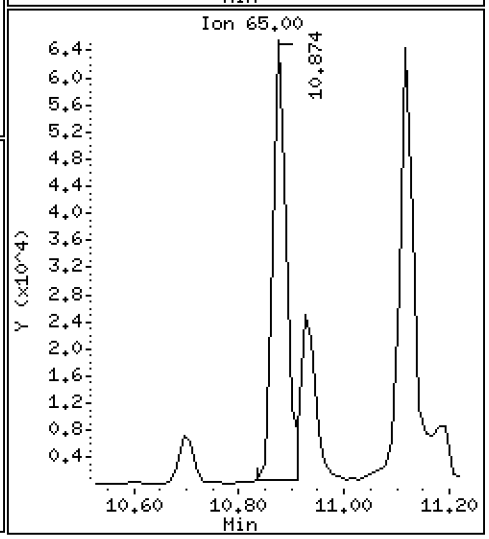












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

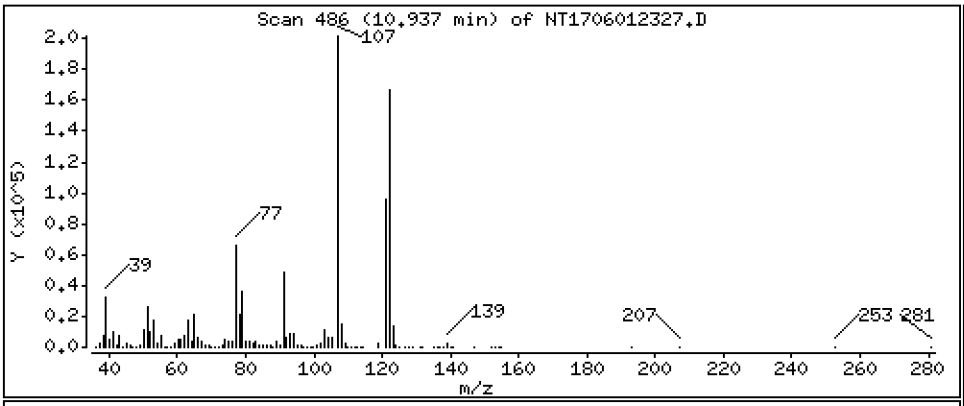
Operator: VTS

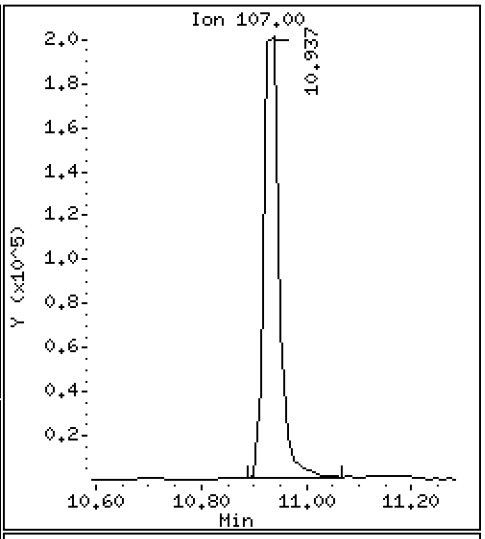
Column phase: ZB-5msi

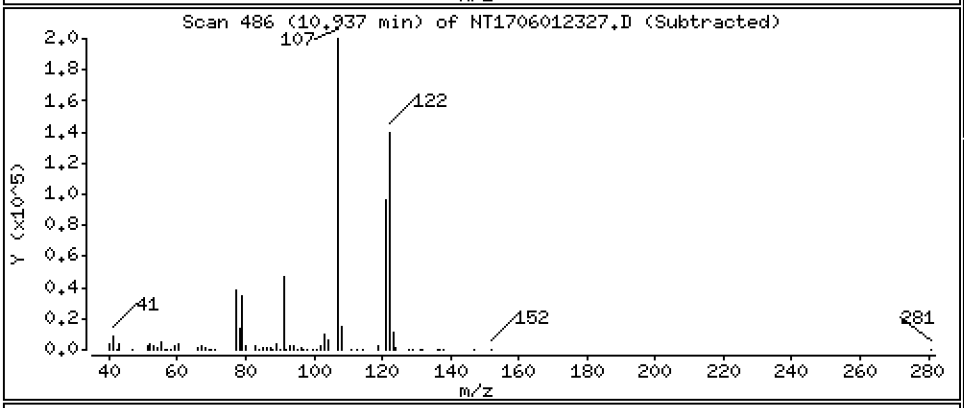
Column diameter: 0.25

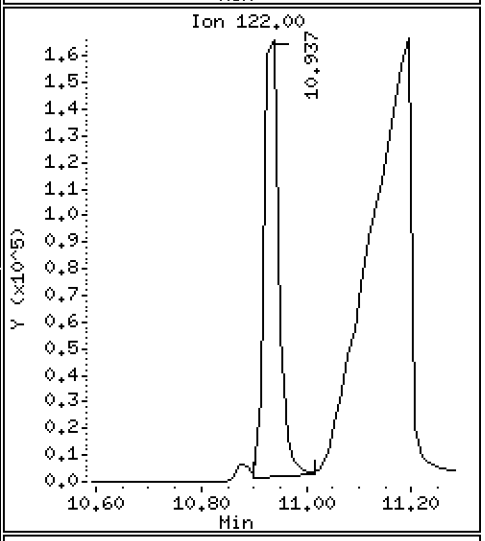
22 2,4-Dimethylphenol

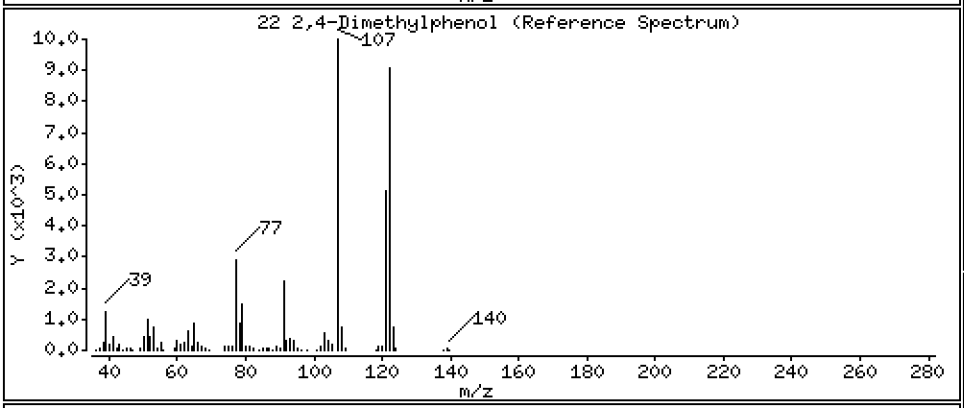
Concentration: 4.110 ug/mL

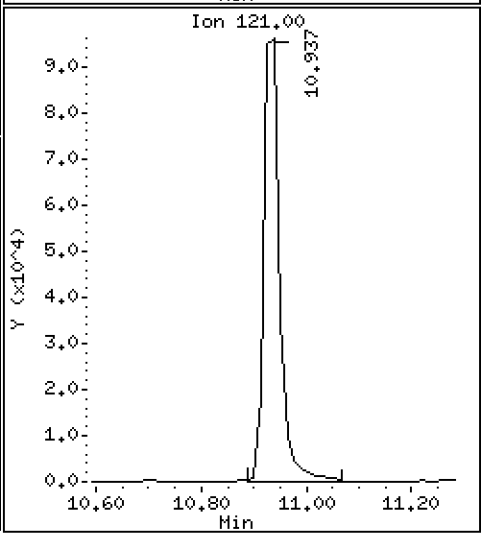


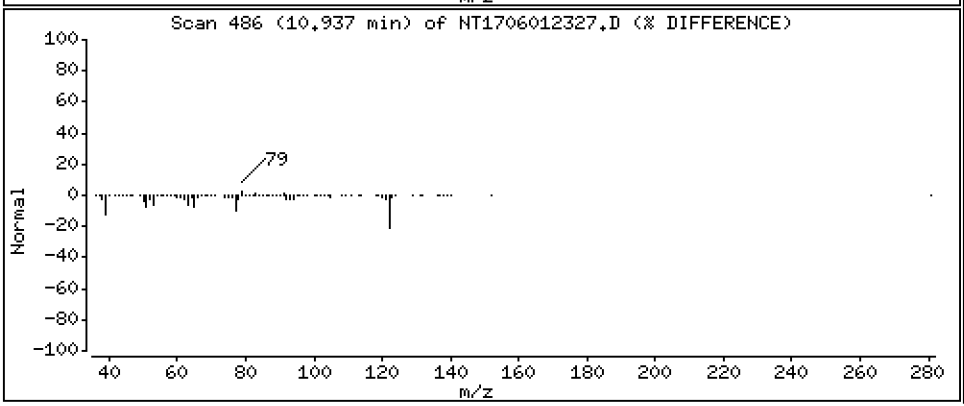












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

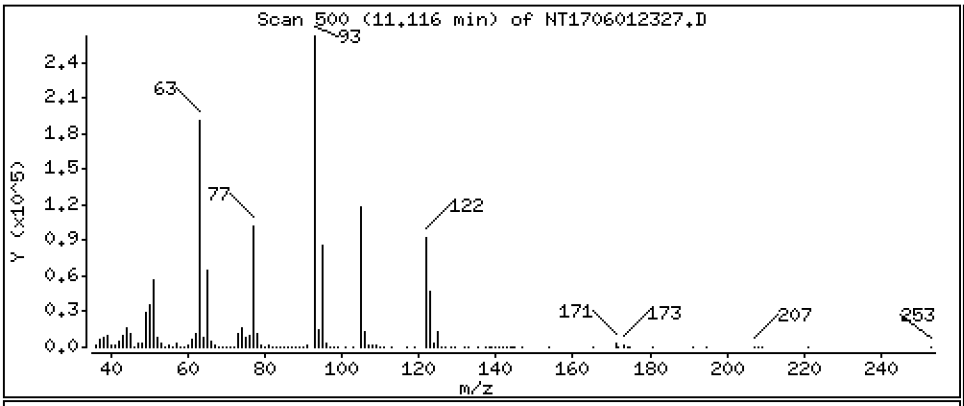
Operator: VTS

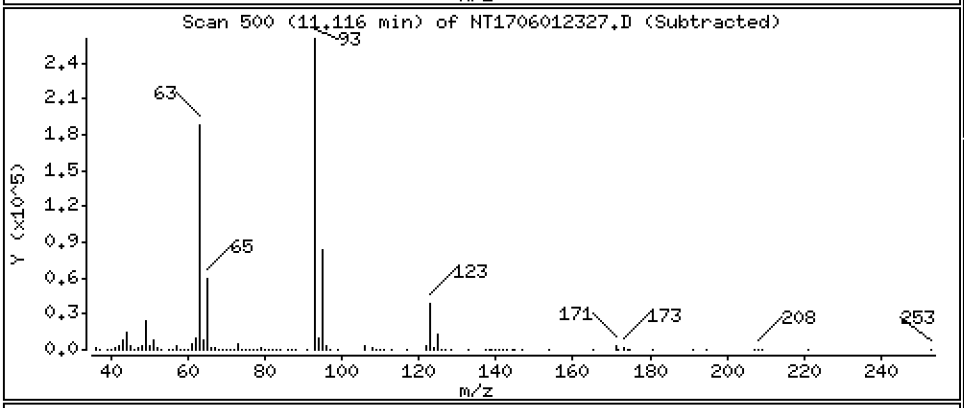
Column phase: ZB-5msi

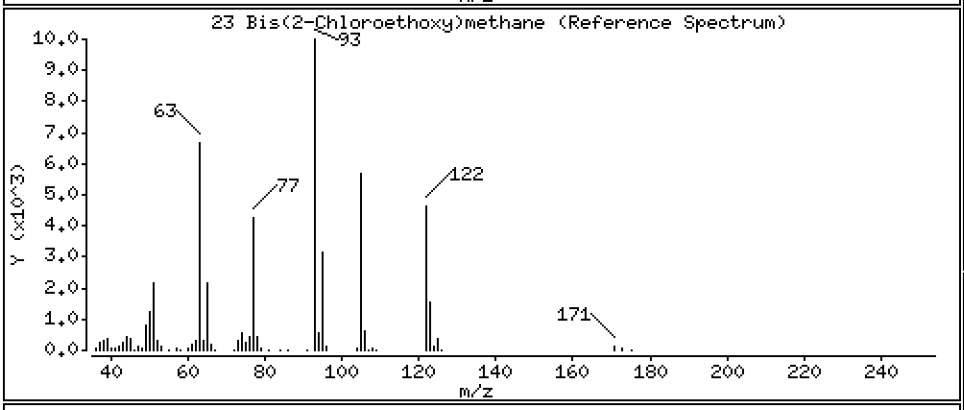
Column diameter: 0.25

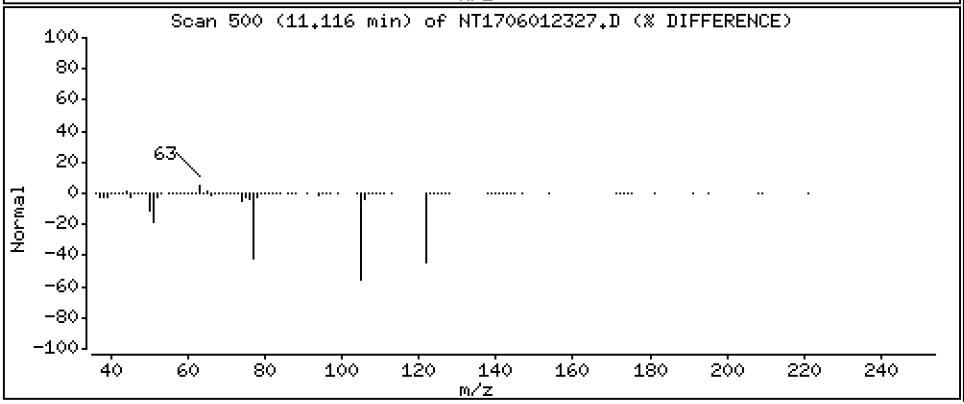
23 Bis(2-Chloroethoxy)methane

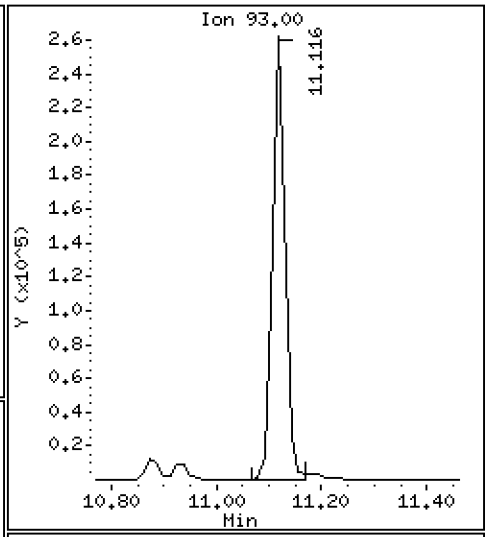
Concentration: 4.726 ug/mL

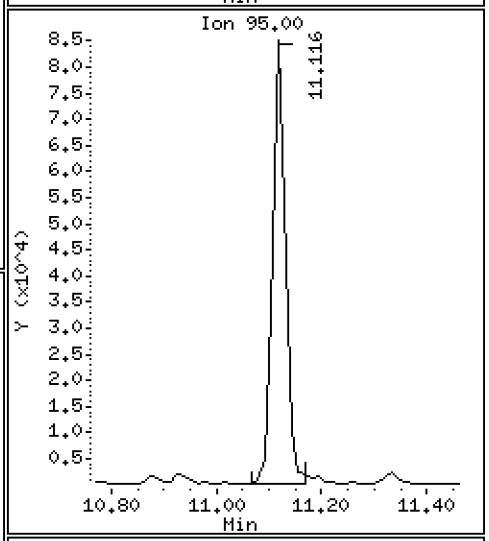


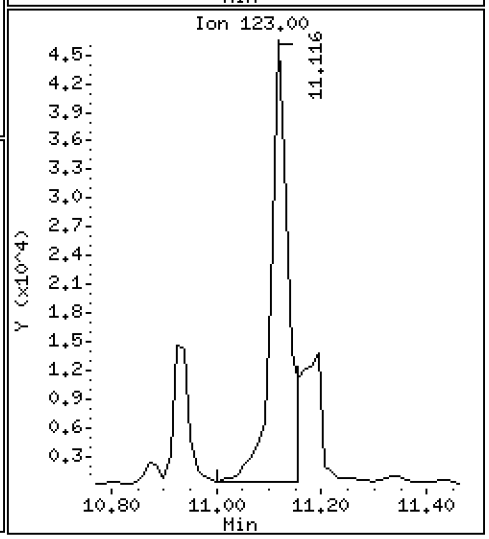












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

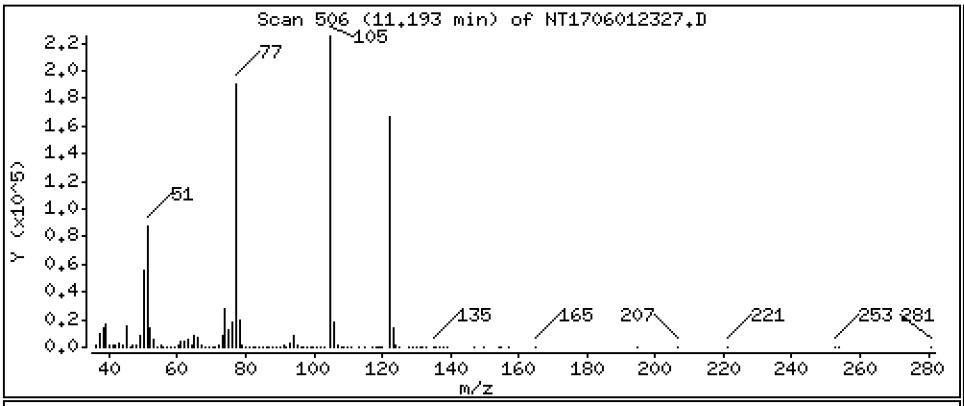
Operator: VTS

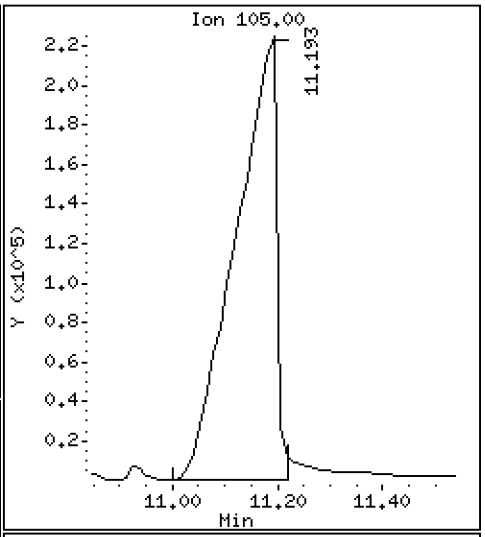
Column phase: ZB-5msi

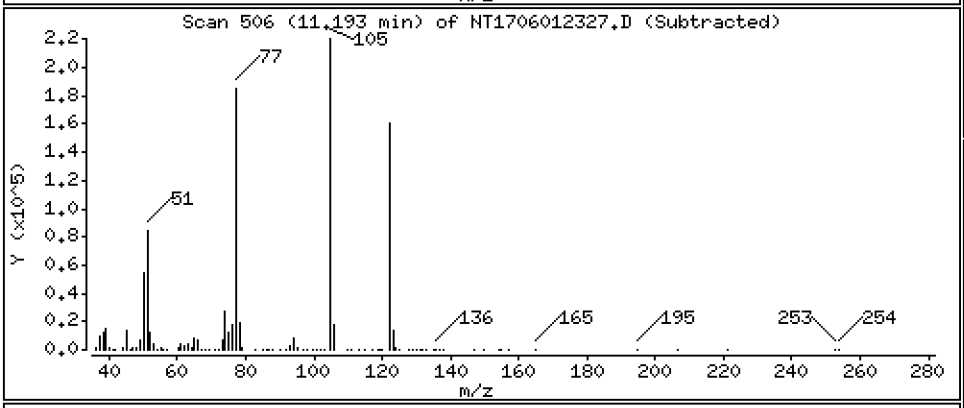
Column diameter: 0.25

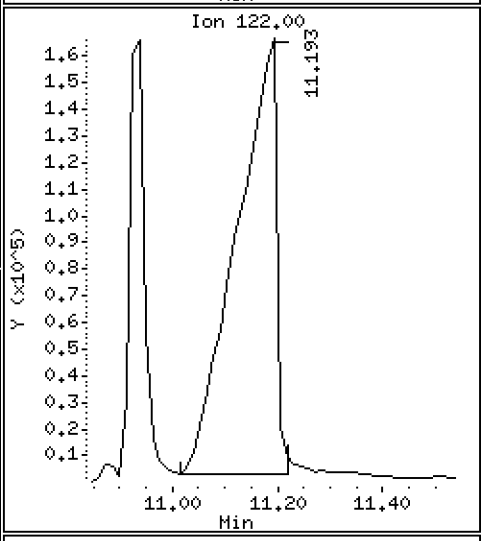
24 Benzoic acid

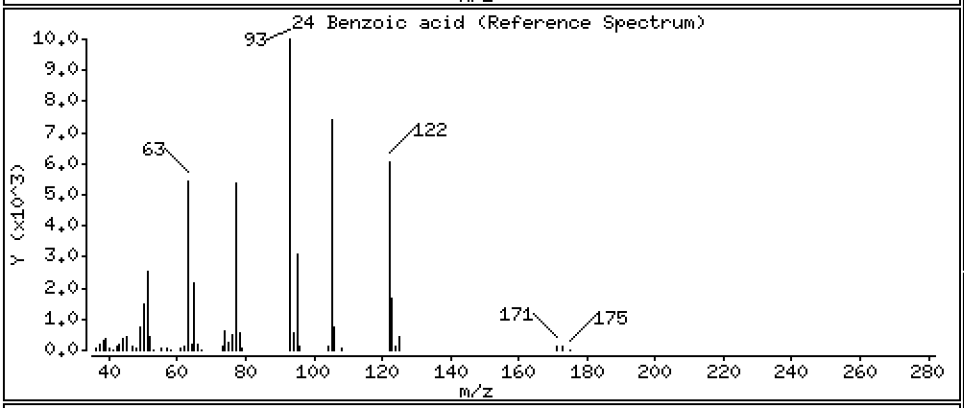
Concentration: 17.52 ug/mL

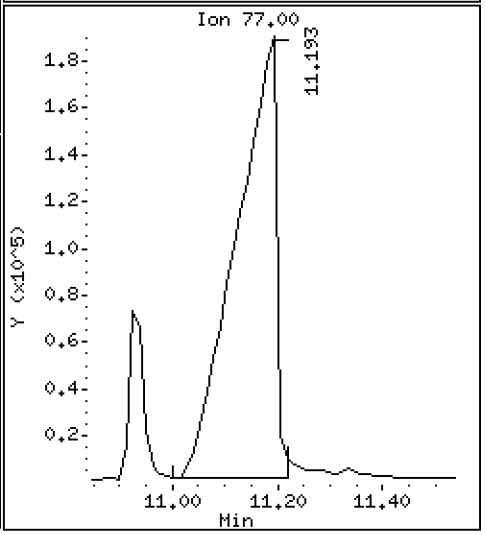


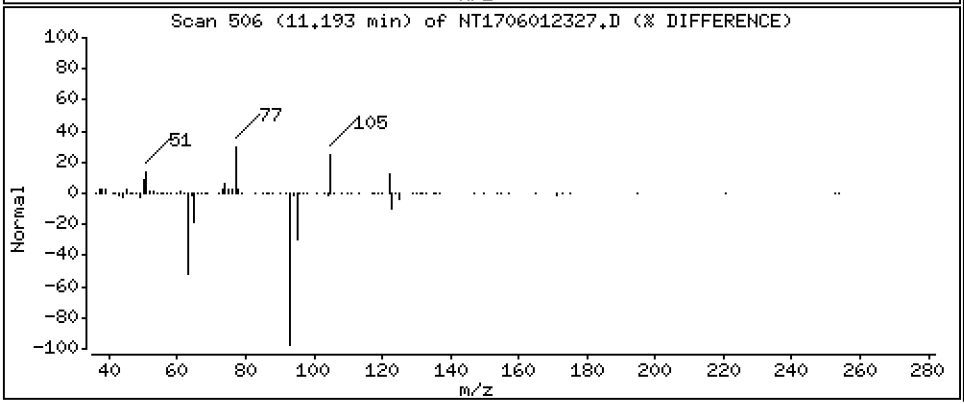












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

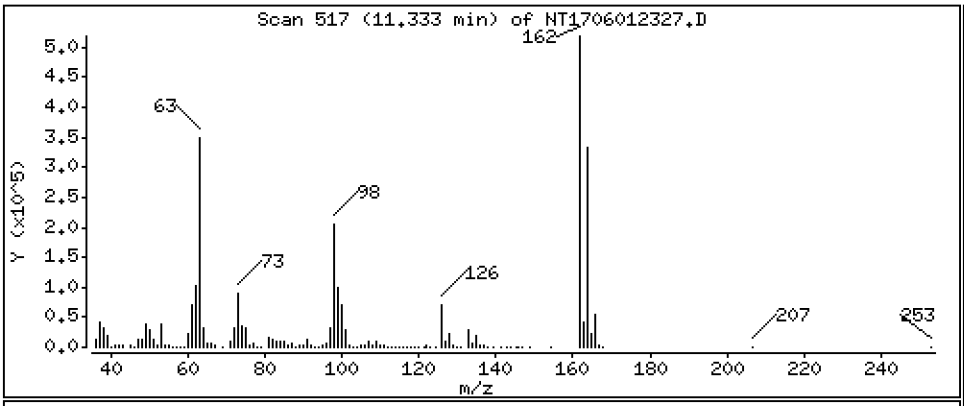
Operator: VTS

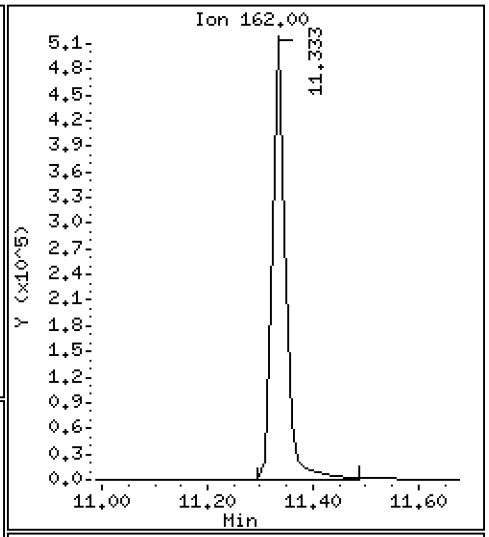
Column phase: ZB-5msi

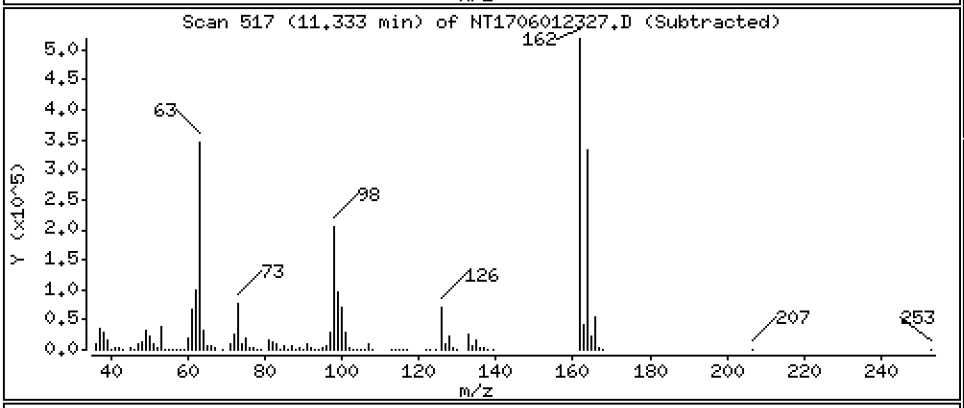
Column diameter: 0.25

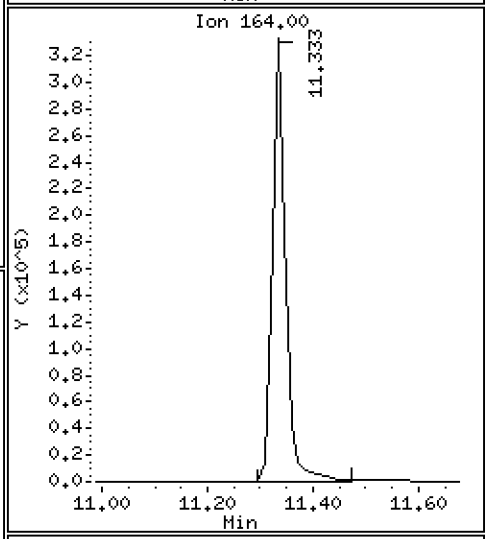
25 2,4-Dichlorophenol

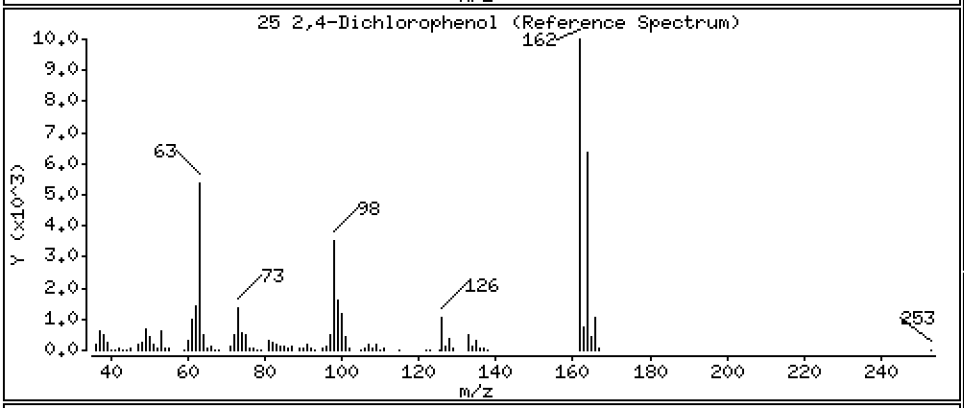
Concentration: 12.33 ug/mL

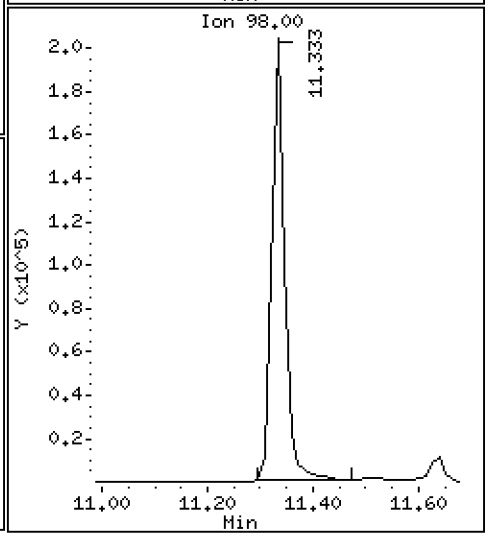


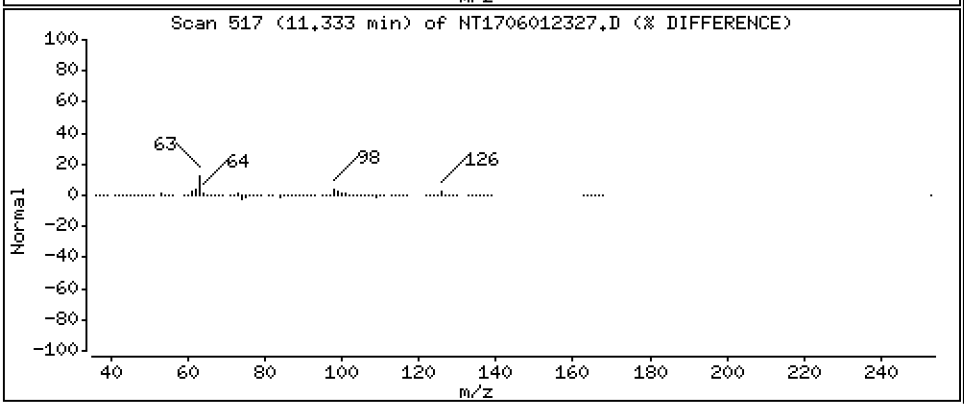












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

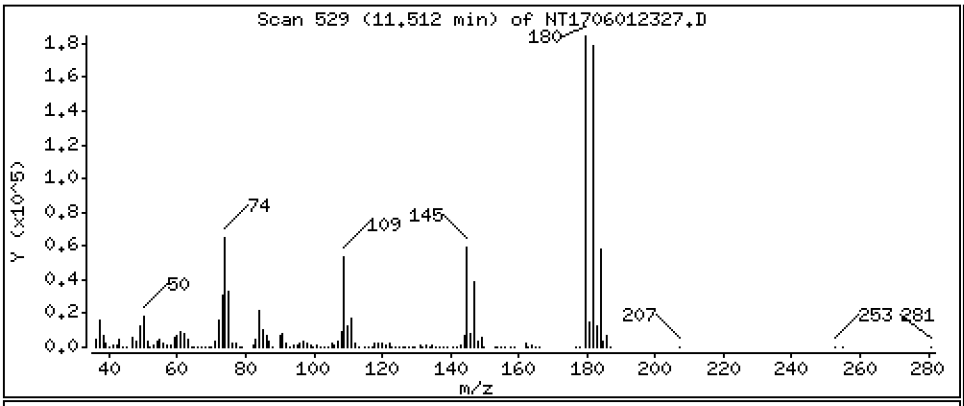
Operator: VTS

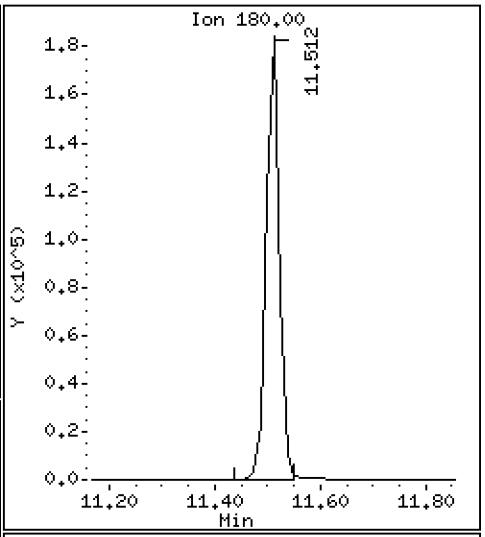
Column phase: ZB-5msi

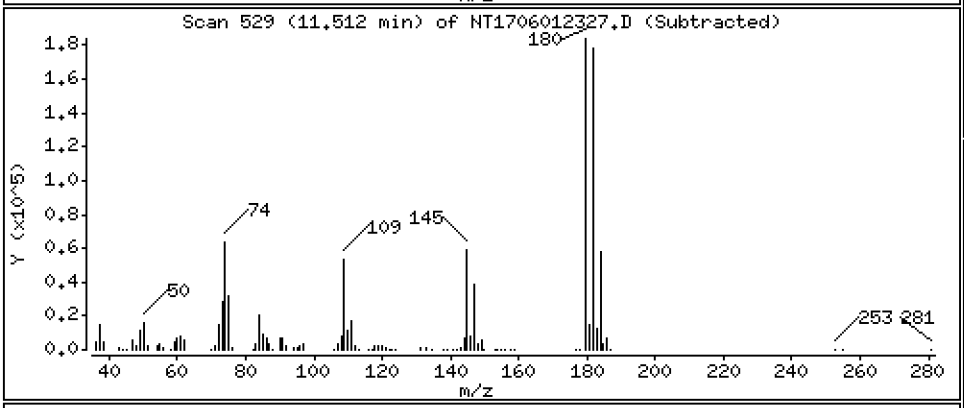
Column diameter: 0.25

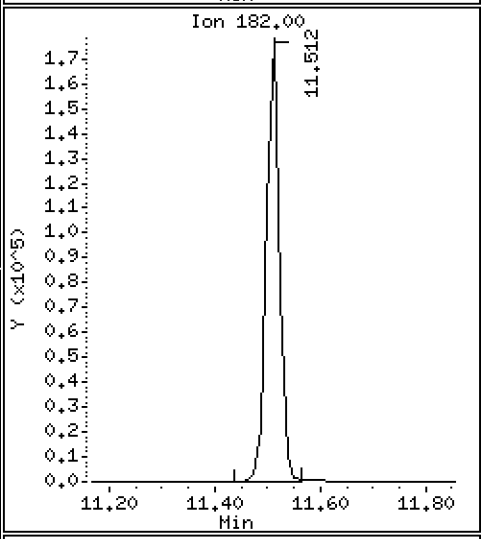
26 1,2,4-Trichlorobenzene

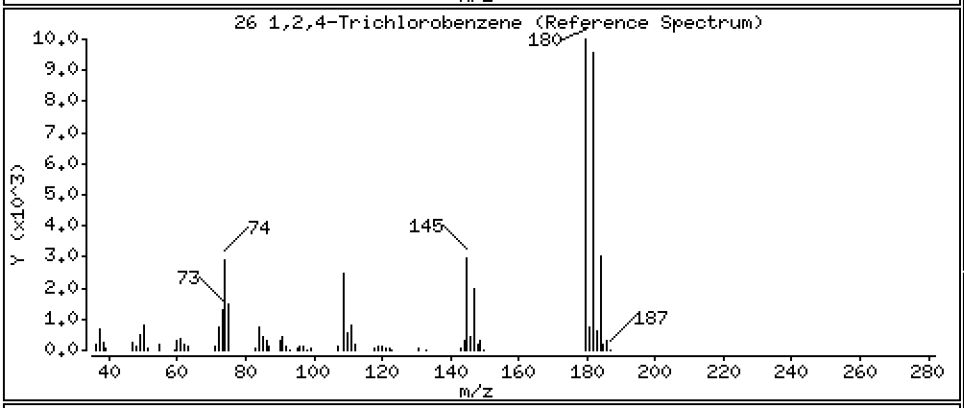
Concentration: 3.544 ug/mL

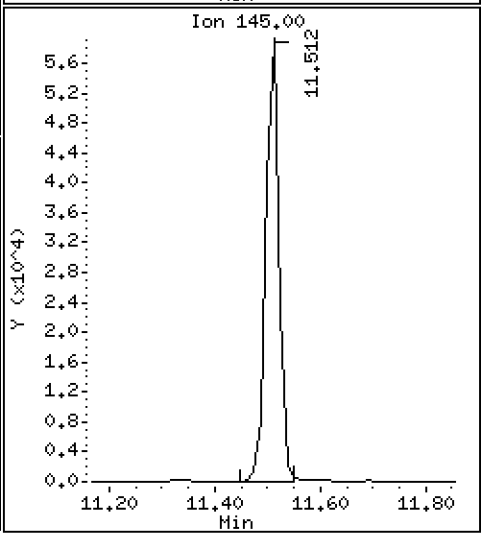


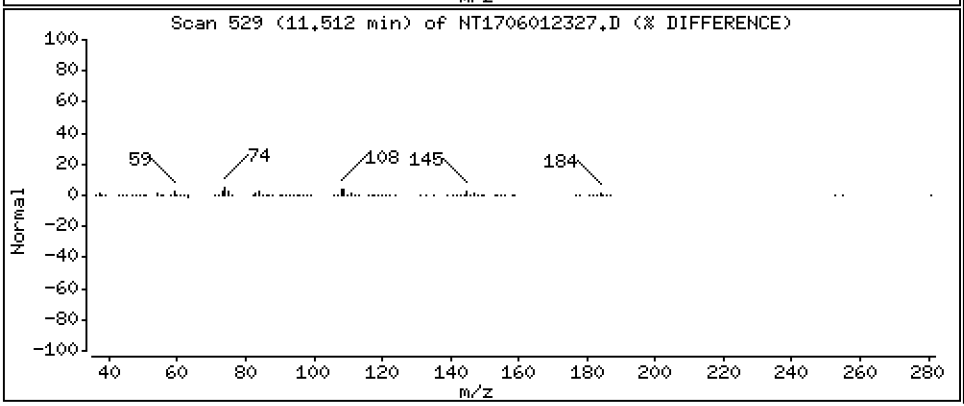












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

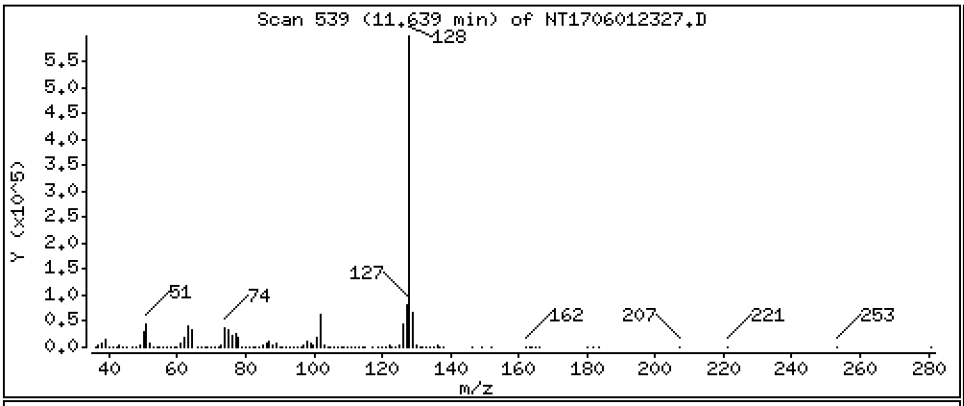
Operator: VTS

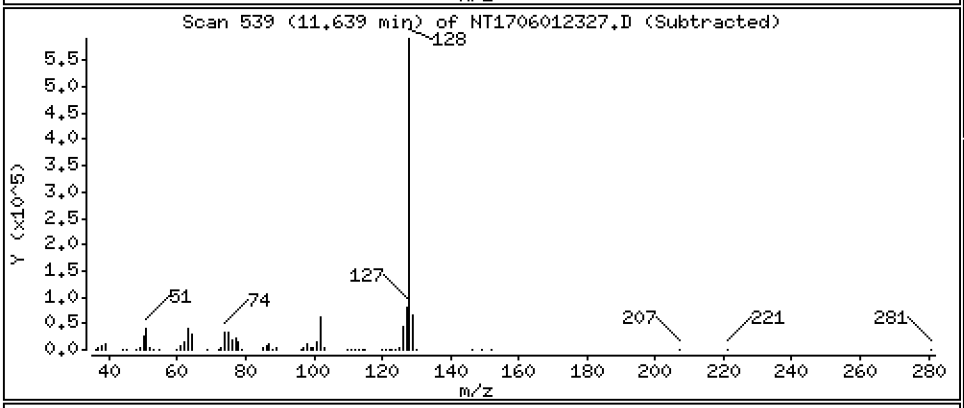
Column phase: ZB-5msi

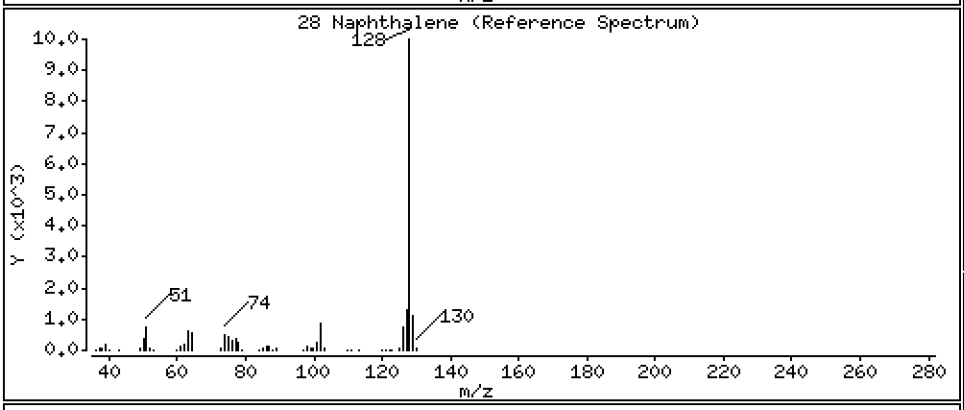
Column diameter: 0.25

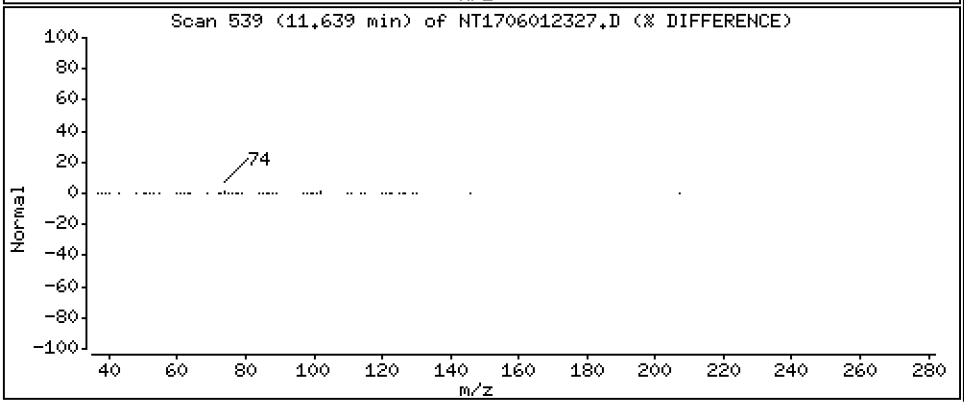
28 Naphthalene

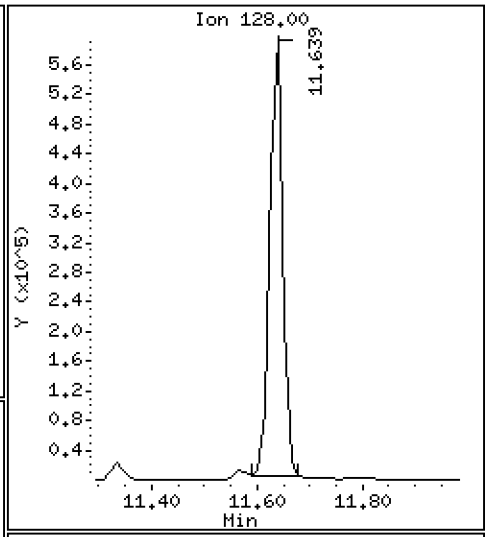
Concentration: 3.633 ug/mL

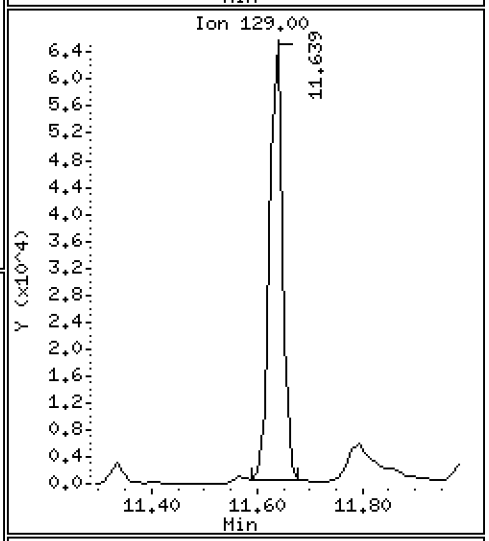


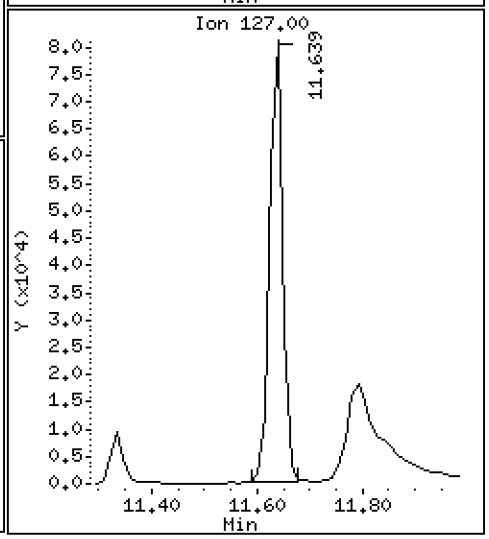












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

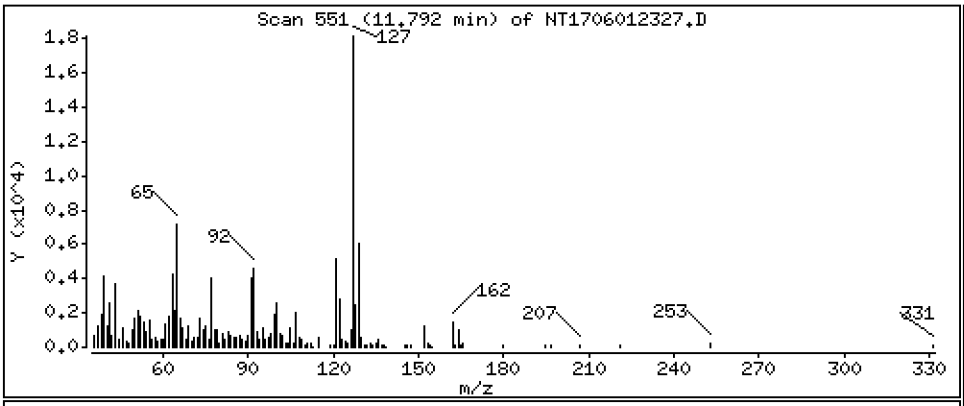
Operator: VTS

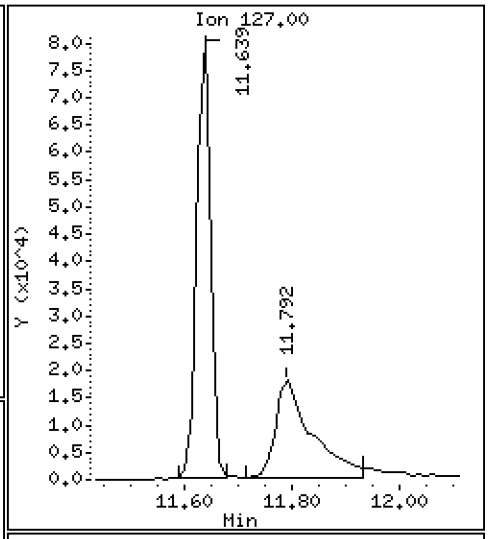
Column phase: ZB-5msi

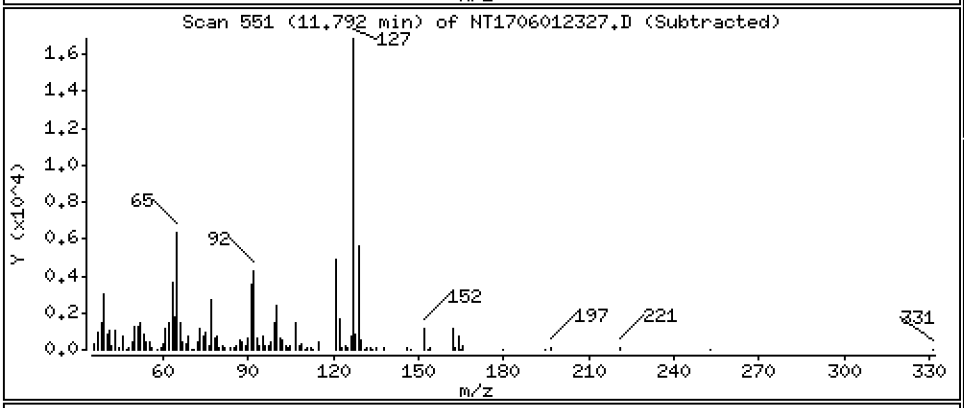
Column diameter: 0.25

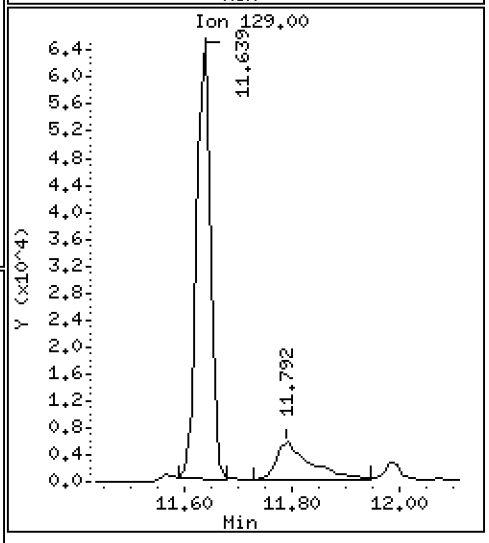
29 4-Chloroaniline

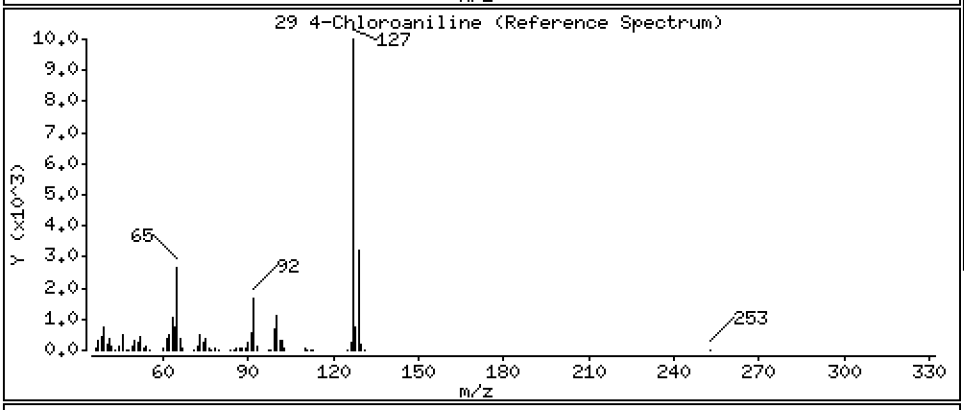
Concentration: 0.8264 ug/mL

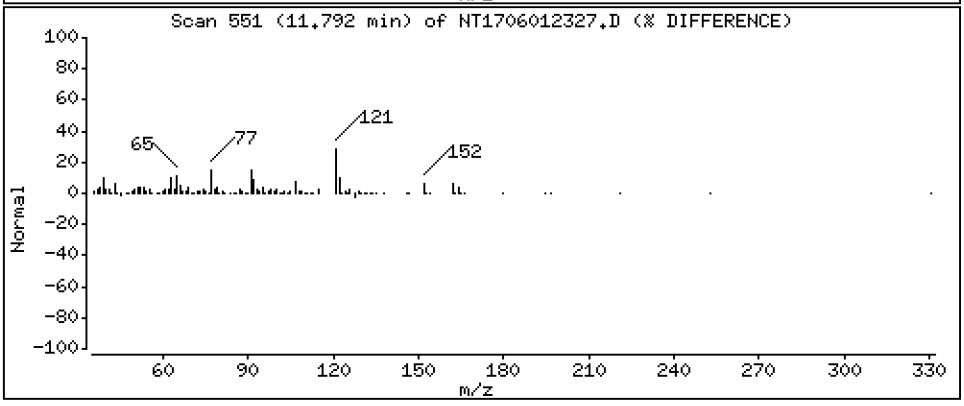












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

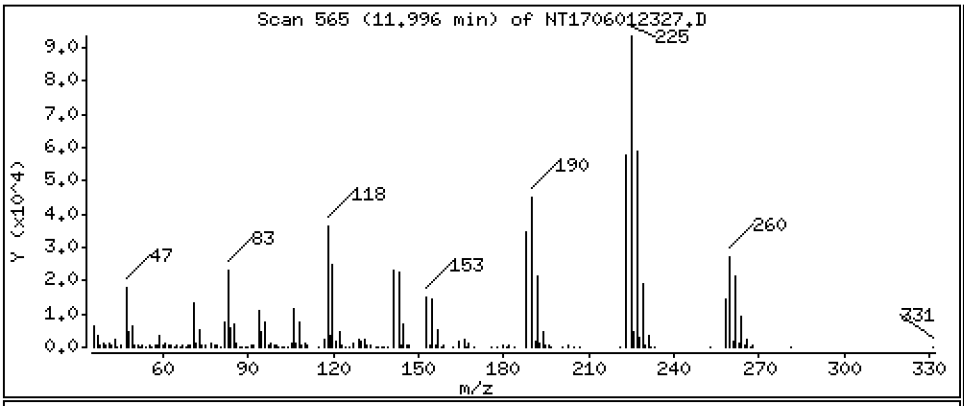
Operator: VTS

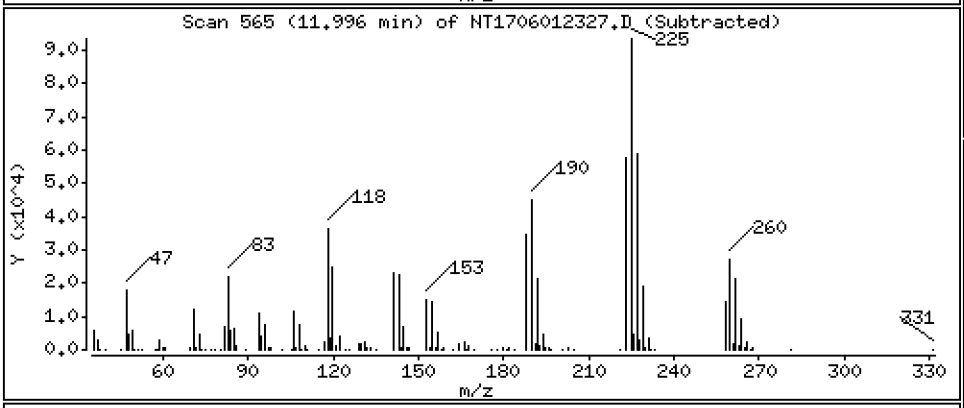
Column phase: ZB-5msi

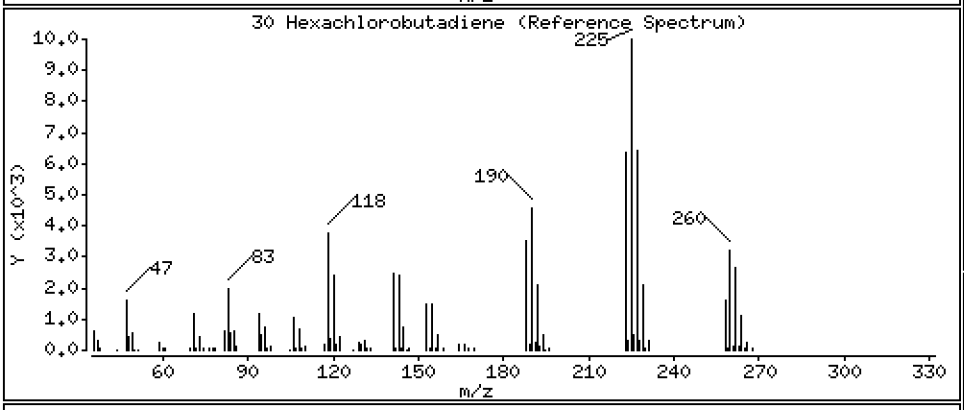
Column diameter: 0.25

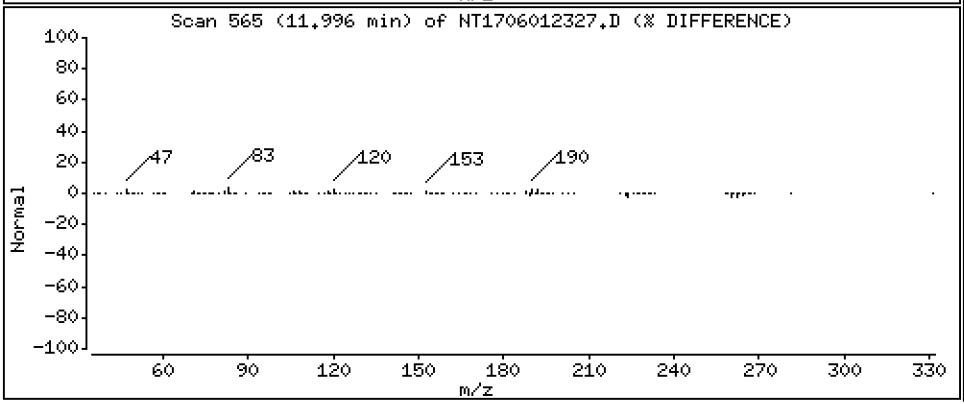
30 Hexachlorobutadiene

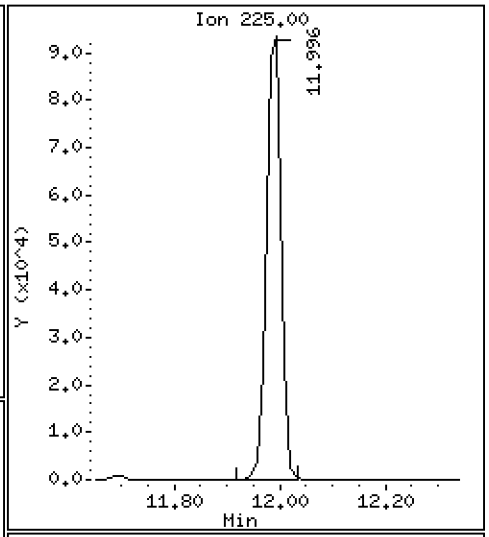
Concentration: 4.080 ug/mL

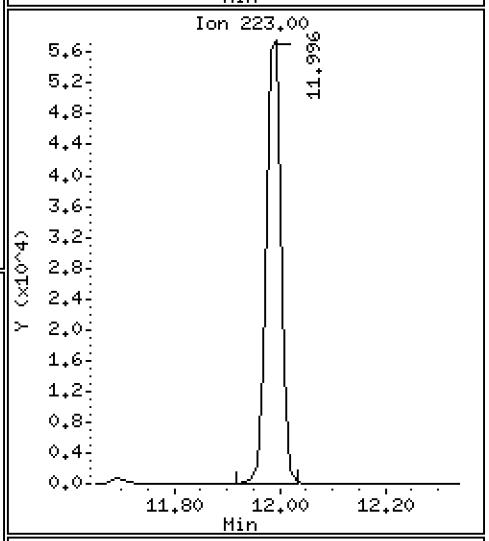


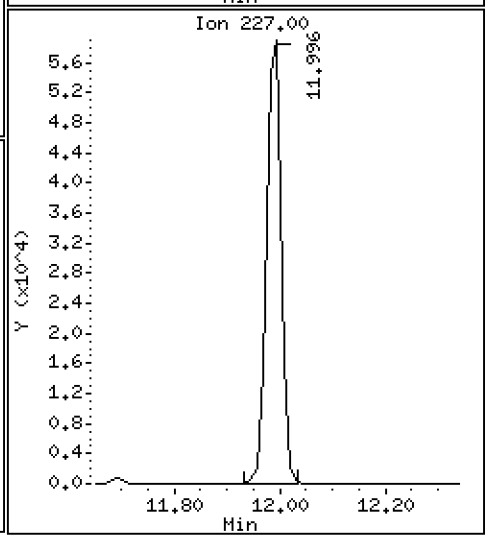












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

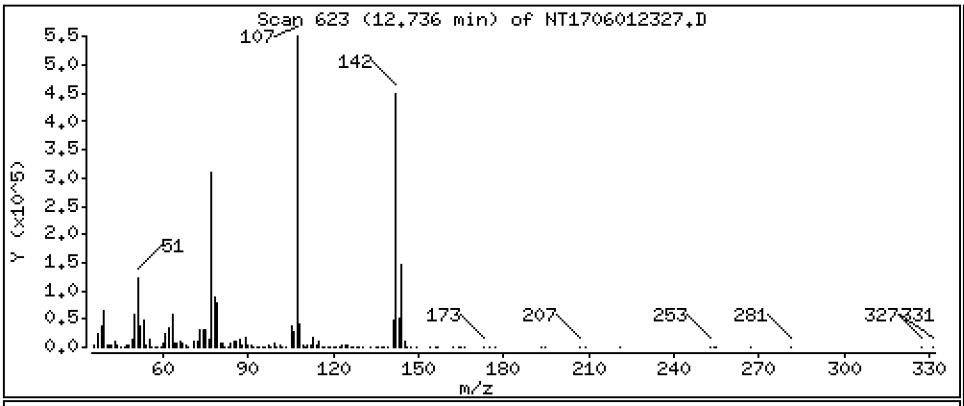
Operator: VTS

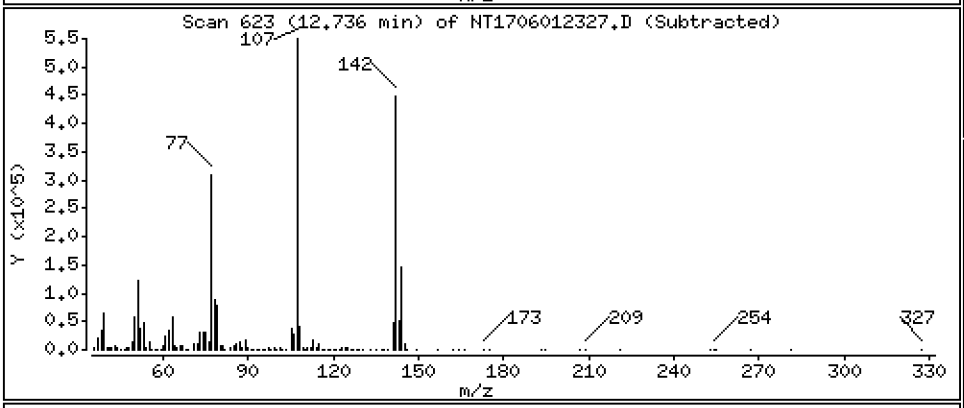
Column phase: ZB-5msi

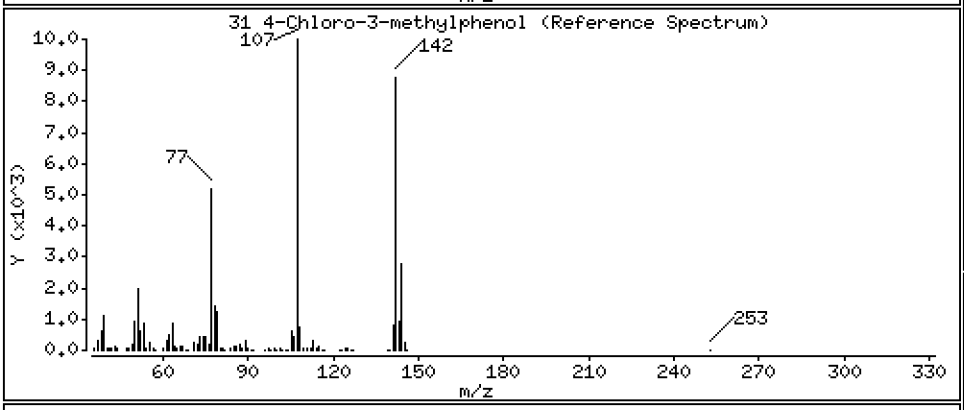
Column diameter: 0.25

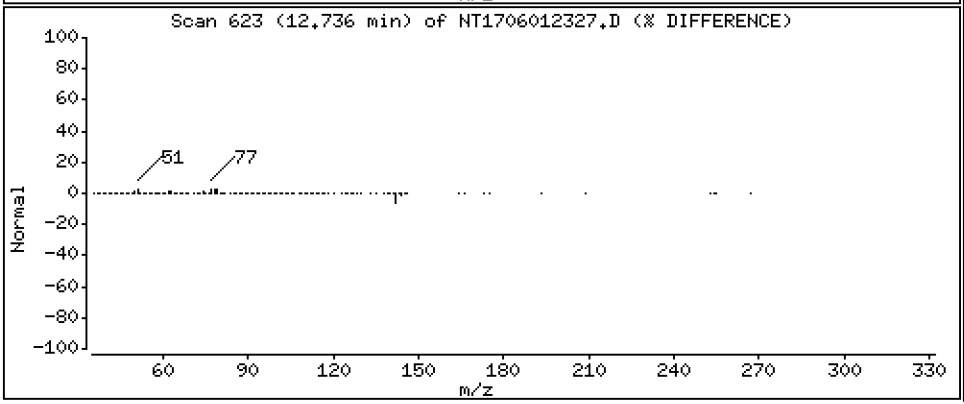
31 4-Chloro-3-methylphenol

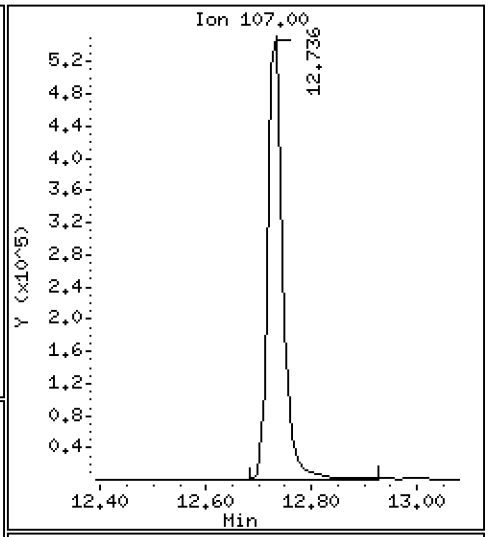
Concentration: 12.77 ug/mL

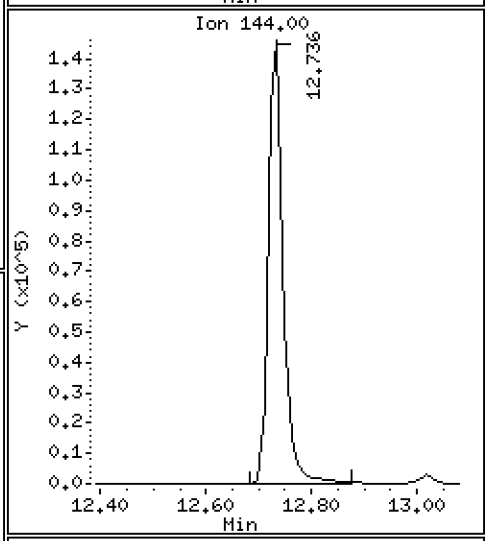


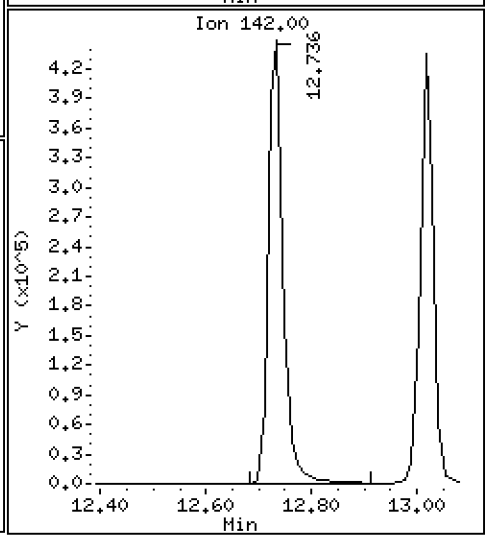












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

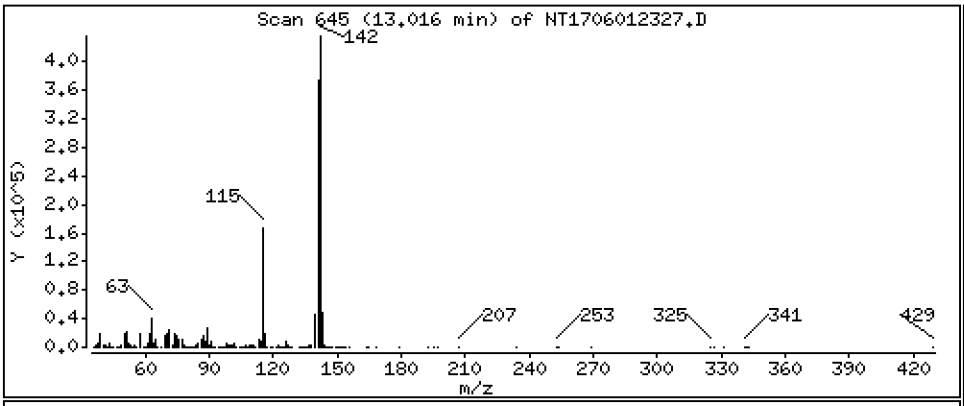
Operator: VTS

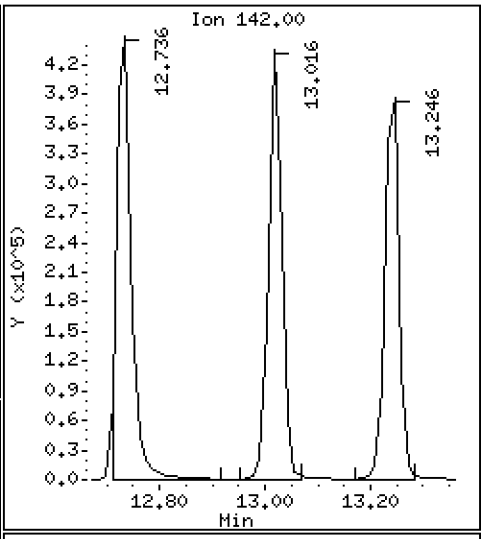
Column phase: ZB-5msi

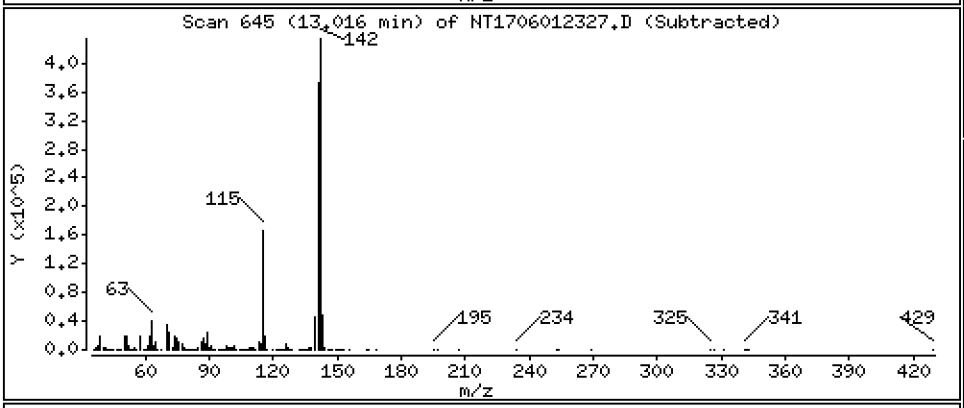
Column diameter: 0.25

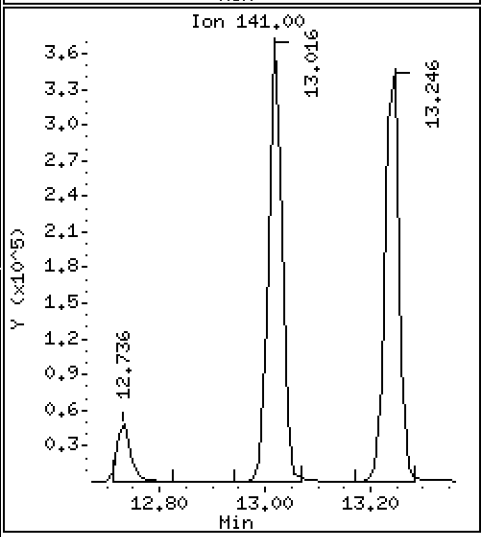
32 2-Methylnaphthalene

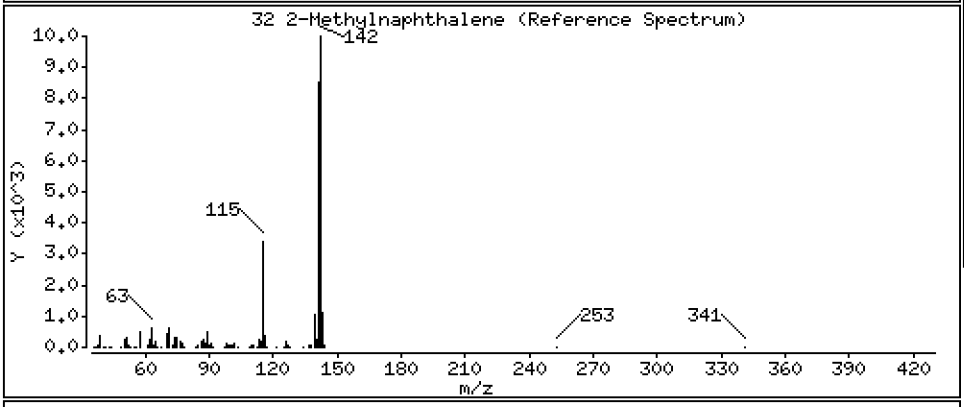
Concentration: 3.765 ug/mL

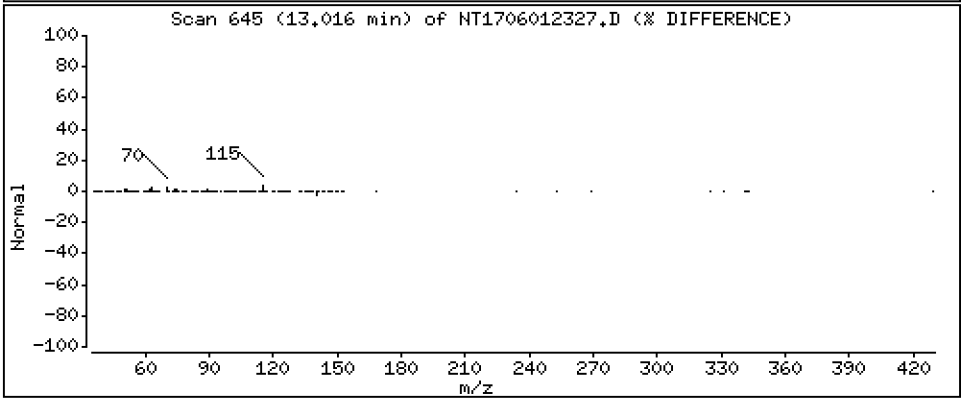












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

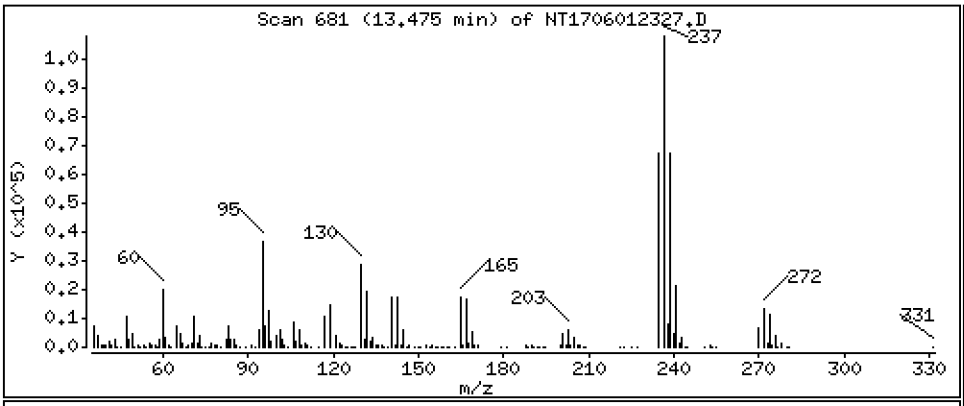
Operator: VTS

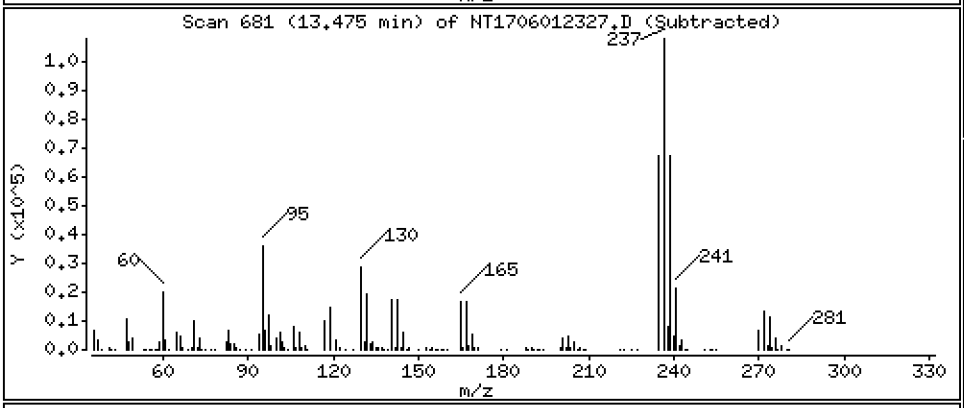
Column phase: ZB-5msi

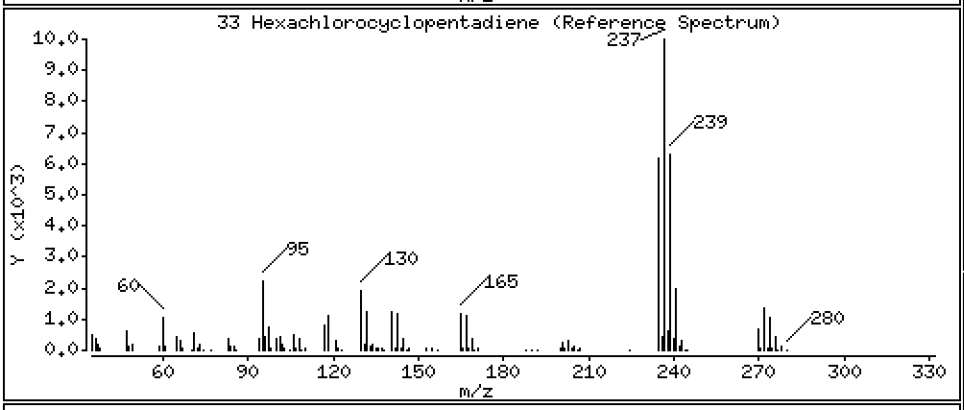
Column diameter: 0.25

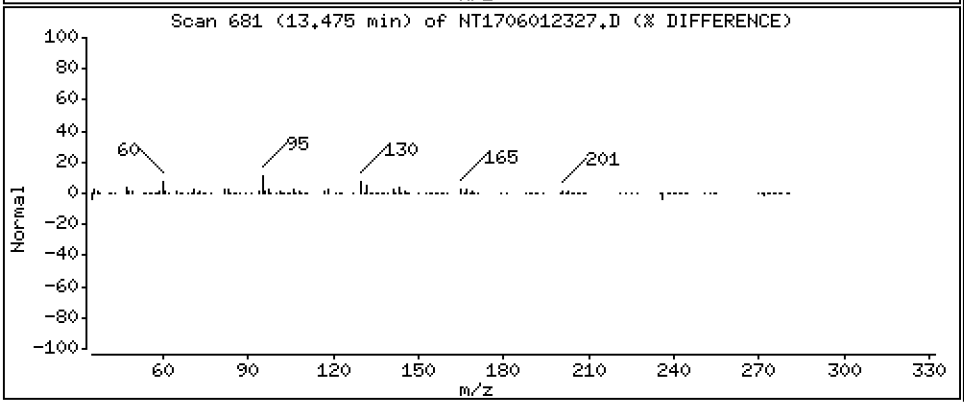
33 Hexachlorocyclopentadiene

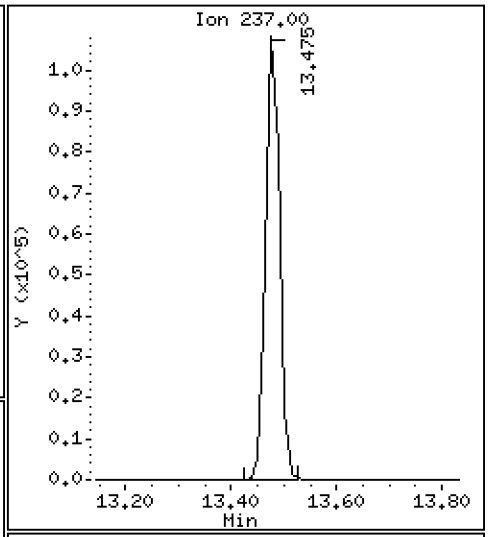
Concentration: 3.661 ug/mL

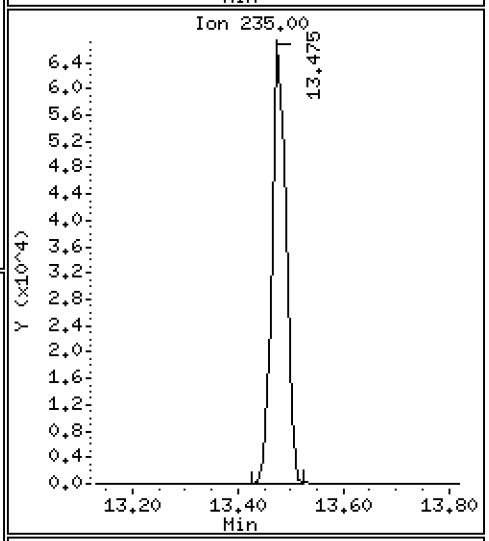


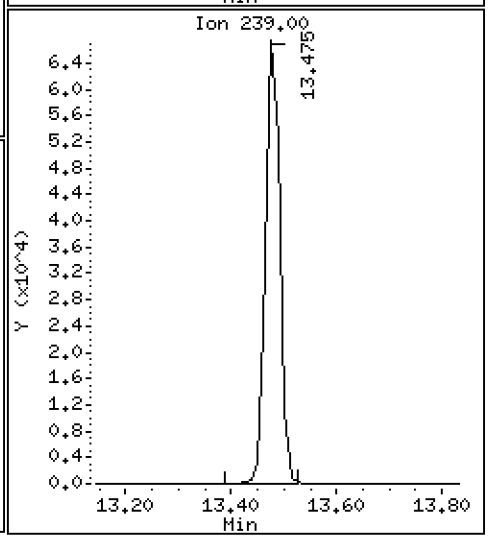












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

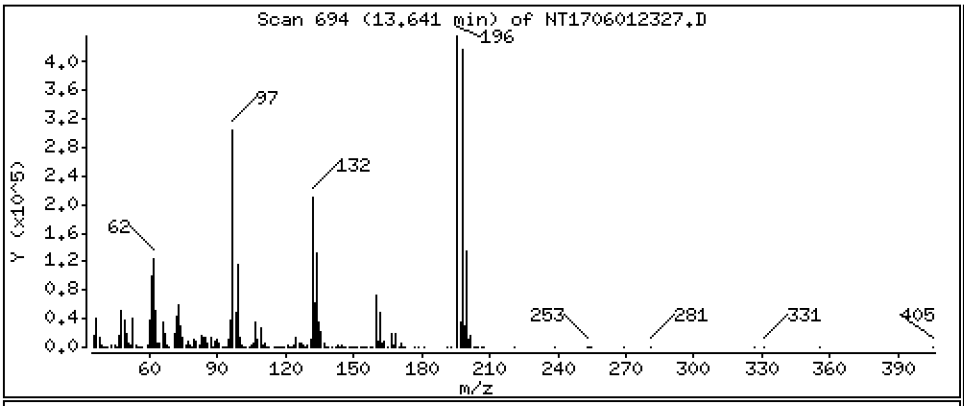
Operator: VTS

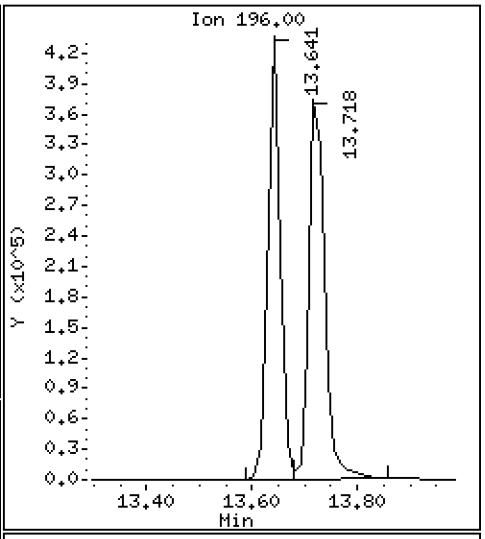
Column phase: ZB-5msi

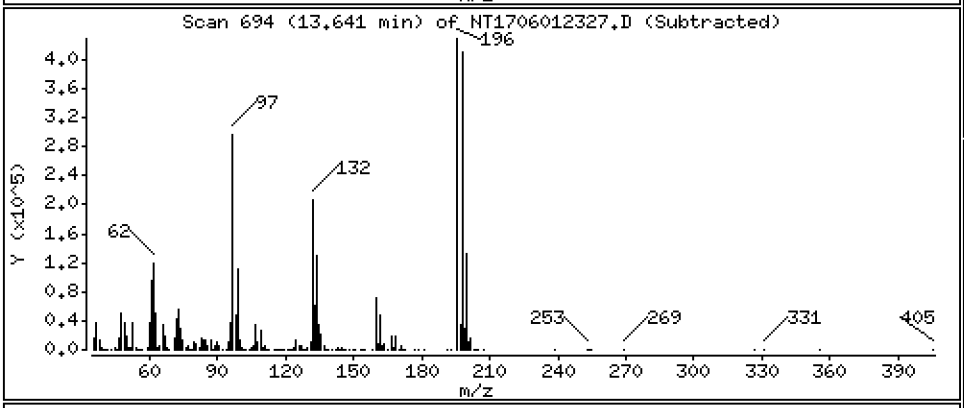
Column diameter: 0.25

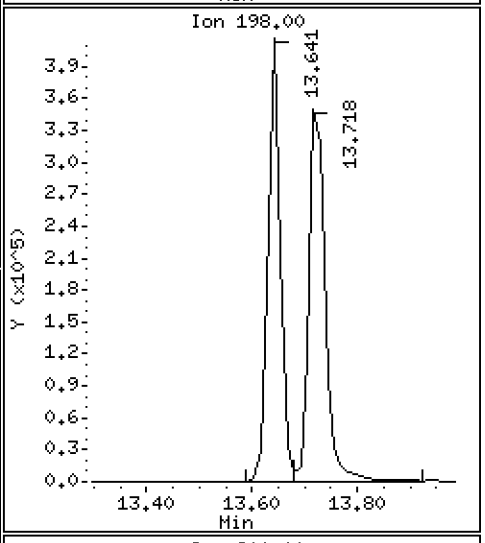
34 2,4,6-Trichlorophenol

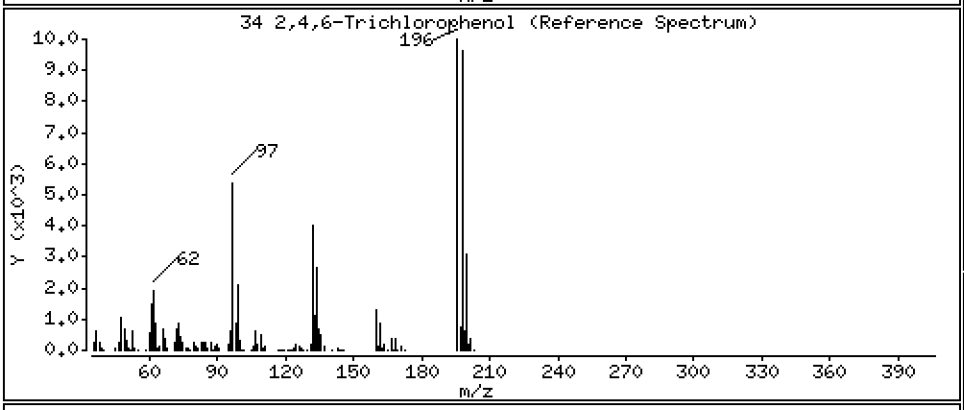
Concentration: 12.16 ug/mL

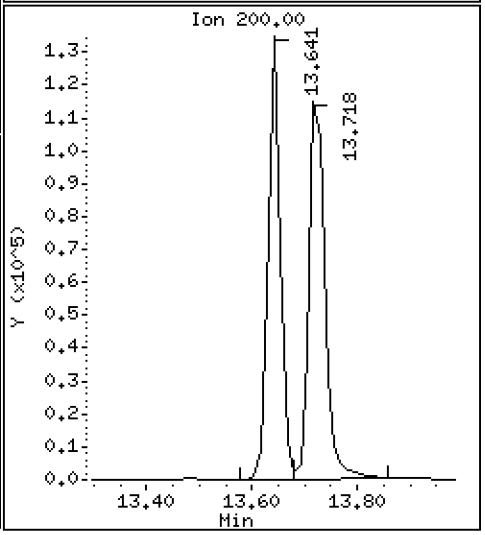


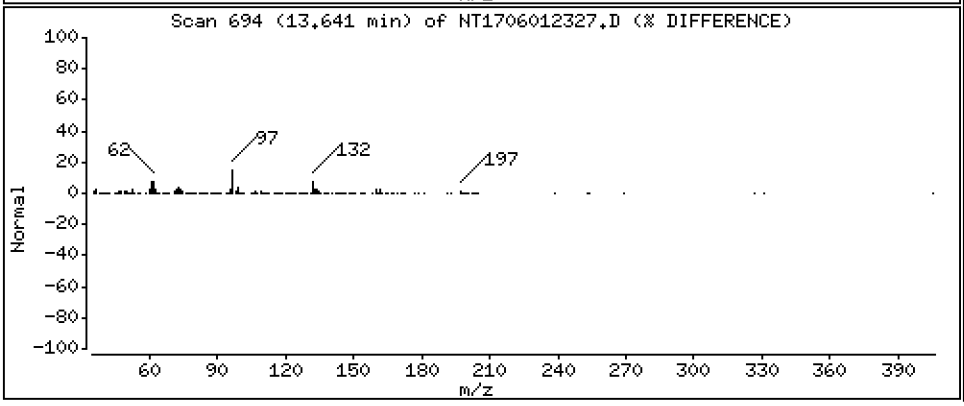












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

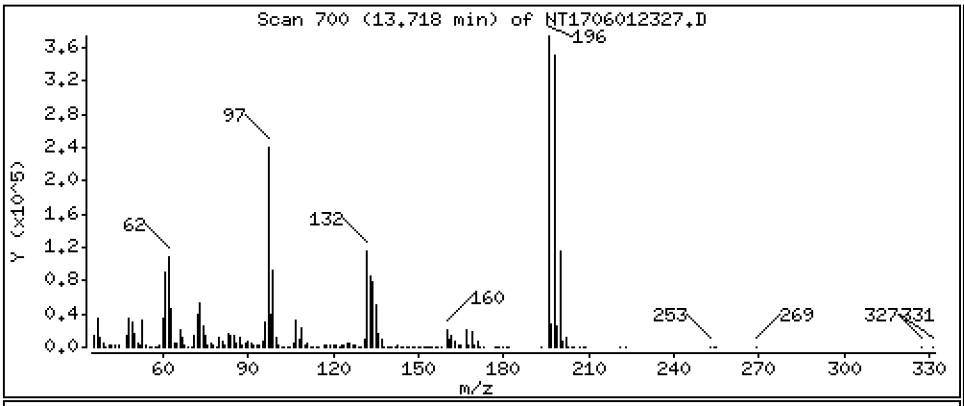
Operator: VTS

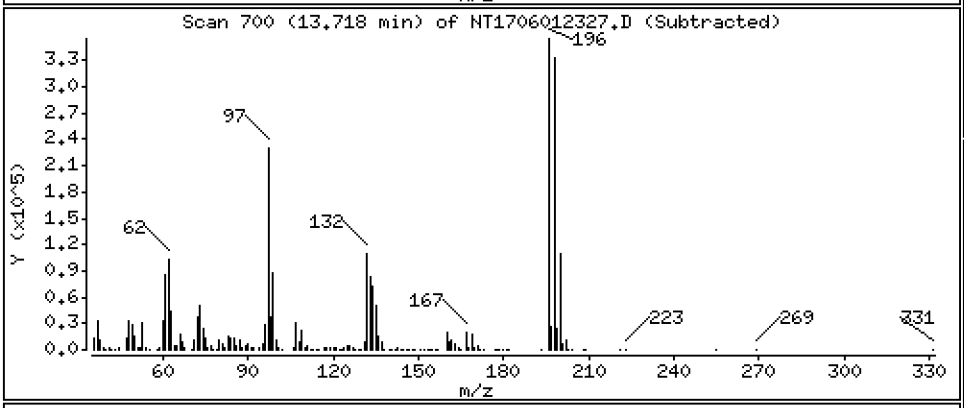
Column phase: ZB-5msi

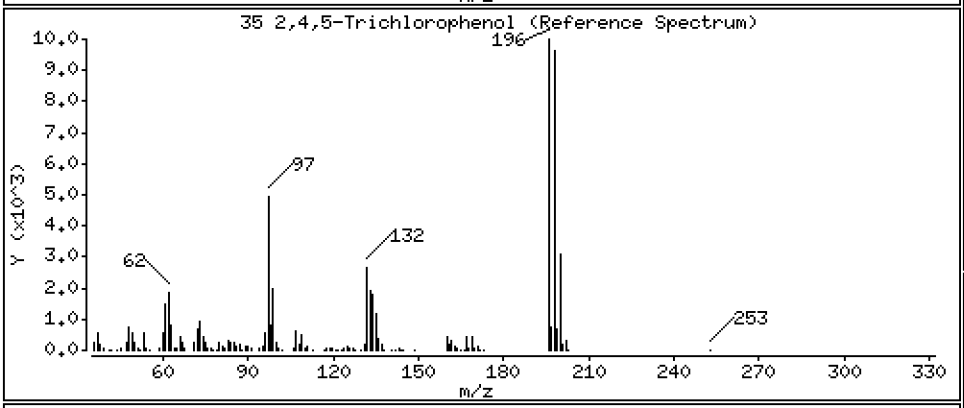
Column diameter: 0.25

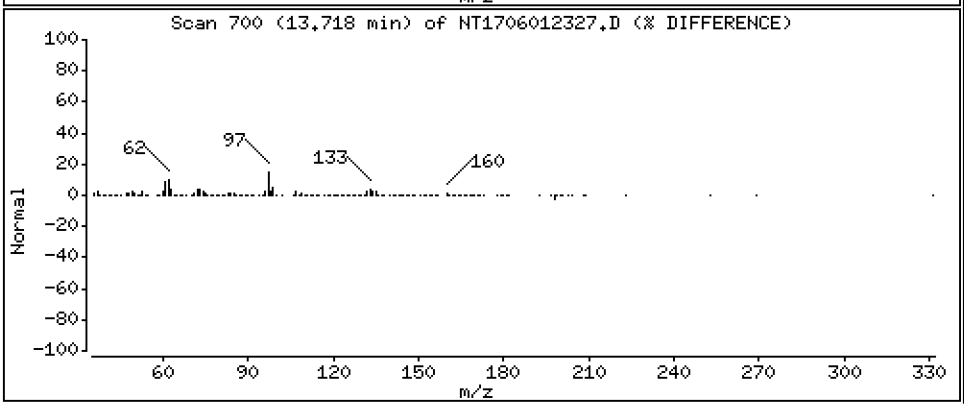
35 2,4,5-Trichlorophenol

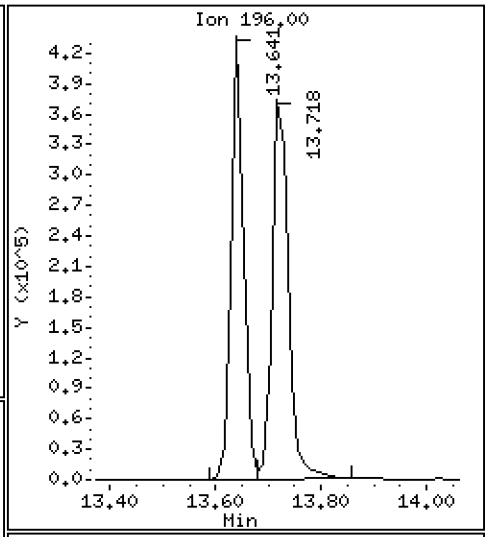
Concentration: 12.50 ug/mL

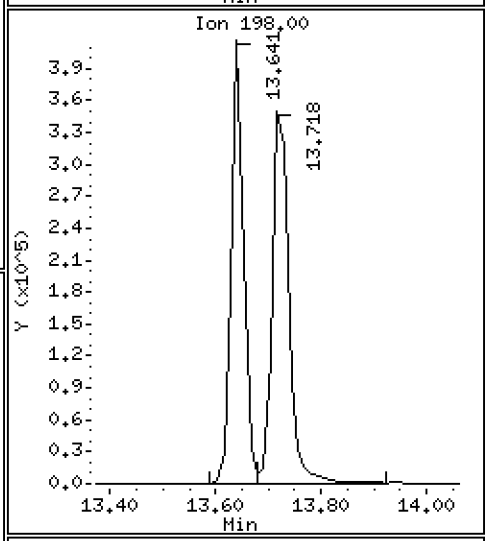


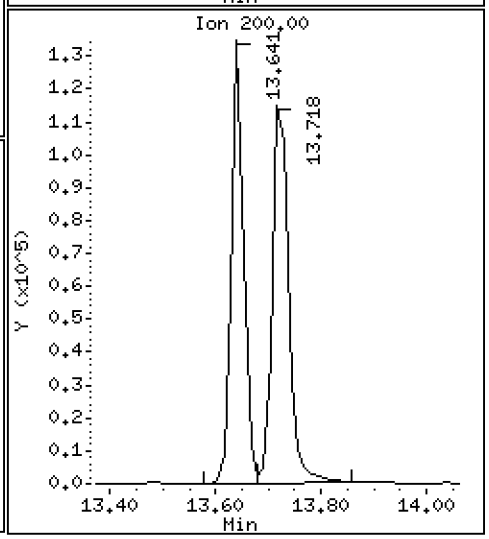












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

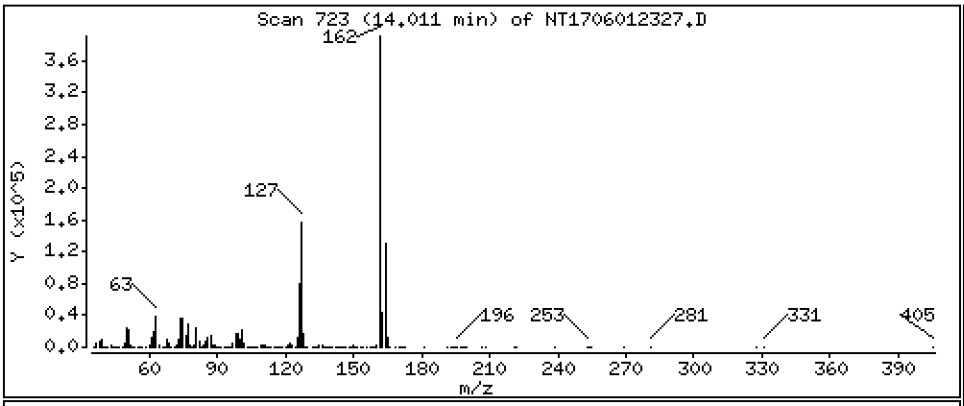
Operator: VTS

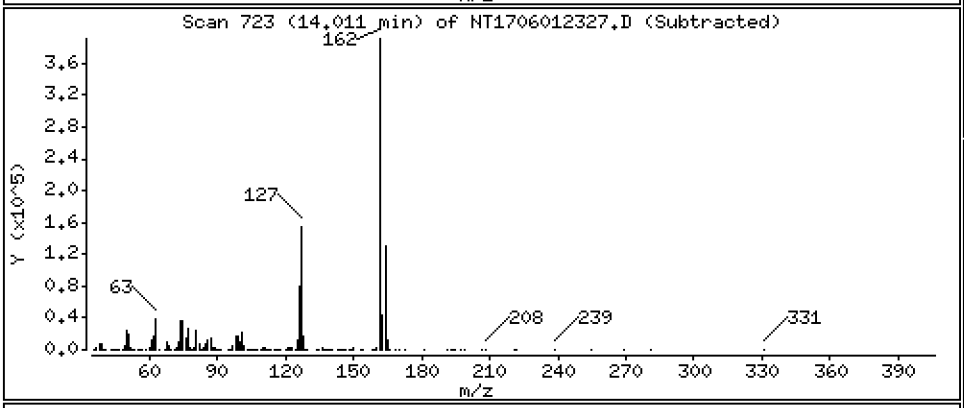
Column phase: ZB-5msi

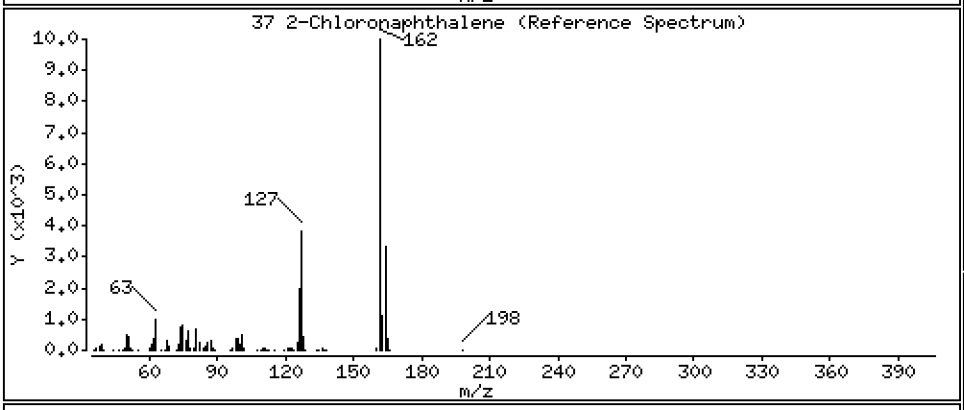
Column diameter: 0.25

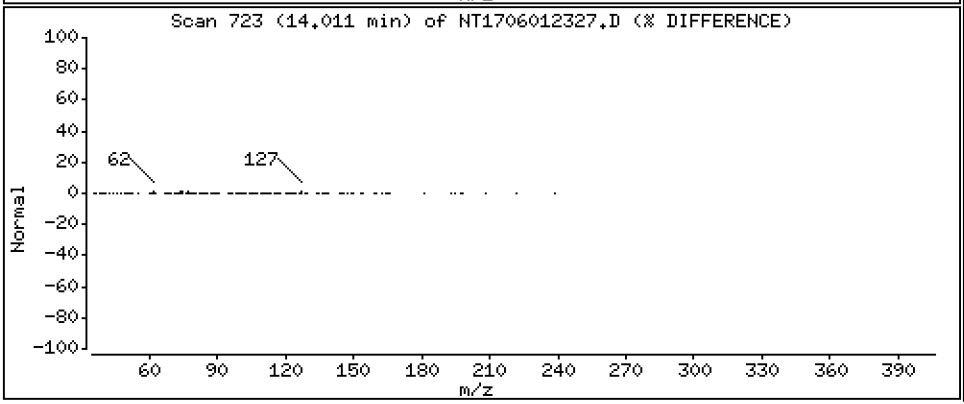
37 2-Chloronaphthalene

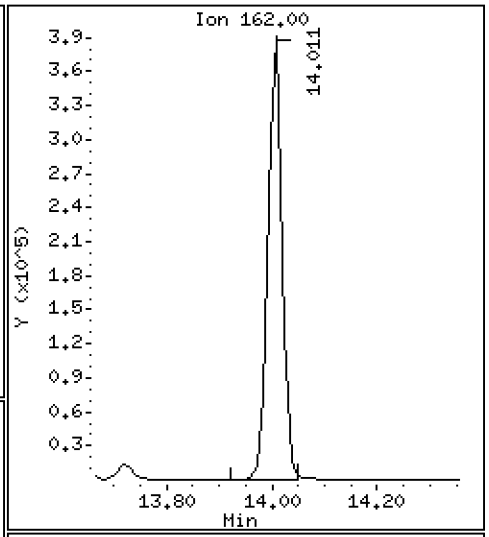
Concentration: 3.984 ug/mL

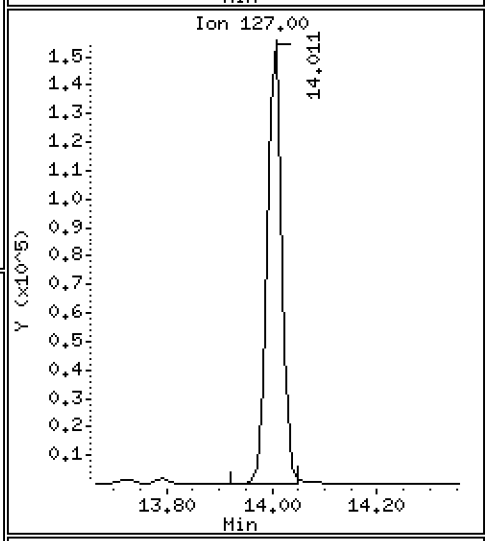


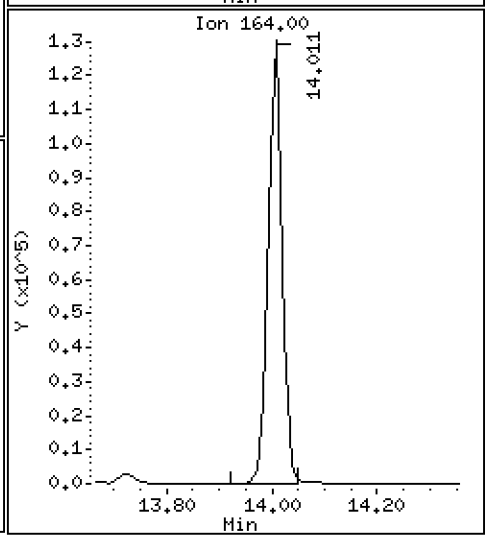












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

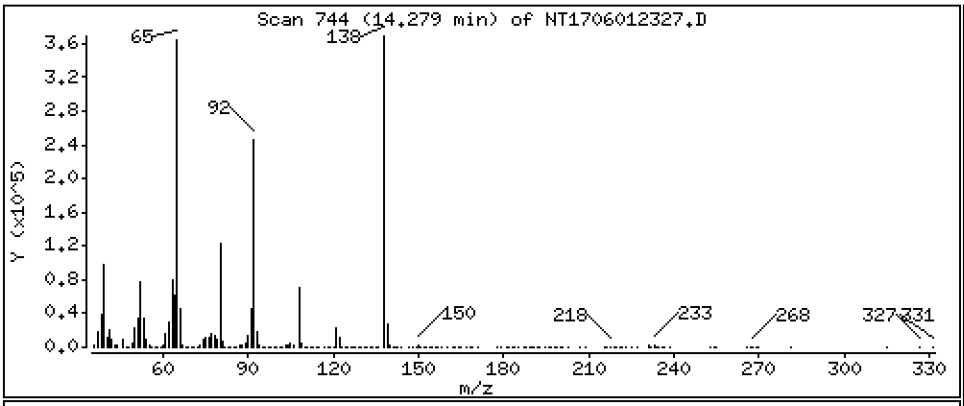
Operator: VTS

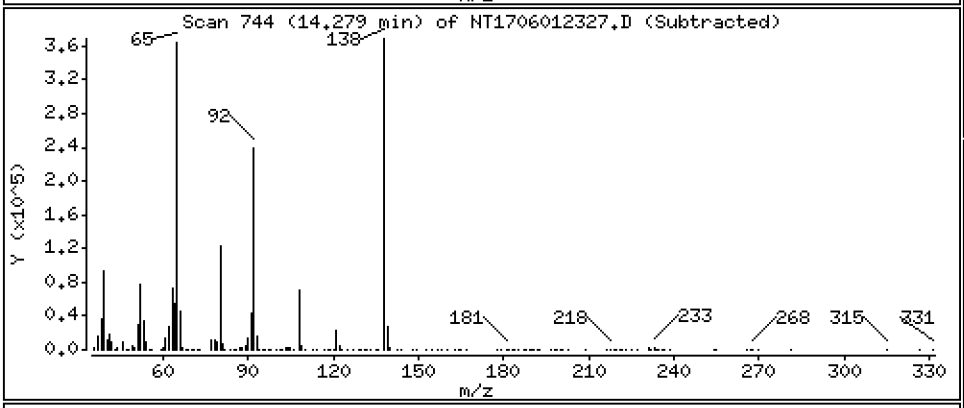
Column phase: ZB-5msi

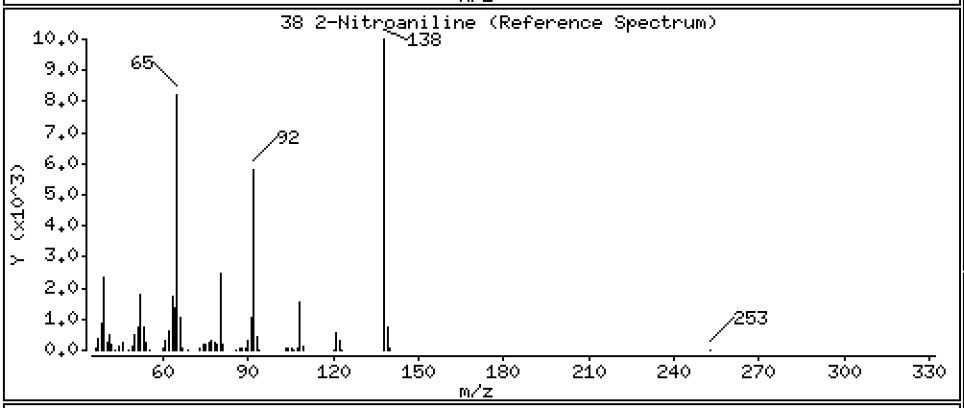
Column diameter: 0.25

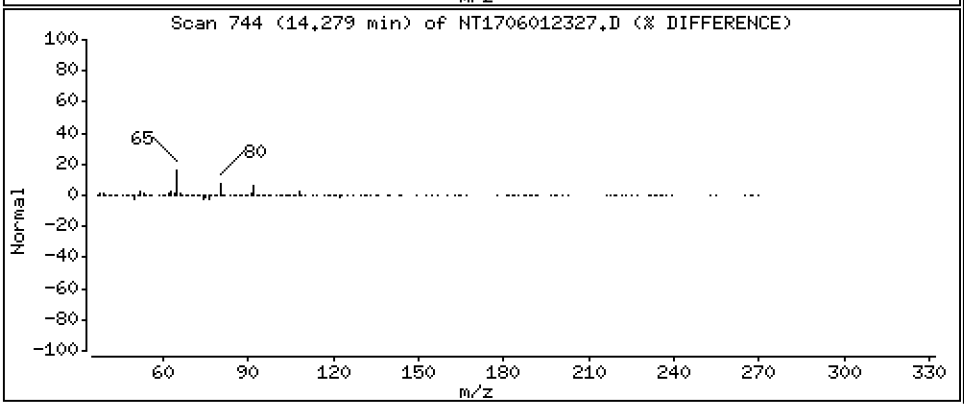
38 2-Nitroaniline

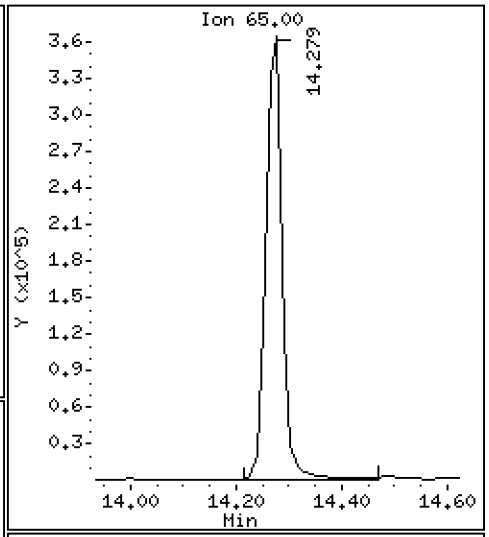
Concentration: 12.93 ug/mL

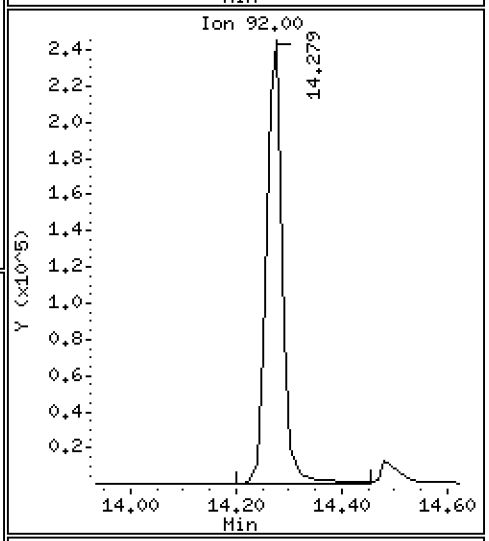


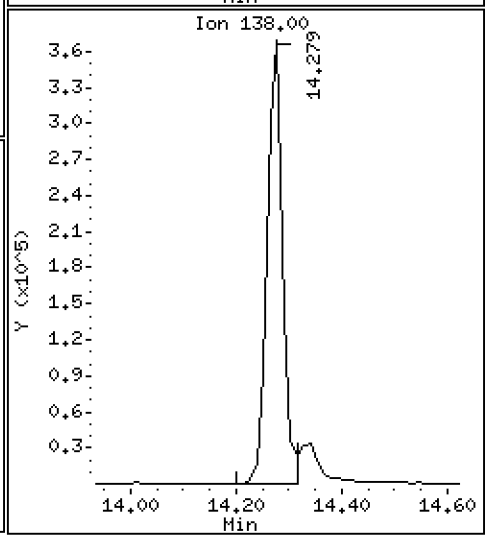












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

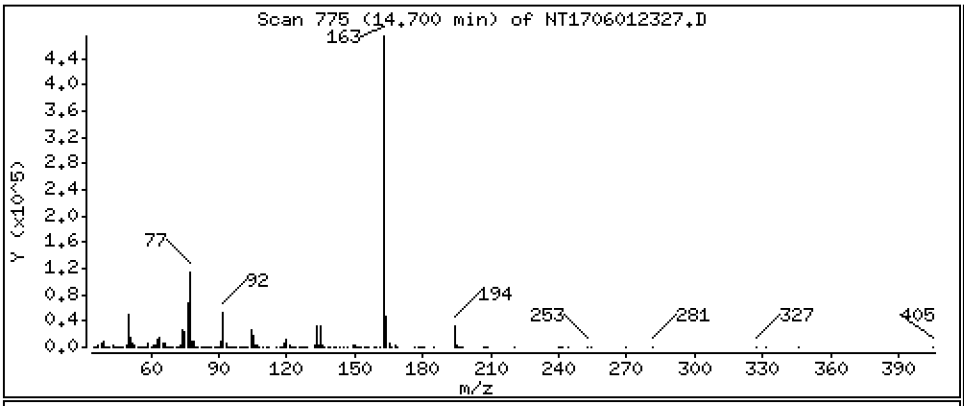
Operator: VTS

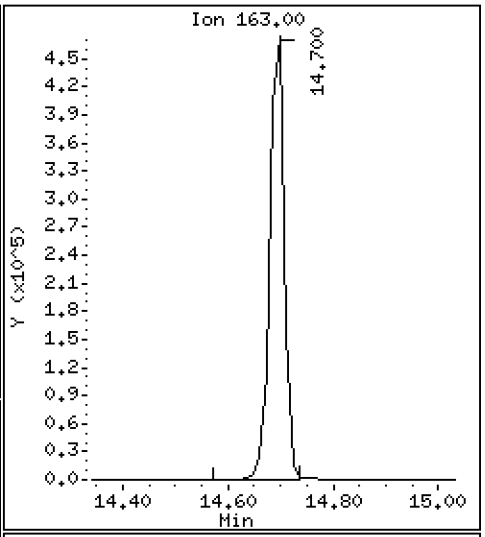
Column phase: ZB-5msi

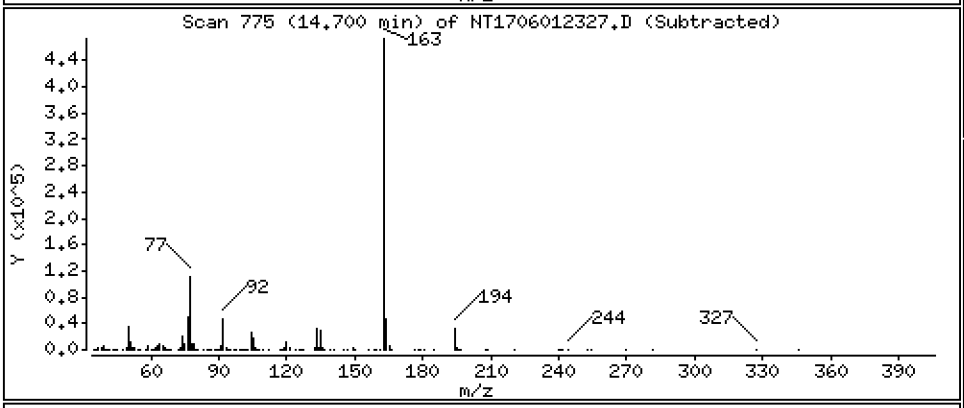
Column diameter: 0.25

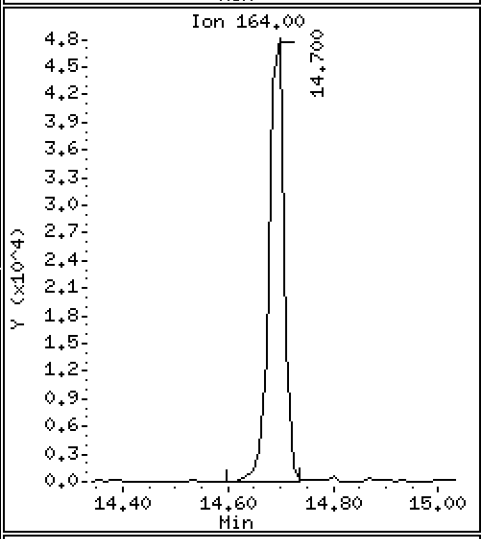
39 Dimethylphthalate

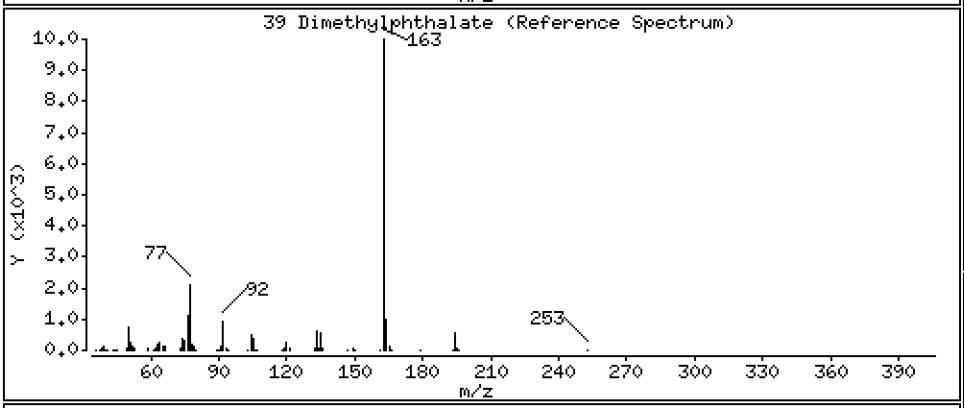
Concentration: 4.775 ug/mL

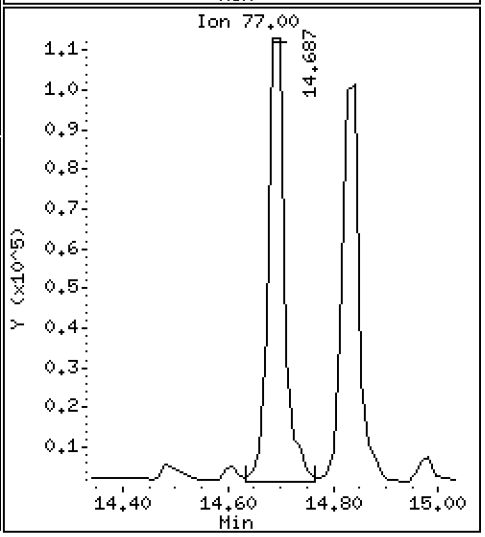


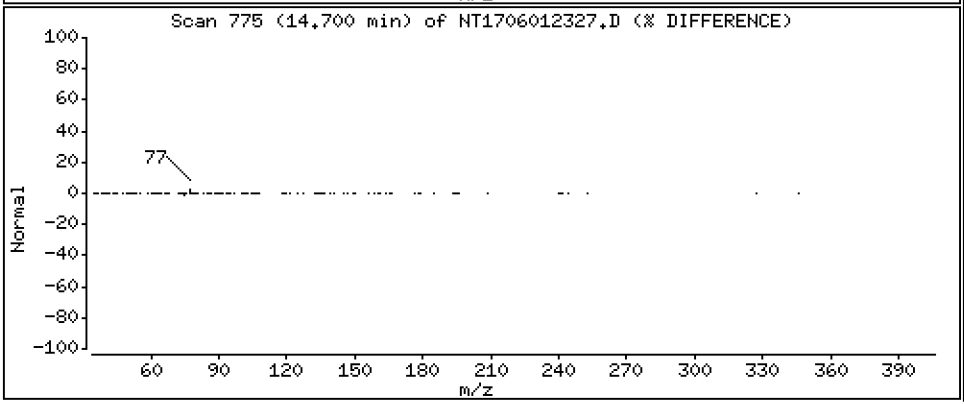












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

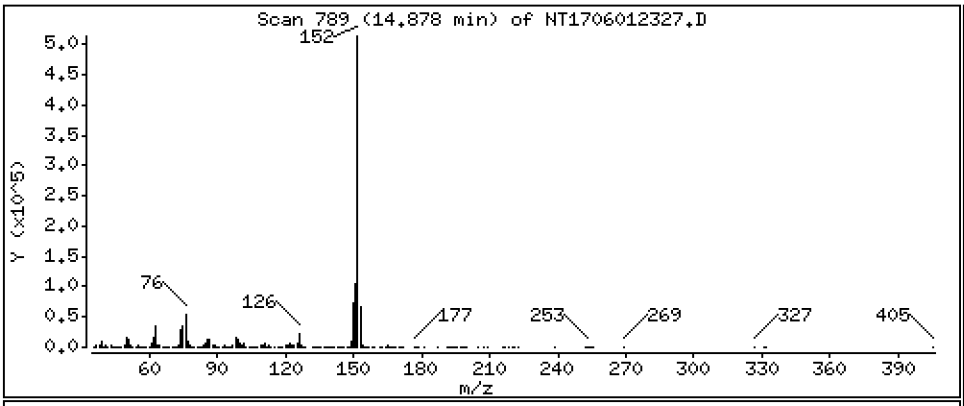
Operator: VTS

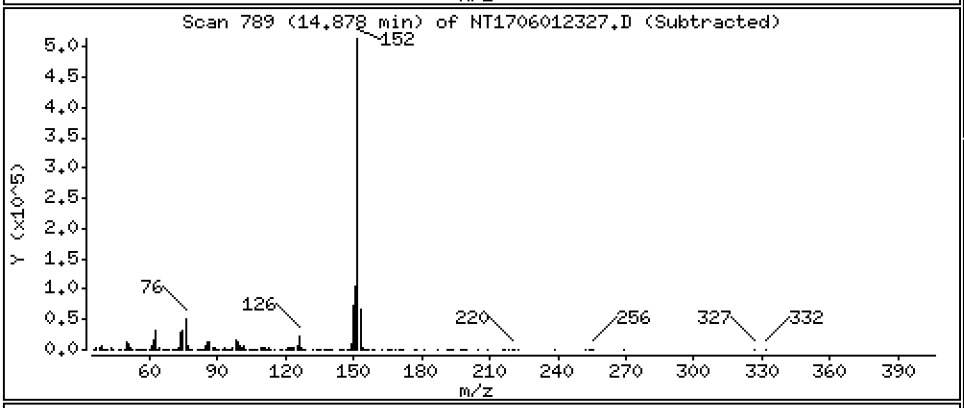
Column phase: ZB-5msi

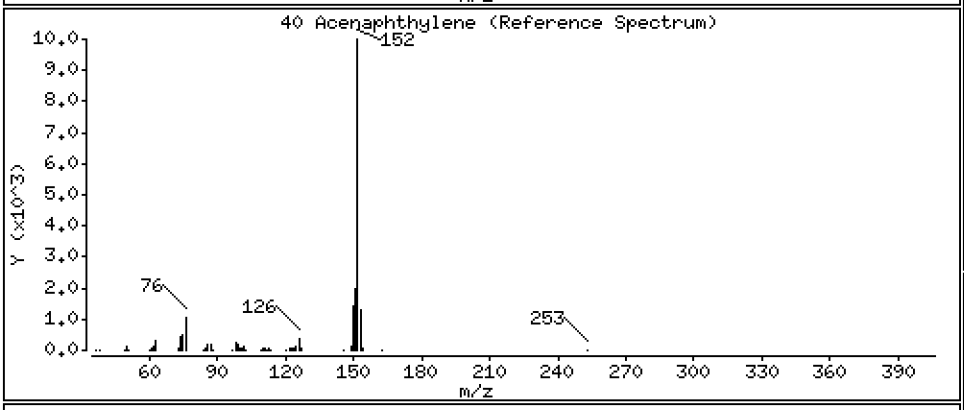
Column diameter: 0.25

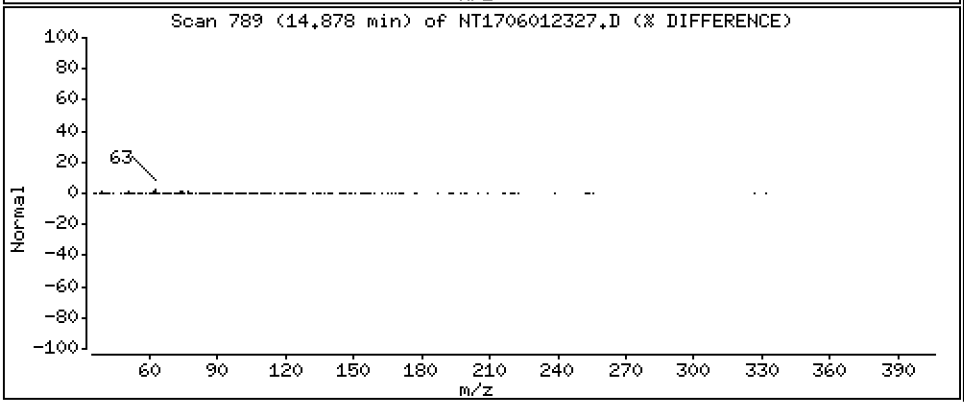
40 Acenaphthylene

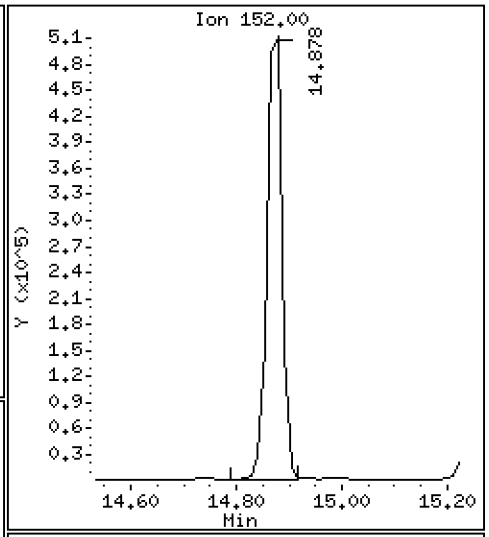
Concentration: 3.658 ug/mL

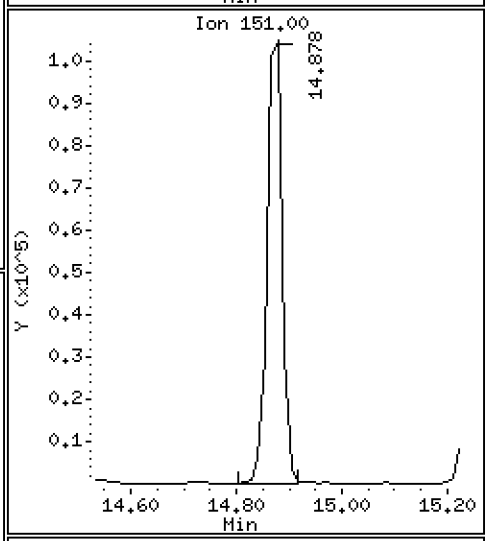


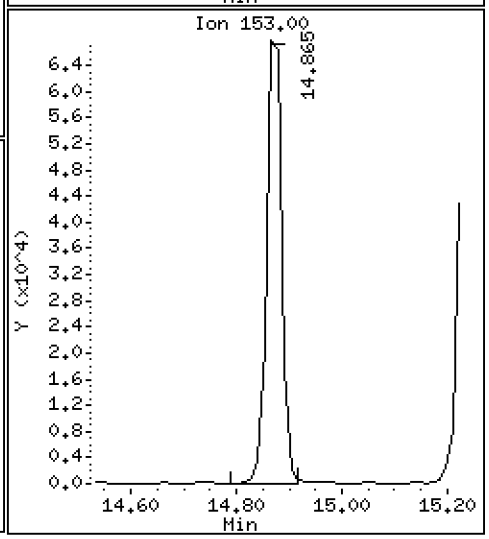












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

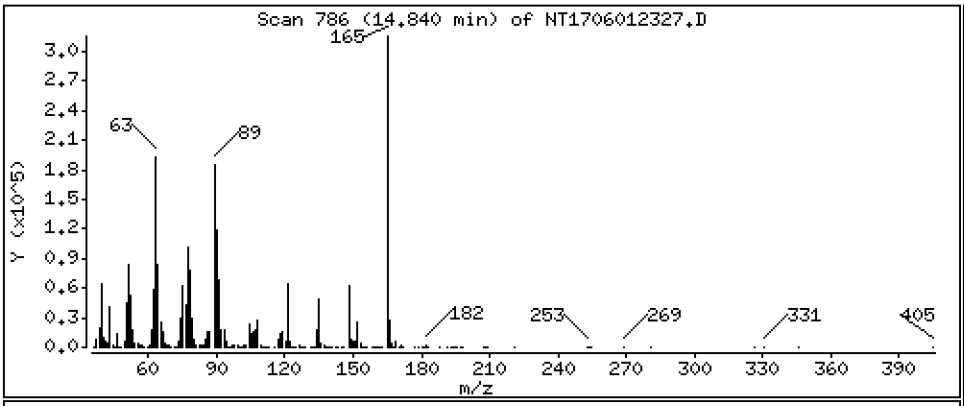
Operator: VTS

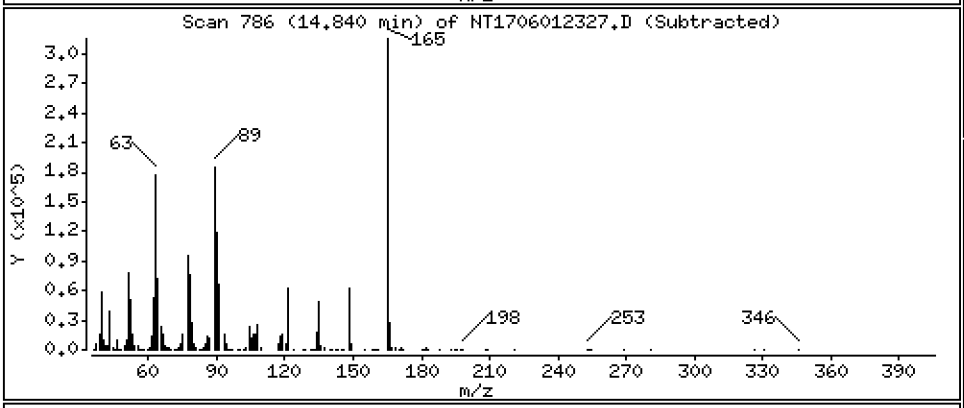
Column phase: ZB-5msi

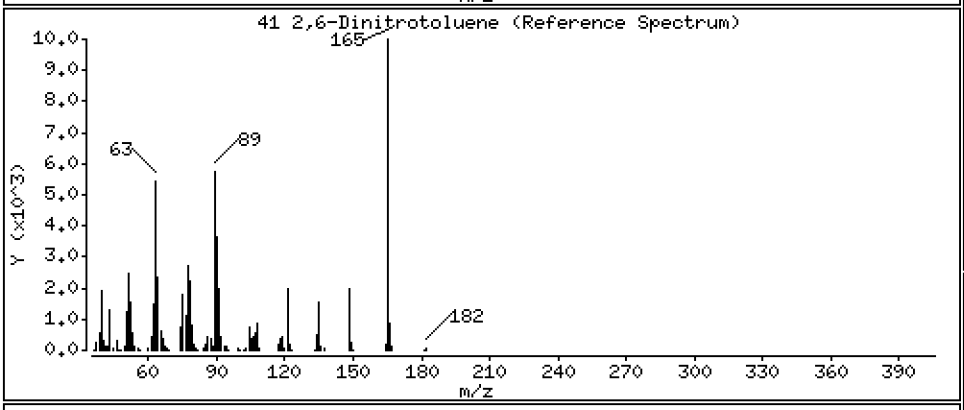
Column diameter: 0.25

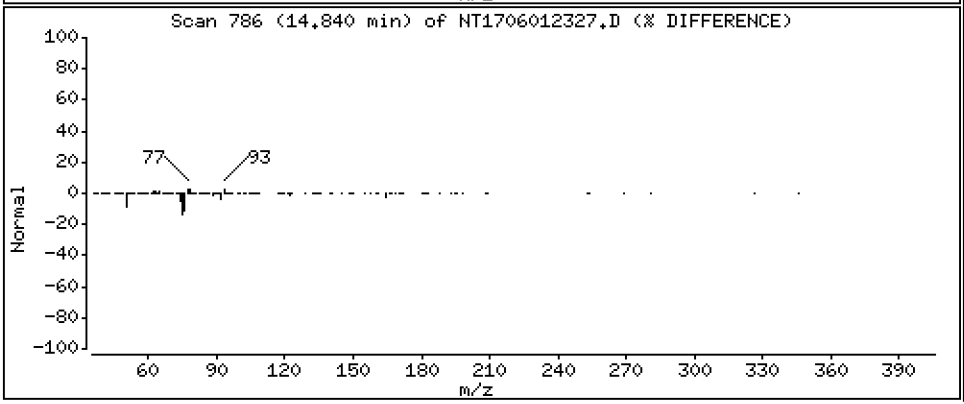
41 2,6-Dinitrotoluene

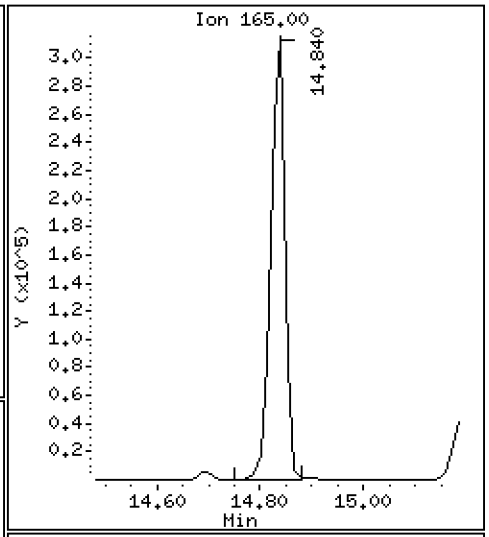
Concentration: 13.09 ug/mL

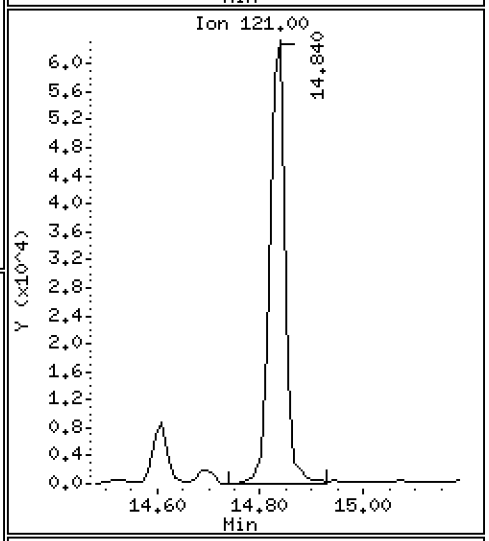


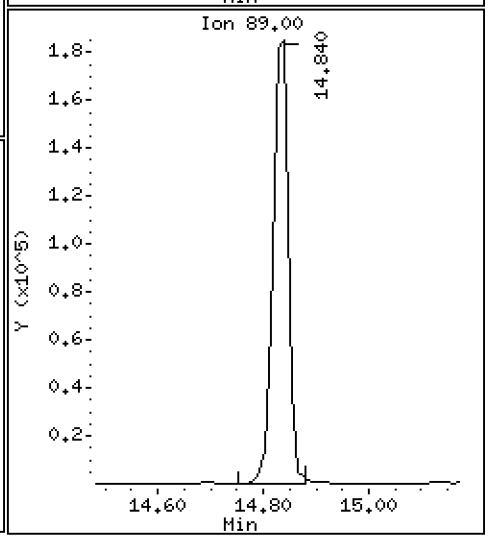












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

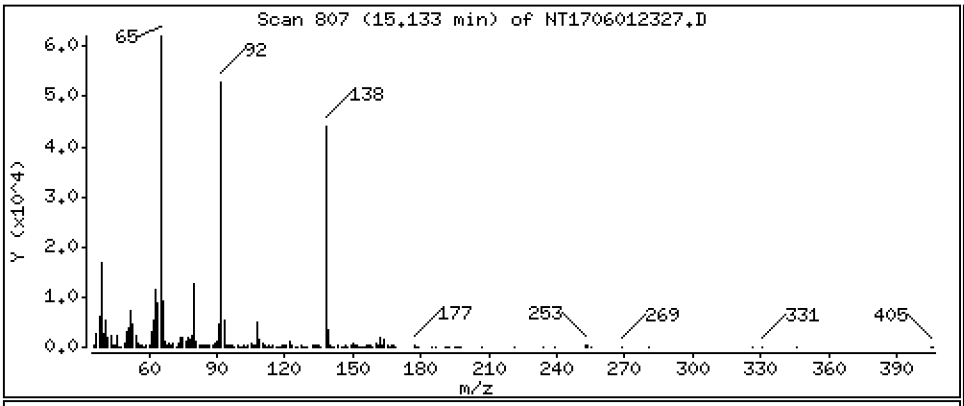
Operator: VTS

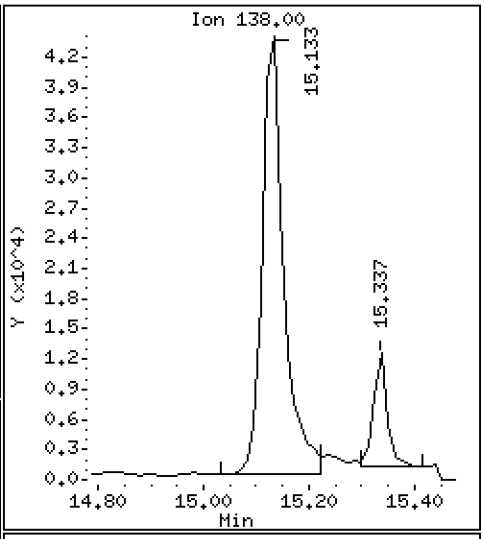
Column phase: ZB-5msi

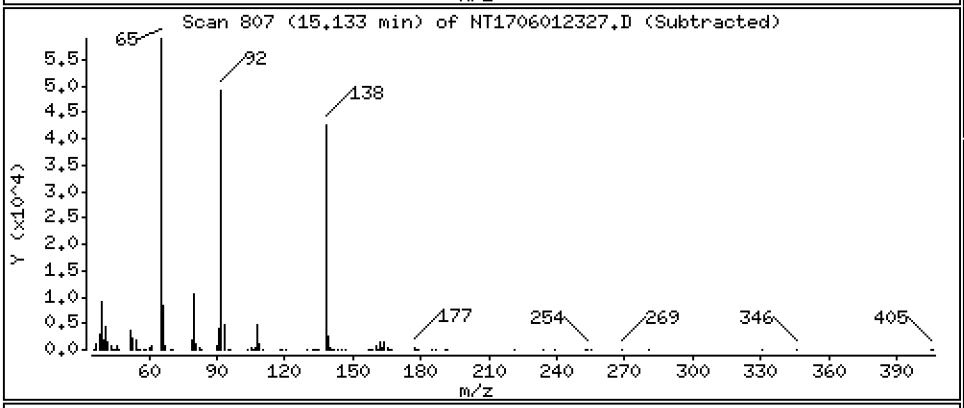
Column diameter: 0.25

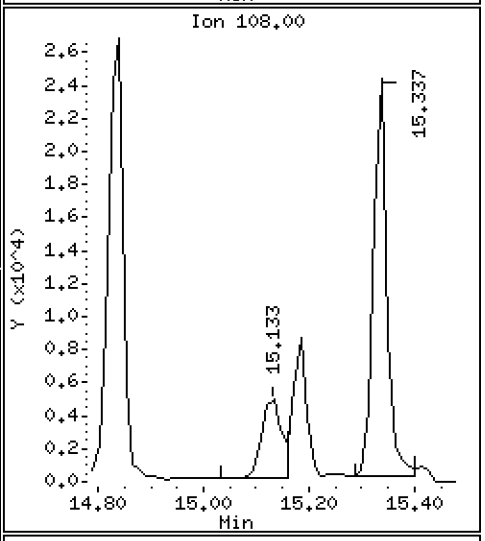
43 3-Nitroaniline

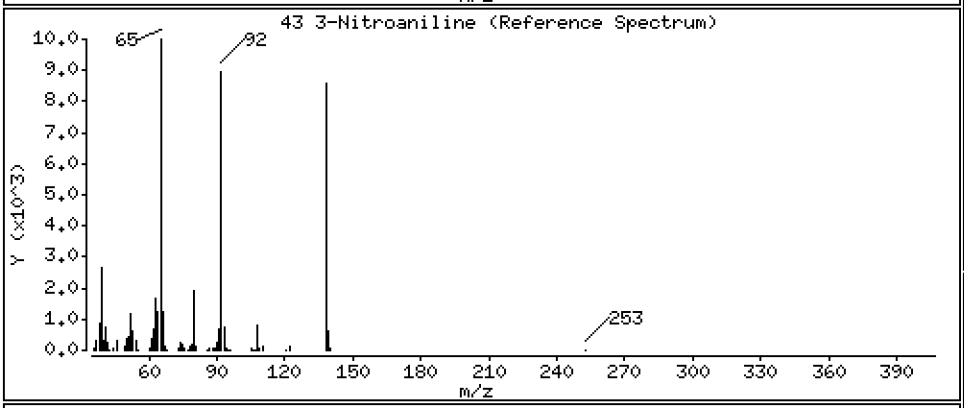
Concentration: 3.011 ug/mL

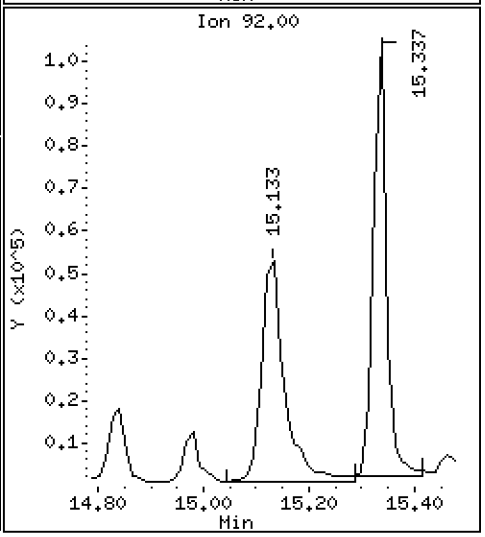


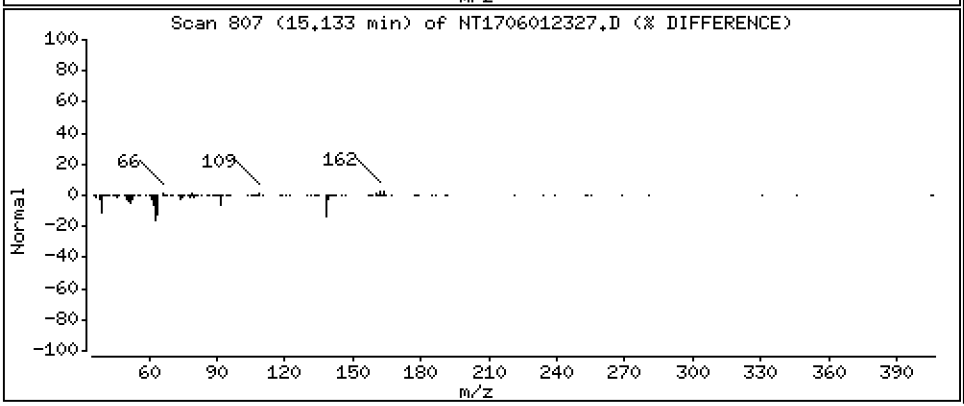












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

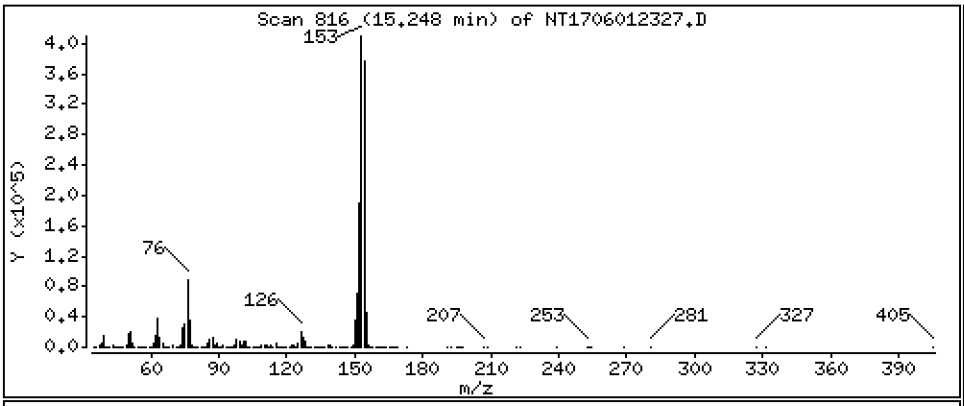
Operator: VTS

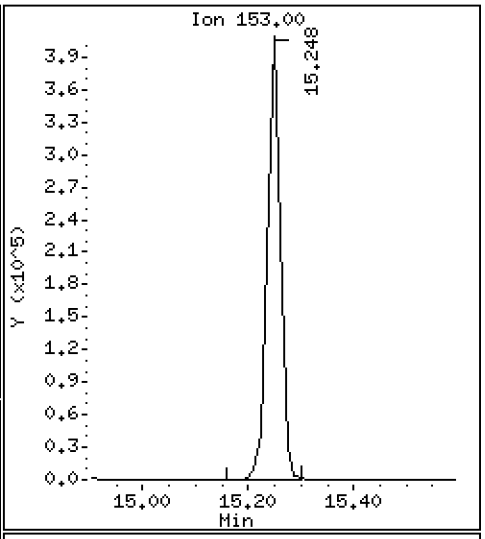
Column phase: ZB-5msi

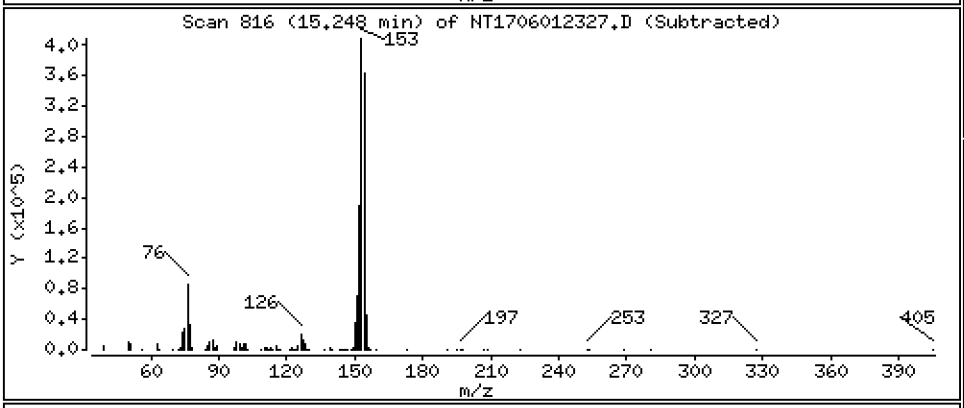
Column diameter: 0.25

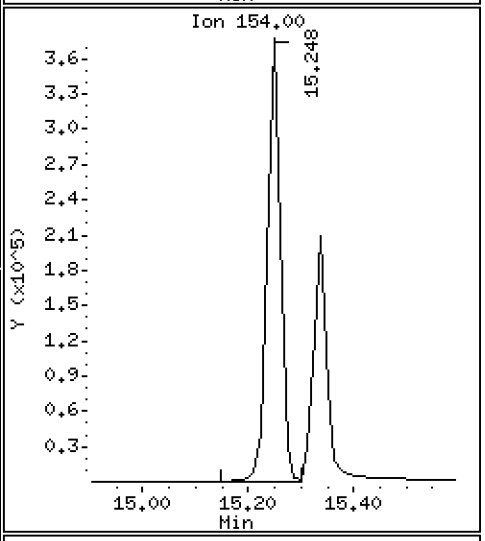
44 Acenaphthene

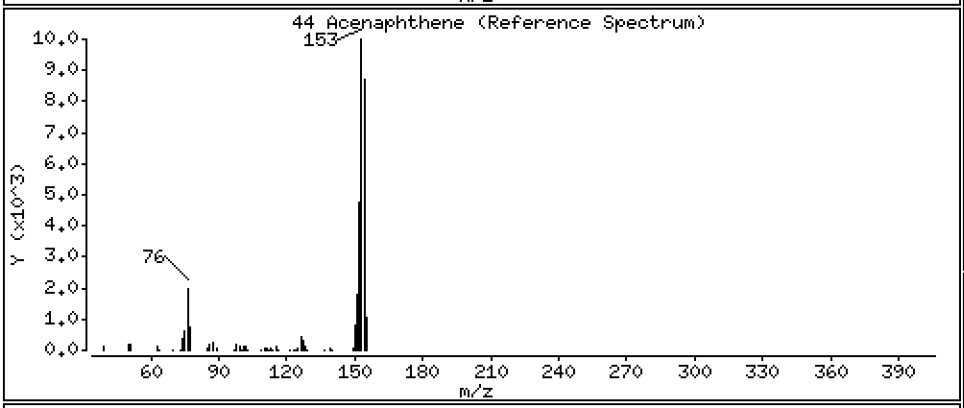
Concentration: 4.006 ug/mL

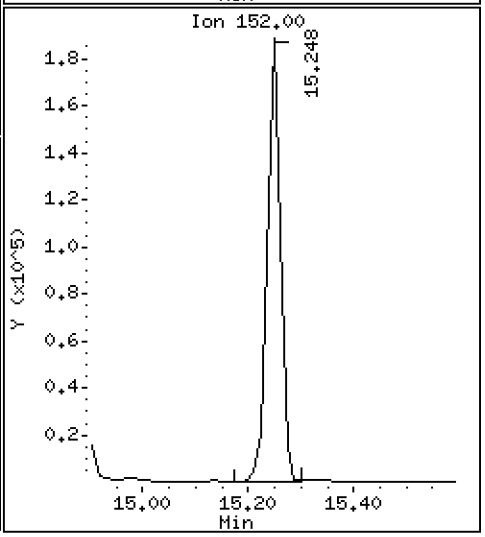


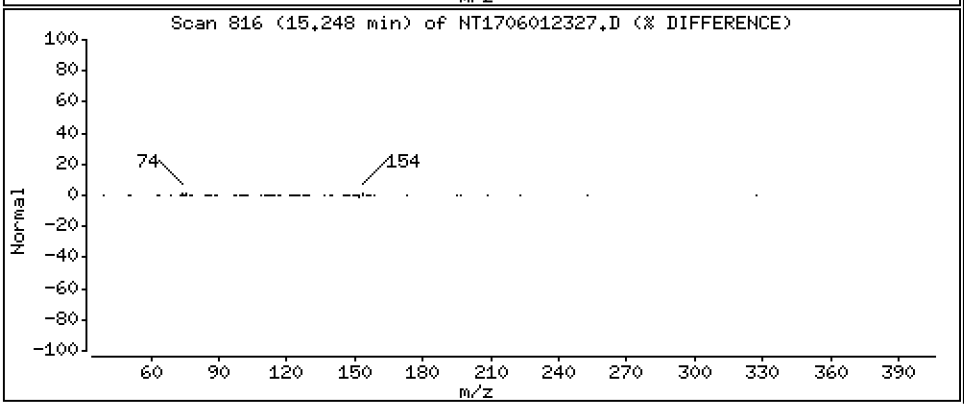












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

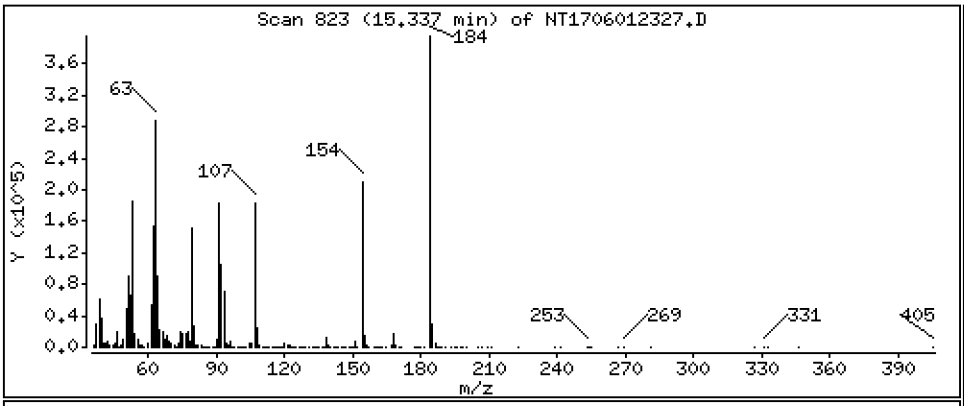
Operator: VTS

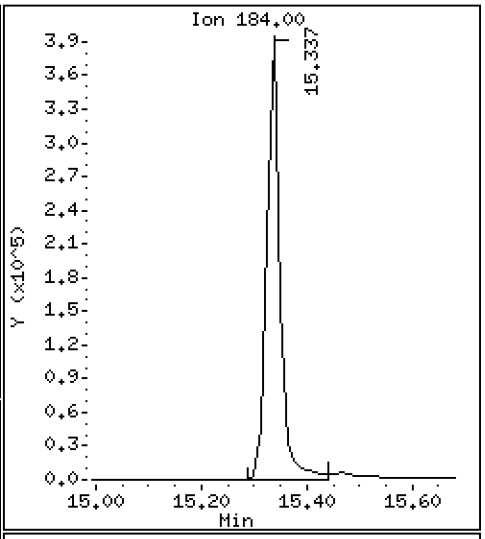
Column phase: ZB-5msi

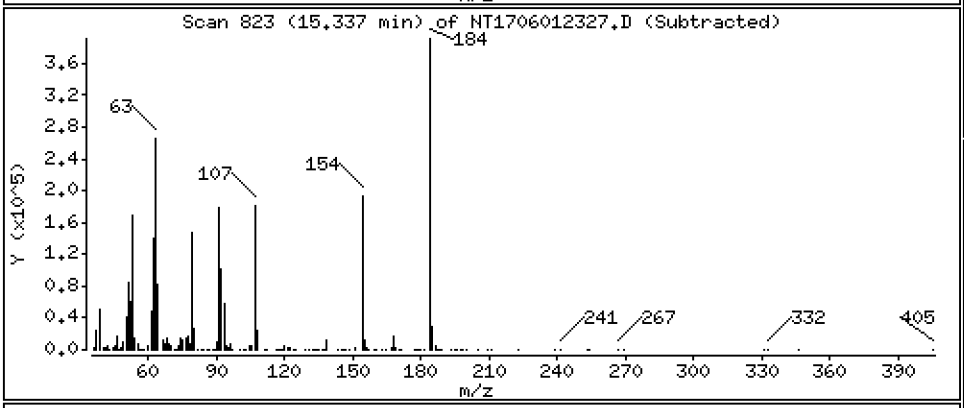
Column diameter: 0.25

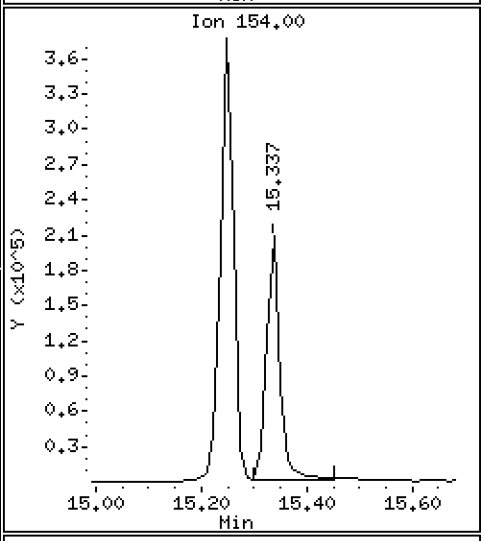
45 2,4-Dinitrophenol

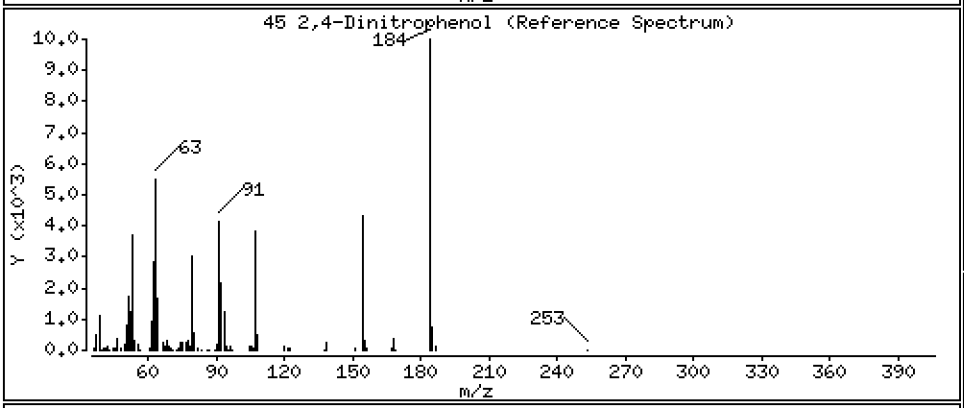
Concentration: 24.10 ug/mL

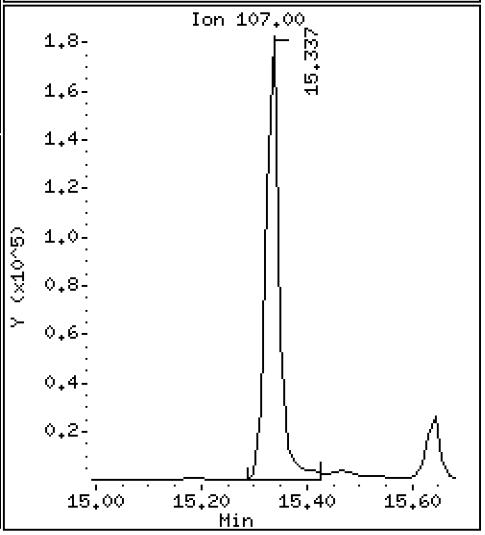


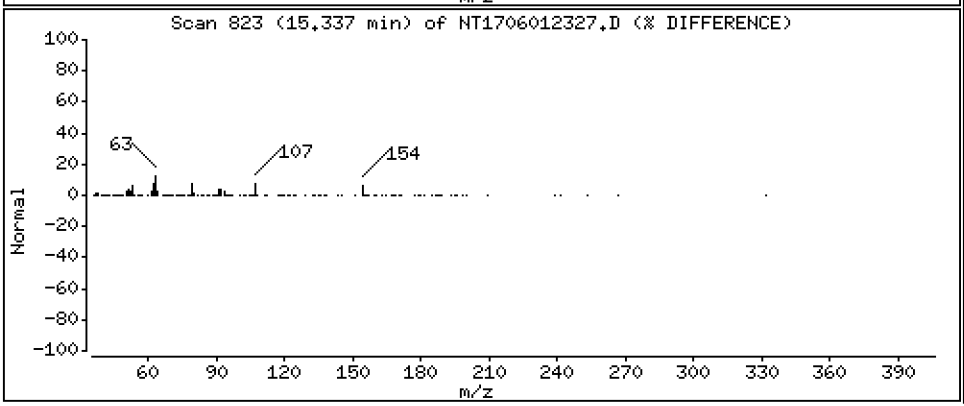












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

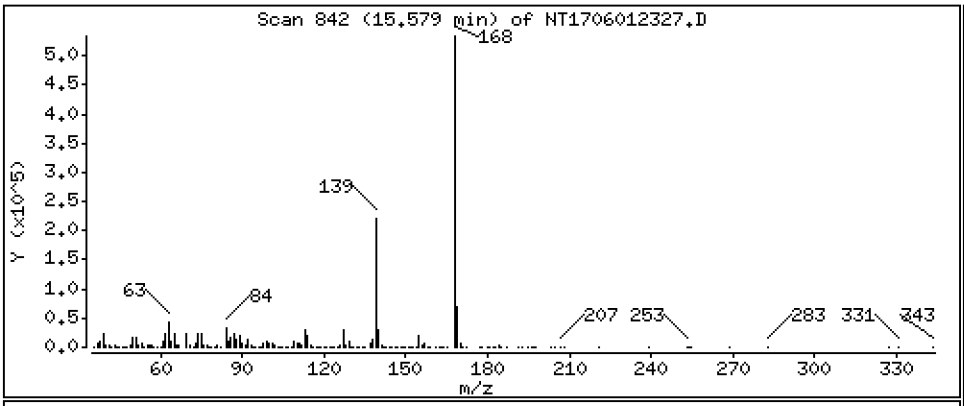
Operator: VTS

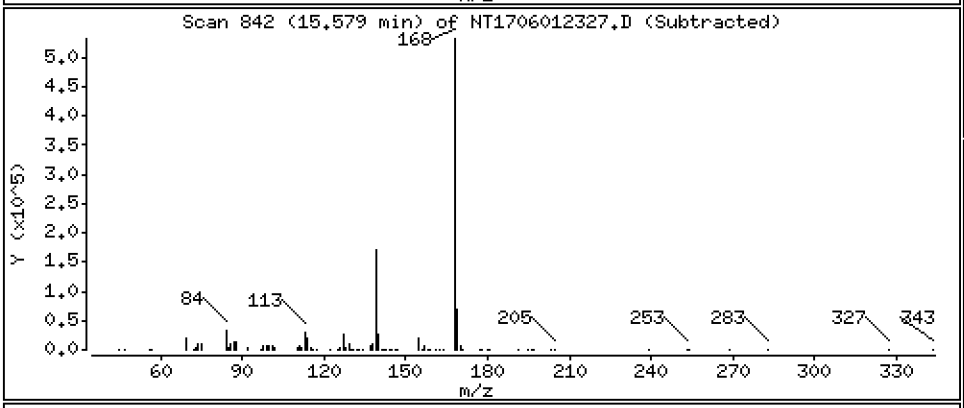
Column phase: ZB-5msi

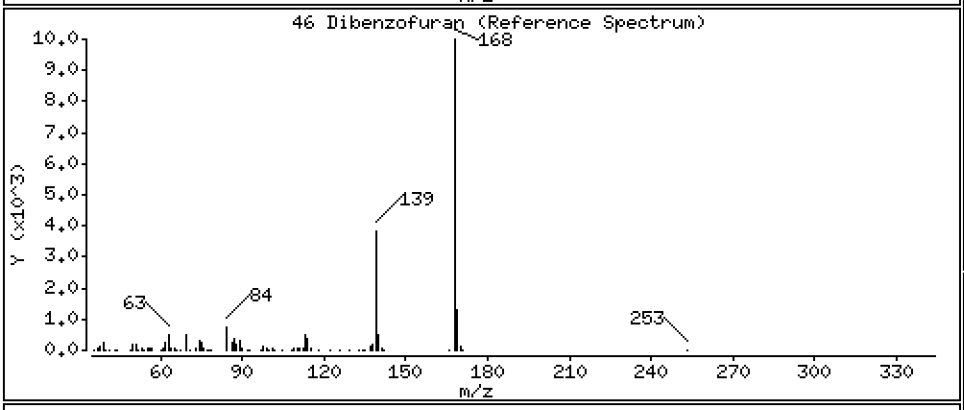
Column diameter: 0.25

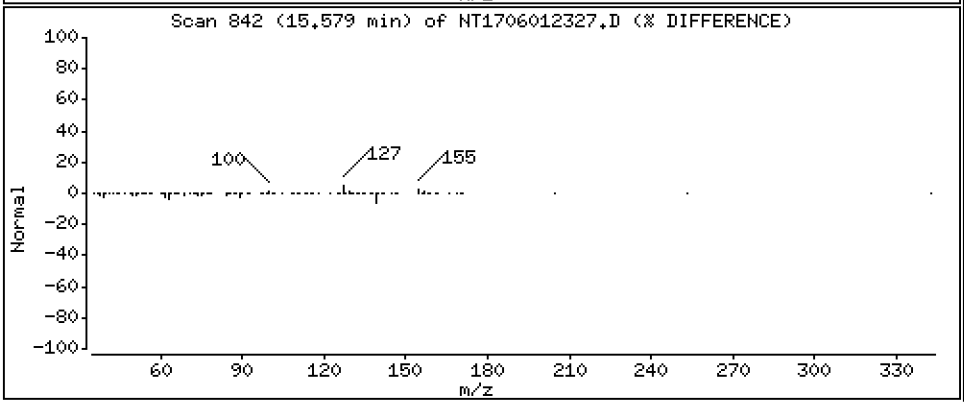
46 Dibenzofuran

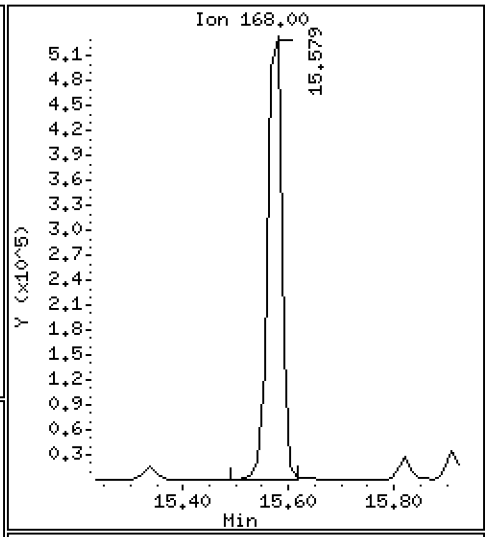
Concentration: 4.208 ug/mL

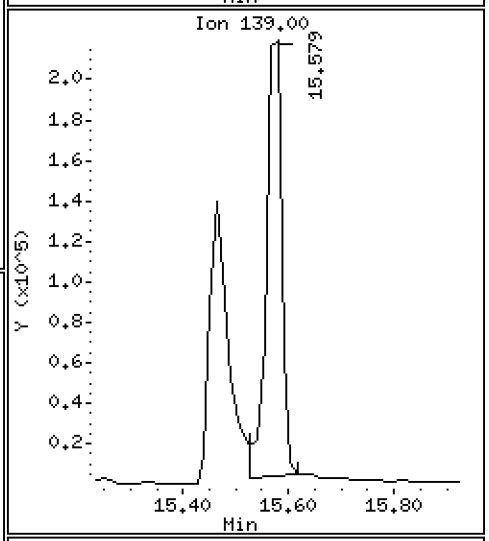


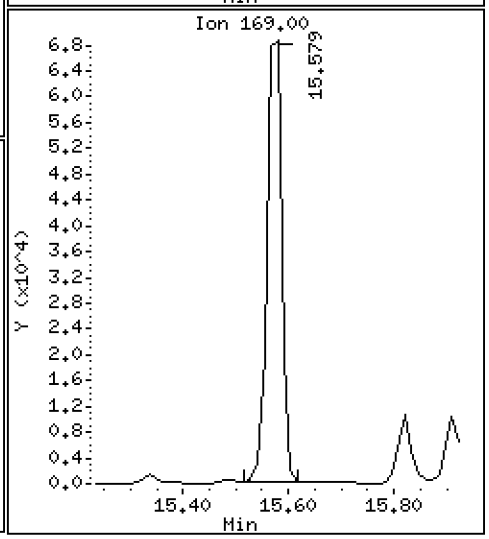












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

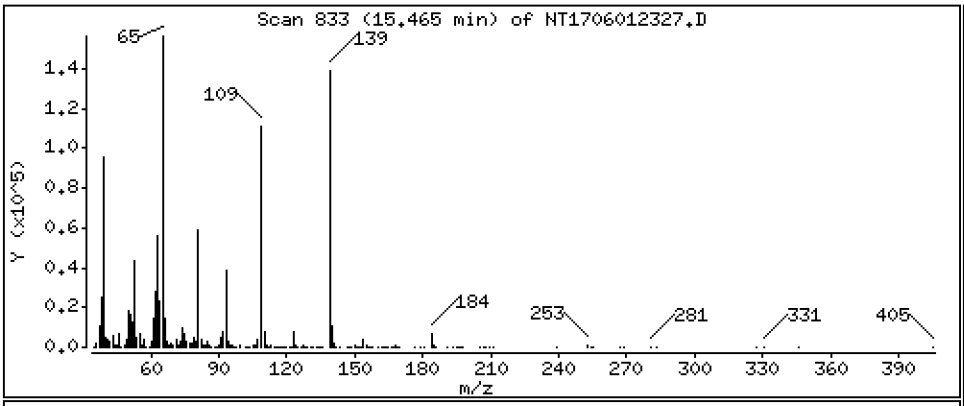
Operator: VTS

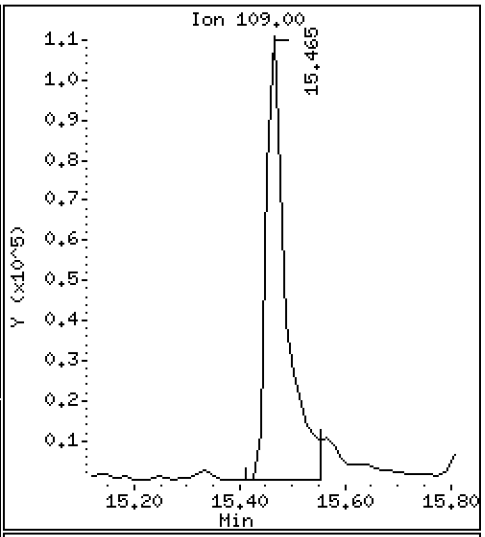
Column phase: ZB-5msi

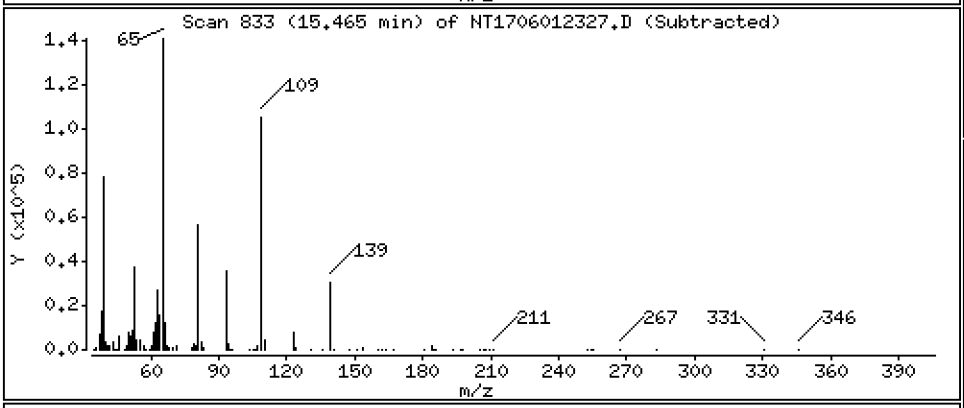
Column diameter: 0.25

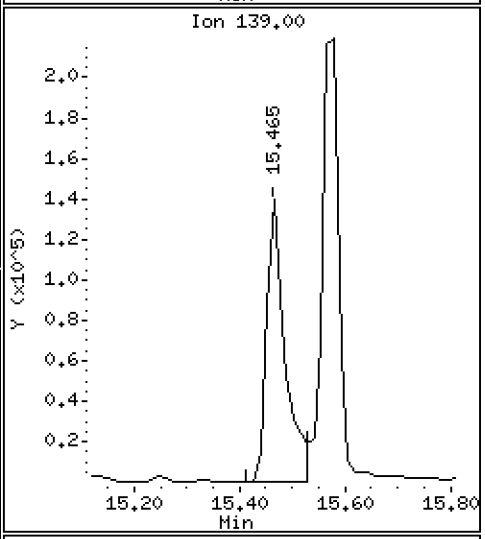
47 4-Nitrophenol

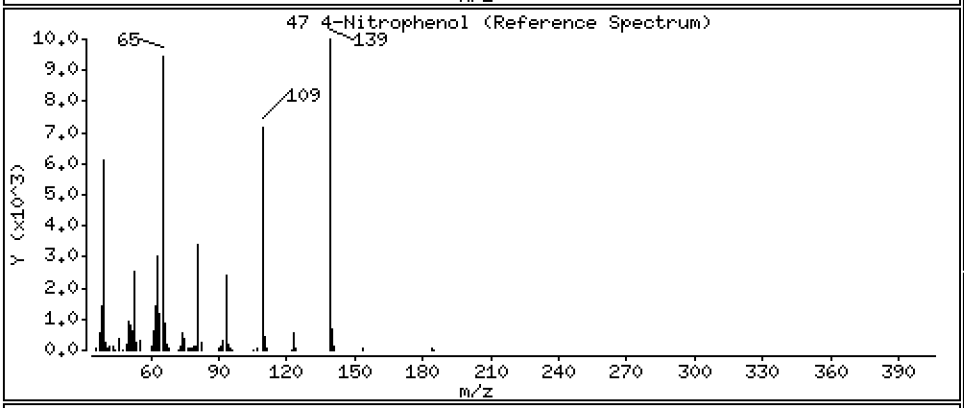
Concentration: 10.86 ug/mL

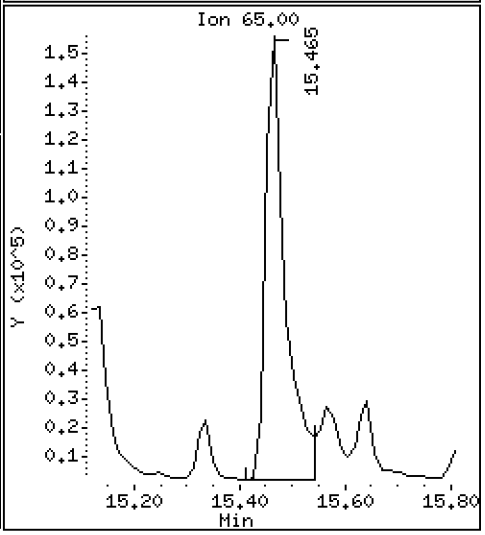


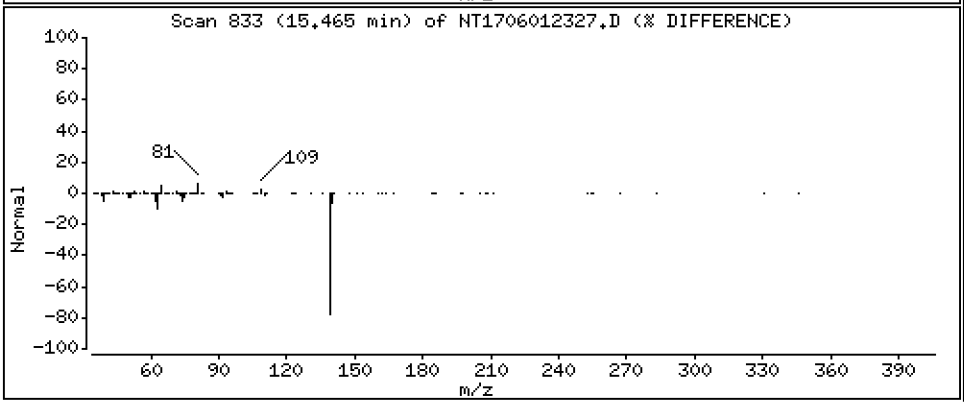












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

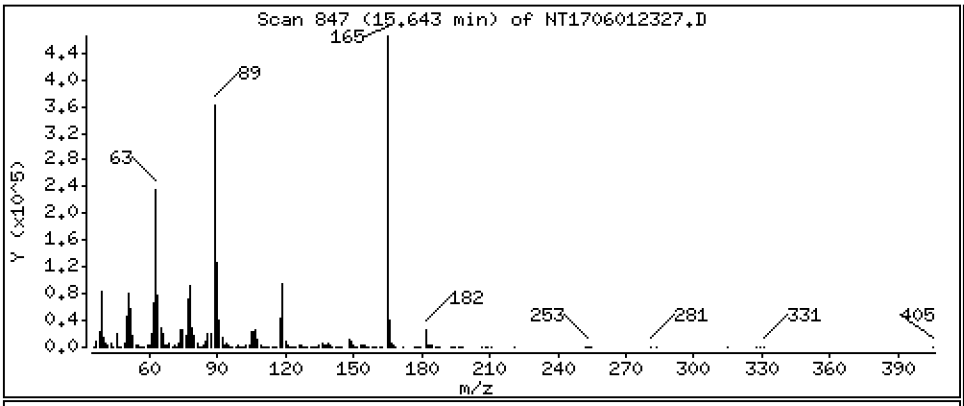
Operator: VTS

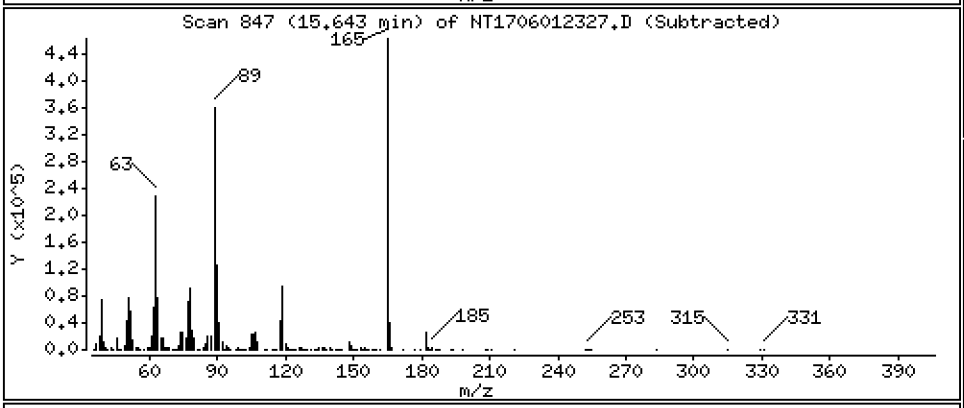
Column phase: ZB-5msi

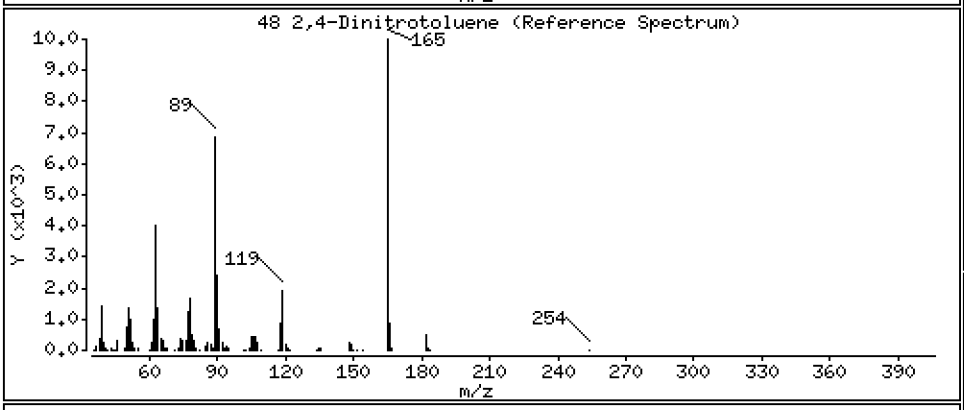
Column diameter: 0.25

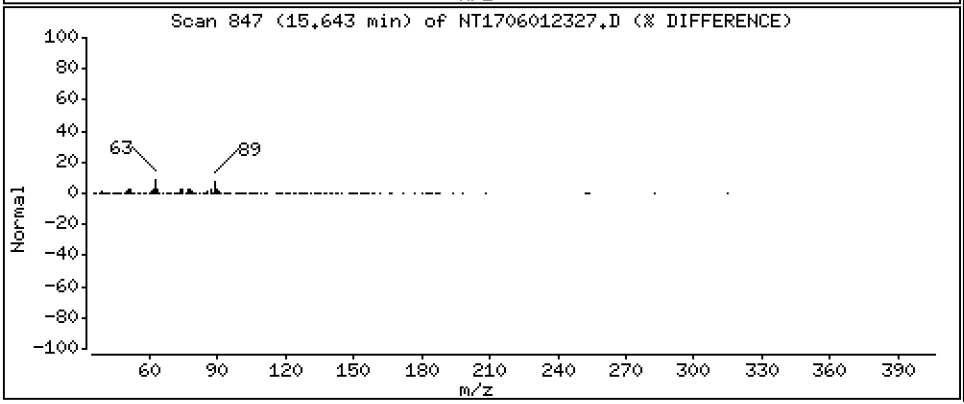
48 2,4-Dinitrotoluene

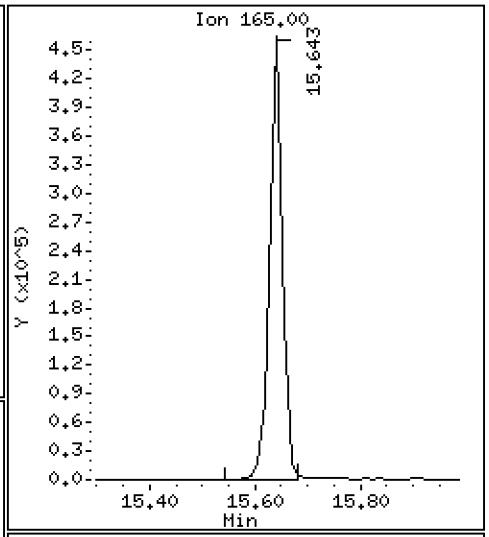
Concentration: 13.38 ug/mL

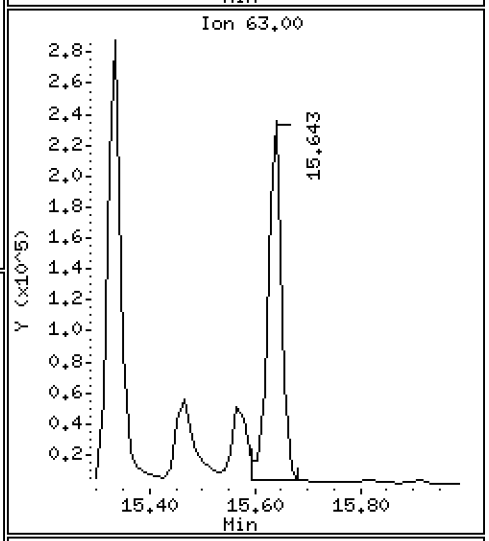


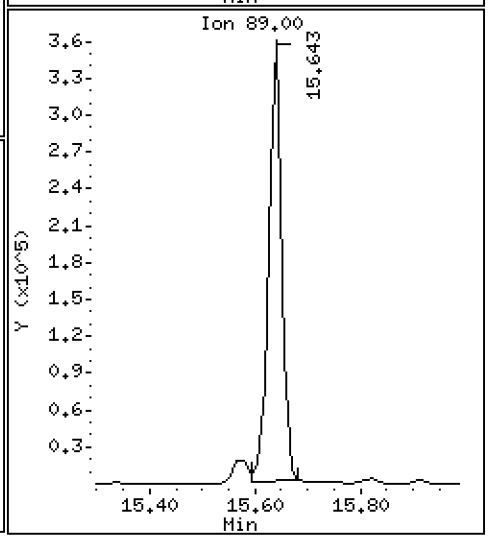












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

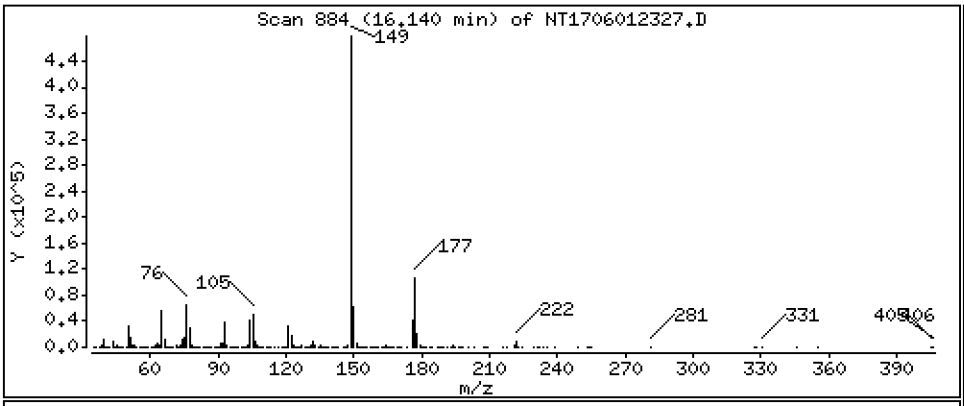
Operator: VTS

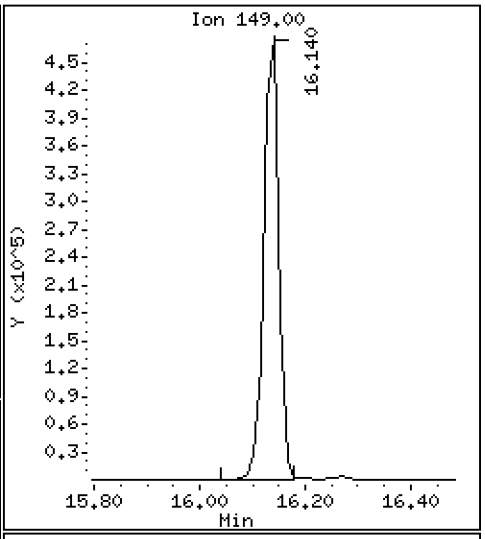
Column phase: ZB-5msi

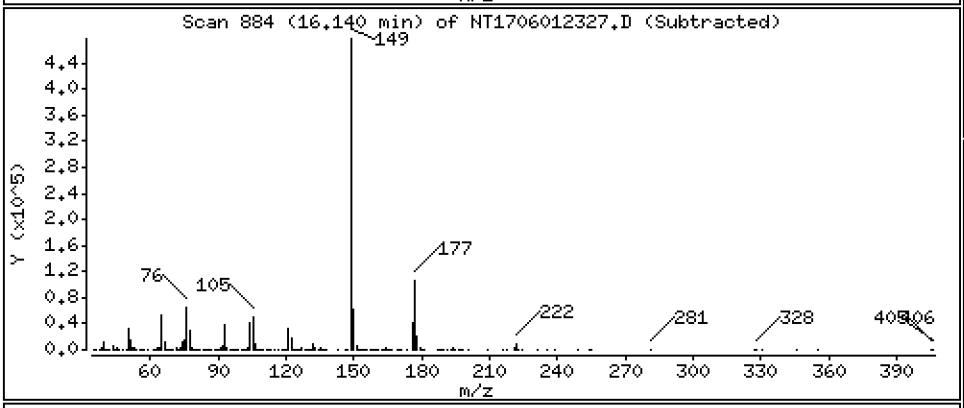
Column diameter: 0.25

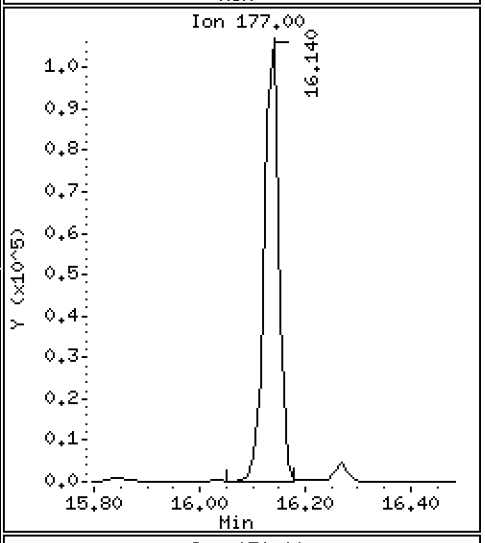
50 Diethylphthalate

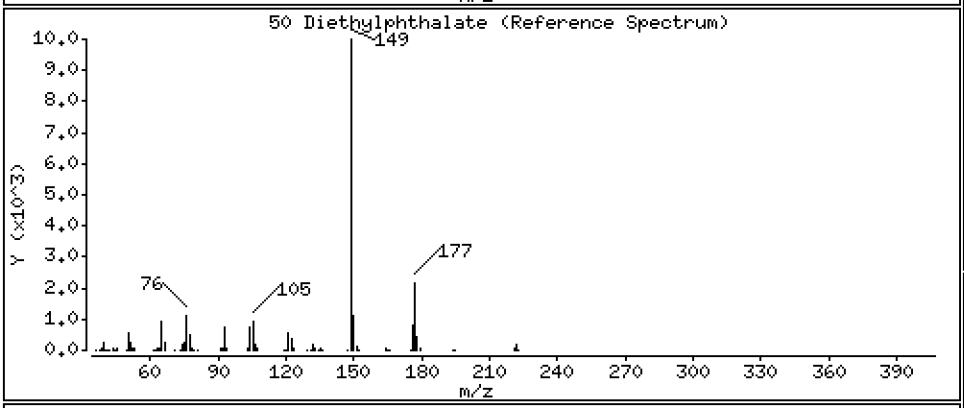
Concentration: 5.069 ug/mL

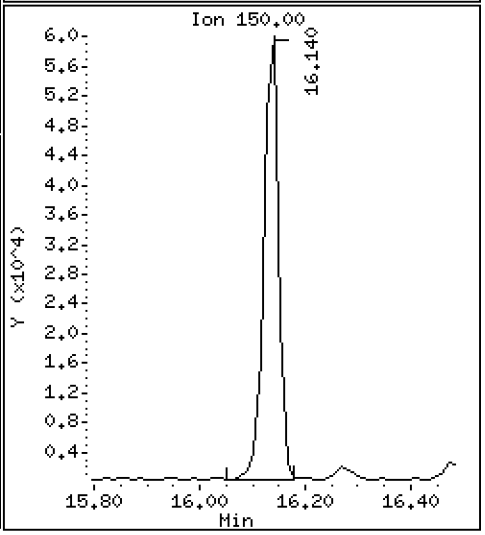


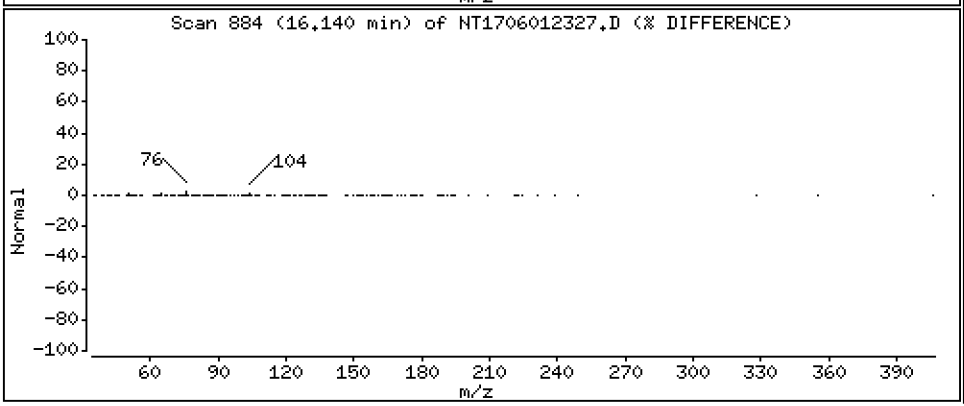












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

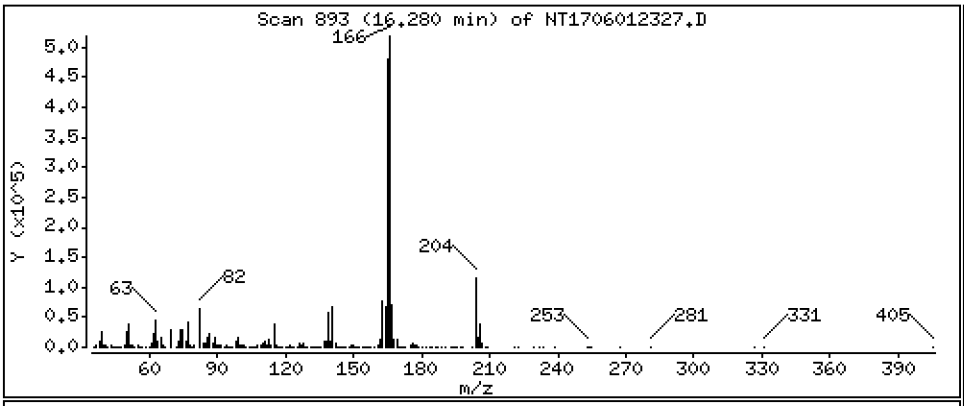
Operator: VTS

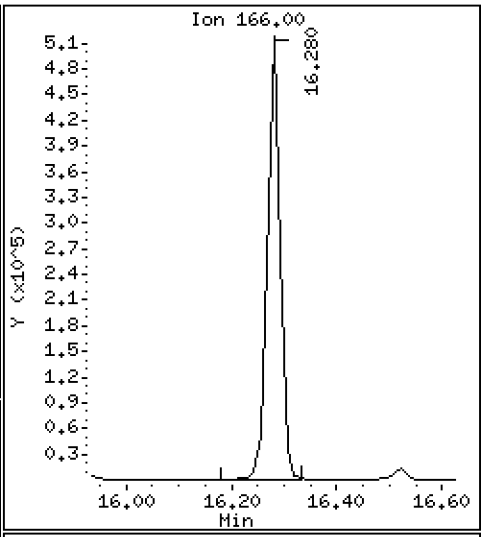
Column phase: ZB-5msi

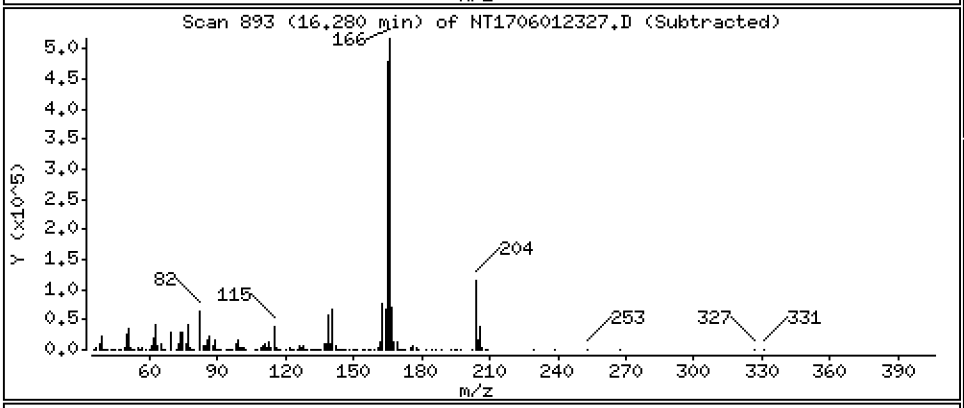
Column diameter: 0.25

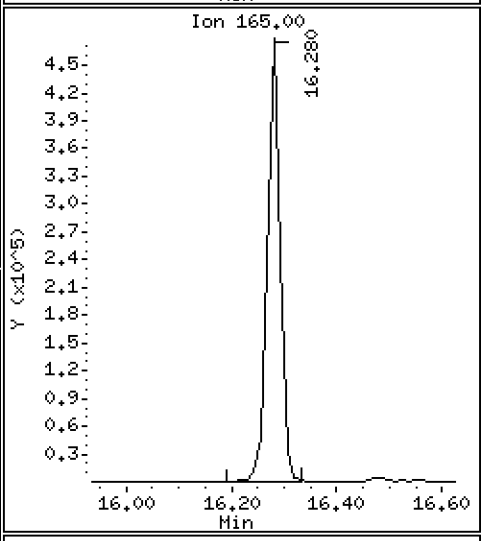
49 Fluorene

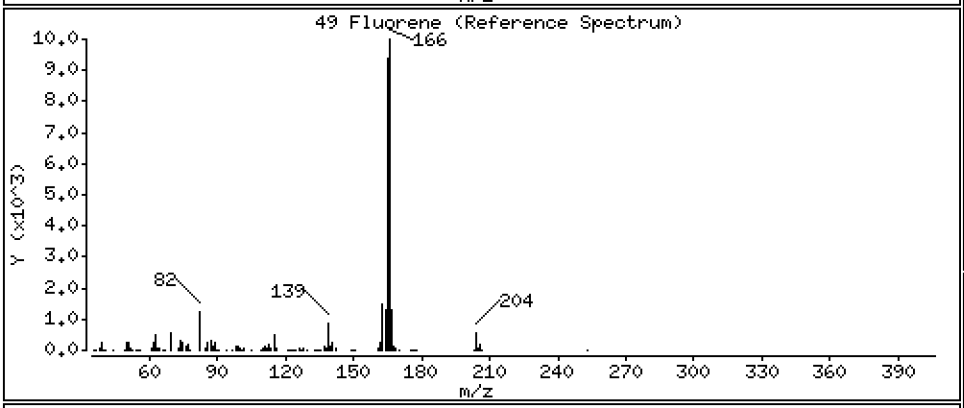
Concentration: 4.432 ug/mL

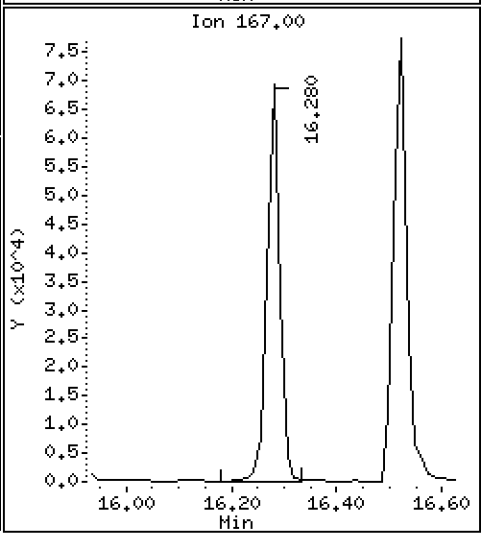


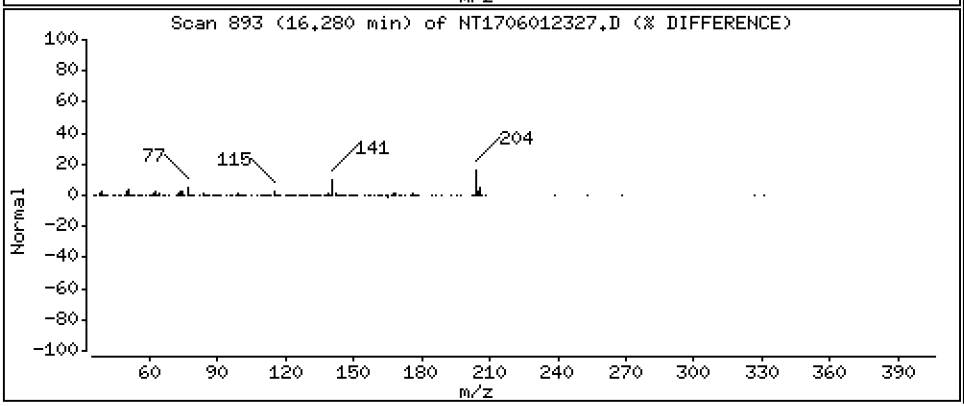












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

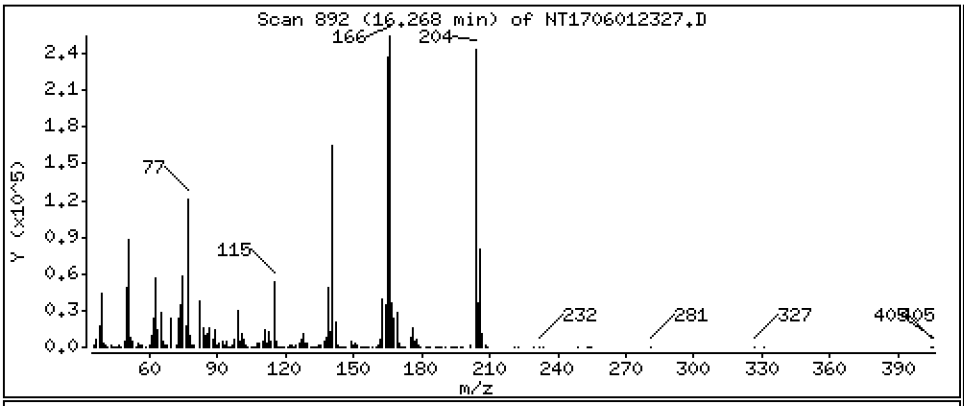
Operator: VTS

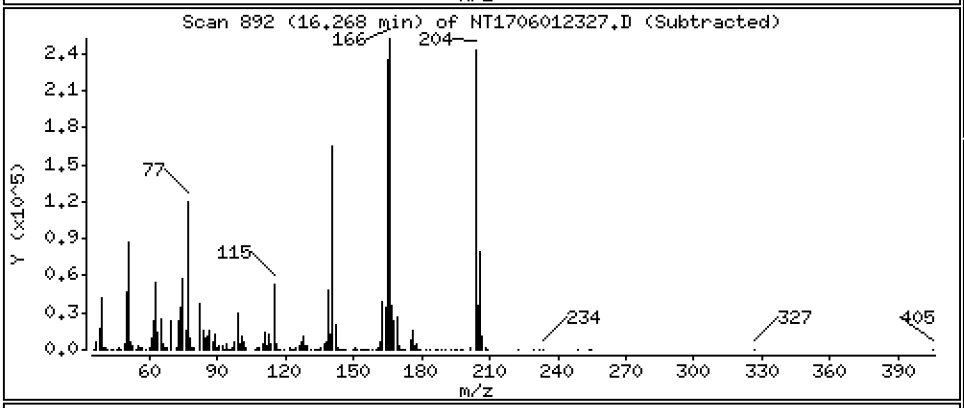
Column phase: ZB-5msi

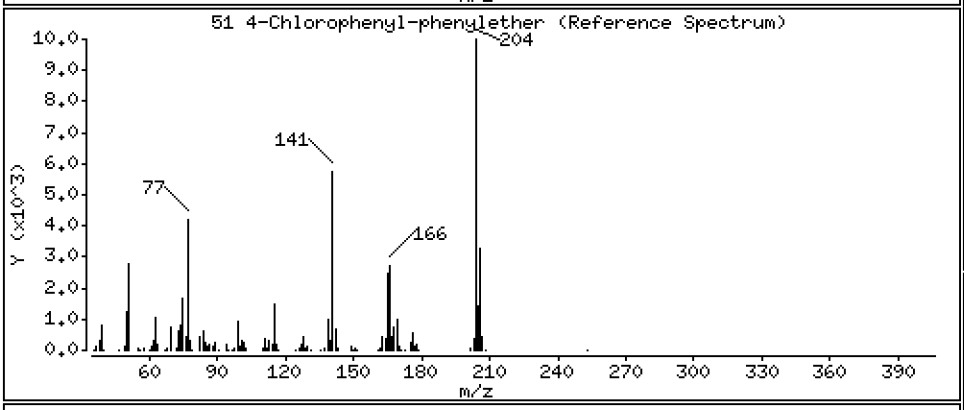
Column diameter: 0.25

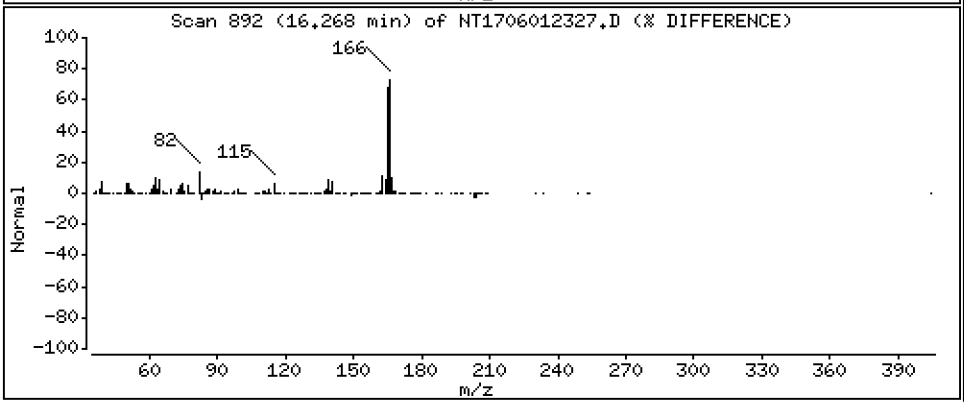
51 4-Chlorophenyl-phenylether

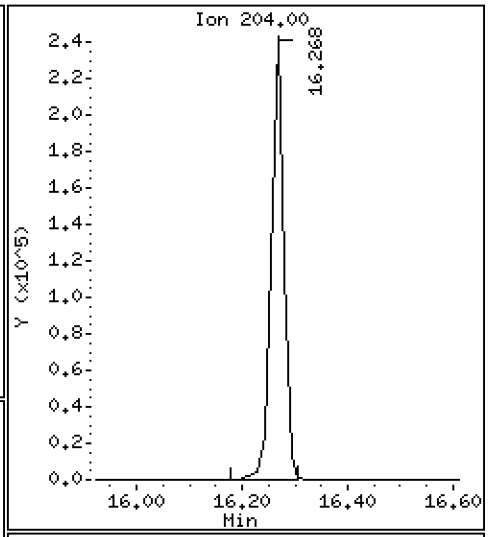
Concentration: 4.594 ug/mL

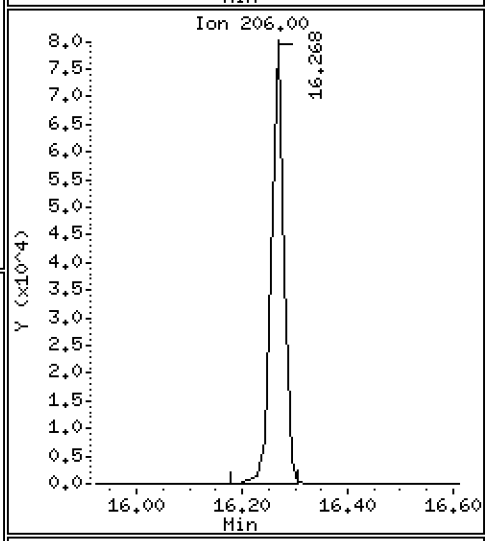


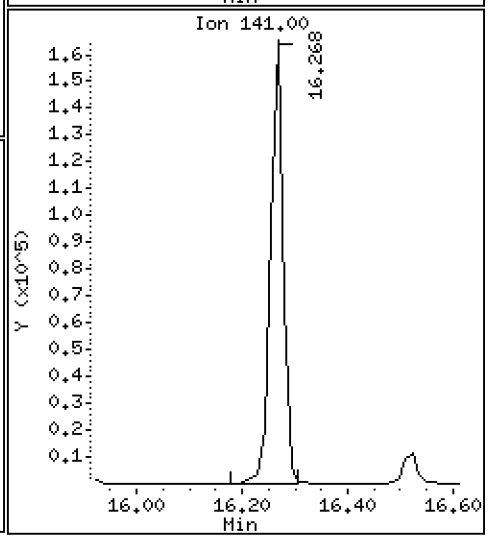












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

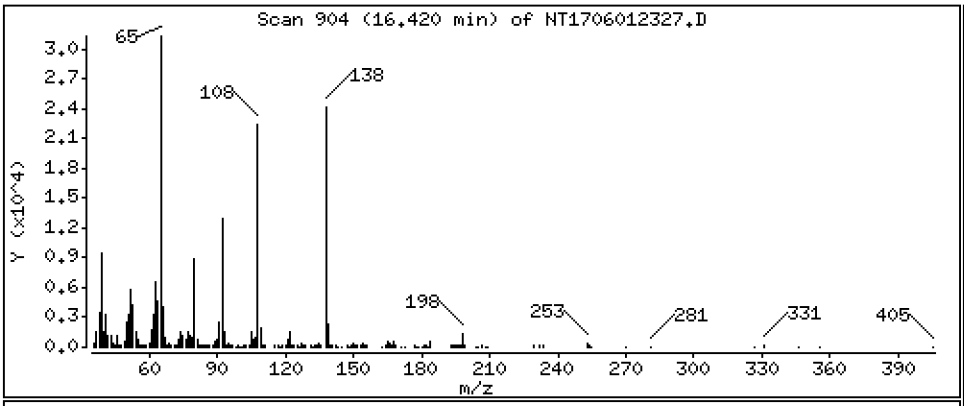
Operator: VTS

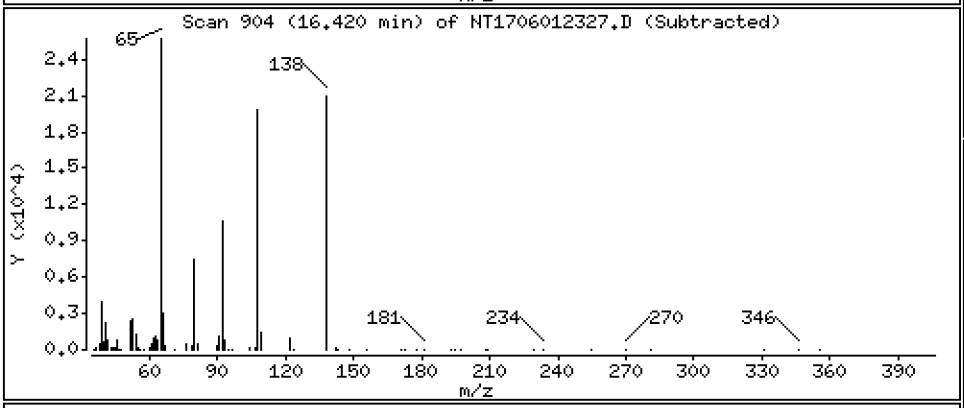
Column phase: ZB-5msi

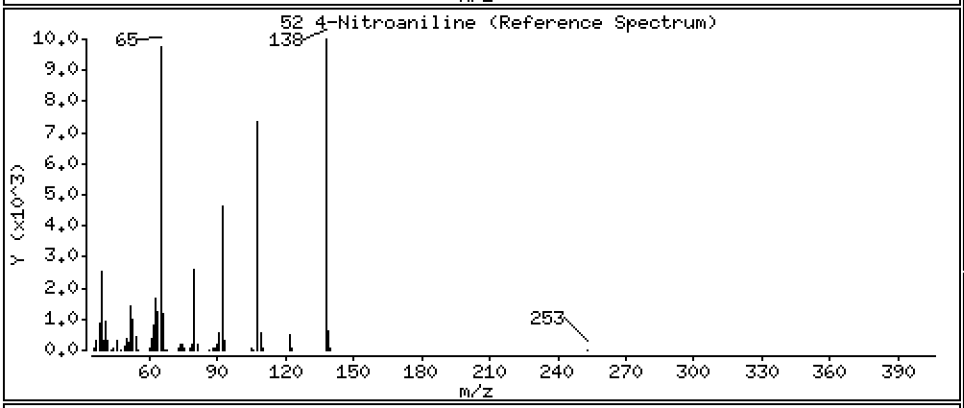
Column diameter: 0.25

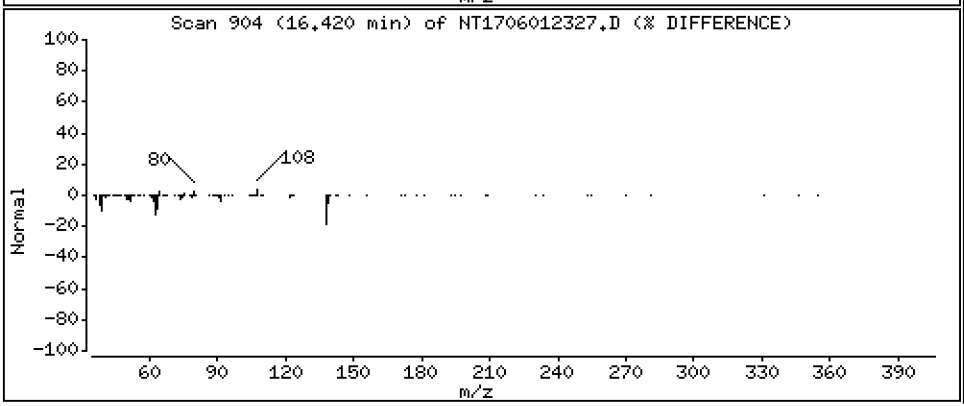
52 4-Nitroaniline

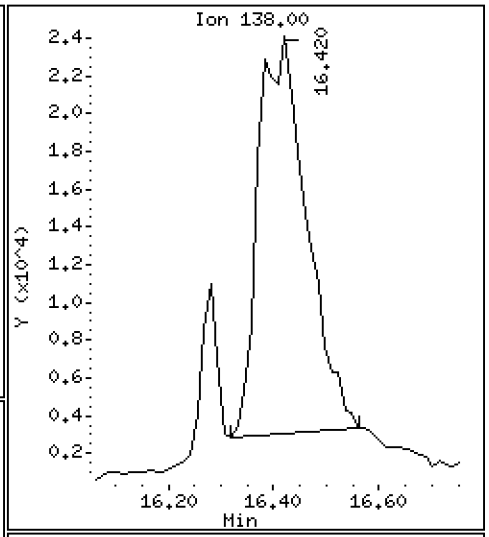
Concentration: 3.407 ug/mL

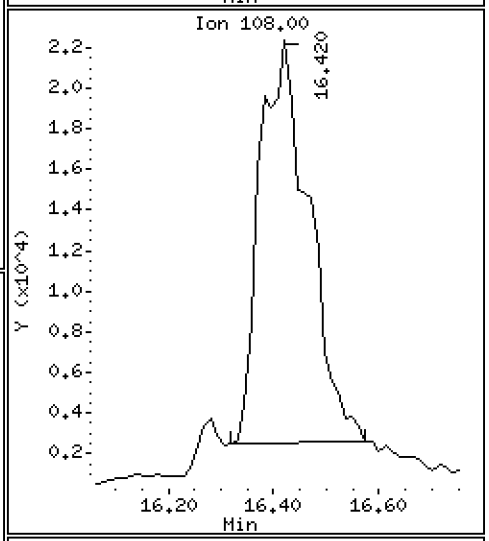


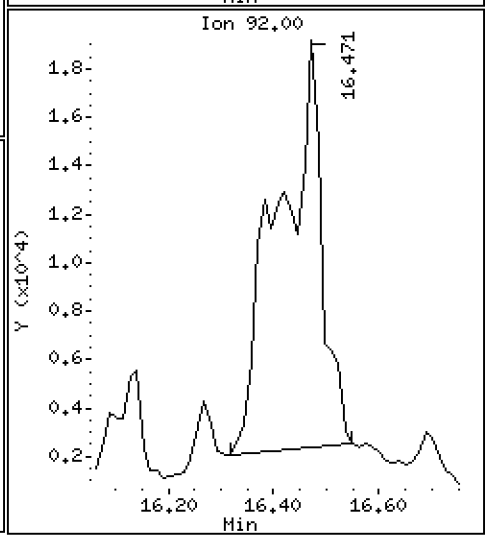












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

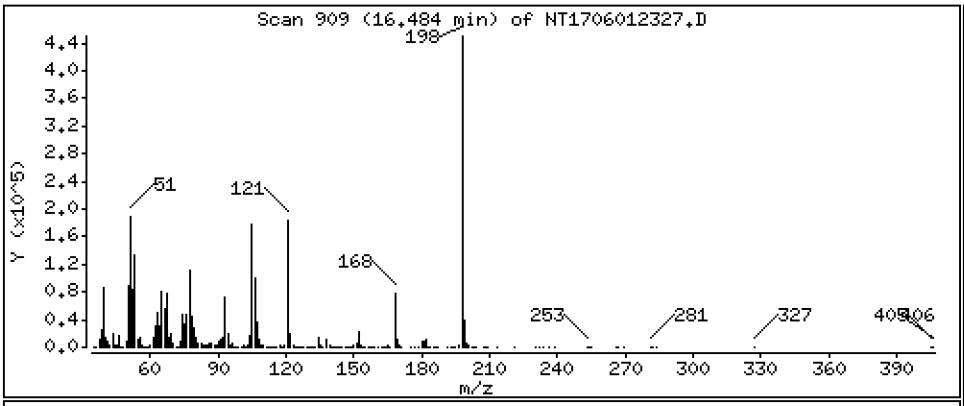
Operator: VTS

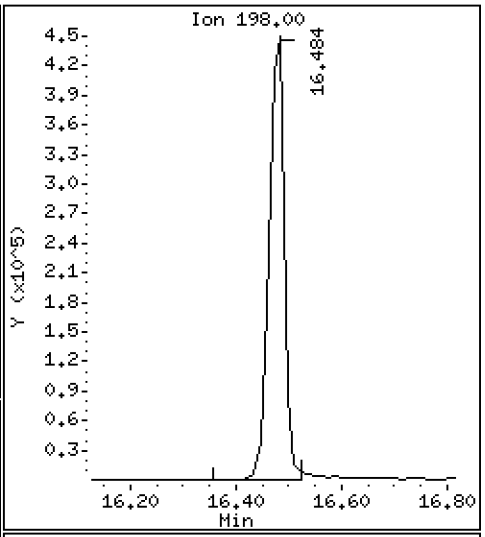
Column phase: ZB-5msi

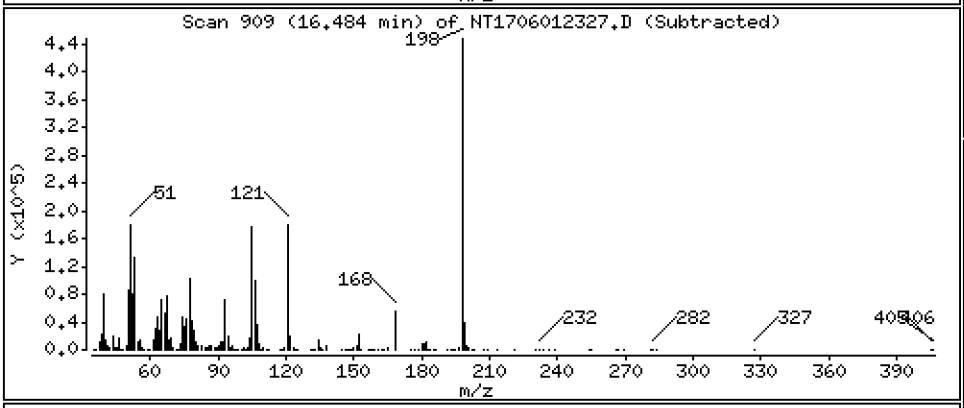
Column diameter: 0.25

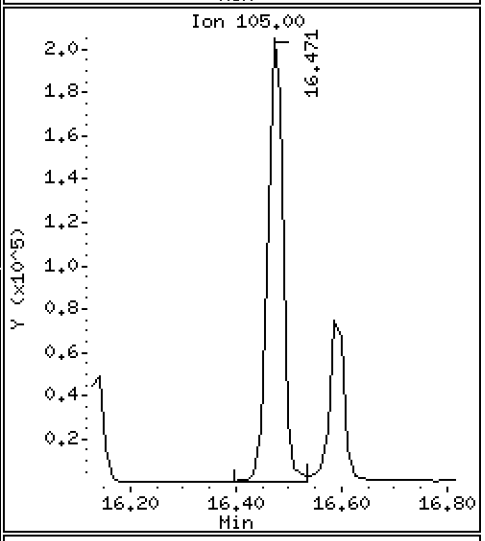
53 4,6-Dinitro-2-methylphenol

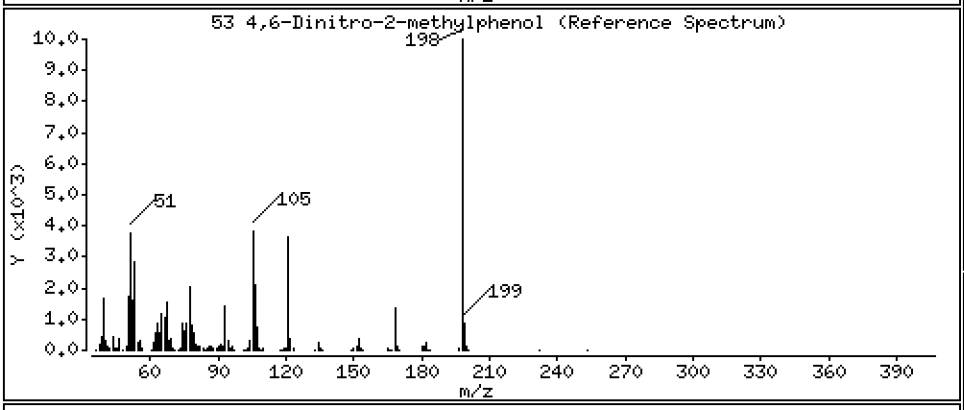
Concentration: 23.89 ug/mL

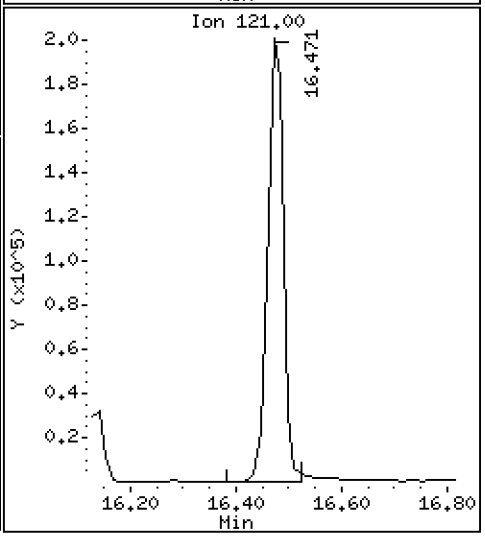


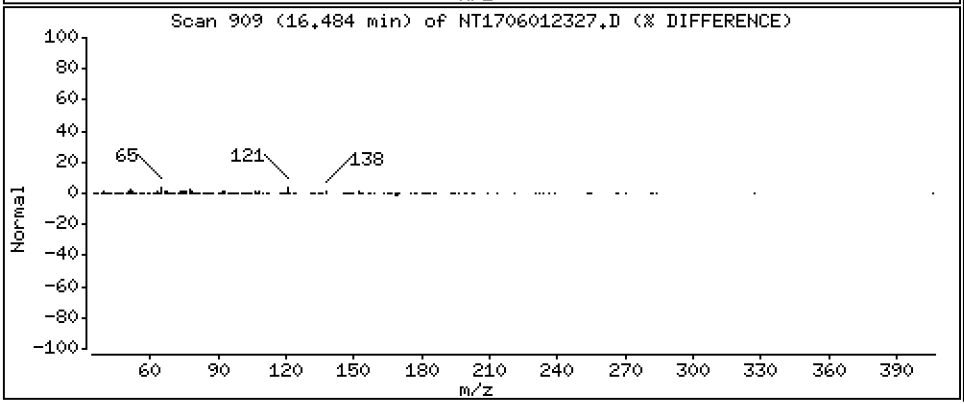












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

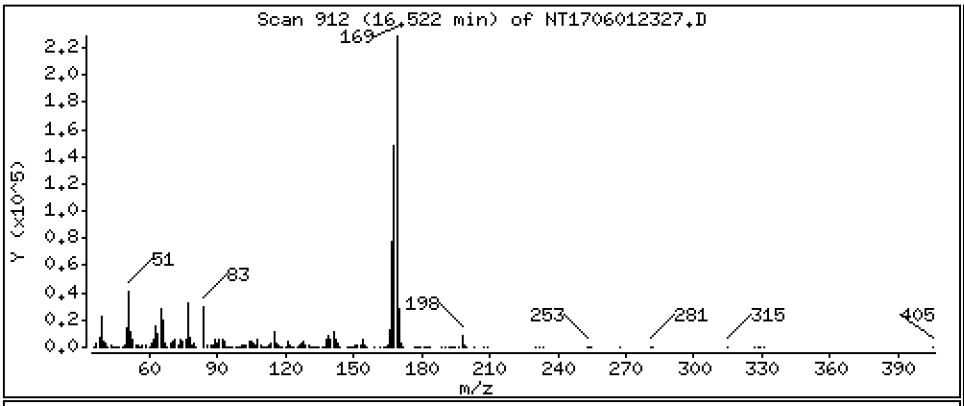
Operator: VTS

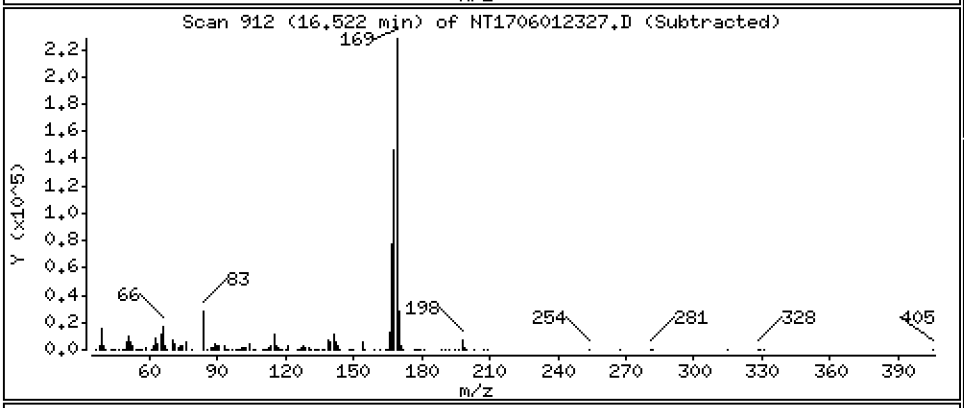
Column phase: ZB-5msi

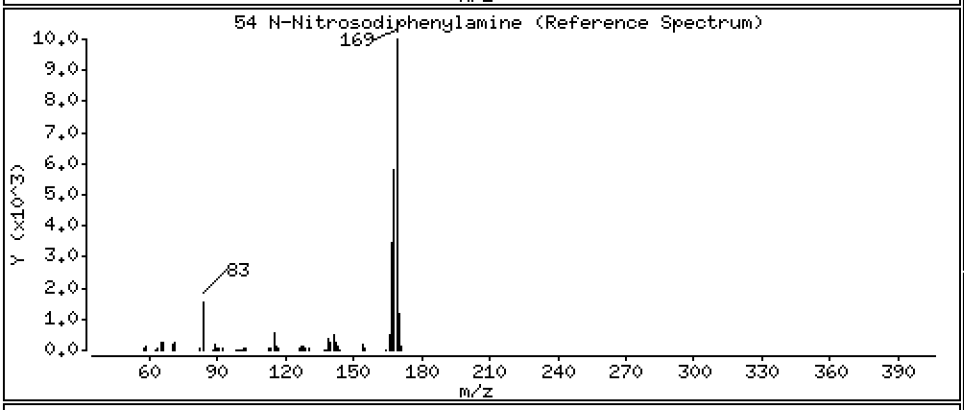
Column diameter: 0.25

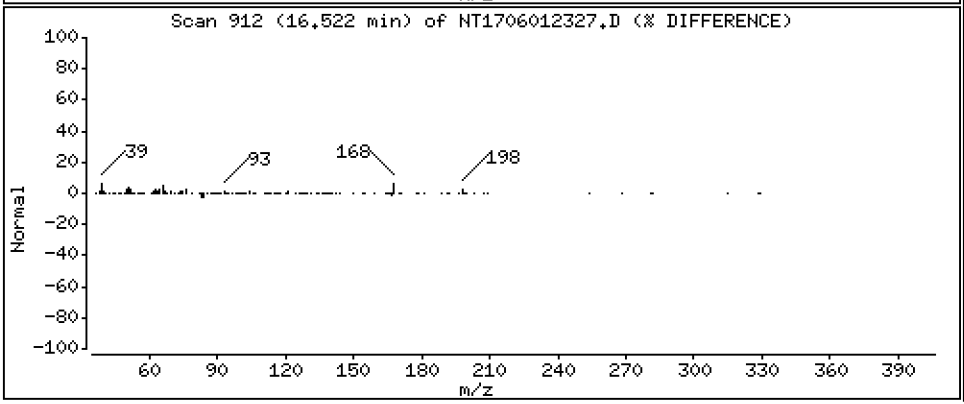
54 N-Nitrosodiphenylamine

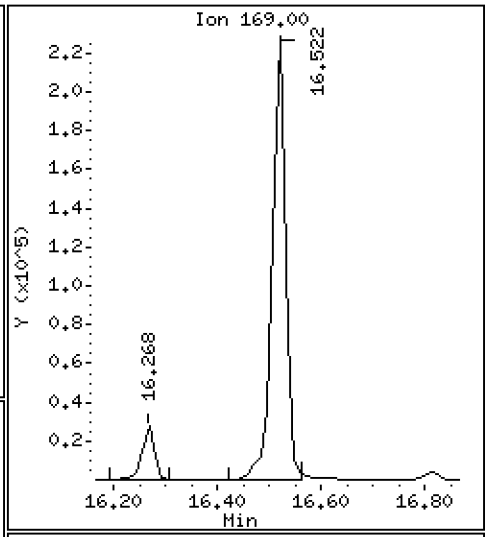
Concentration: 3.023 ug/mL

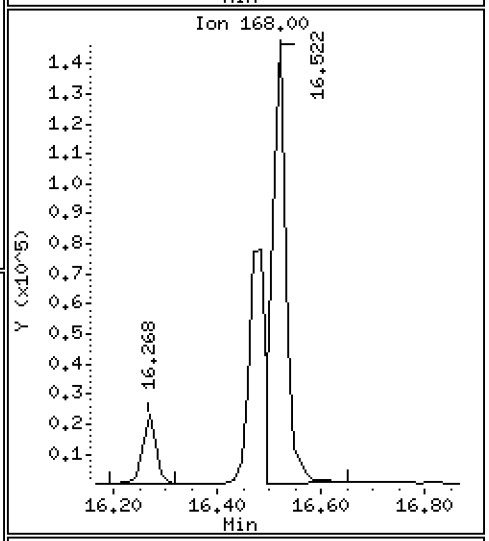


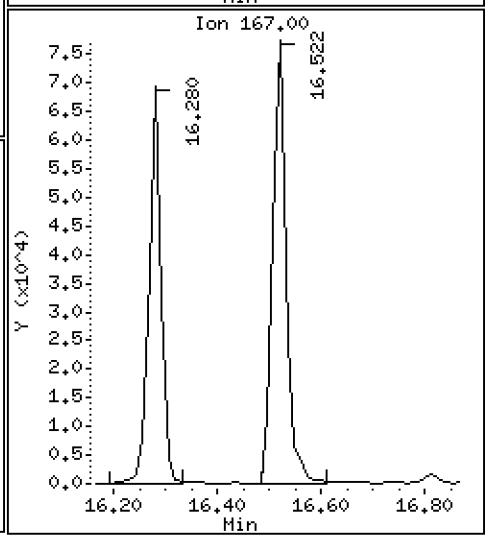












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

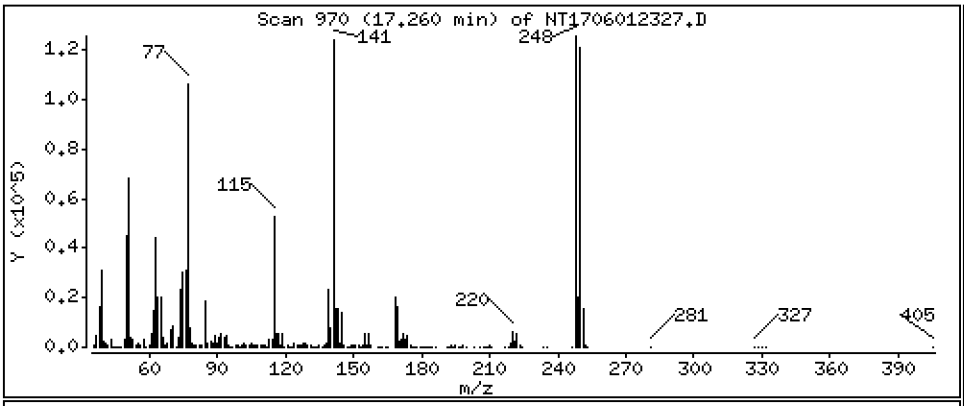
Operator: VTS

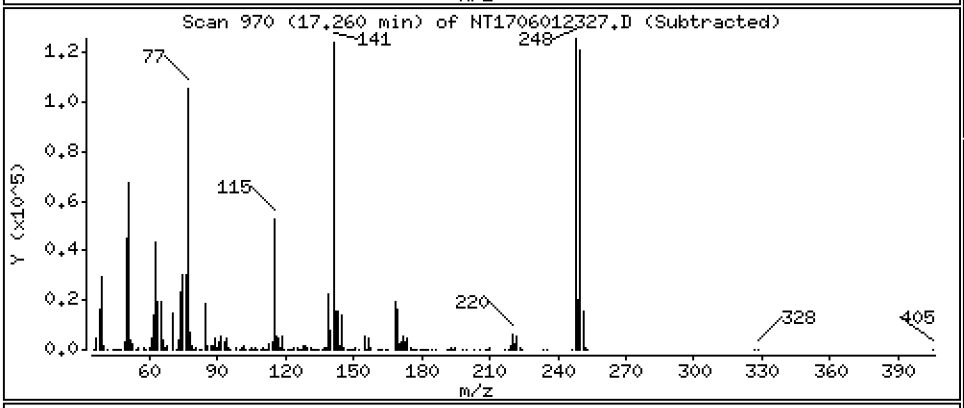
Column phase: ZB-5msi

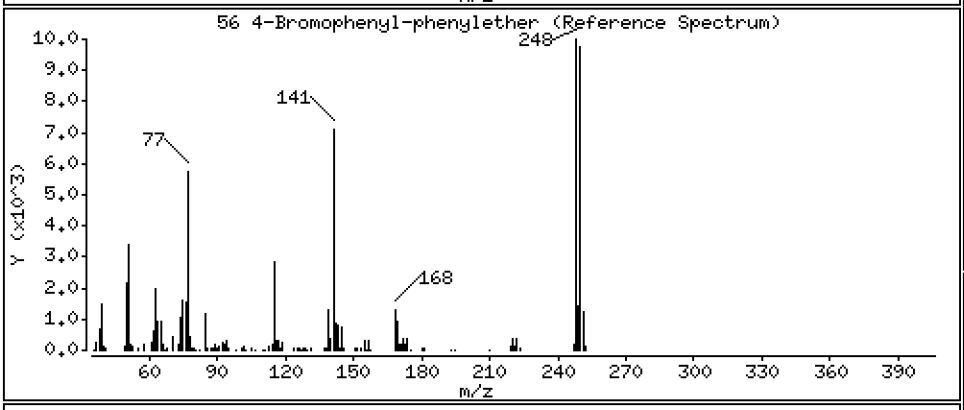
Column diameter: 0.25

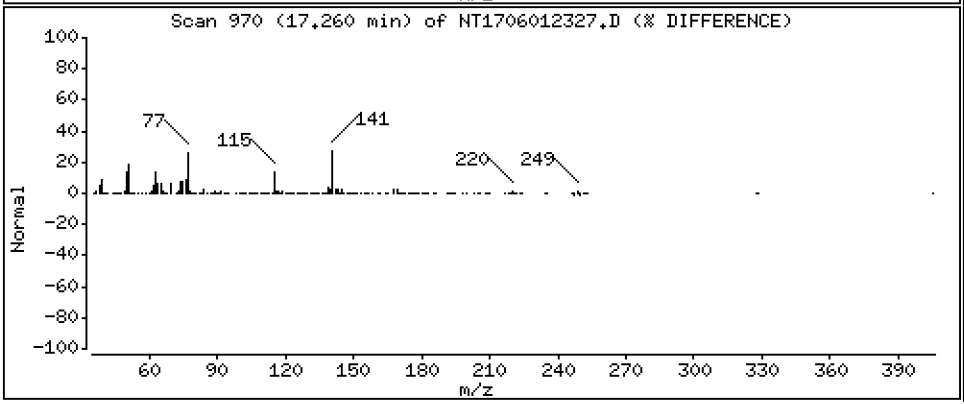
56 4-Bromophenyl-phenylether

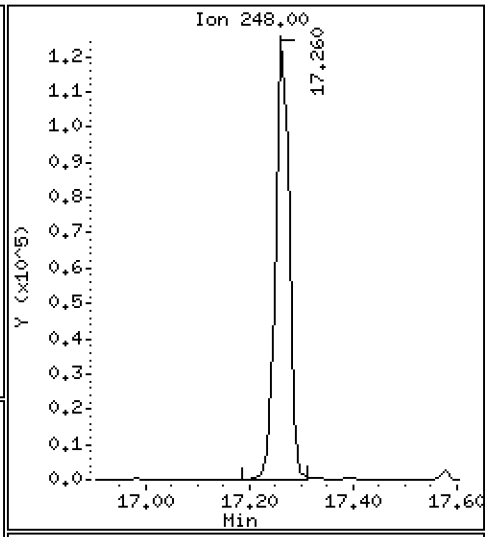
Concentration: 4.888 ug/mL

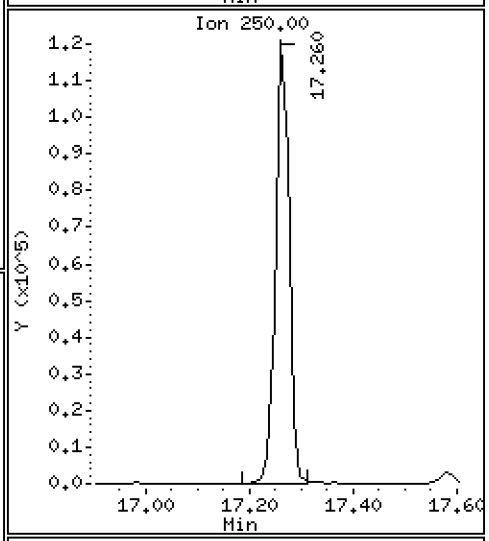


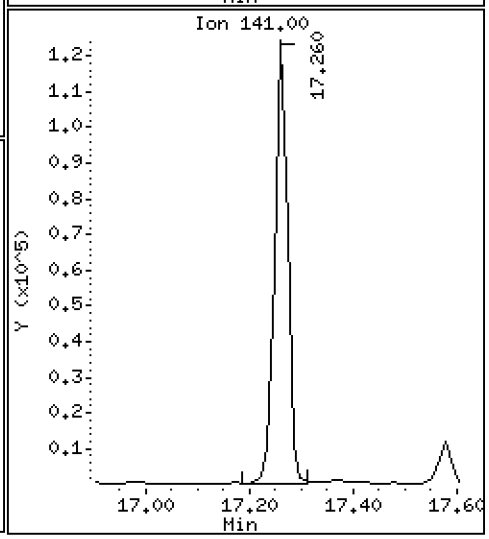












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

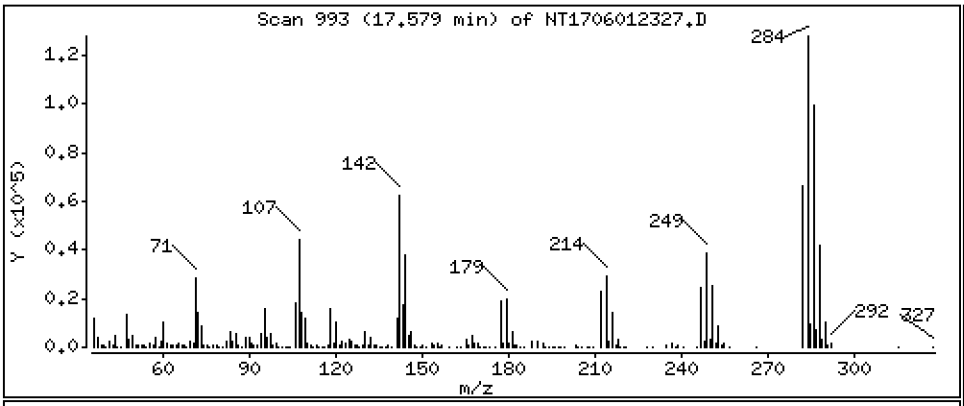
Operator: VTS

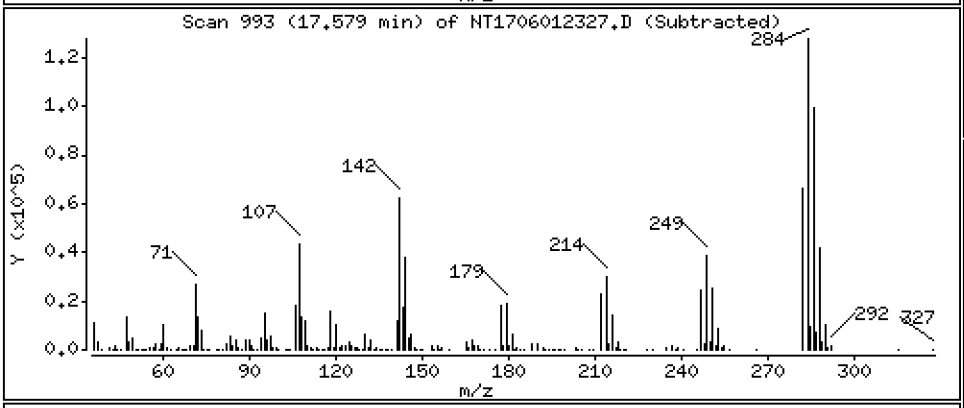
Column phase: ZB-5msi

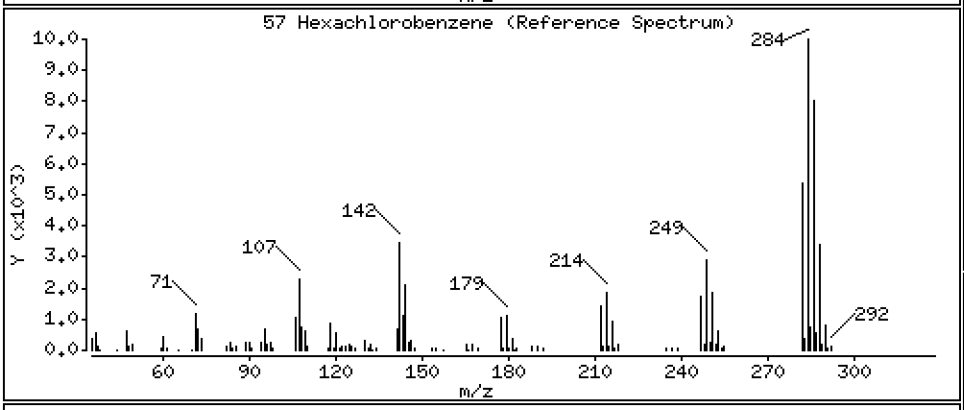
Column diameter: 0.25

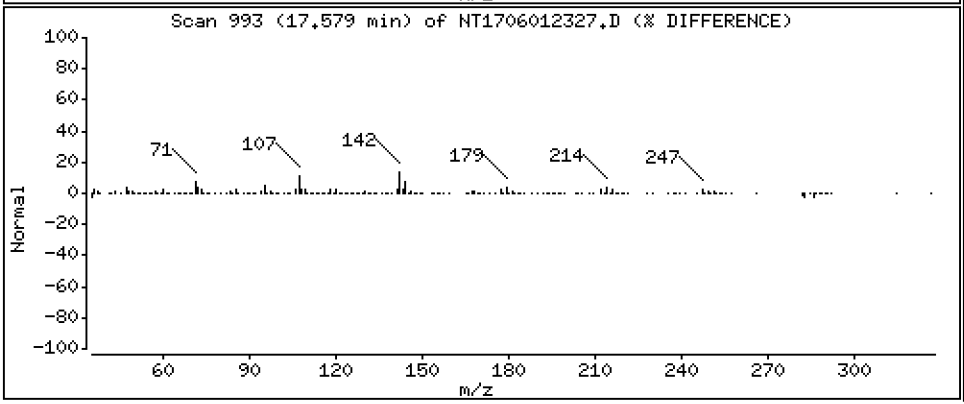
57 Hexachlorobenzene

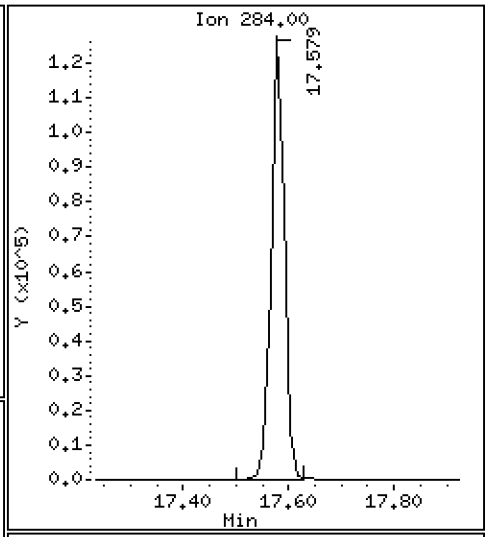
Concentration: 4.648 ug/mL

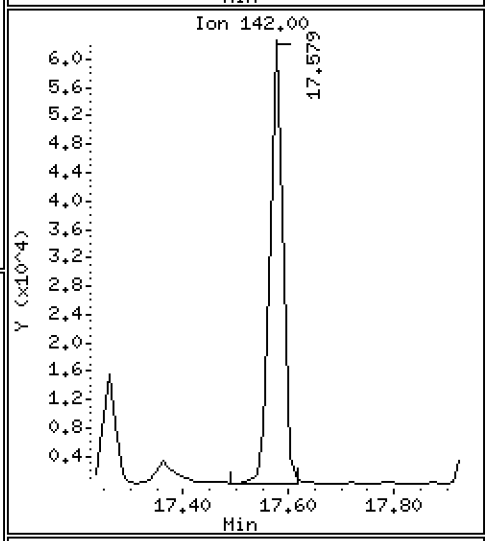


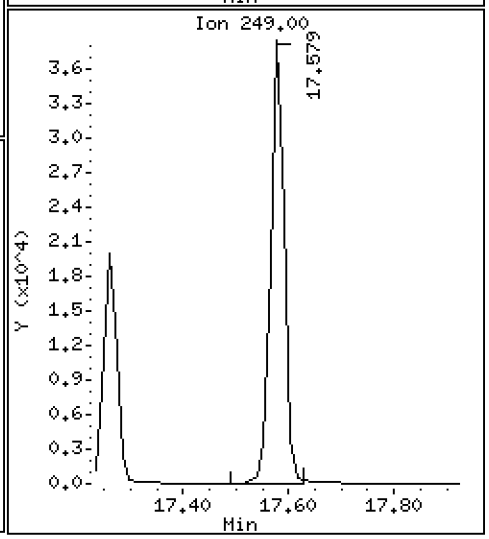












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

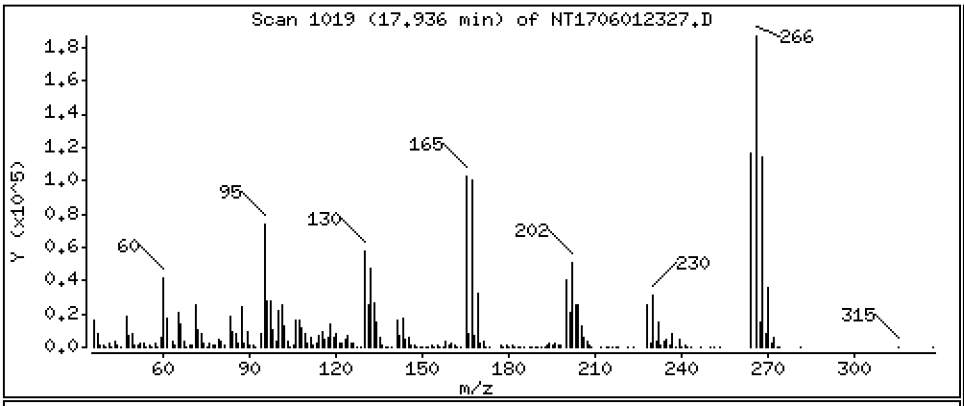
Operator: VTS

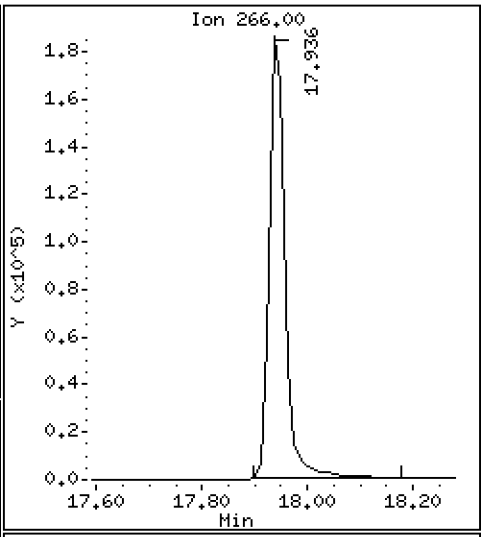
Column phase: ZB-5msi

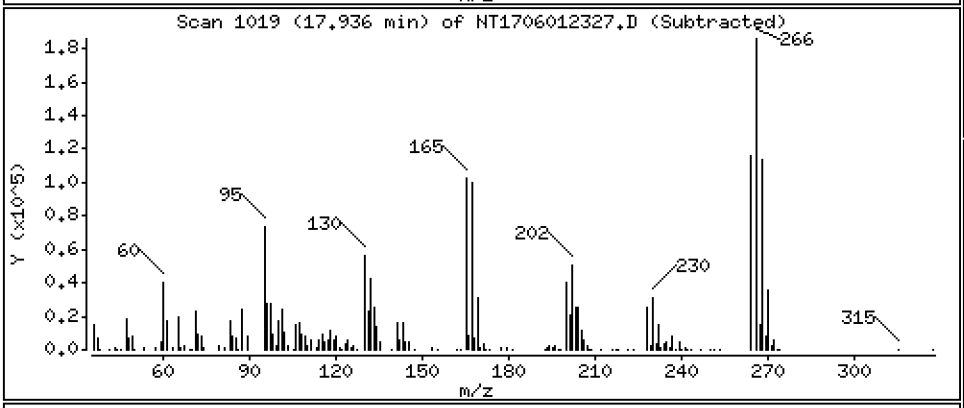
Column diameter: 0.25

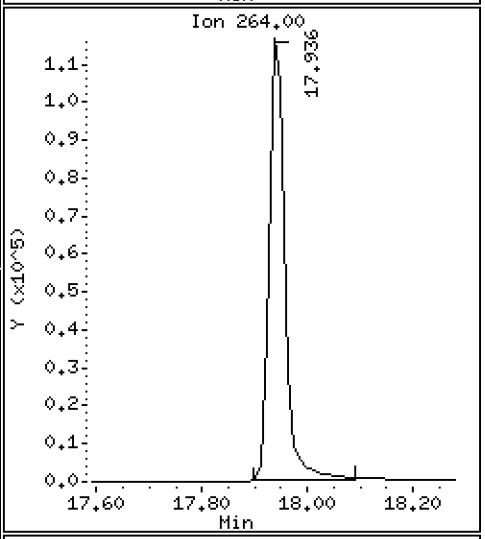
58 Pentachlorophenol

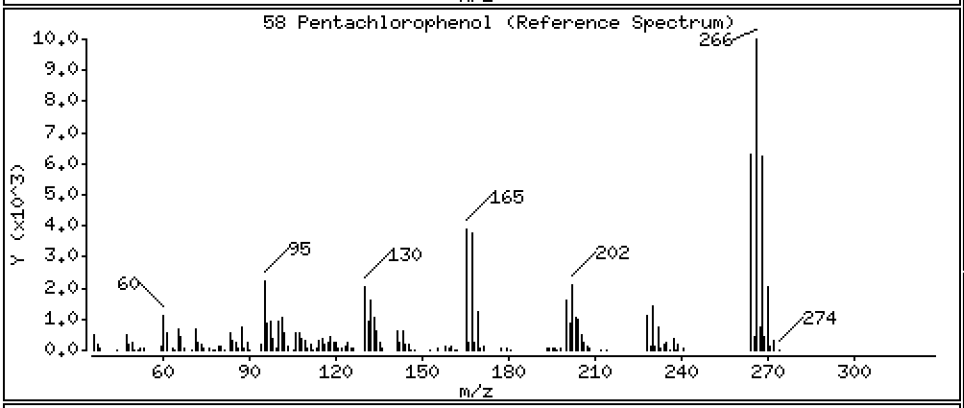
Concentration: 13.19 ug/mL

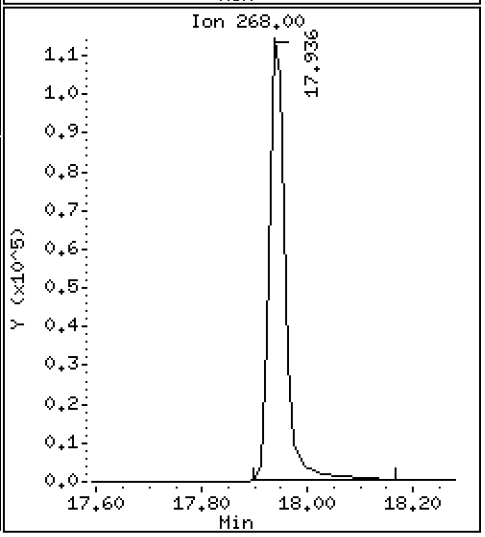


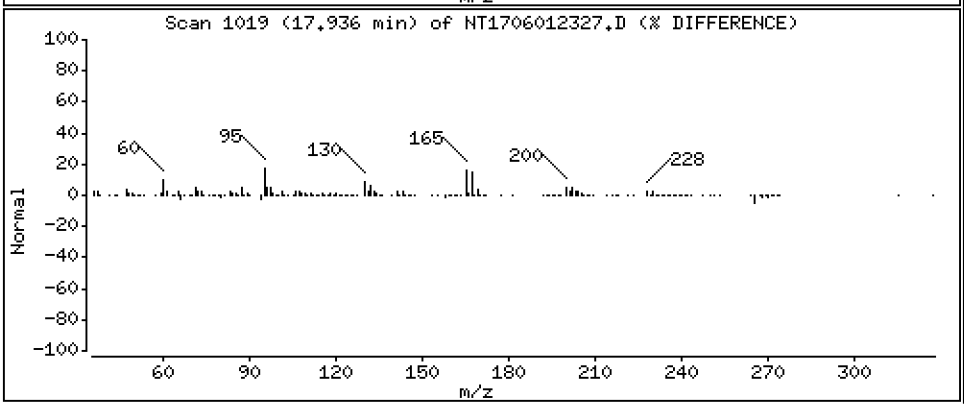












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

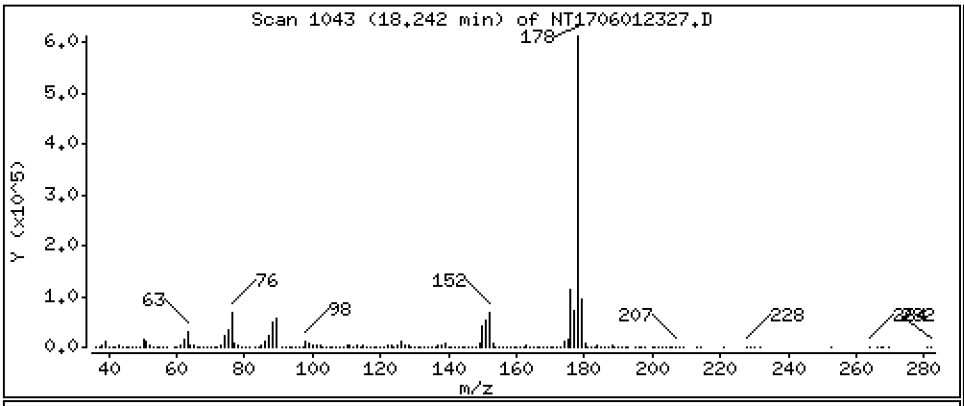
Operator: VTS

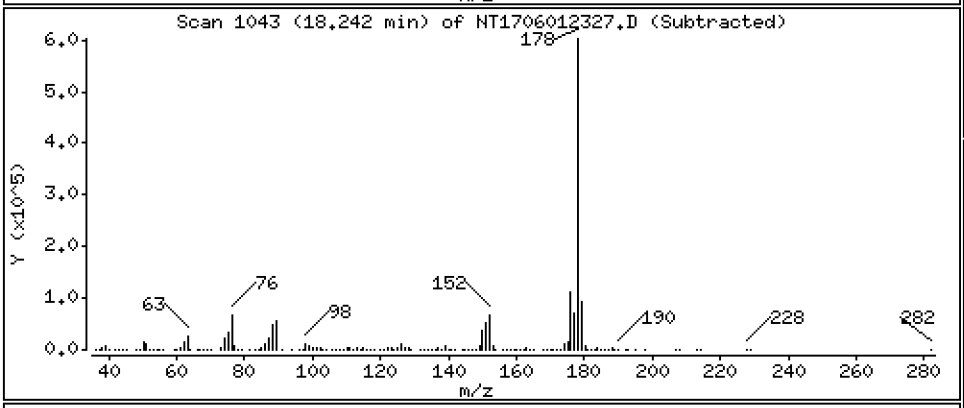
Column phase: ZB-5msi

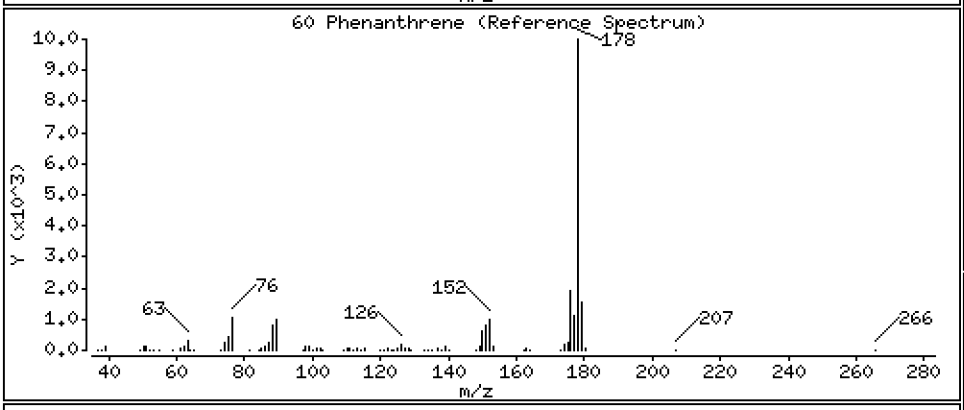
Column diameter: 0.25

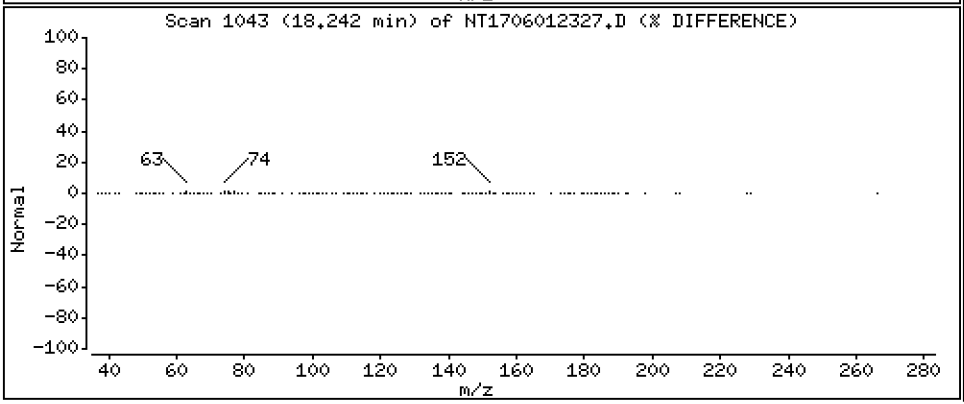
60 Phenanthrene

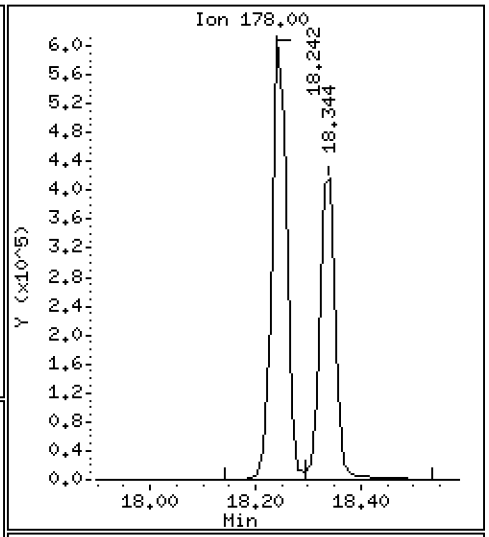
Concentration: 4.129 ug/mL

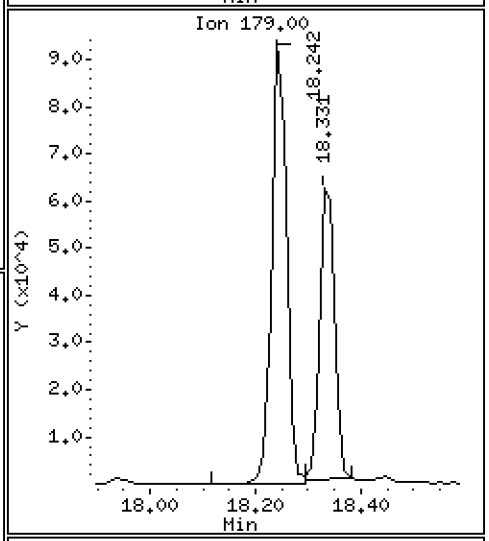


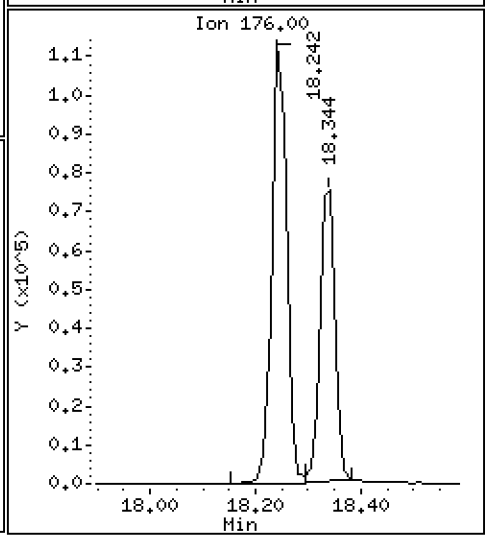












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

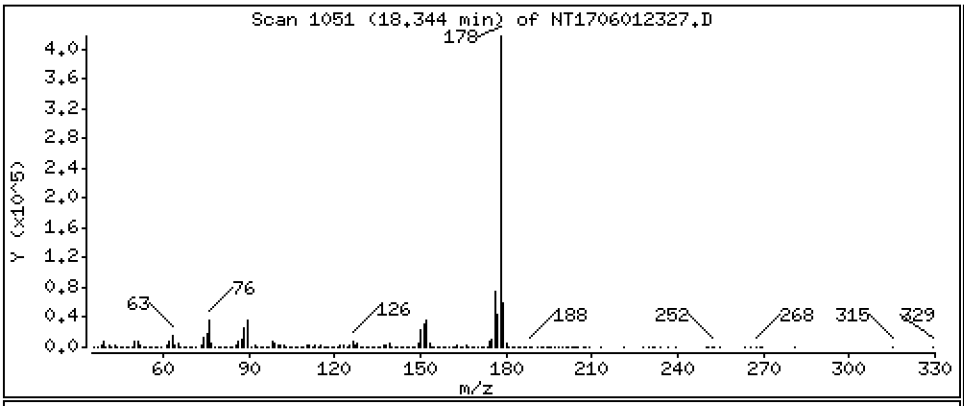
Operator: VTS

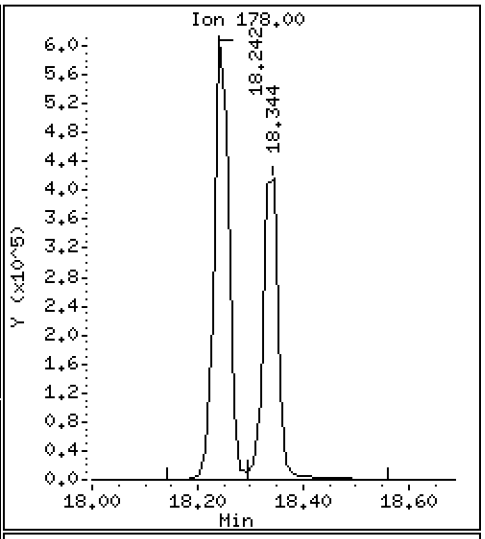
Column phase: ZB-5msi

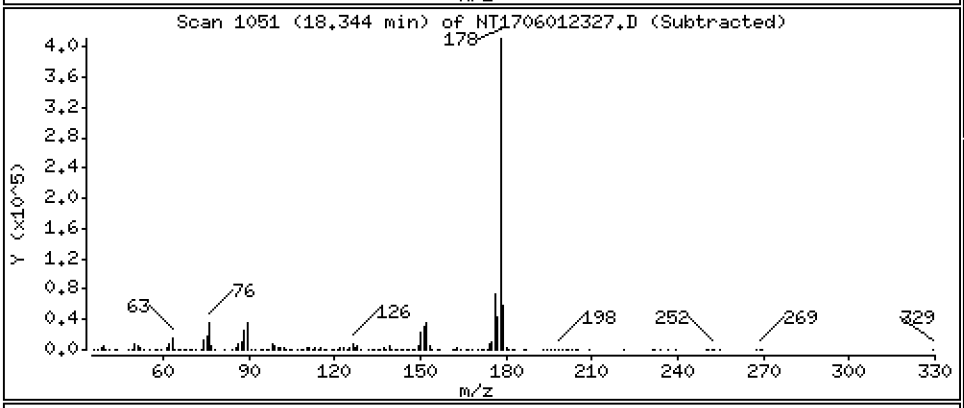
Column diameter: 0.25

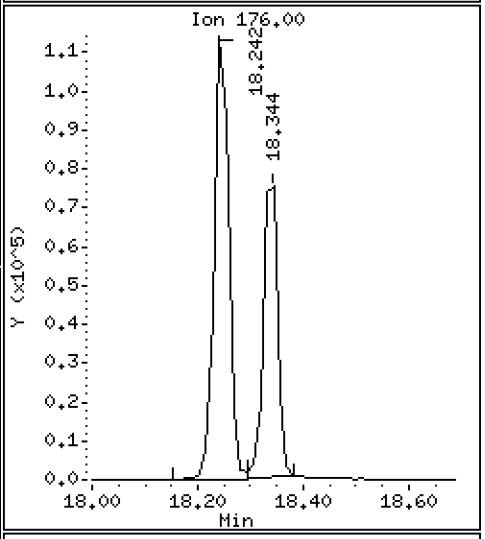
61 Anthracene

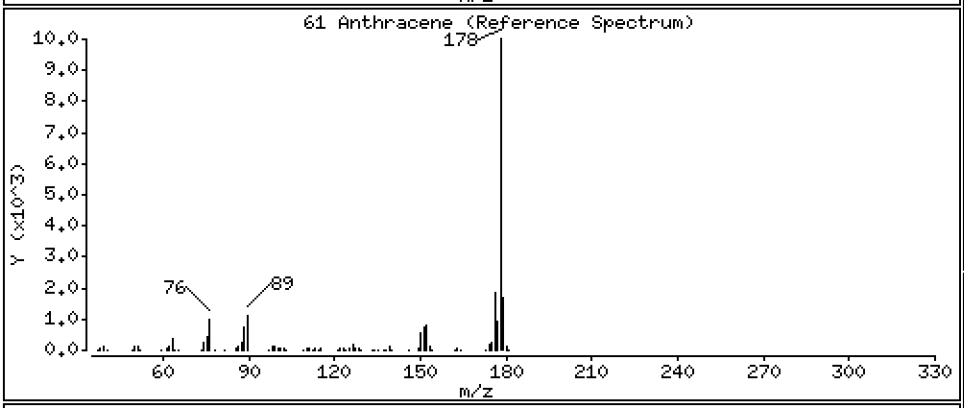
Concentration: 3.331 ug/mL

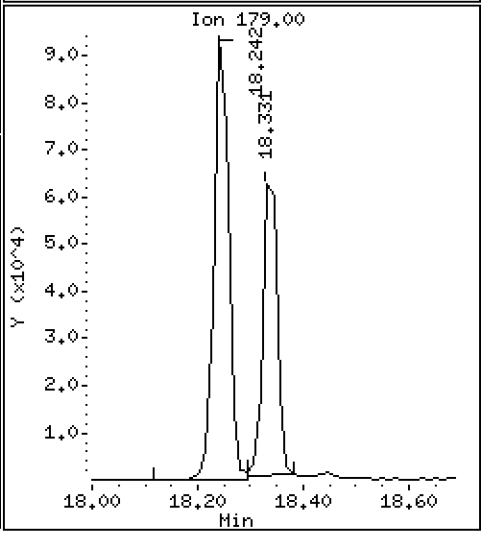


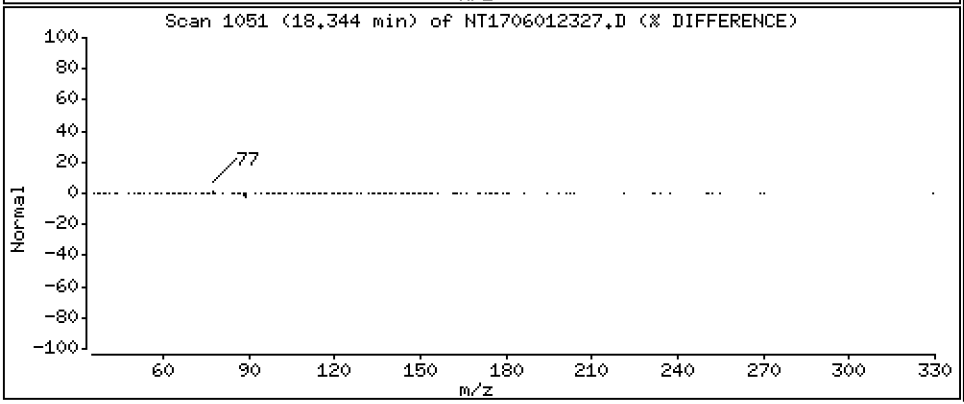












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

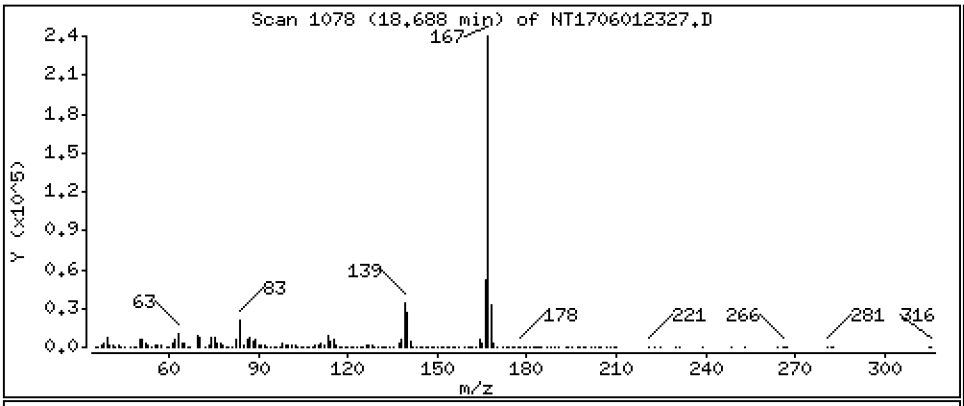
Operator: VTS

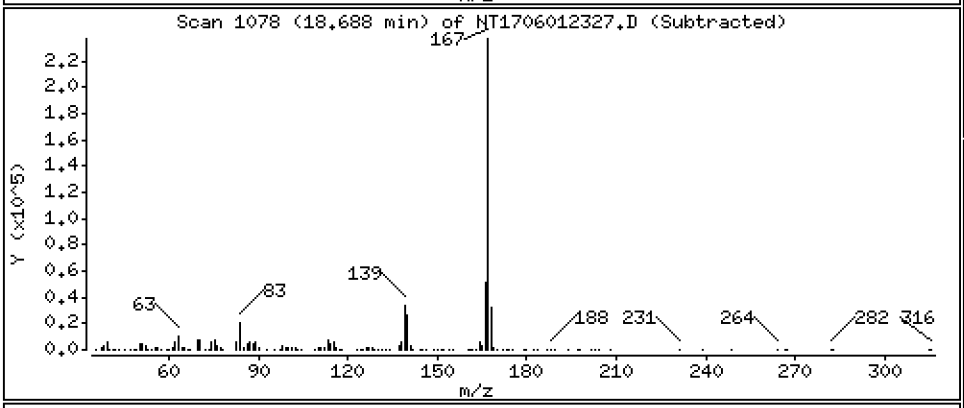
Column phase: ZB-5msi

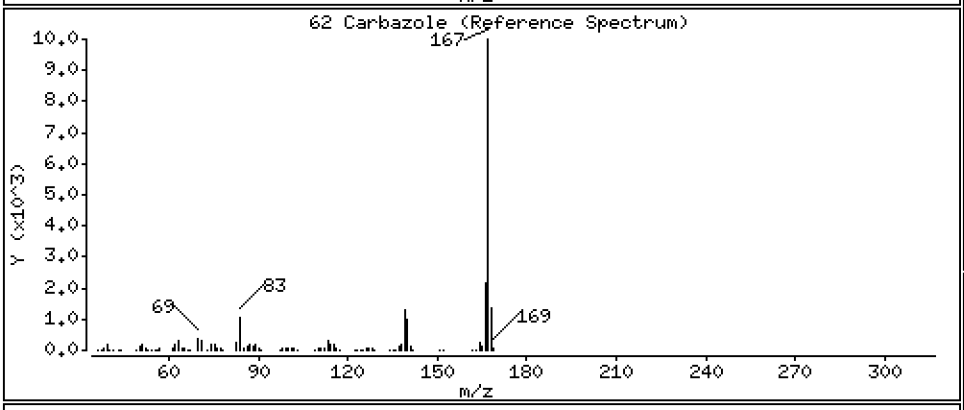
Column diameter: 0.25

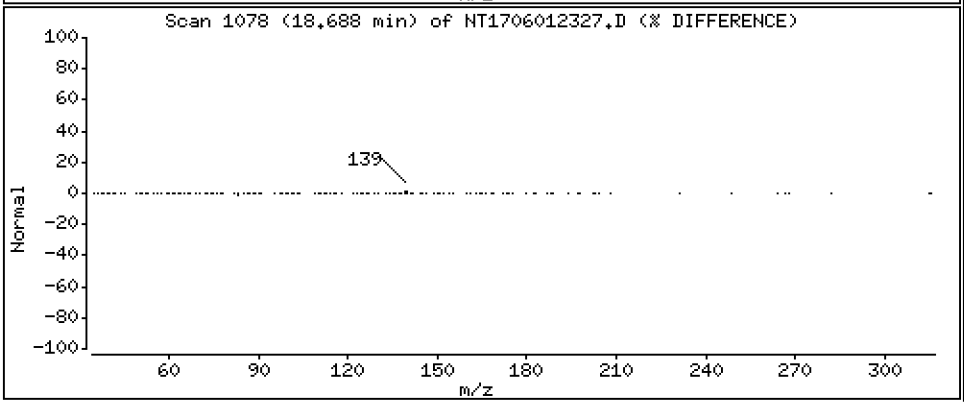
62 Carbazole

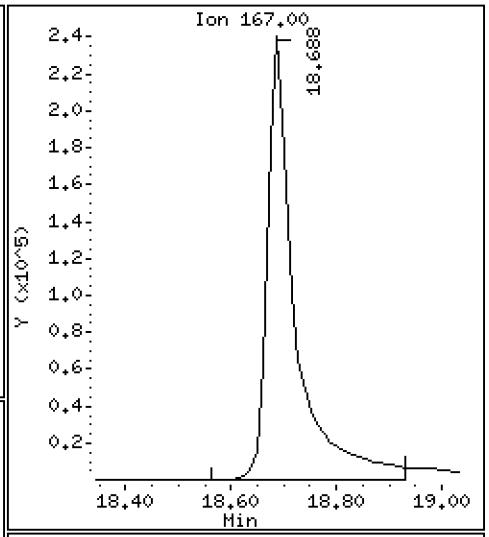
Concentration: 5.168 ug/mL

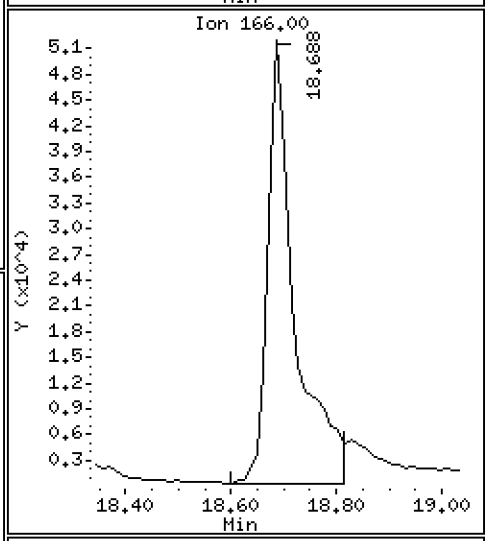


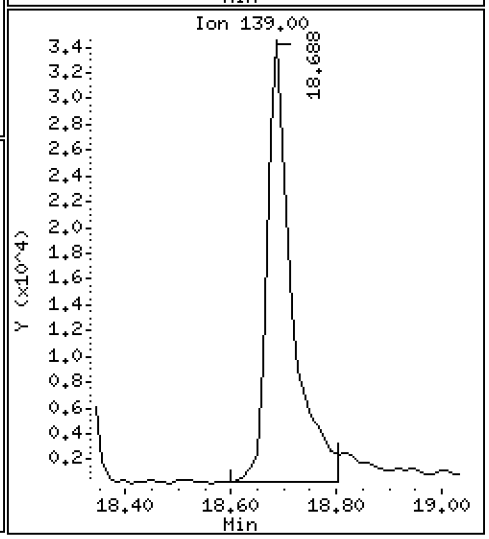












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

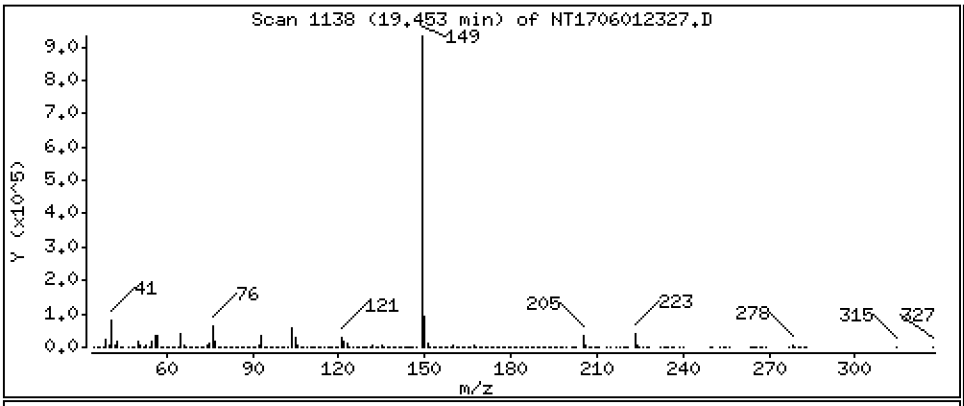
Operator: VTS

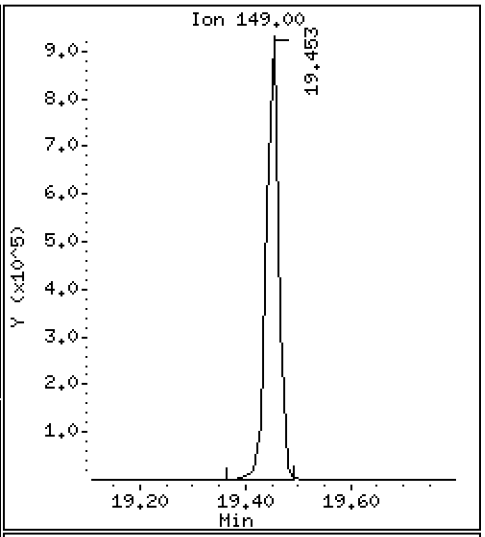
Column phase: ZB-5msi

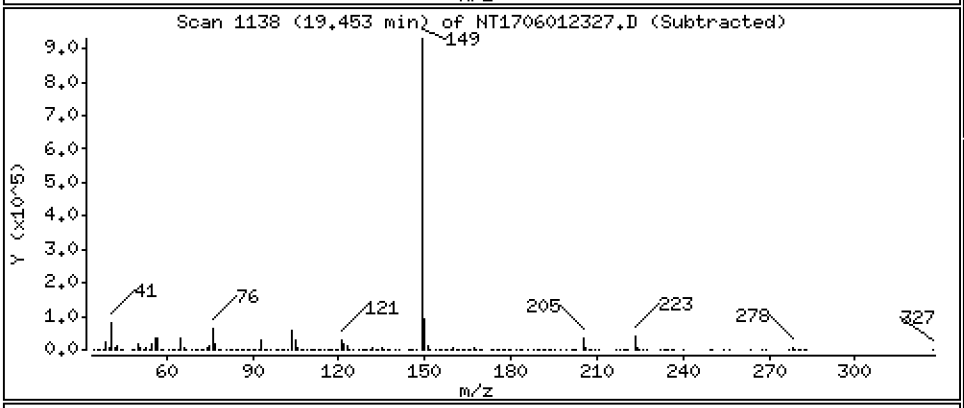
Column diameter: 0.25

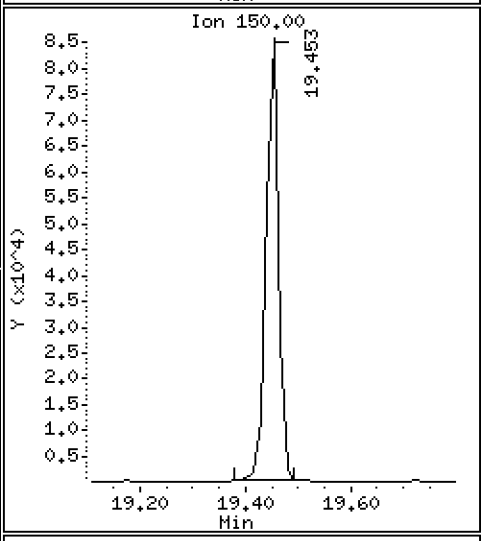
63 Di-n-butylphthalate

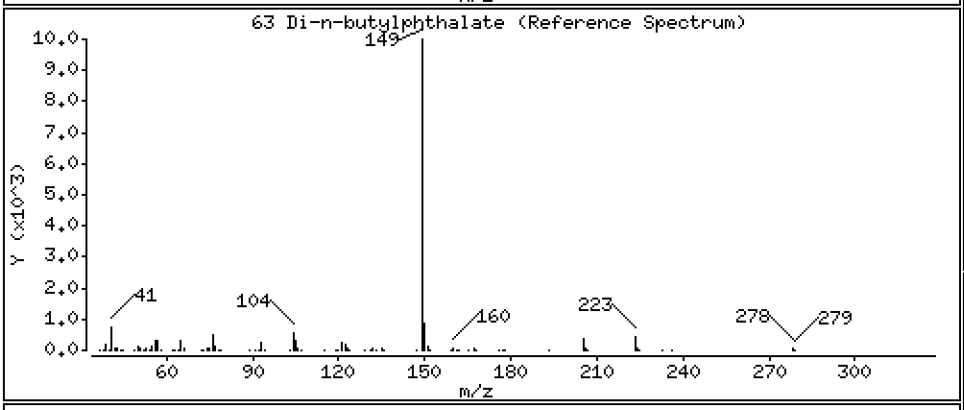
Concentration: 4.859 ug/mL

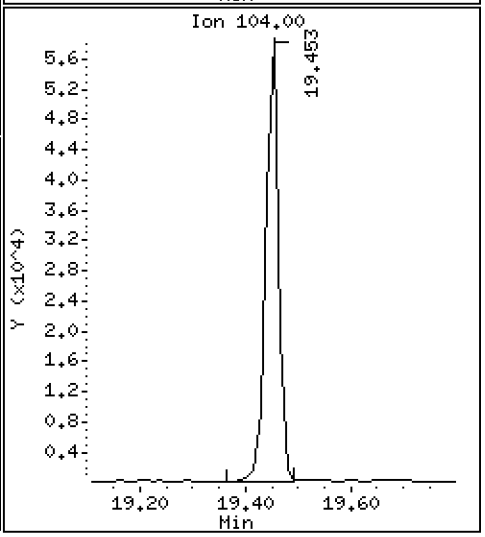


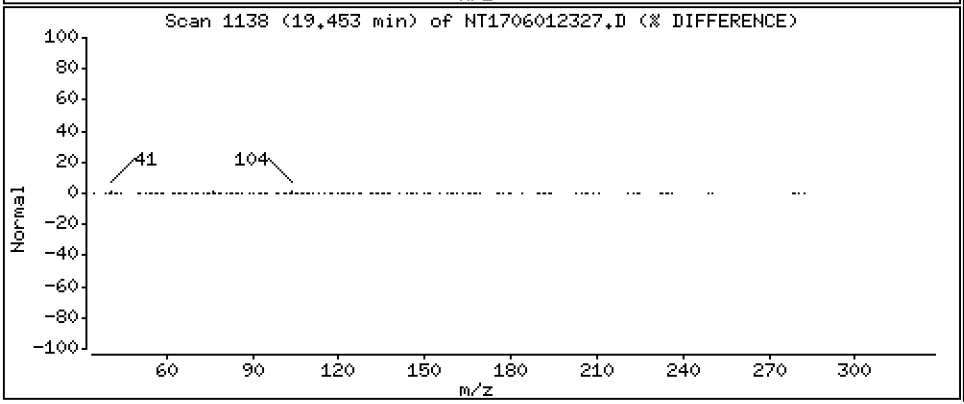












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

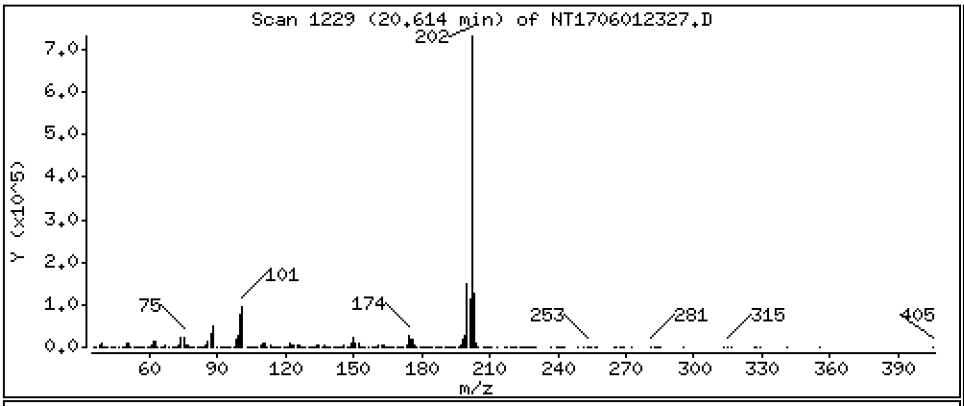
Operator: VTS

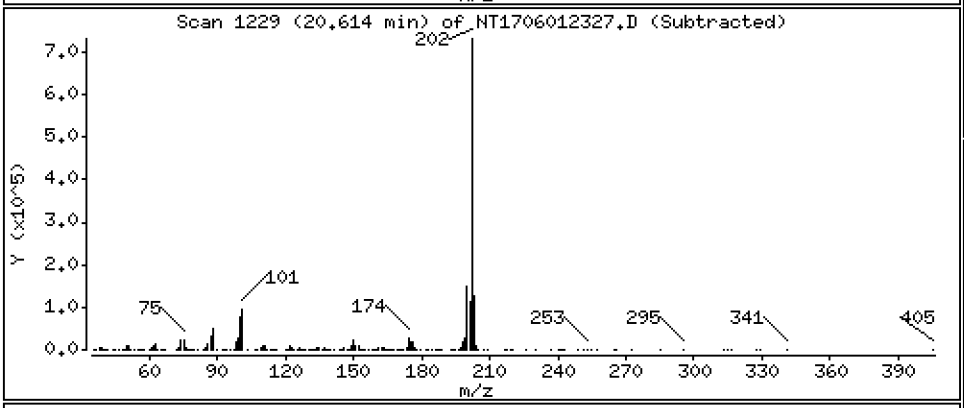
Column phase: ZB-5msi

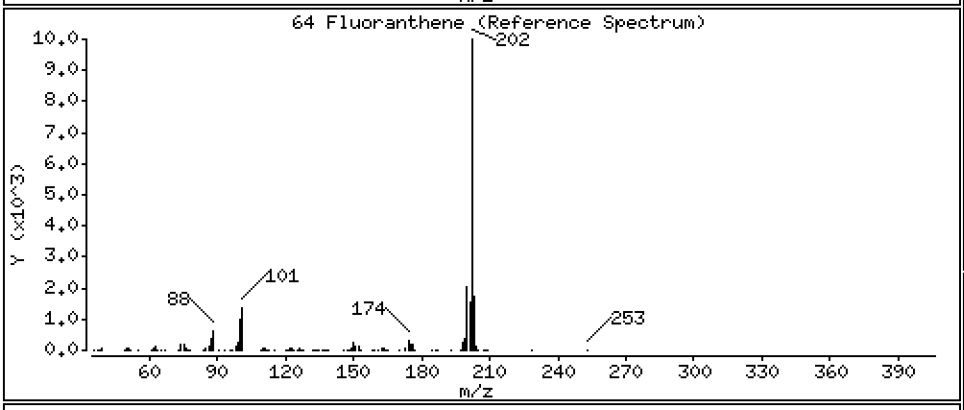
Column diameter: 0.25

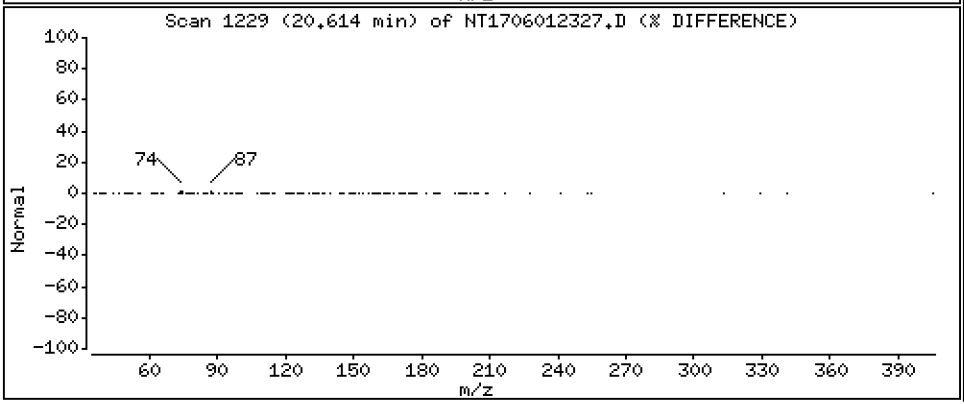
64 Fluoranthene

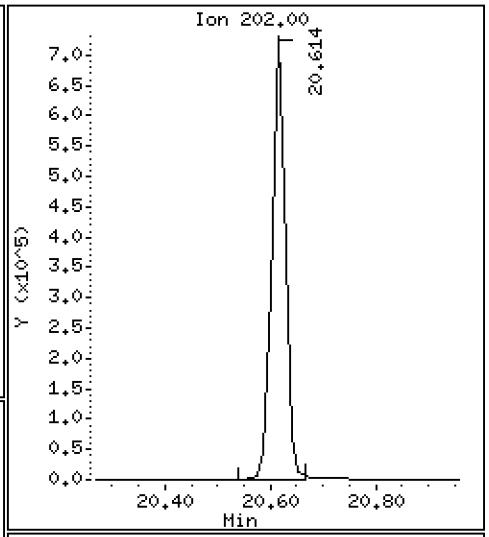
Concentration: 4.697 ug/mL

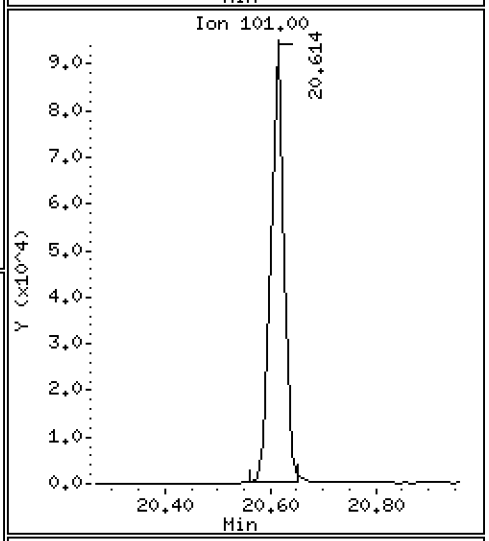


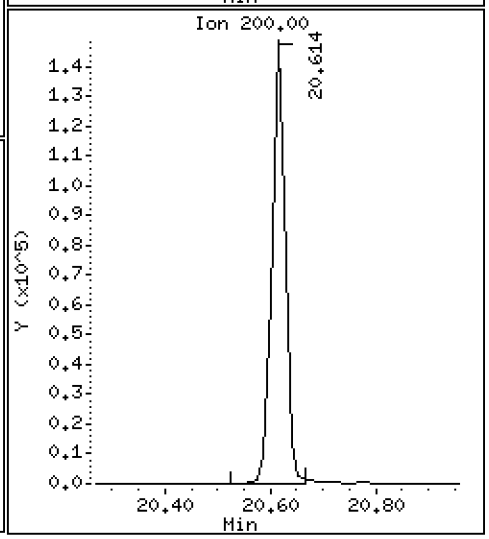












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

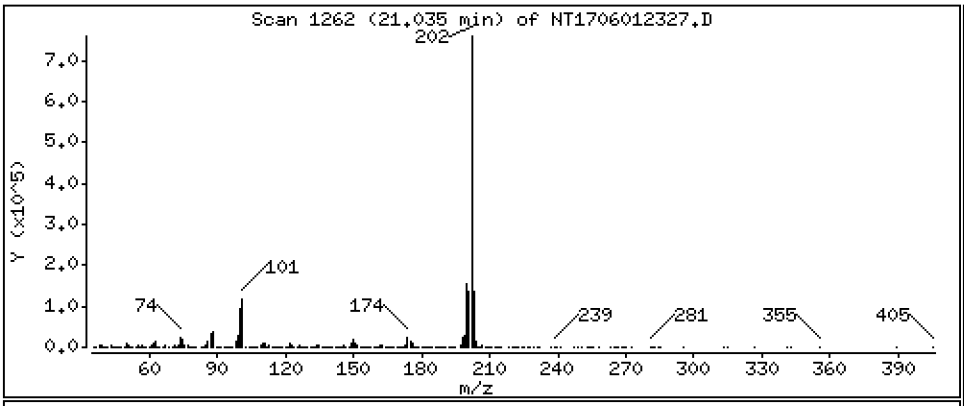
Operator: VTS

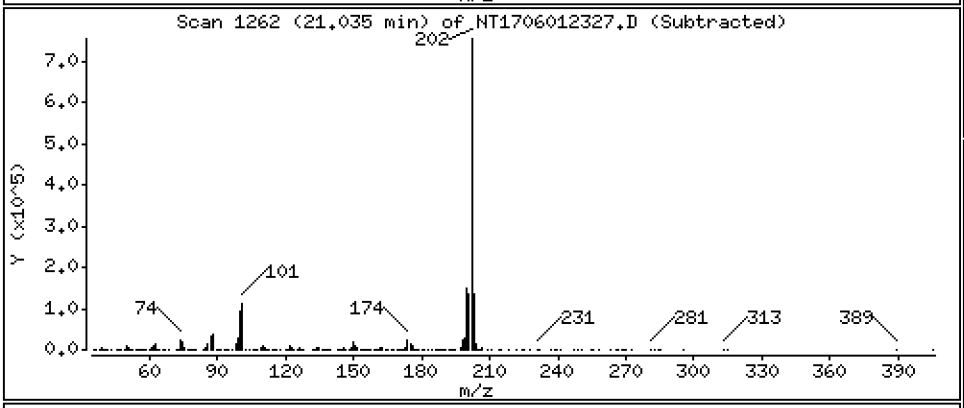
Column phase: ZB-5msi

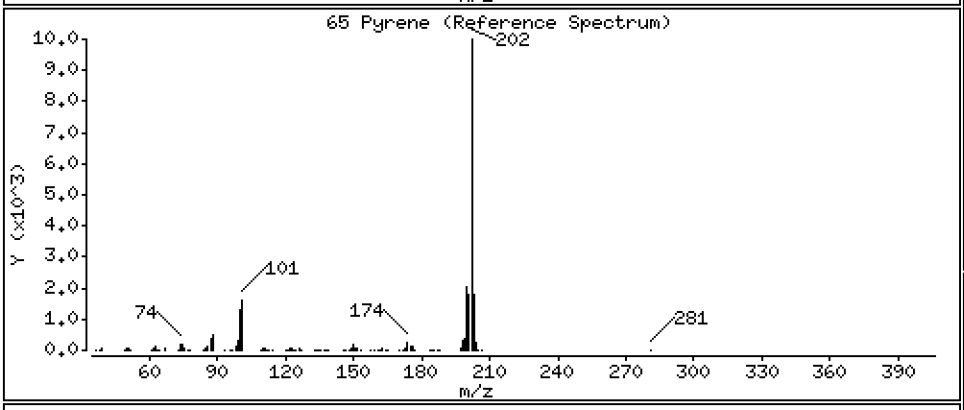
Column diameter: 0.25

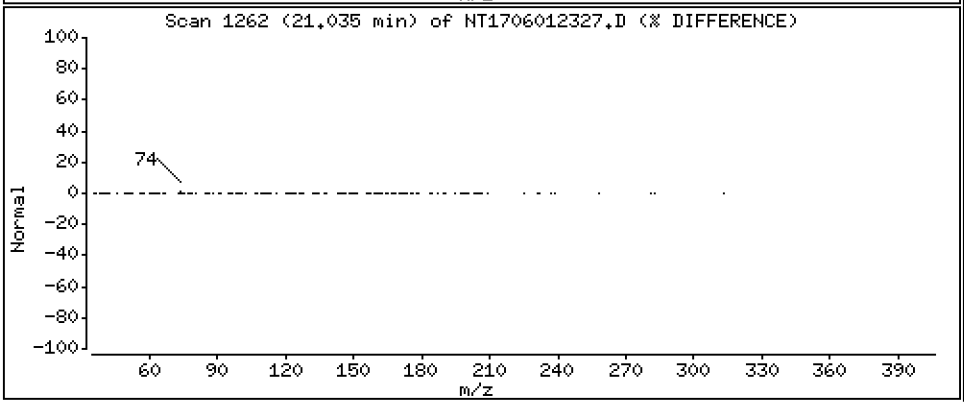
65 Pyrene

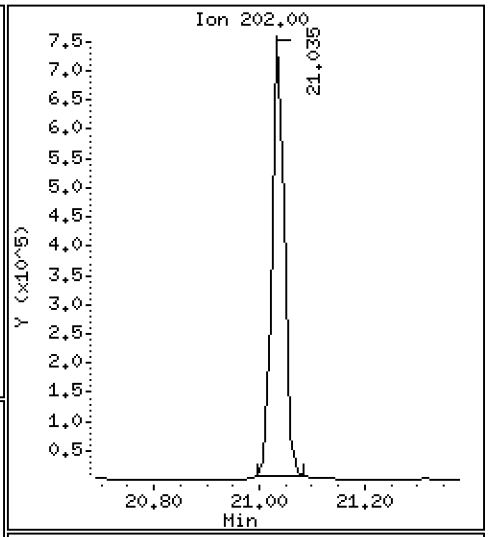
Concentration: 4.468 ug/mL

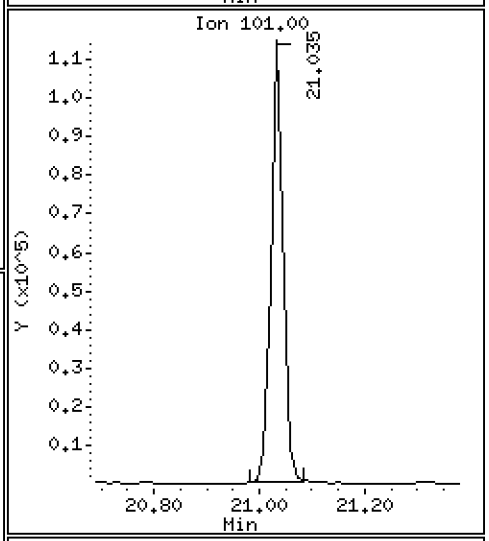


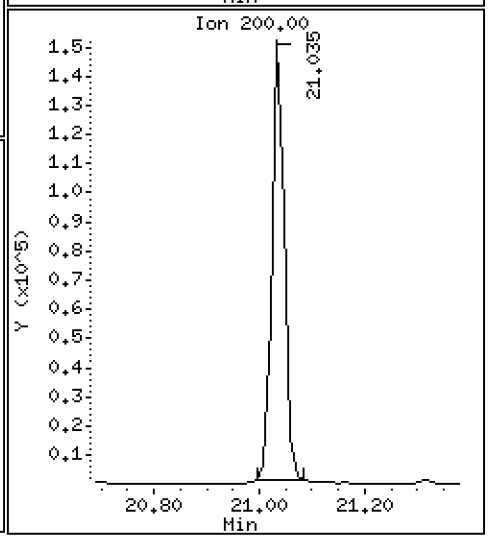












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

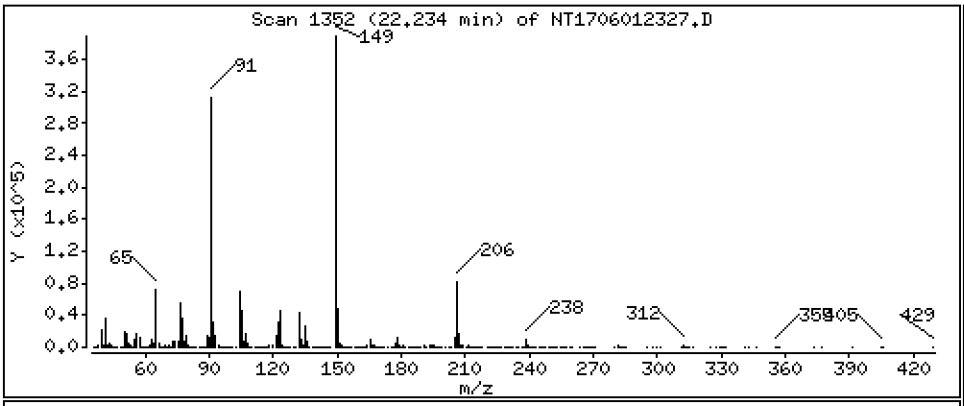
Operator: VTS

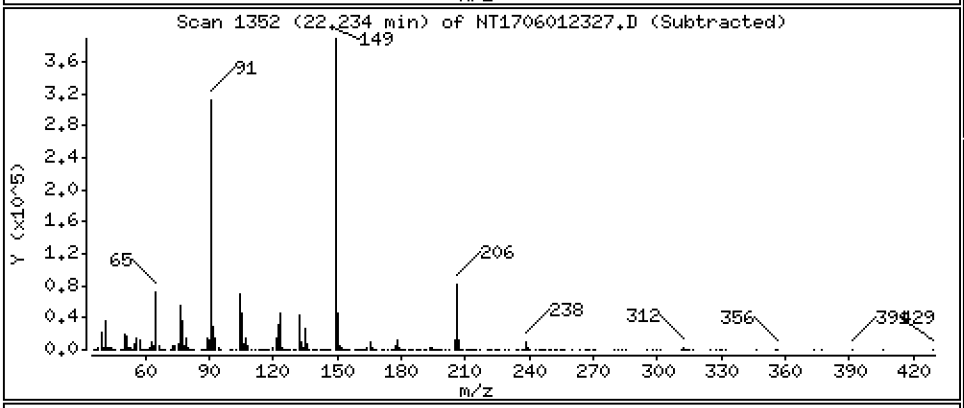
Column phase: ZB-5msi

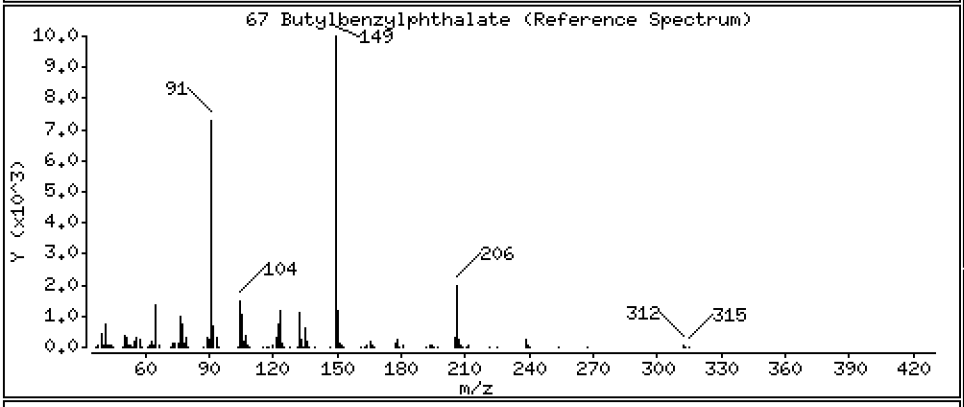
Column diameter: 0.25

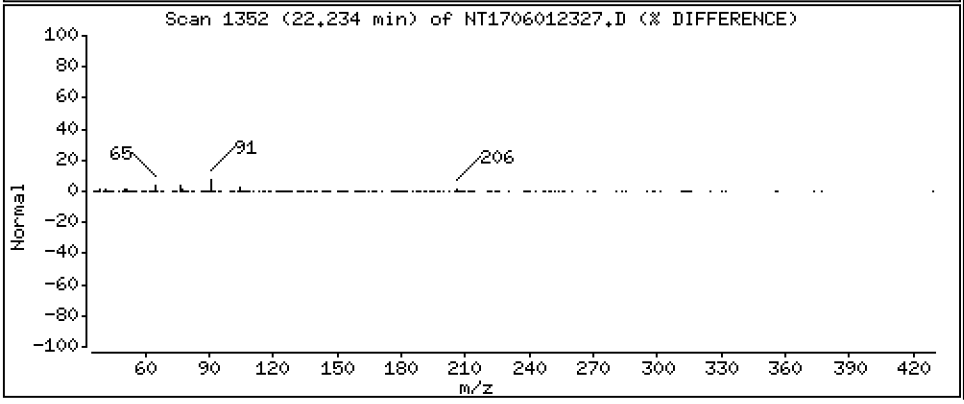
67 Butylbenzylphthalate

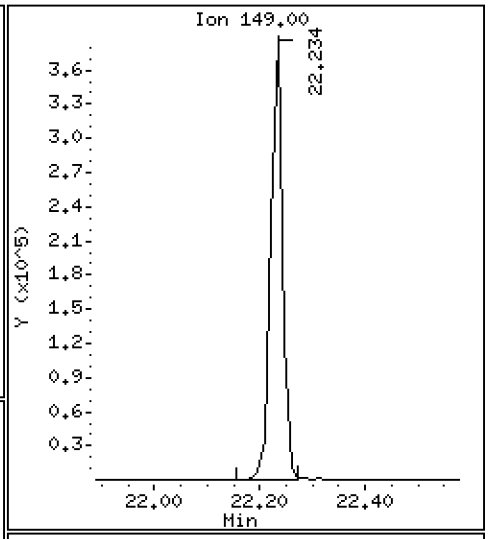
Concentration: 4.925 ug/mL

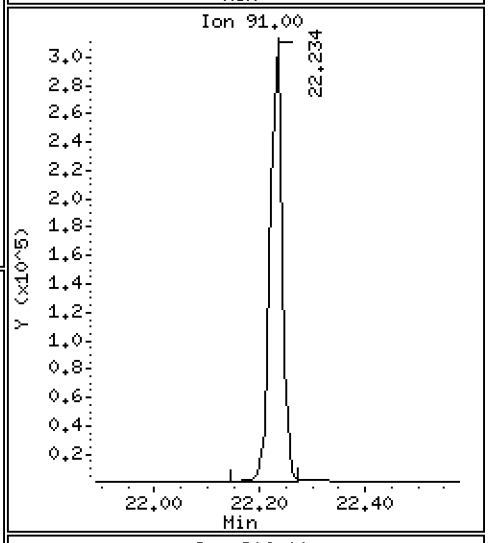


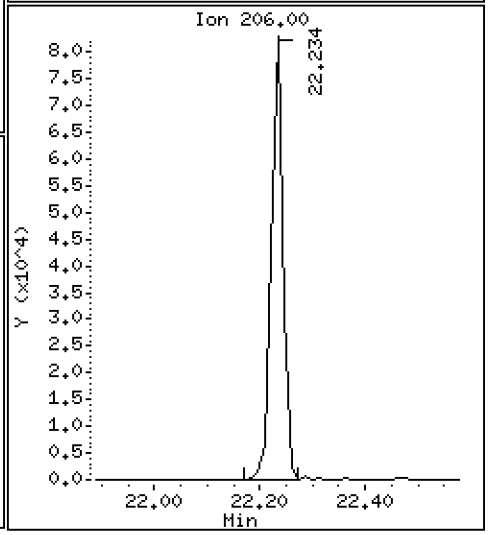












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

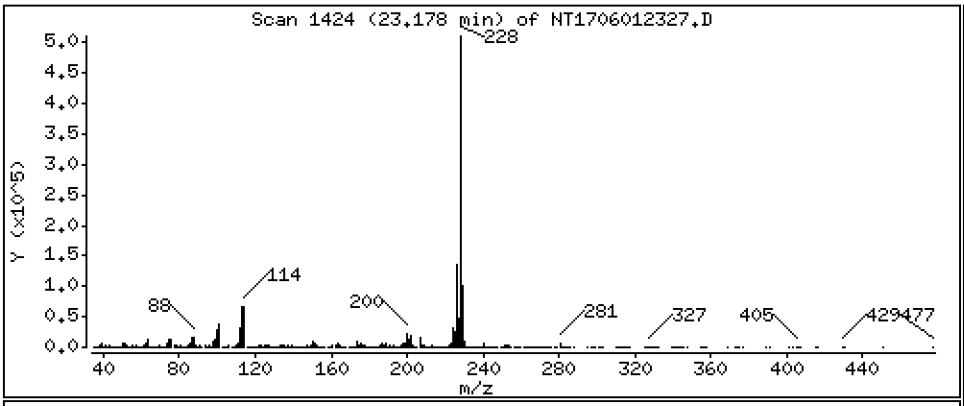
Operator: VTS

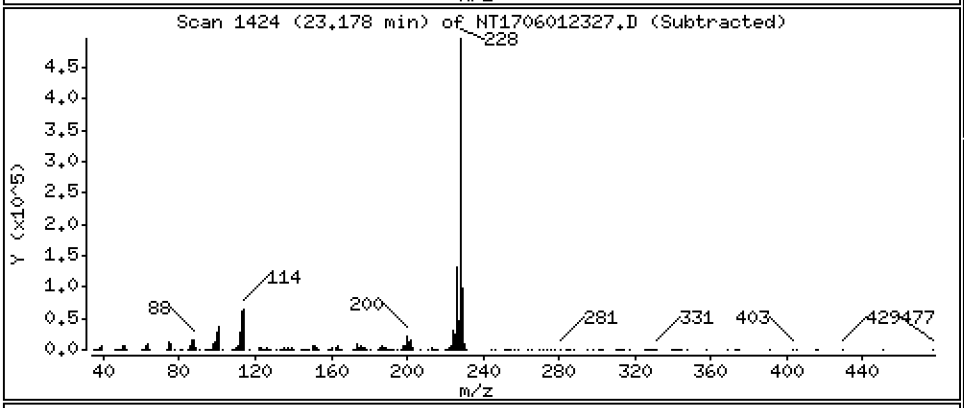
Column phase: ZB-5msi

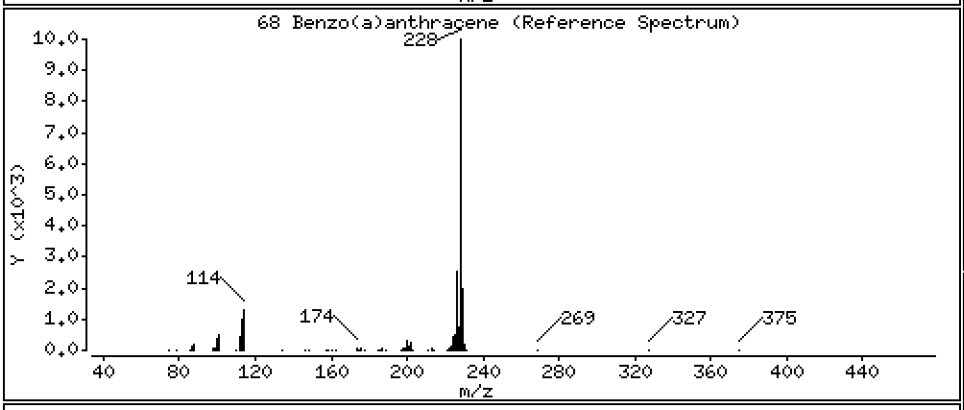
Column diameter: 0.25

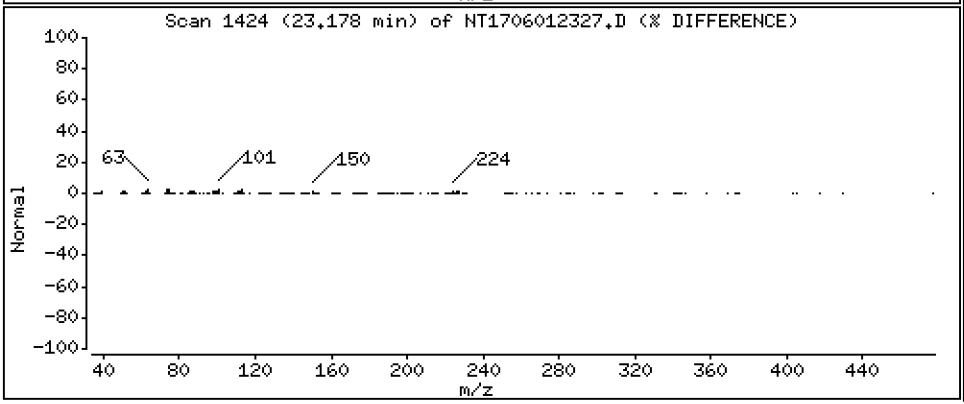
68 Benzo(a)anthracene

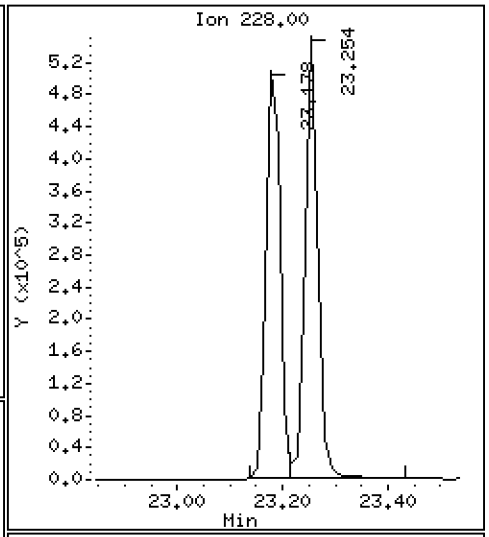
Concentration: 4.323 ug/mL

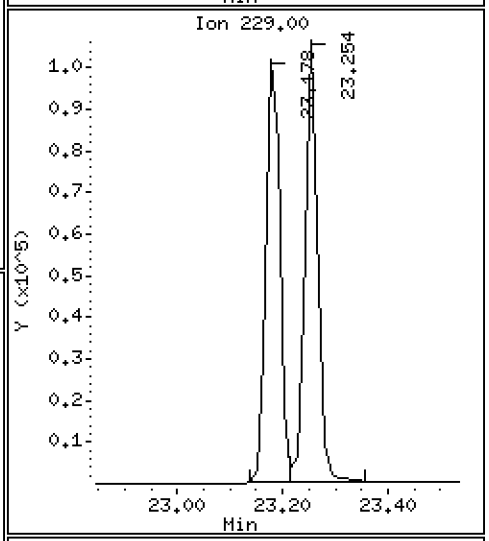


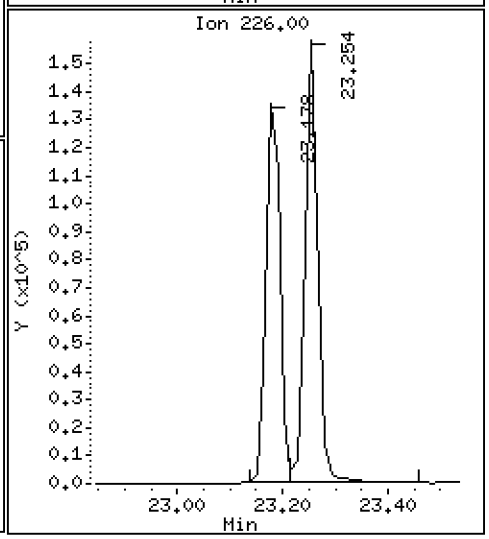












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

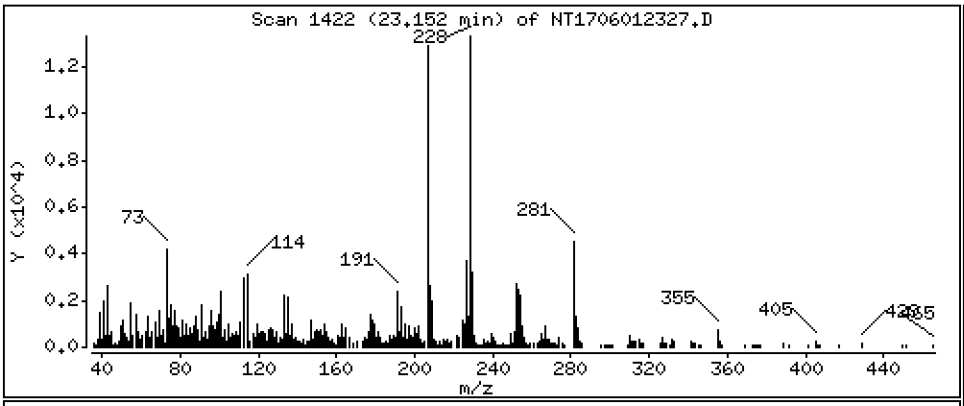
Operator: VTS

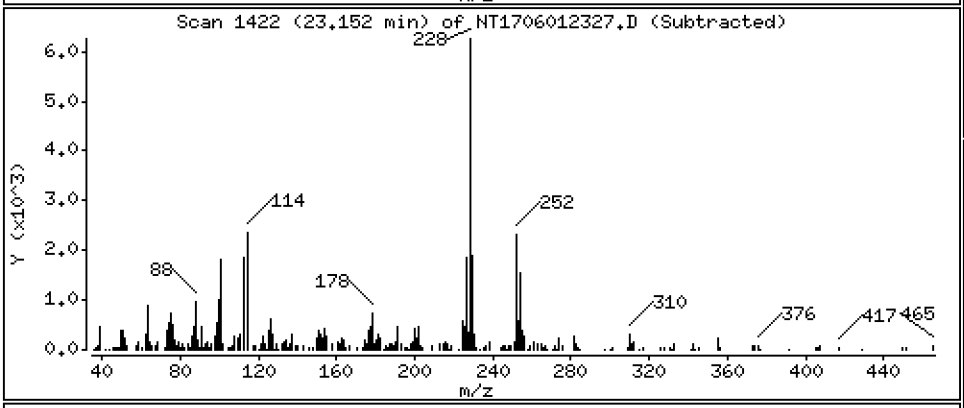
Column phase: ZB-5msi

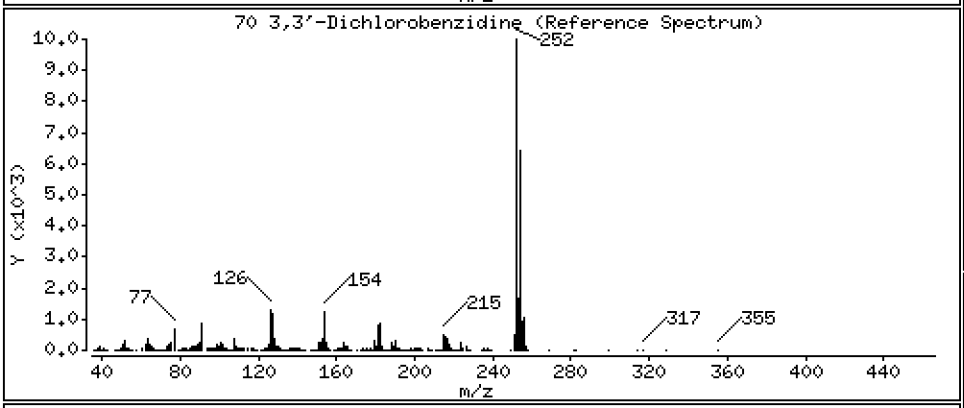
Column diameter: 0.25

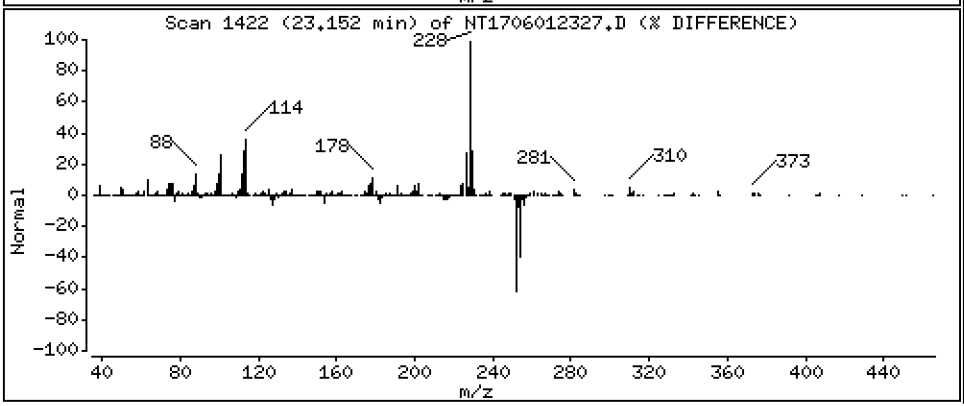
70 3,3'-Dichlorobenzidine

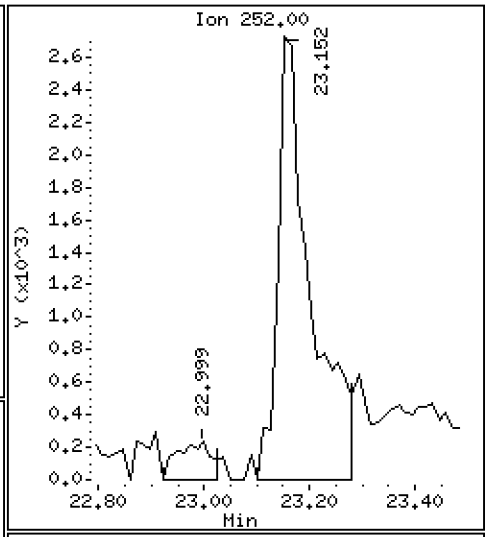
Concentration: 0.2902 ug/mL

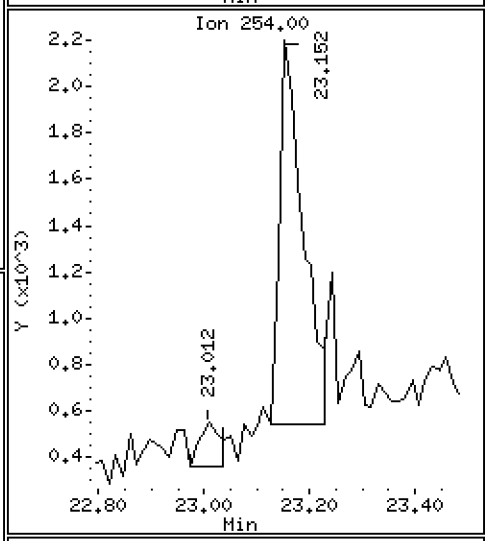


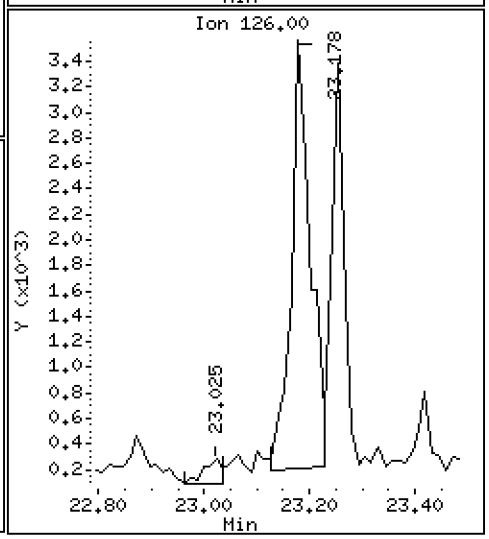












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

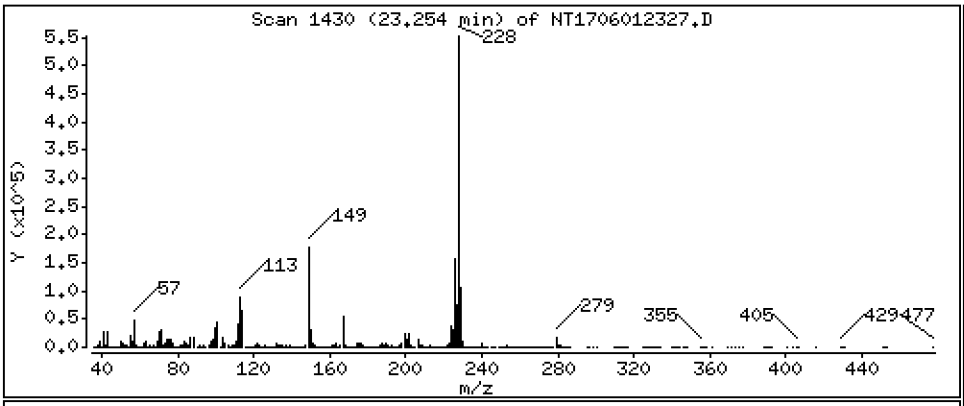
Operator: VTS

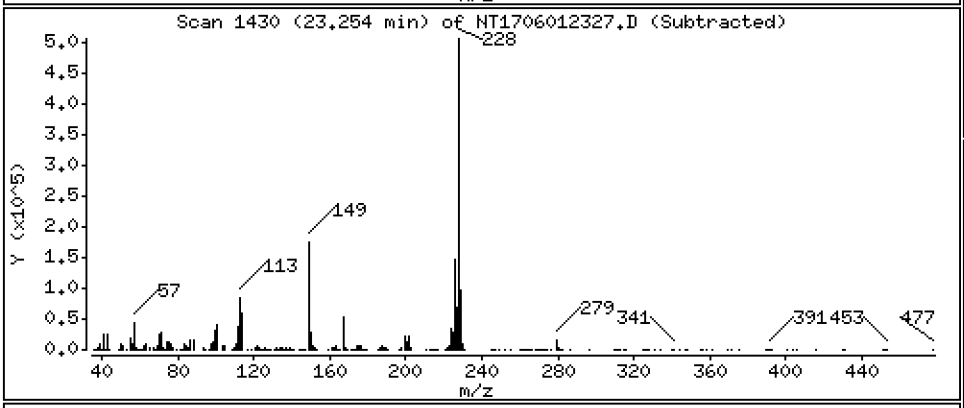
Column phase: ZB-5msi

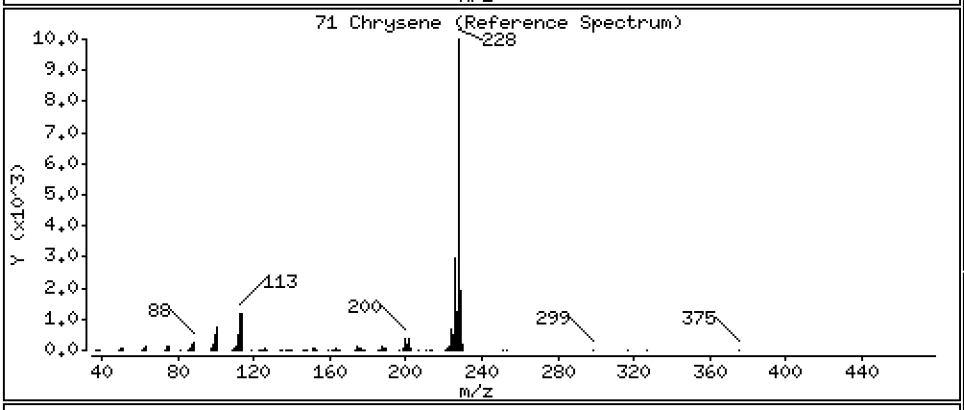
Column diameter: 0.25

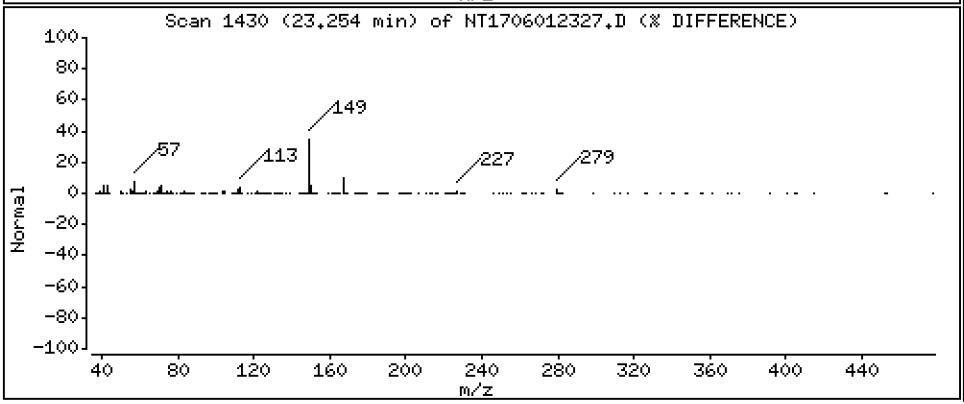
71 Chrysene

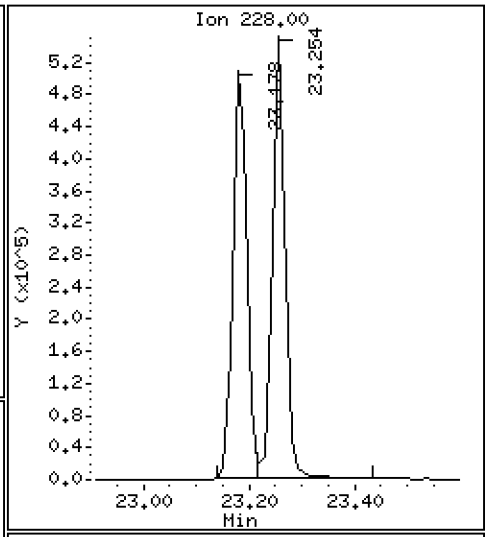
Concentration: 4.617 ug/mL

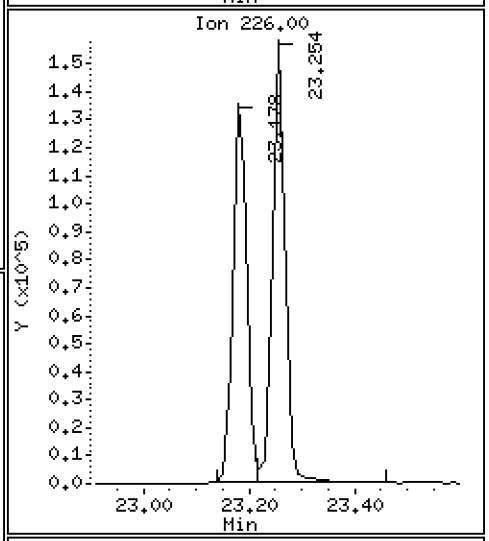


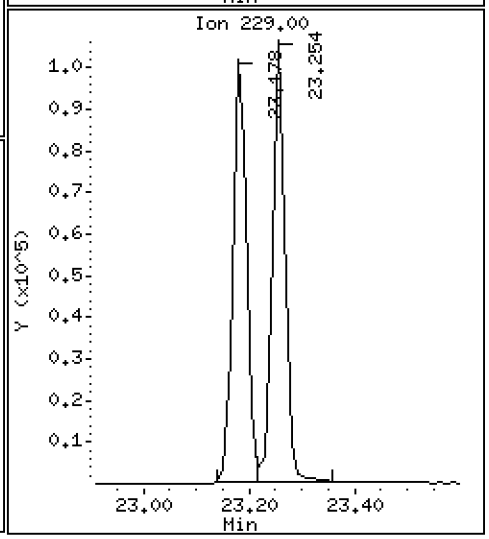












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

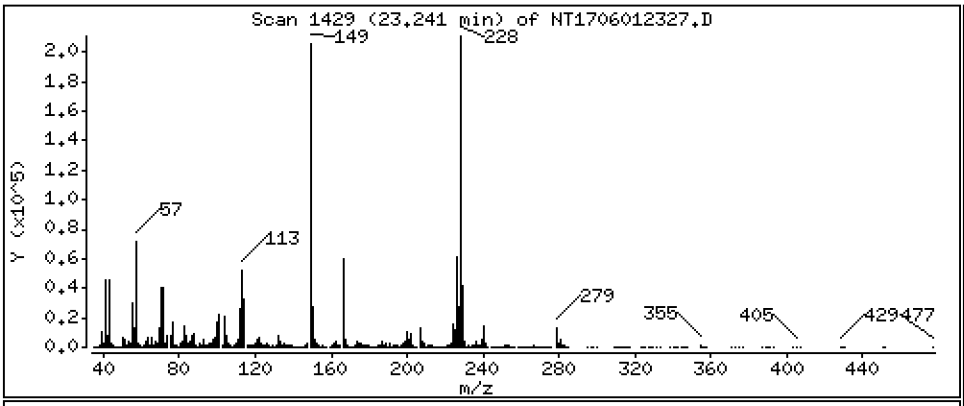
Operator: VTS

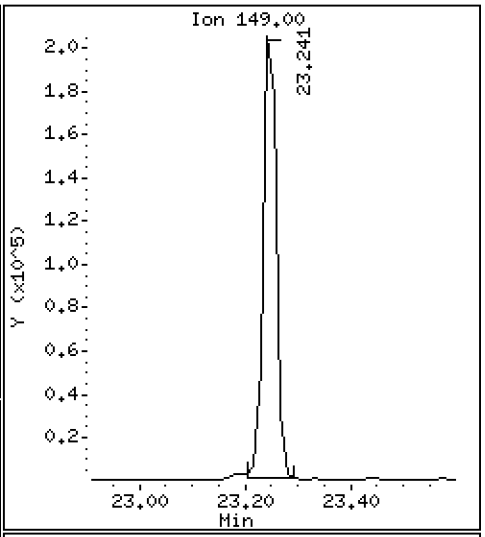
Column phase: ZB-5msi

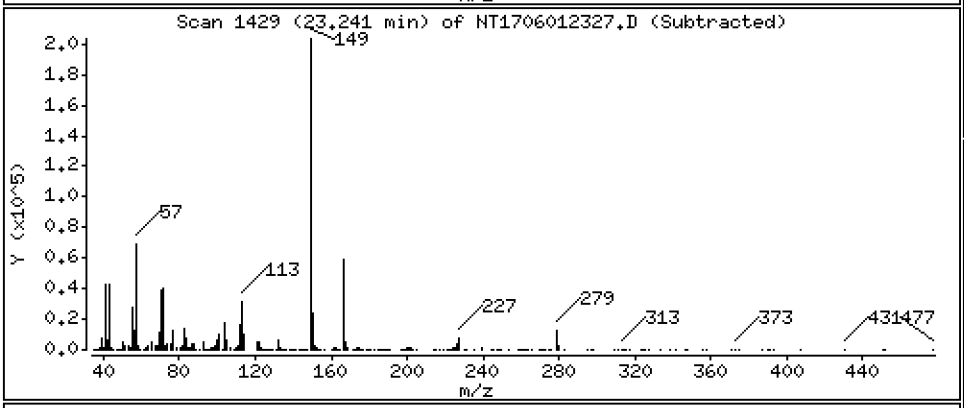
Column diameter: 0.25

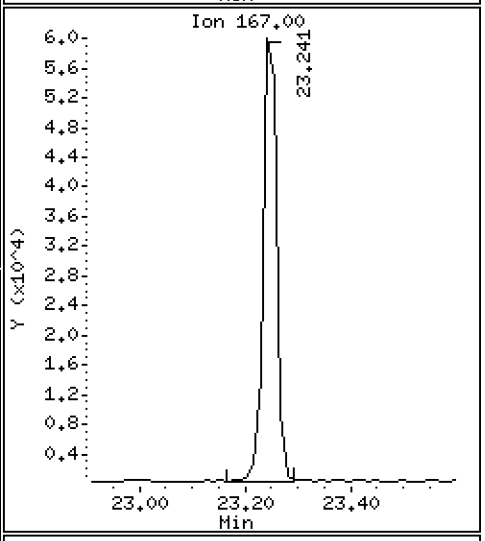
72 bis(2-Ethylhexyl)phthalate

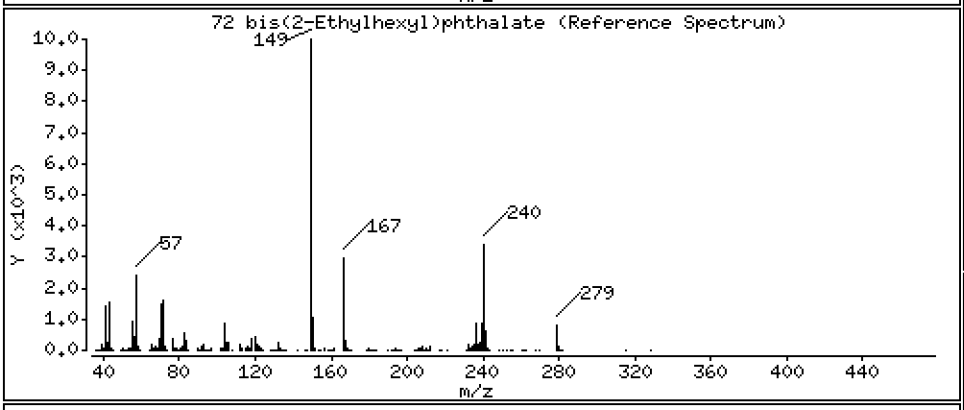
Concentration: 2.155 ug/mL

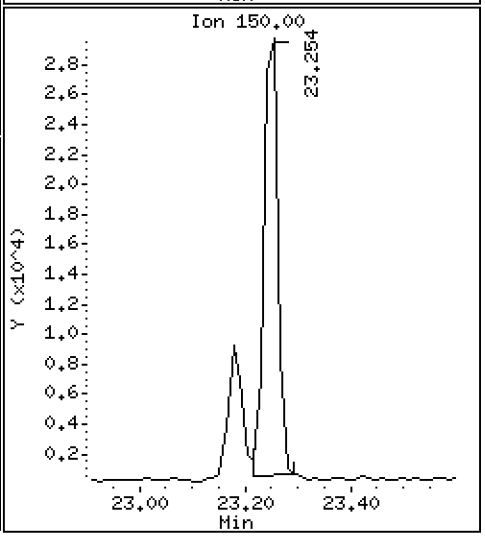


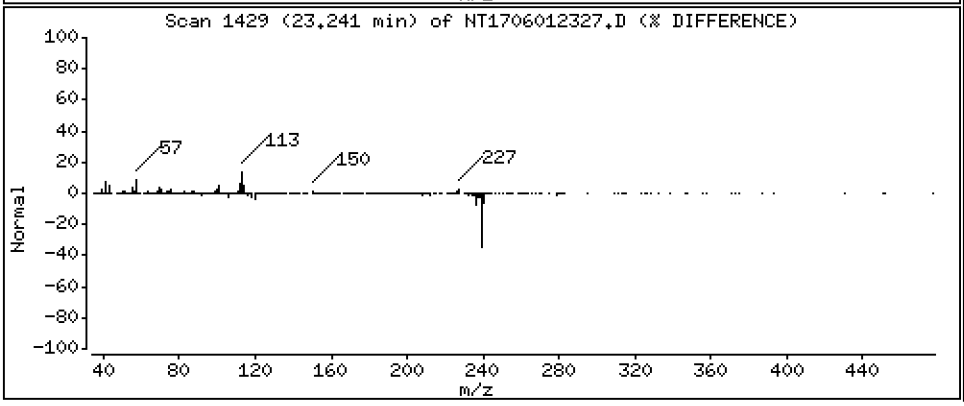












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

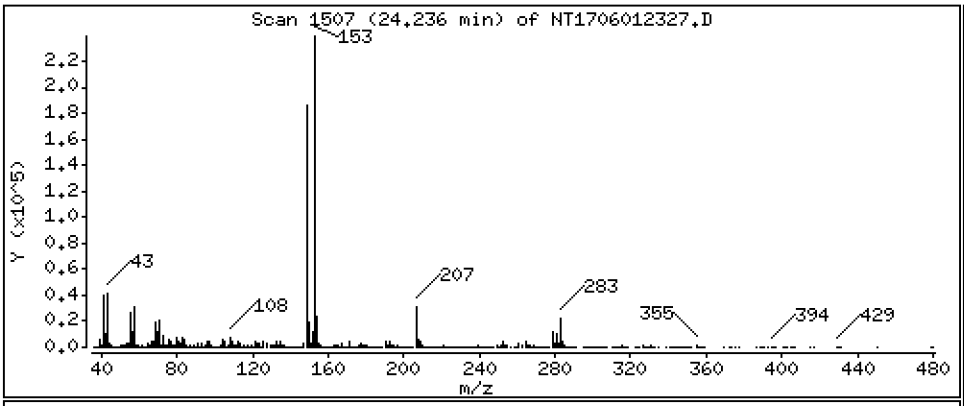
Operator: VTS

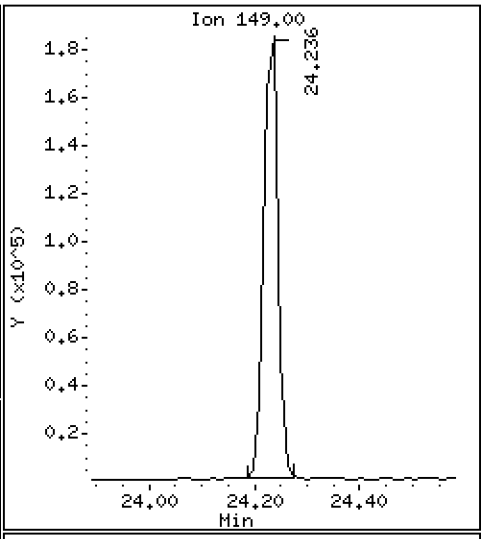
Column phase: ZB-5msi

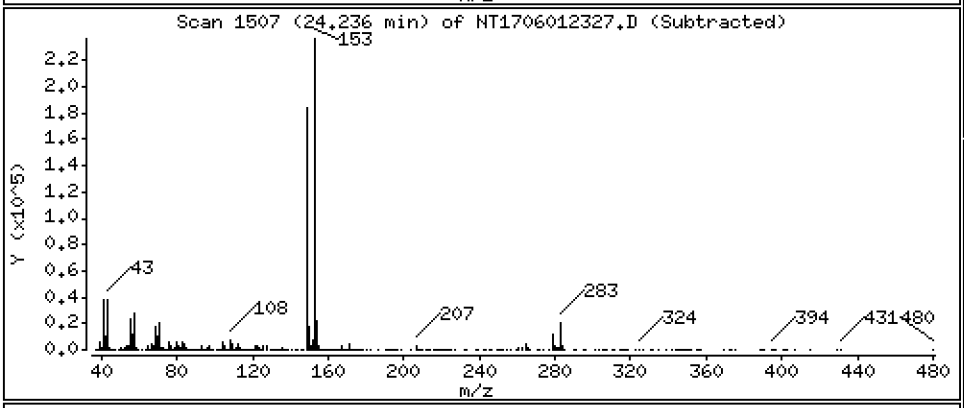
Column diameter: 0.25

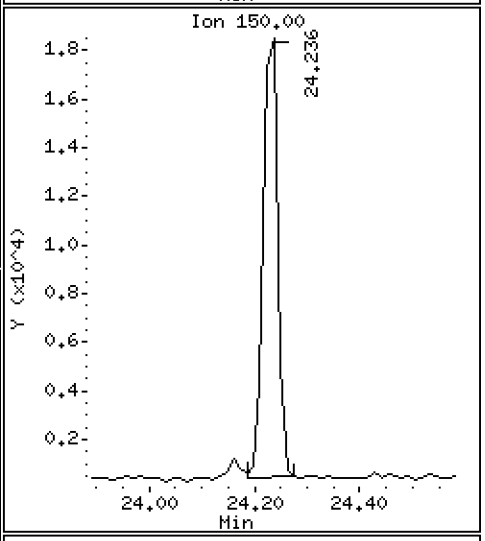
73 Di-n-octylphthalate

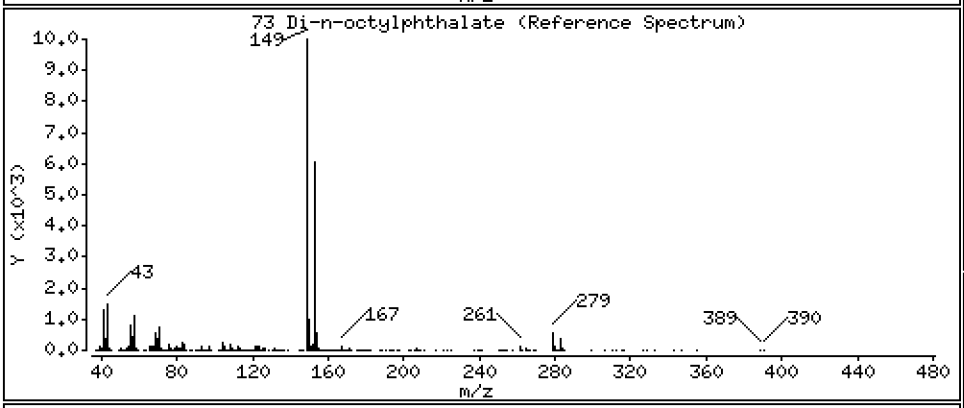
Concentration: 1.124 ug/mL

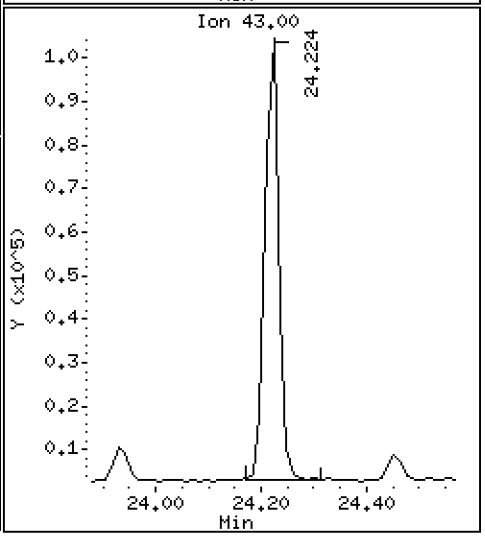


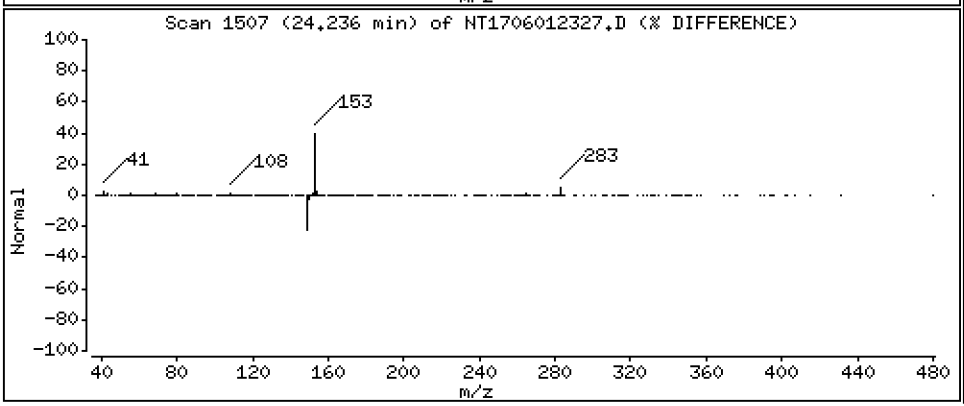












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

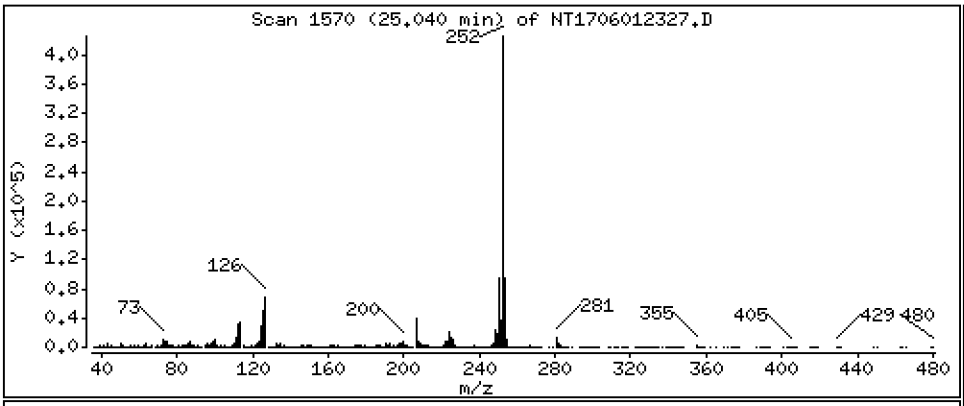
Operator: VTS

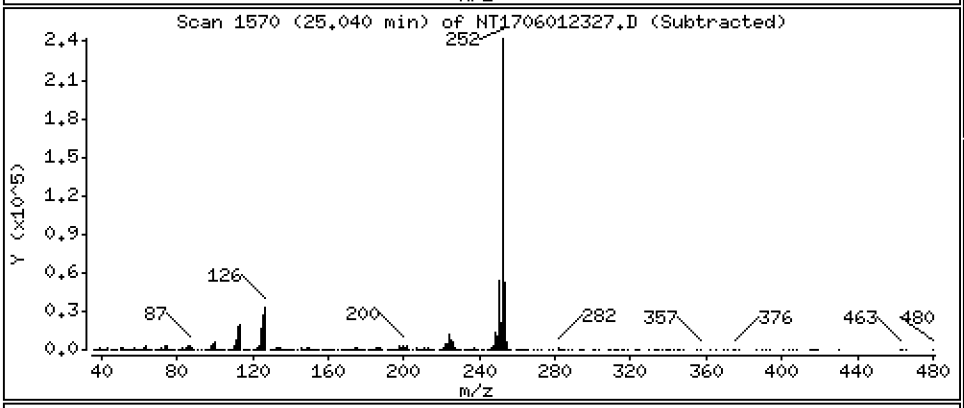
Column phase: ZB-5msi

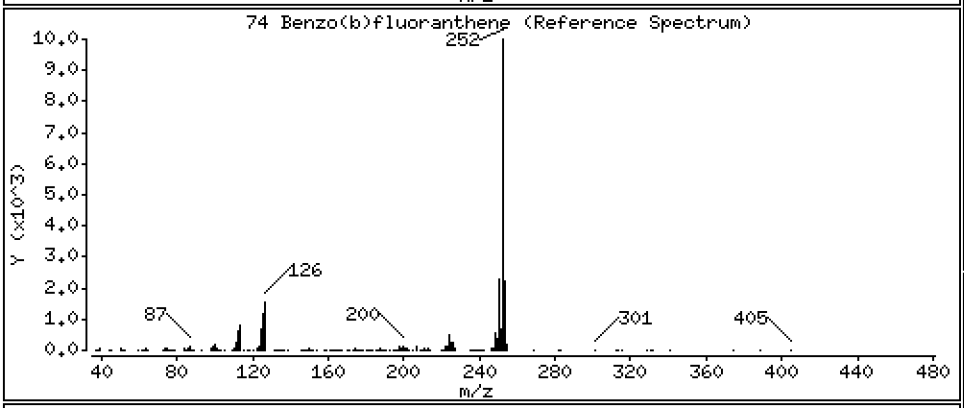
Column diameter: 0.25

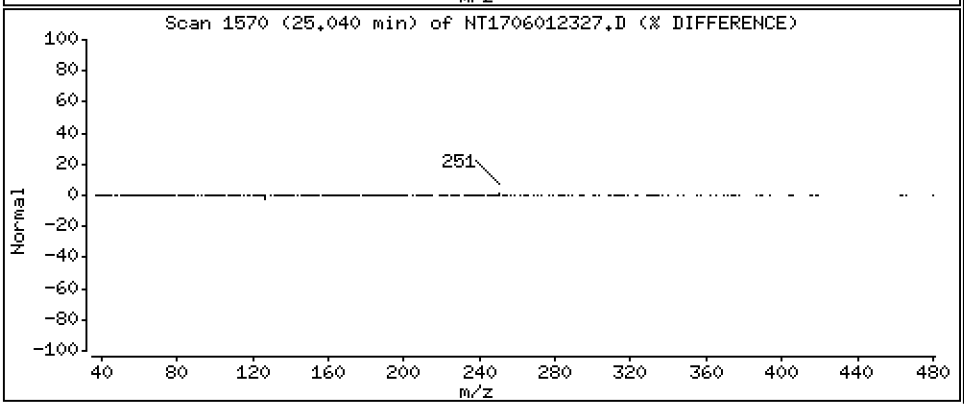
74 Benzo(b)fluoranthene

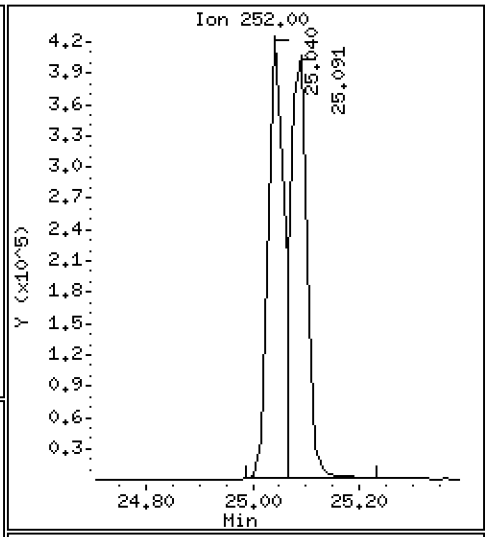
Concentration: 4.732 ug/mL

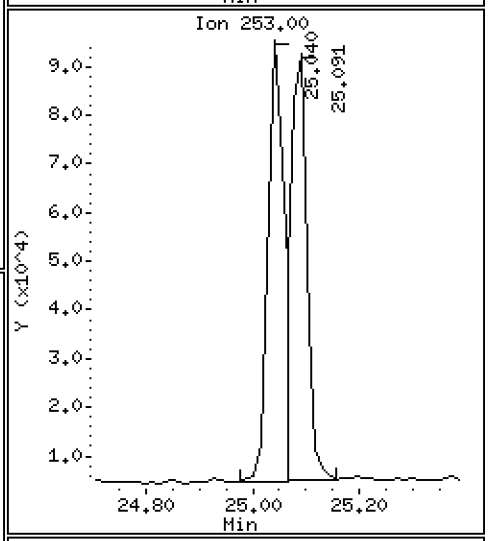


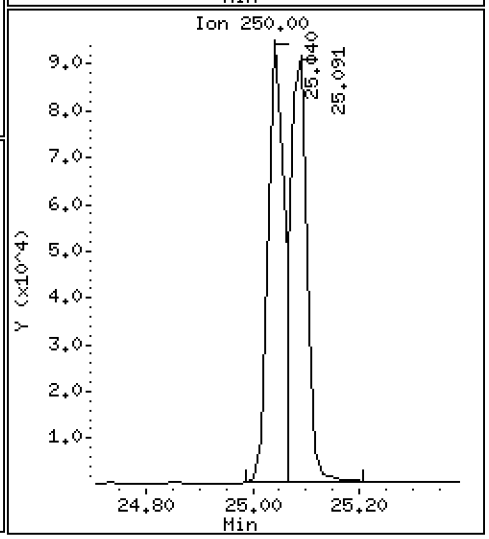












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

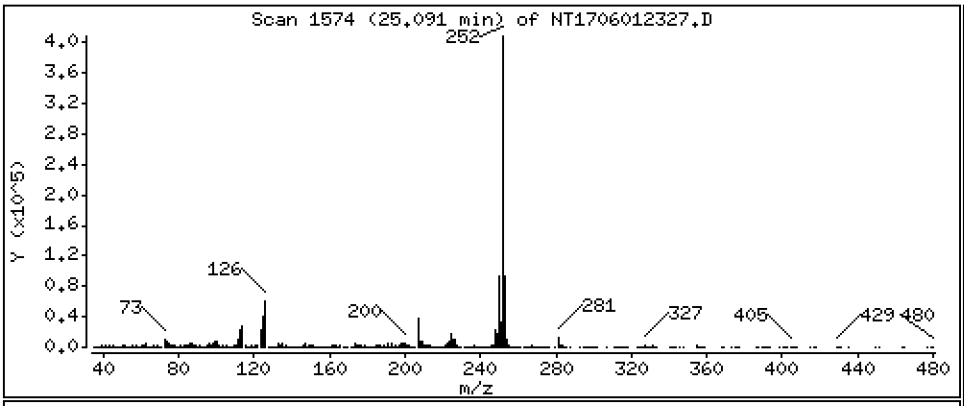
Operator: VTS

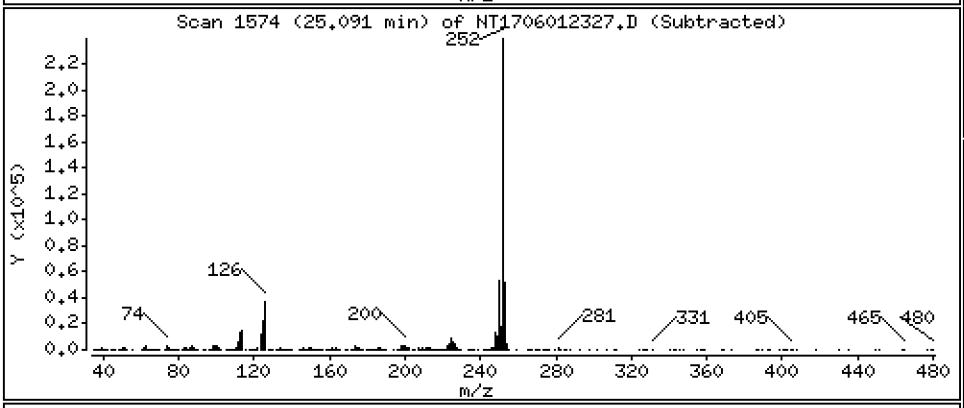
Column phase: ZB-5msi

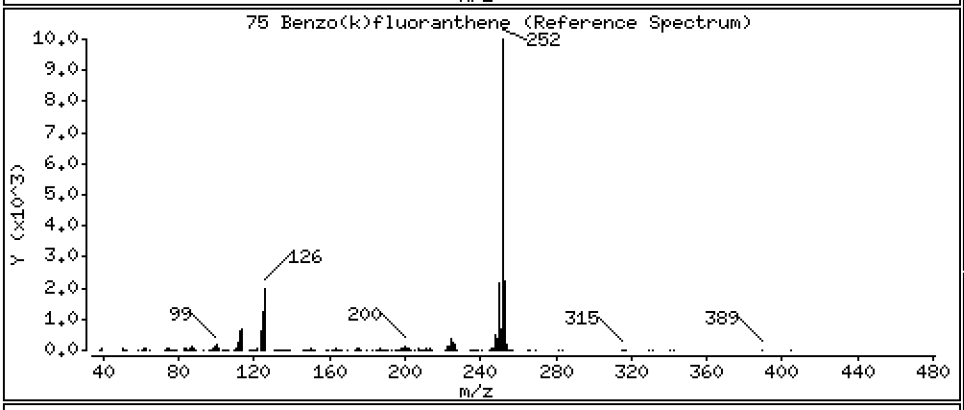
Column diameter: 0.25

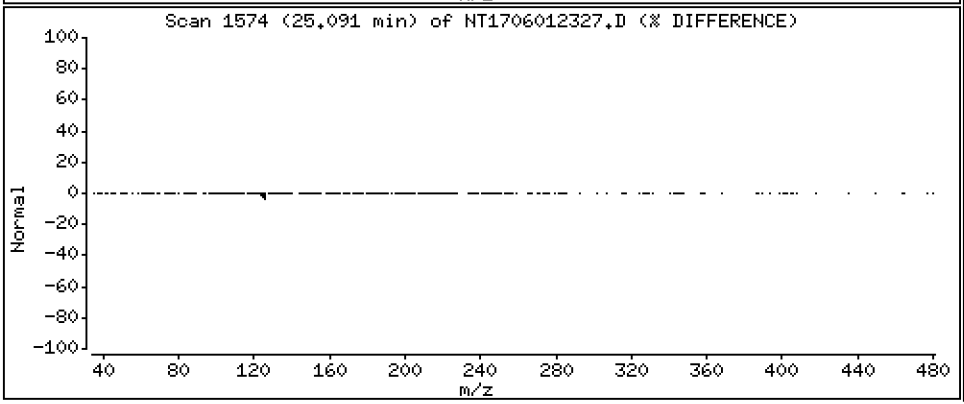
75 Benzo(k)fluoranthene

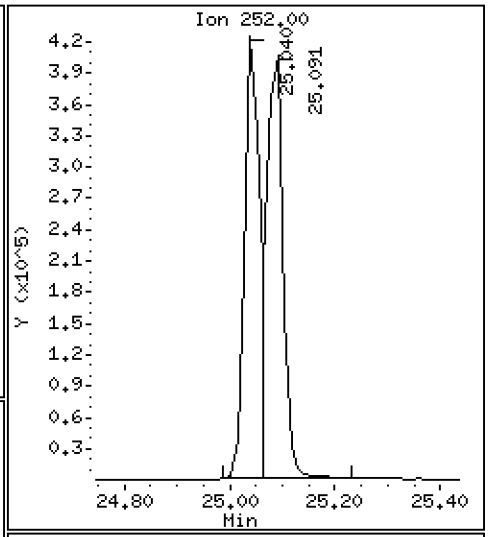
Concentration: 4.922 ug/mL

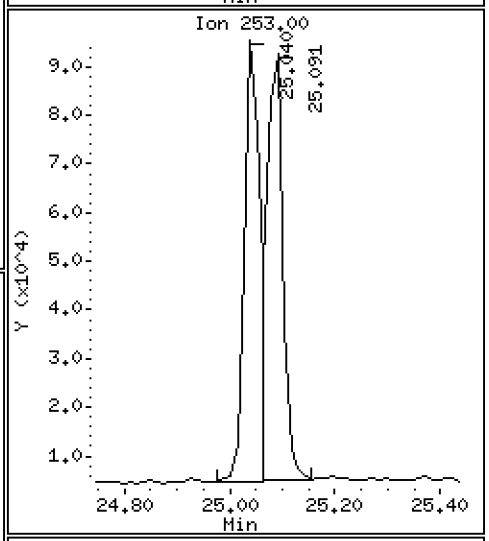


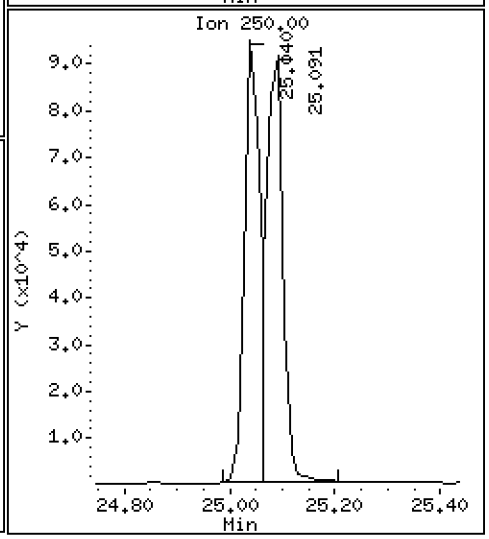












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

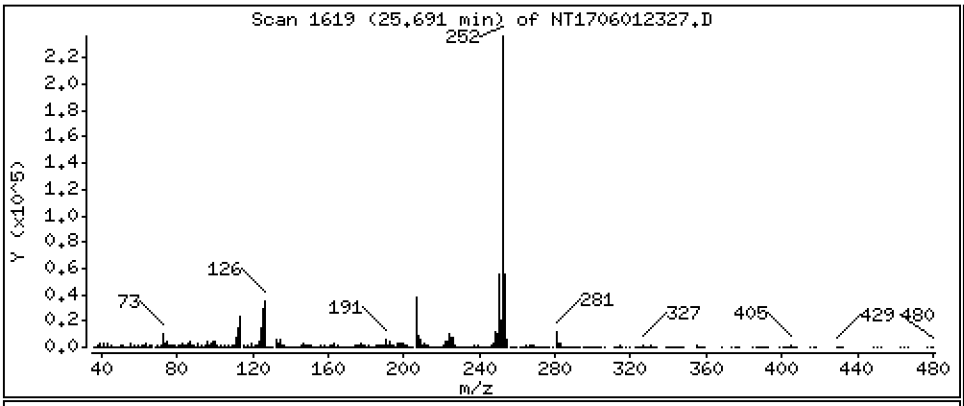
Operator: VTS

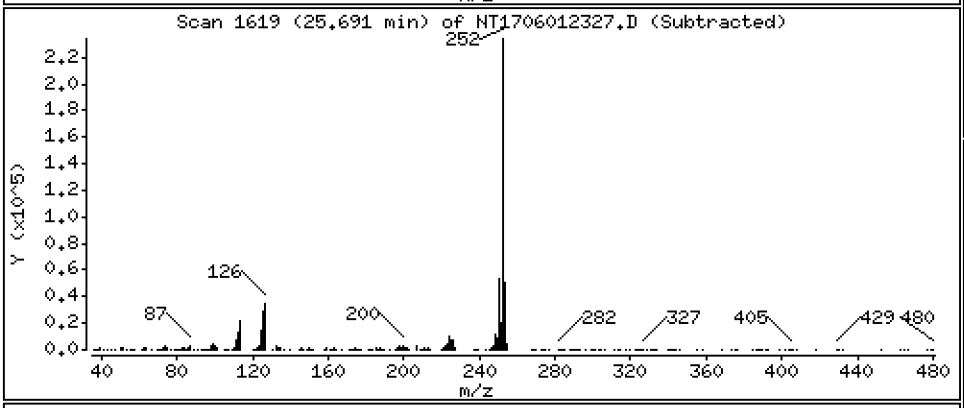
Column phase: ZB-5msi

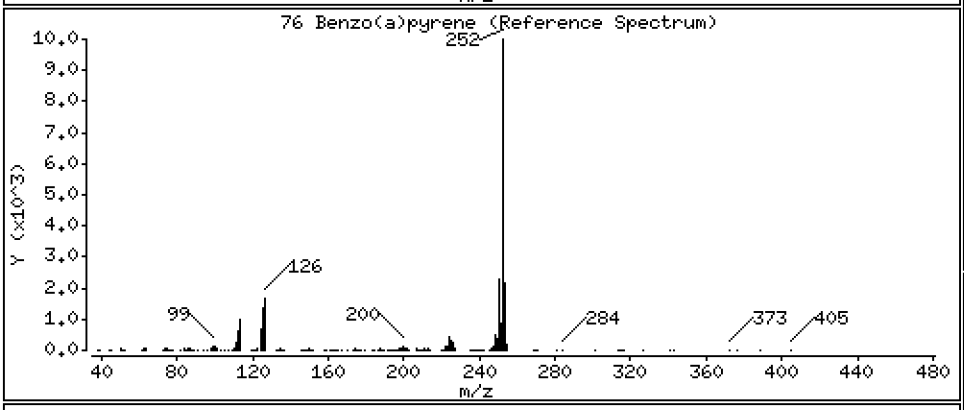
Column diameter: 0.25

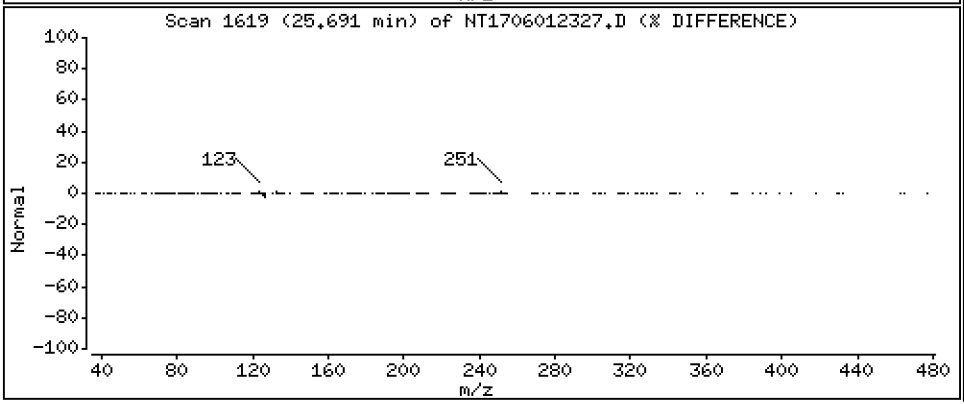
76 Benzo(a)pyrene

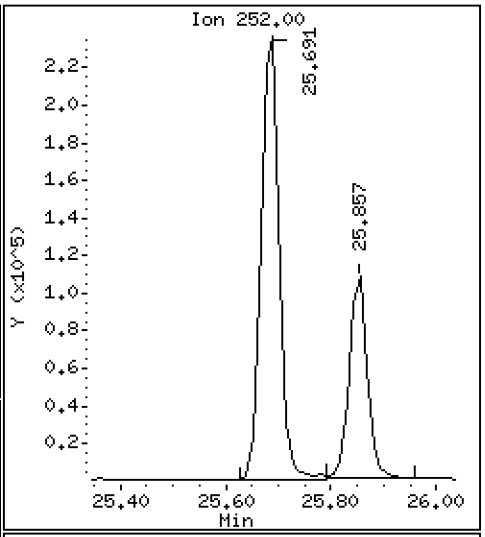
Concentration: 3.695 ug/mL

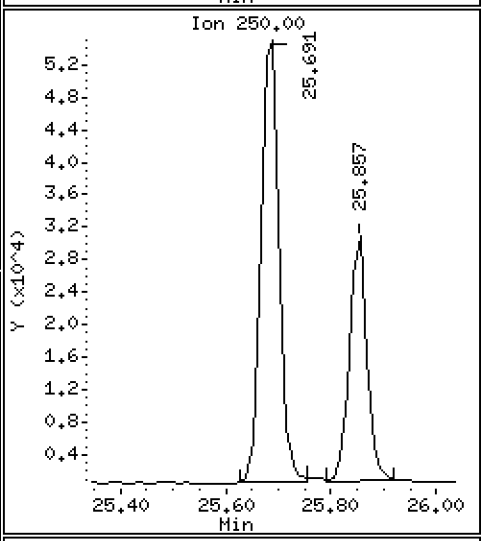


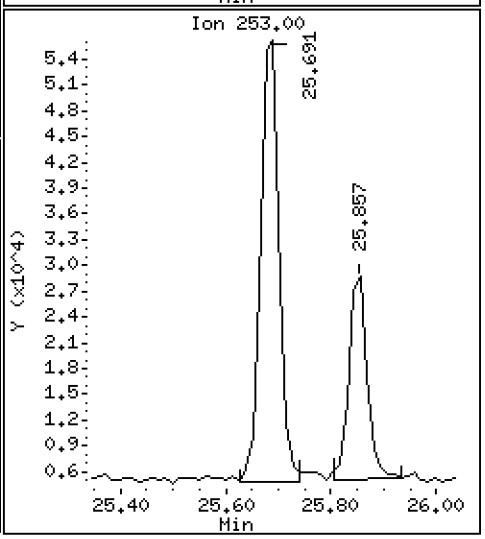












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

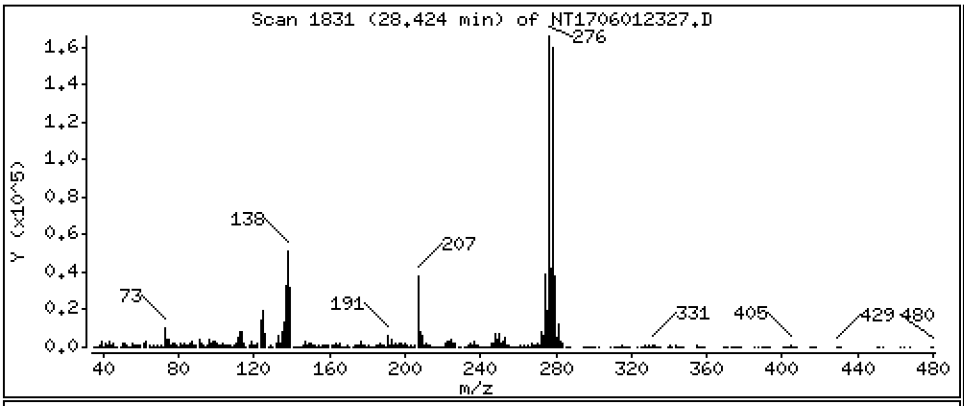
Operator: VTS

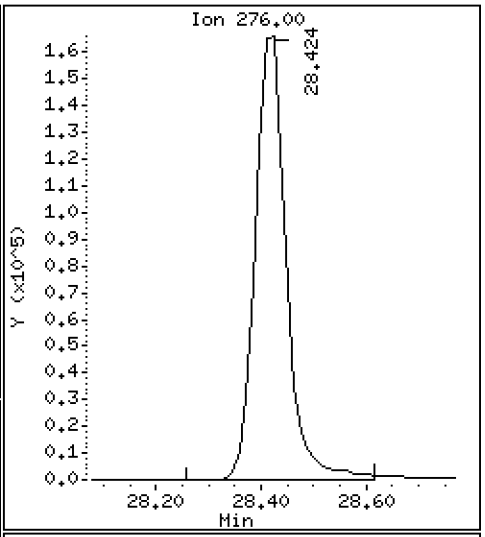
Column phase: ZB-5msi

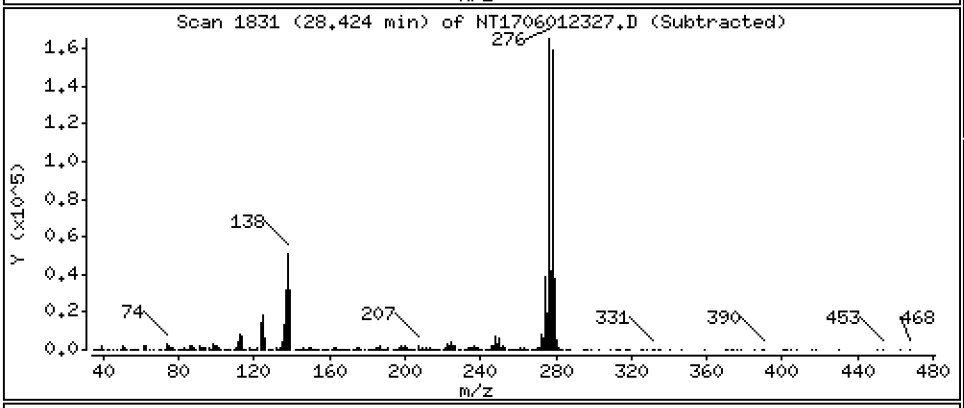
Column diameter: 0.25

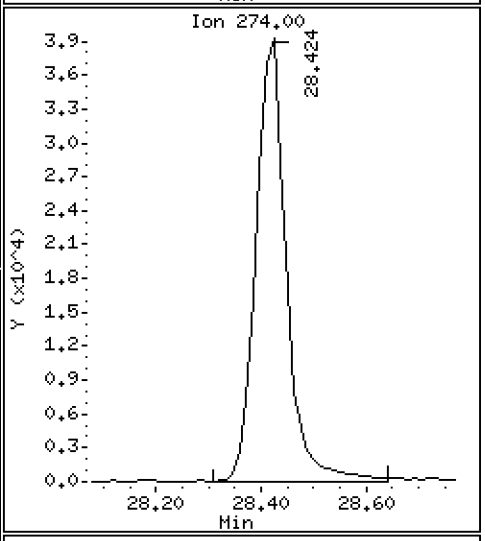
78 Indeno(1,2,3-cd)pyrene

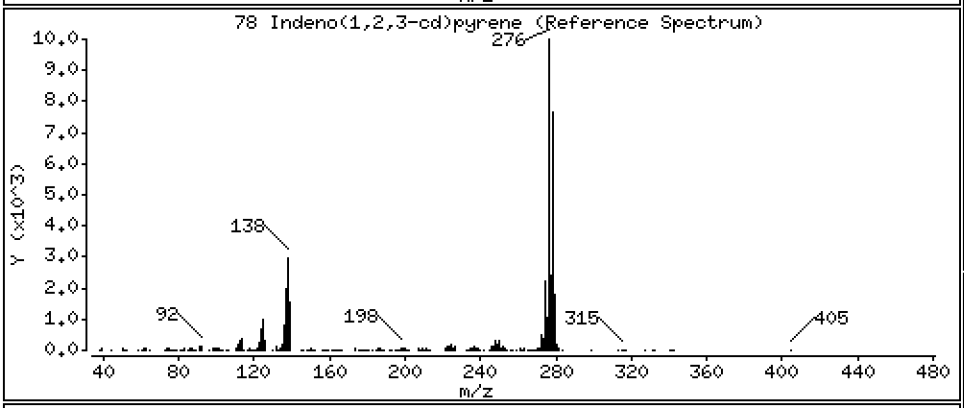
Concentration: 3.768 ug/mL

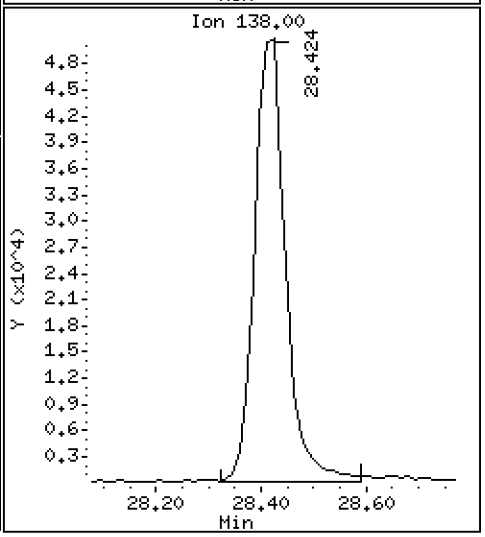


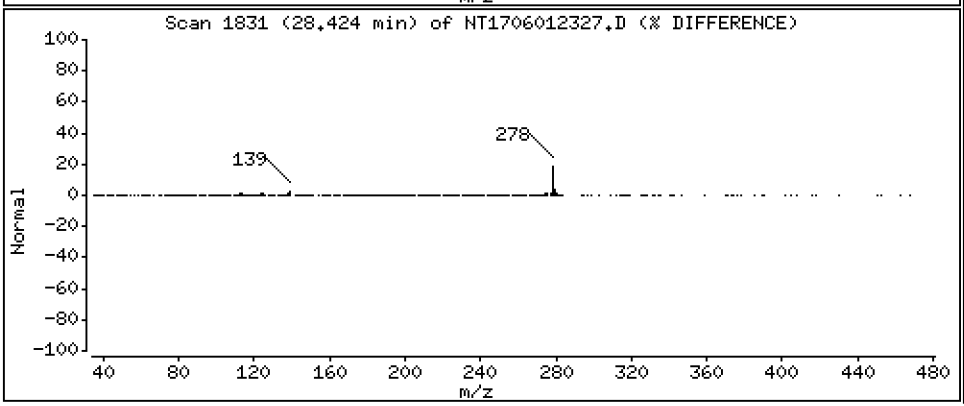












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

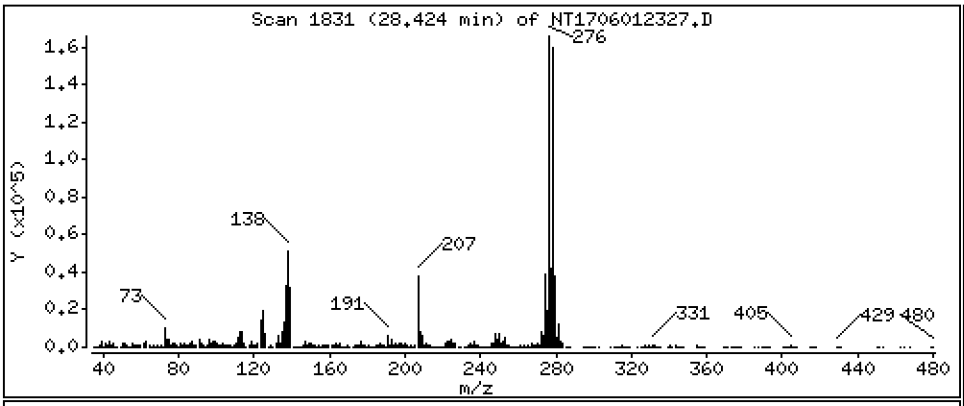
Operator: VTS

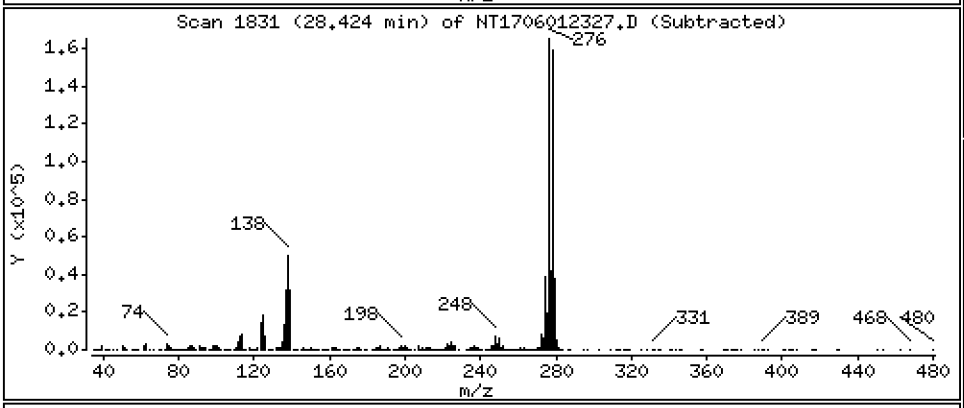
Column phase: ZB-5msi

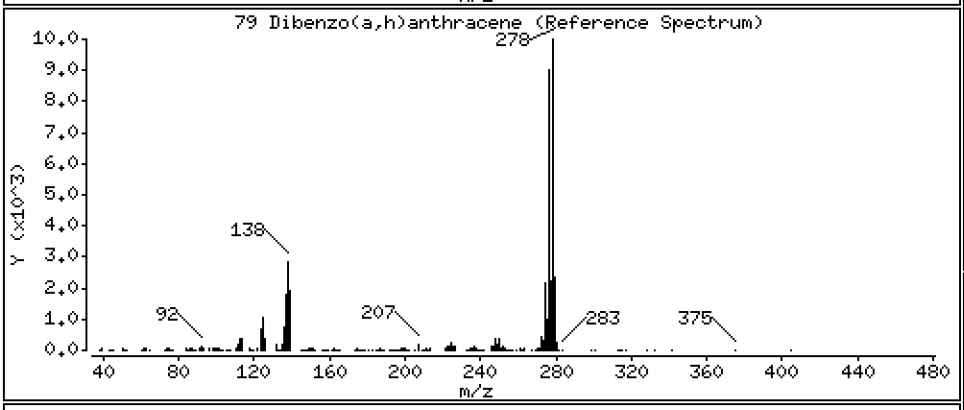
Column diameter: 0.25

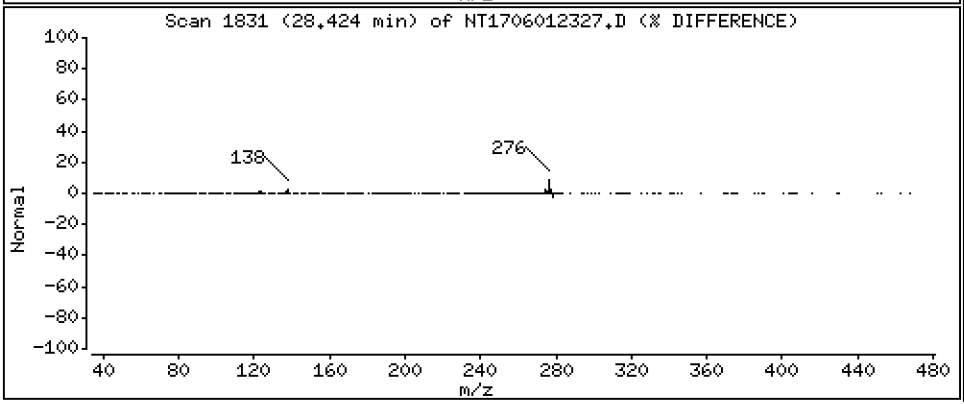
79 Dibenzo(a,h)anthracene

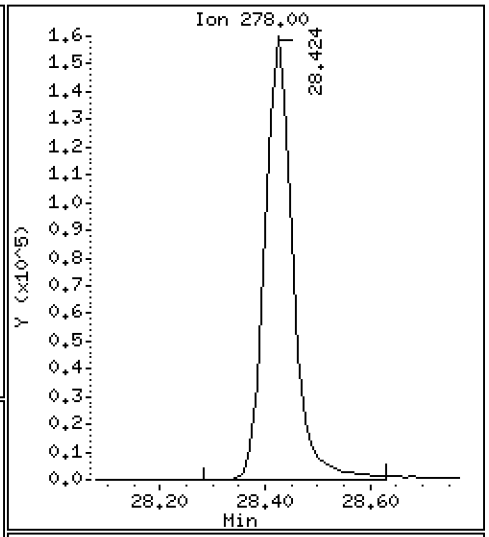
Concentration: 3.912 ug/mL

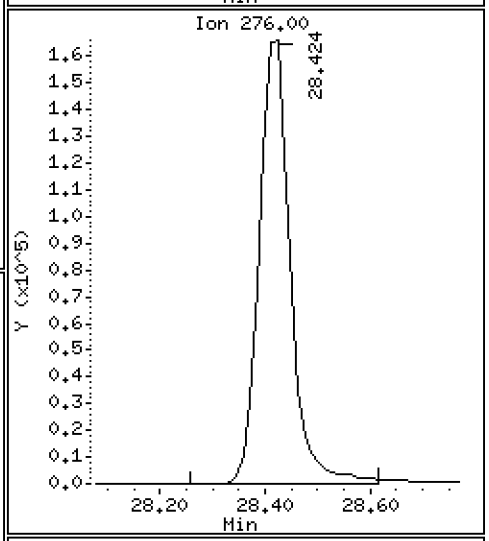


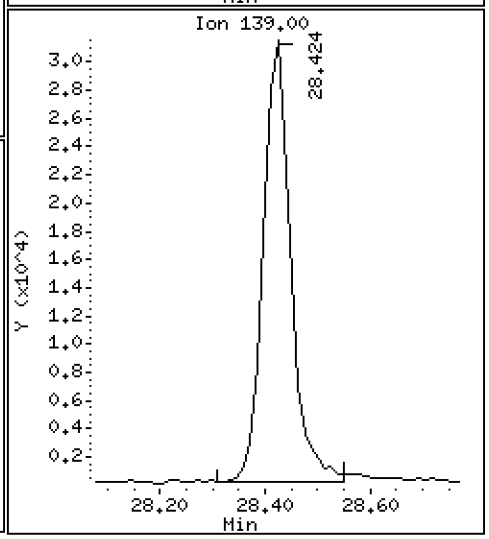












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

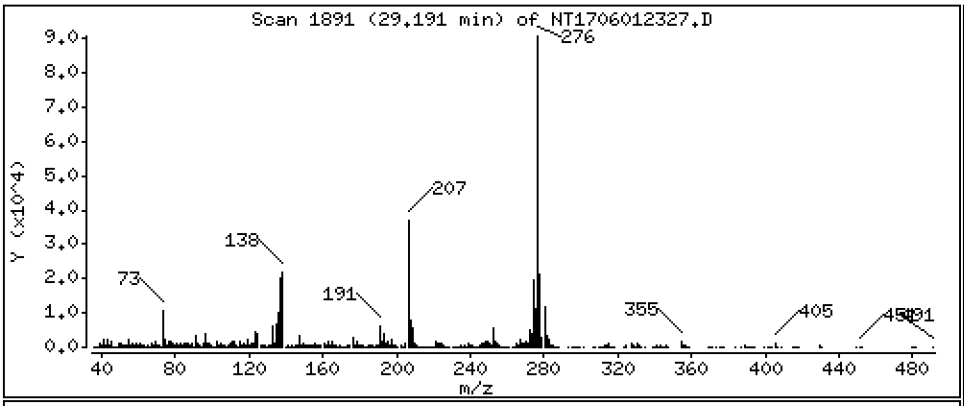
Operator: VTS

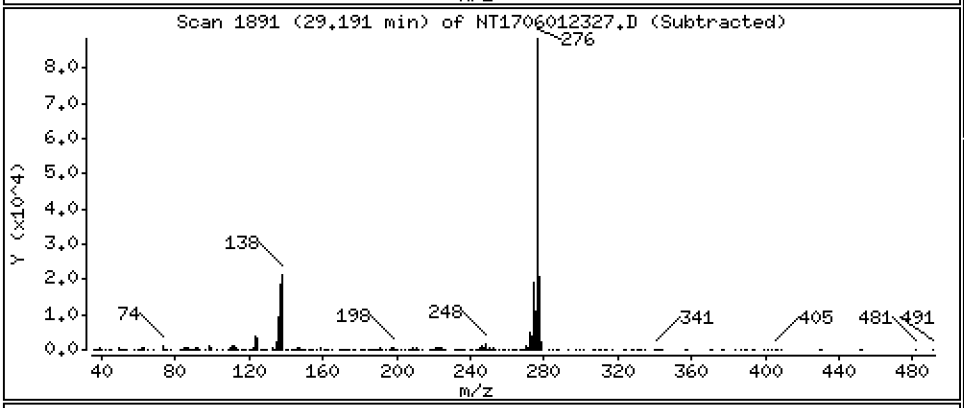
Column phase: ZB-5msi

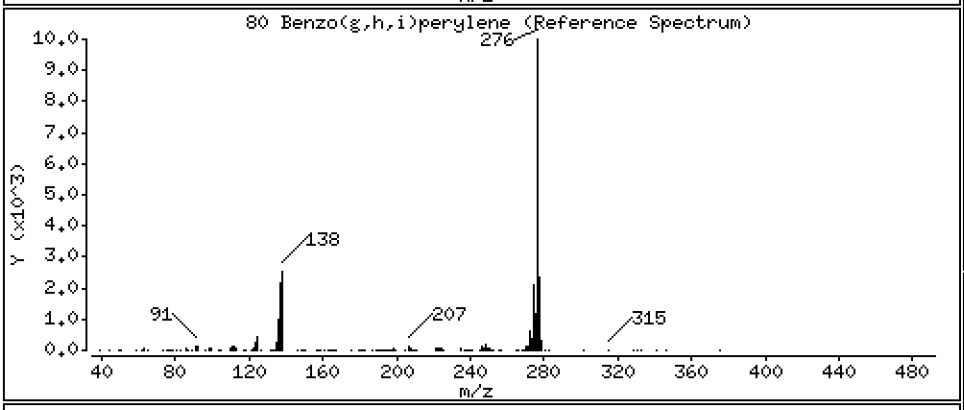
Column diameter: 0.25

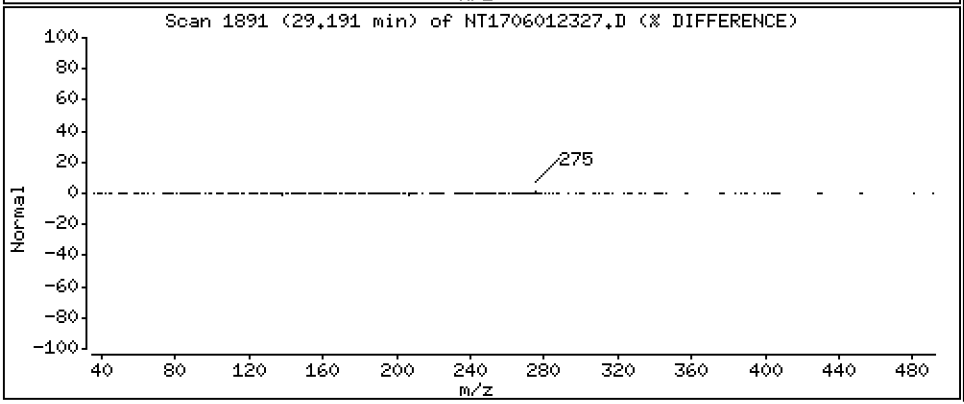
80 Benzo(g,h,i)perylene

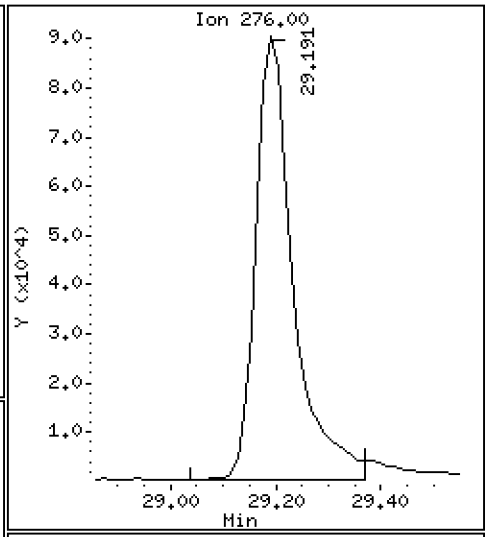
Concentration: 3.045 ug/mL

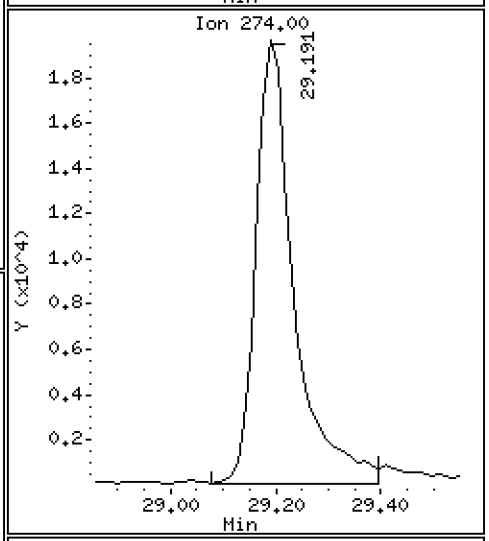


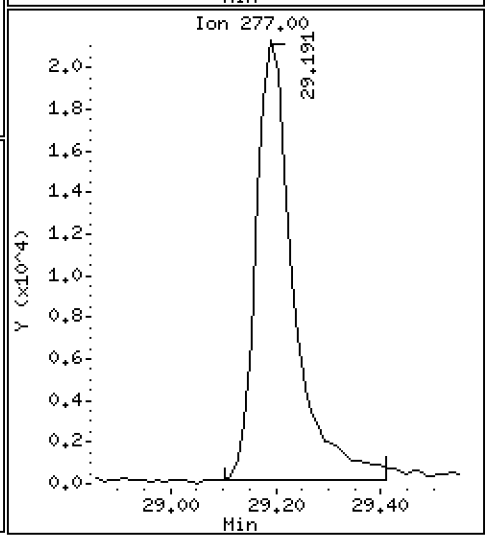












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

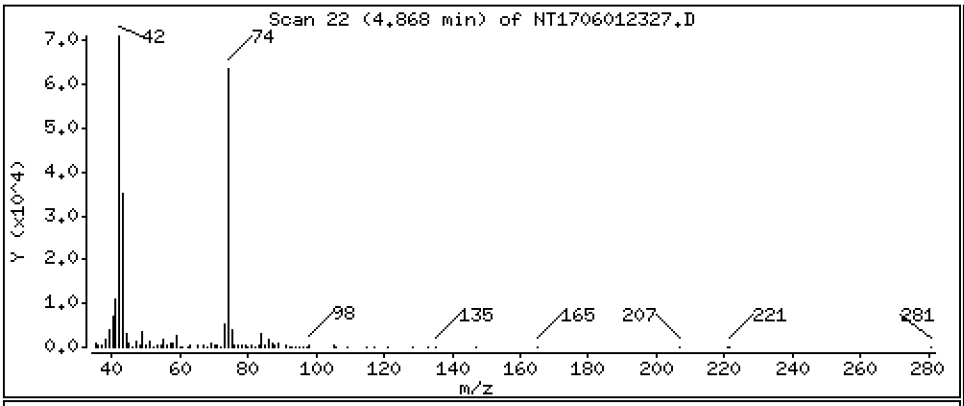
Operator: VTS

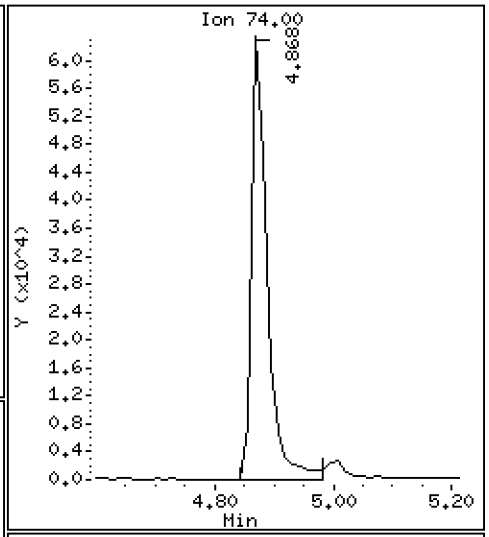
Column phase: ZB-5msi

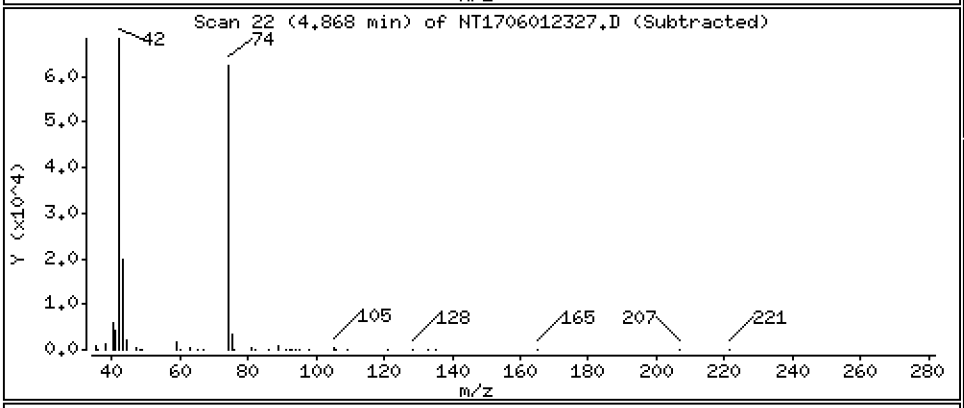
Column diameter: 0.25

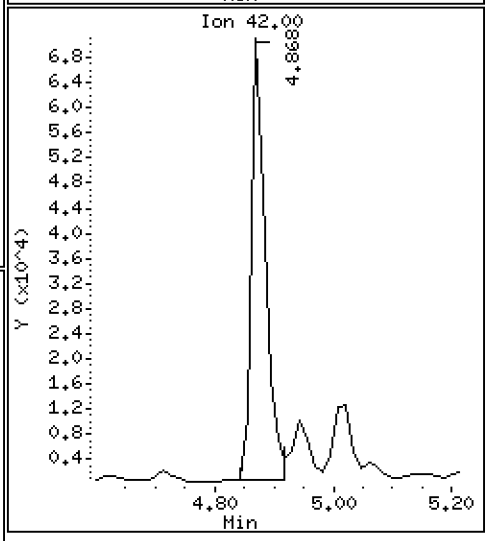
90 N-Nitrosodimethylamine

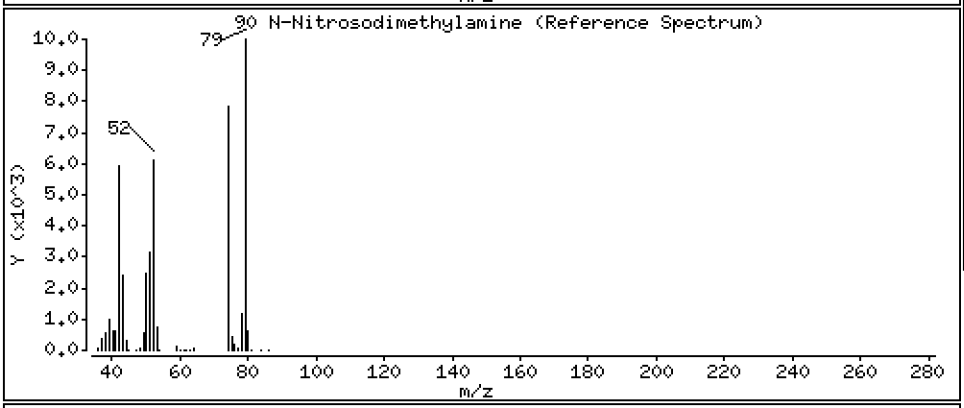
Concentration: 1.936 ug/mL

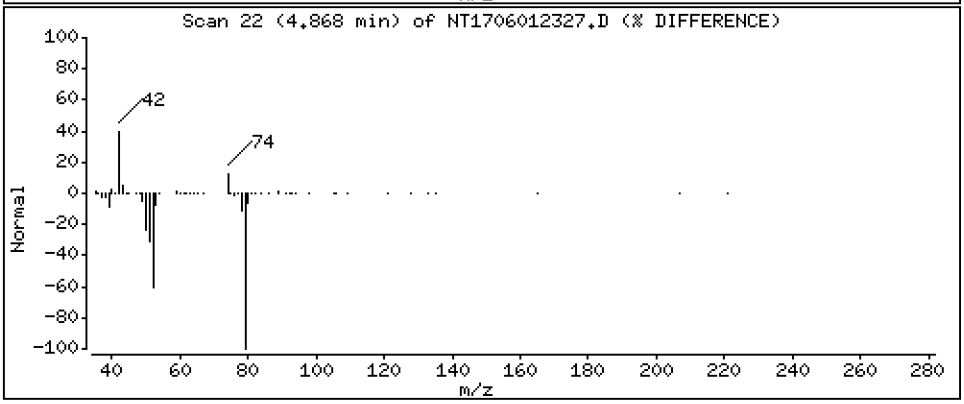












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

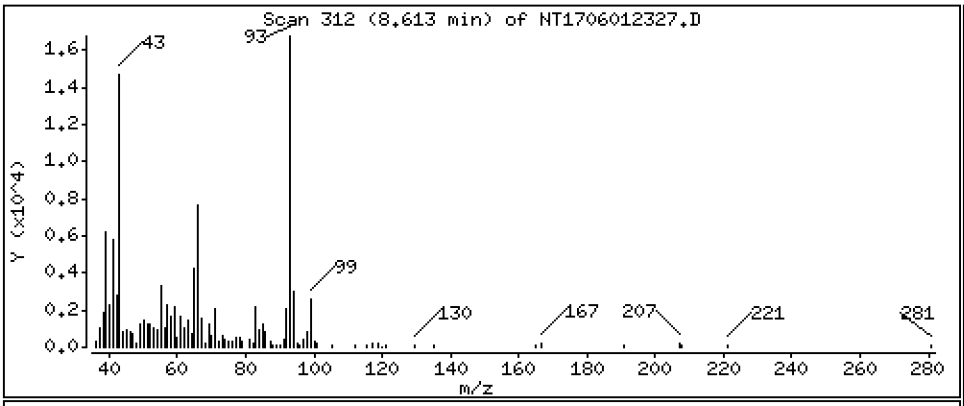
Operator: VTS

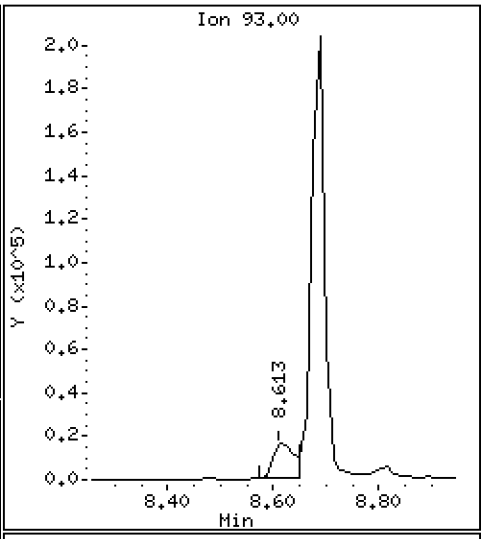
Column phase: ZB-5msi

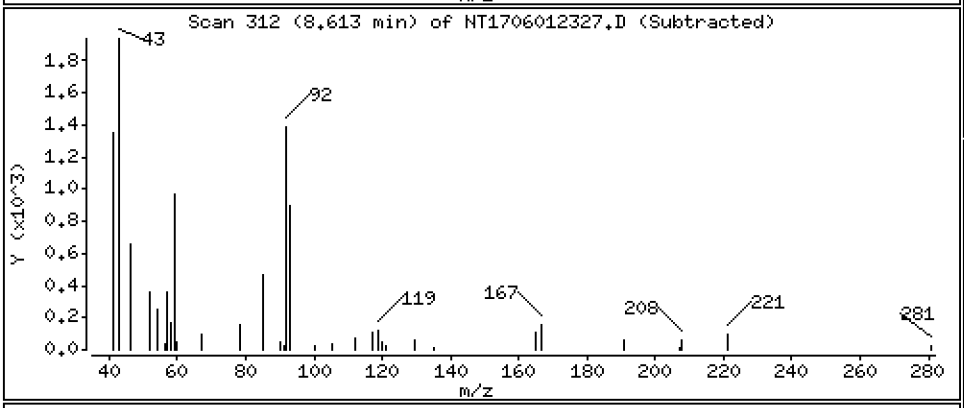
Column diameter: 0.25

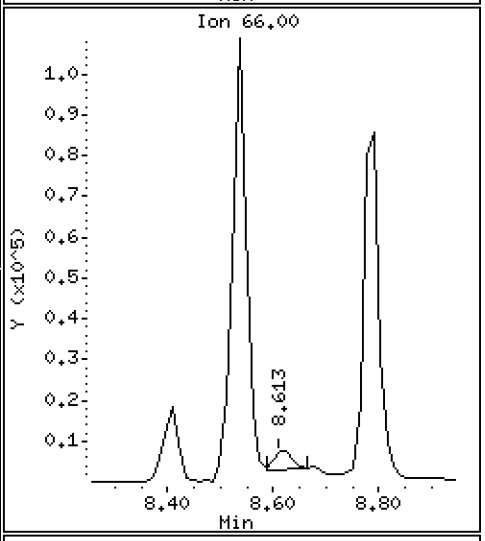
91 Aniline

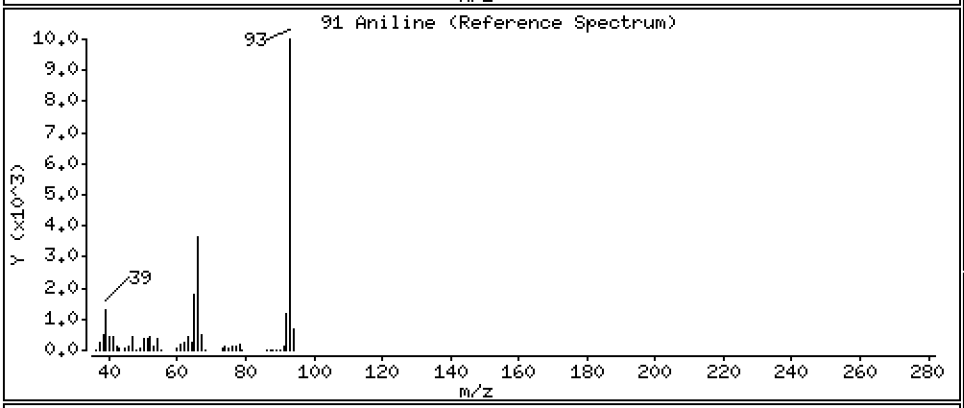
Concentration: 0.4505 ug/mL

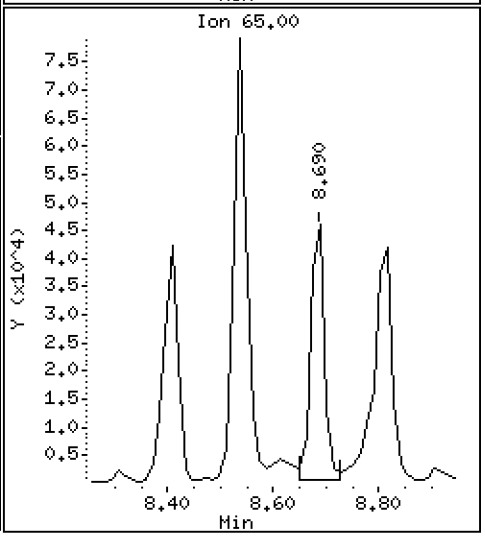


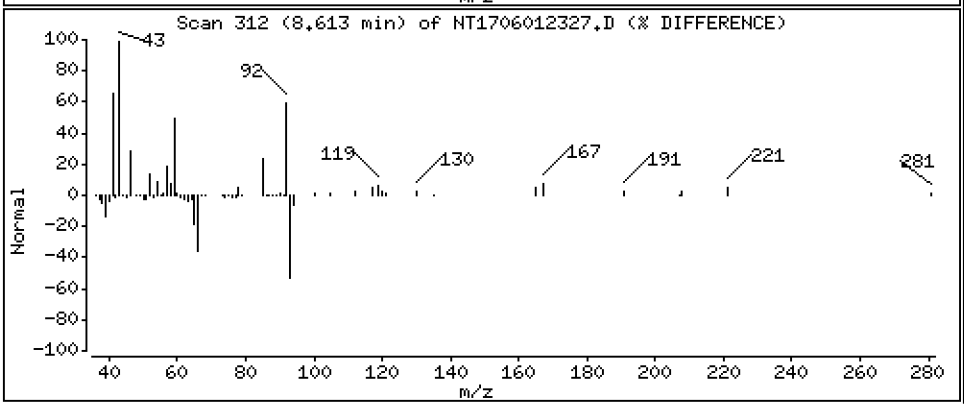












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

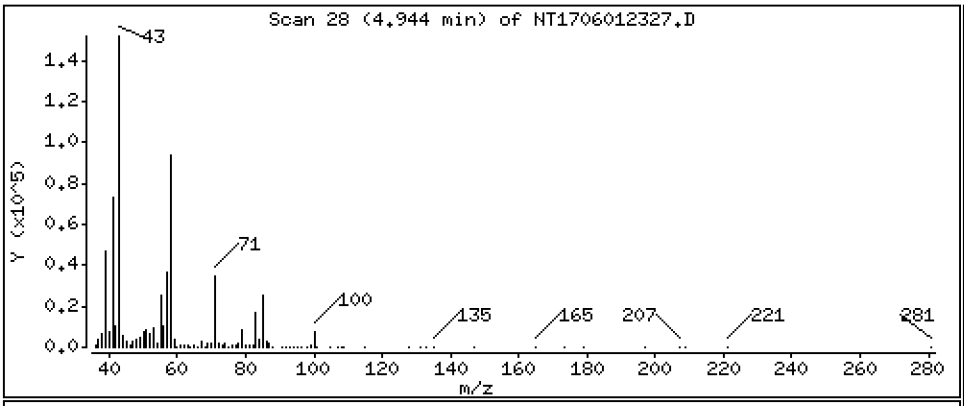
Operator: VTS

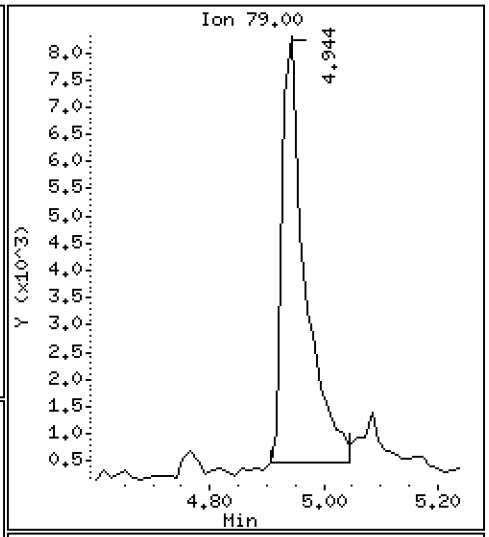
Column phase: ZB-5msi

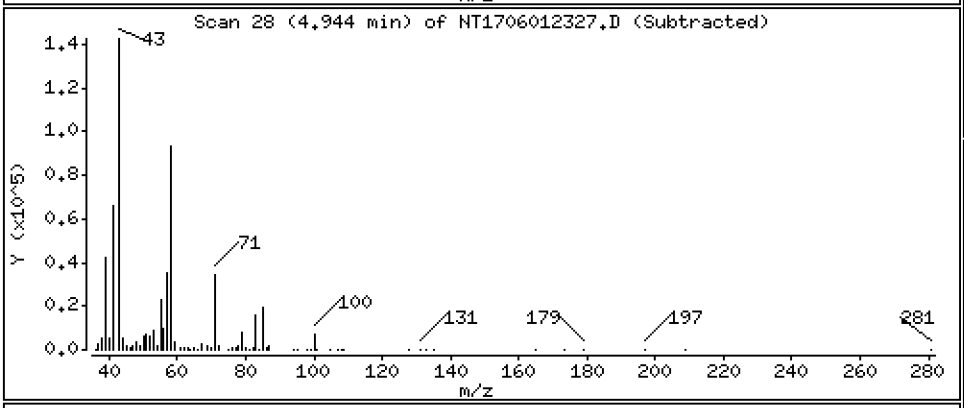
Column diameter: 0.25

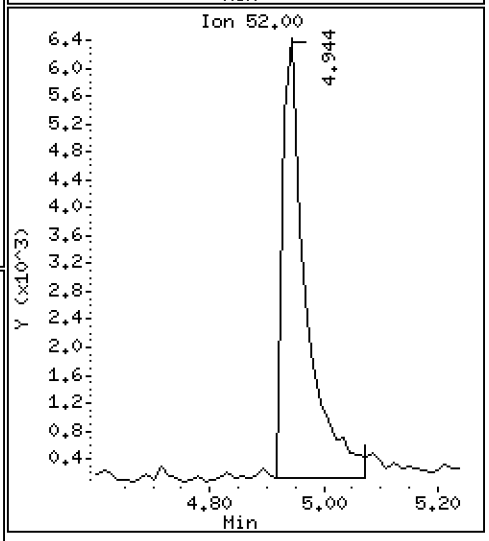
103 Pyridine

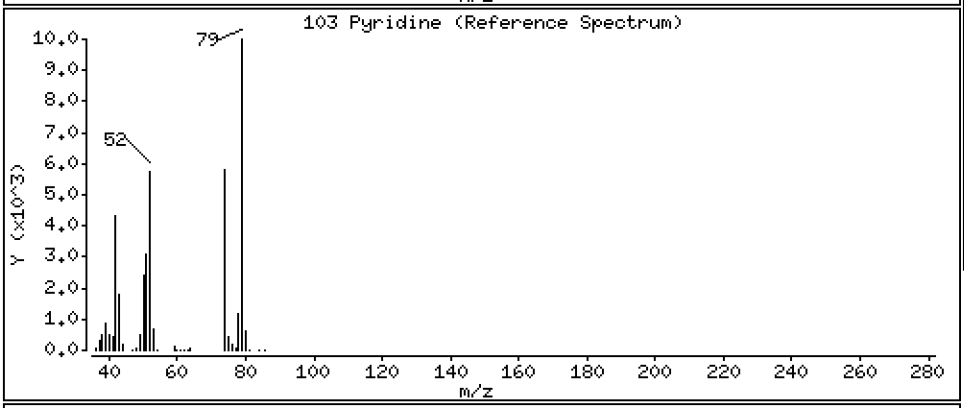
Concentration: 0.2267 ug/mL

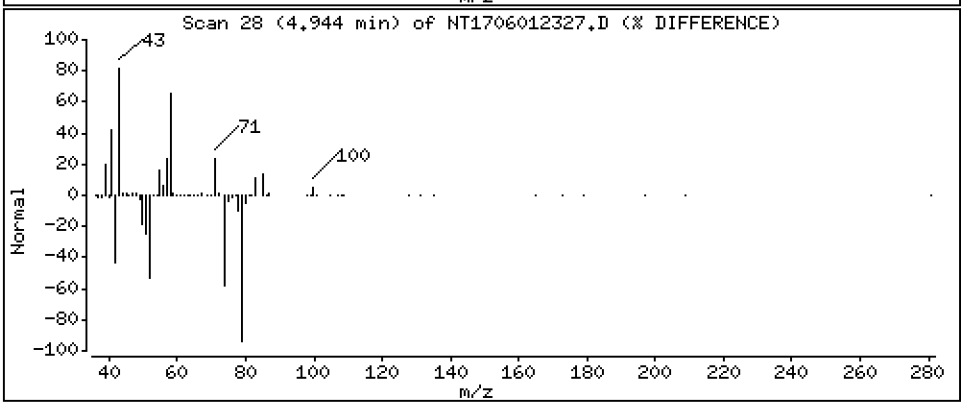












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

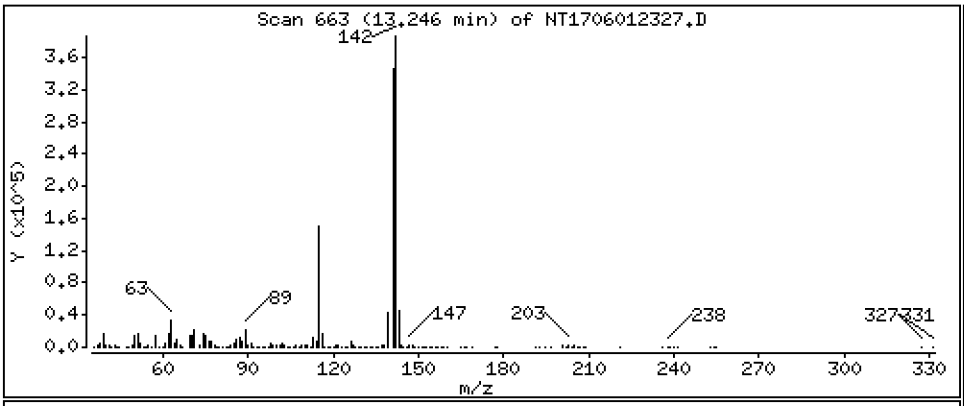
Operator: VTS

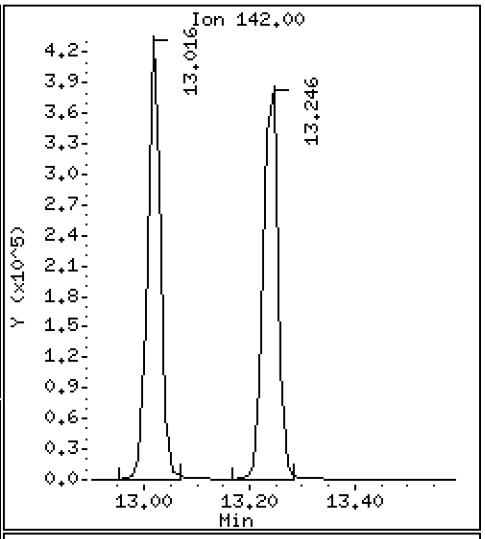
Column phase: ZB-5msi

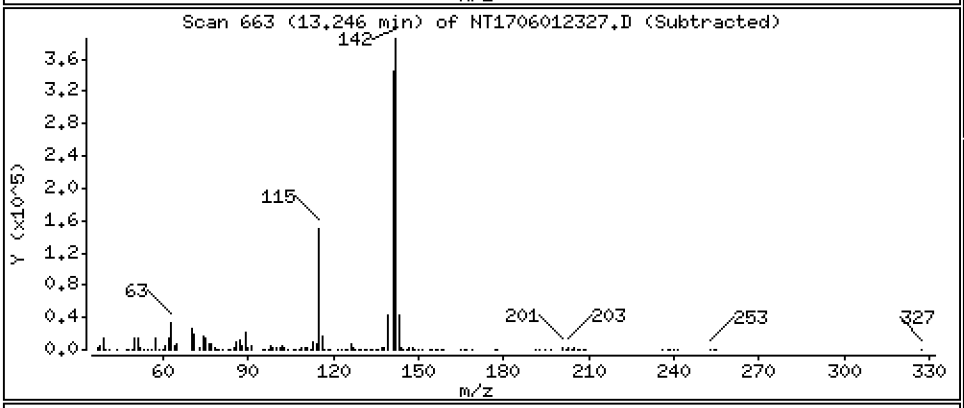
Column diameter: 0.25

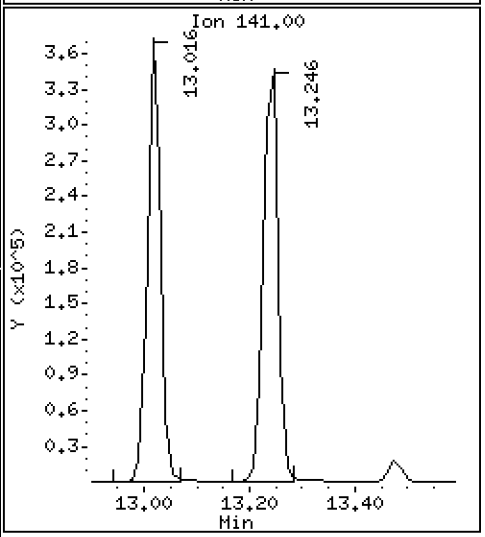
105 1-methylnaphthalene

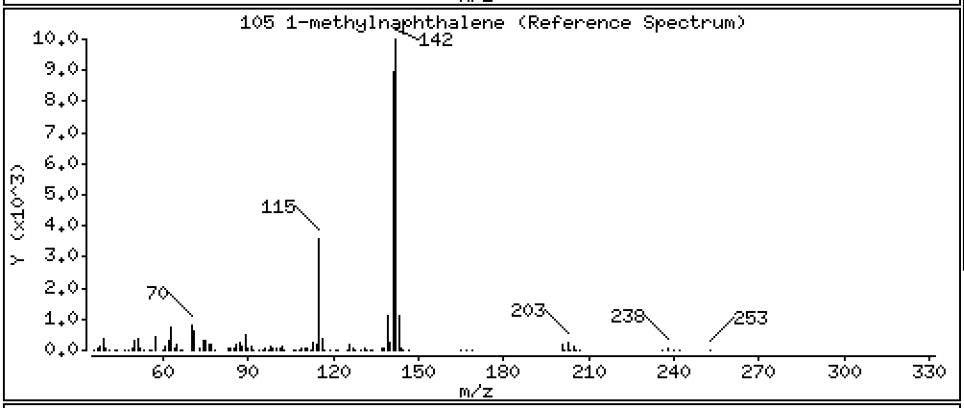
Concentration: 3.952 ug/mL

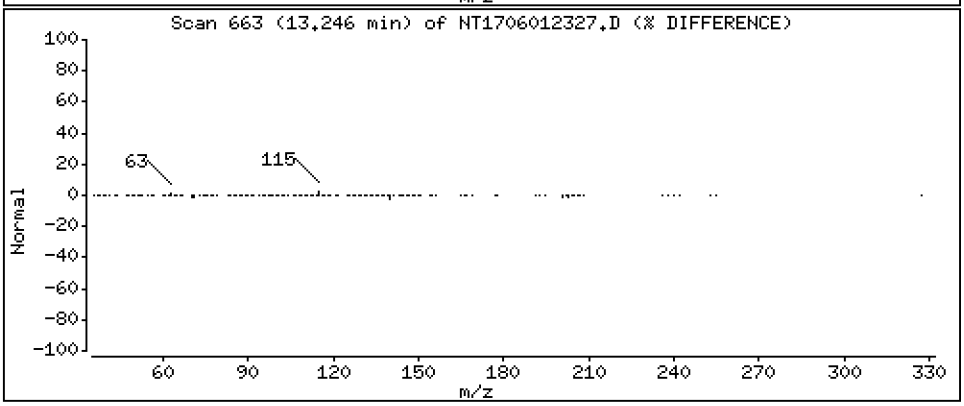












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

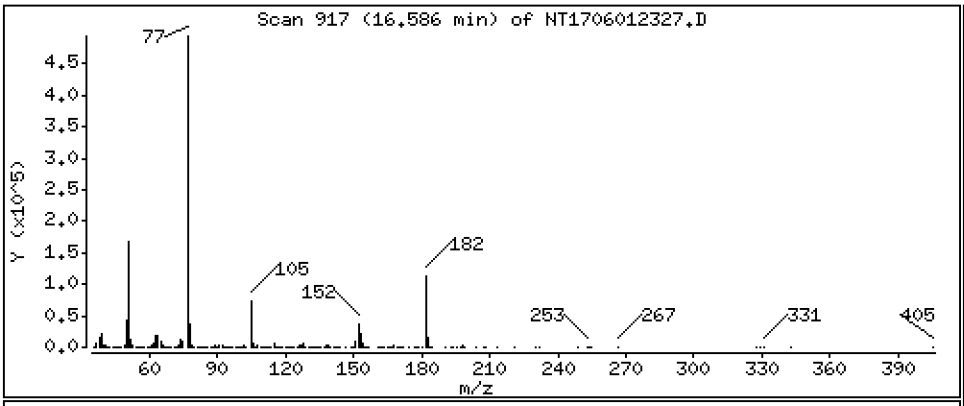
Operator: VTS

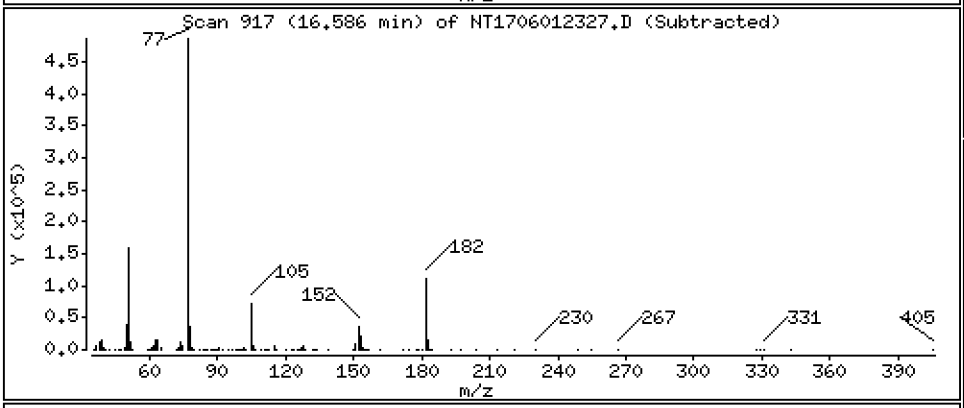
Column phase: ZB-5msi

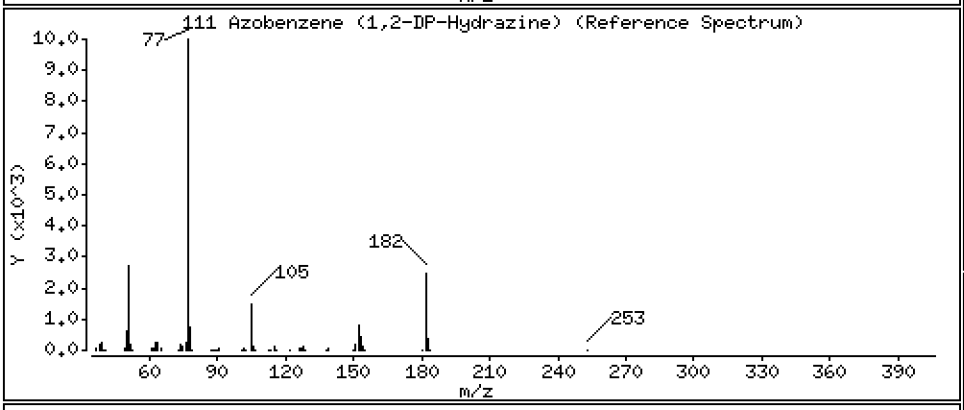
Column diameter: 0.25

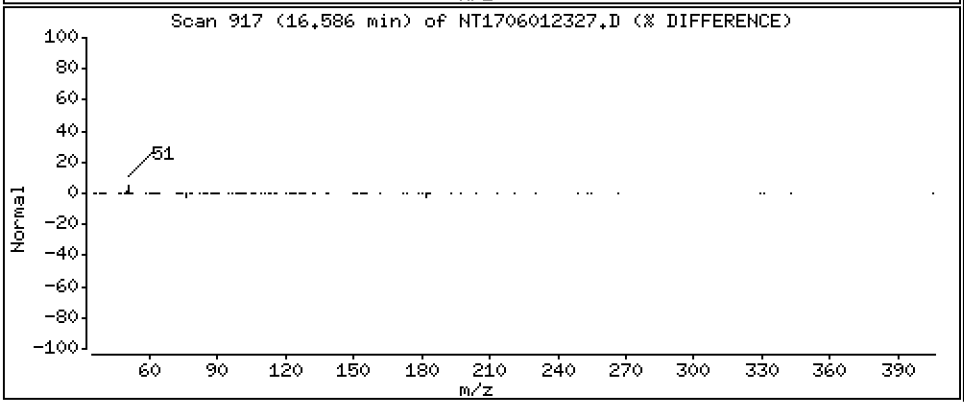
111 Azobenzene (1,2-DP-Hydrazine)

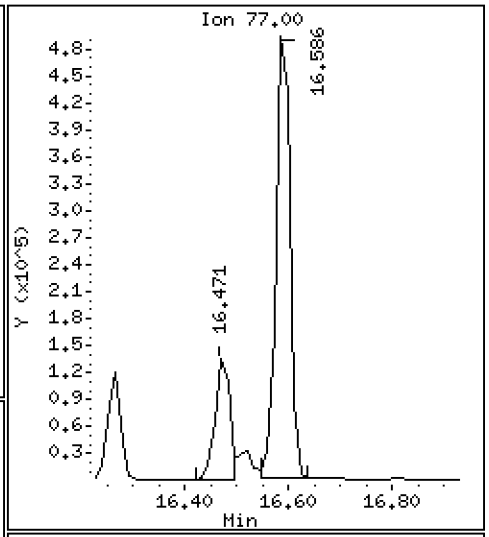
Concentration: 4.202 ug/mL

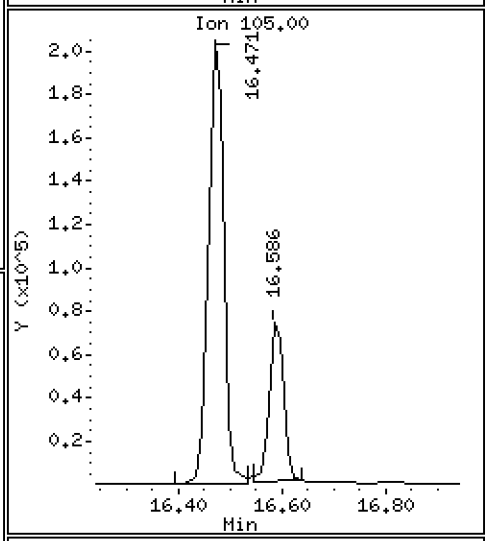


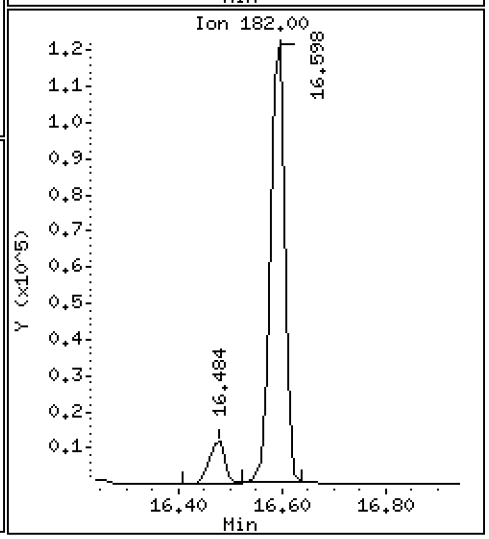












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

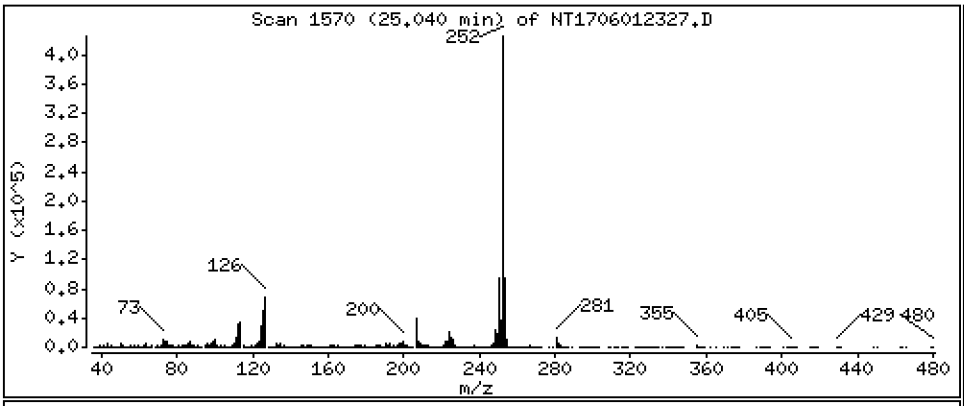
Operator: VTS

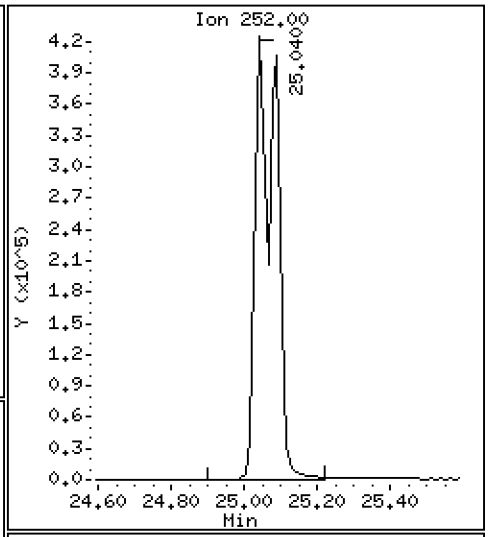
Column phase: ZB-5msi

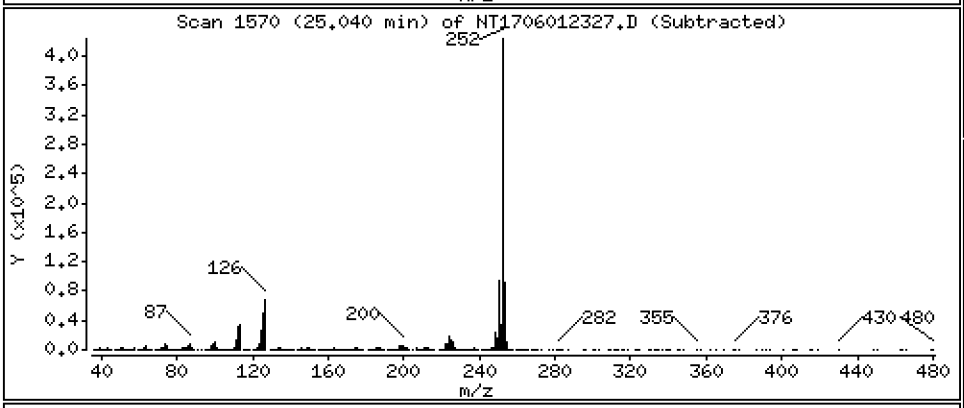
Column diameter: 0.25

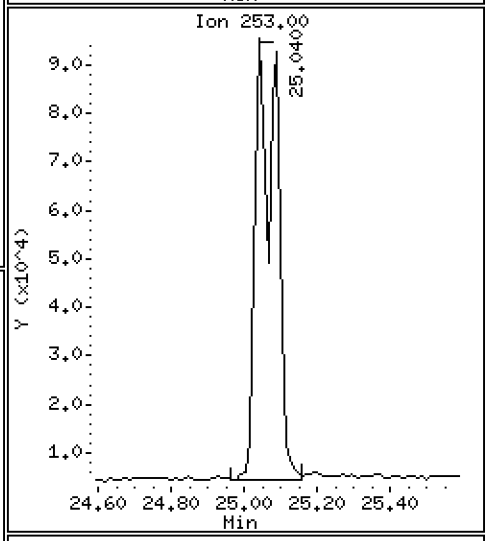
187 Total Benzofluoranthenes

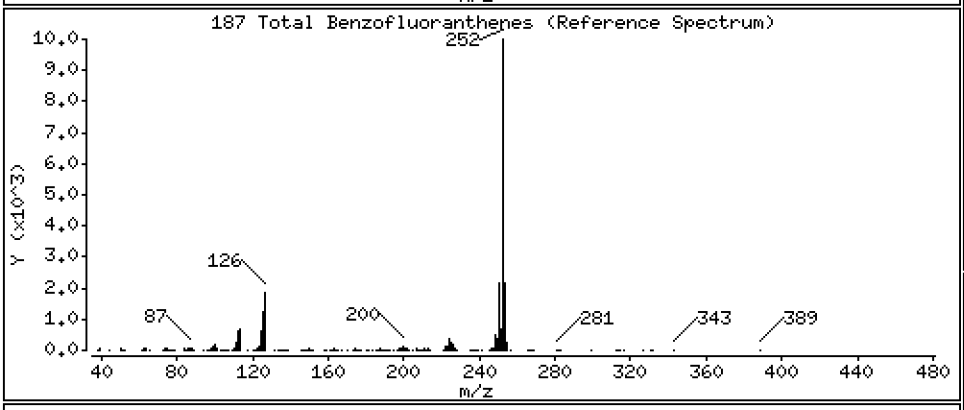
Concentration: 9.663 ug/mL

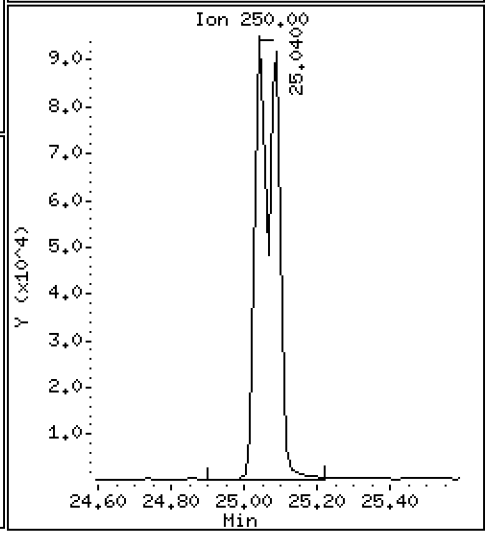


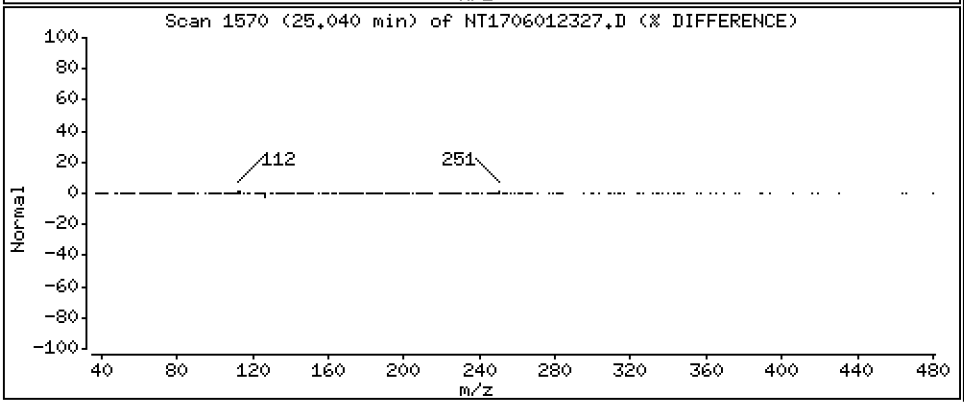












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD1

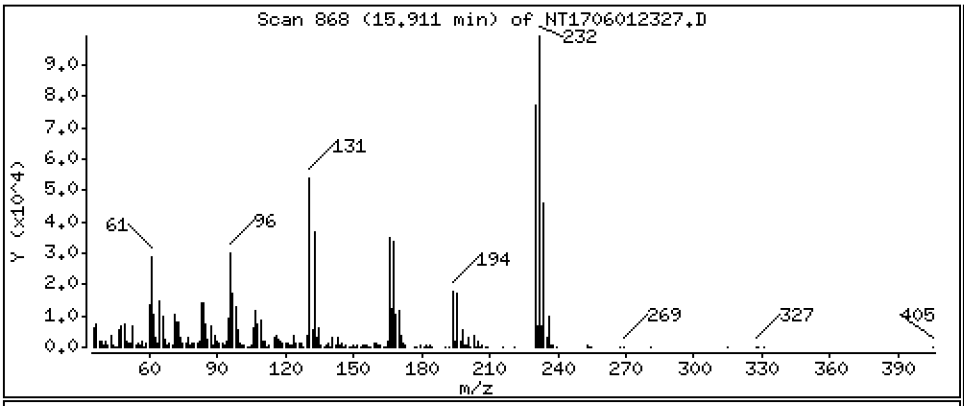
Operator: VTS

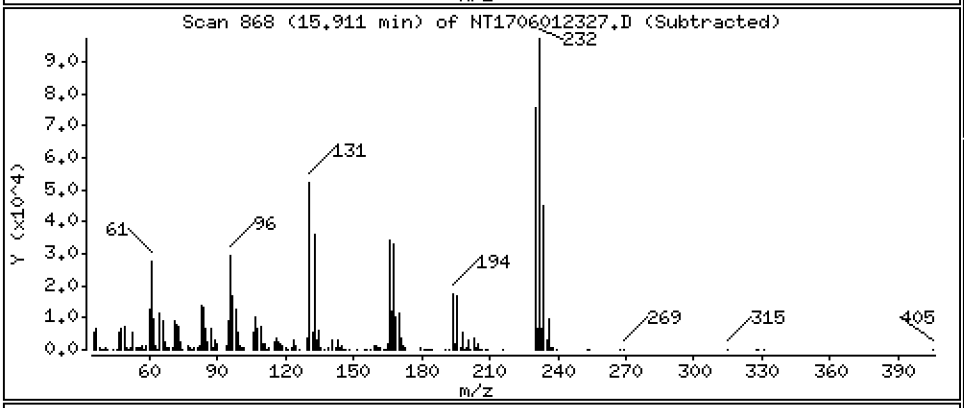
Column phase: ZB-5msi

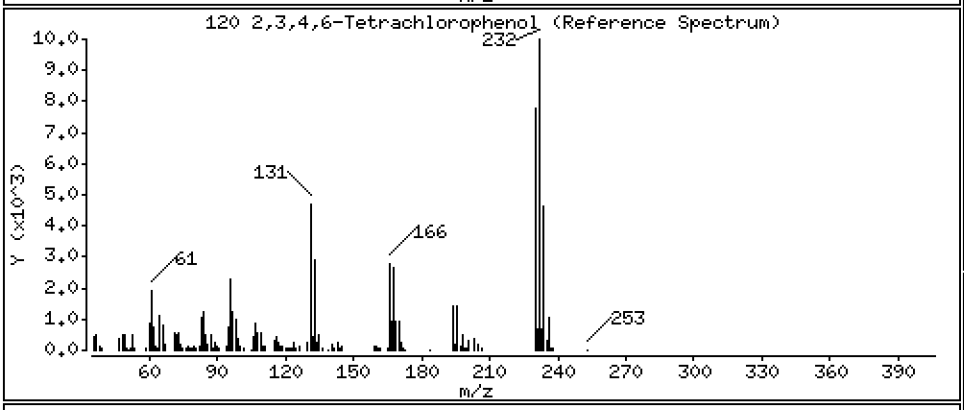
Column diameter: 0.25

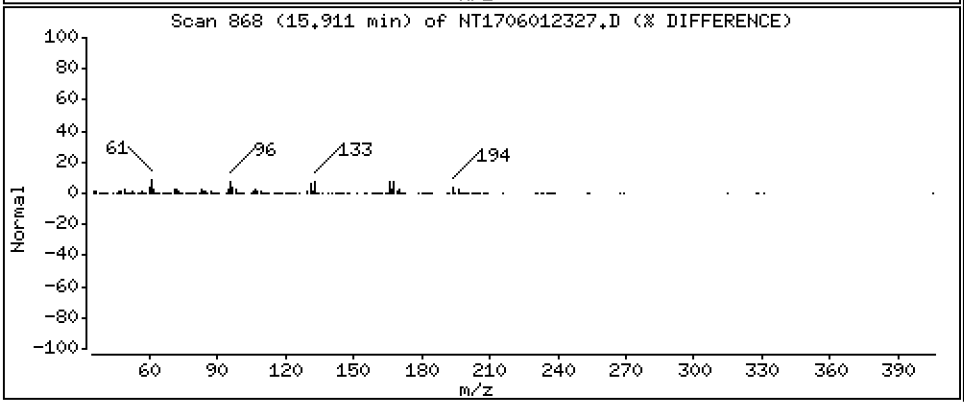
120 2,3,4,6-Tetrachlorophenol

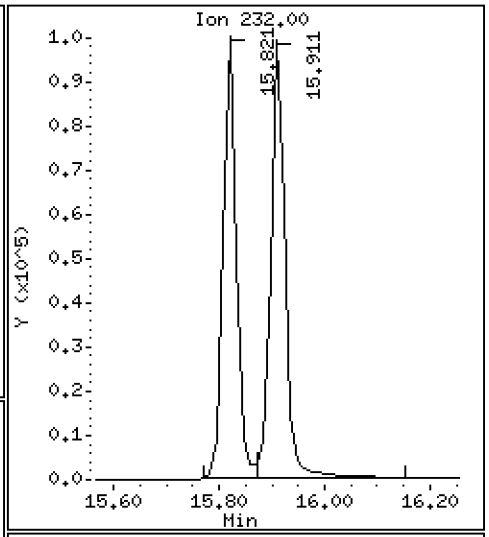
Concentration: 2.947 ug/mL

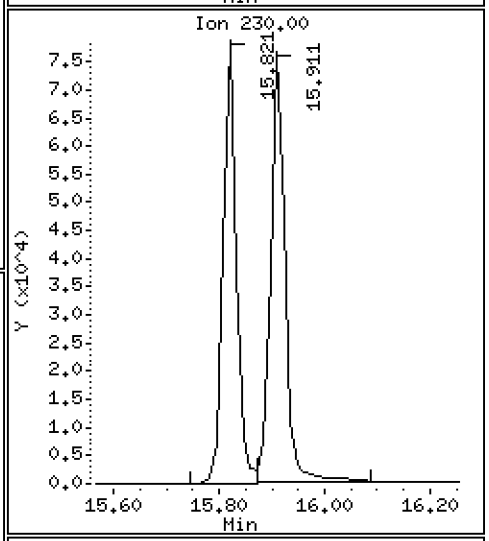


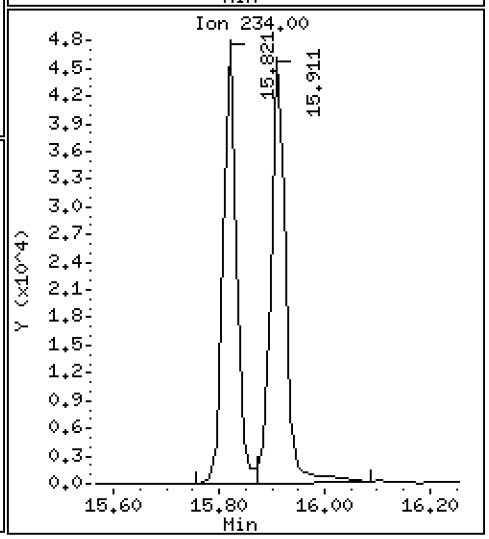












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012327.D
Lab Smp Id: BLE0148-BSD1
Inj Date : 02-JUN-2023 04:11
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-BSD1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.969	6.944	(0.763)	327197	3.65029	3.650
$	2 Phenol-d5	99	8.511	8.511	(0.932)	487705	4.11143	4.111
	3 Phenol	94	8.537	8.536	(0.934)	401350	3.19436	3.194
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	469571	4.94202	4.942
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	353605	3.86060	3.861
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	379884	3.62062	3.621
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	375206	3.53339	3.533
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	273824	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	413100	3.90063	3.901
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	219737	3.29024	3.290
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	367945	3.69582	3.696
	11 Benzyl alcohol	108	9.417	9.417	(1.031)	217742	3.72227	3.722
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	122399	4.36182	4.362
	13 2-Methylphenol	108	9.634	9.634	(1.055)	257537	2.78901	2.789
	17 Hexachloroethane	117	10.094	10.094	(1.105)	160649	3.79207	3.792
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	215155	3.04546	3.045
	15 4-Methylphenol	108	9.902	9.902	(1.084)	301976	3.21182	3.212
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	409183	3.54663	3.547
	19 Nitrobenzene	77	10.247	10.260	(0.883)	431418	3.91936	3.919
	20 Isophorone	82	10.694	10.707	(0.922)	779327	5.17214	5.172
	21 2-Nitrophenol	139	10.873	10.873	(0.937)	200163	3.77373	3.774
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	423254	4.10991	4.110
	23 Bis(2-Chloroethoxy)methane	93	11.116	11.116	(0.958)	436477	4.72648	4.726
	24 Benzoic acid	105	11.192	11.192	(0.965)	1213708	17.5201	17.52
	25 2,4-Dichlorophenol	162	11.333	11.333	(0.977)	1020485	12.3316	12.33
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	318481	3.54351	3.544
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	1013716	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	1012788	3.63305	3.633
	29 4-Chloroaniline	127	11.791	11.766	(1.016)	90811	0.82641	0.8264
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	181647	4.08001	4.080
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	1138132	12.7729	12.77
	32 2-Methylnaphthalene	142	13.016	13.016	(1.122)	751482	3.76495	3.765
	33 Hexachlorocyclopentadiene	237	13.475	13.487	(0.887)	190338	3.66102	3.661

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.641	13.640	(0.898)	711275	12.1588	12.16
35	2,4,5-Trichlorophenol	196	13.717	13.717	(0.903)	774339	12.5039	12.50
$ 36	2-Fluorobiphenyl	172	13.794	13.793	(0.908)	815436	3.70205	3.702
37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	711830	3.98356	3.984
38	2-Nitroaniline	65	14.278	14.278	(0.940)	782403	12.9284	12.93
39	Dimethylphthalate	163	14.699	14.686	(0.968)	918647	4.77521	4.775
40	Acenaphthylene	152	14.878	14.878	(0.980)	1037921	3.65766	3.658
41	2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	589380	13.0856	13.09
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	559117	4.00000	
43	3-Nitroaniline	138	15.133	15.133	(0.997)	125608	3.01102	3.011
44	Acenaphthene	153	15.247	15.247	(1.004)	710625	4.00617	4.006
45	2,4-Dinitrophenol	184	15.337	15.337	(1.010)	685649	24.0962	24.10
46	Dibenzofuran	168	15.579	15.579	(1.026)	1041766	4.20787	4.208
47	4-Nitrophenol	109	15.464	15.464	(1.018)	300950	10.8612	10.86
48	2,4-Dinitrotoluene	165	15.642	15.642	(1.030)	788941	13.3811	13.38
50	Diethylphthalate	149	16.140	16.140	(1.063)	951088	5.06941	5.069
49	Fluorene	166	16.280	16.280	(1.072)	1043294	4.43249	4.432
51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	497148	4.59422	4.594
52	4-Nitroaniline	138	16.420	16.407	(1.081)	134547	3.40749	3.407(M)
53	4,6-Dinitro-2-methylphenol	198	16.483	16.471	(0.906)	910401	23.8850	23.89
54	N-Nitrosodiphenylamine	169	16.522	16.521	(0.908)	404509	3.02341	3.023
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	151257	6.20199	6.202
56	4-Bromophenyl-phenylether	248	17.260	17.260	(0.948)	229131	4.88786	4.888
57	Hexachlorobenzene	284	17.578	17.578	(0.966)	222035	4.64833	4.648
58	Pentachlorophenol	266	17.935	17.935	(0.985)	389743	13.1946	13.19
* 59	Phenanthrene-d10	188	18.203	18.203	(1.000)	955105	4.00000	
60	Phenanthrene	178	18.241	18.241	(1.002)	1150632	4.12878	4.129
61	Anthracene	178	18.343	18.343	(1.008)	871581	3.33120	3.331
62	Carbazole	167	18.688	18.688	(1.027)	867836	5.16783	5.168
63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	1535232	4.85934	4.859
64	Fluoranthene	202	20.613	20.613	(0.888)	1270966	4.69718	4.697
65	Pyrene	202	21.034	21.034	(0.906)	1225432	4.46757	4.468
$ 66	Terphenyl-d14	244	21.315	21.315	(0.918)	861574	4.41852	4.419
67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	604588	4.92473	4.925
68	Benzo(a)anthracene	228	23.177	23.190	(0.998)	920782	4.32289	4.323
* 69	Chrysene-d12	240	23.215	23.215	(1.000)	578446	4.00000	
70	3,3'-Dichlorobenzidine	252	23.152	23.139	(0.997)	11942	0.29024	0.2902
71	Chrysene	228	23.254	23.254	(1.002)	925309	4.61659	4.617
72	bis(2-Ethylhexyl)phthalate	149	23.241	23.254	(0.959)	361340	2.15477	2.155
* 134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1159047	4.00000	
73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	330121	1.12365	1.124
74	Benzo(b)fluoranthene	252	25.040	25.052	(0.971)	919850	4.73183	4.732
75	Benzo(k)fluoranthene	252	25.091	25.091	(0.973)	903976	4.92196	4.922
76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	565851	3.69514	3.695
* 77	Perylene-d12	264	25.792	25.805	(1.000)	490309	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.423	28.423	(1.102)	669254	3.76784	3.768
79	Dibenzo(a,h)anthracene	278	28.423	28.423	(1.102)	583247	3.91244	3.912
80	Benzo(g,h,i)perylene	276	29.190	29.203	(1.132)	446463	3.04527	3.045
90	N-Nitrosodimethylamine	74	4.867	4.867	(0.533)	115777	1.93637	1.936
91	Aniline	93	8.613	8.600	(0.943)	47435	0.45052	0.4505
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.944	4.893	(0.541)	21496	0.22666	0.2267
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	731785	3.95198	3.952
111	Azobenzene (1,2-DP-Hydrazine)	77	16.585	16.585	(1.092)	920354	4.20250	4.202

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.040	25.091	(0.971)	1686294	9.66342	9.663
120 2,3,4,6-Tetrachlorophenol	232	15.910	15.910	(1.048)	206288	2.94728	2.947

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012327.D
Lab Smp Id: BLE0148-BSD1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	273824	6.54
27 Naphthalene-d8	932905	466453	1865810	1013716	8.66
42 Acenaphthene-d10	509574	254787	1019148	559117	9.72
59 Phenanthrene-d10	912749	456375	1825498	955105	4.64
69 Chrysene-d12	578011	289006	1156022	578446	0.08
134 Di-n-octylphthala	1181490	590745	2362980	1159047	-1.90
77 Perylene-d12	513683	256842	1027366	490309	-4.55

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.79	-0.05

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

REVIEW SUMMARY FOR FILE - NT1706012327.D

Lab ID: BLE0148-BSD1
nt17.i, ABN.m, 02-JUN-2023 04:11

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.541	0.536	0.0056	Pyridine

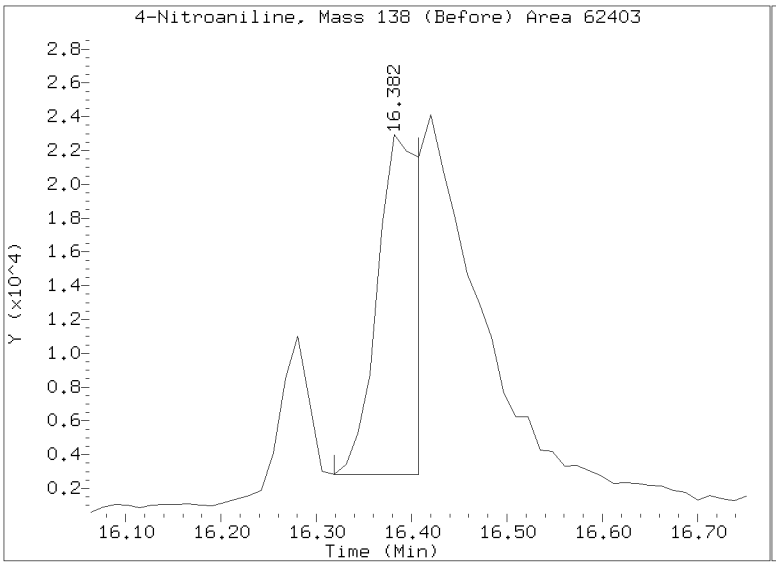
RRT check based on Ccal File: NT1706012320.D

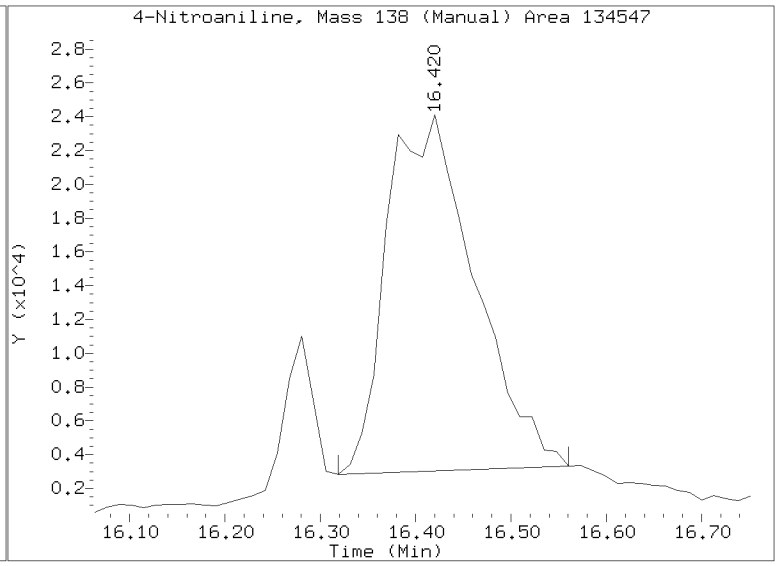
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012327.D
Injection Date: 02-JUN-2023 04:11
Lab ID:BLE0148-BSD1 Client ID:
Report Date: 06/03/2023 10:34





MS / MS DUPLICATE RECOVERY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 04:48
Batch:	BLE0148	Laboratory ID:	BLE0148-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	19.69 g / 1 mL	Source Sample:	LDW23-SS1805

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #		QC LIMITS REC.
Phenol	500	510		823		62.5		34 - 120
4-Methylphenol	500	46.0		340		58.8		29 - 120
Naphthalene	500	301		453	*	30.5	*	43 - 120
2-Methylnaphthalene	500	39.7		425		77.2		43 - 120
Acenaphthylene	500	25.2		416		78.1		42 - 120
Dimethylphthalate	500	ND	U	439		87.7		43 - 120
Acenaphthene	500	41.2		609		114		45 - 120
Dibenzofuran	500	17.3	J	596		116		43 - 120
Fluorene	500	31.9		544		102		45 - 120
Phenanthrene	500	191		4450	*, E	852	*	49 - 120
Anthracene	500	121		451		65.9		45 - 120
Fluoranthene	500	439		9740	*, E	1860	*	53 - 145
Pyrene	500	442		6810	*, E	1270	*	52 - 134
Butylbenzylphthalate	500	9.5	J	434		84.9		45 - 132
Benzo(a)anthracene	500	330		928		119		49 - 120
Chrysene	500	541		3070	*, E	507	*	47 - 120
bis(2-Ethylhexyl)phthalate	500	58.3		318		52.0		34 - 130
Benzofluoranthenes, Total	1000	691		3750	*	306	*	30 - 160
Benzo(a)pyrene	500	334		1050	*	144	*	42 - 120
Indeno(1,2,3-cd)pyrene	500	204		853		130		42 - 163
Dibenzo(a,h)anthracene	500	75.7		563		97.4		30 - 133
Benzo(g,h,i)perylene	500	214		778	Q	113		46 - 148

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E

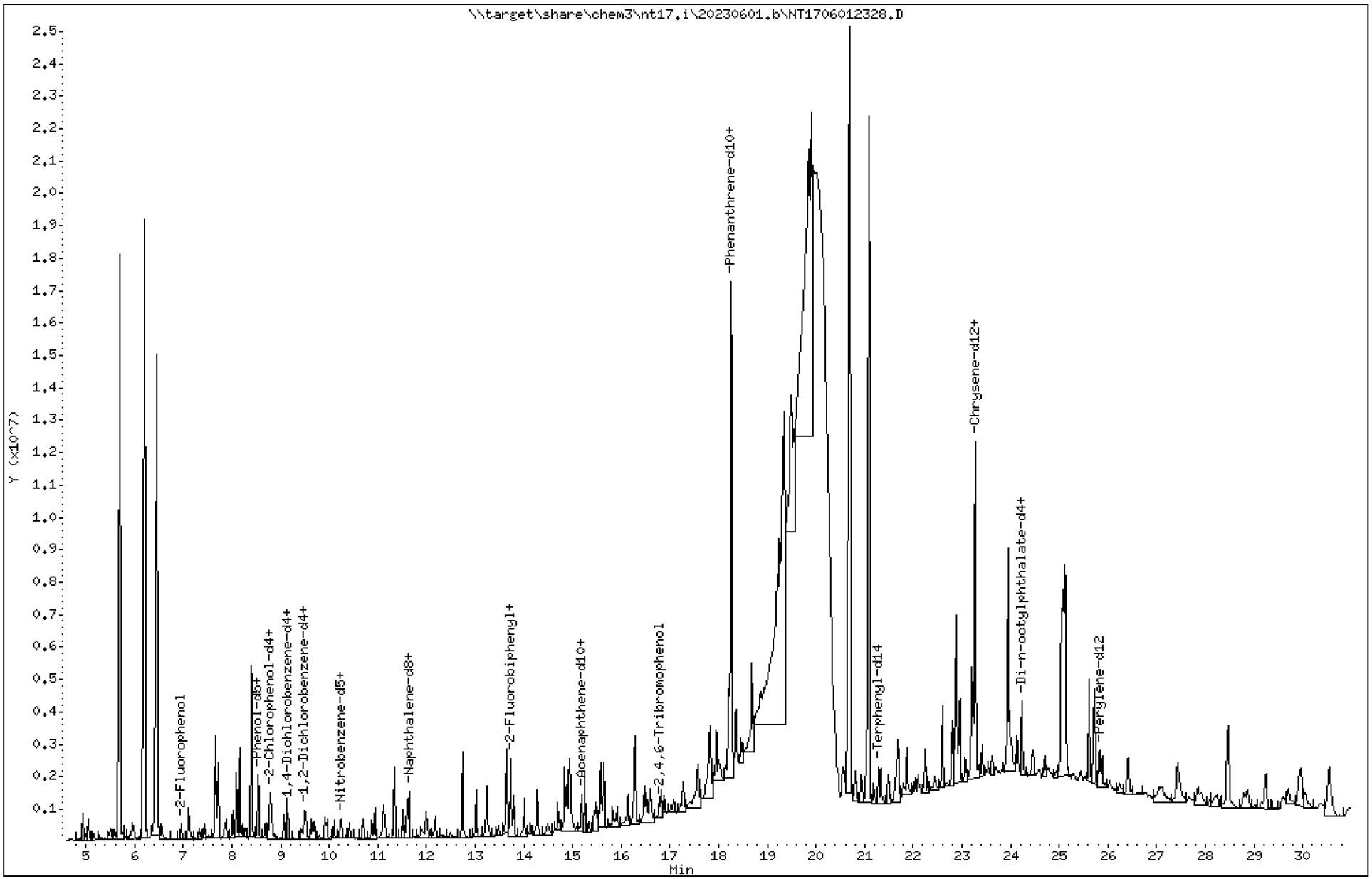
Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 05:25
Batch:	BLE0148	Laboratory ID:	BLE0148-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	19.69 g / 1 mL	Source Sample:	LDW23-SS1805

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	500	774		52.6	6.17	30	34 - 120
4-Methylphenol	500	368		64.4	7.98	30	29 - 120
Naphthalene	500	361	*	12.1 *	22.7	30	43 - 120
2-Methylnaphthalene	500	370		66.0	14.0	30	43 - 120
Acenaphthylene	500	381		71.1	8.75	30	42 - 120
Dimethylphthalate	500	450		90.1	2.62	30	43 - 120
Acenaphthene	500	410	*	73.9	38.9 *	30	45 - 120
Dibenzofuran	500	431	*	82.7	32.1 *	30	43 - 120
Fluorene	500	466		86.7	15.5	30	45 - 120
Phenanthrene	500	574	*	76.5	154 *	30	49 - 120
Anthracene	500	437		63.3	2.97	30	45 - 120
Fluoranthene	500	842	*	80.7	168 *	30	53 - 145
Pyrene	500	811	*	73.8	157 *	30	52 - 134
Butylbenzylphthalate	500	477		93.6	9.49	30	45 - 132
Benzo(a)anthracene	500	717		77.3	25.6	30	49 - 120
Chrysene	500	941	*	80.1	106 *	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	248		37.9	24.8	30	34 - 130
Benzofluoranthenes, Total	1000	1420	*	72.8	90.2 *	30	30 - 160
Benzo(a)pyrene	500	663	*	65.9	45.4 *	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	567	*	72.5	40.4 *	30	42 - 163
Dibenzo(a,h)anthracene	500	494		83.6	13.0	30	30 - 133
Benzo(g,h,i)perylene	500	548	*, Q	66.8	34.7 *	30	46 - 148

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D
Date : 02-JUN-2023 04:48
Client ID:
Sample Info: BLE0148-MS1

Instrument: nt17.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

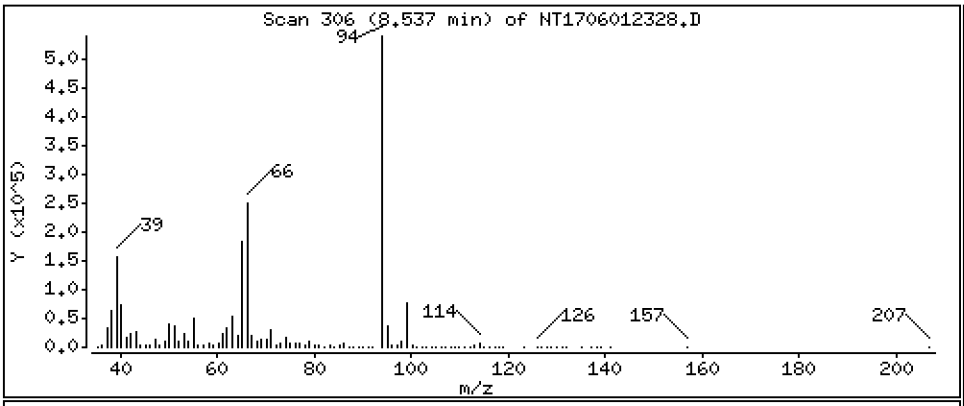
Operator: VTS

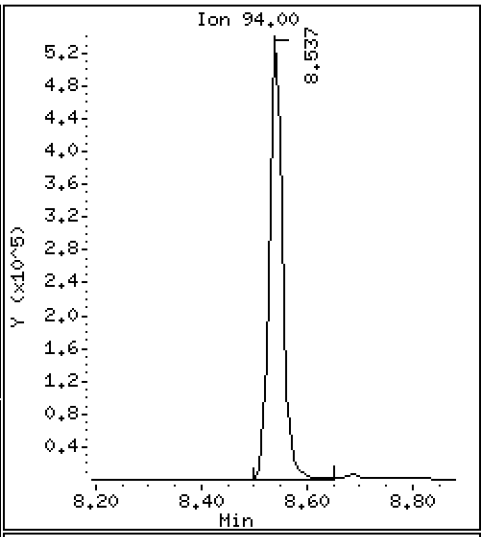
Column phase: ZB-5msi

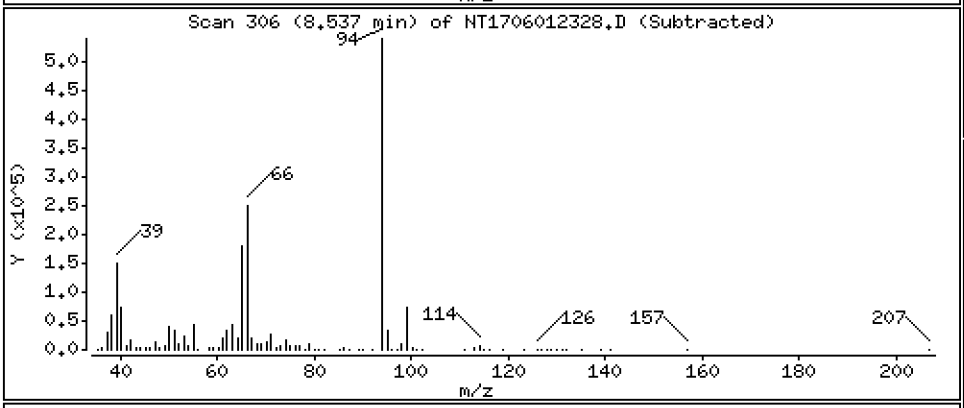
Column diameter: 0.25

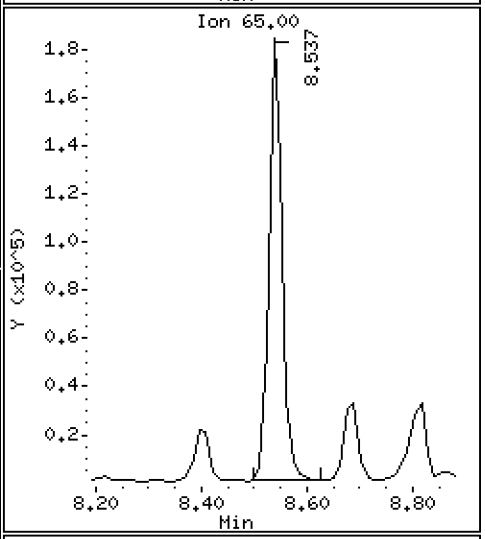
3 Phenol

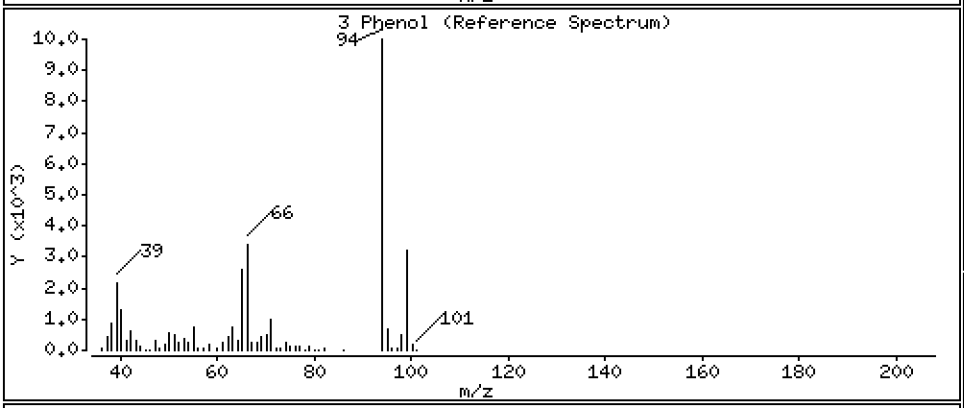
Concentration: 8.228 ug/mL

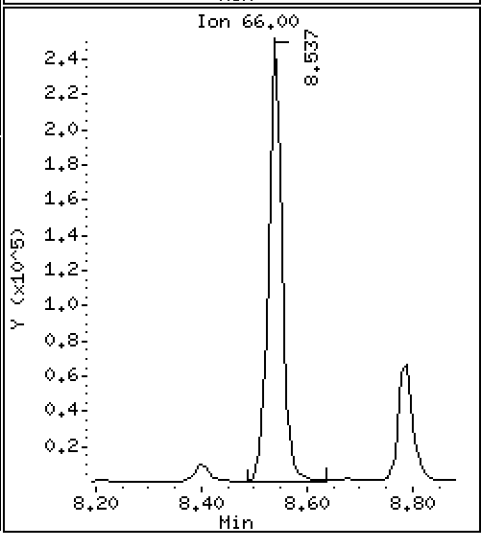


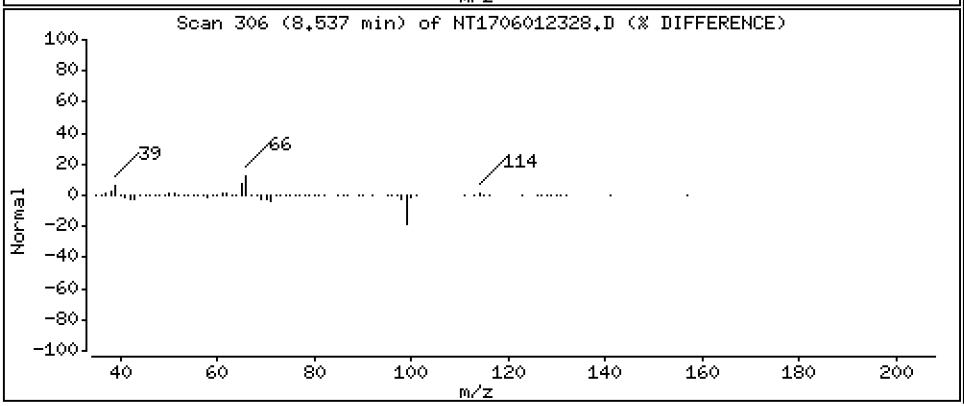












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

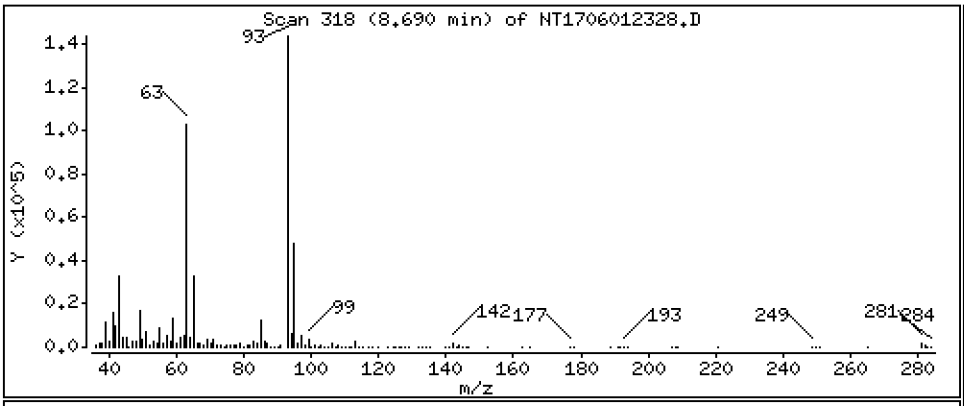
Operator: VTS

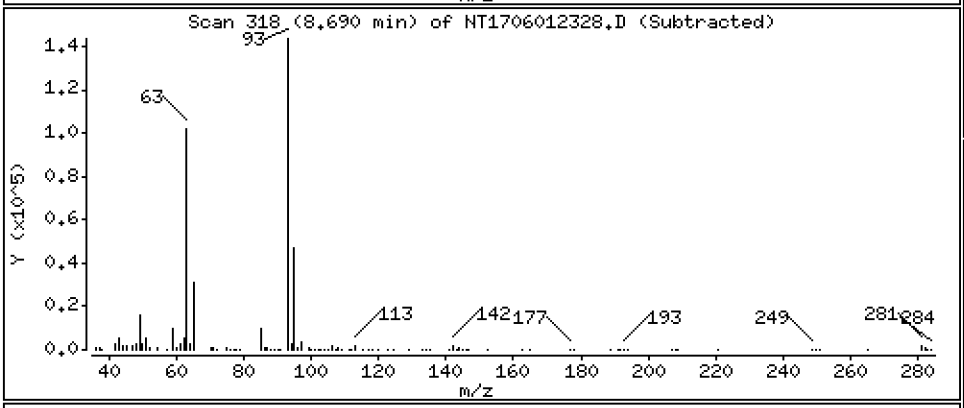
Column phase: ZB-5msi

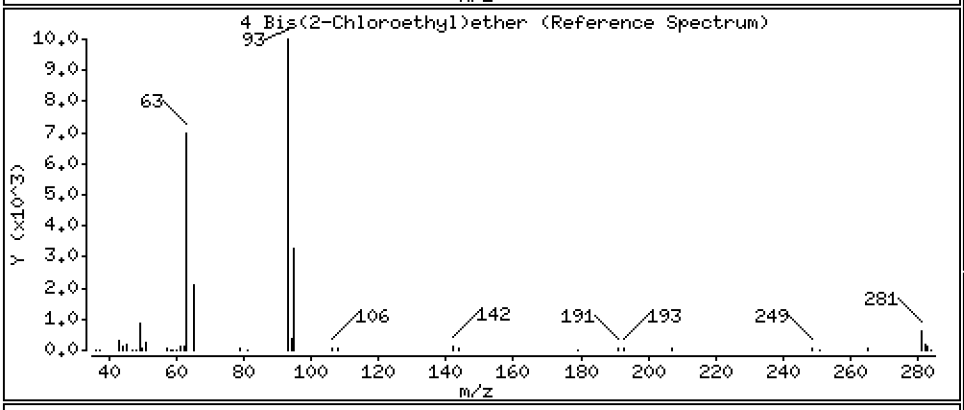
Column diameter: 0.25

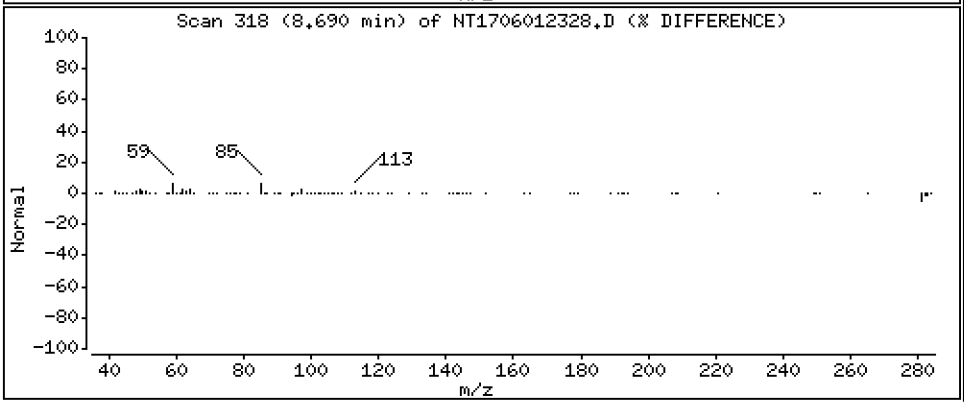
4 Bis(2-Chloroethyl)ether

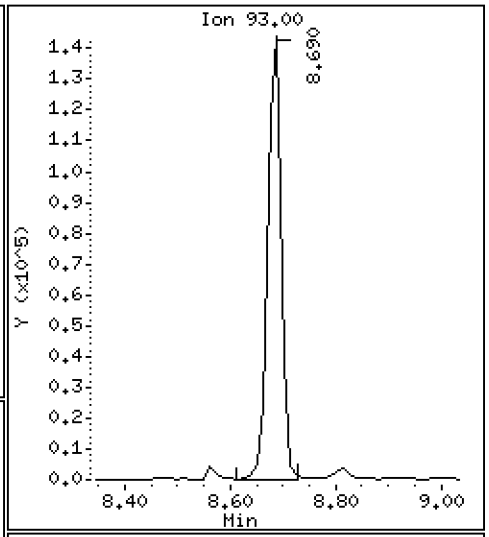
Concentration: 2.967 ug/mL

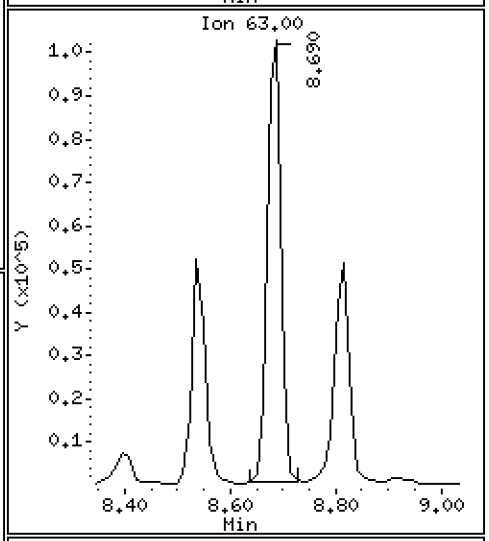


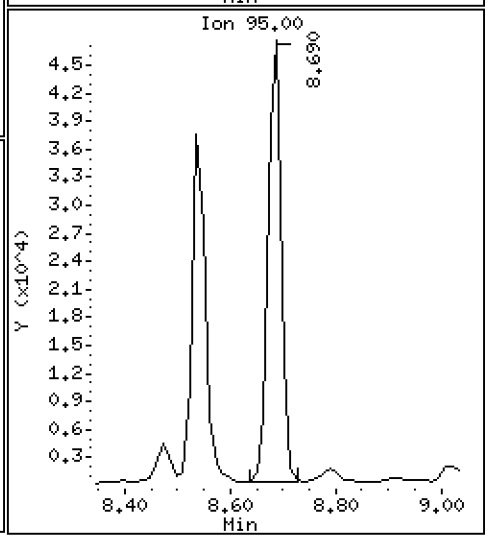












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

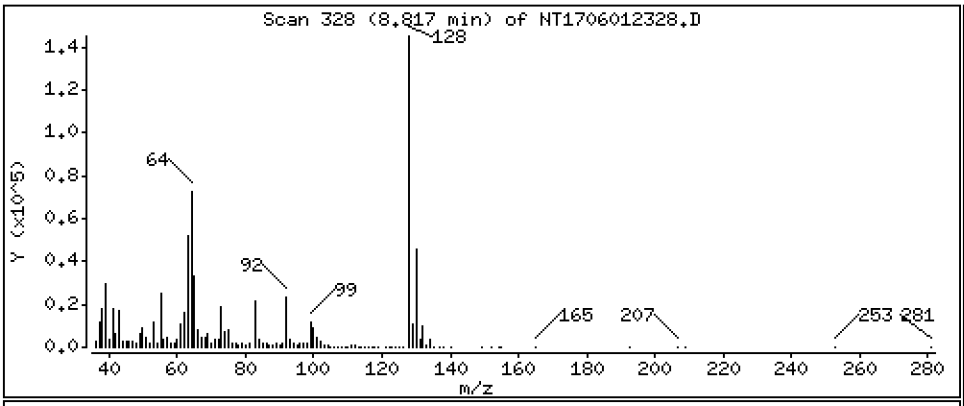
Operator: VTS

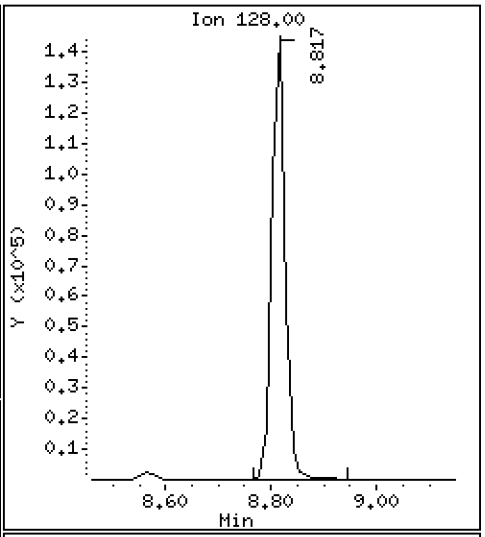
Column phase: ZB-5msi

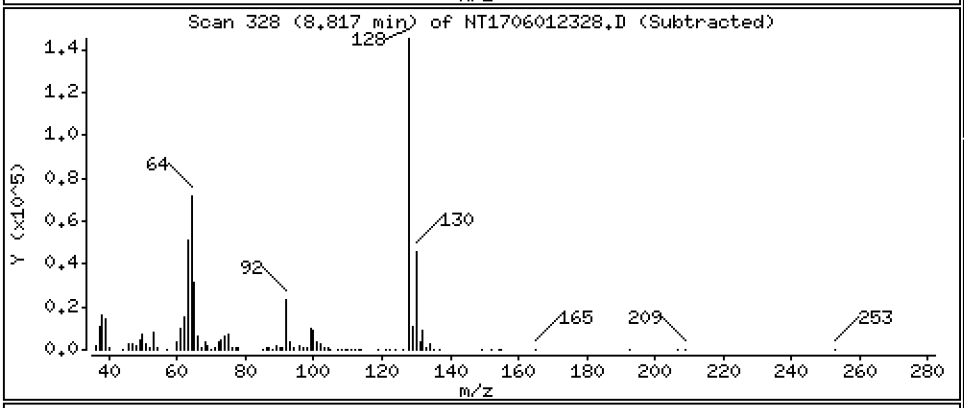
Column diameter: 0.25

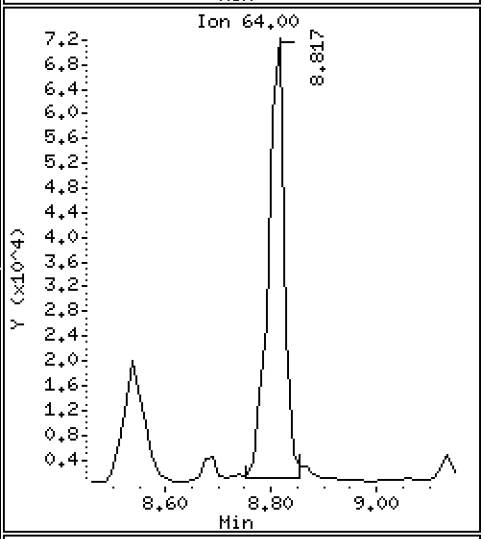
6 2-Chlorophenol

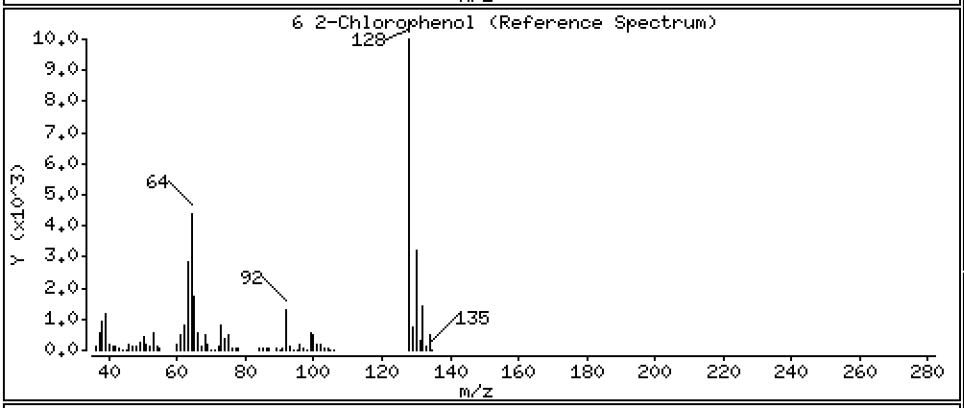
Concentration: 3.016 ug/mL

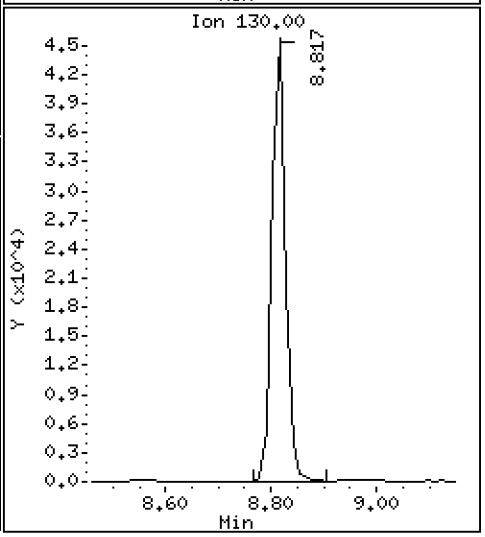


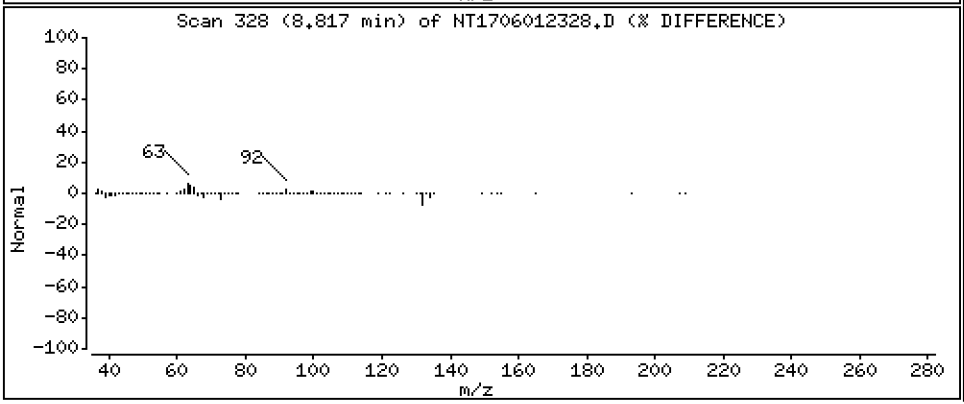












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

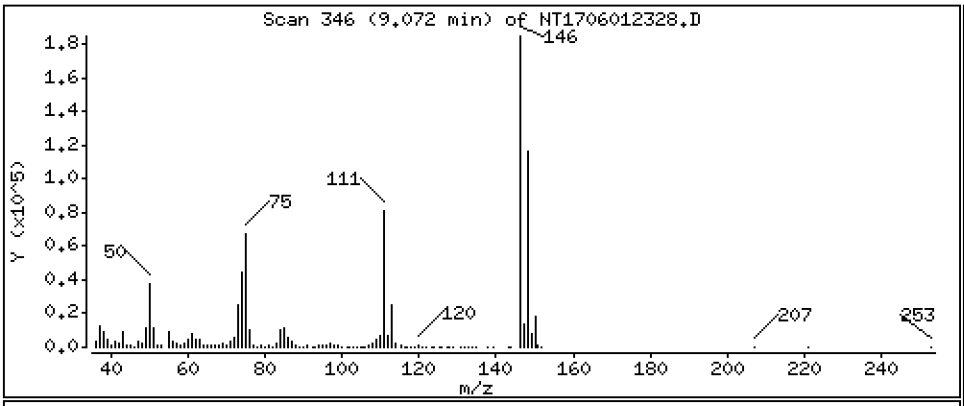
Operator: VTS

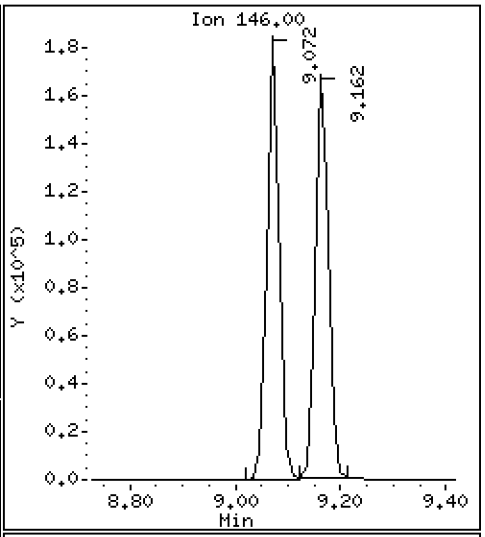
Column phase: ZB-5msi

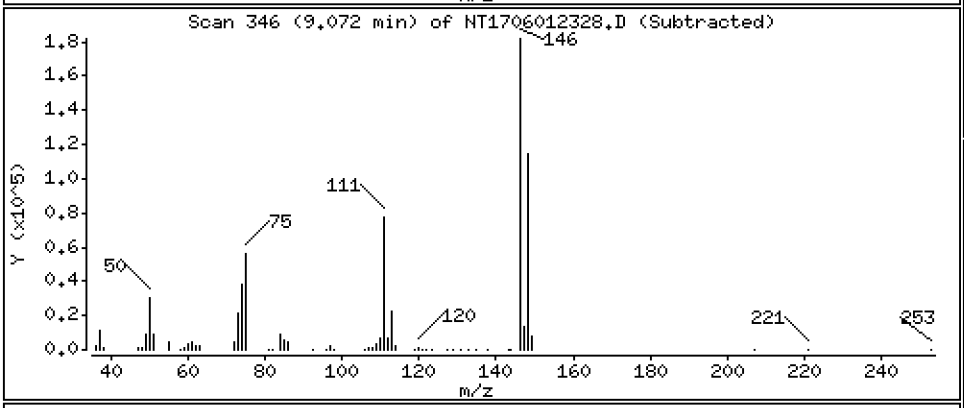
Column diameter: 0.25

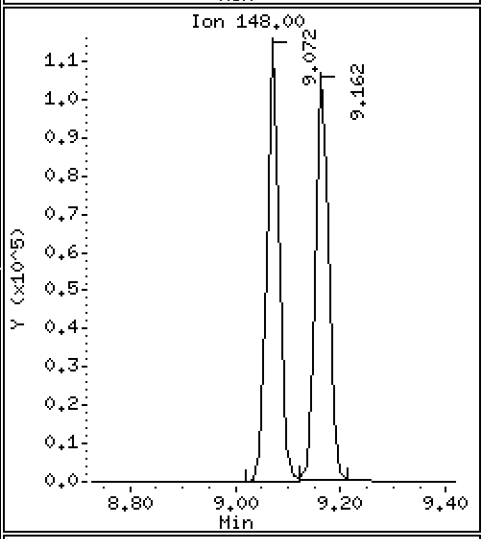
7 1,3-Dichlorobenzene

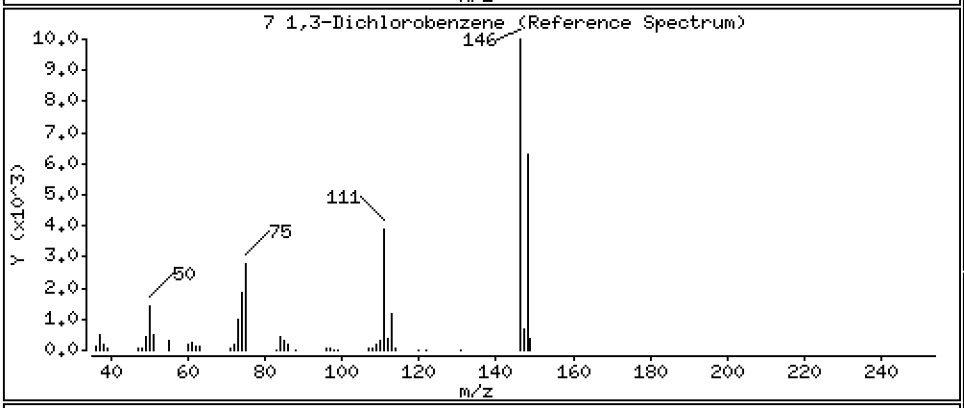
Concentration: 2.975 ug/mL

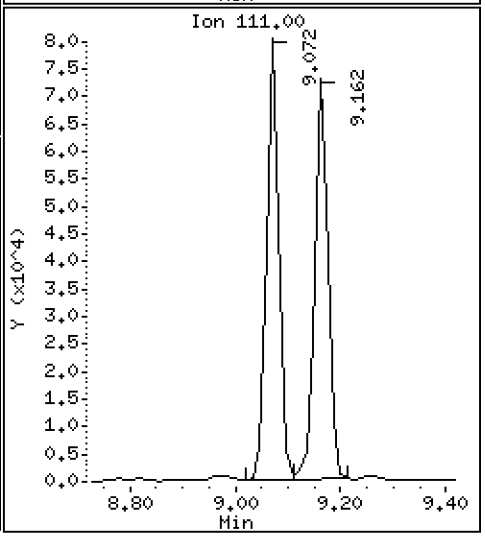


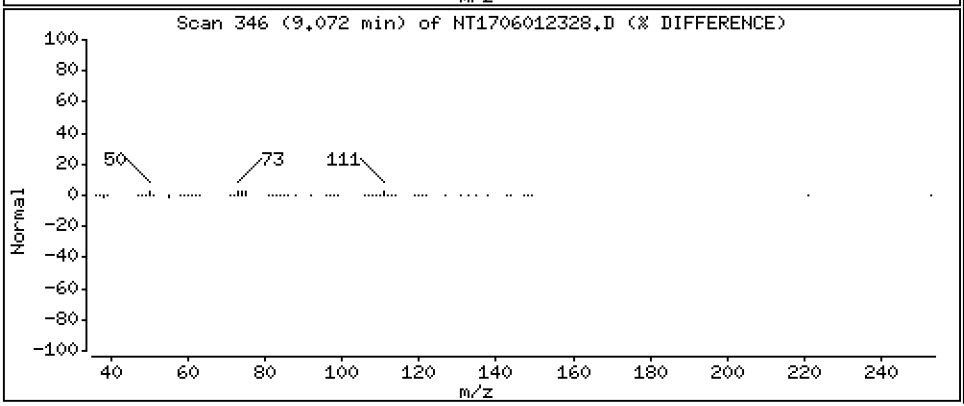












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

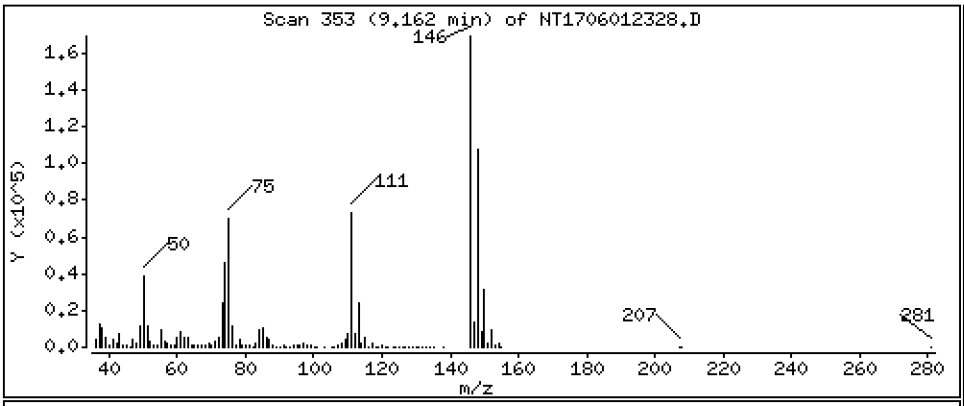
Operator: VTS

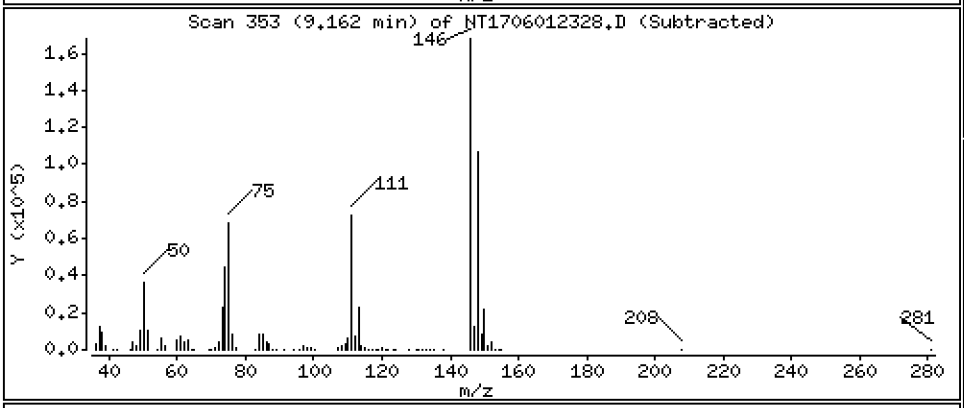
Column phase: ZB-5msi

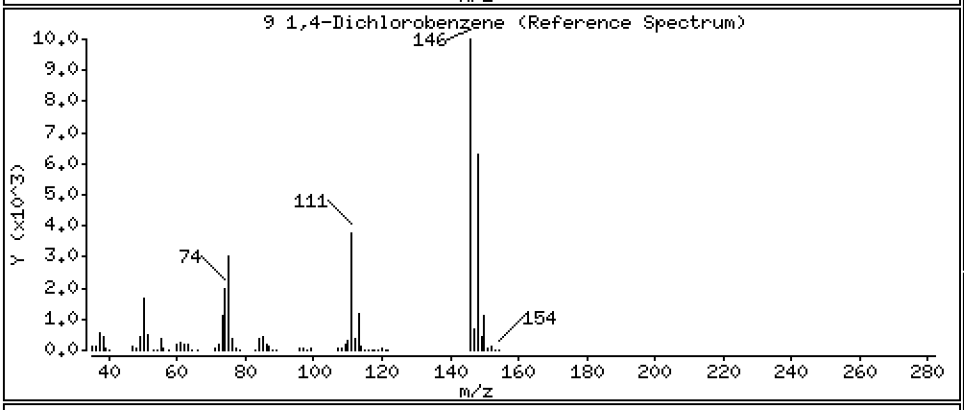
Column diameter: 0.25

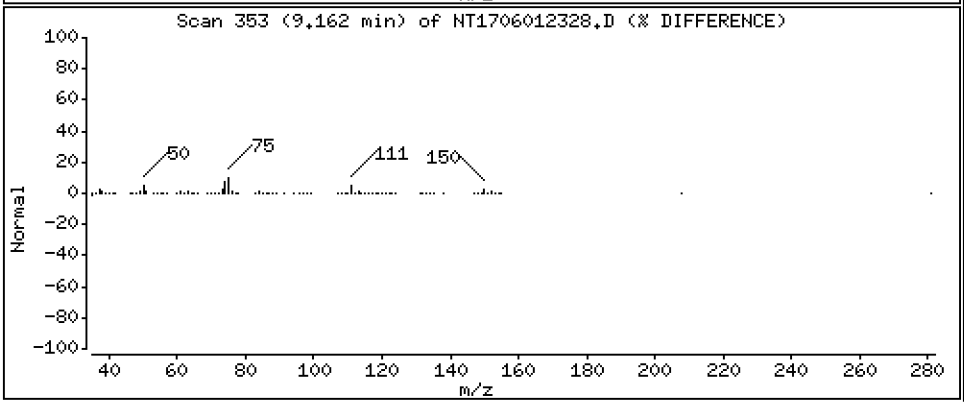
9 1,4-Dichlorobenzene

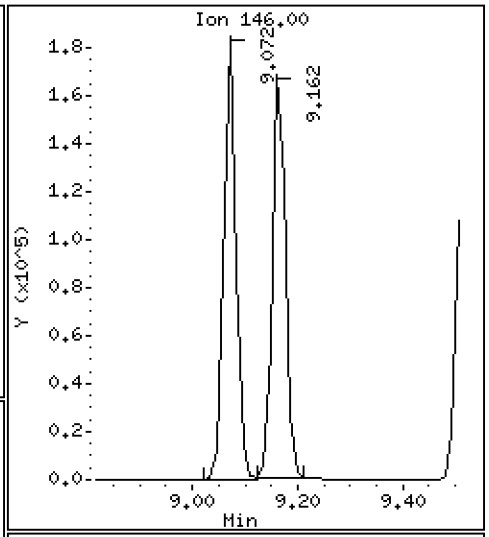
Concentration: 2.917 ug/mL

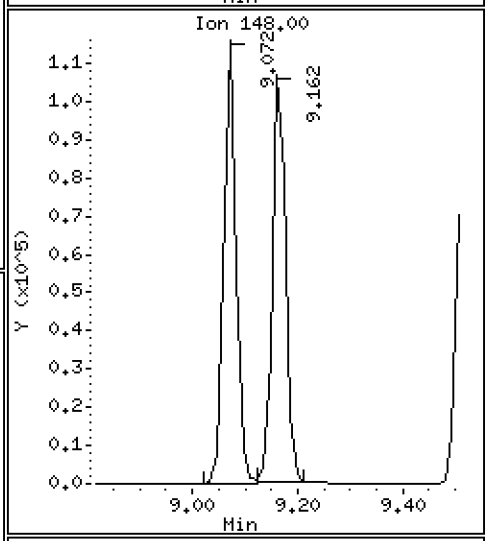


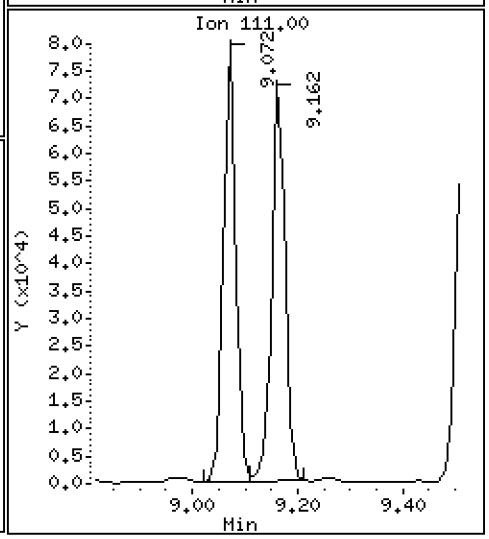












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

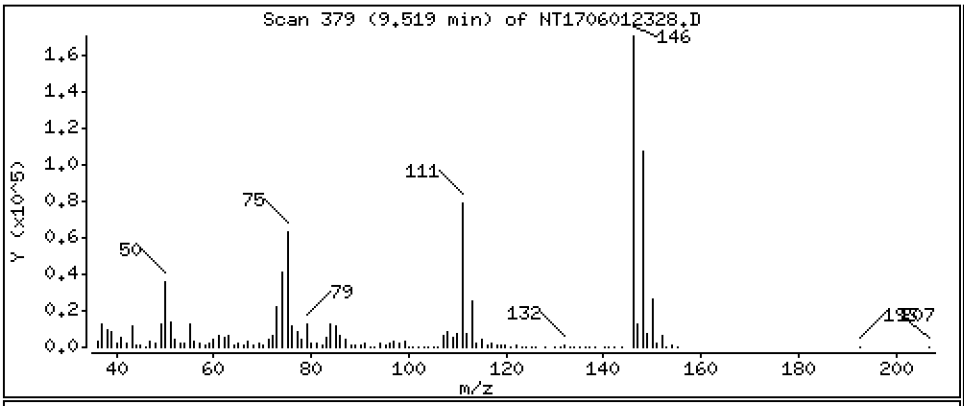
Operator: VTS

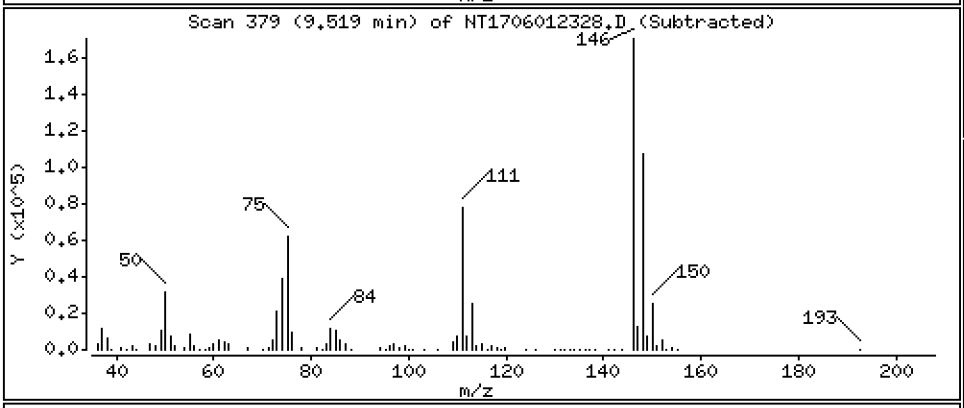
Column phase: ZB-5msi

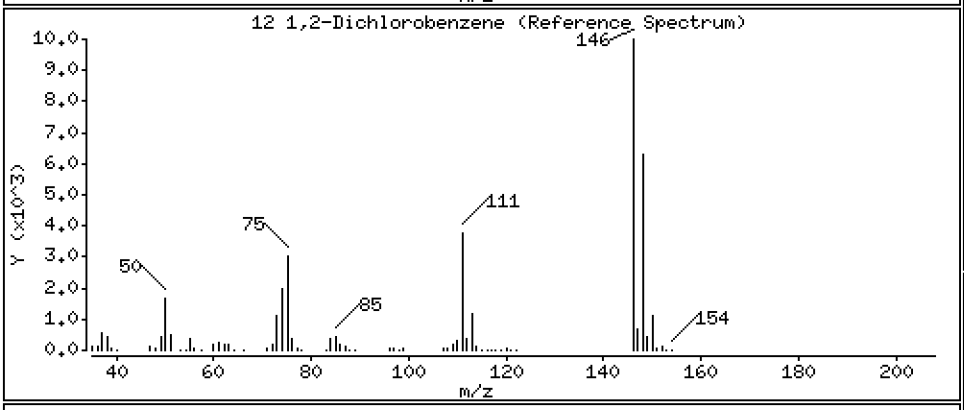
Column diameter: 0.25

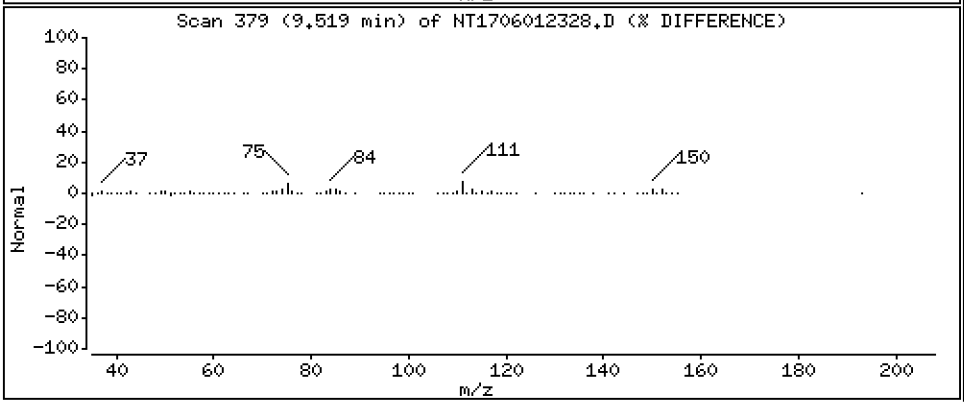
12 1,2-Dichlorobenzene

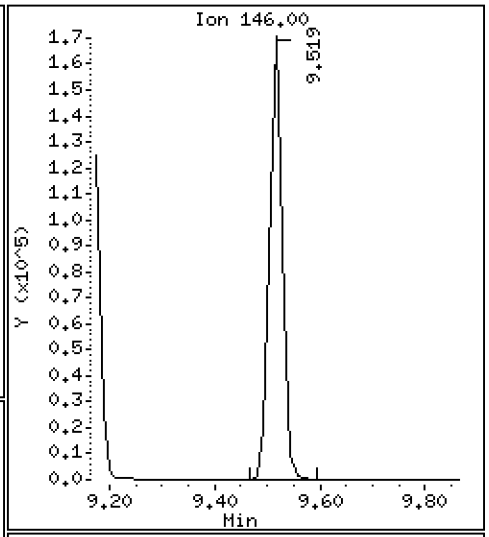
Concentration: 3.094 ug/mL

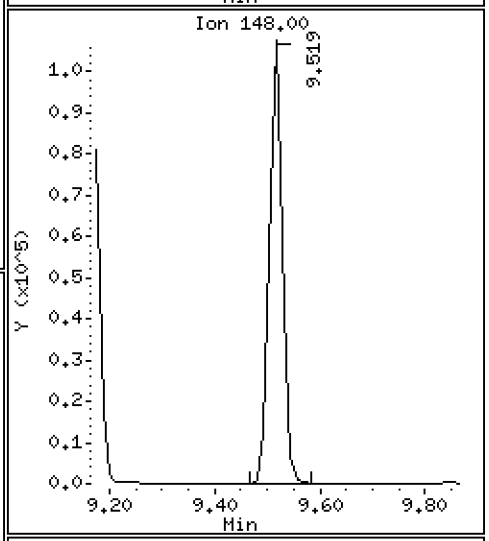


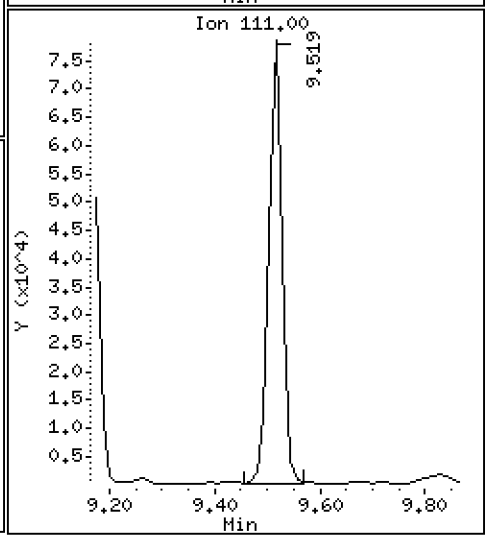












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

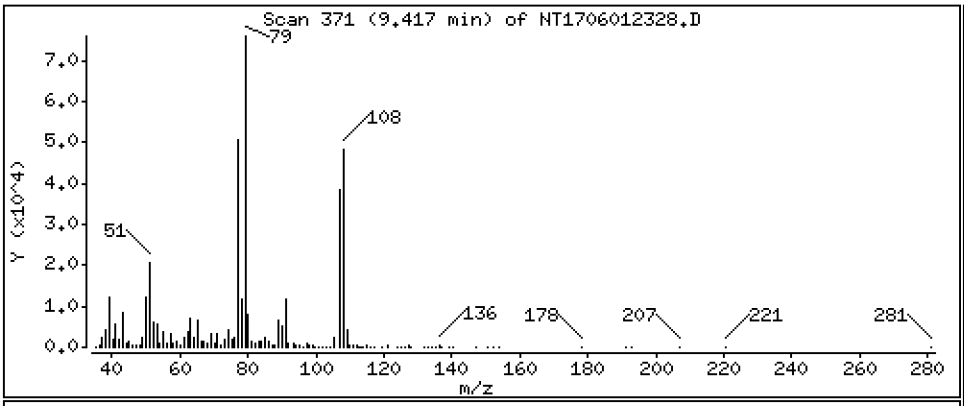
Operator: VTS

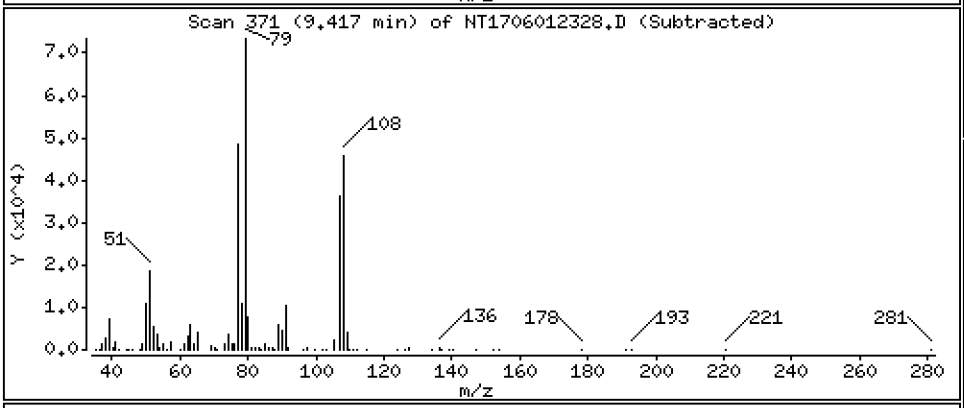
Column phase: ZB-5msi

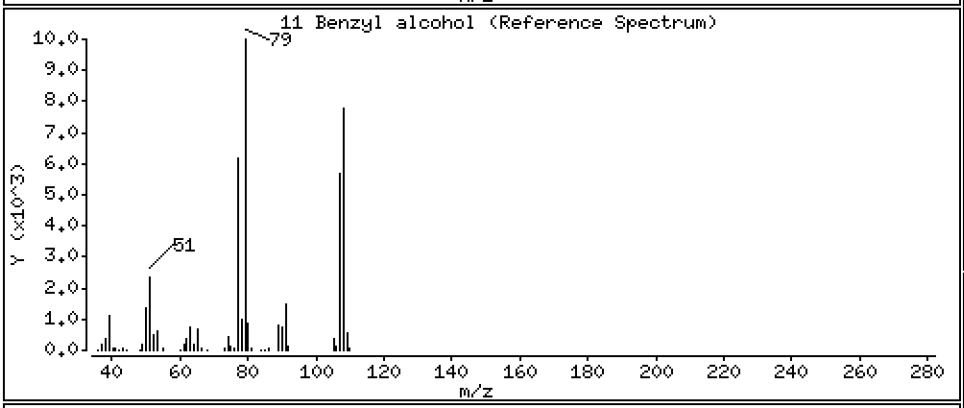
Column diameter: 0.25

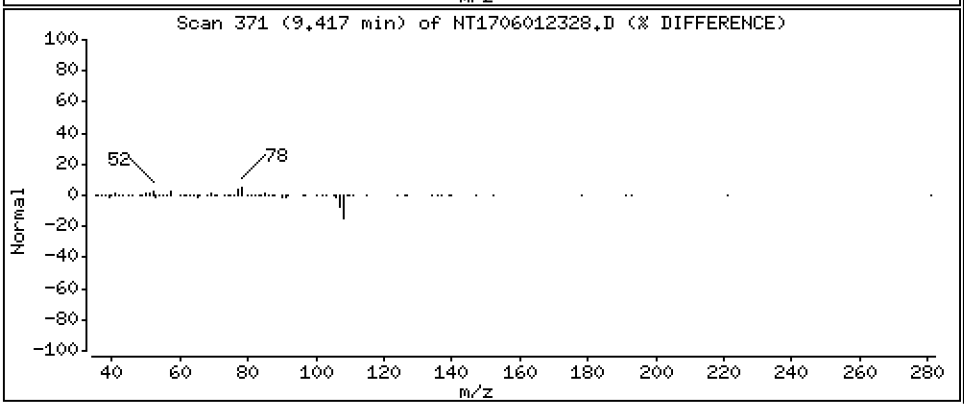
11 Benzyl alcohol

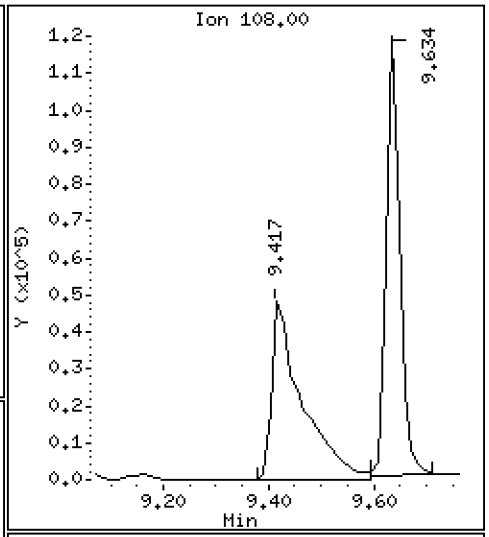
Concentration: 3.488 ug/mL

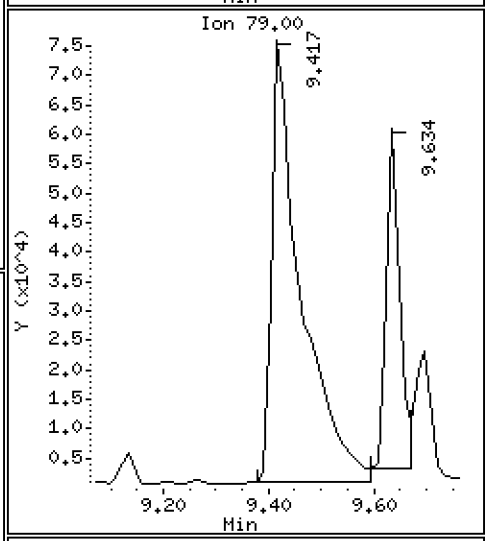


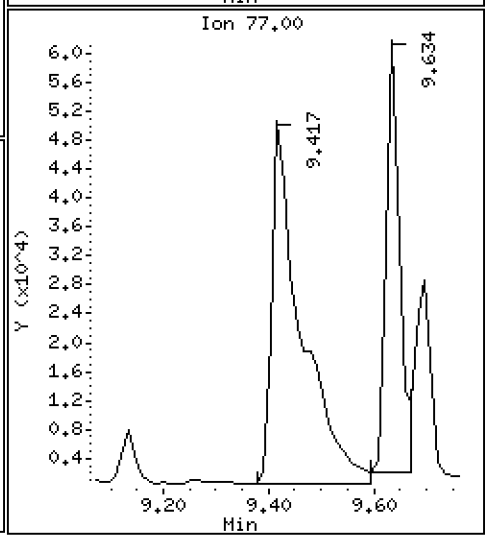












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

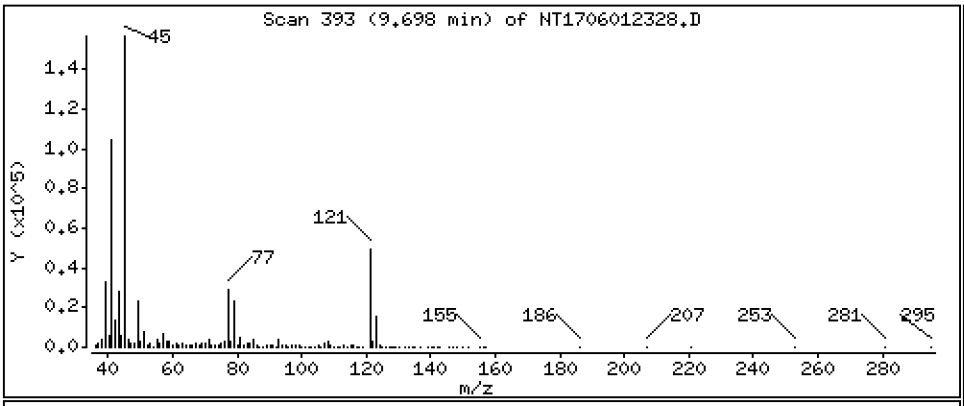
Operator: VTS

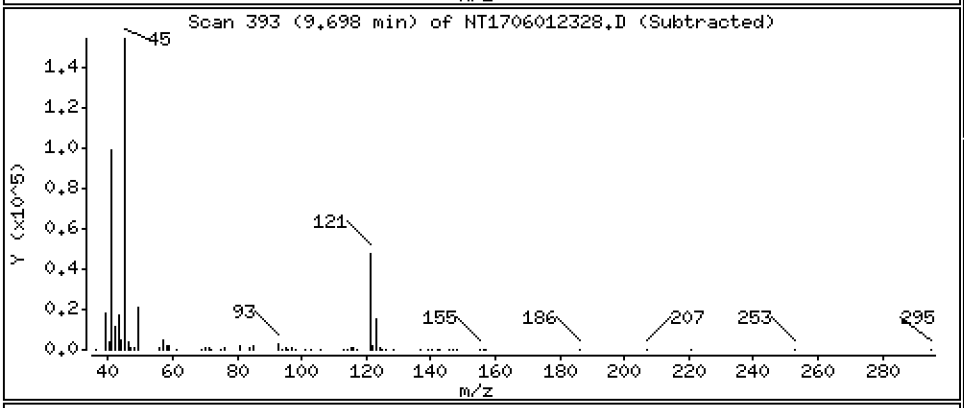
Column phase: ZB-5msi

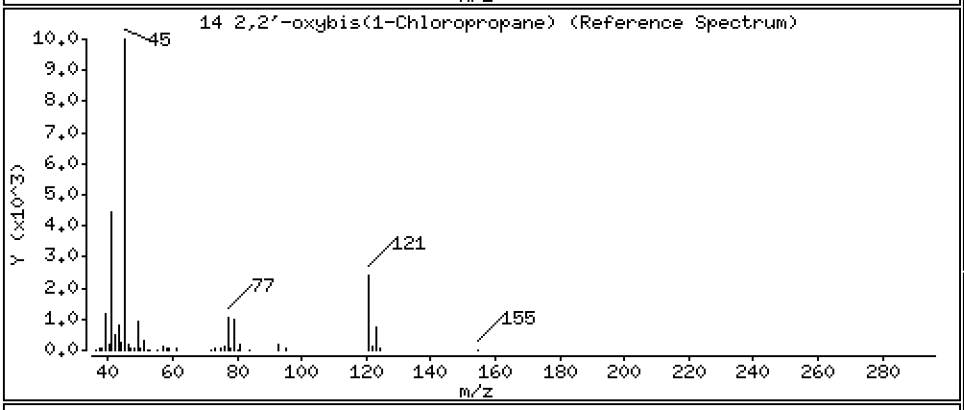
Column diameter: 0.25

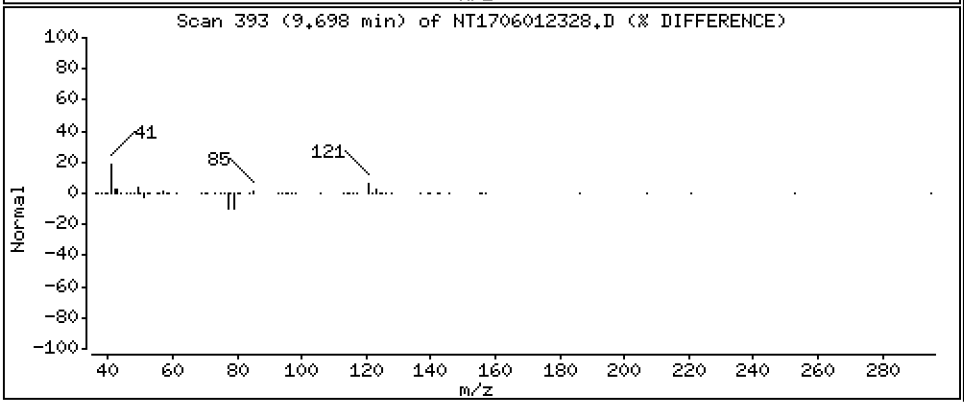
14 2,2'-oxybis(1-Chloropropane)

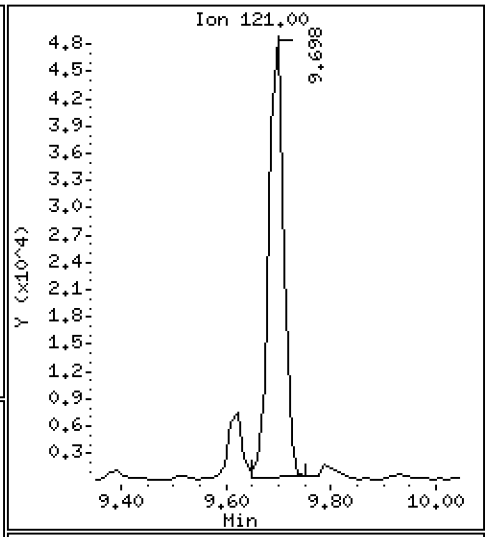
Concentration: 3.709 ug/mL

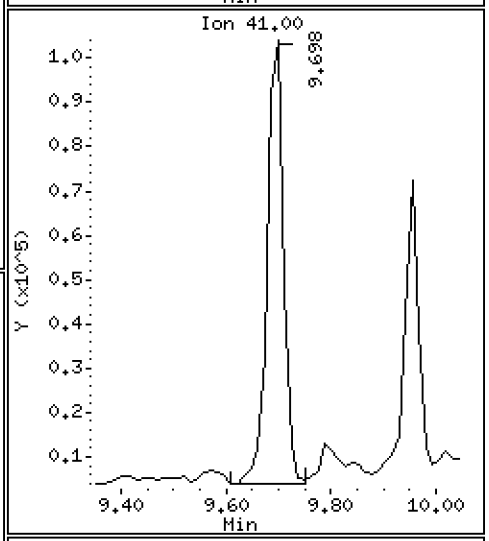


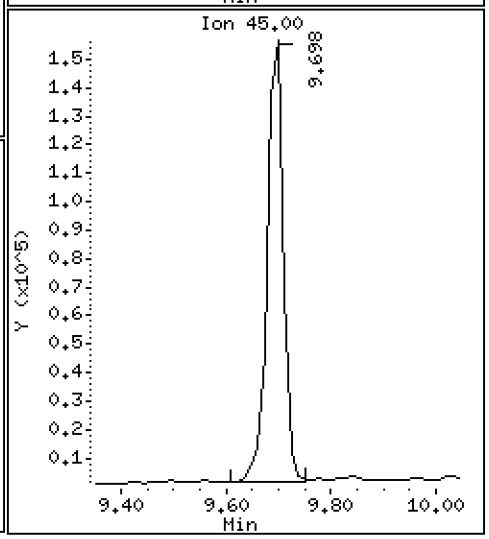












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

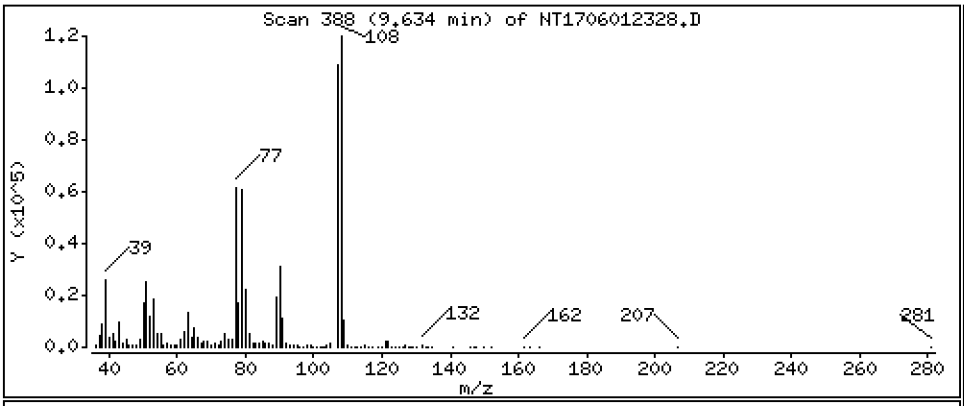
Operator: VTS

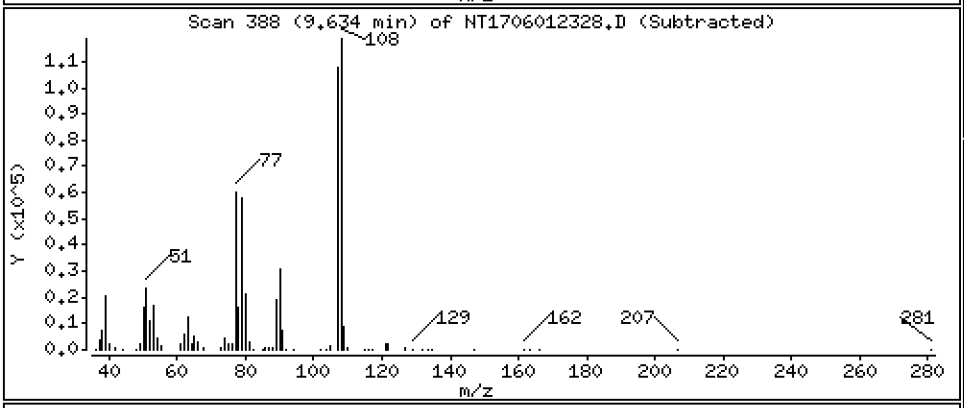
Column phase: ZB-5msi

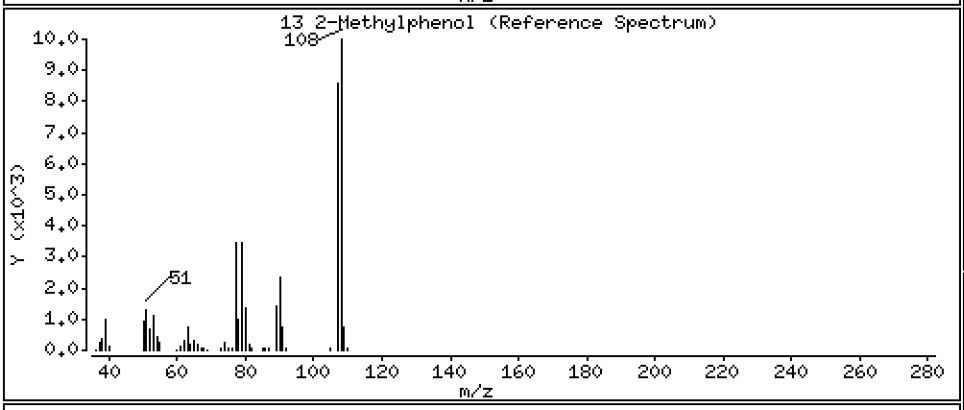
Column diameter: 0.25

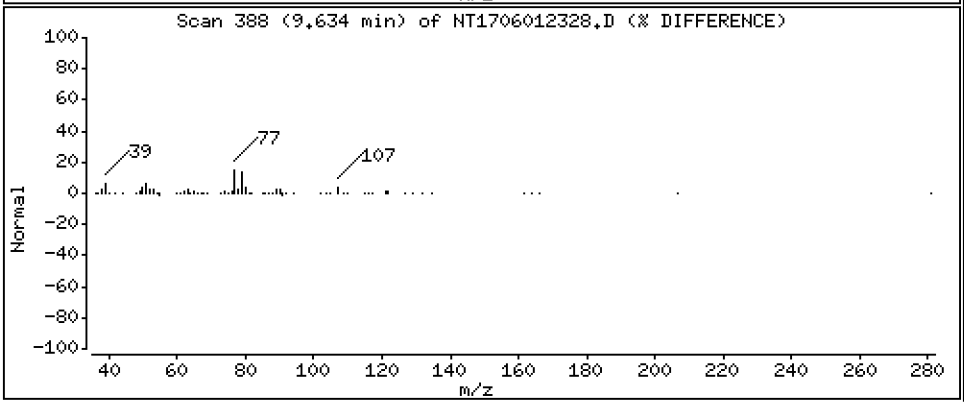
13 2-Methylphenol

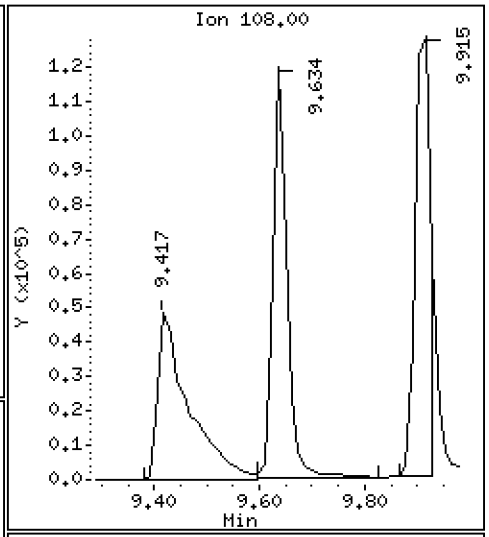
Concentration: 2.893 ug/mL

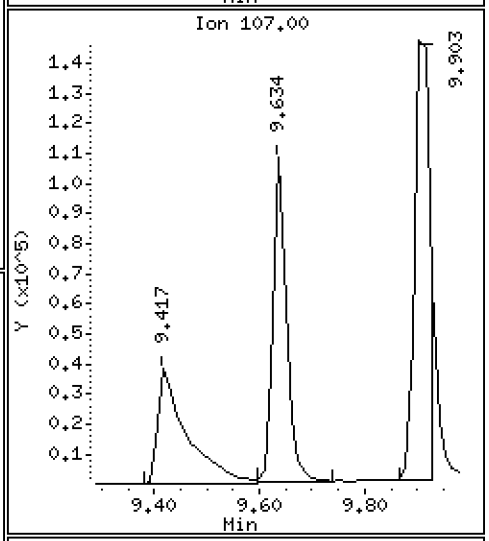


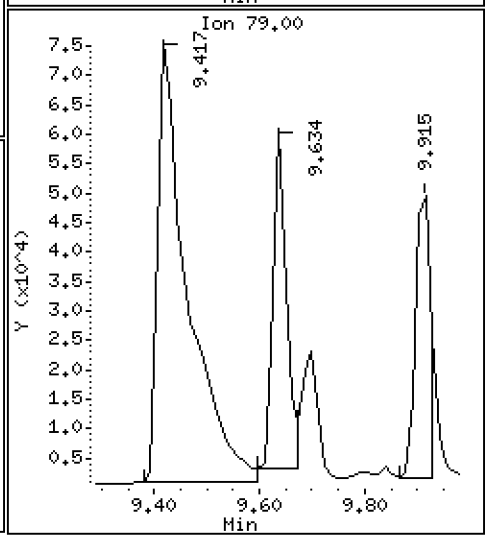












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

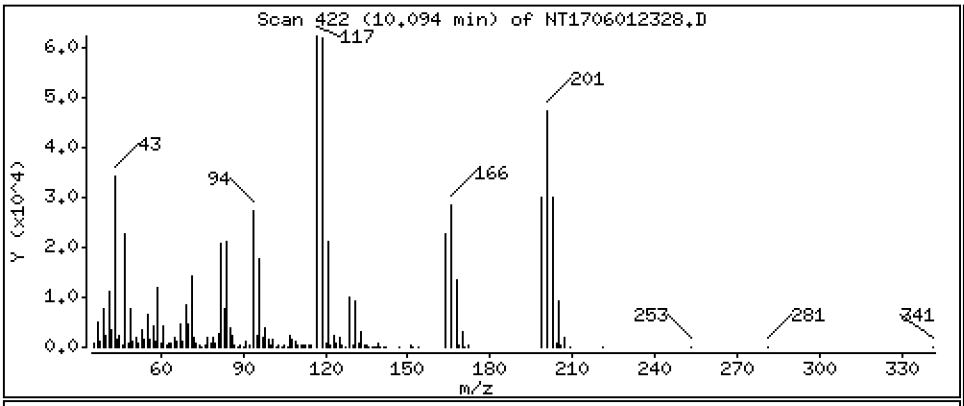
Operator: VTS

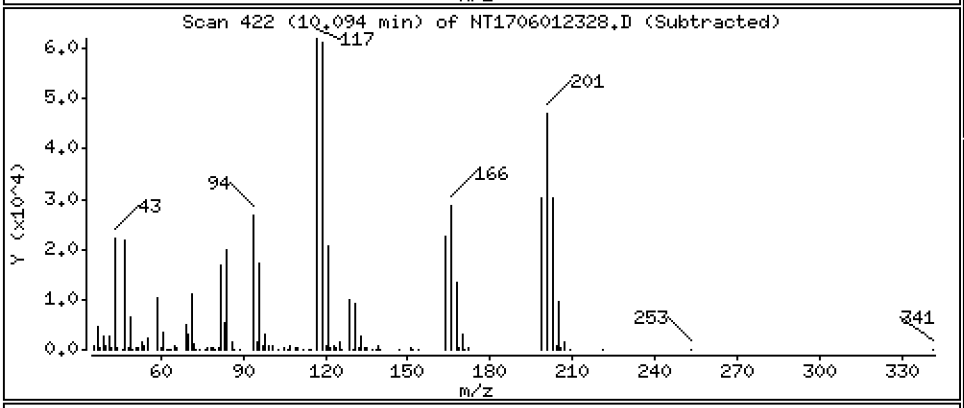
Column phase: ZB-5msi

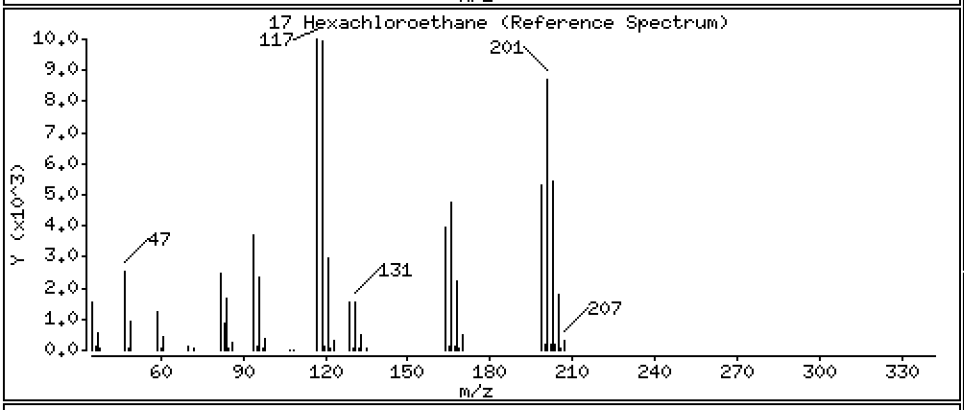
Column diameter: 0.25

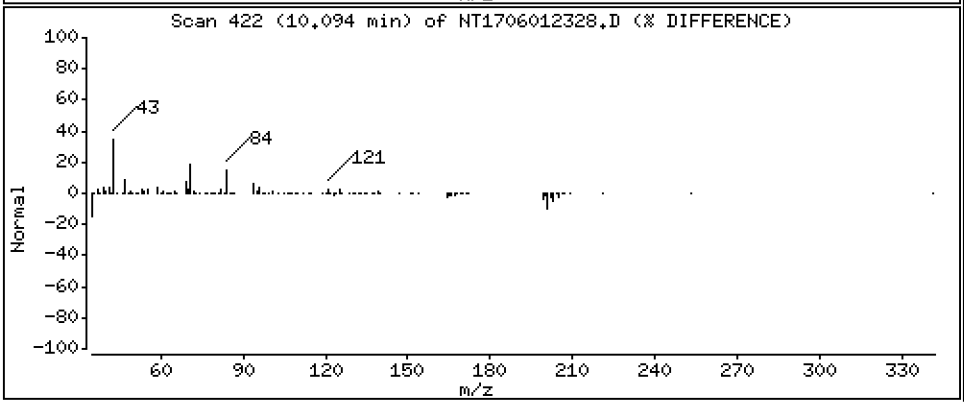
17 Hexachloroethane

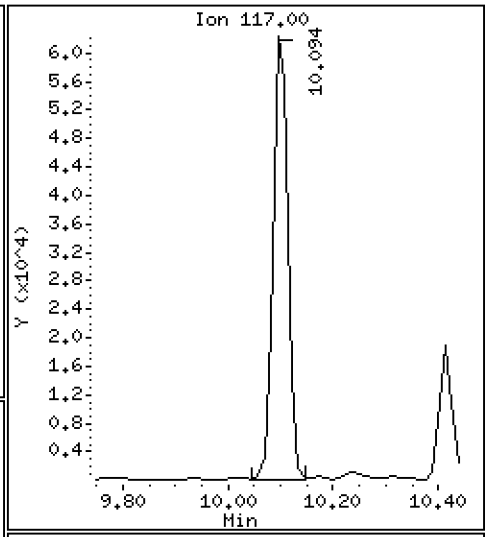
Concentration: 3.050 ug/mL

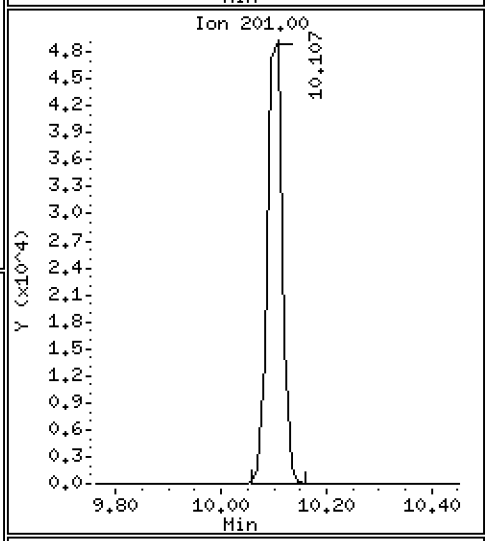


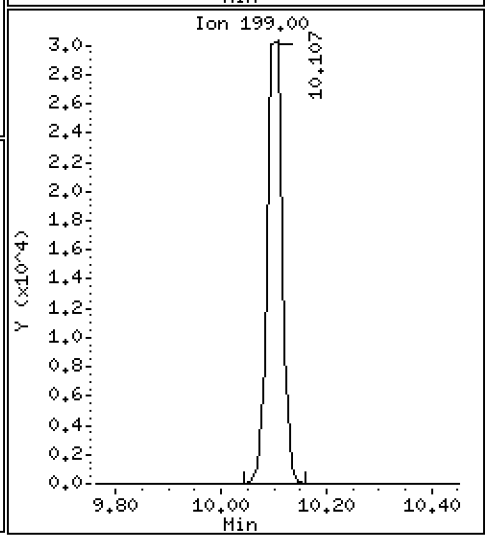












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

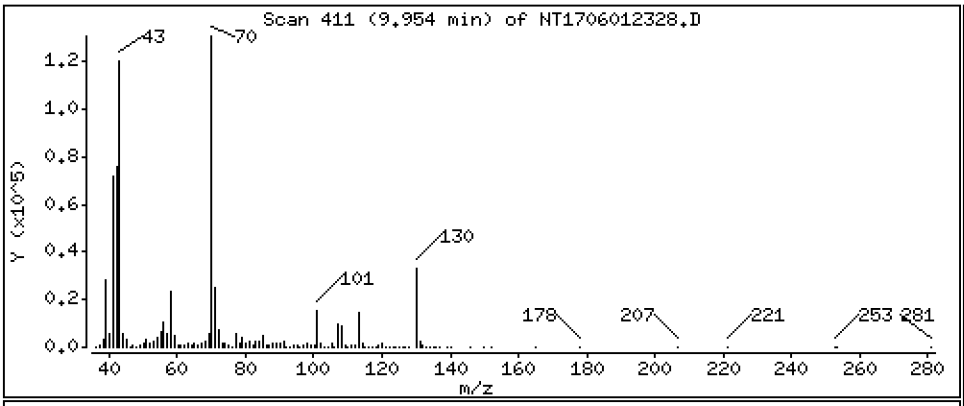
Operator: VTS

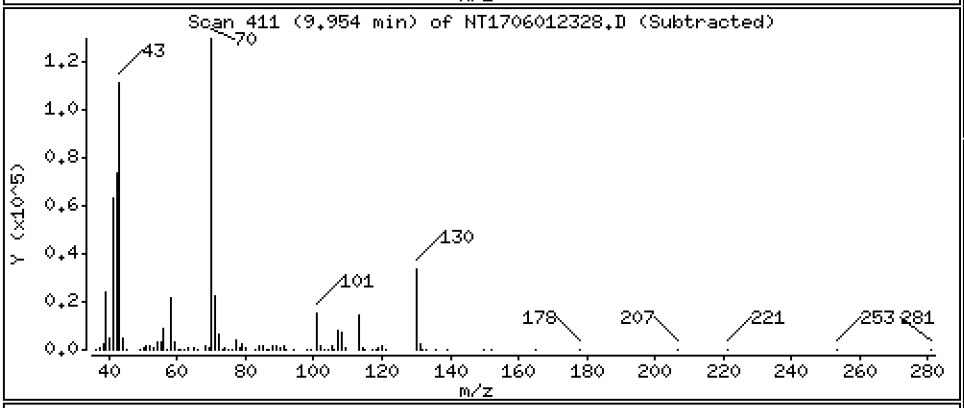
Column phase: ZB-5msi

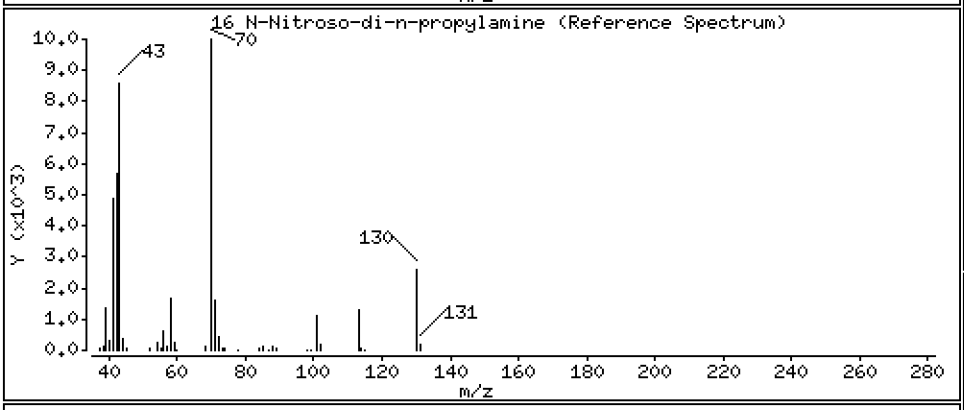
Column diameter: 0.25

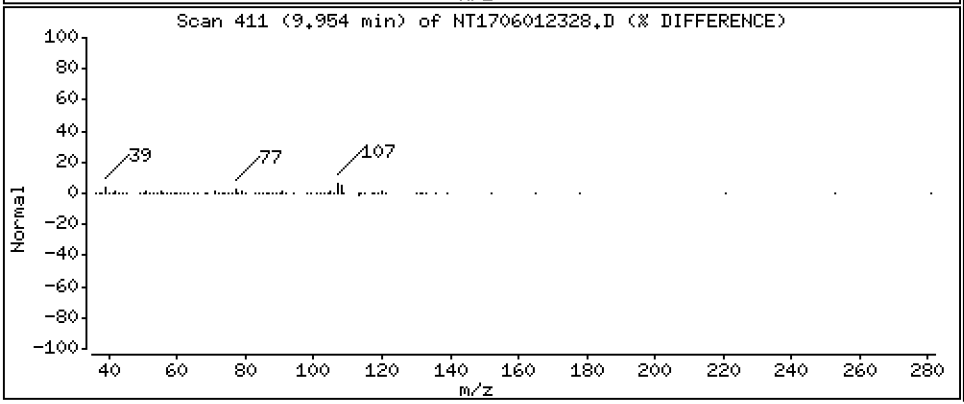
16 N-Nitroso-di-n-propylamine

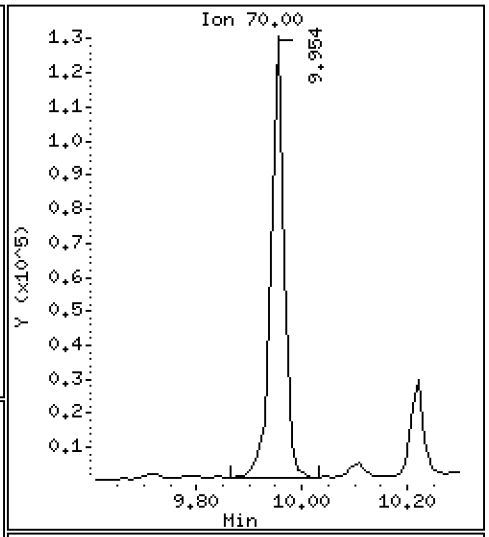
Concentration: 3.421 ug/mL

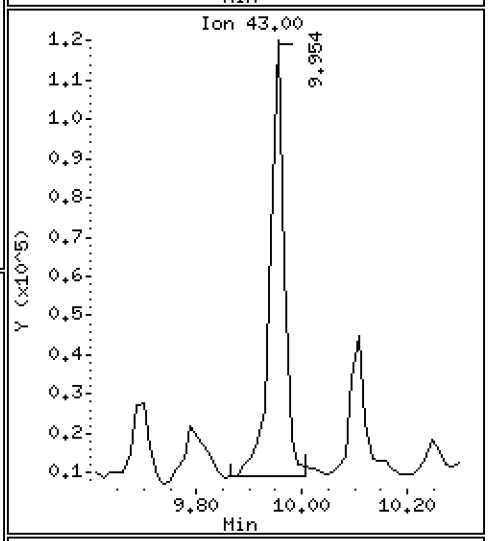


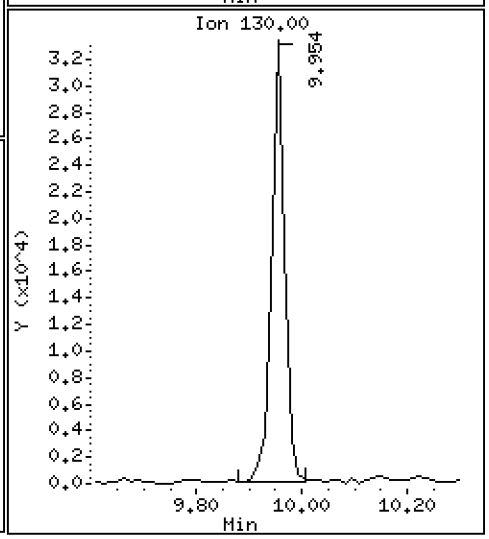












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

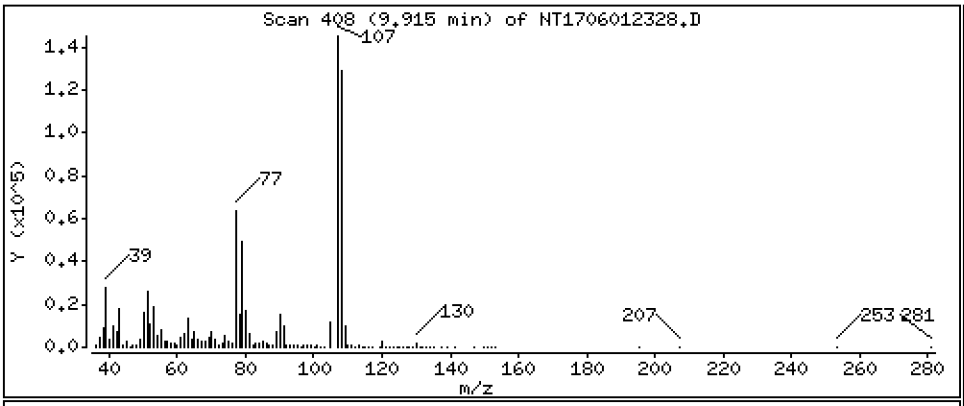
Operator: VTS

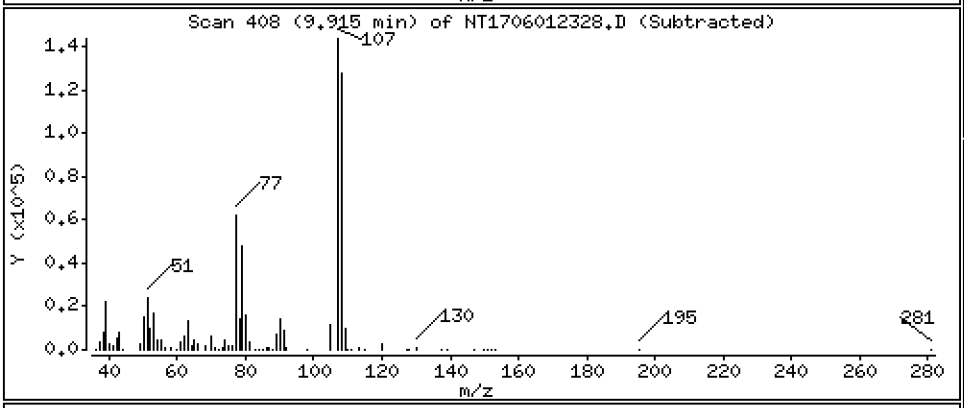
Column phase: ZB-5msi

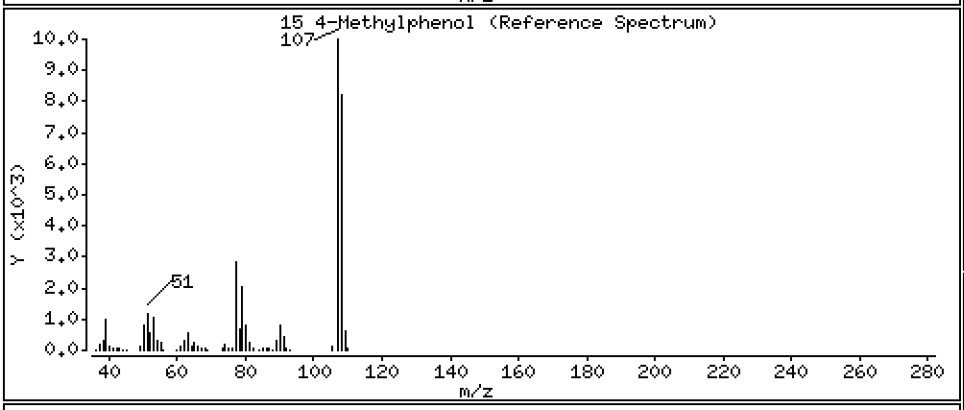
Column diameter: 0.25

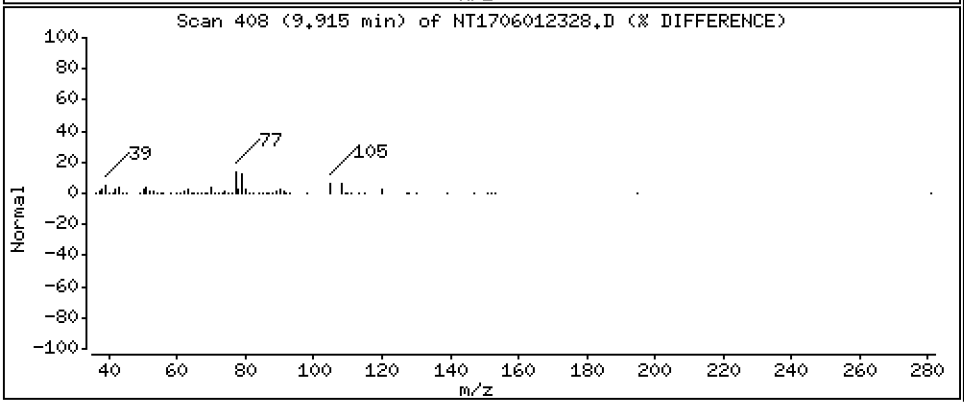
15 4-Methylphenol

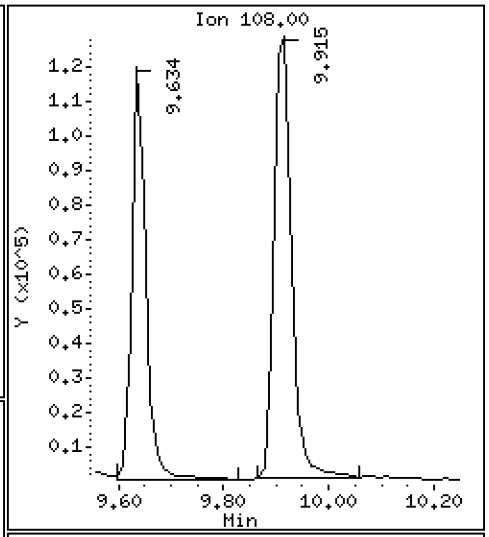
Concentration: 3.398 ug/mL

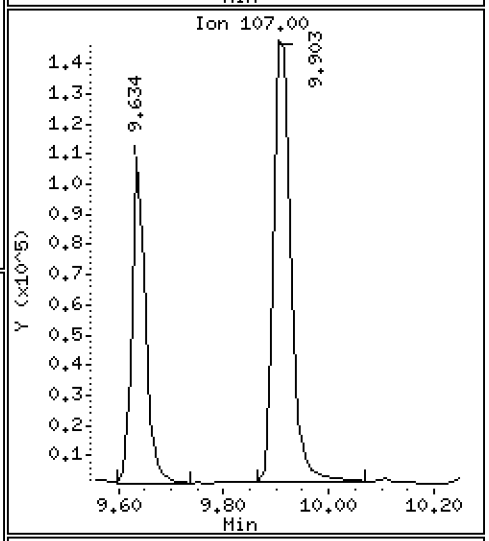


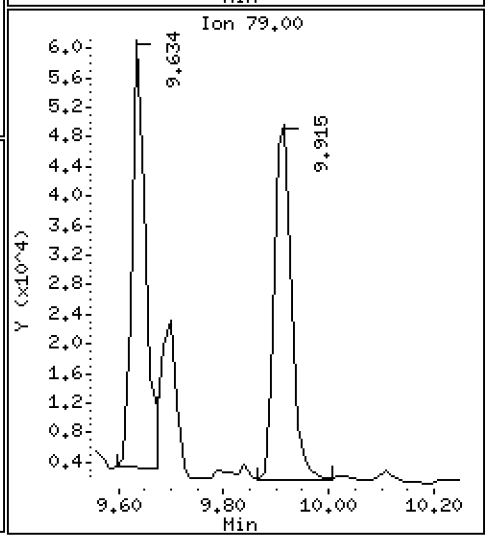












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

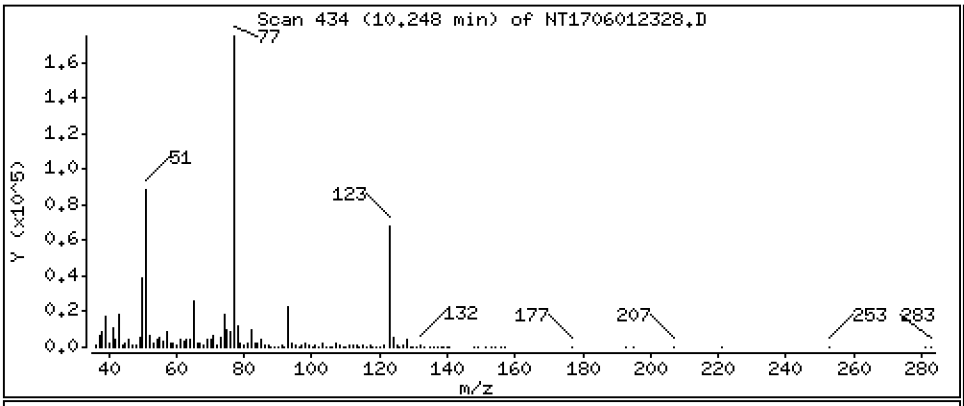
Operator: VTS

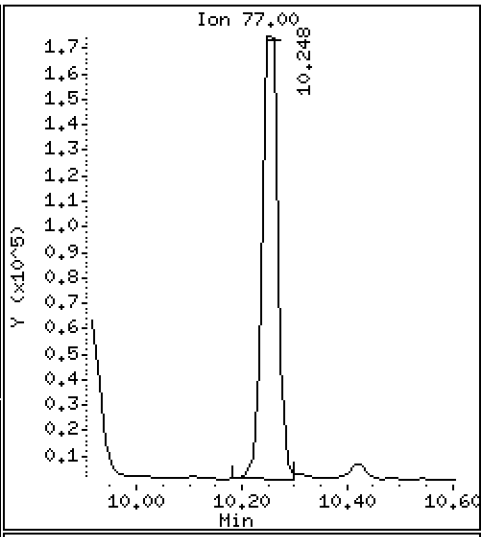
Column phase: ZB-5msi

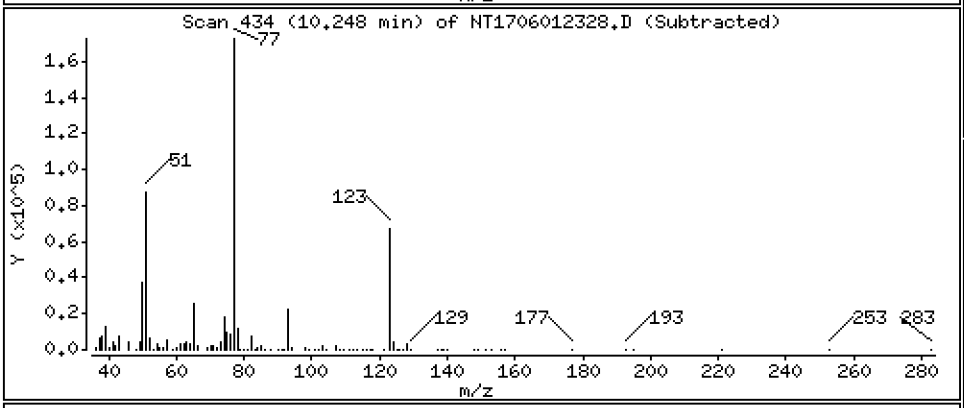
Column diameter: 0.25

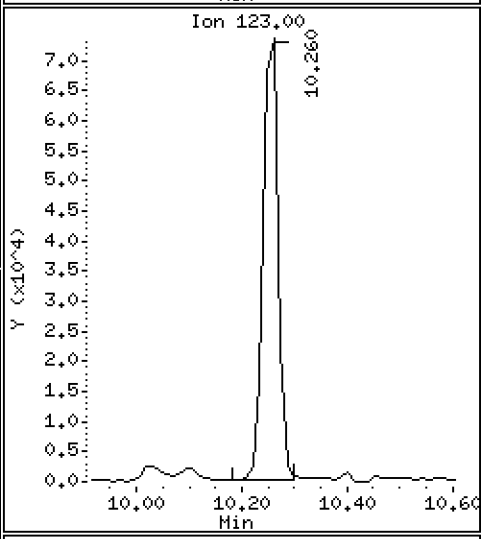
19 Nitrobenzene

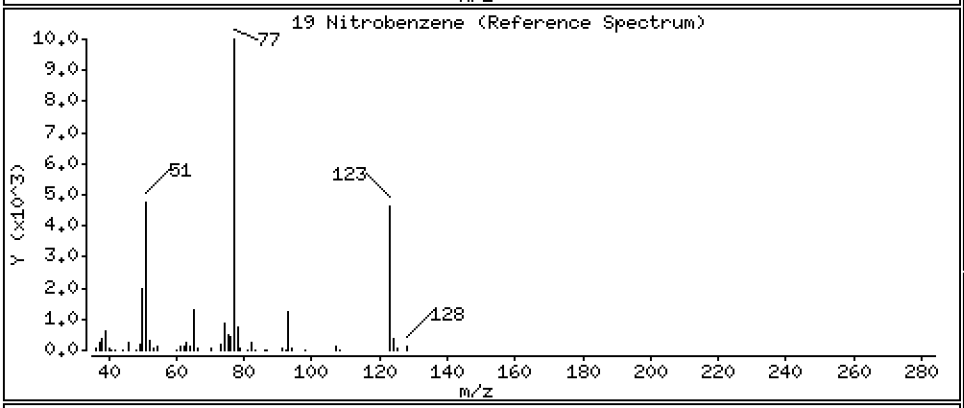
Concentration: 3.386 ug/mL

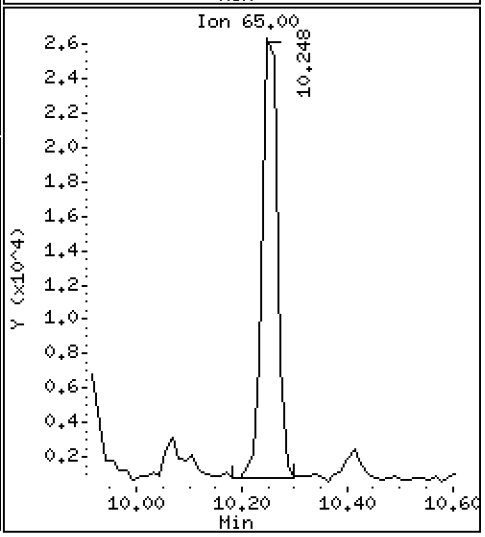


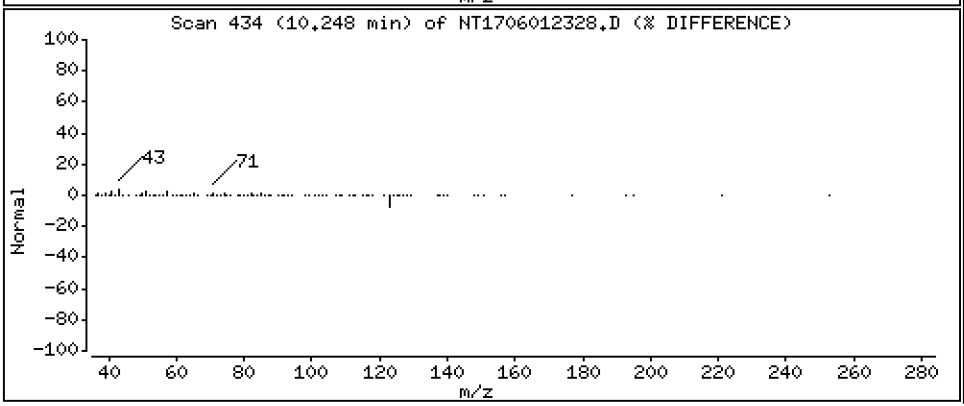












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

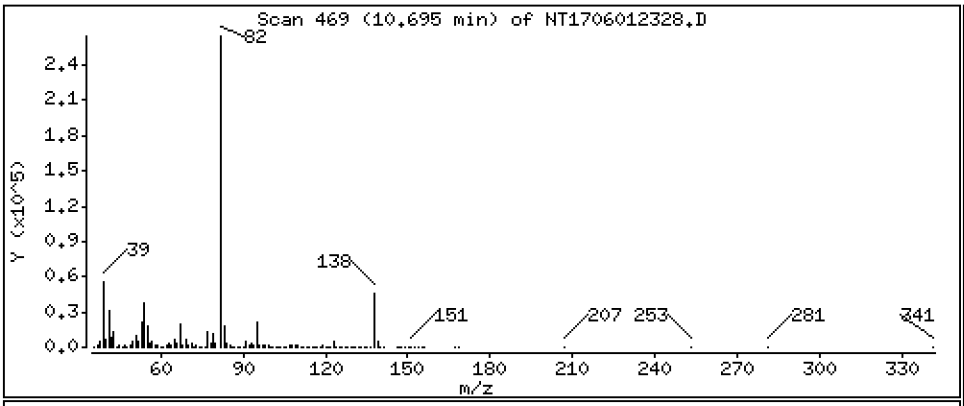
Operator: VTS

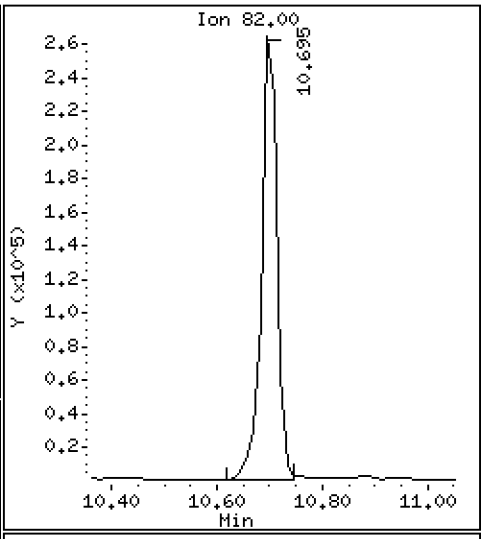
Column phase: ZB-5msi

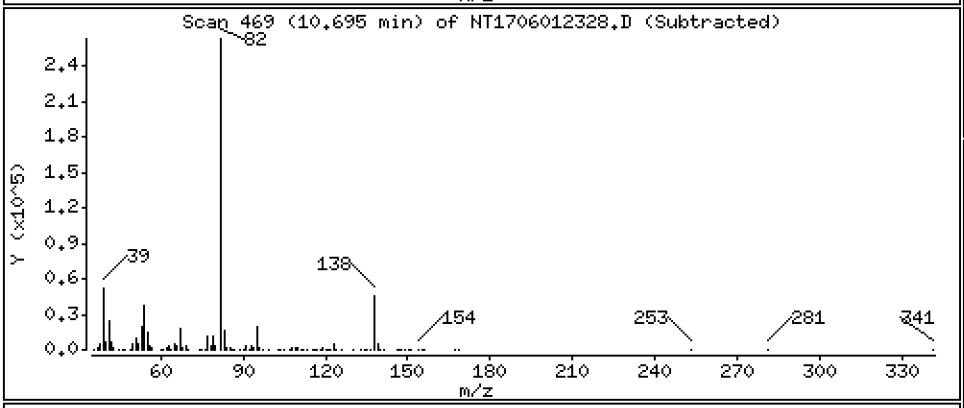
Column diameter: 0.25

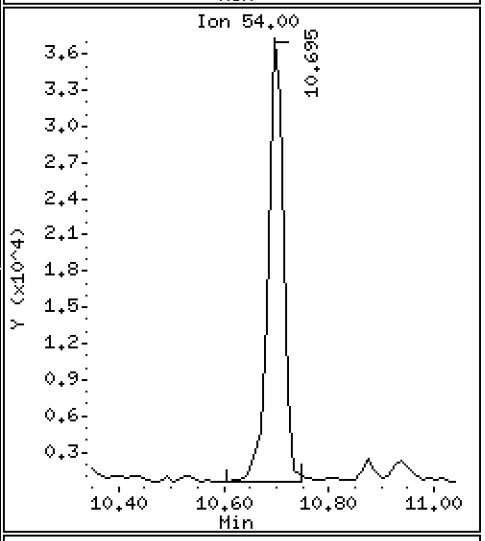
20 Isophorone

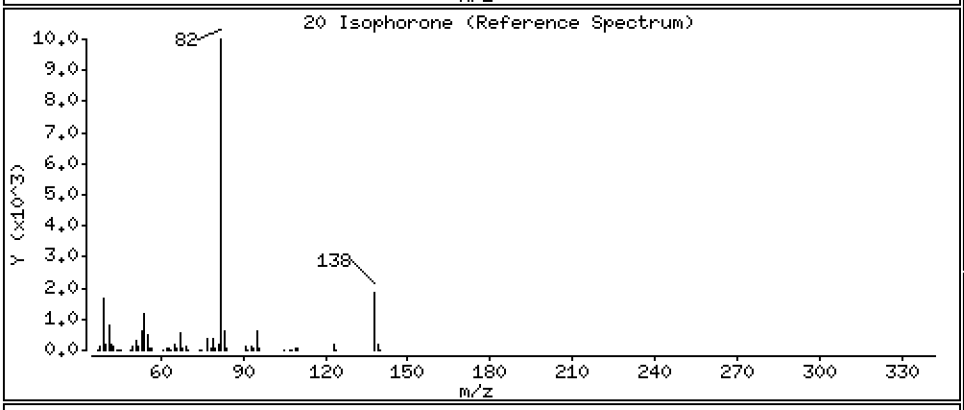
Concentration: 3.840 ug/mL

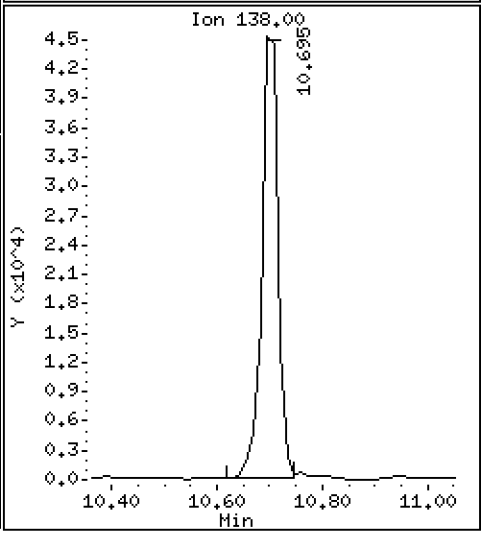


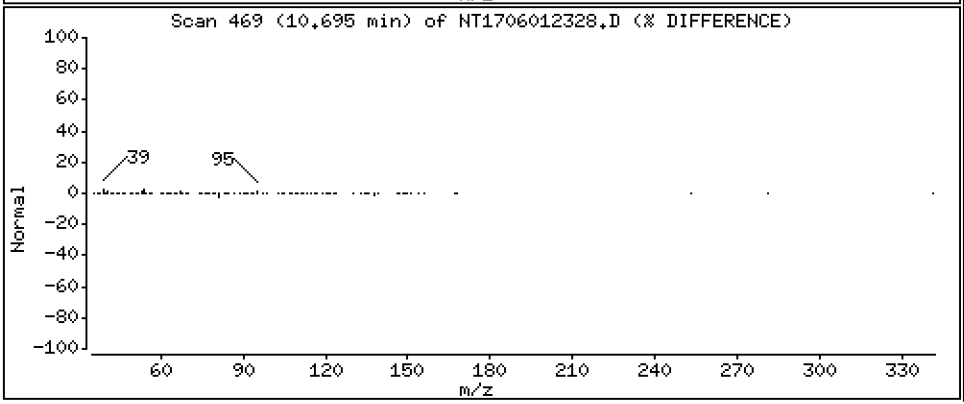












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

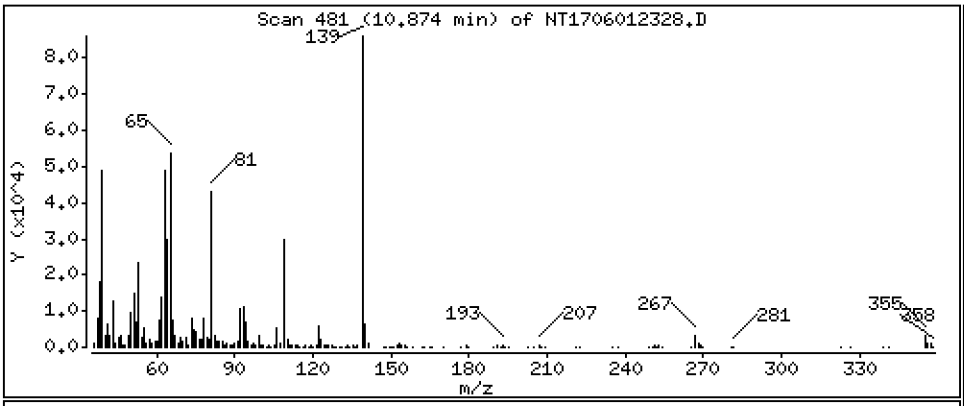
Operator: VTS

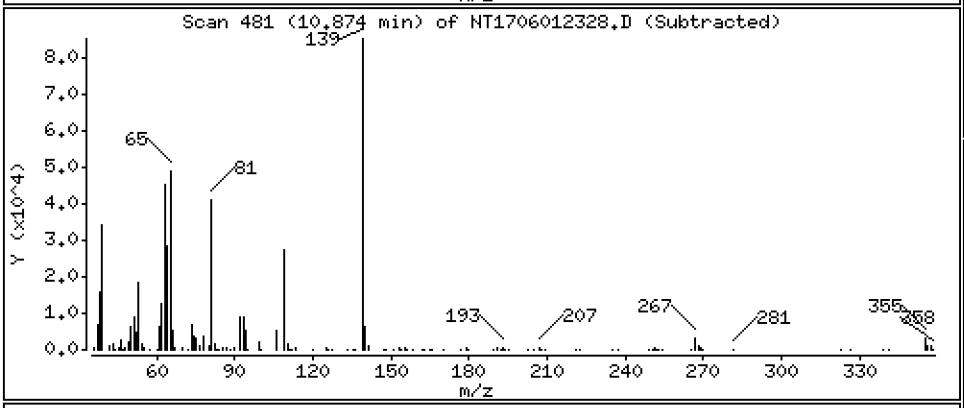
Column phase: ZB-5msi

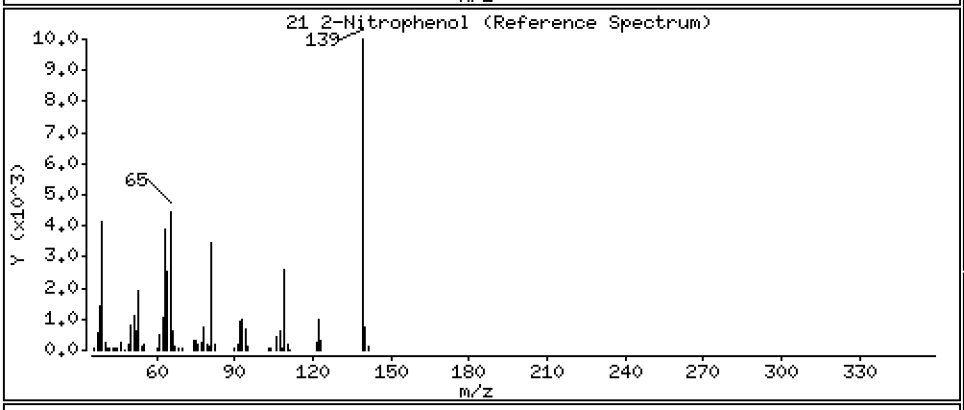
Column diameter: 0.25

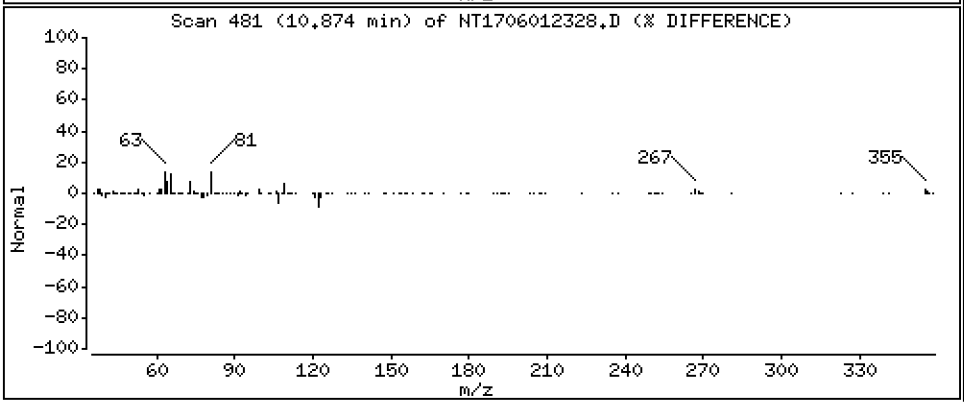
21 2-Nitrophenol

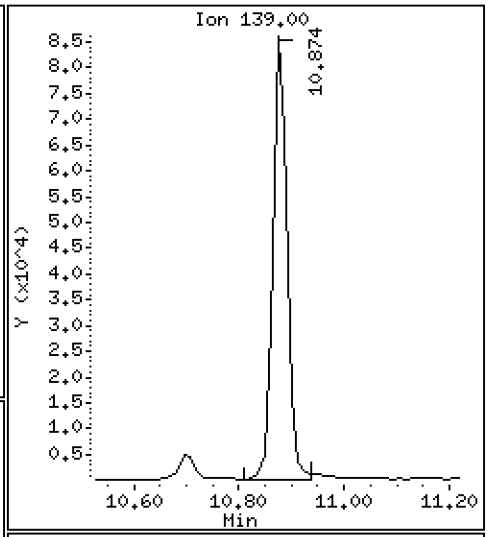
Concentration: 3.244 ug/mL

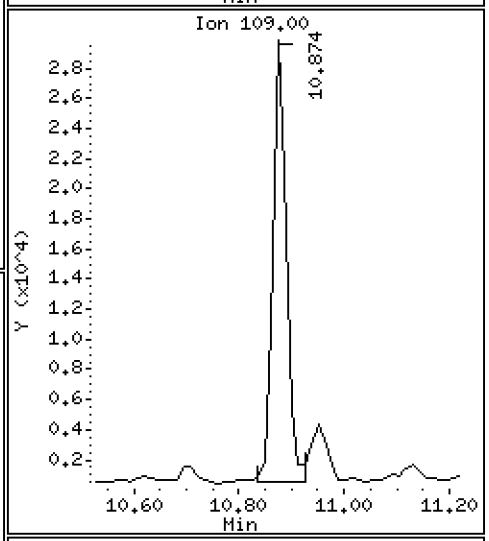


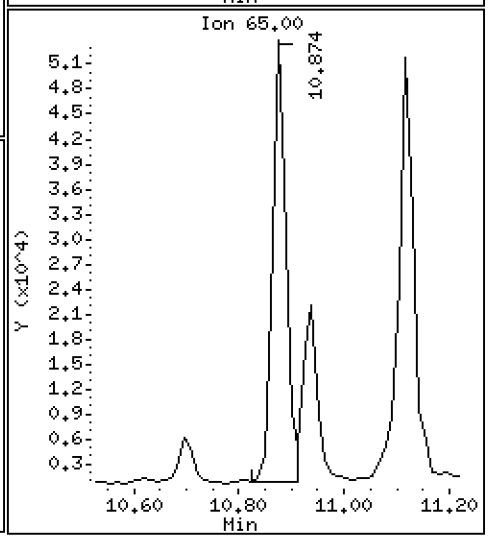












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

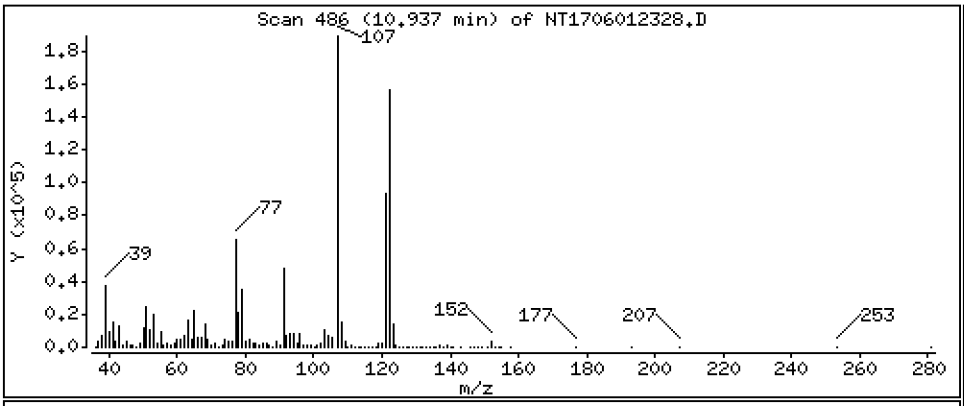
Operator: VTS

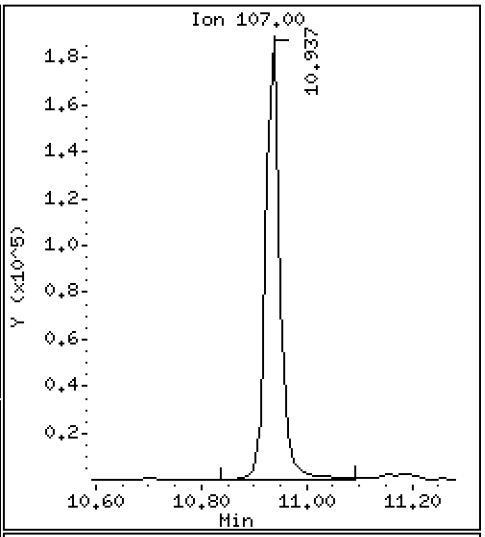
Column phase: ZB-5msi

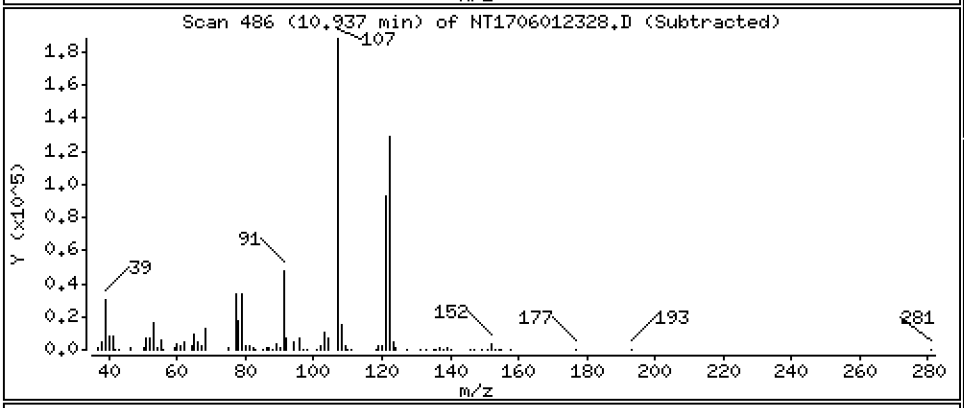
Column diameter: 0.25

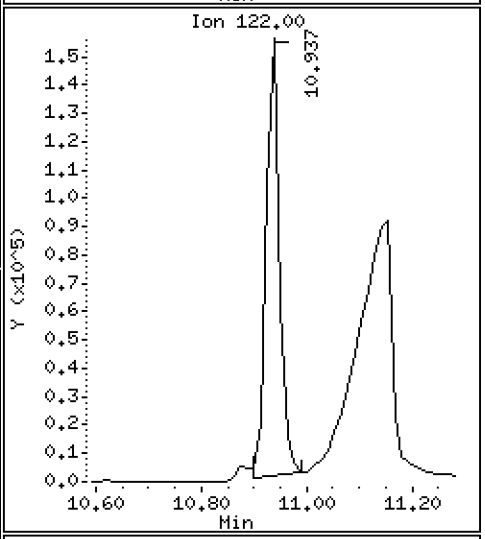
22 2,4-Dimethylphenol

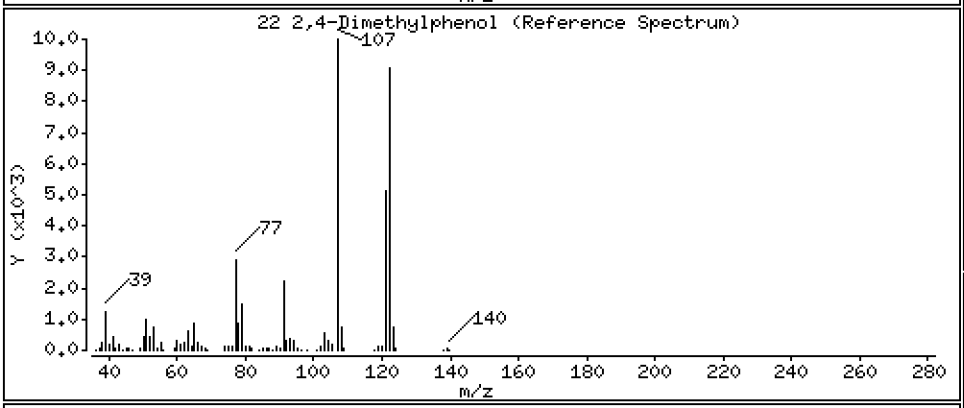
Concentration: 3.750 ug/mL

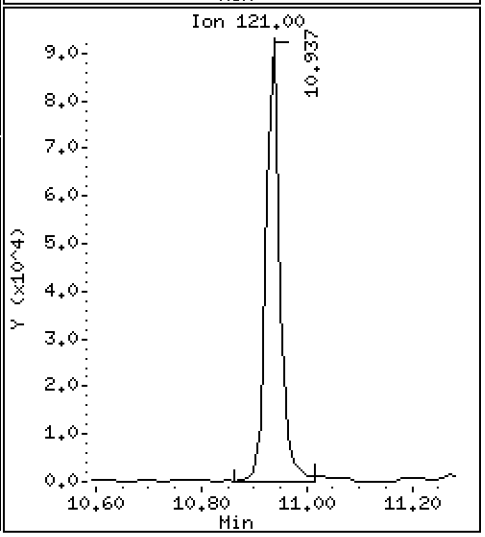


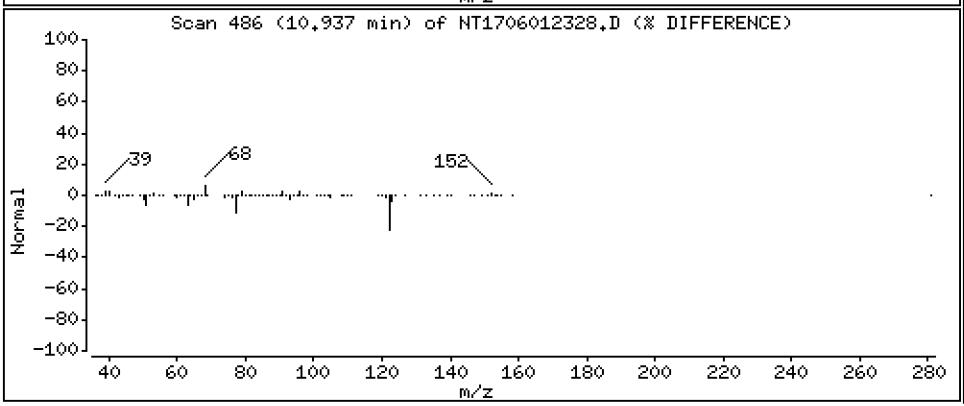












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

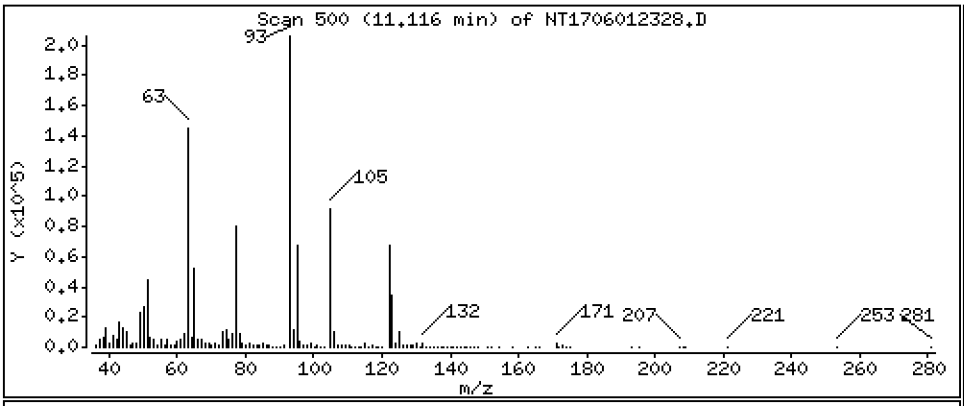
Operator: VTS

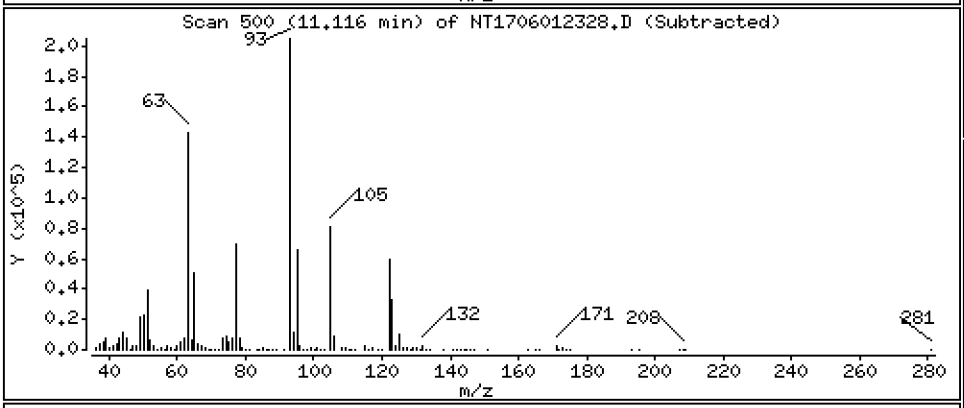
Column phase: ZB-5msi

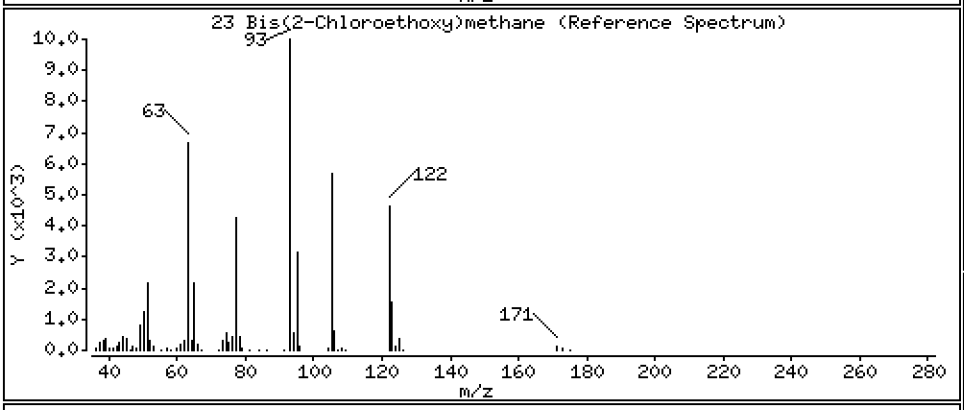
Column diameter: 0.25

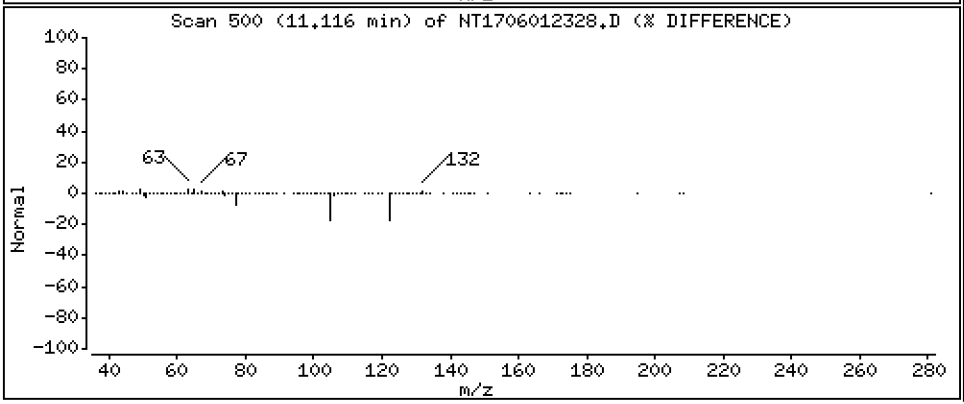
23 Bis(2-Chloroethoxy)methane

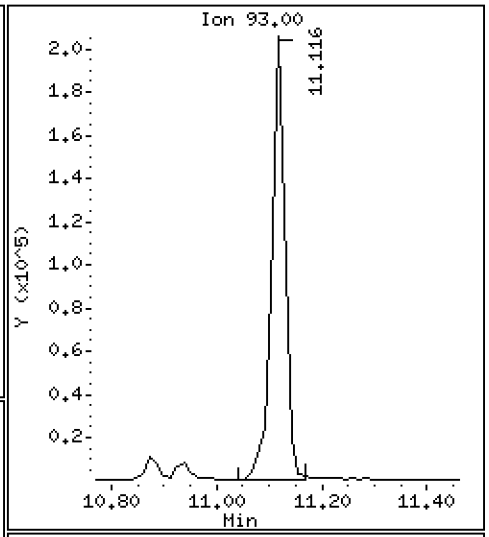
Concentration: 4.257 ug/mL

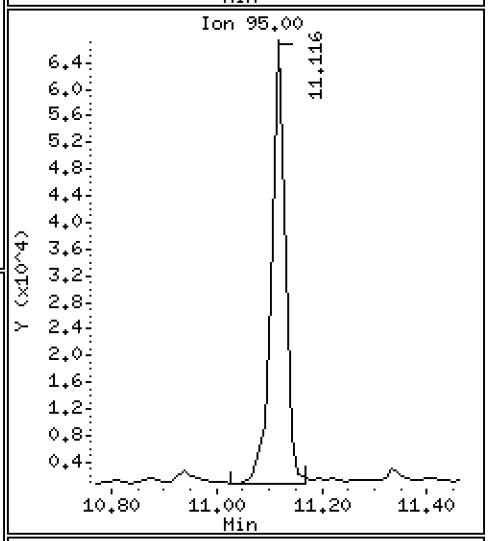


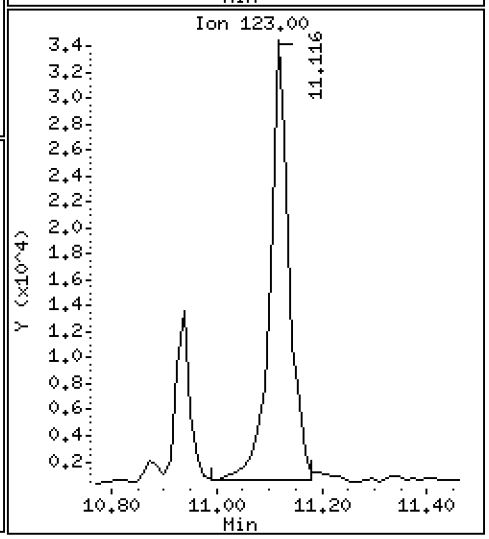












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

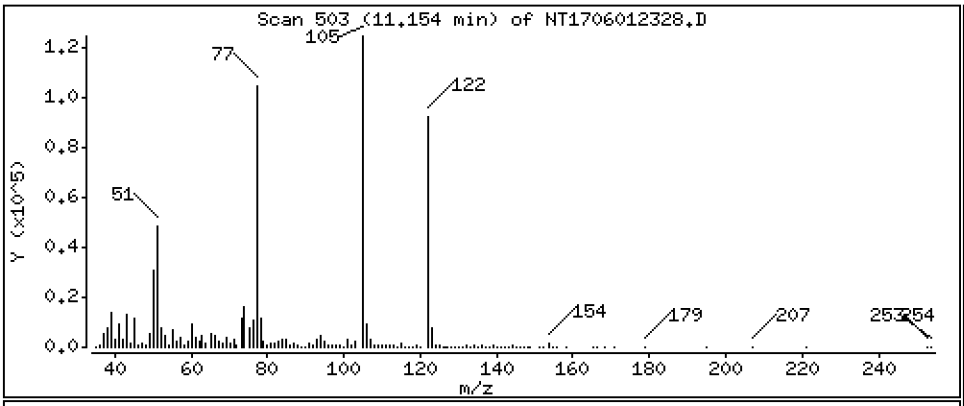
Operator: VTS

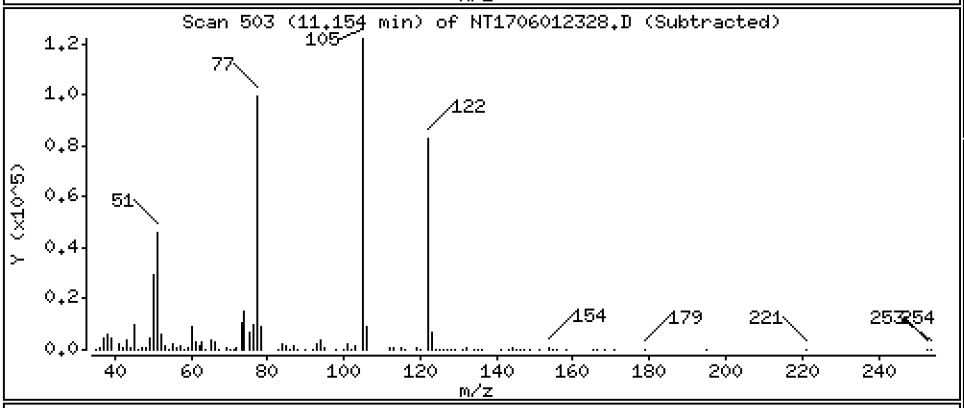
Column phase: ZB-5msi

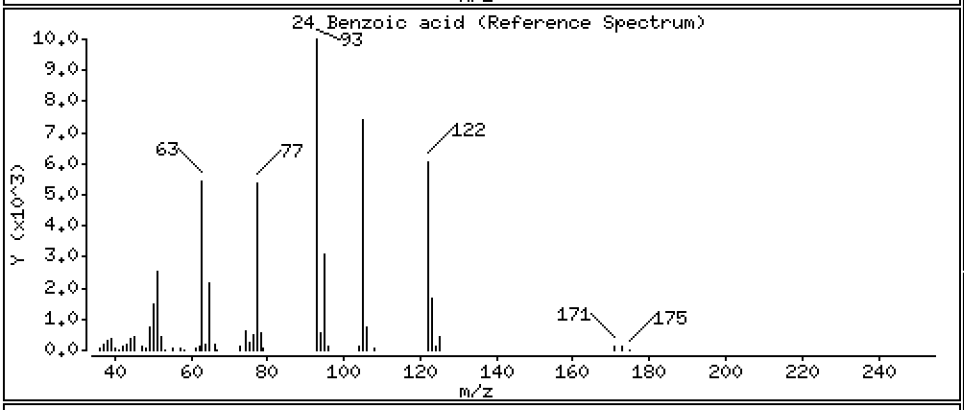
Column diameter: 0.25

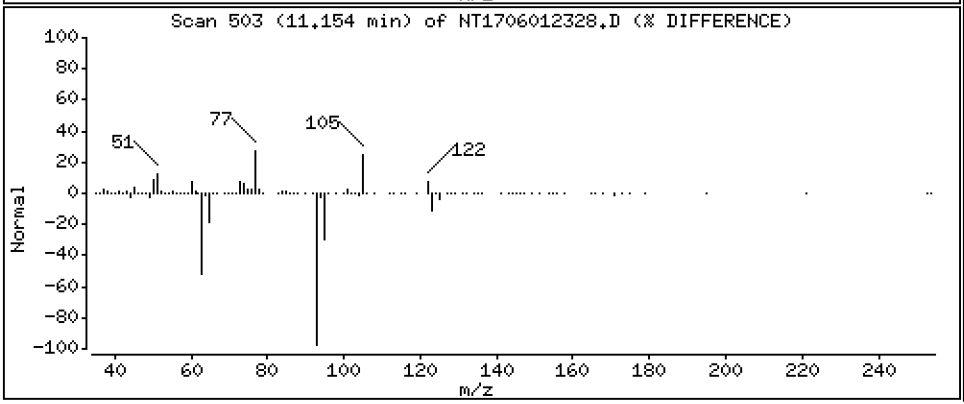
24 Benzoic acid

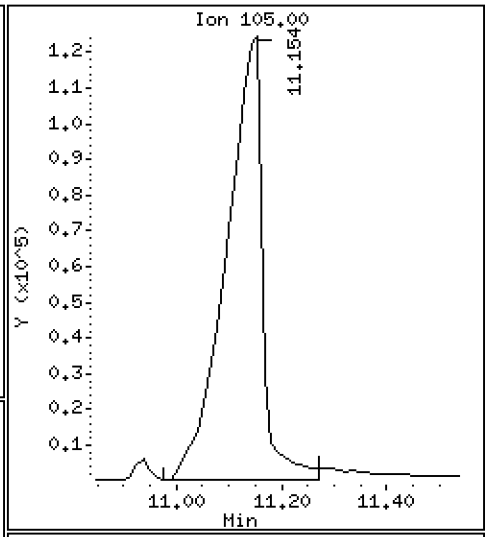
Concentration: 9.215 ug/mL

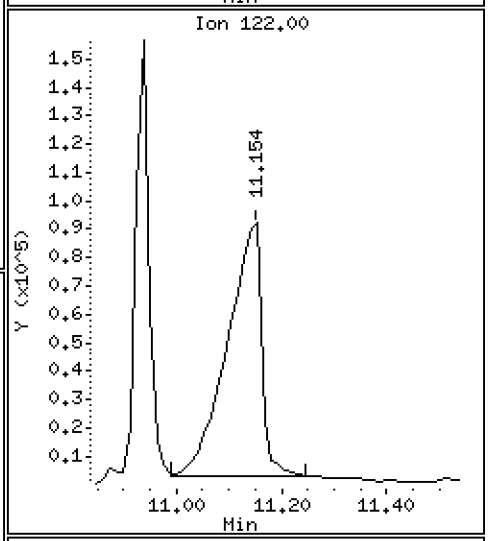


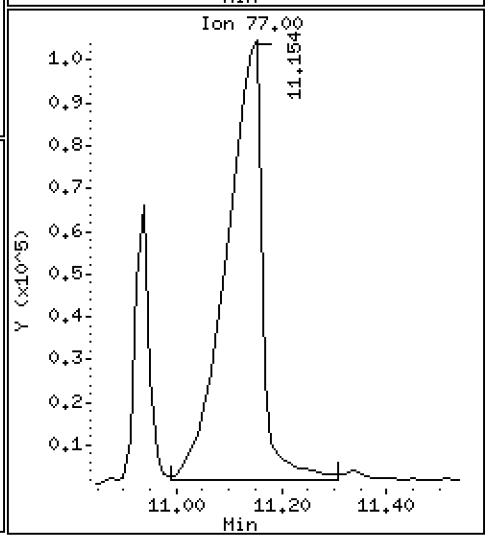












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

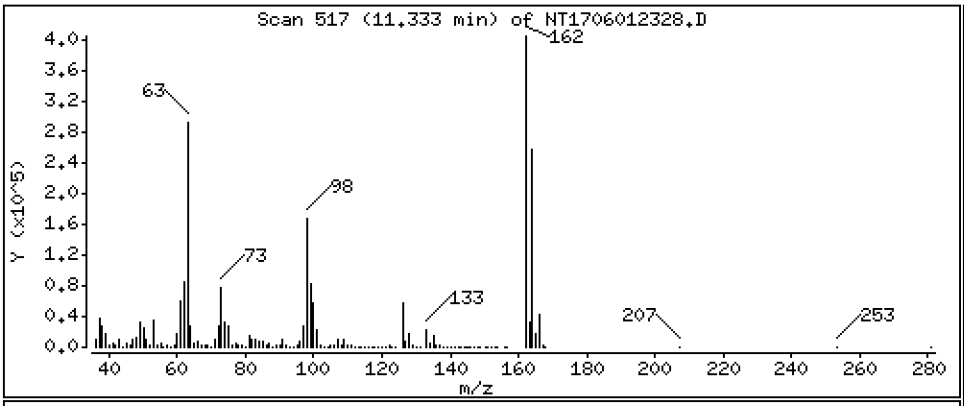
Operator: VTS

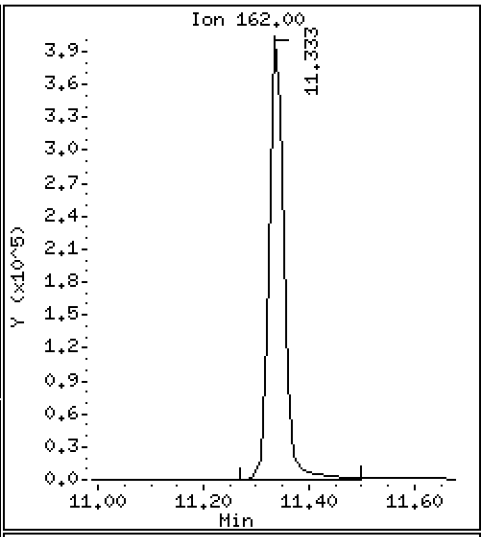
Column phase: ZB-5msi

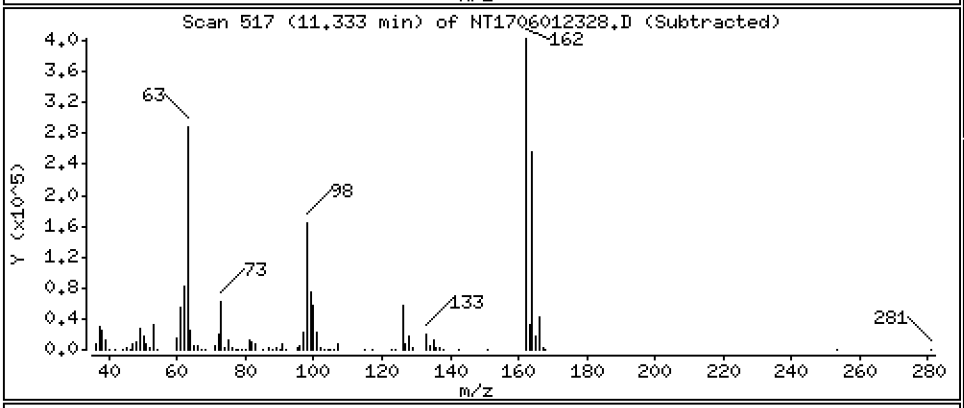
Column diameter: 0.25

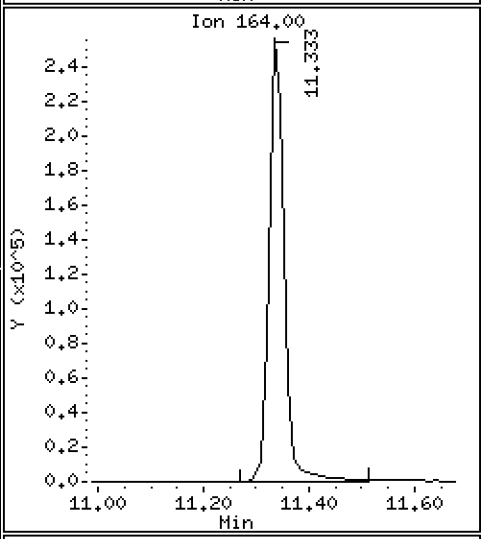
25 2,4-Dichlorophenol

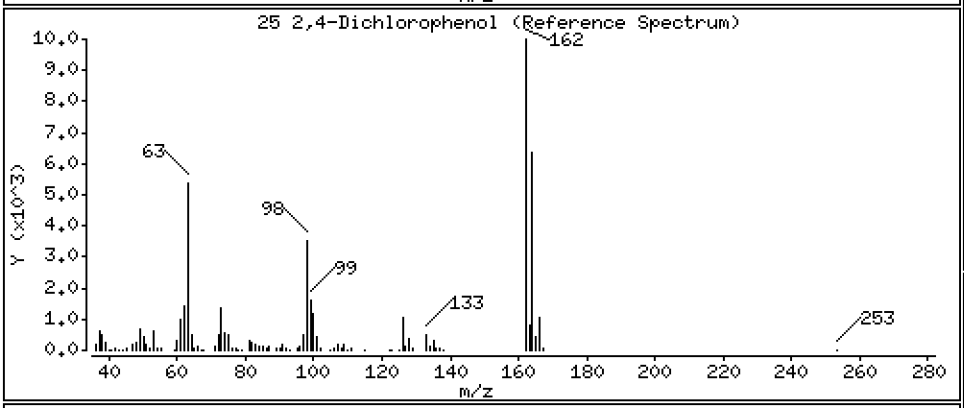
Concentration: 11.61 ug/mL

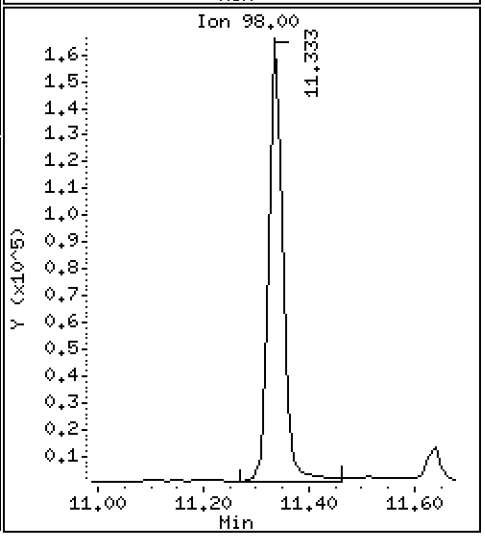


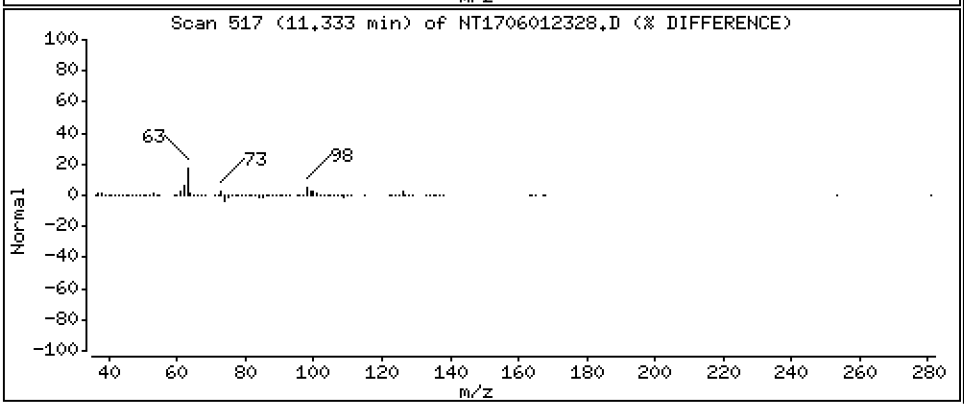












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

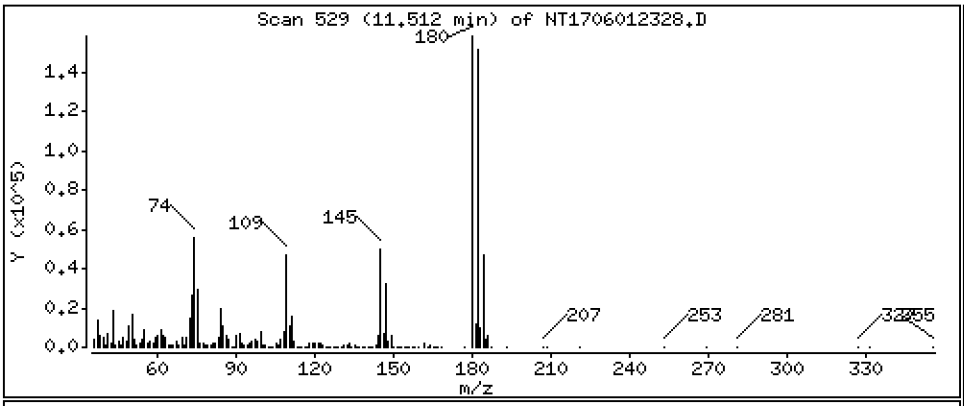
Operator: VTS

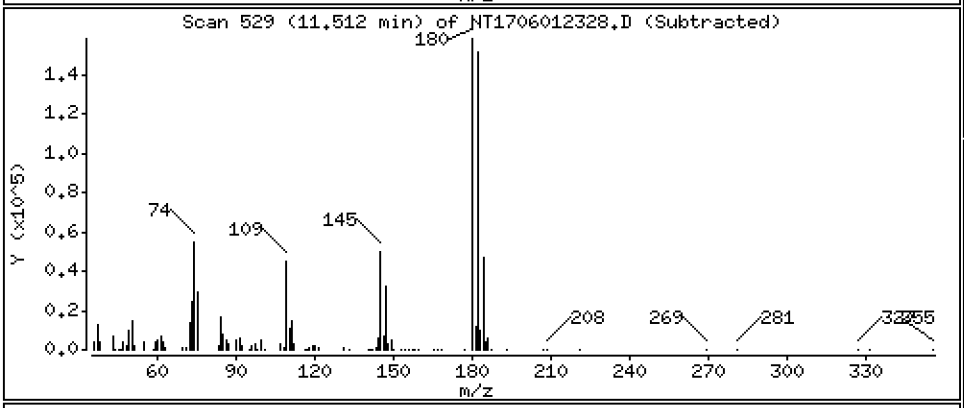
Column phase: ZB-5msi

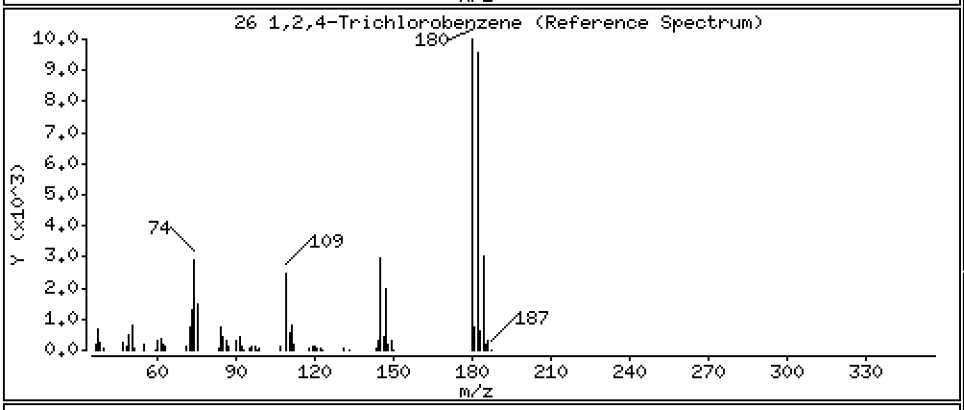
Column diameter: 0.25

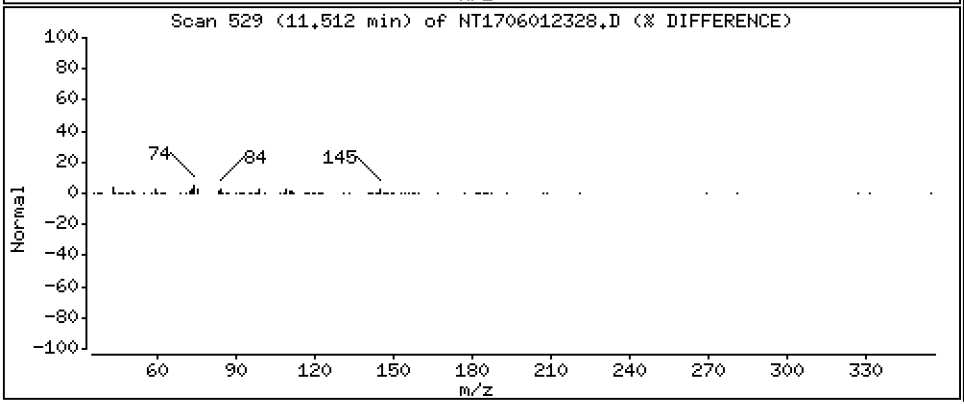
26 1,2,4-Trichlorobenzene

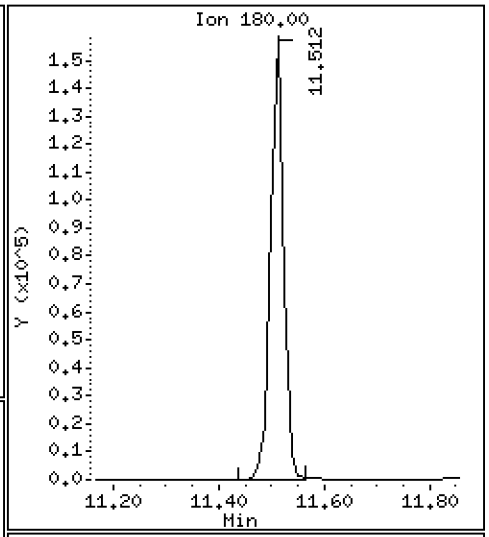
Concentration: 3.246 ug/mL

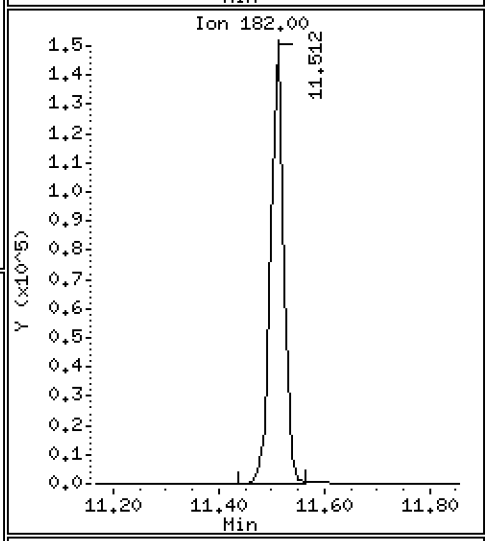


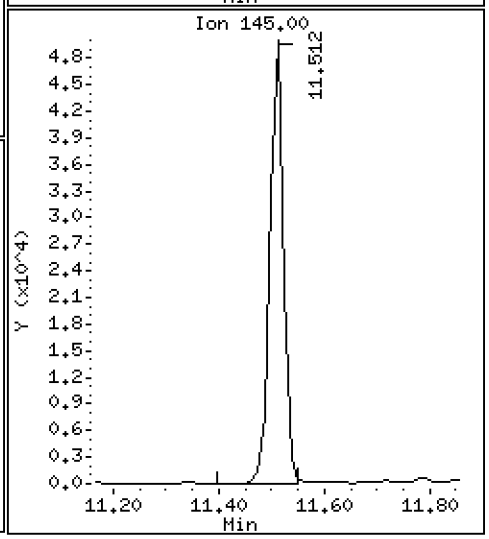












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

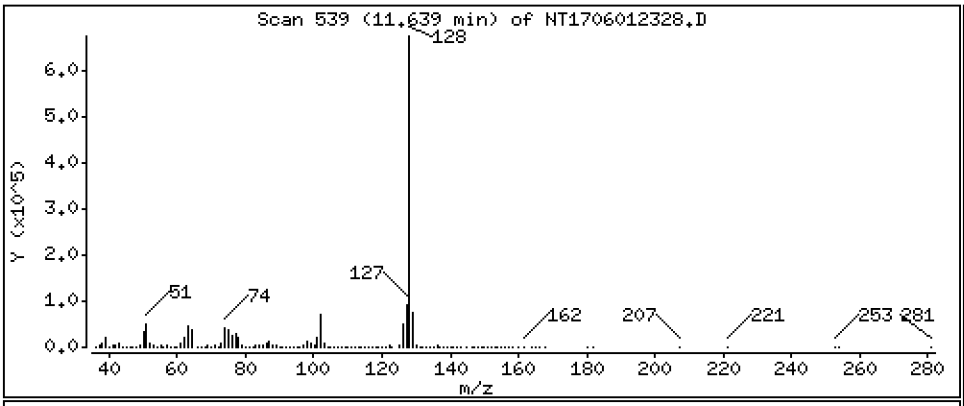
Operator: VTS

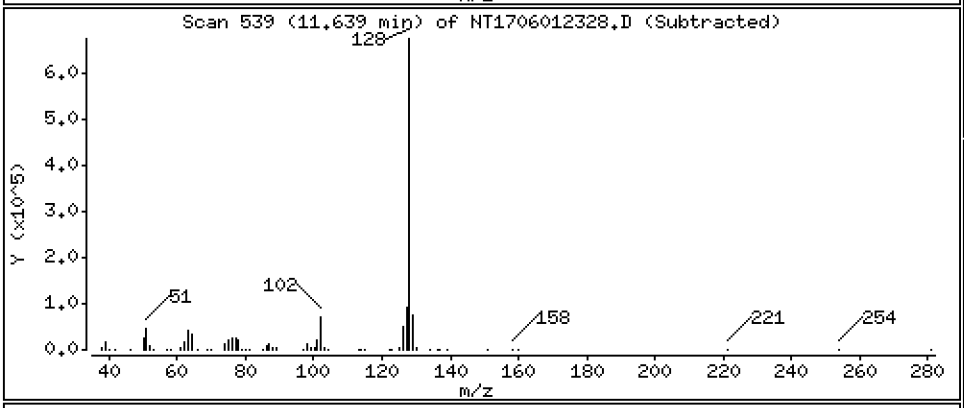
Column phase: ZB-5msi

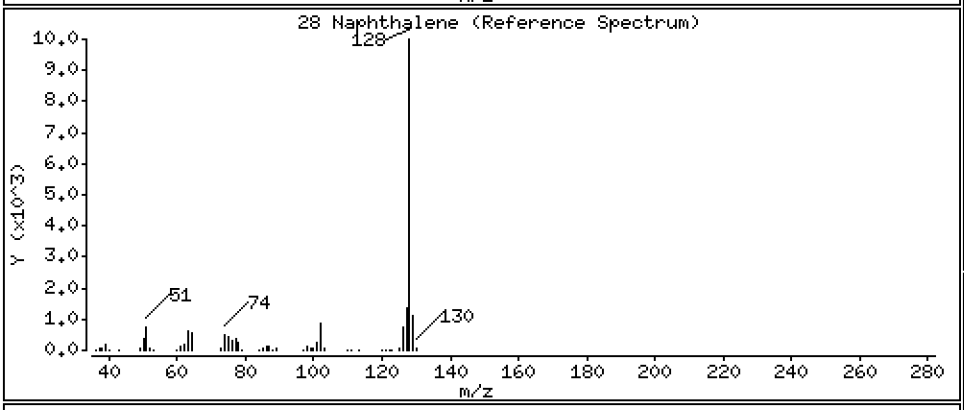
Column diameter: 0.25

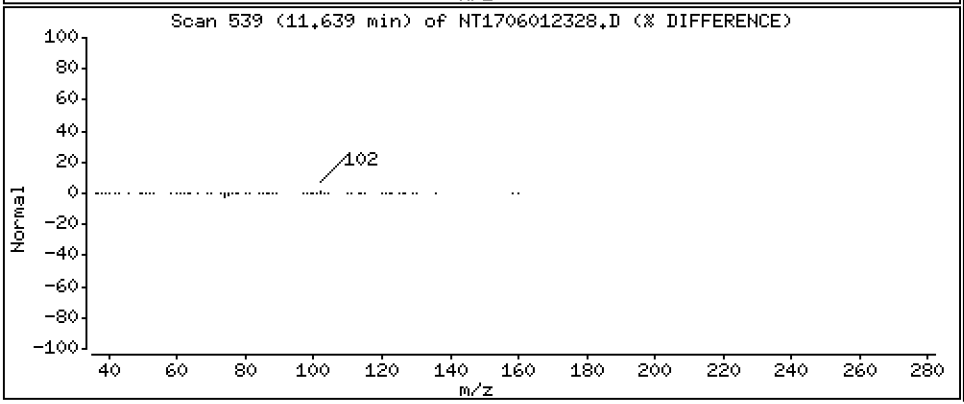
28 Naphthalene

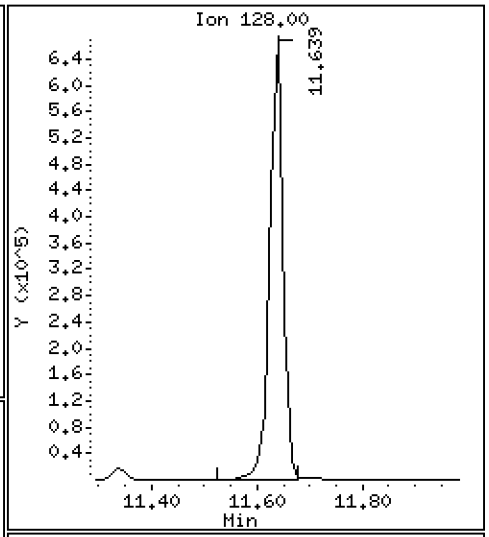
Concentration: 4.535 ug/mL

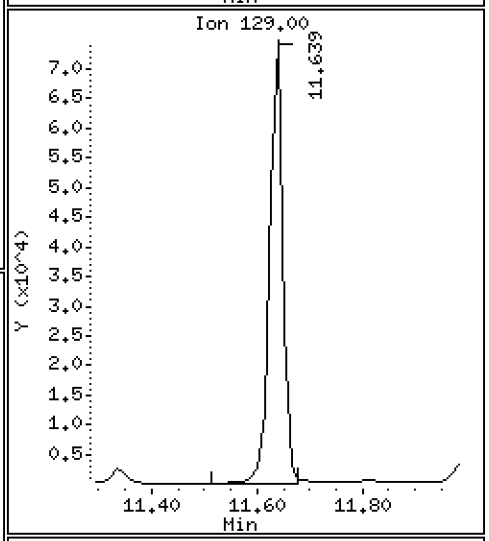


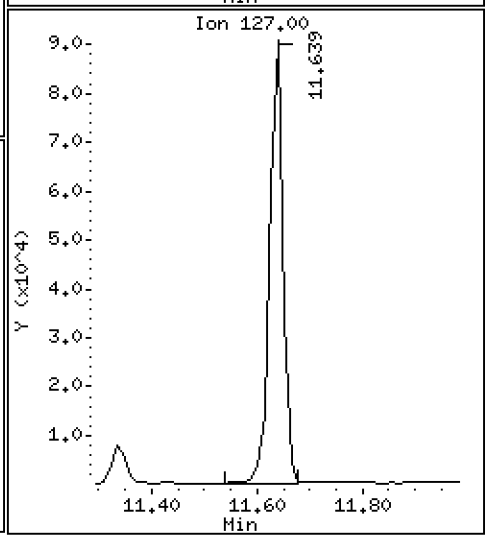












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

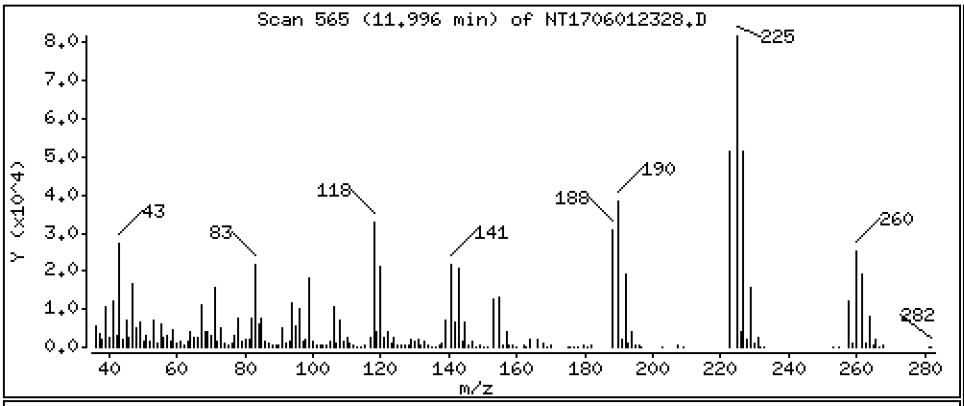
Operator: VTS

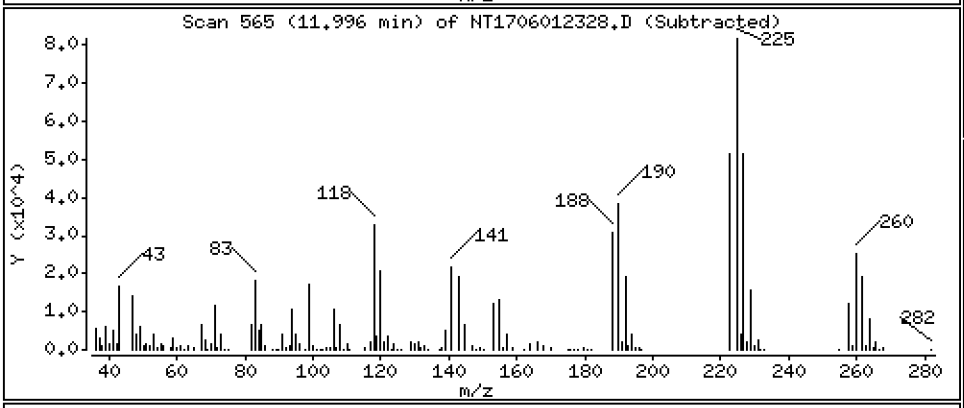
Column phase: ZB-5msi

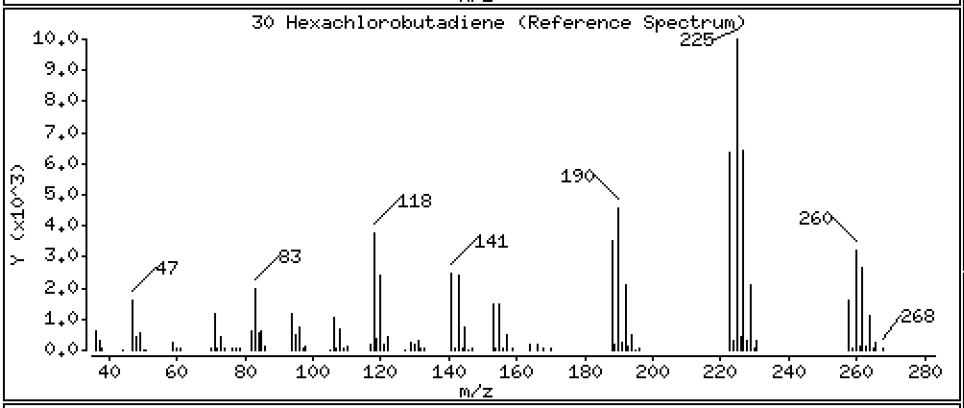
Column diameter: 0.25

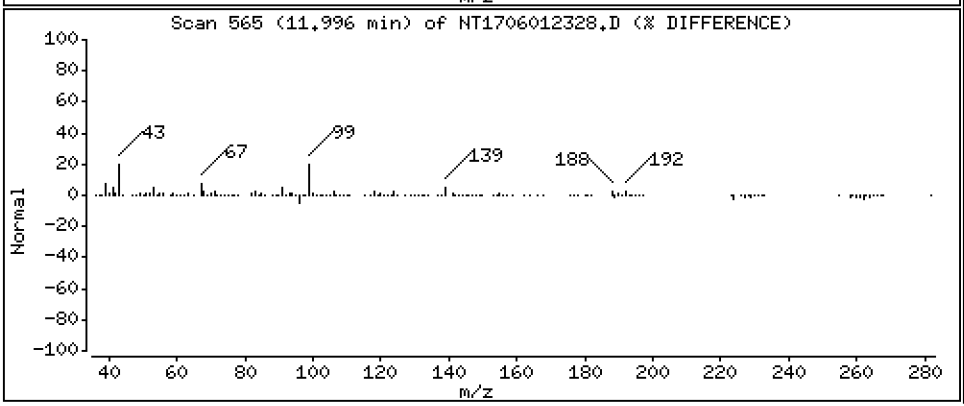
30 Hexachlorobutadiene

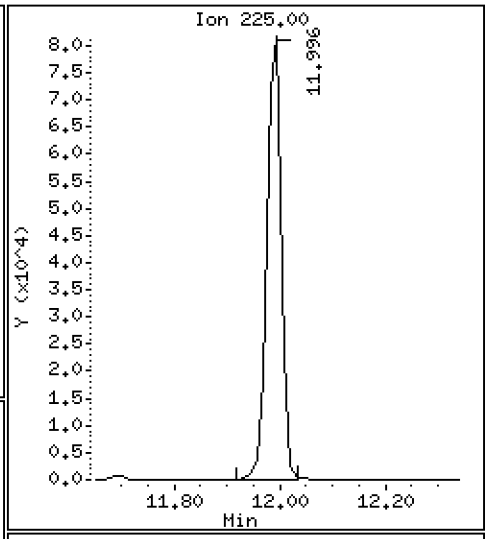
Concentration: 3.747 ug/mL

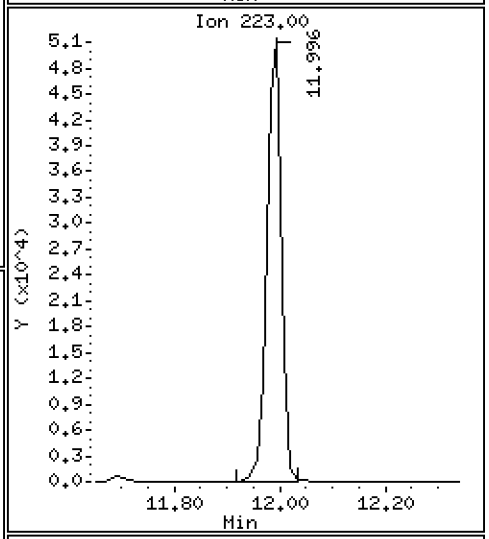


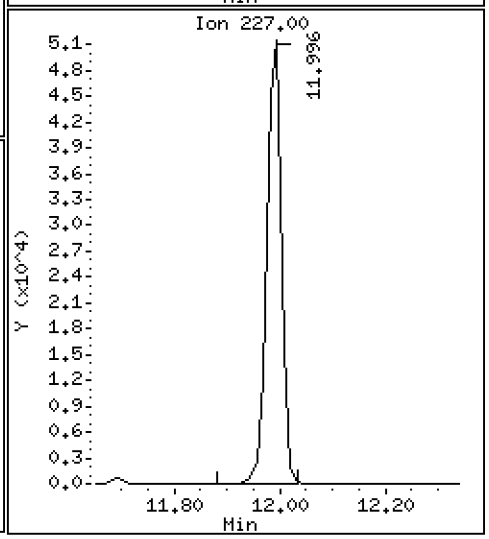












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

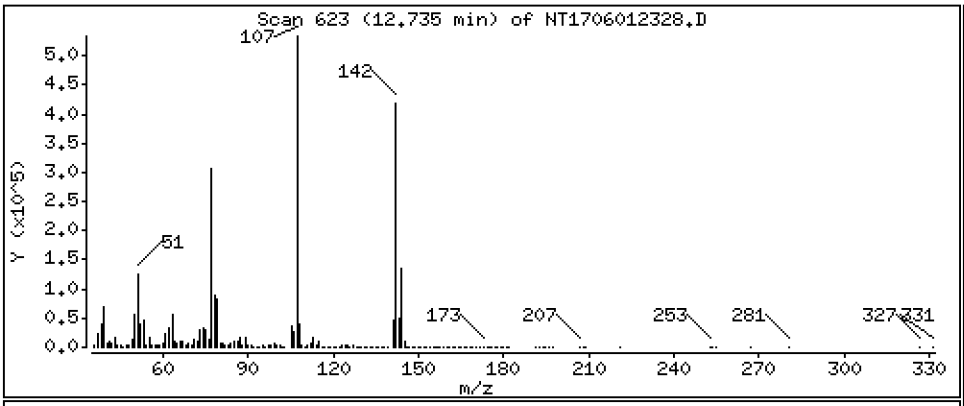
Operator: VTS

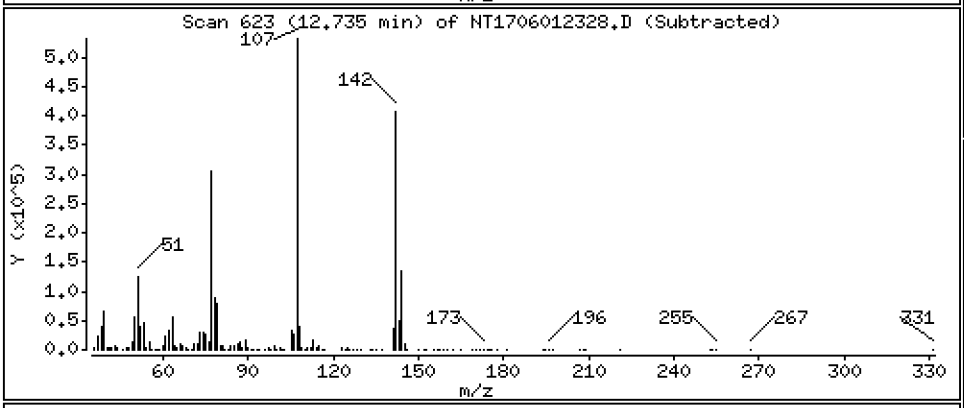
Column phase: ZB-5msi

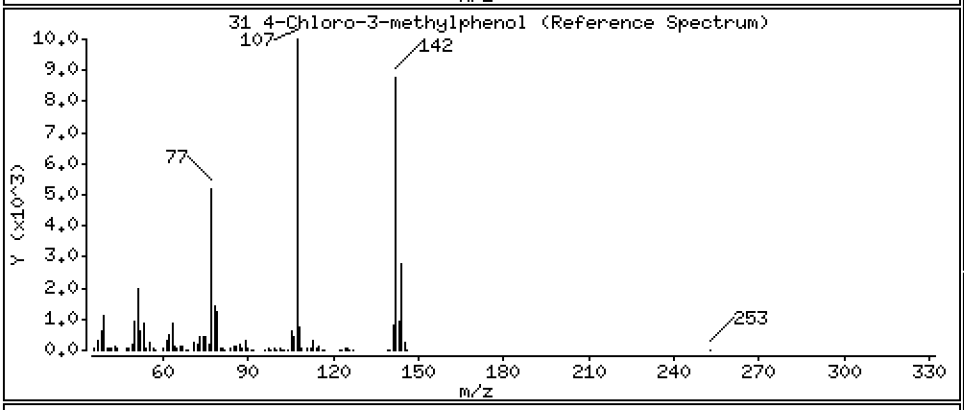
Column diameter: 0.25

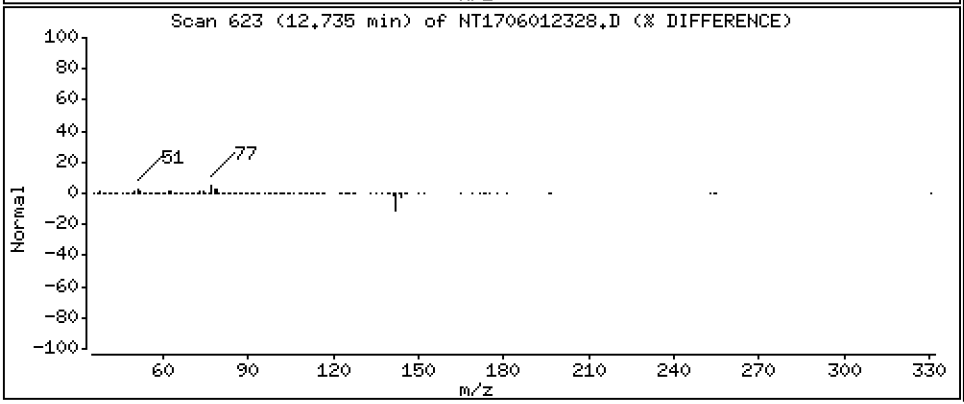
31 4-Chloro-3-methylphenol

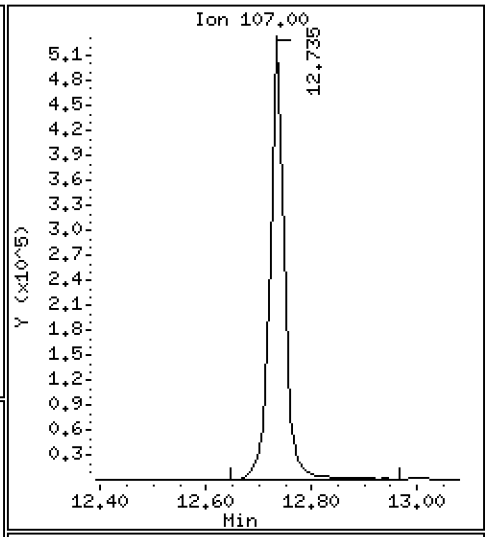
Concentration: 12.23 ug/mL

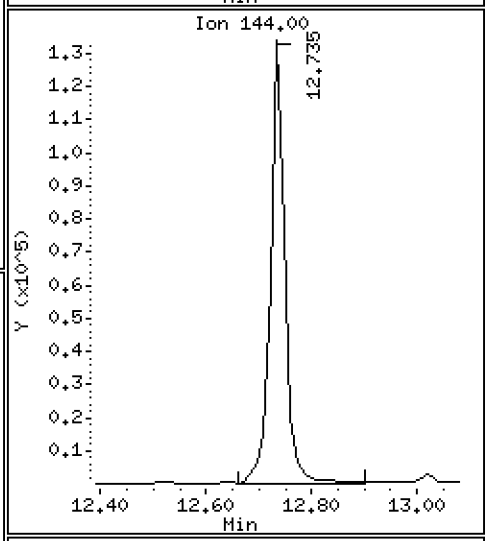


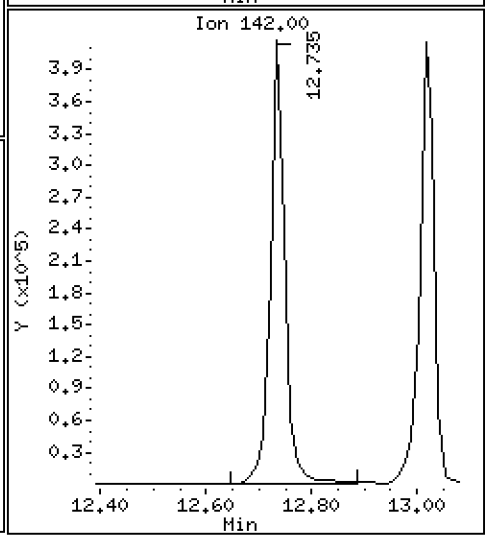












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

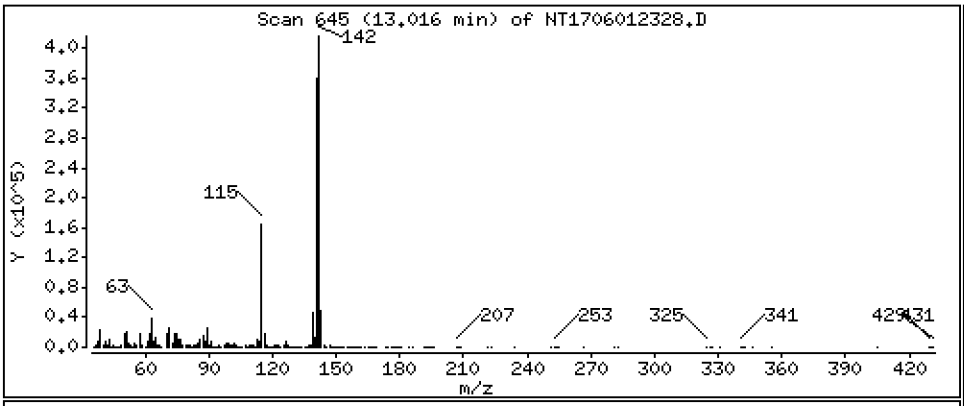
Operator: VTS

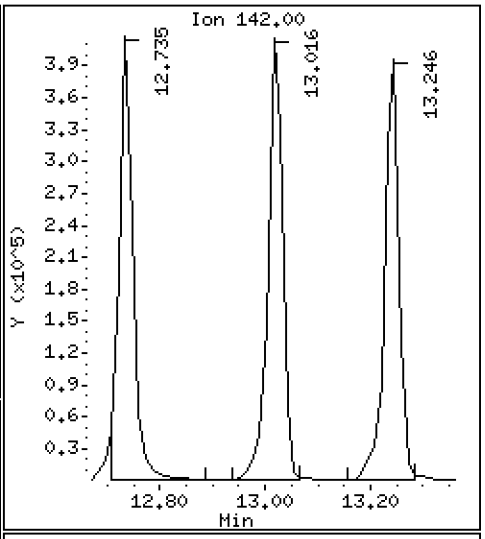
Column phase: ZB-5msi

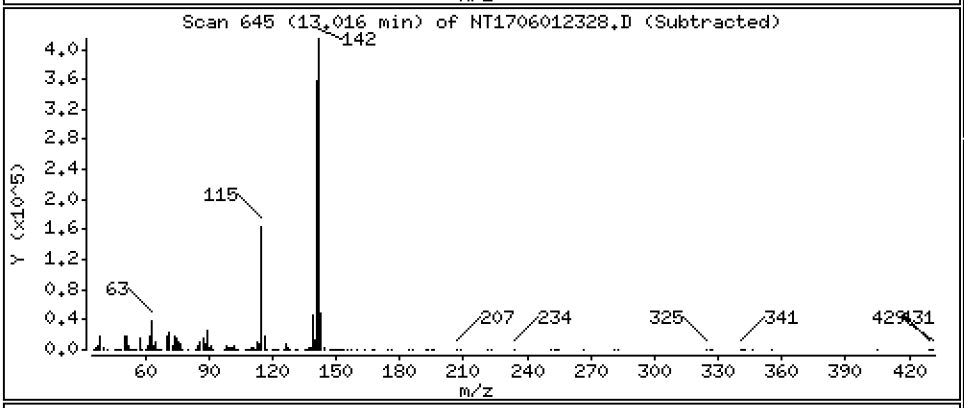
Column diameter: 0.25

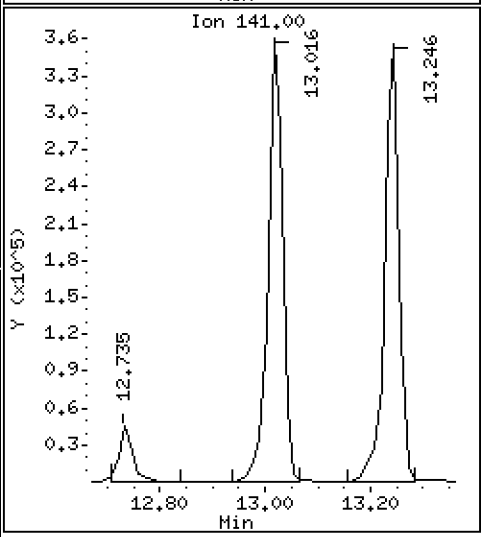
32 2-Methylnaphthalene

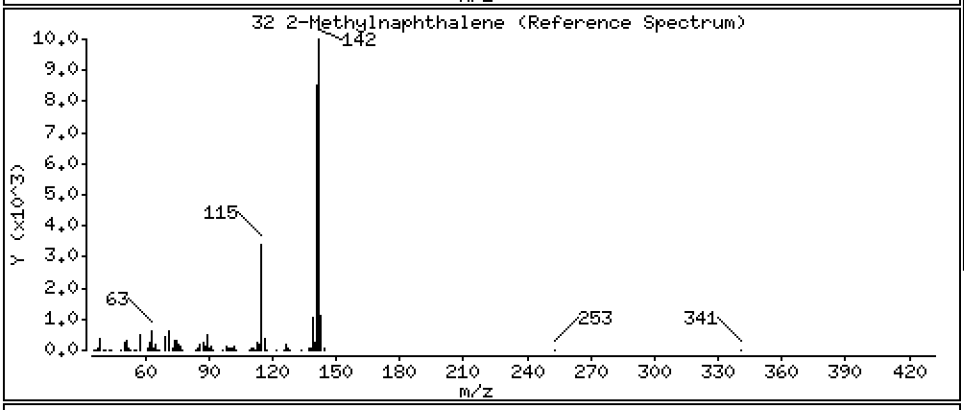
Concentration: 4.255 ug/mL

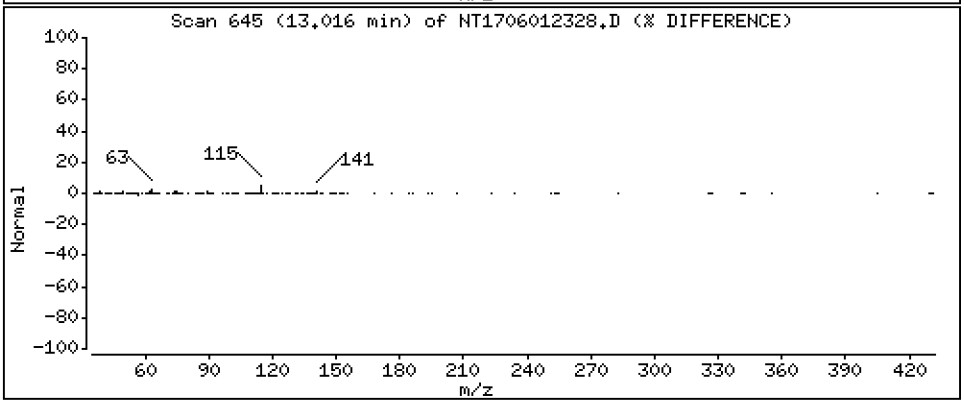












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

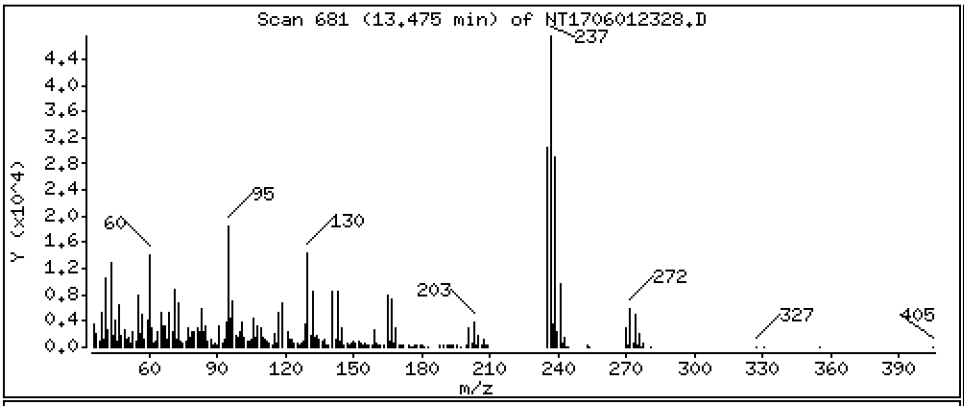
Operator: VTS

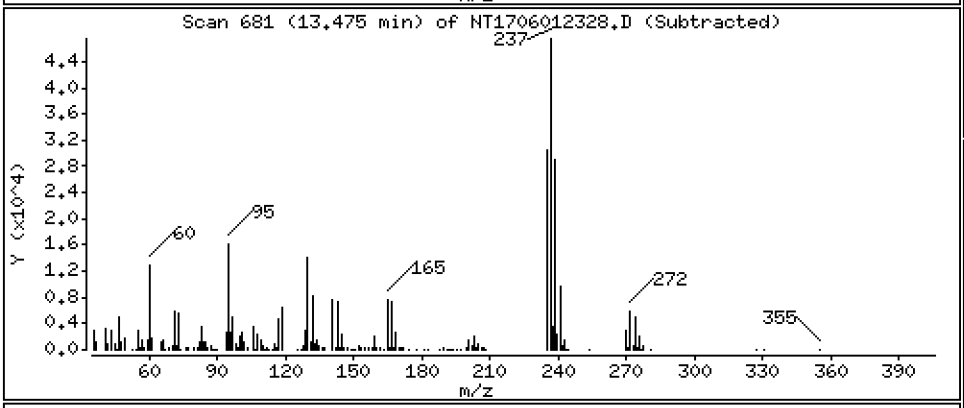
Column phase: ZB-5msi

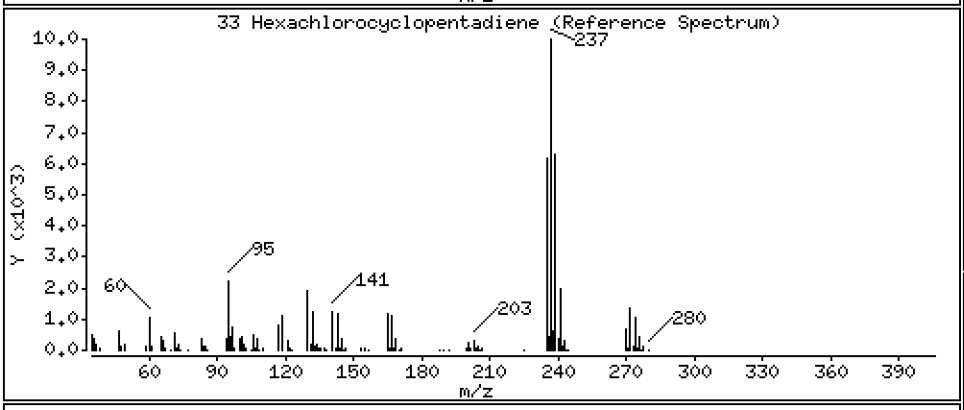
Column diameter: 0.25

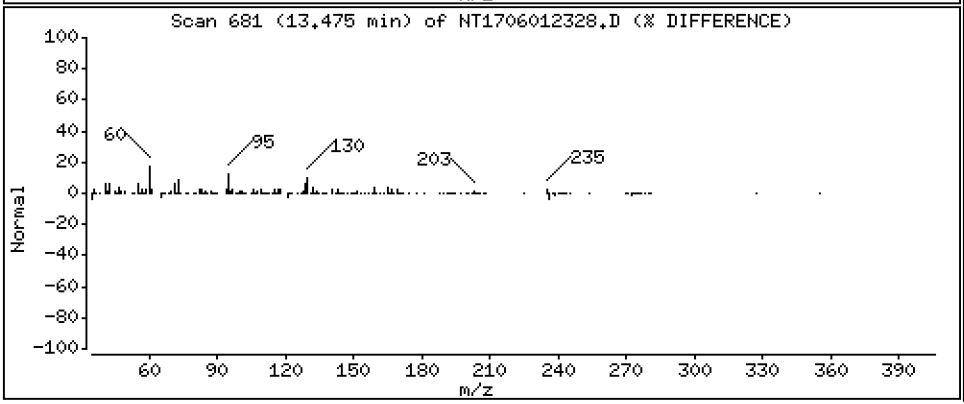
33 Hexachlorocyclopentadiene

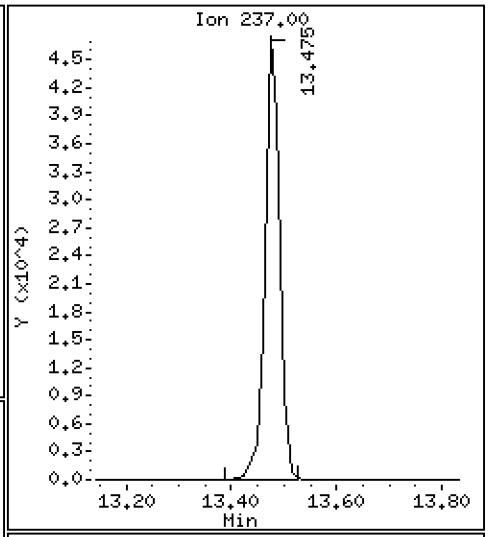
Concentration: 1.892 ug/mL

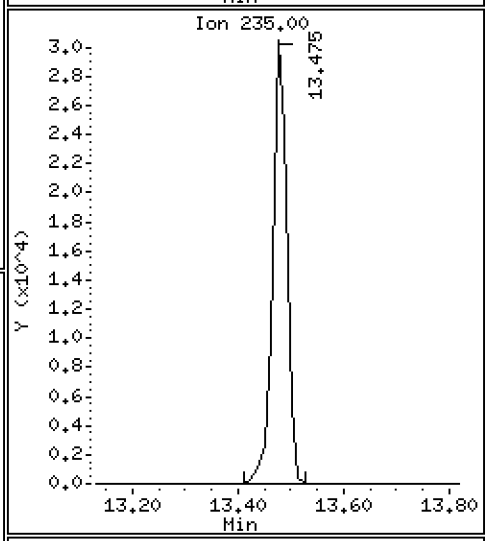


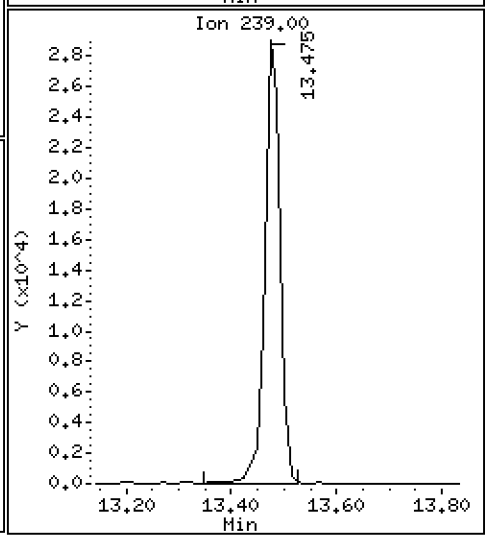












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

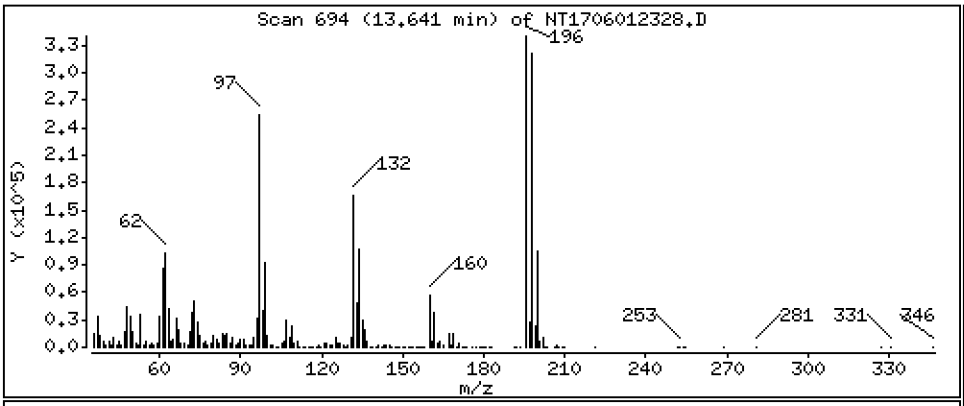
Operator: VTS

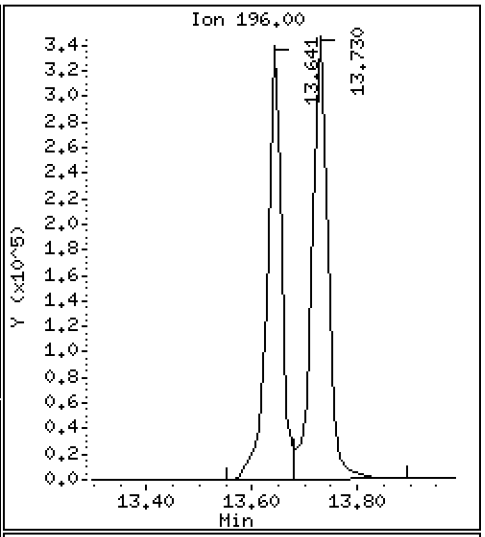
Column phase: ZB-5msi

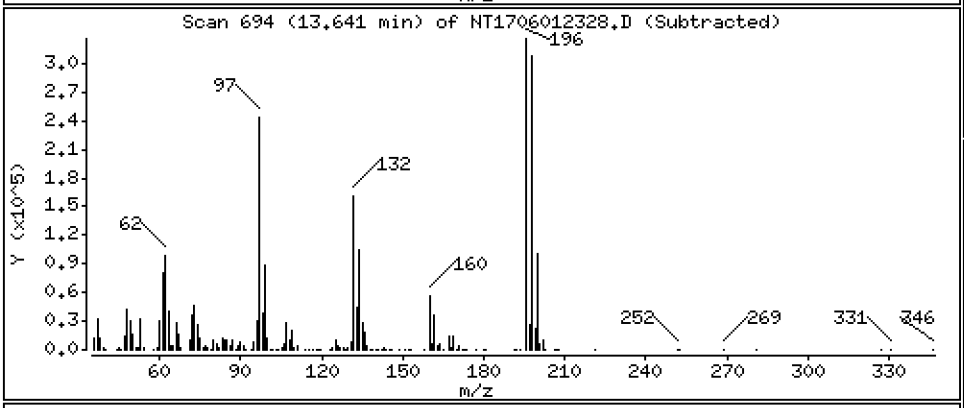
Column diameter: 0.25

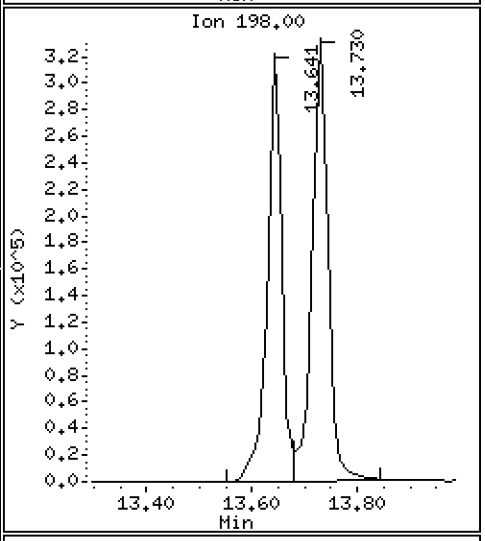
34 2,4,6-Trichlorophenol

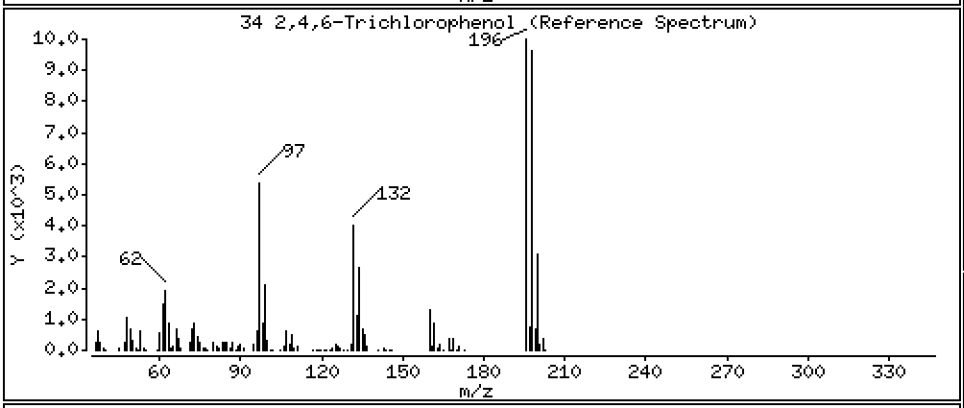
Concentration: 12.29 ug/mL

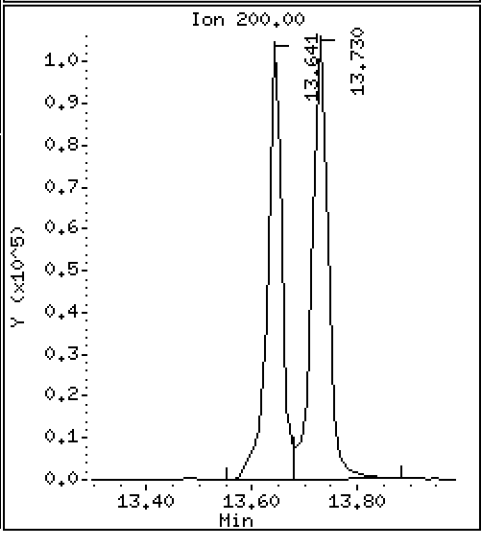


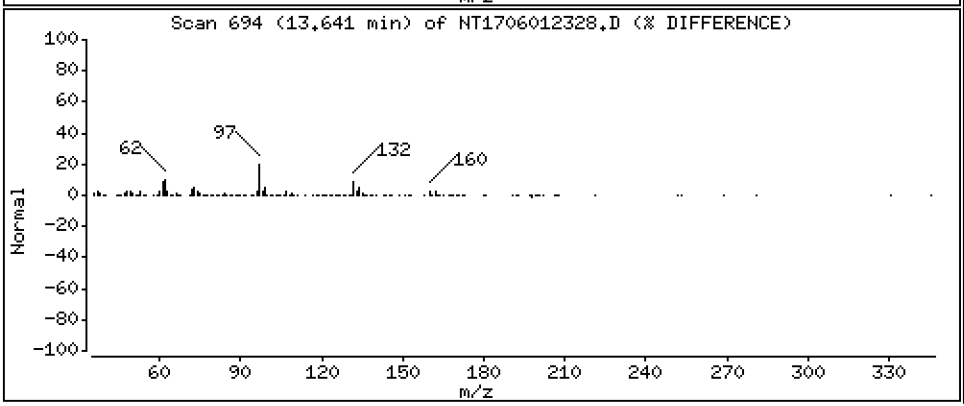












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

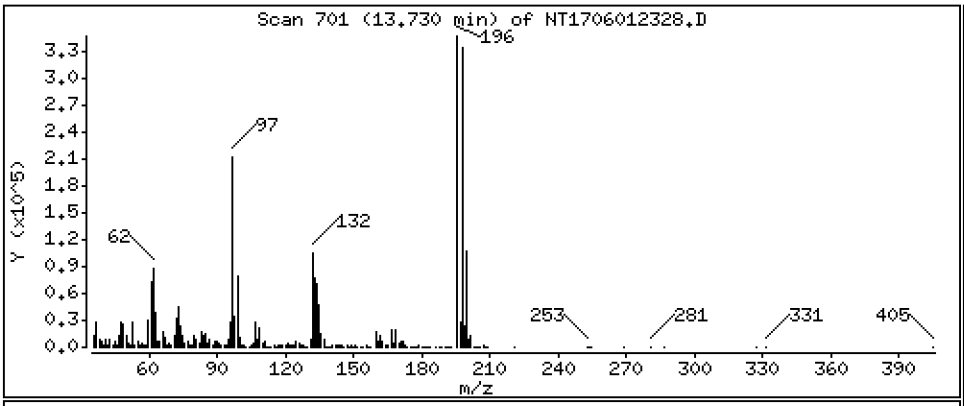
Operator: VTS

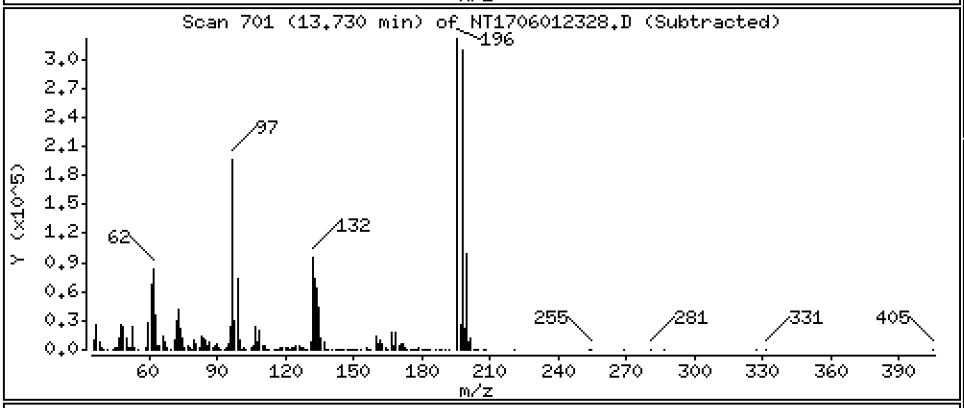
Column phase: ZB-5msi

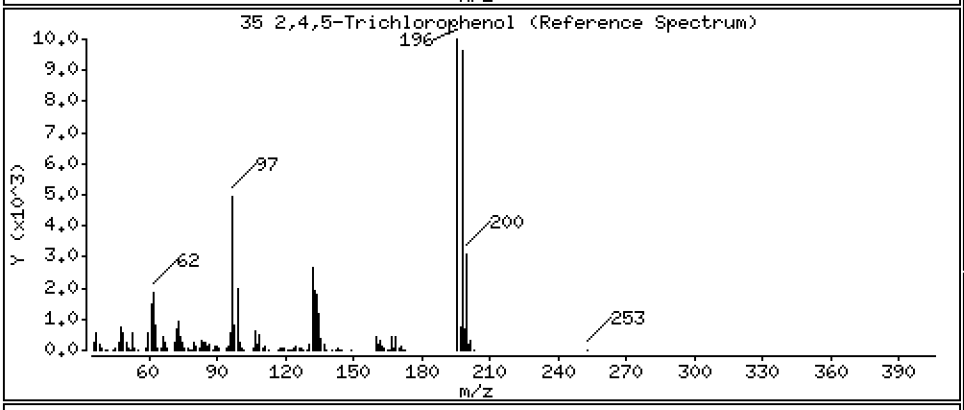
Column diameter: 0.25

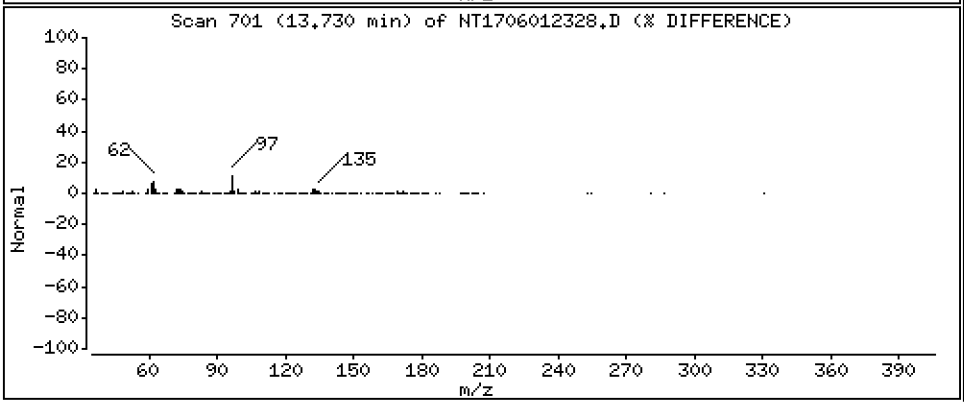
35 2,4,5-Trichlorophenol

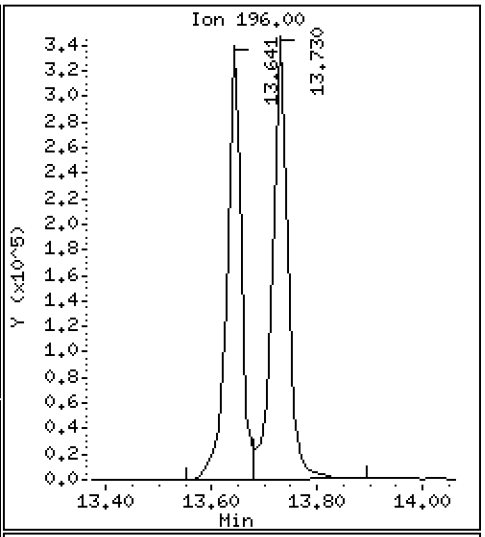
Concentration: 12.55 ug/mL

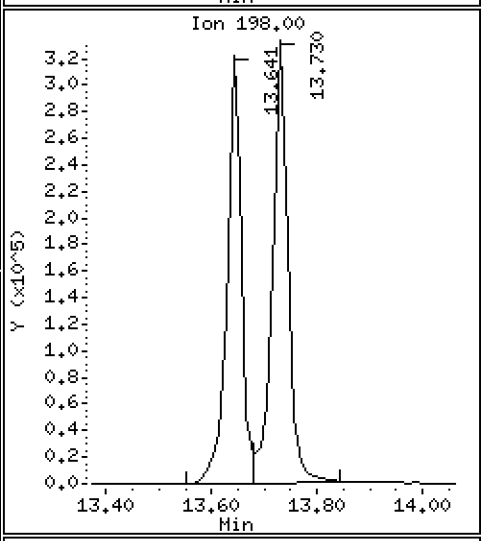


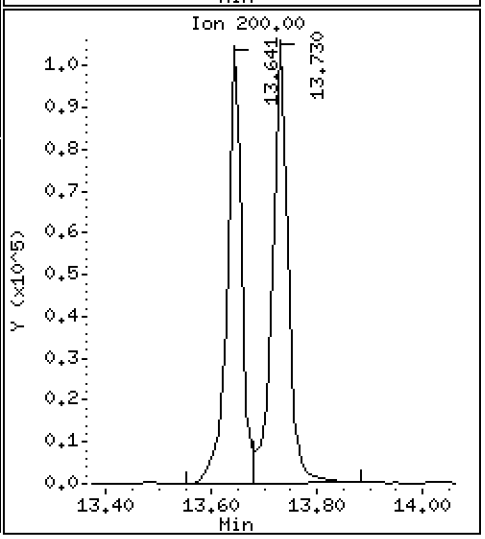












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

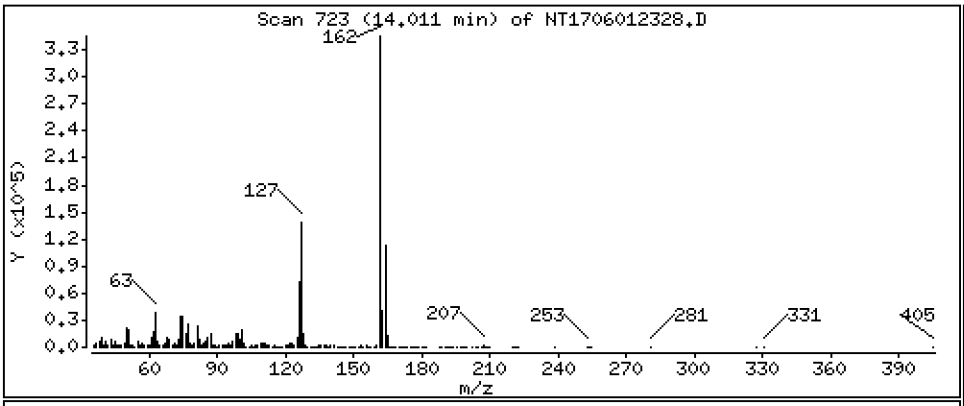
Operator: VTS

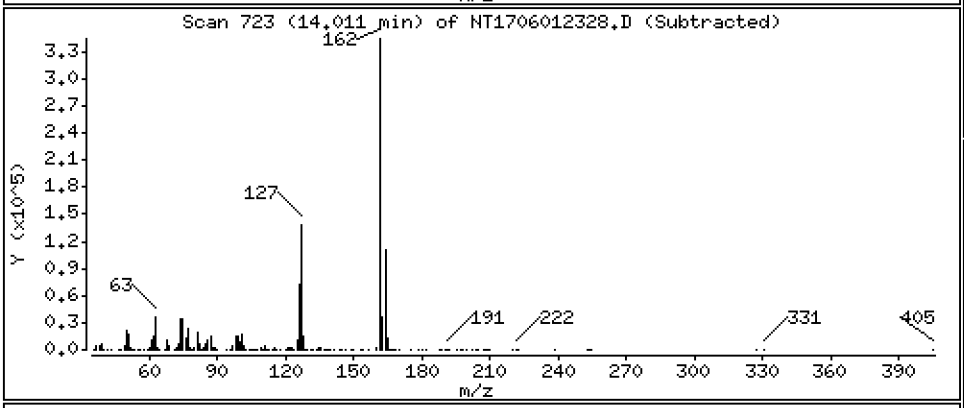
Column phase: ZB-5msi

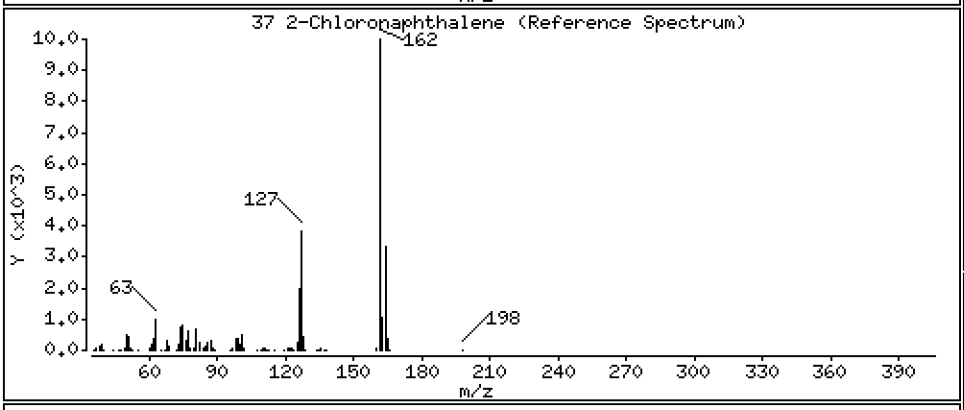
Column diameter: 0.25

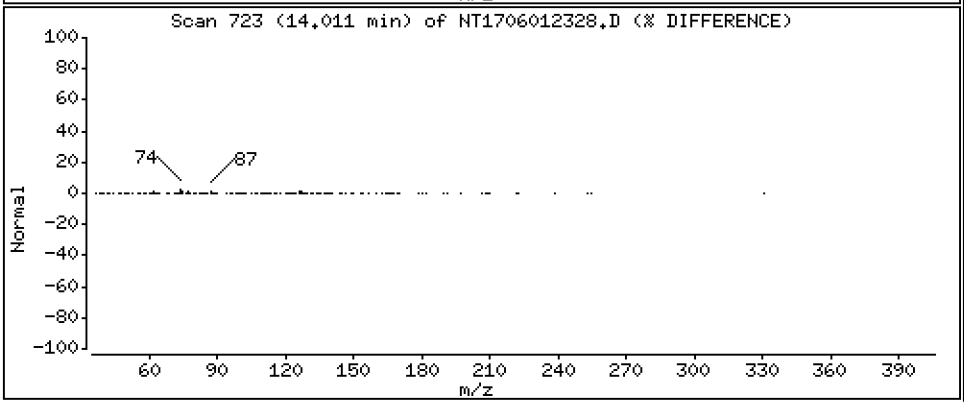
37 2-Chloronaphthalene

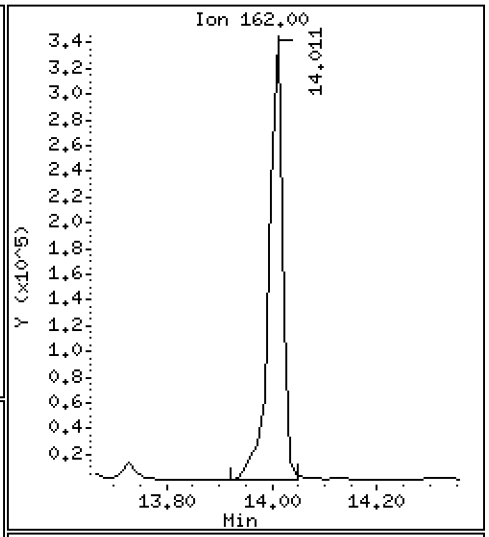
Concentration: 3.871 ug/mL

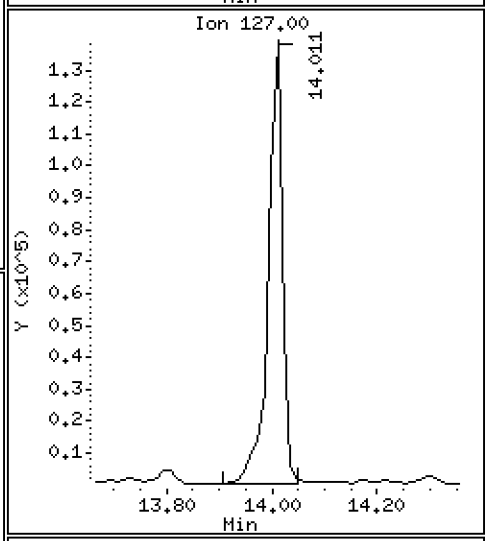


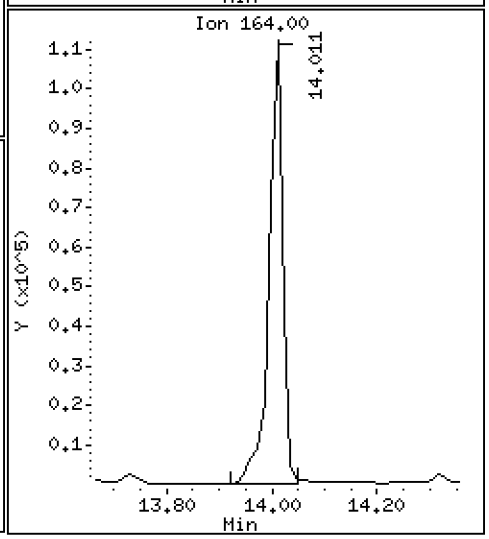












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

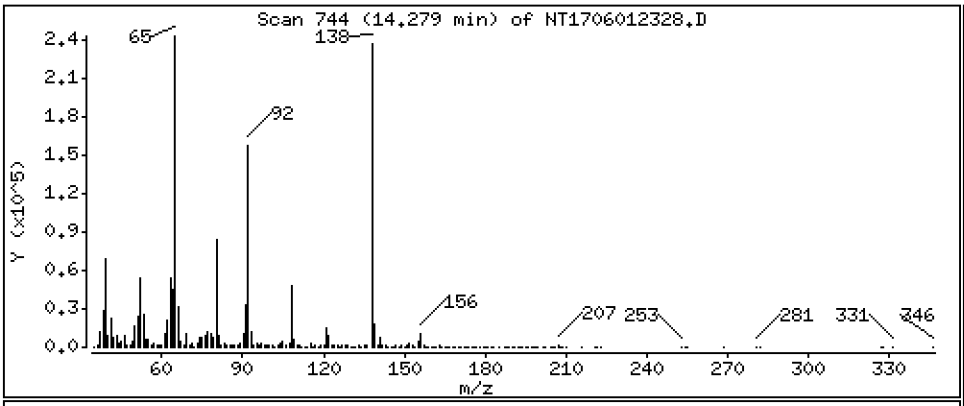
Operator: VTS

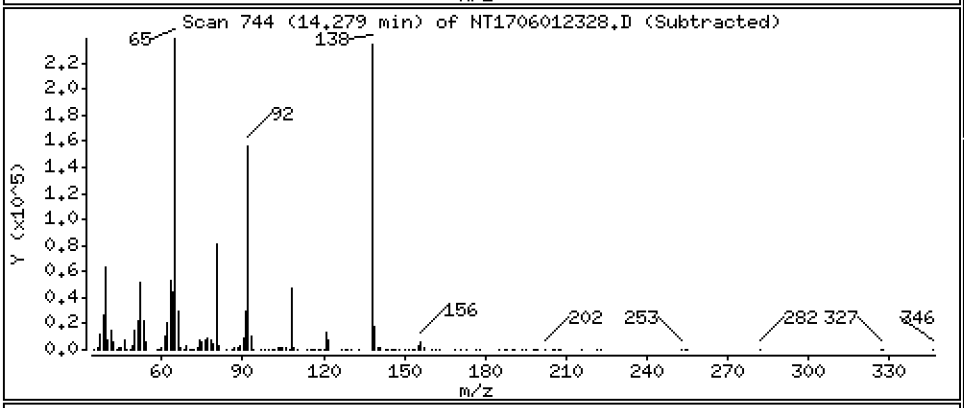
Column phase: ZB-5msi

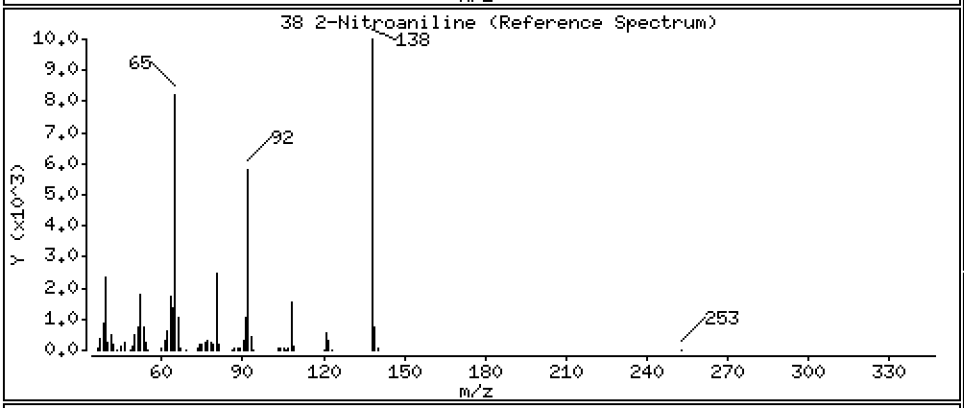
Column diameter: 0.25

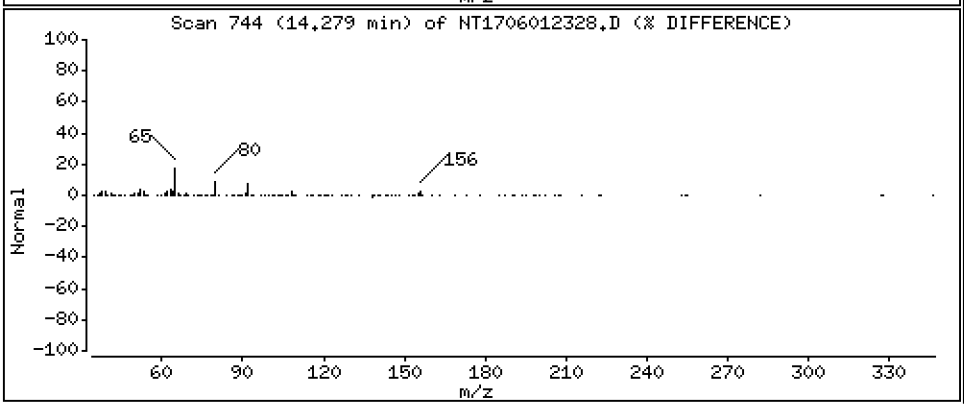
38 2-Nitroaniline

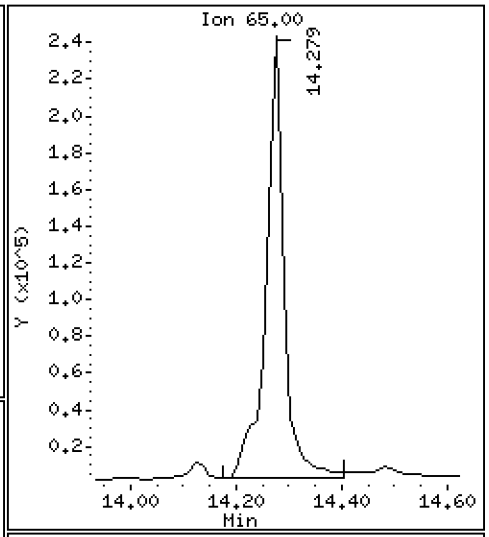
Concentration: 10.38 ug/mL

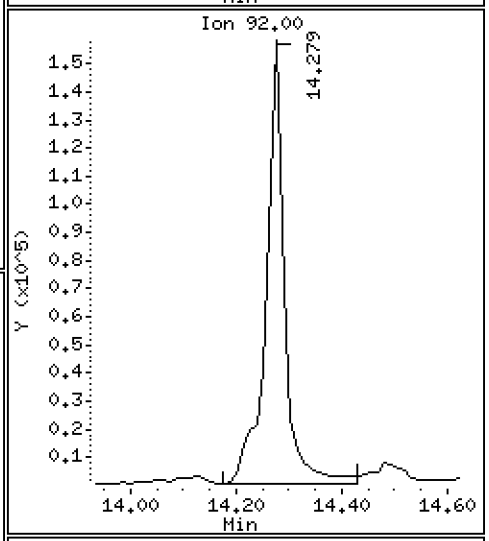


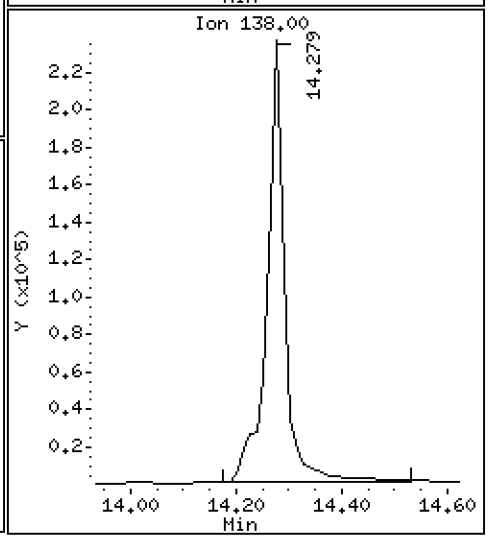












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

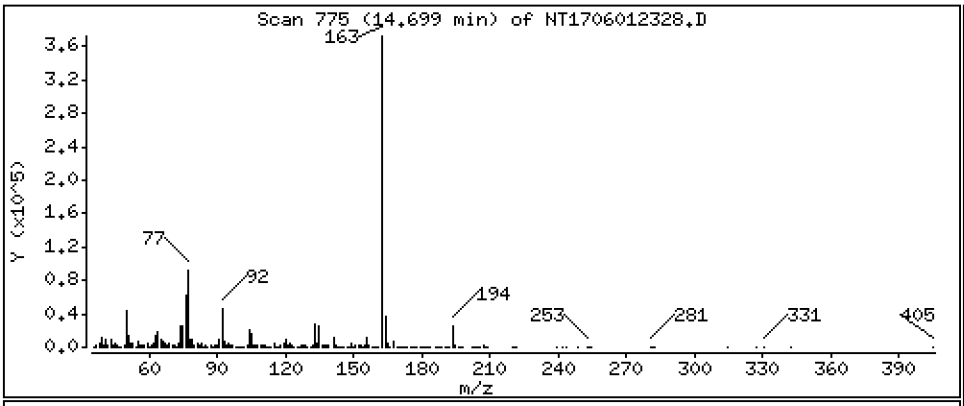
Operator: VTS

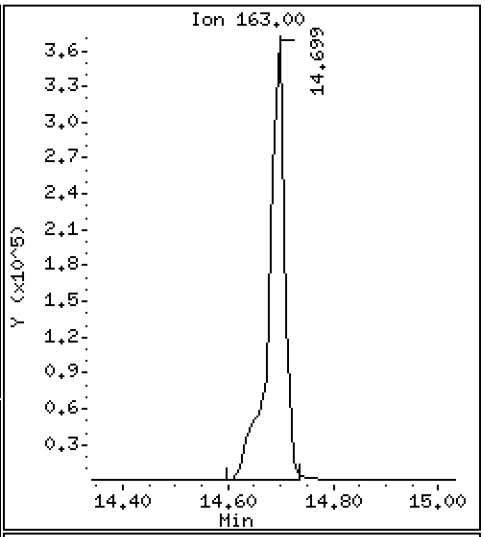
Column phase: ZB-5msi

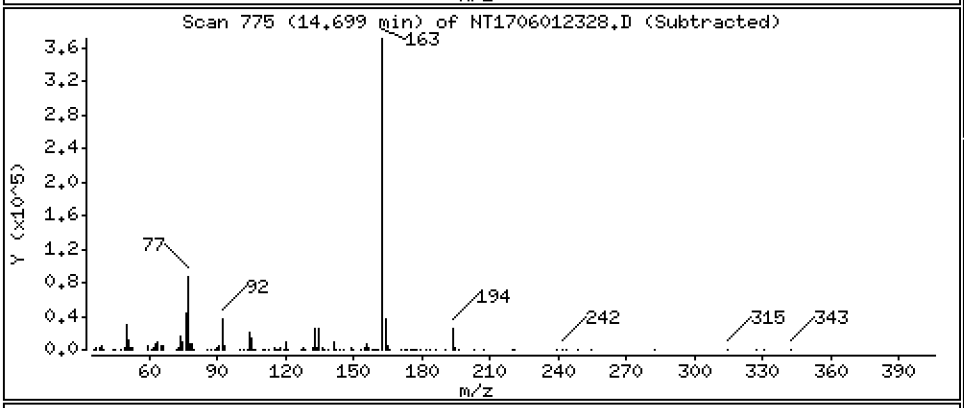
Column diameter: 0.25

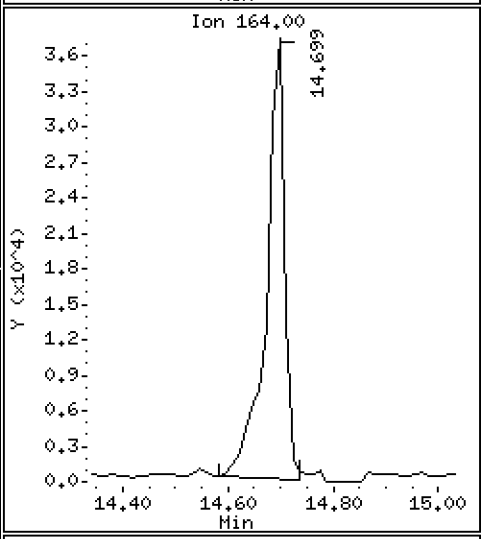
39 Dimethylphthalate

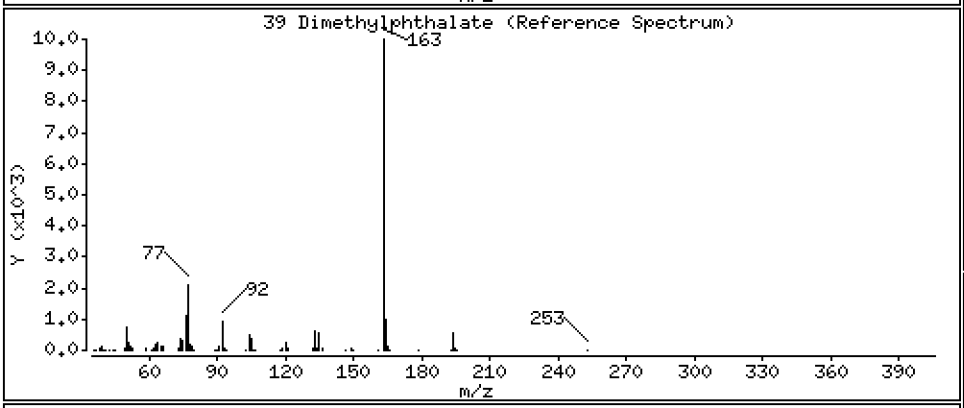
Concentration: 4.387 ug/mL

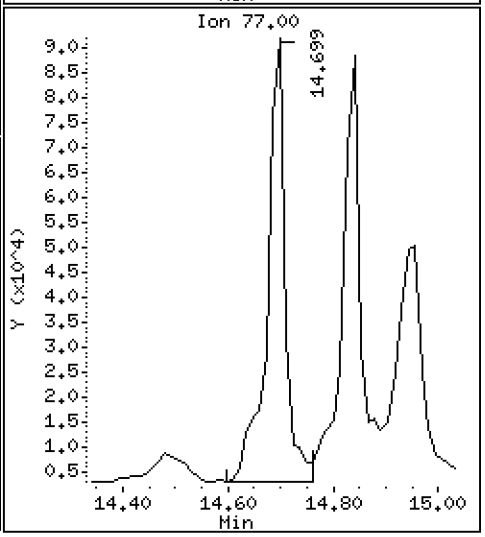


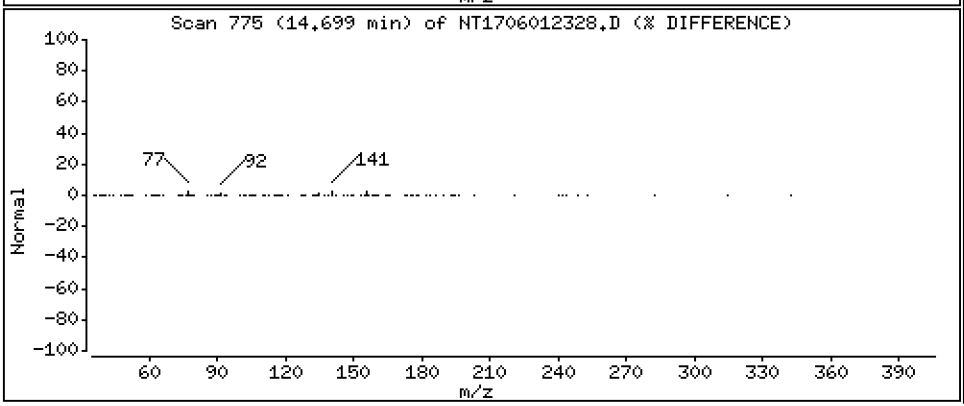












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

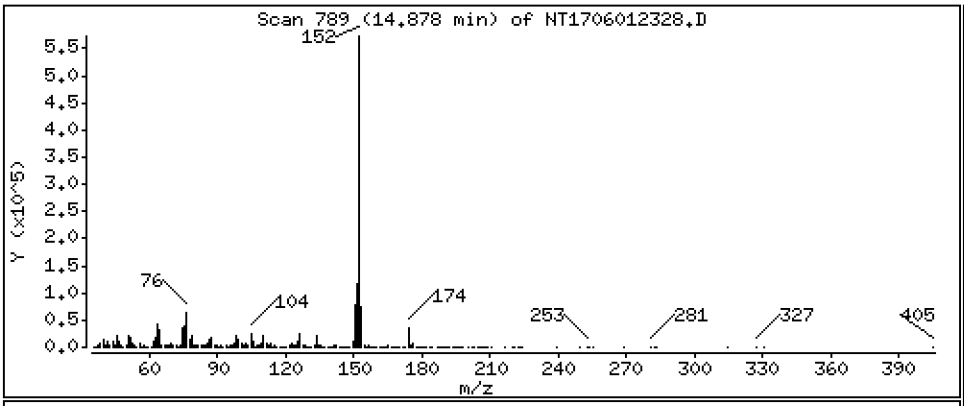
Operator: VTS

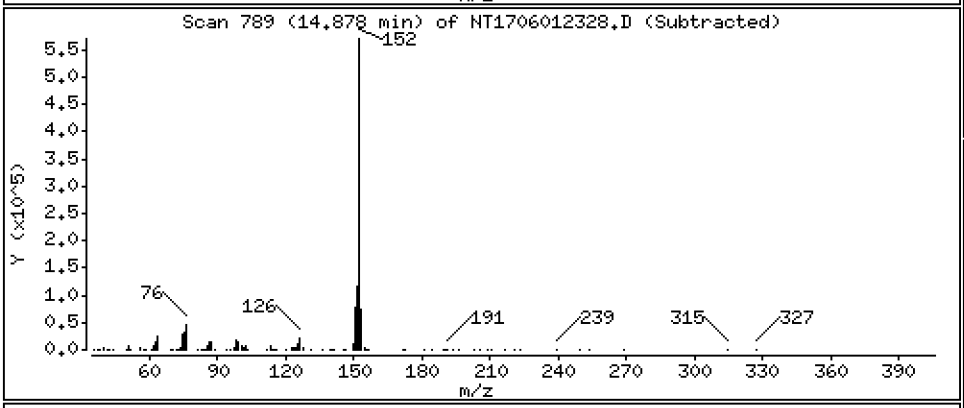
Column phase: ZB-5msi

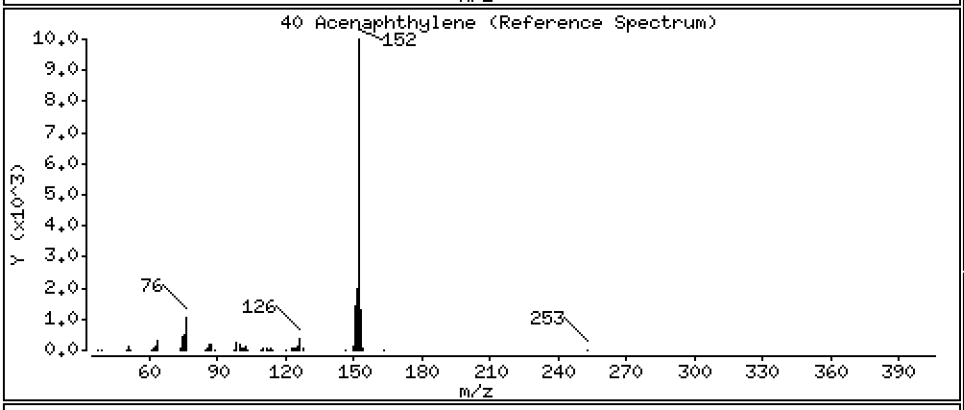
Column diameter: 0.25

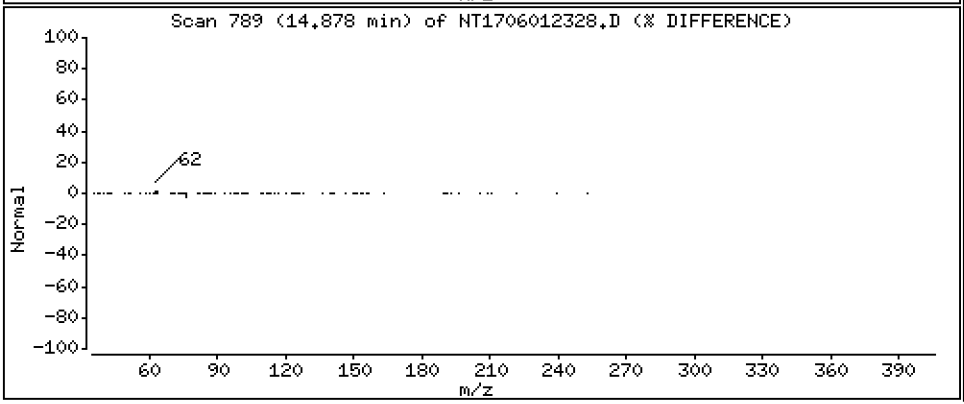
40 Acenaphthylene

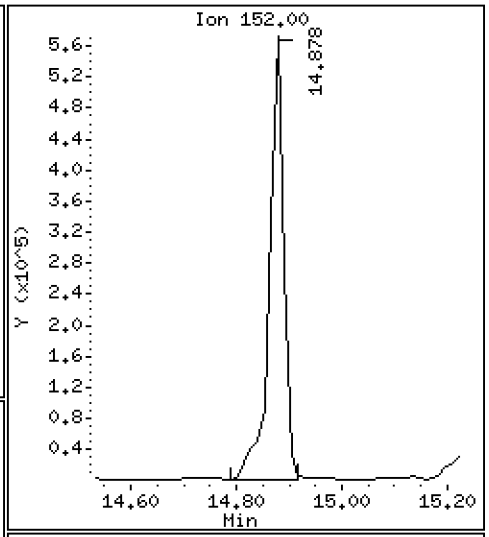
Concentration: 4.157 ug/mL

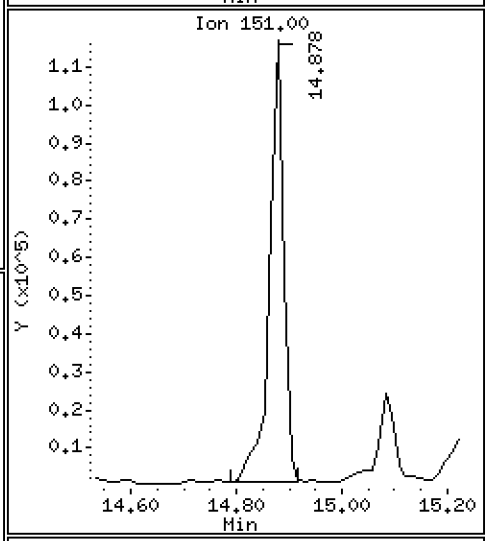


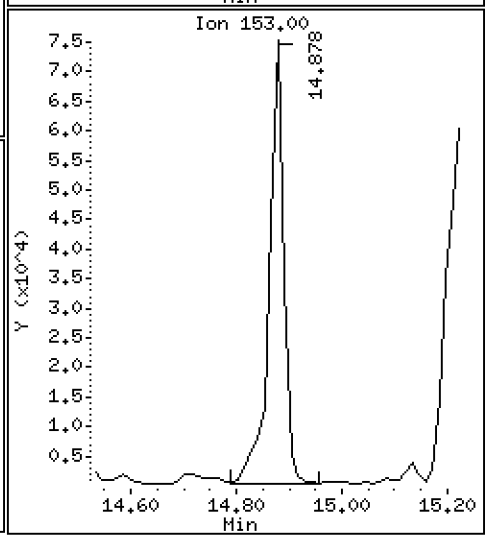












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

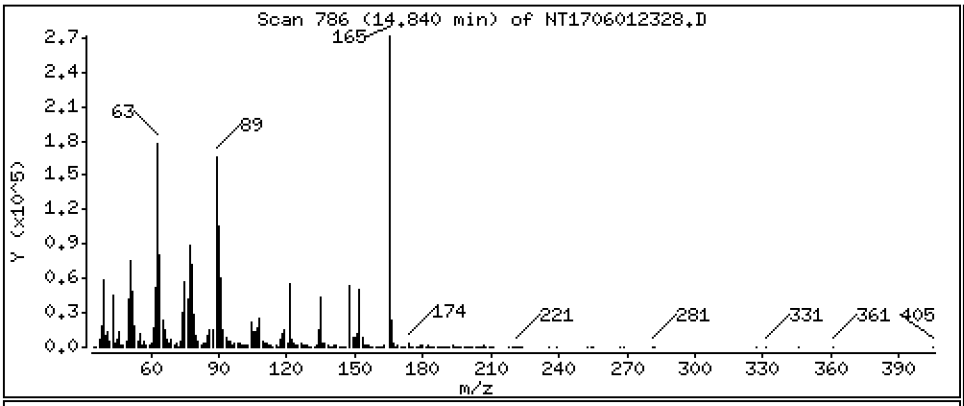
Operator: VTS

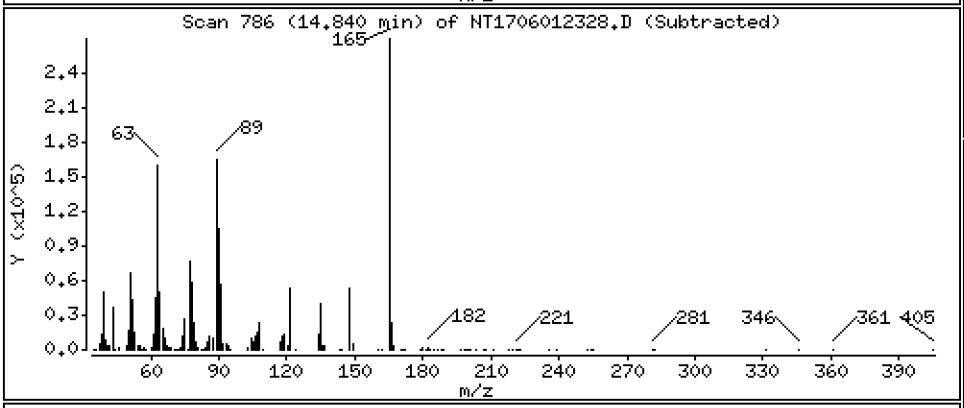
Column phase: ZB-5msi

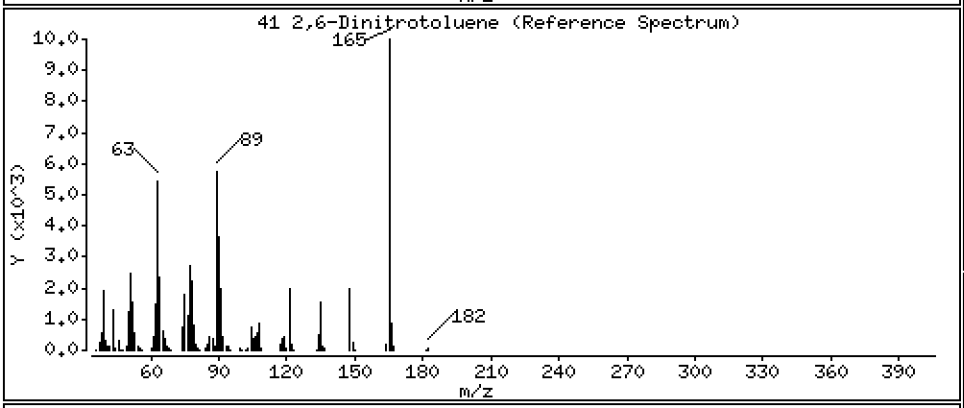
Column diameter: 0.25

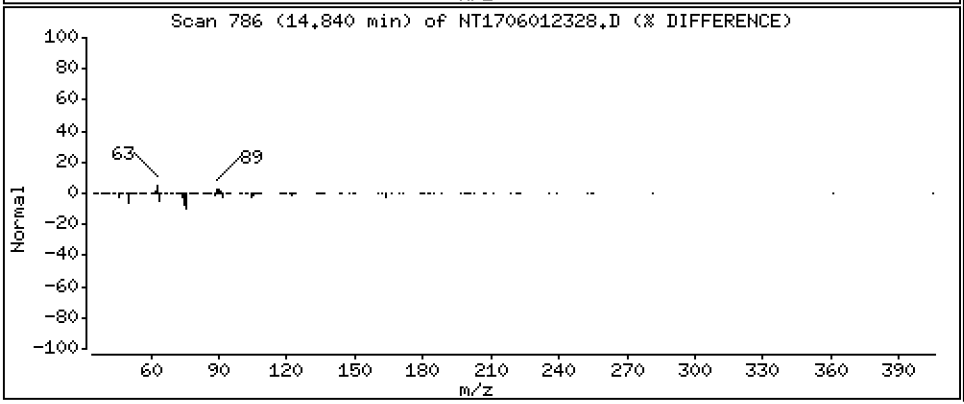
41 2,6-Dinitrotoluene

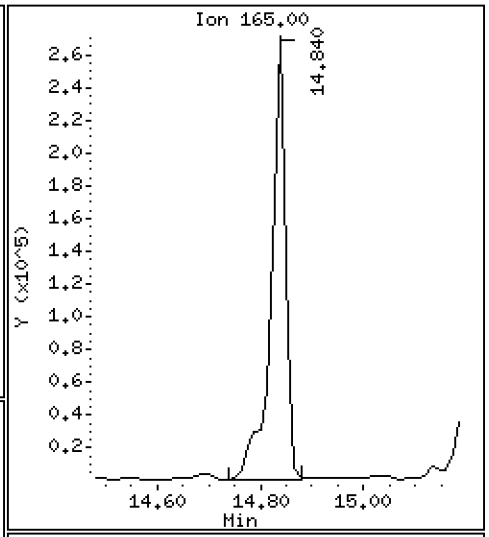
Concentration: 12.48 ug/mL

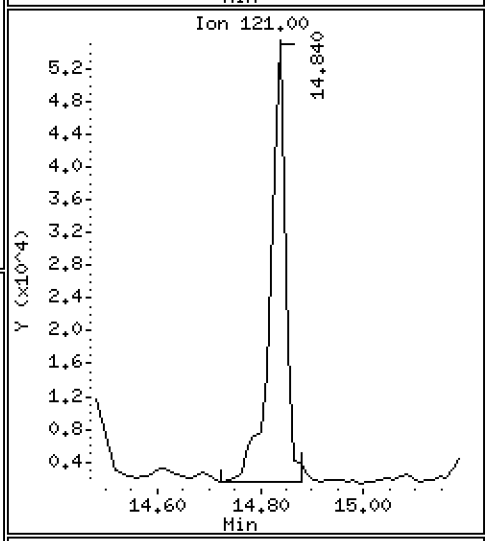


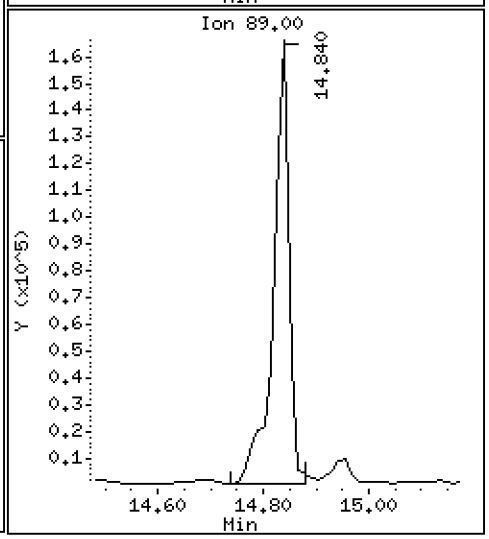












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

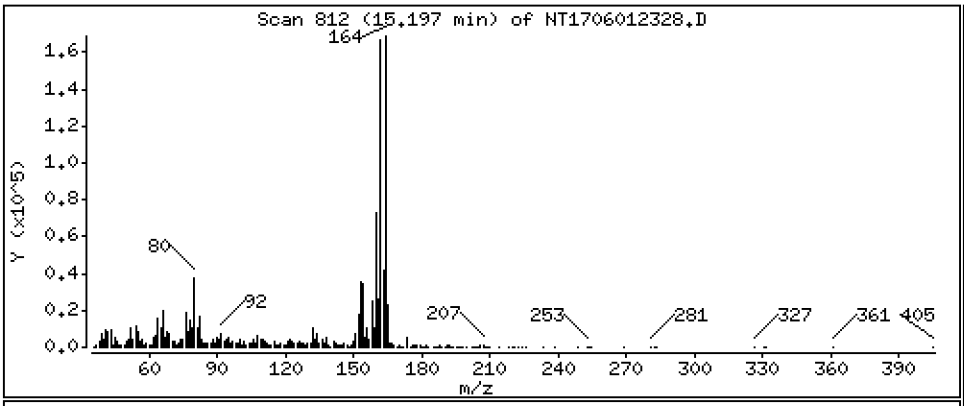
Operator: VTS

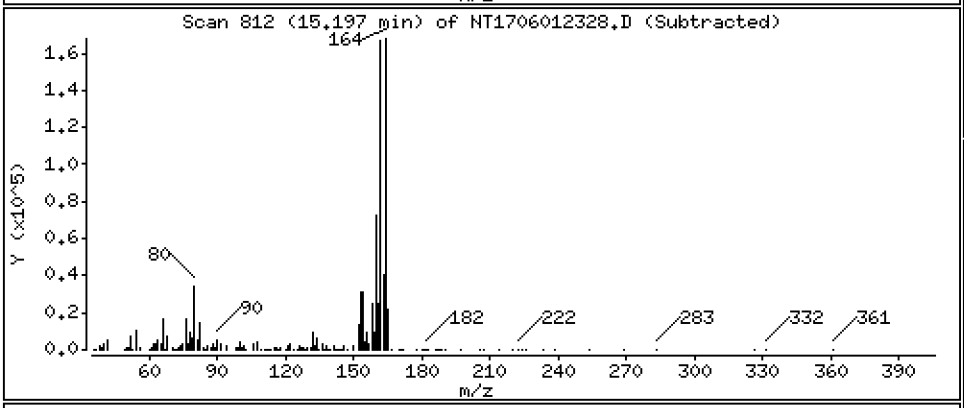
Column phase: ZB-5msi

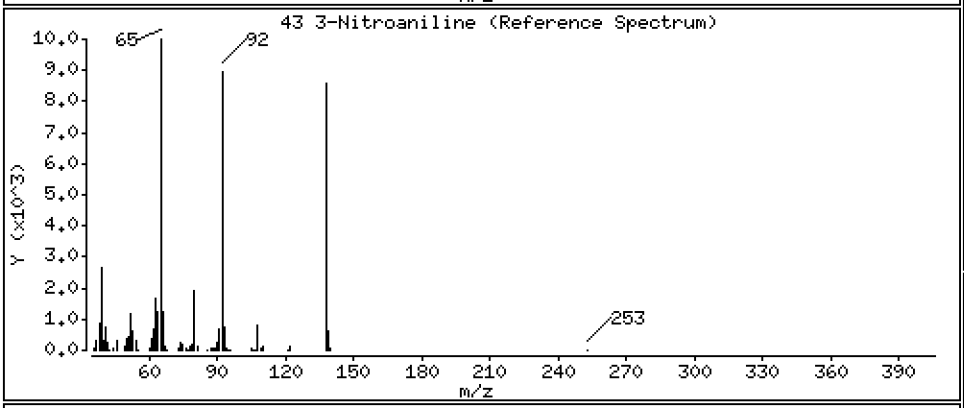
Column diameter: 0.25

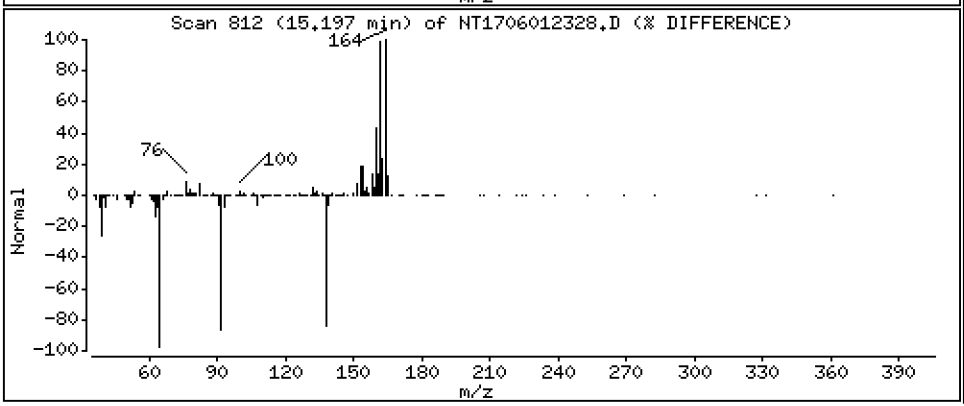
43 3-Nitroaniline

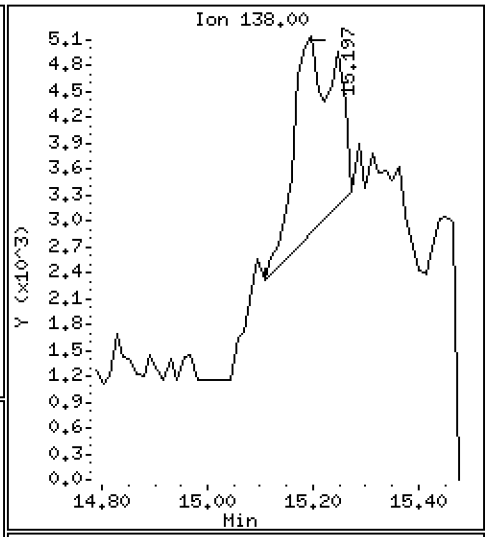
Concentration: 0.3096 ug/mL

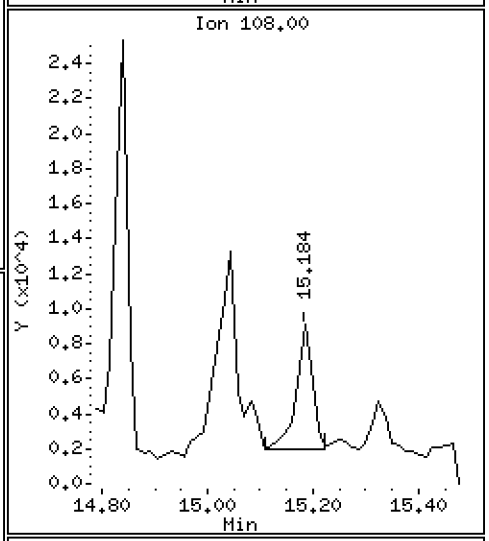


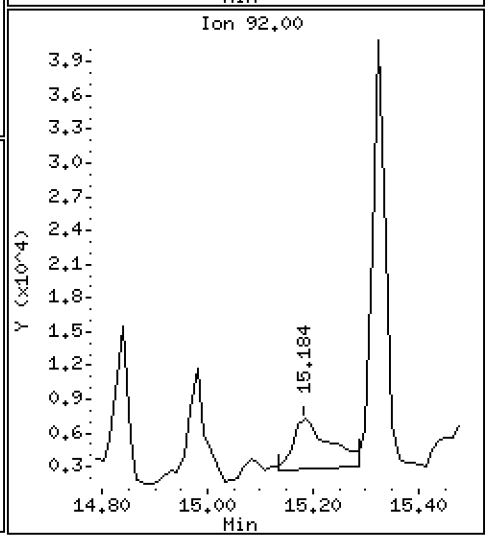












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

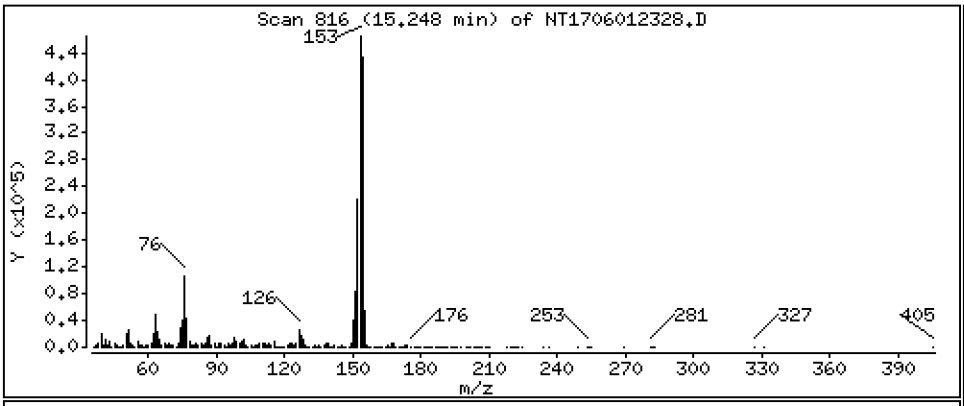
Operator: VTS

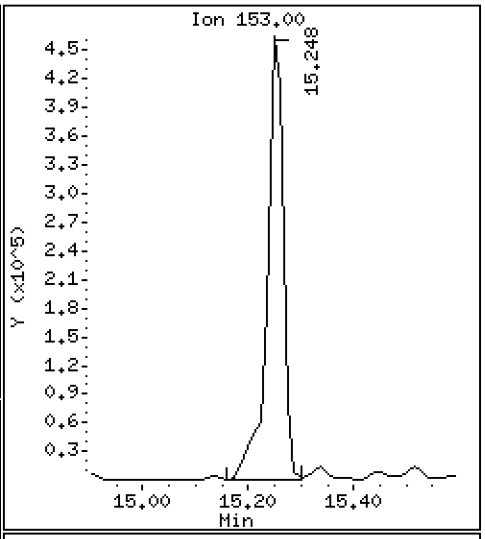
Column phase: ZB-5msi

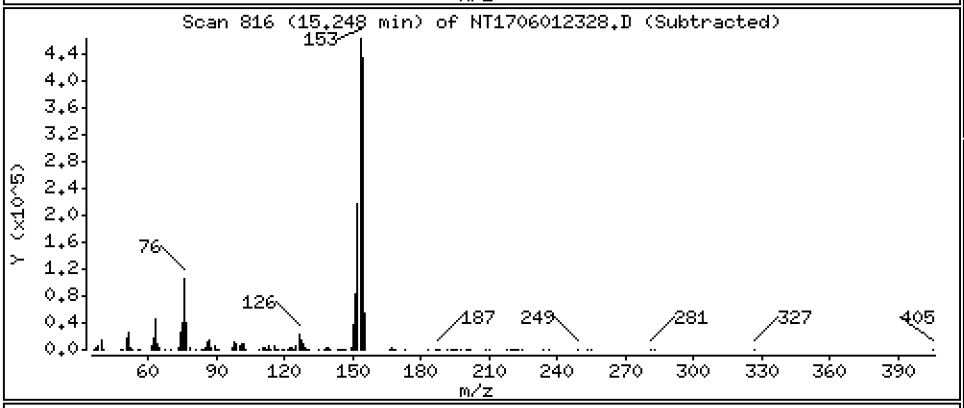
Column diameter: 0.25

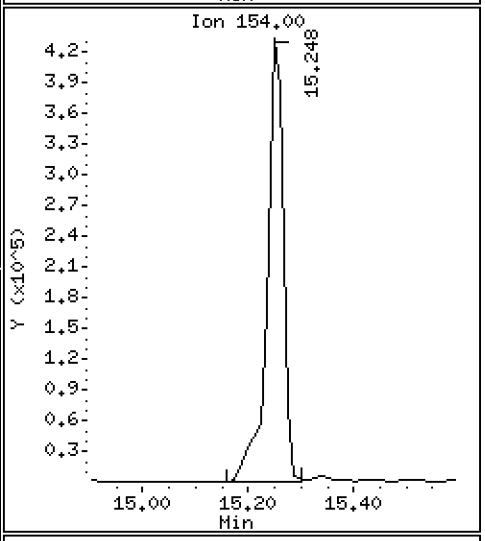
44 Acenaphthene

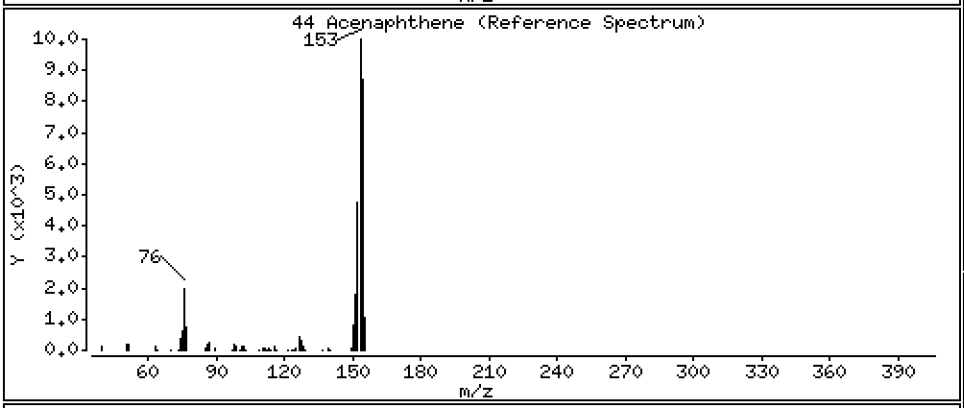
Concentration: 6.089 ug/mL

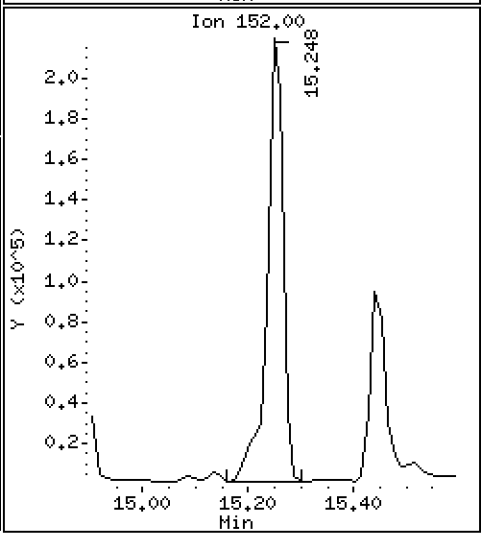


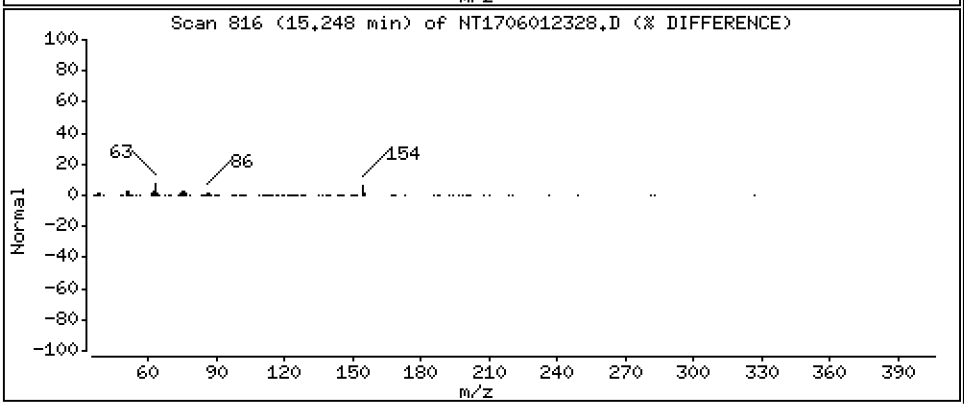












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

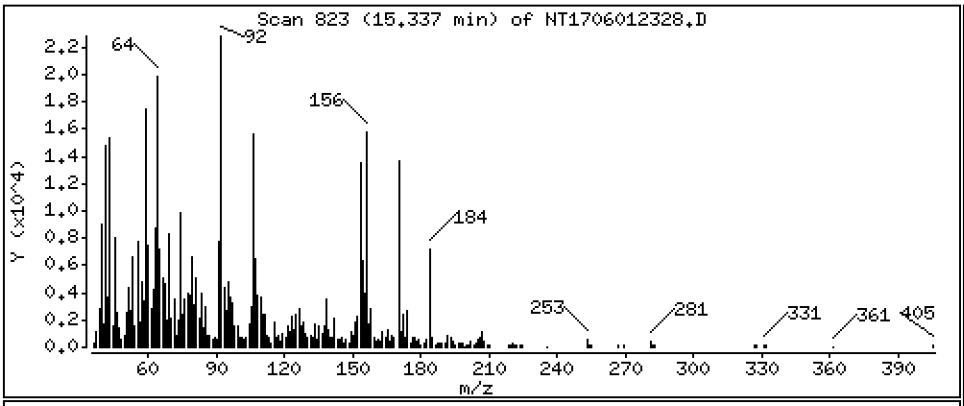
Operator: VTS

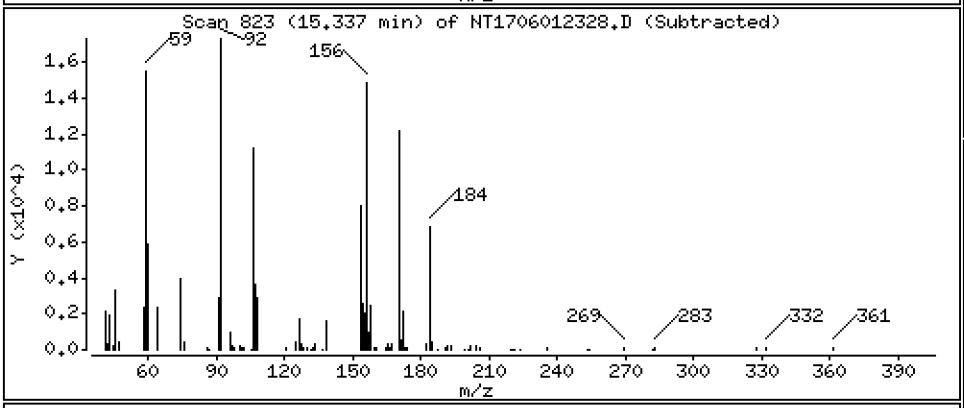
Column phase: ZB-5msi

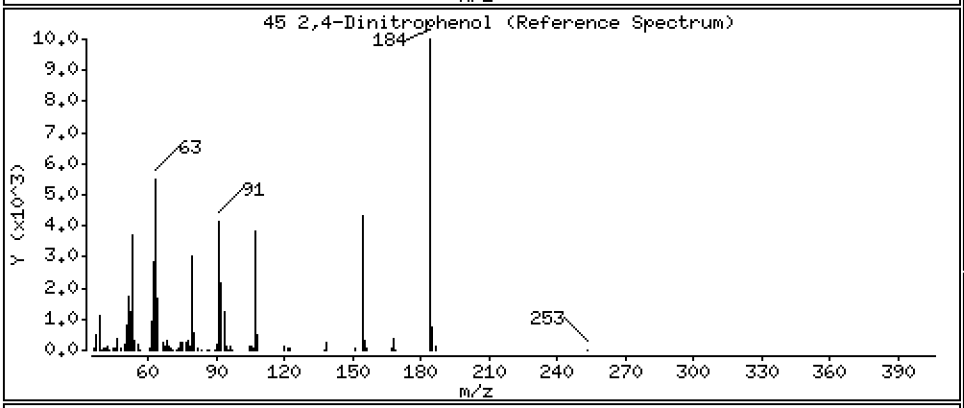
Column diameter: 0.25

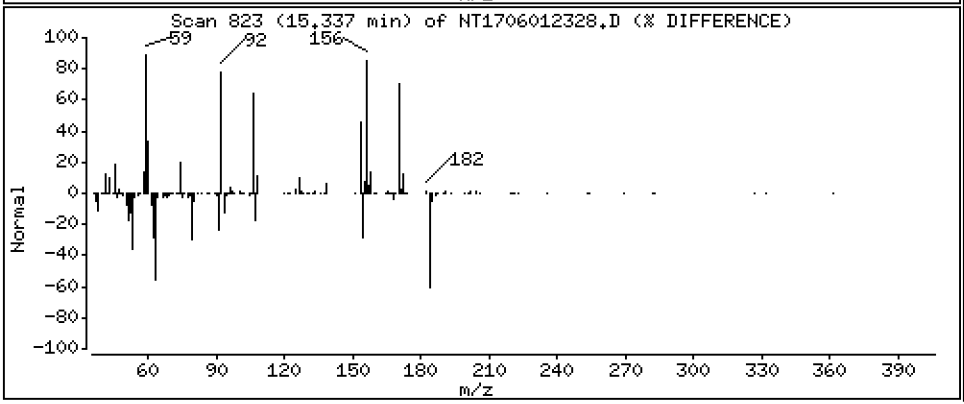
45 2,4-Dinitrophenol

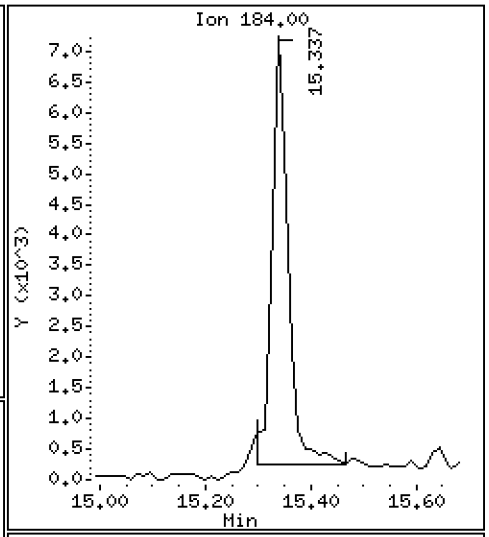
Concentration: 0.6012 ug/mL

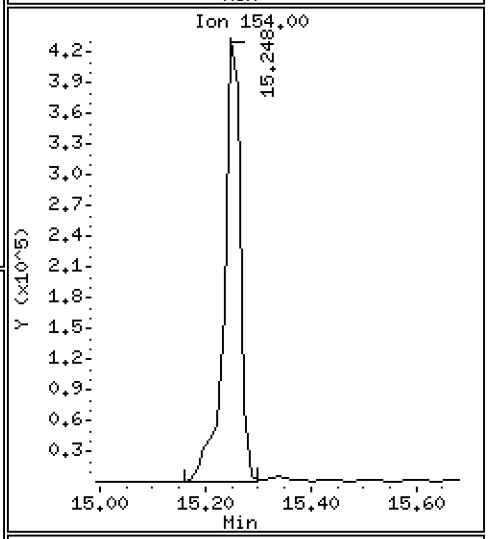


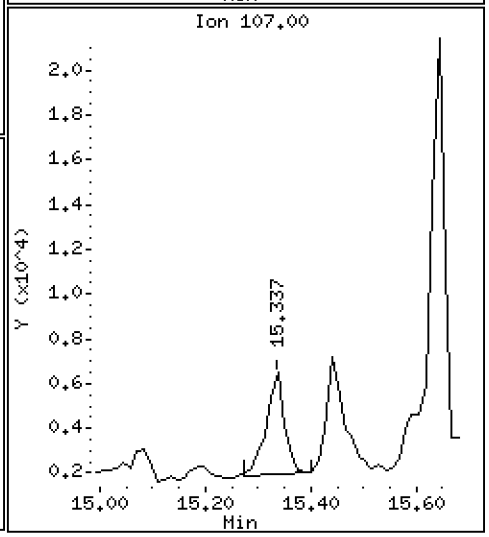












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

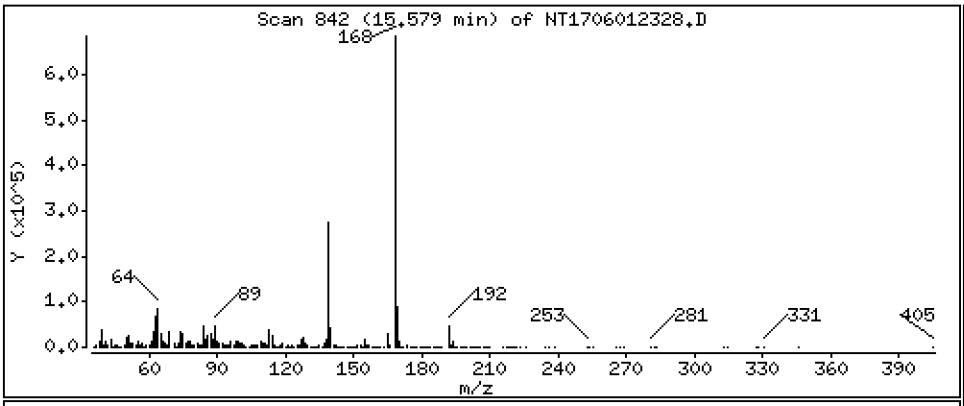
Operator: VTS

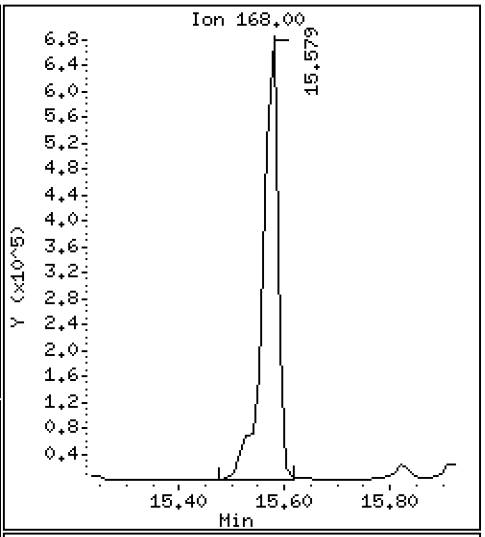
Column phase: ZB-5msi

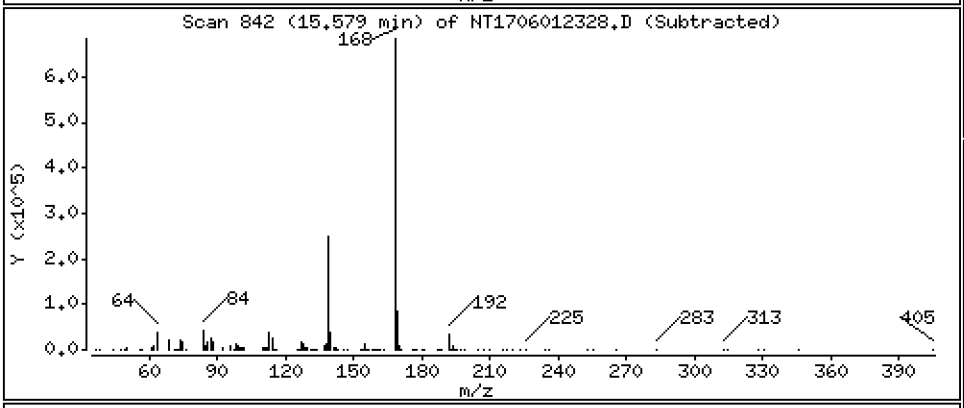
Column diameter: 0.25

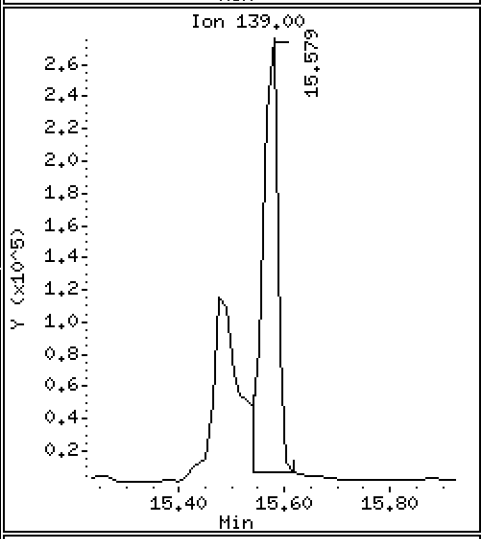
46 Dibenzofuran

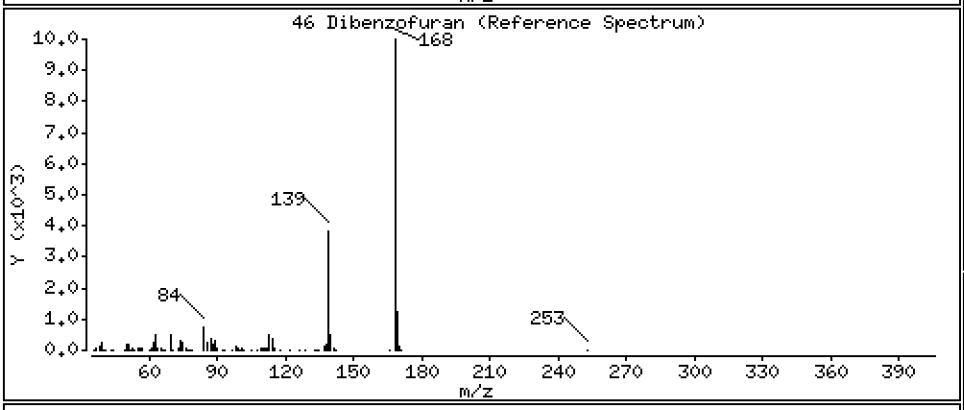
Concentration: 5.956 ug/mL

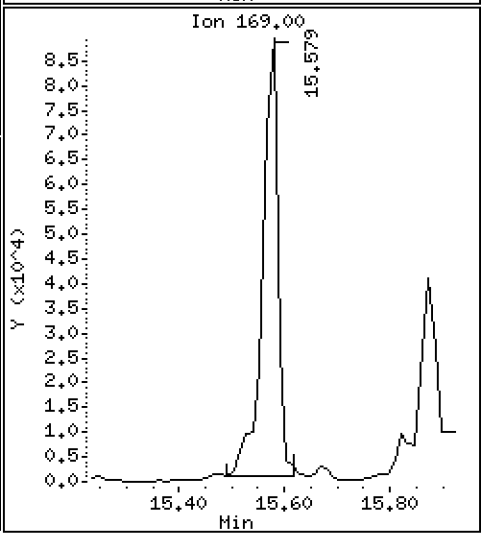


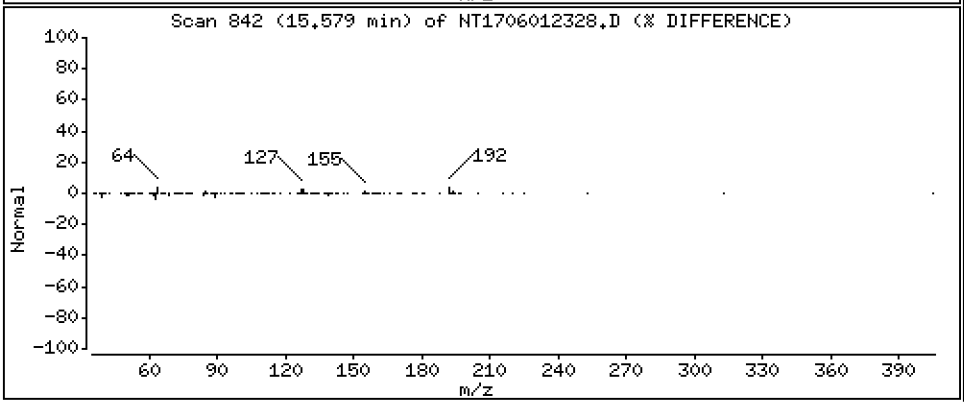












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

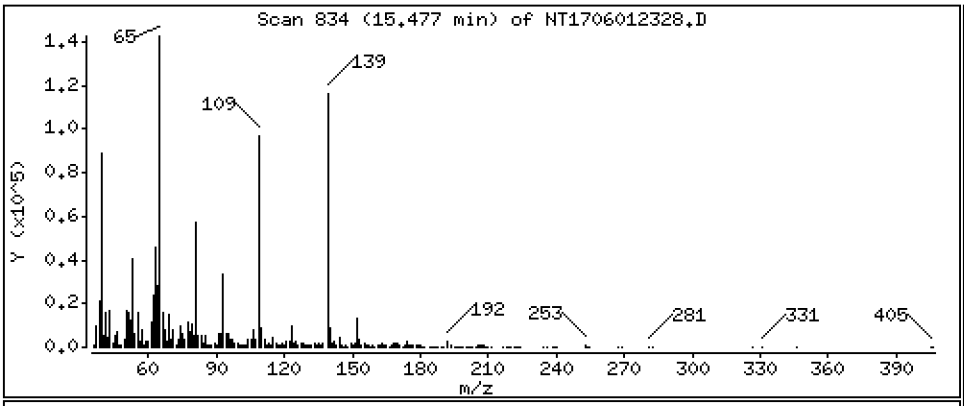
Operator: VTS

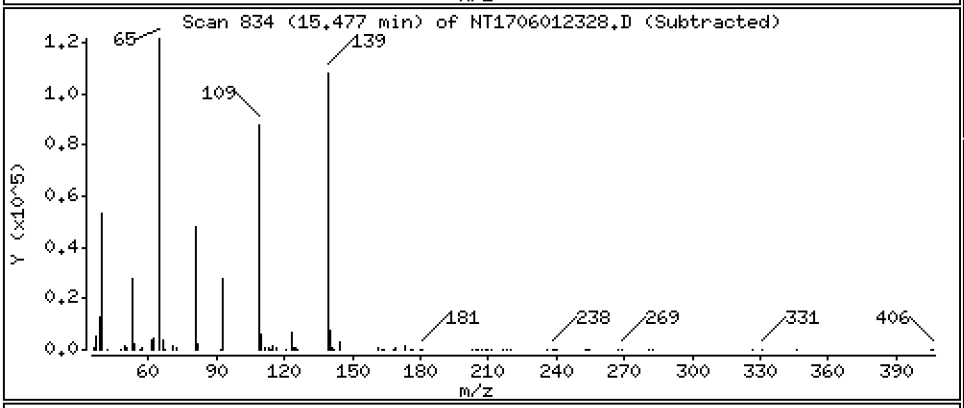
Column phase: ZB-5msi

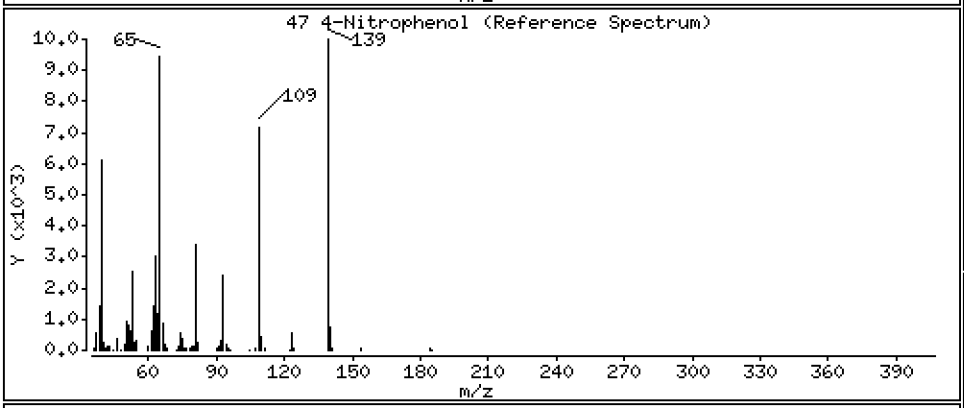
Column diameter: 0.25

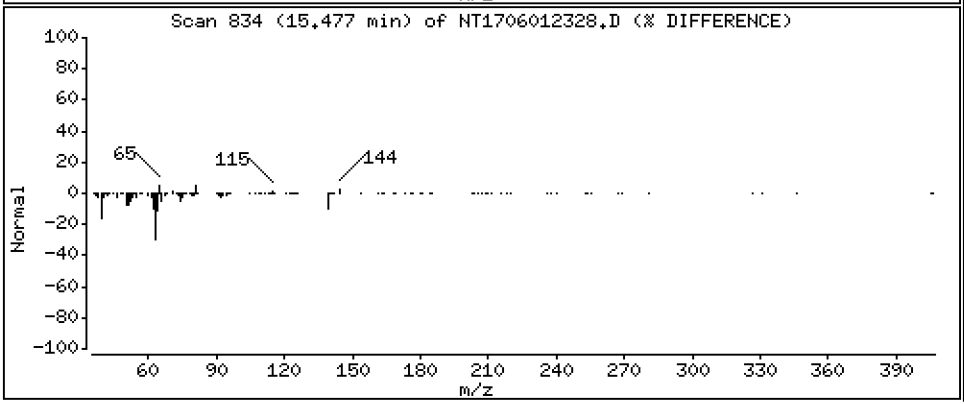
47 4-Nitrophenol

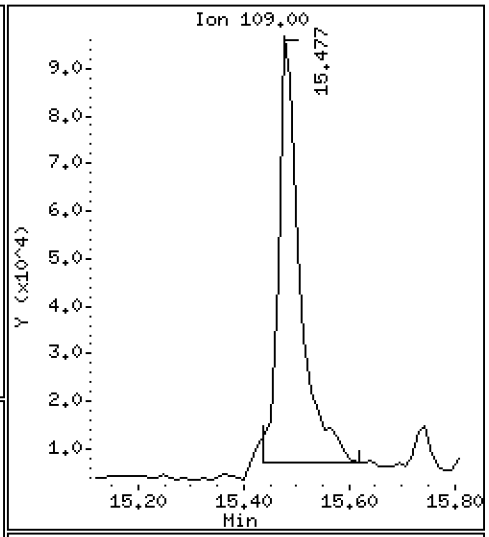
Concentration: 10.34 ug/mL

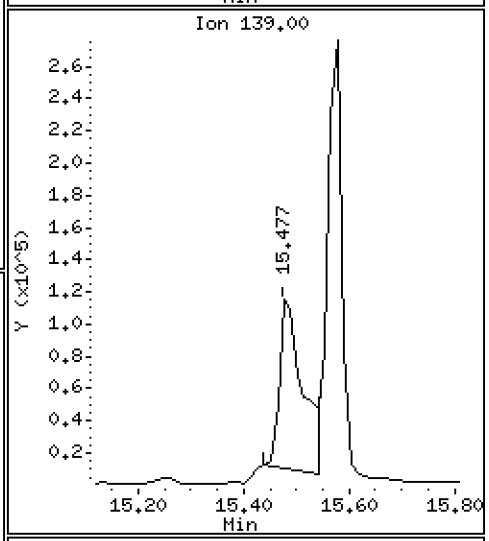


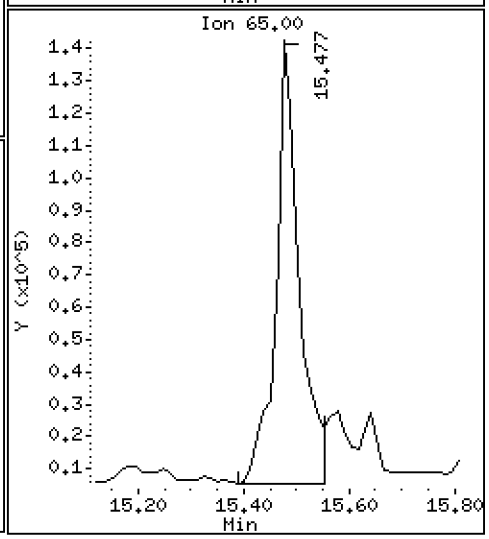












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

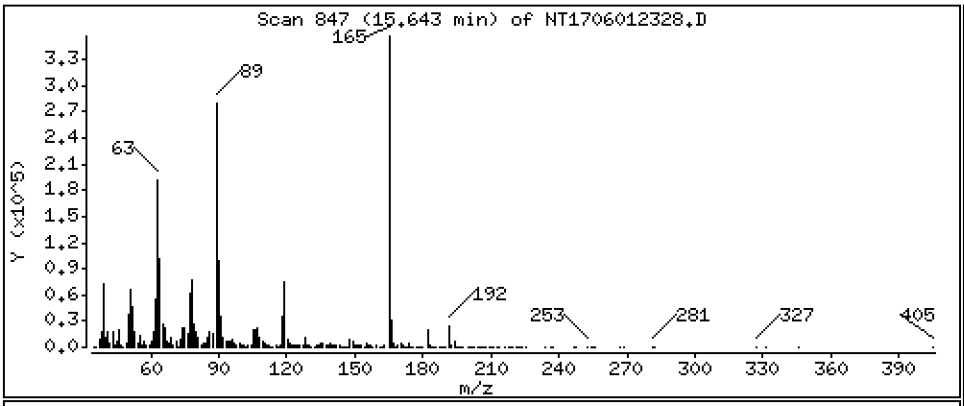
Operator: VTS

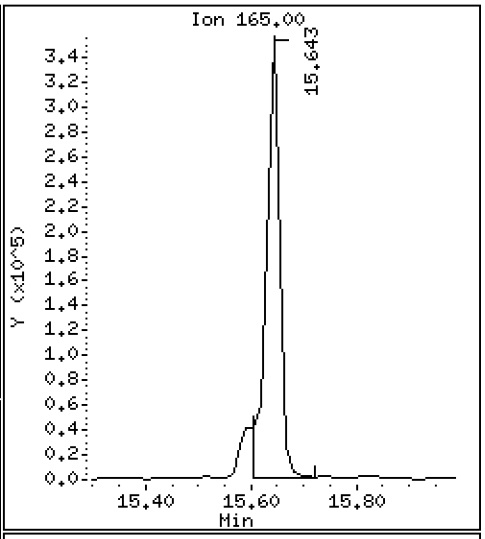
Column phase: ZB-5msi

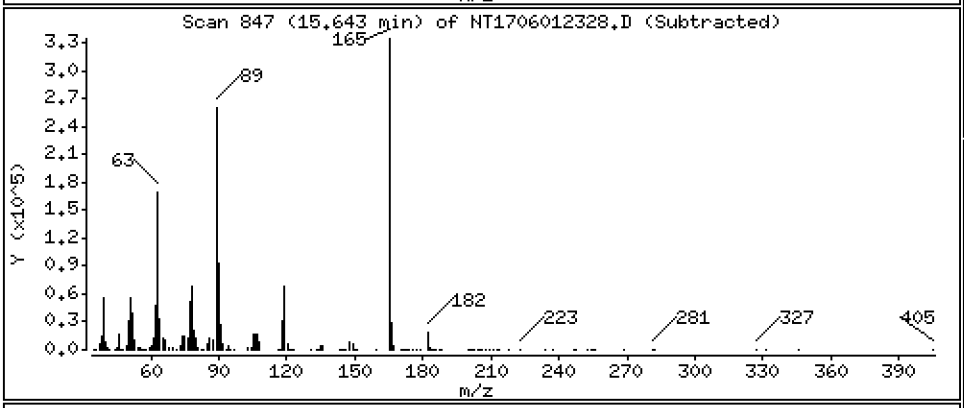
Column diameter: 0.25

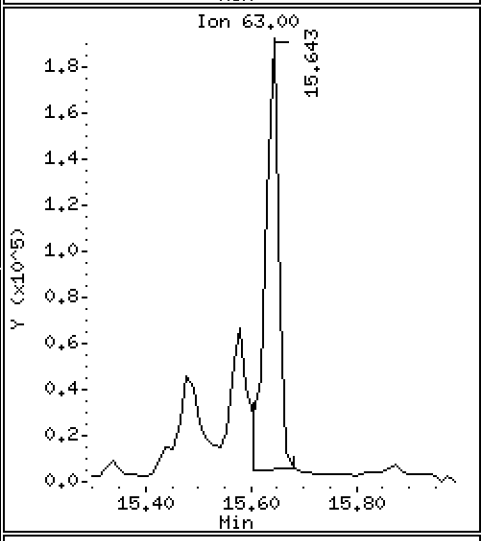
48 2,4-Dinitrotoluene

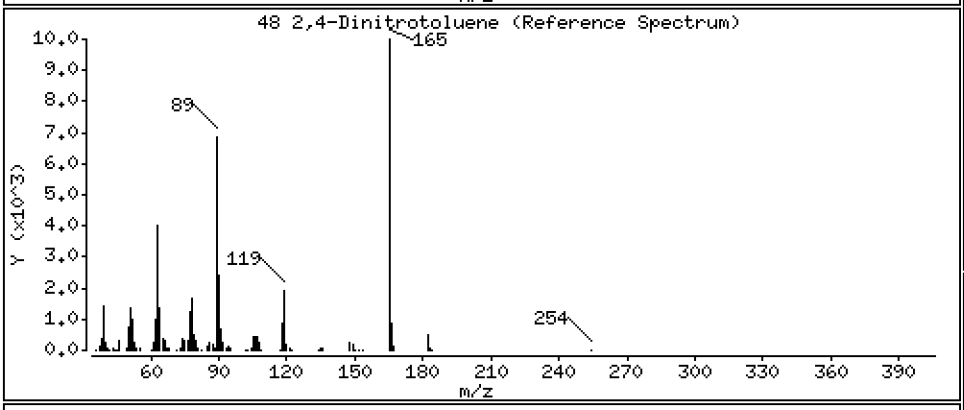
Concentration: 11.94 ug/mL

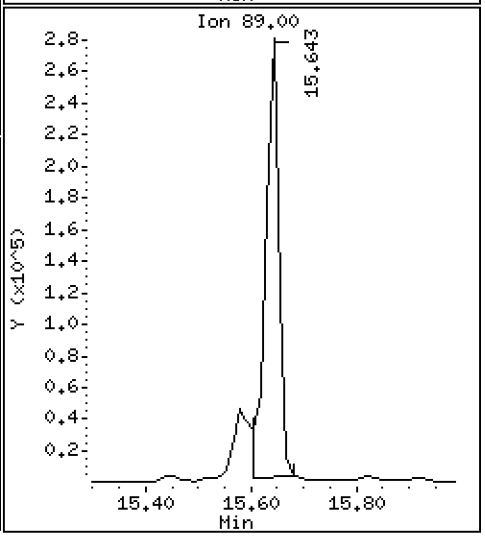


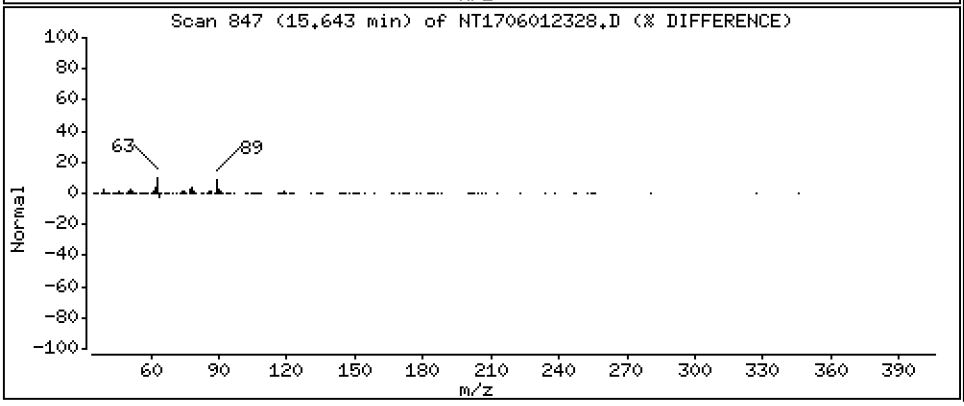












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

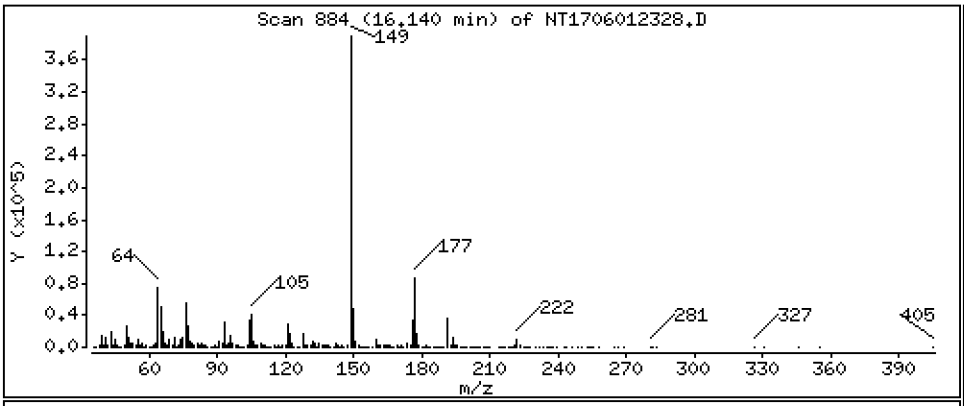
Operator: VTS

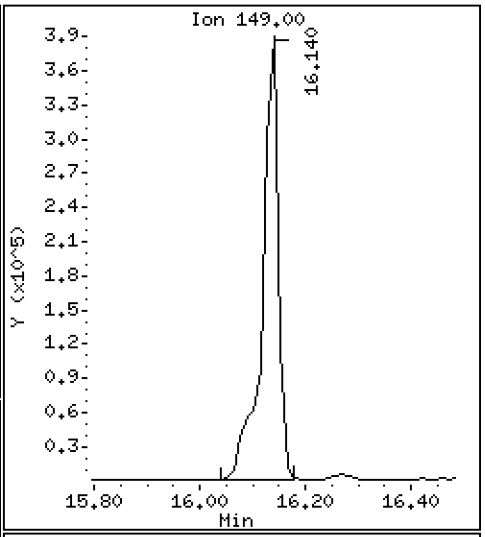
Column phase: ZB-5msi

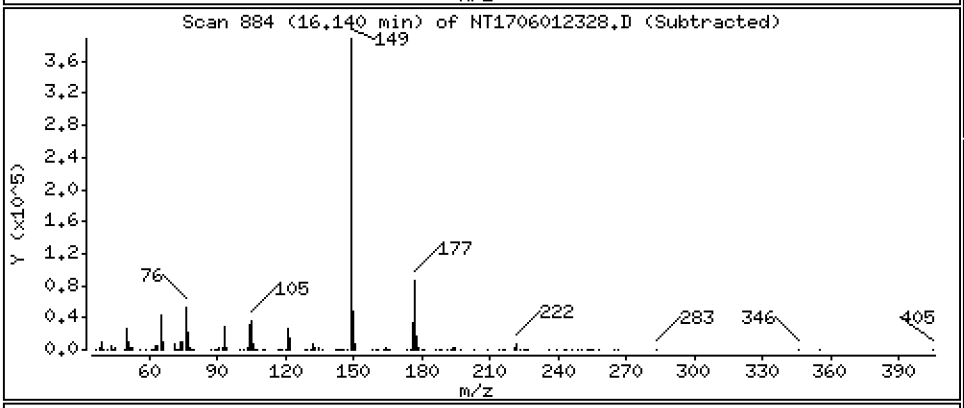
Column diameter: 0.25

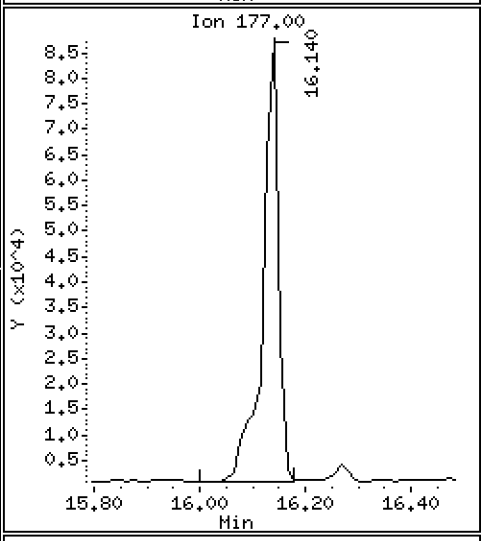
50 Diethylphthalate

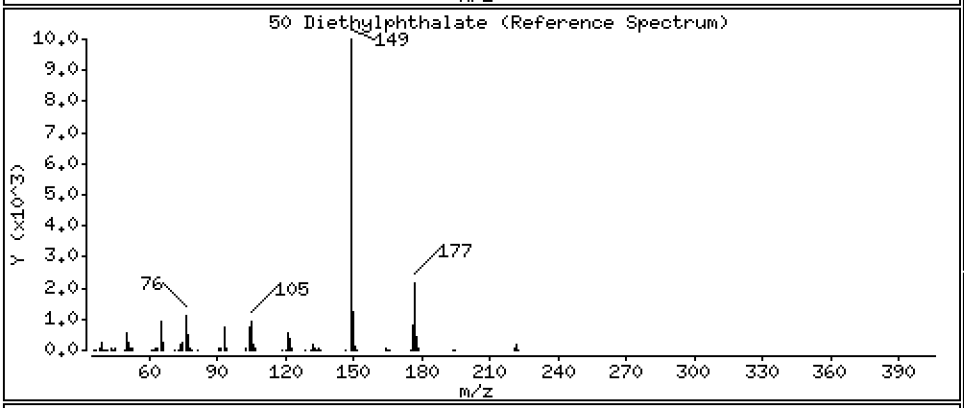
Concentration: 4.759 ug/mL

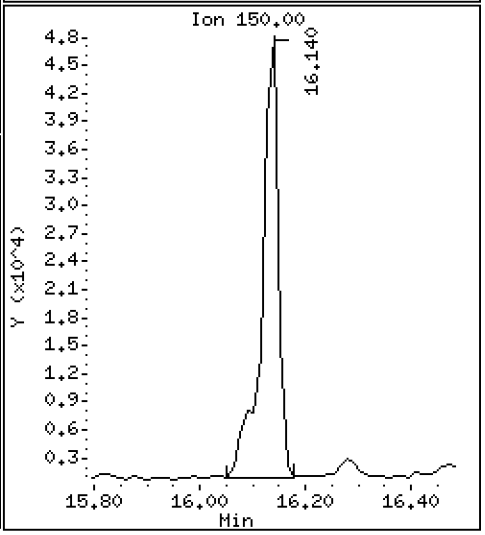


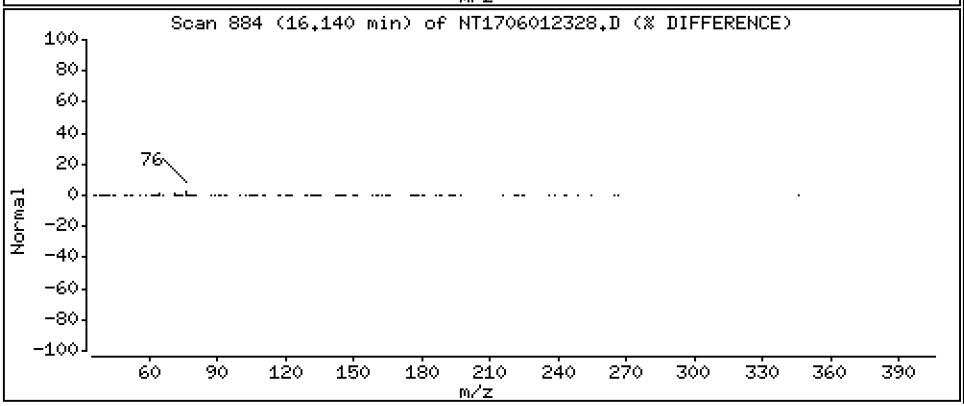












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

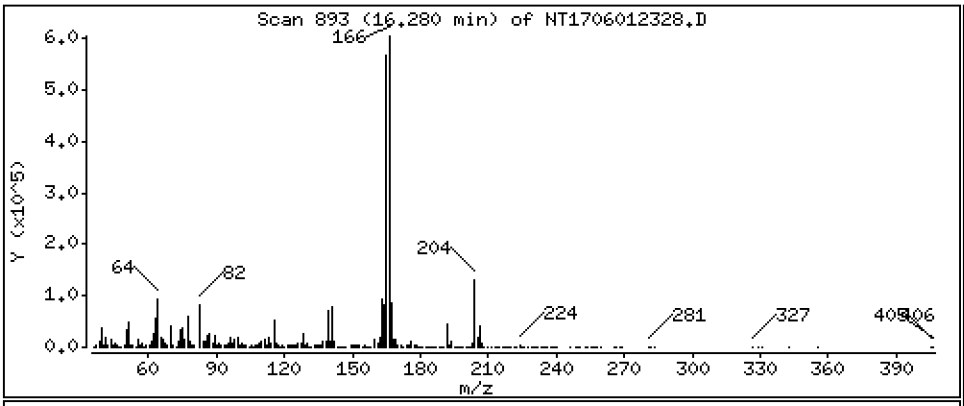
Operator: VTS

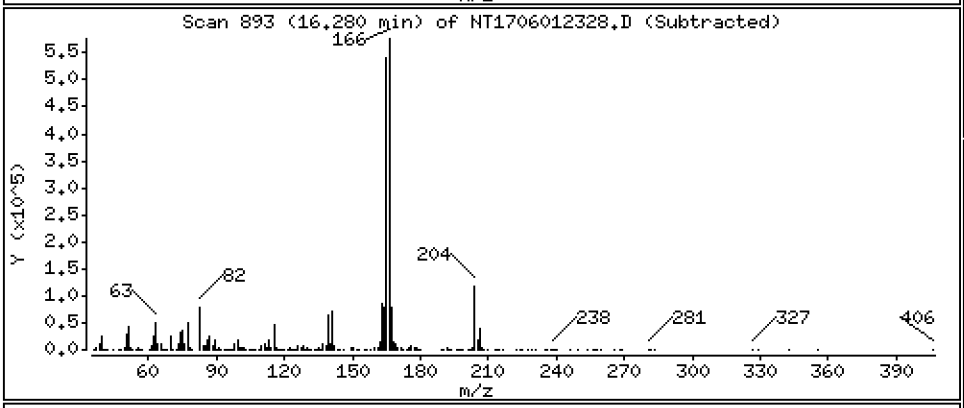
Column phase: ZB-5msi

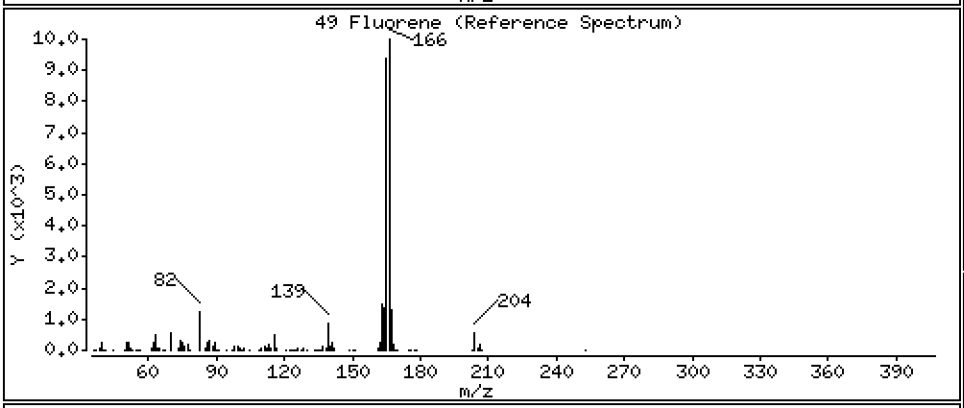
Column diameter: 0.25

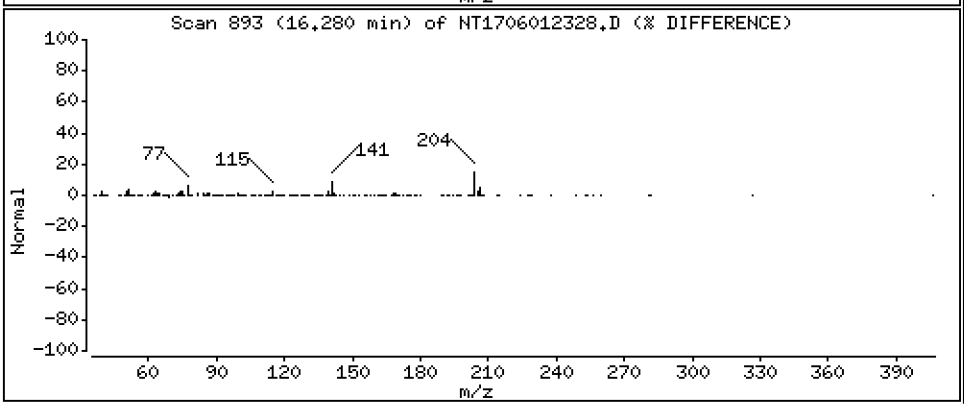
49 Fluorene

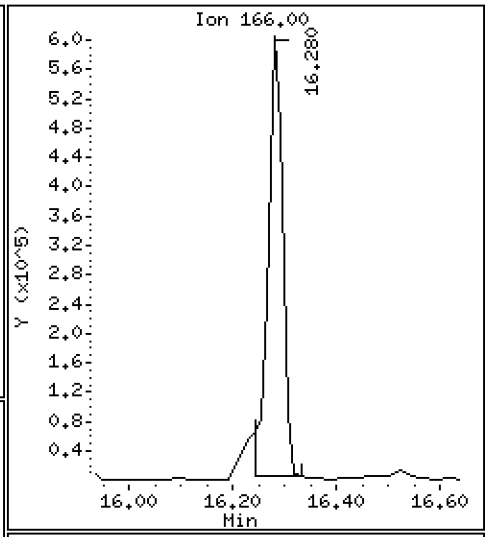
Concentration: 5.438 ug/mL

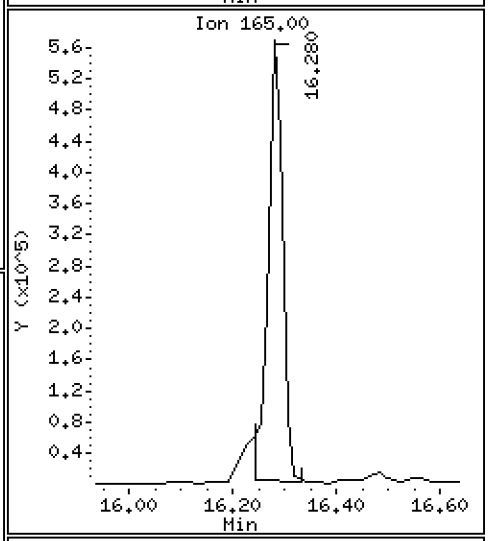


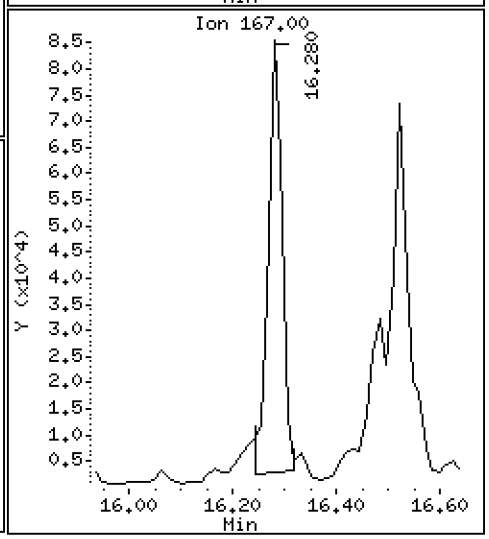












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

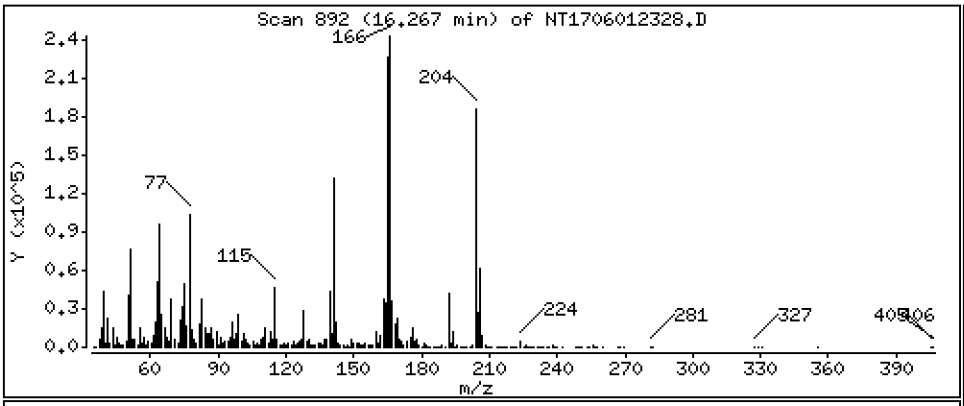
Operator: VTS

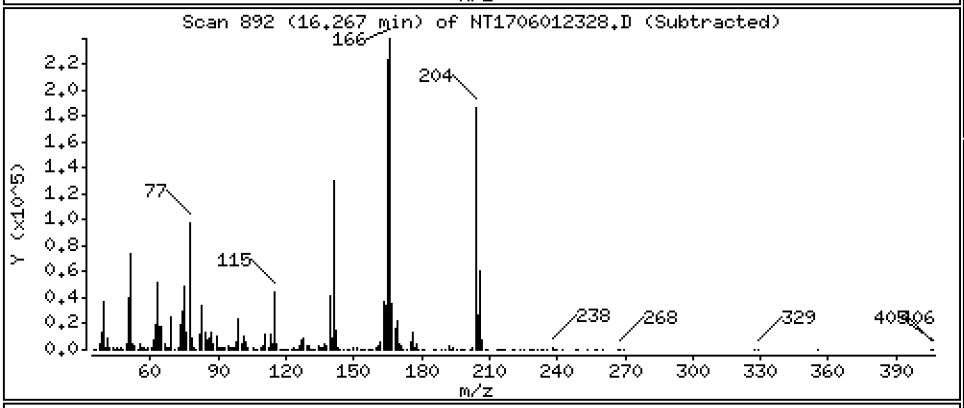
Column phase: ZB-5msi

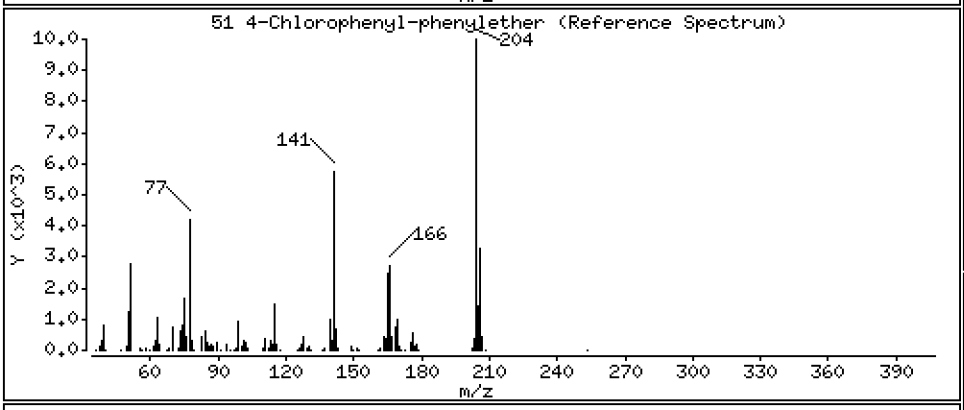
Column diameter: 0.25

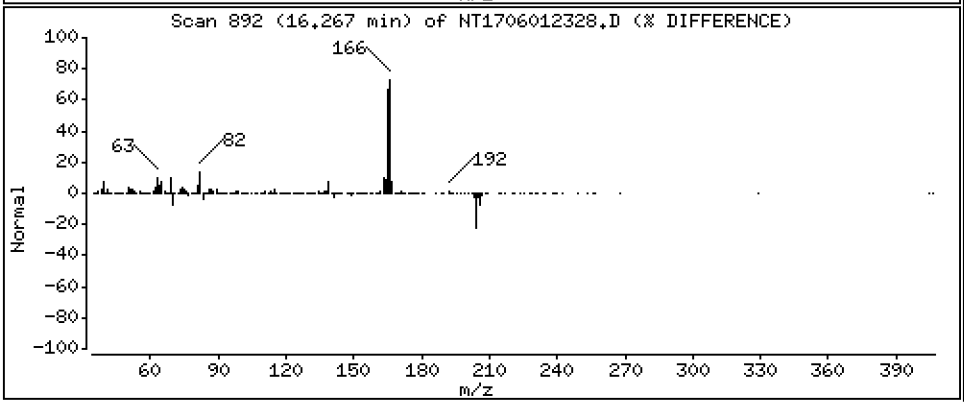
51 4-Chlorophenyl-phenylether

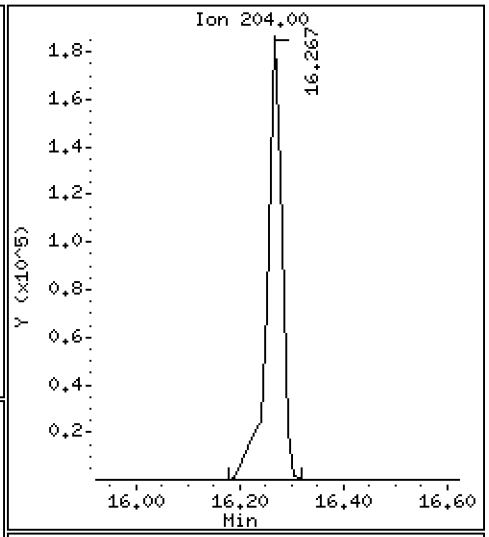
Concentration: 4.299 ug/mL

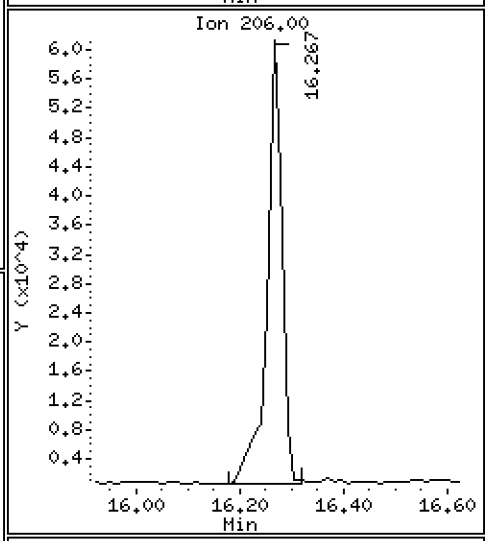


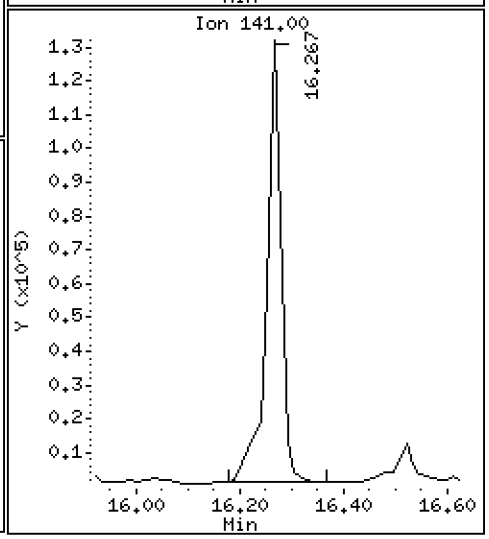












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

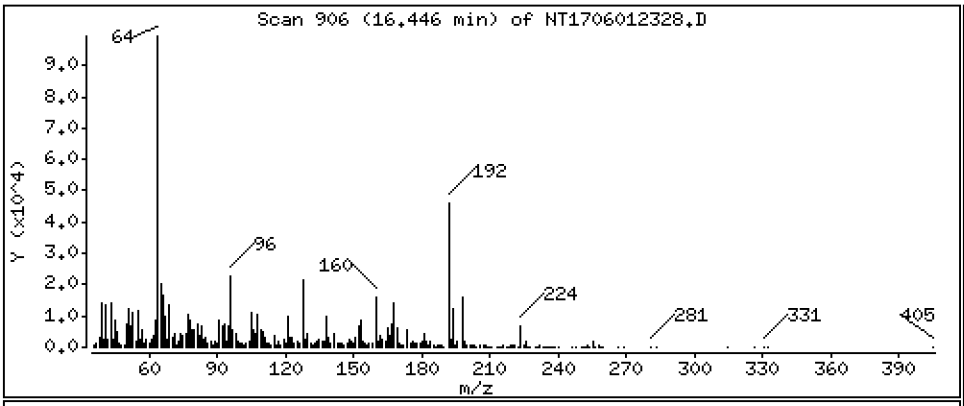
Operator: VTS

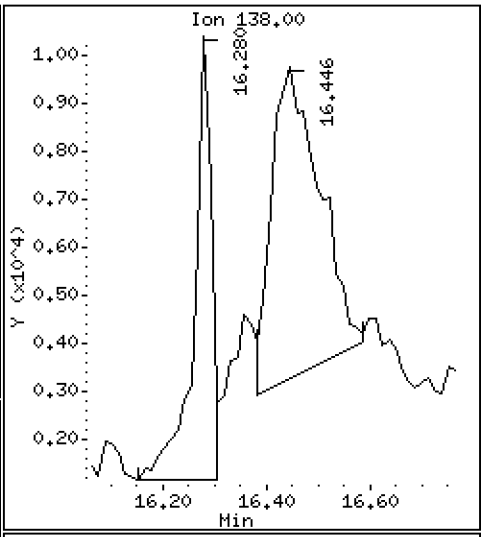
Column phase: ZB-5msi

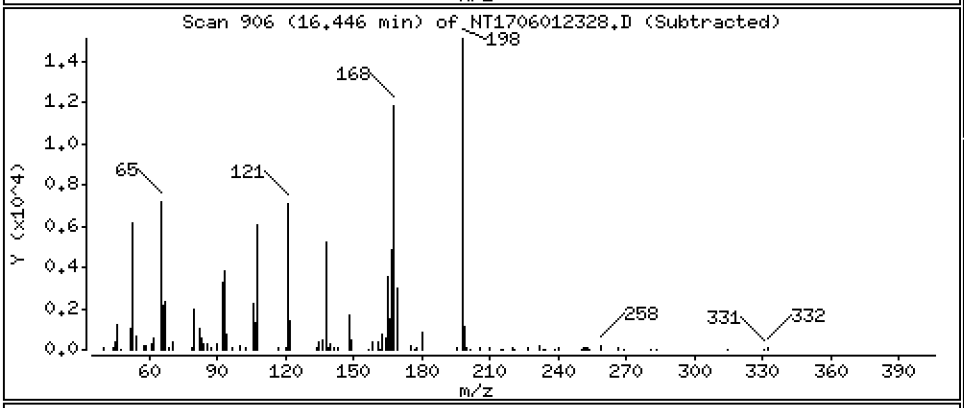
Column diameter: 0.25

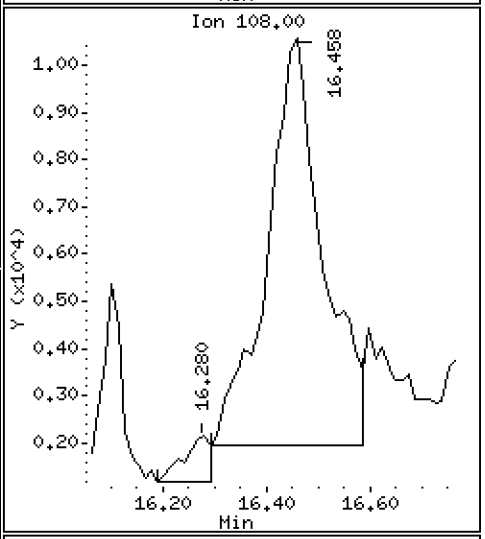
52 4-Nitroaniline

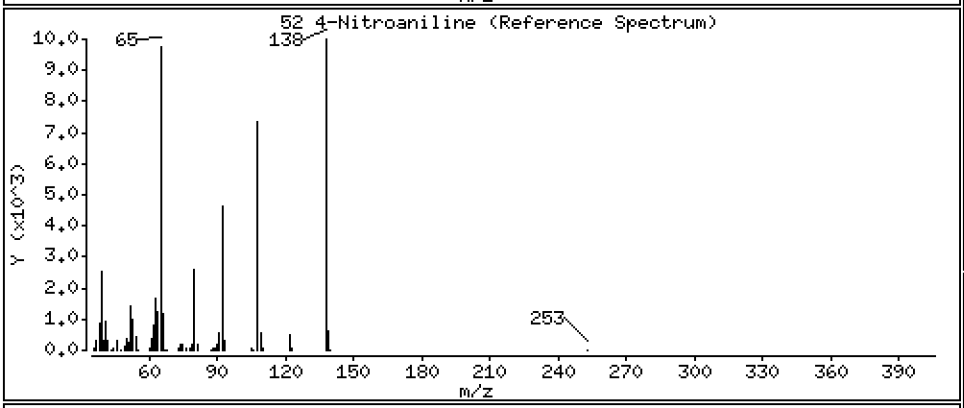
Concentration: 1.151 ug/mL

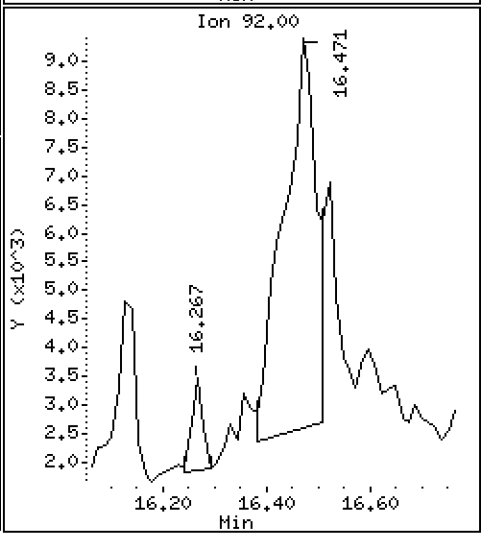


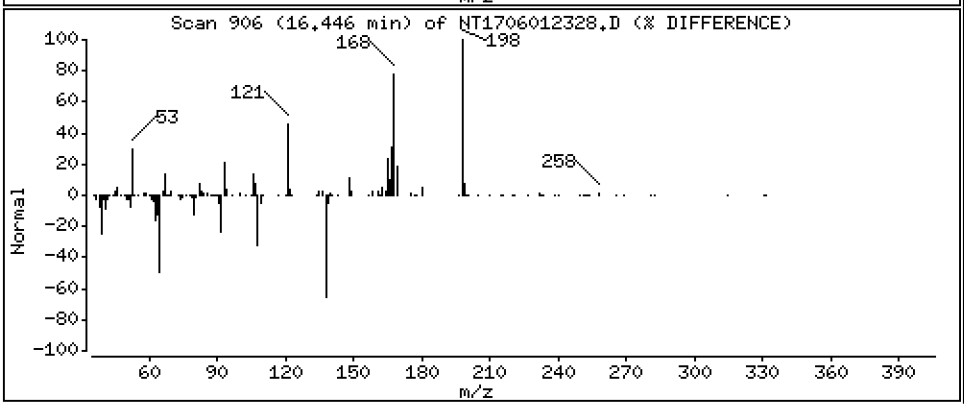












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

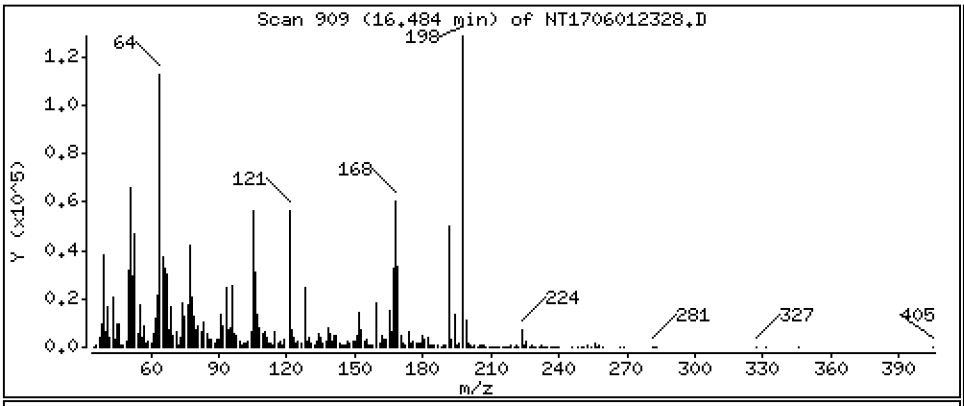
Operator: VTS

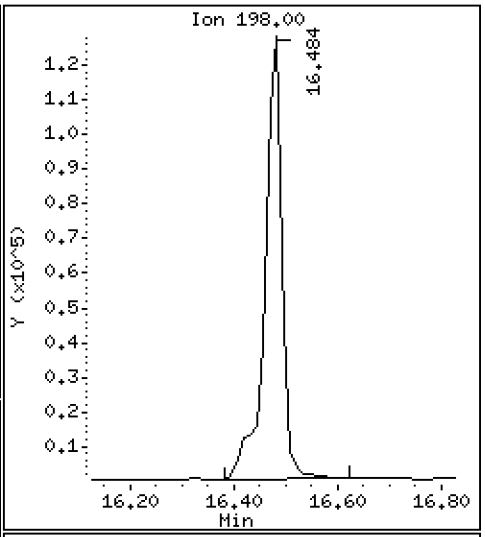
Column phase: ZB-5msi

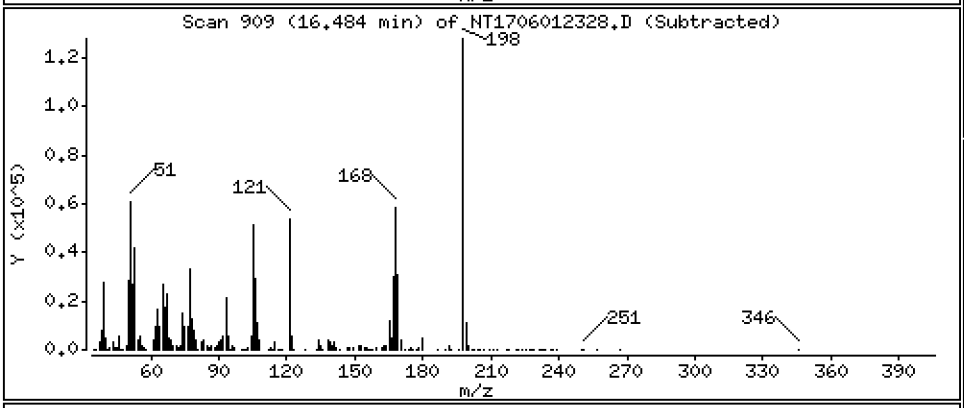
Column diameter: 0.25

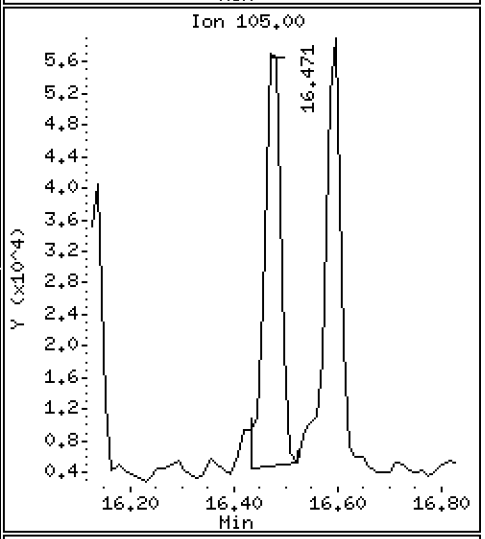
53 4,6-Dinitro-2-methylphenol

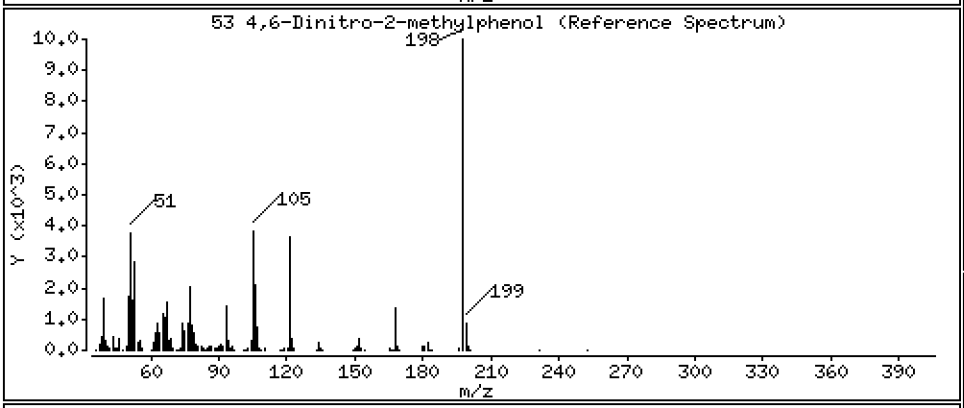
Concentration: 7.415 ug/mL

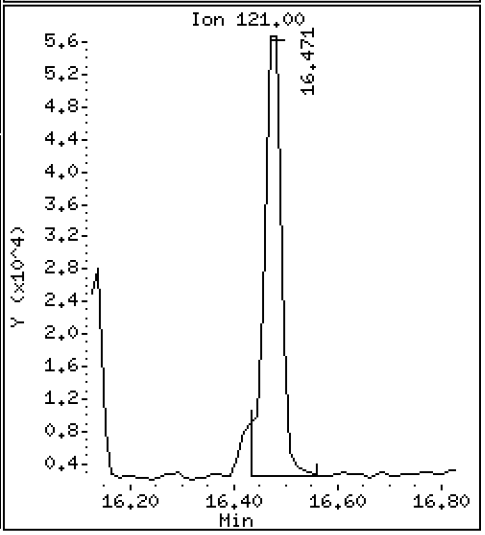


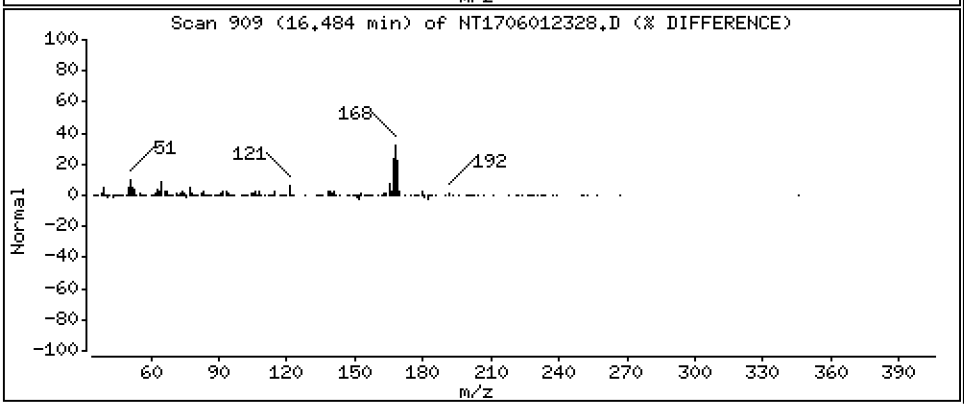












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

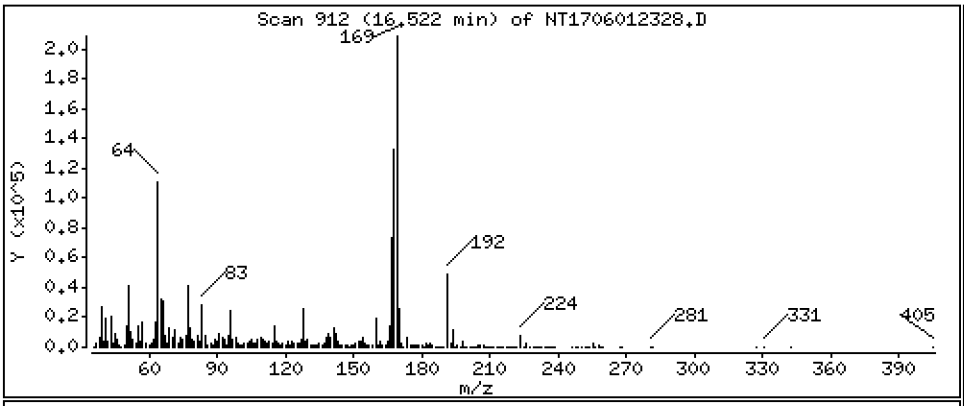
Operator: VTS

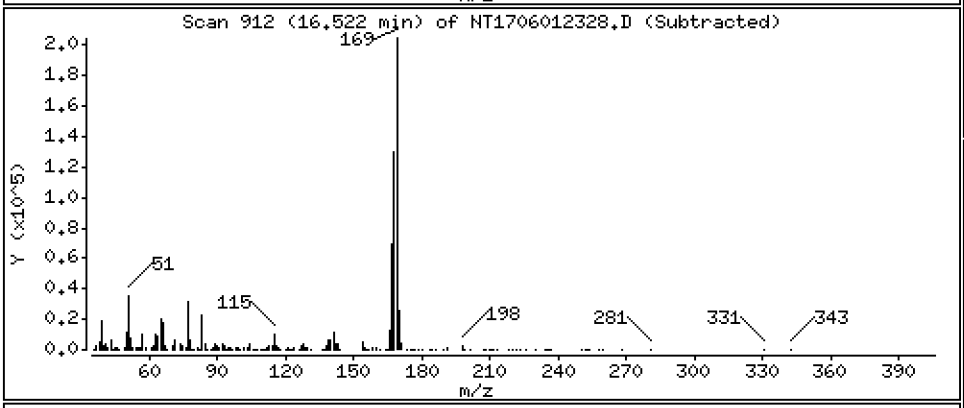
Column phase: ZB-5msi

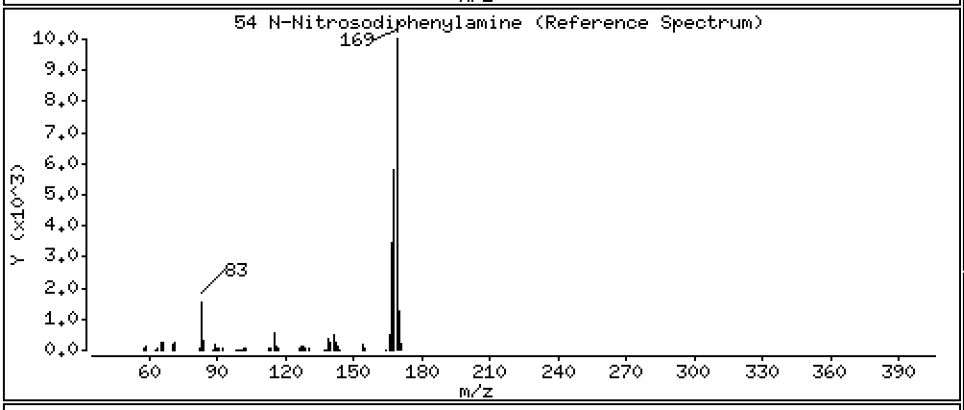
Column diameter: 0.25

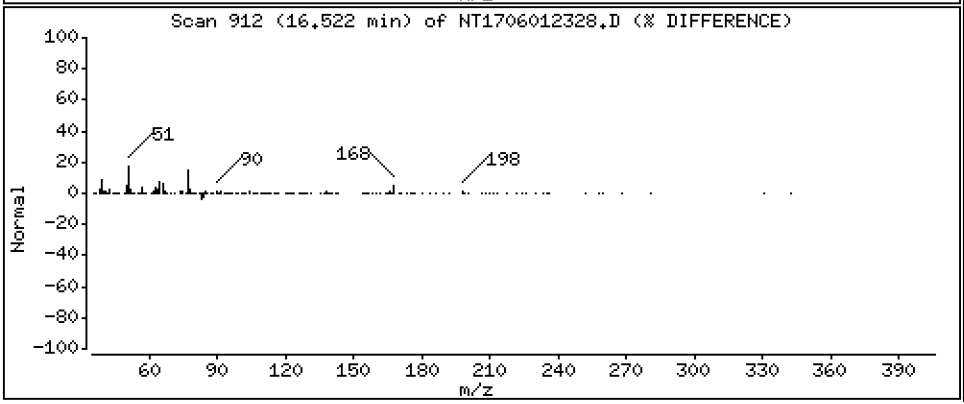
54 N-Nitrosodiphenylamine

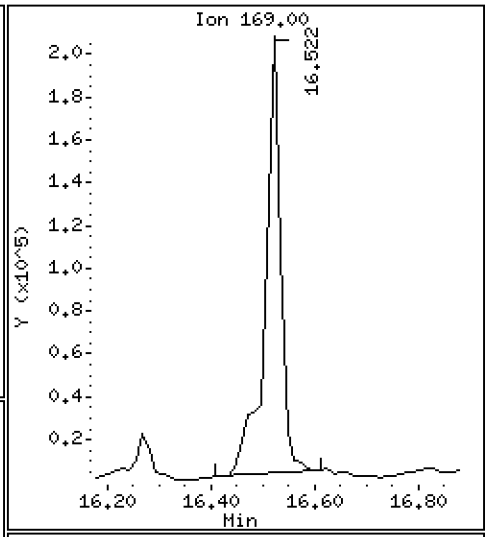
Concentration: 3.017 ug/mL

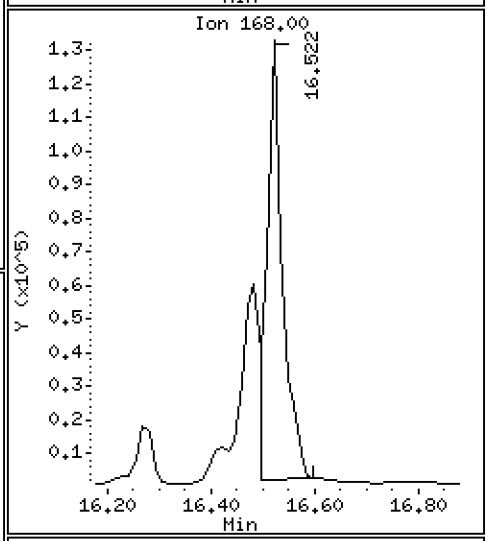


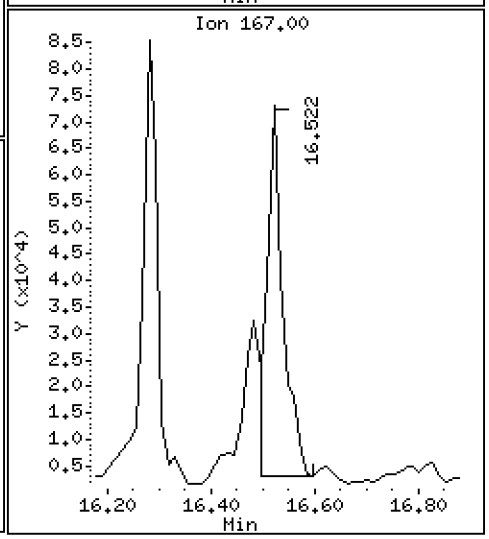












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

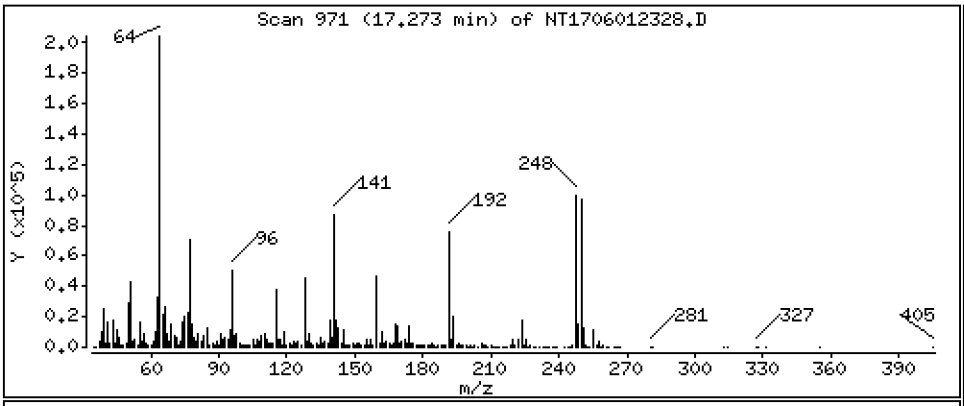
Operator: VTS

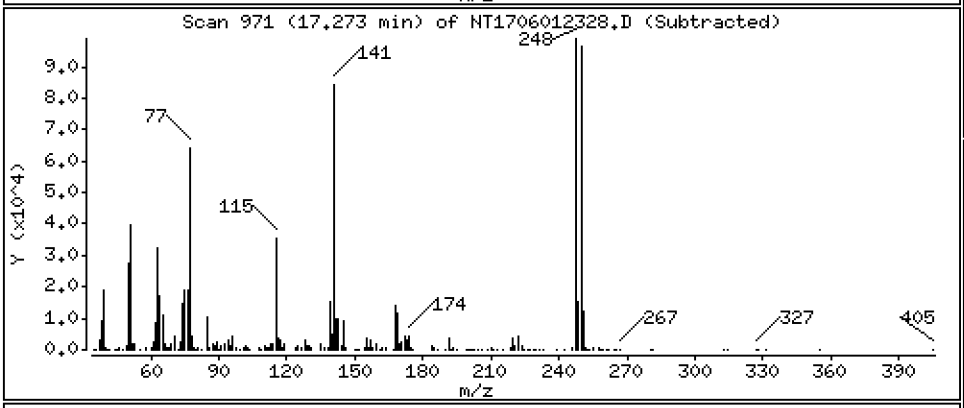
Column phase: ZB-5msi

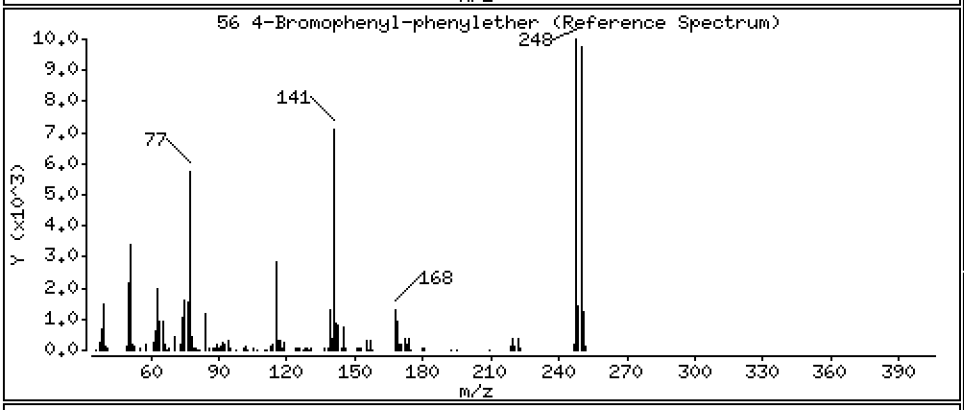
Column diameter: 0.25

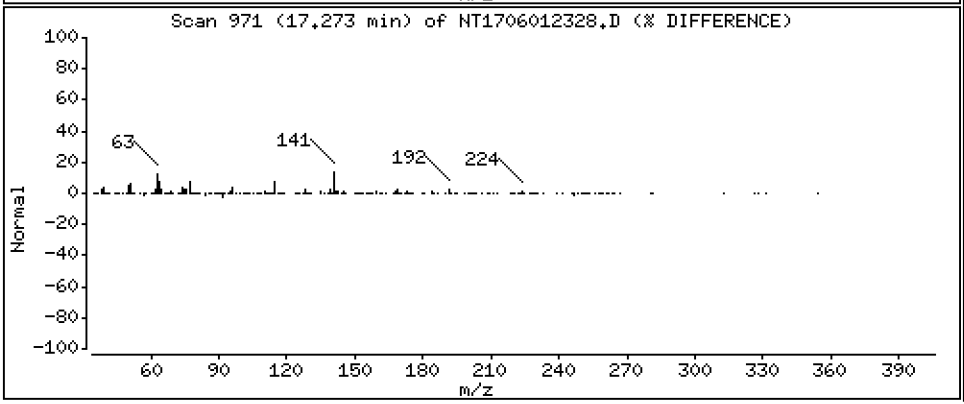
56 4-Bromophenyl-phenylether

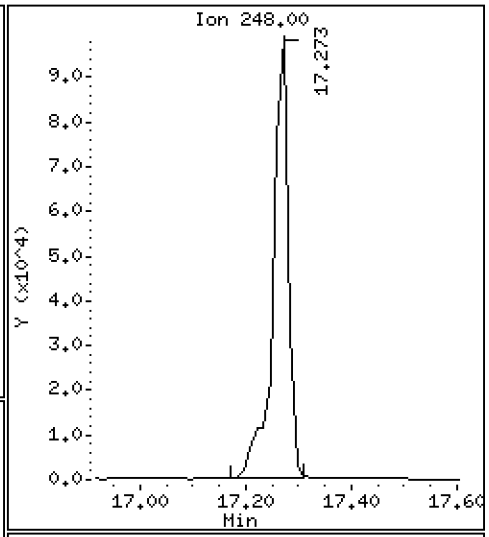
Concentration: 4.181 ug/mL

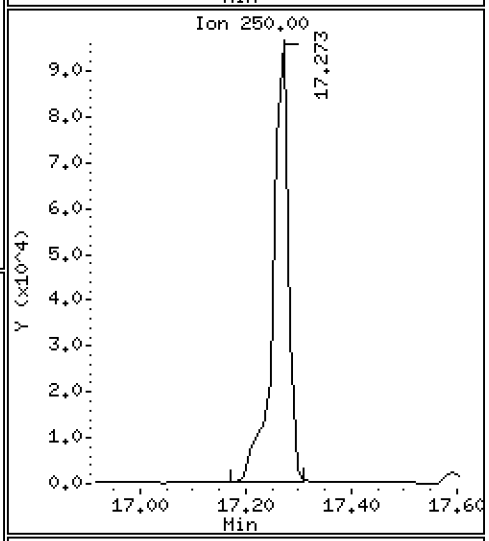


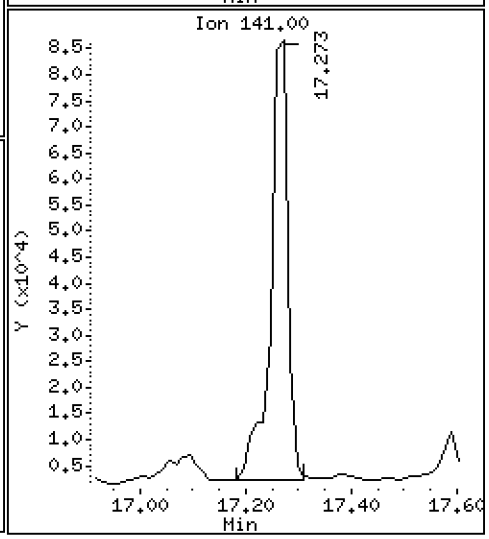












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

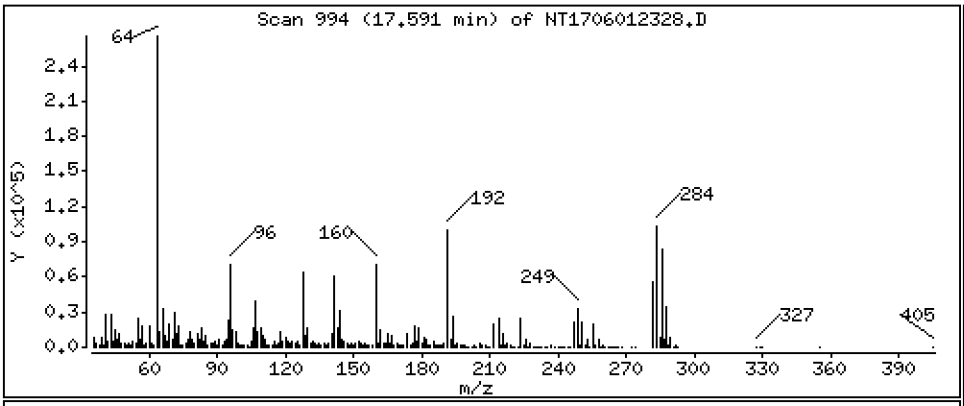
Operator: VTS

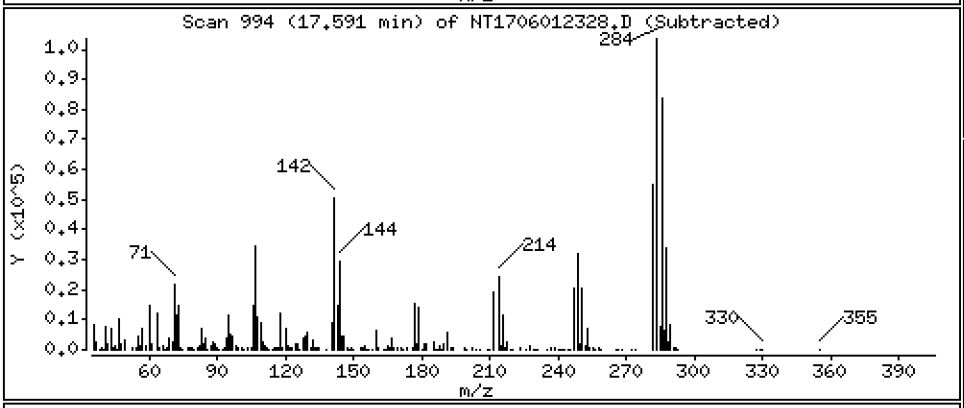
Column phase: ZB-5msi

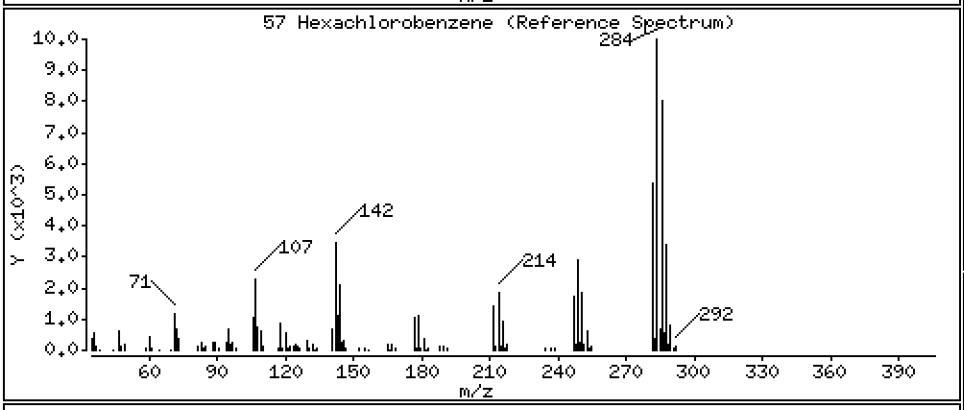
Column diameter: 0.25

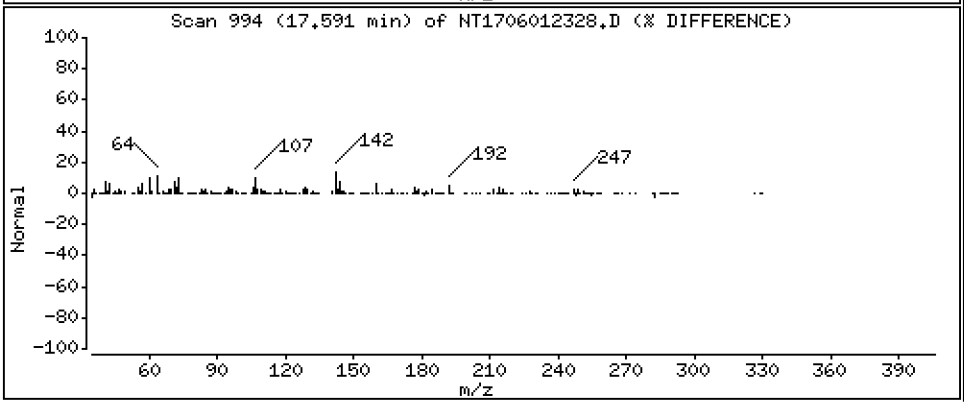
57 Hexachlorobenzene

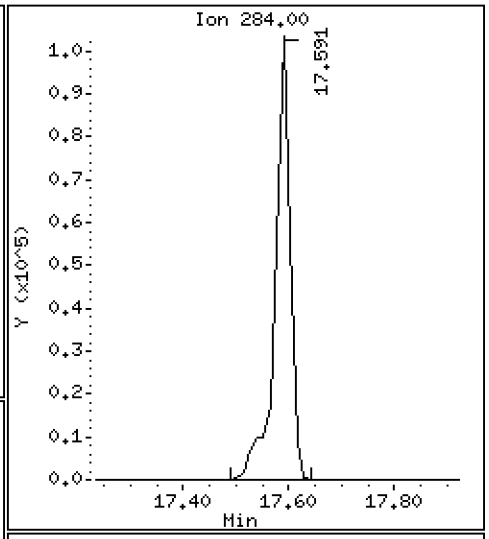
Concentration: 4.213 ug/mL

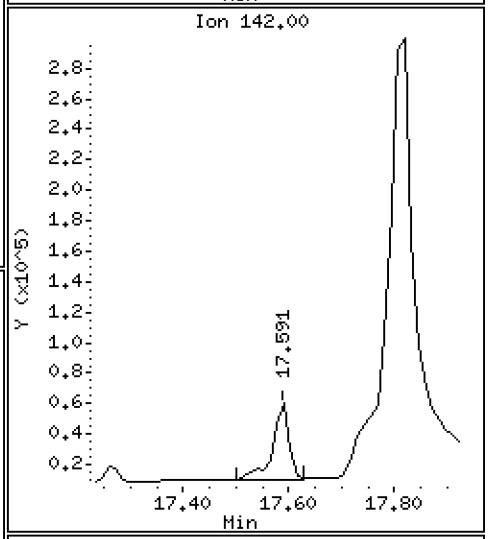


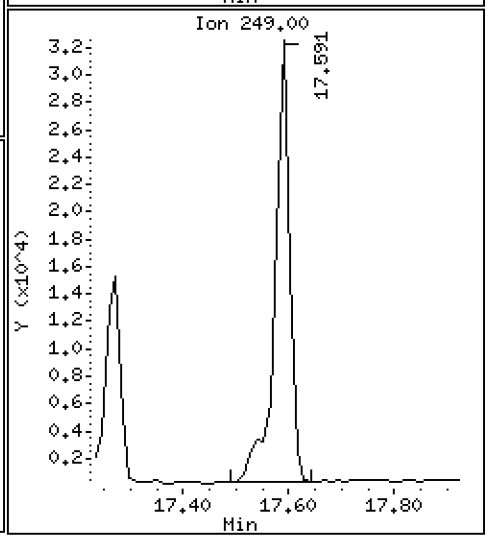












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

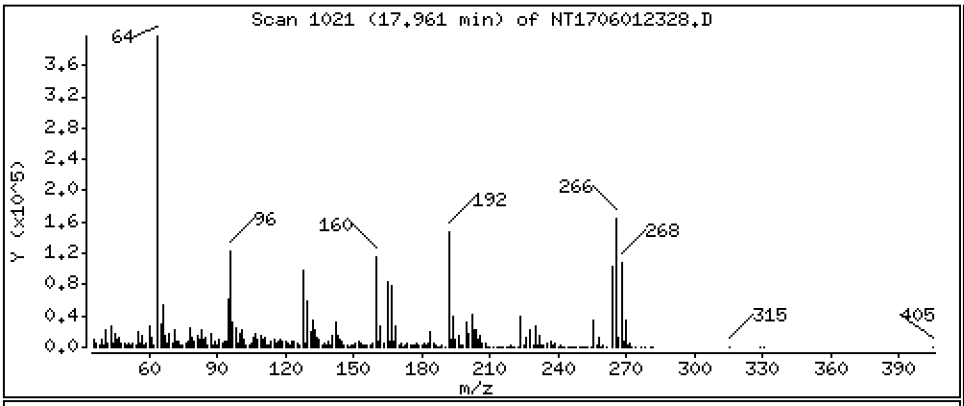
Operator: VTS

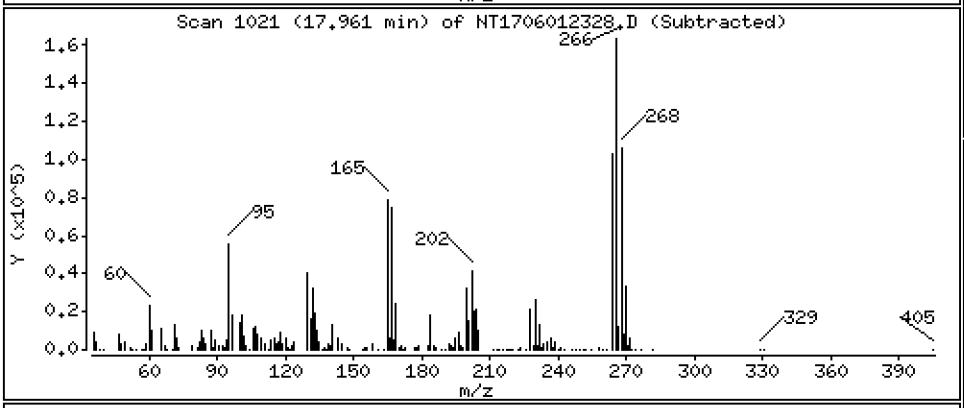
Column phase: ZB-5msi

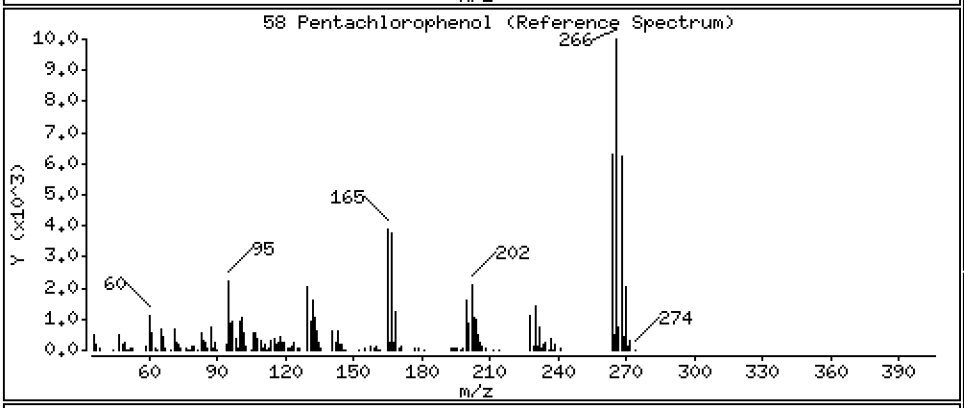
Column diameter: 0.25

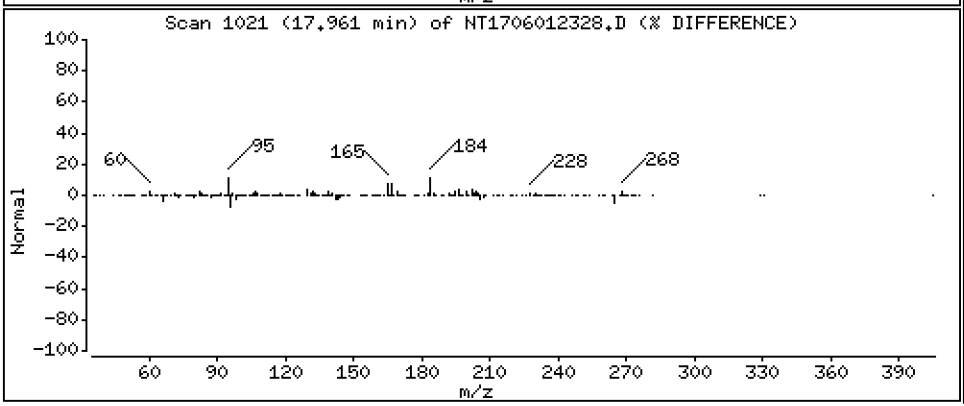
58 Pentachlorophenol

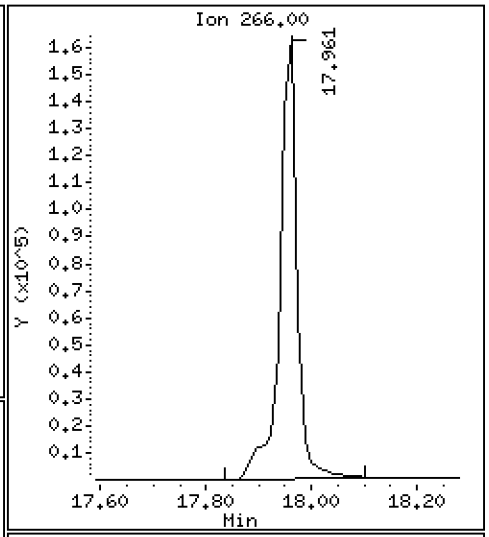
Concentration: 12.33 ug/mL

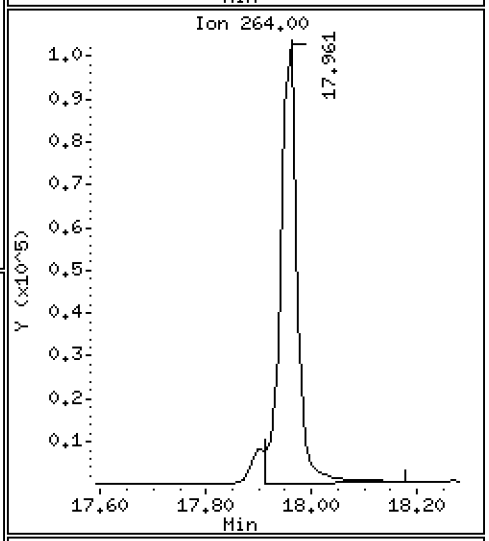


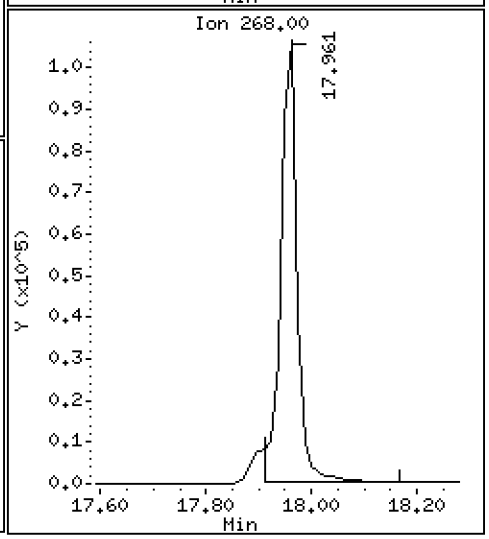












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

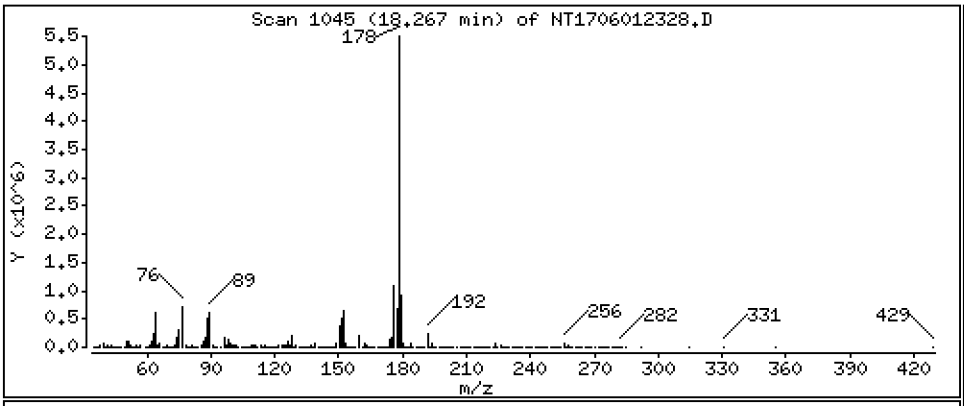
Operator: VTS

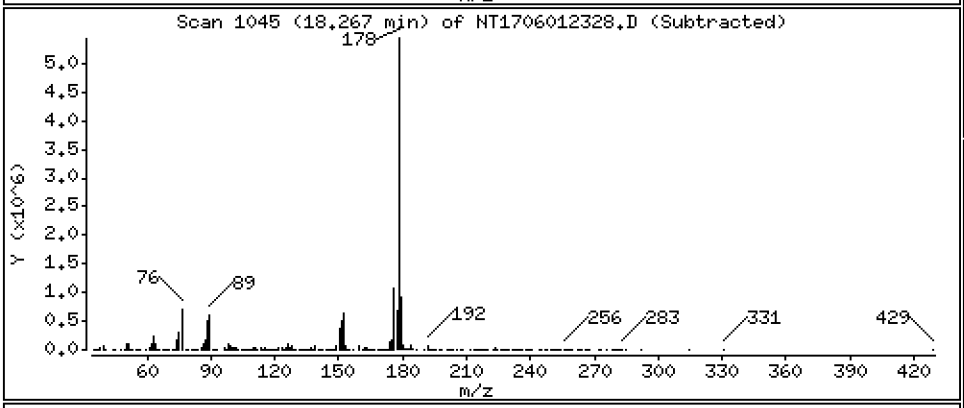
Column phase: ZB-5msi

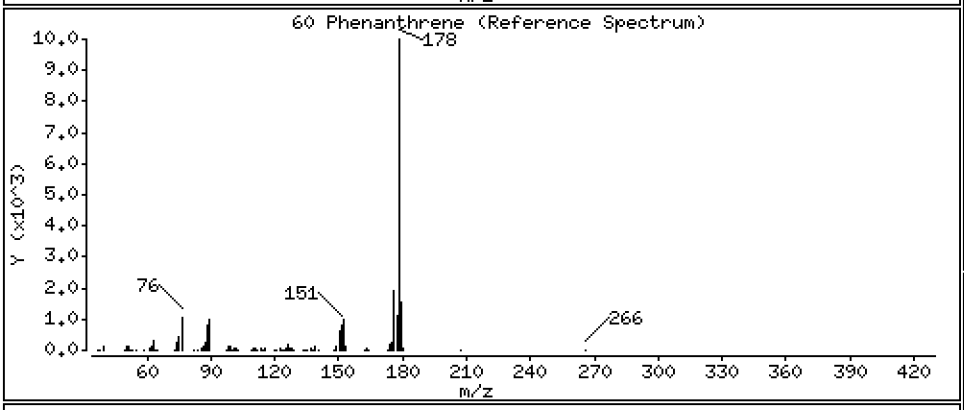
Column diameter: 0.25

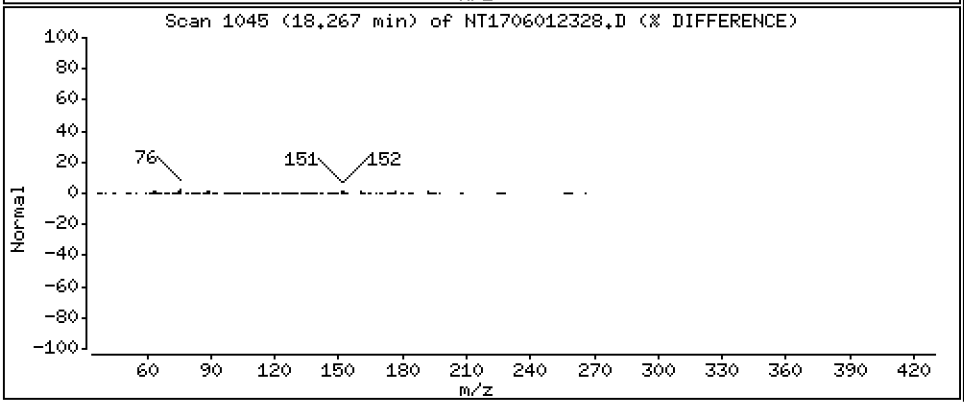
60 Phenanthrene

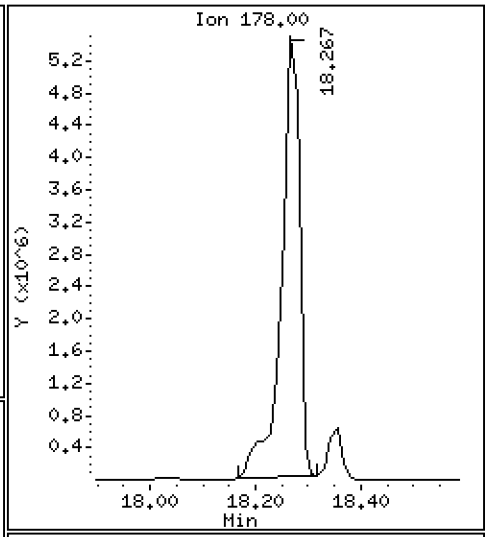
Concentration: 44.50 ug/mL

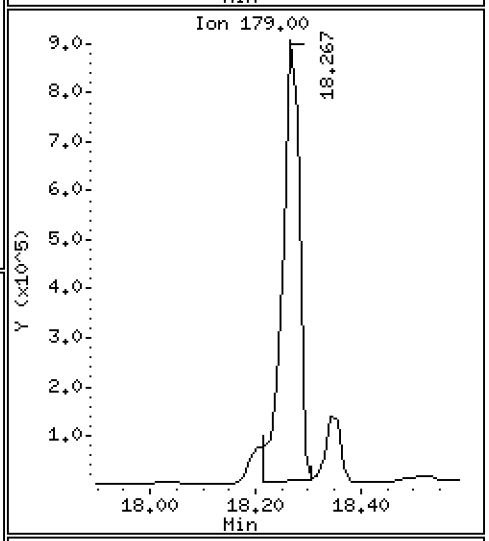


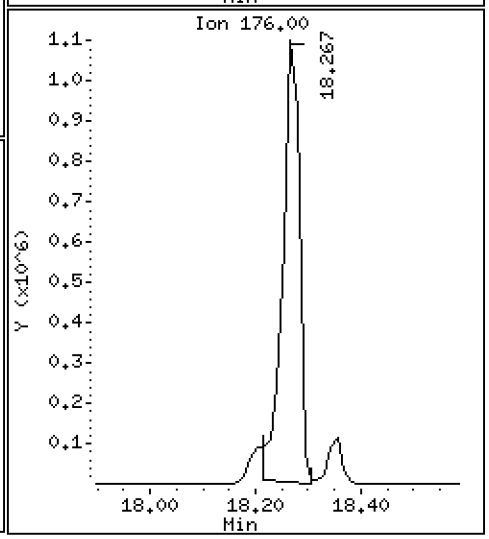












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

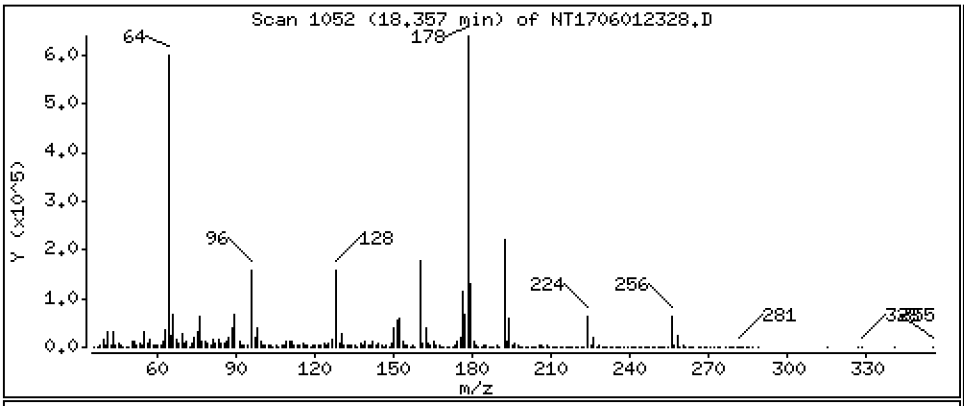
Operator: VTS

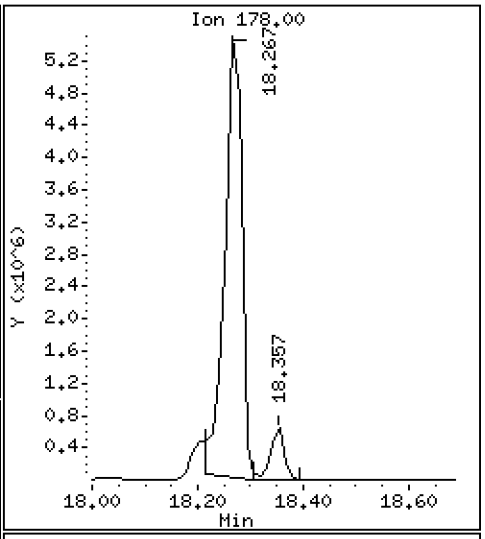
Column phase: ZB-5msi

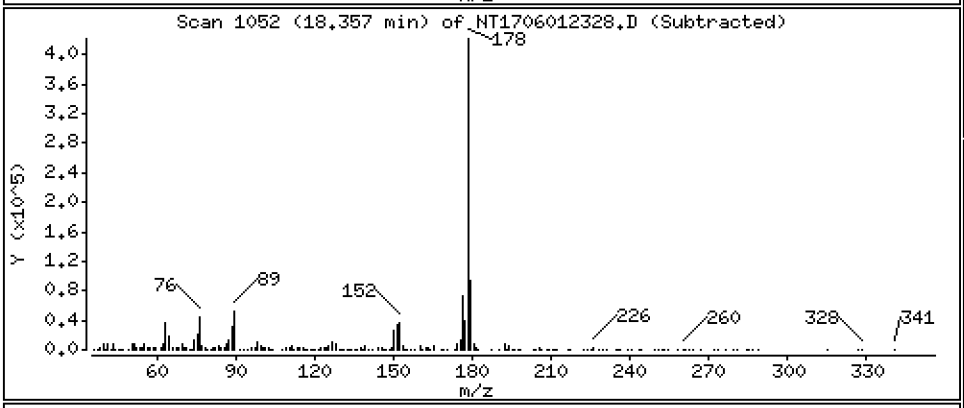
Column diameter: 0.25

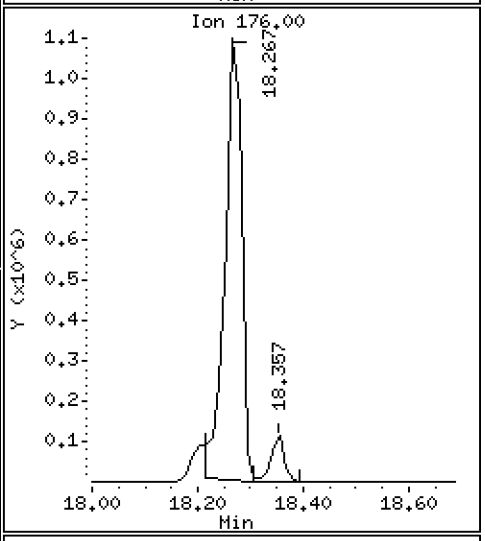
61 Anthracene

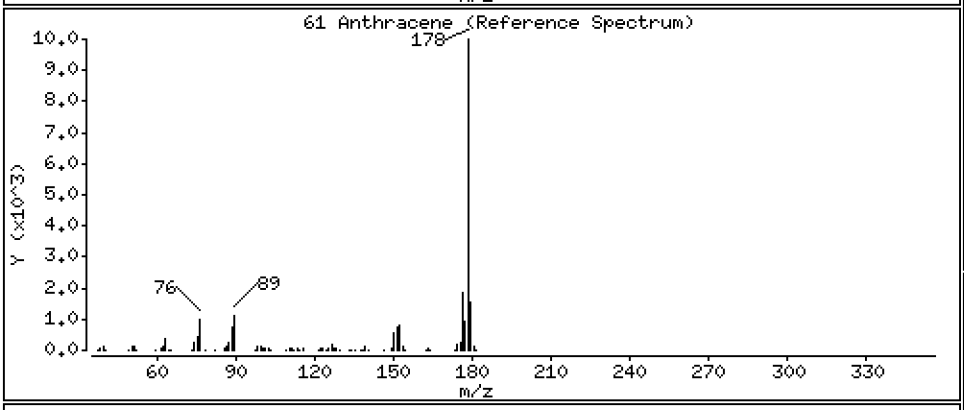
Concentration: 4.506 ug/mL

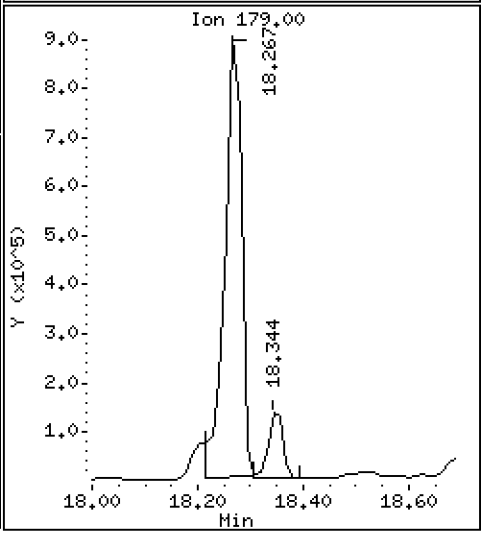


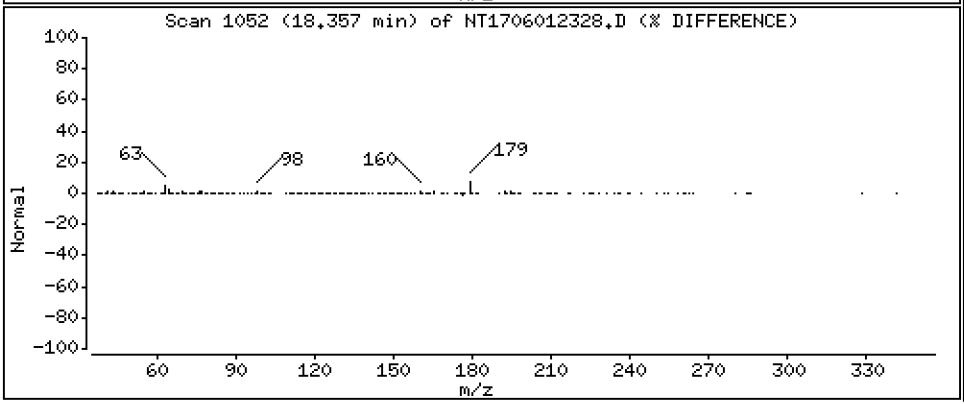












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

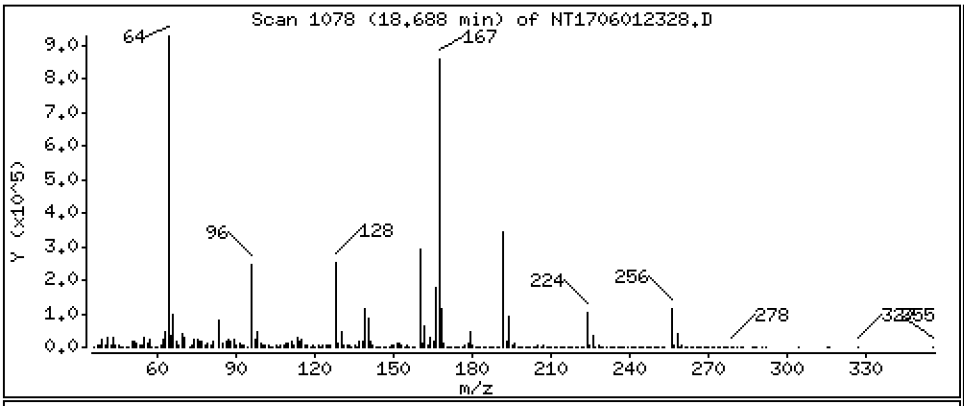
Operator: VTS

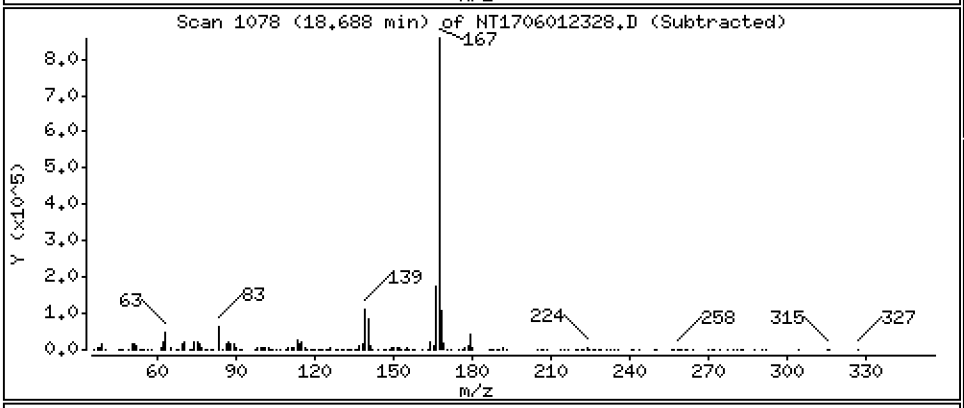
Column phase: ZB-5msi

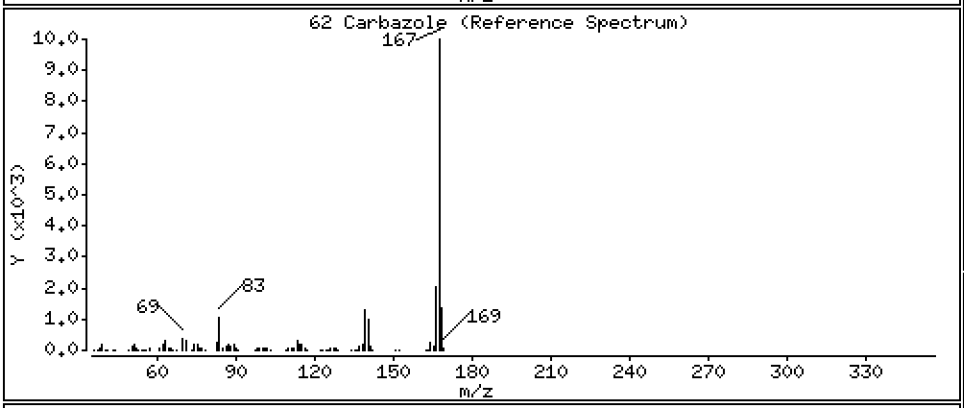
Column diameter: 0.25

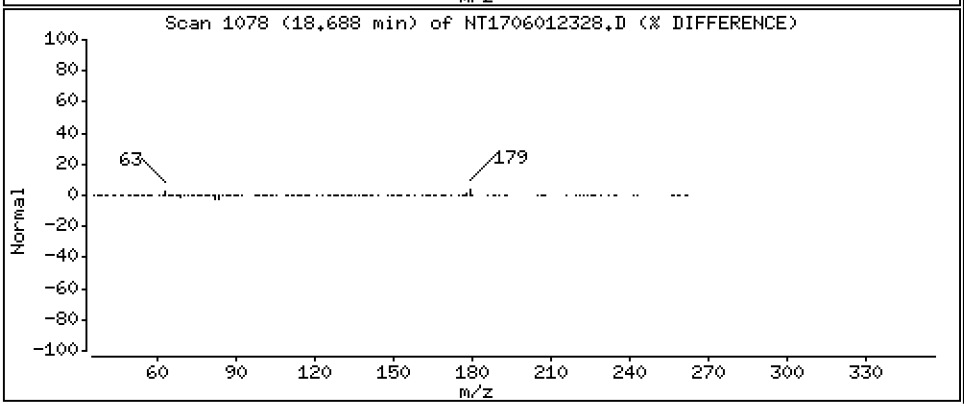
62 Carbazole

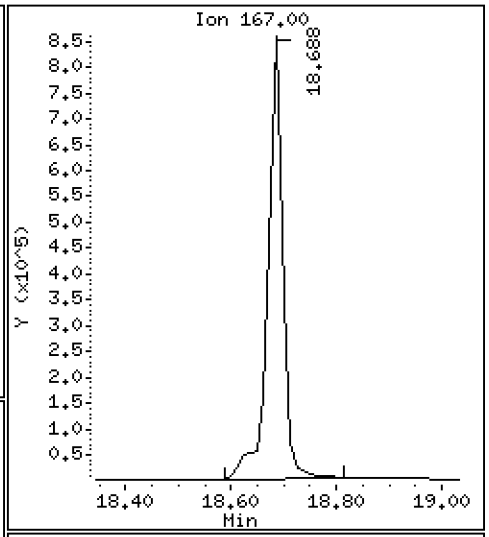
Concentration: 9.220 ug/mL

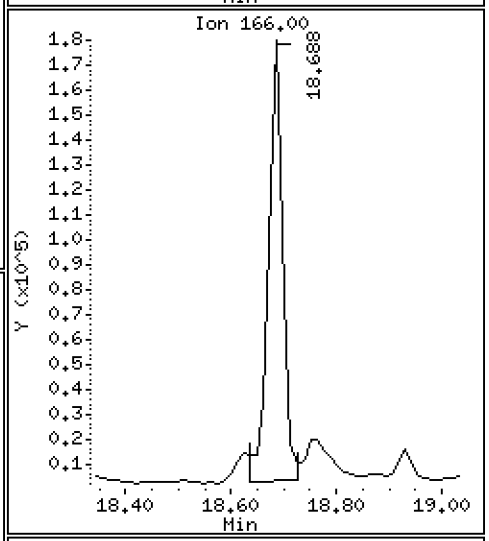


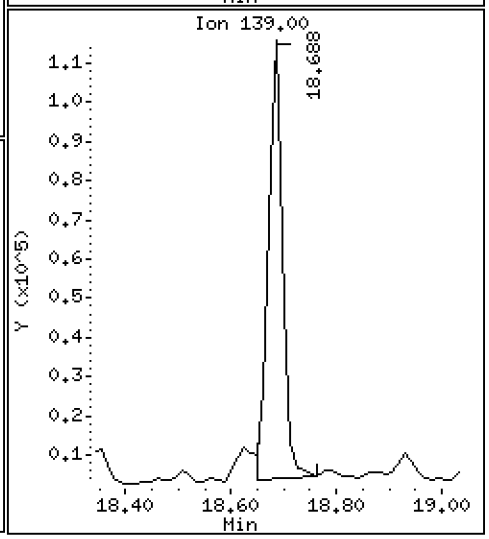












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

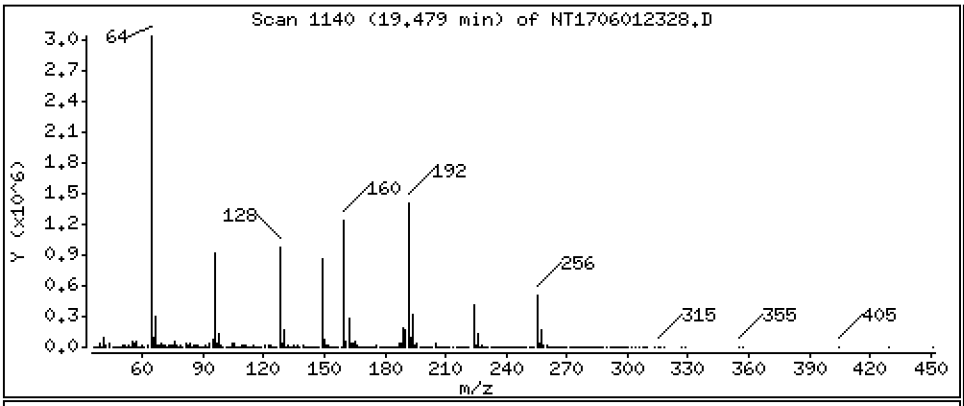
Operator: VTS

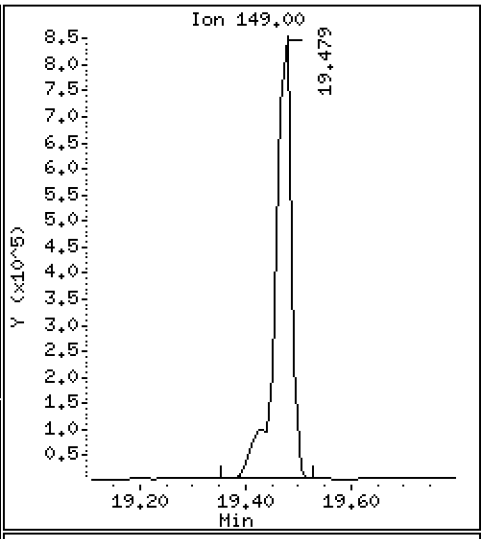
Column phase: ZB-5msi

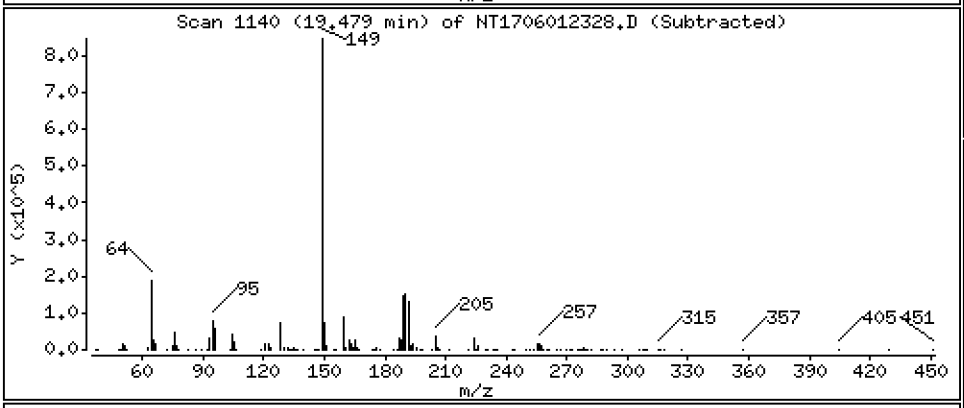
Column diameter: 0.25

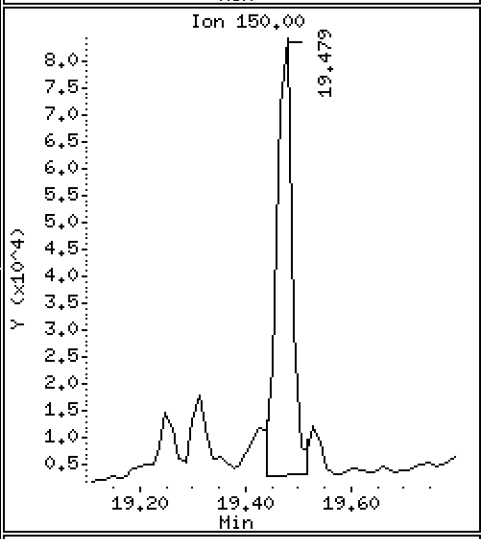
63 Di-n-butylphthalate

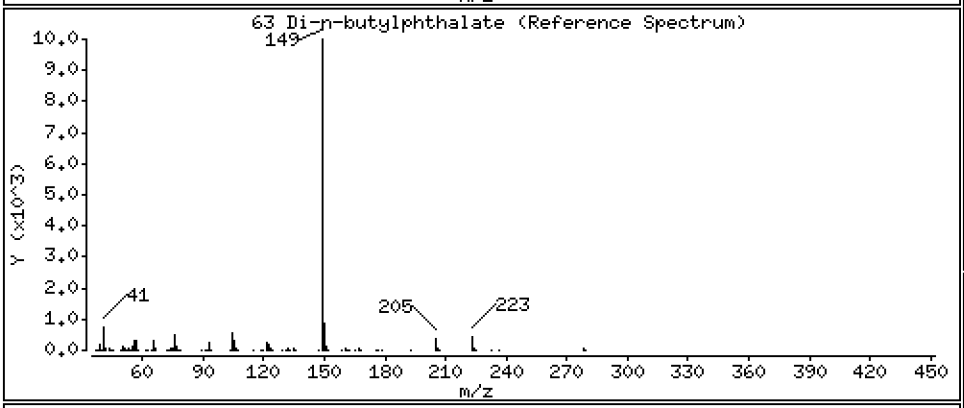
Concentration: 5.344 ug/mL

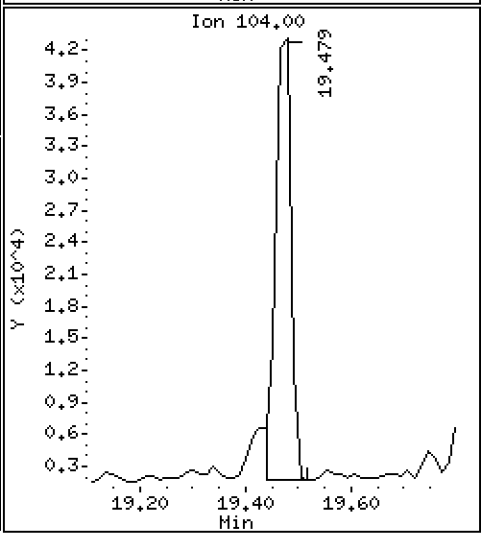


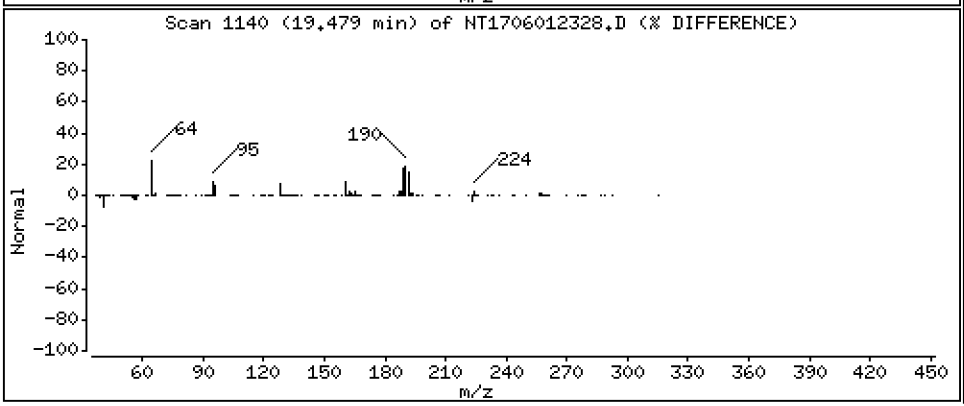












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

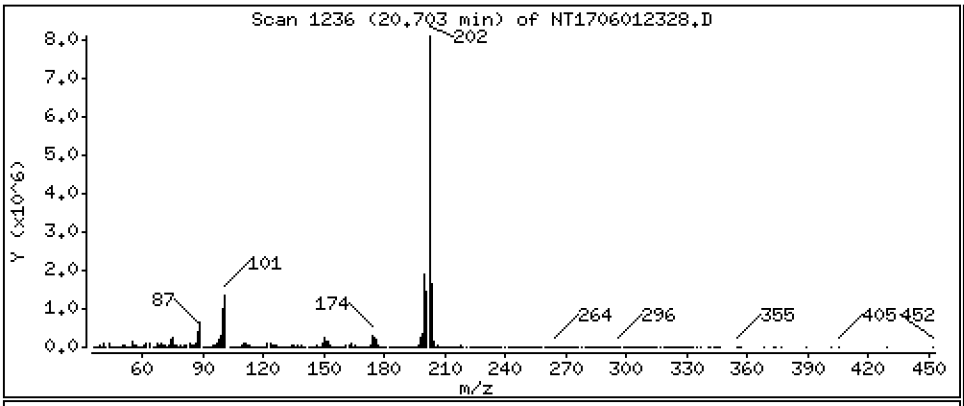
Operator: VTS

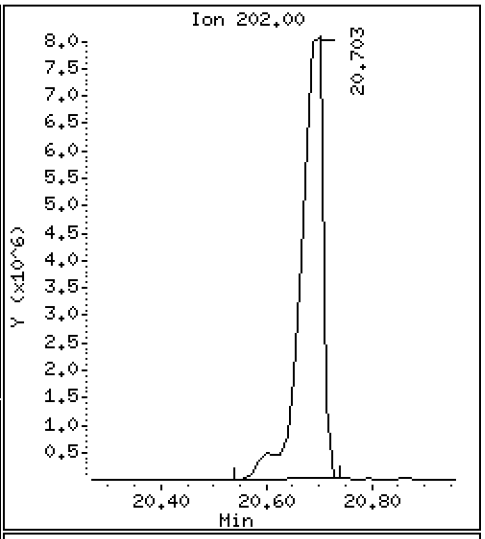
Column phase: ZB-5msi

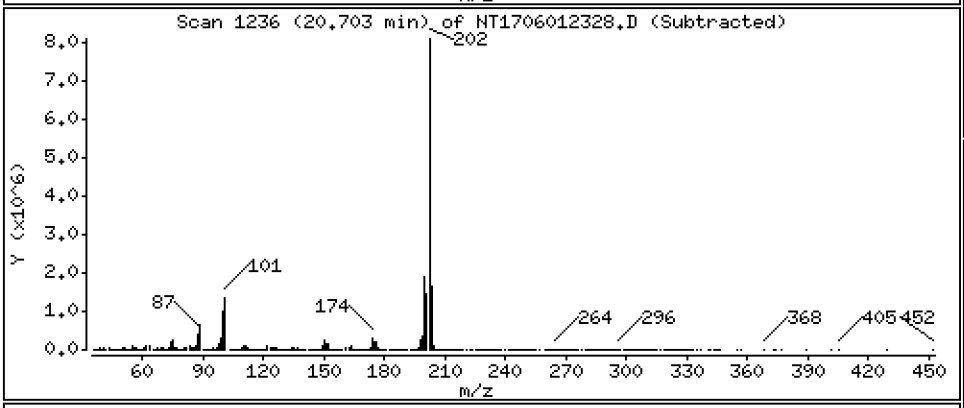
Column diameter: 0.25

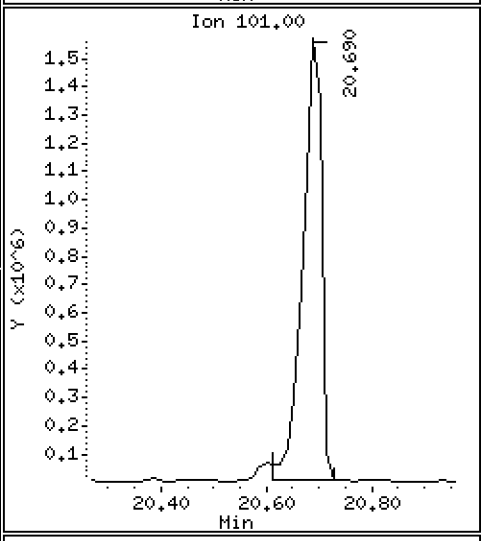
64 Fluoranthene

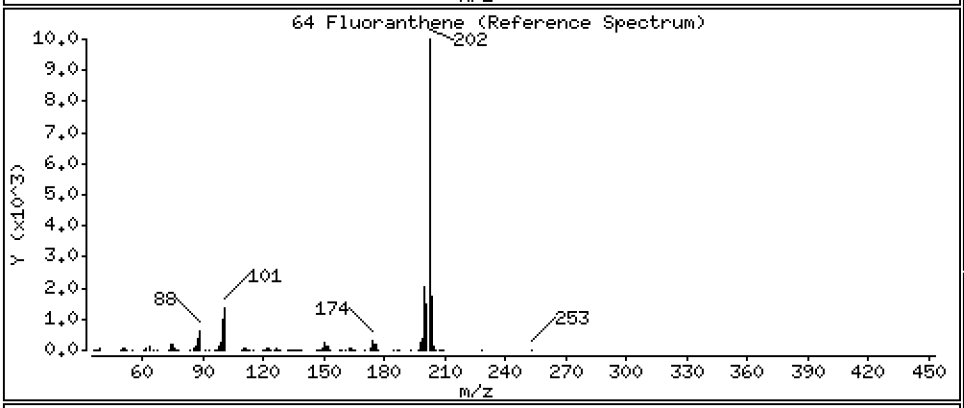
Concentration: 97.37 ug/mL

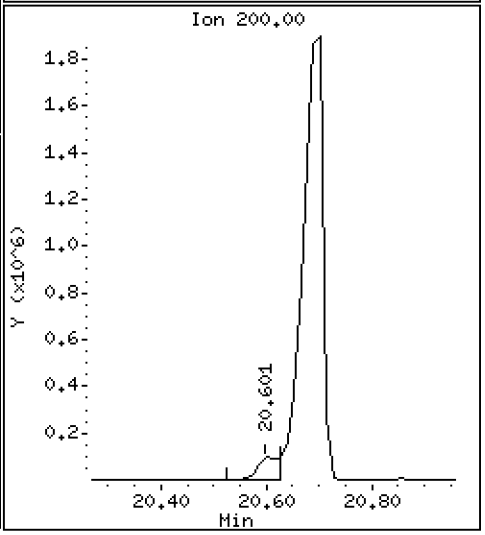


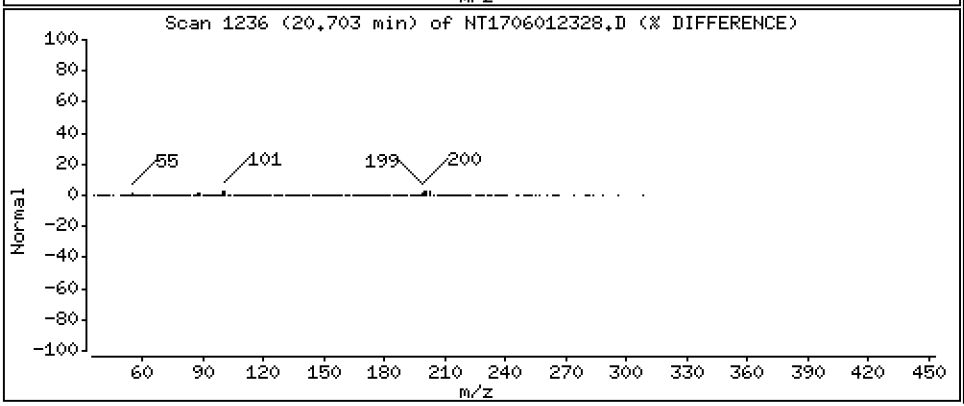












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

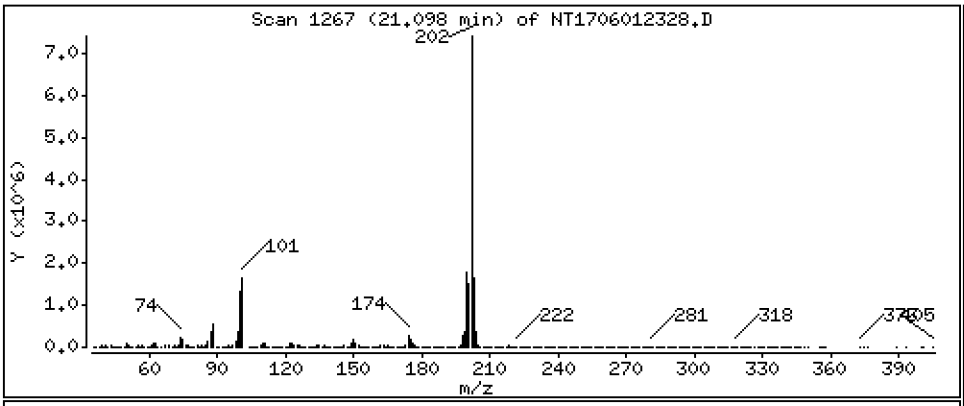
Operator: VTS

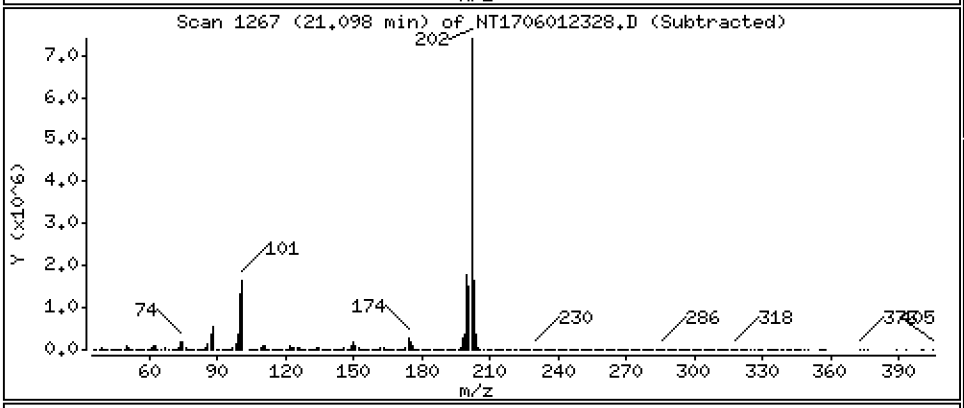
Column phase: ZB-5msi

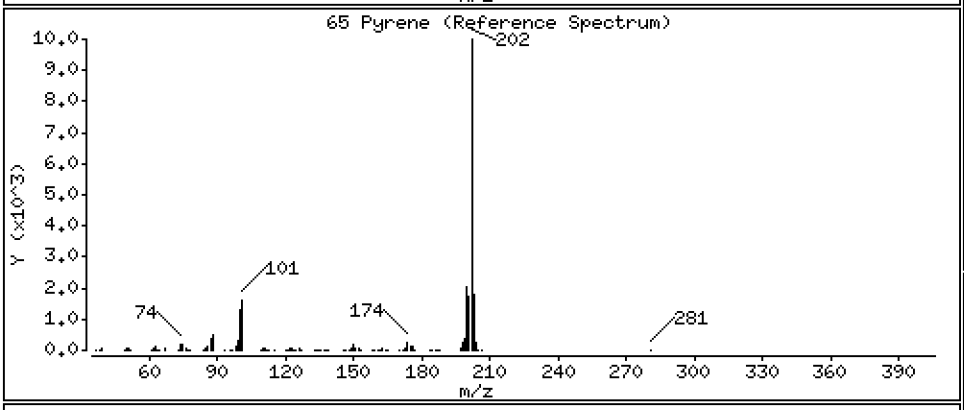
Column diameter: 0.25

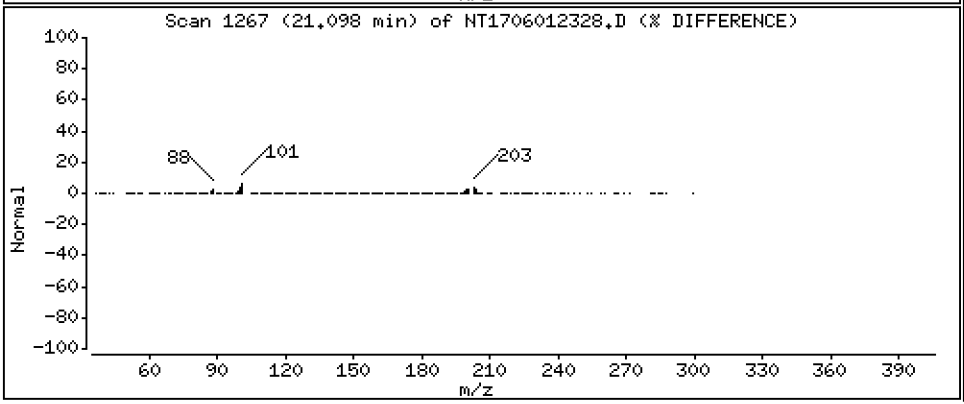
65 Pyrene

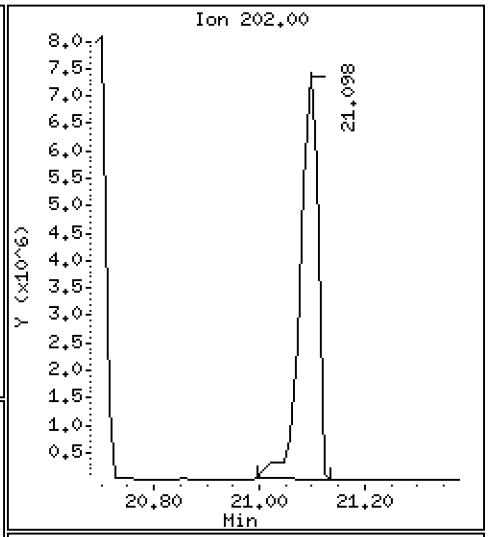
Concentration: 68.07 ug/mL

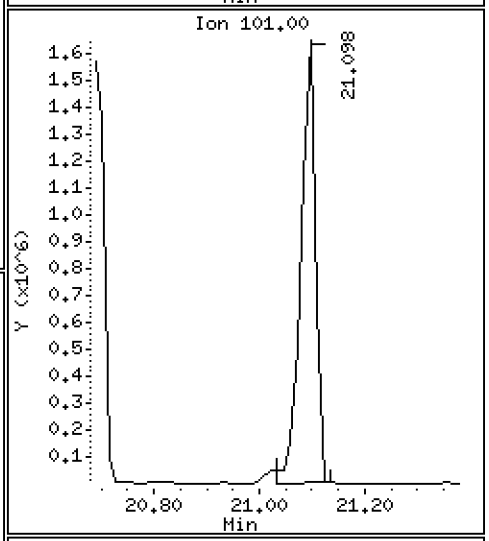


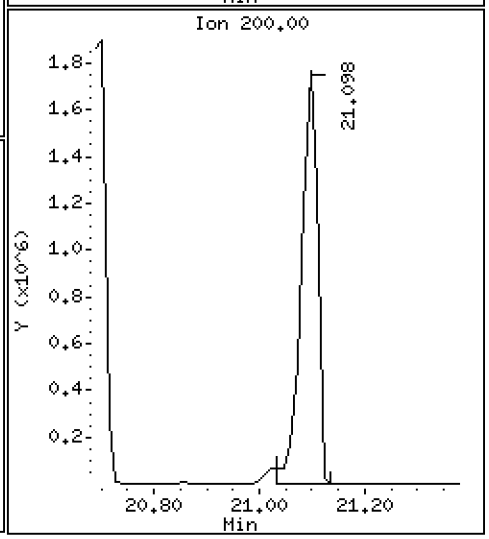












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

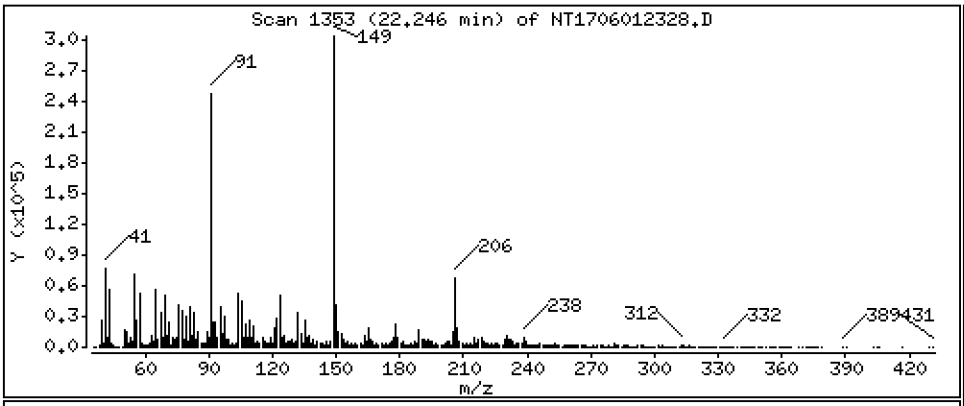
Operator: VTS

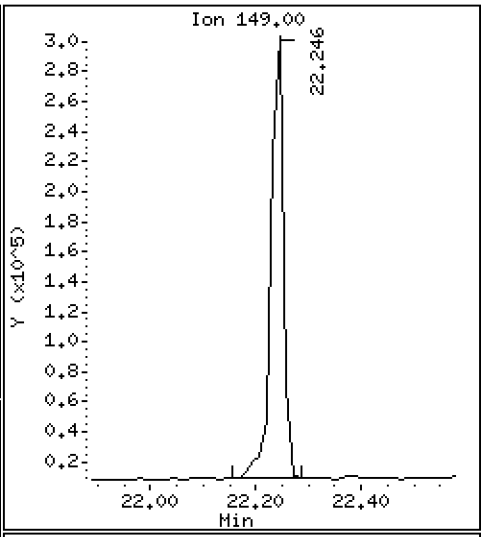
Column phase: ZB-5msi

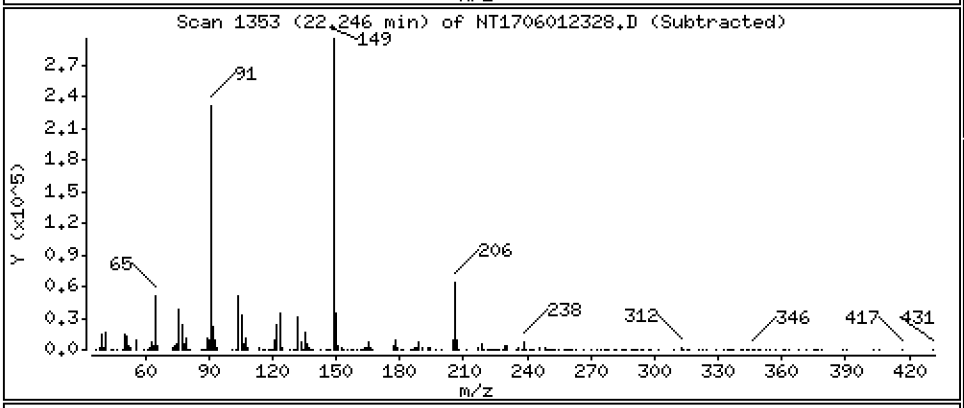
Column diameter: 0.25

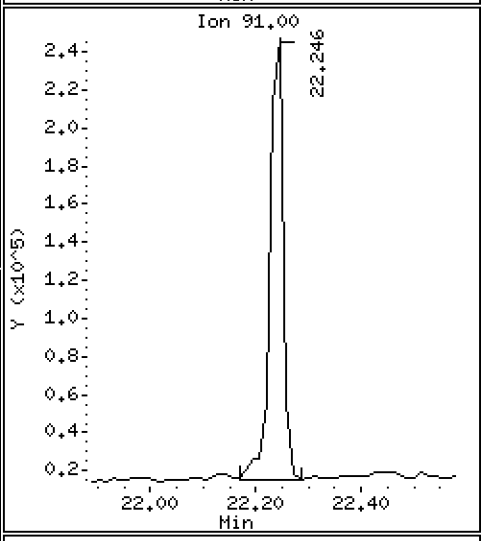
67 Butylbenzylphthalate

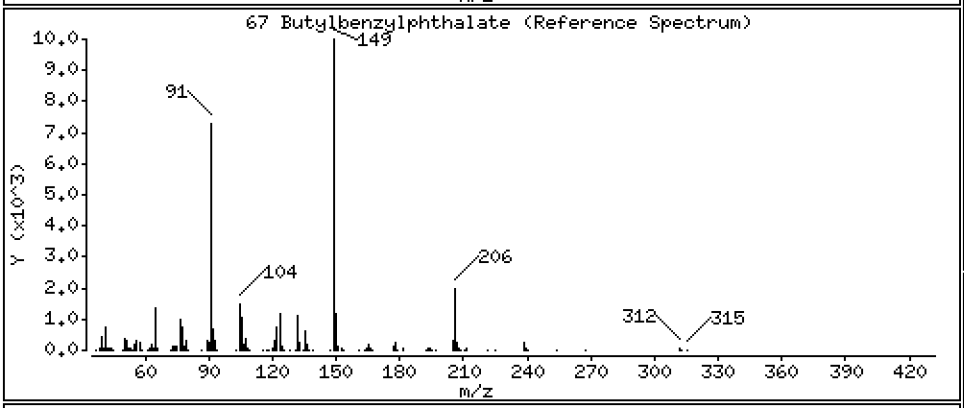
Concentration: 4.340 ug/mL

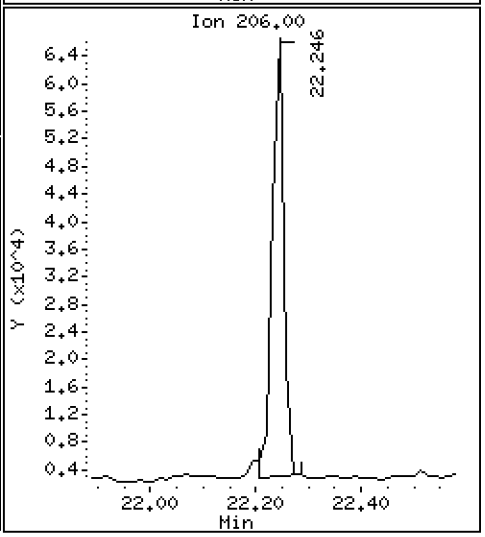


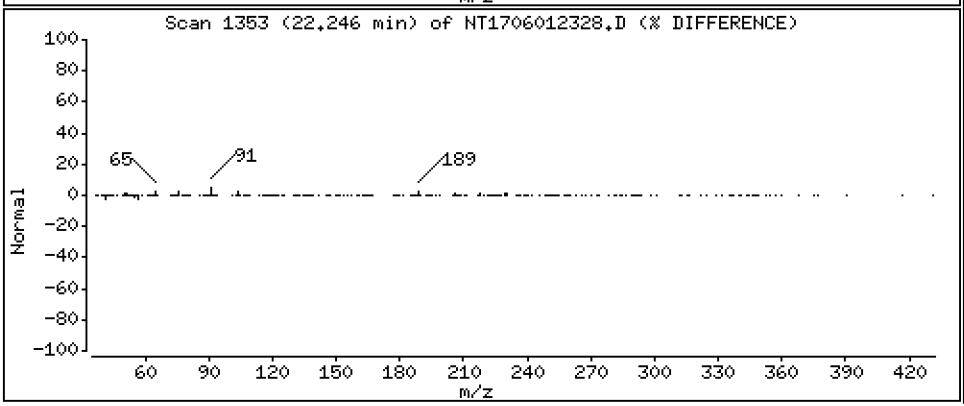












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

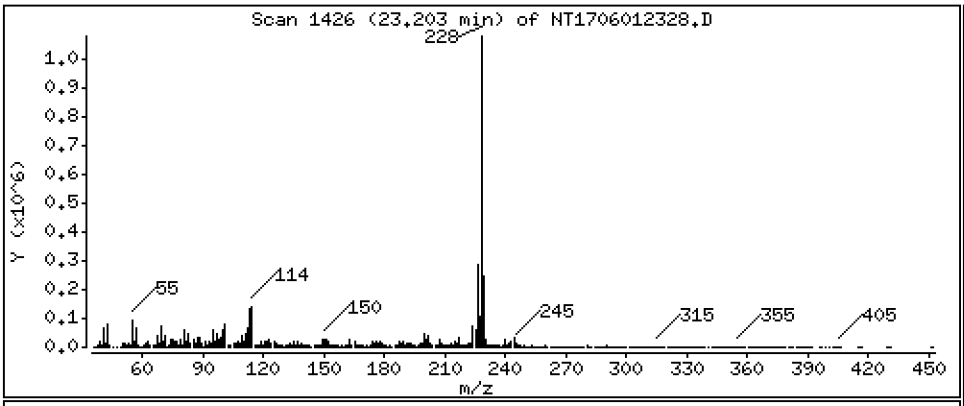
Operator: VTS

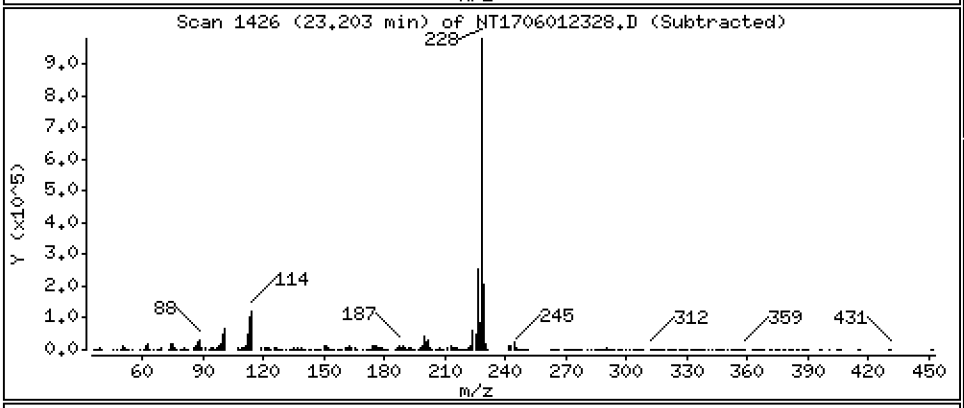
Column phase: ZB-5msi

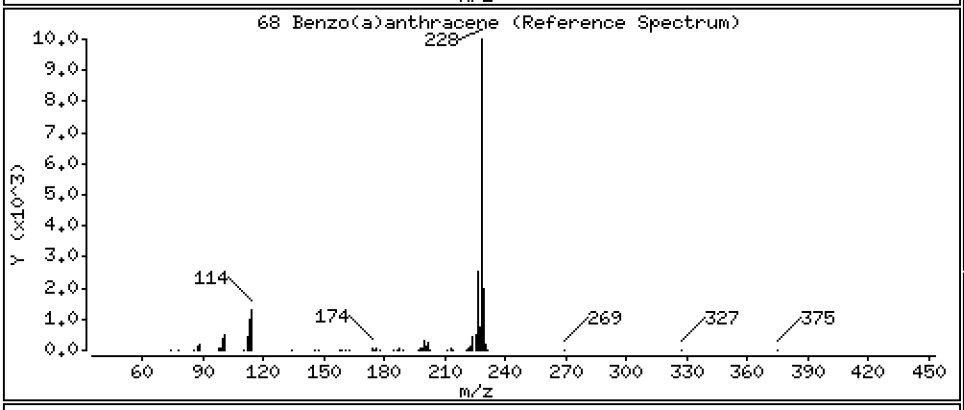
Column diameter: 0.25

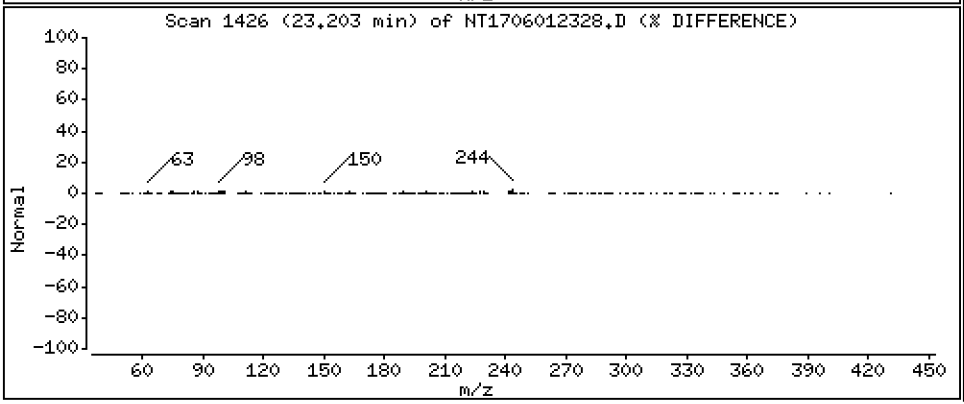
68 Benzo(a)anthracene

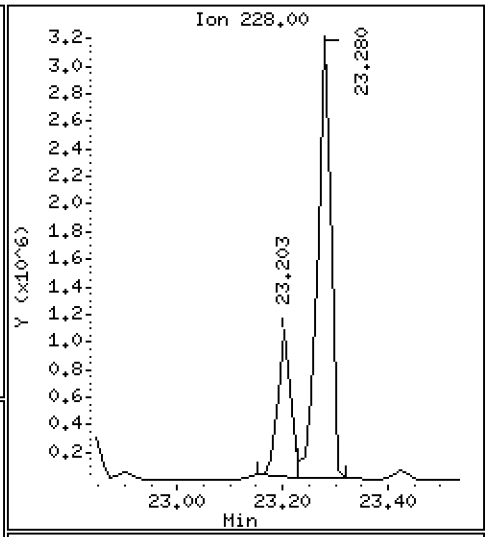
Concentration: 9.277 ug/mL

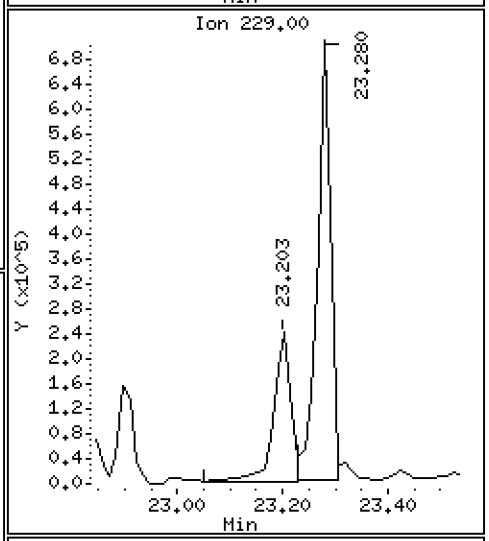


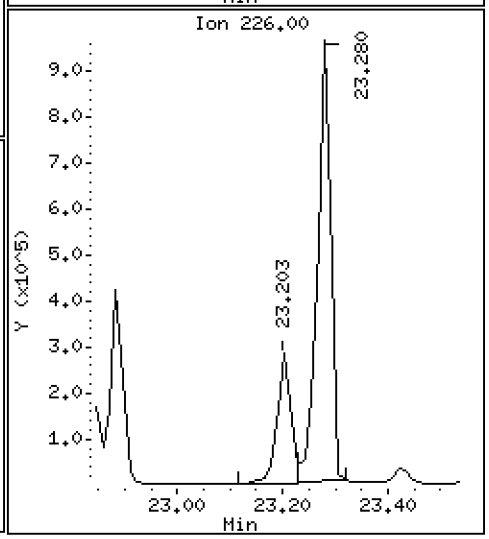












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

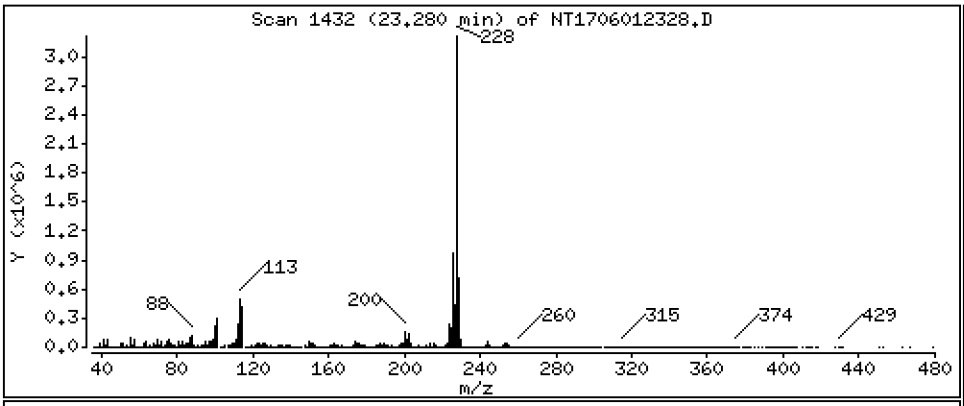
Operator: VTS

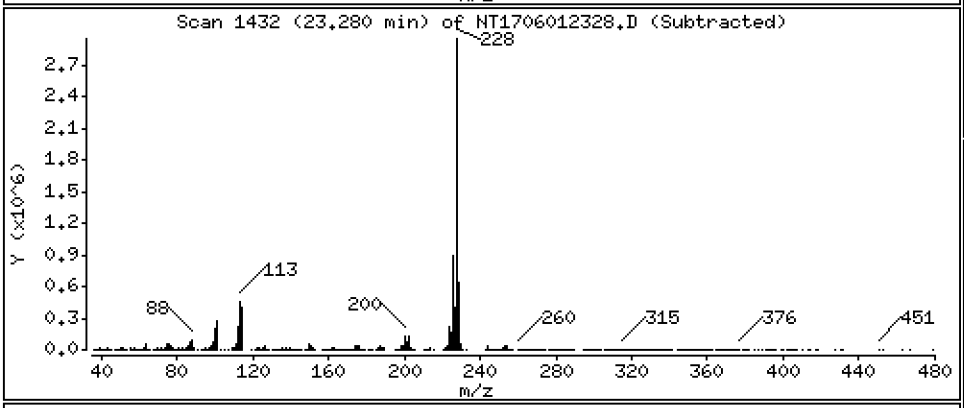
Column phase: ZB-5msi

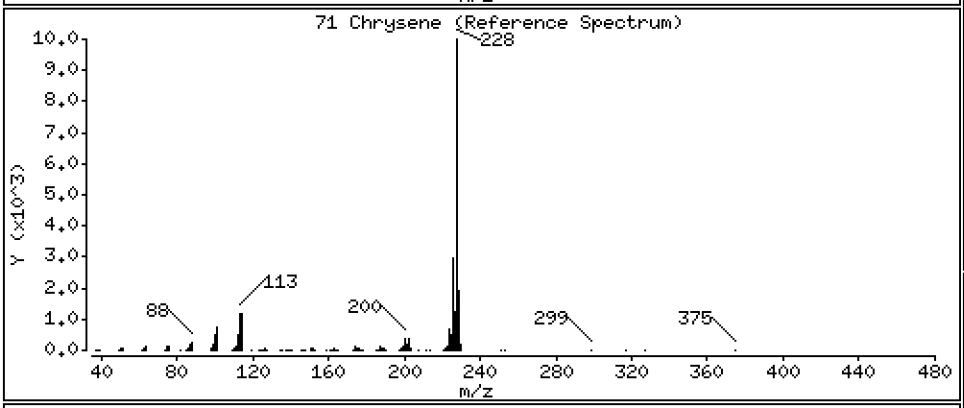
Column diameter: 0.25

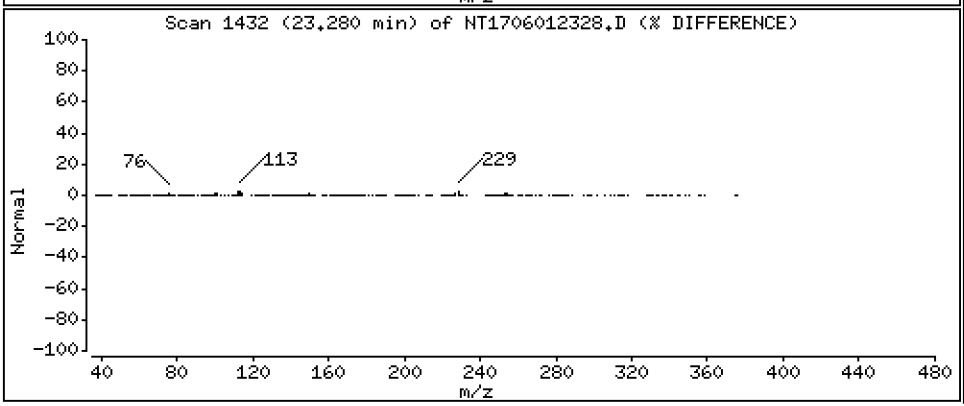
71 Chrysene

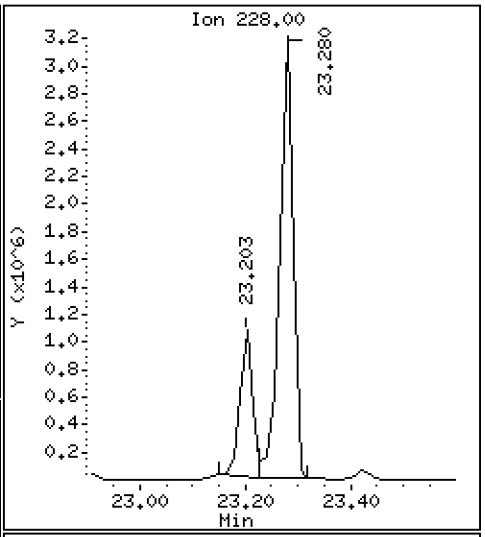
Concentration: 30.74 ug/mL

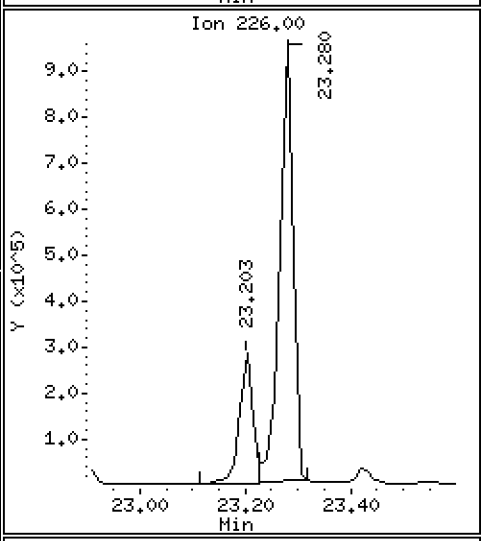


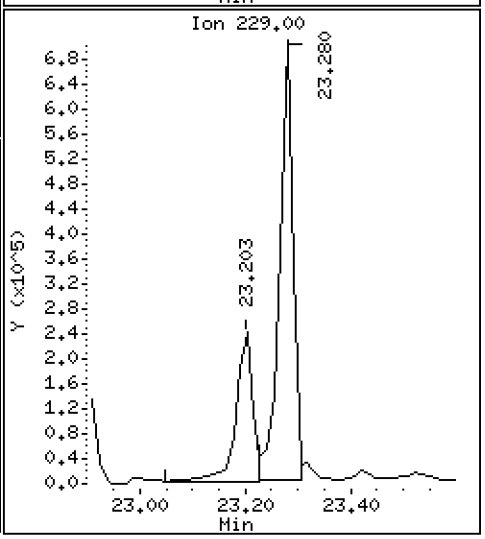












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

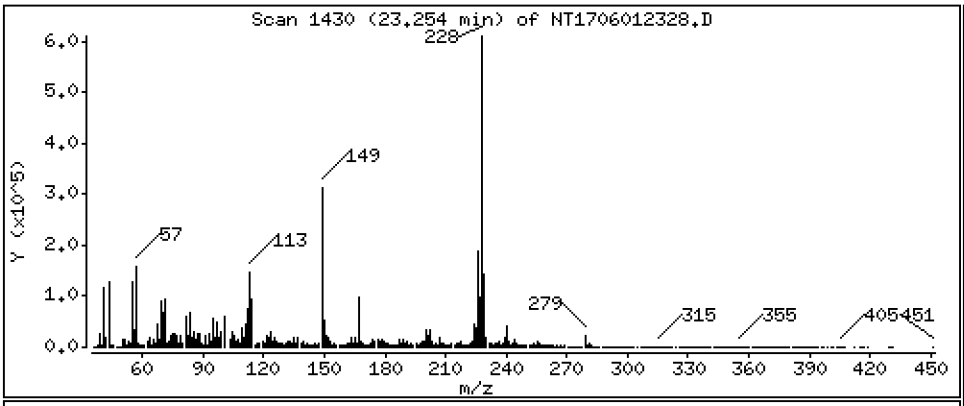
Operator: VTS

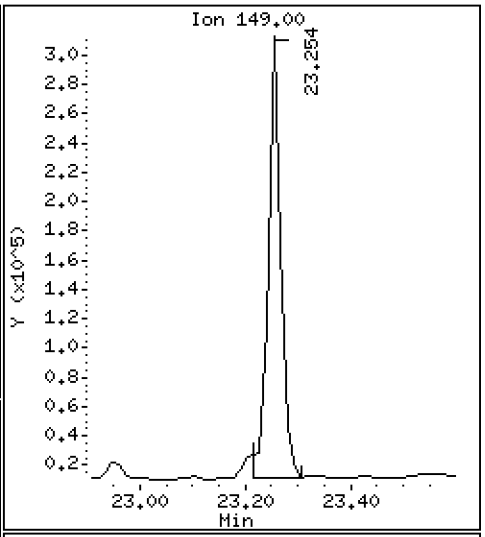
Column phase: ZB-5msi

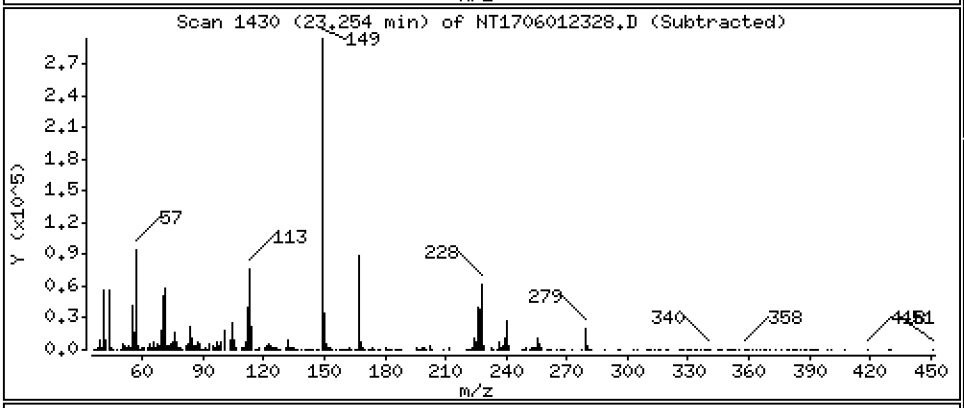
Column diameter: 0.25

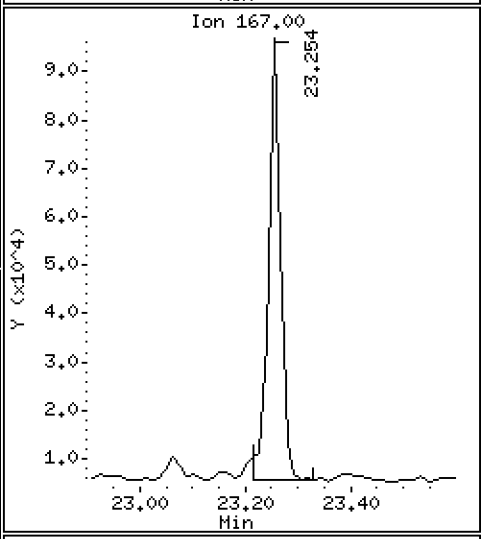
72 bis(2-Ethylhexyl)phthalate

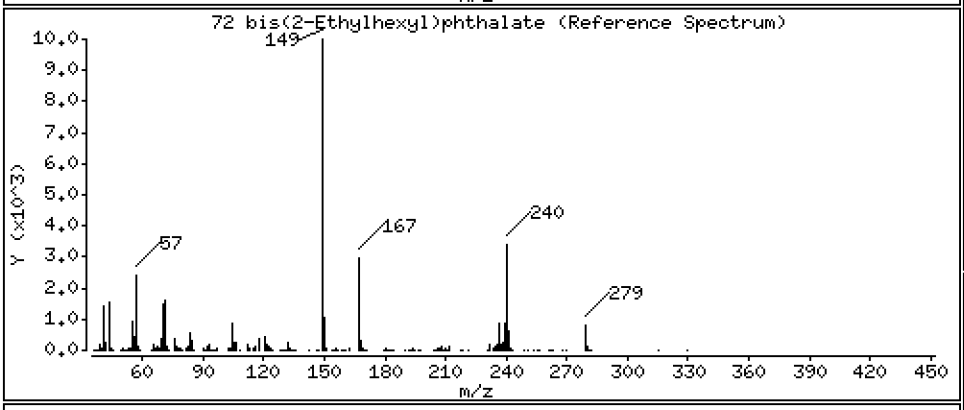
Concentration: 3.183 ug/mL

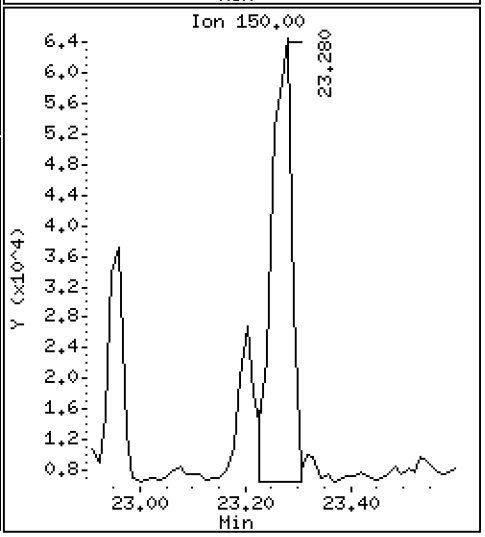


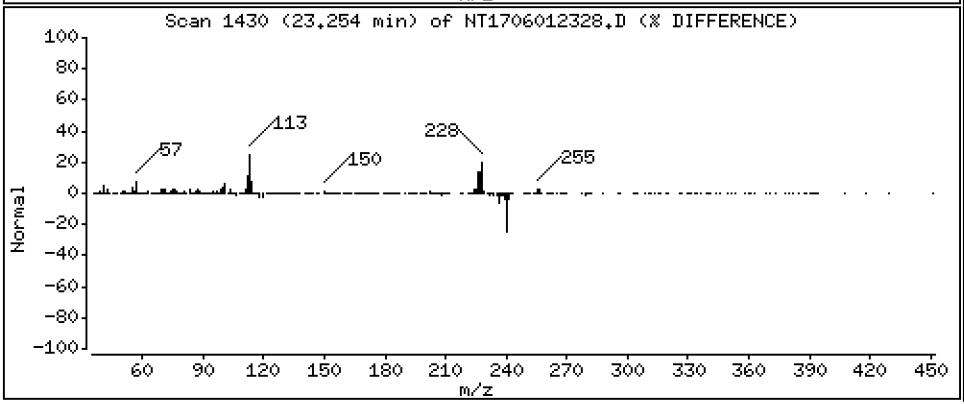












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

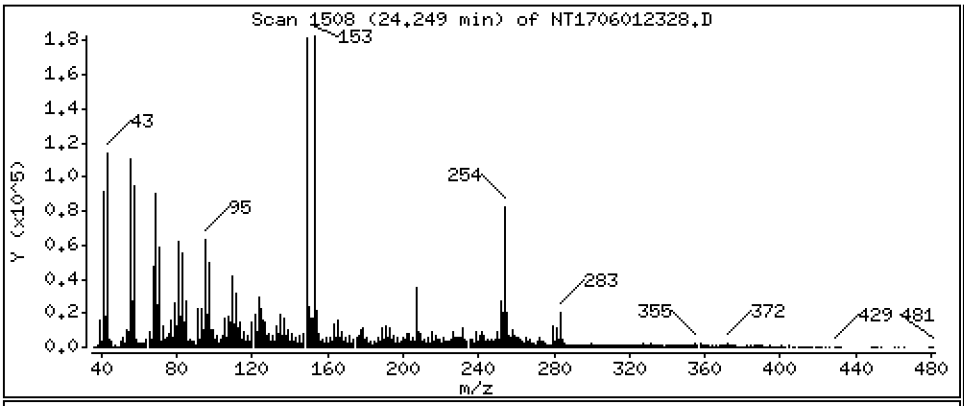
Operator: VTS

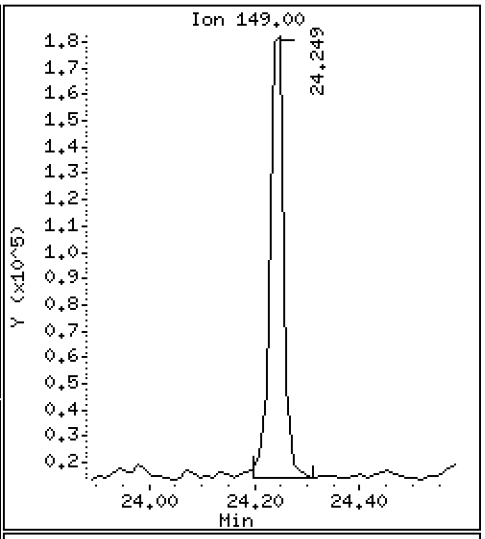
Column phase: ZB-5msi

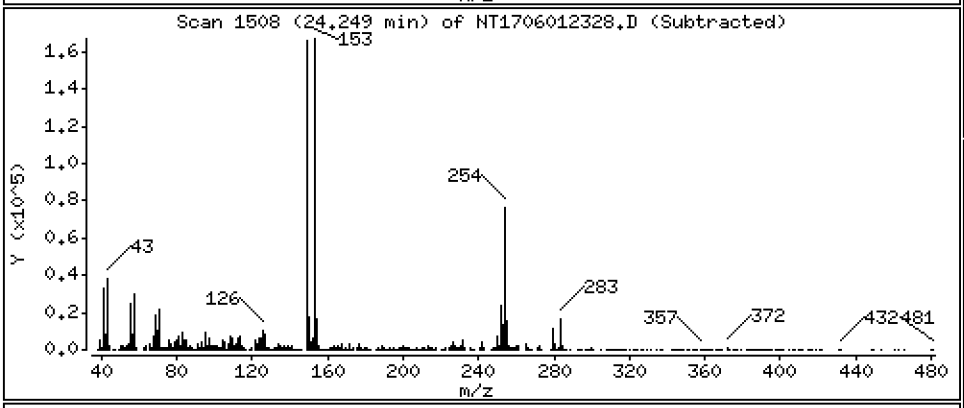
Column diameter: 0.25

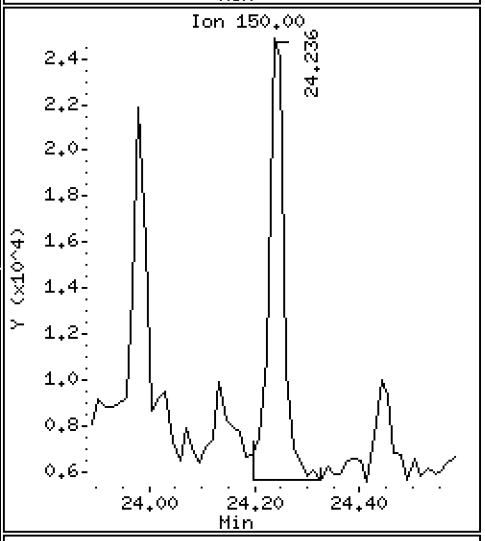
73 Di-n-octylphthalate

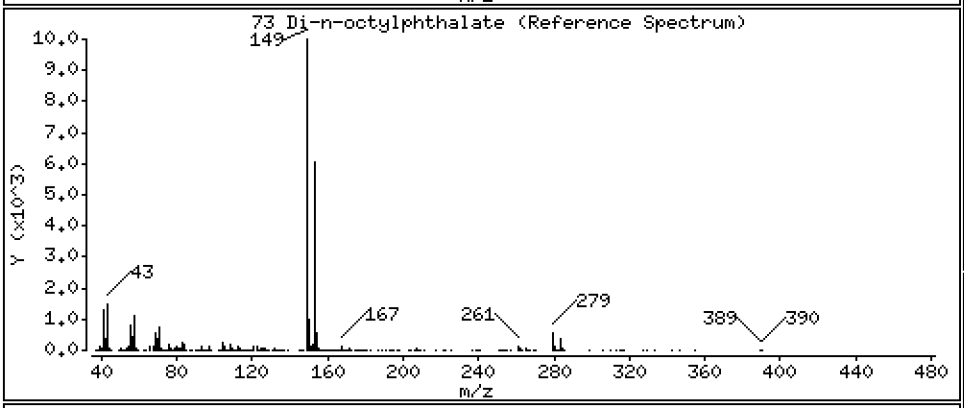
Concentration: 1.212 ug/mL

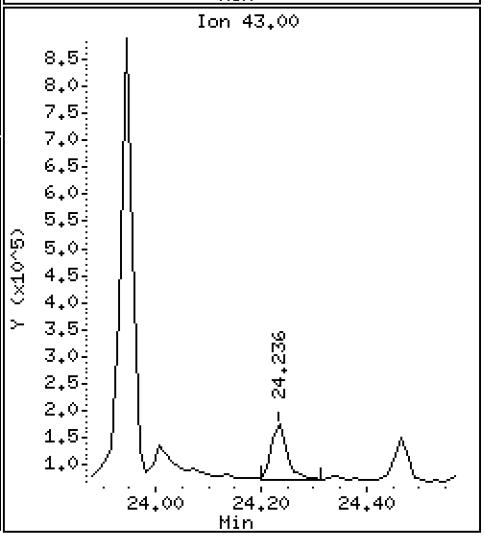


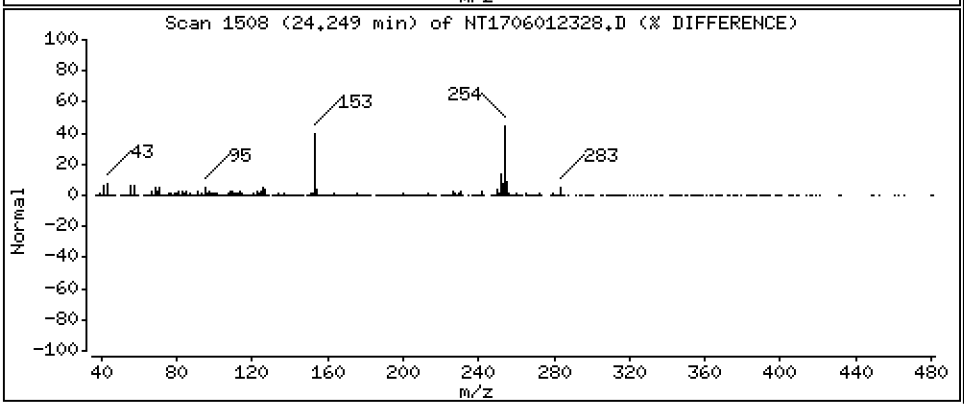












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

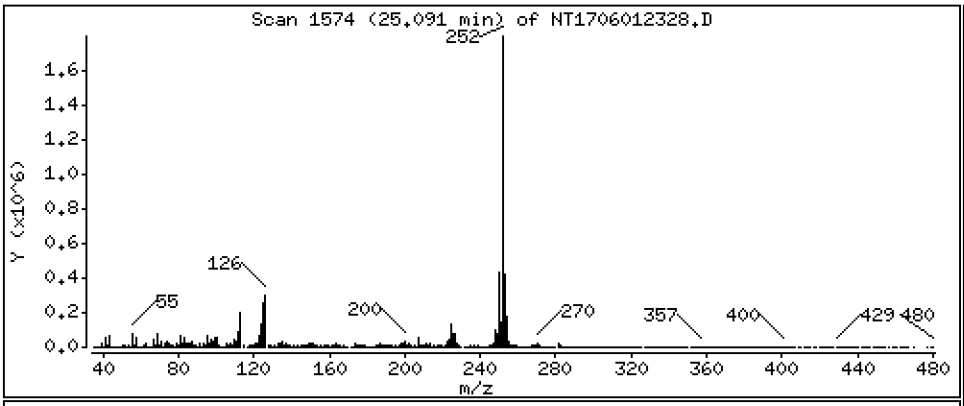
Operator: VTS

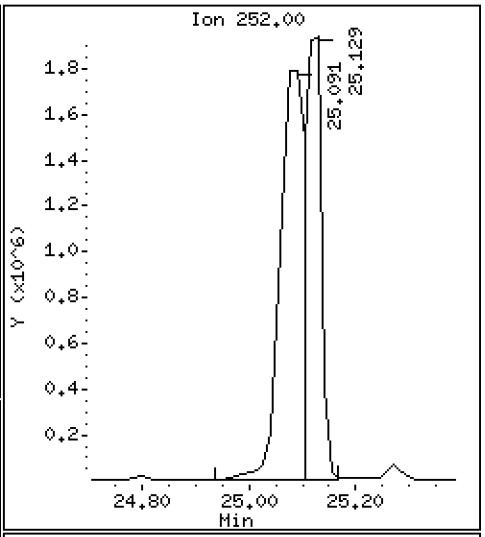
Column phase: ZB-5msi

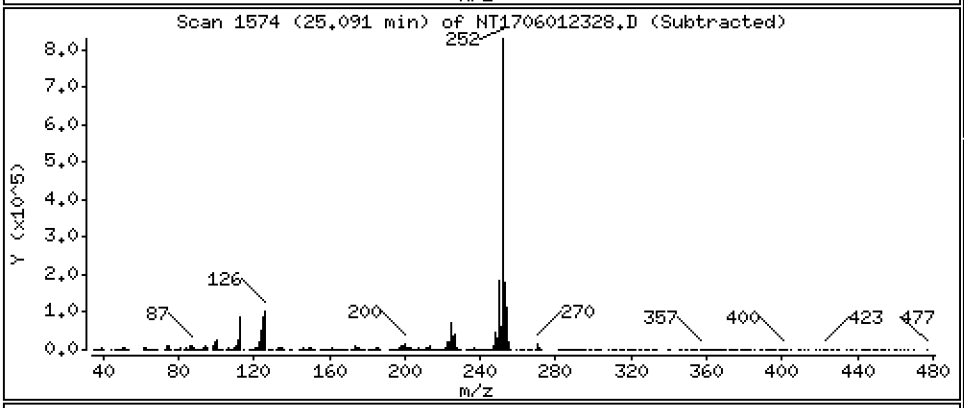
Column diameter: 0.25

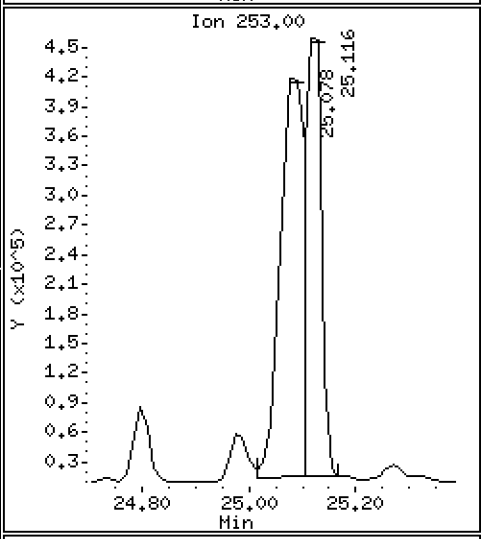
74 Benzo(b)fluoranthene

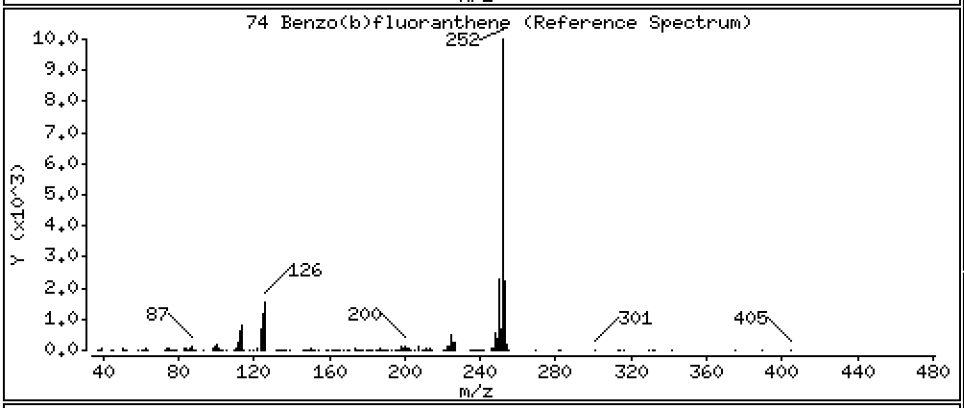
Concentration: 21.35 ug/mL

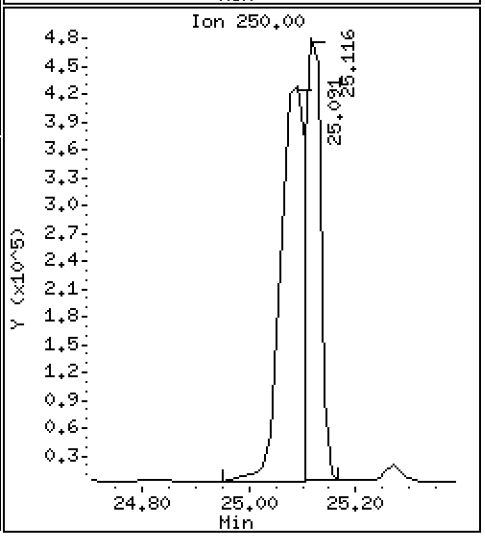


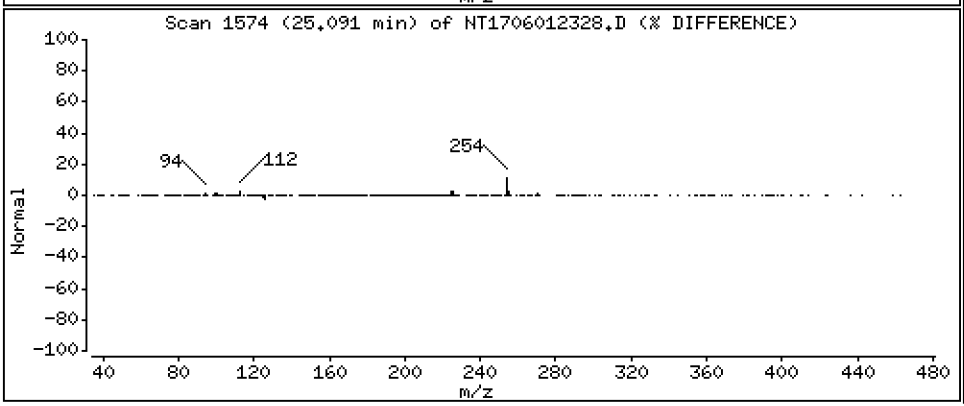












Date : 02-JUN-2023 04:48

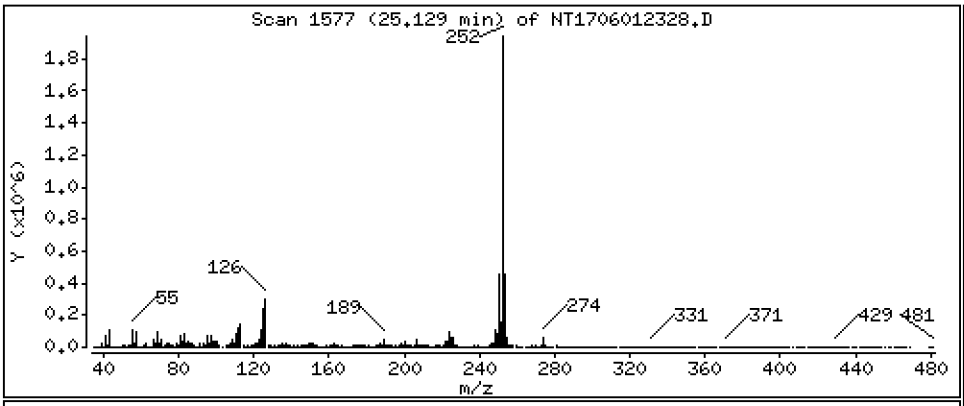
Client ID: Instrument: nt17.i

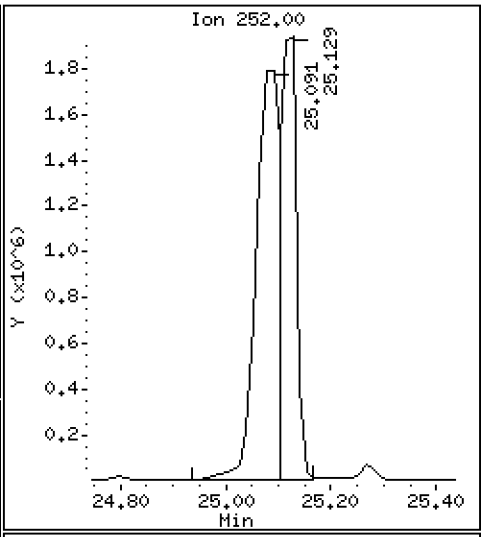
Sample Info: BLE0148-MS1

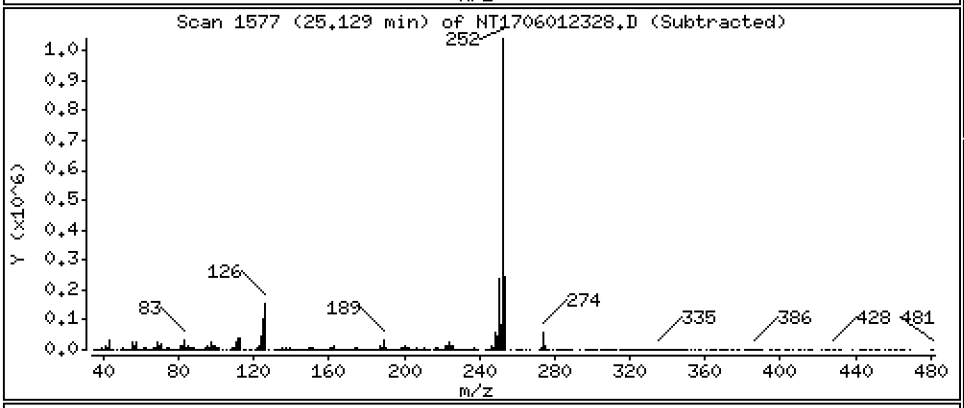
Operator: VTS

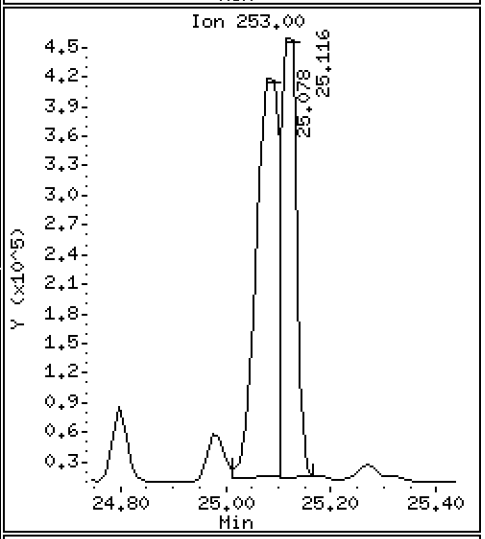
Column phase: ZB-5msi Column diameter: 0.25

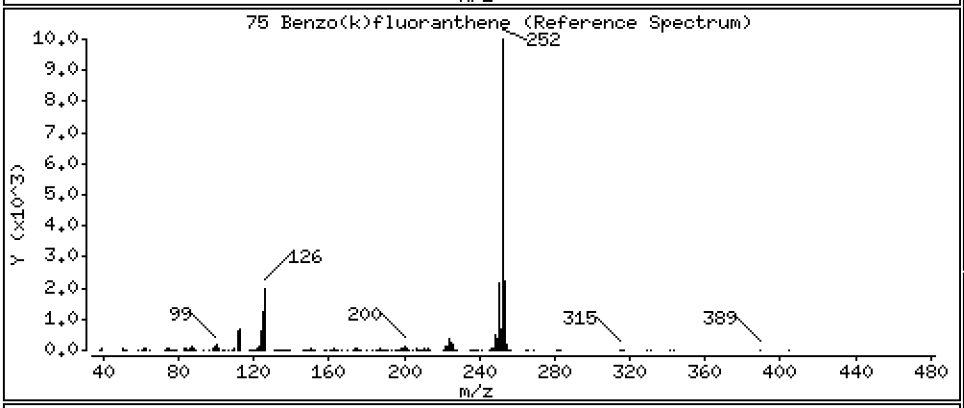
75 Benzo(k)fluoranthene Concentration: 17.50 ug/mL

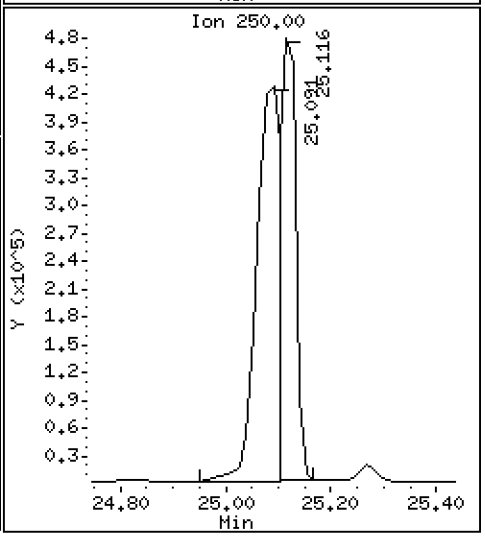


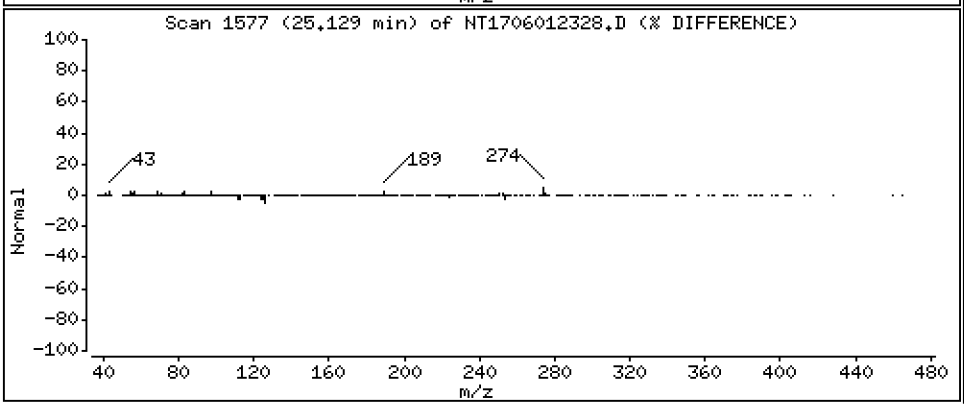












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

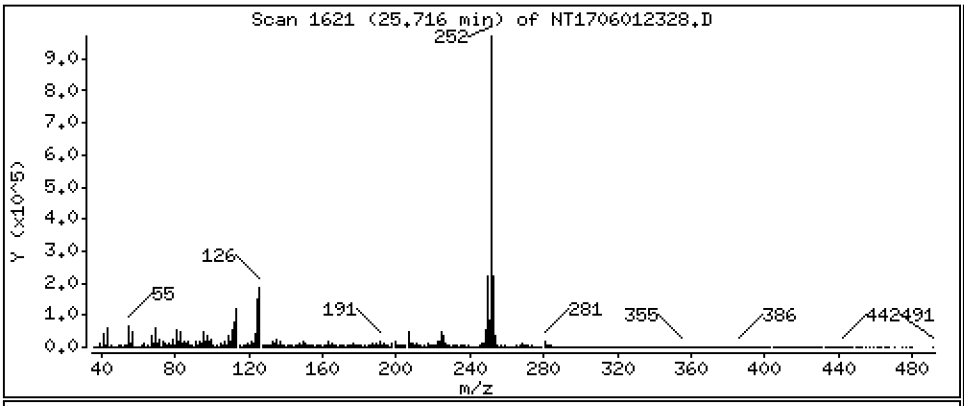
Operator: VTS

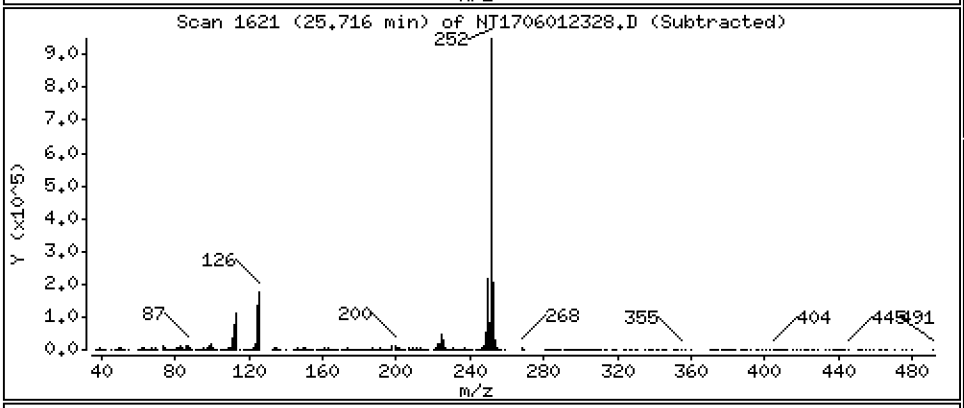
Column phase: ZB-5msi

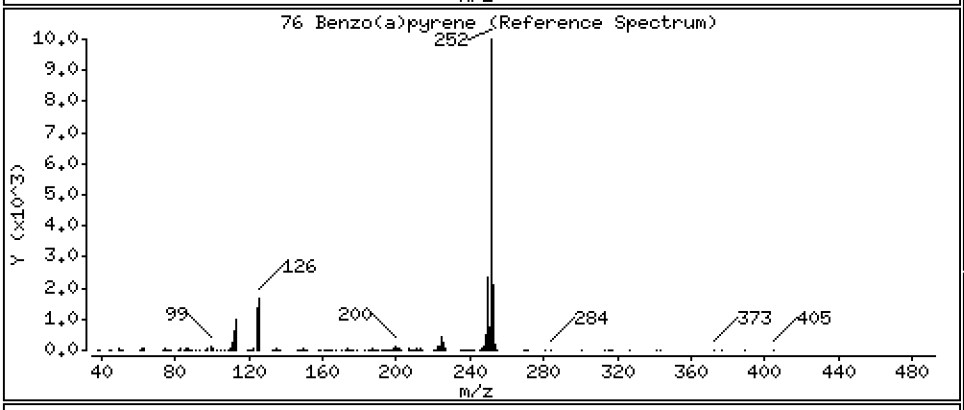
Column diameter: 0.25

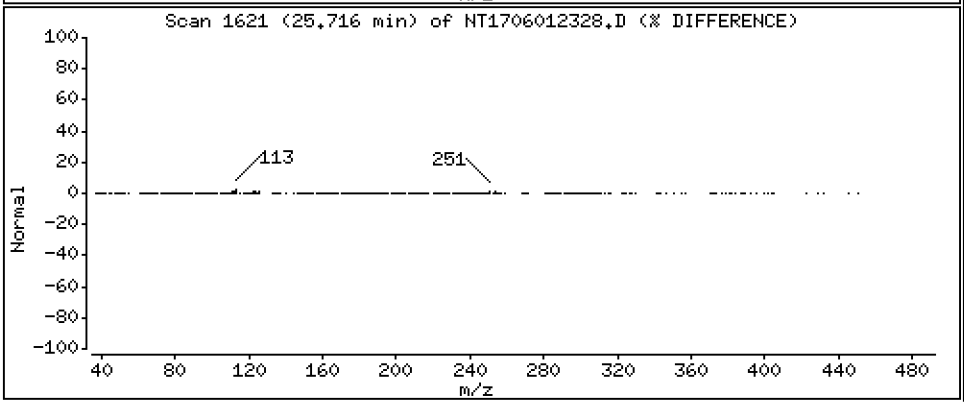
76 Benzo(a)pyrene

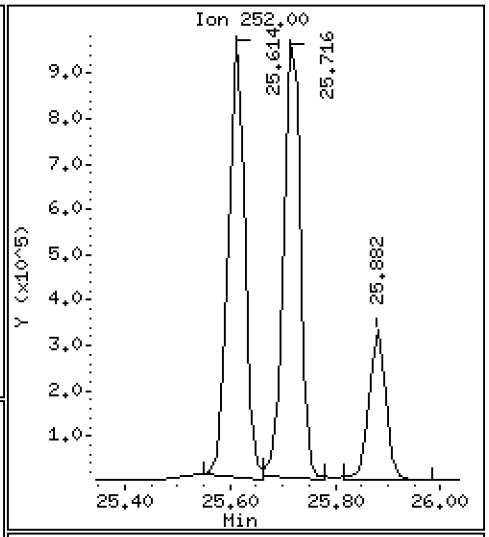
Concentration: 10.53 ug/mL

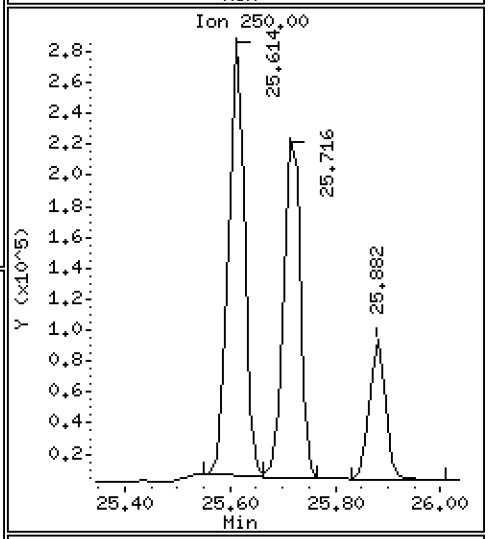


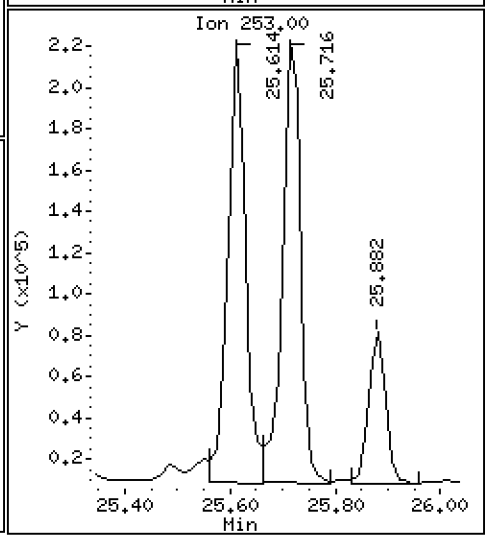












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

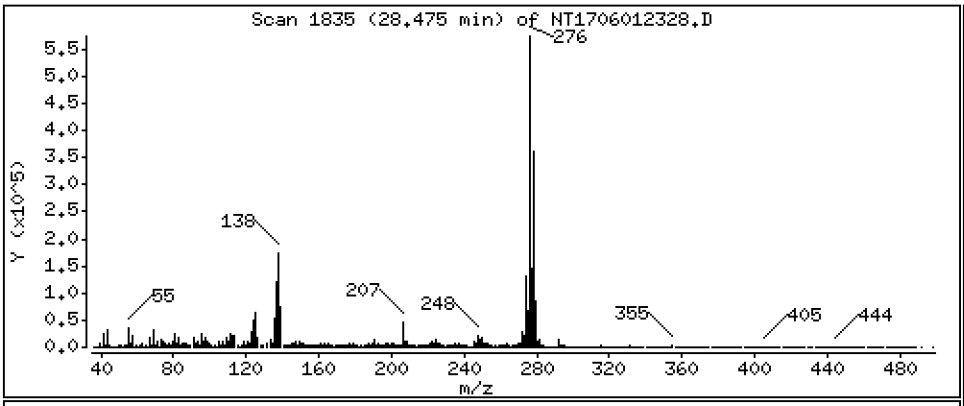
Operator: VTS

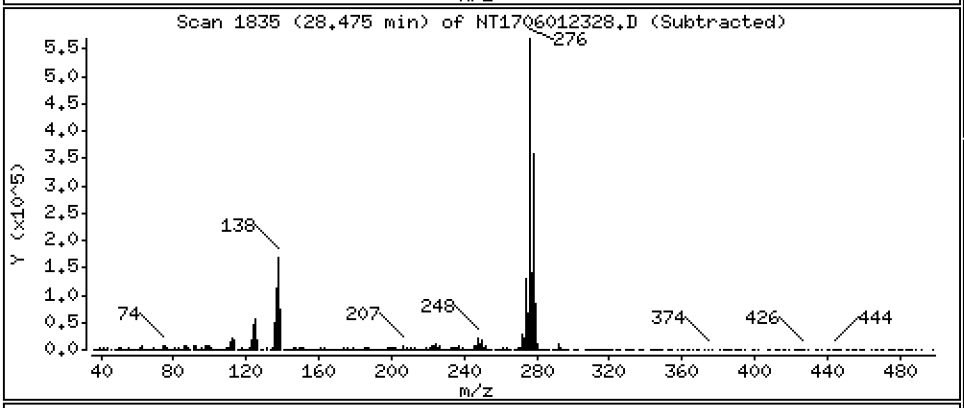
Column phase: ZB-5msi

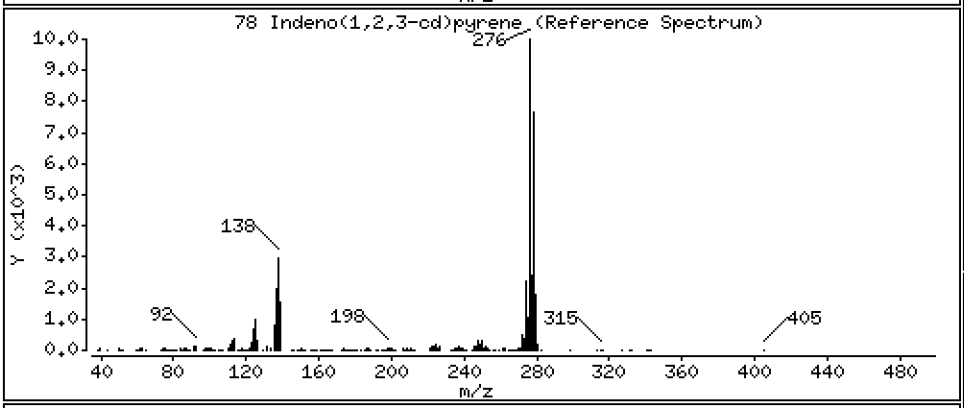
Column diameter: 0.25

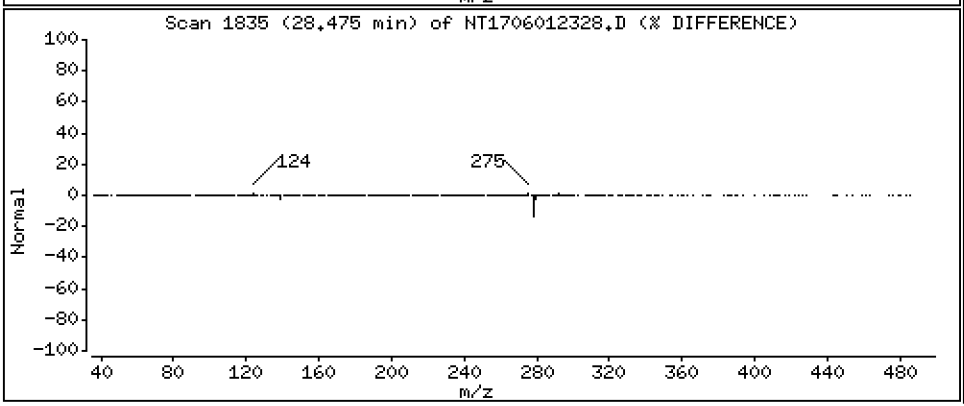
78 Indeno(1,2,3-cd)pyrene

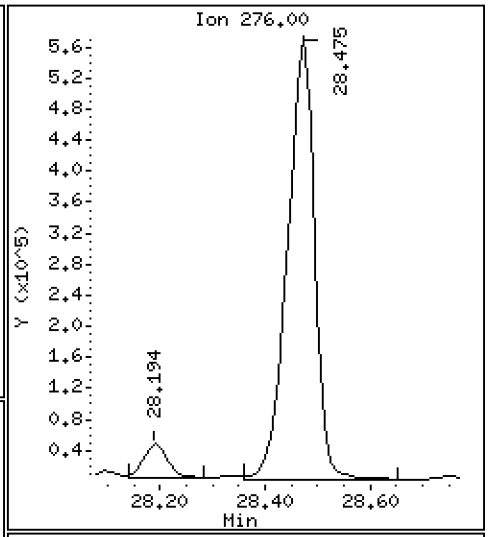
Concentration: 8.533 ug/mL

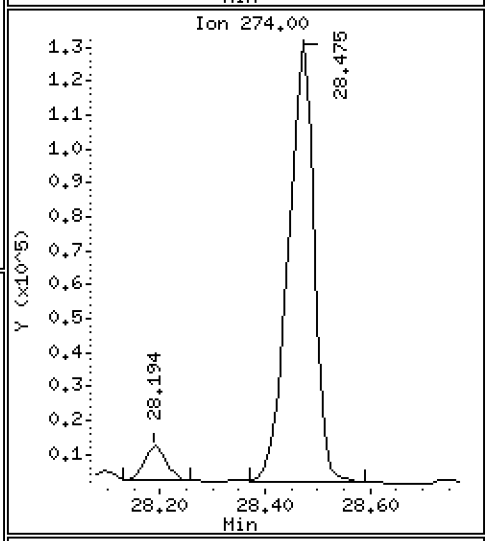


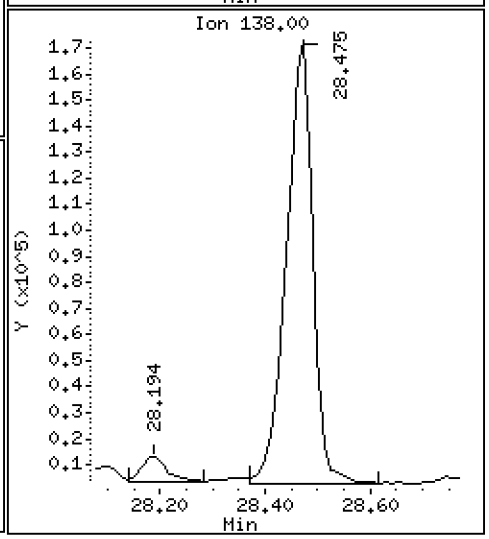












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

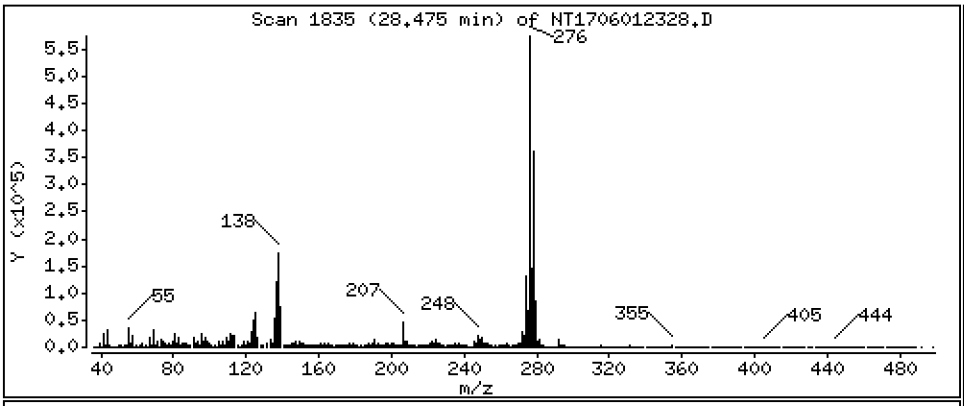
Operator: VTS

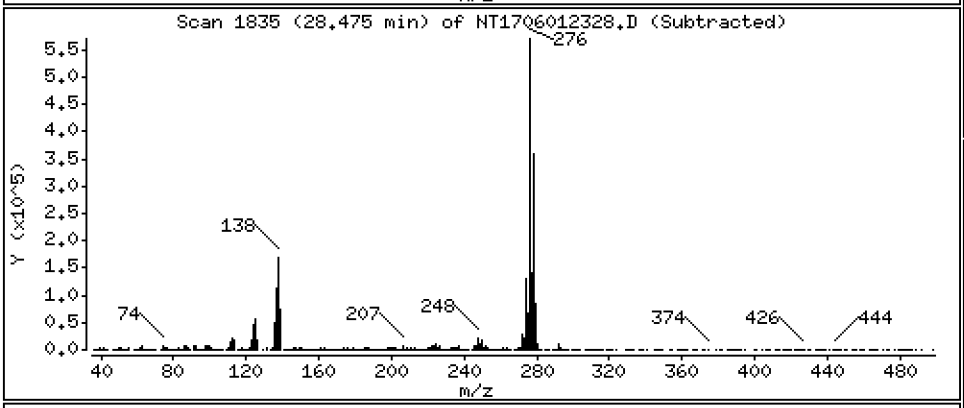
Column phase: ZB-5msi

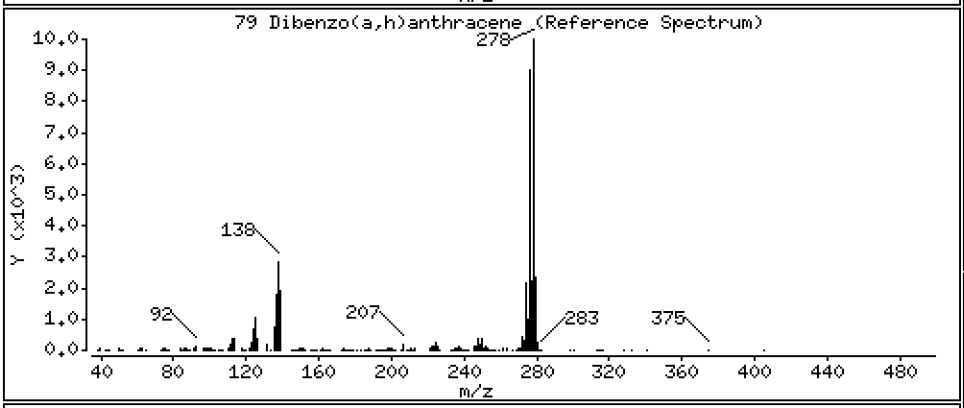
Column diameter: 0.25

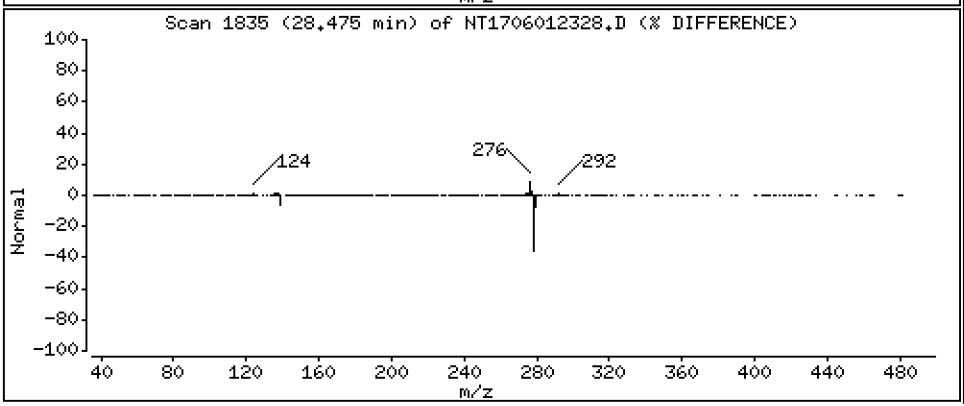
79 Dibenzo(a,h)anthracene

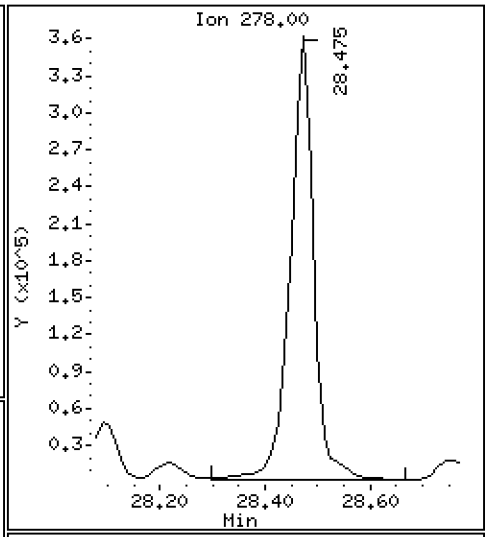
Concentration: 5.627 ug/mL

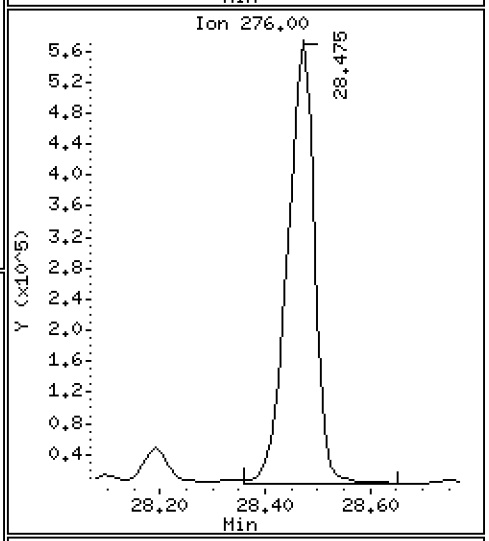


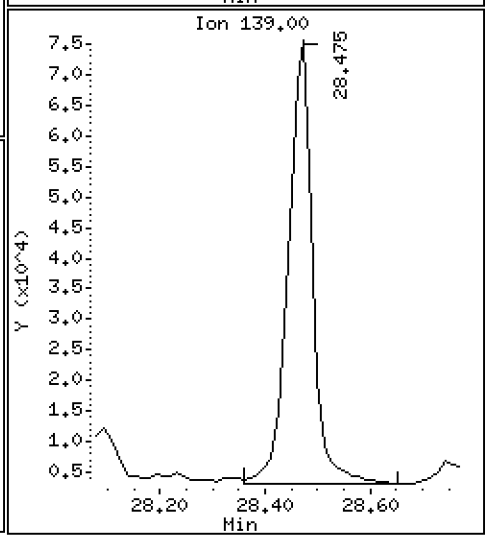












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

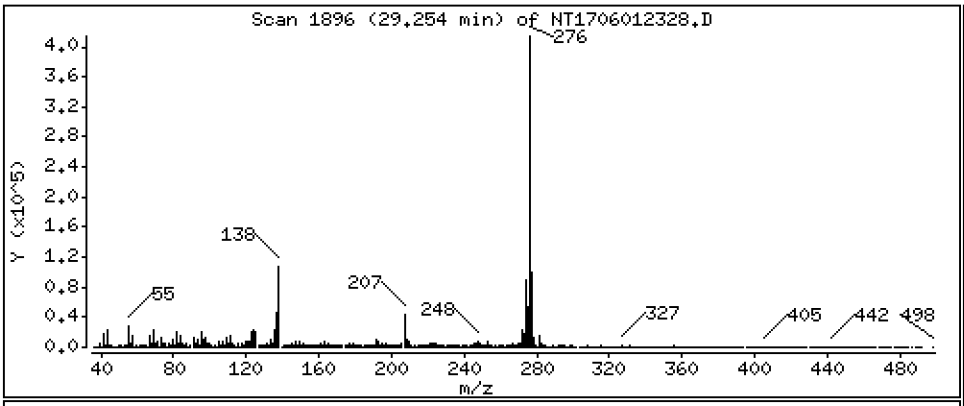
Operator: VTS

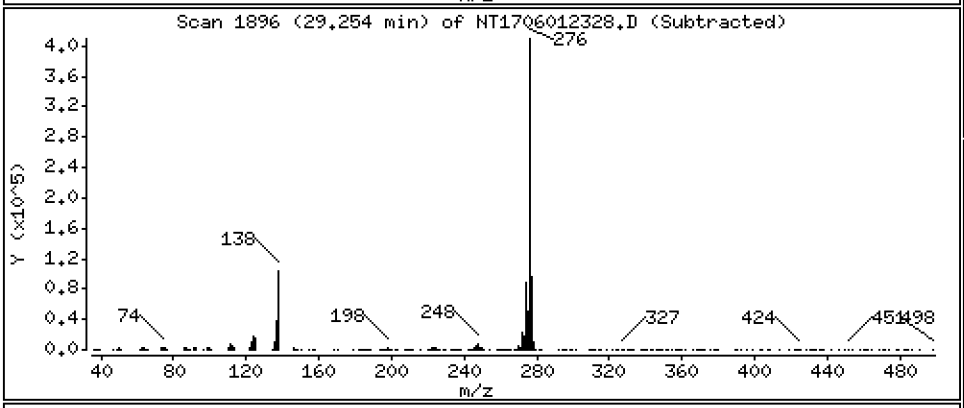
Column phase: ZB-5msi

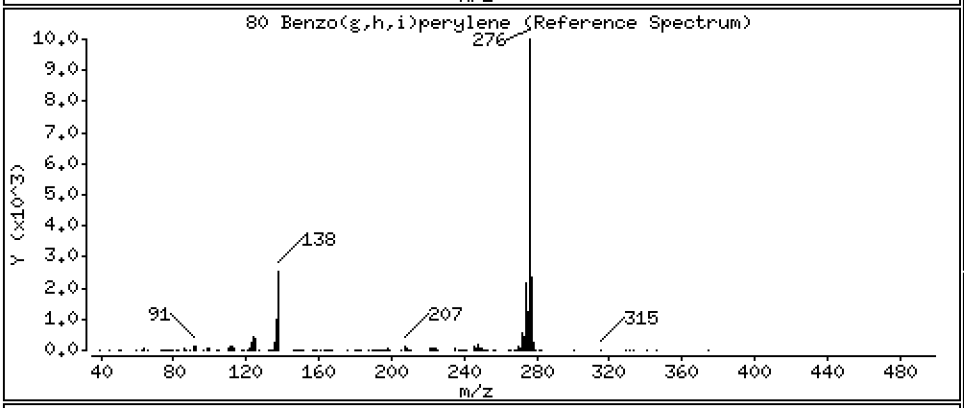
Column diameter: 0.25

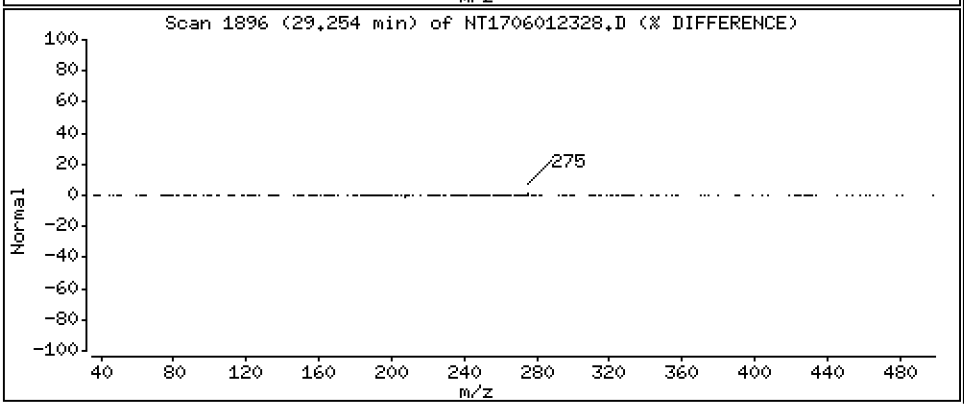
80 Benzo(g,h,i)perylene

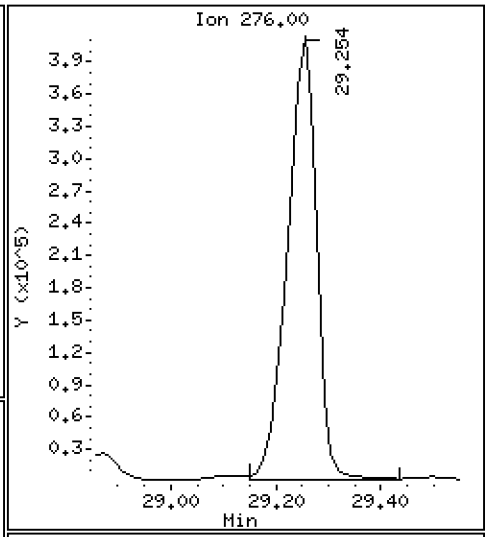
Concentration: 7.777 ug/mL

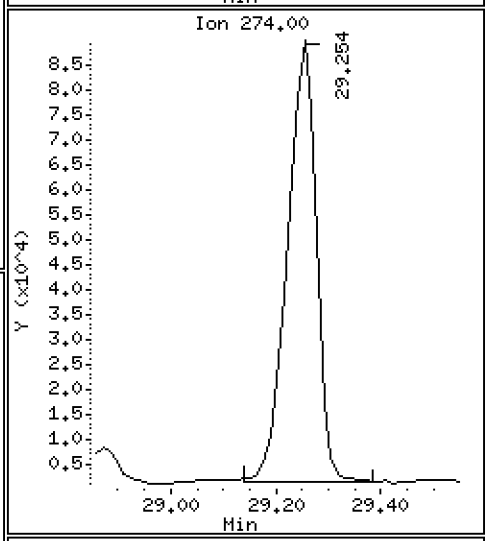


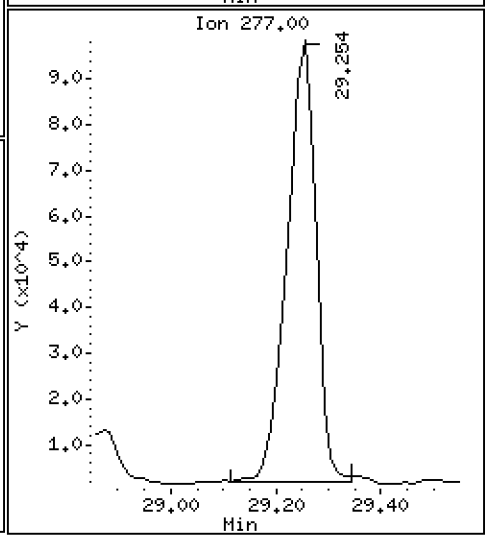












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

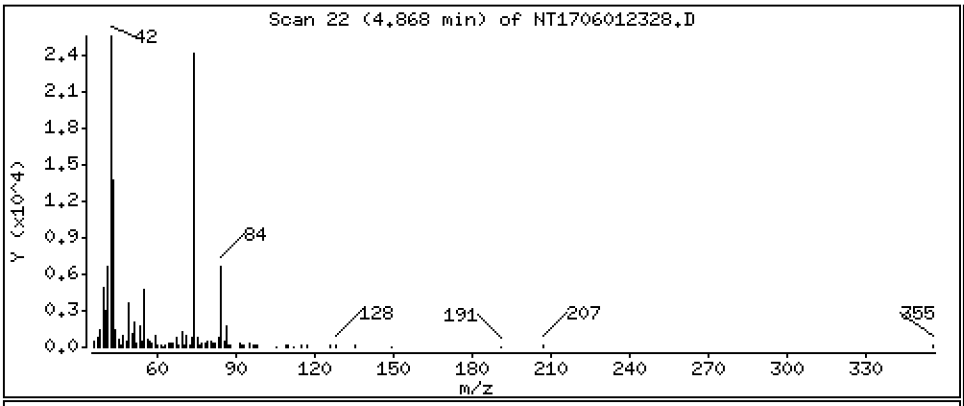
Operator: VTS

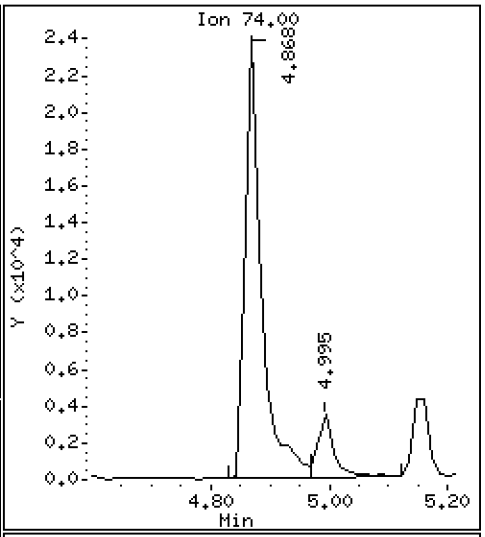
Column phase: ZB-5msi

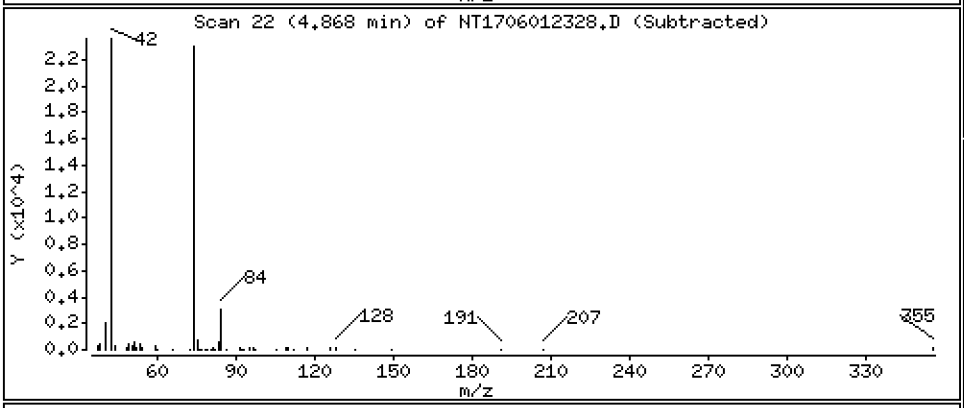
Column diameter: 0.25

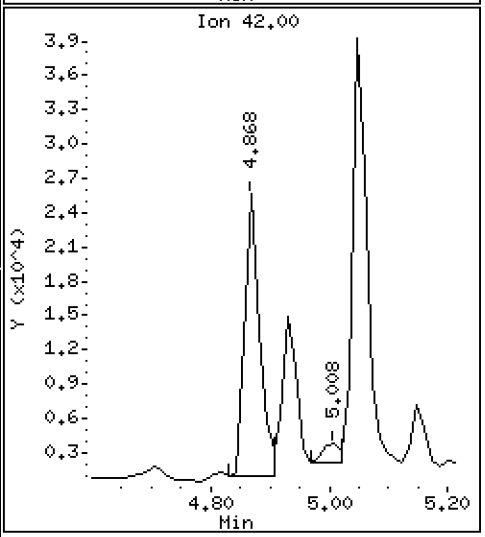
90 N-Nitrosodimethylamine

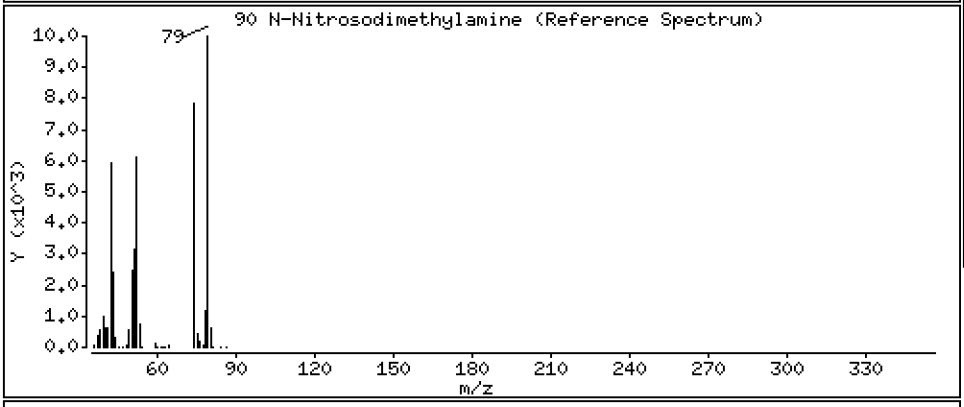
Concentration: 0.8282 ug/mL

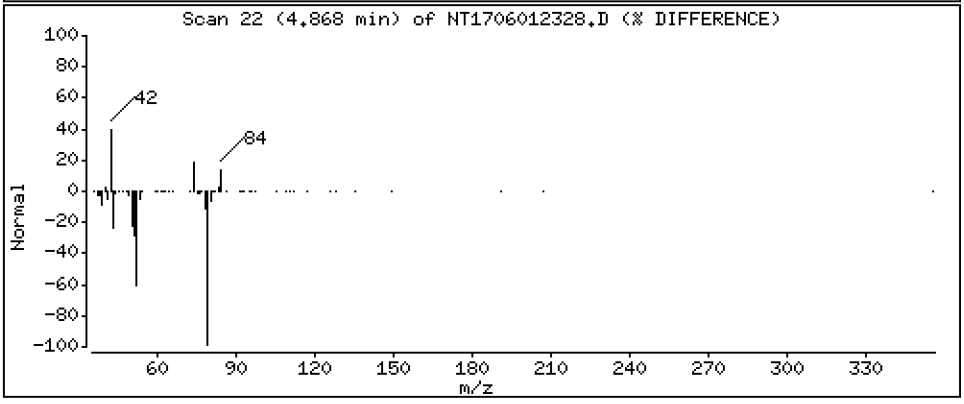












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

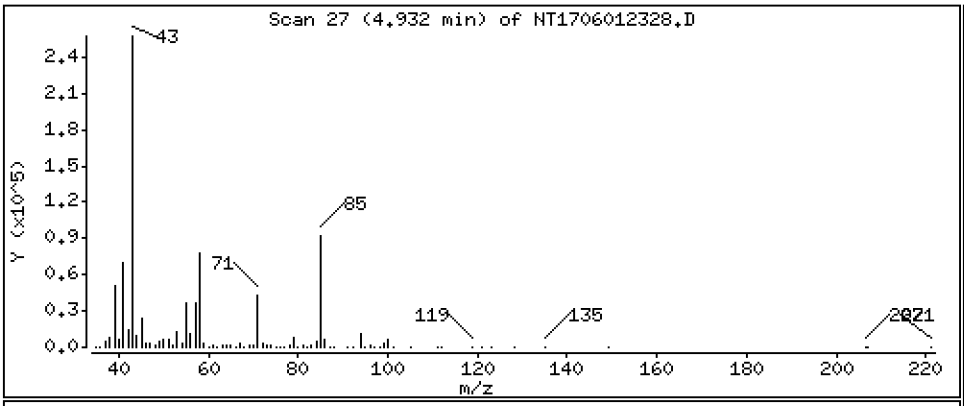
Operator: VTS

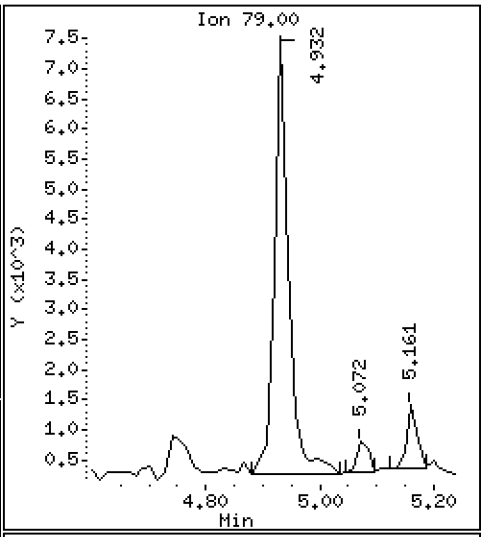
Column phase: ZB-5msi

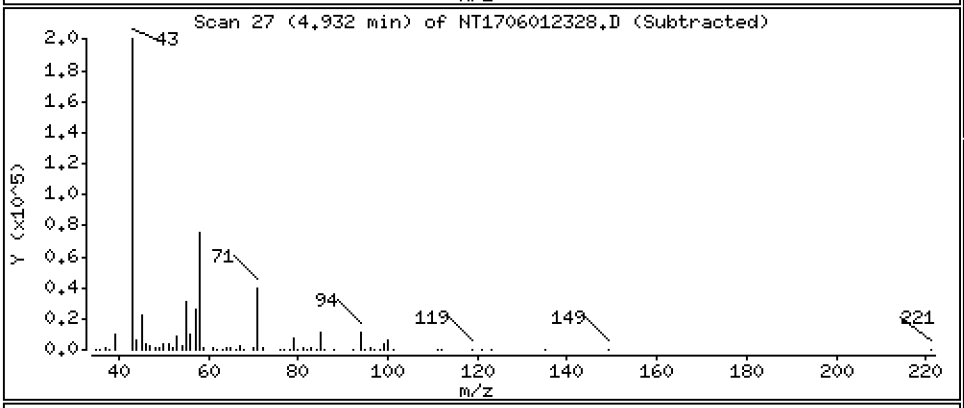
Column diameter: 0.25

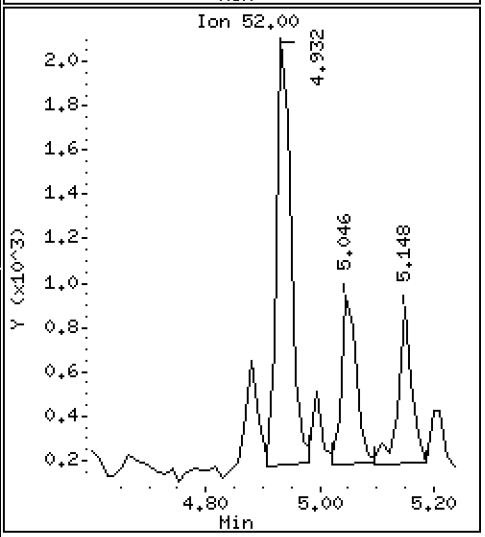
103 Pyridine

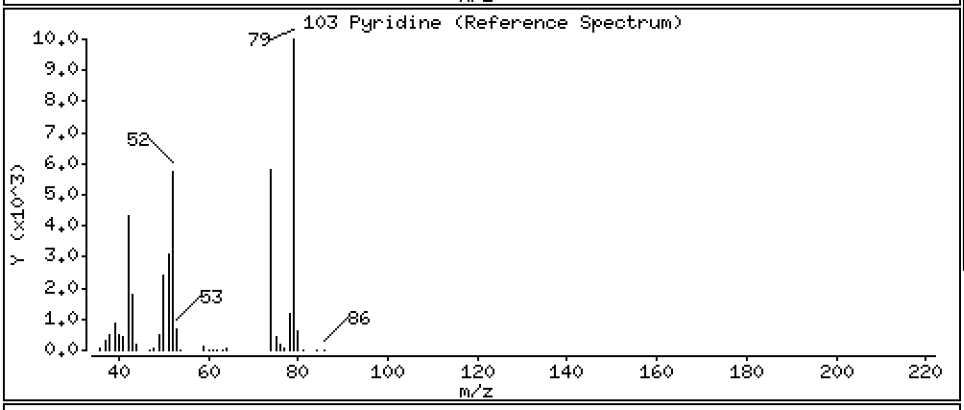
Concentration: 0.1445 ug/mL

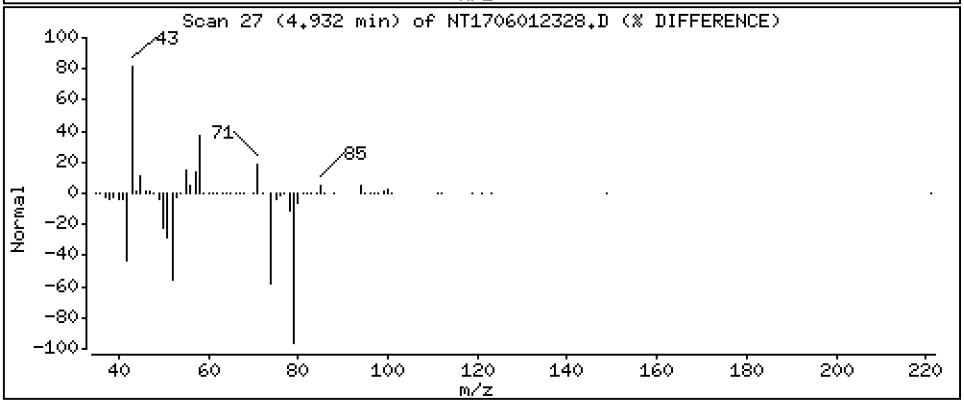












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

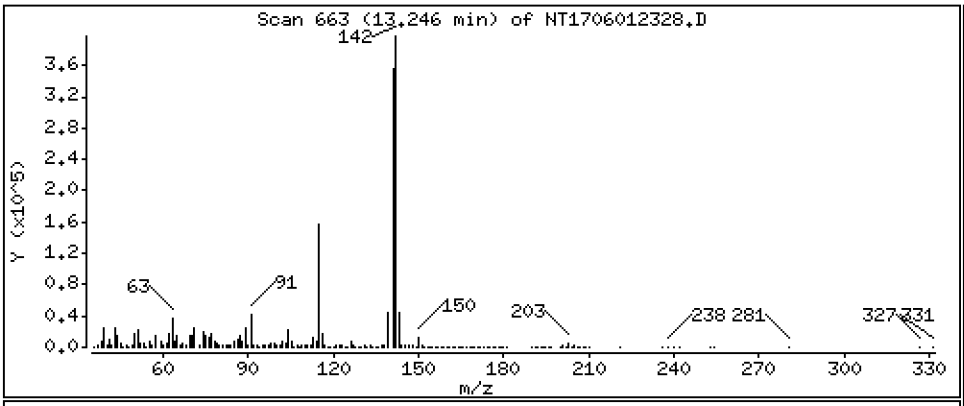
Operator: VTS

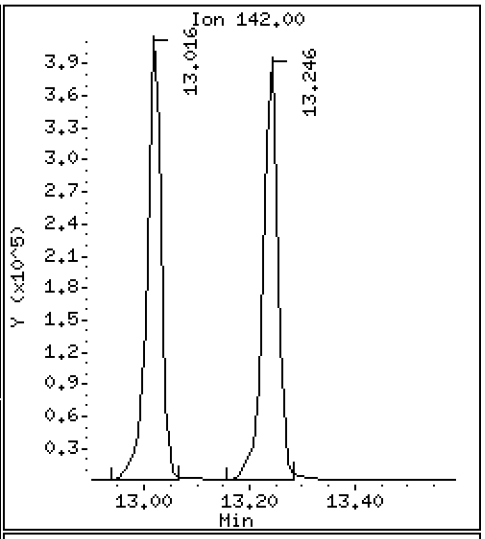
Column phase: ZB-5msi

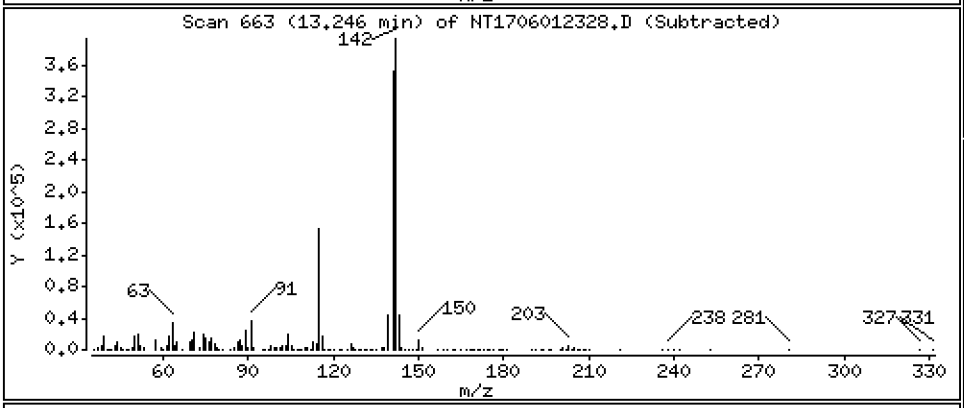
Column diameter: 0.25

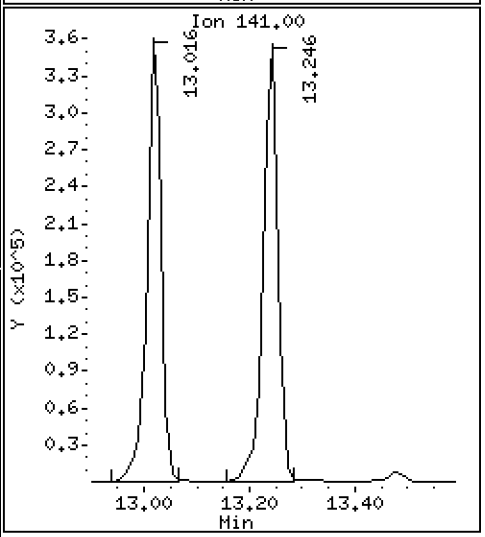
105 1-methylnaphthalene

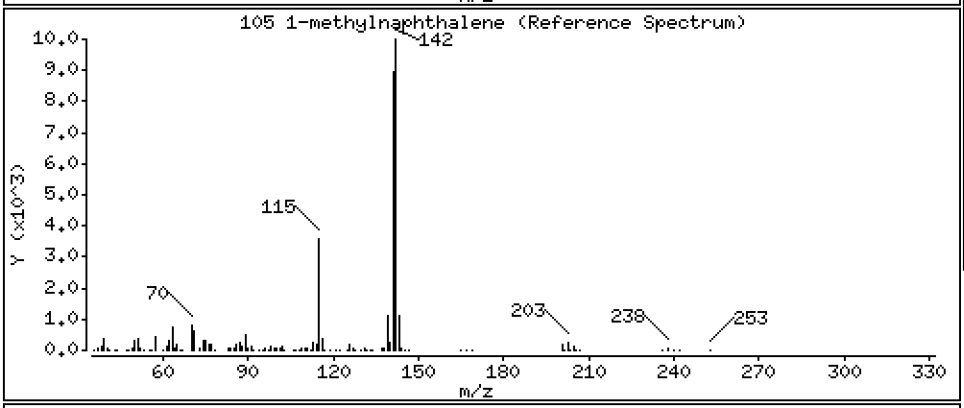
Concentration: 4.421 ug/mL

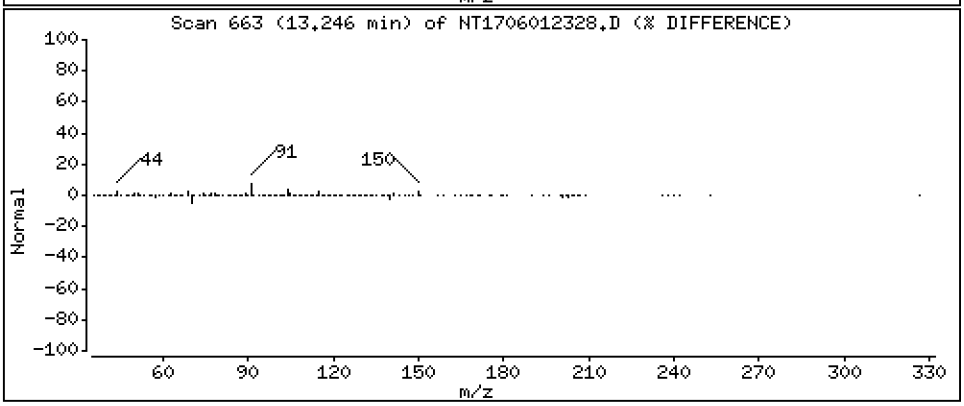












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

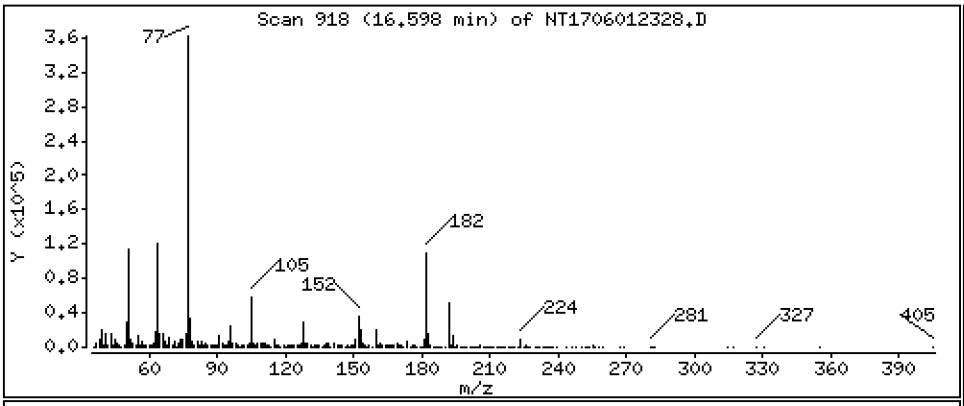
Operator: VTS

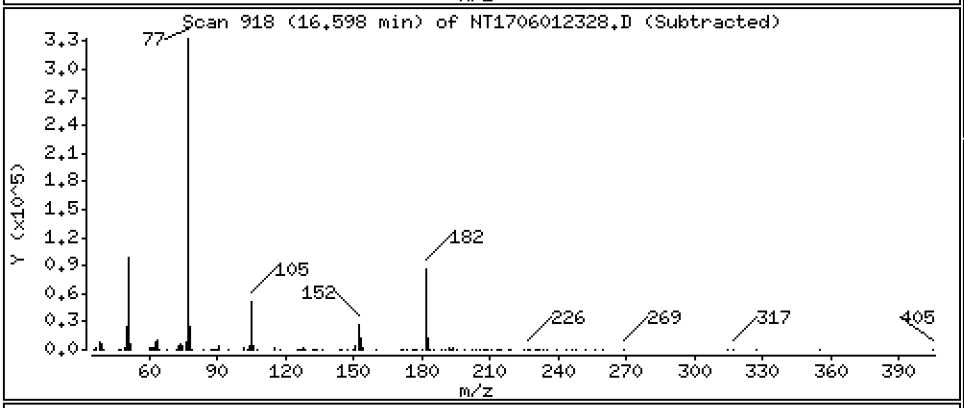
Column phase: ZB-5msi

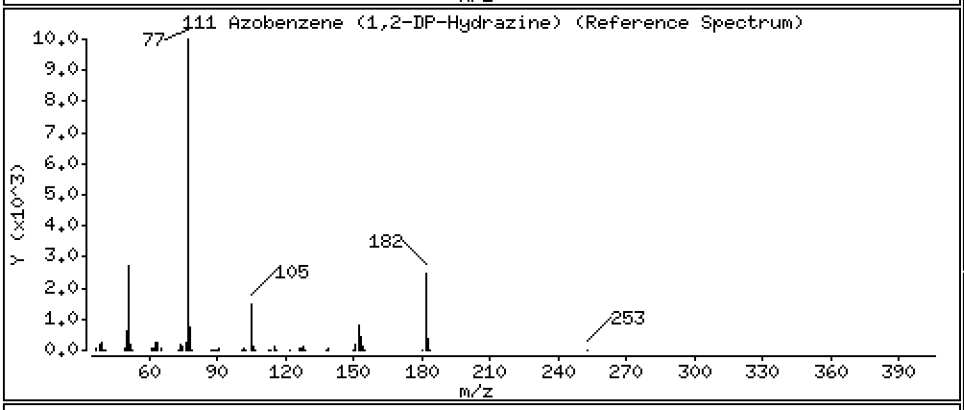
Column diameter: 0.25

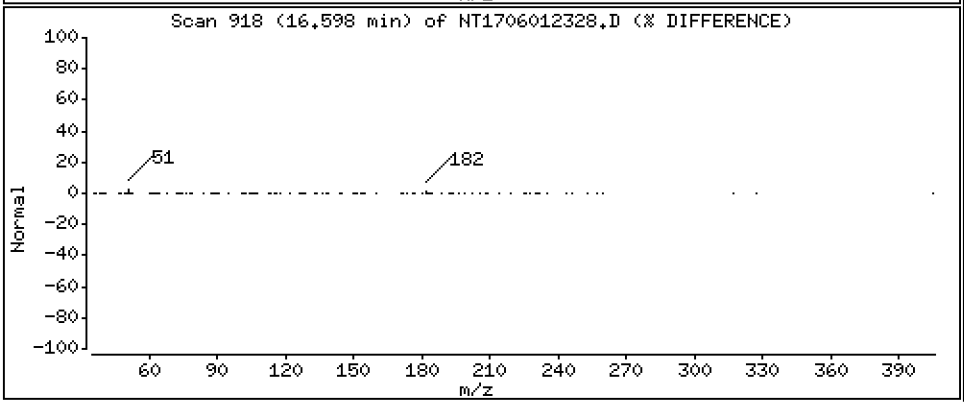
111 Azobenzene (1,2-DP-Hydrazine)

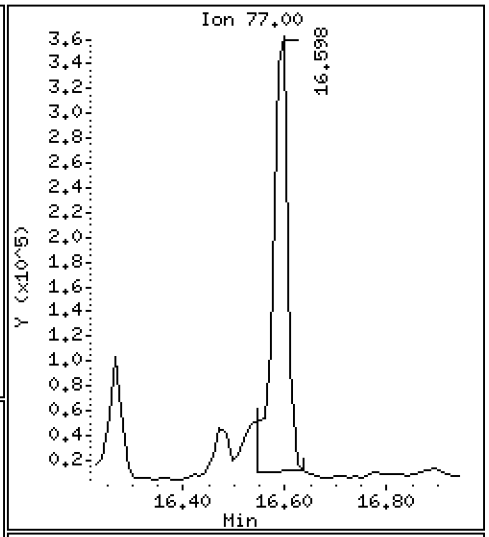
Concentration: 3.625 ug/mL

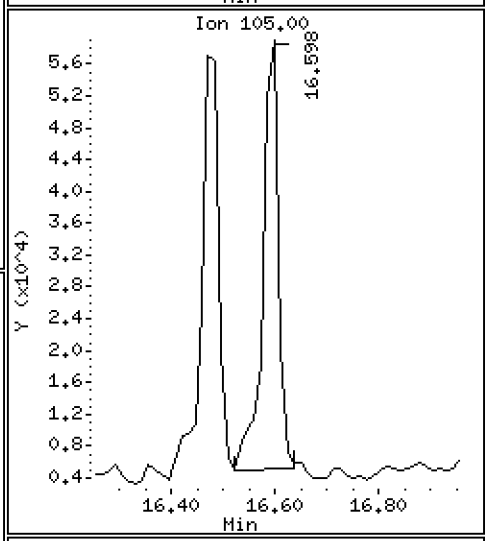


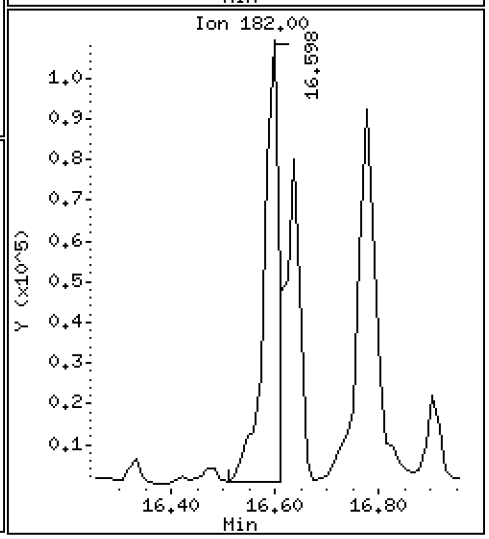












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

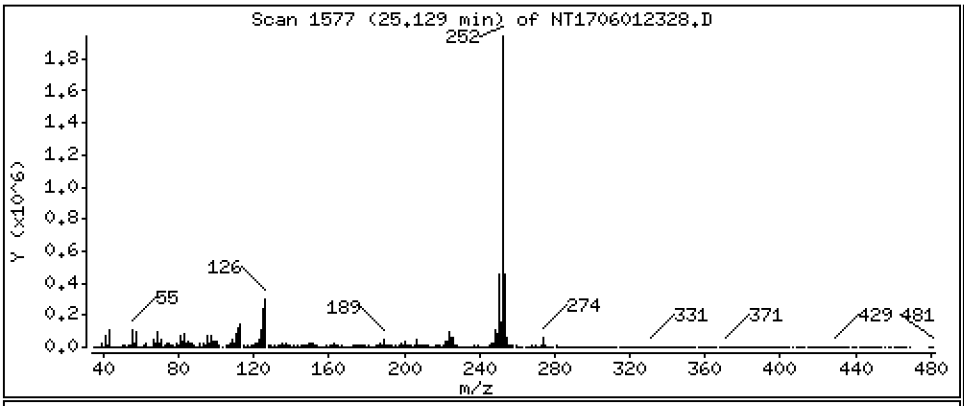
Operator: VTS

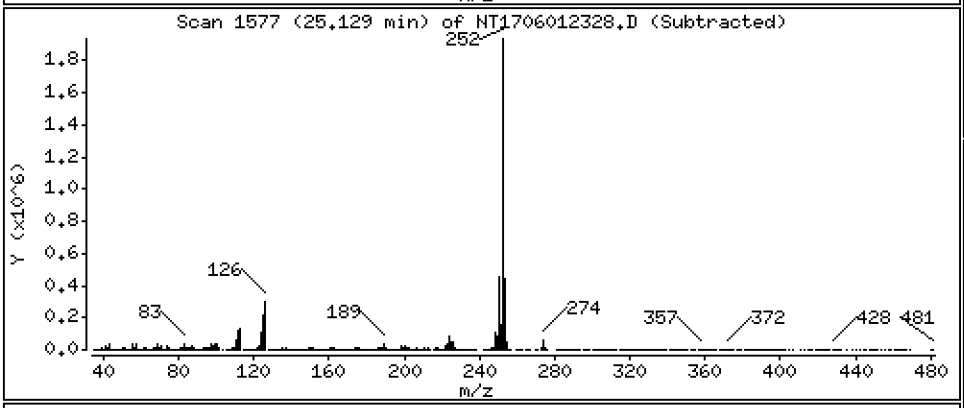
Column phase: ZB-5msi

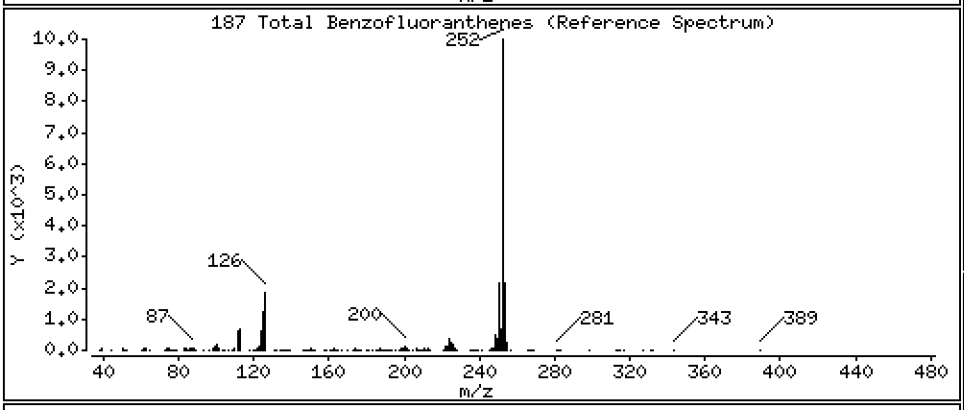
Column diameter: 0.25

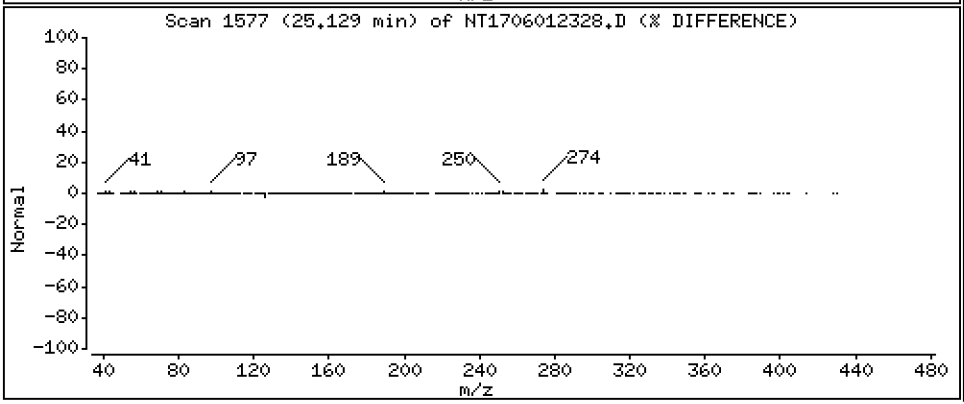
187 Total Benzofluoranthenes

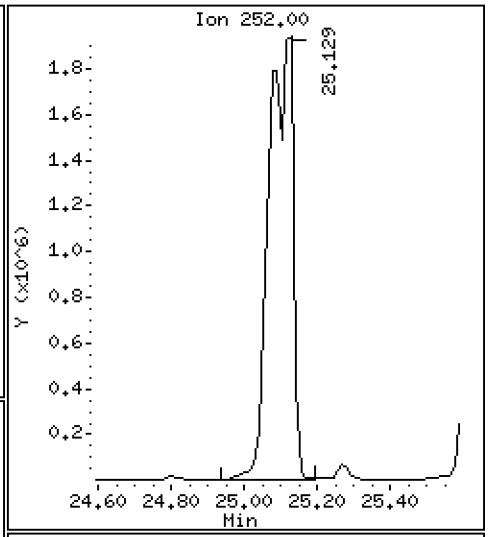
Concentration: 37.52 ug/mL

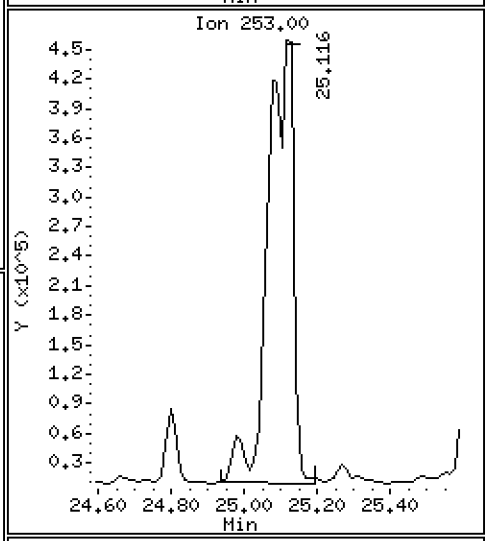


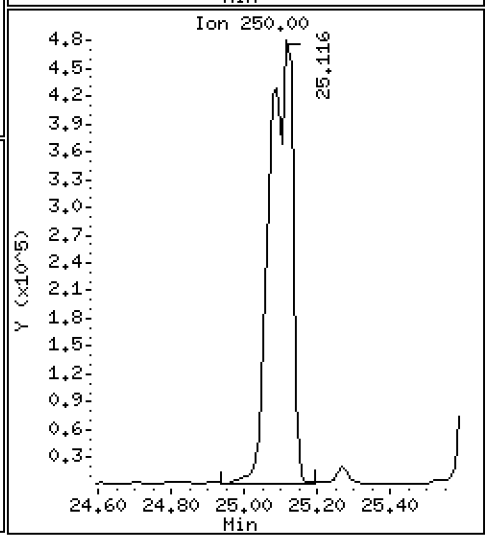












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS1

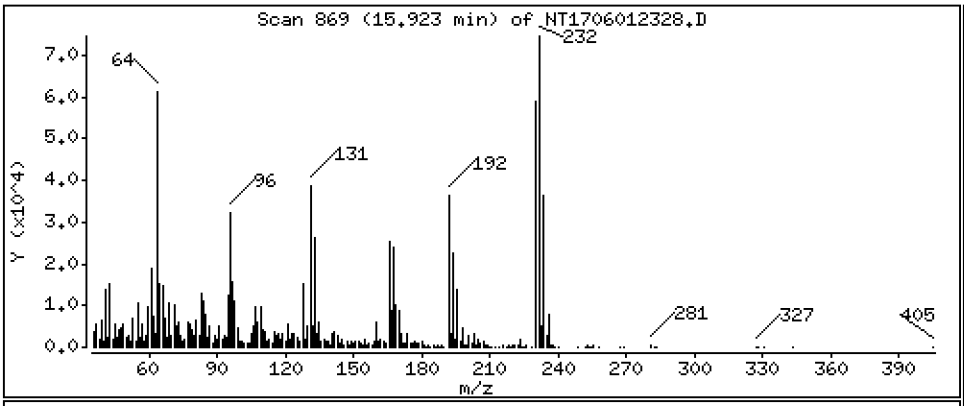
Operator: VTS

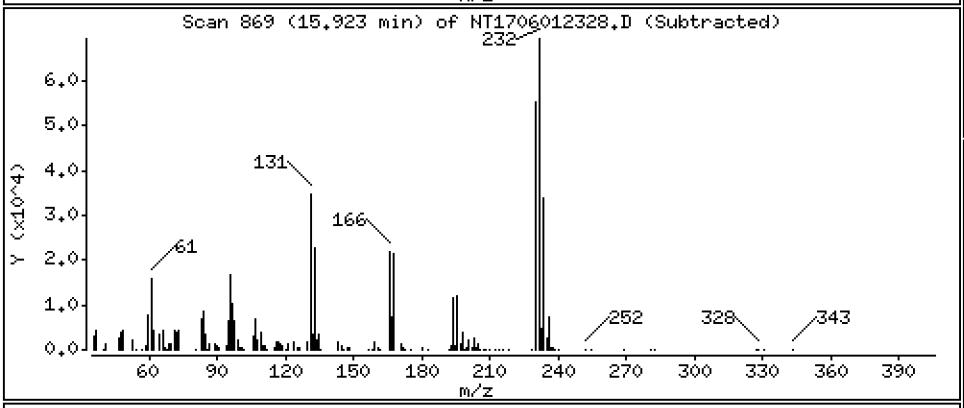
Column phase: ZB-5msi

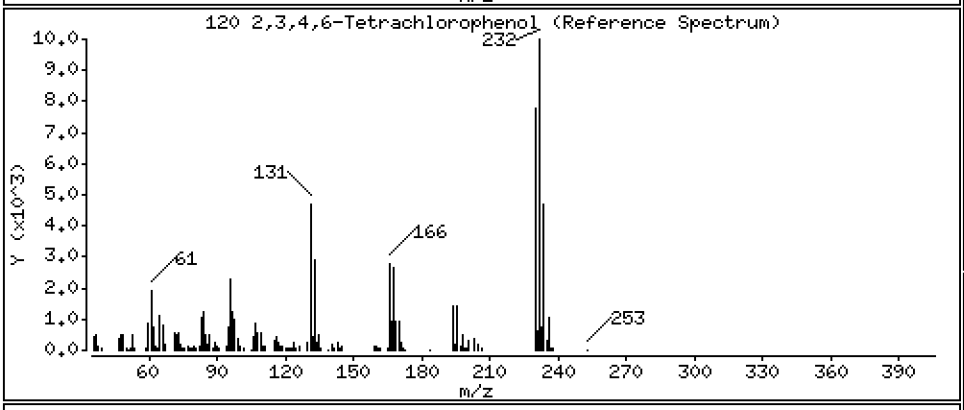
Column diameter: 0.25

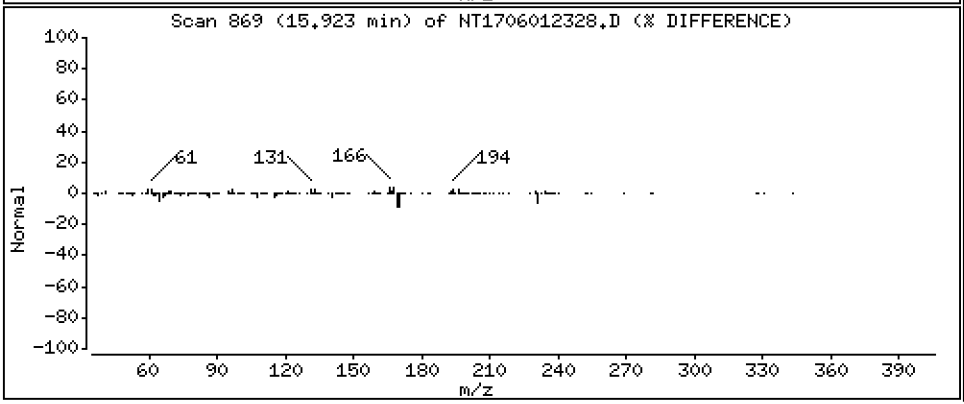
120 2,3,4,6-Tetrachlorophenol

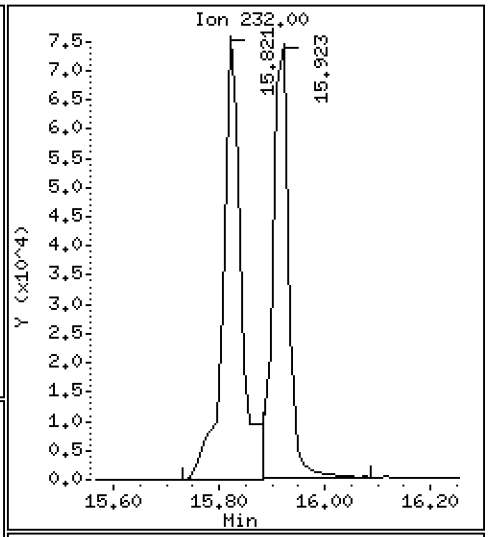
Concentration: 2.834 ug/mL

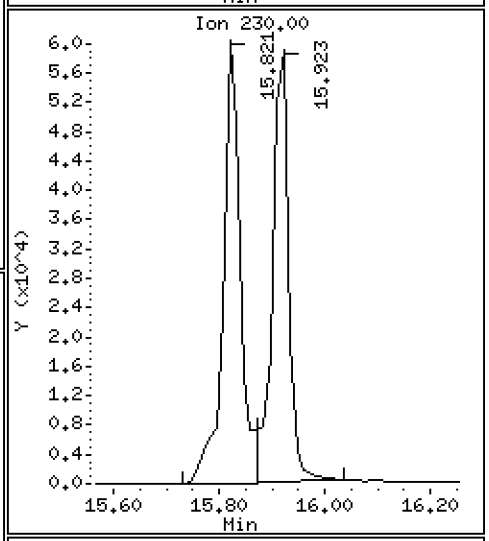


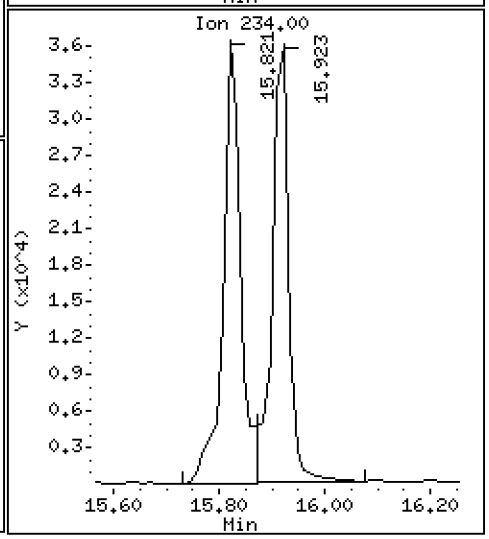












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012328.D
Lab Smp Id: BLE0148-MS1
Inj Date : 02-JUN-2023 04:48
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-MS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.944	(0.761)	217195	2.57847	2.578
$	2 Phenol-d5	99	8.524	8.511	(0.933)	386403	3.46634	3.466
	3 Phenol	94	8.536	8.536	(0.934)	971507	8.22814	8.228
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	364950	4.08725	4.087
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	255397	2.96720	2.967
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	297404	3.01629	3.016
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	296913	2.97540	2.975
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	257322	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	290303	2.91693	2.917
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	172731	2.75226	2.752
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	289446	3.09379	3.094
	11 Benzyl alcohol	108	9.417	9.417	(1.031)	191740	3.48798	3.488
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	97800	3.70871	3.709
	13 2-Methylphenol	108	9.634	9.634	(1.055)	251004	2.89259	2.893
	17 Hexachloroethane	117	10.094	10.094	(1.105)	121442	3.05043	3.050
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	227107	3.42079	3.421
	15 4-Methylphenol	108	9.915	9.902	(1.085)	300270	3.39848	3.398
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	325028	3.02050	3.020
	19 Nitrobenzene	77	10.247	10.260	(0.883)	347608	3.38584	3.386
	20 Isophorone	82	10.694	10.707	(0.922)	539721	3.84043	3.840
	21 2-Nitrophenol	139	10.873	10.873	(0.937)	160487	3.24404	3.244
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	360173	3.74975	3.750
	23 Bis(2-Chloroethoxy)methane	93	11.116	11.116	(0.958)	366694	4.25736	4.257
	24 Benzoic acid	105	11.154	11.192	(0.962)	595398	9.21489	9.215
	25 2,4-Dichlorophenol	162	11.333	11.333	(0.977)	896108	11.6100	11.61
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	272104	3.24598	3.246
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	945489	4.00000	
	28 Naphthalene	128	11.638	11.639	(1.003)	1179149	4.53505	4.535
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	155584	3.74678	3.747
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	1016053	12.2257	12.23
	32 2-Methylnaphthalene	142	13.015	13.016	(1.122)	792165	4.25517	4.255
	33 Hexachlorocyclopentadiene	237	13.475	13.487	(0.887)	90417	1.89181	1.892

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.640	13.640	(0.898)	660651	12.2850	12.29
35	2,4,5-Trichlorophenol	196	13.730	13.717	(0.904)	714606	12.5526	12.55
$ 36	2-Fluorobiphenyl	172	13.793	13.793	(0.908)	710019	3.50650	3.507
37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	635914	3.87119	3.871
38	2-Nitroaniline	65	14.278	14.278	(0.940)	577523	10.3809	10.38
39	Dimethylphthalate	163	14.699	14.686	(0.968)	775804	4.38680	4.387
40	Acenaphthylene	152	14.878	14.878	(0.980)	1084445	4.15717	4.157
41	2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	516741	12.4802	12.48
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	513986	4.00000	
43	3-Nitroaniline	138	15.196	15.133	(1.001)	11871	0.30955	0.3096(MH)
44	Acenaphthene	153	15.247	15.247	(1.004)	992837	6.08862	6.089
45	2,4-Dinitrophenol	184	15.337	15.337	(1.010)	15016	0.60120	0.6012
46	Dibenzofuran	168	15.579	15.579	(1.026)	1355595	5.95626	5.956
47	4-Nitrophenol	109	15.477	15.464	(1.019)	263473	10.3436	10.34
48	2,4-Dinitrotoluene	165	15.642	15.642	(1.030)	647332	11.9433	11.94
50	Diethylphthalate	149	16.139	16.140	(1.063)	820773	4.75895	4.759
49	Fluorene	166	16.280	16.280	(1.072)	1176544	5.43751	5.438
51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	427682	4.29931	4.299
52	4-Nitroaniline	138	16.445	16.407	(1.083)	41775	1.15087	1.151
53	4,6-Dinitro-2-methylphenol	198	16.483	16.471	(0.905)	290712	7.41465	7.415(M)
54	N-Nitrosodiphenylamine	169	16.521	16.521	(0.907)	415176	3.01673	3.017(M)
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	140892	6.28425	6.284(M)
56	4-Bromophenyl-phenylether	248	17.272	17.260	(0.948)	201624	4.18131	4.181
57	Hexachlorobenzene	284	17.591	17.578	(0.966)	207021	4.21332	4.213
58	Pentachlorophenol	266	17.961	17.935	(0.986)	373029	12.3348	12.33(M)
* 59	Phenanthrene-d10	188	18.216	18.203	(1.000)	982463	4.00000	(M)
60	Phenanthrene	178	18.267	18.241	(1.003)	12757023	44.5010	44.50(M)
61	Anthracene	178	18.356	18.343	(1.008)	1212730	4.50600	4.506
62	Carbazole	167	18.688	18.688	(1.026)	1685729	9.22008	9.220(M)
63	Di-n-butylphthalate	149	19.478	19.453	(1.069)	1736787	5.34423	5.344(M)
64	Fluoranthene	202	20.702	20.613	(0.891)	24504283	97.3681	97.37(M)
65	Pyrene	202	21.098	21.034	(0.908)	17366180	68.0702	68.07(M)
$ 66	Terphenyl-d14	244	21.340	21.315	(0.919)	656169	3.61802	3.618
67	Butylbenzylphthalate	149	22.246	22.233	(0.958)	495586	4.34023	4.340
68	Benzo(a)anthracene	228	23.203	23.190	(0.999)	1837944	9.27728	9.277
* 69	Chrysene-d12	240	23.228	23.215	(1.000)	538012	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.279	23.254	(1.002)	5729878	30.7363	30.74
72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.959)	487747	3.18263	3.183
* 134	Di-n-octylphthalate-d4	153	24.236	24.223	(1.000)	1059240	4.00000	
73	Di-n-octylphthalate	149	24.249	24.236	(1.001)	325435	1.21207	1.212
74	Benzo(b)fluoranthene	252	25.090	25.052	(0.971)	5725566	21.3466	21.35
75	Benzo(k)fluoranthene	252	25.129	25.091	(0.973)	4435472	17.5032	17.50
76	Benzo(a)pyrene	252	25.716	25.690	(0.996)	2225017	10.5308	10.53
* 77	Perylene-d12	264	25.830	25.805	(1.000)	676507	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.474	28.423	(1.102)	2091183	8.53278	8.533
79	Dibenzo(a,h)anthracene	278	28.474	28.423	(1.102)	1157440	5.62719	5.627
80	Benzo(g,h,i)perylene	276	29.254	29.203	(1.133)	1573235	7.77735	7.777
90	N-Nitrosodimethylamine	74	4.867	4.867	(0.533)	46534	0.82819	0.8282
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.931	4.893	(0.540)	12877	0.14449	0.1445
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	763568	4.42119	4.421
111	Azobenzene (1,2-DP-Hydrazine)	77	16.598	16.585	(1.093)	729880	3.62540	3.625

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.129	25.091	(0.973)	9032691	37.5156	37.52
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.910	(1.049)	182356	2.83412	2.834

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012328.D
Lab Smp Id: BLE0148-MS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	257322	0.12
27 Naphthalene-d8	932905	466453	1865810	945489	1.35
42 Acenaphthene-d10	509574	254787	1019148	513986	0.87
59 Phenanthrene-d10	912749	456375	1825498	982463	7.64
69 Chrysene-d12	578011	289006	1156022	538012	-6.92
134 Di-n-octylphthala	1181490	590745	2362980	1059240	-10.35
77 Perylene-d12	513683	256842	1027366	676507	31.70

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.22	0.07
69 Chrysene-d12	23.22	22.72	23.72	23.23	0.05
134 Di-n-octylphthala	24.22	23.72	24.72	24.24	0.05
77 Perylene-d12	25.81	25.31	26.31	25.83	0.10

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

REVIEW SUMMARY FOR FILE - NT1706012328.D

Lab ID: BLE0148-MS1
nt17.i, ABN.m, 02-JUN-2023 04:48

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

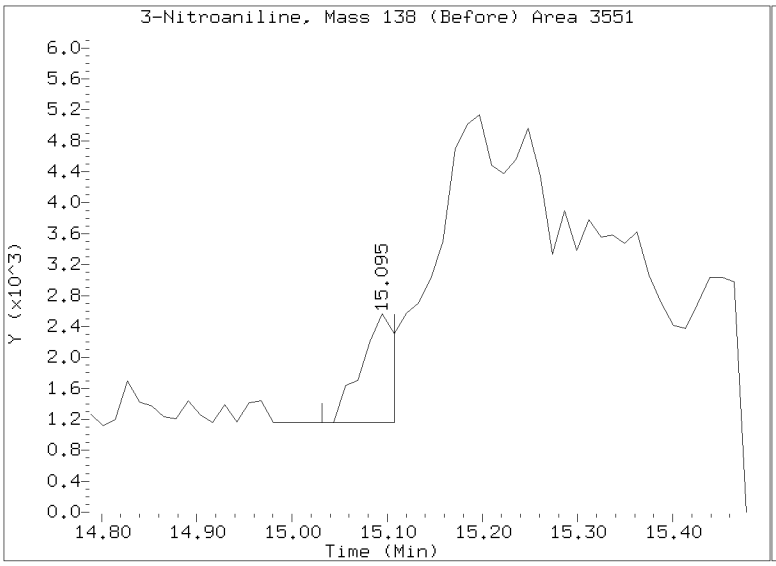
RRT check based on Ccal File: NT1706012320.D

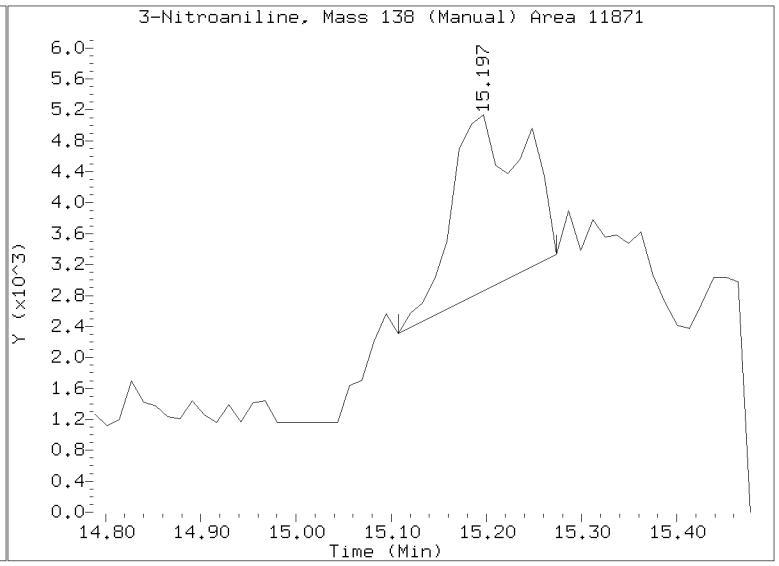
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

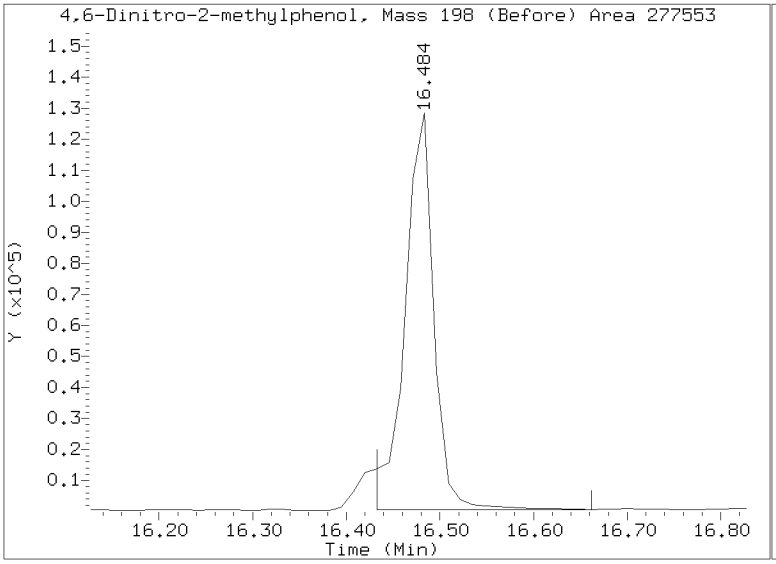
* Only compounds listed in the work order have been verified by the analyst *

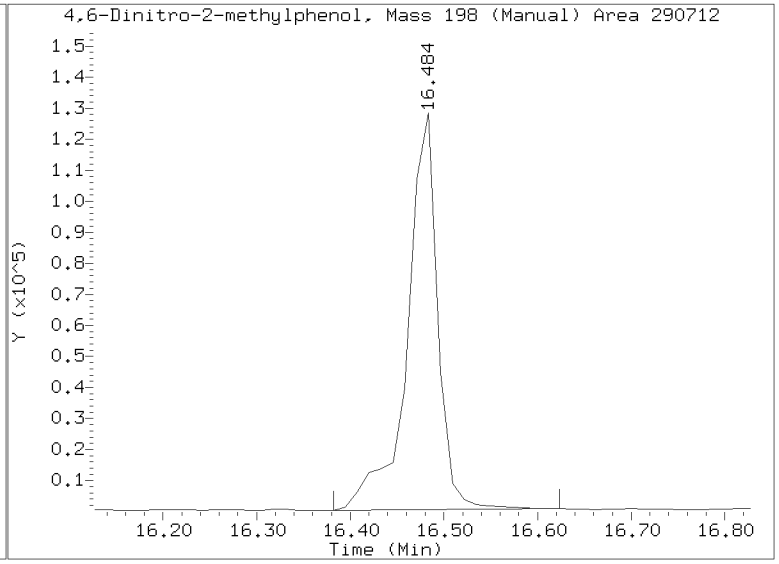
Quant Ion Manual Peak Adjustment Report

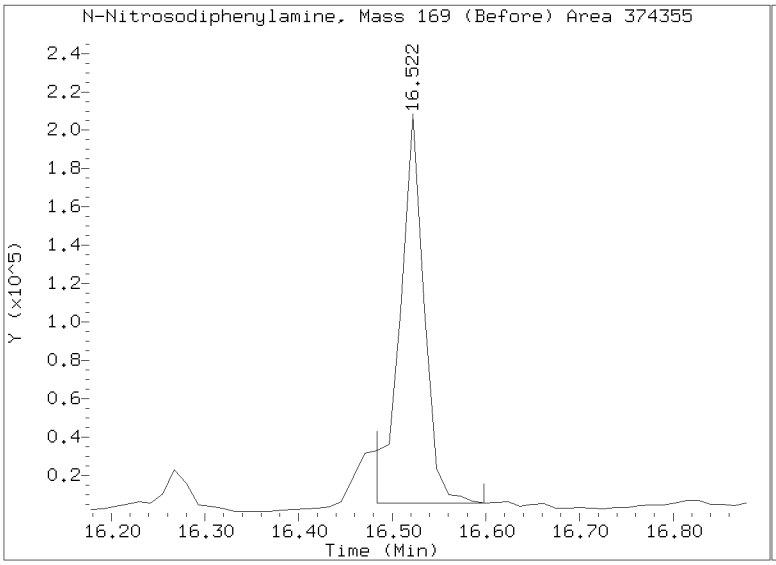
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012328.D
Injection Date: 02-JUN-2023 04:48
Lab ID:BLE0148-MS1 Client ID:
Report Date: 06/03/2023 10:34

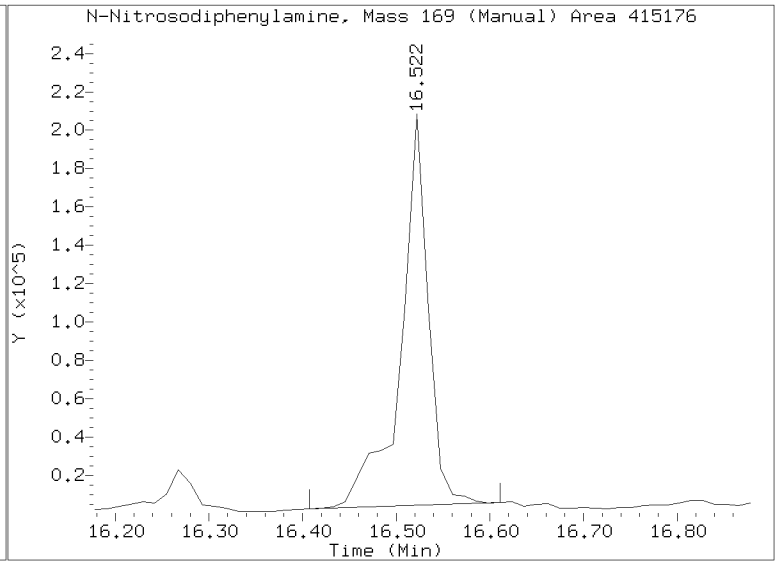






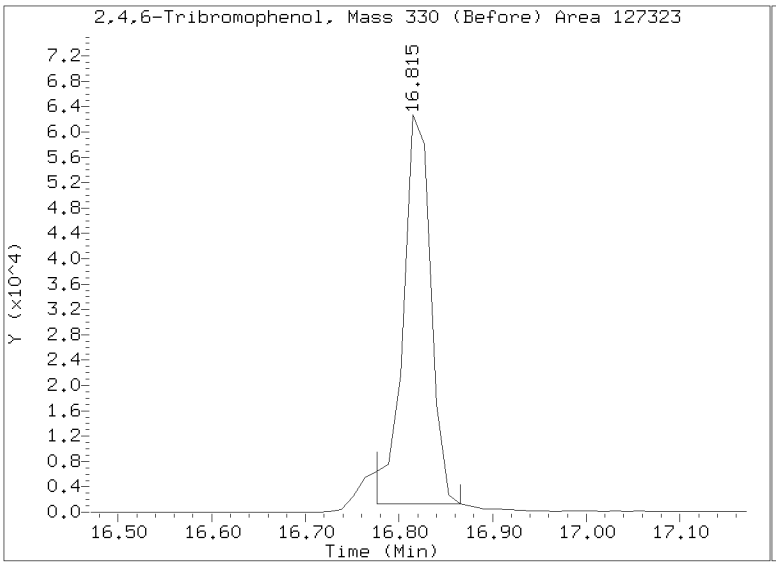


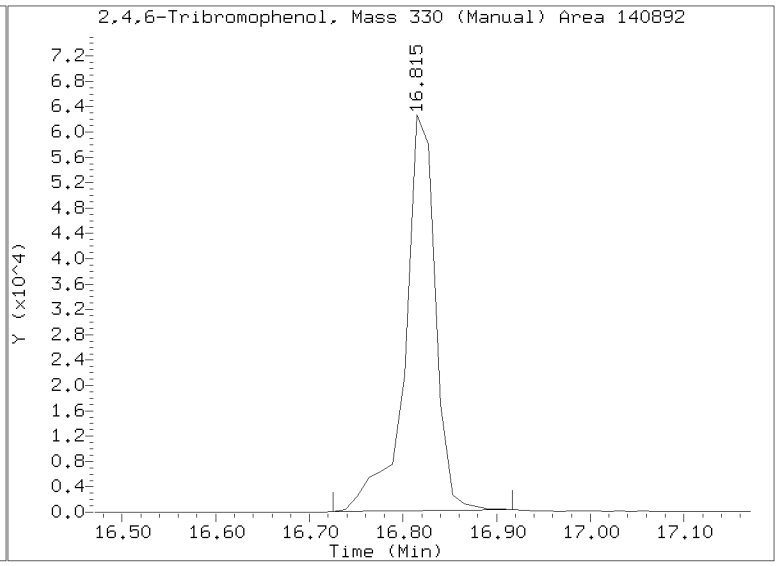


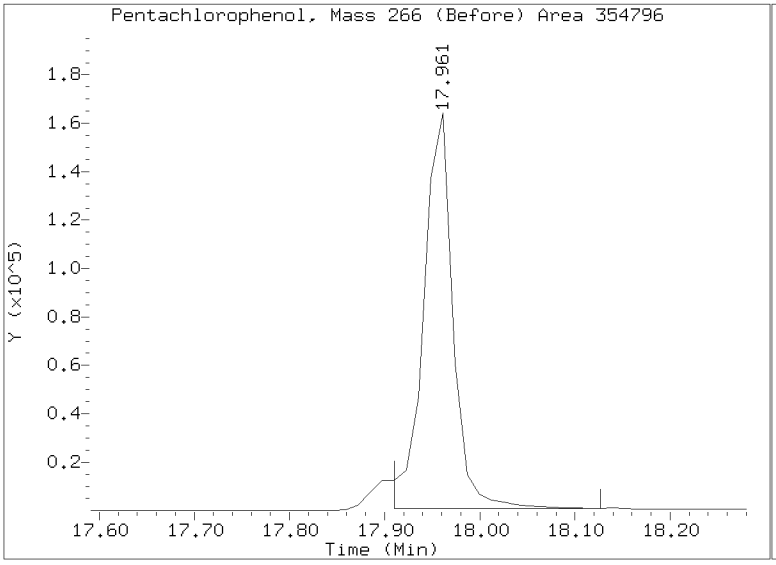


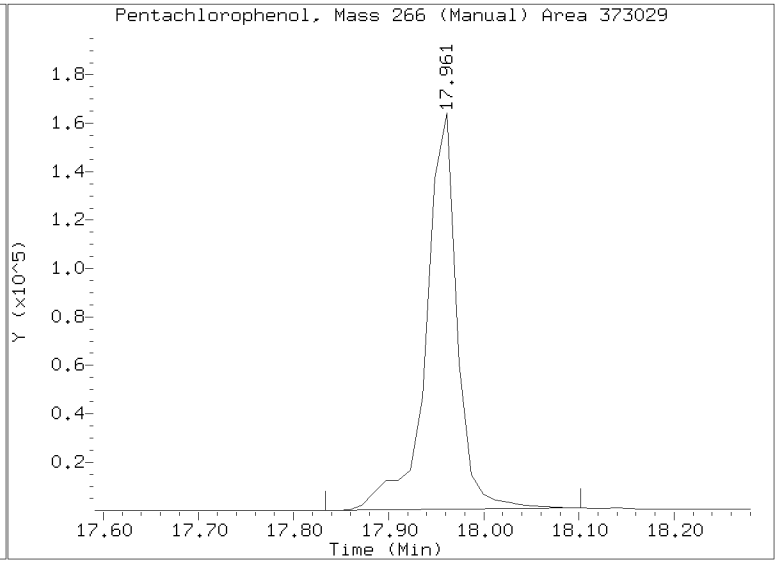
Quant Ion Manual Peak Adjustment Report

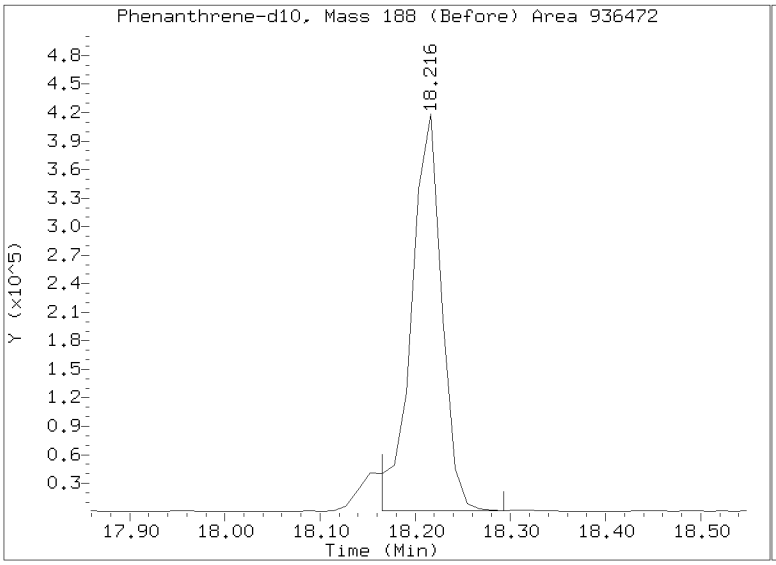
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012328.D
Injection Date: 02-JUN-2023 04:48
Lab ID:BLE0148-MS1 Client ID:
Report Date: 06/03/2023 10:34

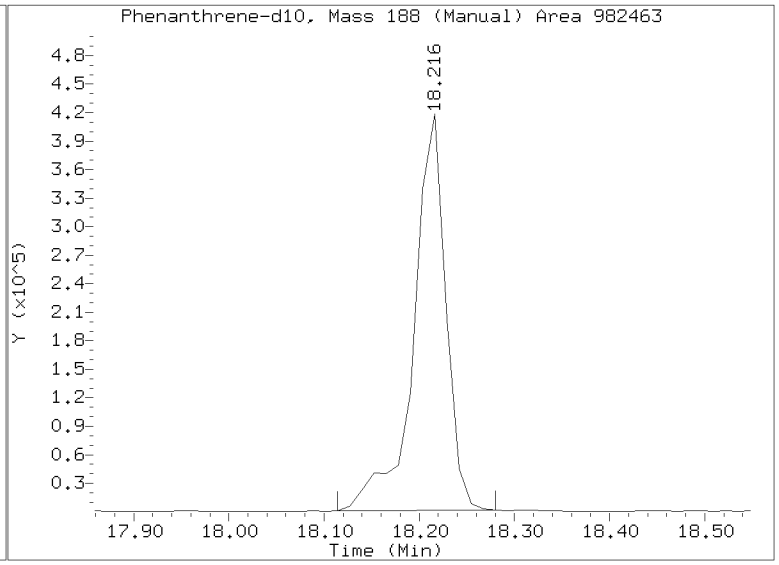






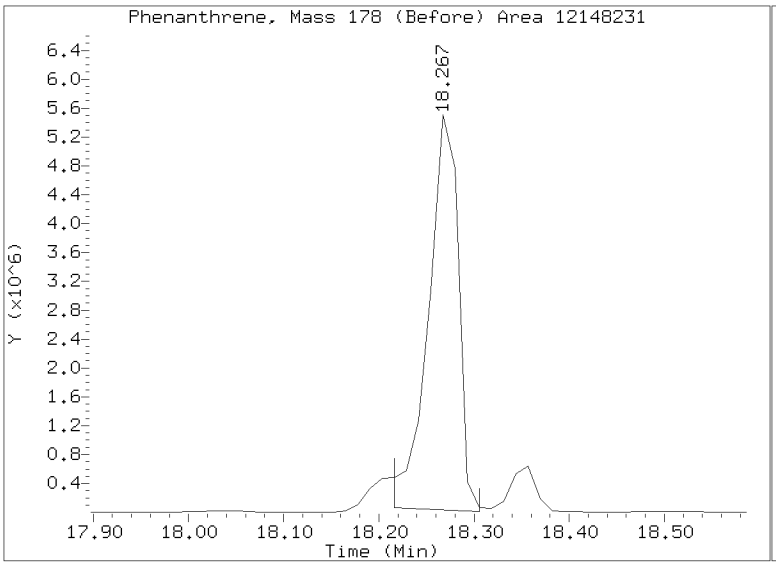


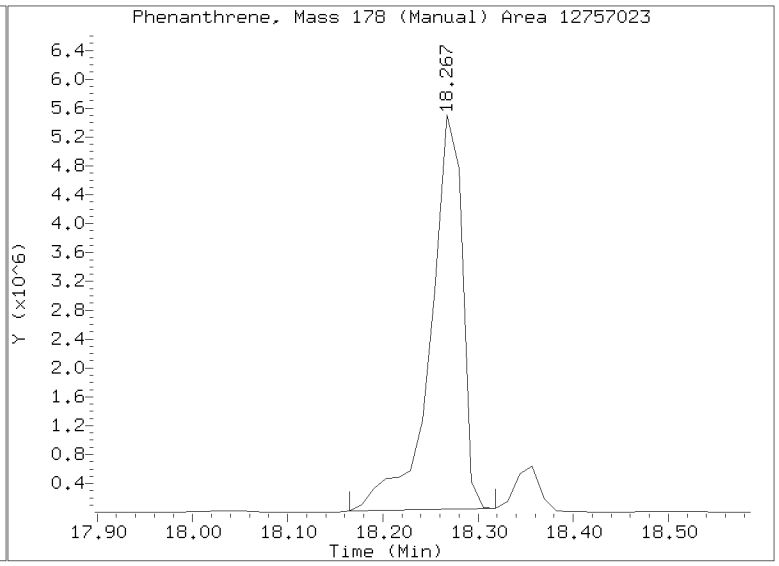


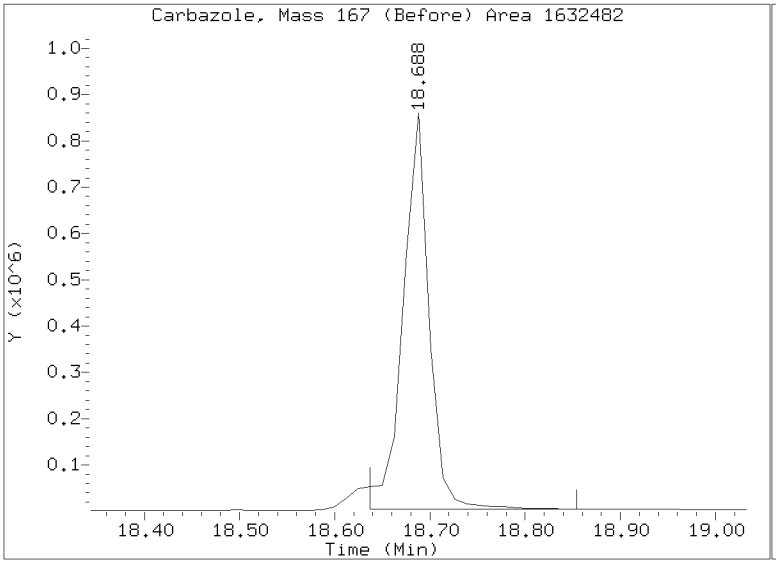


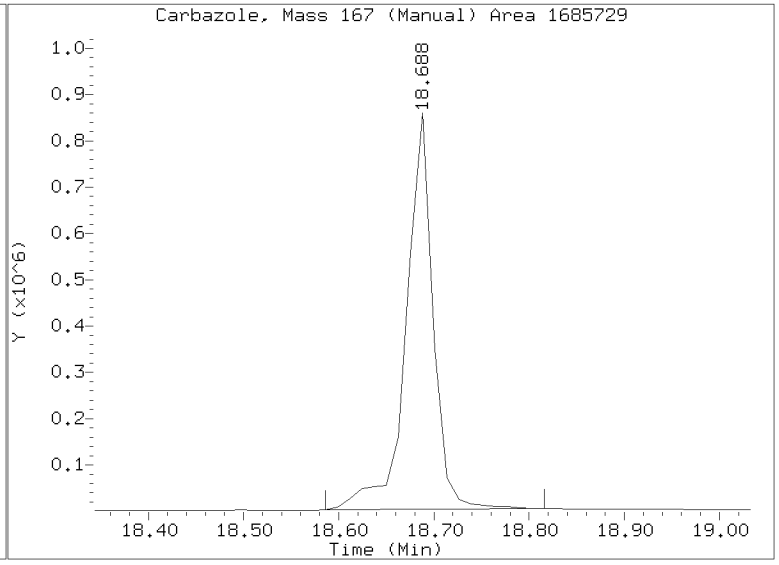
Quant Ion Manual Peak Adjustment Report

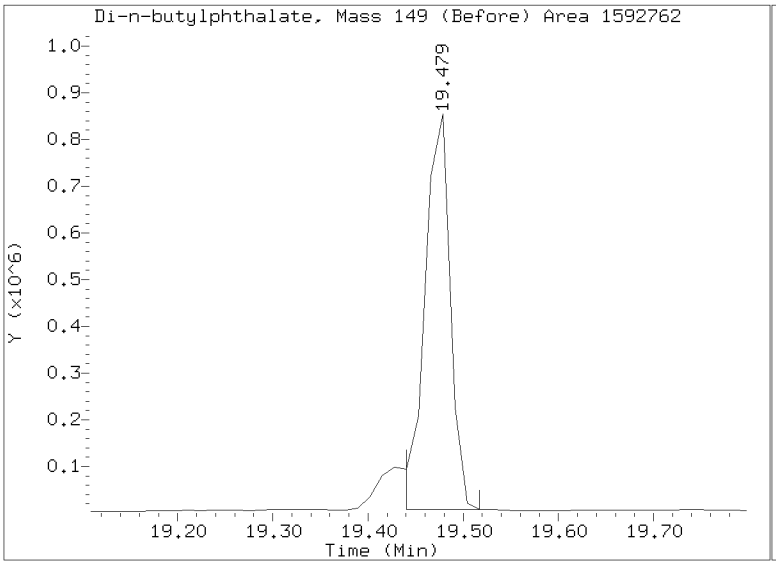
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012328.D
Injection Date: 02-JUN-2023 04:48
Lab ID:BLE0148-MS1 Client ID:
Report Date: 06/03/2023 10:34

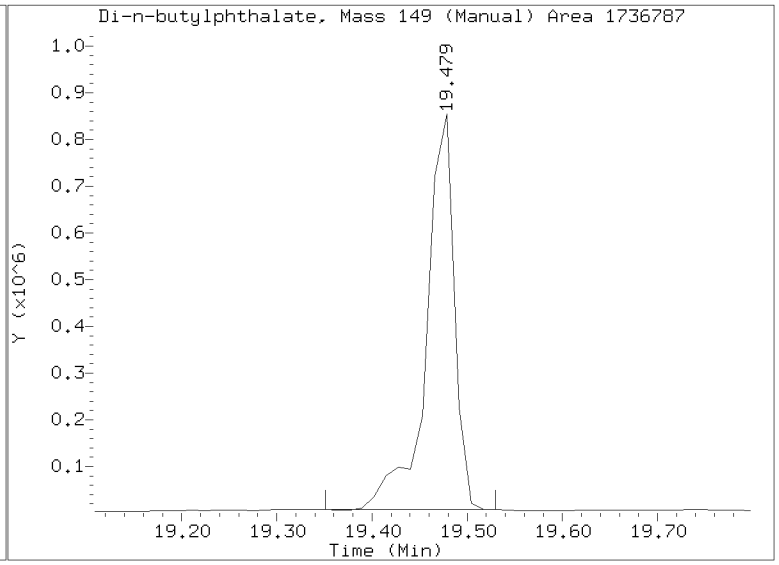






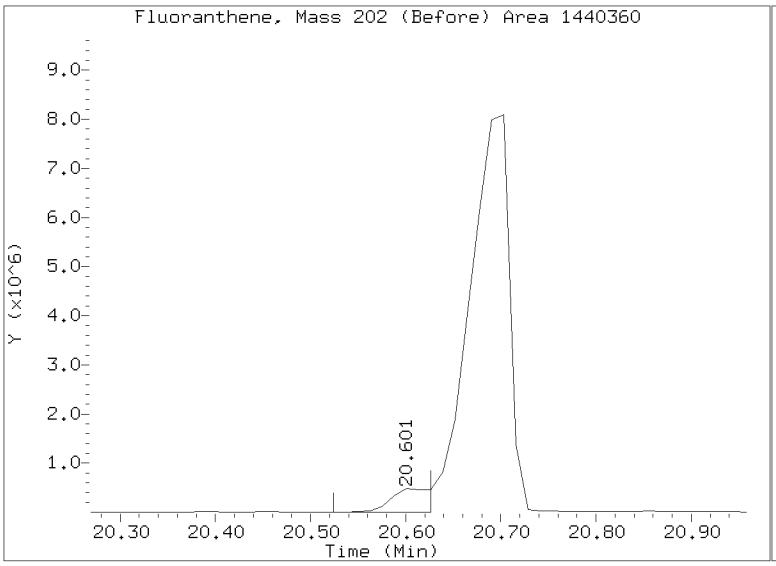


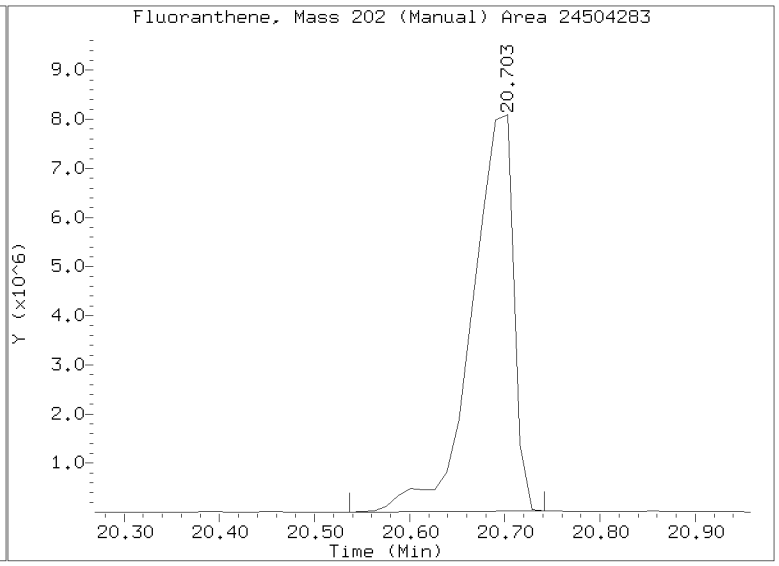


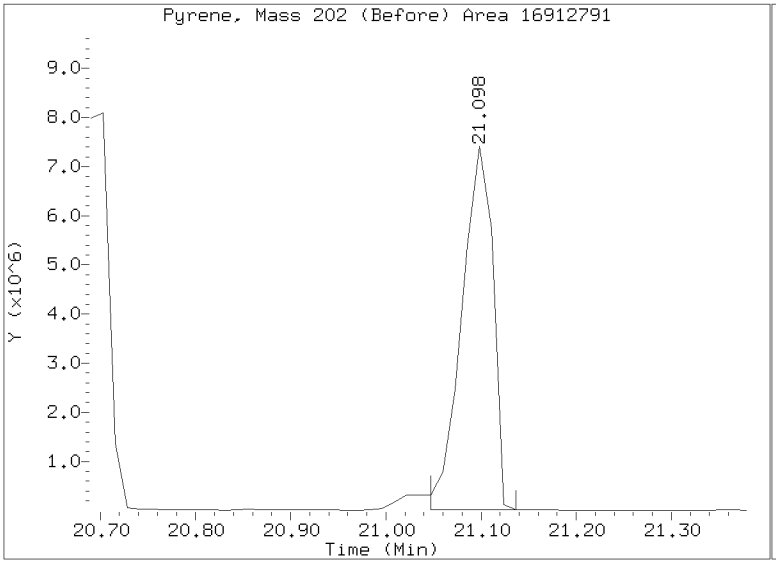


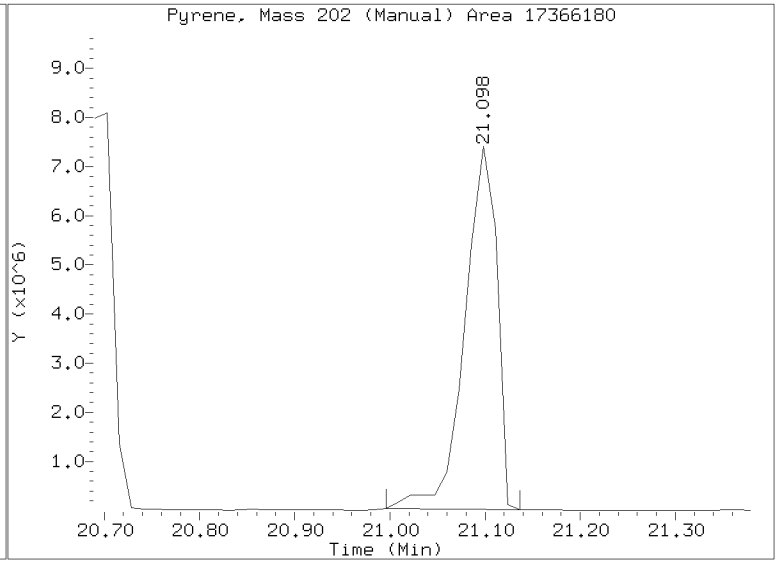
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012328.D
Injection Date: 02-JUN-2023 04:48
Lab ID:BLE0148-MS1 Client ID:
Report Date: 06/03/2023 10:34









Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

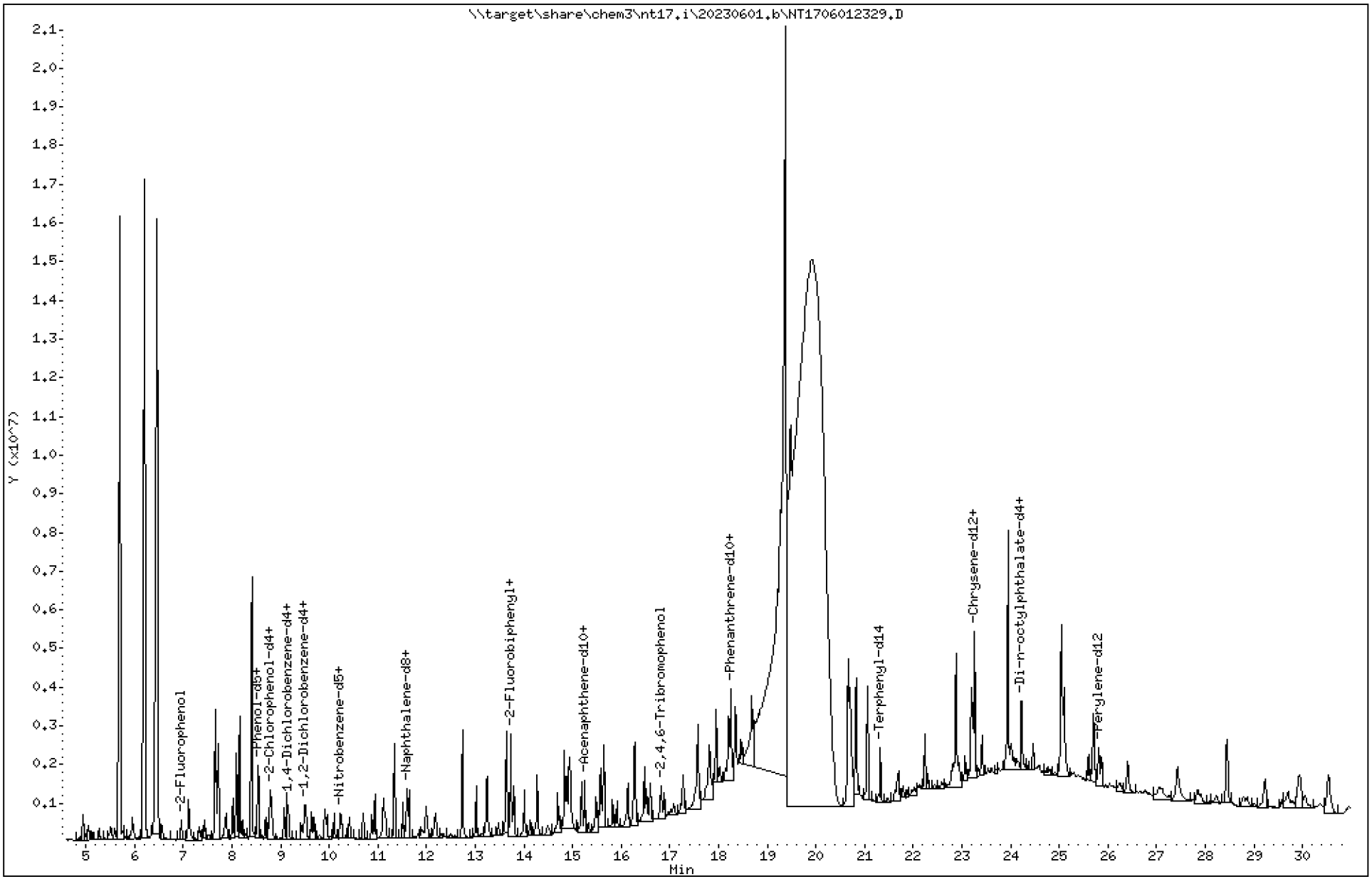
Instrument: nt17.i

Sample Info: BLE0148-MSD1

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

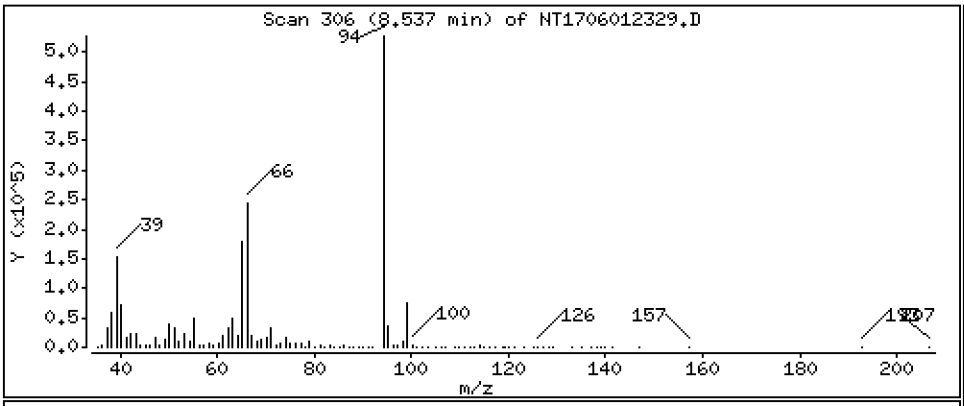
Operator: VTS

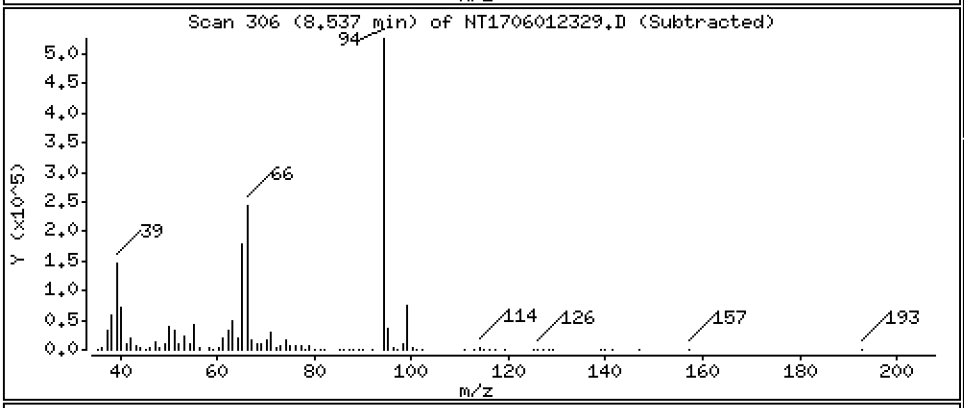
Column phase: ZB-5msi

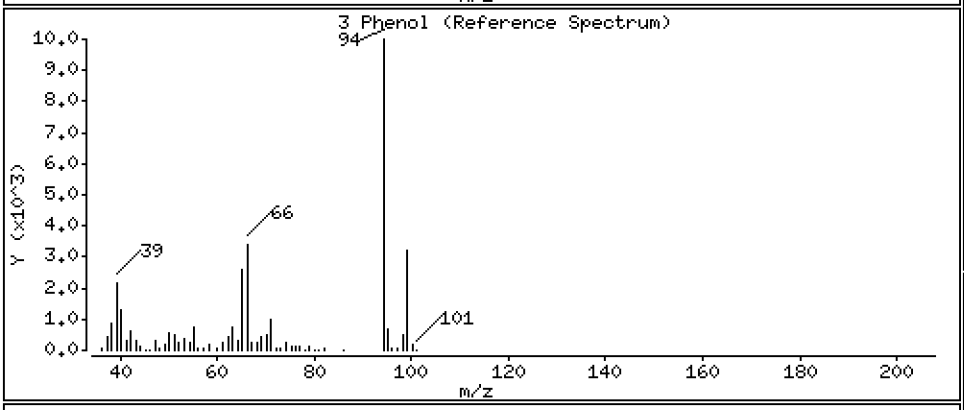
Column diameter: 0.25

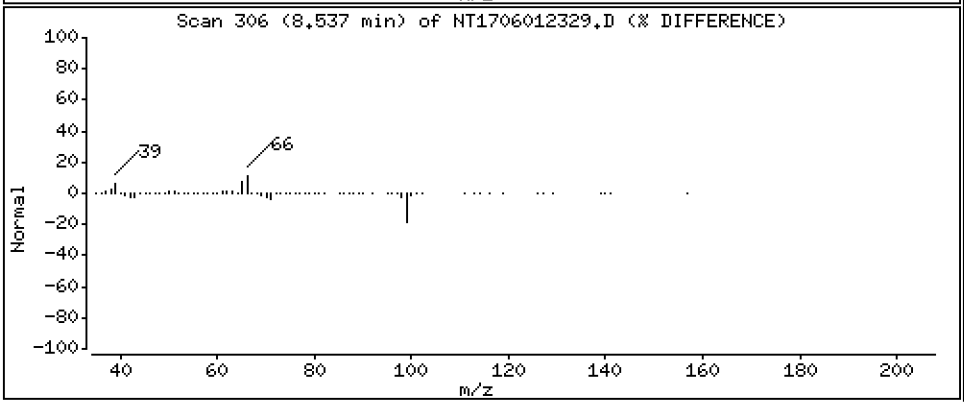
3 Phenol

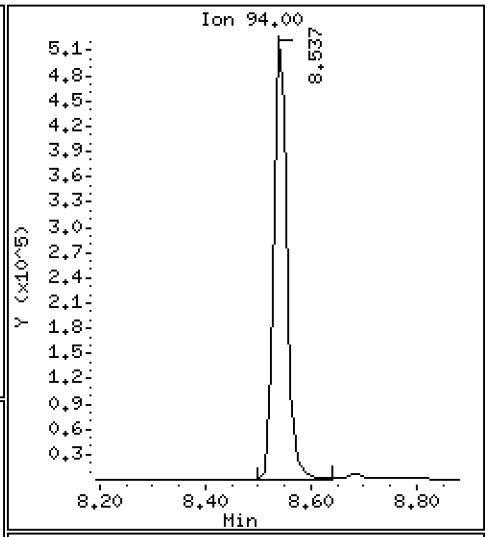
Concentration: 7.736 ug/mL

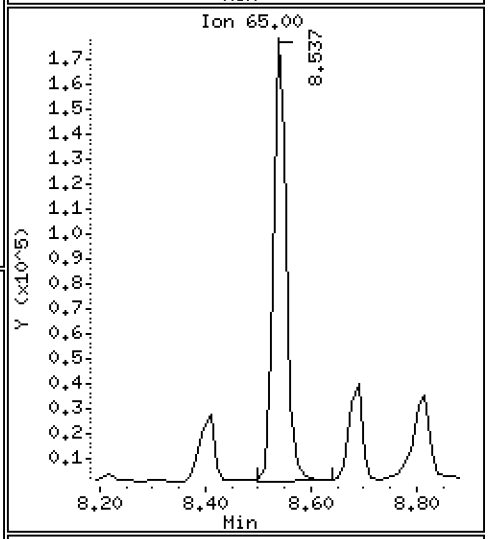


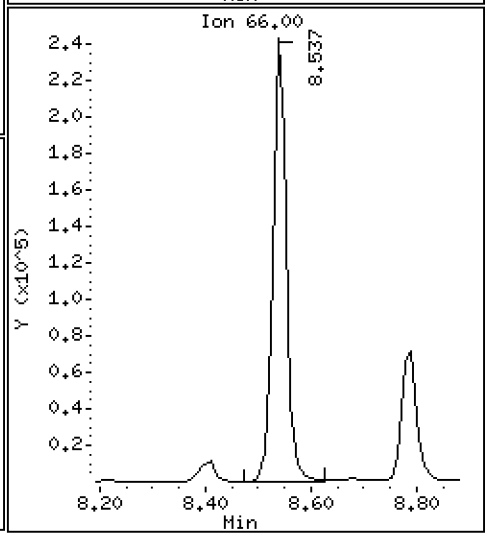












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

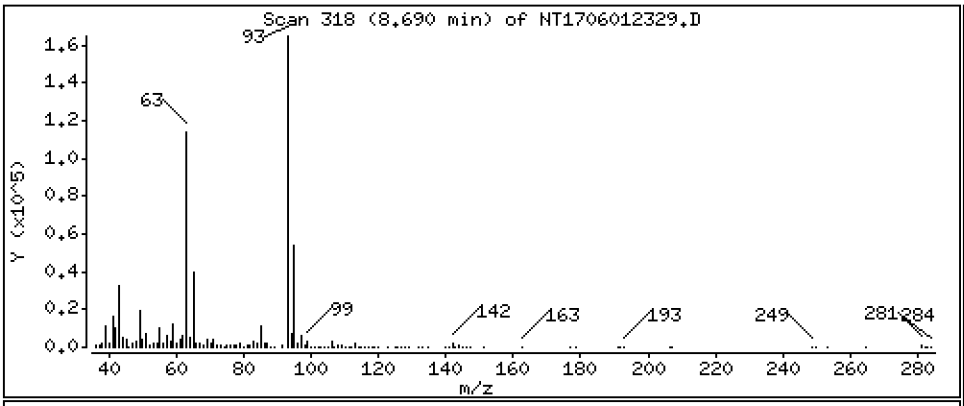
Operator: VTS

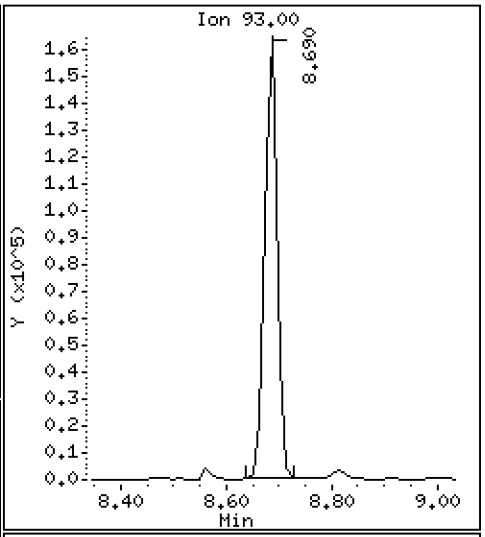
Column phase: ZB-5msi

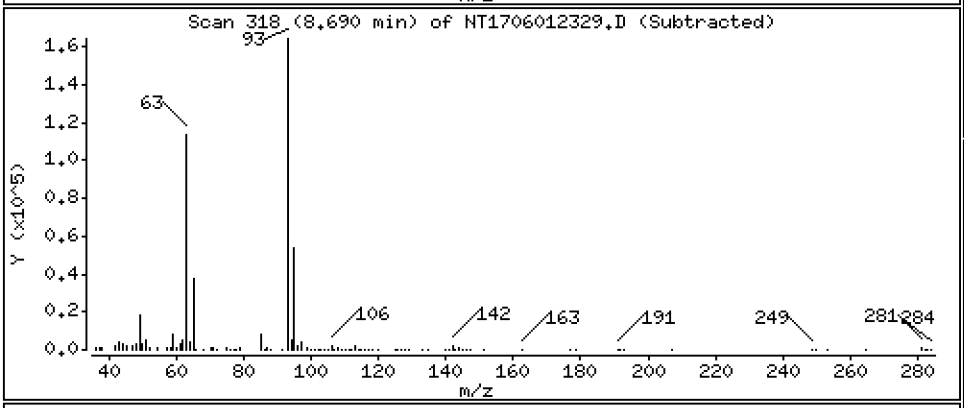
Column diameter: 0.25

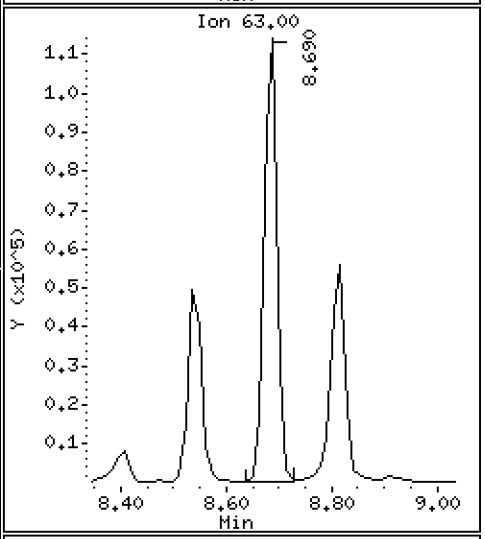
4 Bis(2-Chloroethyl)ether

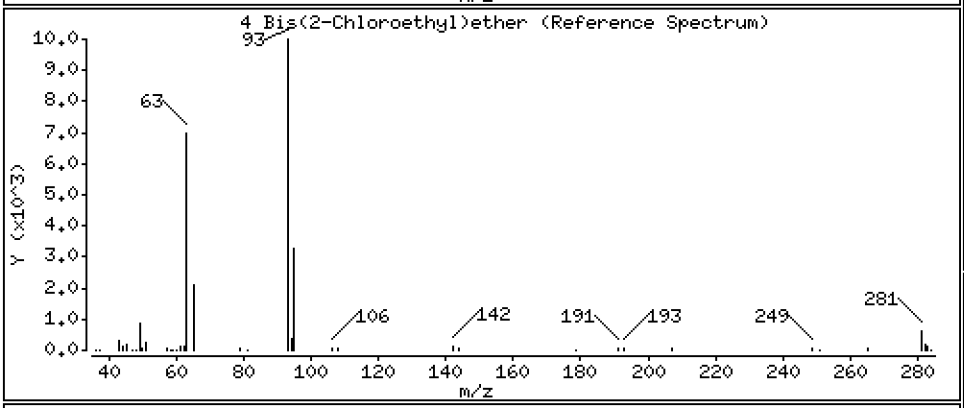
Concentration: 2.985 ug/mL

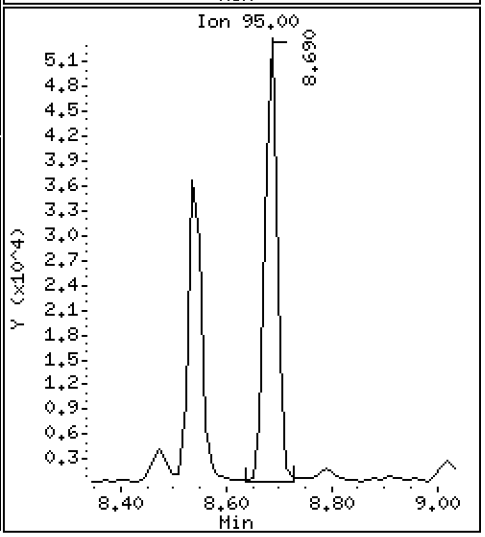


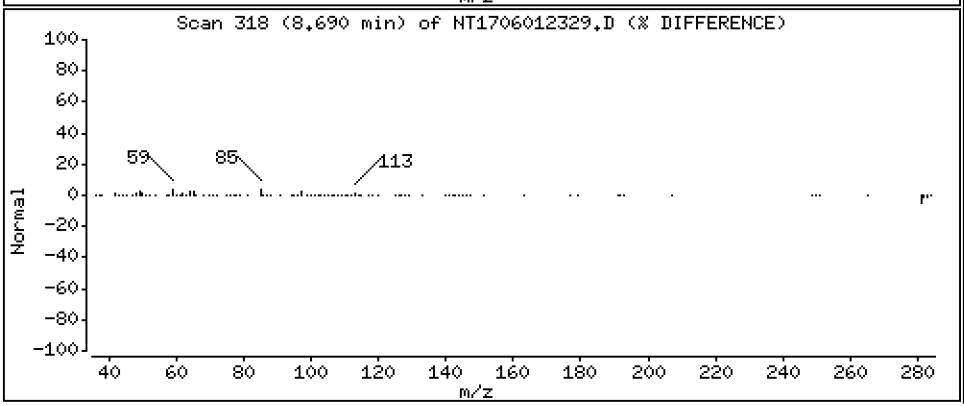












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

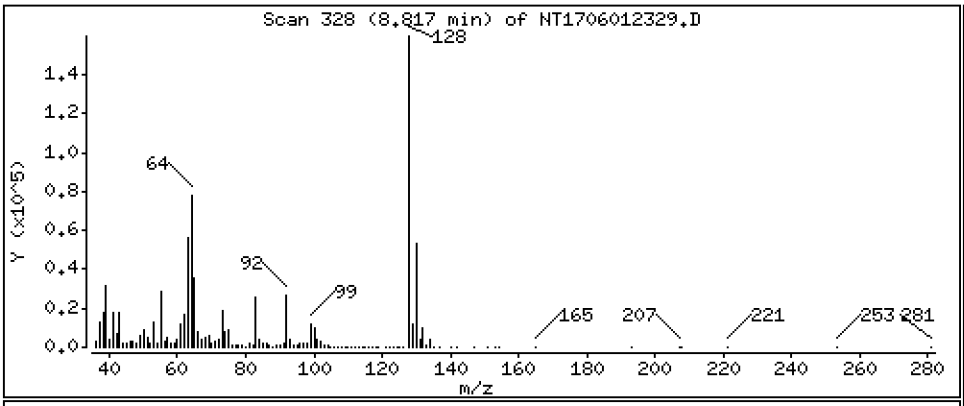
Operator: VTS

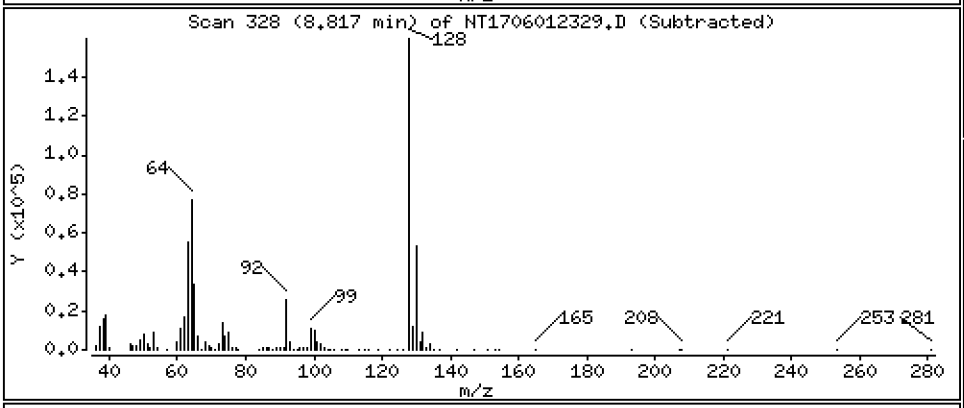
Column phase: ZB-5msi

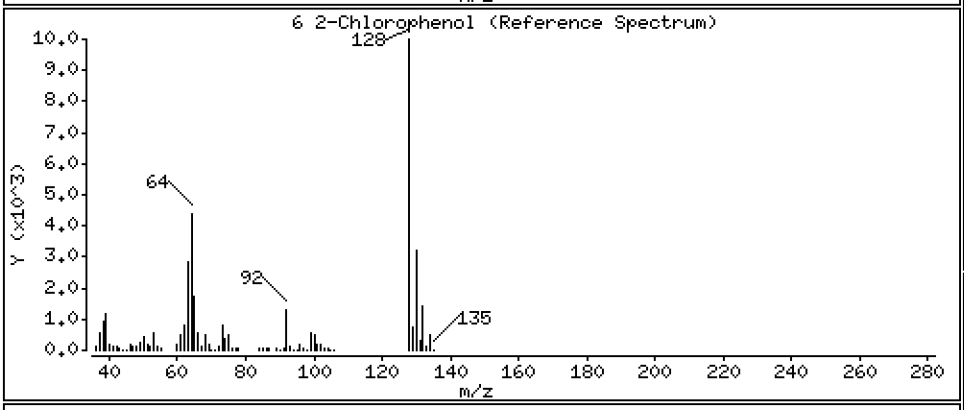
Column diameter: 0.25

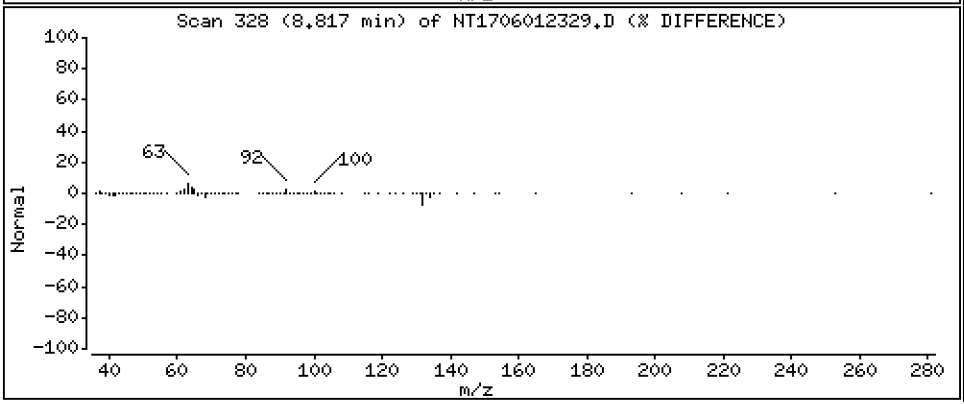
6 2-Chlorophenol

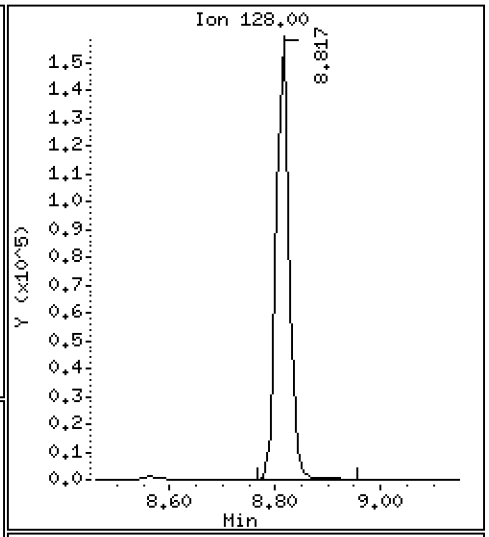
Concentration: 3.032 ug/mL

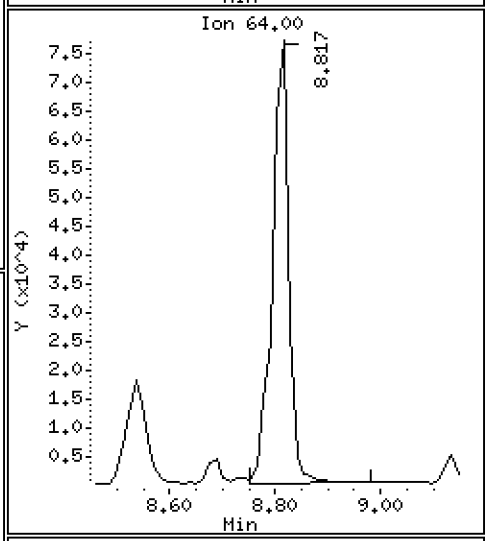


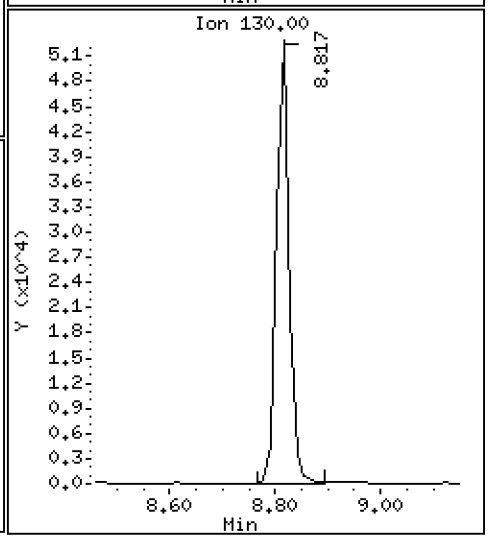












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

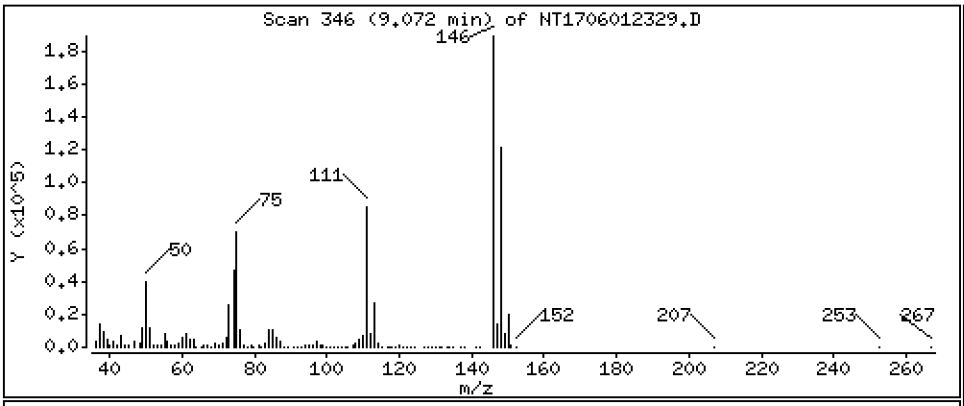
Operator: VTS

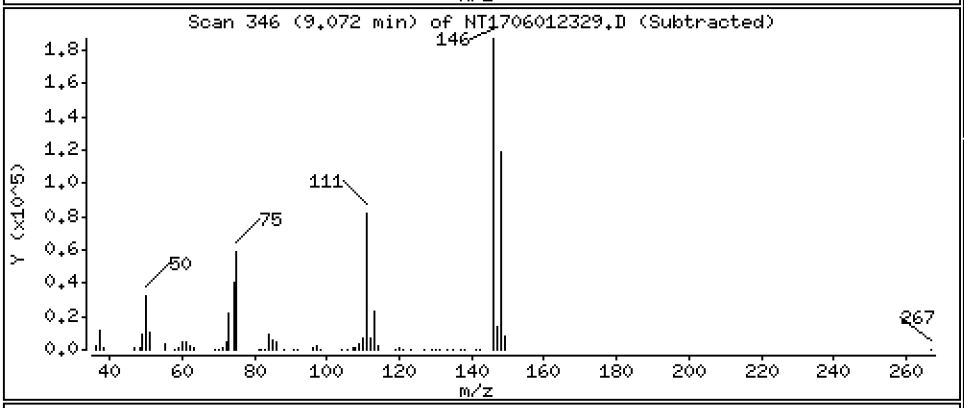
Column phase: ZB-5msi

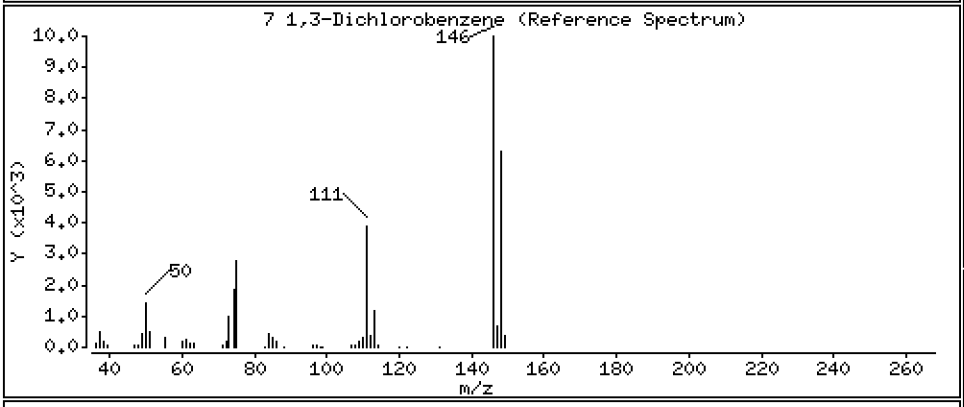
Column diameter: 0.25

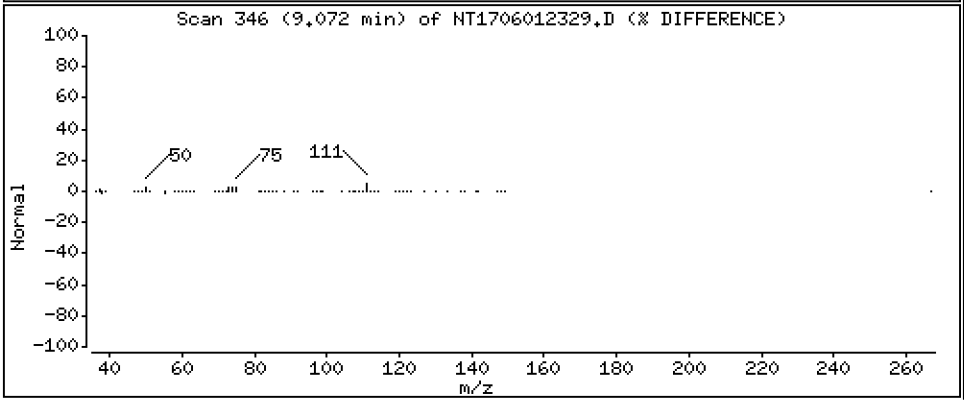
7 1,3-Dichlorobenzene

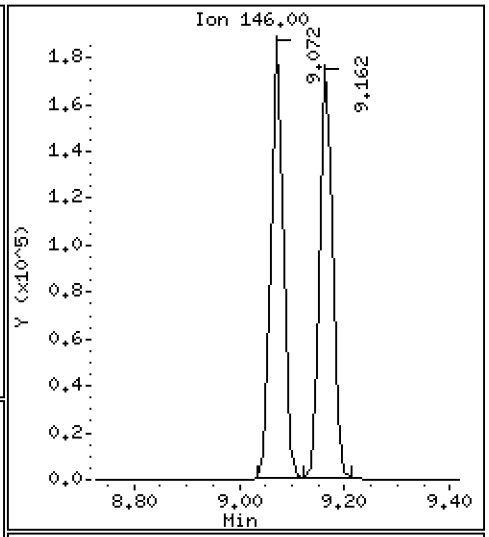
Concentration: 2.932 ug/mL

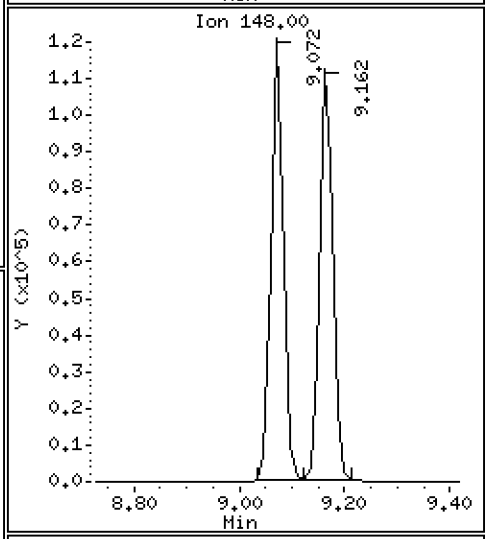


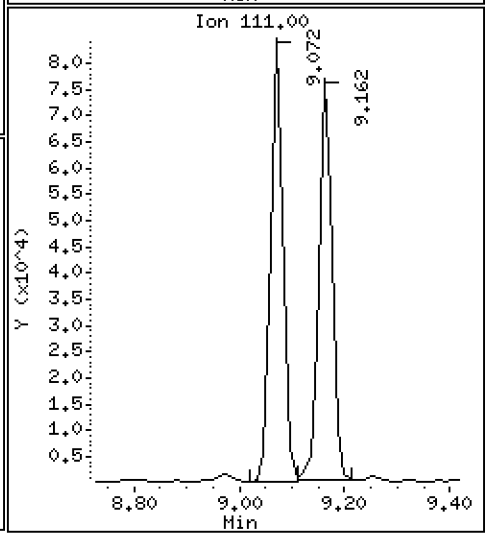












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

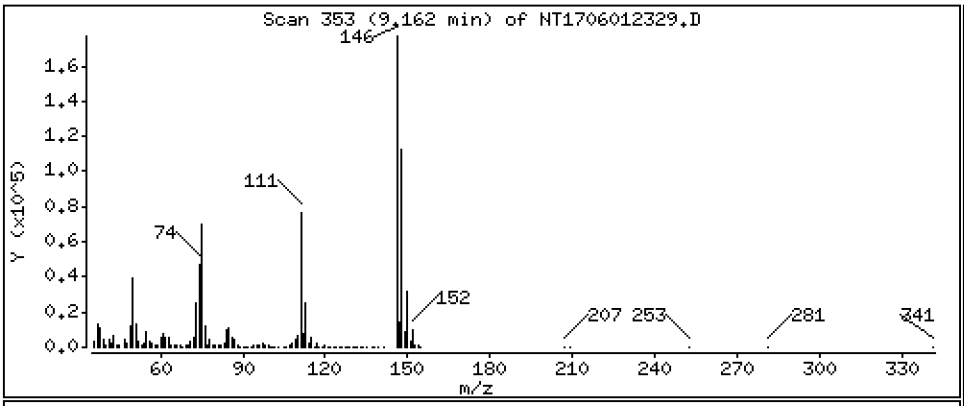
Operator: VTS

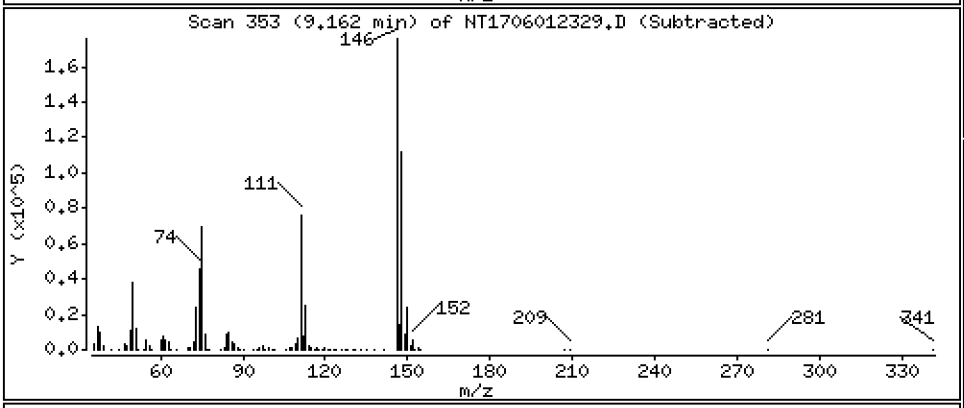
Column phase: ZB-5msi

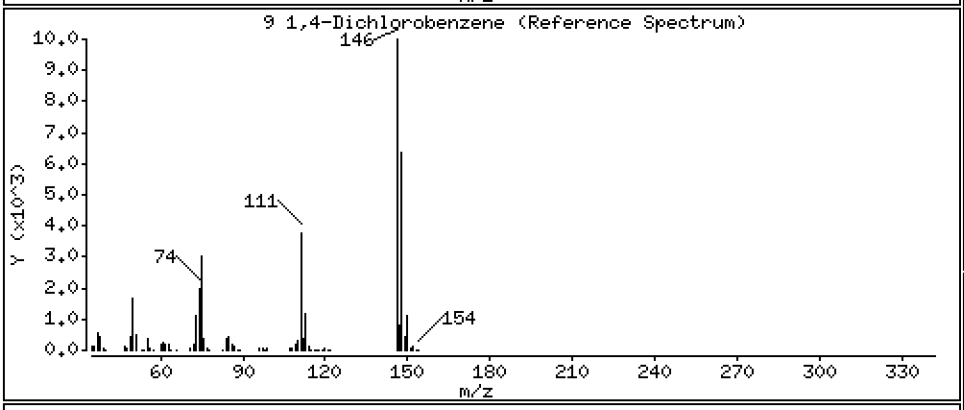
Column diameter: 0.25

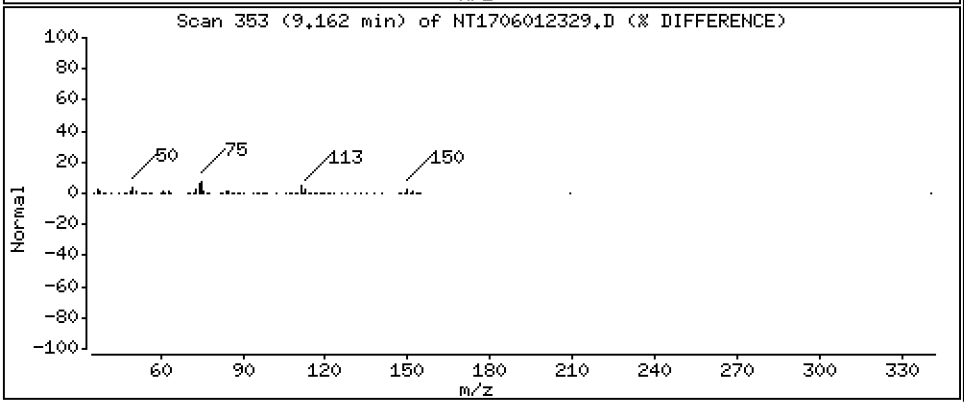
9 1,4-Dichlorobenzene

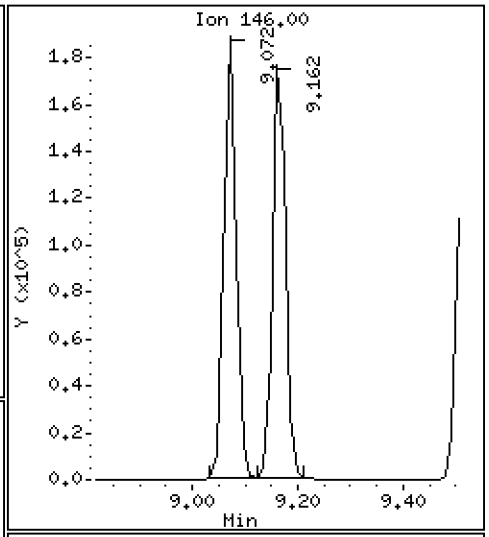
Concentration: 2.887 ug/mL

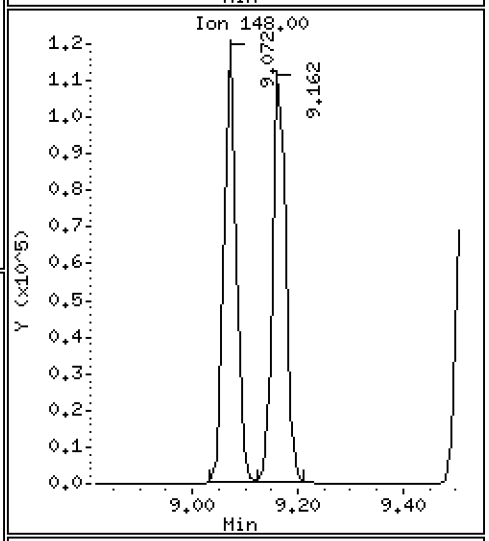


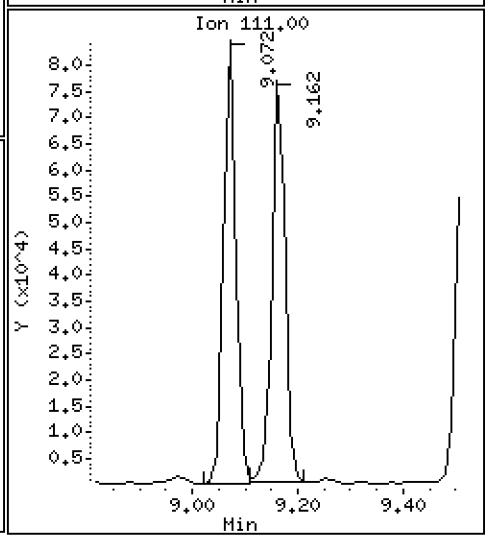












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

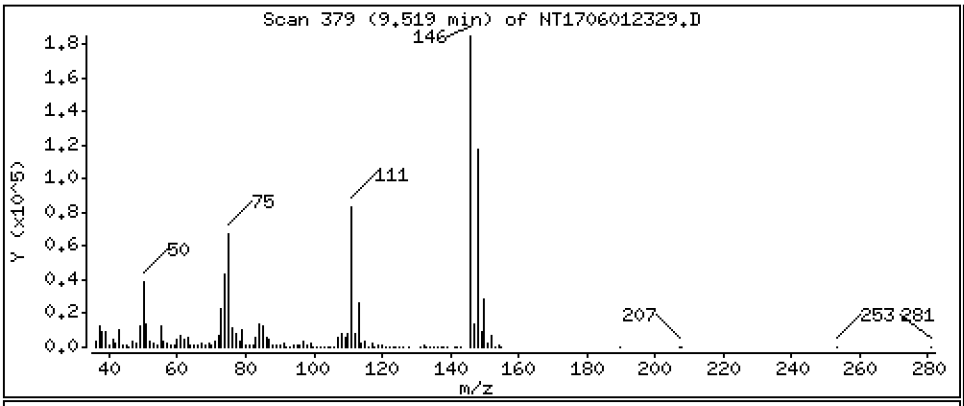
Operator: VTS

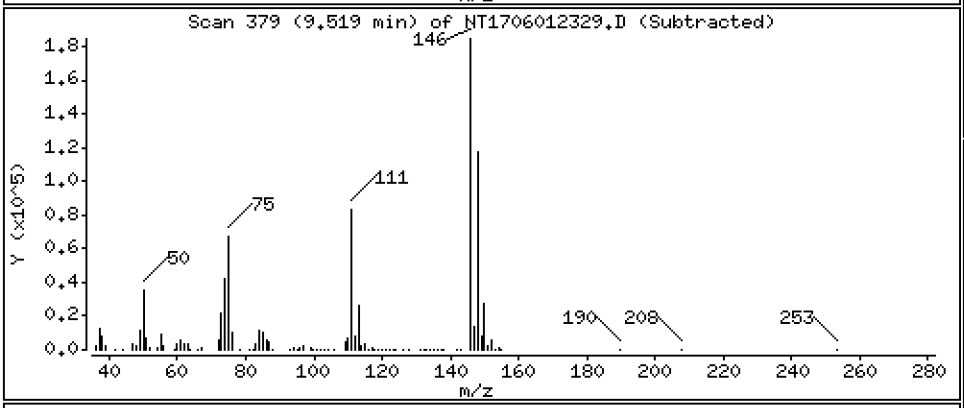
Column phase: ZB-5msi

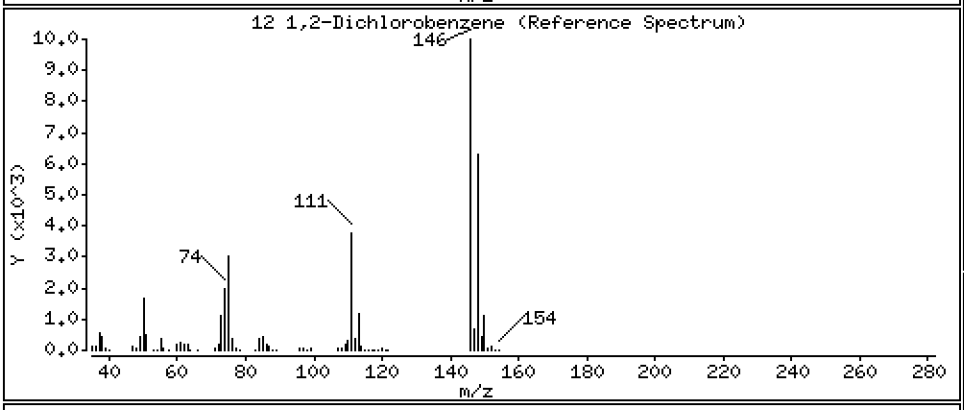
Column diameter: 0.25

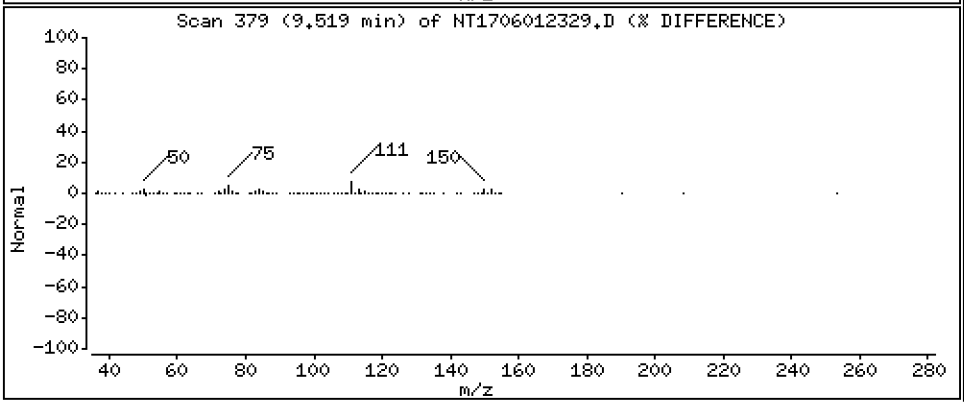
12 1,2-Dichlorobenzene

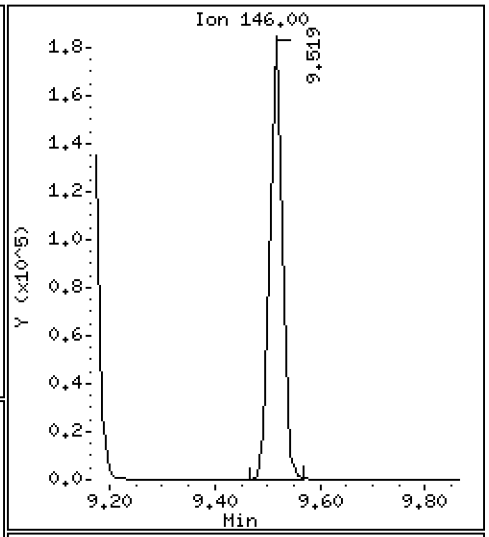
Concentration: 3.142 ug/mL

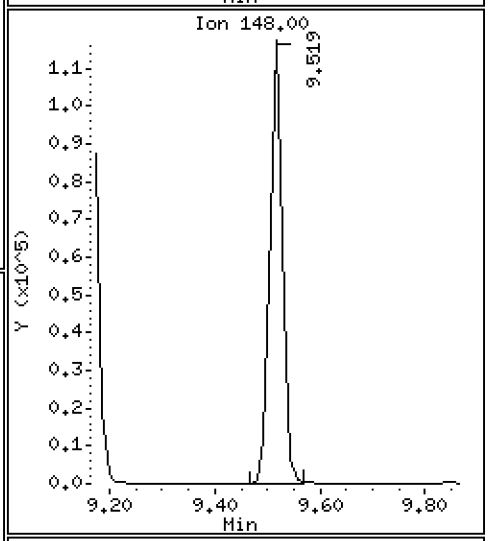


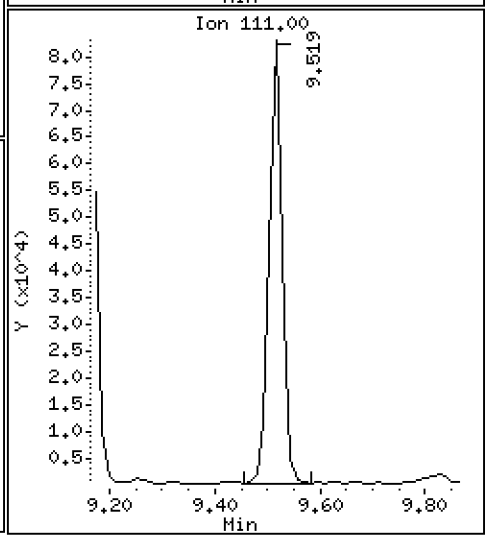












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

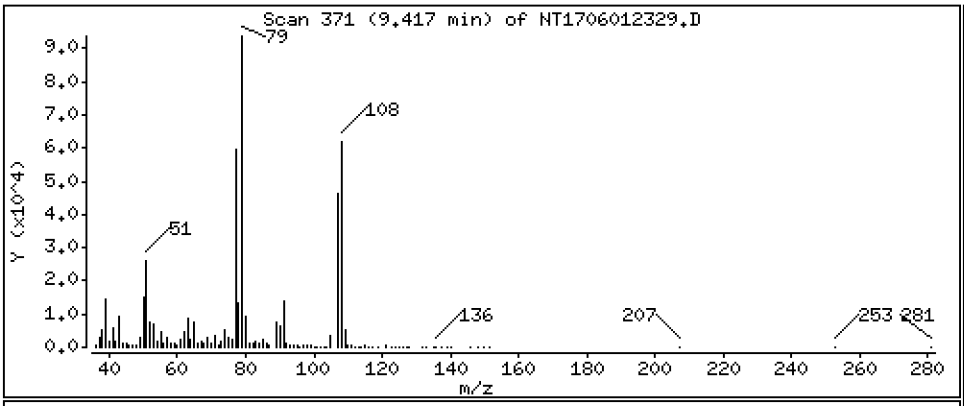
Operator: VTS

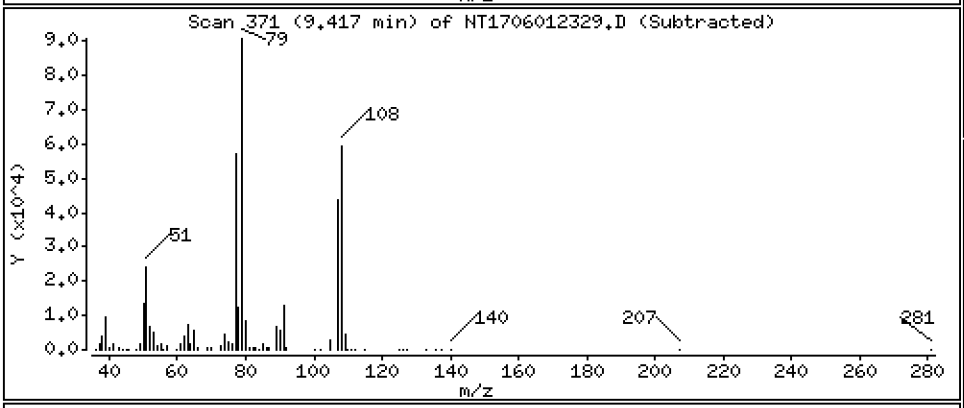
Column phase: ZB-5msi

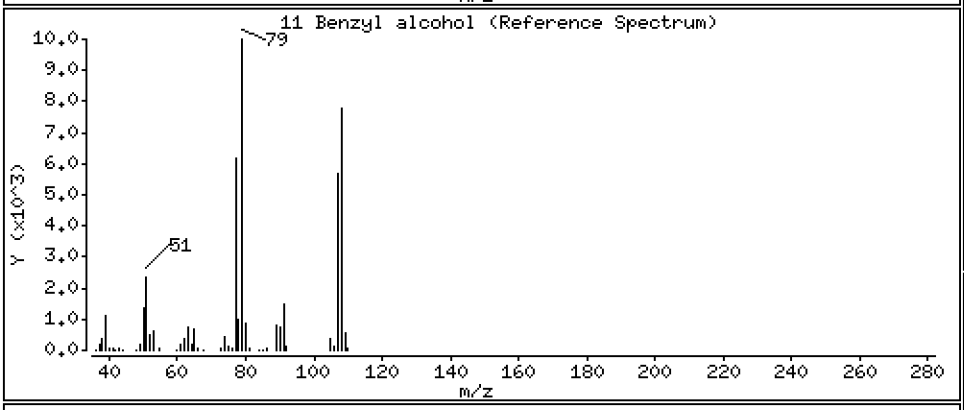
Column diameter: 0.25

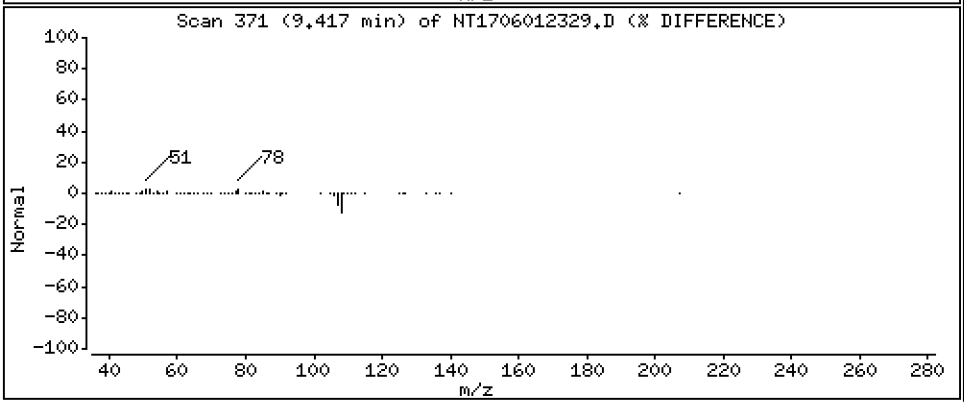
11 Benzyl alcohol

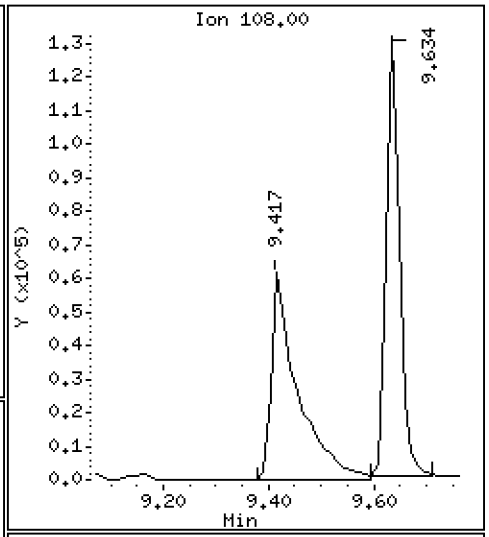
Concentration: 3.639 ug/mL

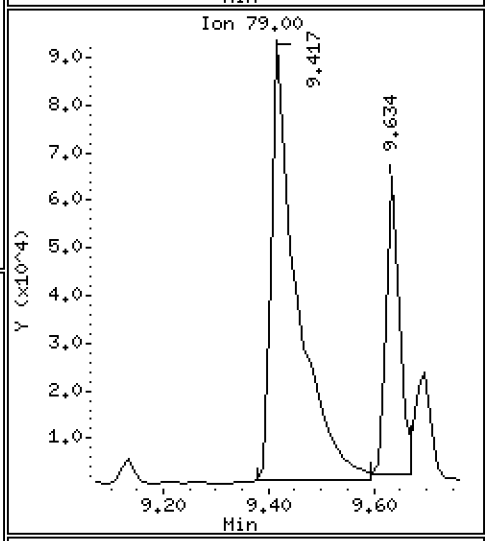


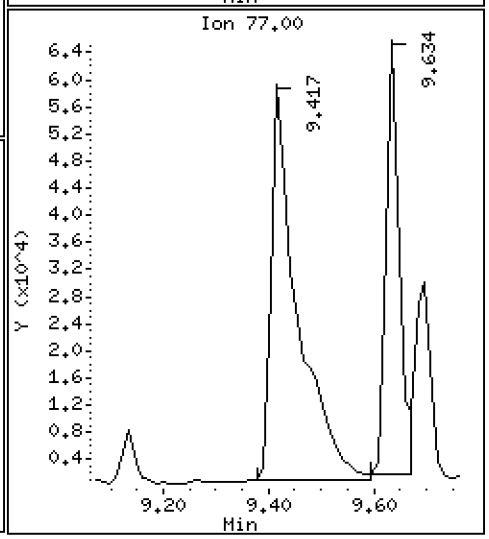












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

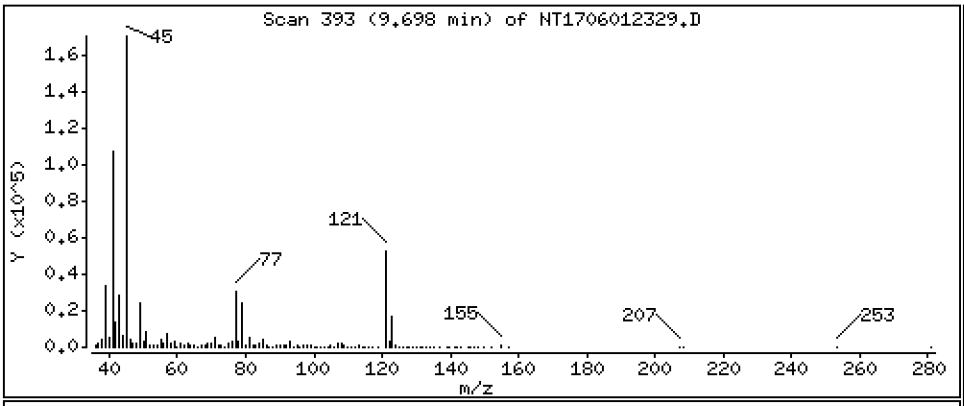
Operator: VTS

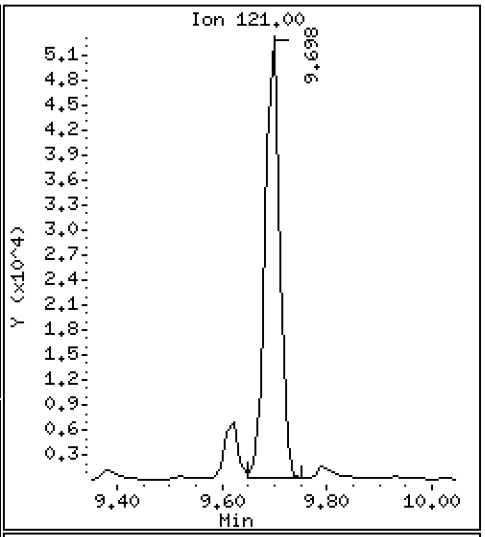
Column phase: ZB-5msi

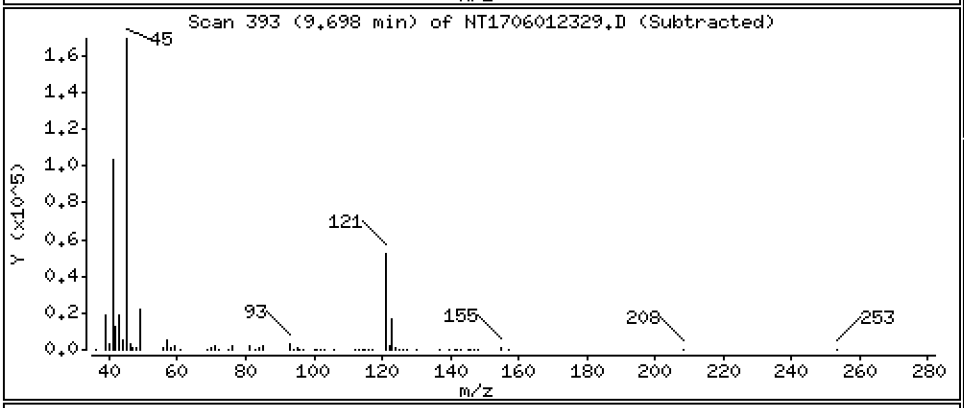
Column diameter: 0.25

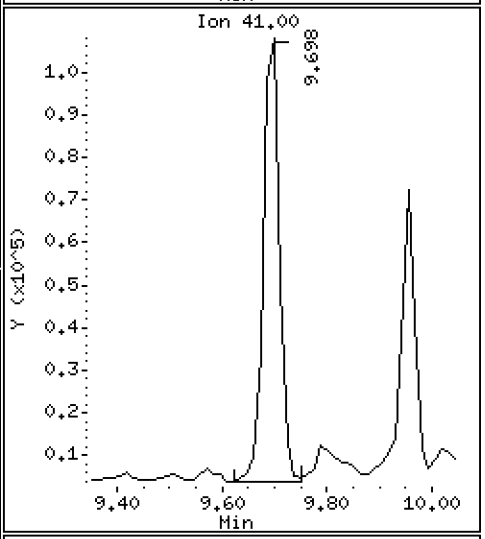
14 2,2'-oxybis(1-Chloropropane)

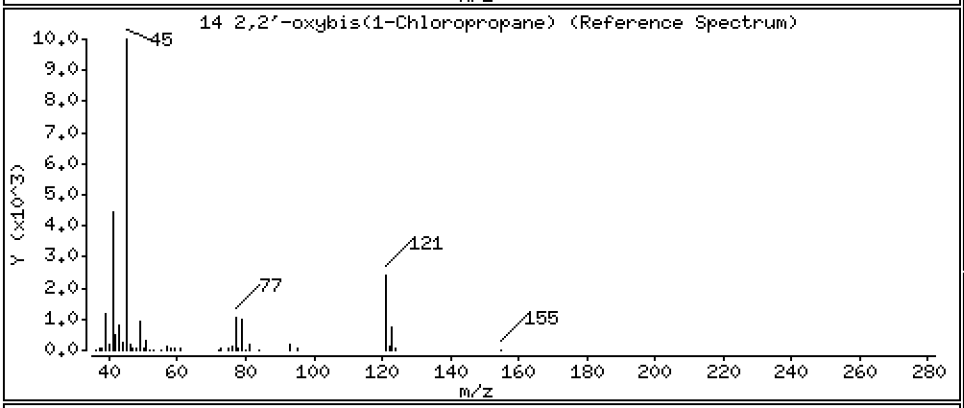
Concentration: 3.712 ug/mL

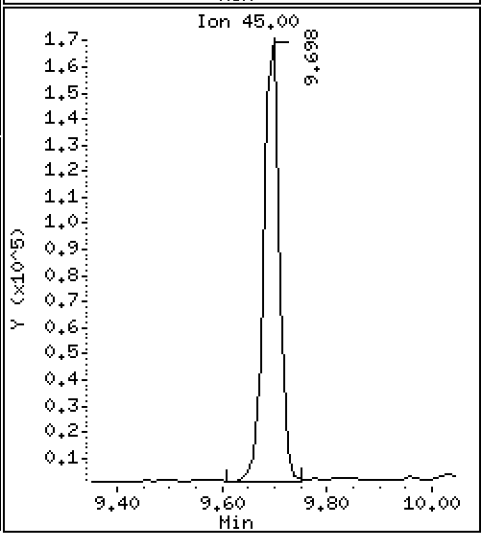


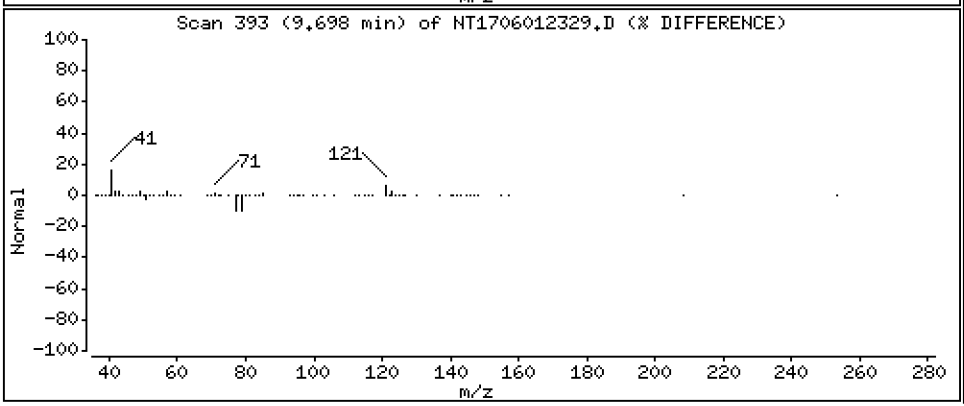












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

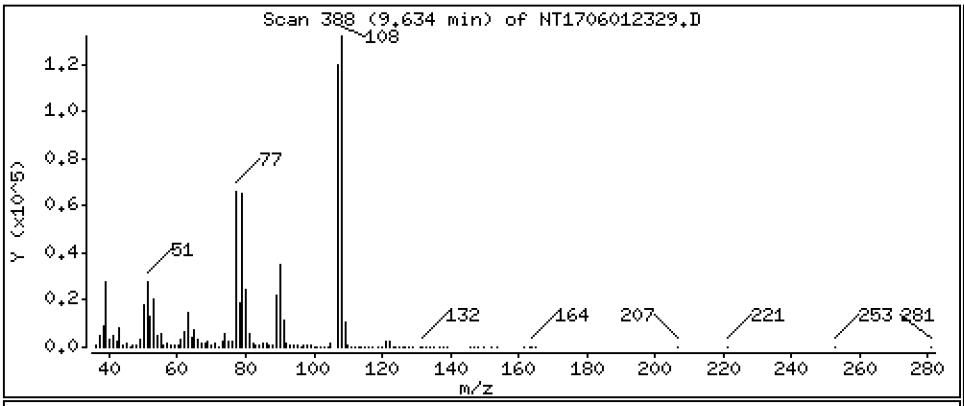
Operator: VTS

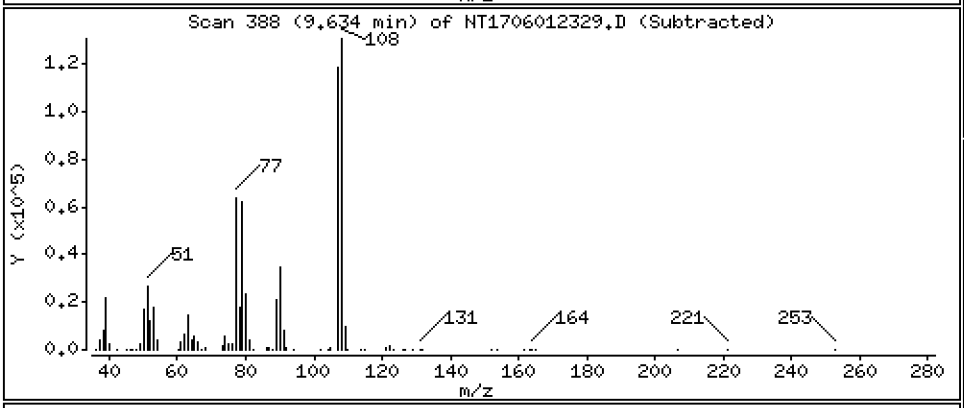
Column phase: ZB-5msi

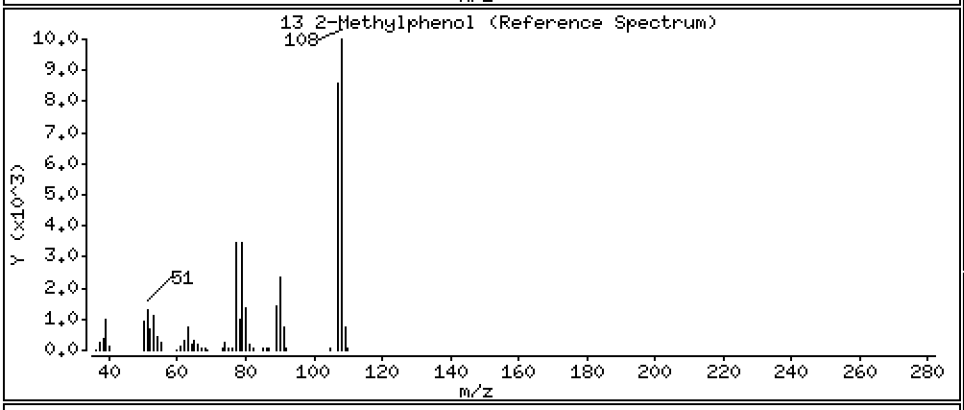
Column diameter: 0.25

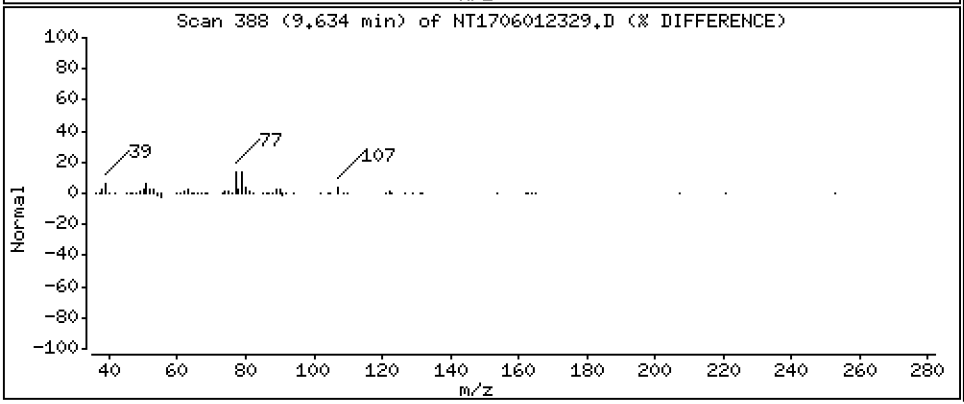
13 2-Methylphenol

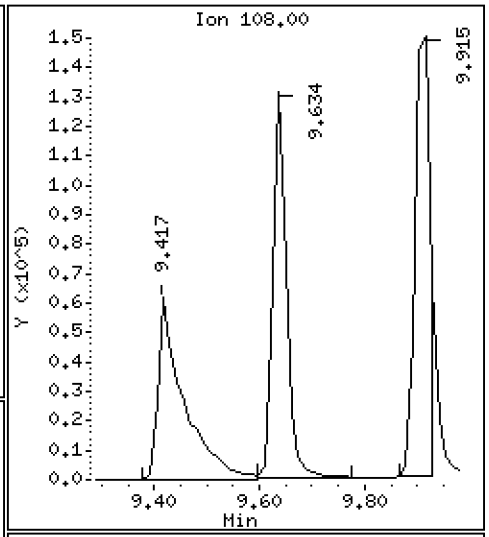
Concentration: 2.600 ug/mL

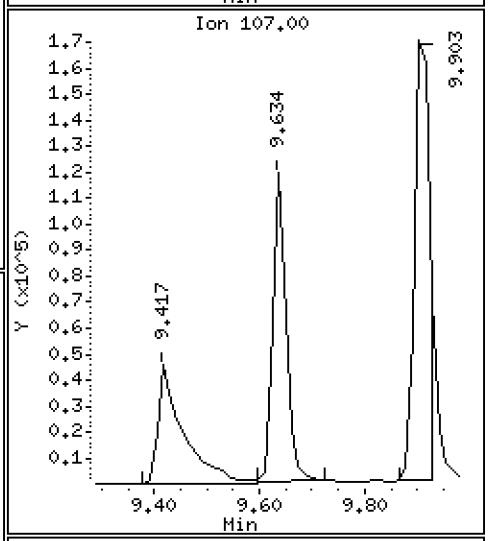


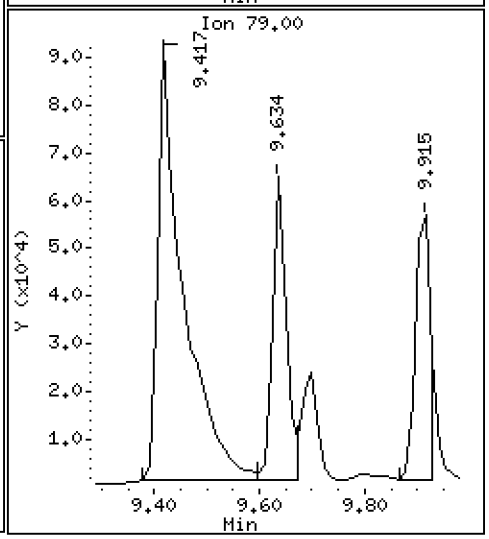












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

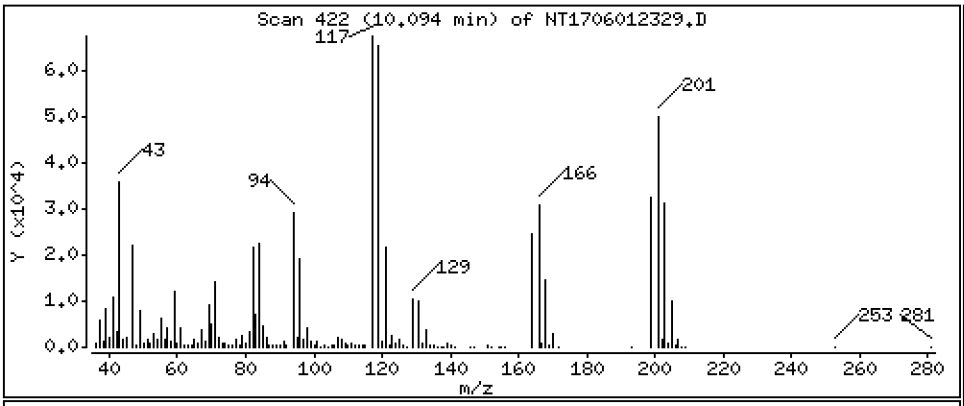
Operator: VTS

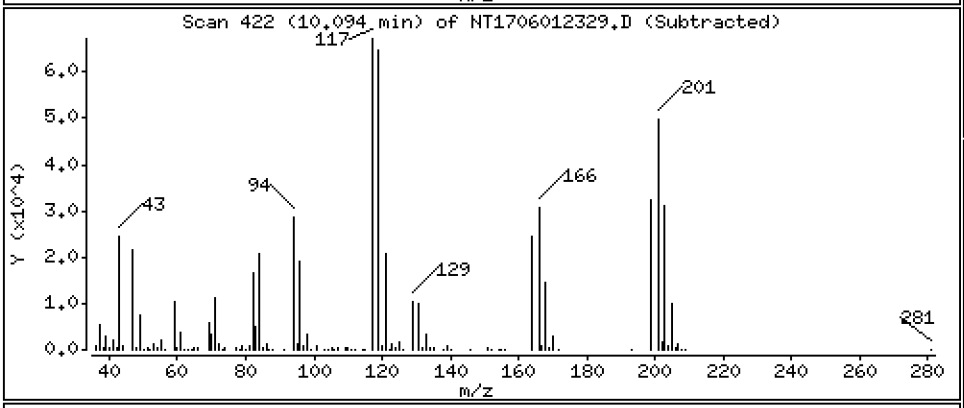
Column phase: ZB-5msi

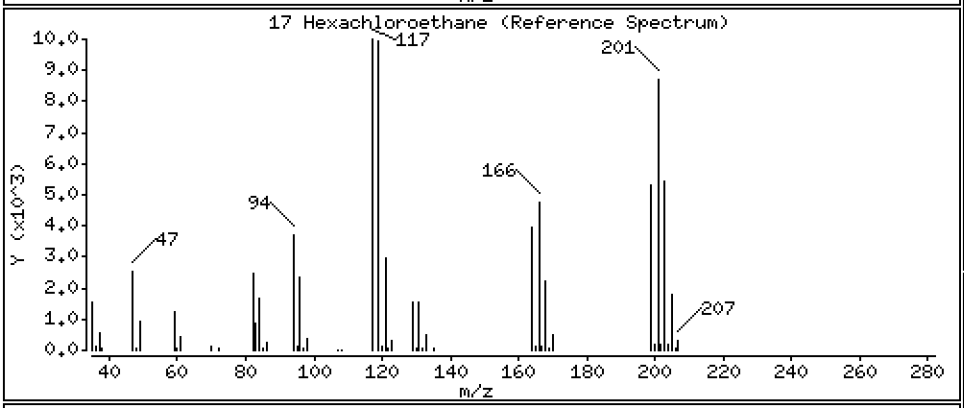
Column diameter: 0.25

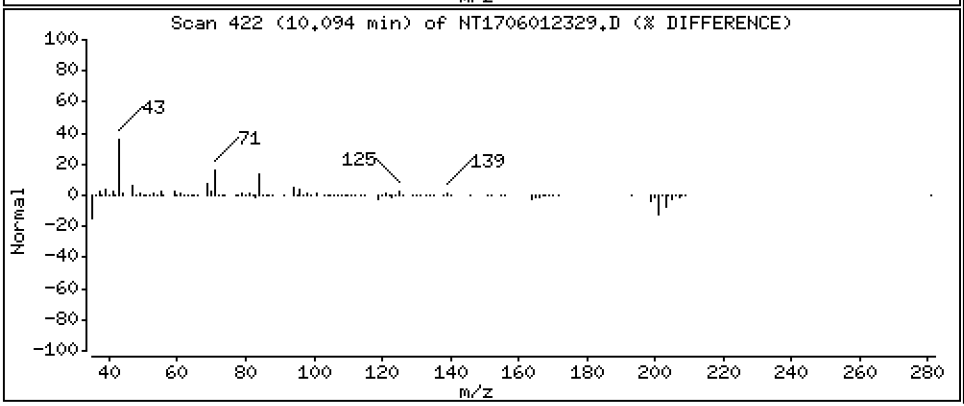
17 Hexachloroethane

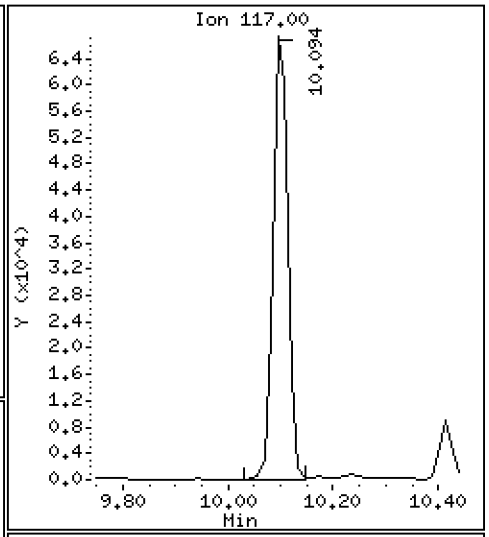
Concentration: 3.121 ug/mL

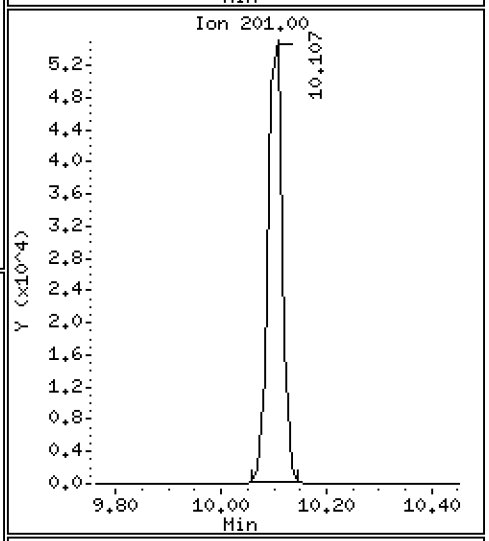


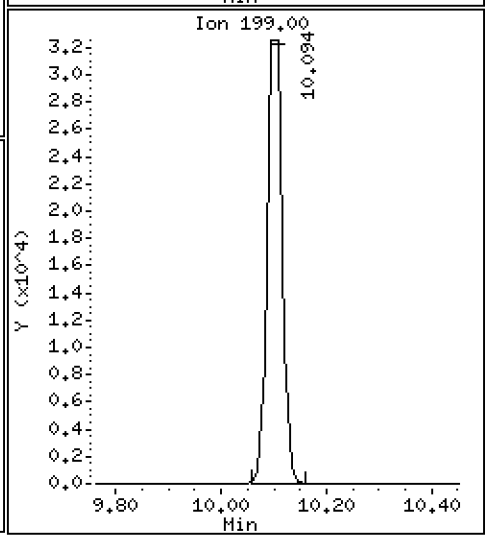












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

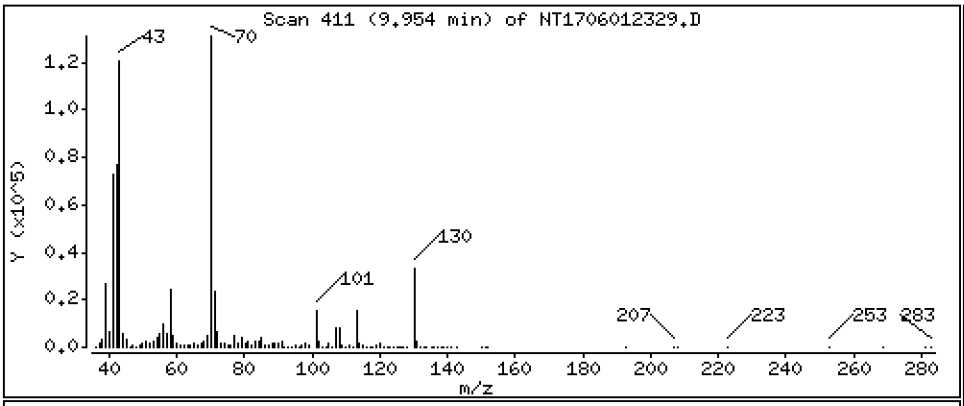
Operator: VTS

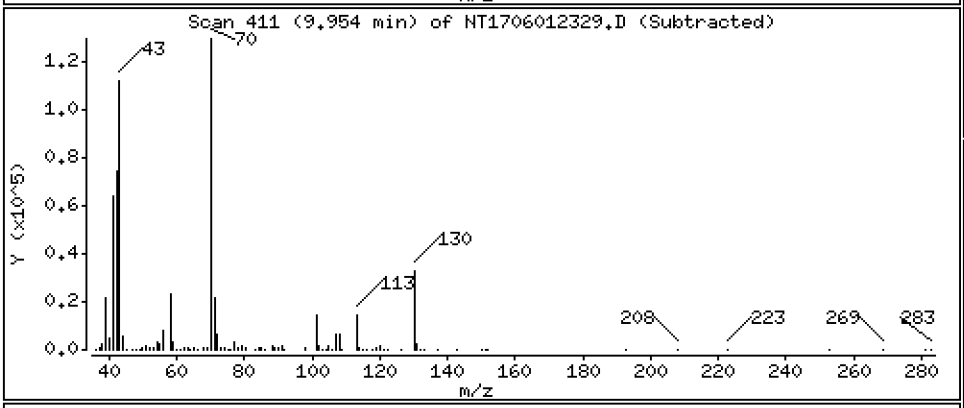
Column phase: ZB-5msi

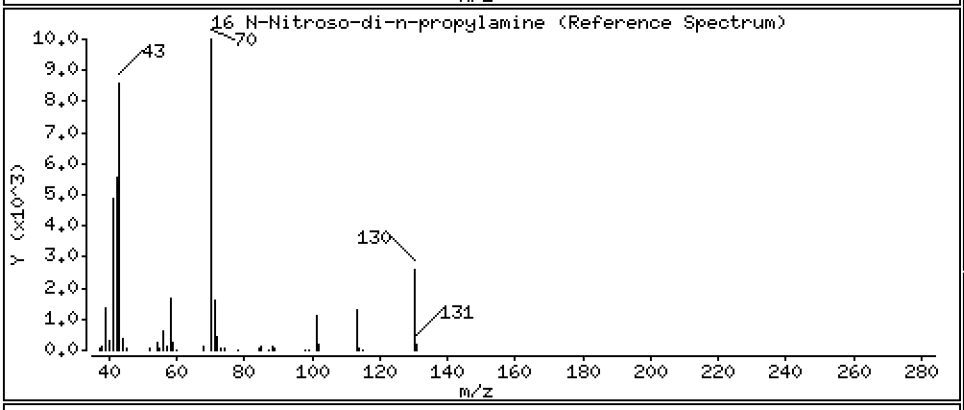
Column diameter: 0.25

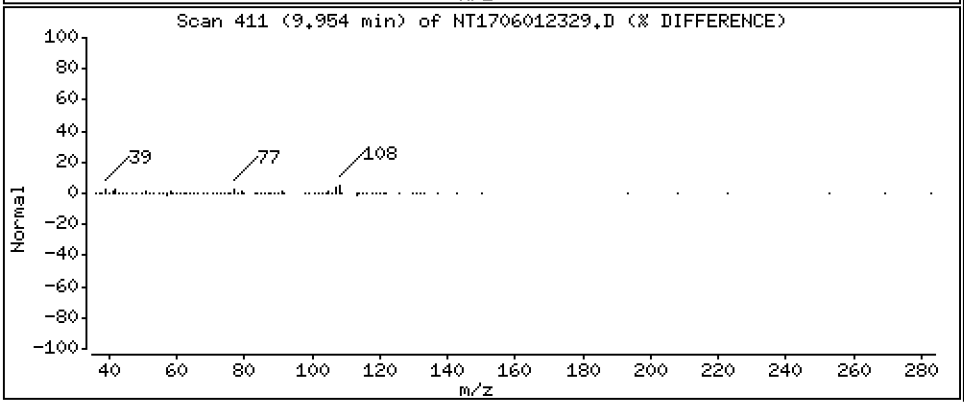
16 N-Nitroso-di-n-propylamine

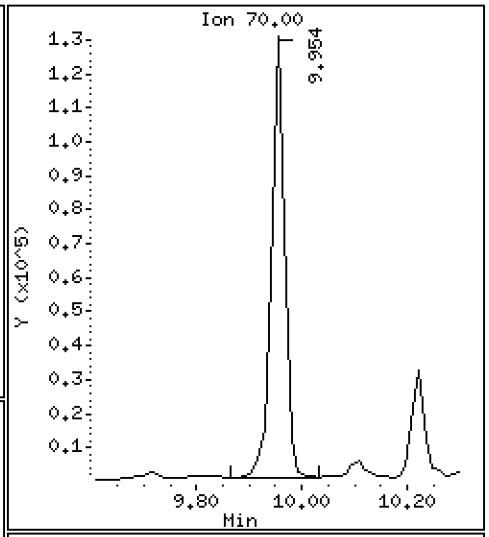
Concentration: 3.289 ug/mL

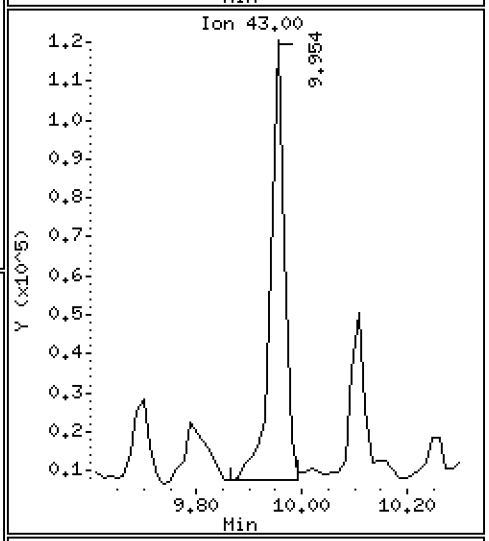


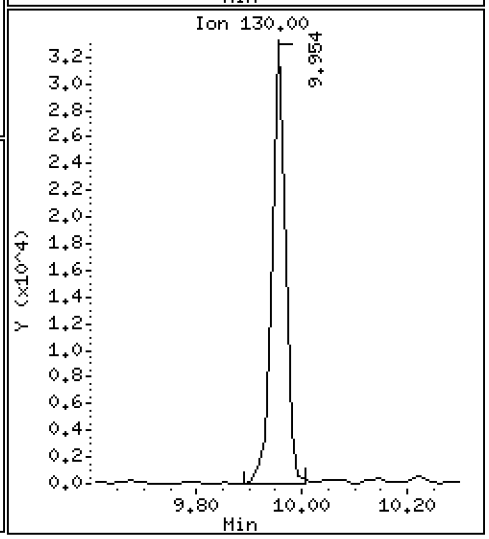












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

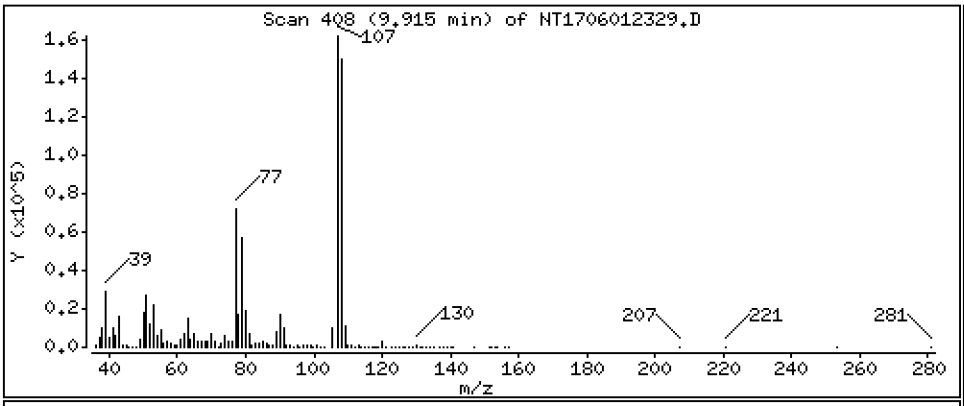
Operator: VTS

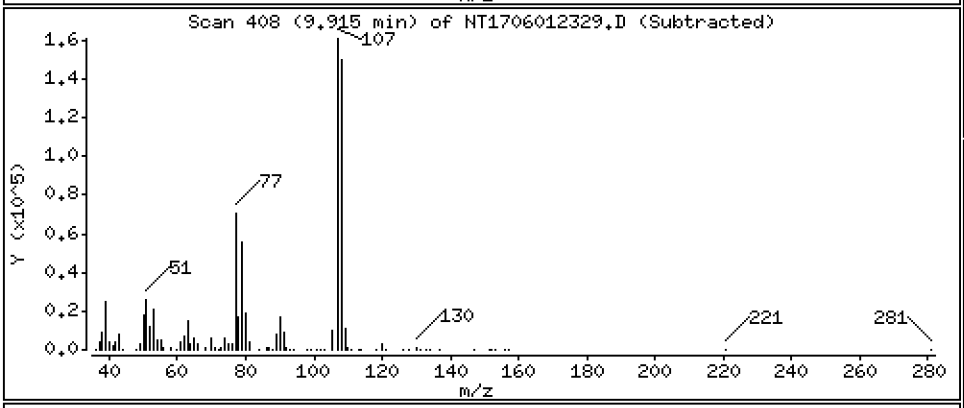
Column phase: ZB-5msi

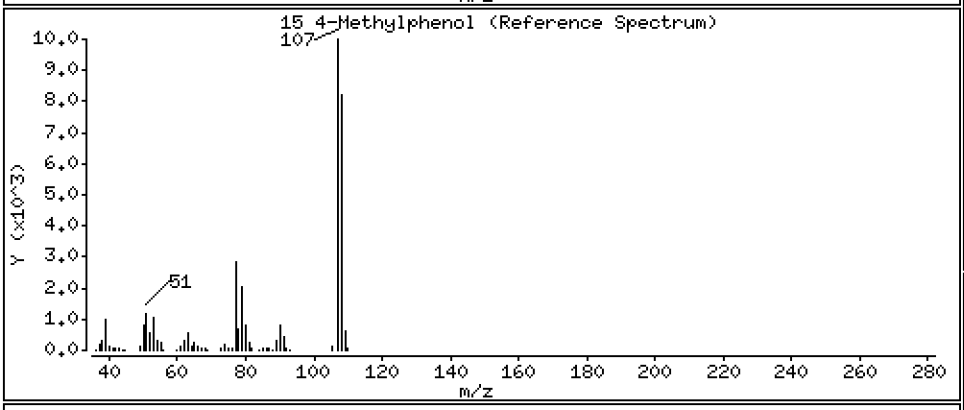
Column diameter: 0.25

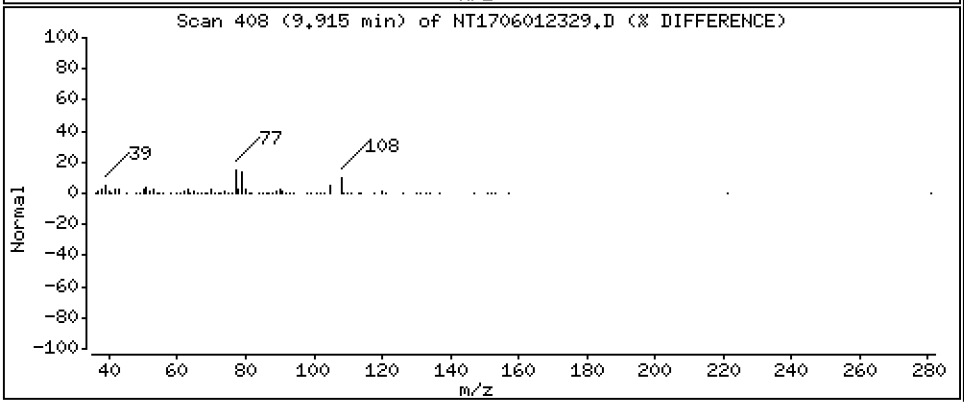
15 4-Methylphenol

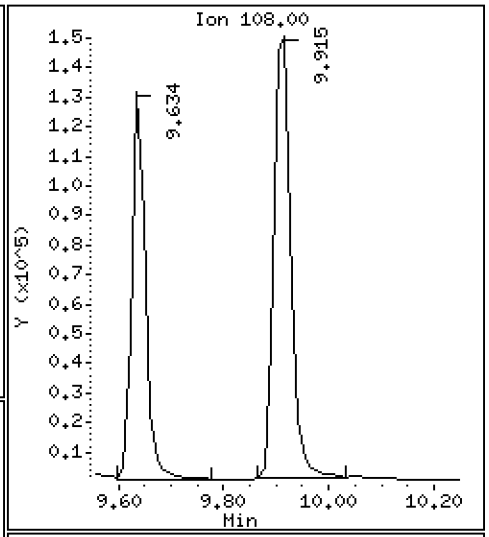
Concentration: 3.681 ug/mL

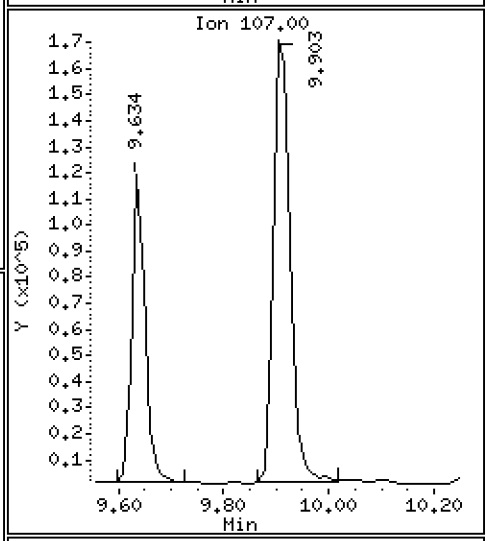


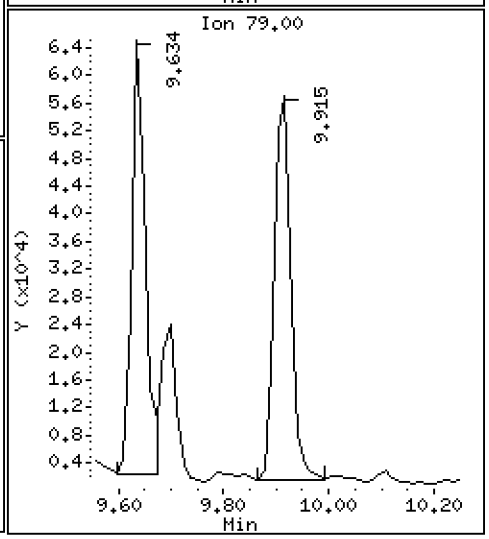












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

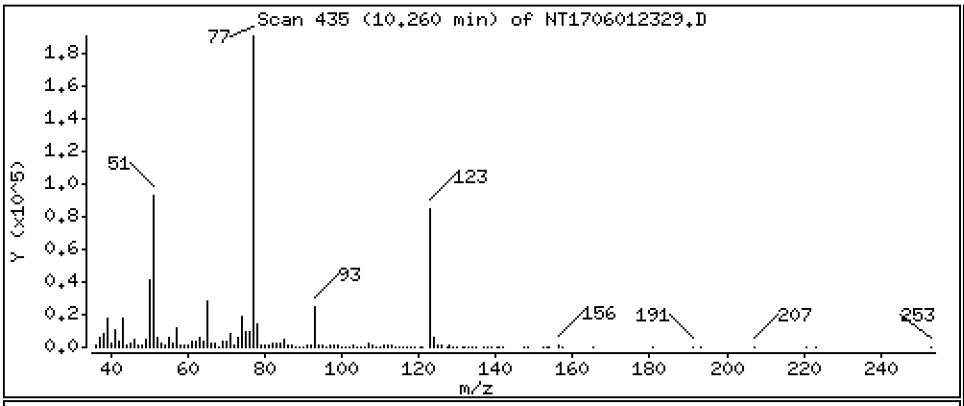
Operator: VTS

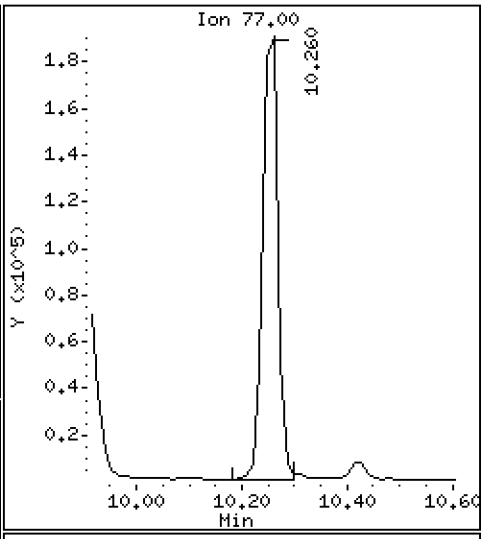
Column phase: ZB-5msi

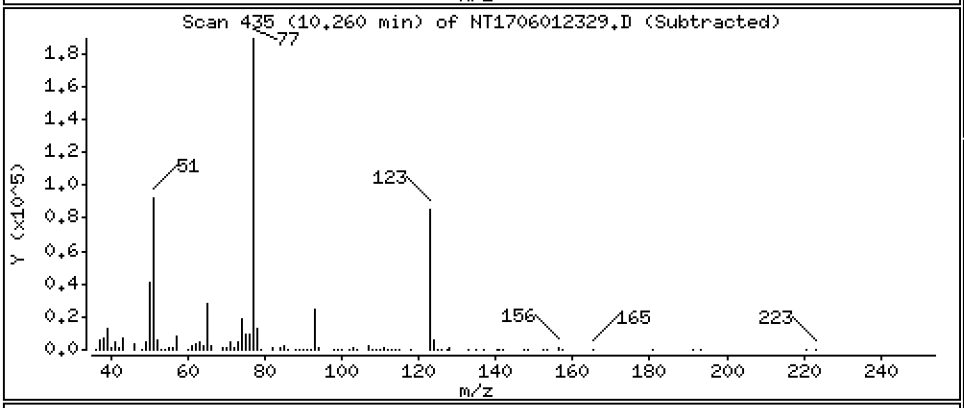
Column diameter: 0.25

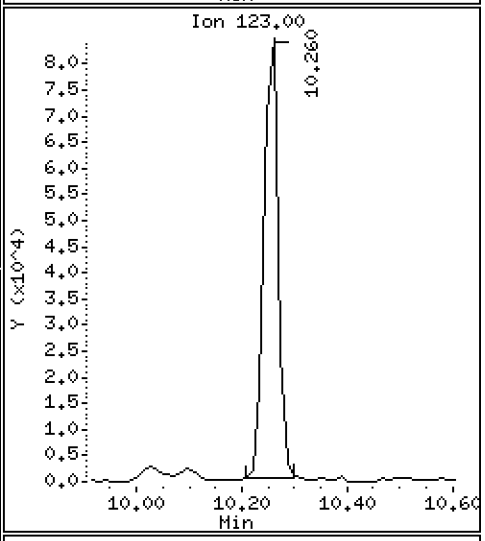
19 Nitrobenzene

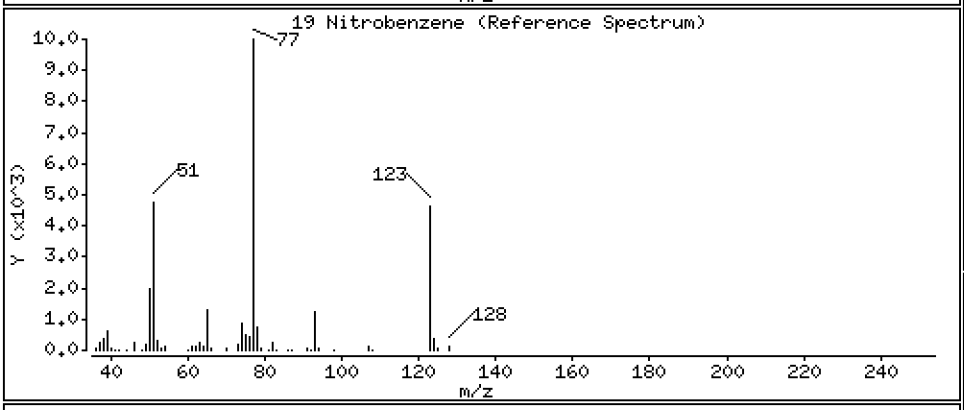
Concentration: 3.433 ug/mL

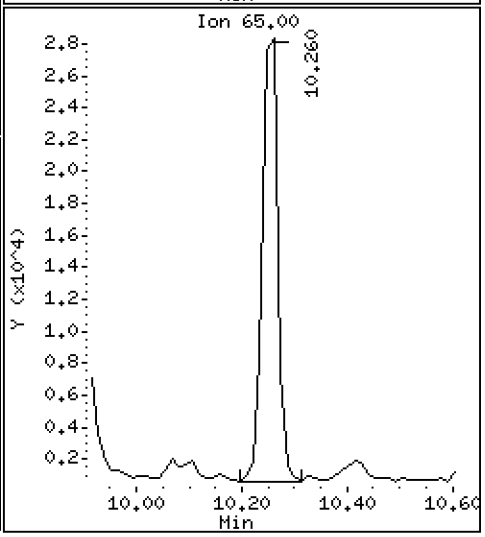


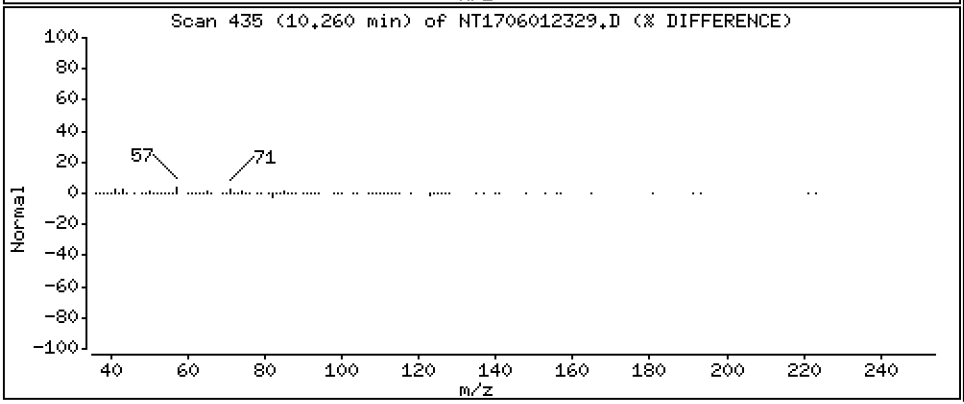












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

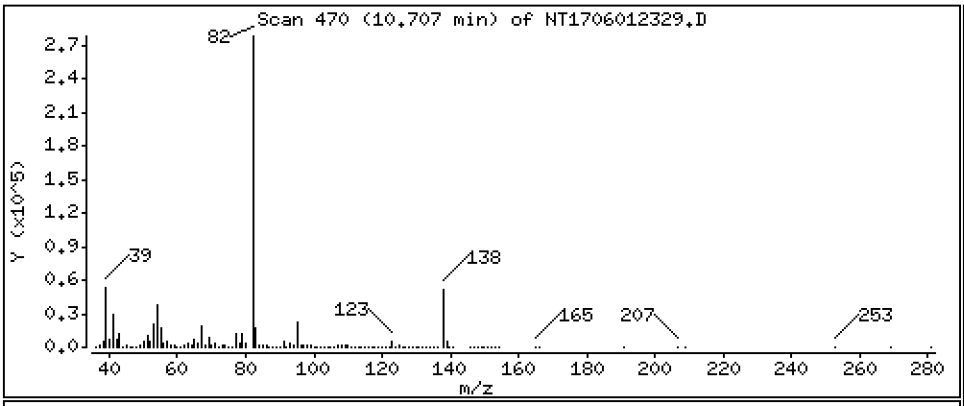
Operator: VTS

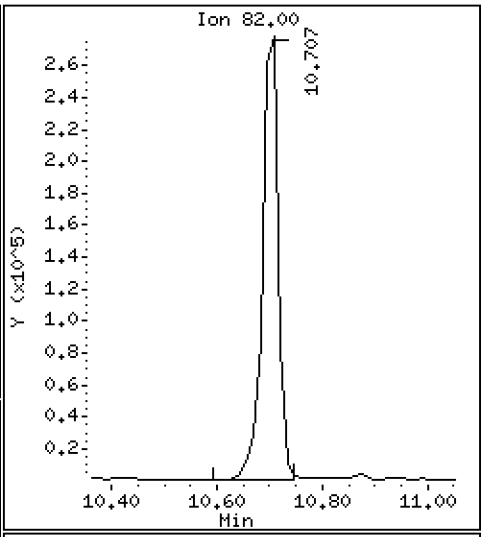
Column phase: ZB-5msi

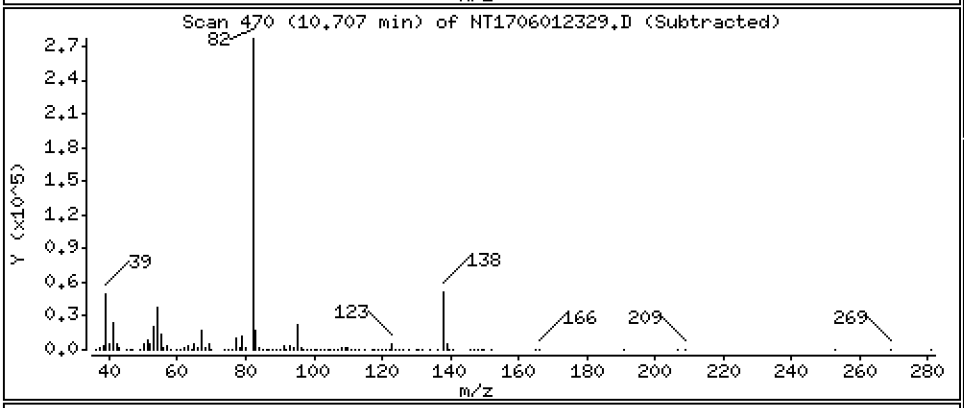
Column diameter: 0.25

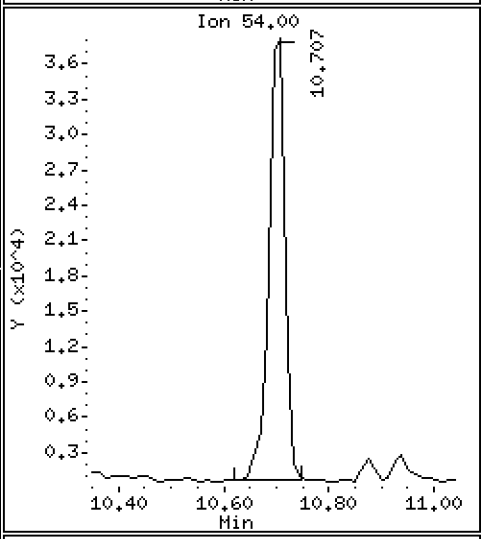
20 Isophorone

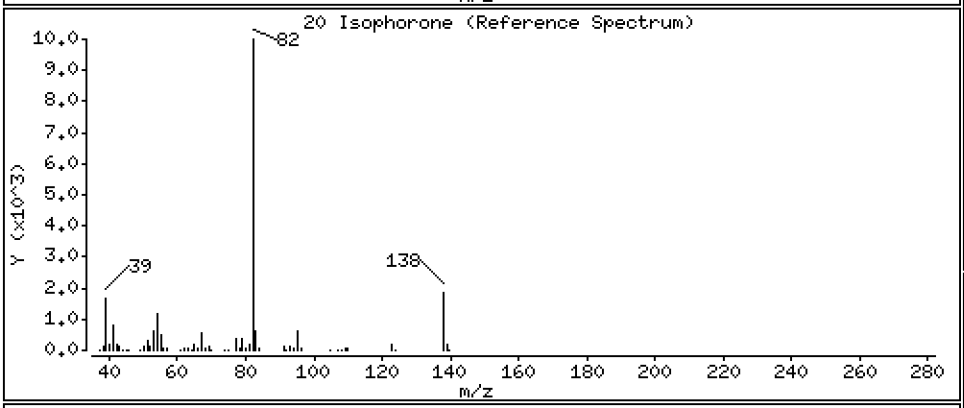
Concentration: 3.956 ug/mL

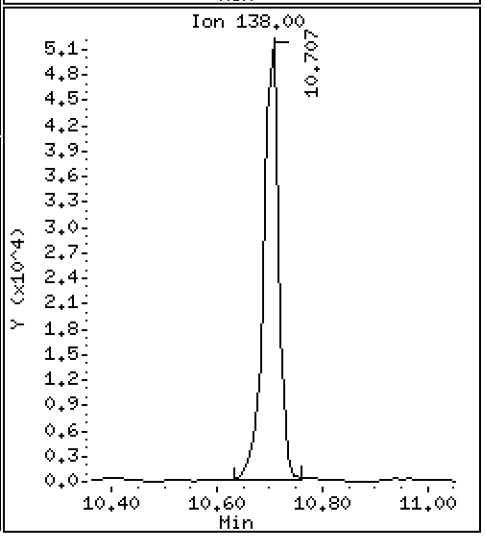


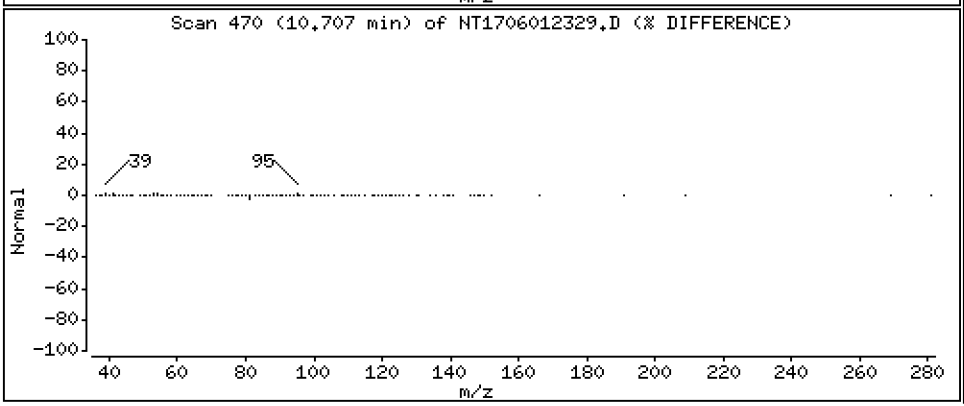












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

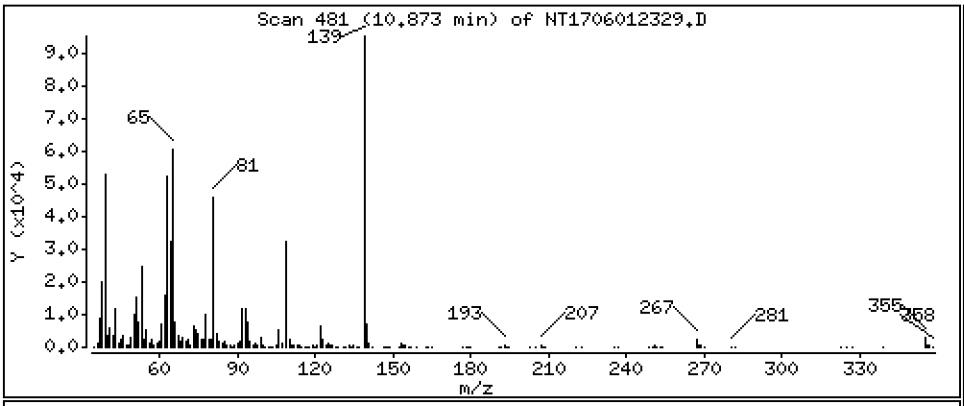
Operator: VTS

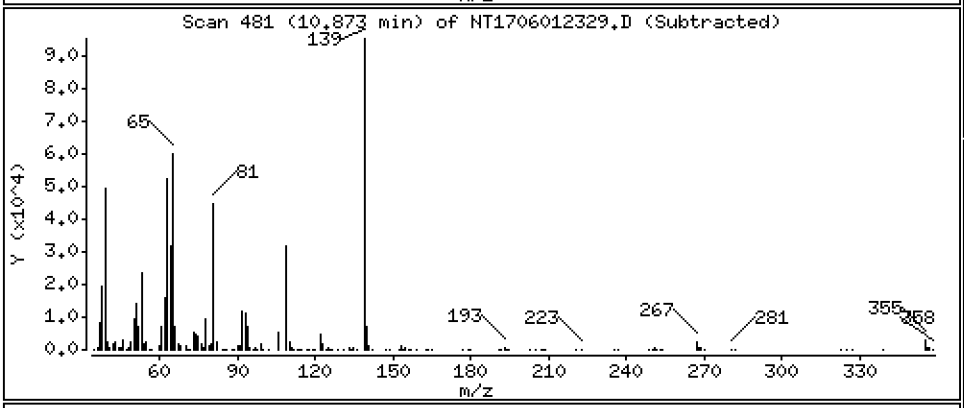
Column phase: ZB-5msi

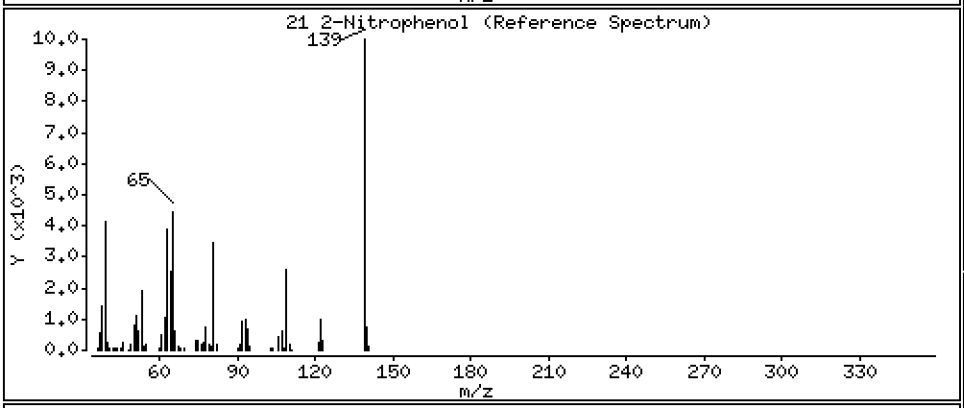
Column diameter: 0.25

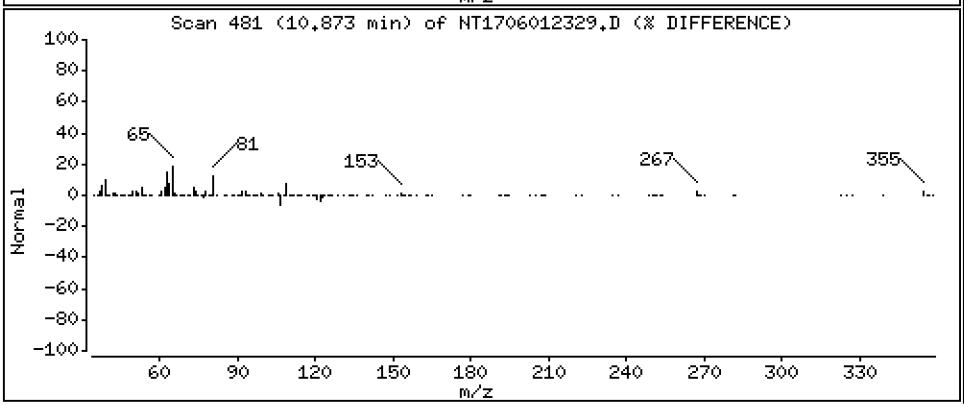
21 2-Nitrophenol

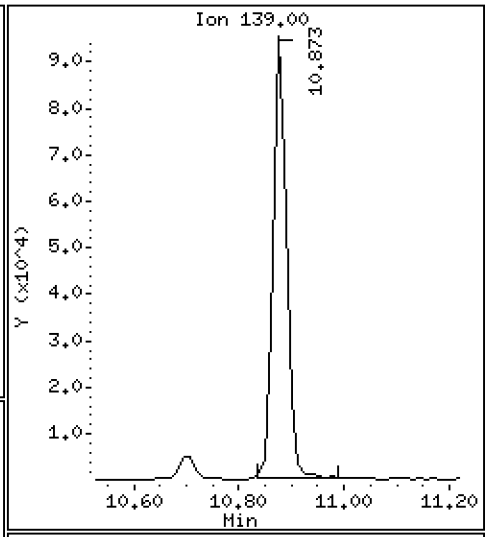
Concentration: 3.269 ug/mL

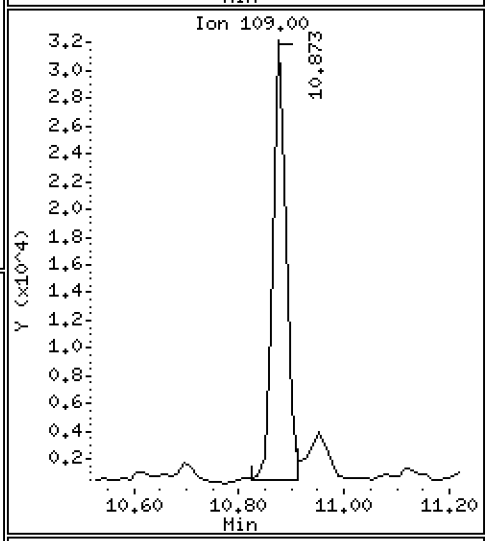


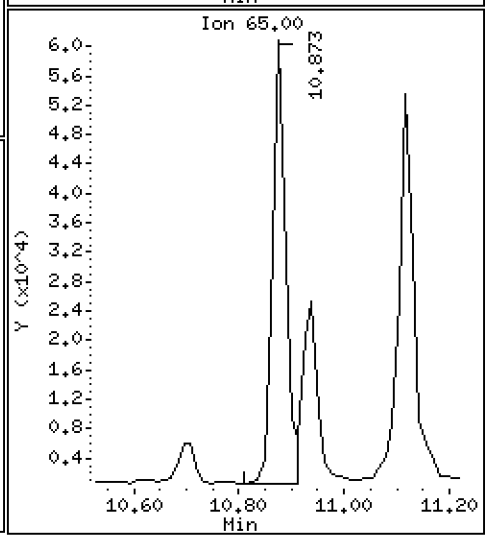












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

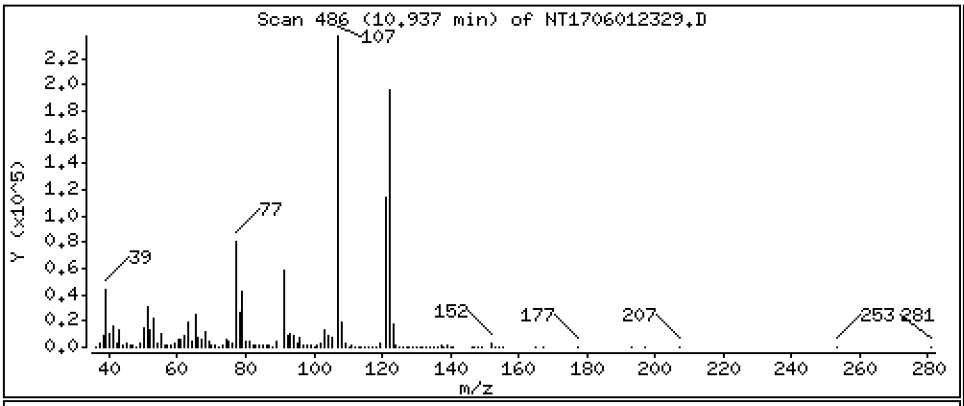
Operator: VTS

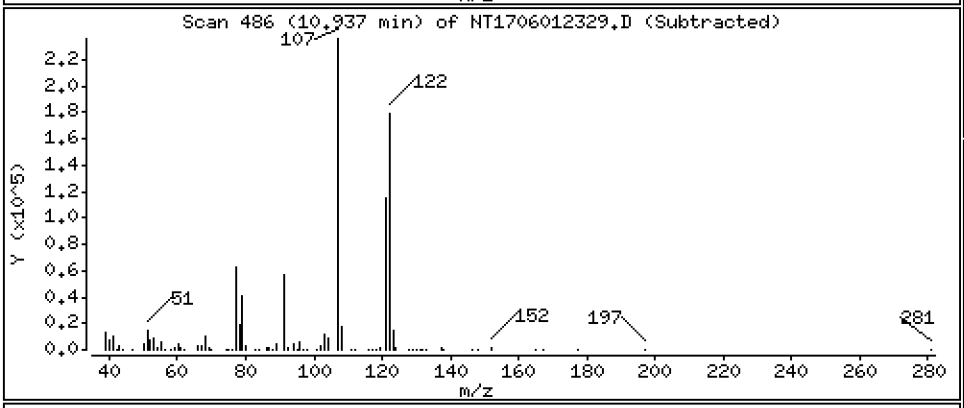
Column phase: ZB-5msi

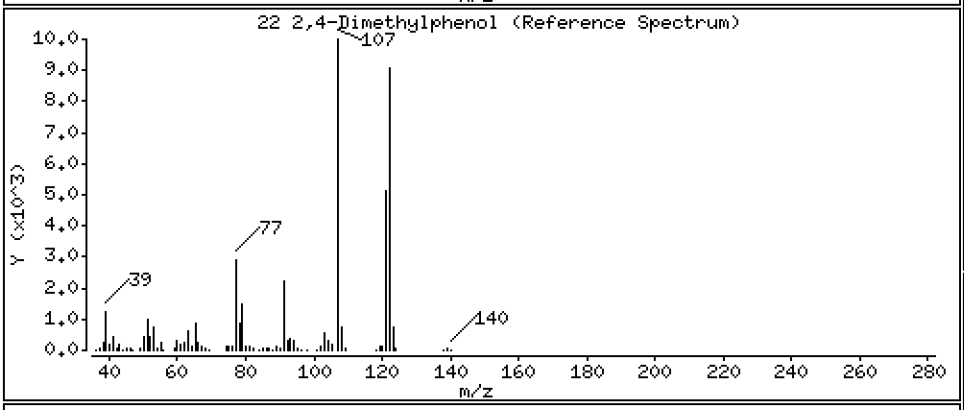
Column diameter: 0.25

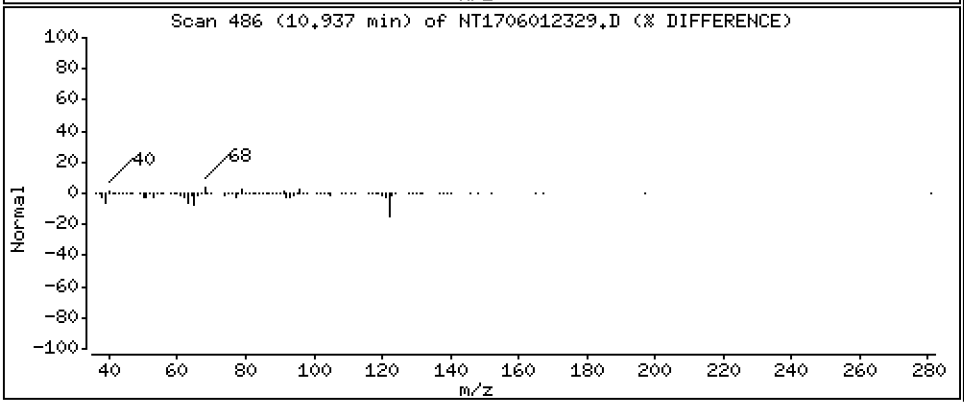
22 2,4-Dimethylphenol

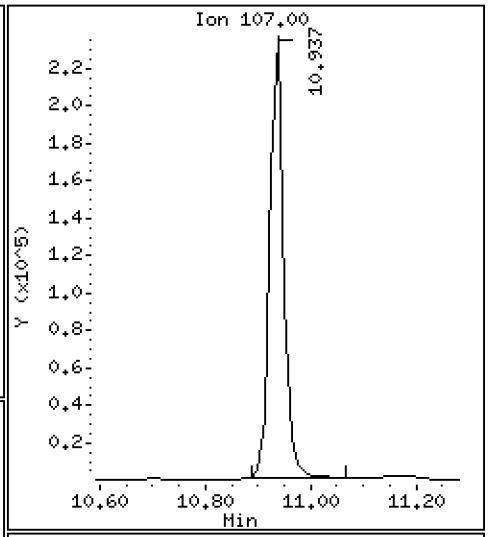
Concentration: 4.281 ug/mL

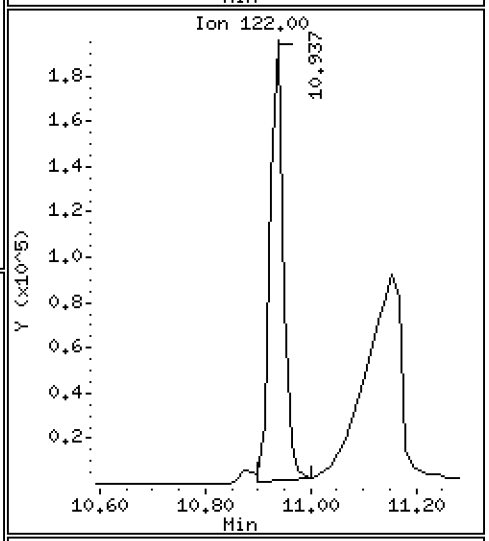


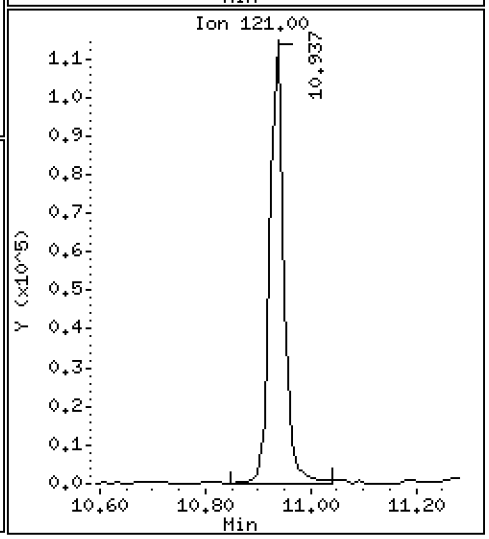












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

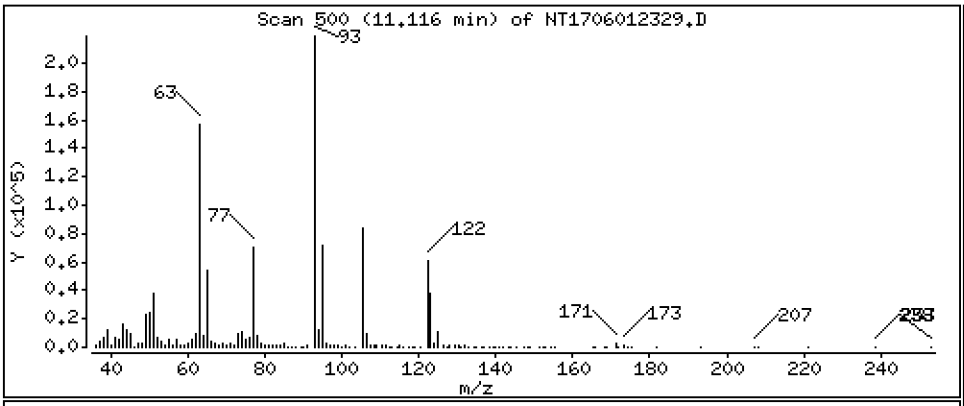
Operator: VTS

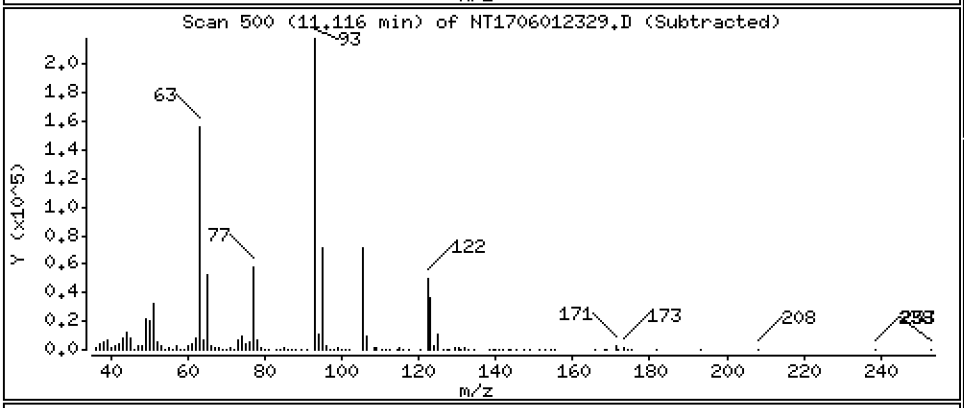
Column phase: ZB-5msi

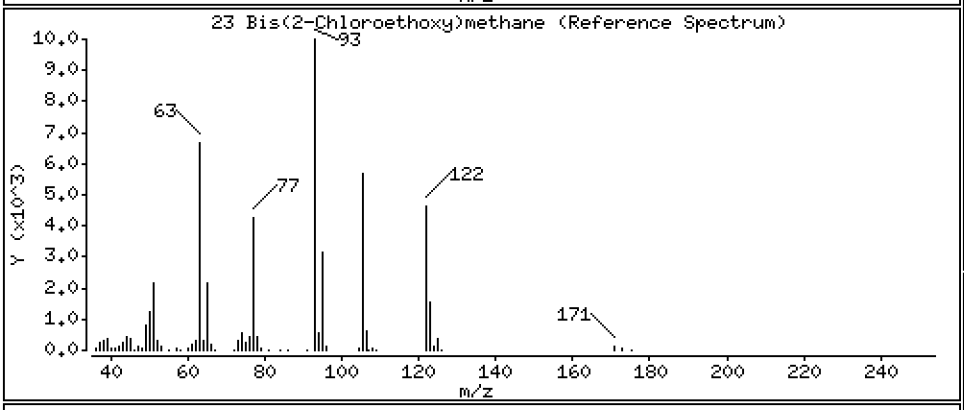
Column diameter: 0.25

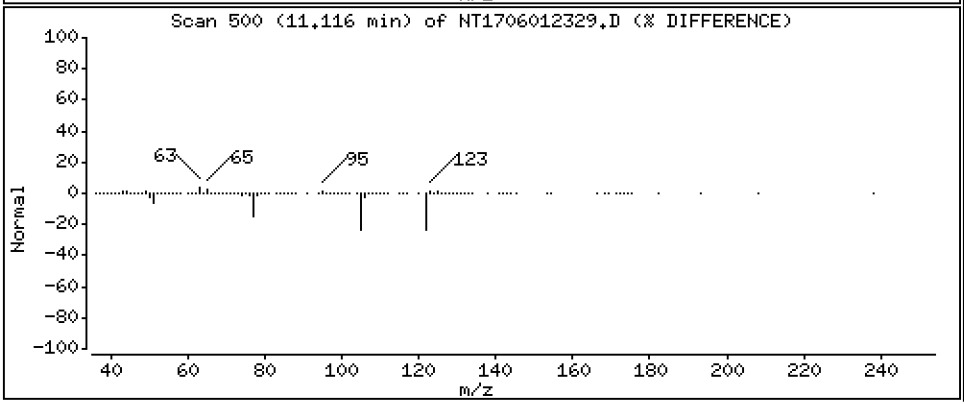
23 Bis(2-Chloroethoxy)methane

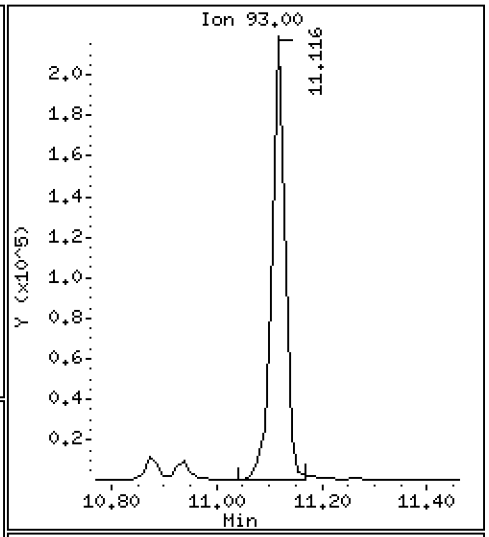
Concentration: 4.245 ug/mL

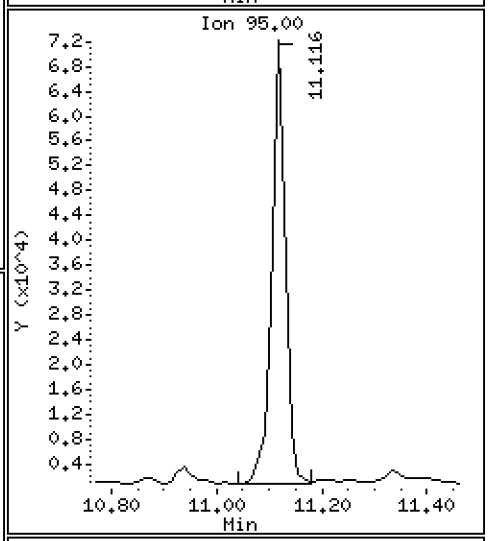


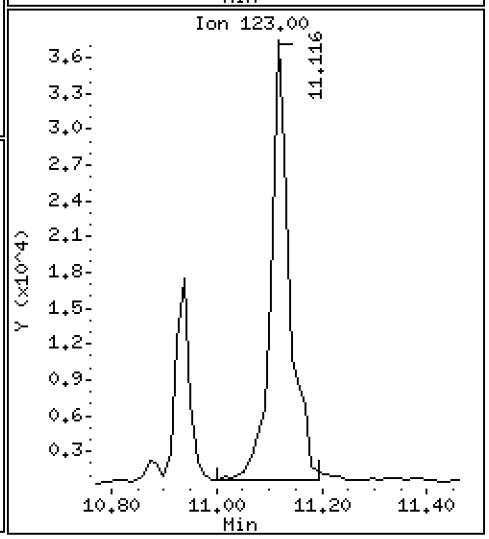












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

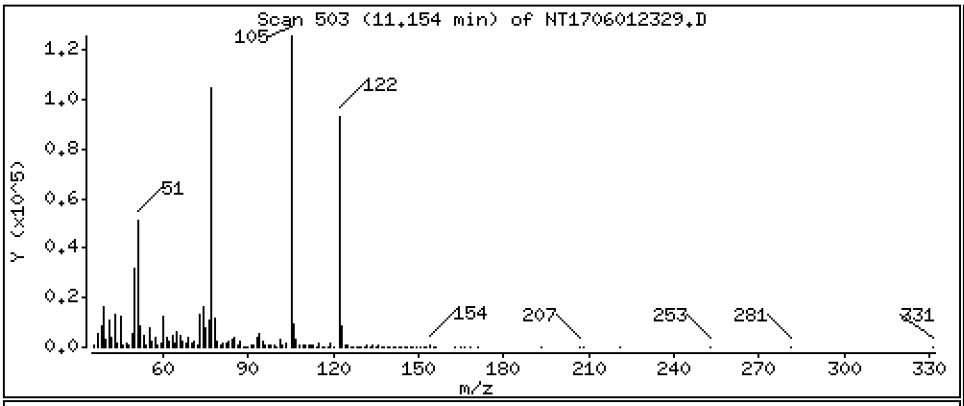
Operator: VTS

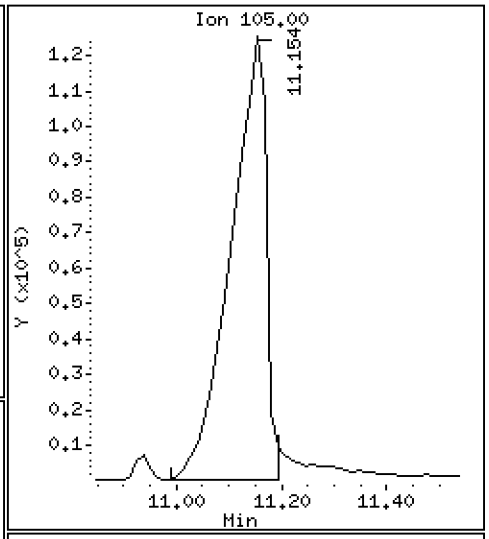
Column phase: ZB-5msi

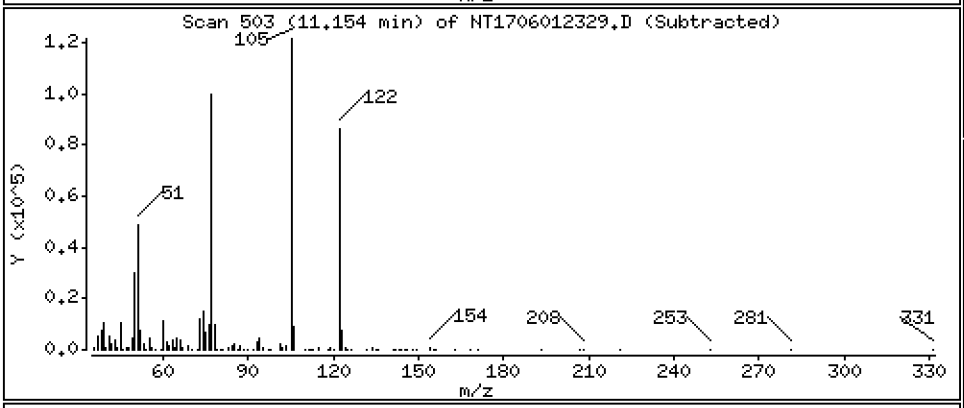
Column diameter: 0.25

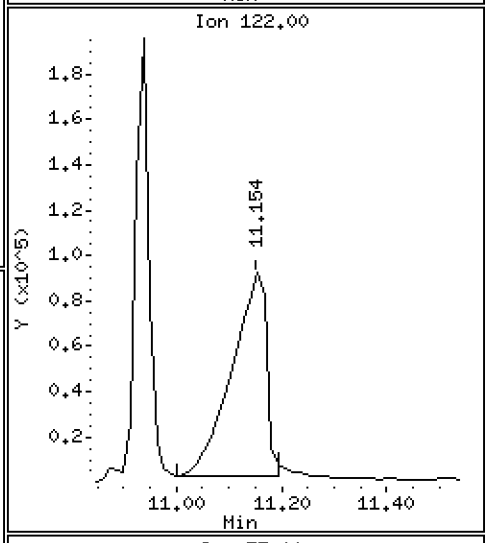
24 Benzoic acid

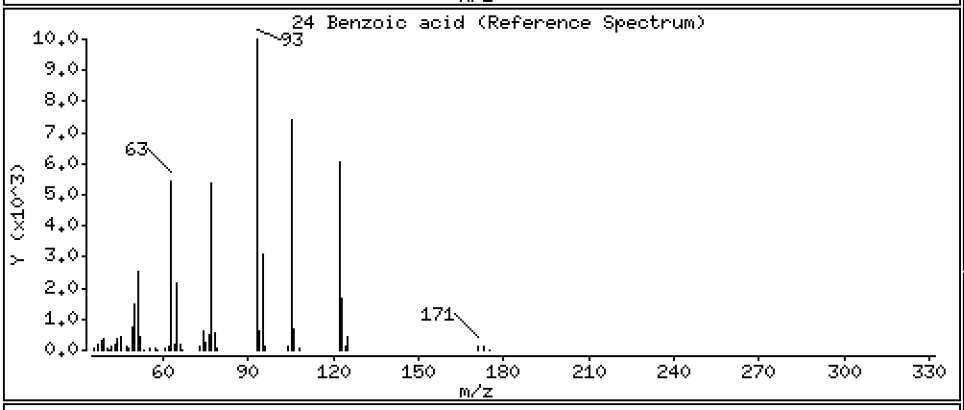
Concentration: 8.614 ug/mL

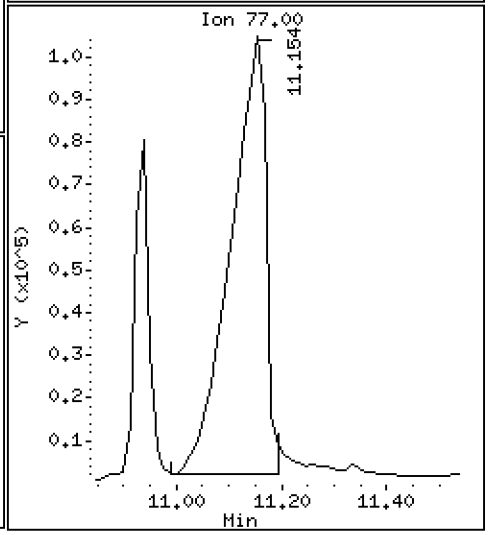


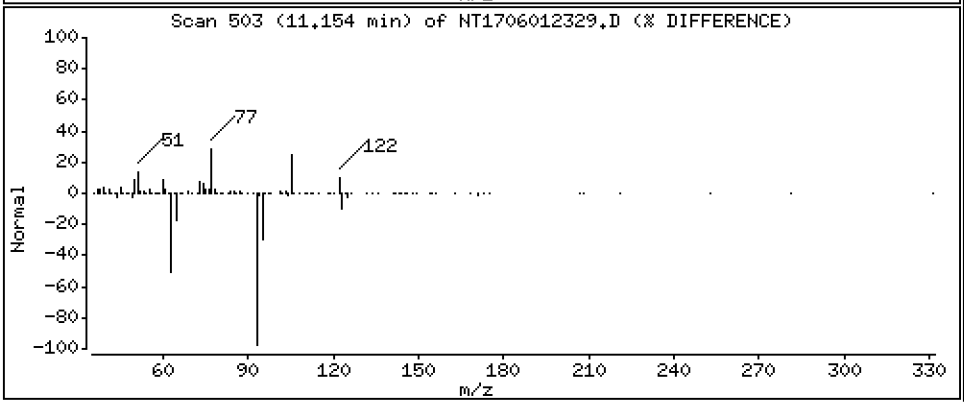












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

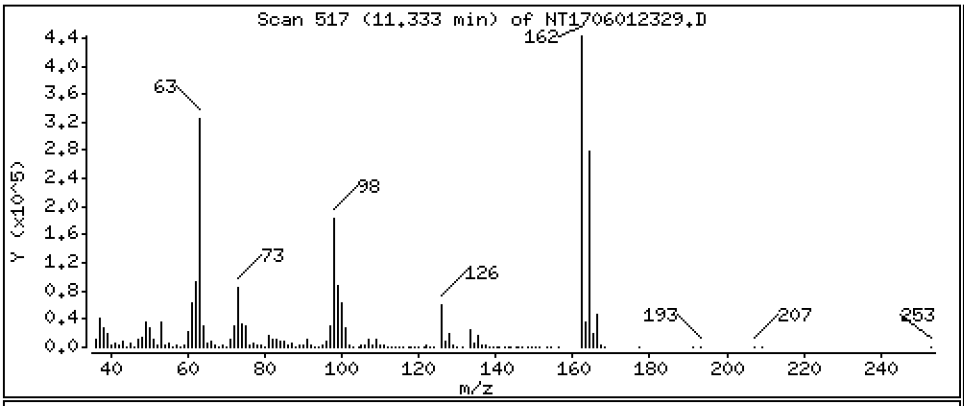
Operator: VTS

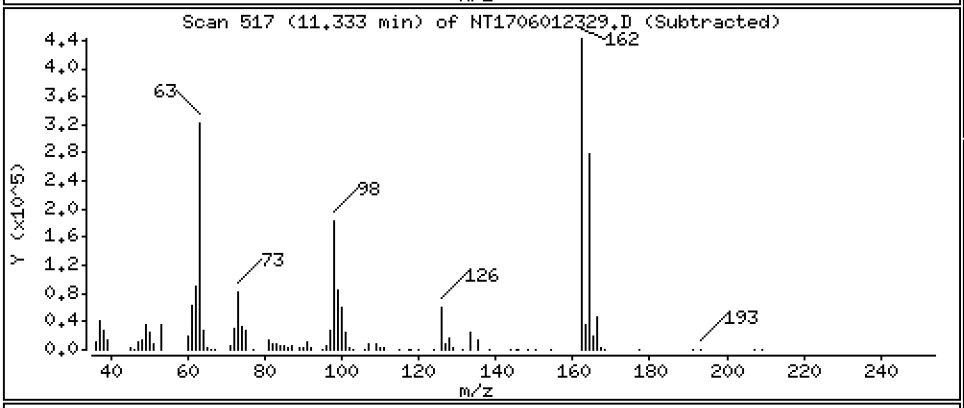
Column phase: ZB-5msi

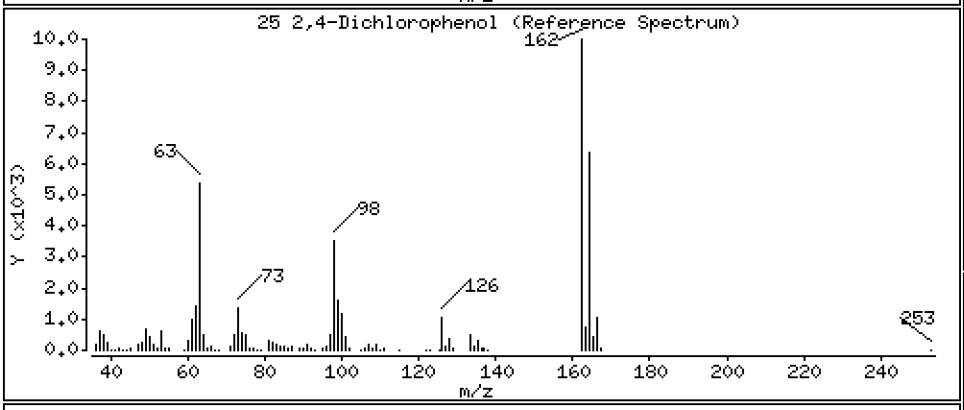
Column diameter: 0.25

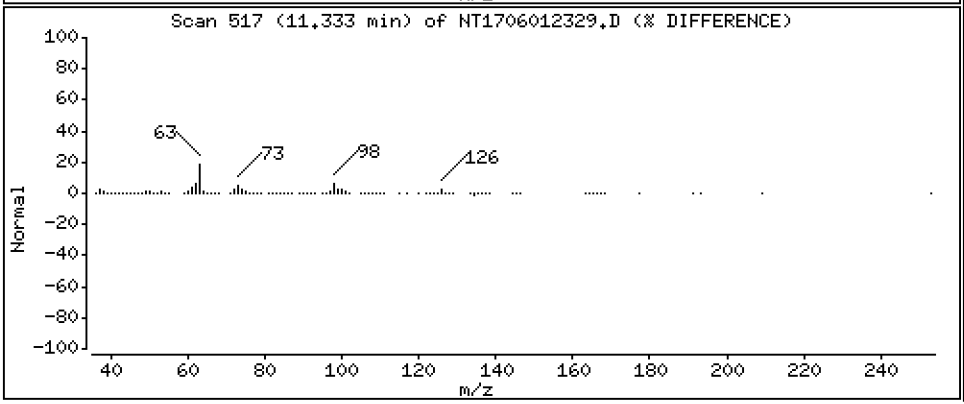
25 2,4-Dichlorophenol

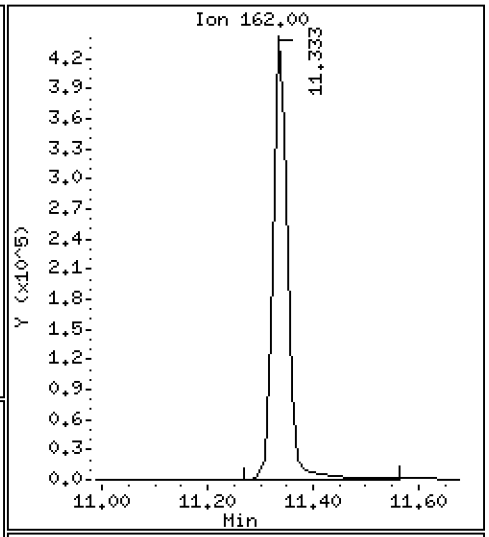
Concentration: 11.46 ug/mL

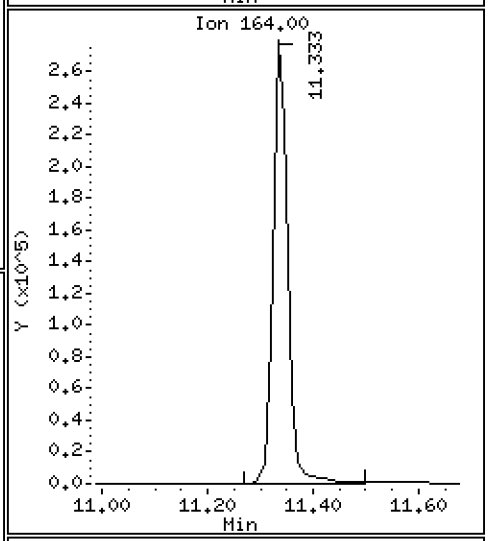


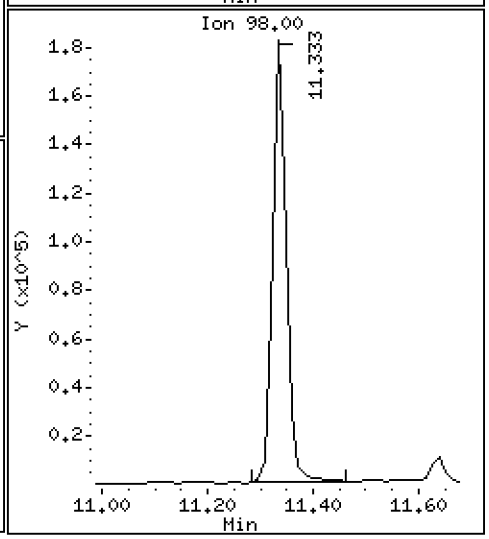












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

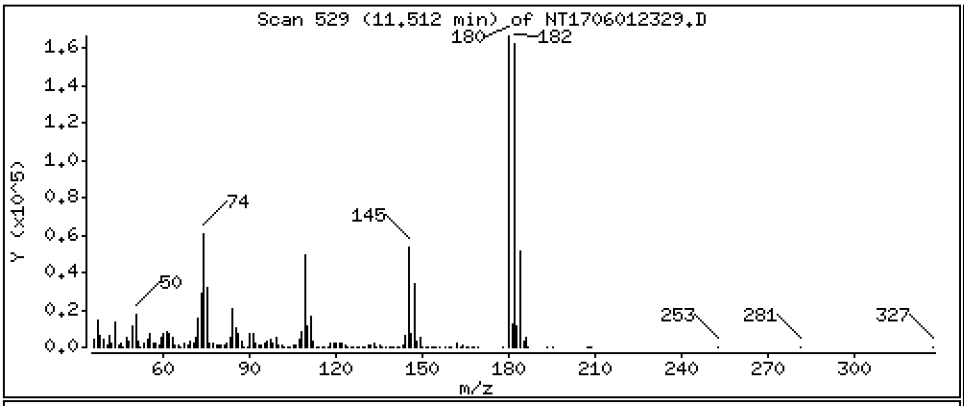
Operator: VTS

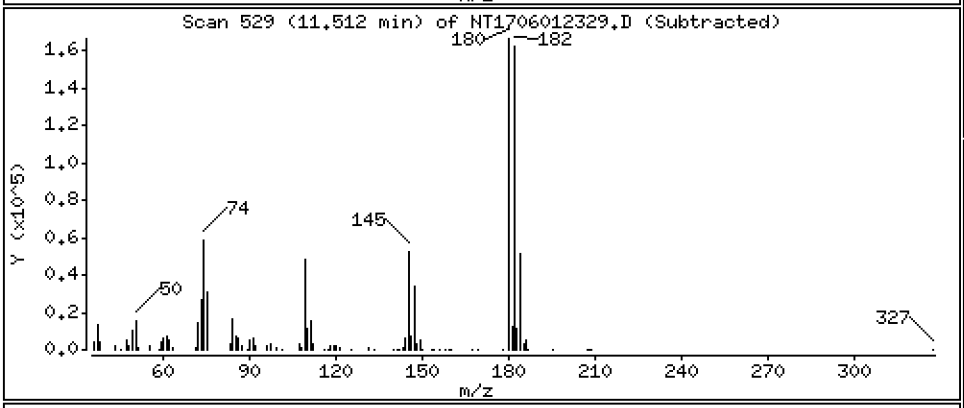
Column phase: ZB-5msi

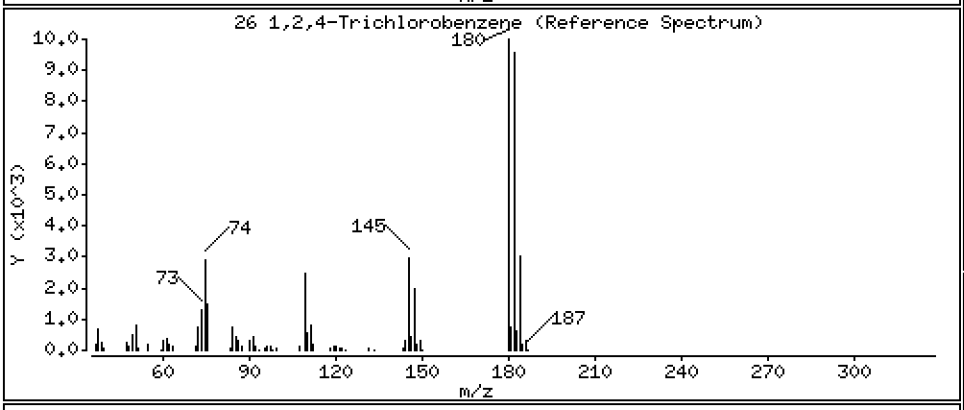
Column diameter: 0.25

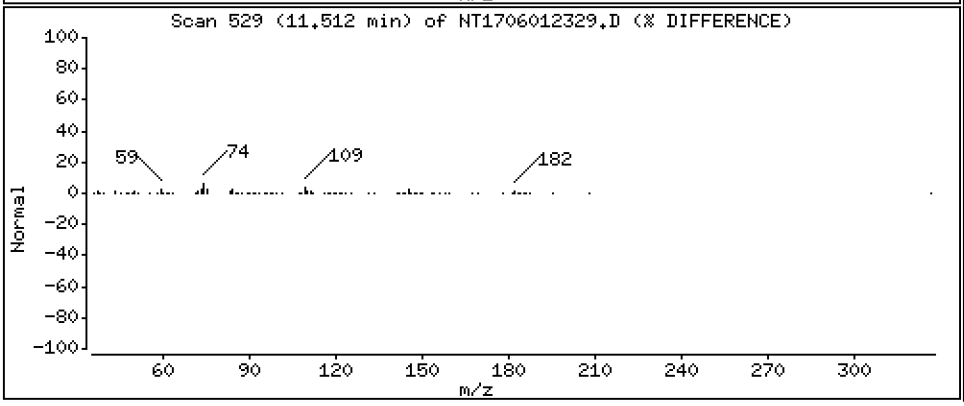
26 1,2,4-Trichlorobenzene

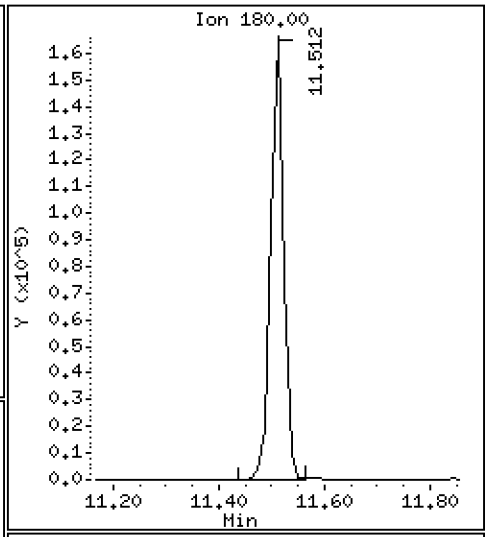
Concentration: 3.215 ug/mL

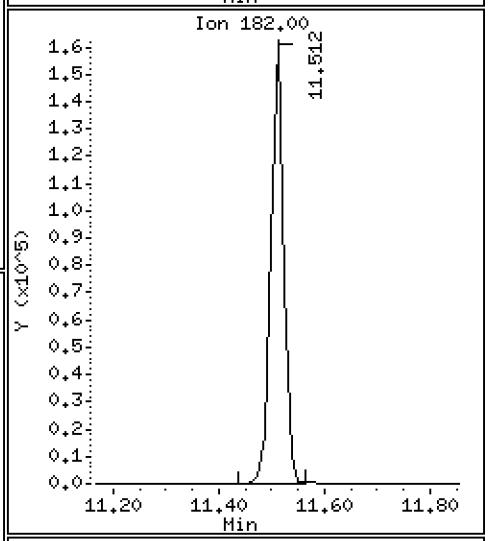


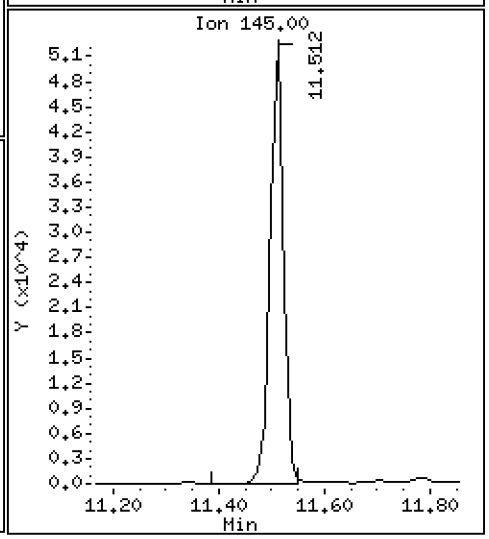












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

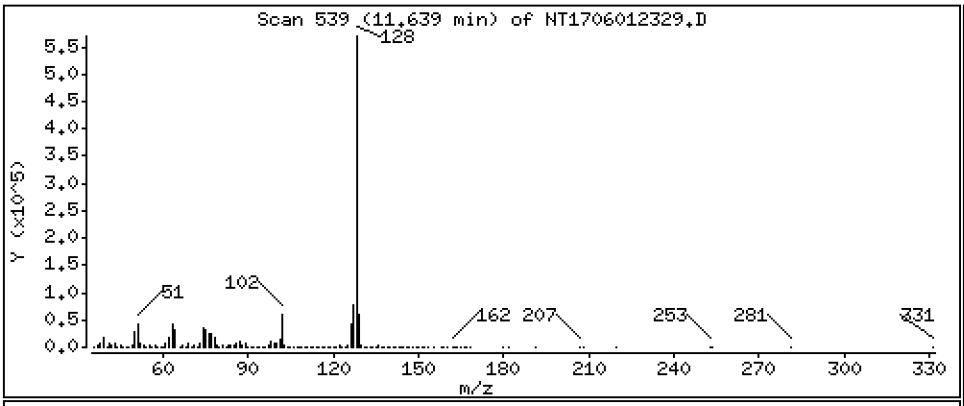
Operator: VTS

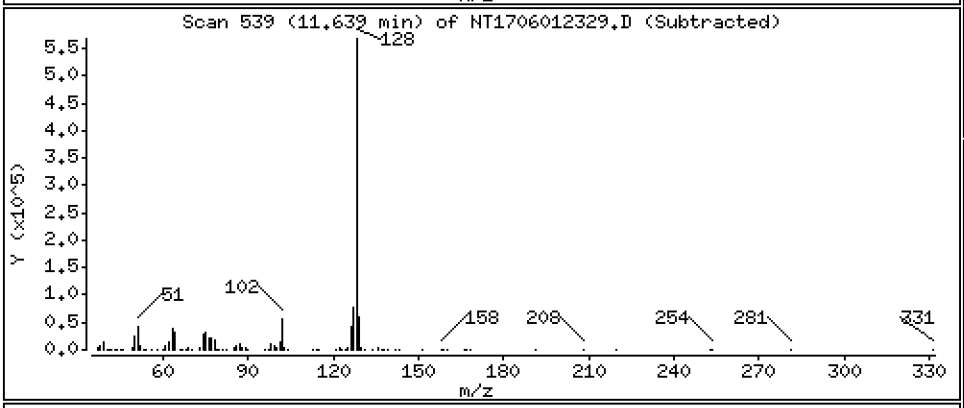
Column phase: ZB-5msi

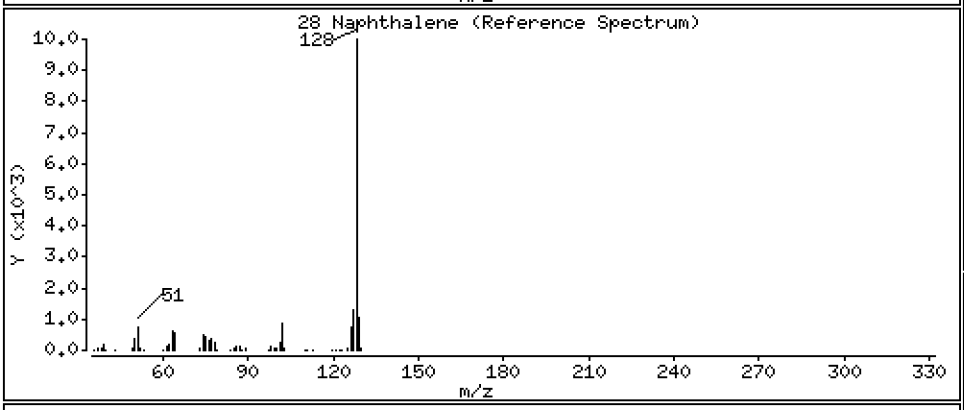
Column diameter: 0.25

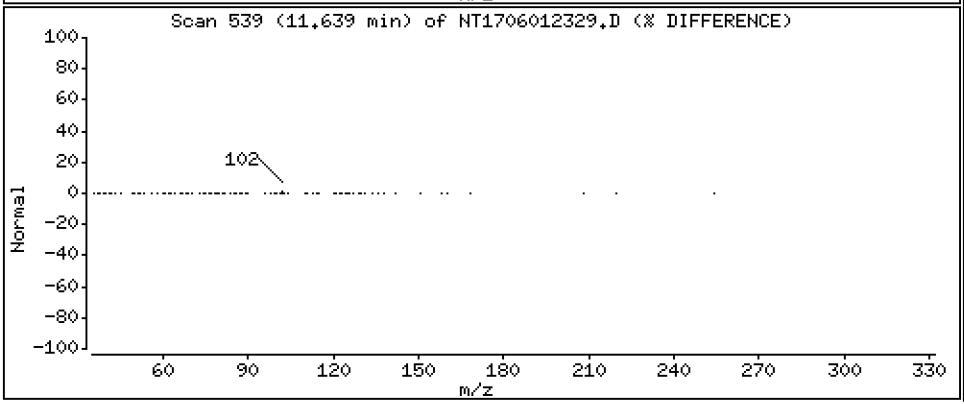
28 Naphthalene

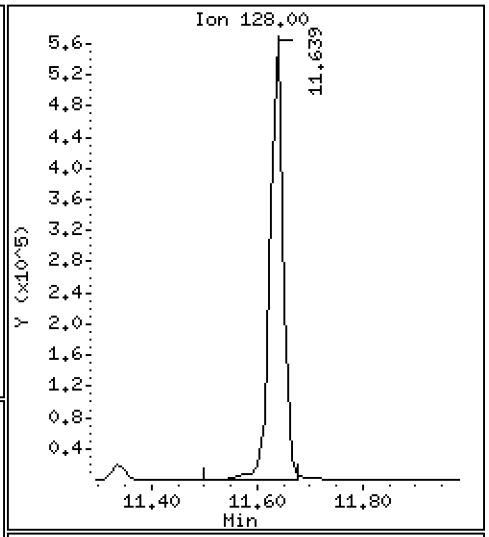
Concentration: 3.612 ug/mL

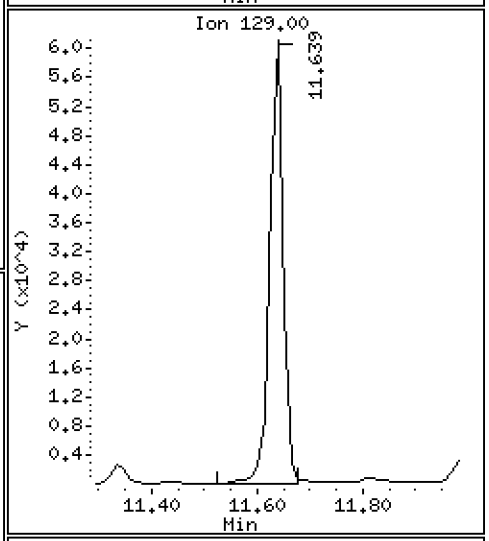


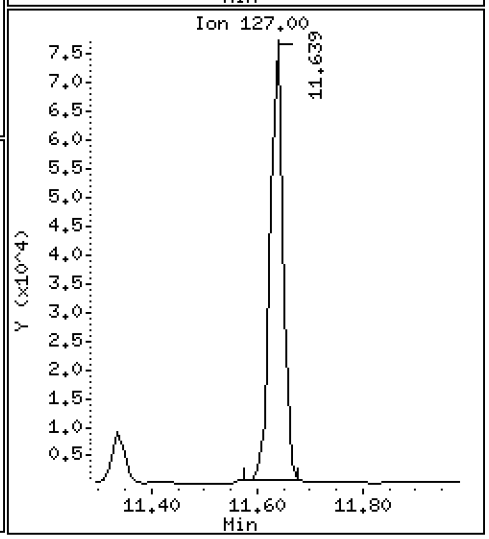












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

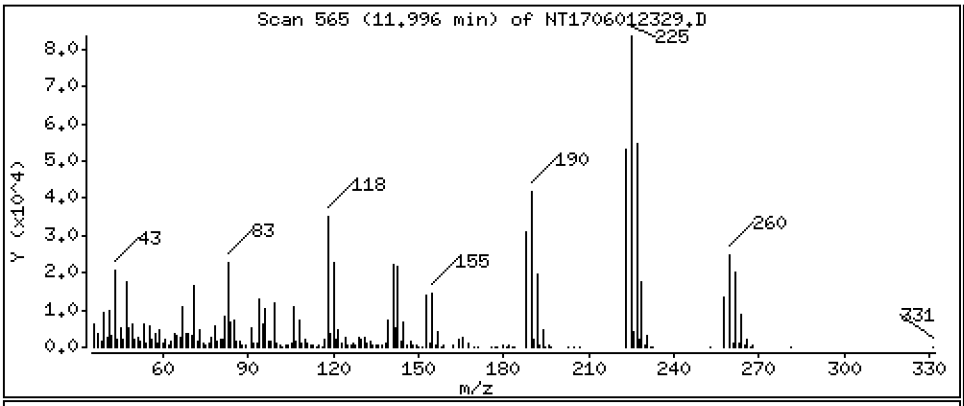
Operator: VTS

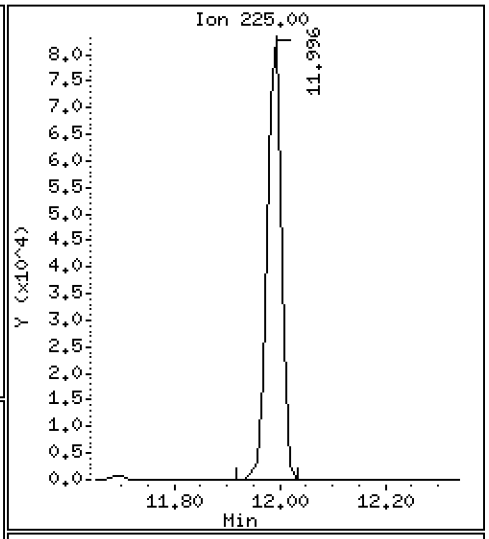
Column phase: ZB-5msi

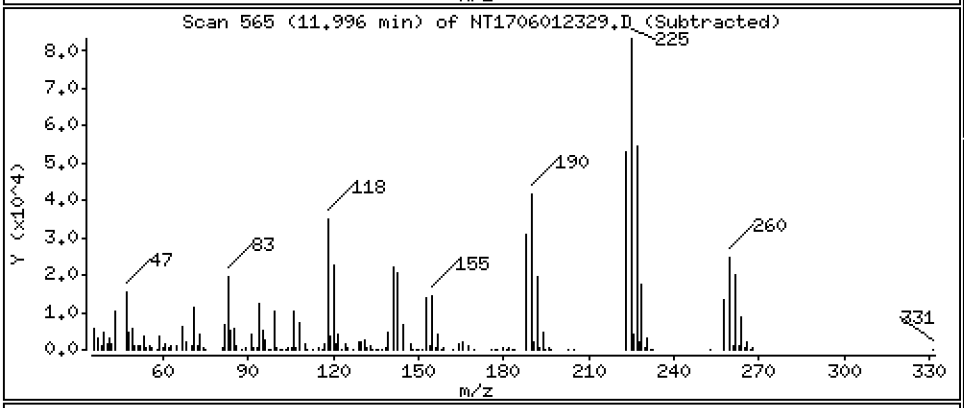
Column diameter: 0.25

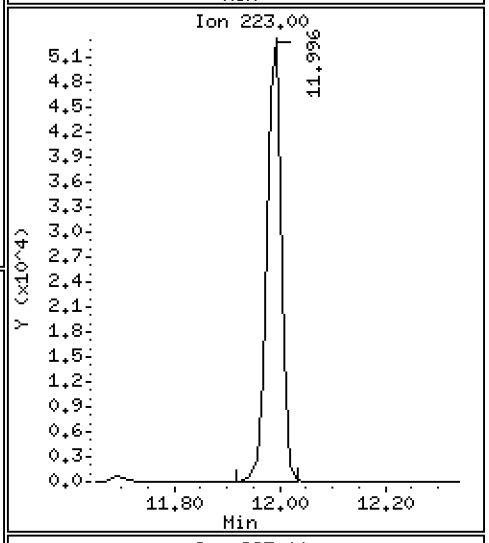
30 Hexachlorobutadiene

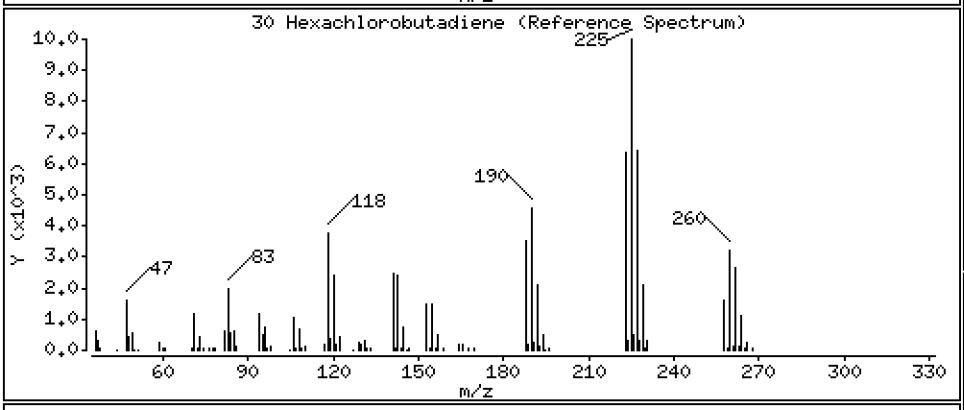
Concentration: 3.622 ug/mL

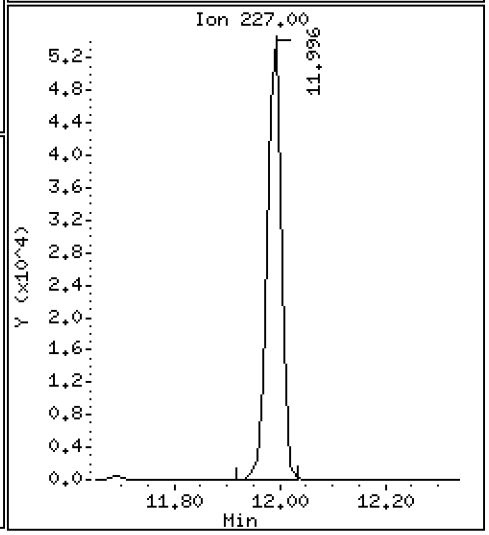


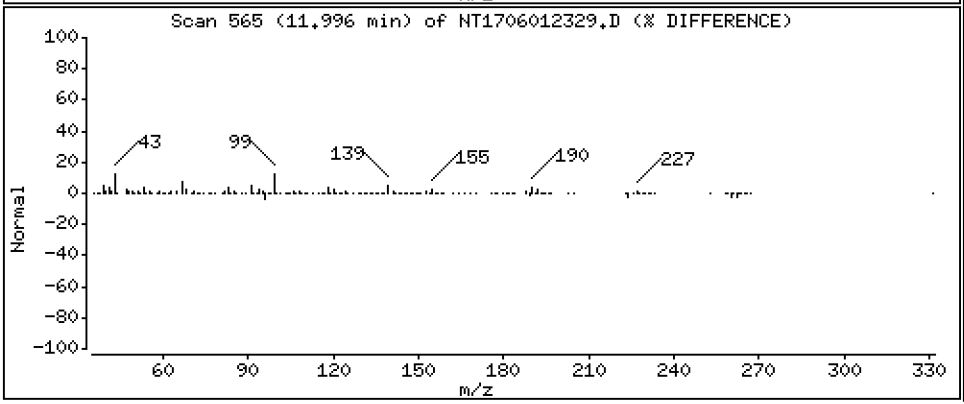












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

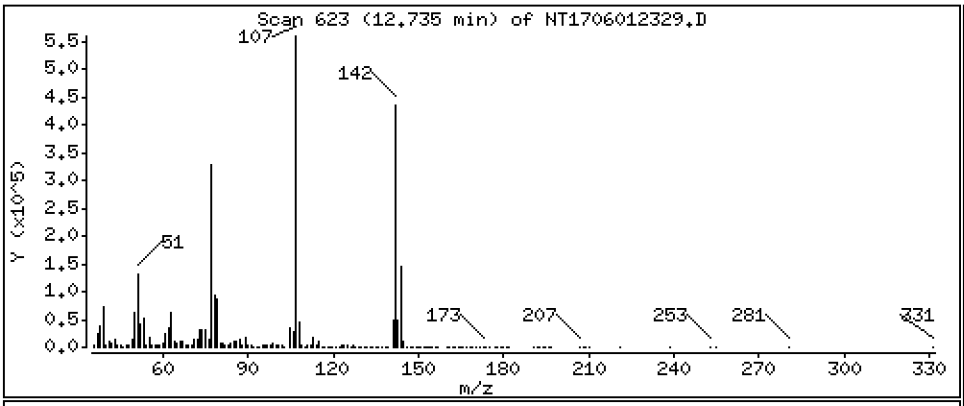
Operator: VTS

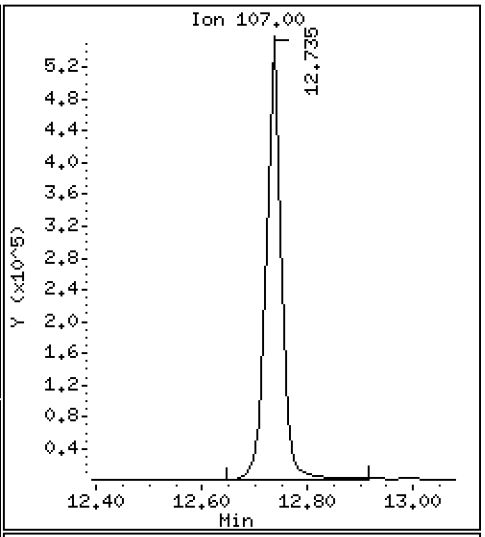
Column phase: ZB-5msi

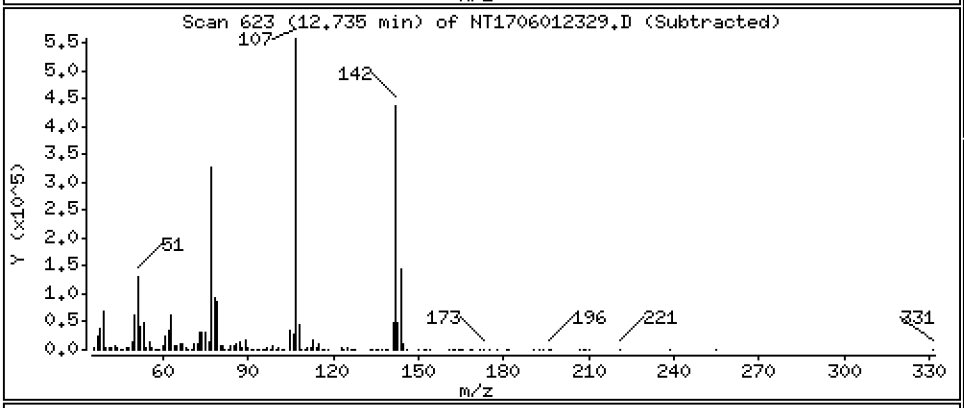
Column diameter: 0.25

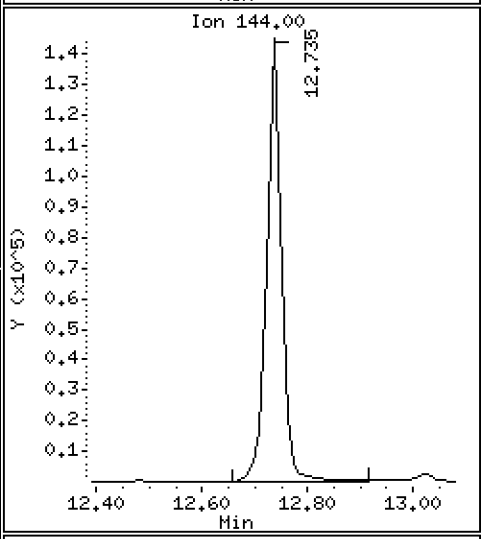
31 4-Chloro-3-methylphenol

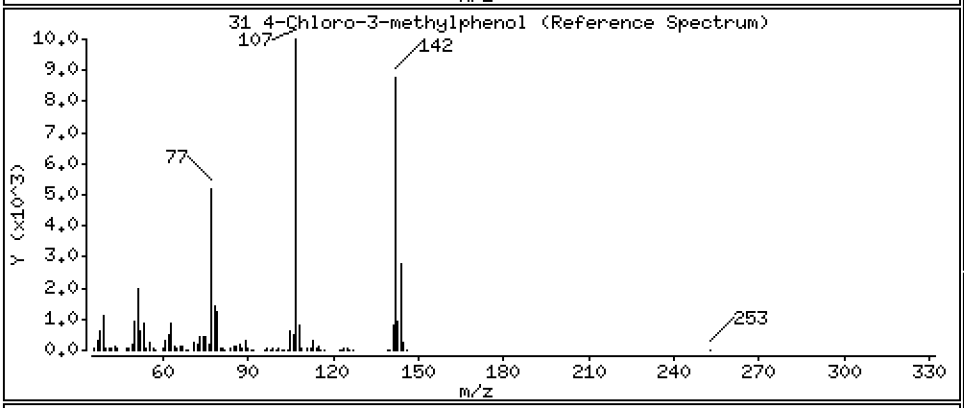
Concentration: 12.39 ug/mL

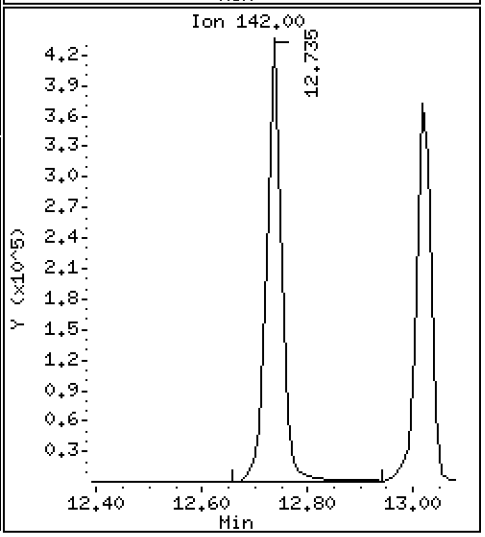


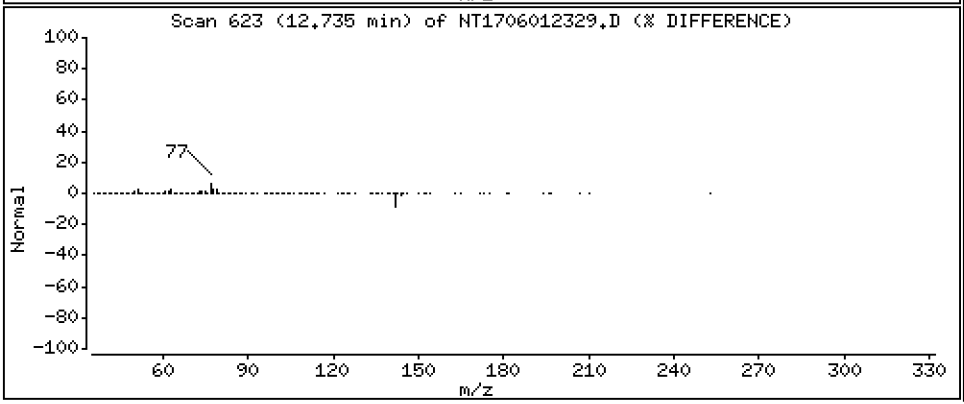












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

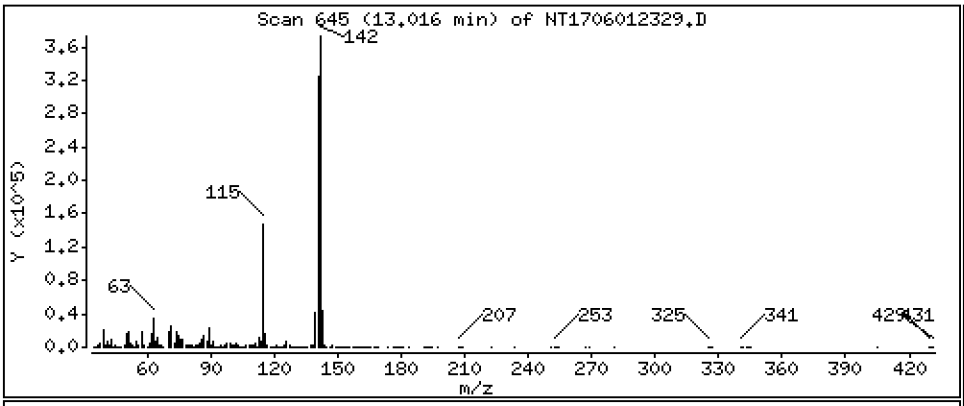
Operator: VTS

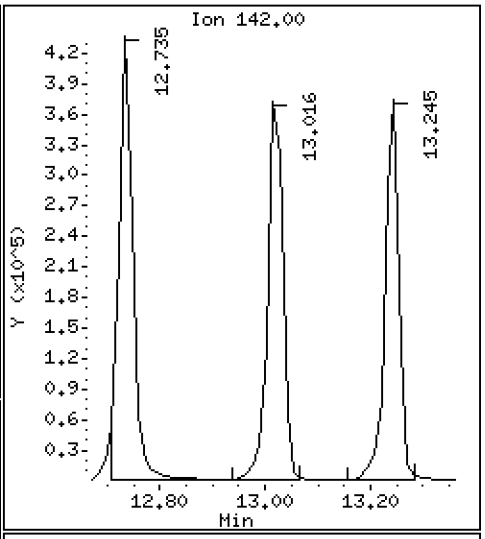
Column phase: ZB-5msi

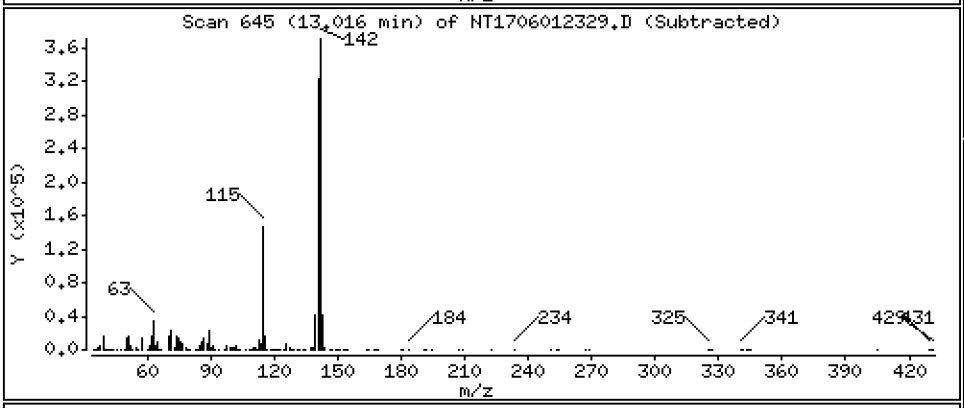
Column diameter: 0.25

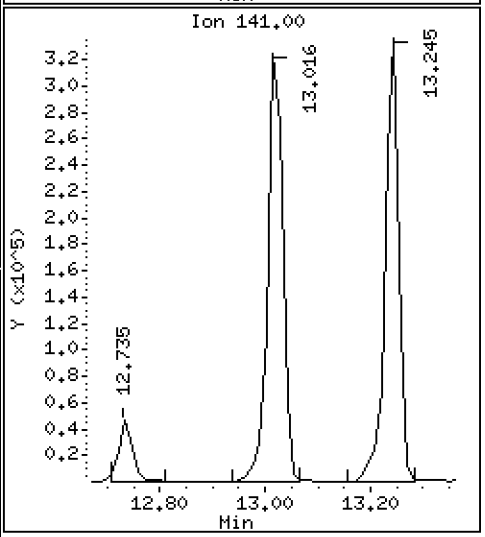
32 2-Methylnaphthalene

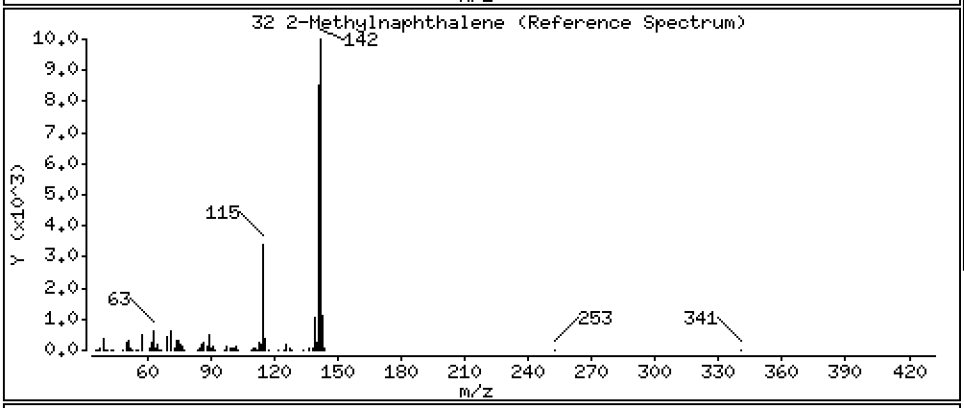
Concentration: 3.697 ug/mL

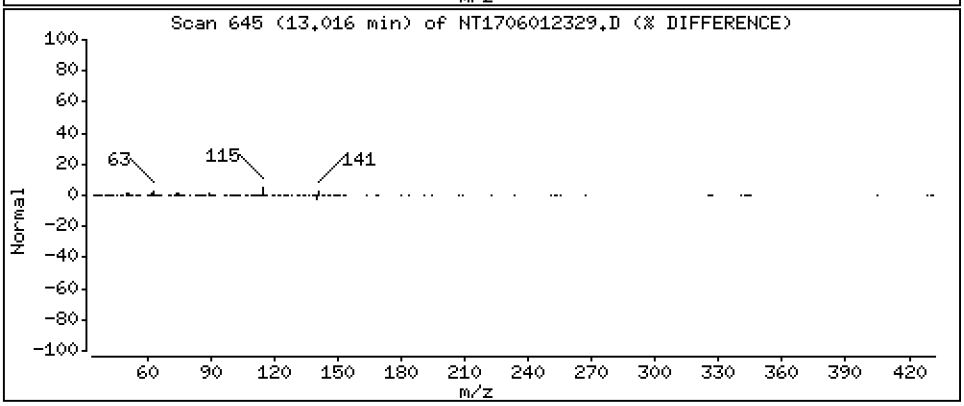












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

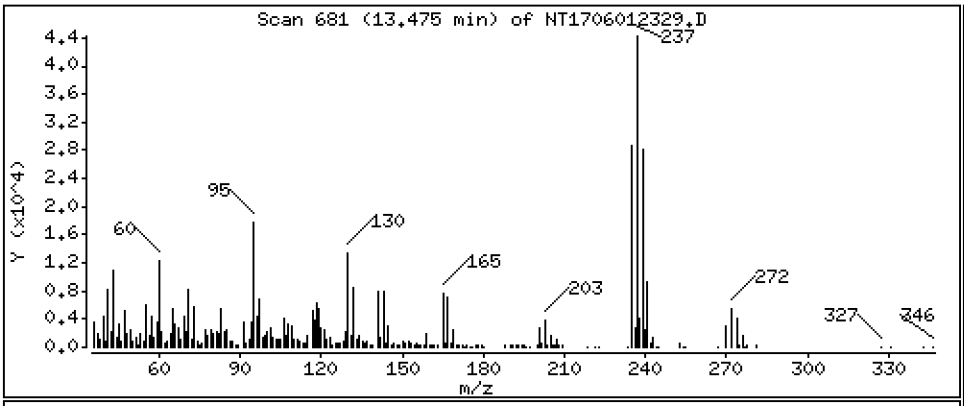
Operator: VTS

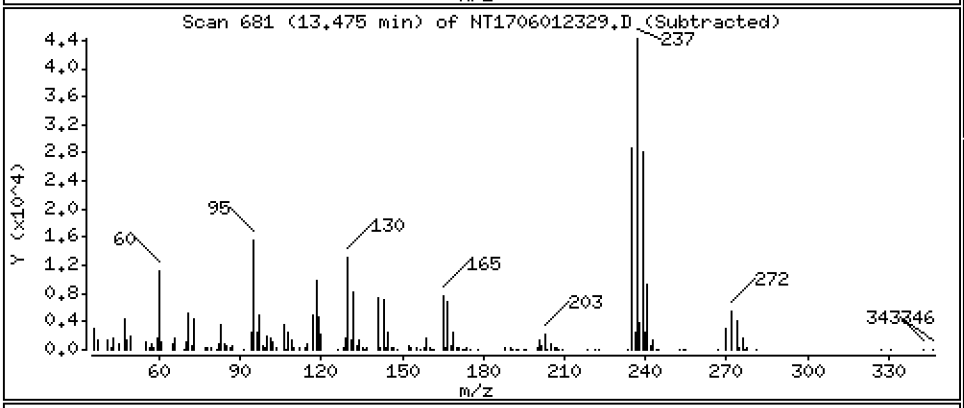
Column phase: ZB-5msi

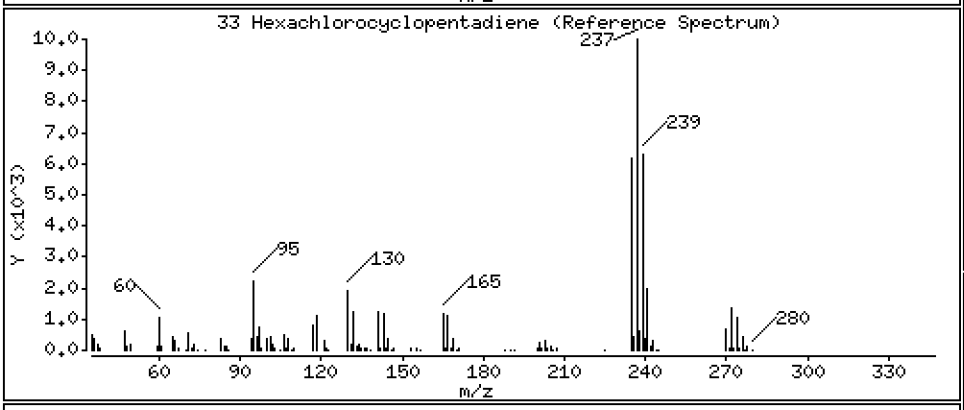
Column diameter: 0.25

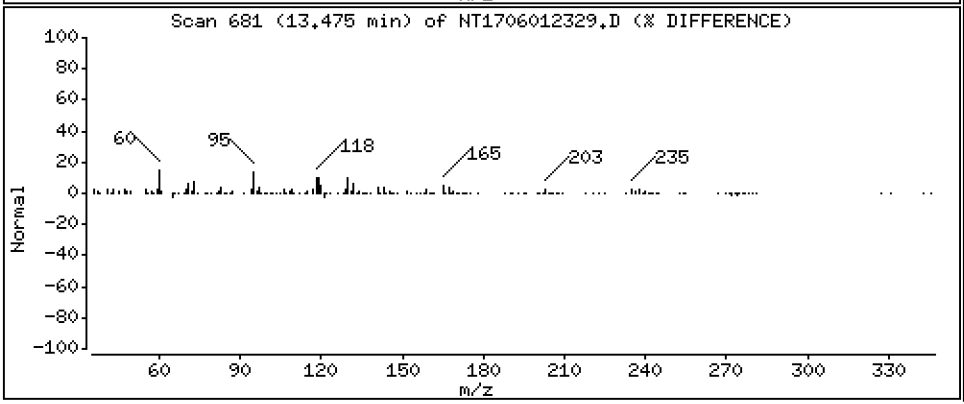
33 Hexachlorocyclopentadiene

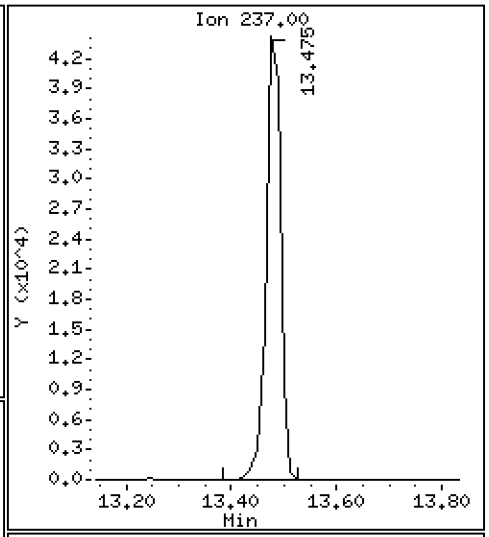
Concentration: 1.749 ug/mL

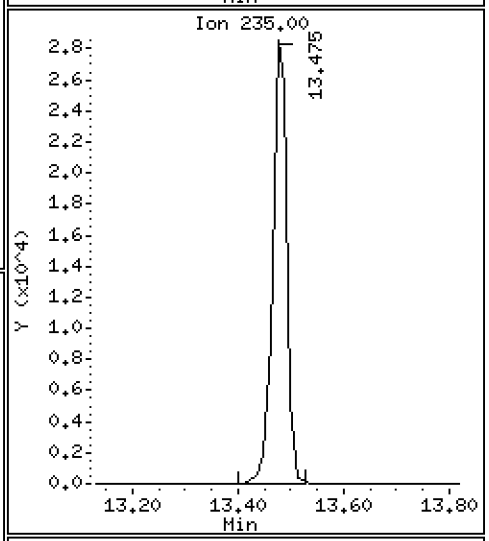


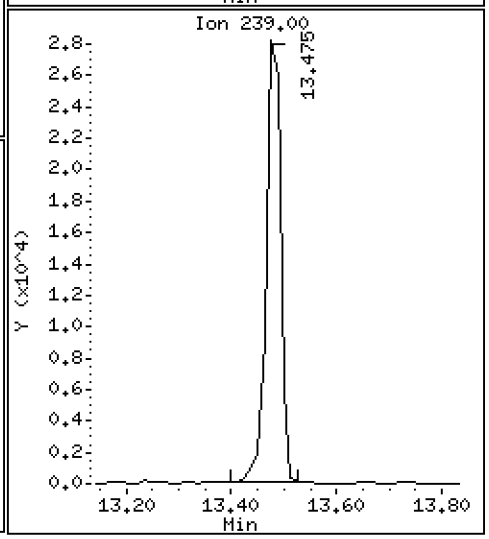












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

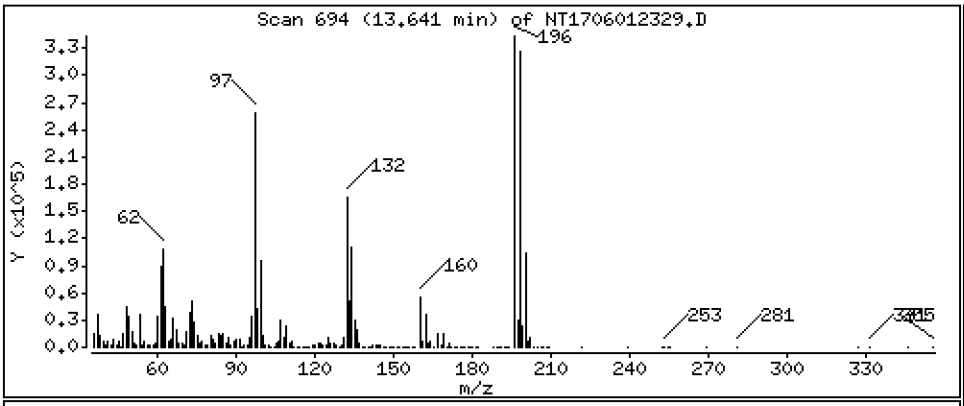
Operator: VTS

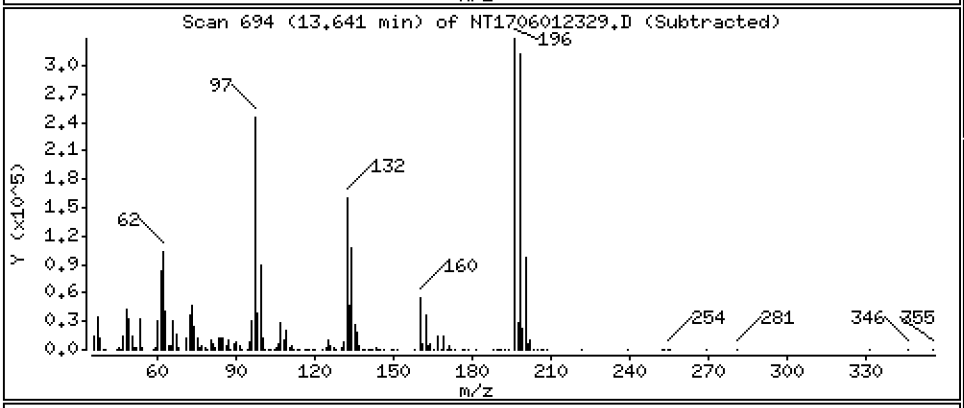
Column phase: ZB-5msi

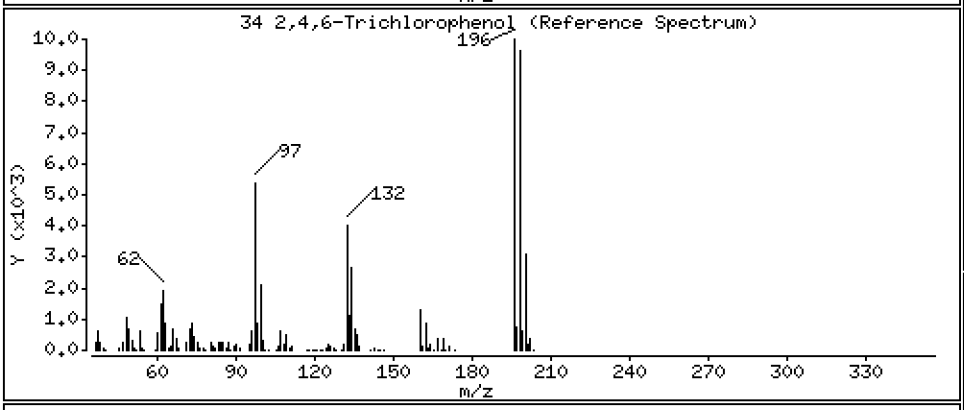
Column diameter: 0.25

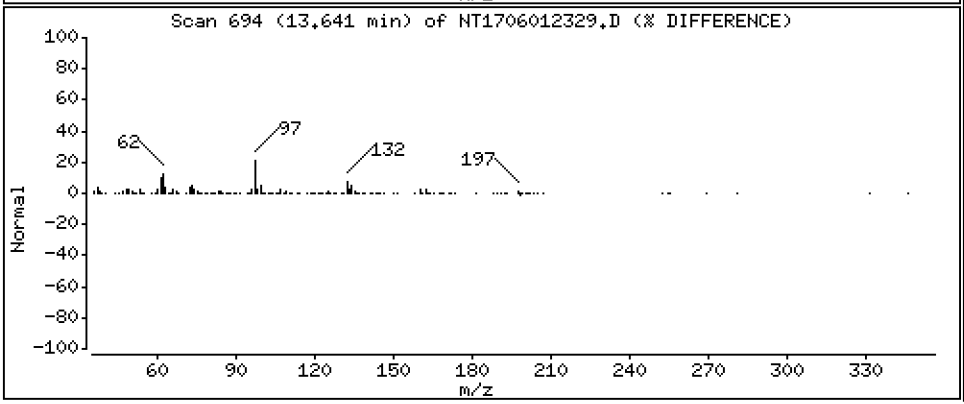
34 2,4,6-Trichlorophenol

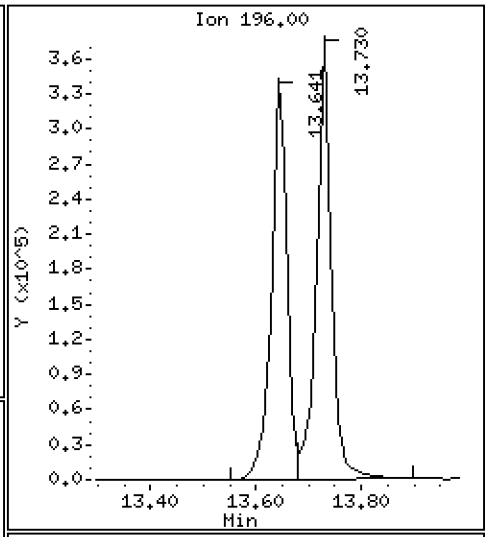
Concentration: 12.42 ug/mL

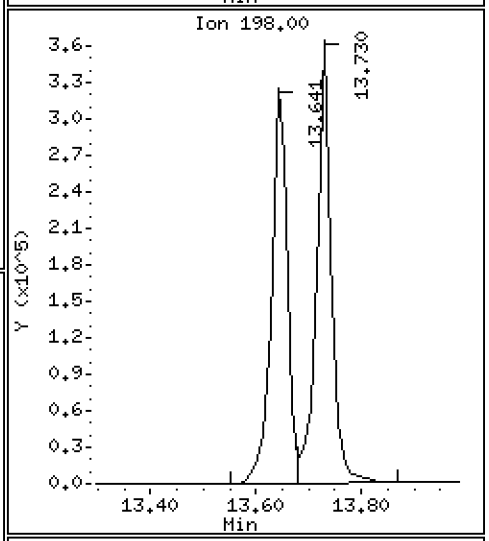


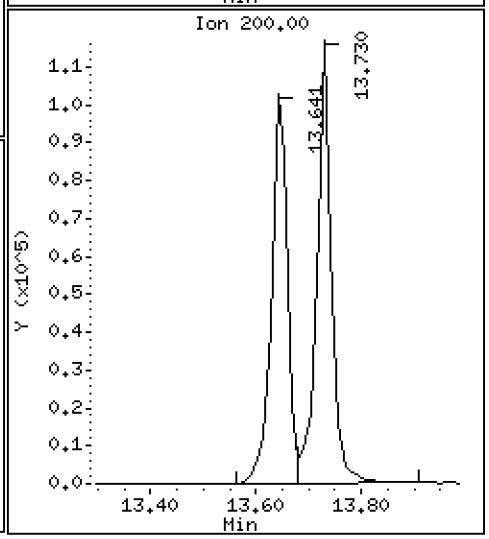












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

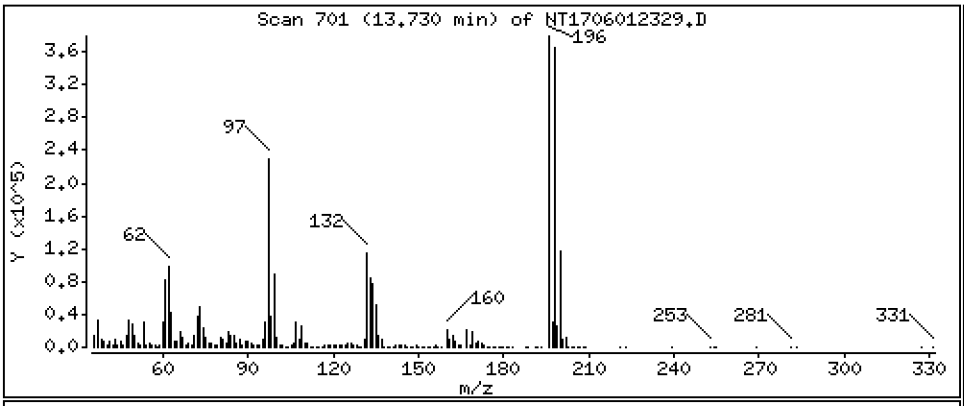
Operator: VTS

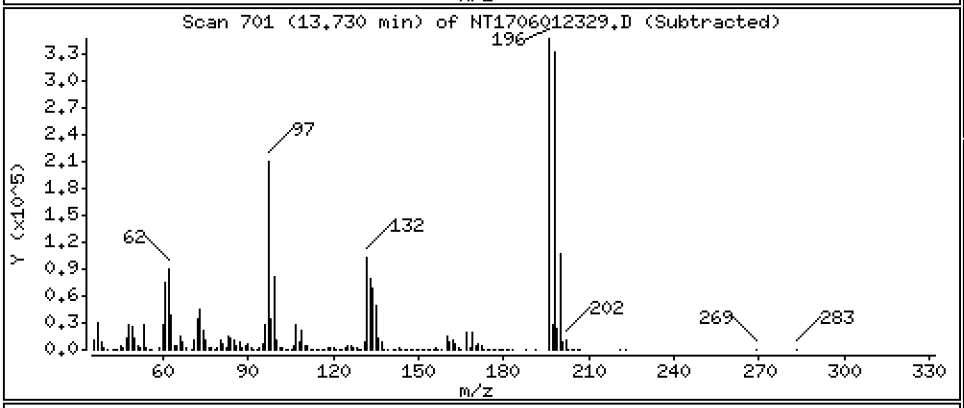
Column phase: ZB-5msi

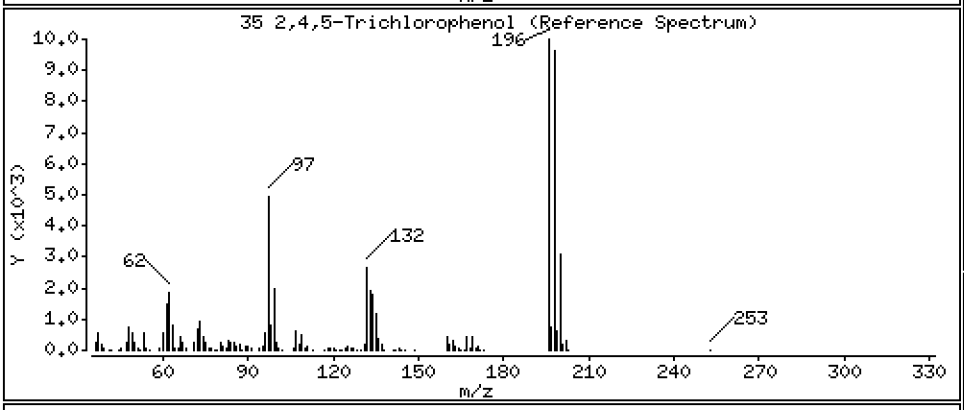
Column diameter: 0.25

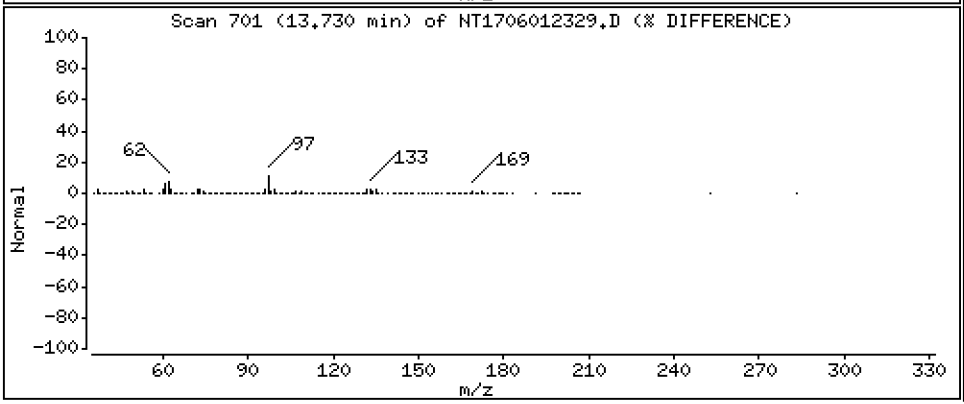
35 2,4,5-Trichlorophenol

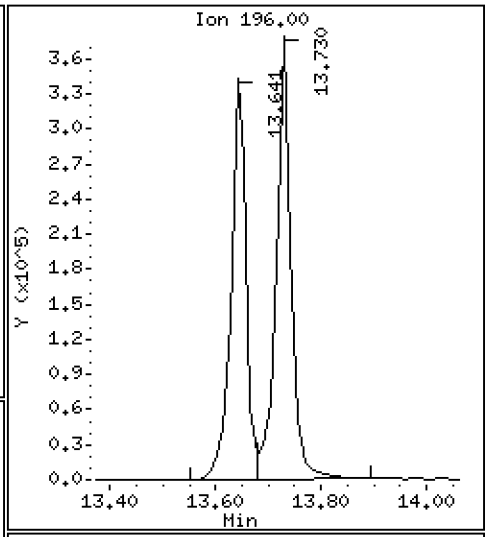
Concentration: 12.96 ug/mL

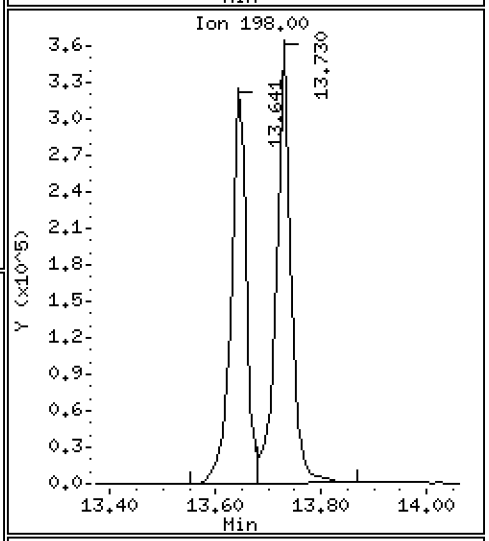


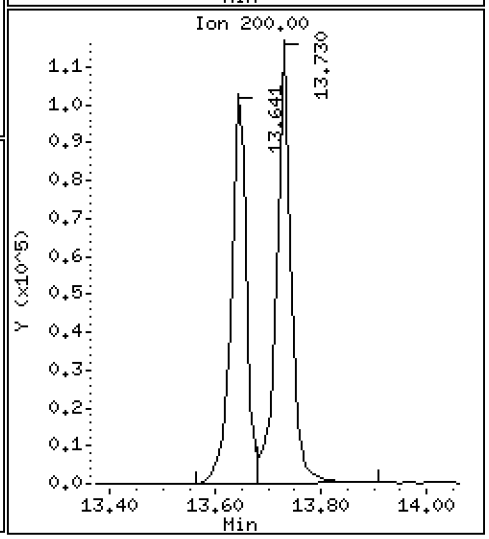












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

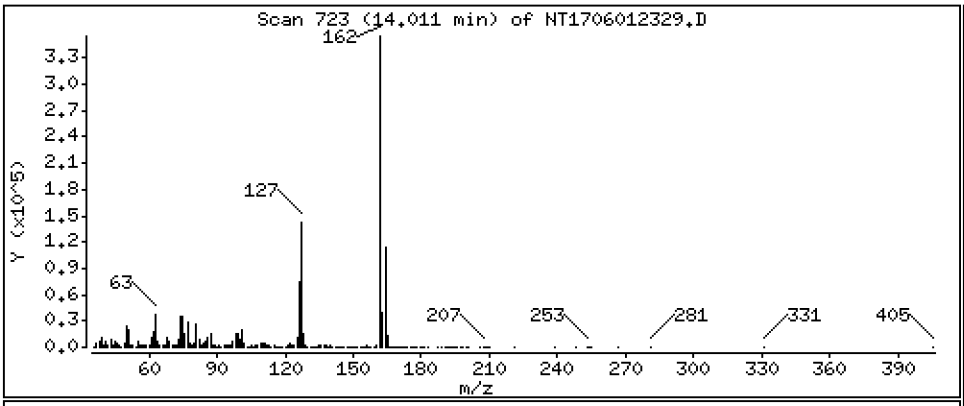
Operator: VTS

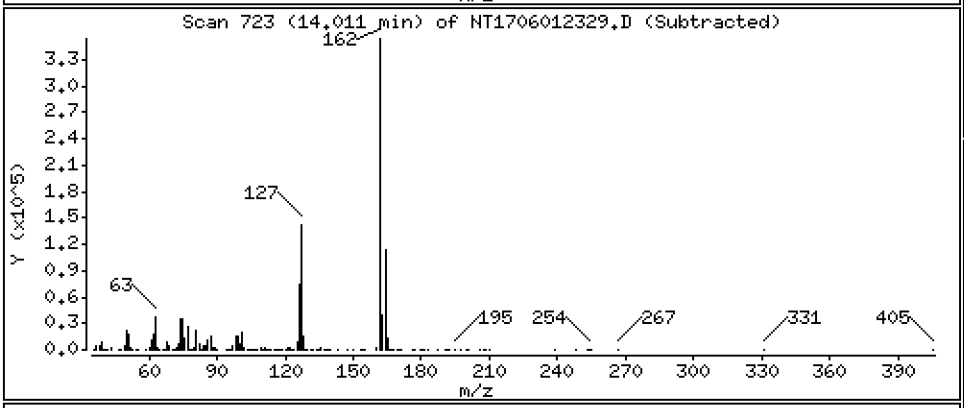
Column phase: ZB-5msi

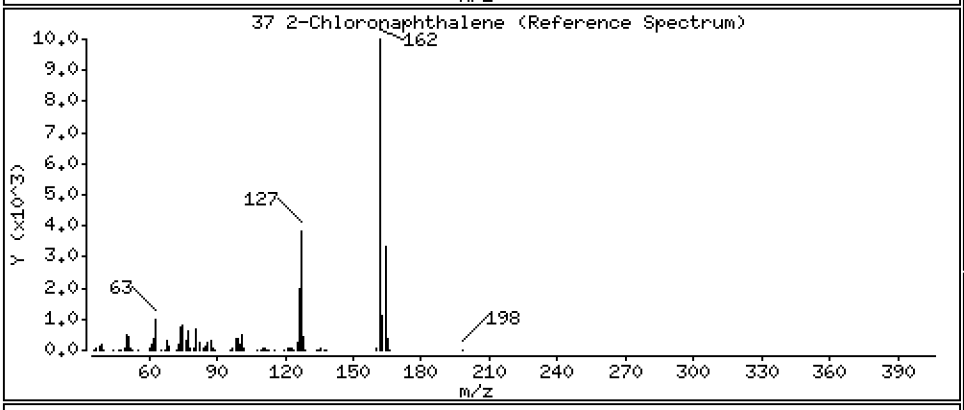
Column diameter: 0.25

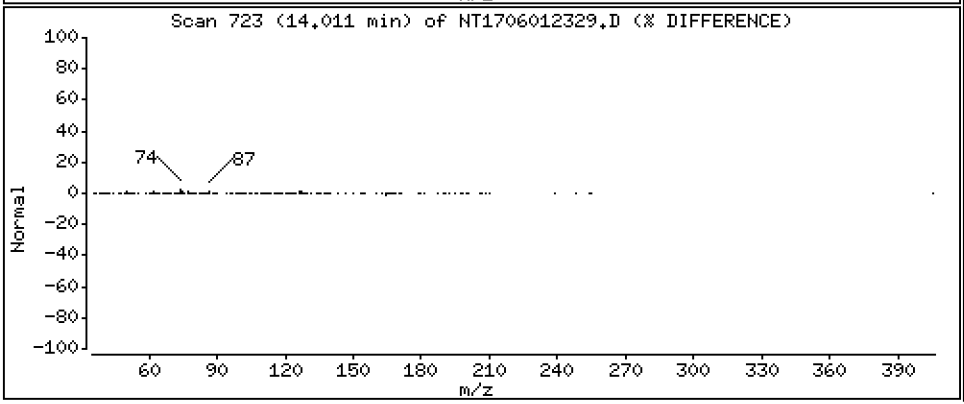
37 2-Chloronaphthalene

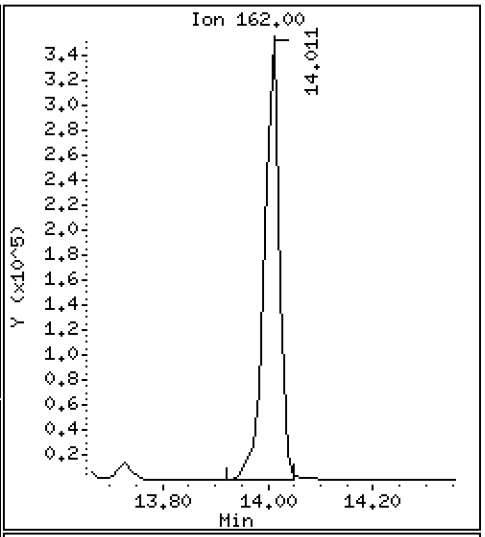
Concentration: 3.954 ug/mL

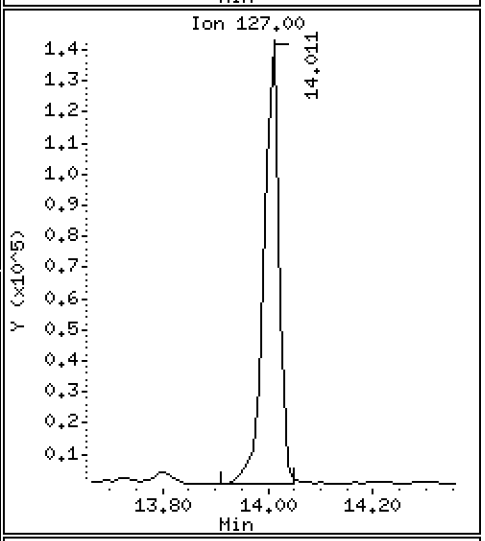


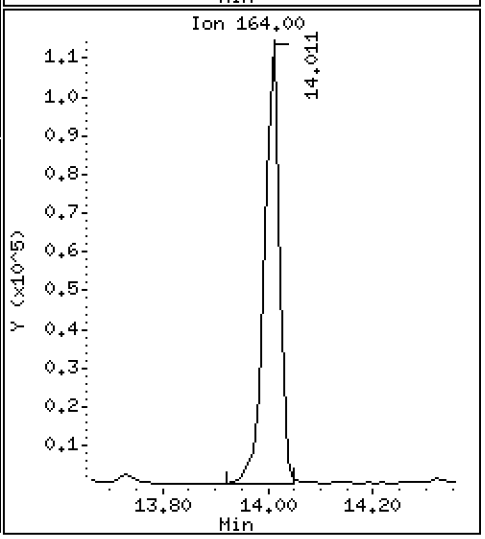












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

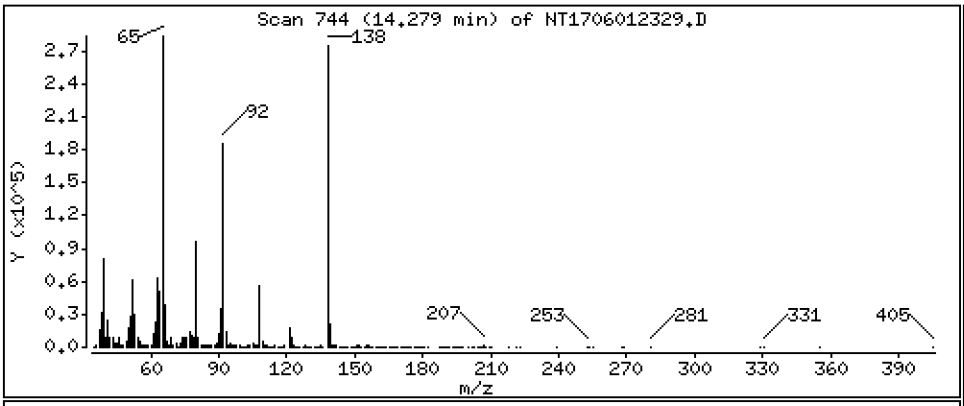
Operator: VTS

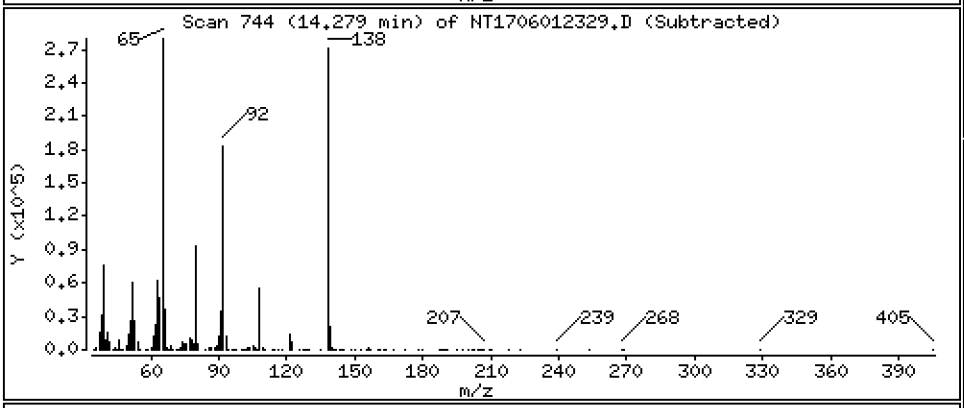
Column phase: ZB-5msi

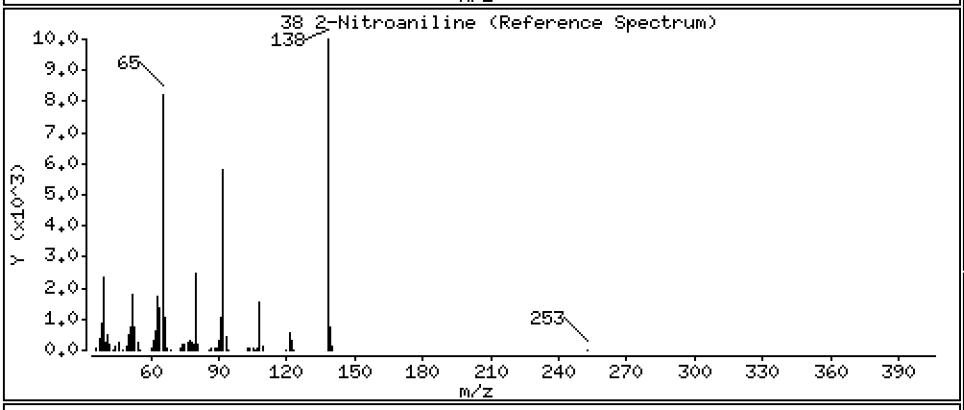
Column diameter: 0.25

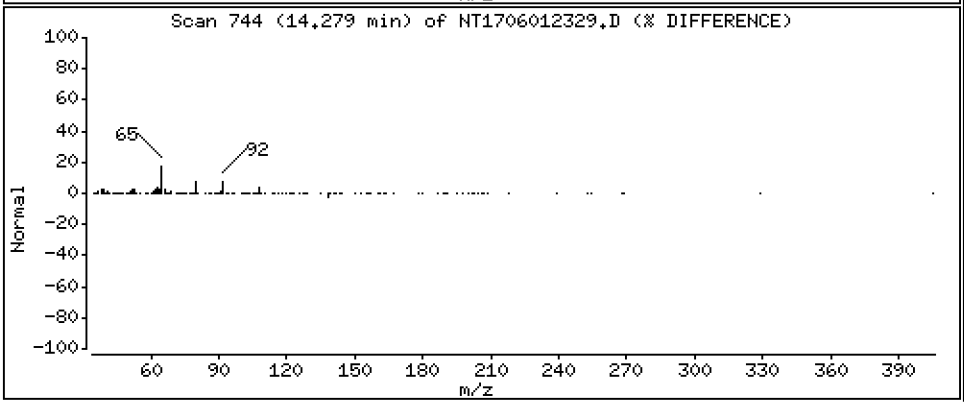
38 2-Nitroaniline

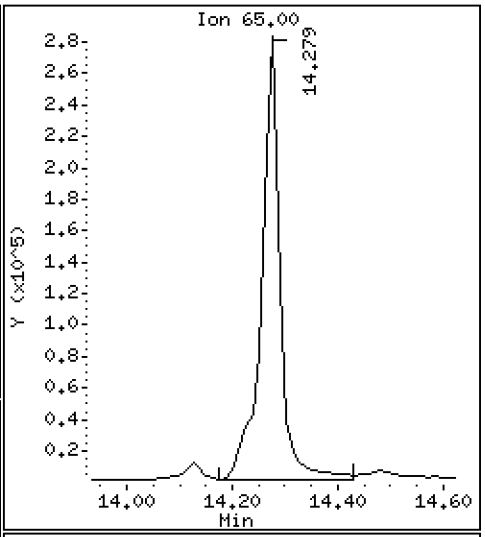
Concentration: 11.75 ug/mL

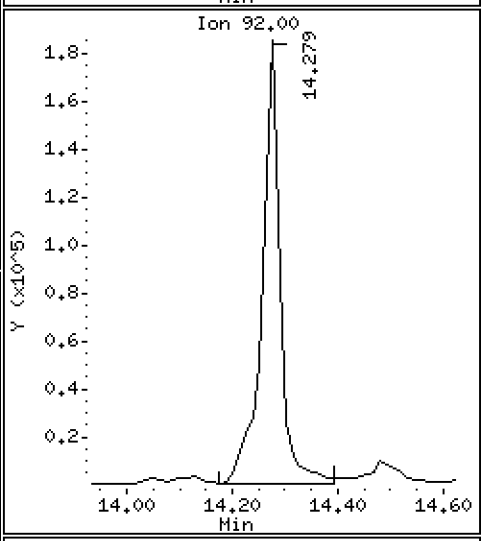


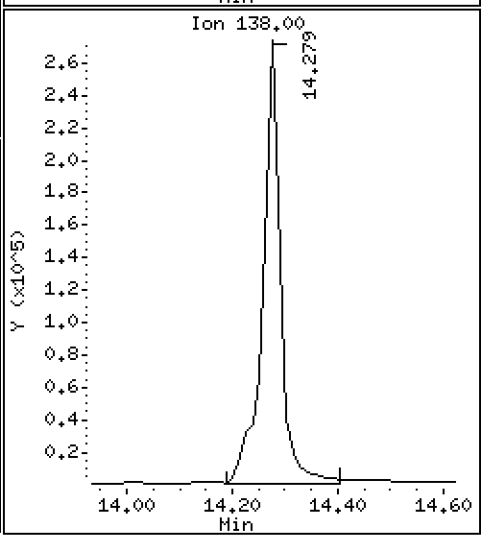












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

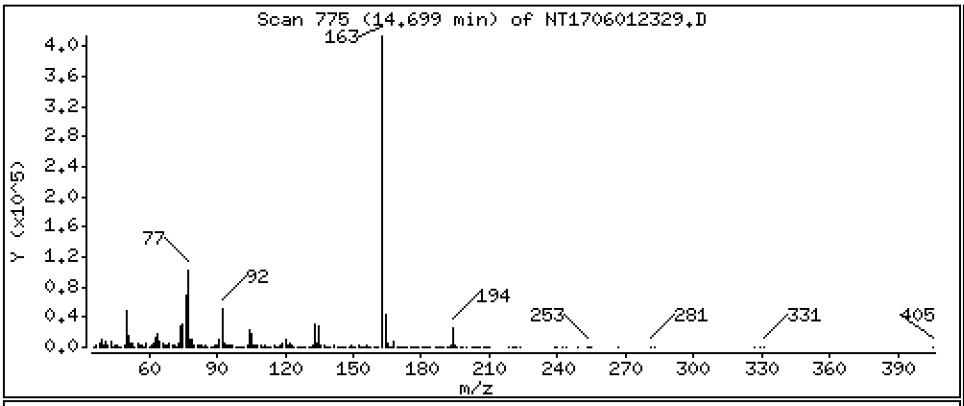
Operator: VTS

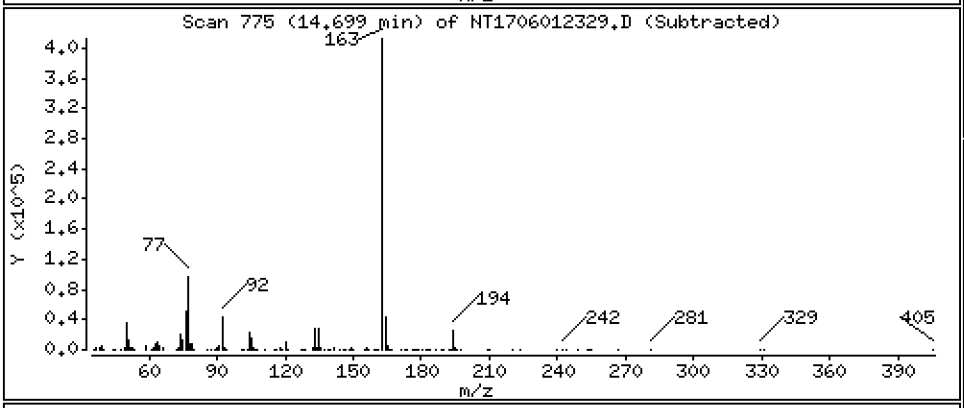
Column phase: ZB-5msi

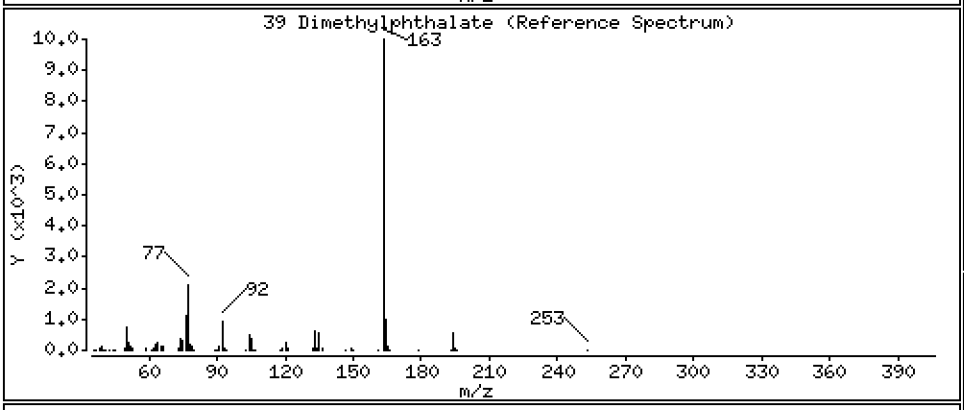
Column diameter: 0.25

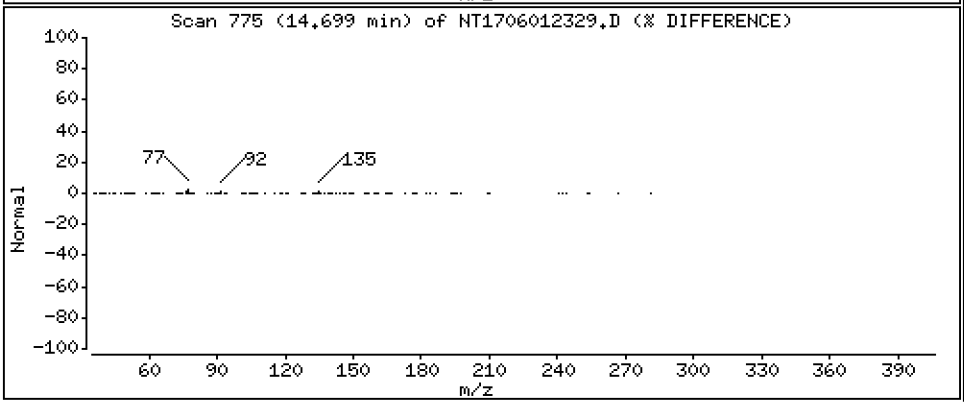
39 Dimethylphthalate

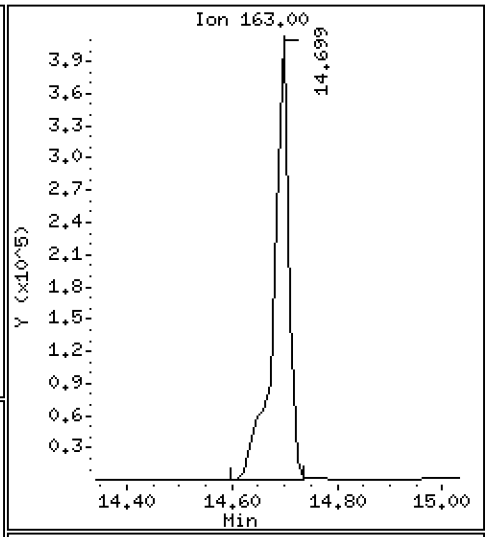
Concentration: 4.503 ug/mL

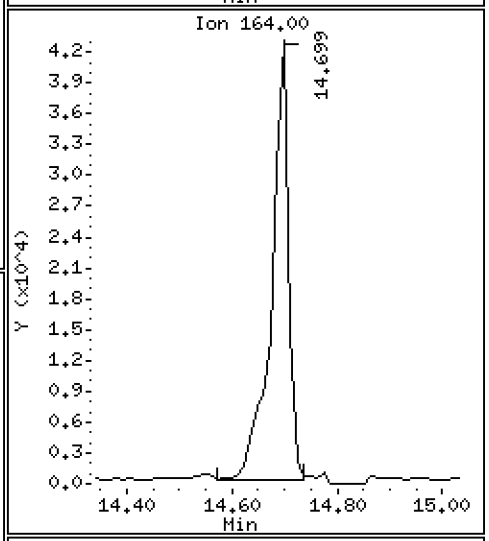


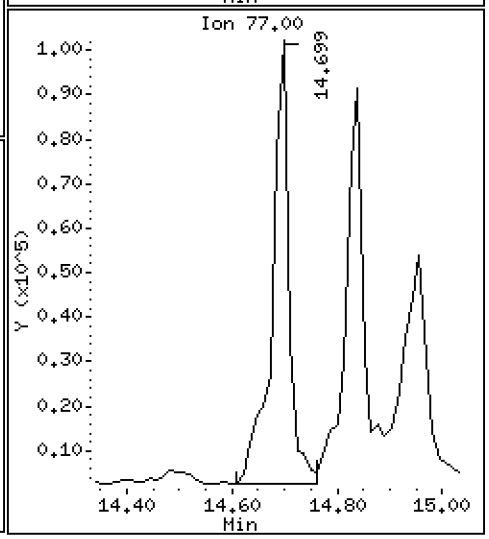












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

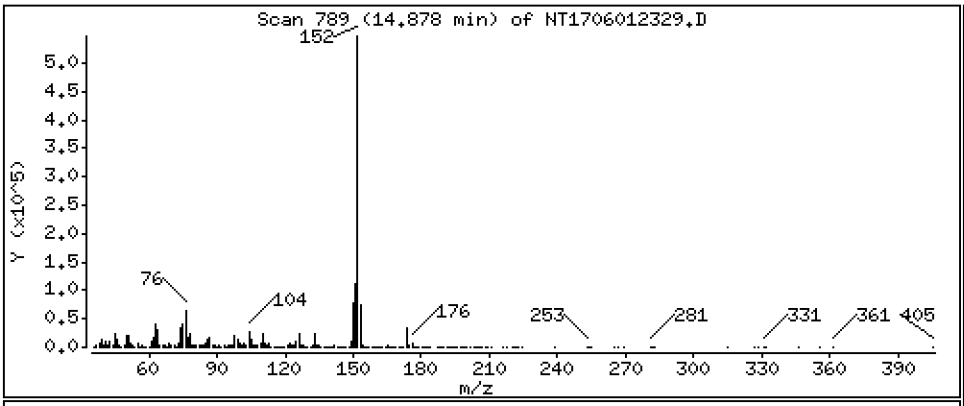
Operator: VTS

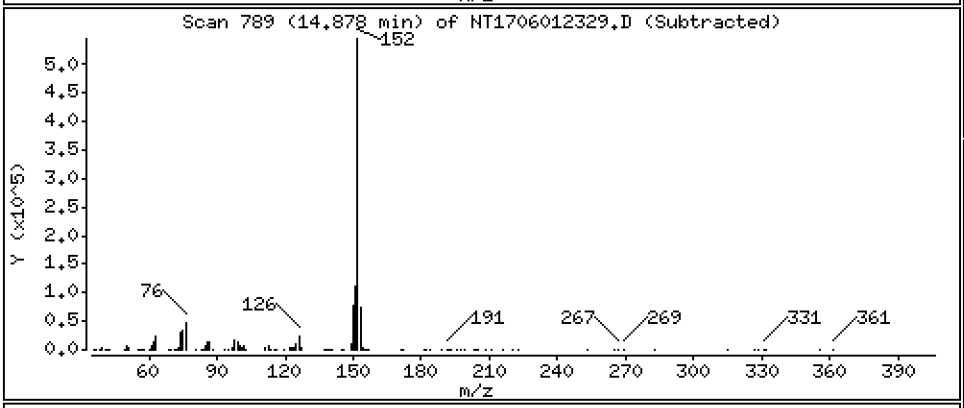
Column phase: ZB-5msi

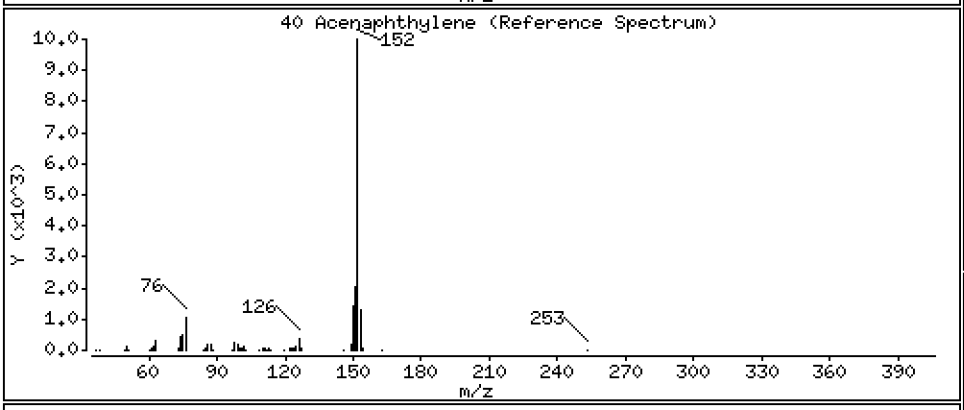
Column diameter: 0.25

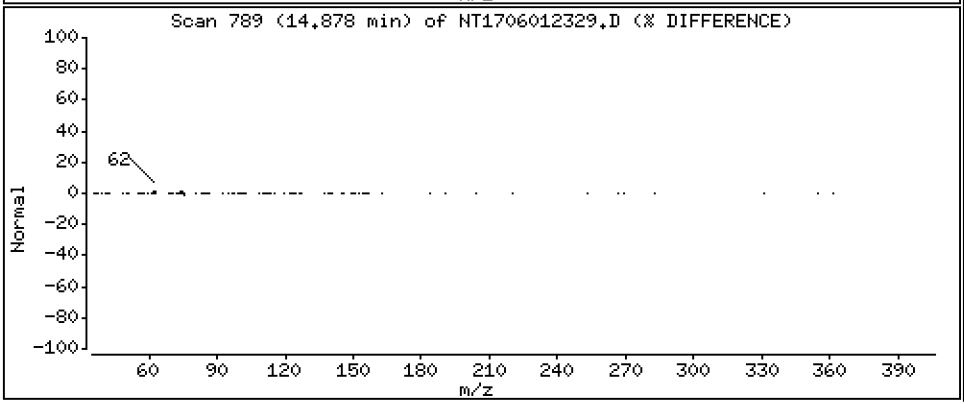
40 Acenaphthylene

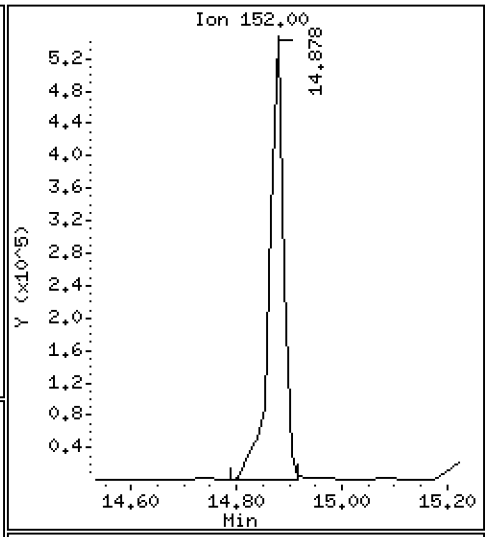
Concentration: 3.809 ug/mL

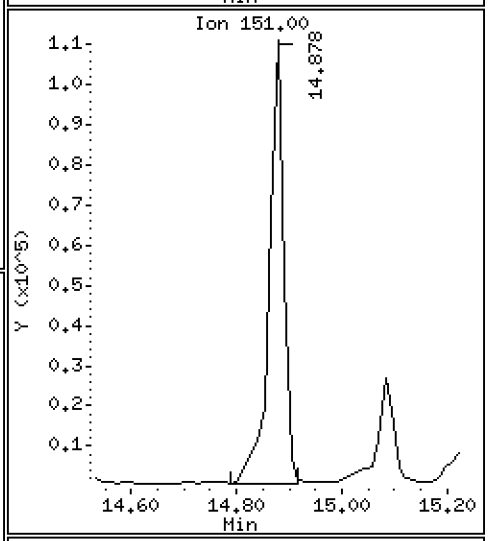


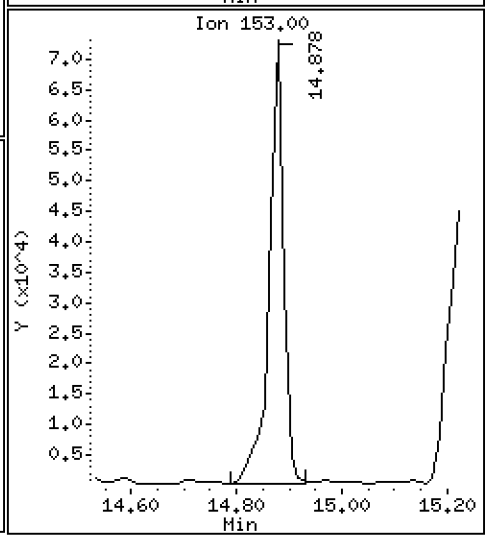












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

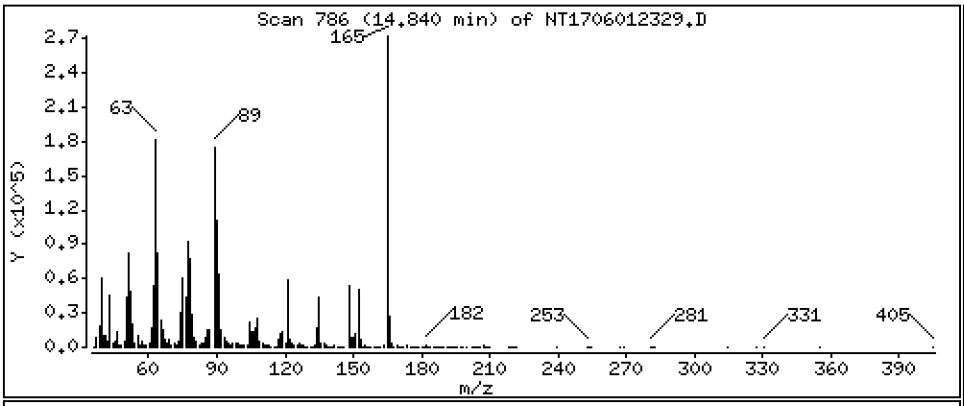
Operator: VTS

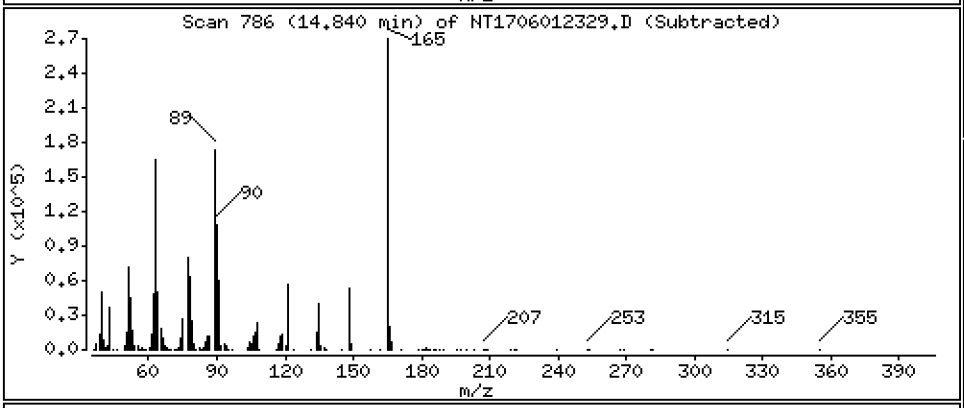
Column phase: ZB-5msi

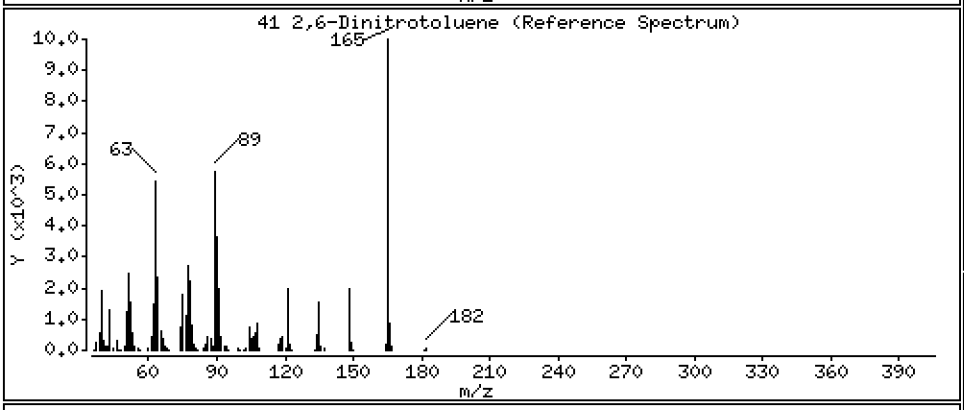
Column diameter: 0.25

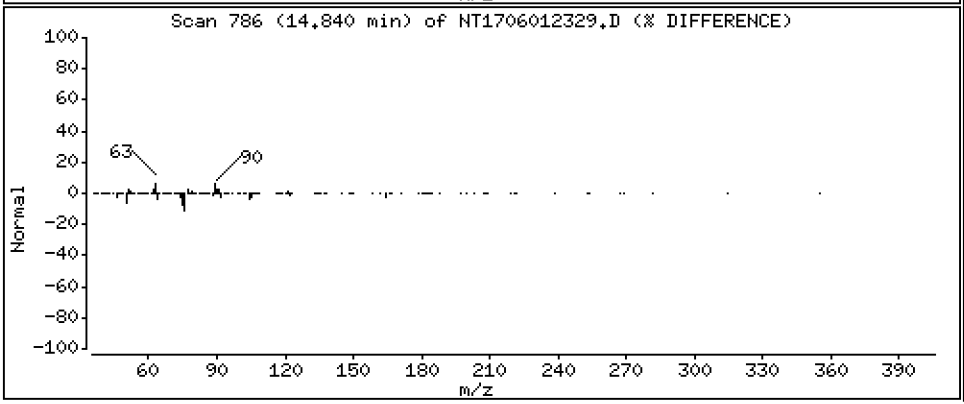
41 2,6-Dinitrotoluene

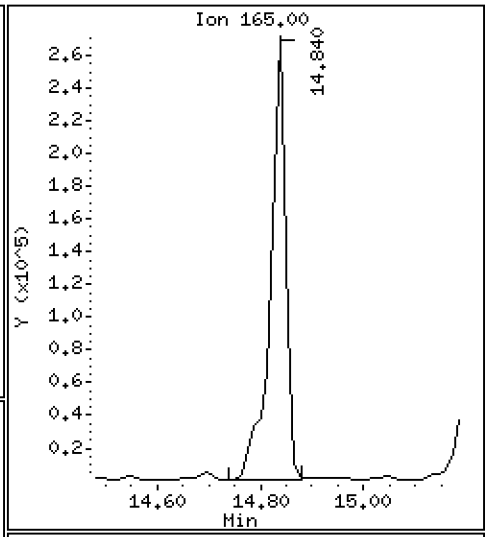
Concentration: 12.70 ug/mL

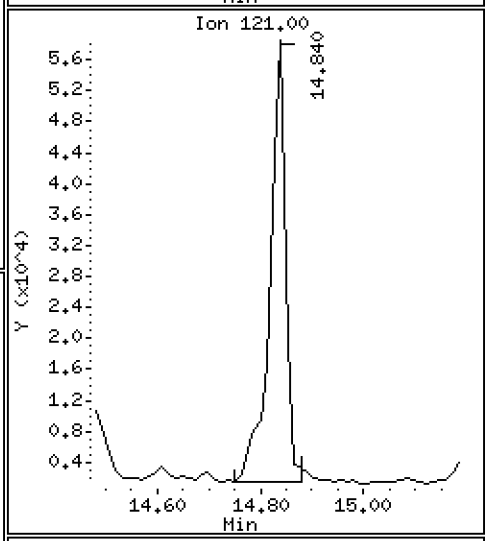


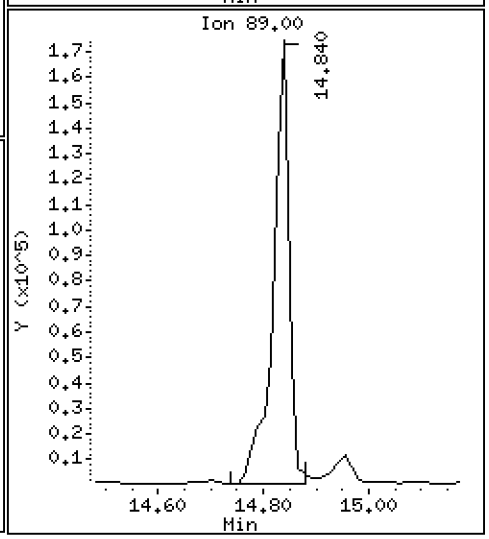












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

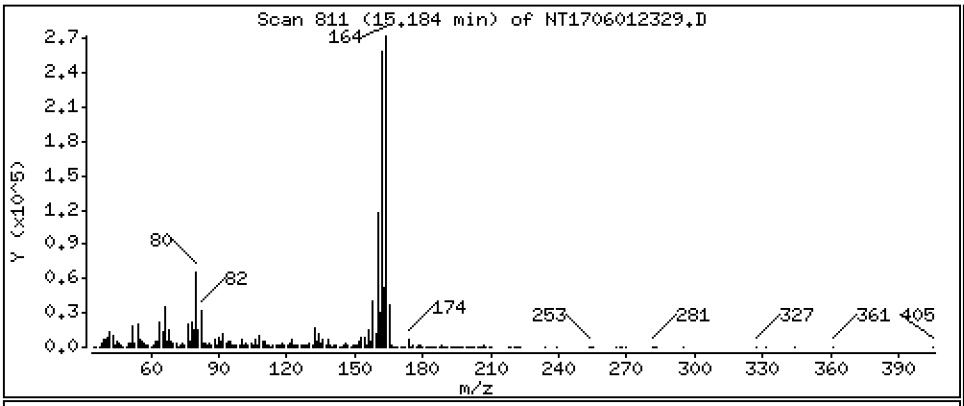
Operator: VTS

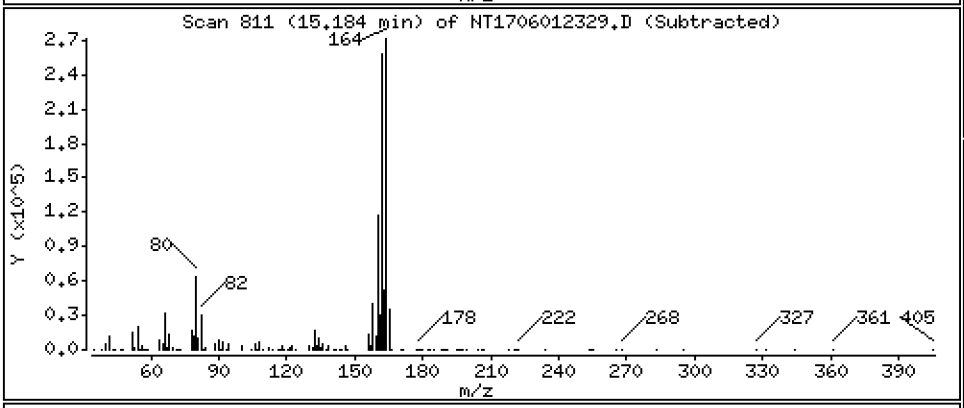
Column phase: ZB-5msi

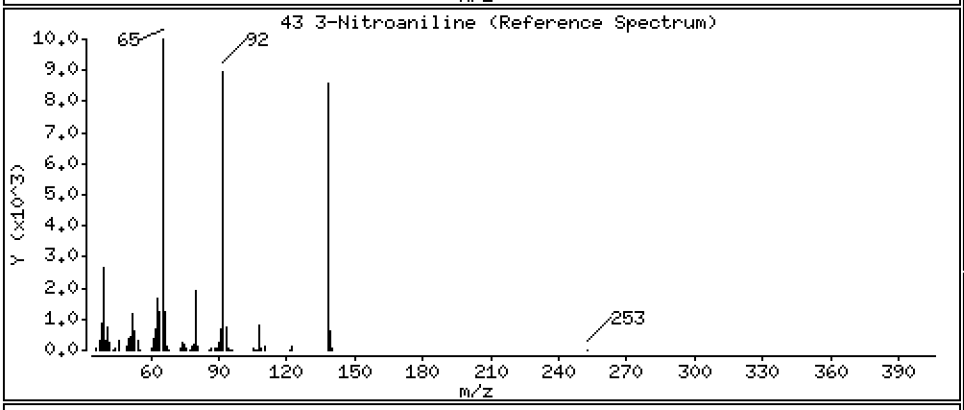
Column diameter: 0.25

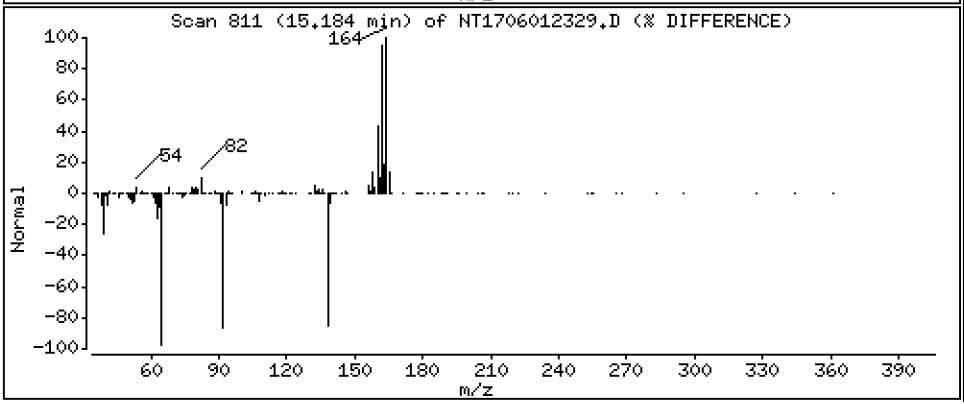
43 3-Nitroaniline

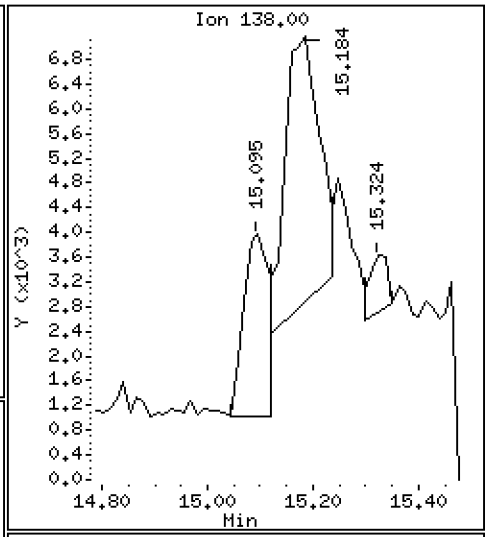
Concentration: 0.5024 ug/mL

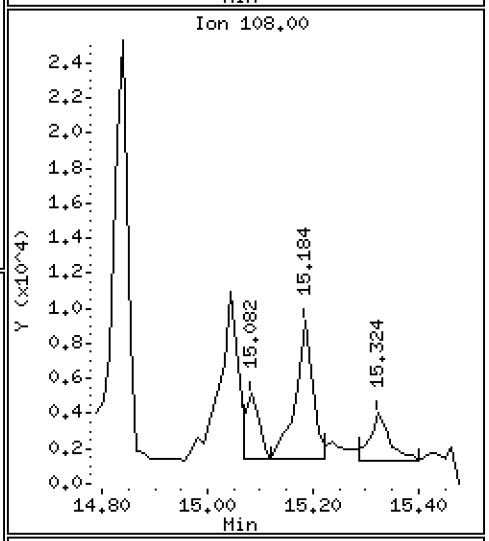


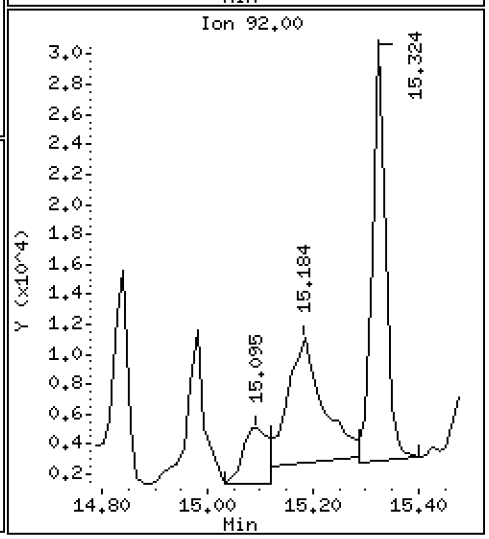












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

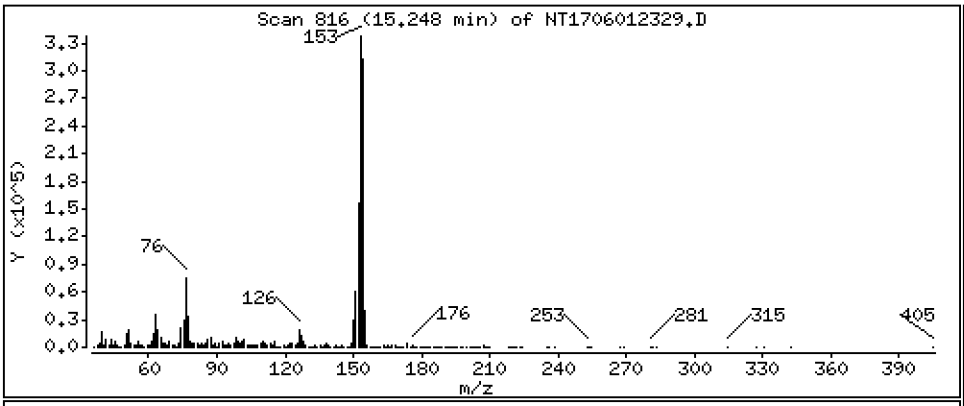
Operator: VTS

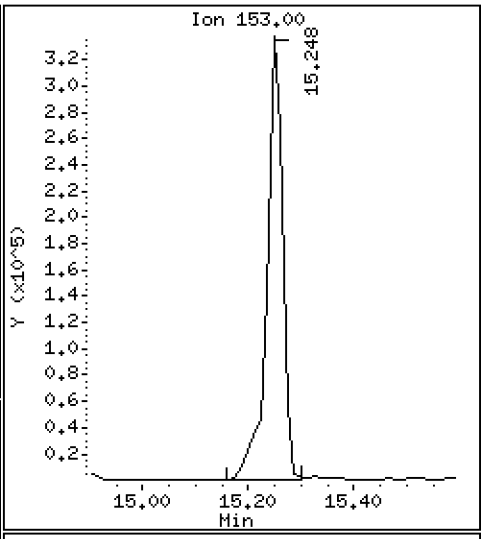
Column phase: ZB-5msi

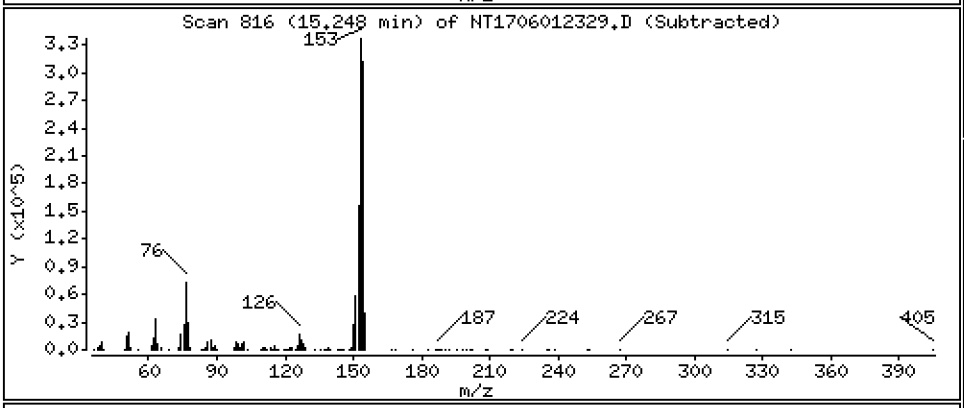
Column diameter: 0.25

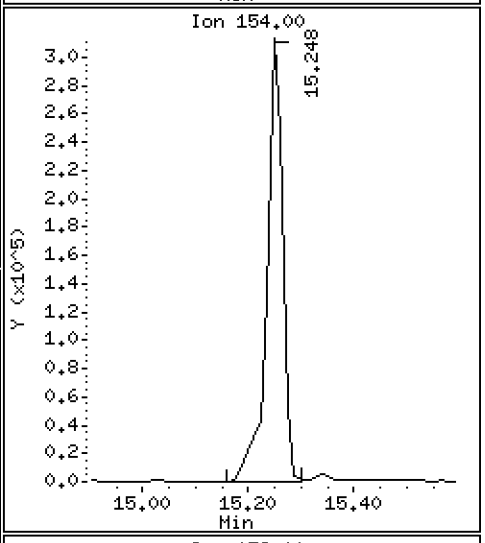
44 Acenaphthene

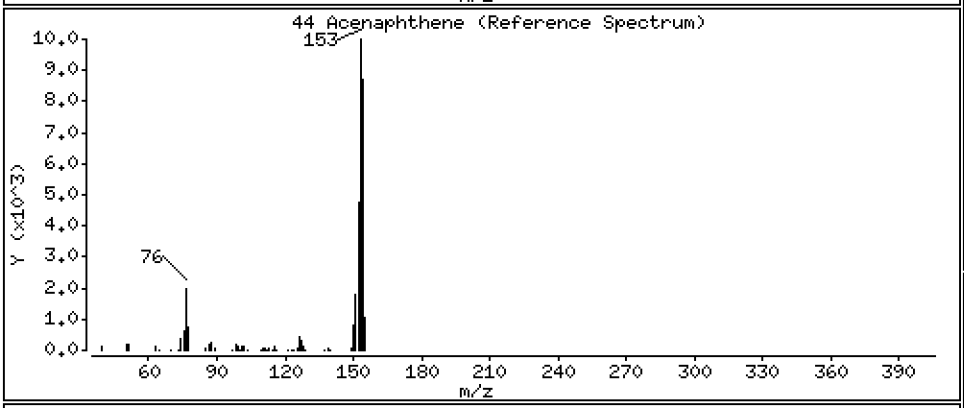
Concentration: 4.105 ug/mL

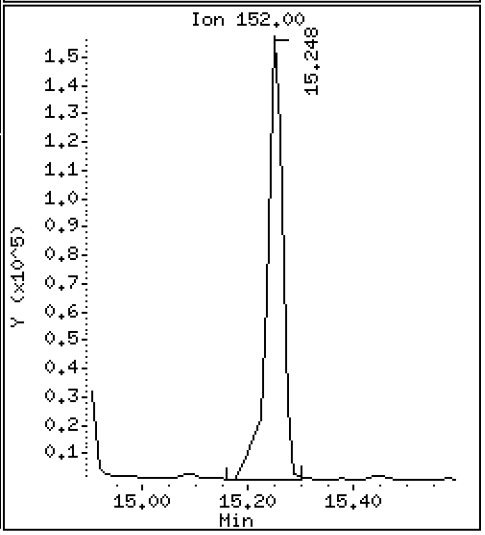


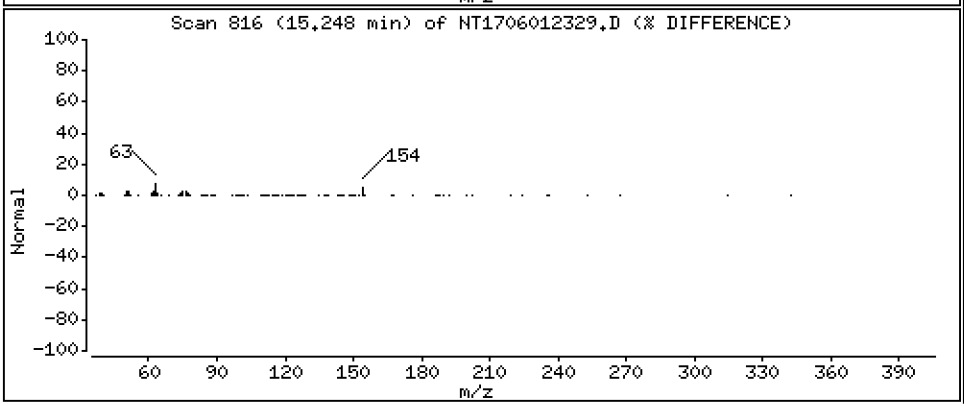












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

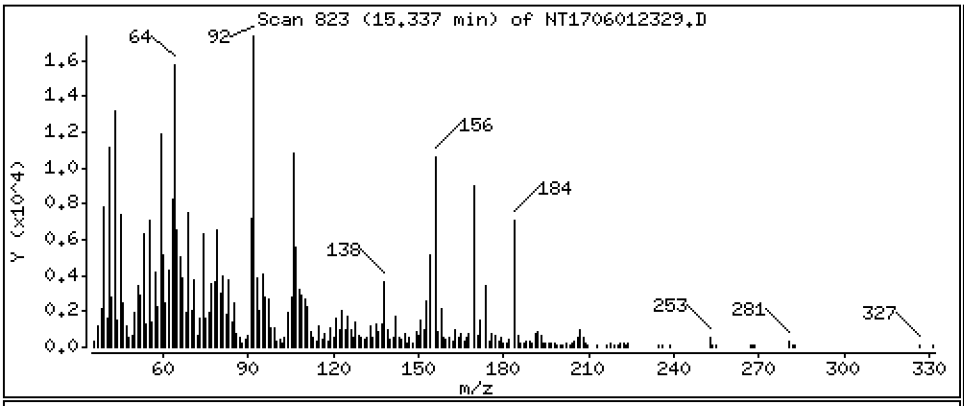
Operator: VTS

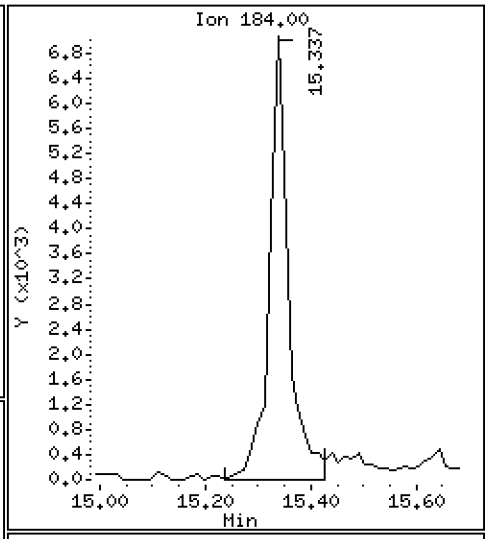
Column phase: ZB-5msi

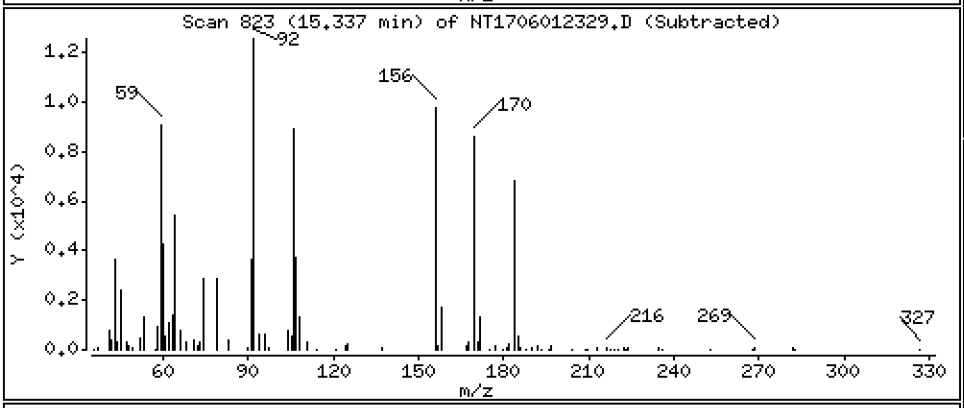
Column diameter: 0.25

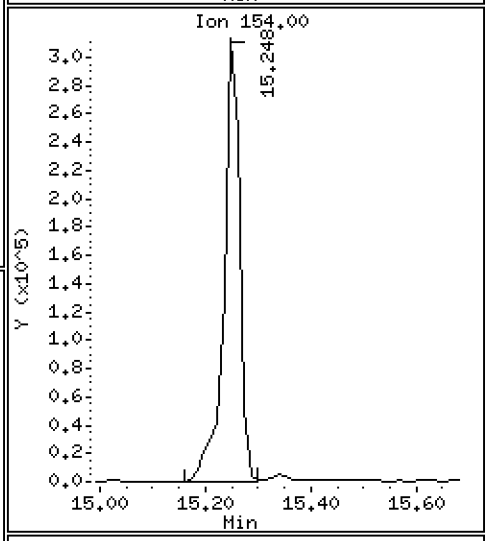
45 2,4-Dinitrophenol

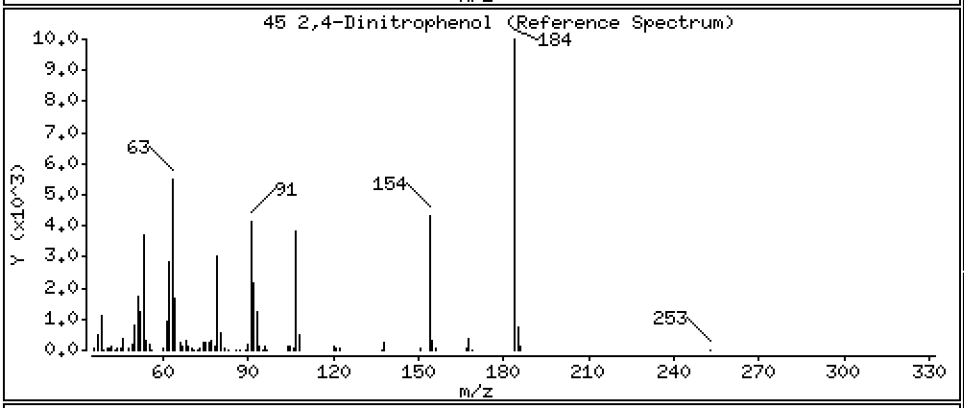
Concentration: 0.6950 ug/mL

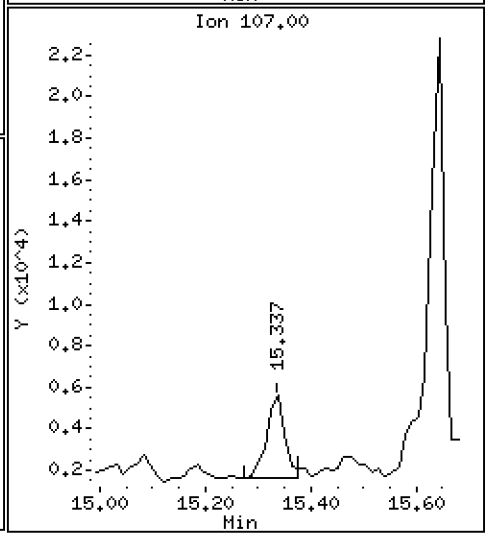


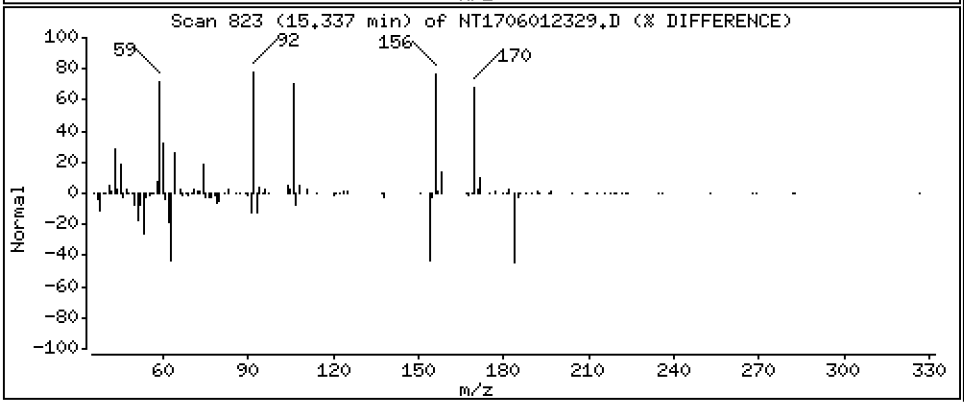












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

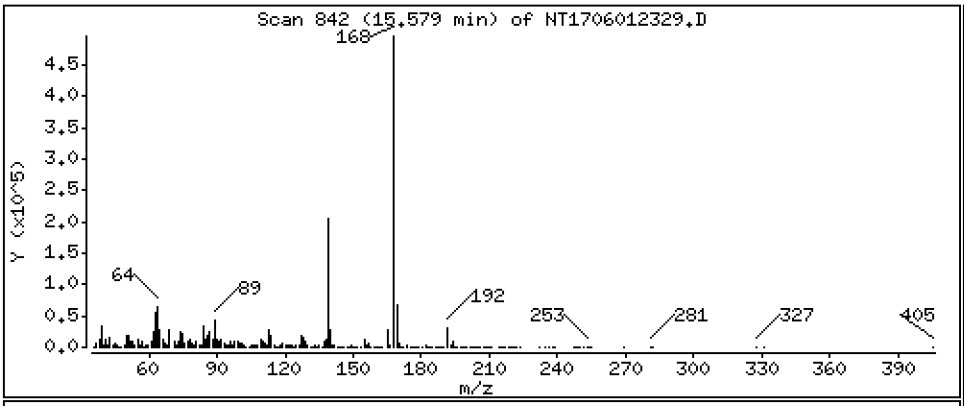
Operator: VTS

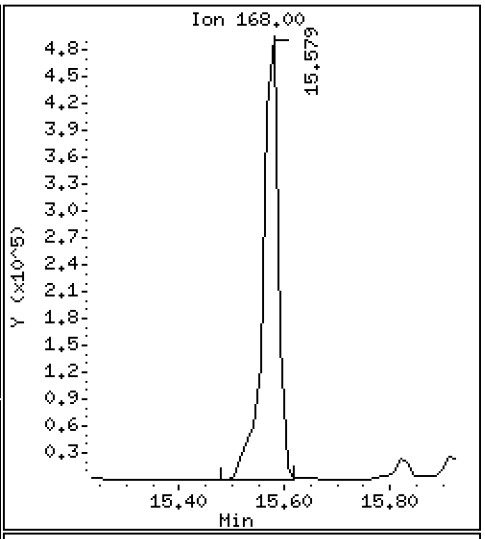
Column phase: ZB-5msi

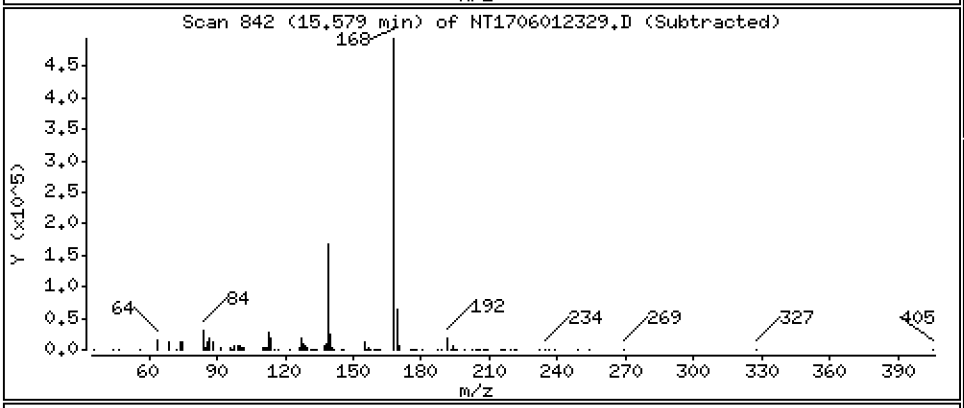
Column diameter: 0.25

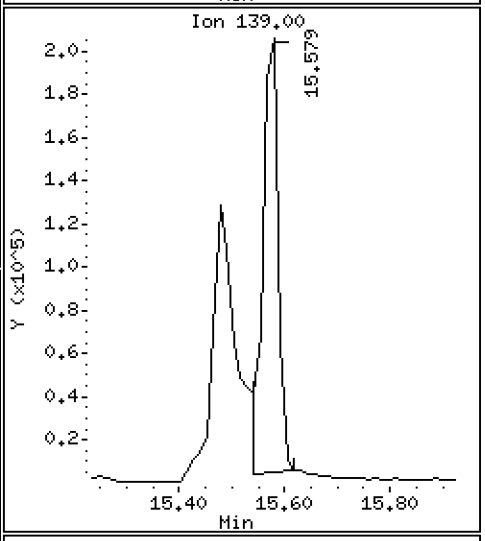
46 Dibenzofuran

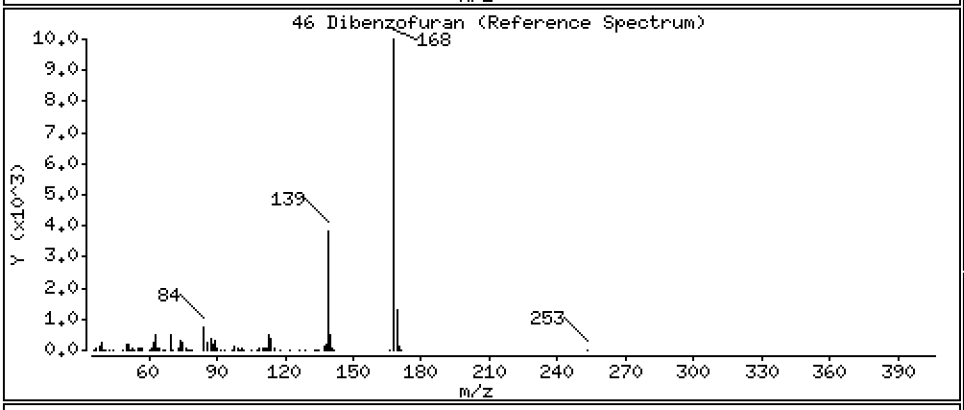
Concentration: 4.310 ug/mL

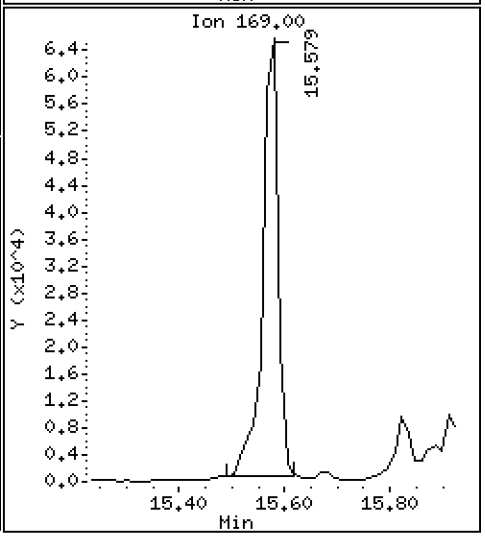


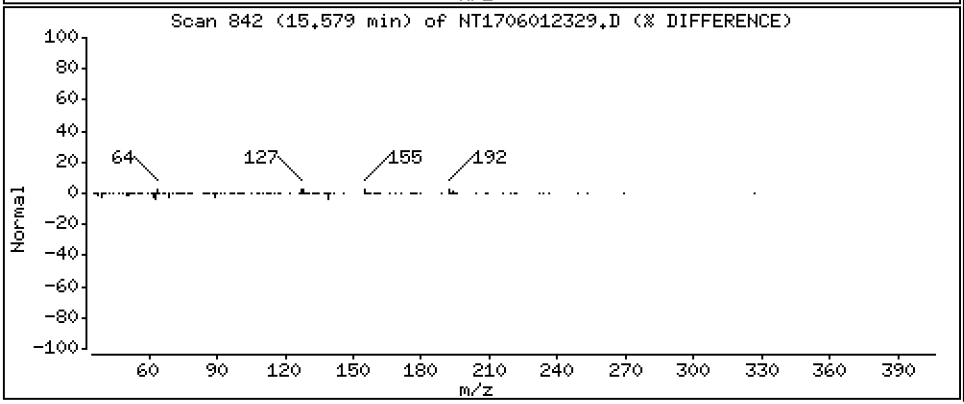












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

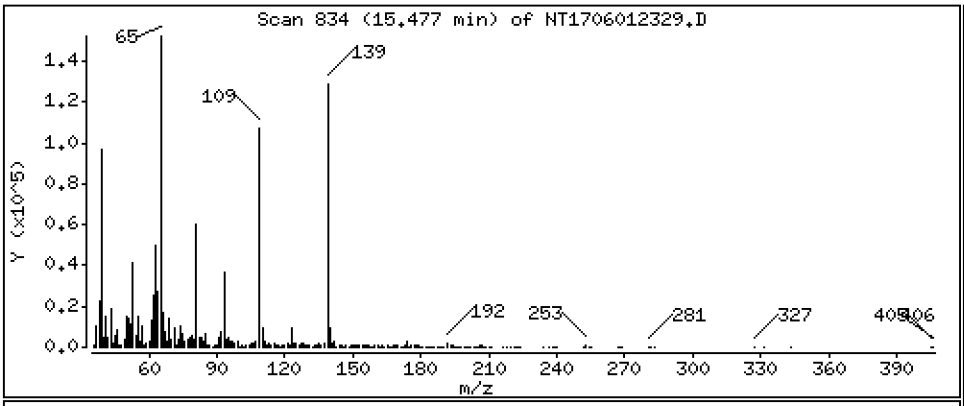
Operator: VTS

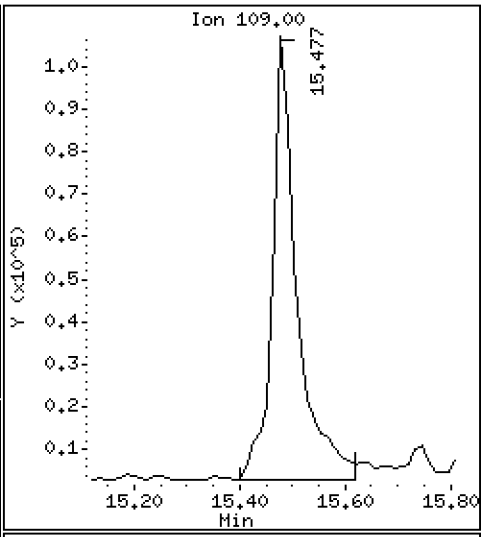
Column phase: ZB-5msi

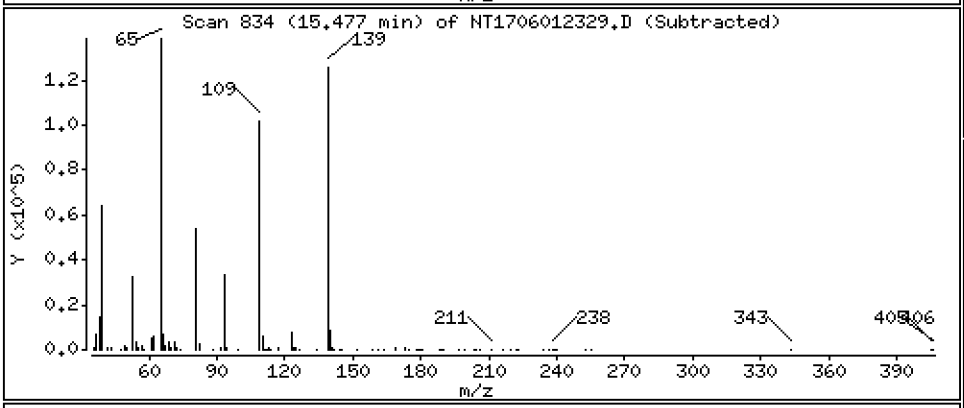
Column diameter: 0.25

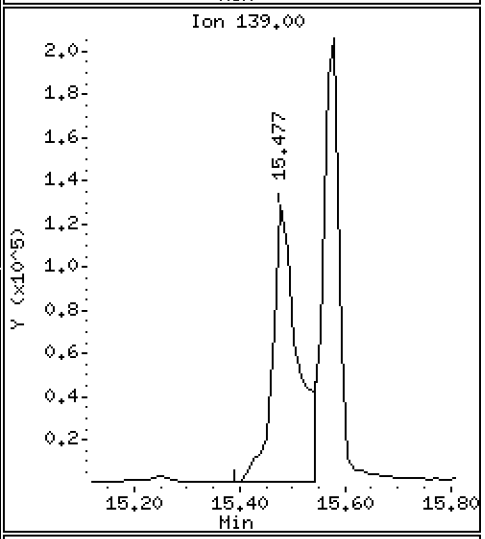
47 4-Nitrophenol

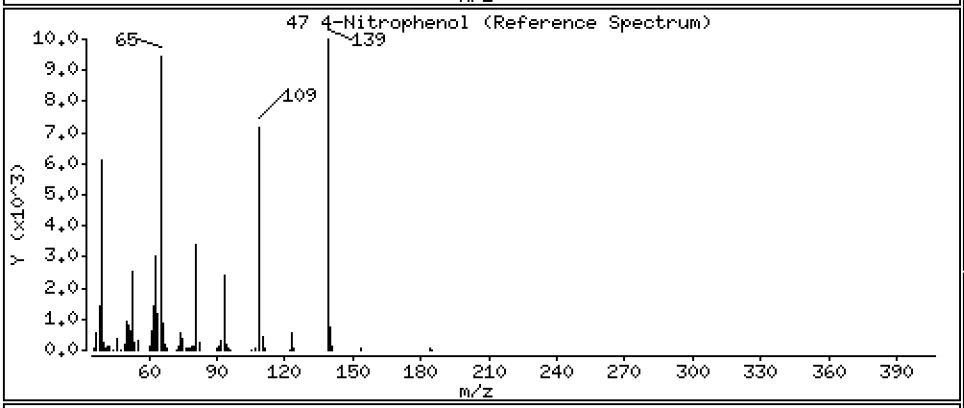
Concentration: 12.66 ug/mL

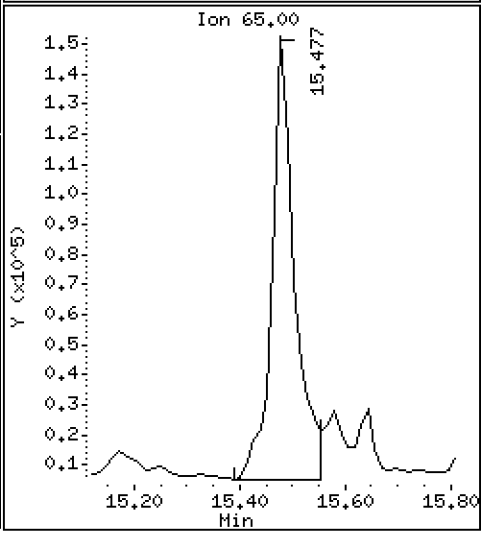


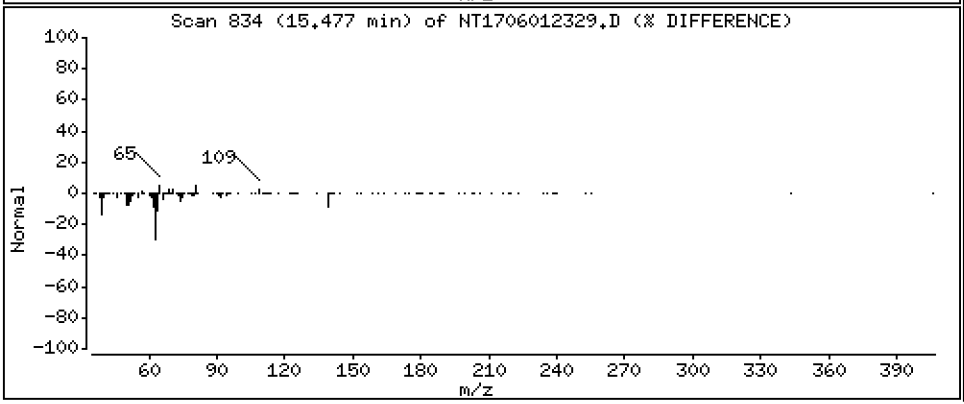












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

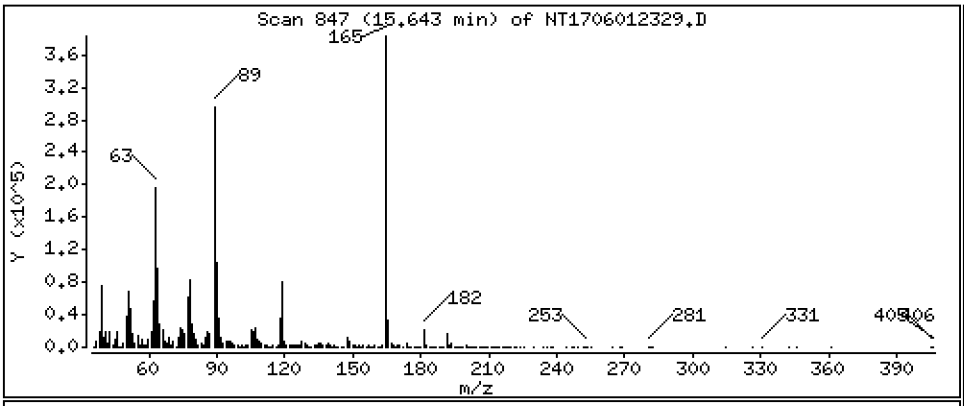
Operator: VTS

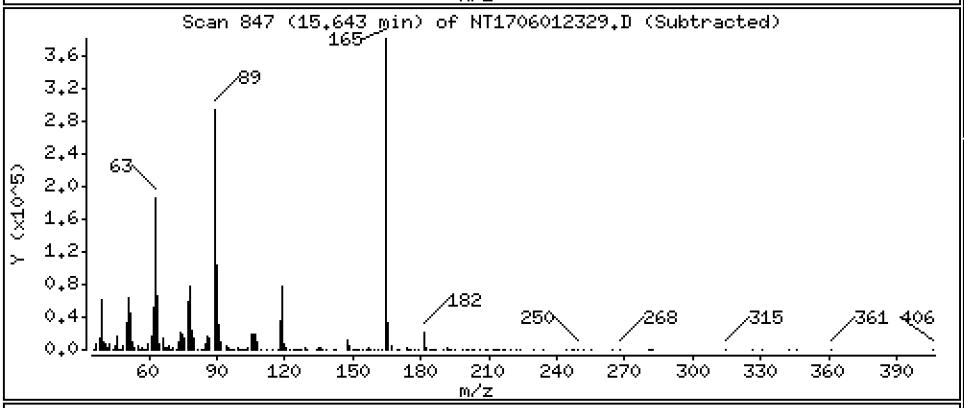
Column phase: ZB-5msi

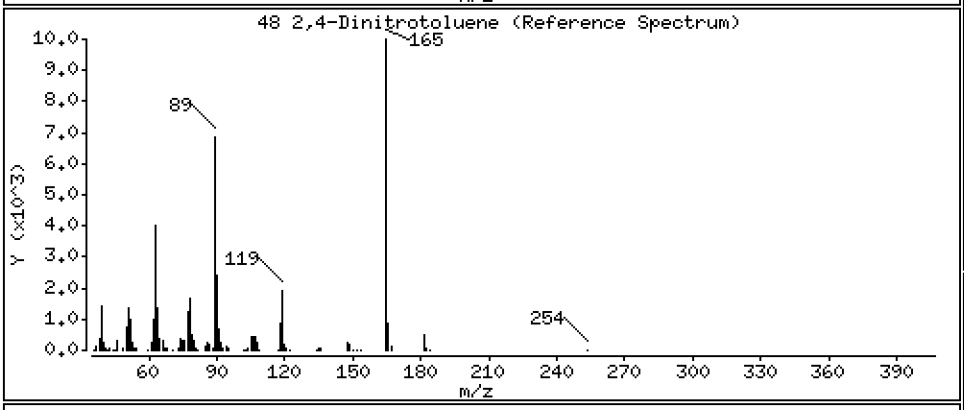
Column diameter: 0.25

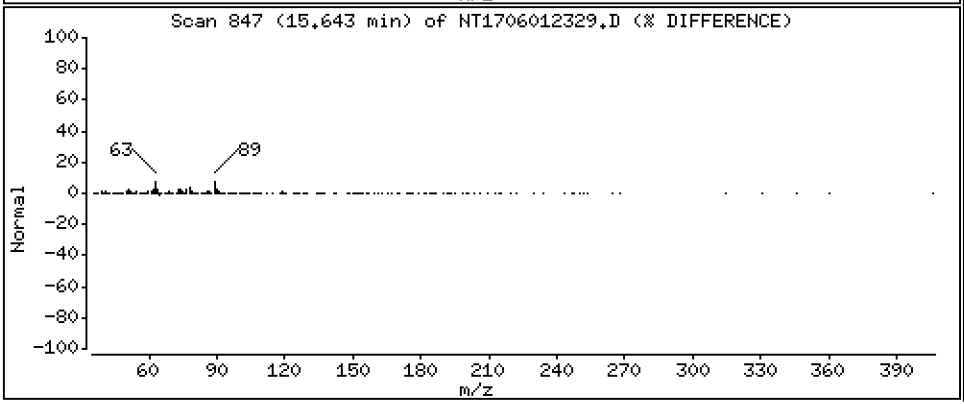
48 2,4-Dinitrotoluene

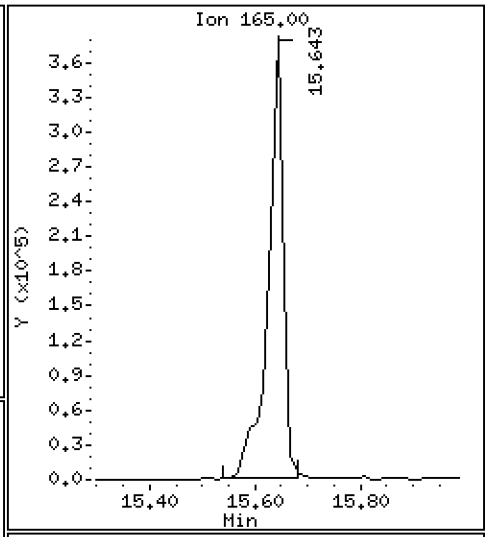
Concentration: 13.45 ug/mL

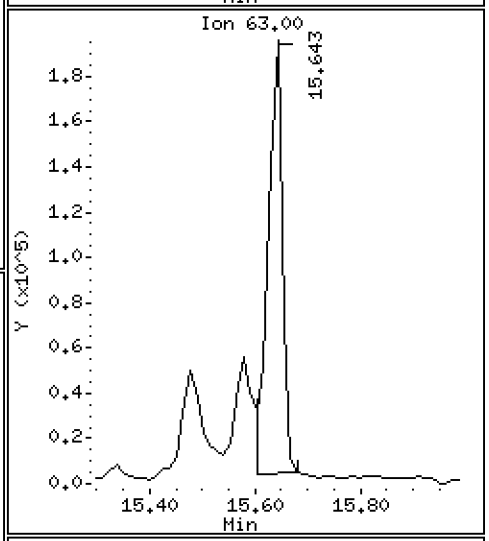


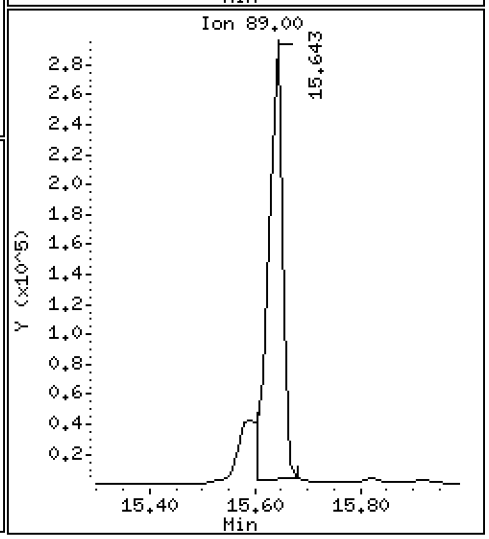












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

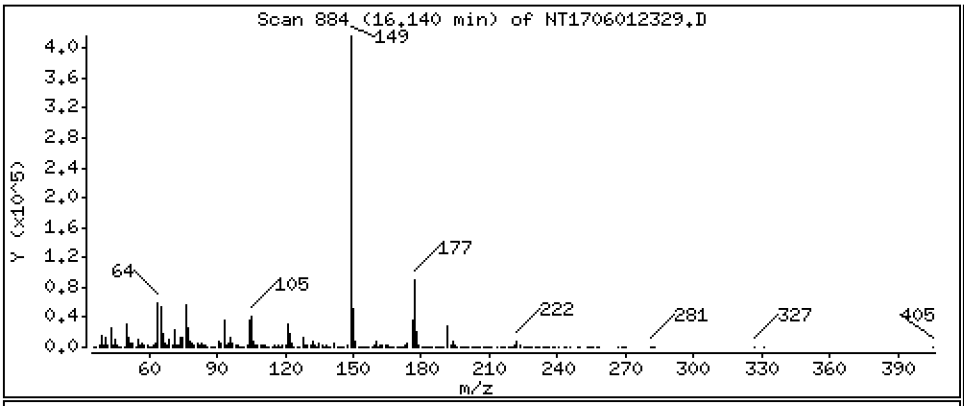
Operator: VTS

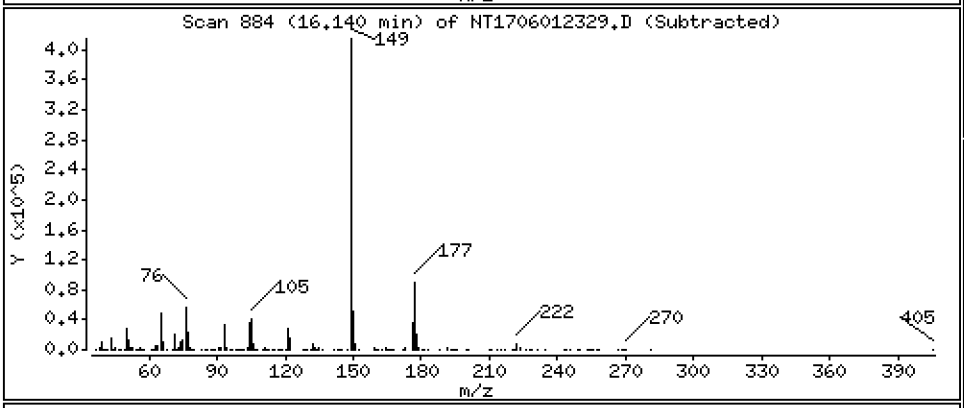
Column phase: ZB-5msi

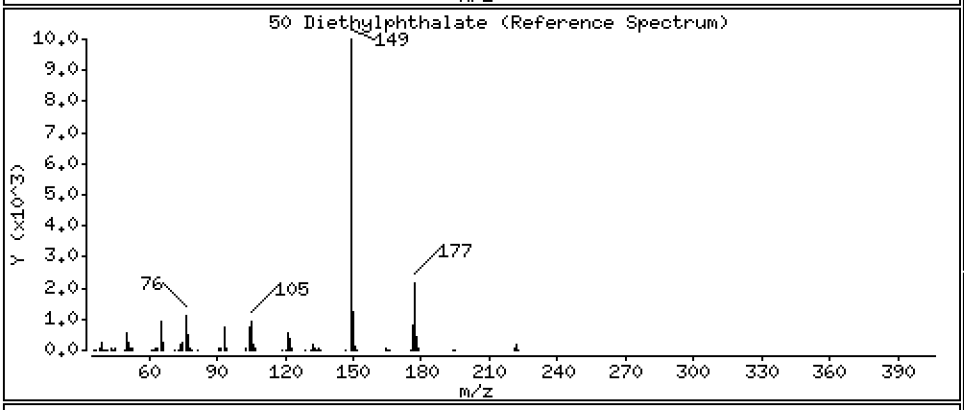
Column diameter: 0.25

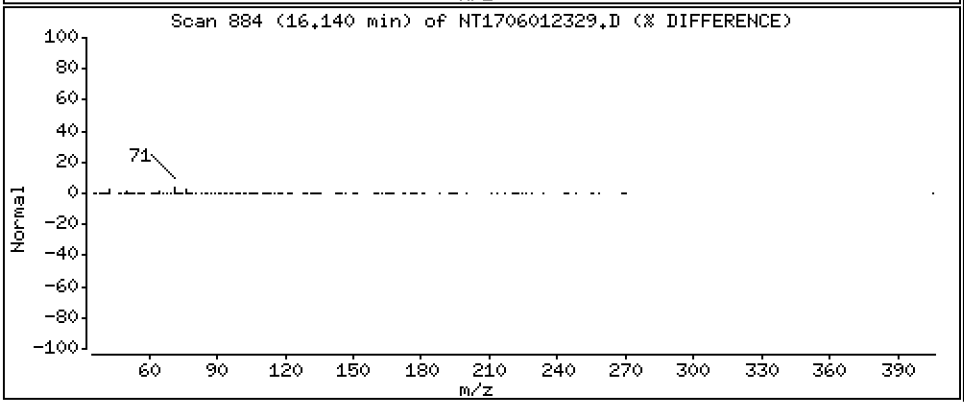
50 Diethylphthalate

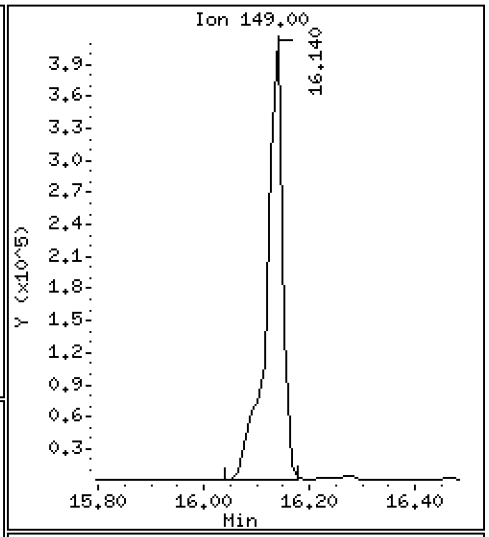
Concentration: 4.905 ug/mL

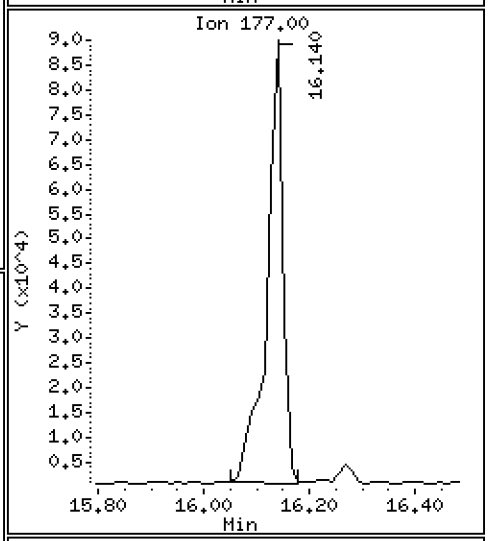


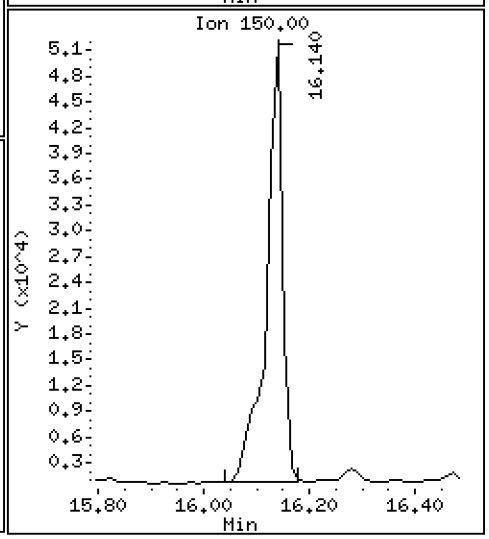












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

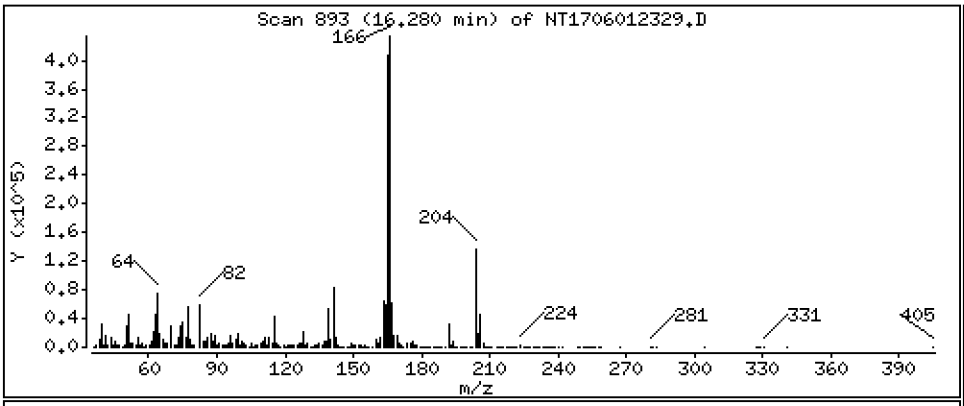
Operator: VTS

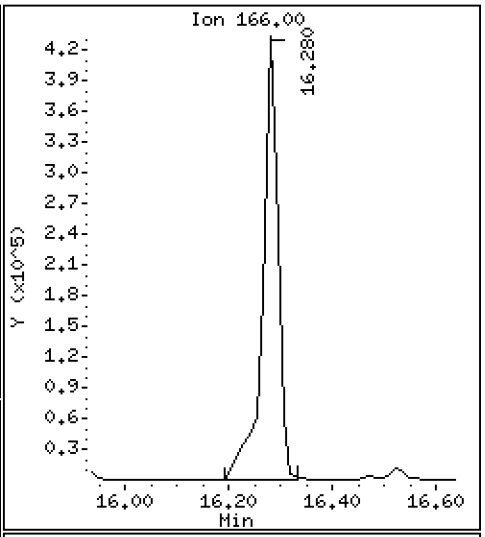
Column phase: ZB-5msi

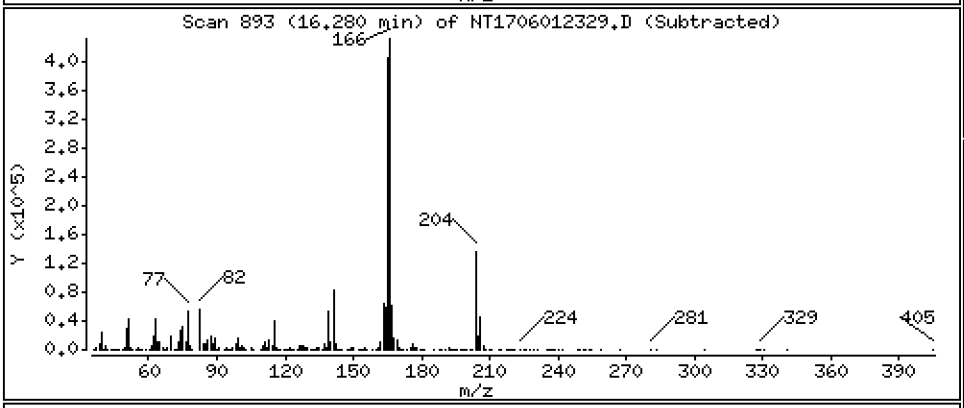
Column diameter: 0.25

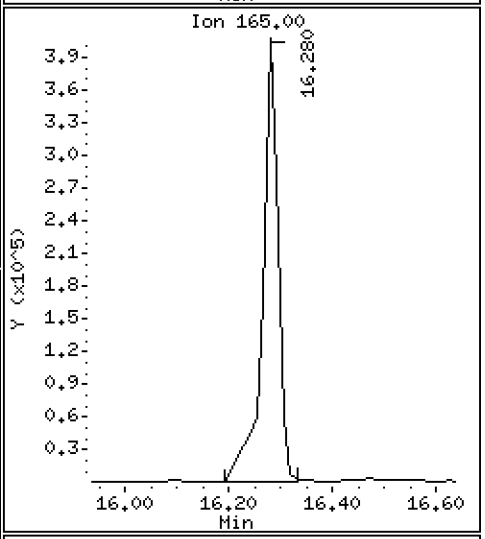
49 Fluorene

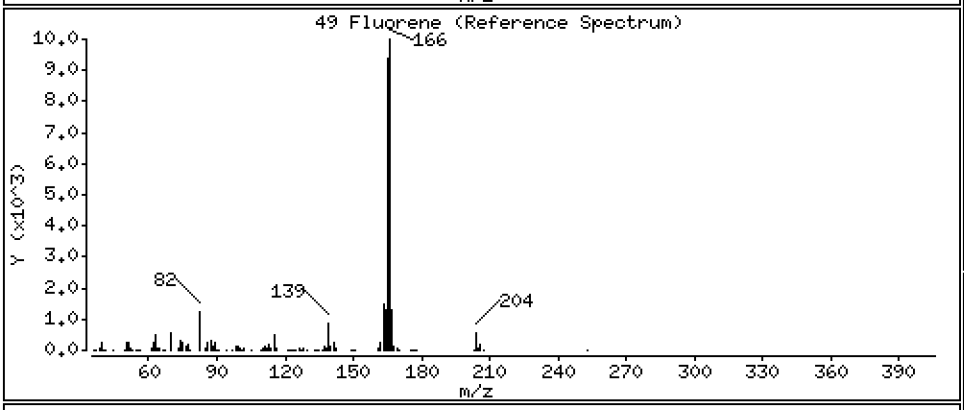
Concentration: 4.656 ug/mL

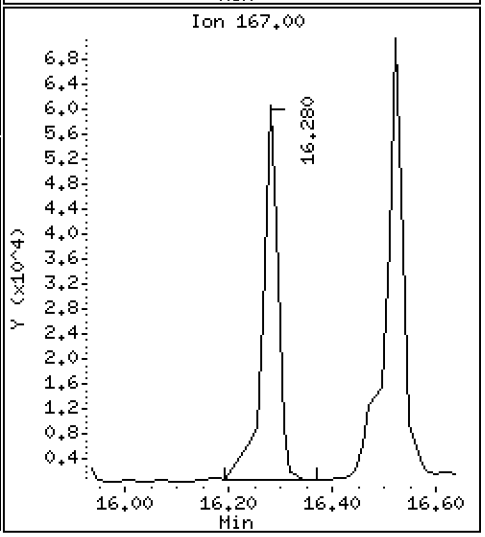


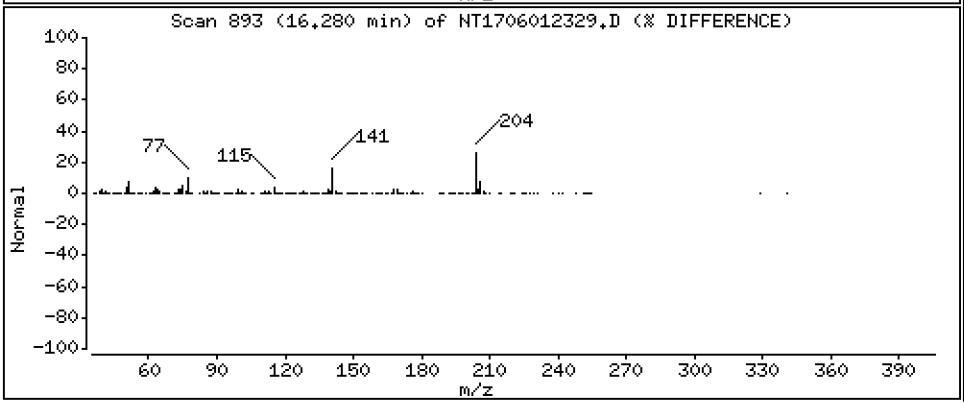












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

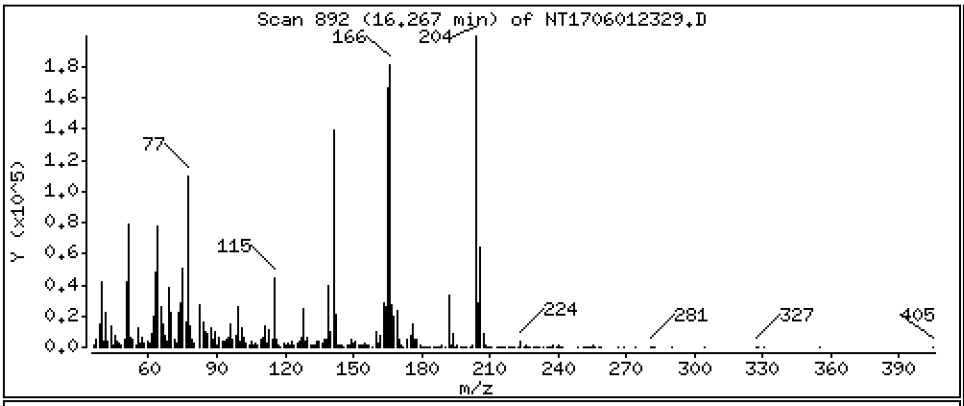
Operator: VTS

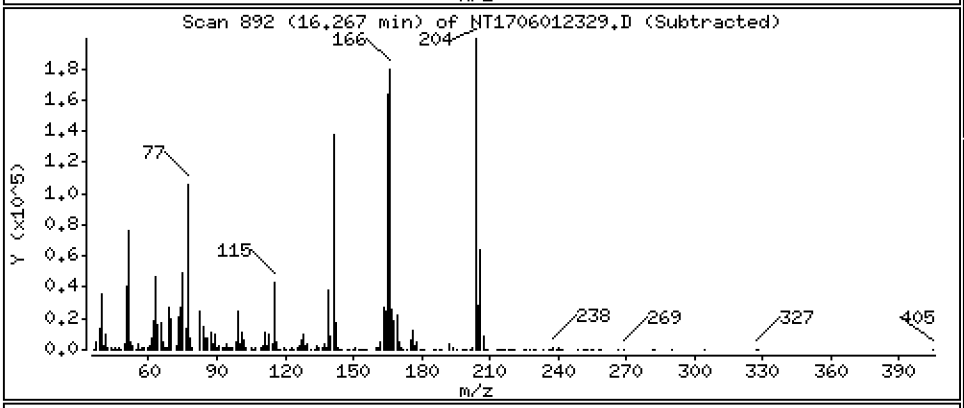
Column phase: ZB-5msi

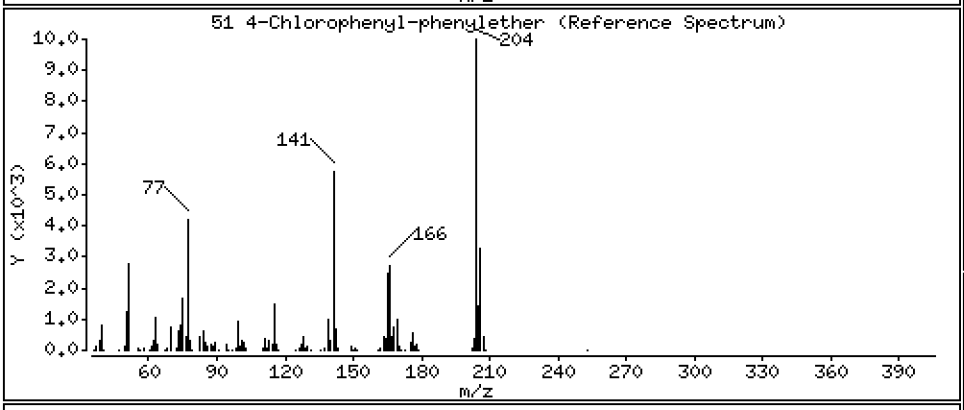
Column diameter: 0.25

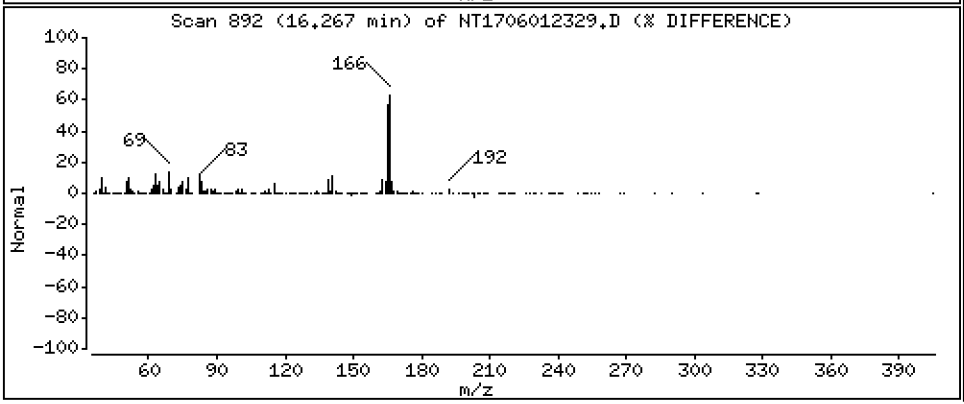
51 4-Chlorophenyl-phenylether

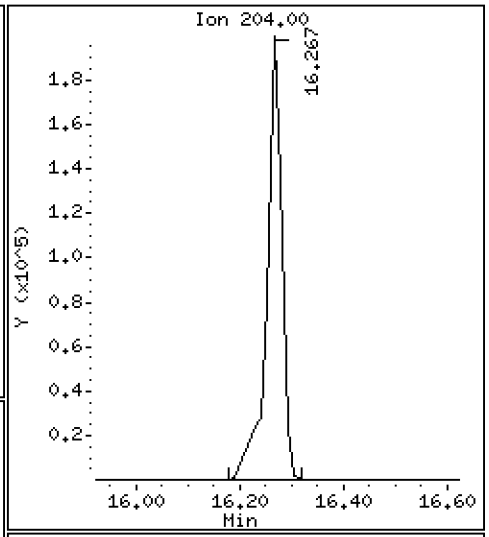
Concentration: 4.433 ug/mL

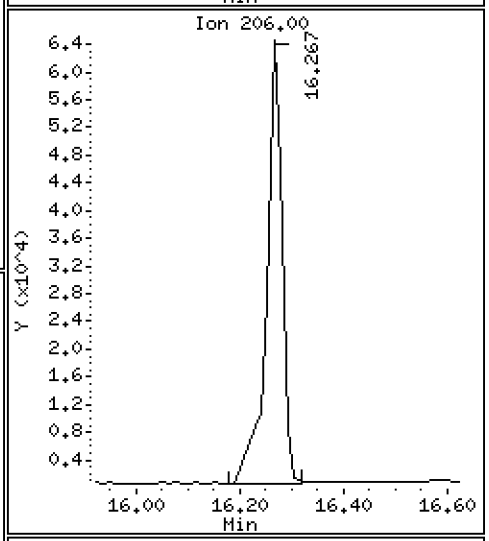


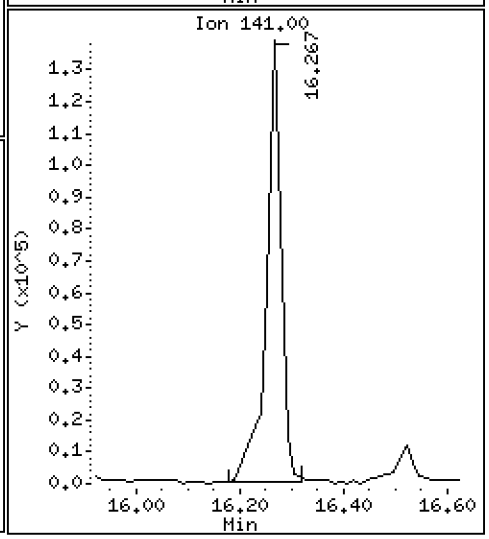












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

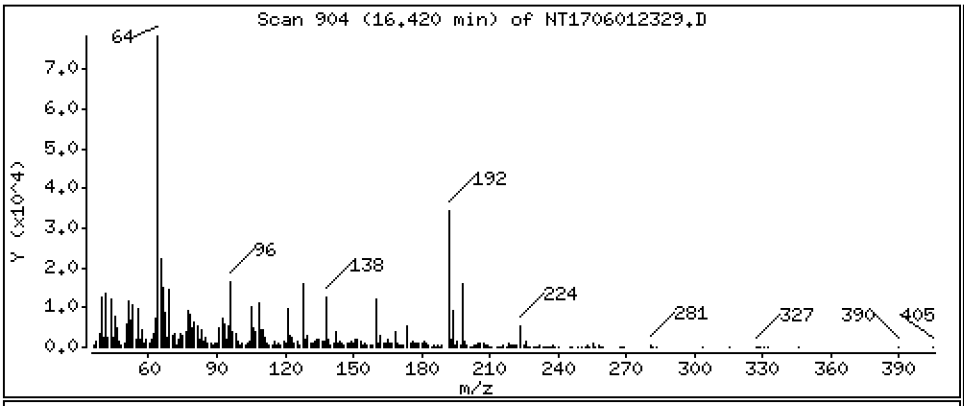
Operator: VTS

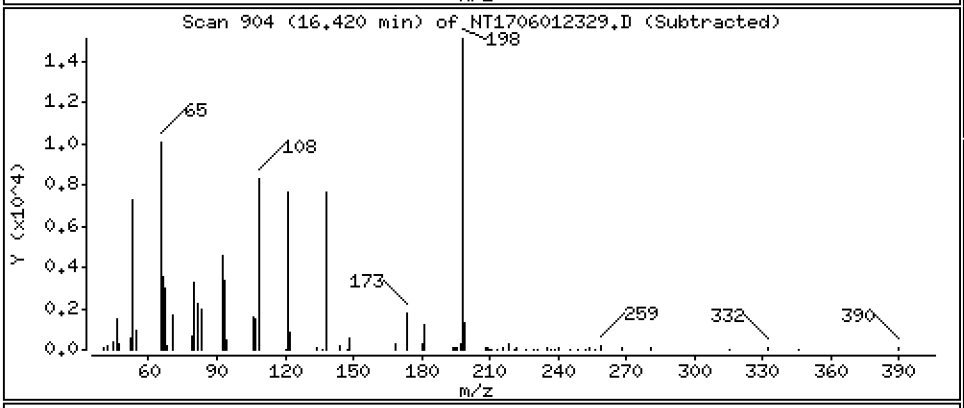
Column phase: ZB-5msi

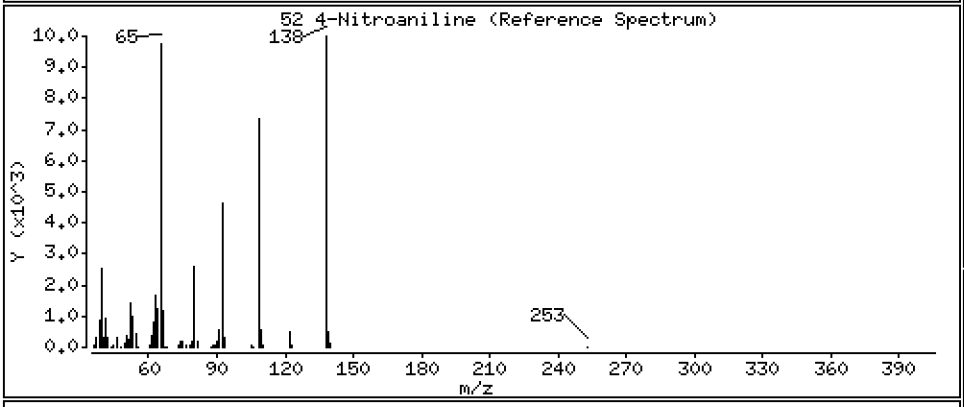
Column diameter: 0.25

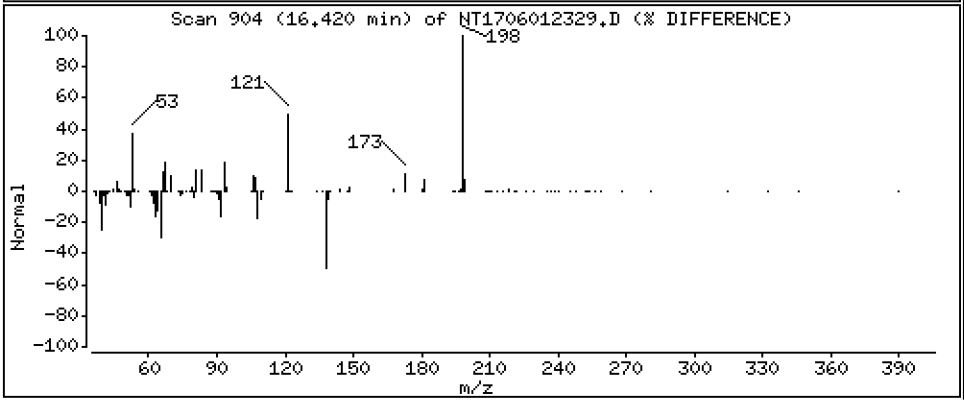
52 4-Nitroaniline

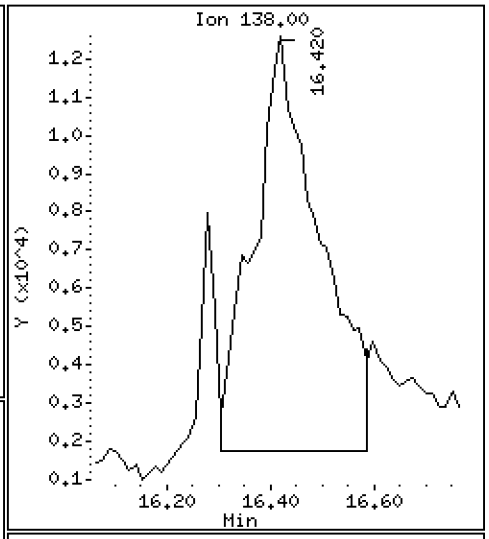
Concentration: 2.551 ug/mL

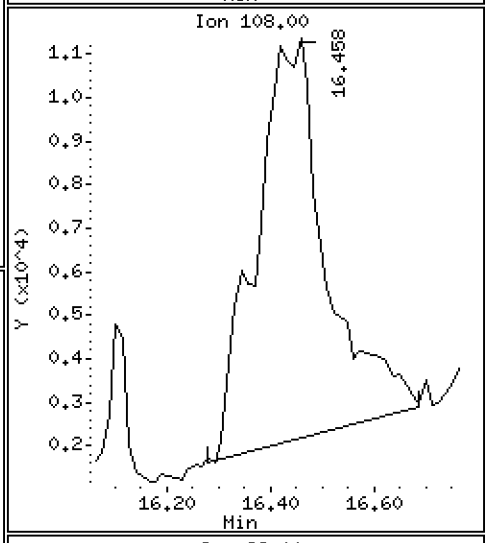


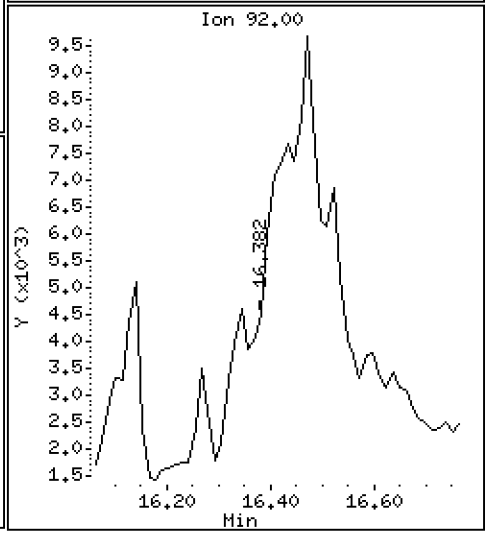












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

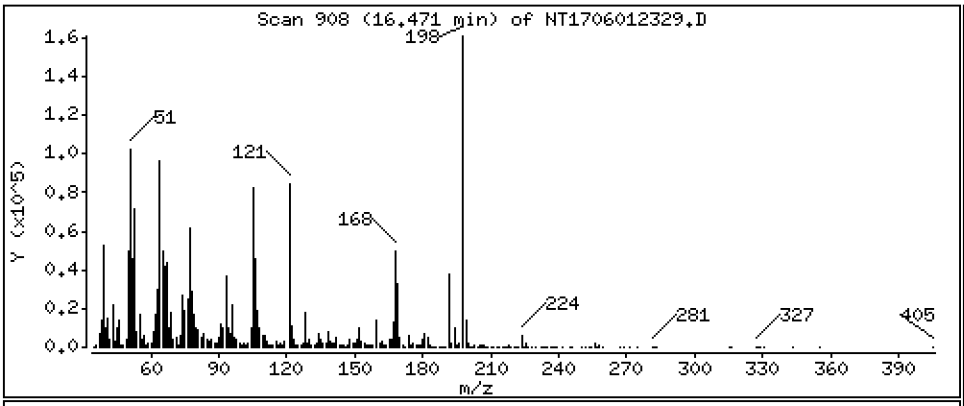
Operator: VTS

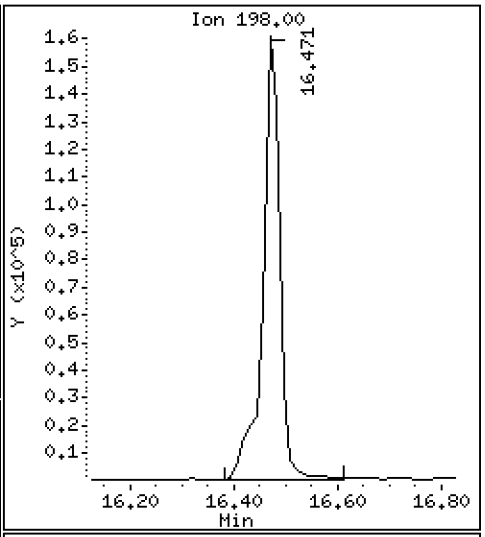
Column phase: ZB-5msi

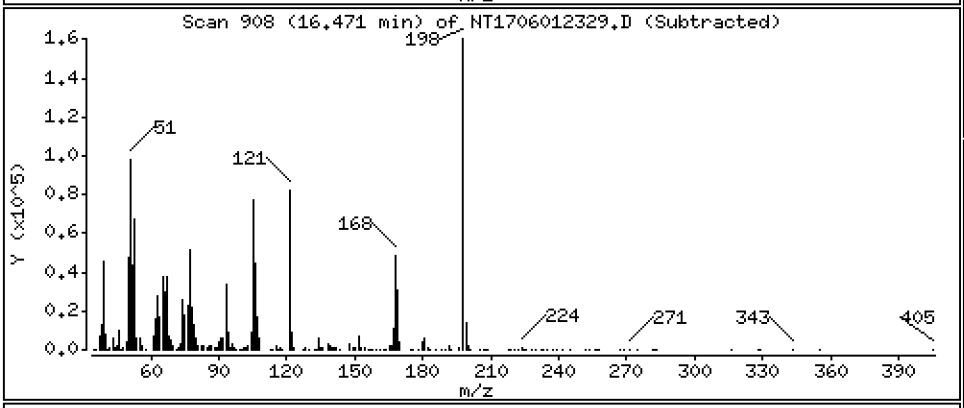
Column diameter: 0.25

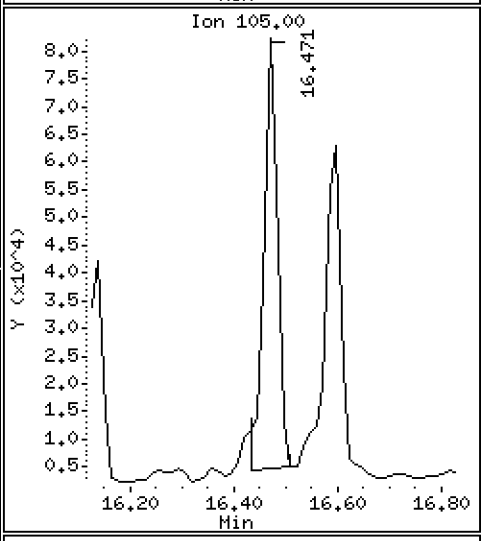
53 4,6-Dinitro-2-methylphenol

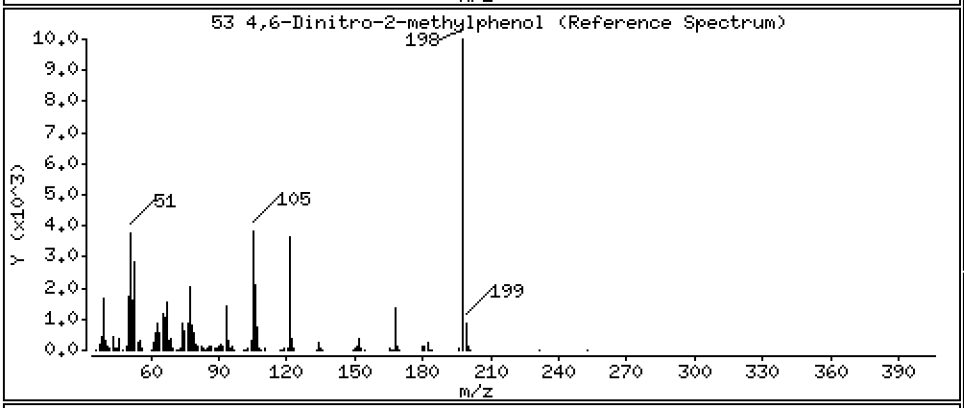
Concentration: 9.180 ug/mL

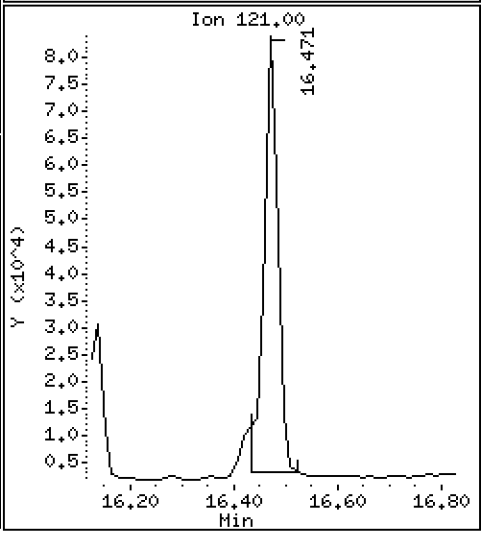


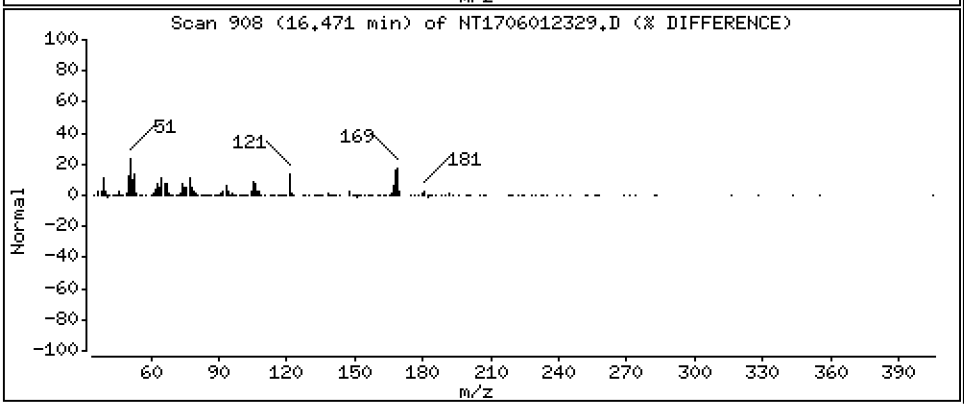












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

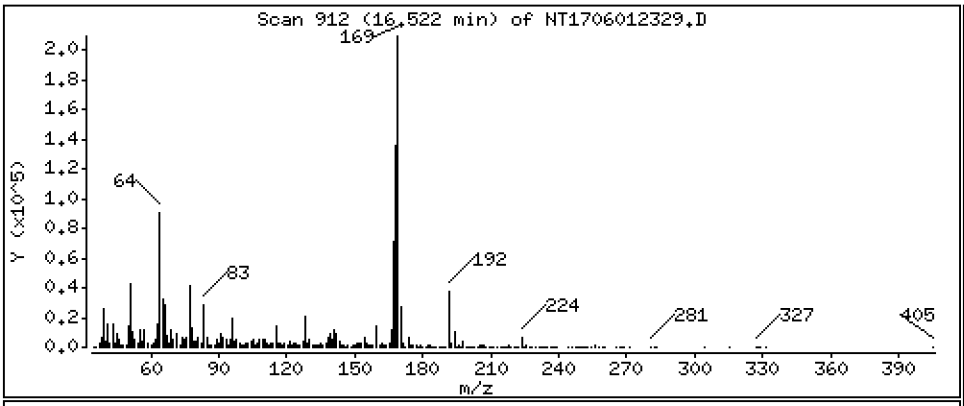
Operator: VTS

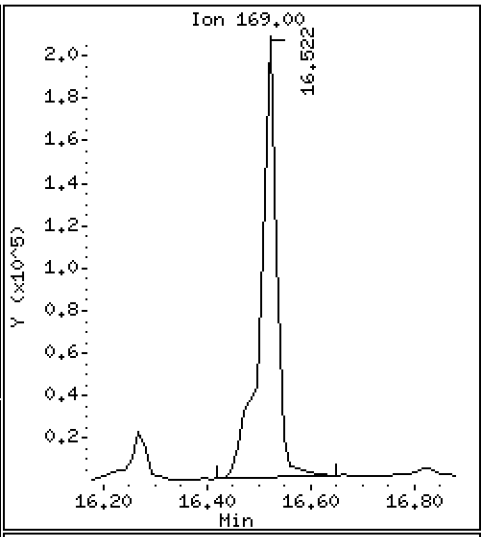
Column phase: ZB-5msi

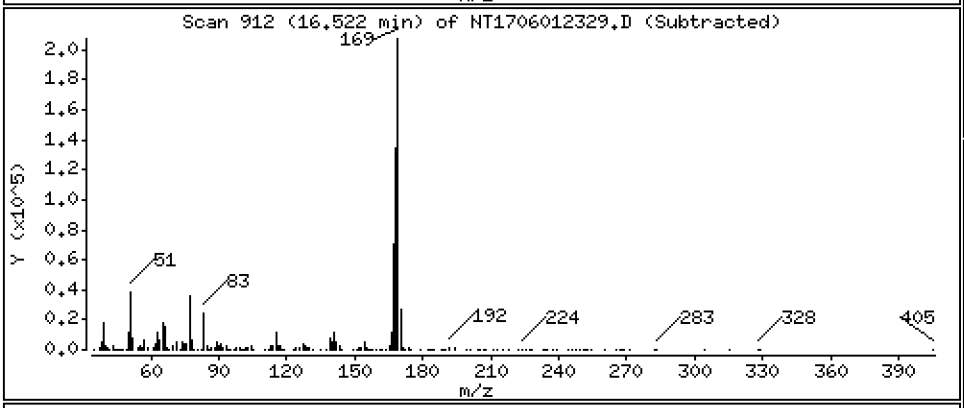
Column diameter: 0.25

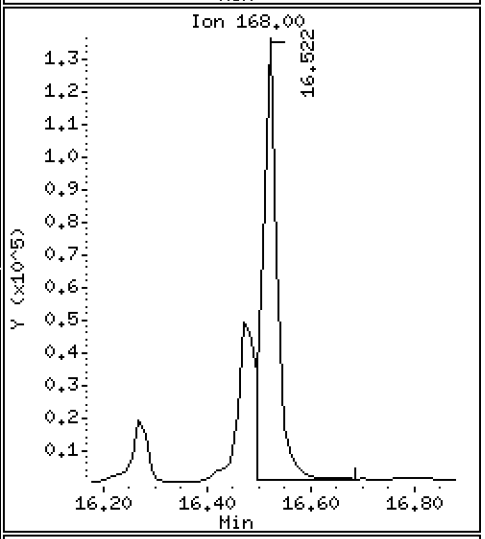
54 N-Nitrosodiphenylamine

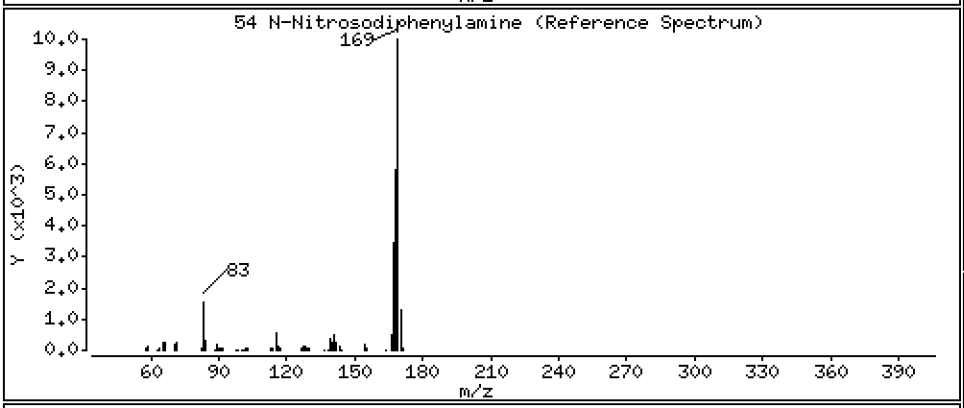
Concentration: 3.187 ug/mL

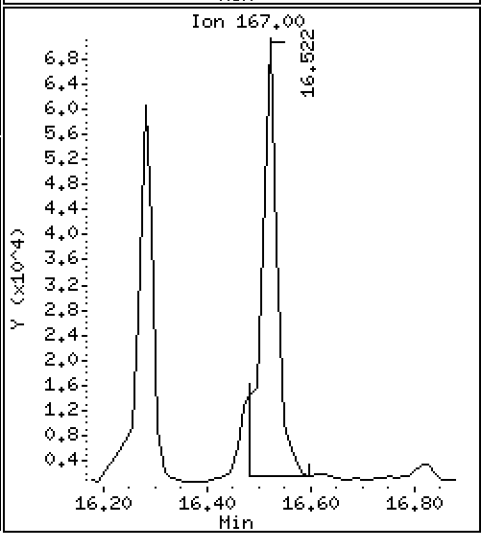


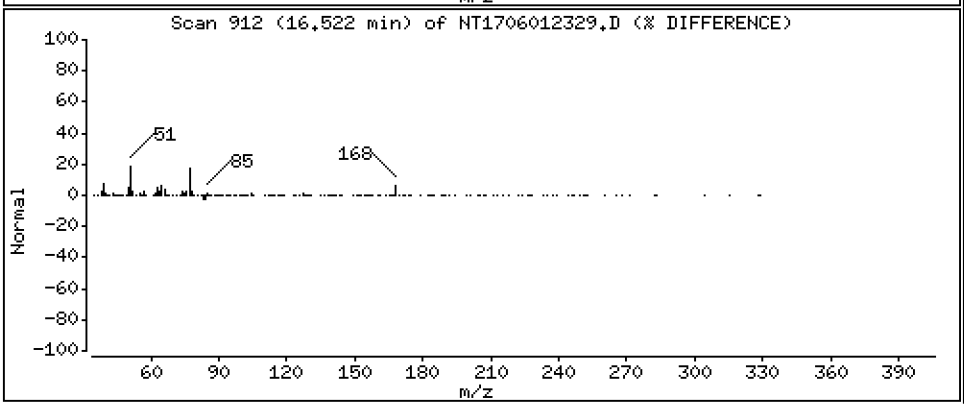












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

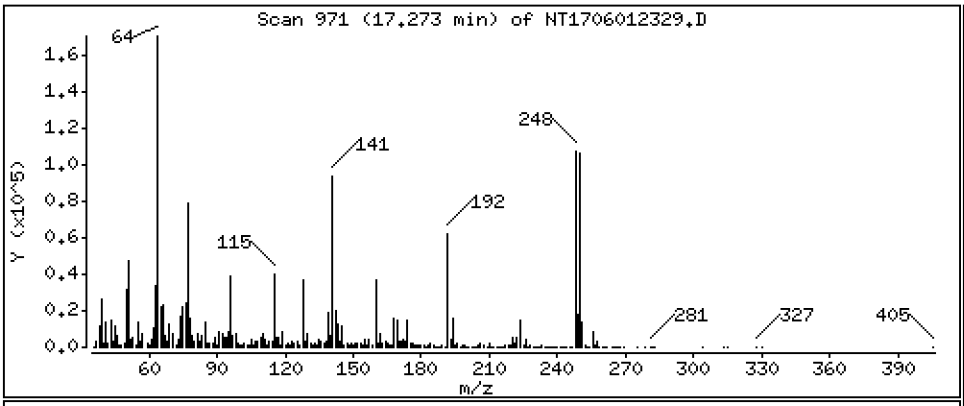
Operator: VTS

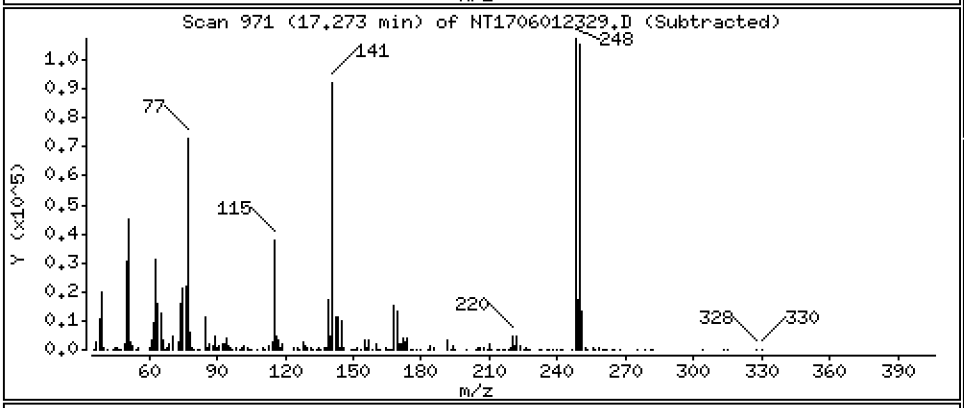
Column phase: ZB-5msi

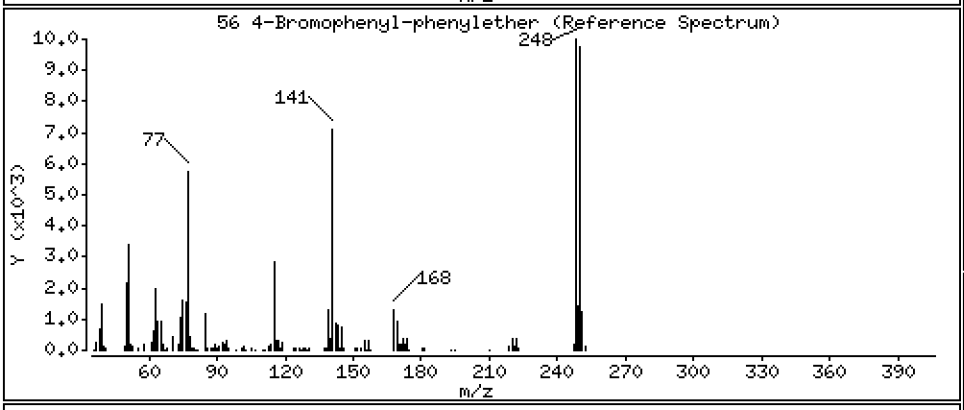
Column diameter: 0.25

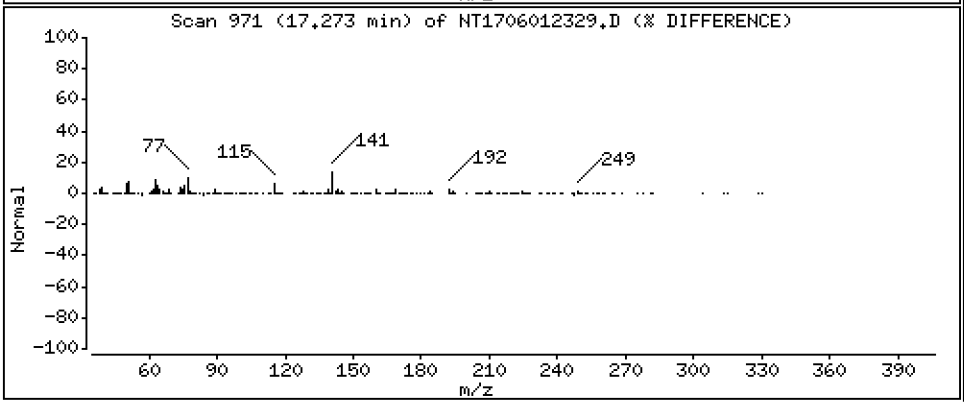
56 4-Bromophenyl-phenylether

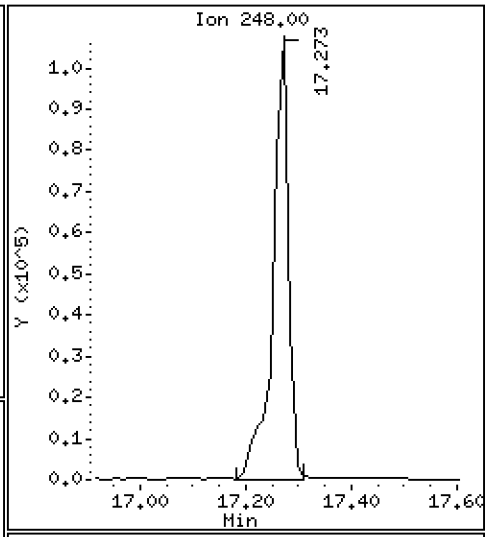
Concentration: 4.524 ug/mL

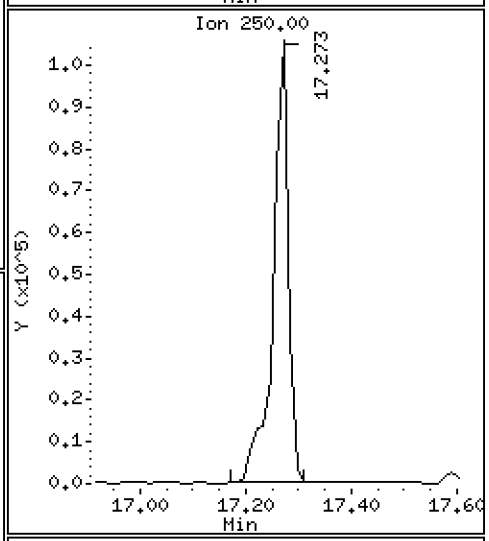


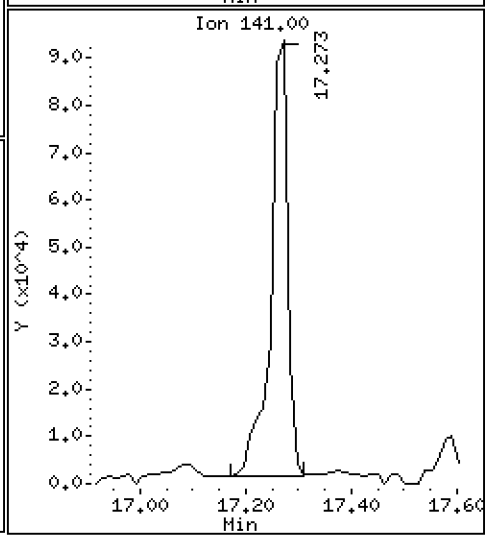












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

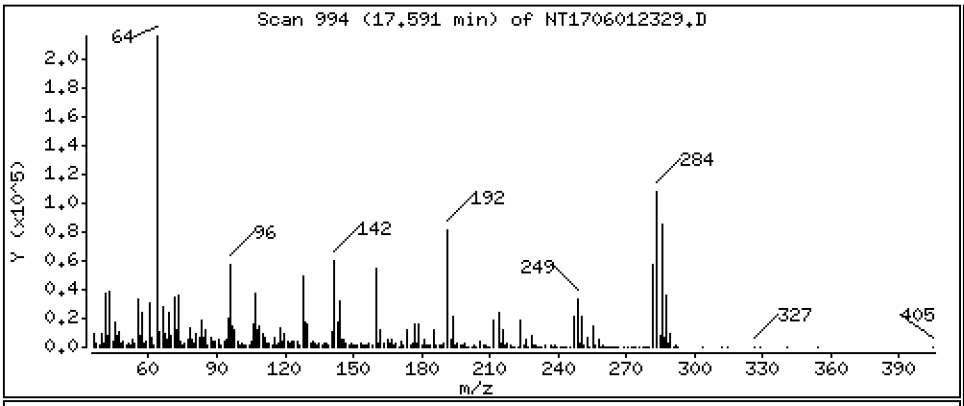
Operator: VTS

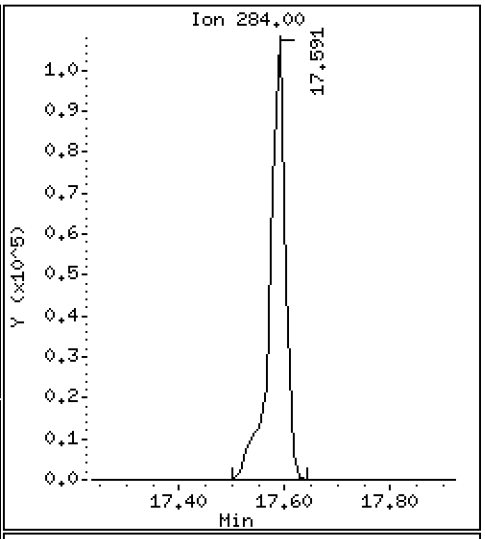
Column phase: ZB-5msi

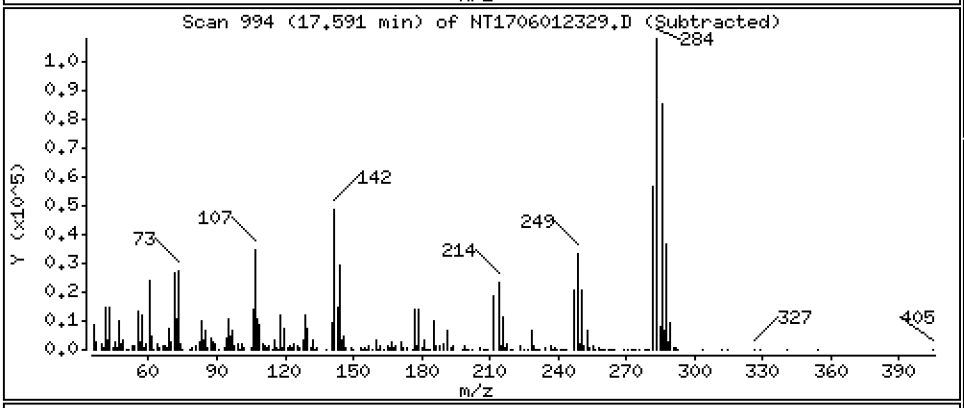
Column diameter: 0.25

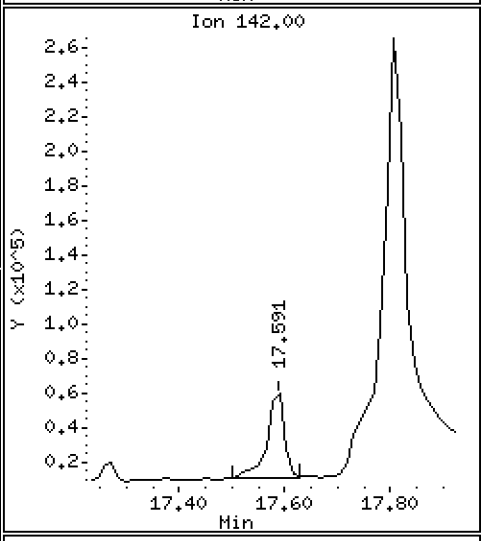
57 Hexachlorobenzene

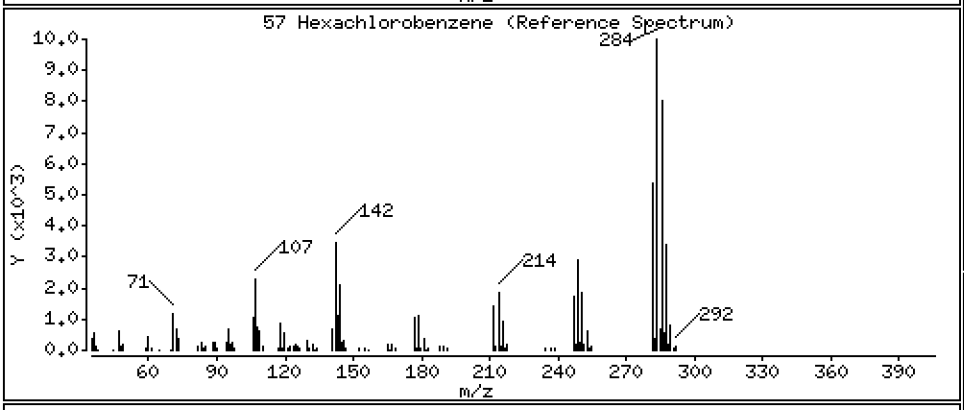
Concentration: 4.483 ug/mL

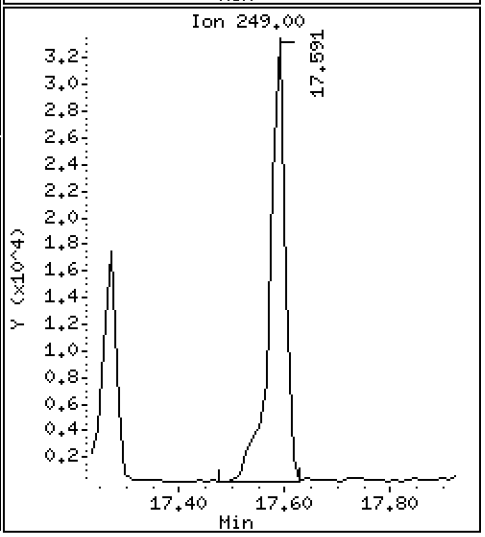


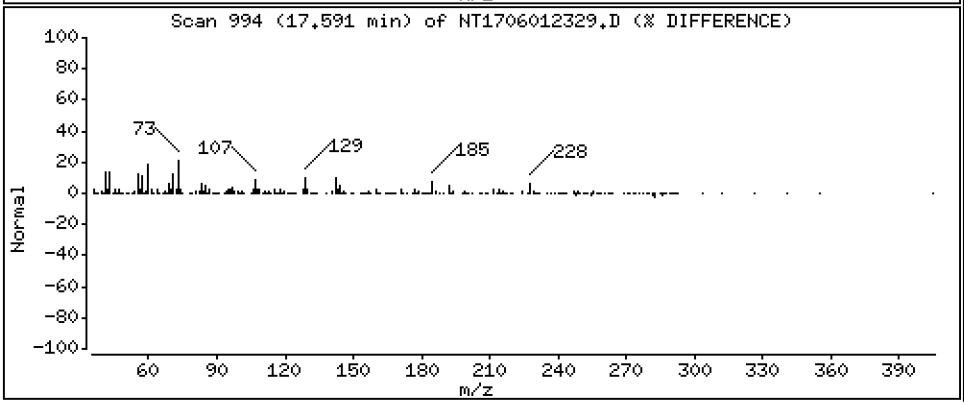












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

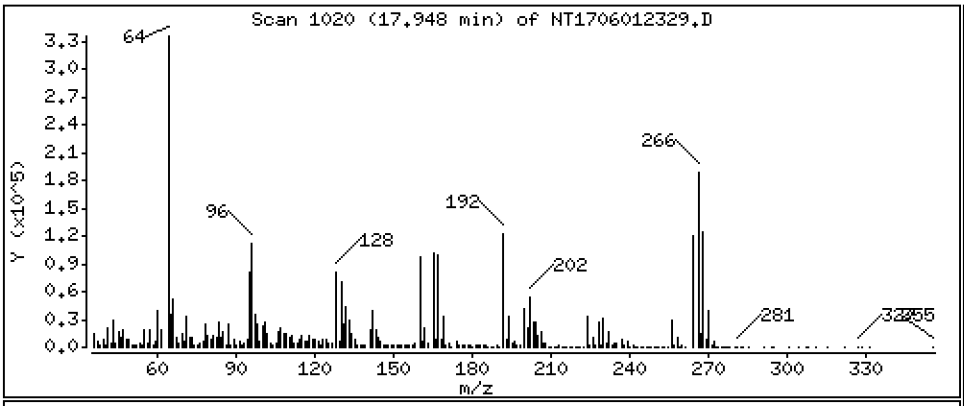
Operator: VTS

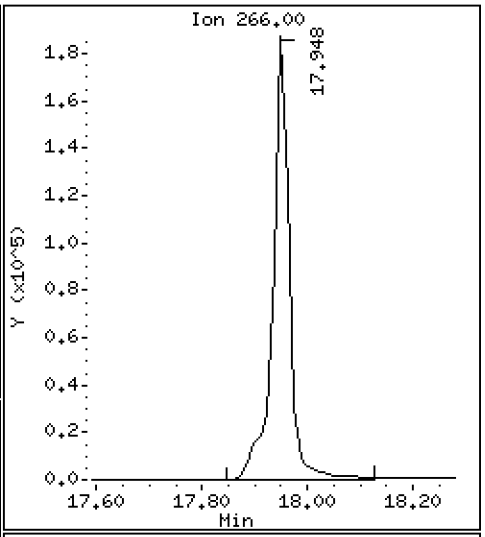
Column phase: ZB-5msi

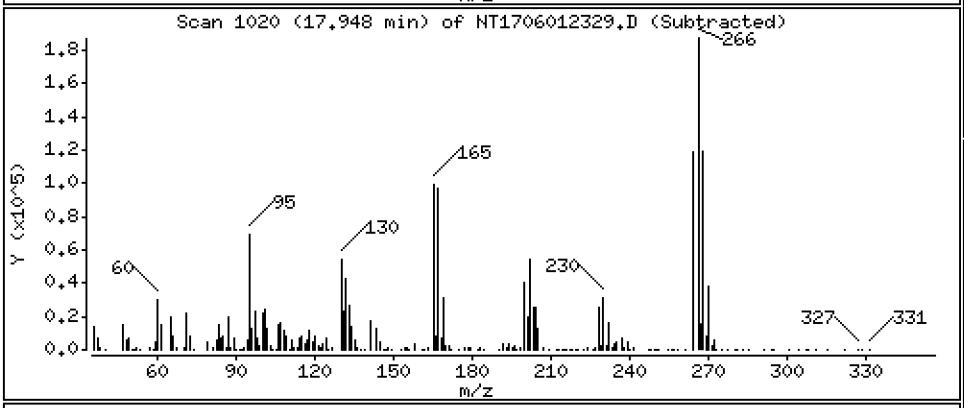
Column diameter: 0.25

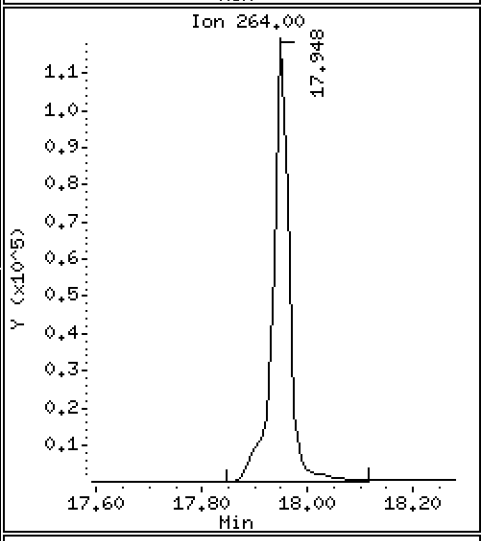
58 Pentachlorophenol

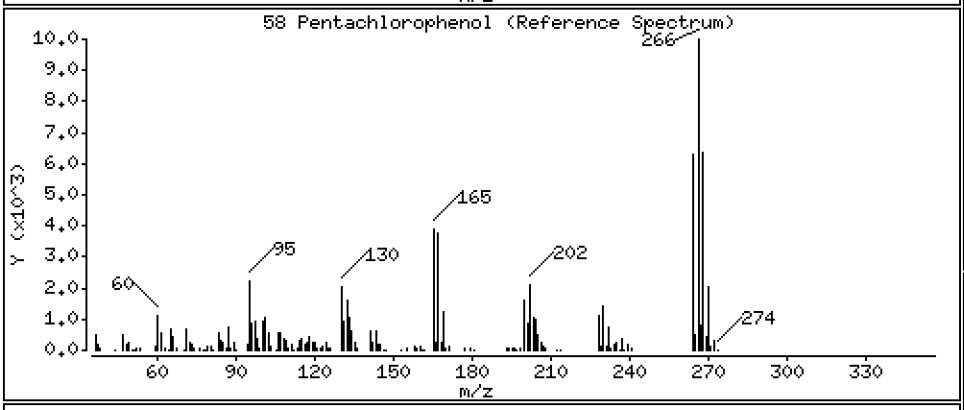
Concentration: 13.27 ug/mL

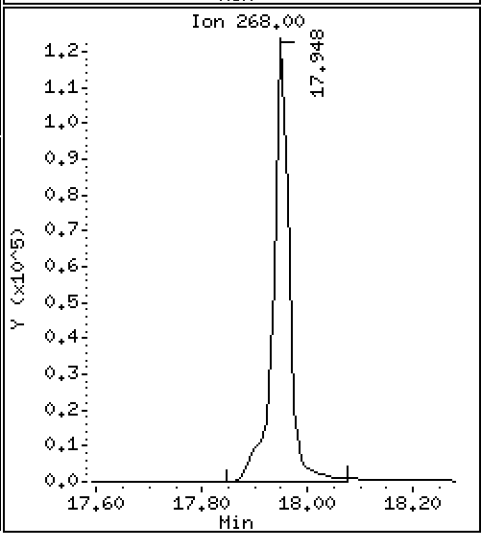


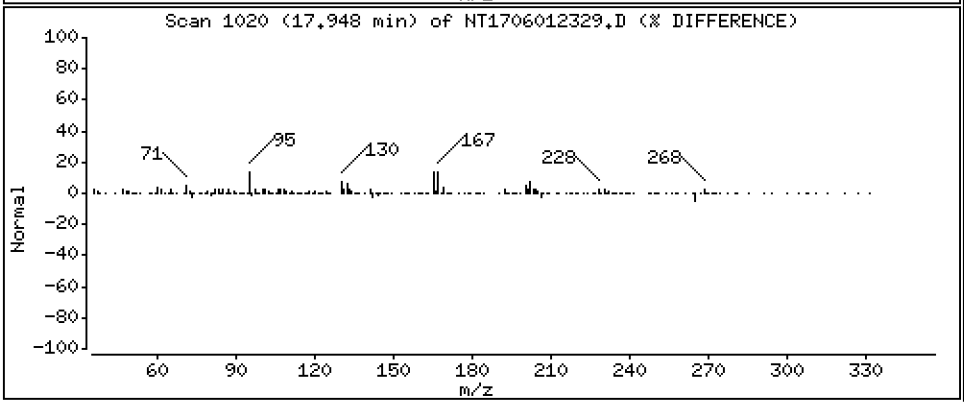












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

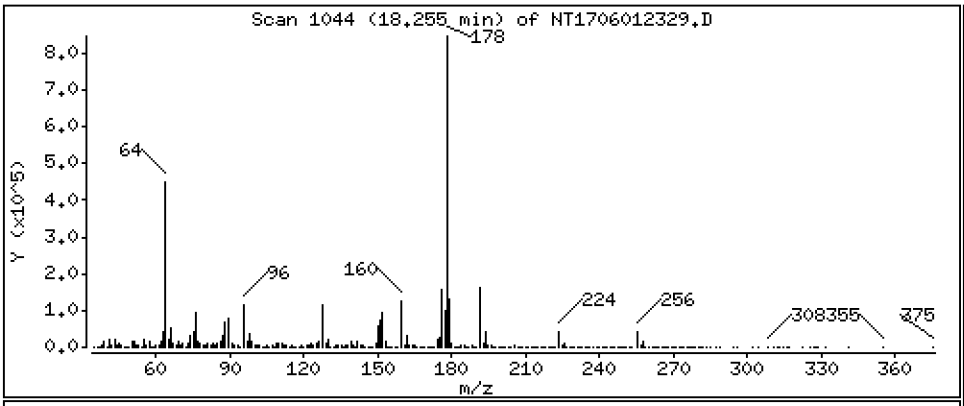
Operator: VTS

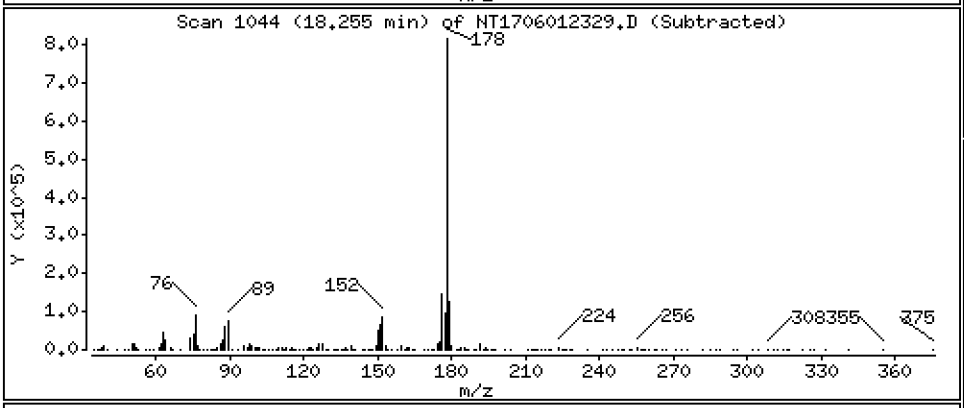
Column phase: ZB-5msi

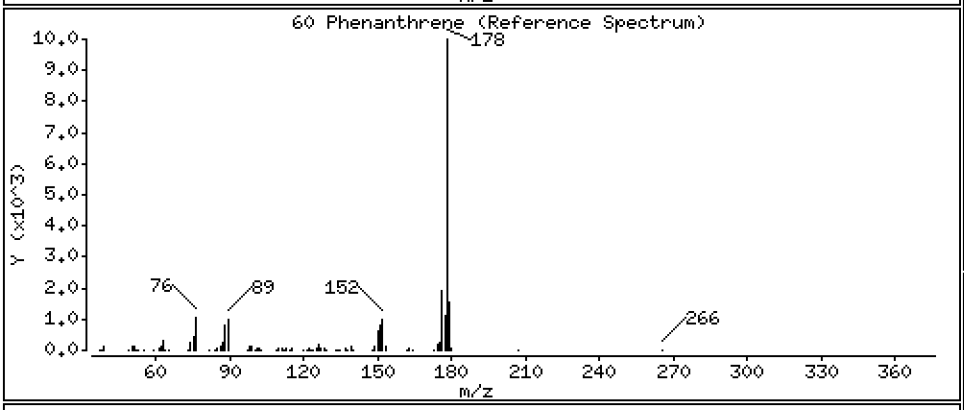
Column diameter: 0.25

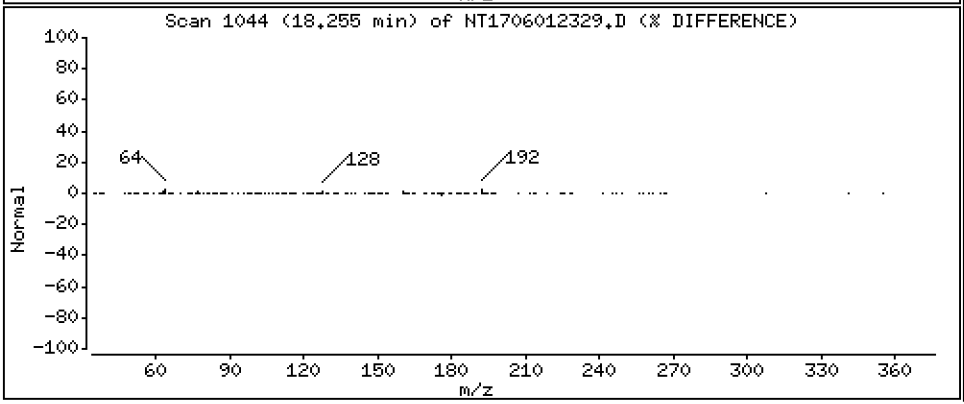
60 Phenanthrene

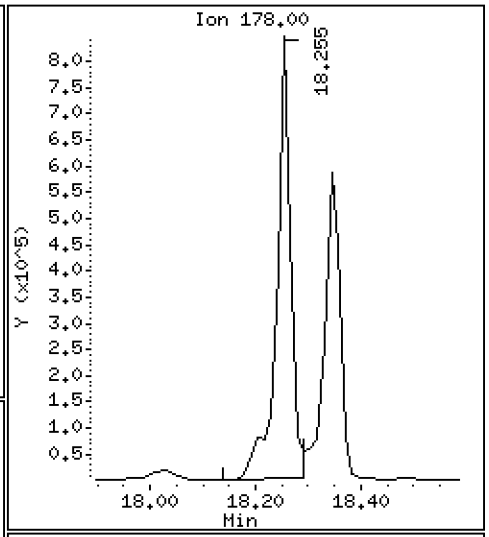
Concentration: 5.739 ug/mL

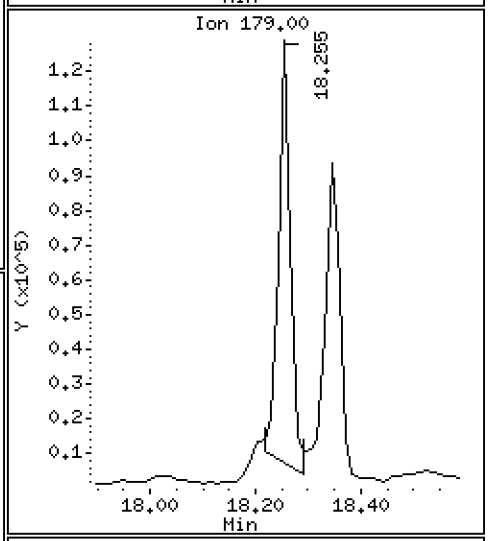


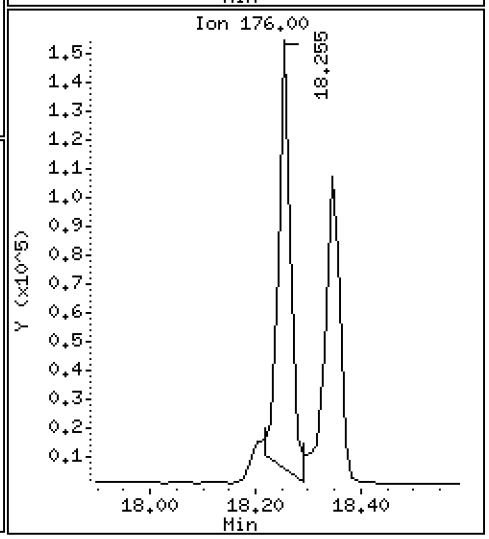












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

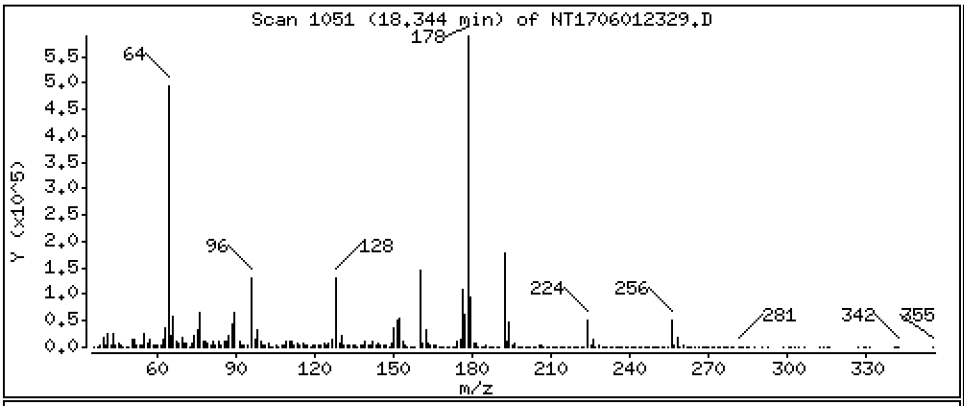
Operator: VTS

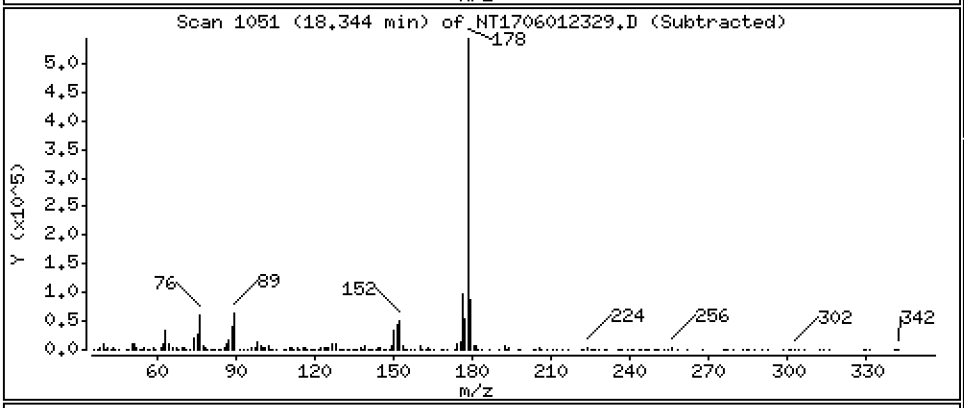
Column phase: ZB-5msi

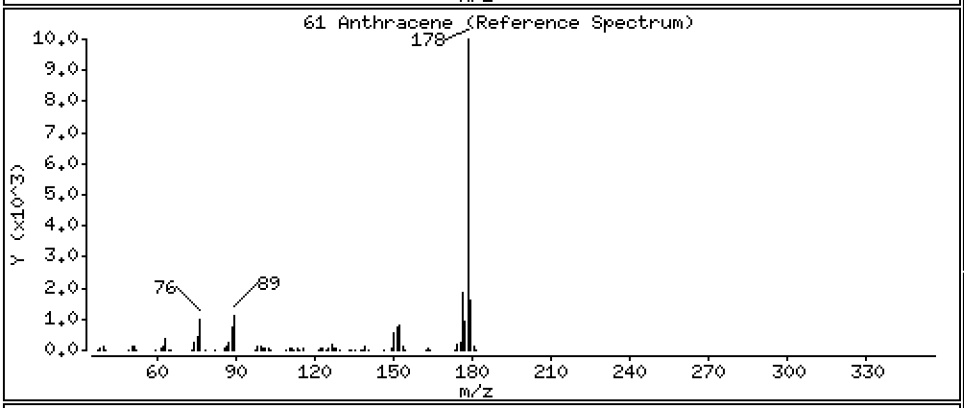
Column diameter: 0.25

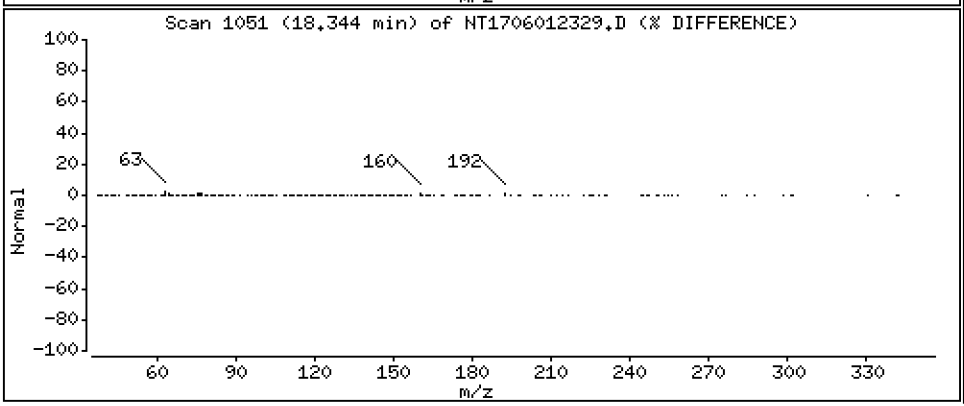
61 Anthracene

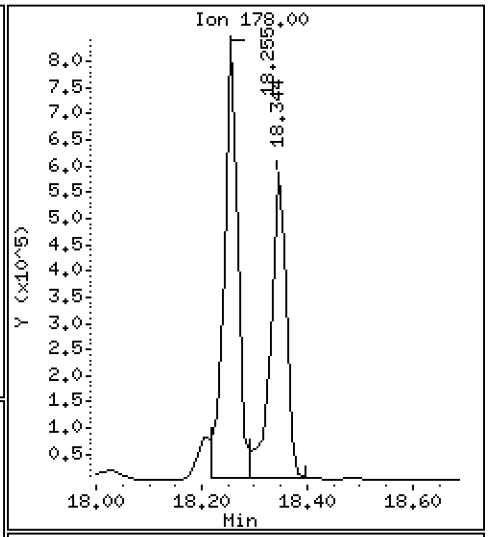
Concentration: 4.374 ug/mL

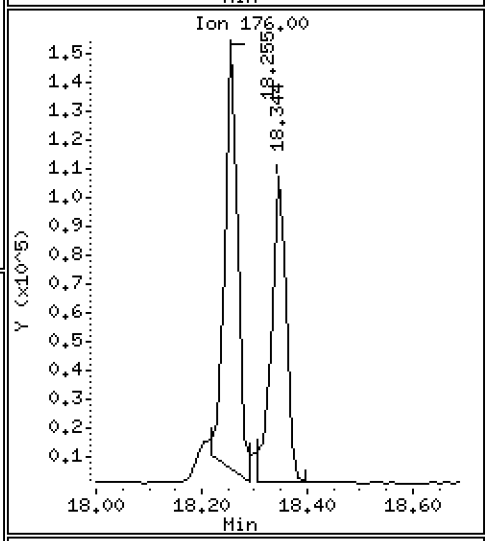


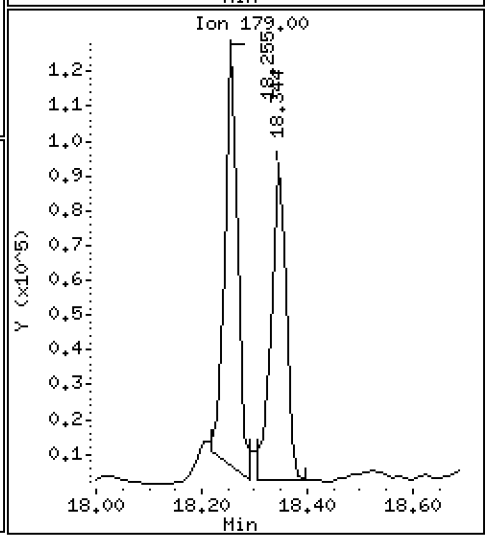












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

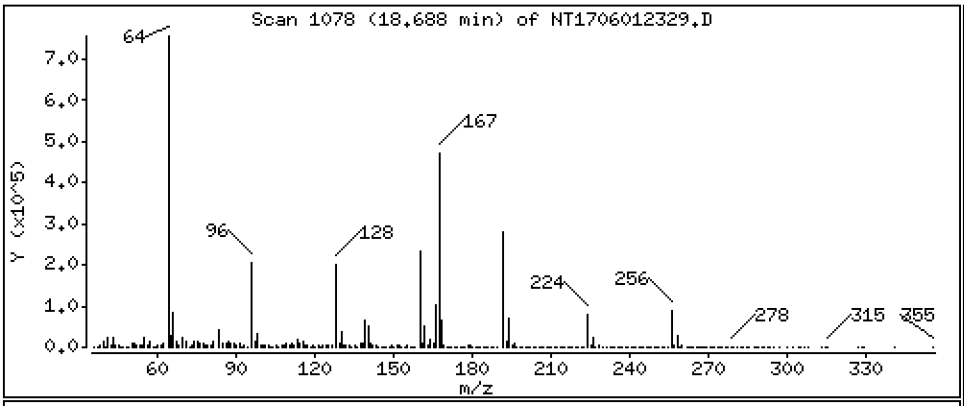
Operator: VTS

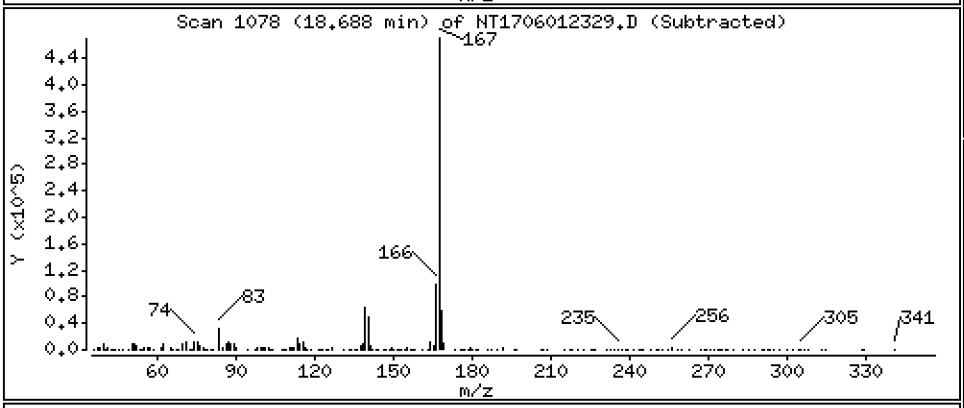
Column phase: ZB-5msi

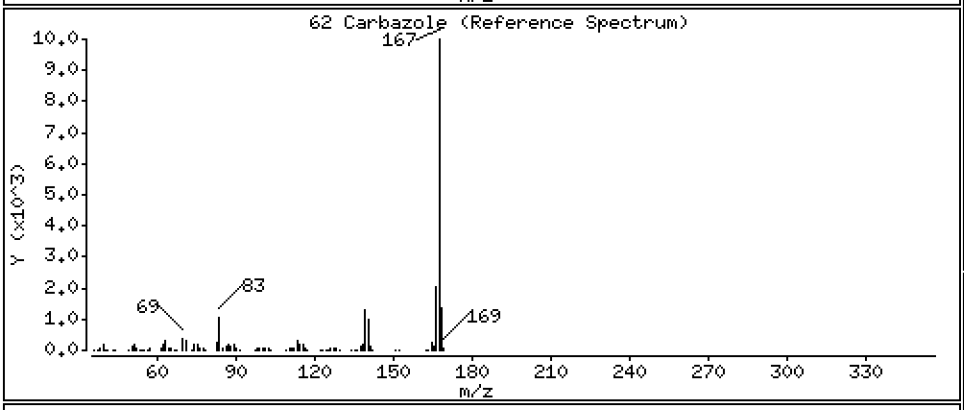
Column diameter: 0.25

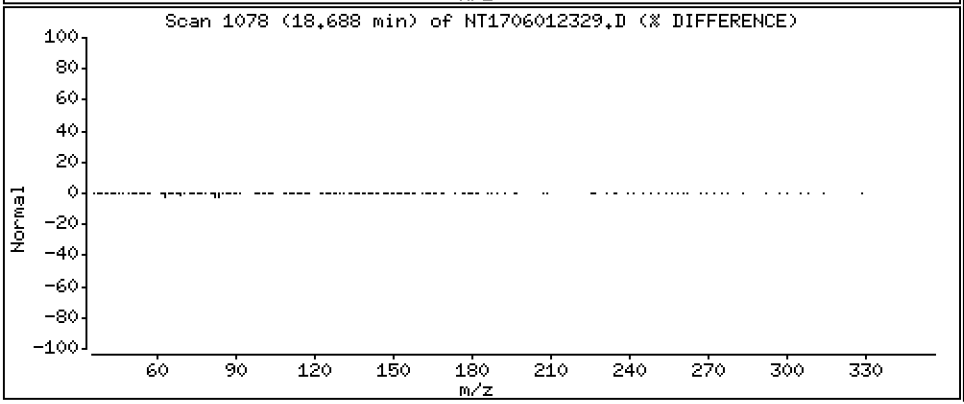
62 Carbazole

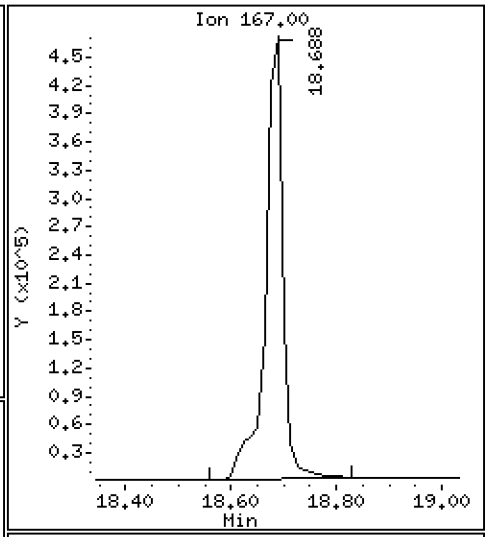
Concentration: 6.240 ug/mL

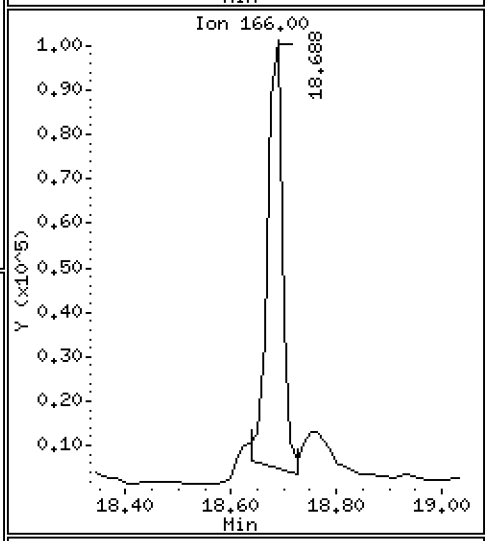


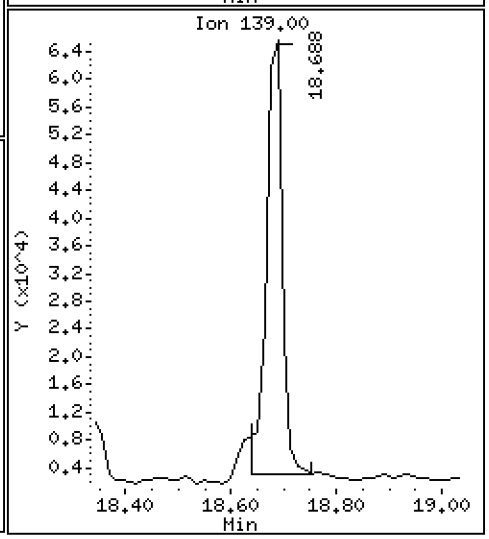












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

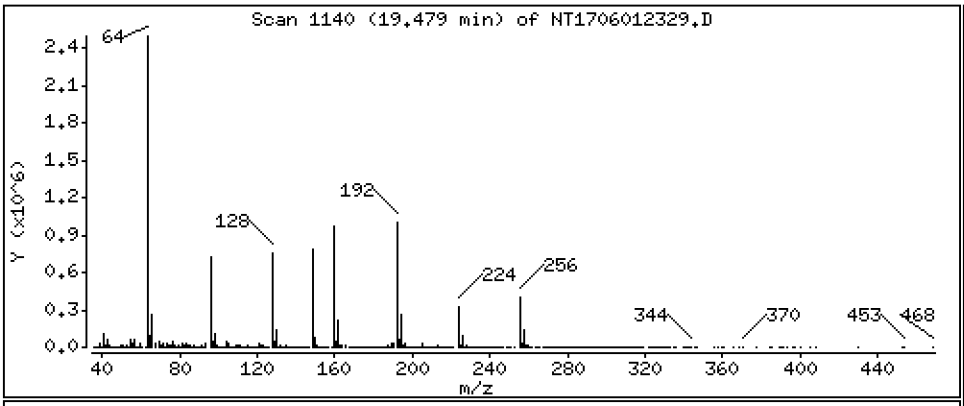
Operator: VTS

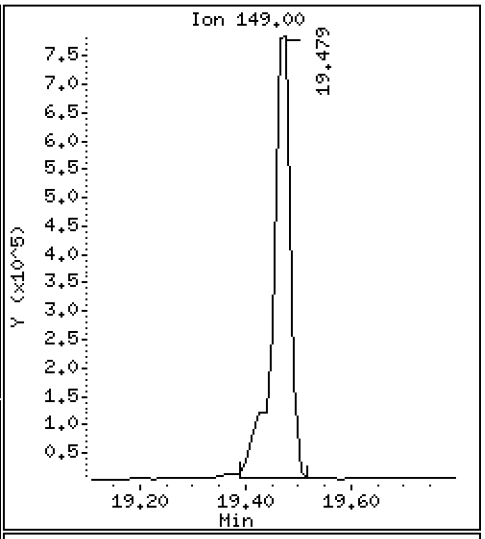
Column phase: ZB-5msi

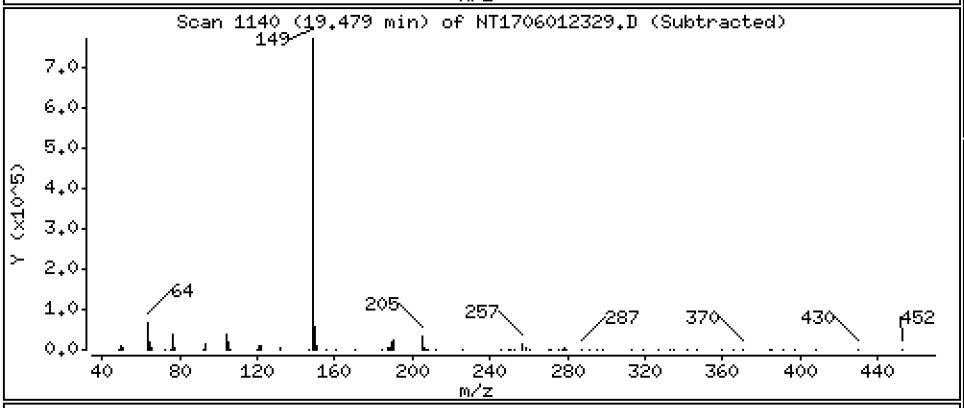
Column diameter: 0.25

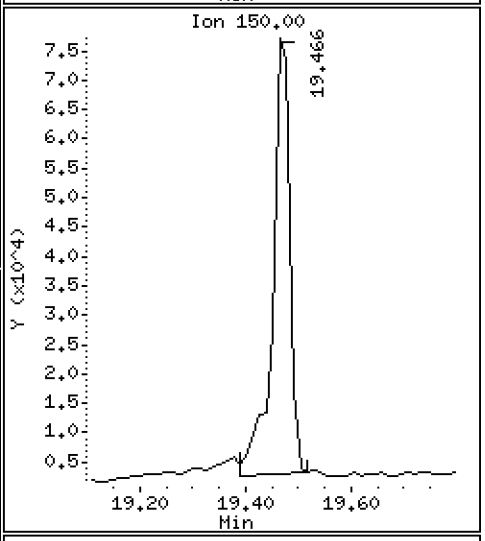
63 Di-n-butylphthalate

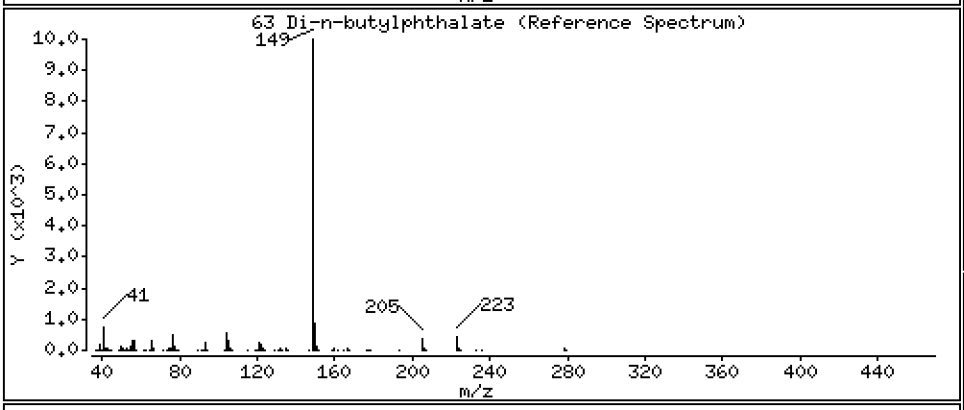
Concentration: 5.460 ug/mL

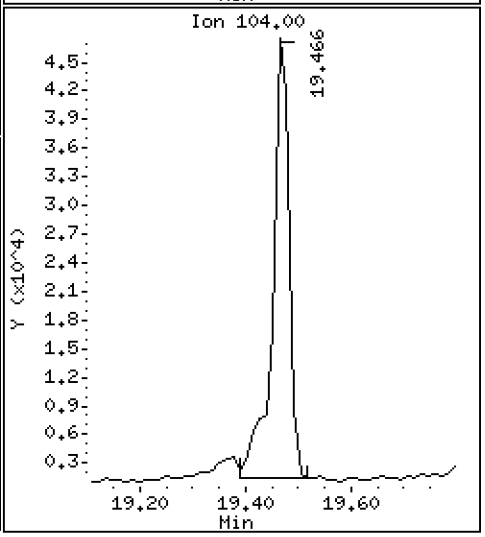


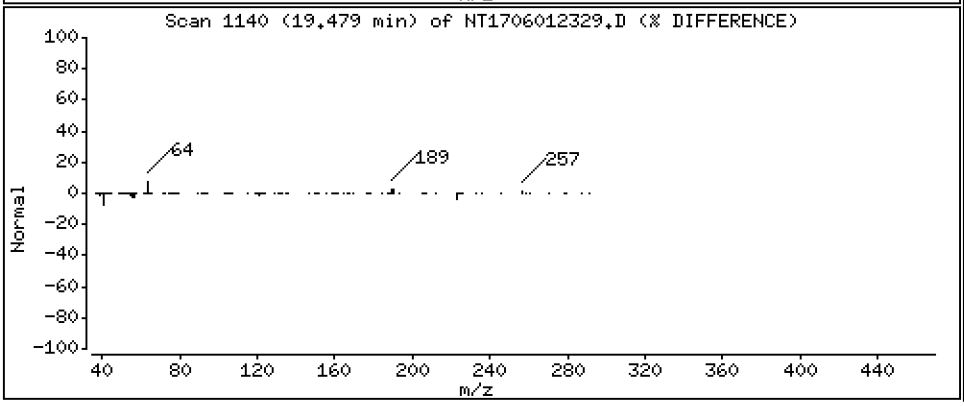












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

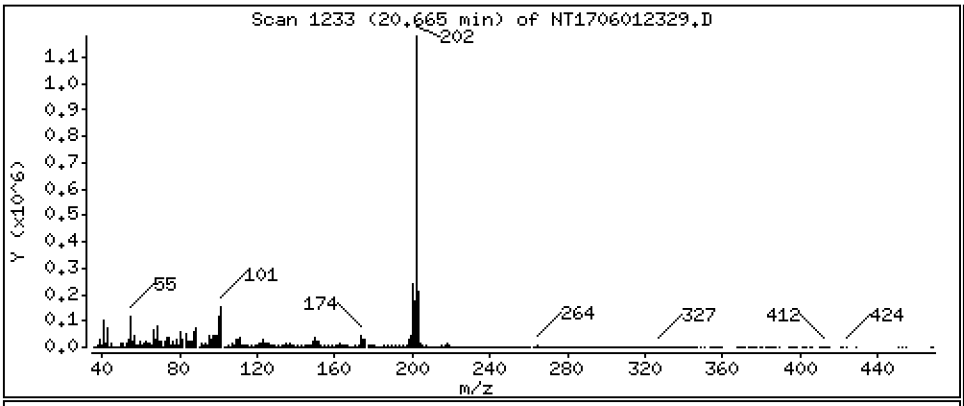
Operator: VTS

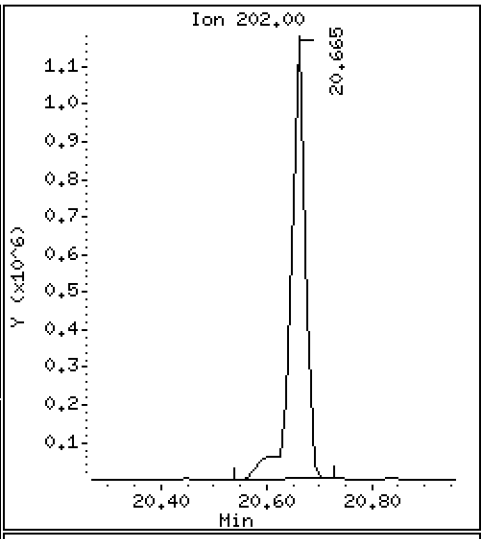
Column phase: ZB-5msi

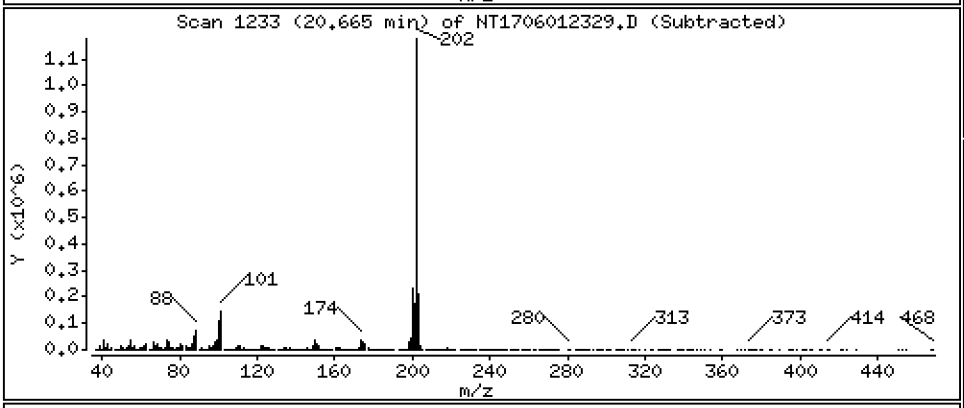
Column diameter: 0.25

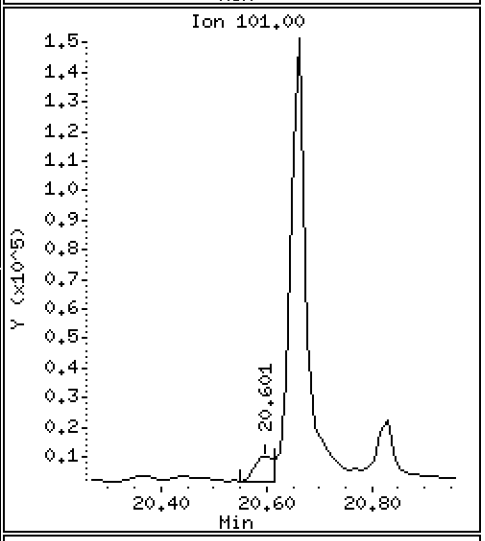
64 Fluoranthene

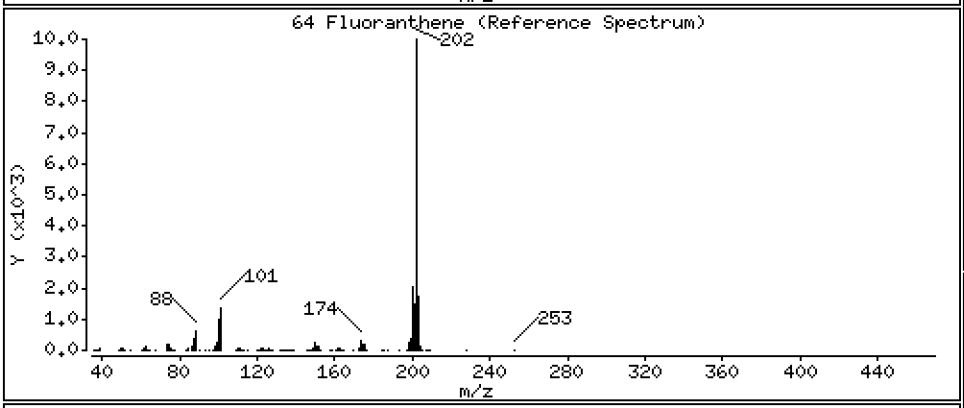
Concentration: 8.419 ug/mL

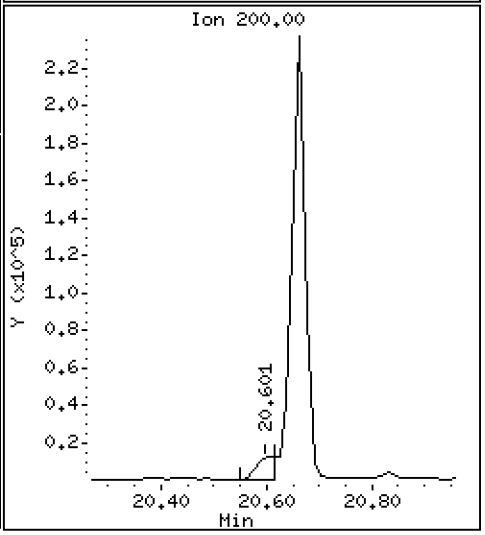


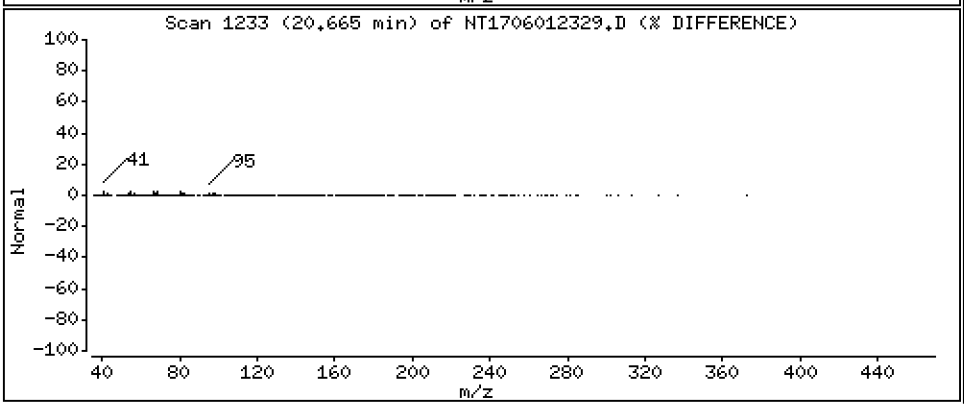












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

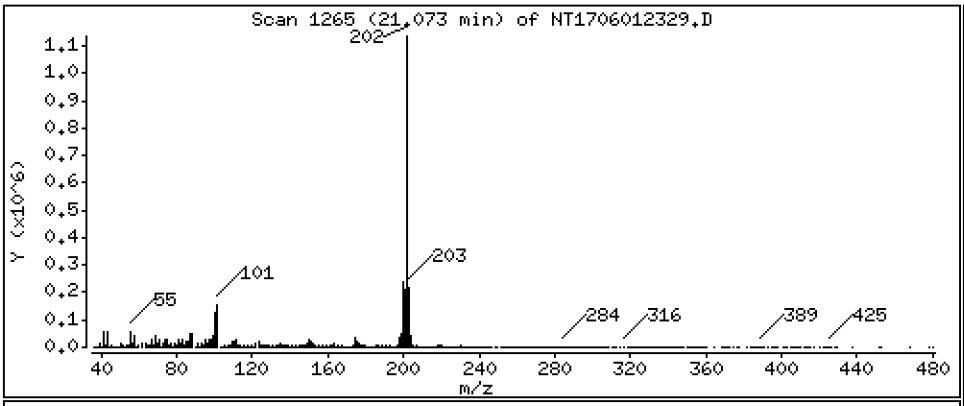
Operator: VTS

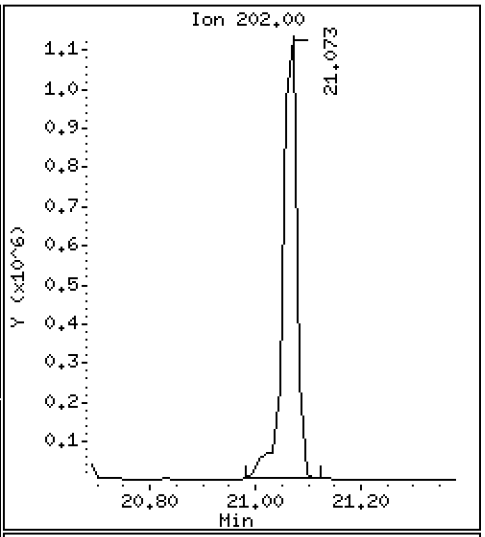
Column phase: ZB-5msi

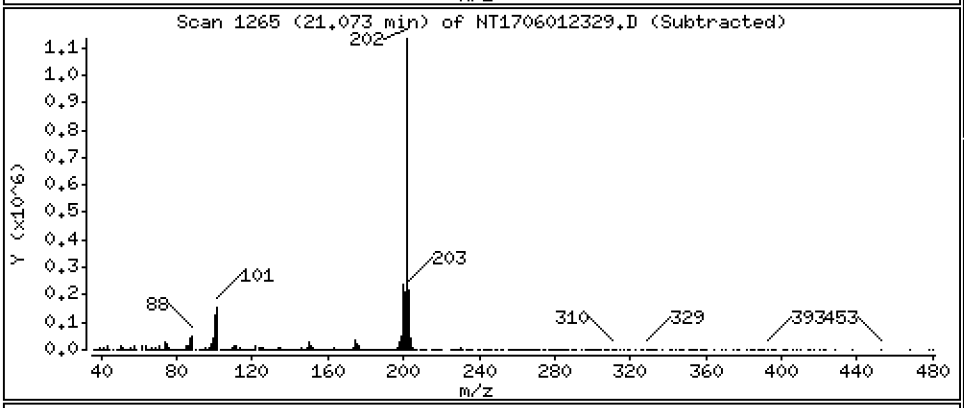
Column diameter: 0.25

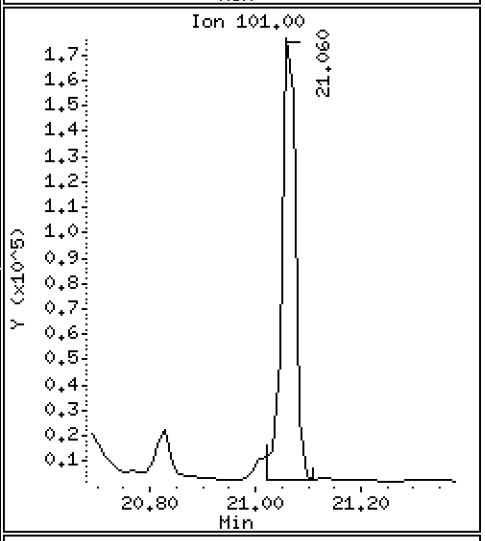
65 Pyrene

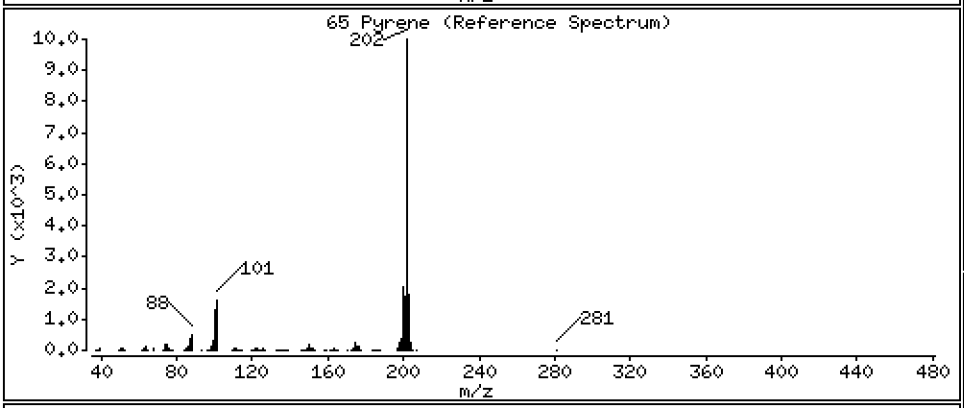
Concentration: 8.109 ug/mL

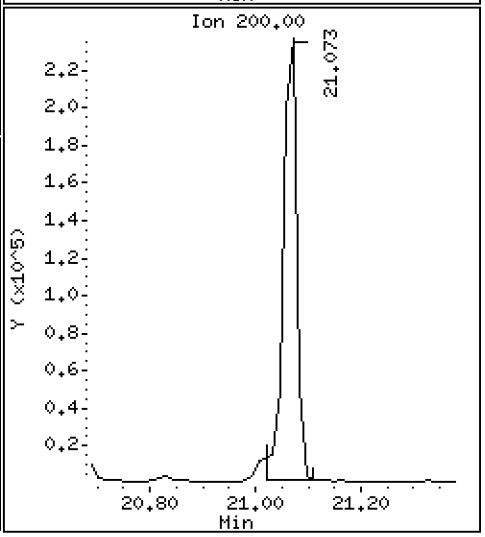


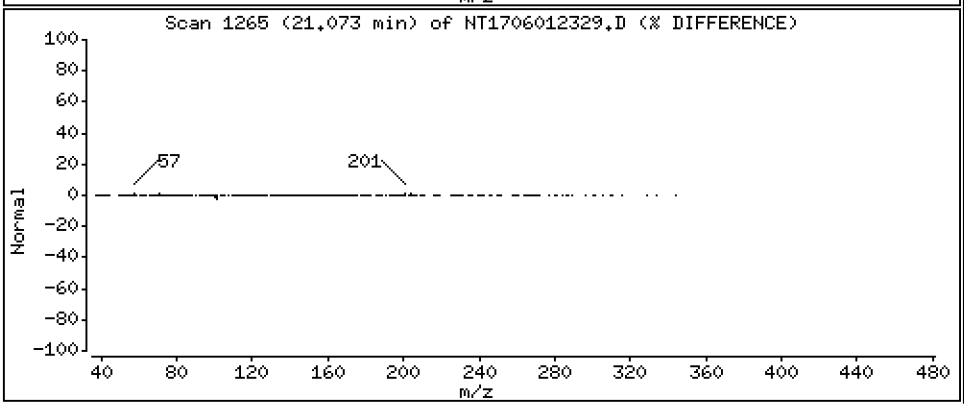












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

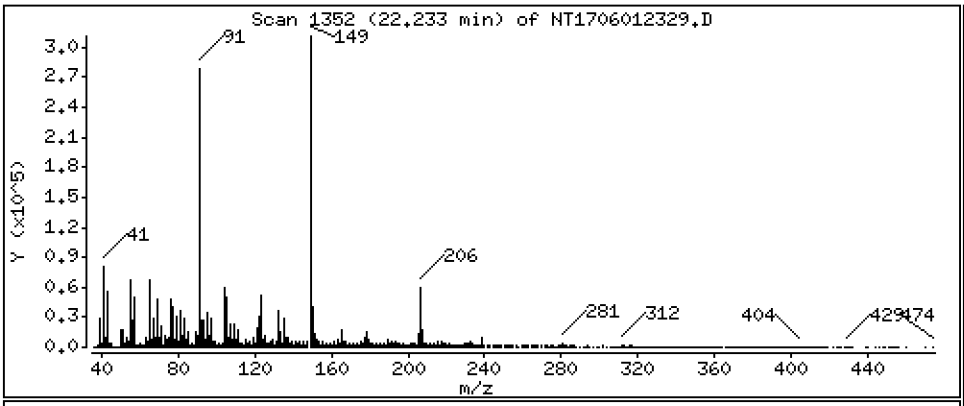
Operator: VTS

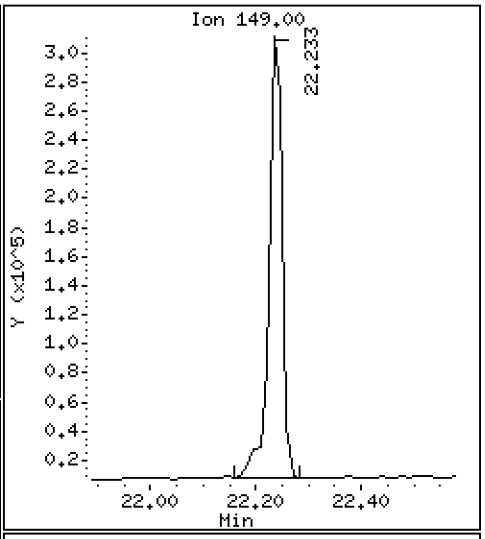
Column phase: ZB-5msi

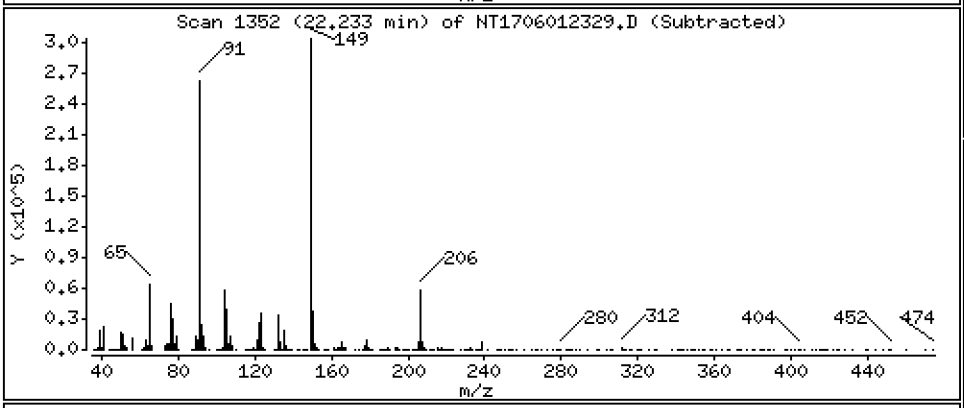
Column diameter: 0.25

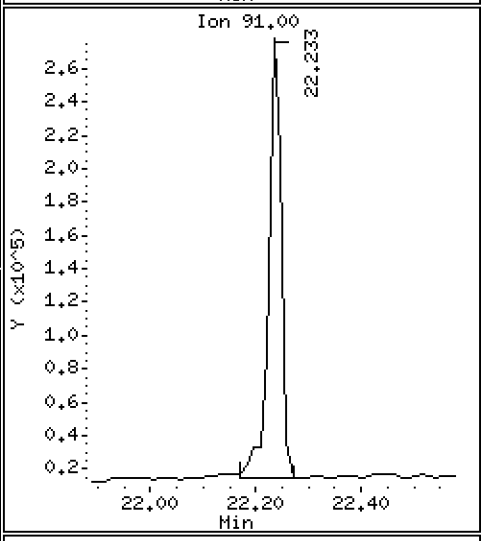
67 Butylbenzylphthalate

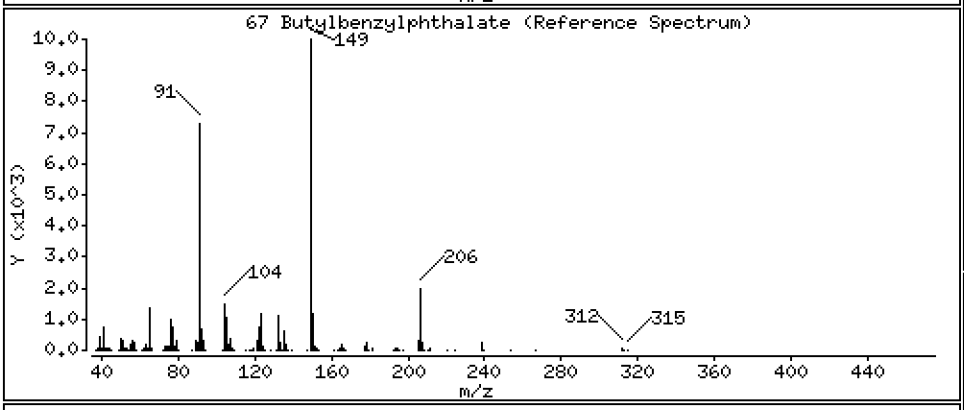
Concentration: 4.773 ug/mL

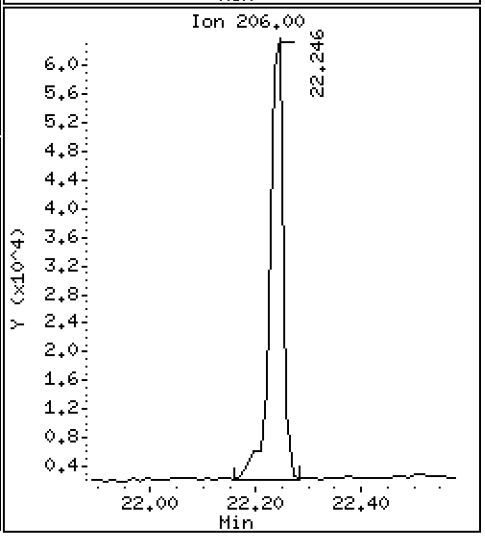


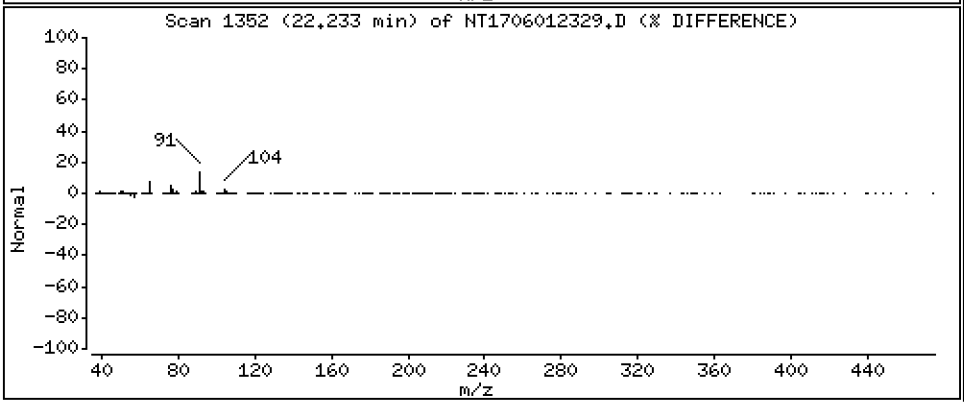












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

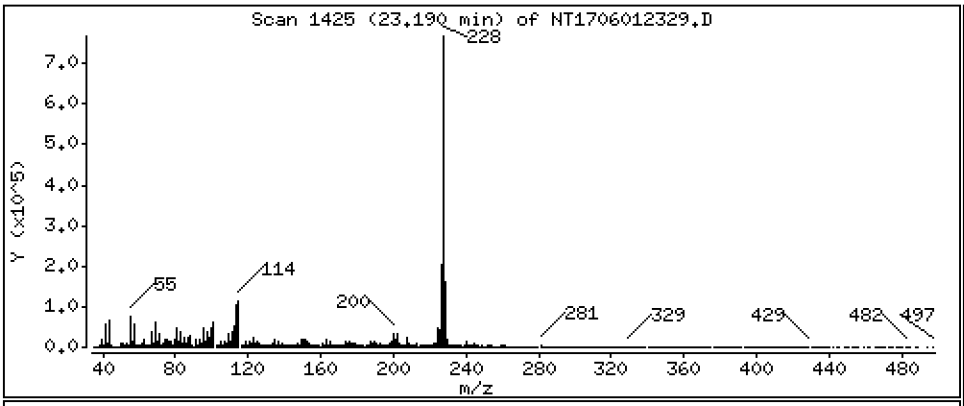
Operator: VTS

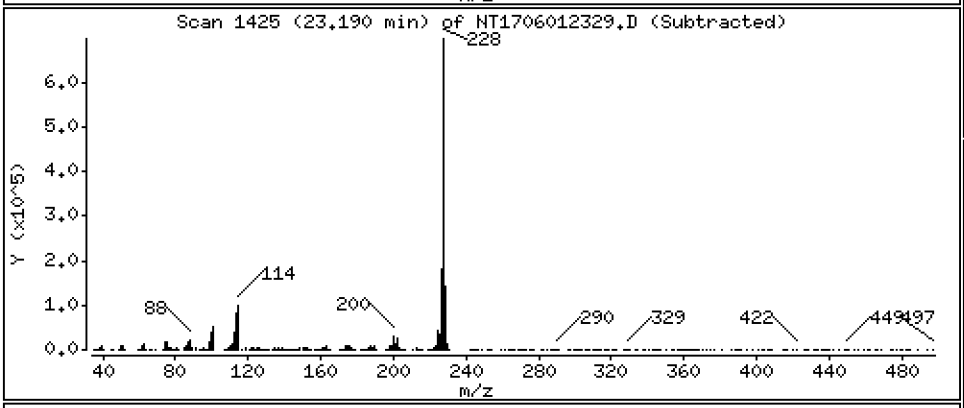
Column phase: ZB-5msi

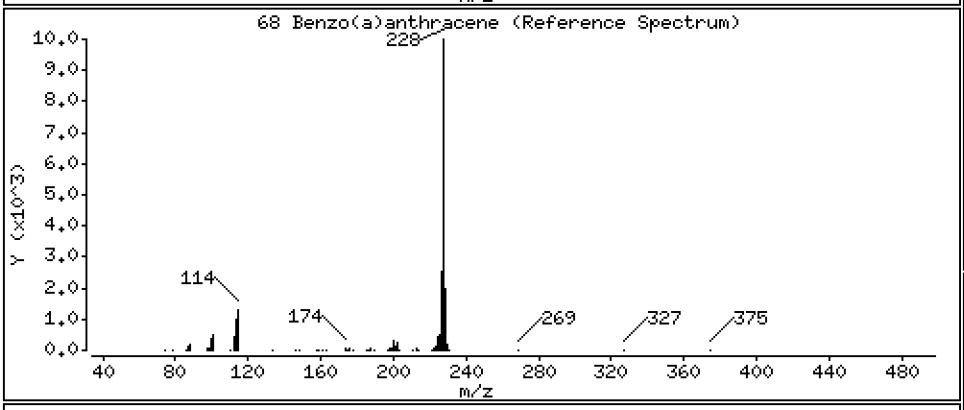
Column diameter: 0.25

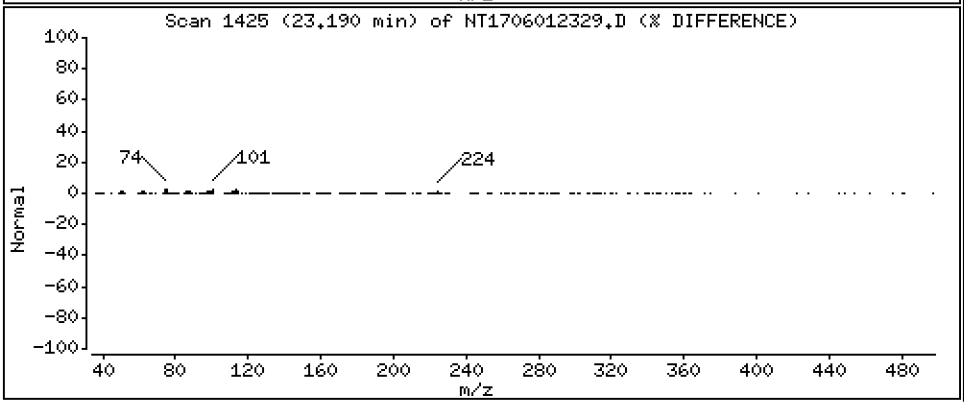
68 Benzo(a)anthracene

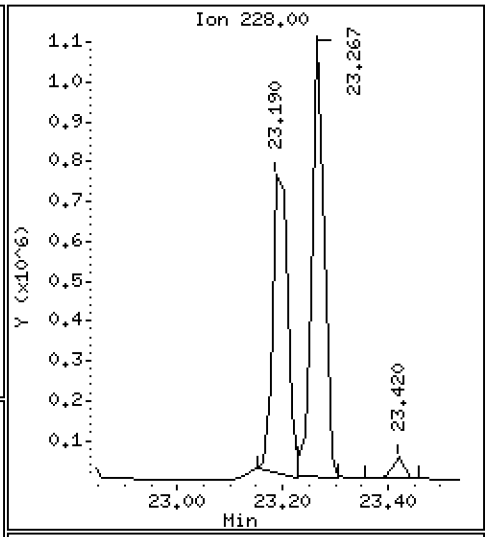
Concentration: 7.169 ug/mL

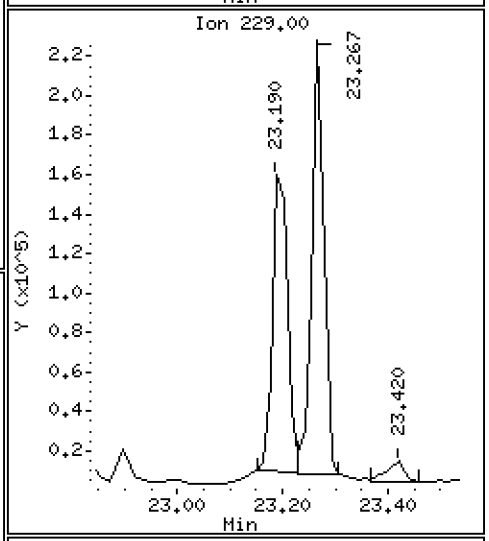


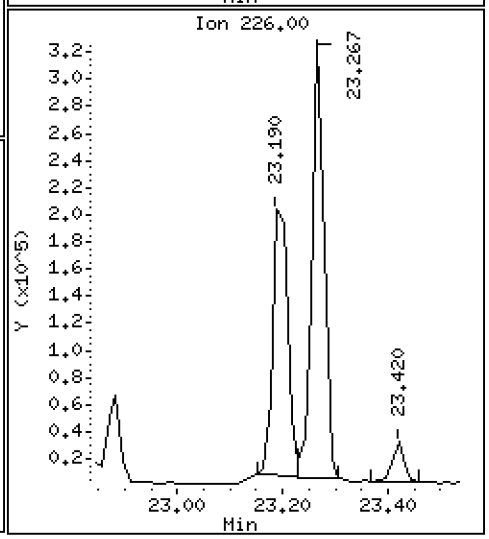












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

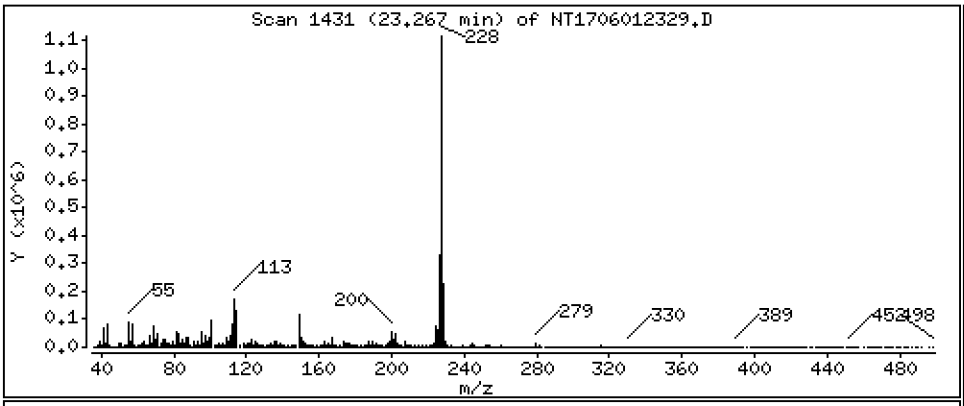
Operator: VTS

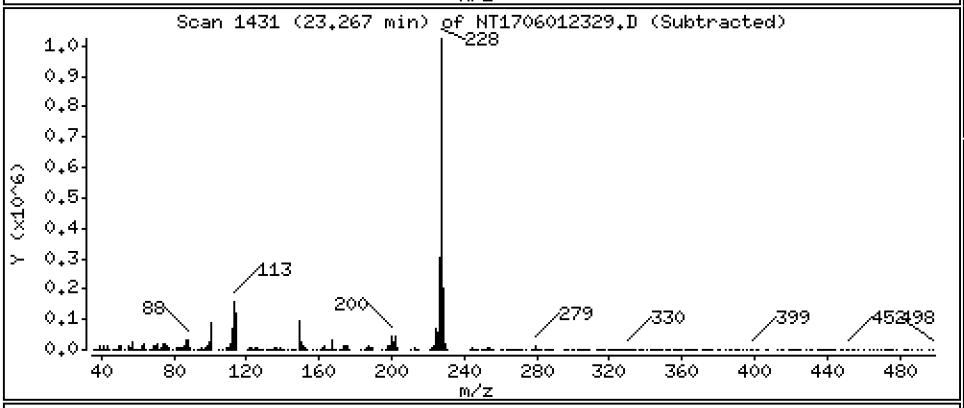
Column phase: ZB-5msi

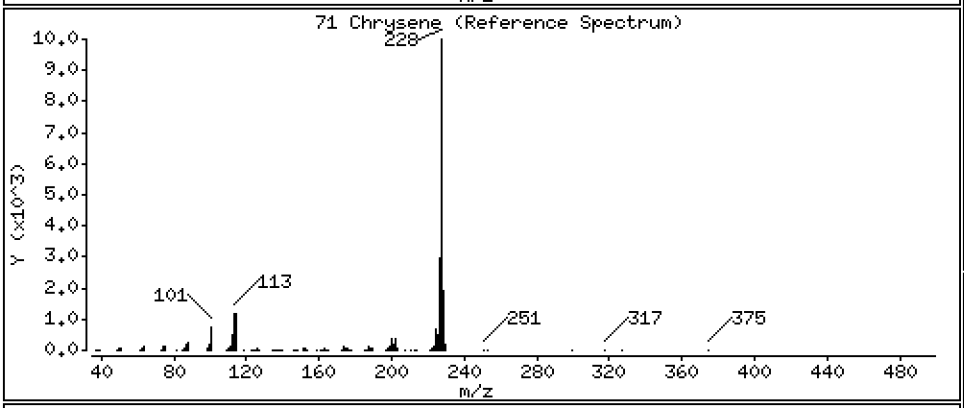
Column diameter: 0.25

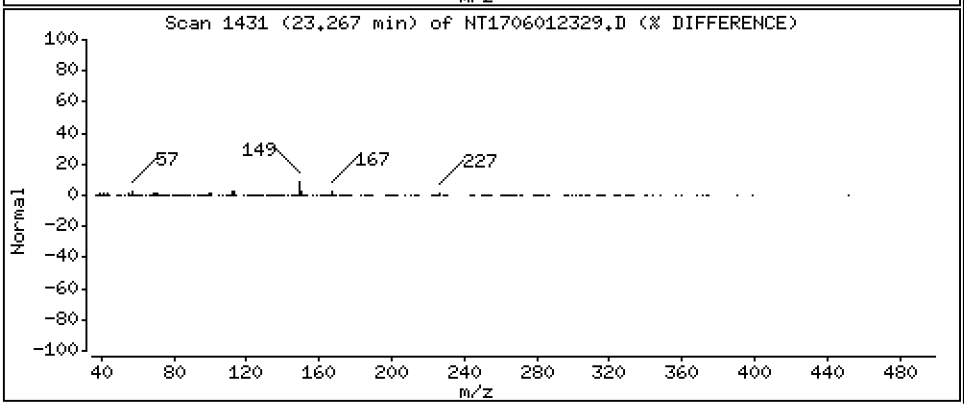
71 Chrysene

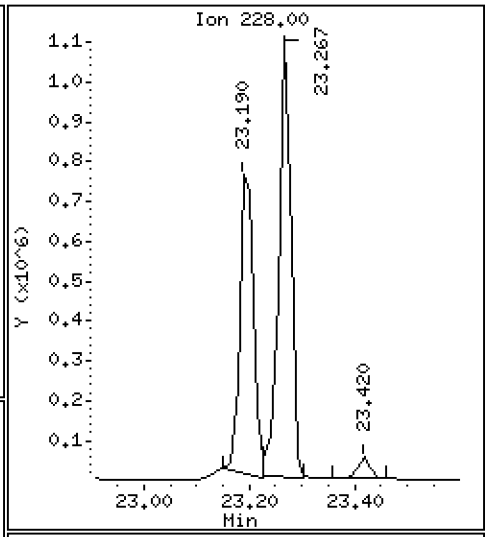
Concentration: 9.414 ug/mL

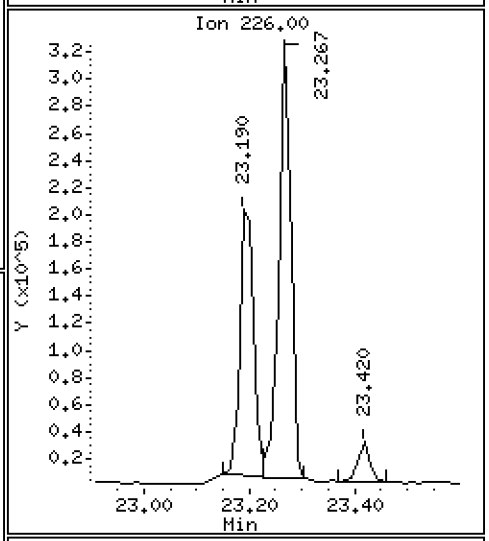


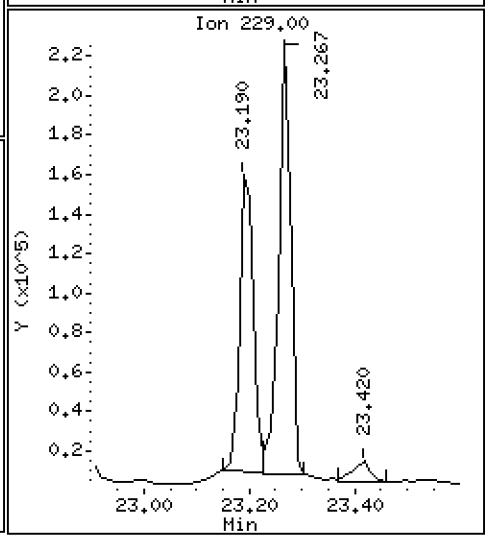












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

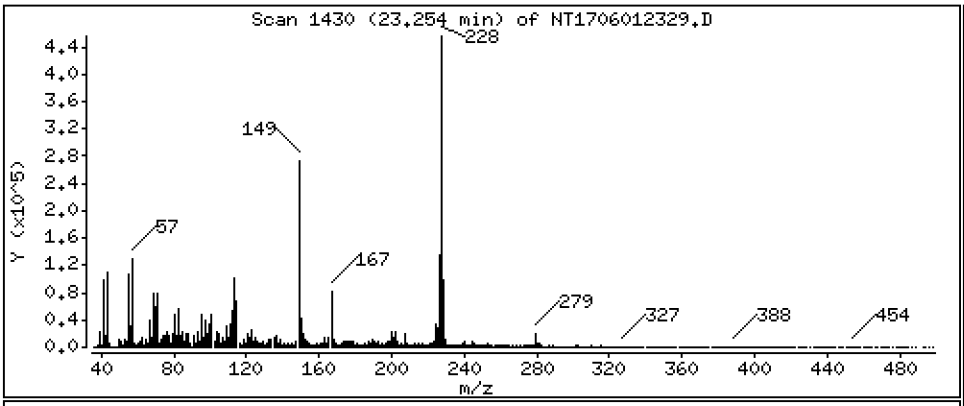
Operator: VTS

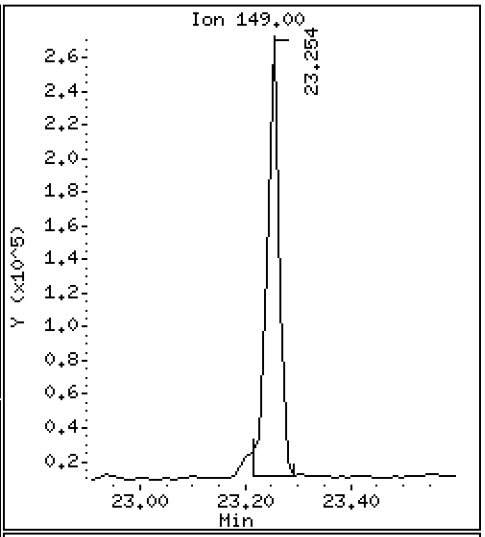
Column phase: ZB-5msi

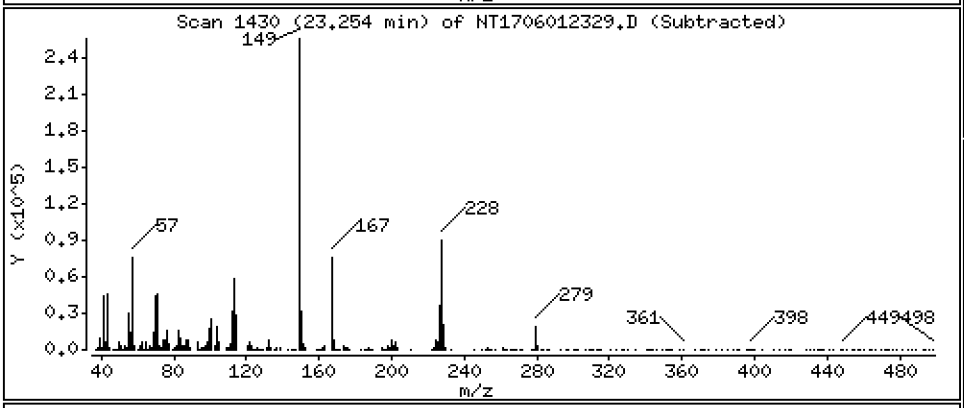
Column diameter: 0.25

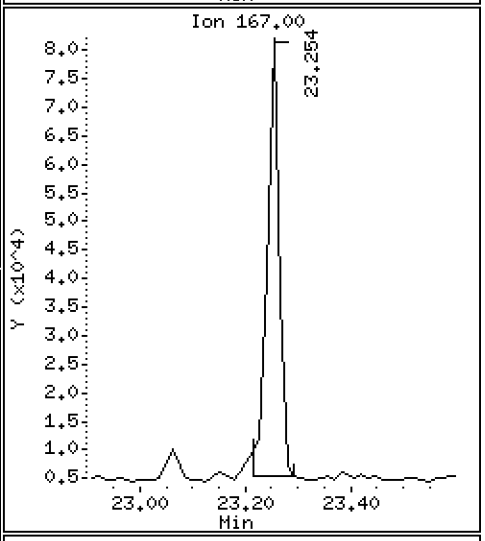
72 bis(2-Ethylhexyl)phthalate

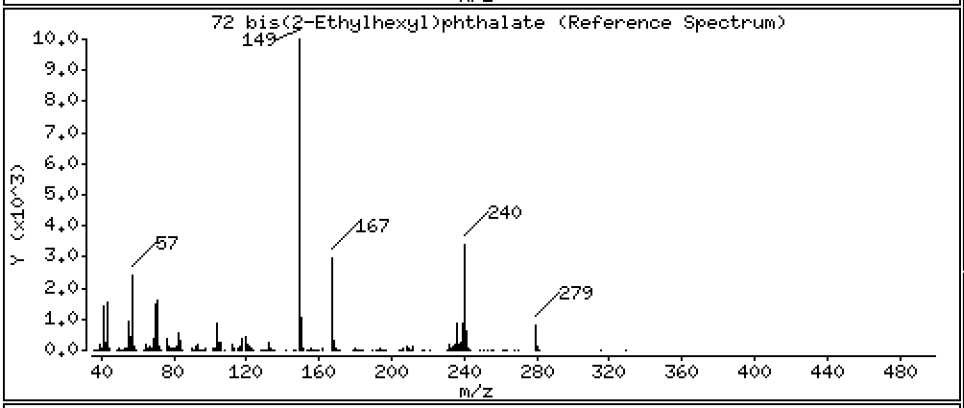
Concentration: 2.480 ug/mL

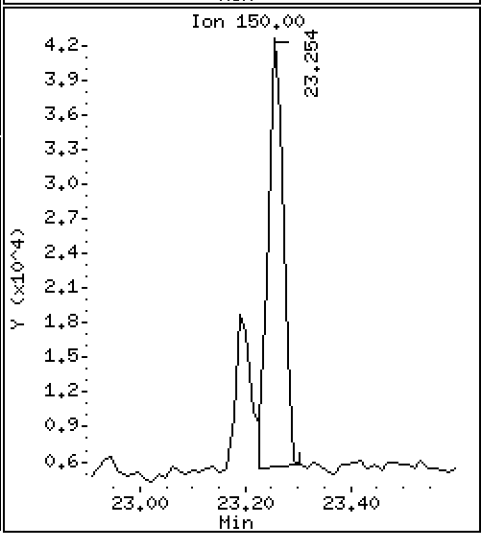


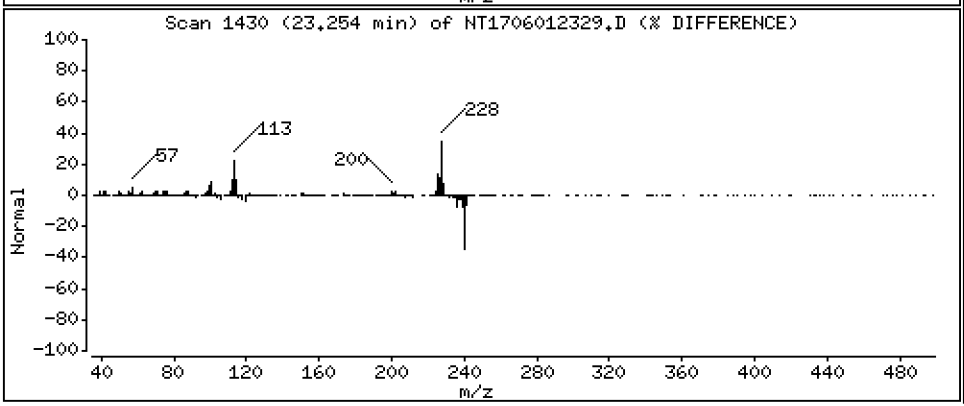












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

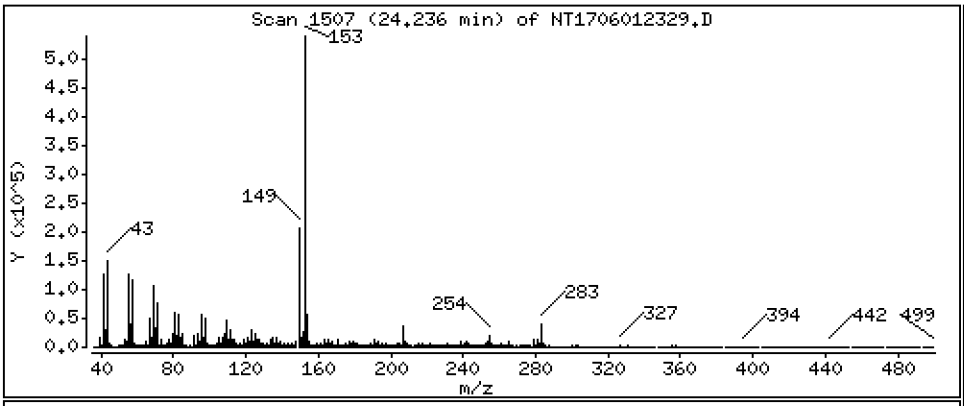
Operator: VTS

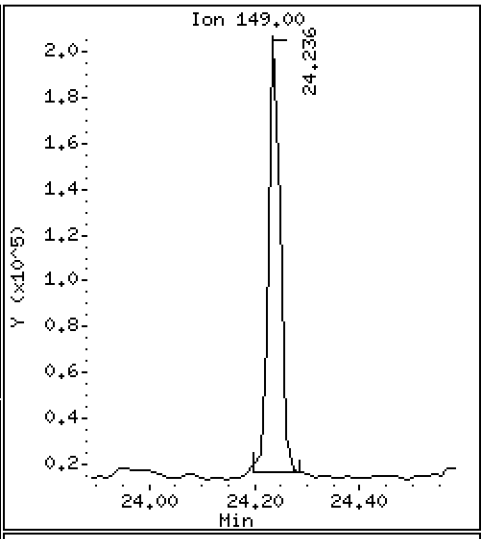
Column phase: ZB-5msi

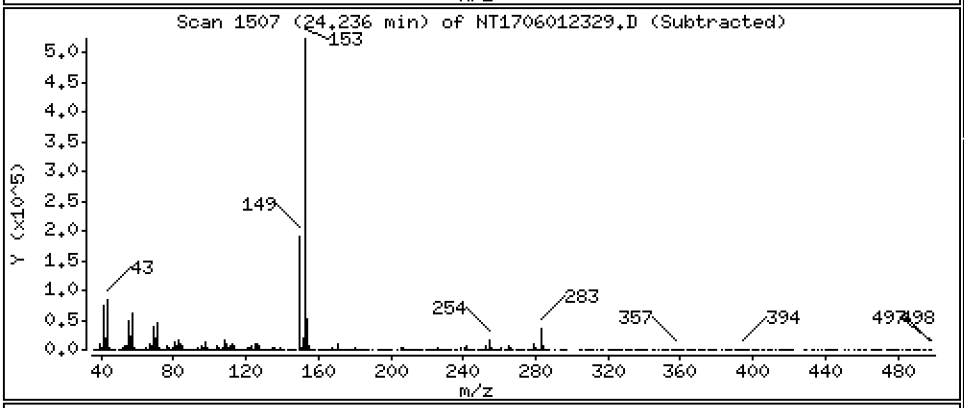
Column diameter: 0.25

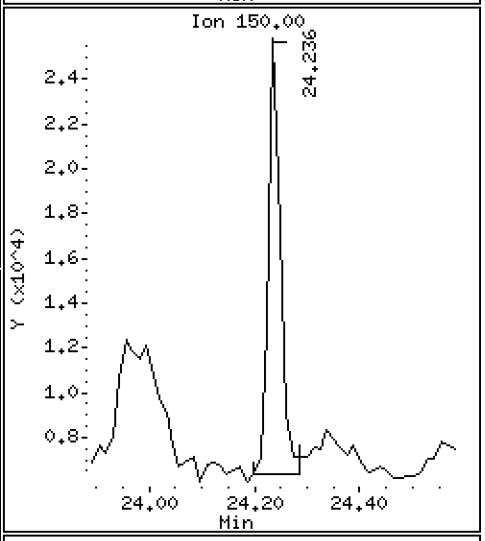
73 Di-n-octylphthalate

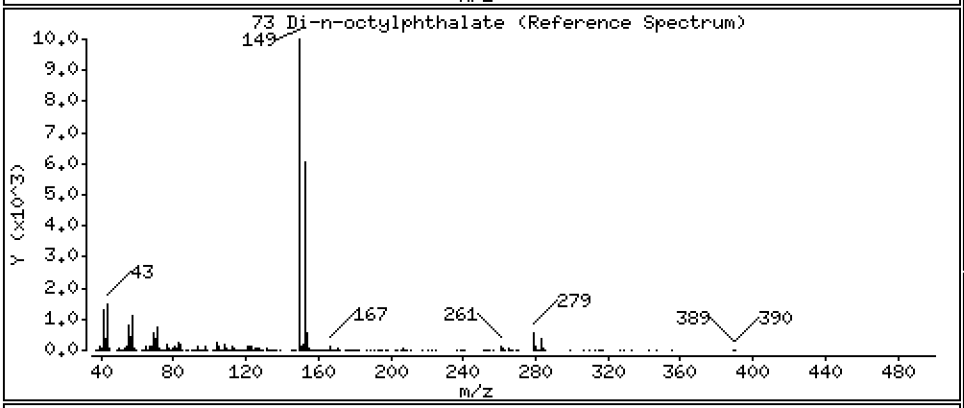
Concentration: 1.050 ug/mL

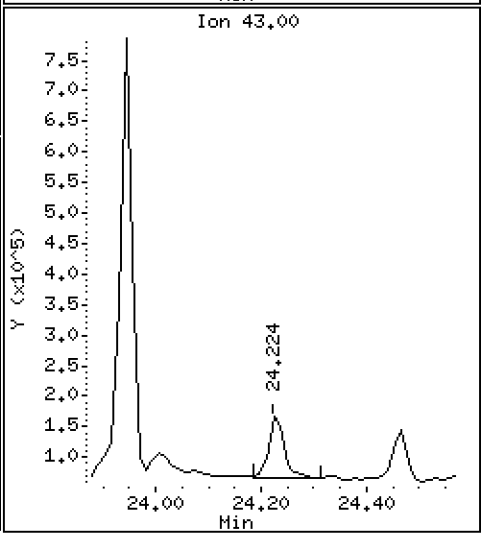


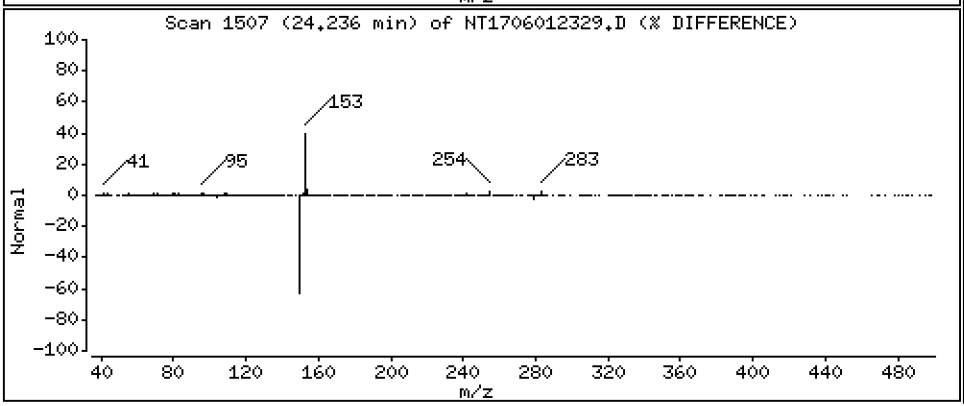












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

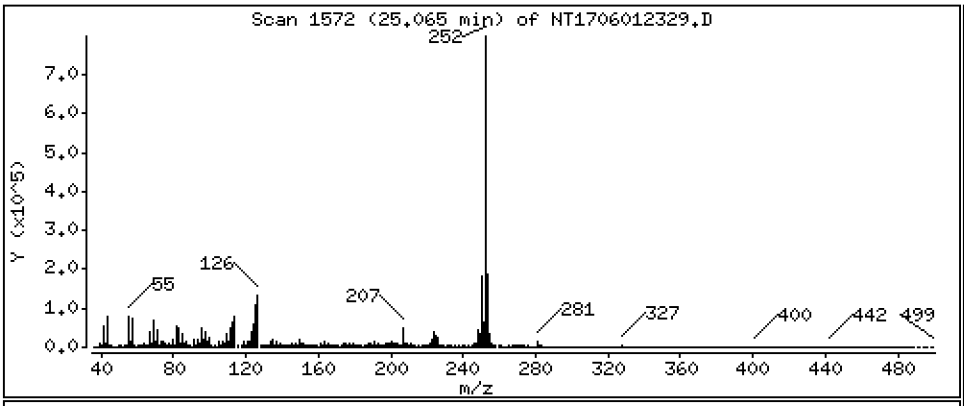
Operator: VTS

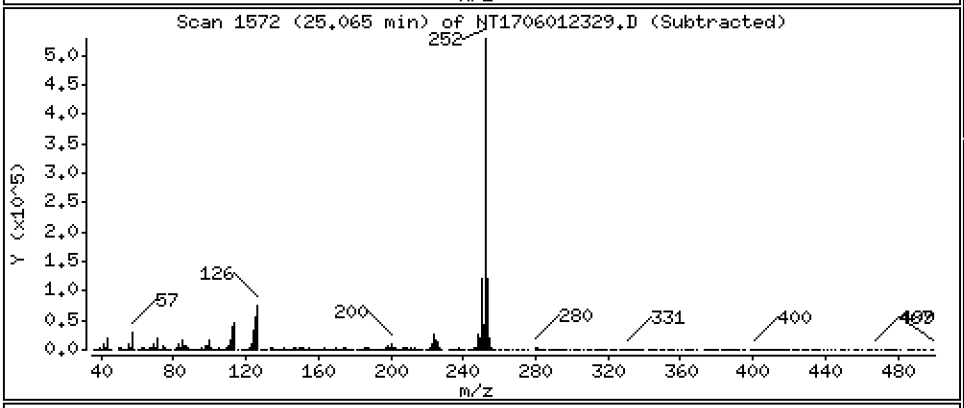
Column phase: ZB-5msi

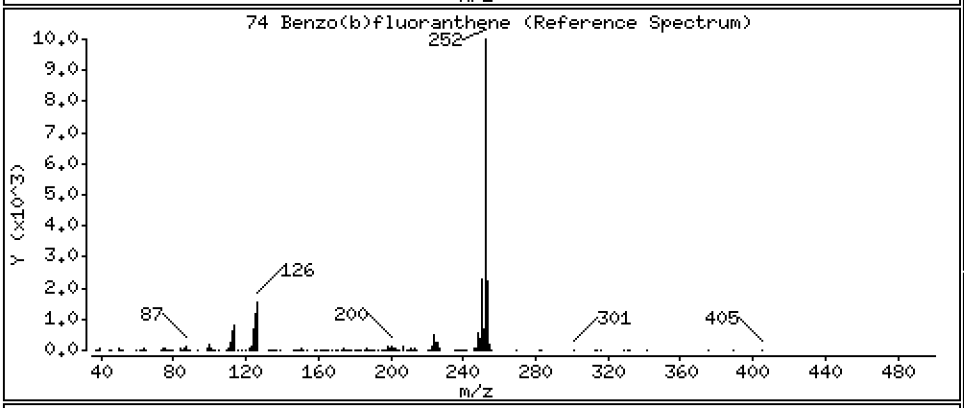
Column diameter: 0.25

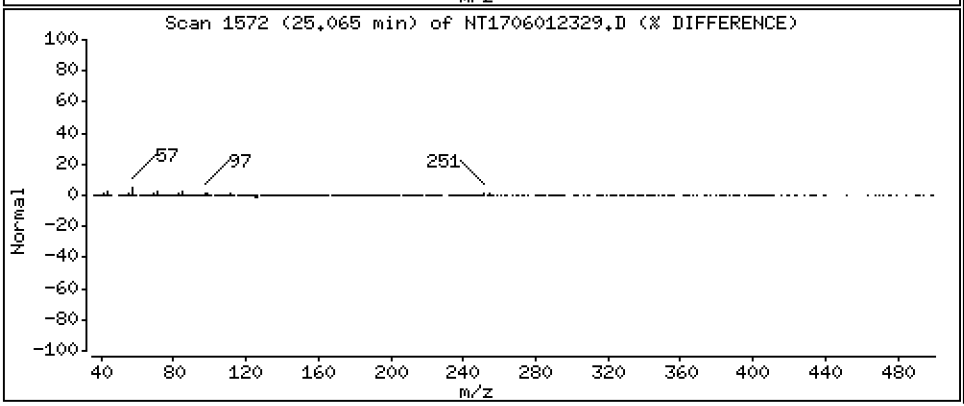
74 Benzo(b)fluoranthene

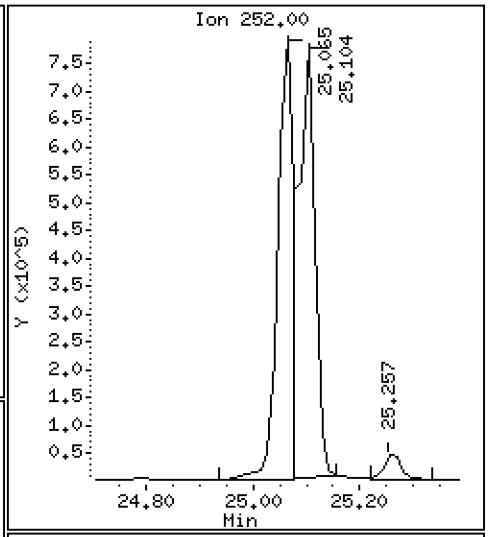
Concentration: 6.937 ug/mL

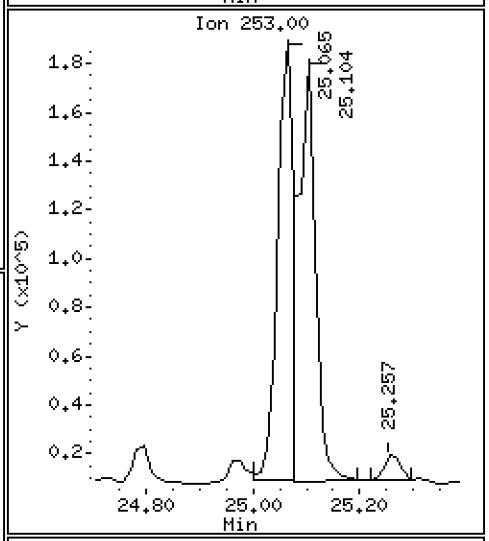


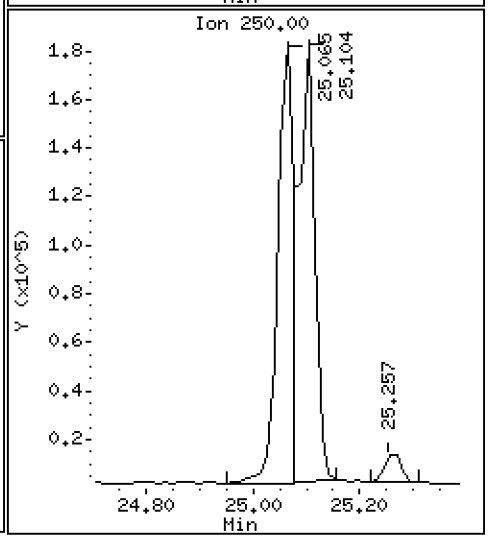












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

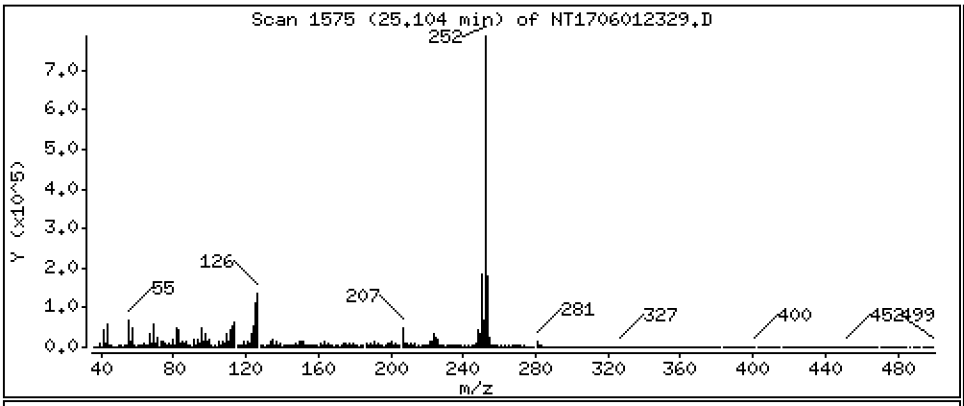
Operator: VTS

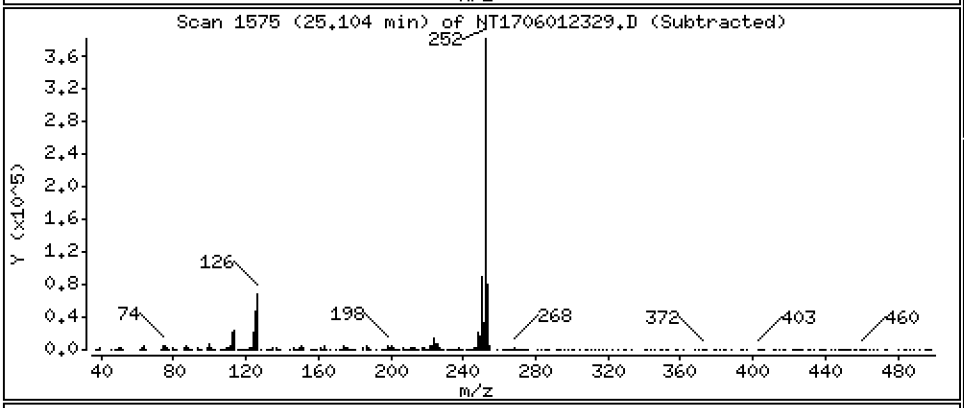
Column phase: ZB-5msi

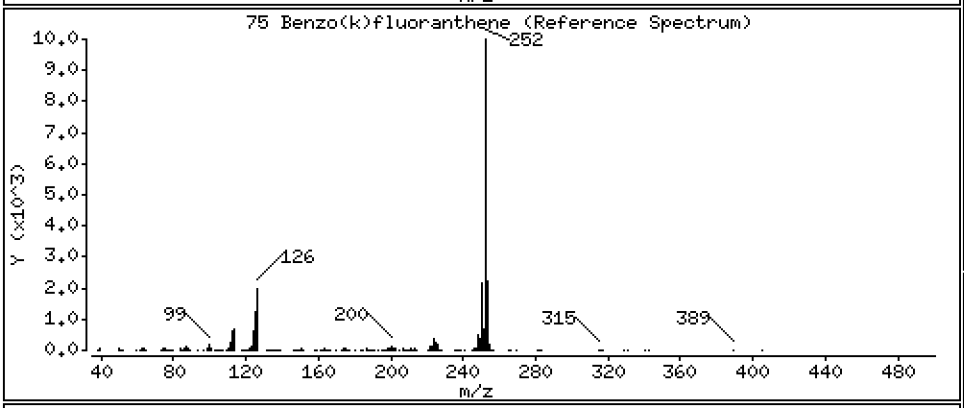
Column diameter: 0.25

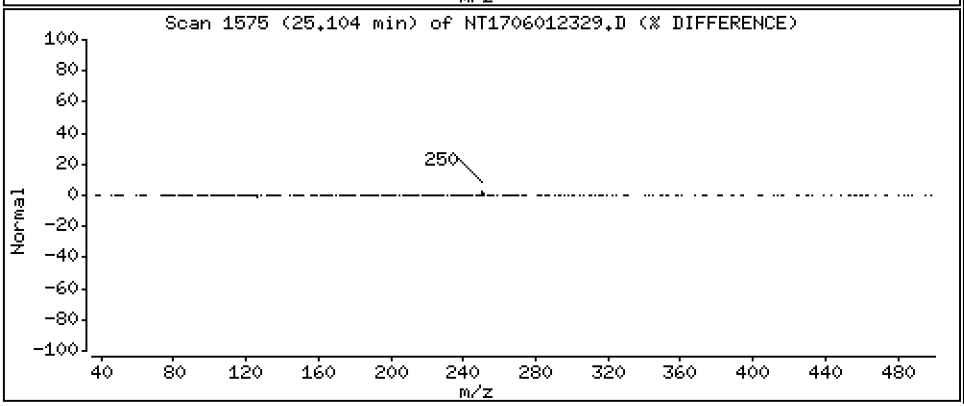
75 Benzo(k)fluoranthene

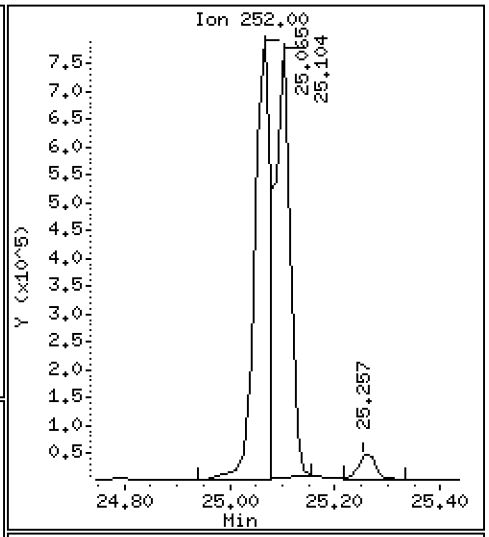
Concentration: 7.659 ug/mL

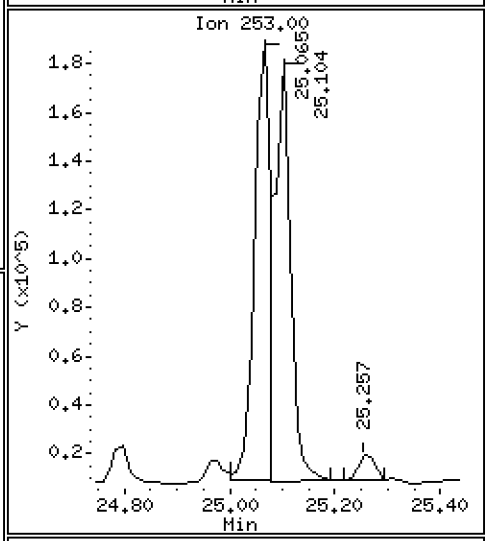


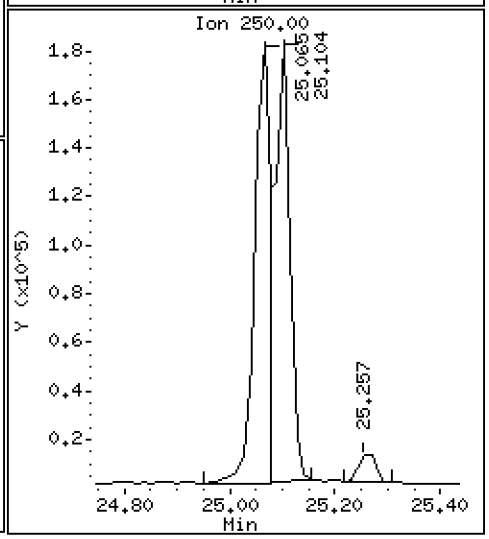












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

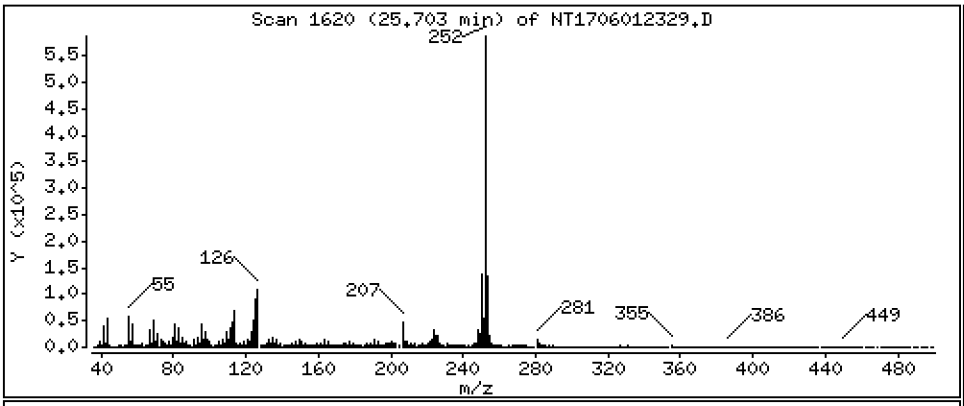
Operator: VTS

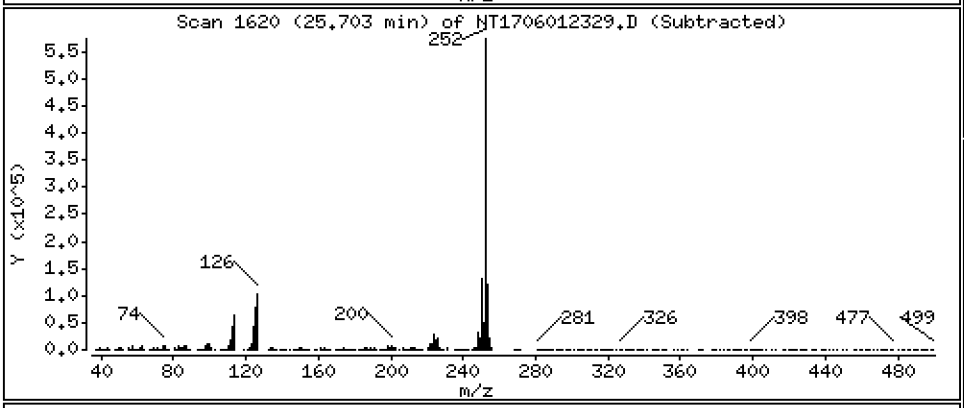
Column phase: ZB-5msi

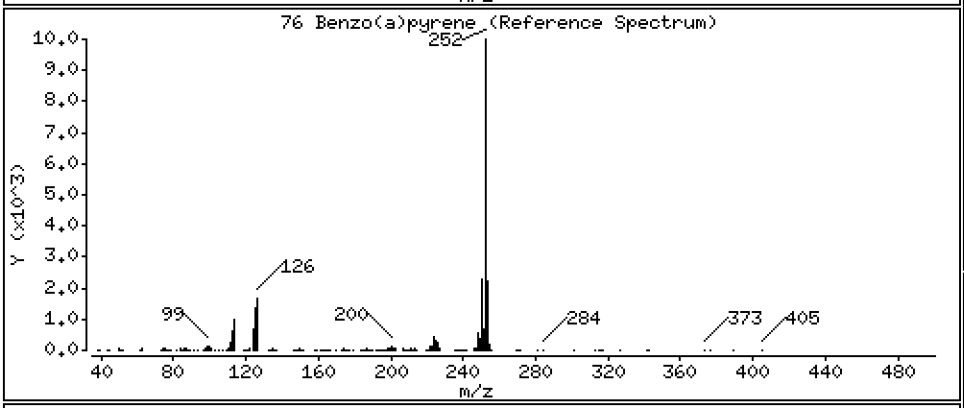
Column diameter: 0.25

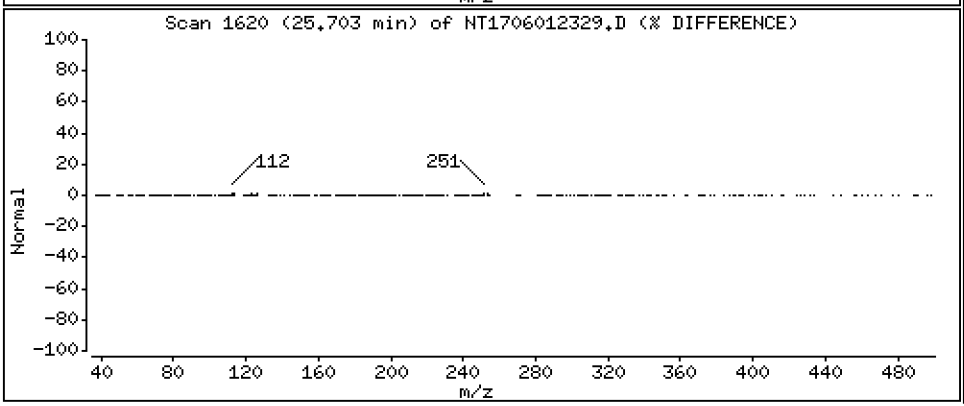
76 Benzo(a)pyrene

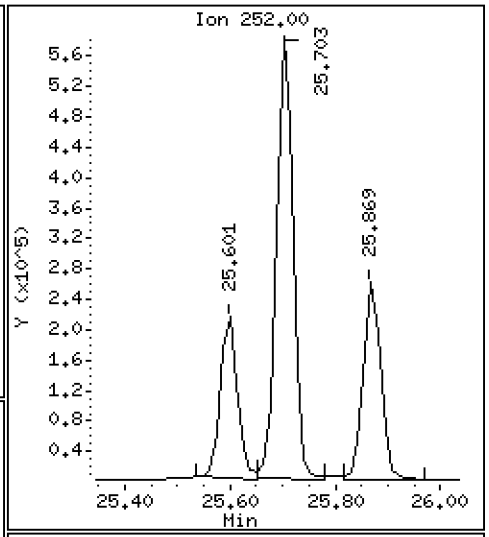
Concentration: 6.633 ug/mL

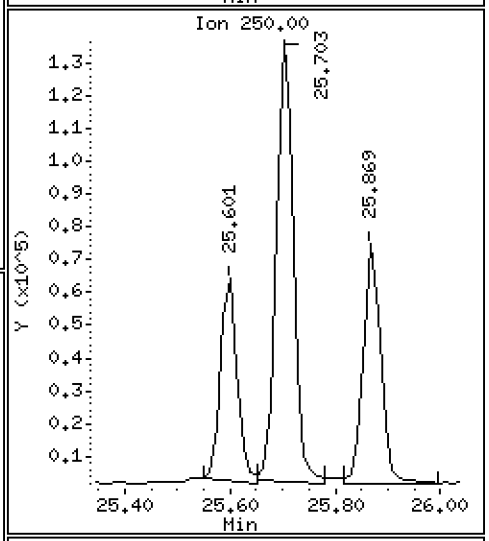


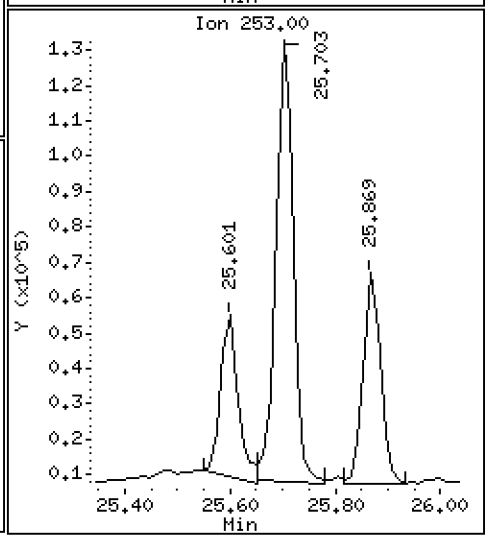












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

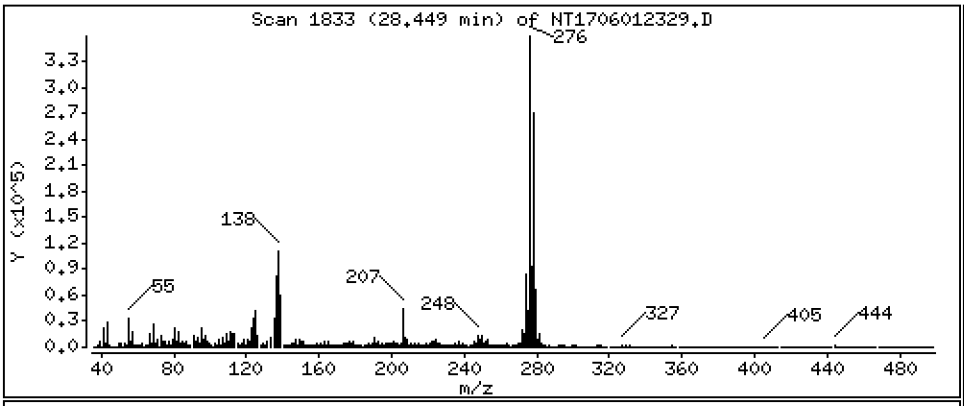
Operator: VTS

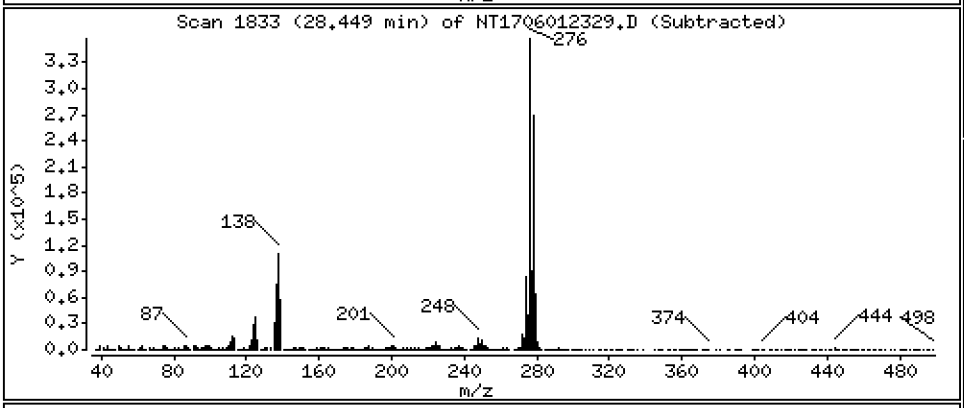
Column phase: ZB-5msi

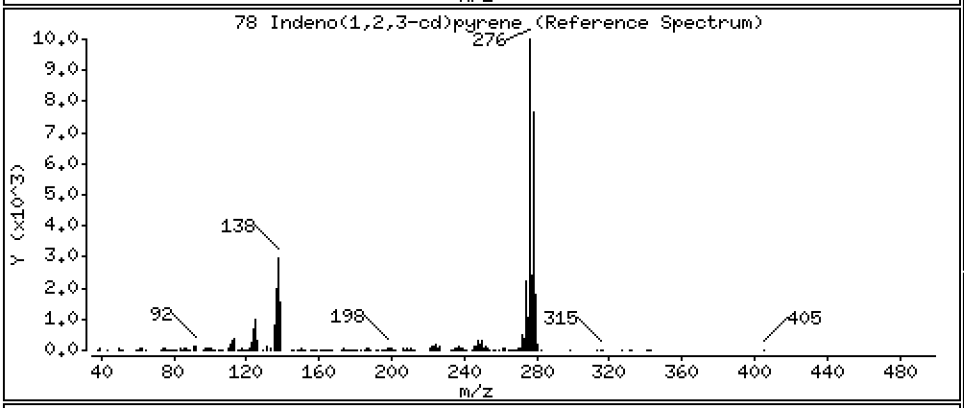
Column diameter: 0.25

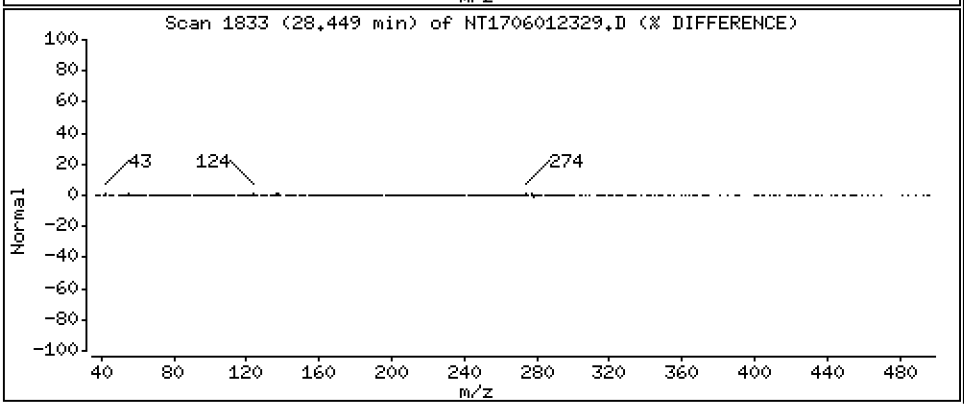
78 Indeno(1,2,3-cd)pyrene

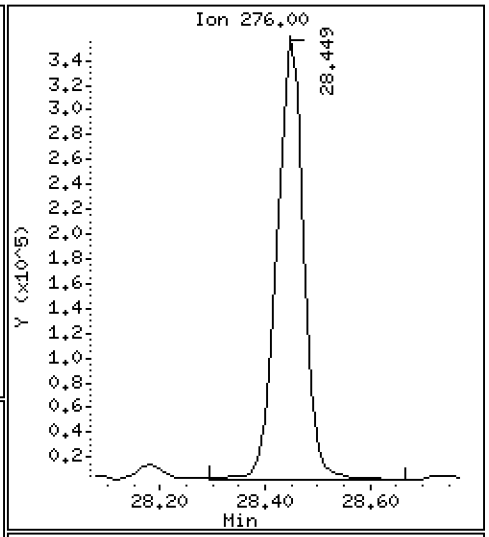
Concentration: 5.666 ug/mL

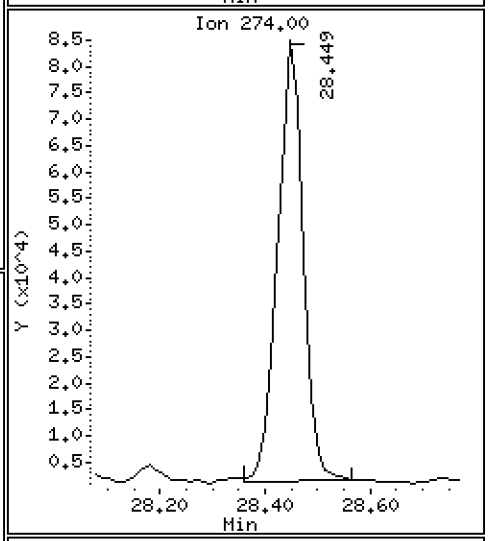


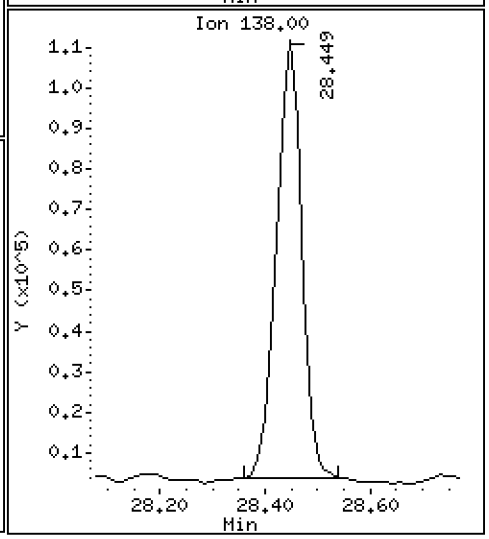












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

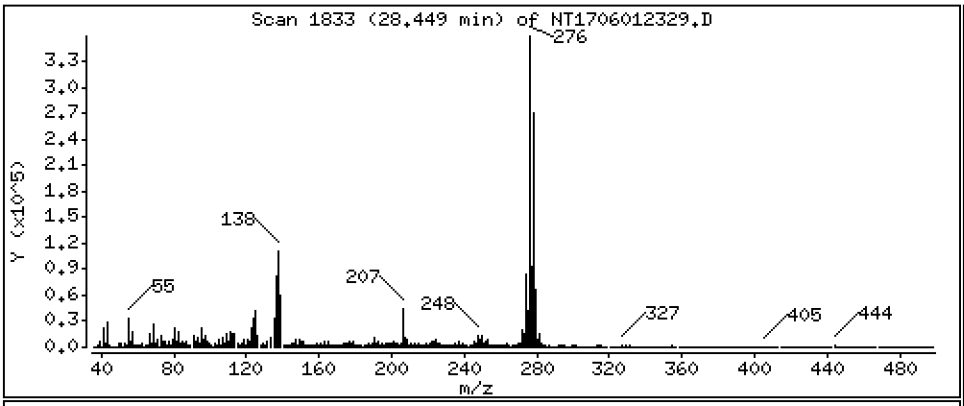
Operator: VTS

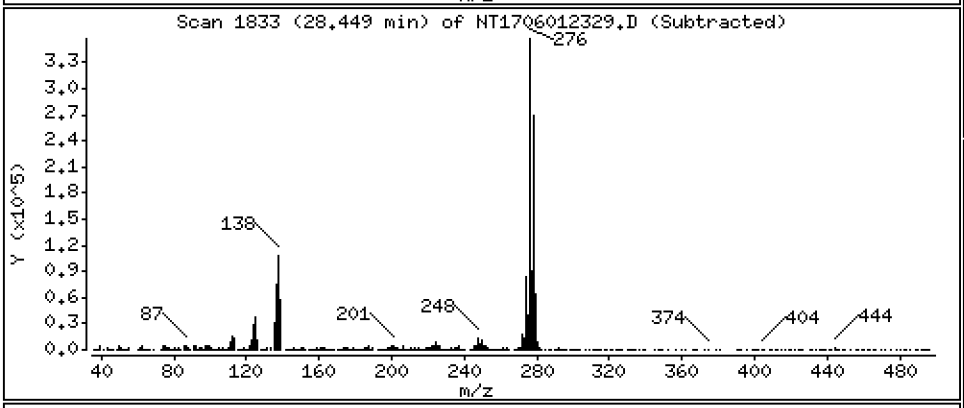
Column phase: ZB-5msi

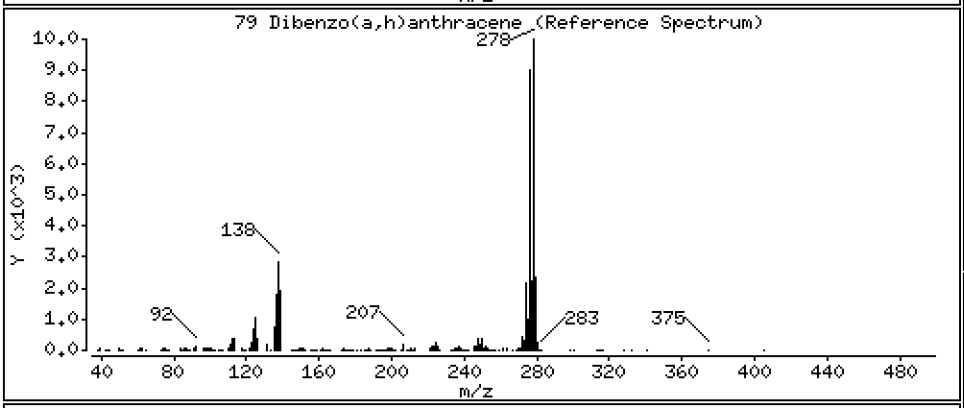
Column diameter: 0.25

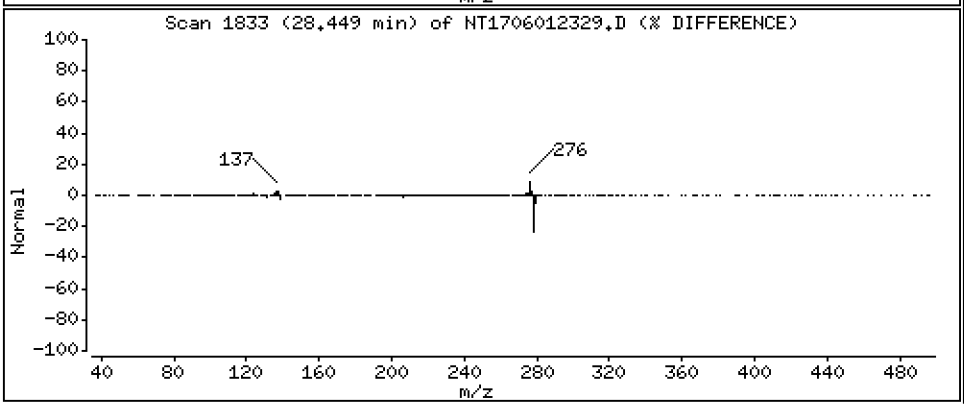
79 Dibenzo(a,h)anthracene

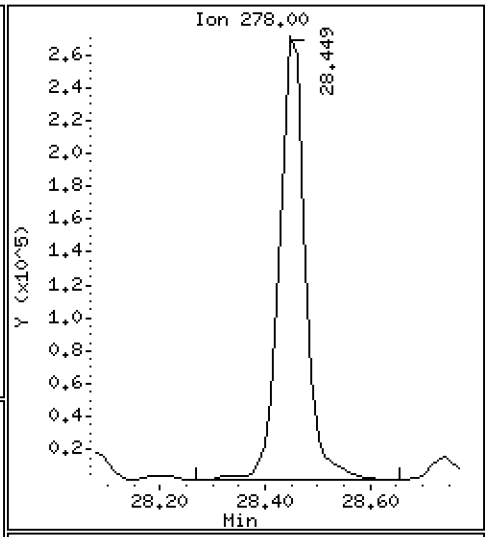
Concentration: 4.939 ug/mL

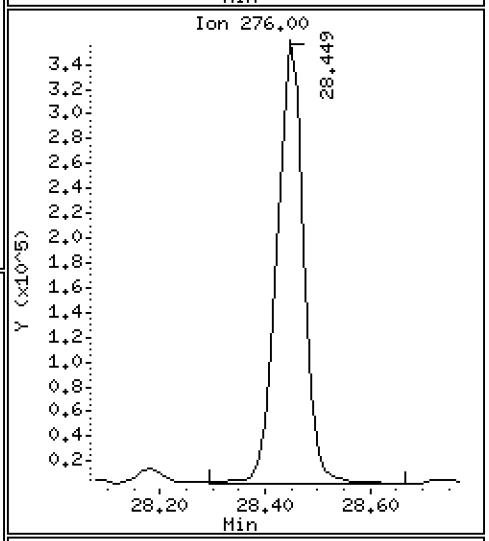


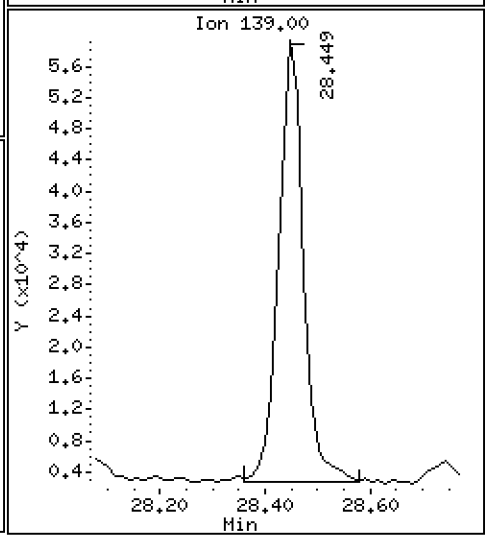












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

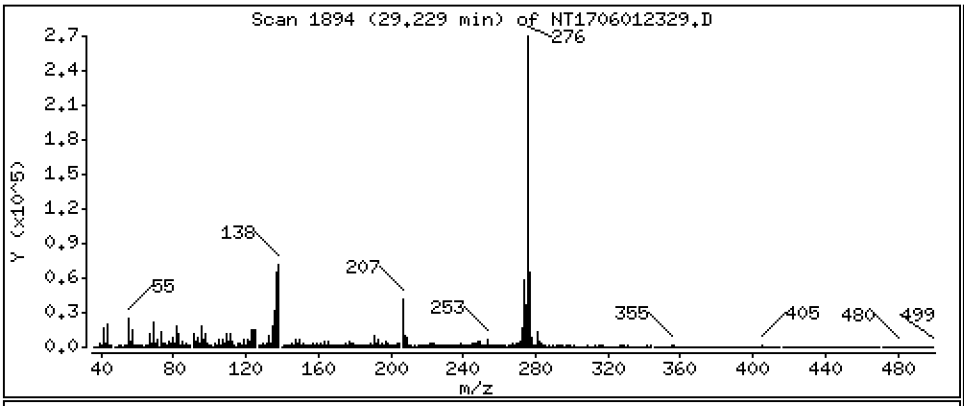
Operator: VTS

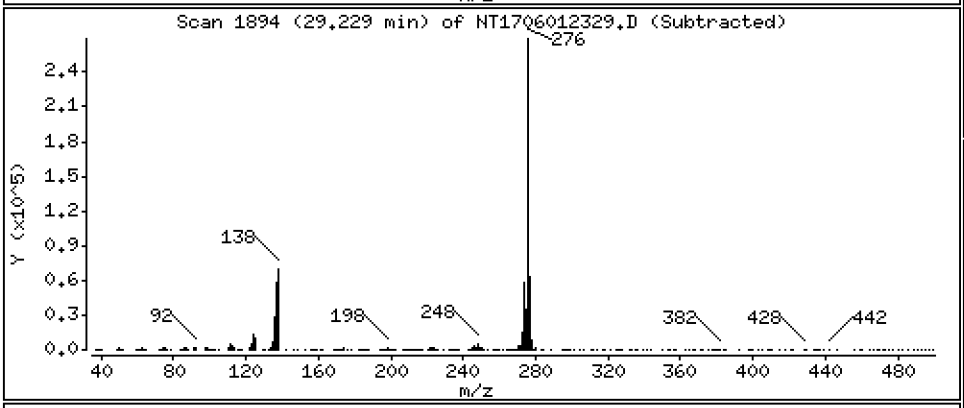
Column phase: ZB-5msi

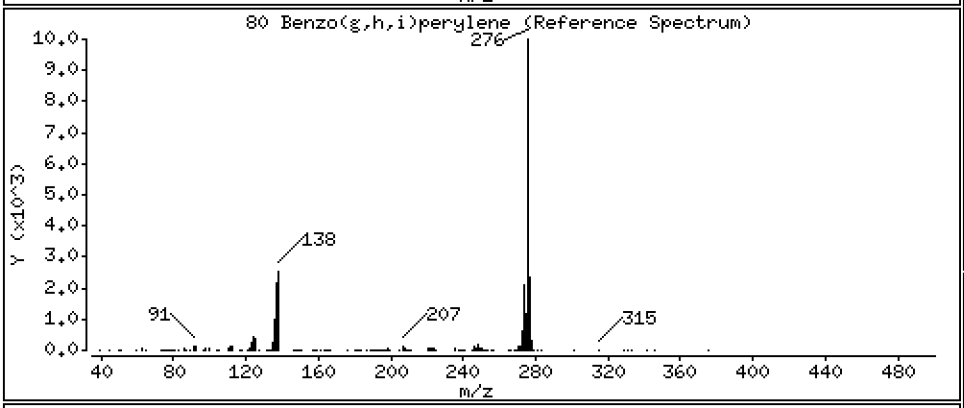
Column diameter: 0.25

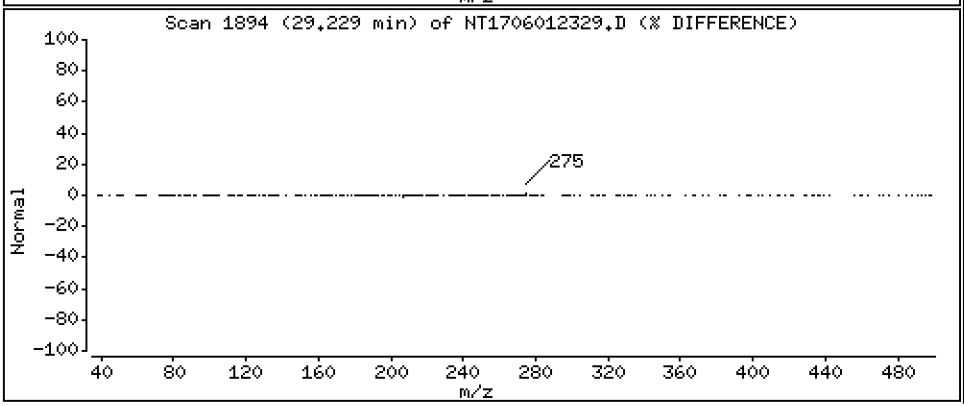
80 Benzo(g,h,i)perylene

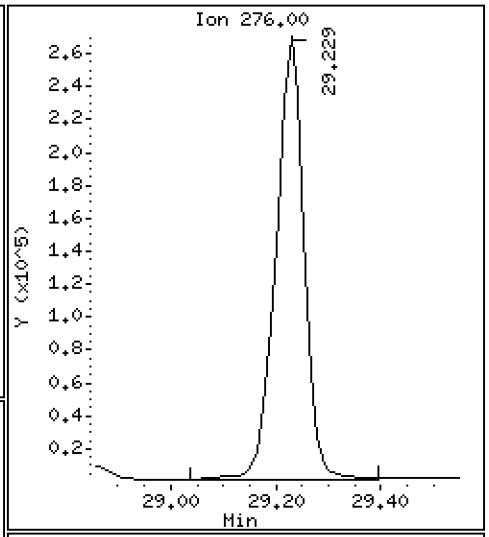
Concentration: 5.477 ug/mL

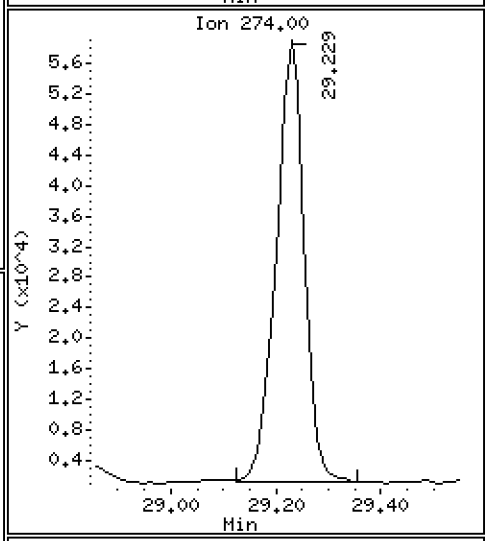


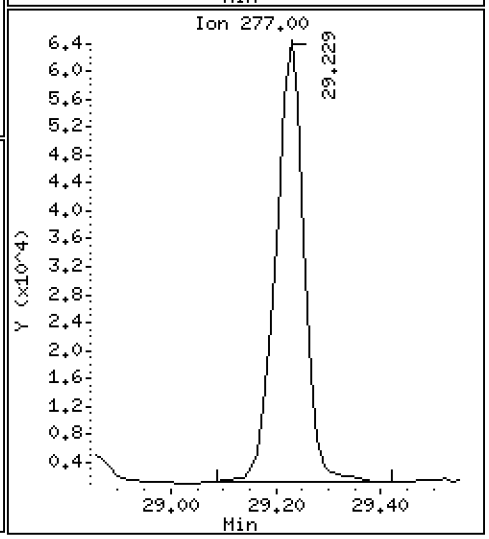












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

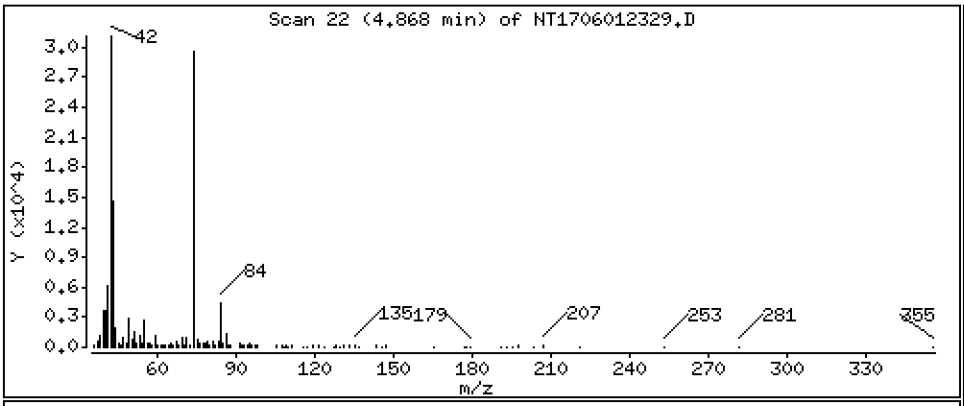
Operator: VTS

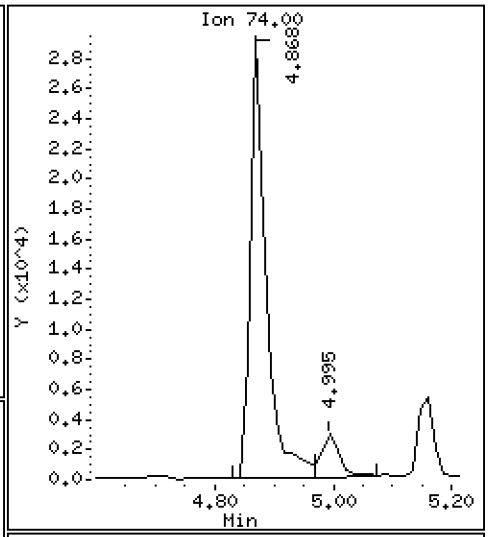
Column phase: ZB-5msi

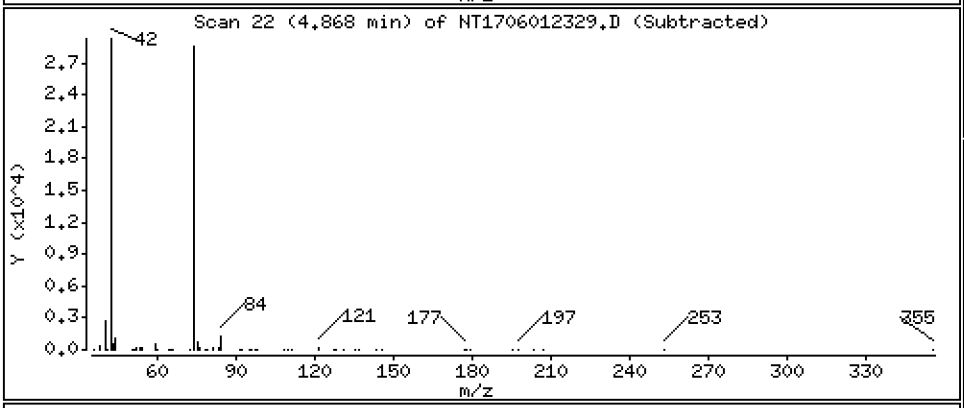
Column diameter: 0.25

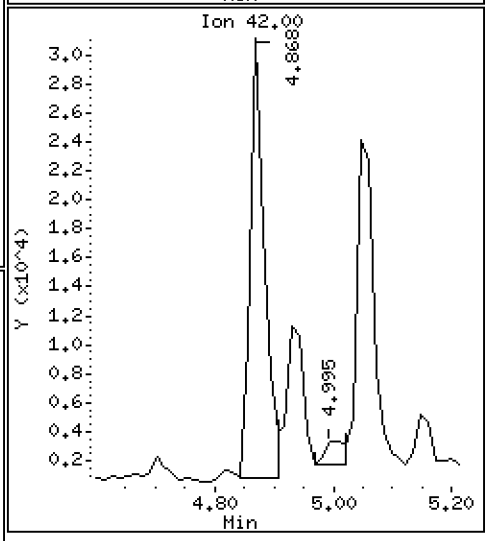
90 N-Nitrosodimethylamine

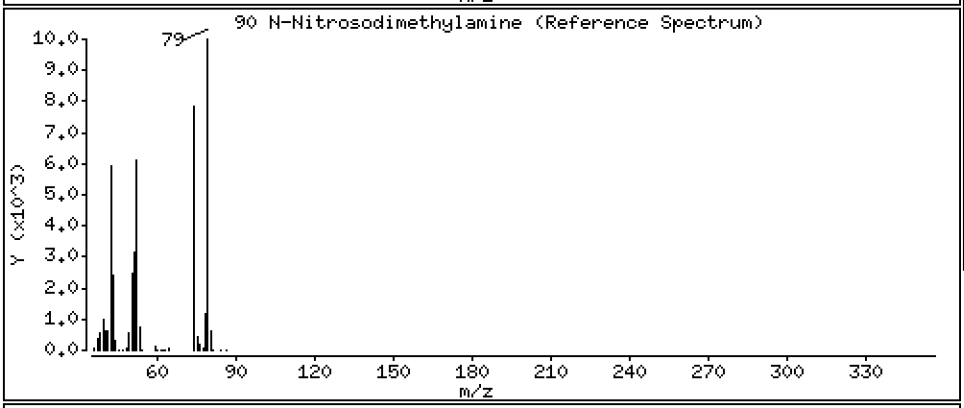
Concentration: 0.9201 ug/mL

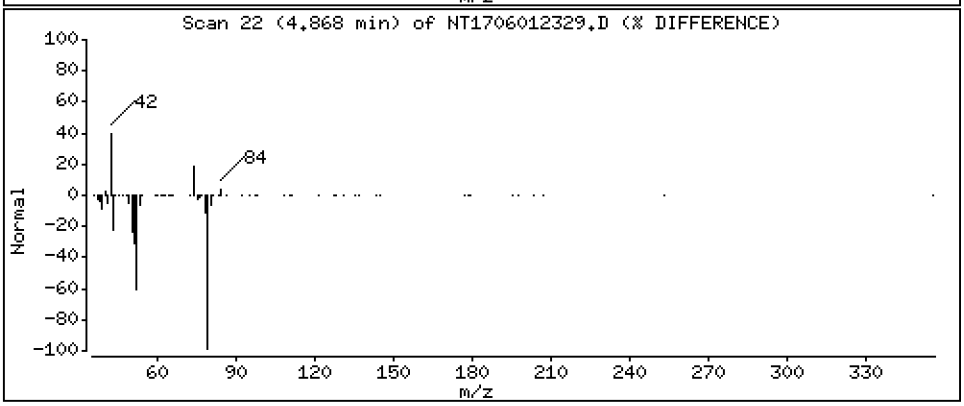












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

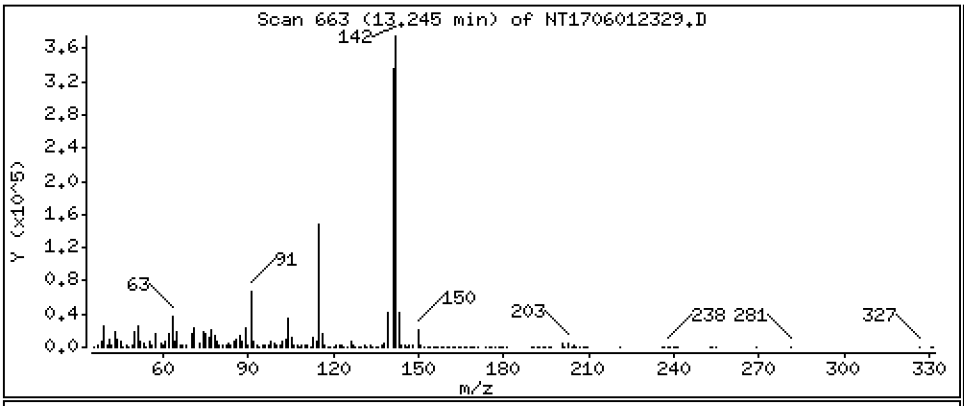
Operator: VTS

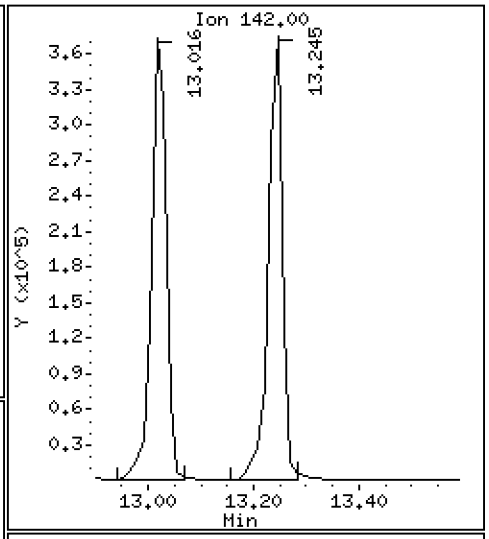
Column phase: ZB-5msi

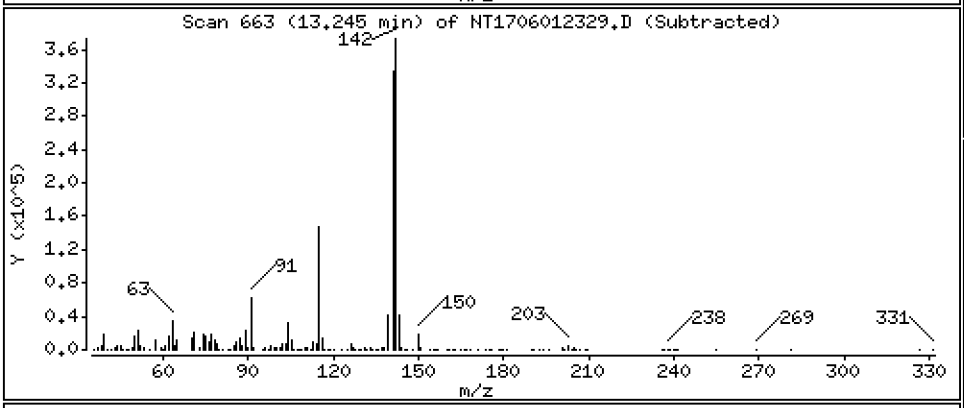
Column diameter: 0.25

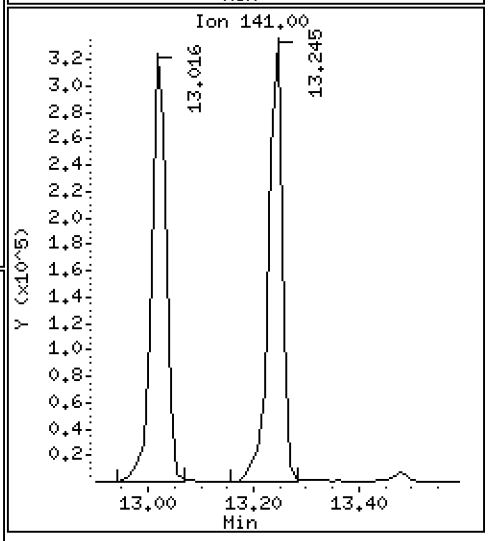
105 1-methylnaphthalene

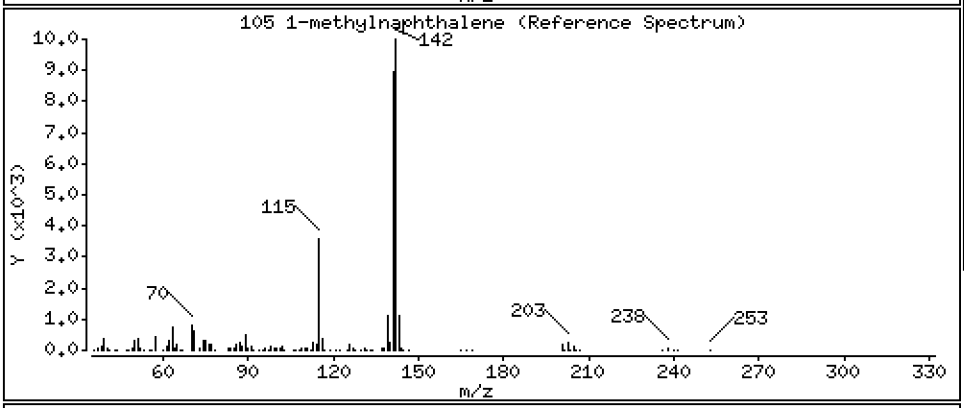
Concentration: 3.882 ug/mL

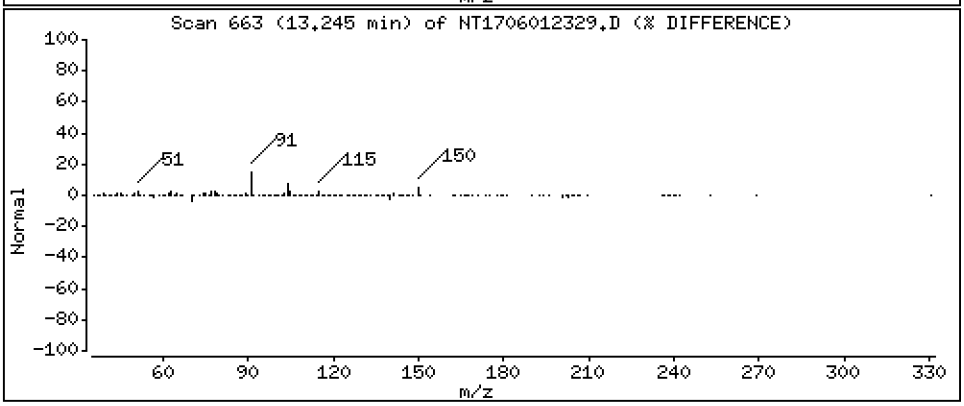












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

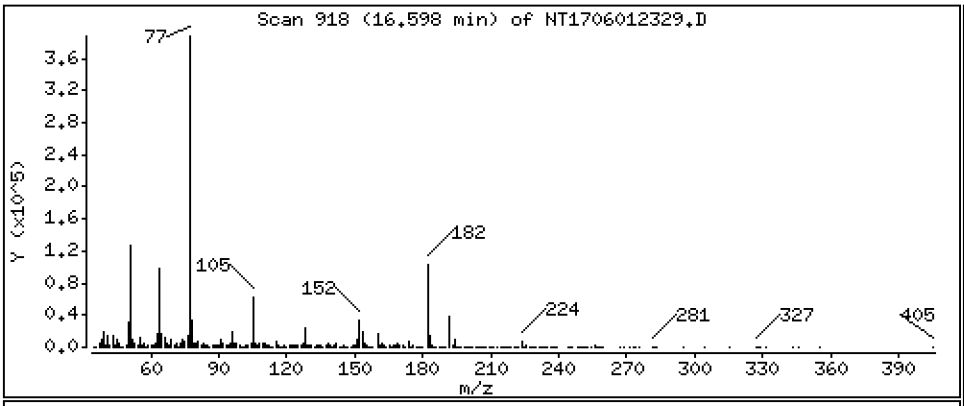
Operator: VTS

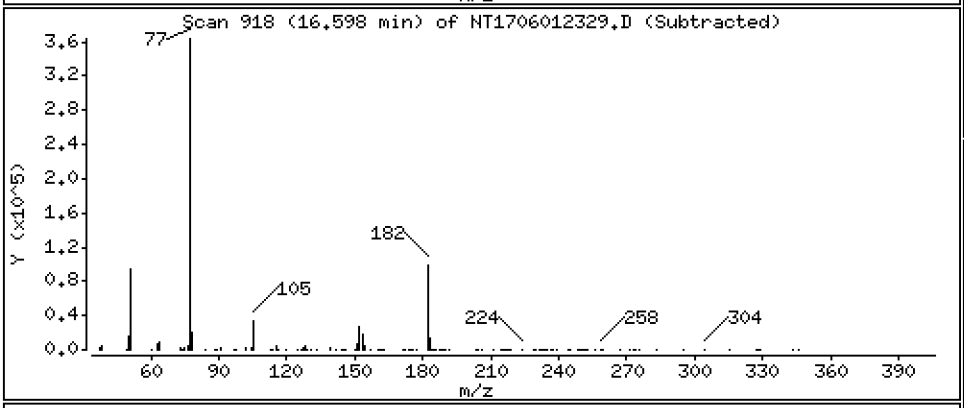
Column phase: ZB-5msi

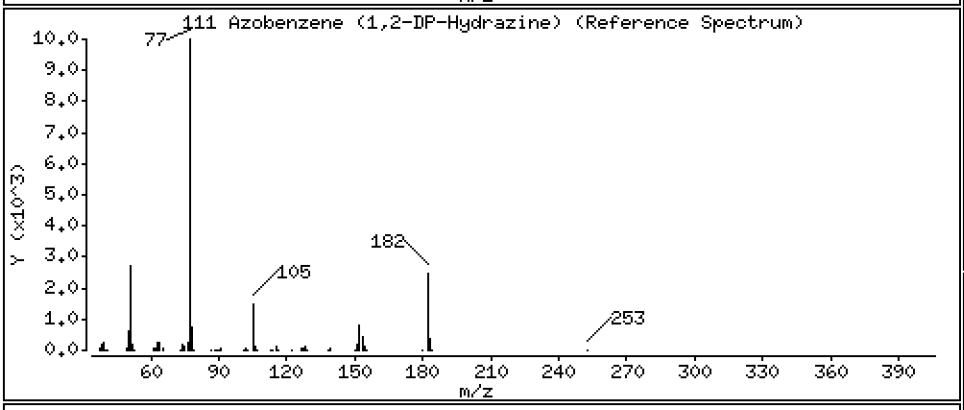
Column diameter: 0.25

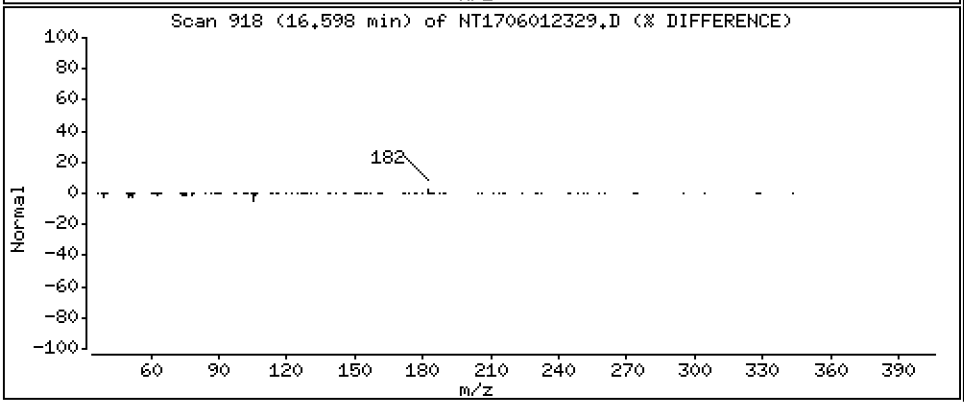
111 Azobenzene (1,2-DP-Hydrazine)

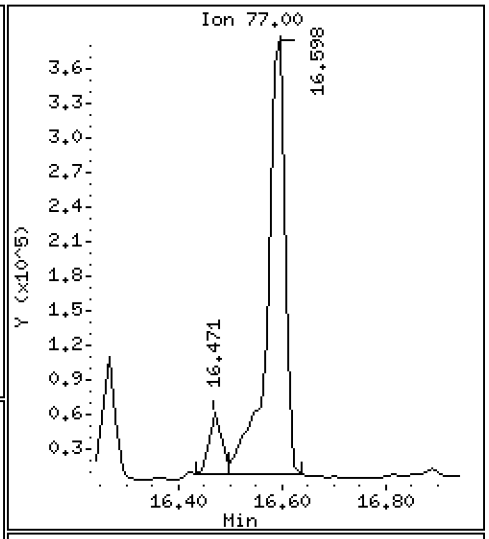
Concentration: 4.280 ug/mL

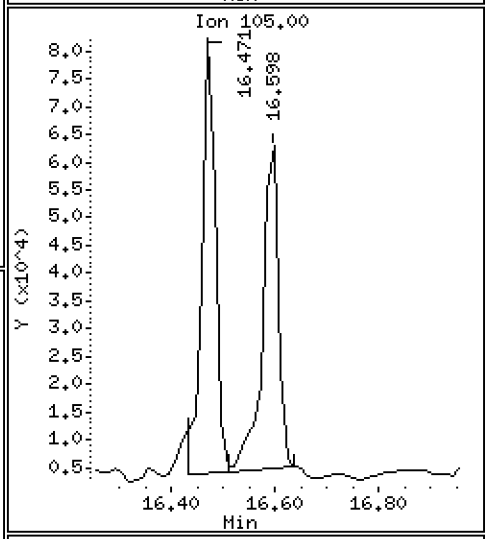


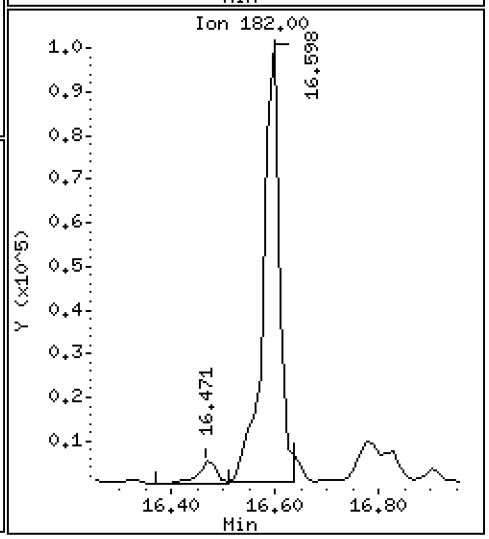












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

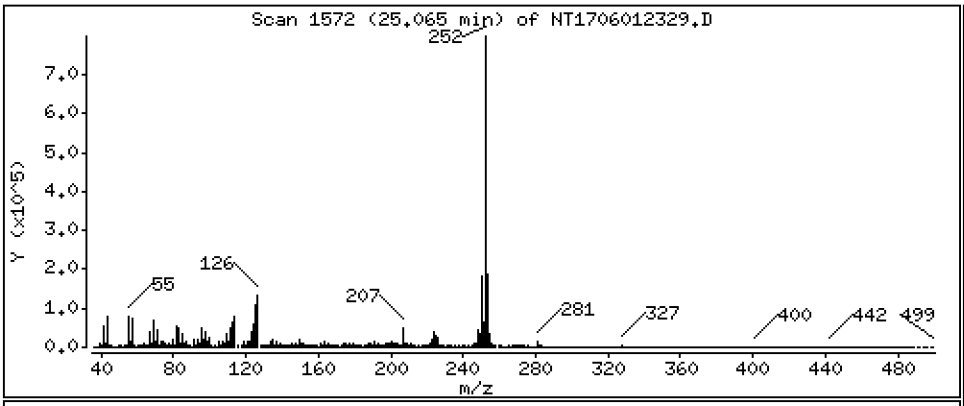
Operator: VTS

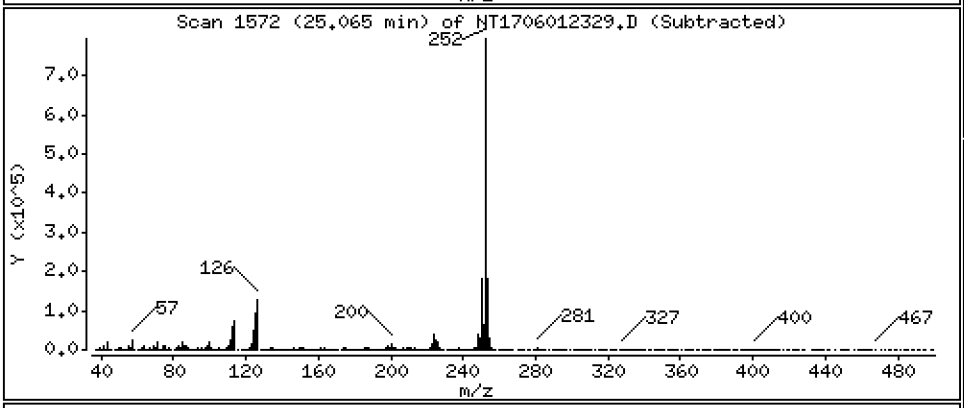
Column phase: ZB-5msi

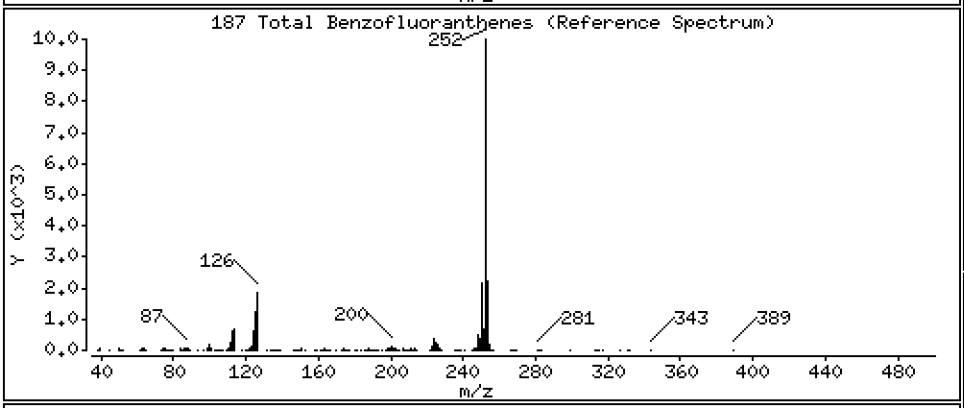
Column diameter: 0.25

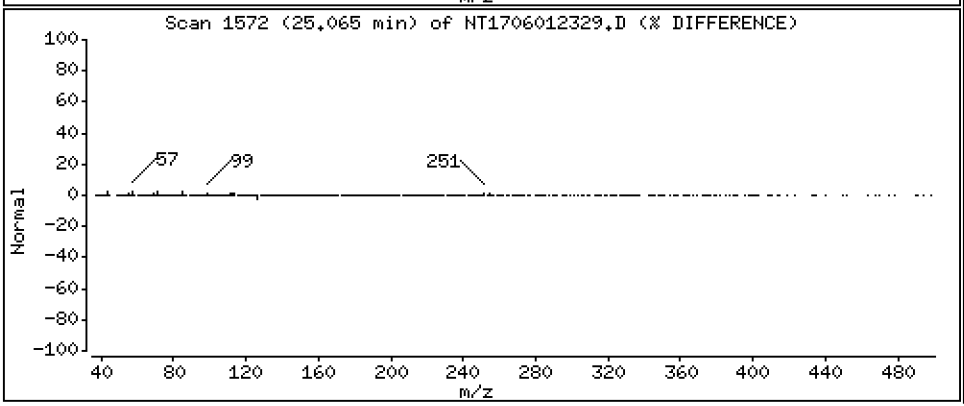
187 Total Benzofluoranthenes

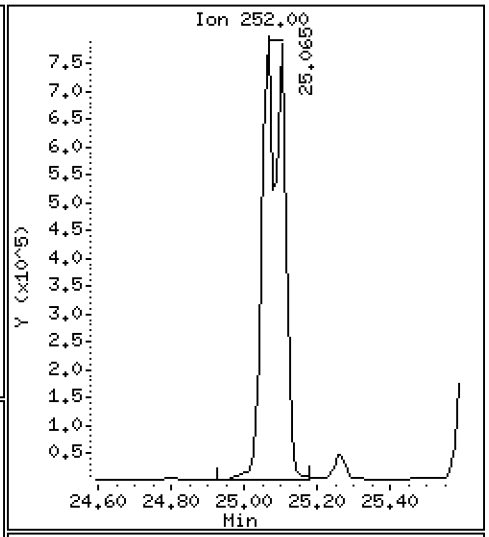
Concentration: 14.19 ug/mL

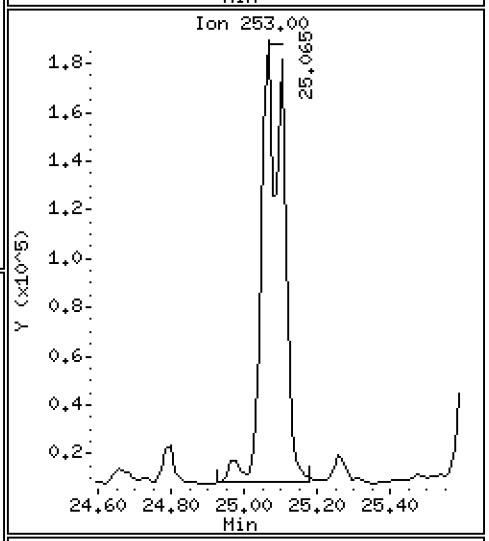


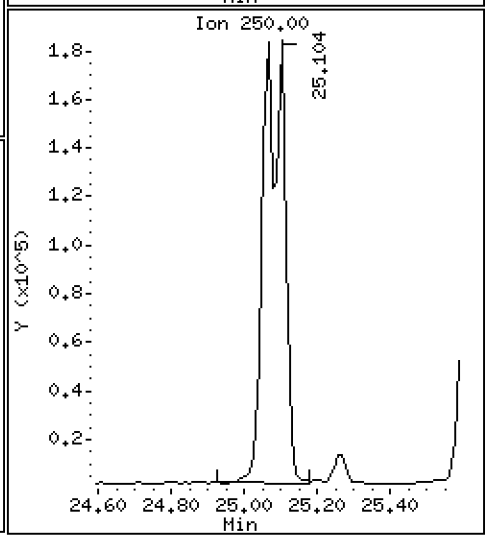












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD1

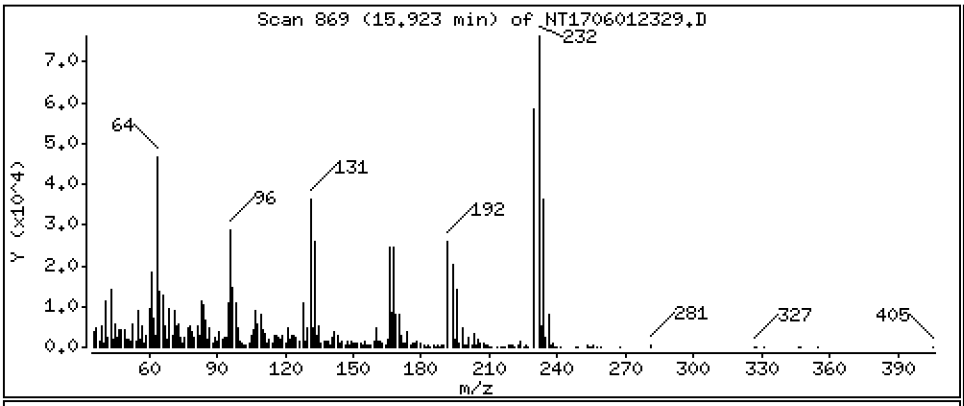
Operator: VTS

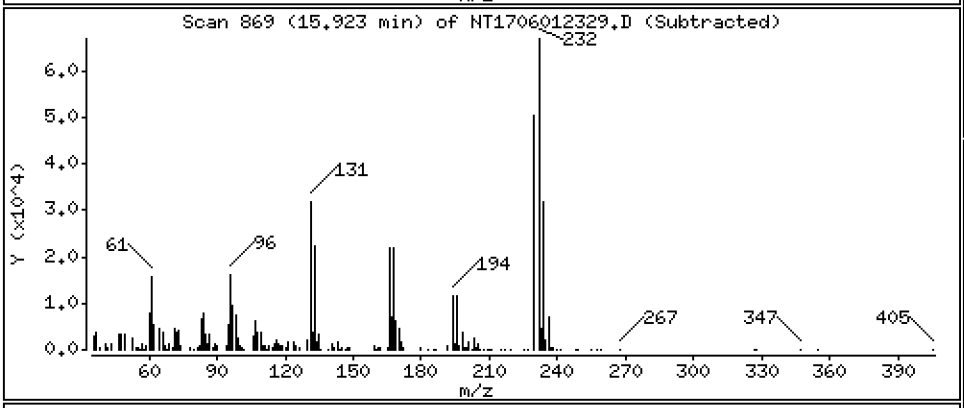
Column phase: ZB-5msi

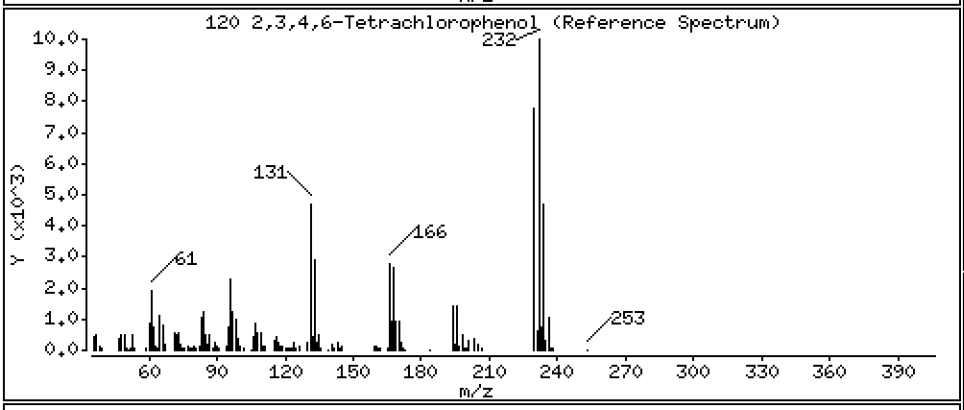
Column diameter: 0.25

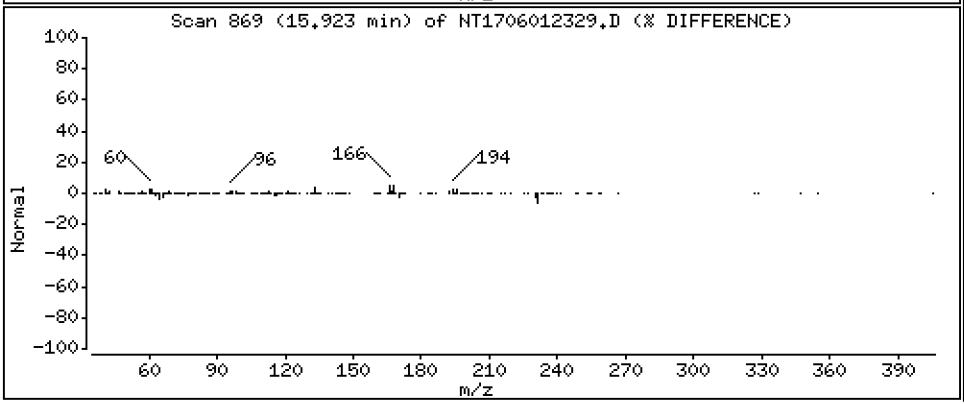
120 2,3,4,6-Tetrachlorophenol

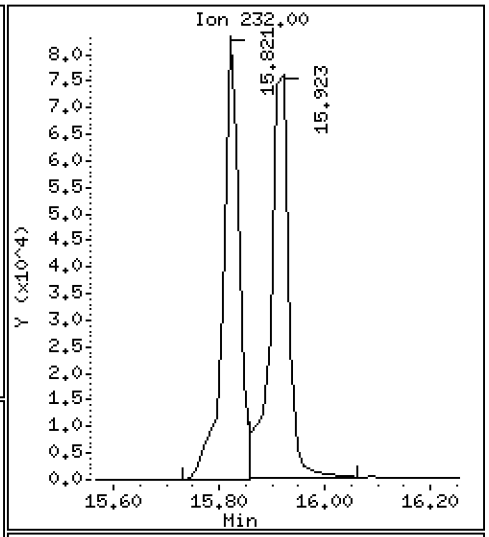
Concentration: 3.163 ug/mL

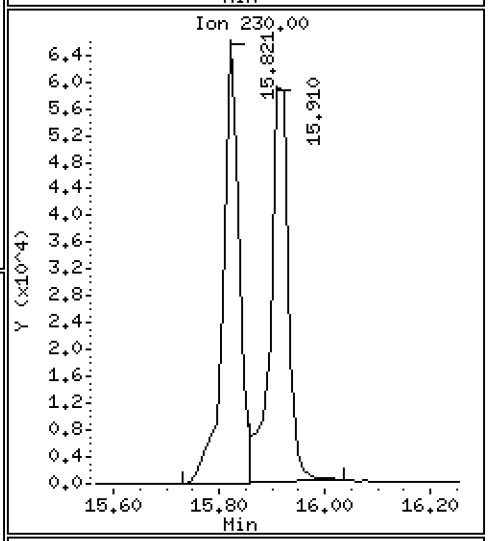


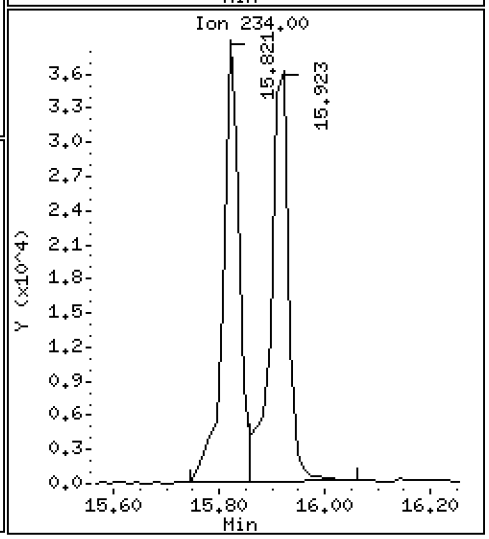












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012329.D
Lab Smp Id: BLE0148-MSD1
Inj Date : 02-JUN-2023 05:25
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-MSD1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.944	(0.761)	234608	2.65083	2.651
$	2 Phenol-d5	99	8.524	8.511	(0.933)	412118	3.51867	3.519
	3 Phenol	94	8.536	8.536	(0.934)	959639	7.73553	7.736
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	392050	4.17893	4.179
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	269979	2.98530	2.985
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	314137	3.03230	3.032
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	307384	2.93173	2.932
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	270365	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	301885	2.88697	2.887
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	180969	2.74442	2.744
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	308892	3.14236	3.142
	11 Benzyl alcohol	108	9.417	9.417	(1.031)	210161	3.63864	3.639
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	102849	3.71203	3.712
	13 2-Methylphenol	108	9.634	9.634	(1.055)	237056	2.60006	2.600
	17 Hexachloroethane	117	10.094	10.094	(1.105)	130565	3.12137	3.121
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	229410	3.28878	3.289
	15 4-Methylphenol	108	9.915	9.902	(1.085)	341707	3.68089	3.681
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	346269	3.05206	3.052
	19 Nitrobenzene	77	10.260	10.260	(0.884)	371643	3.43340	3.433
	20 Isophorone	82	10.707	10.707	(0.923)	586131	3.95573	3.956
	21 2-Nitrophenol	139	10.873	10.873	(0.937)	170510	3.26903	3.269
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	433566	4.28123	4.281
	23 Bis(2-Chloroethoxy)methane	93	11.116	11.116	(0.958)	385539	4.24547	4.245
	24 Benzoic acid	105	11.154	11.192	(0.962)	586827	8.61419	8.614
	25 2,4-Dichlorophenol	162	11.333	11.333	(0.977)	932567	11.4597	11.46
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	284142	3.21490	3.215
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	996862	4.00000	
	28 Naphthalene	128	11.638	11.639	(1.003)	990144	3.61188	3.612
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	158578	3.62208	3.622
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	1085823	12.3919	12.39
	32 2-Methylnaphthalene	142	13.015	13.016	(1.122)	725617	3.69683	3.697
	33 Hexachlorocyclopentadiene	237	13.475	13.487	(0.887)	87205	1.74933	1.749

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.640	13.640	(0.898)	696726	12.4213	12.42
35	2,4,5-Trichlorophenol	196	13.730	13.717	(0.904)	769753	12.9635	12.96
$ 36	2-Fluorobiphenyl	172	13.793	13.793	(0.908)	749191	3.54732	3.547
37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	677397	3.95360	3.954
38	2-Nitroaniline	65	14.278	14.278	(0.940)	681973	11.7527	11.75
39	Dimethylphthalate	163	14.699	14.686	(0.968)	830705	4.50345	4.503
40	Acenaphthylene	152	14.878	14.878	(0.980)	1036298	3.80871	3.809
41	2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	548345	12.6972	12.70
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	536103	4.00000	
43	3-Nitroaniline	138	15.184	15.133	(1.000)	20095	0.50239	0.5024(H)
44	Acenaphthene	153	15.247	15.247	(1.004)	698147	4.10479	4.105
45	2,4-Dinitrophenol	184	15.336	15.337	(1.010)	18108	0.69496	0.6950
46	Dibenzofuran	168	15.579	15.579	(1.026)	1023141	4.31005	4.310
47	4-Nitrophenol	109	15.477	15.464	(1.019)	336453	12.6637	12.66
48	2,4-Dinitrotoluene	165	15.642	15.642	(1.030)	760298	13.4489	13.45
50	Diethylphthalate	149	16.139	16.140	(1.063)	882330	4.90481	4.905
49	Fluorene	166	16.280	16.280	(1.072)	1050848	4.65624	4.656
51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	459979	4.43321	4.433
52	4-Nitroaniline	138	16.420	16.407	(1.081)	96582	2.55100	2.551(M)
53	4,6-Dinitro-2-methylphenol	198	16.470	16.471	(0.905)	363457	9.17960	9.180
54	N-Nitrosodiphenylamine	169	16.521	16.521	(0.908)	442989	3.18742	3.187(M)
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	153863	6.57967	6.580
56	4-Bromophenyl-phenylether	248	17.272	17.260	(0.949)	220308	4.52421	4.524
57	Hexachlorobenzene	284	17.591	17.578	(0.966)	222459	4.48335	4.483
58	Pentachlorophenol	266	17.948	17.935	(0.986)	407178	13.2651	13.27
* 59	Phenanthrene-d10	188	18.203	18.203	(1.000)	992141	4.00000	(M)
60	Phenanthrene	178	18.254	18.241	(1.003)	1661379	5.73894	5.739(M)
61	Anthracene	178	18.343	18.343	(1.008)	1188793	4.37398	4.374
62	Carbazole	167	18.688	18.688	(1.027)	1103992	6.24036	6.240(M)
63	Di-n-butylphthalate	149	19.478	19.453	(1.070)	1791981	5.46027	5.460
64	Fluoranthene	202	20.664	20.613	(0.890)	2181223	8.41939	8.419(M)
65	Pyrene	202	21.072	21.034	(0.907)	2129563	8.10866	8.109(M)
$ 66	Terphenyl-d14	244	21.327	21.315	(0.918)	720093	3.85700	3.857(M)
67	Butylbenzylphthalate	149	22.233	22.233	(0.957)	561003	4.77271	4.773
68	Benzo(a)anthracene	228	23.190	23.190	(0.998)	1461971	7.16859	7.169
* 69	Chrysene-d12	240	23.228	23.215	(1.000)	553842	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.266	23.254	(1.002)	1806514	9.41354	9.414
72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	404948	2.47970	2.480
* 134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1128719	4.00000	
73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	300507	1.05034	1.050
74	Benzo(b)fluoranthene	252	25.065	25.052	(0.971)	1711667	6.93727	6.937
75	Benzo(k)fluoranthene	252	25.103	25.091	(0.972)	1785472	7.65935	7.659
76	Benzo(a)pyrene	252	25.703	25.690	(0.996)	1289129	6.63259	6.633
* 77	Perylene-d12	264	25.818	25.805	(1.000)	622318	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.449	28.423	(1.102)	1277450	5.66634	5.666
79	Dibenzo(a,h)anthracene	278	28.449	28.423	(1.102)	934533	4.93910	4.939
80	Benzo(g,h,i)perylene	276	29.228	29.203	(1.132)	1019258	5.47750	5.477
90	N-Nitrosodimethylamine	74	4.867	4.867	(0.533)	54319	0.92011	0.9201
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	706915	3.88222	3.882
111	Azobenzene (1,2-DP-Hydrazine)	77	16.598	16.585	(1.093)	898664	4.27961	4.280

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.065	25.091	(0.971)	3142821	14.1898	14.19
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.910	(1.049)	212308	3.16350	3.163

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012329.D
Lab Smp Id: BLE0148-MSD1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	270365	5.20
27 Naphthalene-d8	932905	466453	1865810	996862	6.86
42 Acenaphthene-d10	509574	254787	1019148	536103	5.21
59 Phenanthrene-d10	912749	456375	1825498	992141	8.70
69 Chrysene-d12	578011	289006	1156022	553842	-4.18
134 Di-n-octylphthala	1181490	590745	2362980	1128719	-4.47
77 Perylene-d12	513683	256842	1027366	622318	21.15

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.22	22.72	23.72	23.23	0.05
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	-0.00
77 Perylene-d12	25.81	25.31	26.31	25.82	0.05

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

REVIEW SUMMARY FOR FILE - NT1706012329.D

Lab ID: BLE0148-MSD1
nt17.i, ABN.m, 02-JUN-2023 05:25

RT	CO-ELUTION COMPOUNDS
15.184	Acenaphthene-d10 and 3-Nitroaniline
28.449	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
28.449	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

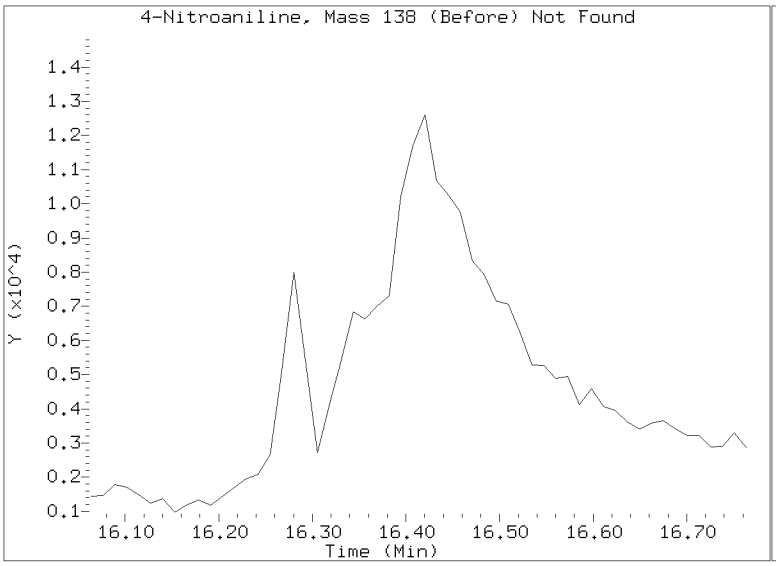
RRT check based on Ccal File: NT1706012320.D

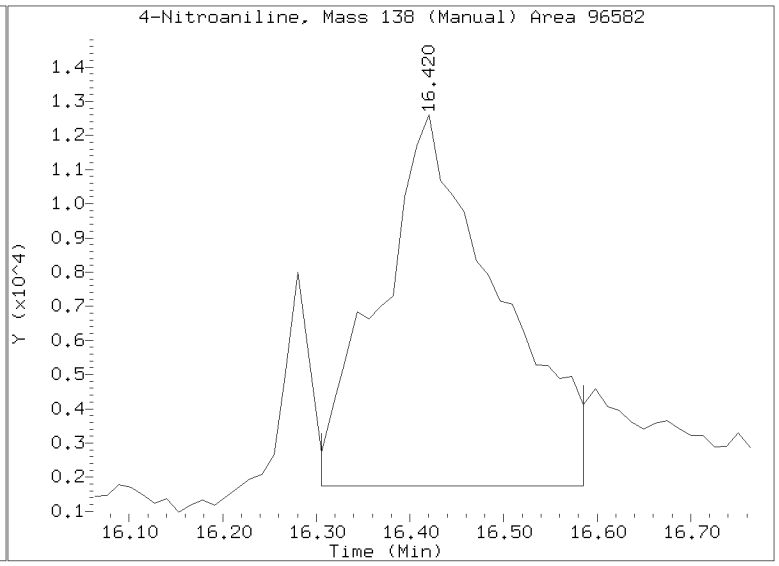
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

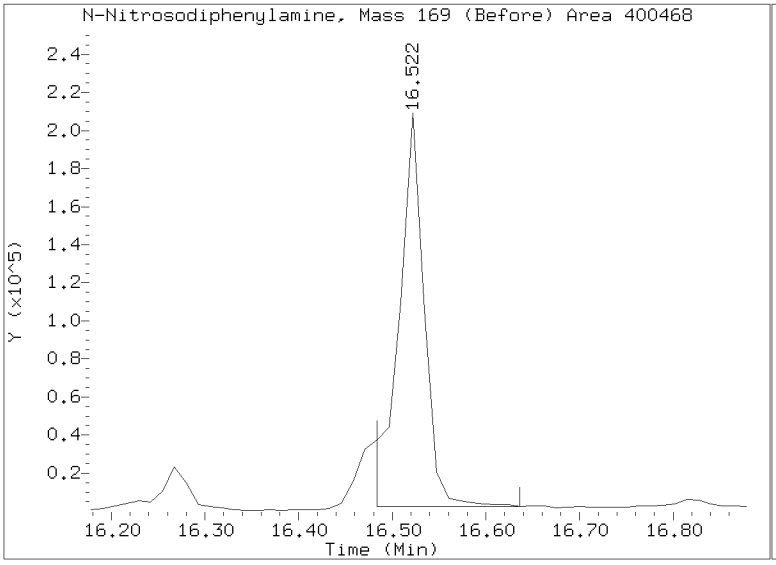
* Only compounds listed in the work order have been verified by the analyst *

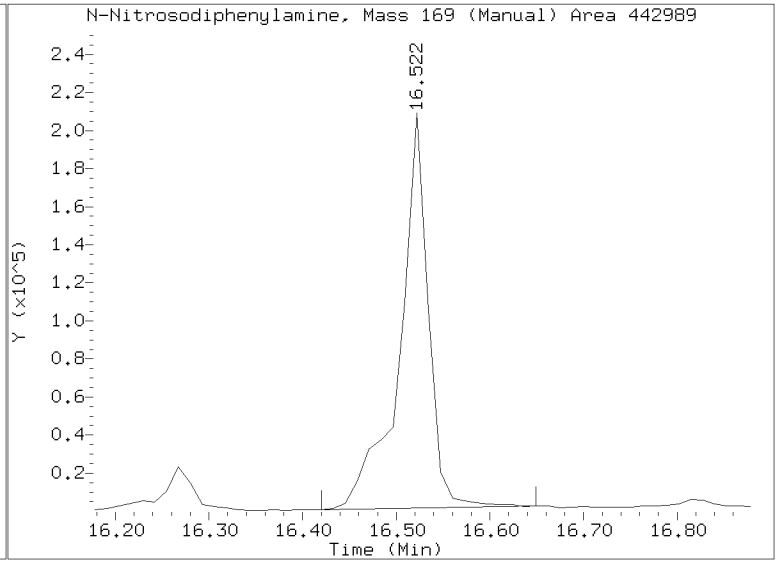
Quant Ion Manual Peak Adjustment Report

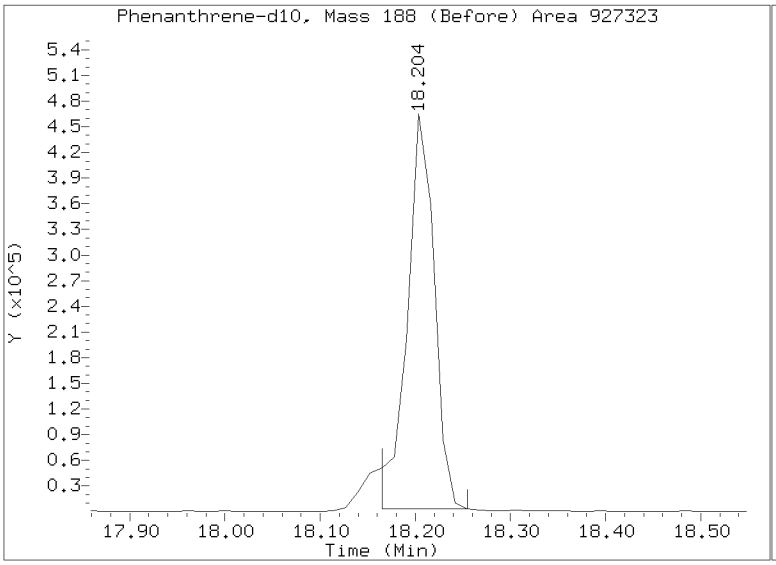
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012329.D
Injection Date: 02-JUN-2023 05:25
Lab ID:BLE0148-MSD1 Client ID:
Report Date: 06/03/2023 10:35

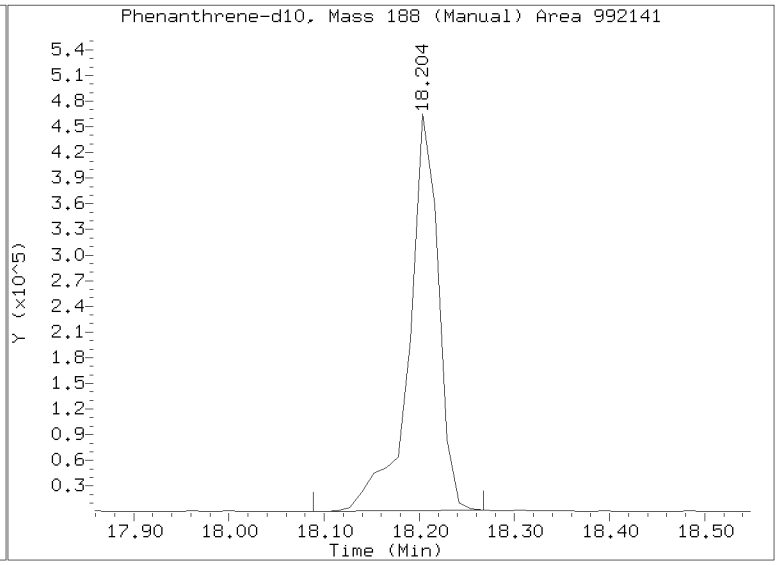






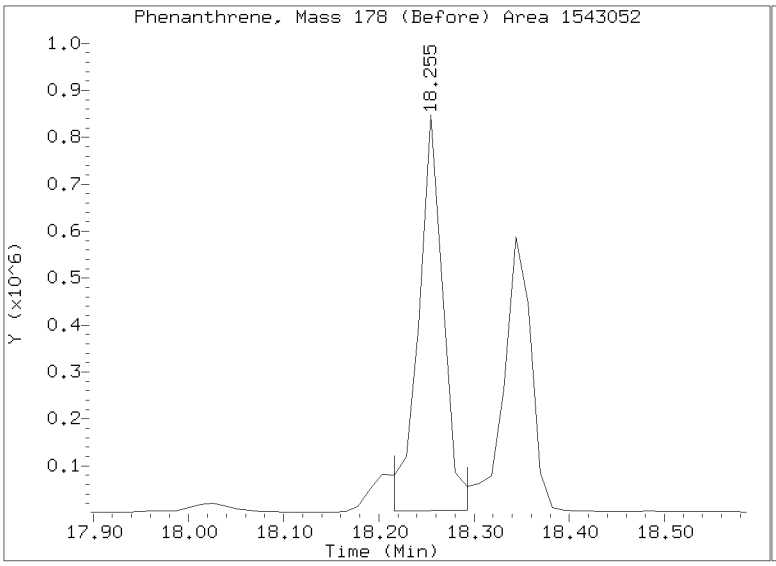


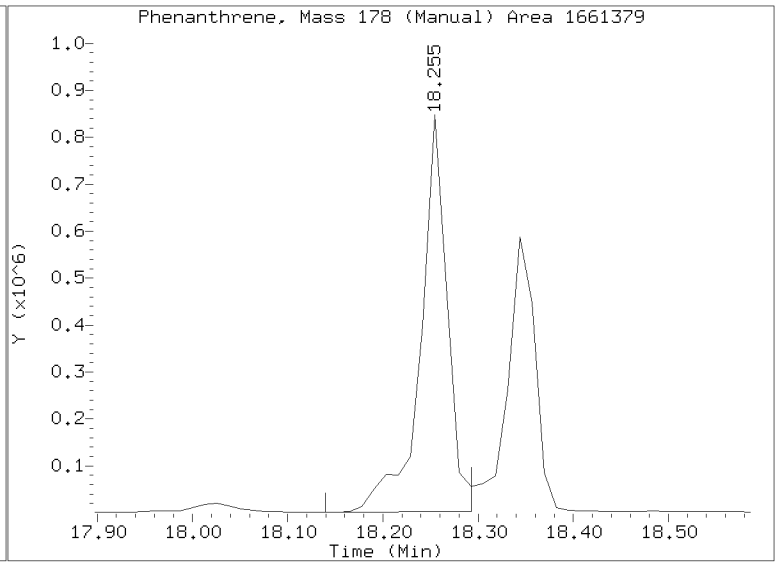


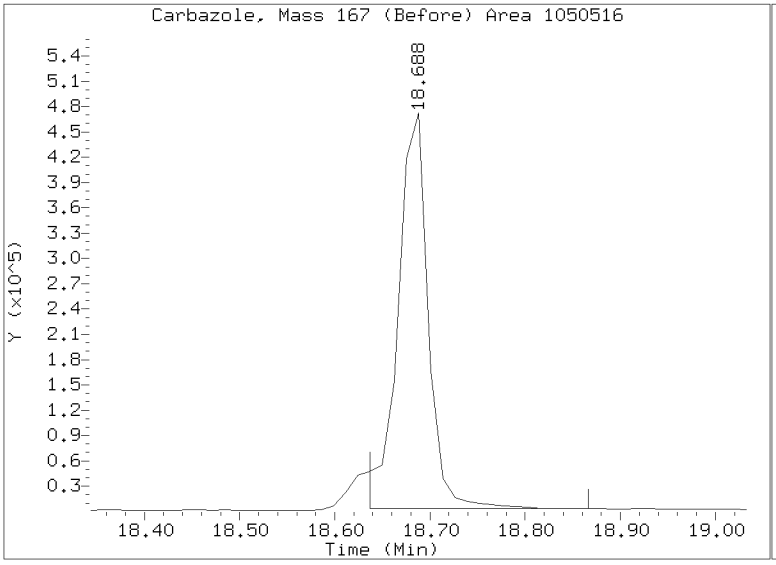


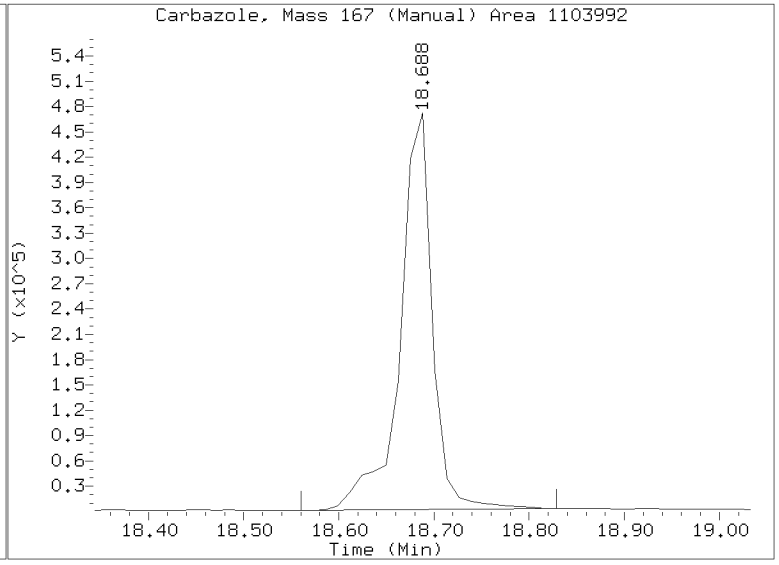
Quant Ion Manual Peak Adjustment Report

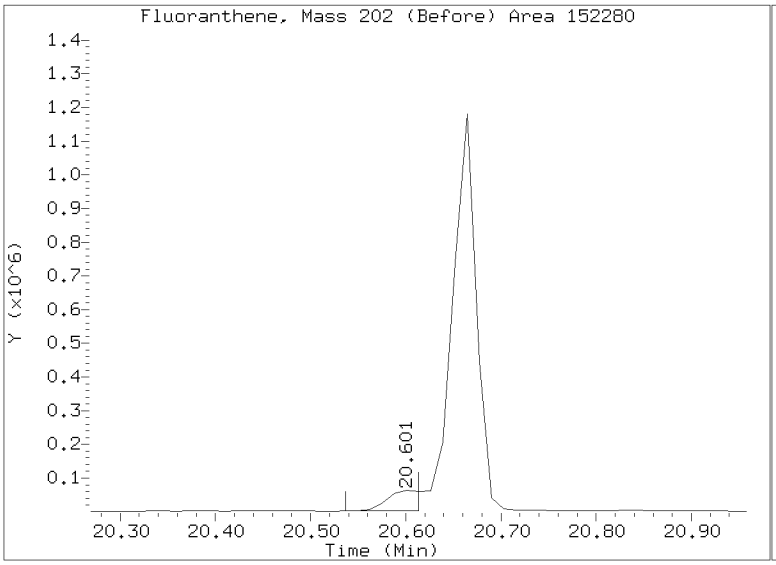
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012329.D
Injection Date: 02-JUN-2023 05:25
Lab ID:BLE0148-MSD1 Client ID:
Report Date: 06/03/2023 10:35

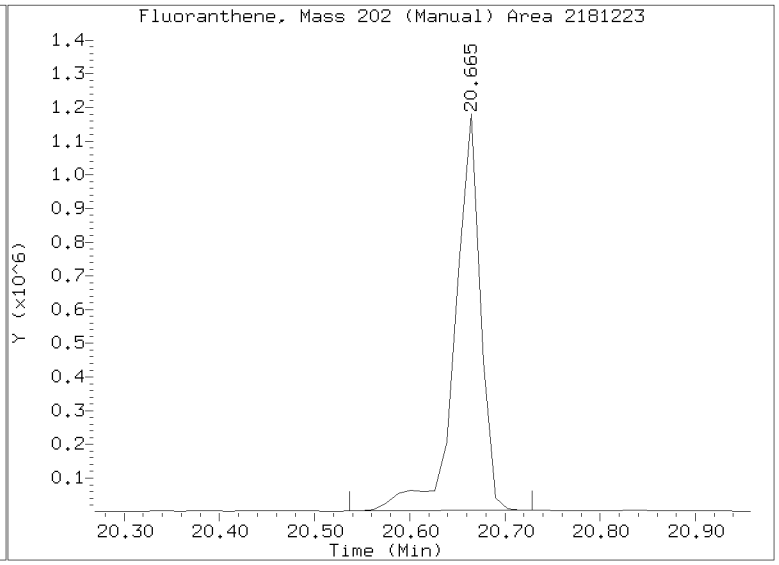






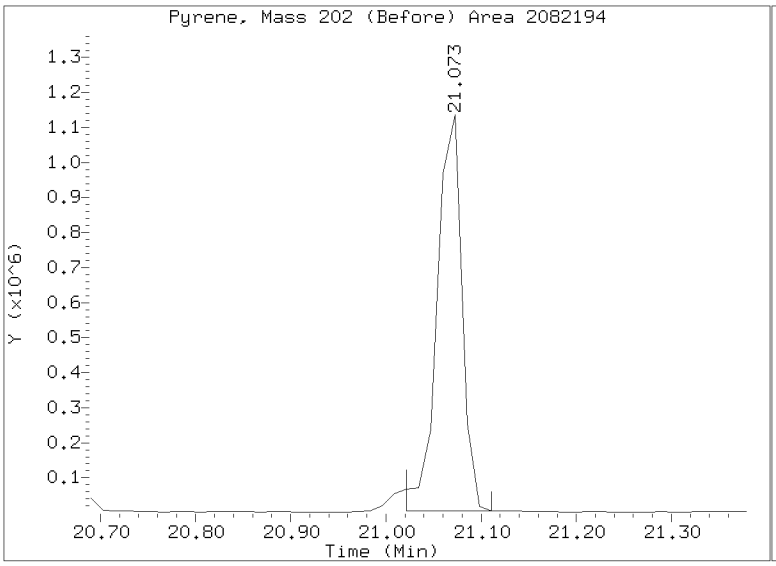


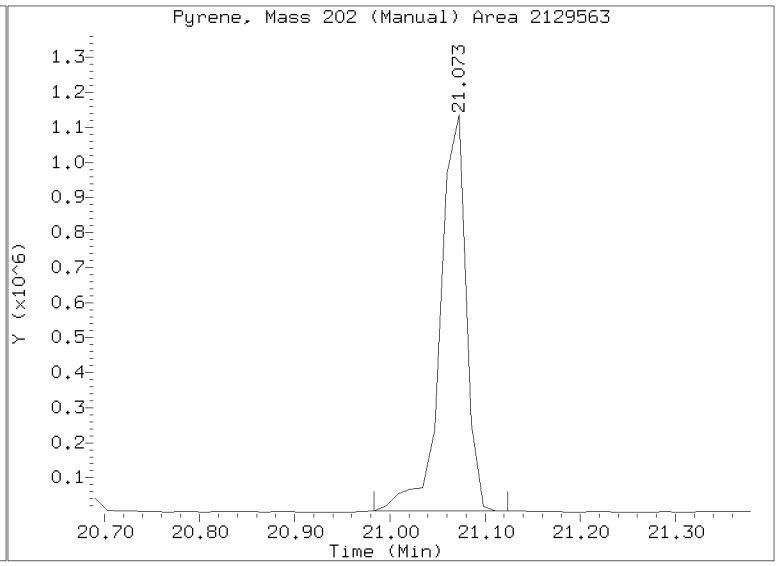


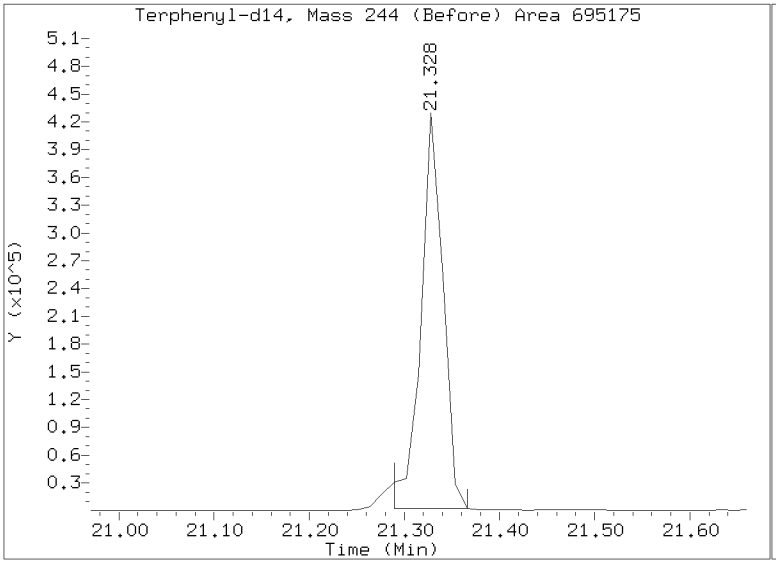


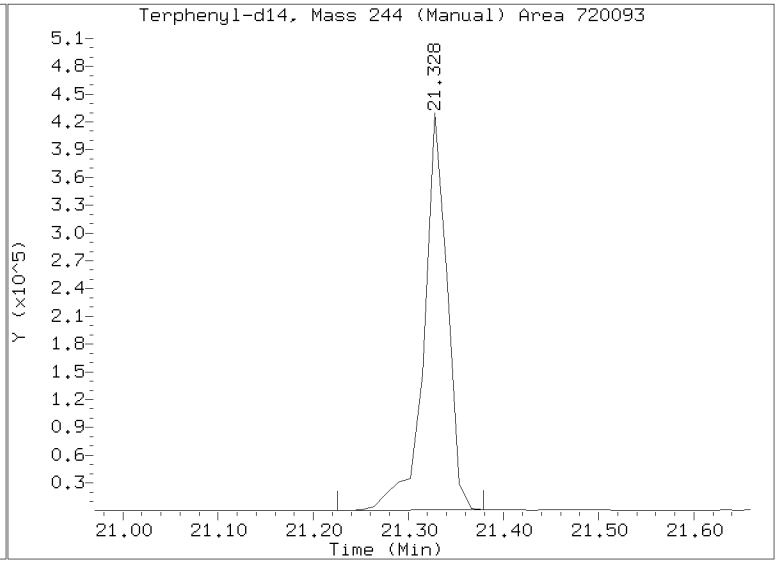
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012329.D
Injection Date: 02-JUN-2023 05:25
Lab ID:BLE0148-MSD1 Client ID:
Report Date: 06/03/2023 10:35









STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0148-SRM1
Batch: BLE0148
Initial/Final: 1 g / 1 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 06/02/2023 6:02
Standard ID: K003477
Expires: 01/31/2024
Standard Lot#: CRM 143 (LRAC8918)
Description: CRM 143 BNAs - Sandy Loam

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Phenol	2660.0	1910	43.9	200		71.7	26 - 174
4-Methylphenol	6617.0	5540	73.9	200		83.7	40 - 160
Naphthalene	4458.0	3070	42.4	200		68.9	25 - 175
Acenaphthylene	1948.0	1480	62.4	200		75.8	37 - 167
Dimethylphthalate	4537.0	4620	43.9	200		102	41 - 159
Acenaphthene	5489.0	4740	52.2	200		86.4	41 - 159
Dibenzofuran	6130.0	5650	141	200		92.2	45 - 155
Fluorene	3724.0	3550	146	200		95.3	44 - 156
Phenanthrene	5052.0	4440	87.2	200		88.0	46 - 154
Anthracene	2866.0	2030	71.9	200		70.7	42 - 158
Fluoranthene	2497.0	2210	60.9	200		88.5	39 - 161
Pyrene	2964.0	2820	56.8	200		95.2	38 - 162
Butylbenzylphthalate	3511.0	3550	94.1	200		101	36 - 164
Benzo(a)anthracene	5751.0	5350	59.6	200		93.1	49 - 151
Chrysene	1477.0	1330	60.6	200		89.7	45 - 155
bis(2-Ethylhexyl)phthalate	2905.0	1210	54.6	500		41.7	26 - 174
Benzofluoranthenes, Total	6534.0	5170	100	400		79.1	40 - 160
Benzo(a)pyrene	5902.0	4350	42.3	200		73.7	43 - 157
Indeno(1,2,3-cd)pyrene	3914.0	3400	147	200		86.8	22 - 178
Dibenzo(a,h)anthracene	3420.0	3200	172	200		93.6	37 - 163
Benzo(g,h,i)perylene	1380.0	1060	136	200	Q	76.7	35 - 165

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

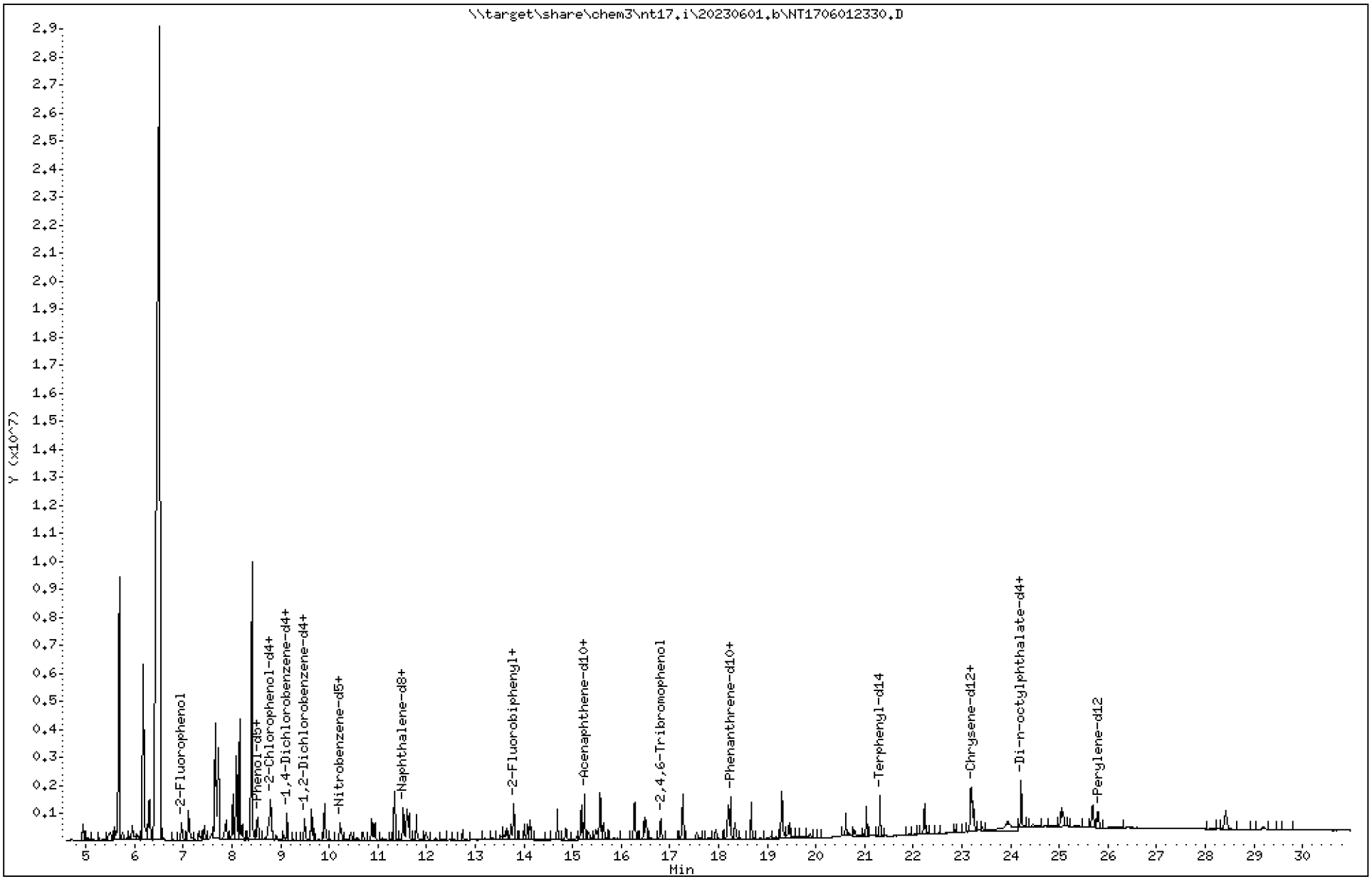
Instrument: nt17.i

Sample Info: BLE0148-SRM1

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

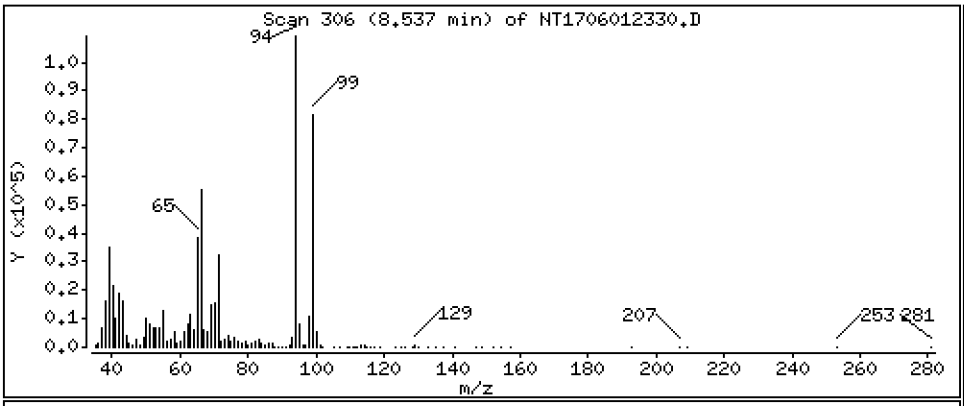
Operator: VTS

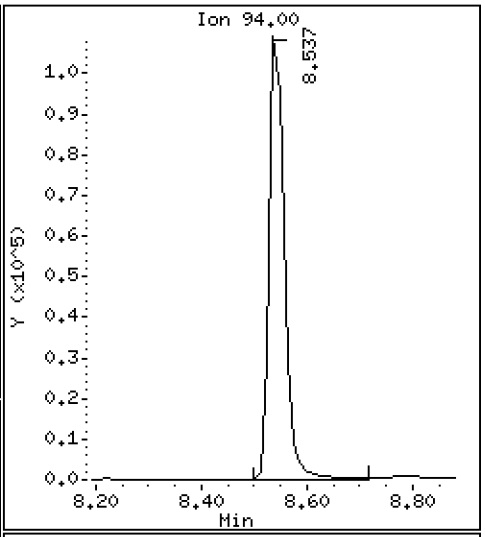
Column phase: ZB-5msi

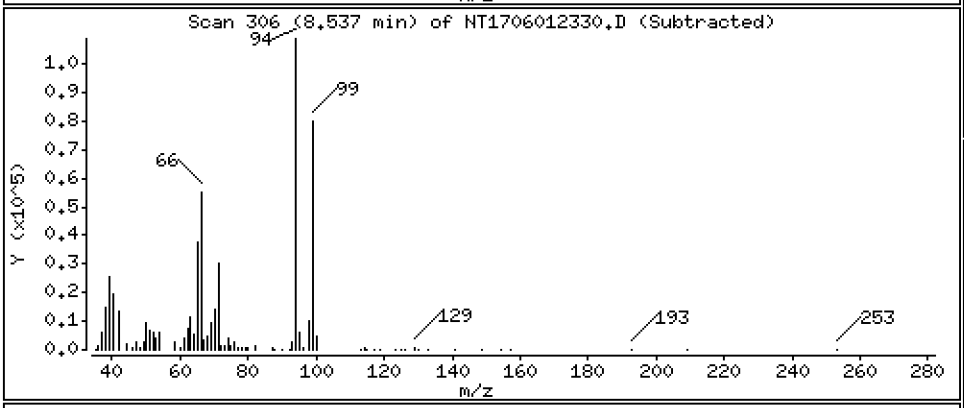
Column diameter: 0.25

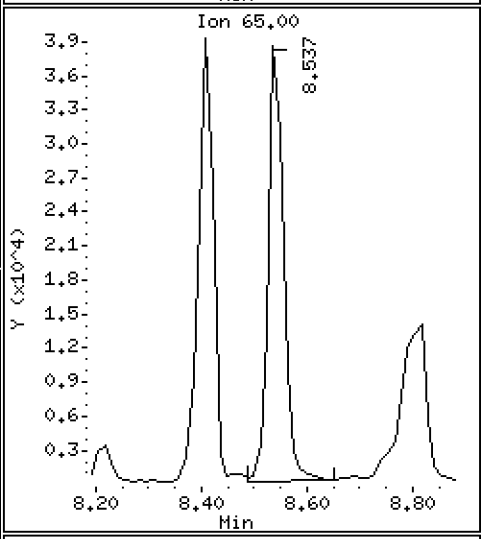
3 Phenol

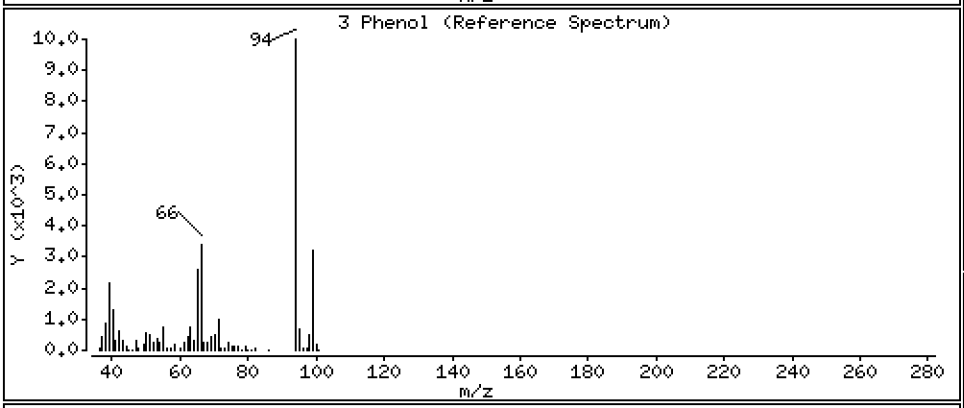
Concentration: 1.907 ug/mL

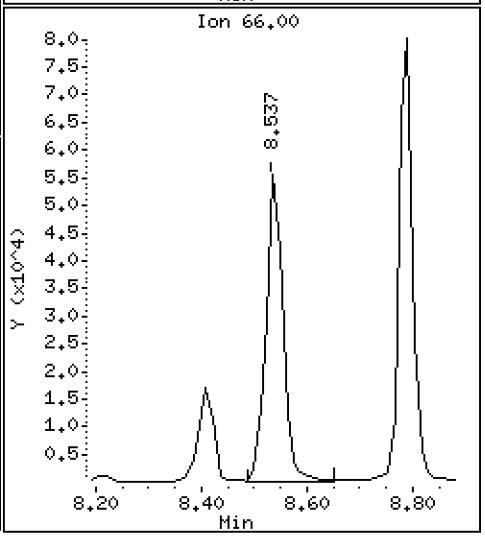


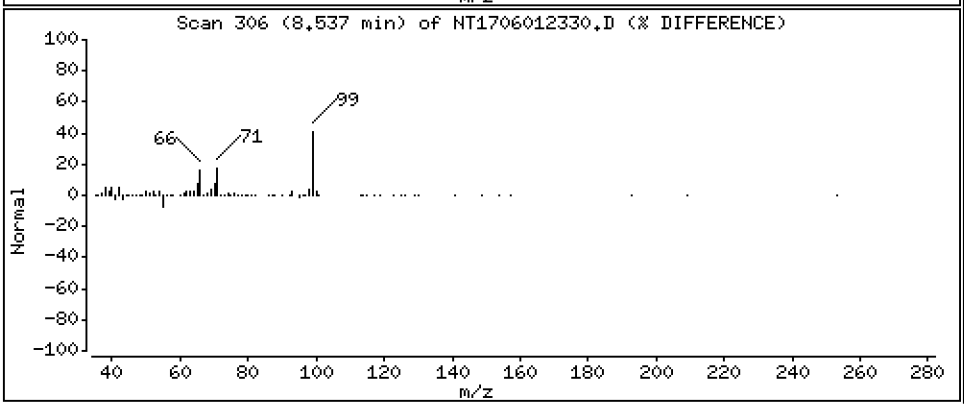












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

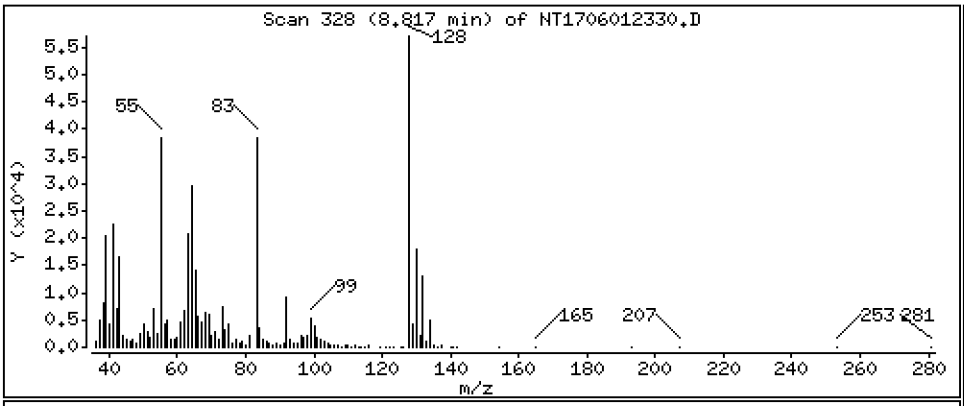
Operator: VTS

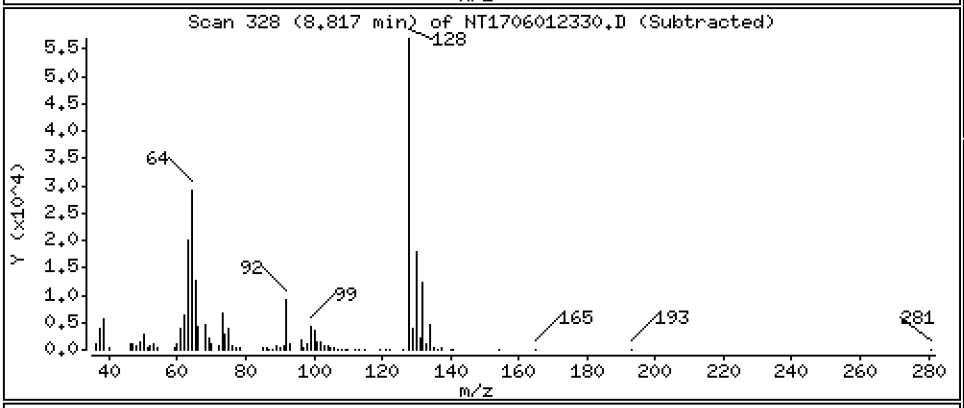
Column phase: ZB-5msi

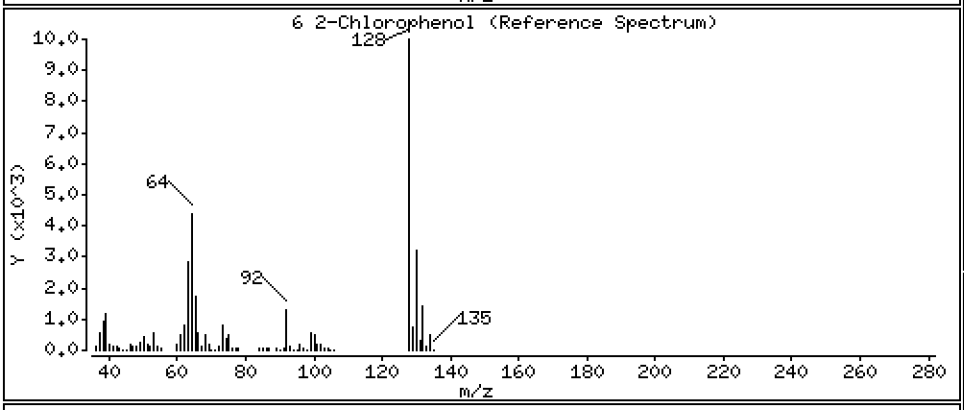
Column diameter: 0.25

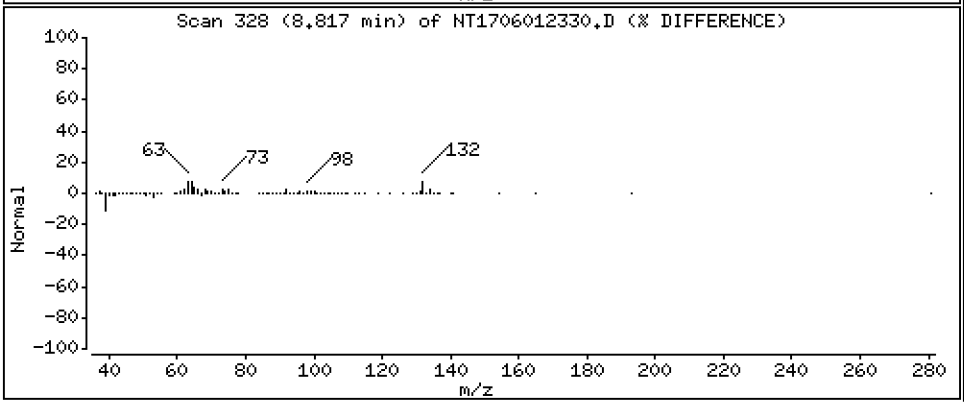
6 2-Chlorophenol

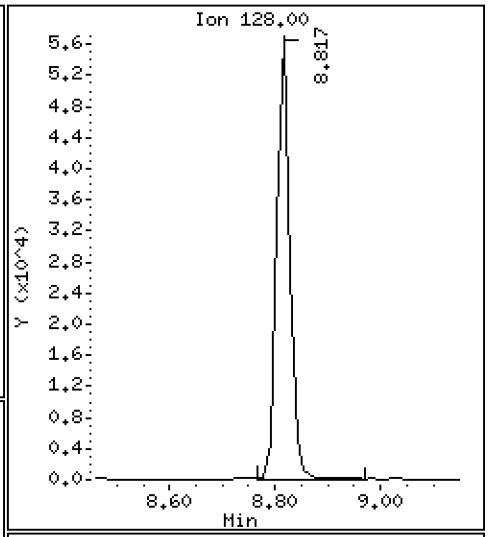
Concentration: 1.188 ug/mL

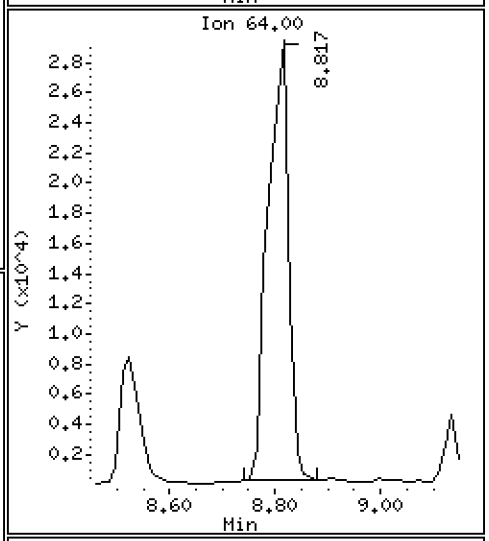


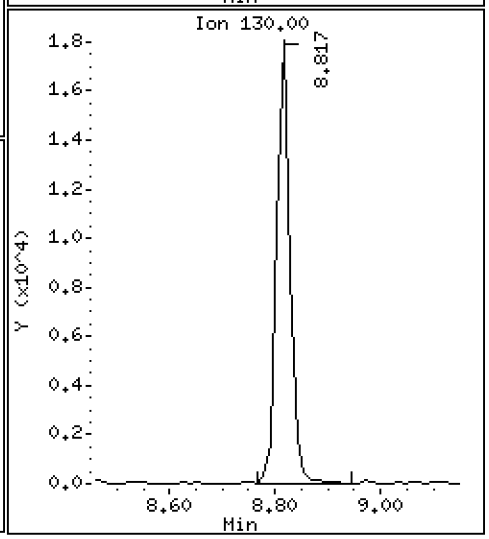












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

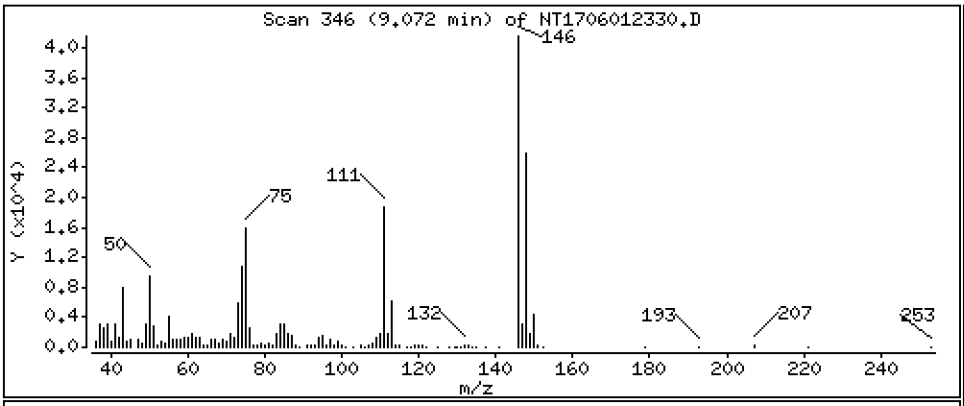
Operator: VTS

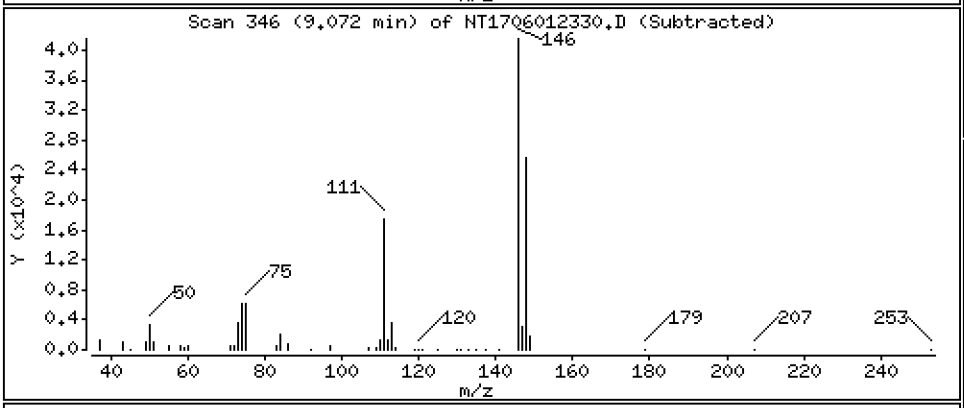
Column phase: ZB-5msi

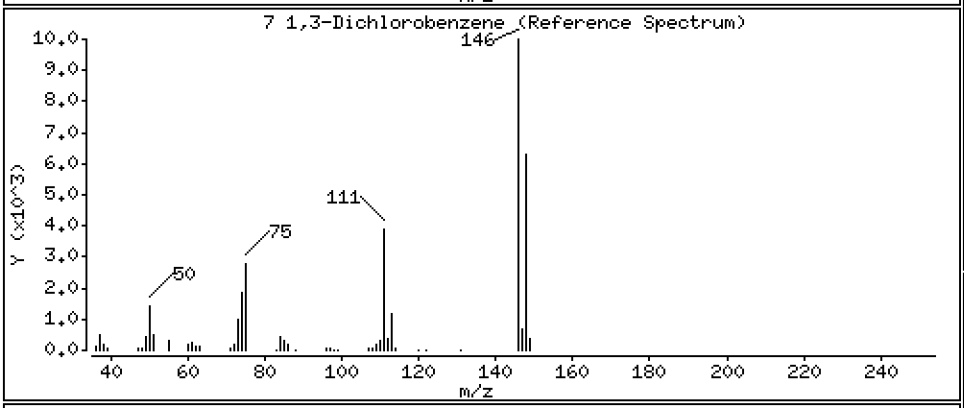
Column diameter: 0.25

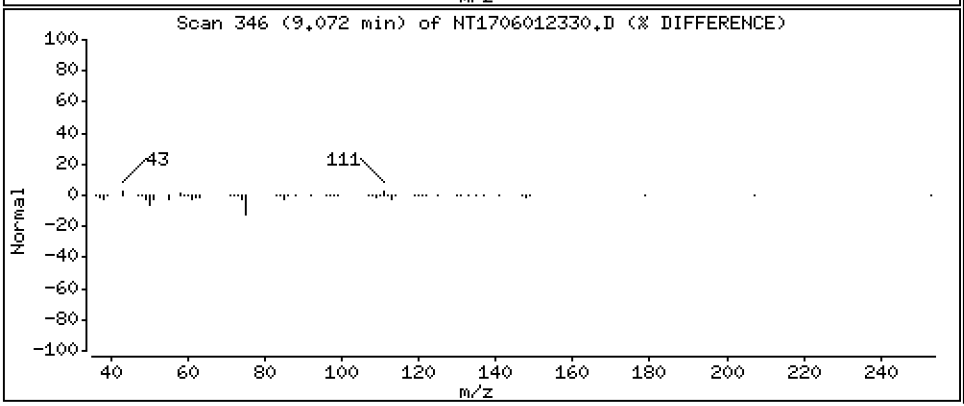
7 1,3-Dichlorobenzene

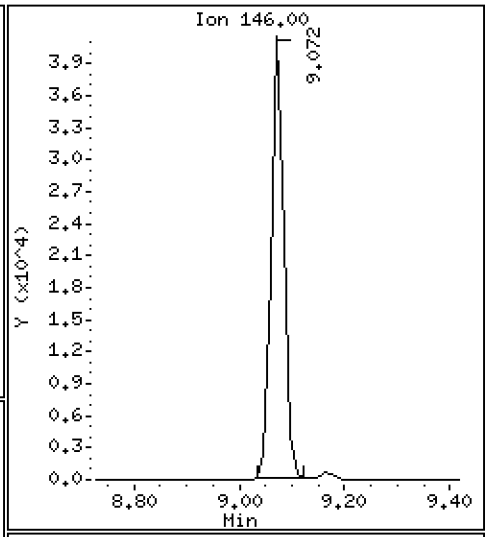
Concentration: 0.7141 ug/mL

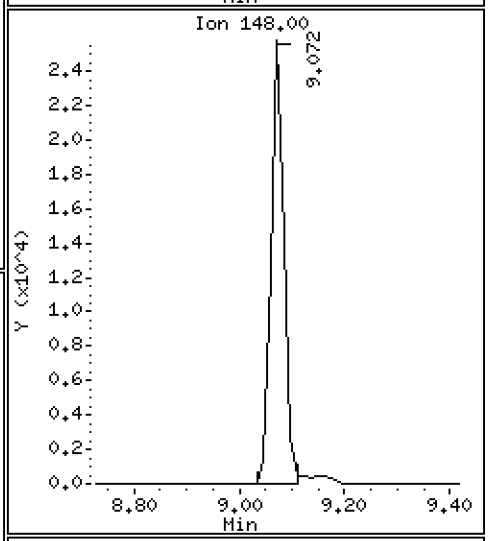


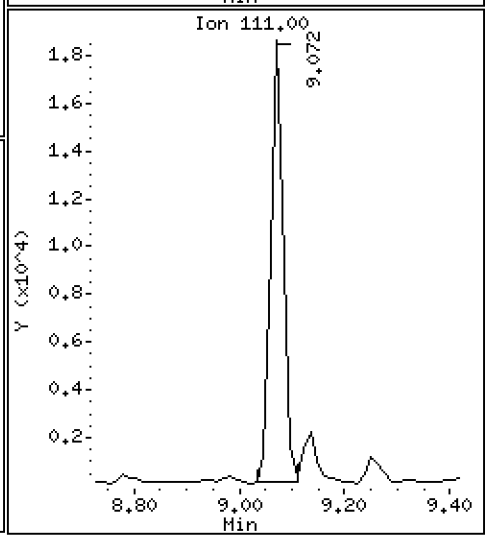












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

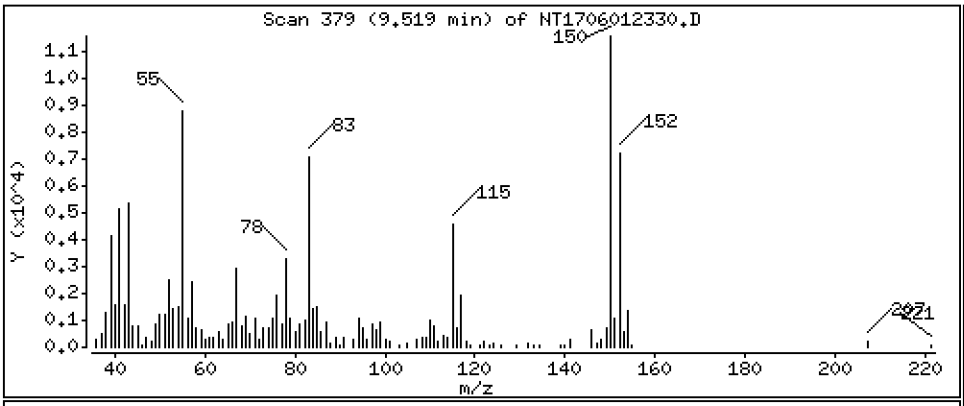
Operator: VTS

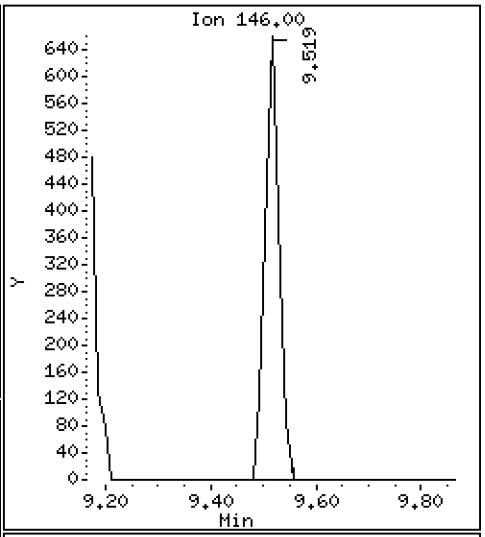
Column phase: ZB-5msi

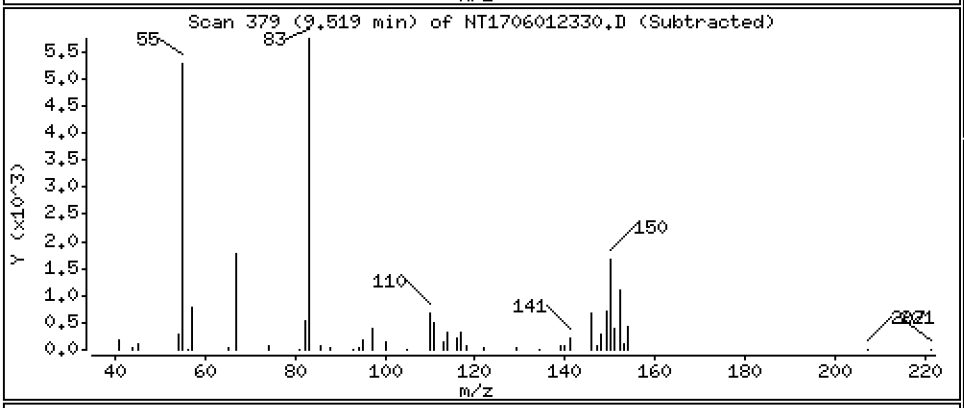
Column diameter: 0.25

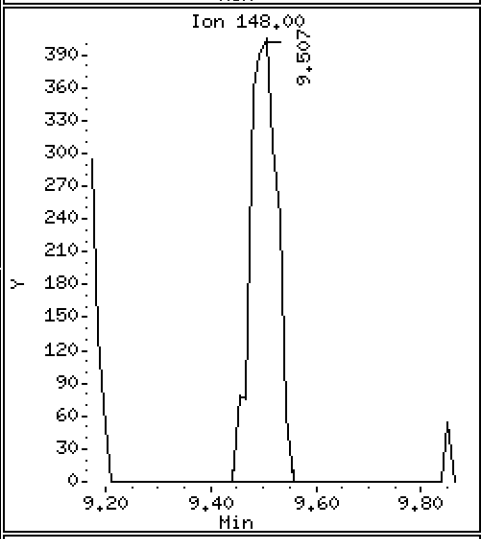
12 1,2-Dichlorobenzene

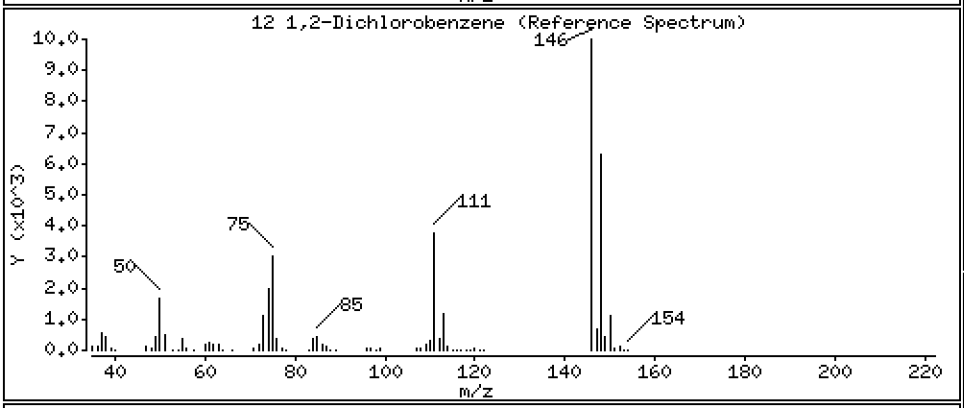
Concentration: 0.01378 ug/mL

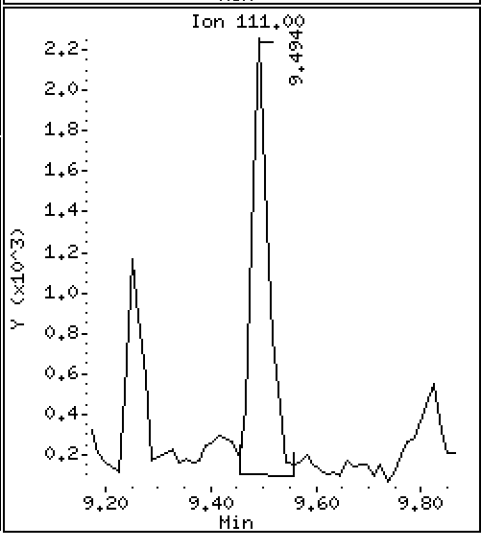


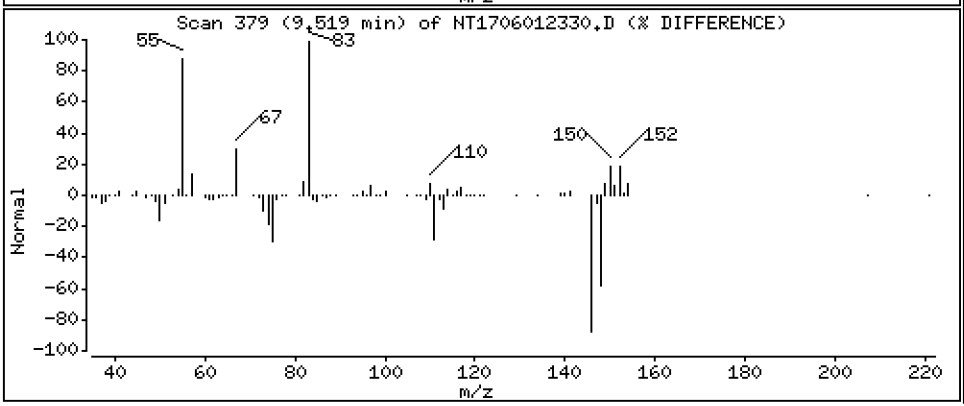












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

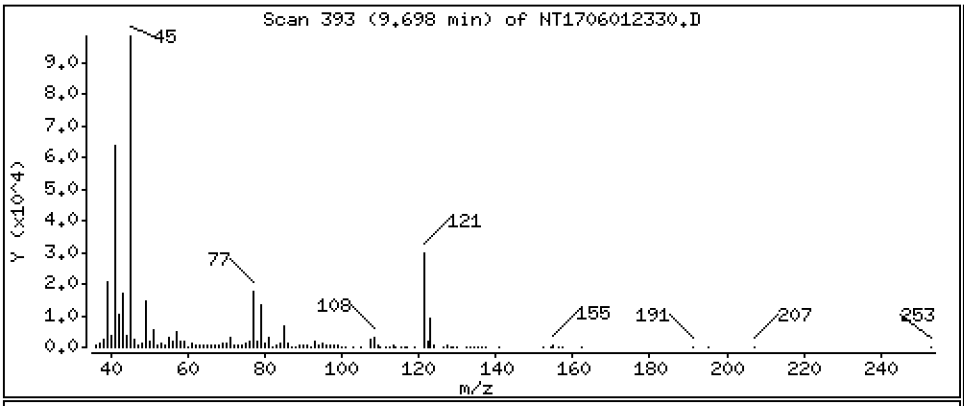
Operator: VTS

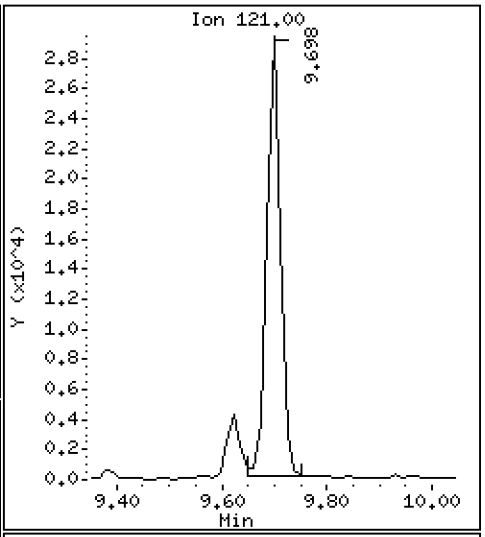
Column phase: ZB-5msi

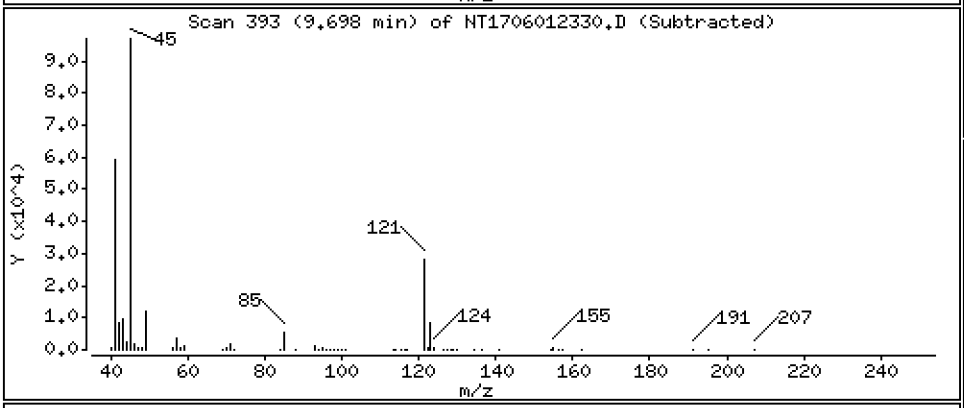
Column diameter: 0.25

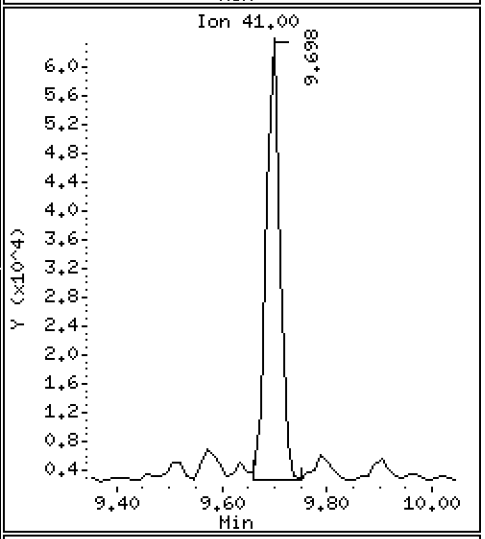
14 2,2'-oxybis(1-Chloropropane)

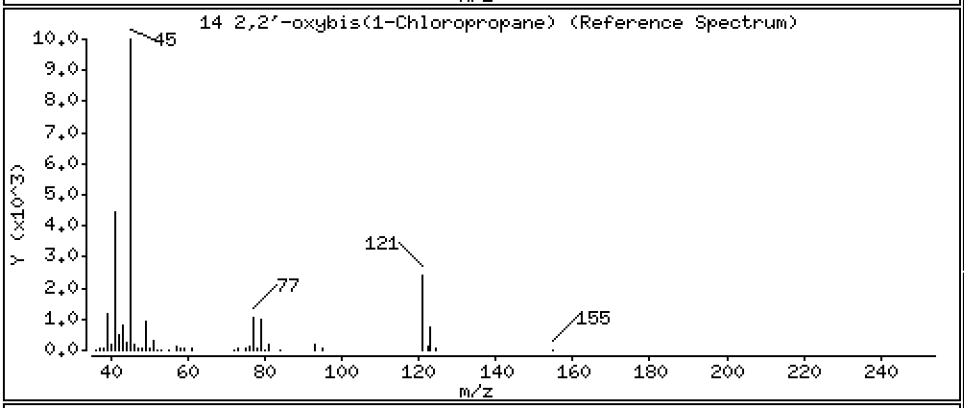
Concentration: 2.091 ug/mL

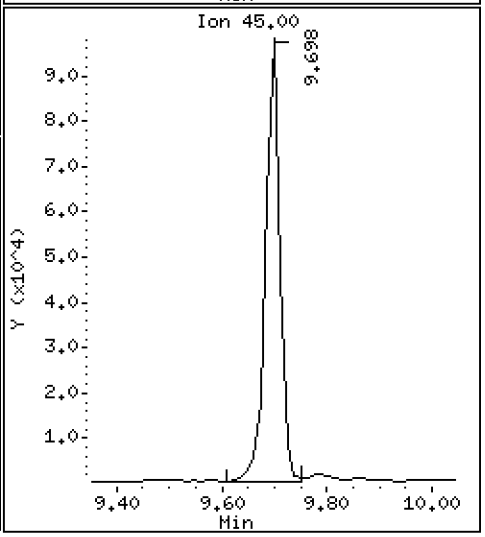


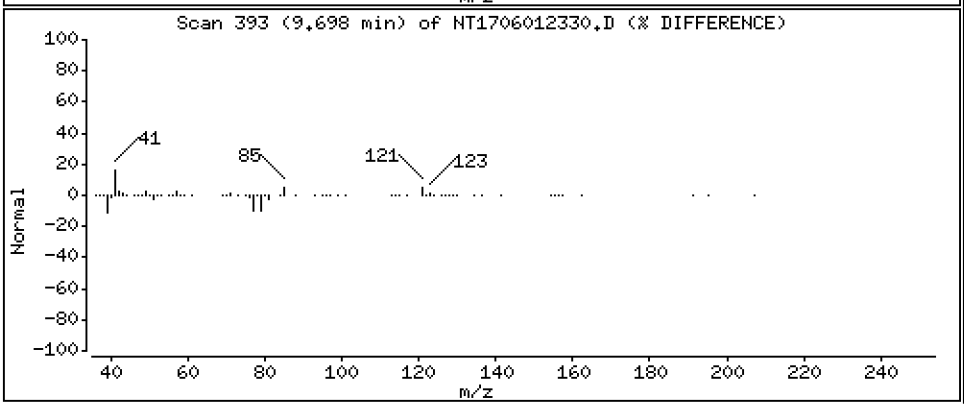












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

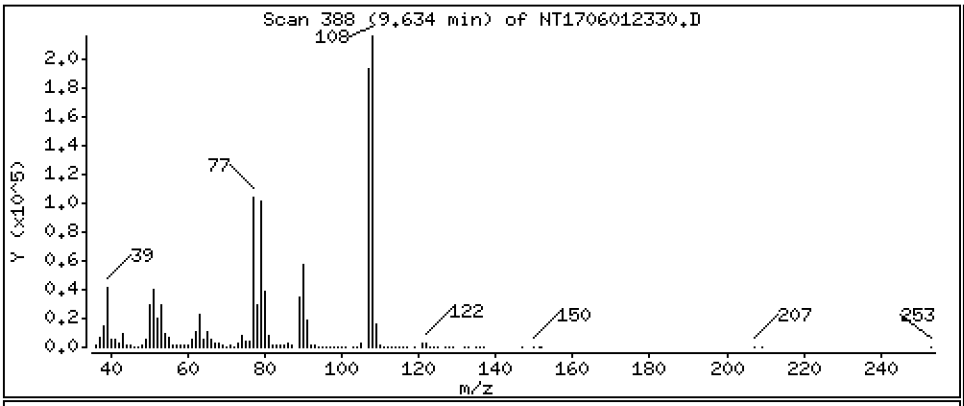
Operator: VTS

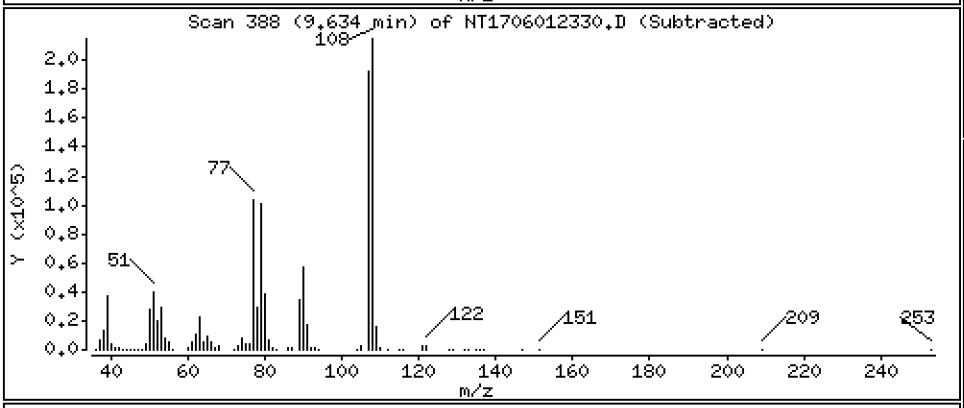
Column phase: ZB-5msi

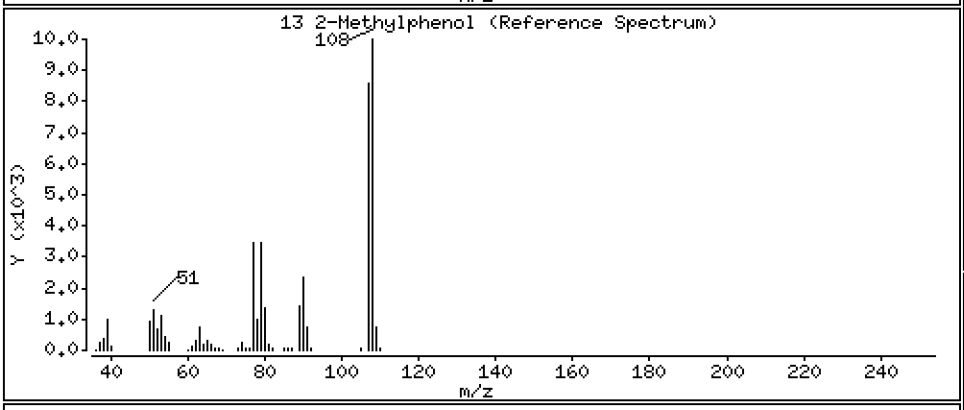
Column diameter: 0.25

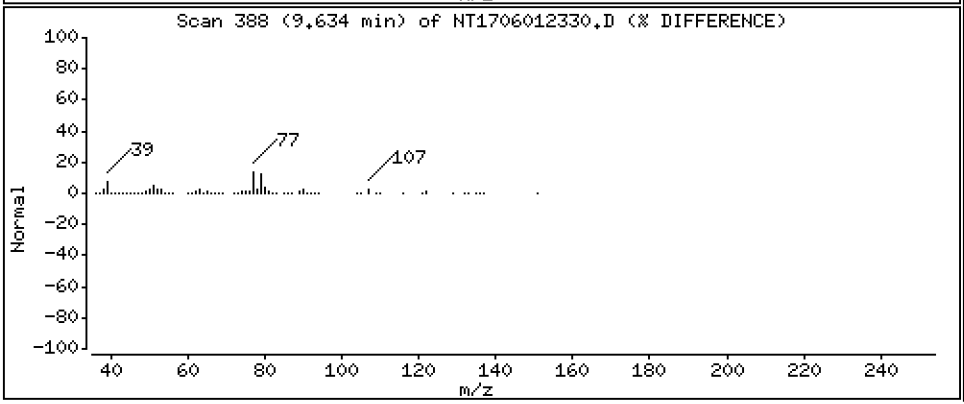
13 2-Methylphenol

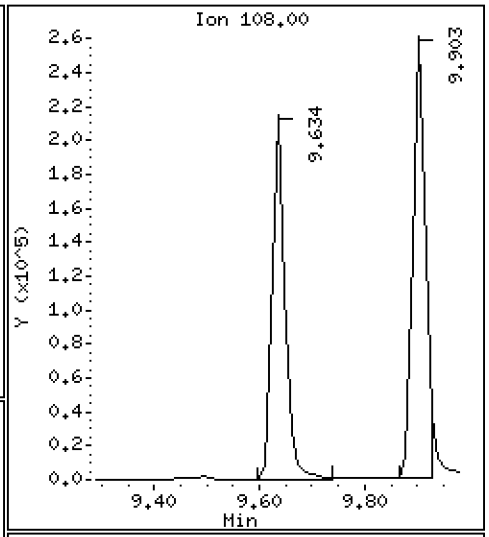
Concentration: 4.349 ug/mL

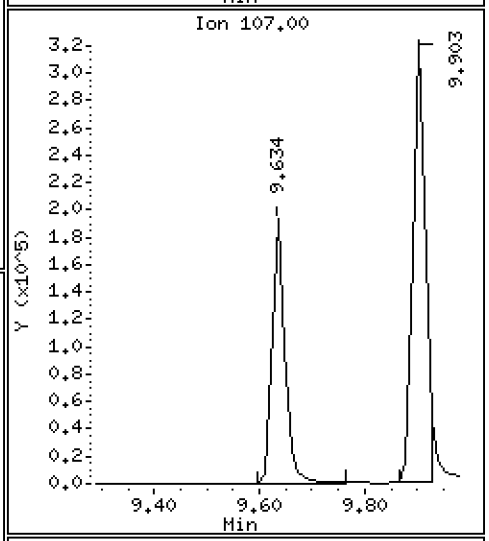


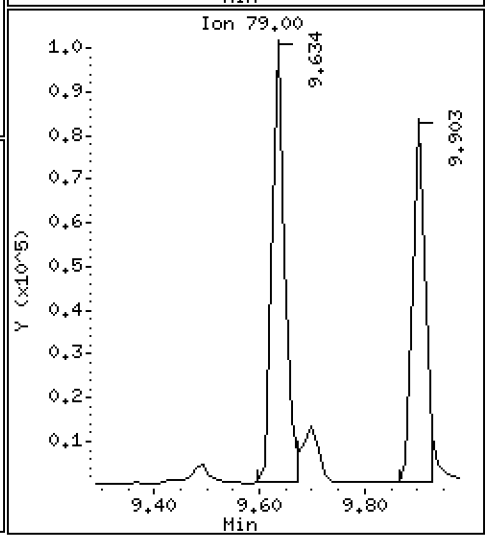












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

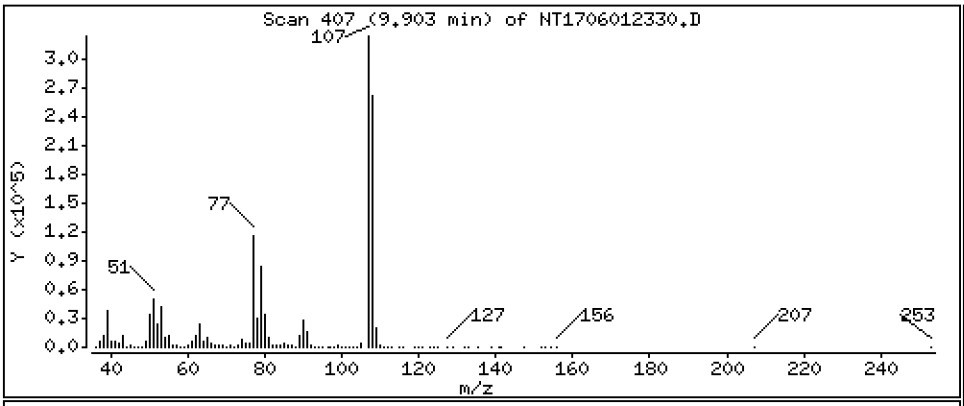
Operator: VTS

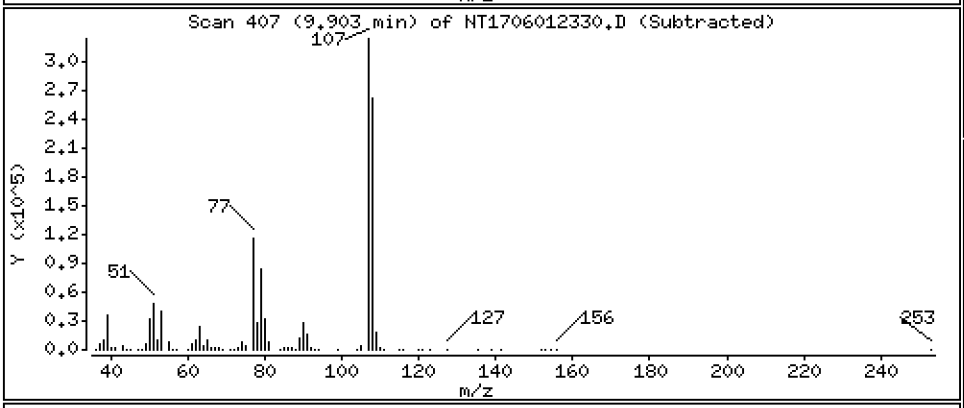
Column phase: ZB-5msi

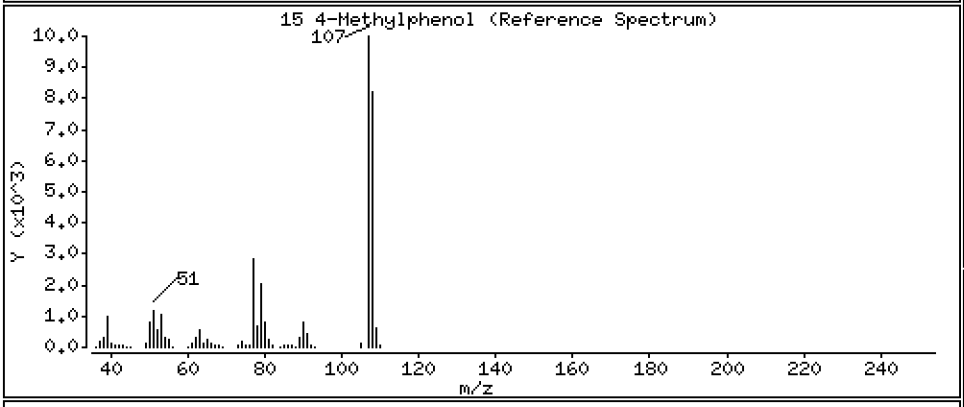
Column diameter: 0.25

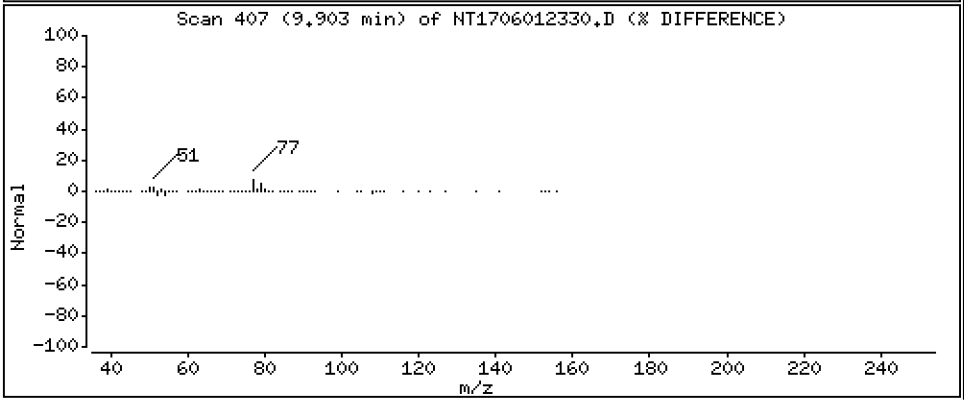
15 4-Methylphenol

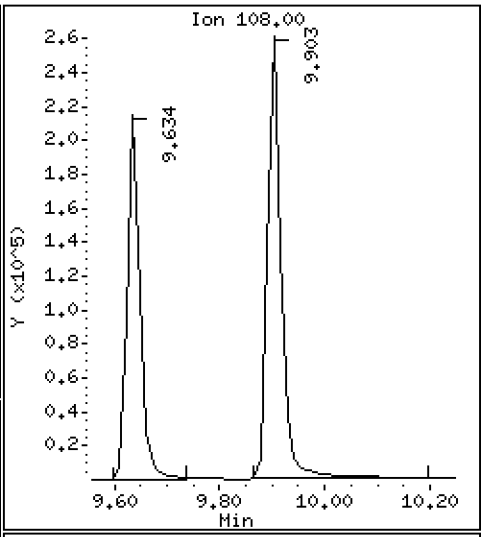
Concentration: 5.537 ug/mL

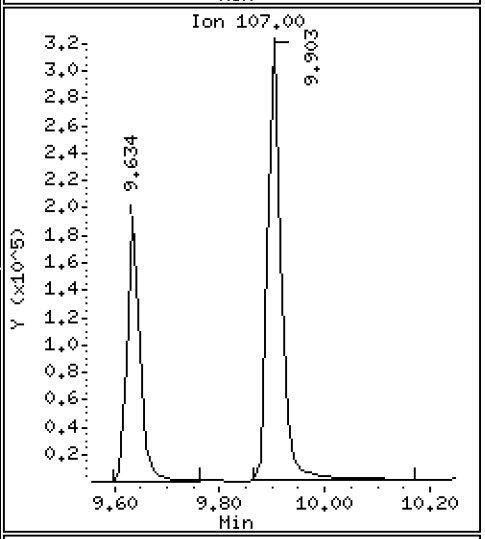


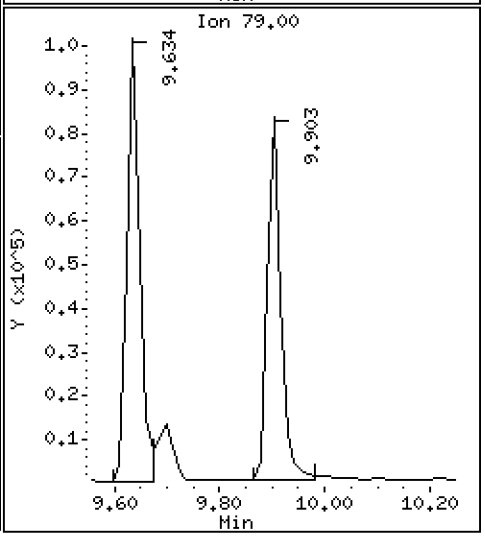












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

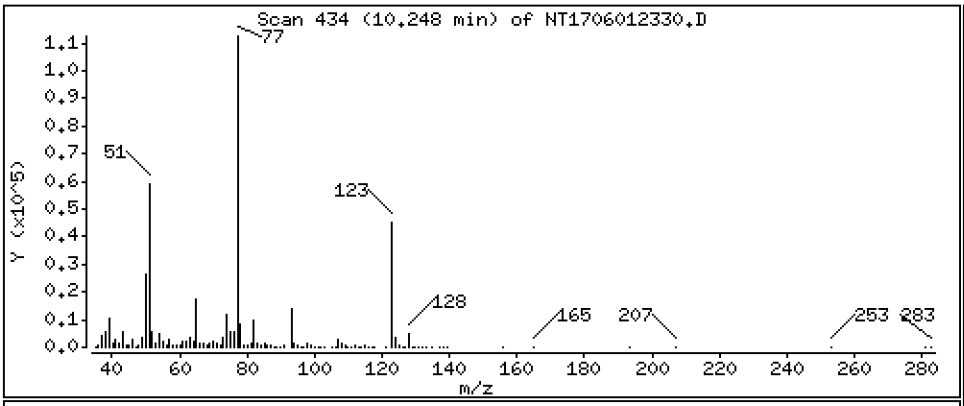
Operator: VTS

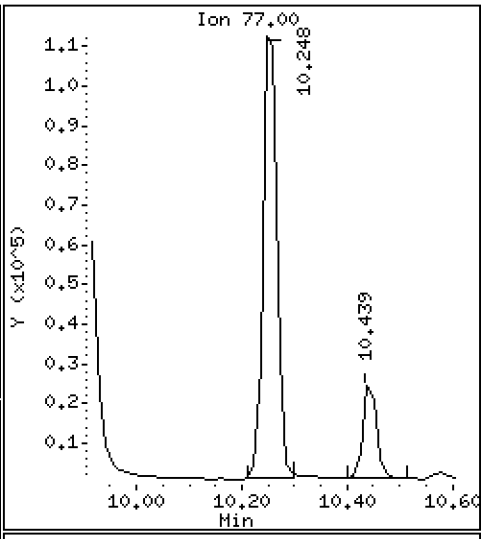
Column phase: ZB-5msi

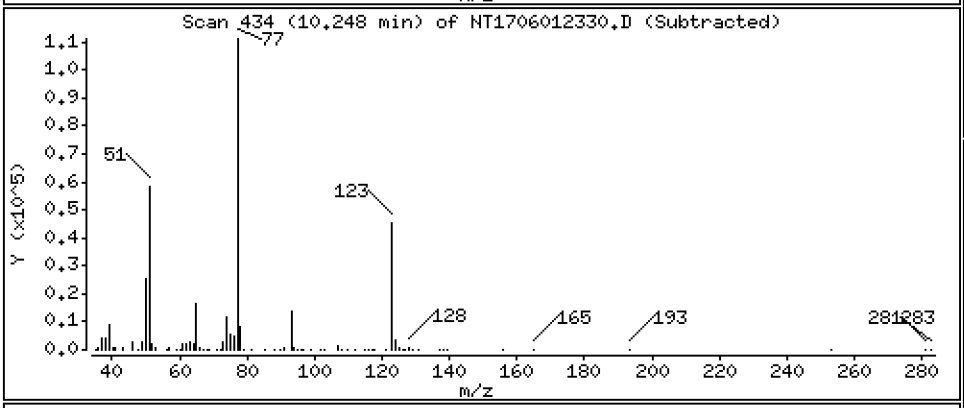
Column diameter: 0.25

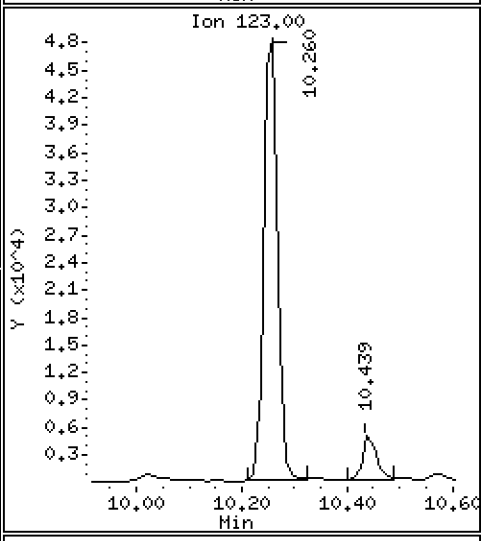
19 Nitrobenzene

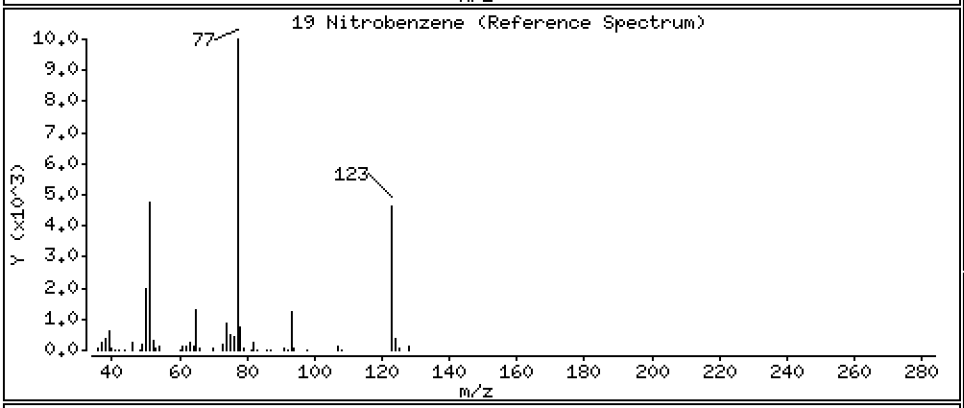
Concentration: 2.216 ug/mL

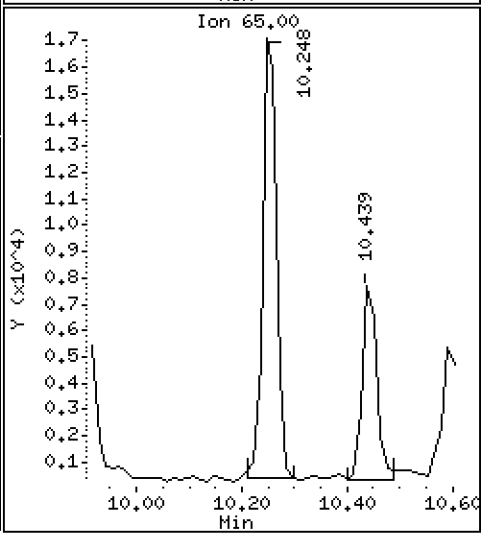


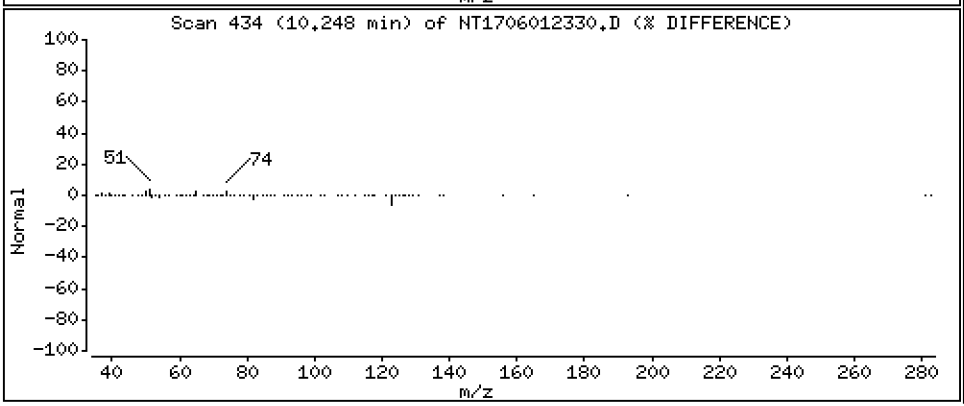












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

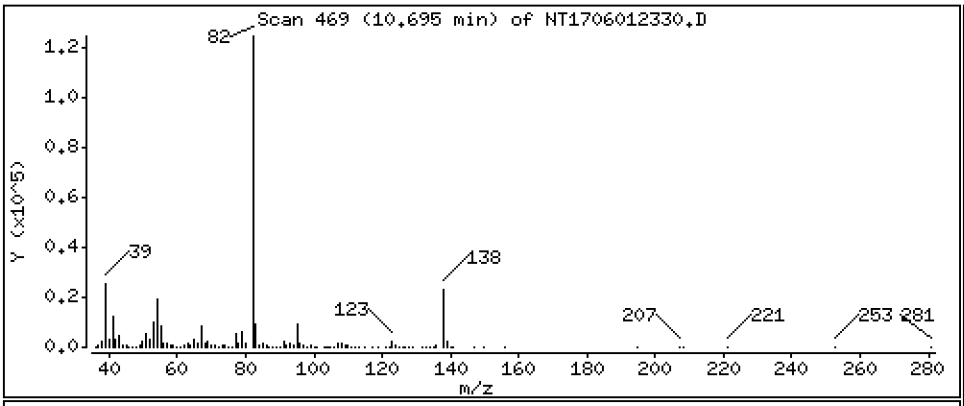
Operator: VTS

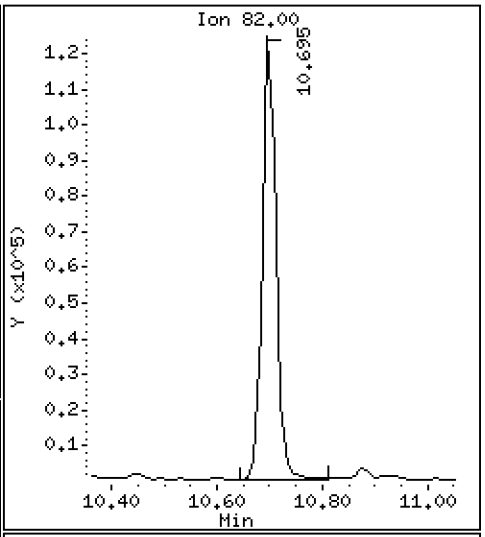
Column phase: ZB-5msi

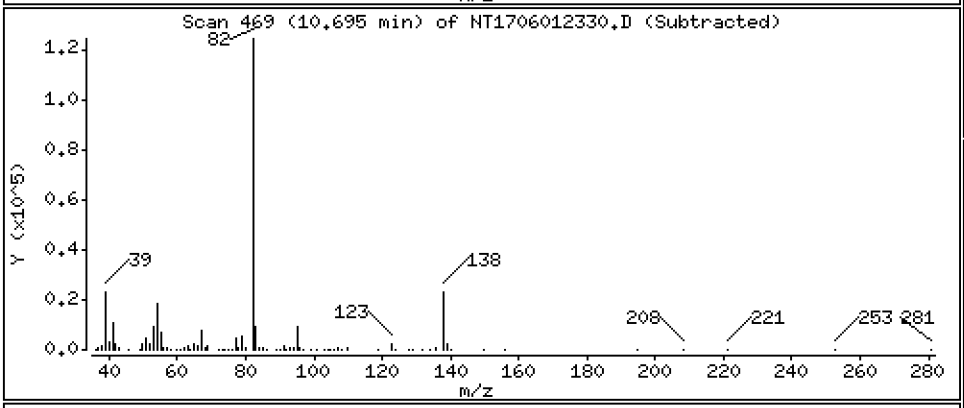
Column diameter: 0.25

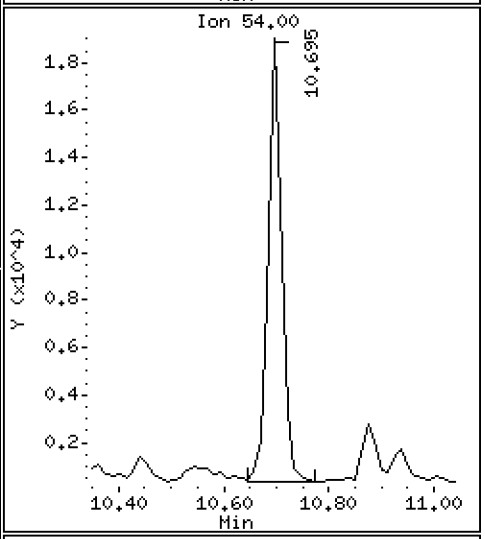
20 Isophorone

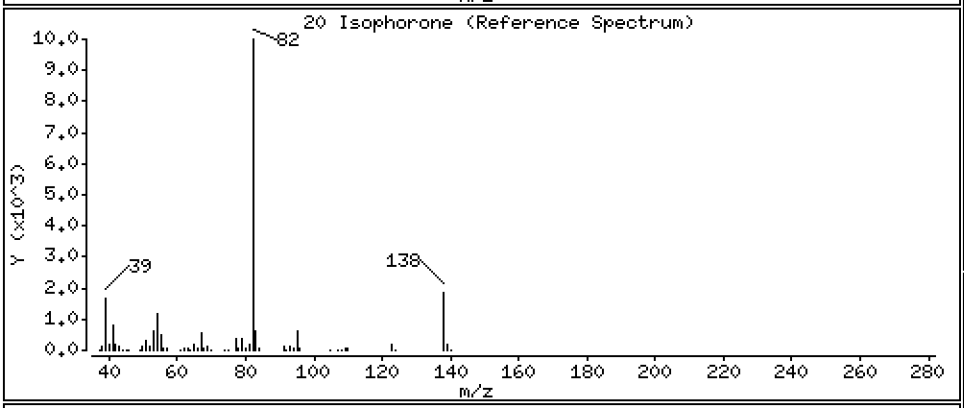
Concentration: 1.970 ug/mL

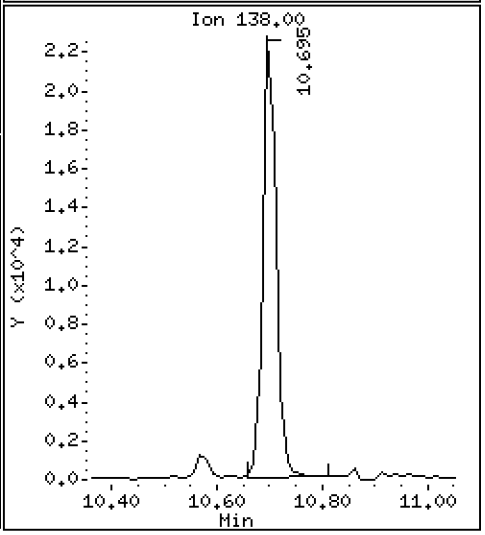


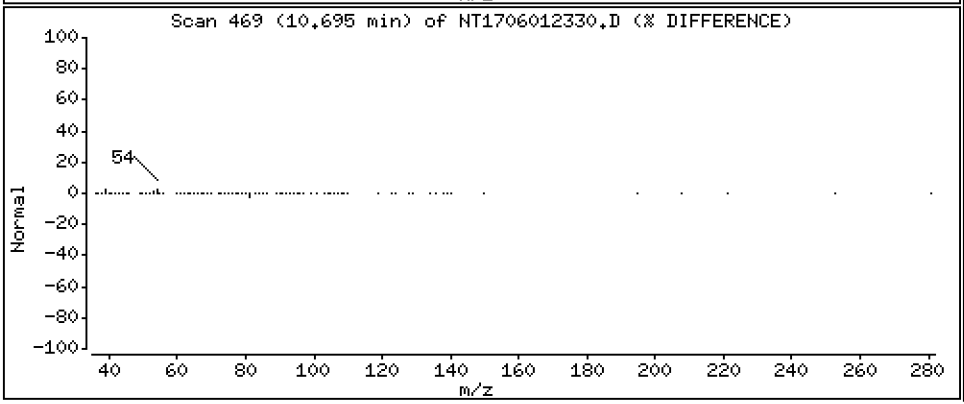












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

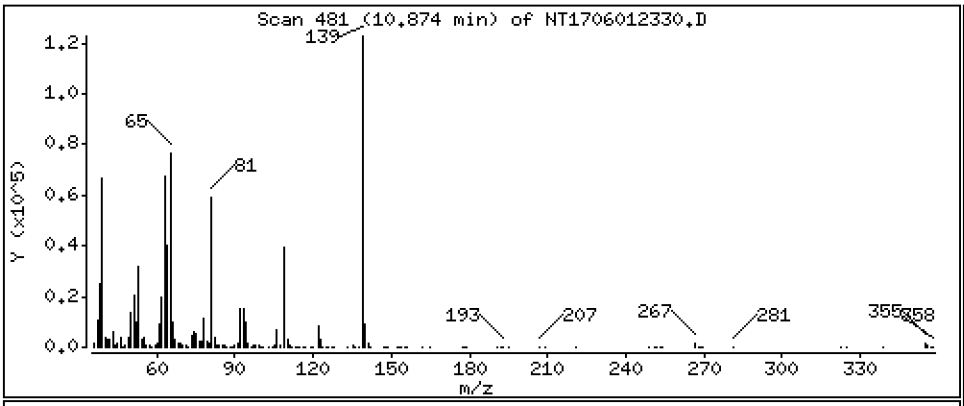
Operator: VTS

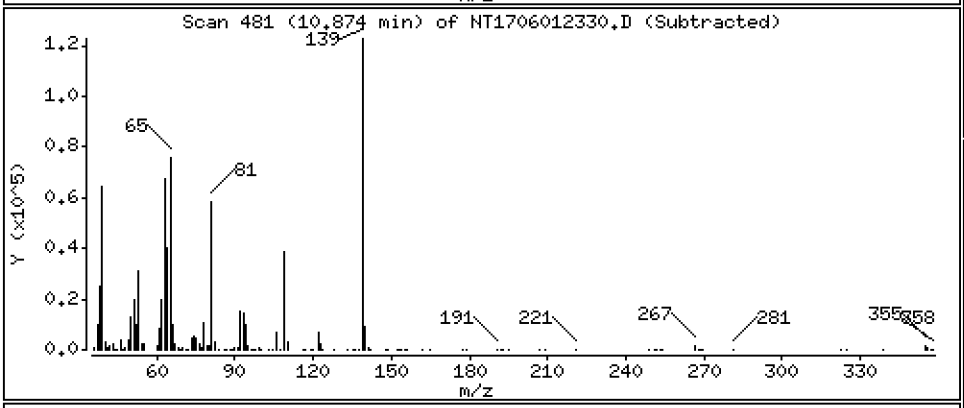
Column phase: ZB-5msi

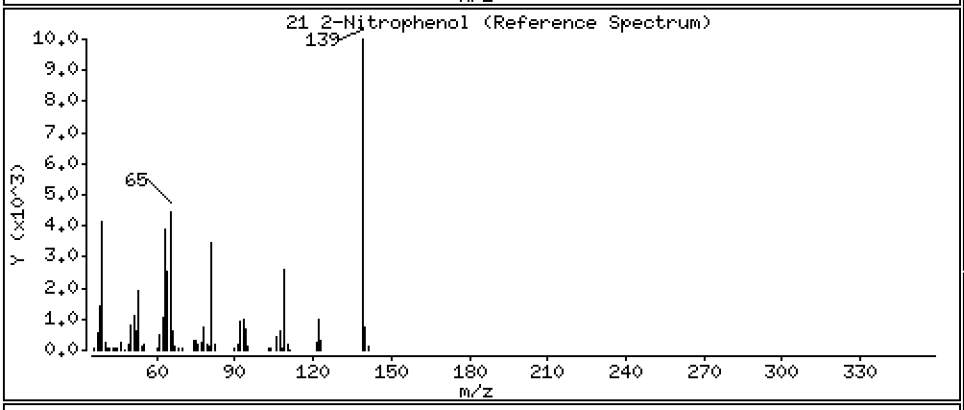
Column diameter: 0.25

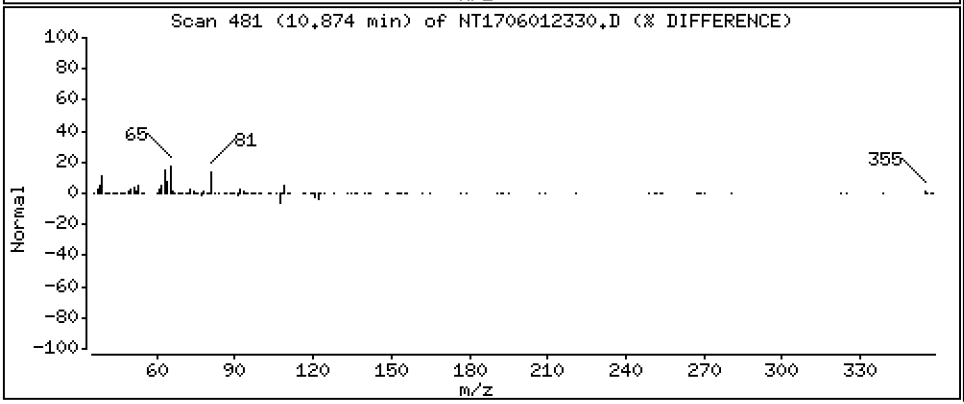
21 2-Nitrophenol

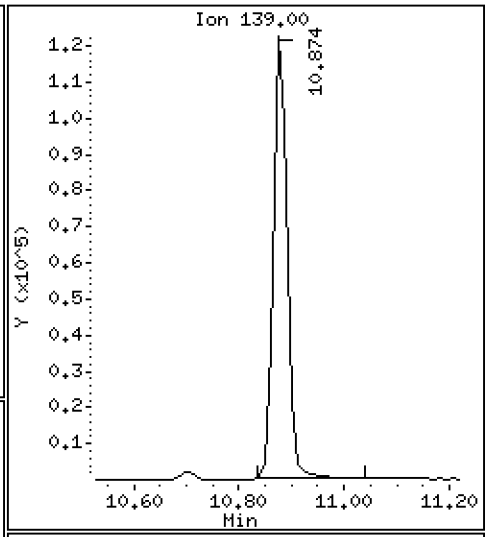
Concentration: 4.698 ug/mL

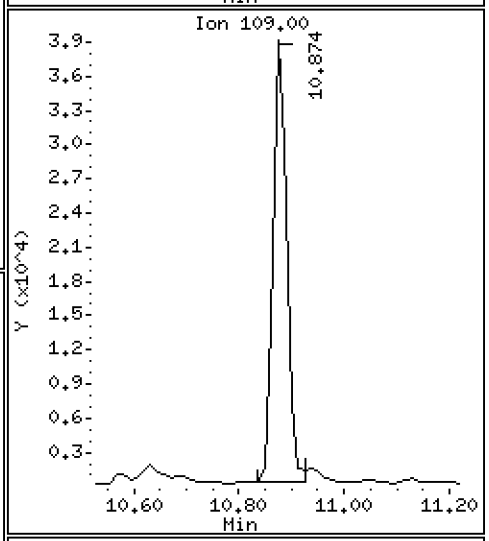


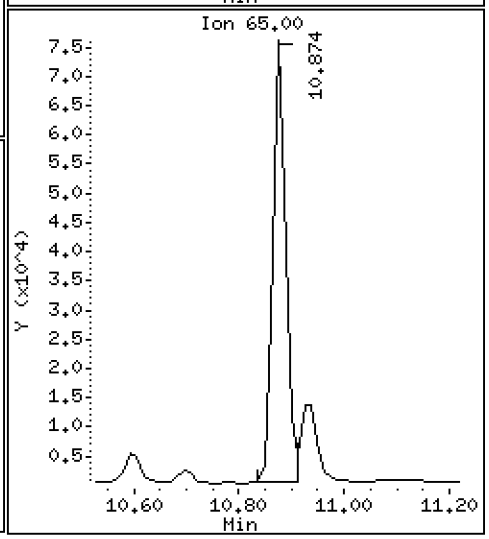












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

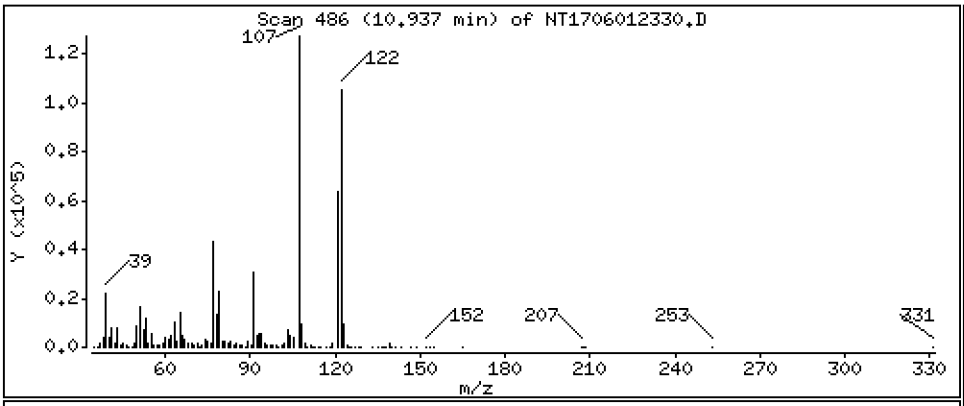
Operator: VTS

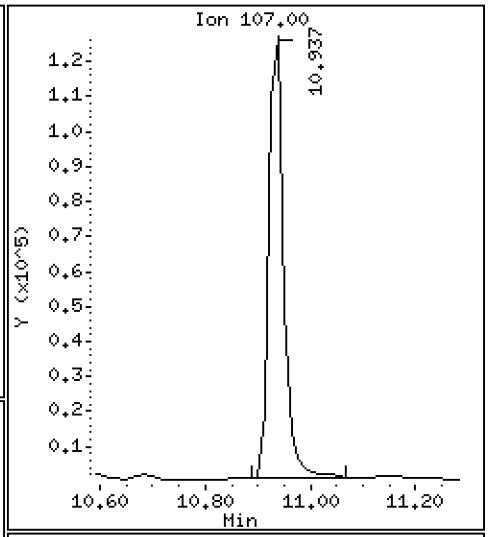
Column phase: ZB-5msi

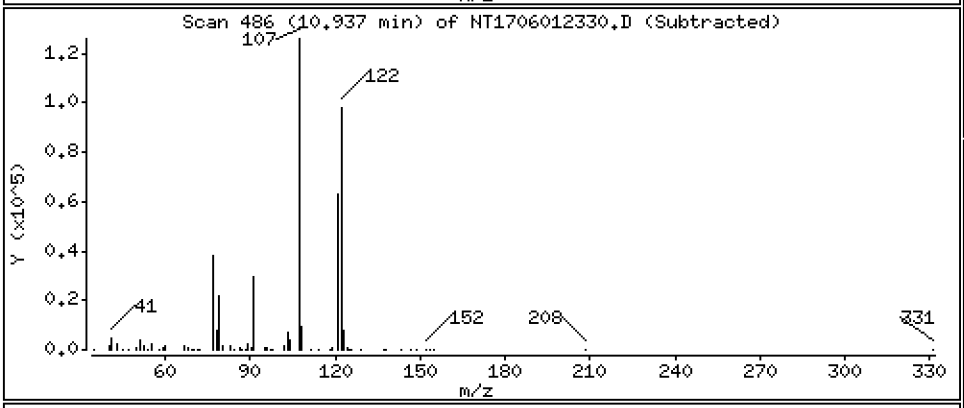
Column diameter: 0.25

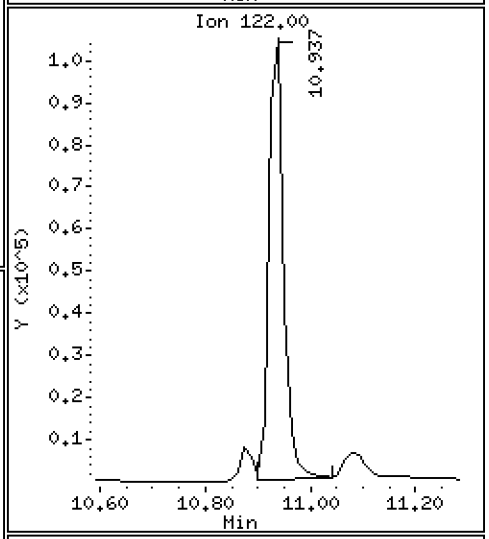
22 2,4-Dimethylphenol

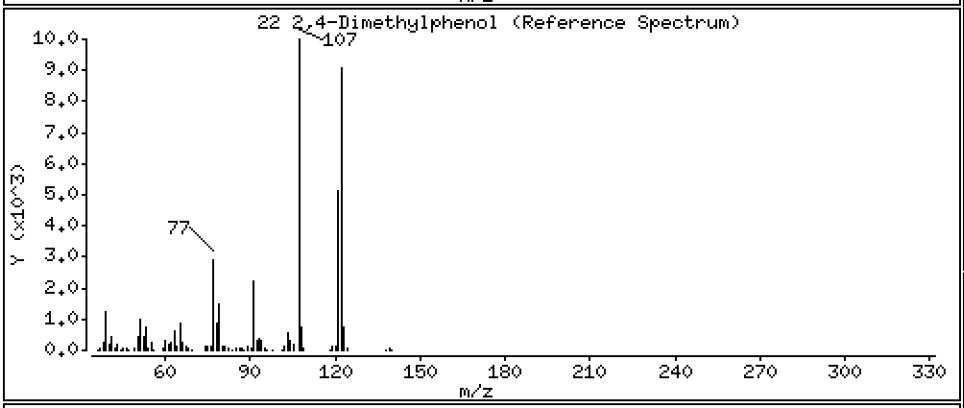
Concentration: 2.709 ug/mL

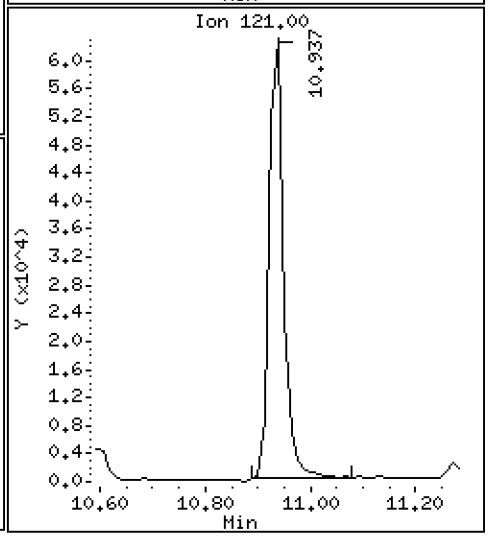


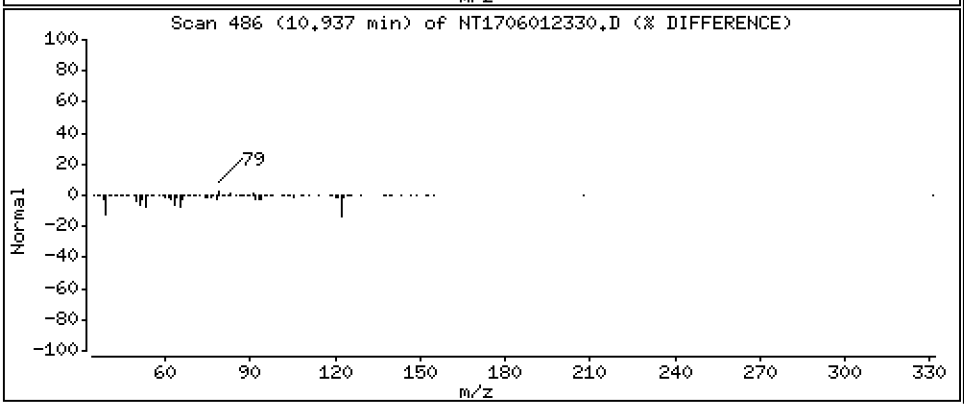












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

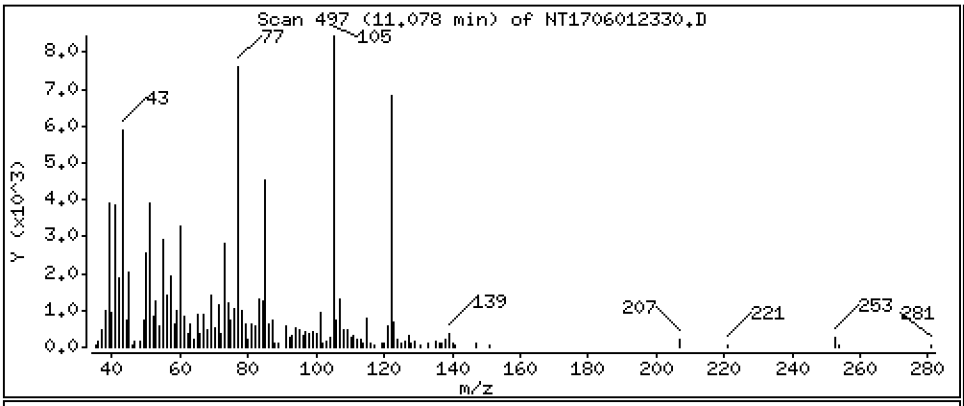
Operator: VTS

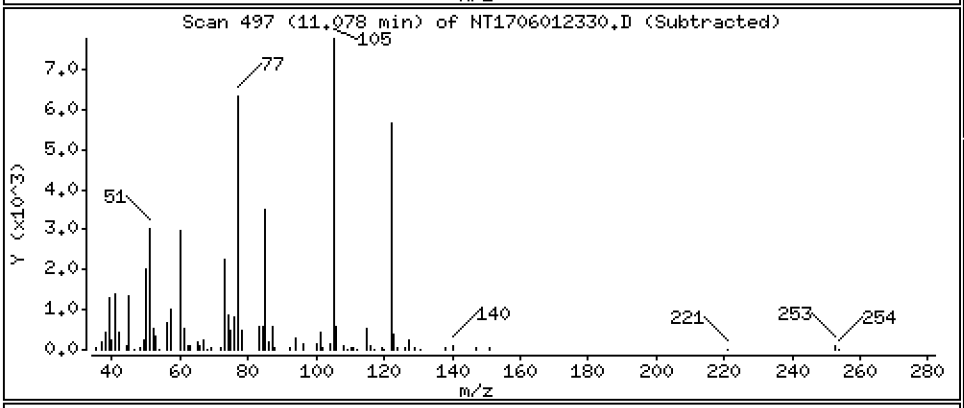
Column phase: ZB-5msi

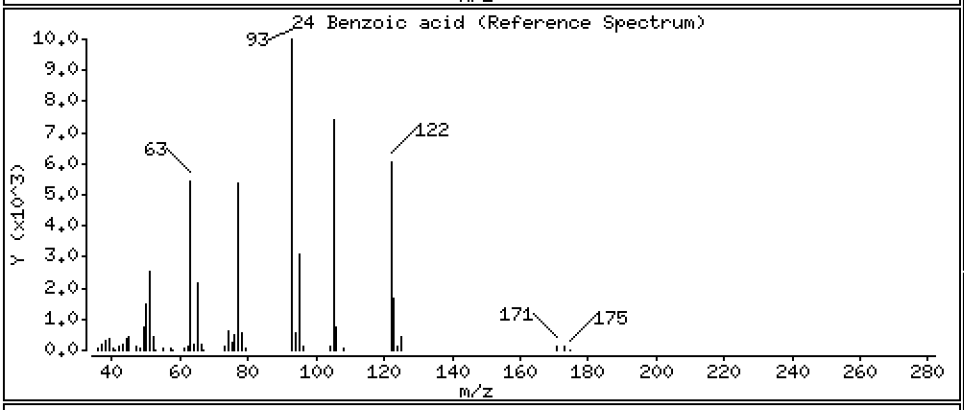
Column diameter: 0.25

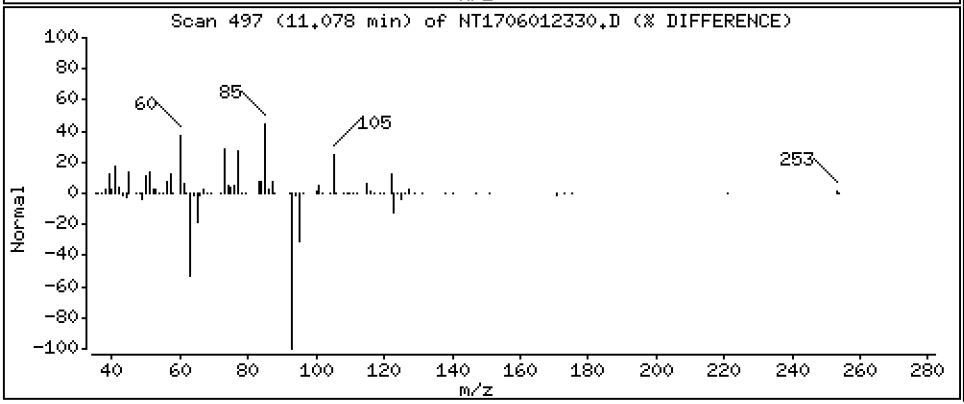
24 Benzoic acid

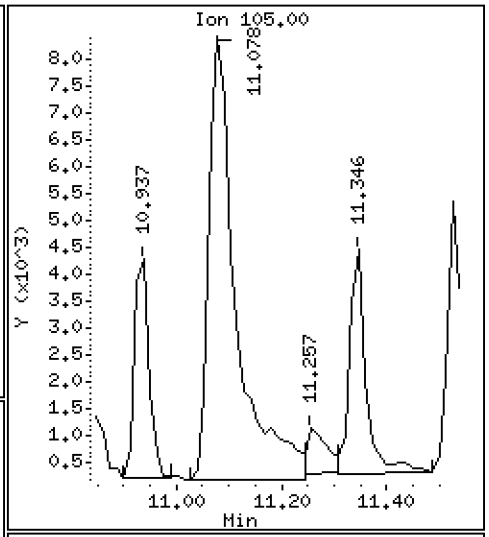
Concentration: 0.4863 ug/mL

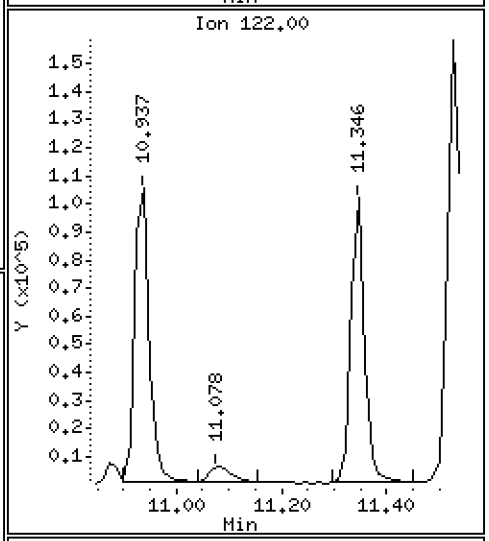


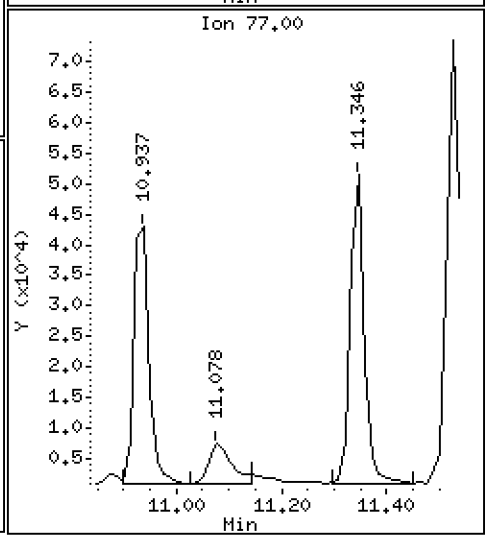












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

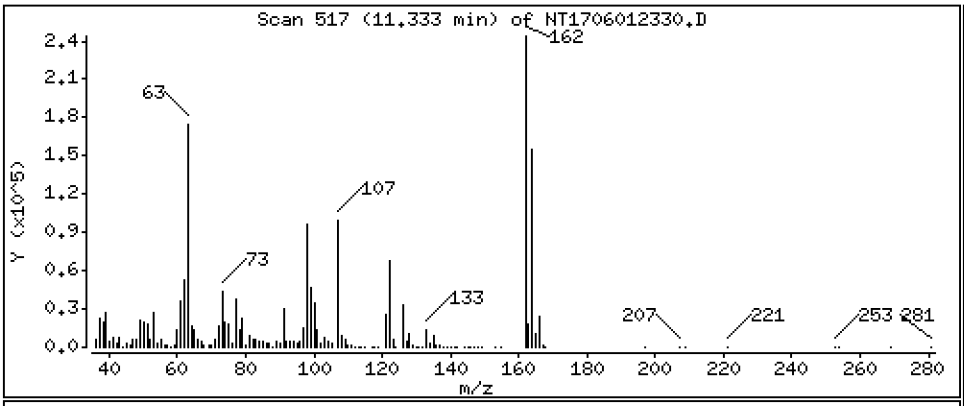
Operator: VTS

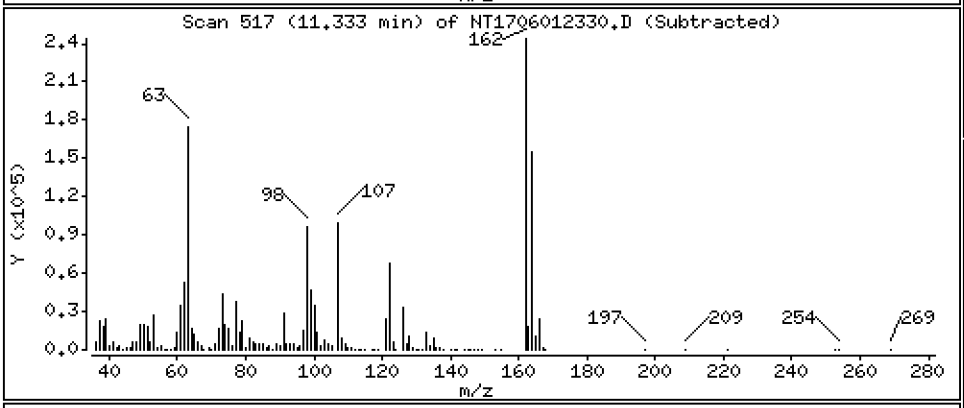
Column phase: ZB-5msi

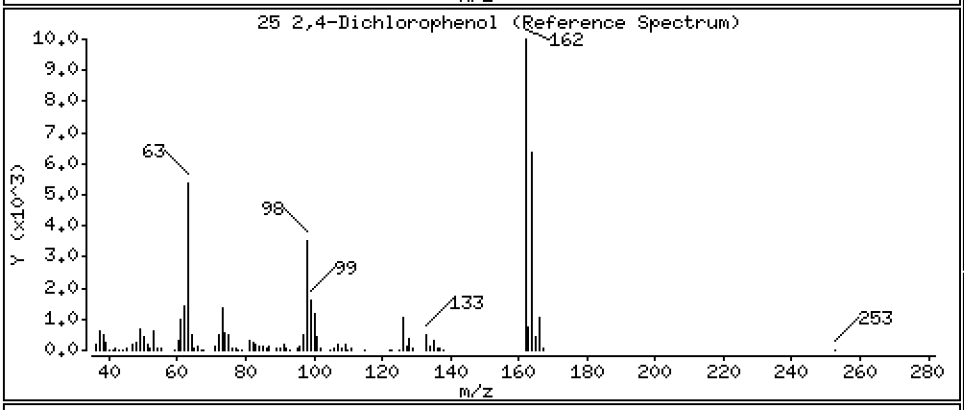
Column diameter: 0.25

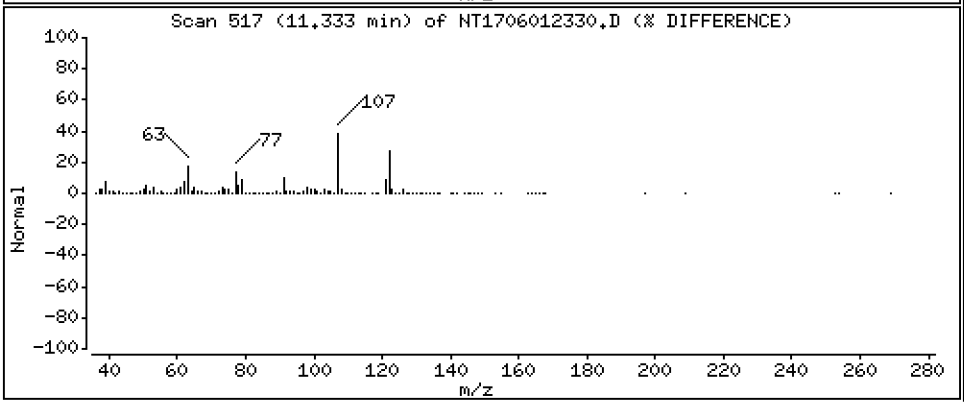
25 2,4-Dichlorophenol

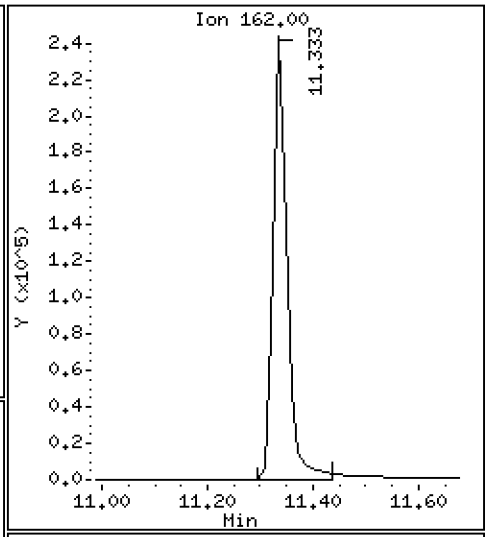
Concentration: 7.299 ug/mL

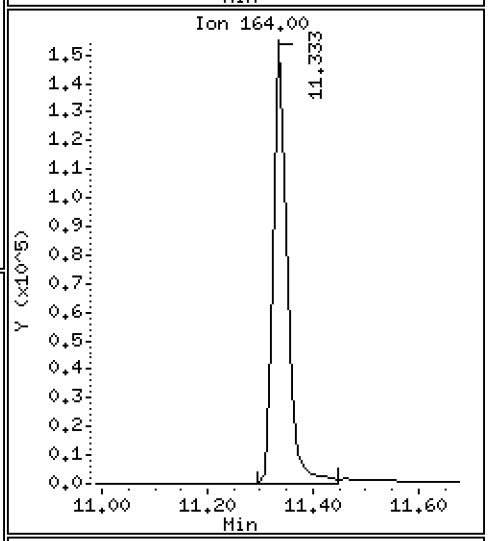


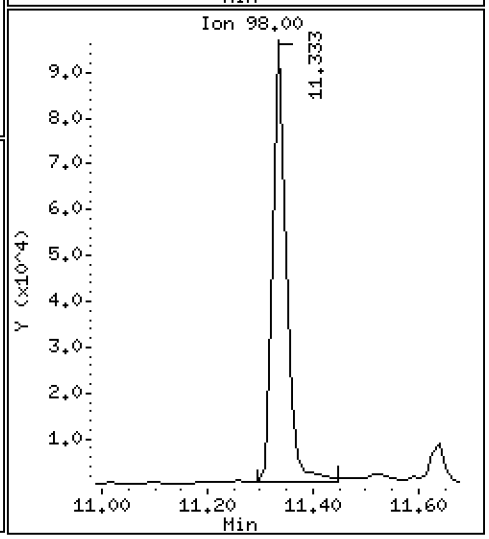












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

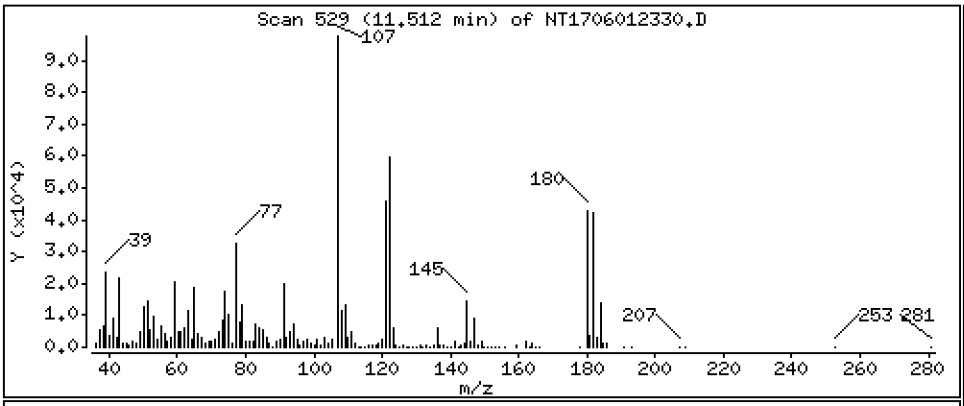
Operator: VTS

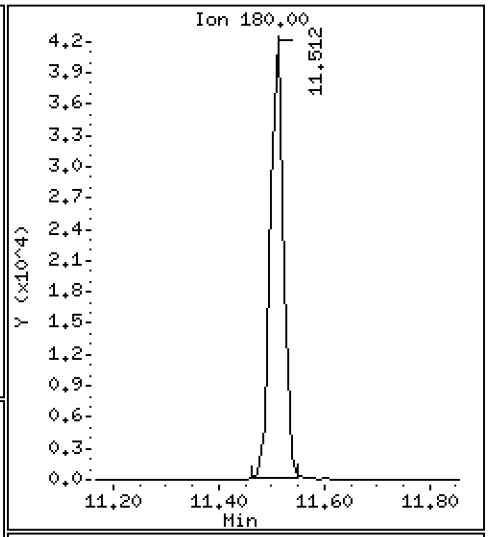
Column phase: ZB-5msi

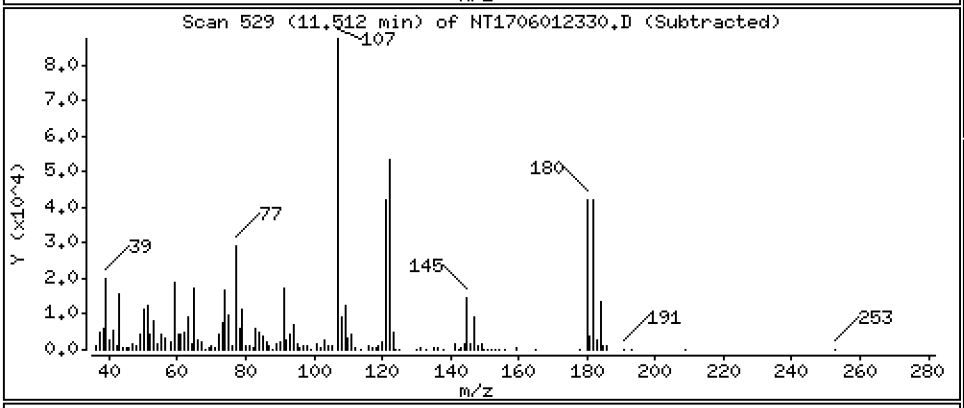
Column diameter: 0.25

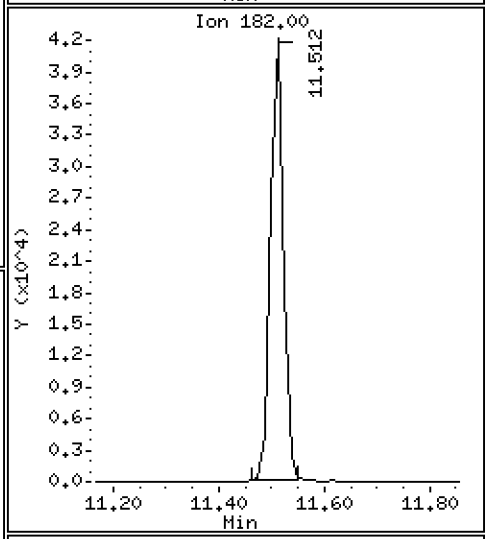
26 1,2,4-Trichlorobenzene

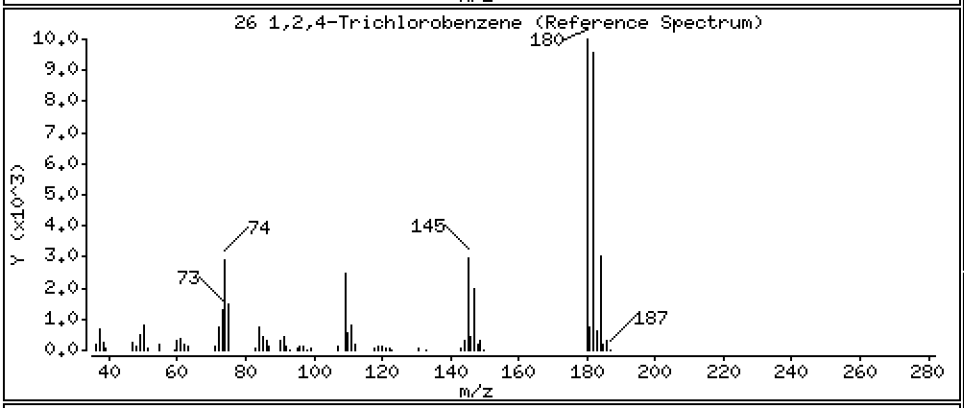
Concentration: 0.9204 ug/mL

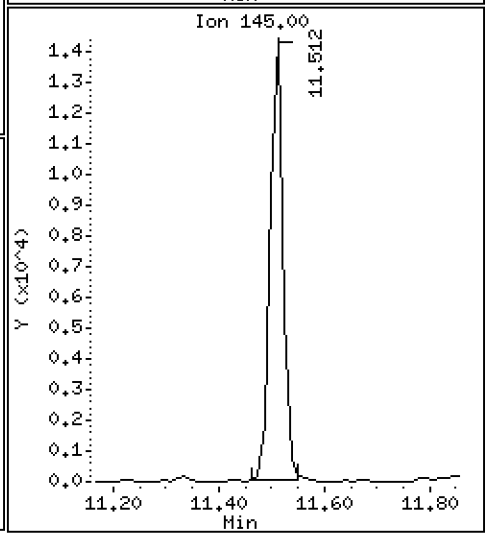


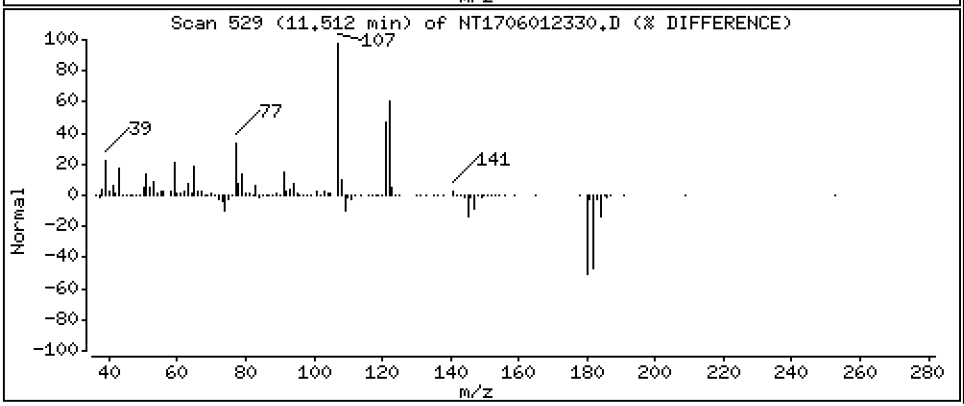












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

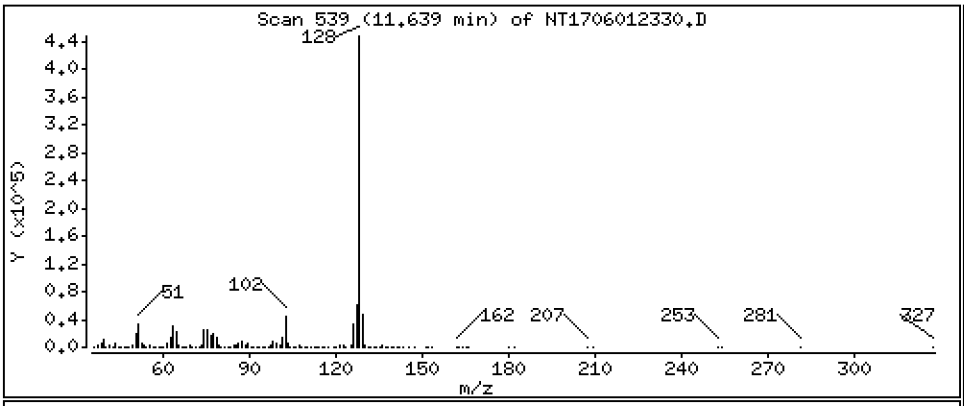
Operator: VTS

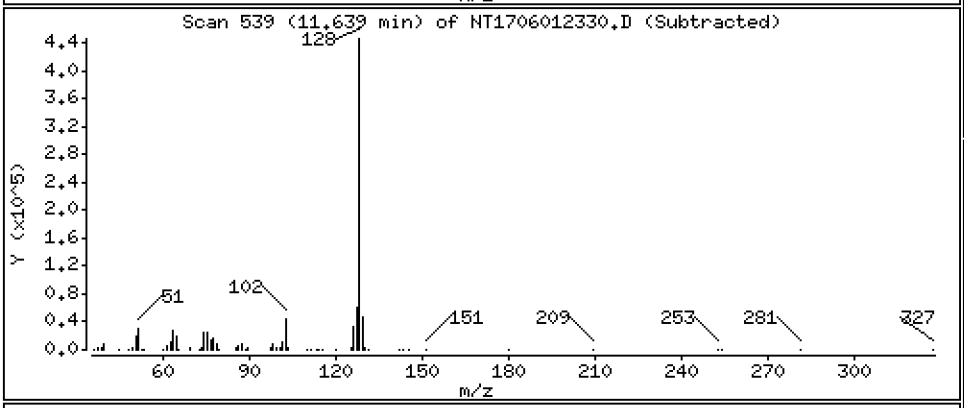
Column phase: ZB-5msi

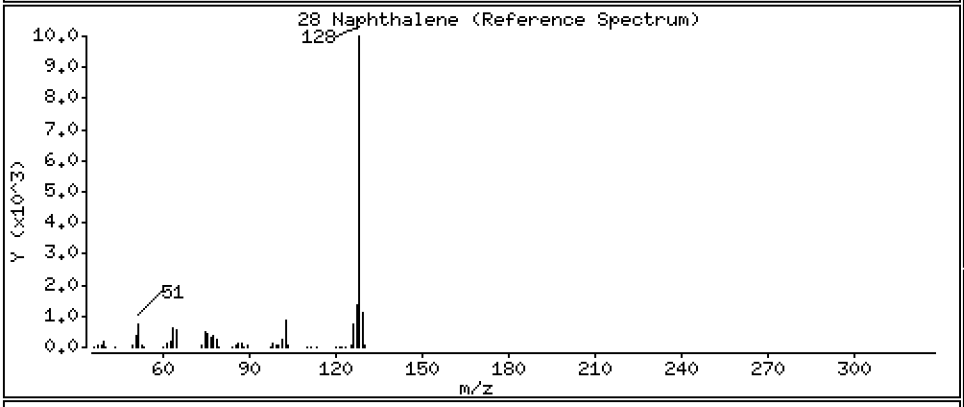
Column diameter: 0.25

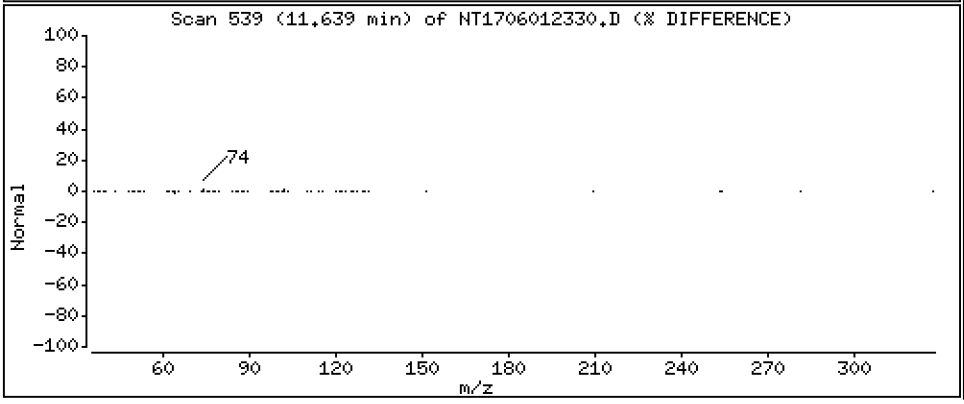
28 Naphthalene

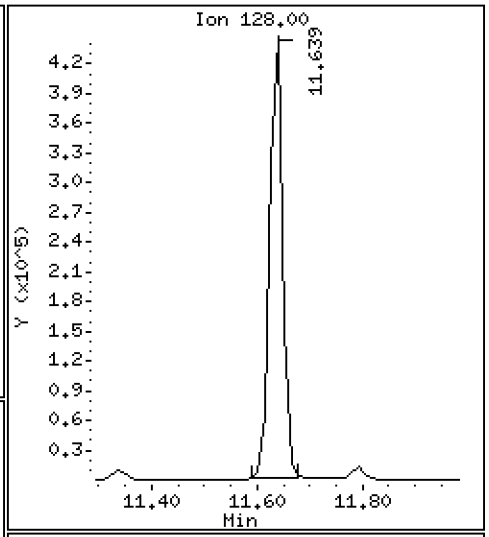
Concentration: 3.074 ug/mL

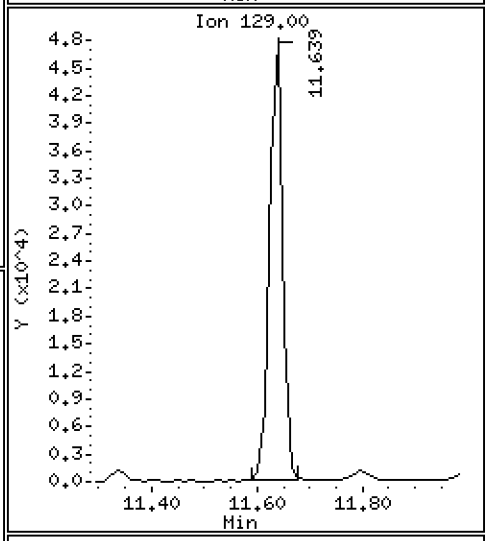


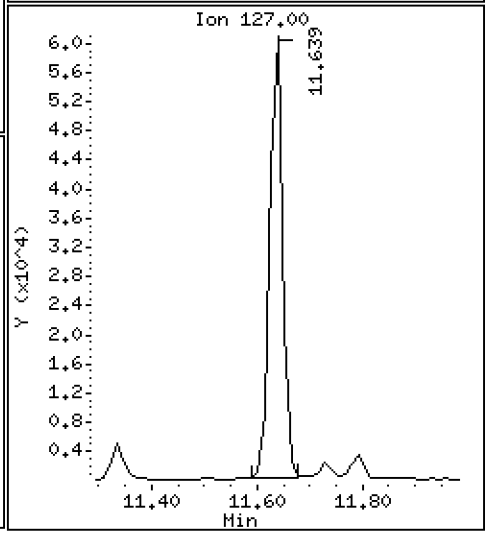












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

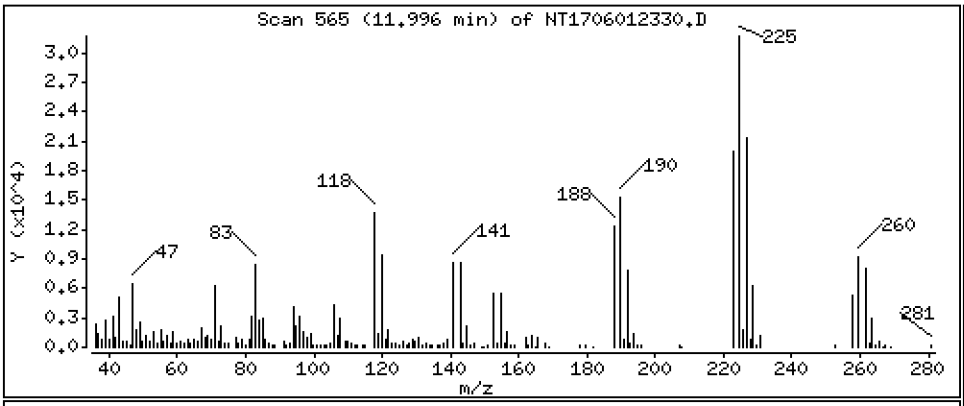
Operator: VTS

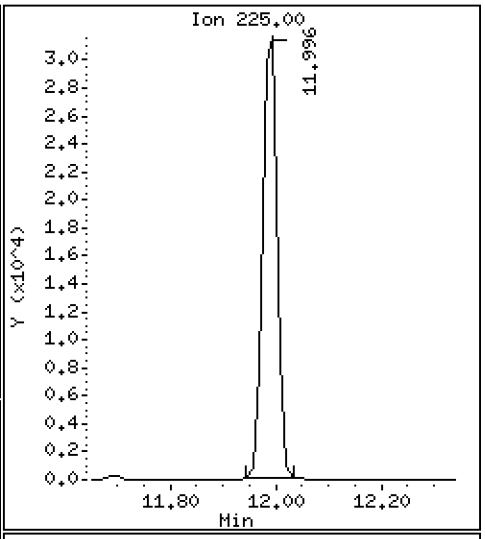
Column phase: ZB-5msi

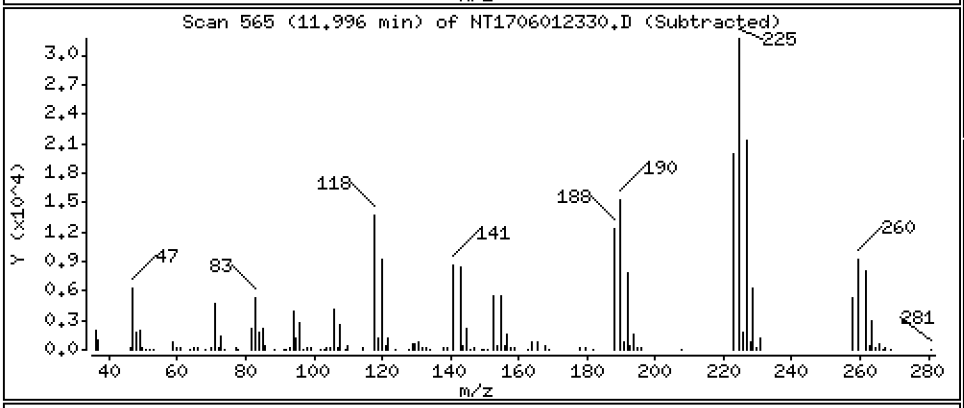
Column diameter: 0.25

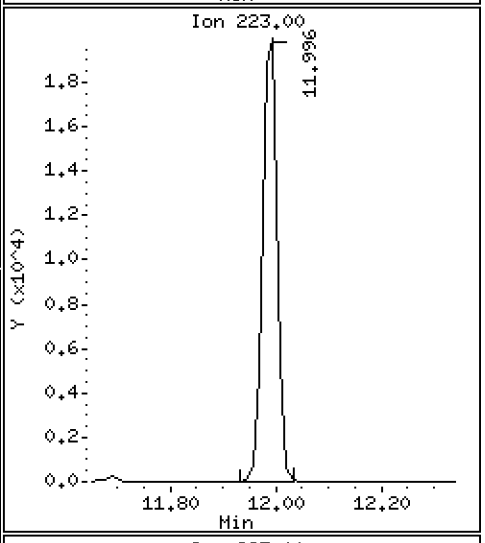
30 Hexachlorobutadiene

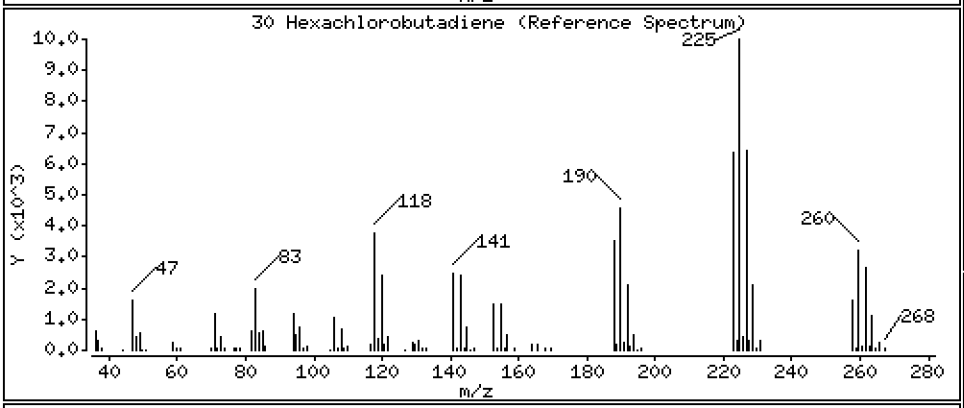
Concentration: 1.528 ug/mL

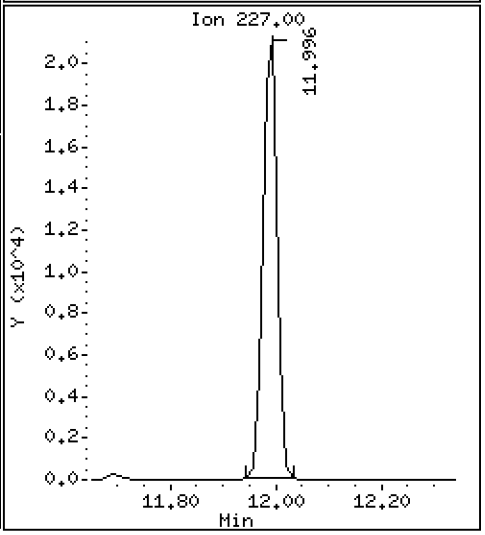


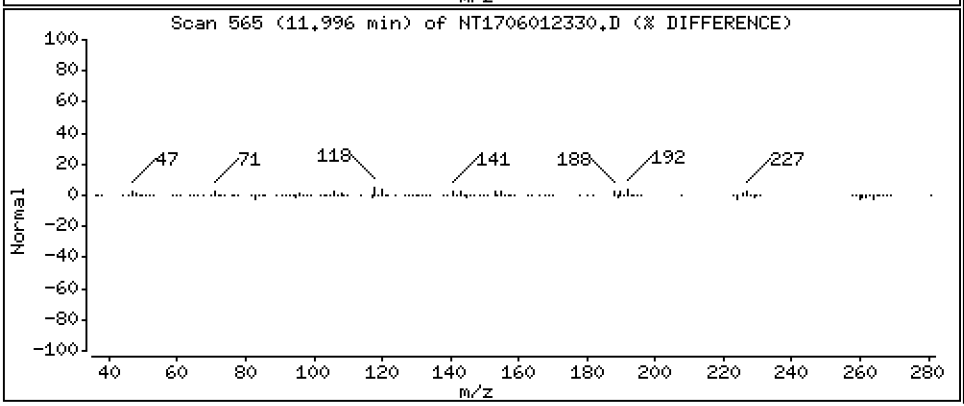












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

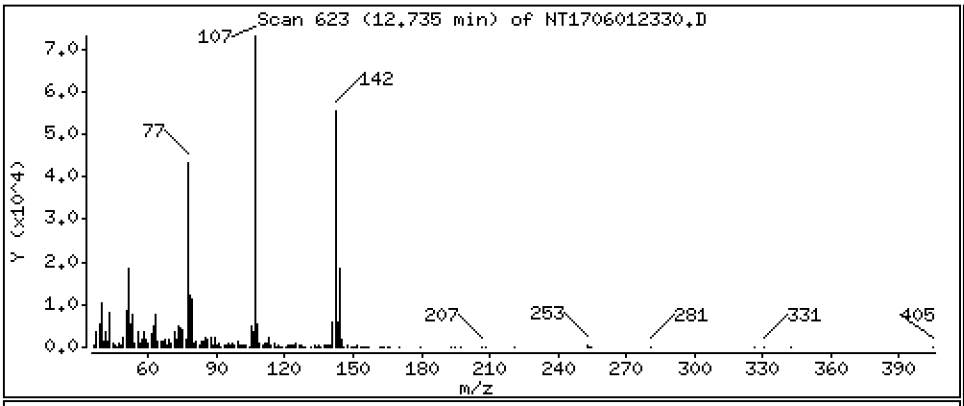
Operator: VTS

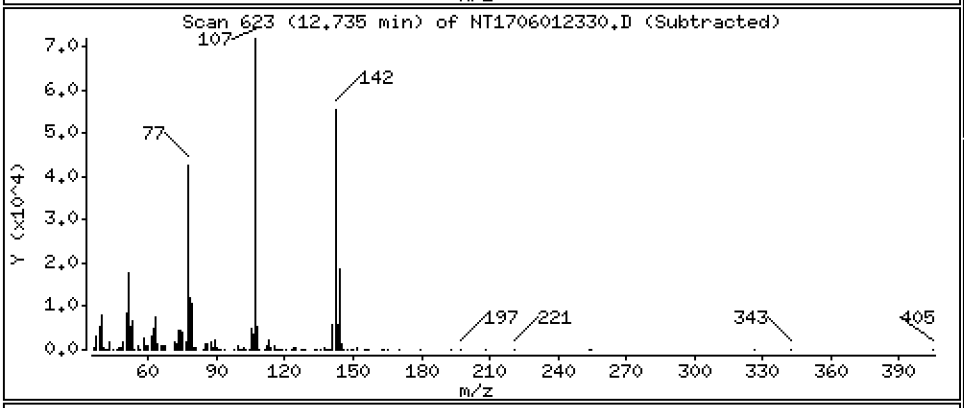
Column phase: ZB-5msi

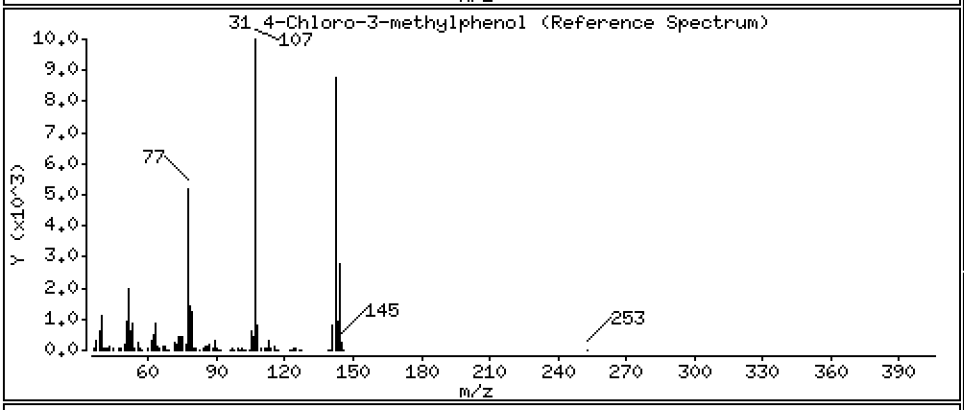
Column diameter: 0.25

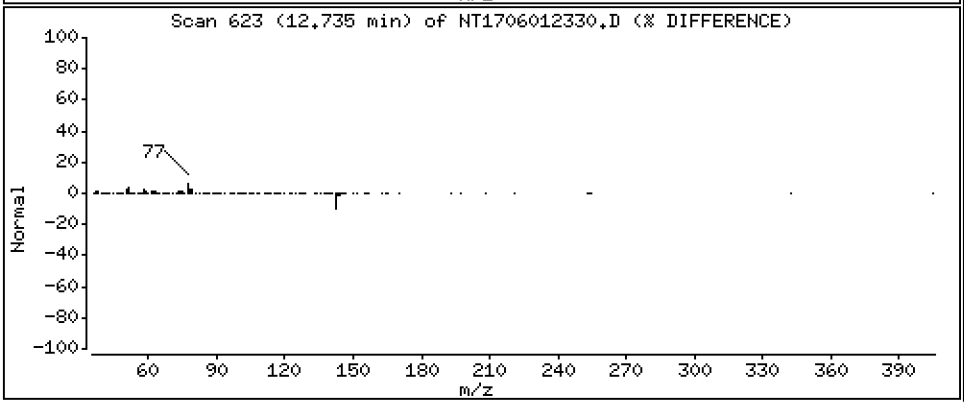
31 4-Chloro-3-methylphenol

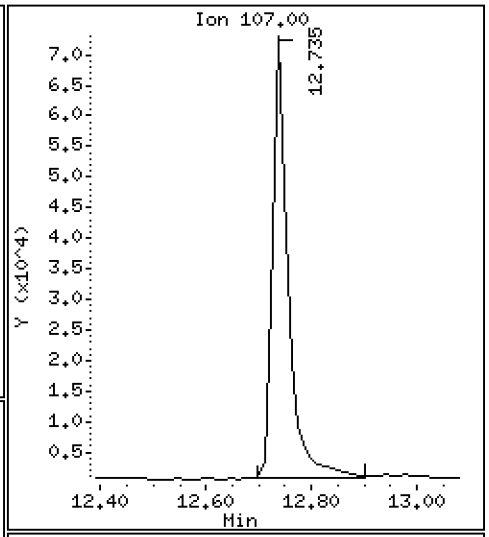
Concentration: 1.875 ug/mL

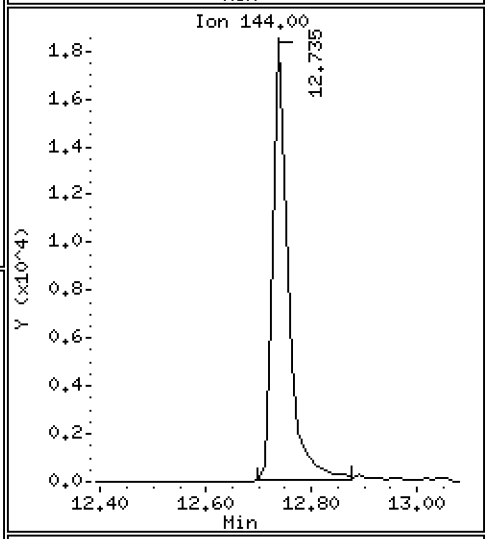


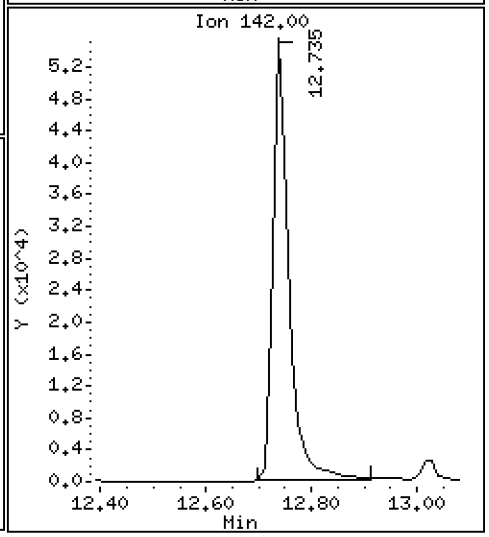












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

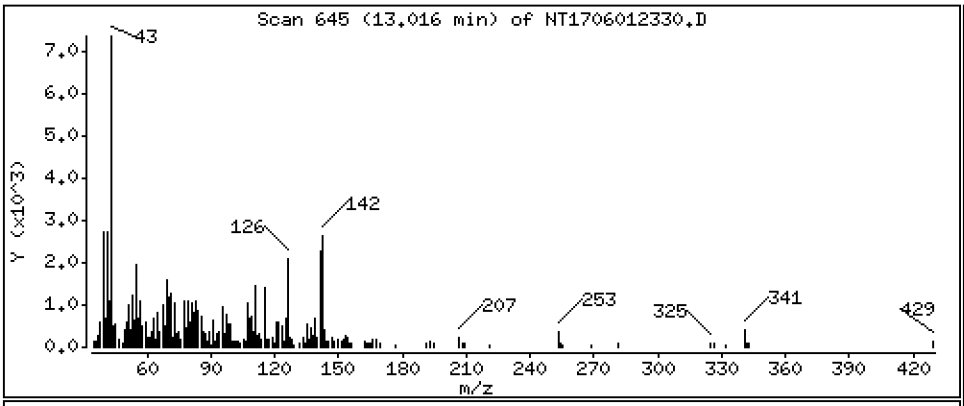
Operator: VTS

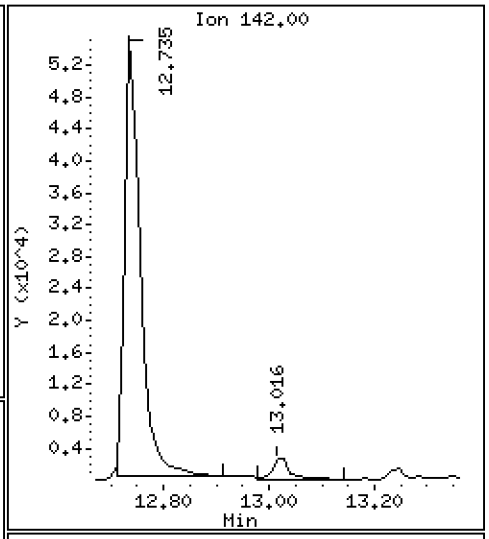
Column phase: ZB-5msi

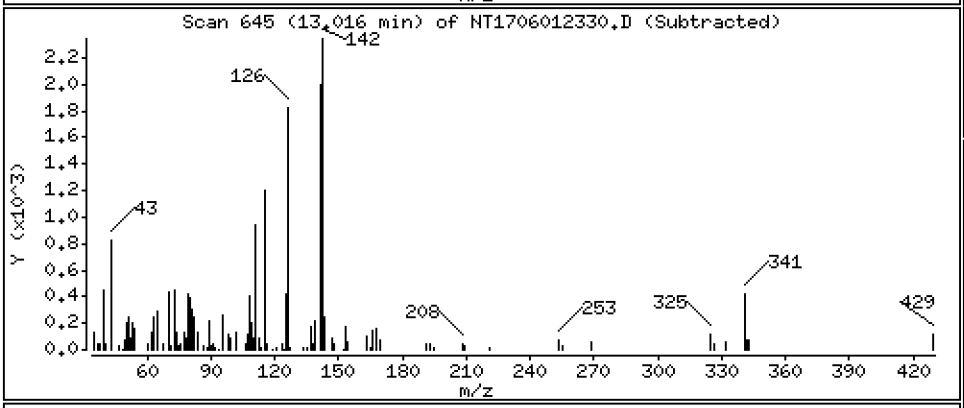
Column diameter: 0.25

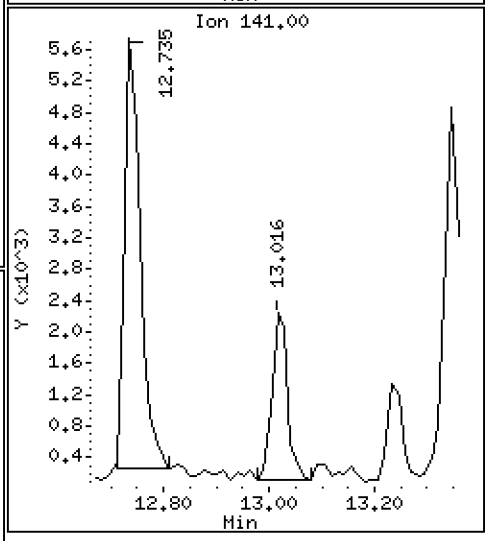
32 2-Methylnaphthalene

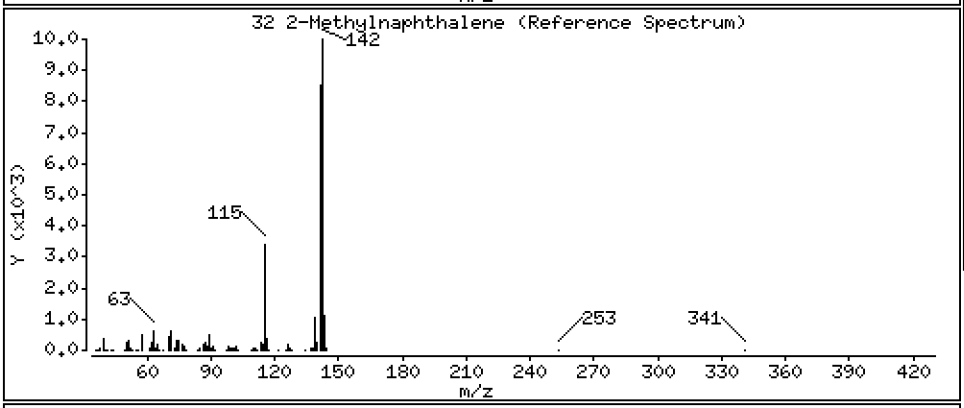
Concentration: 0.03327 ug/mL

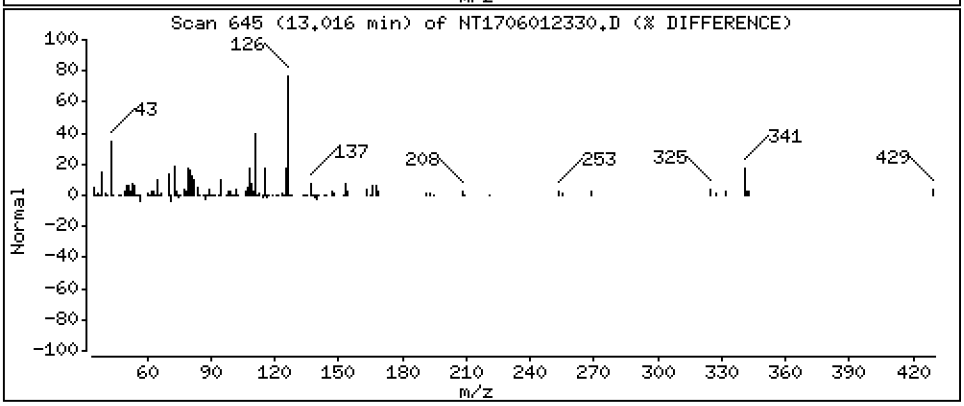












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

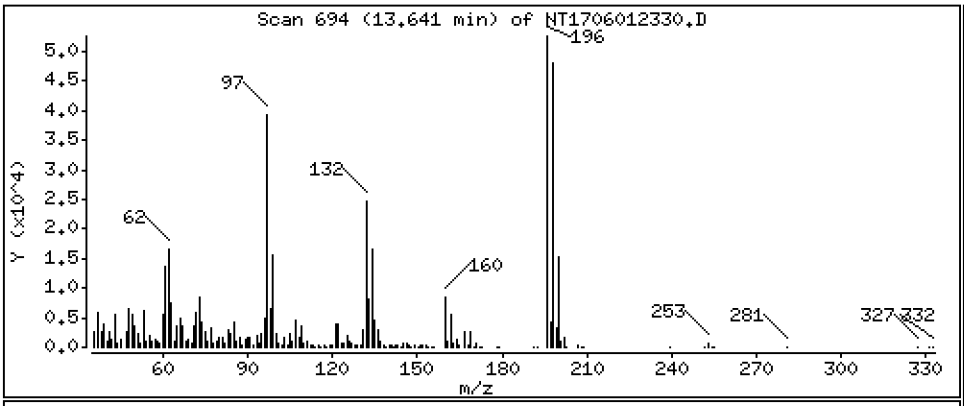
Operator: VTS

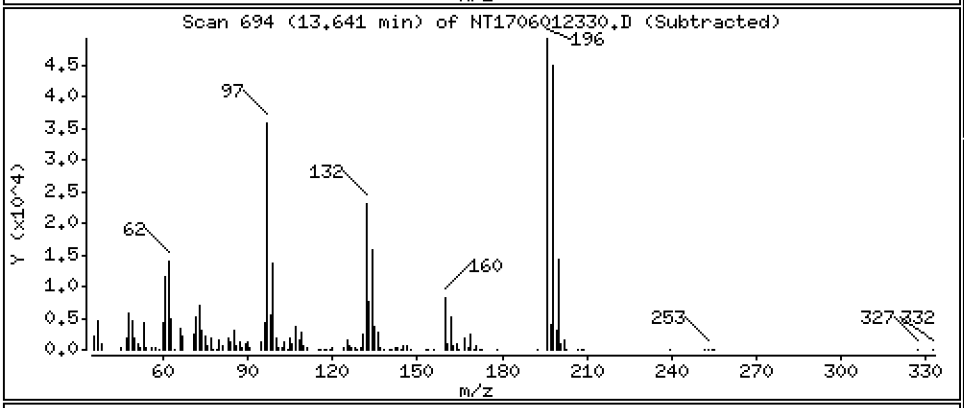
Column phase: ZB-5msi

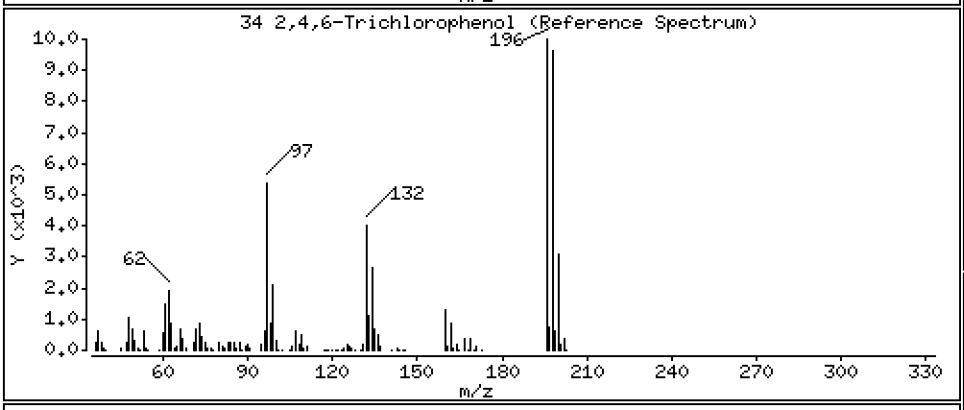
Column diameter: 0.25

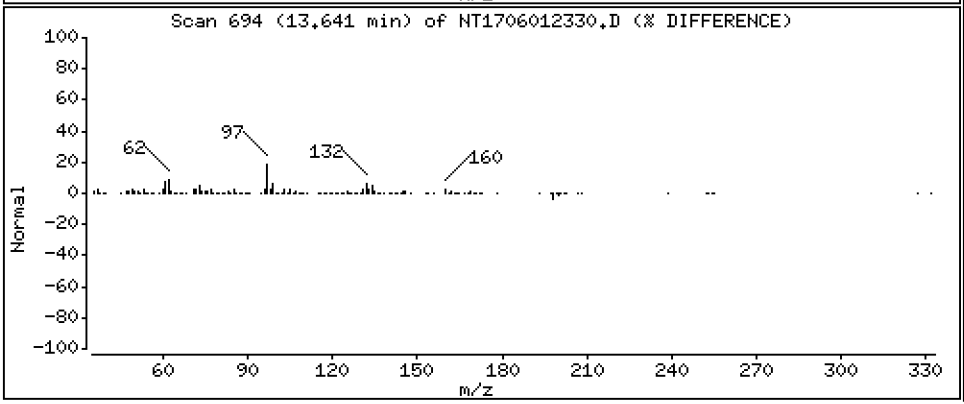
34 2,4,6-Trichlorophenol

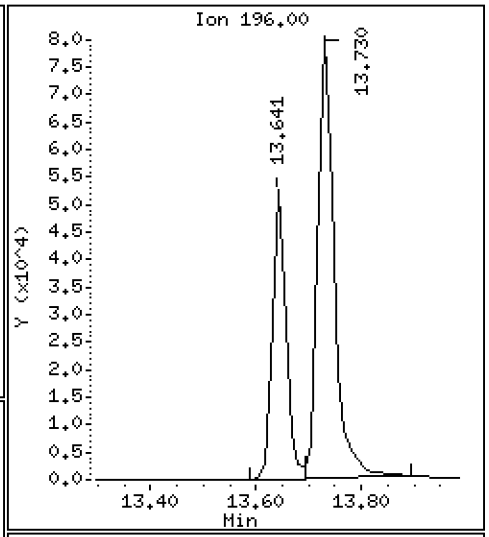
Concentration: 1.904 ug/mL

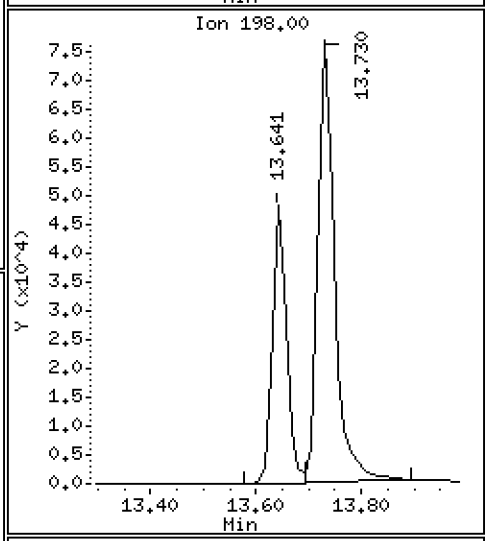


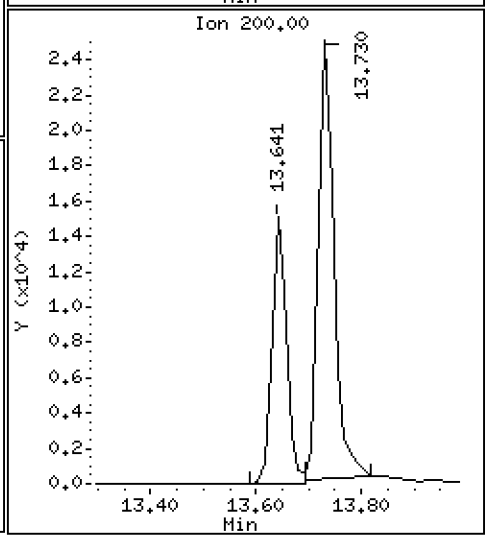












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

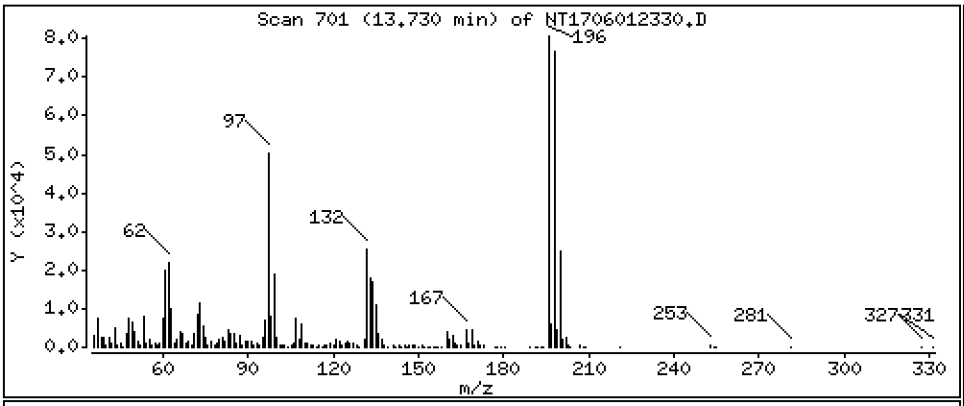
Operator: VTS

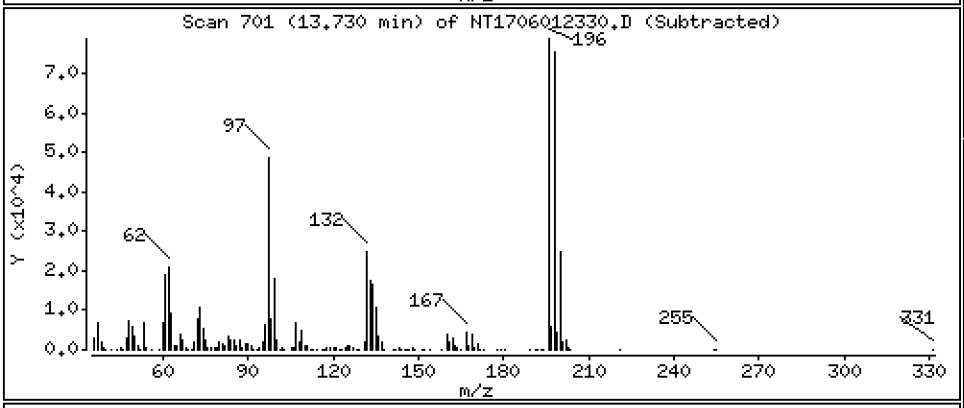
Column phase: ZB-5msi

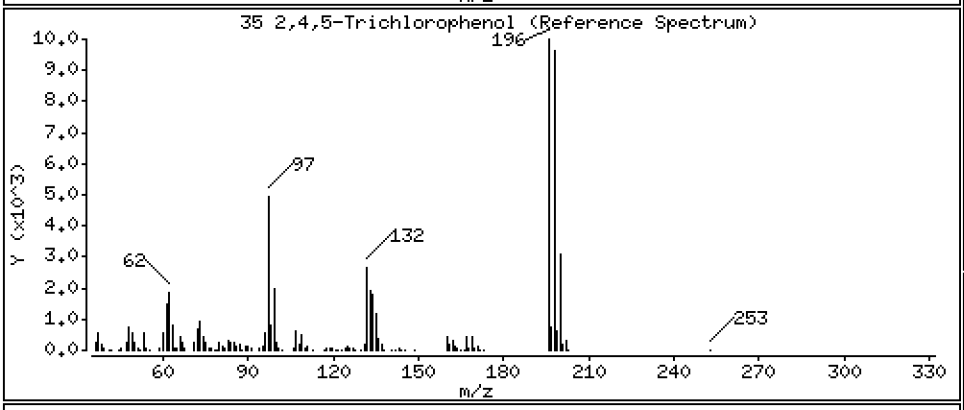
Column diameter: 0.25

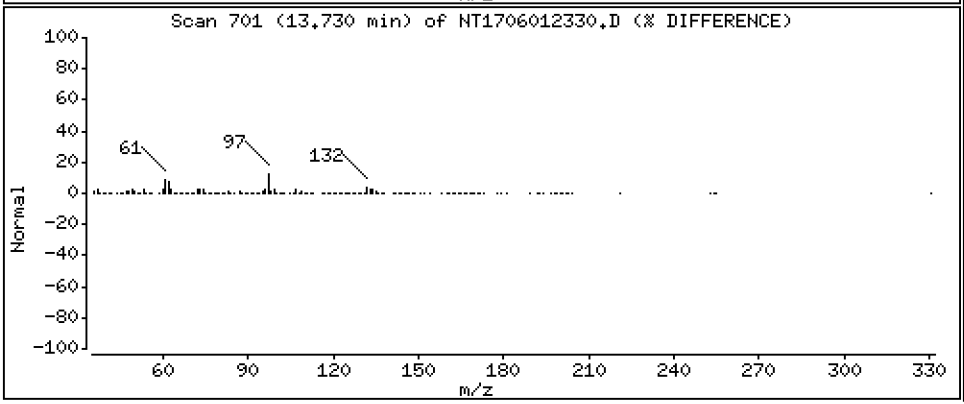
35 2,4,5-Trichlorophenol

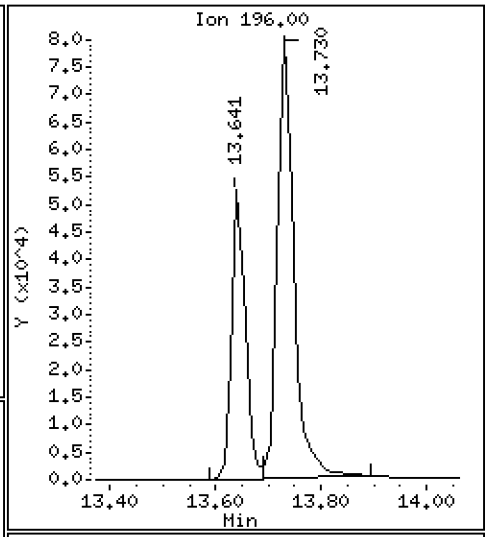
Concentration: 3.197 ug/mL

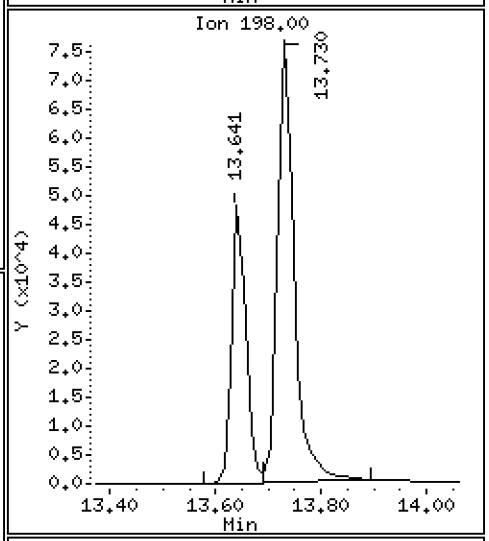


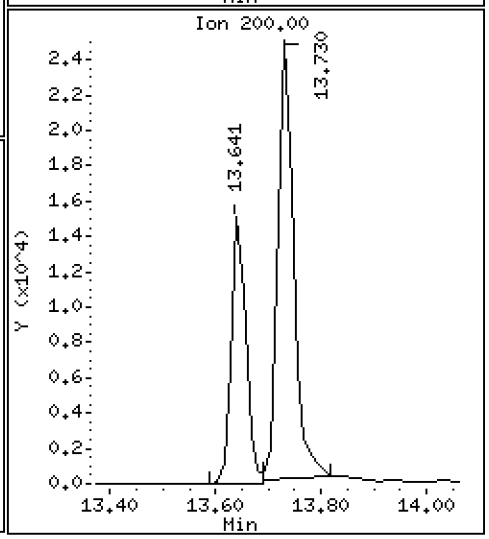












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

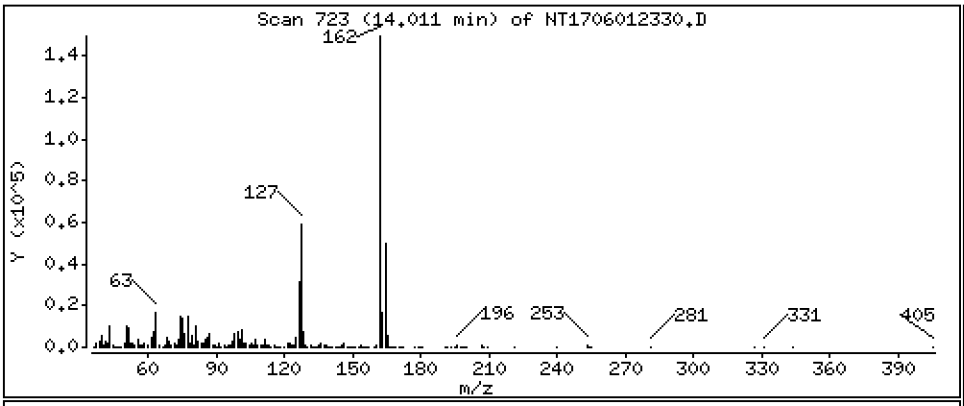
Operator: VTS

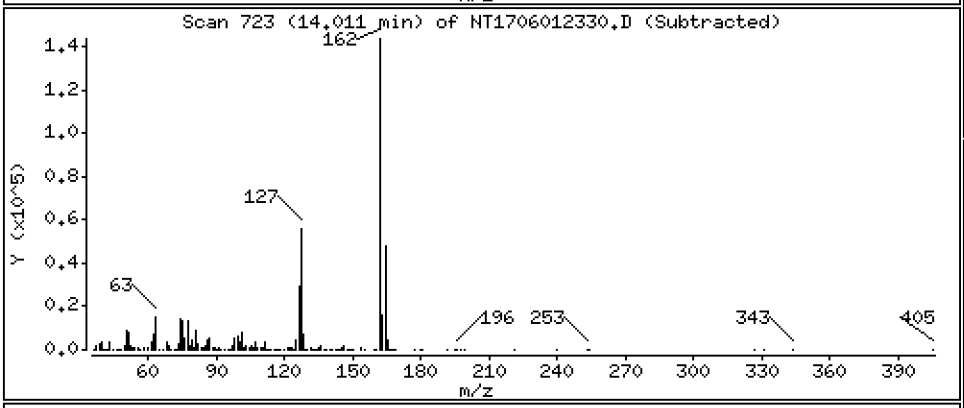
Column phase: ZB-5msi

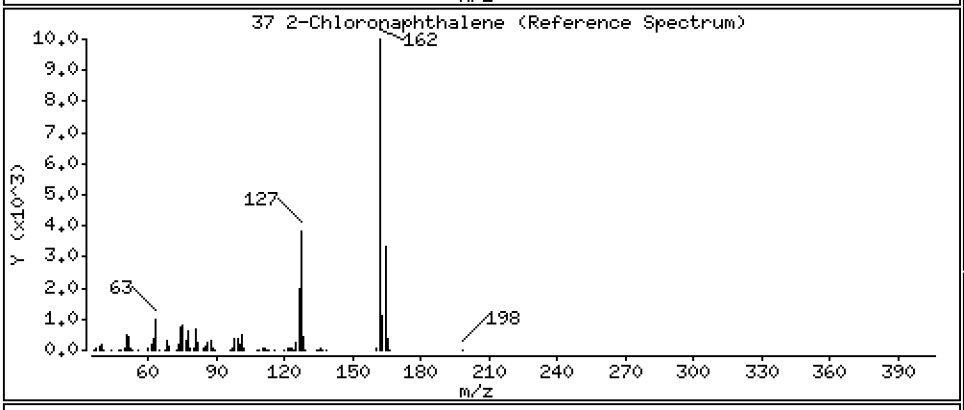
Column diameter: 0.25

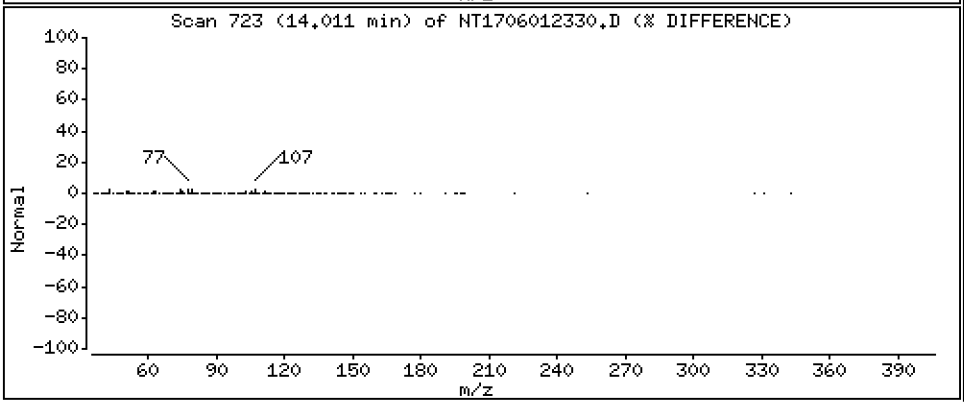
37 2-Chloronaphthalene

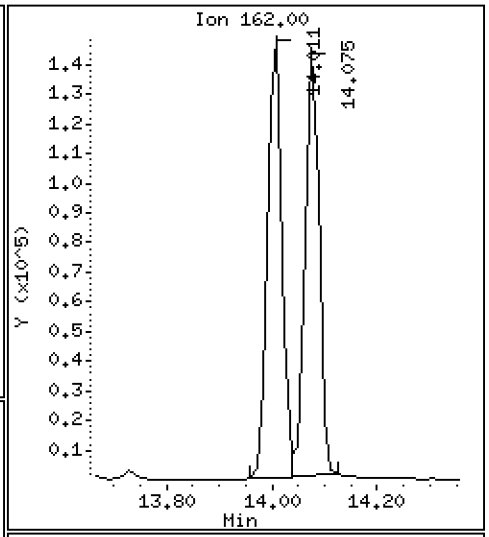
Concentration: 1.821 ug/mL

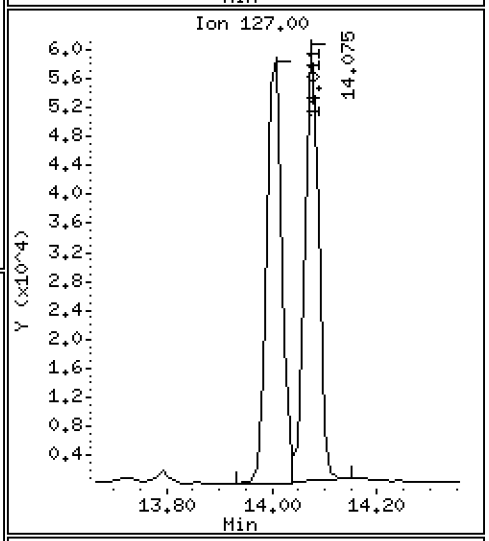


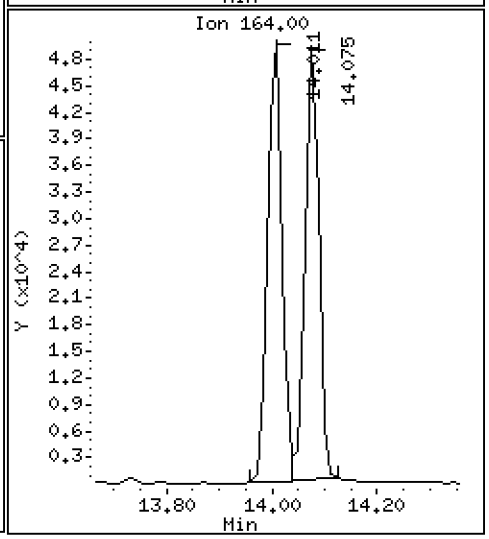












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

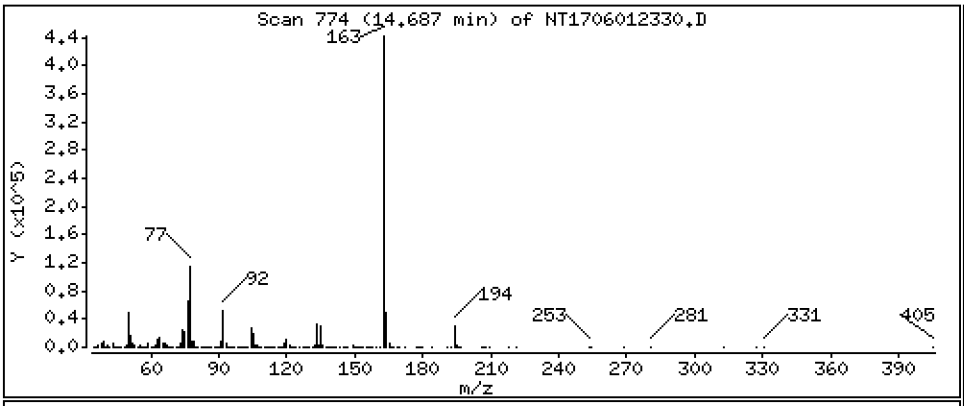
Operator: VTS

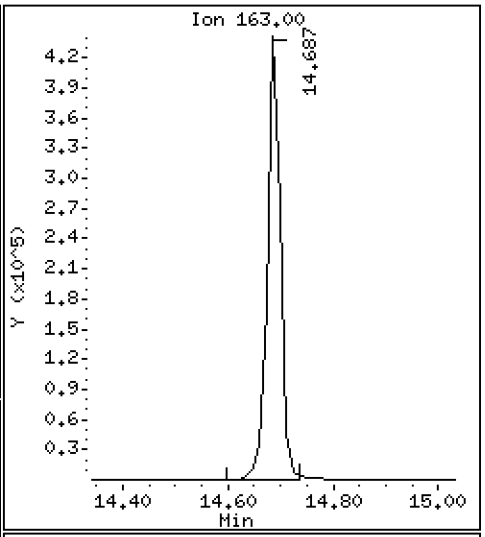
Column phase: ZB-5msi

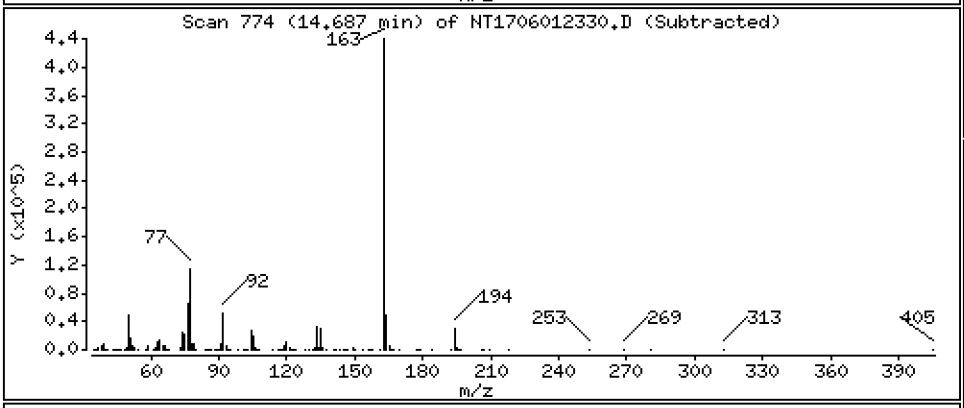
Column diameter: 0.25

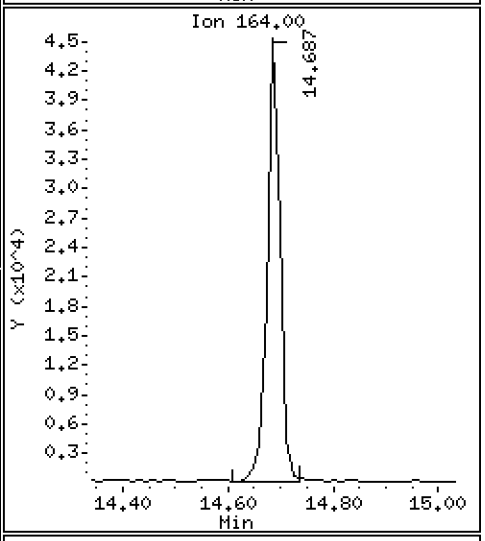
39 Dimethylphthalate

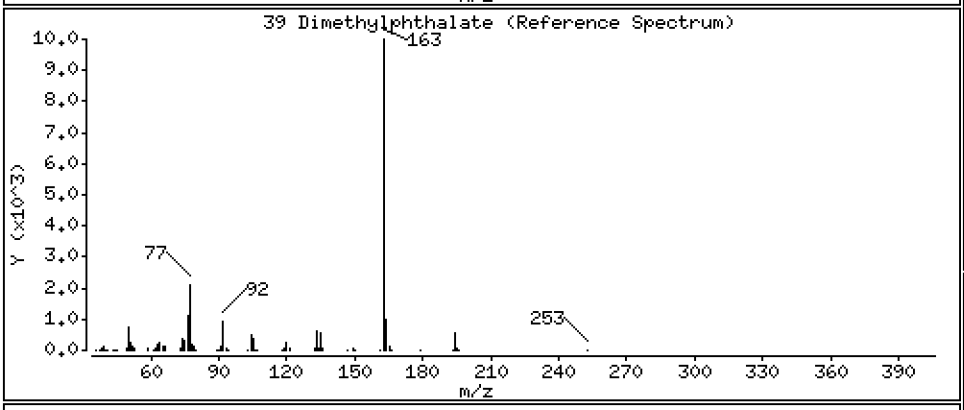
Concentration: 4.618 ug/mL

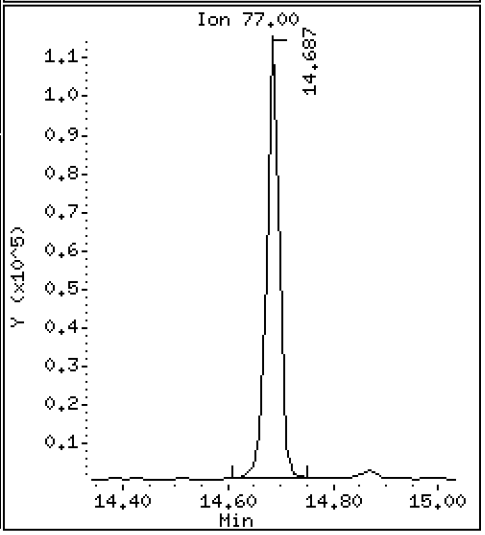


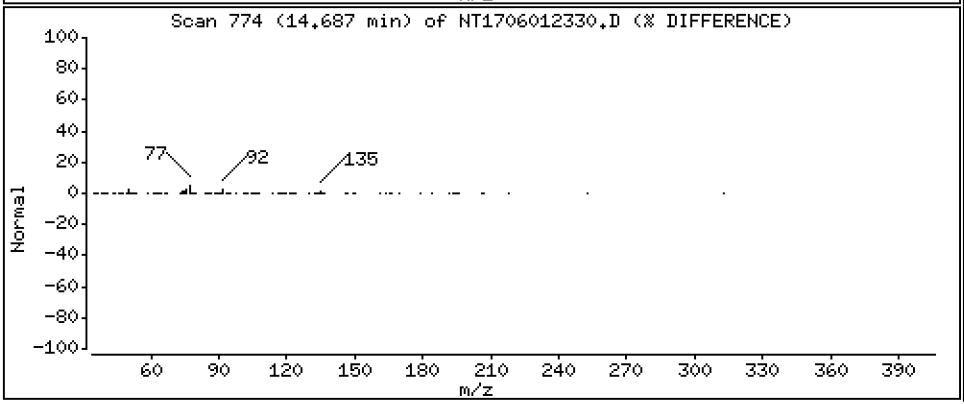












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

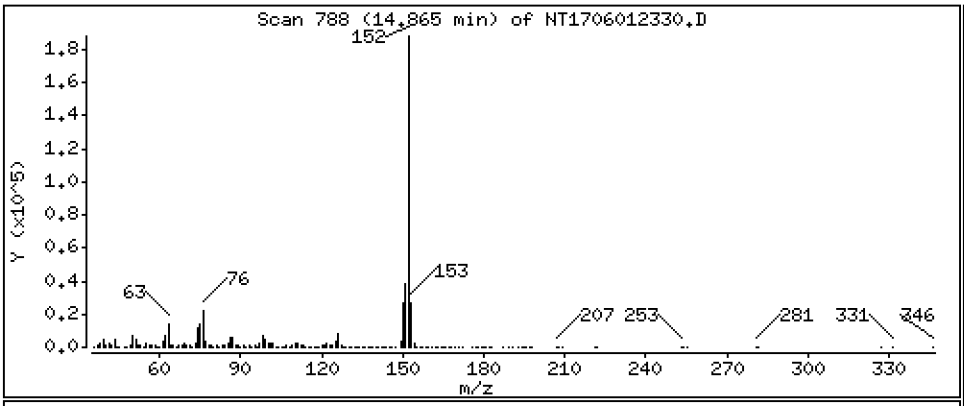
Operator: VTS

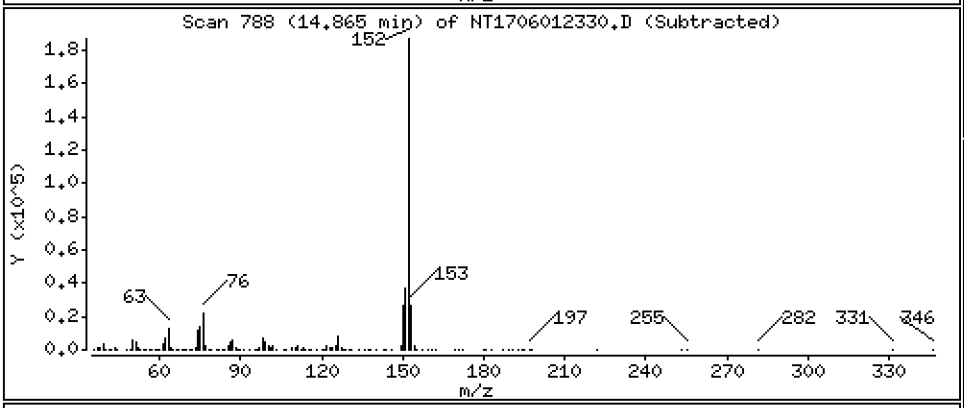
Column phase: ZB-5msi

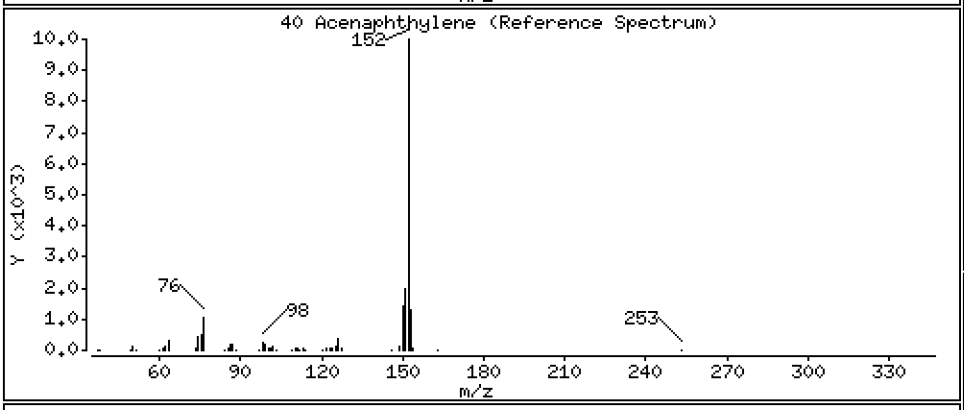
Column diameter: 0.25

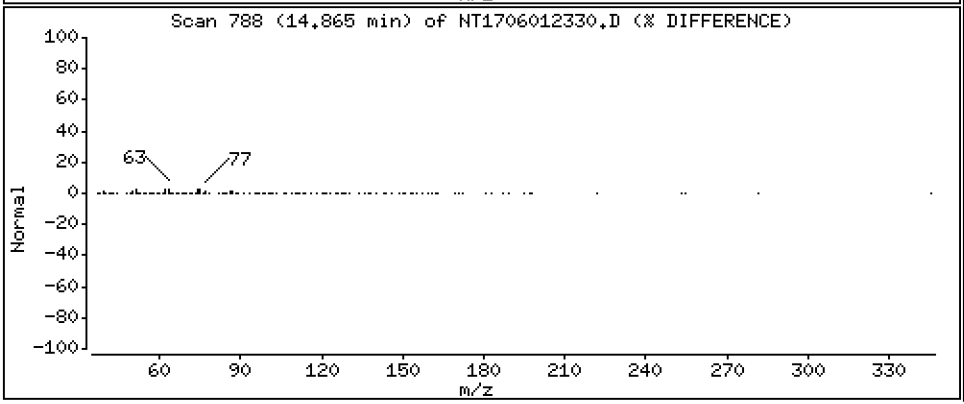
40 Acenaphthylene

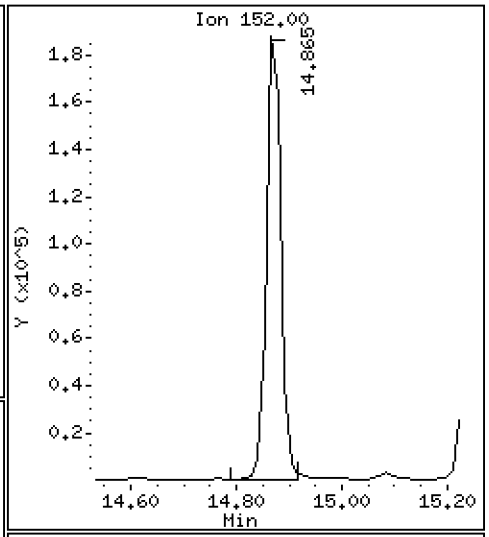
Concentration: 1.477 ug/mL

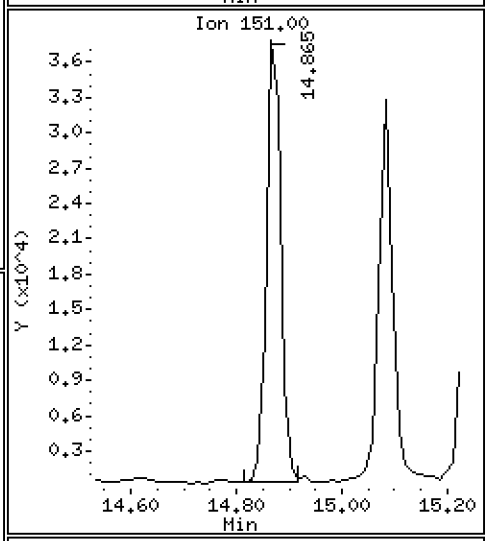


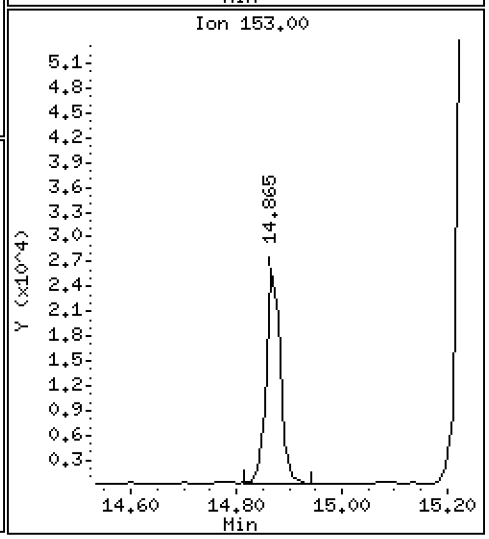












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

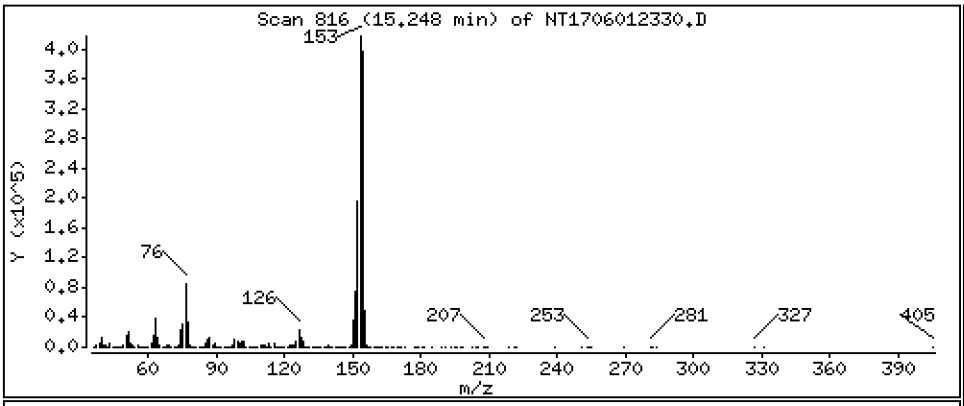
Operator: VTS

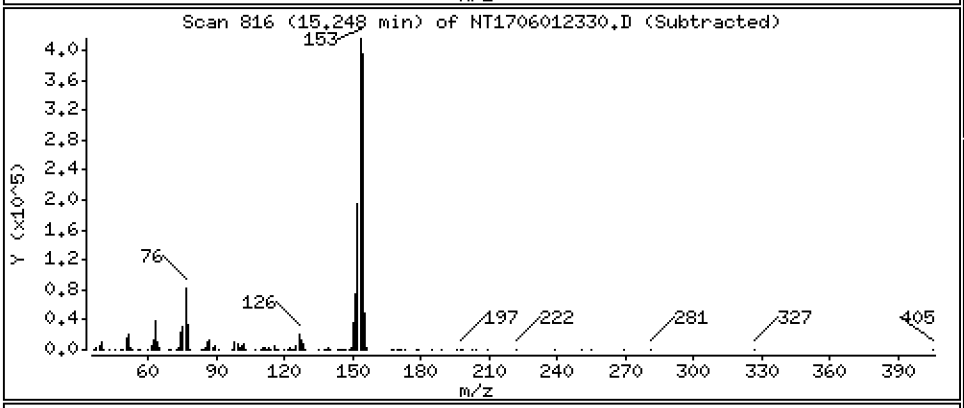
Column phase: ZB-5msi

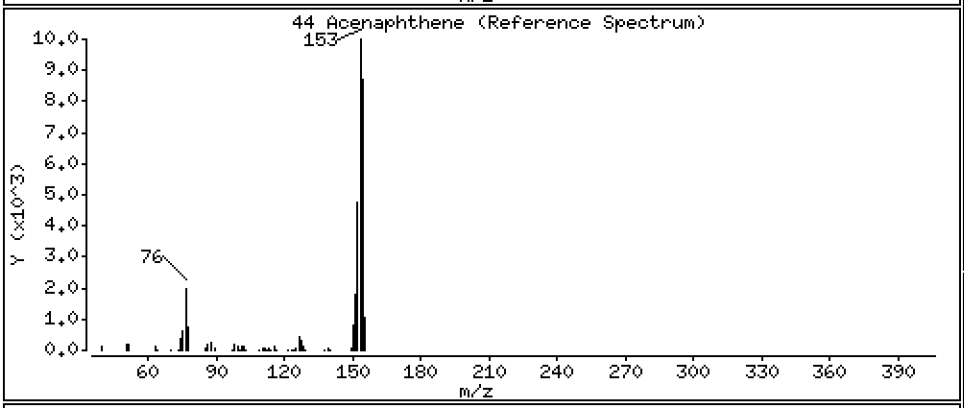
Column diameter: 0.25

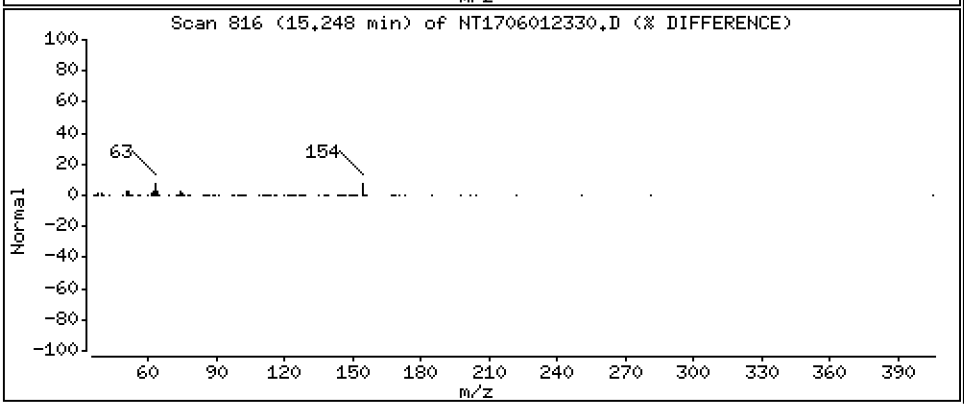
44 Acenaphthene

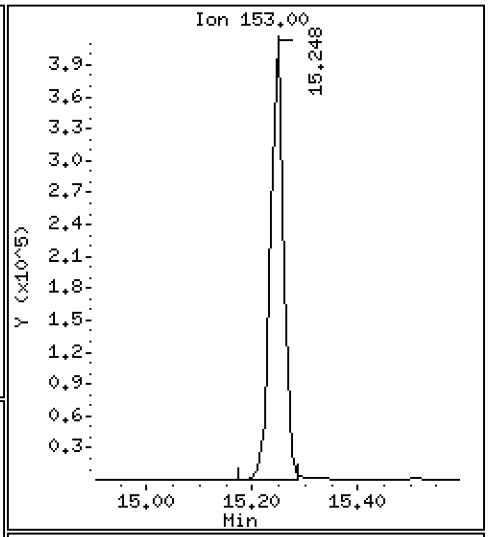
Concentration: 4.741 ug/mL

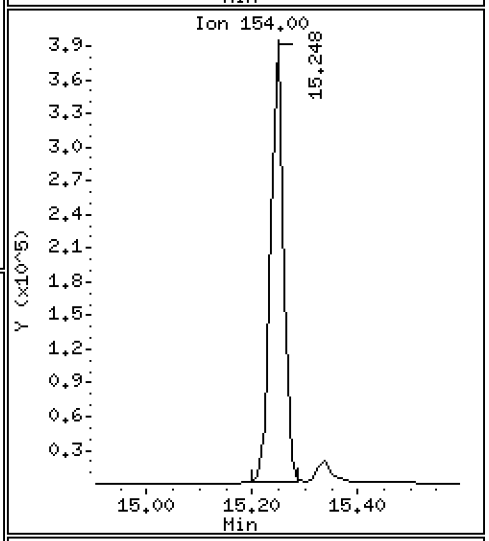


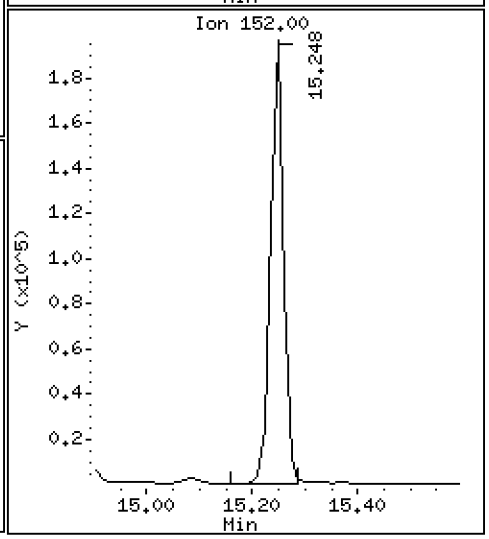












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

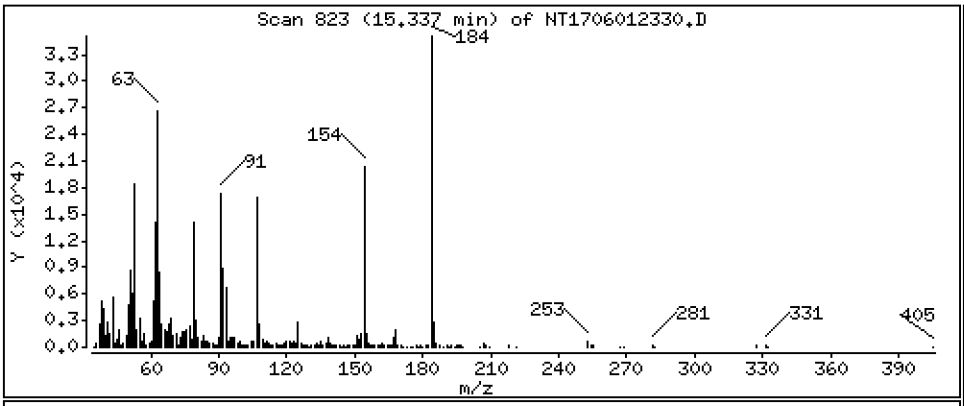
Operator: VTS

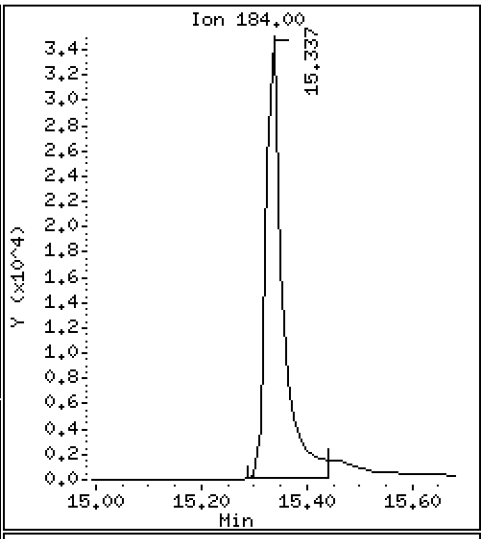
Column phase: ZB-5msi

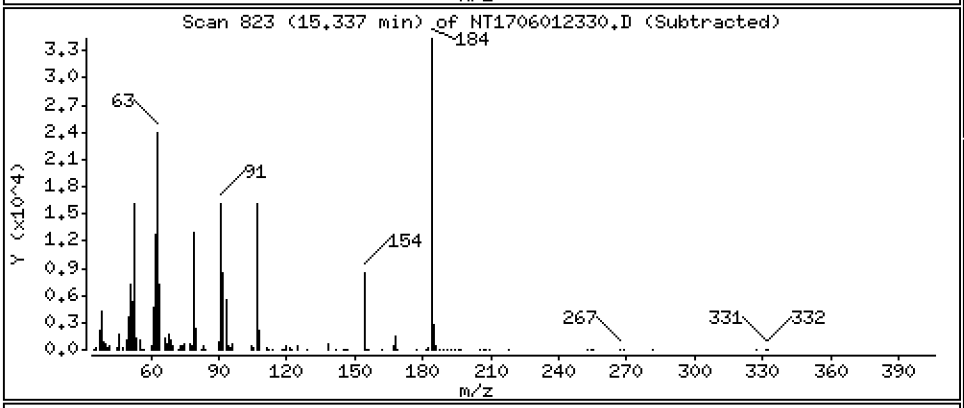
Column diameter: 0.25

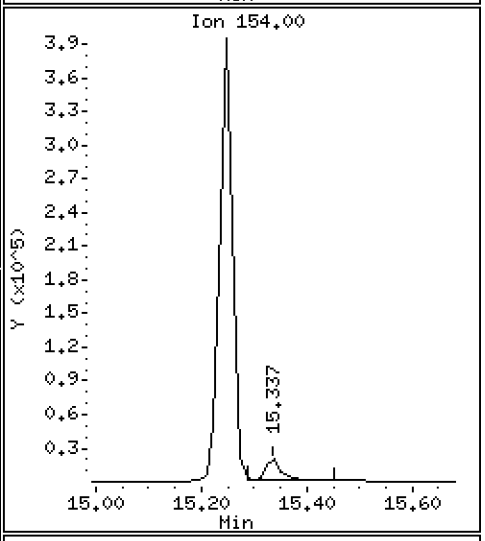
45 2,4-Dinitrophenol

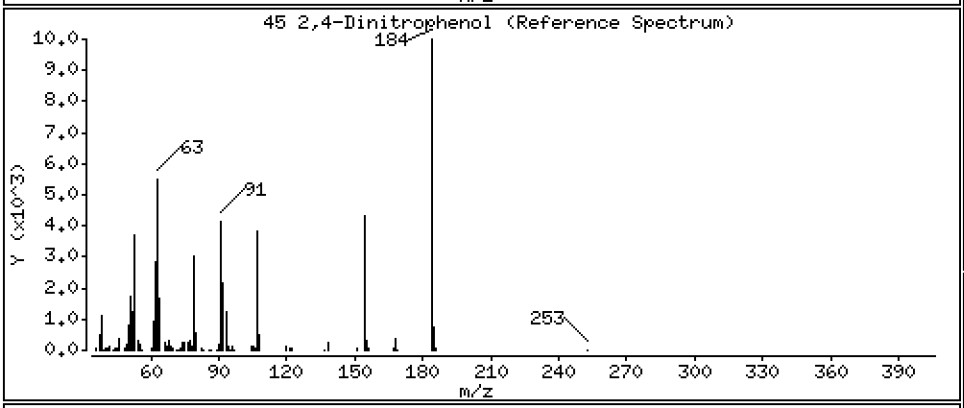
Concentration: 3.374 ug/mL

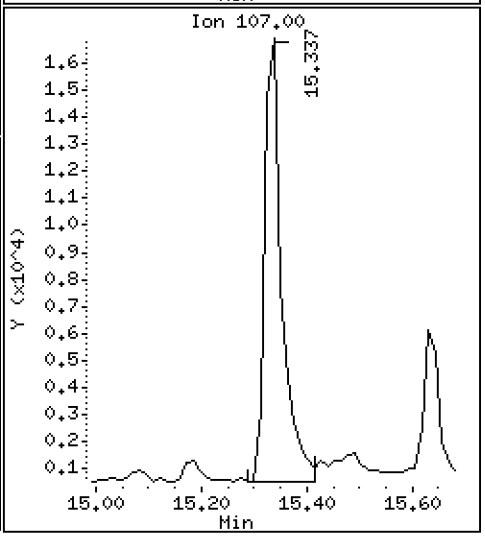


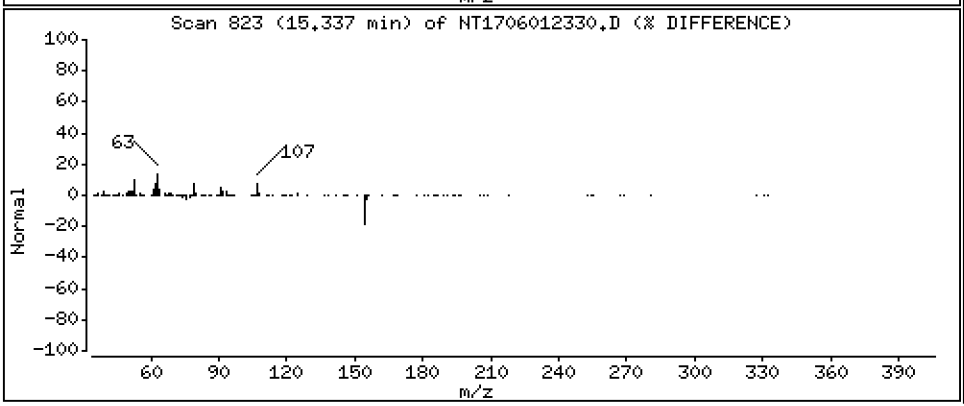












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

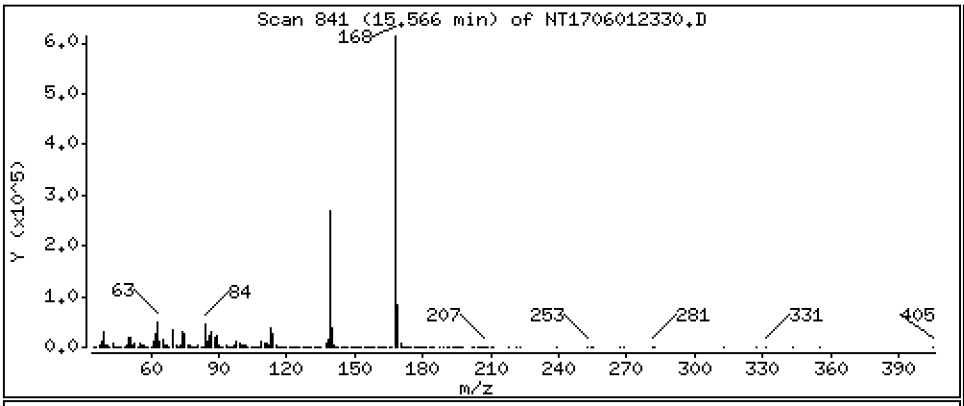
Operator: VTS

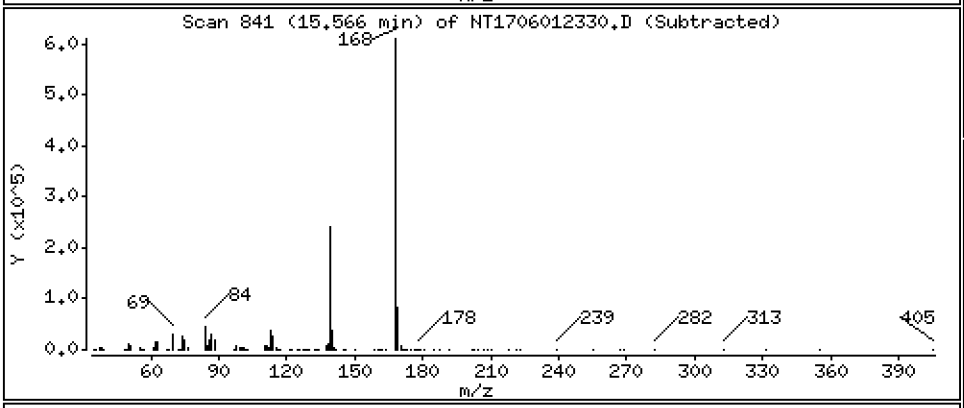
Column phase: ZB-5msi

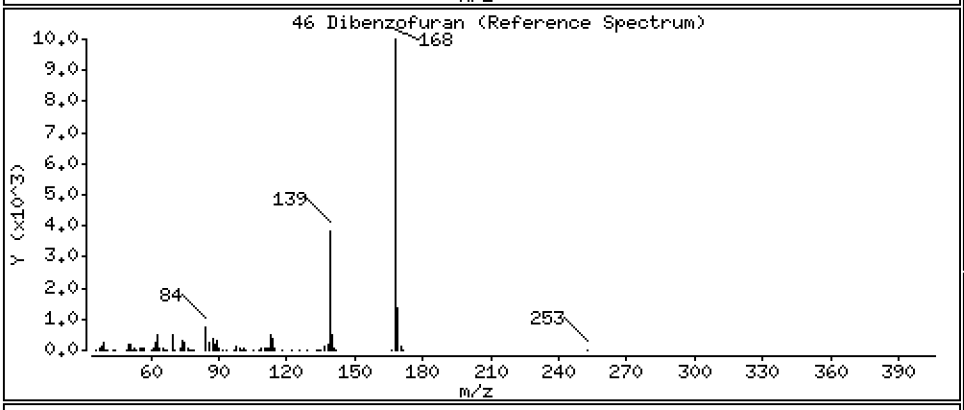
Column diameter: 0.25

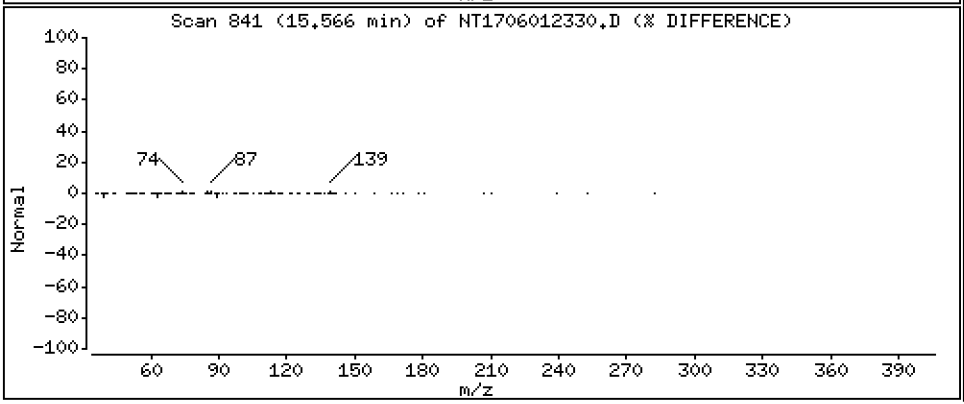
46 Dibenzofuran

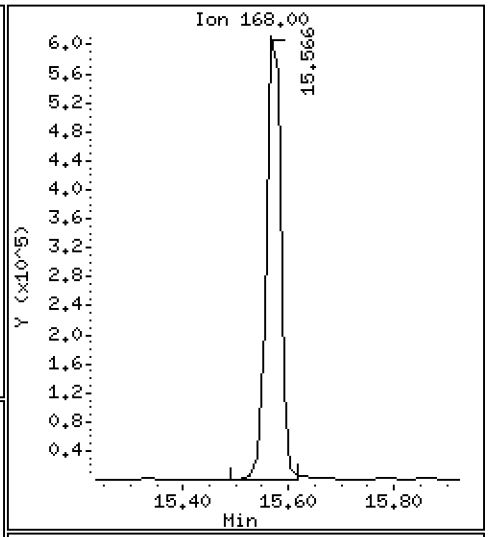
Concentration: 5.654 ug/mL

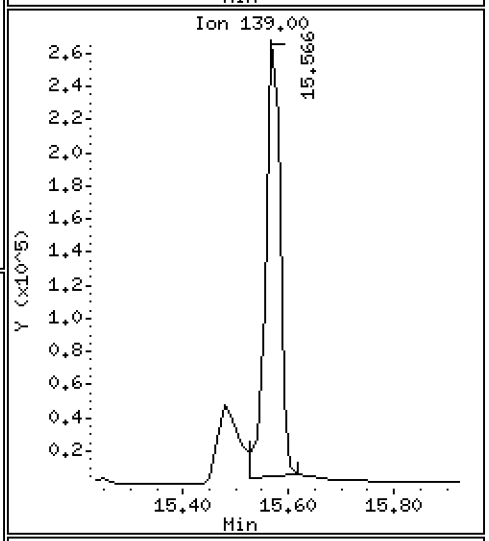


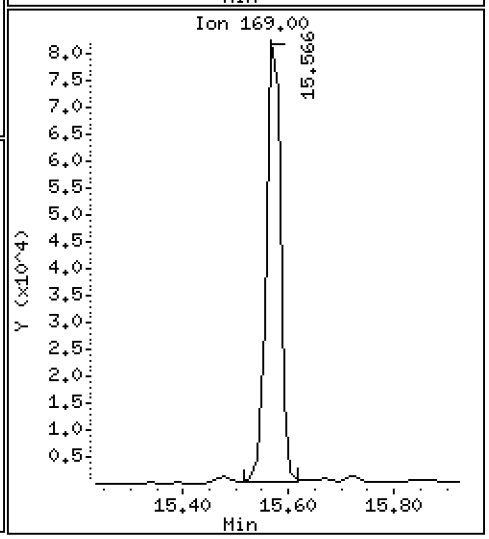












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

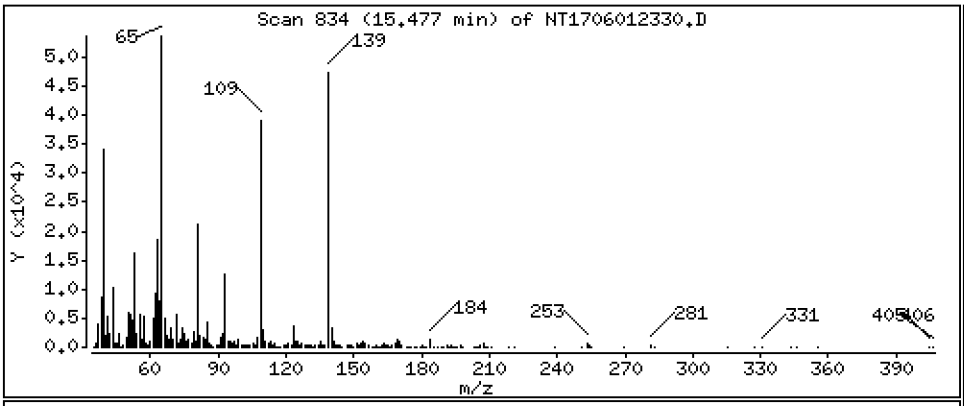
Operator: VTS

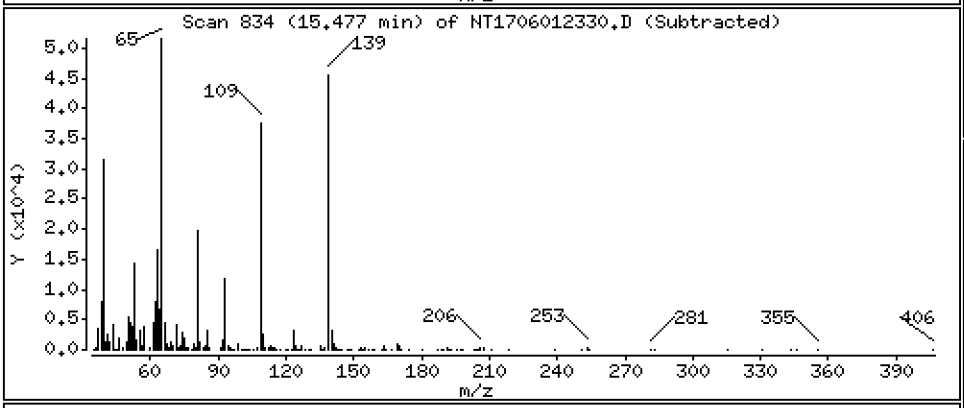
Column phase: ZB-5msi

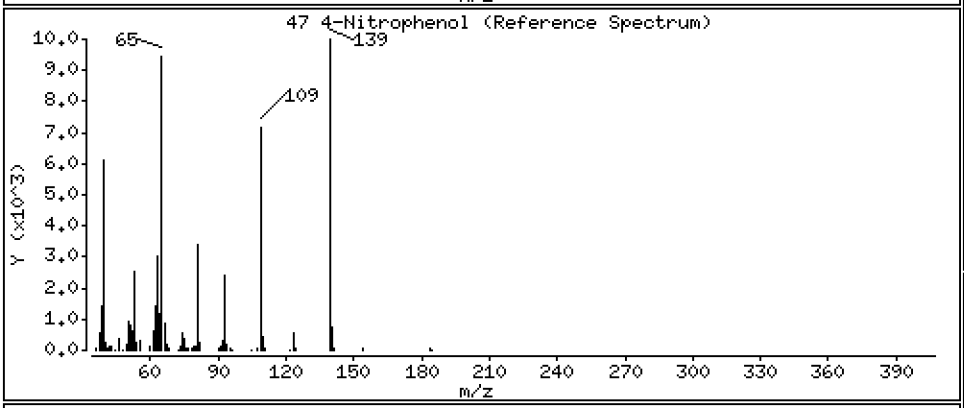
Column diameter: 0.25

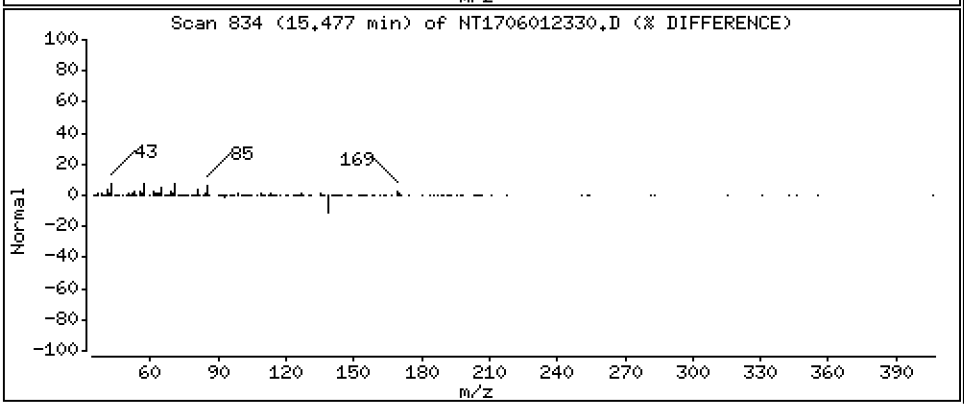
47 4-Nitrophenol

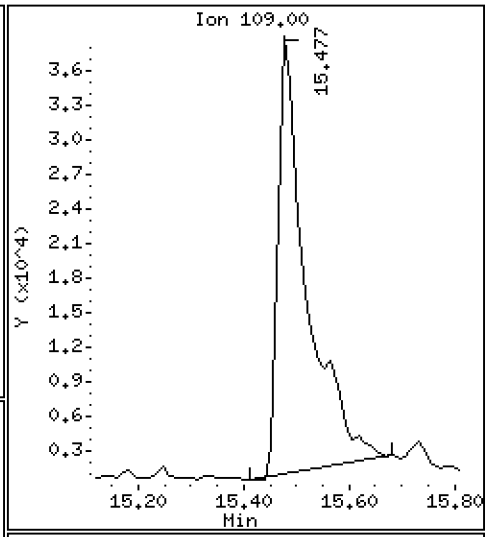
Concentration: 6.089 ug/mL

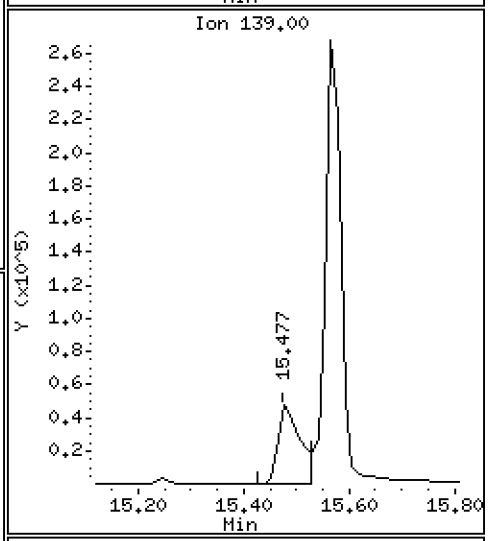


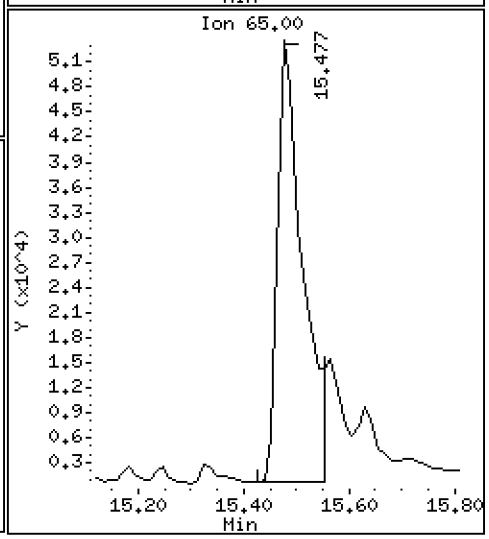












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

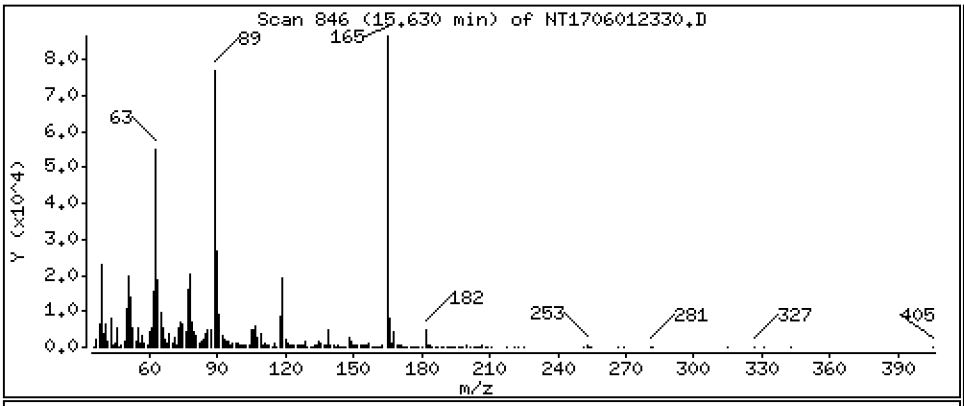
Operator: VTS

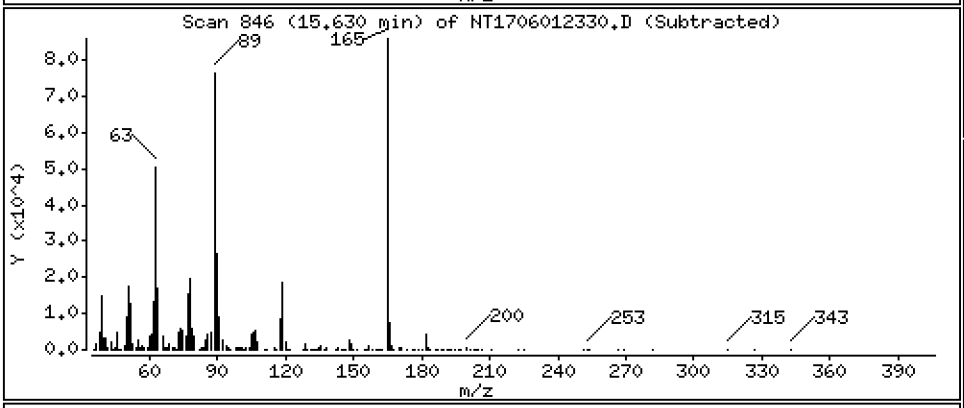
Column phase: ZB-5msi

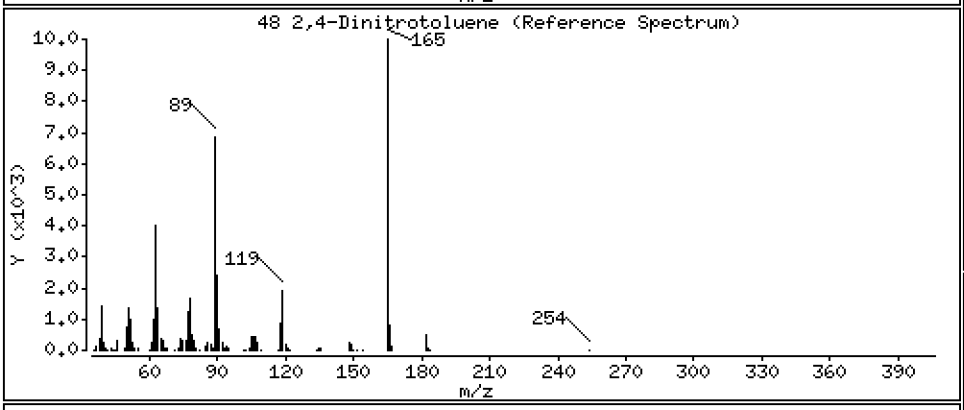
Column diameter: 0.25

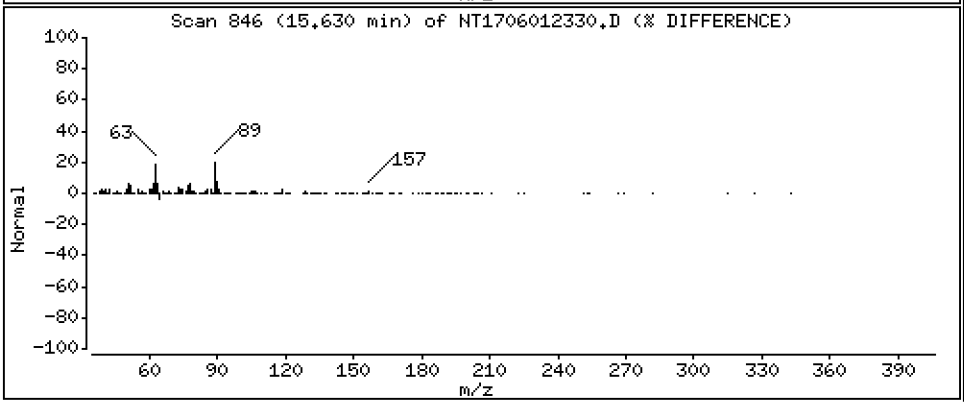
48 2,4-Dinitrotoluene

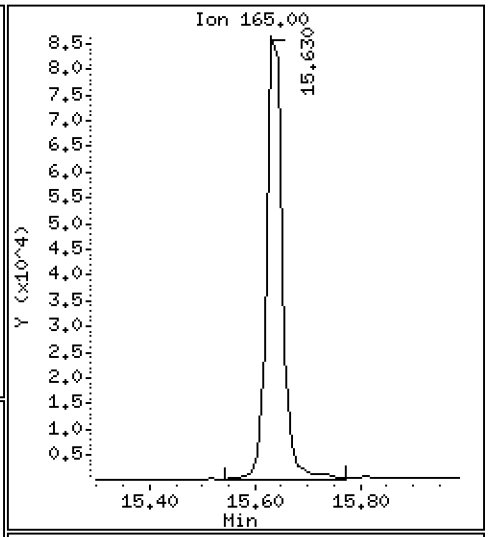
Concentration: 3.613 ug/mL

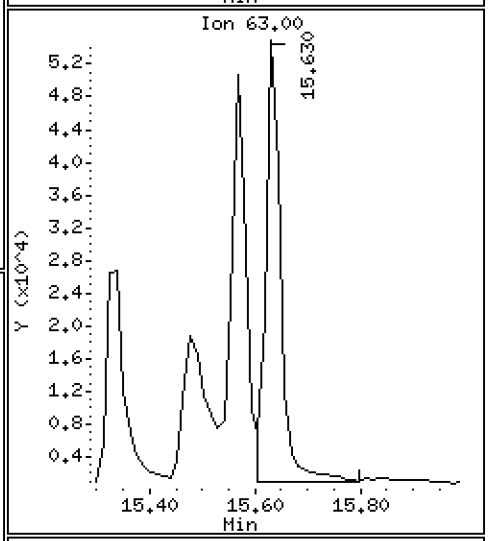


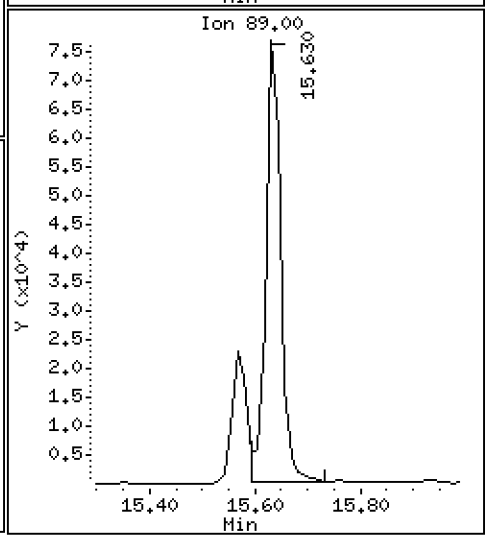












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

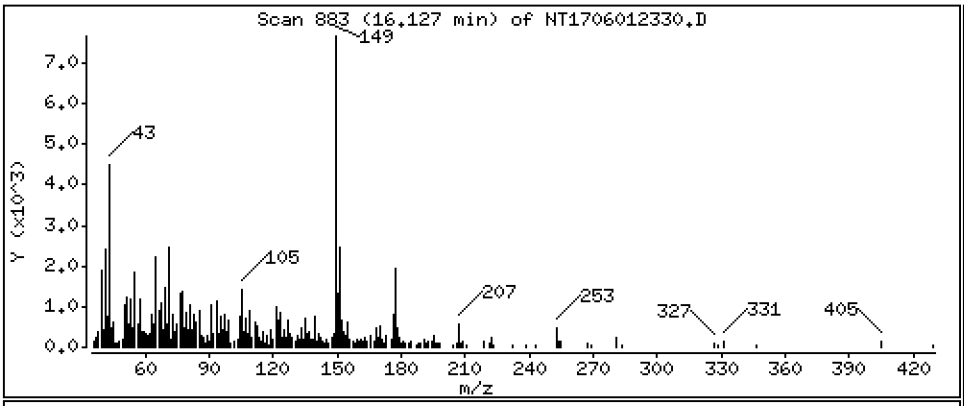
Operator: VTS

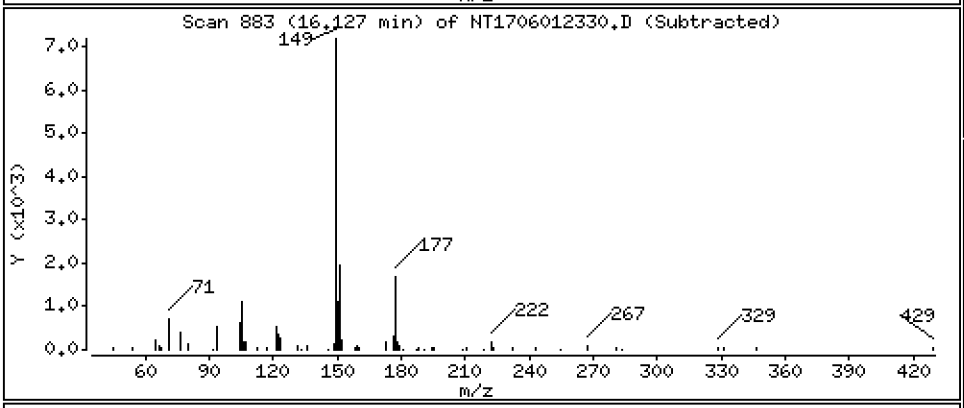
Column phase: ZB-5msi

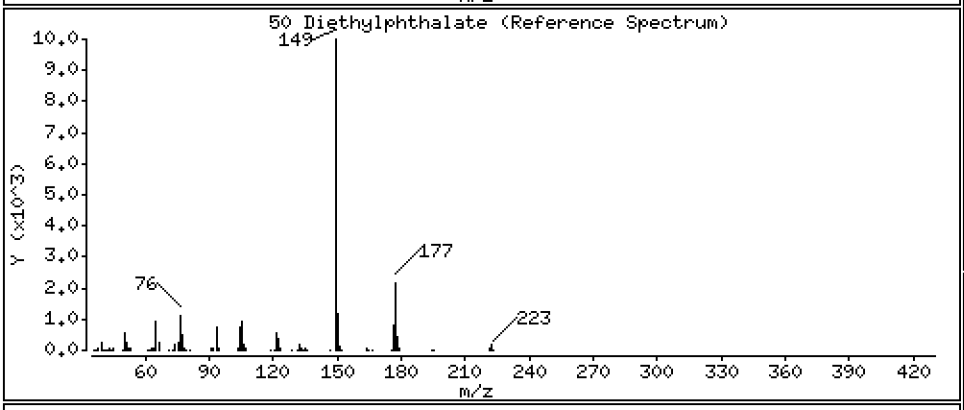
Column diameter: 0.25

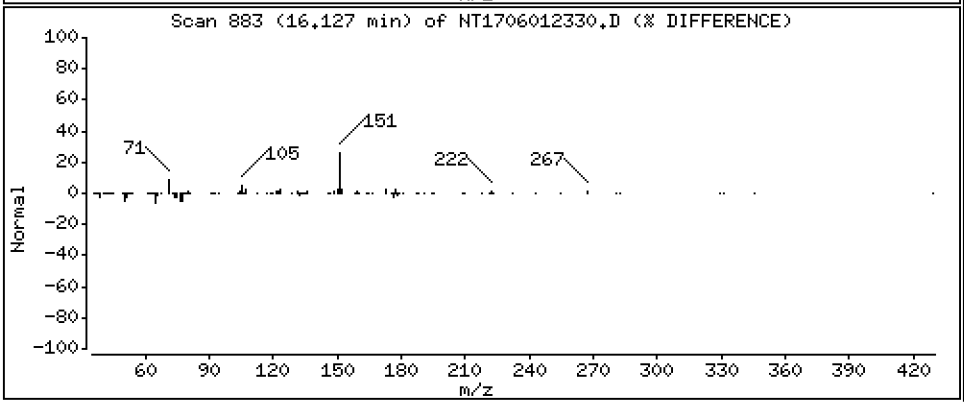
50 Diethylphthalate

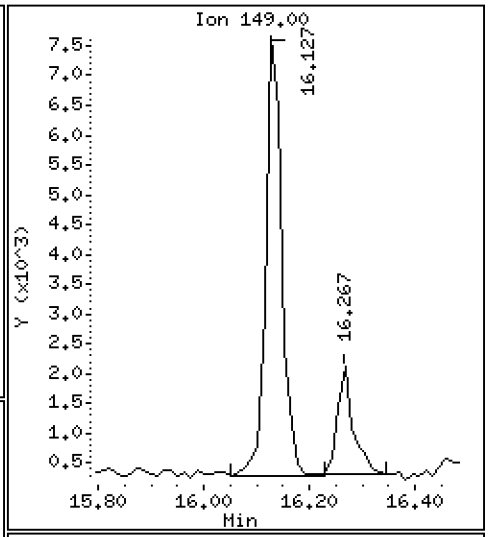
Concentration: 0.1144 ug/mL

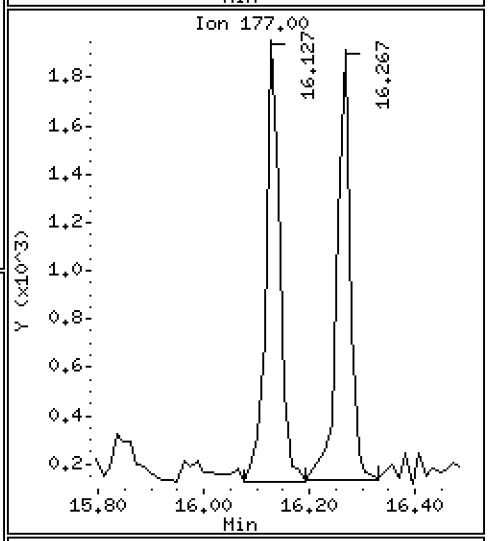


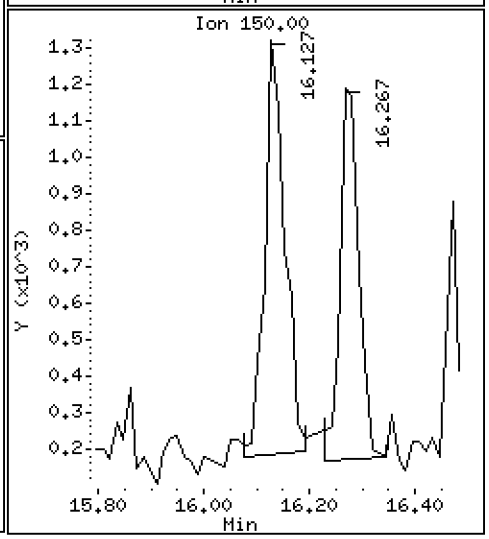












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

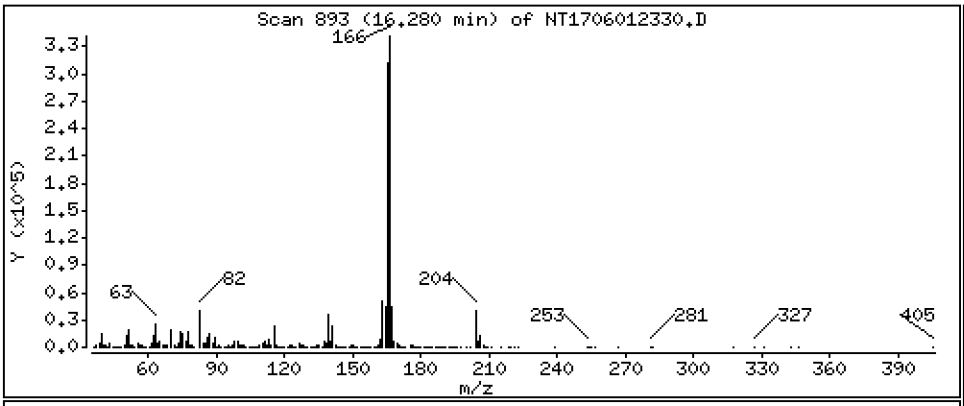
Operator: VTS

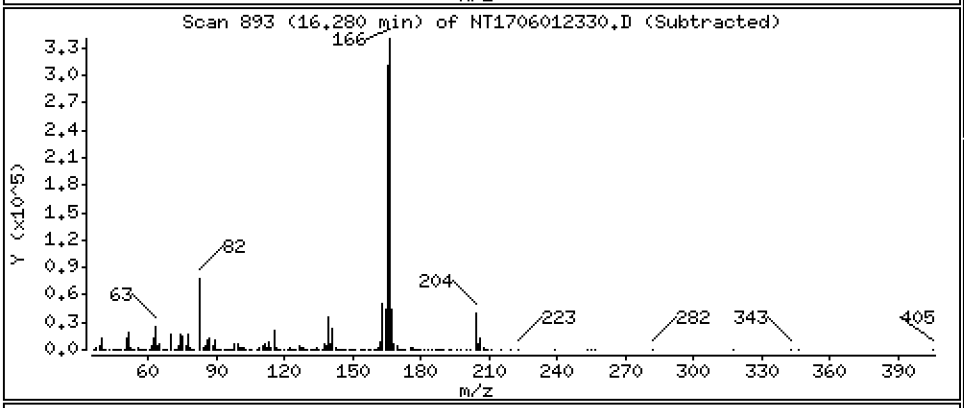
Column phase: ZB-5msi

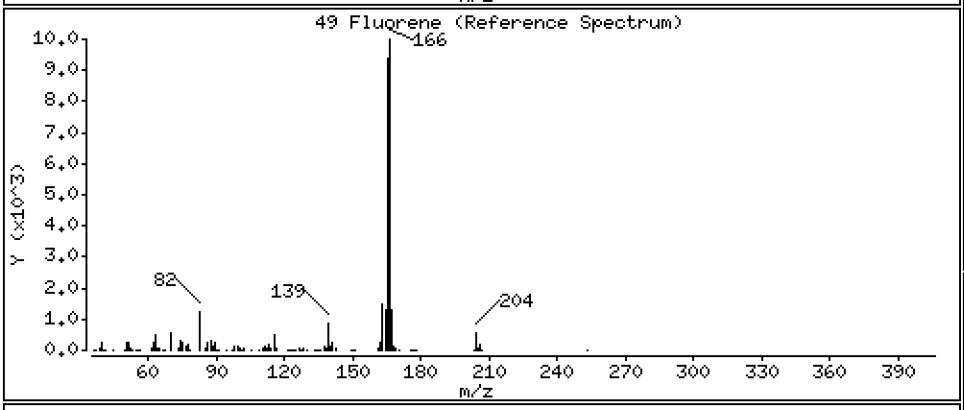
Column diameter: 0.25

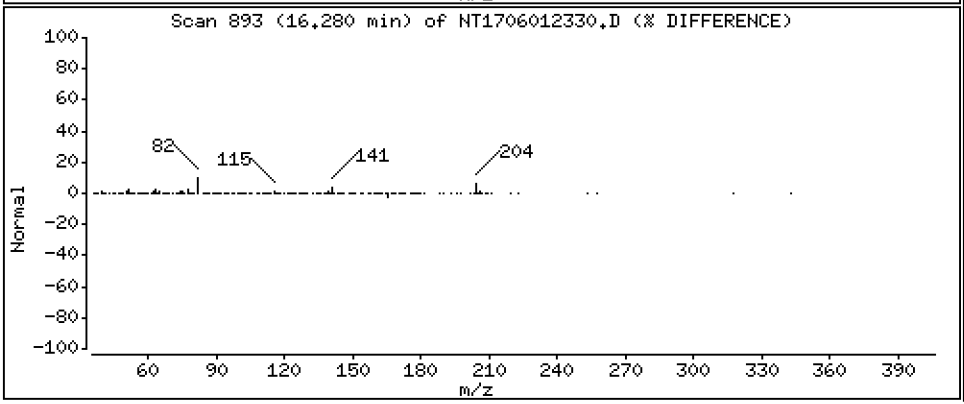
49 Fluorene

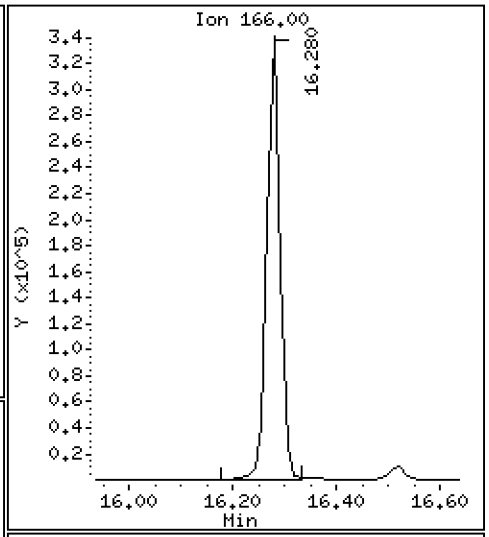
Concentration: 3.547 ug/mL

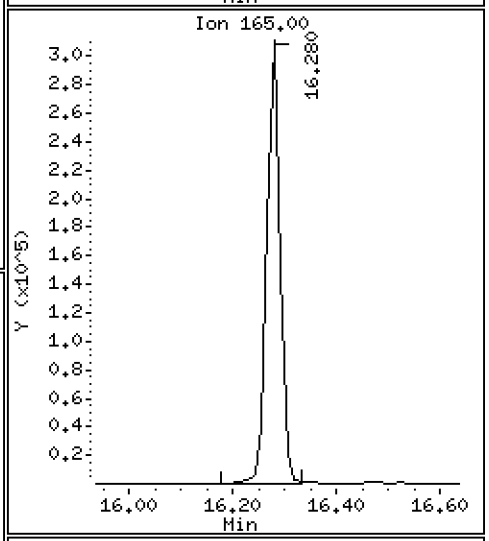


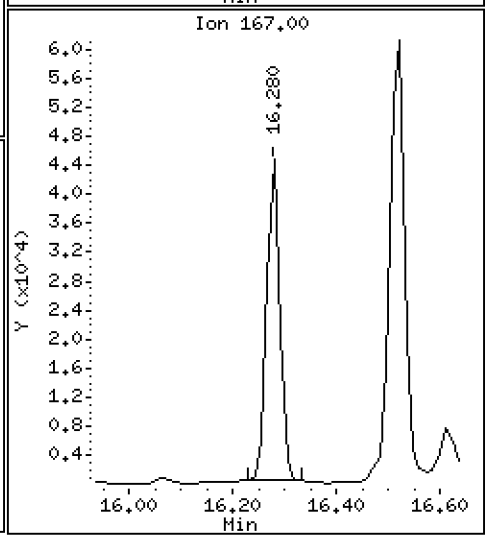












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

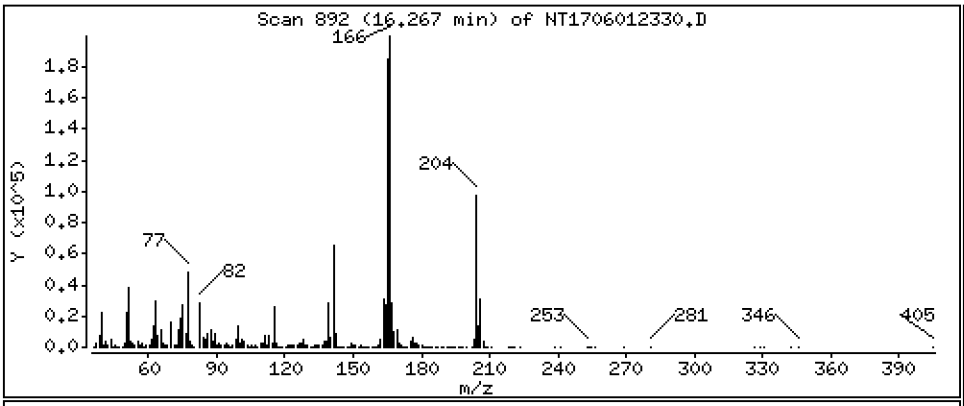
Operator: VTS

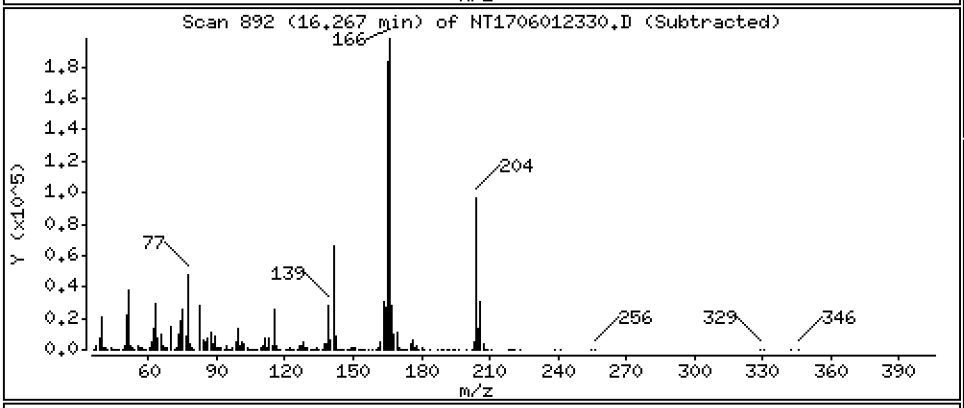
Column phase: ZB-5msi

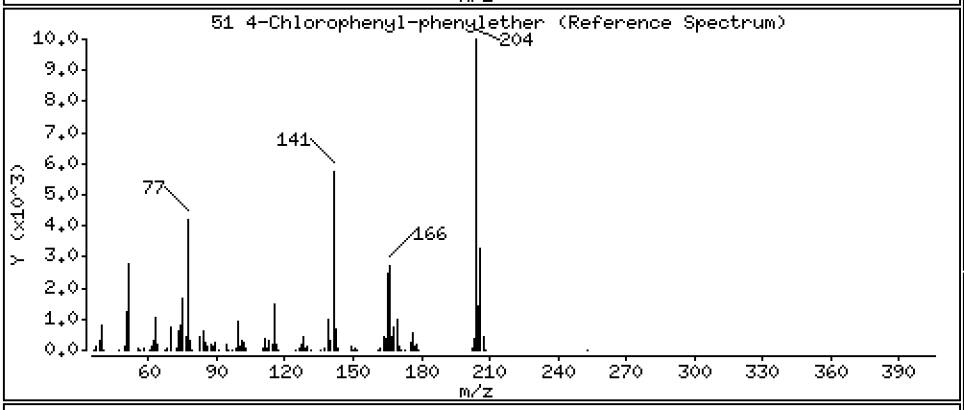
Column diameter: 0.25

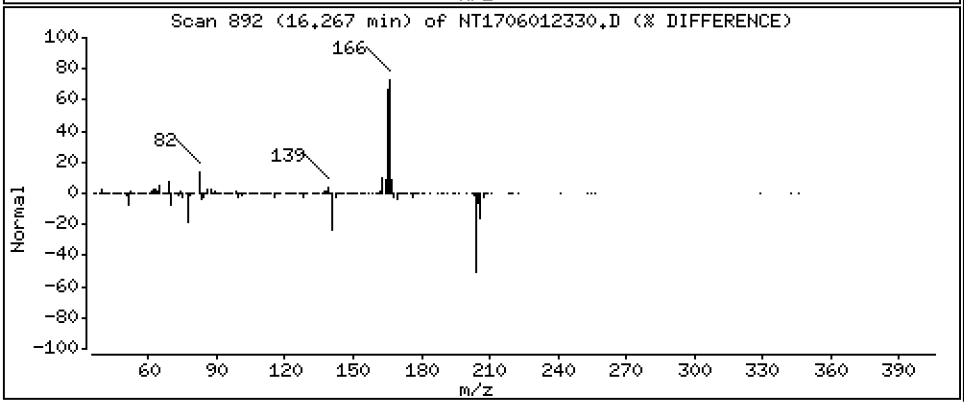
51 4-Chlorophenyl-phenylether

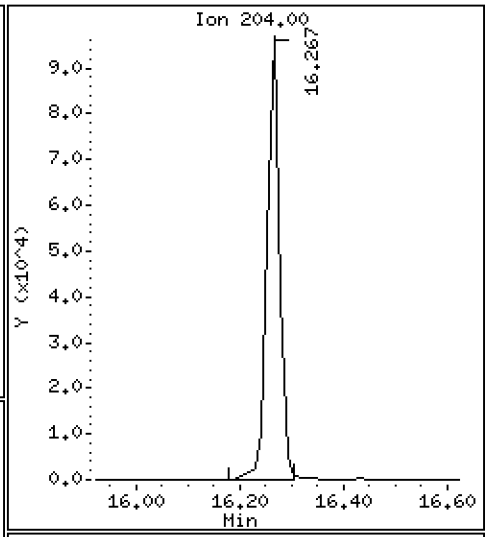
Concentration: 2.142 ug/mL

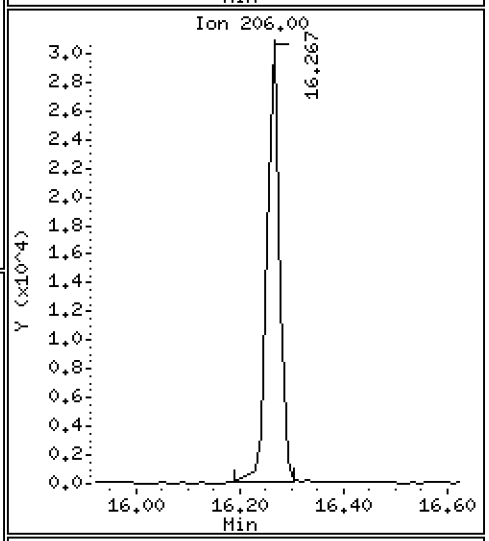


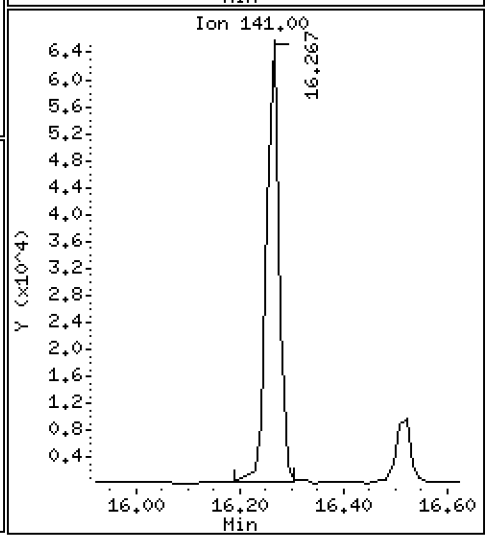












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

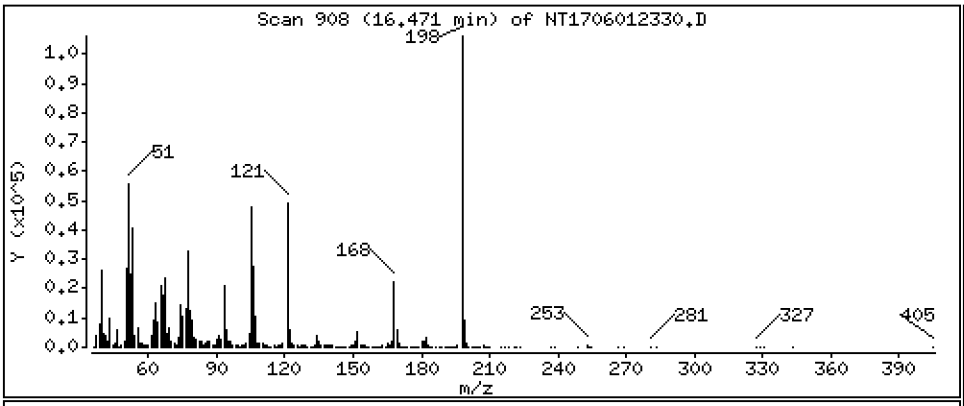
Operator: VTS

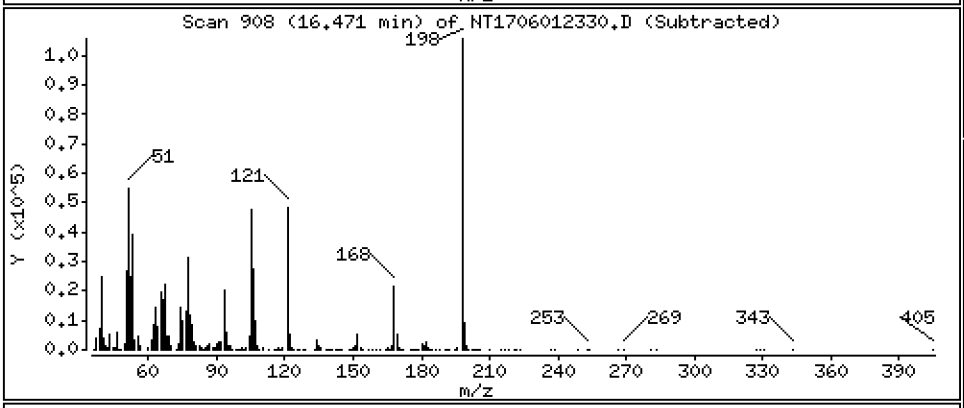
Column phase: ZB-5msi

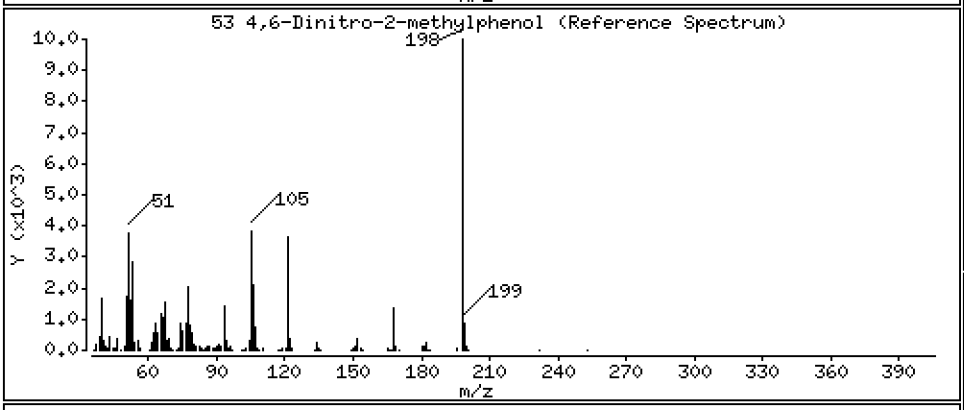
Column diameter: 0.25

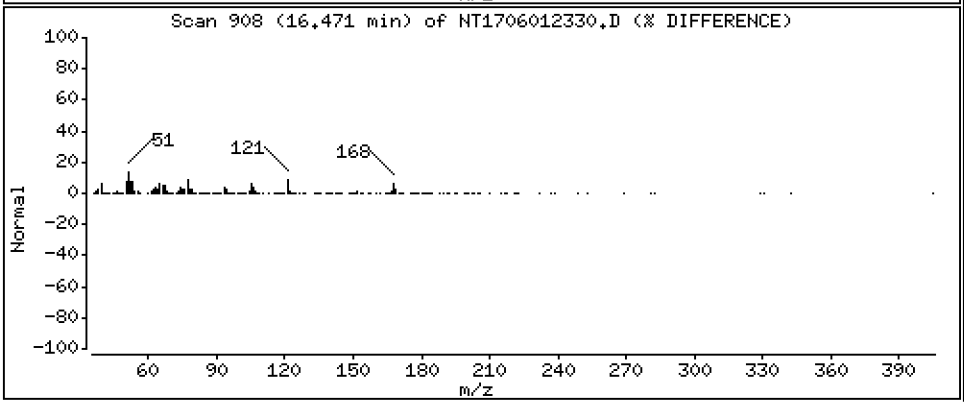
53 4,6-Dinitro-2-methylphenol

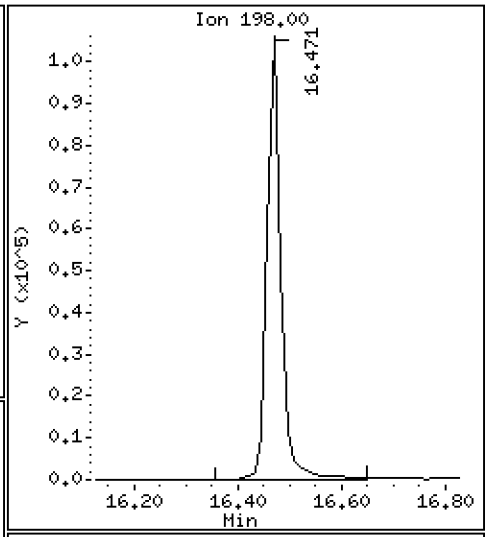
Concentration: 5.962 ug/mL

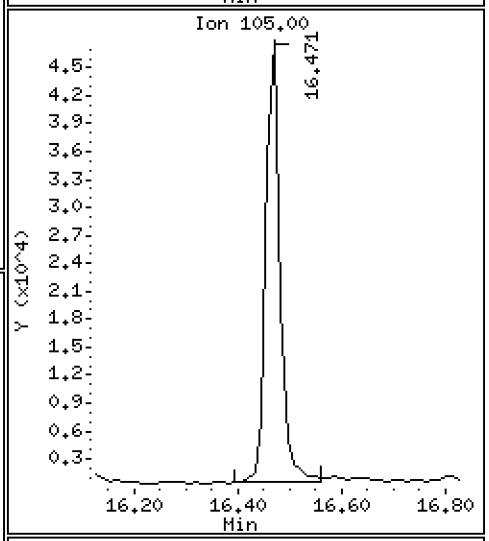


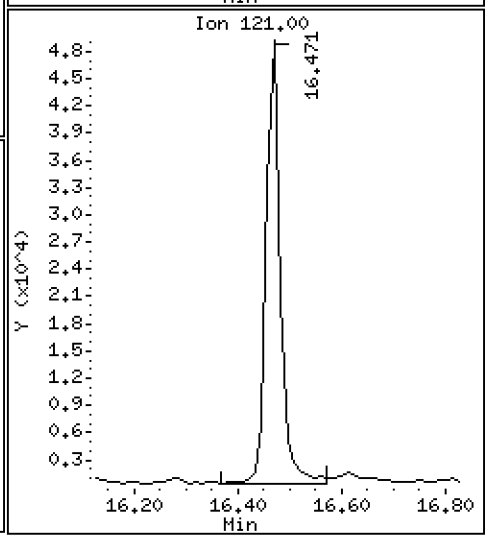












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

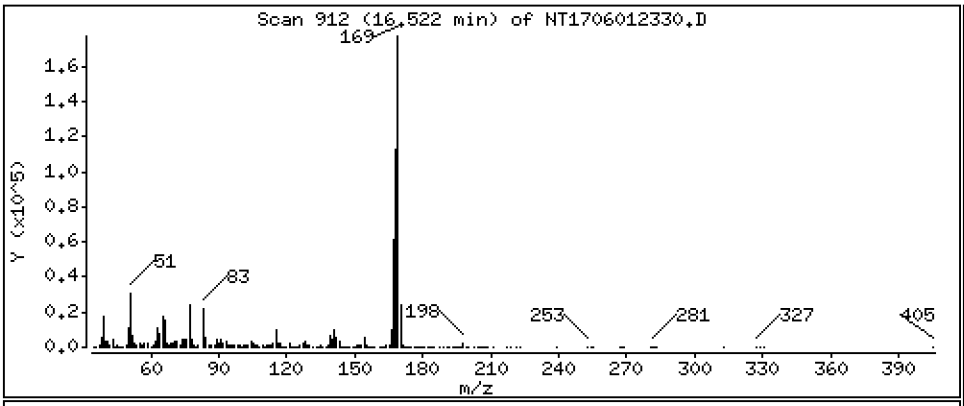
Operator: VTS

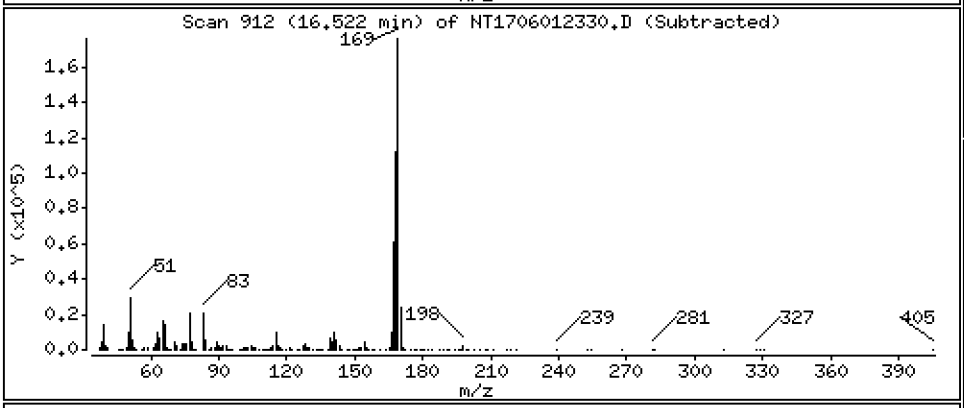
Column phase: ZB-5msi

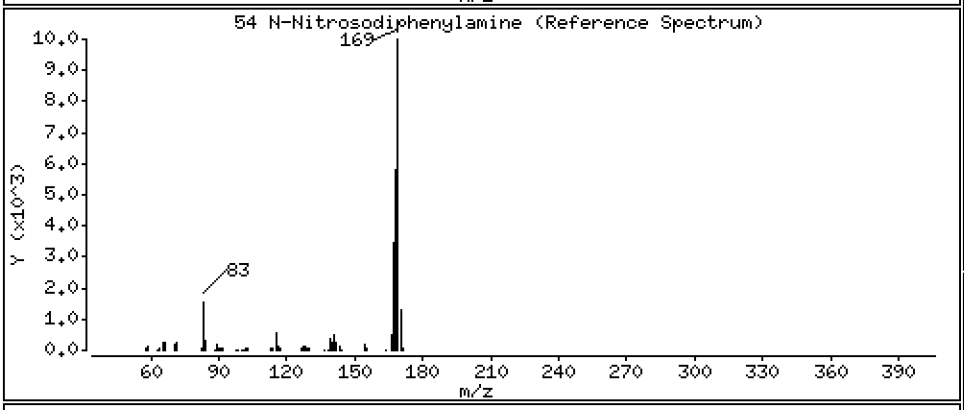
Column diameter: 0.25

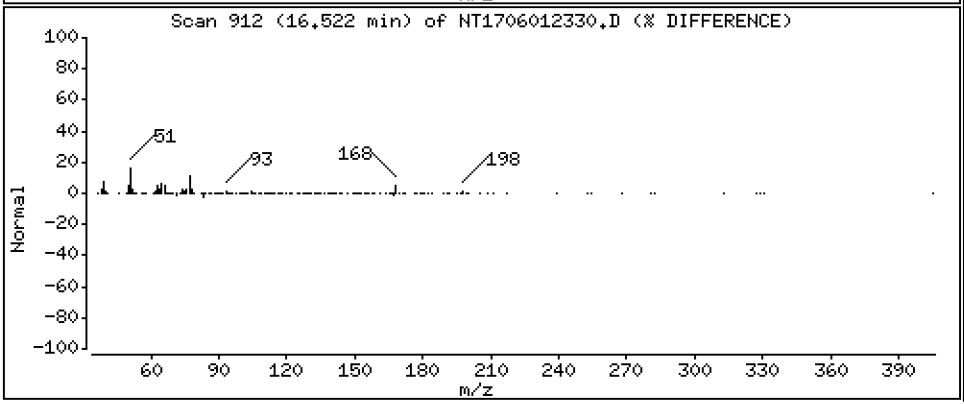
54 N-Nitrosodiphenylamine

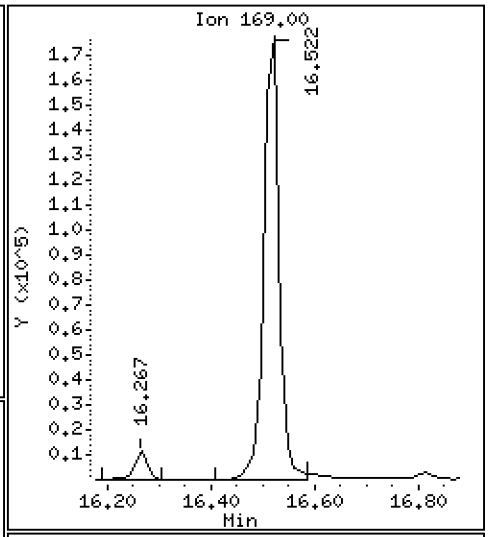
Concentration: 3.133 ug/mL

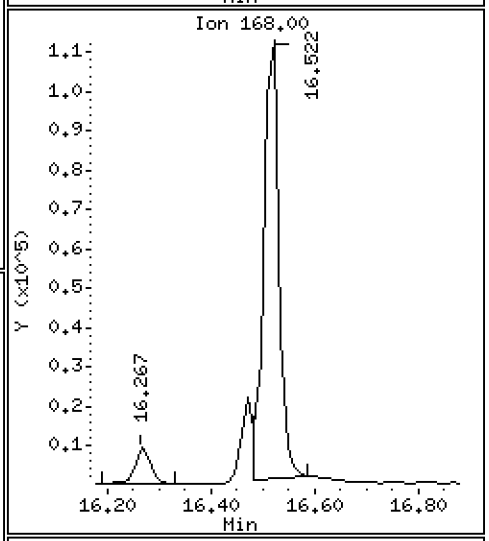


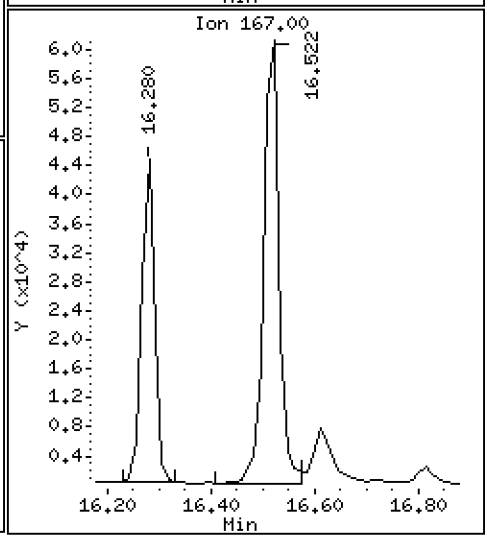












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

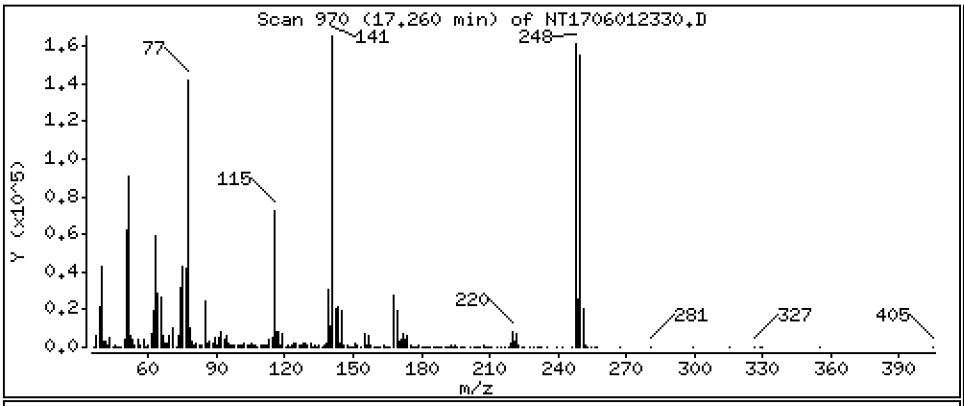
Operator: VTS

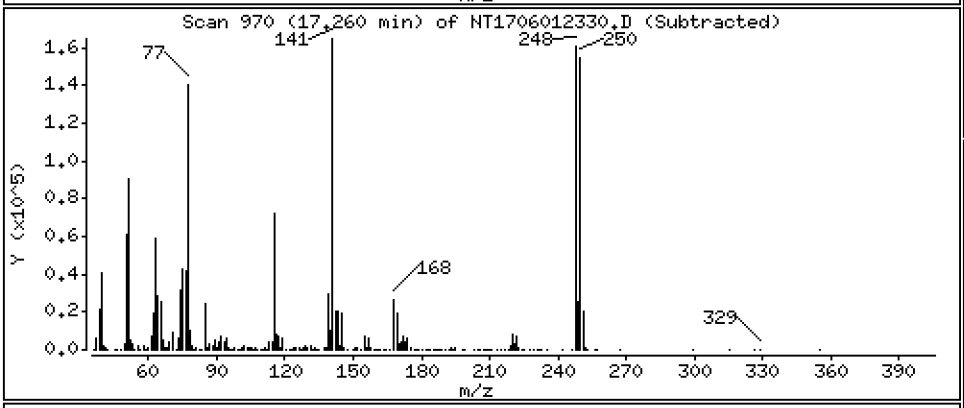
Column phase: ZB-5msi

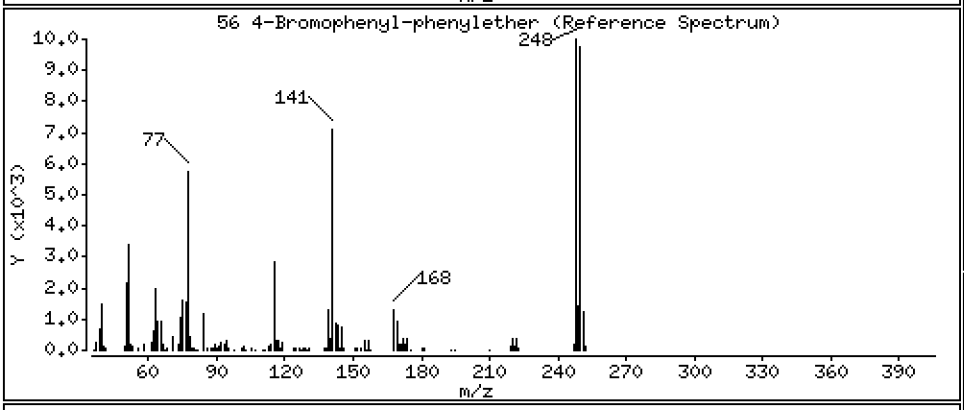
Column diameter: 0.25

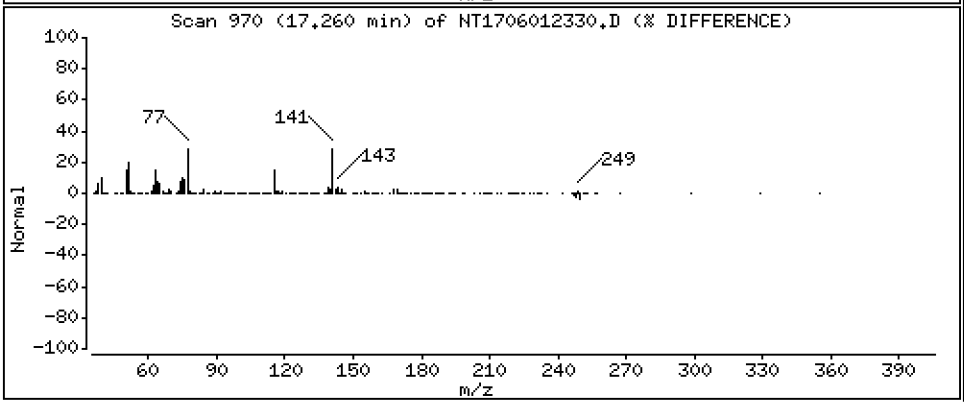
56 4-Bromophenyl-phenylether

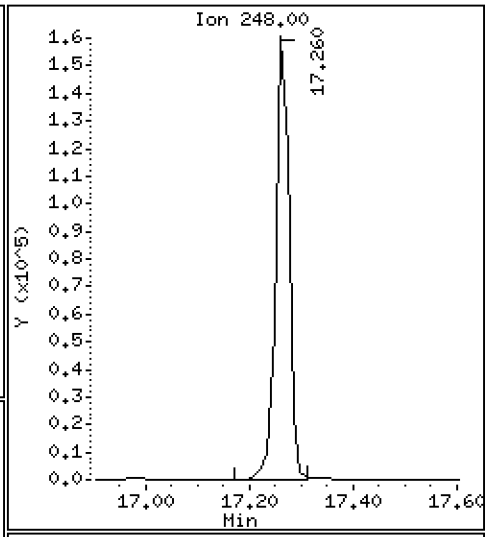
Concentration: 7.087 ug/mL

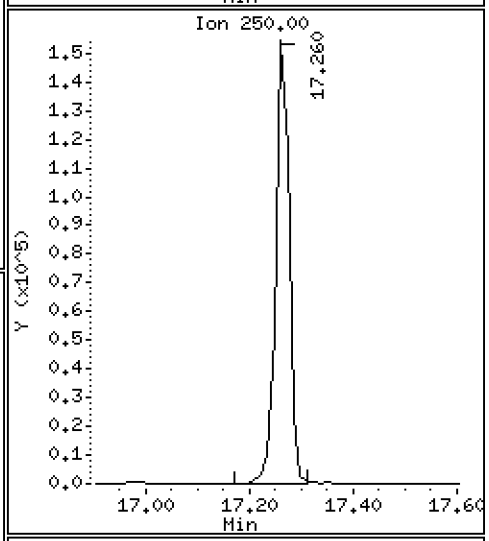


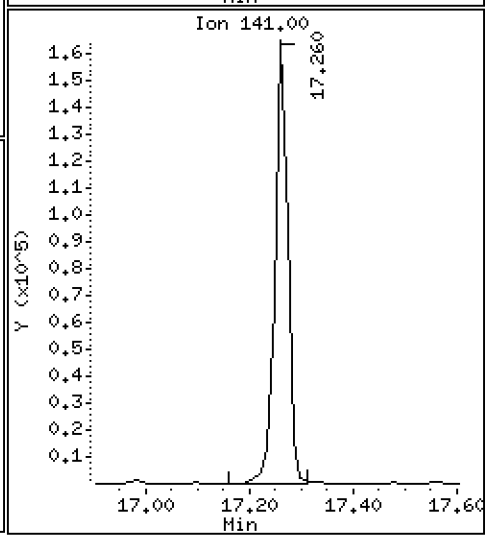












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

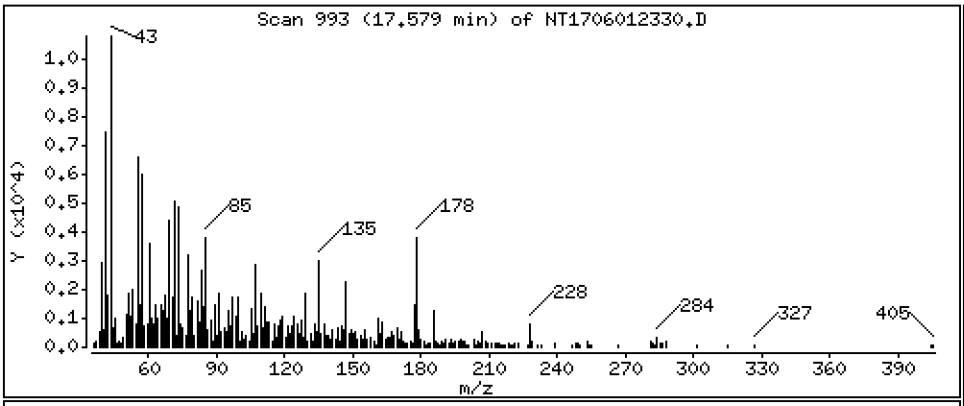
Operator: VTS

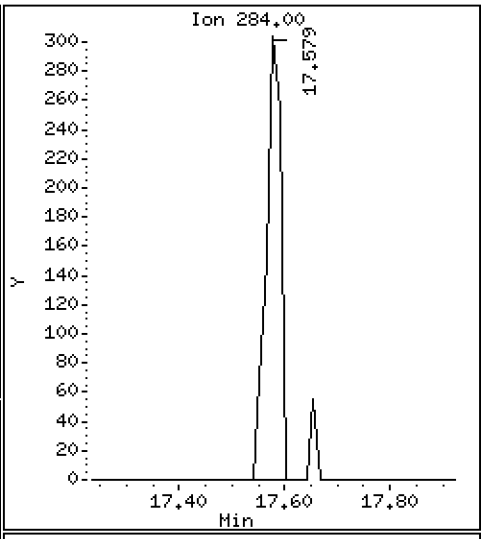
Column phase: ZB-5msi

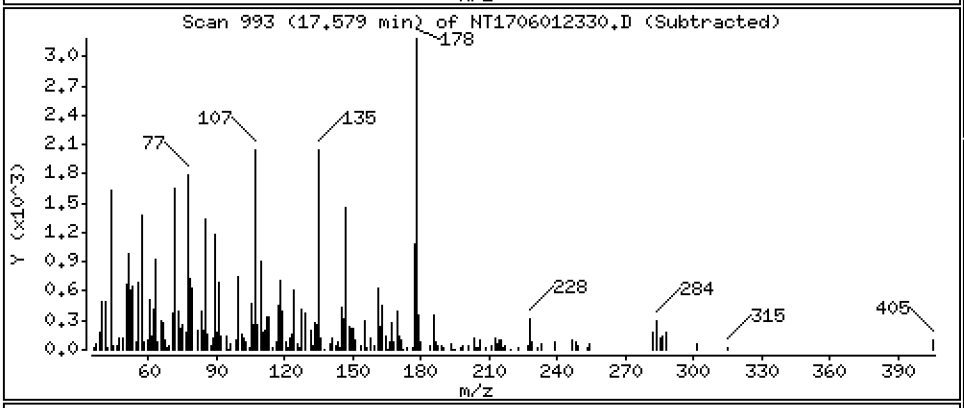
Column diameter: 0.25

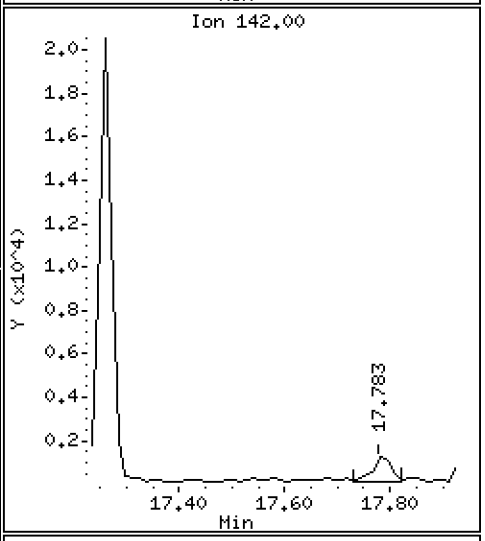
57 Hexachlorobenzene

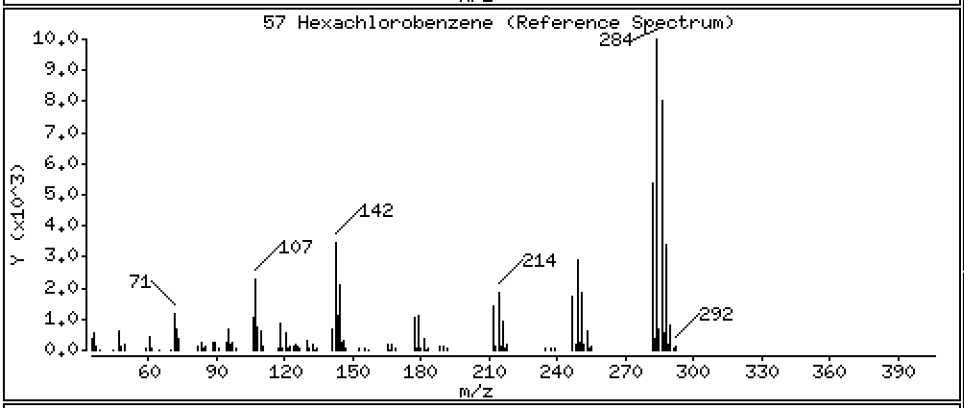
Concentration: 0.01437 ug/mL

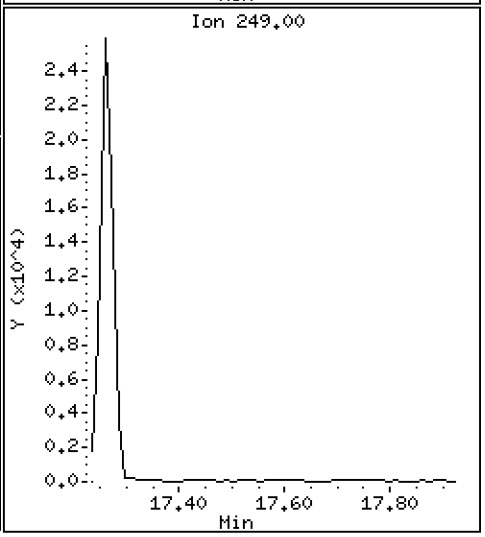


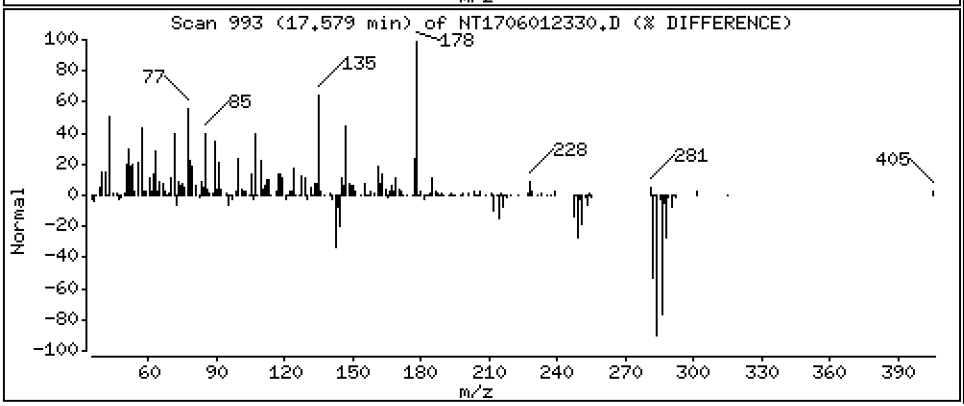












Date : 02-JUN-2023 06:02

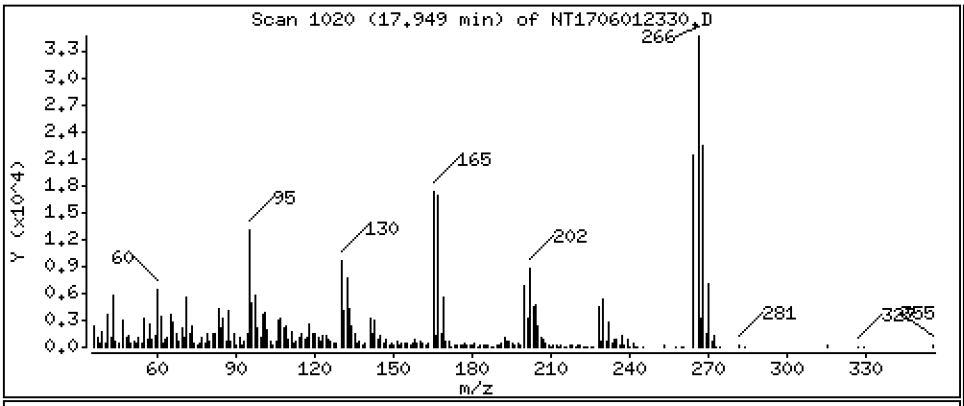
Client ID: Instrument: nt17.i

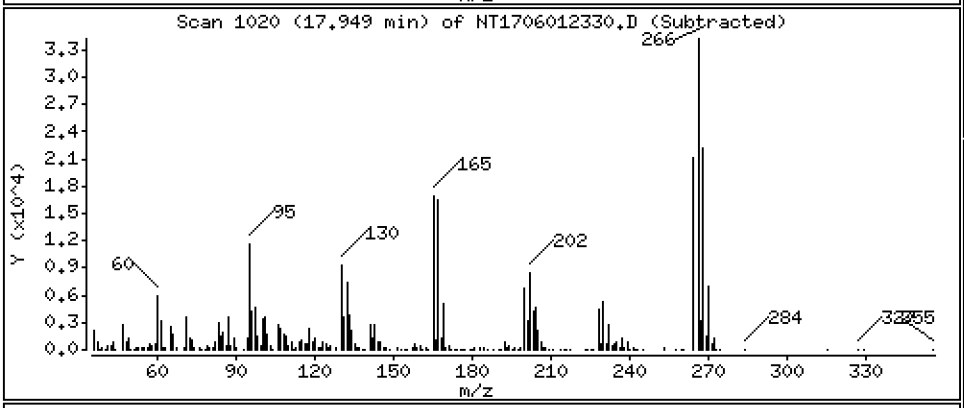
Sample Info: BLE0148-SRM1

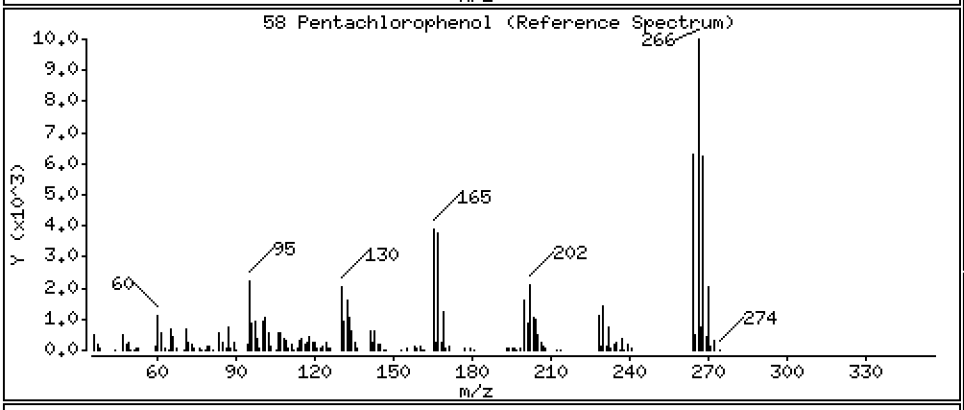
Operator: VTS

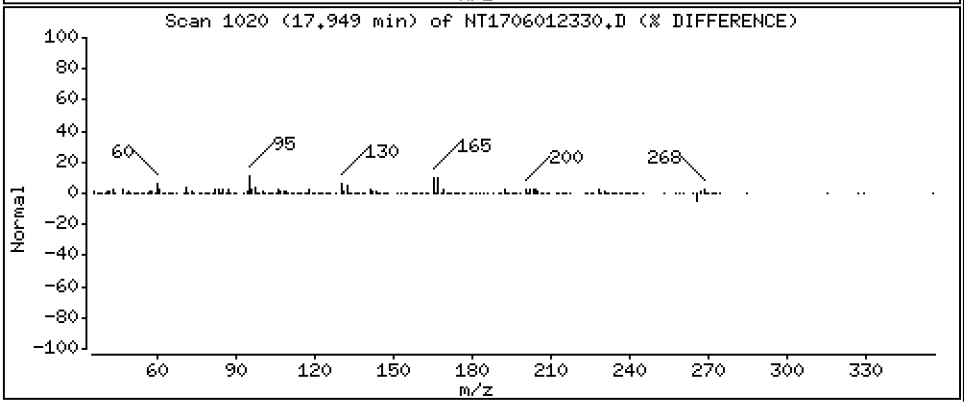
Column phase: ZB-5msi Column diameter: 0.25

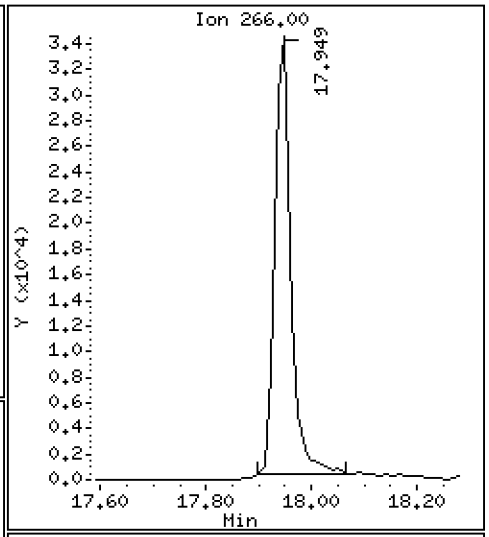
58 Pentachlorophenol Concentration: 2.983 ug/mL

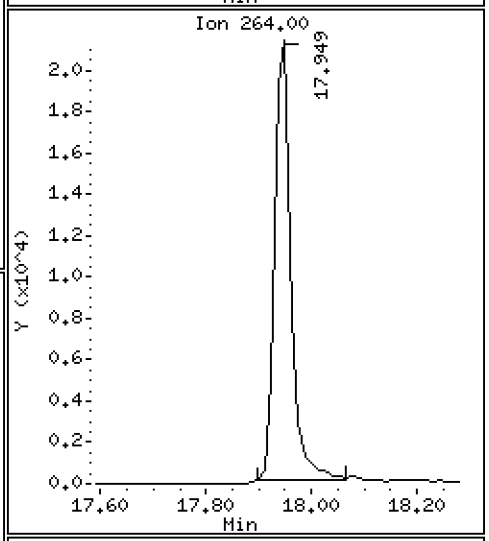


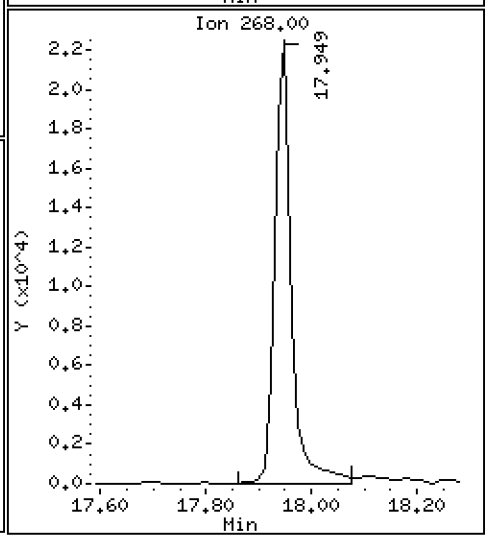












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

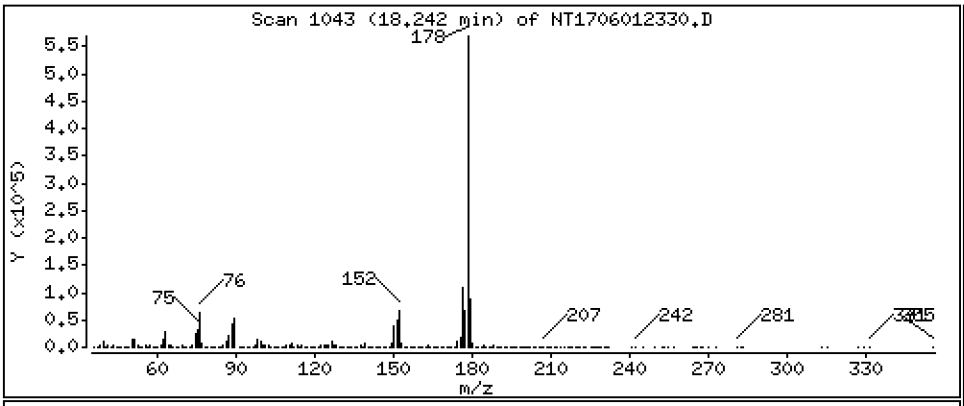
Operator: VTS

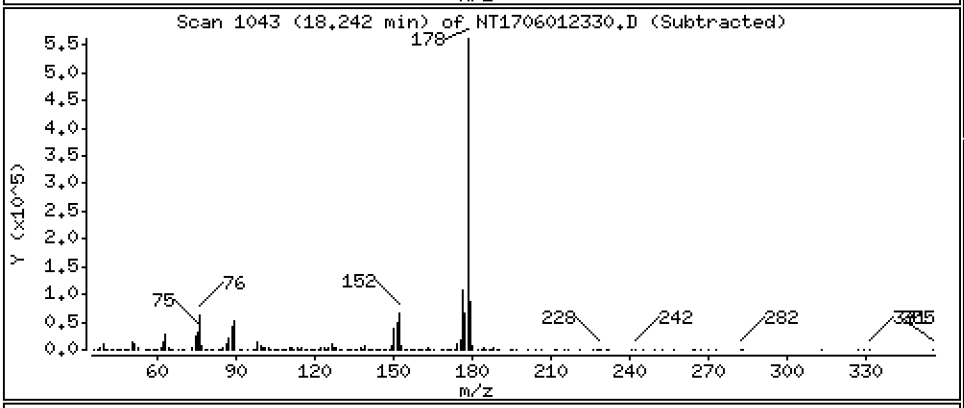
Column phase: ZB-5msi

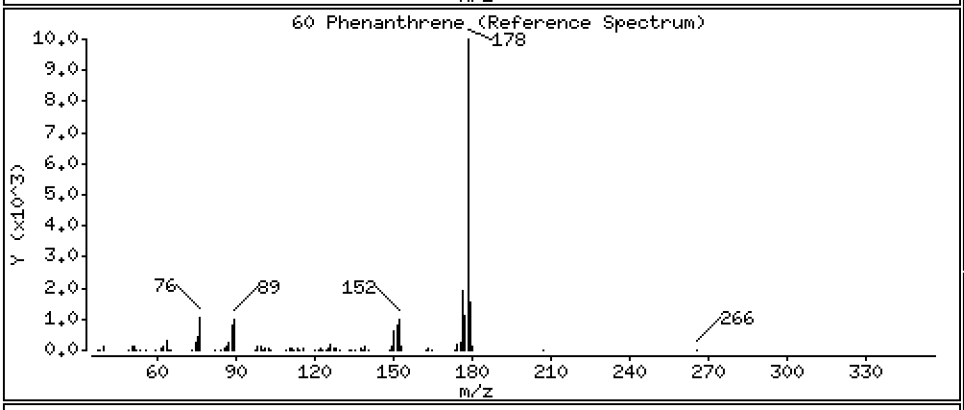
Column diameter: 0.25

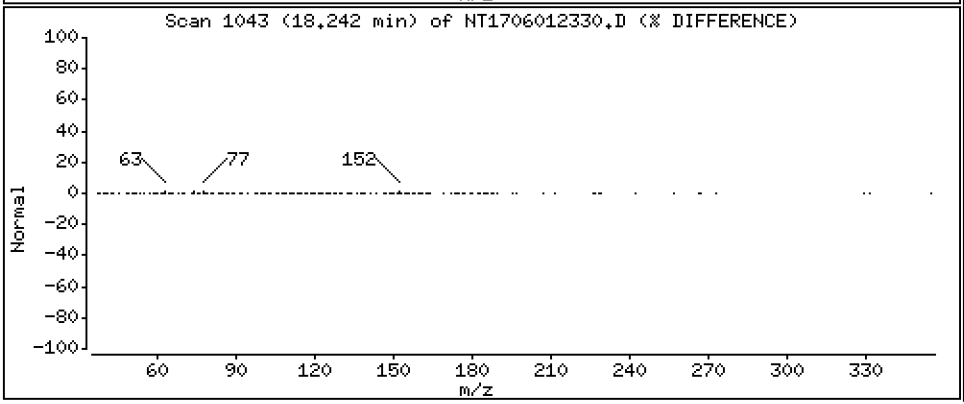
60 Phenanthrene

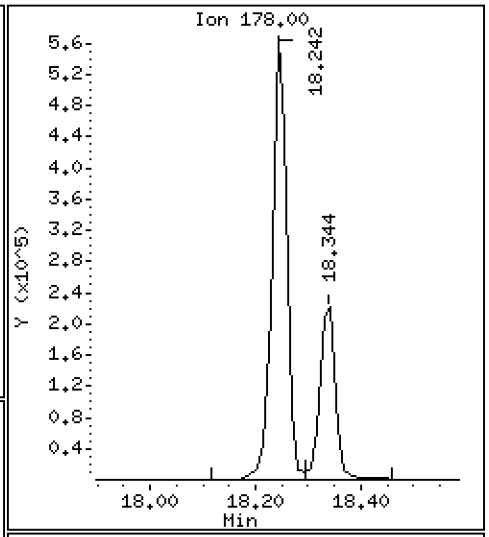
Concentration: 4.444 ug/mL

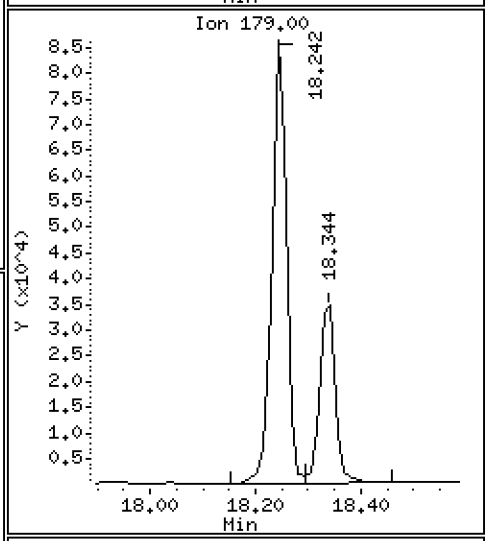


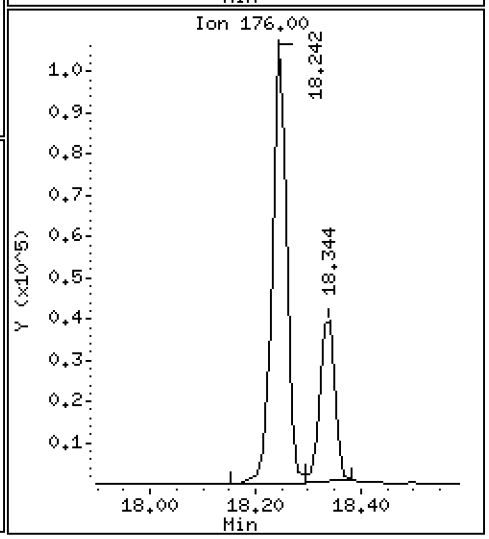












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

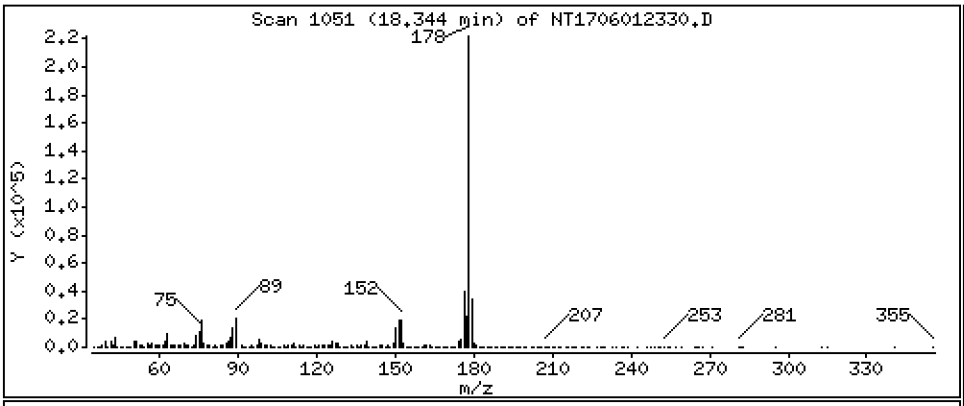
Operator: VTS

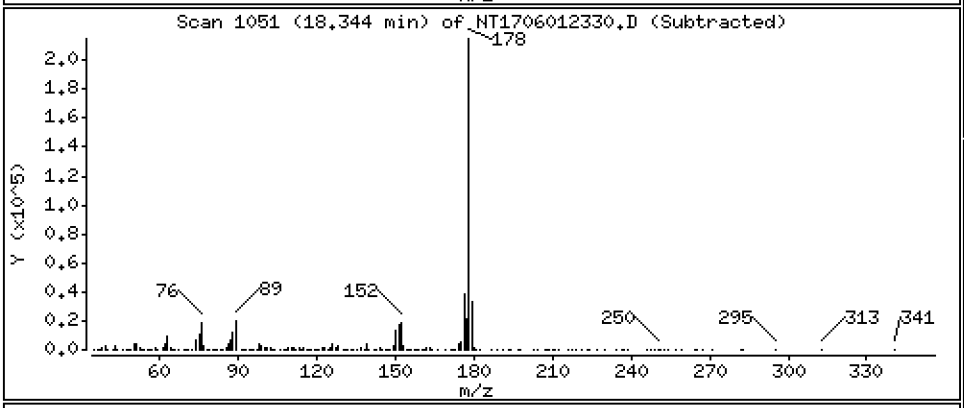
Column phase: ZB-5msi

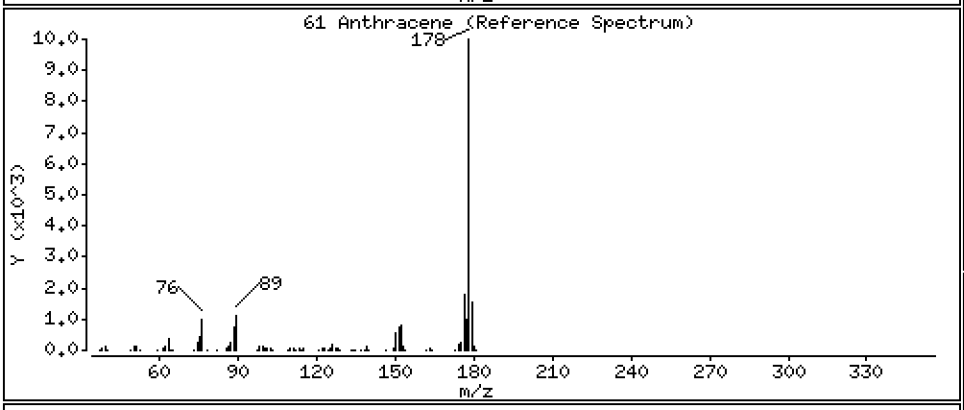
Column diameter: 0.25

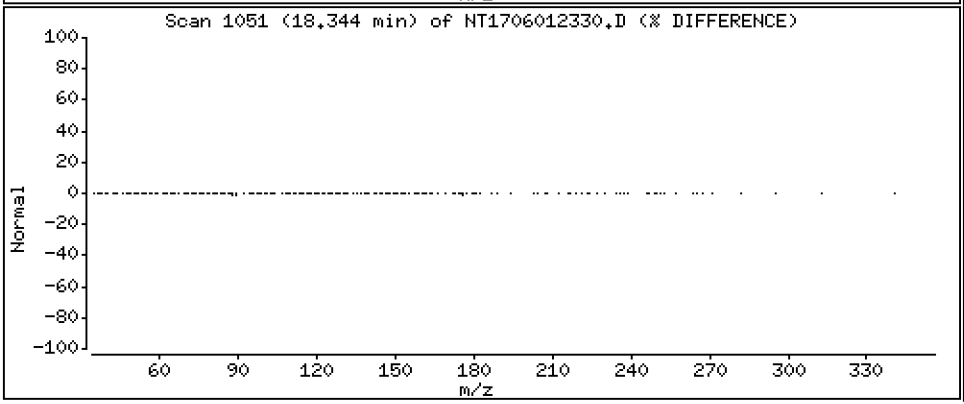
61 Anthracene

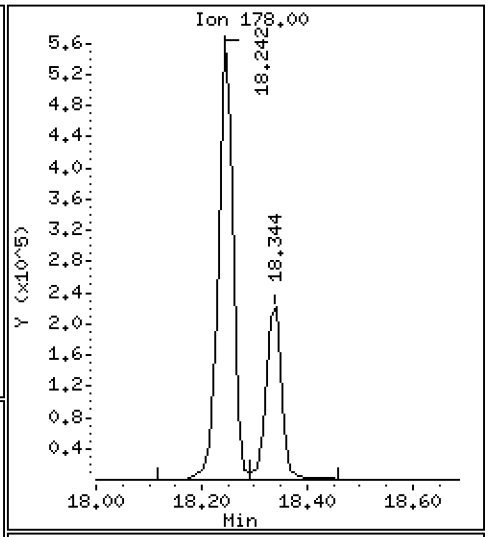
Concentration: 2.025 ug/mL

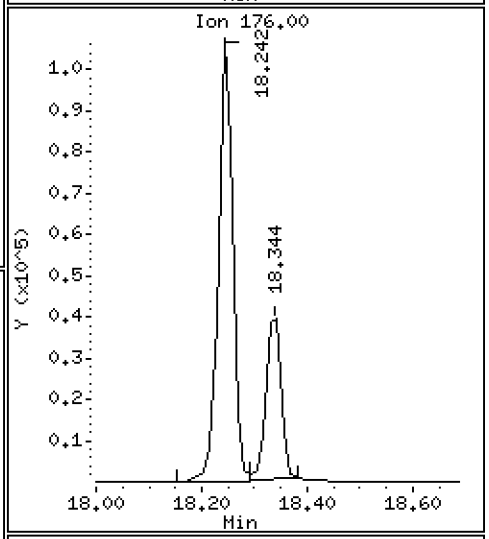


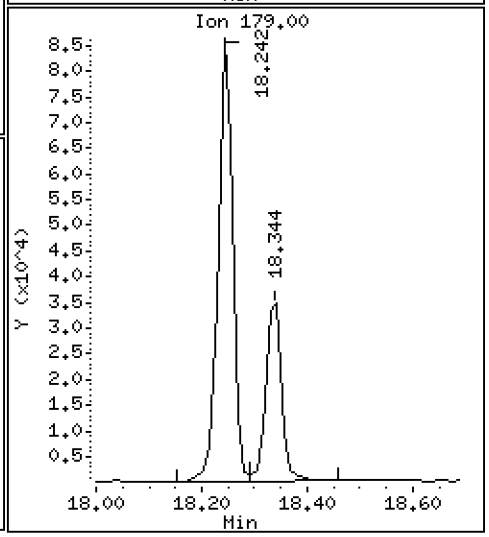












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

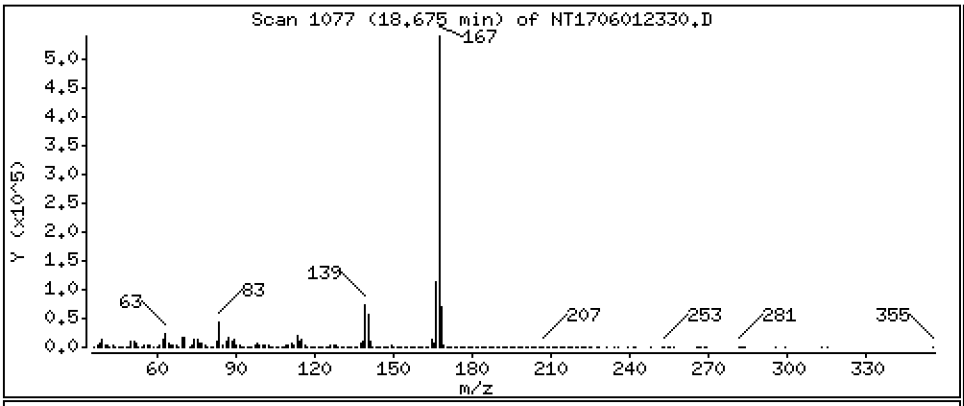
Operator: VTS

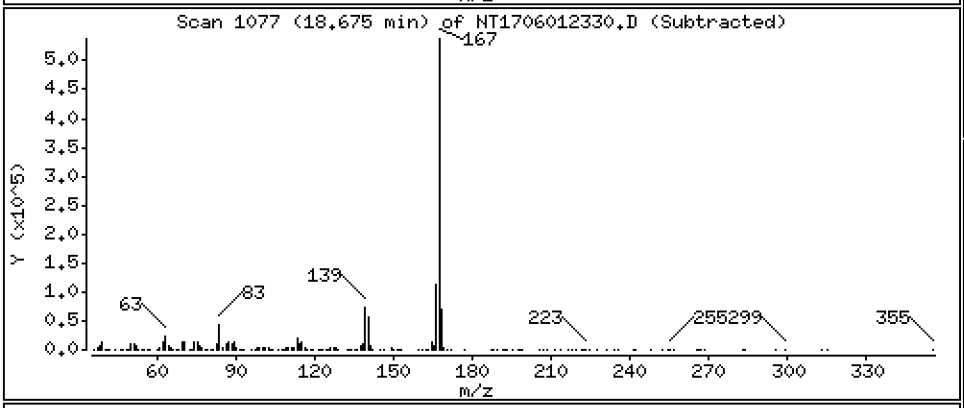
Column phase: ZB-5msi

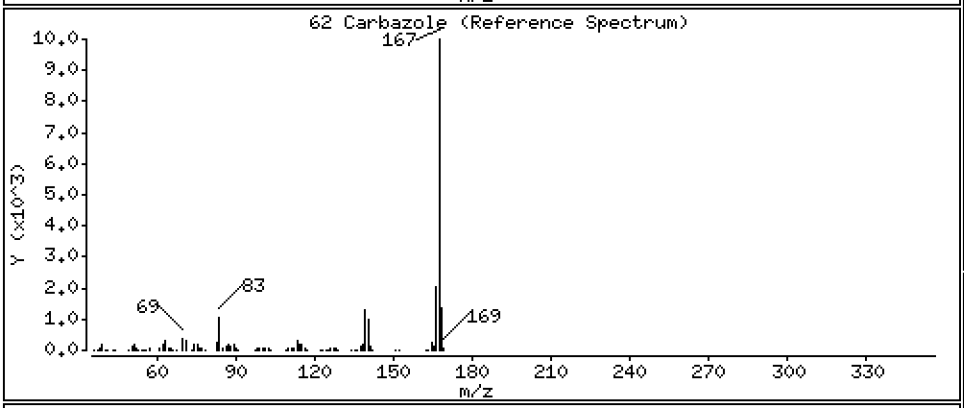
Column diameter: 0.25

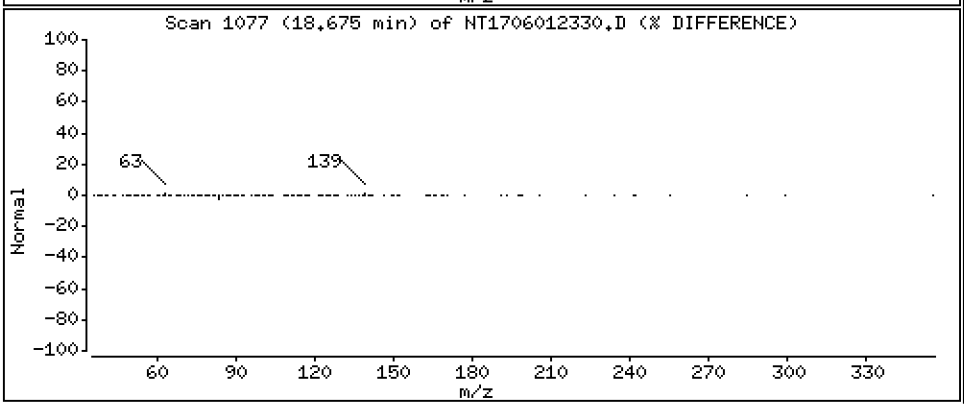
62 Carbazole

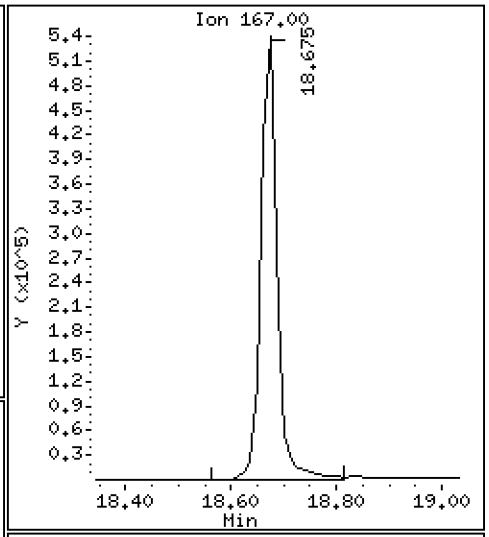
Concentration: 7.404 ug/mL

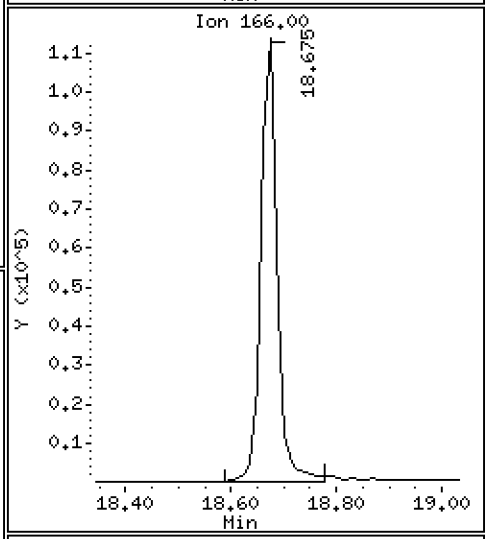


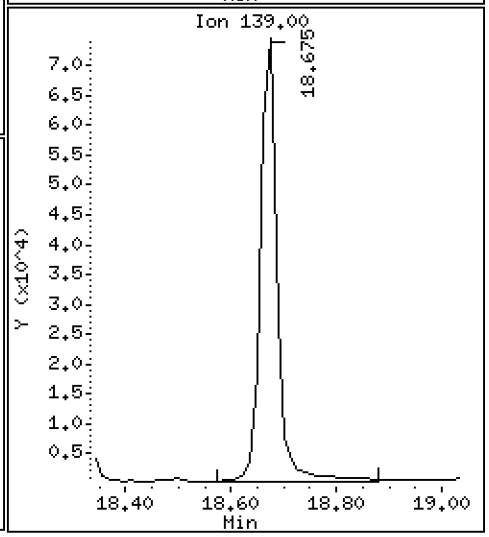












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

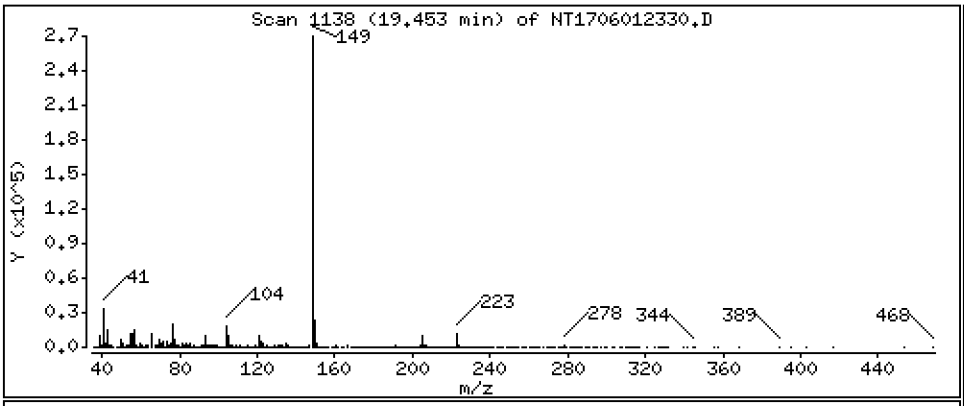
Operator: VTS

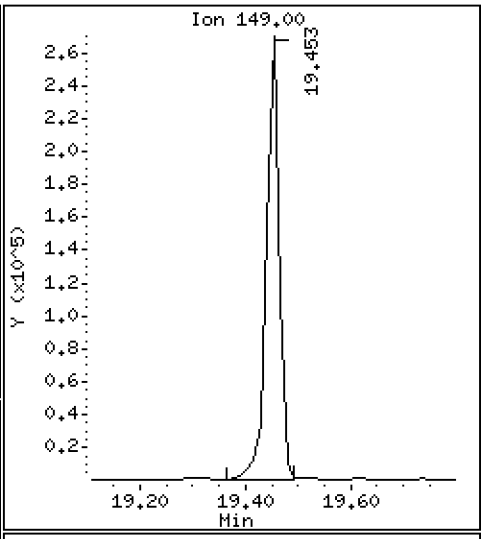
Column phase: ZB-5msi

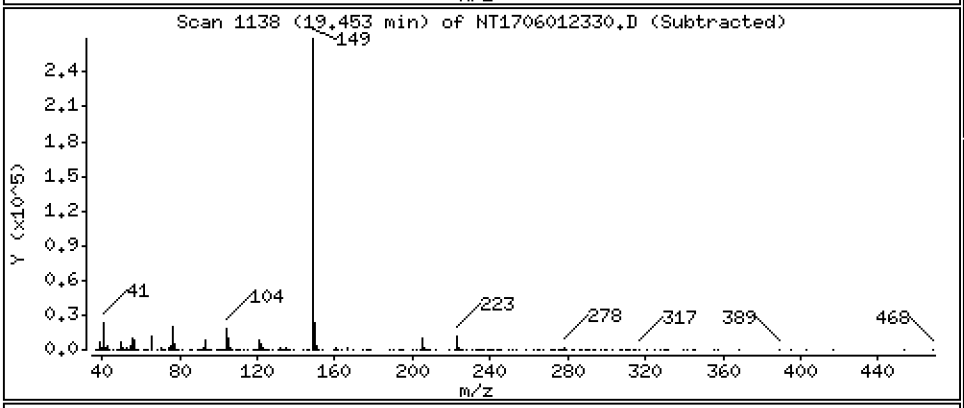
Column diameter: 0.25

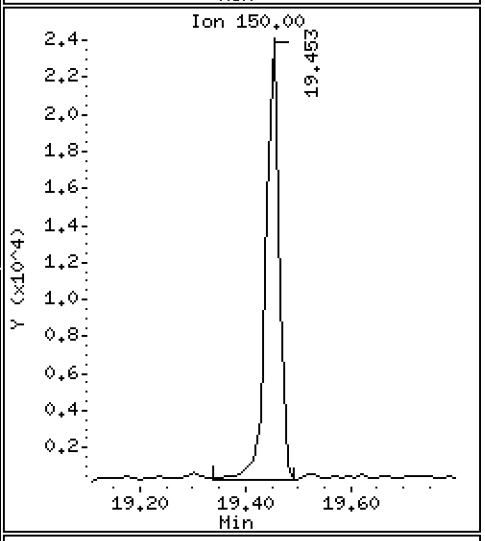
63 Di-n-butylphthalate

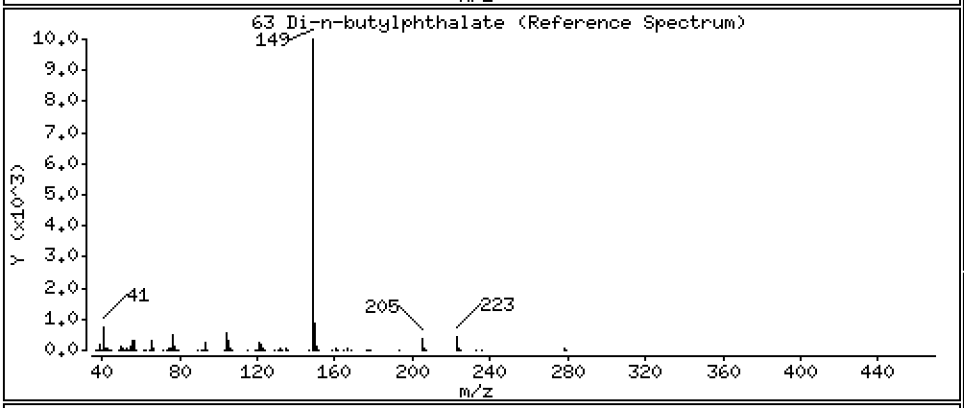
Concentration: 1.668 ug/mL

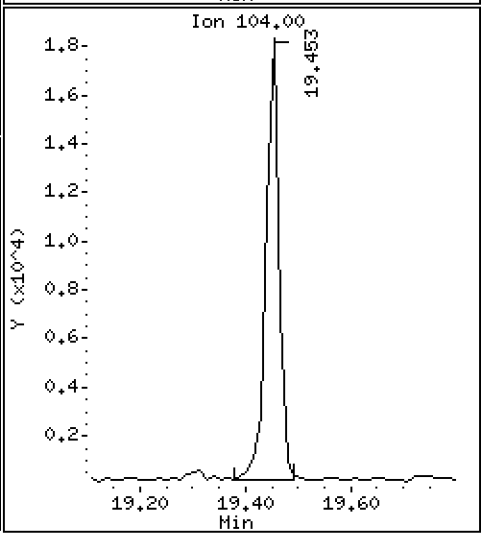


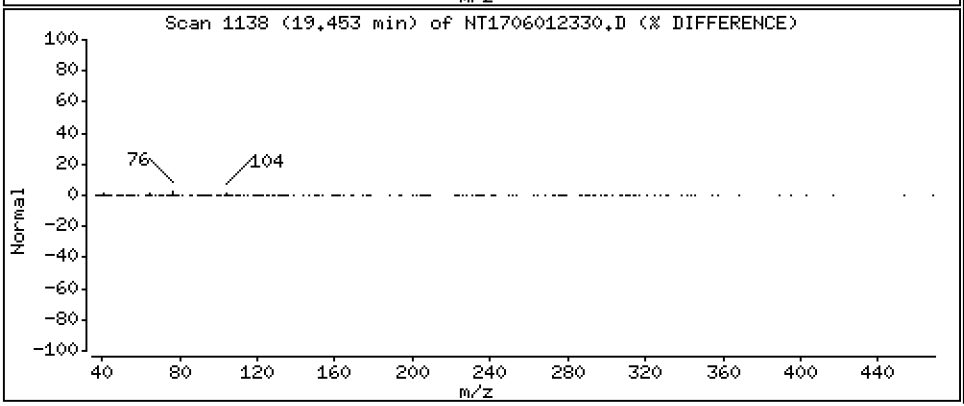












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

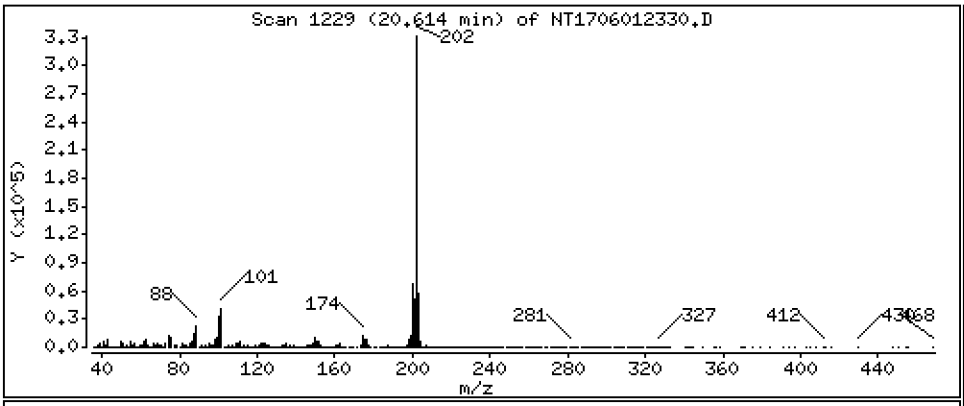
Operator: VTS

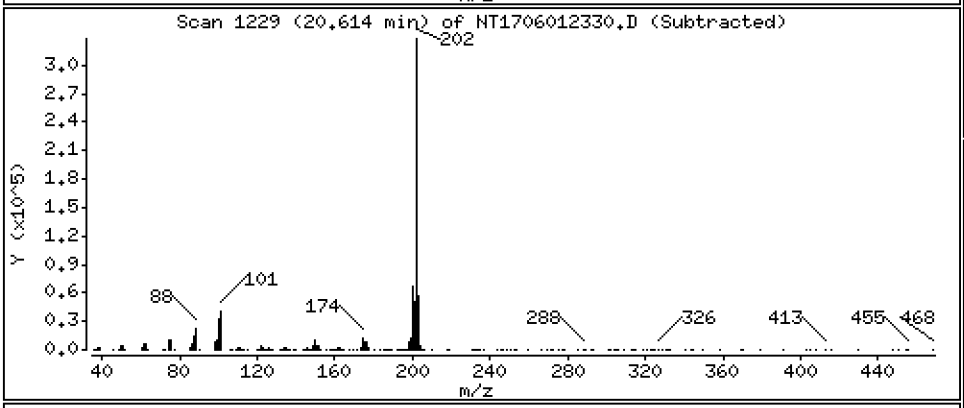
Column phase: ZB-5msi

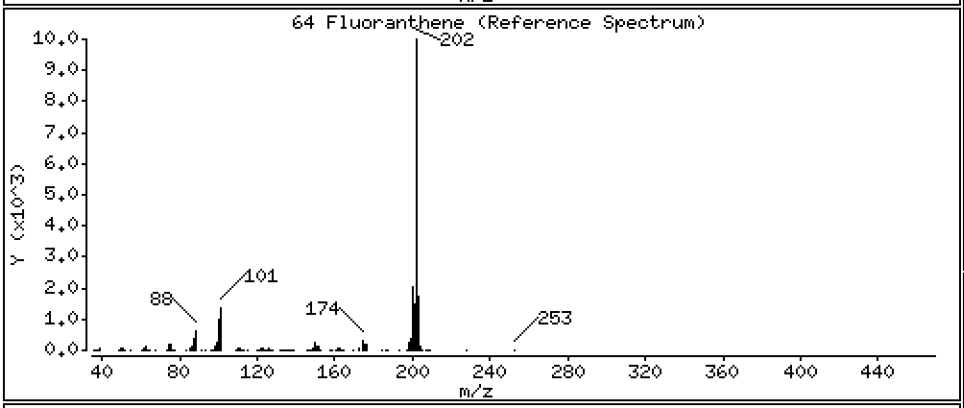
Column diameter: 0.25

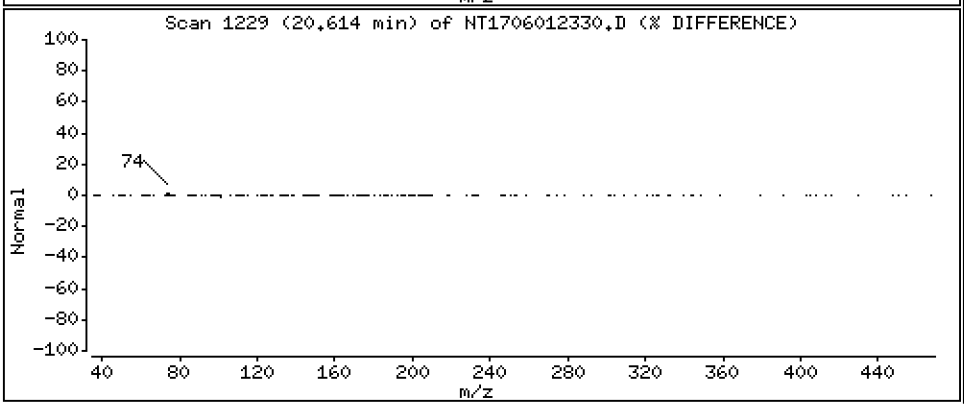
64 Fluoranthene

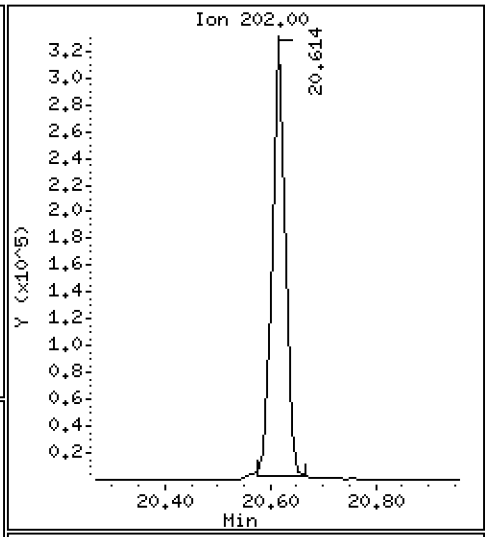
Concentration: 2.211 ug/mL

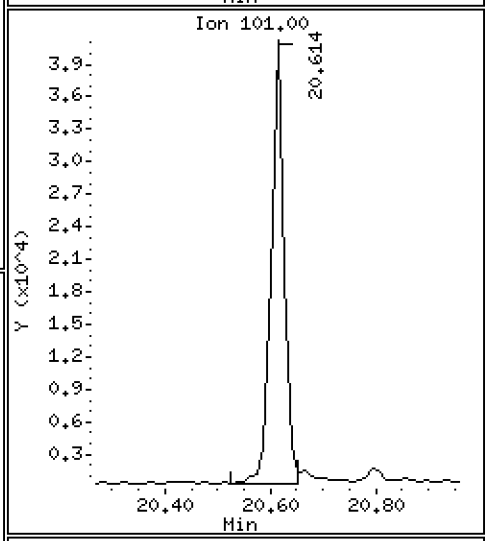


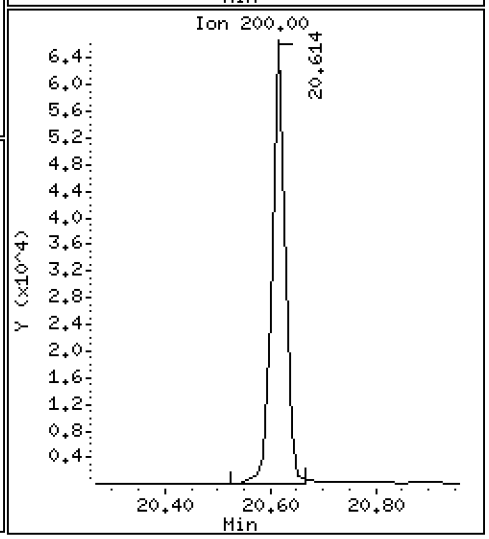












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

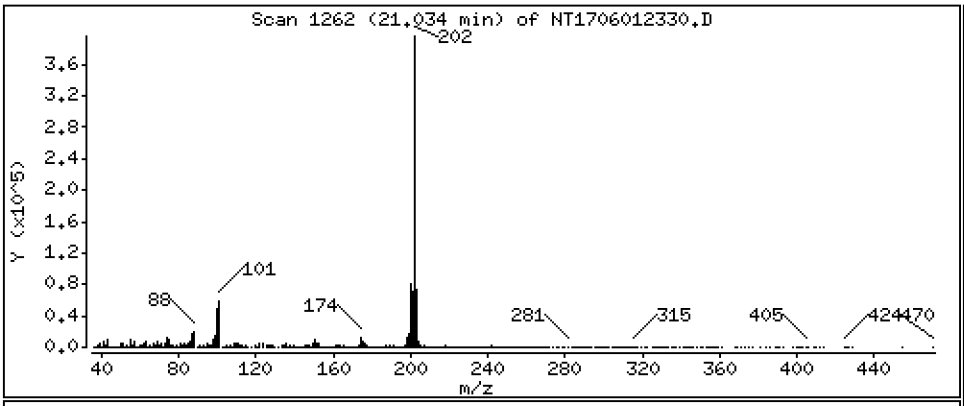
Operator: VTS

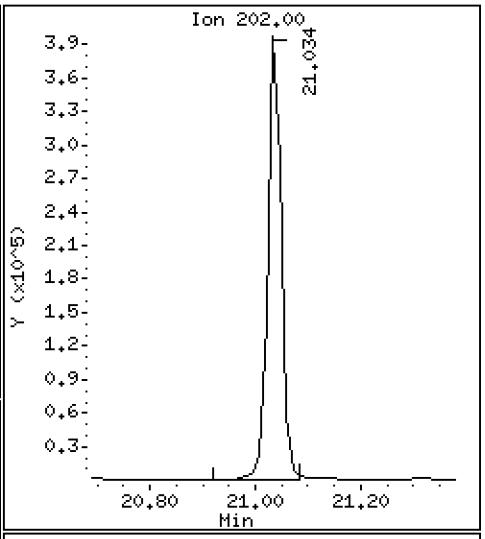
Column phase: ZB-5msi

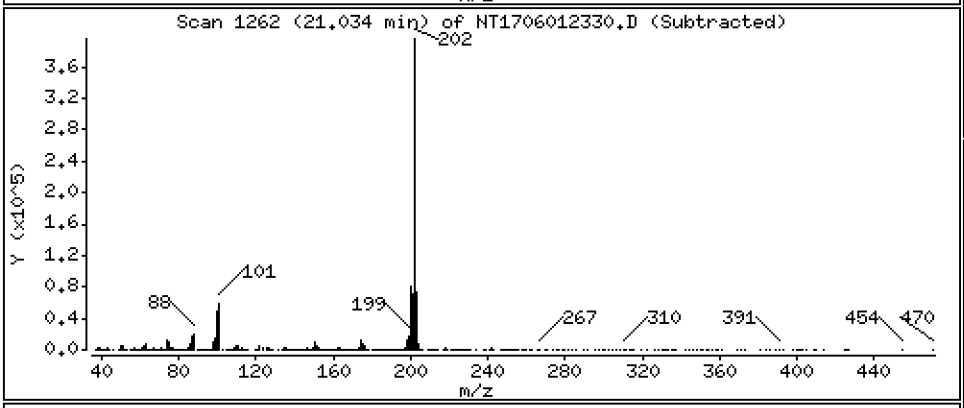
Column diameter: 0.25

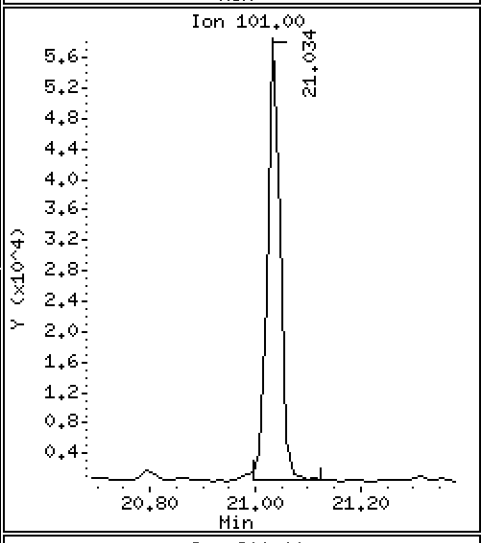
65 Pyrene

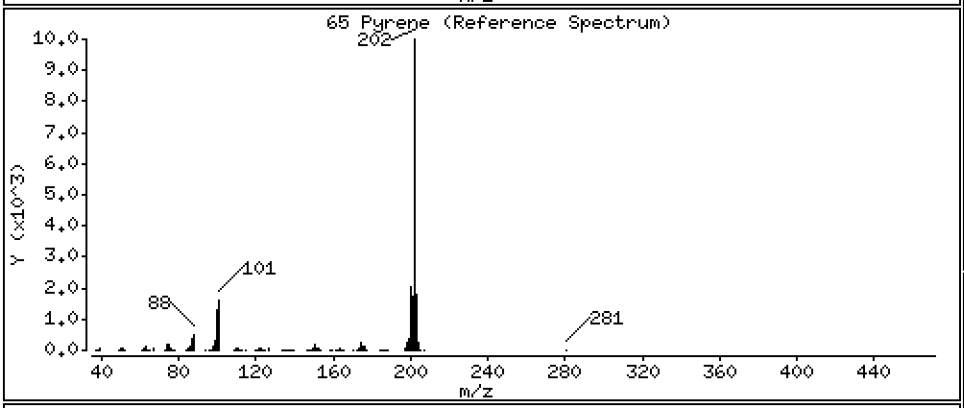
Concentration: 2.821 ug/mL

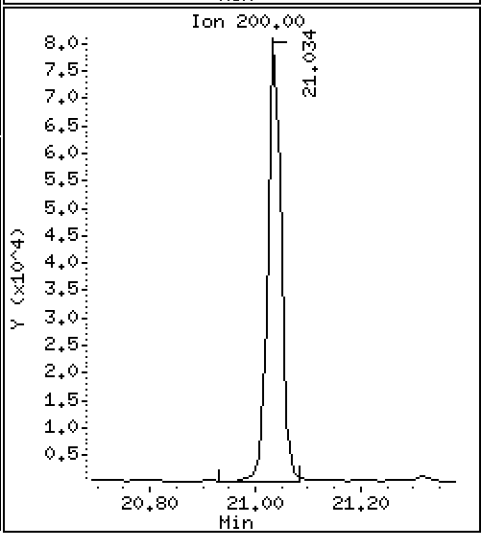


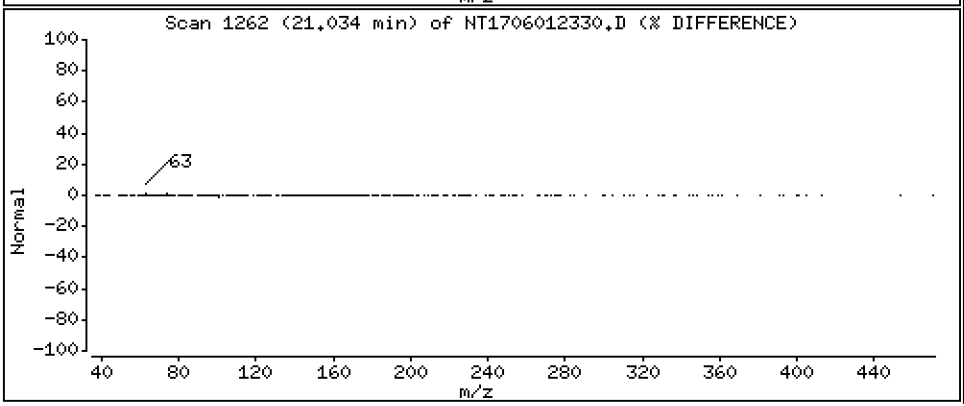












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

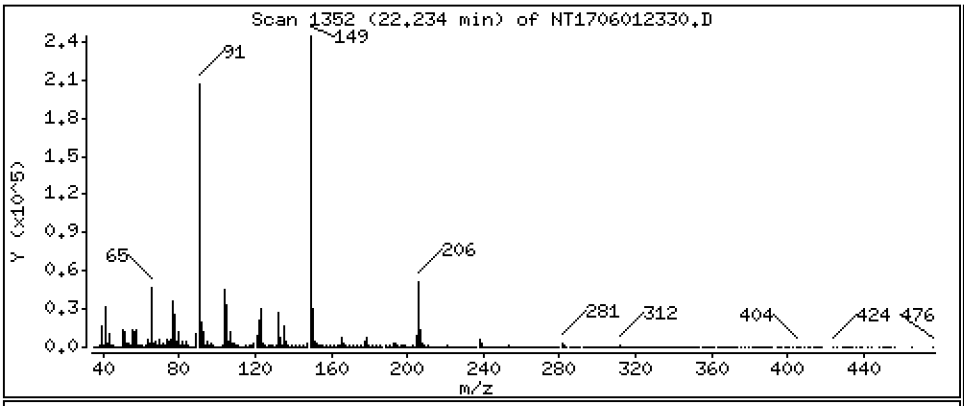
Operator: VTS

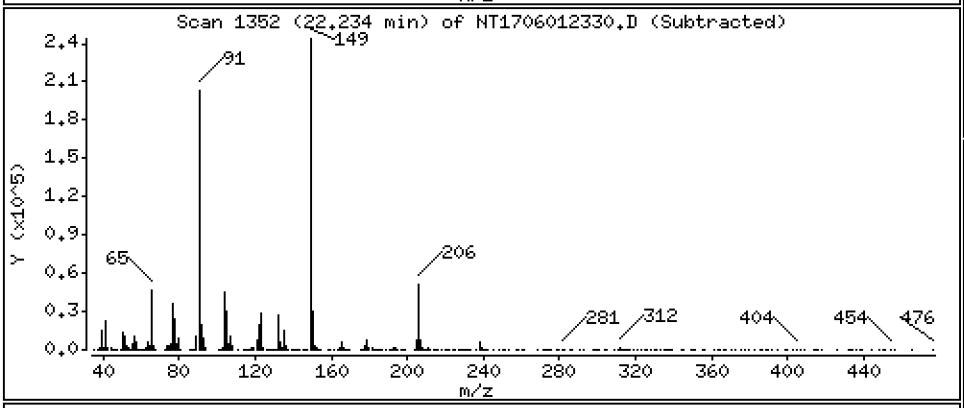
Column phase: ZB-5msi

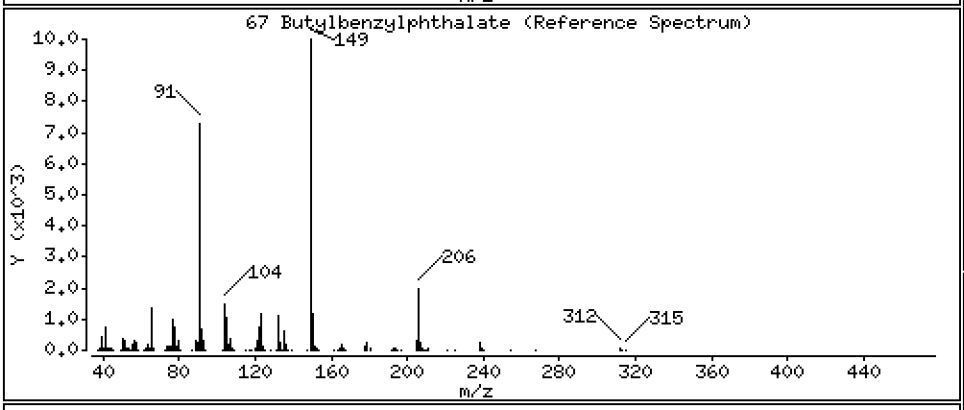
Column diameter: 0.25

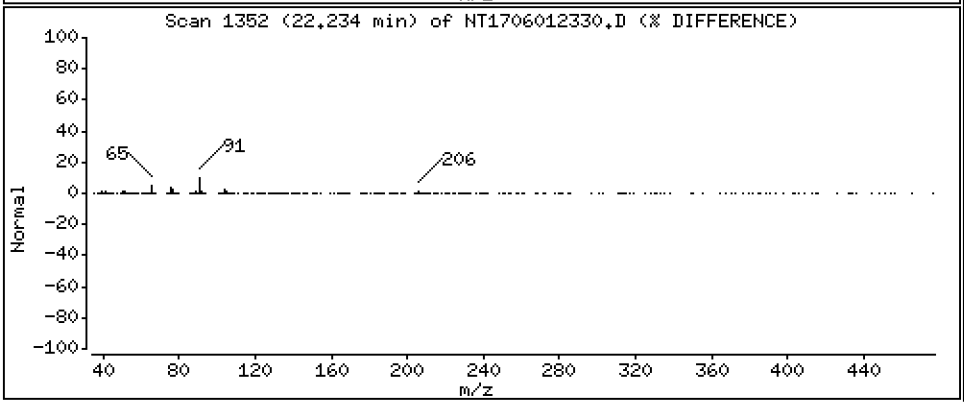
67 Butylbenzylphthalate

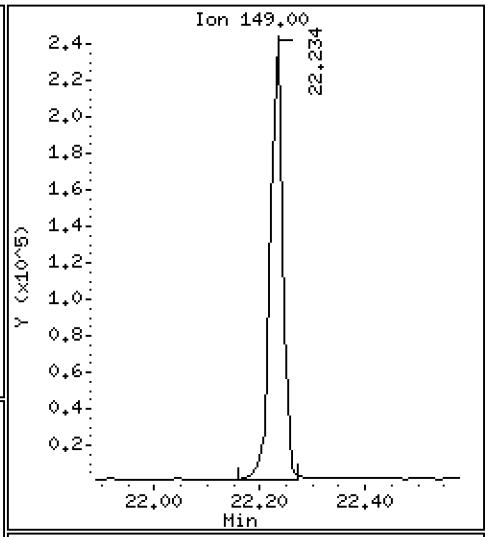
Concentration: 3.546 ug/mL

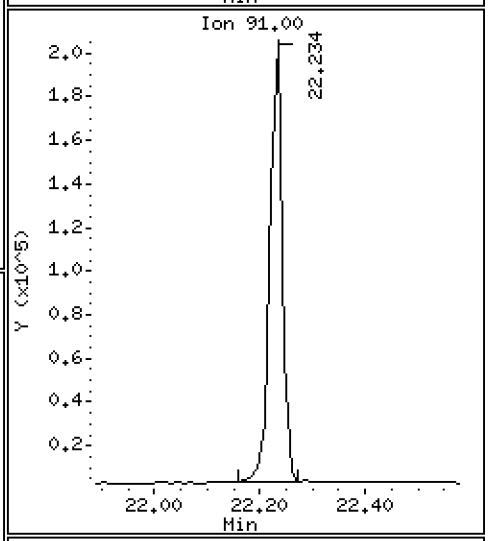


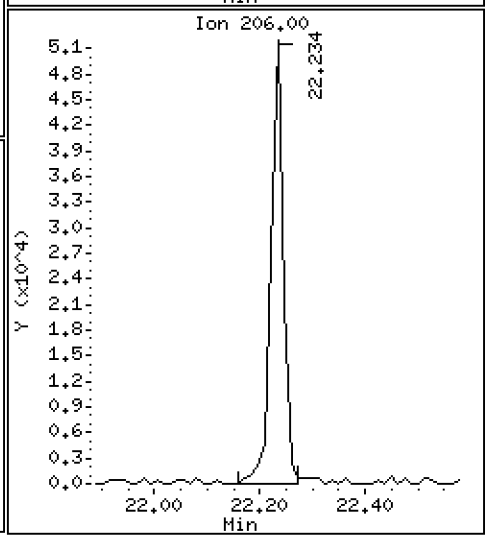












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

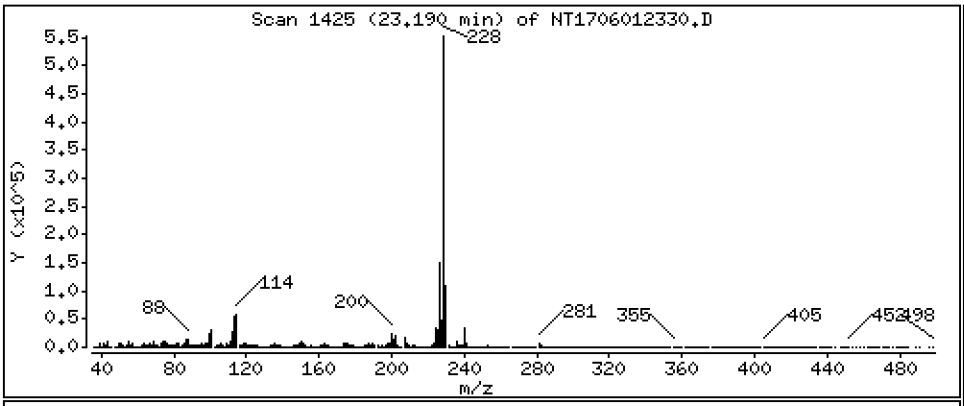
Operator: VTS

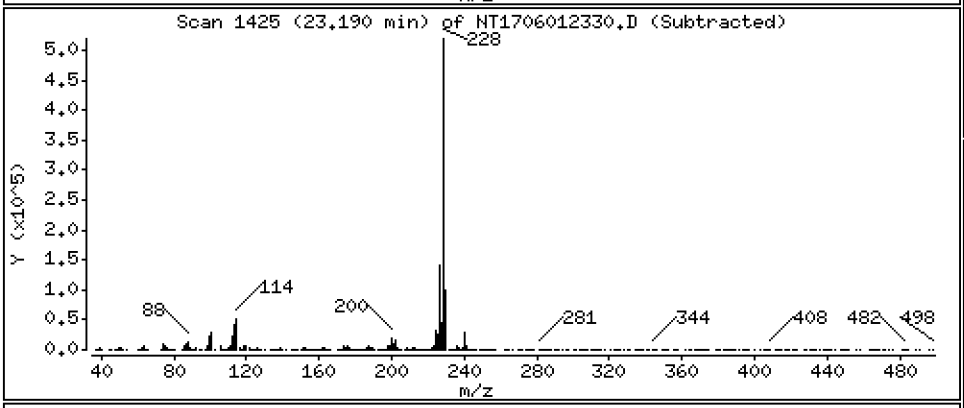
Column phase: ZB-5msi

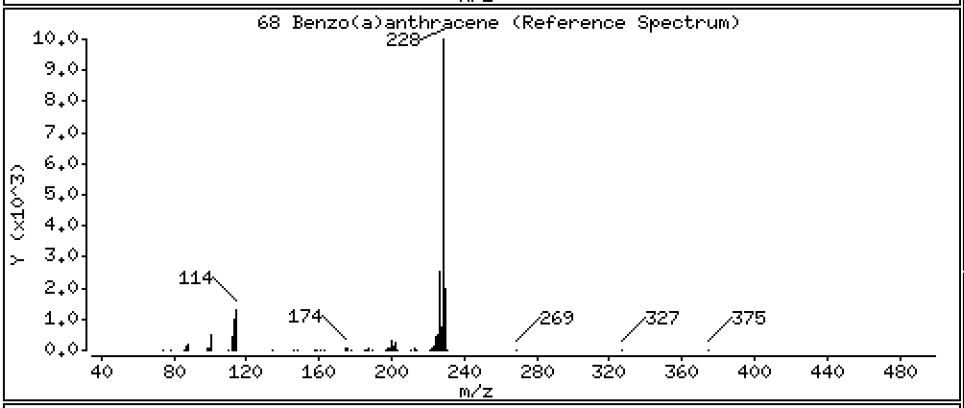
Column diameter: 0.25

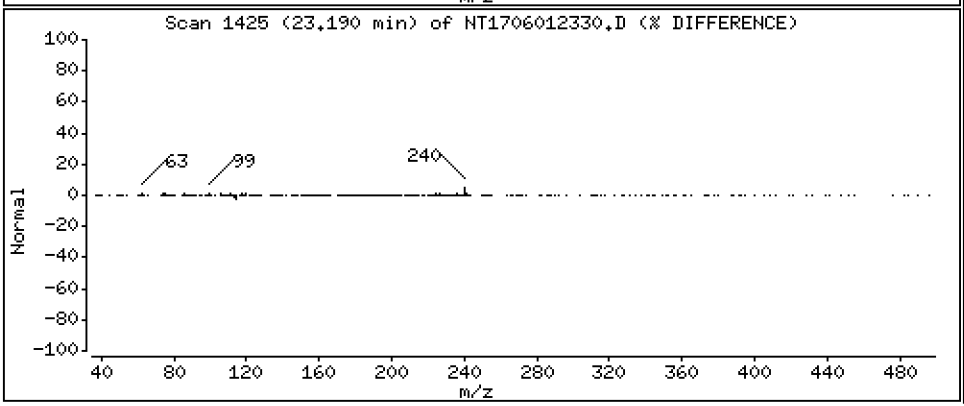
68 Benzo(a)anthracene

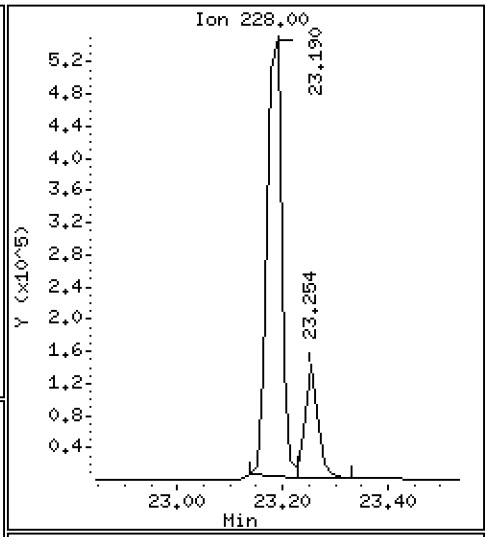
Concentration: 5.352 ug/mL

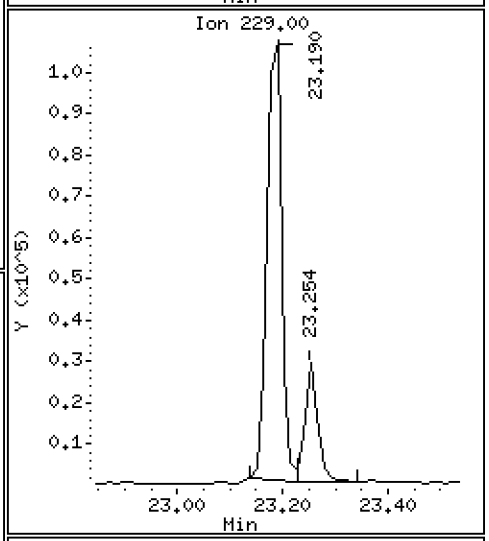


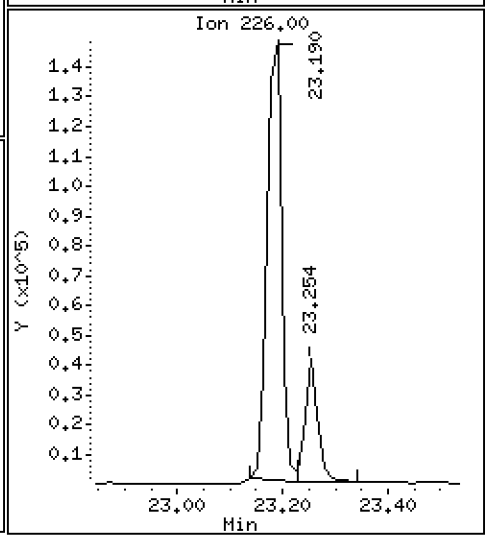












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

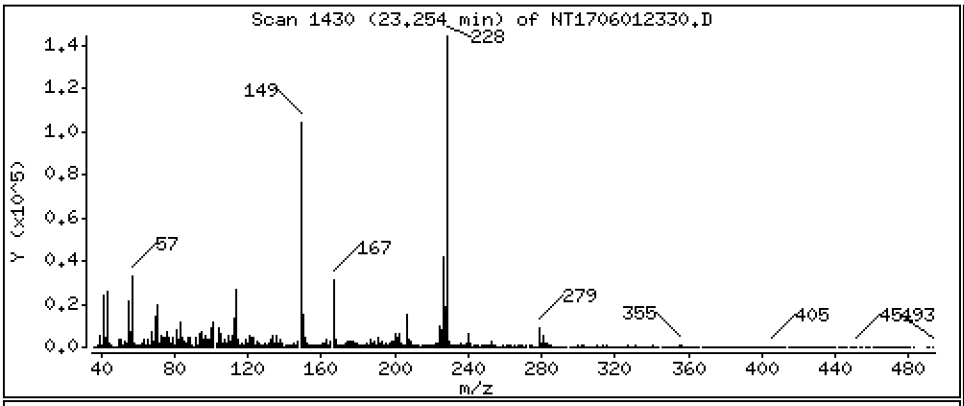
Operator: VTS

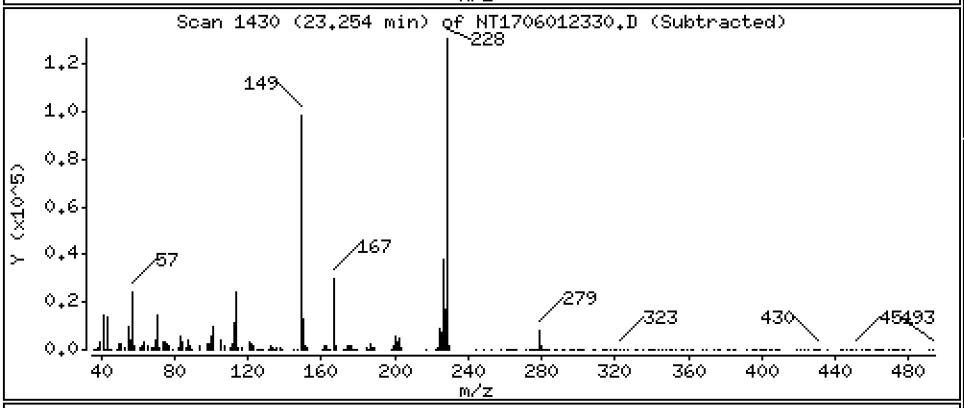
Column phase: ZB-5msi

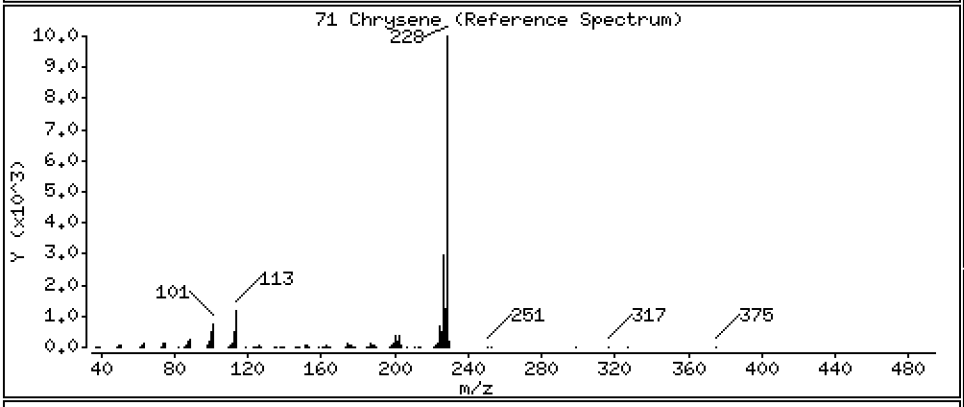
Column diameter: 0.25

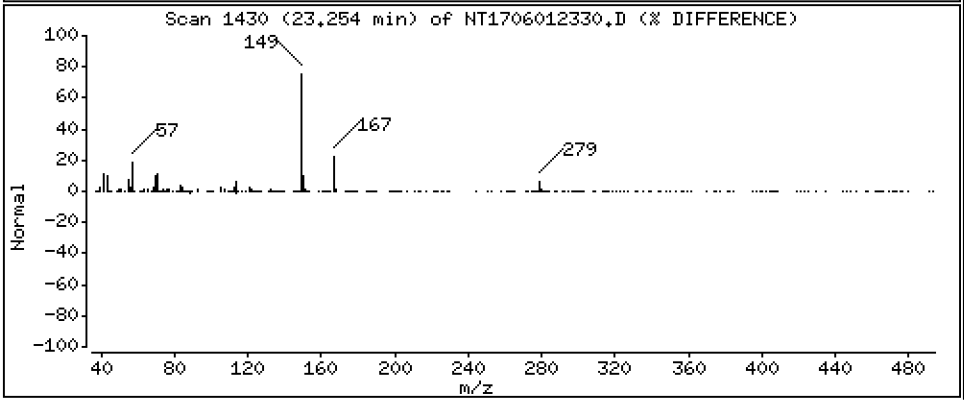
71 Chrysene

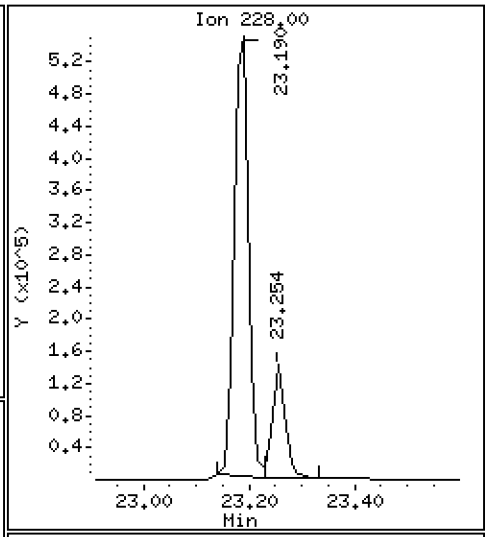
Concentration: 1.325 ug/mL

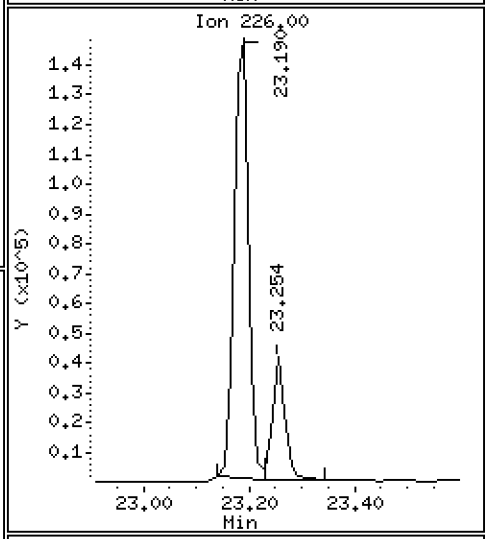


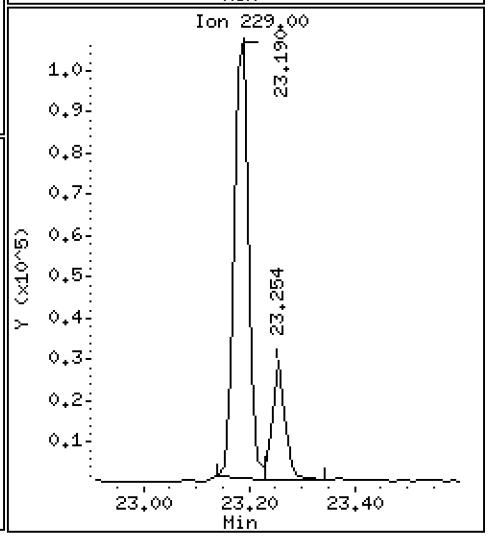












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

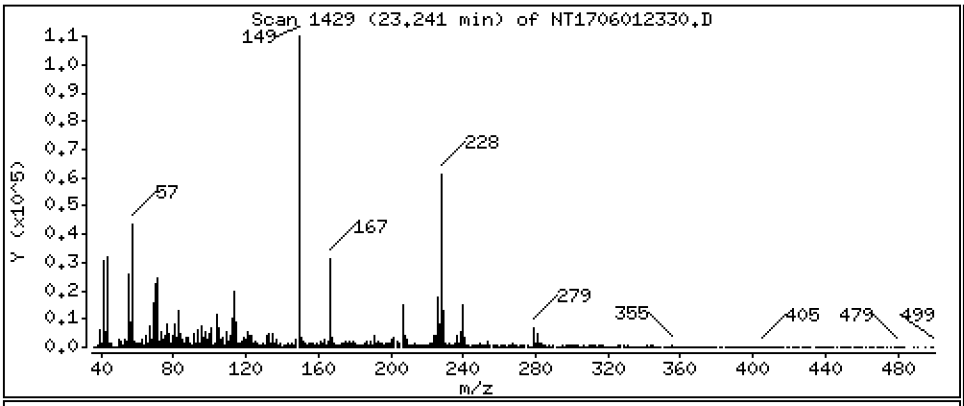
Operator: VTS

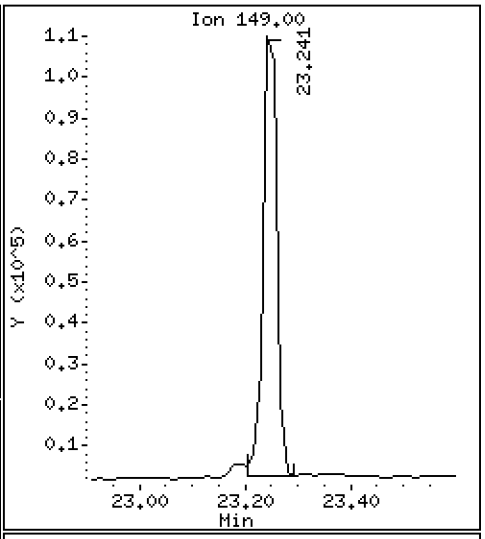
Column phase: ZB-5msi

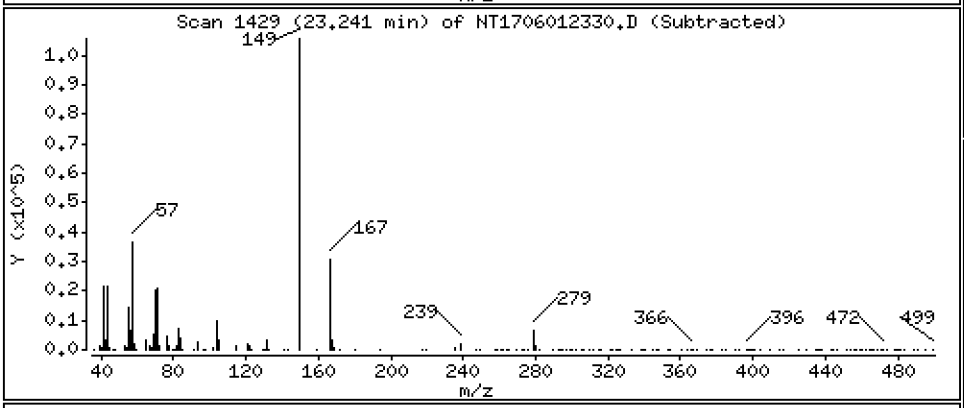
Column diameter: 0.25

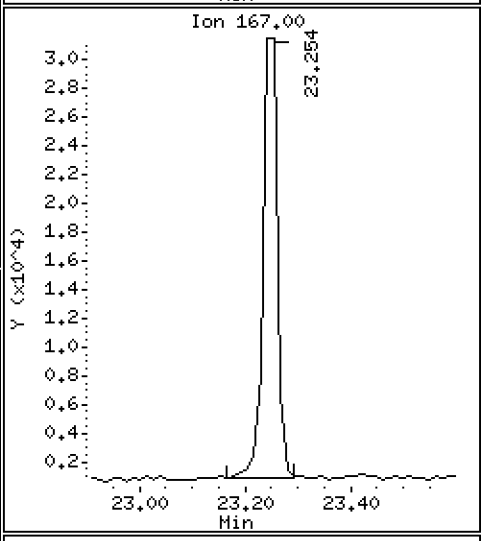
72 bis(2-Ethylhexyl)phthalate

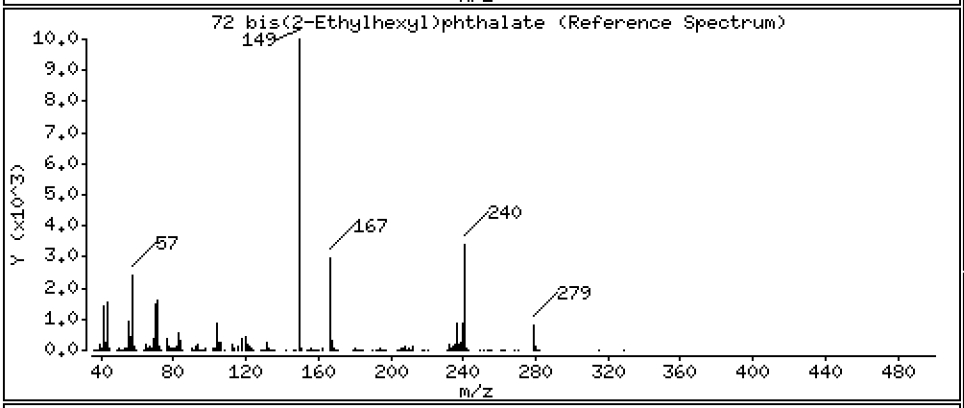
Concentration: 1.210 ug/mL

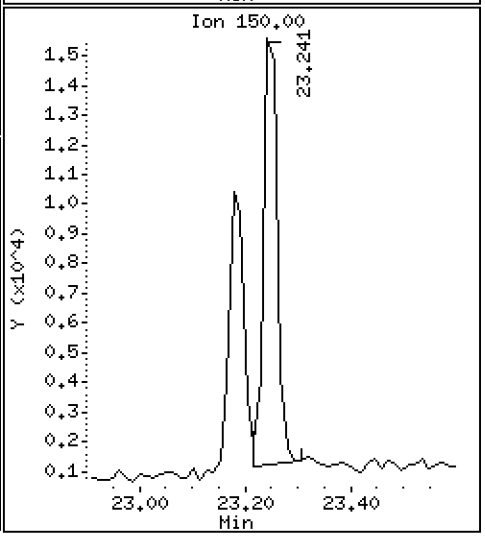


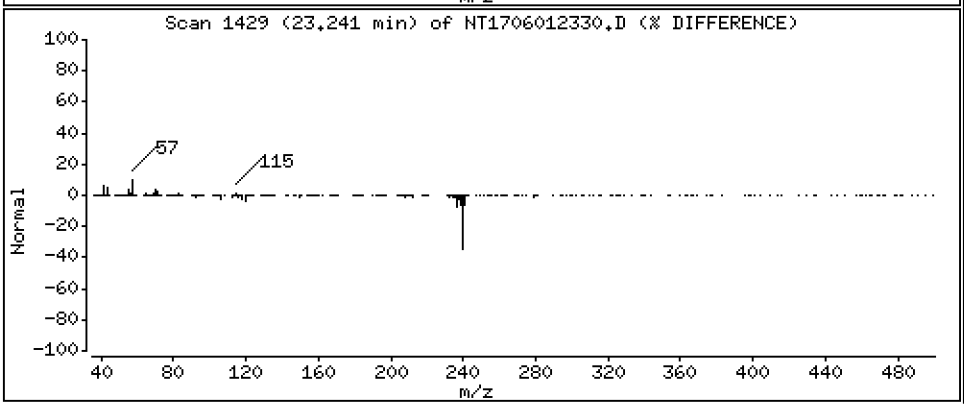












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

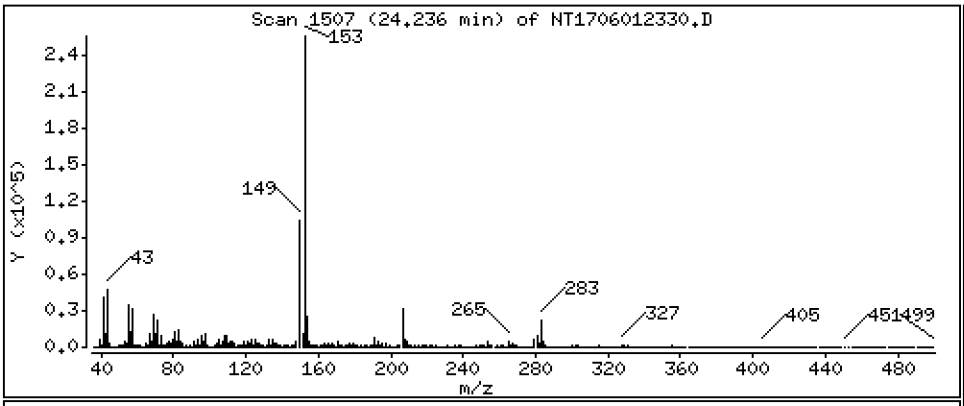
Operator: VTS

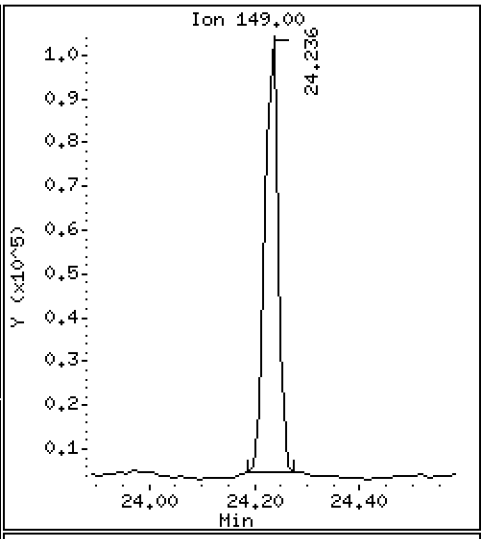
Column phase: ZB-5msi

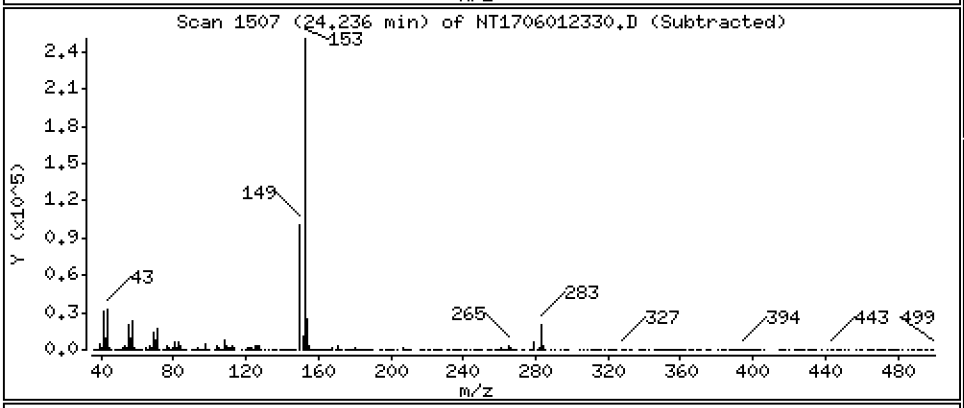
Column diameter: 0.25

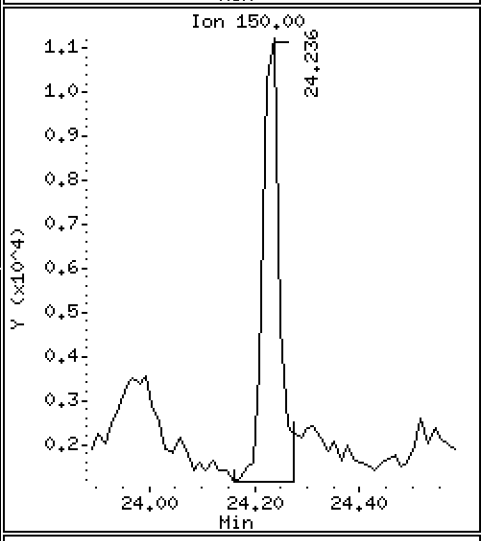
73 Di-n-octylphthalate

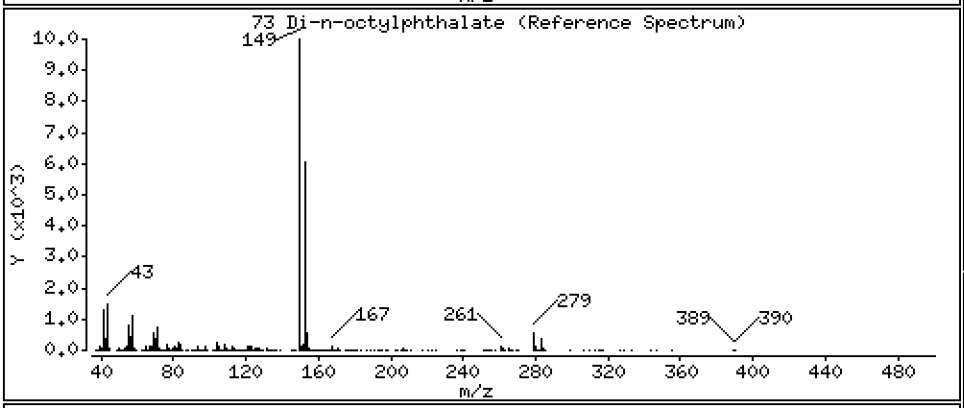
Concentration: 0.5854 ug/mL

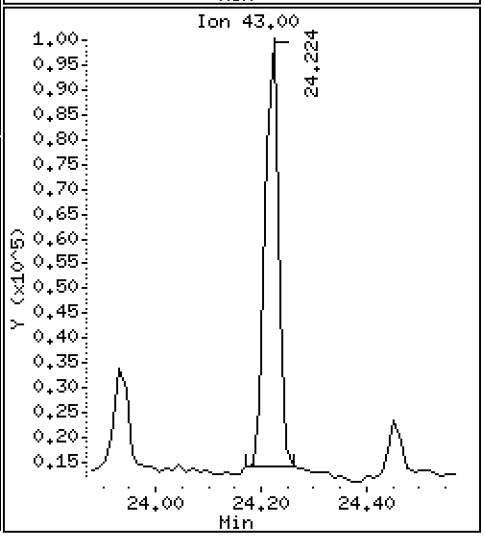


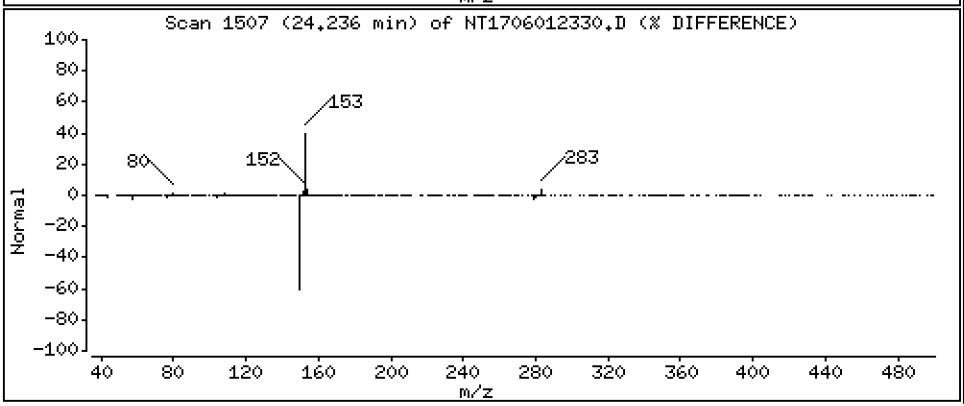












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

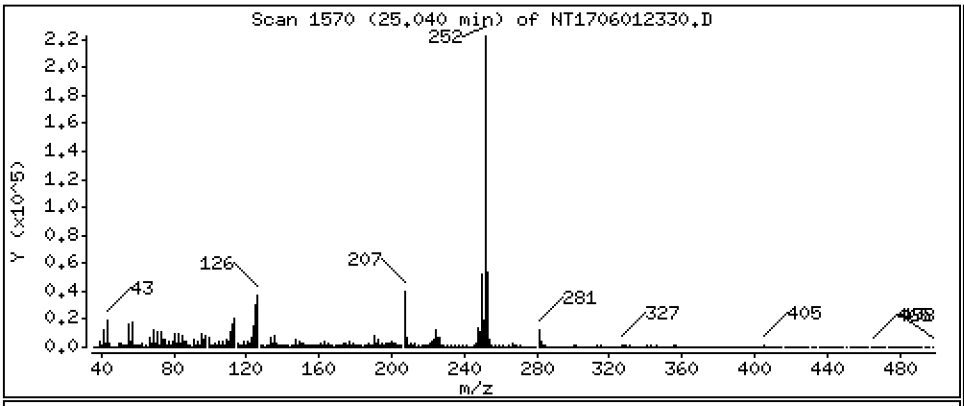
Operator: VTS

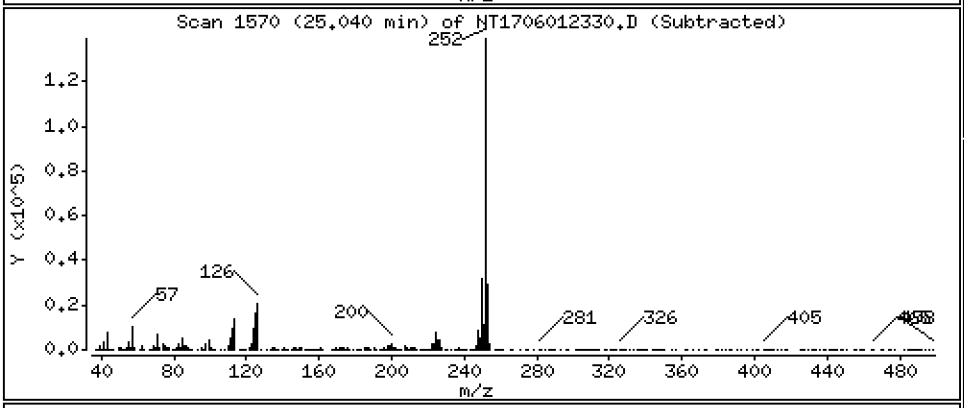
Column phase: ZB-5msi

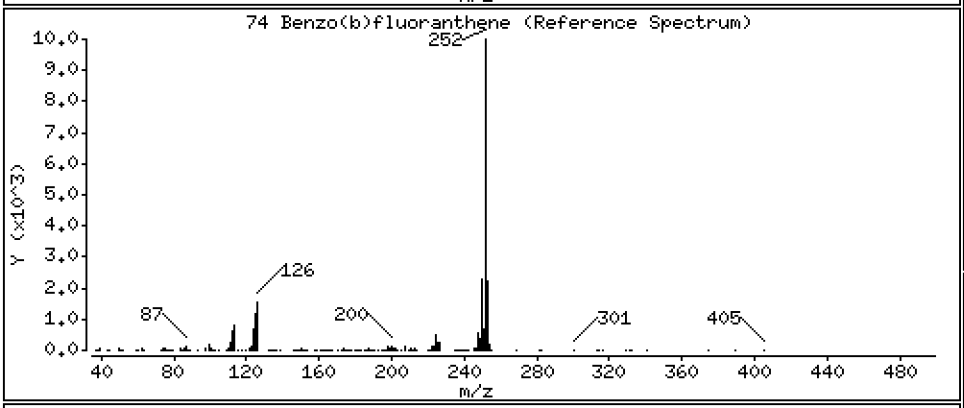
Column diameter: 0.25

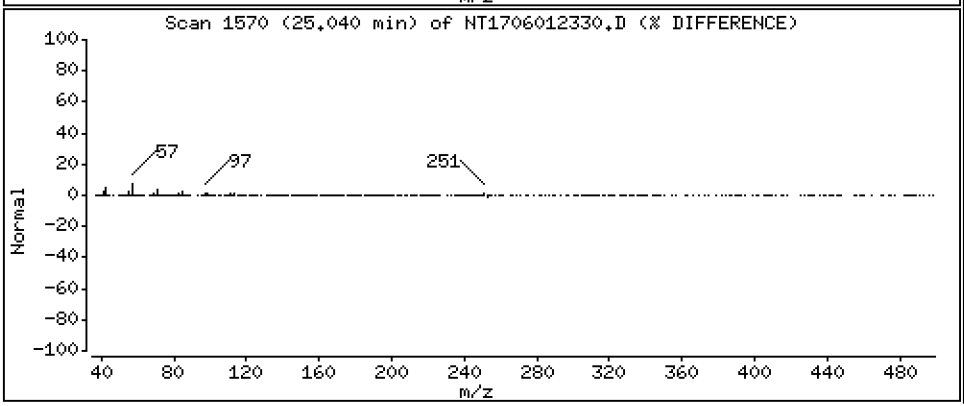
74 Benzo(b)fluoranthene

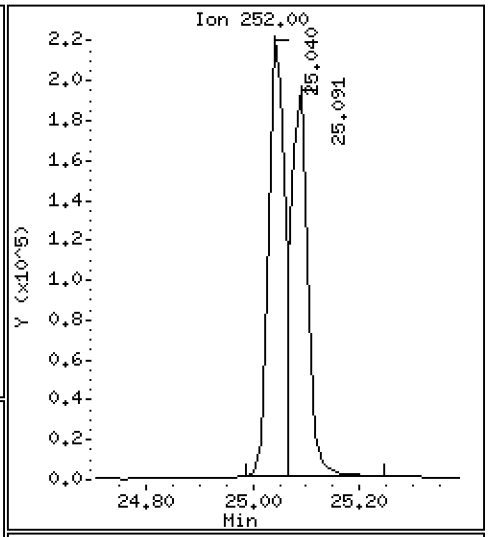
Concentration: 2.602 ug/mL

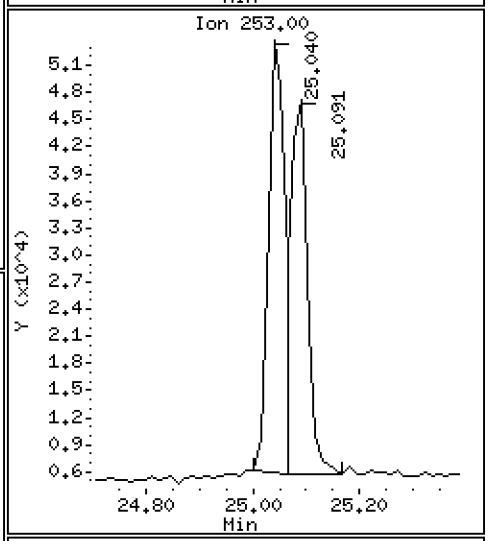


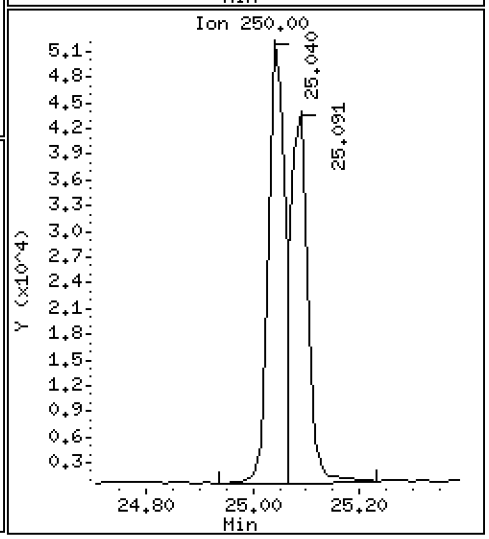












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

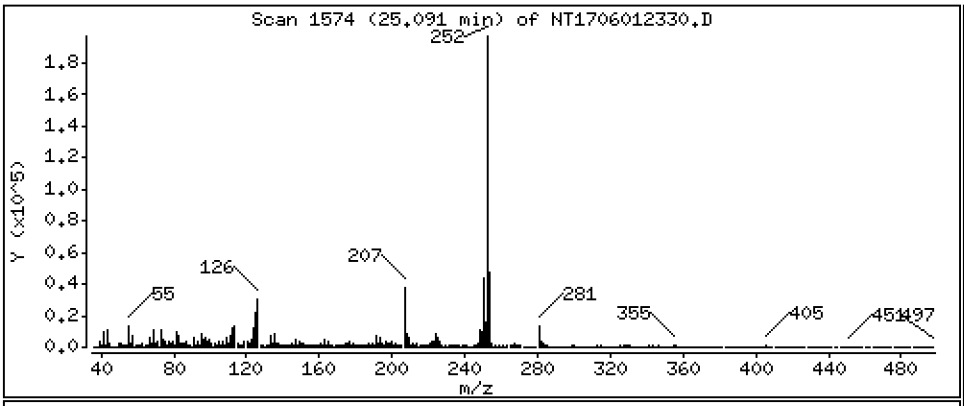
Operator: VTS

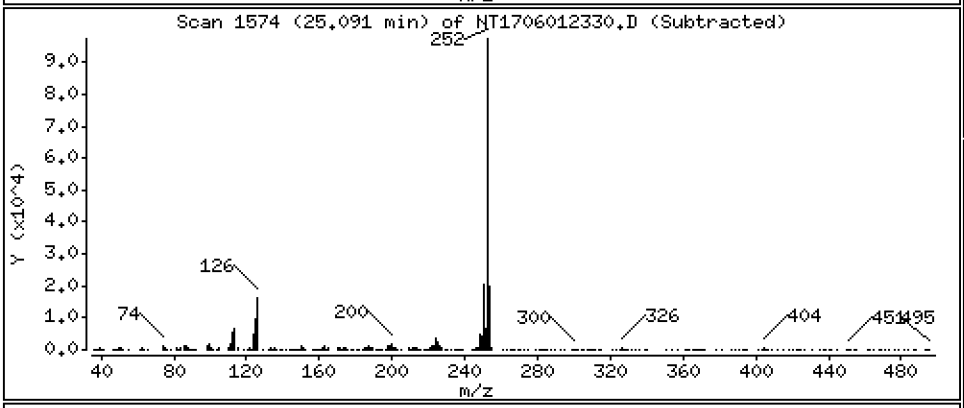
Column phase: ZB-5msi

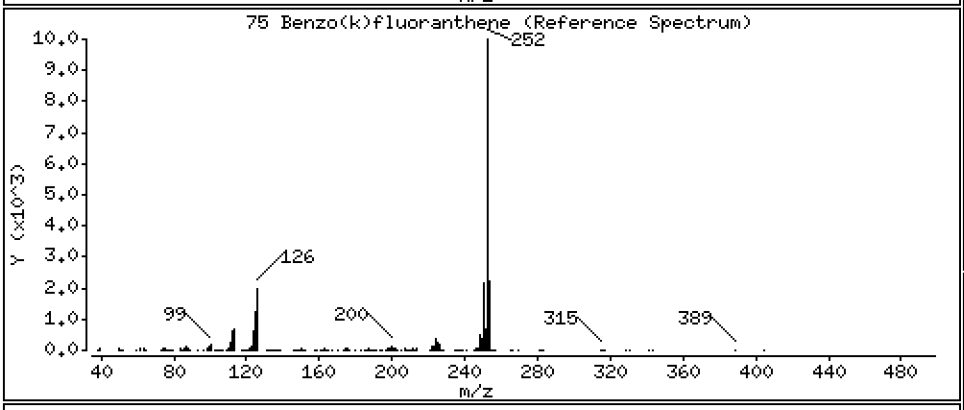
Column diameter: 0.25

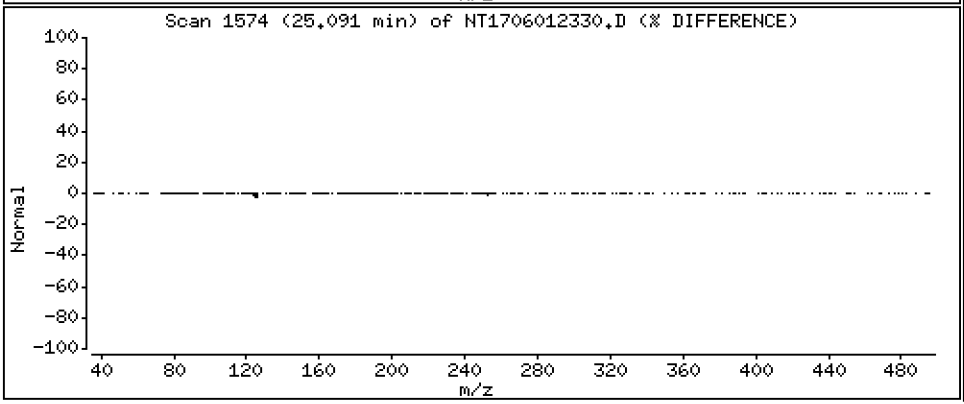
75 Benzo(k)fluoranthene

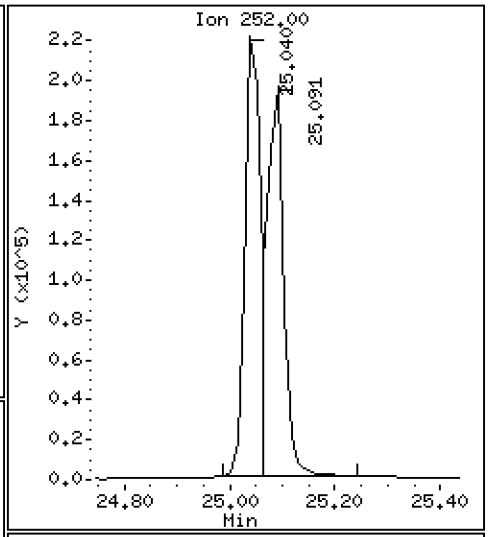
Concentration: 2.531 ug/mL

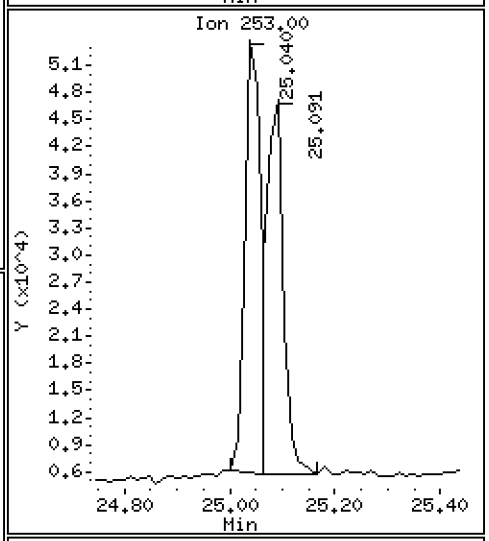


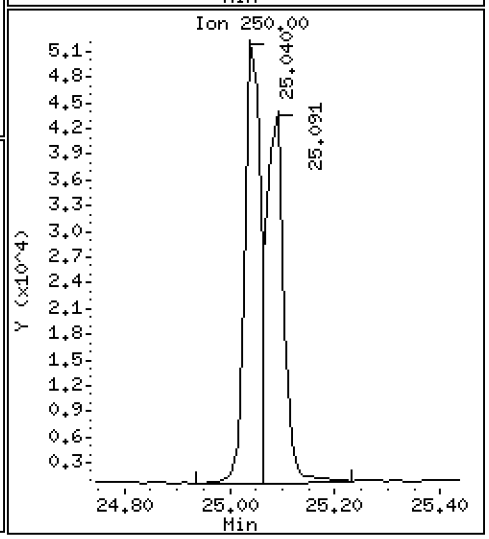












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

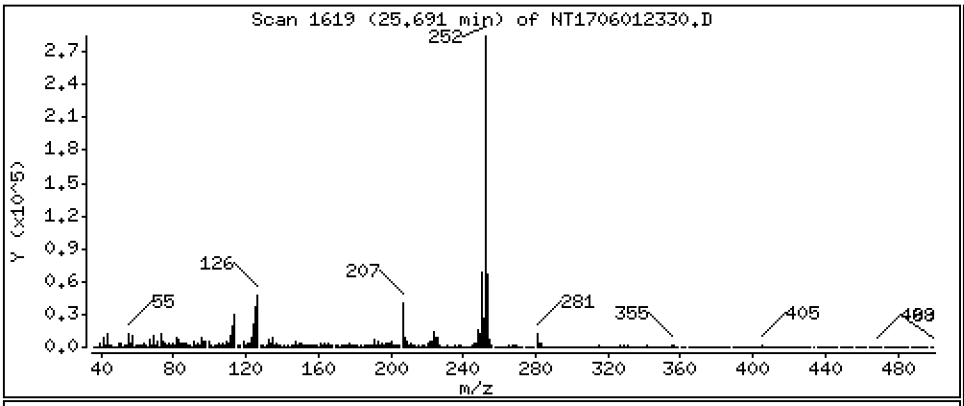
Operator: VTS

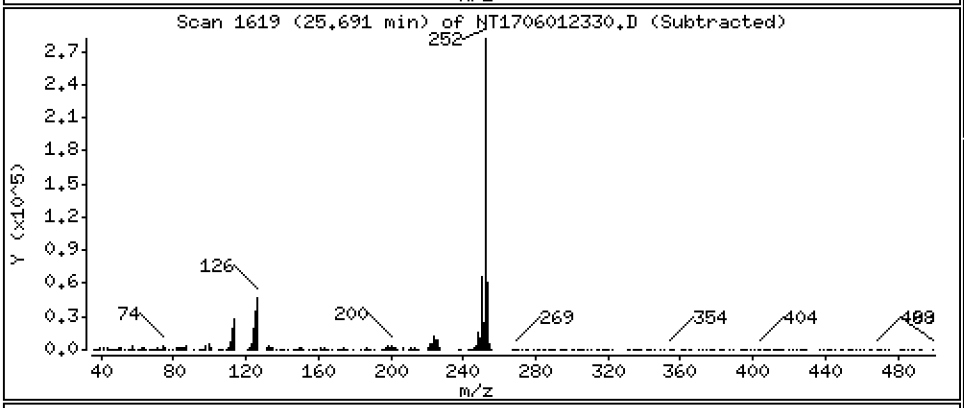
Column phase: ZB-5msi

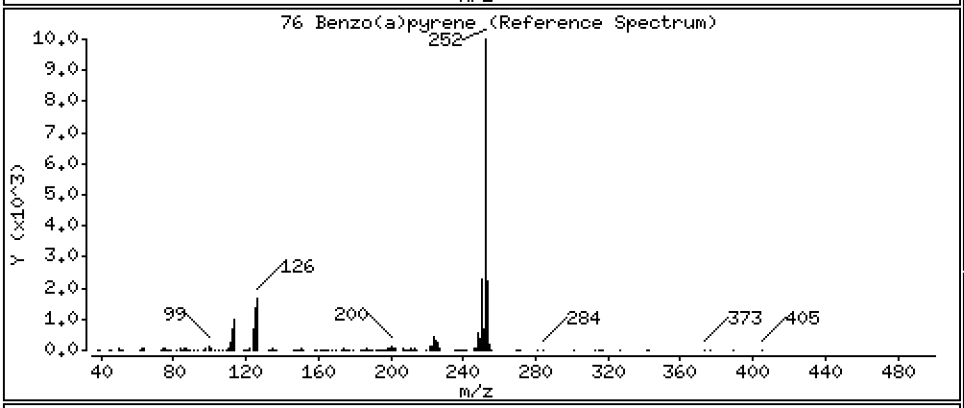
Column diameter: 0.25

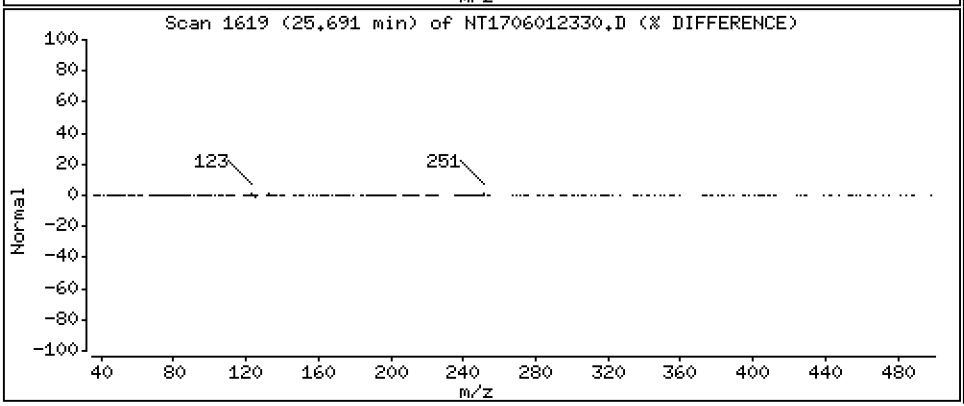
76 Benzo(a)pyrene

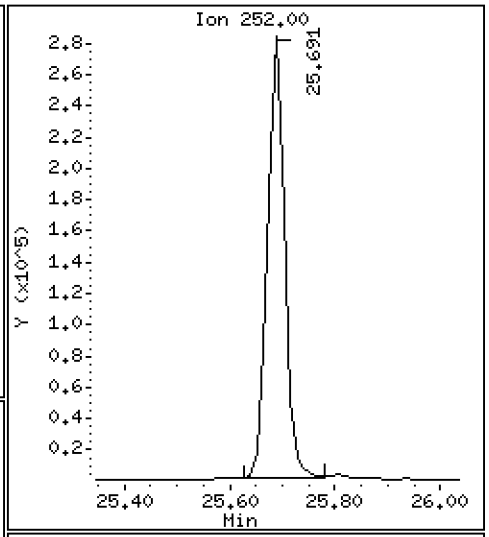
Concentration: 4.347 ug/mL

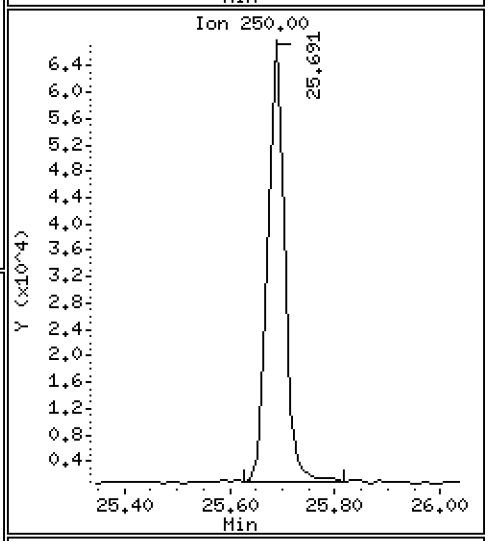


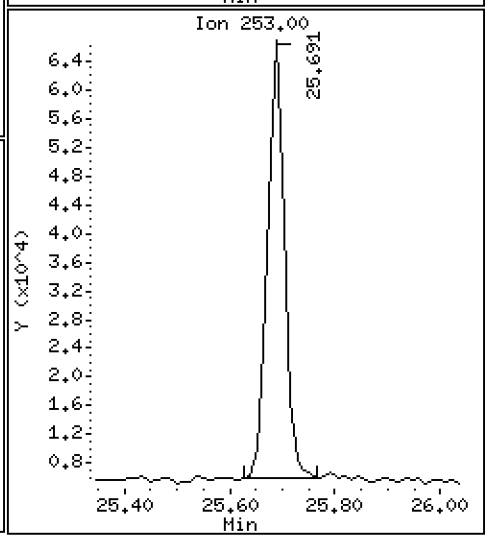












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

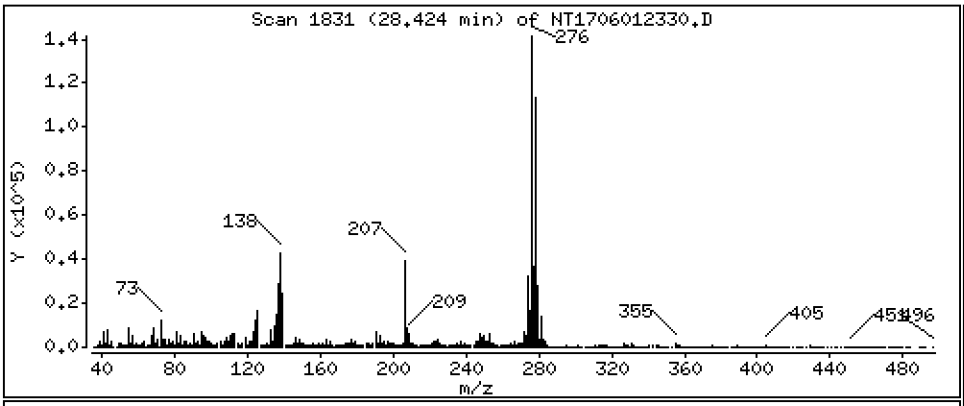
Operator: VTS

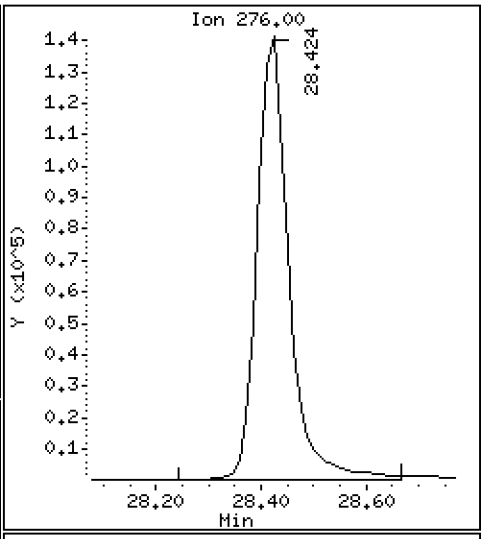
Column phase: ZB-5msi

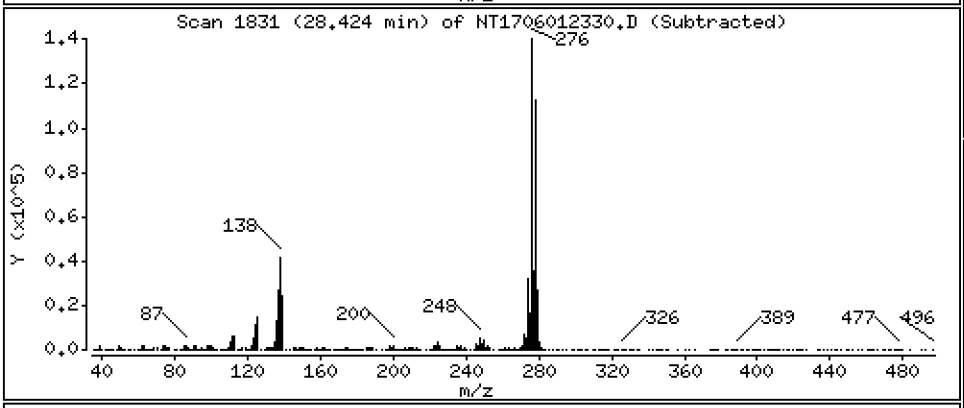
Column diameter: 0.25

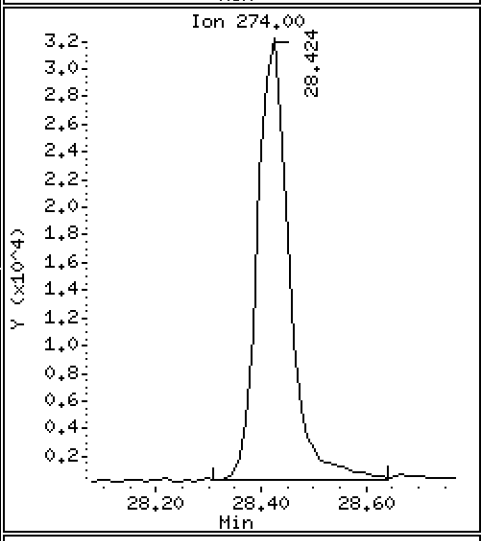
78 Indeno(1,2,3-cd)pyrene

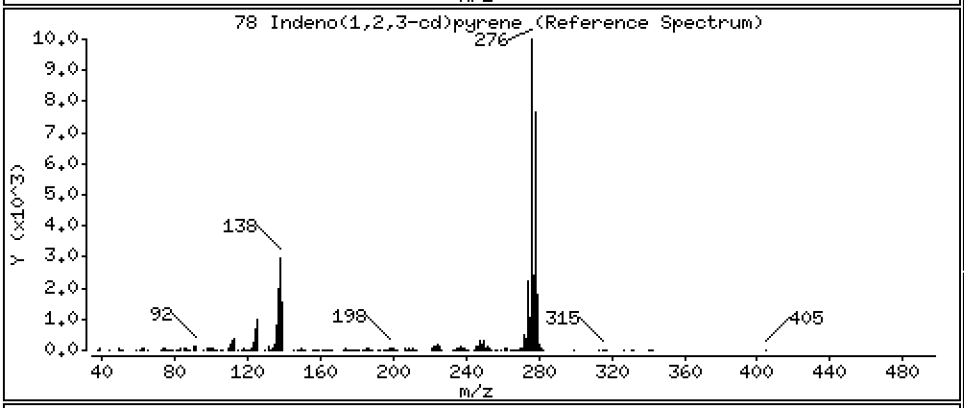
Concentration: 3.399 ug/mL

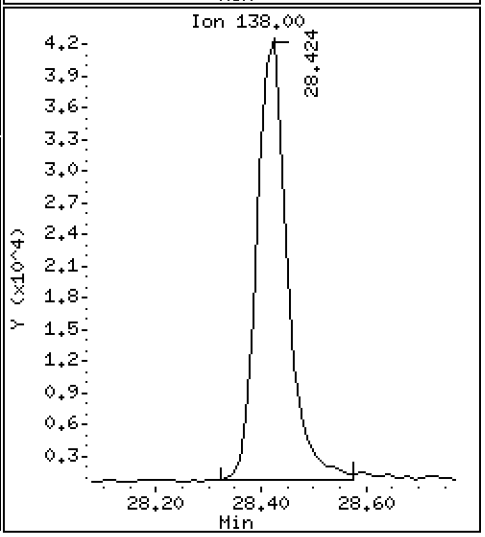


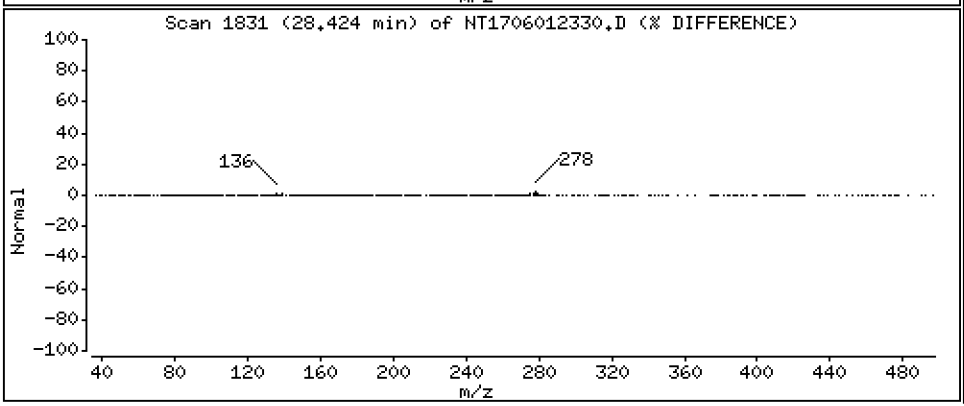












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

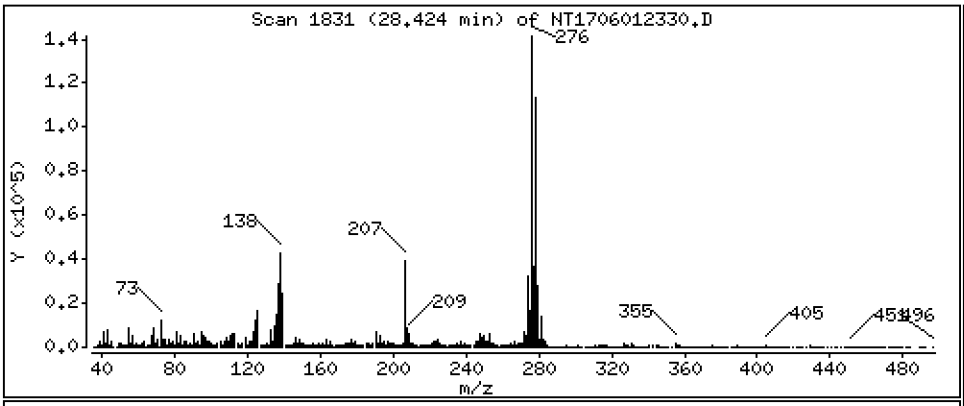
Operator: VTS

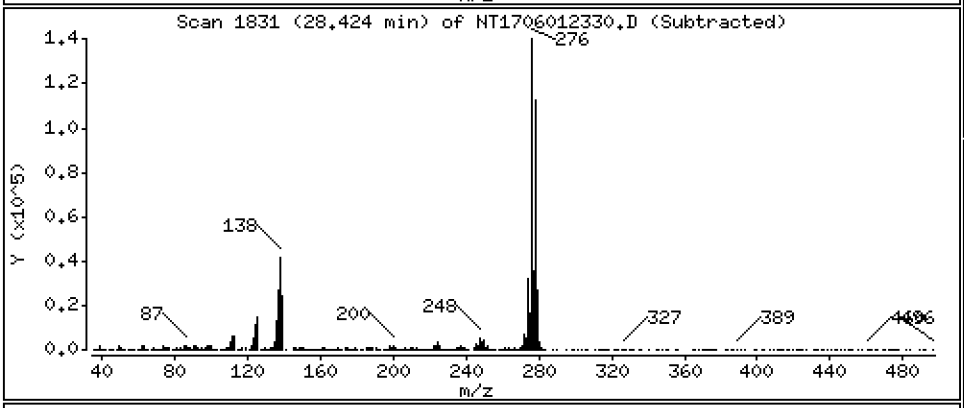
Column phase: ZB-5msi

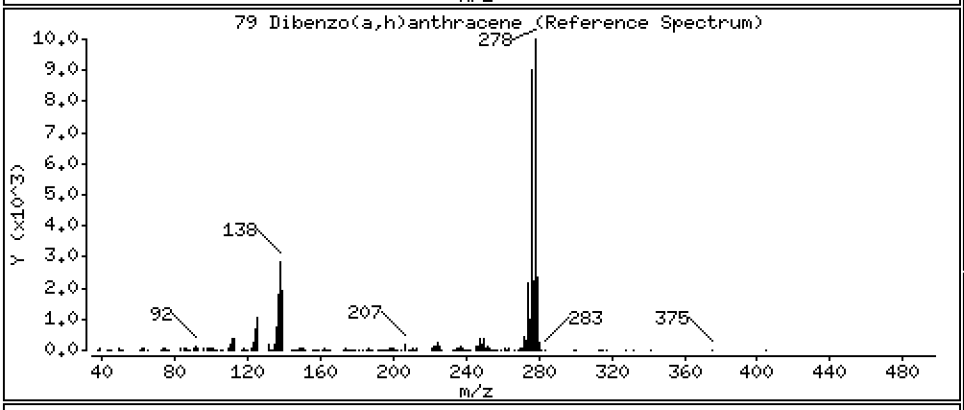
Column diameter: 0.25

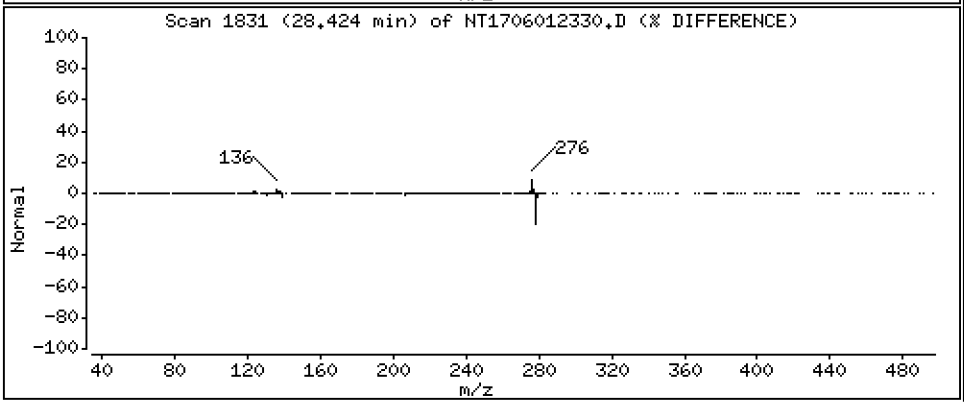
79 Dibenzo(a,h)anthracene

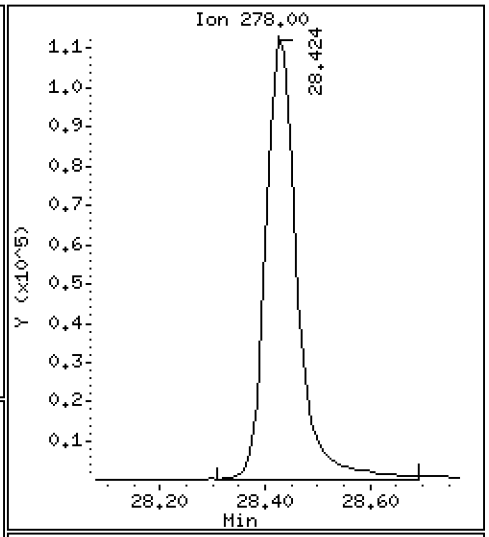
Concentration: 3.202 ug/mL

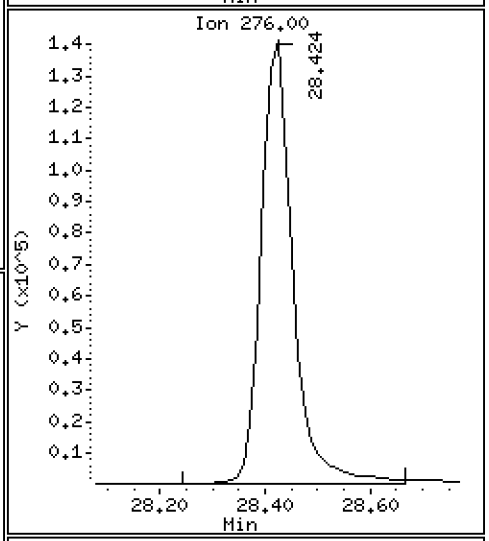


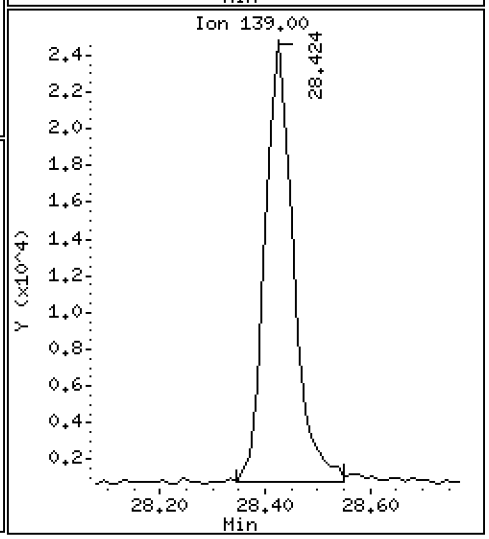












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

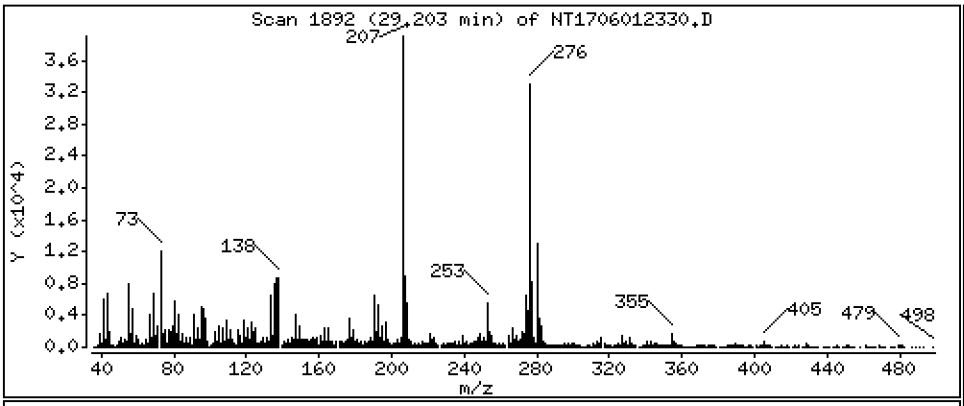
Operator: VTS

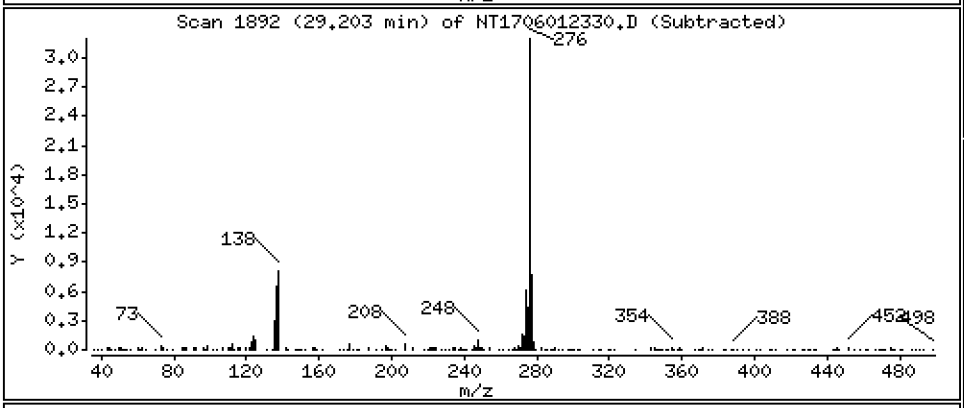
Column phase: ZB-5msi

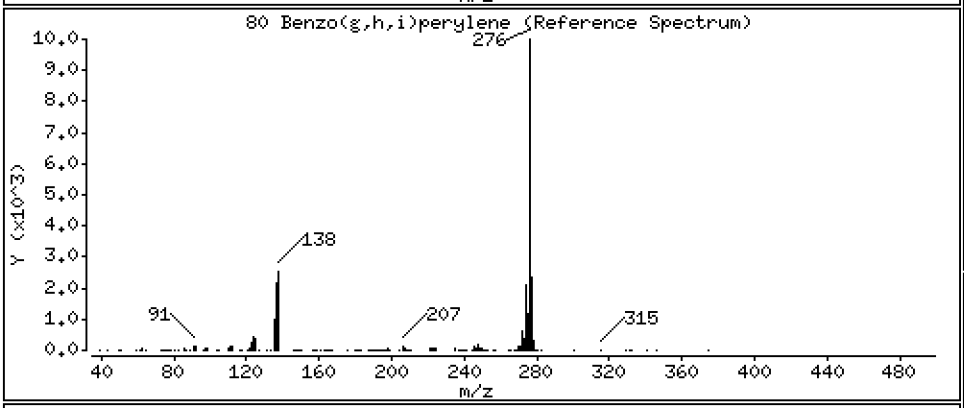
Column diameter: 0.25

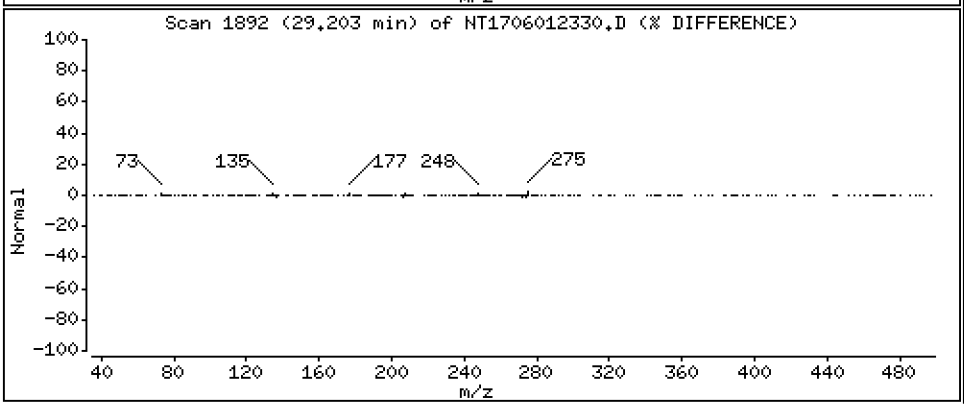
80 Benzo(g,h,i)perylene

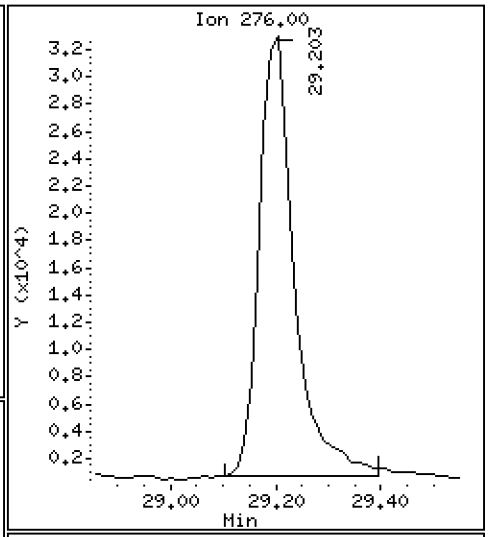
Concentration: 1.058 ug/mL

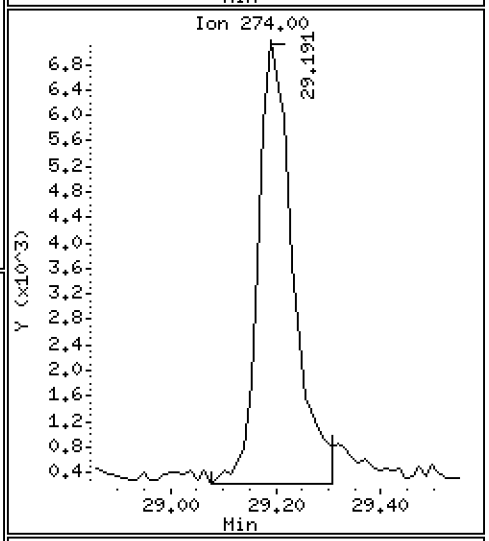


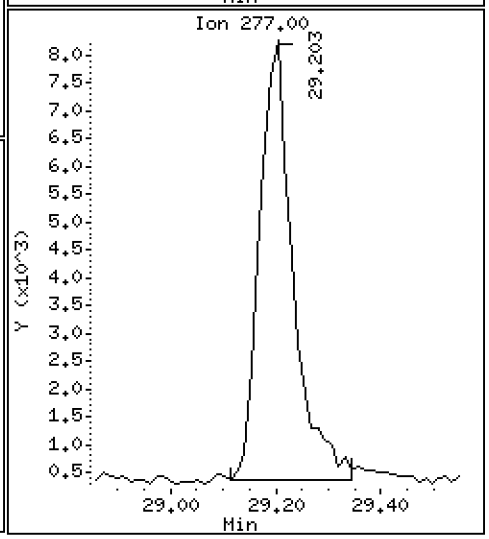












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

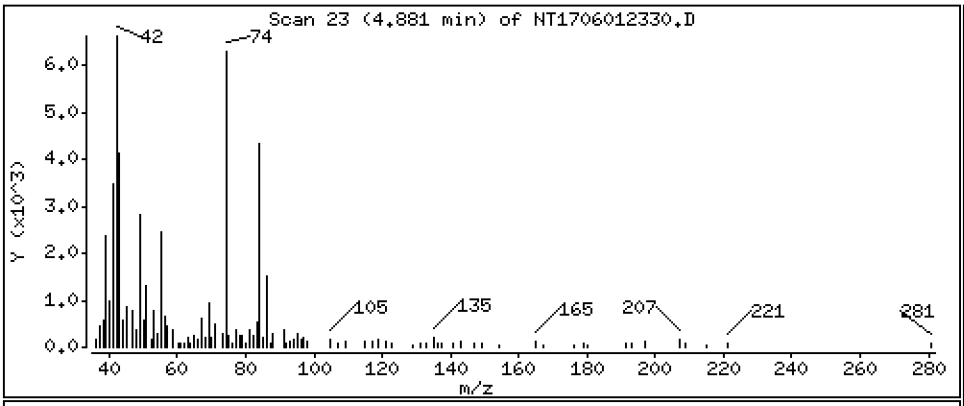
Operator: VTS

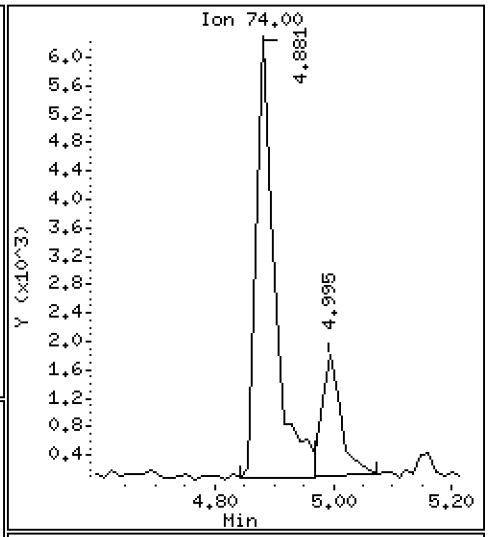
Column phase: ZB-5msi

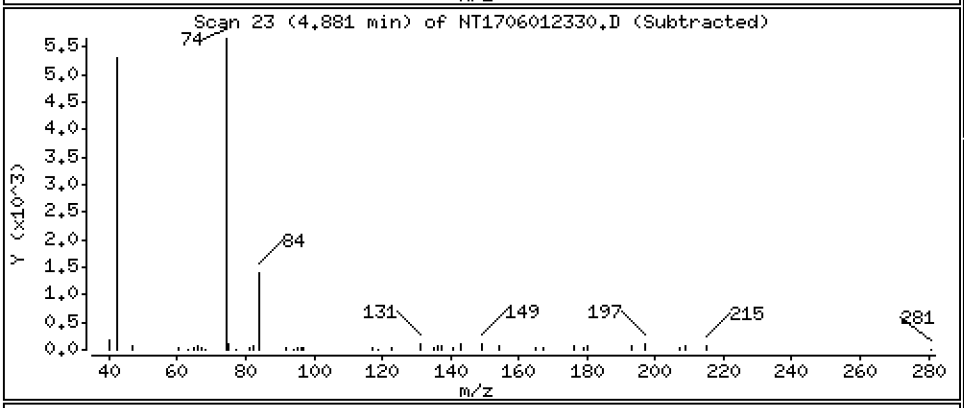
Column diameter: 0.25

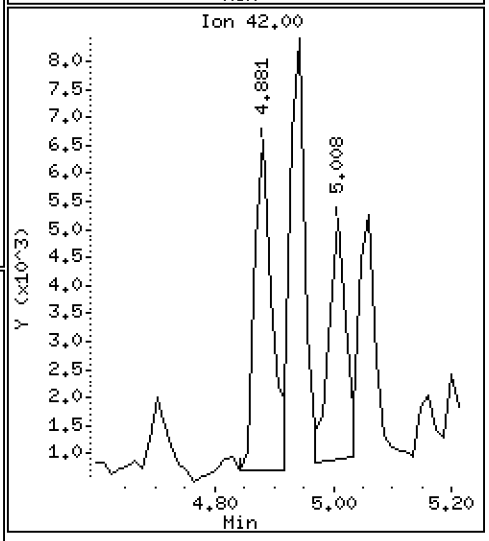
90 N-Nitrosodimethylamine

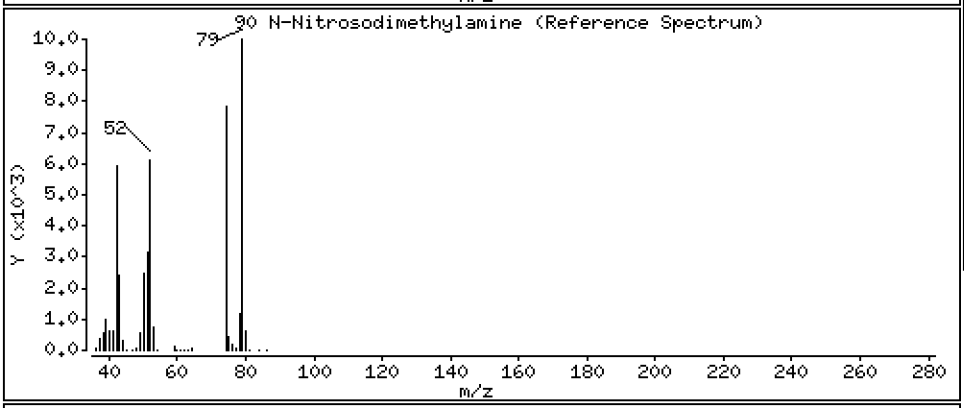
Concentration: 0.2564 ug/mL

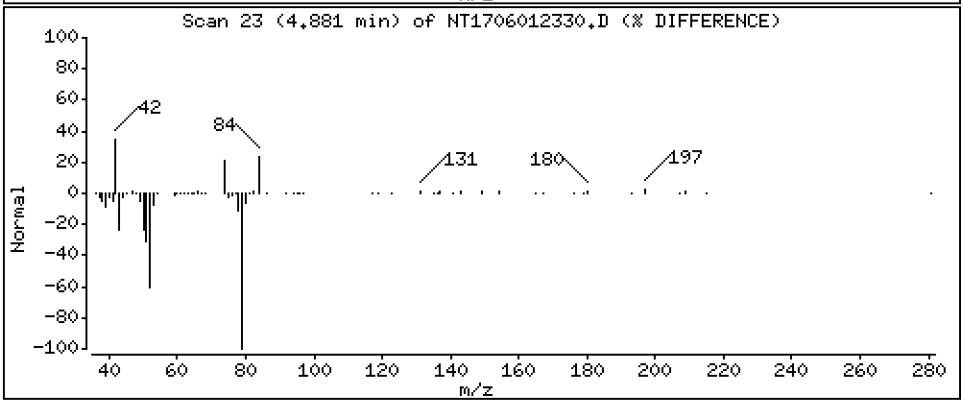












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

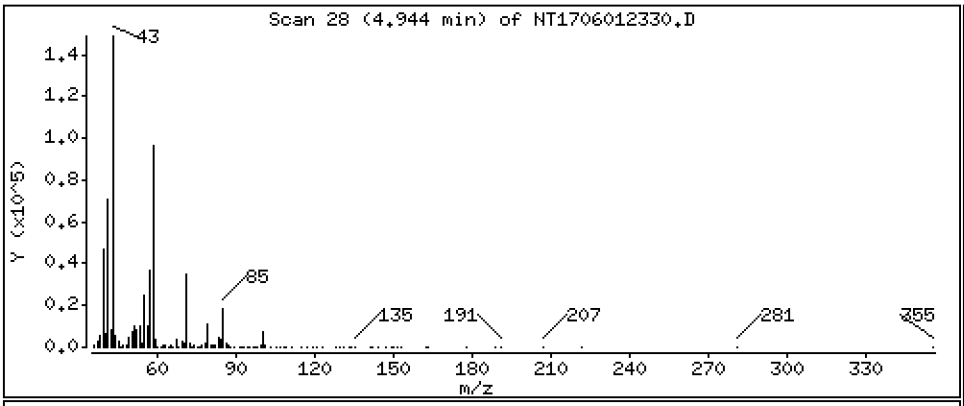
Operator: VTS

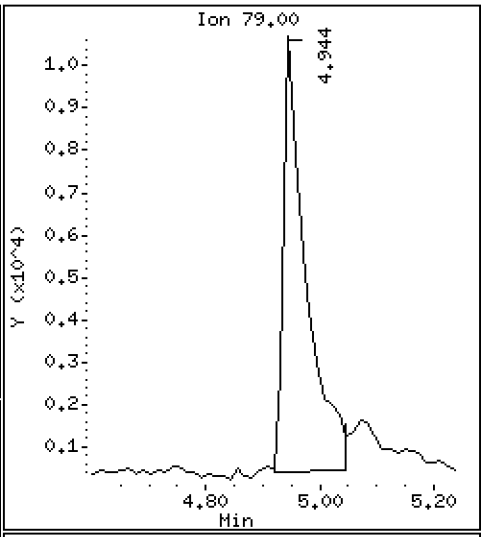
Column phase: ZB-5msi

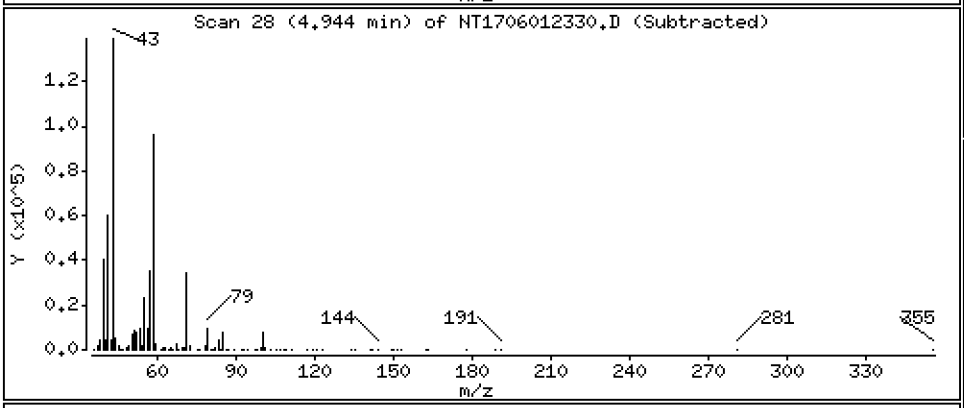
Column diameter: 0.25

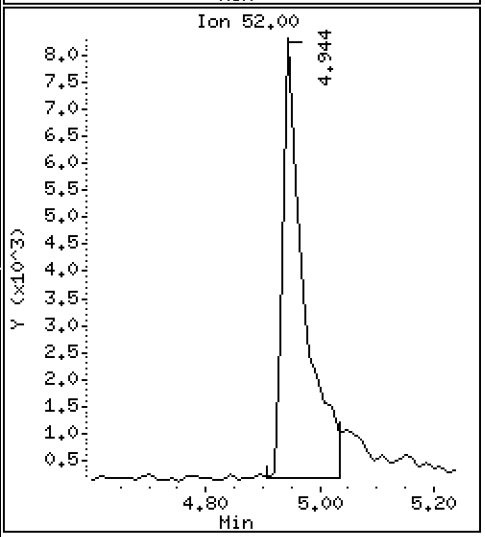
103 Pyridine

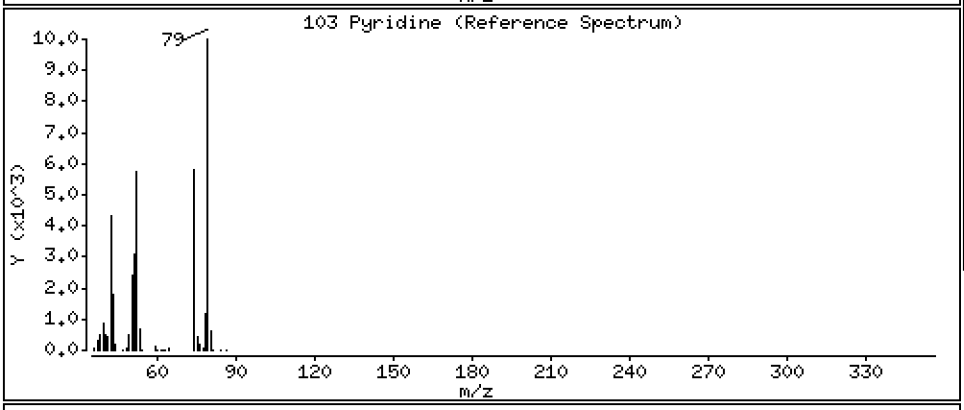
Concentration: 0.3284 ug/mL

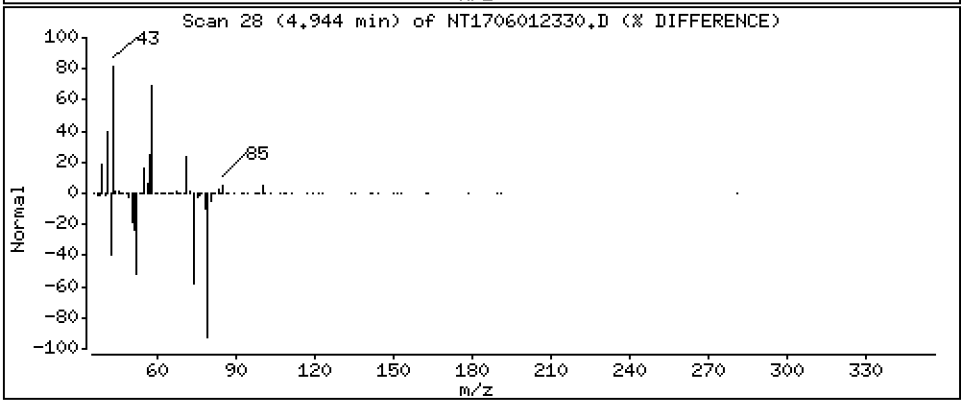












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

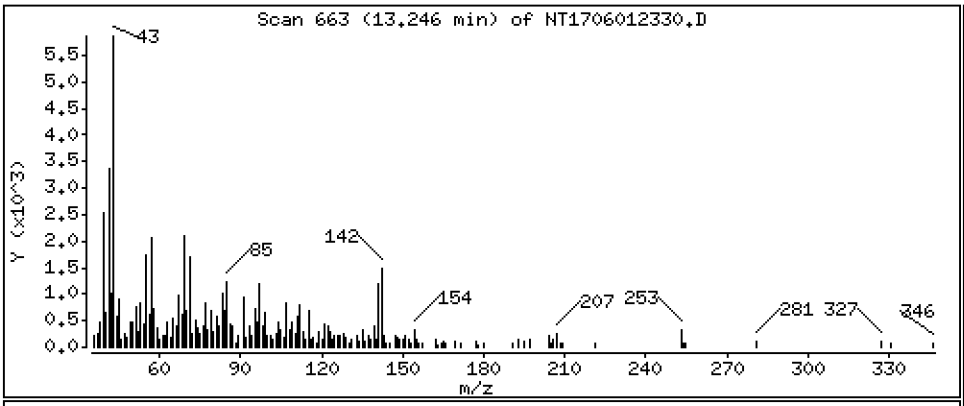
Operator: VTS

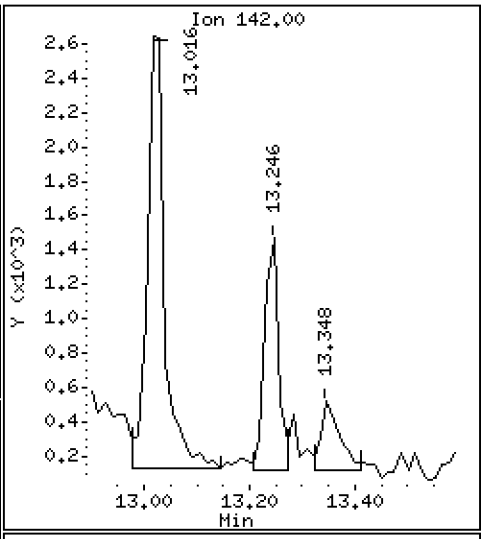
Column phase: ZB-5msi

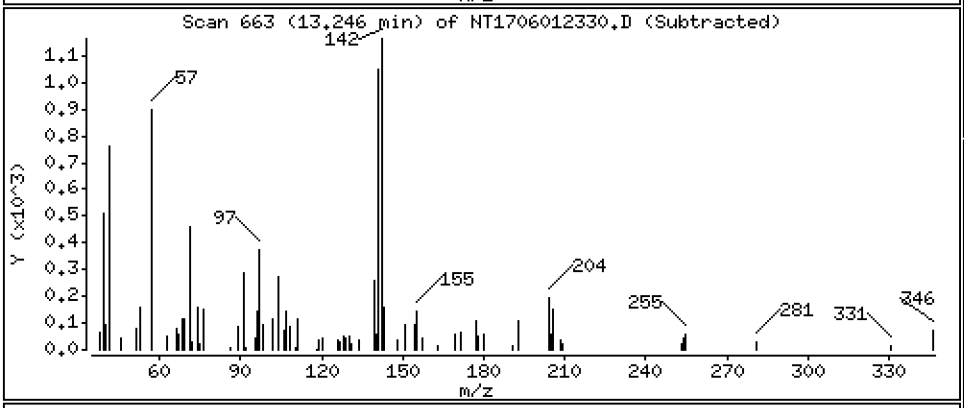
Column diameter: 0.25

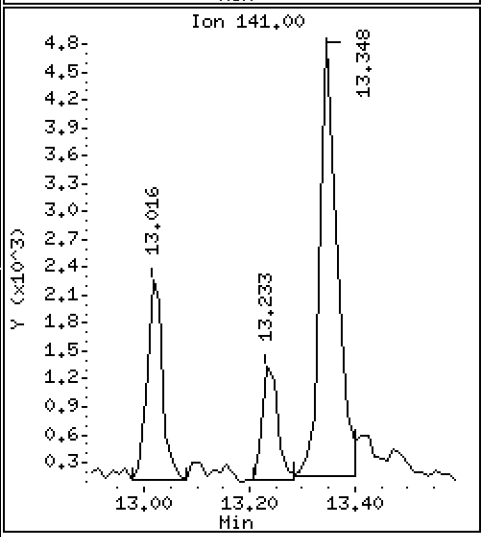
105 1-methylnaphthalene

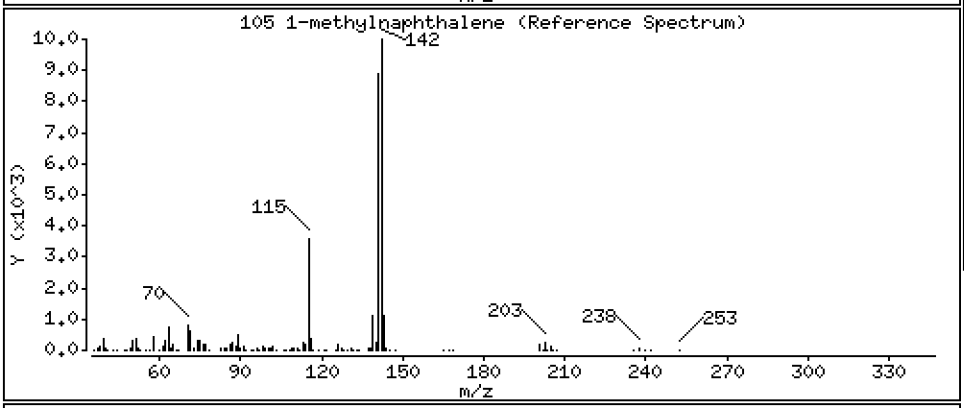
Concentration: 0.01488 ug/mL

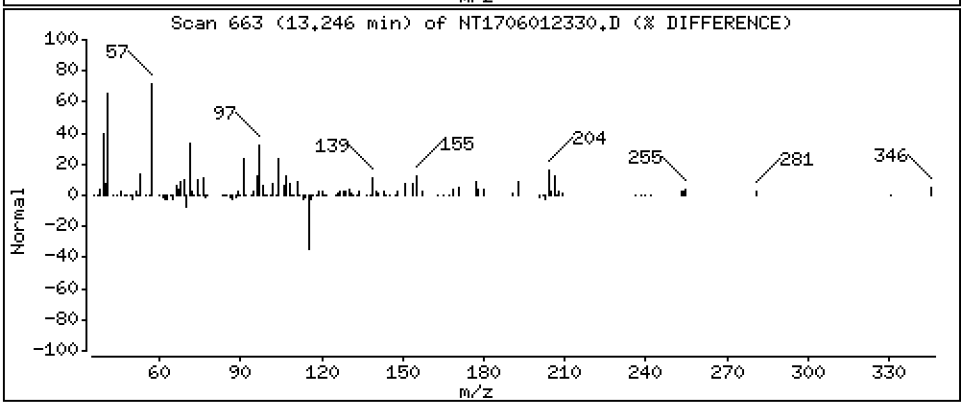












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

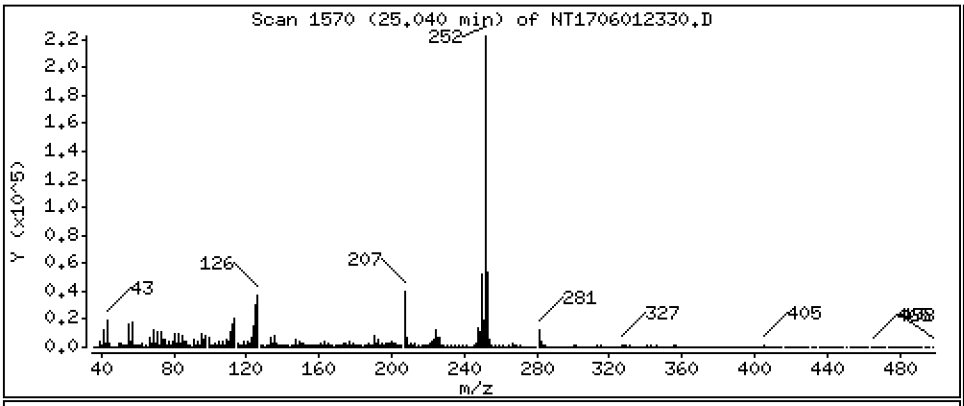
Operator: VTS

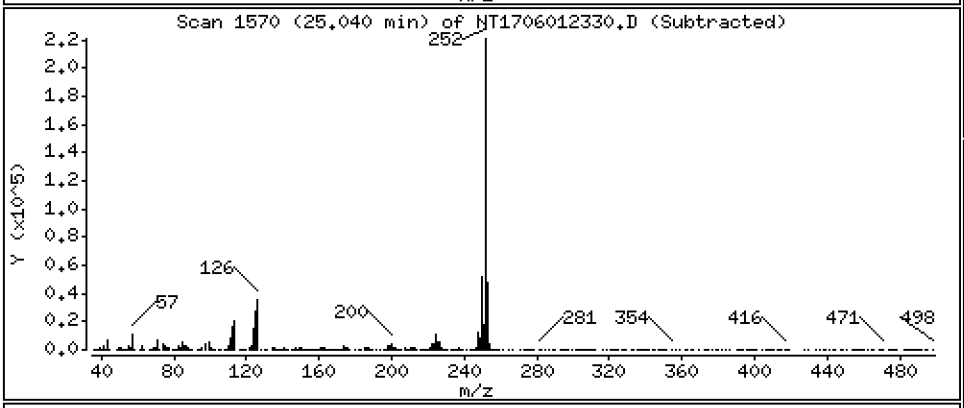
Column phase: ZB-5msi

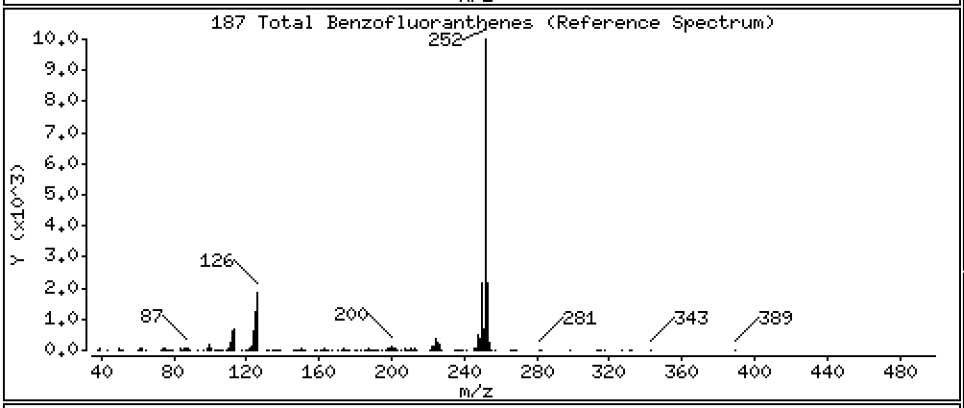
Column diameter: 0.25

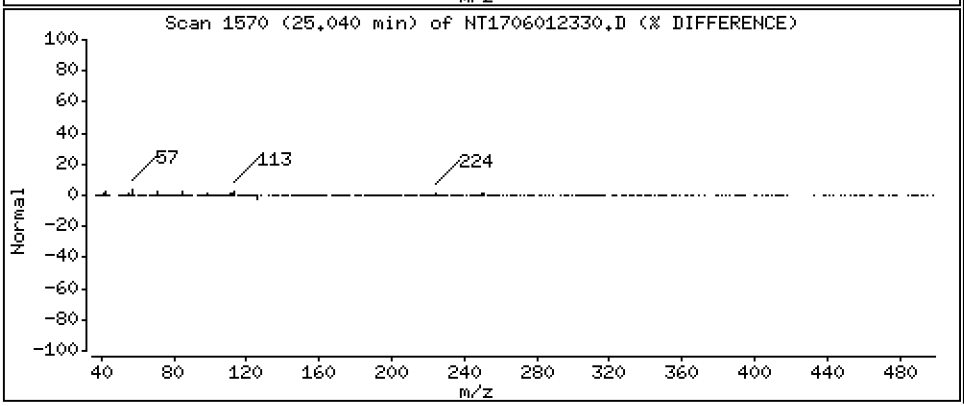
187 Total Benzofluoranthenes

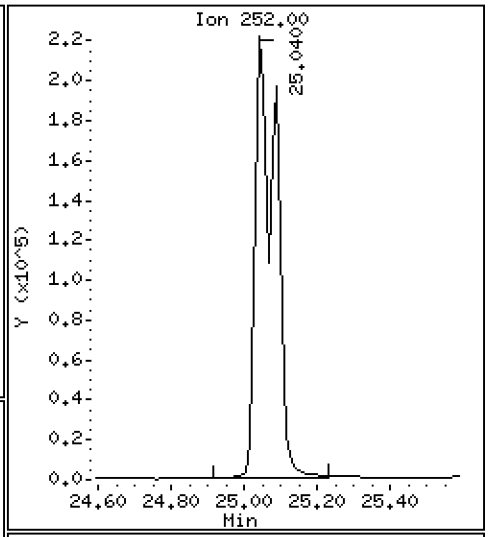
Concentration: 5.169 ug/mL

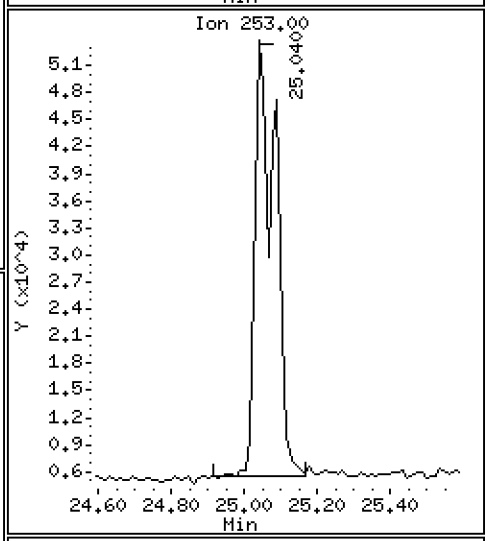


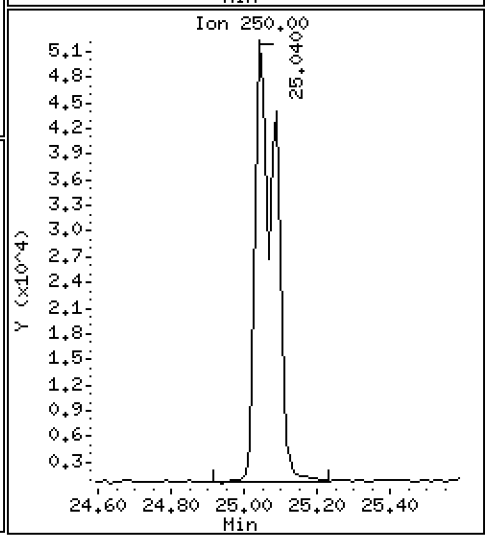












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM1

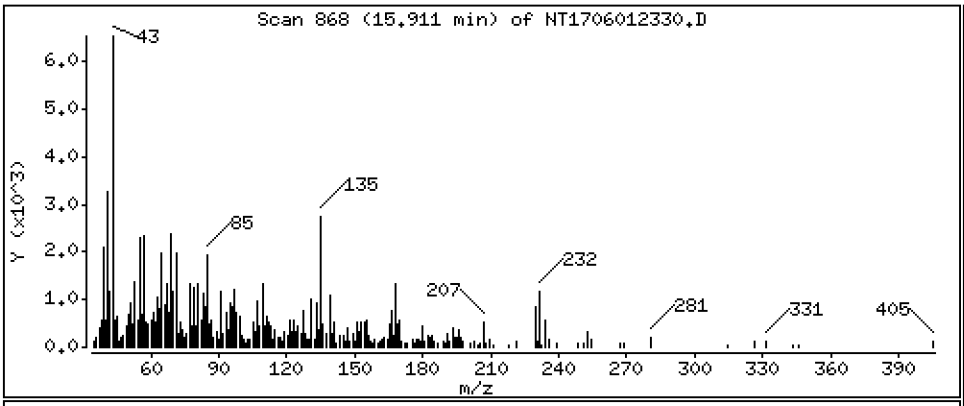
Operator: VTS

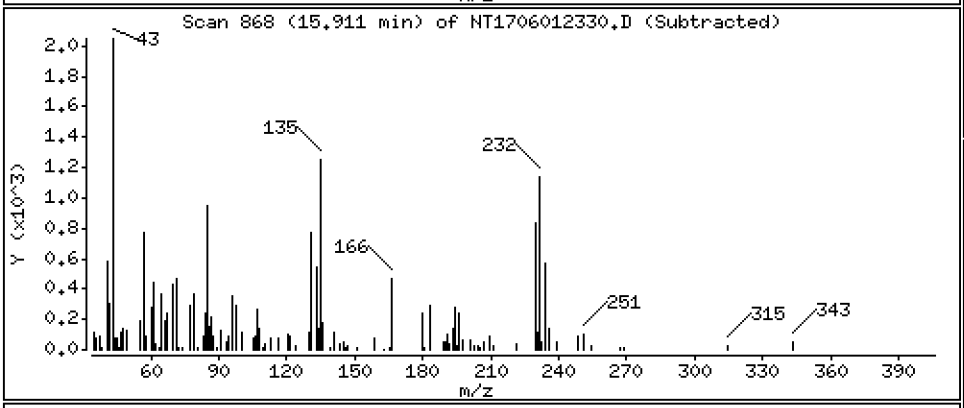
Column phase: ZB-5msi

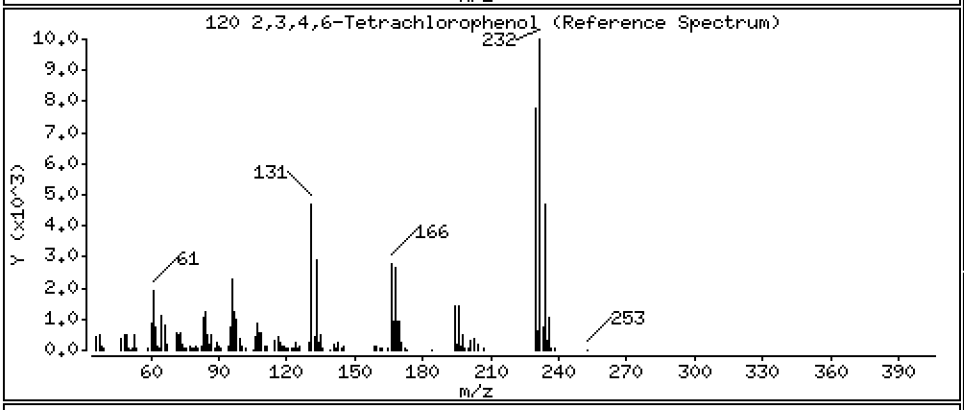
Column diameter: 0.25

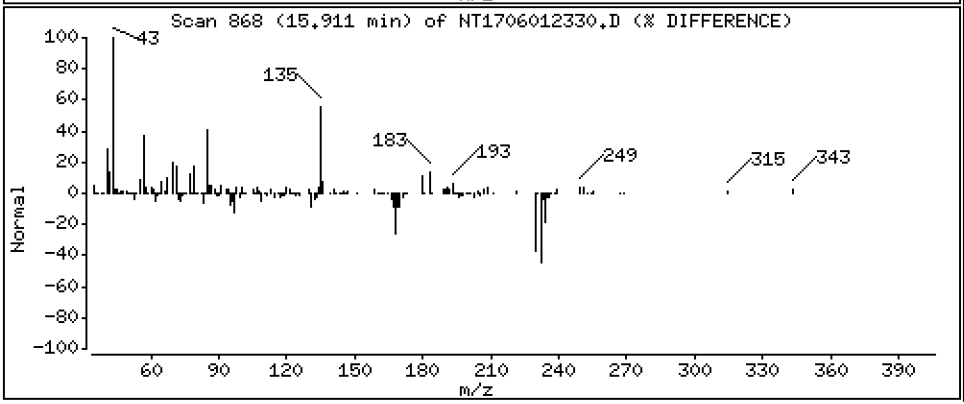
120 2,3,4,6-Tetrachlorophenol

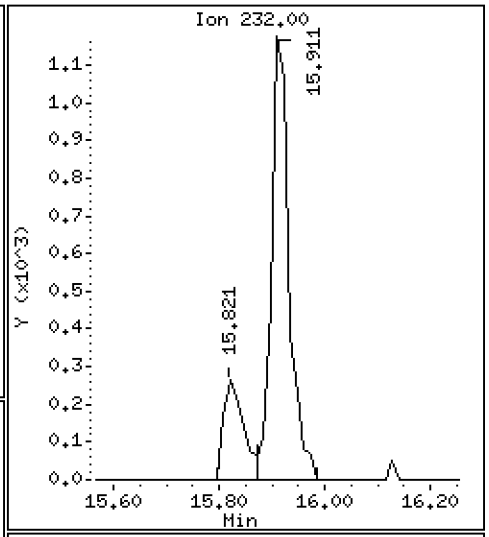
Concentration: 0.04623 ug/mL

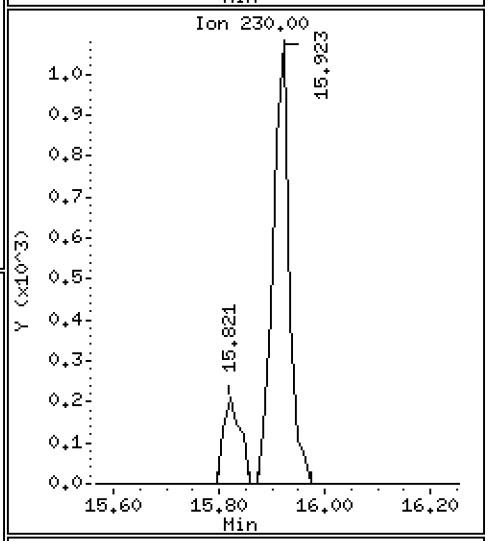


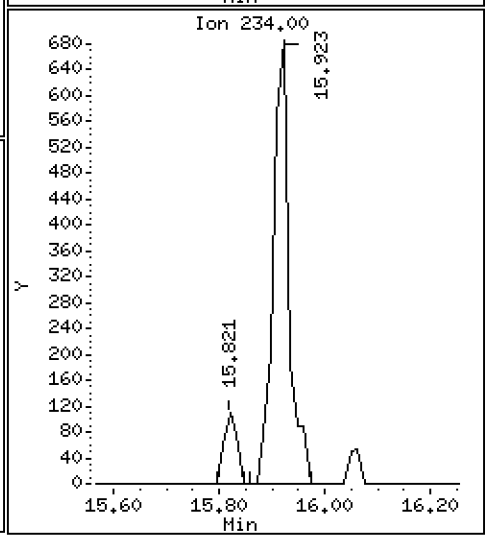












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012330.D
Lab Smp Id: BLE0148-SRM1
Inj Date : 02-JUN-2023 06:02
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-SRM1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.969	6.944	(0.763)	301928	3.71428	3.714
$	2 Phenol-d5	99	8.524	8.511	(0.933)	434923	4.04298	4.043
	3 Phenol	94	8.536	8.536	(0.934)	217266	1.90680	1.907
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	474531	5.50707	5.507
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	113012	1.18771	1.188
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	68763	0.71405	0.7141
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	248324	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	193873	3.20107	3.201
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	1244	0.01378	0.01378
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	53217	2.09119	2.091
	13 2-Methylphenol	108	9.634	9.634	(1.055)	364221	4.34940	4.349
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.902	9.902	(1.084)	472126	5.53719	5.537
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	351190	3.40485	3.405
	19 Nitrobenzene	77	10.247	10.260	(0.883)	218075	2.21605	2.216
	20 Isophorone	82	10.694	10.707	(0.922)	265333	1.96970	1.970
	21 2-Nitrophenol	139	10.873	10.873	(0.937)	222772	4.69792	4.698
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	249454	2.70944	2.709
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.077	11.192	(0.955)	30118	0.48630	0.4863(H)
	25 2,4-Dichlorophenol	162	11.333	11.333	(0.977)	539978	7.29870	7.299
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	73956	0.92041	0.9204
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	906272	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	766006	3.07357	3.074
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	60801	1.52757	1.528
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	149337	1.87466	1.875
	32 2-Methylnaphthalene	142	13.016	13.016	(1.122)	5936	0.03327	0.03327
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

		QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.640	13.640	(0.898)	95646	1.90389	1.904
35	2,4,5-Trichlorophenol	196	13.730	13.717	(0.904)	170044	3.19742	3.197
$ 36	2-Fluorobiphenyl	172	13.794	13.793	(0.908)	683082	3.61118	3.611
37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	279422	1.82087	1.821
38	2-Nitroaniline	65	Compound Not Detected.					
39	Dimethylphthalate	163	14.686	14.686	(0.967)	762968	4.61822	4.618
40	Acenaphthylene	152	14.865	14.878	(0.979)	359932	1.47701	1.477
41	2,6-Dinitrotoluene	165	Compound Not Detected.					
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	480152	4.00000	
43	3-Nitroaniline	138	Compound Not Detected.					
44	Acenaphthene	153	15.247	15.247	(1.004)	722137	4.74060	4.741
45	2,4-Dinitrophenol	184	15.337	15.337	(1.010)	79140	3.37446	3.374
46	Dibenzofuran	168	15.566	15.579	(1.025)	1202086	5.65394	5.654
47	4-Nitrophenol	109	15.477	15.464	(1.019)	144884	6.08874	6.089(M)
48	2,4-Dinitrotoluene	165	15.630	15.642	(1.029)	182933	3.61296	3.613
50	Diethylphthalate	149	16.127	16.140	(1.062)	18438	0.11444	0.1144
49	Fluorene	166	16.280	16.280	(1.072)	717056	3.54746	3.547
51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	199072	2.14220	2.142
52	4-Nitroaniline	138	Compound Not Detected.					
53	4,6-Dinitro-2-methylphenol	198	16.471	16.471	(0.905)	196920	5.96170	5.962
54	N-Nitrosodiphenylamine	169	16.521	16.521	(0.908)	363209	3.13265	3.133
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	128357	6.12857	6.129
56	4-Bromophenyl-phenylether	248	17.260	17.260	(0.948)	287888	7.08672	7.087
57	Hexachlorobenzene	284	17.578	17.578	(0.966)	595	0.01437	0.01437
58	Pentachlorophenol	266	17.948	17.935	(0.986)	72515	2.98346	2.983
* 59	Phenanthrene-d10	188	18.203	18.203	(1.000)	827683	4.00000	
60	Phenanthrene	178	18.241	18.241	(1.002)	1073159	4.44362	4.444
61	Anthracene	178	18.343	18.343	(1.008)	459224	2.02537	2.025
62	Carbazole	167	18.675	18.688	(1.026)	1110391	7.40427	7.404
63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	456714	1.66815	1.668
64	Fluoranthene	202	20.613	20.613	(0.888)	546719	2.21100	2.211
65	Pyrene	202	21.034	21.034	(0.906)	707157	2.82110	2.821
$ 66	Terphenyl-d14	244	21.315	21.315	(0.918)	742906	4.16907	4.169
67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	397781	3.54559	3.546
68	Benzo(a)anthracene	228	23.190	23.190	(0.999)	1041816	5.35217	5.352
* 69	Chrysene-d12	240	23.215	23.215	(1.000)	528618	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.254	23.254	(1.002)	242749	1.32530	1.325
72	bis(2-Ethylhexyl)phthalate	149	23.241	23.254	(0.959)	199954	1.21030	1.210
* 134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1141887	4.00000	
73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	169449	0.58543	0.5854
74	Benzo(b)fluoranthene	252	25.040	25.052	(0.970)	486994	2.60210	2.602
75	Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	447618	2.53149	2.531
76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	640859	4.34690	4.347
* 77	Perylene-d12	264	25.805	25.805	(1.000)	472043	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.423	28.423	(1.101)	581249	3.39900	3.399
79	Dibenzo(a,h)anthracene	278	28.423	28.423	(1.101)	459574	3.20213	3.202
80	Benzo(g,h,i)perylene	276	29.203	29.203	(1.132)	149332	1.05799	1.058
90	N-Nitrosodimethylamine	74	4.880	4.867	(0.534)	13903	0.25641	0.2564
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.944	4.893	(0.541)	28246	0.32842	0.3284
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	2463	0.01488	0.01488
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.040	25.091	(0.970)	868375	5.16884	5.169
120 2,3,4,6-Tetrachlorophenol	232	15.910	15.910	(1.048)	2779	0.04623	0.04623

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012330.D
Lab Smp Id: BLE0148-SRM1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	248324	-3.38
27 Naphthalene-d8	932905	466453	1865810	906272	-2.85
42 Acenaphthene-d10	509574	254787	1019148	480152	-5.77
59 Phenanthrene-d10	912749	456375	1825498	827683	-9.32
69 Chrysene-d12	578011	289006	1156022	528618	-8.55
134 Di-n-octylphthala	1181490	590745	2362980	1141887	-3.35
77 Perylene-d12	513683	256842	1027366	472043	-8.11

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012330.D

Lab ID: BLE0148-SRM1
nt17.i, ABN.m, 02-JUN-2023 06:02

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.955	0.965	-0.0099	Benzoic acid
0.541	0.536	0.0056	Pyridine

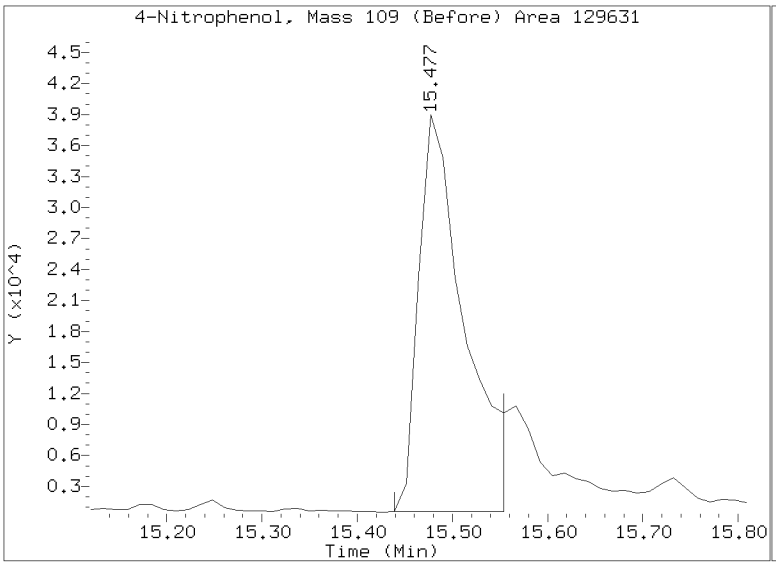
RRT check based on Ccal File: NT1706012320.D

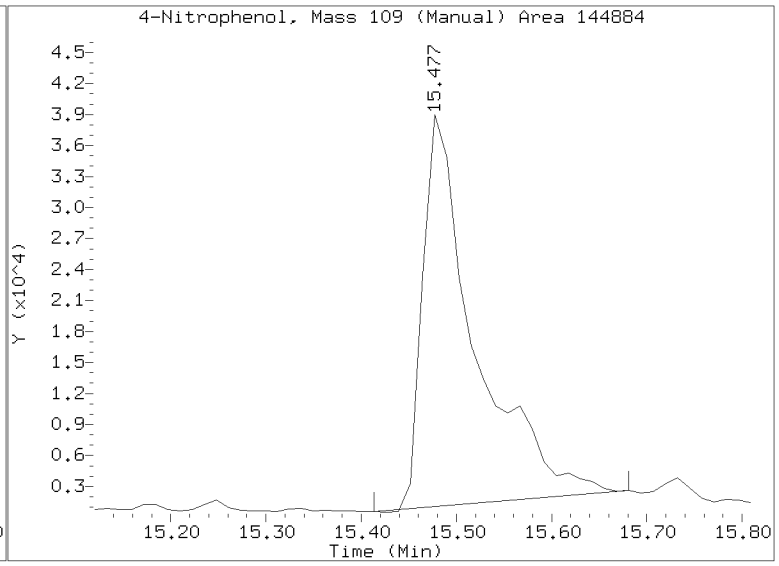
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012330.D
Injection Date: 02-JUN-2023 06:02
Lab ID:BLE0148-SRM1 Client ID:
Report Date: 06/03/2023 10:35





Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E

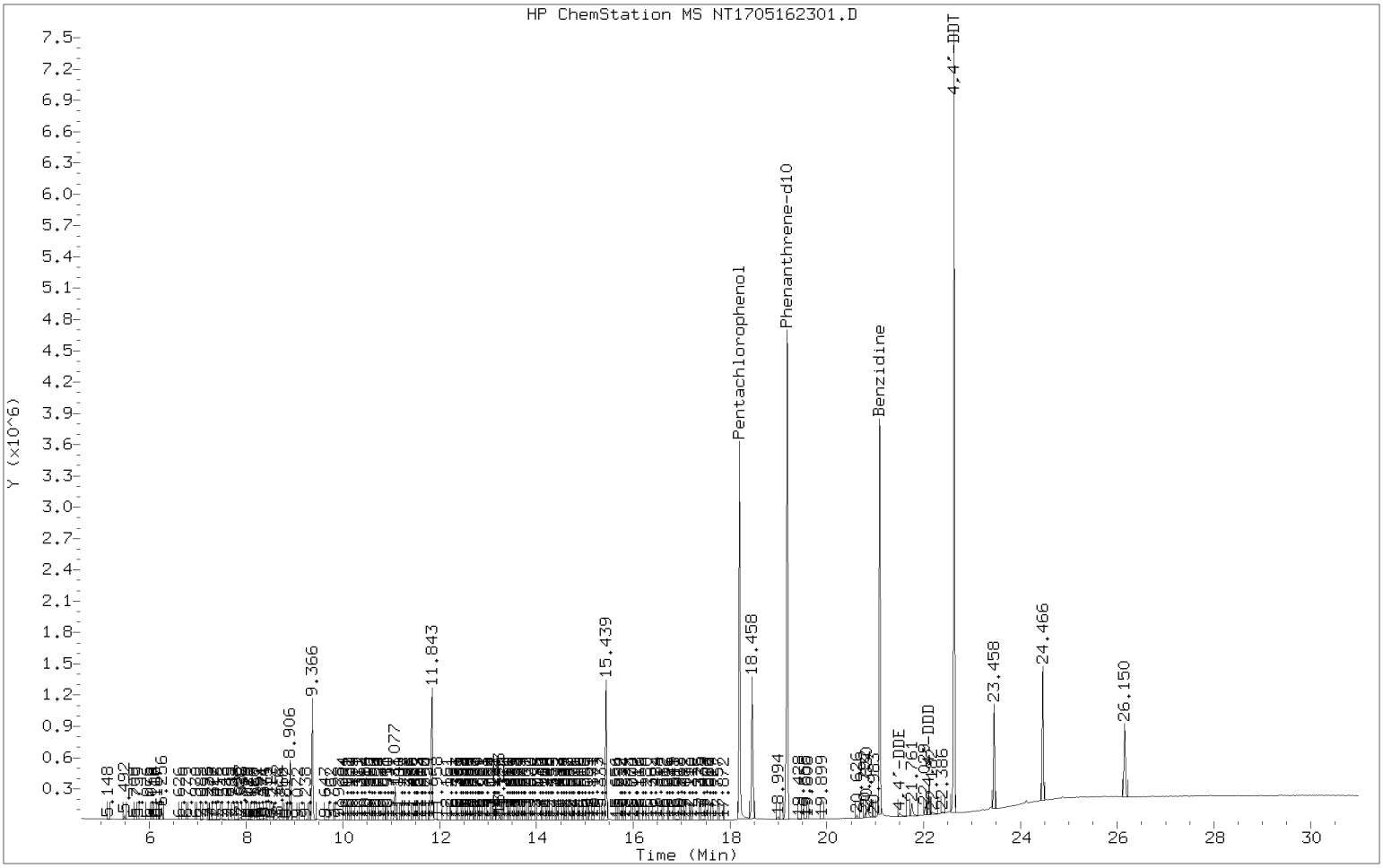
Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	NT1705162301.D	Injection Date:	05/16/23
Instrument ID:	NT17	Injection Time:	18:14
Sequence:	SLE0338	Lab Sample ID:	SLE0338-TUN1

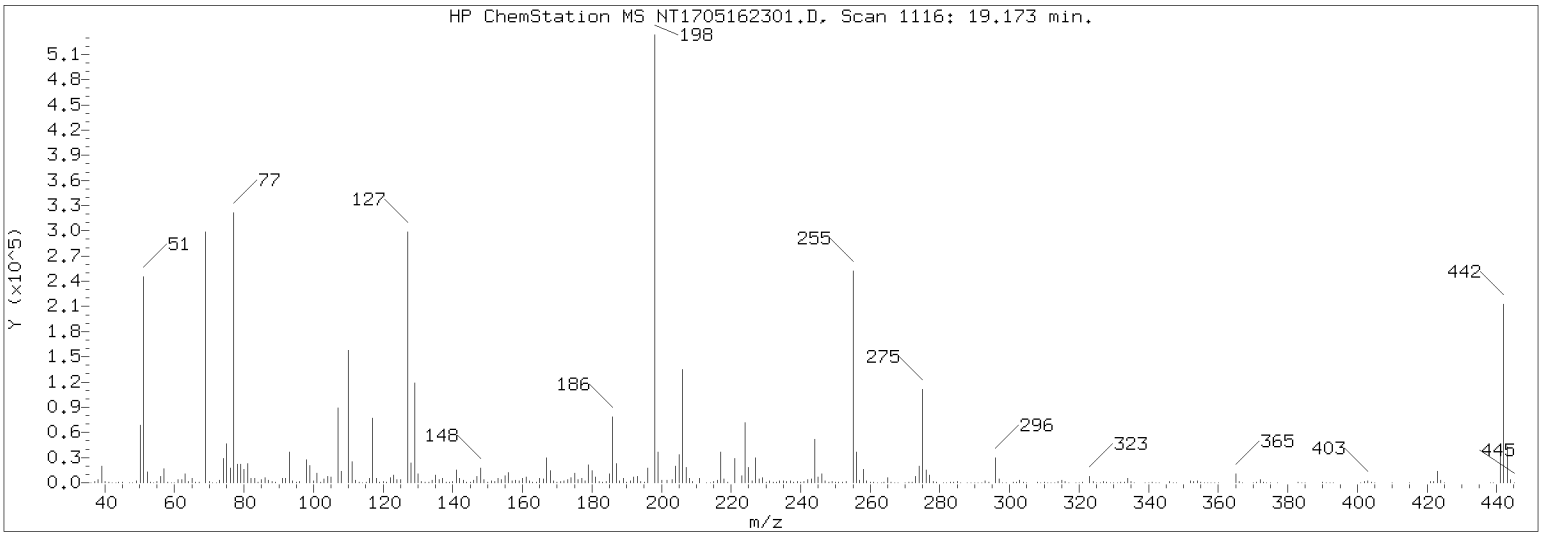
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	0	PASS
69	Less than 100% of 198	55.7	PASS
70	Less than 2% of 69	0.497	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.89	PASS
365	1 - 100% of 198	2.01	PASS
441	Less than 150% of 443	80.7	PASS
442	1 - 200% of 198	39.8	PASS
443	15 - 24% of 442	20.1	PASS
4,4'-DDD	Less than 20% of 4,4'-DDT		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Less than 200% of		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLE0338-TUN1	NT1705162301.D	05/16/2023	18:14
Cal Standard	SLE0338-CAL7	NT1705162302.D	05/16/2023	18:52
Cal Standard	SLE0338-CAL6	NT1705162303.D	05/16/2023	19:29
Cal Standard	SLE0338-CAL5	NT1705162304.D	05/16/2023	20:07
Cal Standard	SLE0338-CAL4	NT1705162305.D	05/16/2023	20:44
Cal Standard	SLE0338-CAL3	NT1705162306.D	05/16/2023	21:22
Cal Standard	SLE0338-CAL2	NT1705162307.D	05/16/2023	21:59
Cal Standard	SLE0338-CAL1	NT1705162308.D	05/16/2023	22:37
Secondary Cal Check	SLE0338-SCV1	NT1705162311.D	05/17/2023	0:29
Initial Cal Blank	SLE0338-ICB1	NT1705162312.D	05/17/2023	1:07

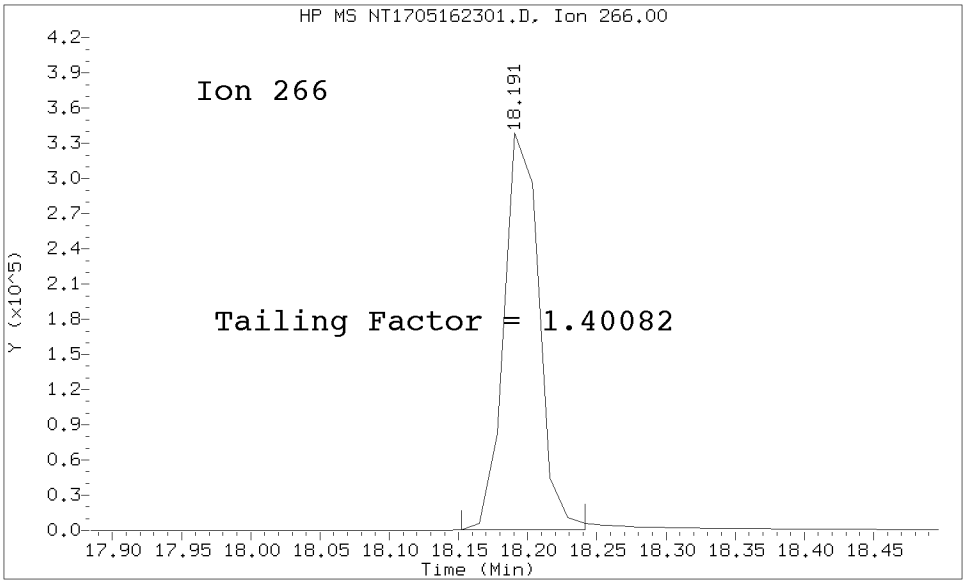
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230516.b/NT1705162301.D/NT1705162301.D
Method Used: \20230516.b\DFTPP8270E.m Inst: nt17
Injection Date: 16-MAY-2023 18:14 Operator: VTS
Sample Info: SLE0338-TUN1 SLE0338-TUN1
Report Date: 05/20/2023 13:10



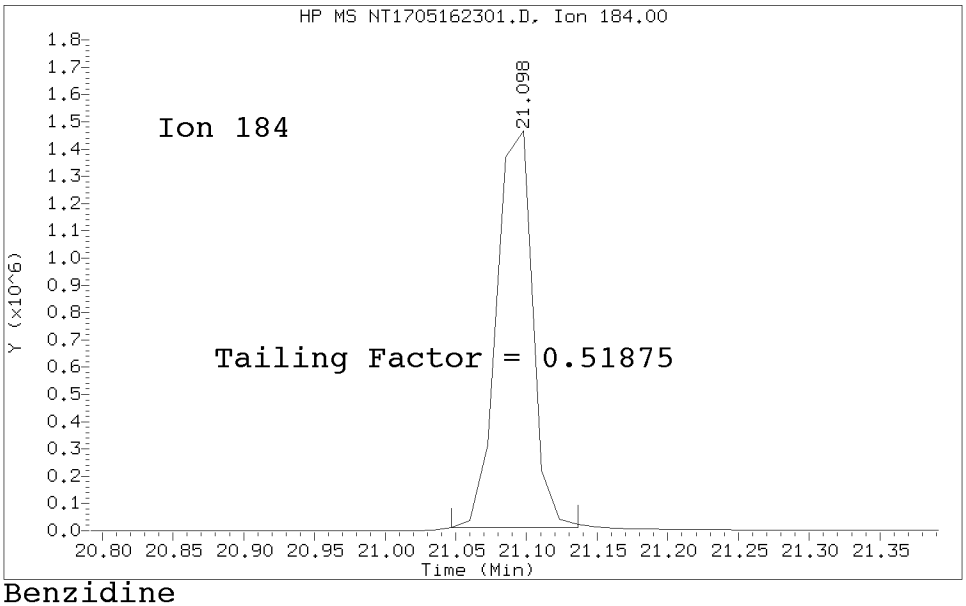


Datafile Analyzed: /20230516.b/NT1705162301.D/NT1705162301.D
Method Used: \20230516.b\DFTPP8270E.m\sw846ddt.m Inst: nt17
Injection Date: 16-MAY-2023 18:14 Operator: JGR
Sample Info: NT1705162301
Report Date: 05/20/2023 13:10



Pentachlorophenol
==========
Exp. RT = 18.191
Found RT = 18.191

Tail Factor = 1.401 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 21.098
Found RT = 21.098

Tail Factor = 0.519 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4008163	2.000	PASS
Benzidine	0.5187468	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1797024			N/A
4,4-DDE	5899	0.3	20.0	PASS
4,4-DDD	55596	3.0	20.0	PASS
4,4-DDD + DDE	61495	3.3	20.0	PASS

Tuning Sample, nt17.i/20230516.b/NT1705162301.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	55.71
70	Less than 2.00% of mass 69	0.28 (0.50)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.89
365	1.00 - 100.00% of mass 198	2.01
441	Less than 150.00% of mass 443	6.45 (80.67)
442	Less than 200.00% of mass 198	39.79
443	15.00 - 24.00% of mass 442	8.00 (20.10)

Data File: NT1705162301.D
Spectrum: HP ChemStation MS NT1705162301.D, Scan 1116: 19.173 min.
Location of Maximum: 198.00
Number of points: 331

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	373	125.00	3764	212.90	378	304.10	870
37.10	1236	127.00	299008	214.00	187	304.90	93
38.10	3574	128.00	23768	215.00	1418	308.00	456
39.10	19776	129.00	119136	216.10	3082	309.00	262
40.10	1147	130.00	10361	217.00	36592	310.00	402
41.10	878	131.00	1814	218.00	4762	311.00	86
42.00	117	132.00	965	219.00	396	312.00	116
43.10	290	133.10	535	221.00	29232	313.00	219
44.00	563	134.00	3393	223.00	8299	314.00	1504
45.00	582	135.00	9407	224.00	71792	315.00	3072
47.00	97	136.00	3952	225.00	17928	316.00	1521
48.00	170	137.00	4988	226.10	2276	317.00	314
49.10	2254	138.00	1078	227.00	30000	319.10	73
50.10	68392	139.00	652	228.00	4583	320.10	106
51.10	245312	140.00	1657	229.00	6282	321.00	853
52.10	13090	141.00	15600	230.00	812	323.00	7992
53.10	590	142.00	5275	231.00	2667	324.10	1422
54.10	108	143.00	3193	232.00	430	325.00	180
55.00	1424	144.00	947	233.00	547	326.10	206
56.00	7762	145.00	844	234.00	1964	327.00	1582
57.00	17056	146.00	3027	235.00	2156	328.00	897
58.00	866	147.00	7959	236.00	1308	329.00	186
59.10	293	148.00	17552	237.00	2222	329.90	82
60.00	267	149.00	3605	237.90	416	331.10	85
61.00	3445	150.00	847	239.00	1164	332.00	681
62.10	3924	151.10	1978	240.00	951	333.00	829
63.10	10682	152.00	1250	241.00	1482	334.00	5269
64.00	1343	153.00	5043	242.00	3506	335.00	1251
65.10	5380	154.00	3616	243.10	4237	335.90	192
66.00	439	155.00	8310	244.00	51672	339.00	128
67.10	548	156.00	12288	245.00	7098	340.10	147
69.00	297216	157.00	2390	246.00	10908	341.00	859
70.00	1476	158.00	3197	247.00	2147	342.00	240
70.90	268	159.00	2124	248.10	405	343.10	69
72.10	180	160.00	4998	249.00	1791	346.00	1668
73.00	2846	161.00	6841	250.00	400	347.00	375
74.10	28912	162.00	1948	250.90	471	348.00	75
75.00	46408	163.00	565	252.00	547	352.00	2294
76.10	17424	164.00	677	253.00	1432	353.00	1625
77.10	321920	165.00	5602	255.00	252288	354.10	2225
78.10	22048	166.00	4612	256.00	36264	355.00	516
79.00	22016	167.00	29864	257.00	3077	356.00	63
80.00	16324	168.00	14362	258.00	15639	356.90	53
81.00	22800	169.00	2523	259.00	2592	358.00	71
82.00	5387	170.00	957	260.10	431	359.00	210
83.00	5076	171.00	1311	261.00	461	360.10	57
84.00	563	172.00	2519	262.00	108	365.00	10733
85.00	4136	173.00	3591	263.10	161	366.00	1640
86.00	6323	174.00	6157	264.00	692	366.90	121

87.00	3104	175.00	11592	265.00	6219	370.00	199
88.00	1154	176.00	3445	266.00	980	371.00	691
89.00	552	177.00	5417	267.00	143	372.00	3968
91.00	5210	178.00	1917	267.90	329	373.00	1018
92.00	5631	179.00	21584	270.00	364	374.00	88
93.00	36336	180.00	14393	271.00	614	375.00	64
94.00	2258	181.00	6949	272.00	778	377.00	178
95.10	602	182.00	1161	273.00	7503	382.90	939
96.00	1677	183.00	749	274.00	19672	384.00	273
98.00	27664	184.00	1652	275.00	111592	385.00	126
99.00	20856	185.00	10677	276.00	15342	390.00	425
100.00	1939	186.00	78320	277.00	9319	391.00	350
101.00	11566	187.00	22896	278.00	1573	392.10	253
102.00	831	188.00	2244	279.00	451	393.00	72
103.00	4398	189.00	5077	281.00	219	401.00	268
104.00	7600	190.00	951	282.00	285	402.00	1410
105.00	7080	191.00	2327	283.00	1010	403.00	2061
107.00	89200	192.00	6979	284.00	690	404.00	774
108.00	13702	193.00	7409	285.00	1524	405.00	123
110.00	158144	194.00	1633	286.00	314	410.00	81
111.00	25024	195.10	1054	287.90	160	414.90	77
112.00	3002	196.00	17264	289.00	314	421.00	1760
113.00	864	198.00	533504	290.00	311	422.00	1730
114.00	302	199.00	36760	291.00	191	423.00	13610
115.10	463	200.00	2858	292.00	365	424.00	2795
116.00	5300	201.50	3067	293.00	1946	425.00	303
117.00	76832	203.00	3883	294.00	397	438.30	74
118.00	5637	204.00	19736	296.00	30016	439.10	152
119.00	739	205.00	33208	297.00	4246	441.10	34424
120.00	1147	206.00	134656	297.90	294	442.00	212288
121.00	584	207.00	18008	299.00	90	443.00	42672
122.00	6244	208.00	5001	301.10	394	444.00	3817
123.00	9329	209.00	1511	302.00	506	445.10	229
124.00	4061	211.00	5429	303.00	3269		

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00065	Instrument:	NT17
Calibration Date:	05/20/2023	Column (1):	ZB-5MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Phenol	0.2	1.515327	0.5	1.64205	1	1.951215	2.5	1.946316	5	1.925094	10	1.955636
bis(2-chloroethyl) ether	0.2	1.304717	0.5	1.295399	1	1.478041	2.5	1.369821	5	1.331908	10	1.311267
2-Chlorophenol	0.2	1.499455	0.5	1.50802	1	1.717396	2.5	1.490307	5	1.498177	10	1.510733
1,3-Dichlorobenzene	0.2	1.503555	0.5	1.466725	1	1.638838	2.5	1.565023	5	1.556608	10	1.567334
1,4-Dichlorobenzene	0.2	1.412365	0.5	1.630819	1	1.798907	2.5	1.49308	5	1.488694	10	1.498669
1,2-Dichlorobenzene	0.2	1.339741	0.5	1.338052	1	1.531626	2.5	1.47113	5	1.476145	10	1.514948
Benzyl Alcohol	0.2	0.7011163	0.5	0.7351646	1	0.8941789	2.5	0.9302211	5	0.895946	10	0.9159356
2,2'-Oxybis(1-chloropropane)	0.2	0.3827998	0.5	0.3687671	1	0.4359081	2.5	0.415285	5	0.426351	10	0.4209867
2-Methylphenol	0.2	1.154959	0.5	1.212785	1	1.39403	2.5	1.552001	5	1.358761	10	1.386669
Hexachloroethane	0.2	0.5532909	0.5	0.5679359	1	0.6395764	2.5	0.6327795	5	0.6378225	10	0.6455227
N-Nitroso-di-n-Propylamine	0.2	0.9225615	0.5	0.9325315	1	1.056034	2.5	1.093845	5	1.077681	10	1.08524
4-Methylphenol	0.2	1.167844	0.5	1.182646	1	1.409867	2.5	1.472511	5	1.451305	10	1.475234
Nitrobenzene	0.2	0.4060282	0.5	0.4412374	1	0.4422102	2.5	0.4416006	5	0.4395413	10	0.4396436
Isophorone	0.2	0.5271224	0.5	0.6360812	1	0.5537528	2.5	0.5650856	5	0.5711294	10	0.6730137
2-Nitrophenol	0.2	0.1598392	0.5	0.1864089	1	0.2418321	2.5	0.2103456	5	0.2148844	10	0.2208109
2,4-Dimethylphenol			1	0.4110101	2	0.4149893	5	0.4052563	10	0.4080673	20	0.4041597
Bis(2-Chloroethoxy)methane	0.2	0.3647075	0.5	0.3509254	1	0.3707641	2.5	0.3622648	5	0.3686203	10	0.3664199
2,4-Dichlorophenol			1	0.3423595	2	0.3461516	5	0.3130138	10	0.3135113	20	0.3246616
1,2,4-Trichlorobenzene	0.2	0.3603233	0.5	0.355971	1	0.344624	2.5	0.3402865	5	0.3396736	10	0.3383516
Naphthalene	0.2	1.111221	0.5	1.119409	1	1.102741	2.5	1.101742	5	1.095938	10	1.091171
Benzoic acid			2	7.946971E-02	4	0.1496777	10	0.2227278	20	0.2520231	40	0.2699127
4-Chloroaniline			1	0.4258349	2	0.4317672	5	0.4590405	10	0.458243	20	0.4152621
Hexachlorobutadiene	0.2	0.1706535	0.5	0.1726665	1	0.1716239	2.5	0.1748862	5	0.1756936	10	0.1783674
4-Chloro-3-Methylphenol			1	0.316369	2	0.3397437	5	0.3563181	10	0.3608724	20	0.3677406
2-Methylnaphthalene	0.2	0.7697858	0.5	0.7505503	1	0.7790407	2.5	0.7993737	5	0.8052455	10	0.8055023
Hexachlorocyclopentadiene	0.4	0.1706078	1	0.2143461	2	0.248999	5	0.308174	10	0.3174482	20	0.3571023
2,4,6-Trichlorophenol			1	0.374323	2	0.3891811	5	0.418747	10	0.417309	20	0.4480786
2,4,5-Trichlorophenol			1	0.3966077	2	0.4279123	5	0.4346061	10	0.4415632	20	0.4677754

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00065	Instrument:	NT17
Calibration Date:	05/20/2023	Column (1):	ZB-5MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2-Chloronaphthalene	0.2	1.292225	0.5	1.268009	1	1.271172	2.5	1.28054	5	1.263294	10	1.297566
2-Nitroaniline			1	0.3983443	2	0.4272776	5	0.4451883	10	0.4393913	20	0.4497003
Acenaphthylene	0.2	2.036084	0.5	2.059006	1	2.070821	2.5	2.030202	5	2.003144	10	2.01163
Dimethylphthalate	0.2	1.381073	0.5	1.405351	1	1.419896	2.5	1.404543	5	1.356323	10	1.344048
2,6-Dinitrotoluene			1	0.2981727	2	0.3056219	5	0.3261255	10	0.3250702	20	0.3366974
Acenaphthene	0.2	1.245076	0.5	1.263675	1	1.27027	2.5	1.273983	5	1.257471	10	1.294951
3-Nitroaniline			1	0.2787192	2	0.26979	5	0.2540363	10	0.3089221	20	0.3301823
2,4-Dinitrophenol	0.8		2	2.818422E-02	4	9.024559E-02	10	0.1620519	20	0.1892771	40	0.2197305
Dibenzofuran	0.2	1.77706	0.5	1.756784	1	1.75382	2.5	1.749859	5	1.75933	10	1.796287
4-Nitrophenol	0.4	8.703705E-02	1	0.1305194	2	0.1641116	5	0.1933669	10	0.1918027	20	0.2002034
2,4-Dinitrotoluene			1	0.3600138	2	0.4106691	5	0.4292884	10	0.4342633	20	0.4448729
Fluorene	0.2	1.396283	0.5	1.78943	1	1.799349	2.5	1.489574	5	1.781784	10	1.757136
4-Chlorophenylphenyl ether	0.2	0.7876275	0.5	0.7844299	1	0.7827804	2.5	0.6286909	5	0.7797913	10	0.8146494
Diethyl phthalate	0.2	1.302779	0.5	1.301983	1	1.347032	2.5	1.344656	5	1.303862	10	1.302658
4-Nitroaniline			1	0.236244	2	0.2745343	5	0.2753014	10	0.2844043	20	0.3076564
4,6-Dinitro-2-methylphenol	0.8	4.197058E-02	2	6.895356E-02	4	9.431631E-02	10	0.1230775	20	0.1382111	40	0.1546454
N-Nitrosodiphenylamine	0.2	0.5626007	0.5	0.5776893	1	0.5799067	2.5	0.5397361	5	0.5250946	10	0.5644336
4-Bromophenyl phenyl ether	0.2	0.1841331	0.5	0.1895423	1	0.1861595	2.5	0.1884463	5	0.1978305	10	0.2089616
Hexachlorobenzene	0.2	0.1991402	0.5	0.1974876	1	0.1898174	2.5	0.1921283	5	0.1983506	10	0.2070359
Pentachlorophenol	0.4	3.402963E-02	1	5.405844E-02	2	6.899246E-02	5	0.0973416	10	0.1172324	20	0.132916
Phenanthrene	0.2	1.145162	0.5	1.16863	1	1.150035	2.5	1.129793	5	1.172838	10	1.208755
Anthracene	0.2	1.004975	0.5	1.044685	1	1.06765	2.5	1.107929	5	1.129767	10	1.161012
Carbazole	0.2	0.9664878	0.5	0.9864561	1	0.9266959	2.5	0.6924964	5	0.6245934	10	0.769363
Di-n-Butylphthalate	0.2	1.182153	0.5	1.239651	1	1.303818	2.5	1.366907	5	1.407721	10	1.39066
Fluoranthene	0.2	1.756504	0.5	1.854365	1	1.873671	2.5	1.893399	5	1.949547	10	1.937891
Pyrene	0.2	1.861727	0.5	1.919689	1	1.923173	2.5	1.90314	5	1.926956	10	1.929794
Butylbenzylphthalate	0.2	0.7911624	0.5	0.8403236	1	0.8780115	2.5	0.8721963	5	0.8779673	10	0.8615676
Benzo(a)anthracene	0.2	1.503088	0.5	1.501633	1	1.477556	2.5	1.461652	5	1.459356	10	1.465531

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00065	Instrument:	NT17
Calibration Date:	05/20/2023	Column (1):	ZB-5MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
3,3'-Dichlorobenzidine	0.6	0.4422015	1.5	0.4353429	3	0.3605899	7.5	0.2985874	15	0.2716155	30	0.3372362
Chrysene	0.2	1.392476	0.5	1.426542	1	1.385766	2.5	1.37608	5	1.368949	10	1.392704
bis(2-Ethylhexyl)phthalate	0.2	0.5451547	0.5	0.5863116	1	0.5874959	2.5	0.5901079	5	0.5933055	10	0.5812585
Di-n-Octylphthalate	0.2	1.071564	0.5	1.044612	1	1.030433	2.5	1.013275	5	1.002075	10	0.9864001
Benzofluoranthenes, Total	0.4	1.388826	1	1.379164	2	1.378157	5	1.425352	10	1.428639	20	1.451637
Benzo(a)pyrene	0.2	1.289058	0.5	1.22301	1	1.17691	2.5	1.216623	5	1.244532	10	1.273014
Indeno(1,2,3-cd)pyrene	0.2	1.410706	0.5	1.408115	1	1.387911	2.5	1.414105	5	1.456107	10	1.465178
Dibenzo(a,h)anthracene	0.2	1.161385	0.5	1.178336	1	1.172982	2.5	1.188193	5	1.217272	10	1.233675
Benzo(g,h,i)perylene	0.2	1.160037	0.5	1.180393	1	1.147711	2.5	1.142466	5	1.207497	10	1.211392
1-Methylnaphthalene	0.2	0.7150203	0.5	0.7211858	1	0.7217567	2.5	0.7350043	5	0.738476	10	0.7401884
2-Fluorophenol	0.3	1.055315	0.75	1.150007	1.5	1.379364	3.75	1.402335	7.5	1.422699	15	1.398997
Phenol-d5	0.3	1.477121	0.75	1.562941	1.5	1.811627	3.75	1.798854	7.5	1.825745	15	1.849259
2-Chlorophenol-d4	0.3	1.244802	0.75	1.266216	1.5	1.43093	3.75	1.434268	7.5	1.436906	15	1.447931
1,2-Dichlorobenzene-d4	0.2	0.8803341	0.5	0.8720824	1	1.026267	2.5	1.000234	5	1.00558	10	1.016151
Nitrobenzene-d5	0.2	0.426305	0.5	0.4529385	1	0.4544389	2.5	0.4599618	5	0.4674622	10	0.4653675
2-Fluorobiphenyl	0.2	1.57529	0.5	1.581192	1	1.571831	2.5	1.566911	5	1.558354	10	1.584487
2,4,6-Tribromophenol	0.3	0.1091973	0.75	0.1195035	1.5	0.1300426	3.75	0.1460022	7.5	0.1466165	15	0.158924
p-Terphenyl-d14	0.2	1.37092	0.5	1.339393	1	1.370088	2.5	1.339808	5	1.352528	10	1.364215

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00065	Instrument:	NT17
Calibration Date:	05/20/2023	Column (1):	ZB-5MS

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Phenol	20	1.912059										
bis(2-chloroethyl) ether	20	1.274754										
2-Chlorophenol	20	1.504806										
1,3-Dichlorobenzene	20	1.560279										
1,4-Dichlorobenzene	20	1.506931										
1,2-Dichlorobenzene	20	1.508603										
Benzyl Alcohol	20	0.9090791										
2,2'-Oxybis(1-chloropropane)	20	0.4193386										
2-Methylphenol	20	1.383045										
Hexachloroethane	20	0.6550718										
N-Nitroso-di-n-Propylamine	20	1.056236										
4-Methylphenol	20	1.454682										
Nitrobenzene	20	0.4300984										
Isophorone	20	0.6357134										
2-Nitrophenol	20	0.230936										
2,4-Dimethylphenol	40	0.3946827										
Bis(2-Chloroethoxy)methane	20	0.3670318										
2,4-Dichlorophenol	40	0.3195233										
1,2,4-Trichlorobenzene	20	0.4032811										
Naphthalene	20	1.077739										
Benzoic acid	80	0.276247										
4-Chloroaniline	40	0.4114227										
Hexachlorobutadiene	20	0.1858351										
4-Chloro-3-Methylphenol	40	0.3685457										
2-Methylnaphthalene	20	0.8036622										
Hexachlorocyclopentadiene	40	0.3793577										
2,4,6-Trichlorophenol	40	0.4634198										
2,4,5-Trichlorophenol	40	0.4897727										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00065	Instrument:	NT17
Calibration Date:	05/20/2023	Column (1):	ZB-5MS

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2-Chloronaphthalene	20	1.275899										
2-Nitroaniline	40	0.4378235										
Acenaphthylene	20	1.999852										
Dimethylphthalate	20	1.322869										
2,6-Dinitrotoluene	40	0.3416608										
Acenaphthene	20	1.277702										
3-Nitroaniline	40	0.3490092										
2,4-Dinitrophenol	80	0.2351858										
Dibenzofuran	20	1.805194										
4-Nitrophenol	40	0.198296										
2,4-Dinitrotoluene	40	0.4517129										
Fluorene	20	1.773748										
4-Chlorophenylphenyl ether	20	0.8411589										
Diethyl phthalate	20	1.492502										
4-Nitroaniline	40	0.3167772										
4,6-Dinitro-2-methylphenol	80	0.1625065										
N-Nitrosodiphenylamine	20	0.5728148										
4-Bromophenyl phenyl ether	20	0.2191967										
Hexachlorobenzene	20	0.2163736										
Pentachlorophenol	40	0.1510293										
Phenanthrene	20	1.194775										
Anthracene	20	1.154318										
Carbazole	20	0.9554842										
Di-n-Butylphthalate	20	1.371066										
Fluoranthene	20	1.832218										
Pyrene	20	1.812931										
Butylbenzylphthalate	20	0.8213087										
Benzo(a)anthracene	20	1.441631										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00065	Instrument:	NT17
Calibration Date:	05/20/2023	Column (1):	ZB-5MS

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
3,3'-Dichlorobenzidine	60	0.4699082										
Chrysene	20	1.359461										
bis(2-Ethylhexyl)phthalate	20	0.5674596										
Di-n-Octylphthalate	20	0.9490266										
Benzofluoranthenes, Total	40	1.513527										
Benzo(a)pyrene	20	1.321834										
Indeno(1,2,3-cd)pyrene	20	1.601363										
Dibenzo(a,h)anthracene	20	1.361357										
Benzo(g,h,i)perylene	20	1.322862										
1-Methylnaphthalene	20	0.7429514										
2-Fluorophenol	30	1.357037										
Phenol-d5	30	1.804164										
2-Chlorophenol-d4	30	1.454858										
1,2-Dichlorobenzene-d4	20	1.028424										
Nitrobenzene-d5	20	0.4602463										
2-Fluorobiphenyl	20	1.592623										
2,4,6-Tribromophenol	30	0.1798038										
p-Terphenyl-d14	20	1.301713										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00065	Instrument:	NT17
Calibration Date:	05/20/2023	Column (1):	ZB-5MS

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Phenol	1.835385	9.8			RSD (15)	
bis(2-chloroethyl) ether	1.337987	5.1			RSD (15)	
2-Chlorophenol	1.532699	5.3			RSD (15)	
1,3-Dichlorobenzene	1.551195	3.5			RSD (15)	
1,4-Dichlorobenzene	1.547066	8.3			RSD (15)	
1,2-Dichlorobenzene	1.454321	5.6			RSD (15)	
Benzyl Alcohol	0.8545202	11.1			RSD (15)	
2,2'-Oxybis(1-chloropropane)	0.4099195	6.0			RSD (15)	
2-Methylphenol	1.348893	9.7			RSD (15)	
Hexachloroethane	0.6188571	6.6			RSD (15)	
N-Nitroso-di-n-Propylamine	1.032018	7.1			RSD (15)	
4-Methylphenol	1.373441	10.0			RSD (15)	
Nitrobenzene	0.4343371	3.0			RSD (15)	
Isophorone	0.5945569	9.0			RSD (15)	
2-Nitrophenol	0.2092939	13.3			RSD (15)	
2,4-Dimethylphenol	0.4063609	1.7			RSD (15)	
Bis(2-Chloroethoxy)methane	0.3643905	1.8			RSD (15)	
2,4-Dichlorophenol	0.3265369	4.4			RSD (15)	
1,2,4-Trichlorobenzene	0.3546444	6.5			RSD (15)	
Naphthalene	1.099994	1.2			RSD (15)	
Benzoic acid	0.208343	37.5	0.9973		LCOD (0.99)	
4-Chloroaniline	0.4335951	4.8			RSD (15)	
Hexachlorobutadiene	0.1756752	3.0			RSD (15)	
4-Chloro-3-Methylphenol	0.3515982	5.7			RSD (15)	
2-Methylnaphthalene	0.7875944	2.7			RSD (15)	
Hexachlorocyclopentadiene	0.2851479	26.8	0.9962		LCOD (0.99)	
2,4,6-Trichlorophenol	0.4185098	8.1			RSD (15)	
2,4,5-Trichlorophenol	0.4430396	7.3			RSD (15)	
2-Chloronaphthalene	1.278386	1.0			RSD (15)	
2-Nitroaniline	0.4329542	4.3			RSD (15)	
Acenaphthylene	2.030106	1.4			RSD (15)	

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00065	Instrument:	NT17
Calibration Date:	05/20/2023	Column (1):	ZB-5MS

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Dimethylphthalate	1.3763	2.6			RSD (15)	
2,6-Dinitrotoluene	0.3222248	5.3			RSD (15)	
Acenaphthene	1.269018	1.2			RSD (15)	
3-Nitroaniline	0.2984432	12.4			RSD (15)	
2,4-Dinitrophenol	0.1541125	52.0		0.9967	QCOD (0.99)	
Dibenzofuran	1.771191	1.2			RSD (15)	
4-Nitrophenol	0.1664767	25.9	0.9996		LCOD (0.99)	
2,4-Dinitrotoluene	0.4218034	7.9			RSD (15)	
Fluorene	1.683901	9.9			RSD (15)	
4-Chlorophenylphenyl ether	0.7741612	8.8			RSD (15)	
Diethyl phthalate	1.34221	5.2			RSD (15)	
4-Nitroaniline	0.2824863	10.1			RSD (15)	
4,6-Dinitro-2-methylphenol	0.1119544	40.4	0.9959		LCOD (0.99)	
N-Nitrosodiphenylamine	0.5603251	3.7			RSD (15)	
4-Bromophenyl phenyl ether	0.1963243	6.7			RSD (15)	
Hexachlorobenzene	0.2000477	4.5			RSD (15)	
Pentachlorophenol	9.365712E-02	46.0		0.9982	QCOD (0.99)	
Phenanthrene	1.167141	2.4			RSD (15)	
Anthracene	1.095762	5.4			RSD (15)	
Carbazole	0.8459395	17.5		0.9984	QCOD (0.99)	
Di-n-Butylphthalate	1.323139	6.4			RSD (15)	
Fluoranthene	1.871085	3.5			RSD (15)	
Pyrene	1.896773	2.3			RSD (15)	
Butylbenzylphthalate	0.8489339	3.9			RSD (15)	
Benzo(a)anthracene	1.472921	1.5			RSD (15)	
3,3'-Dichlorobenzidine	0.3736402	20.5		0.9987	QCOD (0.99)	
Chrysene	1.385997	1.6			RSD (15)	
bis(2-Ethylhexyl)phthalate	0.5787277	2.9			RSD (15)	
Di-n-Octylphthalate	1.013912	4.0			RSD (15)	
Benzofluoranthenes, Total	1.423615	3.4			RSD (15)	
Benzo(a)pyrene	1.249283	3.9			RSD (15)	

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00065	Instrument:	NT17
Calibration Date:	05/20/2023	Column (1):	ZB-5MS

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Indeno(1,2,3-cd)pyrene	1.449069	5.0			RSD (15)	
Dibenzo(a,h)anthracene	1.216171	5.7			RSD (15)	
Benzo(g,h,i)perylene	1.196051	5.2			RSD (15)	
1-Methylnaphthalene	0.7306547	1.5			RSD (15)	
2-Fluorophenol	1.309393	11.1			RSD (15)	
Phenol-d5	1.732816	8.6			RSD (15)	
2-Chlorophenol-d4	1.387987	6.6			RSD (15)	
1,2-Dichlorobenzene-d4	0.9755818	7.0			RSD (15)	
Nitrobenzene-d5	0.4552457	3.0			RSD (15)	
2-Fluorobiphenyl	1.575813	0.7			RSD (15)	
2,4,6-Tribromophenol	0.1414414	17.0	0.9934		LCOD (0.99)	
p-Terphenyl-d14	1.348381	1.8			RSD (15)	

Printed: 5/20/2023 1:31:24PM

ANALYSIS SEQUENCE

SLE0338

Instrument ID: NT17
Calibration ID: GE00065
MS EM Level: 1450 EV

GCMS Description: Agilent 7890B/5977B
GCMS Column ID: L004289

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0338-TUN1	MS Tune	QC		1	L005045		05/16/2023 18:14	NT1705162301.D	VTS	
SLE0338-CAL7	ABN 20	QC		2	K011111	K010831	05/16/2023 18:52	NT1705162302.D	JGR	
SLE0338-CAL6	ABN 10	QC		3	K011110	K010831	05/16/2023 19:29	NT1705162303.D	JGR	
SLE0338-CAL5	ABN 5	QC		4	K011109	K010831	05/16/2023 20:07	NT1705162304.D	JGR	
SLE0338-CAL4	ABN 2.5	QC		5	K011108	K010831	05/16/2023 20:44	NT1705162305.D	JGR	
SLE0338-CAL3	ABN 1.0	QC		6	K011107	K010831	05/16/2023 21:22	NT1705162306.D	JGR	
SLE0338-CAL2	ABN 0.5	QC		7	K011106	K010831	05/16/2023 21:59	NT1705162307.D	JGR	
SLE0338-CAL1	ABN 0.2	QC		8	K011105	K010831	05/16/2023 22:37	NT1705162308.D	JGR	
SLE0338-SCV1	SCV 5.0	QC		9	K010066	K010831	05/17/2023 00:29	NT1705162311.D	JGR	
SLE0338-ICB1	Initial Cal Blank	QC		10	K005156	K010831	05/17/2023 01:07	NT1705162312.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230516.b

	Time	Filename	LabID	ClientId	DF																			
1	1814	NT1705162301.D	SLE0338-TUN1		1	|NO ISTDS FOUND||																		
2	1852	NT1705162302.D	SLE0338-CAL7		1	| 9.38	262646	||11.84	972245	||15.44	531394	||18.47	858760	||23.47	584767	||26.16	454990	||24.47	1150423	|				
3	1929	NT1705162303.D	SLE0338-CAL6		1	| 9.37	285800	||11.84	1067038	||15.44	581019	||18.47	929294	||23.46	582943	||26.16	481255	||24.47	1171304	|				
4	2007	NT1705162304.D	SLE0338-CAL5		1	| 9.37	287078	||11.84	1056758	||15.44	587510	||18.46	933575	||23.46	576570	||26.15	491359	||24.47	1181651	|				
5	2044	NT1705162305.D	SLE0338-CAL4		1	| 9.37	294275	||11.84	1079321	||15.44	588382	||18.46	983826	||23.46	618048	||26.15	536896	||24.47	1230644	|				
6	2122	NT1705162306.D	SLE0338-CAL3		1	| 9.37	291199	||11.84	1069618	||15.44	576693	||18.46	946973	||23.46	570480	||26.15	514255	||24.47	1138779	|				
7	2159	NT1705162307.D	SLE0338-CAL2		1	| 9.37	324107	||11.84	1038534	||15.44	548179	||18.46	888076	||23.45	524160	||26.15	482063	||24.45	1033662	|				
8	2237	NT1705162308.D	SLE0338-CAL1		1	| 9.37	341484	||11.83	1094850	||15.43	579868	||18.46	948879	||23.45	564132	||26.15	504570	||24.47	1101082	|				
9	2314	NT1705162309.D	SIM0.1		1	| 9.37	321301	||11.83	1156521	||15.44	625574	||18.46	1065678	||23.45	676035	||26.15	620220	||24.45	1323254	|				
10	2351	NT1705162310.D	SIM 0.5		1	| 9.37	332506	||11.83	1064302	||15.43	556553	||18.46	907034	||23.45	531815	||26.15	492679	||24.45	1051214	|				
11	0029	NT1705162311.D	SLE0338-SCV1		1	| 9.37	265705	||11.84	965231	||15.44	512787	||18.46	850147	||23.46	511511	||26.15	456008	||24.47	1044471	|				
12	0107	NT1705162312.D	SLE0338-ICB1		1	| 9.37	287620	||11.83	1041050	||15.44	539097	||18.46	886060	||23.45	518615	||26.15	487385	||24.45	1011857	|				

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230516.b

Instrument: nt17.i Date: 16-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1814	NT1705162301.D	SLE0338-TUN1	1	NO MANUAL INTEGRATION
1852	NT1705162302.D	SLE0338-CAL7	1	Benzoic acid, 2-Fluorophenol,
1929	NT1705162303.D	SLE0338-CAL6	1	Benzoic acid,
2007	NT1705162304.D	SLE0338-CAL5	1	NO MANUAL INTEGRATION
2044	NT1705162305.D	SLE0338-CAL4	1	Benzoic acid,
2122	NT1705162306.D	SLE0338-CAL3	1	NO MANUAL INTEGRATION
2159	NT1705162307.D	SLE0338-CAL2	1	NO MANUAL INTEGRATION
2237	NT1705162308.D	SLE0338-CAL1	1	Benzoic acid,
2314	NT1705162309.D	SIM0.1	1	Benzo(k)fluoranthene,
2351	NT1705162310.D	SIM 0.5	1	NO MANUAL INTEGRATION
0029	NT1705162311.D	SLE0338-SCV1	1	NO MANUAL INTEGRATION
0107	NT1705162312.D	SLE0338-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 20-May-2023 13:32

NT1705162301.D	Data Locked	van, 20-May-2023 13:32
NT1705162302.D	Data Locked	van, 20-May-2023 13:32
NT1705162303.D	Data Locked	van, 20-May-2023 13:32
NT1705162304.D	Data Locked	van, 20-May-2023 13:32
NT1705162305.D	Data Locked	van, 20-May-2023 13:32
NT1705162306.D	Data Locked	van, 20-May-2023 13:32
NT1705162307.D	Data Locked	van, 20-May-2023 13:32
NT1705162308.D	Data Locked	van, 20-May-2023 13:32
NT1705162309.D	Data Locked	van, 20-May-2023 13:32
NT1705162310.D	Data Locked	van, 20-May-2023 13:32
NT1705162311.D	Data Locked	van, 20-May-2023 13:32
NT1705162312.D	Data Locked	van, 20-May-2023 13:32

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Calibration File Names:
Level 1: \\target\share\chem3\nt17.i\20230516.b\NT1705162308.D
Level 2: \\target\share\chem3\nt17.i\20230516.b\NT1705162307.D
Level 3: \\target\share\chem3\nt17.i\20230516.b\NT1705162306.D
Level 4: \\target\share\chem3\nt17.i\20230516.b\NT1705162305.D
Level 5: \\target\share\chem3\nt17.i\20230516.b\NT1705162304.D
Level 6: \\target\share\chem3\nt17.i\20230516.b\NT1705162303.D
Level 7: \\target\share\chem3\nt17.i\20230516.b\NT1705162302.D

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
120 2,3,4,6-Tetrachlorophenol	8430	21645	51169	146074	319360	688855						
	1360268						LINR	0.000e+000	0.50074		0.99583	
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
116 Dibutyl Phenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
115 Tributyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
114 Beta-Pinene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
113 Diphenyl Oxide	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
112 Biphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.48237 / 1.53148	1.56765	1.61750	1.64942	1.55052	1.56844	AVRG		1.56677		3.49977	
110 Tetrachloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
106 Guaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
105 1-methylnaphthalene	0.71502 / 0.74295	0.72119	0.72176	0.73500	0.73848	0.74019	AVRG		0.73065		1.51528	
151 1,2,4,5-Tetrachlorobenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
152 Benzo(e)pyrene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
153 Chlorpyrifos	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
154 Diazinon	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
155 Kelthane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
3 Phenol	1.51533	1.64205	1.95122	1.94632	1.92509	1.95564						
	1.91206						AVRG		1.83539		9.79520	
4 Bis(2-Chloroethyl)ether	1.30472	1.29540	1.47804	1.36982	1.33191	1.31127						
	1.27475						AVRG		1.33799		5.13279	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20.0000 Level 7										
6 2-Chlorophenol	1.49946	1.50802	1.71740	1.49031	1.49818	1.51073					
	1.50481						AVRG		1.53270		5.33228
7 1,3-Dichlorobenzene	1.50356	1.46673	1.63884	1.56502	1.55661	1.56733					
	1.56028						AVRG		1.55119		3.49642
9 1,4-Dichlorobenzene	1.41236	1.63082	1.79891	1.49308	1.48869	1.49867					
	1.50693						AVRG		1.54707		8.29701
11 Benzyl alcohol	0.70112	0.73516	0.89418	0.93022	0.89595	0.91594					
	0.90908						AVRG		0.85452		11.05523
12 1,2-Dichlorobenzene	1.33974	1.33805	1.53163	1.47113	1.47615	1.51495					
	1.50860						AVRG		1.45432		5.61458
13 2-Methylphenol	1.15496	1.21278	1.39403	1.55200	1.35876	1.38667					
	1.38304						AVRG		1.34889		9.67155
14 2,2'-oxybis(1-Chloropropane)	0.38280	0.36877	0.43591	0.41529	0.42635	0.42099					
	0.41934						AVRG		0.40992		5.98747

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20.0000 Level 7										
15 4-Methylphenol	1.16784	1.18265	1.40987	1.47251	1.45130	1.47523					
	1.45468						AVRG		1.37344		9.98491
16 N-Nitroso-di-n-propylamine	0.92256	0.93253	1.05603	1.09384	1.07768	1.08524					
	1.05624						AVRG		1.03202		7.05222
17 Hexachloroethane	0.55329	0.56794	0.63958	0.63278	0.63782	0.64552					
	0.65507						AVRG		0.61886		6.56284
19 Nitrobenzene	0.40603	0.44124	0.44221	0.44160	0.43954	0.43964					
	0.43010						AVRG		0.43434		3.02676
20 Isophorone	0.52712	0.63608	0.55375	0.56509	0.57113	0.67301					
	0.63571						AVRG		0.59456		9.00612
21 2-Nitrophenol	0.15984	0.18641	0.24183	0.21035	0.21488	0.22081					
	0.23094						AVRG		0.20929		13.31789
22 2,4-Dimethylphenol	+++++	0.41101	0.41499	0.40526	0.40807	0.40416					
	0.39468						AVRG		0.40636		1.70998

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
23 Bis(2-Chloroethoxy)methane	0.36471	0.35093	0.37076	0.36226	0.36862	0.36642					
	0.36703						AVRG		0.36439		1.79095
24 Benzoic acid	+++++	41266	160098	600987	1331637	2880071					
	5371595						LINR	0.000e+000	0.27335		0.99728
25 2,4-Dichlorophenol	+++++	0.34236	0.34615	0.31301	0.31351	0.32466					
	0.31952						AVRG		0.32654		4.41744
26 1,2,4-Trichlorobenzene	0.36032	0.35597	0.34462	0.34029	0.33967	0.33835					
	0.40328						AVRG		0.35464		6.50747
28 Naphthalene	1.11122	1.11941	1.10274	1.10174	1.09594	1.09117					
	1.07774						AVRG		1.09999		1.23270
29 4-Chloroaniline	+++++	0.42583	0.43177	0.45904	0.45824	0.41526					
	0.41142						AVRG		0.43360		4.77829
30 Hexachlorobutadiene	0.17065	0.17267	0.17162	0.17489	0.17569	0.17837					
	0.18584						AVRG		0.17568		2.95578

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
	20.0000 Level 7										
31 4-Chloro-3-methylphenol	+++++	0.31637	0.33974	0.35632	0.36087	0.36774					
	0.36855						AVRG		0.35160		5.74168
32 2-Methylnaphthalene	0.76979	0.75055	0.77904	0.79937	0.80525	0.80550					
	0.80366						AVRG		0.78759		2.73880
33 Hexachlorocyclopentadiene	+++++	29375	71798	226655	466260	1037416					
	2015884						LINR	0.000e+000	0.37195		0.99573
34 2,4,6-Trichlorophenol	+++++	0.37432	0.38918	0.41875	0.41731	0.44808					
	0.46342						AVRG		0.41851		8.07145
35 2,4,5-Trichlorophenol	+++++	0.39661	0.42791	0.43461	0.44156	0.46778					
	0.48977						AVRG		0.44304		7.31668
37 2-Chloronaphthalene	1.29223	1.26801	1.27117	1.28054	1.26329	1.29757					
	1.27590						AVRG		1.27839		0.98828
38 2-Nitroaniline	+++++	0.39834	0.42728	0.44519	0.43939	0.44970					
	0.43782						AVRG		0.43295		4.29050

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
39 Dimethylphthalate	1.38107	1.40535	1.41990	1.40454	1.35632	1.34405						
	1.32287						AVRG		1.37630		2.62967	
40 Acenaphthylene	2.03608	2.05901	2.07082	2.03020	2.00314	2.01163						
	1.99985						AVRG		2.03011		1.35084	
41 2,6-Dinitrotoluene	+++++	0.29817	0.30562	0.32613	0.32507	0.33670						
	0.34166						AVRG		0.32222		5.31164	
43 3-Nitroaniline	+++++	0.27872	0.26979	0.25404	0.30892	0.33018						
	0.34901						AVRG		0.29844		12.40773	
44 Acenaphthene	1.24508	1.26367	1.27027	1.27398	1.25747	1.29495						
	1.27770						AVRG		1.26902		1.24978	
45 2,4-Dinitrophenol	+++++	7725	52044	238371	556011	1276676						
	2499526						QUAD	0.000e+000	5.15029	-0.19402	0.99884	<-
46 Dibenzofuran	1.77706	1.75678	1.75382	1.74986	1.75933	1.79629						
	1.80519						AVRG		1.77119		1.24669	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20.0000 Level 7										
47 4-Nitrophenol	+++++	17887	47321	142217	281715	581610					
	1053733						LINR	0.000e+000	0.19823		0.99965
48 2,4-Dinitrotoluene	+++++	0.36001	0.41067	0.42929	0.43426	0.44487					
	0.45171						AVRG		0.42180		7.91993
49 Fluorene	1.39628	1.78943	1.79935	1.48957	1.78178	1.75714					
	1.77375						AVRG		1.68390		9.93624
50 Diethylphthalate	1.30278	1.30198	1.34703	1.34466	1.30386	1.30266					
	1.49250						AVRG		1.34221		5.16401
51 4-Chlorophenyl-phenylether	0.78763	0.78443	0.78278	0.62869	0.77979	0.81465					
	0.84116						AVRG		0.77416		8.77394
52 4-Nitroaniline	+++++	0.23624	0.27453	0.27530	0.28440	0.30766					
	0.31678						AVRG		0.28249		10.09524
53 4,6-Dinitro-2-methylphenol	+++++	30618	89315	302717	645152	1437110					
	2791081						LINR	0.000e+000	0.15963		0.99551

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
54 N-Nitrosodiphenylamine	0.56260	0.57769	0.57991	0.53974	0.52509	0.56443					
	0.57281						AVRG		0.56033		3.66338
56 4-Bromophenyl-phenylether	0.18413	0.18954	0.18616	0.18845	0.19783	0.20896					
	0.21920						AVRG		0.19632		6.72256
57 Hexachlorobenzene	0.19914	0.19749	0.18982	0.19213	0.19835	0.20704					
	0.21637						AVRG		0.20005		4.53122
58 Pentachlorophenol	+++++	12002	32667	119709	273613	617590					
	1296979						QUAD	0.000e+000	8.63071	-1.34063	0.99924
60 Phenanthrene	1.14516	1.16863	1.15003	1.12979	1.17284	1.20875					
	1.19477						AVRG		1.16714		2.39814
61 Anthracene	1.00498	1.04469	1.06765	1.10793	1.12977	1.16101					
	1.15432						AVRG		1.09576		5.35155
62 Carbazole	45854	109506	219389	425810	728881	1787411					
	4102658						QUAD	0.000e+000	1.51022	-0.09723	0.99848

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20.0000 Level 7										
63 Di-n-butylphthalate	1.18215	1.23965	1.30382	1.36691	1.40772	1.39066					
	1.37107						AVRG		1.32314		6.40902
64 Fluoranthene	1.75650	1.85437	1.87367	1.89340	1.94955	1.93789					
	1.83222						AVRG		1.87108		3.52109
65 Pyrene	1.86173	1.91969	1.92317	1.90314	1.92696	1.92979					
	1.81293						AVRG		1.89677		2.31029
67 Butylbenzylphthalate	0.79116	0.84032	0.87801	0.87220	0.87797	0.86157					
	0.82131						AVRG		0.84893		3.89615
68 Benzo(a)anthracene	1.50309	1.50163	1.47756	1.46165	1.45936	1.46553					
	1.44163						AVRG		1.47292		1.54337
70 3,3'-Dichlorobenzidine	37419	85571	154282	346015	587270	1474421					
	4121802						QUAD	0.000e+000	3.51872	-0.19750	0.99874
71 Chrysene	1.39248	1.42654	1.38577	1.37608	1.36895	1.39270					
	1.35946						AVRG		1.38600		1.56529

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
72 bis(2-Ethylhexyl)phthalate	0.54515	0.58631	0.58750	0.59011	0.59331	0.58126					
	0.56746						AVRG		0.57873		2.93997
73 Di-n-octylphthalate	1.07156	1.04461	1.03043	1.01328	1.00208	0.98640					
	0.94903						AVRG		1.01391		3.95471
74 Benzo(b)fluoranthene	1.67806	1.58426	1.59279	1.55259	1.48360	1.65816					
	1.55191						AVRG		1.58591		4.19018
75 Benzo(k)fluoranthene	1.44075	1.37079	1.41319	1.48869	1.57004	1.46139					
	1.74349						AVRG		1.49834		8.33302
187 Total Benzofluoranthenes	1.38883	1.37916	1.37816	1.42535	1.42864	1.45164					
	1.51353						AVRG		1.42361		3.41126
76 Benzo(a)pyrene	1.28906	1.22301	1.17691	1.21662	1.24453	1.27301					
	1.32183						AVRG		1.24928		3.92500
78 Indeno(1,2,3-cd)pyrene	1.41071	1.40811	1.38791	1.41410	1.45611	1.46518					
	1.60136						AVRG		1.44907		5.00930

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
79 Dibenzo(a,h)anthracene	1.16138	1.17834	1.17298	1.18819	1.21727	1.23368						
	1.36136						AVRG		1.21617		5.66377	
80 Benzo(g,h,i)perylene	1.16004	1.18039	1.14771	1.14247	1.20750	1.21139						
	1.32286						AVRG		1.19605		5.19871	
90 N-Nitrosodimethylamine	0.75734	0.78089	0.93590	0.94678	0.91987	0.91954						
	0.85362						AVRG		0.87342		8.86830	
91 Aniline	+++++	1.32671	1.49931	1.55787	1.60682	1.64294						
	1.59466						AVRG		1.53805		7.44122	
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
93 Benzidine	+++++	73568	119355	332205	535492	1662132						
	3987621						QUAD	0.000e+000	2.15780	-0.10234	0.99414	
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	20.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	*****	*****	*****	*****	*****	*****	*****	AVRG		0.000e+000		0.000e+000	<-
98 Retene	*****	*****	*****	*****	*****	*****	*****	AVRG		0.000e+000		0.000e+000	<-
99 Perylene	*****	*****	*****	*****	*****	*****	*****	AVRG		0.000e+000		0.000e+000	<-
100 3-beta-Coprostanol	*****	*****	*****	*****	*****	*****	*****	AVRG		0.000e+000		0.000e+000	<-
101 Cholesterol	*****	*****	*****	*****	*****	*****	*****	AVRG		0.000e+000		0.000e+000	<-
102 beta-Sitosterol	*****	*****	*****	*****	*****	*****	*****	AVRG		0.000e+000		0.000e+000	<-
103 Pyridine	1.28770	1.32196	1.47087	1.48489	1.44527	1.39185	1.29504	AVRG		1.38537		6.07970	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
188 2,6-Dichlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
189 N-Nitrosomethylethylamine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
$ 1 2-Fluorophenol	1.05532 / 1.35704	1.15001	1.37936	1.40233	1.42270	1.39900	AVRG		1.30939		11.09490	
$ 137 d8-1,4-Dioxane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
$ 2 Phenol-d5	1.47712 / 1.80416	1.56294	1.81163	1.79885	1.82574	1.84926	AVRG		1.73282		8.56278	
$ 5 2-Chlorophenol-d4	1.24480 / 1.45486	1.26622	1.43093	1.43427	1.43691	1.44793	AVRG		1.38799		6.56208	
$ 10 1,2-Dichlorobenzene-d4	0.88033 / 1.02842	0.87208	1.02627	1.00023	1.00558	1.01615	AVRG		0.97558		7.03958	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
$ 18 Nitrobenzene-d5	0.42630	0.45294	0.45444	0.45996	0.46746	0.46537						
	0.46025						AVRG		0.45525		3.03112	
$ 36 2-Fluorobiphenyl	1.57529	1.58119	1.57183	1.56691	1.55835	1.58449						
	1.59262						AVRG		1.57581		0.72674	
$ 55 2,4,6-Tribromophenol	4749	12283	28123	80536	161510	346267						
	716600						LINR	0.000e+000	0.17448		0.99340	
$ 66 Terphenyl-d14	1.37092	1.33939	1.37009	1.33981	1.35253	1.36422						
	1.30171						AVRG		1.34838		1.81140	
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 09-MAY-2023 11:13
End Cal Date : 16-MAY-2023 22:37
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Last Edit : 18-May-2023 07:42 jrains

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Batch File: \\target\share\chem3\nt17.i\20230516.b
Inst ID: nt17.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	NT1705162302	NT1705162303	NT1705162304	NT1705162305	NT1705162306	NT1705162307	NT1705162308
INJ.DATE:	16-MAY-2023	16-MAY-2023	16-MAY-2023	16-MAY-2023	16-MAY-2023	16-MAY-2023	16-MAY-2023
INJ.TIME:	18:52	19:29	20:07	20:44	21:22	21:59	22:37

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	7.161	7.161	7.148	7.148	7.161	7.161	7.161	7.161	4.161-10.161	7.157	0.006
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.921	5.921-11.921	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.908	14.908-20.908	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.871	17.871-23.871	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.829	17.829-23.829	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.506	21.506-27.506	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.196	16.196-22.196	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.572	18.572-24.572	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.736	5.736-11.736	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Batch File: \\target\share\chem3\nt17.i\20230516.b
Inst ID: nt17.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.672	13.672-19.672	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.466	24.466	24.466	24.466	24.466	24.453	24.466	24.466	21.466-27.466	24.464	0.005
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.539	13.539-19.539	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.260	9.260-15.260	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Batch File: \\target\share\chem3\nt17.i\20230516.b
Inst ID: nt17.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.381	8.381-14.381	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	16.166	16.166	16.166	16.153	16.153	16.153	16.153	16.153	13.153-19.153	16.158	0.007
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.541	14.541-20.541	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.049	14.049-20.049	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.526	12.526-18.526	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	16.853	16.853	16.841	16.841	16.841	16.841	16.841	16.841	13.841-19.841	16.844	0.006
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.874	14.874-20.874	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.070	12.070-18.070	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.232	12.232-18.232	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.374	13.374-19.374	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.739	10.739-16.739	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.160	11.160-17.160	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.160	11.160-17.160	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.737	8.737-14.737	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Batch File: \\target\share\chem3\nt17.i\20230516.b
Inst ID: nt17.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
		+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	6.750-12.750	+++++	+++++
106	Guaiacol	13.501	13.488	13.488	13.488	13.488	13.488	13.488	13.488	10.488-16.488	13.490	0.005
105	1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
151	1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
152	Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	28.456	25.456-31.456	+++++	+++++
153	Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.930	23.930-29.930	+++++	+++++
154	Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.054	26.054-32.054	+++++	+++++
155	Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.586	23.586-29.586	+++++	+++++
156	Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.276	24.276-30.276	+++++	+++++
157	Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.808	21.808-27.808	+++++	+++++
158	Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.109	23.109-29.109	+++++	+++++
159	4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.115	18.115-24.115	+++++	+++++
160	Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
161	1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
162	1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
163	1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
164	1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
165	1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
166	Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
167	2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	5.715-11.715	8.721	0.010
$ 2	Phenol-d5	8.741	8.728	8.716	8.715	8.715	8.716	8.715	8.741	5.741-11.741	8.746	0.010
3	Phenol	8.766	8.754	8.741	8.741	8.741	8.741	8.741	8.907	5.906-11.906	8.910	0.006
4	Bis(2-Chloroethyl)ethe	8.919	8.919	8.907	8.907	8.906	8.907	8.906	8.906	6.008-12.008	9.010	0.005
$ 5	2-Chlorophenol-d4	9.021	9.008	9.008	9.008	9.008	9.008	9.008				

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Batch File: \\target\share\chem3\nt17.i\20230516.b
Inst ID: nt17.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	9.047	9.047	9.034	9.034	9.034	9.034	9.034	9.034	6.034-12.034	9.038	0.006
	7 1,3-Dichlorobenzene	9.314	9.302	9.302	9.302	9.302	9.302	9.302	9.302	6.302-12.302	9.304	0.005
*	8 1,4-Dichlorobenzene-d4	9.378	9.366	9.366	9.366	9.366	9.366	9.366	9.366	6.366-12.366	9.367	0.005
	9 1,4-Dichlorobenzene	9.404	9.404	9.404	9.391	9.391	9.391	9.391	9.391	6.391-12.391	9.397	0.007
$	10 1,2-Dichlorobenzene-d4	9.736	9.736	9.723	9.723	9.723	9.723	9.723	9.723	6.723-12.723	9.727	0.006
	11 Benzyl alcohol	9.647	9.634	9.634	9.634	9.634	9.634	9.634	9.634	6.634-12.634	9.636	0.005
	12 1,2-Dichlorobenzene	9.762	9.762	9.749	9.749	9.749	9.749	9.749	9.749	6.749-12.749	9.753	0.006
	13 2-Methylphenol	9.864	9.851	9.851	9.851	9.851	9.851	9.851	9.851	6.851-12.851	9.853	0.005
	14 2,2'-oxybis(1-Chloropr	9.928	9.928	9.928	9.928	9.928	9.915	9.915	9.915	6.915-12.915	9.924	0.006
	15 4-Methylphenol	10.132	10.119	10.119	10.107	10.107	10.107	10.119	10.119	7.119-13.119	10.116	0.010
	16 N-Nitroso-di-n-propyla	10.209	10.196	10.183	10.183	10.183	10.171	10.170	10.170	7.170-13.170	10.185	0.014
	17 Hexachloroethane	10.349	10.337	10.337	10.337	10.337	10.337	10.337	10.337	7.337-13.337	10.338	0.005
$	18 Nitrobenzene-d5	10.464	10.464	10.452	10.452	10.451	10.452	10.452	10.452	7.452-13.452	10.455	0.006
	19 Nitrobenzene	10.503	10.490	10.490	10.490	10.490	10.490	10.490	10.490	7.490-13.490	10.492	0.005
	20 Isophorone	10.975	10.950	10.937	10.924	10.924	10.924	10.924	10.924	7.924-13.924	10.937	0.020
	21 2-Nitrophenol	11.129	11.116	11.116	11.116	11.116	11.116	11.116	11.116	8.116-14.116	11.118	0.005
	22 2,4-Dimethylphenol	11.167	11.167	11.154	11.154	11.154	11.154	11.154	11.154	8.154-14.154	11.158	0.006
	23 Bis(2-Chloroethoxy)met	11.358	11.358	11.346	11.346	11.346	11.346	11.346	11.346	8.346-14.346	11.349	0.006
	24 Benzoic acid	11.550	11.473	11.397	11.346	11.294	11.269	11.333	11.333	8.333-14.333	11.380	0.101
	25 2,4-Dichlorophenol	11.575	11.575	11.563	11.563	11.563	11.563	11.563	11.563	8.563-14.563	11.566	0.006
	26 1,2,4-Trichlorobenzene	11.754	11.754	11.754	11.754	11.754	11.754	11.754	11.754	8.754-14.754	11.754	0.000
*	27 Naphthalene-d8	11.843	11.843	11.843	11.843	11.843	11.843	11.830	11.830	8.830-14.830	11.841	0.005
	28 Naphthalene	11.894	11.881	11.881	11.881	11.881	11.881	11.881	11.881	8.881-14.881	11.883	0.005
	29 4-Chloroaniline	12.021	12.009	12.009	11.996	11.996	11.996	11.996	11.996	8.996-14.996	12.003	0.010

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Batch File: \\target\share\chem3\nt17.i\20230516.b
Inst ID: nt17.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.238	12.238	12.238	12.225	12.225	12.225	12.225	12.225	9.225-15.225	12.231	0.007
	31 4-Chloro-3-methylpheno	12.965	12.952	12.952	12.952	12.952	12.952	12.952	12.952	9.952-15.952	12.954	0.005
	32 2-Methylnaphthalene	13.271	13.271	13.271	13.258	13.258	13.258	13.258	13.258	10.258-16.258	13.264	0.007
	33 Hexachlorocyclopentadi	13.730	13.730	13.730	13.730	13.730	13.730	13.730	13.730	10.730-16.730	13.730	0.000
	34 2,4,6-Trichlorophenol	13.896	13.883	13.883	13.883	13.883	13.883	13.883	13.883	10.883-16.883	13.885	0.005
	35 2,4,5-Trichlorophenol	13.972	13.960	13.960	13.960	13.960	13.960	13.960	13.960	10.960-16.960	13.962	0.005
$	36 2-Fluorobiphenyl	14.049	14.036	14.036	14.036	14.036	14.036	14.036	14.036	11.036-17.036	14.038	0.005
	37 2-Chloronaphthalene	14.266	14.266	14.253	14.253	14.253	14.253	14.253	14.253	11.253-17.253	14.257	0.006
	38 2-Nitroaniline	14.534	14.521	14.508	14.508	14.508	14.508	14.508	14.508	11.508-17.508	14.514	0.010
	39 Dimethylphthalate	14.955	14.942	14.929	14.929	14.929	14.929	14.929	14.929	11.929-17.929	14.935	0.010
	40 Acenaphthylene	15.133	15.133	15.120	15.120	15.120	15.120	15.120	15.120	12.120-18.120	15.124	0.006
	41 2,6-Dinitrotoluene	15.095	15.082	15.082	15.069	15.069	15.069	15.069	15.069	12.069-18.069	15.077	0.010
*	42 Acenaphthene-d10	15.439	15.439	15.439	15.439	15.439	15.439	15.426	15.426	12.426-18.426	15.437	0.005
	43 3-Nitroaniline	15.388	15.375	15.363	15.363	15.350	15.350	15.350	15.350	12.350-18.350	15.363	0.015
	44 Acenaphthene	15.516	15.503	15.503	15.503	15.503	15.503	15.503	15.503	12.503-18.503	15.505	0.005
	45 2,4-Dinitrophenol	15.605	15.592	15.579	15.567	15.567	15.567	+++++	15.567	12.567-18.567	15.579	0.016
	46 Dibenzofuran	15.847	15.834	15.834	15.822	15.821	15.822	15.821	15.821	12.821-18.821	15.829	0.010
	47 4-Nitrophenol	15.707	15.681	15.681	15.669	15.668	15.669	15.681	15.681	12.681-18.681	15.679	0.014
	48 2,4-Dinitrotoluene	15.911	15.898	15.885	15.872	15.872	15.873	15.872	15.872	12.872-18.872	15.883	0.015
	49 Fluorene	16.548	16.548	16.535	16.535	16.535	16.535	16.535	16.535	13.535-19.535	16.539	0.006
	50 Diethylphthalate	16.395	16.395	16.382	16.370	16.370	16.370	16.370	16.370	13.370-19.370	16.379	0.012
	51 4-Chlorophenyl-phenyle	16.522	16.523	16.523	16.523	16.510	16.510	16.510	16.510	13.510-19.510	16.517	0.007
	52 4-Nitroaniline	16.675	16.650	16.637	16.624	16.611	16.612	16.612	16.612	13.612-19.612	16.632	0.024
	53 4,6-Dinitro-2-methylph	16.752	16.739	16.726	16.713	16.713	16.713	16.713	16.713	13.713-19.713	16.724	0.015

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Batch File: \\target\share\chem3\nt17.i\20230516.b
Inst ID: nt17.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	16.790	16.777	16.764	16.764	16.764	16.764	16.764	16.764	13.764-19.764	16.770	0.010
$	55 2,4,6-Tribromophenol	17.082	17.082	17.070	17.070	17.070	17.070	17.070	17.070	14.070-20.070	17.073	0.006
	56 4-Bromophenyl-phenylet	17.528	17.528	17.515	17.515	17.515	17.515	17.515	17.515	14.515-20.515	17.519	0.006
	57 Hexachlorobenzene	17.846	17.846	17.846	17.834	17.833	17.834	17.834	17.834	14.834-20.834	17.839	0.007
	58 Pentachlorophenol	18.203	18.203	18.191	18.191	18.191	18.191	18.203	18.203	15.203-21.203	18.196	0.007
*	59 Phenanthrene-d10	18.471	18.471	18.459	18.459	18.458	18.459	18.458	18.458	15.458-21.458	18.462	0.006
	60 Phenanthrene	18.522	18.510	18.510	18.510	18.509	18.510	18.497	18.497	15.497-21.497	18.510	0.007
	61 Anthracene	18.611	18.612	18.599	18.599	18.599	18.599	18.599	18.599	15.599-21.599	18.602	0.006
	62 Carbazole	18.930	18.930	18.918	18.918	18.917	18.918	18.918	18.918	15.918-21.918	18.921	0.006
	63 Di-n-butylphthalate	19.695	19.695	19.695	19.683	19.683	19.683	19.683	19.683	16.683-22.683	19.688	0.007
	64 Fluoranthene	20.869	20.869	20.869	20.869	20.856	20.856	20.856	20.856	17.856-23.856	20.863	0.007
	65 Pyrene	21.302	21.289	21.289	21.289	21.289	21.277	21.277	21.277	18.277-24.277	21.288	0.009
$	66 Terphenyl-d14	21.557	21.557	21.557	21.557	21.557	21.557	21.557	21.557	18.557-24.557	21.557	0.000
	67 Butylbenzylphthalate	22.463	22.463	22.463	22.463	22.463	22.463	22.463	22.463	19.463-25.463	22.463	0.000
	68 Benzo(a)anthracene	23.432	23.433	23.420	23.420	23.420	23.420	23.420	23.420	20.420-26.420	23.423	0.006
*	69 Chrysene-d12	23.471	23.458	23.458	23.458	23.458	23.445	23.445	23.445	20.445-26.445	23.456	0.009
	70 3,3'-Dichlorobenzidine	23.394	23.381	23.369	23.369	23.369	23.369	23.369	23.369	20.369-26.369	23.374	0.010
	71 Chrysene	23.509	23.509	23.496	23.496	23.496	23.496	23.496	23.496	20.496-26.496	23.500	0.006
	72 bis(2-Ethylhexyl)phtha	23.471	23.471	23.471	23.471	23.471	23.471	23.471	23.471	20.471-26.471	23.471	0.000
	73 Di-n-octylphthalate	24.478	24.479	24.479	24.466	24.466	24.466	24.466	24.466	21.466-27.466	24.471	0.007
	74 Benzo(b)fluoranthene	25.371	25.359	25.346	25.346	25.346	25.346	25.346	25.346	22.346-28.346	25.351	0.010
	75 Benzo(k)fluoranthene	25.410	25.410	25.397	25.397	25.384	25.384	25.384	25.384	22.384-28.384	25.395	0.011
	187 Total Benzofluoranthen	25.410	25.359	25.397	25.346	25.346	25.346	25.384	25.384	22.384-28.384	25.370	0.027
	76 Benzo(a)pyrene	26.048	26.035	26.035	26.035	26.022	26.022	26.022	26.022	23.022-29.022	26.031	0.010

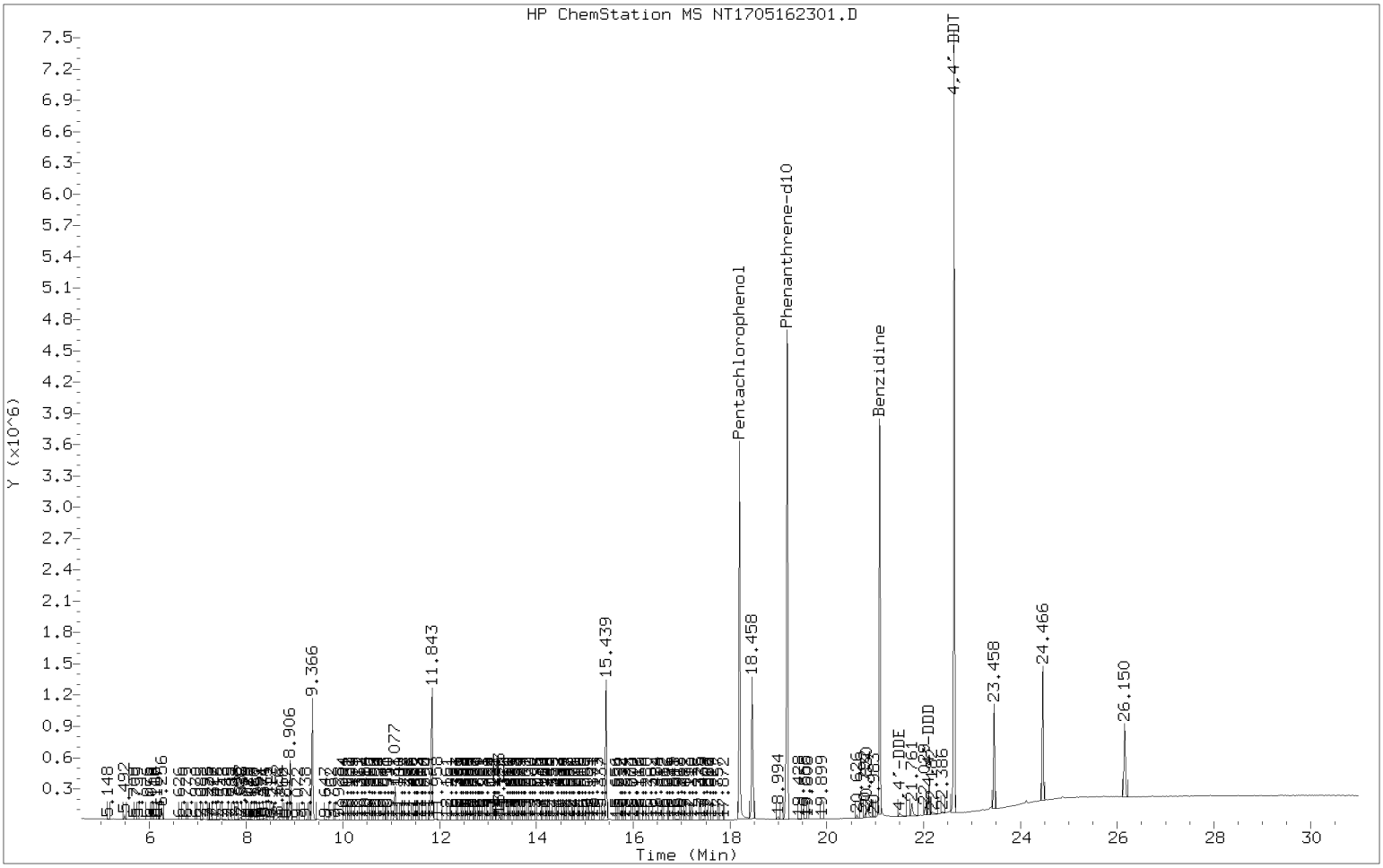
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

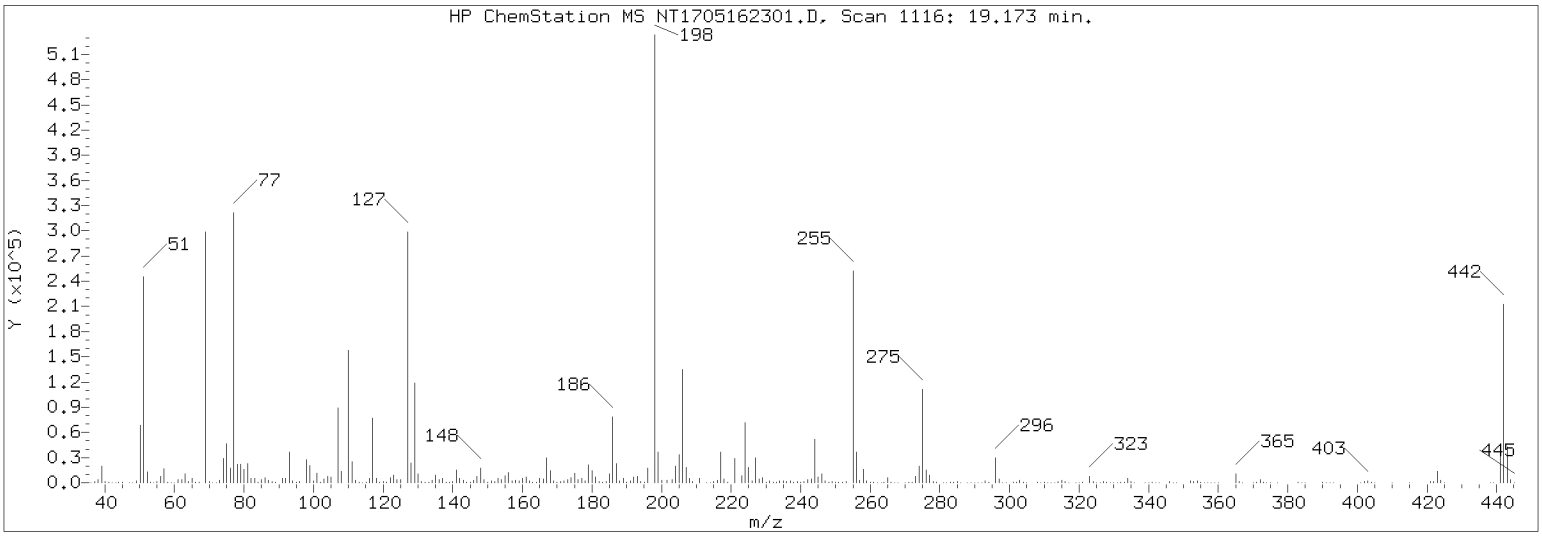
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Batch File: \\target\share\chem3\nt17.i\20230516.b
Inst ID: nt17.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.162	26.162	26.150	26.150	26.150	26.150	26.150	26.150	23.150-29.150	26.153	0.006
	78 Indeno(1,2,3-cd)pyrene	28.998	28.959	28.947	28.934	28.934	28.934	28.934	28.934	25.934-31.934	28.948	0.024
	79 Dibenzo(a,h)anthracene	28.998	28.972	28.959	28.947	28.934	28.934	28.947	28.947	25.947-31.947	28.956	0.023
	80 Benzo(g,h,i)perylene	29.828	29.790	29.777	29.765	29.765	29.752	29.752	29.752	26.752-32.752	29.776	0.027
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	5.097	5.084	5.072	5.072	5.072	5.072	5.072	5.072	2.072-8.072	5.077	0.010
	91 Aniline	8.843	8.830	8.830	8.830	8.830	8.830	8.830	8.830	5.830-11.830	8.832	0.005
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.098	21.098	21.085	21.085	21.085	21.085	21.085	21.085	18.085-24.085	21.089	0.006
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.248	15.248-21.248	+++++	+++++
	99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.094	23.094-29.094	+++++	+++++
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	5.097	5.110	5.097	5.097	5.110	5.110	5.123	5.123	2.123-8.123	5.106	0.010
	188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.874	8.874-14.874	+++++	+++++
	189 N-Nitrosomethylethylam	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.818	2.818-8.818	+++++	+++++

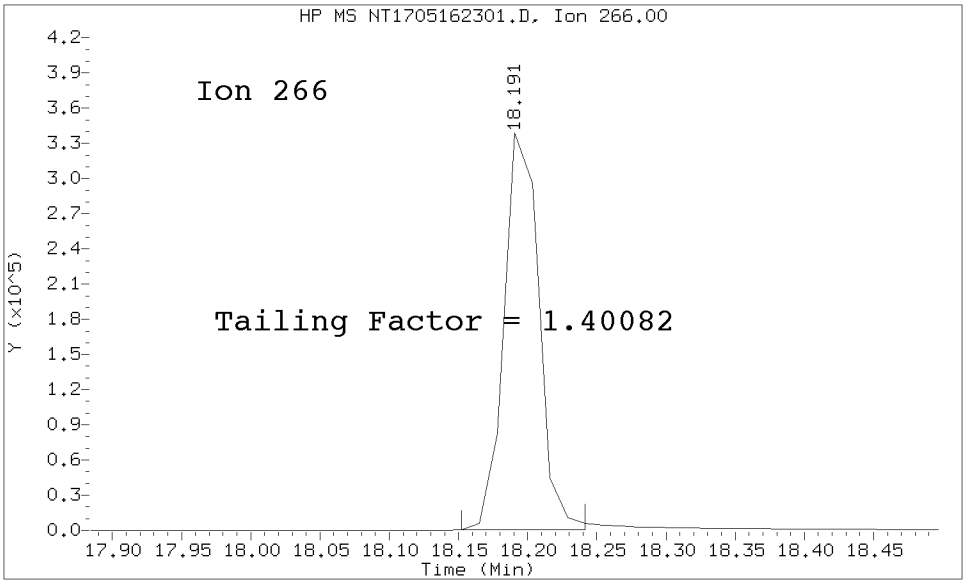
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230516.b/NT1705162301.D/NT1705162301.D
Method Used: \20230516.b\DFTPP8270E.m Inst: nt17
Injection Date: 16-MAY-2023 18:14 Operator: VTS
Sample Info: SLE0338-TUN1 SLE0338-TUN1
Report Date: 05/20/2023 13:10



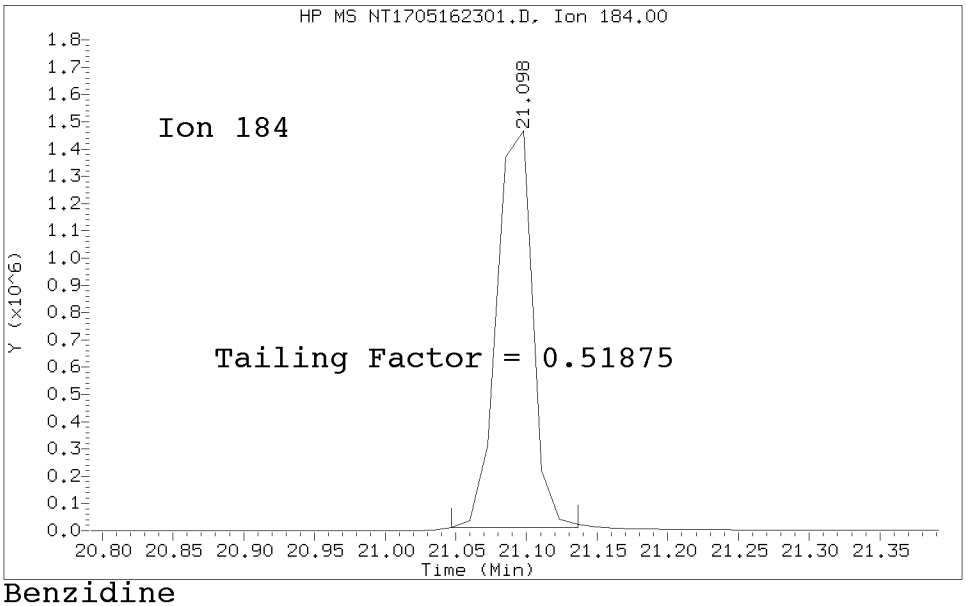


Datafile Analyzed: /20230516.b/NT1705162301.D/NT1705162301.D
Method Used: \20230516.b\DFTPP8270E.m\sw846ddt.m Inst: nt17
Injection Date: 16-MAY-2023 18:14 Operator: JGR
Sample Info: NT1705162301
Report Date: 05/20/2023 13:10



Pentachlorophenol
==========
Exp. RT = 18.191
Found RT = 18.191

Tail Factor = 1.401 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 21.098
Found RT = 21.098

Tail Factor = 0.519 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4008163	2.000	PASS
Benzidine	0.5187468	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1797024			N/A
4,4-DDE	5899	0.3	20.0	PASS
4,4-DDD	55596	3.0	20.0	PASS
4,4-DDD + DDE	61495	3.3	20.0	PASS

Tuning Sample, nt17.i/20230516.b/NT1705162301.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	55.71
70	Less than 2.00% of mass 69	0.28 (0.50)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.89
365	1.00 - 100.00% of mass 198	2.01
441	Less than 150.00% of mass 443	6.45 (80.67)
442	Less than 200.00% of mass 198	39.79
443	15.00 - 24.00% of mass 442	8.00 (20.10)

Data File: NT1705162301.D
Spectrum: HP ChemStation MS NT1705162301.D, Scan 1116: 19.173 min.
Location of Maximum: 198.00
Number of points: 331

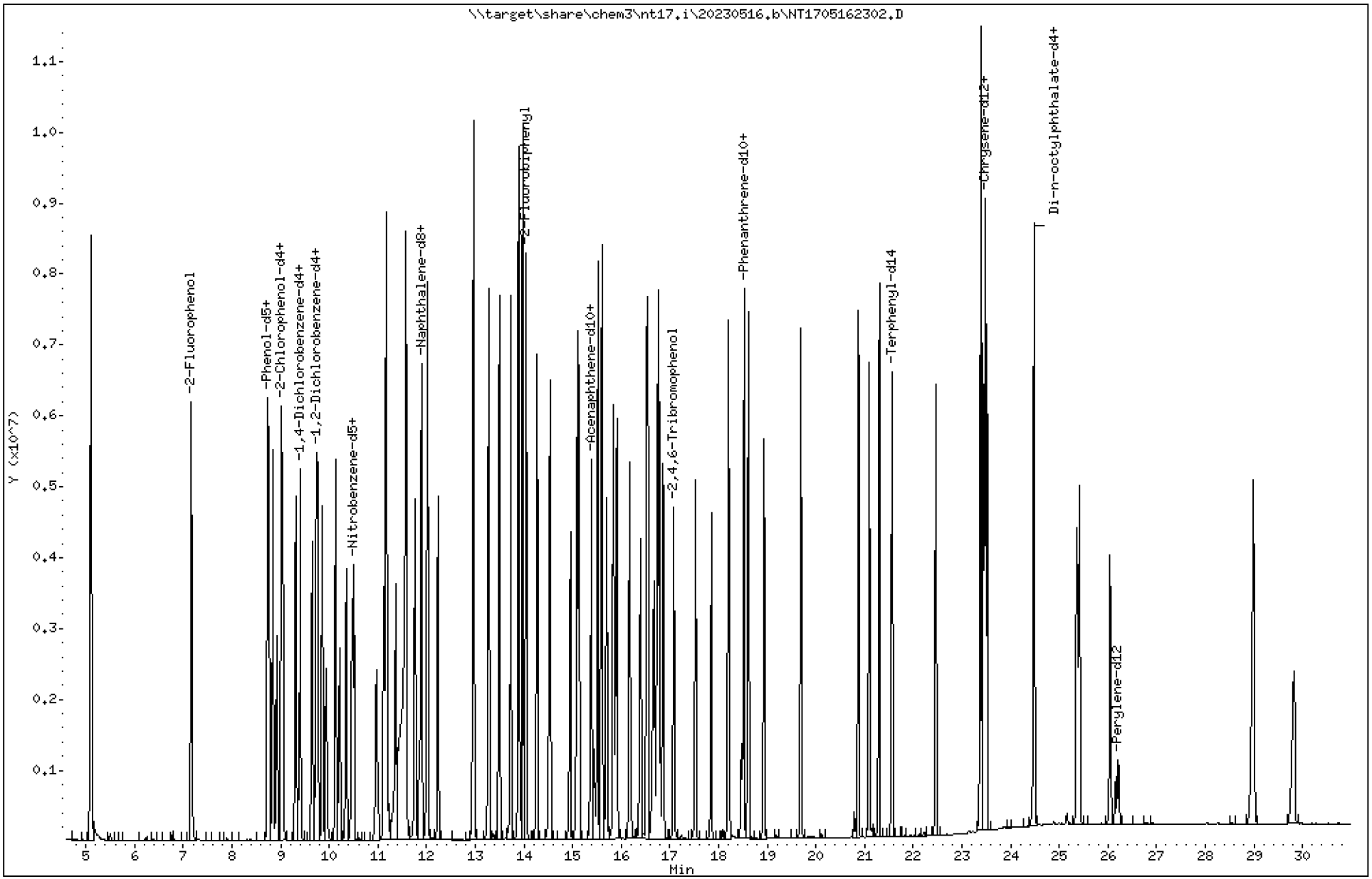
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	373	125.00	3764	212.90	378	304.10	870
37.10	1236	127.00	299008	214.00	187	304.90	93
38.10	3574	128.00	23768	215.00	1418	308.00	456
39.10	19776	129.00	119136	216.10	3082	309.00	262
40.10	1147	130.00	10361	217.00	36592	310.00	402
41.10	878	131.00	1814	218.00	4762	311.00	86
42.00	117	132.00	965	219.00	396	312.00	116
43.10	290	133.10	535	221.00	29232	313.00	219
44.00	563	134.00	3393	223.00	8299	314.00	1504
45.00	582	135.00	9407	224.00	71792	315.00	3072
47.00	97	136.00	3952	225.00	17928	316.00	1521
48.00	170	137.00	4988	226.10	2276	317.00	314
49.10	2254	138.00	1078	227.00	30000	319.10	73
50.10	68392	139.00	652	228.00	4583	320.10	106
51.10	245312	140.00	1657	229.00	6282	321.00	853
52.10	13090	141.00	15600	230.00	812	323.00	7992
53.10	590	142.00	5275	231.00	2667	324.10	1422
54.10	108	143.00	3193	232.00	430	325.00	180
55.00	1424	144.00	947	233.00	547	326.10	206
56.00	7762	145.00	844	234.00	1964	327.00	1582
57.00	17056	146.00	3027	235.00	2156	328.00	897
58.00	866	147.00	7959	236.00	1308	329.00	186
59.10	293	148.00	17552	237.00	2222	329.90	82
60.00	267	149.00	3605	237.90	416	331.10	85
61.00	3445	150.00	847	239.00	1164	332.00	681
62.10	3924	151.10	1978	240.00	951	333.00	829
63.10	10682	152.00	1250	241.00	1482	334.00	5269
64.00	1343	153.00	5043	242.00	3506	335.00	1251
65.10	5380	154.00	3616	243.10	4237	335.90	192
66.00	439	155.00	8310	244.00	51672	339.00	128
67.10	548	156.00	12288	245.00	7098	340.10	147
69.00	297216	157.00	2390	246.00	10908	341.00	859
70.00	1476	158.00	3197	247.00	2147	342.00	240
70.90	268	159.00	2124	248.10	405	343.10	69
72.10	180	160.00	4998	249.00	1791	346.00	1668
73.00	2846	161.00	6841	250.00	400	347.00	375
74.10	28912	162.00	1948	250.90	471	348.00	75
75.00	46408	163.00	565	252.00	547	352.00	2294
76.10	17424	164.00	677	253.00	1432	353.00	1625
77.10	321920	165.00	5602	255.00	252288	354.10	2225
78.10	22048	166.00	4612	256.00	36264	355.00	516
79.00	22016	167.00	29864	257.00	3077	356.00	63
80.00	16324	168.00	14362	258.00	15639	356.90	53
81.00	22800	169.00	2523	259.00	2592	358.00	71
82.00	5387	170.00	957	260.10	431	359.00	210
83.00	5076	171.00	1311	261.00	461	360.10	57
84.00	563	172.00	2519	262.00	108	365.00	10733
85.00	4136	173.00	3591	263.10	161	366.00	1640
86.00	6323	174.00	6157	264.00	692	366.90	121

87.00	3104	175.00	11592	265.00	6219	370.00	199
88.00	1154	176.00	3445	266.00	980	371.00	691
89.00	552	177.00	5417	267.00	143	372.00	3968
91.00	5210	178.00	1917	267.90	329	373.00	1018
92.00	5631	179.00	21584	270.00	364	374.00	88
93.00	36336	180.00	14393	271.00	614	375.00	64
94.00	2258	181.00	6949	272.00	778	377.00	178
95.10	602	182.00	1161	273.00	7503	382.90	939
96.00	1677	183.00	749	274.00	19672	384.00	273
98.00	27664	184.00	1652	275.00	111592	385.00	126
99.00	20856	185.00	10677	276.00	15342	390.00	425
100.00	1939	186.00	78320	277.00	9319	391.00	350
101.00	11566	187.00	22896	278.00	1573	392.10	253
102.00	831	188.00	2244	279.00	451	393.00	72
103.00	4398	189.00	5077	281.00	219	401.00	268
104.00	7600	190.00	951	282.00	285	402.00	1410
105.00	7080	191.00	2327	283.00	1010	403.00	2061
107.00	89200	192.00	6979	284.00	690	404.00	774
108.00	13702	193.00	7409	285.00	1524	405.00	123
110.00	158144	194.00	1633	286.00	314	410.00	81
111.00	25024	195.10	1054	287.90	160	414.90	77
112.00	3002	196.00	17264	289.00	314	421.00	1760
113.00	864	198.00	533504	290.00	311	422.00	1730
114.00	302	199.00	36760	291.00	191	423.00	13610
115.10	463	200.00	2858	292.00	365	424.00	2795
116.00	5300	201.50	3067	293.00	1946	425.00	303
117.00	76832	203.00	3883	294.00	397	438.30	74
118.00	5637	204.00	19736	296.00	30016	439.10	152
119.00	739	205.00	33208	297.00	4246	441.10	34424
120.00	1147	206.00	134656	297.90	294	442.00	212288
121.00	584	207.00	18008	299.00	90	443.00	42672
122.00	6244	208.00	5001	301.10	394	444.00	3817
123.00	9329	209.00	1511	302.00	506	445.10	229
124.00	4061	211.00	5429	303.00	3269		

Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162302.D
Date : 16-MAY-2023 18:52
Client ID:
Sample Info: SLE0338-CAL7

Instrument: nt17.i
Operator: JGR
Column diameter: 0.25

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162302.D
Lab Smp Id: SLE0338-CAL7
Inj Date : 16-MAY-2023 18:52
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-CAL7
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.161	7.161	(0.764)	2673153	30.0000	31.09(M)
$	2 Phenol-d5	99	8.740	8.715	(0.932)	3553924	30.0000	31.24
	3 Phenol	94	8.766	8.740	(0.935)	2510973	20.0000	20.84
$	5 2-Chlorophenol-d4	132	9.021	9.008	(0.962)	2865845	30.0000	31.45
	4 Bis(2-Chloroethyl)ether	93	8.919	8.906	(0.951)	1674045	20.0000	19.05
	6 2-Chlorophenol	128	9.046	9.033	(0.965)	1976156	20.0000	19.64
	7 1,3-Dichlorobenzene	146	9.314	9.301	(0.993)	2049005	20.0000	20.12
*	8 1,4-Dichlorobenzene-d4	152	9.378	9.365	(1.000)	262646	4.00000	
	9 1,4-Dichlorobenzene	146	9.403	9.391	(1.003)	1978947	20.0000	19.48
$	10 1,2-Dichlorobenzene-d4	152	9.736	9.723	(1.038)	1350557	20.0000	21.08
	12 1,2-Dichlorobenzene	146	9.761	9.748	(1.041)	1981143	20.0000	20.75
	11 Benzyl alcohol	108	9.646	9.633	(1.029)	1193830	20.0000	21.28
	14 2,2'-oxybis(1-Chloropropane)	121	9.927	9.914	(1.059)	550688	20.0000	20.46
	13 2-Methylphenol	108	9.863	9.851	(1.052)	1816256	20.0000	20.51
	17 Hexachloroethane	117	10.349	10.336	(1.104)	860260	20.0000	21.17
	16 N-Nitroso-di-n-propylamine	70	10.208	10.170	(1.089)	1387081	20.0000	20.47
	15 4-Methylphenol	108	10.132	10.119	(1.080)	1910332	20.0000	21.18
$	18 Nitrobenzene-d5	82	10.464	10.451	(0.884)	2237361	20.0000	20.22
	19 Nitrobenzene	77	10.502	10.489	(0.887)	2090805	20.0000	19.80
	20 Isophorone	82	10.975	10.924	(0.927)	3090346	20.0000	21.38
	21 2-Nitrophenol	139	11.128	11.115	(0.940)	1122632	20.0000	22.07
	22 2,4-Dimethylphenol	107	11.166	11.154	(0.943)	3837283	40.0000	38.85
	23 Bis(2-Chloroethoxy)methane	93	11.358	11.345	(0.959)	1784224	20.0000	20.14
	24 Benzoic acid	105	11.549	11.333	(0.975)	5371595	80.0000	80.85(M)
	25 2,4-Dichlorophenol	162	11.575	11.562	(0.977)	3106549	40.0000	39.14
	26 1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	1960440	20.0000	22.74
*	27 Naphthalene-d8	136	11.843	11.830	(1.000)	972245	4.00000	
	28 Naphthalene	128	11.893	11.881	(1.004)	5239130	20.0000	19.60
	29 4-Chloroaniline	127	12.021	11.995	(1.015)	4000037	40.0000	37.95
	30 Hexachlorobutadiene	225	12.237	12.225	(1.033)	903386	20.0000	21.16
	31 4-Chloro-3-methylphenol	107	12.964	12.952	(1.095)	3583167	40.0000	41.93
	32 2-Methylnaphthalene	142	13.271	13.258	(1.121)	3906783	20.0000	20.41
	33 Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	2015884	40.0000	40.80

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.895	13.883	(0.900)	2462585	40.0000	44.29
	35	2,4,5-Trichlorophenol	196	13.972	13.959	(0.905)	2602623	40.0000	44.22
$	36	2-Fluorobiphenyl	172	14.048	14.036	(0.910)	4231551	20.0000	20.21
	37	2-Chloronaphthalene	162	14.265	14.253	(0.924)	3390026	20.0000	19.96
	38	2-Nitroaniline	65	14.533	14.508	(0.941)	2326568	40.0000	40.45
	39	Dimethylphthalate	163	14.954	14.929	(0.969)	3514822	20.0000	19.22
	40	Acenaphthylene	152	15.133	15.120	(0.980)	5313547	20.0000	19.70
	41	2,6-Dinitrotoluene	165	15.094	15.069	(0.978)	1815565	40.0000	42.41
*	42	Acenaphthene-d10	164	15.439	15.426	(1.000)	531394	4.00000	
	43	3-Nitroaniline	138	15.388	15.349	(0.997)	1854614	40.0000	46.78
	44	Acenaphthene	153	15.515	15.502	(1.005)	3394815	20.0000	20.14
	45	2,4-Dinitrophenol	184	15.604	15.567	(1.011)	2499526	80.0000	79.73
	46	Dibenzofuran	168	15.846	15.821	(1.026)	4796346	20.0000	20.38
	47	4-Nitrophenol	109	15.706	15.681	(1.017)	1053733	40.0000	40.01
	48	2,4-Dinitrotoluene	165	15.910	15.872	(1.031)	2400375	40.0000	42.84
	50	Diethylphthalate	149	16.395	16.369	(1.062)	3965533	20.0000	22.24
	49	Fluorene	166	16.547	16.535	(1.072)	4712796	20.0000	21.07
	51	4-Chlorophenyl-phenylether	204	16.522	16.509	(1.070)	2234934	20.0000	21.73
	52	4-Nitroaniline	138	16.675	16.611	(1.080)	1683335	40.0000	44.86
	53	4,6-Dinitro-2-methylphenol	198	16.751	16.713	(0.907)	2791081	80.0000	81.44
	54	N-Nitrosodiphenylamine	169	16.789	16.764	(0.909)	2459552	20.0000	20.45
$	55	2,4,6-Tribromophenol	330	17.082	17.070	(1.106)	716600	30.0000	30.92
	56	4-Bromophenyl-phenylether	248	17.527	17.515	(0.949)	941187	20.0000	22.33
	57	Hexachlorobenzene	284	17.846	17.833	(0.966)	929065	20.0000	21.63
	58	Pentachlorophenol	266	18.203	18.203	(0.986)	1296979	40.0000	39.91
*	59	Phenanthrene-d10	188	18.471	18.458	(1.000)	858760	4.00000	
	60	Phenanthrene	178	18.522	18.496	(1.003)	5130124	20.0000	20.47
	61	Anthracene	178	18.611	18.598	(1.008)	4956412	20.0000	21.07
	62	Carbazole	167	18.930	18.918	(1.025)	4102658	20.0000	19.98
	63	Di-n-butylphthalate	149	19.695	19.682	(1.066)	5887085	20.0000	20.72
	64	Fluoranthene	202	20.868	20.855	(0.889)	5357102	20.0000	19.58
	65	Pyrene	202	21.302	21.276	(0.908)	5300712	20.0000	19.12
$	66	Terphenyl-d14	244	21.557	21.557	(0.918)	3805993	20.0000	19.31
	67	Butylbenzylphthalate	149	22.462	22.462	(0.957)	2401371	20.0000	19.35
	68	Benzo(a)anthracene	228	23.432	23.419	(0.998)	4215090	20.0000	19.58
*	69	Chrysene-d12	240	23.470	23.445	(1.000)	584767	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.394	23.369	(0.997)	4121802	60.0000	59.96
	71	Chrysene	228	23.508	23.496	(1.002)	3974840	20.0000	19.62
	72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	3264093	20.0000	19.61
*	134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1150423	4.00000	
	73	Di-n-octylphthalate	149	24.478	24.465	(1.001)	5458910	20.0000	18.72
	74	Benzo(b)fluoranthene	252	25.371	25.345	(0.970)	3530511	20.0000	19.57
	75	Benzo(k)fluoranthene	252	25.409	25.384	(0.971)	3966360	20.0000	23.27(H)
	76	Benzo(a)pyrene	252	26.047	26.022	(0.996)	3007107	20.0000	21.16
*	77	Perylene-d12	264	26.162	26.149	(1.000)	454990	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.997	28.933	(1.108)	3643021	20.0000	22.10
	79	Dibenzo(a,h)anthracene	278	28.997	28.946	(1.108)	3097019	20.0000	22.39
	80	Benzo(g,h,i)perylene	276	29.828	29.751	(1.140)	3009444	20.0000	22.12
	90	N-Nitrosodimethylamine	74	5.097	5.071	(0.543)	2242002	40.0000	39.09
	91	Aniline	93	8.842	8.830	(0.943)	4188310	40.0000	41.47
	93	Benzidine	184	21.098	21.085	(0.899)	3987621	40.0000	39.82
	103	Pyridine	79	5.097	5.122	(0.543)	3401382	40.0000	37.39
	105	1-methylnaphthalene	142	13.500	13.487	(1.140)	3611654	20.0000	20.34
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.853	16.840	(1.092)	4069093	20.0000	19.55

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.409	25.384	(0.971)	6886398	40.0000	42.53
120 2,3,4,6-Tetrachlorophenol	232	16.165	16.152	(1.047)	1360268	20.0000	20.45

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162302.D
Lab Smp Id: SLE0338-CAL7
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	262646	-8.51
27 Naphthalene-d8	1056758	528379	2113516	972245	-8.00
42 Acenaphthene-d10	587510	293755	1175020	531394	-9.55
59 Phenanthrene-d10	933575	466788	1867150	858760	-8.01
69 Chrysene-d12	576570	288285	1153140	584767	1.42
134 Di-n-octylphthala	1181651	590826	2363302	1150423	-2.64
77 Perylene-d12	491359	245680	982718	454990	-7.40

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.38	0.14
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.47	0.07
69 Chrysene-d12	23.46	22.96	23.96	23.47	0.05
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	-0.00
77 Perylene-d12	26.15	25.65	26.65	26.16	0.05

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

REVIEW SUMMARY FOR FILE - NT1705162302.D

Lab ID: SLE0338-CAL7
nt17.i, ABN.m, 16-MAY-2023 18:52

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.975	0.958	0.0173	Benzoic acid
1.011	0.000	1.0107	2,4-Dinitrophenol

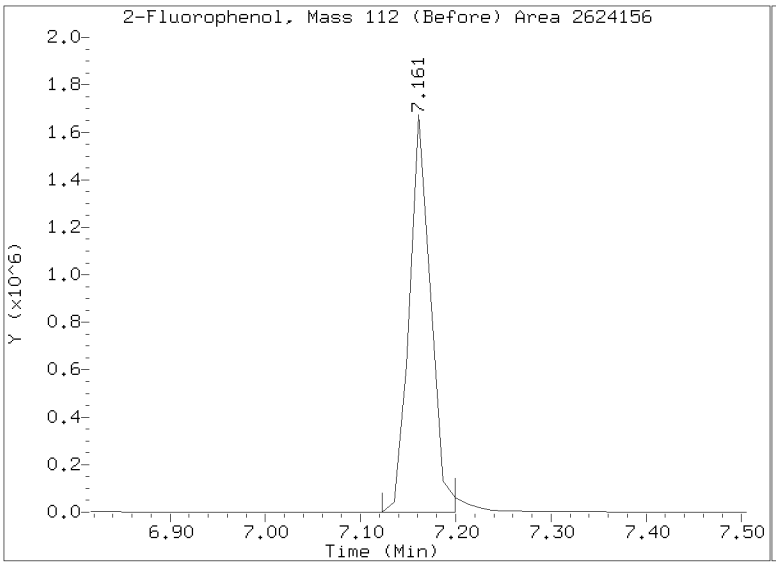
RRT check based on Ccal File: NT1705162308.D

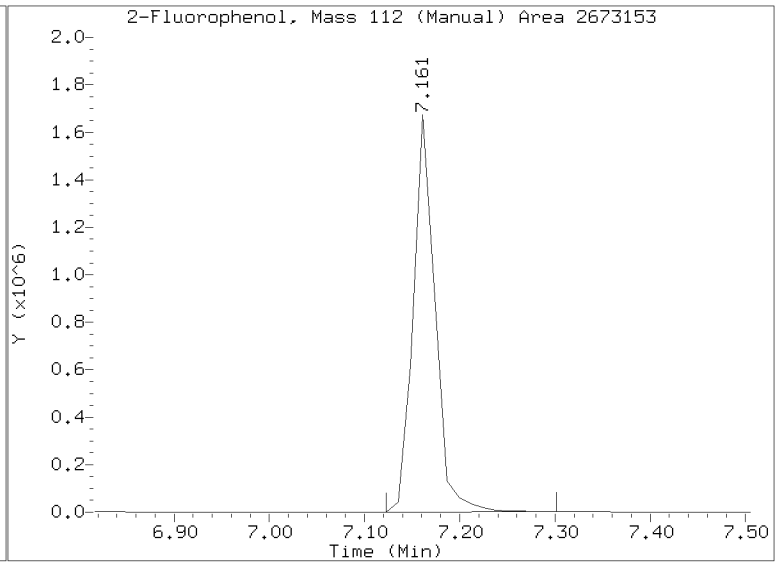
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

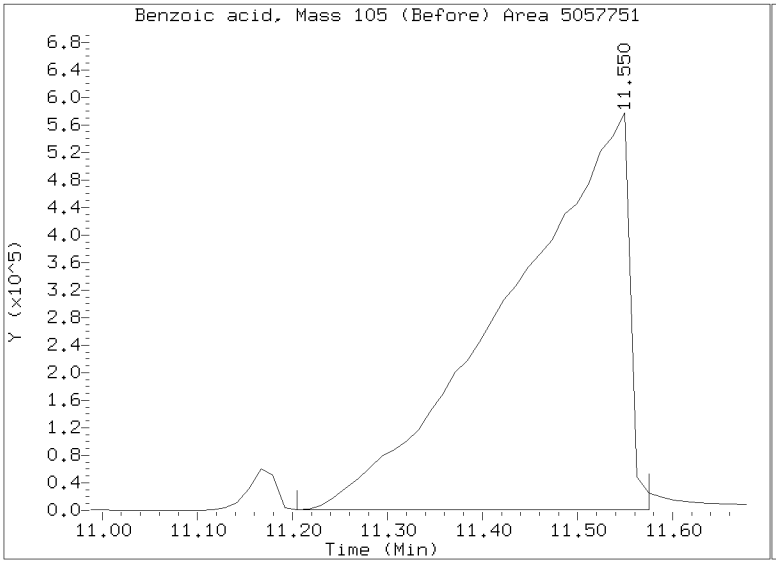
* Only compounds listed in the work order have been verified by the analyst *

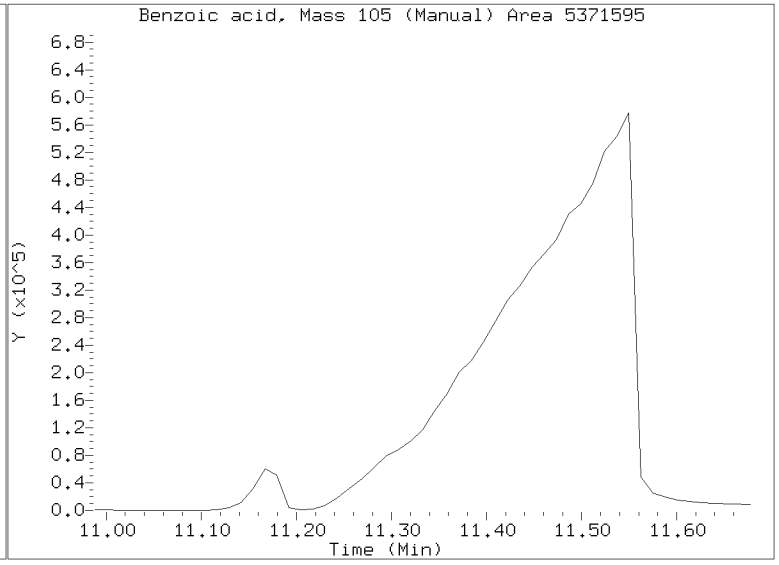
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/NT1705162302.D
Injection Date: 16-MAY-2023 18:52
Lab ID:SLE0338-CAL7 Client ID:
Report Date: 05/20/2023 12:55









Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162303.D

Page 1

Date : 16-MAY-2023 19:29

Client ID:

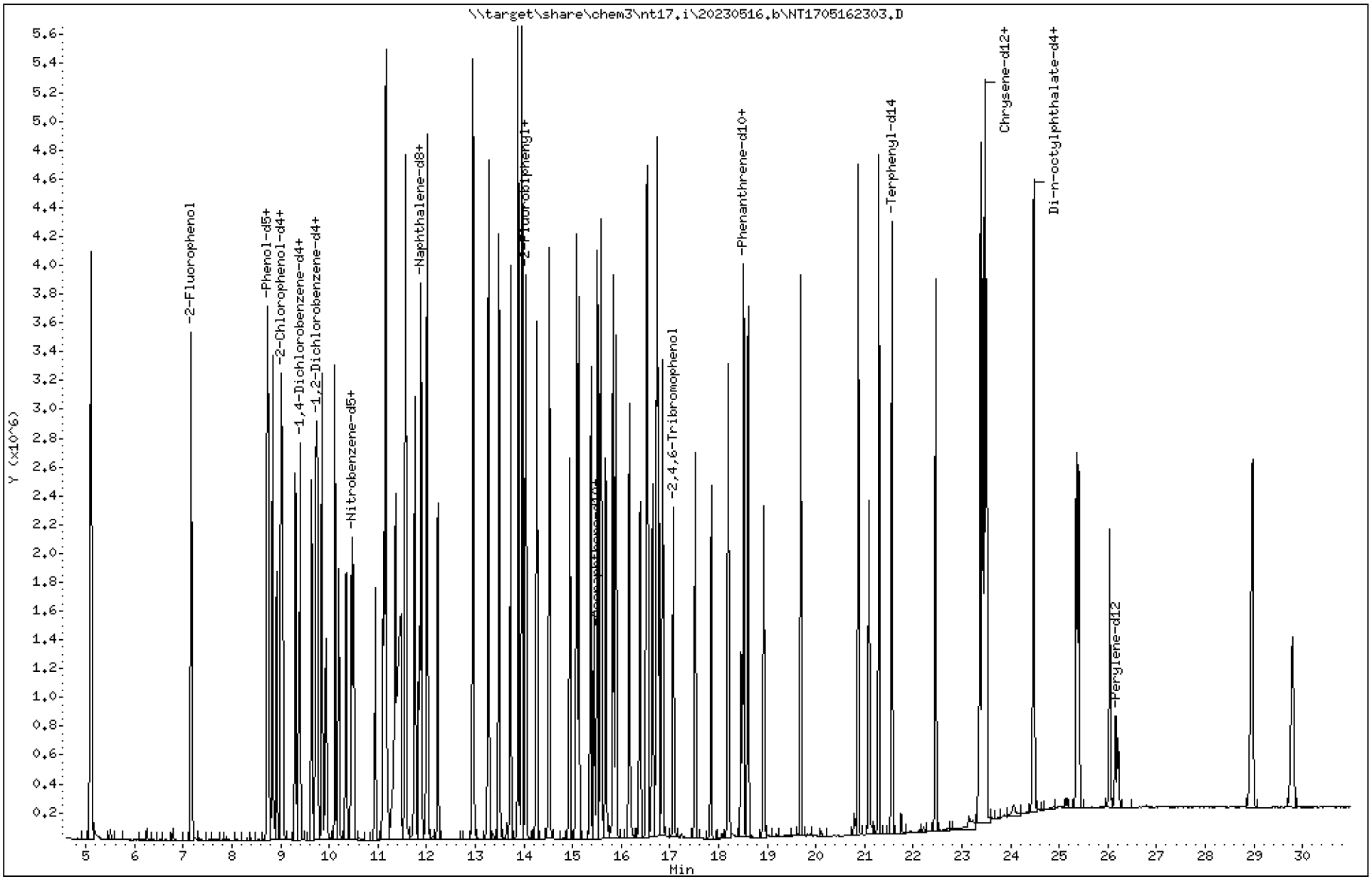
Instrument: nt17.i

Sample Info: SLE0338-CAL6

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162303.D
Lab Smp Id: SLE0338-CAL6
Inj Date : 16-MAY-2023 19:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-CAL6
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.161	7.161	(0.765)	1499375	15.0000	16.03
$	2 Phenol-d5	99	8.728	8.715	(0.932)	1981943	15.0000	16.01
	3 Phenol	94	8.753	8.740	(0.935)	1397302	10.0000	10.66
$	5 2-Chlorophenol-d4	132	9.008	9.008	(0.962)	1551820	15.0000	15.65
	4 Bis(2-Chloroethyl)ether	93	8.919	8.906	(0.952)	936900	10.0000	9.800
	6 2-Chlorophenol	128	9.046	9.033	(0.966)	1079419	10.0000	9.857
	7 1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	1119860	10.0000	10.10
*	8 1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	285800	4.00000	
	9 1,4-Dichlorobenzene	146	9.403	9.391	(1.004)	1070799	10.0000	9.687
$	10 1,2-Dichlorobenzene-d4	152	9.736	9.723	(1.040)	726040	10.0000	10.42
	12 1,2-Dichlorobenzene	146	9.761	9.748	(1.042)	1082430	10.0000	10.42
	11 Benzyl alcohol	108	9.633	9.633	(1.029)	654436	10.0000	10.72
	14 2,2'-oxybis(1-Chloropropane)	121	9.927	9.914	(1.060)	300795	10.0000	10.27
	13 2-Methylphenol	108	9.851	9.851	(1.052)	990775	10.0000	10.28
	17 Hexachloroethane	117	10.336	10.336	(1.104)	461226	10.0000	10.43
	16 N-Nitroso-di-n-propylamine	70	10.196	10.170	(1.089)	775404	10.0000	10.52
	15 4-Methylphenol	108	10.119	10.119	(1.080)	1054055	10.0000	10.74
$	18 Nitrobenzene-d5	82	10.464	10.451	(0.884)	1241412	10.0000	10.22
	19 Nitrobenzene	77	10.489	10.489	(0.886)	1172791	10.0000	10.12
	20 Isophorone	82	10.949	10.924	(0.925)	1795328	10.0000	11.32
	21 2-Nitrophenol	139	11.115	11.115	(0.939)	589034	10.0000	10.55
	22 2,4-Dimethylphenol	107	11.166	11.154	(0.943)	2156269	20.0000	19.89
	23 Bis(2-Chloroethoxy)methane	93	11.358	11.345	(0.959)	977460	10.0000	10.06
	24 Benzoic acid	105	11.473	11.333	(0.969)	2880071	40.0000	39.50(M)
	25 2,4-Dichlorophenol	162	11.575	11.562	(0.977)	1732131	20.0000	19.89
	26 1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	902585	10.0000	9.541
*	27 Naphthalene-d8	136	11.843	11.830	(1.000)	1067038	4.00000	
	28 Naphthalene	128	11.881	11.881	(1.003)	2910801	10.0000	9.920
	29 4-Chloroaniline	127	12.008	11.995	(1.014)	2215502	20.0000	19.15
	30 Hexachlorobutadiene	225	12.238	12.225	(1.033)	475812	10.0000	10.15
	31 4-Chloro-3-methylphenol	107	12.952	12.952	(1.094)	1961966	20.0000	20.92
	32 2-Methylnaphthalene	142	13.271	13.258	(1.121)	2148754	10.0000	10.23
	33 Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	1037416	20.0000	19.20

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.899)	1301711	20.0000	21.41
	35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.904)	1358932	20.0000	21.12
$	36	2-Fluorobiphenyl	172	14.036	14.036	(0.909)	2301542	10.0000	10.06
	37	2-Chloronaphthalene	162	14.265	14.253	(0.924)	1884776	10.0000	10.15
	38	2-Nitroaniline	65	14.520	14.508	(0.941)	1306422	20.0000	20.77
	39	Dimethylphthalate	163	14.941	14.929	(0.968)	1952293	10.0000	9.766
	40	Acenaphthylene	152	15.133	15.120	(0.980)	2921988	10.0000	9.909
	41	2,6-Dinitrotoluene	165	15.082	15.069	(0.977)	978138	20.0000	20.90
*	42	Acenaphthene-d10	164	15.439	15.426	(1.000)	581019	4.00000	
	43	3-Nitroaniline	138	15.375	15.349	(0.996)	959211	20.0000	22.13
	44	Acenaphthene	153	15.502	15.502	(1.004)	1880978	10.0000	10.20
	45	2,4-Dinitrophenol	184	15.592	15.567	(1.010)	1276676	40.0000	41.52
	46	Dibenzofuran	168	15.834	15.821	(1.026)	2609192	10.0000	10.14
	47	4-Nitrophenol	109	15.681	15.681	(1.016)	581610	20.0000	20.20
	48	2,4-Dinitrotoluene	165	15.897	15.872	(1.030)	1292398	20.0000	21.09
	50	Diethylphthalate	149	16.395	16.369	(1.062)	1892172	10.0000	9.705
	49	Fluorene	166	16.547	16.535	(1.072)	2552323	10.0000	10.43
	51	4-Chlorophenyl-phenylether	204	16.522	16.509	(1.070)	1183317	10.0000	10.52
	52	4-Nitroaniline	138	16.649	16.611	(1.078)	893771	20.0000	21.78
	53	4,6-Dinitro-2-methylphenol	198	16.738	16.713	(0.906)	1437110	40.0000	38.75
	54	N-Nitrosodiphenylamine	169	16.777	16.764	(0.908)	1311312	10.0000	10.07
$	55	2,4,6-Tribromophenol	330	17.082	17.070	(1.106)	346267	15.0000	13.66
	56	4-Bromophenyl-phenylether	248	17.527	17.515	(0.949)	485467	10.0000	10.64
	57	Hexachlorobenzene	284	17.846	17.833	(0.966)	480993	10.0000	10.35
	58	Pentachlorophenol	266	18.203	18.203	(0.986)	617590	20.0000	20.57
*	59	Phenanthrene-d10	188	18.471	18.458	(1.000)	929294	4.00000	
	60	Phenanthrene	178	18.509	18.496	(1.002)	2808221	10.0000	10.36
	61	Anthracene	178	18.611	18.598	(1.008)	2697304	10.0000	10.60
	62	Carbazole	167	18.930	18.918	(1.025)	1787411	10.0000	10.18
	63	Di-n-butylphthalate	149	19.695	19.682	(1.066)	3230829	10.0000	10.51
	64	Fluoranthene	202	20.868	20.855	(0.890)	2824200	10.0000	10.36
	65	Pyrene	202	21.289	21.276	(0.908)	2812400	10.0000	10.17
$	66	Terphenyl-d14	244	21.557	21.557	(0.919)	1988149	10.0000	10.12
	67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	1255612	10.0000	10.15
	68	Benzo(a)anthracene	228	23.432	23.419	(0.999)	2135802	10.0000	9.950
*	69	Chrysene-d12	240	23.458	23.445	(1.000)	582943	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.381	23.369	(0.997)	1474421	30.0000	30.55
	71	Chrysene	228	23.509	23.496	(1.002)	2029668	10.0000	10.05
	72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	1702076	10.0000	10.04
*	134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1171304	4.00000	
	73	Di-n-octylphthalate	149	24.478	24.465	(1.001)	2888436	10.0000	9.729
	74	Benzo(b)fluoranthene	252	25.358	25.345	(0.969)	1994991	10.0000	10.46
	75	Benzo(k)fluoranthene	252	25.409	25.384	(0.971)	1758254	10.0000	9.753(H)
	76	Benzo(a)pyrene	252	26.034	26.022	(0.995)	1531611	10.0000	10.19
*	77	Perylene-d12	264	26.162	26.149	(1.000)	481255	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.959	28.933	(1.107)	1762811	10.0000	10.11
	79	Dibenzo(a,h)anthracene	278	28.972	28.946	(1.107)	1484281	10.0000	10.14
	80	Benzo(g,h,i)perylene	276	29.790	29.751	(1.139)	1457471	10.0000	10.13
	90	N-Nitrosodimethylamine	74	5.084	5.071	(0.543)	1314020	20.0000	21.06
	91	Aniline	93	8.830	8.830	(0.943)	2347756	20.0000	21.36
	93	Benzidine	184	21.098	21.085	(0.899)	1662132	20.0000	21.28
	103	Pyridine	79	5.109	5.122	(0.546)	1988954	20.0000	20.09
	105	1-methylnaphthalene	142	13.487	13.487	(1.139)	1974523	10.0000	10.13
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.853	16.840	(1.092)	2278228	10.0000	10.01

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.358	25.384	(0.969)	3493039	20.0000	20.39
120 2,3,4,6-Tetrachlorophenol	232	16.165	16.152	(1.047)	688855	10.0000	9.471

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162303.D
Lab Smp Id: SLE0338-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	285800	-0.45
27 Naphthalene-d8	1056758	528379	2113516	1067038	0.97
42 Acenaphthene-d10	587510	293755	1175020	581019	-1.10
59 Phenanthrene-d10	933575	466788	1867150	929294	-0.46
69 Chrysene-d12	576570	288285	1153140	582943	1.11
134 Di-n-octylphthala	1181651	590826	2363302	1171304	-0.88
77 Perylene-d12	491359	245680	982718	481255	-2.06

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.47	0.07
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	-0.00
77 Perylene-d12	26.15	25.65	26.65	26.16	0.05

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

REVIEW SUMMARY FOR FILE - NT1705162303.D

Lab ID: SLE0338-CAL6
nt17.i, ABN.m, 16-MAY-2023 19:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.969	0.958	0.0108	Benzoic acid
1.010	0.000	1.0099	2,4-Dinitrophenol

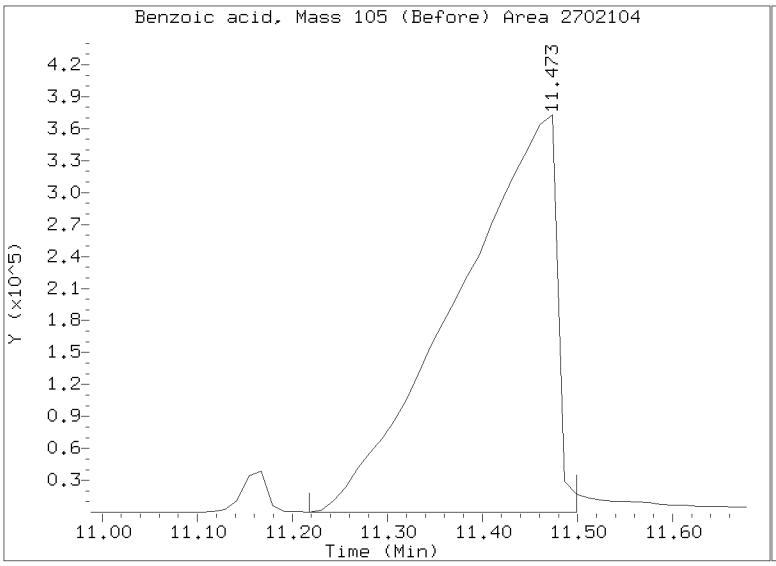
RRT check based on Ccal File: NT1705162308.D

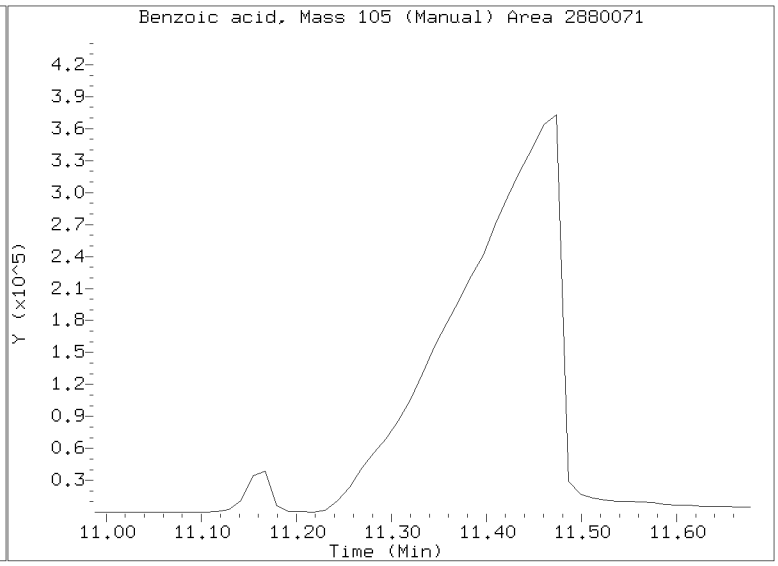
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/NT1705162303.D
Injection Date: 16-MAY-2023 19:29
Lab ID:SLE0338-CAL6 Client ID:
Report Date: 05/20/2023 12:55





Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162304.D

Page 1

Date : 16-MAY-2023 20:07

Client ID:

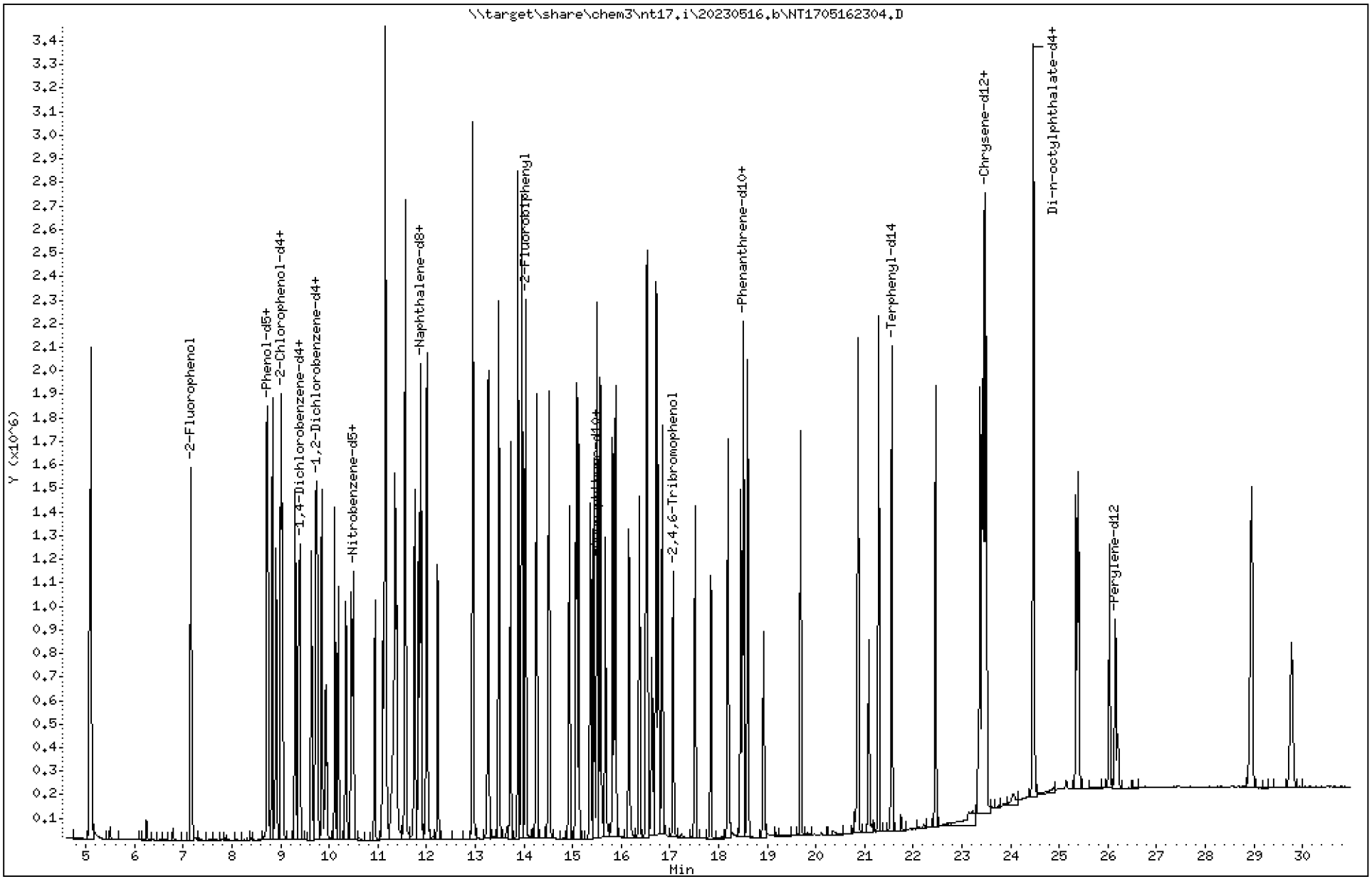
Instrument: nt17.i

Sample Info: SLE0338-CAL5

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162304.D
Lab Smp Id: SLE0338-CAL5
Inj Date : 16-MAY-2023 20:07
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-CAL5
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 4 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.148	7.161	(0.763)	765798	7.50000	8.149
$	2 Phenol-d5	99	8.715	8.715	(0.931)	982746	7.50000	7.902
	3 Phenol	94	8.740	8.740	(0.933)	690815	5.00000	5.244
$	5 2-Chlorophenol-d4	132	9.008	9.008	(0.962)	773445	7.50000	7.764
	4 Bis(2-Chloroethyl)ether	93	8.906	8.906	(0.951)	477952	5.00000	4.977
	6 2-Chlorophenol	128	9.033	9.033	(0.965)	537617	5.00000	4.887
	7 1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	558585	5.00000	5.017
*	8 1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	287078	4.00000	
	9 1,4-Dichlorobenzene	146	9.403	9.391	(1.004)	534214	5.00000	4.811
$	10 1,2-Dichlorobenzene-d4	152	9.723	9.723	(1.038)	360850	5.00000	5.154
	12 1,2-Dichlorobenzene	146	9.748	9.748	(1.041)	529711	5.00000	5.075
	11 Benzyl alcohol	108	9.633	9.633	(1.029)	321508	5.00000	5.242
	14 2,2'-oxybis(1-Chloropropane)	121	9.927	9.914	(1.060)	152995	5.00000	5.200
	13 2-Methylphenol	108	9.851	9.851	(1.052)	487588	5.00000	5.037
	17 Hexachloroethane	117	10.336	10.336	(1.104)	228881	5.00000	5.153
	16 N-Nitroso-di-n-propylamine	70	10.183	10.170	(1.087)	386723	5.00000	5.221
	15 4-Methylphenol	108	10.119	10.119	(1.080)	520797	5.00000	5.283
$	18 Nitrobenzene-d5	82	10.451	10.451	(0.883)	617493	5.00000	5.134
	19 Nitrobenzene	77	10.489	10.489	(0.886)	580611	5.00000	5.060
	20 Isophorone	82	10.937	10.924	(0.923)	754432	5.00000	4.803
	21 2-Nitrophenol	139	11.115	11.115	(0.939)	283851	5.00000	5.134
	22 2,4-Dimethylphenol	107	11.154	11.154	(0.942)	1078071	10.0000	10.04
	23 Bis(2-Chloroethoxy)methane	93	11.345	11.345	(0.958)	486928	5.00000	5.058
	24 Benzoic acid	105	11.396	11.333	(0.962)	1331637	20.0000	18.44
	25 2,4-Dichlorophenol	162	11.562	11.562	(0.976)	828264	10.0000	9.601
	26 1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	448691	5.00000	4.789
*	27 Naphthalene-d8	136	11.843	11.830	(1.000)	1056758	4.00000	
	28 Naphthalene	128	11.881	11.881	(1.003)	1447676	5.00000	4.982
	29 4-Chloroaniline	127	12.008	11.995	(1.014)	1210630	10.0000	10.57
	30 Hexachlorobutadiene	225	12.238	12.225	(1.033)	232082	5.00000	5.001
	31 4-Chloro-3-methylphenol	107	12.952	12.952	(1.094)	953387	10.0000	10.26
	32 2-Methylnaphthalene	142	13.271	13.258	(1.121)	1063687	5.00000	5.112
	33 Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	466260	10.0000	8.535

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.899)	612933	10.0000	9.971
35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.904)	648557	10.0000	9.967
$ 36	2-Fluorobiphenyl	172	14.036	14.036	(0.909)	1144436	5.00000	4.945
37	2-Chloronaphthalene	162	14.253	14.253	(0.923)	927747	5.00000	4.941
38	2-Nitroaniline	65	14.508	14.508	(0.940)	645367	10.0000	10.15
39	Dimethylphthalate	163	14.929	14.929	(0.967)	996067	5.00000	4.927
40	Acenaphthylene	152	15.120	15.120	(0.979)	1471084	5.00000	4.934
41	2,6-Dinitrotoluene	165	15.082	15.069	(0.977)	477455	10.0000	10.09
* 42	Acenaphthene-d10	164	15.439	15.426	(1.000)	587510	4.00000	
43	3-Nitroaniline	138	15.362	15.349	(0.995)	453737	10.0000	10.35
44	Acenaphthene	153	15.502	15.502	(1.004)	923471	5.00000	4.955
45	2,4-Dinitrophenol	184	15.579	15.567	(1.009)	556011	20.0000	18.80
46	Dibenzofuran	168	15.834	15.821	(1.026)	1292030	5.00000	4.967
47	4-Nitrophenol	109	15.681	15.681	(1.016)	281715	10.0000	9.676
48	2,4-Dinitrotoluene	165	15.885	15.872	(1.029)	637835	10.0000	10.30
50	Diethylphthalate	149	16.382	16.369	(1.061)	957540	5.00000	4.857
49	Fluorene	166	16.535	16.535	(1.071)	1308520	5.00000	5.291
51	4-Chlorophenyl-phenylether	204	16.522	16.509	(1.070)	572669	5.00000	5.036
52	4-Nitroaniline	138	16.637	16.611	(1.078)	417726	10.0000	10.07
53	4,6-Dinitro-2-methylphenol	198	16.726	16.713	(0.906)	645152	20.0000	17.32
54	N-Nitrosodiphenylamine	169	16.764	16.764	(0.908)	612769	5.00000	4.686
$ 55	2,4,6-Tribromophenol	330	17.069	17.070	(1.106)	161510	7.50000	6.302
56	4-Bromophenyl-phenylether	248	17.515	17.515	(0.949)	230862	5.00000	5.038
57	Hexachlorobenzene	284	17.846	17.833	(0.967)	231469	5.00000	4.958
58	Pentachlorophenol	266	18.190	18.203	(0.985)	273613	10.0000	9.657
* 59	Phenanthrene-d10	188	18.458	18.458	(1.000)	933575	4.00000	
60	Phenanthrene	178	18.509	18.496	(1.003)	1368665	5.00000	5.024
61	Anthracene	178	18.598	18.598	(1.008)	1318403	5.00000	5.155
62	Carbazole	167	18.917	18.918	(1.025)	728881	5.00000	4.479
63	Di-n-butylphthalate	149	19.695	19.682	(1.067)	1642766	5.00000	5.320
64	Fluoranthene	202	20.868	20.855	(0.890)	1405063	5.00000	5.210
65	Pyrene	202	21.289	21.276	(0.908)	1388781	5.00000	5.080
$ 66	Terphenyl-d14	244	21.557	21.557	(0.919)	974784	5.00000	5.015
67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	632762	5.00000	5.171
68	Benzo(a)anthracene	228	23.419	23.419	(0.998)	1051776	5.00000	4.954
* 69	Chrysene-d12	240	23.458	23.445	(1.000)	576570	4.00000	
70	3,3'-Dichlorobenzidine	252	23.368	23.369	(0.996)	587270	15.0000	13.52
71	Chrysene	228	23.496	23.496	(1.002)	986619	5.00000	4.939
72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	876350	5.00000	5.126
* 134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1181651	4.00000	
73	Di-n-octylphthalate	149	24.478	24.465	(1.001)	1480129	5.00000	4.942
74	Benzo(b)fluoranthene	252	25.345	25.345	(0.969)	911226	5.00000	4.677
75	Benzo(k)fluoranthene	252	25.397	25.384	(0.971)	964317	5.00000	5.239(H)
76	Benzo(a)pyrene	252	26.034	26.022	(0.996)	764390	5.00000	4.981
* 77	Perylene-d12	264	26.149	26.149	(1.000)	491359	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.946	28.933	(1.107)	894339	5.00000	5.024
79	Dibenzo(a,h)anthracene	278	28.959	28.946	(1.107)	747647	5.00000	5.005
80	Benzo(g,h,i)perylene	276	29.777	29.751	(1.139)	741643	5.00000	5.048
90	N-Nitrosodimethylamine	74	5.071	5.071	(0.542)	660188	10.0000	10.53
91	Aniline	93	8.830	8.830	(0.943)	1153210	10.0000	10.45
93	Benzidine	184	21.085	21.085	(0.899)	535492	10.0000	7.663
103	Pyridine	79	5.097	5.122	(0.544)	1037266	10.0000	10.43
105	1-methylnaphthalene	142	13.487	13.487	(1.139)	975488	5.00000	5.054
111	Azobenzene (1,2-DP-Hydrazine)	77	16.840	16.840	(1.091)	1138685	5.00000	4.948

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.397	25.384	(0.971)	1754937	10.0000	10.04
120 2,3,4,6-Tetrachlorophenol	232	16.165	16.152	(1.047)	319360	5.00000	4.342

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162304.D
Lab Smp Id: SLE0338-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	287078	0.00
27 Naphthalene-d8	1056758	528379	2113516	1056758	0.00
42 Acenaphthene-d10	587510	293755	1175020	587510	0.00
59 Phenanthrene-d10	933575	466788	1867150	933575	0.00
69 Chrysene-d12	576570	288285	1153140	576570	0.00
134 Di-n-octylphthala	1181651	590826	2363302	1181651	0.00
77 Perylene-d12	491359	245680	982718	491359	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	0.00
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	0.00
77 Perylene-d12	26.15	25.65	26.65	26.15	0.00

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

REVIEW SUMMARY FOR FILE - NT1705162304.D

Lab ID: SLE0338-CAL5
nt17.i, ABN.m, 16-MAY-2023 20:07

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.009	0.000	1.0091	2,4-Dinitrophenol

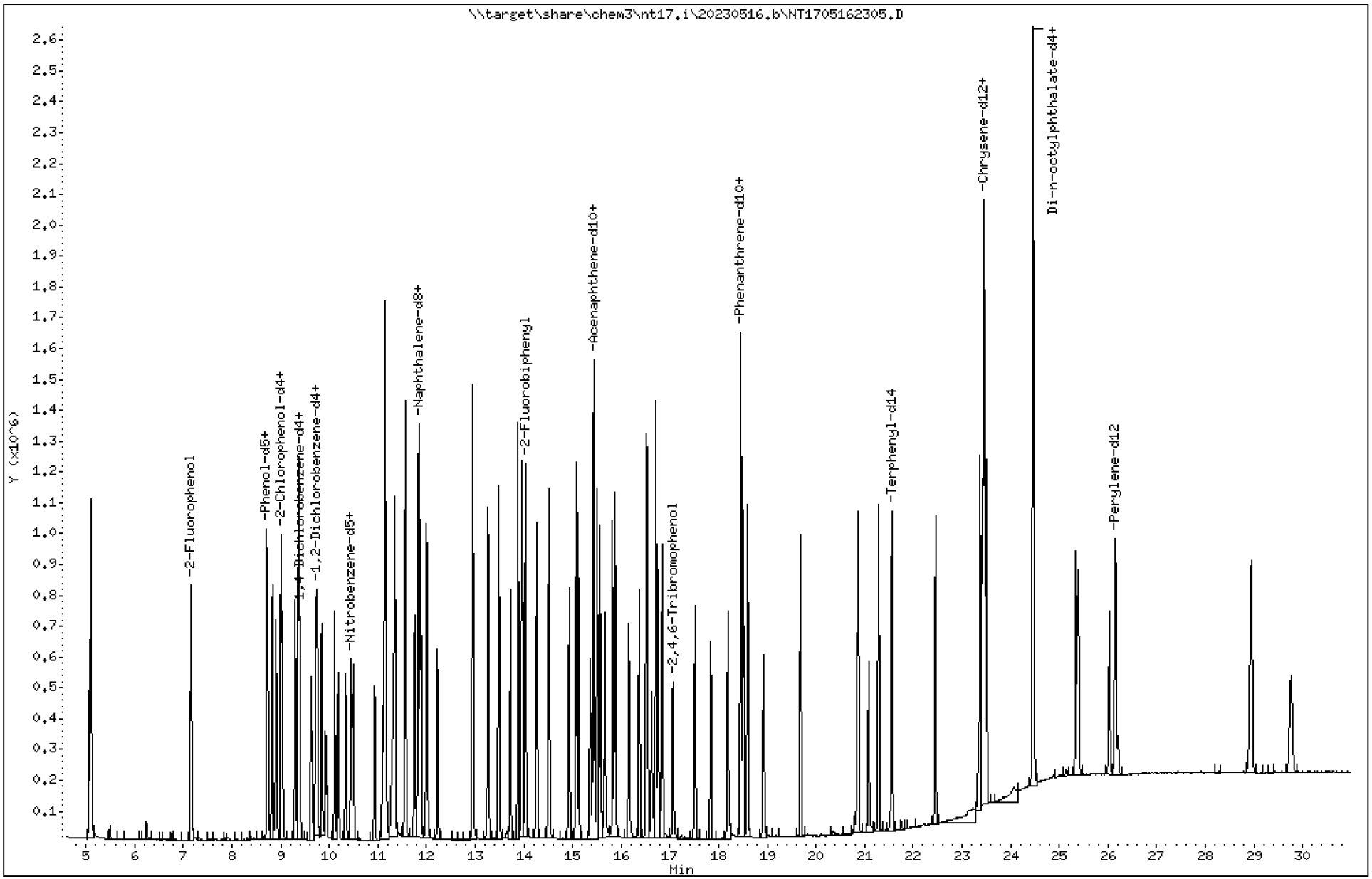
RRT check based on Ccal File: NT1705162308.D

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162305.D
Date : 16-MAY-2023 20:44
Client ID:
Sample Info: SLE0338-CAL4

Instrument: nt17.i
Operator: JGR
Column phase: ZB-5msi
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162305.D
Lab Smp Id: SLE0338-CAL4
Inj Date : 16-MAY-2023 20:44
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-CAL4
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.148	7.161	(0.763)	386880	3.75000	4.016
$	2 Phenol-d5	99	8.715	8.715	(0.931)	496273	3.75000	3.893
	3 Phenol	94	8.740	8.740	(0.933)	357970	2.50000	2.651
$	5 2-Chlorophenol-d4	132	9.008	9.008	(0.962)	395690	3.75000	3.875
	4 Bis(2-Chloroethyl)ether	93	8.906	8.906	(0.951)	251940	2.50000	2.559
	6 2-Chlorophenol	128	9.033	9.033	(0.965)	274100	2.50000	2.431
	7 1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	287842	2.50000	2.522
*	8 1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	294275	4.00000	
	9 1,4-Dichlorobenzene	146	9.391	9.391	(1.003)	274610	2.50000	2.413
$	10 1,2-Dichlorobenzene-d4	152	9.723	9.723	(1.038)	183965	2.50000	2.563
	12 1,2-Dichlorobenzene	146	9.748	9.748	(1.041)	270573	2.50000	2.529
	11 Benzyl alcohol	108	9.633	9.633	(1.029)	171088	2.50000	2.721
	14 2,2'-oxybis(1-Chloropropane)	121	9.927	9.914	(1.060)	76380	2.50000	2.533
	13 2-Methylphenol	108	9.851	9.851	(1.052)	285447	2.50000	2.876
	17 Hexachloroethane	117	10.336	10.336	(1.104)	116382	2.50000	2.556
	16 N-Nitroso-di-n-propylamine	70	10.183	10.170	(1.087)	201182	2.50000	2.650
	15 4-Methylphenol	108	10.106	10.119	(1.079)	270827	2.50000	2.680
$	18 Nitrobenzene-d5	82	10.451	10.451	(0.883)	310279	2.50000	2.526
	19 Nitrobenzene	77	10.489	10.489	(0.886)	297893	2.50000	2.542
	20 Isophorone	82	10.924	10.924	(0.922)	381193	2.50000	2.376
	21 2-Nitrophenol	139	11.115	11.115	(0.939)	141894	2.50000	2.513
	22 2,4-Dimethylphenol	107	11.154	11.154	(0.942)	546752	5.00000	4.986
	23 Bis(2-Chloroethoxy)methane	93	11.345	11.345	(0.958)	244375	2.50000	2.485
	24 Benzoic acid	105	11.345	11.333	(0.958)	600987	10.0000	8.148(M)
	25 2,4-Dichlorophenol	162	11.562	11.562	(0.976)	422303	5.00000	4.793
	26 1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	229549	2.50000	2.399
*	27 Naphthalene-d8	136	11.843	11.830	(1.000)	1079321	4.00000	
	28 Naphthalene	128	11.881	11.881	(1.003)	743208	2.50000	2.504
	29 4-Chloroaniline	127	11.995	11.995	(1.013)	619315	5.00000	5.293
	30 Hexachlorobutadiene	225	12.225	12.225	(1.032)	117974	2.50000	2.489
	31 4-Chloro-3-methylphenol	107	12.952	12.952	(1.094)	480727	5.00000	5.067
	32 2-Methylnaphthalene	142	13.258	13.258	(1.119)	539238	2.50000	2.537
	33 Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	226655	5.00000	4.143

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.899)	307979	5.00000	5.003
	35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.904)	319643	5.00000	4.905
$	36	2-Fluorobiphenyl	172	14.036	14.036	(0.909)	576214	2.50000	2.486
	37	2-Chloronaphthalene	162	14.253	14.253	(0.923)	470904	2.50000	2.504
	38	2-Nitroaniline	65	14.508	14.508	(0.940)	327426	5.00000	5.141
	39	Dimethylphthalate	163	14.929	14.929	(0.967)	516505	2.50000	2.551
	40	Acenaphthylene	152	15.120	15.120	(0.979)	746584	2.50000	2.500
	41	2,6-Dinitrotoluene	165	15.069	15.069	(0.976)	239858	5.00000	5.061
*	42	Acenaphthene-d10	164	15.439	15.426	(1.000)	588382	4.00000	
	43	3-Nitroaniline	138	15.362	15.349	(0.995)	186838	5.00000	4.256
	44	Acenaphthene	153	15.502	15.502	(1.004)	468493	2.50000	2.510
	45	2,4-Dinitrophenol	184	15.566	15.567	(1.008)	238371	10.0000	8.219
	46	Dibenzofuran	168	15.821	15.821	(1.025)	643491	2.50000	2.470
	47	4-Nitrophenol	109	15.668	15.681	(1.015)	142217	5.00000	4.877
	48	2,4-Dinitrotoluene	165	15.872	15.872	(1.028)	315732	5.00000	5.089
	50	Diethylphthalate	149	16.369	16.369	(1.060)	494482	2.50000	2.505
	49	Fluorene	166	16.535	16.535	(1.071)	547774	2.50000	2.211
	51	4-Chlorophenyl-phenylether	204	16.522	16.509	(1.070)	231194	2.50000	2.030
	52	4-Nitroaniline	138	16.624	16.611	(1.077)	202478	5.00000	4.873
	53	4,6-Dinitro-2-methylphenol	198	16.713	16.713	(0.905)	302717	10.0000	7.710
	54	N-Nitrosodiphenylamine	169	16.764	16.764	(0.908)	331879	2.50000	2.408
$	55	2,4,6-Tribromophenol	330	17.069	17.070	(1.106)	80536	3.75000	3.138
	56	4-Bromophenyl-phenylether	248	17.515	17.515	(0.949)	115874	2.50000	2.400
	57	Hexachlorobenzene	284	17.833	17.833	(0.966)	118138	2.50000	2.401
	58	Pentachlorophenol	266	18.190	18.203	(0.985)	119709	5.00000	4.121
*	59	Phenanthrene-d10	188	18.458	18.458	(1.000)	983826	4.00000	
	60	Phenanthrene	178	18.509	18.496	(1.003)	694700	2.50000	2.420
	61	Anthracene	178	18.598	18.598	(1.008)	681256	2.50000	2.528
	62	Carbazole	167	18.917	18.918	(1.025)	425810	2.50000	2.542
	63	Di-n-butylphthalate	149	19.682	19.682	(1.066)	840499	2.50000	2.583
	64	Fluoranthene	202	20.868	20.855	(0.890)	731382	2.50000	2.530
	65	Pyrene	202	21.289	21.276	(0.908)	735145	2.50000	2.508
$	66	Terphenyl-d14	244	21.557	21.557	(0.919)	517541	2.50000	2.484
	67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	336912	2.50000	2.569
	68	Benzo(a)anthracene	228	23.419	23.419	(0.998)	564607	2.50000	2.481
*	69	Chrysene-d12	240	23.458	23.445	(1.000)	618048	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.368	23.369	(0.996)	346015	7.50000	7.632
	71	Chrysene	228	23.496	23.496	(1.002)	531552	2.50000	2.482
	72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	453883	2.50000	2.549
*	134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1230644	4.00000	
	73	Di-n-octylphthalate	149	24.465	24.465	(1.000)	779363	2.50000	2.498
	74	Benzo(b)fluoranthene	252	25.345	25.345	(0.969)	520986	2.50000	2.447
	75	Benzo(k)fluoranthene	252	25.396	25.384	(0.971)	499544	2.50000	2.484(H)
	76	Benzo(a)pyrene	252	26.034	26.022	(0.996)	408250	2.50000	2.435
*	77	Perylene-d12	264	26.149	26.149	(1.000)	536896	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.933	28.933	(1.106)	474517	2.50000	2.440
	79	Dibenzo(a,h)anthracene	278	28.946	28.946	(1.107)	398710	2.50000	2.442
	80	Benzo(g,h,i)perylene	276	29.764	29.751	(1.138)	383366	2.50000	2.388
	90	N-Nitrosodimethylamine	74	5.071	5.071	(0.542)	348268	5.00000	5.420
	91	Aniline	93	8.830	8.830	(0.943)	573053	5.00000	5.064
	93	Benzidine	184	21.085	21.085	(0.899)	332205	5.00000	4.521
	103	Pyridine	79	5.097	5.122	(0.544)	546209	5.00000	5.359
	105	1-methylnaphthalene	142	13.487	13.487	(1.139)	495816	2.50000	2.515
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.840	16.840	(1.091)	606555	2.50000	2.632

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.345	25.384	(0.969)	956582	5.00000	5.006
120 2,3,4,6-Tetrachlorophenol	232	16.152	16.152	(1.046)	146074	2.50000	1.983

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162305.D
Lab Smp Id: SLE0338-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	294275	2.51
27 Naphthalene-d8	1056758	528379	2113516	1079321	2.14
42 Acenaphthene-d10	587510	293755	1175020	588382	0.15
59 Phenanthrene-d10	933575	466788	1867150	983826	5.38
69 Chrysene-d12	576570	288285	1153140	618048	7.19
134 Di-n-octylphthala	1181651	590826	2363302	1230644	4.15
77 Perylene-d12	491359	245680	982718	536896	9.27

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	-0.00
77 Perylene-d12	26.15	25.65	26.65	26.15	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162305.D

Lab ID: SLE0338-CAL4
nt17.i, ABN.m, 16-MAY-2023 20:44

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.008	0.000	1.0083	2,4-Dinitrophenol

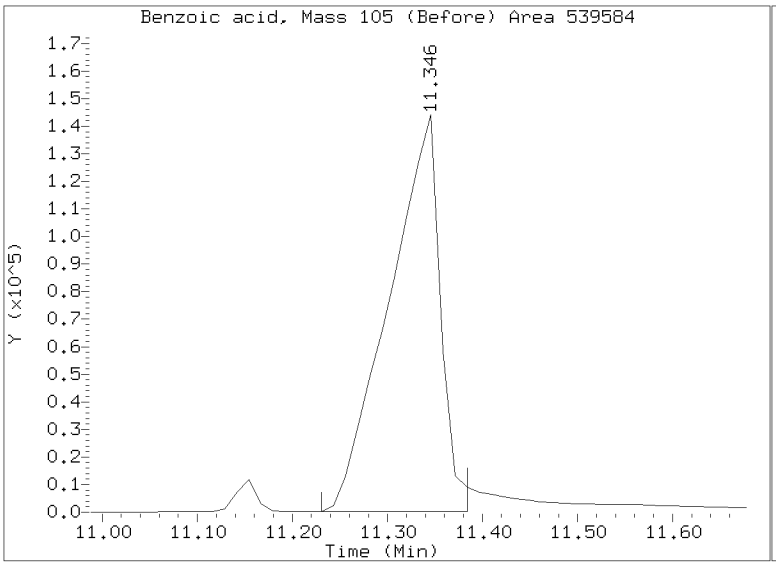
RRT check based on Ccal File: NT1705162308.D

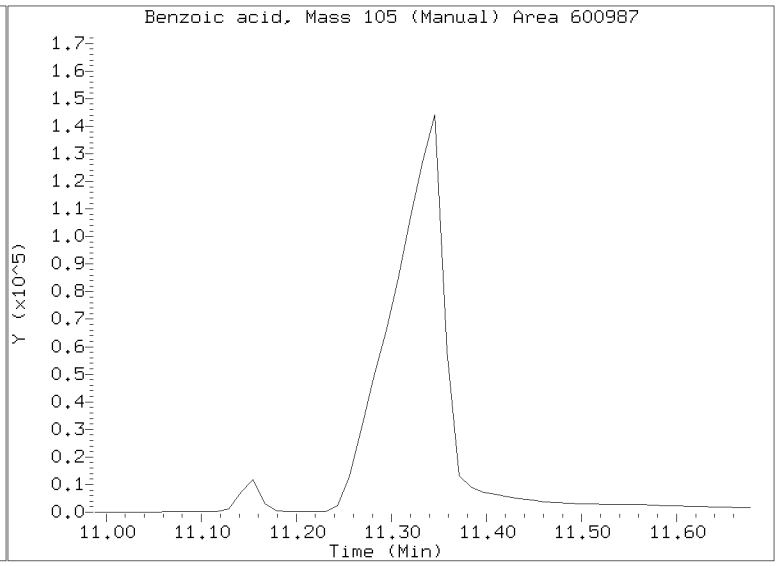
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/NT1705162305.D
Injection Date: 16-MAY-2023 20:44
Lab ID:SLE0338-CAL4 Client ID:
Report Date: 05/20/2023 12:55

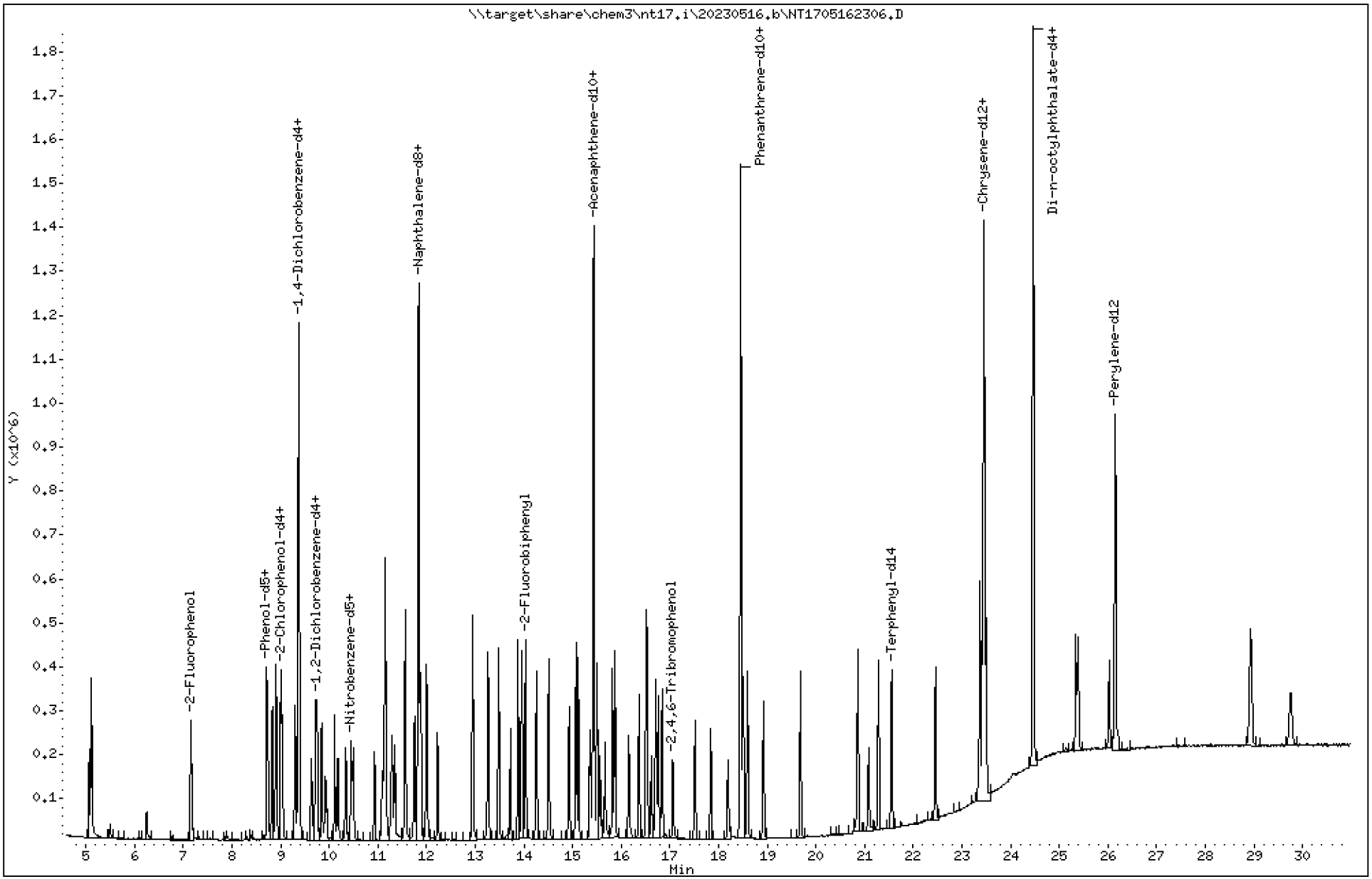




Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162306.D
Date : 16-MAY-2023 21:22
Client ID:
Sample Info: SLE0338-CAL3

Instrument: nt17.i
Operator: JGR
Column diameter: 0.25

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162306.D
Lab Smp Id: SLE0338-CAL3
Inj Date : 16-MAY-2023 21:22
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-CAL3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.160	7.161	(0.765)	150626	1.50000	1.580
$	2 Phenol-d5	99	8.715	8.715	(0.931)	197829	1.50000	1.568
	3 Phenol	94	8.740	8.740	(0.933)	142048	1.00000	1.063
$	5 2-Chlorophenol-d4	132	9.008	9.008	(0.962)	156257	1.50000	1.546
	4 Bis(2-Chloroethyl)ether	93	8.906	8.906	(0.951)	107601	1.00000	1.105
	6 2-Chlorophenol	128	9.033	9.033	(0.965)	125026	1.00000	1.121
	7 1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	119307	1.00000	1.057
*	8 1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	291199	4.00000	
	9 1,4-Dichlorobenzene	146	9.391	9.391	(1.003)	130960	1.00000	1.163
$	10 1,2-Dichlorobenzene-d4	152	9.723	9.723	(1.038)	74712	1.00000	1.052
	12 1,2-Dichlorobenzene	146	9.748	9.748	(1.041)	111502	1.00000	1.053
	11 Benzyl alcohol	108	9.633	9.633	(1.029)	65096	1.00000	1.046
	14 2,2'-oxybis(1-Chloropropane)	121	9.927	9.914	(1.060)	31734	1.00000	1.063
	13 2-Methylphenol	108	9.851	9.851	(1.052)	101485	1.00000	1.033
	17 Hexachloroethane	117	10.336	10.336	(1.104)	46561	1.00000	1.033
	16 N-Nitroso-di-n-propylamine	70	10.183	10.170	(1.087)	76879	1.00000	1.023
	15 4-Methylphenol	108	10.106	10.119	(1.079)	102638	1.00000	1.027
$	18 Nitrobenzene-d5	82	10.451	10.451	(0.883)	121519	1.00000	0.9982
	19 Nitrobenzene	77	10.489	10.489	(0.886)	118249	1.00000	1.018
	20 Isophorone	82	10.924	10.924	(0.922)	148076	1.00000	0.9314
	21 2-Nitrophenol	139	11.115	11.115	(0.939)	64667	1.00000	1.155
	22 2,4-Dimethylphenol	107	11.154	11.154	(0.942)	221940	2.00000	2.042
	23 Bis(2-Chloroethoxy)methane	93	11.345	11.345	(0.958)	99144	1.00000	1.017
	24 Benzoic acid	105	11.294	11.333	(0.954)	160098	4.00000	2.190
	25 2,4-Dichlorophenol	162	11.562	11.562	(0.976)	185125	2.00000	2.120
	26 1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	92154	1.00000	0.9717
*	27 Naphthalene-d8	136	11.842	11.830	(1.000)	1069618	4.00000	
	28 Naphthalene	128	11.881	11.881	(1.003)	294878	1.00000	1.002
	29 4-Chloroaniline	127	11.995	11.995	(1.013)	230913	2.00000	1.992
	30 Hexachlorobutadiene	225	12.225	12.225	(1.032)	45893	1.00000	0.9769
	31 4-Chloro-3-methylphenol	107	12.952	12.952	(1.094)	181698	2.00000	1.933
	32 2-Methylnaphthalene	142	13.258	13.258	(1.119)	208319	1.00000	0.9891
	33 Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	71798	2.00000	1.339

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.899)	112219	2.00000	1.860
	35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.904)	123387	2.00000	1.932
$	36	2-Fluorobiphenyl	172	14.036	14.036	(0.909)	226616	1.00000	0.9975
	37	2-Chloronaphthalene	162	14.252	14.253	(0.923)	183269	1.00000	0.9944
	38	2-Nitroaniline	65	14.508	14.508	(0.940)	123204	2.00000	1.974
	39	Dimethylphthalate	163	14.928	14.929	(0.967)	204711	1.00000	1.032
	40	Acenaphthylene	152	15.120	15.120	(0.979)	298557	1.00000	1.020
	41	2,6-Dinitrotoluene	165	15.069	15.069	(0.976)	88125	2.00000	1.897
*	42	Acenaphthene-d10	164	15.439	15.426	(1.000)	576693	4.00000	
	43	3-Nitroaniline	138	15.349	15.349	(0.994)	77793	2.00000	1.808
	44	Acenaphthene	153	15.502	15.502	(1.004)	183139	1.00000	1.001
	45	2,4-Dinitrophenol	184	15.566	15.567	(1.008)	52044	4.00000	1.853
	46	Dibenzofuran	168	15.821	15.821	(1.025)	252854	1.00000	0.9902
	47	4-Nitrophenol	109	15.668	15.681	(1.015)	47321	2.00000	1.656
	48	2,4-Dinitrotoluene	165	15.872	15.872	(1.028)	118415	2.00000	1.947
	50	Diethylphthalate	149	16.369	16.369	(1.060)	194206	1.00000	1.004
	49	Fluorene	166	16.535	16.535	(1.071)	259418	1.00000	1.069
	51	4-Chlorophenyl-phenylether	204	16.509	16.509	(1.069)	112856	1.00000	1.011
	52	4-Nitroaniline	138	16.611	16.611	(1.076)	79161	2.00000	1.944
	53	4,6-Dinitro-2-methylphenol	198	16.713	16.713	(0.905)	89315	4.00000	2.363
	54	N-Nitrosodiphenylamine	169	16.764	16.764	(0.908)	137289	1.00000	1.035
$	55	2,4,6-Tribromophenol	330	17.069	17.070	(1.106)	28123	1.50000	1.118
	56	4-Bromophenyl-phenylether	248	17.514	17.515	(0.949)	44072	1.00000	0.9482
	57	Hexachlorobenzene	284	17.833	17.833	(0.966)	44938	1.00000	0.9489
	58	Pentachlorophenol	266	18.190	18.203	(0.985)	32667	2.00000	1.185
*	59	Phenanthrene-d10	188	18.458	18.458	(1.000)	946973	4.00000	
	60	Phenanthrene	178	18.509	18.496	(1.003)	272263	1.00000	0.9853
	61	Anthracene	178	18.598	18.598	(1.008)	252759	1.00000	0.9743
	62	Carbazole	167	18.917	18.918	(1.025)	219389	1.00000	1.379
	63	Di-n-butylphthalate	149	19.682	19.682	(1.066)	308670	1.00000	0.9854
	64	Fluoranthene	202	20.855	20.855	(0.889)	267223	1.00000	1.001
	65	Pyrene	202	21.289	21.276	(0.908)	274283	1.00000	1.014
$	66	Terphenyl-d14	244	21.557	21.557	(0.919)	195402	1.00000	1.016
	67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	125222	1.00000	1.034
	68	Benzo(a)anthracene	228	23.419	23.419	(0.998)	210729	1.00000	1.003
*	69	Chrysene-d12	240	23.457	23.445	(1.000)	570480	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.368	23.369	(0.996)	154282	3.00000	3.749
	71	Chrysene	228	23.496	23.496	(1.002)	197638	1.00000	0.9998
	72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	167257	1.00000	1.015
*	134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1138779	4.00000	
	73	Di-n-octylphthalate	149	24.465	24.465	(1.000)	293359	1.00000	1.016
	74	Benzo(b)fluoranthene	252	25.345	25.345	(0.969)	204775	1.00000	1.004
	75	Benzo(k)fluoranthene	252	25.384	25.384	(0.971)	181685	1.00000	0.9432(H)
	76	Benzo(a)pyrene	252	26.022	26.022	(0.995)	151308	1.00000	0.9421
*	77	Perylene-d12	264	26.149	26.149	(1.000)	514255	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.933	28.933	(1.106)	178435	1.00000	0.9578
	79	Dibenzo(a,h)anthracene	278	28.933	28.946	(1.106)	150803	1.00000	0.9645
	80	Benzo(g,h,i)perylene	276	29.764	29.751	(1.138)	147554	1.00000	0.9596
	90	N-Nitrosodimethylamine	74	5.071	5.071	(0.542)	136266	2.00000	2.143
	91	Aniline	93	8.830	8.830	(0.943)	218299	2.00000	1.950
	93	Benzidine	184	21.085	21.085	(0.899)	119355	2.00000	1.788
	103	Pyridine	79	5.109	5.122	(0.546)	214158	2.00000	2.123
	105	1-methylnaphthalene	142	13.487	13.487	(1.139)	193001	1.00000	0.9878
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.840	16.840	(1.091)	233200	1.00000	1.032

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.345	25.384	(0.969)	354362	2.00000	1.936
120 2,3,4,6-Tetrachlorophenol	232	16.152	16.152	(1.046)	51169	1.00000	0.7088

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162306.D
Lab Smp Id: SLE0338-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	291199	1.44
27 Naphthalene-d8	1056758	528379	2113516	1069618	1.22
42 Acenaphthene-d10	587510	293755	1175020	576693	-1.84
59 Phenanthrene-d10	933575	466788	1867150	946973	1.44
69 Chrysene-d12	576570	288285	1153140	570480	-1.06
134 Di-n-octylphthala	1181651	590826	2363302	1138779	-3.63
77 Perylene-d12	491359	245680	982718	514255	4.66

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	-0.00
77 Perylene-d12	26.15	25.65	26.65	26.15	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162306.D

Lab ID: SLE0338-CAL3
nt17.i, ABN.m, 16-MAY-2023 21:22

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.008	0.000	1.0083	2,4-Dinitrophenol

RRT check based on Ccal File: NT1705162308.D

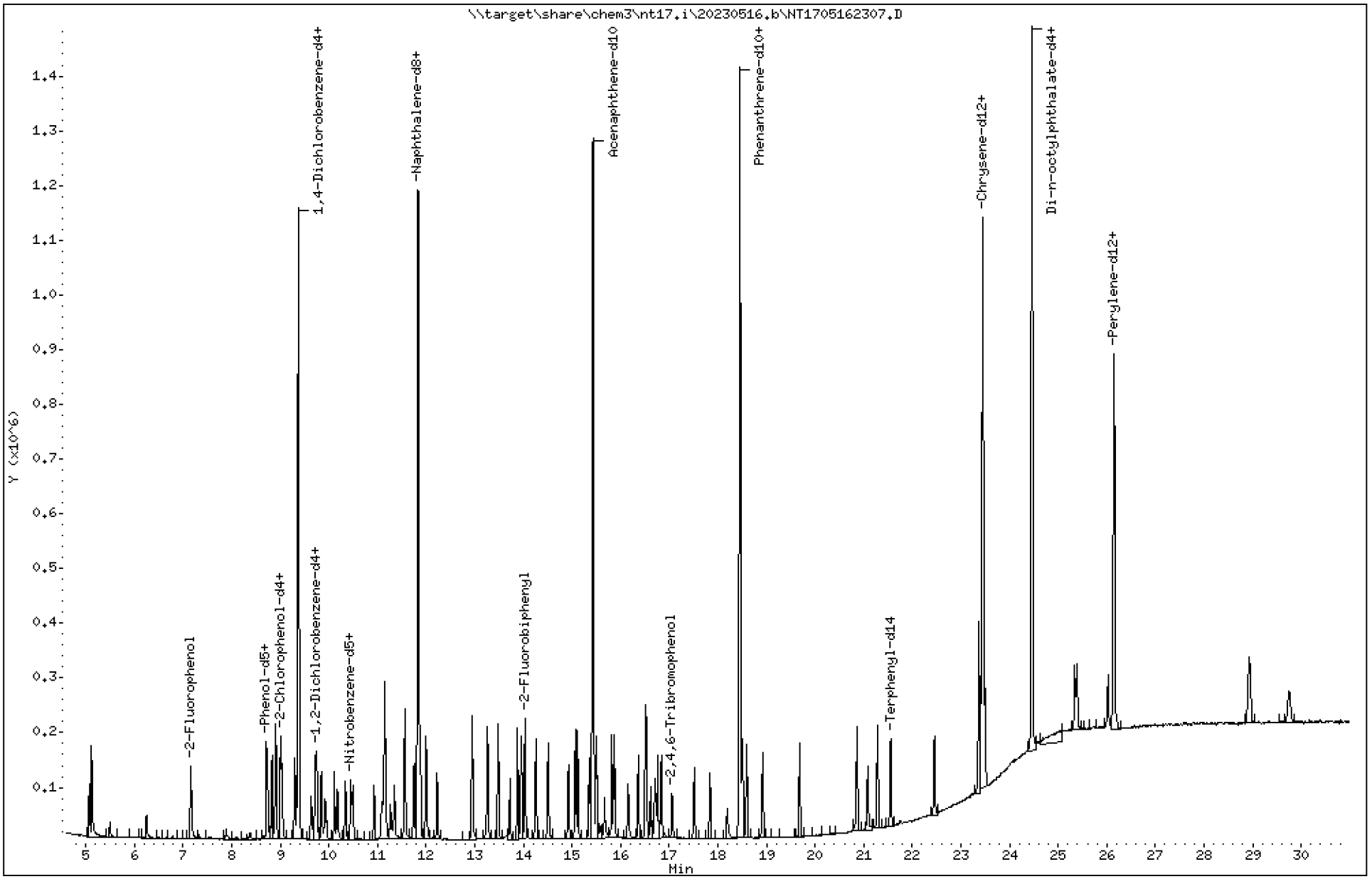
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162307.D
Date : 16-MAY-2023 21:59
Client ID:
Sample Info: SLE0338-CAL2

Instrument: nt17.i
Operator: JGR
Column diameter: 0.25

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162307.D
Lab Smp Id: SLE0338-CAL2
Inj Date : 16-MAY-2023 21:59
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-CAL2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 7 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	7.161	7.161	(0.765)	69886	0.75000	0.6587
$	2	Phenol-d5	99	8.715	8.715	(0.931)	94980	0.75000	0.6765
	3	Phenol	94	8.740	8.740	(0.933)	66525	0.50000	0.4473
$	5	2-Chlorophenol-d4	132	9.008	9.008	(0.962)	76948	0.75000	0.6842
	4	Bis(2-Chloroethyl)ether	93	8.906	8.906	(0.951)	52481	0.50000	0.4841
	6	2-Chlorophenol	128	9.033	9.033	(0.965)	61095	0.50000	0.4919
	7	1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	59422	0.50000	0.4728
*	8	1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	324107	4.00000	
	9	1,4-Dichlorobenzene	146	9.391	9.391	(1.003)	66070	0.50000	0.5271
$	10	1,2-Dichlorobenzene-d4	152	9.723	9.723	(1.038)	35331	0.50000	0.4470
	12	1,2-Dichlorobenzene	146	9.748	9.748	(1.041)	54209	0.50000	0.4600
	11	Benzyl alcohol	108	9.633	9.633	(1.029)	29784	0.50000	0.4302
	14	2,2'-oxybis(1-Chloropropane)	121	9.915	9.914	(1.059)	14940	0.50000	0.4498
	13	2-Methylphenol	108	9.851	9.851	(1.052)	49134	0.50000	0.4495
	17	Hexachloroethane	117	10.336	10.336	(1.104)	23009	0.50000	0.4589
	16	N-Nitroso-di-n-propylamine	70	10.170	10.170	(1.086)	37780	0.50000	0.4518
	15	4-Methylphenol	108	10.106	10.119	(1.079)	47913	0.50000	0.4305
$	18	Nitrobenzene-d5	82	10.451	10.451	(0.883)	58799	0.50000	0.4975
	19	Nitrobenzene	77	10.489	10.489	(0.886)	57280	0.50000	0.5079
	20	Isophorone	82	10.924	10.924	(0.922)	82574	0.50000	0.5349
	21	2-Nitrophenol	139	11.115	11.115	(0.939)	24199	0.50000	0.4453
	22	2,4-Dimethylphenol	107	11.154	11.154	(0.942)	106712	1.00000	1.011
	23	Bis(2-Chloroethoxy)methane	93	11.345	11.345	(0.958)	45556	0.50000	0.4815
	24	Benzoic acid	105	11.269	11.333	(0.952)	41266	2.00000	0.5814
	25	2,4-Dichlorophenol	162	11.562	11.562	(0.976)	88888	1.00000	1.048
	26	1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	46211	0.50000	0.5019
*	27	Naphthalene-d8	136	11.843	11.830	(1.000)	1038534	4.00000	
	28	Naphthalene	128	11.881	11.881	(1.003)	145318	0.50000	0.5088
	29	4-Chloroaniline	127	11.995	11.995	(1.013)	110561	1.00000	0.9821
	30	Hexachlorobutadiene	225	12.225	12.225	(1.032)	22415	0.50000	0.4914
	31	4-Chloro-3-methylphenol	107	12.952	12.952	(1.094)	82140	1.00000	0.8998
	32	2-Methylnaphthalene	142	13.258	13.258	(1.119)	97434	0.50000	0.4765
	33	Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	29375	1.00000	0.5763

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.899)	51299	1.00000	0.8944
	35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.904)	54353	1.00000	0.8952
$	36	2-Fluorobiphenyl	172	14.036	14.036	(0.909)	108347	0.50000	0.5017
	37	2-Chloronaphthalene	162	14.253	14.253	(0.923)	86887	0.50000	0.4959
	38	2-Nitroaniline	65	14.508	14.508	(0.940)	54591	1.00000	0.9201
	39	Dimethylphthalate	163	14.929	14.929	(0.967)	96298	0.50000	0.5106
	40	Acenaphthylene	152	15.120	15.120	(0.979)	141088	0.50000	0.5071
	41	2,6-Dinitrotoluene	165	15.069	15.069	(0.976)	40863	1.00000	0.9254
*	42	Acenaphthene-d10	164	15.439	15.426	(1.000)	548179	4.00000	
	43	3-Nitroaniline	138	15.349	15.349	(0.994)	38197	1.00000	0.9339
	44	Acenaphthene	153	15.502	15.502	(1.004)	86590	0.50000	0.4979
	45	2,4-Dinitrophenol	184	15.566	15.567	(1.008)	7725	2.00000	0.2902
	46	Dibenzofuran	168	15.821	15.821	(1.025)	120379	0.50000	0.4959
	47	4-Nitrophenol	109	15.668	15.681	(1.015)	17887	1.00000	0.6584
	48	2,4-Dinitrotoluene	165	15.872	15.872	(1.028)	49338	1.00000	0.8535
	50	Diethylphthalate	149	16.369	16.369	(1.060)	89215	0.50000	0.4850
	49	Fluorene	166	16.535	16.535	(1.071)	122616	0.50000	0.5313
	51	4-Chlorophenyl-phenylether	204	16.509	16.509	(1.069)	53751	0.50000	0.5066
	52	4-Nitroaniline	138	16.611	16.611	(1.076)	32376	1.00000	0.8363
	53	4,6-Dinitro-2-methylphenol	198	16.713	16.713	(0.905)	30618	2.00000	0.8639
	54	N-Nitrosodiphenylamine	169	16.764	16.764	(0.908)	64129	0.50000	0.5155
$	55	2,4,6-Tribromophenol	330	17.069	17.070	(1.106)	12283	0.75000	0.5137
	56	4-Bromophenyl-phenylether	248	17.515	17.515	(0.949)	21041	0.50000	0.4827
	57	Hexachlorobenzene	284	17.833	17.833	(0.966)	21923	0.50000	0.4936
	58	Pentachlorophenol	266	18.190	18.203	(0.985)	12002	1.00000	0.4656
*	59	Phenanthrene-d10	188	18.458	18.458	(1.000)	888076	4.00000	
	60	Phenanthrene	178	18.509	18.496	(1.003)	129729	0.50000	0.5006
	61	Anthracene	178	18.598	18.598	(1.008)	115970	0.50000	0.4767
	62	Carbazole	167	18.917	18.918	(1.025)	109506	0.50000	0.7390
	63	Di-n-butylphthalate	149	19.682	19.682	(1.066)	137613	0.50000	0.4685
	64	Fluoranthene	202	20.855	20.855	(0.890)	121498	0.50000	0.4955
	65	Pyrene	202	21.276	21.276	(0.908)	125778	0.50000	0.5060
$	66	Terphenyl-d14	244	21.557	21.557	(0.919)	87757	0.50000	0.4967
	67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	55058	0.50000	0.4949
	68	Benzo(a)anthracene	228	23.419	23.419	(0.999)	98387	0.50000	0.5097
*	69	Chrysene-d12	240	23.445	23.445	(1.000)	524160	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.368	23.369	(0.997)	85571	1.50000	2.277
	71	Chrysene	228	23.496	23.496	(1.002)	93467	0.50000	0.5146
	72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.960)	75756	0.50000	0.5066
*	134	Di-n-octylphthalate-d4	153	24.453	24.465	(1.000)	1033662	4.00000	
	73	Di-n-octylphthalate	149	24.465	24.465	(1.001)	134972	0.50000	0.5151
	74	Benzo(b)fluoranthene	252	25.345	25.345	(0.969)	95464	0.50000	0.4995
	75	Benzo(k)fluoranthene	252	25.384	25.384	(0.971)	82601	0.50000	0.4574(H)
	76	Benzo(a)pyrene	252	26.022	26.022	(0.995)	73696	0.50000	0.4895
*	77	Perylene-d12	264	26.149	26.149	(1.000)	482063	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.933	28.933	(1.106)	84850	0.50000	0.4859
	79	Dibenzo(a,h)anthracene	278	28.933	28.946	(1.106)	71004	0.50000	0.4844
	80	Benzo(g,h,i)perylene	276	29.751	29.751	(1.138)	71128	0.50000	0.4935
	90	N-Nitrosodimethylamine	74	5.071	5.071	(0.542)	63273	1.00000	0.8941
	91	Aniline	93	8.830	8.830	(0.943)	107499	1.00000	0.8626
	93	Benzidine	184	21.085	21.085	(0.899)	73568	1.00000	1.203
	103	Pyridine	79	5.110	5.122	(0.546)	107114	1.00000	0.9542
	105	1-methylnaphthalene	142	13.487	13.487	(1.139)	93622	0.50000	0.4935
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.840	16.840	(1.091)	107419	0.50000	0.5003

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.345	25.384	(0.969)	166211	1.00000	0.9688
120 2,3,4,6-Tetrachlorophenol	232	16.152	16.152	(1.046)	21645	0.50000	0.3154

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162307.D
Lab Smp Id: SLE0338-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	324107	12.90
27 Naphthalene-d8	1056758	528379	2113516	1038534	-1.72
42 Acenaphthene-d10	587510	293755	1175020	548179	-6.69
59 Phenanthrene-d10	933575	466788	1867150	888076	-4.87
69 Chrysene-d12	576570	288285	1153140	524160	-9.09
134 Di-n-octylphthala	1181651	590826	2363302	1033662	-12.52
77 Perylene-d12	491359	245680	982718	482063	-1.89

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	0.00
69 Chrysene-d12	23.46	22.96	23.96	23.45	-0.05
134 Di-n-octylphthala	24.47	23.97	24.97	24.45	-0.05
77 Perylene-d12	26.15	25.65	26.65	26.15	0.00

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

REVIEW SUMMARY FOR FILE - NT1705162307.D

Lab ID: SLE0338-CAL2
nt17.i, ABN.m, 16-MAY-2023 21:59

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.958	-0.0064	Benzoic acid
1.008	0.000	1.0083	2,4-Dinitrophenol

RRT check based on Ccal File: NT1705162308.D

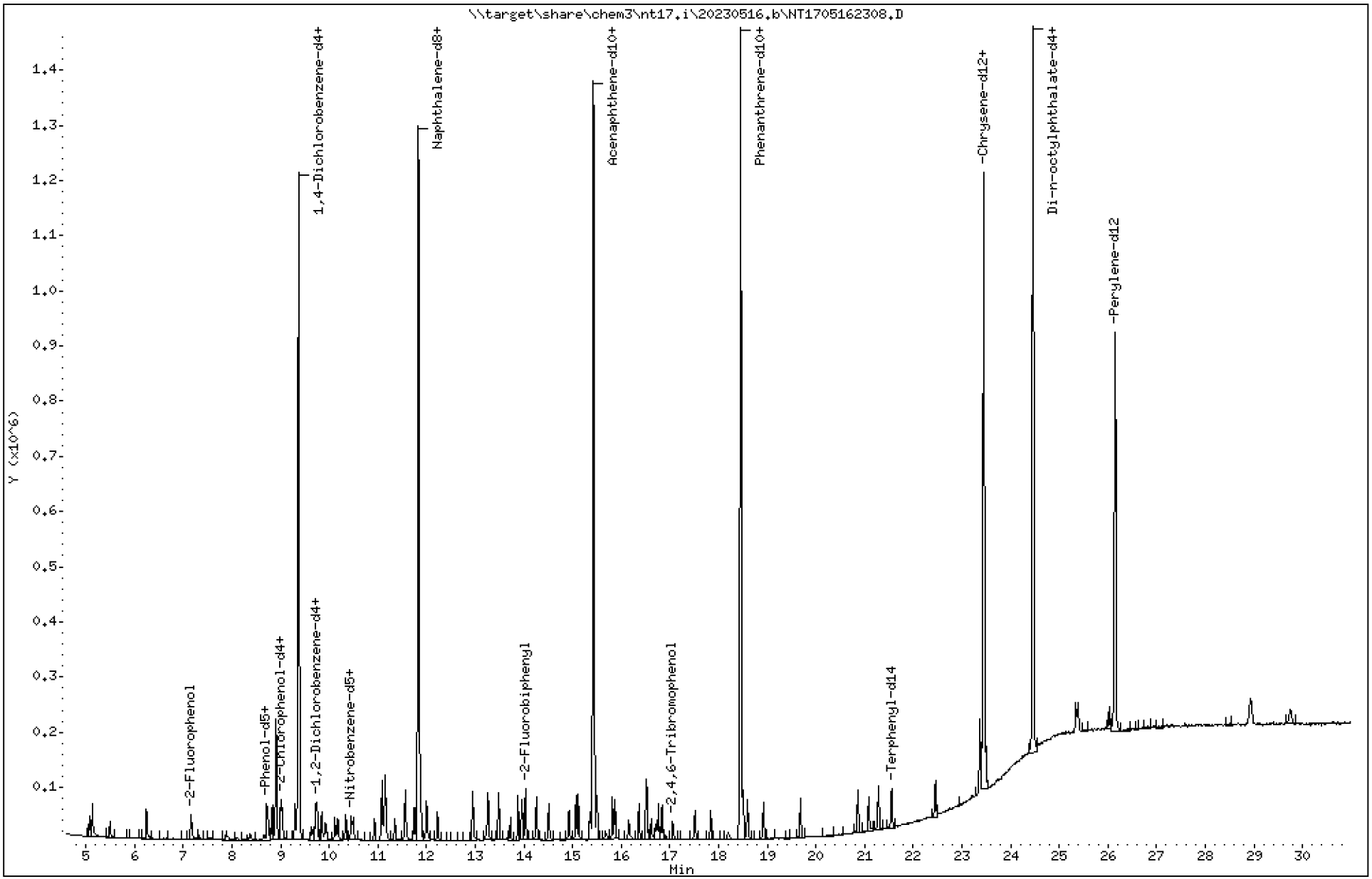
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162308.D
Date : 16-MAY-2023 22:37
Client ID:
Sample Info: SLE0338-CAL1

Instrument: nt17.i
Operator: JGR
Column diameter: 0.25

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162308.D
Lab Smp Id: SLE0338-CAL1
Inj Date : 16-MAY-2023 22:37
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-CAL1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.161	7.161	(0.765)	27028	0.30000	0.2418
$	2 Phenol-d5	99	8.715	8.715	(0.931)	37831	0.30000	0.2557
	3 Phenol	94	8.740	8.740	(0.933)	25873	0.20000	0.1651
$	5 2-Chlorophenol-d4	132	9.008	9.008	(0.962)	31881	0.30000	0.2691
	4 Bis(2-Chloroethyl)ether	93	8.906	8.906	(0.951)	22277	0.20000	0.1950
	6 2-Chlorophenol	128	9.033	9.033	(0.965)	25602	0.20000	0.1957
	7 1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	25672	0.20000	0.1939
*	8 1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	341484	4.00000	
	9 1,4-Dichlorobenzene	146	9.391	9.391	(1.003)	24115	0.20000	0.1826
$	10 1,2-Dichlorobenzene-d4	152	9.723	9.723	(1.038)	15031	0.20000	0.1805
	12 1,2-Dichlorobenzene	146	9.748	9.748	(1.041)	22875	0.20000	0.1842
	11 Benzyl alcohol	108	9.633	9.633	(1.029)	11971	0.20000	0.1641
	14 2,2'-oxybis(1-Chloropropane)	121	9.914	9.914	(1.059)	6536	0.20000	0.1868
	13 2-Methylphenol	108	9.851	9.851	(1.052)	19720	0.20000	0.1712
	17 Hexachloroethane	117	10.336	10.336	(1.104)	9447	0.20000	0.1788
	16 N-Nitroso-di-n-propylamine	70	10.170	10.170	(1.086)	15752	0.20000	0.1788
	15 4-Methylphenol	108	10.119	10.119	(1.080)	19940	0.20000	0.1701
$	18 Nitrobenzene-d5	82	10.451	10.451	(0.883)	23337	0.20000	0.1873
	19 Nitrobenzene	77	10.489	10.489	(0.887)	22227	0.20000	0.1870
	20 Isophorone	82	10.924	10.924	(0.923)	28856	0.20000	0.1773
	21 2-Nitrophenol	139	11.115	11.115	(0.940)	8750	0.20000	0.1527
	22 2,4-Dimethylphenol	107	11.154	11.154	(0.943)	42572	0.40000	0.3828
	23 Bis(2-Chloroethoxy)methane	93	11.345	11.345	(0.959)	19965	0.20000	0.2002
	24 Benzoic acid	105	11.332	11.333	(0.958)	10264	0.80000	0.1372(M)
	25 2,4-Dichlorophenol	162	11.562	11.562	(0.977)	35162	0.40000	0.3934
	26 1,2,4-Trichlorobenzene	180	11.753	11.753	(0.994)	19725	0.20000	0.2032
*	27 Naphthalene-d8	136	11.830	11.830	(1.000)	1094850	4.00000	
	28 Naphthalene	128	11.881	11.881	(1.004)	60831	0.20000	0.2020
	29 4-Chloroaniline	127	11.995	11.995	(1.014)	44419	0.40000	0.3743
	30 Hexachlorobutadiene	225	12.225	12.225	(1.033)	9342	0.20000	0.1943
	31 4-Chloro-3-methylphenol	107	12.952	12.952	(1.095)	32908	0.40000	0.3419
	32 2-Methylnaphthalene	142	13.258	13.258	(1.121)	42140	0.20000	0.1955
	33 Hexachlorocyclopentadiene	237	13.730	13.730	(0.890)	9893	0.40000	0.1835

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.900)	19996	0.40000	0.3296
	35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.905)	20986	0.40000	0.3268
$	36	2-Fluorobiphenyl	172	14.036	14.036	(0.910)	45673	0.20000	0.1999
	37	2-Chloronaphthalene	162	14.253	14.253	(0.924)	37466	0.20000	0.2022
	38	2-Nitroaniline	65	14.508	14.508	(0.940)	19399	0.40000	0.3091
	39	Dimethylphthalate	163	14.929	14.929	(0.968)	40042	0.20000	0.2007
	40	Acenaphthylene	152	15.120	15.120	(0.980)	59033	0.20000	0.2006
	41	2,6-Dinitrotoluene	165	15.069	15.069	(0.977)	16463	0.40000	0.3524
*	42	Acenaphthene-d10	164	15.426	15.426	(1.000)	579868	4.00000	
	43	3-Nitroaniline	138	15.349	15.349	(0.995)	14982	0.40000	0.3463
	44	Acenaphthene	153	15.502	15.502	(1.005)	36099	0.20000	0.1962
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.821	15.821	(1.026)	51523	0.20000	0.2007
	47	4-Nitrophenol	109	15.681	15.681	(1.017)	5047	0.40000	0.1756
	48	2,4-Dinitrotoluene	165	15.872	15.872	(1.029)	19047	0.40000	0.3115
	50	Diethylphthalate	149	16.369	16.369	(1.061)	37772	0.20000	0.1941
	49	Fluorene	166	16.535	16.535	(1.072)	40483	0.20000	0.1658
	51	4-Chlorophenyl-phenylether	204	16.509	16.509	(1.070)	22836	0.20000	0.2035
	52	4-Nitroaniline	138	16.611	16.611	(1.077)	13985	0.40000	0.3415
	53	4,6-Dinitro-2-methylphenol	198	16.713	16.713	(0.905)	7965	0.80000	0.2103
	54	N-Nitrosodiphenylamine	169	16.764	16.764	(0.908)	26692	0.20000	0.2008
$	55	2,4,6-Tribromophenol	330	17.069	17.070	(1.107)	4749	0.30000	0.1878
	56	4-Bromophenyl-phenylether	248	17.515	17.515	(0.949)	8736	0.20000	0.1876
	57	Hexachlorobenzene	284	17.833	17.833	(0.966)	9448	0.20000	0.1991
	58	Pentachlorophenol	266	18.203	18.203	(0.986)	3229	0.40000	0.1174
*	59	Phenanthrene-d10	188	18.458	18.458	(1.000)	948879	4.00000	
	60	Phenanthrene	178	18.496	18.496	(1.002)	54331	0.20000	0.1962
	61	Anthracene	178	18.598	18.598	(1.008)	47680	0.20000	0.1834
	62	Carbazole	167	18.917	18.918	(1.025)	45854	0.20000	0.2910
	63	Di-n-butylphthalate	149	19.682	19.682	(1.066)	56086	0.20000	0.1787
	64	Fluoranthene	202	20.855	20.855	(0.890)	49545	0.20000	0.1878
	65	Pyrene	202	21.276	21.276	(0.908)	52513	0.20000	0.1963
$	66	Terphenyl-d14	244	21.557	21.557	(0.919)	38669	0.20000	0.2033
	67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	22316	0.20000	0.1864
	68	Benzo(a)anthracene	228	23.419	23.419	(0.999)	42397	0.20000	0.2041
*	69	Chrysene-d12	240	23.445	23.445	(1.000)	564132	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.368	23.369	(0.997)	37419	0.60000	0.9301
	71	Chrysene	228	23.496	23.496	(1.002)	39277	0.20000	0.2009
	72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	30013	0.20000	0.1884
*	134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1101082	4.00000	
	73	Di-n-octylphthalate	149	24.465	24.465	(1.000)	58994	0.20000	0.2114
	74	Benzo(b)fluoranthene	252	25.345	25.345	(0.969)	42335	0.20000	0.2116
	75	Benzo(k)fluoranthene	252	25.384	25.384	(0.971)	36348	0.20000	0.1923(H)
	76	Benzo(a)pyrene	252	26.022	26.022	(0.995)	32521	0.20000	0.2064
*	77	Perylene-d12	264	26.149	26.149	(1.000)	504570	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.933	28.933	(1.106)	35590	0.20000	0.1947
	79	Dibenzo(a,h)anthracene	278	28.946	28.946	(1.107)	29300	0.20000	0.1910
	80	Benzo(g,h,i)perylene	276	29.751	29.751	(1.138)	29266	0.20000	0.1940
	90	N-Nitrosodimethylamine	74	5.071	5.071	(0.542)	25862	0.40000	0.3468
	91	Aniline	93	8.830	8.830	(0.943)	44414	0.40000	0.3383
	93	Benzidine	184	21.085	21.085	(0.899)	38219	0.40000	0.5829
	103	Pyridine	79	5.122	5.122	(0.547)	43973	0.40000	0.3718
	105	1-methylnaphthalene	142	13.487	13.487	(1.140)	39142	0.20000	0.1957
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.840	16.840	(1.092)	42979	0.20000	0.1892

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.384	25.384	(0.971)	70076	0.40000	0.3902
120 2,3,4,6-Tetrachlorophenol	232	16.152	16.152	(1.047)	8430	0.20000	0.1161

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162308.D
Lab Smp Id: SLE0338-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	341484	18.95
27 Naphthalene-d8	1056758	528379	2113516	1094850	3.60
42 Acenaphthene-d10	587510	293755	1175020	579868	-1.30
59 Phenanthrene-d10	933575	466788	1867150	948879	1.64
69 Chrysene-d12	576570	288285	1153140	564132	-2.16
134 Di-n-octylphthala	1181651	590826	2363302	1101082	-6.82
77 Perylene-d12	491359	245680	982718	504570	2.69

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.83	-0.11
42 Acenaphthene-d10	15.44	14.94	15.94	15.43	-0.08
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.45	-0.05
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	-0.00
77 Perylene-d12	26.15	25.65	26.65	26.15	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162308.D

Lab ID: SLE0338-CAL1
nt17.i, ABN.m, 16-MAY-2023 22:37

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

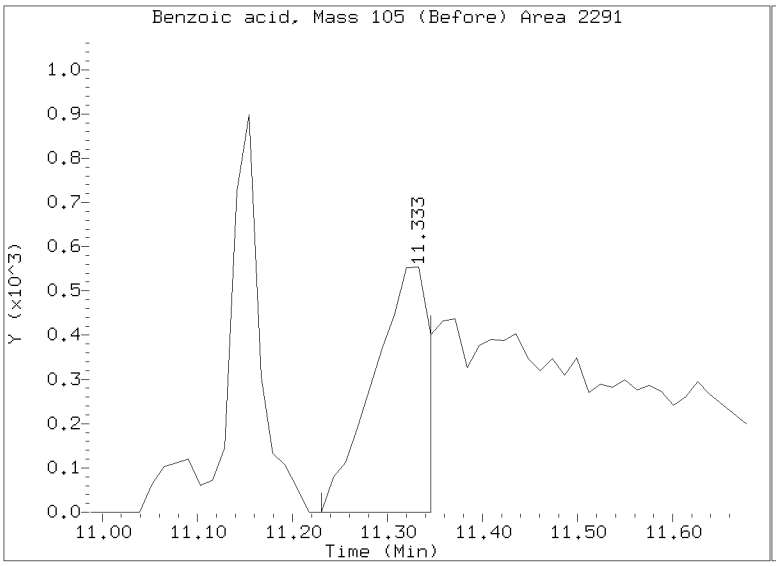
RRT check based on Ccal File: NT1705162308.D

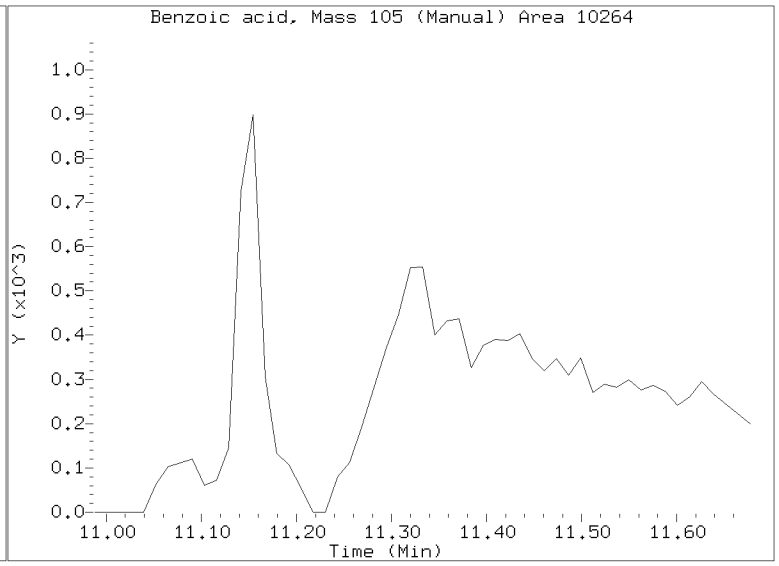
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/NT1705162308.D
Injection Date: 16-MAY-2023 22:37
Lab ID:SLE0338-CAL1 Client ID:
Report Date: 05/20/2023 12:56





Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

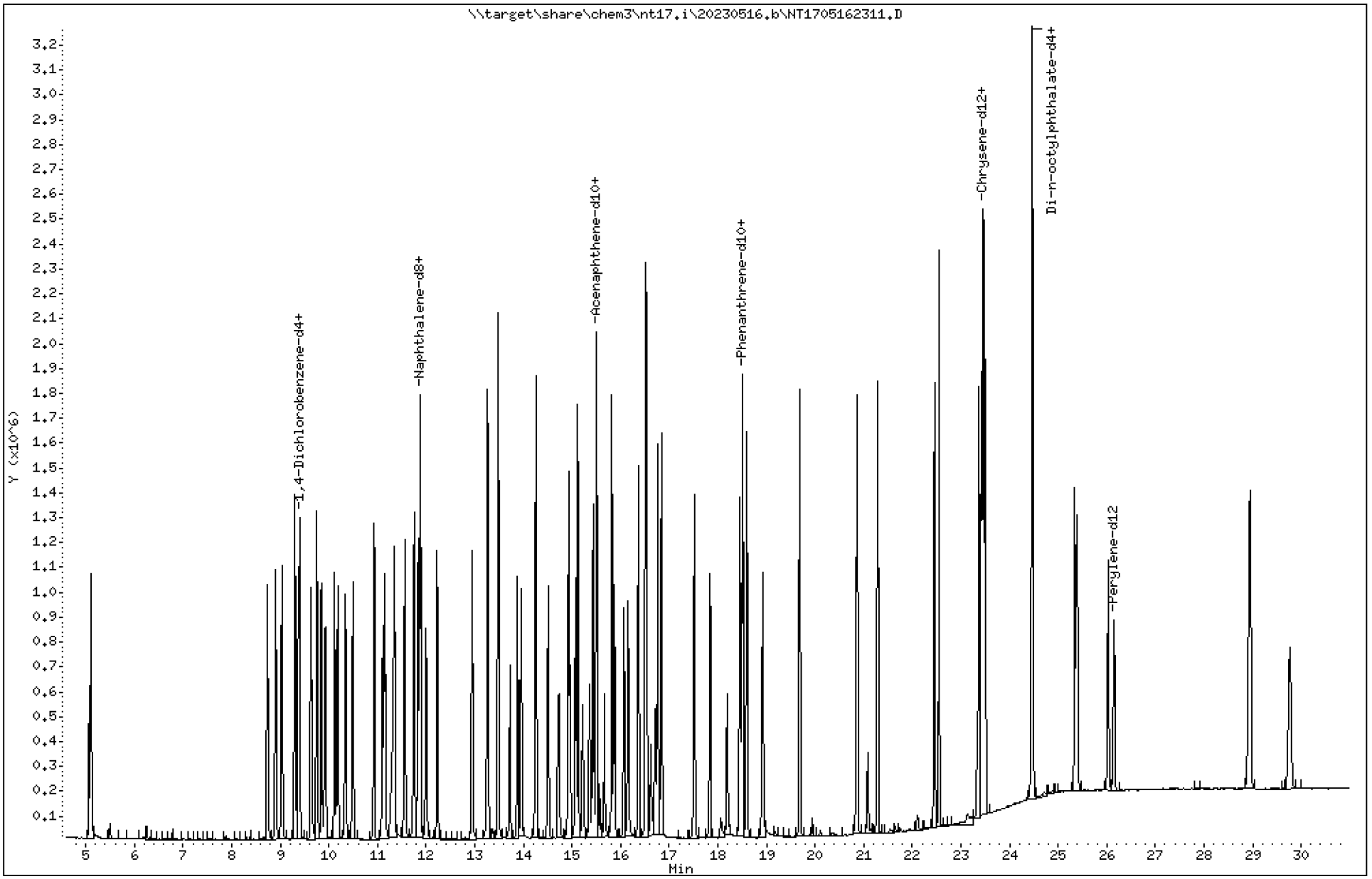
Sample Info: SLE0338-SCV1

Column phase: ZB-5msi

Instrument: nt17.i

Operator: JGR

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

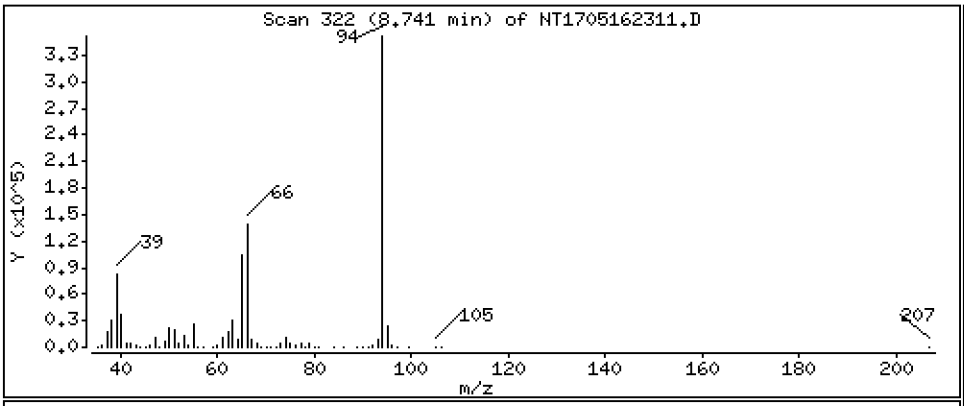
Operator: JGR

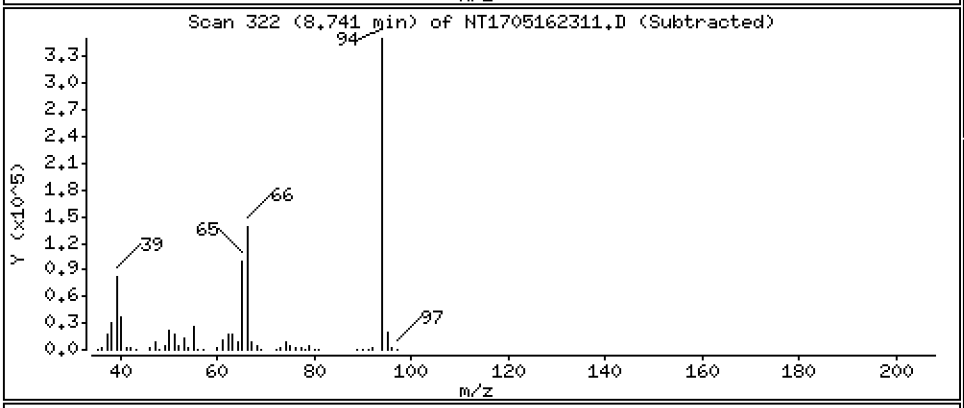
Column phase: ZB-5msi

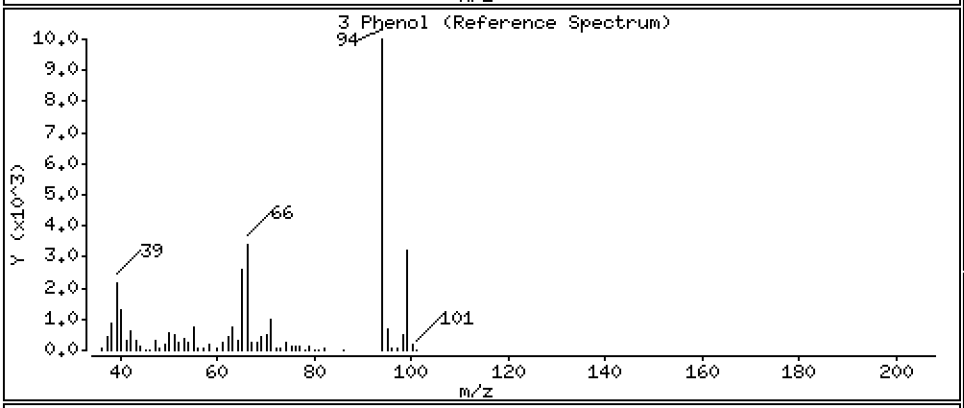
Column diameter: 0.25

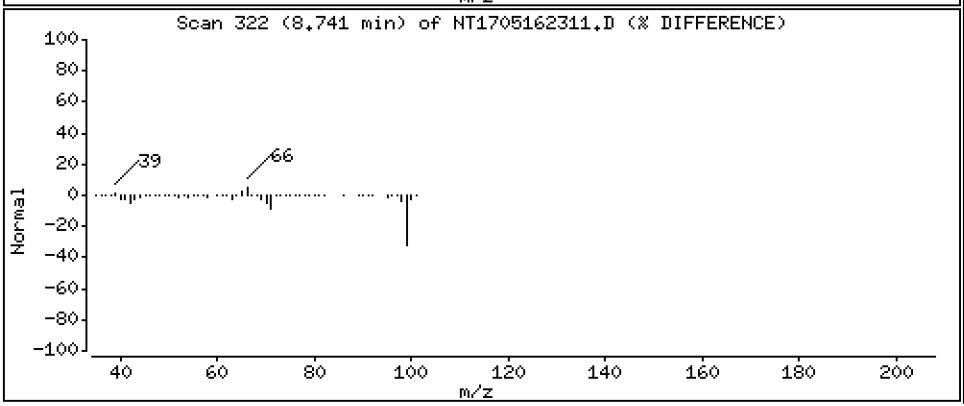
3 Phenol

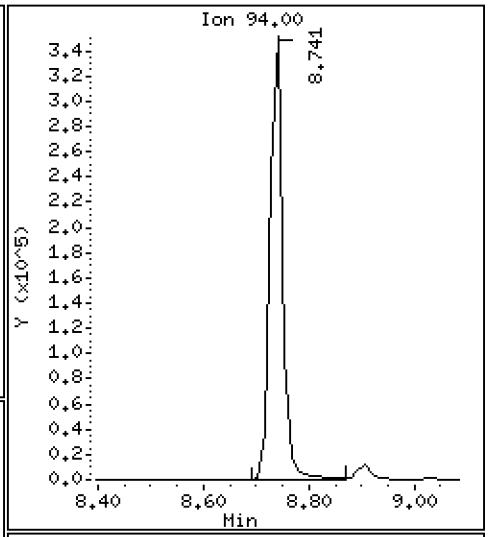
Concentration: 4.823 ug/mL

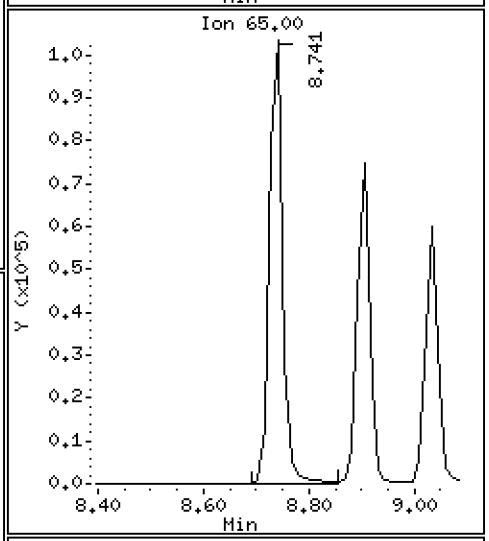


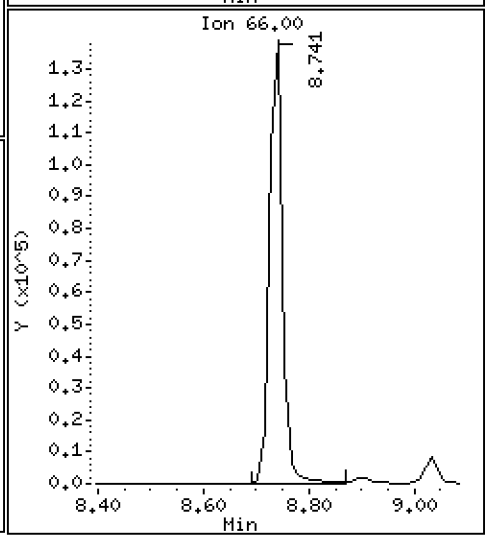












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

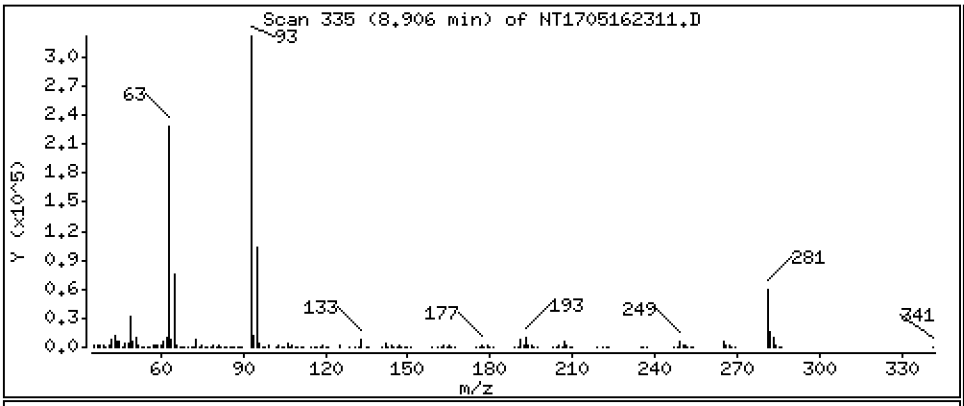
Operator: JGR

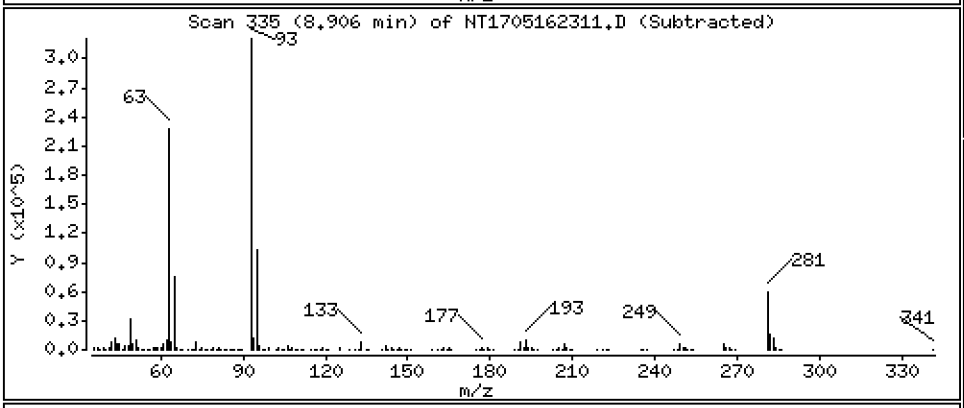
Column phase: ZB-5msi

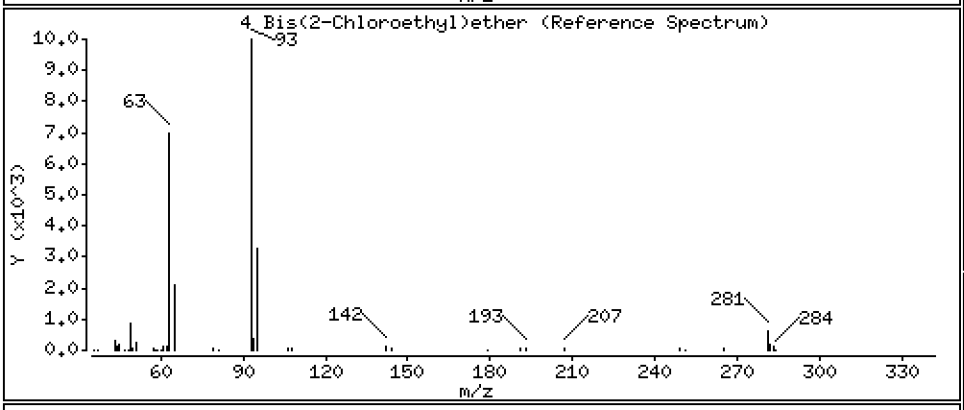
Column diameter: 0.25

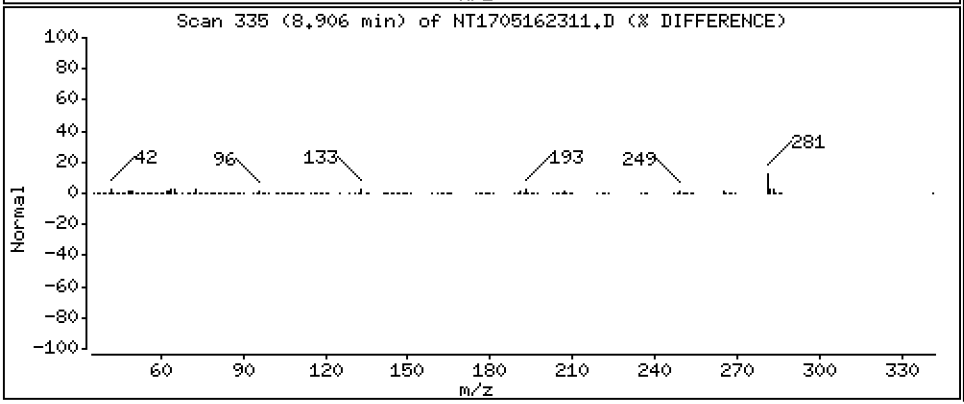
4 Bis(2-Chloroethyl)ether

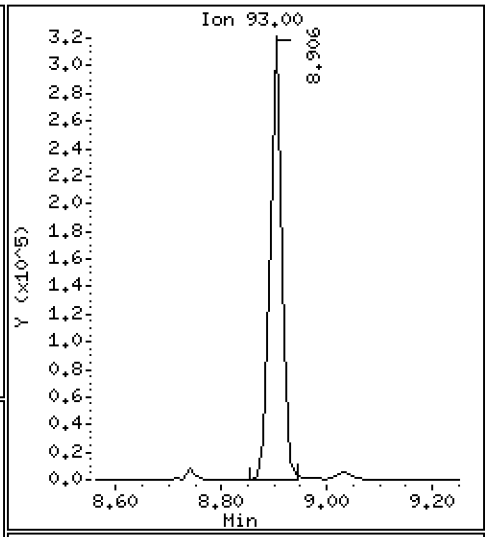
Concentration: 5.566 ug/mL

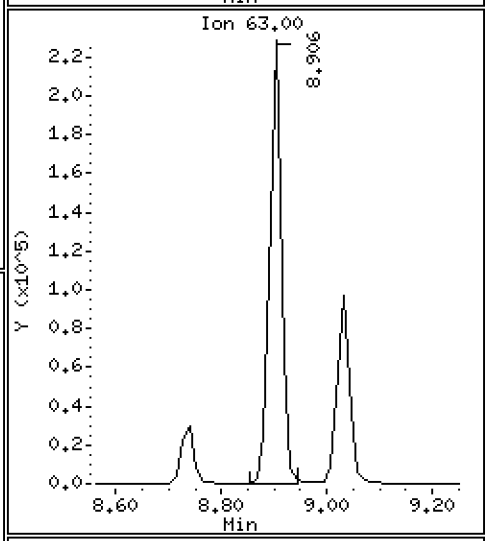


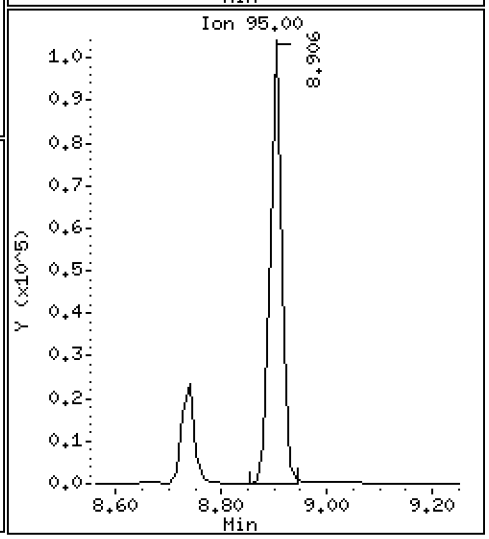












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

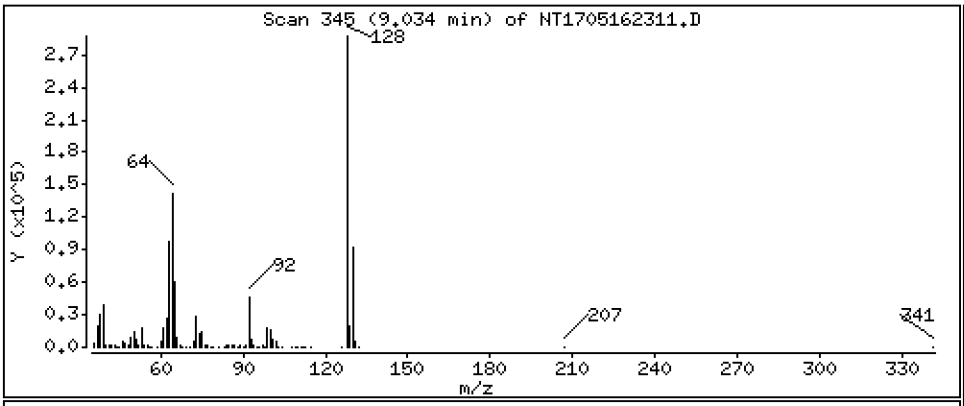
Operator: JGR

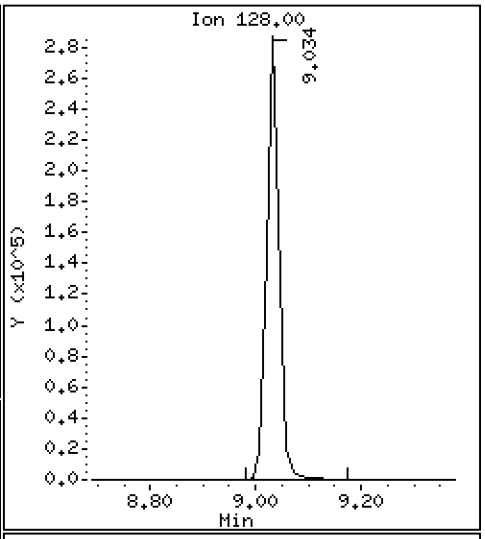
Column phase: ZB-5msi

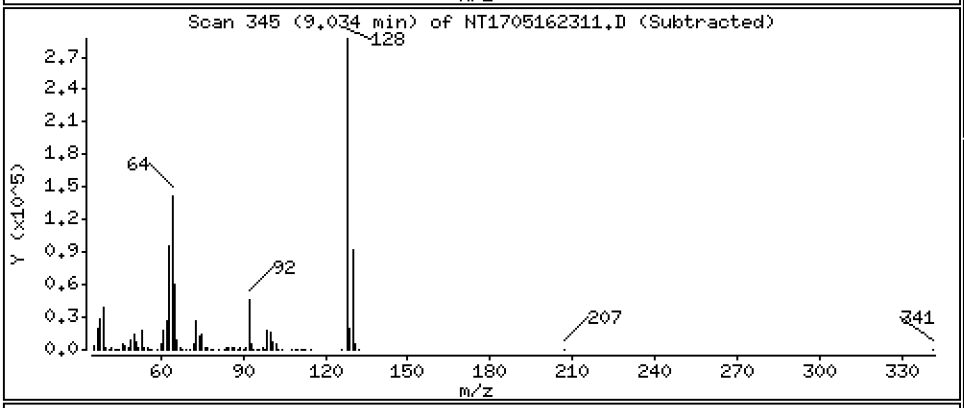
Column diameter: 0.25

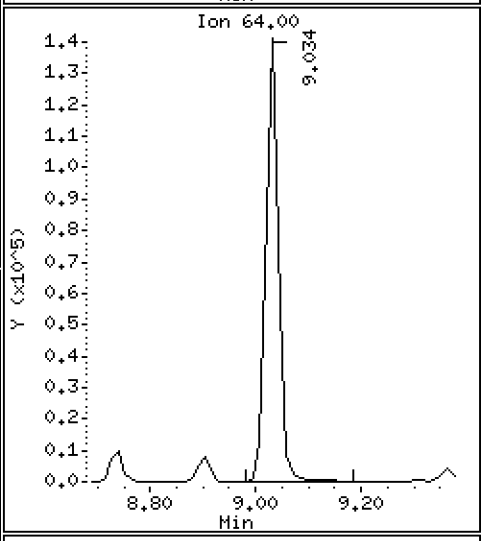
6 2-Chlorophenol

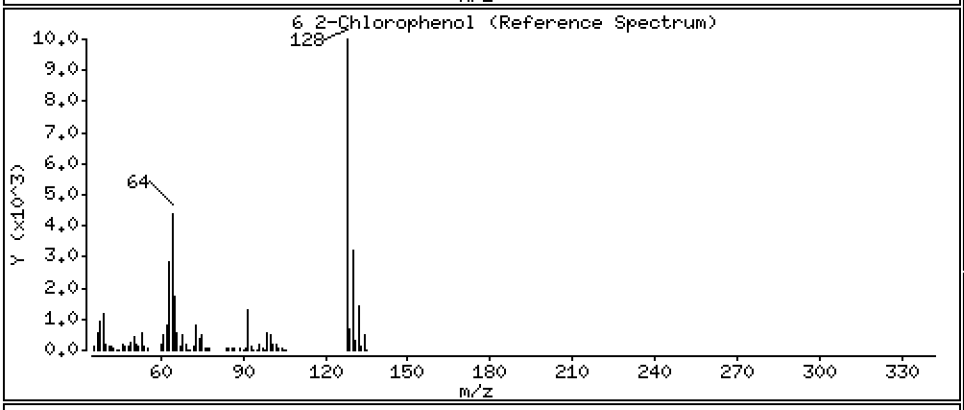
Concentration: 5.294 ug/mL

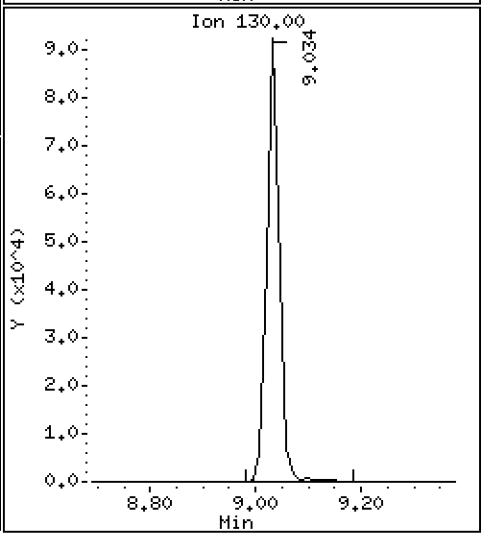


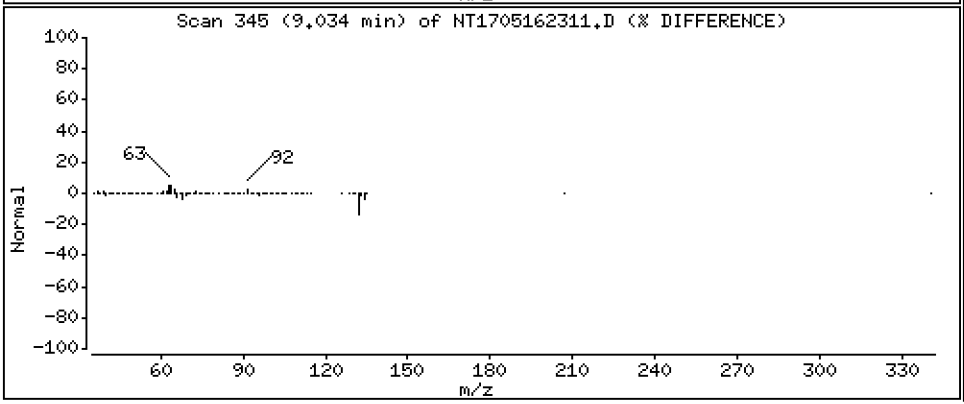












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

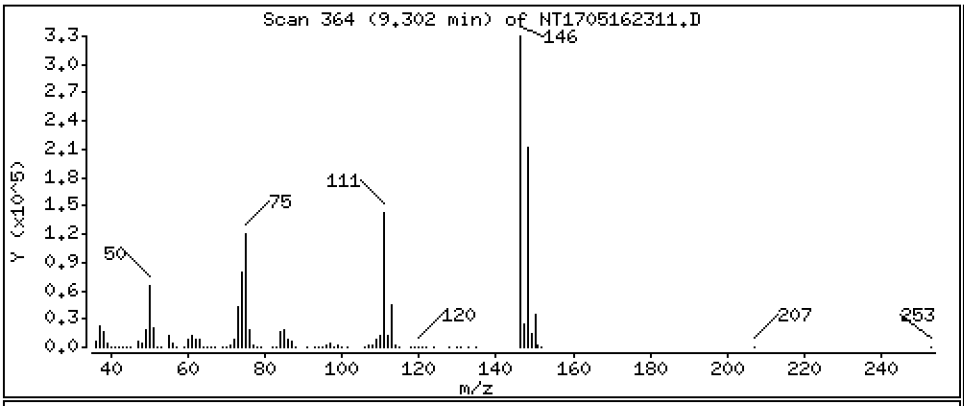
Operator: JGR

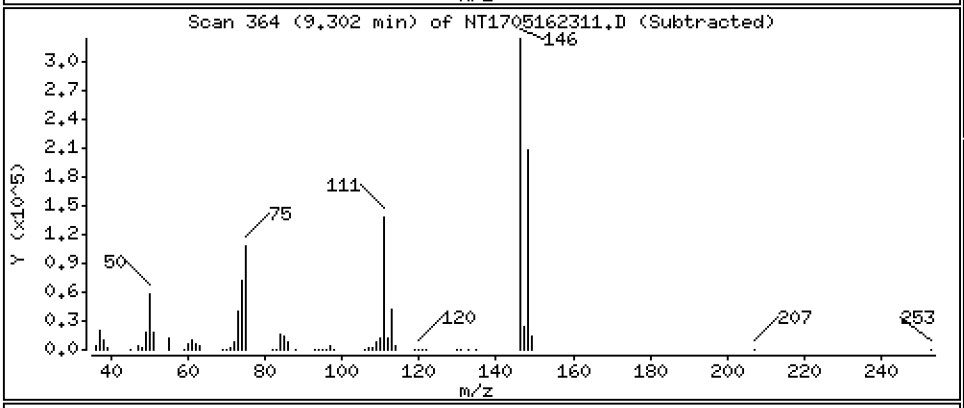
Column phase: ZB-5msi

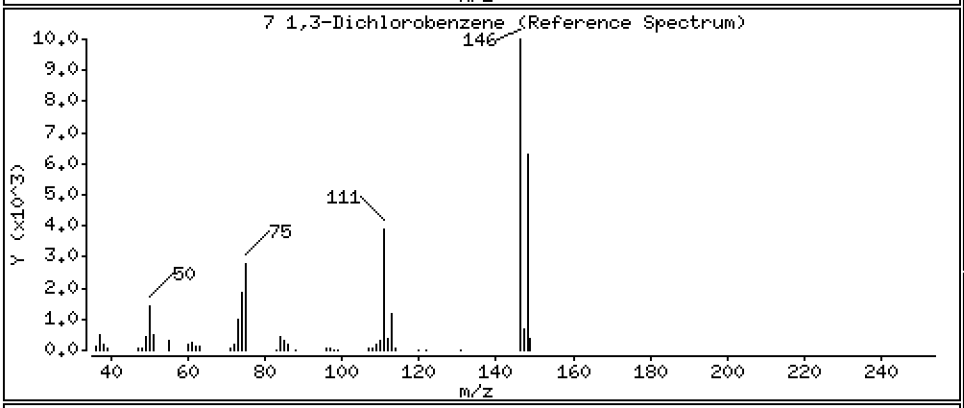
Column diameter: 0.25

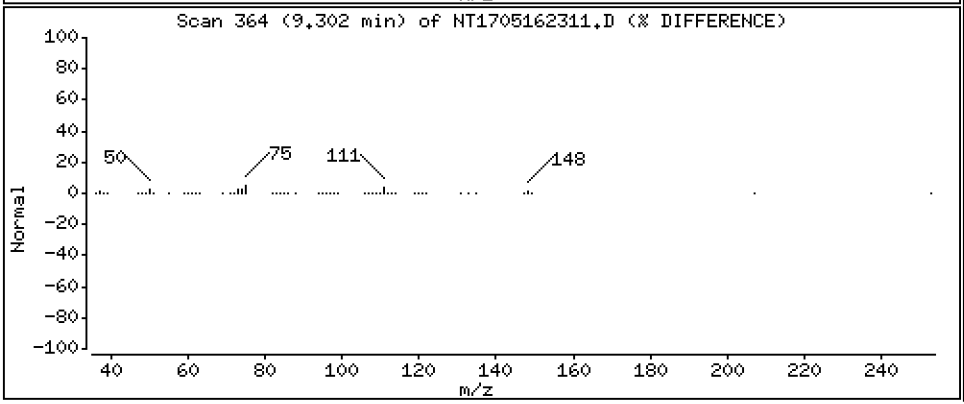
7 1,3-Dichlorobenzene

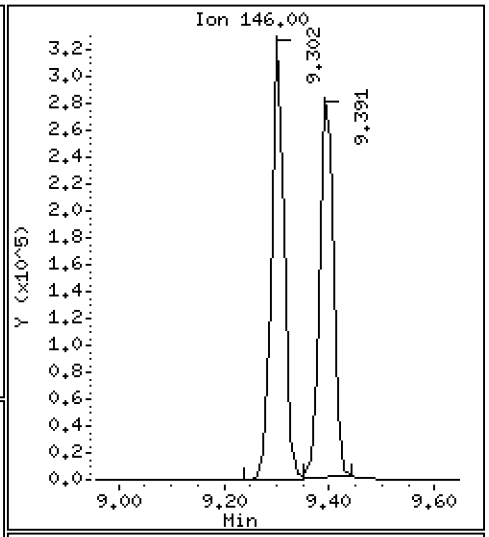
Concentration: 5.319 ug/mL

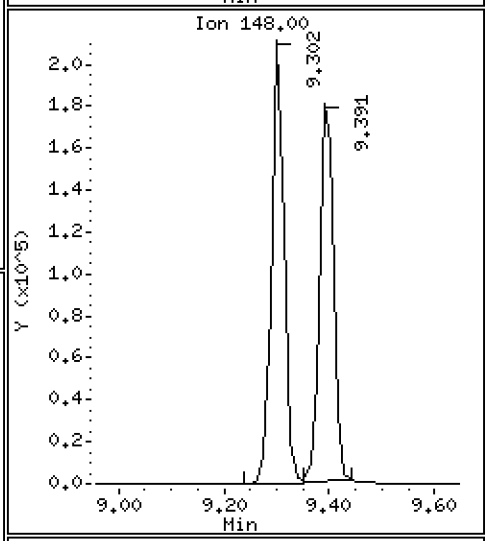


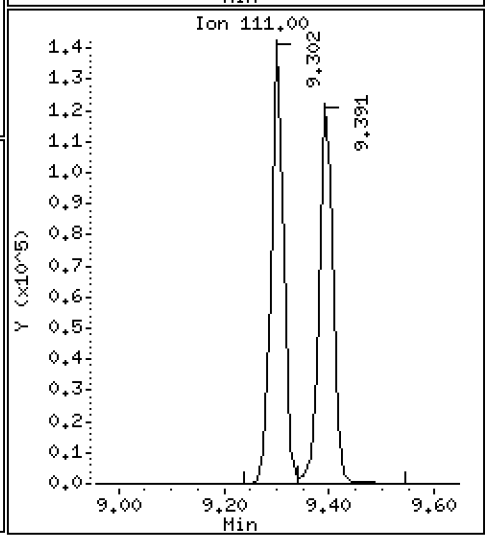












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

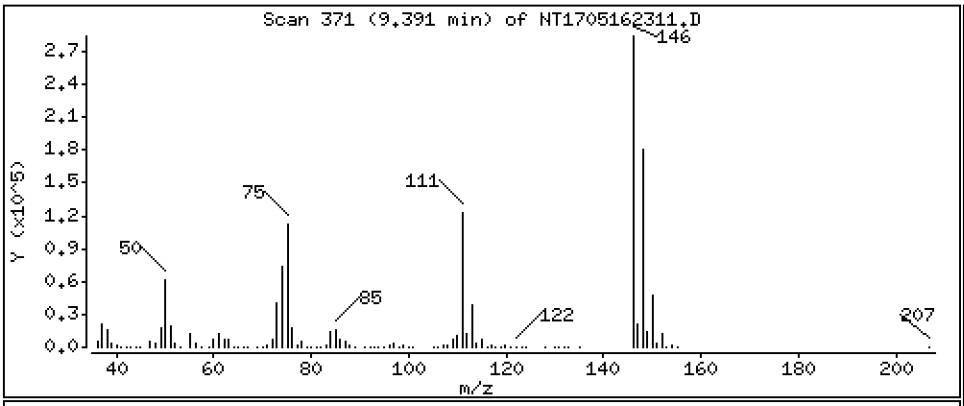
Operator: JGR

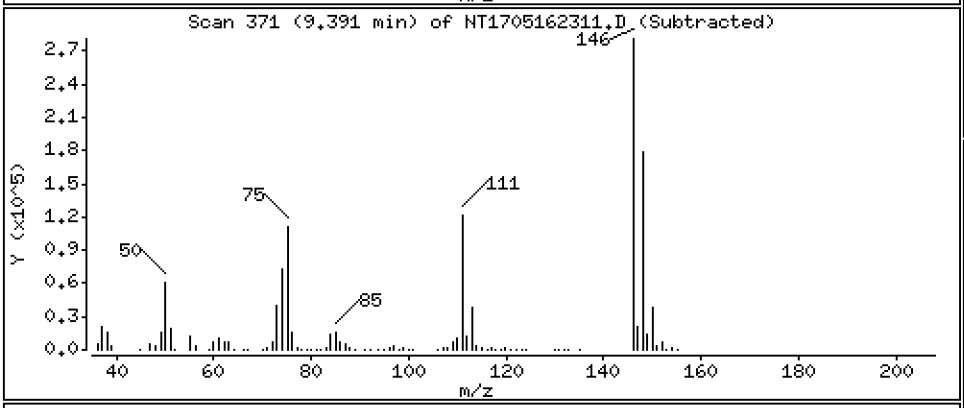
Column phase: ZB-5msi

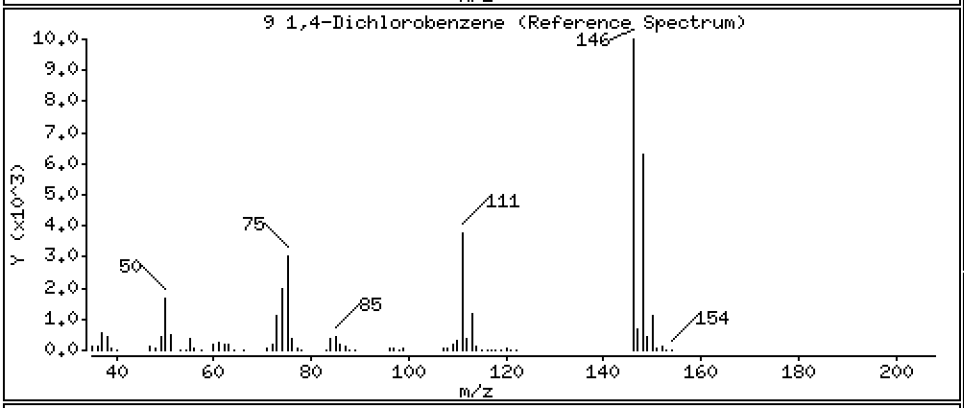
Column diameter: 0.25

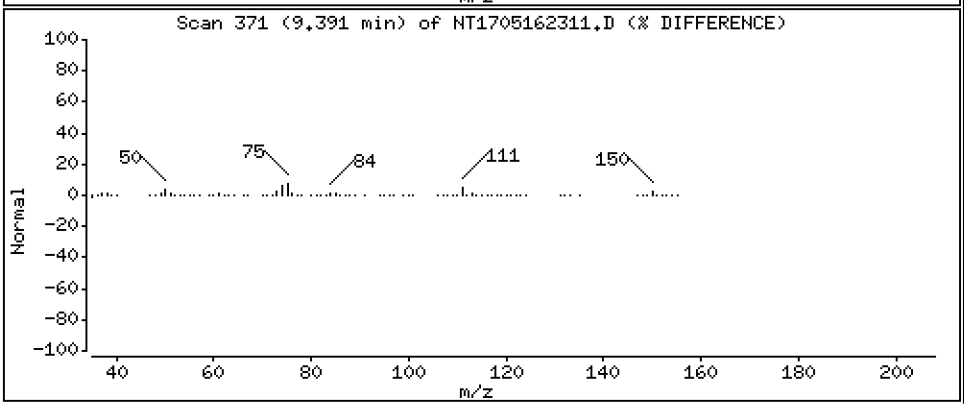
9 1,4-Dichlorobenzene

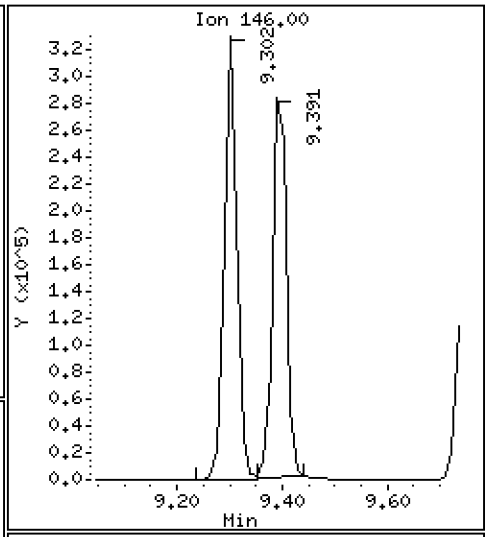
Concentration: 5.071 ug/mL

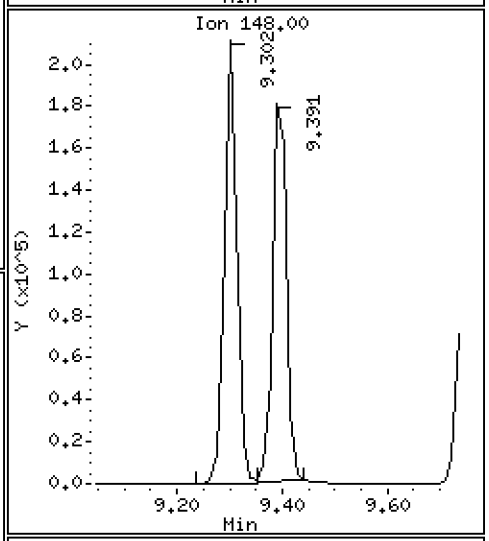


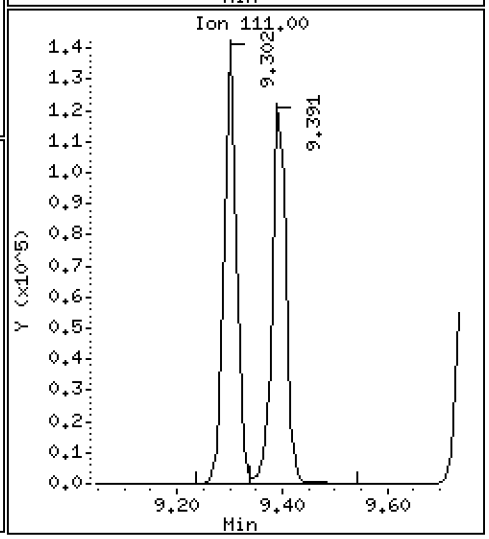












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

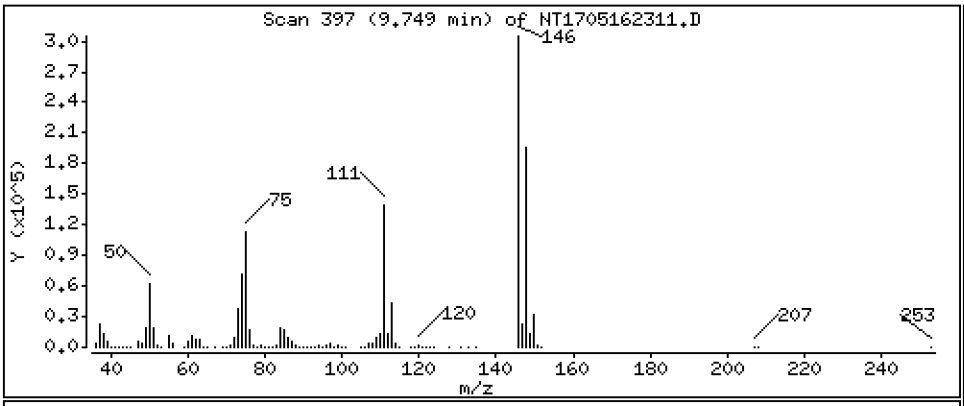
Operator: JGR

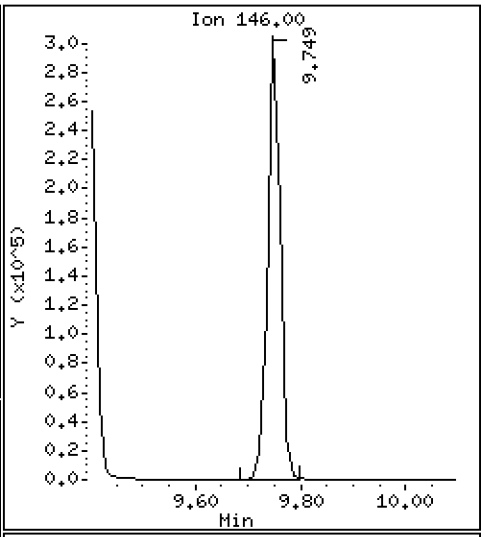
Column phase: ZB-5msi

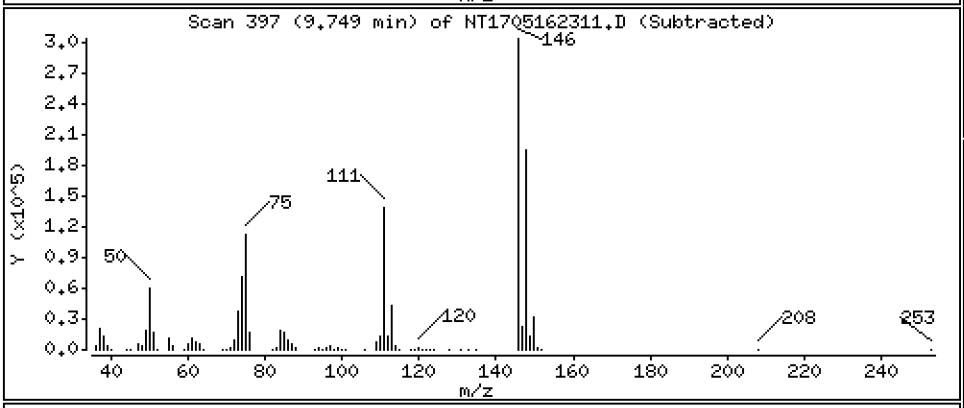
Column diameter: 0.25

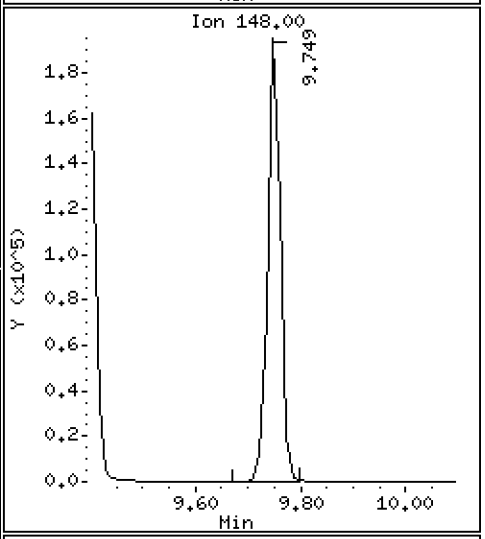
12 1,2-Dichlorobenzene

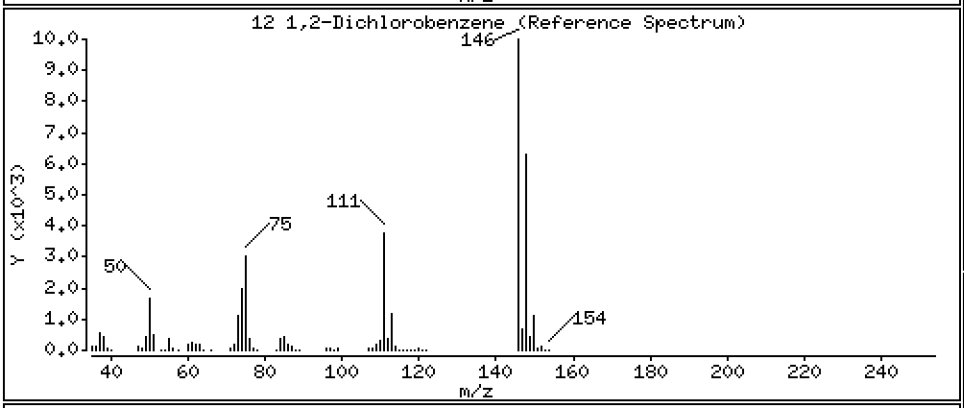
Concentration: 5.258 ug/mL

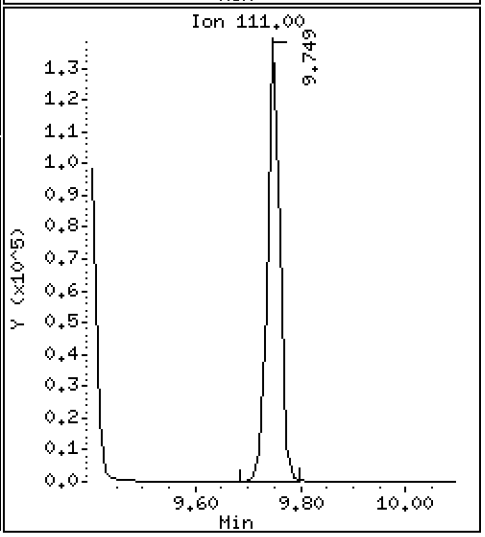


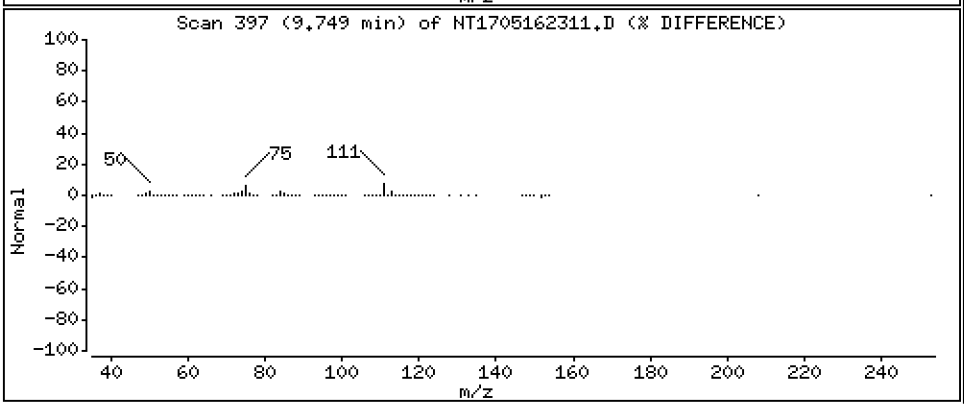












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

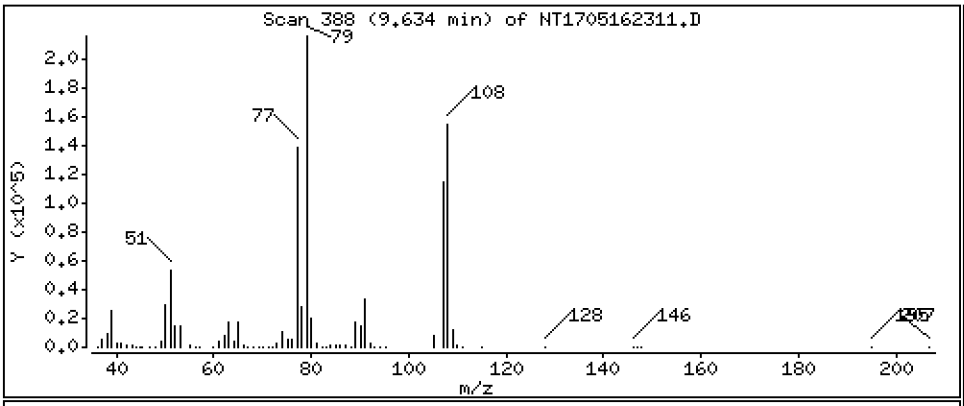
Operator: JGR

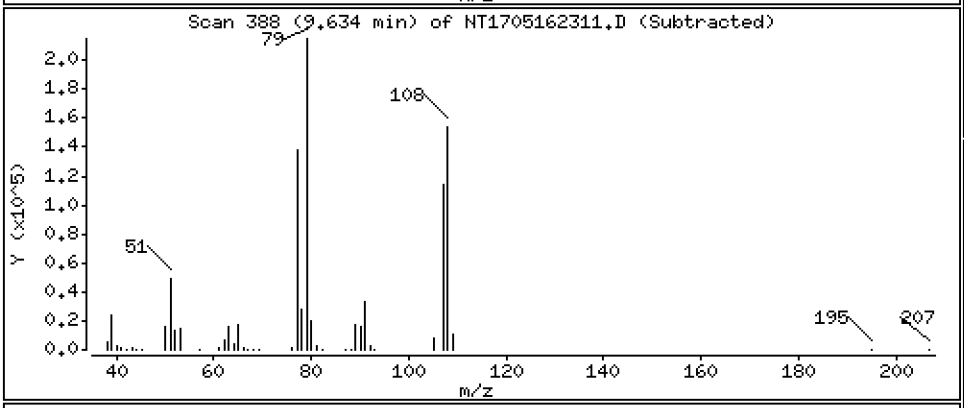
Column phase: ZB-5msi

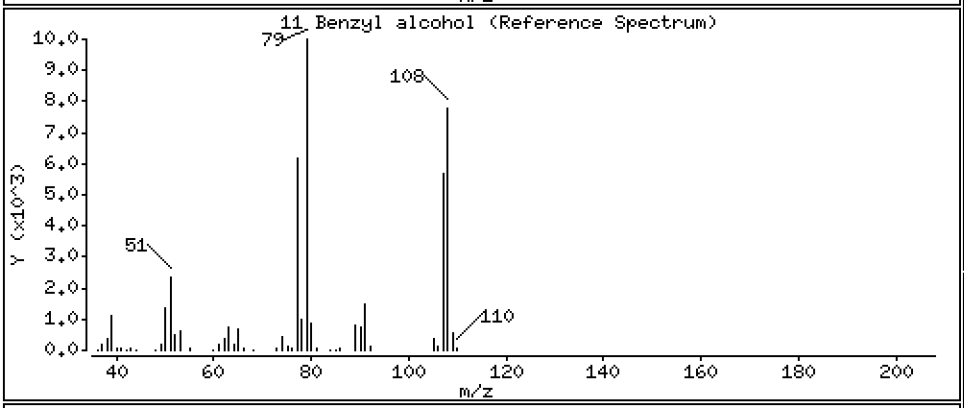
Column diameter: 0.25

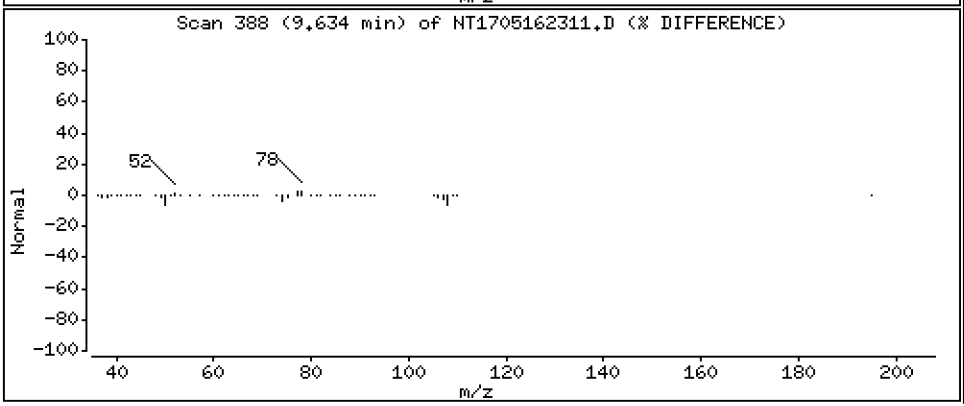
11 Benzyl alcohol

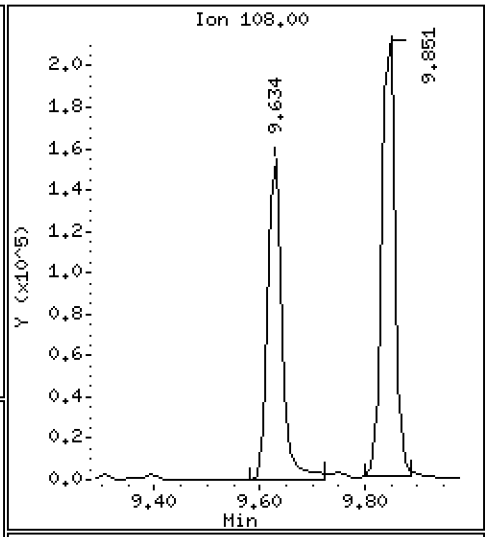
Concentration: 5.274 ug/mL

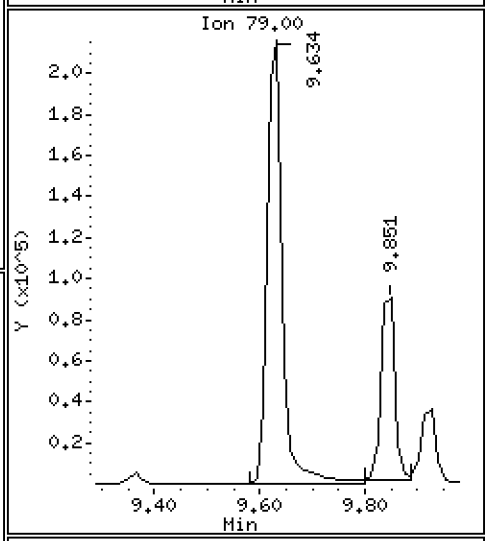


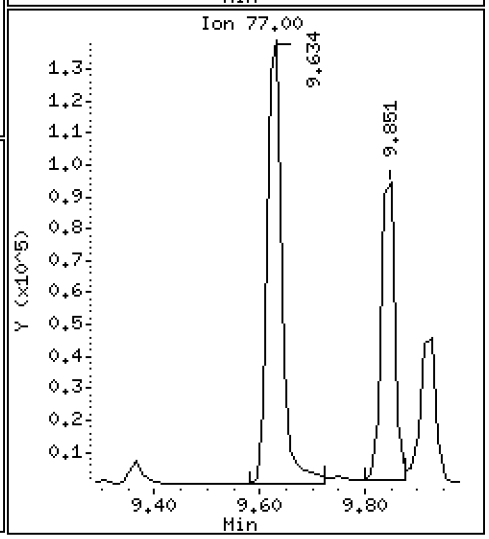












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

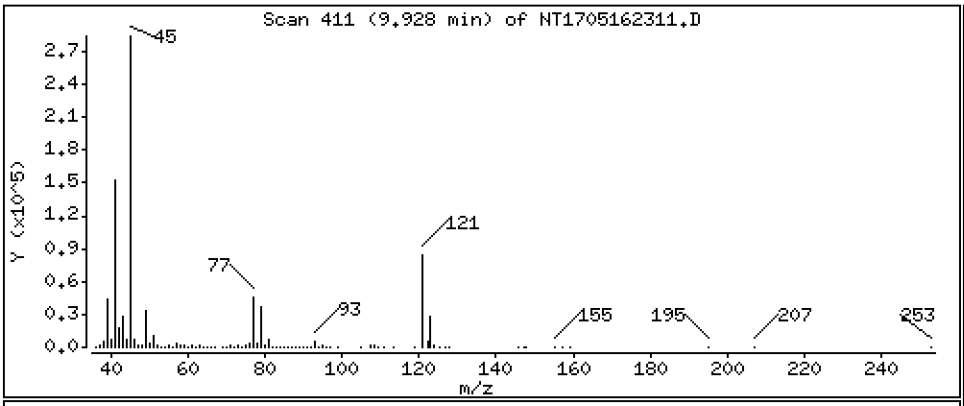
Operator: JGR

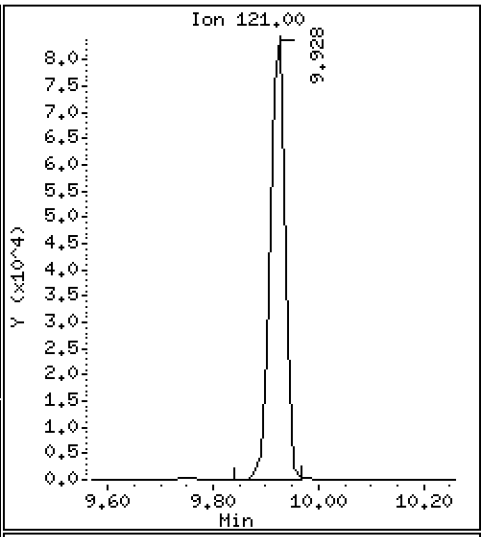
Column phase: ZB-5msi

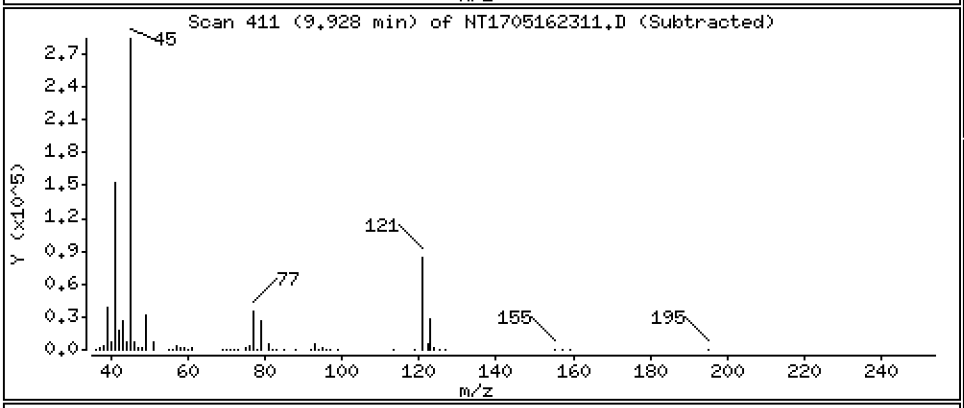
Column diameter: 0.25

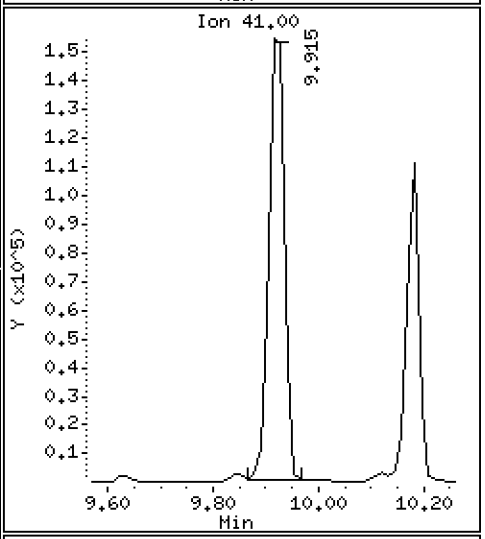
14 2,2'-oxybis(1-Chloropropane)

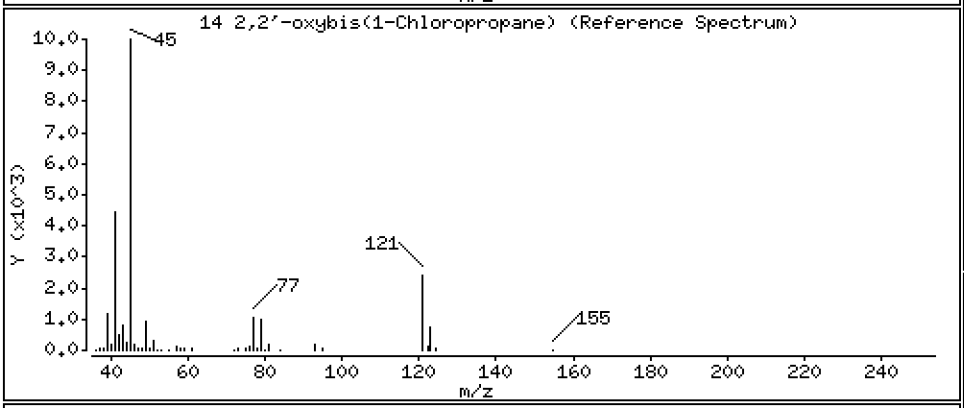
Concentration: 6.179 ug/mL

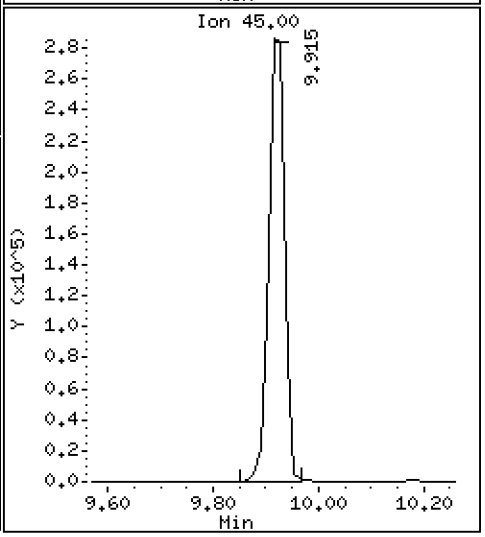


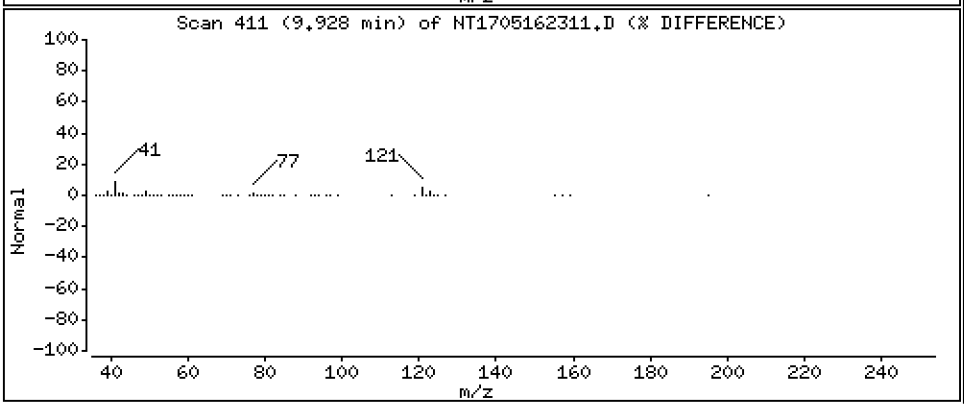












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

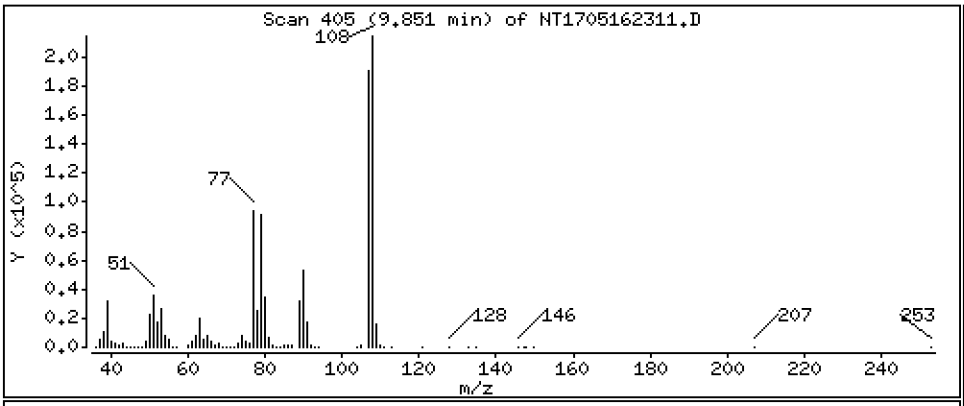
Operator: JGR

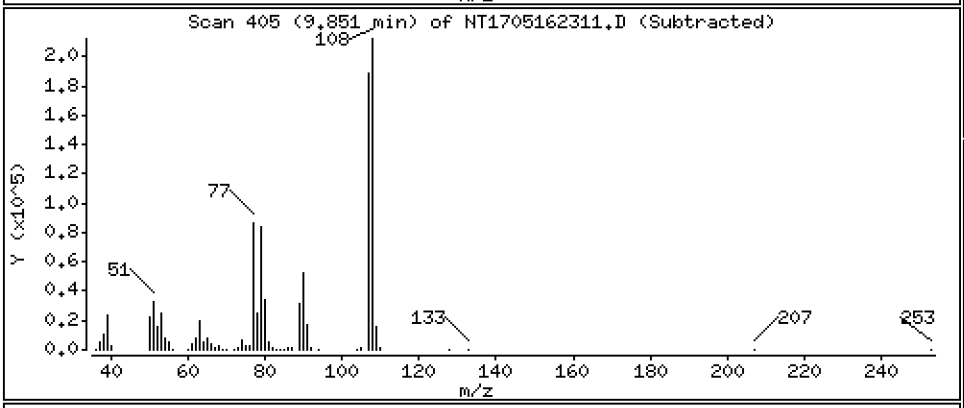
Column phase: ZB-5msi

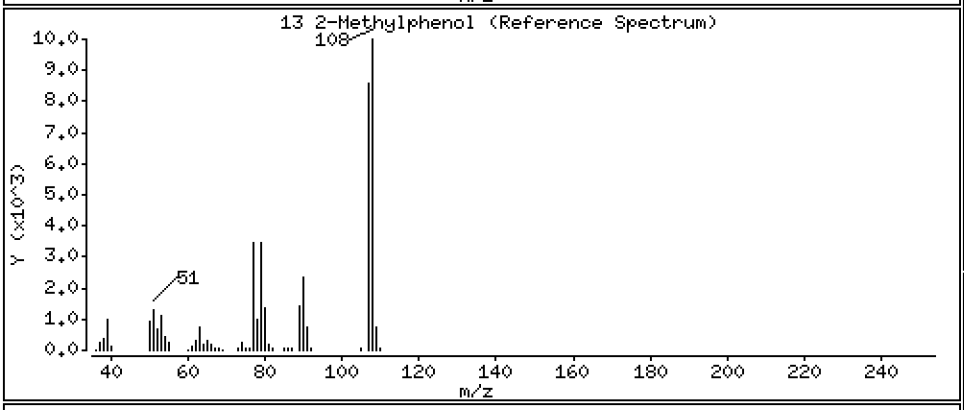
Column diameter: 0.25

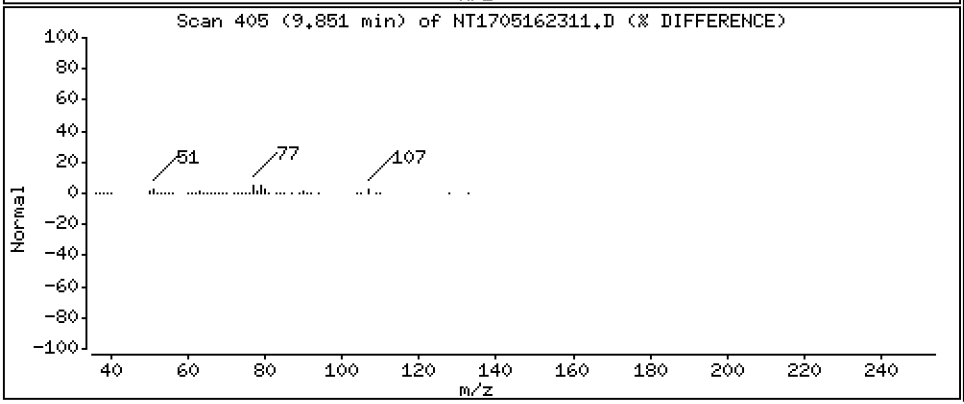
13 2-Methylphenol

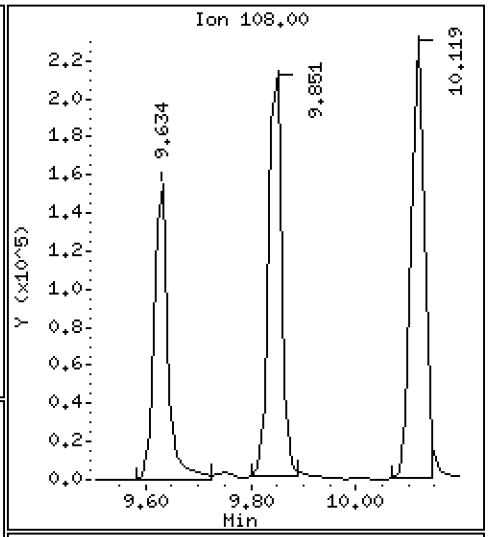
Concentration: 4.229 ug/mL

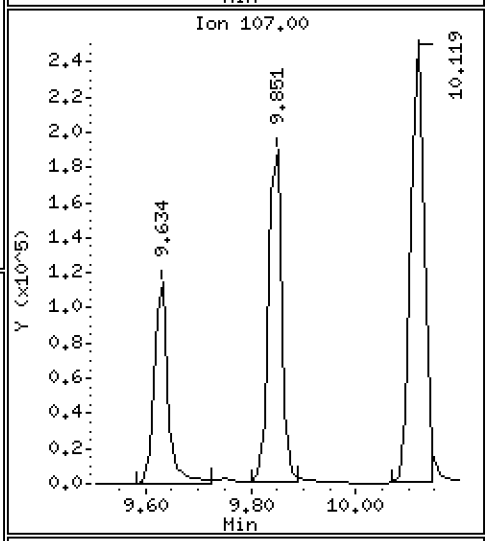


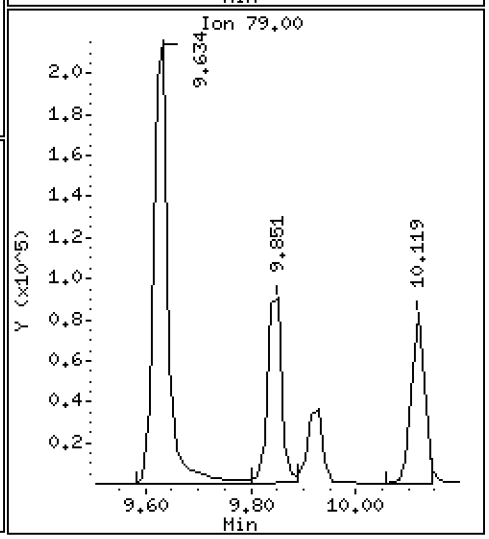












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

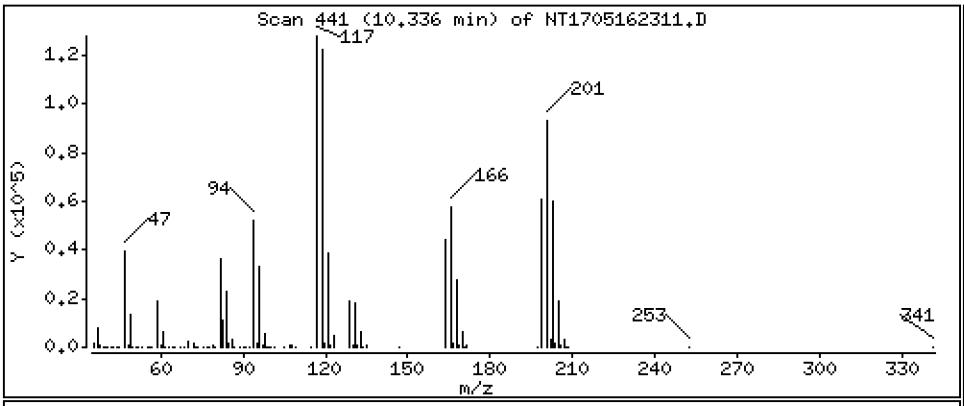
Operator: JGR

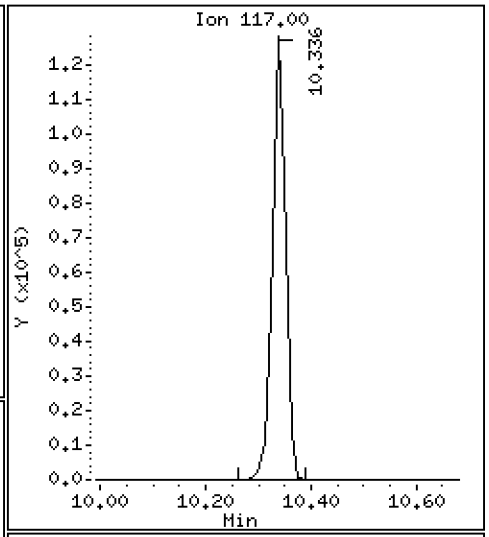
Column phase: ZB-5msi

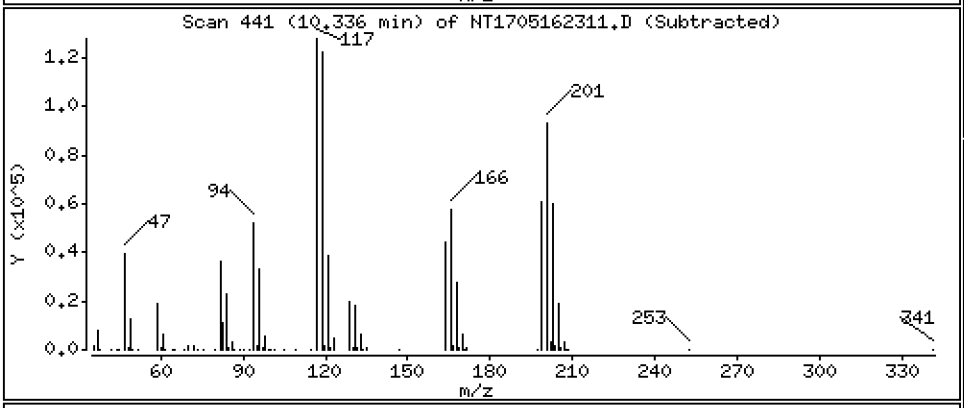
Column diameter: 0.25

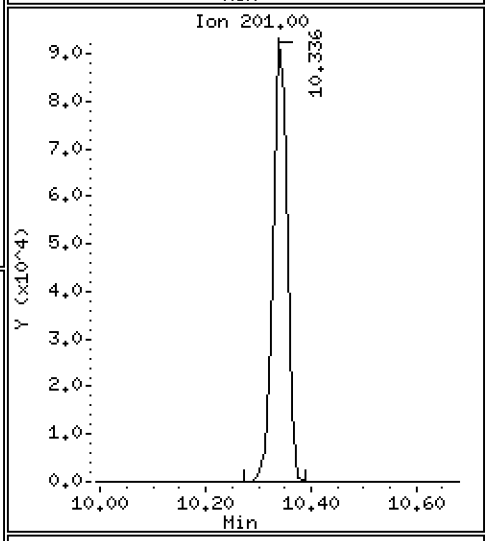
17 Hexachloroethane

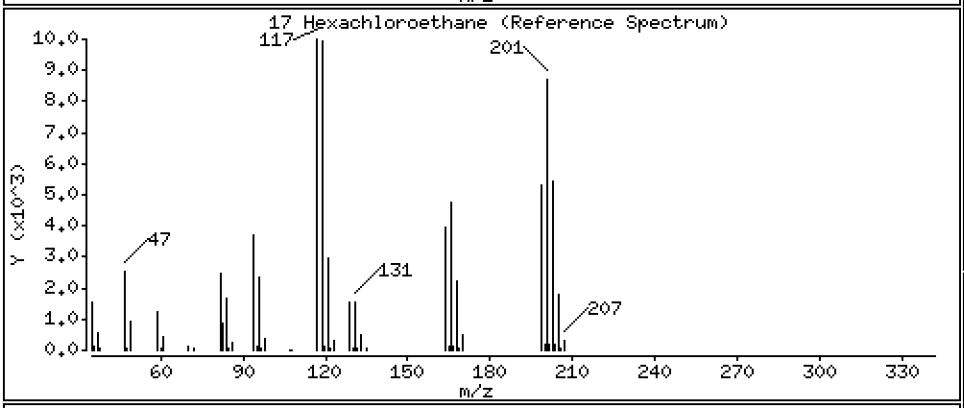
Concentration: 5.419 ug/mL

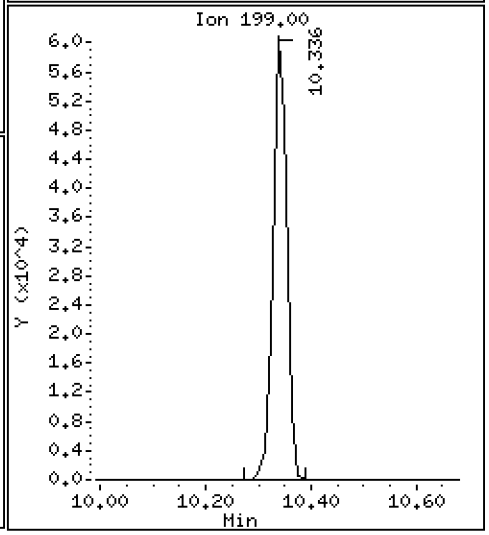


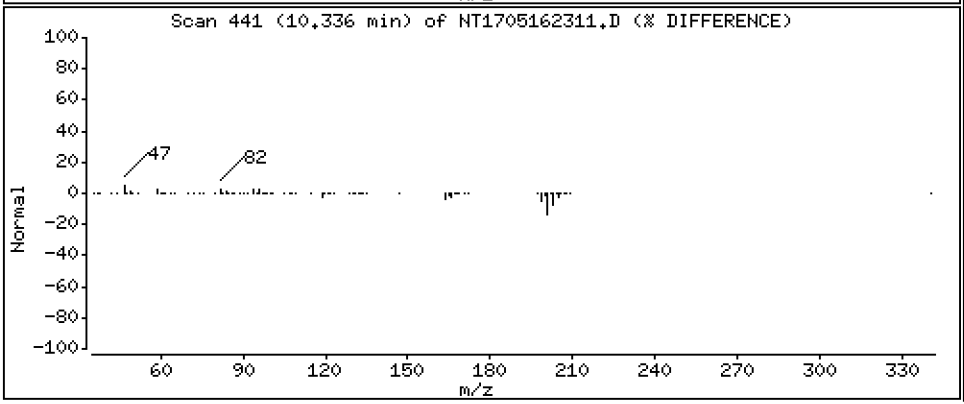












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

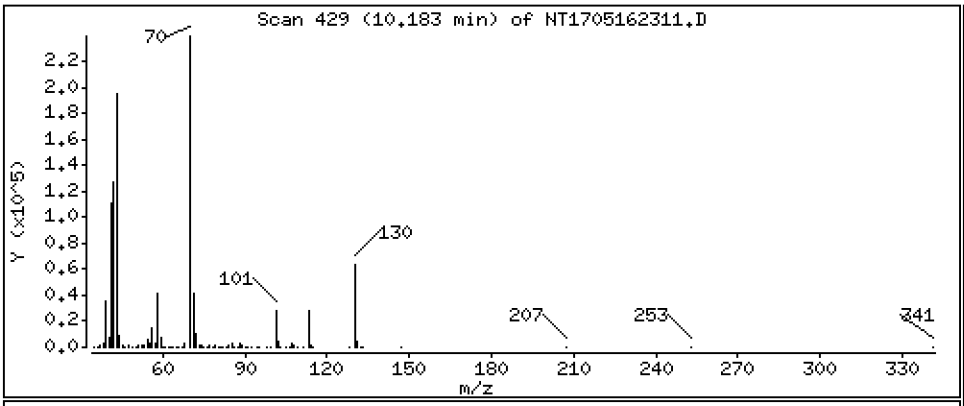
Operator: JGR

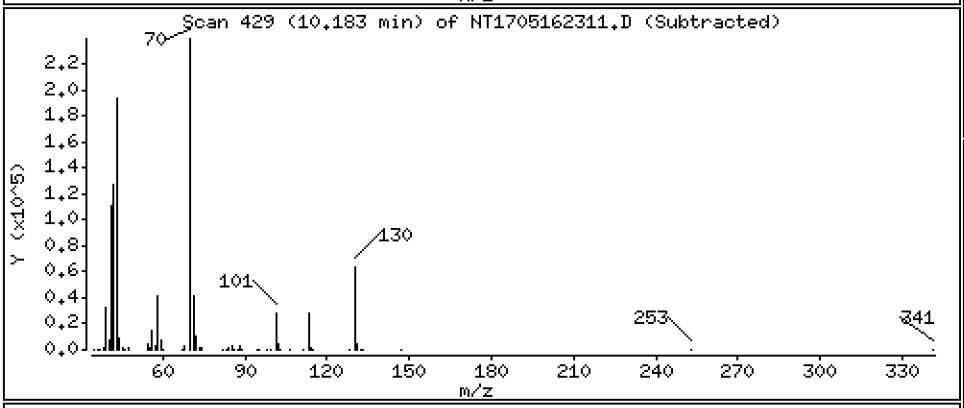
Column phase: ZB-5msi

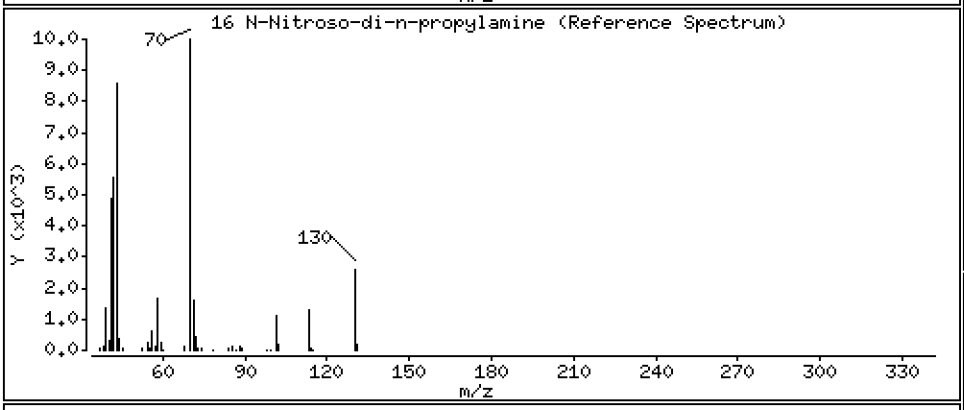
Column diameter: 0.25

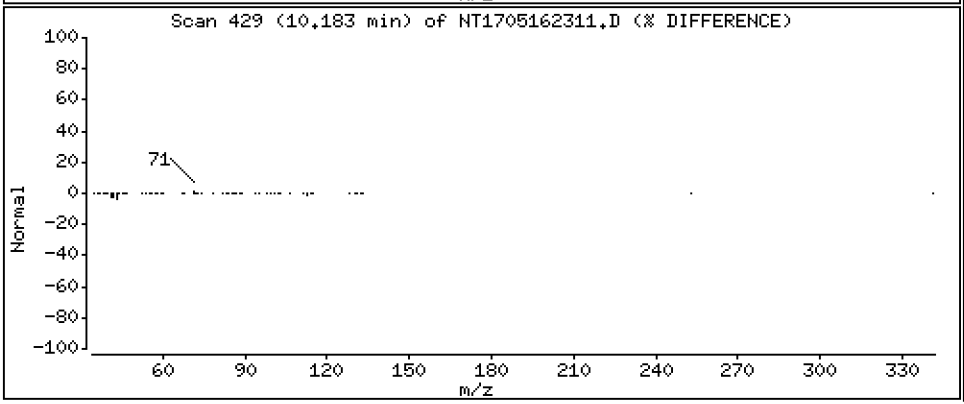
16 N-Nitroso-di-n-propylamine

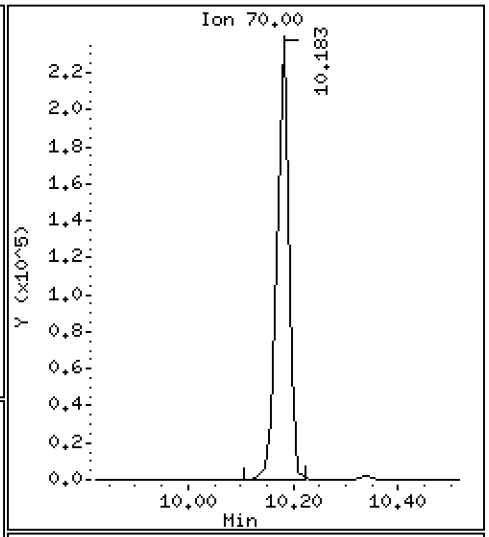
Concentration: 5.517 ug/mL

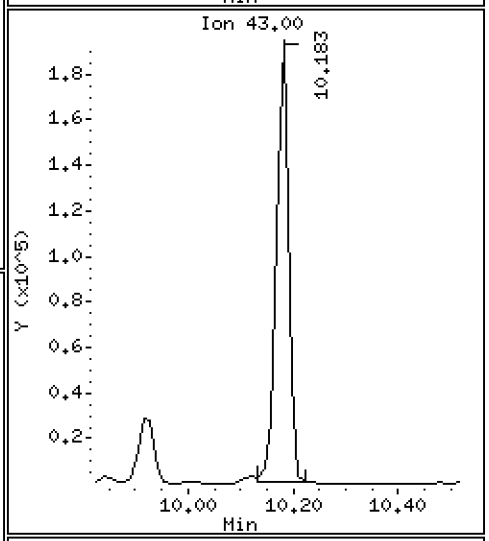


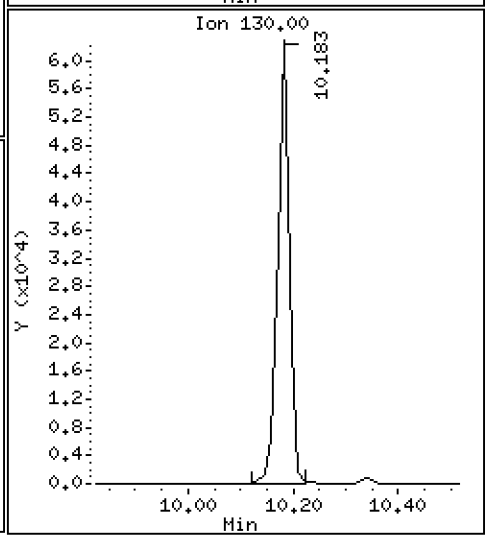












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

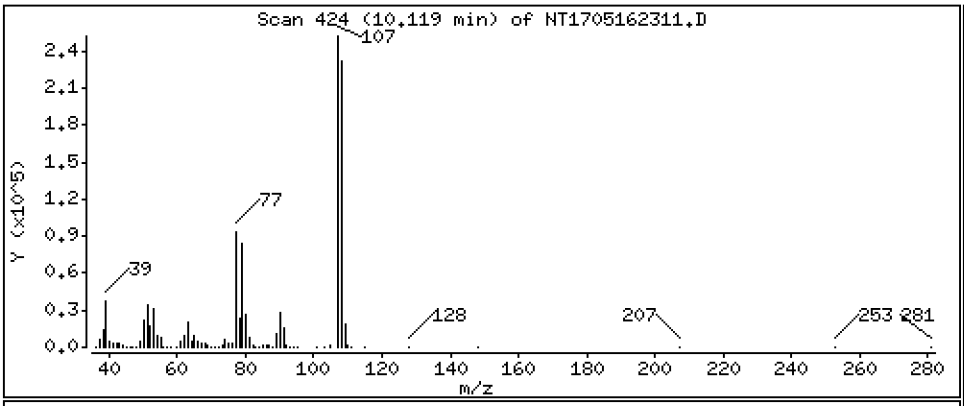
Operator: JGR

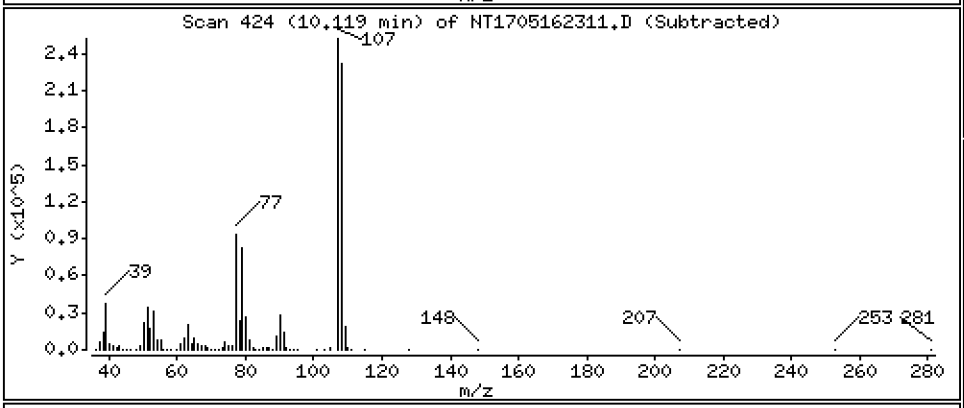
Column phase: ZB-5msi

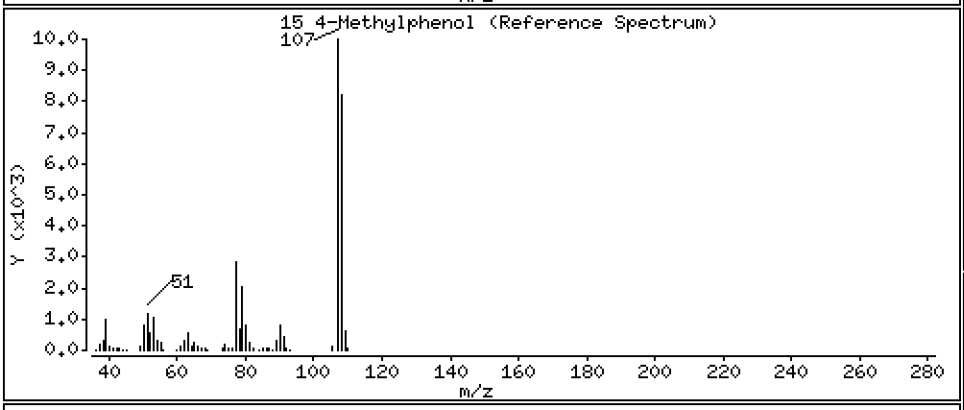
Column diameter: 0.25

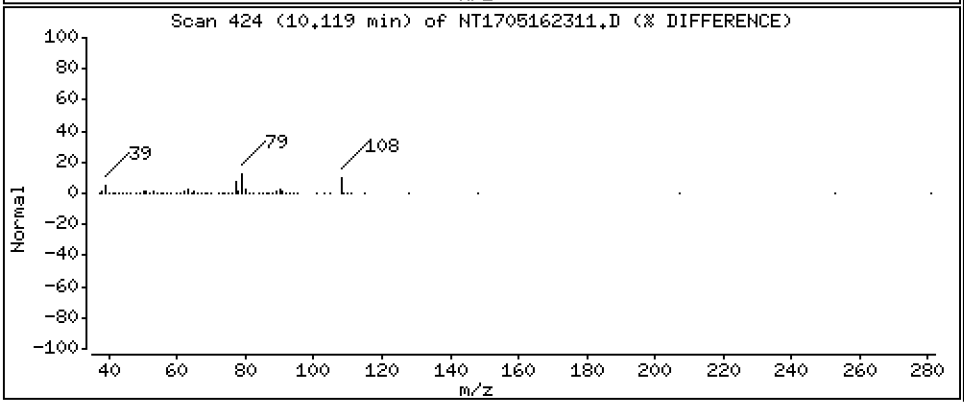
15 4-Methylphenol

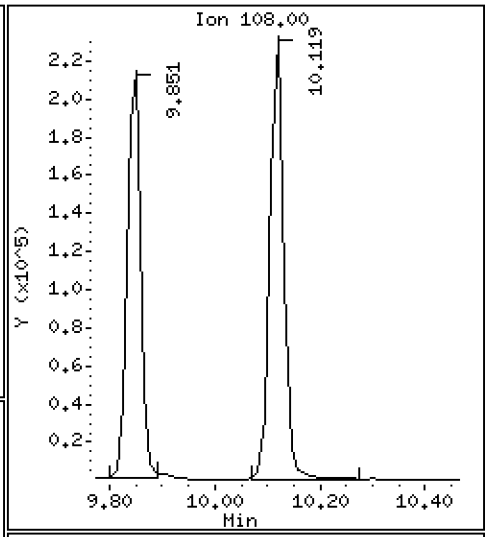
Concentration: 4.661 ug/mL

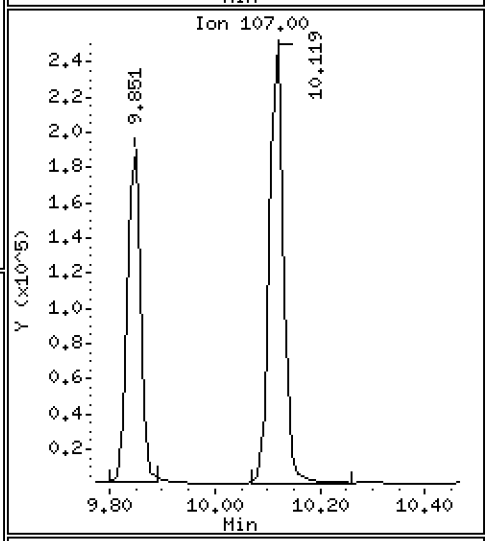


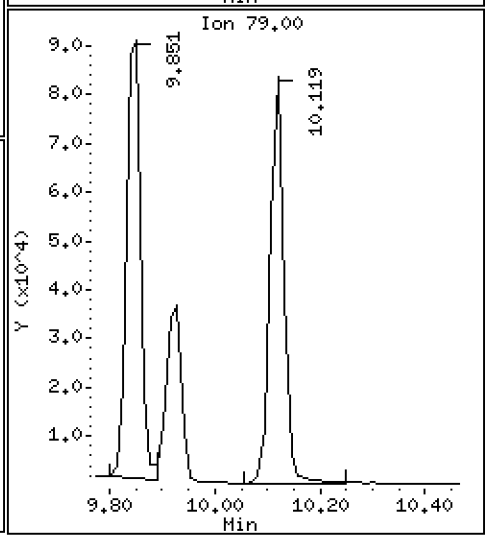












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

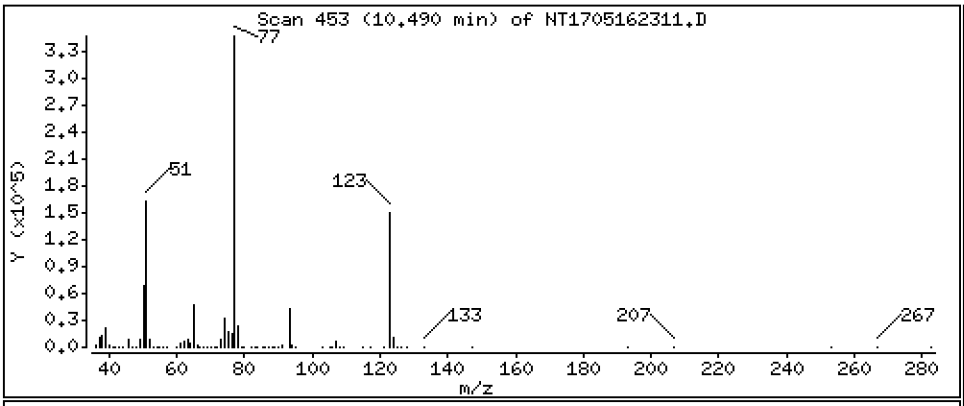
Operator: JGR

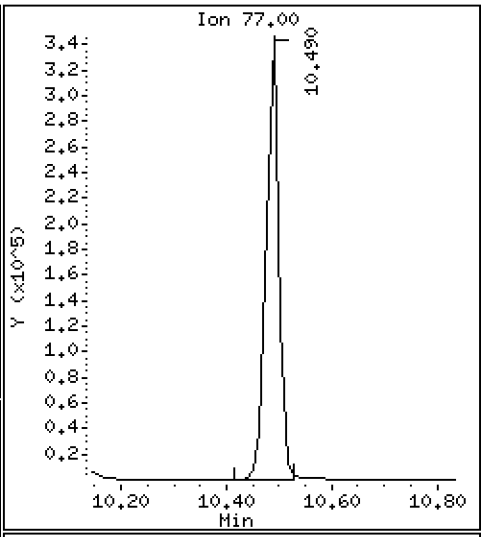
Column phase: ZB-5msi

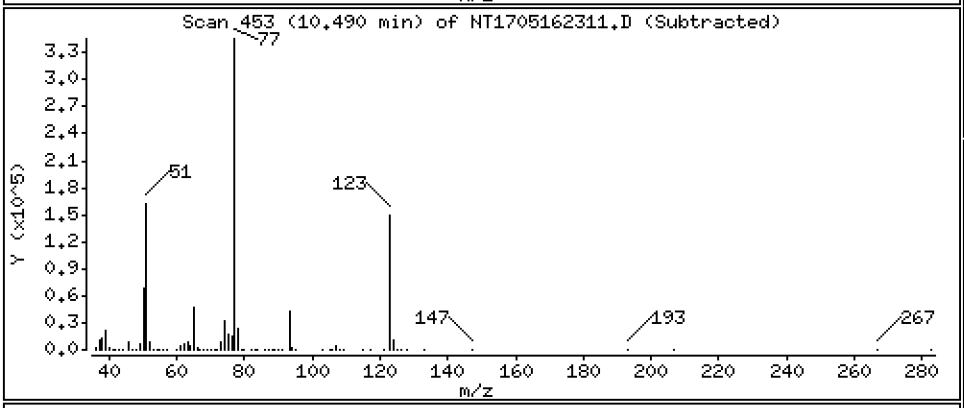
Column diameter: 0.25

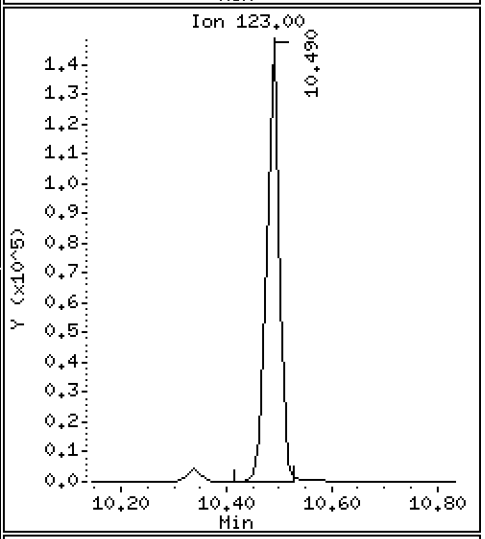
19 Nitrobenzene

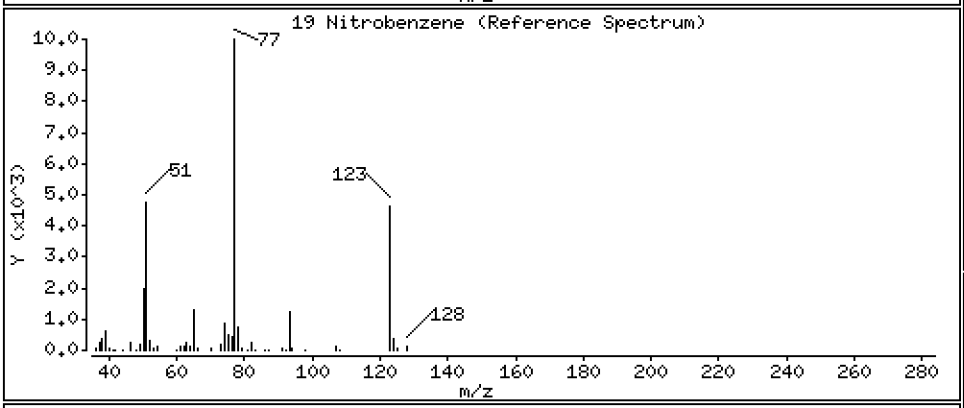
Concentration: 5.329 ug/mL

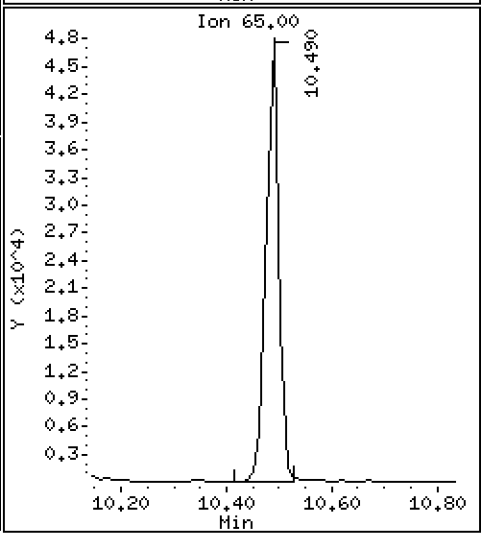


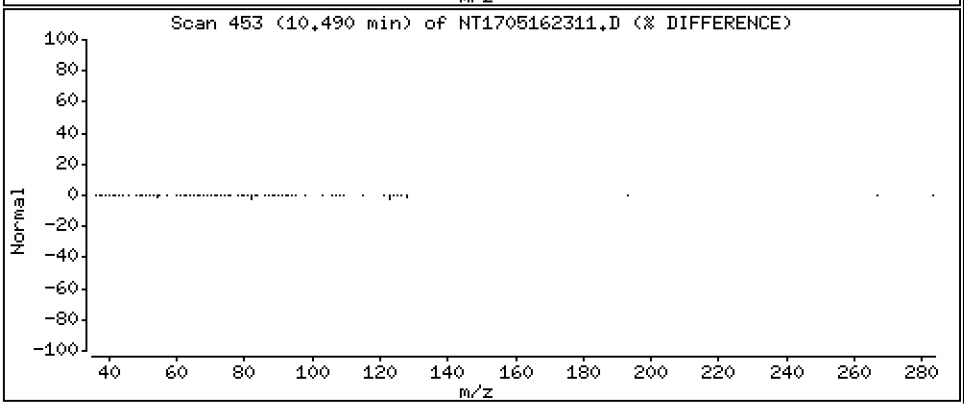












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

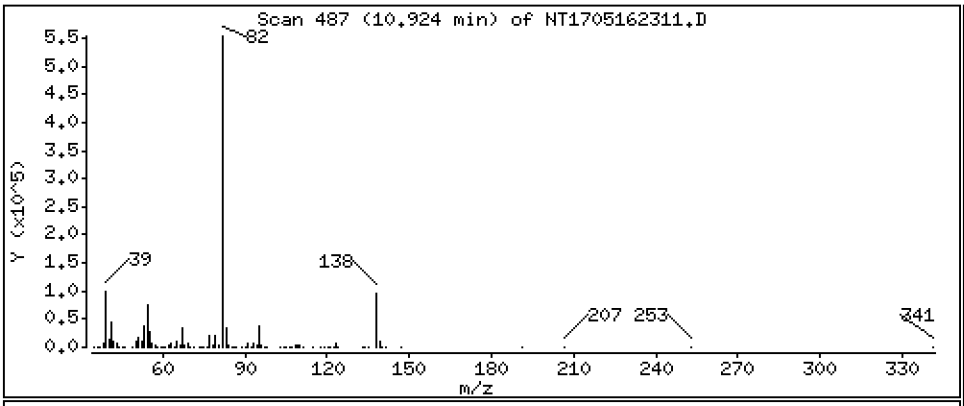
Operator: JGR

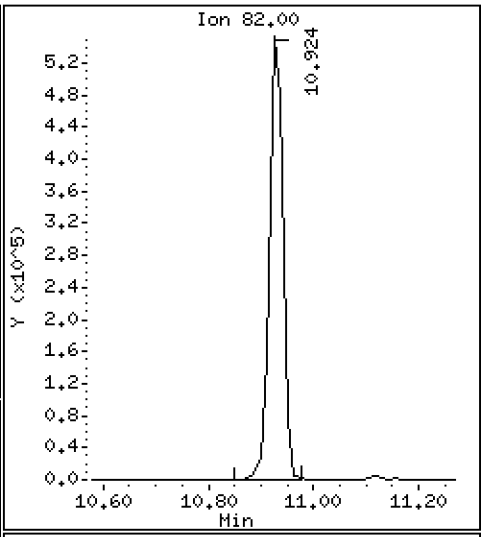
Column phase: ZB-5msi

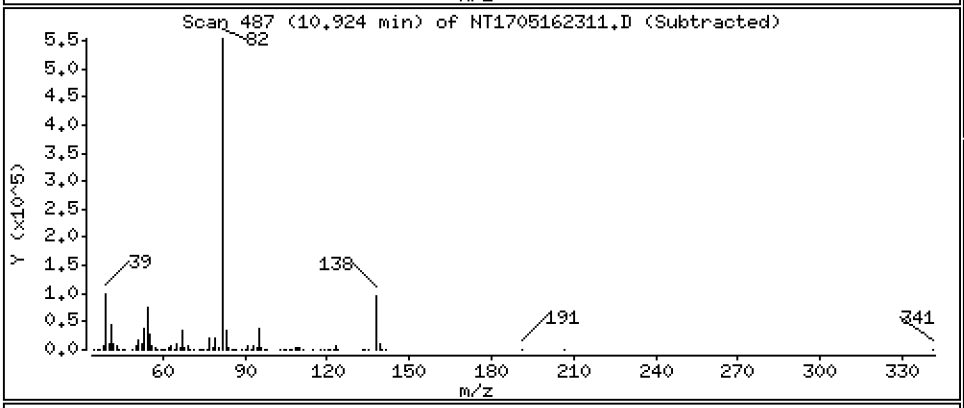
Column diameter: 0.25

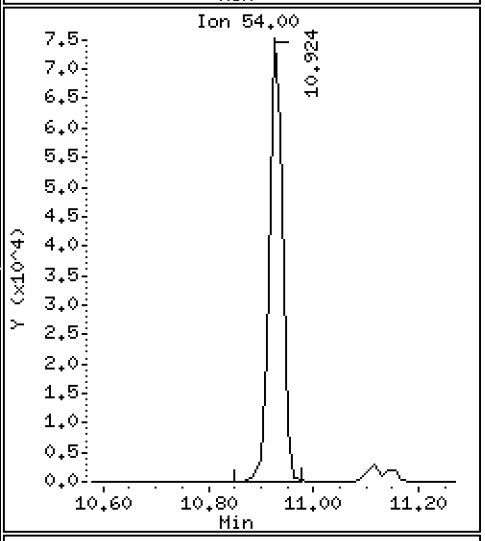
20 Isophorone

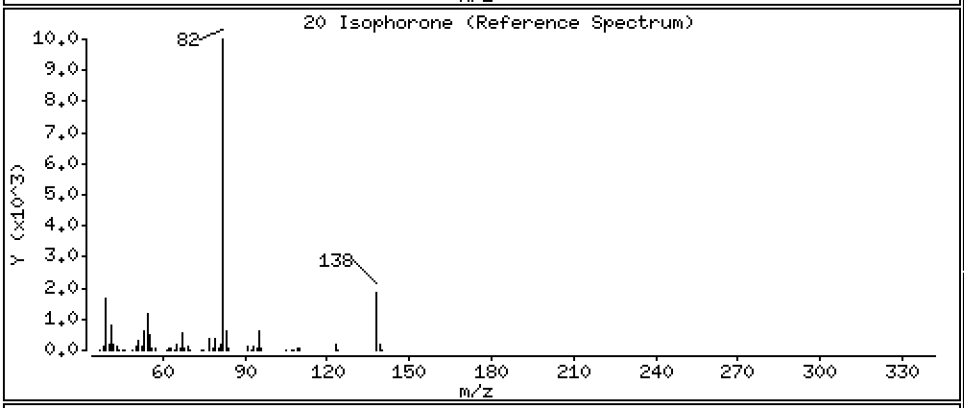
Concentration: 6.943 ug/mL

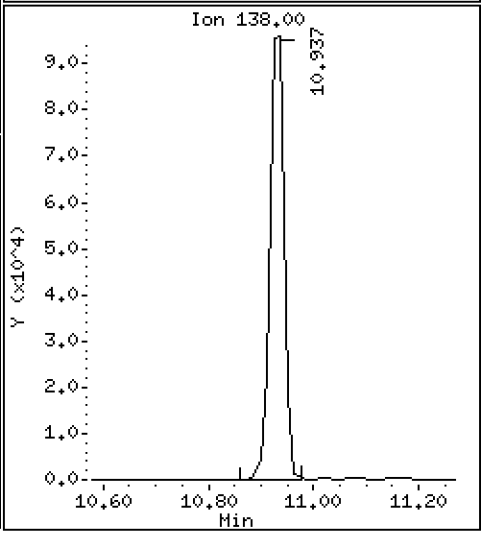


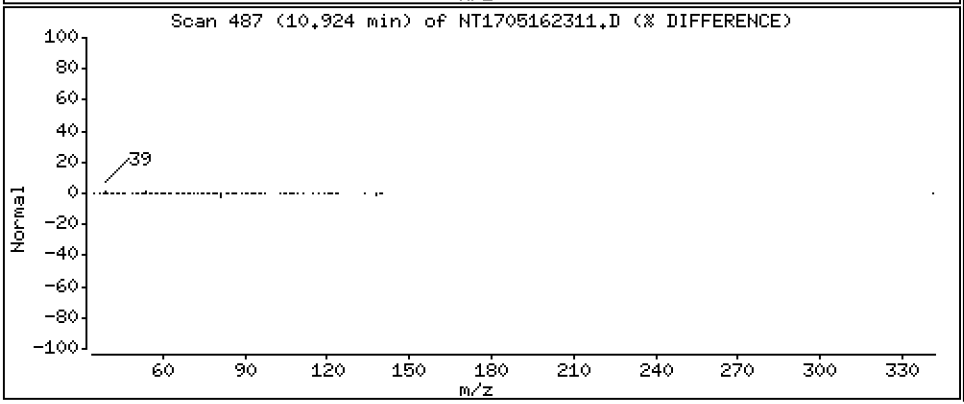












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

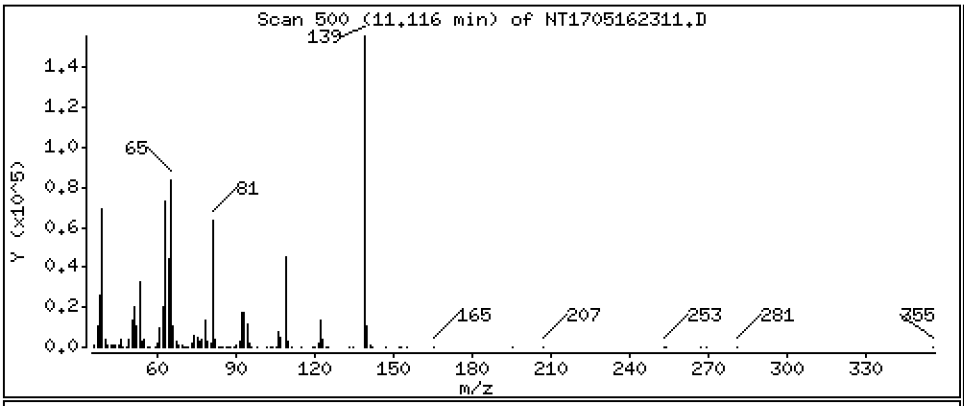
Operator: JGR

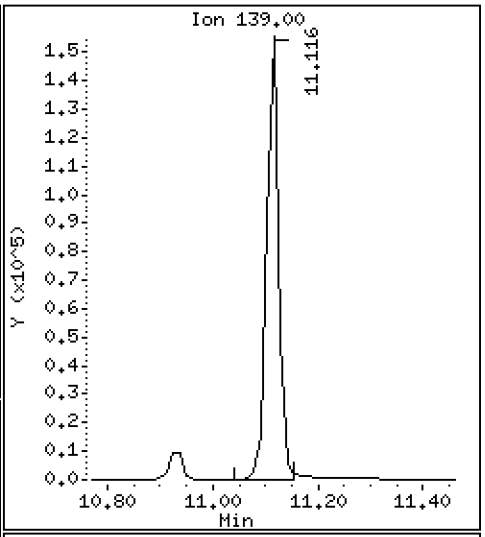
Column phase: ZB-5msi

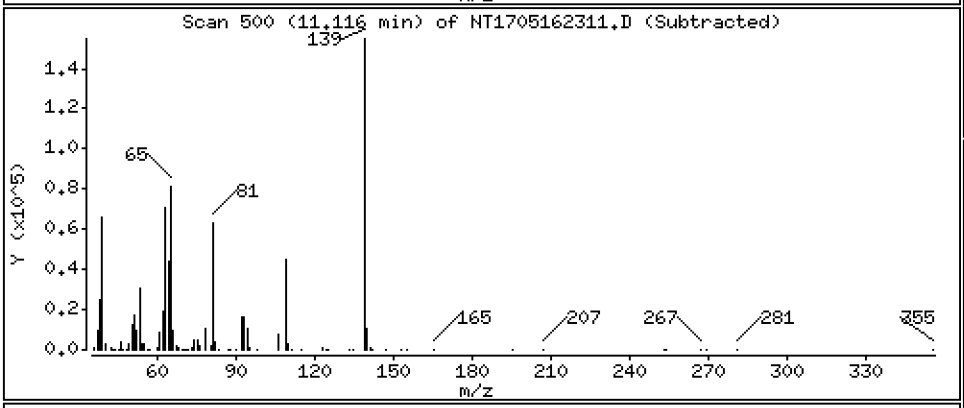
Column diameter: 0.25

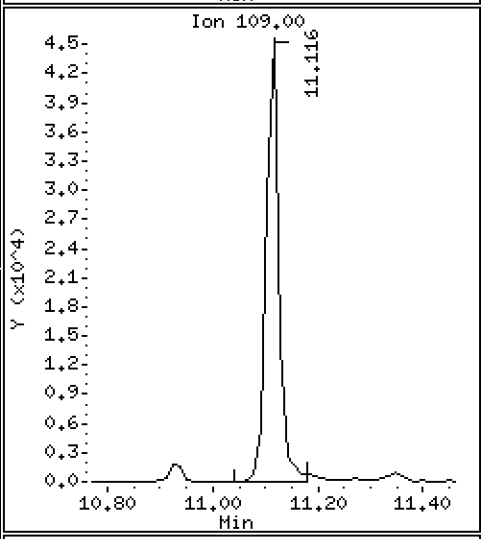
21 2-Nitrophenol

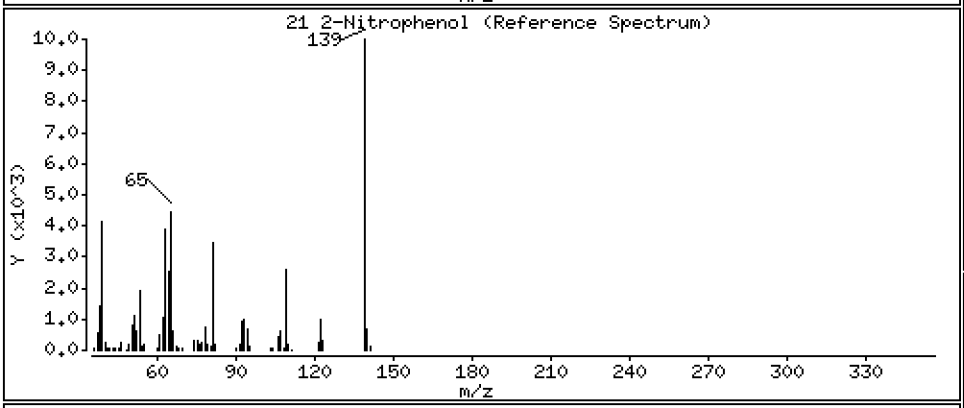
Concentration: 4.899 ug/mL

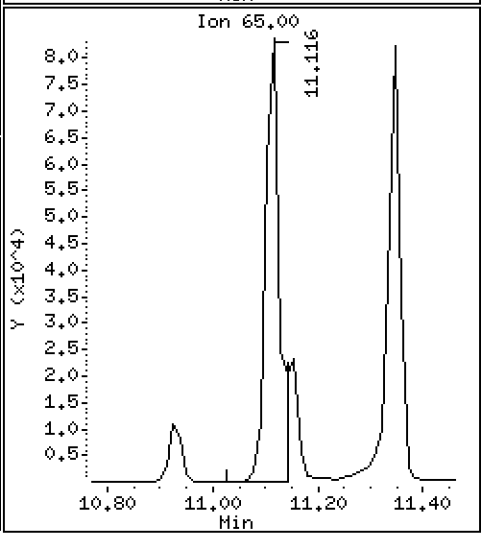


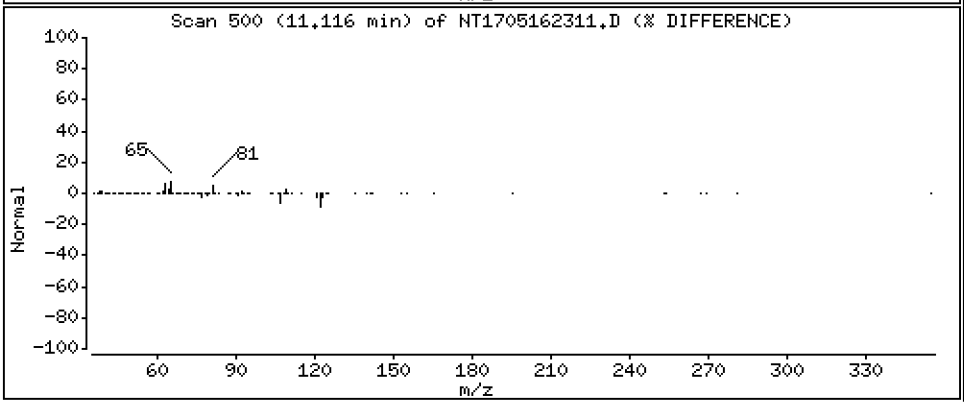












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

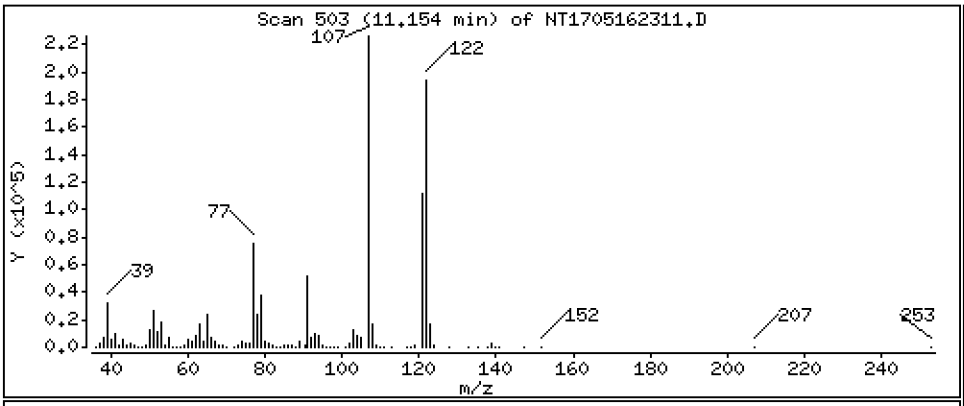
Operator: JGR

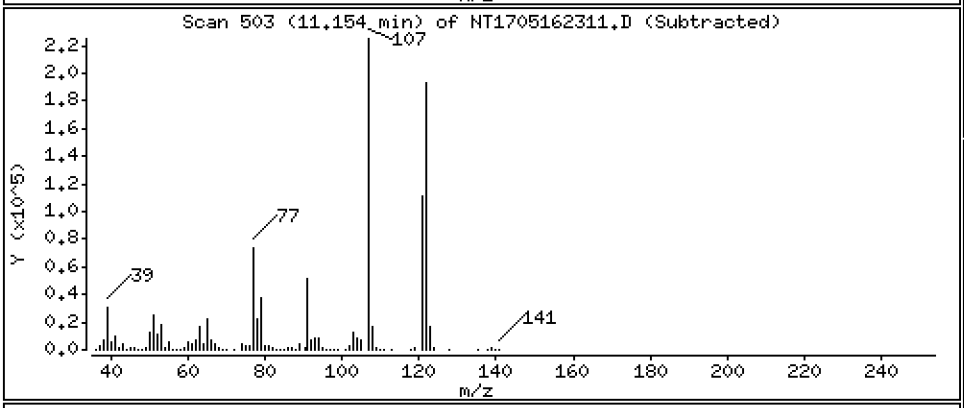
Column phase: ZB-5msi

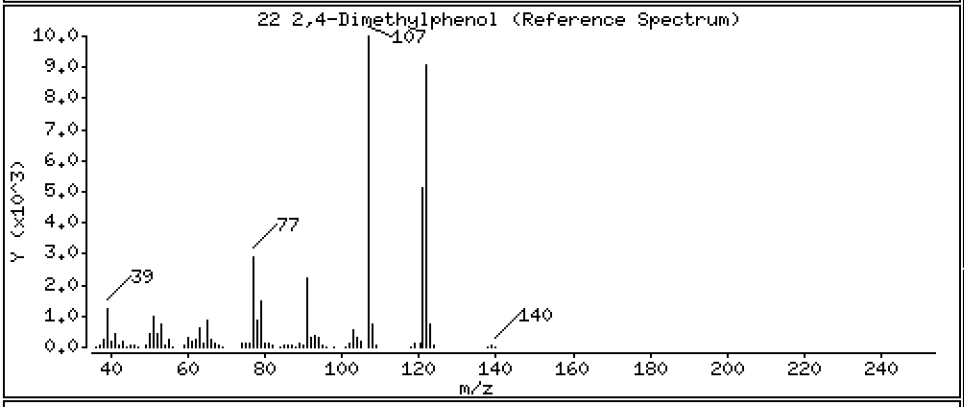
Column diameter: 0.25

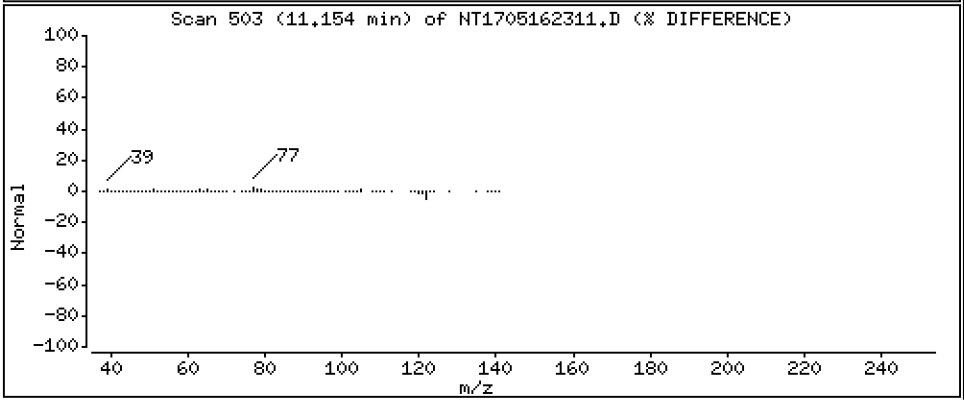
22 2,4-Dimethylphenol

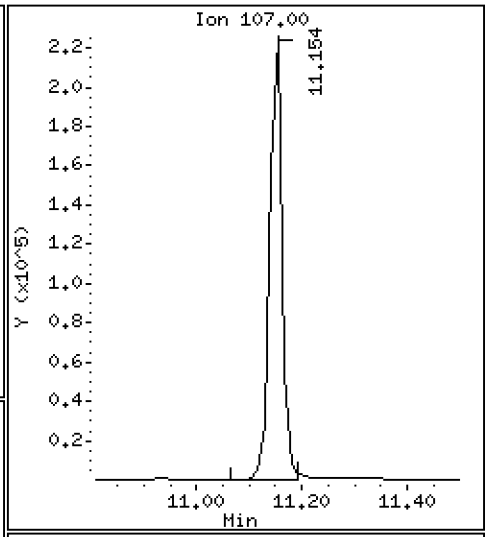
Concentration: 3.788 ug/mL

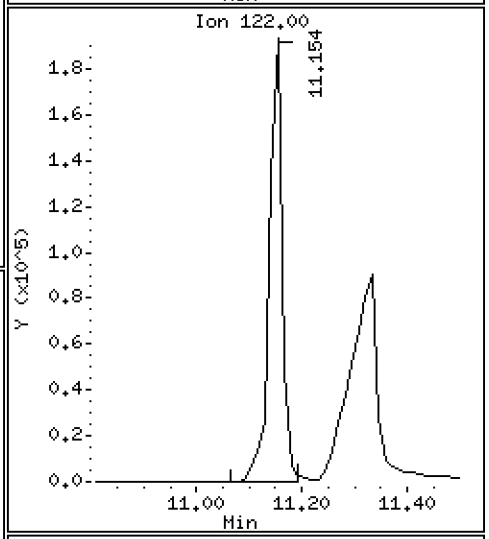


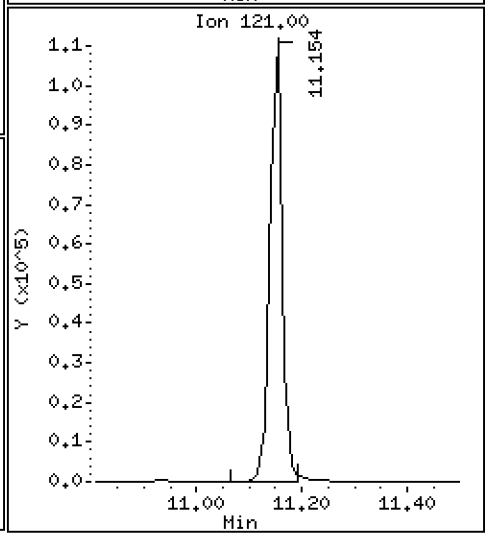












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

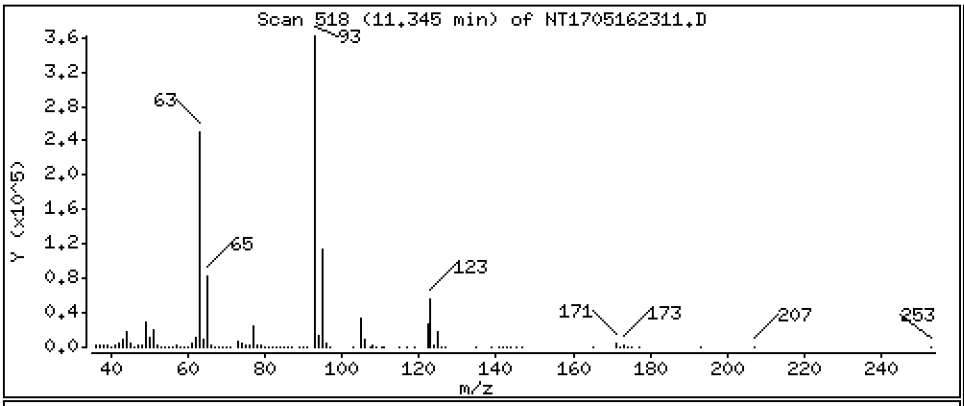
Operator: JGR

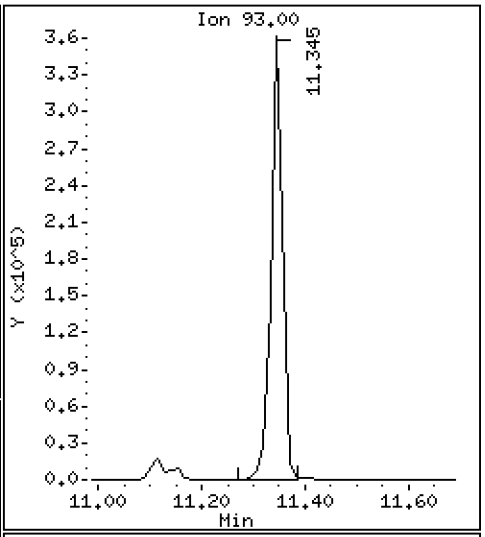
Column phase: ZB-5msi

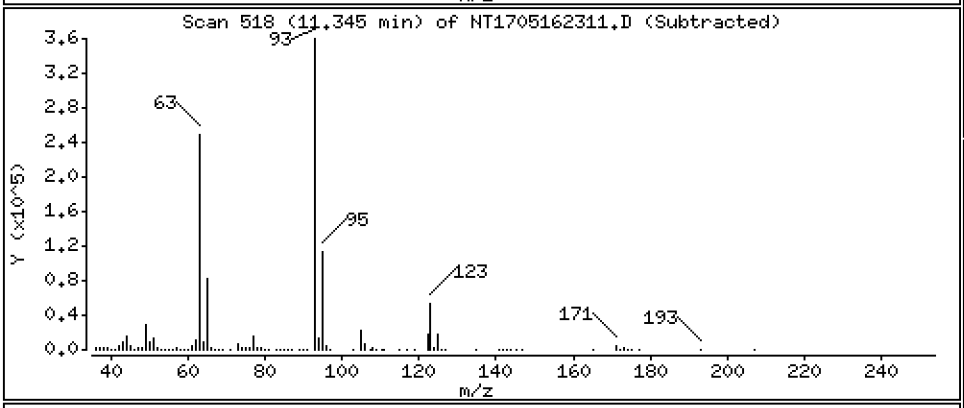
Column diameter: 0.25

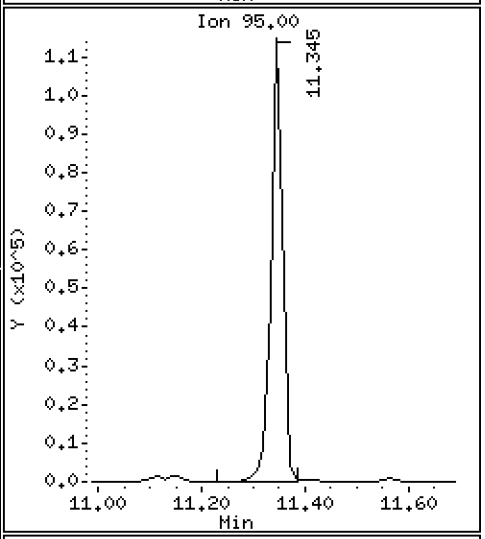
23 Bis(2-Chloroethoxy)methane

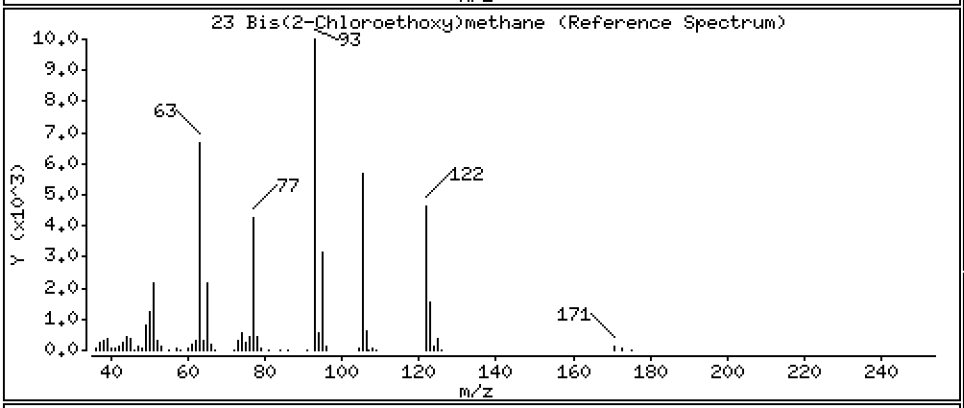
Concentration: 6.232 ug/mL

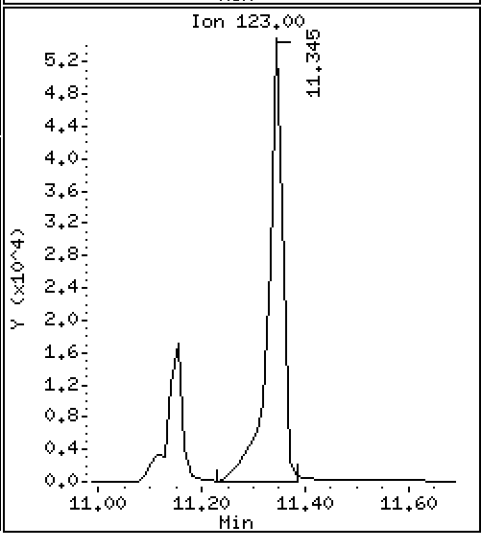


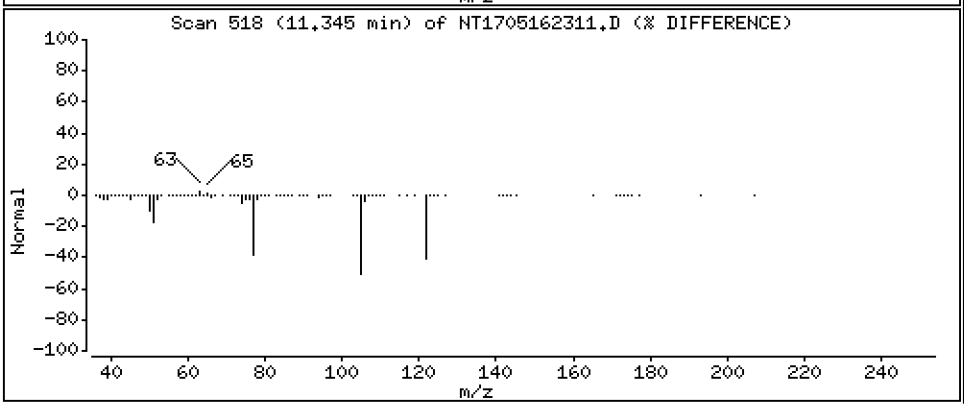












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

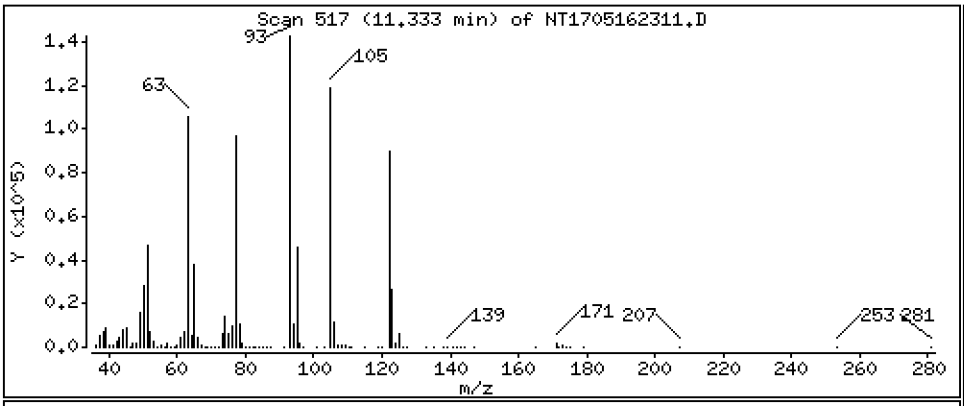
Operator: JGR

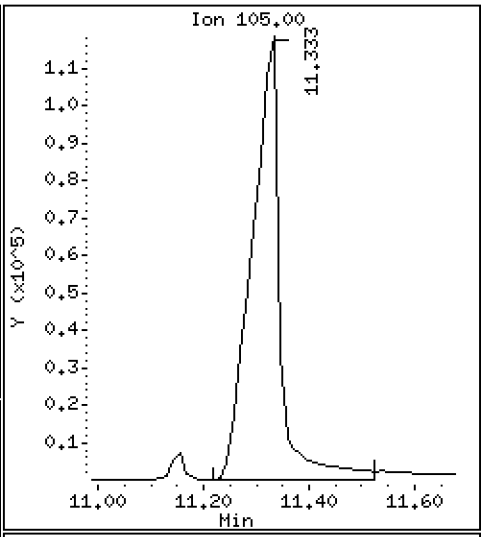
Column phase: ZB-5msi

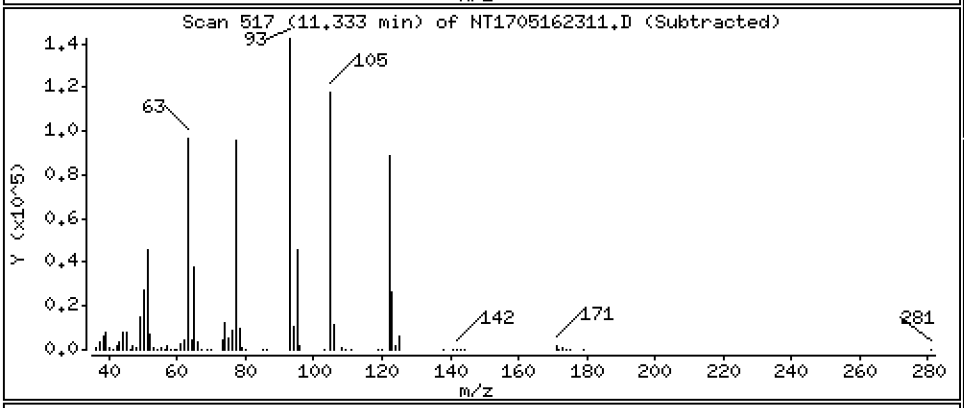
Column diameter: 0.25

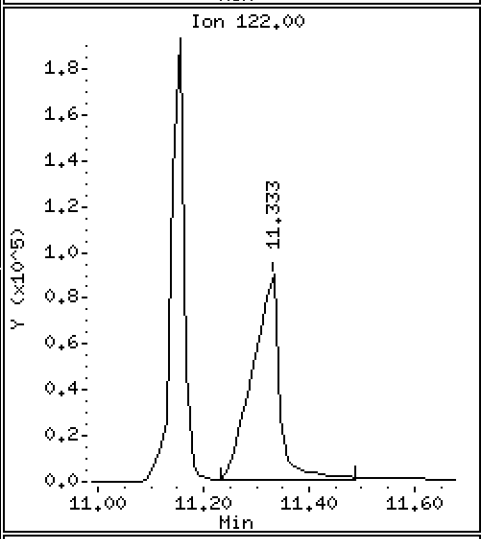
24 Benzoic acid

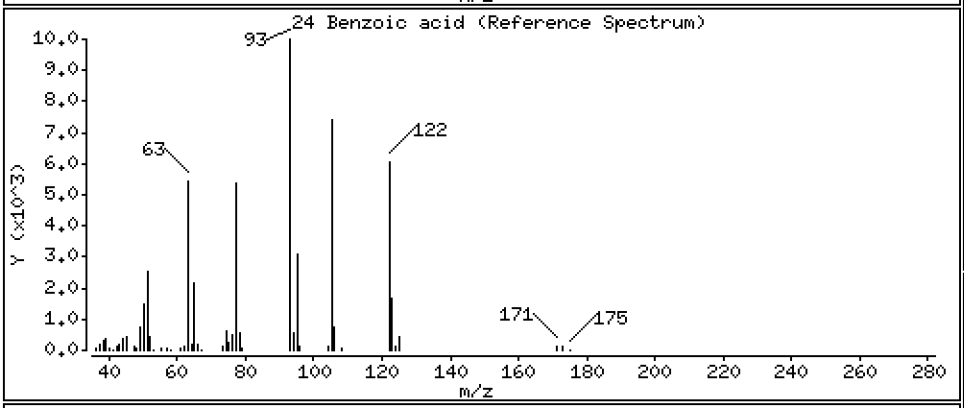
Concentration: 6.761 ug/mL

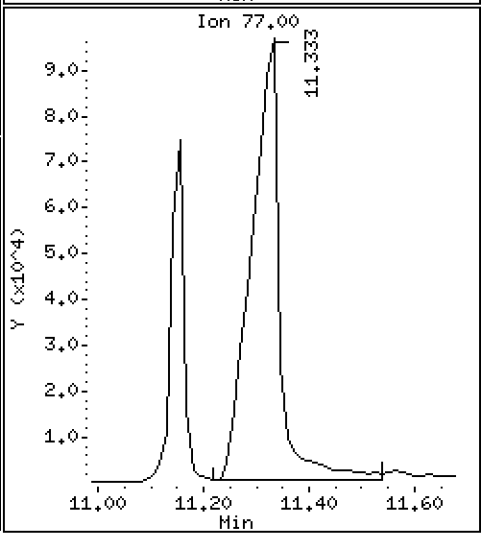


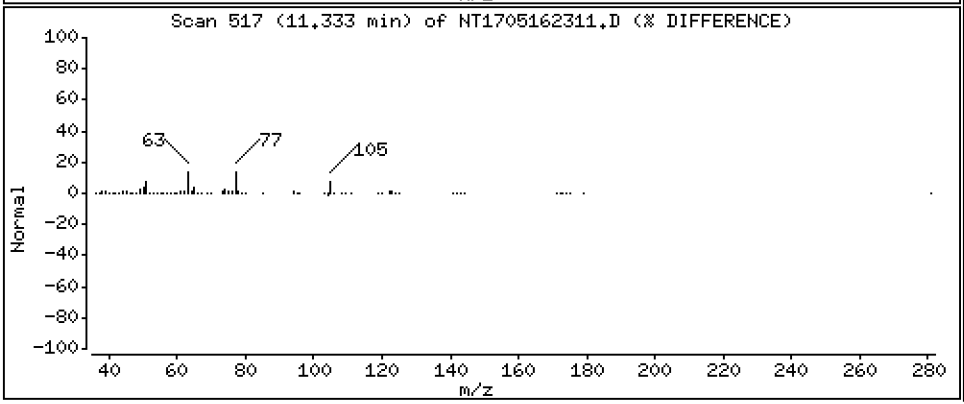












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

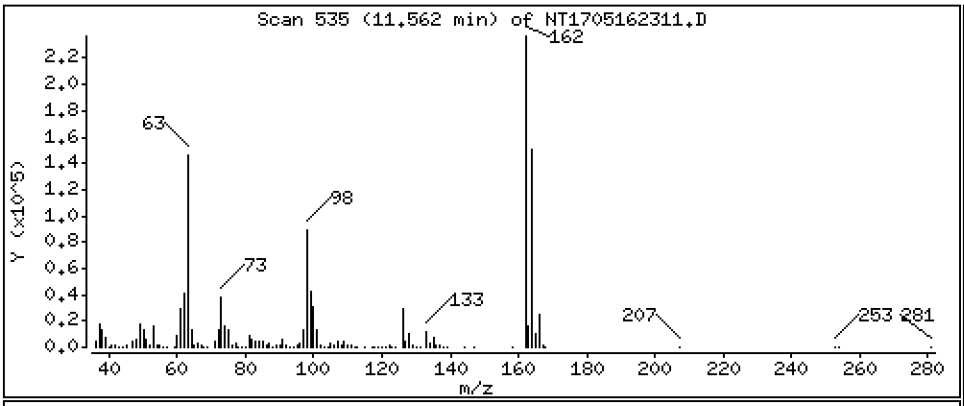
Operator: JGR

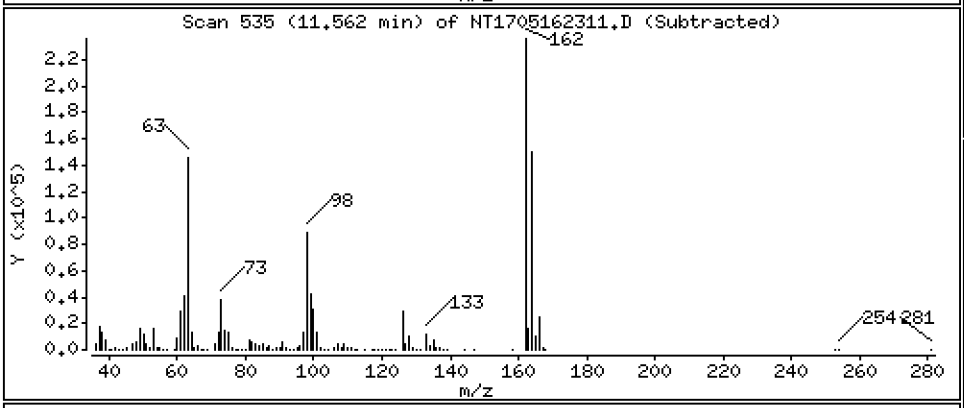
Column phase: ZB-5msi

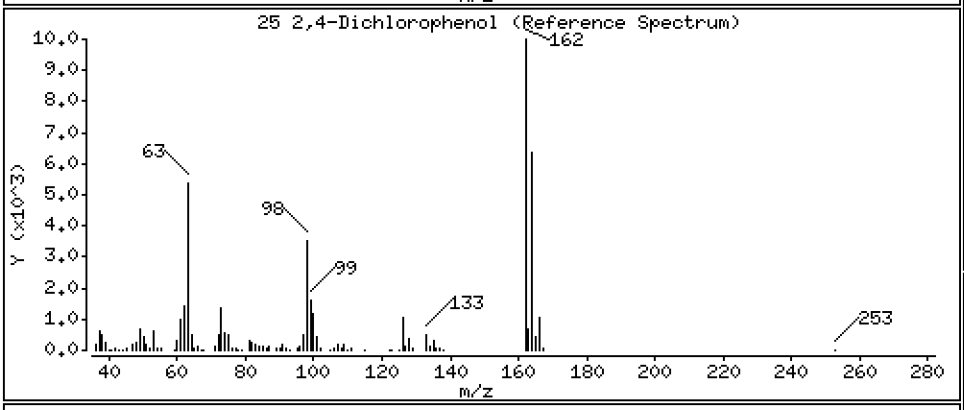
Column diameter: 0.25

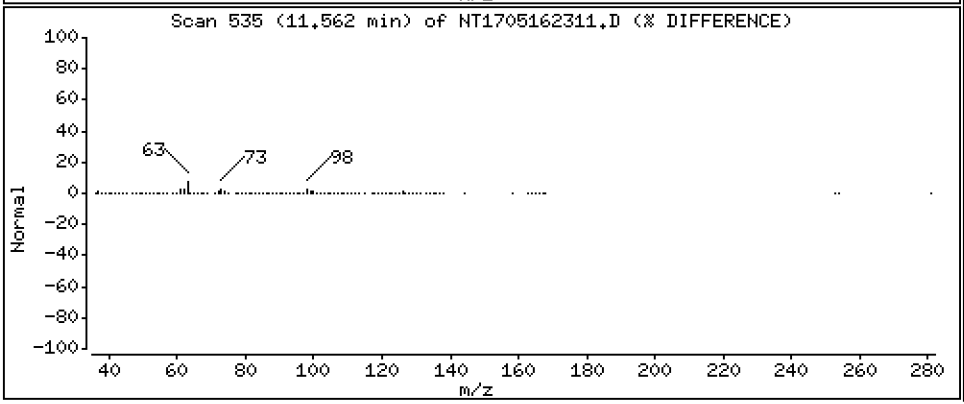
25 2,4-Dichlorophenol

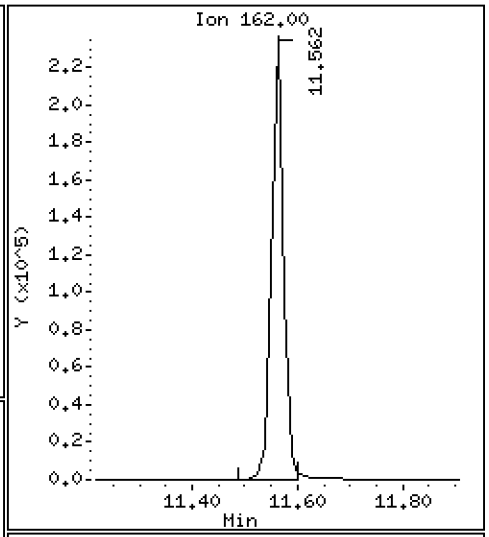
Concentration: 4.707 ug/mL

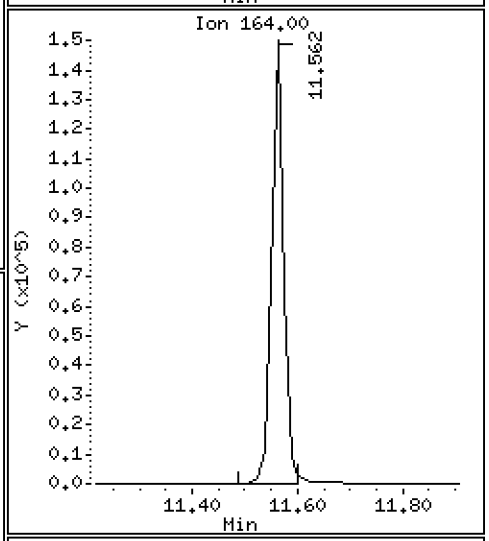


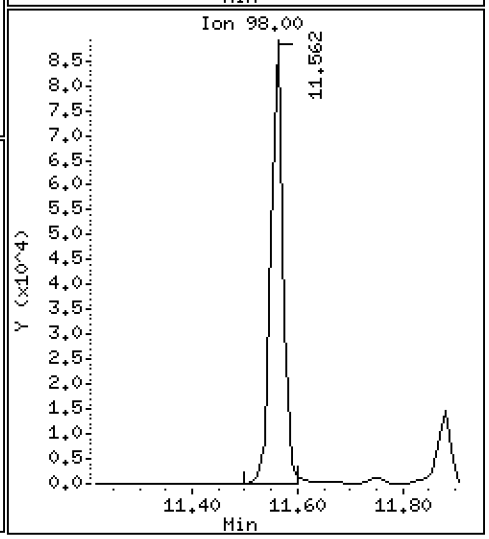












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

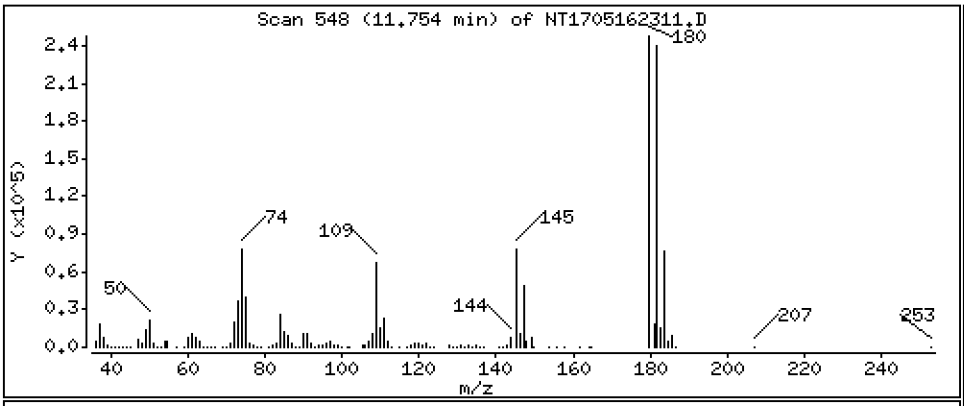
Operator: JGR

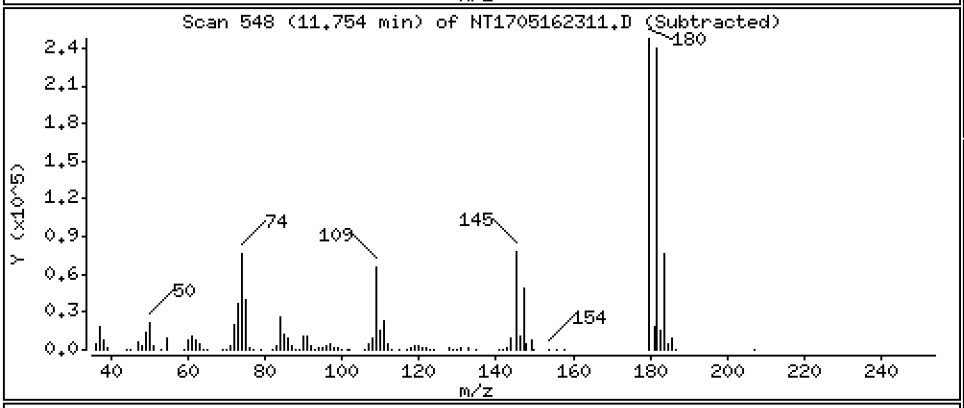
Column phase: ZB-5msi

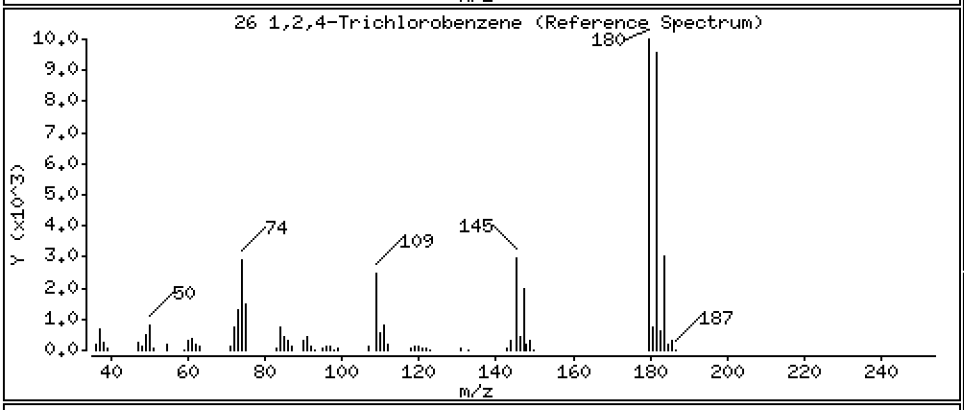
Column diameter: 0.25

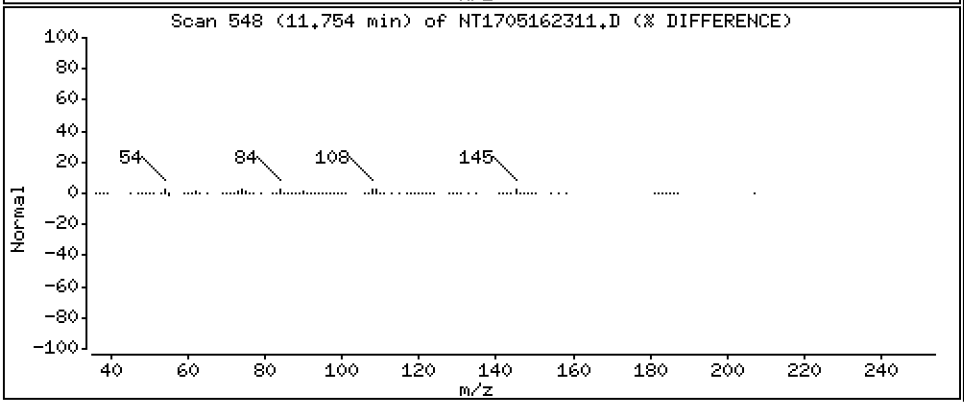
26 1,2,4-Trichlorobenzene

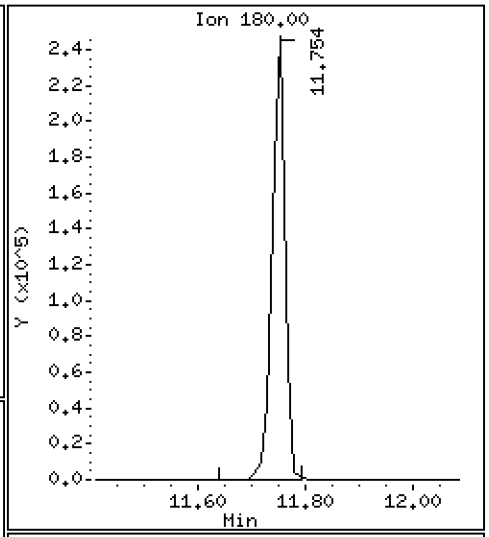
Concentration: 5.879 ug/mL

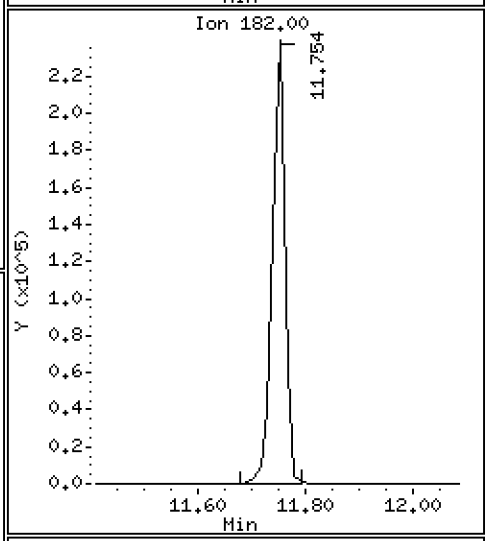


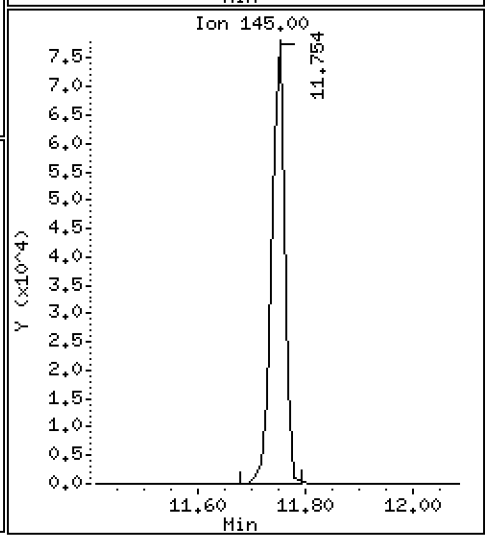












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

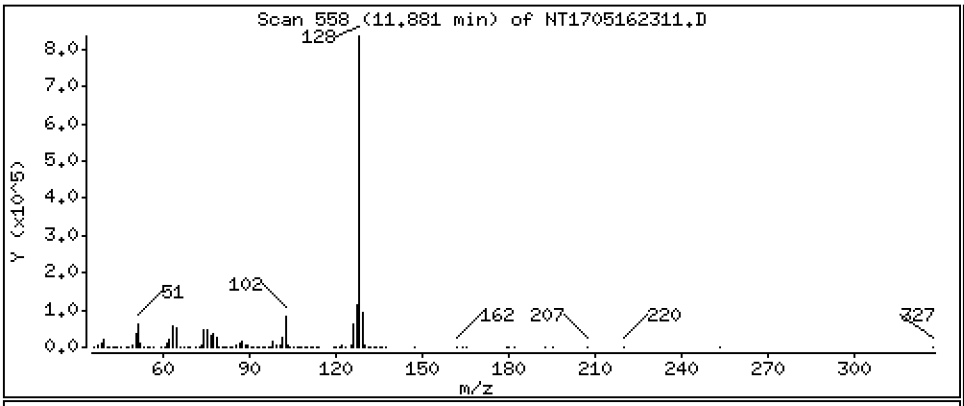
Operator: JGR

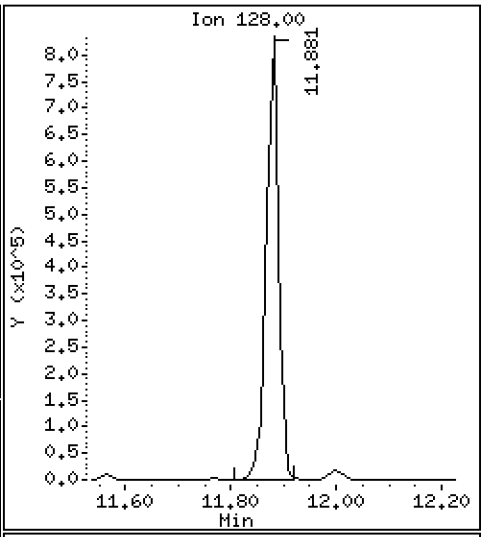
Column phase: ZB-5msi

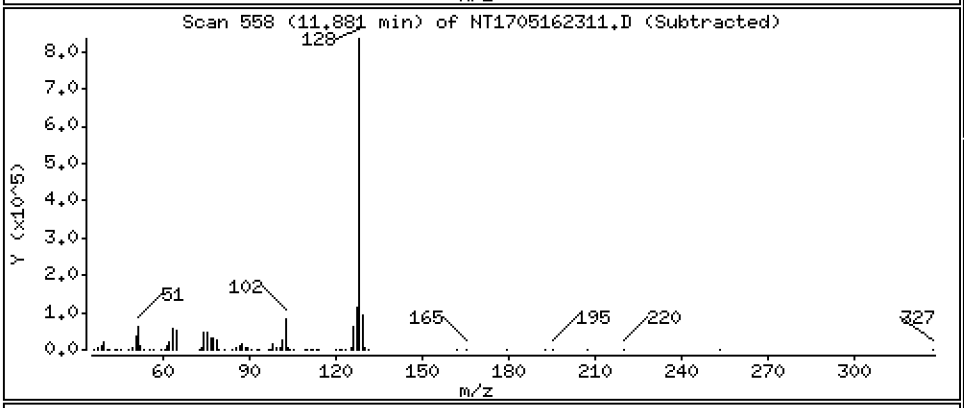
Column diameter: 0.25

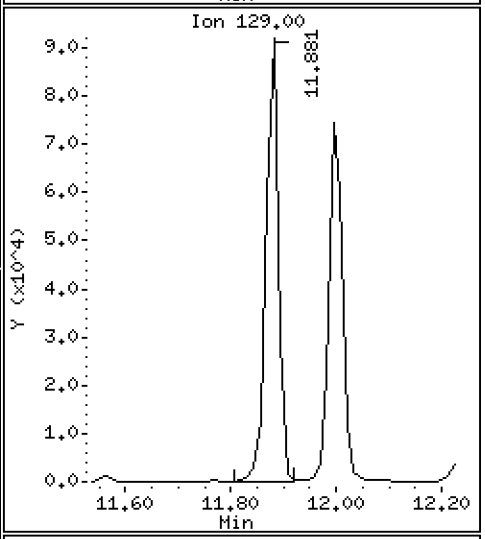
28 Naphthalene

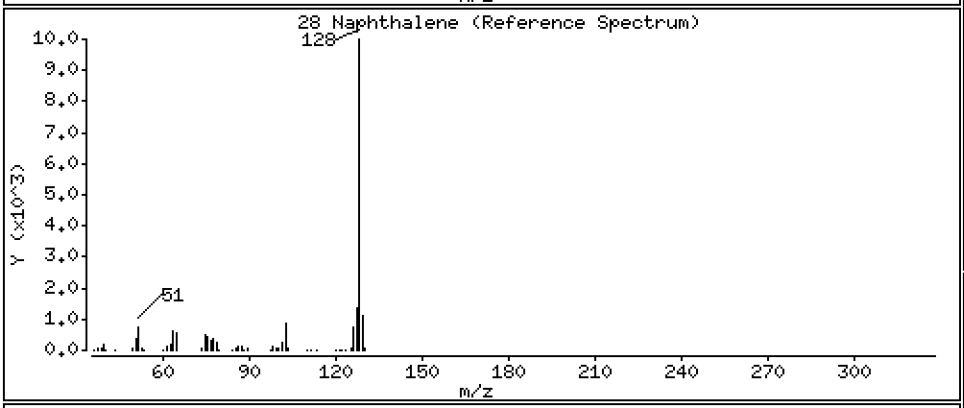
Concentration: 5.129 ug/mL

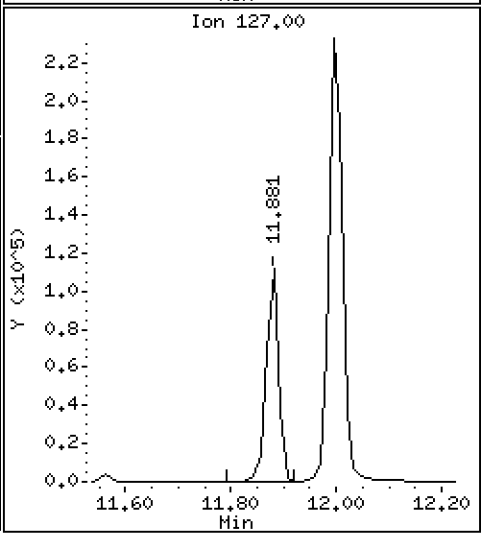


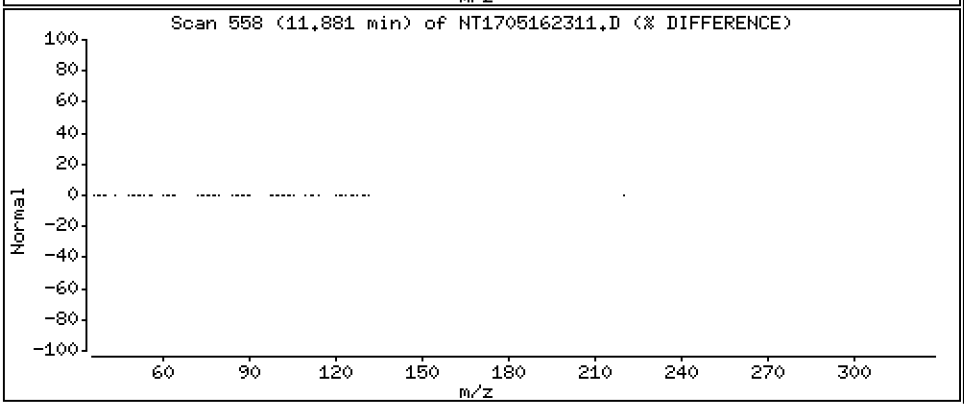












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

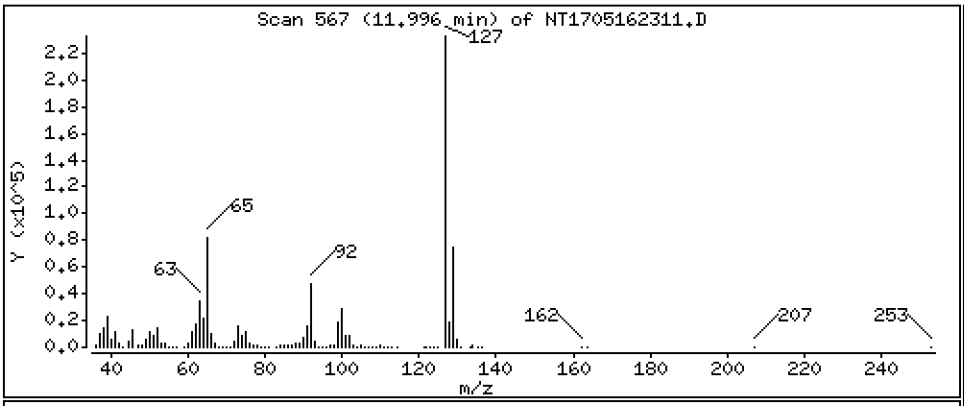
Operator: JGR

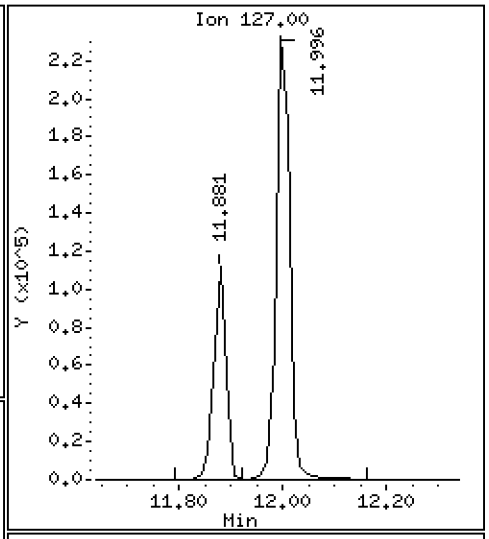
Column phase: ZB-5msi

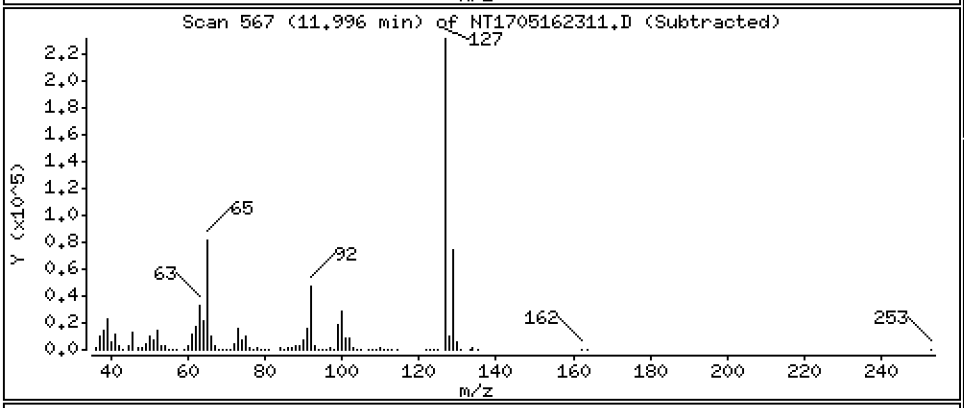
Column diameter: 0.25

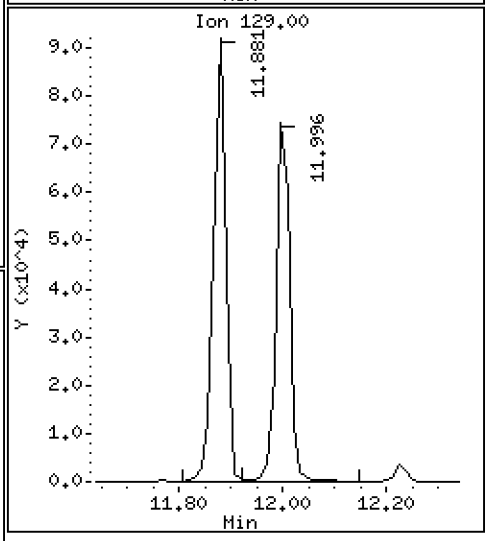
29 4-Chloroaniline

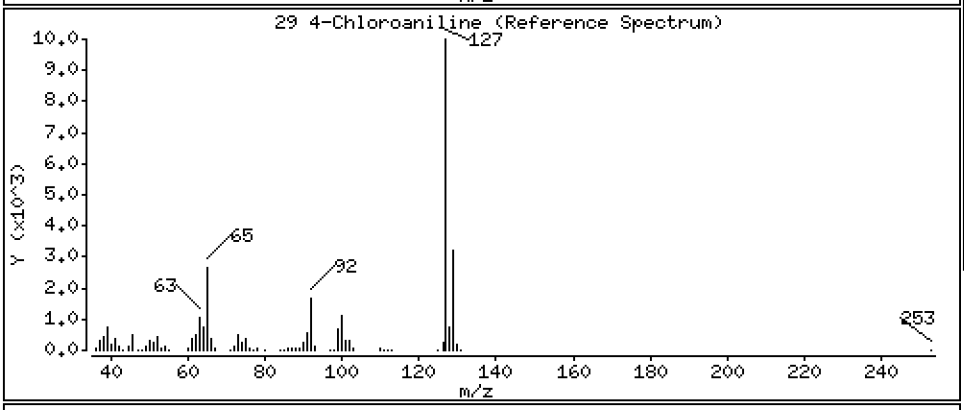
Concentration: 4.488 ug/mL

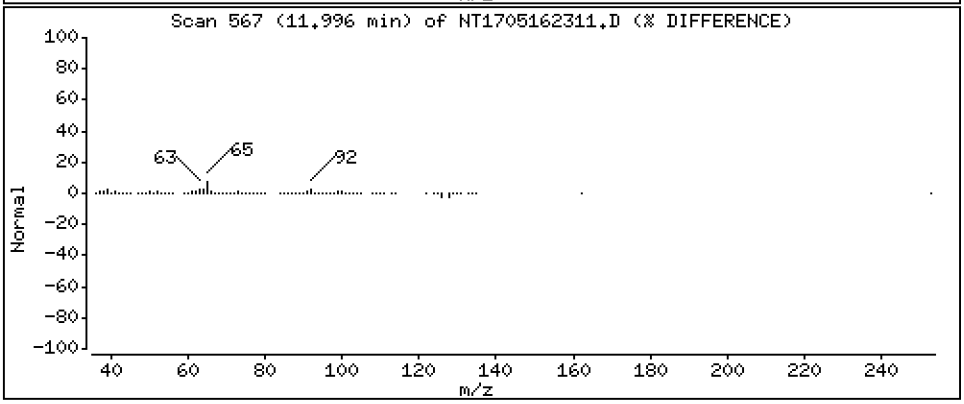












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

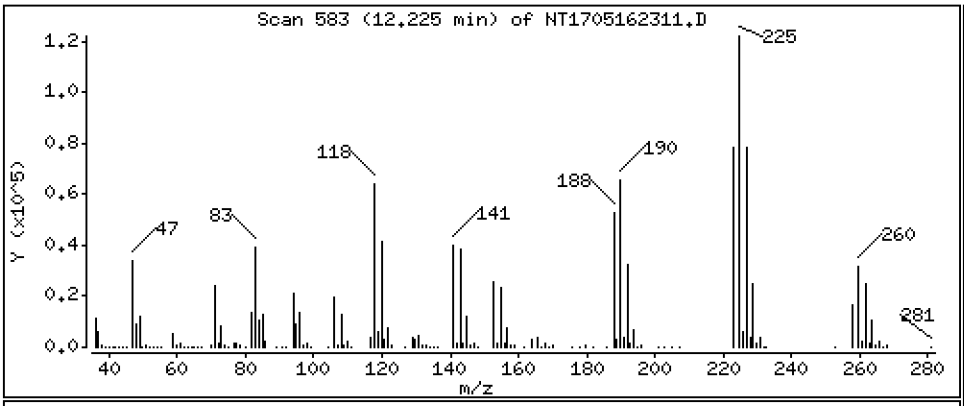
Operator: JGR

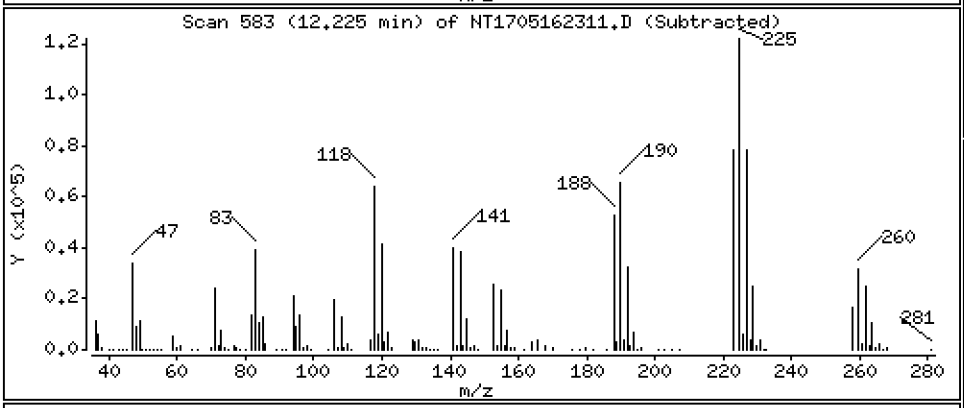
Column phase: ZB-5msi

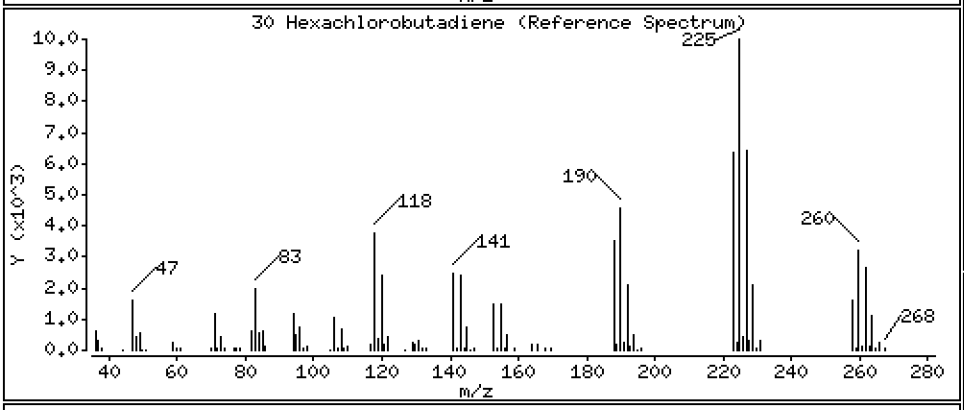
Column diameter: 0.25

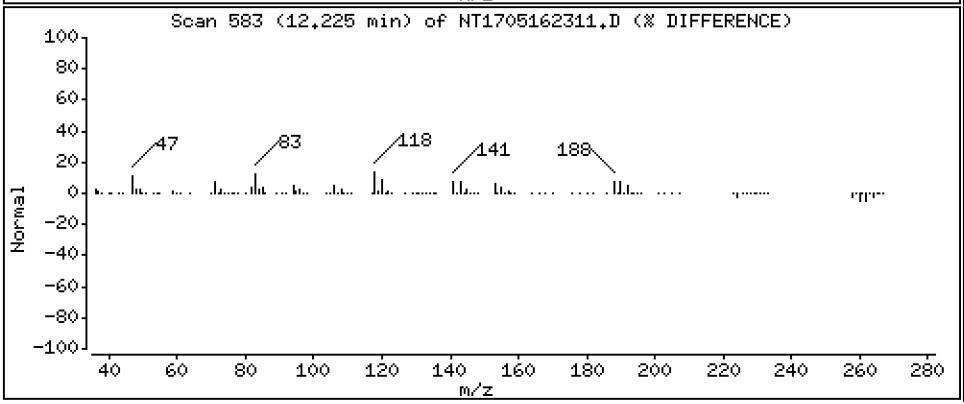
30 Hexachlorobutadiene

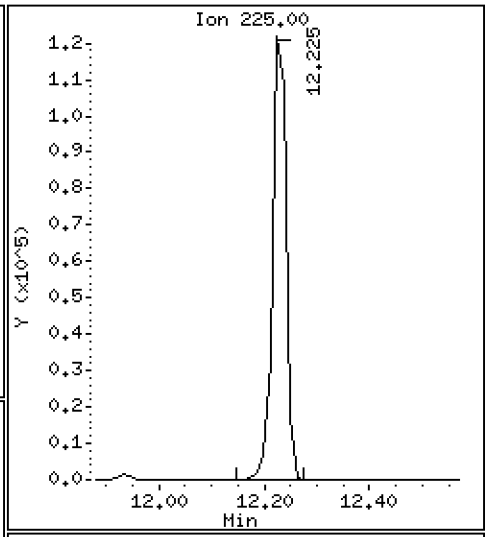
Concentration: 5.241 ug/mL

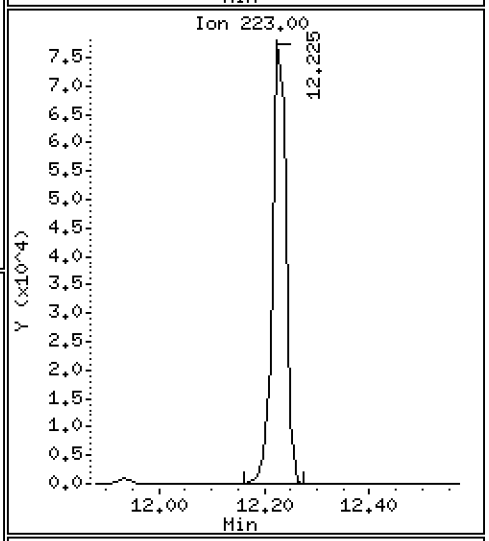


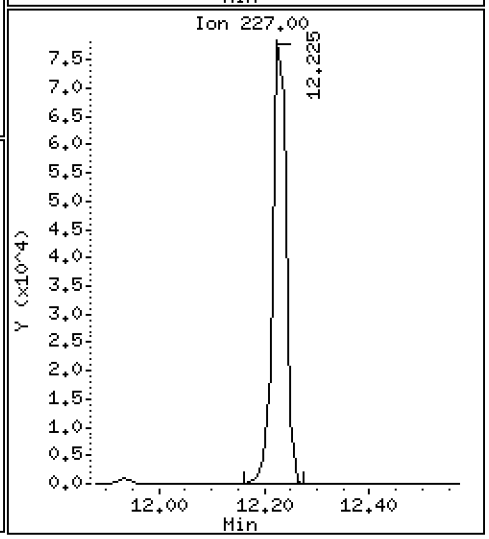












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

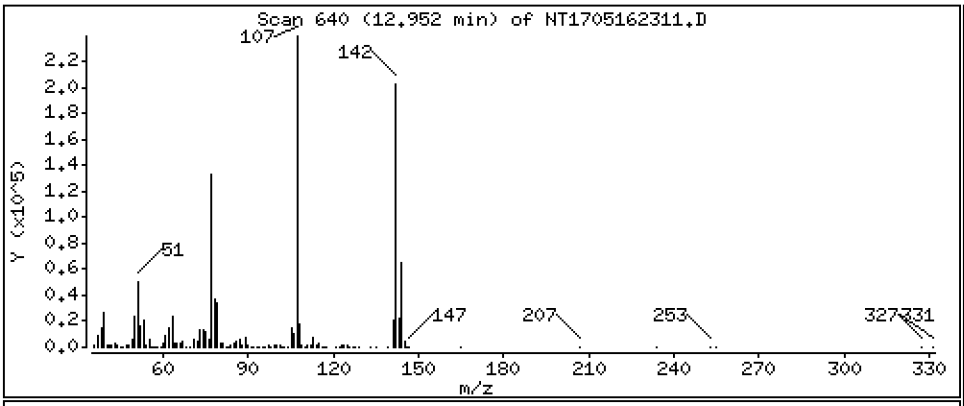
Operator: JGR

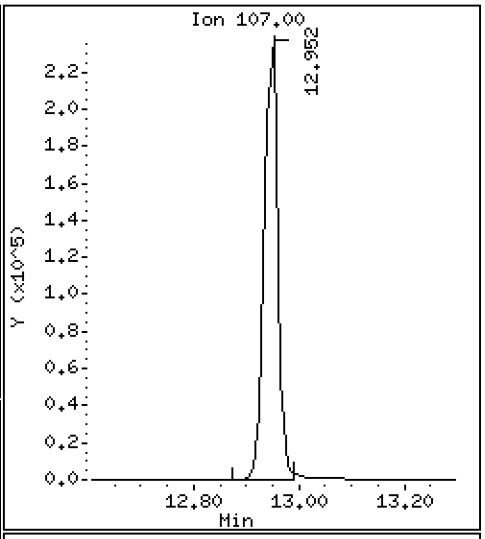
Column phase: ZB-5msi

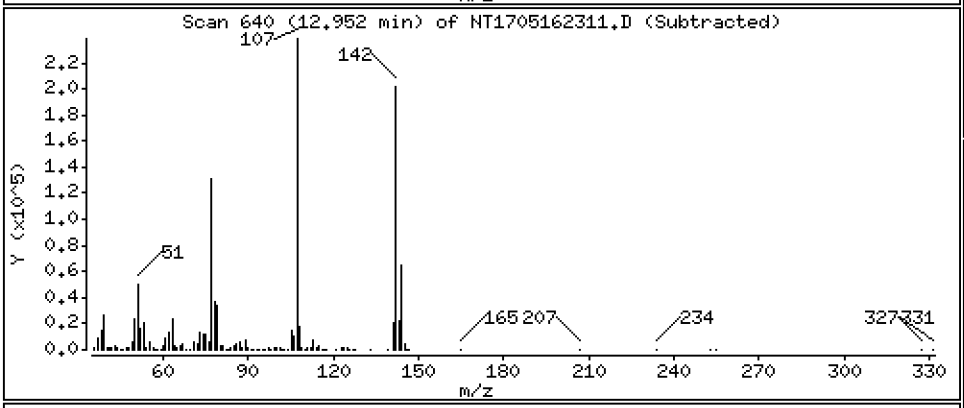
Column diameter: 0.25

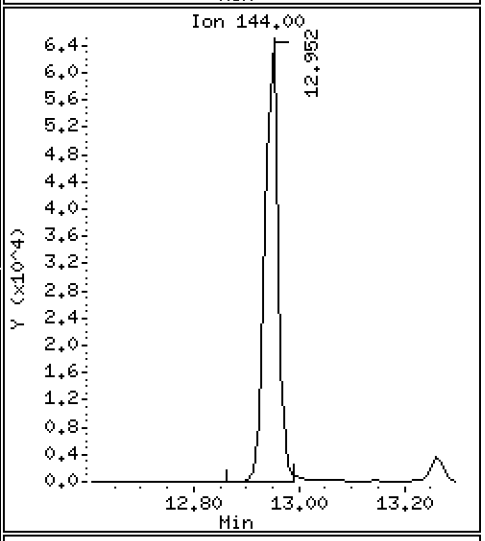
31 4-Chloro-3-methylphenol

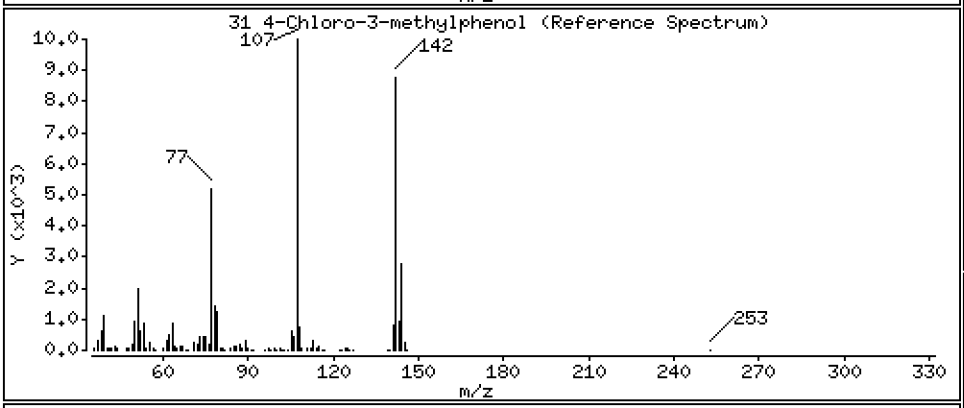
Concentration: 4.878 ug/mL

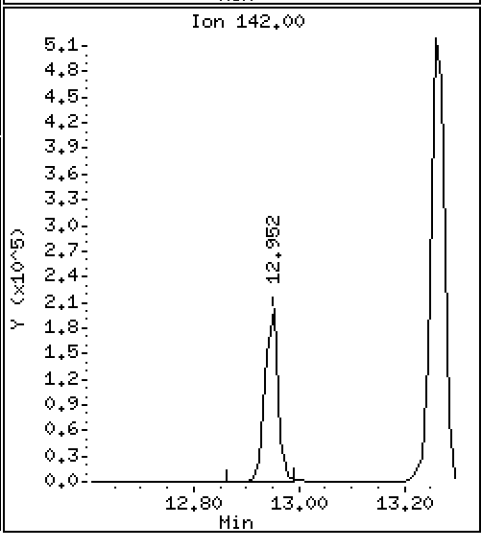


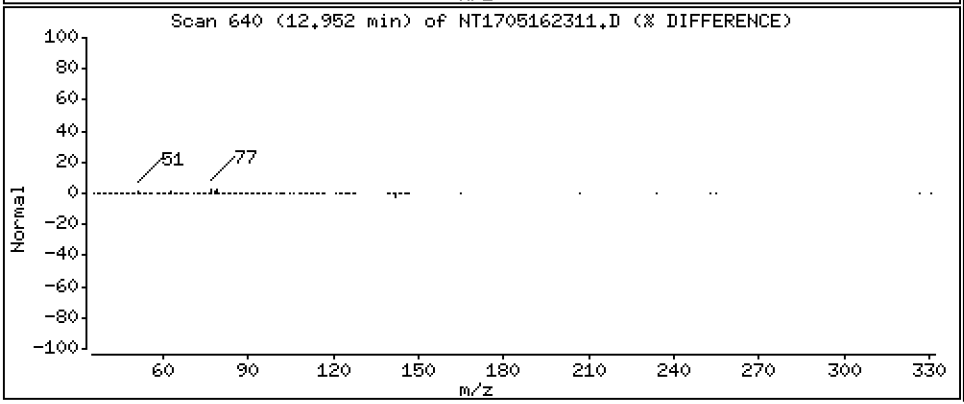












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

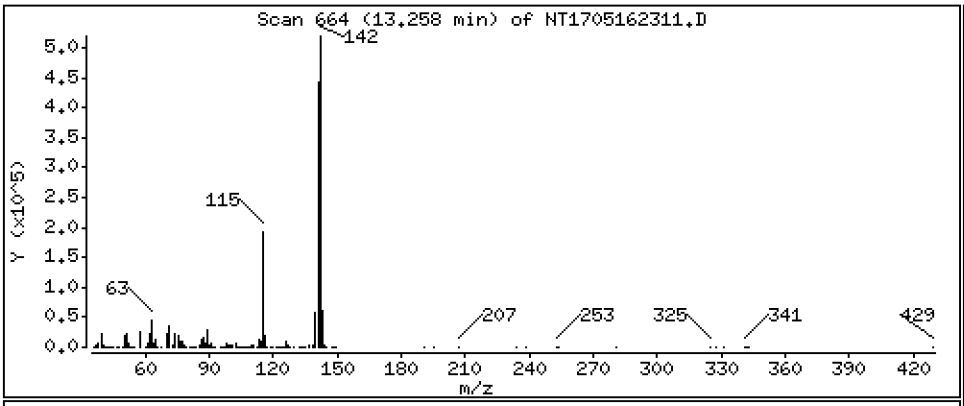
Operator: JGR

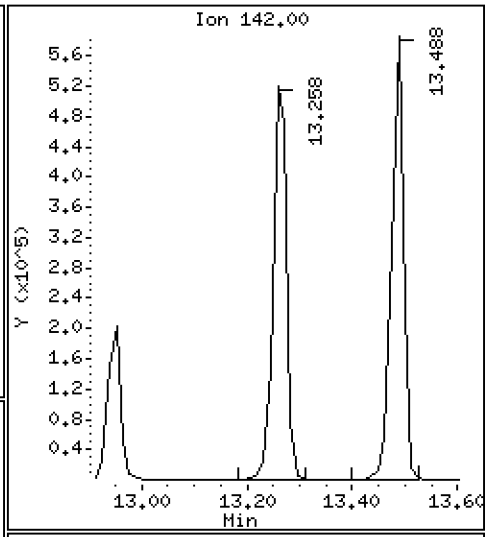
Column phase: ZB-5msi

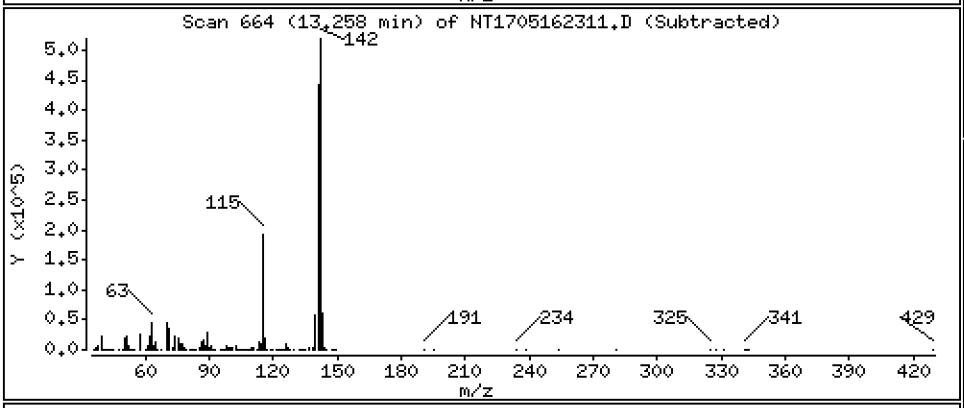
Column diameter: 0.25

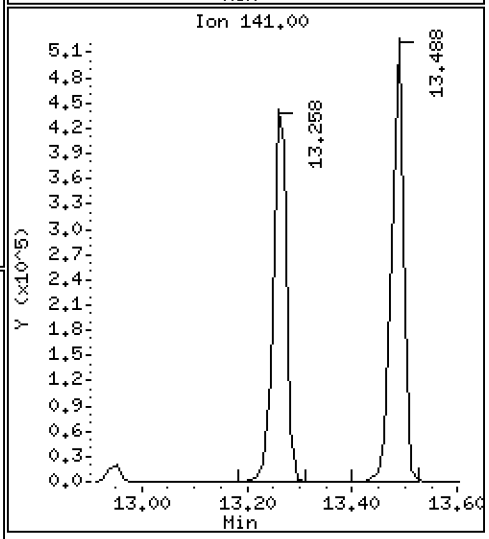
32 2-Methylnaphthalene

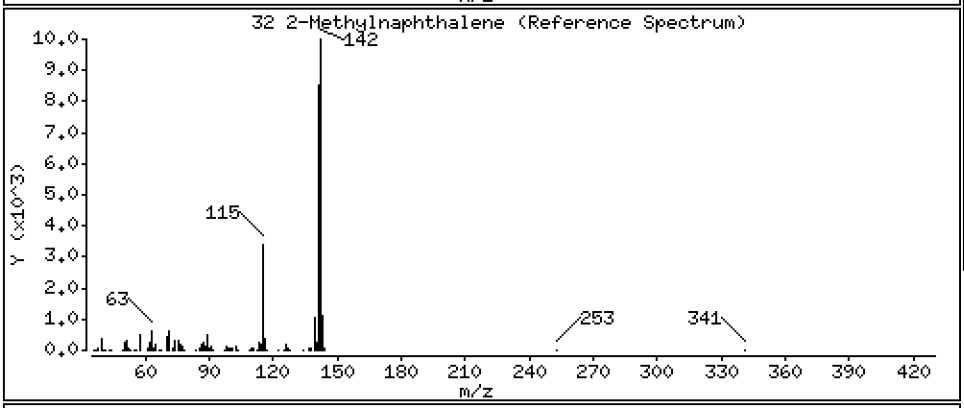
Concentration: 5.028 ug/mL

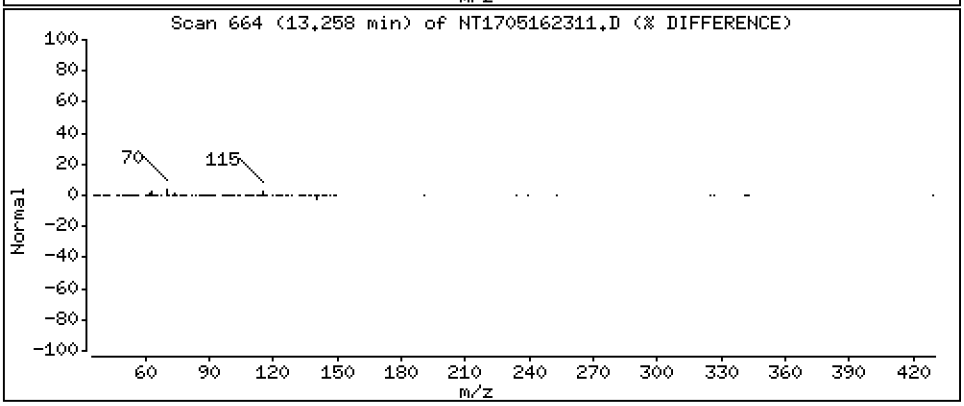












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

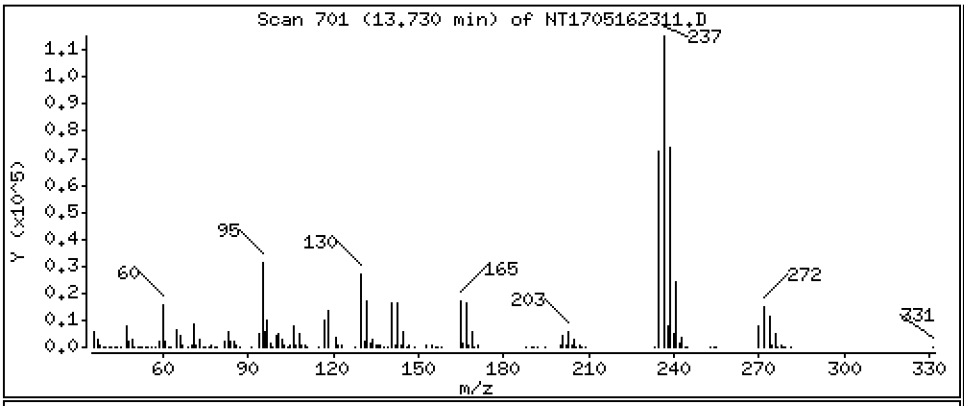
Operator: JGR

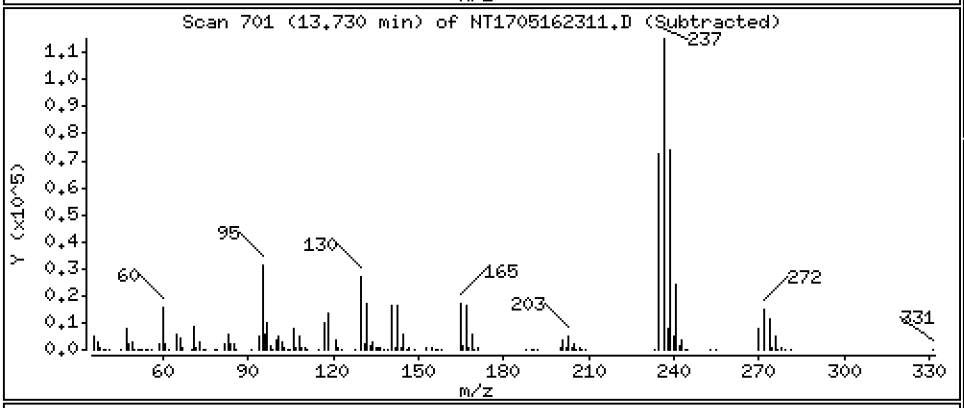
Column phase: ZB-5msi

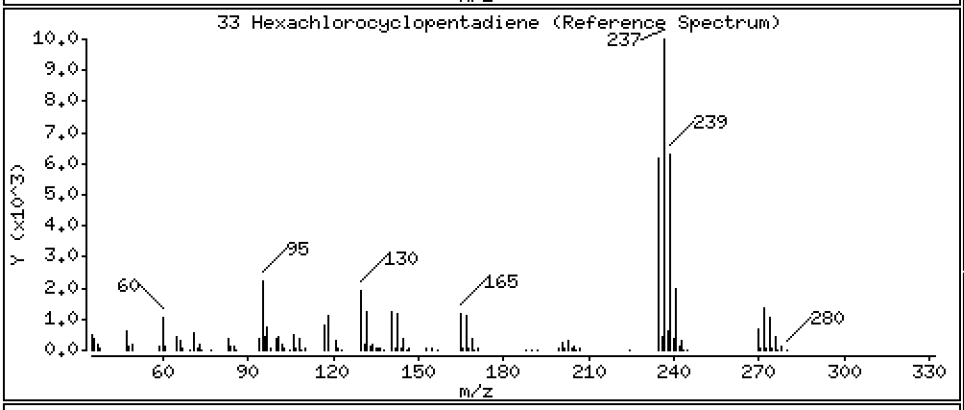
Column diameter: 0.25

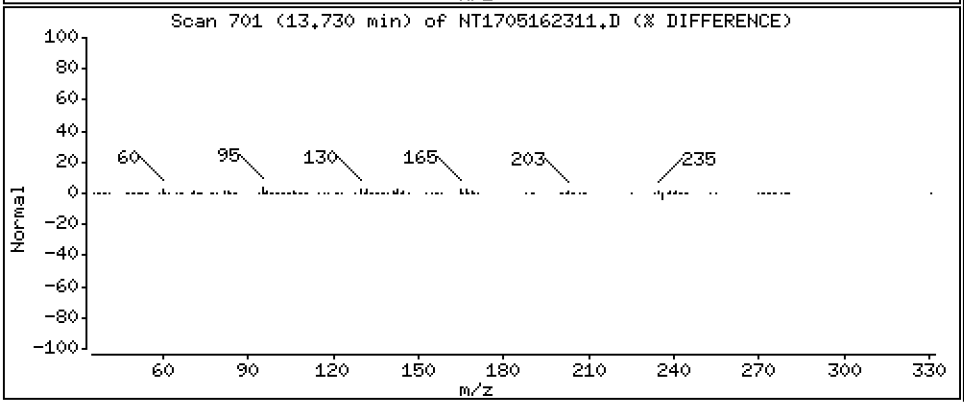
33 Hexachlorocyclopentadiene

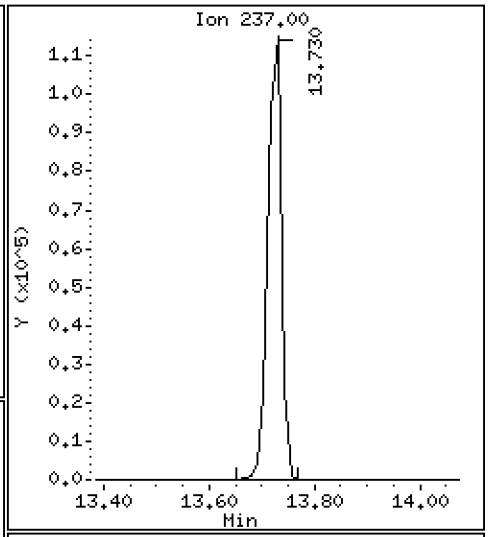
Concentration: 4.219 ug/mL

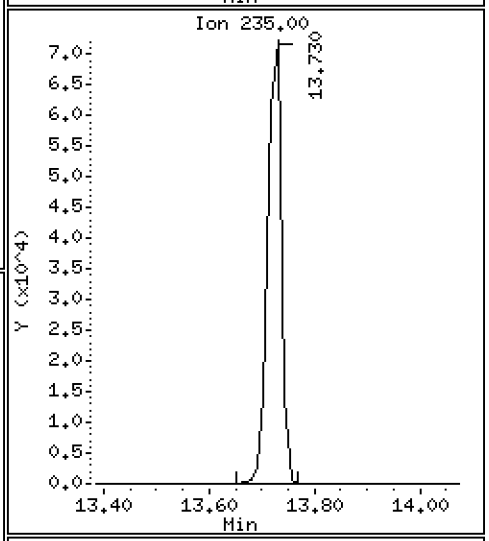


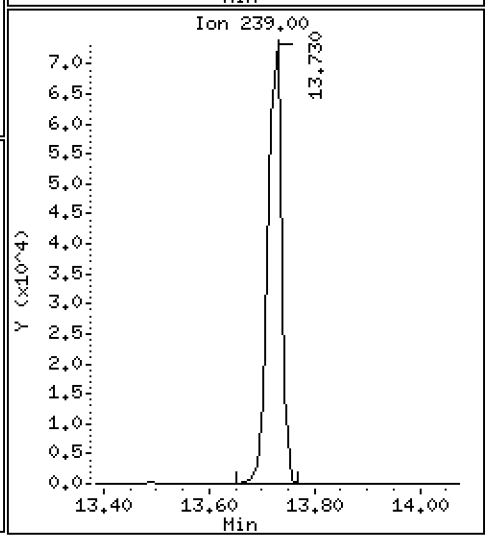












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

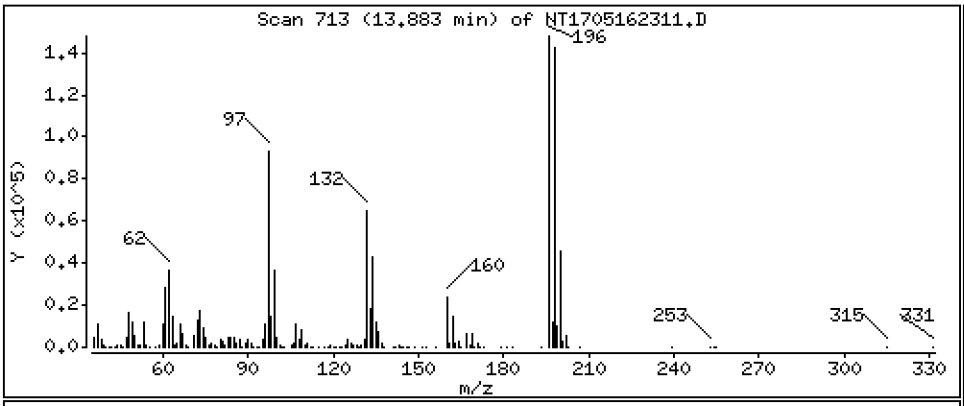
Operator: JGR

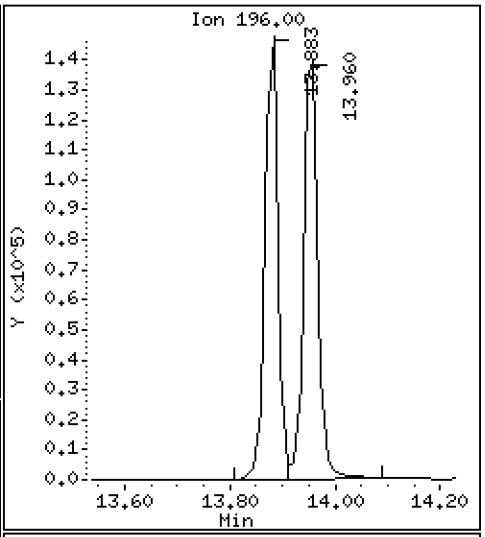
Column phase: ZB-5msi

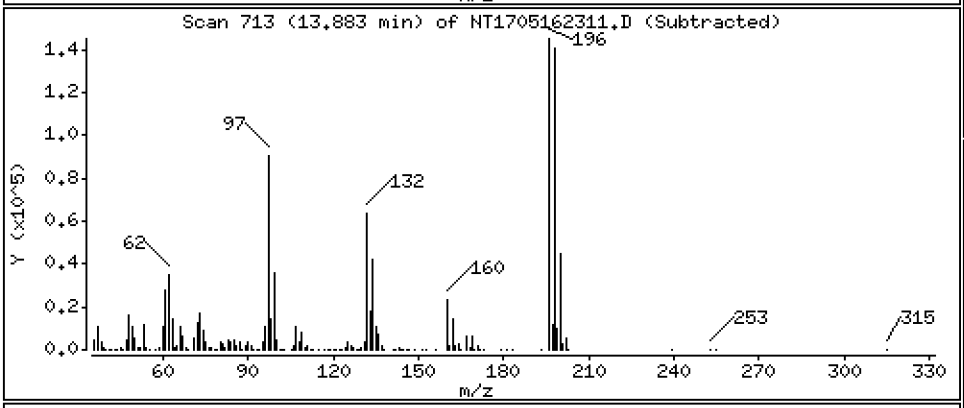
Column diameter: 0.25

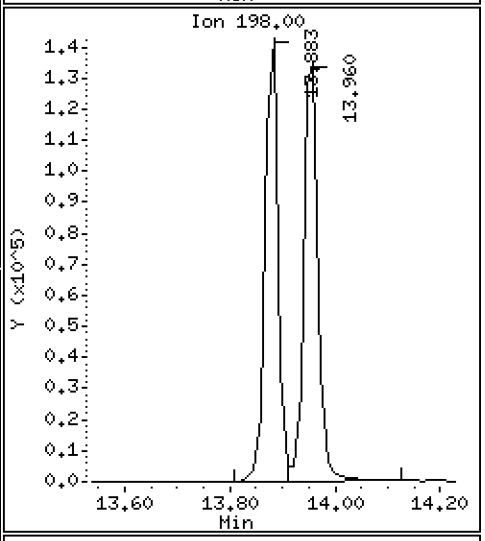
34 2,4,6-Trichlorophenol

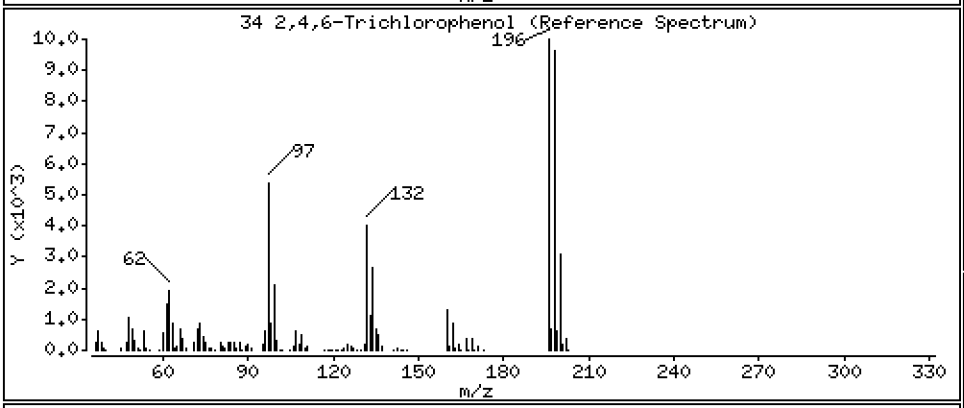
Concentration: 4.794 ug/mL

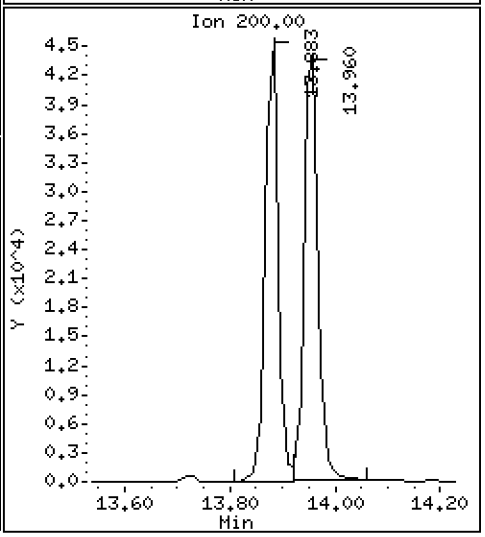


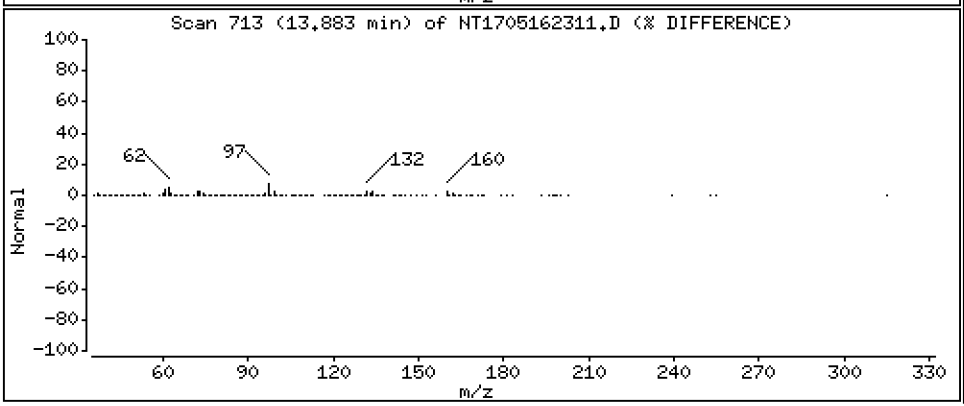












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

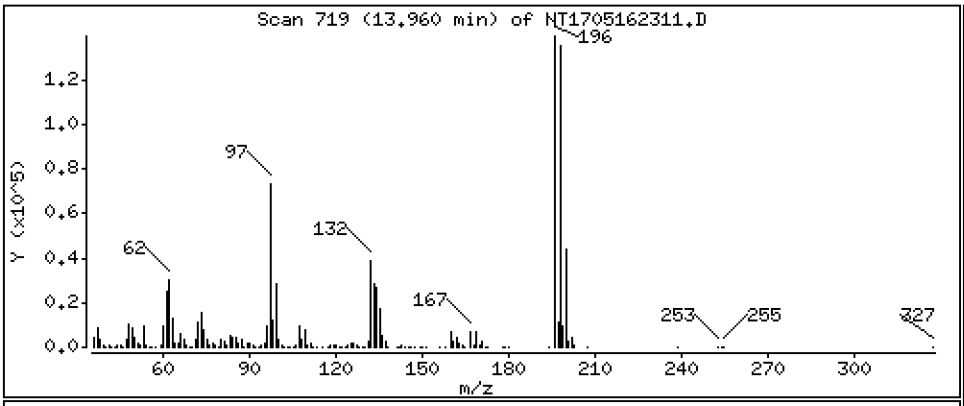
Operator: JGR

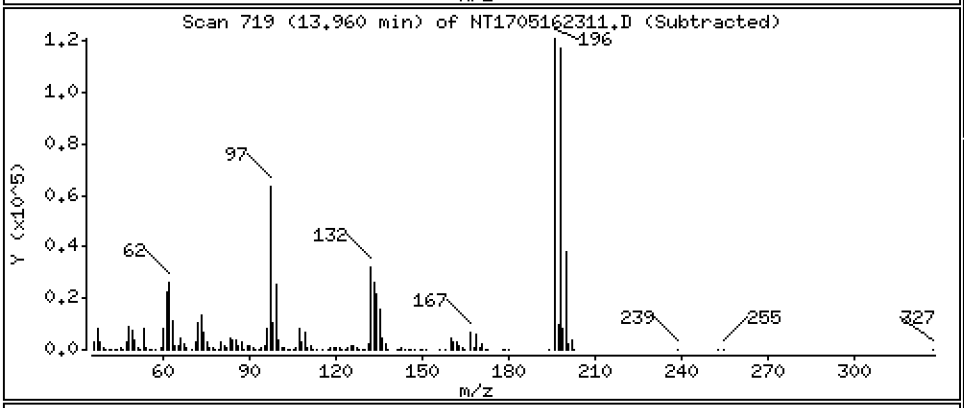
Column phase: ZB-5msi

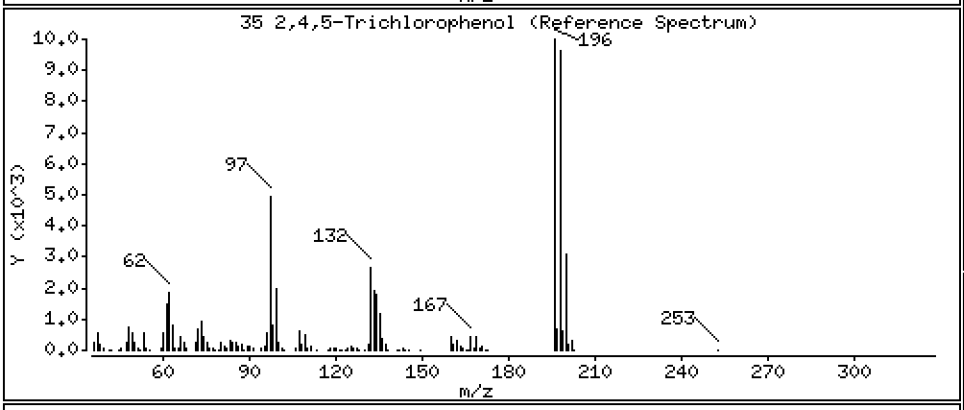
Column diameter: 0.25

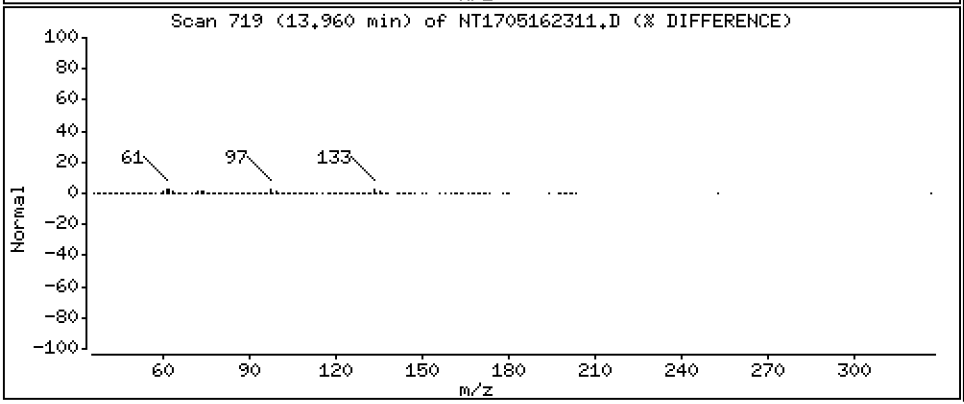
35 2,4,5-Trichlorophenol

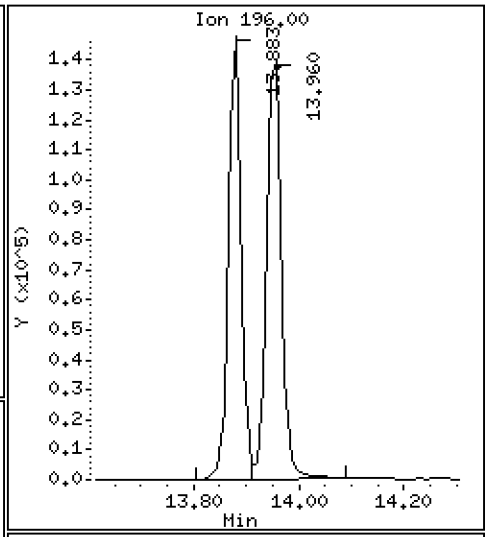
Concentration: 4.837 ug/mL

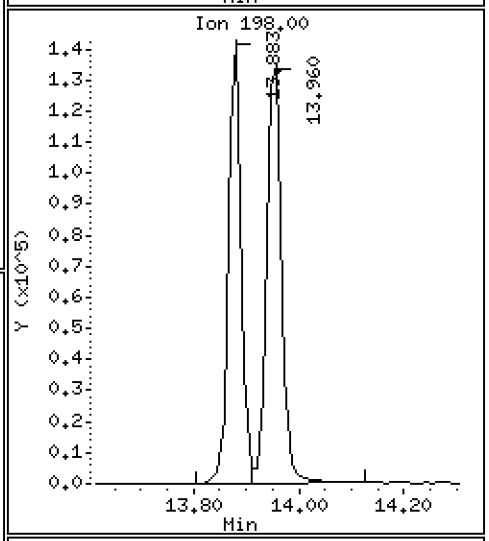


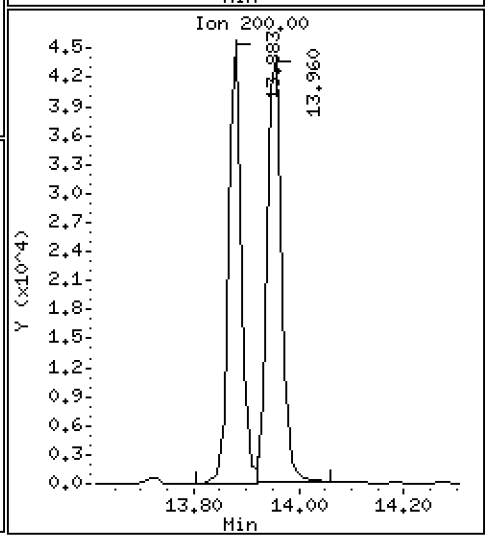












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

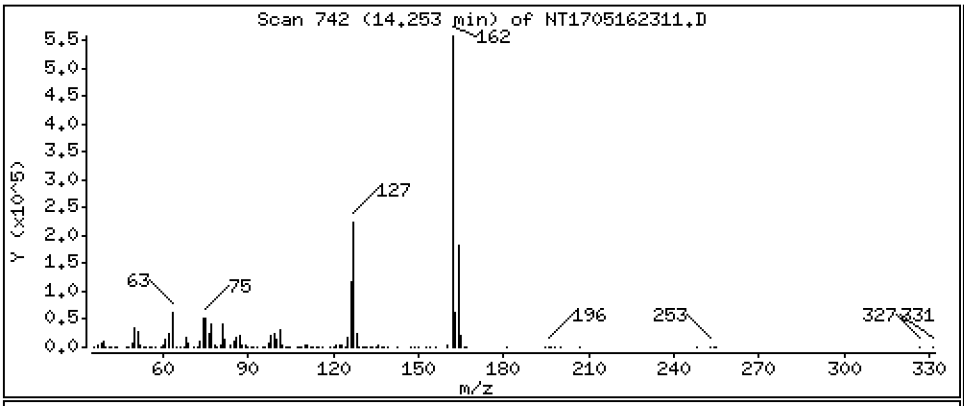
Operator: JGR

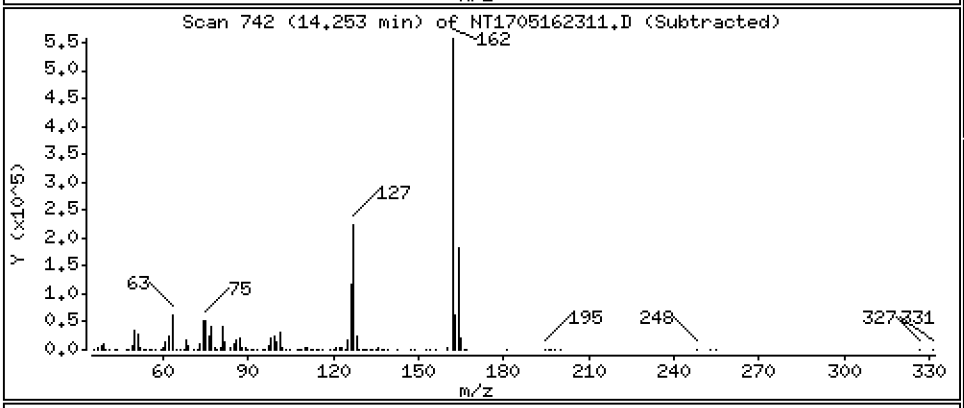
Column phase: ZB-5msi

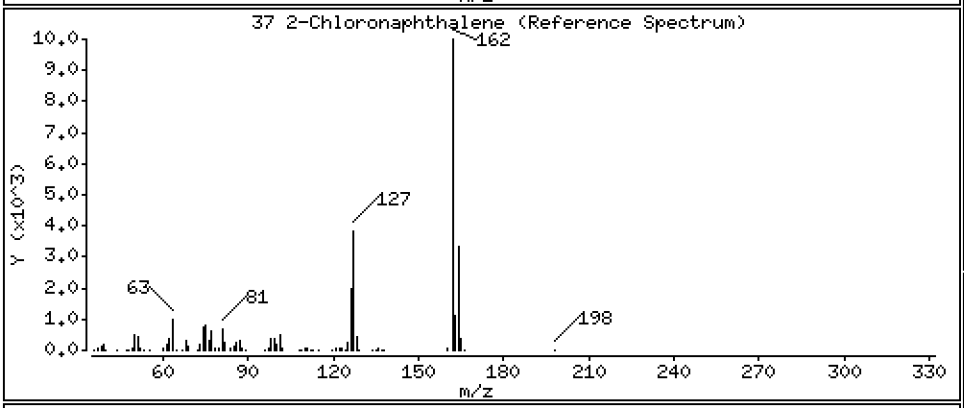
Column diameter: 0.25

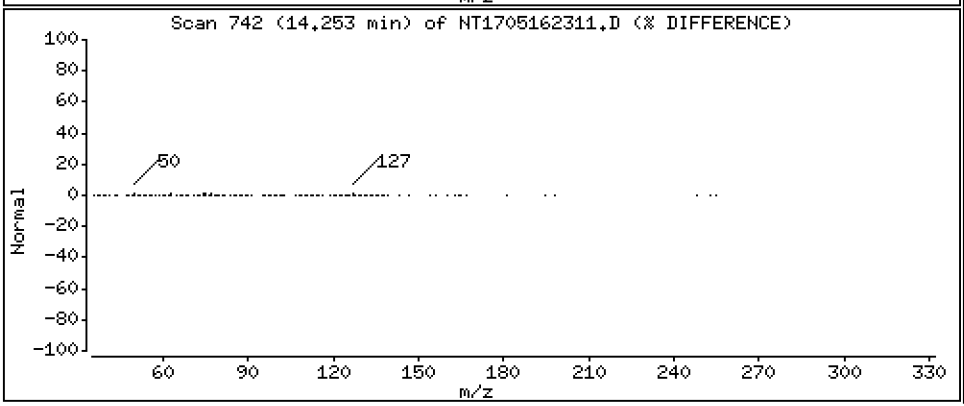
37 2-Chloronaphthalene

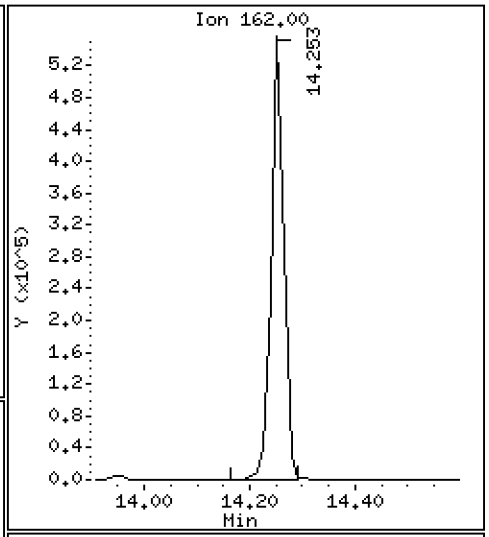
Concentration: 5.401 ug/mL

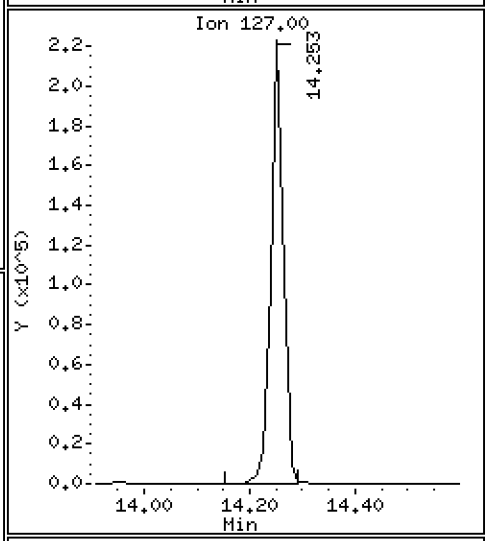


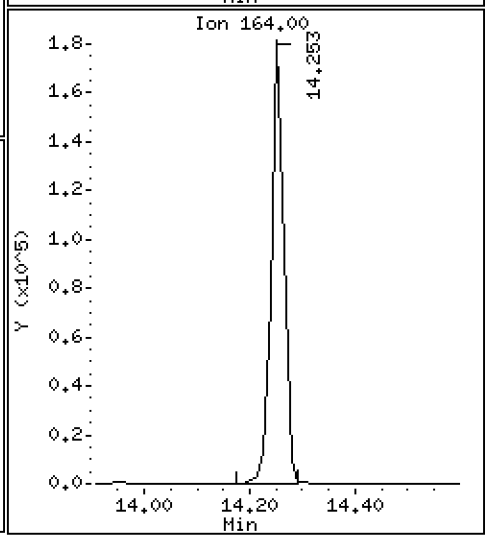












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

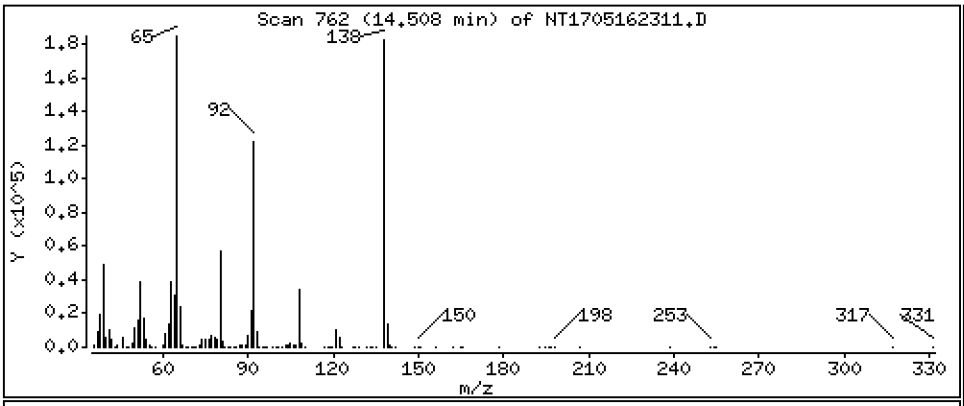
Operator: JGR

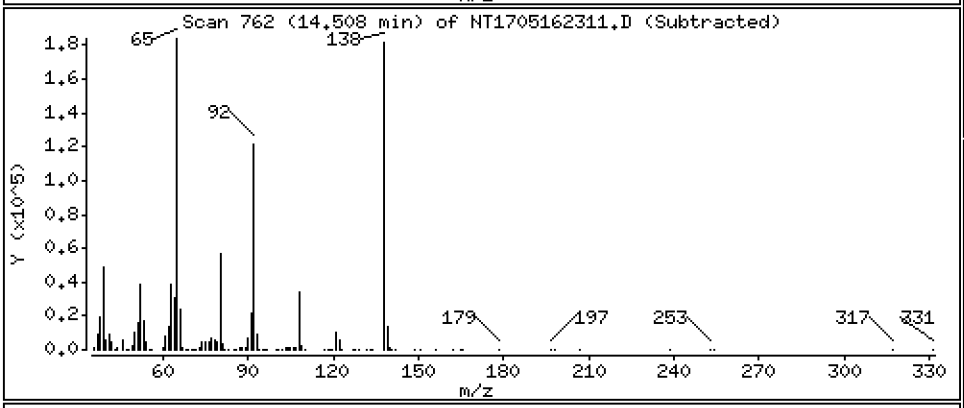
Column phase: ZB-5msi

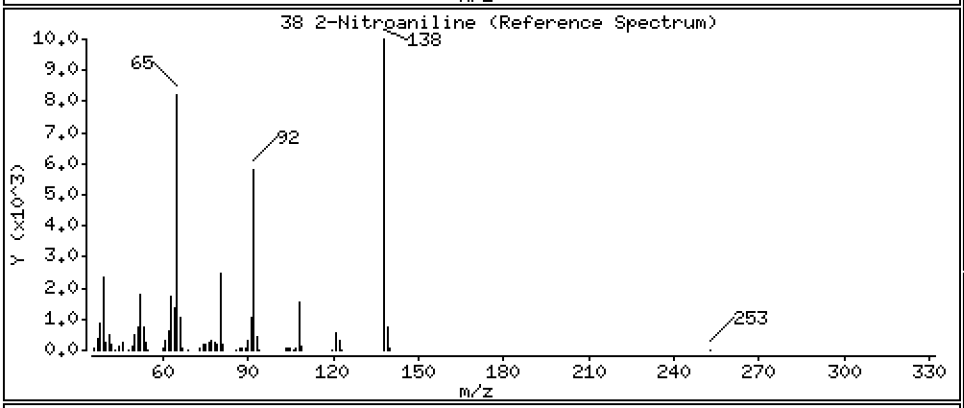
Column diameter: 0.25

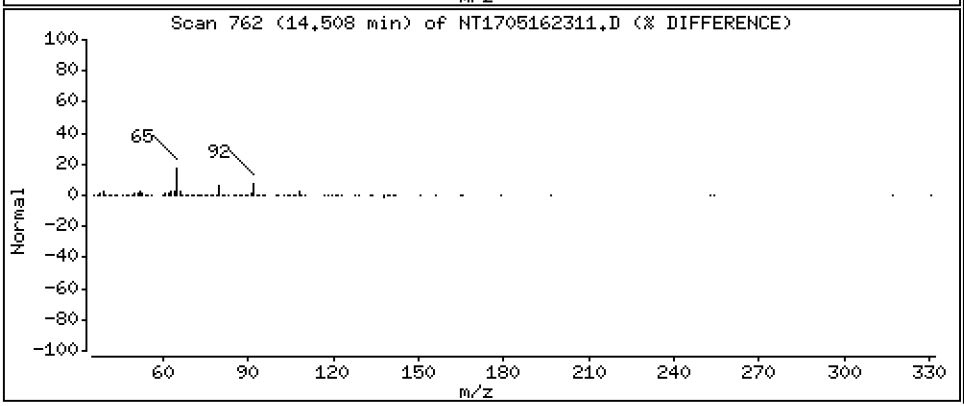
38 2-Nitroaniline

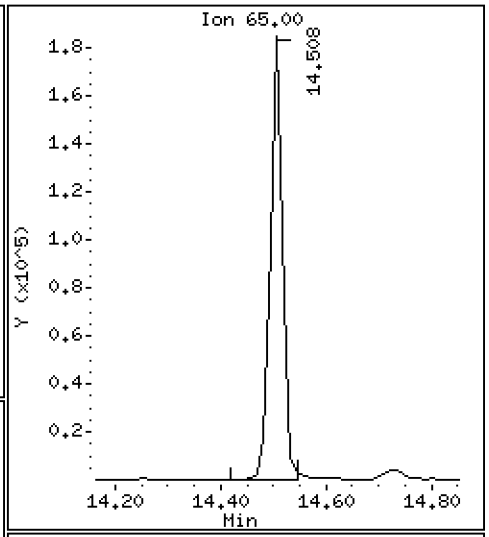
Concentration: 5.356 ug/mL

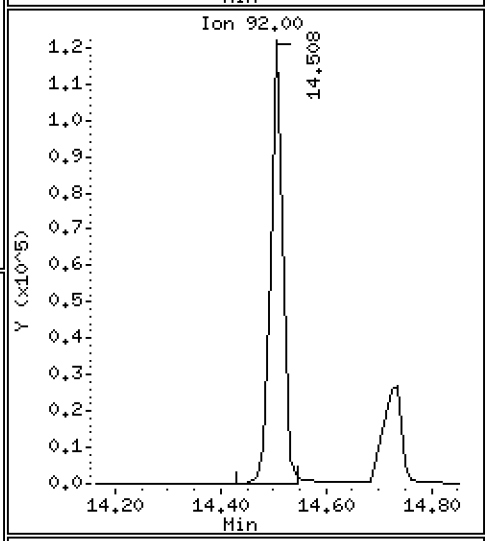


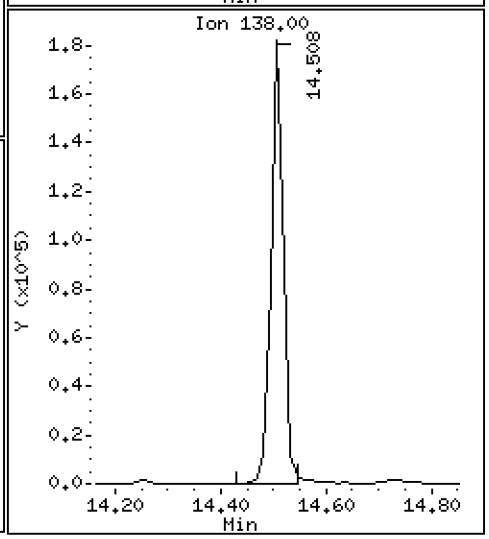












Date : 17-MAY-2023 00:29

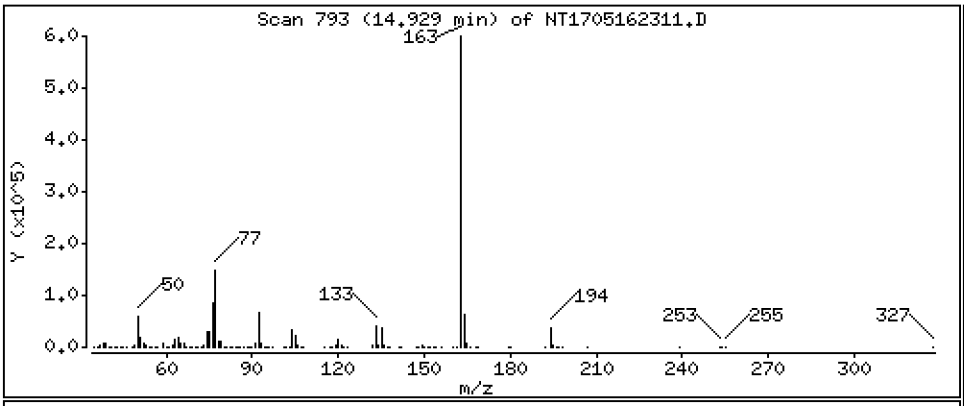
Client ID: Instrument: nt17.i

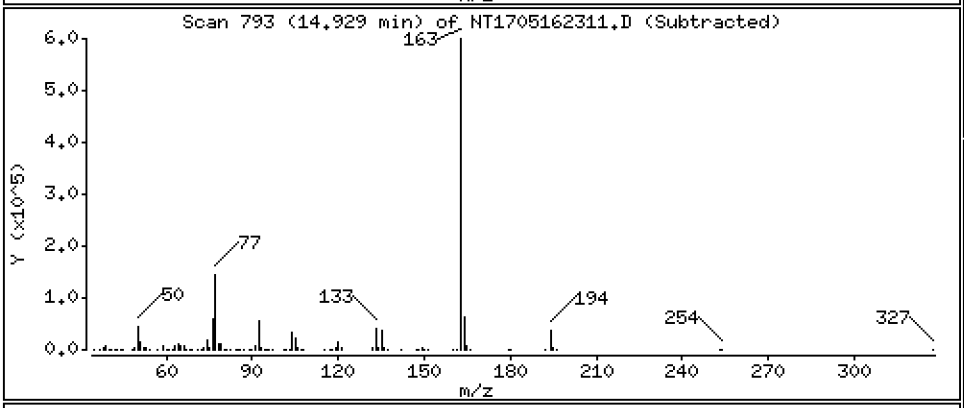
Sample Info: SLE0338-SCV1

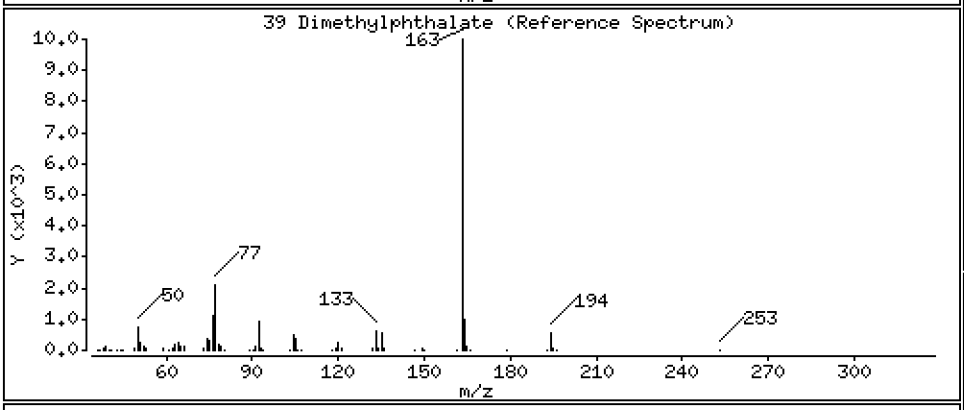
Operator: JGR

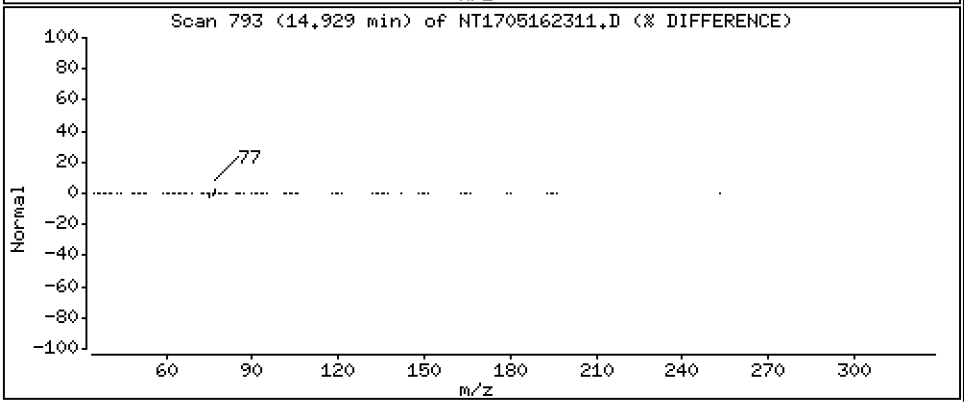
Column phase: ZB-5msi Column diameter: 0.25

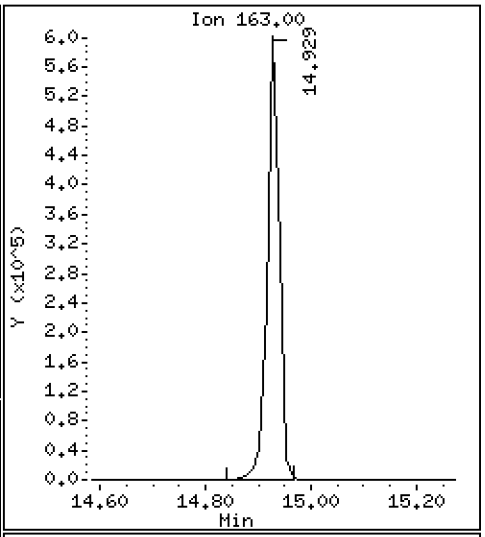
39 Dimethylphthalate Concentration: 5.418 ug/mL

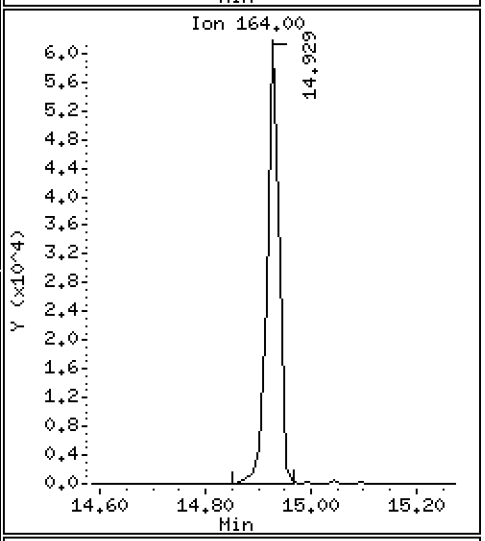


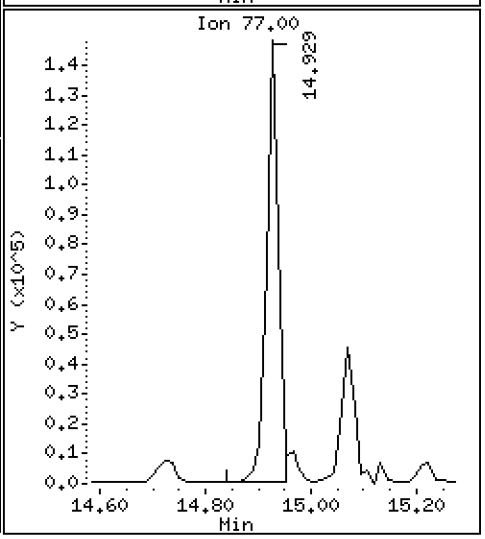












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

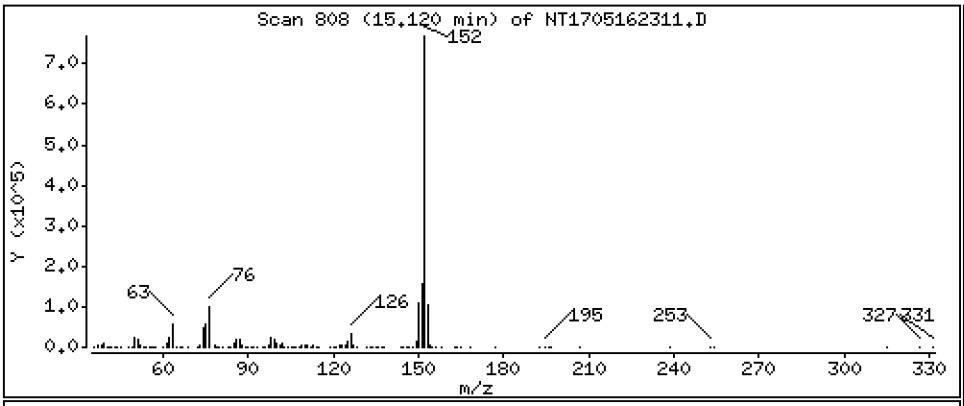
Operator: JGR

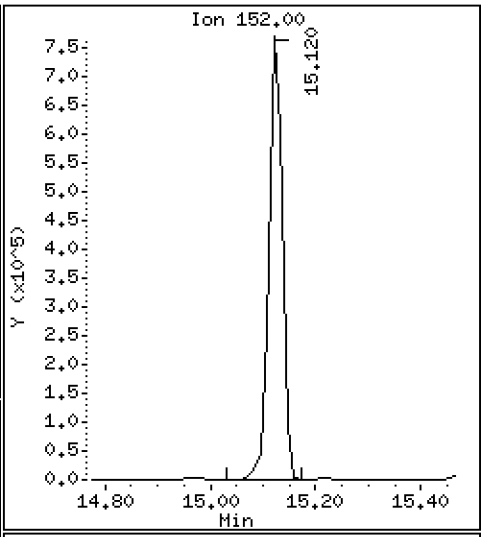
Column phase: ZB-5msi

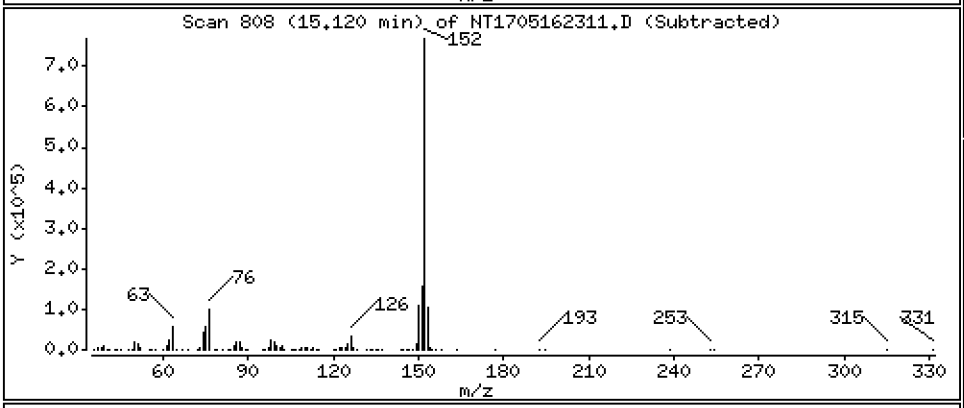
Column diameter: 0.25

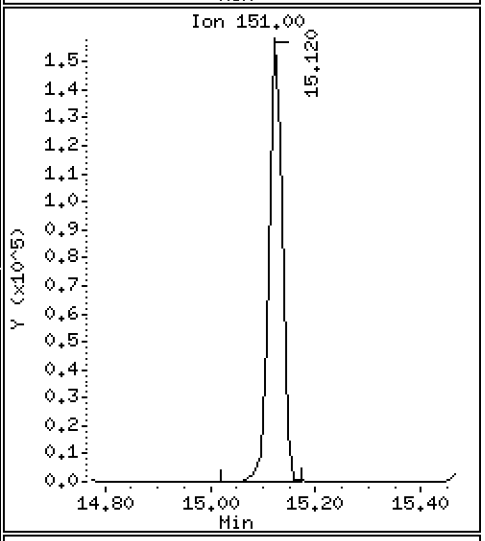
40 Acenaphthylene

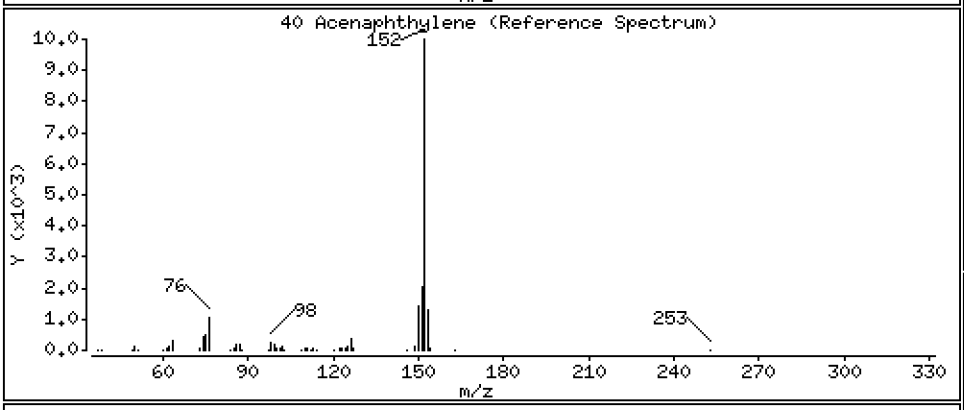
Concentration: 5.282 ug/mL

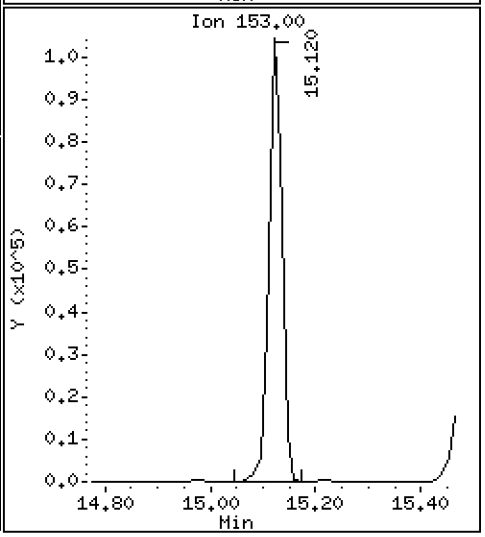


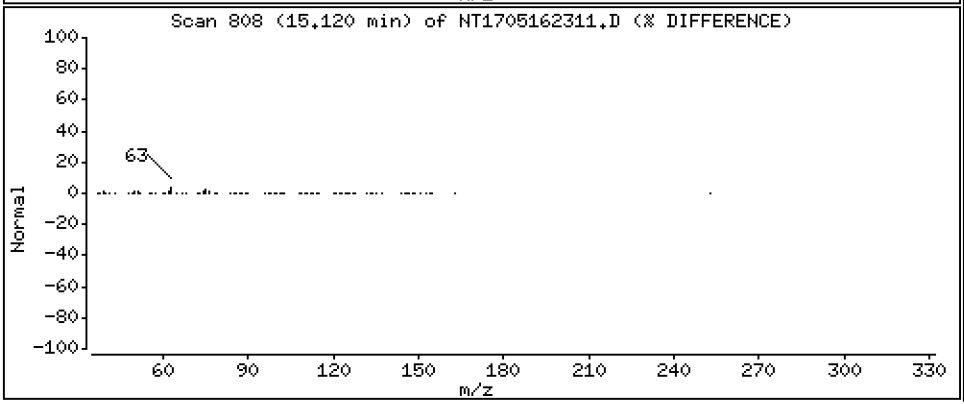












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

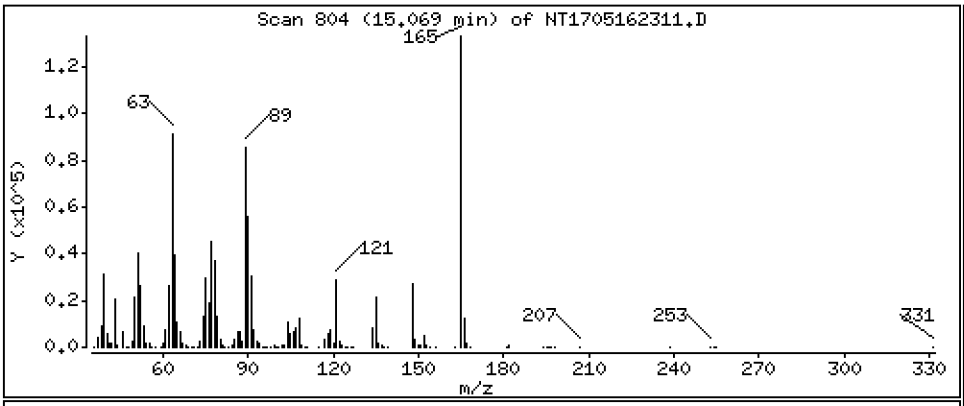
Operator: JGR

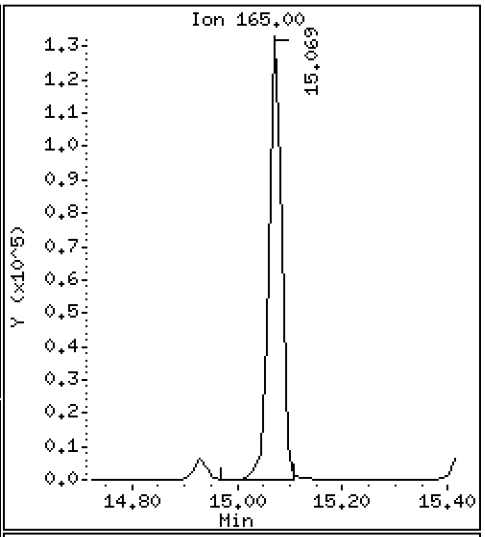
Column phase: ZB-5msi

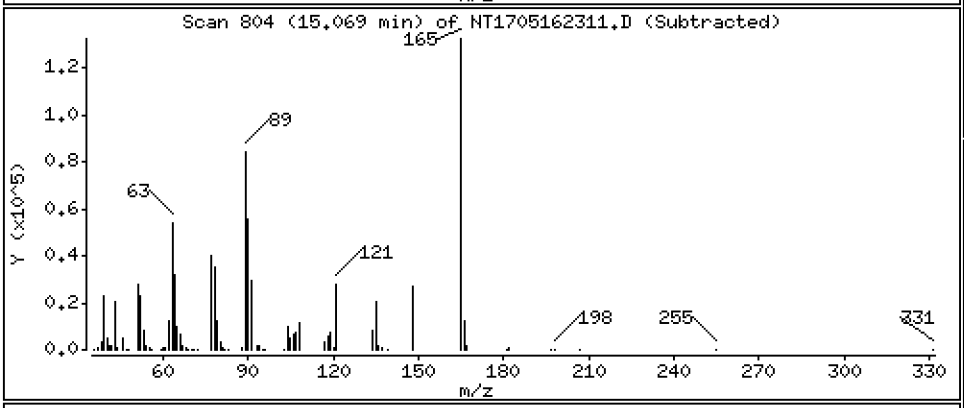
Column diameter: 0.25

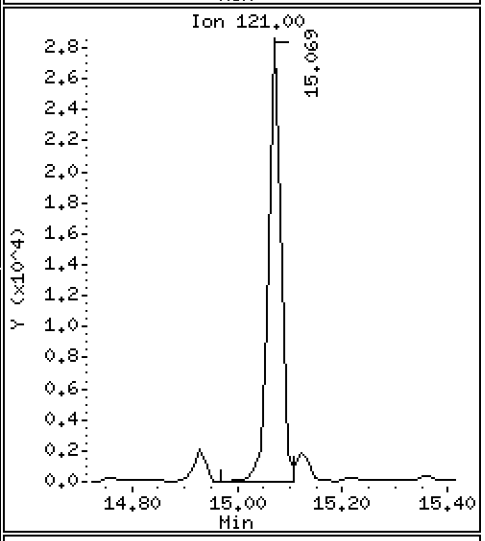
41 2,6-Dinitrotoluene

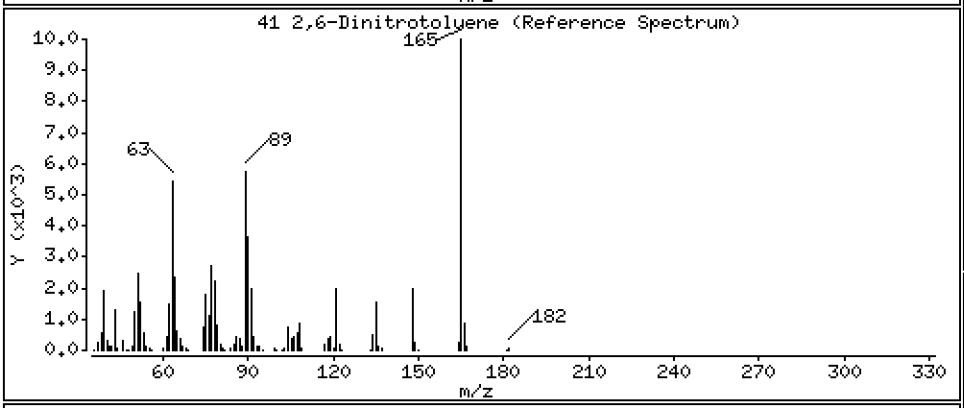
Concentration: 5.404 ug/mL

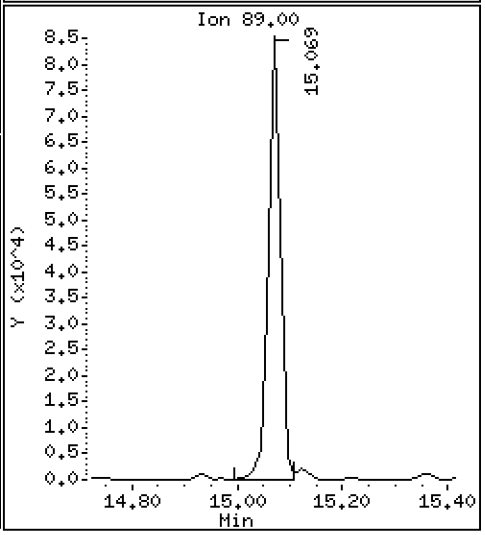


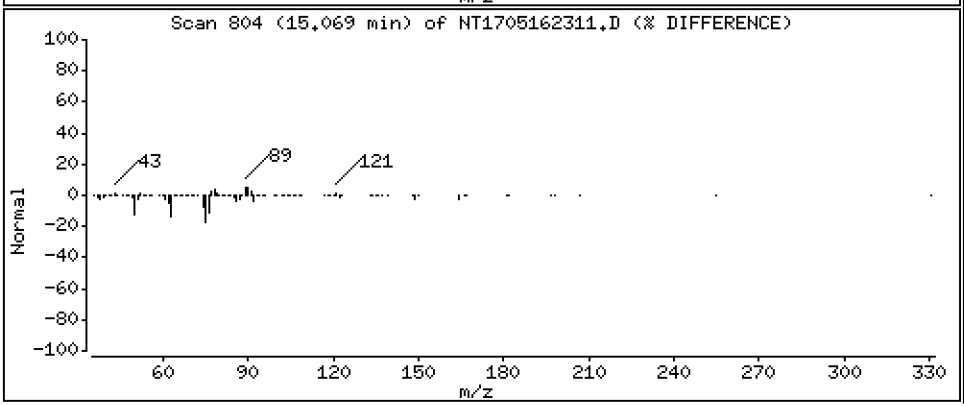












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

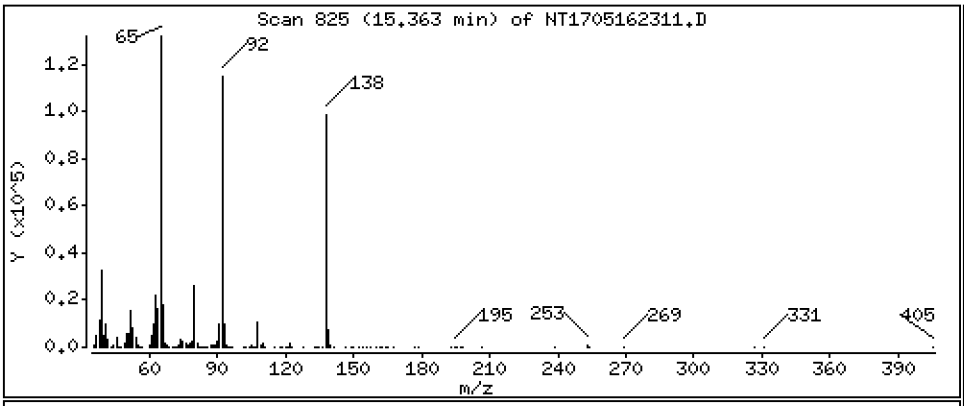
Operator: JGR

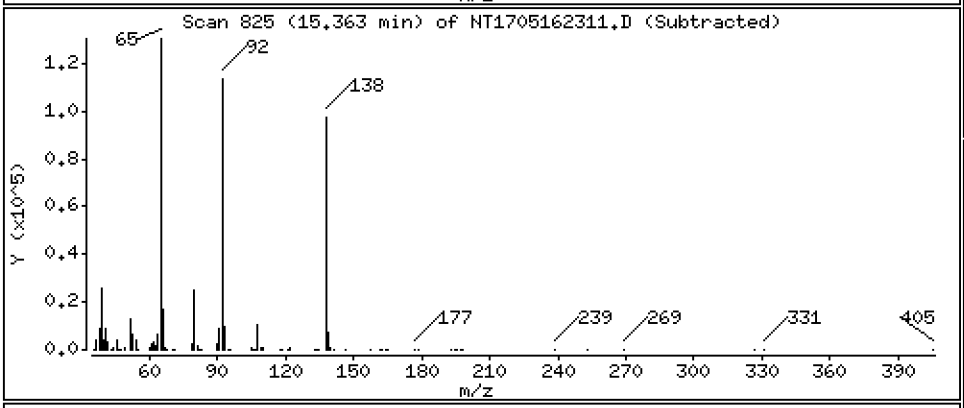
Column phase: ZB-5msi

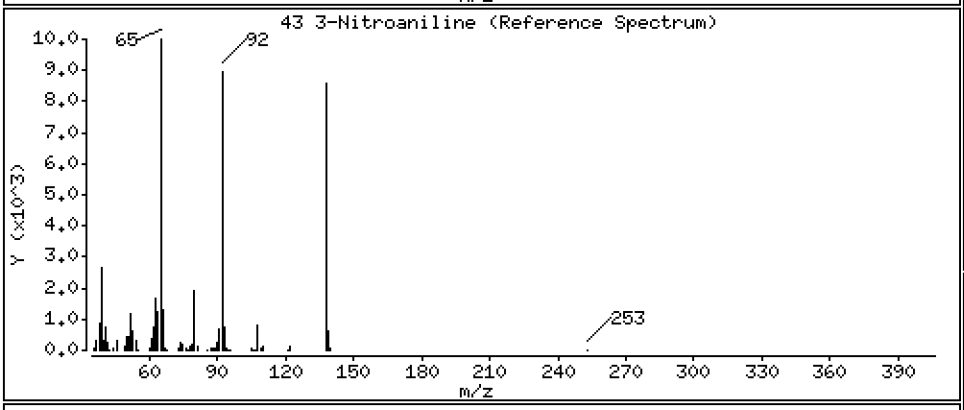
Column diameter: 0.25

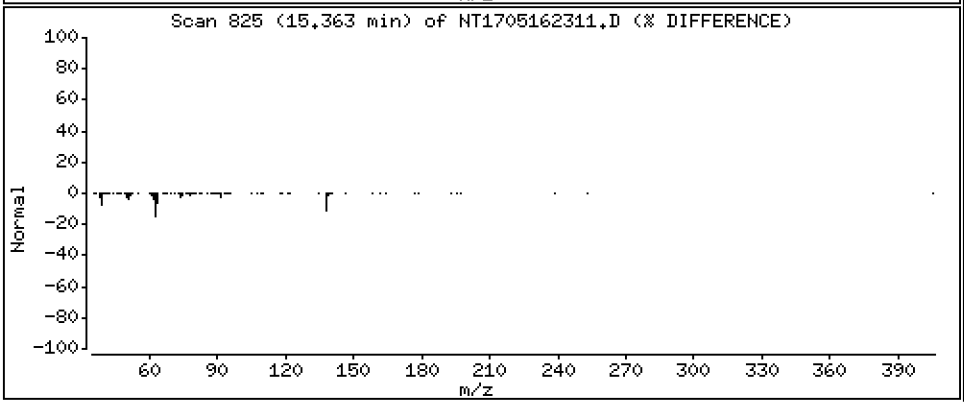
43 3-Nitroaniline

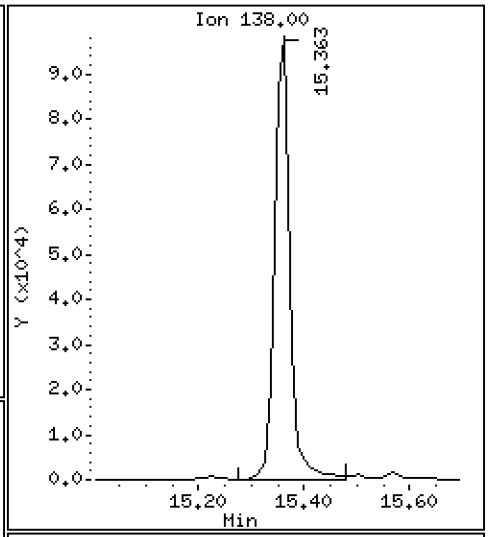
Concentration: 5.169 ug/mL

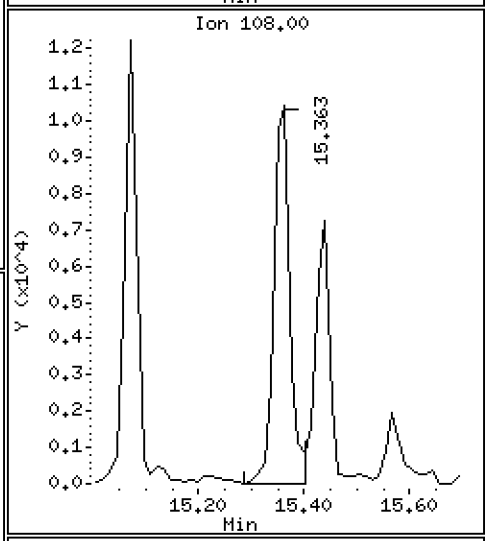


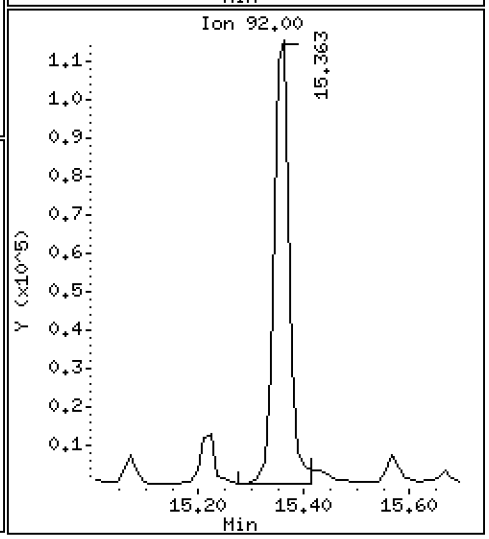












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

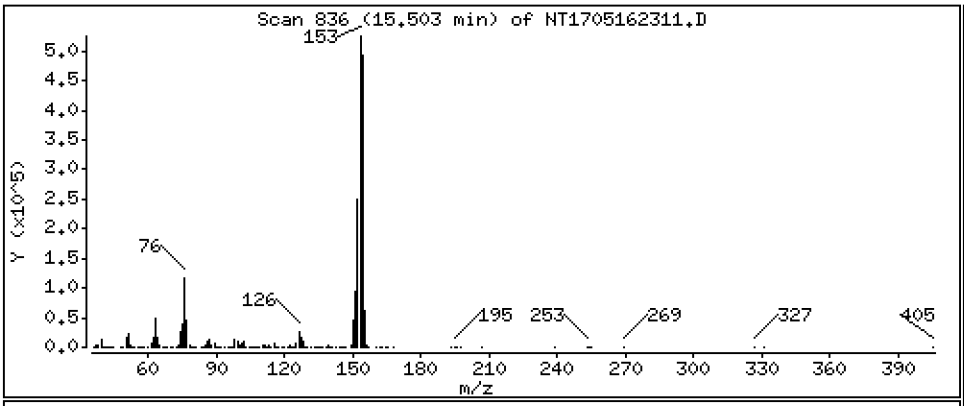
Operator: JGR

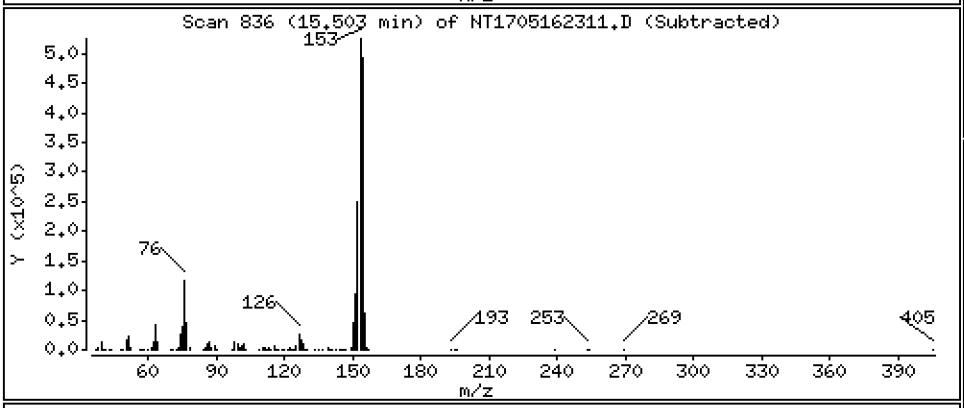
Column phase: ZB-5msi

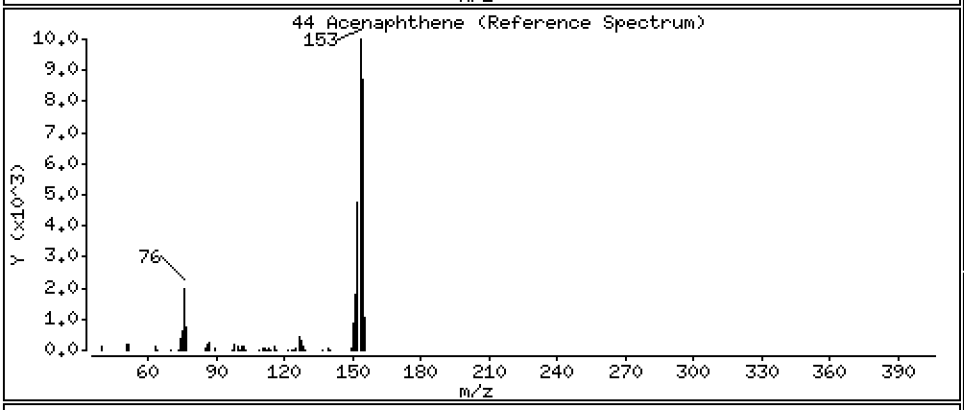
Column diameter: 0.25

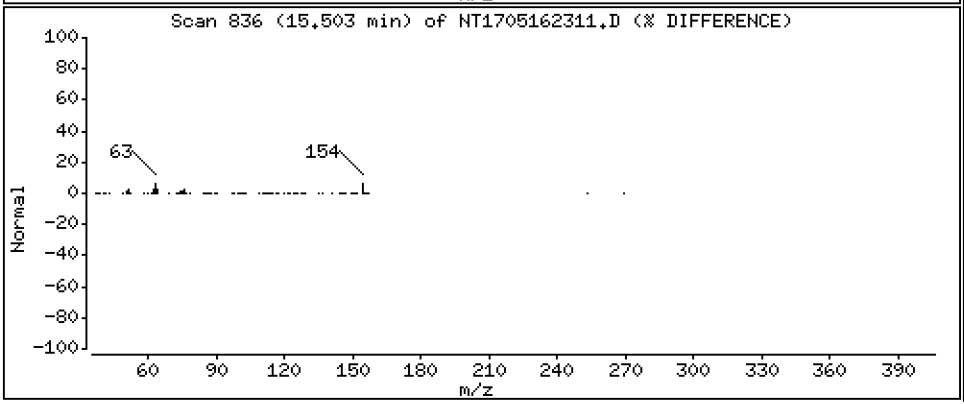
44 Acenaphthene

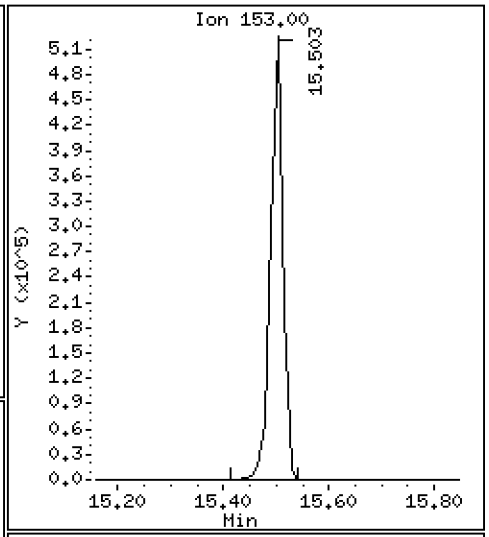
Concentration: 5.283 ug/mL

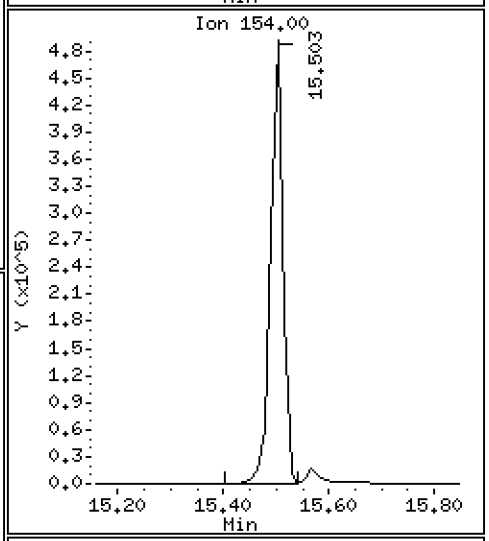


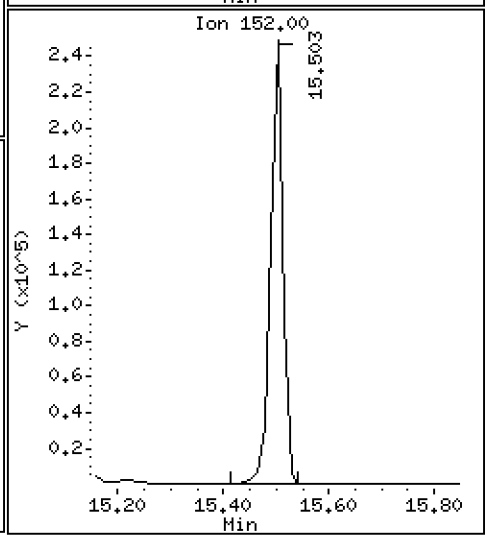












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

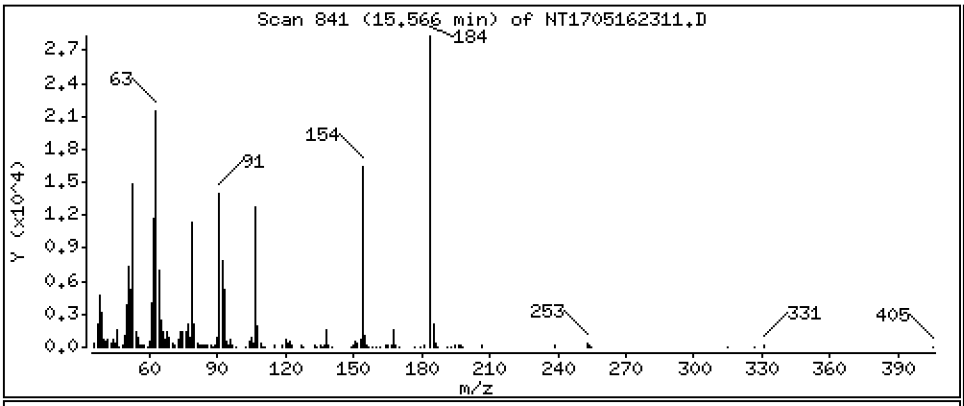
Operator: JGR

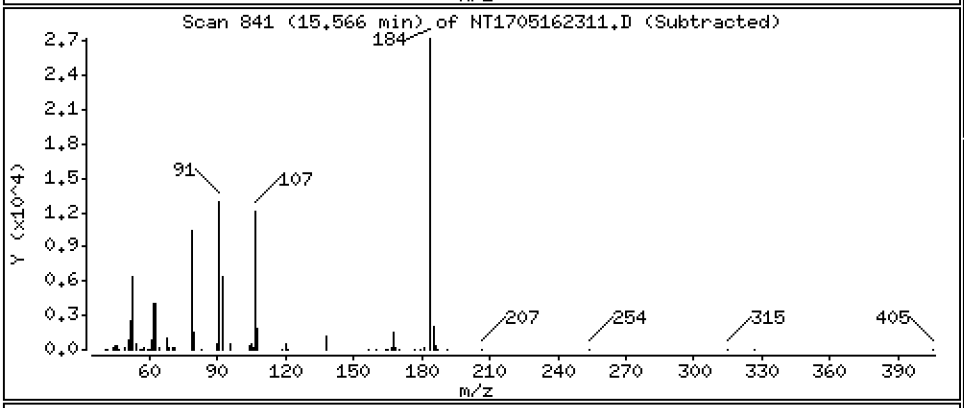
Column phase: ZB-5msi

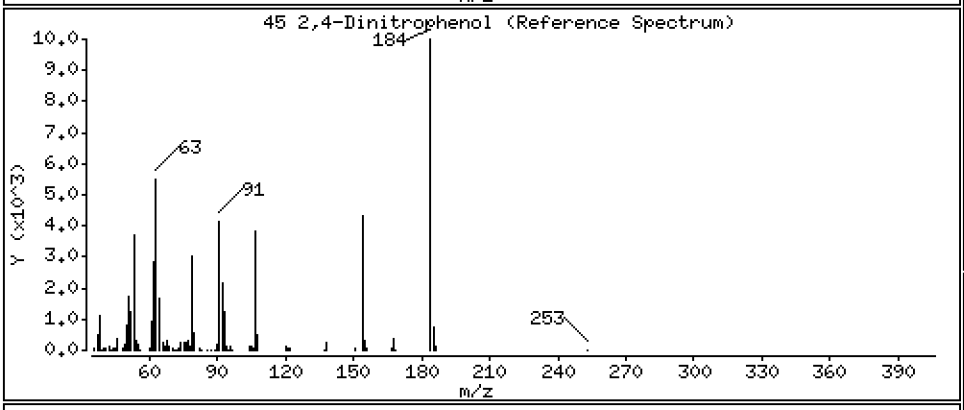
Column diameter: 0.25

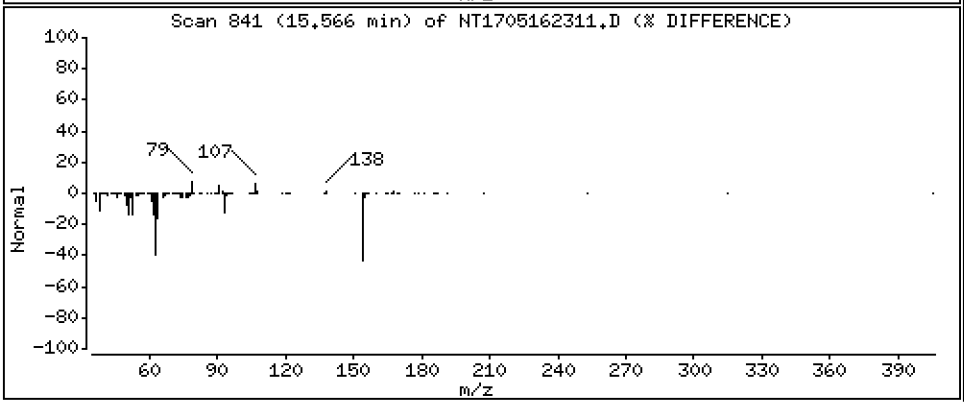
45 2,4-Dinitrophenol

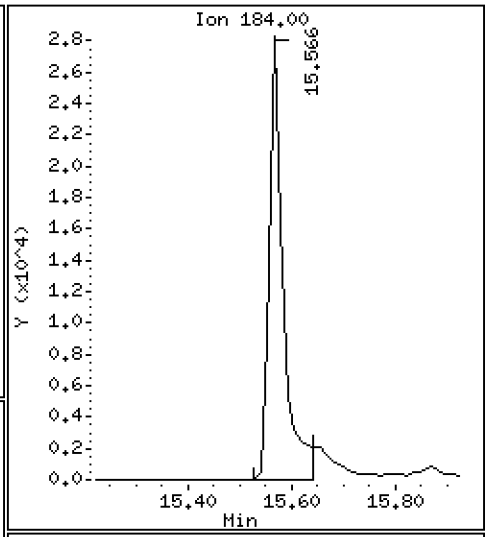
Concentration: 2.119 ug/mL

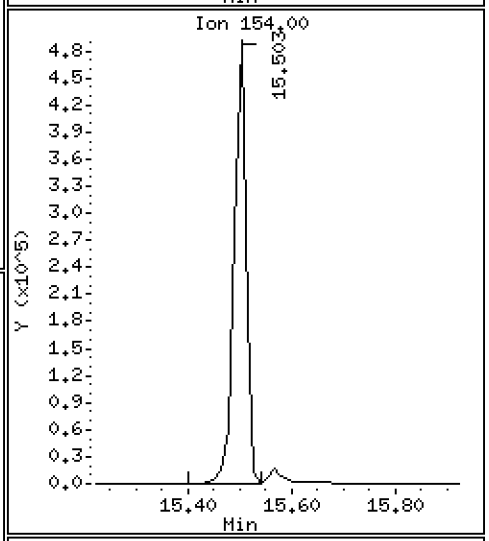


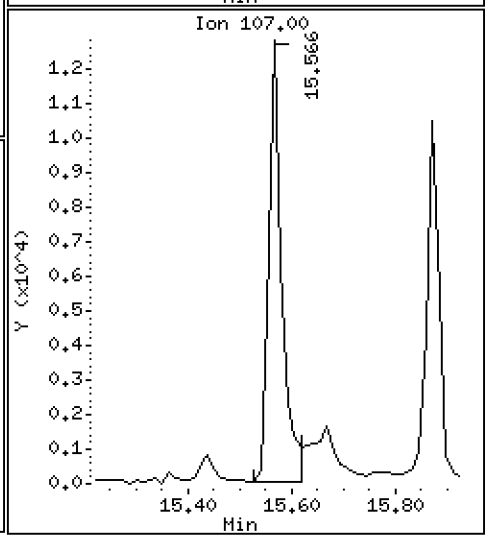












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

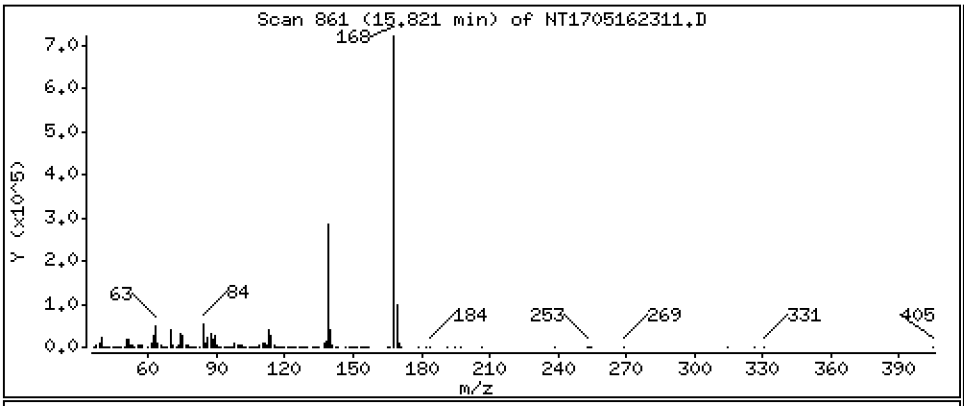
Operator: JGR

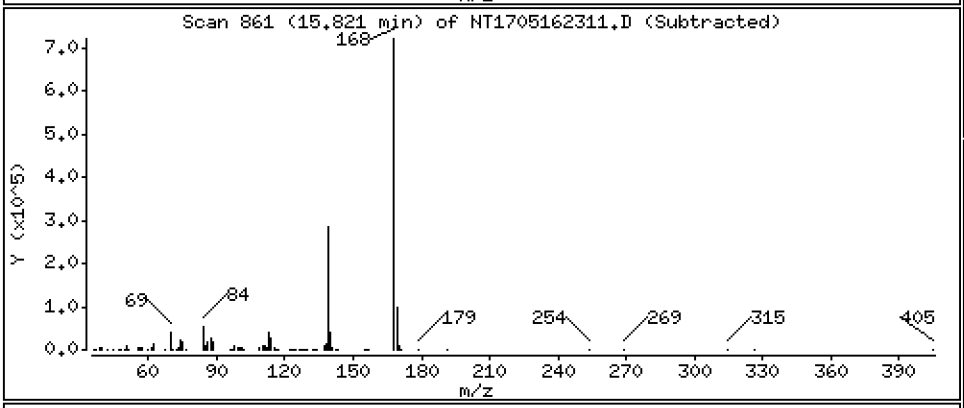
Column phase: ZB-5msi

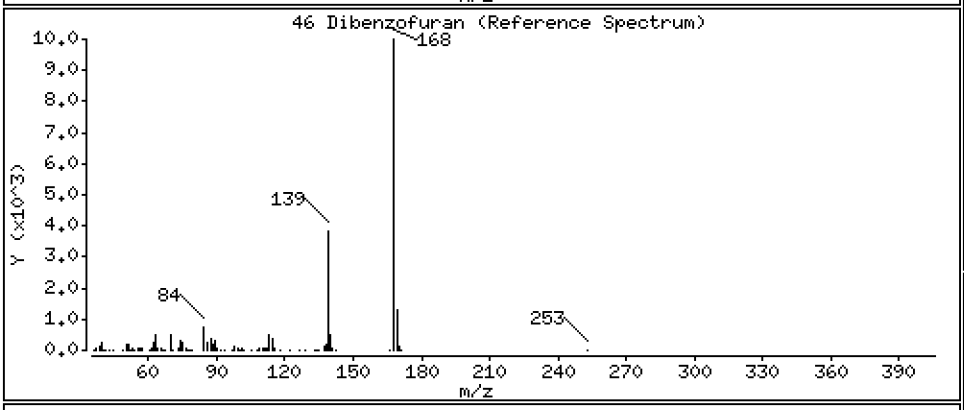
Column diameter: 0.25

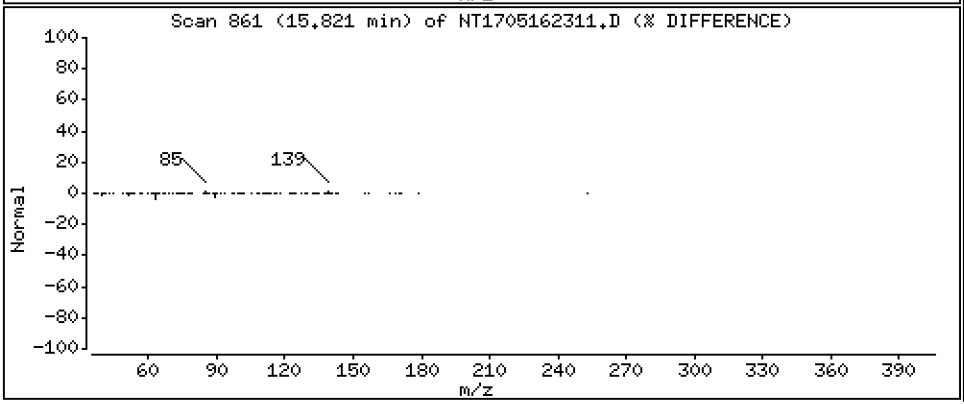
46 Dibenzofuran

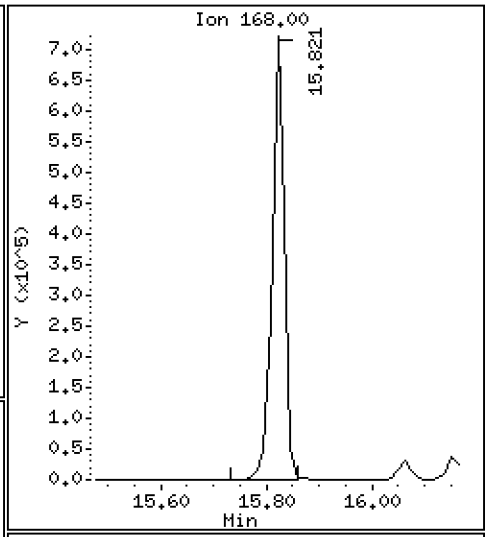
Concentration: 5.163 ug/mL

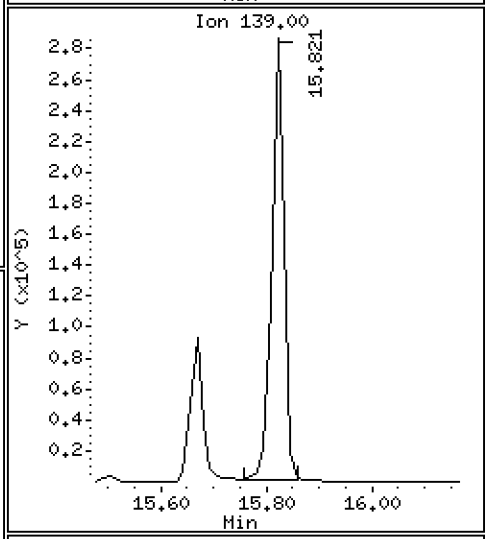


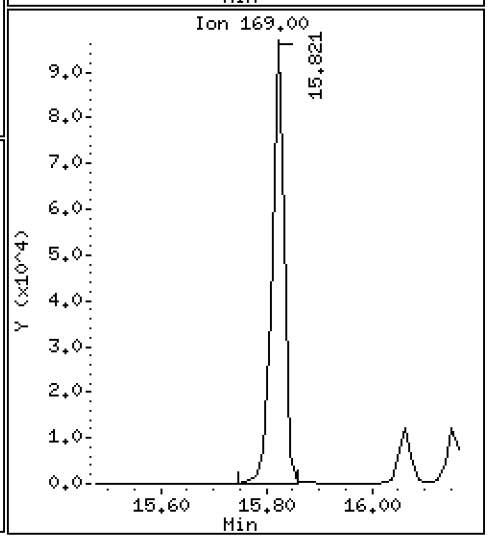












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

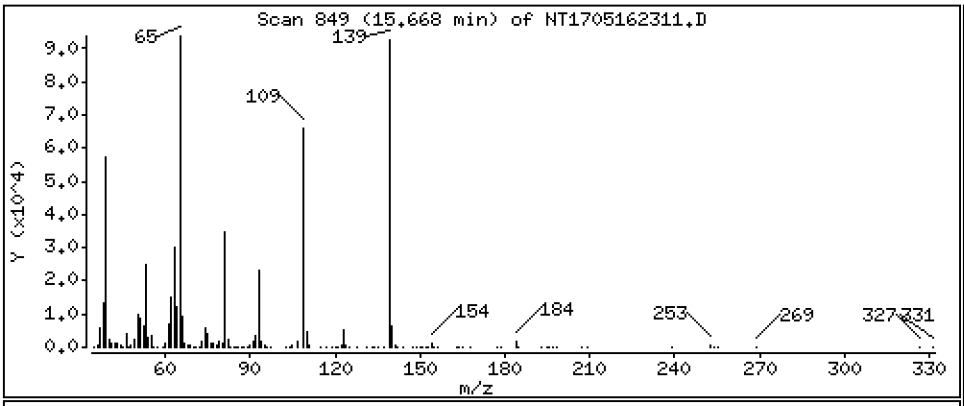
Operator: JGR

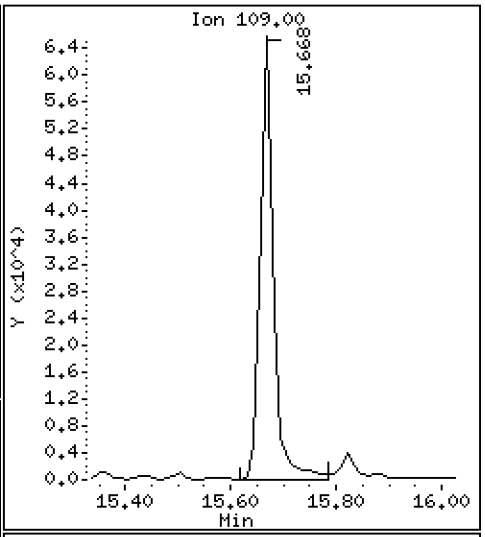
Column phase: ZB-5msi

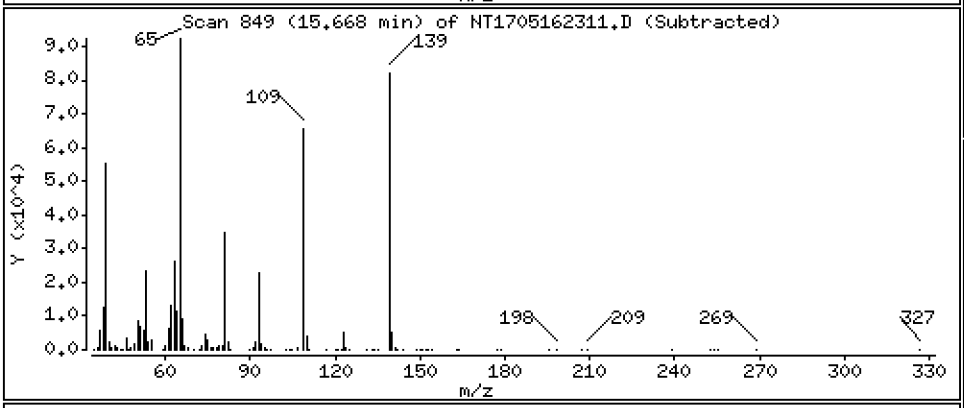
Column diameter: 0.25

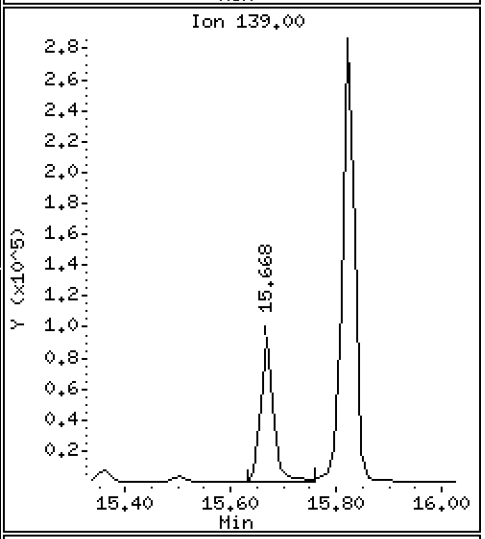
47 4-Nitrophenol

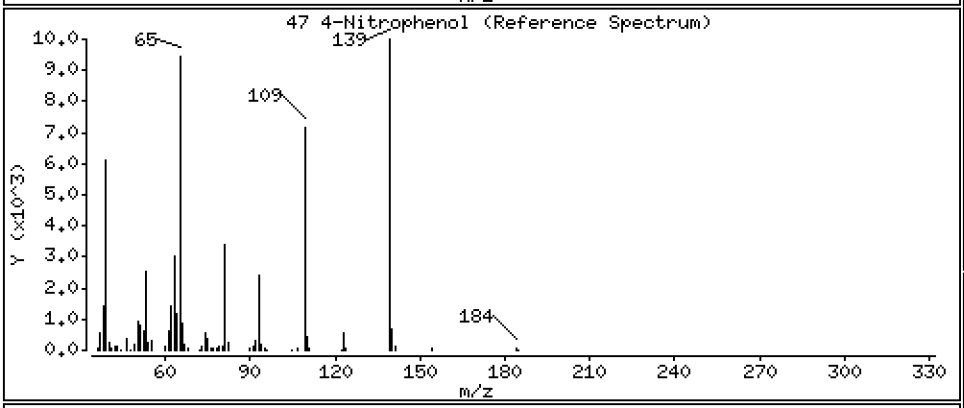
Concentration: 4.504 ug/mL

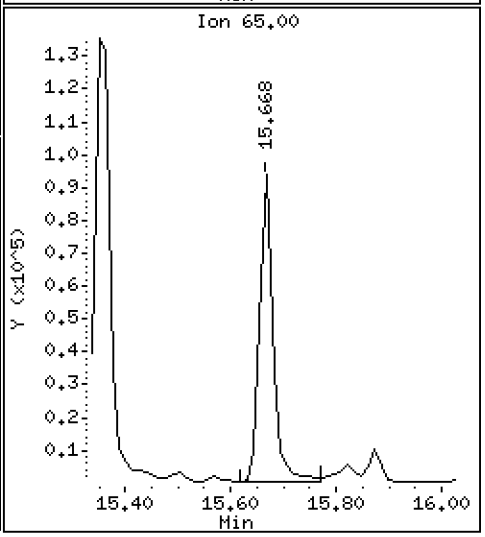


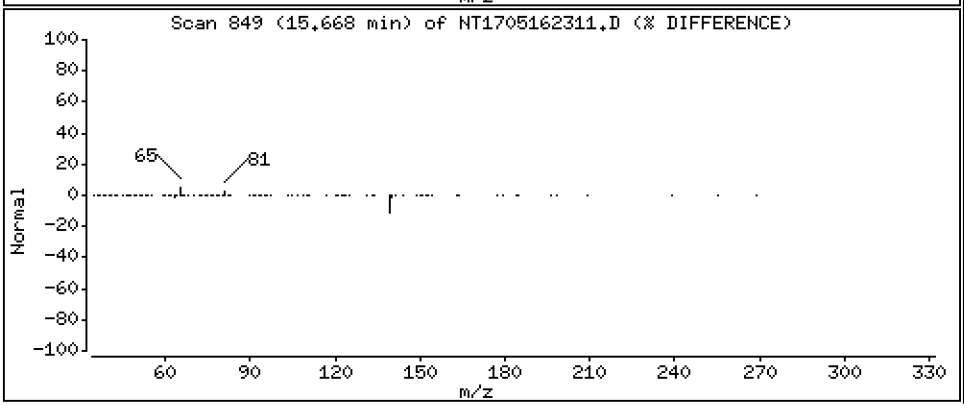












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

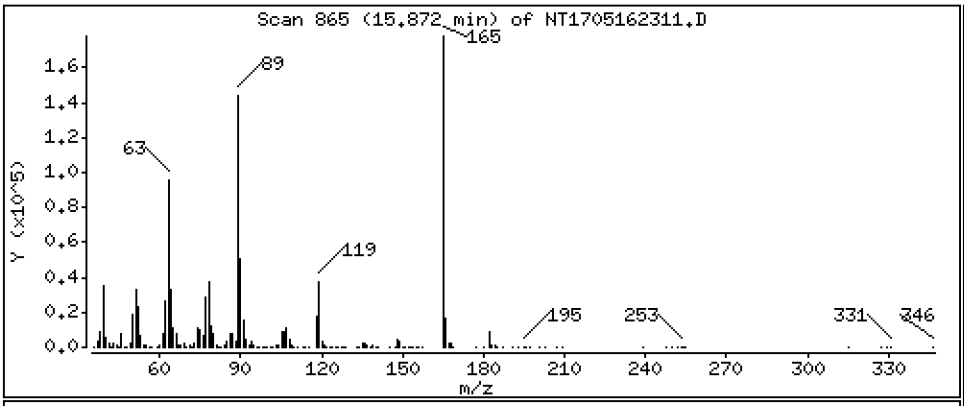
Operator: JGR

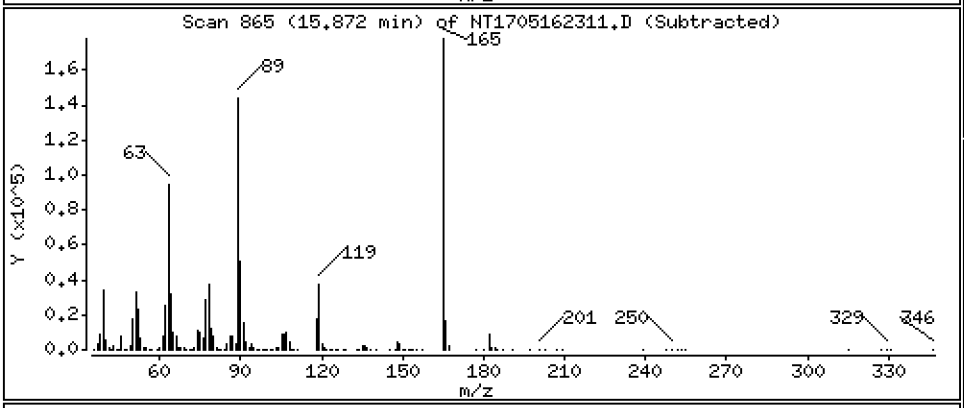
Column phase: ZB-5msi

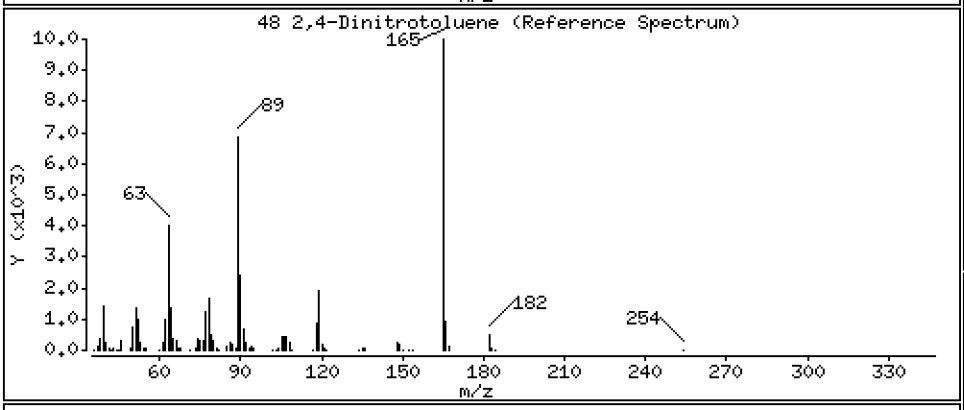
Column diameter: 0.25

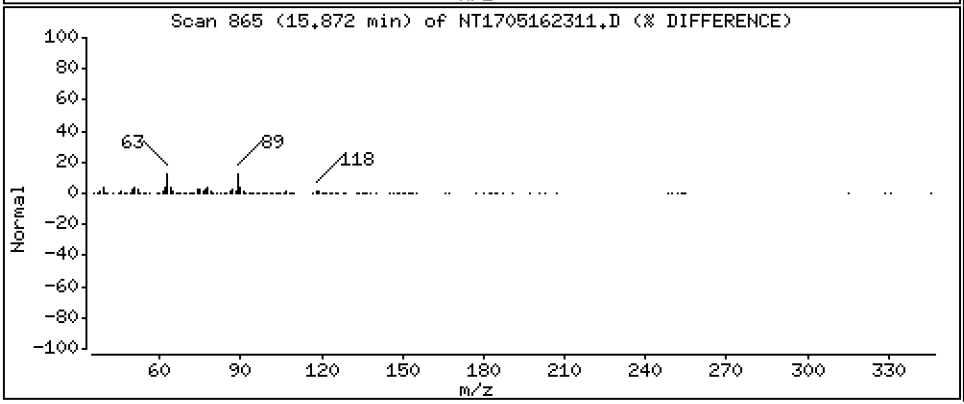
48 2,4-Dinitrotoluene

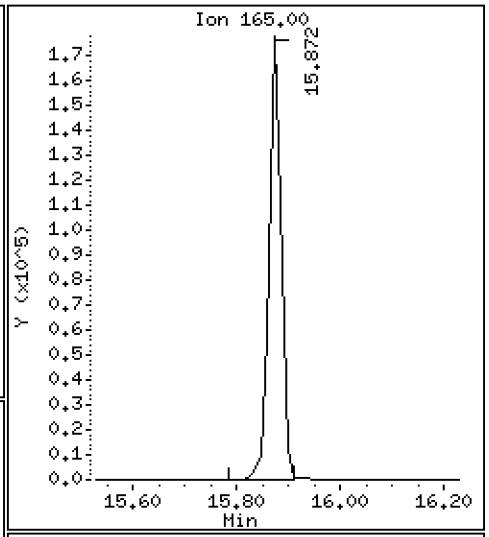
Concentration: 5.269 ug/mL

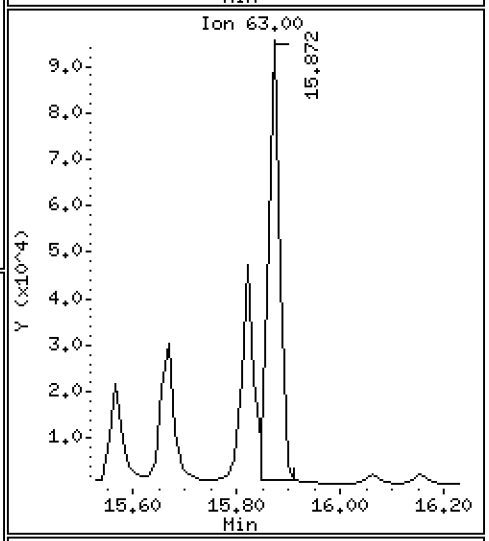


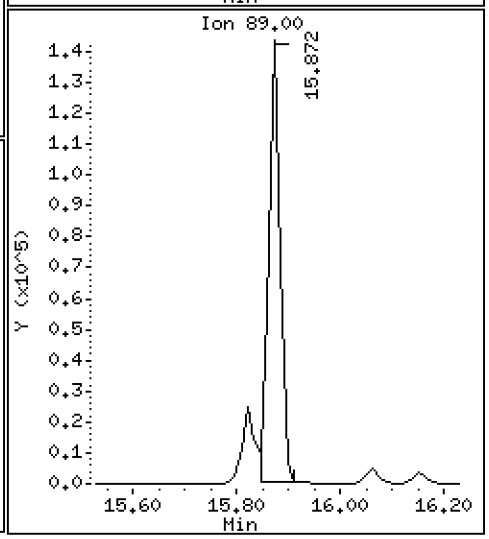












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

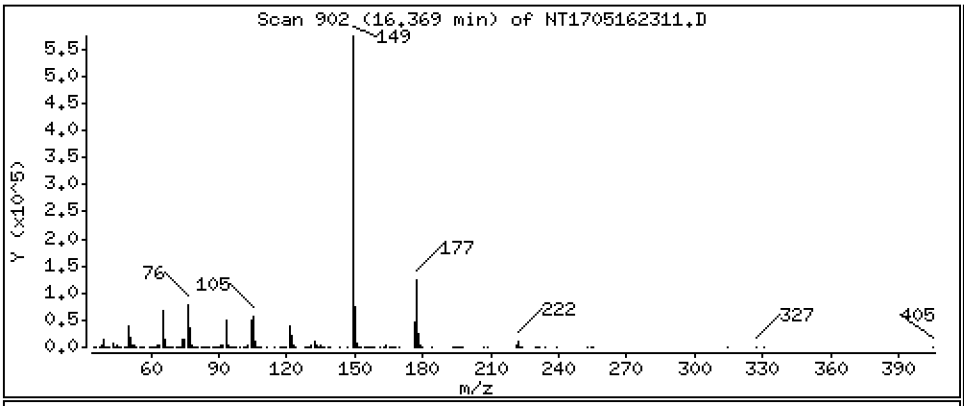
Operator: JGR

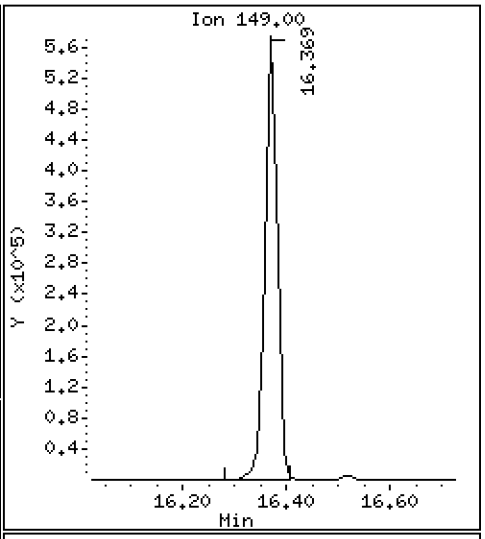
Column phase: ZB-5msi

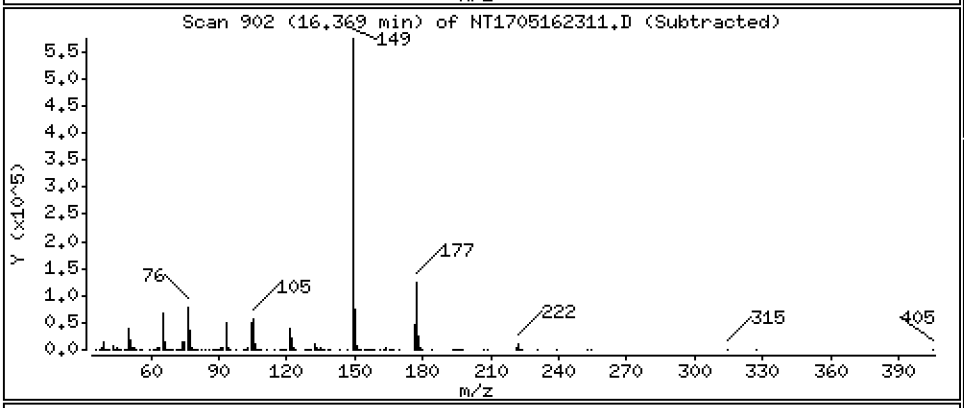
Column diameter: 0.25

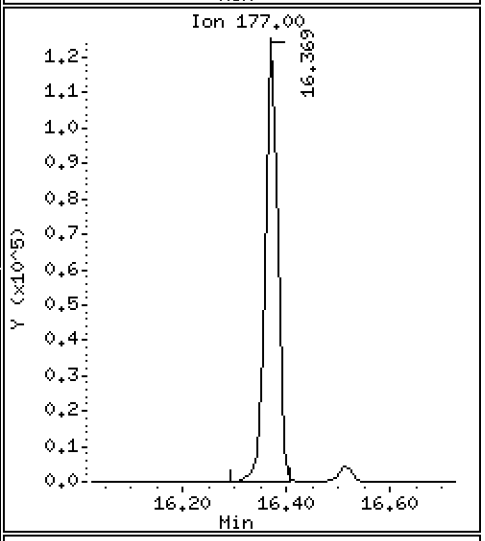
50 Diethylphthalate

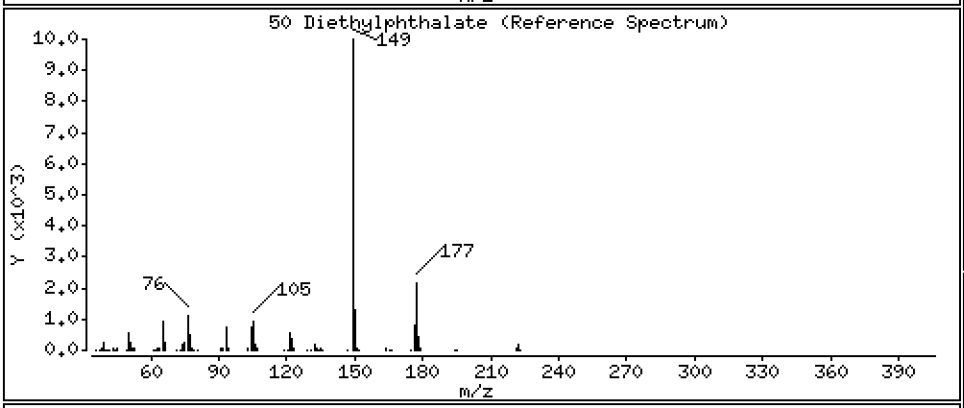
Concentration: 5.494 ug/mL

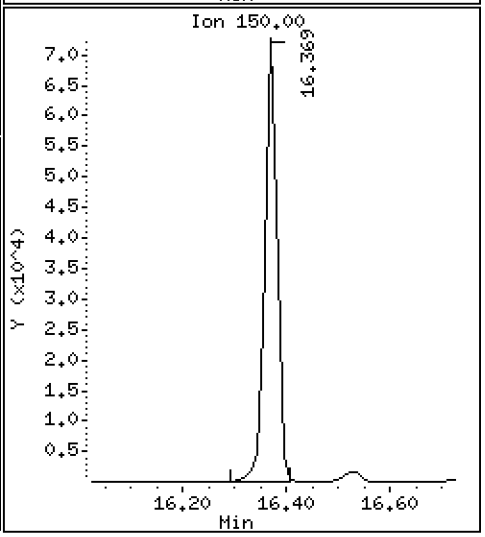


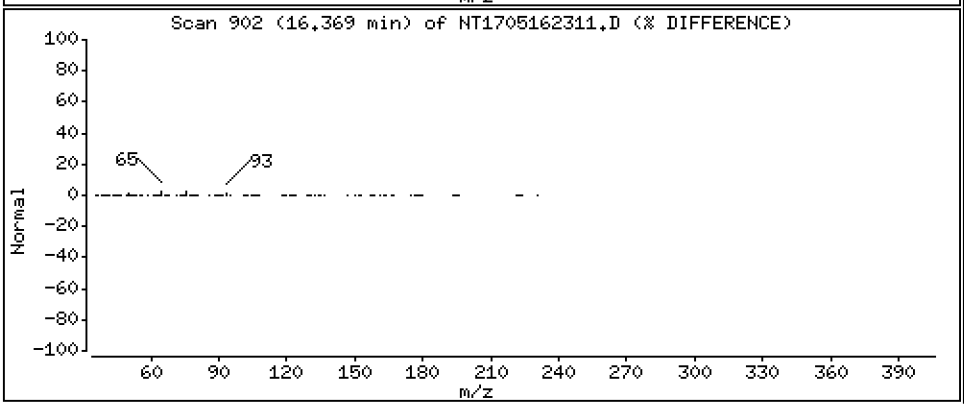












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

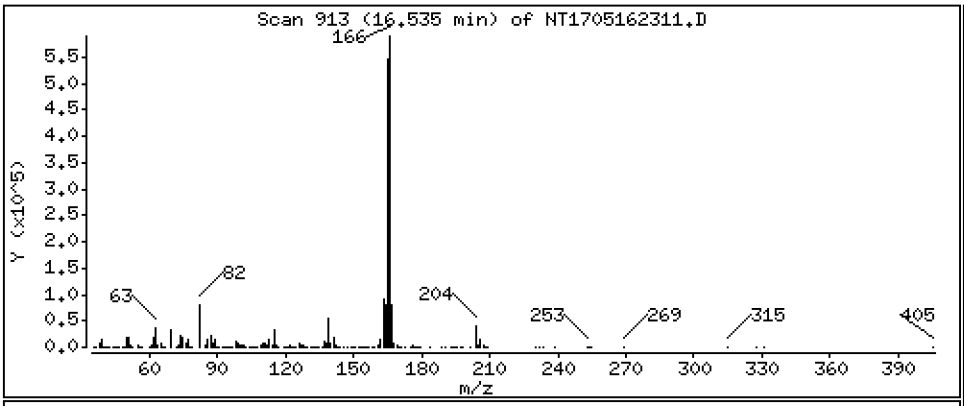
Operator: JGR

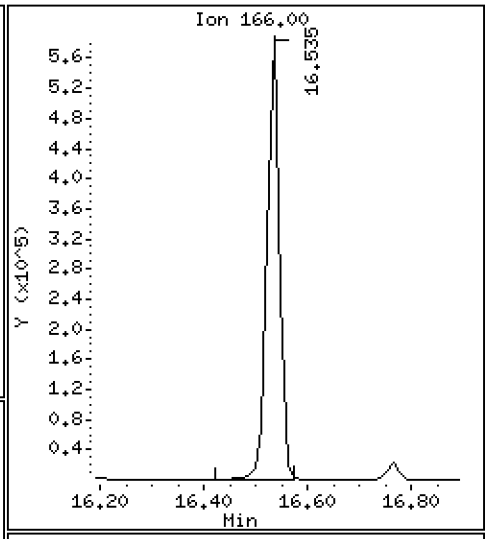
Column phase: ZB-5msi

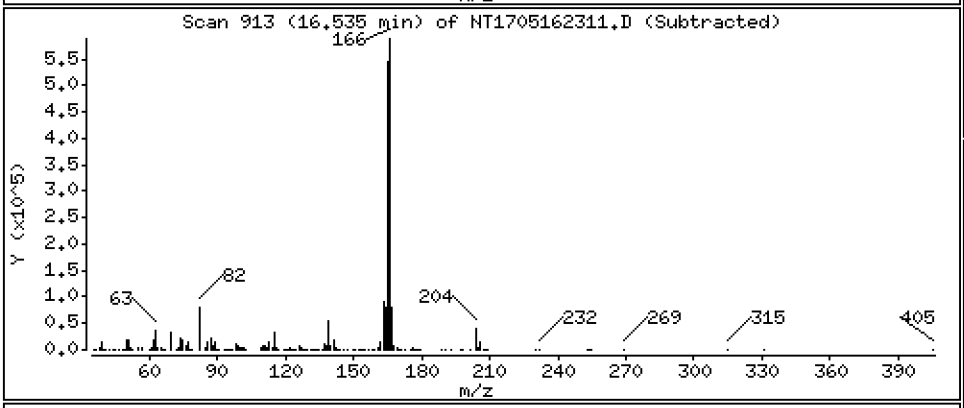
Column diameter: 0.25

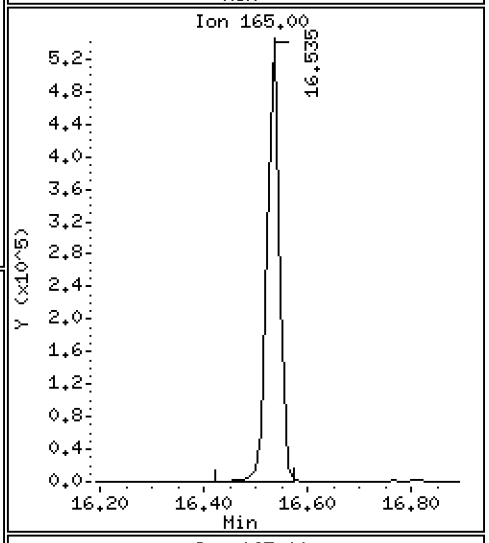
49 Fluorene

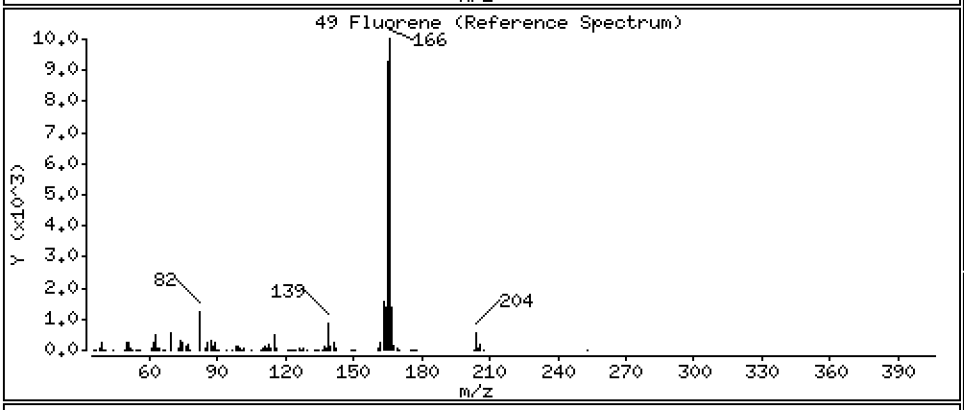
Concentration: 5.398 ug/mL

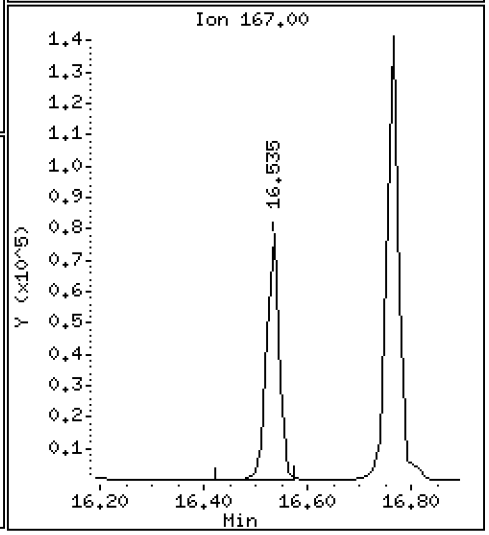


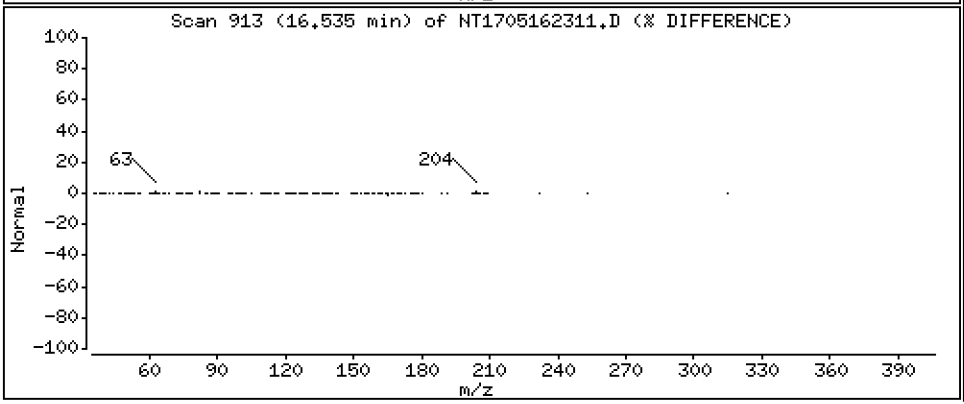












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

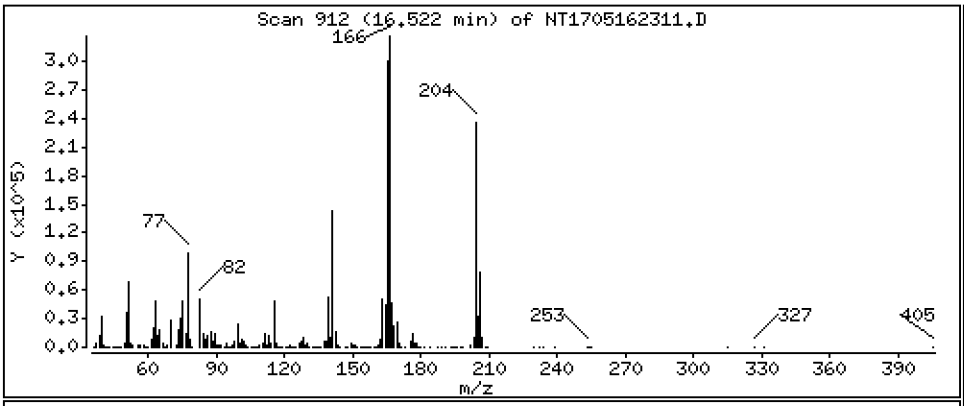
Operator: JGR

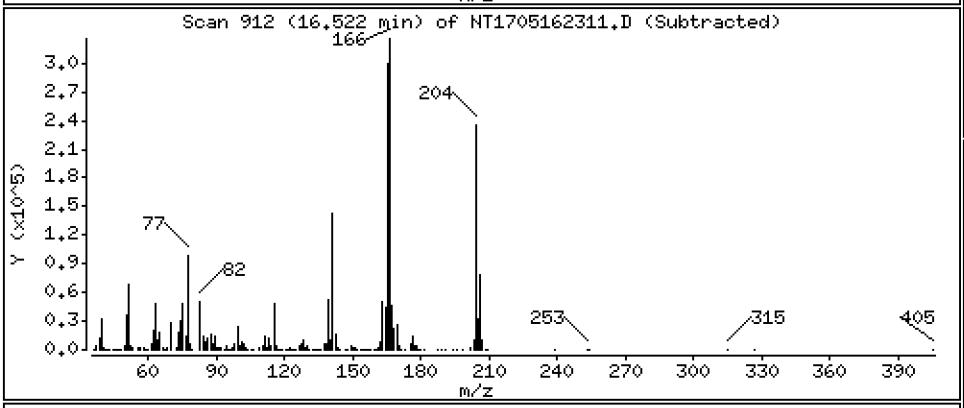
Column phase: ZB-5msi

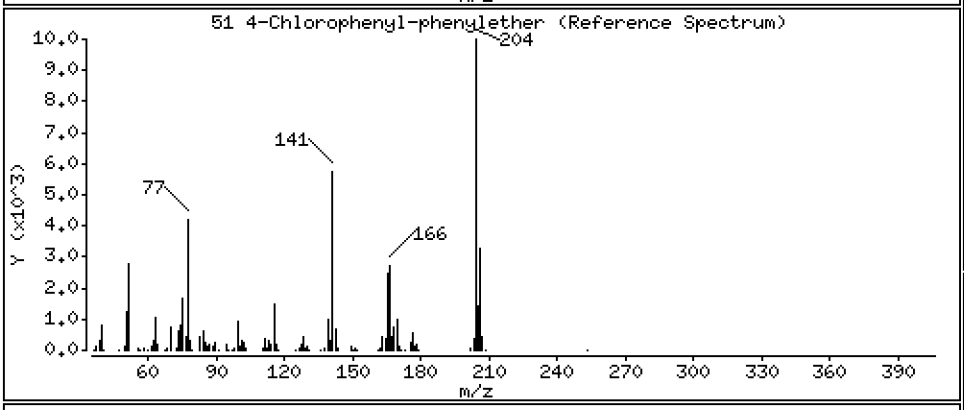
Column diameter: 0.25

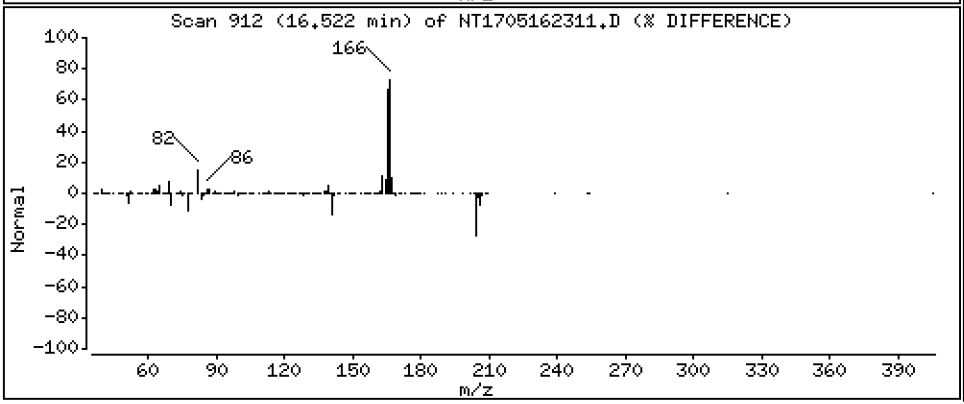
51 4-Chlorophenyl-phenylether

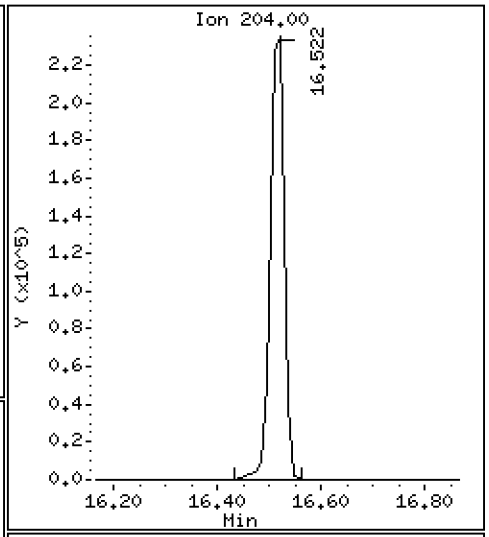
Concentration: 5.462 ug/mL

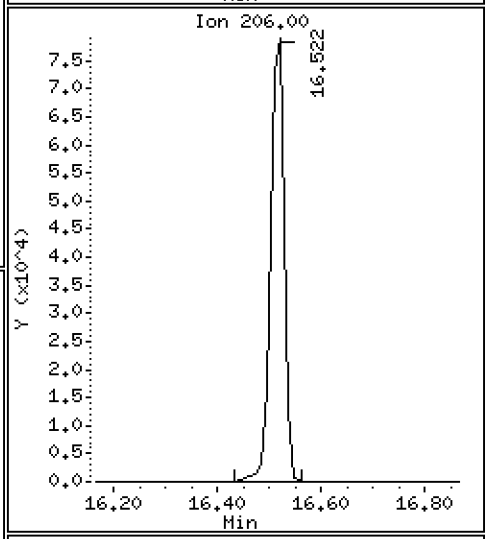


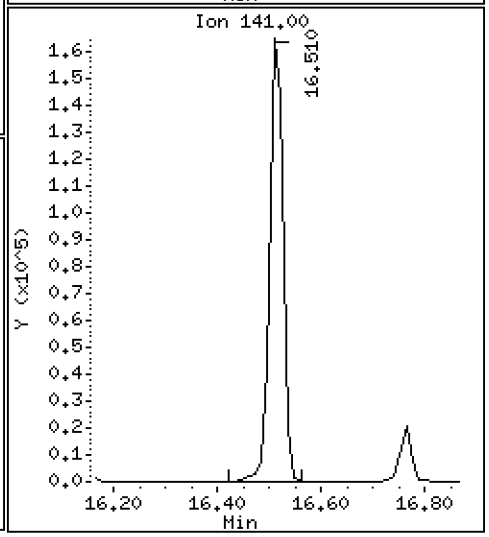












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

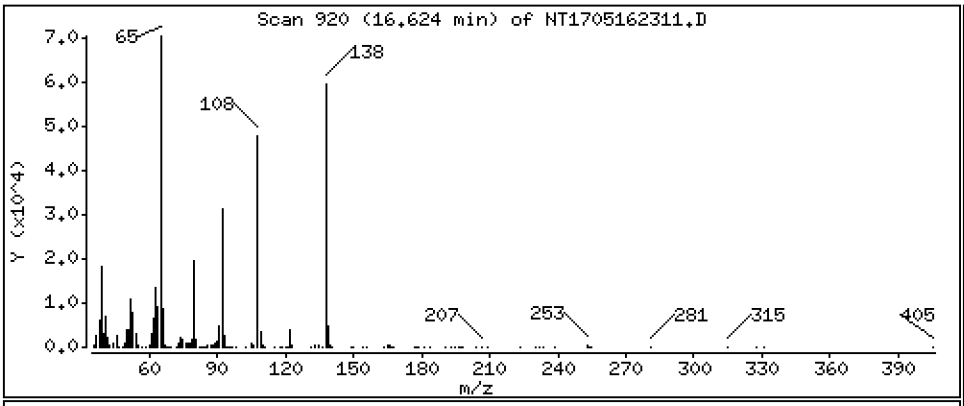
Operator: JGR

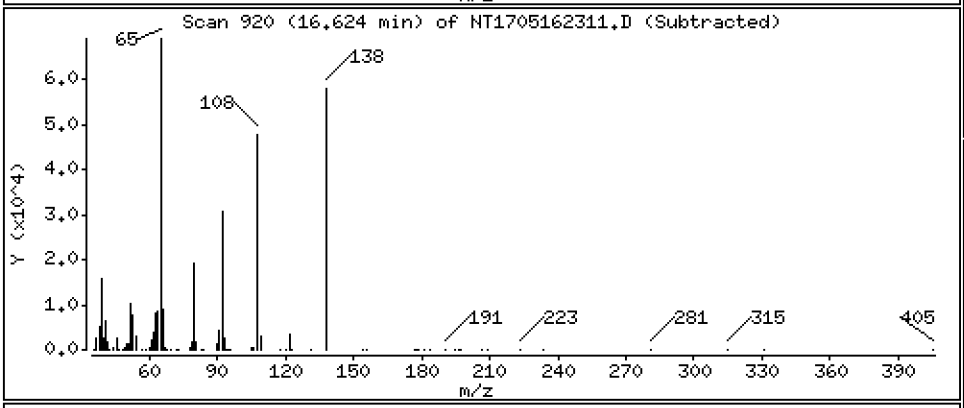
Column phase: ZB-5msi

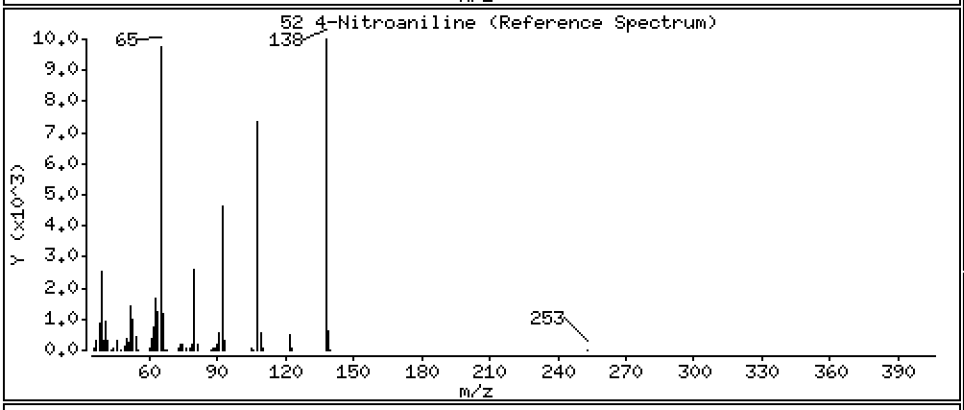
Column diameter: 0.25

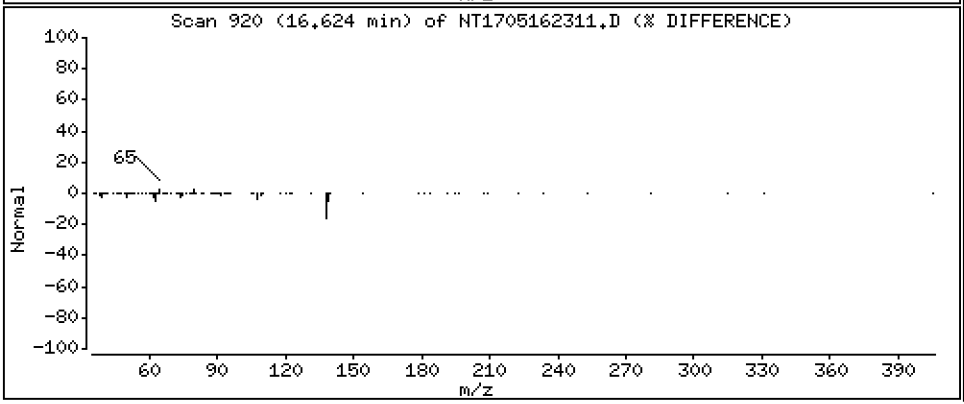
52 4-Nitroaniline

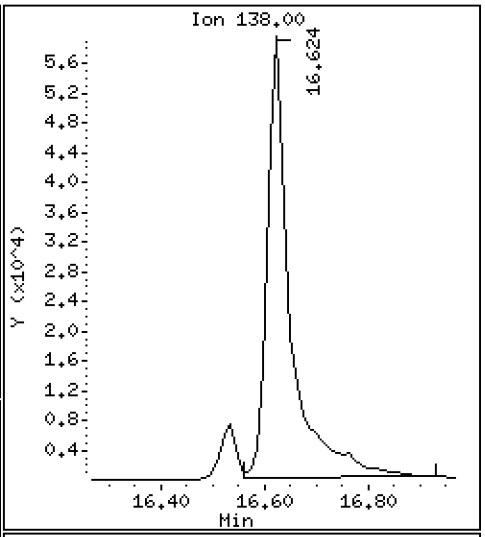
Concentration: 5.108 ug/mL

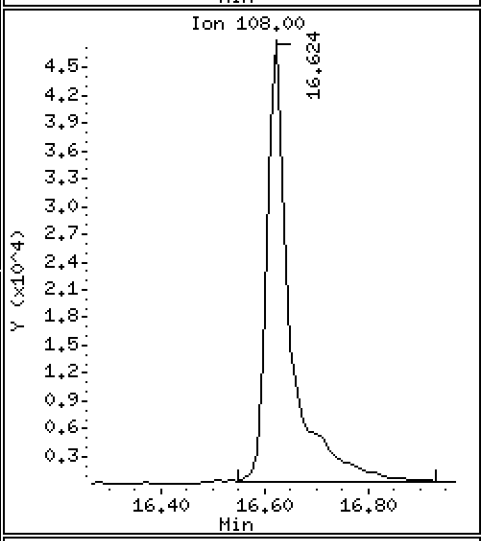


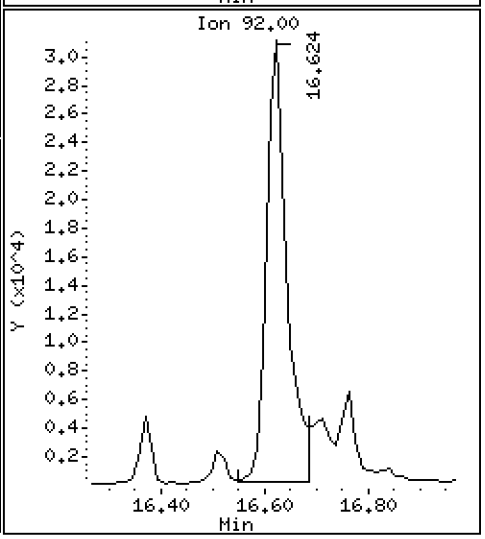












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

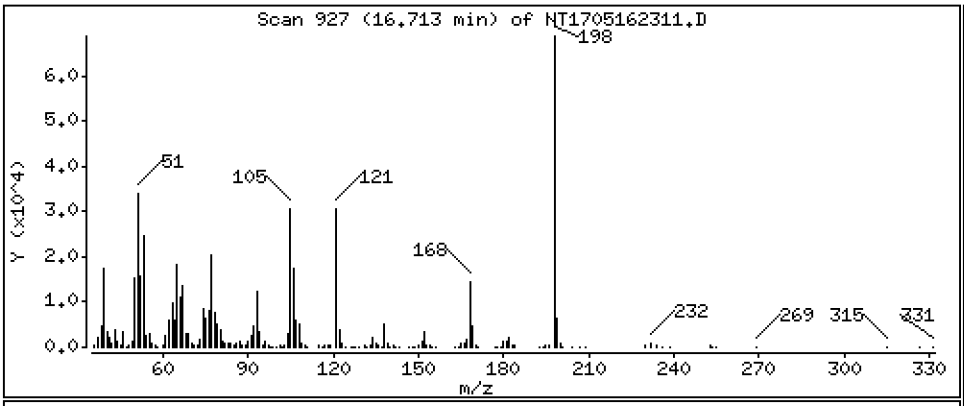
Operator: JGR

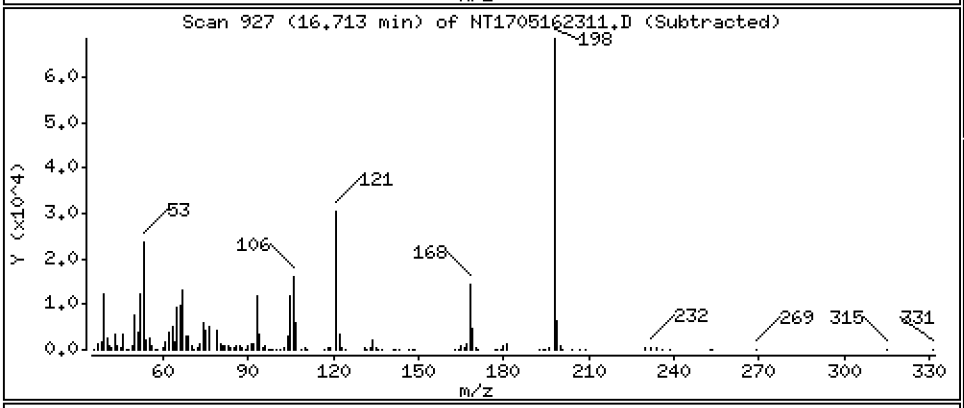
Column phase: ZB-5msi

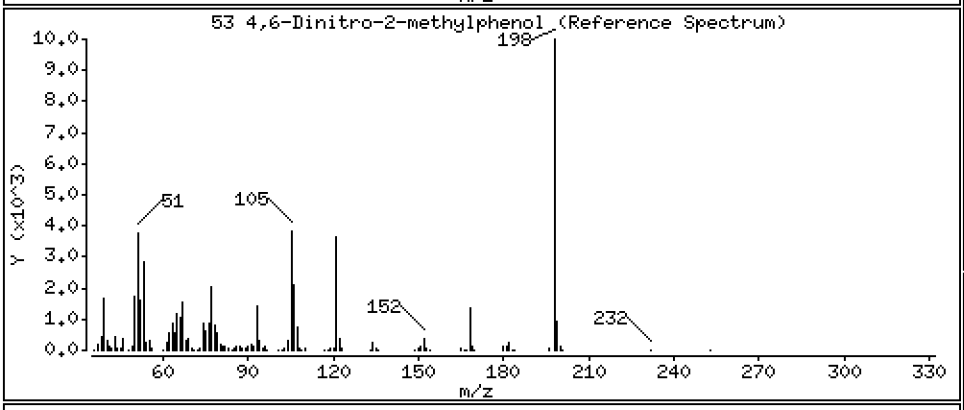
Column diameter: 0.25

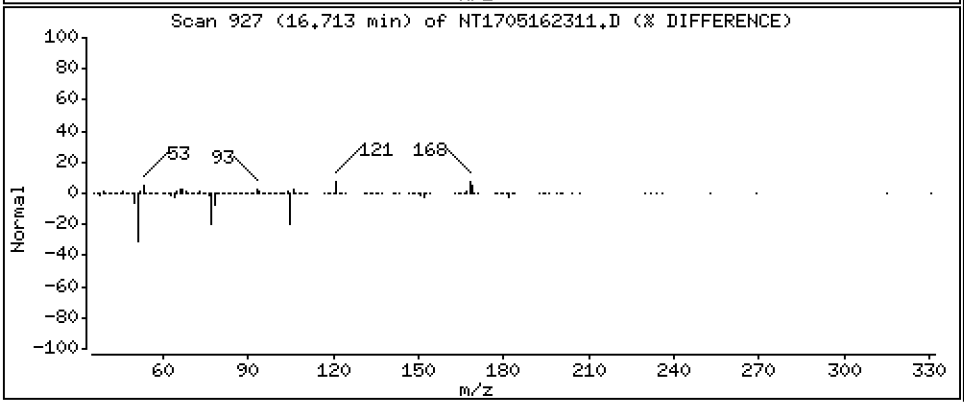
53 4,6-Dinitro-2-methylphenol

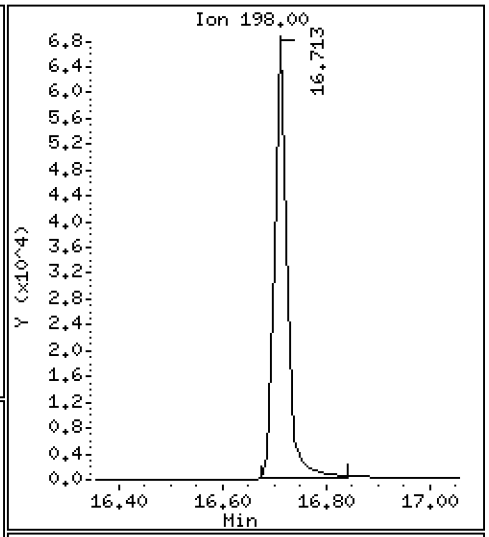
Concentration: 3.355 ug/mL

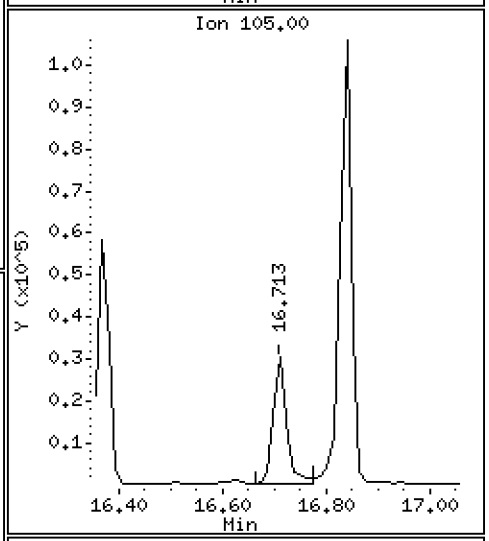


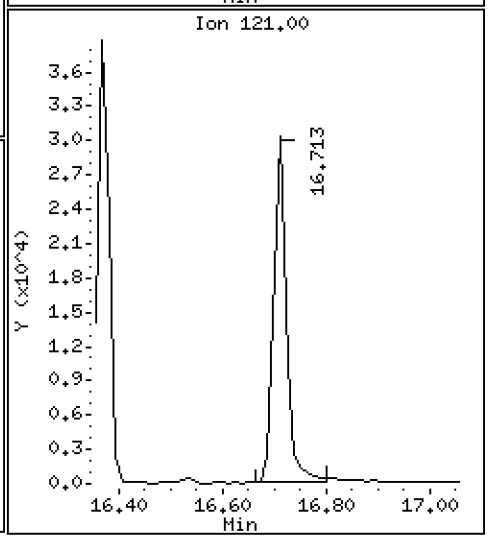












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

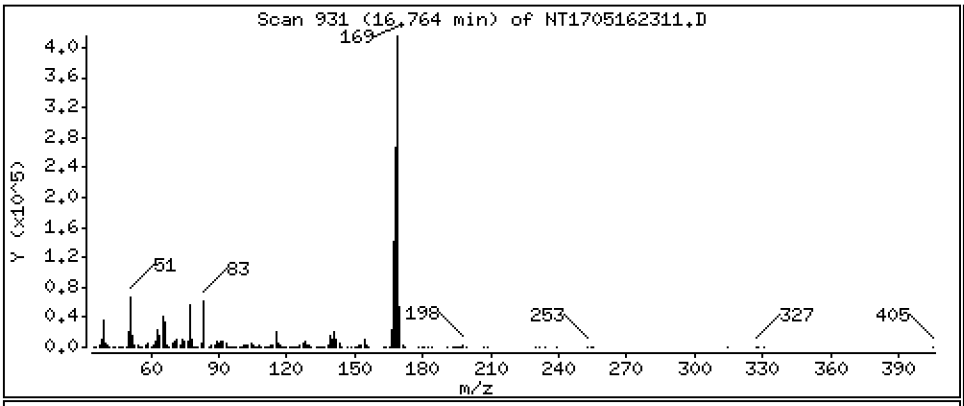
Operator: JGR

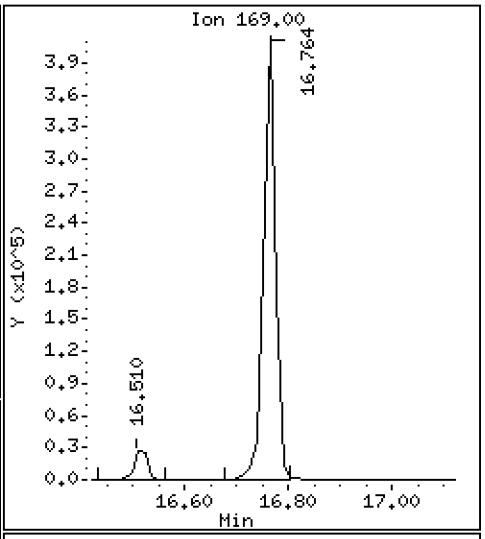
Column phase: ZB-5msi

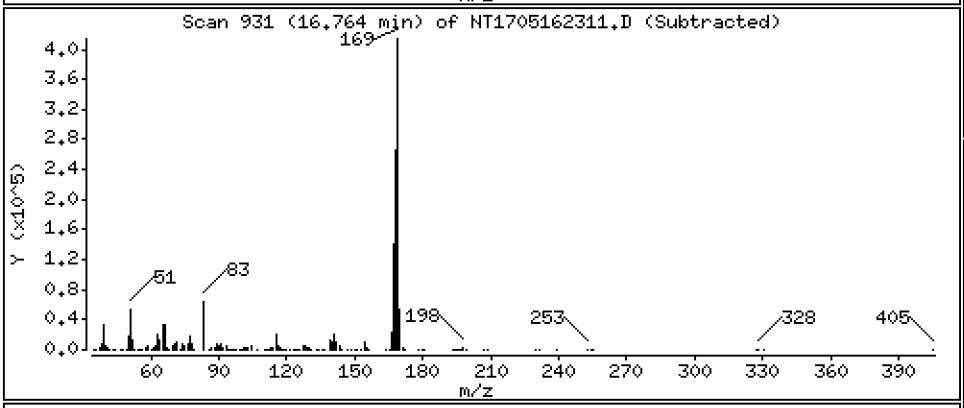
Column diameter: 0.25

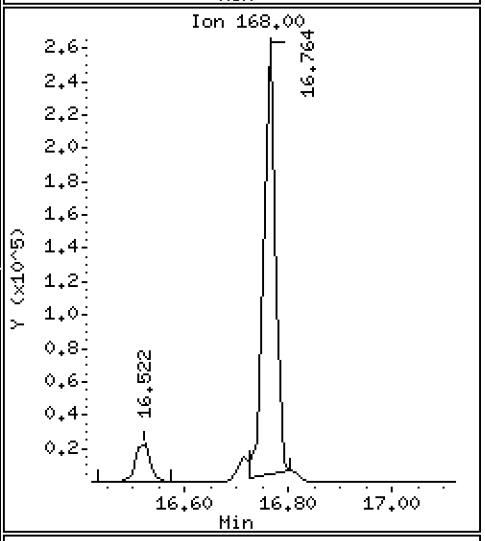
54 N-Nitrosodiphenylamine

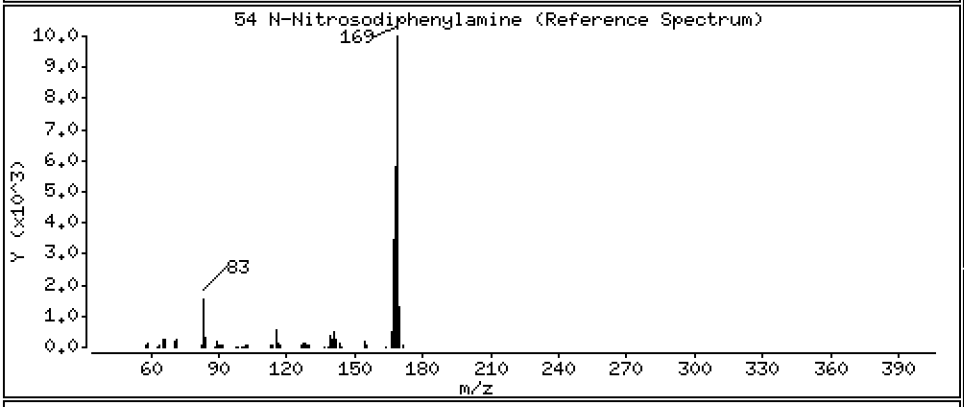
Concentration: 5.470 ug/mL

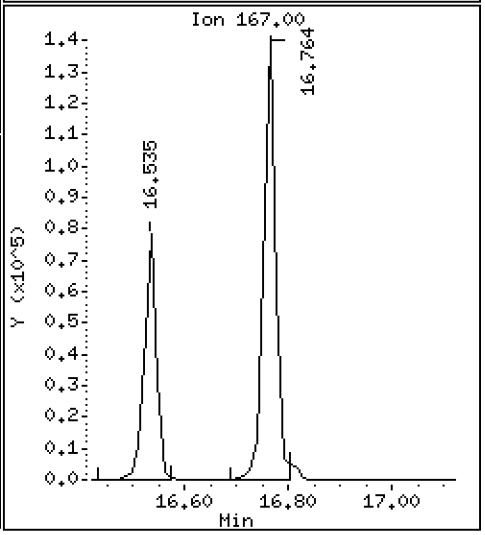


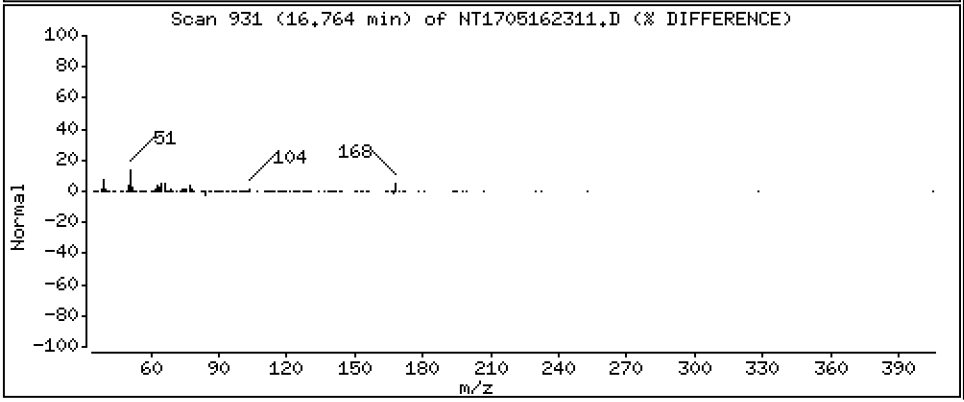












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

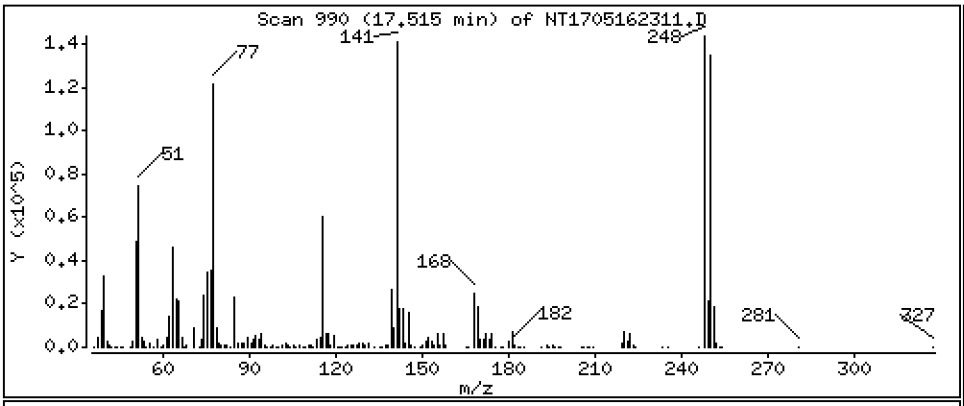
Operator: JGR

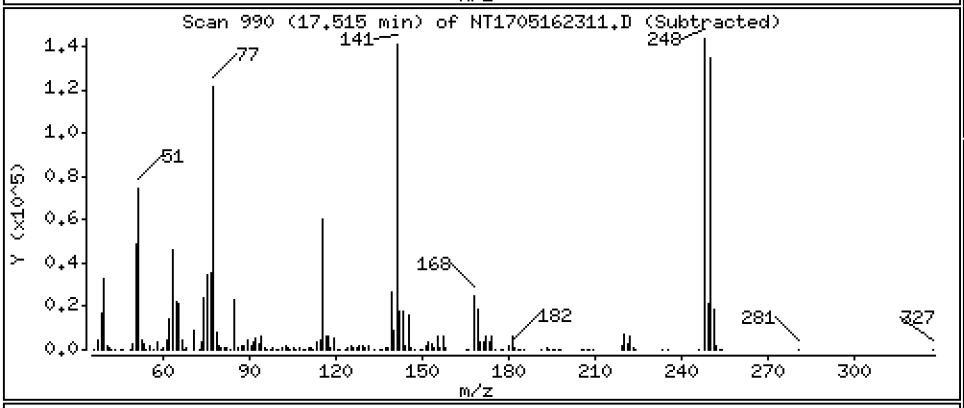
Column phase: ZB-5msi

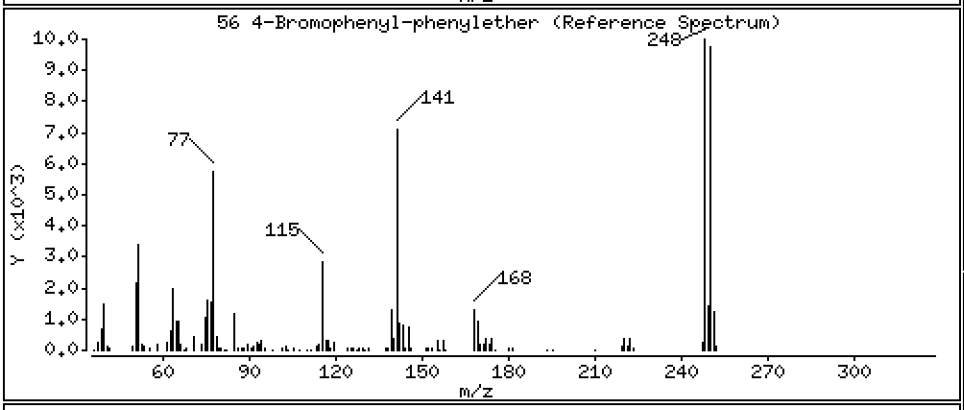
Column diameter: 0.25

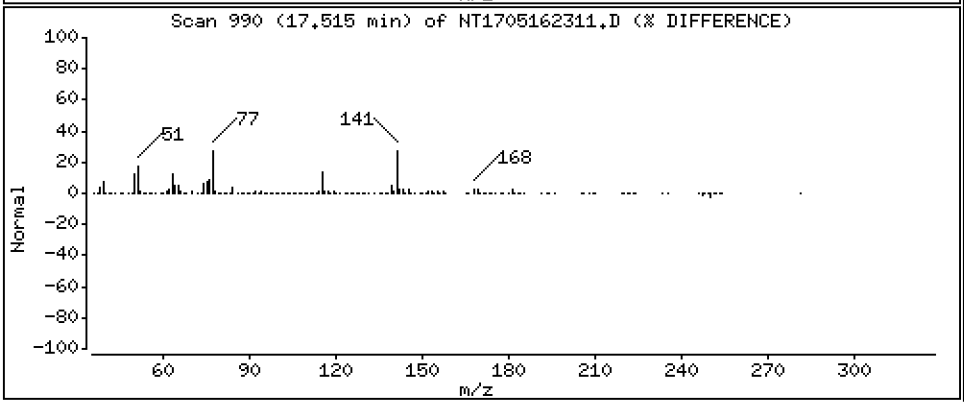
56 4-Bromophenyl-phenylether

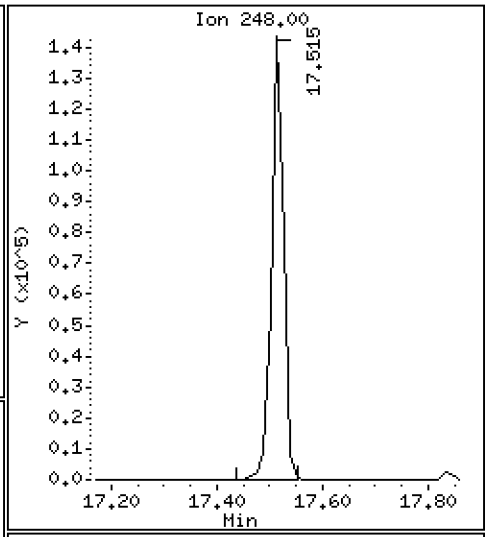
Concentration: 5.420 ug/mL

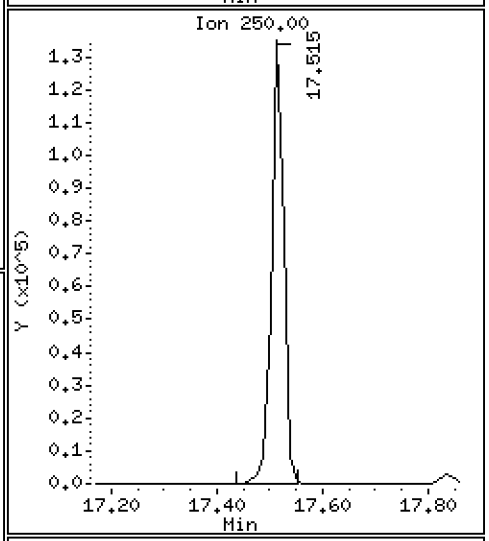


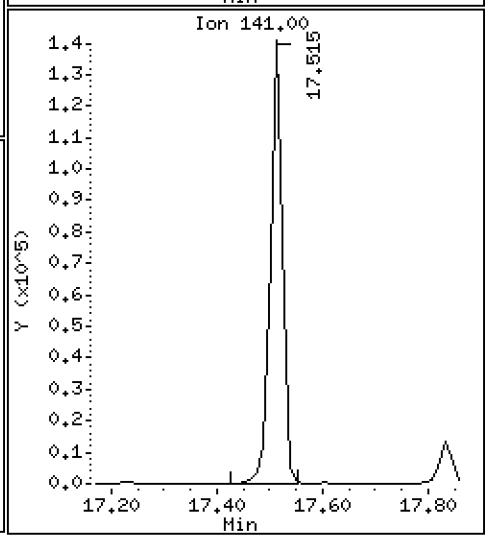












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

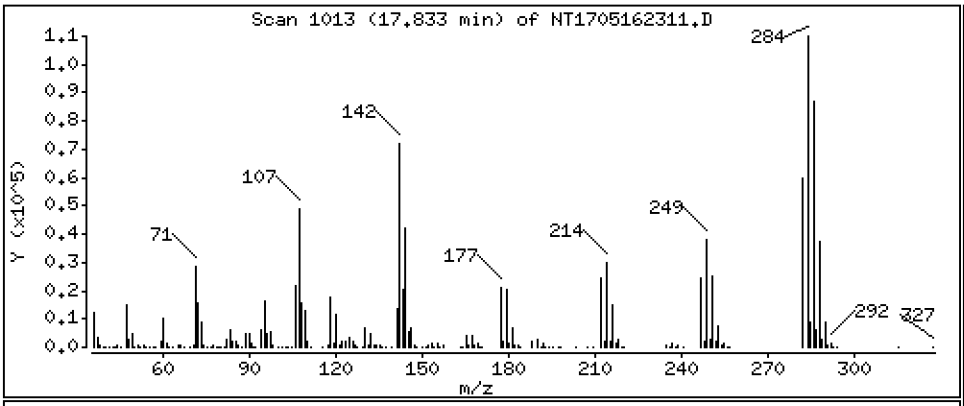
Operator: JGR

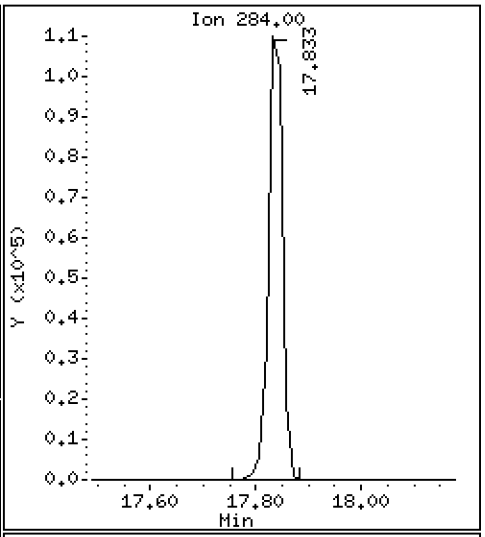
Column phase: ZB-5msi

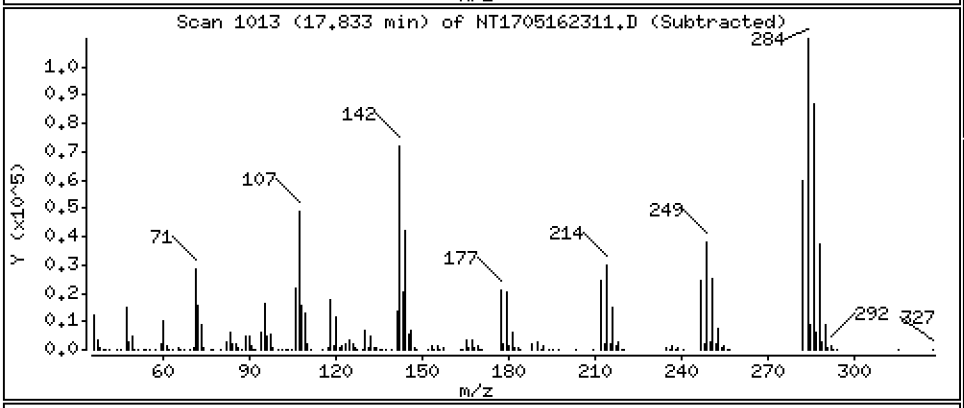
Column diameter: 0.25

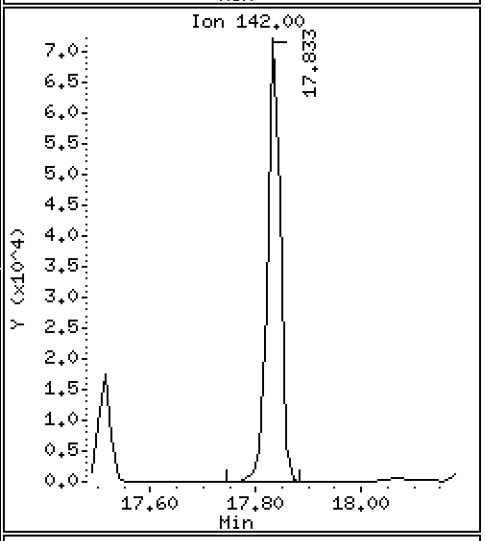
57 Hexachlorobenzene

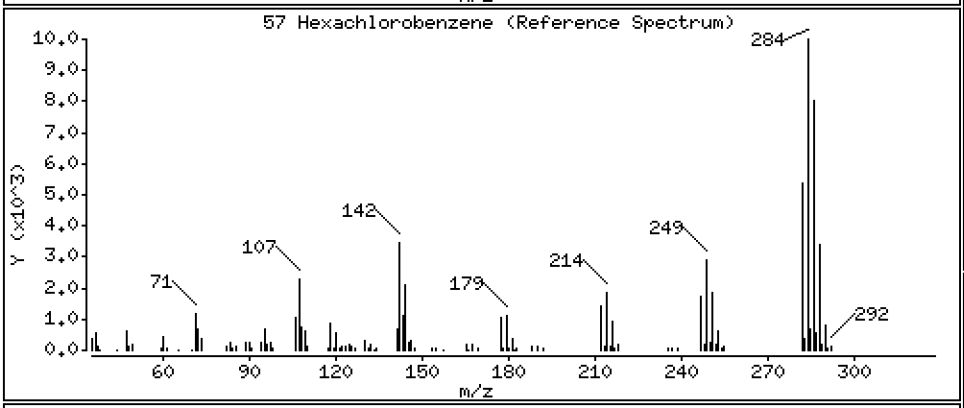
Concentration: 4.913 ug/mL

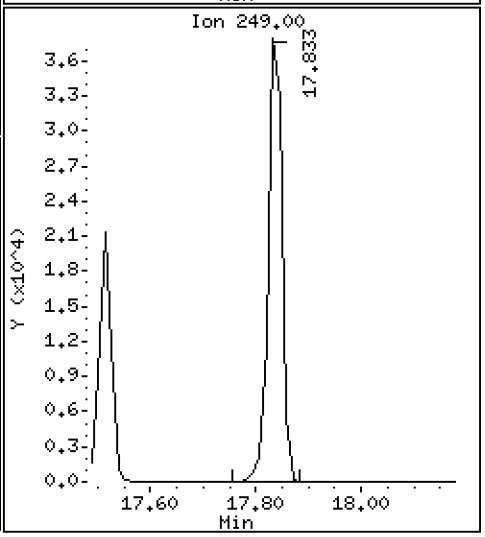


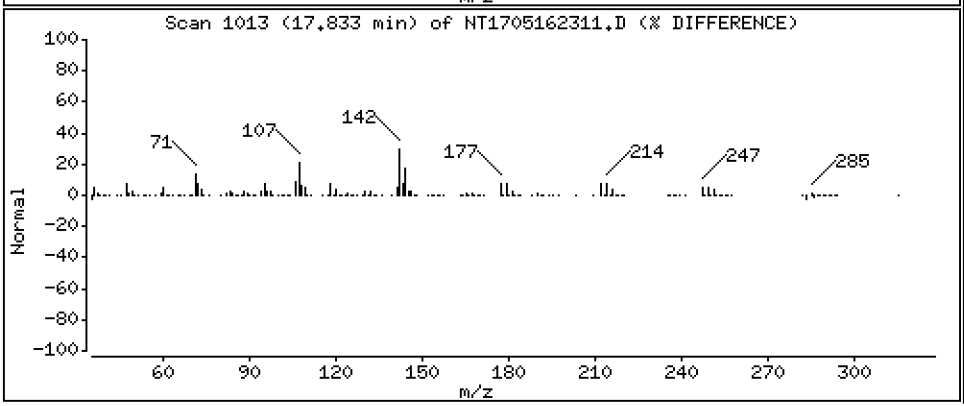












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

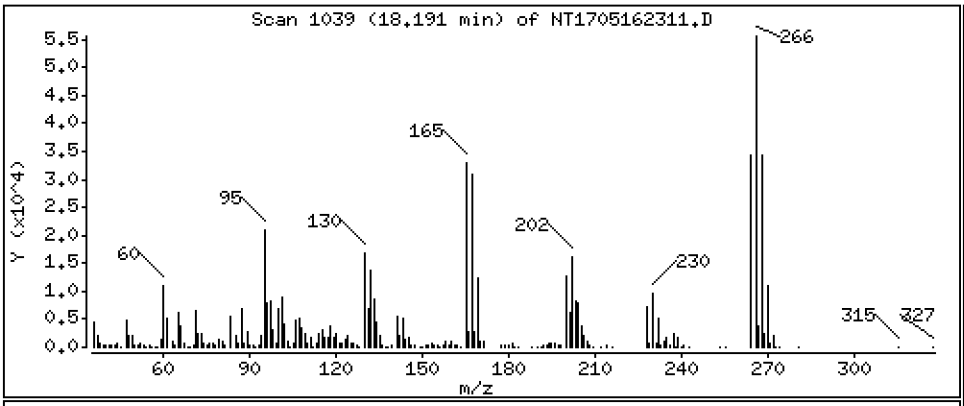
Operator: JGR

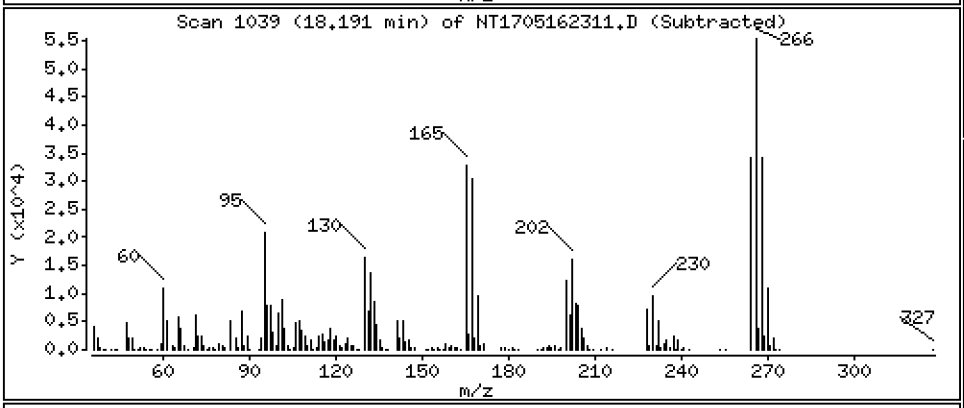
Column phase: ZB-5msi

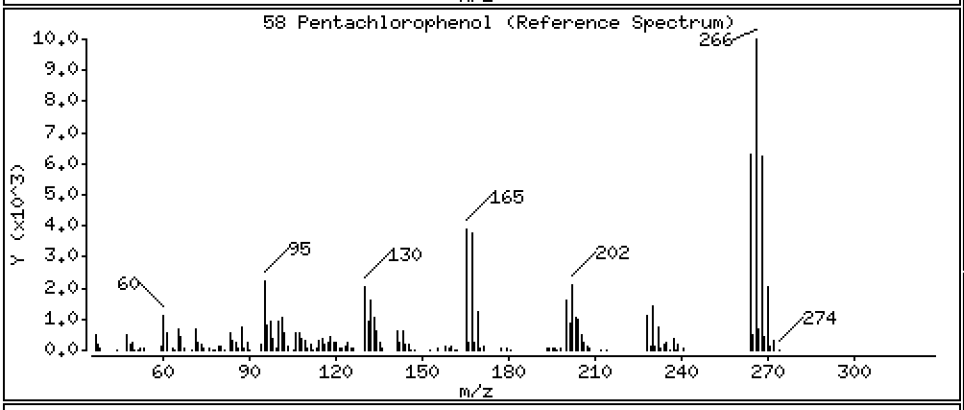
Column diameter: 0.25

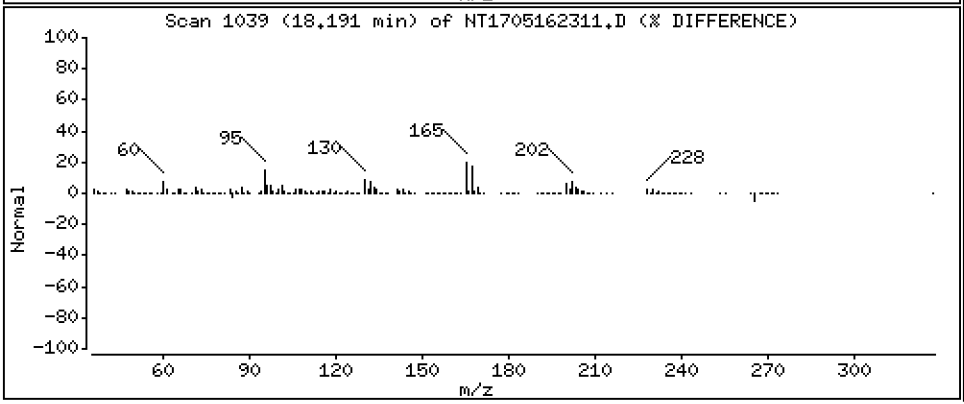
58 Pentachlorophenol

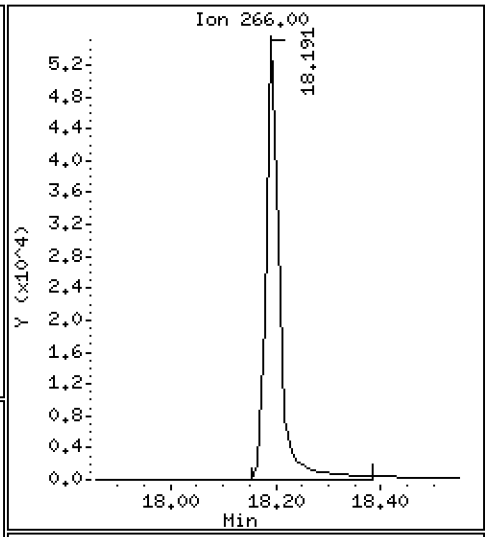
Concentration: 3.943 ug/mL

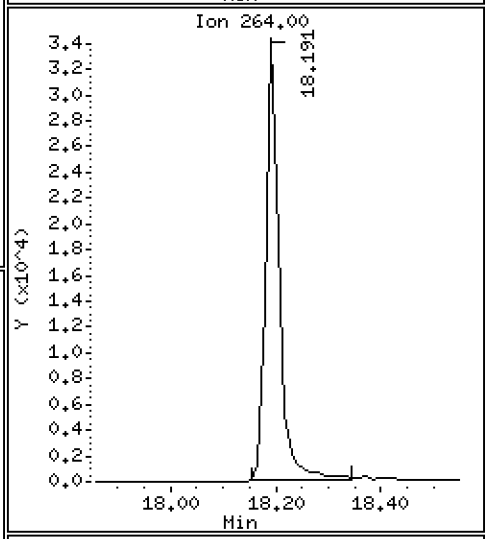


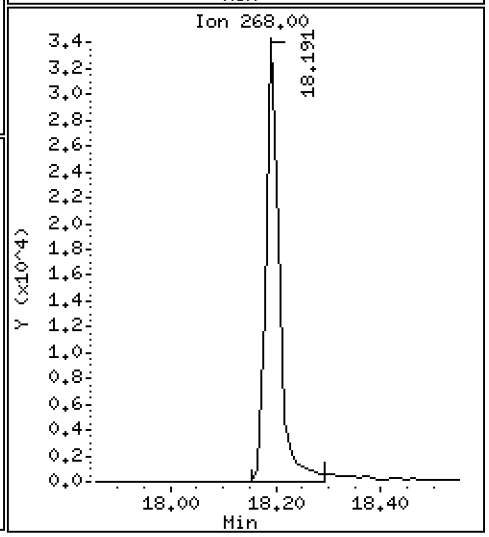












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

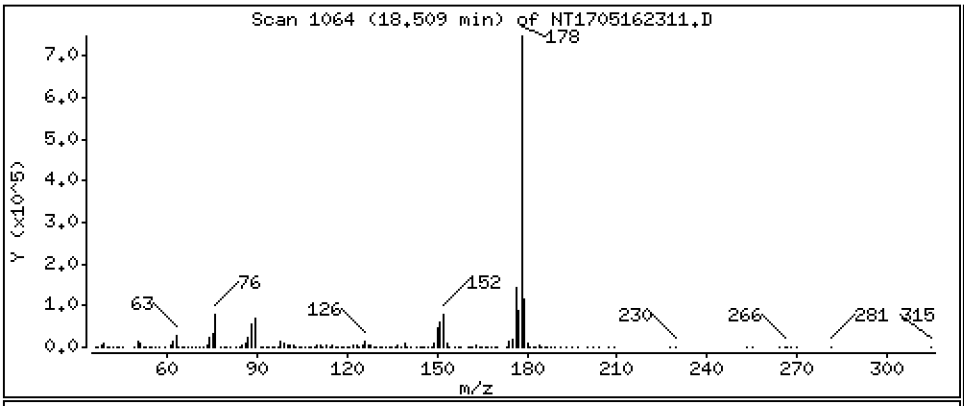
Operator: JGR

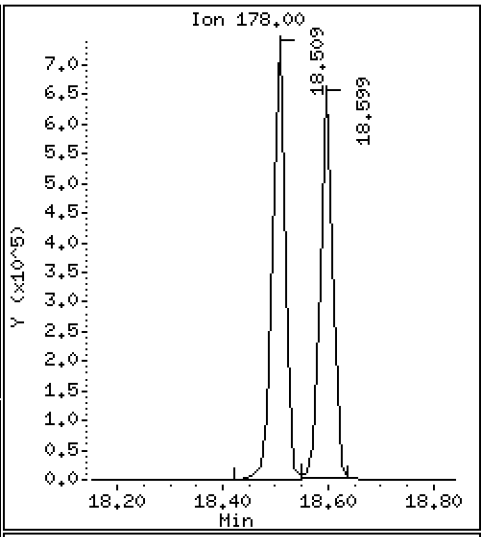
Column phase: ZB-5msi

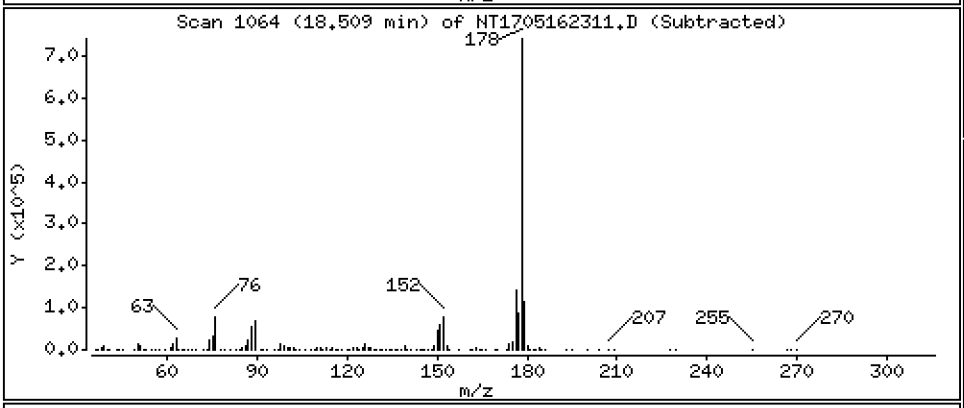
Column diameter: 0.25

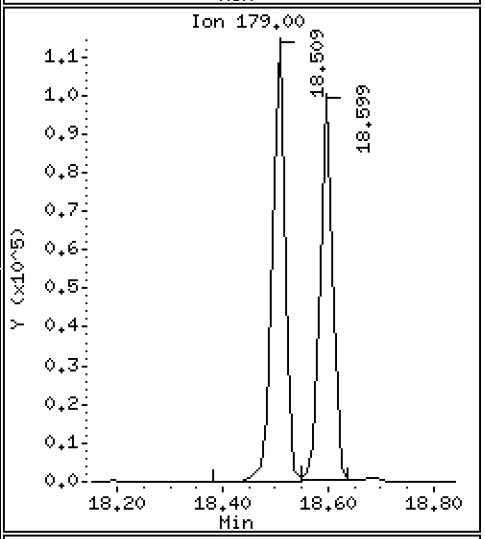
60 Phenanthrene

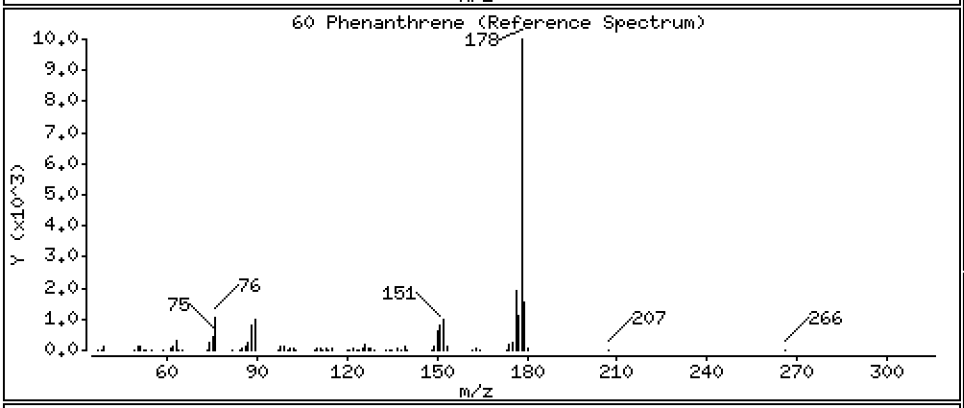
Concentration: 5.039 ug/mL

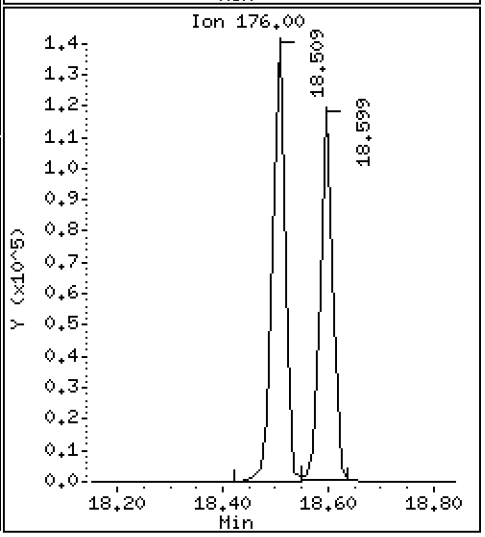


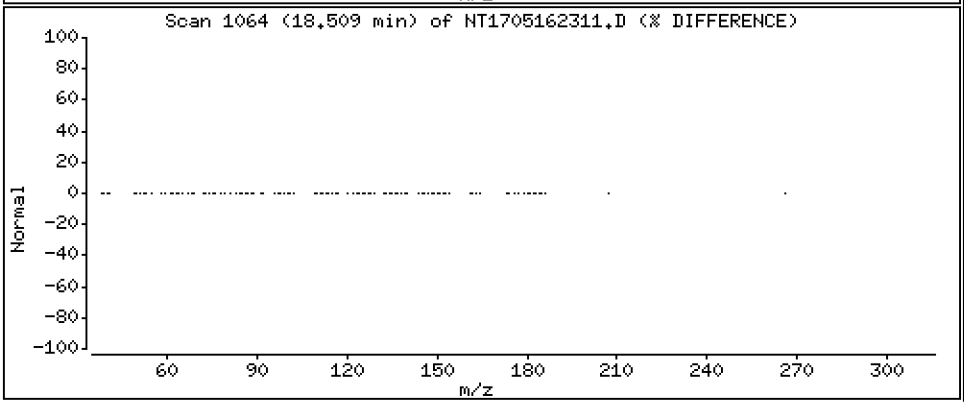












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

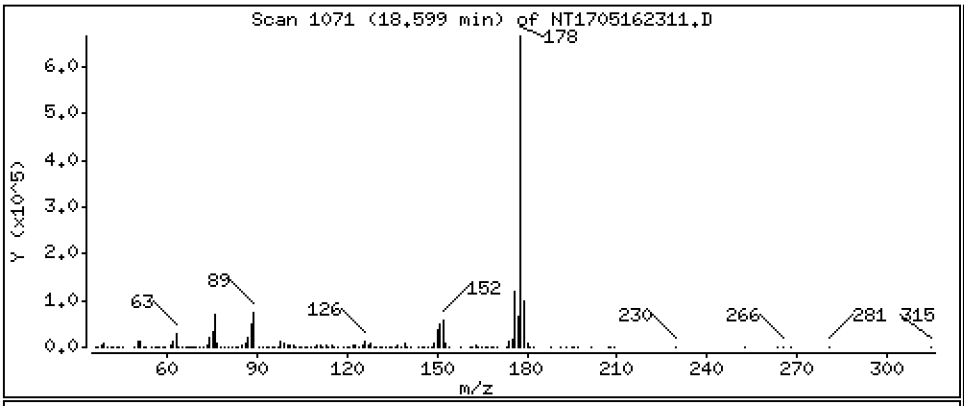
Operator: JGR

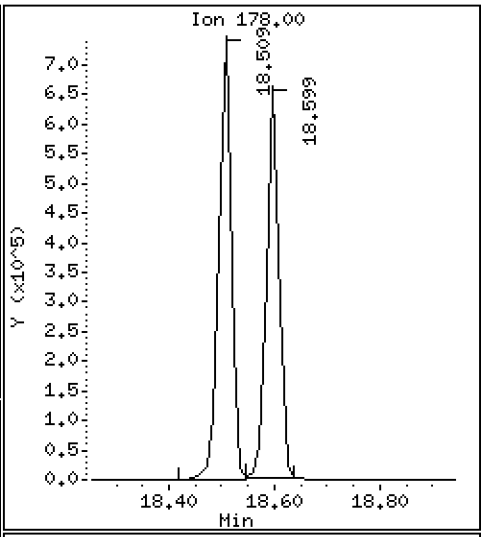
Column phase: ZB-5msi

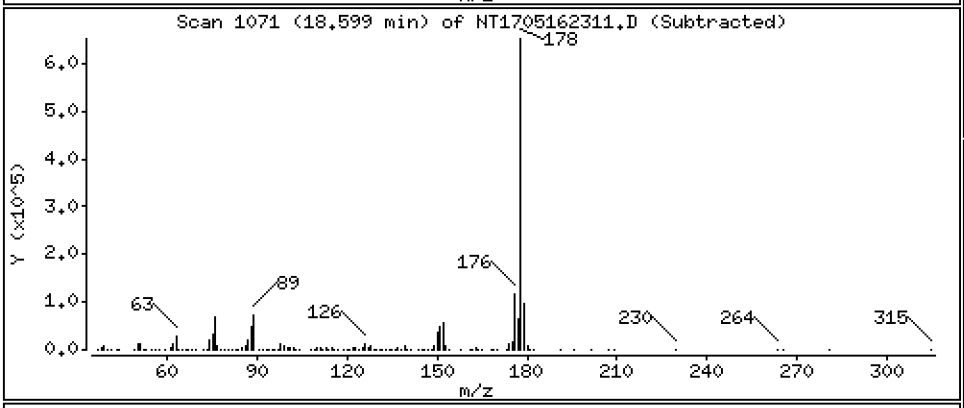
Column diameter: 0.25

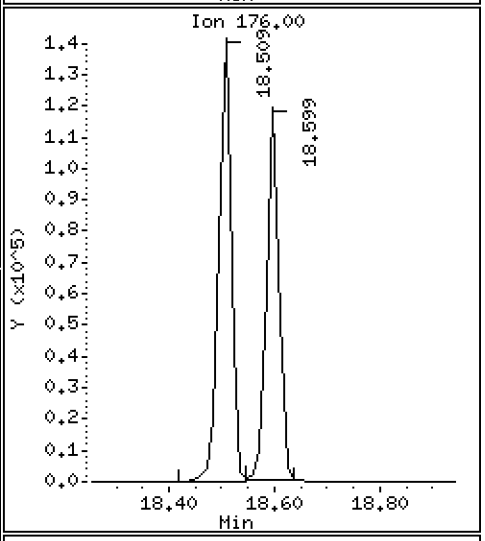
61 Anthracene

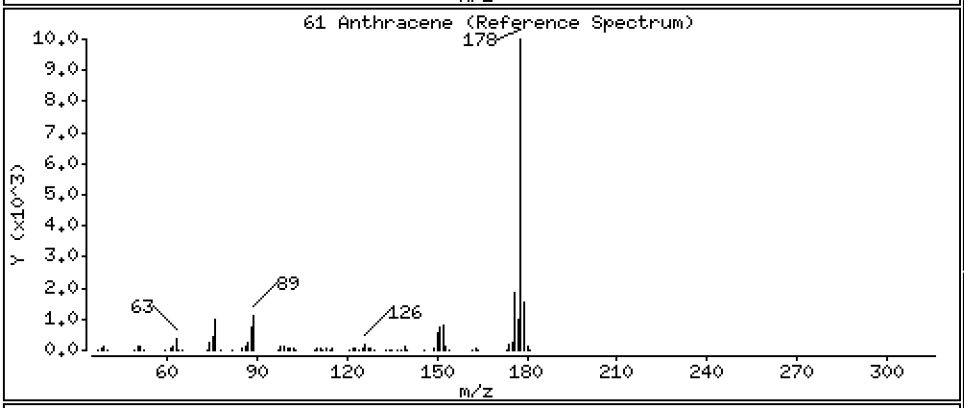
Concentration: 4.530 ug/mL

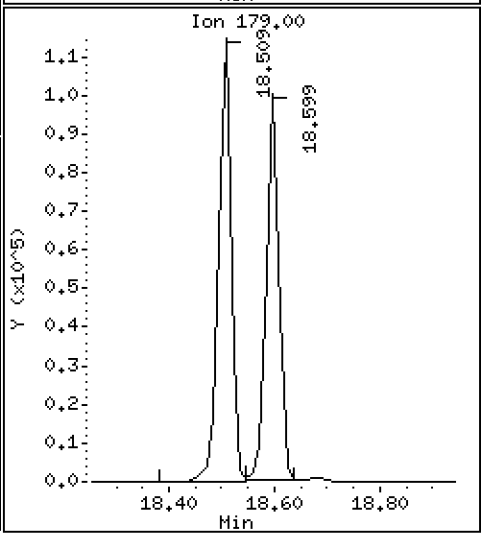


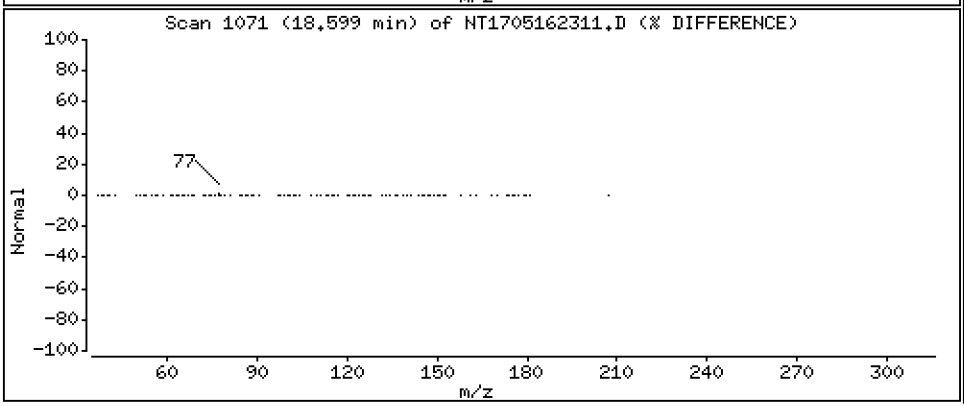












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

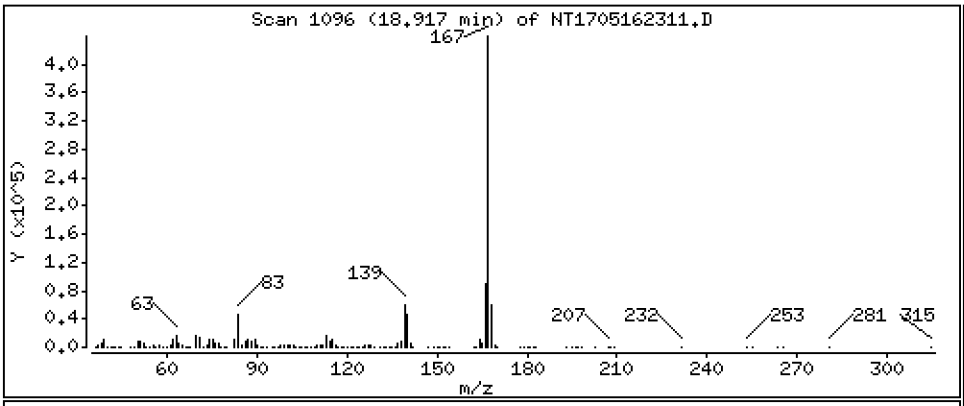
Operator: JGR

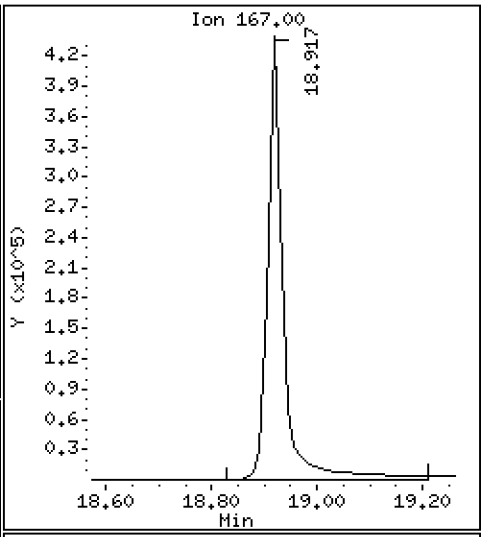
Column phase: ZB-5msi

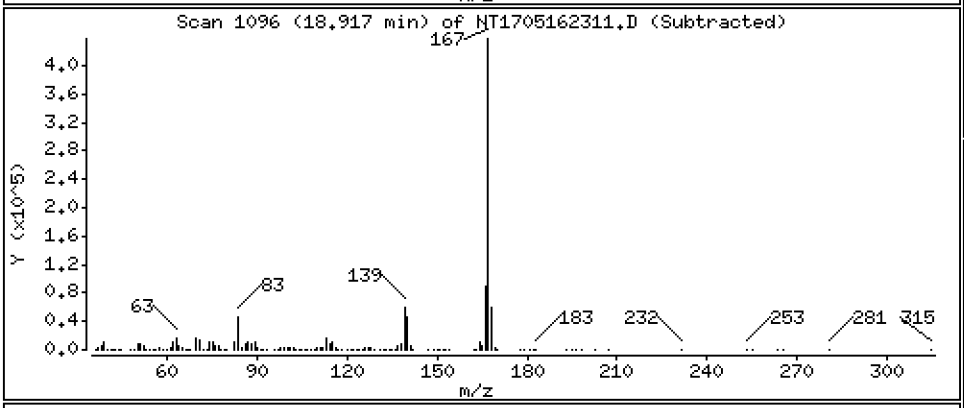
Column diameter: 0.25

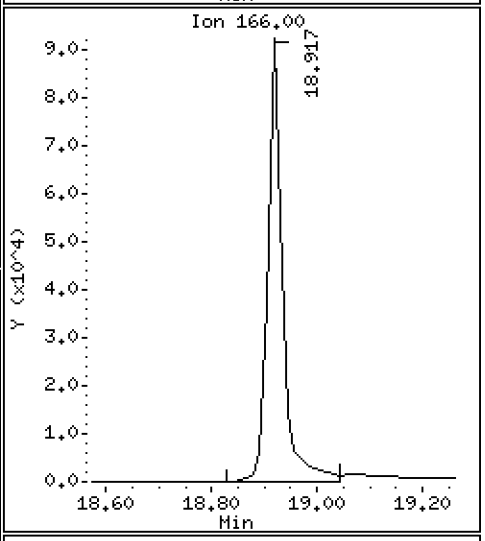
62 Carbazole

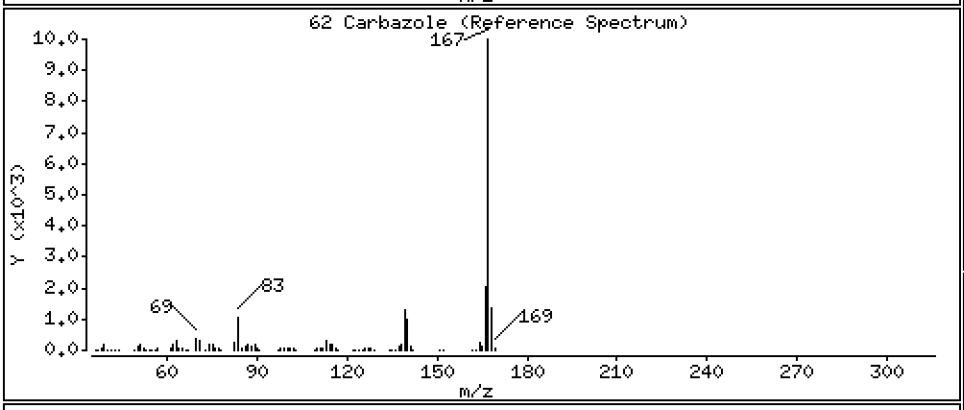
Concentration: 5.938 ug/mL

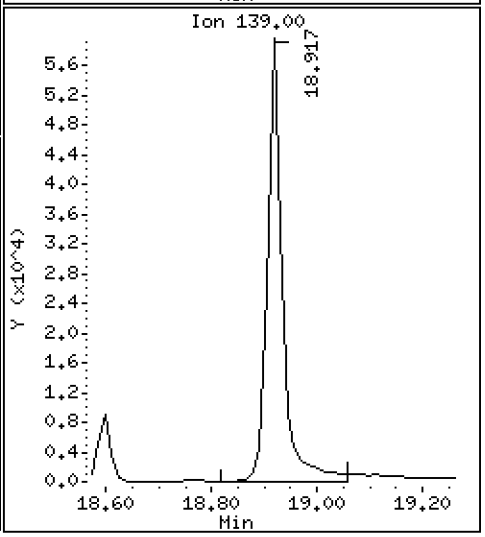


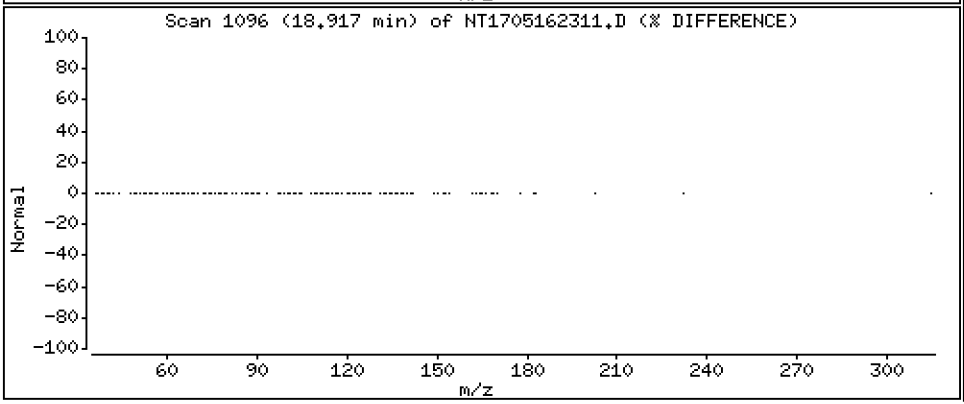












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

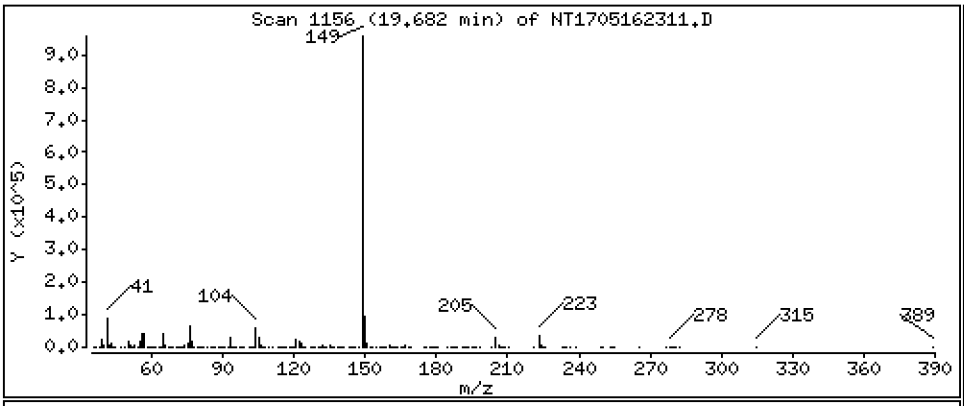
Operator: JGR

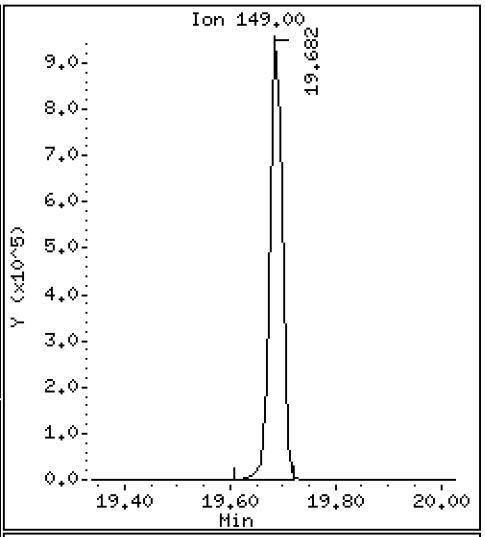
Column phase: ZB-5msi

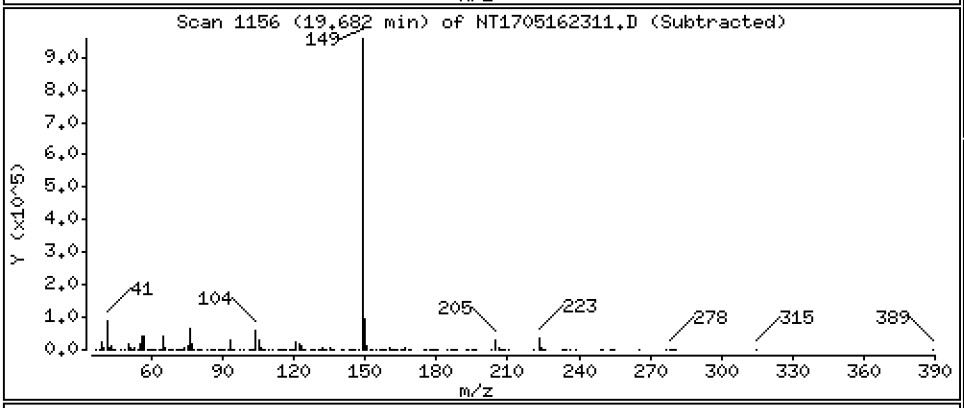
Column diameter: 0.25

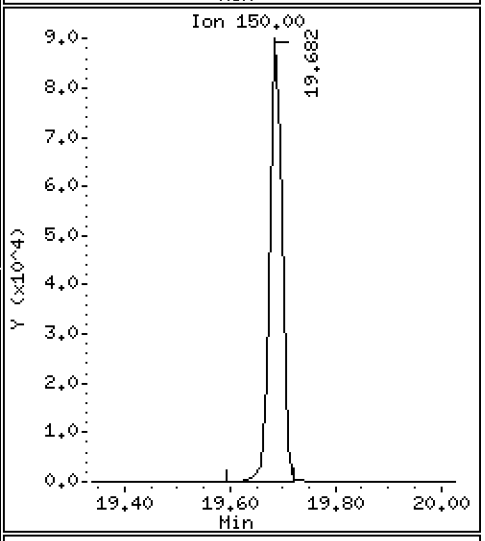
63 Di-n-butylphthalate

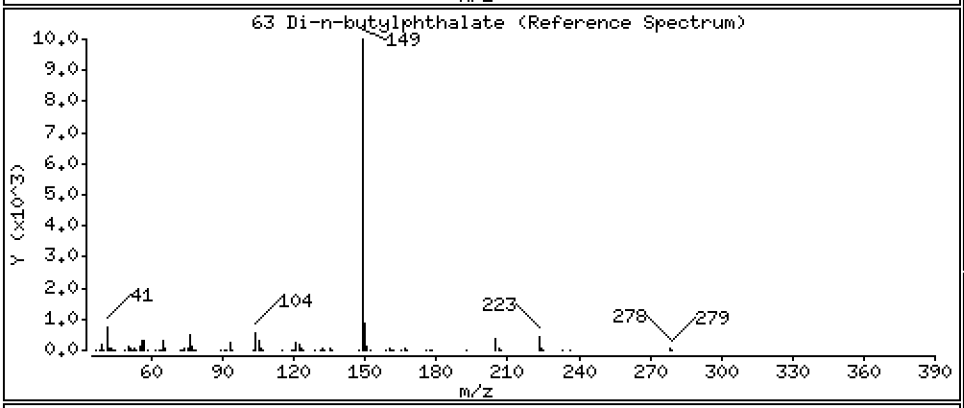
Concentration: 5.642 ug/mL

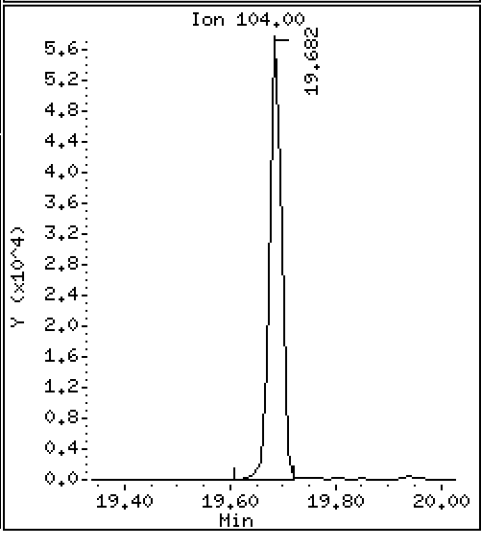


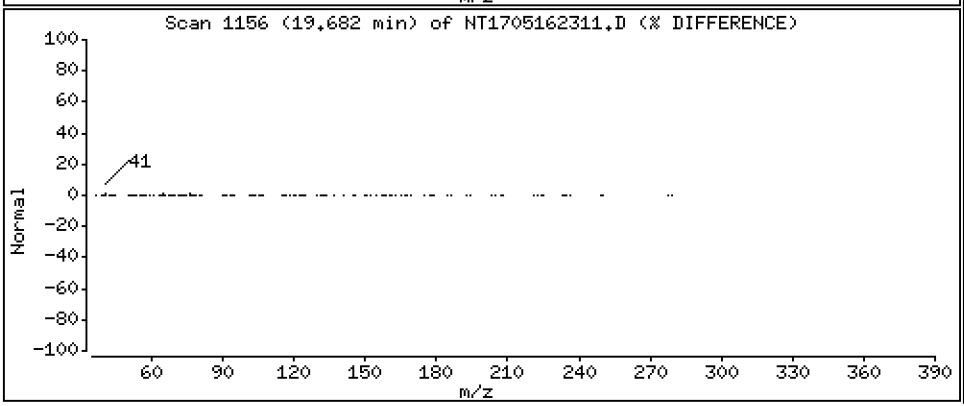












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

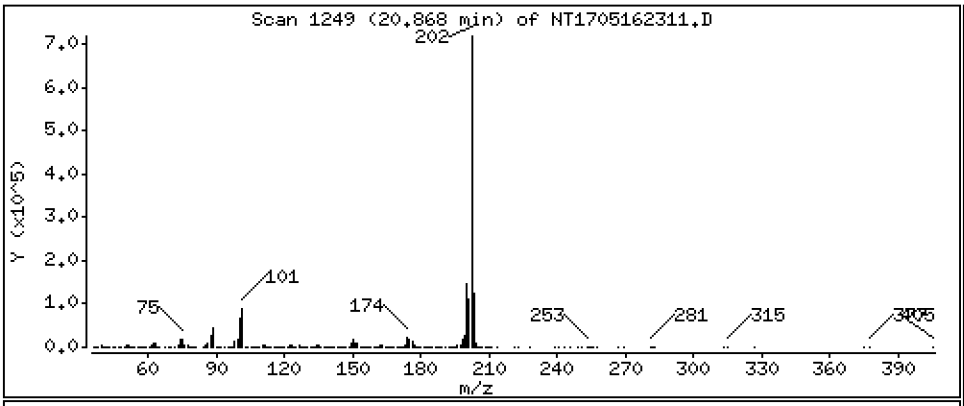
Operator: JGR

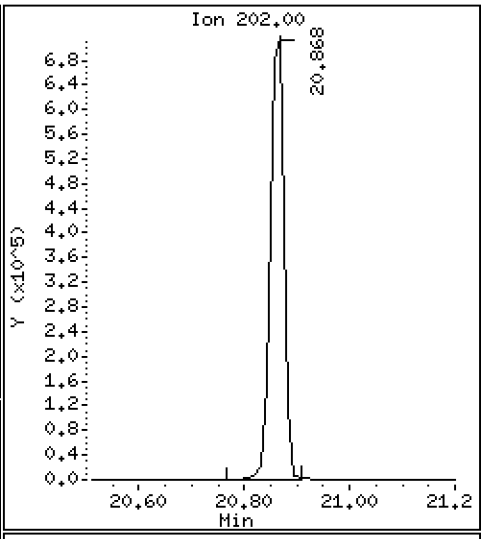
Column phase: ZB-5msi

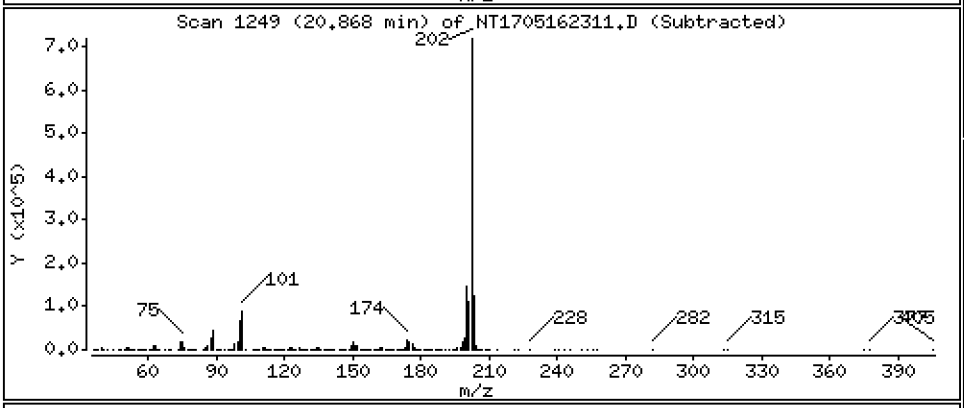
Column diameter: 0.25

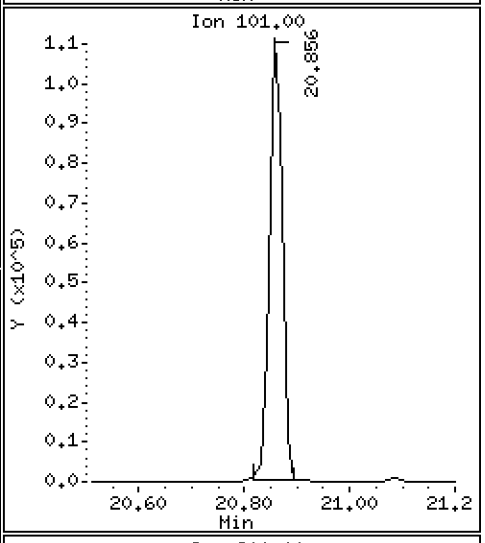
64 Fluoranthene

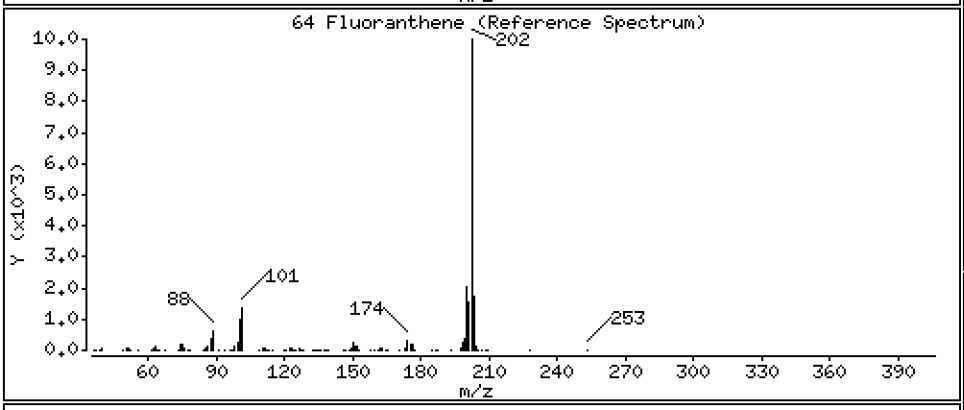
Concentration: 5.467 ug/mL

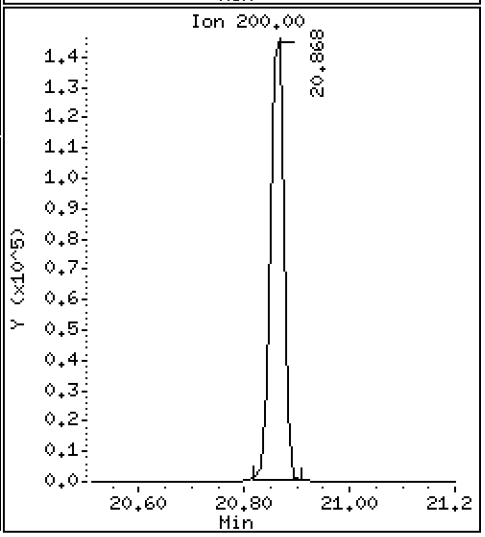


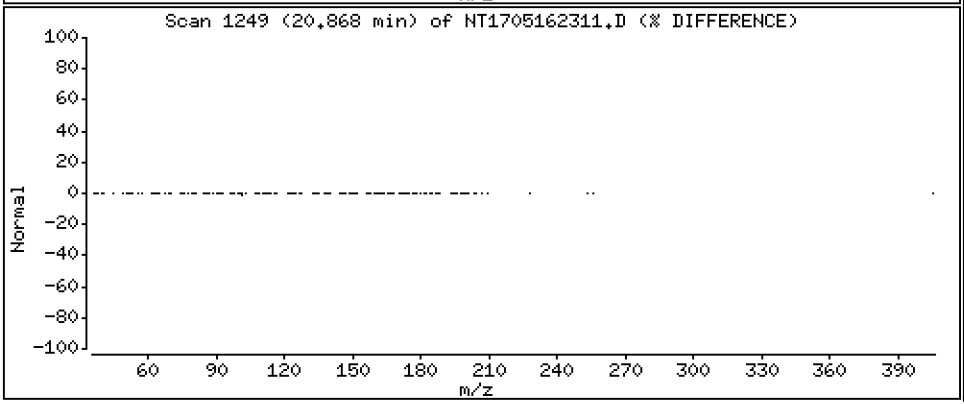












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

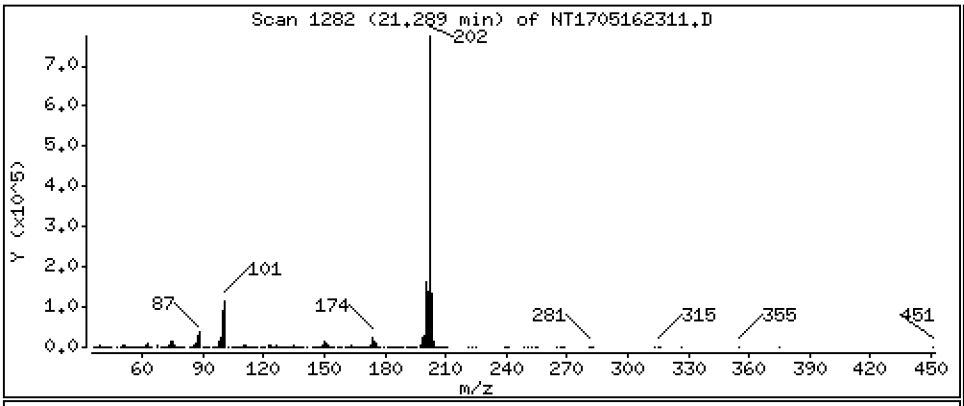
Operator: JGR

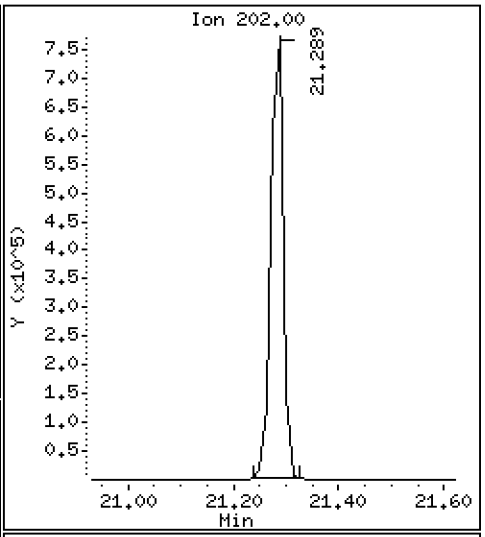
Column phase: ZB-5msi

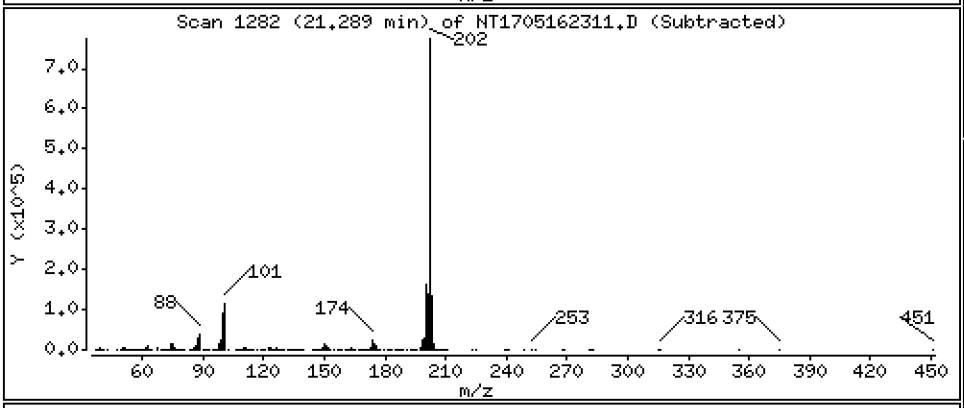
Column diameter: 0.25

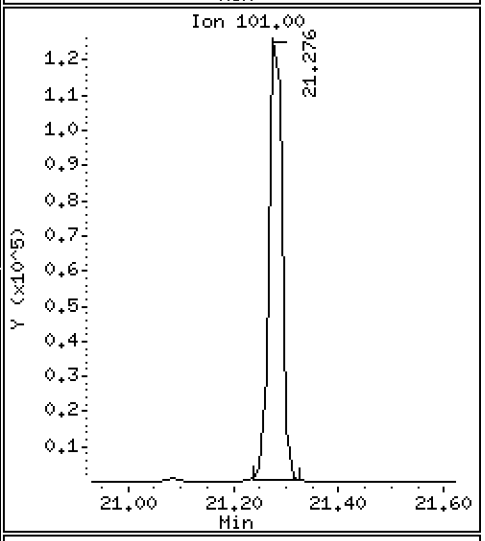
65 Pyrene

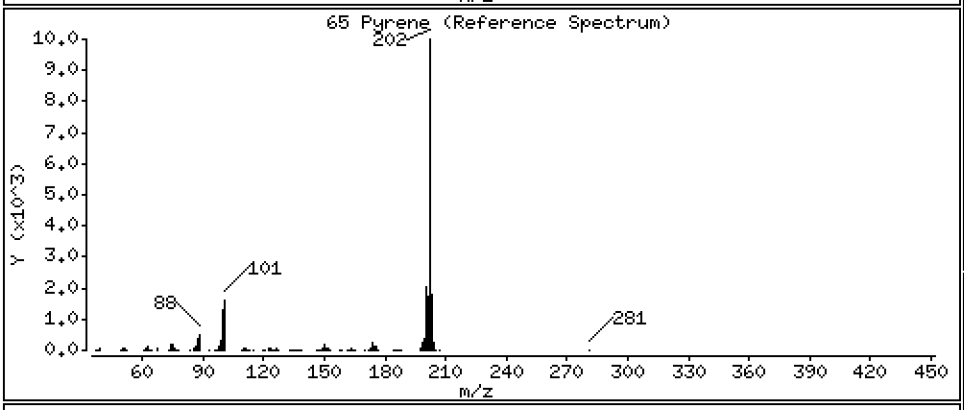
Concentration: 5.265 ug/mL

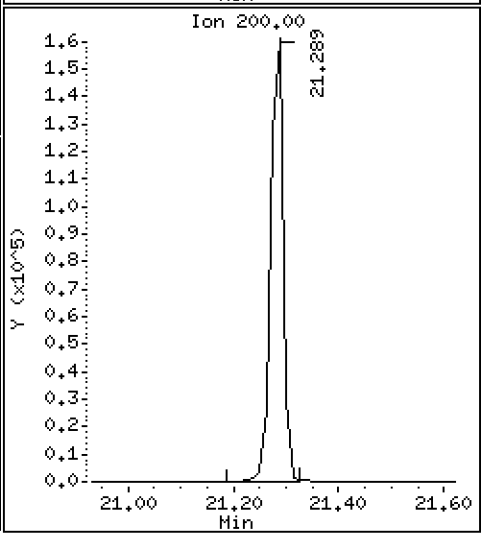


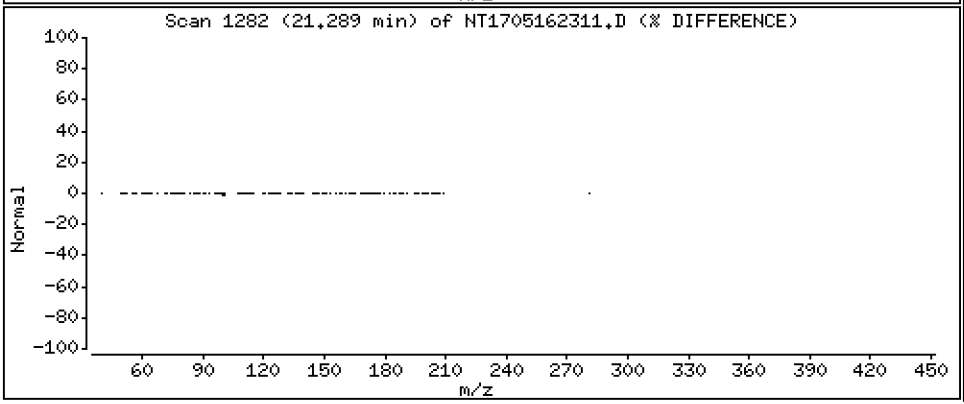












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

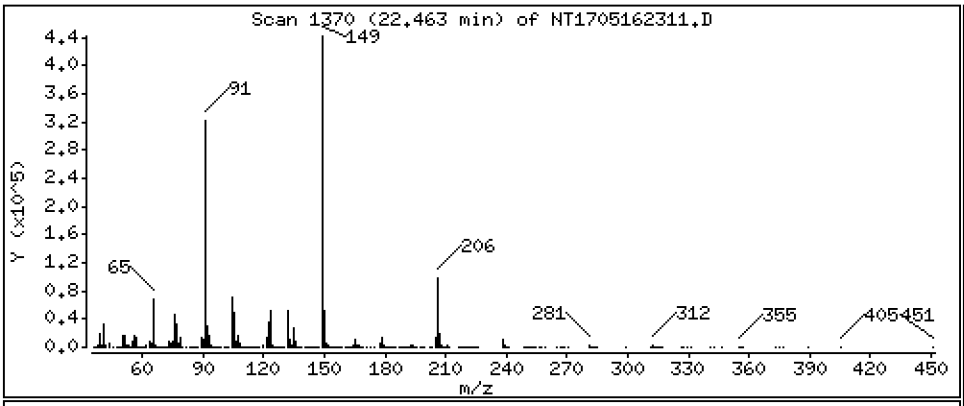
Operator: JGR

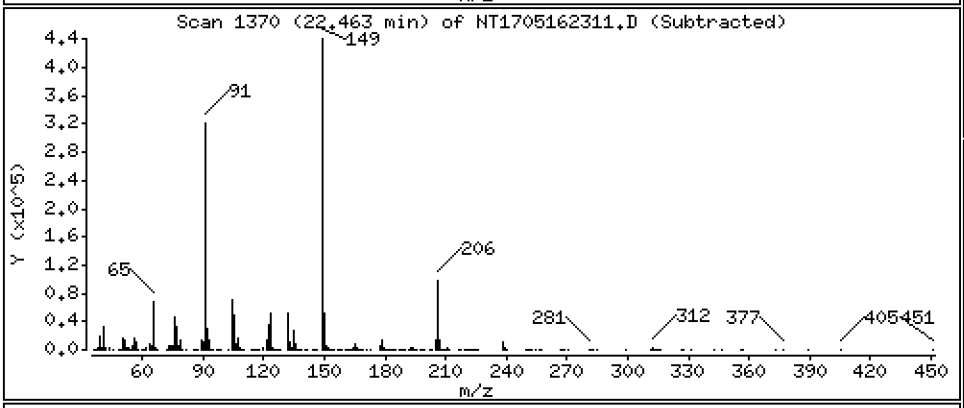
Column phase: ZB-5msi

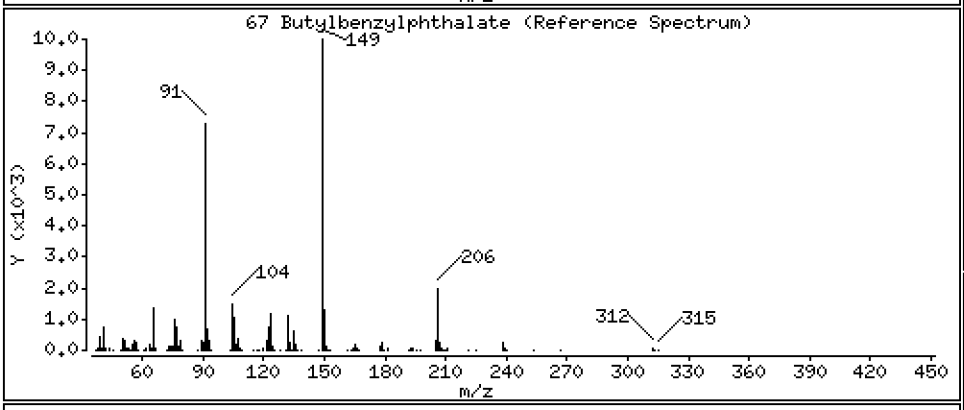
Column diameter: 0.25

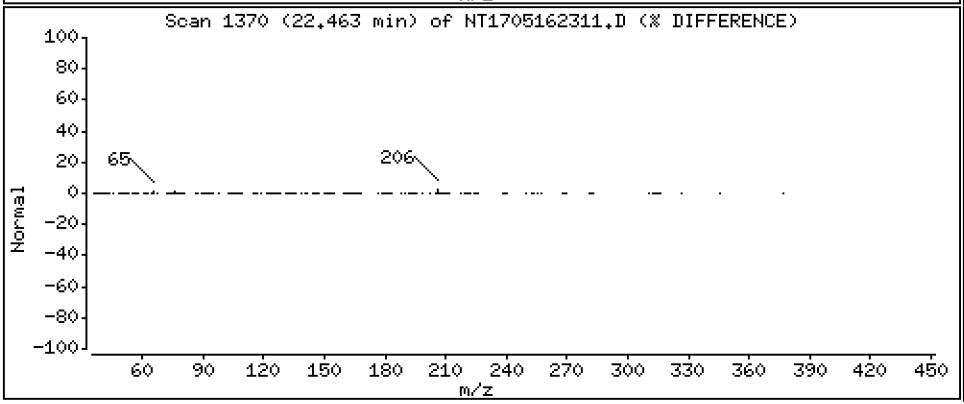
67 Butylbenzylphthalate

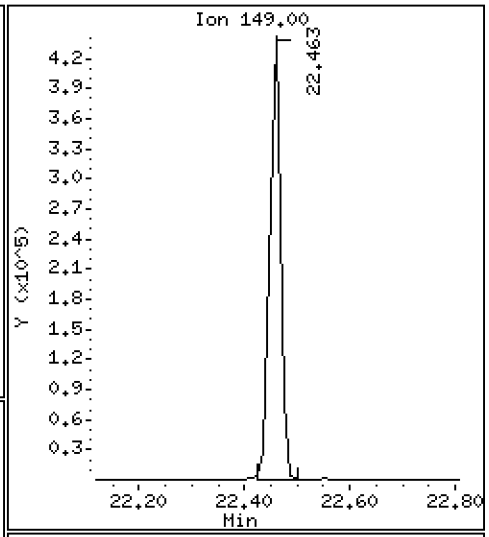
Concentration: 5.825 ug/mL

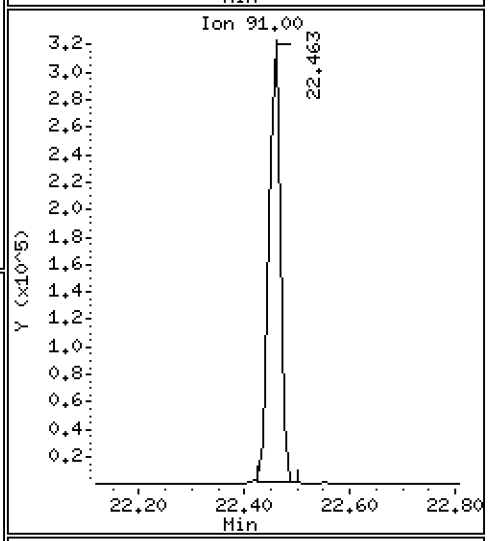


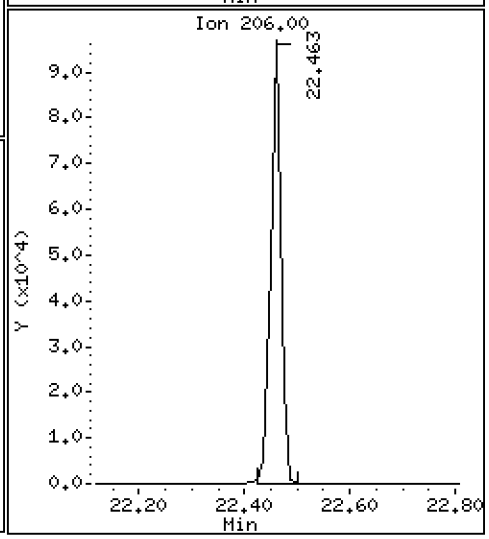












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

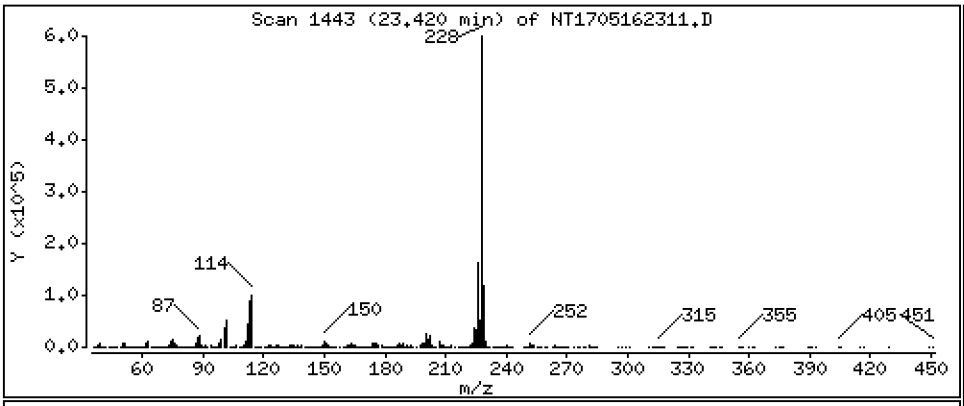
Operator: JGR

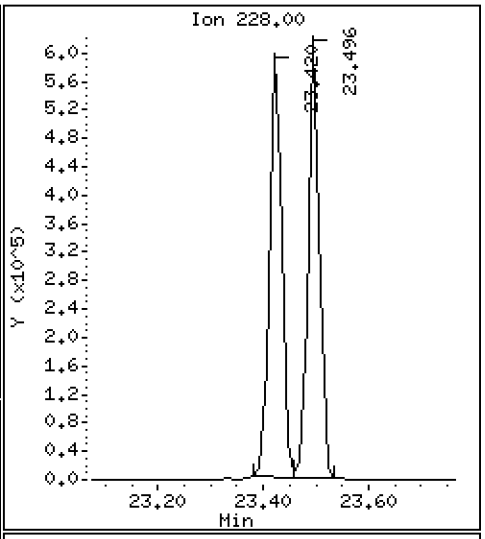
Column phase: ZB-5msi

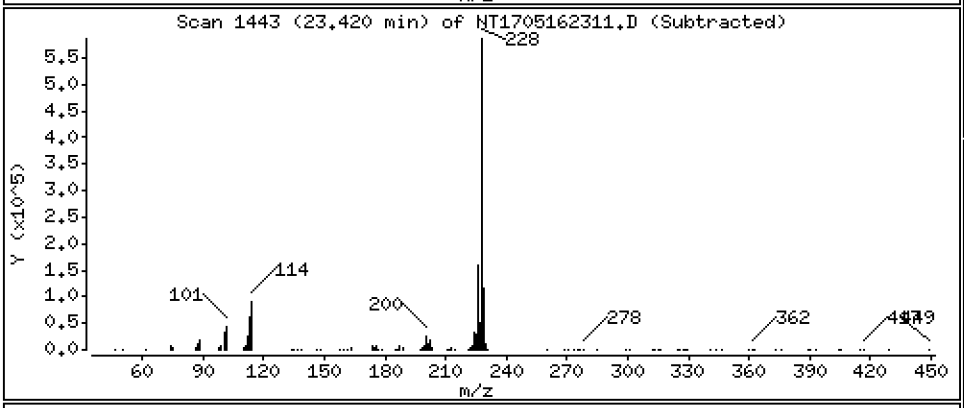
Column diameter: 0.25

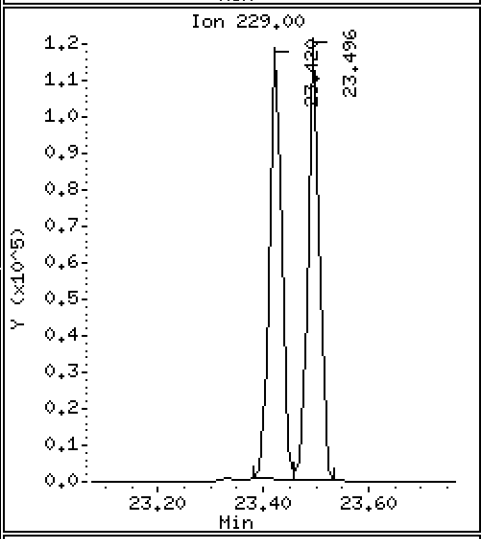
68 Benzo(a)anthracene

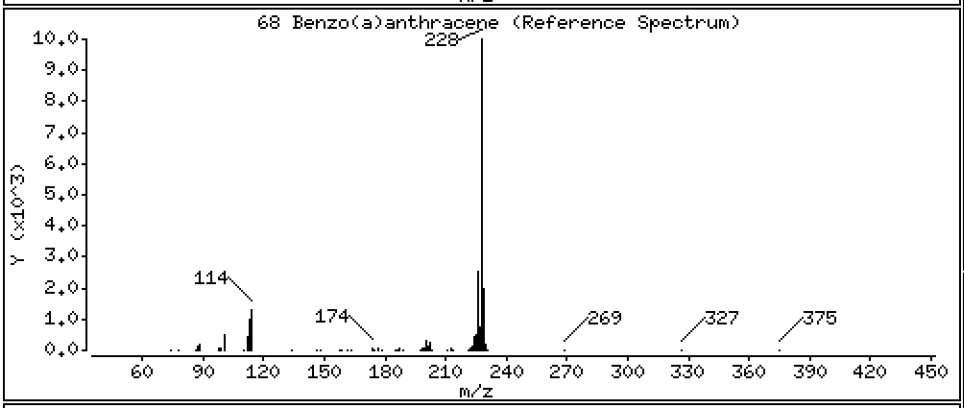
Concentration: 5.064 ug/mL

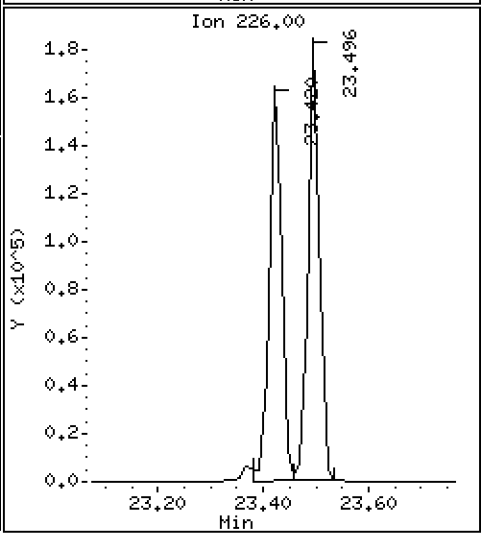


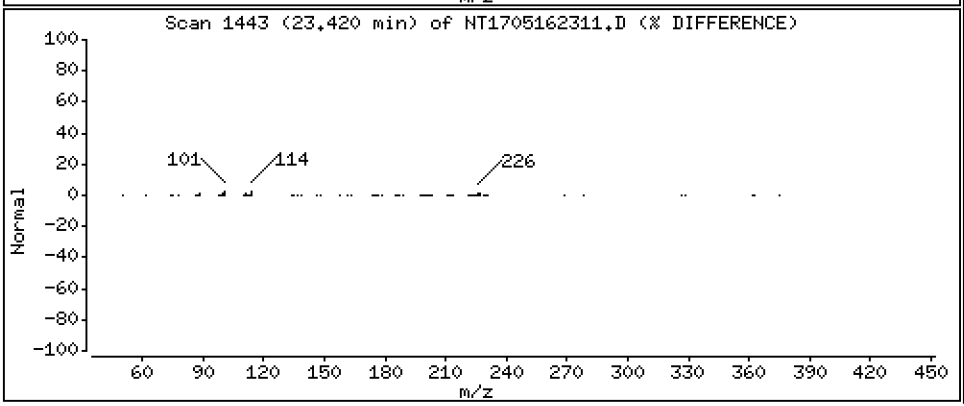












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

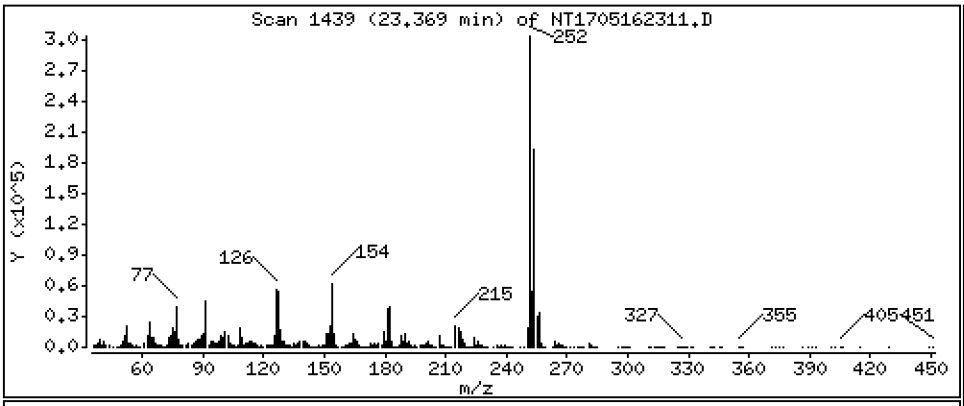
Operator: JGR

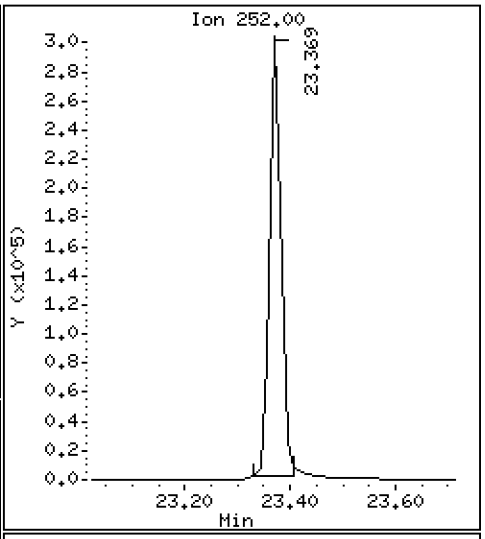
Column phase: ZB-5msi

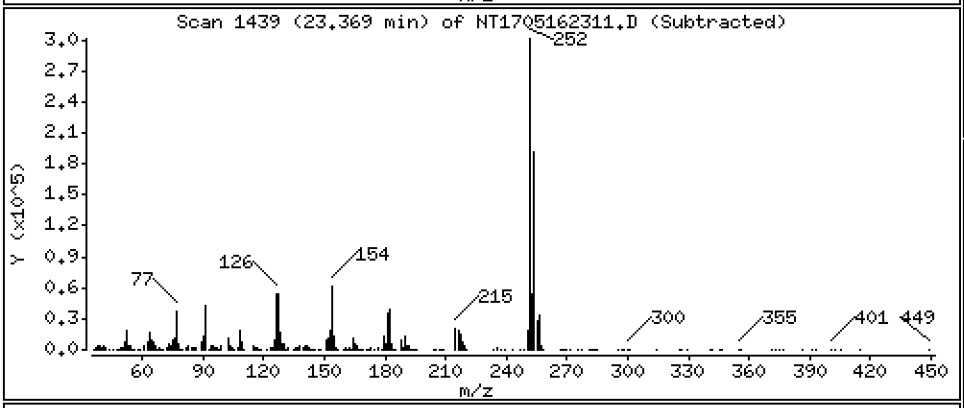
Column diameter: 0.25

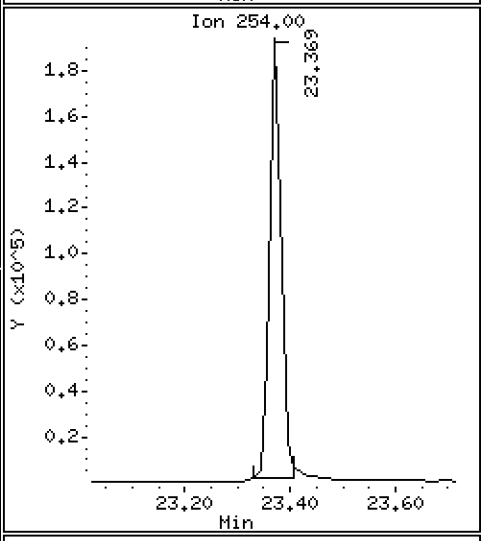
70 3,3'-Dichlorobenzidine

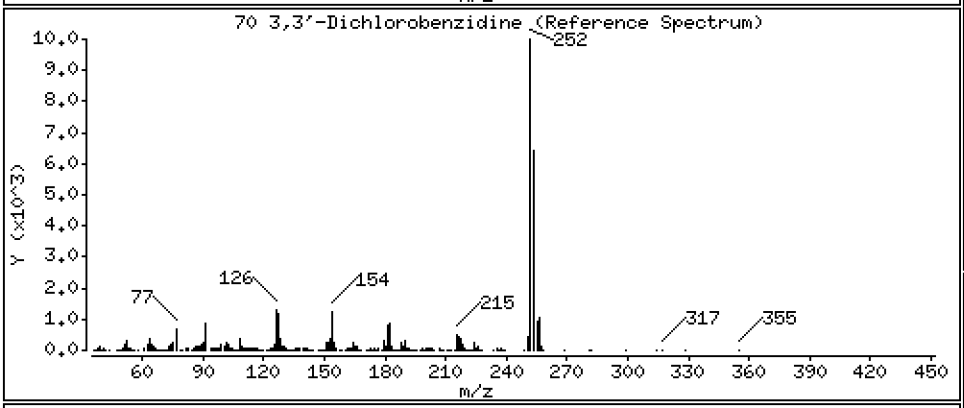
Concentration: 11.99 ug/mL

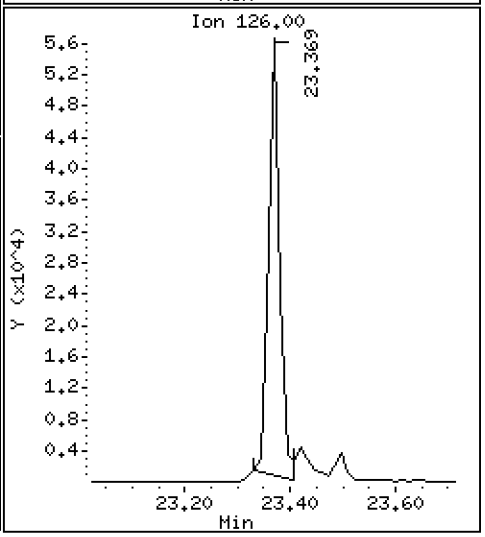


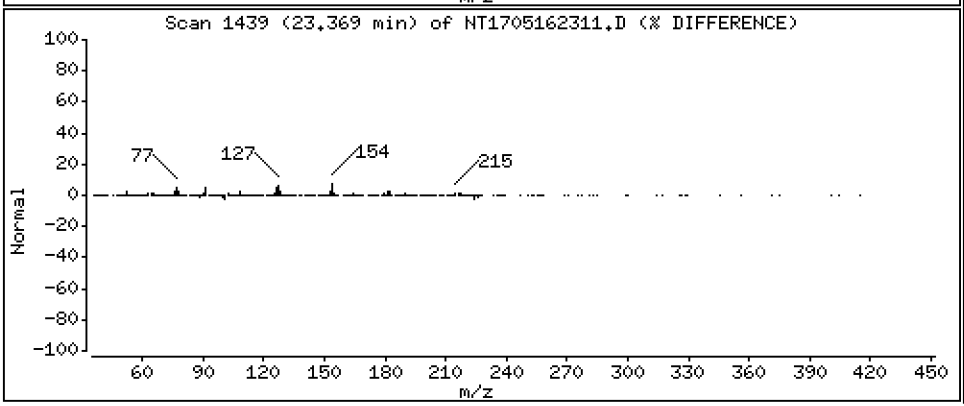












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

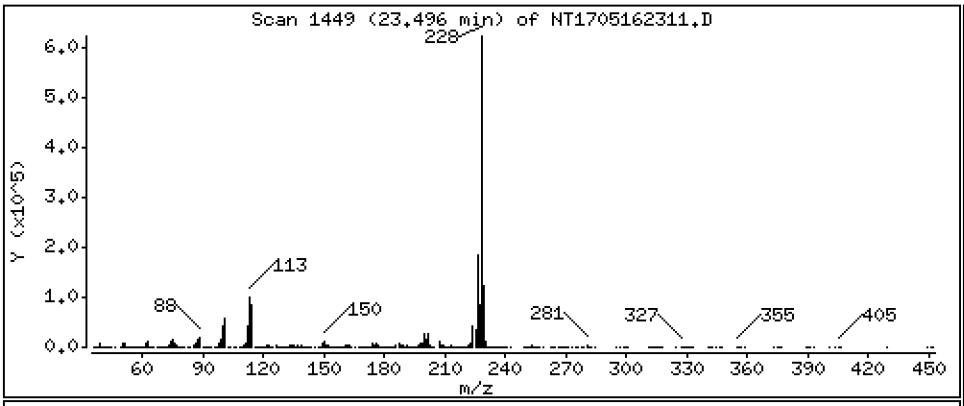
Operator: JGR

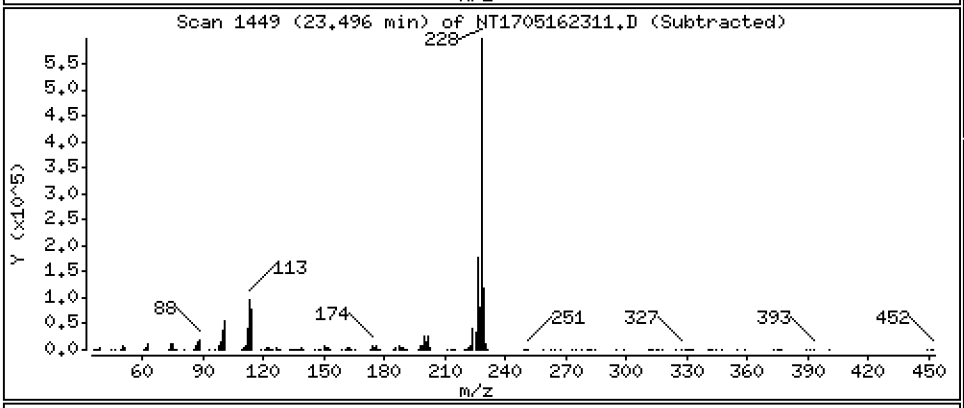
Column phase: ZB-5msi

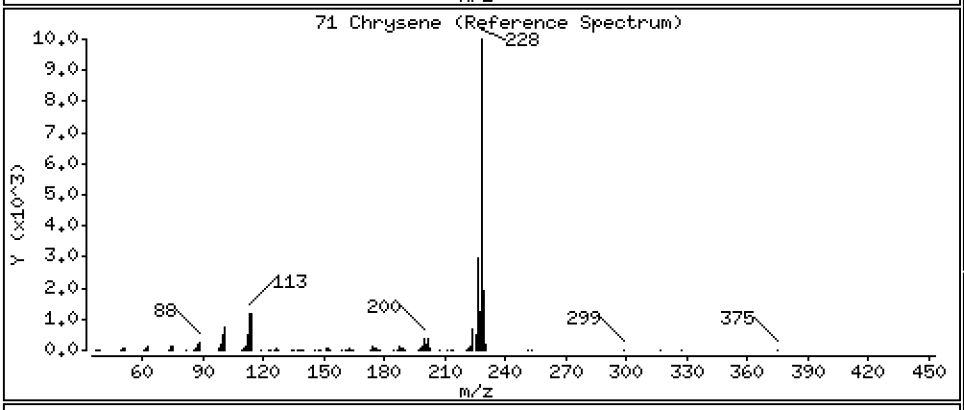
Column diameter: 0.25

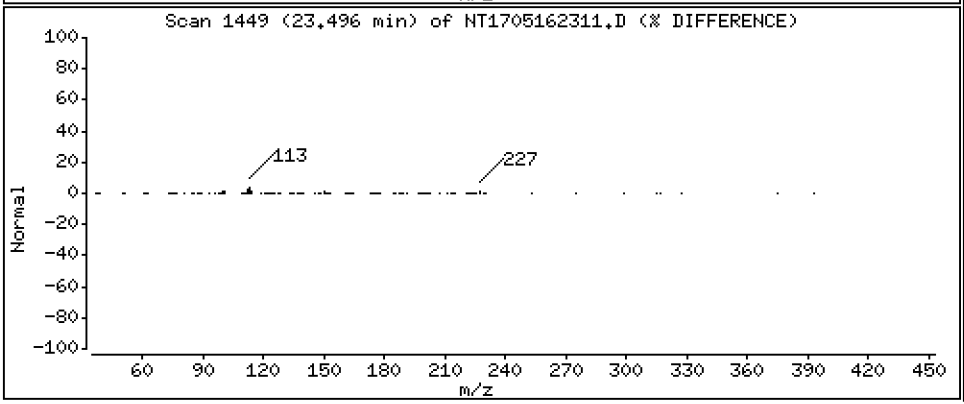
71 Chrysene

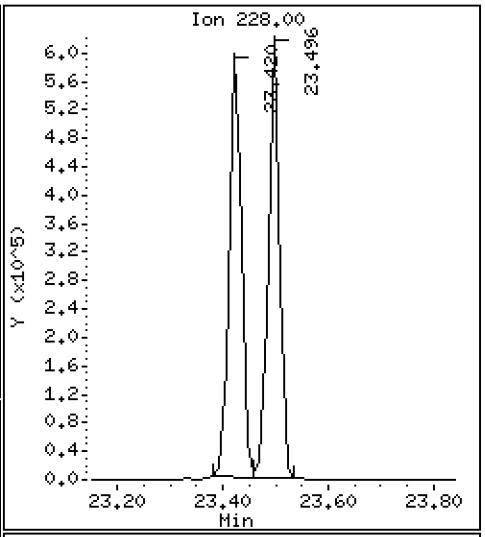
Concentration: 5.018 ug/mL

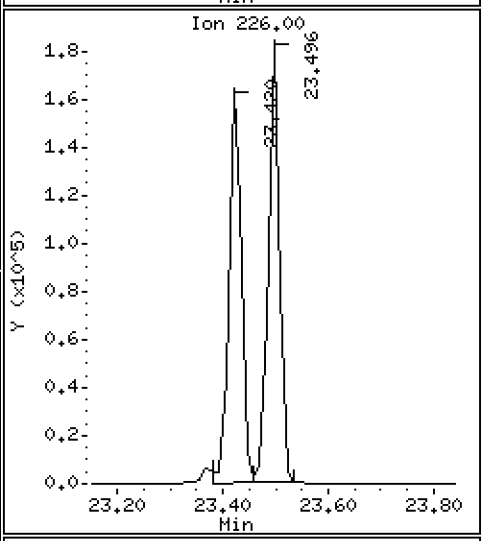


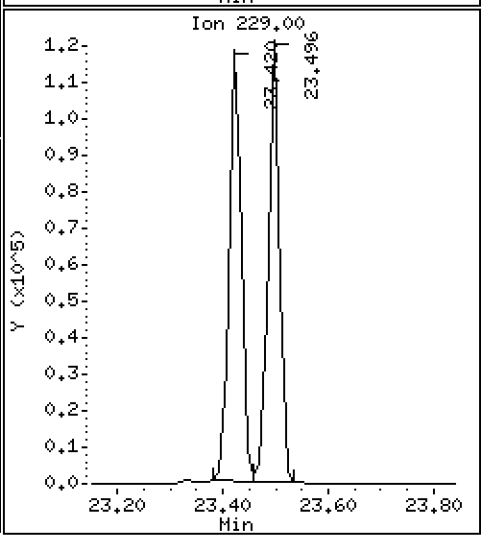












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

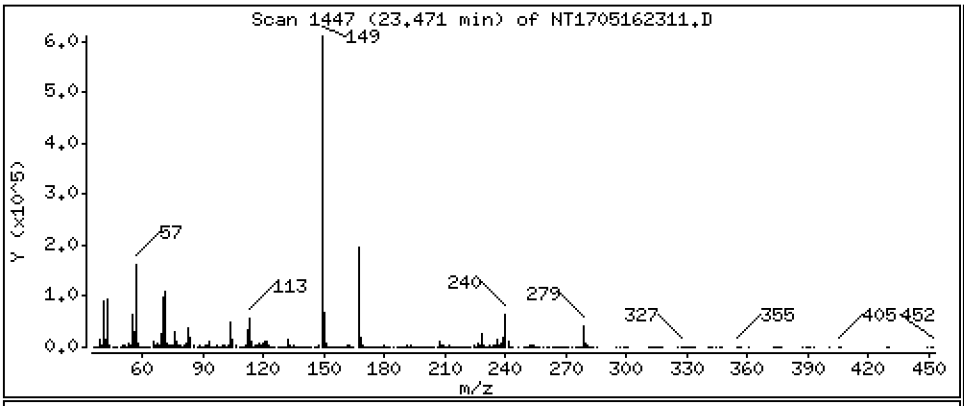
Operator: JGR

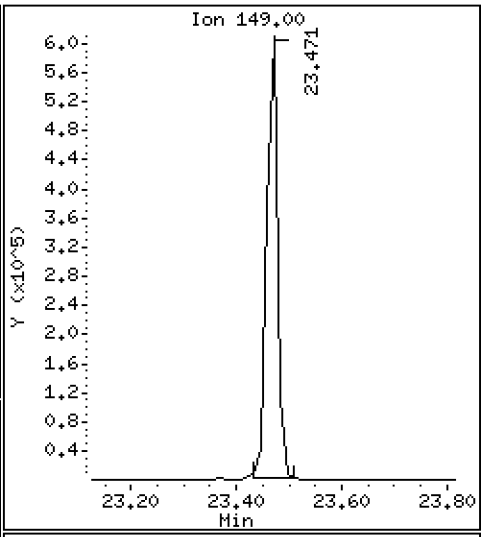
Column phase: ZB-5msi

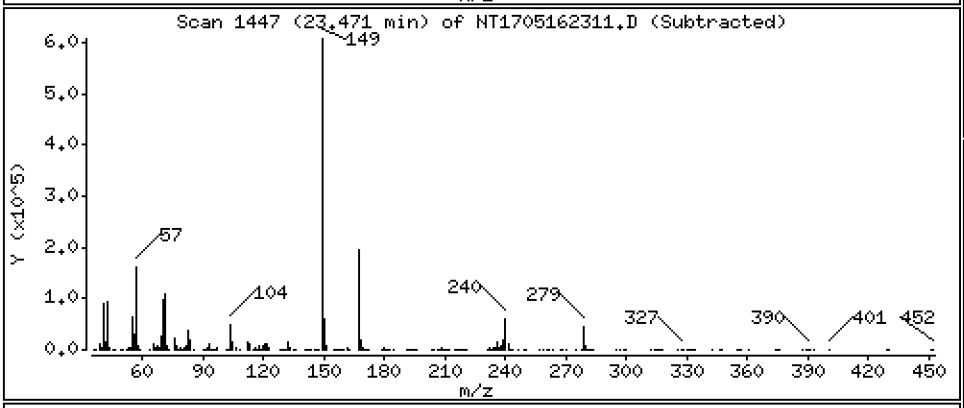
Column diameter: 0.25

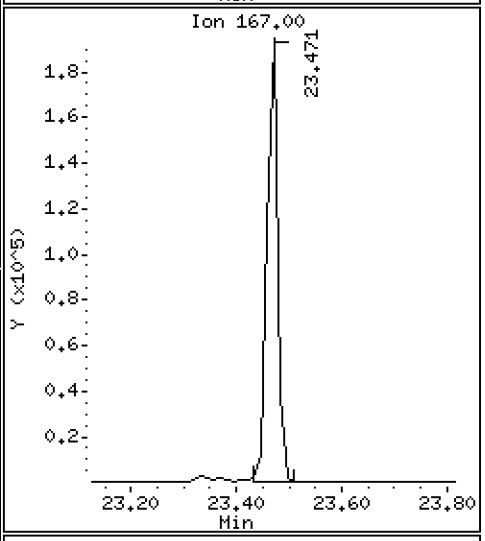
72 bis(2-Ethylhexyl)phthalate

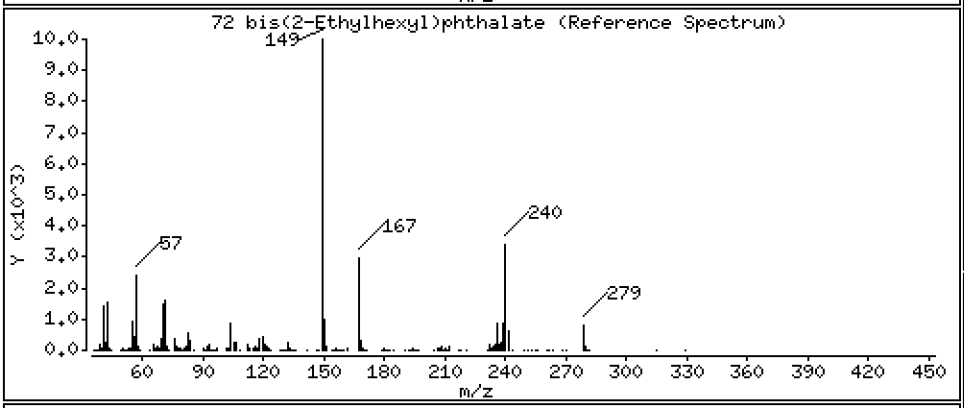
Concentration: 5.792 ug/mL

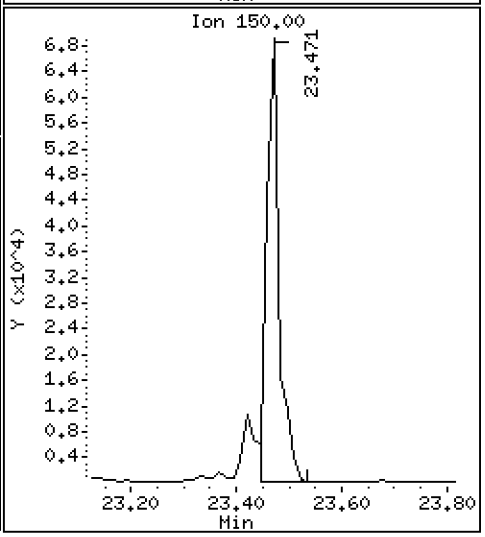


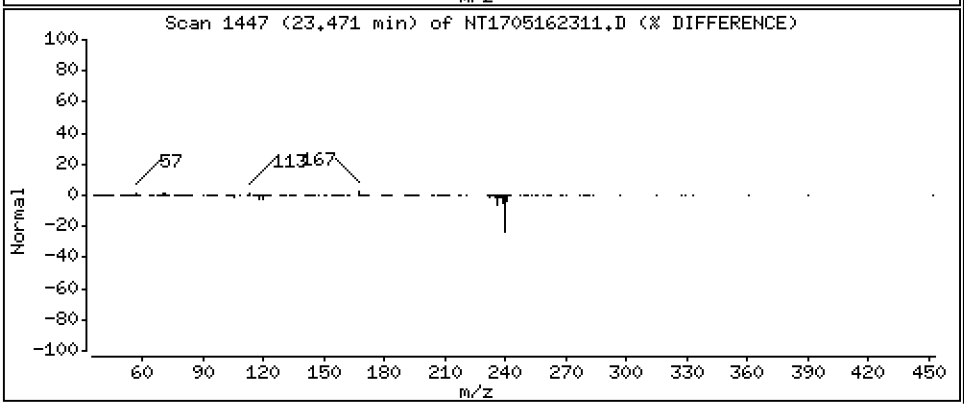












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

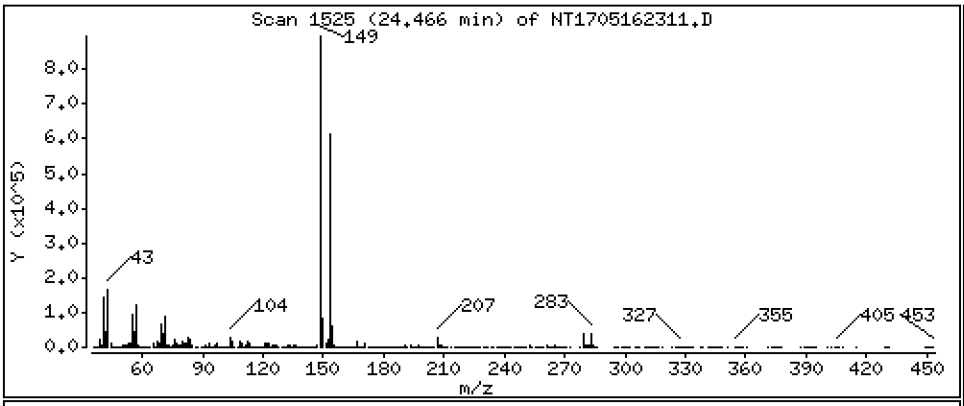
Operator: JGR

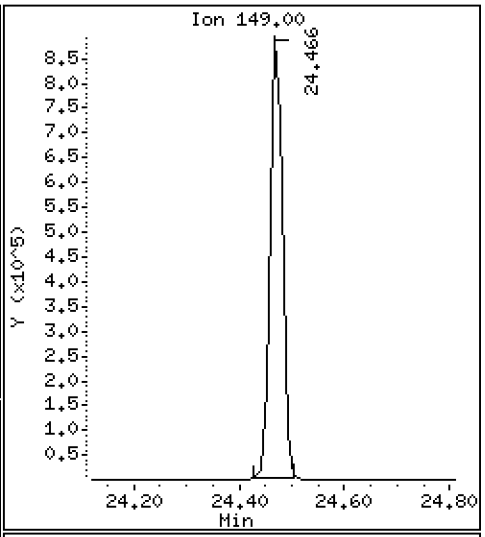
Column phase: ZB-5msi

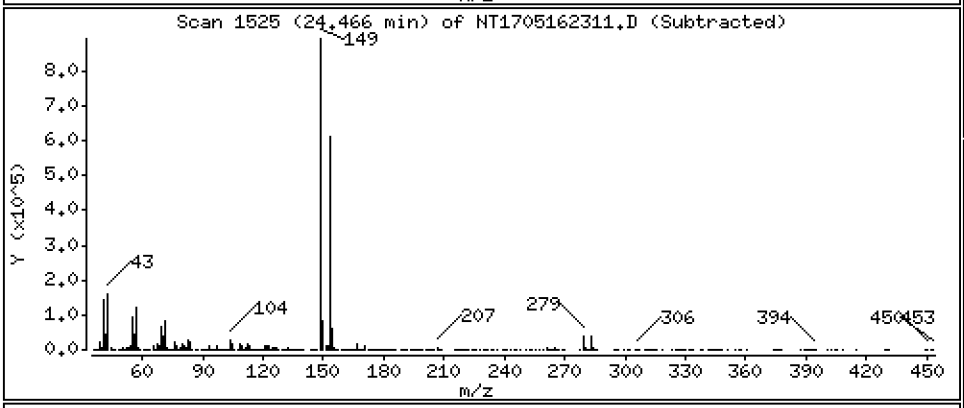
Column diameter: 0.25

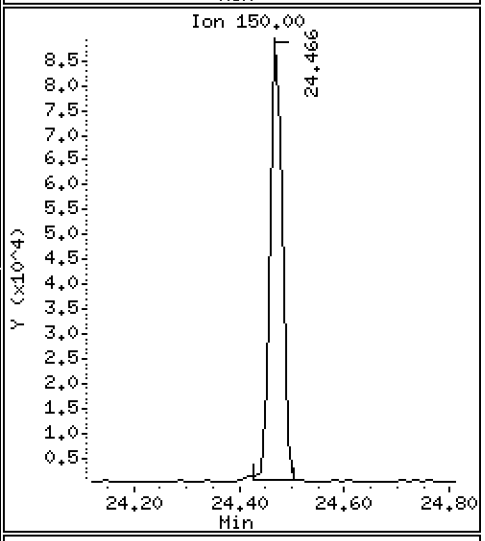
73 Di-n-octylphthalate

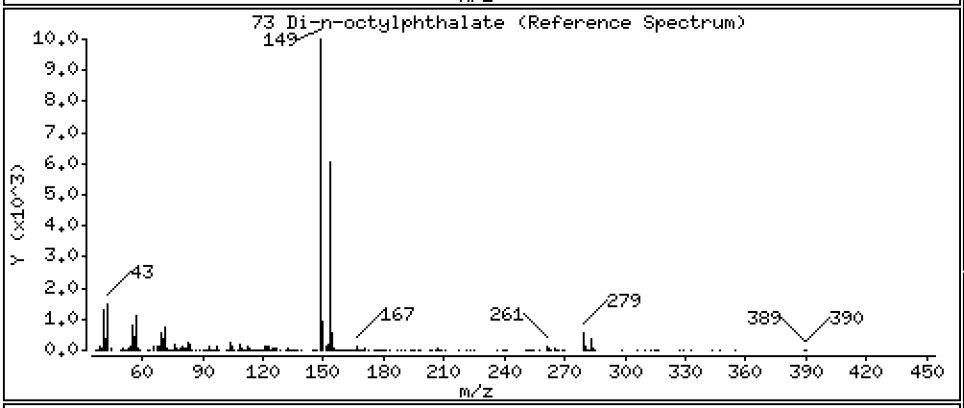
Concentration: 5.482 ug/mL

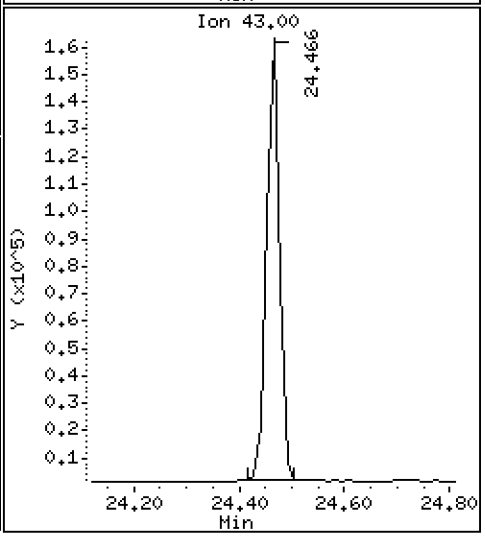


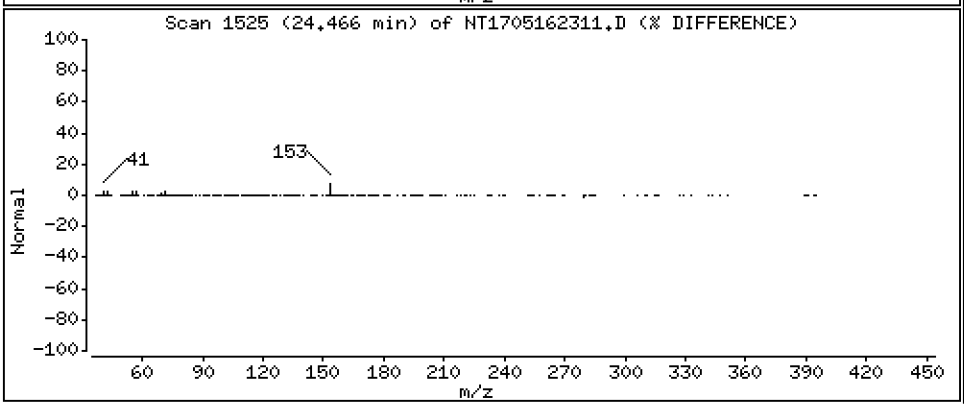












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

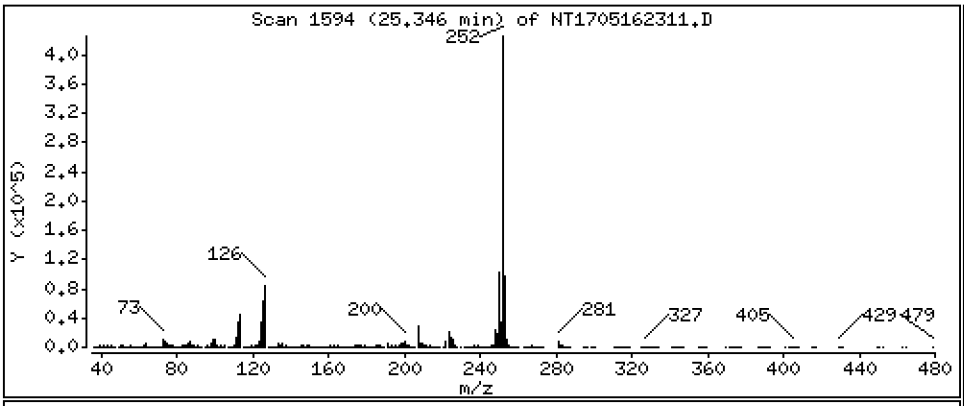
Operator: JGR

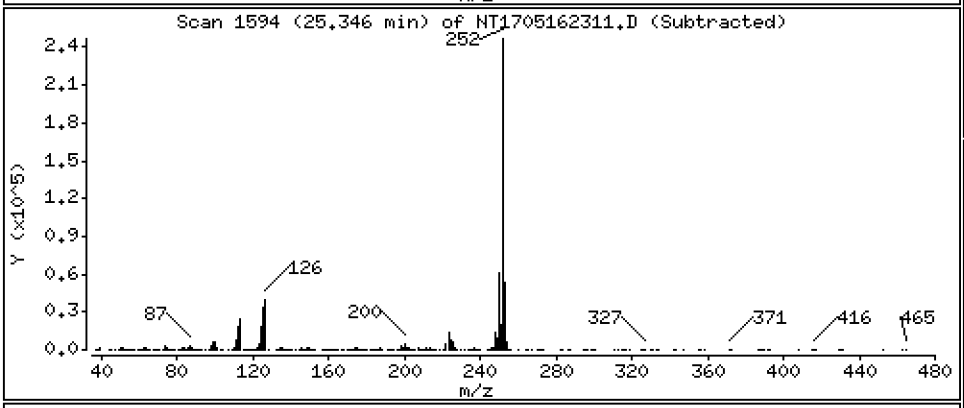
Column phase: ZB-5msi

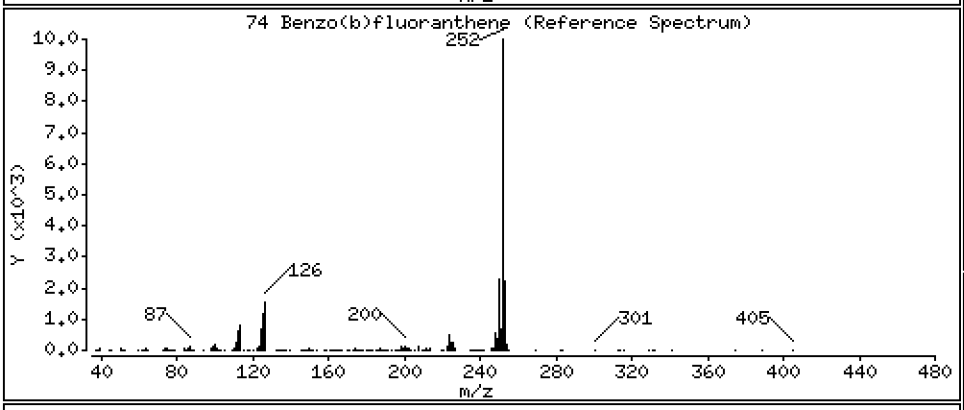
Column diameter: 0.25

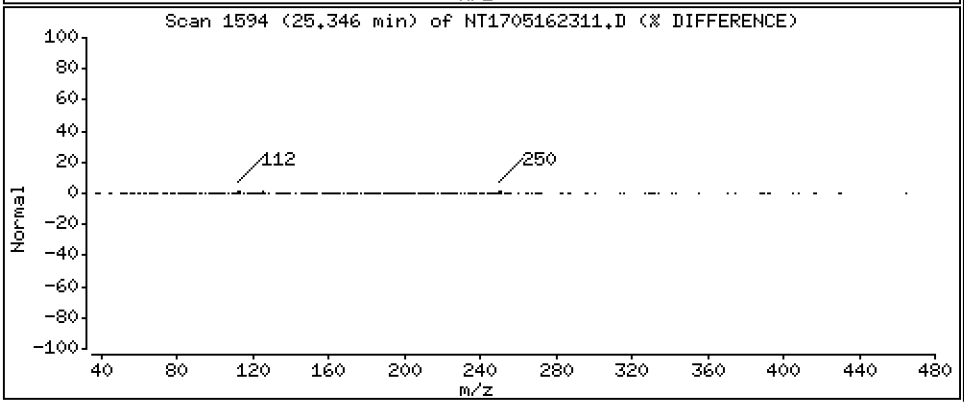
74 Benzo(b)fluoranthene

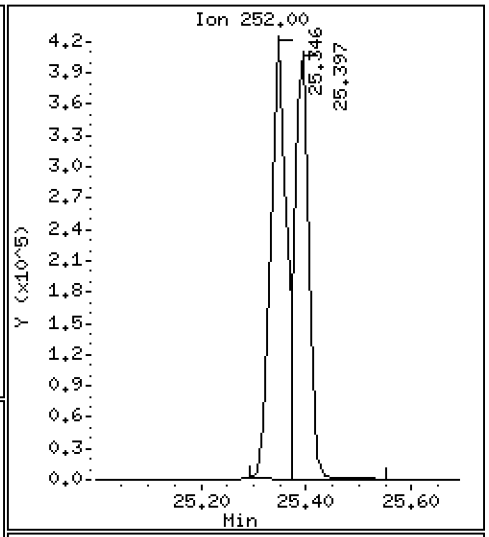
Concentration: 4.912 ug/mL

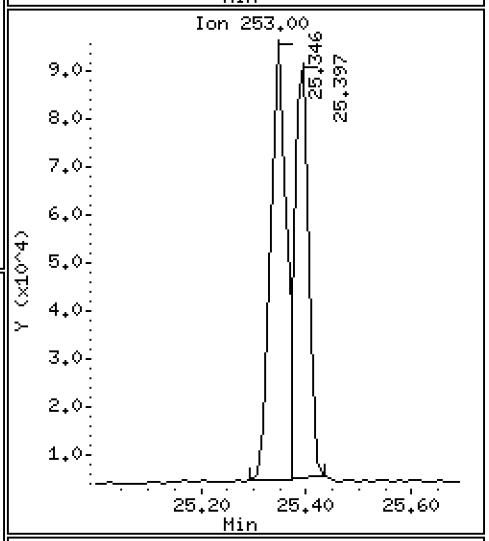


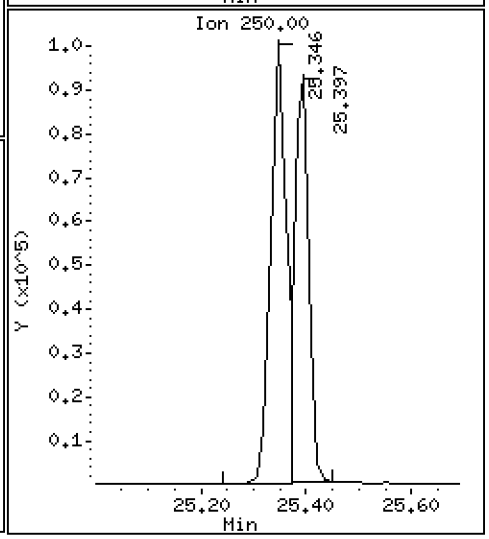












Date : 17-MAY-2023 00:29

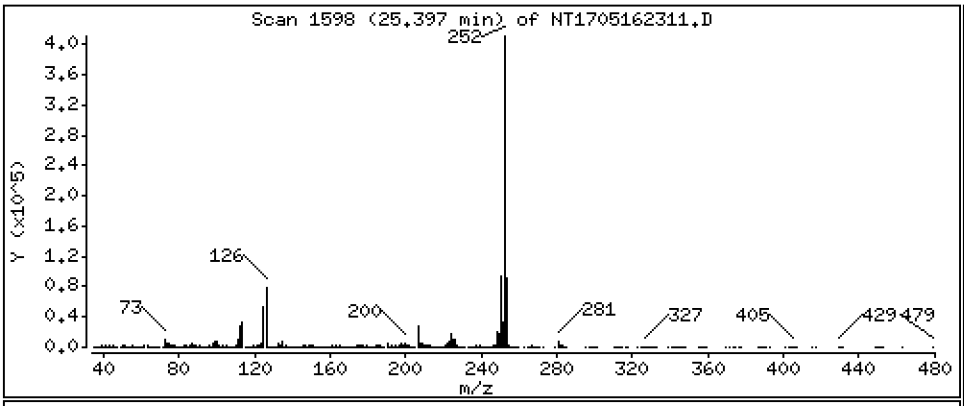
Client ID: Instrument: nt17.i

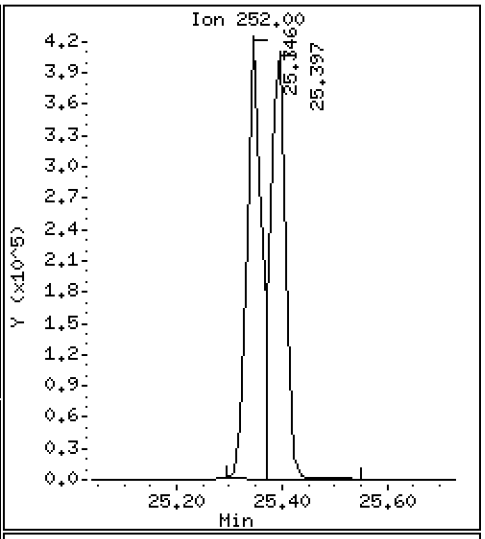
Sample Info: SLE0338-SCV1

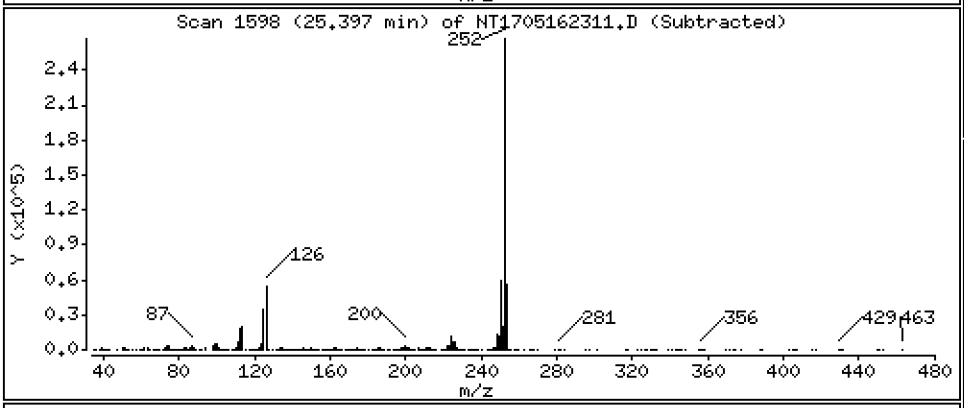
Operator: JGR

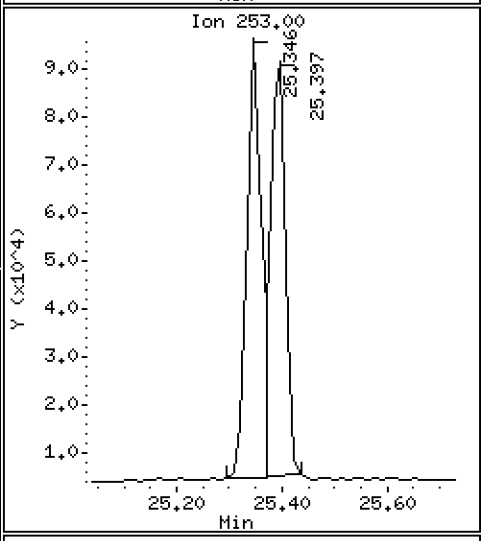
Column phase: ZB-5msi Column diameter: 0.25

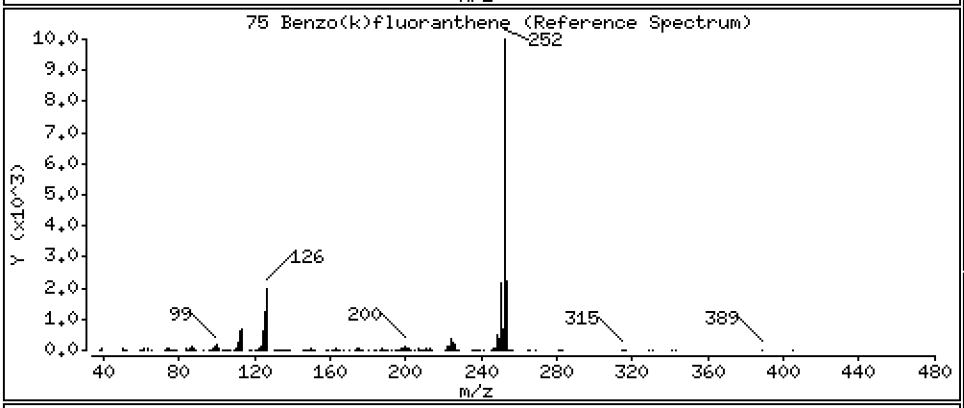
75 Benzo(k)fluoranthene Concentration: 4.965 ug/mL

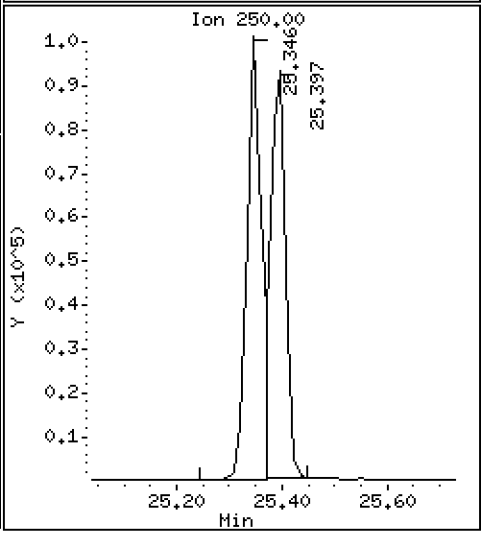


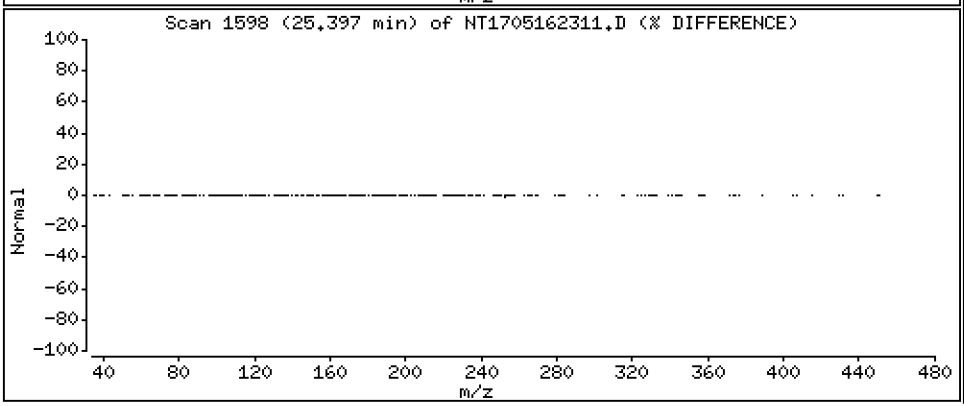












Date : 17-MAY-2023 00:29

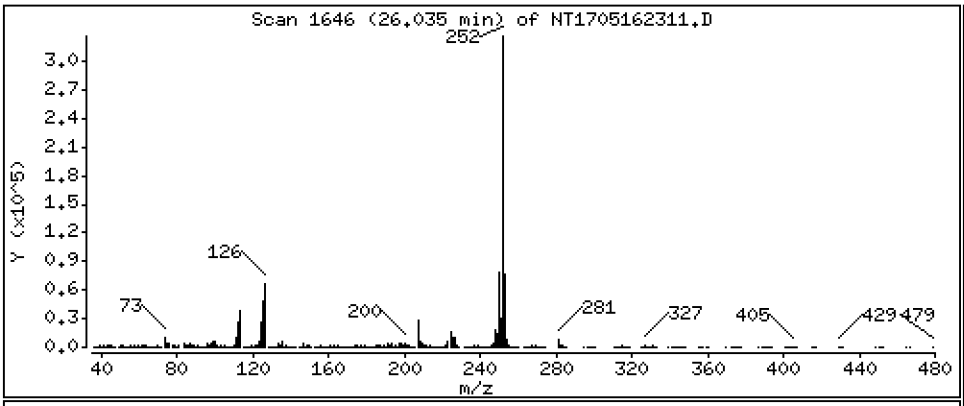
Client ID: Instrument: nt17.i

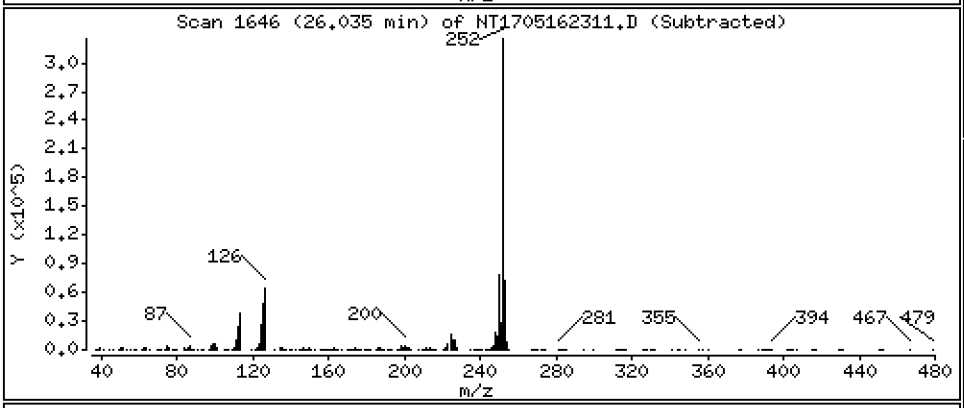
Sample Info: SLE0338-SCV1

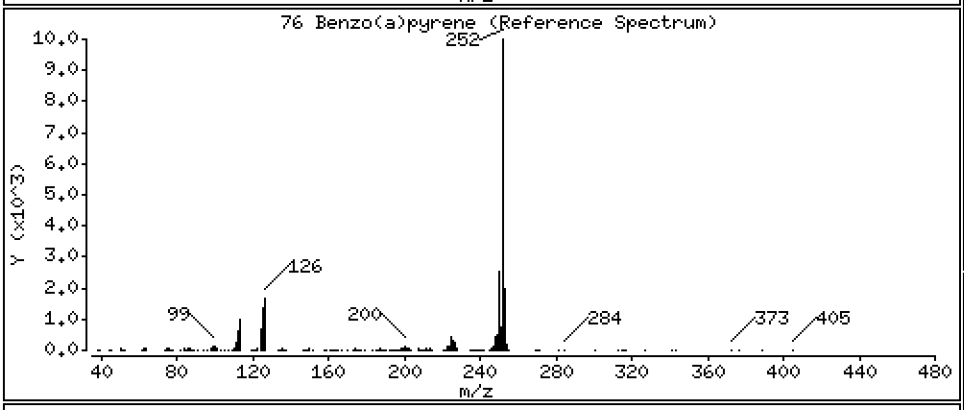
Operator: JGR

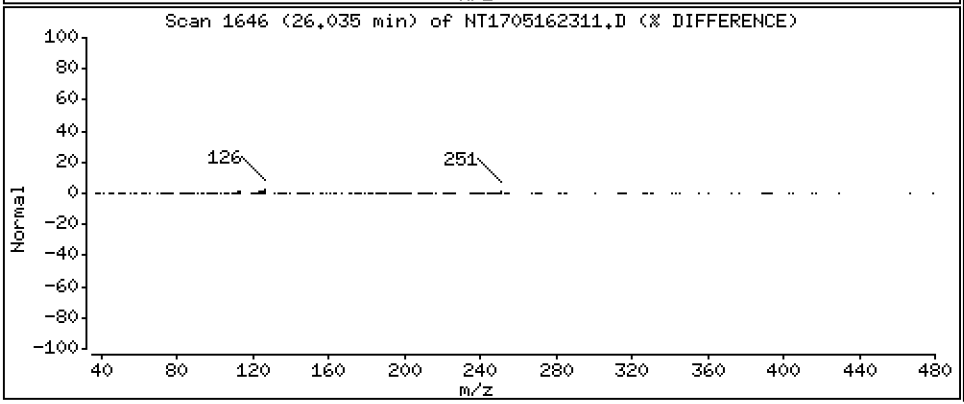
Column phase: ZB-5msi Column diameter: 0.25

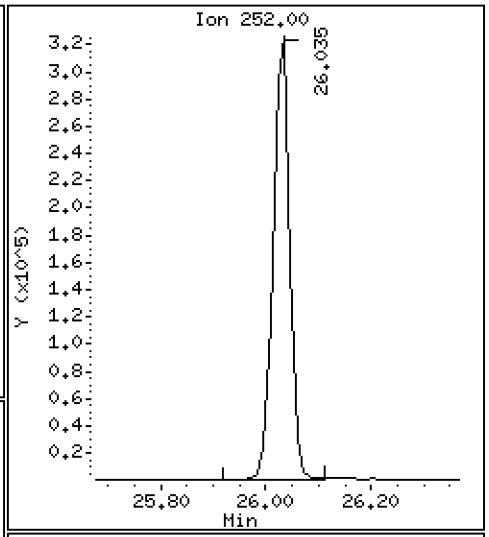
76 Benzo(a)pyrene Concentration: 5.172 ug/mL

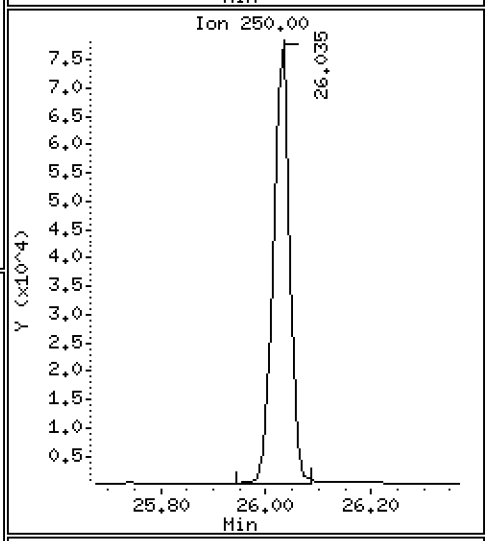


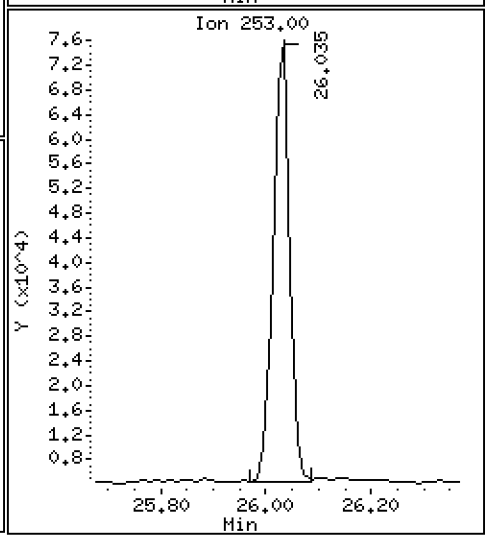












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

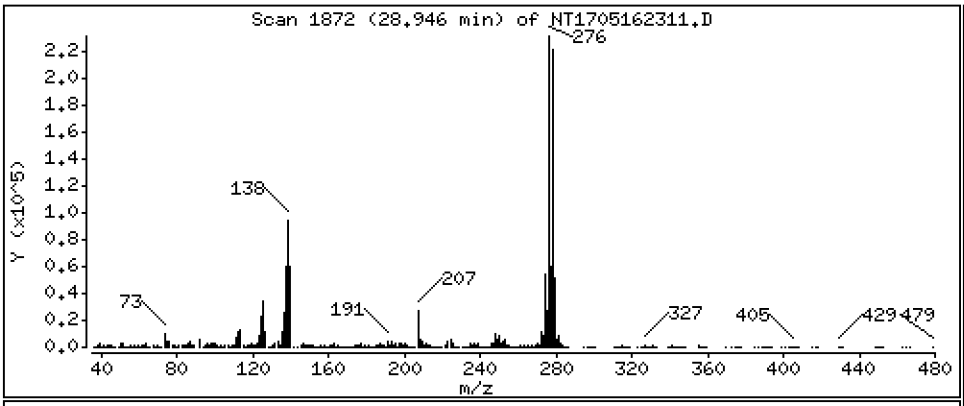
Operator: JGR

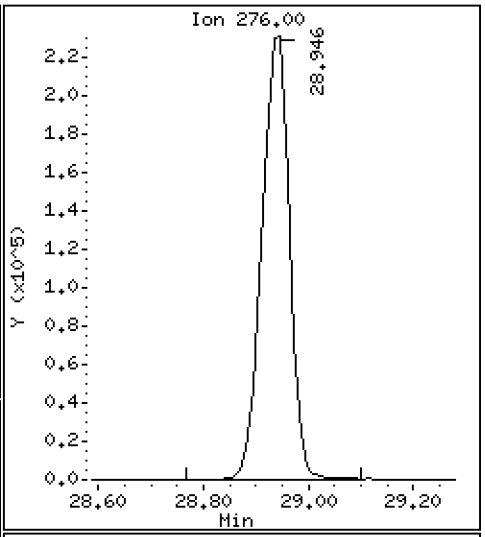
Column phase: ZB-5msi

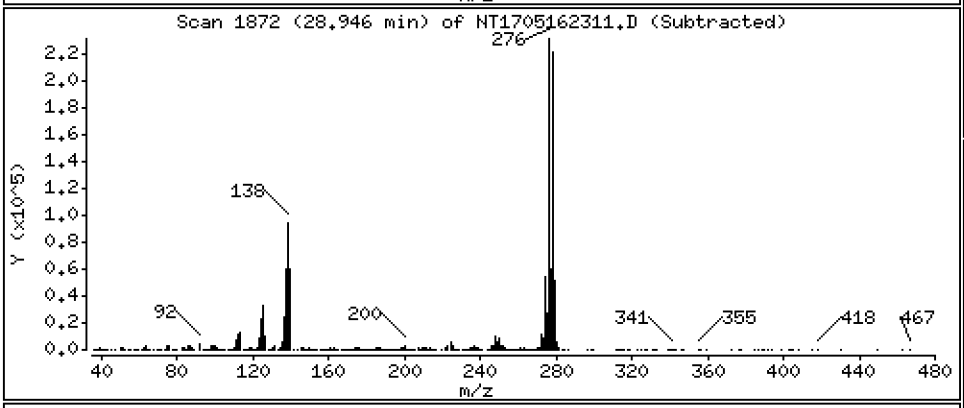
Column diameter: 0.25

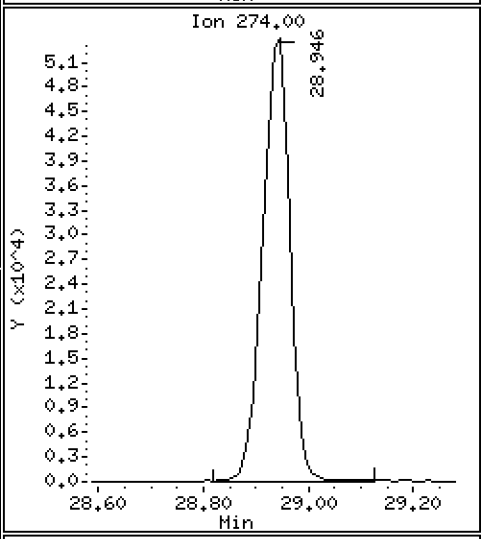
78 Indeno(1,2,3-cd)pyrene

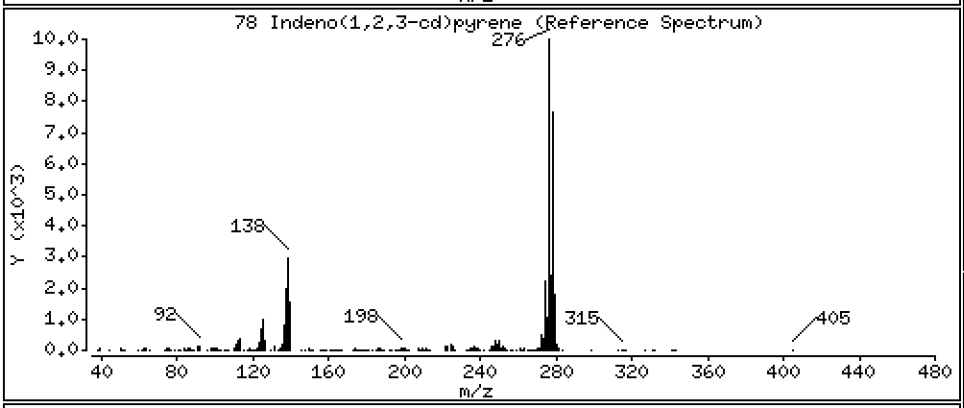
Concentration: 5.029 ug/mL

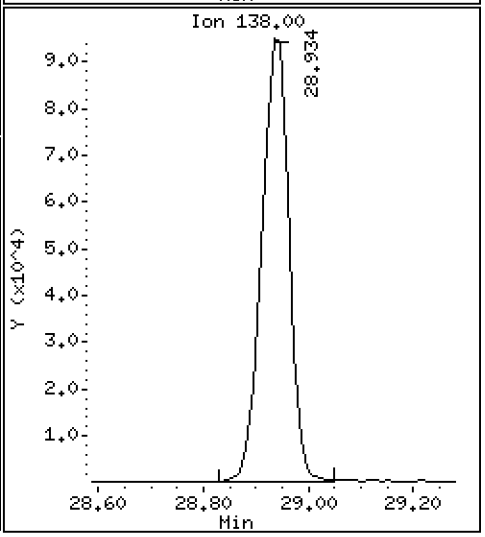


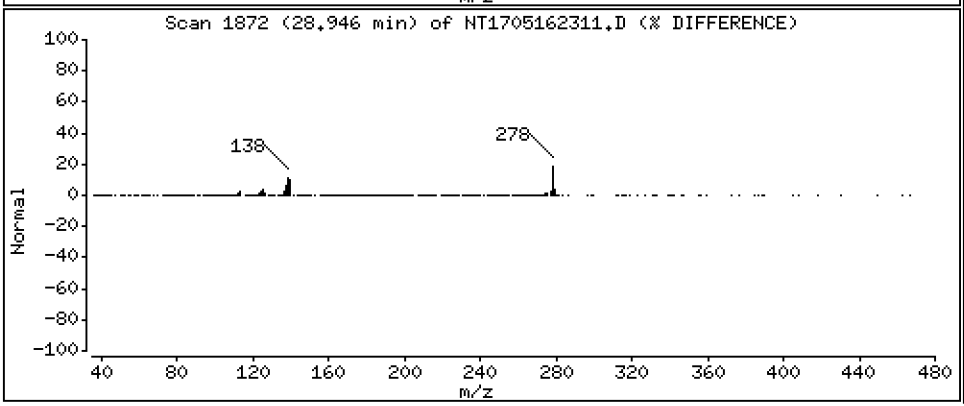












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

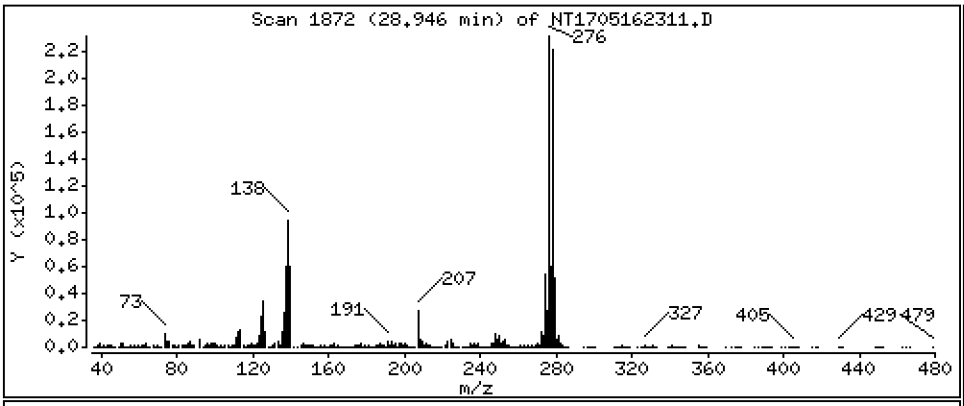
Operator: JGR

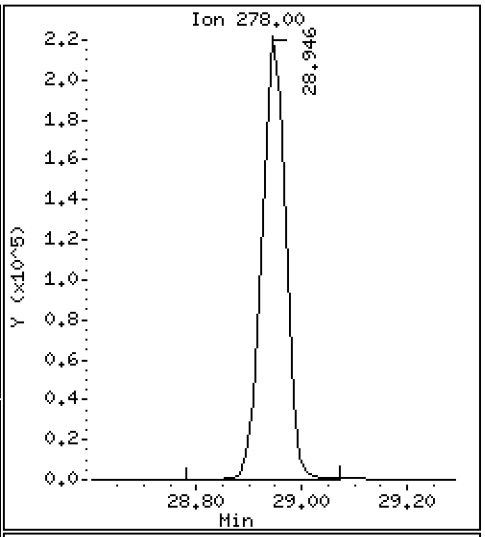
Column phase: ZB-5msi

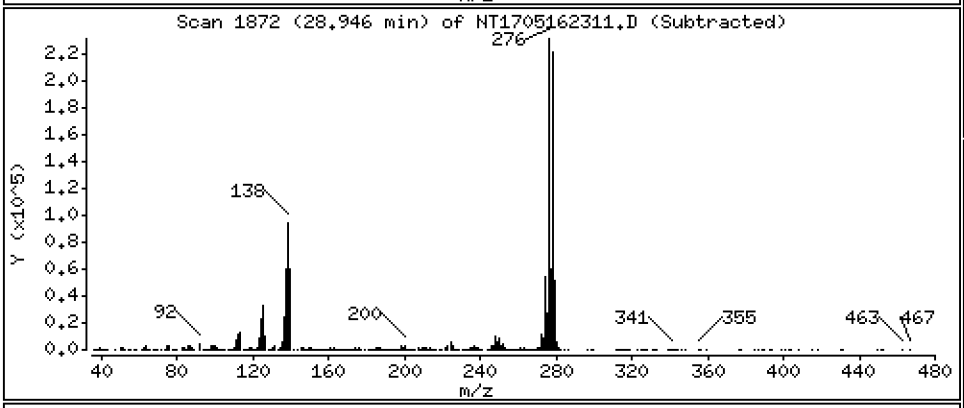
Column diameter: 0.25

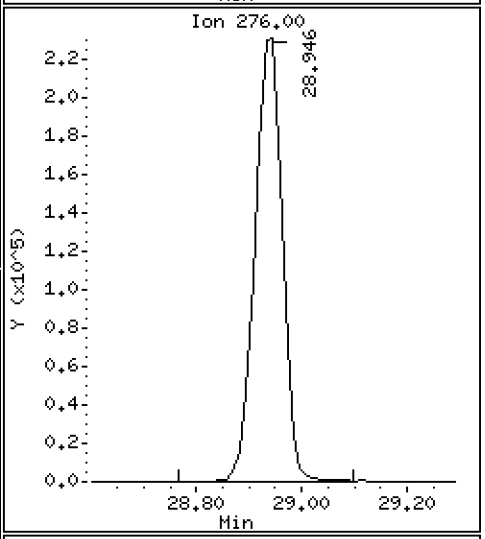
79 Dibenzo(a,h)anthracene

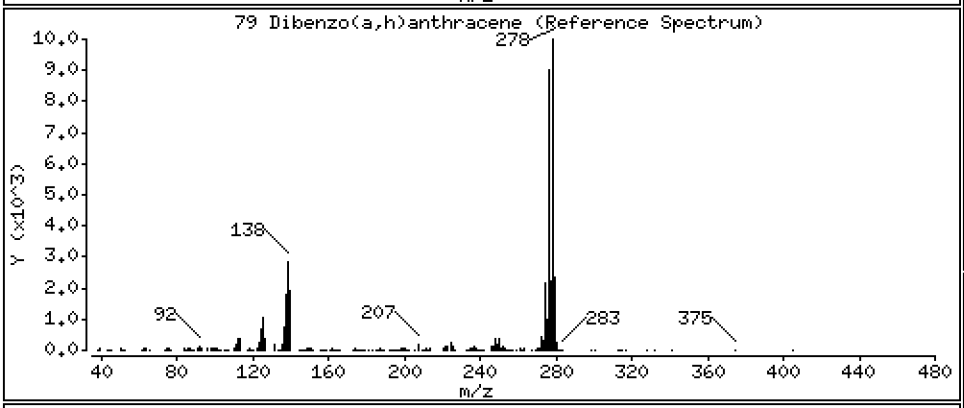
Concentration: 4.970 ug/mL

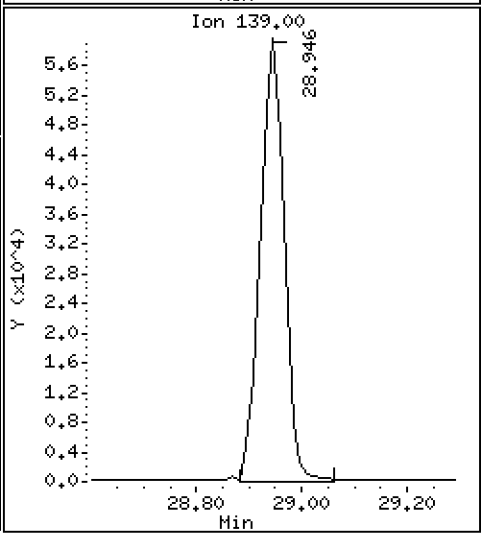


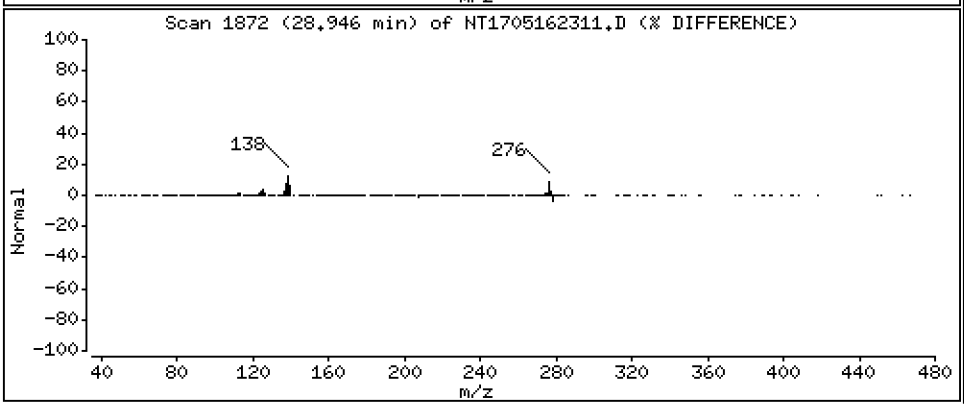












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

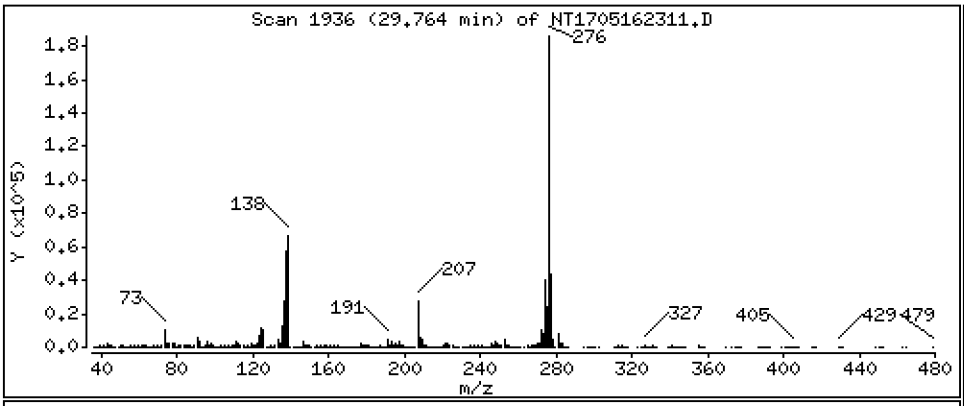
Operator: JGR

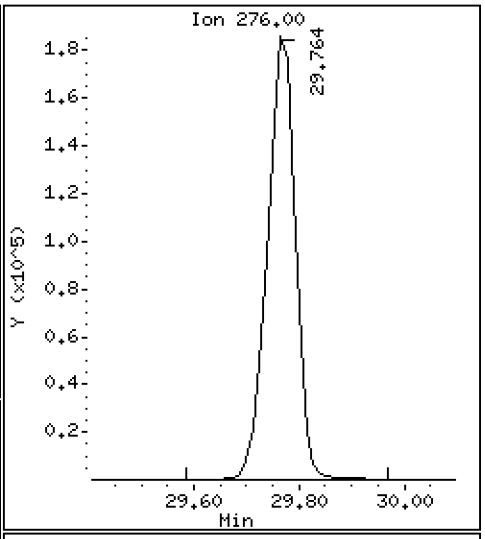
Column phase: ZB-5msi

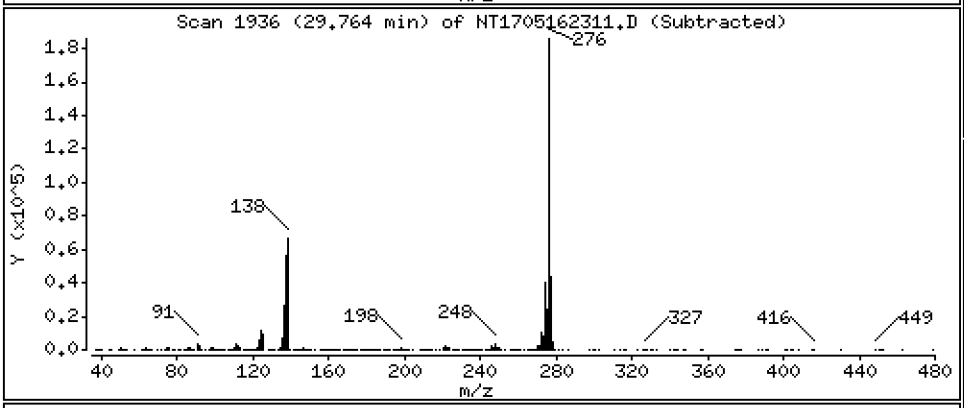
Column diameter: 0.25

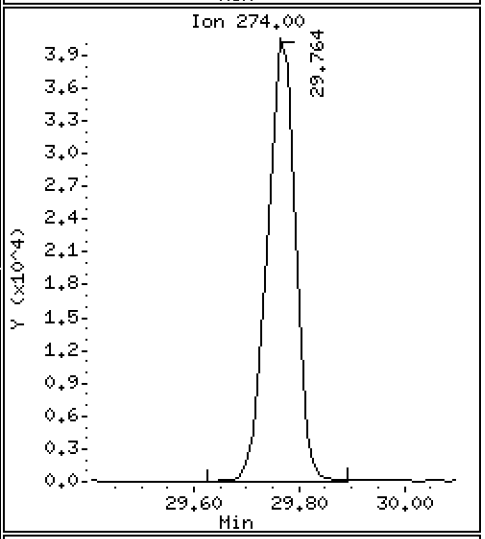
80 Benzo(g,h,i)perylene

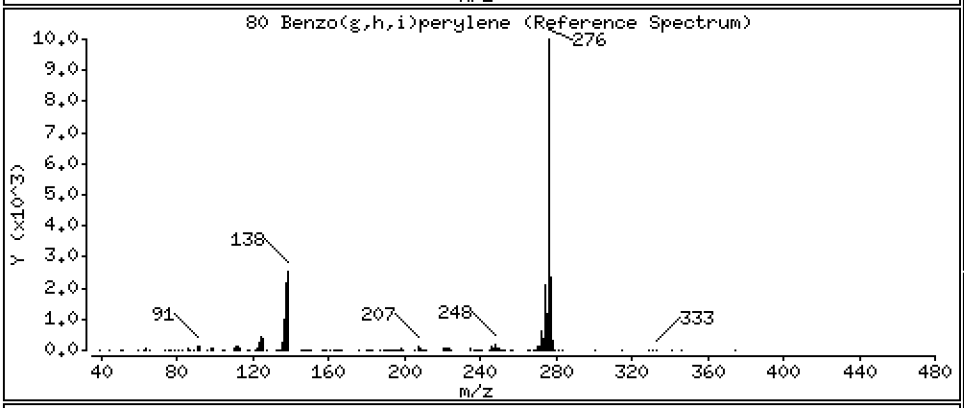
Concentration: 5.054 ug/mL

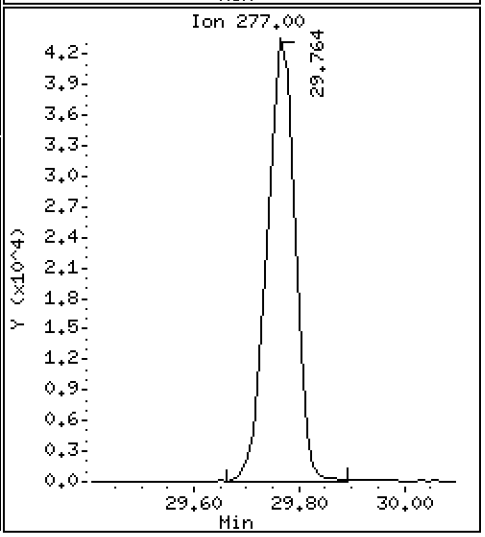


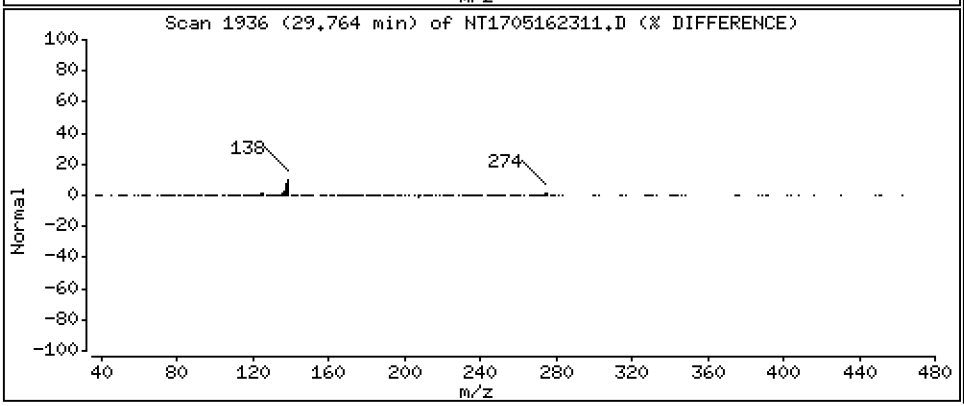












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

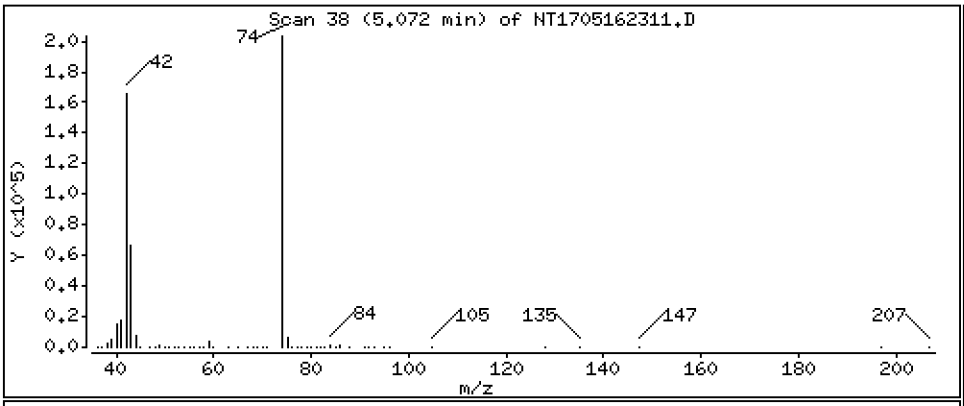
Operator: JGR

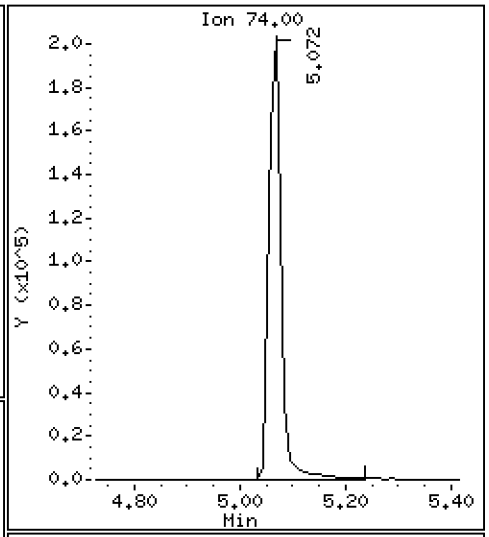
Column phase: ZB-5msi

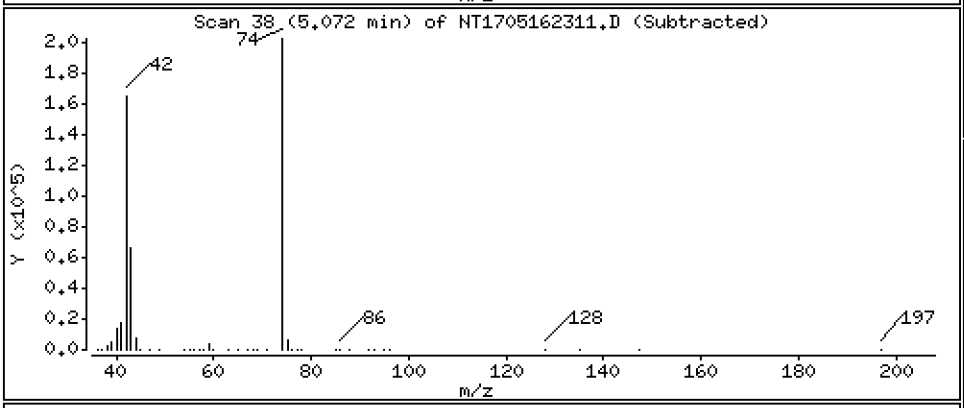
Column diameter: 0.25

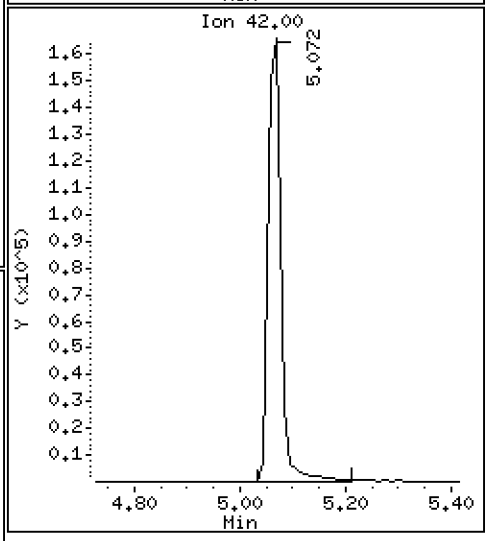
90 N-Nitrosodimethylamine

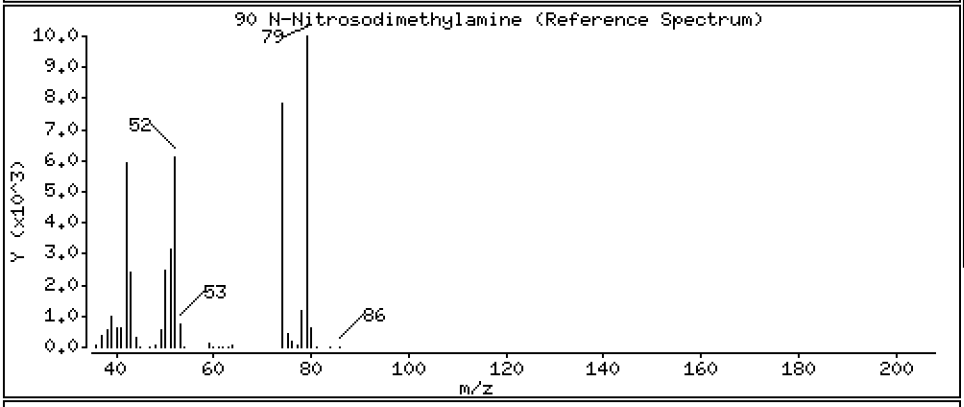
Concentration: 5.767 ug/mL

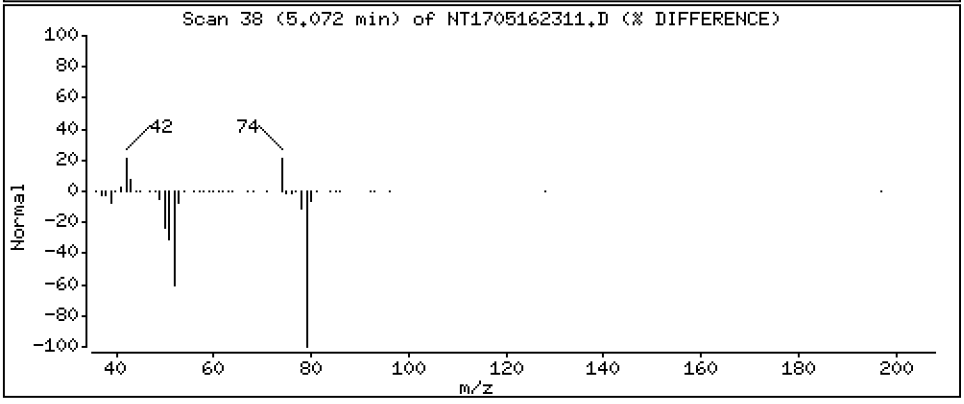












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

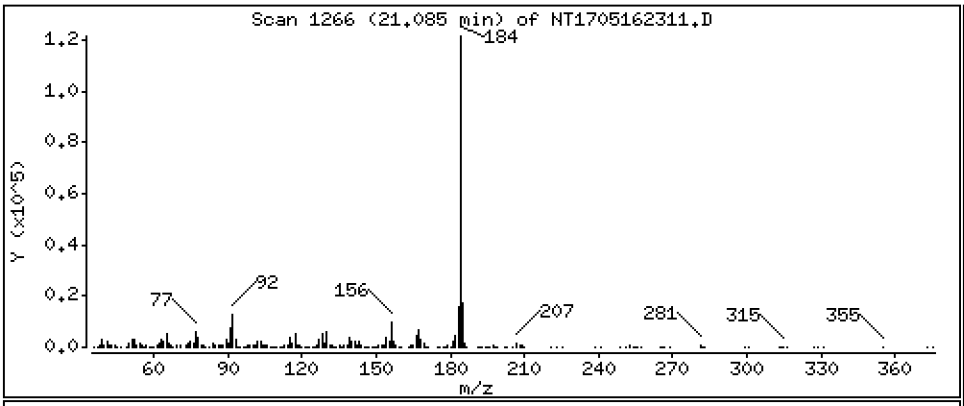
Operator: JGR

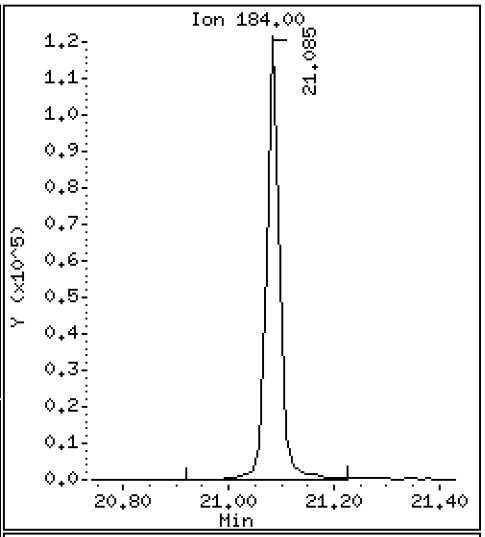
Column phase: ZB-5msi

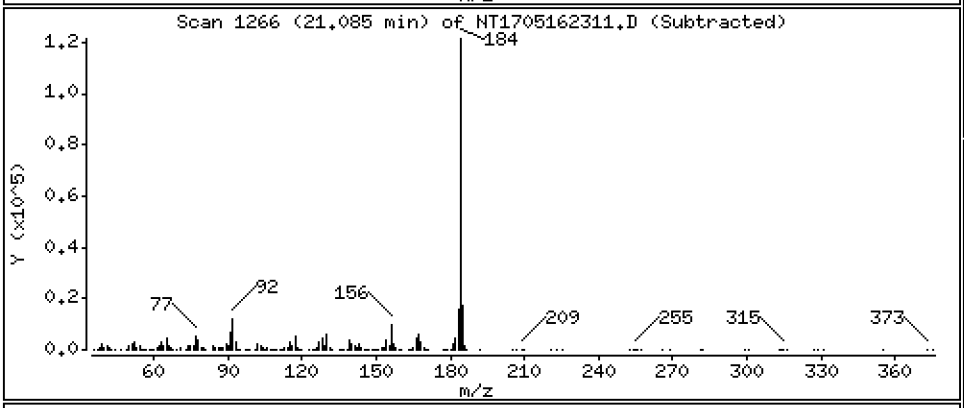
Column diameter: 0.25

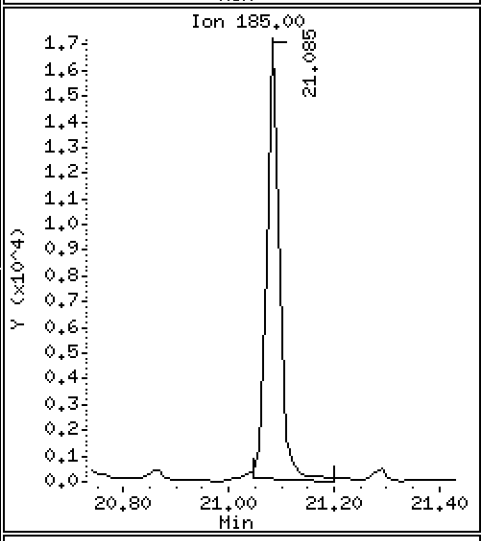
93 Benzidine

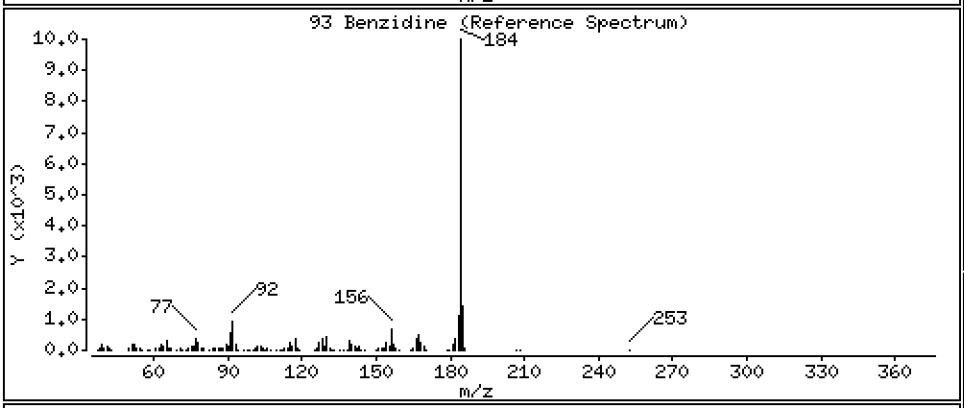
Concentration: 3.457 ug/mL

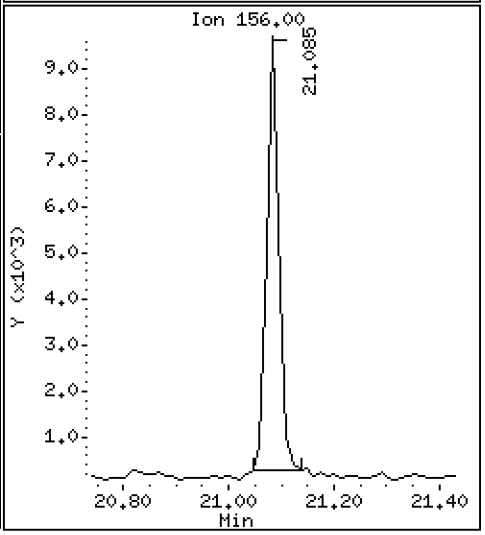


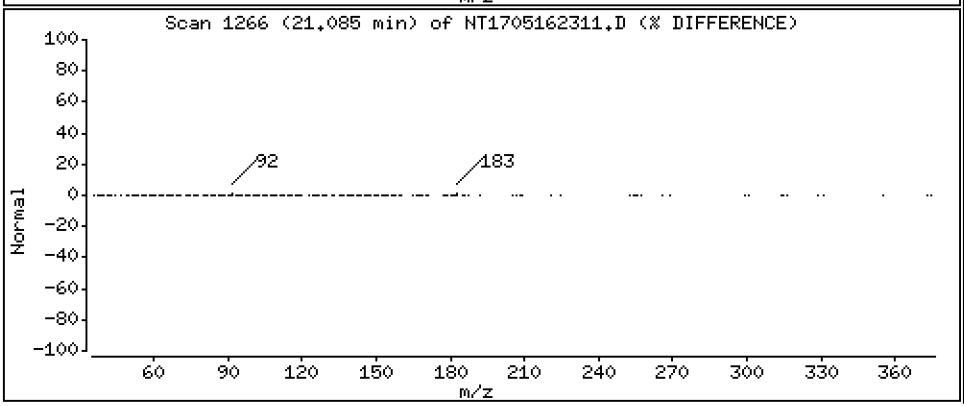












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

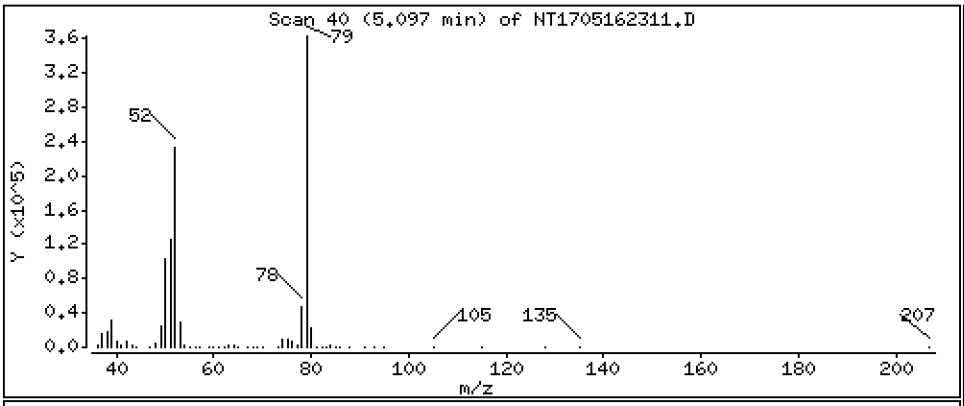
Operator: JGR

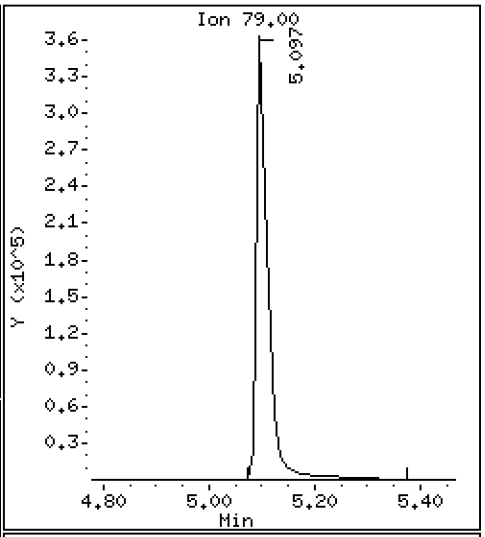
Column phase: ZB-5msi

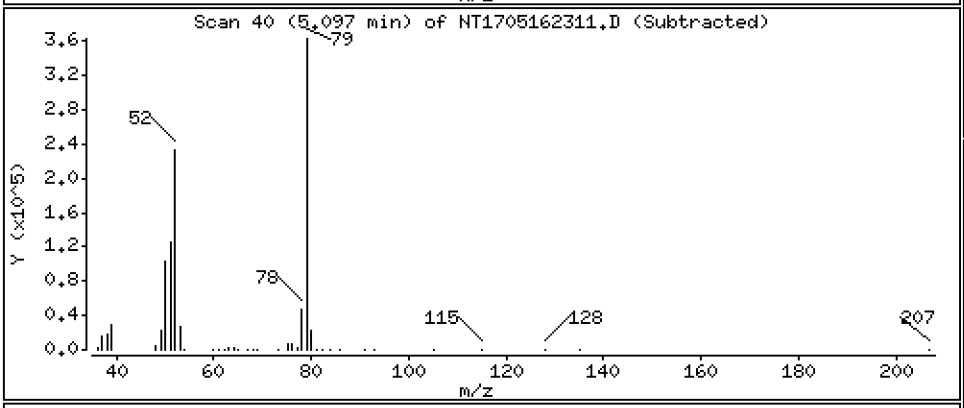
Column diameter: 0.25

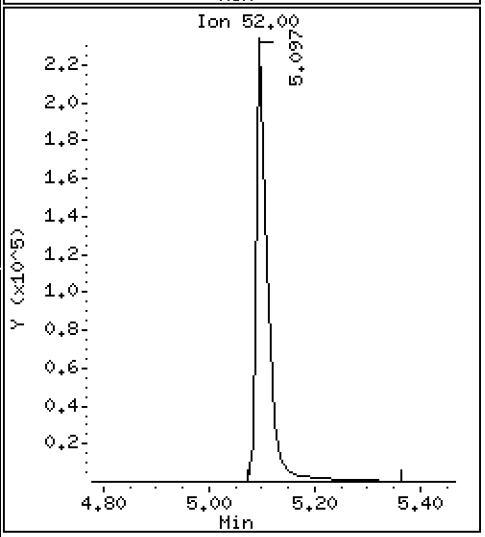
103 Pyridine

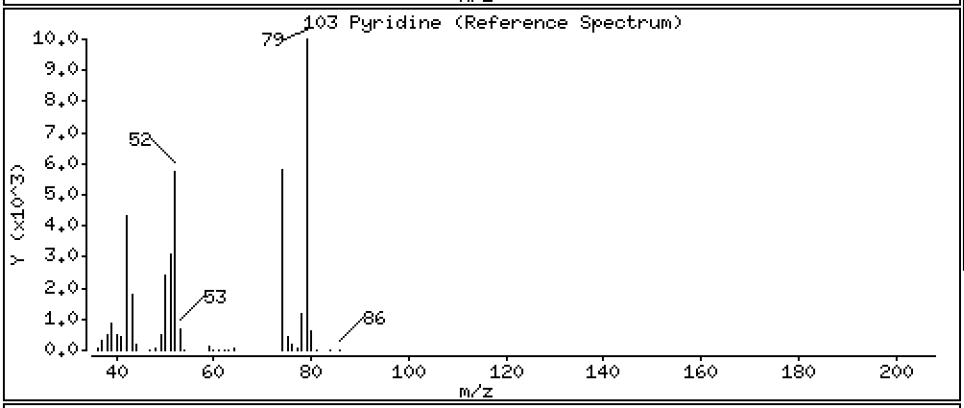
Concentration: 5.811 ug/mL

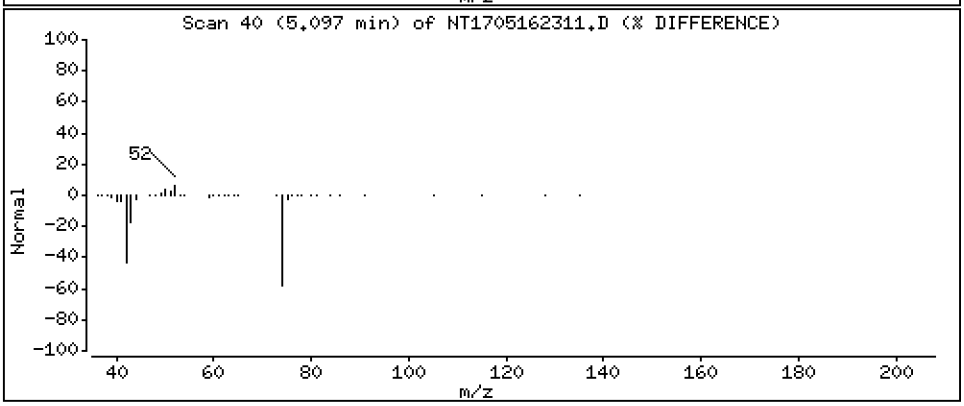












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

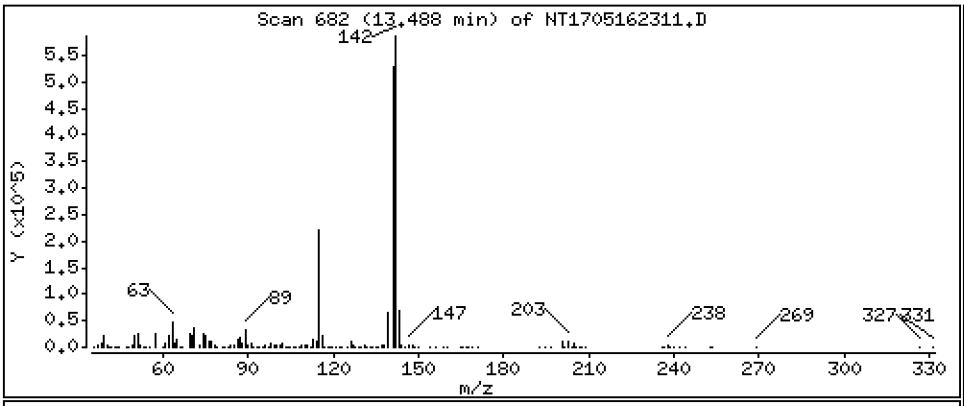
Operator: JGR

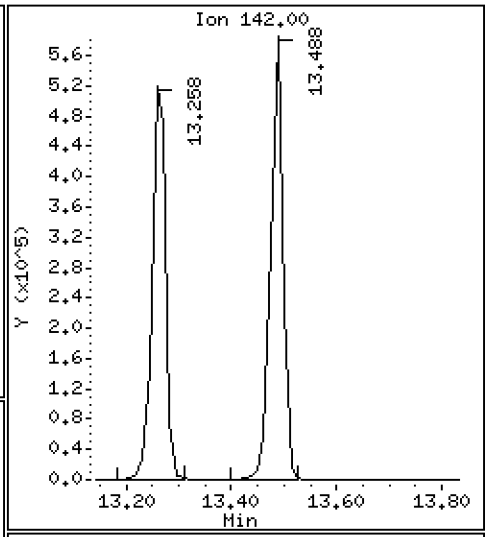
Column phase: ZB-5msi

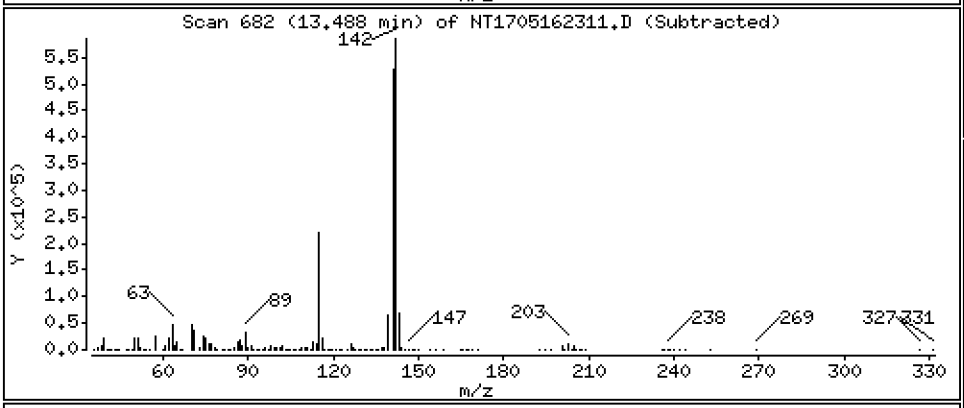
Column diameter: 0.25

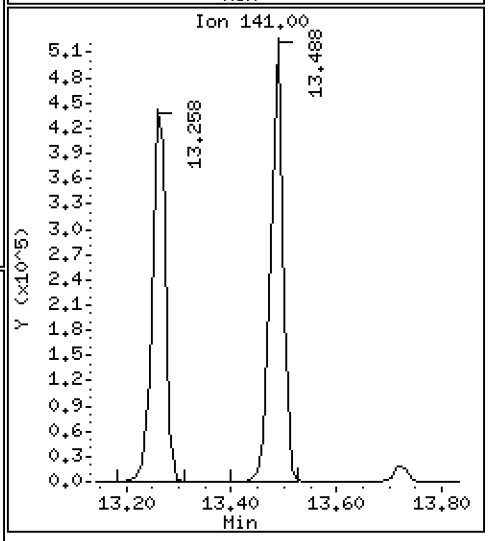
105 1-methylnaphthalene

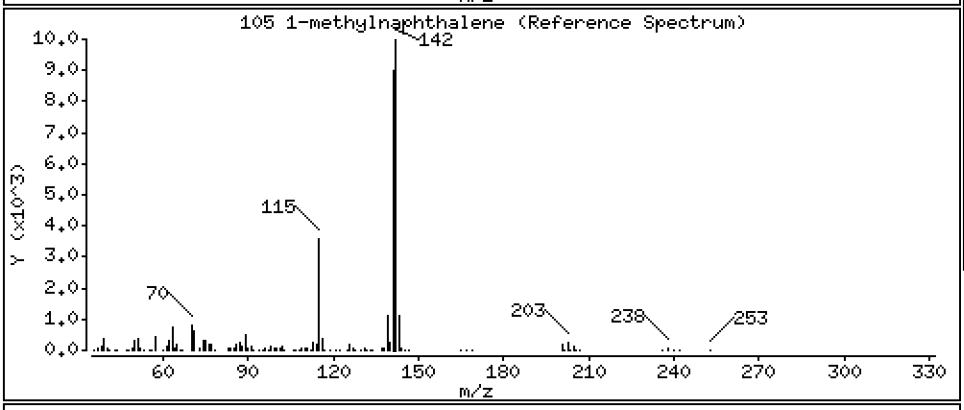
Concentration: 5.250 ug/mL

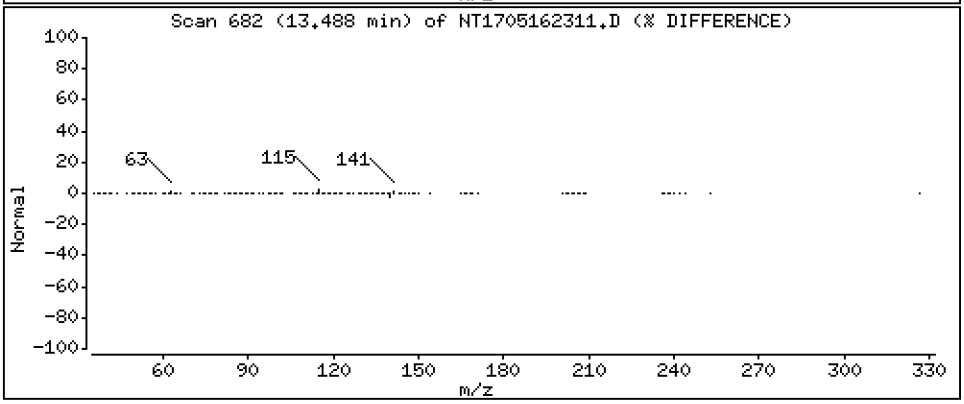












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

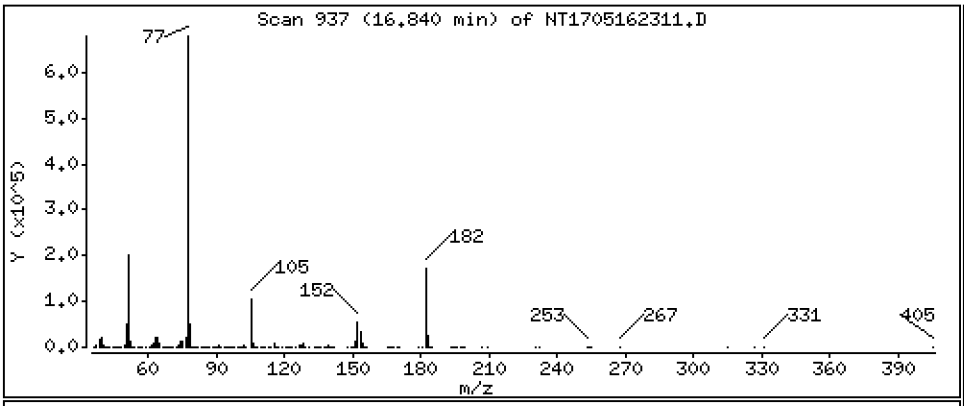
Operator: JGR

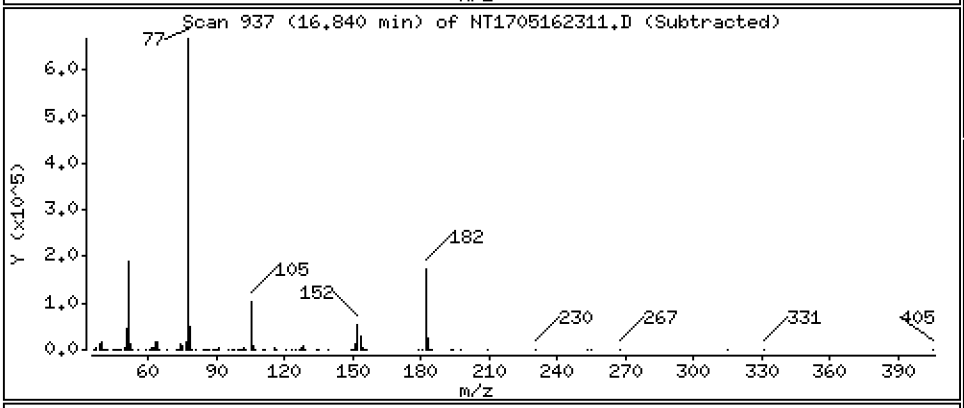
Column phase: ZB-5msi

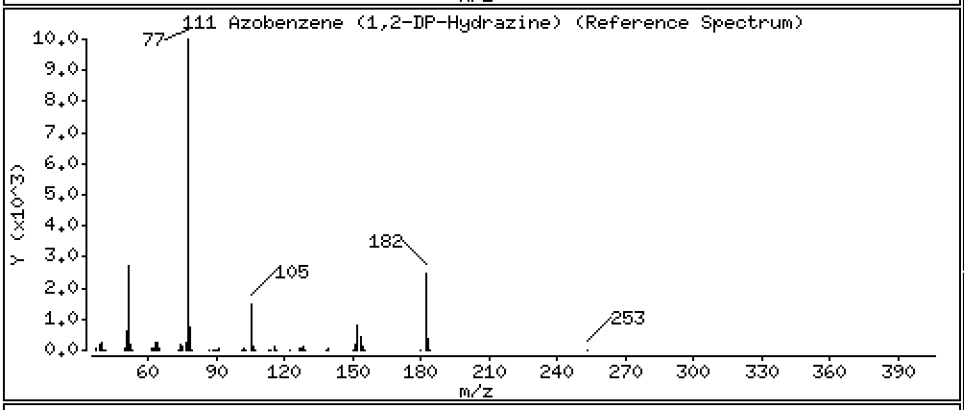
Column diameter: 0.25

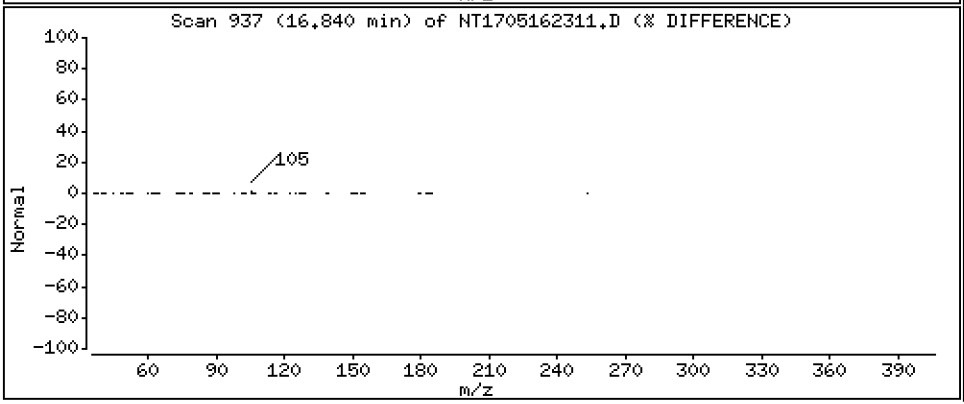
111 Azobenzene (1,2-DP-Hydrazine)

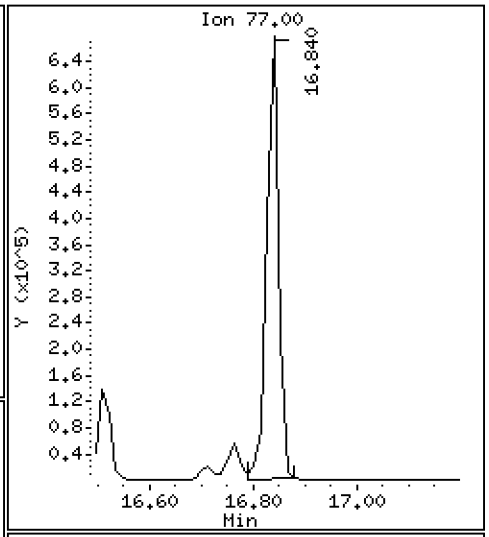
Concentration: 5.338 ug/mL

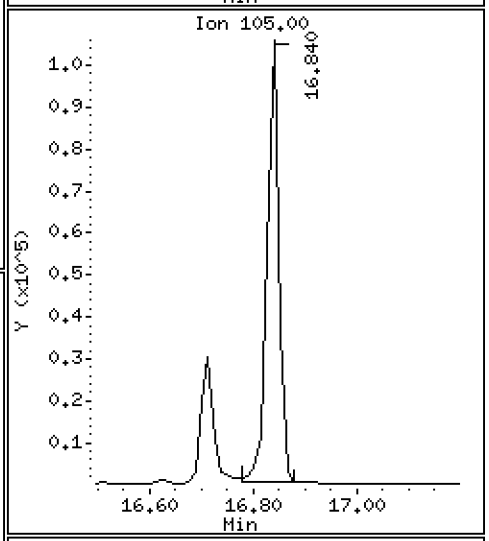


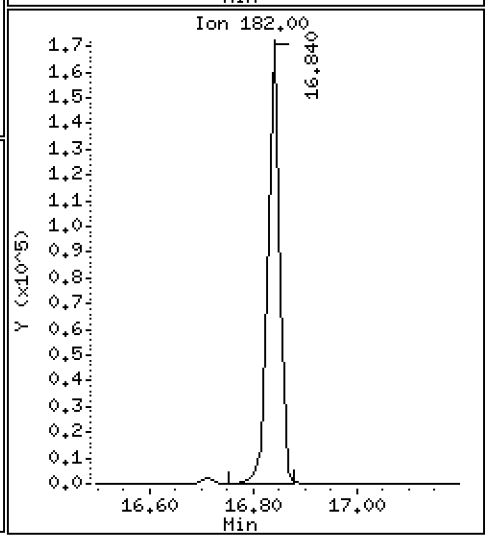












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

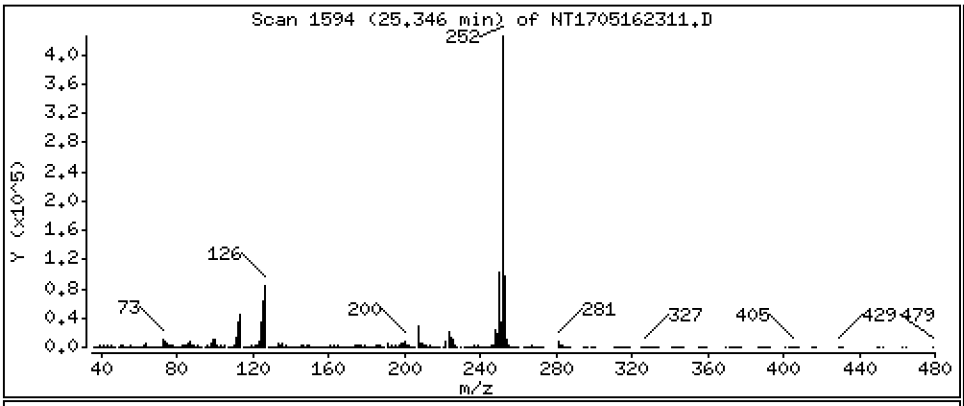
Operator: JGR

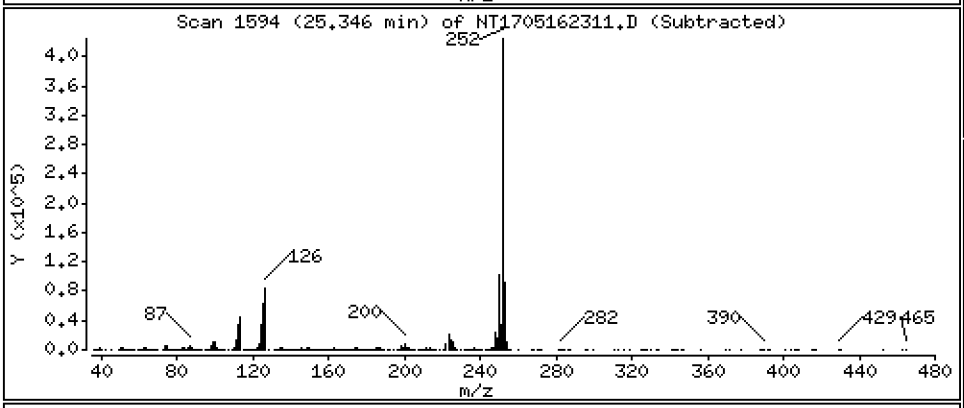
Column phase: ZB-5msi

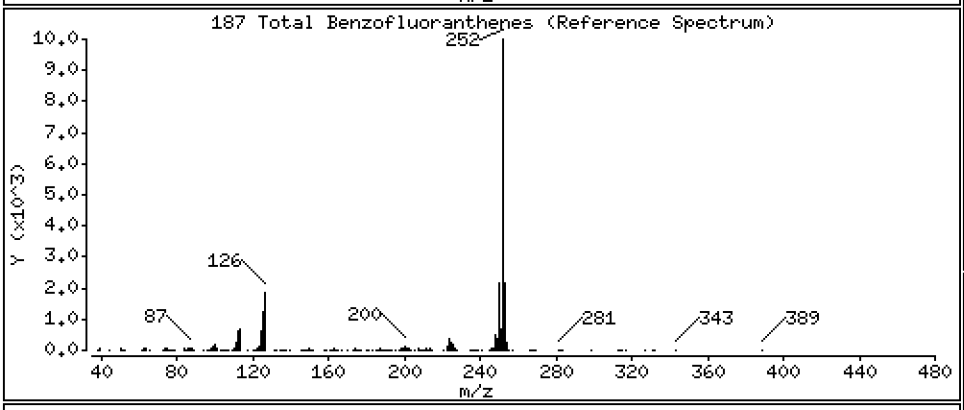
Column diameter: 0.25

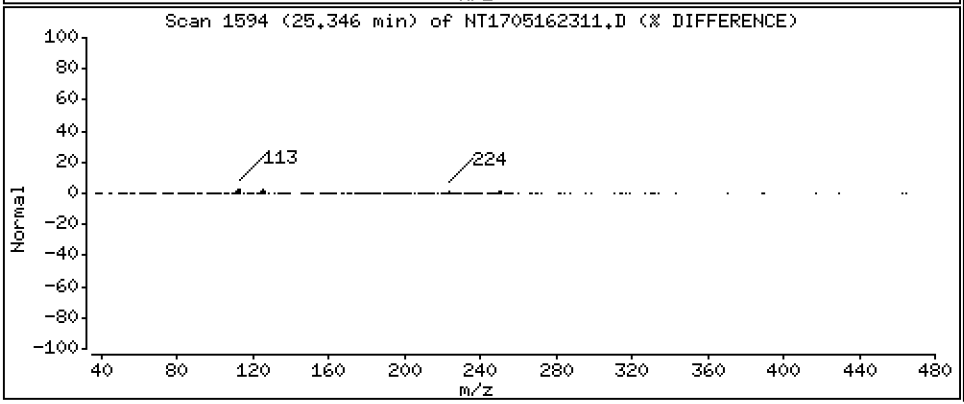
187 Total Benzofluoranthenes

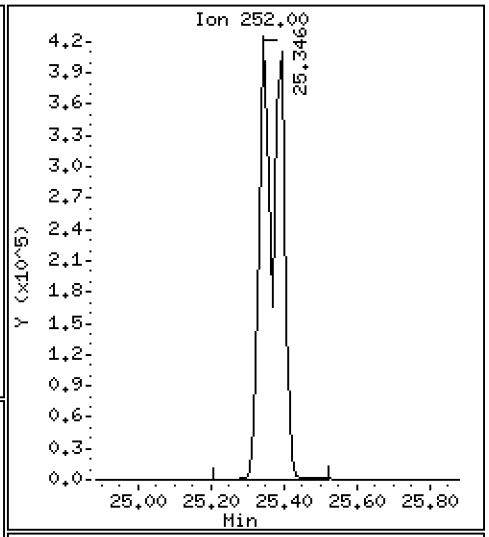
Concentration: 10.02 ug/mL

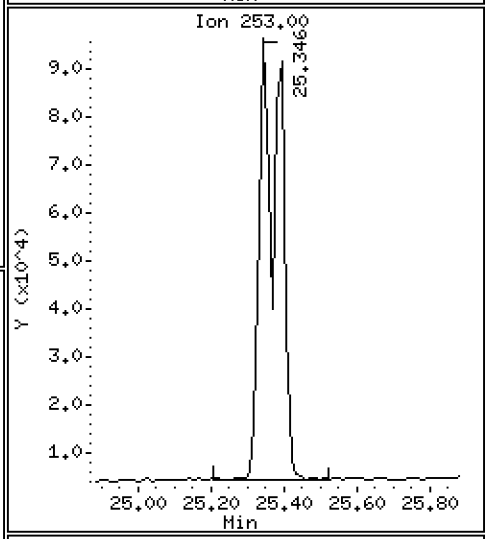


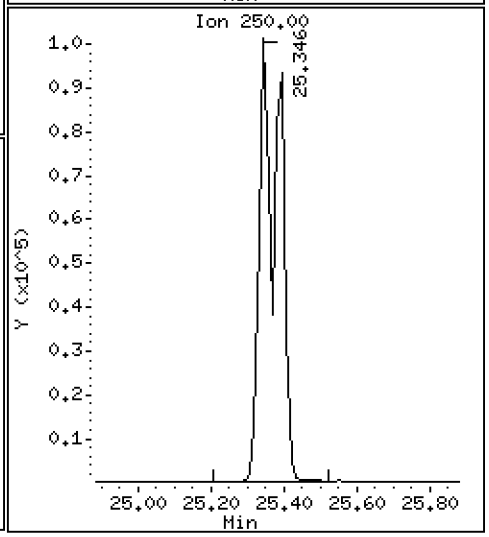












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

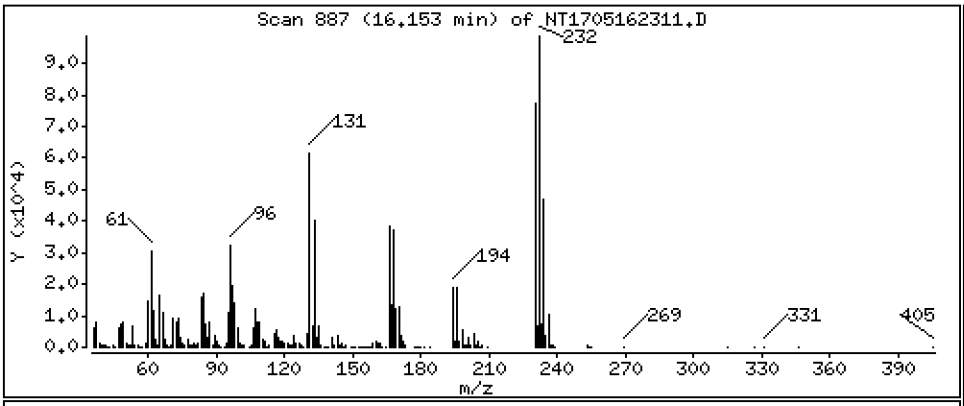
Operator: JGR

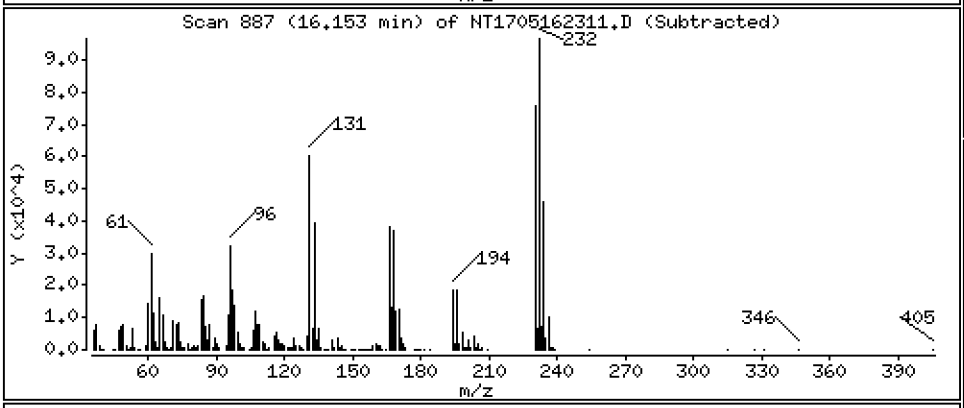
Column phase: ZB-5msi

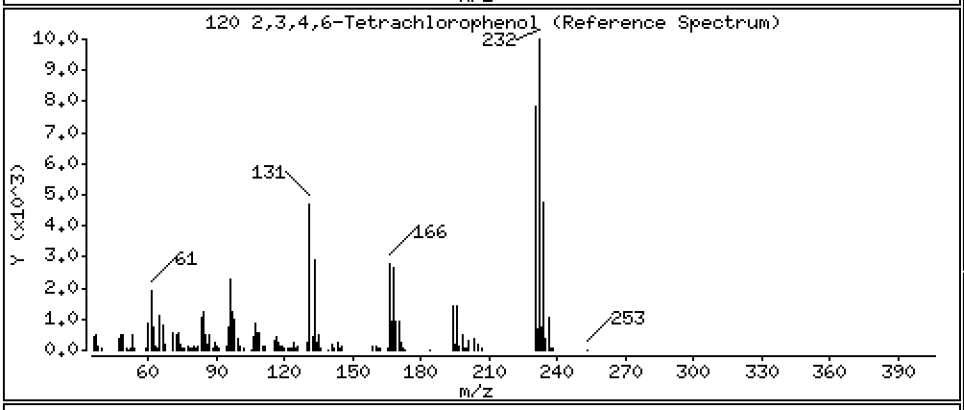
Column diameter: 0.25

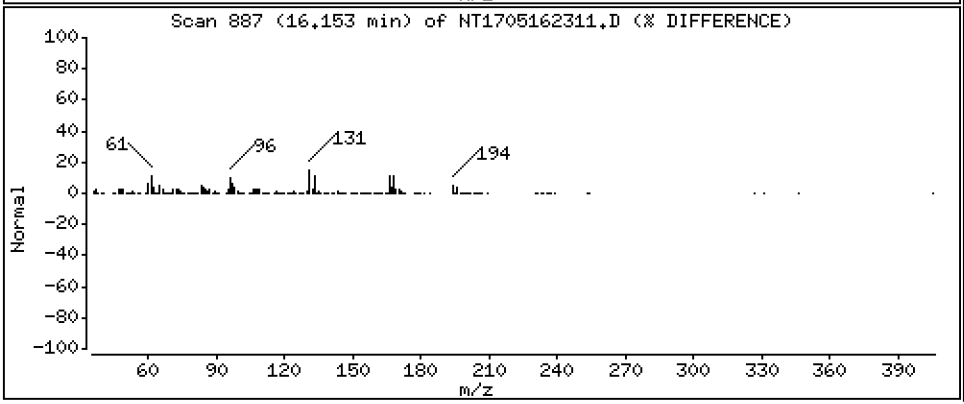
120 2,3,4,6-Tetrachlorophenol

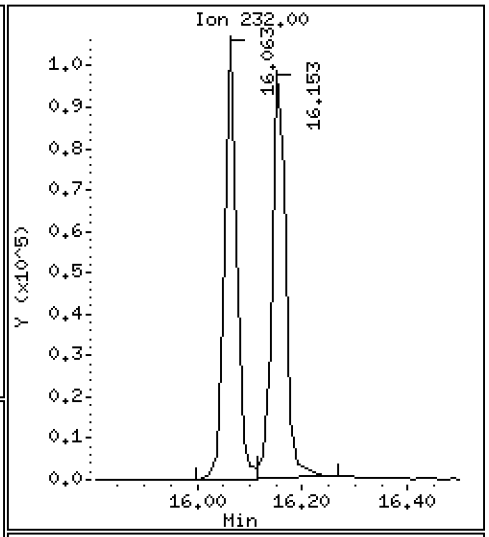
Concentration: 3.283 ug/mL

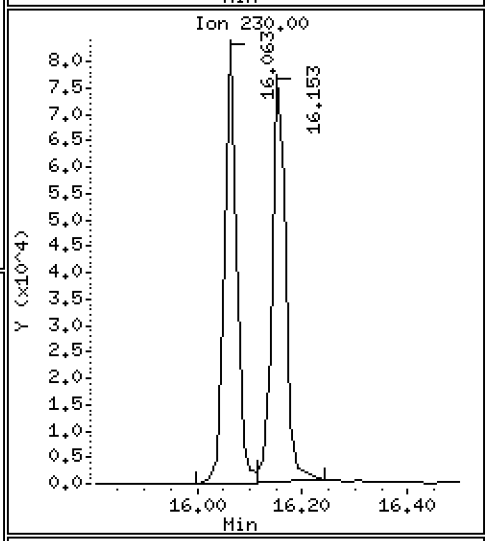


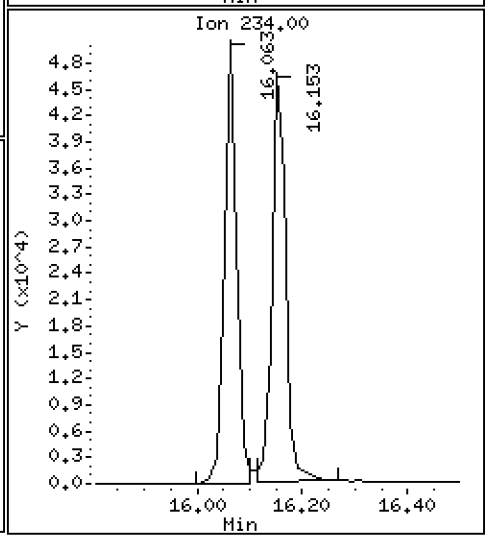












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D
Lab Smp Id: SLE0338-SCV1
Inj Date : 17-MAY-2023 00:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	8.740	8.740	(0.933)	588001	4.82293	4.823
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.906	8.906	(0.951)	494651	5.56554	5.566
	6 2-Chlorophenol	128	9.033	9.033	(0.965)	539006	5.29416	5.294
	7 1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	548081	5.31911	5.319
*	8 1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	265705	4.00000	
	9 1,4-Dichlorobenzene	146	9.390	9.391	(1.003)	521173	5.07146	5.071
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.748	9.748	(1.041)	507921	5.25771	5.258
	11 Benzyl alcohol	108	9.633	9.633	(1.029)	299374	5.27414	5.274
	14 2,2'-oxybis(1-Chloropropane)	121	9.927	9.914	(1.060)	168255	6.17916	6.179
	13 2-Methylphenol	108	9.850	9.851	(1.052)	378927	4.22901	4.229
	17 Hexachloroethane	117	10.336	10.336	(1.104)	222748	5.41856	5.419
	16 N-Nitroso-di-n-propylamine	70	10.183	10.170	(1.087)	378231	5.51734	5.517
	15 4-Methylphenol	108	10.119	10.119	(1.080)	425231	4.66096	4.661
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	10.489	10.489	(0.886)	558517	5.32891	5.329
	20 Isophorone	82	10.924	10.924	(0.922)	996054	6.94254	6.943
	21 2-Nitrophenol	139	11.115	11.115	(0.939)	247403	4.89866	4.899
	22 2,4-Dimethylphenol	107	11.153	11.154	(0.942)	371455	3.78811	3.788
	23 Bis(2-Chloroethoxy)methane	93	11.345	11.345	(0.958)	547968	6.23185	6.232
	24 Benzoic acid	105	11.332	11.333	(0.957)	445958	6.76086	6.761
	25 2,4-Dichlorophenol	162	11.562	11.562	(0.976)	370930	4.70748	4.707
	26 1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	503147	5.87937	5.879
*	27 Naphthalene-d8	136	11.842	11.830	(1.000)	965231	4.00000	
	28 Naphthalene	128	11.881	11.881	(1.003)	1361438	5.12904	5.129
	29 4-Chloroaniline	127	11.995	11.995	(1.013)	469527	4.48751	4.488
	30 Hexachlorobutadiene	225	12.225	12.225	(1.032)	222159	5.24062	5.241
	31 4-Chloro-3-methylphenol	107	12.952	12.952	(1.094)	413906	4.87847	4.878
	32 2-Methylnaphthalene	142	13.258	13.258	(1.120)	955574	5.02794	5.028
	33 Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	201170	4.21896	4.219

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.899)	257193	4.79376	4.794
	35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.904)	274739	4.83728	4.837
$	36	2-Fluorobiphenyl	172	Compound Not Detected.					
	37	2-Chloronaphthalene	162	14.252	14.253	(0.923)	885085	5.40065	5.401
	38	2-Nitroaniline	65	14.507	14.508	(0.940)	297267	5.35584	5.356
	39	Dimethylphthalate	163	14.928	14.929	(0.967)	955980	5.41824	5.418
	40	Acenaphthylene	152	15.120	15.120	(0.979)	1374665	5.28203	5.282
	41	2,6-Dinitrotoluene	165	15.069	15.069	(0.976)	223225	5.40390	5.404
*	42	Acenaphthene-d10	164	15.438	15.426	(1.000)	512787	4.00000	
	43	3-Nitroaniline	138	15.362	15.349	(0.995)	197758	5.16887	5.169
	44	Acenaphthene	153	15.502	15.502	(1.004)	859485	5.28316	5.283
	45	2,4-Dinitrophenol	184	15.566	15.567	(1.008)	52944	2.11874	2.119
	46	Dibenzofuran	168	15.821	15.821	(1.025)	1172327	5.16305	5.163
	47	4-Nitrophenol	109	15.668	15.681	(1.015)	114450	4.50365	4.504
	48	2,4-Dinitrotoluene	165	15.872	15.872	(1.028)	284935	5.26937	5.269
	50	Diethylphthalate	149	16.369	16.369	(1.060)	945291	5.49374	5.494
	49	Fluorene	166	16.535	16.535	(1.071)	1165179	5.39758	5.398
	51	4-Chlorophenyl-phenylether	204	16.522	16.509	(1.070)	542088	5.46212	5.462
	52	4-Nitroaniline	138	16.624	16.611	(1.077)	184970	5.10772	5.108
	53	4,6-Dinitro-2-methylphenol	198	16.713	16.713	(0.905)	113822	3.35487	3.355
	54	N-Nitrosodiphenylamine	169	16.764	16.764	(0.908)	651392	5.46976	5.470
$	55	2,4,6-Tribromophenol	330	Compound Not Detected.					
	56	4-Bromophenyl-phenylether	248	17.514	17.515	(0.949)	226164	5.42020	5.420
	57	Hexachlorobenzene	284	17.833	17.833	(0.966)	208878	4.91276	4.913
	58	Pentachlorophenol	266	18.190	18.203	(0.985)	98895	3.94337	3.943
*	59	Phenanthrene-d10	188	18.458	18.458	(1.000)	850147	4.00000	
	60	Phenanthrene	178	18.509	18.496	(1.003)	1250084	5.03943	5.039
	61	Anthracene	178	18.598	18.598	(1.008)	1054910	4.52965	4.530
	62	Carbazole	167	18.917	18.918	(1.025)	896606	5.93842	5.938
	63	Di-n-butylphthalate	149	19.682	19.682	(1.066)	1586517	5.64164	5.642
	64	Fluoranthene	202	20.868	20.855	(0.890)	1308113	5.46710	5.467
	65	Pyrene	202	21.289	21.276	(0.908)	1277121	5.26528	5.265
$	66	Terphenyl-d14	244	Compound Not Detected.					
	67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	632335	5.82476	5.825
	68	Benzo(a)anthracene	228	23.419	23.419	(0.998)	953848	5.06413	5.064
*	69	Chrysene-d12	240	23.457	23.445	(1.000)	511511	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.368	23.369	(0.996)	459041	11.9948	11.99
	71	Chrysene	228	23.496	23.496	(1.002)	889381	5.01800	5.018
	72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	875291	5.79218	5.792
*	134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1044471	4.00000	
	73	Di-n-octylphthalate	149	24.465	24.465	(1.000)	1451463	5.48238	5.482
	74	Benzo(b)fluoranthene	252	25.345	25.345	(0.969)	887996	4.91157	4.912
	75	Benzo(k)fluoranthene	252	25.396	25.384	(0.971)	848094	4.96504	4.965(H)
	76	Benzo(a)pyrene	252	26.034	26.022	(0.996)	736579	5.17185	5.172
*	77	Perylene-d12	264	26.149	26.149	(1.000)	456008	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.946	28.933	(1.107)	830811	5.02922	5.029
	79	Dibenzo(a,h)anthracene	278	28.946	28.946	(1.107)	689006	4.96953	4.970
	80	Benzo(g,h,i)perylene	276	29.764	29.751	(1.138)	689189	5.05448	5.054
	90	N-Nitrosodimethylamine	74	5.071	5.071	(0.542)	334608	5.76731	5.767
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	21.085	21.085	(0.899)	208933	3.45722	3.457
	103	Pyridine	79	5.097	5.122	(0.544)	534742	5.81084	5.811
	105	1-methylnaphthalene	142	13.487	13.487	(1.139)	925646	5.25003	5.250
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.840	16.840	(1.091)	1072104	5.33771	5.338

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.345	25.384	(0.969)	1625913	10.0183	10.02
120 2,3,4,6-Tetrachlorophenol	232	16.152	16.152	(1.046)	210743	3.28296	3.283

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162311.D
Lab Smp Id: SLE0338-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	265705	-7.45
27 Naphthalene-d8	1056758	528379	2113516	965231	-8.66
42 Acenaphthene-d10	587510	293755	1175020	512787	-12.72
59 Phenanthrene-d10	933575	466788	1867150	850147	-8.94
69 Chrysene-d12	576570	288285	1153140	511511	-11.28
134 Di-n-octylphthala	1181651	590826	2363302	1044471	-11.61
77 Perylene-d12	491359	245680	982718	456008	-7.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	-0.00
77 Perylene-d12	26.15	25.65	26.65	26.15	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162311.D

Lab ID: SLE0338-SCV1
nt17.i, ABN.m, 17-MAY-2023 00:29

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

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.008	0.000	1.0083	2,4-Dinitrophenol

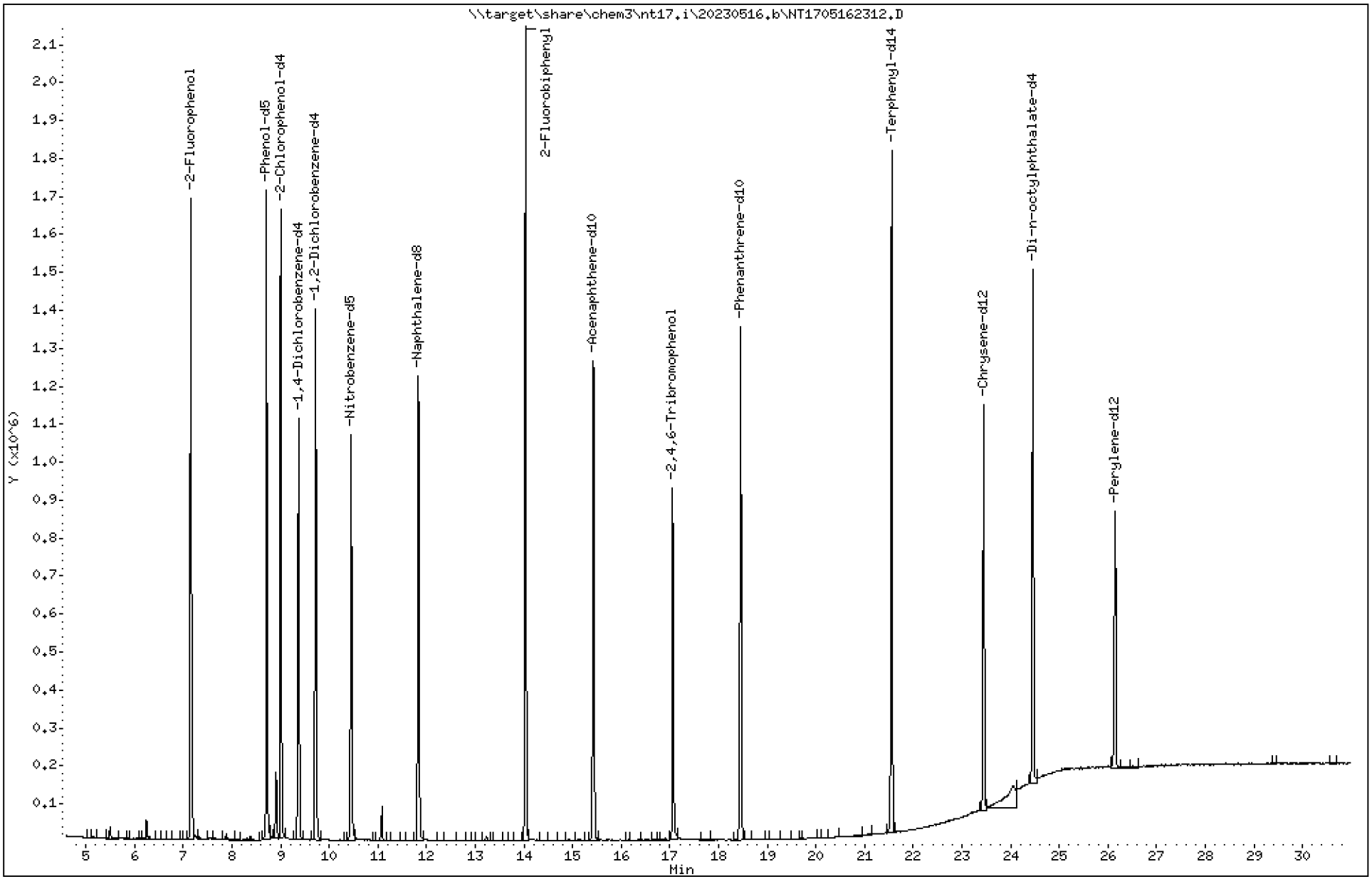
RRT check based on Ccal File: NT1705162308.D

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162312.D
Date : 17-MAY-2023 01:07
Client ID:
Sample Info: SLE0338-ICB1

Instrument: nt17.i
Operator: JGR
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162312.D

Date : 17-MAY-2023 01:07

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-ICB1

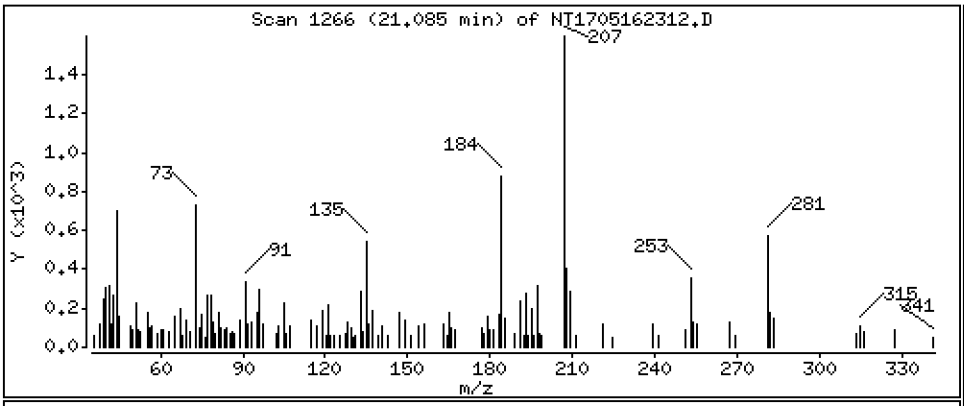
Operator: JGR

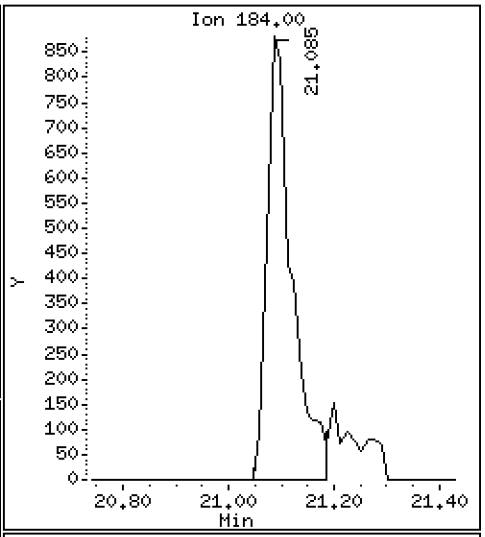
Column phase: ZB-5msi

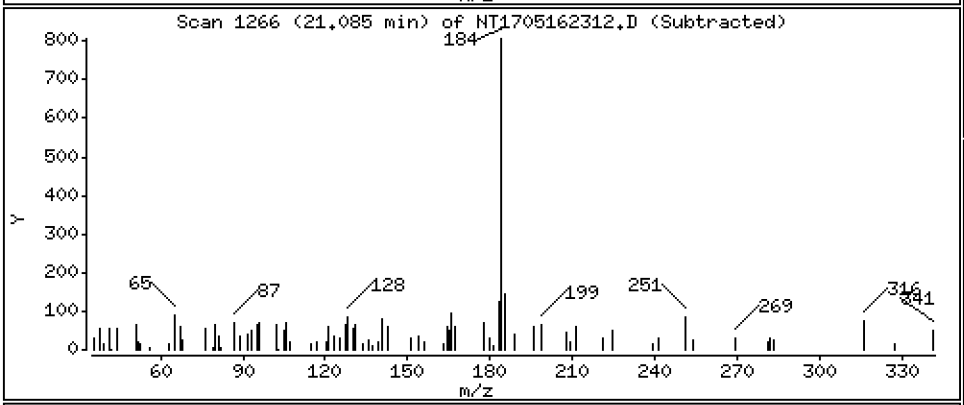
Column diameter: 0.25

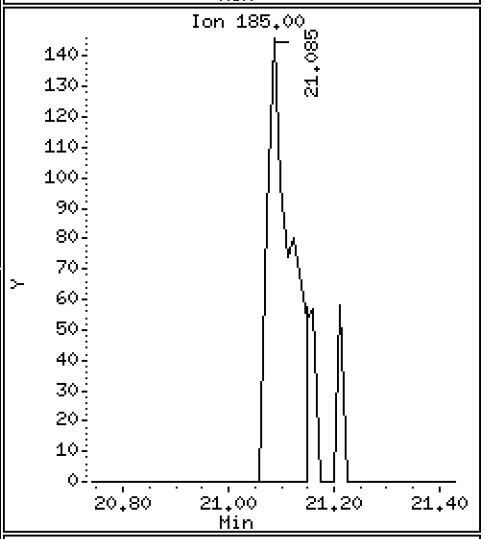
93 Benzidine

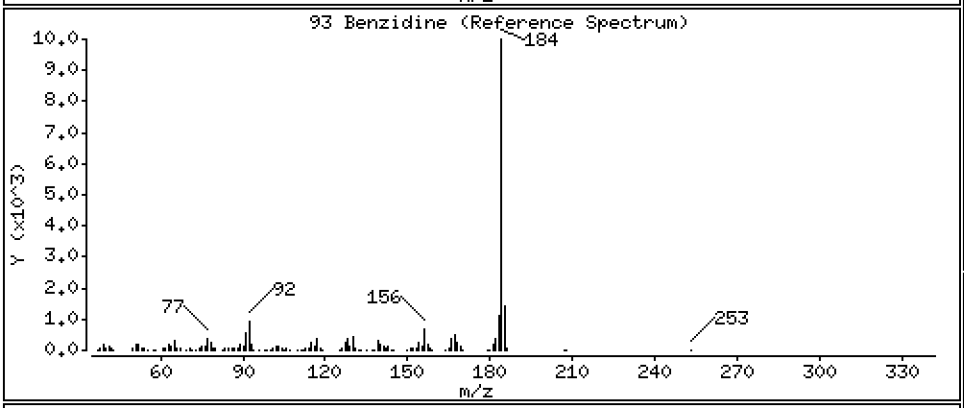
Concentration: 0.04787 ug/mL

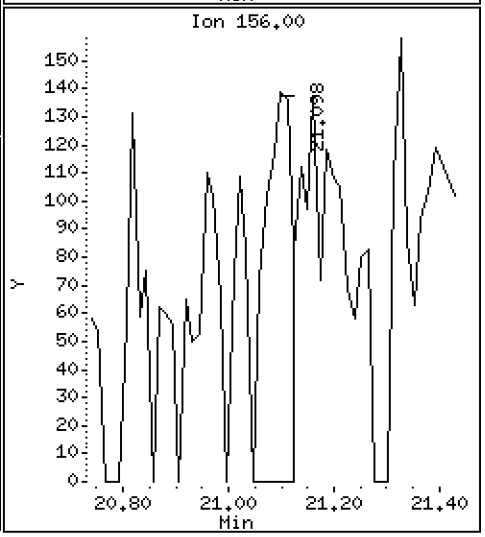


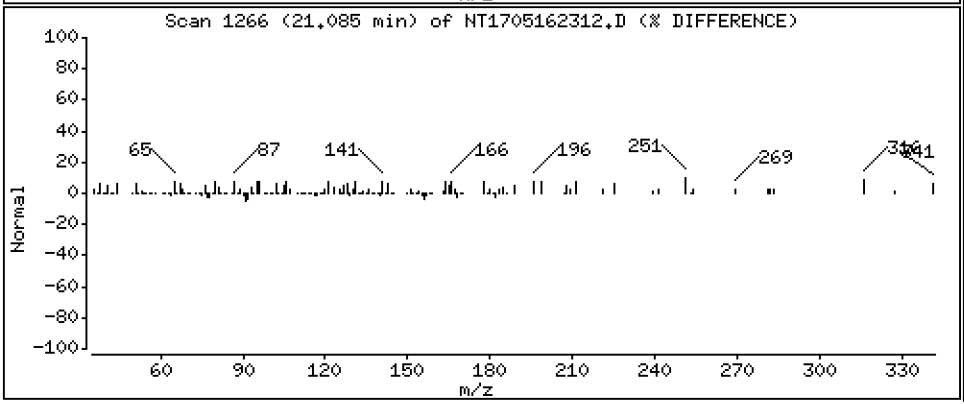












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162312.D
Lab Smp Id: SLE0338-ICB1
Inj Date : 17-MAY-2023 01:07
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-ICB1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	7.148	7.161	(0.763)	733528	7.79090	7.791
$ 2	Phenol-d5	99	8.715	8.715	(0.931)	897476	7.20297	7.203
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	9.008	9.008	(0.962)	759790	7.61288	7.613
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	287620	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	9.723	9.723	(1.038)	351911	5.01661	5.017
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	Compound Not Detected.					
$ 18	Nitrobenzene-d5	82	10.451	10.451	(0.883)	585251	4.93952	4.940
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.830	11.830	(1.000)	1041050	4.00000	
28	Naphthalene	128	Compound Not Detected.					
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	Compound Not Detected.					
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	14.036	14.036	(0.909)	1089823	5.13150	5.132
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.439	15.426	(1.000)	539097	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	Compound Not Detected.					
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	Compound Not Detected.					
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	Compound Not Detected.					
	49	Fluorene	166	Compound Not Detected.					
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	17.069	17.070	(1.106)	137823	5.86102	5.861
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.458	18.458	(1.000)	886060	4.00000	
	60	Phenanthrene	178	Compound Not Detected.					
	61	Anthracene	178	Compound Not Detected.					
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	Compound Not Detected.					
	65	Pyrene	202	Compound Not Detected.					
$	66	Terphenyl-d14	244	21.557	21.557	(0.919)	956952	5.47385	5.474
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	Compound Not Detected.					
*	69	Chrysene-d12	240	23.445	23.445	(1.000)	518615	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	Compound Not Detected.					
	72	bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134	Di-n-octylphthalate-d4	153	24.452	24.465	(1.000)	1011857	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	Compound Not Detected.					
	75	Benzo(k)fluoranthene	252	Compound Not Detected.					
	76	Benzo(a)pyrene	252	Compound Not Detected.					
*	77	Perylene-d12	264	26.149	26.149	(1.000)	487385	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	21.085	21.085	(0.899)	2877	0.04787	0.04787
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162312.D
Lab Smp Id: SLE0338-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	287620	0.19
27 Naphthalene-d8	1056758	528379	2113516	1041050	-1.49
42 Acenaphthene-d10	587510	293755	1175020	539097	-8.24
59 Phenanthrene-d10	933575	466788	1867150	886060	-5.09
69 Chrysene-d12	576570	288285	1153140	518615	-10.05
134 Di-n-octylphthala	1181651	590826	2363302	1011857	-14.37
77 Perylene-d12	491359	245680	982718	487385	-0.81

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.83	-0.11
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.45	-0.06
134 Di-n-octylphthala	24.47	23.97	24.97	24.45	-0.05
77 Perylene-d12	26.15	25.65	26.65	26.15	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162312.D

Lab ID: SLE0338-ICB1
nt17.i, ABN.m, 17-MAY-2023 01:07

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1705162308.D

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLE0338-SCV1
Sequence: SLE0338
Sequence Name: SCV 5.0
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.8	-3.5	20.00
bis(2-chloroethyl) ether	5.0000	5.6	11.3	20.00
2-Chlorophenol	5.0000	5.3	5.9	20.00
1,3-Dichlorobenzene	5.0000	5.3	6.4	20.00
1,4-Dichlorobenzene	5.0000	5.1	1.4	20.00
1,2-Dichlorobenzene	5.0000	5.3	5.2	20.00
Benzyl Alcohol	5.0000	5.3	5.5	20.00
2,2'-Oxybis(1-chloropropane)	5.0000	6.2	23.6	20.00
2-Methylphenol	5.0000	4.2	-15.4	20.00
Hexachloroethane	5.0000	5.4	8.4	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.5	10.3	20.00
4-Methylphenol	5.0000	4.7	-6.8	20.00
Nitrobenzene	5.0000	5.3	6.6	20.00
Isophorone	5.0000	6.9	38.9	20.00
2-Nitrophenol	5.0000	4.9	-2.0	20.00
2,4-Dimethylphenol	5.0000	3.8	-24.2	20.00
Bis(2-Chloroethoxy)methane	5.0000	6.2	24.6	20.00
2,4-Dichlorophenol	5.0000	4.7	-5.9	20.00
1,2,4-Trichlorobenzene	5.0000	5.9	17.6	20.00
Naphthalene	5.0000	5.1	2.6	20.00
Benzoic acid	10.000	6.8	-32.4	20.00
4-Chloroaniline	5.0000	4.5	-10.2	20.00
Hexachlorobutadiene	5.0000	5.2	4.8	20.00
4-Chloro-3-Methylphenol	5.0000	4.9	-2.4	20.00
2-Methylnaphthalene	5.0000	5.0	0.6	20.00
Hexachlorocyclopentadiene	5.0000	4.2	-15.6	20.00
2,4,6-Trichlorophenol	5.0000	4.8	-4.1	20.00
2,4,5-Trichlorophenol	5.0000	4.8	-3.3	20.00
2-Chloronaphthalene	5.0000	5.4	8.0	20.00
2-Nitroaniline	5.0000	5.4	7.1	20.00
Acenaphthylene	5.0000	5.3	5.6	20.00
Dimethylphthalate	5.0000	5.4	8.4	20.00
2,6-Dinitrotoluene	5.0000	5.4	8.1	20.00
Acenaphthene	5.0000	5.3	5.7	20.00

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLE0338-SCV1
Sequence: SLE0338
Sequence Name: SCV 5.0
Standard ID: K010066

3-Nitroaniline	5.0000	5.2	3.4	20.00
2,4-Dinitrophenol	5.0000	2.1	-57.6	20.00
Dibenzofuran	5.0000	5.2	3.3	20.00
4-Nitrophenol	5.0000	4.5	-9.9	20.00
2,4-Dinitrotoluene	5.0000	5.3	5.4	20.00
Fluorene	5.0000	5.4	8.0	20.00
4-Chlorophenylphenyl ether	5.0000	5.5	9.2	20.00
Diethyl phthalate	5.0000	5.5	9.9	20.00
4-Nitroaniline	5.0000	5.1	2.2	20.00
4,6-Dinitro-2-methylphenol	5.0000	3.4	-32.9	20.00
N-Nitrosodiphenylamine	5.0000	5.5	9.4	20.00
4-Bromophenyl phenyl ether	5.0000	5.4	8.4	20.00
Hexachlorobenzene	5.0000	4.9	-1.7	20.00
Pentachlorophenol	5.0000	3.9	-21.1	20.00
Phenanthrene	5.0000	5.0	0.8	20.00
Anthracene	5.0000	4.5	-9.4	20.00
Carbazole	5.0000	5.9	18.8	20.00
Di-n-Butylphthalate	5.0000	5.6	12.8	20.00
Fluoranthene	5.0000	5.5	9.3	20.00
Pyrene	5.0000	5.3	5.3	20.00
Butylbenzylphthalate	5.0000	5.8	16.5	20.00
Benzo(a)anthracene	5.0000	5.1	1.3	20.00
3,3'-Dichlorobenzidine	10.000	12.0	19.9	20.00
Chrysene	5.0000	5.0	0.4	20.00
bis(2-Ethylhexyl)phthalate	5.0000	5.8	15.8	20.00
Di-n-Octylphthalate	5.0000	5.5	9.6	20.00
Benzofluoranthenes, Total	10.000	10.0	0.2	20.00
Benzo(a)pyrene	5.0000	5.2	3.4	20.00
Indeno(1,2,3-cd)pyrene	5.0000	5.0	0.6	20.00
Dibenzo(a,h)anthracene	5.0000	5.0	-0.6	20.00
Benzo(g,h,i)perylene	5.0000	5.1	1.1	20.00
1-Methylnaphthalene	5.0000	5.3	5.0	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

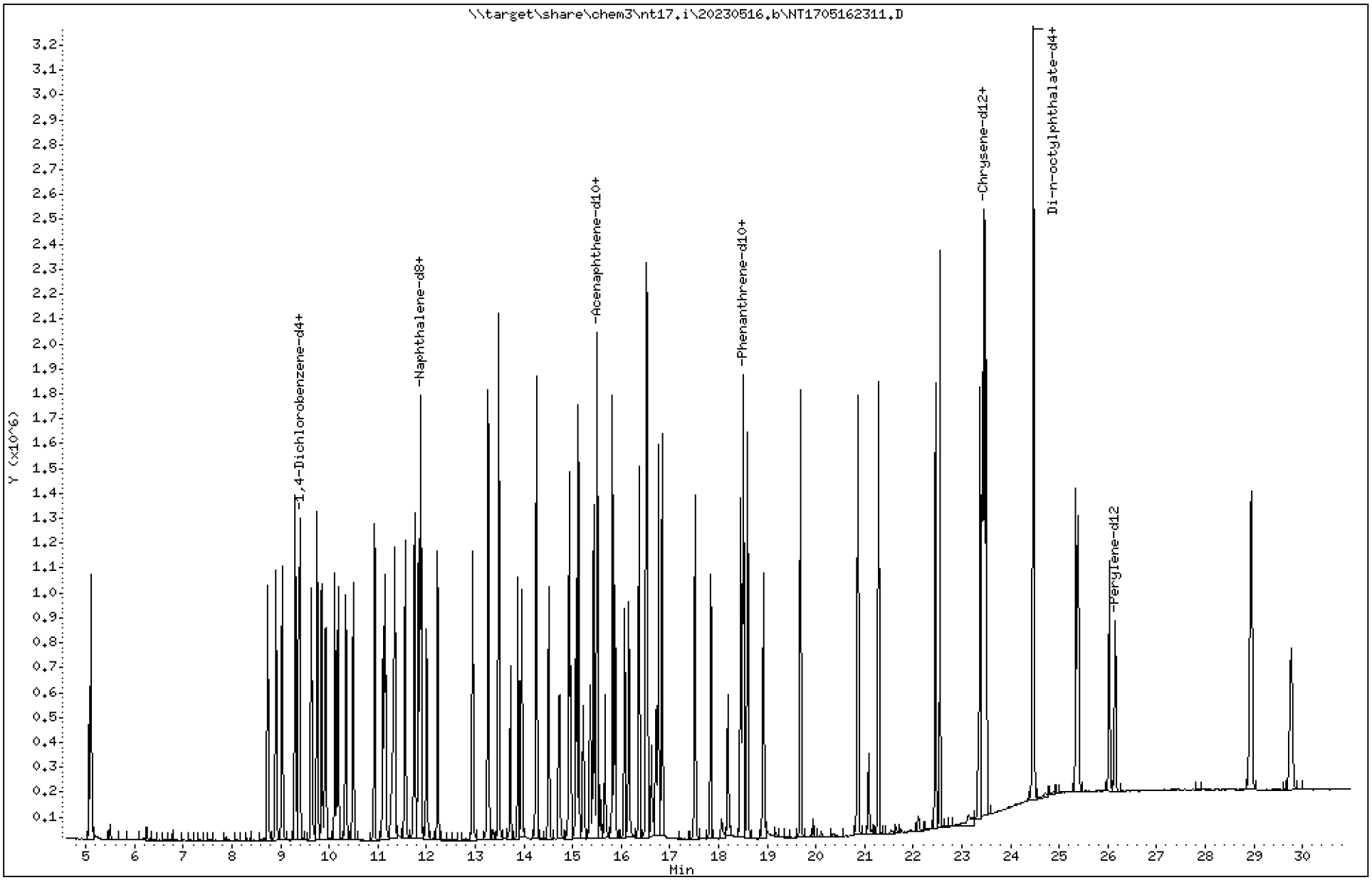
Sample Info: SLE0338-SCV1

Column phase: ZB-5msi

Instrument: nt17.i

Operator: JGR

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

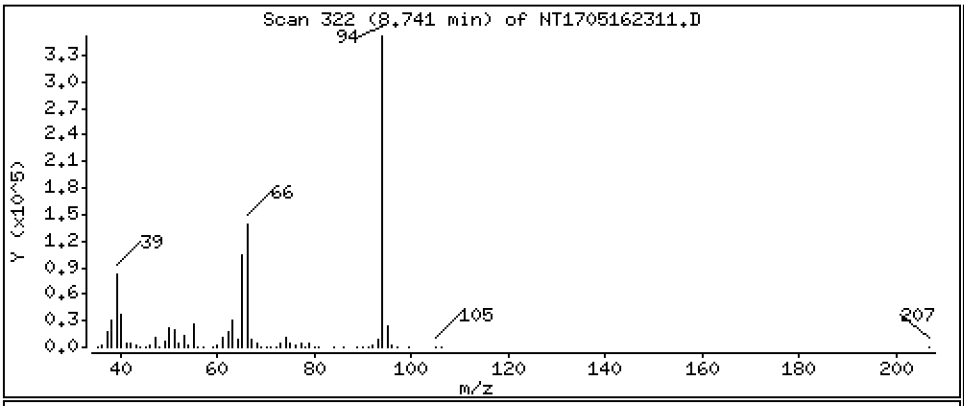
Operator: JGR

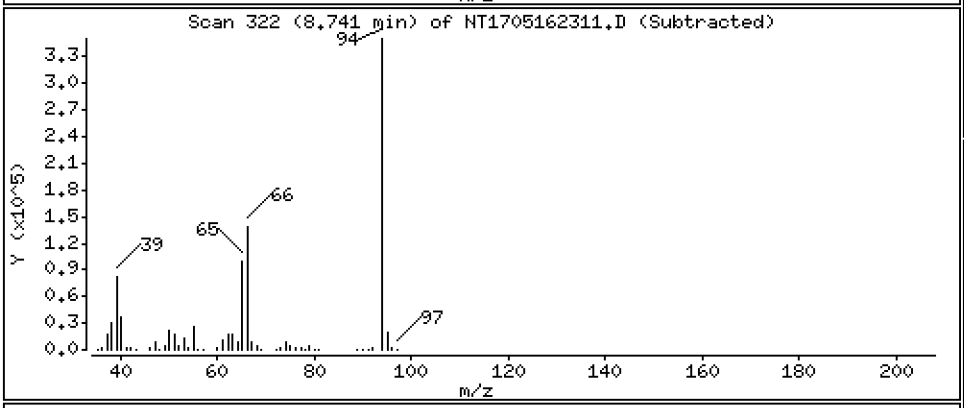
Column phase: ZB-5msi

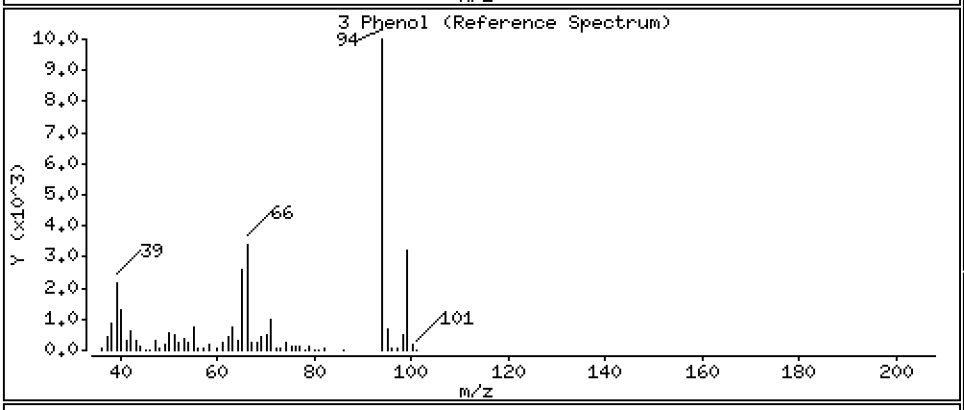
Column diameter: 0.25

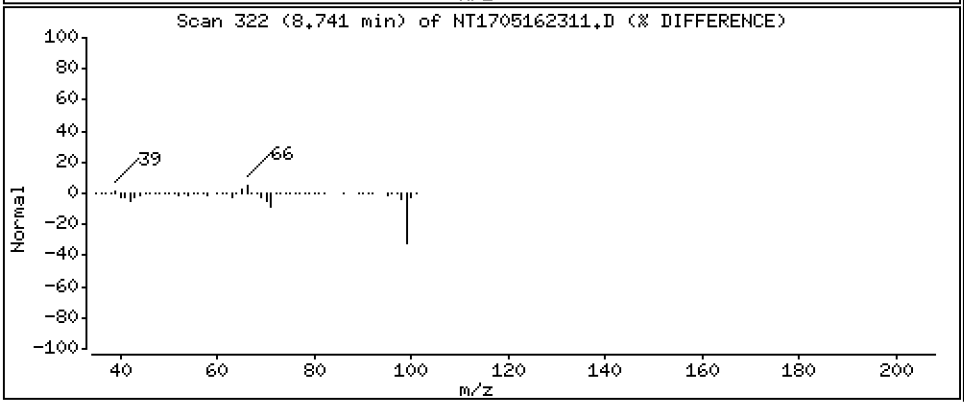
3 Phenol

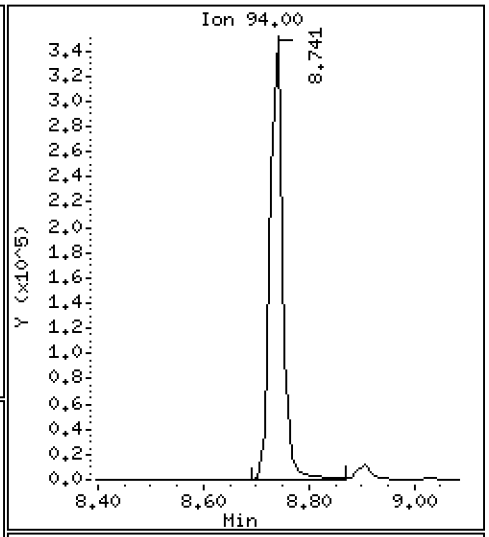
Concentration: 4.823 ug/mL

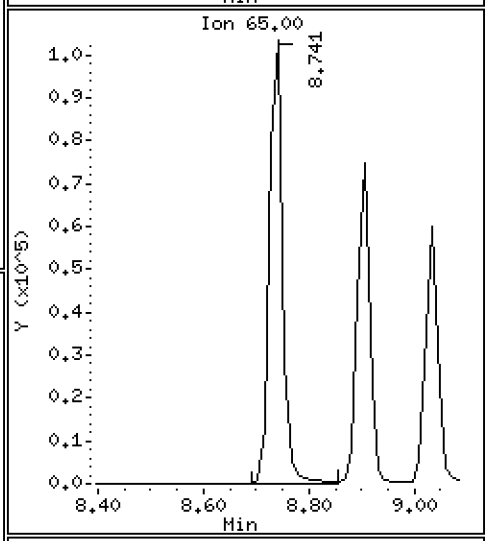


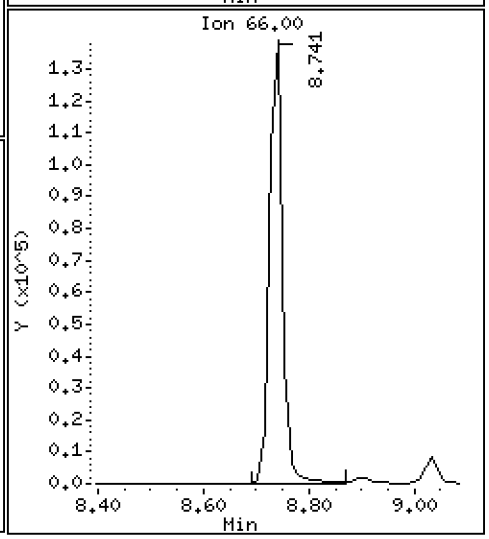












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

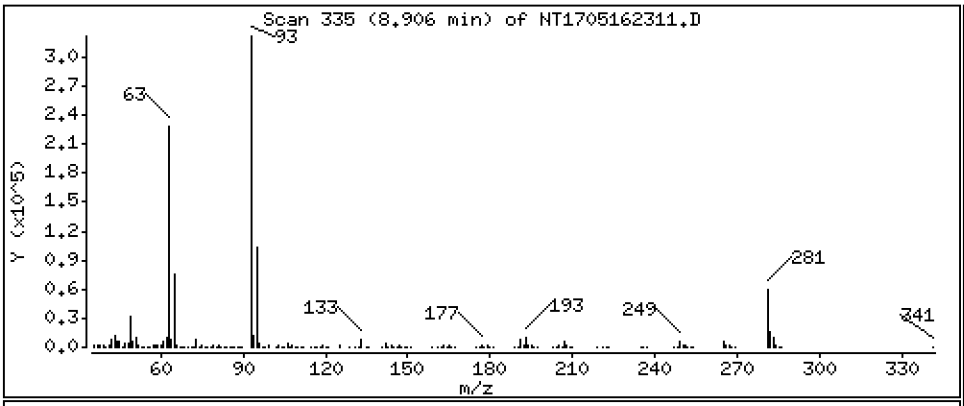
Operator: JGR

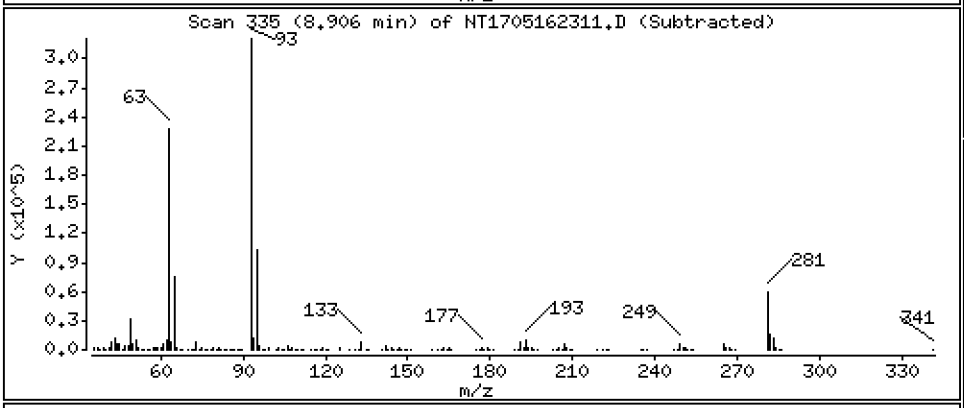
Column phase: ZB-5msi

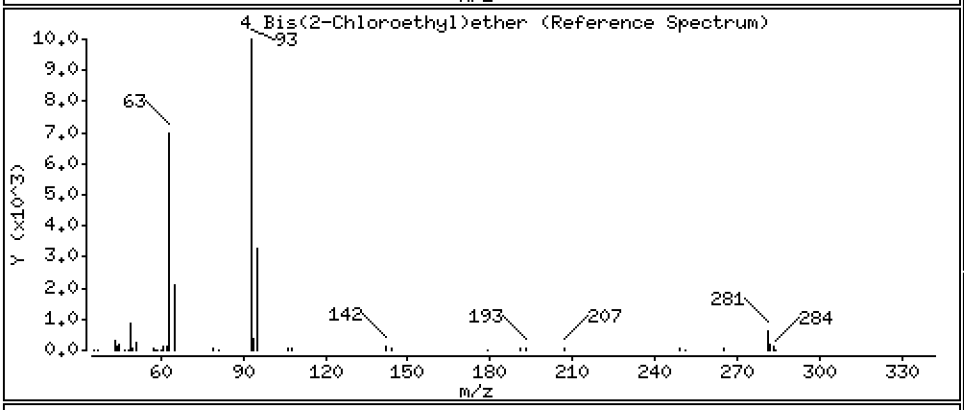
Column diameter: 0.25

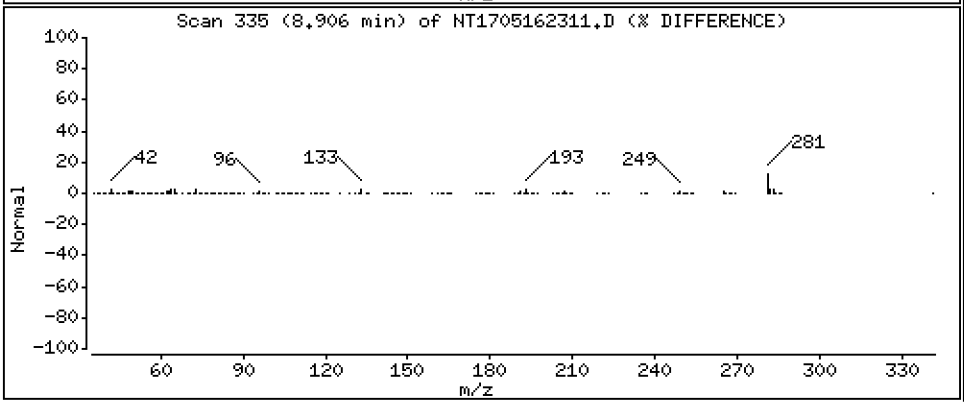
4 Bis(2-Chloroethyl)ether

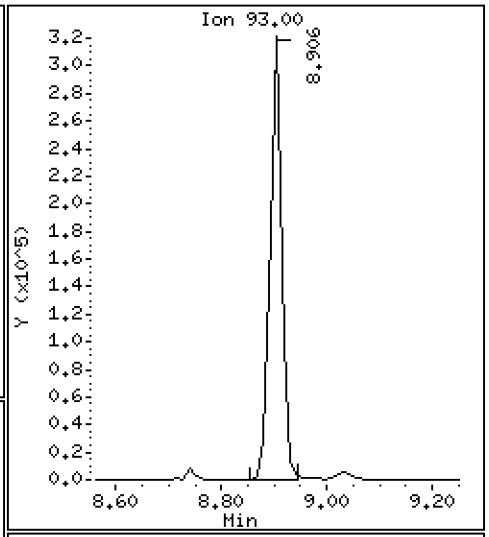
Concentration: 5.566 ug/mL

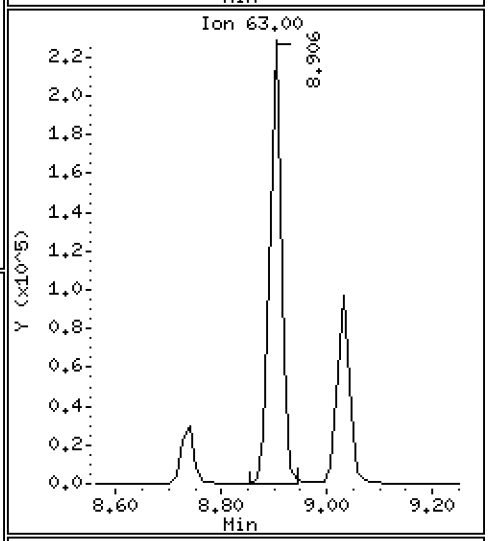


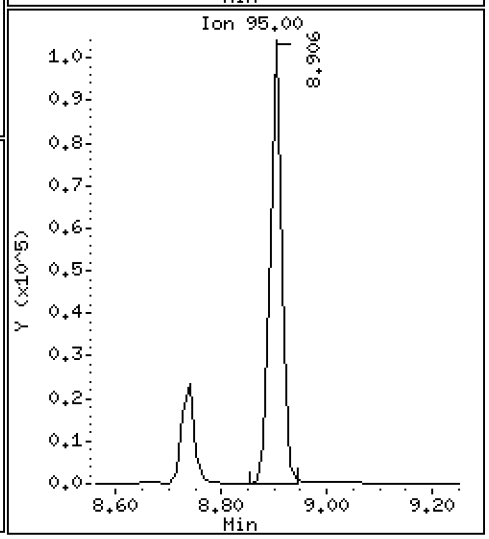












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

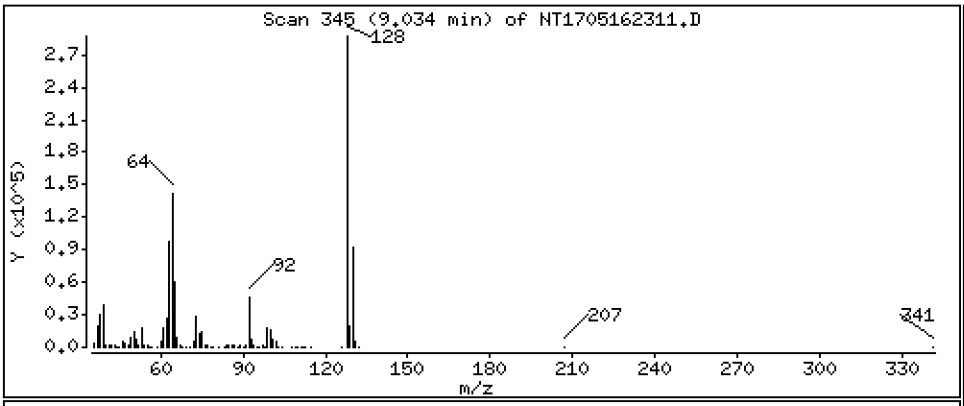
Operator: JGR

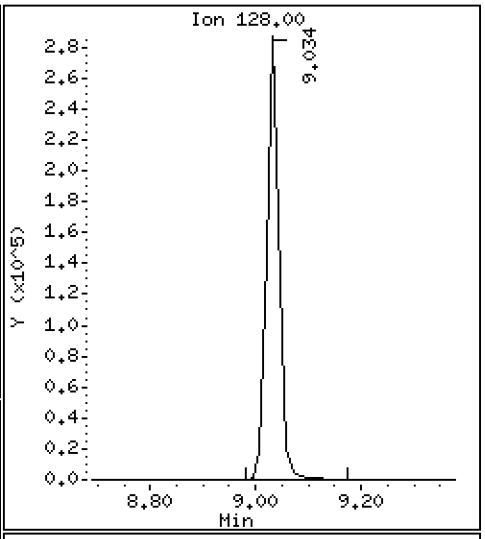
Column phase: ZB-5msi

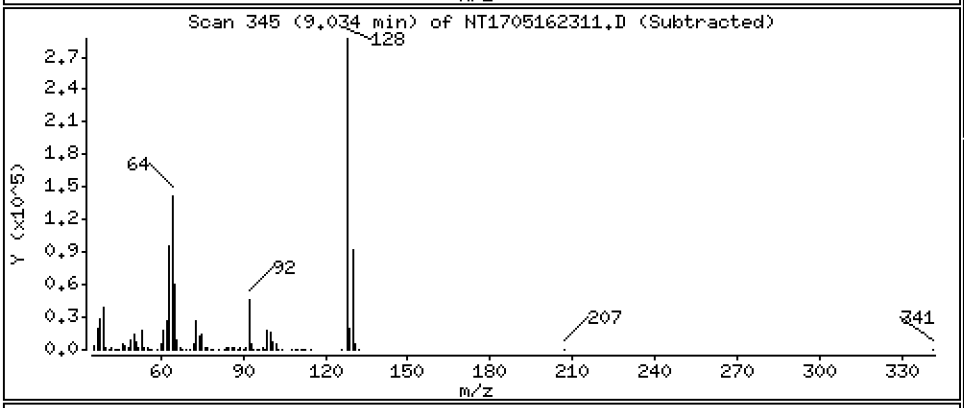
Column diameter: 0.25

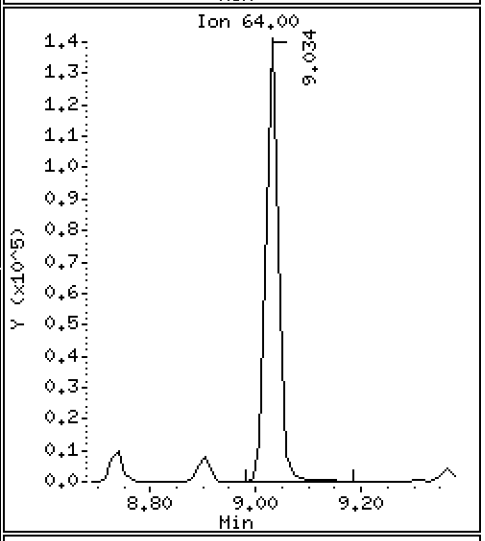
6 2-Chlorophenol

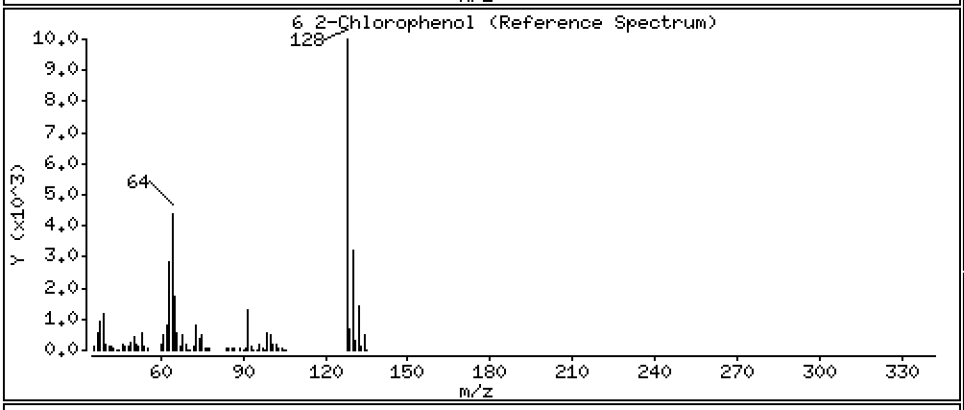
Concentration: 5.294 ug/mL

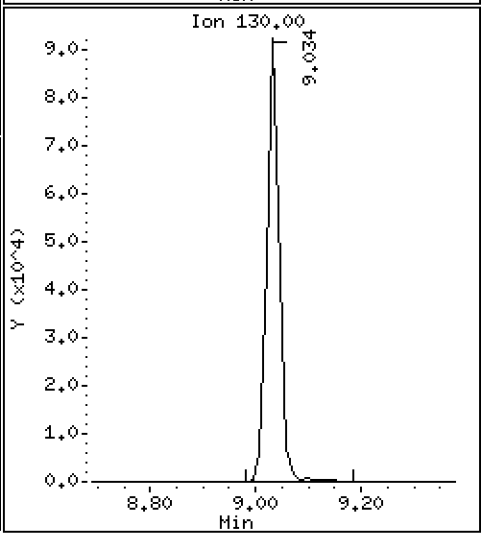


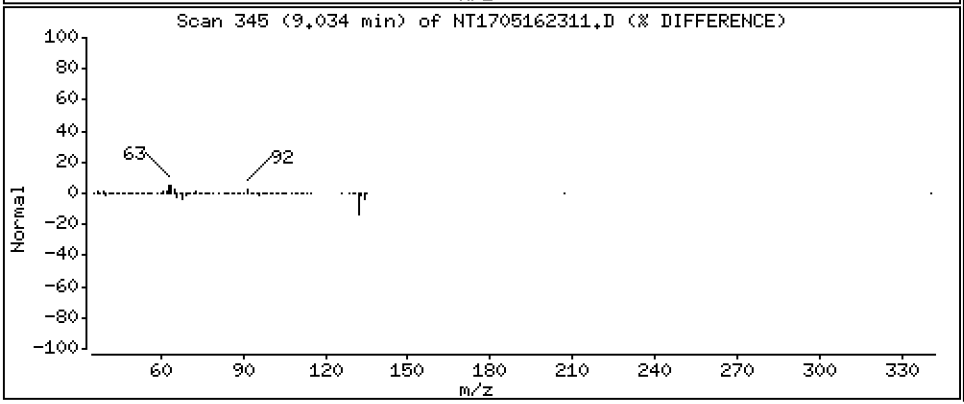












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

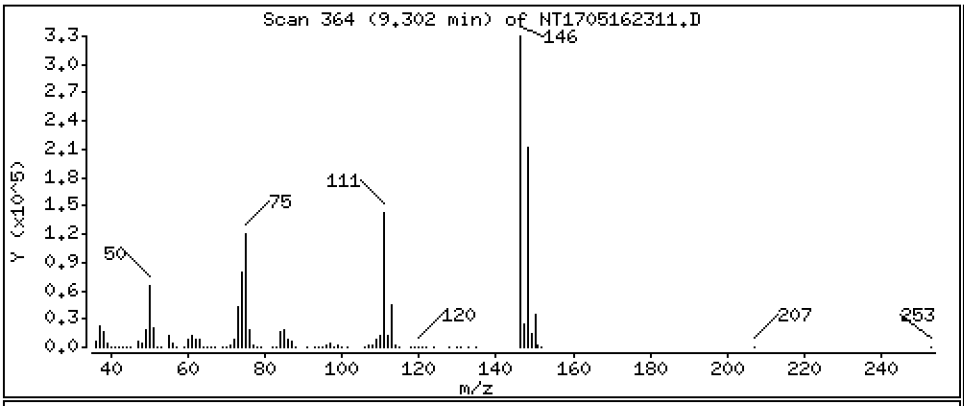
Operator: JGR

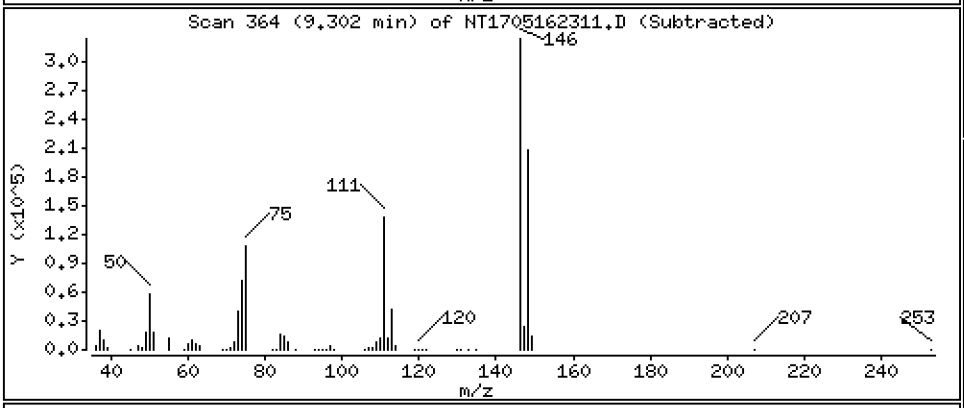
Column phase: ZB-5msi

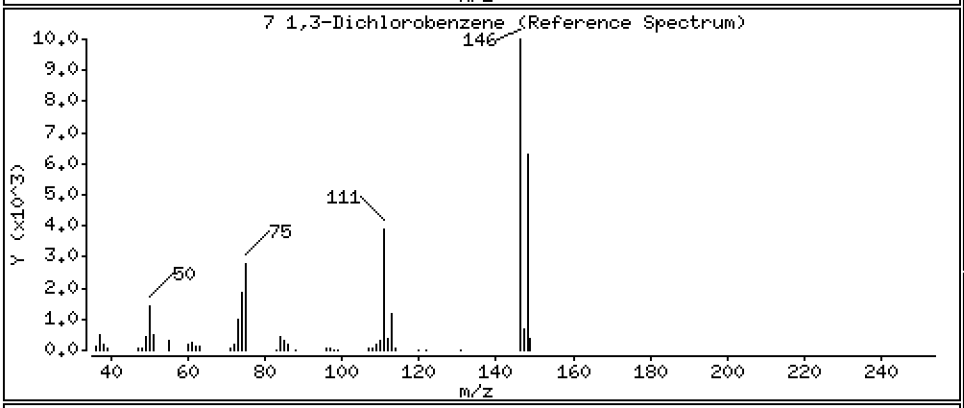
Column diameter: 0.25

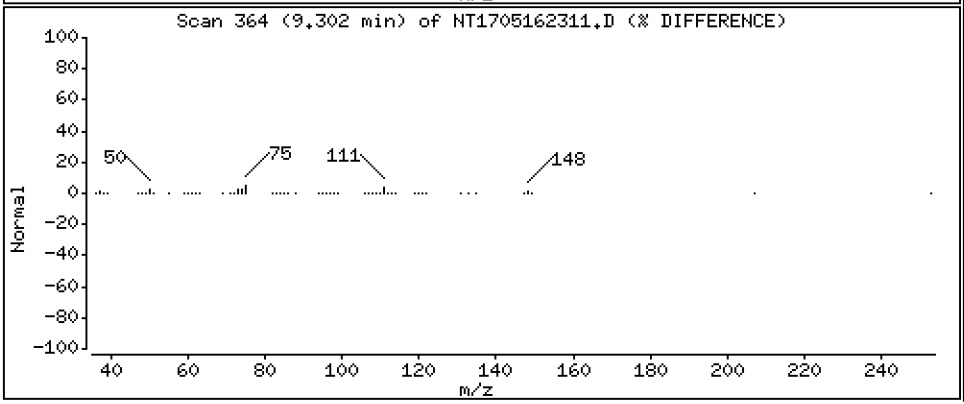
7 1,3-Dichlorobenzene

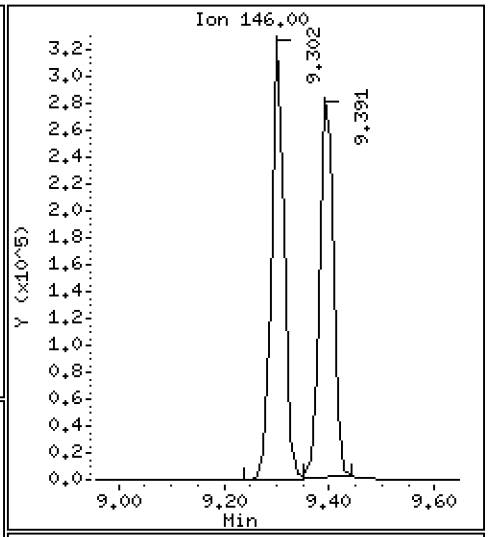
Concentration: 5.319 ug/mL

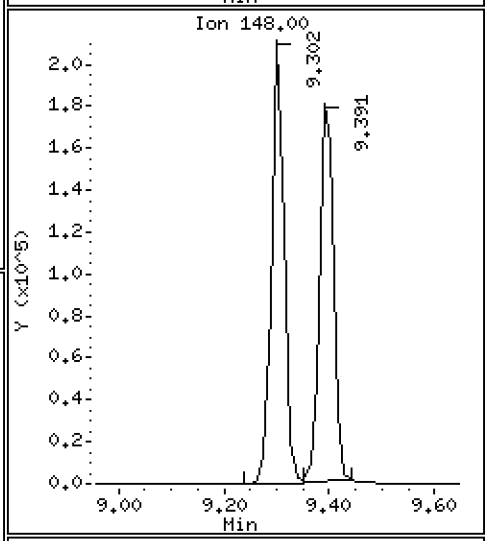


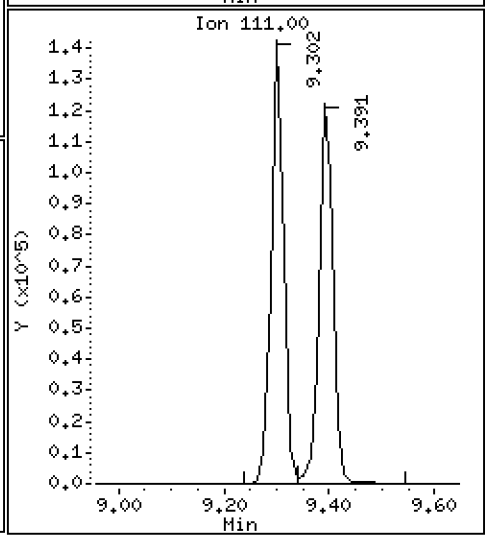












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

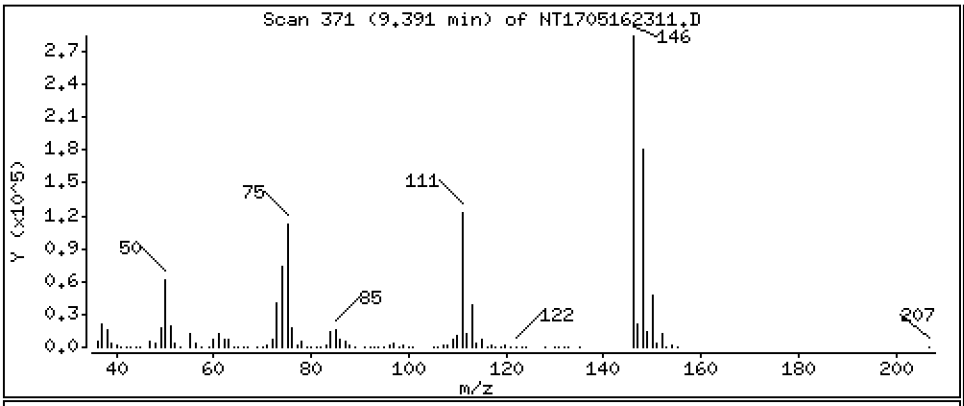
Operator: JGR

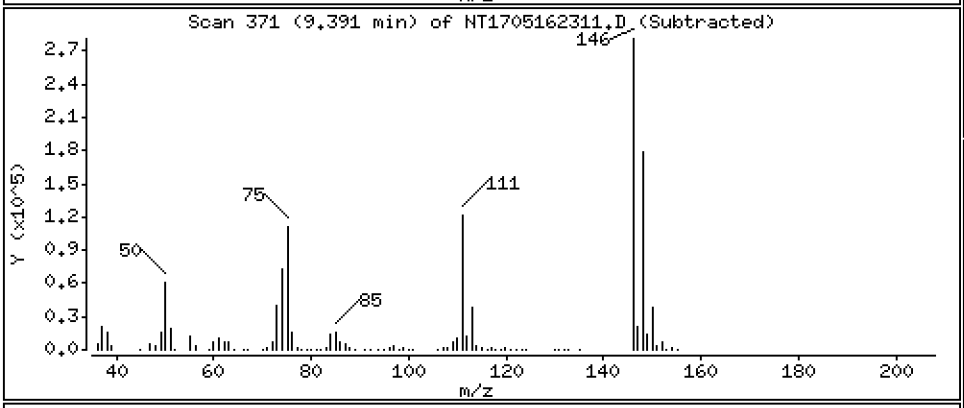
Column phase: ZB-5msi

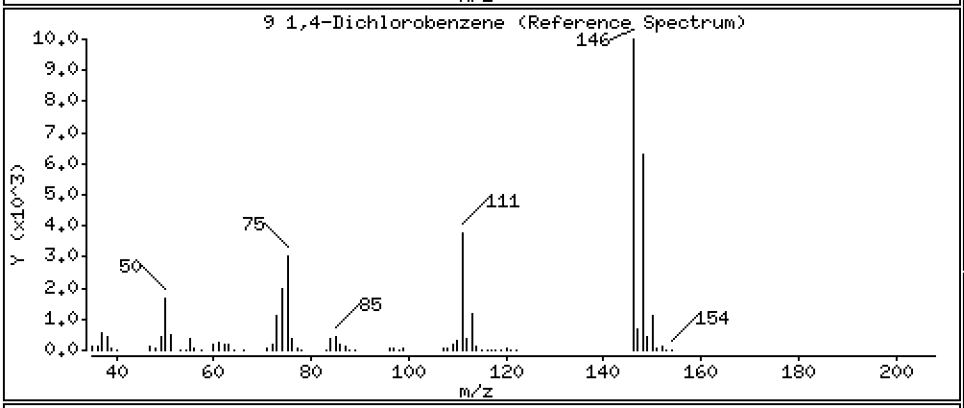
Column diameter: 0.25

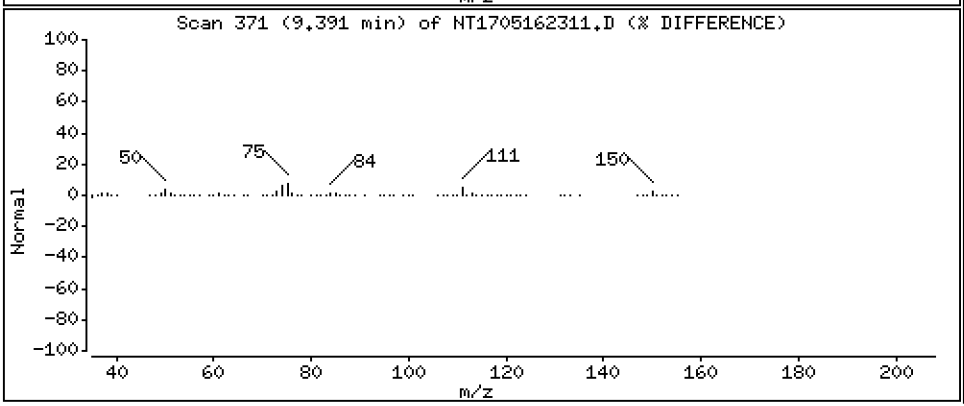
9 1,4-Dichlorobenzene

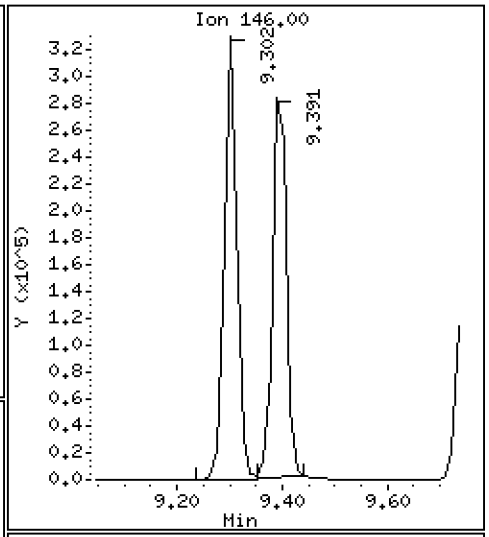
Concentration: 5.071 ug/mL

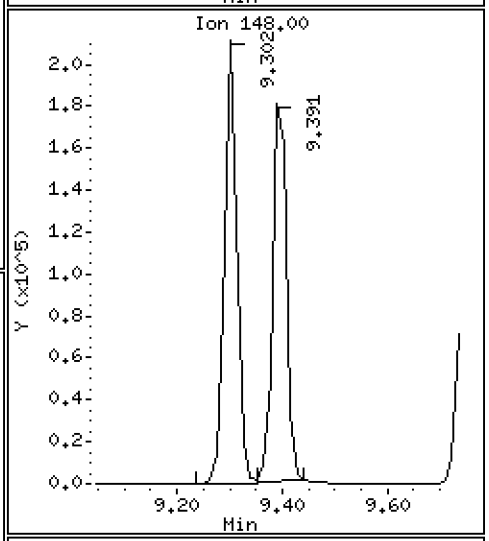


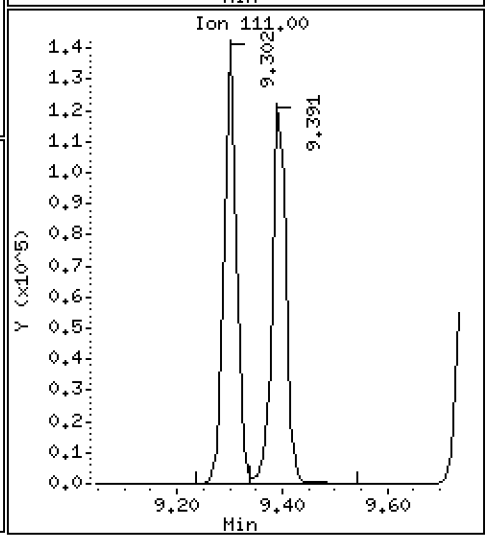












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

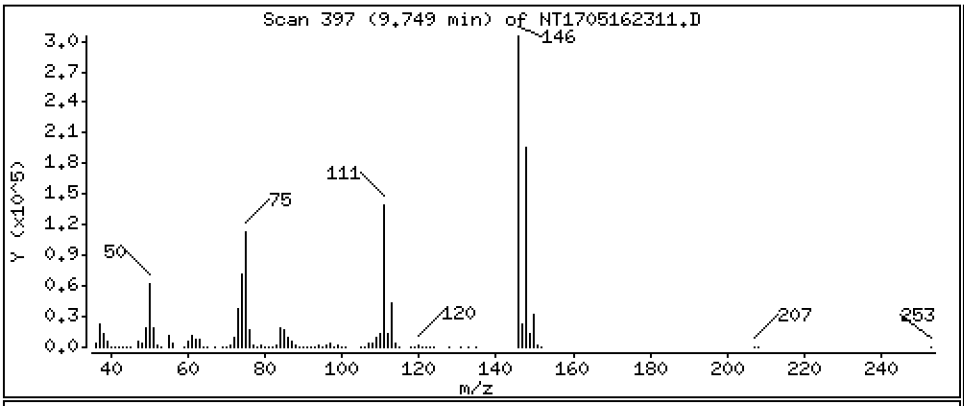
Operator: JGR

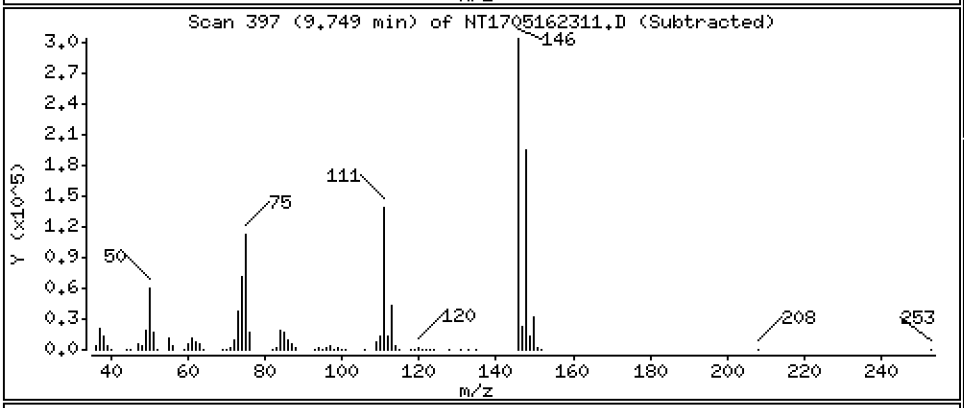
Column phase: ZB-5msi

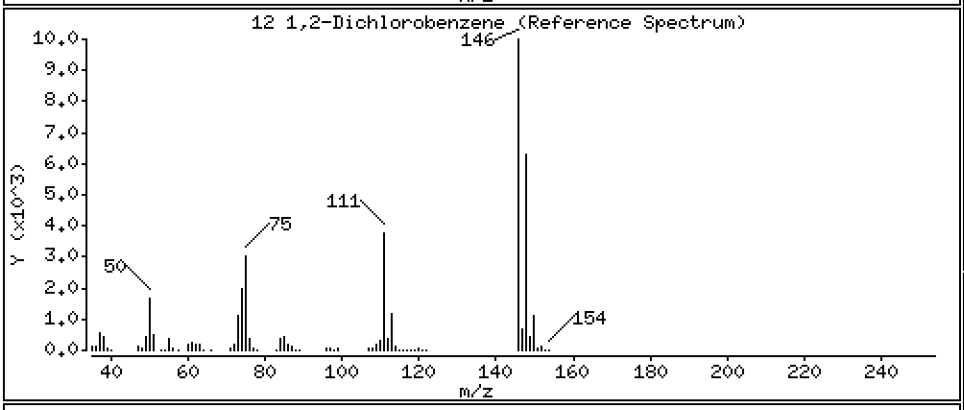
Column diameter: 0.25

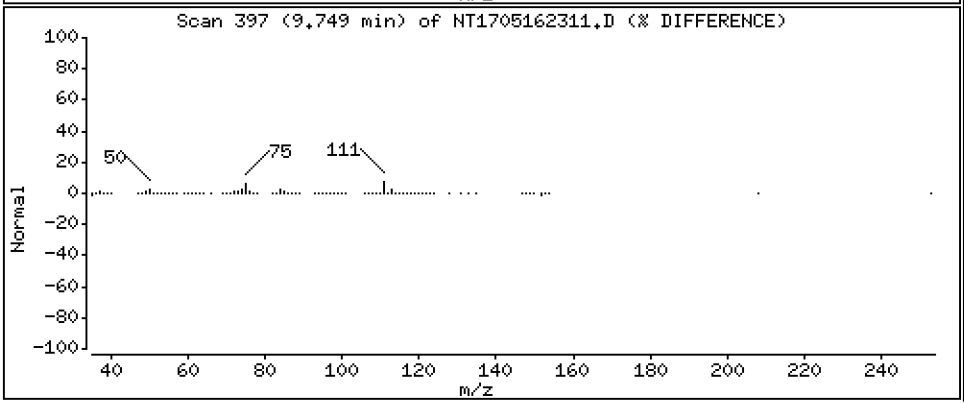
12 1,2-Dichlorobenzene

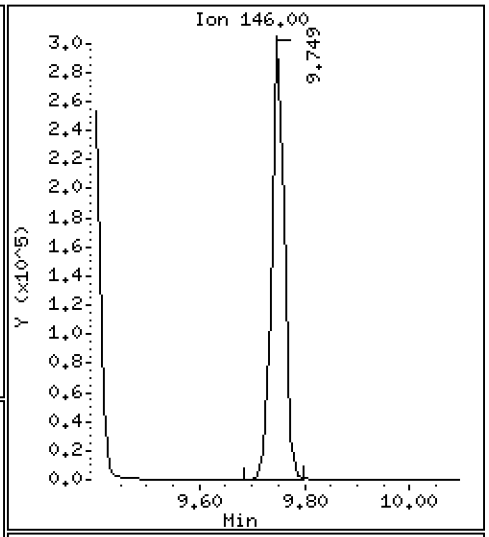
Concentration: 5.258 ug/mL

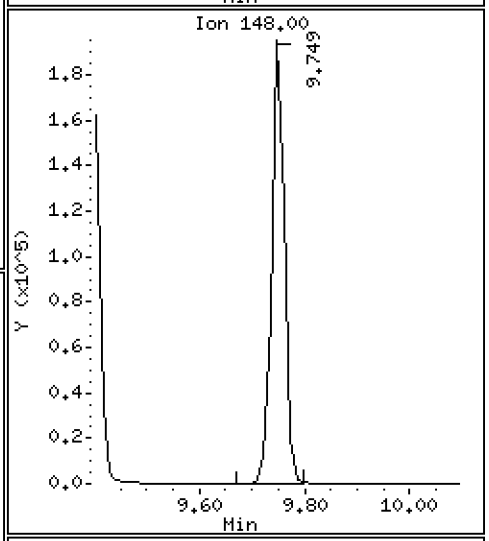


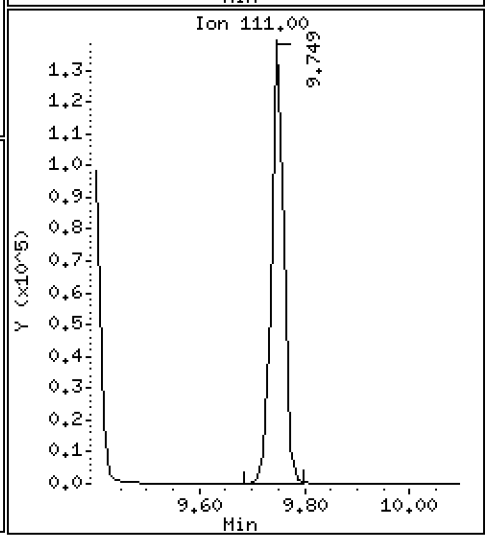












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

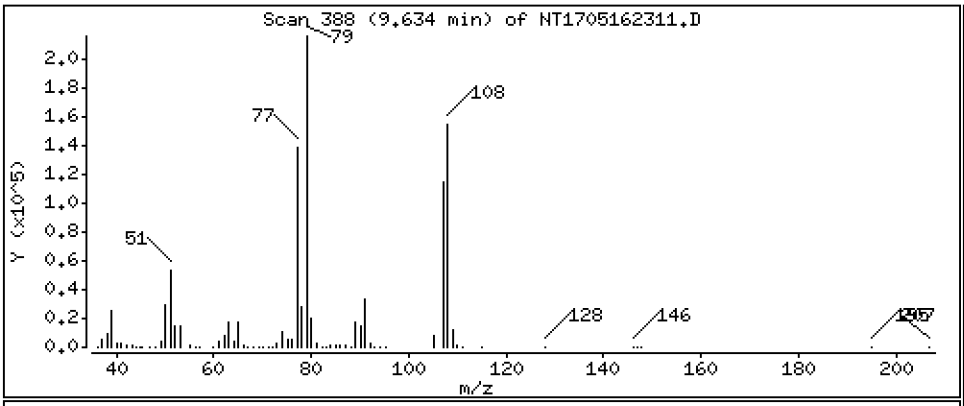
Operator: JGR

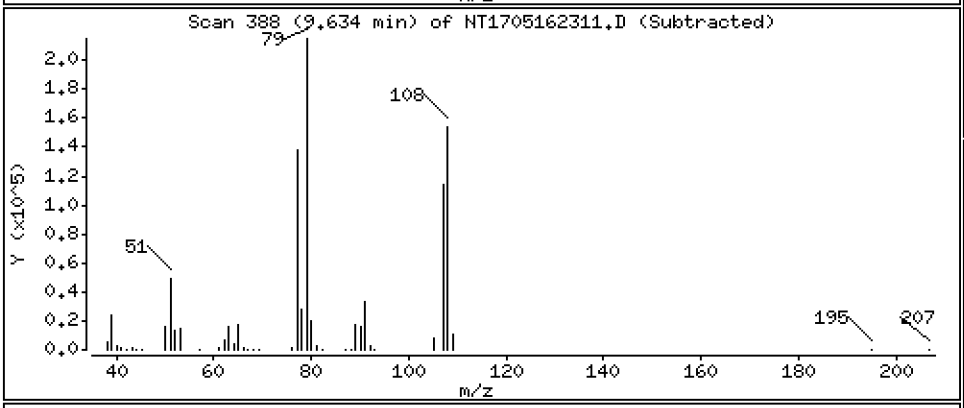
Column phase: ZB-5msi

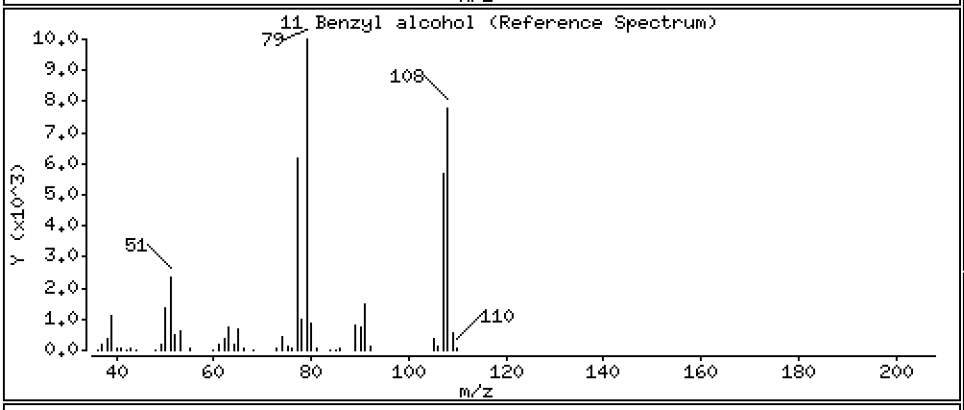
Column diameter: 0.25

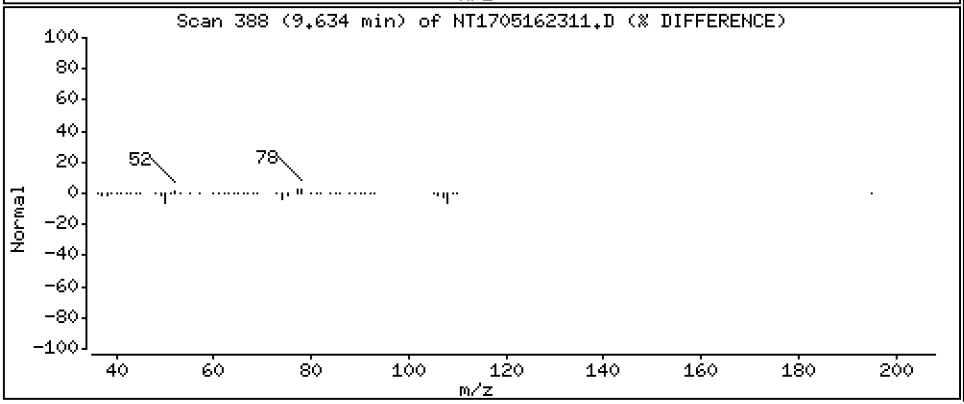
11 Benzyl alcohol

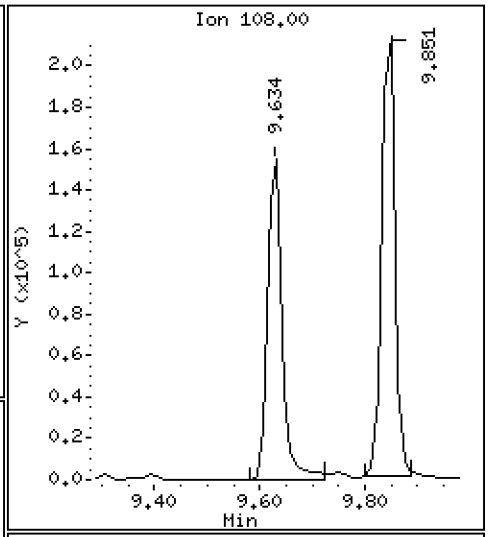
Concentration: 5.274 ug/mL

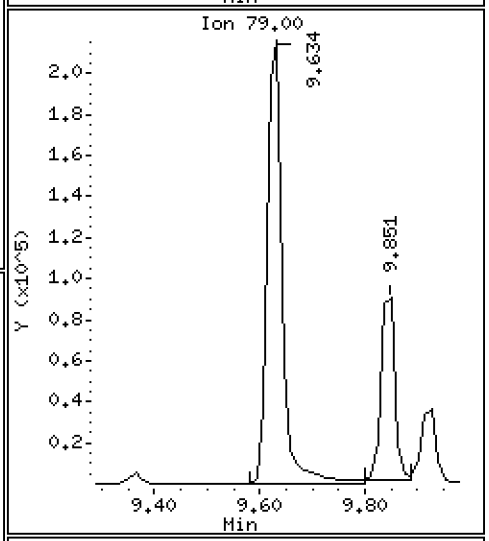


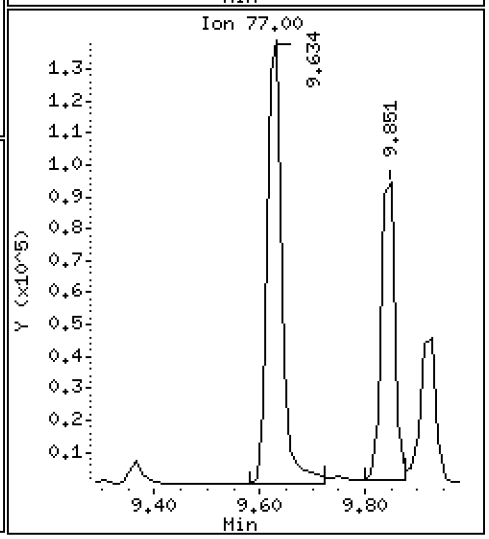












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

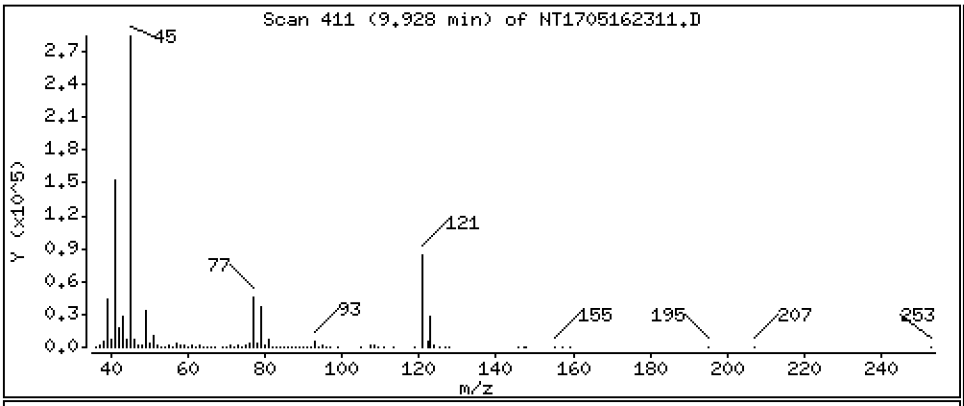
Operator: JGR

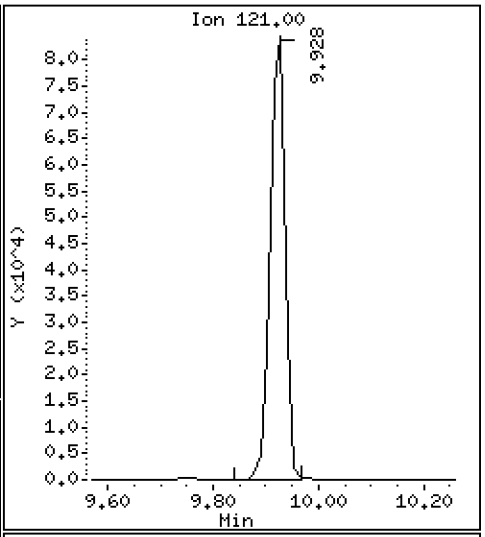
Column phase: ZB-5msi

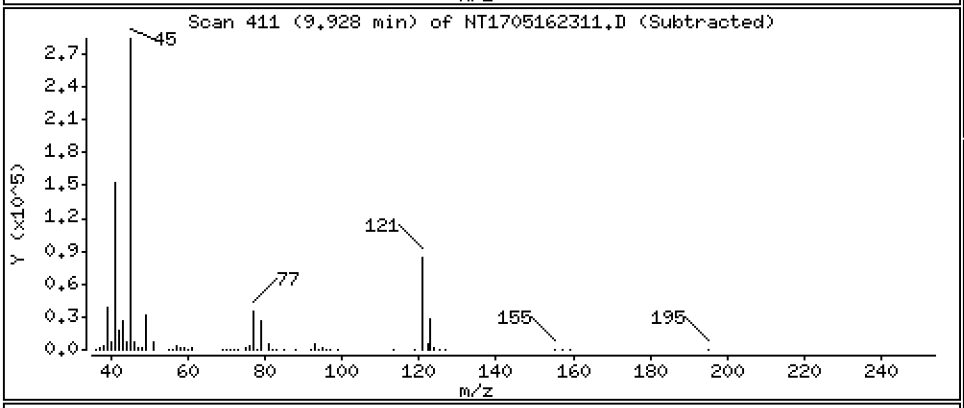
Column diameter: 0.25

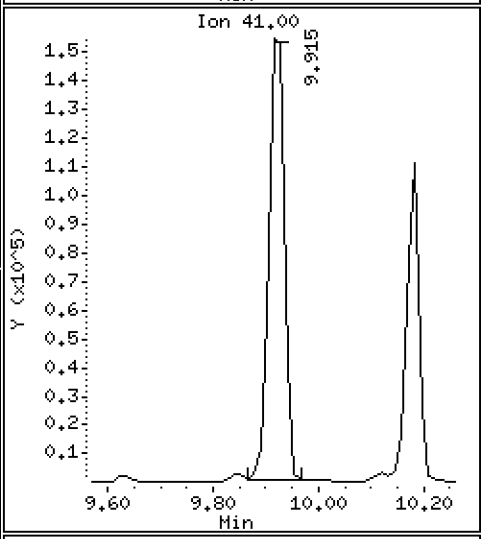
14 2,2'-oxybis(1-Chloropropane)

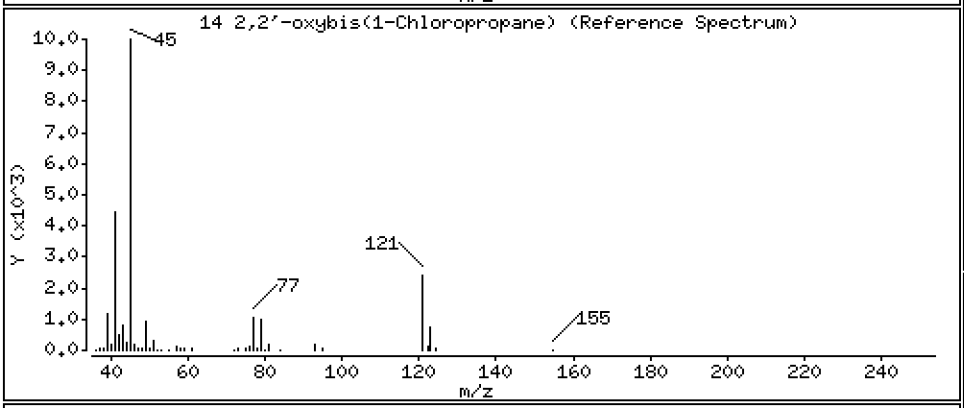
Concentration: 6.179 ug/mL

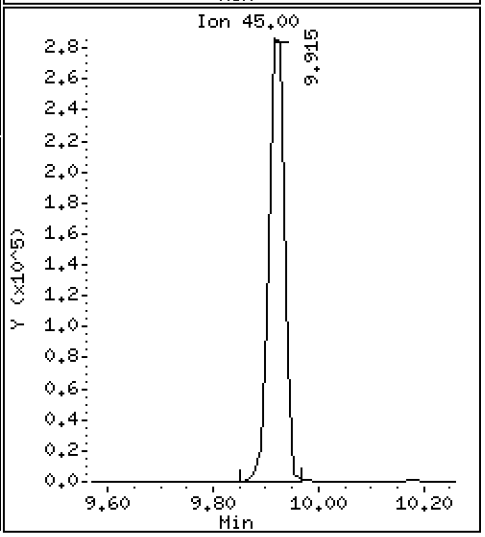


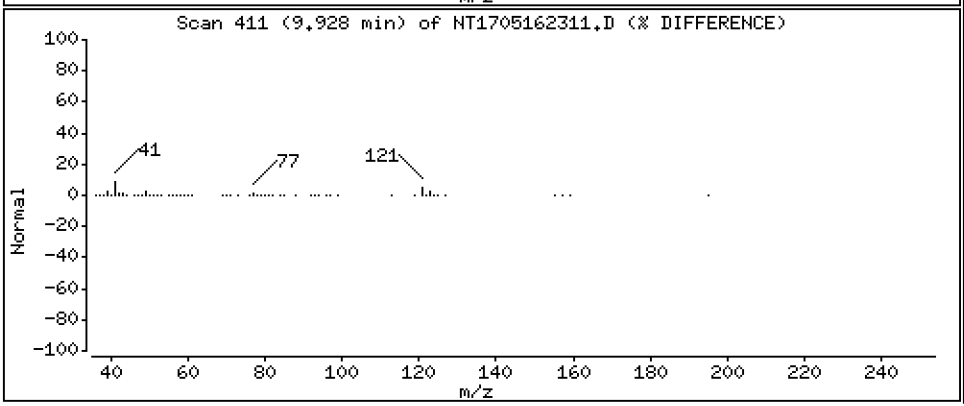












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

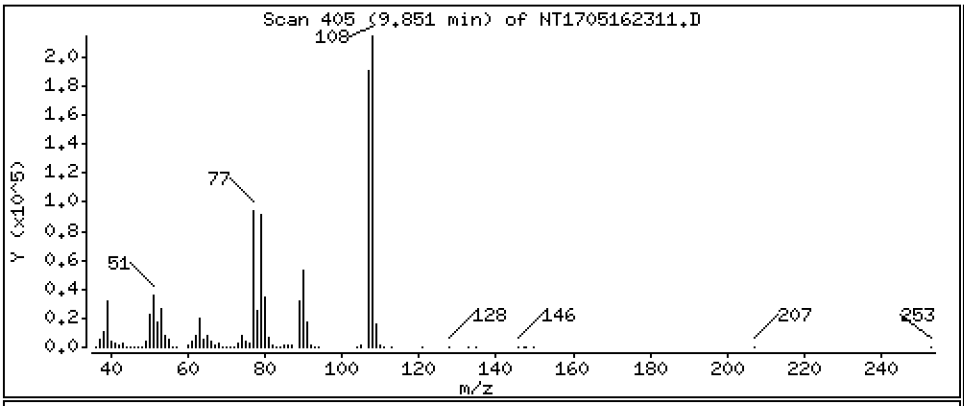
Operator: JGR

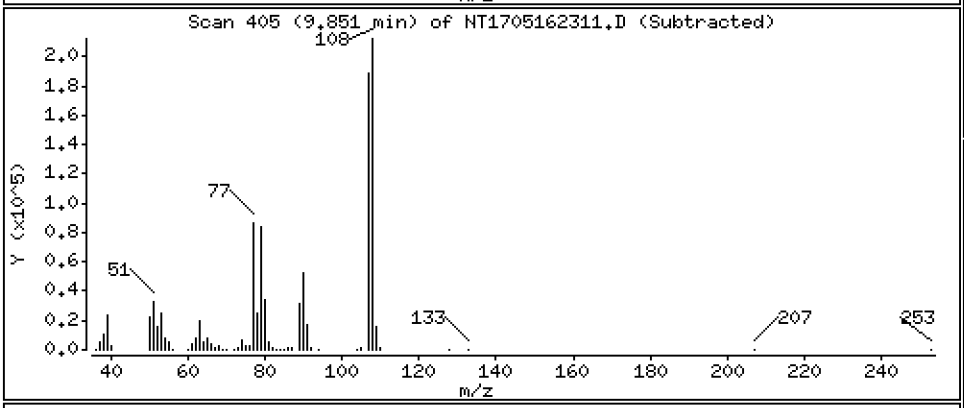
Column phase: ZB-5msi

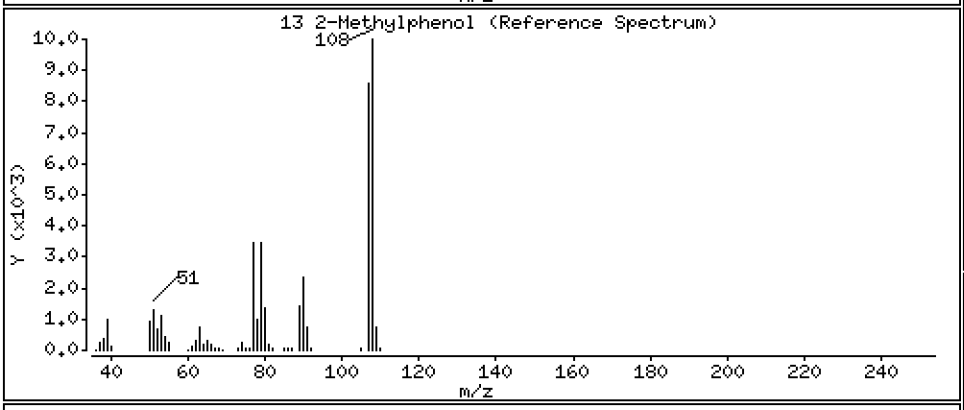
Column diameter: 0.25

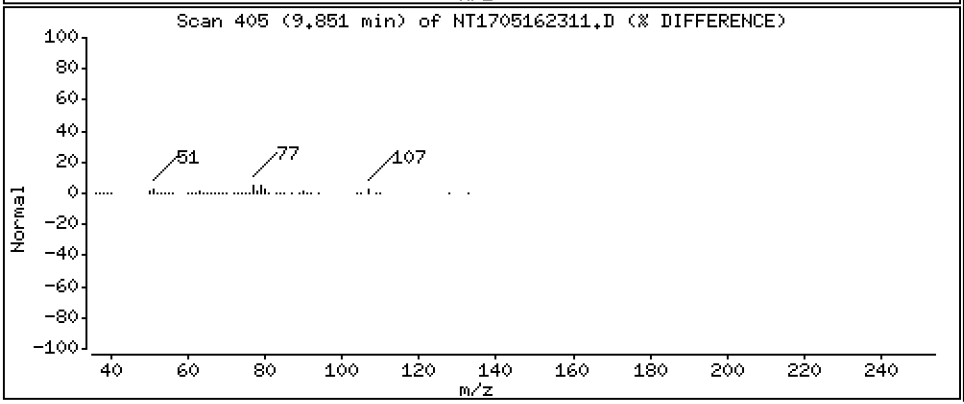
13 2-Methylphenol

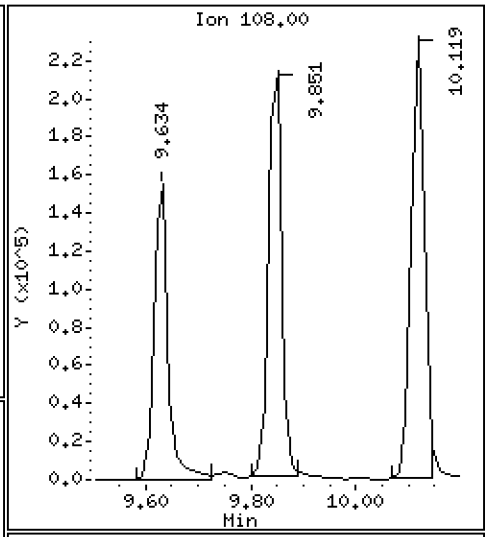
Concentration: 4.229 ug/mL

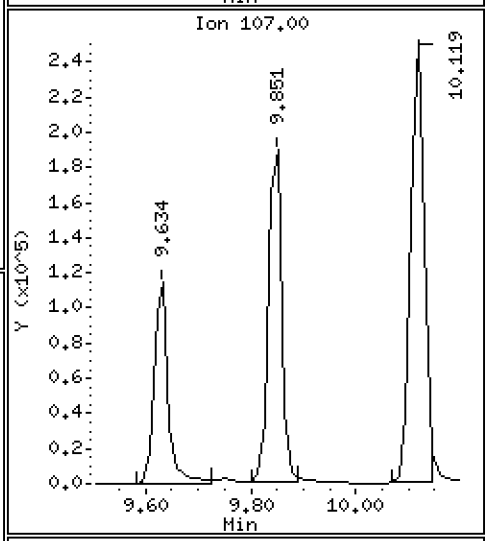


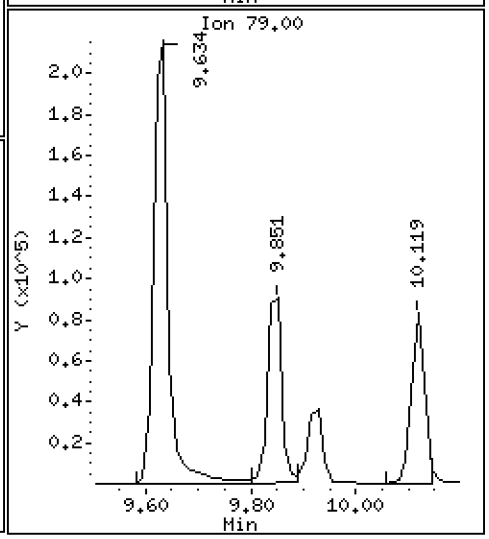












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

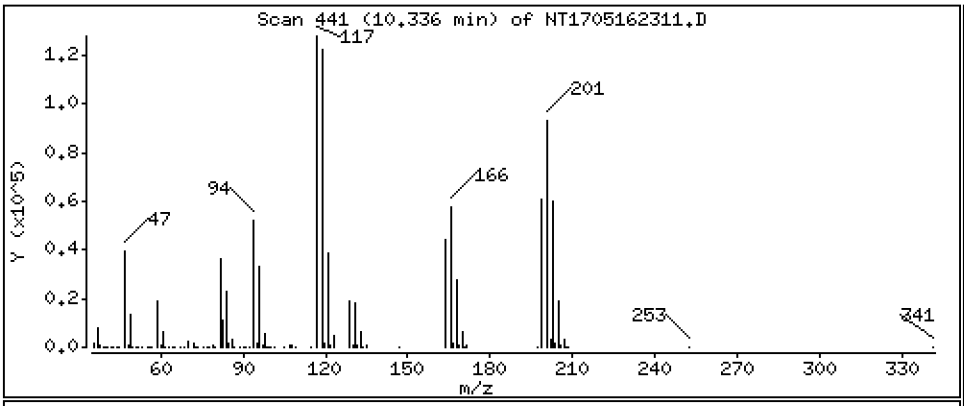
Operator: JGR

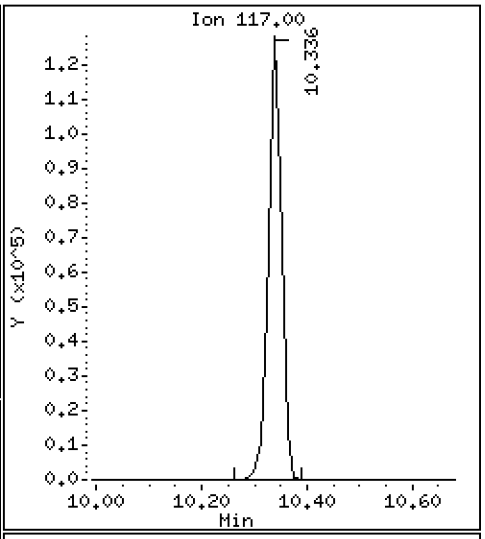
Column phase: ZB-5msi

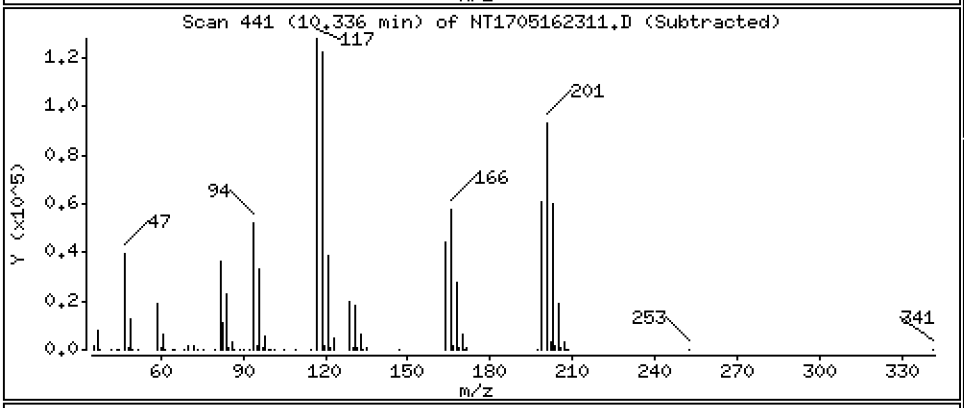
Column diameter: 0.25

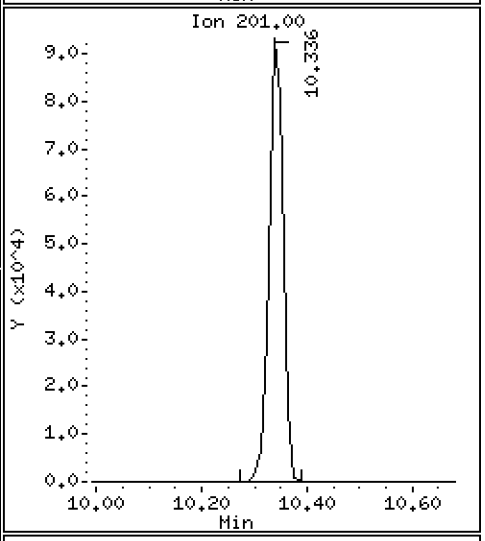
17 Hexachloroethane

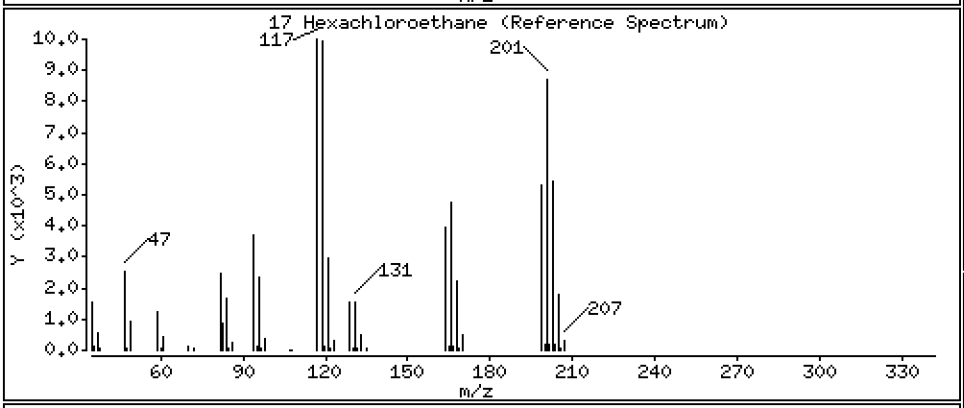
Concentration: 5.419 ug/mL

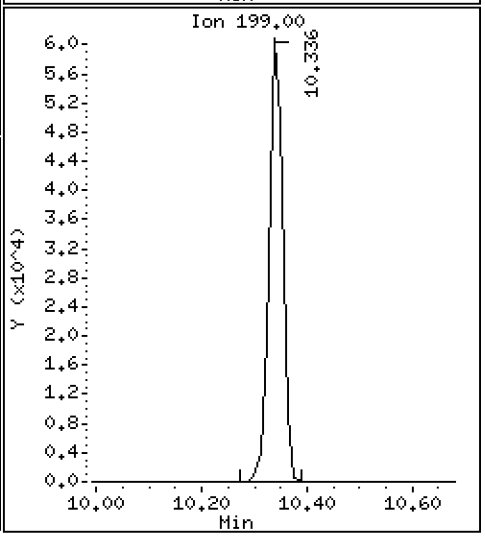


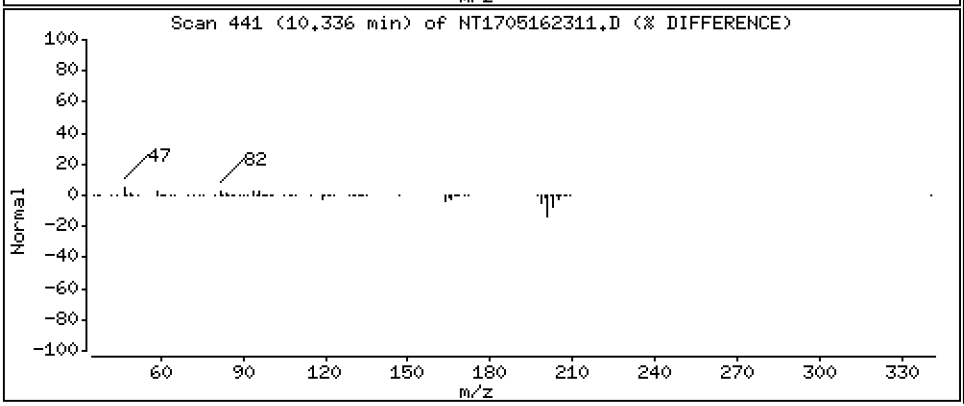












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

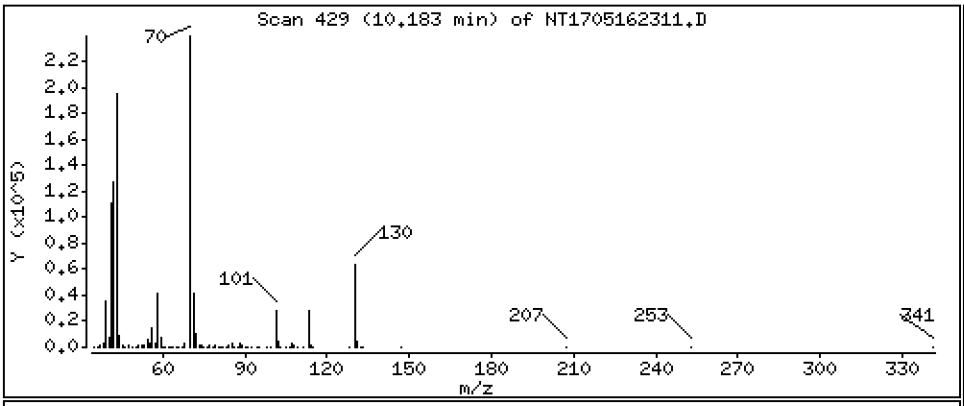
Operator: JGR

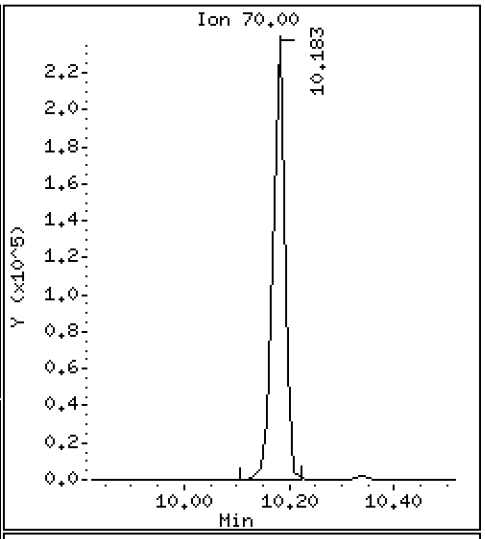
Column phase: ZB-5msi

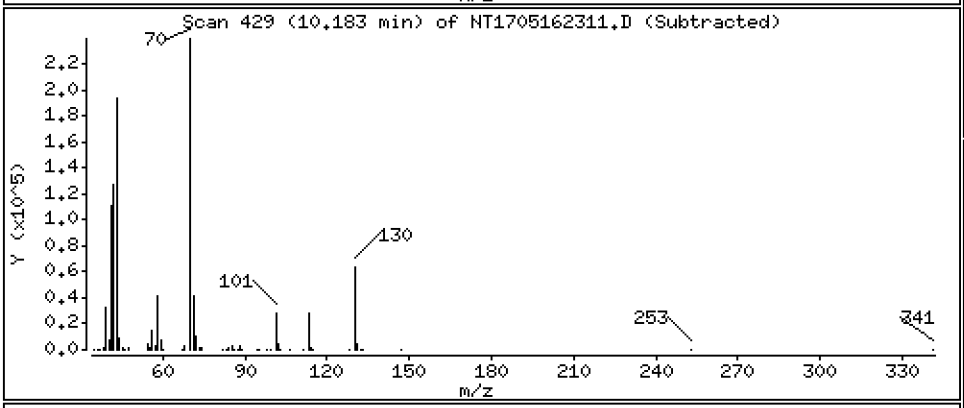
Column diameter: 0.25

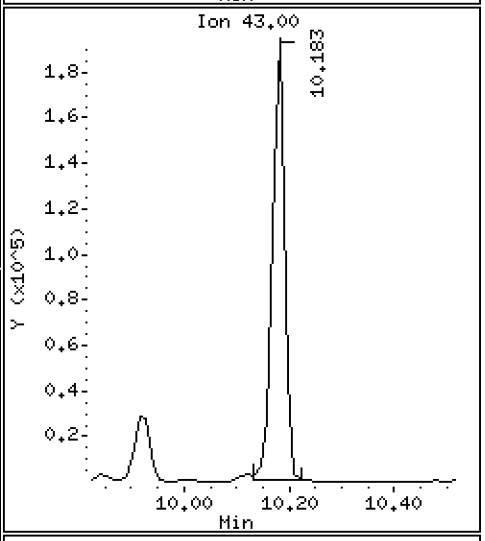
16 N-Nitroso-di-n-propylamine

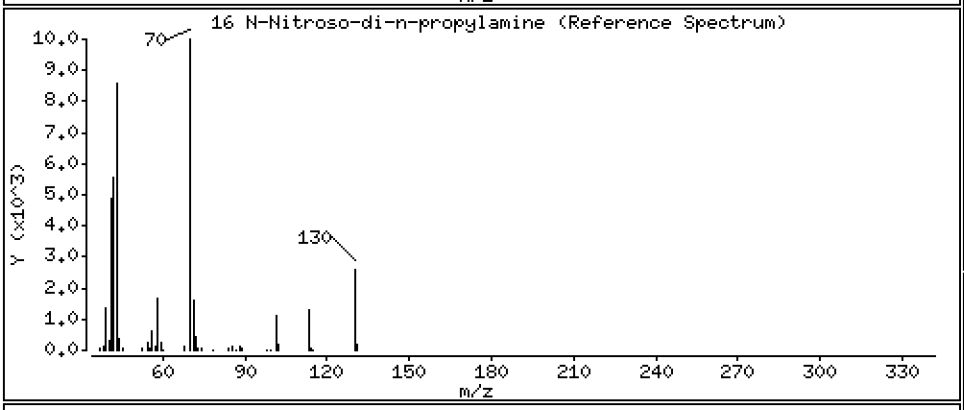
Concentration: 5.517 ug/mL

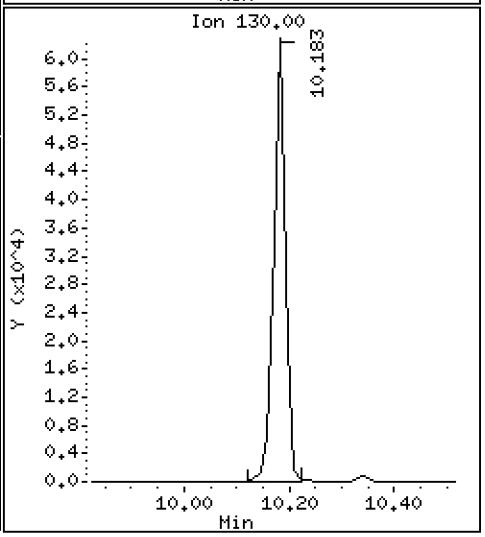


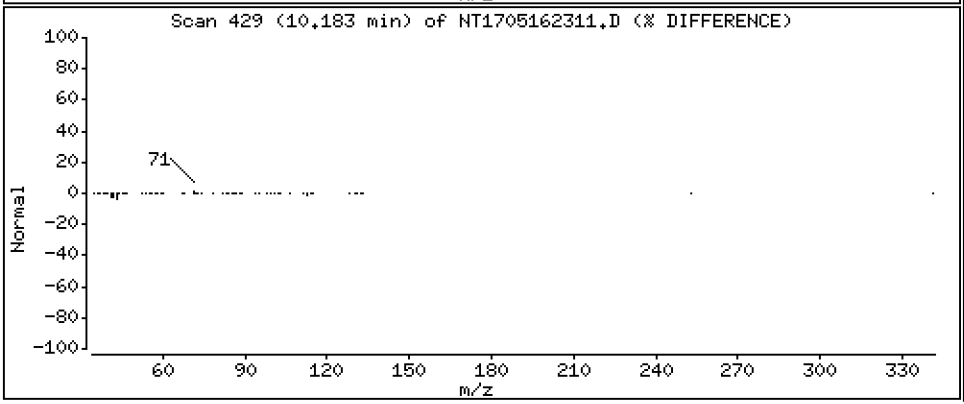












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

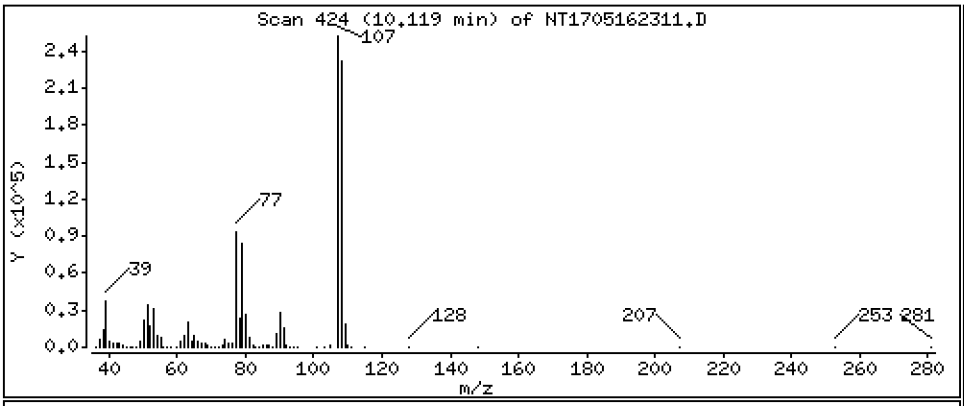
Operator: JGR

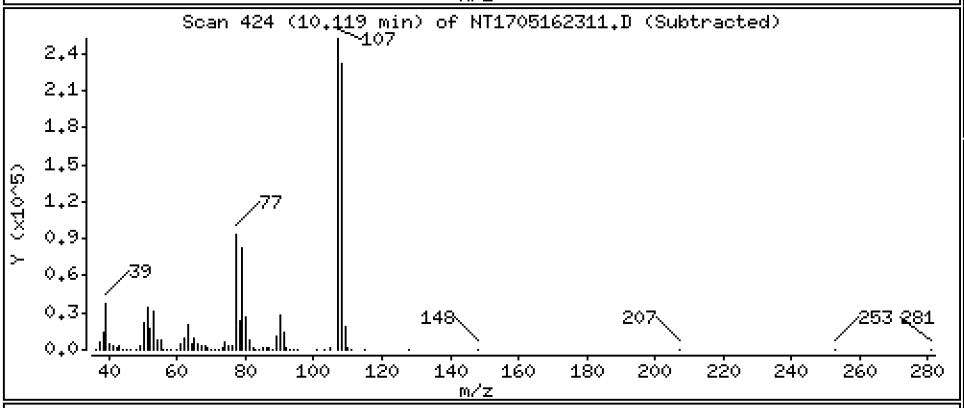
Column phase: ZB-5msi

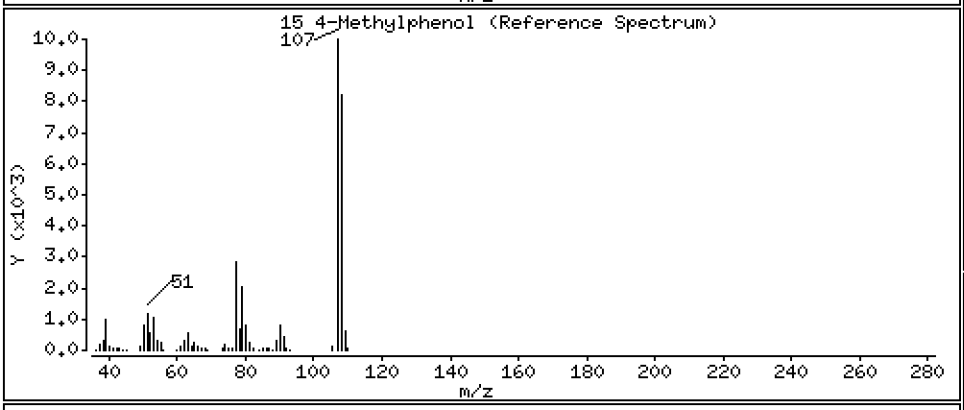
Column diameter: 0.25

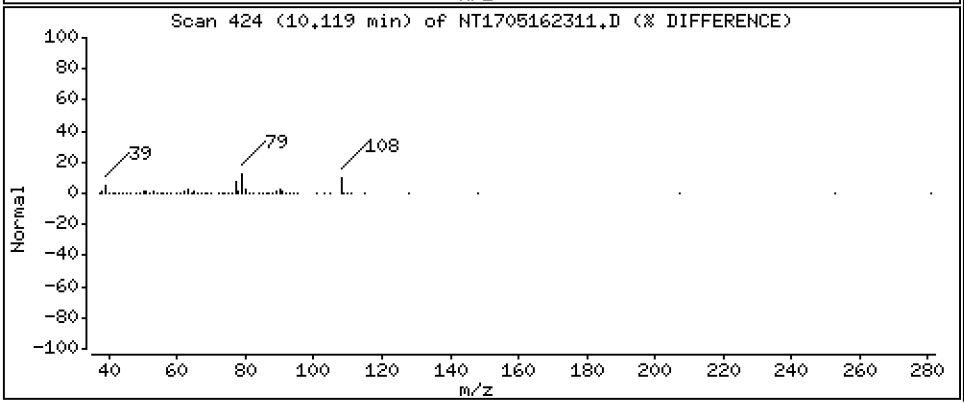
15 4-Methylphenol

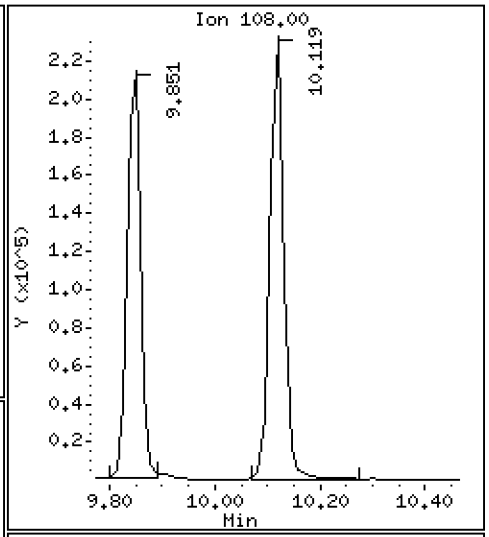
Concentration: 4.661 ug/mL

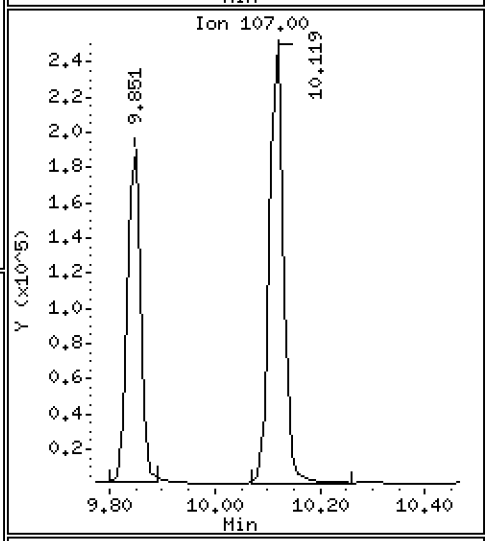


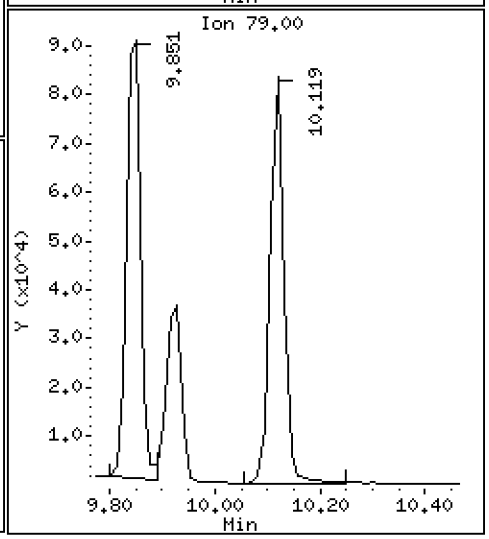












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

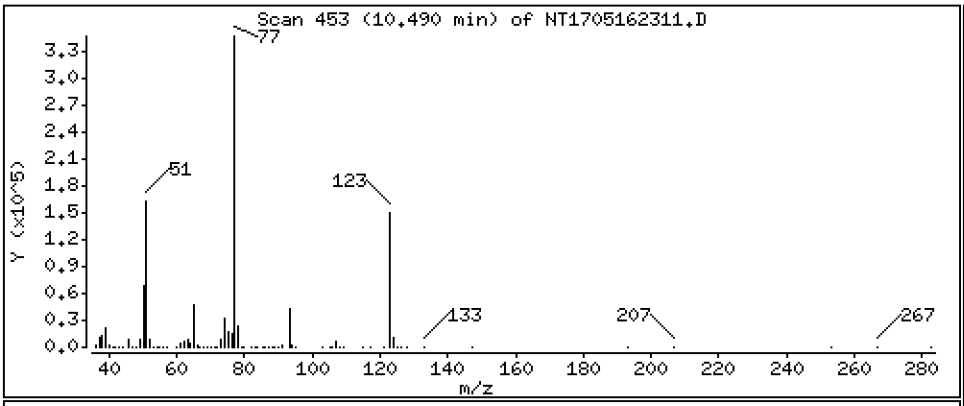
Operator: JGR

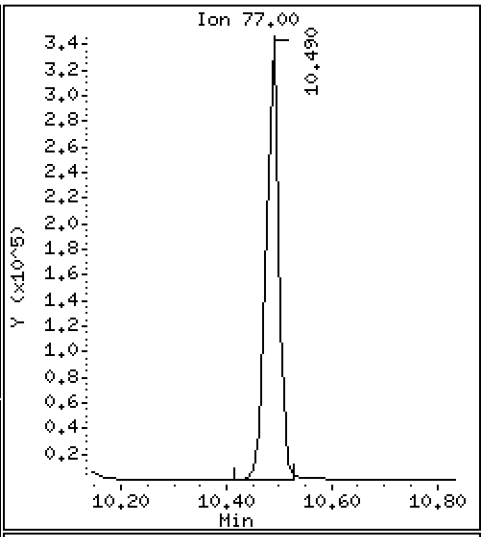
Column phase: ZB-5msi

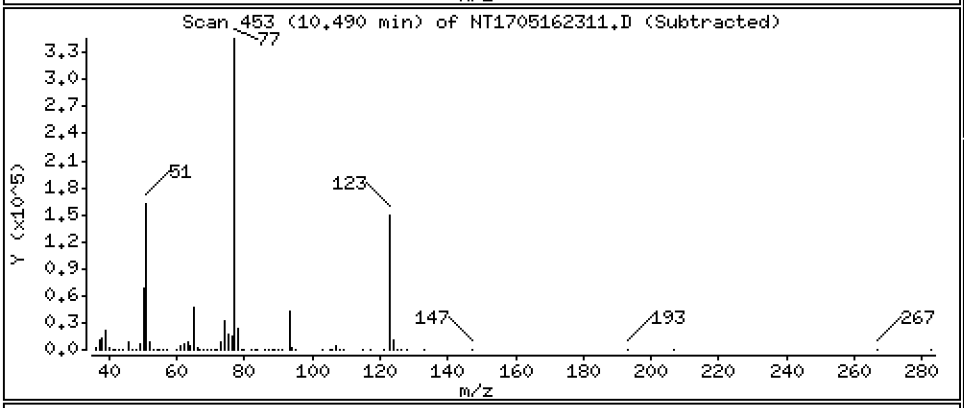
Column diameter: 0.25

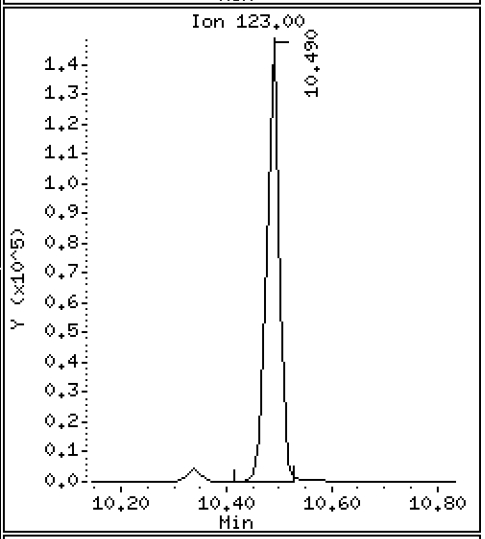
19 Nitrobenzene

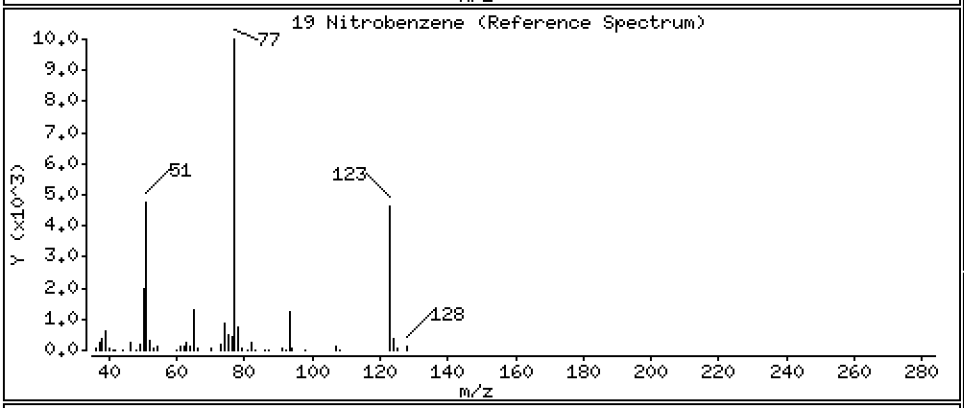
Concentration: 5.329 ug/mL

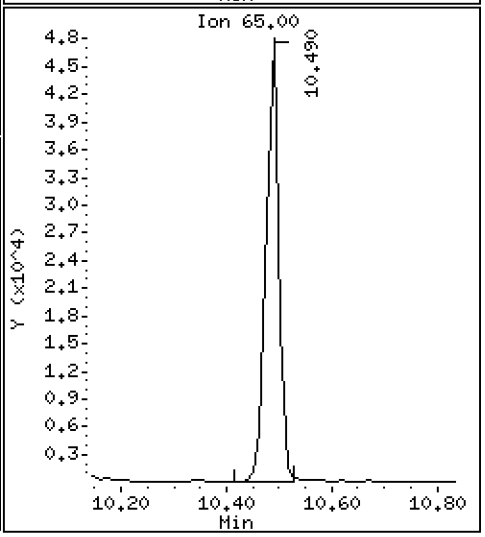


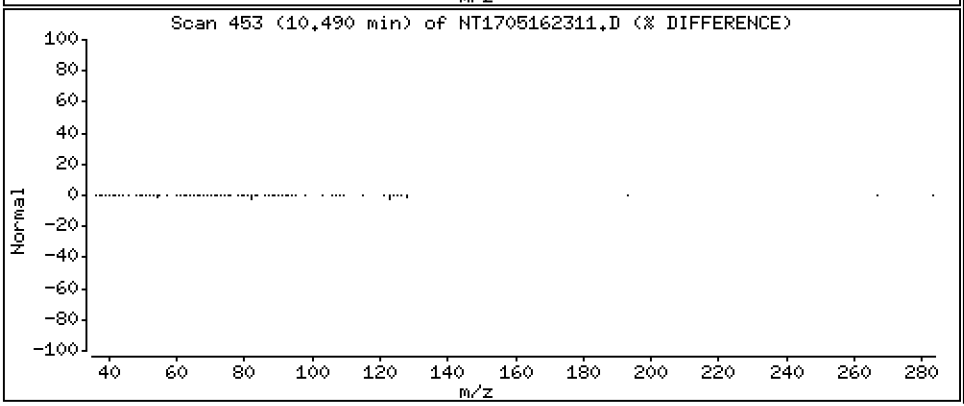












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

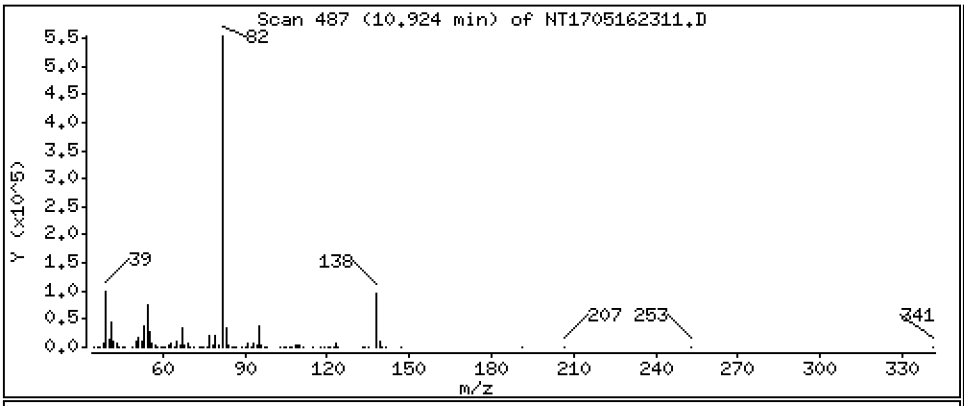
Operator: JGR

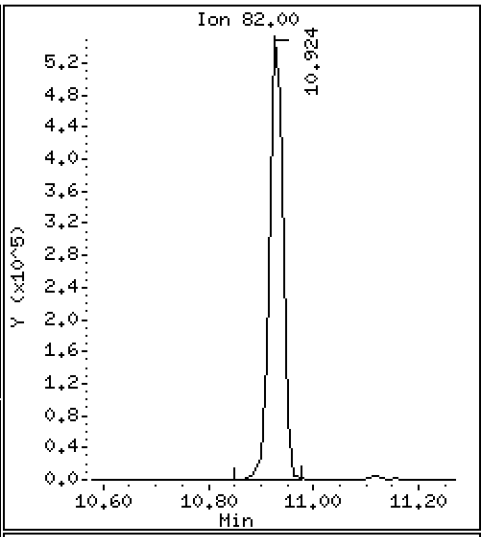
Column phase: ZB-5msi

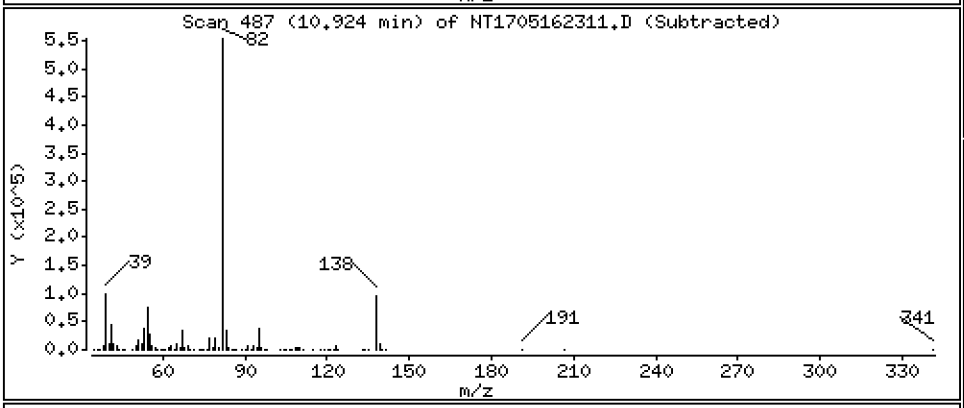
Column diameter: 0.25

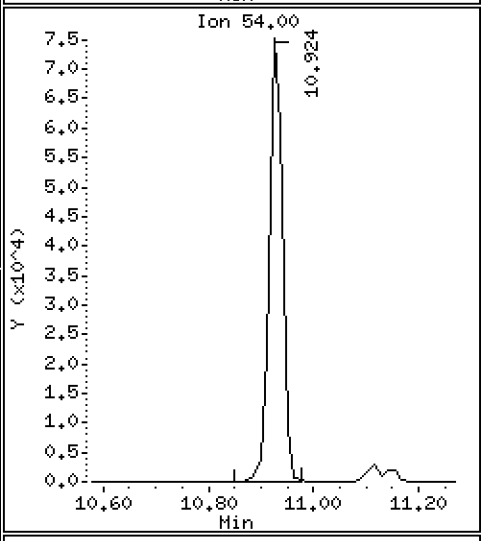
20 Isophorone

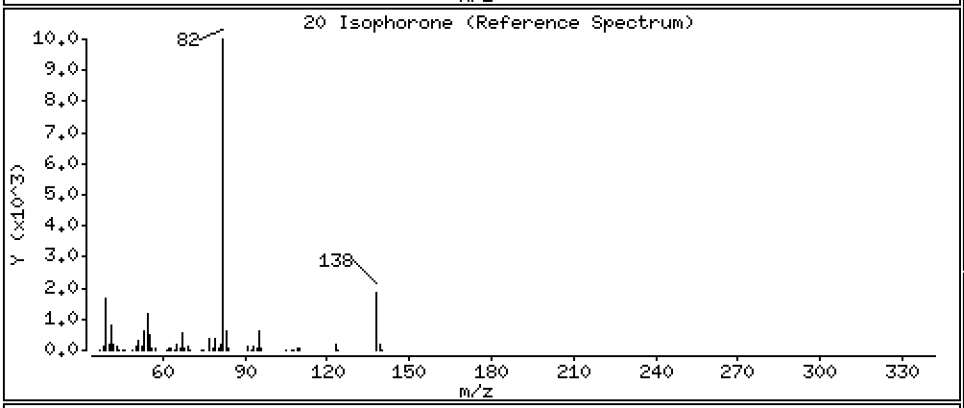
Concentration: 6.943 ug/mL

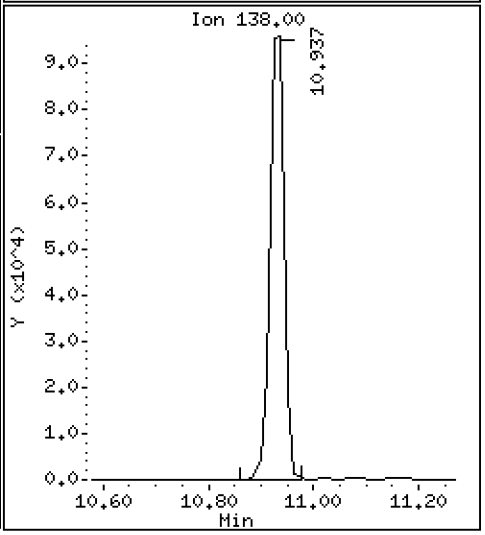


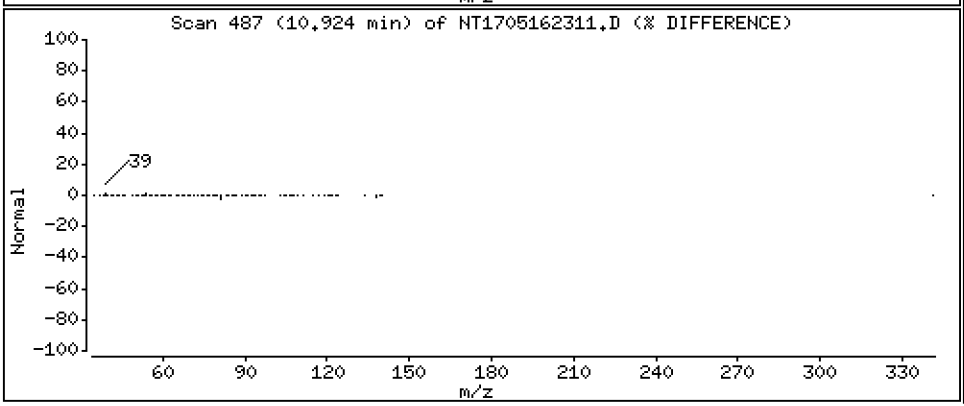












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

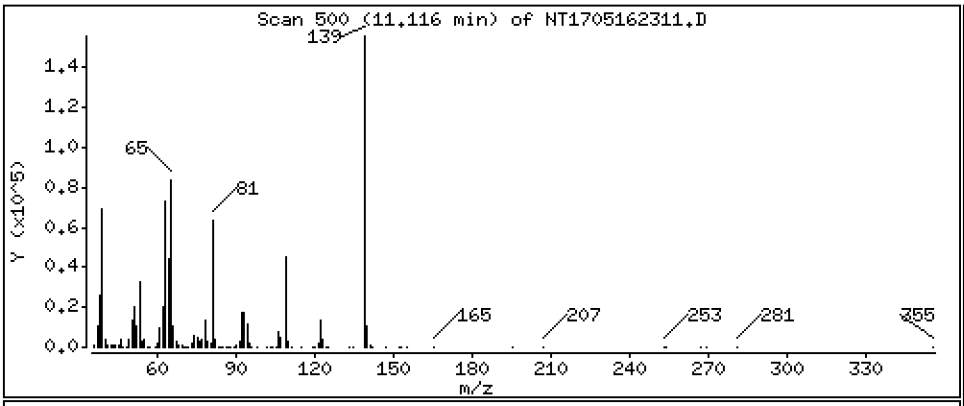
Operator: JGR

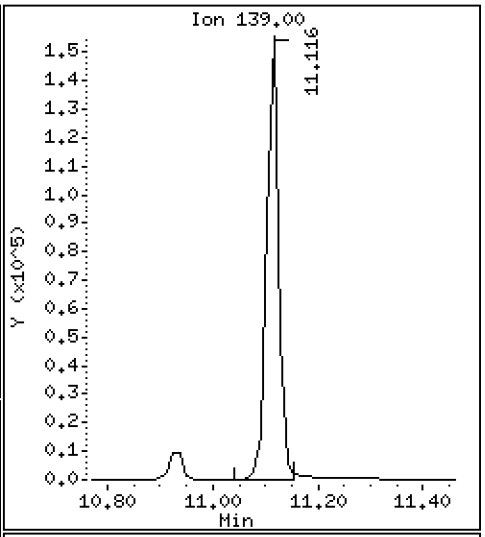
Column phase: ZB-5msi

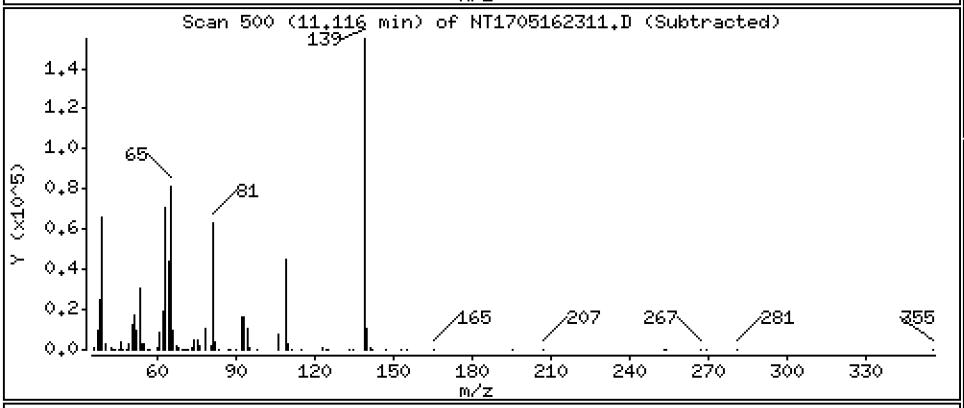
Column diameter: 0.25

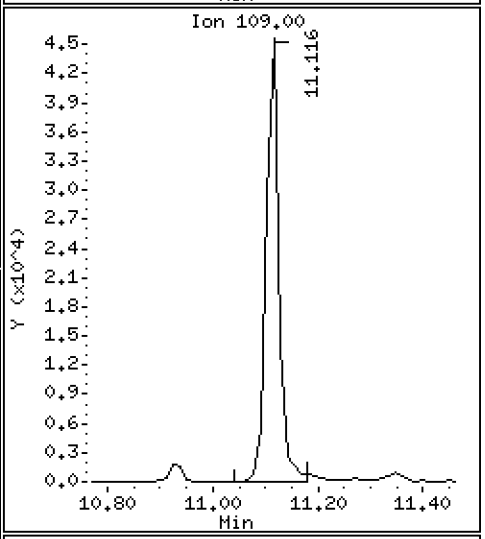
21 2-Nitrophenol

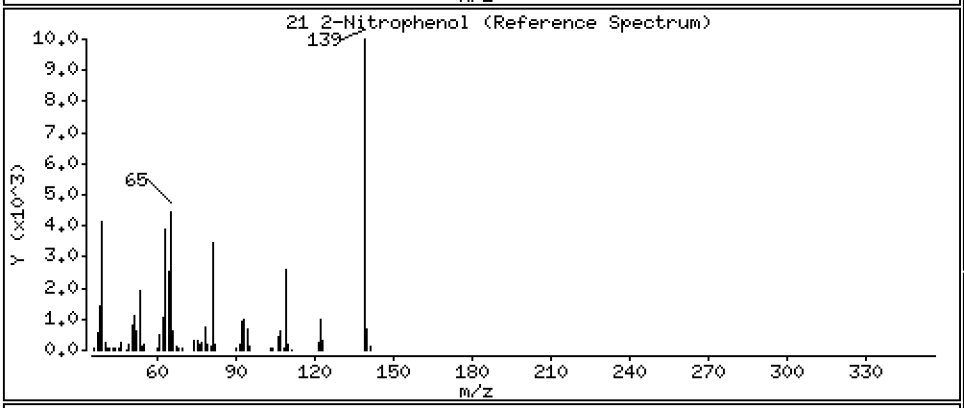
Concentration: 4.899 ug/mL

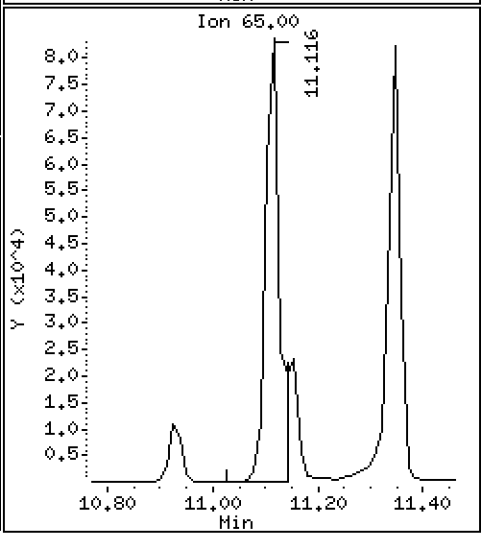


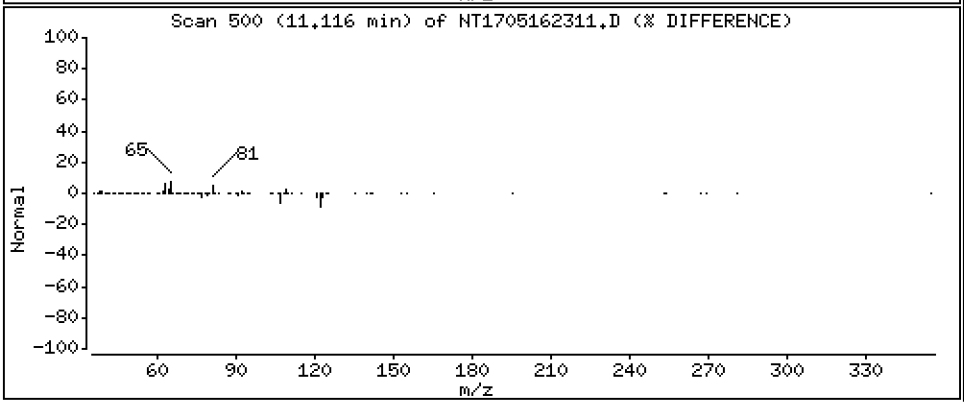












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

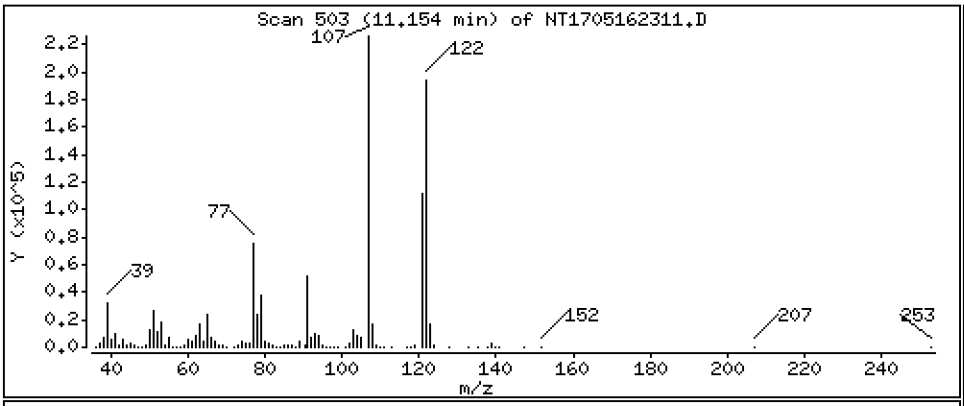
Operator: JGR

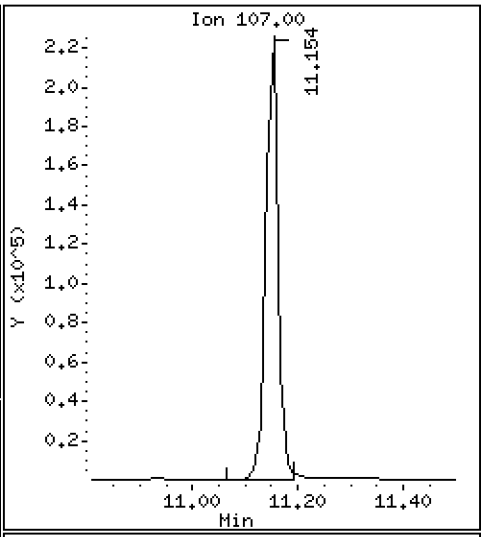
Column phase: ZB-5msi

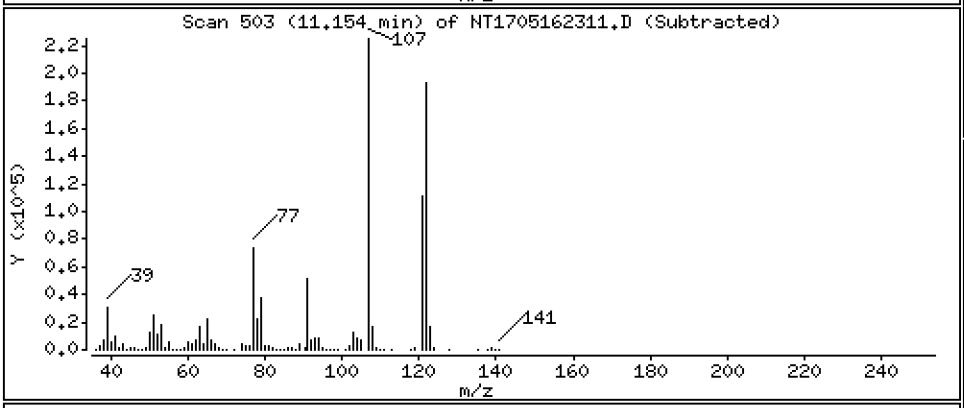
Column diameter: 0.25

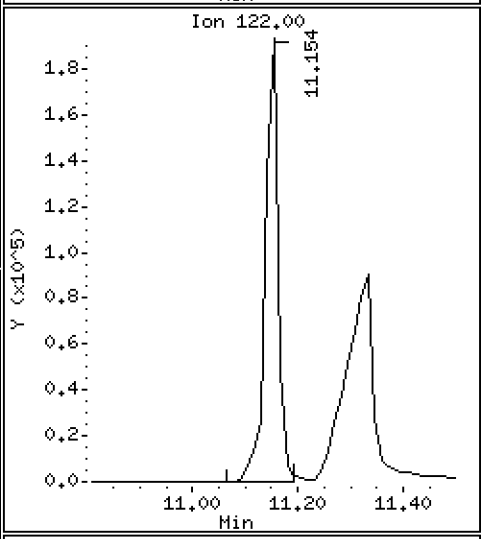
22 2,4-Dimethylphenol

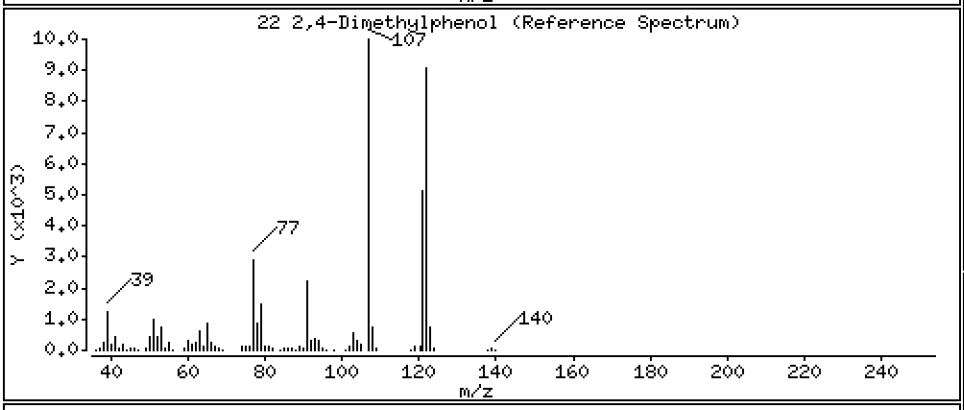
Concentration: 3.788 ug/mL

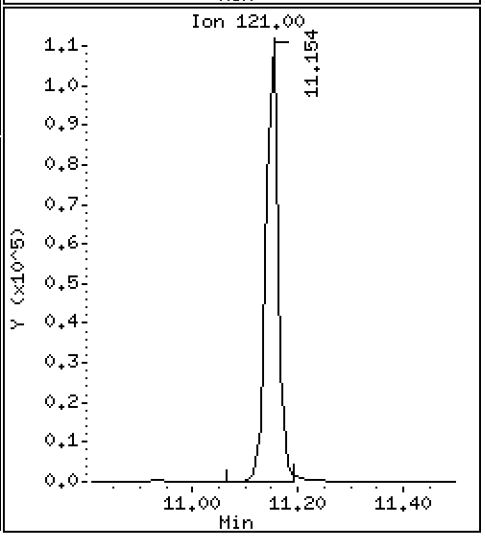


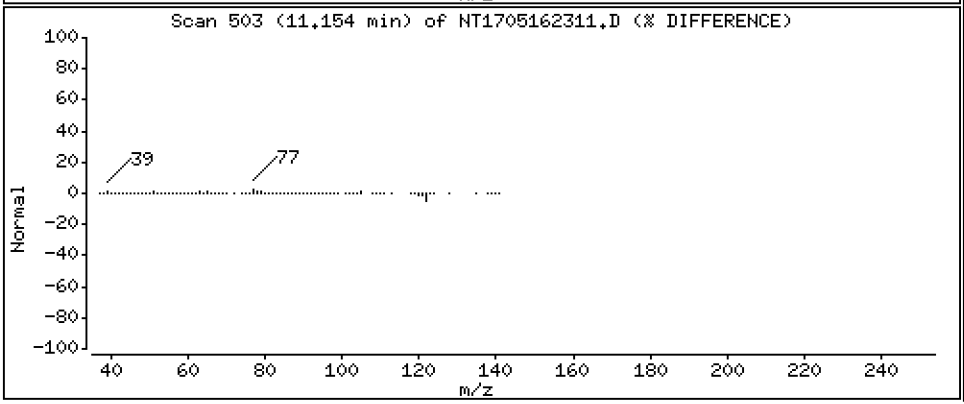












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

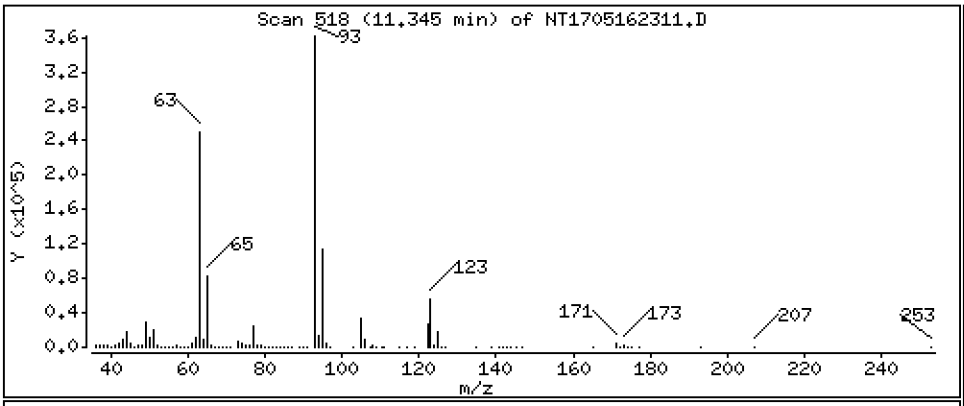
Operator: JGR

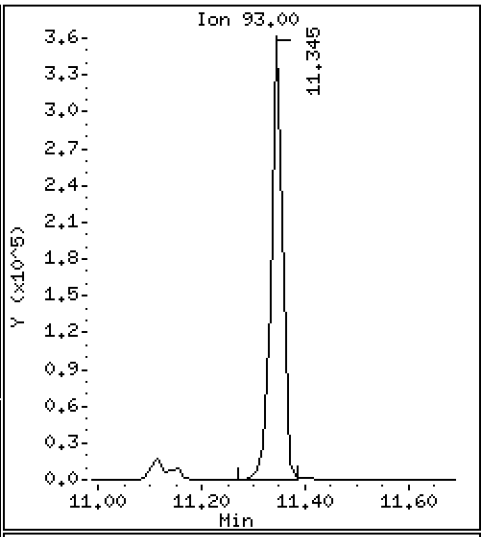
Column phase: ZB-5msi

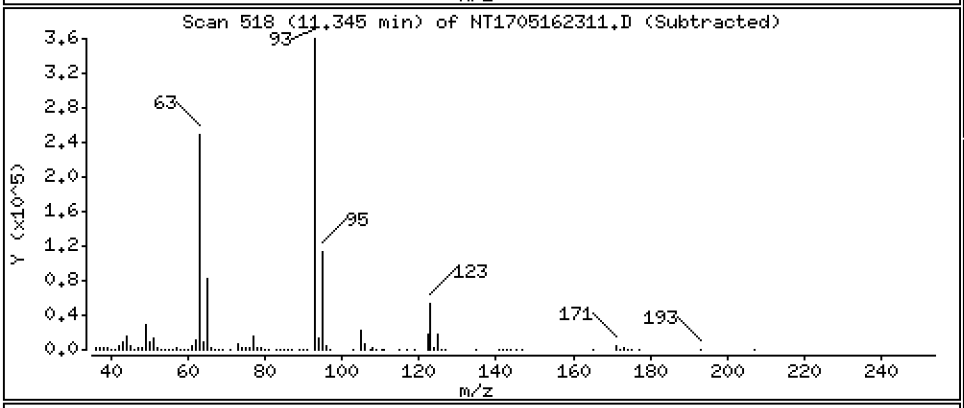
Column diameter: 0.25

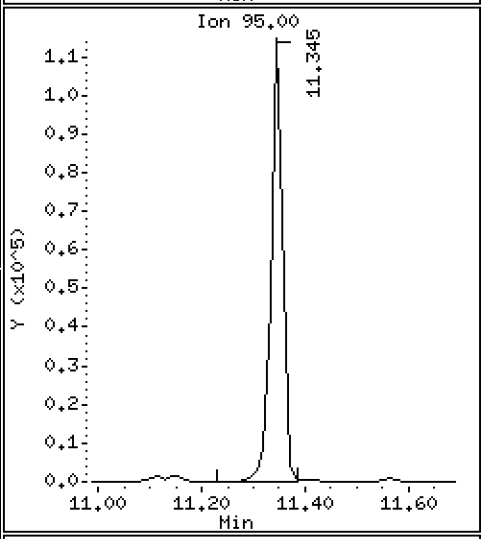
23 Bis(2-Chloroethoxy)methane

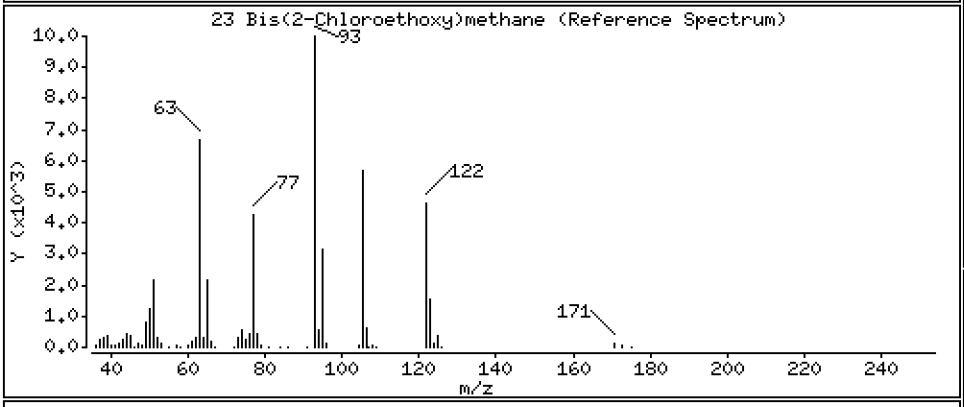
Concentration: 6.232 ug/mL

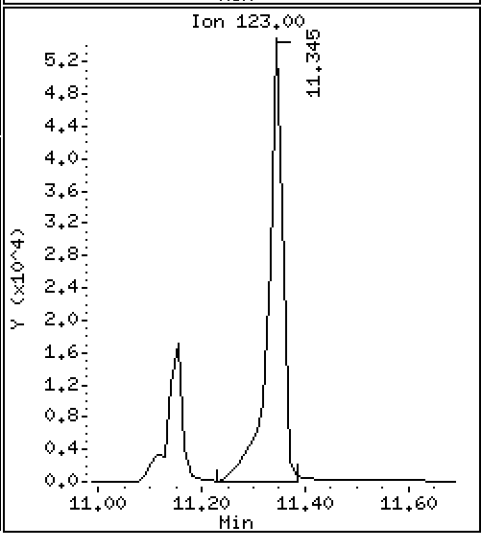


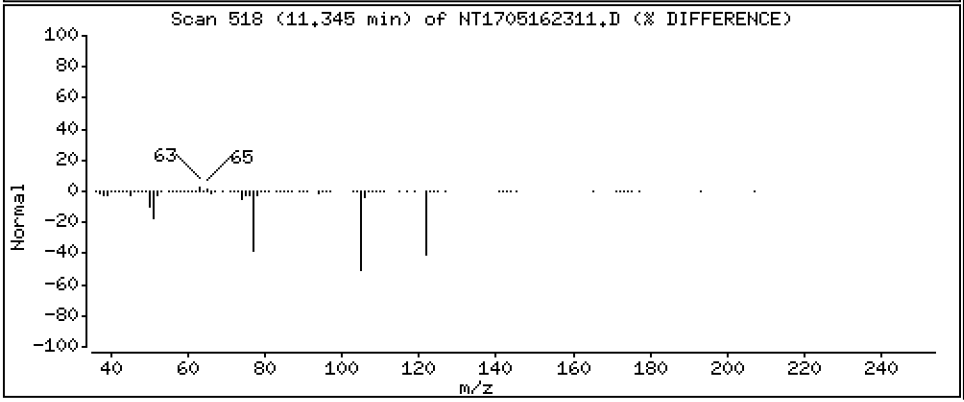












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

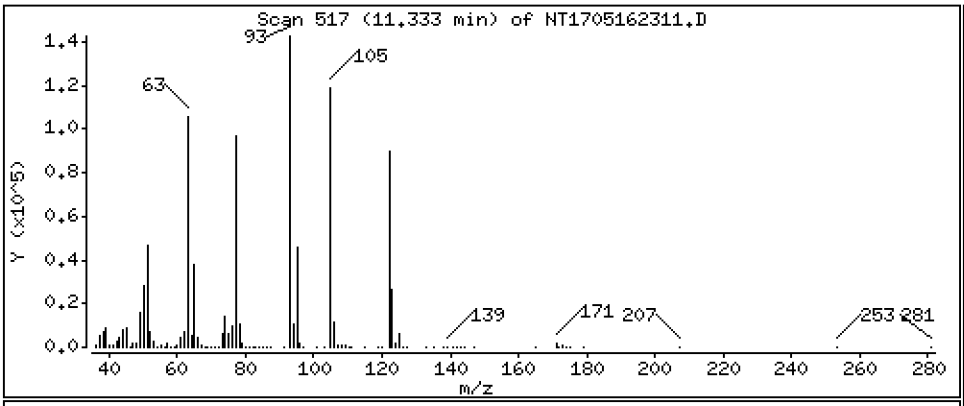
Operator: JGR

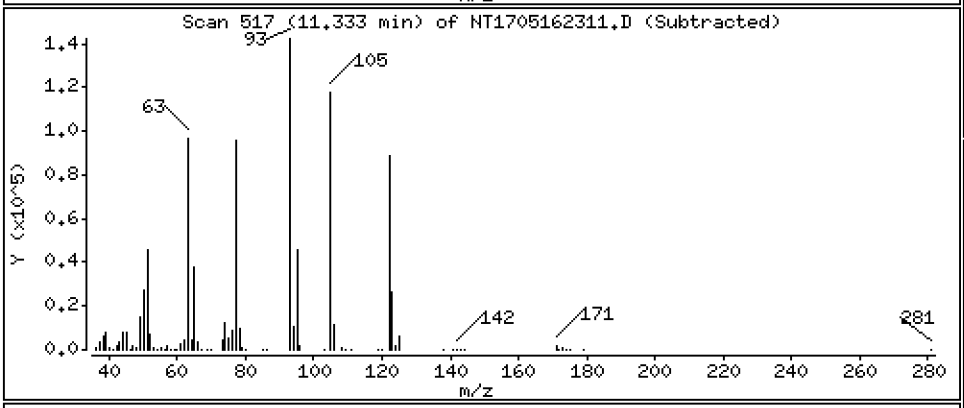
Column phase: ZB-5msi

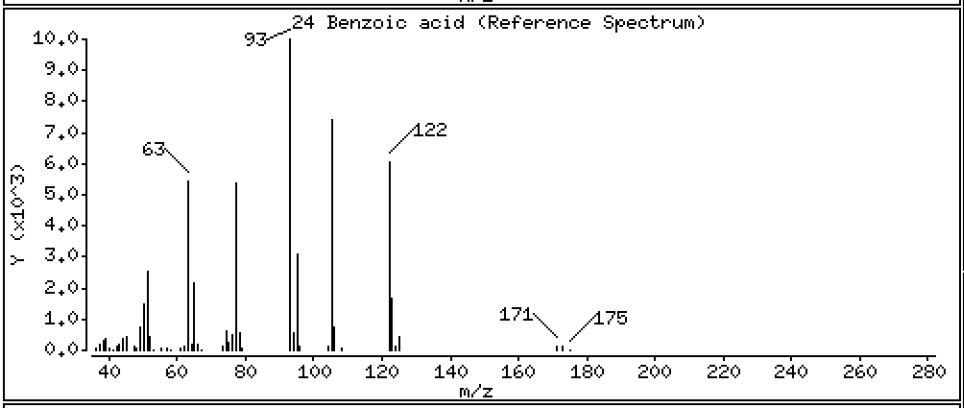
Column diameter: 0.25

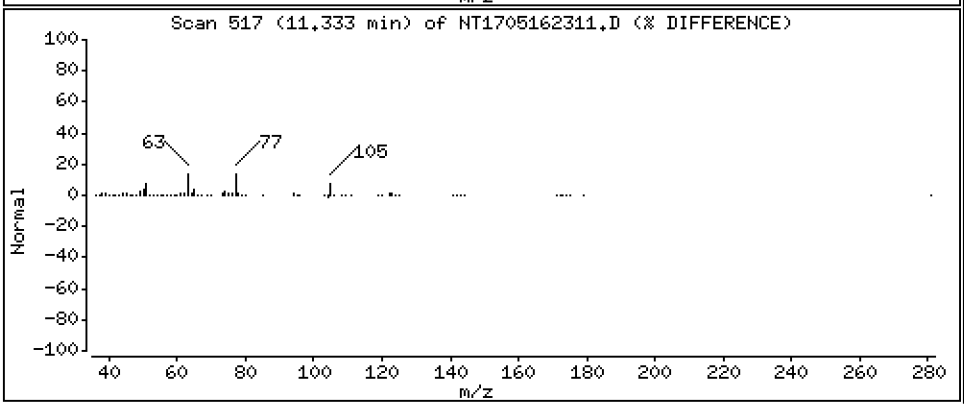
24 Benzoic acid

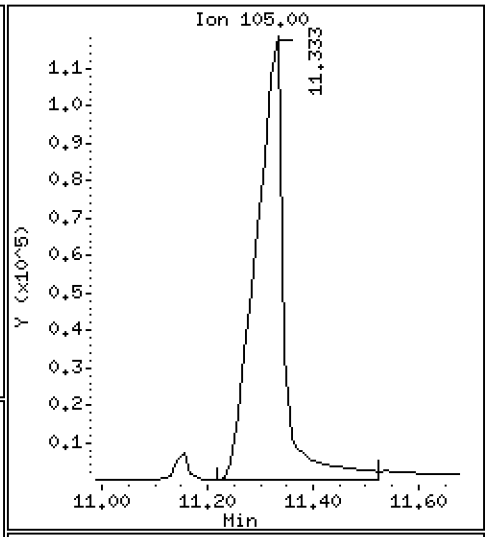
Concentration: 6.761 ug/mL

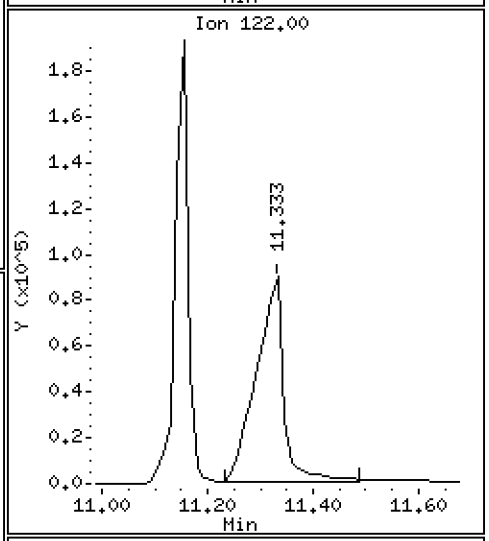


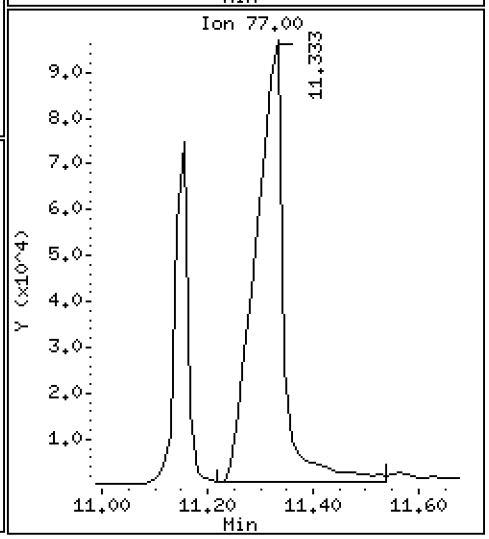












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

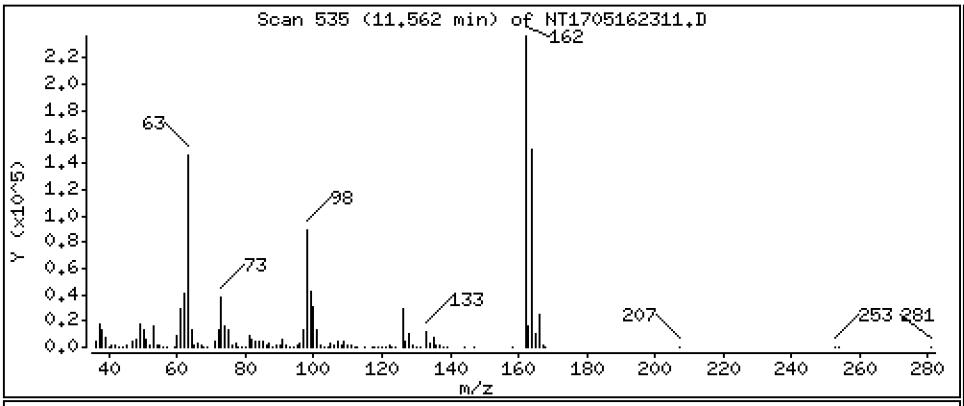
Operator: JGR

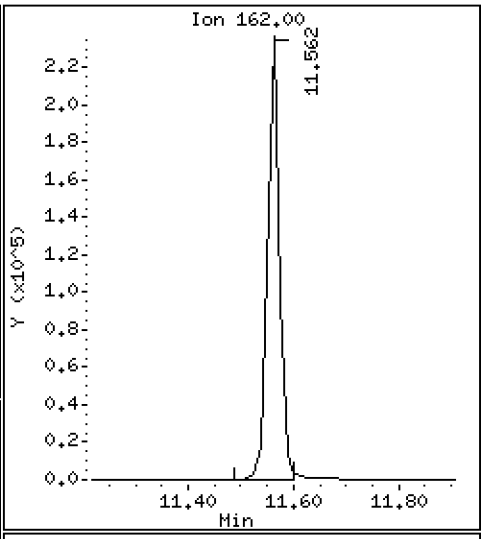
Column phase: ZB-5msi

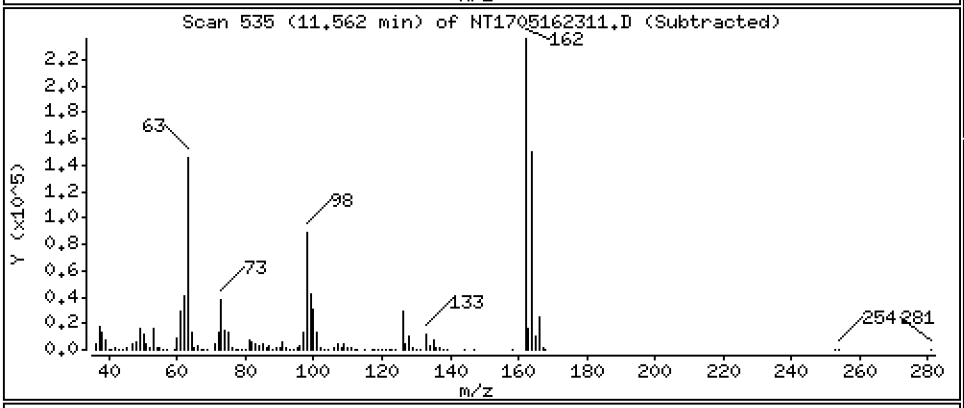
Column diameter: 0.25

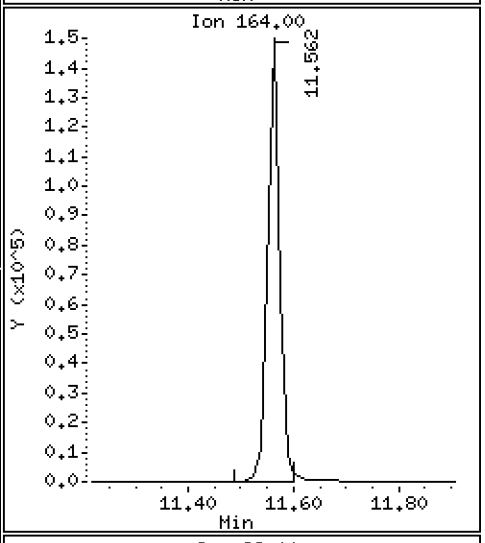
25 2,4-Dichlorophenol

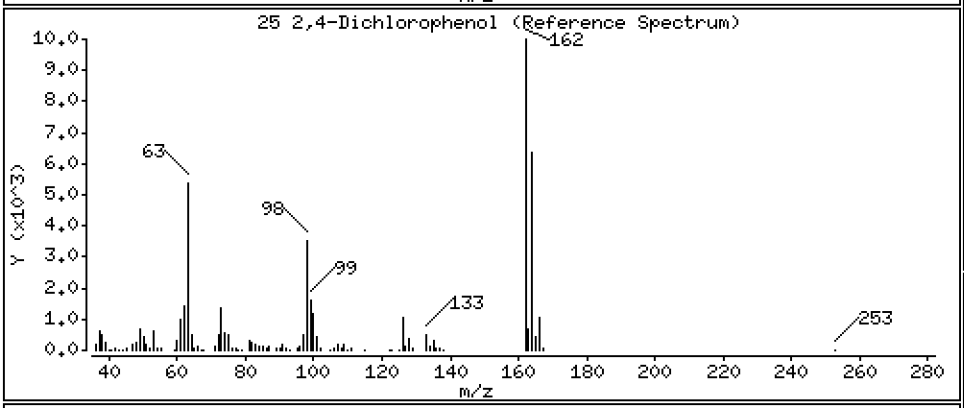
Concentration: 4.707 ug/mL

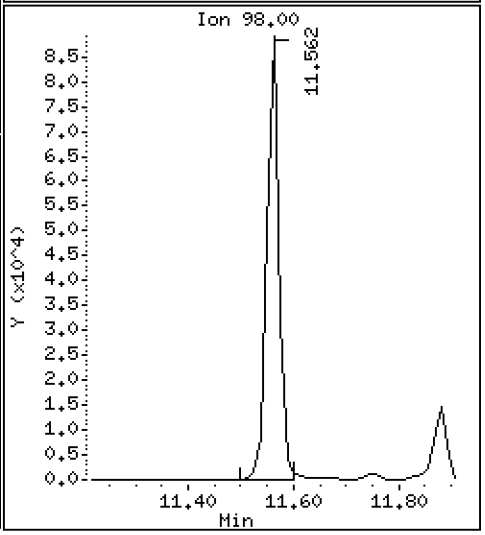


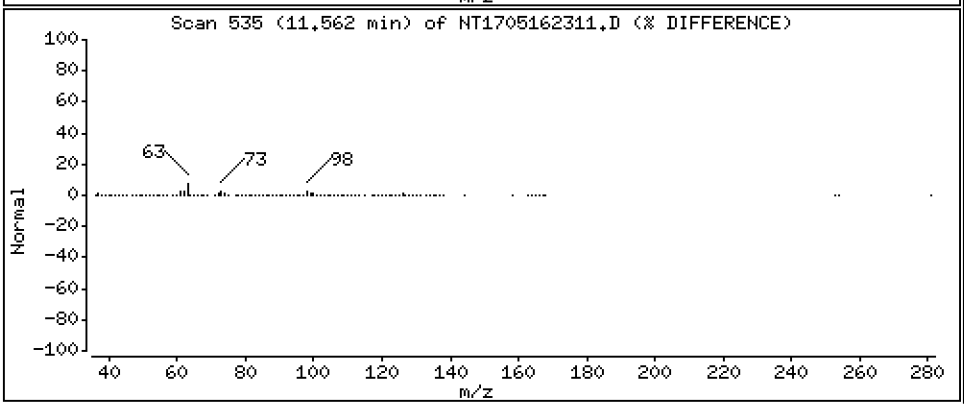












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

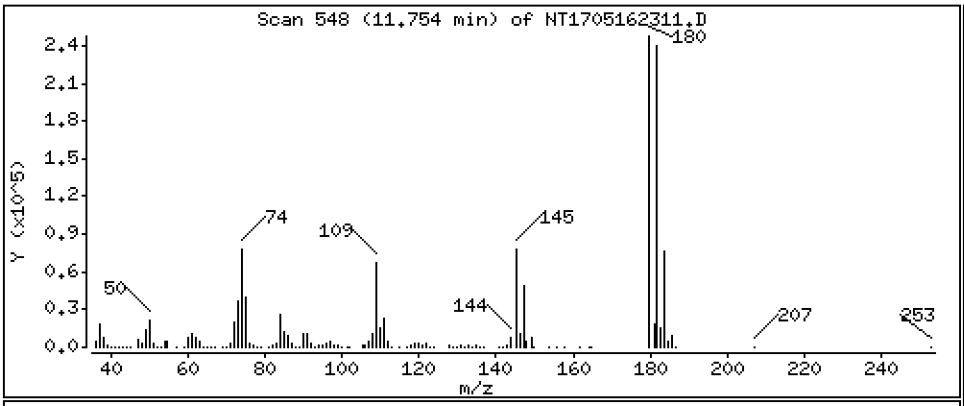
Operator: JGR

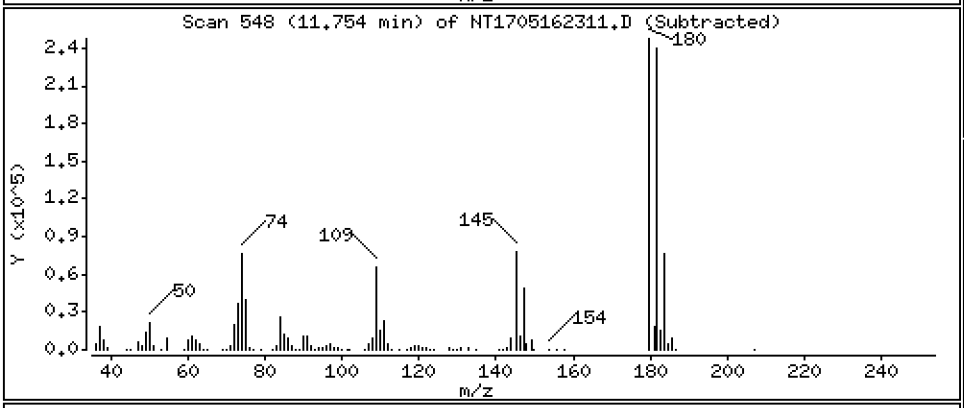
Column phase: ZB-5msi

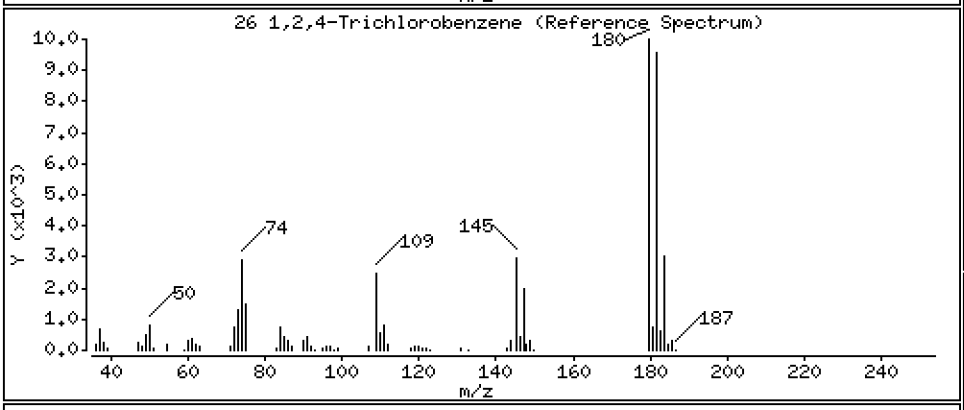
Column diameter: 0.25

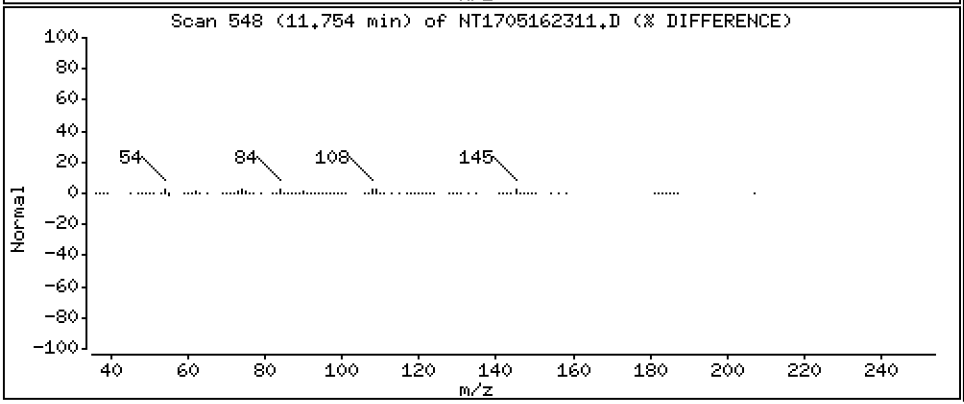
26 1,2,4-Trichlorobenzene

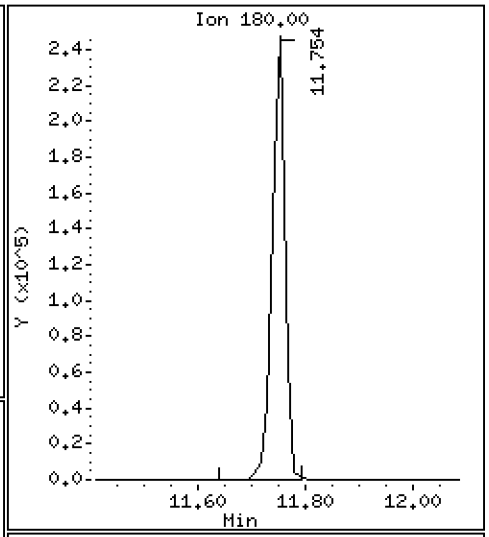
Concentration: 5.879 ug/mL

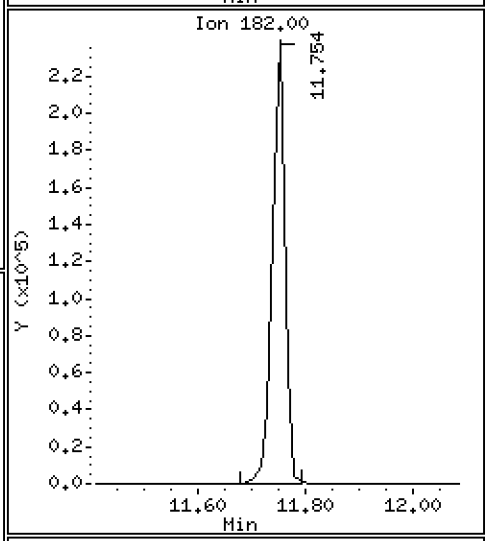


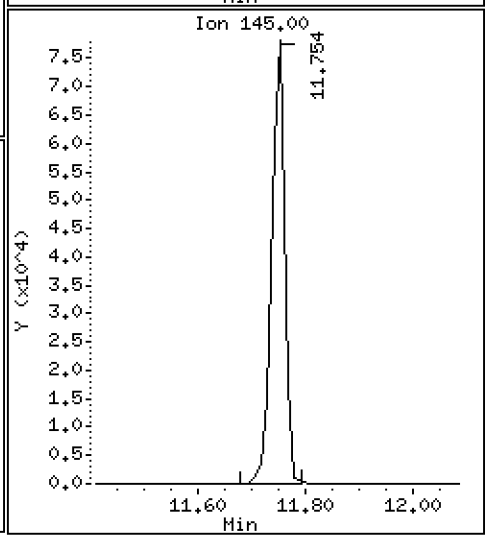












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

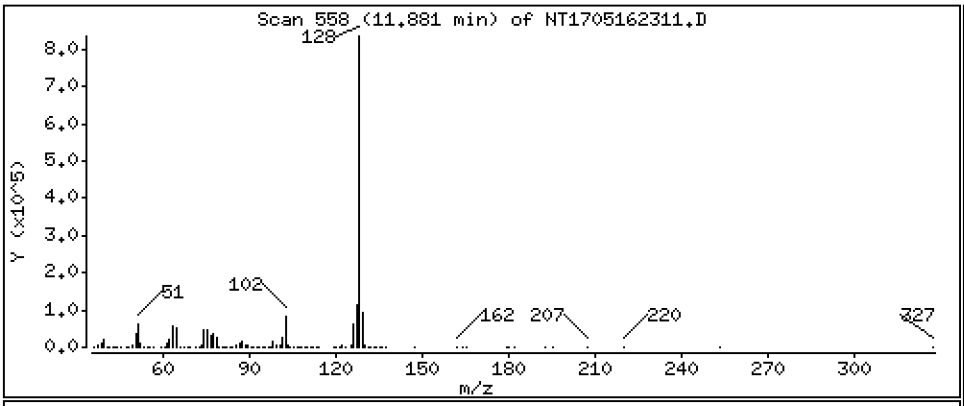
Operator: JGR

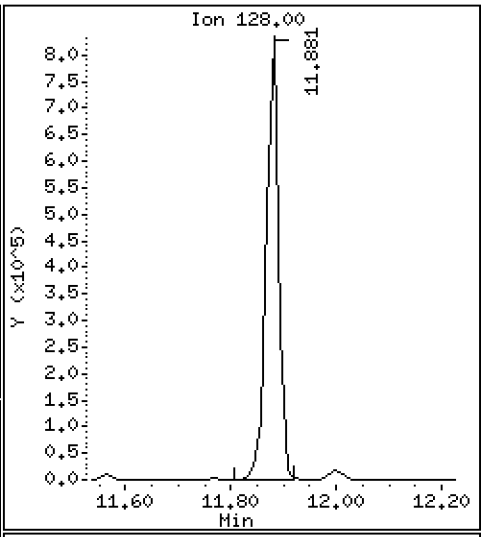
Column phase: ZB-5msi

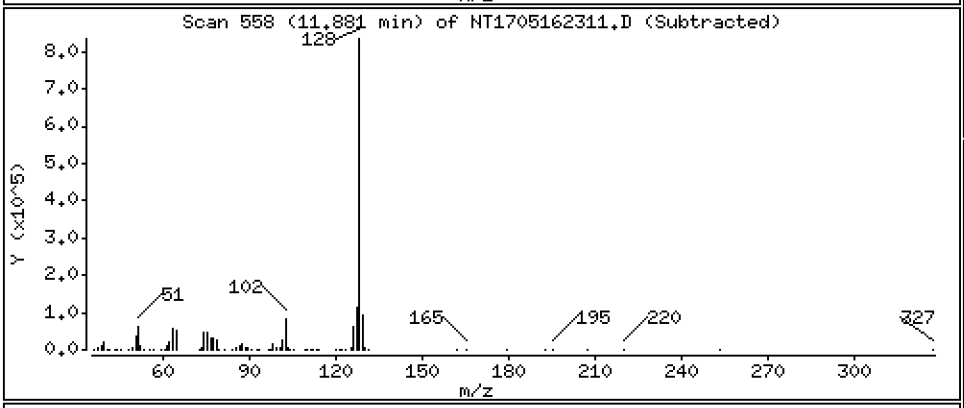
Column diameter: 0.25

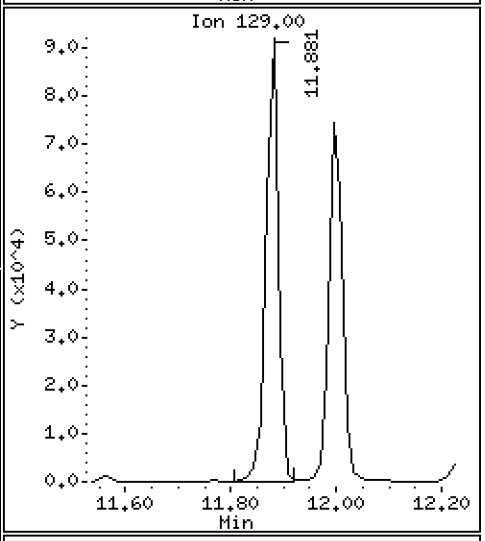
28 Naphthalene

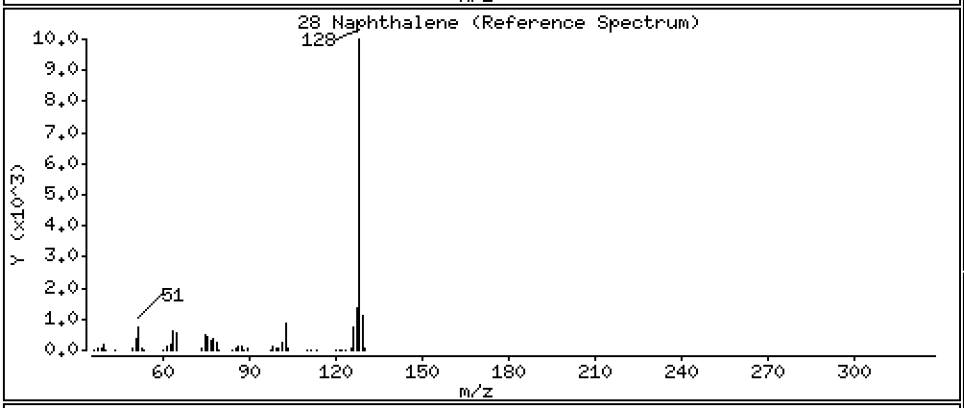
Concentration: 5.129 ug/mL

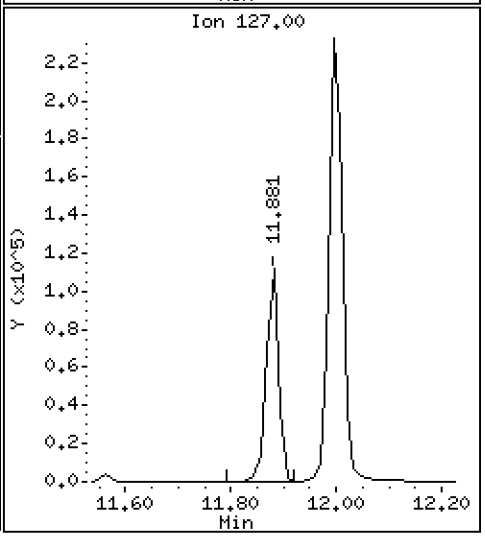


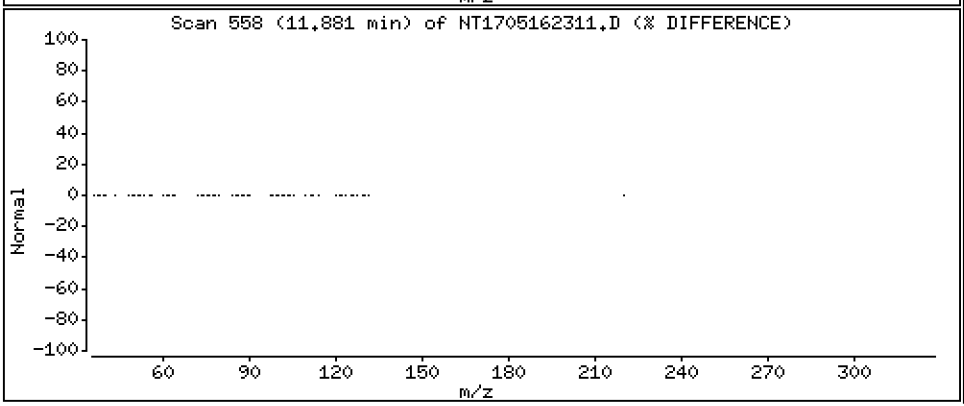












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

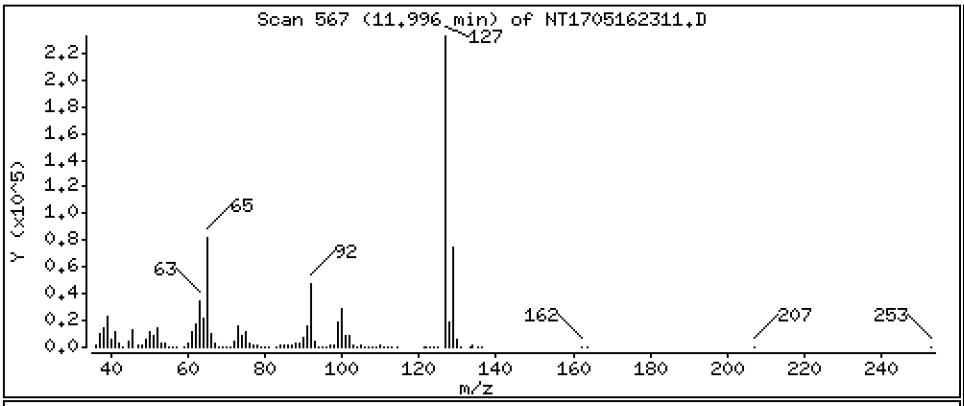
Operator: JGR

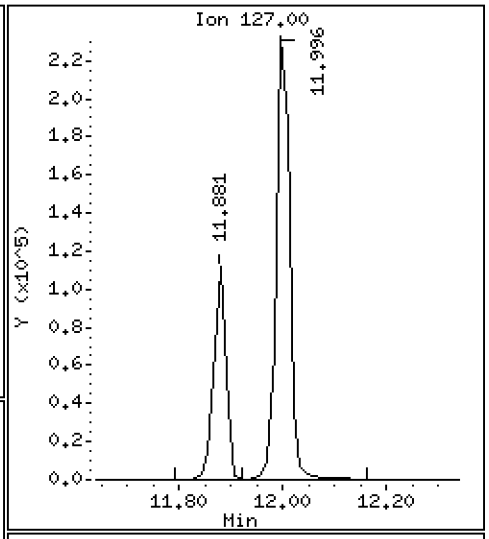
Column phase: ZB-5msi

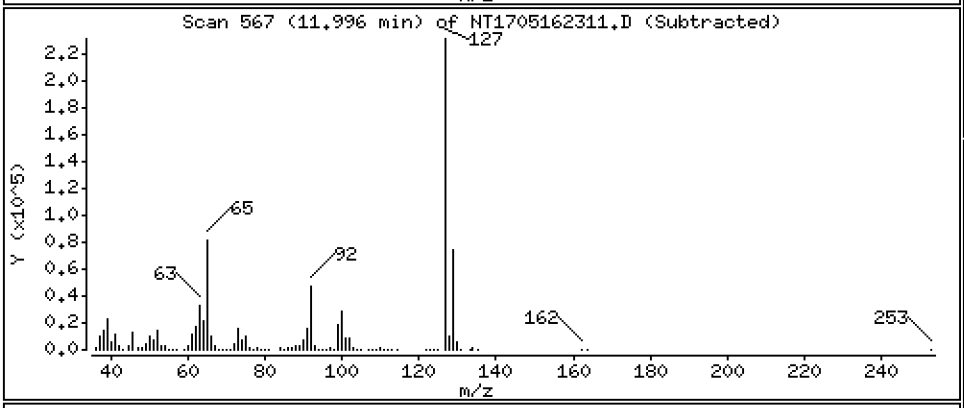
Column diameter: 0.25

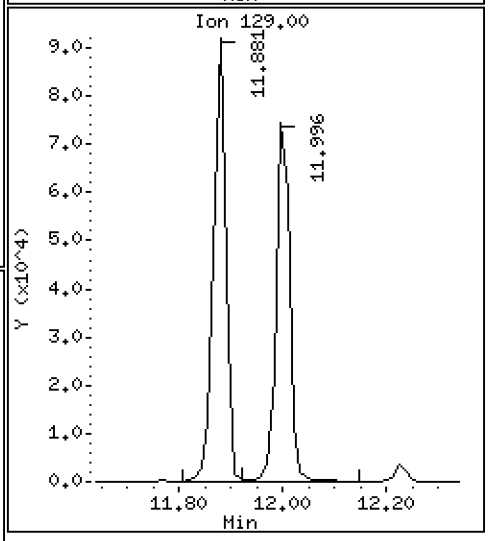
29 4-Chloroaniline

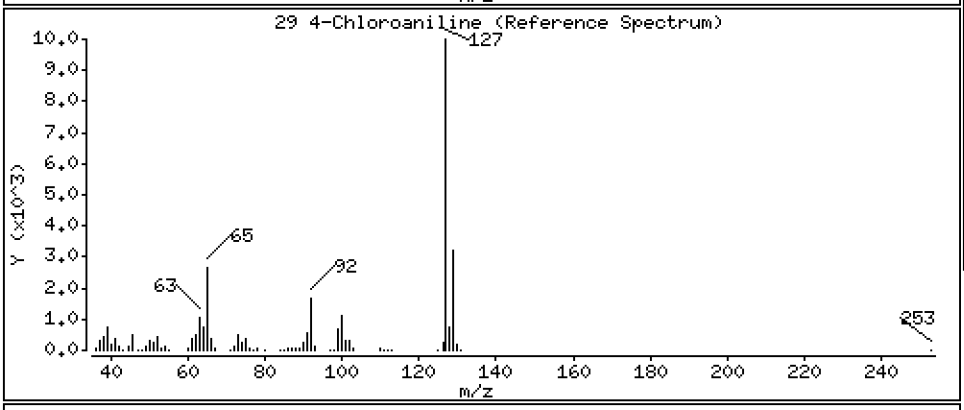
Concentration: 4.488 ug/mL

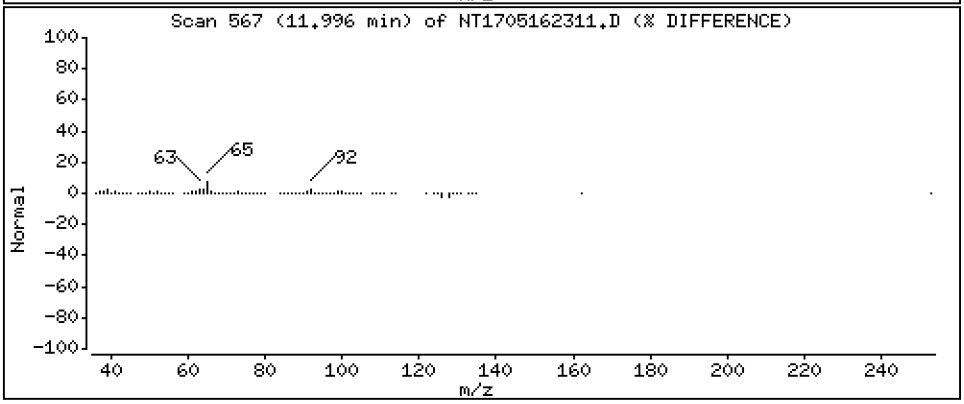












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

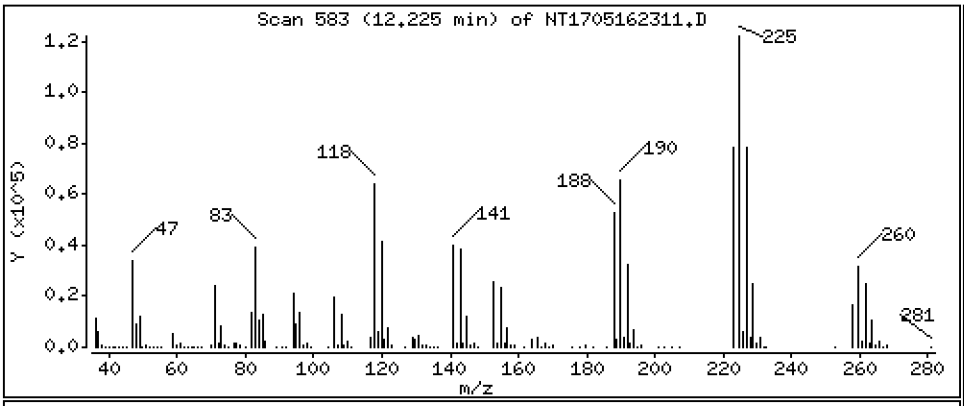
Operator: JGR

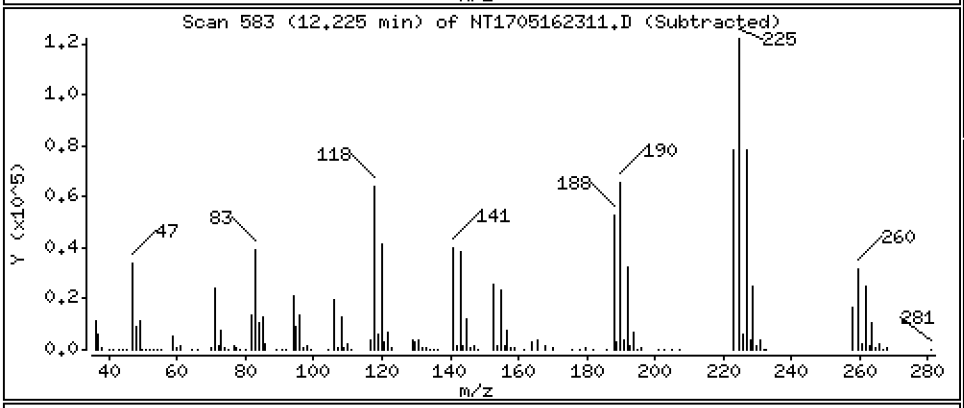
Column phase: ZB-5msi

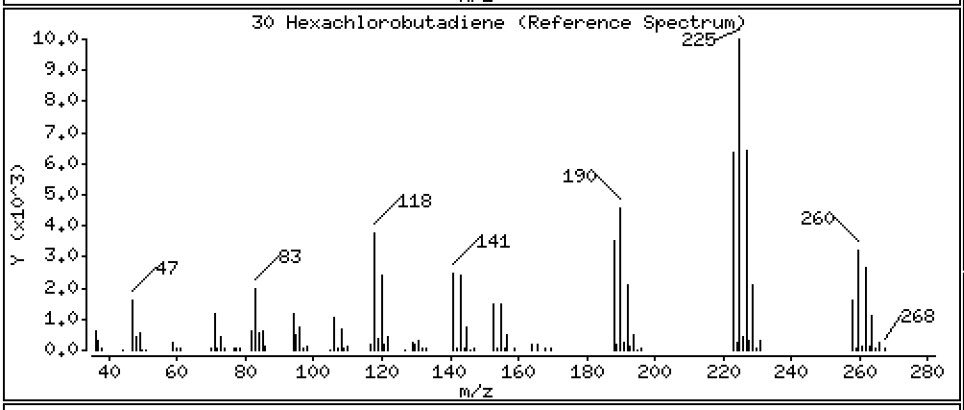
Column diameter: 0.25

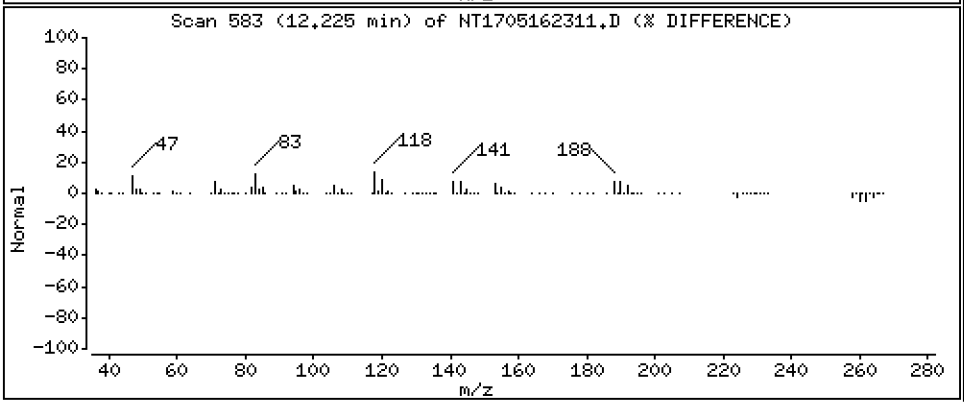
30 Hexachlorobutadiene

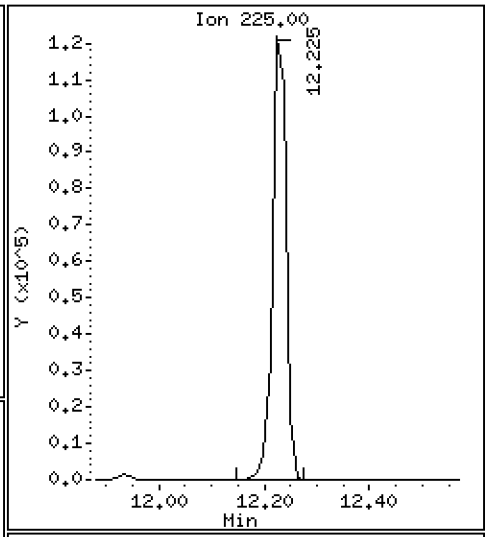
Concentration: 5.241 ug/mL

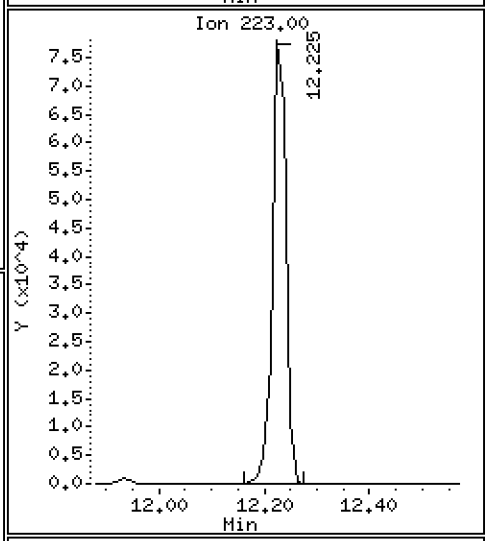


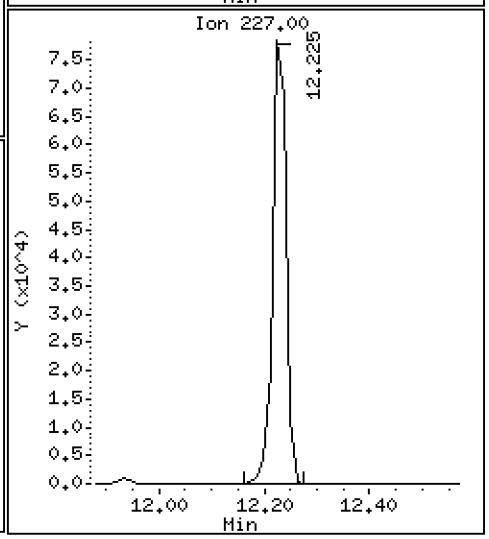












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

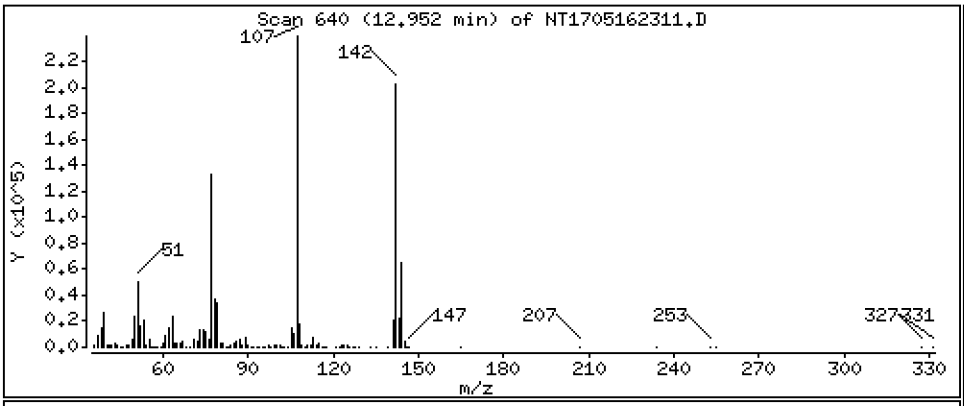
Operator: JGR

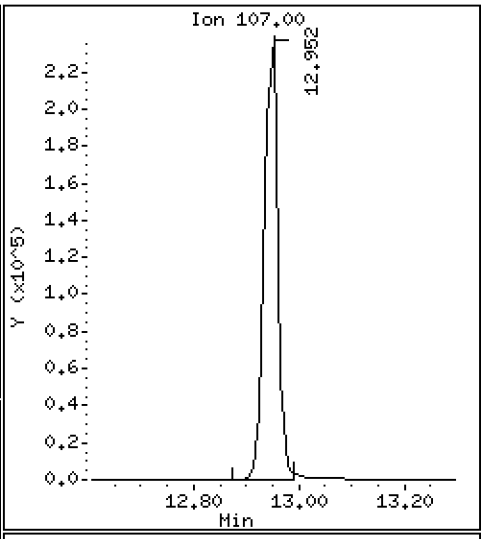
Column phase: ZB-5msi

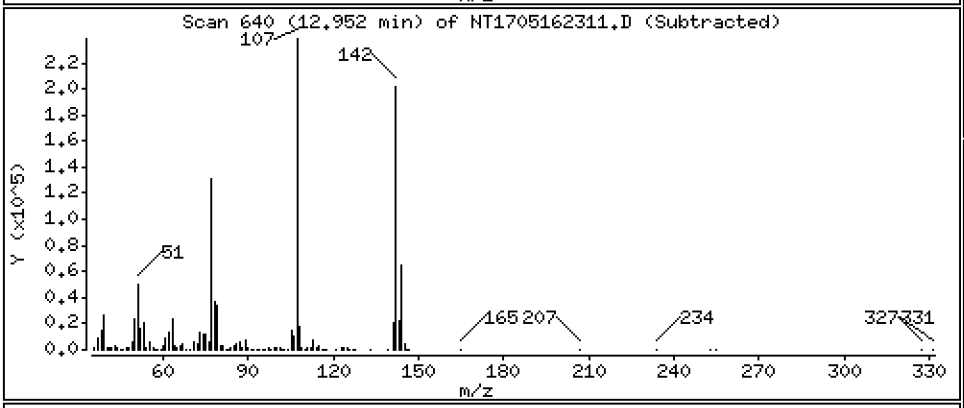
Column diameter: 0.25

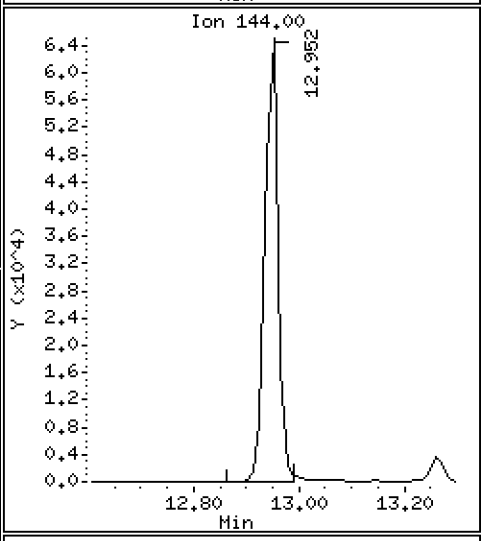
31 4-Chloro-3-methylphenol

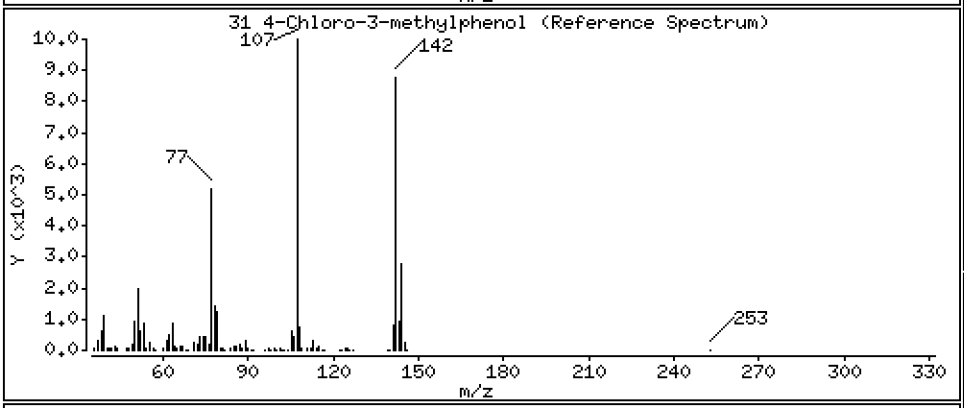
Concentration: 4.878 ug/mL

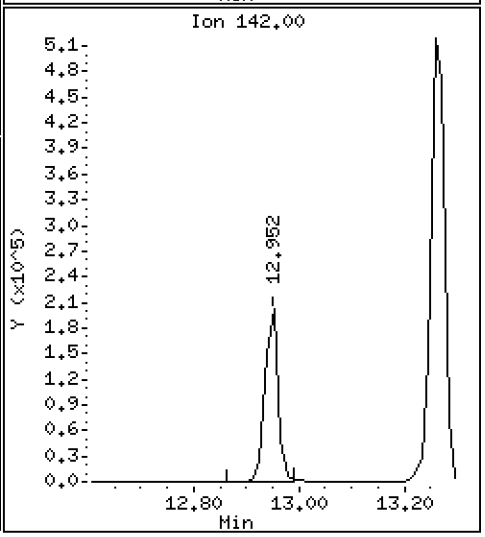


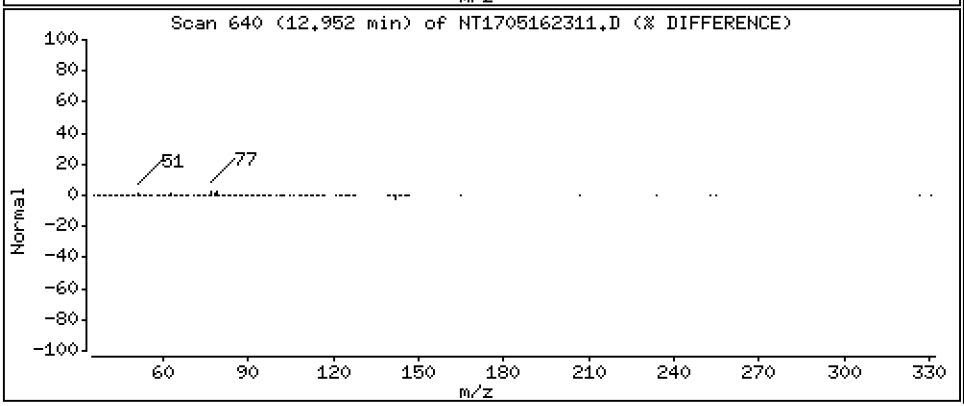












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

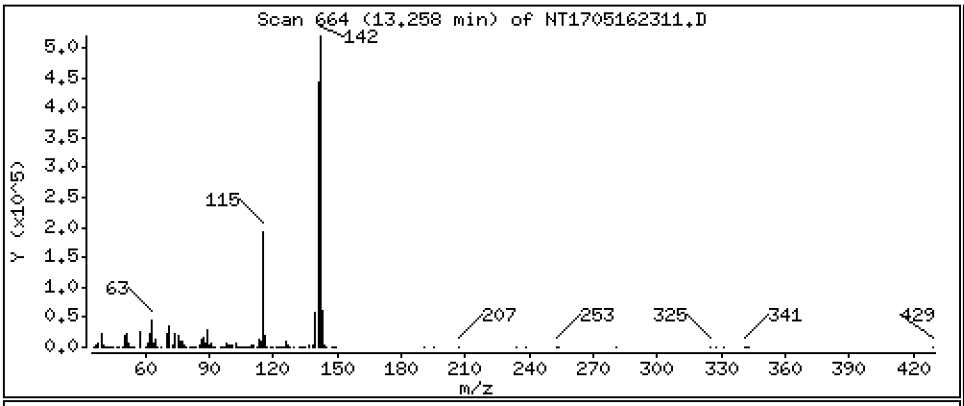
Operator: JGR

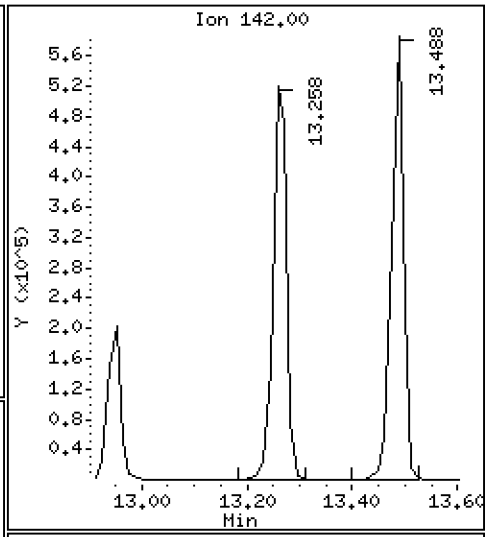
Column phase: ZB-5msi

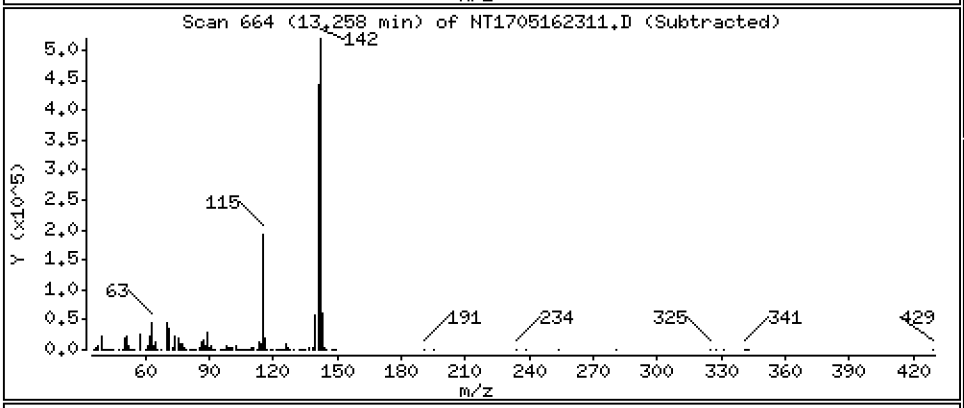
Column diameter: 0.25

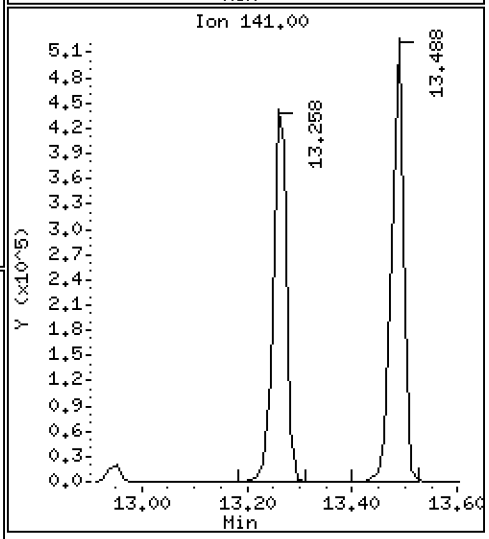
32 2-Methylnaphthalene

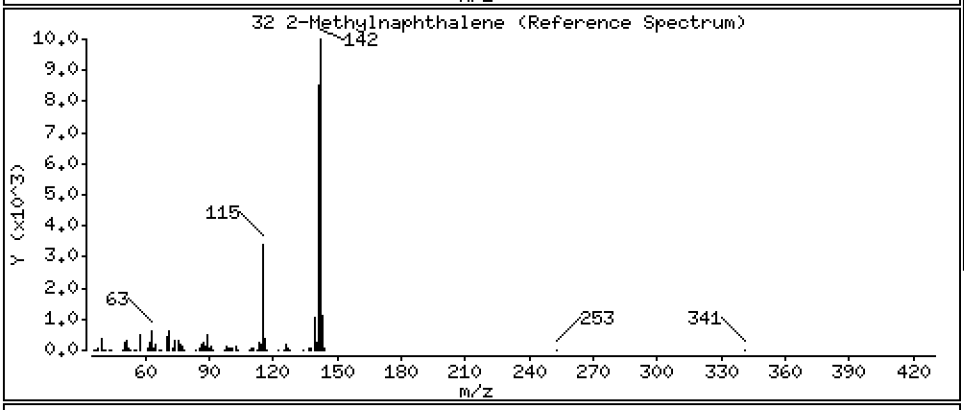
Concentration: 5.028 ug/mL

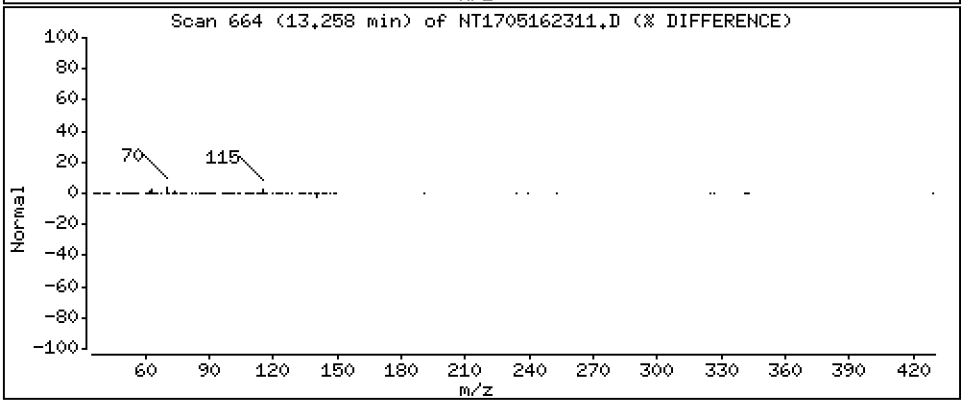












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

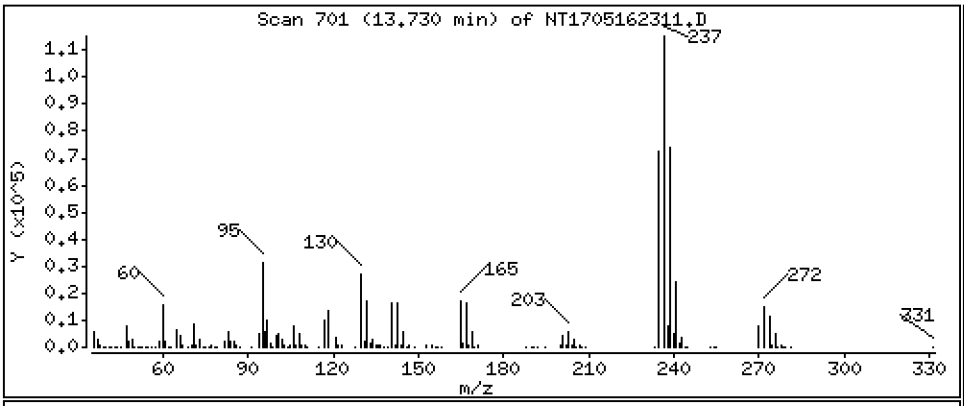
Operator: JGR

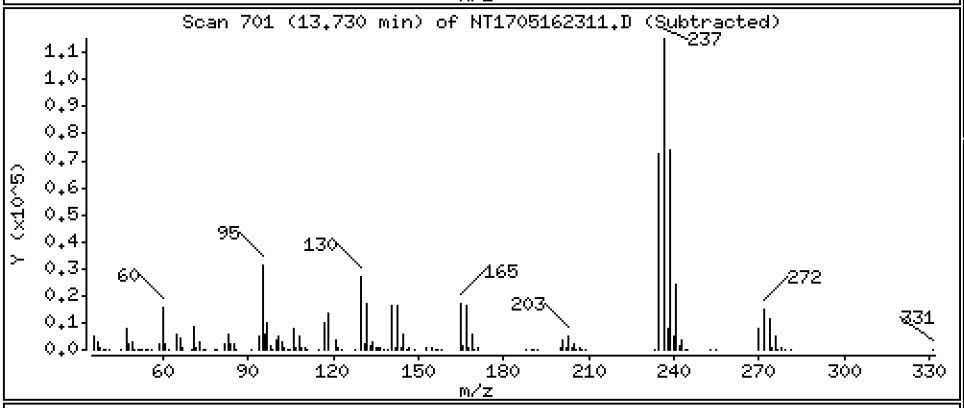
Column phase: ZB-5msi

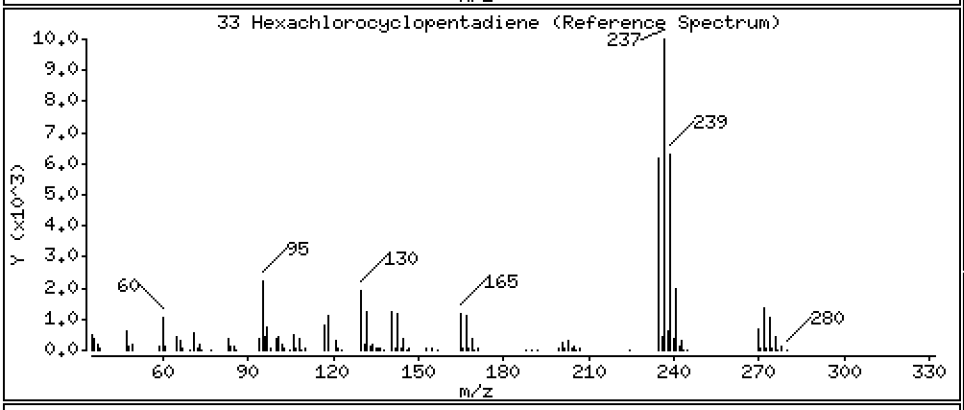
Column diameter: 0.25

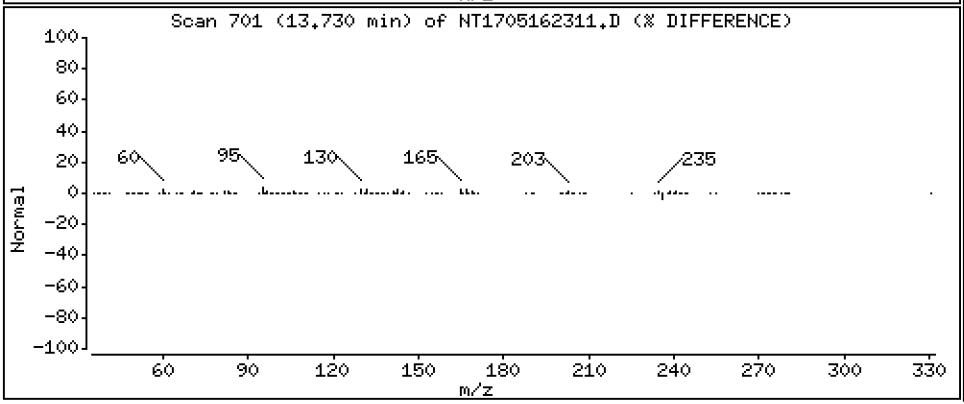
33 Hexachlorocyclopentadiene

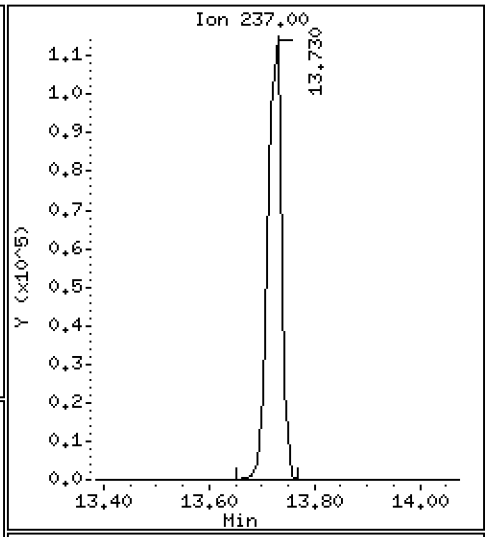
Concentration: 4.219 ug/mL

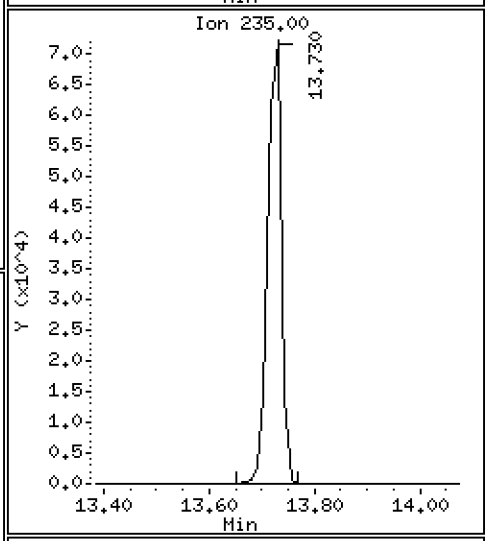


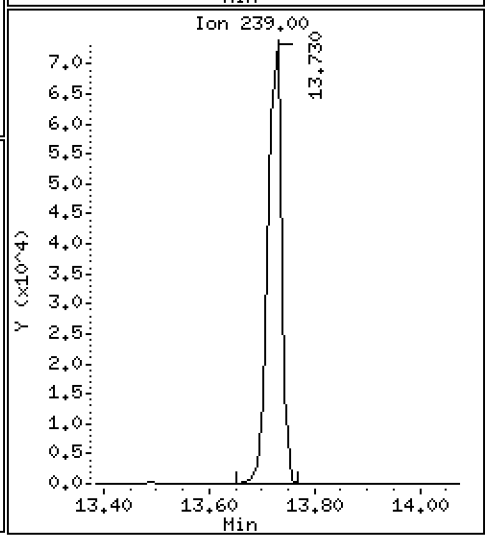












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

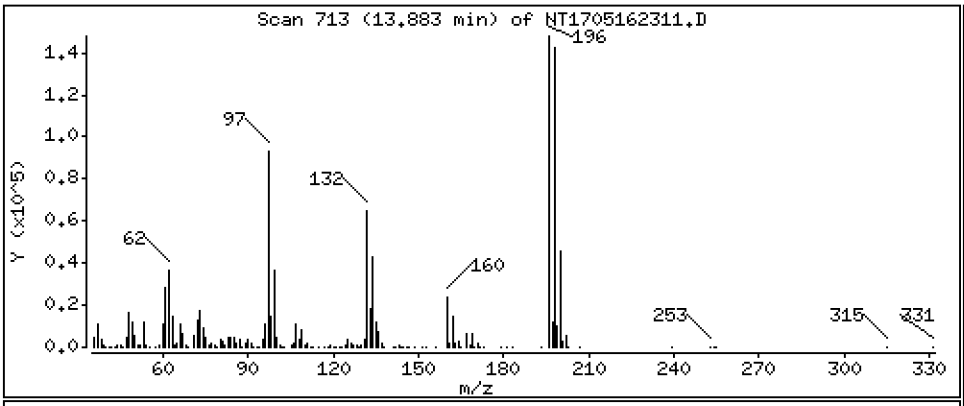
Operator: JGR

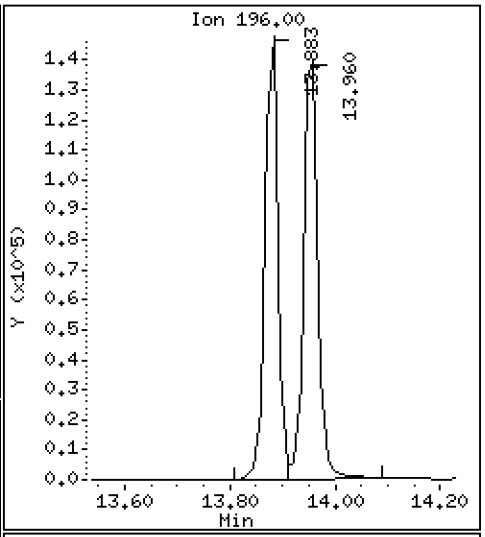
Column phase: ZB-5msi

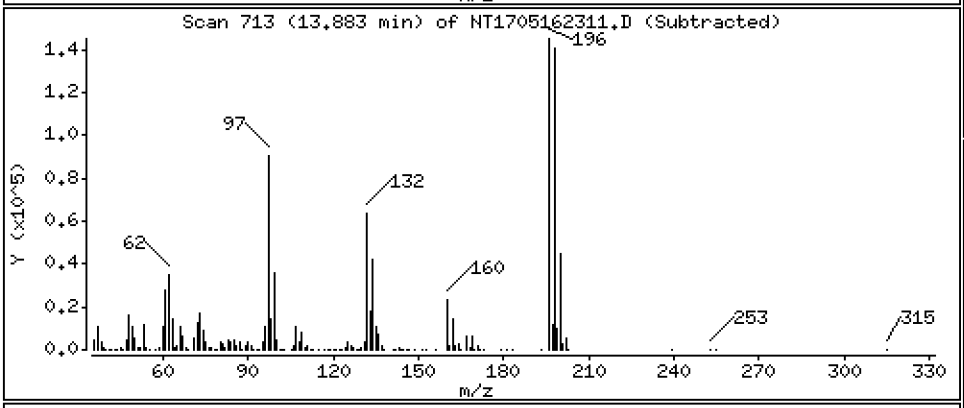
Column diameter: 0.25

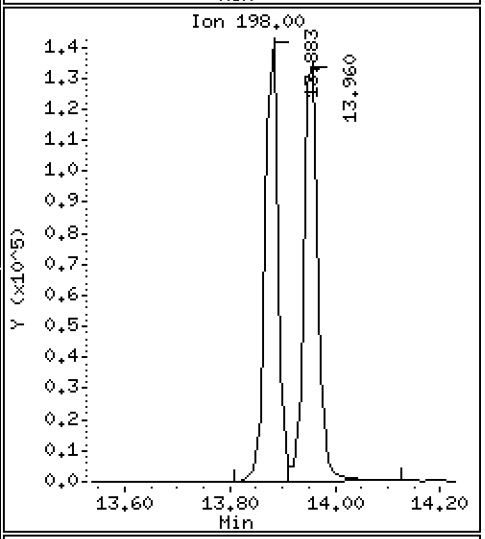
34 2,4,6-Trichlorophenol

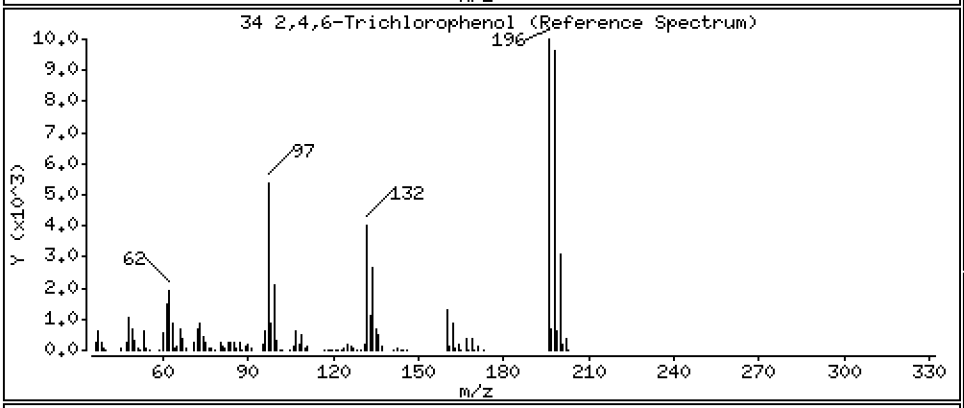
Concentration: 4.794 ug/mL

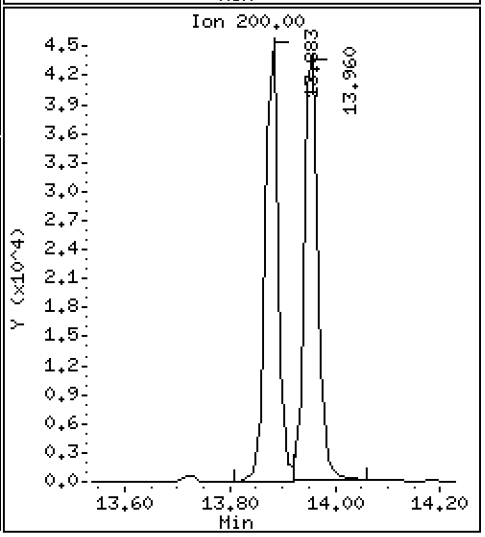


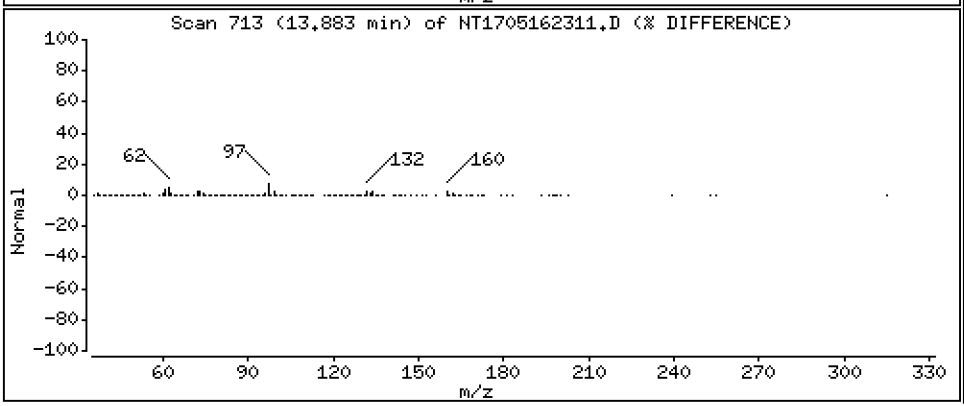












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

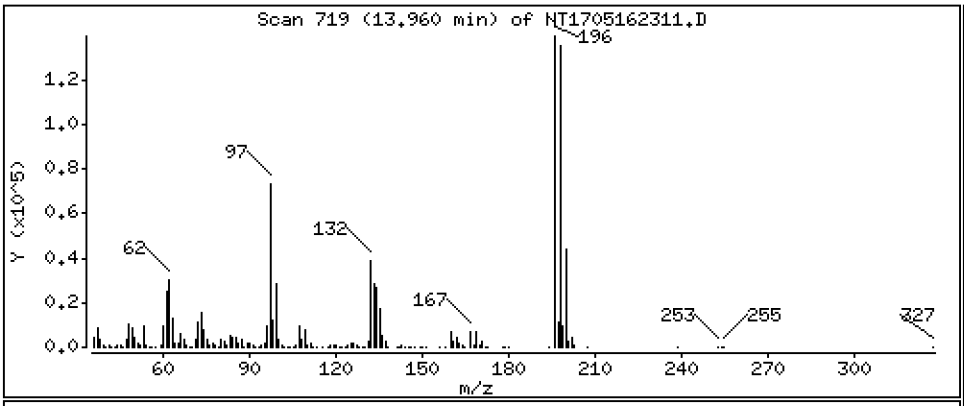
Operator: JGR

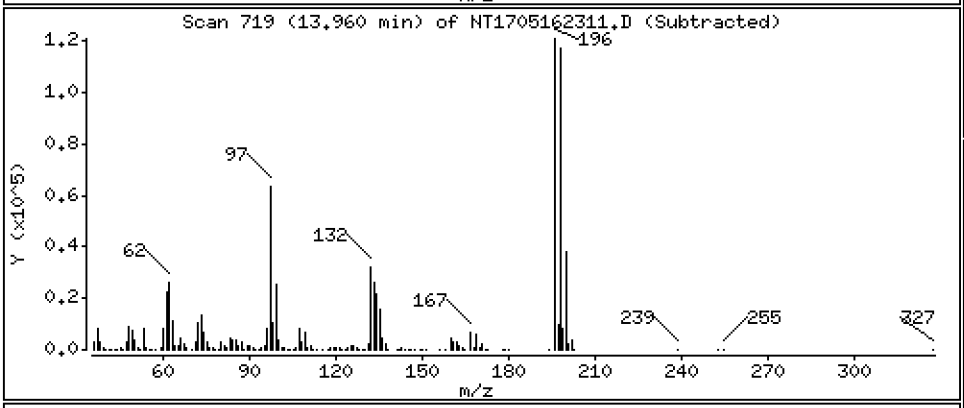
Column phase: ZB-5msi

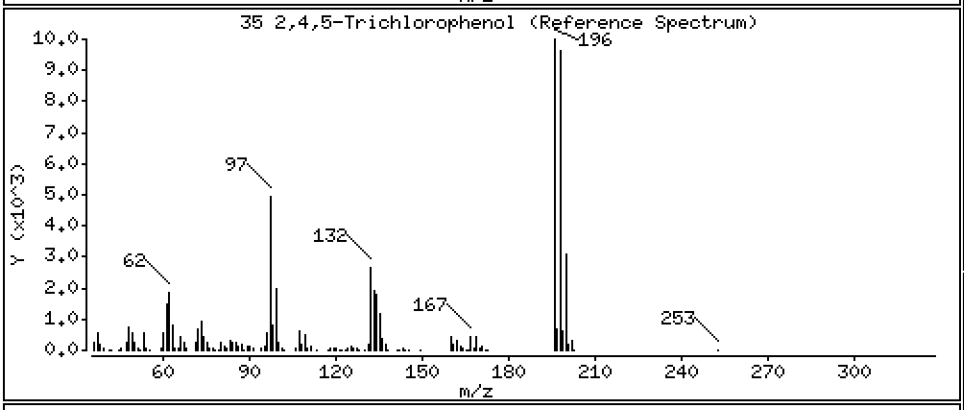
Column diameter: 0.25

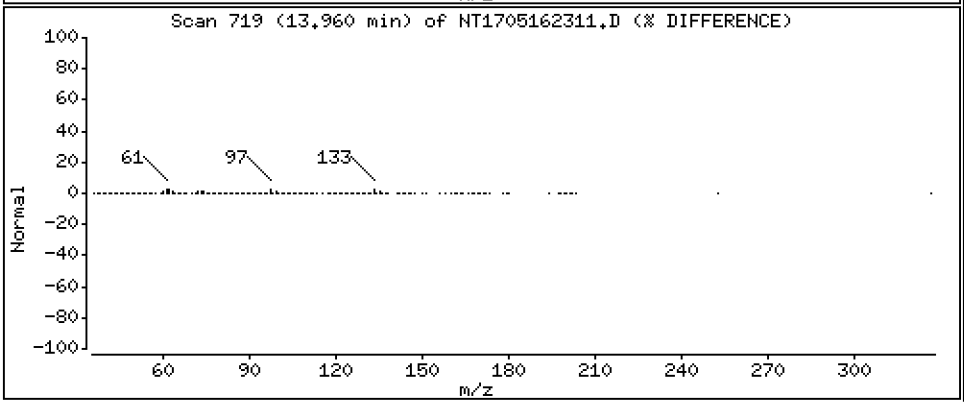
35 2,4,5-Trichlorophenol

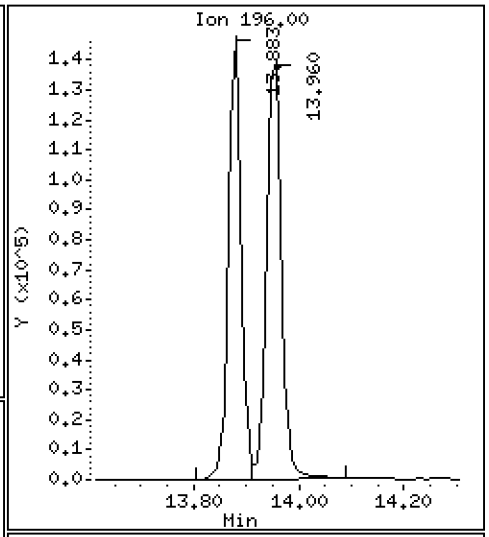
Concentration: 4.837 ug/mL

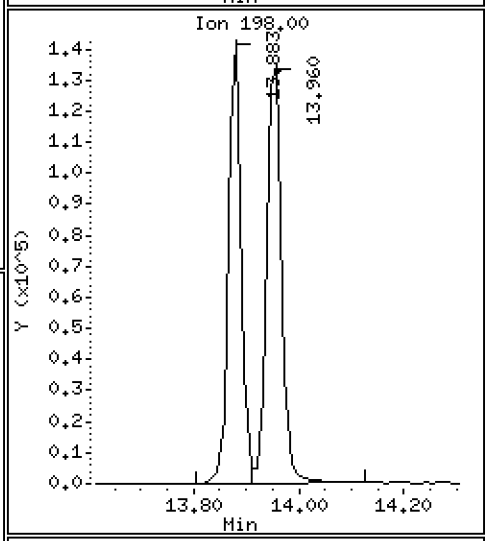


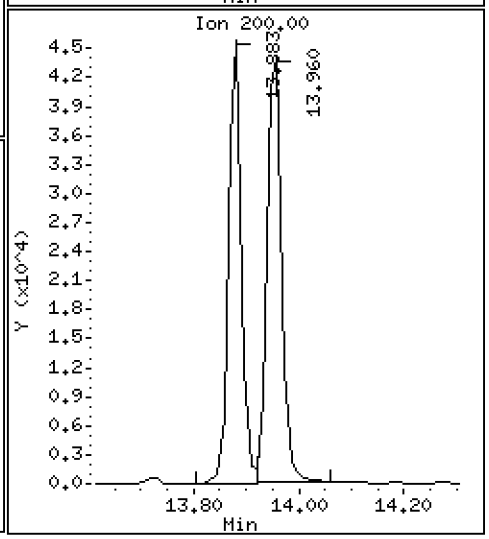












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

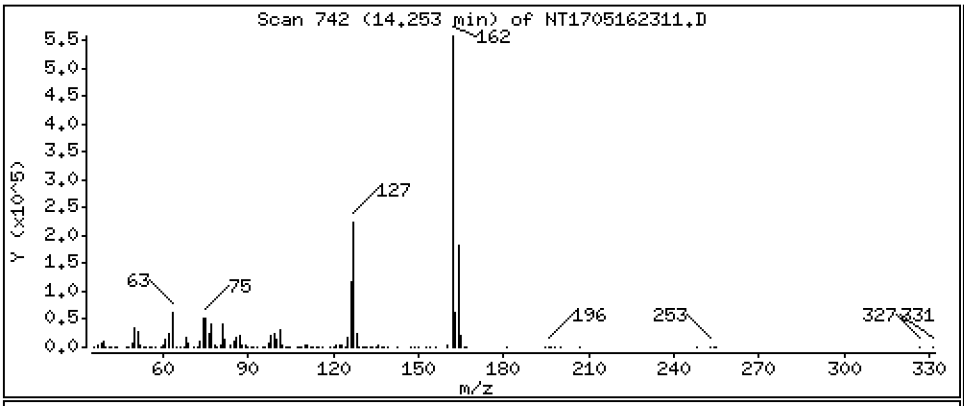
Operator: JGR

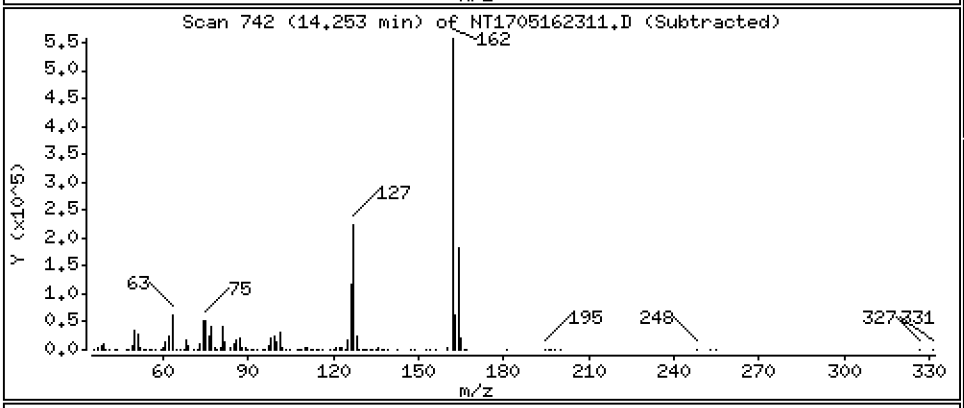
Column phase: ZB-5msi

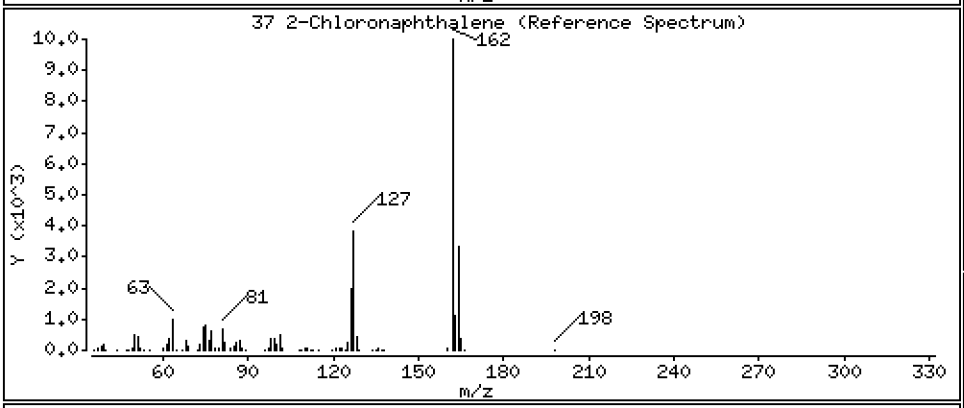
Column diameter: 0.25

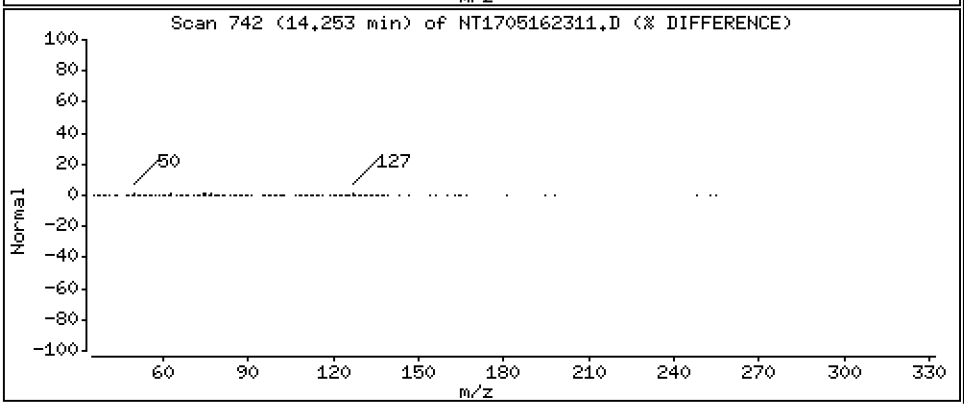
37 2-Chloronaphthalene

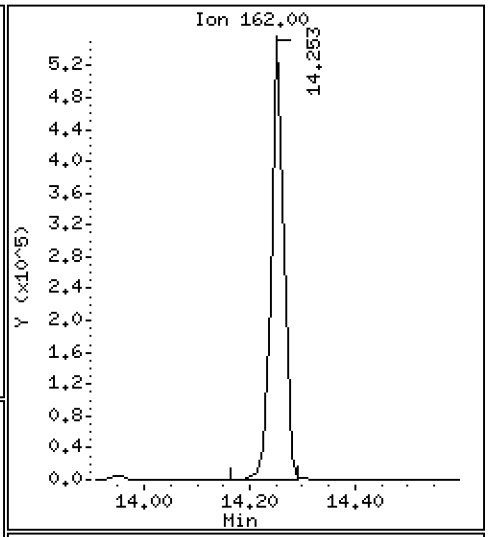
Concentration: 5.401 ug/mL

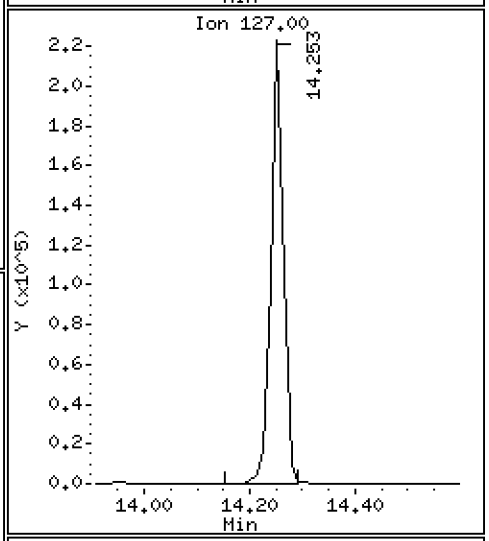


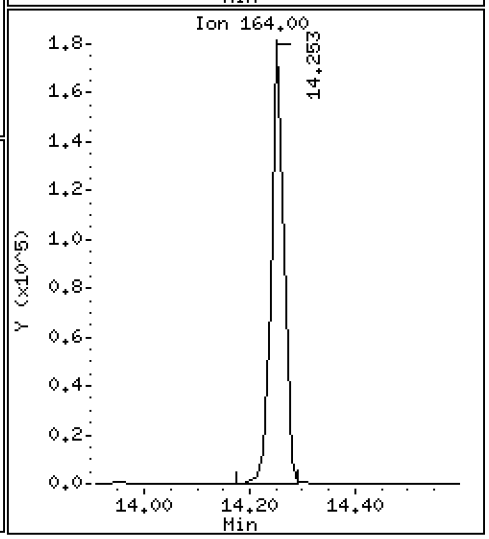












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

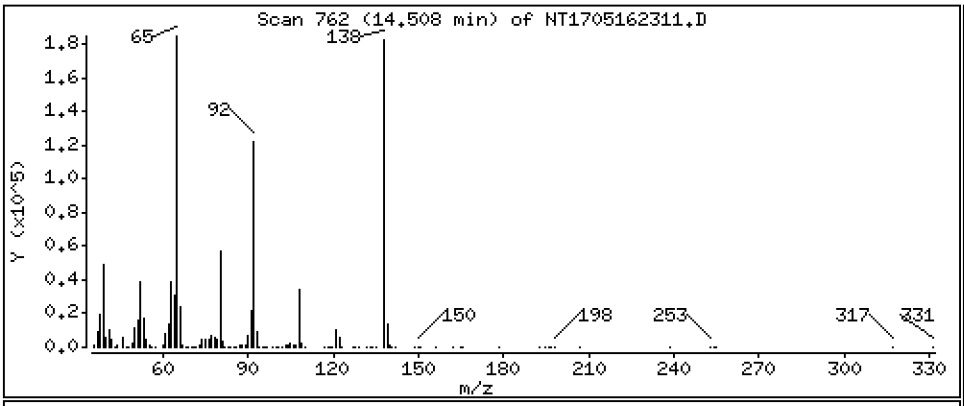
Operator: JGR

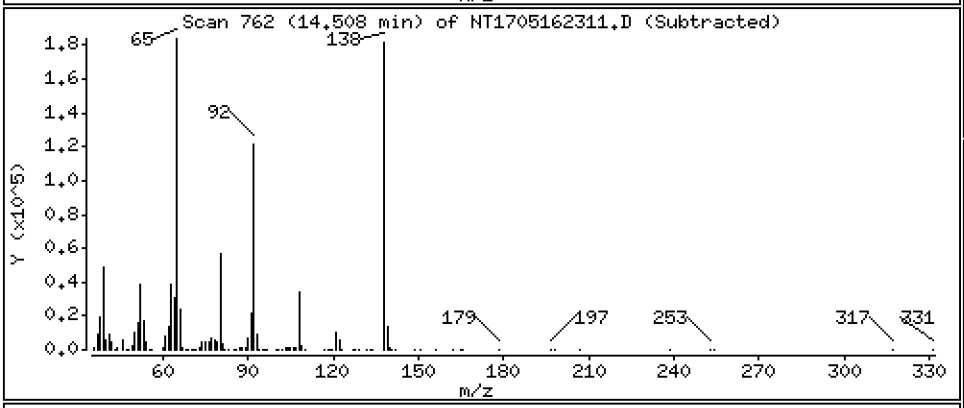
Column phase: ZB-5msi

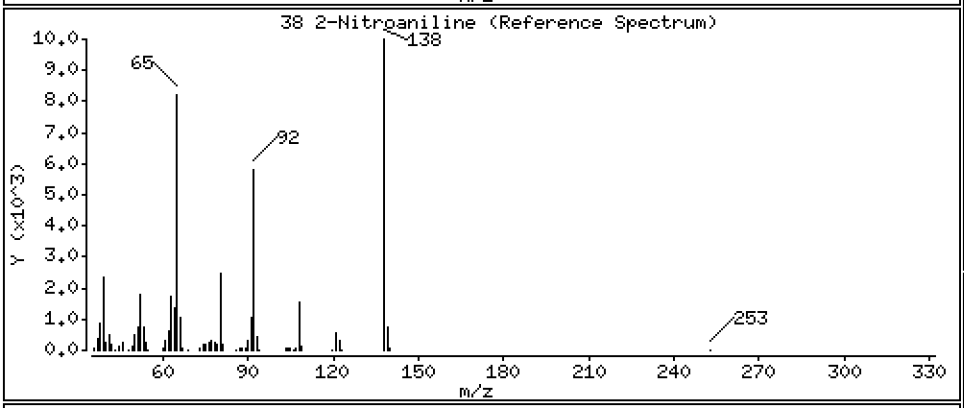
Column diameter: 0.25

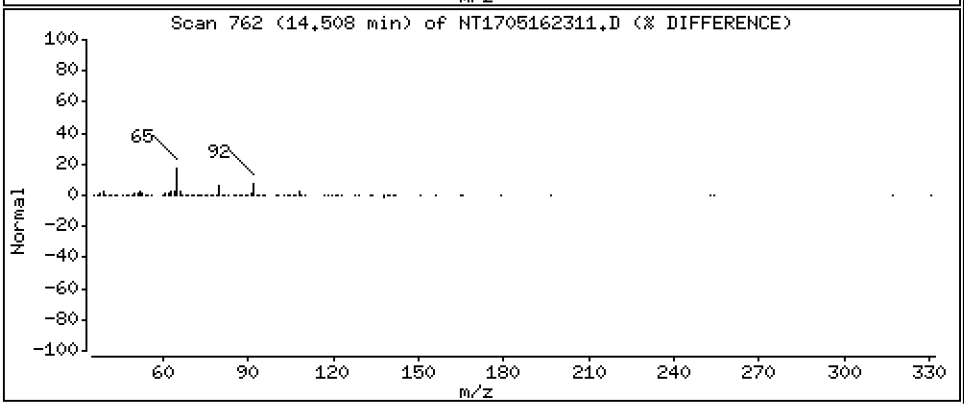
38 2-Nitroaniline

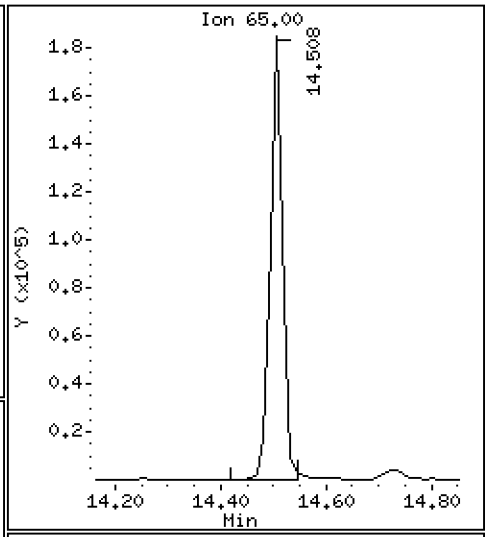
Concentration: 5.356 ug/mL

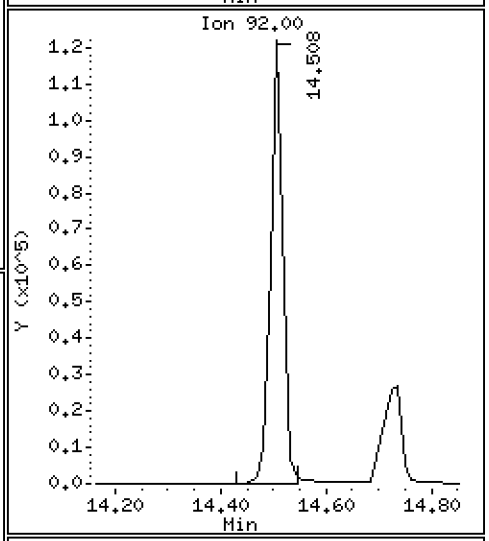


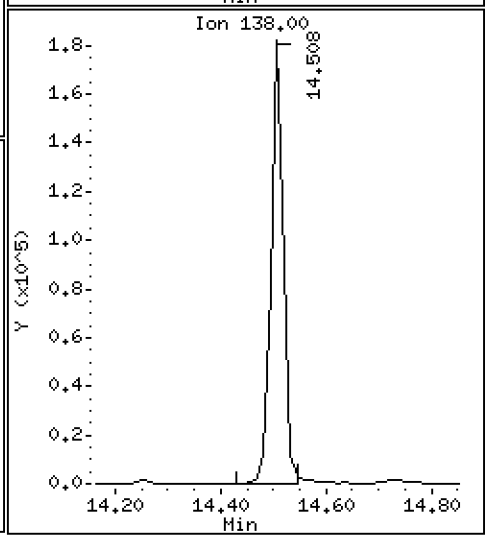












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

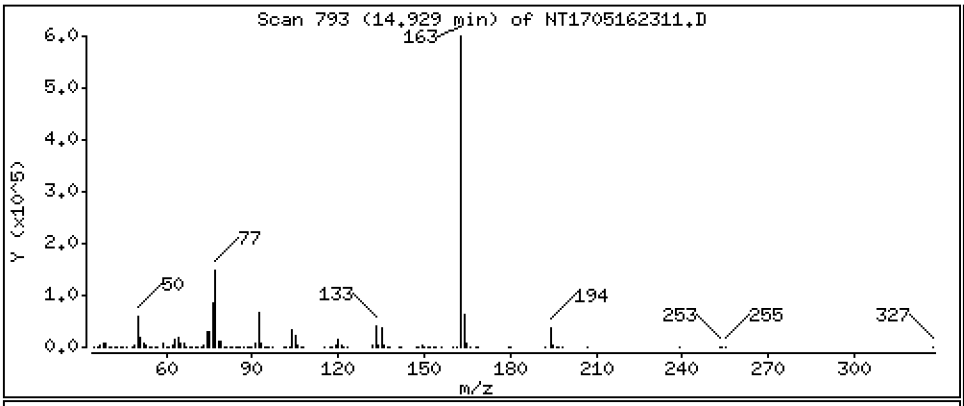
Operator: JGR

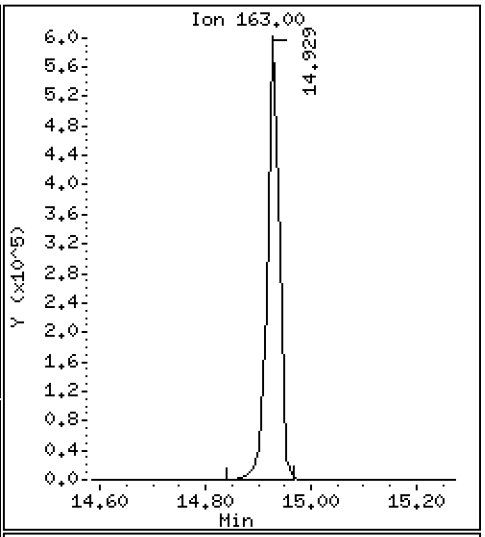
Column phase: ZB-5msi

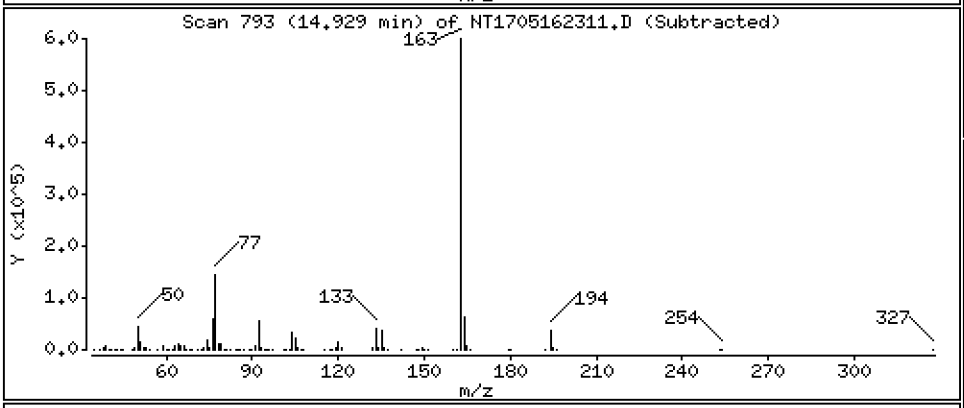
Column diameter: 0.25

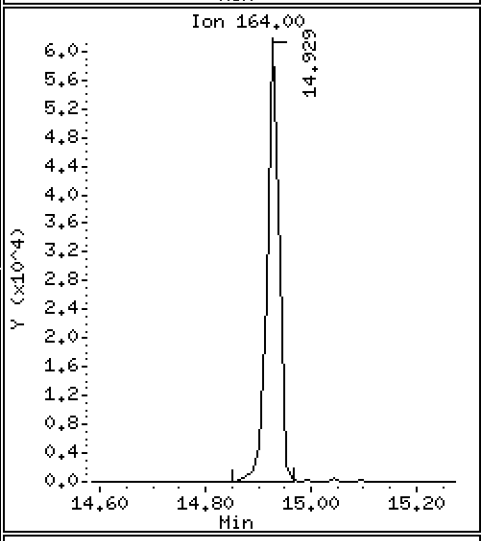
39 Dimethylphthalate

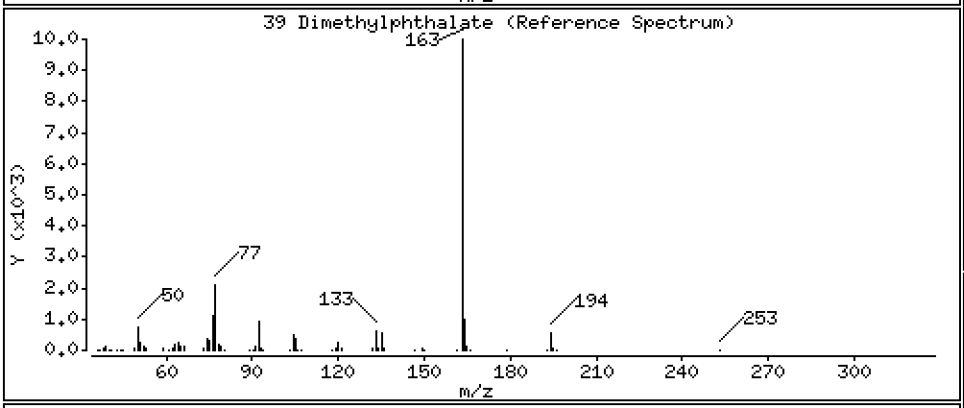
Concentration: 5.418 ug/mL

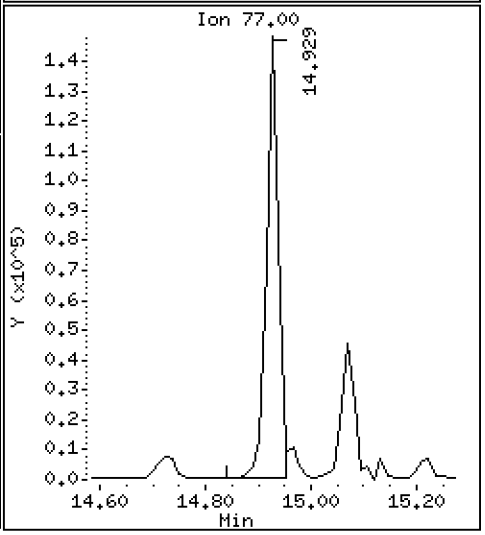


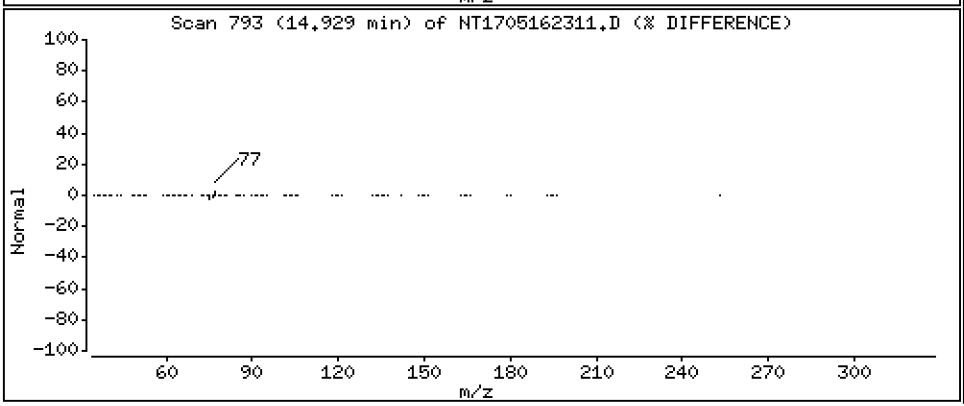












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

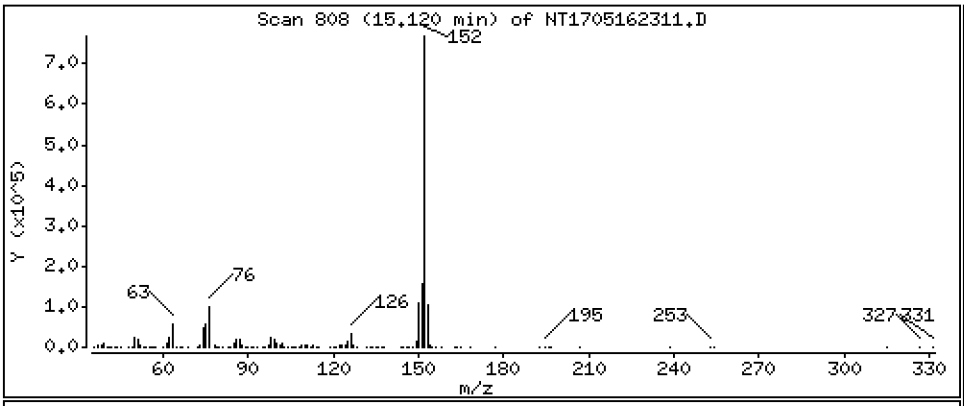
Operator: JGR

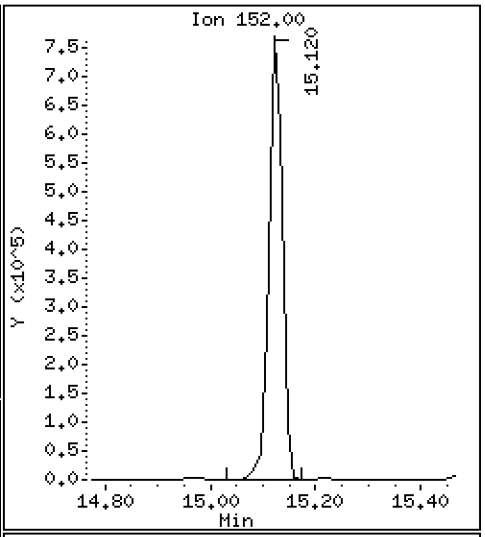
Column phase: ZB-5msi

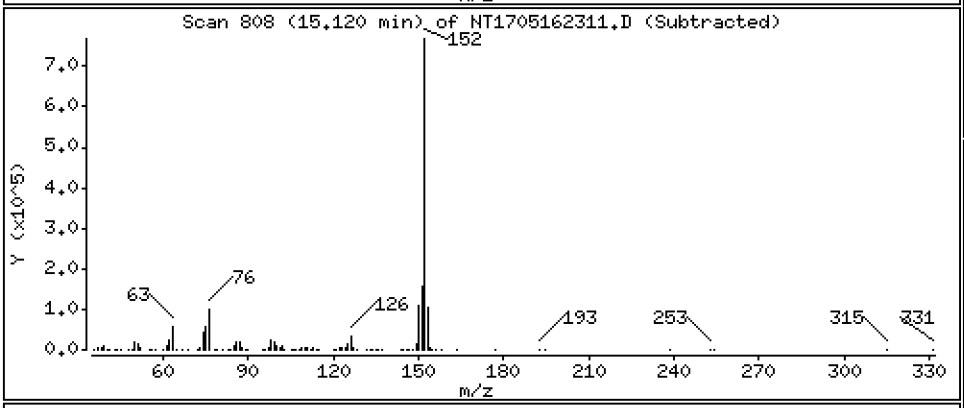
Column diameter: 0.25

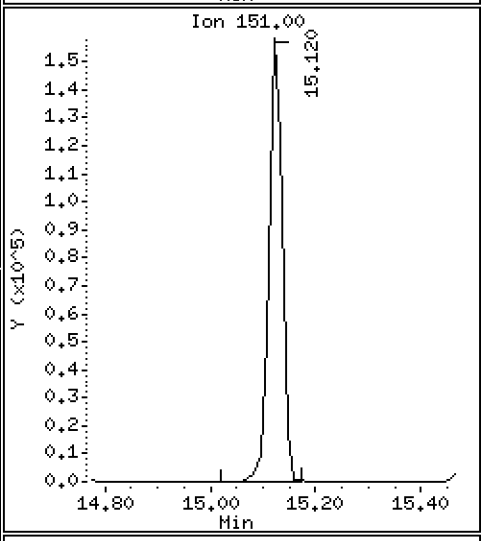
40 Acenaphthylene

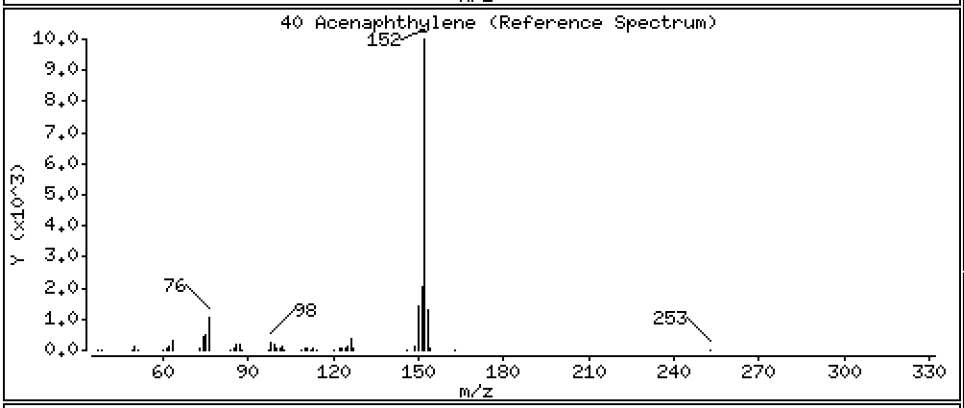
Concentration: 5.282 ug/mL

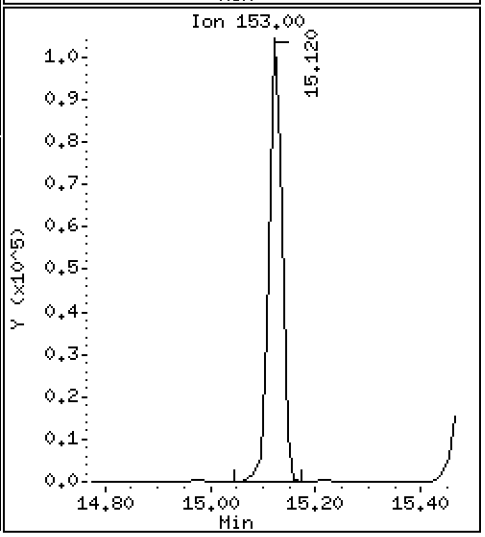


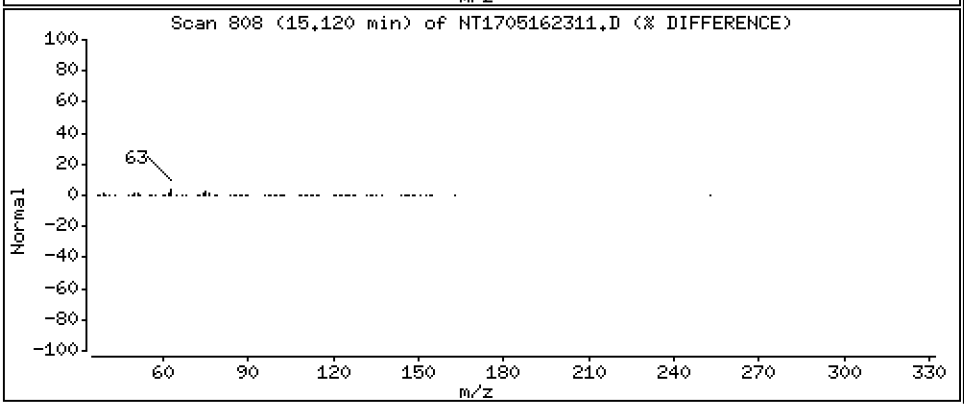












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

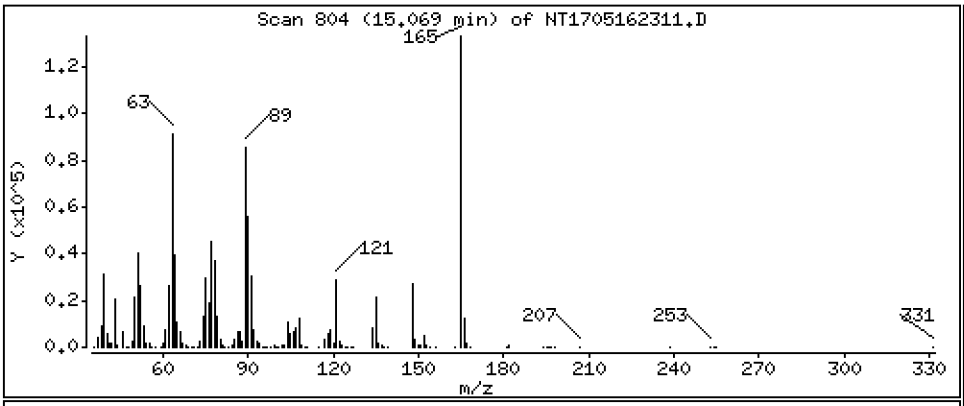
Operator: JGR

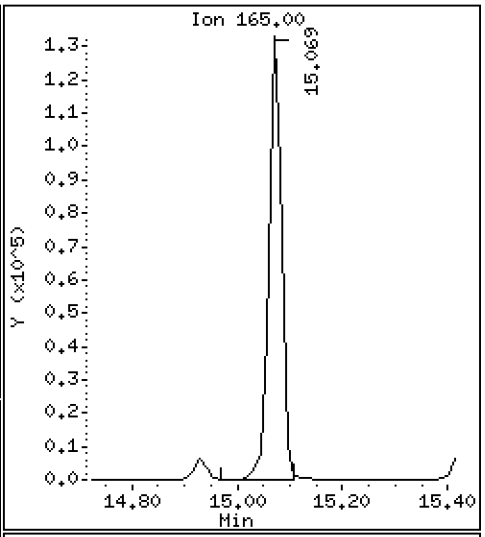
Column phase: ZB-5msi

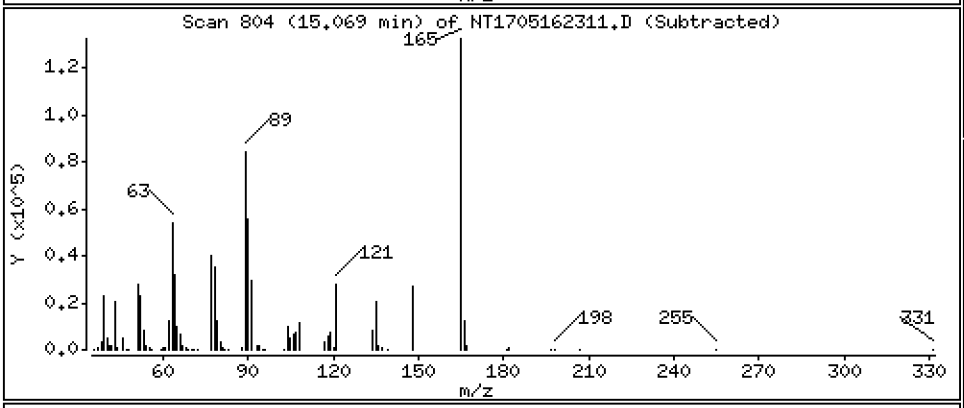
Column diameter: 0.25

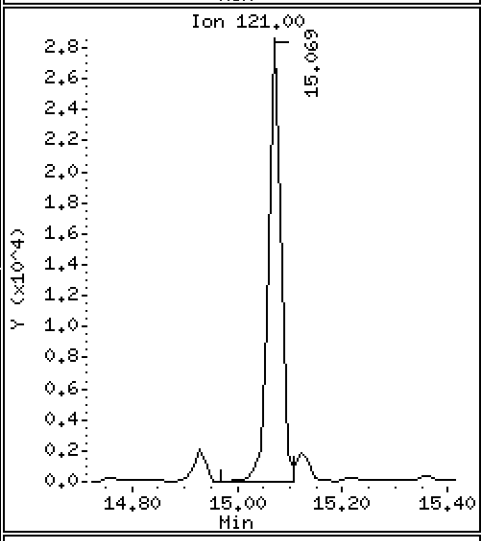
41 2,6-Dinitrotoluene

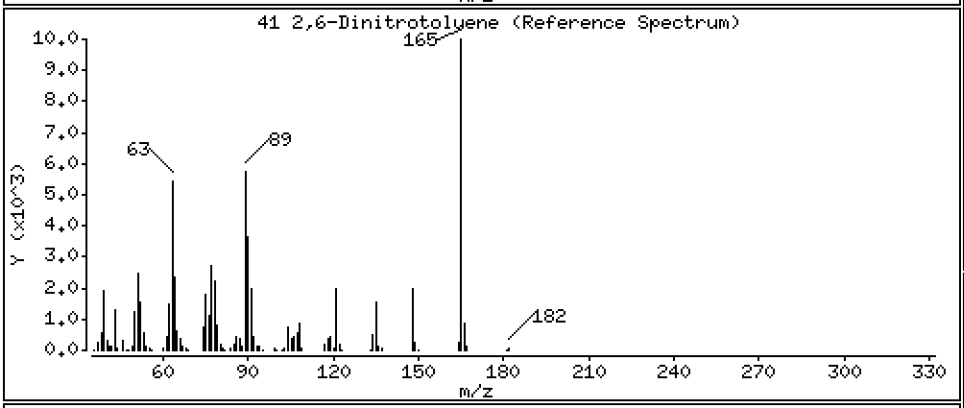
Concentration: 5.404 ug/mL

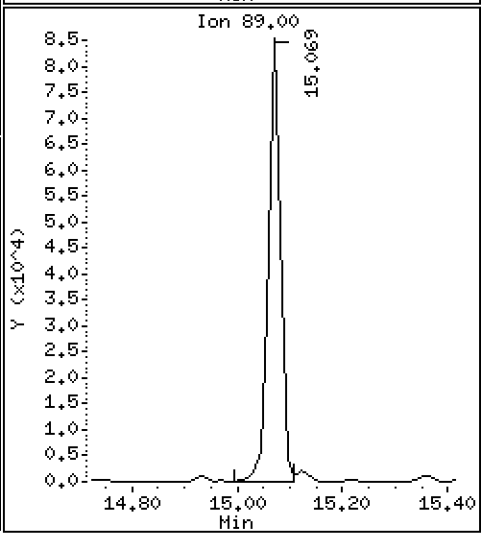


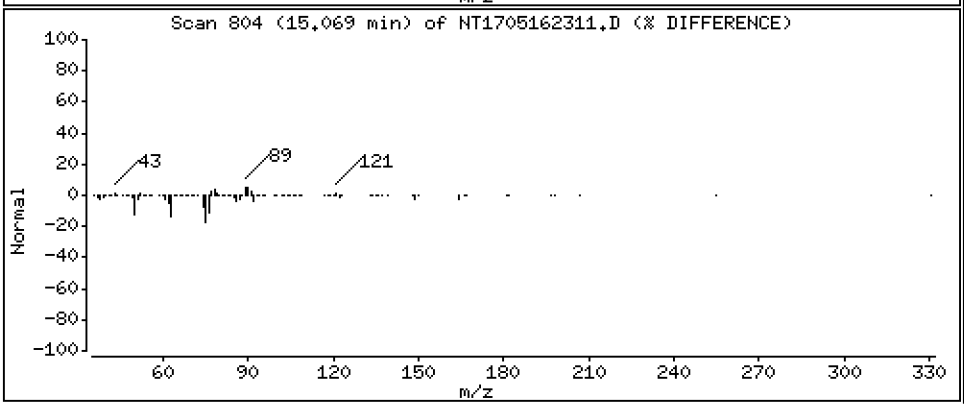












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

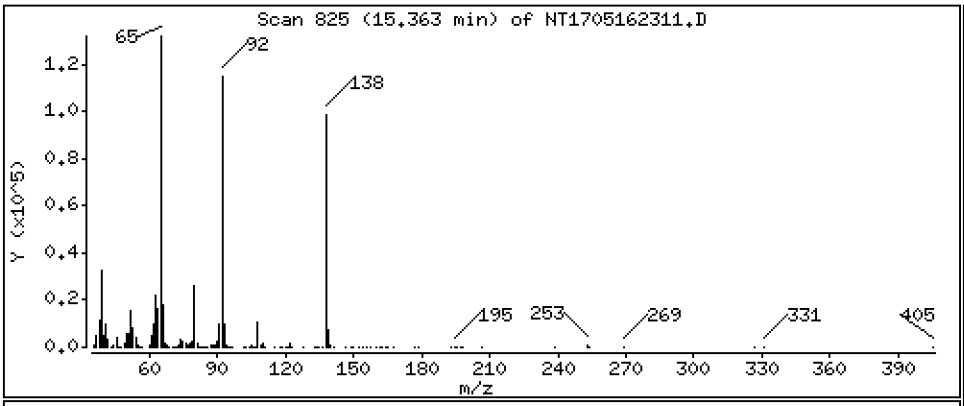
Operator: JGR

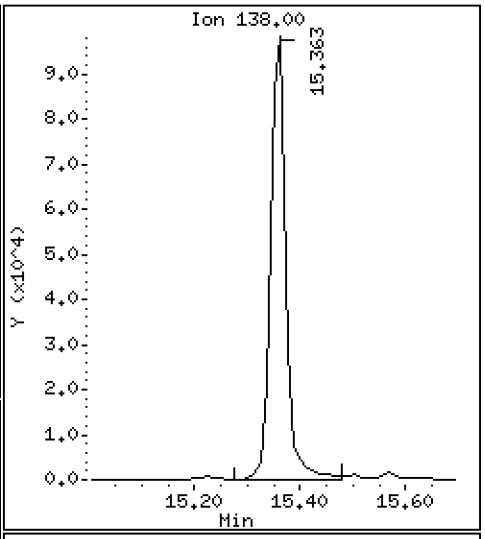
Column phase: ZB-5msi

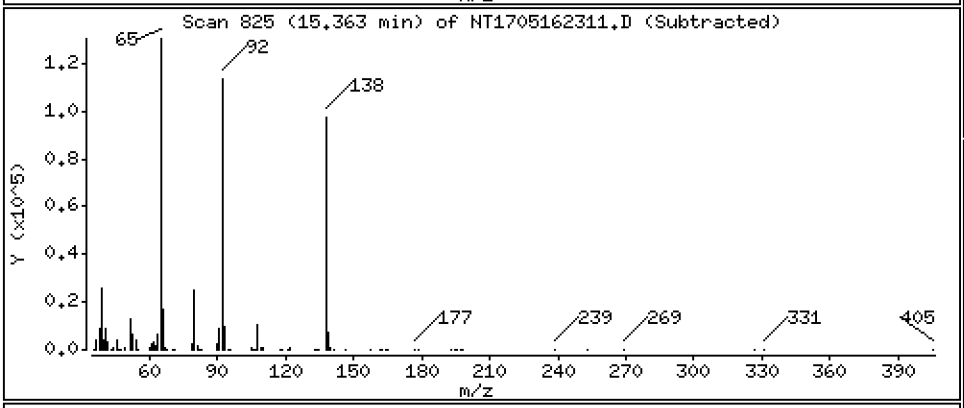
Column diameter: 0.25

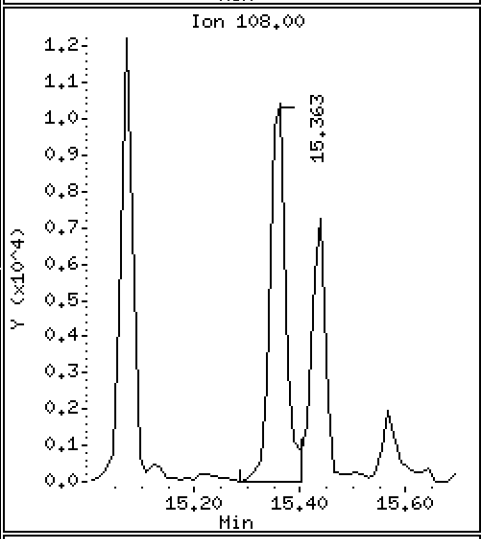
43 3-Nitroaniline

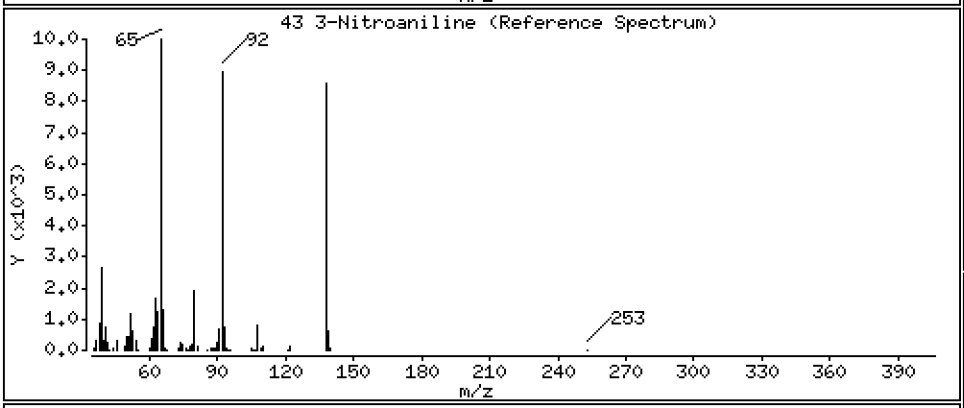
Concentration: 5.169 ug/mL

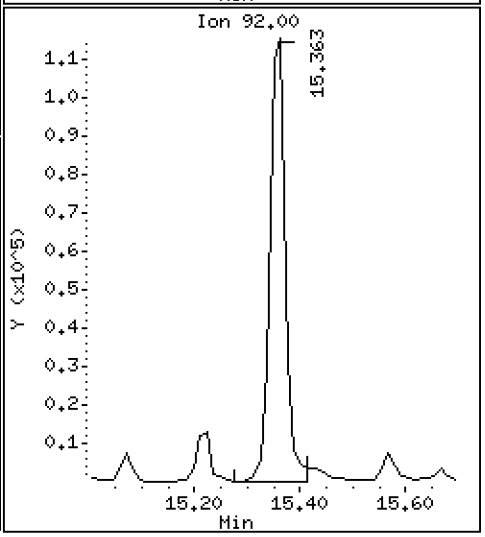


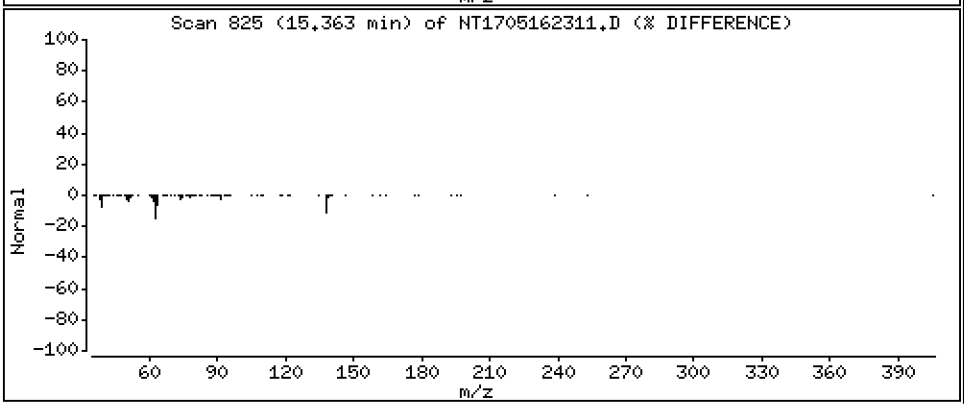












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

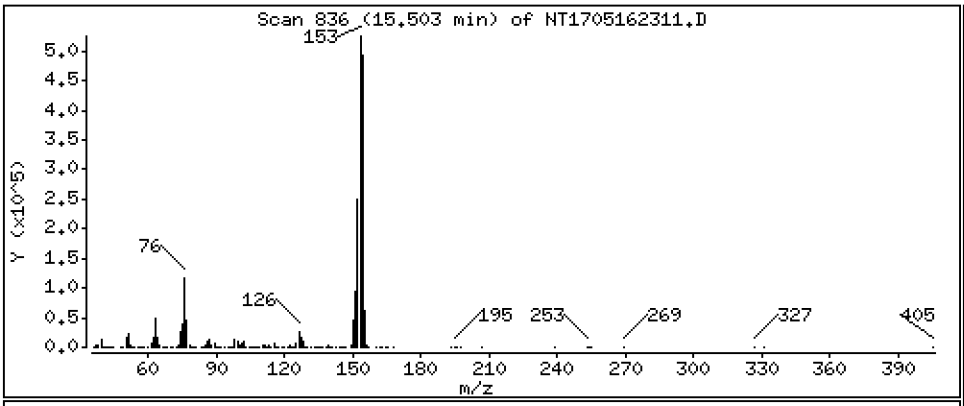
Operator: JGR

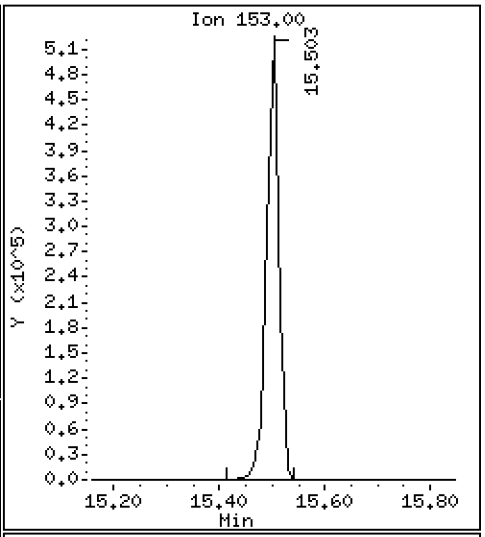
Column phase: ZB-5msi

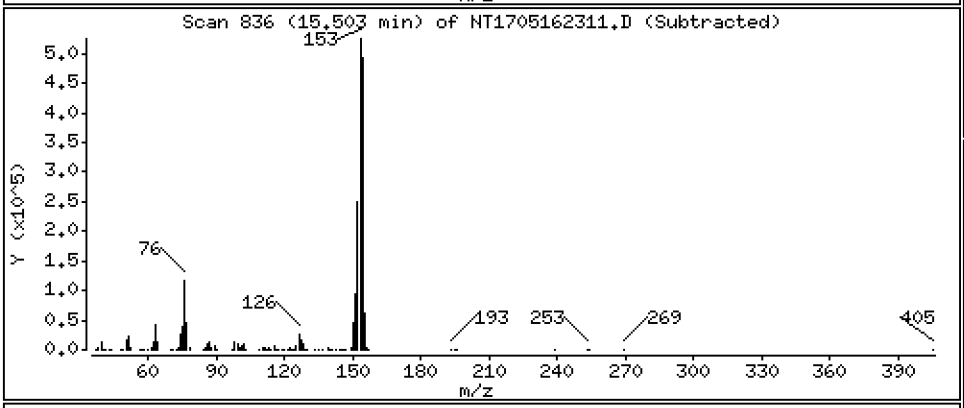
Column diameter: 0.25

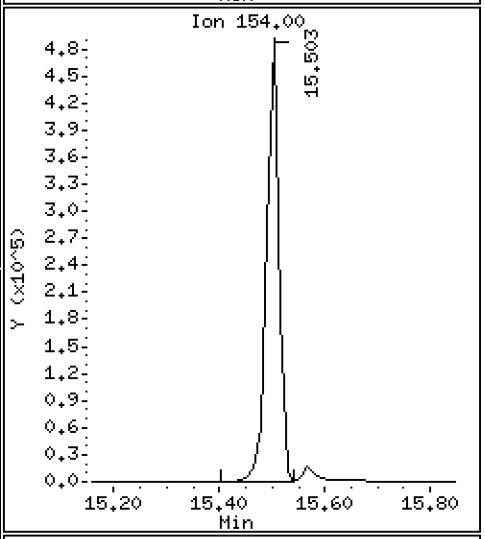
44 Acenaphthene

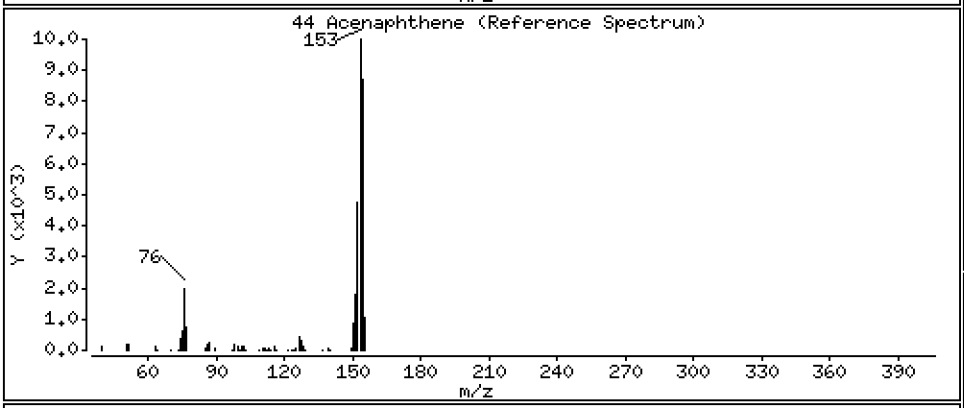
Concentration: 5.283 ug/mL

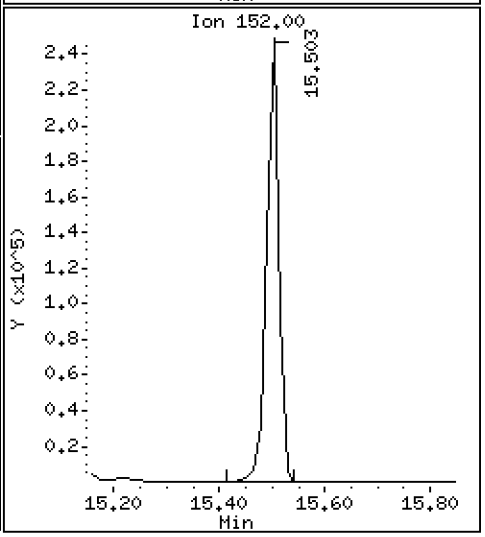


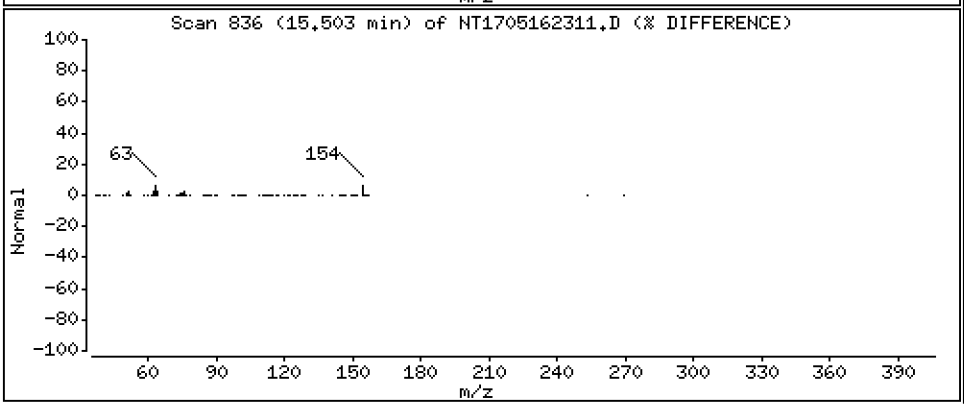












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

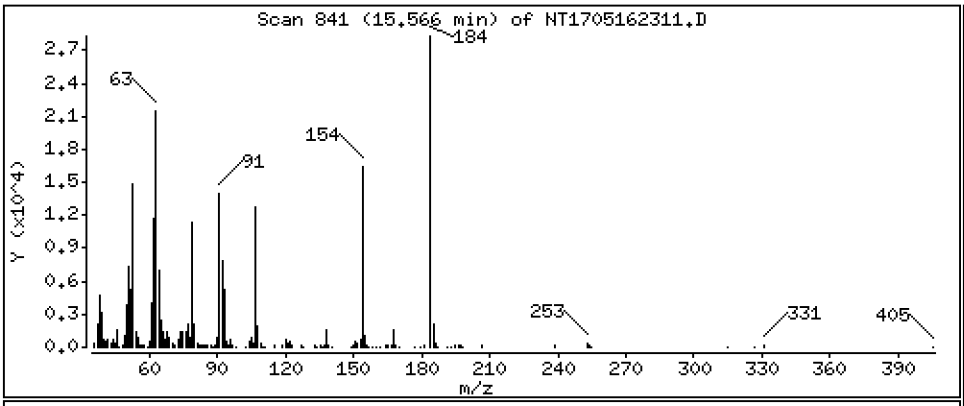
Operator: JGR

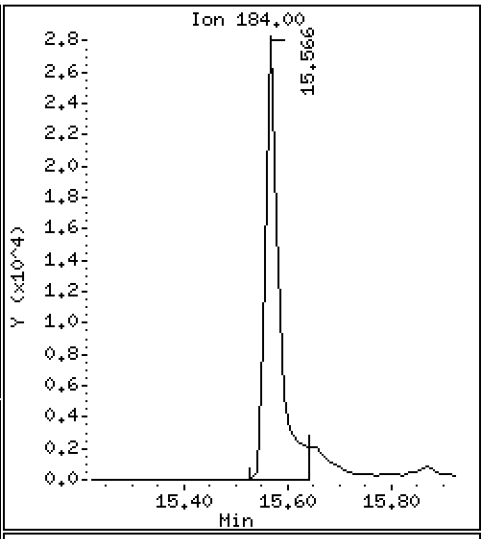
Column phase: ZB-5msi

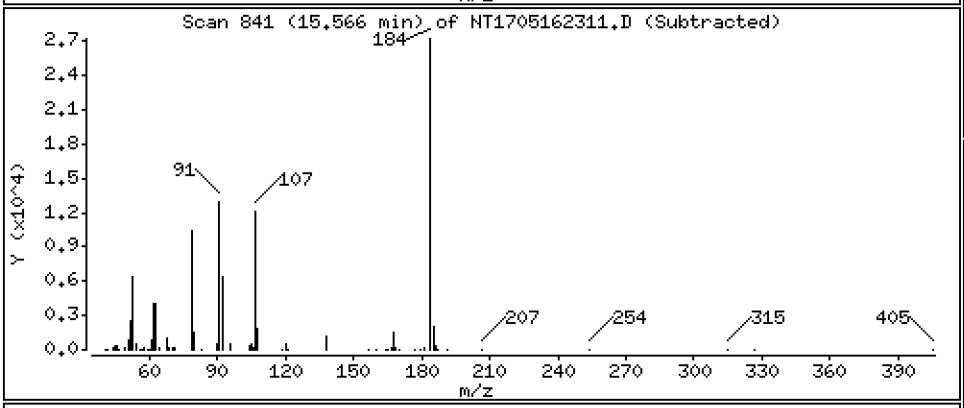
Column diameter: 0.25

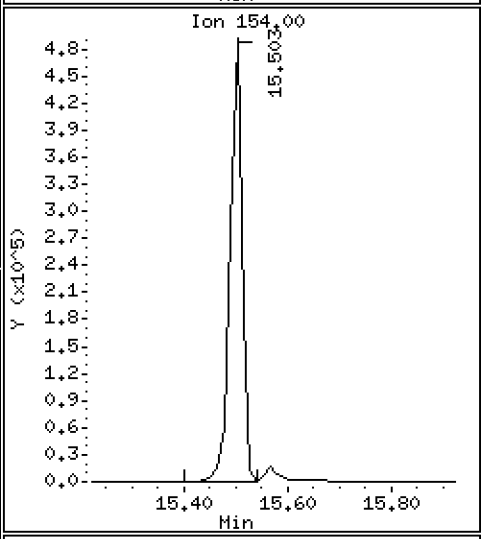
45 2,4-Dinitrophenol

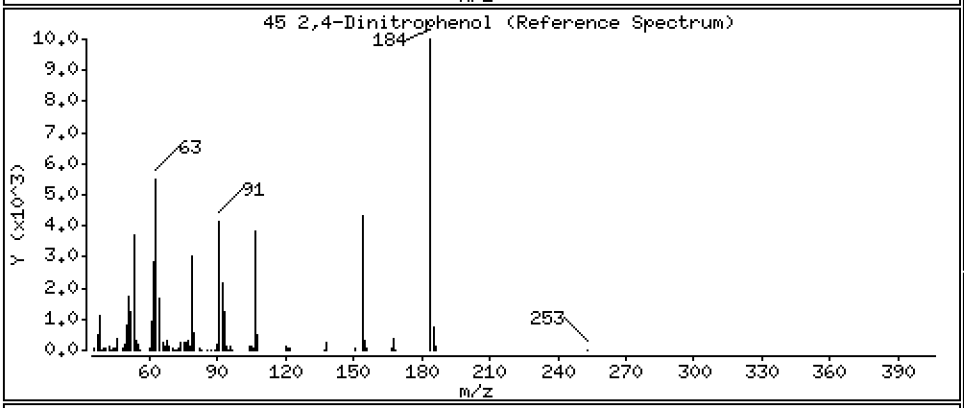
Concentration: 2.119 ug/mL

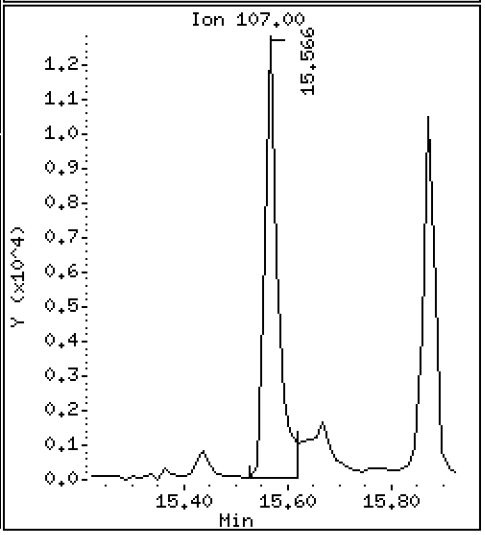


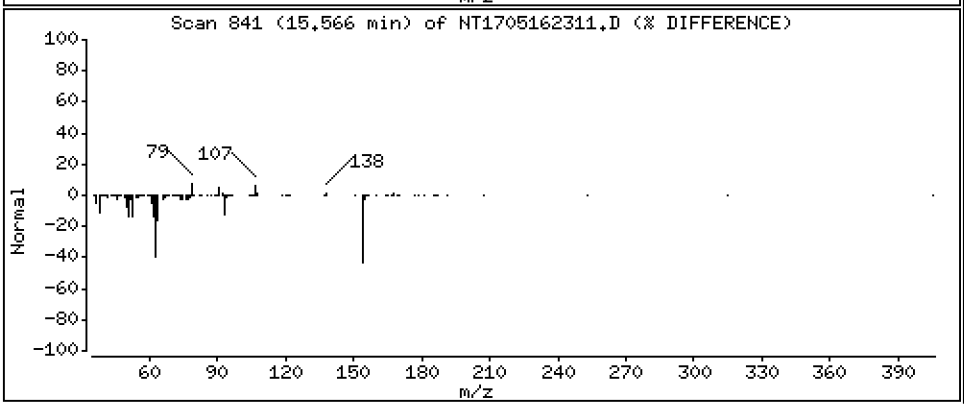












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

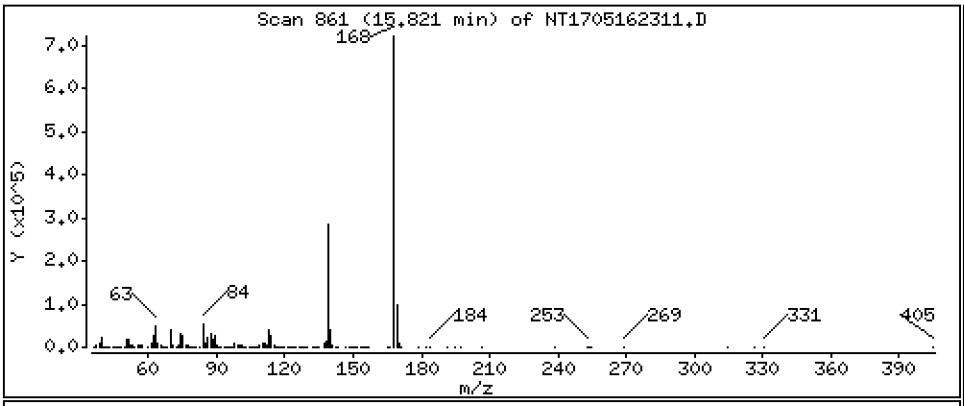
Operator: JGR

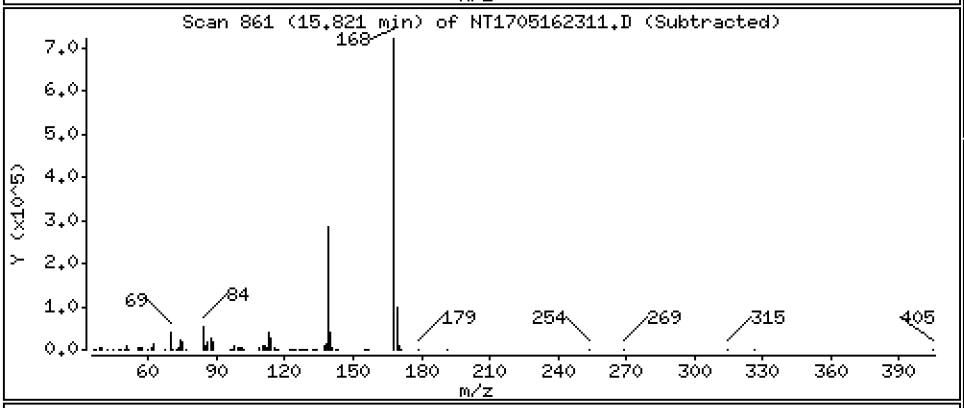
Column phase: ZB-5msi

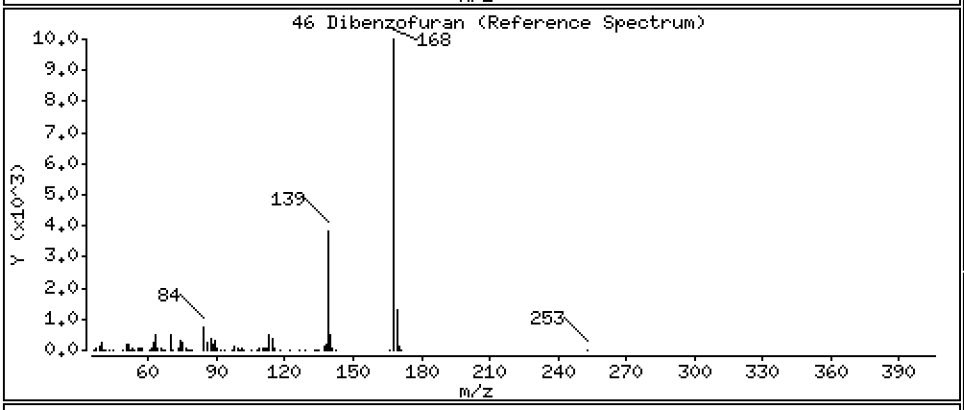
Column diameter: 0.25

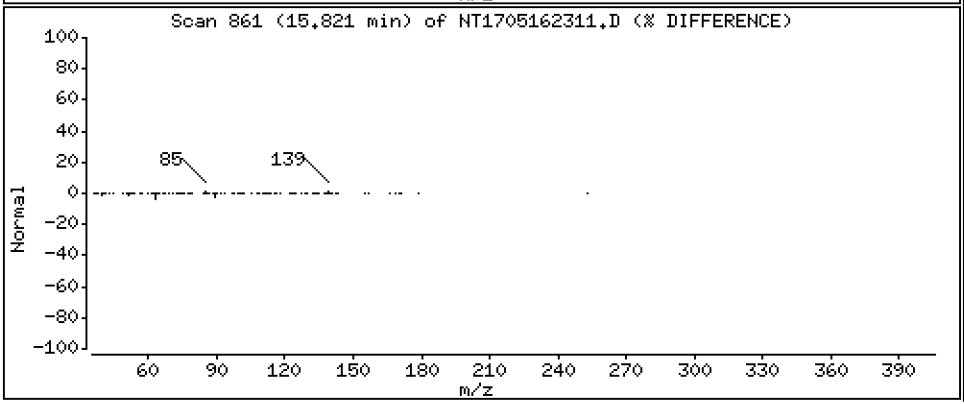
46 Dibenzofuran

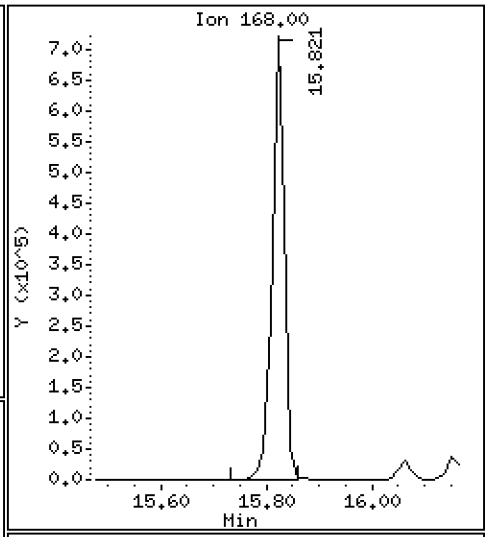
Concentration: 5.163 ug/mL

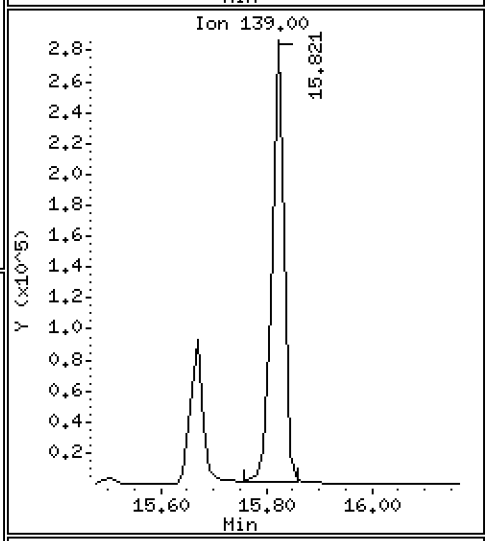


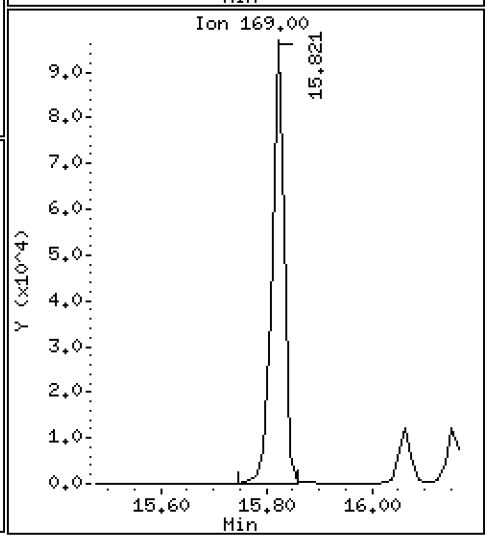












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

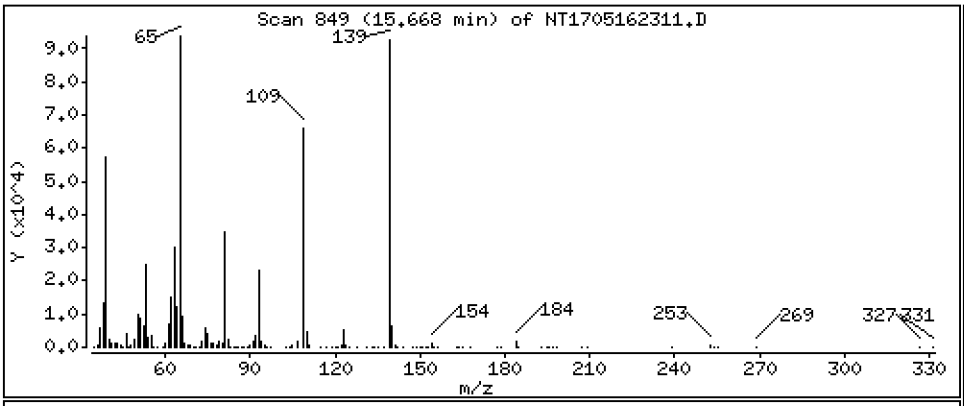
Operator: JGR

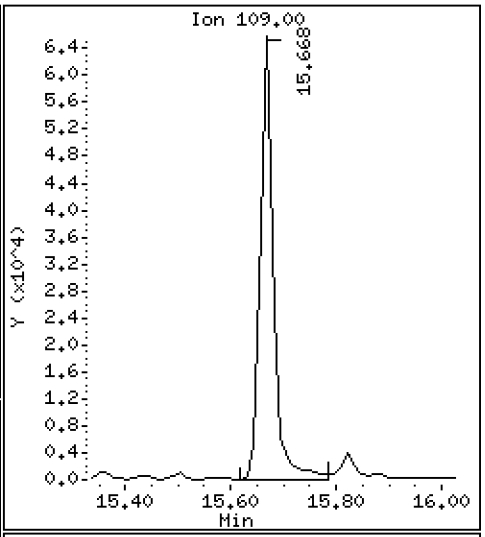
Column phase: ZB-5msi

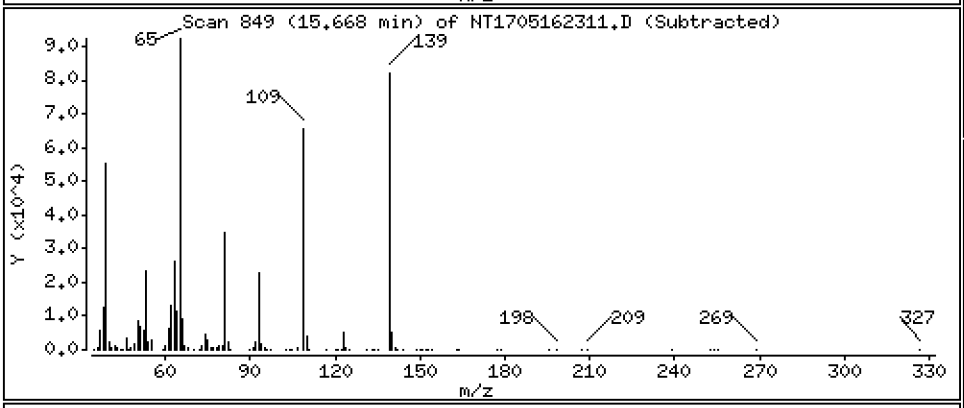
Column diameter: 0.25

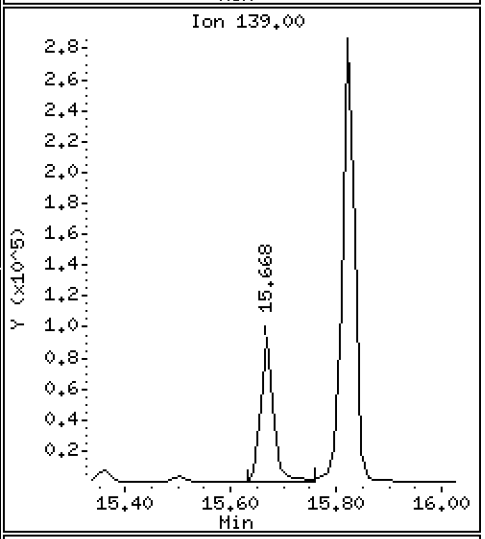
47 4-Nitrophenol

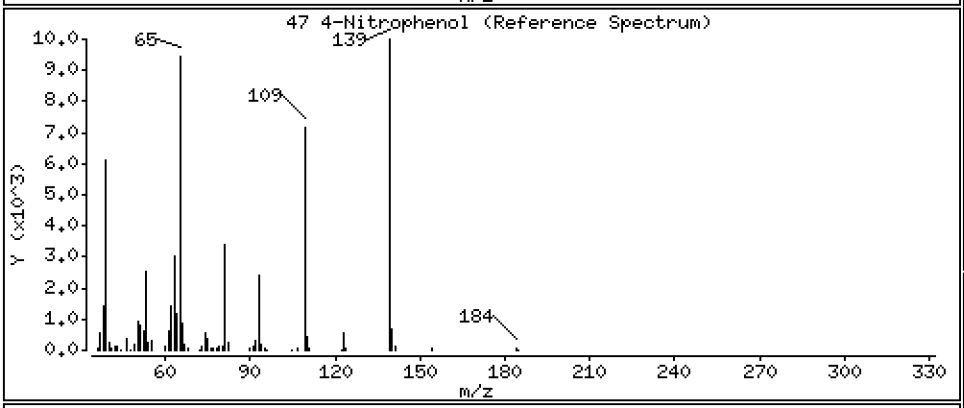
Concentration: 4.504 ug/mL

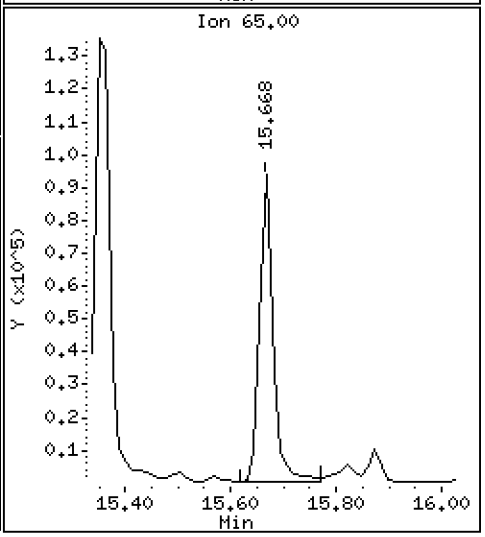


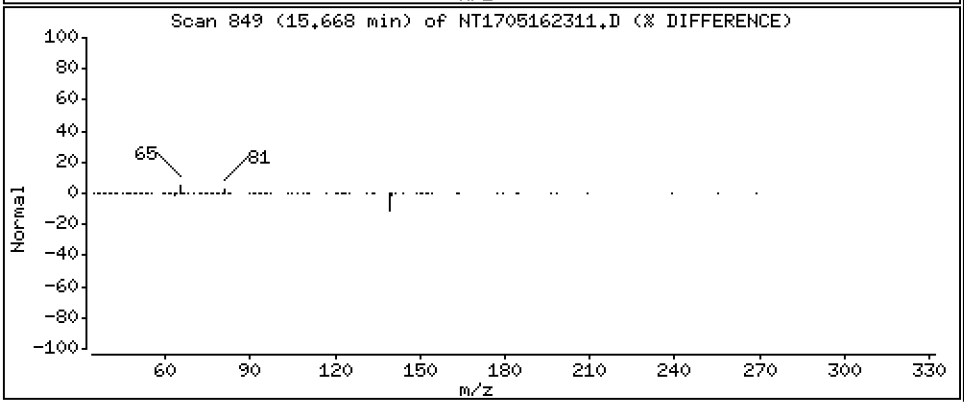












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

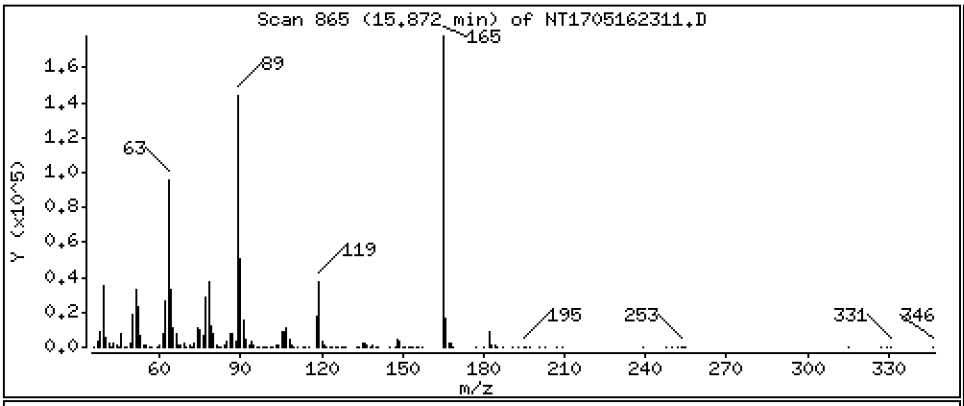
Operator: JGR

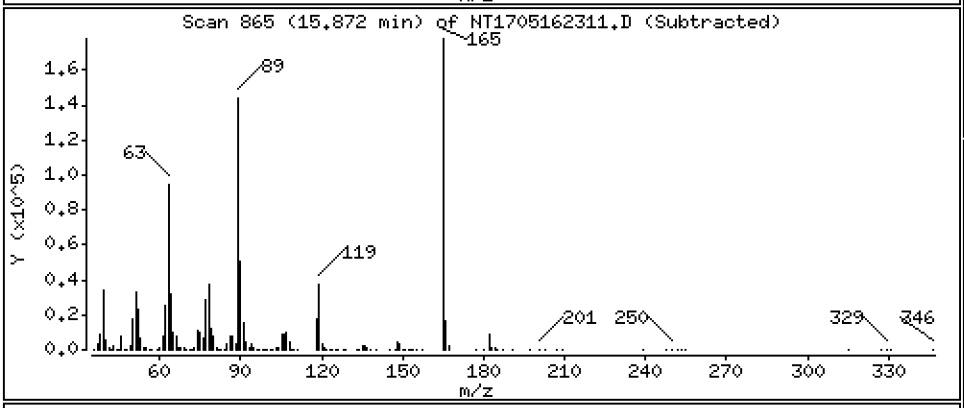
Column phase: ZB-5msi

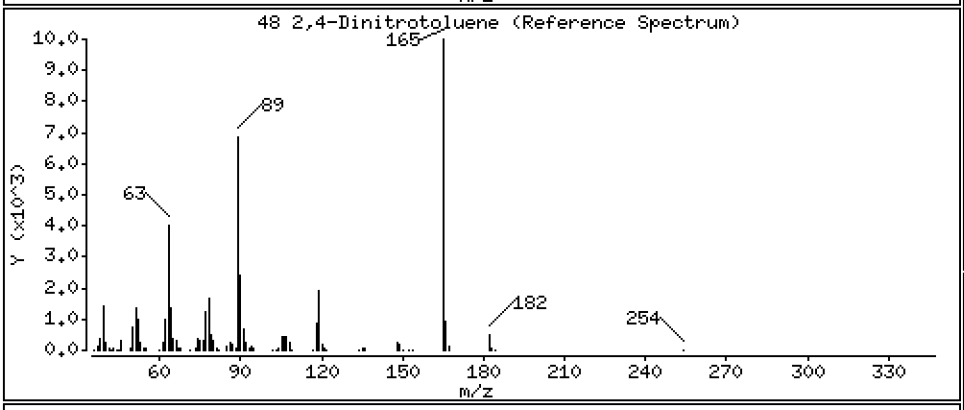
Column diameter: 0.25

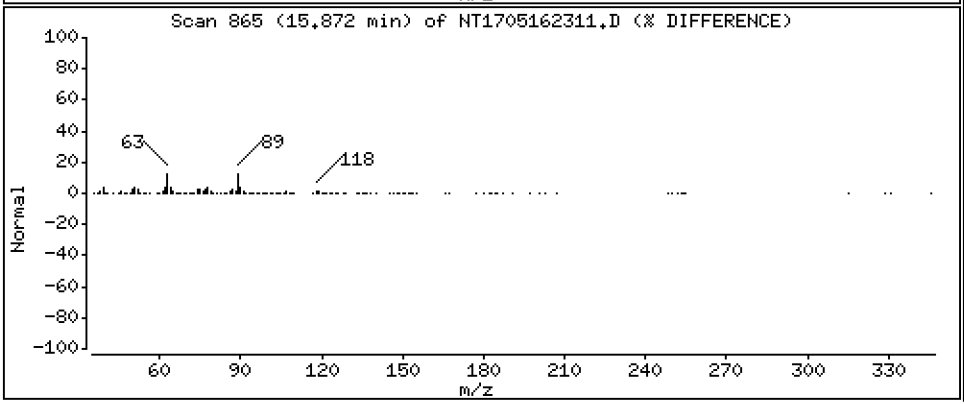
48 2,4-Dinitrotoluene

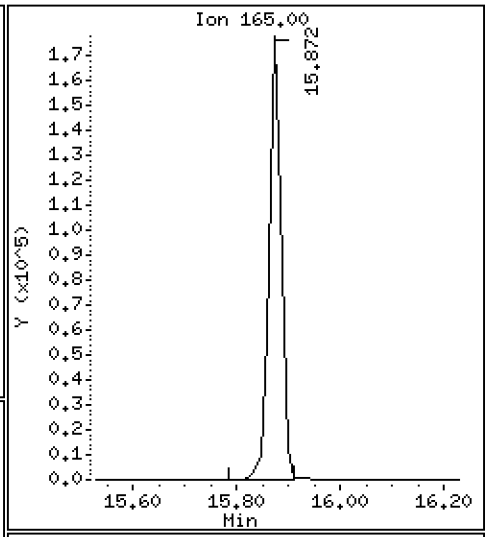
Concentration: 5.269 ug/mL

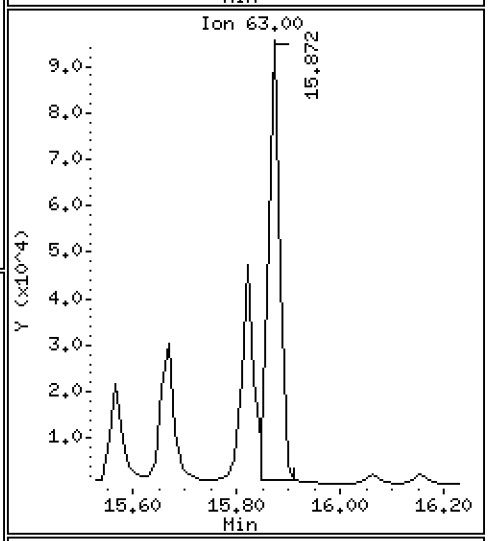


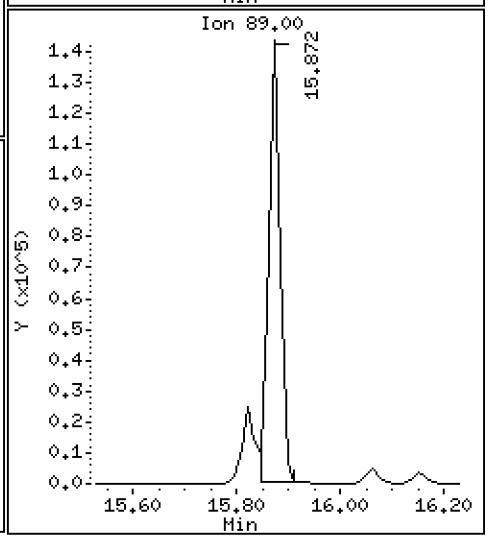












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

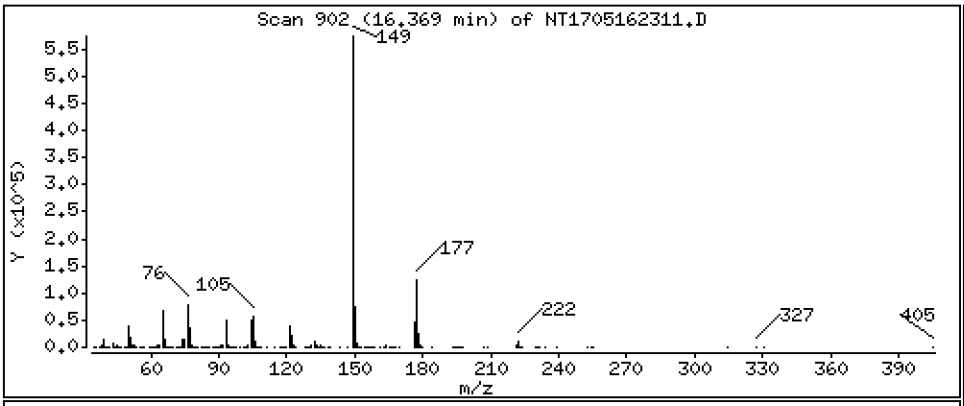
Operator: JGR

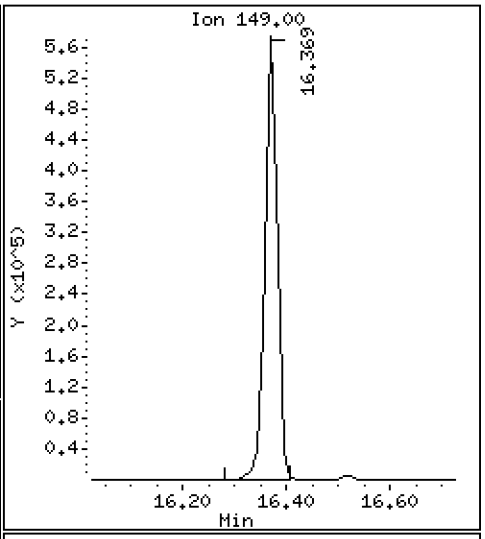
Column phase: ZB-5msi

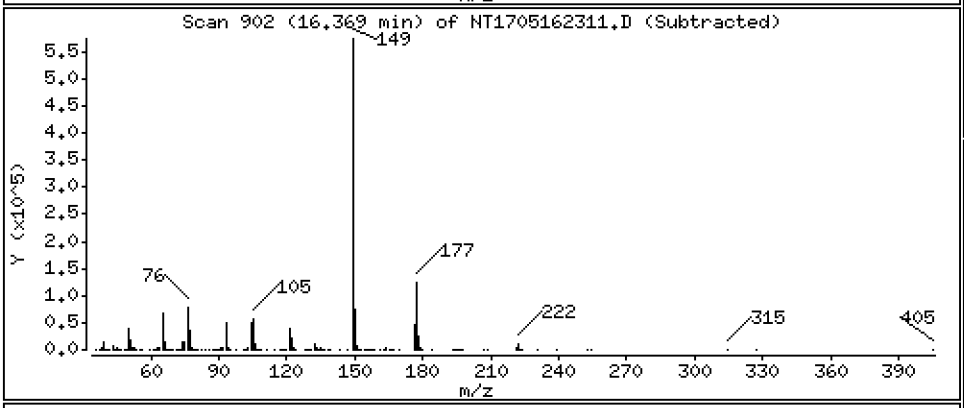
Column diameter: 0.25

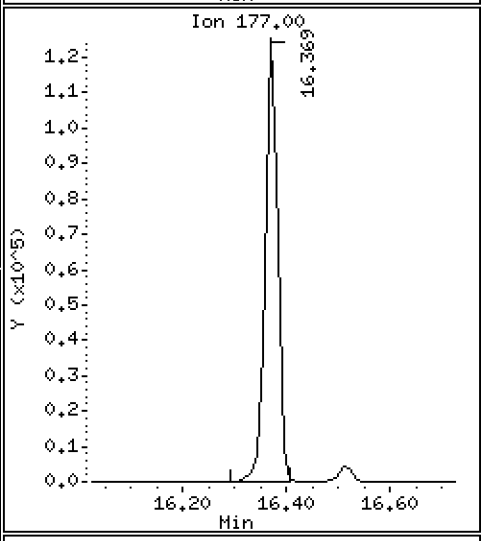
50 Diethylphthalate

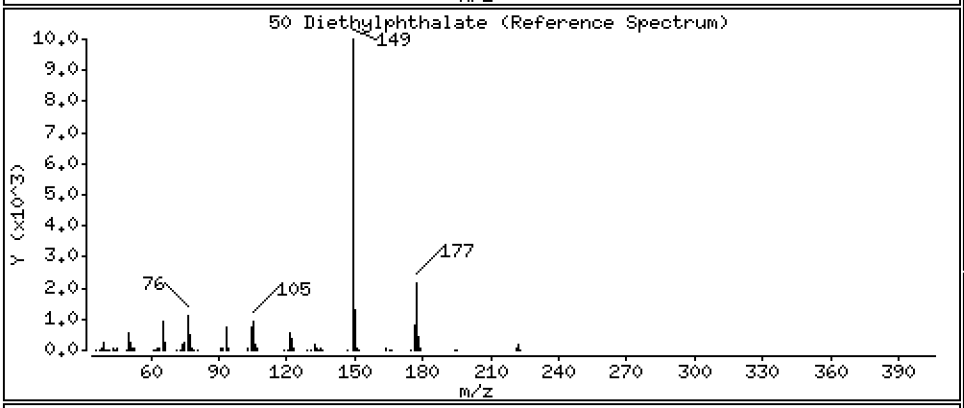
Concentration: 5.494 ug/mL

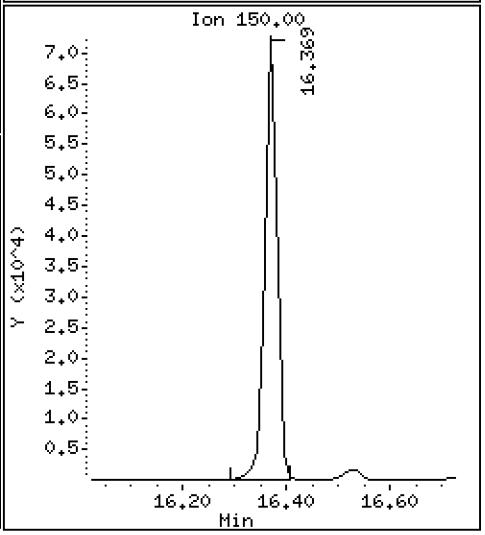


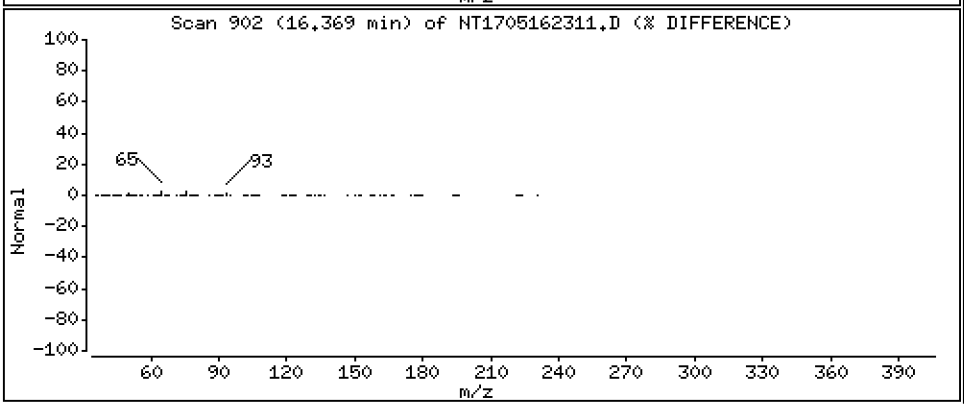












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

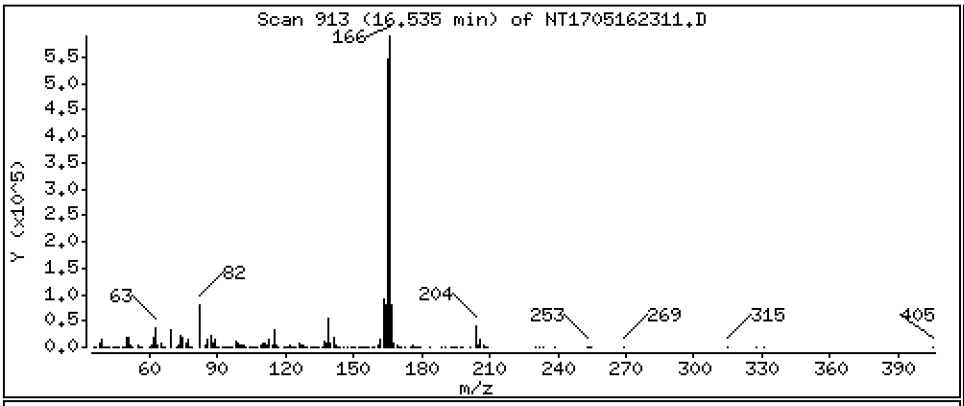
Operator: JGR

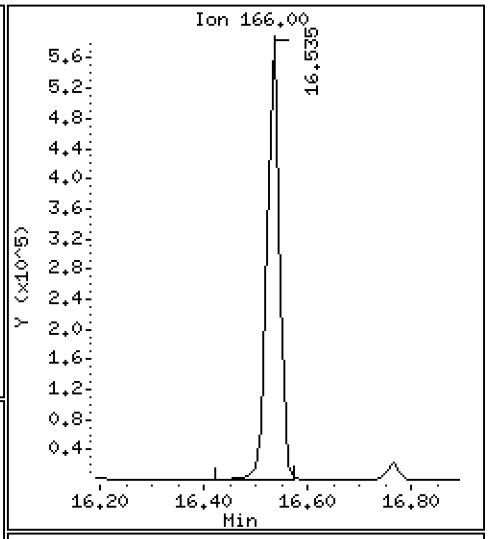
Column phase: ZB-5msi

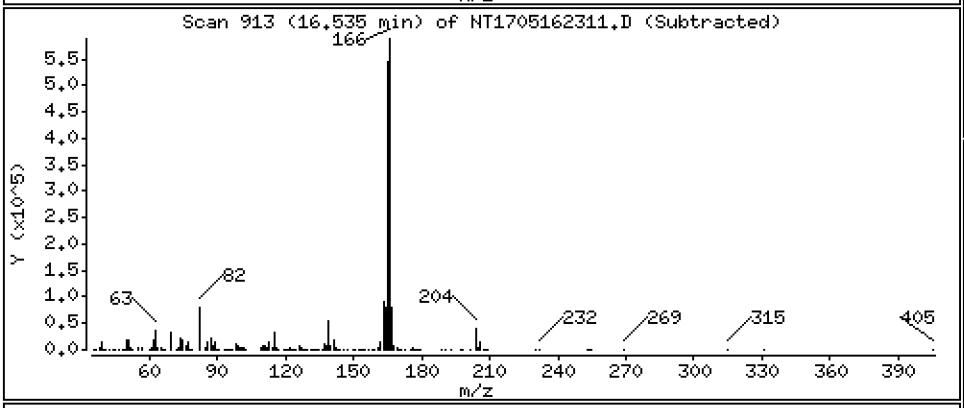
Column diameter: 0.25

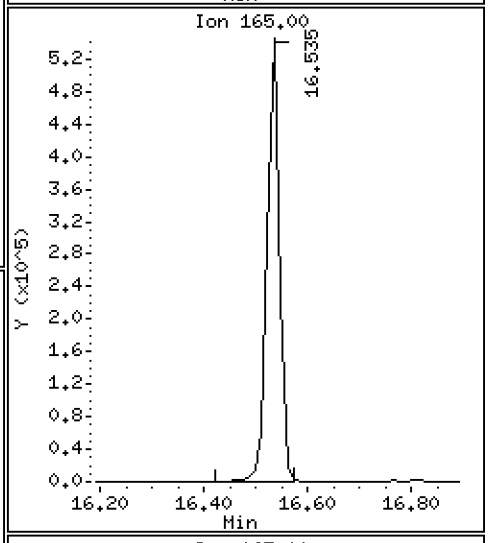
49 Fluorene

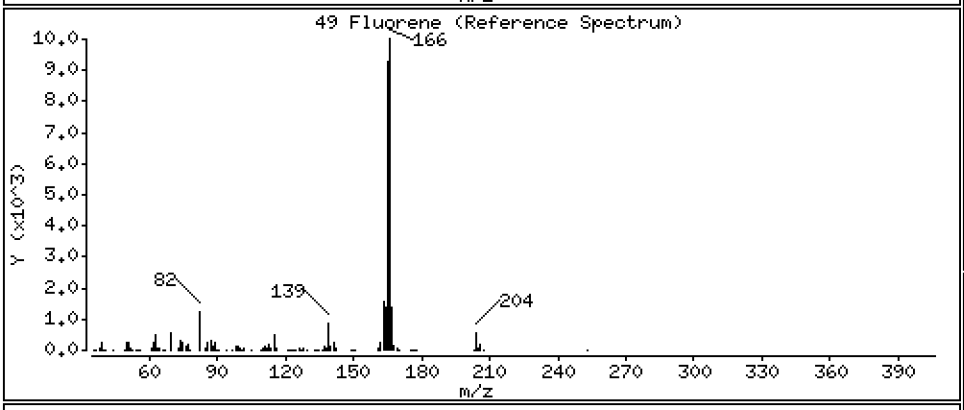
Concentration: 5.398 ug/mL

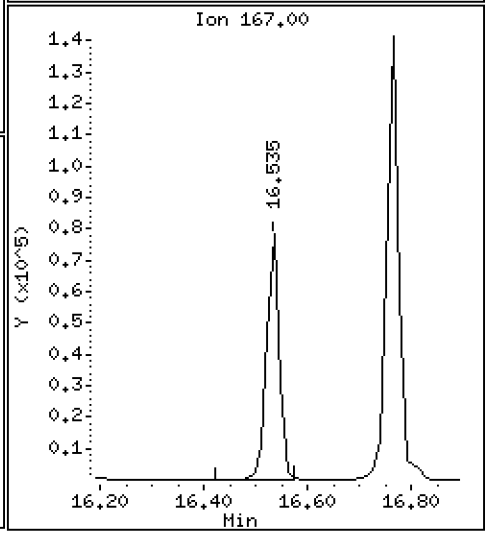


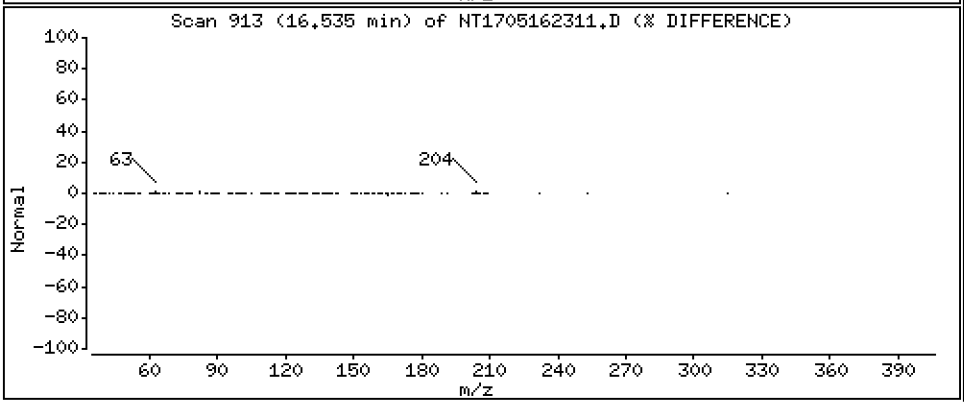












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

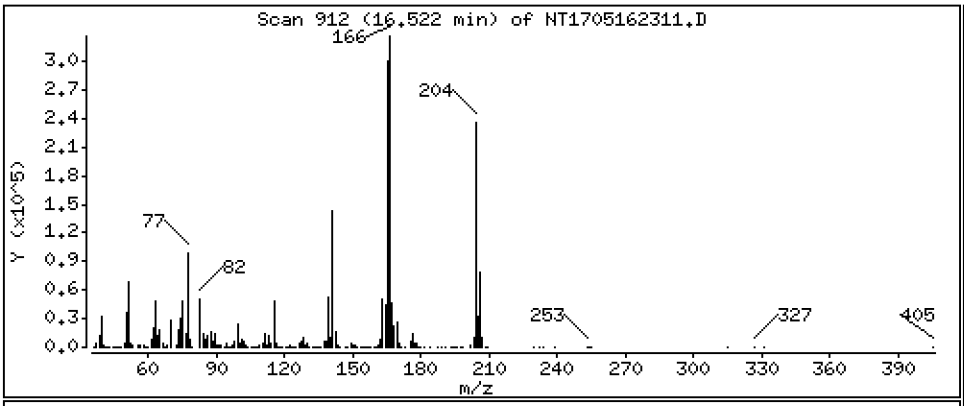
Operator: JGR

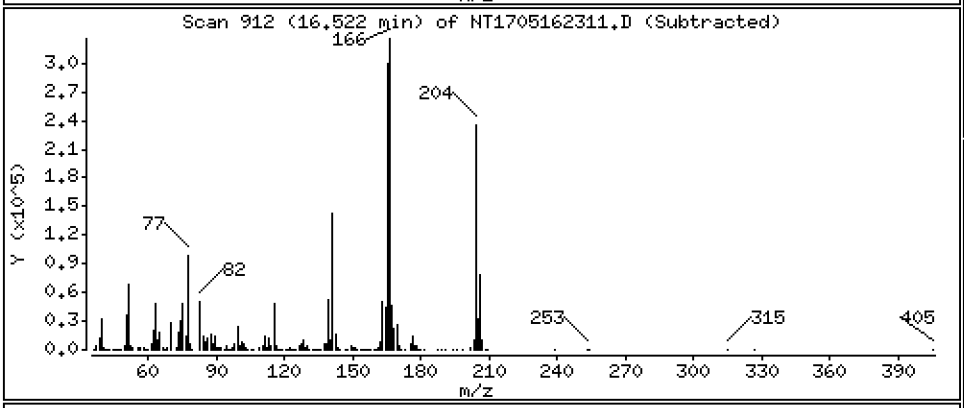
Column phase: ZB-5msi

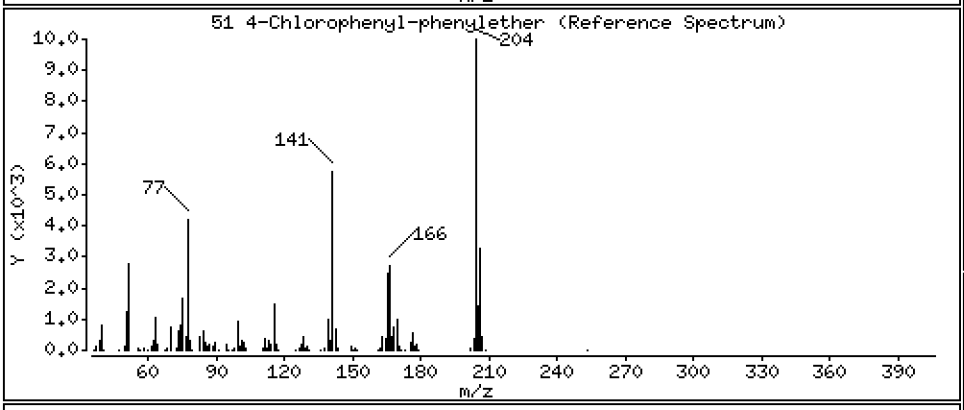
Column diameter: 0.25

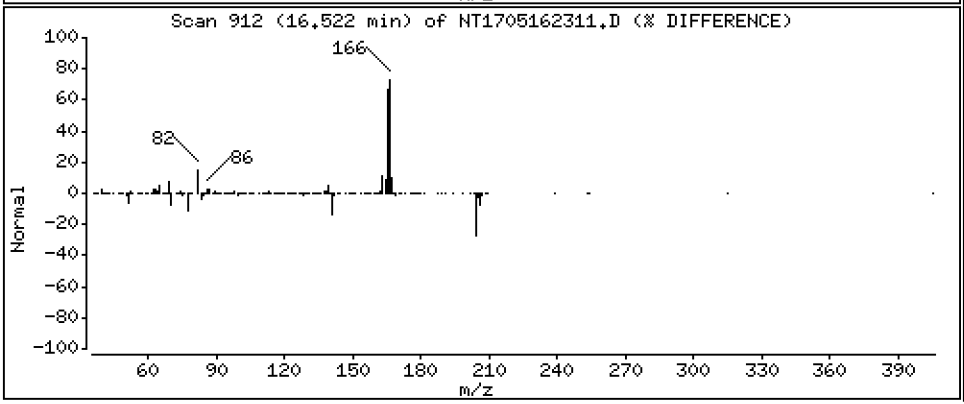
51 4-Chlorophenyl-phenylether

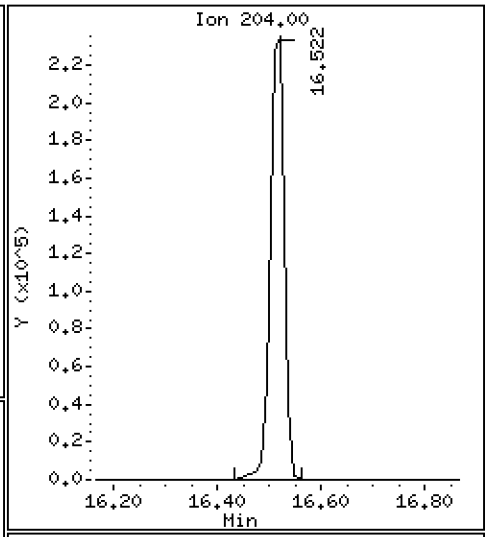
Concentration: 5.462 ug/mL

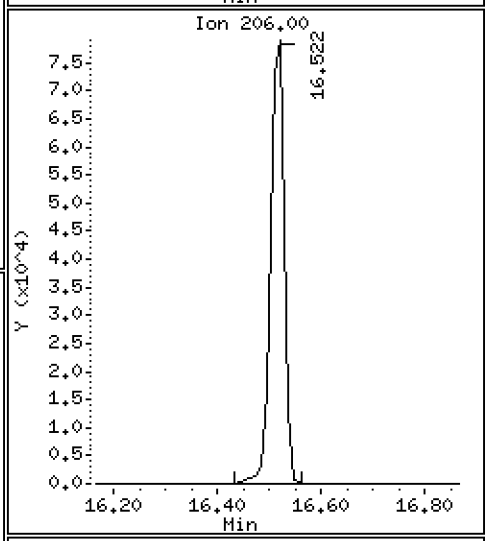


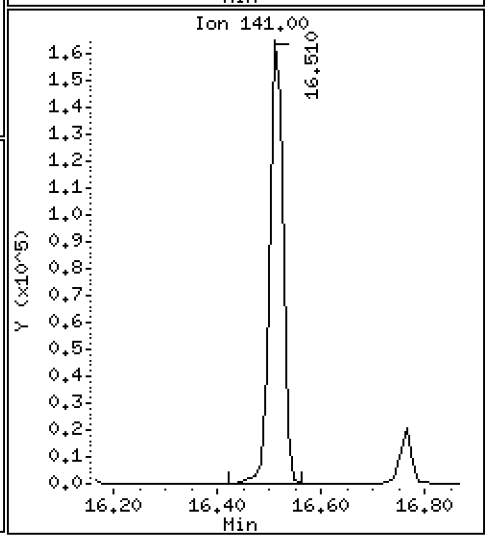












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

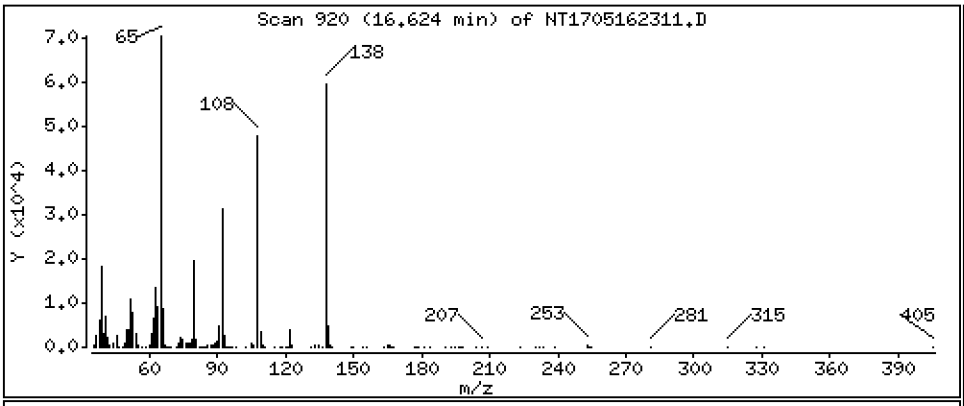
Operator: JGR

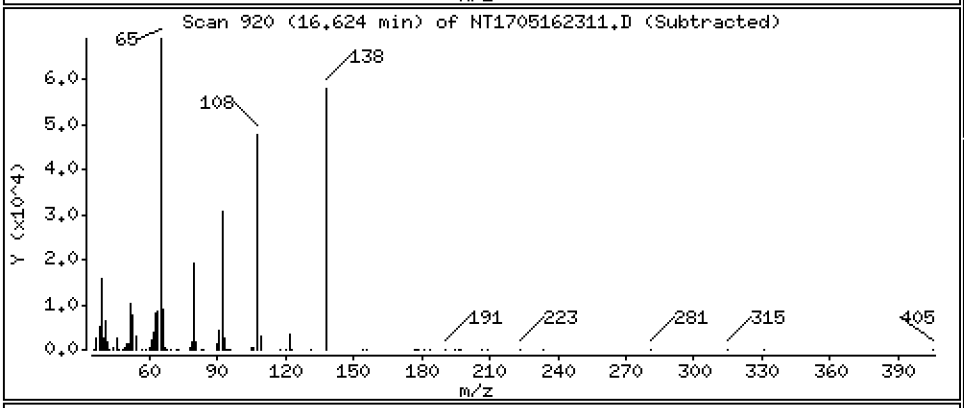
Column phase: ZB-5msi

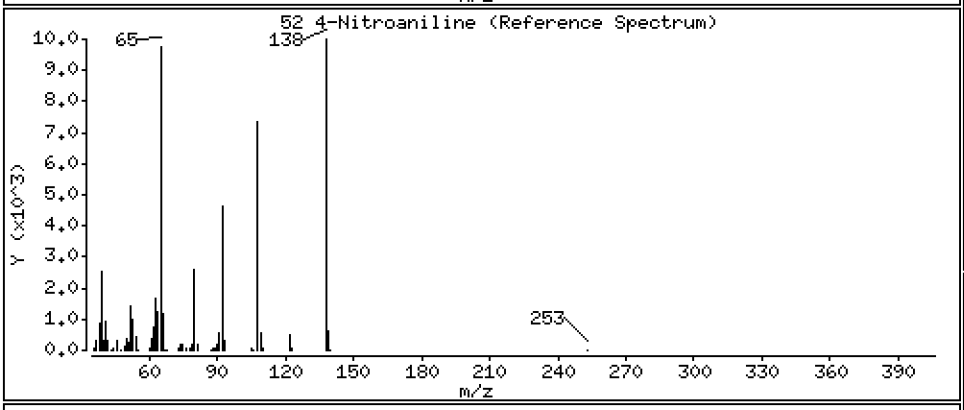
Column diameter: 0.25

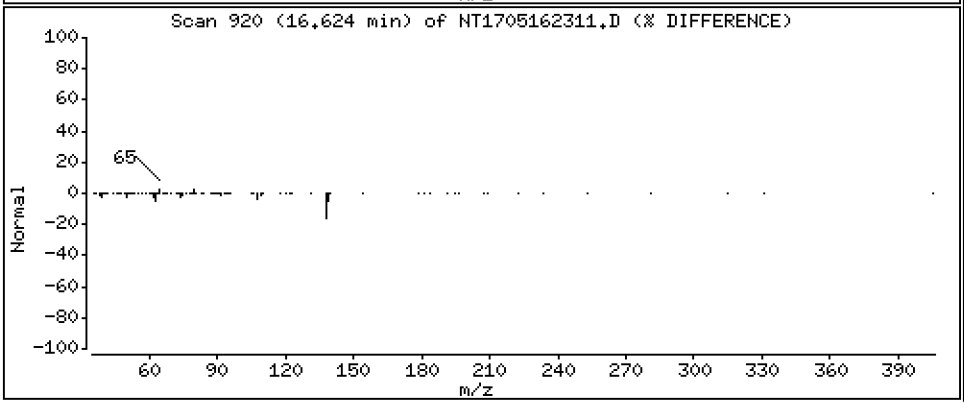
52 4-Nitroaniline

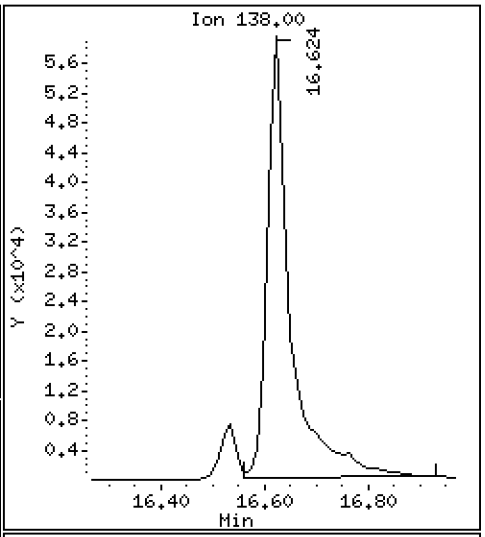
Concentration: 5.108 ug/mL

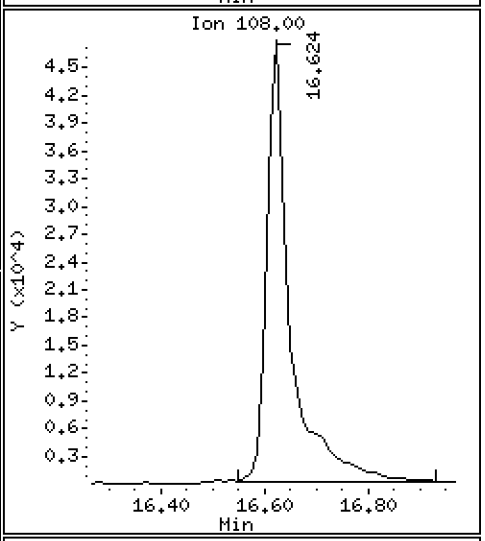


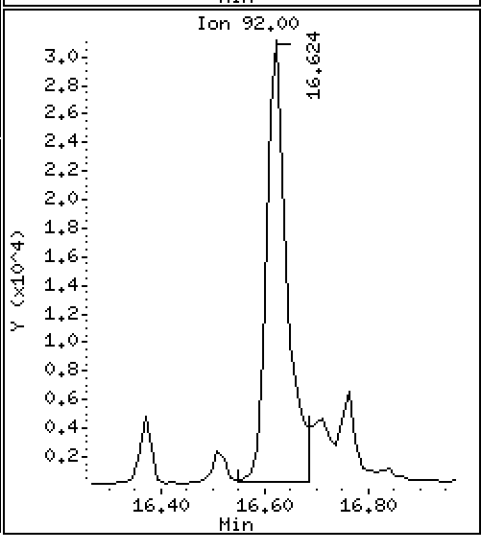












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

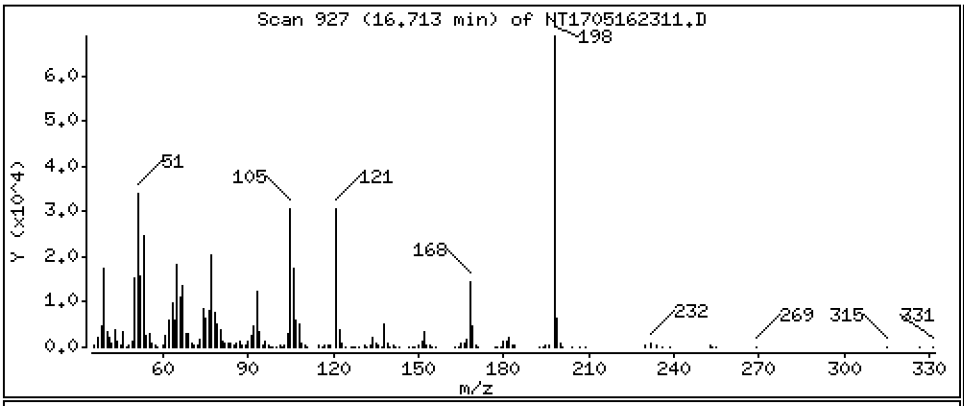
Operator: JGR

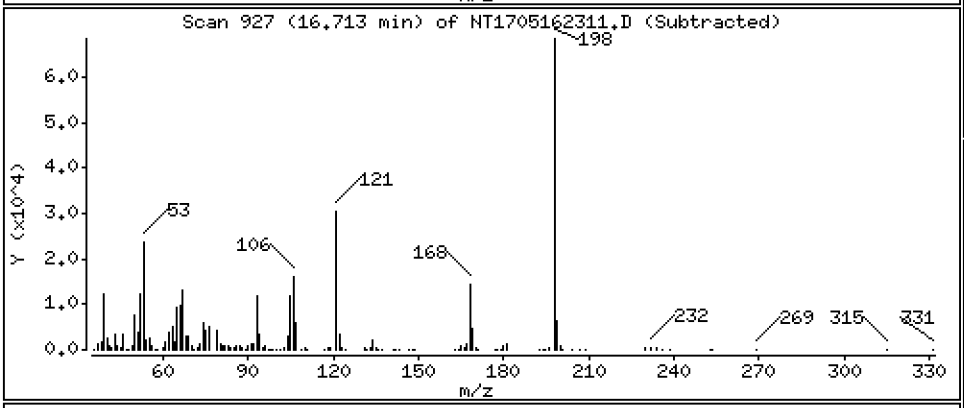
Column phase: ZB-5msi

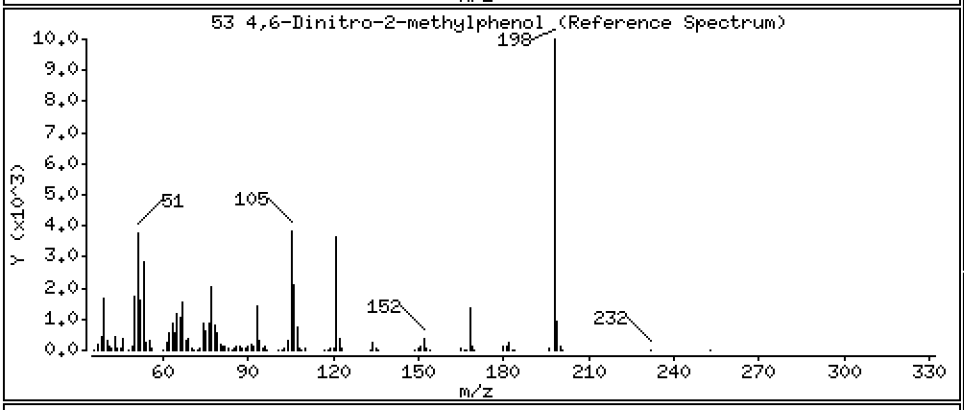
Column diameter: 0.25

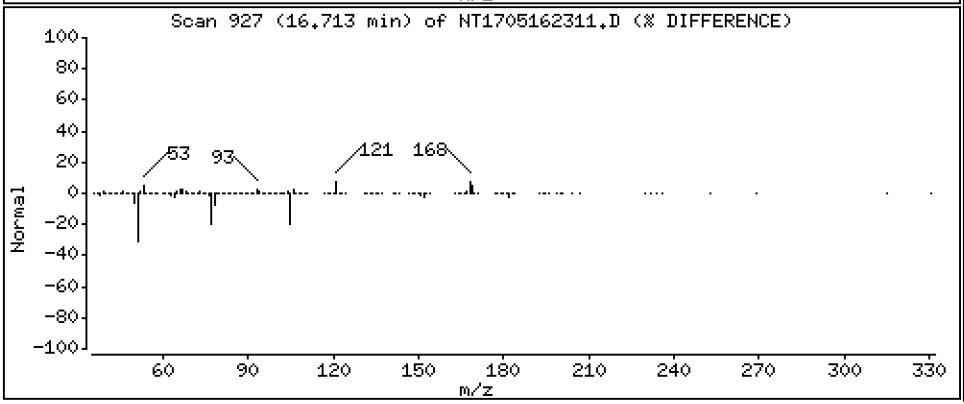
53 4,6-Dinitro-2-methylphenol

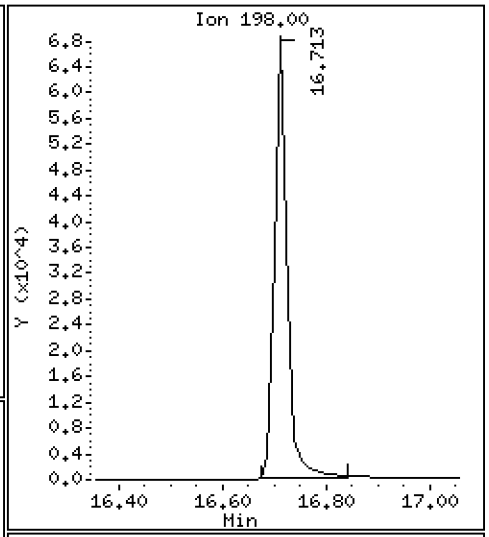
Concentration: 3.355 ug/mL

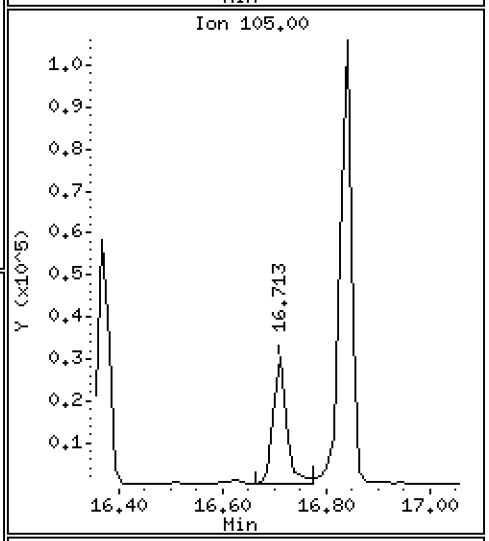


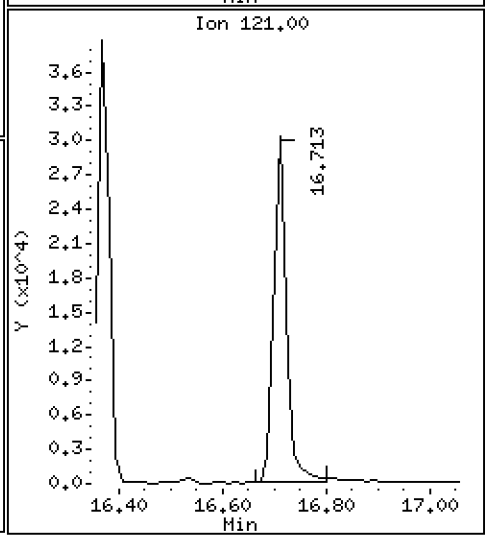












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

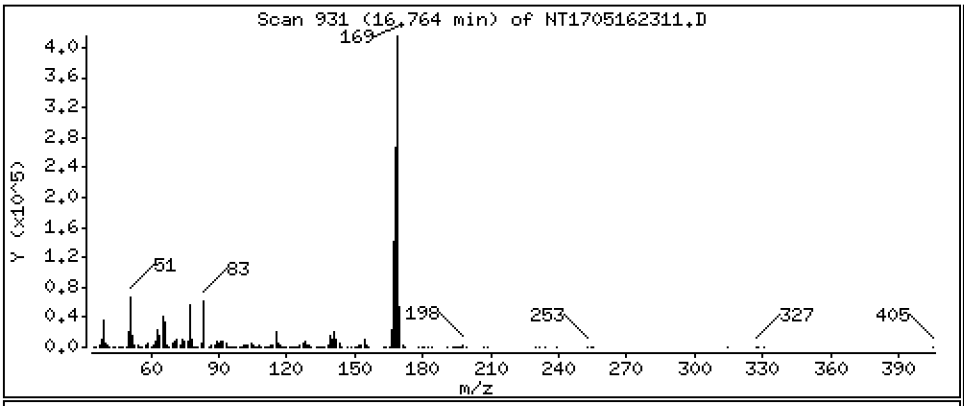
Operator: JGR

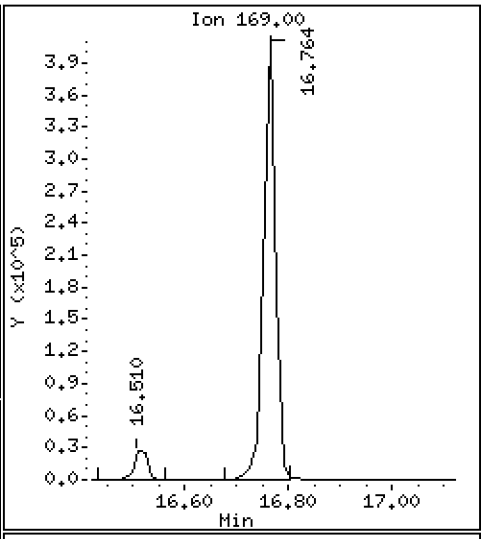
Column phase: ZB-5msi

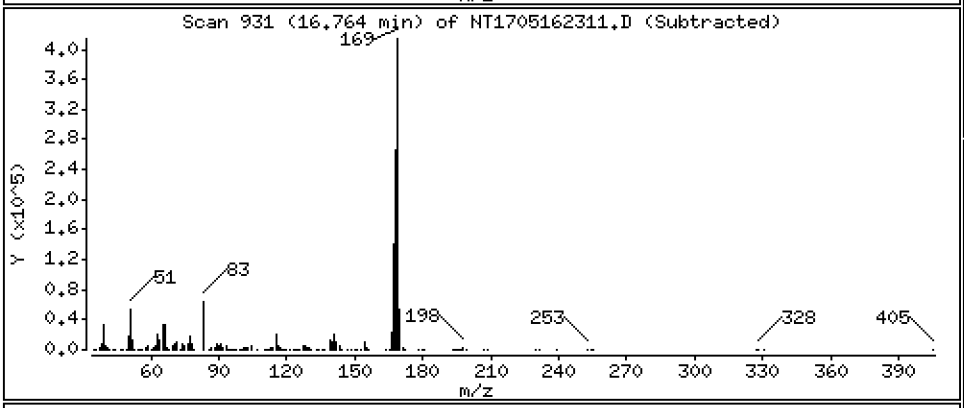
Column diameter: 0.25

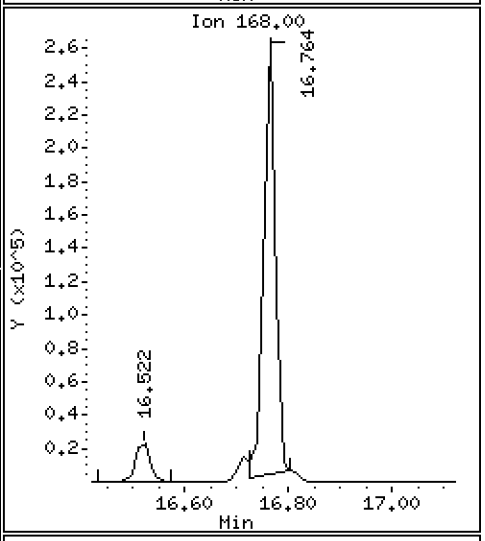
54 N-Nitrosodiphenylamine

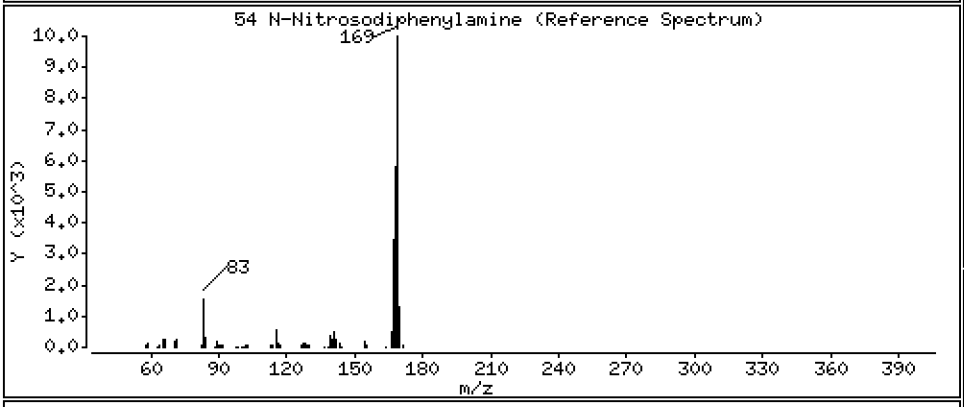
Concentration: 5.470 ug/mL

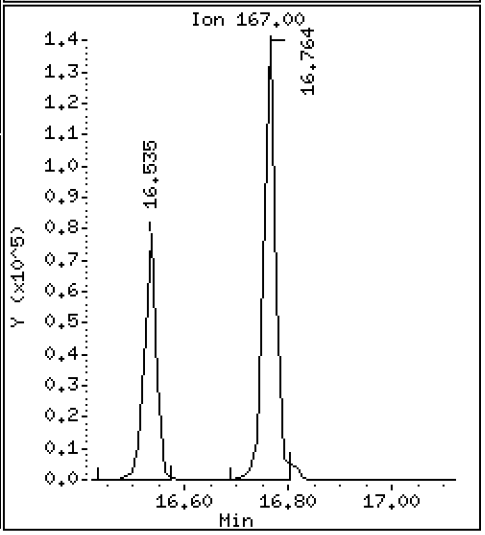


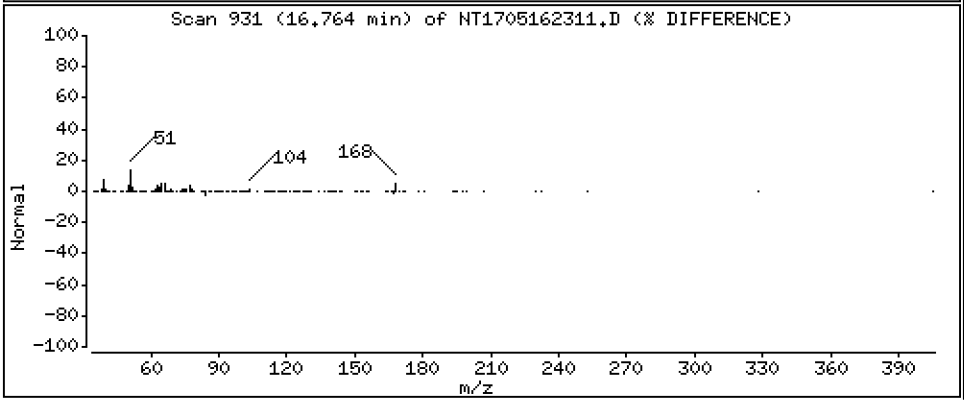












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

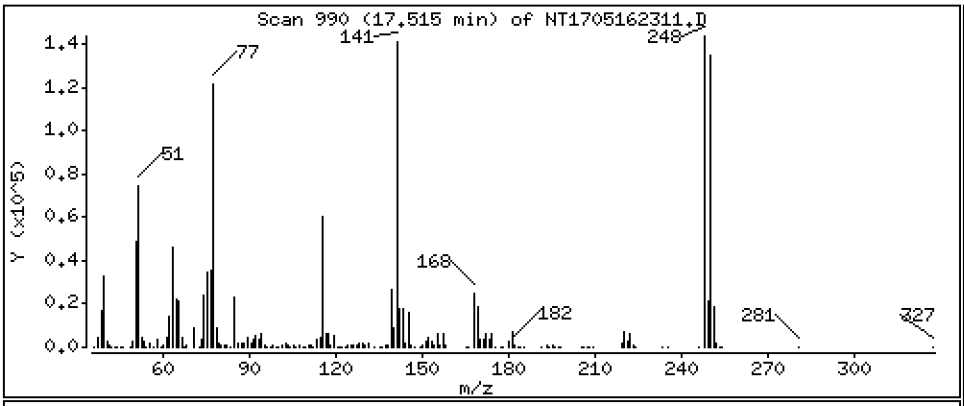
Operator: JGR

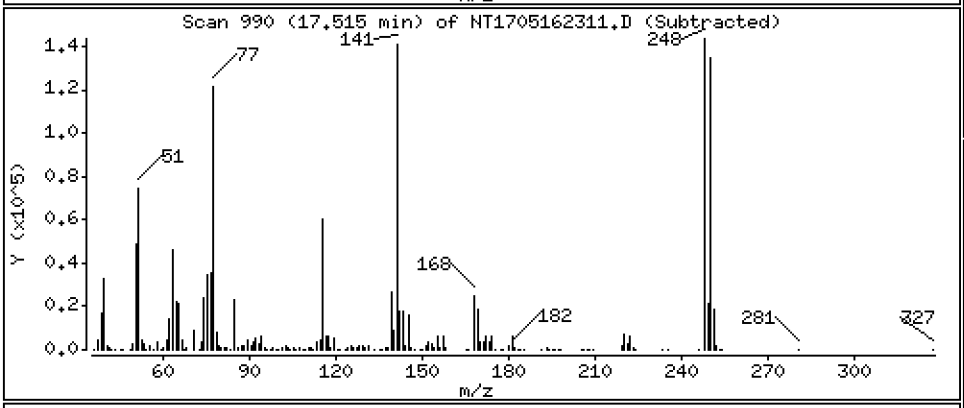
Column phase: ZB-5msi

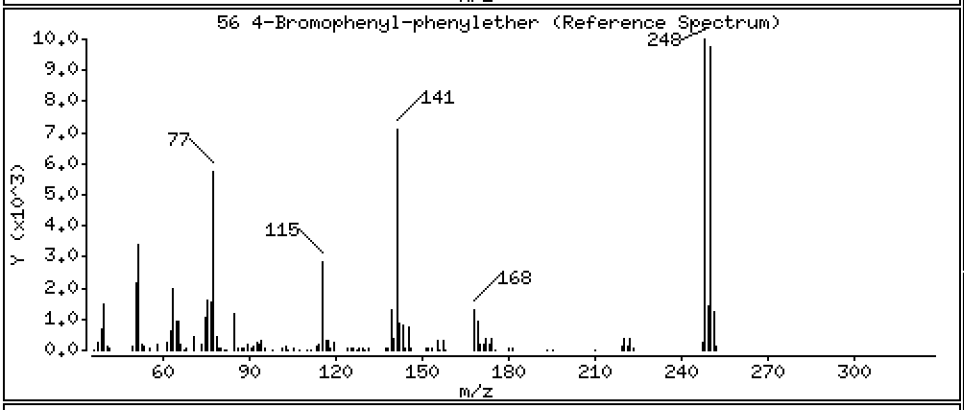
Column diameter: 0.25

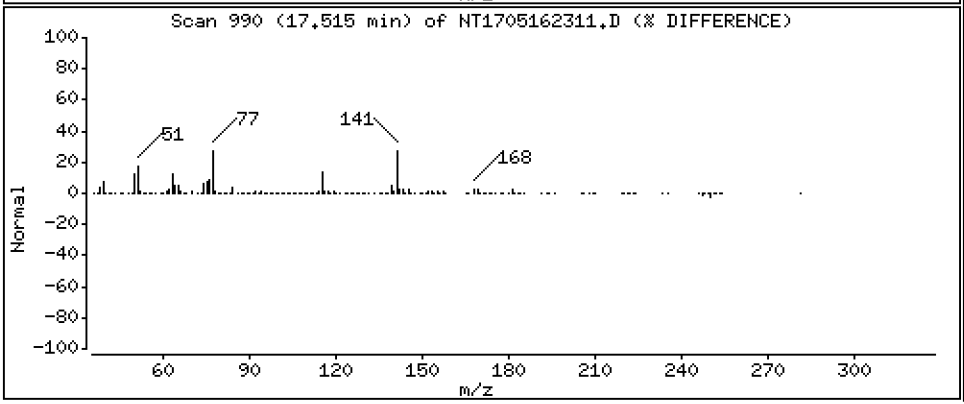
56 4-Bromophenyl-phenylether

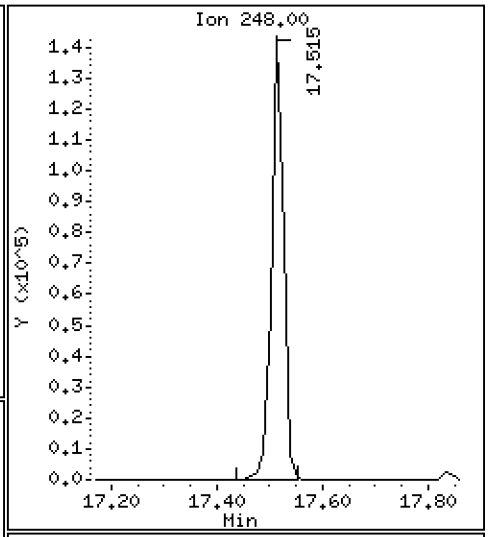
Concentration: 5.420 ug/mL

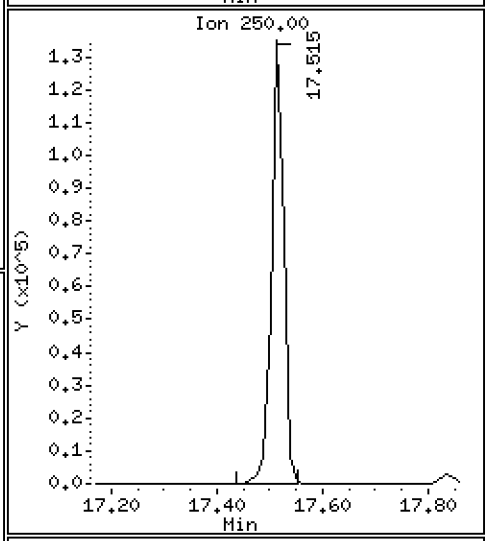


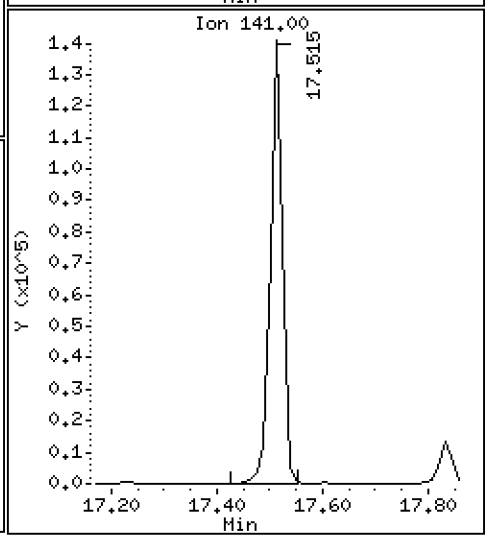












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

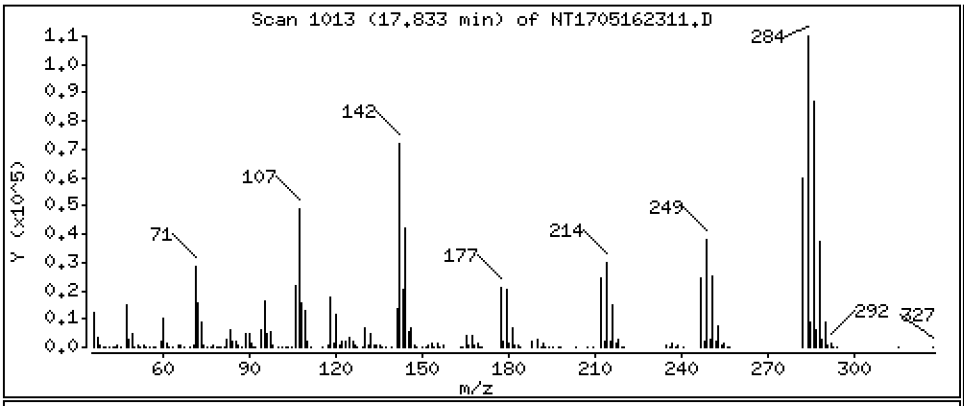
Operator: JGR

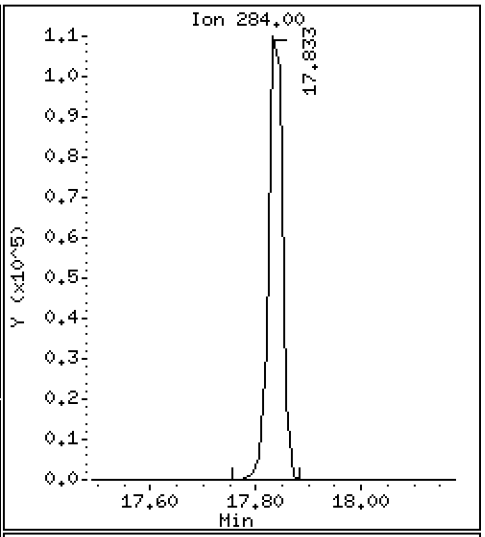
Column phase: ZB-5msi

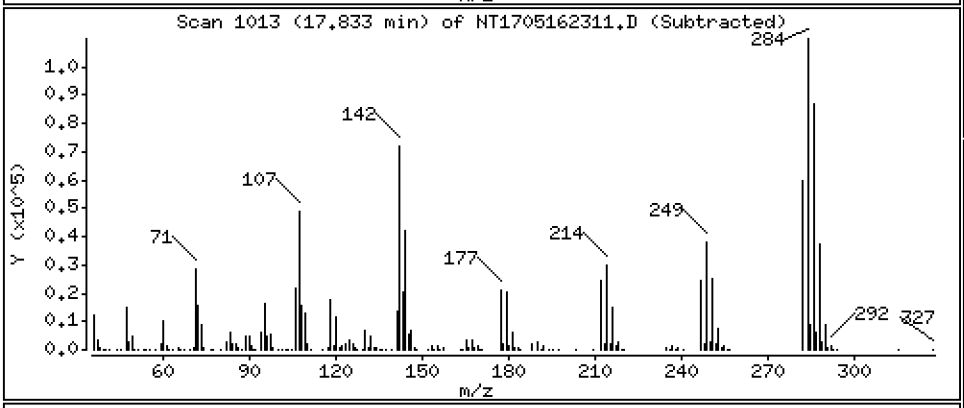
Column diameter: 0.25

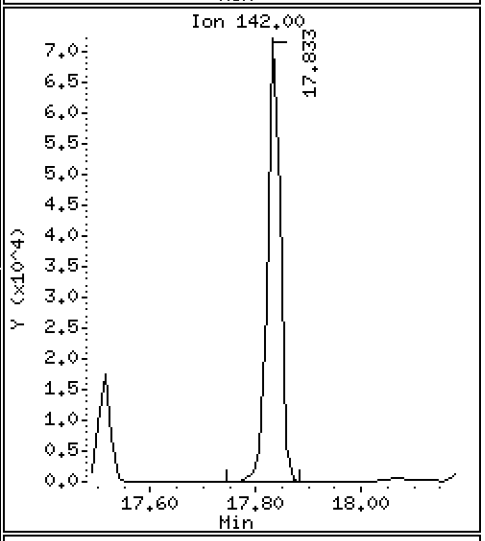
57 Hexachlorobenzene

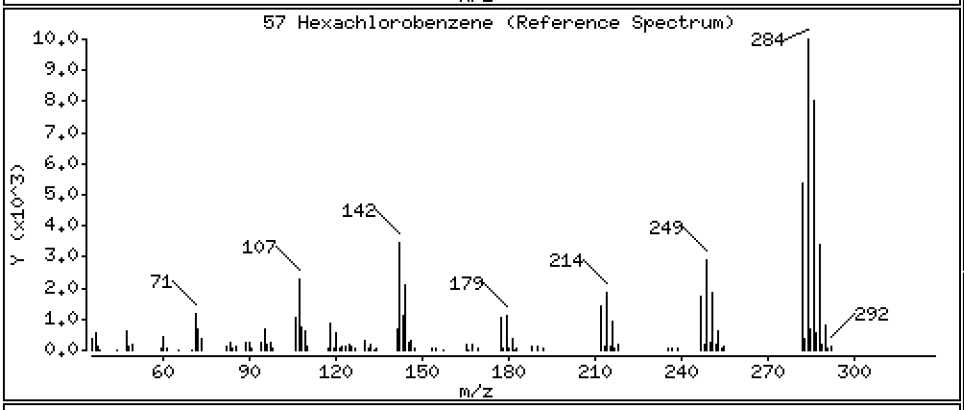
Concentration: 4.913 ug/mL

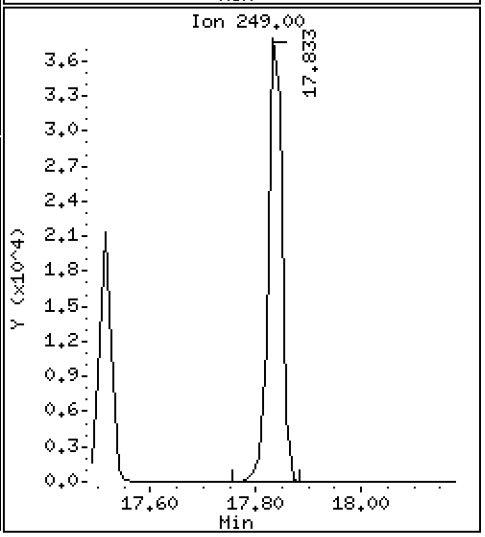


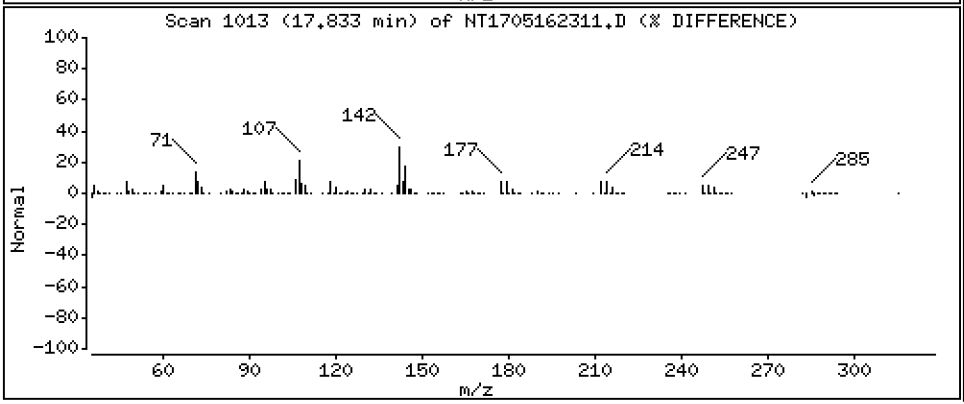












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

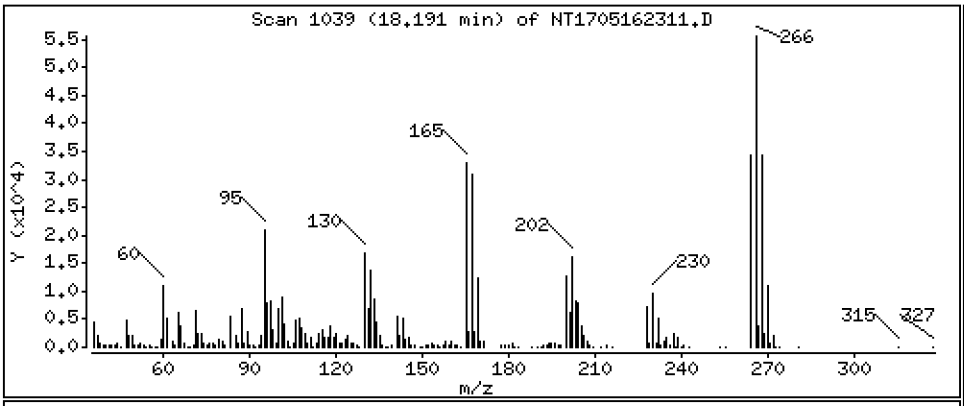
Operator: JGR

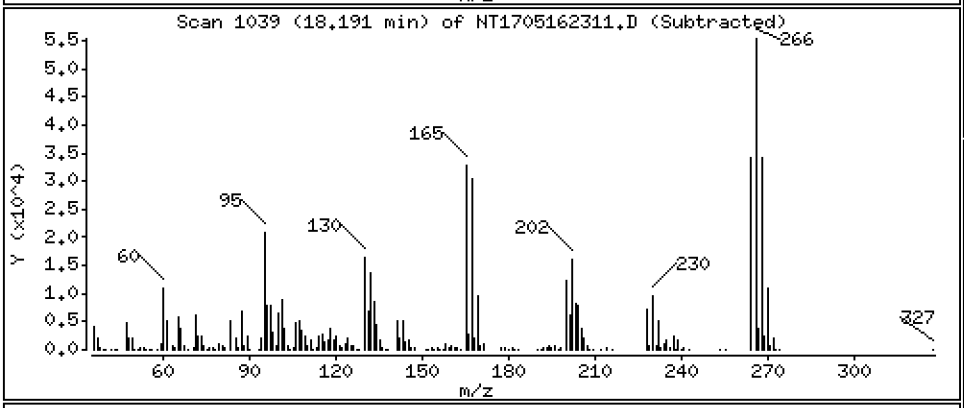
Column phase: ZB-5msi

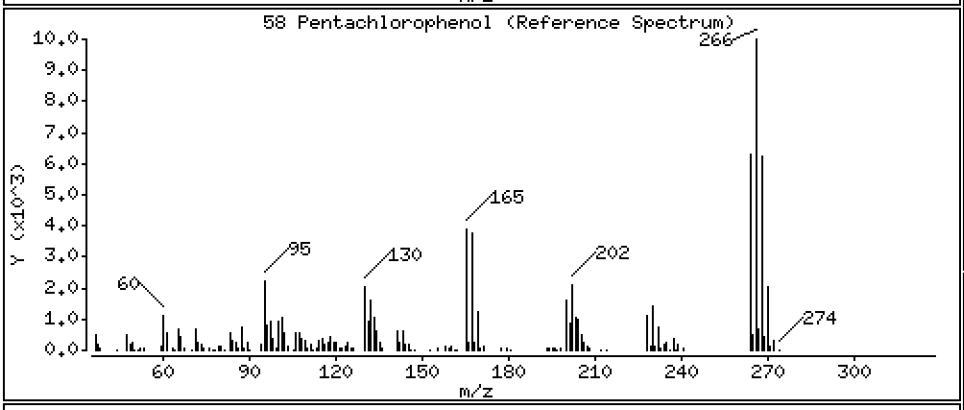
Column diameter: 0.25

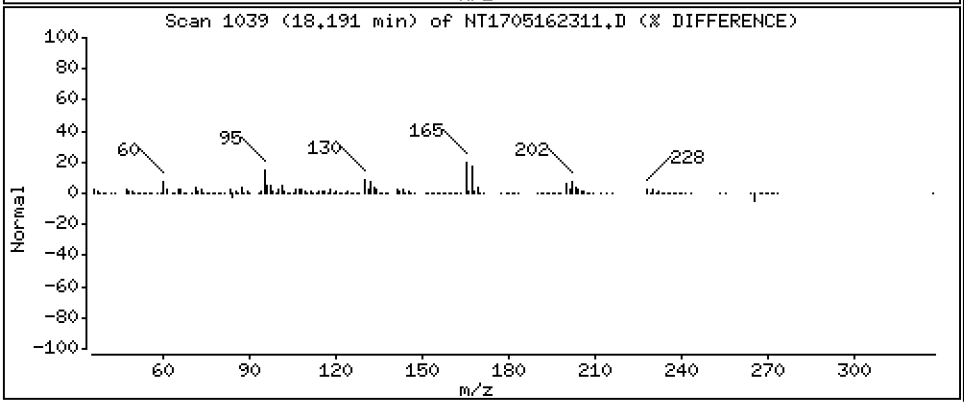
58 Pentachlorophenol

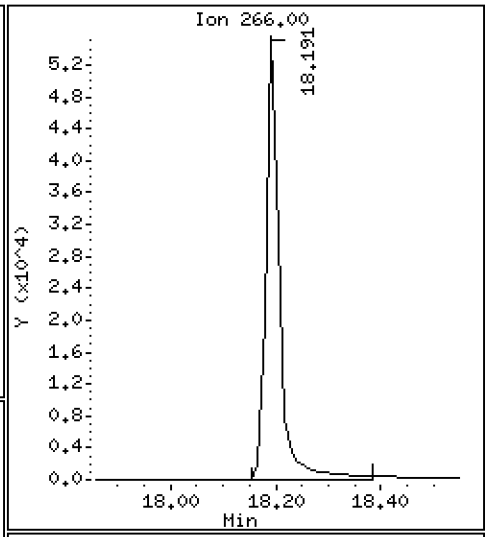
Concentration: 3.943 ug/mL

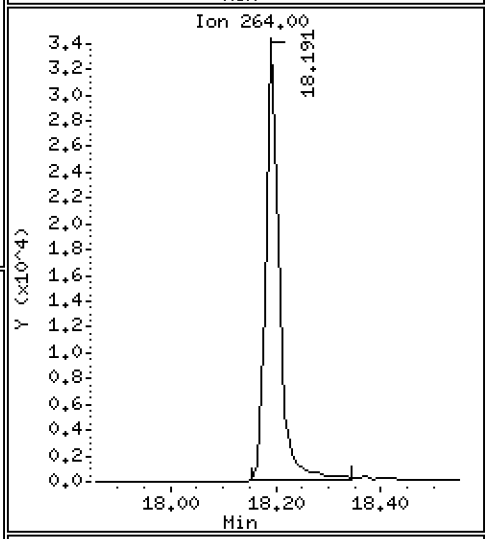


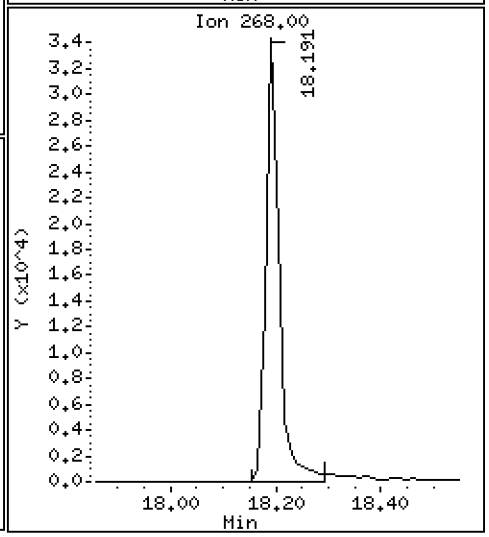












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

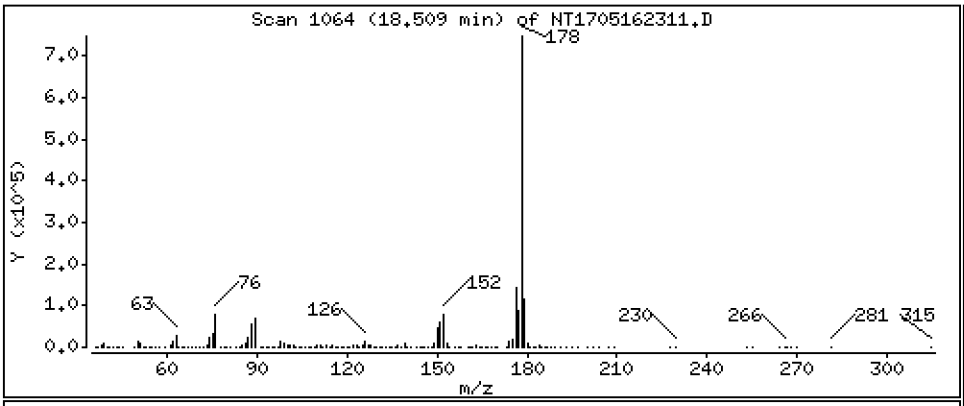
Operator: JGR

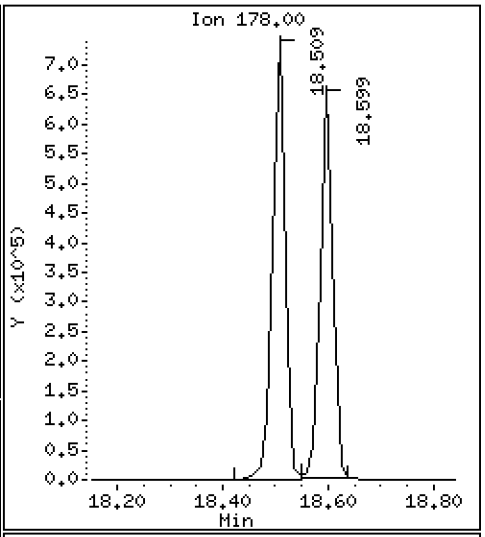
Column phase: ZB-5msi

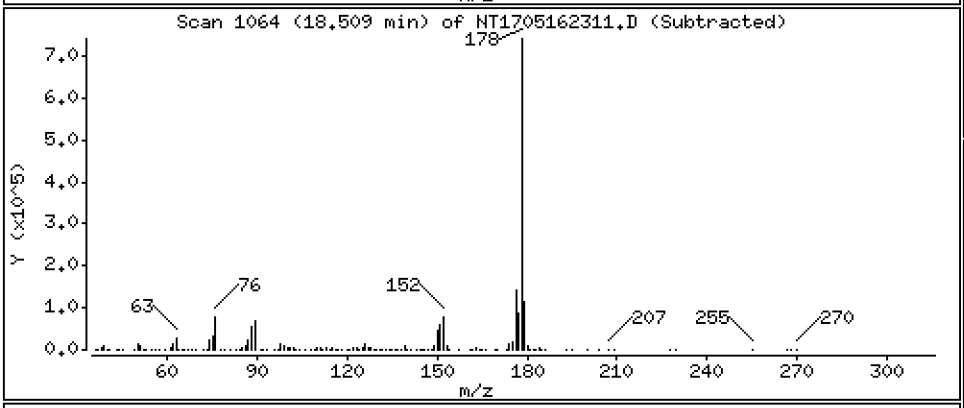
Column diameter: 0.25

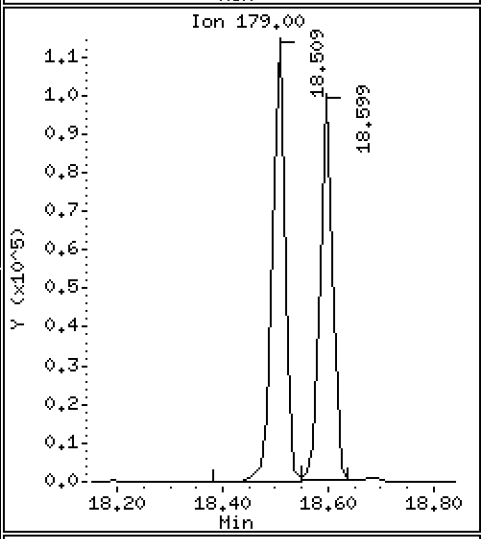
60 Phenanthrene

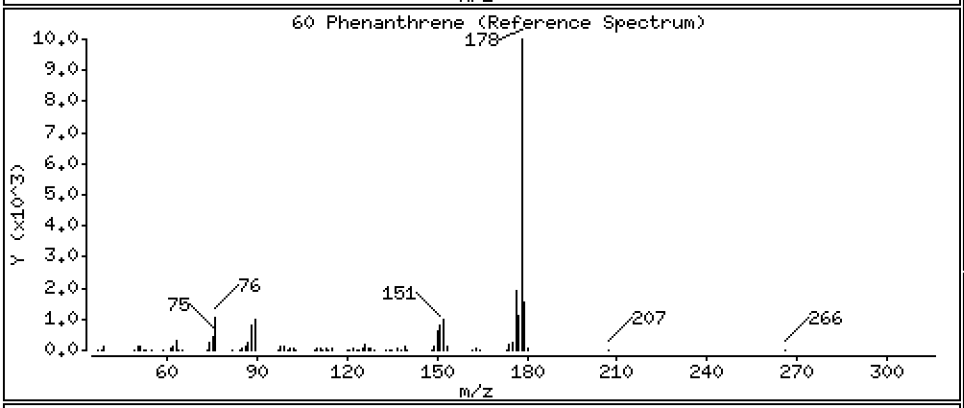
Concentration: 5.039 ug/mL

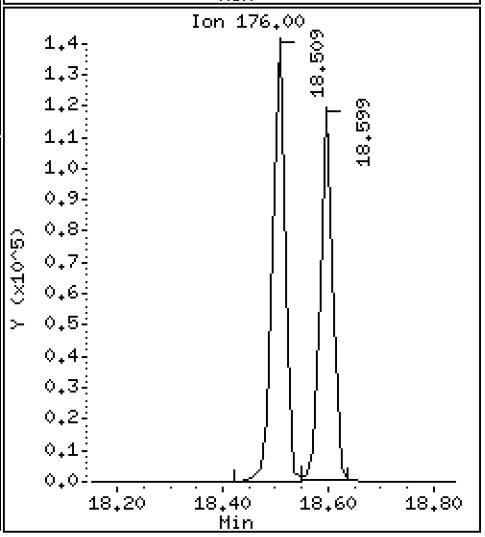


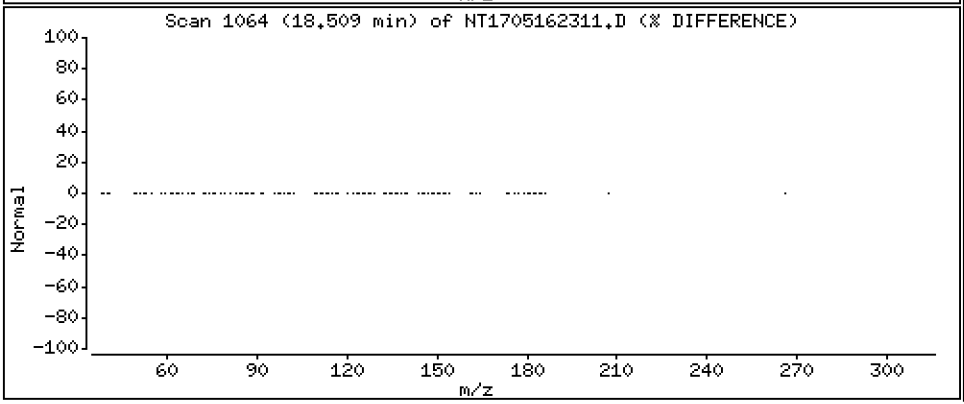












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

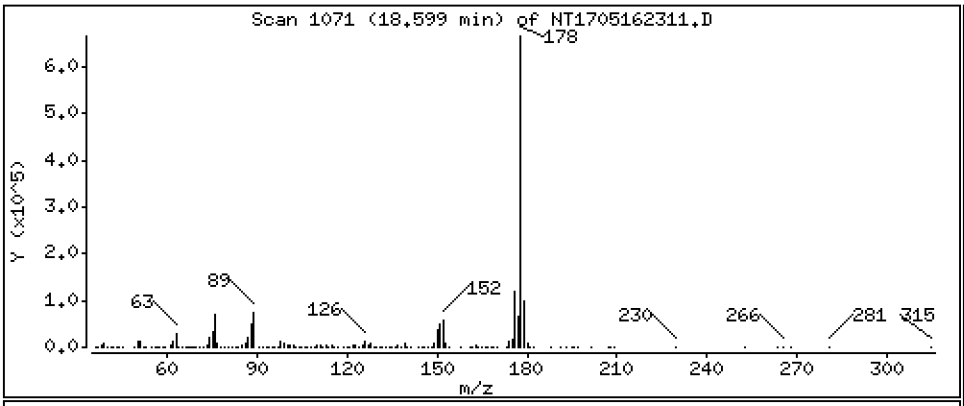
Operator: JGR

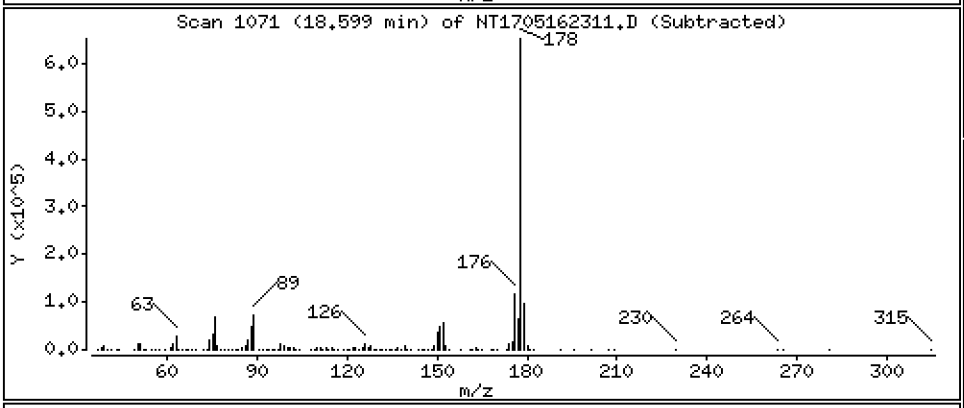
Column phase: ZB-5msi

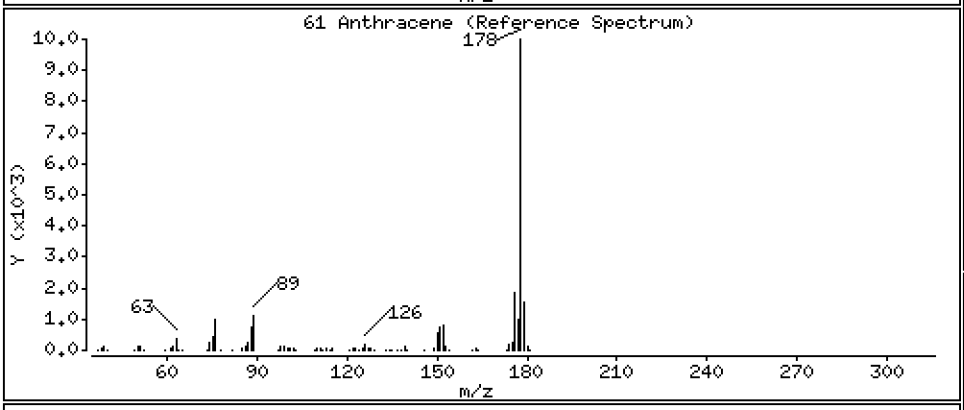
Column diameter: 0.25

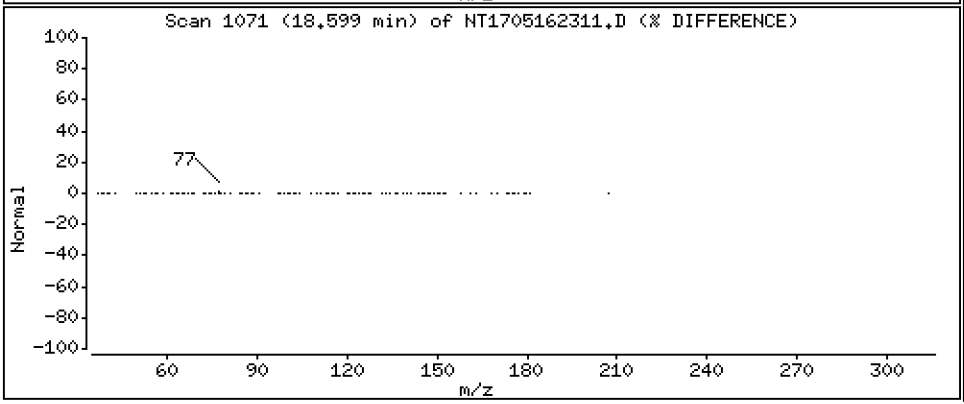
61 Anthracene

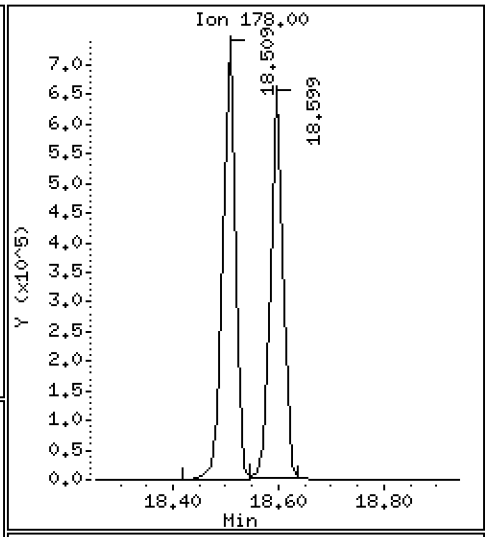
Concentration: 4.530 ug/mL

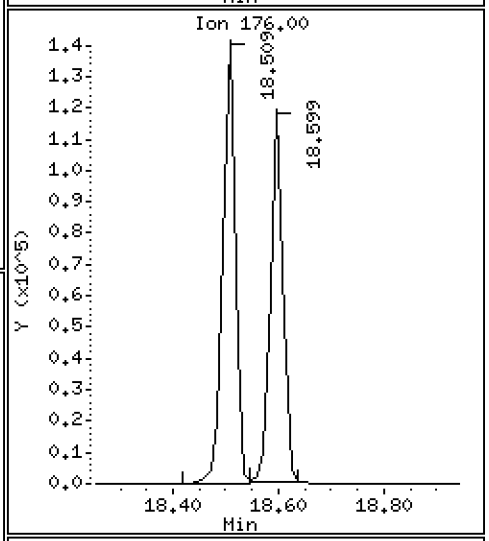


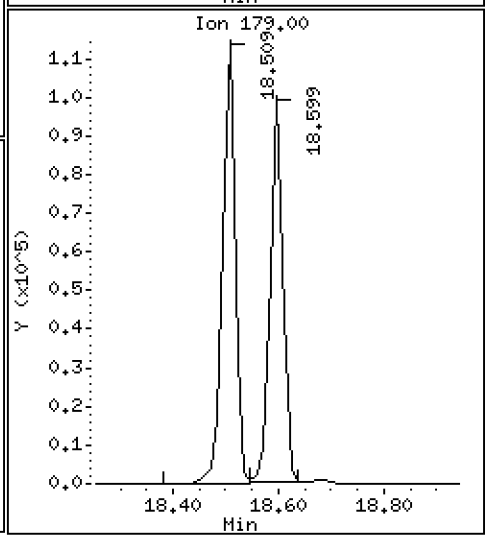












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

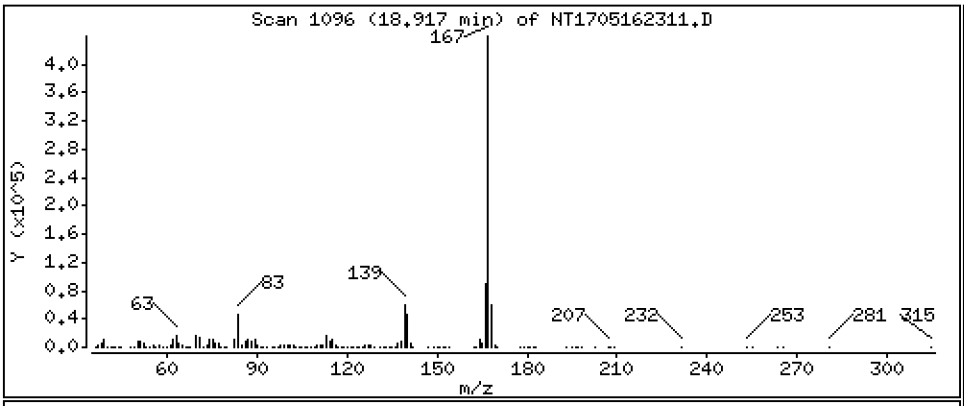
Operator: JGR

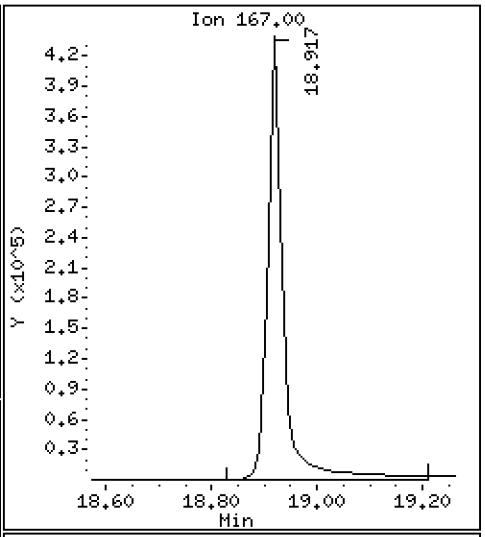
Column phase: ZB-5msi

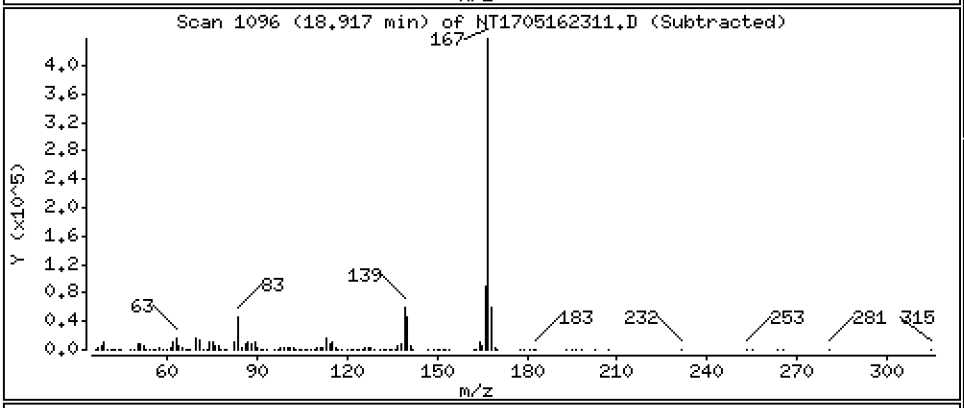
Column diameter: 0.25

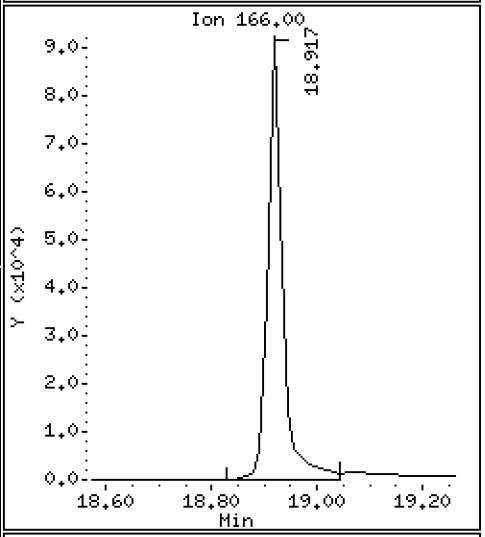
62 Carbazole

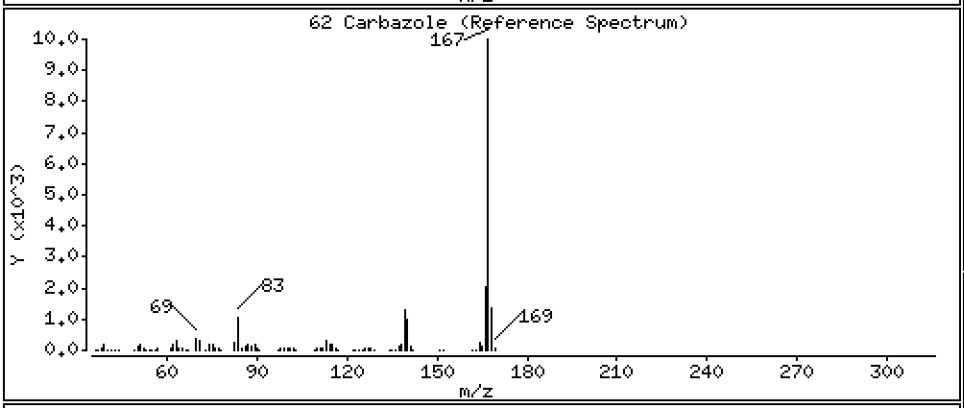
Concentration: 5.938 ug/mL

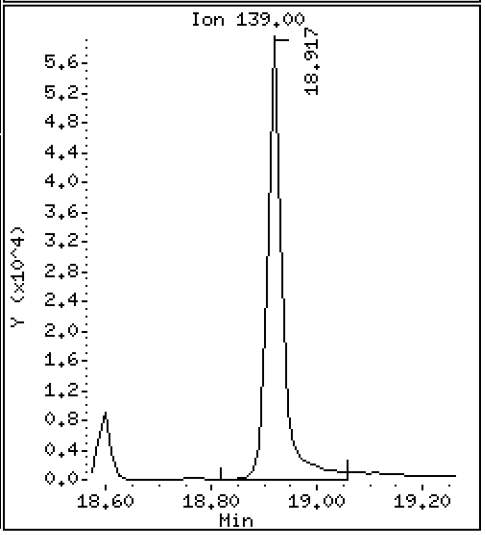


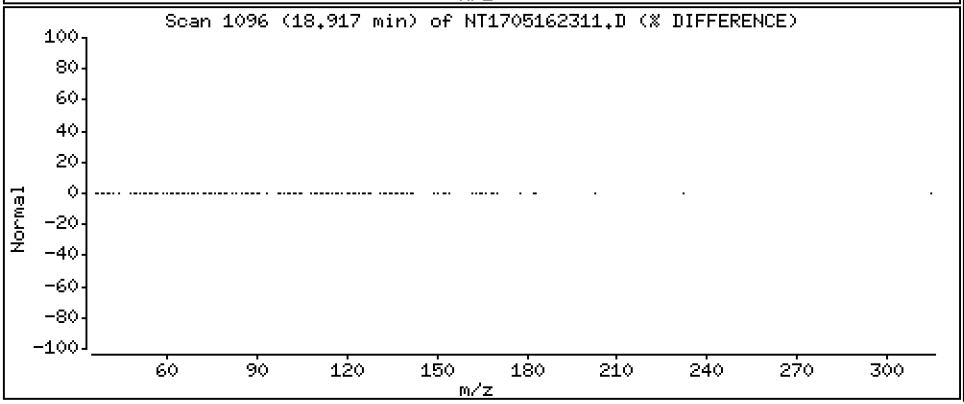












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

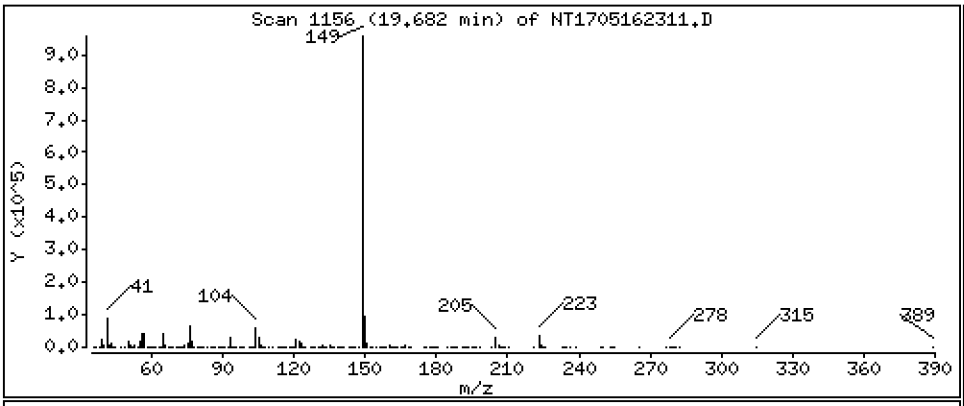
Operator: JGR

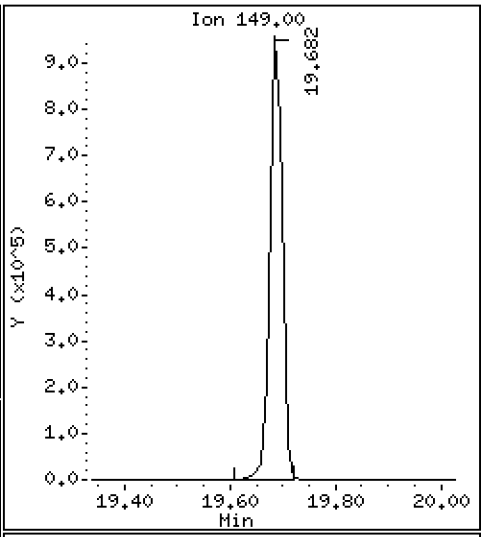
Column phase: ZB-5msi

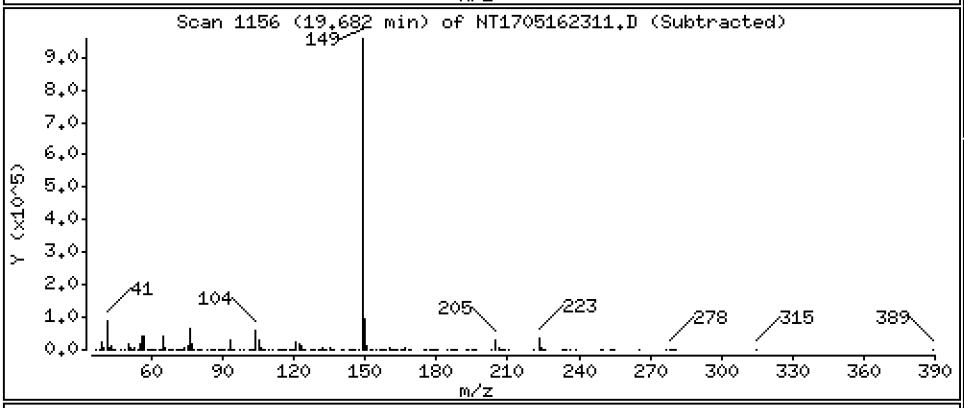
Column diameter: 0.25

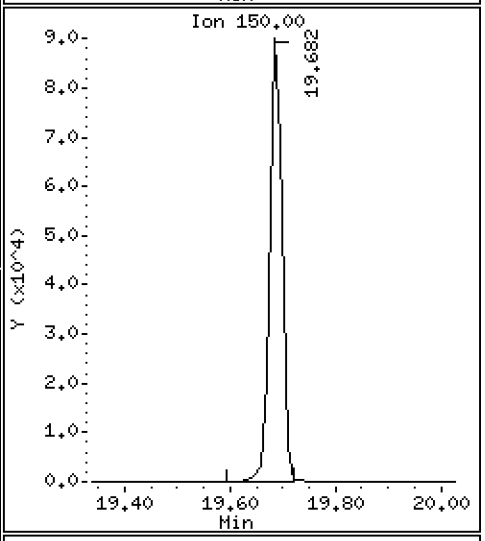
63 Di-n-butylphthalate

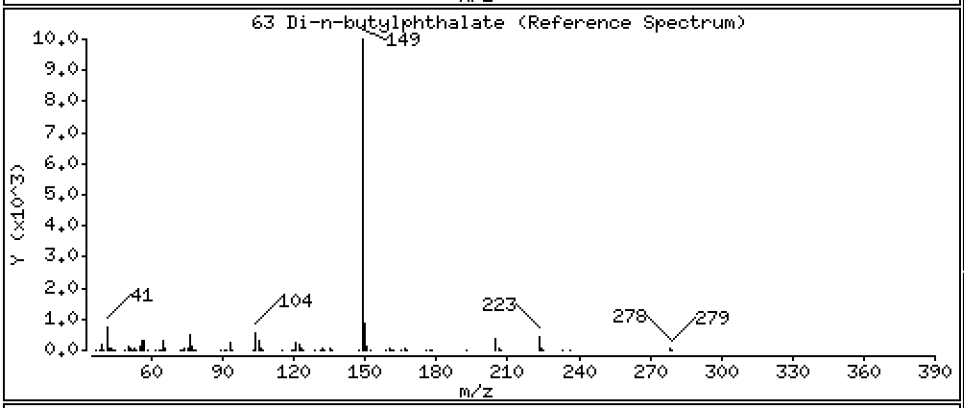
Concentration: 5.642 ug/mL

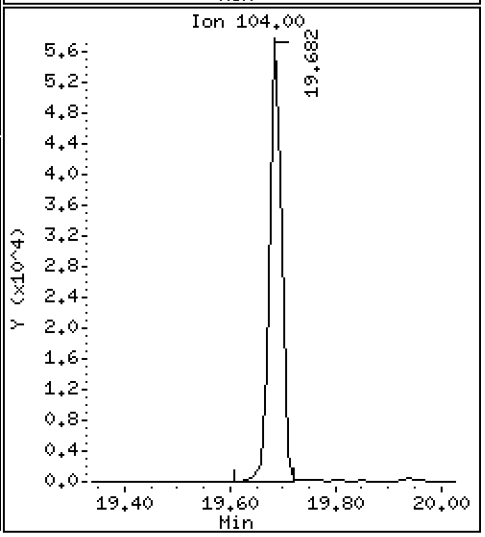


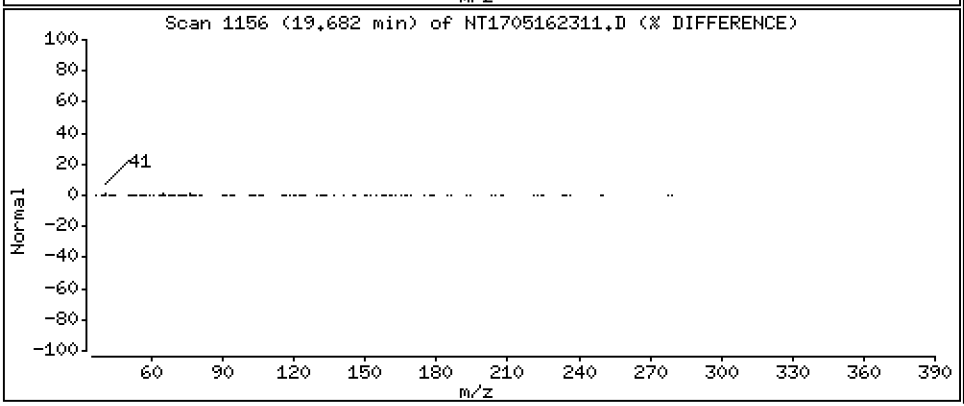












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

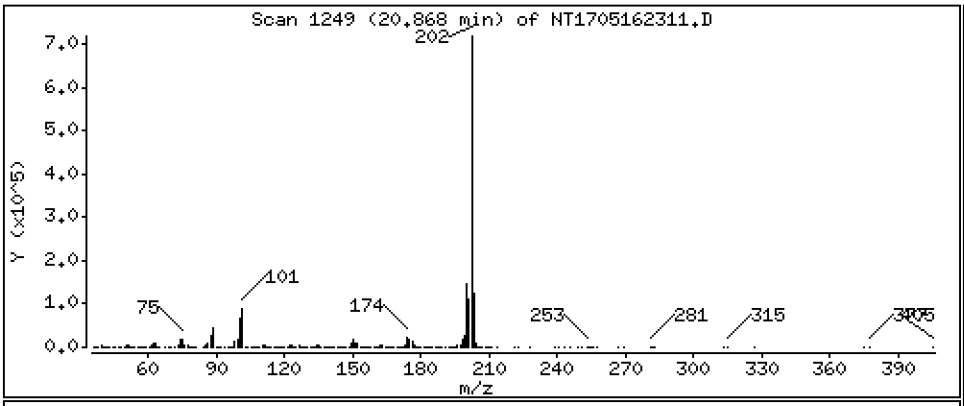
Operator: JGR

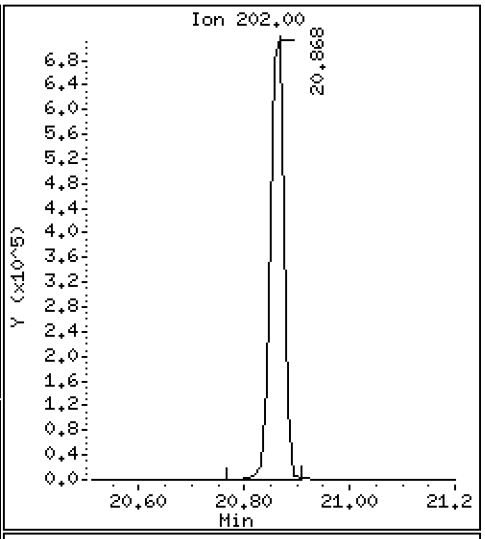
Column phase: ZB-5msi

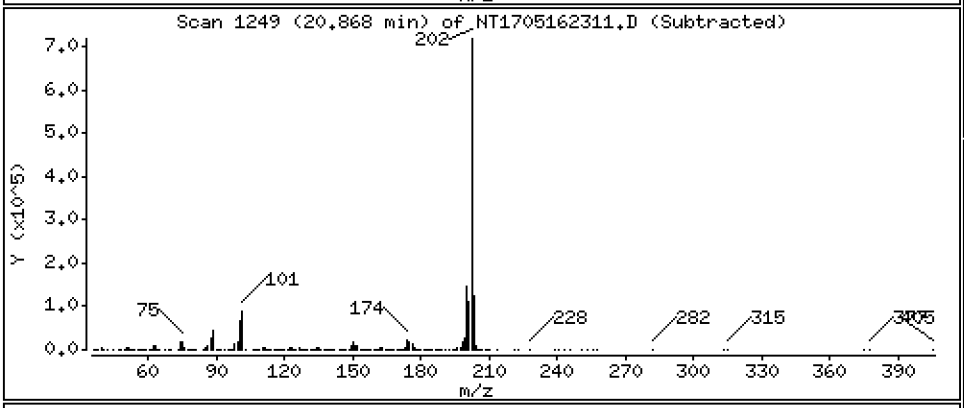
Column diameter: 0.25

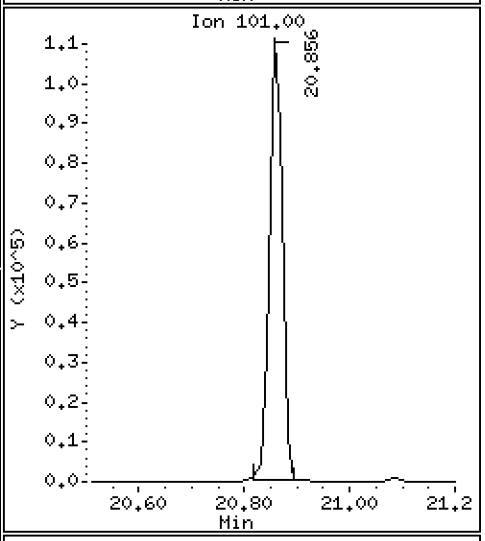
64 Fluoranthene

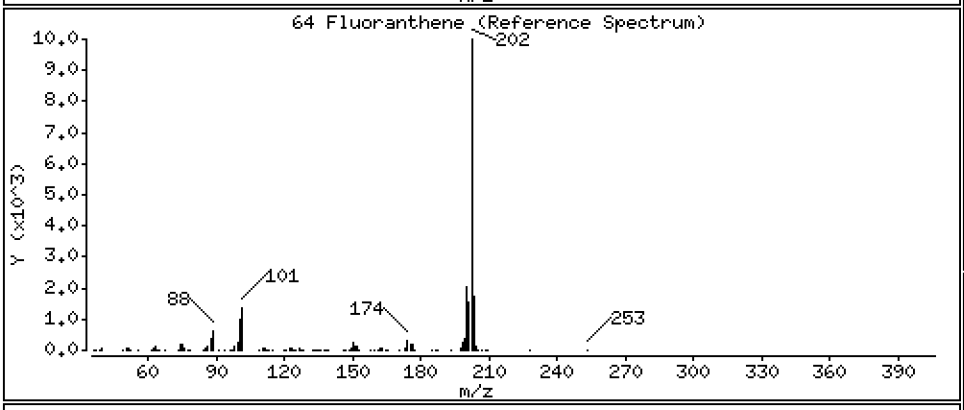
Concentration: 5.467 ug/mL

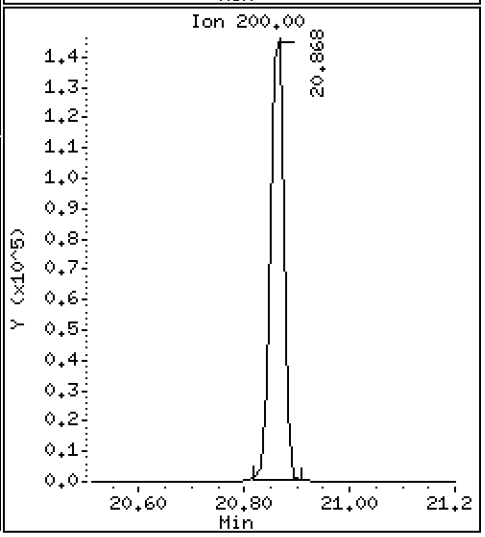


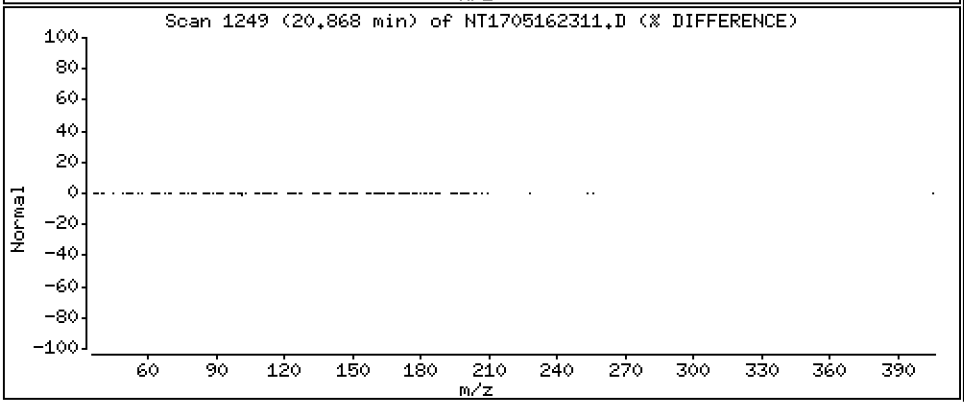












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

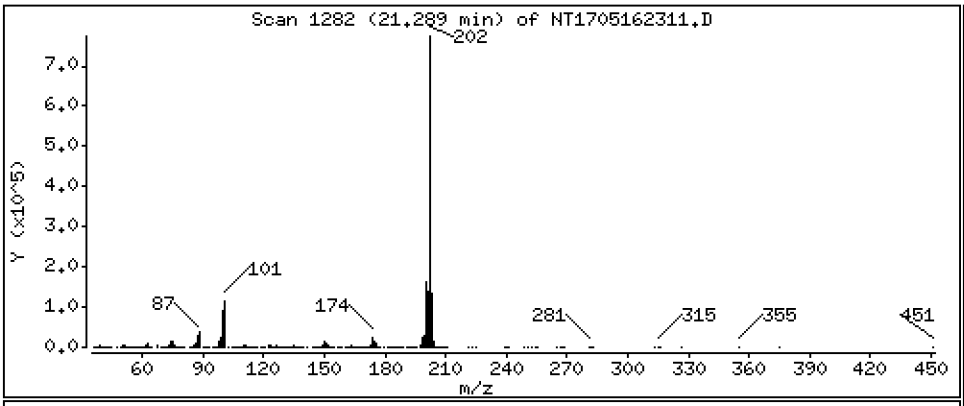
Operator: JGR

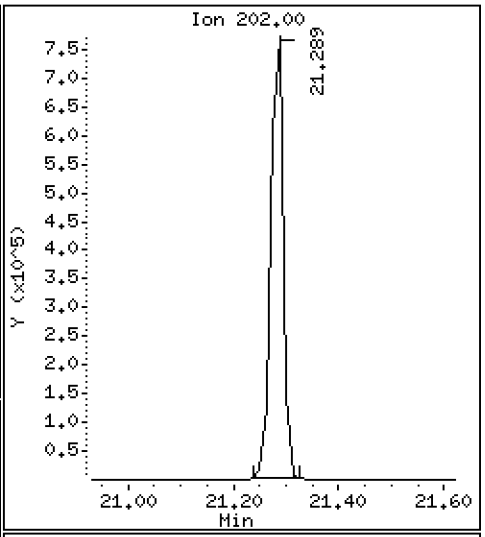
Column phase: ZB-5msi

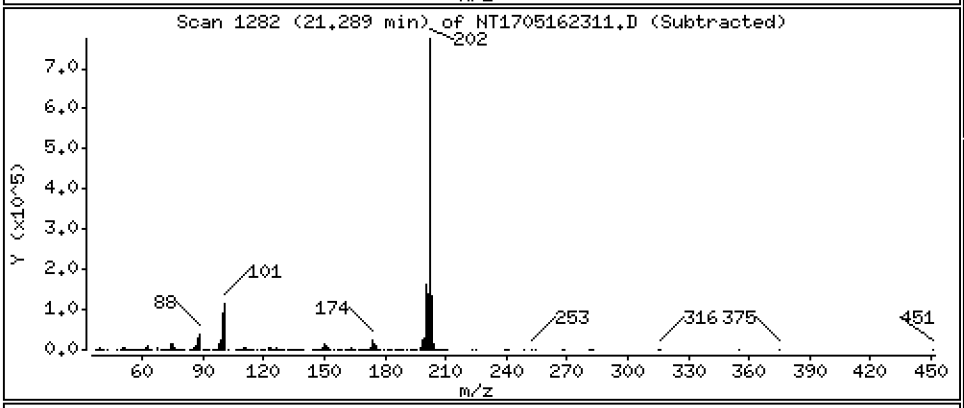
Column diameter: 0.25

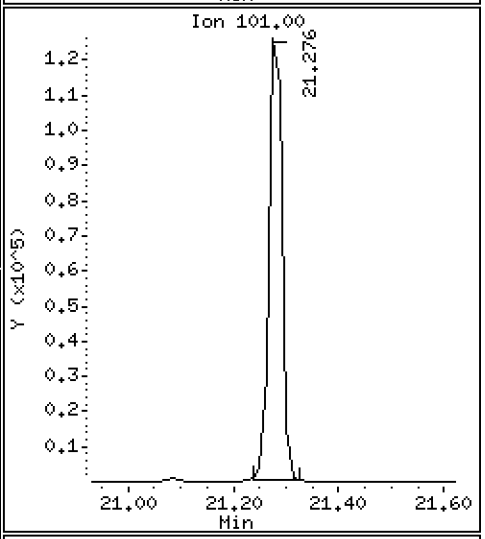
65 Pyrene

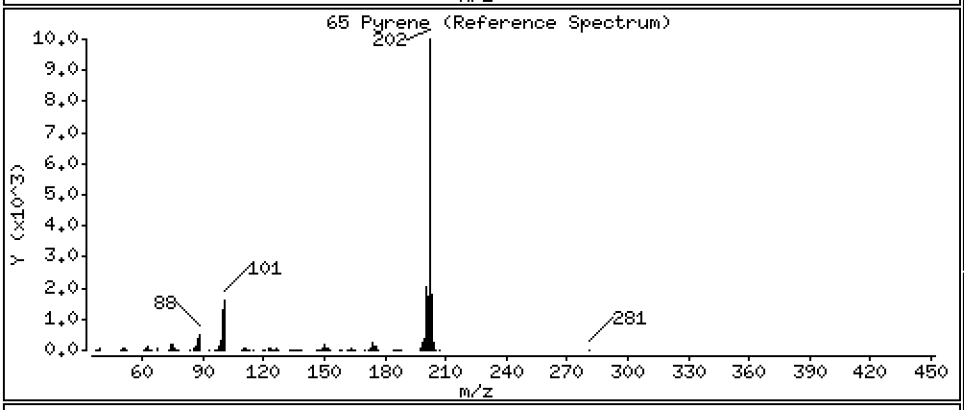
Concentration: 5.265 ug/mL

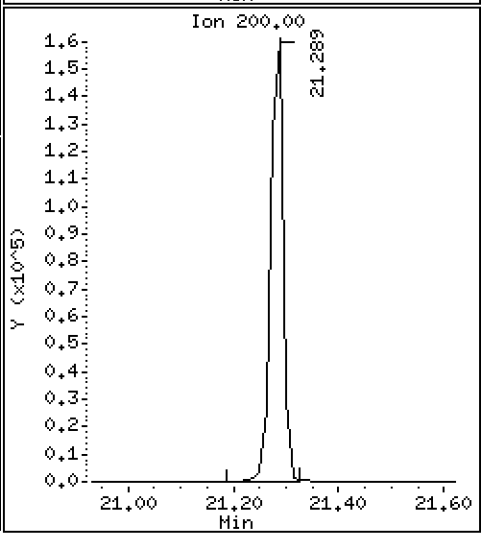


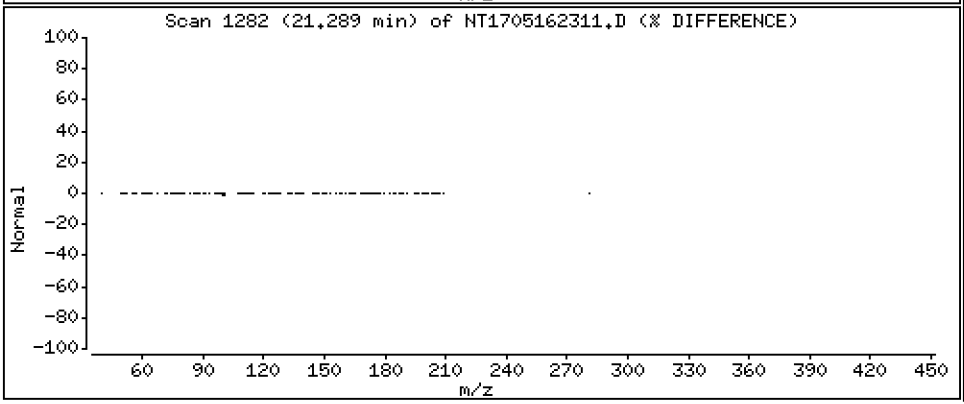












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

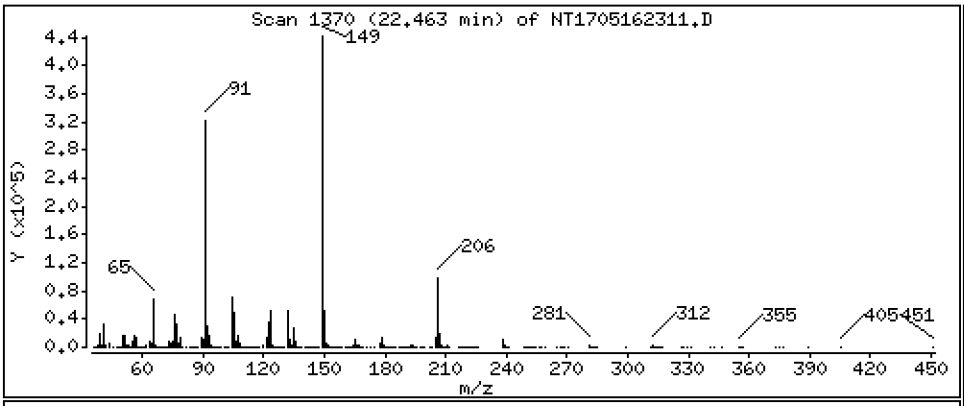
Operator: JGR

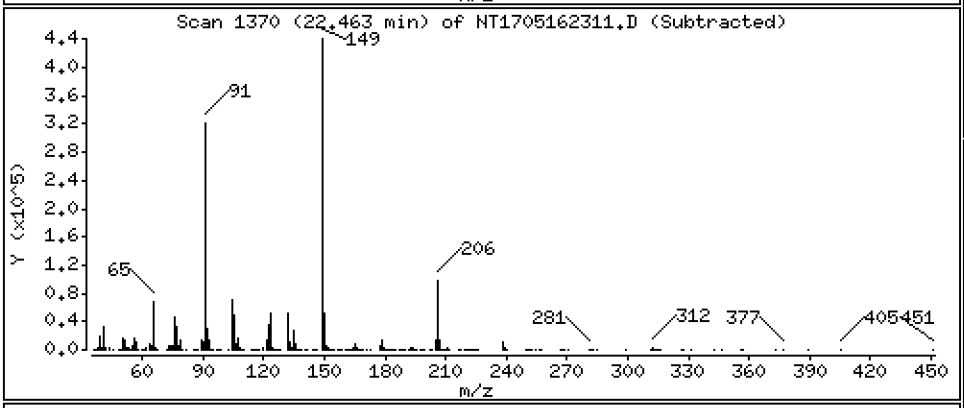
Column phase: ZB-5msi

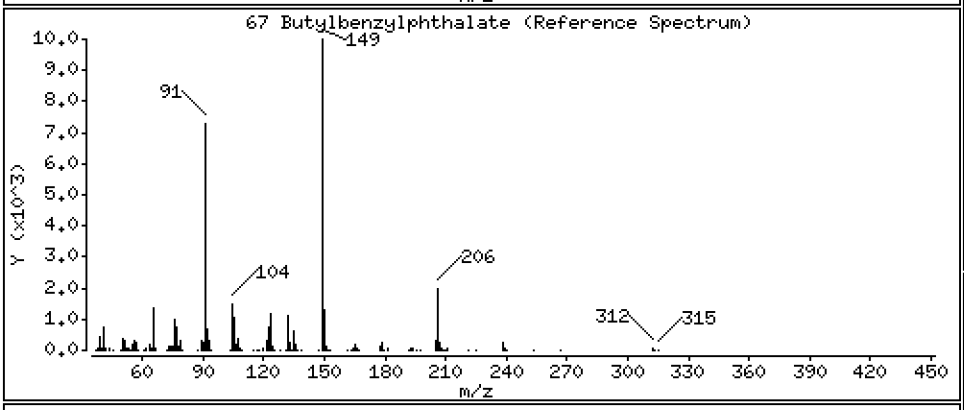
Column diameter: 0.25

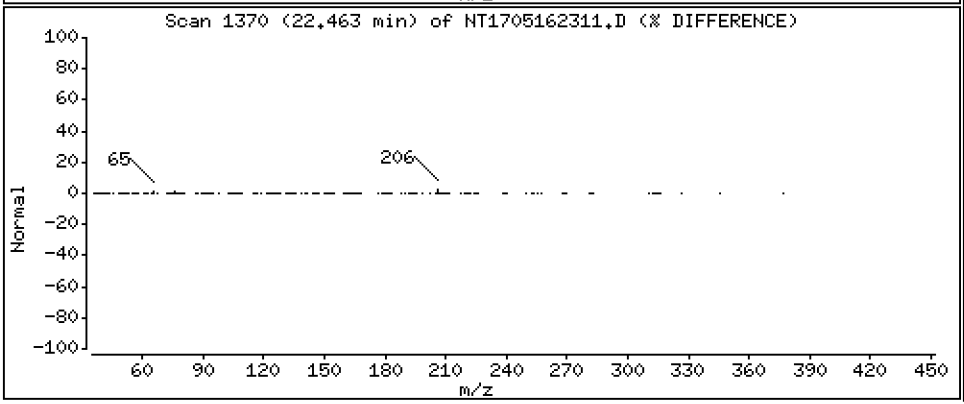
67 Butylbenzylphthalate

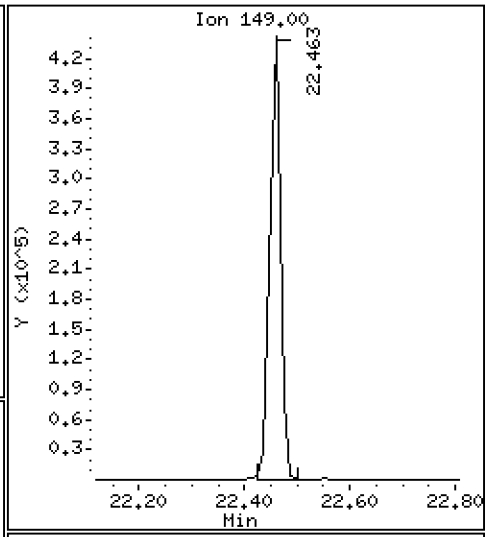
Concentration: 5.825 ug/mL

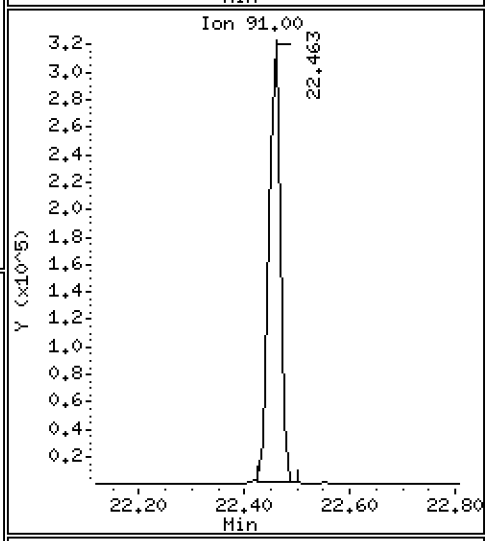


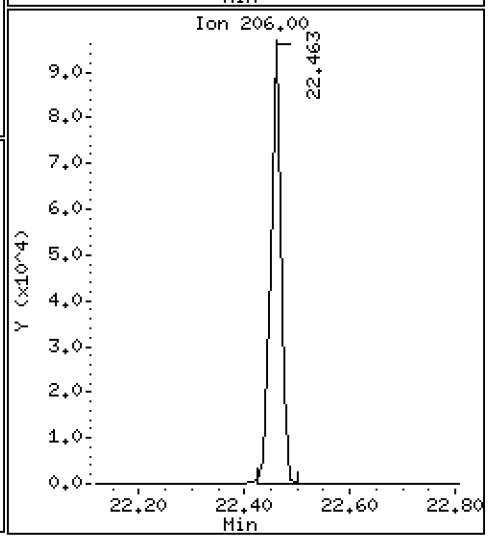












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

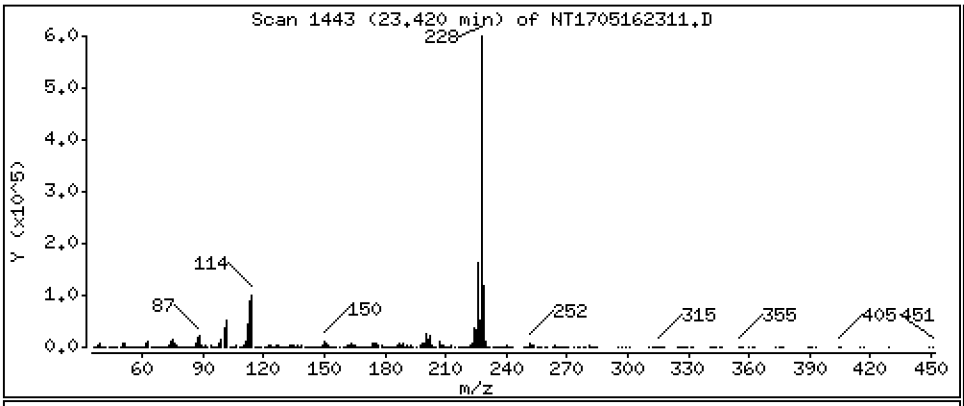
Operator: JGR

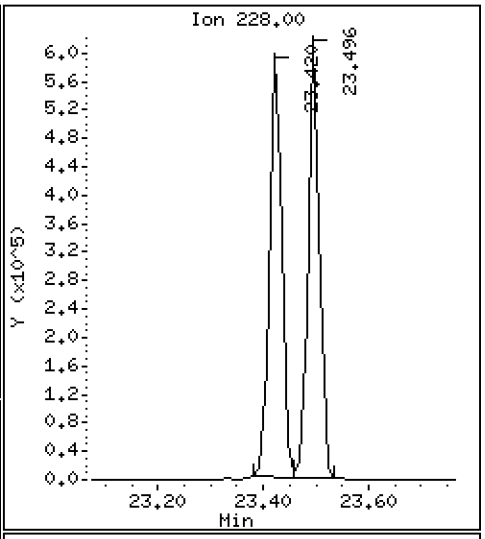
Column phase: ZB-5msi

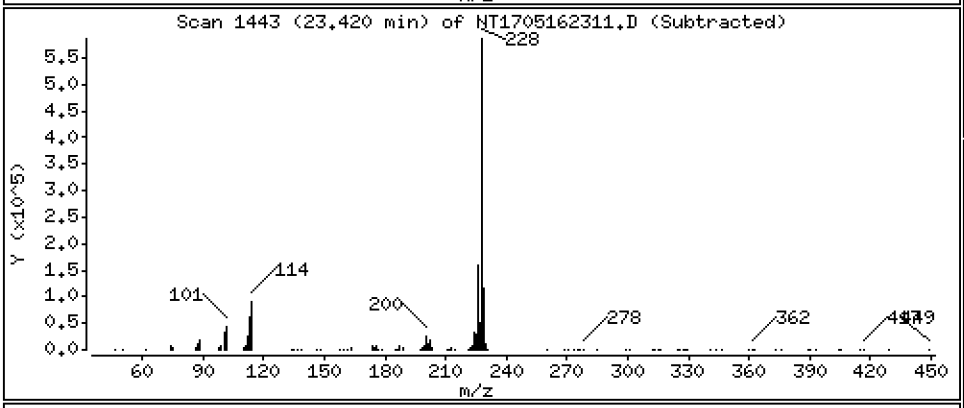
Column diameter: 0.25

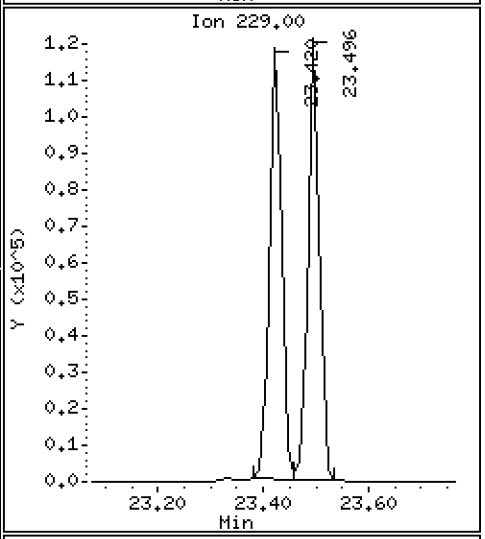
68 Benzo(a)anthracene

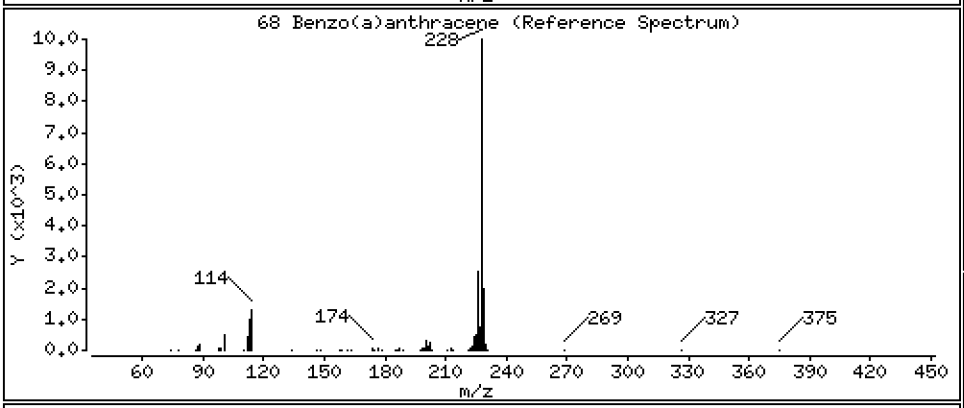
Concentration: 5.064 ug/mL

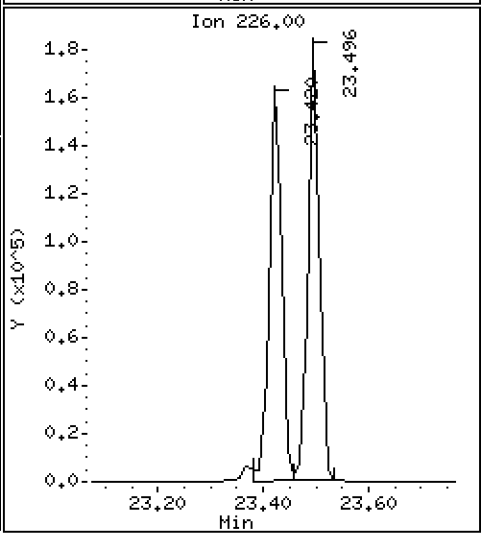


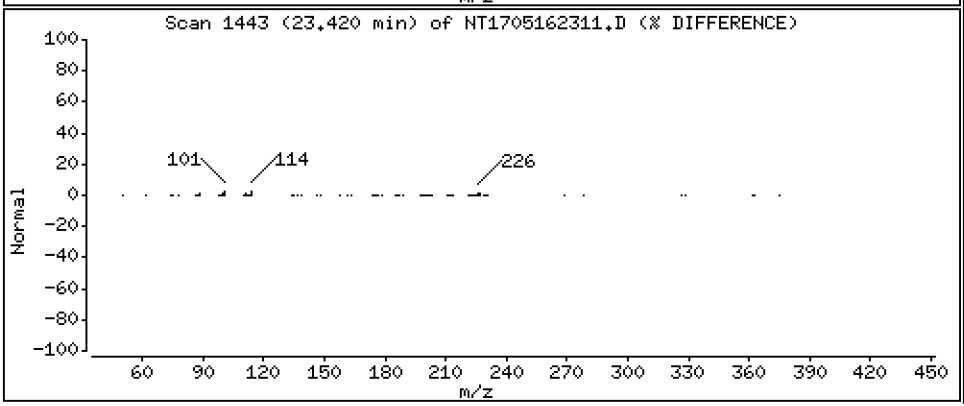












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

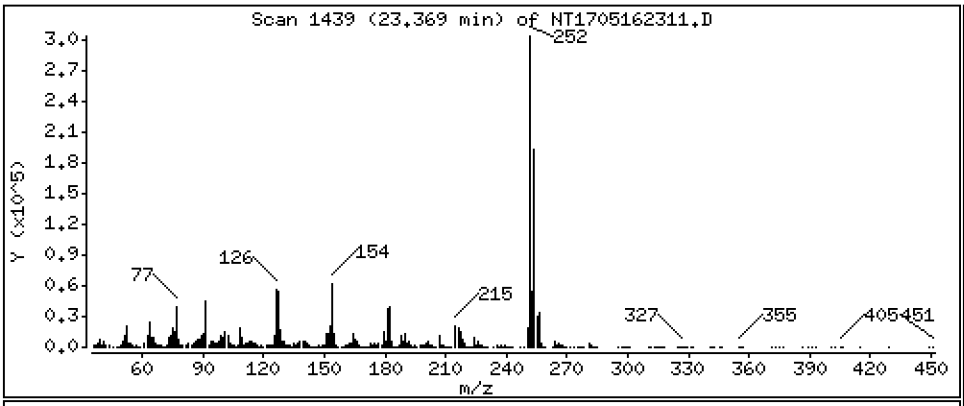
Operator: JGR

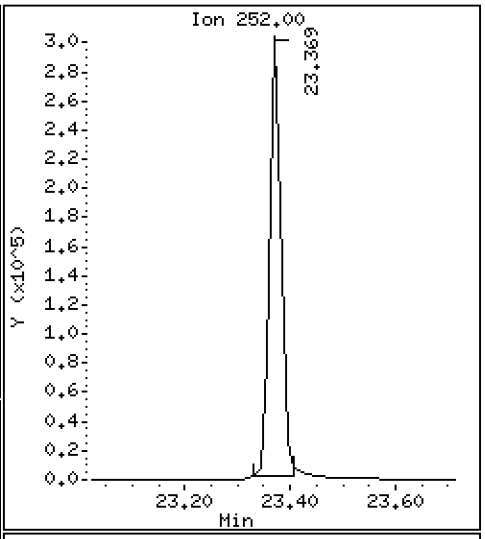
Column phase: ZB-5msi

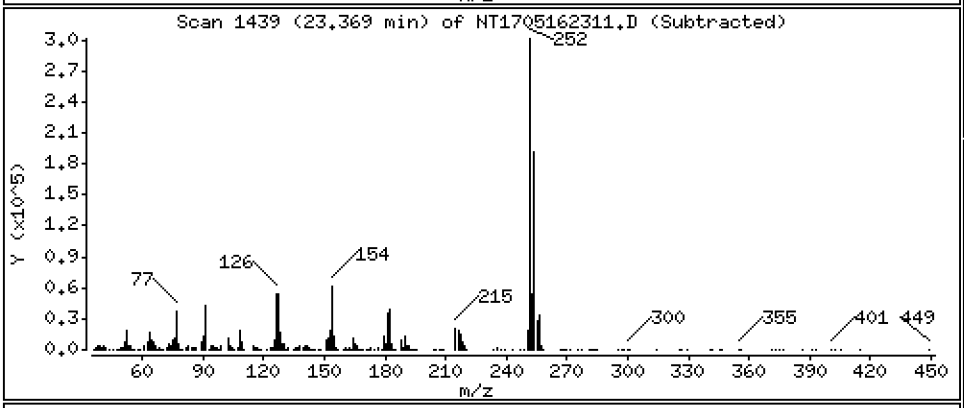
Column diameter: 0.25

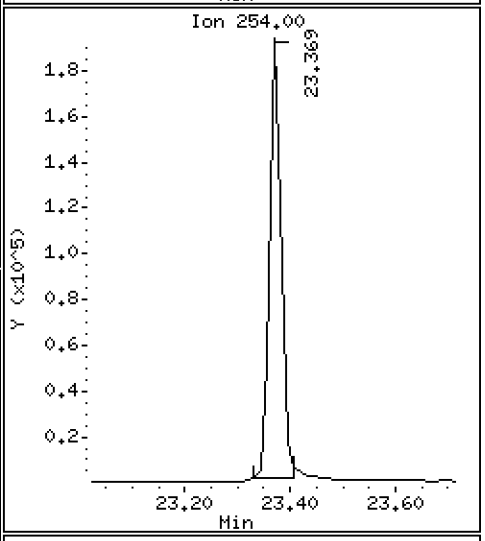
70 3,3'-Dichlorobenzidine

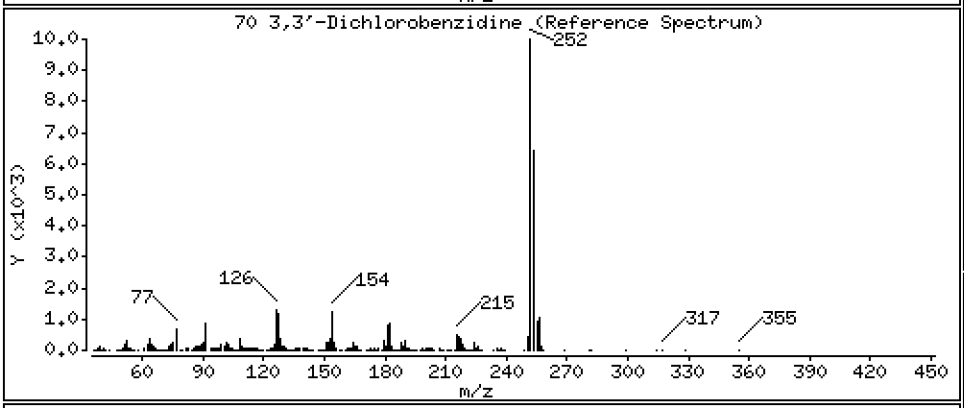
Concentration: 11.99 ug/mL

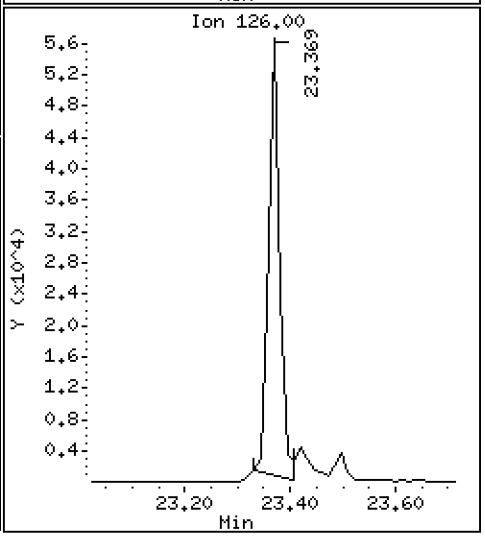


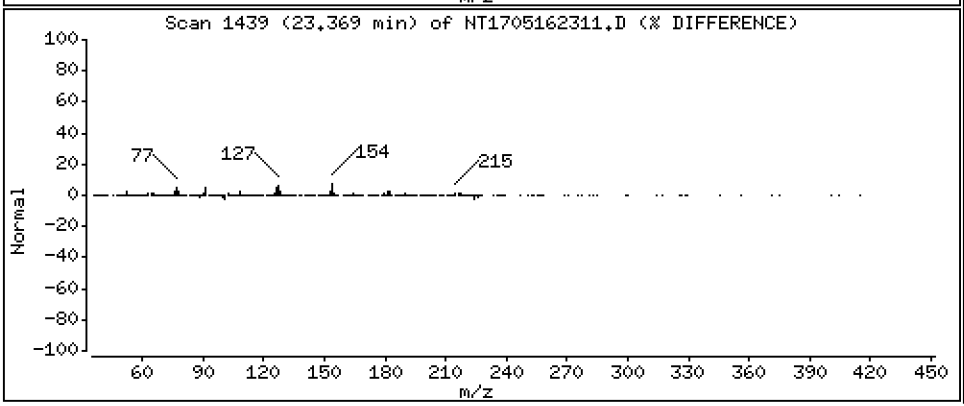












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

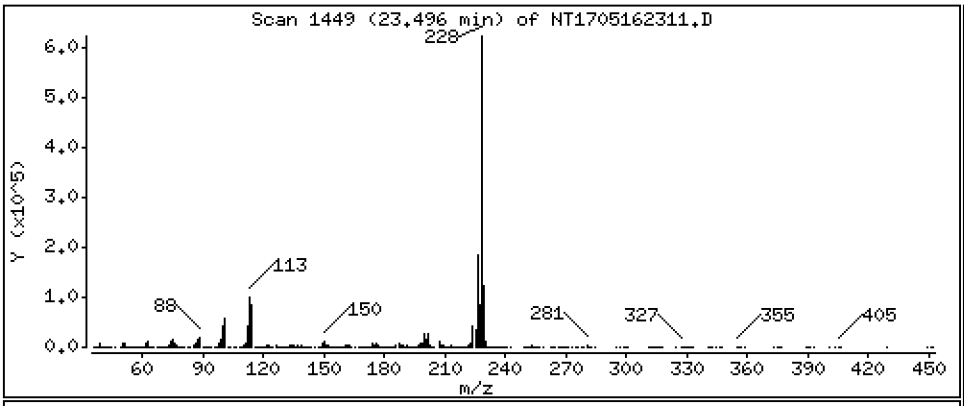
Operator: JGR

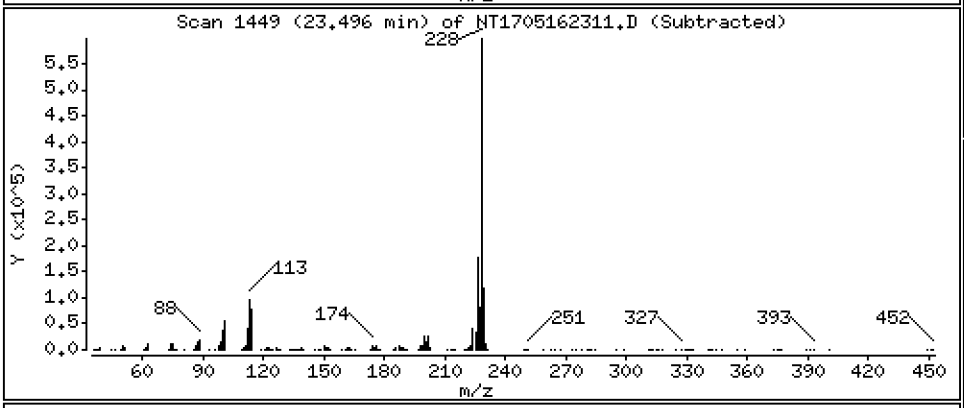
Column phase: ZB-5msi

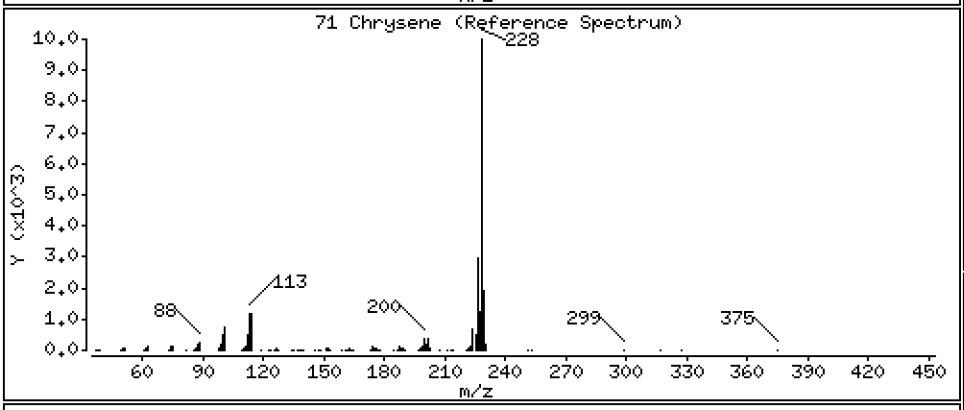
Column diameter: 0.25

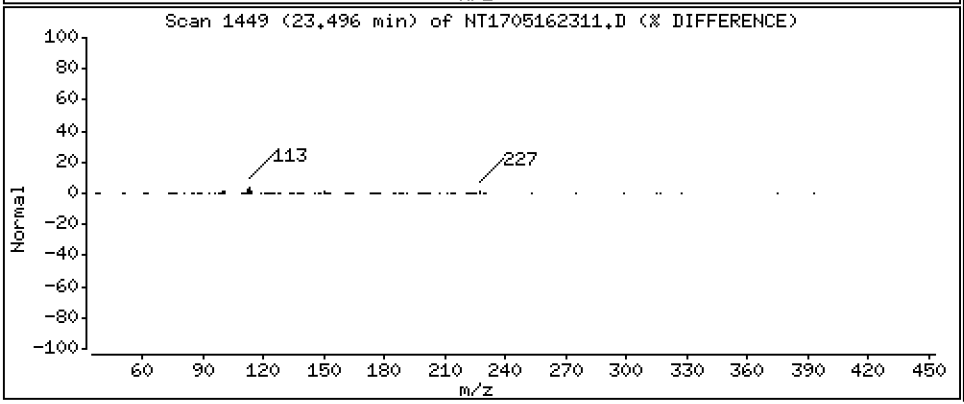
71 Chrysene

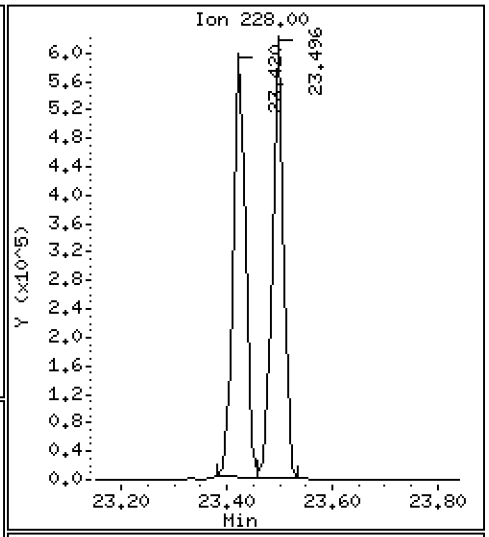
Concentration: 5.018 ug/mL

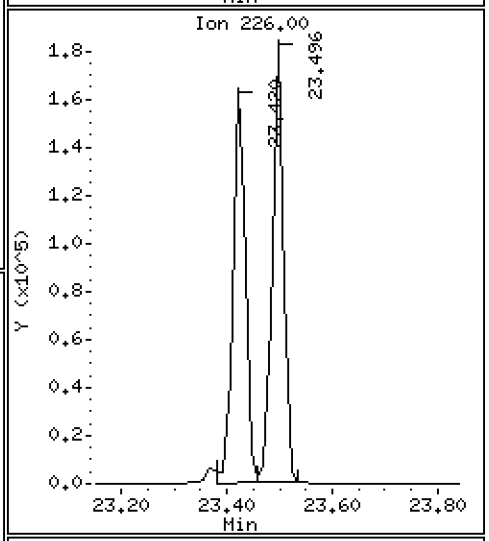


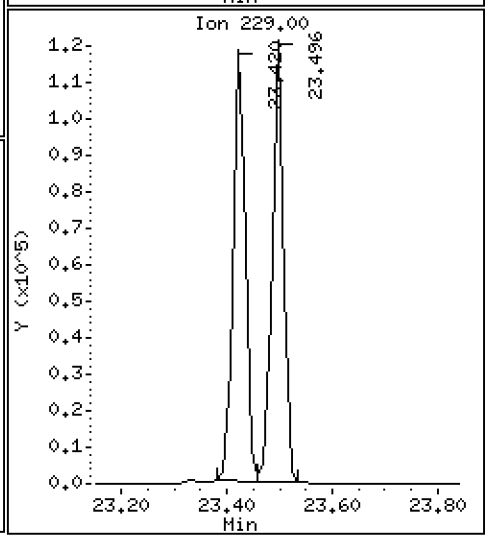












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

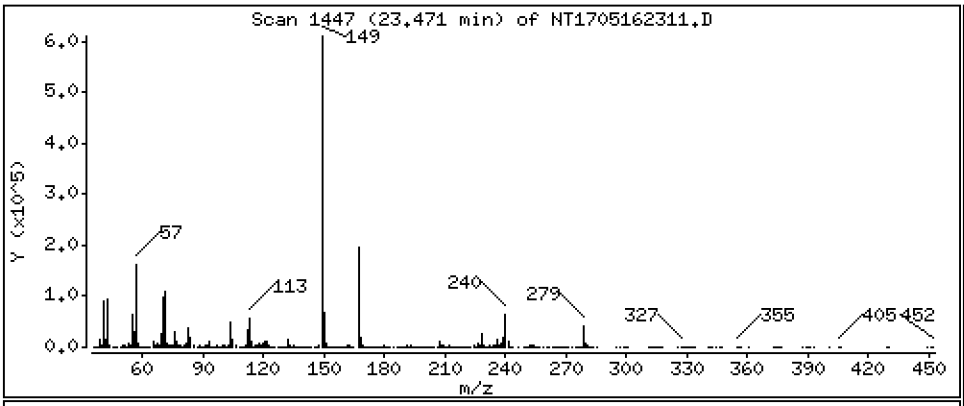
Operator: JGR

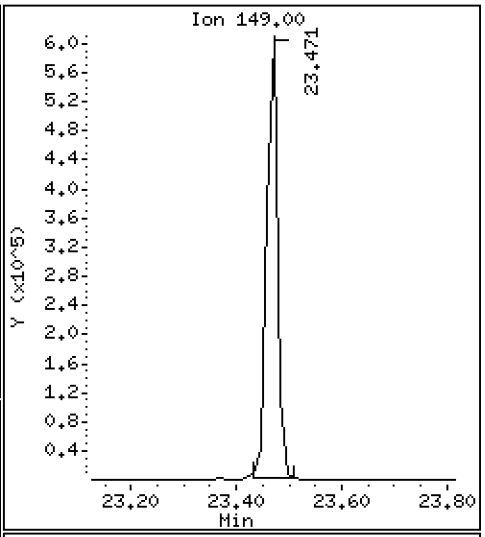
Column phase: ZB-5msi

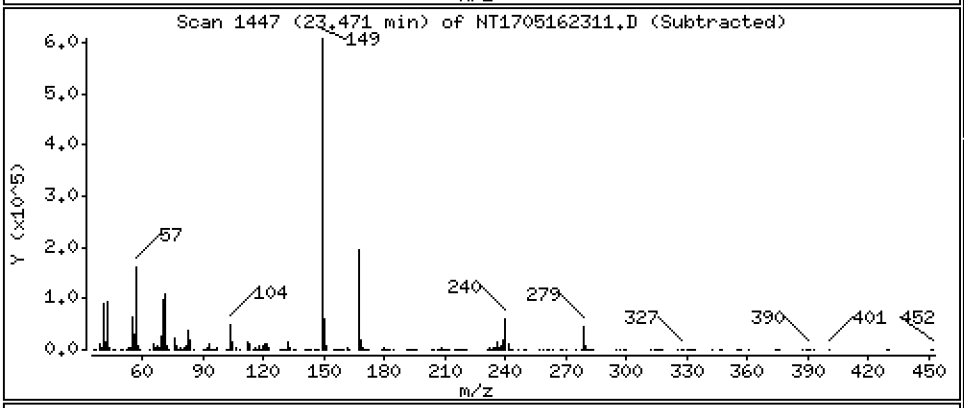
Column diameter: 0.25

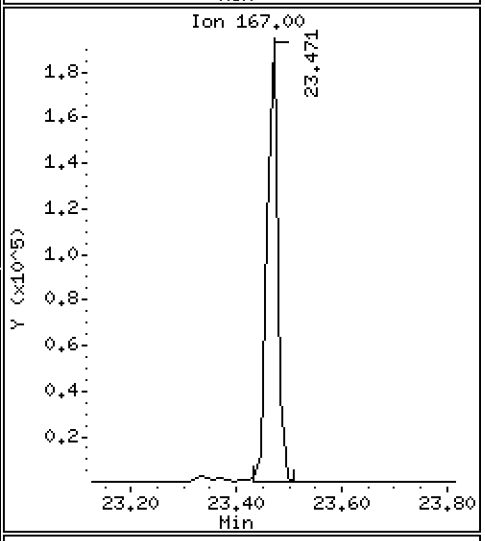
72 bis(2-Ethylhexyl)phthalate

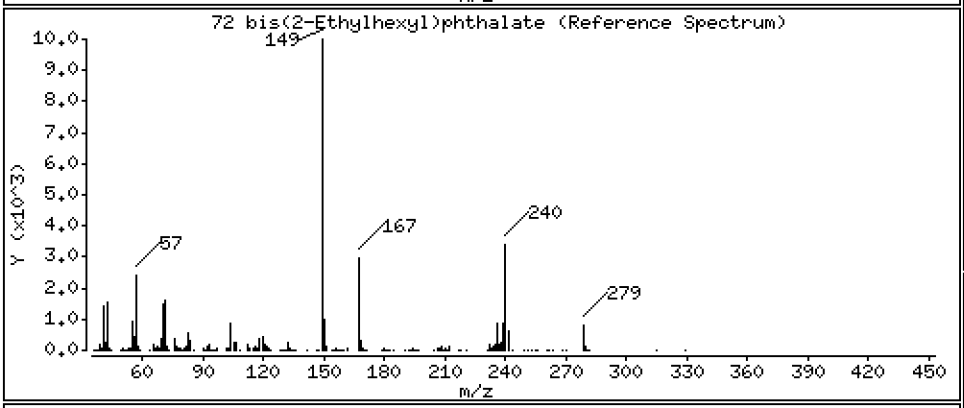
Concentration: 5.792 ug/mL

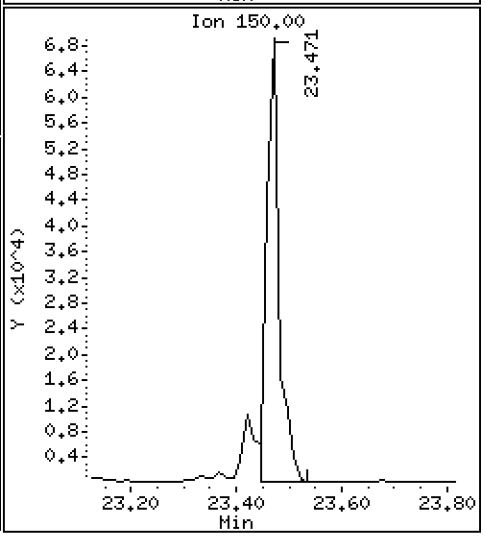


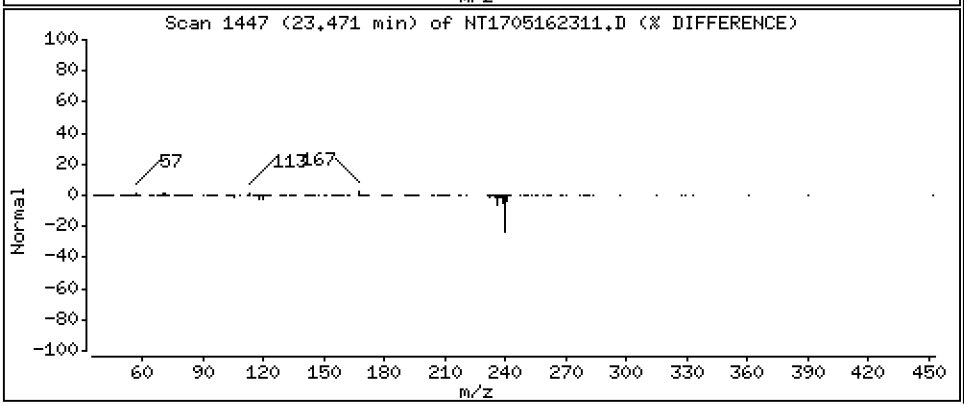












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

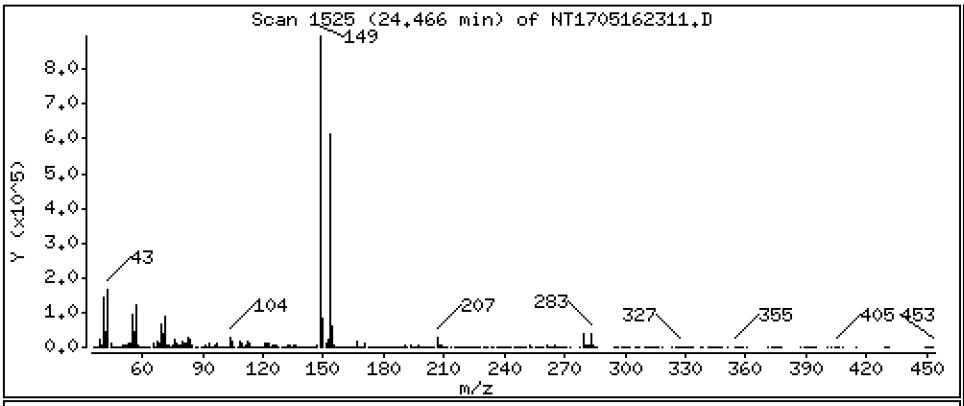
Operator: JGR

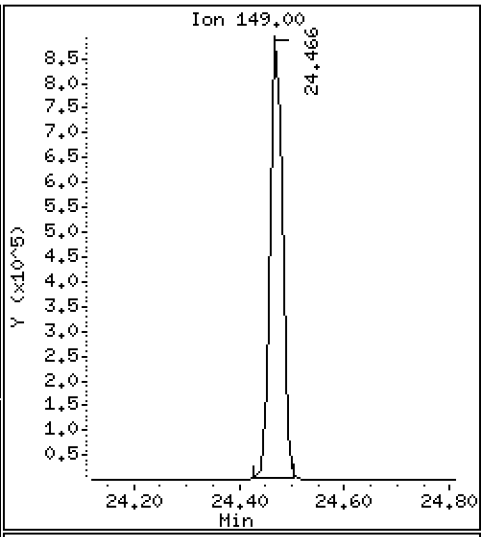
Column phase: ZB-5msi

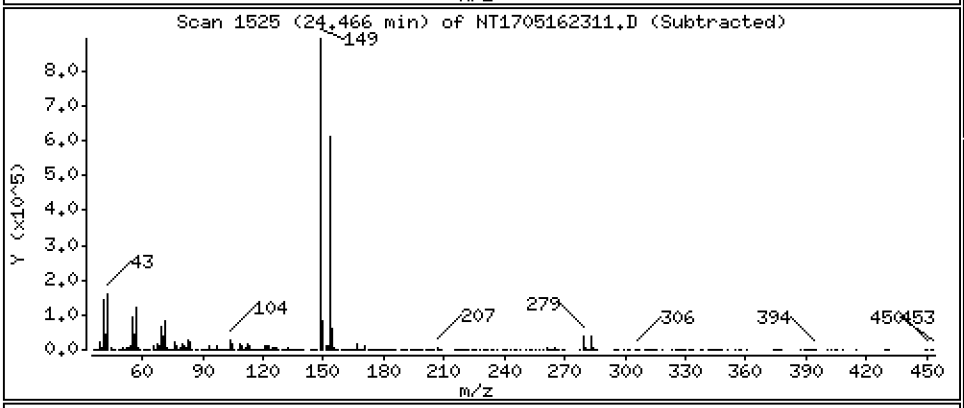
Column diameter: 0.25

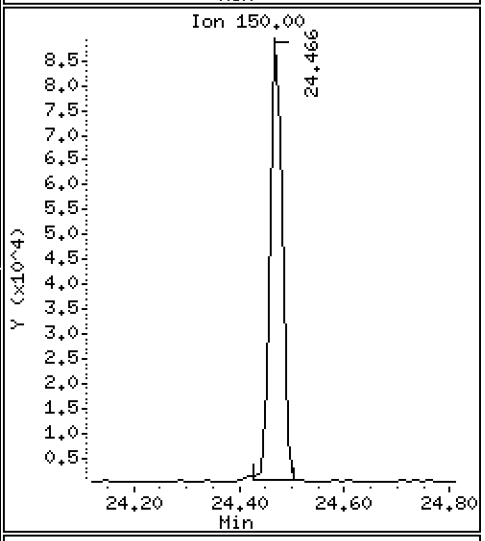
73 Di-n-octylphthalate

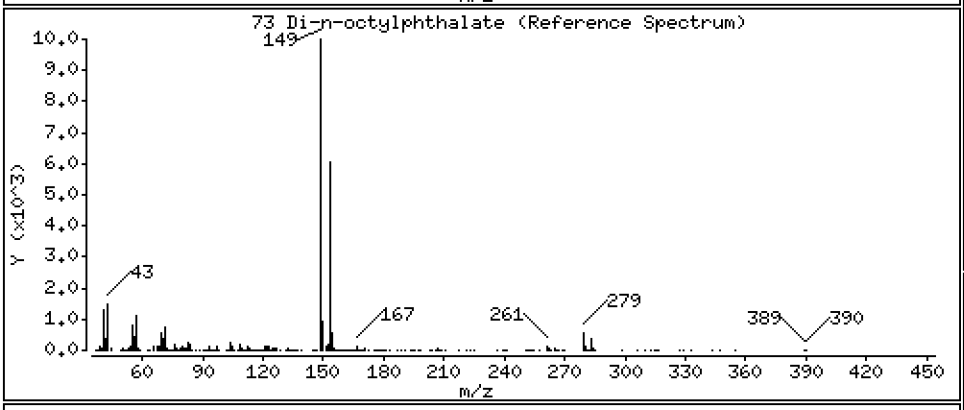
Concentration: 5.482 ug/mL

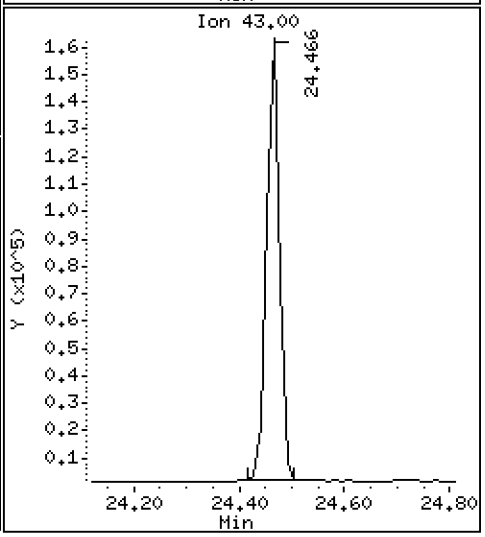


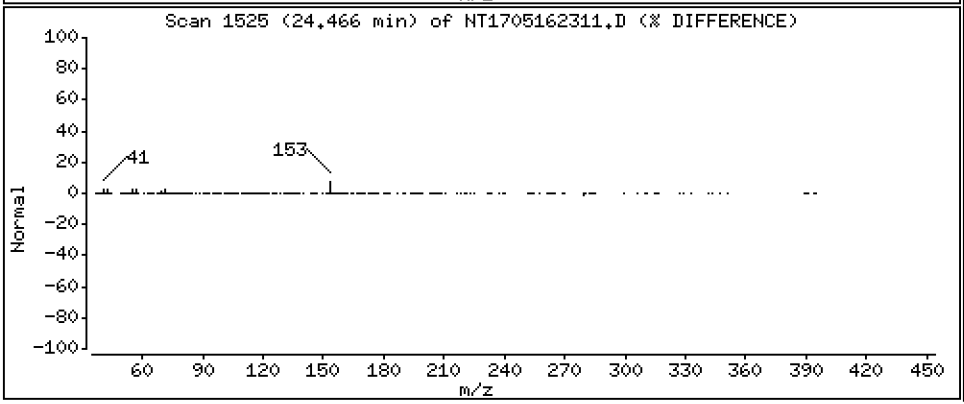












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

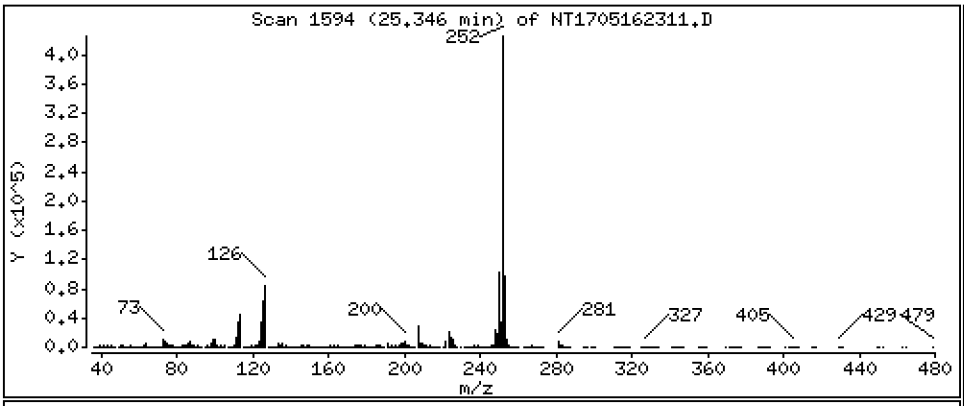
Operator: JGR

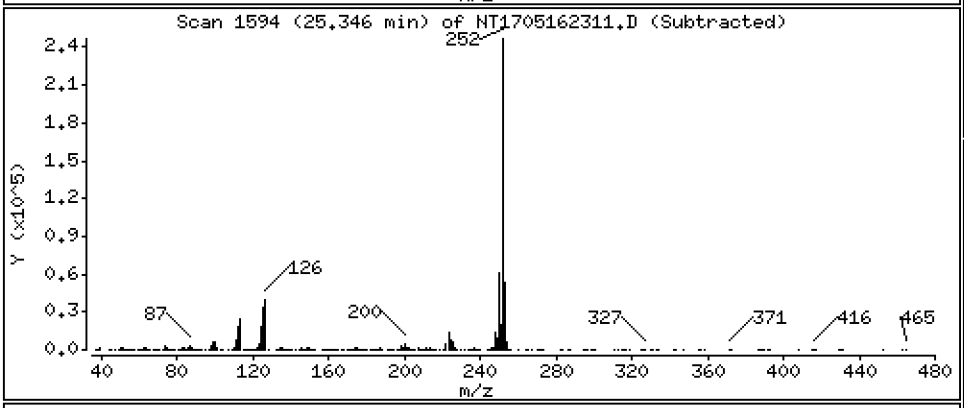
Column phase: ZB-5msi

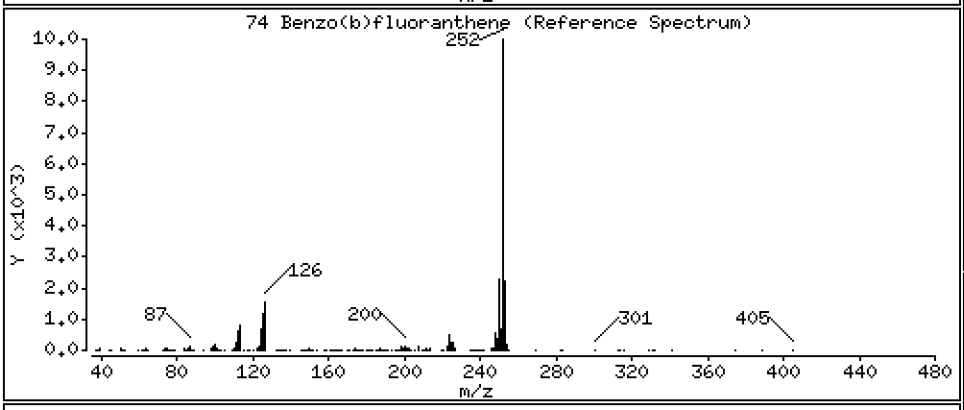
Column diameter: 0.25

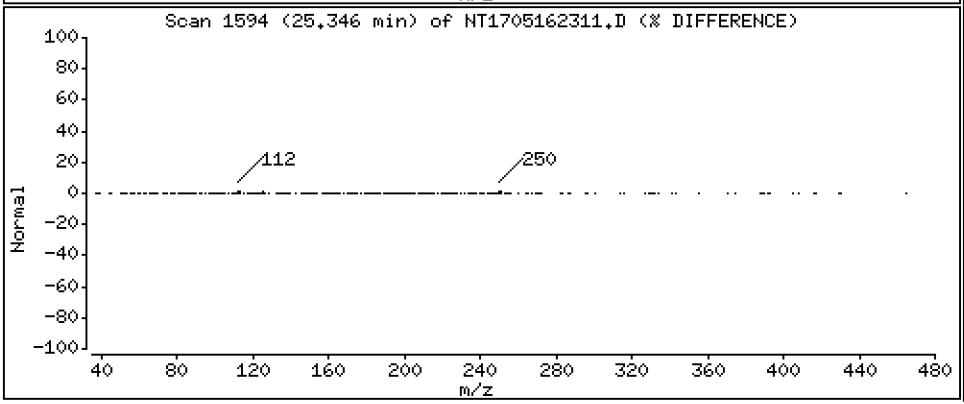
74 Benzo(b)fluoranthene

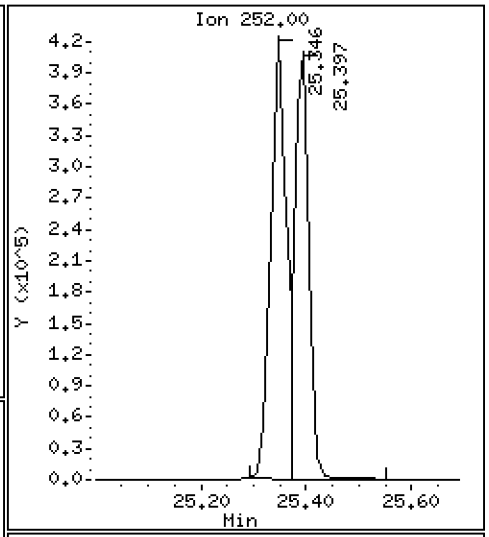
Concentration: 4.912 ug/mL

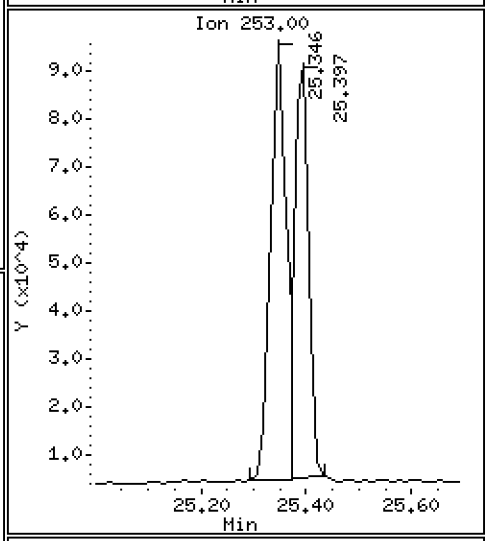


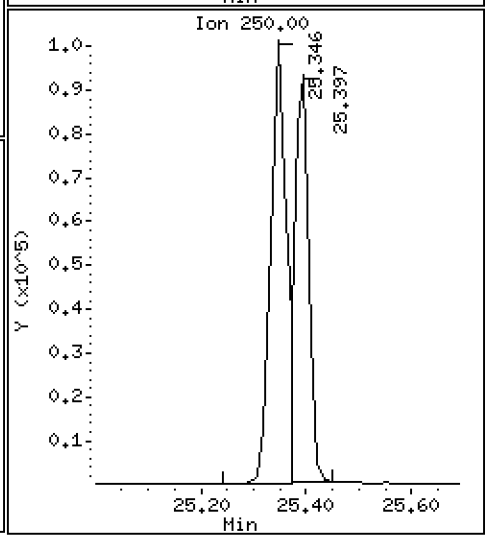












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

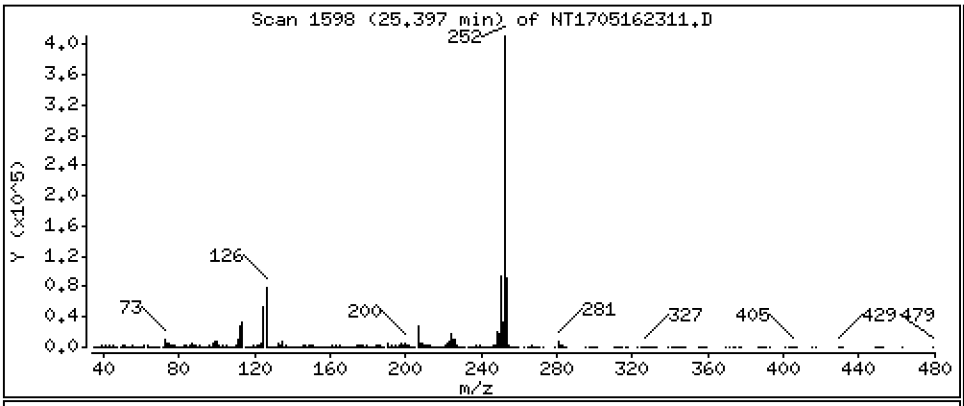
Operator: JGR

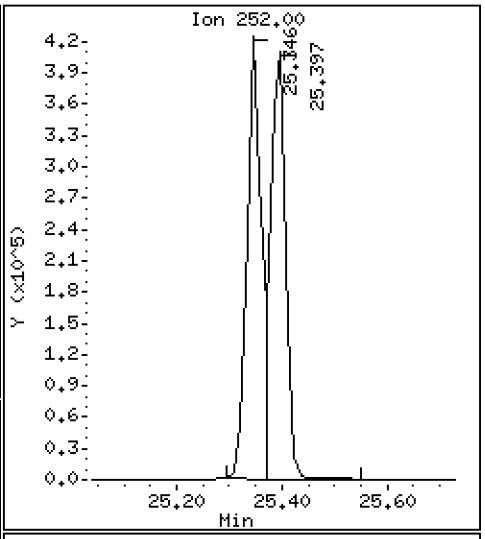
Column phase: ZB-5msi

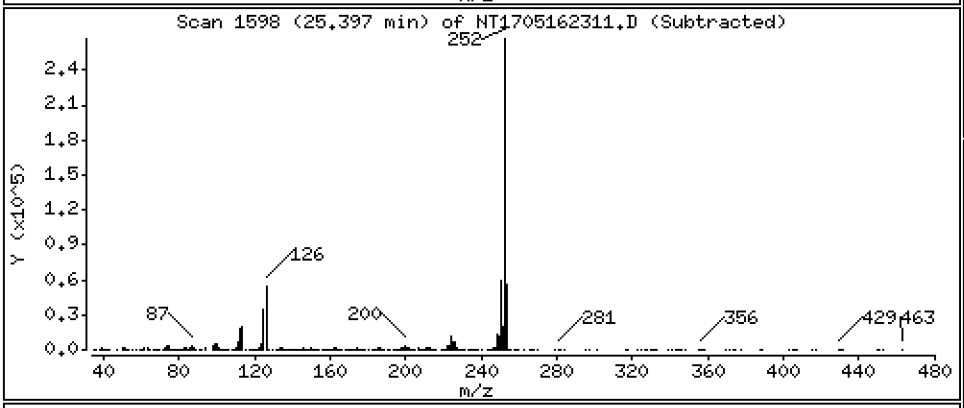
Column diameter: 0.25

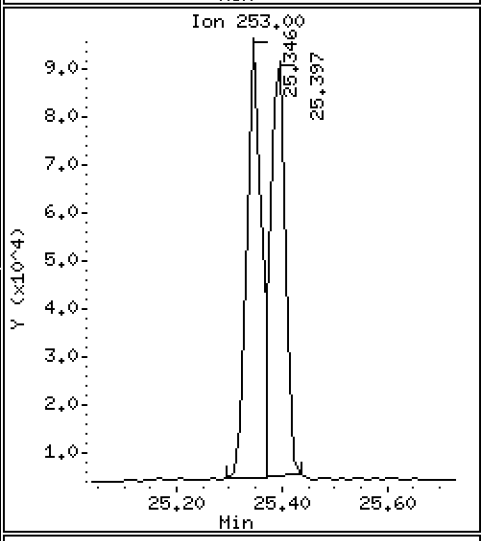
75 Benzo(k)fluoranthene

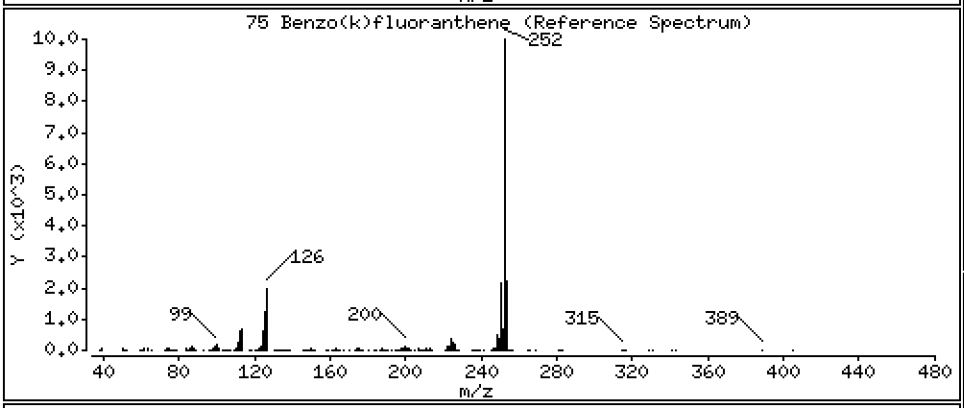
Concentration: 4.965 ug/mL

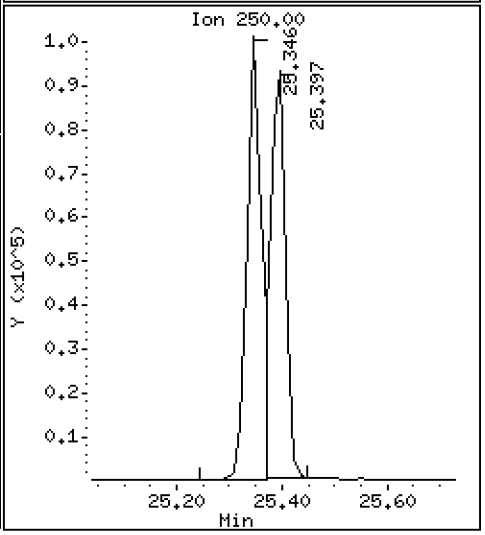


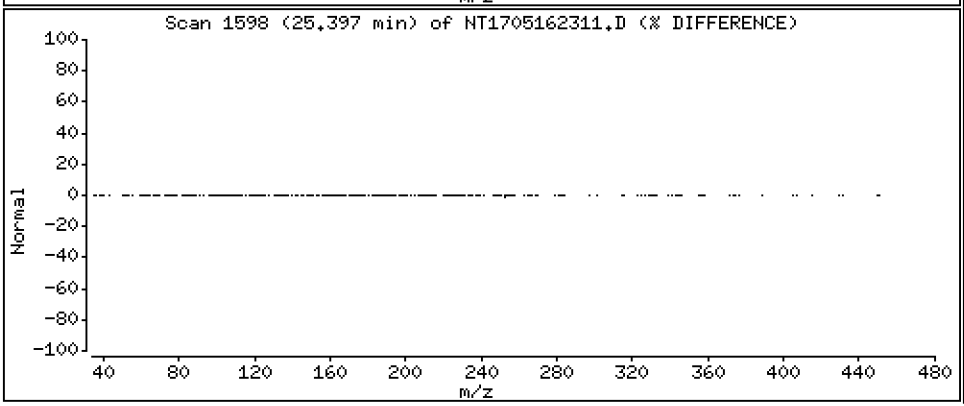












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

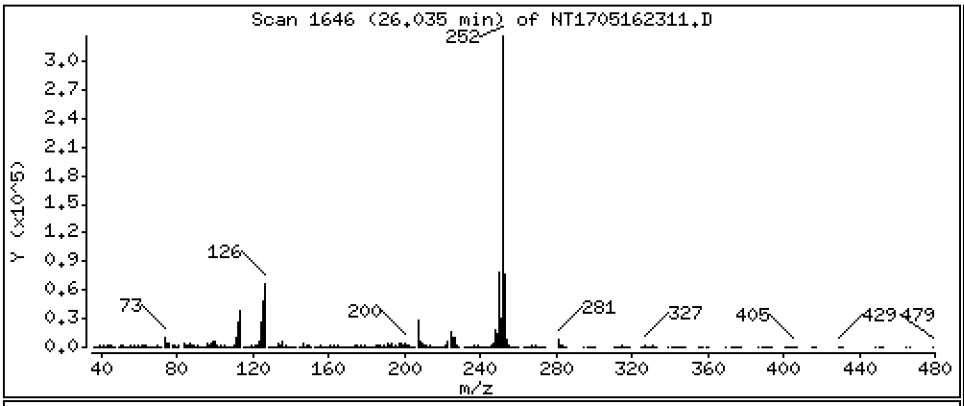
Operator: JGR

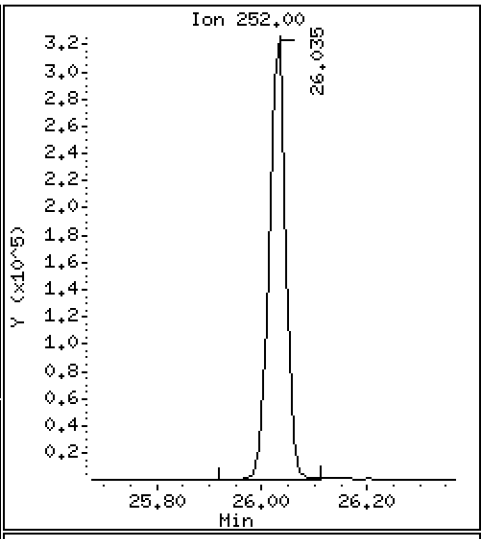
Column phase: ZB-5msi

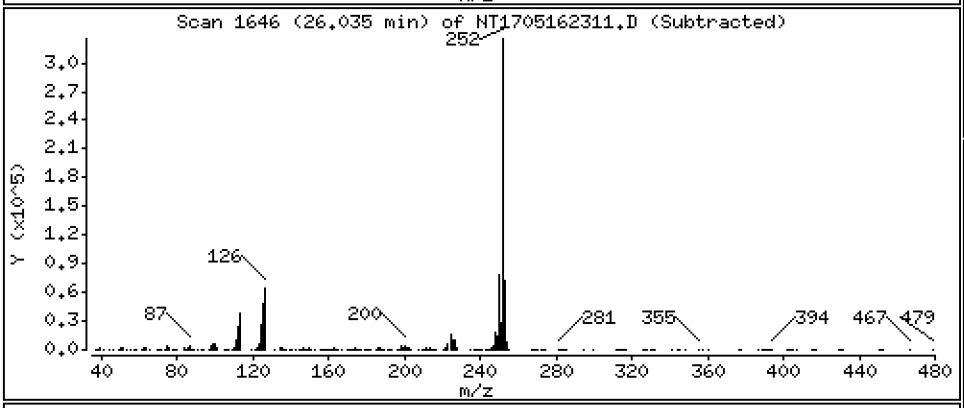
Column diameter: 0.25

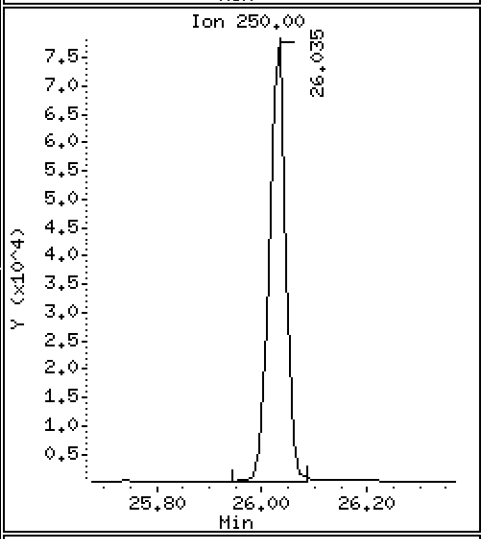
76 Benzo(a)pyrene

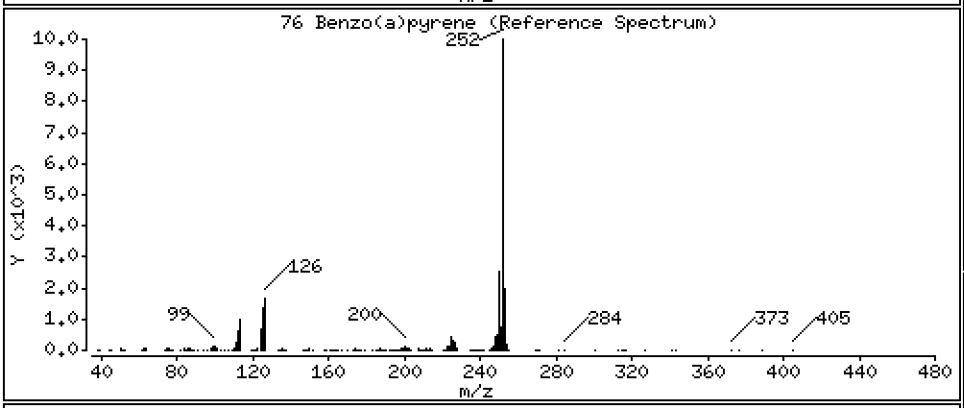
Concentration: 5.172 ug/mL

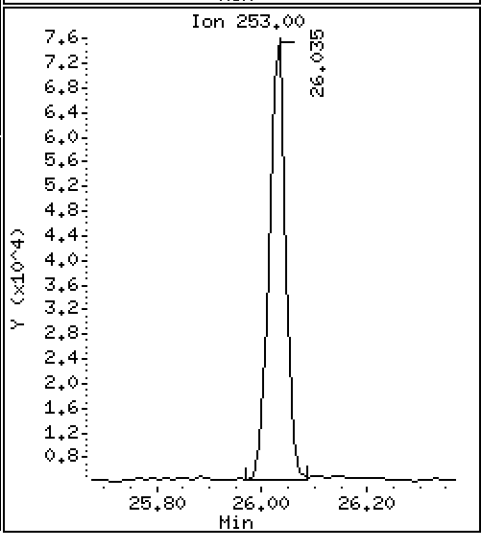


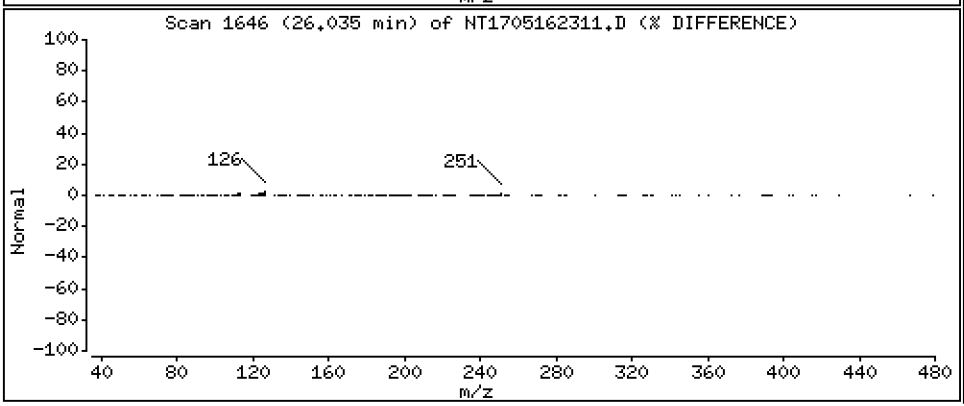












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

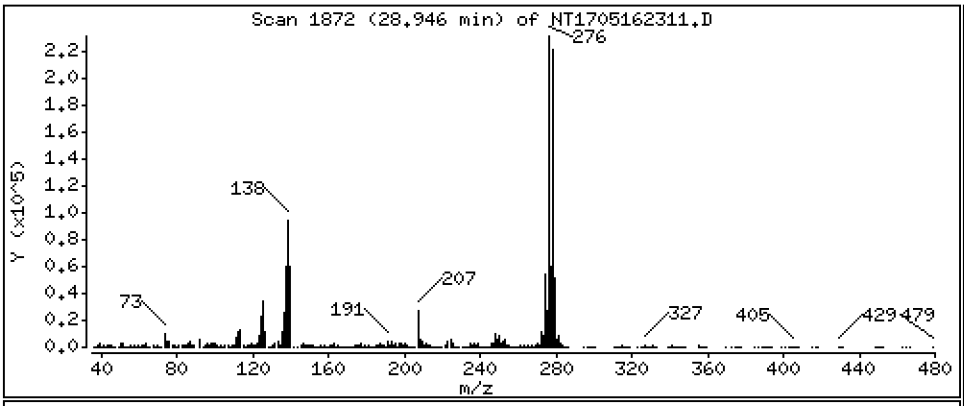
Operator: JGR

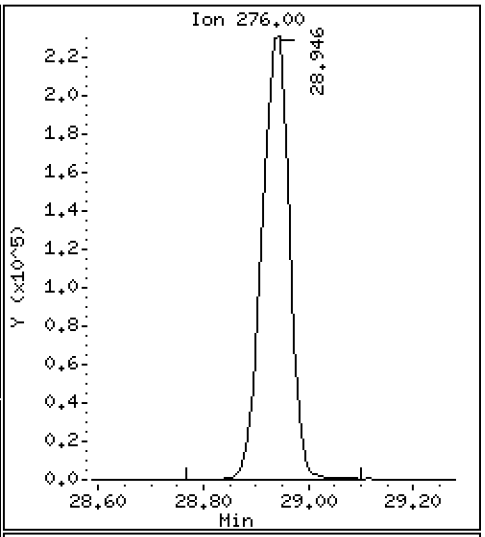
Column phase: ZB-5msi

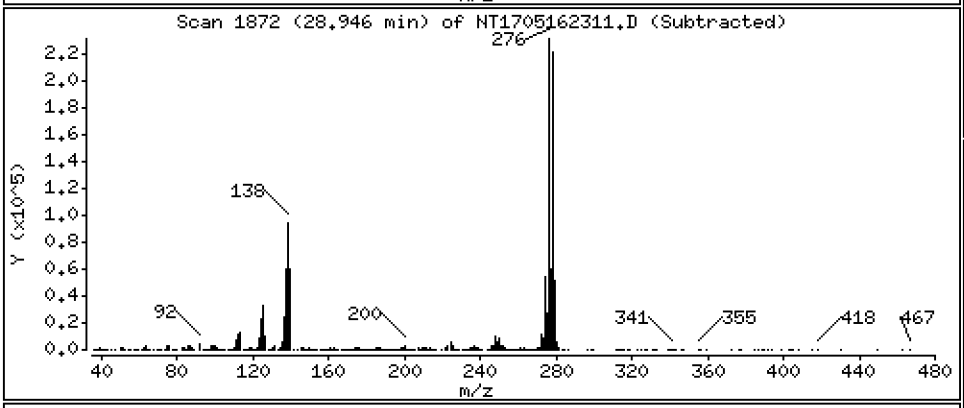
Column diameter: 0.25

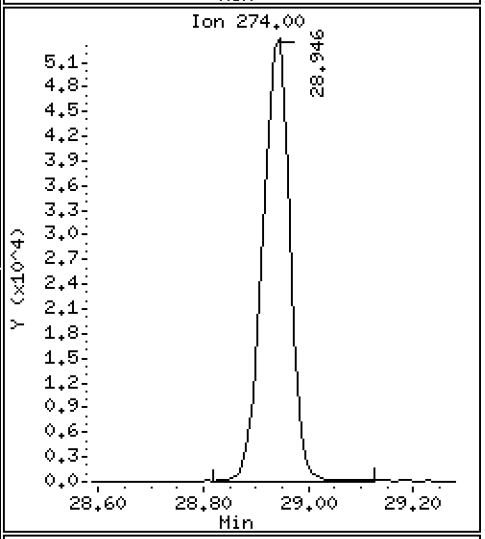
78 Indeno(1,2,3-cd)pyrene

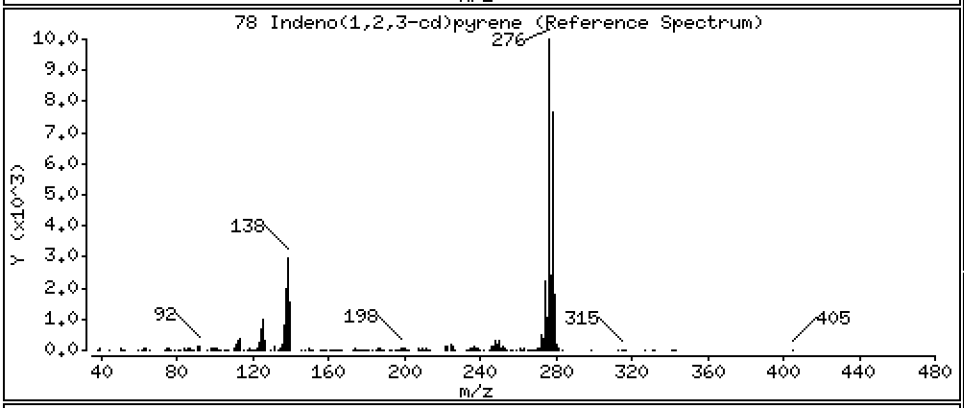
Concentration: 5.029 ug/mL

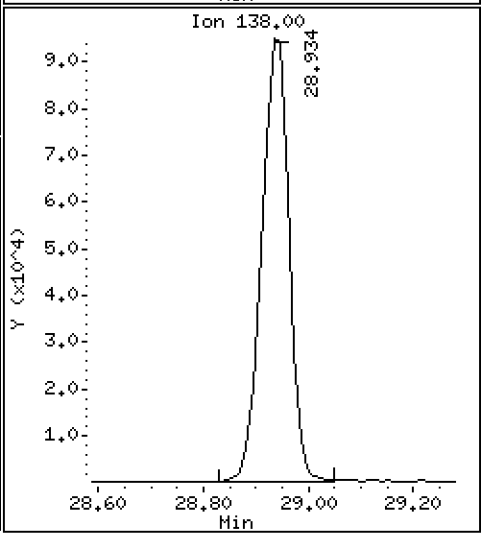


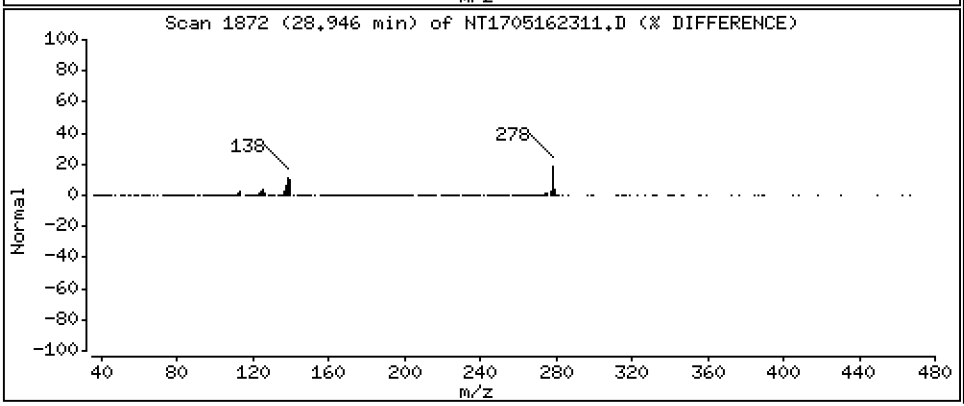












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

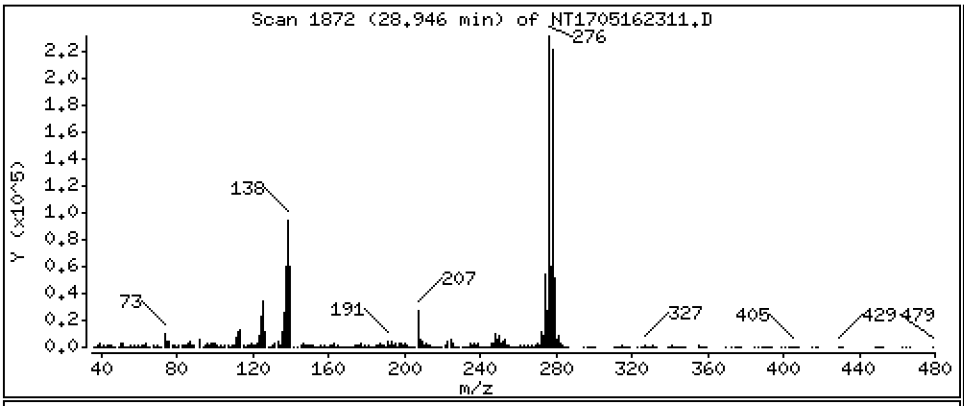
Operator: JGR

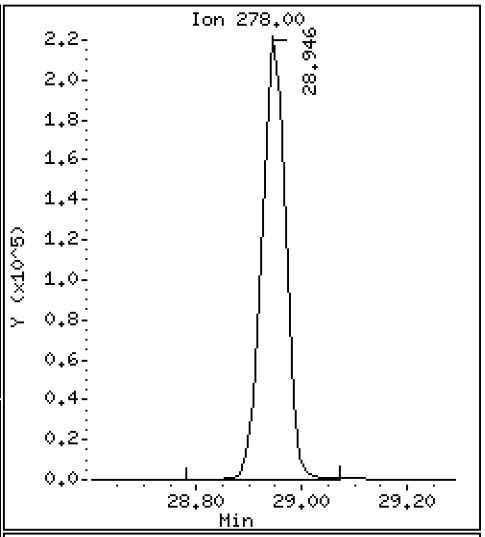
Column phase: ZB-5msi

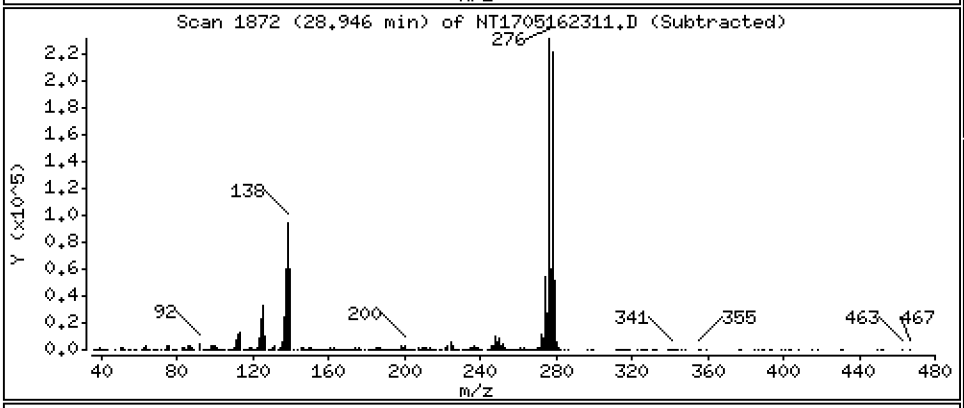
Column diameter: 0.25

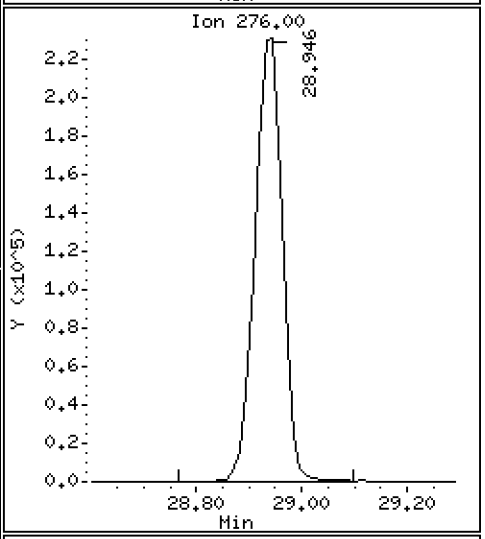
79 Dibenzo(a,h)anthracene

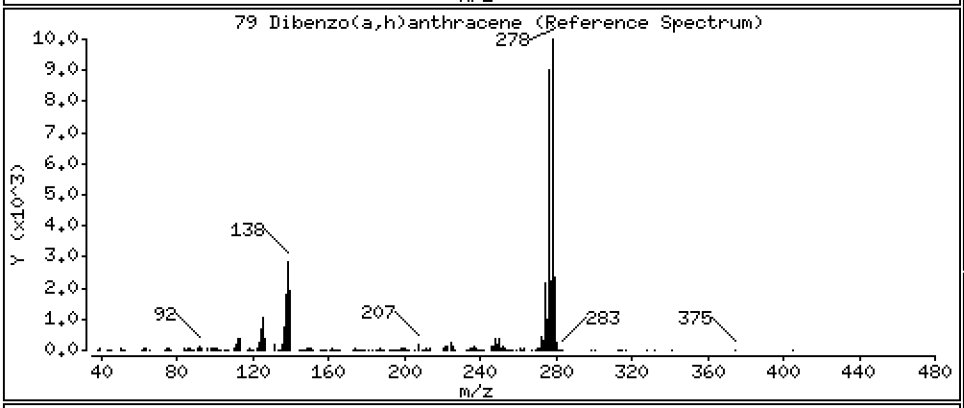
Concentration: 4.970 ug/mL

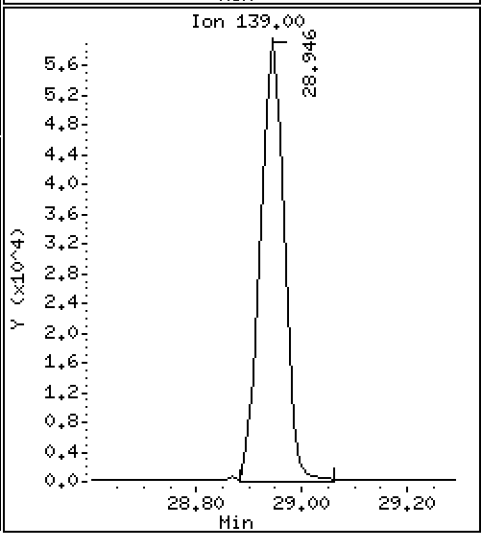


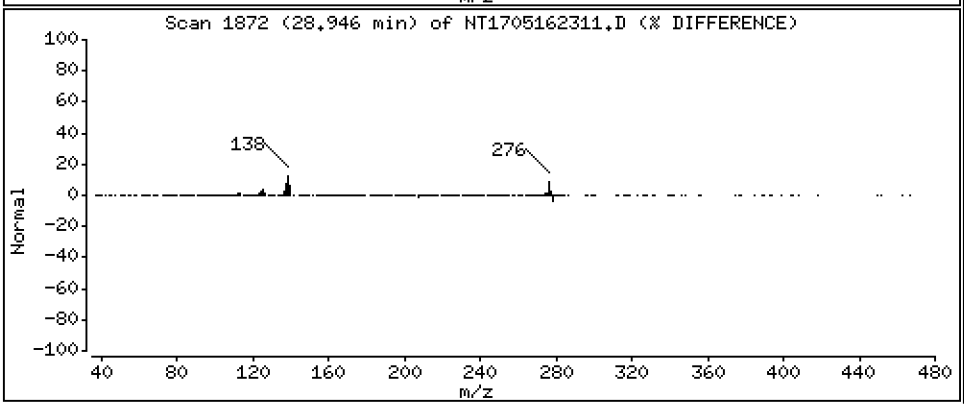












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

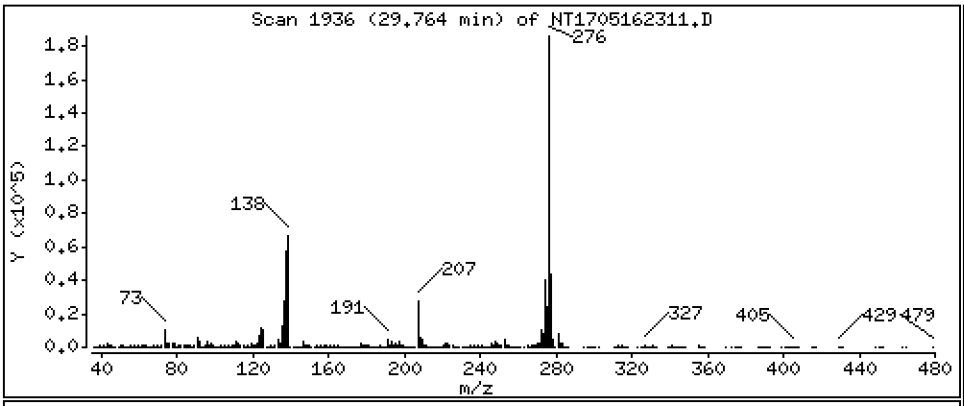
Operator: JGR

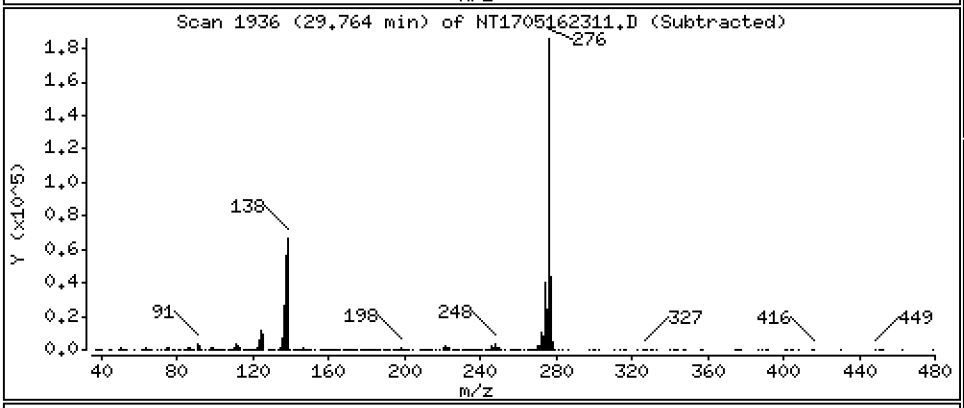
Column phase: ZB-5msi

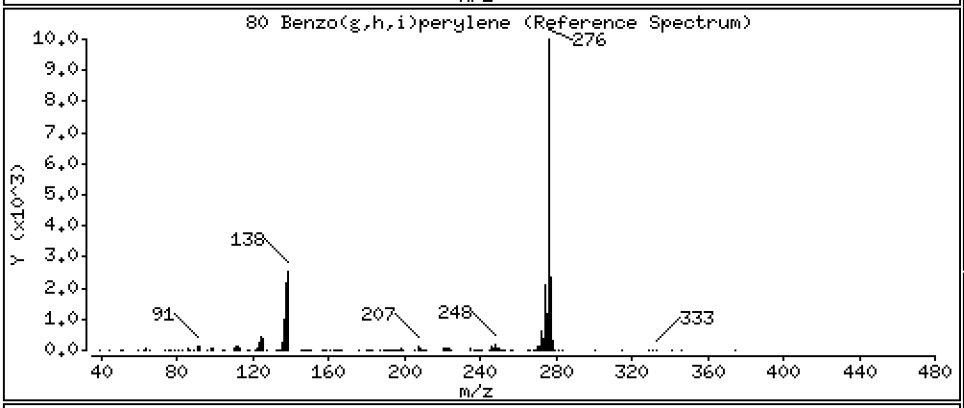
Column diameter: 0.25

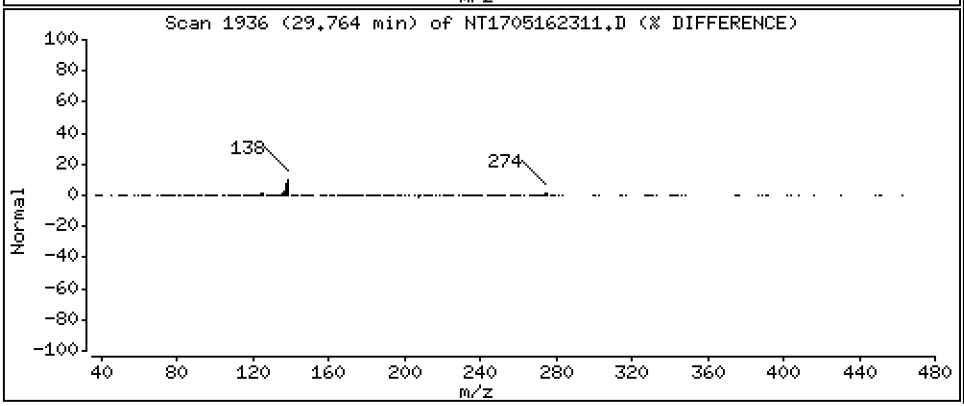
80 Benzo(g,h,i)perylene

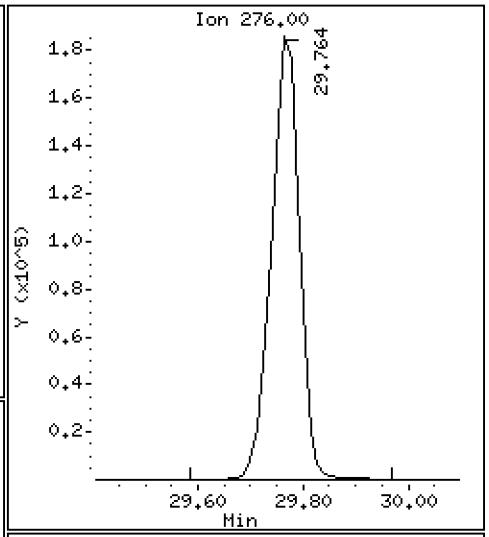
Concentration: 5.054 ug/mL

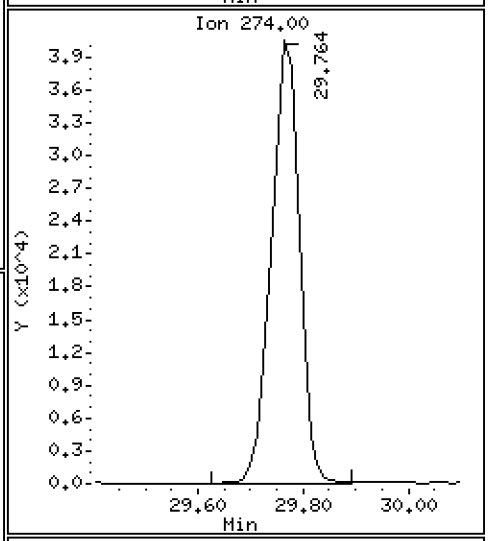


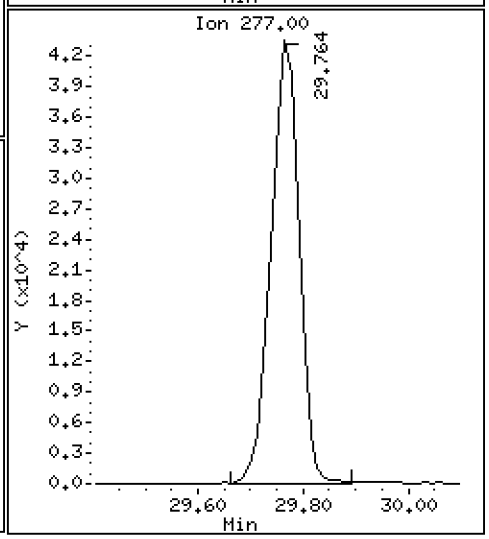












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

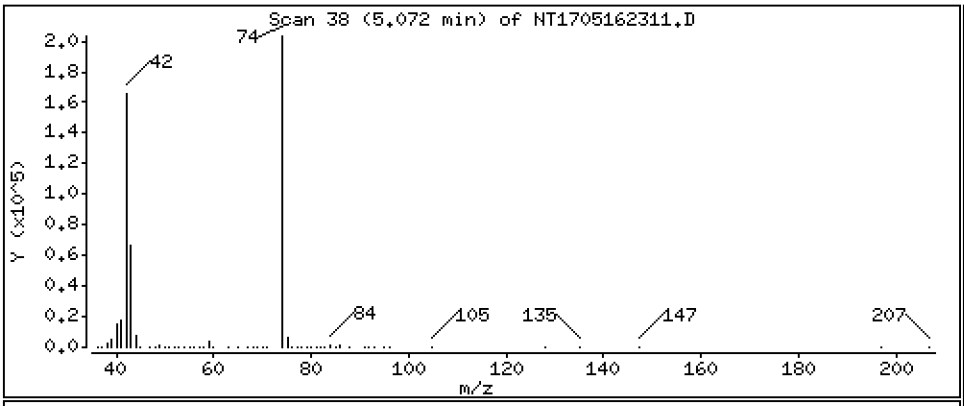
Operator: JGR

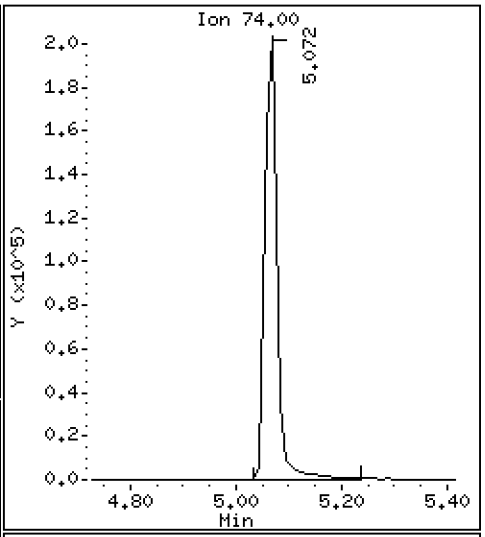
Column phase: ZB-5msi

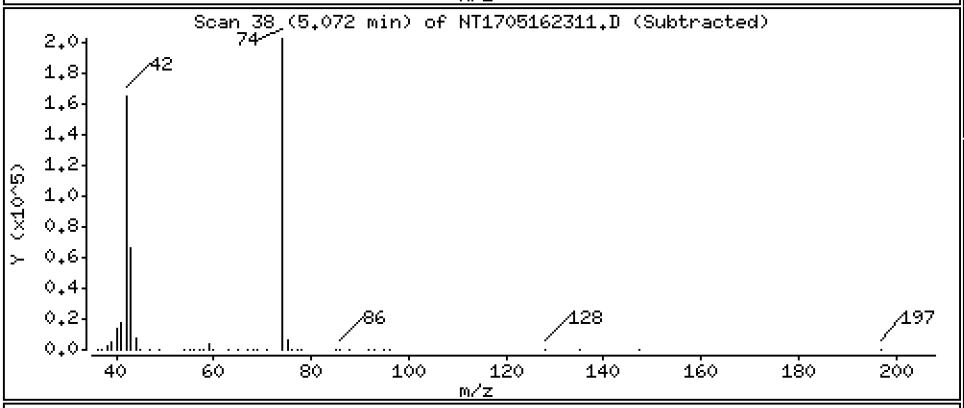
Column diameter: 0.25

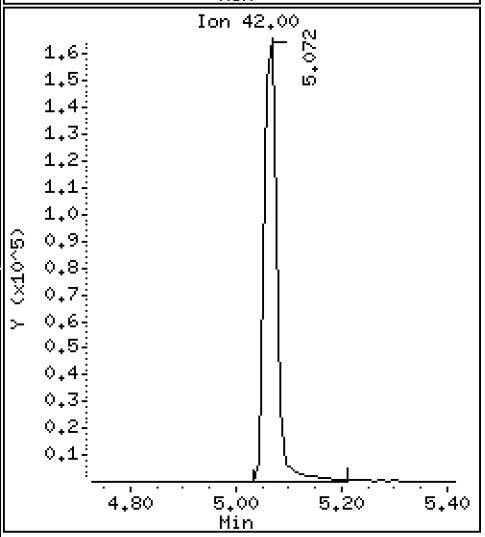
90 N-Nitrosodimethylamine

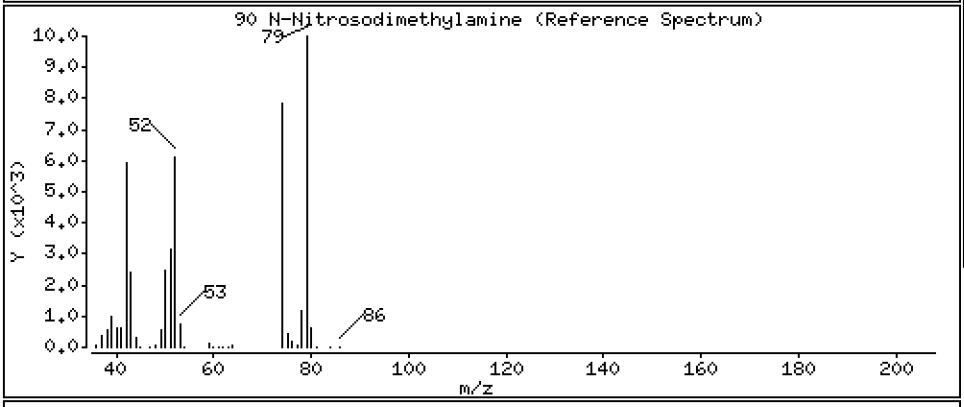
Concentration: 5.767 ug/mL

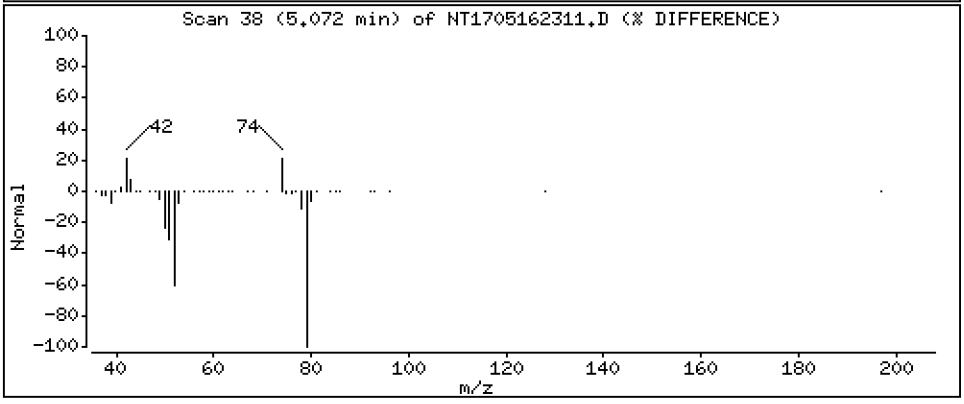












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

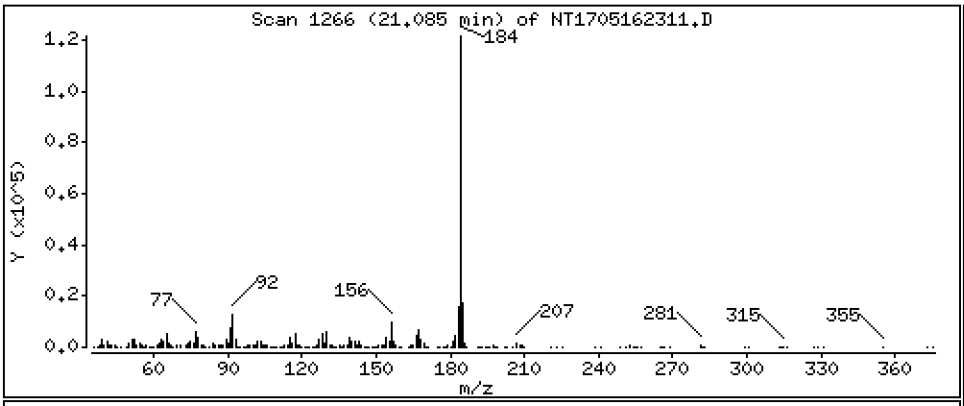
Operator: JGR

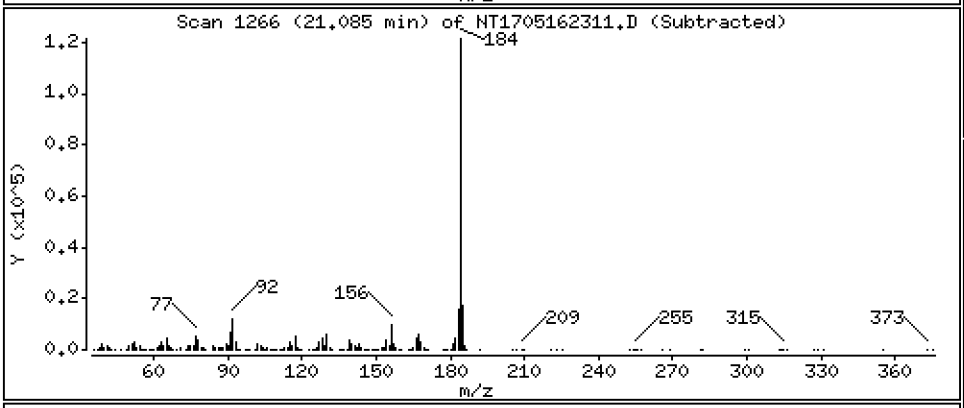
Column phase: ZB-5msi

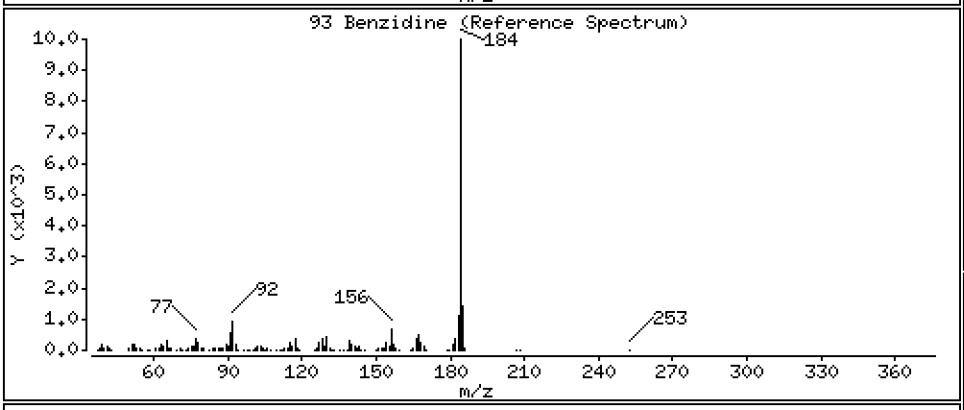
Column diameter: 0.25

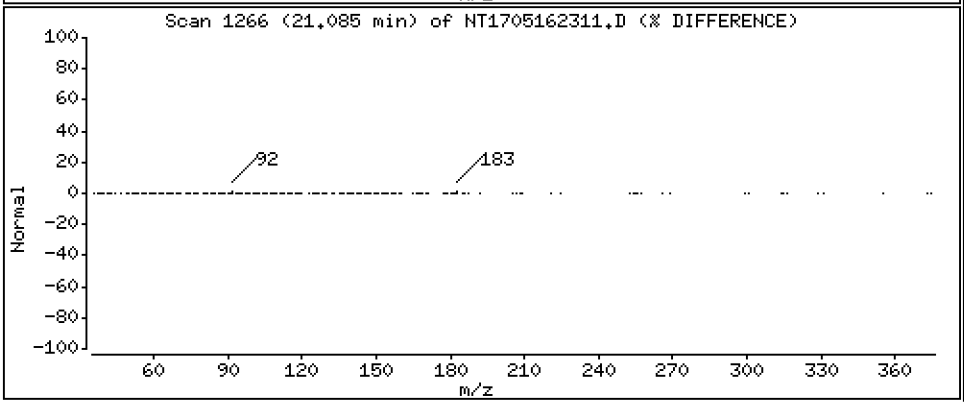
93 Benzidine

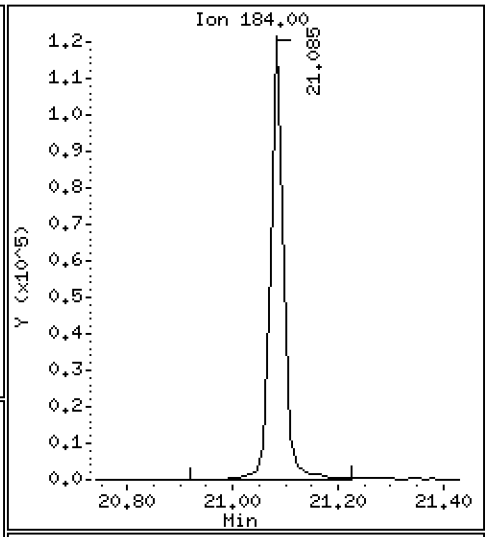
Concentration: 3.457 ug/mL

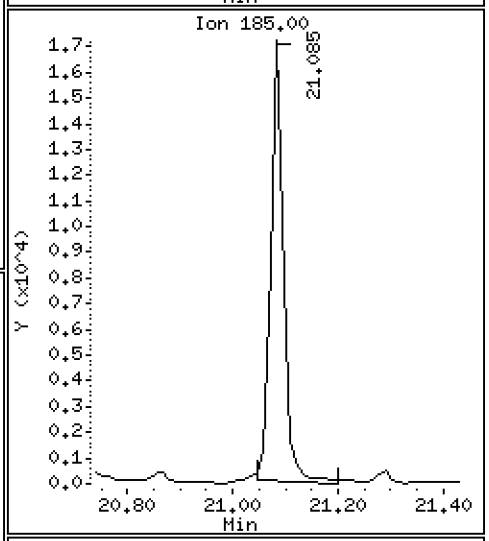


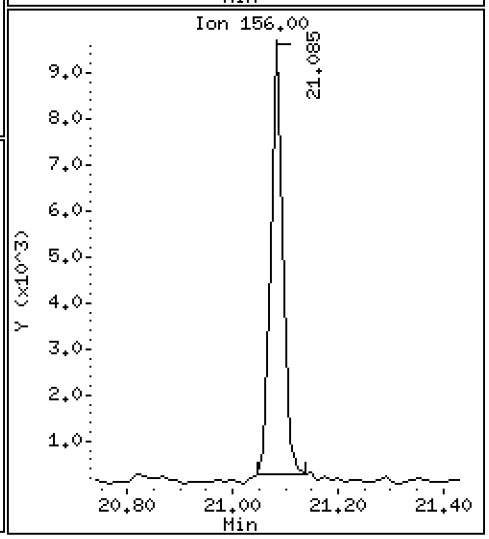












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

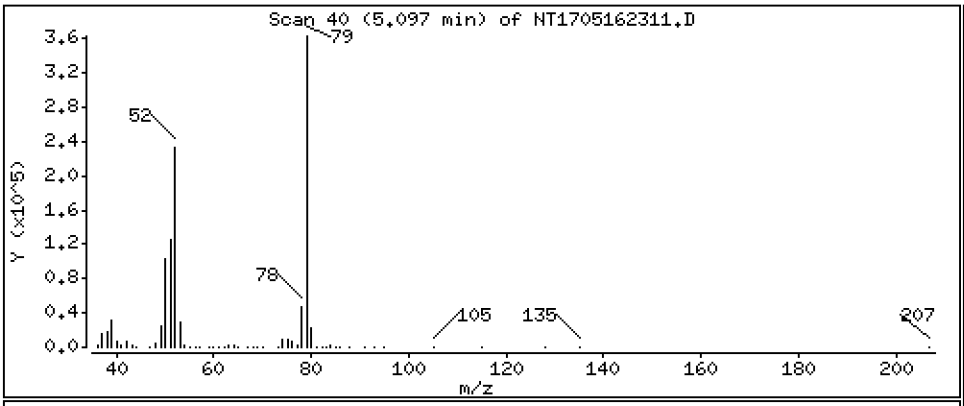
Operator: JGR

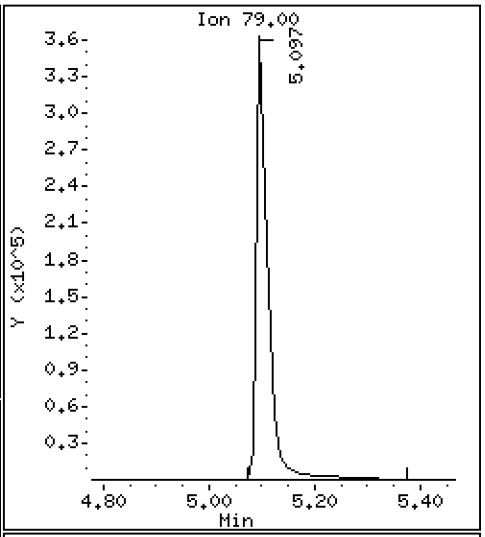
Column phase: ZB-5msi

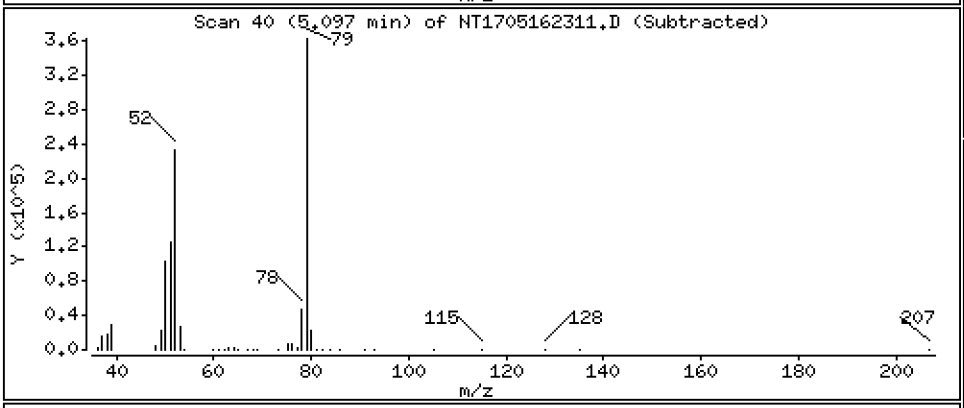
Column diameter: 0.25

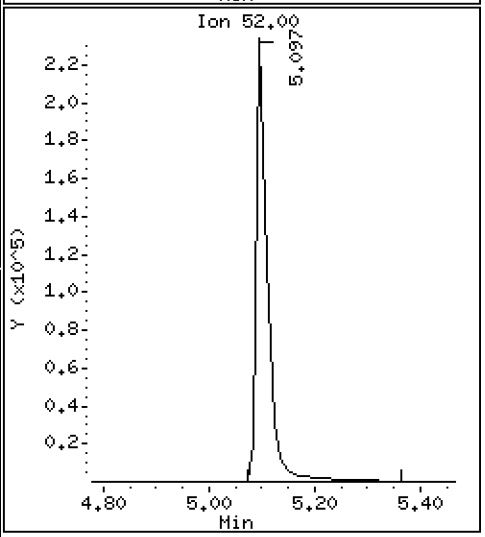
103 Pyridine

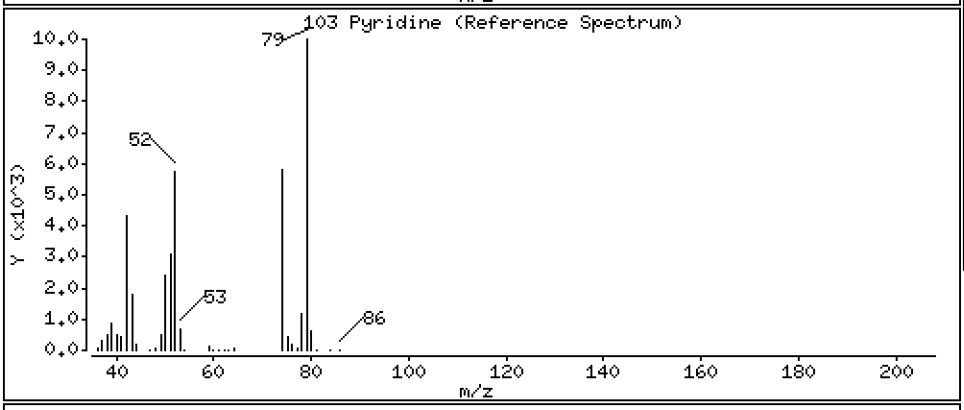
Concentration: 5.811 ug/mL

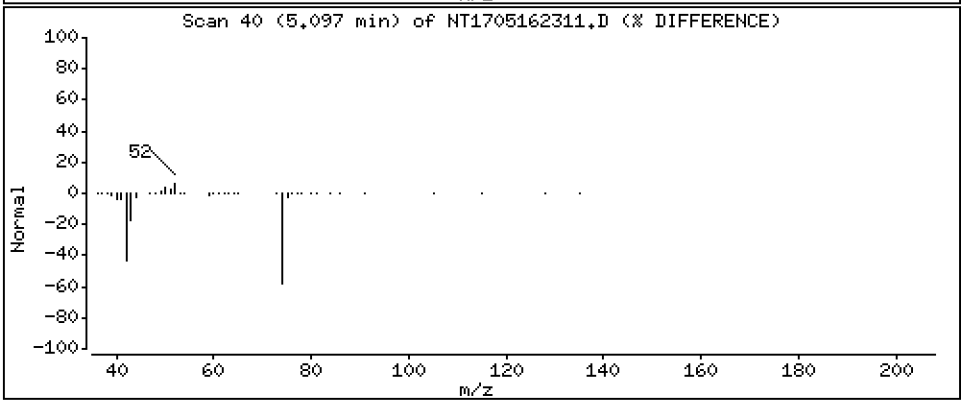












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

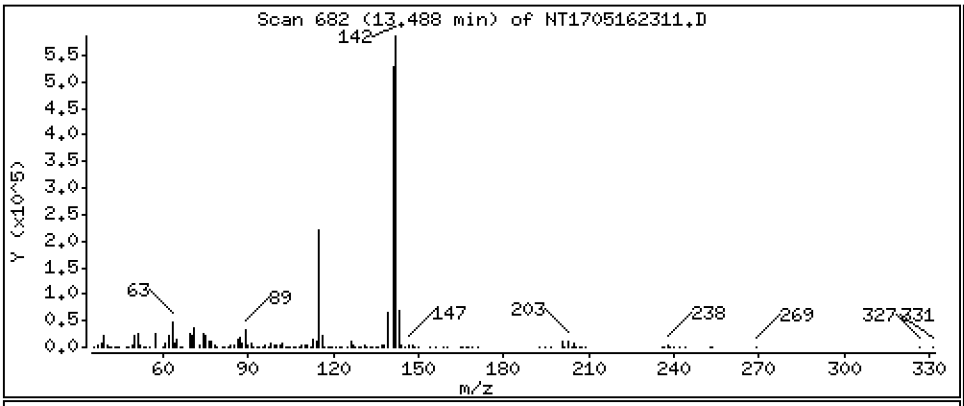
Operator: JGR

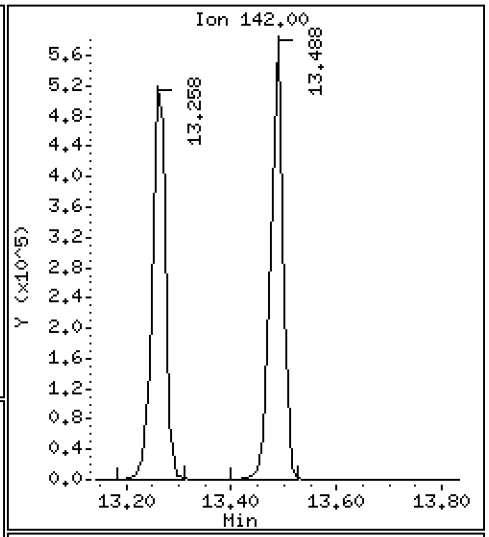
Column phase: ZB-5msi

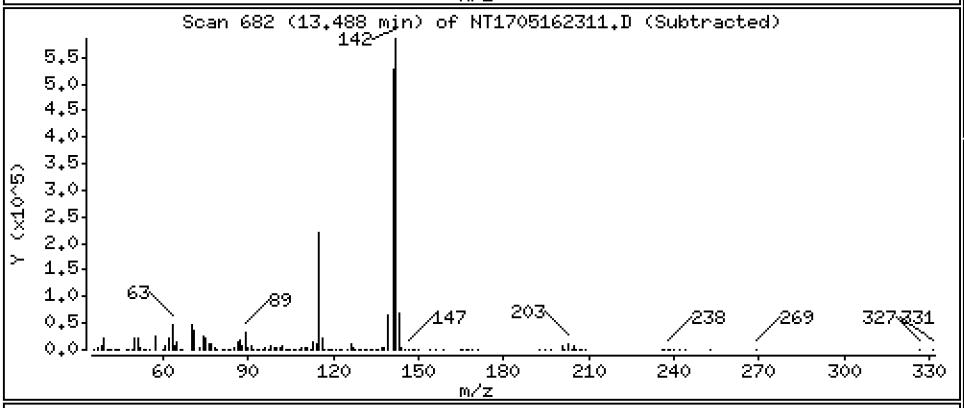
Column diameter: 0.25

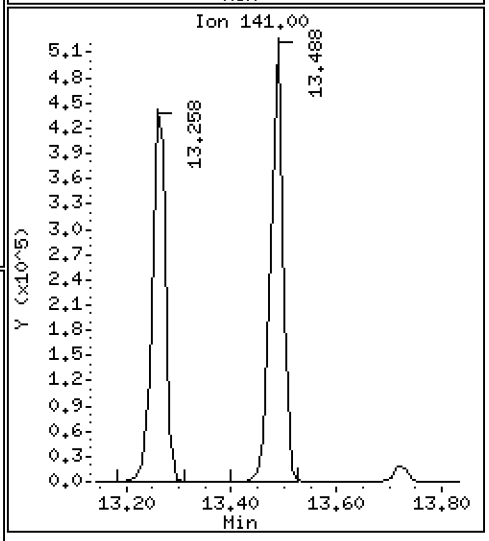
105 1-methylnaphthalene

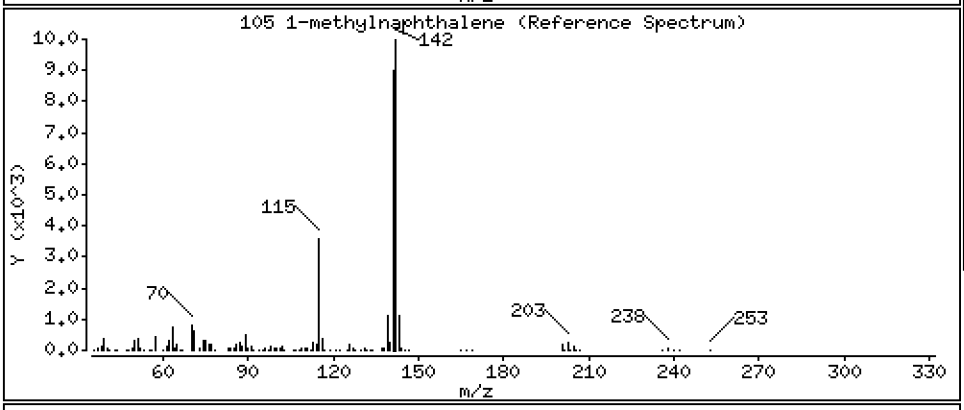
Concentration: 5.250 ug/mL

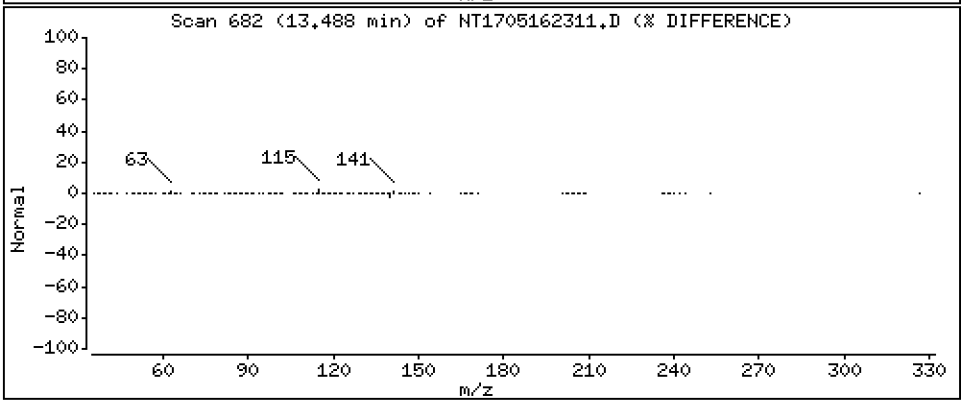












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

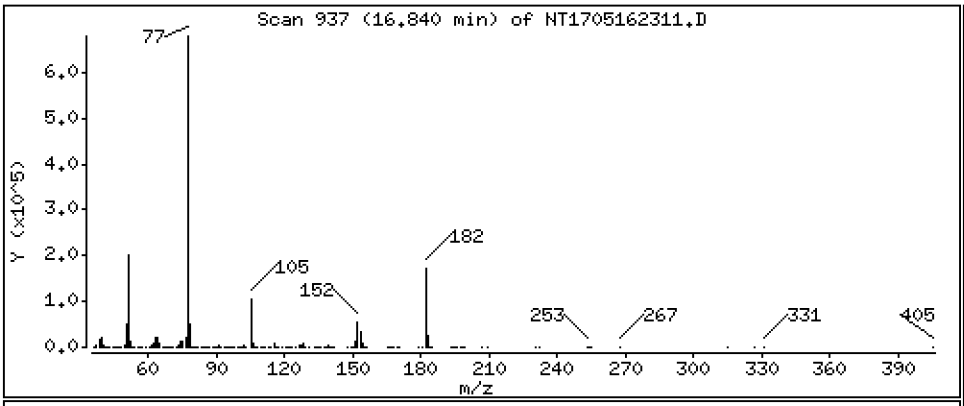
Operator: JGR

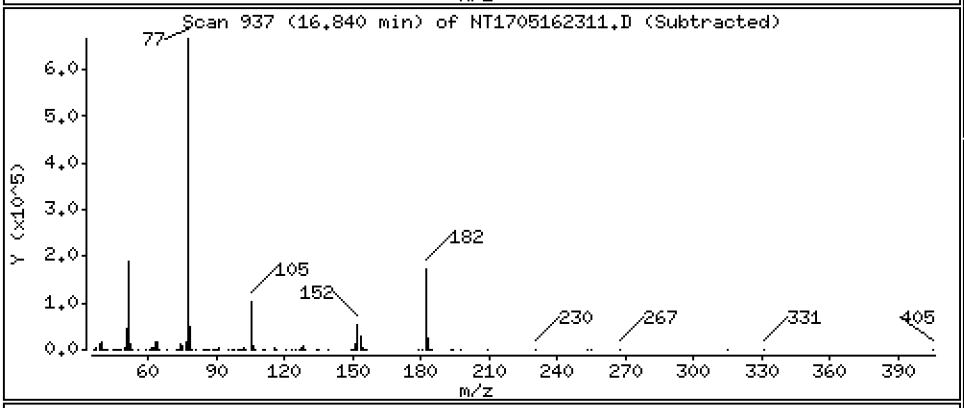
Column phase: ZB-5msi

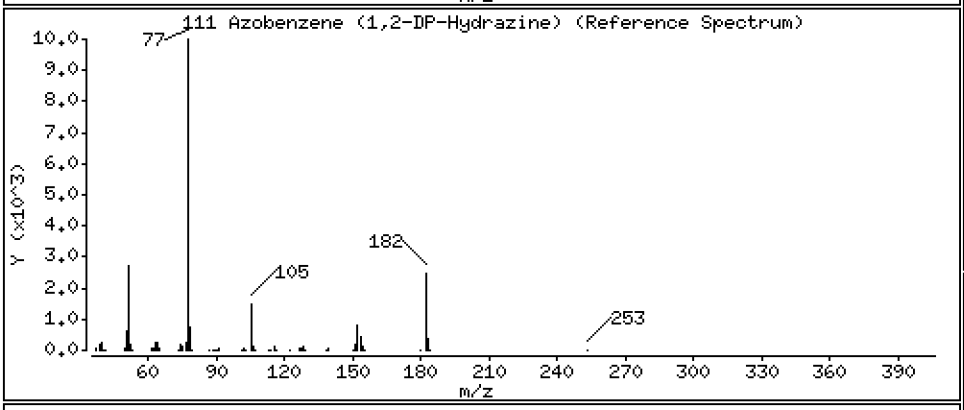
Column diameter: 0.25

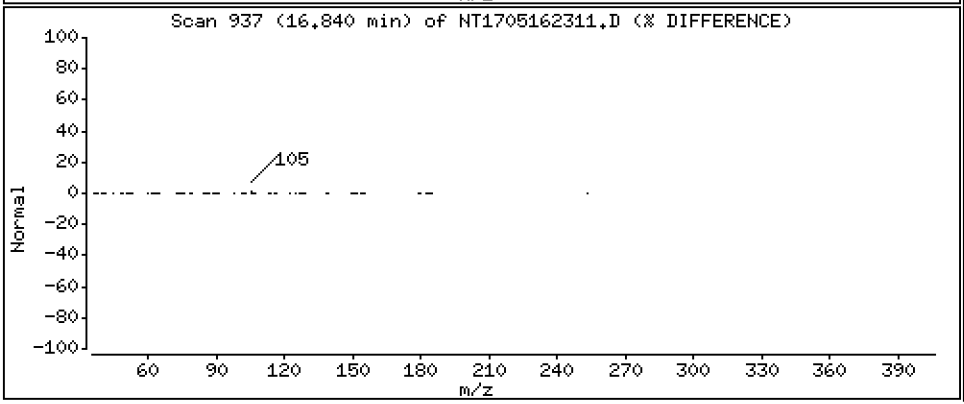
111 Azobenzene (1,2-DP-Hydrazine)

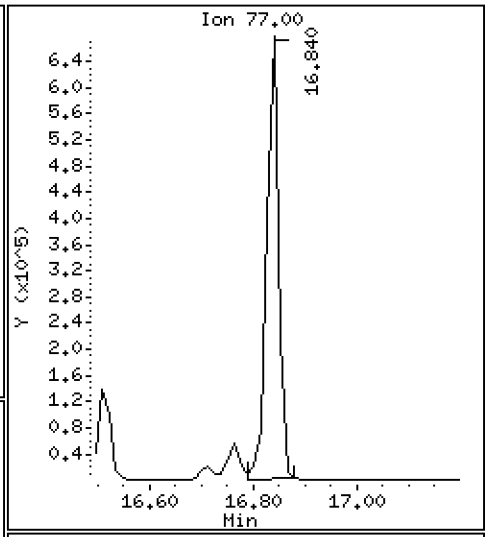
Concentration: 5.338 ug/mL

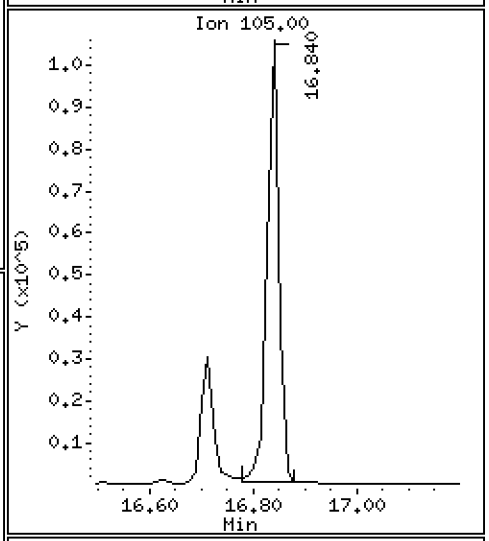


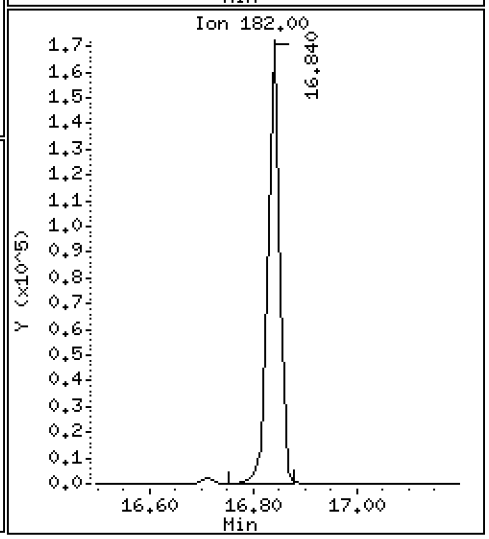












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

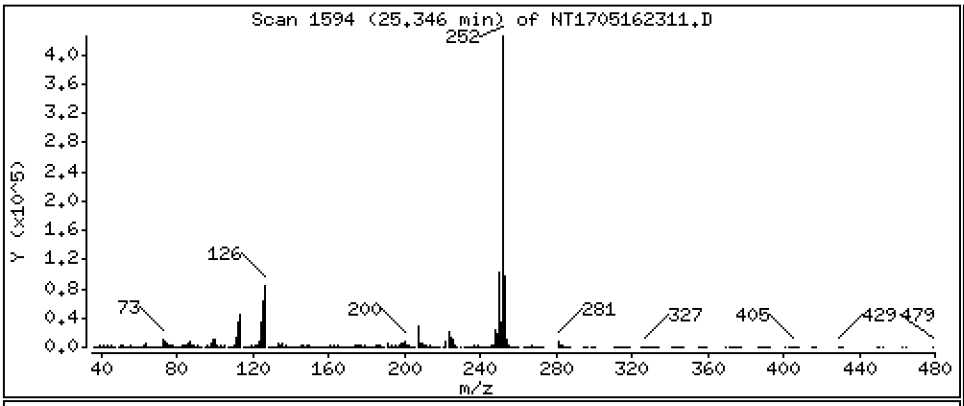
Operator: JGR

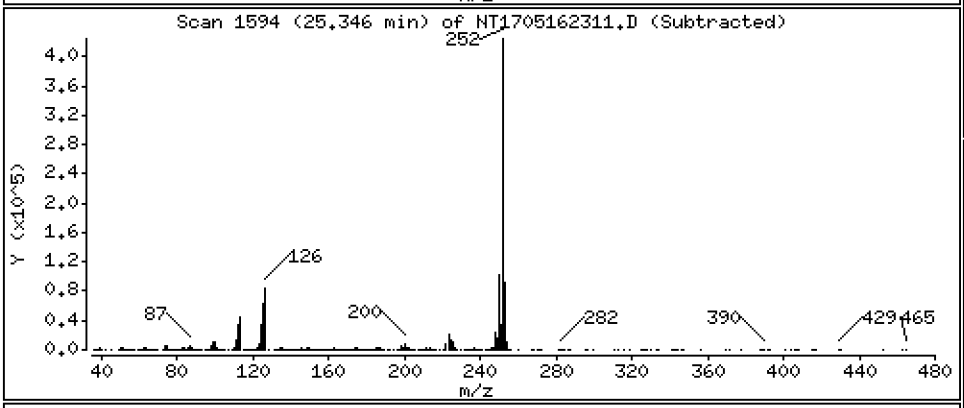
Column phase: ZB-5msi

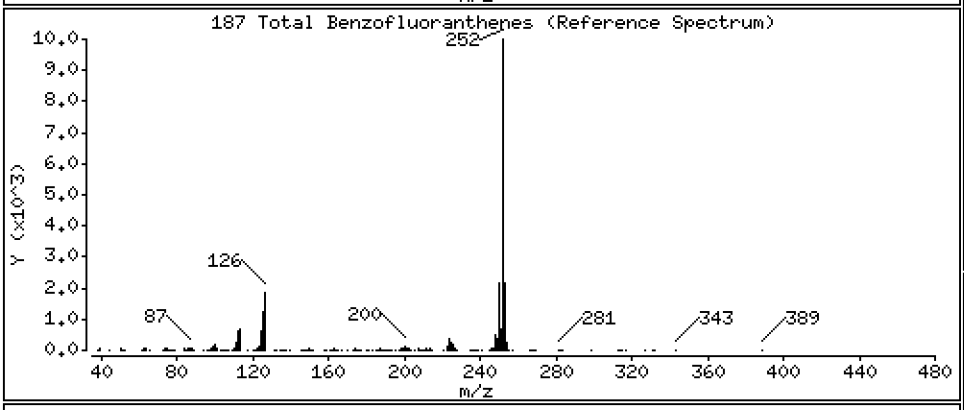
Column diameter: 0.25

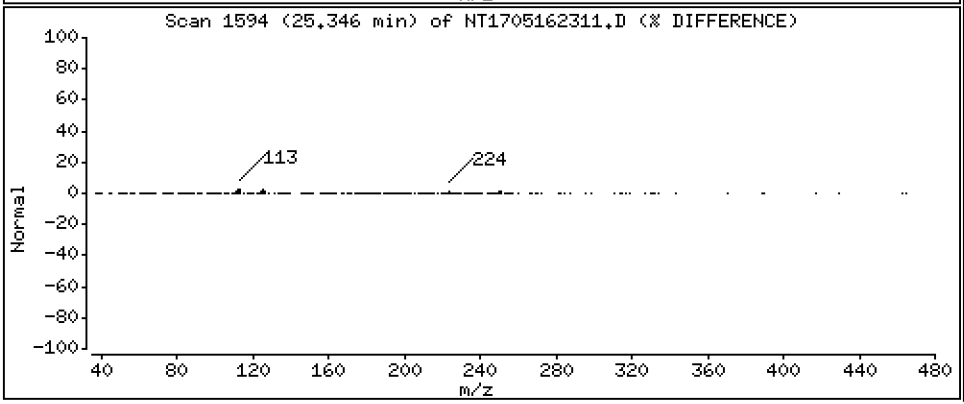
187 Total Benzofluoranthenes

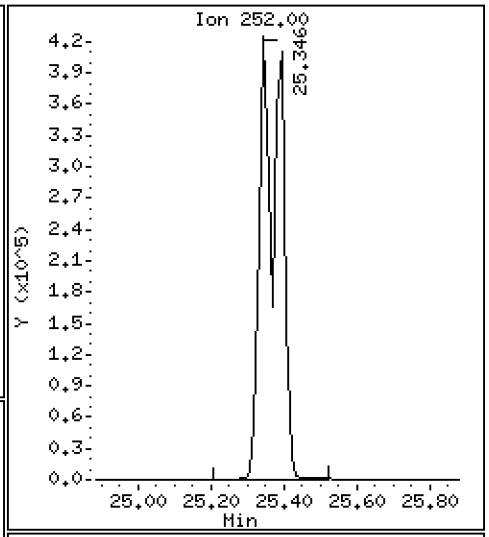
Concentration: 10.02 ug/mL

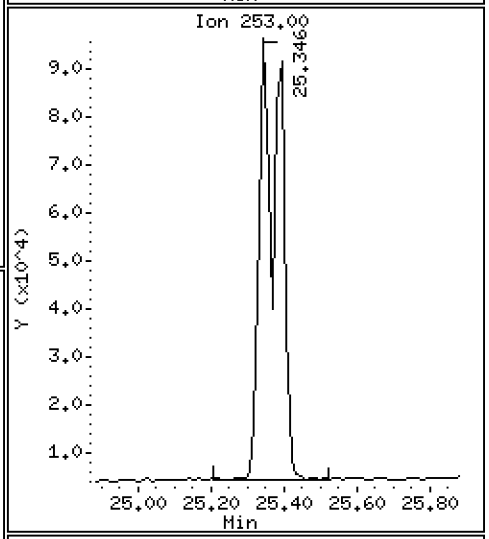


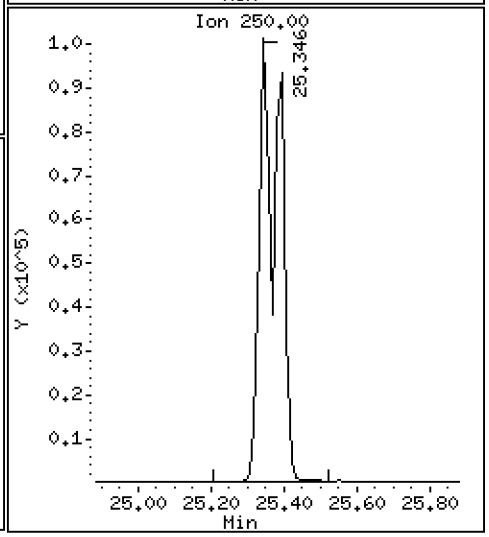












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

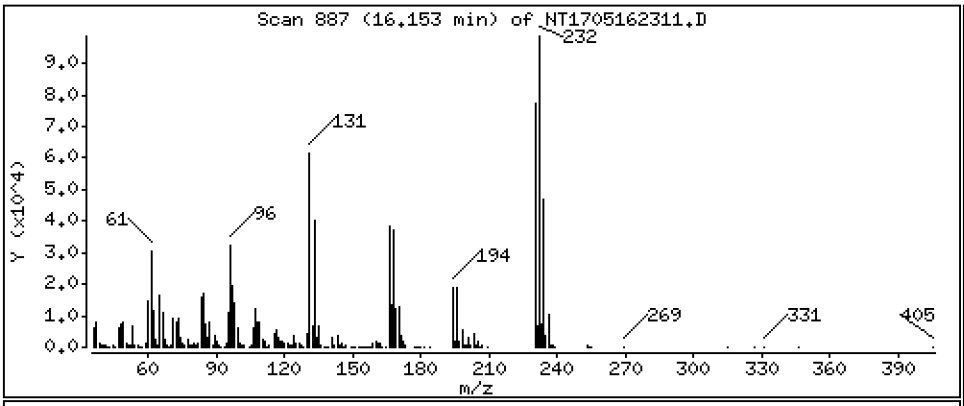
Operator: JGR

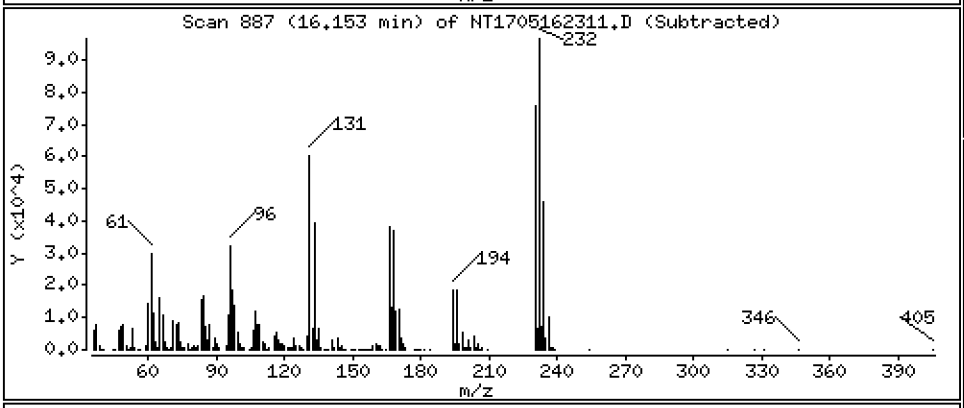
Column phase: ZB-5msi

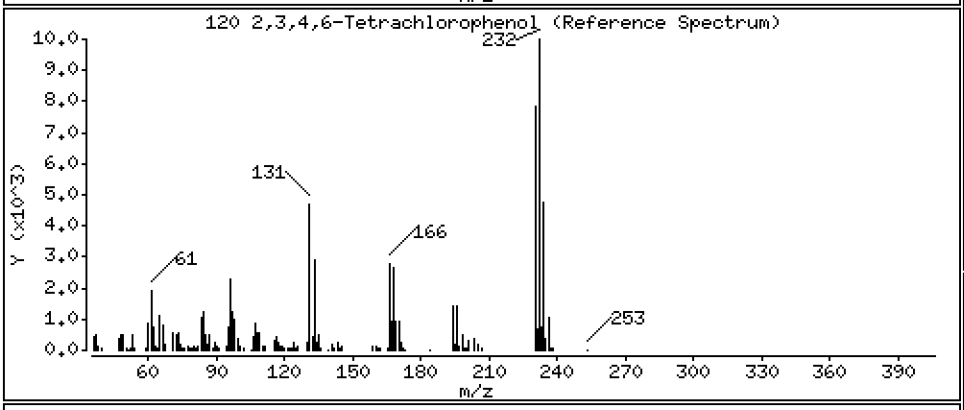
Column diameter: 0.25

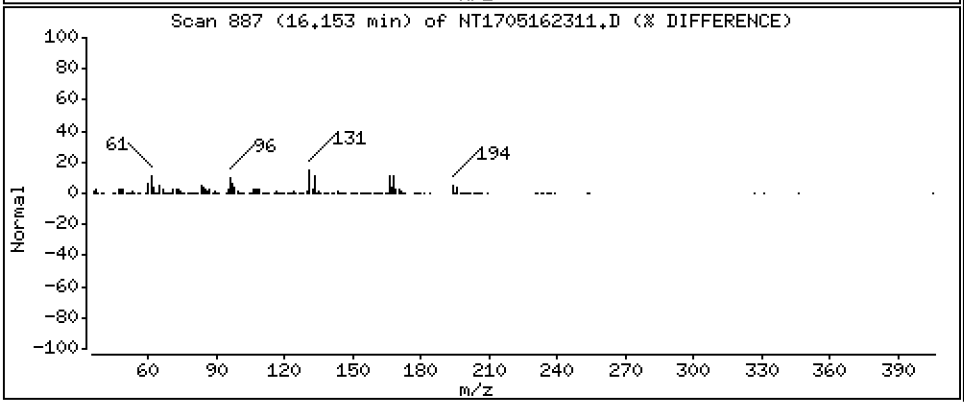
120 2,3,4,6-Tetrachlorophenol

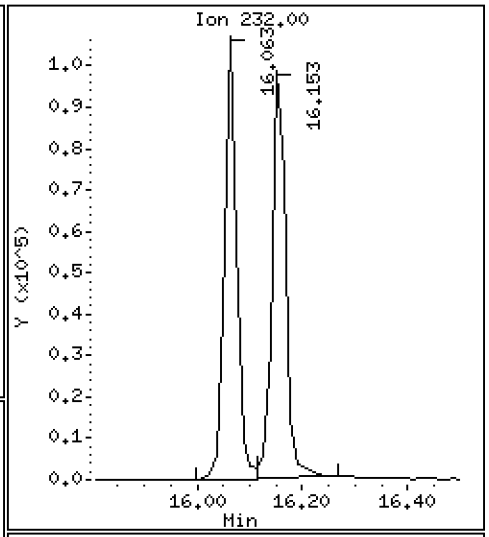
Concentration: 3.283 ug/mL

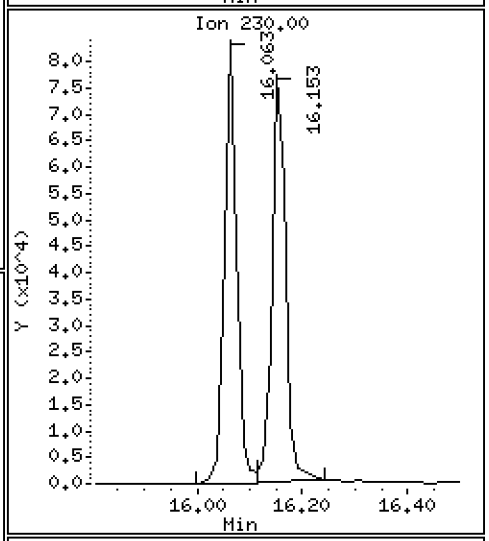


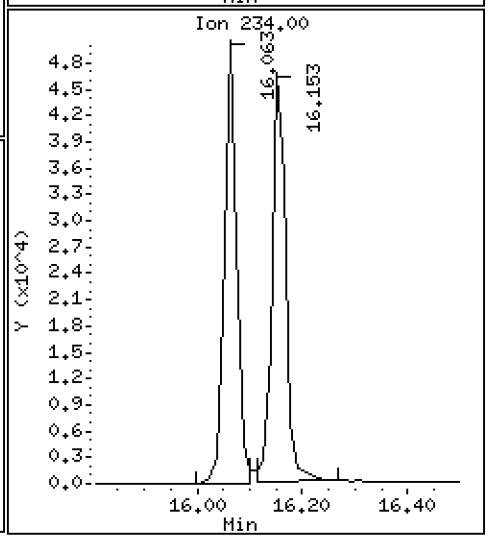












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D
Lab Smp Id: SLE0338-SCV1
Inj Date : 17-MAY-2023 00:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	8.740	8.740	(0.933)	588001	4.82293	4.823
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.906	8.906	(0.951)	494651	5.56554	5.566
6	2-Chlorophenol	128	9.033	9.033	(0.965)	539006	5.29416	5.294
7	1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	548081	5.31911	5.319
* 8	1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	265705	4.00000	
9	1,4-Dichlorobenzene	146	9.390	9.391	(1.003)	521173	5.07146	5.071
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.748	9.748	(1.041)	507921	5.25771	5.258
11	Benzyl alcohol	108	9.633	9.633	(1.029)	299374	5.27414	5.274
14	2,2'-oxybis(1-Chloropropane)	121	9.927	9.914	(1.060)	168255	6.17916	6.179
13	2-Methylphenol	108	9.850	9.851	(1.052)	378927	4.22901	4.229
17	Hexachloroethane	117	10.336	10.336	(1.104)	222748	5.41856	5.419
16	N-Nitroso-di-n-propylamine	70	10.183	10.170	(1.087)	378231	5.51734	5.517
15	4-Methylphenol	108	10.119	10.119	(1.080)	425231	4.66096	4.661
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	10.489	10.489	(0.886)	558517	5.32891	5.329
20	Isophorone	82	10.924	10.924	(0.922)	996054	6.94254	6.943
21	2-Nitrophenol	139	11.115	11.115	(0.939)	247403	4.89866	4.899
22	2,4-Dimethylphenol	107	11.153	11.154	(0.942)	371455	3.78811	3.788
23	Bis(2-Chloroethoxy)methane	93	11.345	11.345	(0.958)	547968	6.23185	6.232
24	Benzoic acid	105	11.332	11.333	(0.957)	445958	6.76086	6.761
25	2,4-Dichlorophenol	162	11.562	11.562	(0.976)	370930	4.70748	4.707
26	1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	503147	5.87937	5.879
* 27	Naphthalene-d8	136	11.842	11.830	(1.000)	965231	4.00000	
28	Naphthalene	128	11.881	11.881	(1.003)	1361438	5.12904	5.129
29	4-Chloroaniline	127	11.995	11.995	(1.013)	469527	4.48751	4.488
30	Hexachlorobutadiene	225	12.225	12.225	(1.032)	222159	5.24062	5.241
31	4-Chloro-3-methylphenol	107	12.952	12.952	(1.094)	413906	4.87847	4.878
32	2-Methylnaphthalene	142	13.258	13.258	(1.120)	955574	5.02794	5.028
33	Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	201170	4.21896	4.219

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.899)	257193	4.79376	4.794
	35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.904)	274739	4.83728	4.837
$	36	2-Fluorobiphenyl	172	Compound Not Detected.					
	37	2-Chloronaphthalene	162	14.252	14.253	(0.923)	885085	5.40065	5.401
	38	2-Nitroaniline	65	14.507	14.508	(0.940)	297267	5.35584	5.356
	39	Dimethylphthalate	163	14.928	14.929	(0.967)	955980	5.41824	5.418
	40	Acenaphthylene	152	15.120	15.120	(0.979)	1374665	5.28203	5.282
	41	2,6-Dinitrotoluene	165	15.069	15.069	(0.976)	223225	5.40390	5.404
*	42	Acenaphthene-d10	164	15.438	15.426	(1.000)	512787	4.00000	
	43	3-Nitroaniline	138	15.362	15.349	(0.995)	197758	5.16887	5.169
	44	Acenaphthene	153	15.502	15.502	(1.004)	859485	5.28316	5.283
	45	2,4-Dinitrophenol	184	15.566	15.567	(1.008)	52944	2.11874	2.119
	46	Dibenzofuran	168	15.821	15.821	(1.025)	1172327	5.16305	5.163
	47	4-Nitrophenol	109	15.668	15.681	(1.015)	114450	4.50365	4.504
	48	2,4-Dinitrotoluene	165	15.872	15.872	(1.028)	284935	5.26937	5.269
	50	Diethylphthalate	149	16.369	16.369	(1.060)	945291	5.49374	5.494
	49	Fluorene	166	16.535	16.535	(1.071)	1165179	5.39758	5.398
	51	4-Chlorophenyl-phenylether	204	16.522	16.509	(1.070)	542088	5.46212	5.462
	52	4-Nitroaniline	138	16.624	16.611	(1.077)	184970	5.10772	5.108
	53	4,6-Dinitro-2-methylphenol	198	16.713	16.713	(0.905)	113822	3.35487	3.355
	54	N-Nitrosodiphenylamine	169	16.764	16.764	(0.908)	651392	5.46976	5.470
$	55	2,4,6-Tribromophenol	330	Compound Not Detected.					
	56	4-Bromophenyl-phenylether	248	17.514	17.515	(0.949)	226164	5.42020	5.420
	57	Hexachlorobenzene	284	17.833	17.833	(0.966)	208878	4.91276	4.913
	58	Pentachlorophenol	266	18.190	18.203	(0.985)	98895	3.94337	3.943
*	59	Phenanthrene-d10	188	18.458	18.458	(1.000)	850147	4.00000	
	60	Phenanthrene	178	18.509	18.496	(1.003)	1250084	5.03943	5.039
	61	Anthracene	178	18.598	18.598	(1.008)	1054910	4.52965	4.530
	62	Carbazole	167	18.917	18.918	(1.025)	896606	5.93842	5.938
	63	Di-n-butylphthalate	149	19.682	19.682	(1.066)	1586517	5.64164	5.642
	64	Fluoranthene	202	20.868	20.855	(0.890)	1308113	5.46710	5.467
	65	Pyrene	202	21.289	21.276	(0.908)	1277121	5.26528	5.265
$	66	Terphenyl-d14	244	Compound Not Detected.					
	67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	632335	5.82476	5.825
	68	Benzo(a)anthracene	228	23.419	23.419	(0.998)	953848	5.06413	5.064
*	69	Chrysene-d12	240	23.457	23.445	(1.000)	511511	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.368	23.369	(0.996)	459041	11.9948	11.99
	71	Chrysene	228	23.496	23.496	(1.002)	889381	5.01800	5.018
	72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	875291	5.79218	5.792
*	134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1044471	4.00000	
	73	Di-n-octylphthalate	149	24.465	24.465	(1.000)	1451463	5.48238	5.482
	74	Benzo(b)fluoranthene	252	25.345	25.345	(0.969)	887996	4.91157	4.912
	75	Benzo(k)fluoranthene	252	25.396	25.384	(0.971)	848094	4.96504	4.965(H)
	76	Benzo(a)pyrene	252	26.034	26.022	(0.996)	736579	5.17185	5.172
*	77	Perylene-d12	264	26.149	26.149	(1.000)	456008	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.946	28.933	(1.107)	830811	5.02922	5.029
	79	Dibenzo(a,h)anthracene	278	28.946	28.946	(1.107)	689006	4.96953	4.970
	80	Benzo(g,h,i)perylene	276	29.764	29.751	(1.138)	689189	5.05448	5.054
	90	N-Nitrosodimethylamine	74	5.071	5.071	(0.542)	334608	5.76731	5.767
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	21.085	21.085	(0.899)	208933	3.45722	3.457
	103	Pyridine	79	5.097	5.122	(0.544)	534742	5.81084	5.811
	105	1-methylnaphthalene	142	13.487	13.487	(1.139)	925646	5.25003	5.250
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.840	16.840	(1.091)	1072104	5.33771	5.338

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.345	25.384	(0.969)	1625913	10.0183	10.02
120 2,3,4,6-Tetrachlorophenol	232	16.152	16.152	(1.046)	210743	3.28296	3.283

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162311.D
Lab Smp Id: SLE0338-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	265705	-7.45
27 Naphthalene-d8	1056758	528379	2113516	965231	-8.66
42 Acenaphthene-d10	587510	293755	1175020	512787	-12.72
59 Phenanthrene-d10	933575	466788	1867150	850147	-8.94
69 Chrysene-d12	576570	288285	1153140	511511	-11.28
134 Di-n-octylphthala	1181651	590826	2363302	1044471	-11.61
77 Perylene-d12	491359	245680	982718	456008	-7.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	-0.00
77 Perylene-d12	26.15	25.65	26.65	26.15	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162311.D

Lab ID: SLE0338-SCV1
nt17.i, ABN.m, 17-MAY-2023 00:29

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

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.008	0.000	1.0083	2,4-Dinitrophenol

RRT check based on Ccal File: NT1705162308.D

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLE0338-SCV1
Sequence: SLE0338
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.8	-3.5	20.00
bis(2-chloroethyl) ether	5.0000	5.6	11.3	20.00
2-Chlorophenol	5.0000	5.3	5.9	20.00
1,3-Dichlorobenzene	5.0000	5.3	6.4	20.00
1,4-Dichlorobenzene	5.0000	5.1	1.4	20.00
1,2-Dichlorobenzene	5.0000	5.3	5.2	20.00
Benzyl Alcohol	5.0000	5.3	5.5	20.00
2,2'-Oxybis(1-chloropropane)	5.0000	6.2	23.6	20.00
2-Methylphenol	5.0000	4.2	-15.4	20.00
Hexachloroethane	5.0000	5.4	8.4	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.5	10.3	20.00
4-Methylphenol	5.0000	4.7	-6.8	20.00
Nitrobenzene	5.0000	5.3	6.6	20.00
Isophorone	5.0000	6.9	38.9	20.00
2-Nitrophenol	5.0000	4.9	-2.0	20.00
2,4-Dimethylphenol	5.0000	3.8	-24.2	20.00
Bis(2-Chloroethoxy)methane	5.0000	6.2	24.6	20.00
2,4-Dichlorophenol	5.0000	4.7	-5.9	20.00
1,2,4-Trichlorobenzene	5.0000	5.9	17.6	20.00
Naphthalene	5.0000	5.1	2.6	20.00
Benzoic acid	10.000	6.8	-32.4	20.00
4-Chloroaniline	5.0000	4.5	-10.2	20.00
Hexachlorobutadiene	5.0000	5.2	4.8	20.00
4-Chloro-3-Methylphenol	5.0000	4.9	-2.4	20.00
2-Methylnaphthalene	5.0000	5.0	0.6	20.00
Hexachlorocyclopentadiene	5.0000	4.2	-15.6	20.00
2,4,6-Trichlorophenol	5.0000	4.8	-4.1	20.00
2,4,5-Trichlorophenol	5.0000	4.8	-3.3	20.00
2-Chloronaphthalene	5.0000	5.4	8.0	20.00
2-Nitroaniline	5.0000	5.4	7.1	20.00
Acenaphthylene	5.0000	5.3	5.6	20.00
Dimethylphthalate	5.0000	5.4	8.4	20.00

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

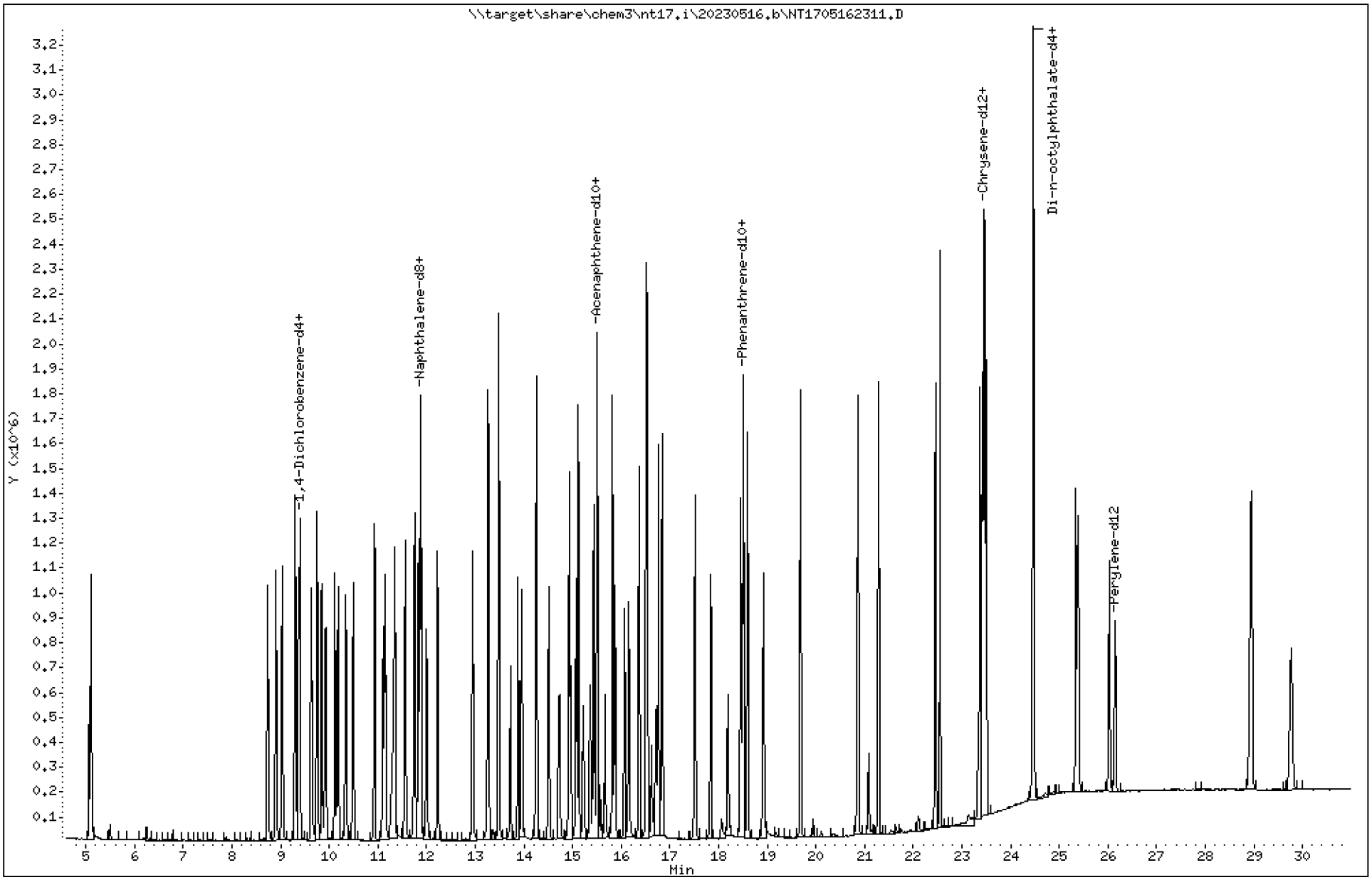
Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLE0338-SCV1
Sequence: SLE0338
Standard ID: K010066

2,6-Dinitrotoluene	5.0000	5.4	8.1	20.00
Acenaphthene	5.0000	5.3	5.7	20.00
3-Nitroaniline	5.0000	5.2	3.4	20.00
2,4-Dinitrophenol	5.0000	2.1	-57.6	20.00
Dibenzofuran	5.0000	5.2	3.3	20.00
4-Nitrophenol	5.0000	4.5	-9.9	20.00
2,4-Dinitrotoluene	5.0000	5.3	5.4	20.00
Fluorene	5.0000	5.4	8.0	20.00
4-Chlorophenylphenyl ether	5.0000	5.5	9.2	20.00
Diethyl phthalate	5.0000	5.5	9.9	20.00
4-Nitroaniline	5.0000	5.1	2.2	20.00
4,6-Dinitro-2-methylphenol	5.0000	3.4	-32.9	20.00
N-Nitrosodiphenylamine	5.0000	5.5	9.4	20.00
4-Bromophenyl phenyl ether	5.0000	5.4	8.4	20.00
Hexachlorobenzene	5.0000	4.9	-1.7	20.00
Pentachlorophenol	5.0000	3.9	-21.1	20.00
Phenanthrene	5.0000	5.0	0.8	20.00
Anthracene	5.0000	4.5	-9.4	20.00
Carbazole	5.0000	5.9	18.8	20.00
Di-n-Butylphthalate	5.0000	5.6	12.8	20.00
Fluoranthene	5.0000	5.5	9.3	20.00
Pyrene	5.0000	5.3	5.3	20.00
Butylbenzylphthalate	5.0000	5.8	16.5	20.00
Benzo(a)anthracene	5.0000	5.1	1.3	20.00
3,3'-Dichlorobenzidine	10.000	12.0	19.9	20.00
Chrysene	5.0000	5.0	0.4	20.00
bis(2-Ethylhexyl)phthalate	5.0000	5.8	15.8	20.00
Di-n-Octylphthalate	5.0000	5.5	9.6	20.00
Benzofluoranthenes, Total	10.000	10.0	0.2	20.00
Benzo(a)pyrene	5.0000	5.2	3.4	20.00
Indeno(1,2,3-cd)pyrene	5.0000	5.0	0.6	20.00
Dibenzo(a,h)anthracene	5.0000	5.0	-0.6	20.00
Benzo(g,h,i)perylene	5.0000	5.1	1.1	20.00
1-Methylnaphthalene	5.0000	5.3	5.0	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D
Date : 17-MAY-2023 00:29
Client ID:
Sample Info: SLE0338-SCV1

Instrument: nt17.i
Operator: JGR
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

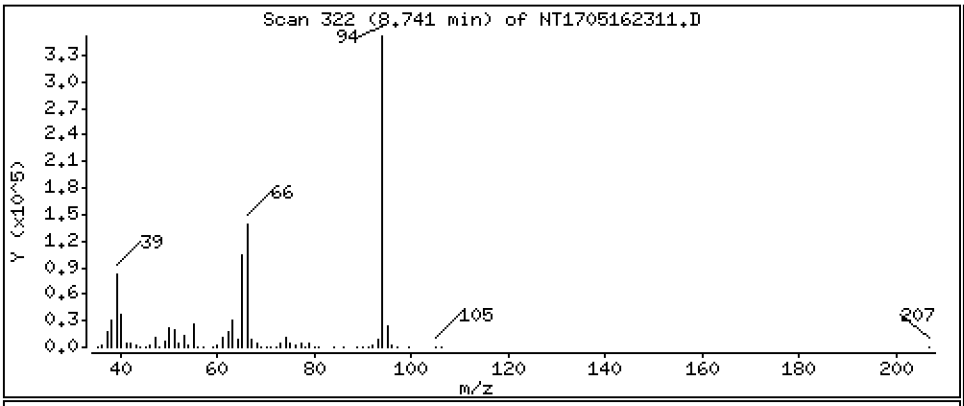
Operator: JGR

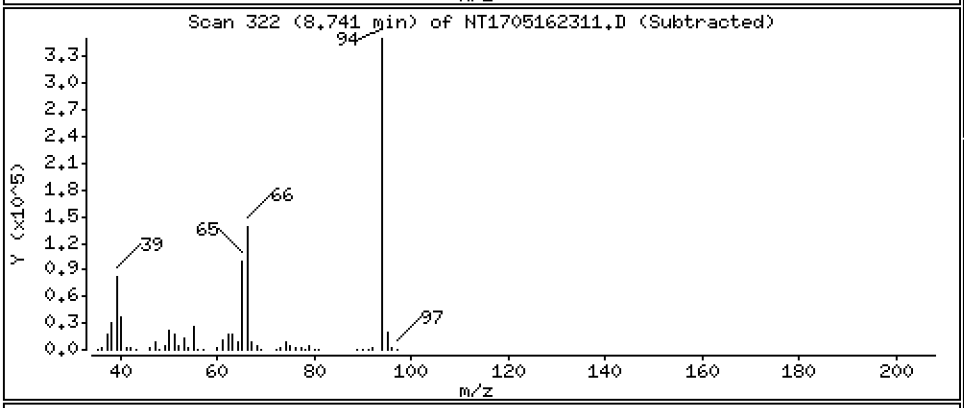
Column phase: ZB-5msi

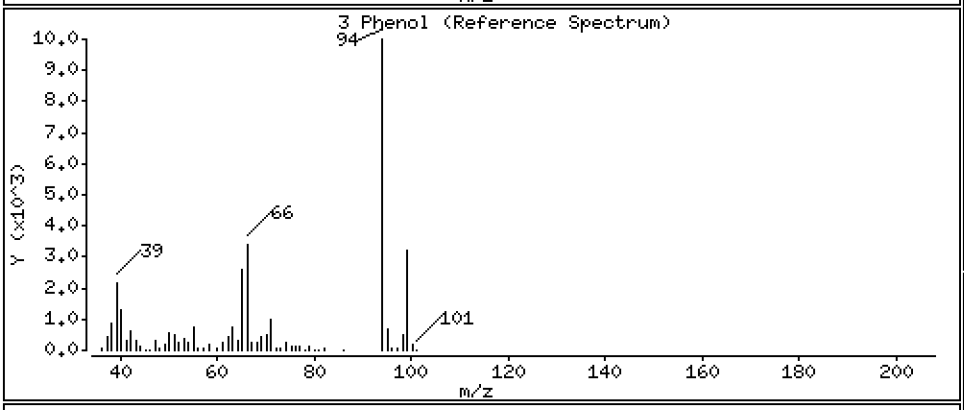
Column diameter: 0.25

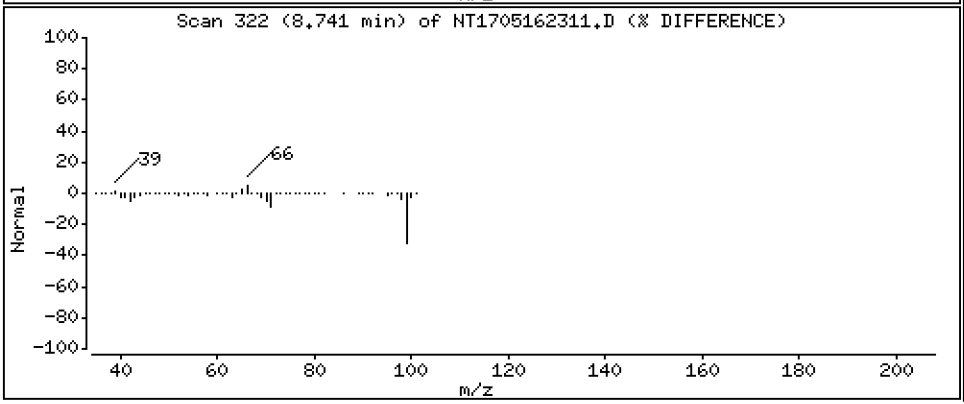
3 Phenol

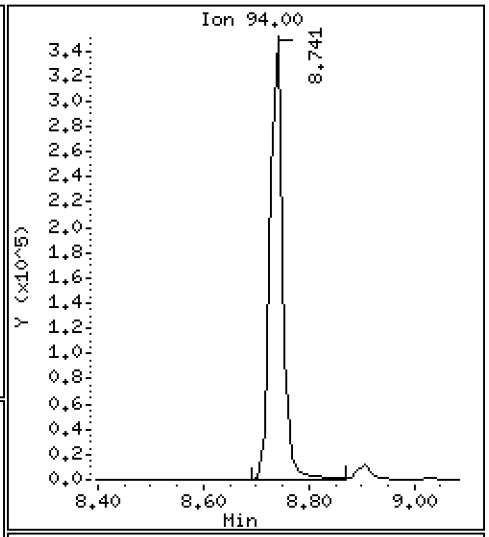
Concentration: 4.823 ug/mL

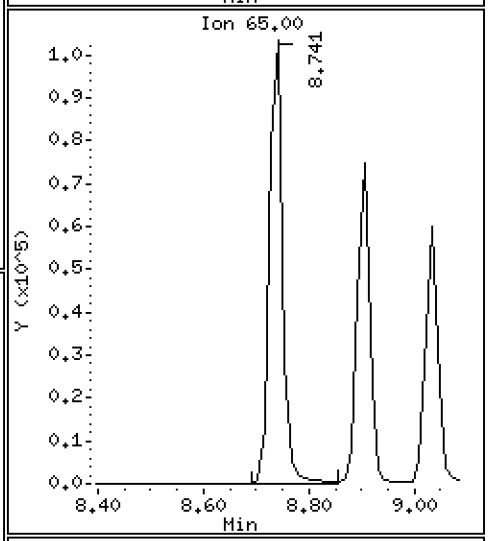


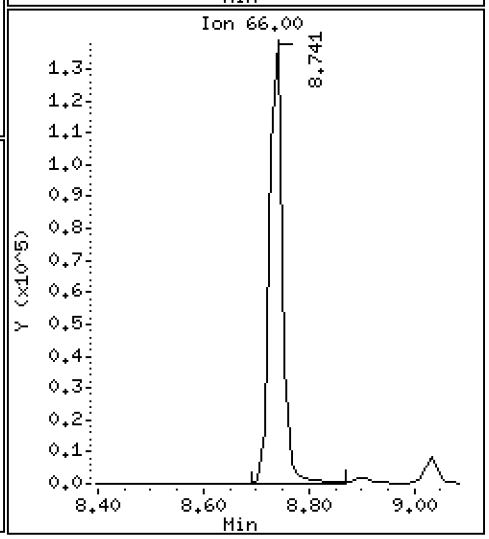












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

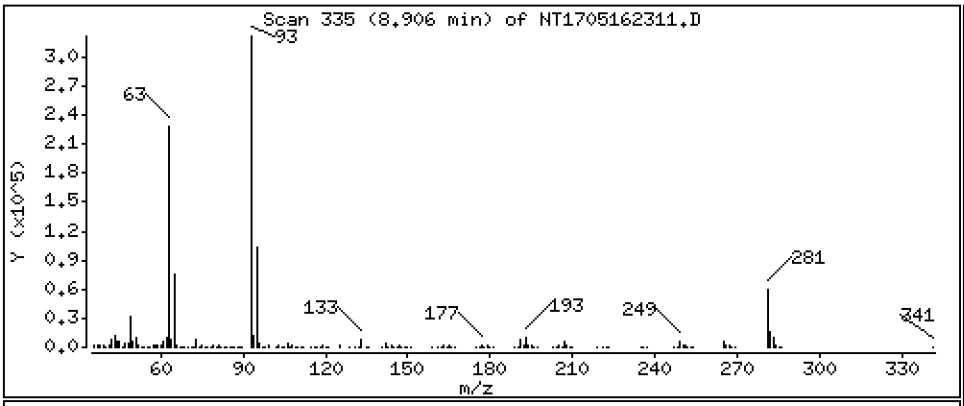
Operator: JGR

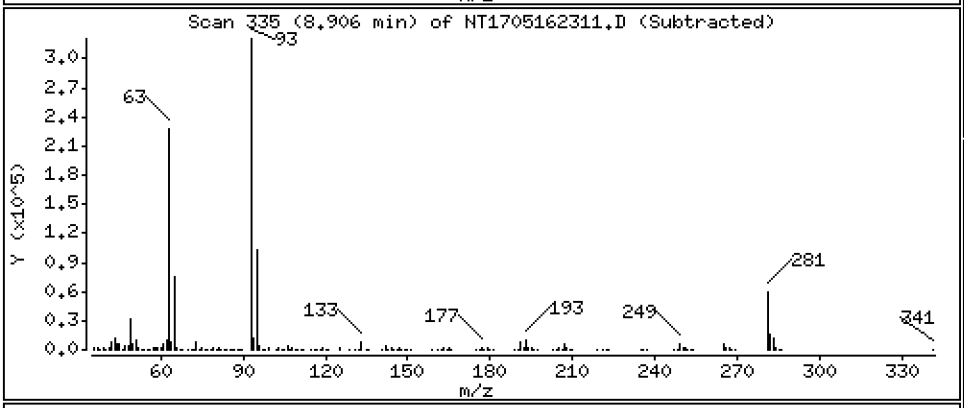
Column phase: ZB-5msi

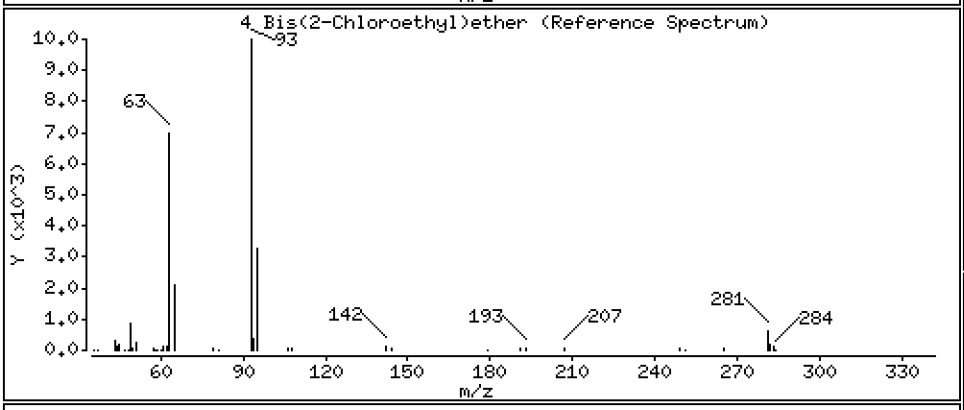
Column diameter: 0.25

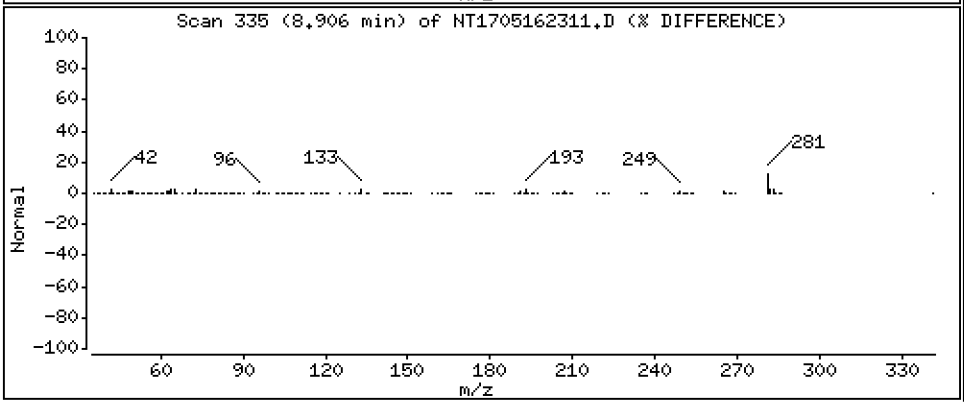
4 Bis(2-Chloroethyl)ether

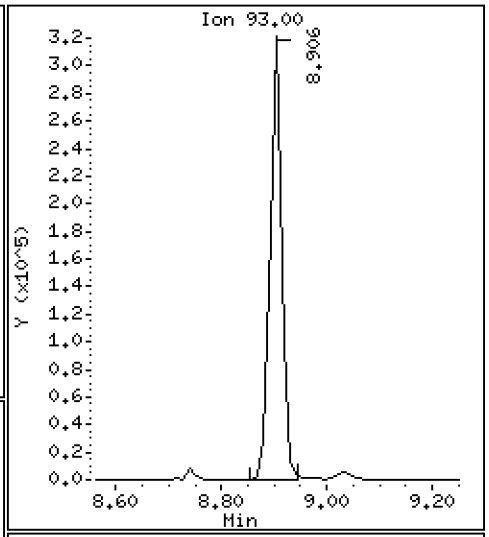
Concentration: 5.566 ug/mL

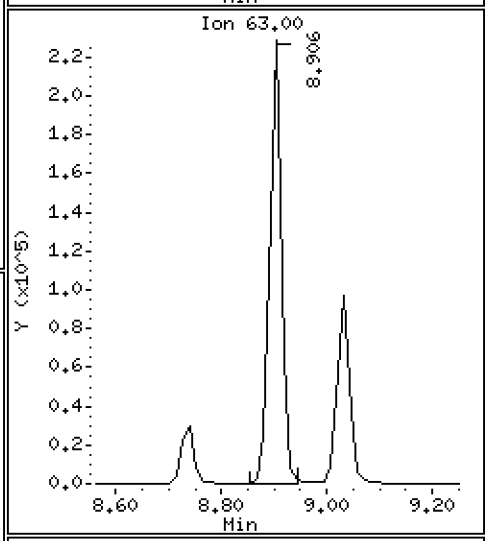


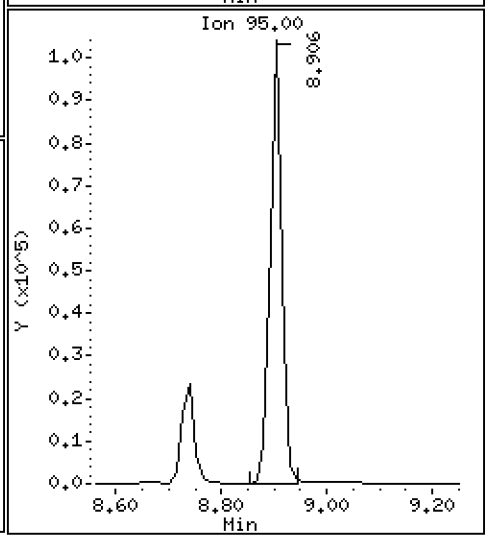












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

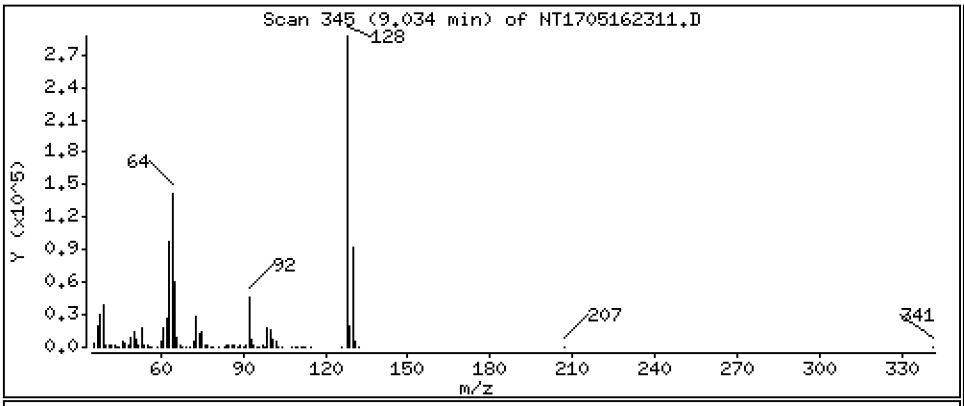
Operator: JGR

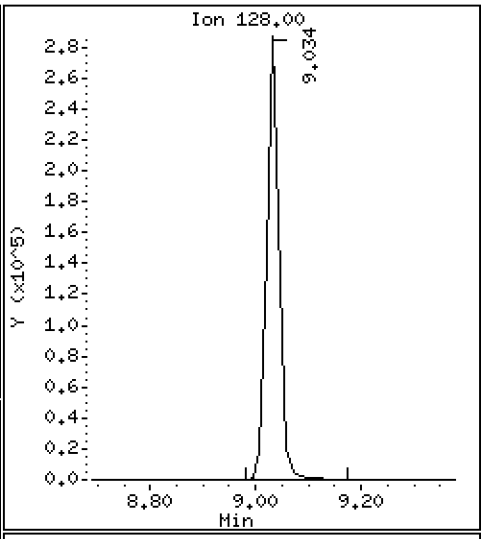
Column phase: ZB-5msi

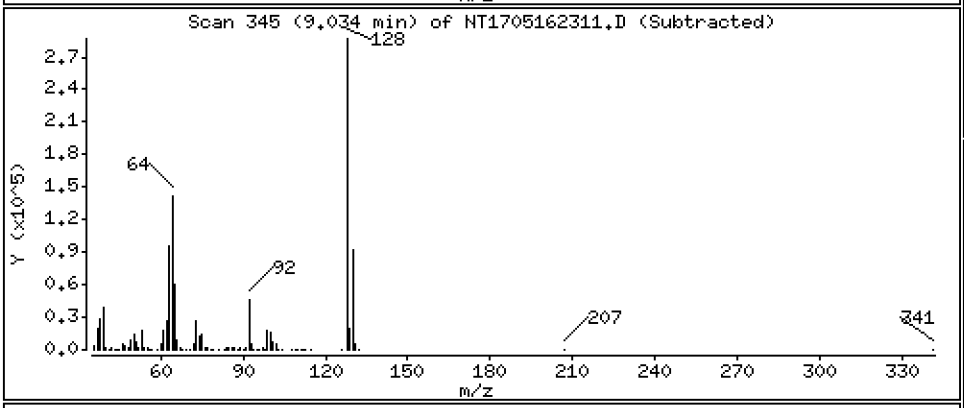
Column diameter: 0.25

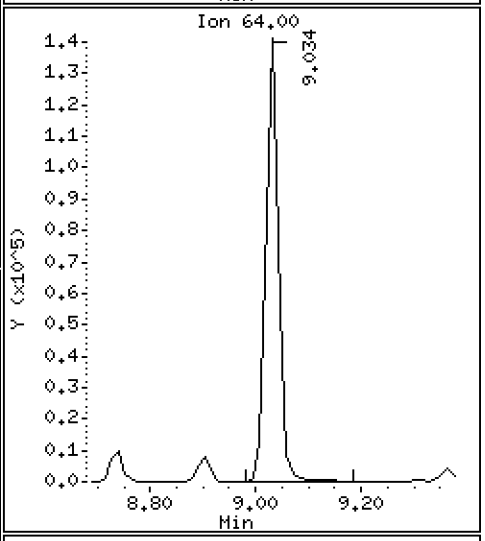
6 2-Chlorophenol

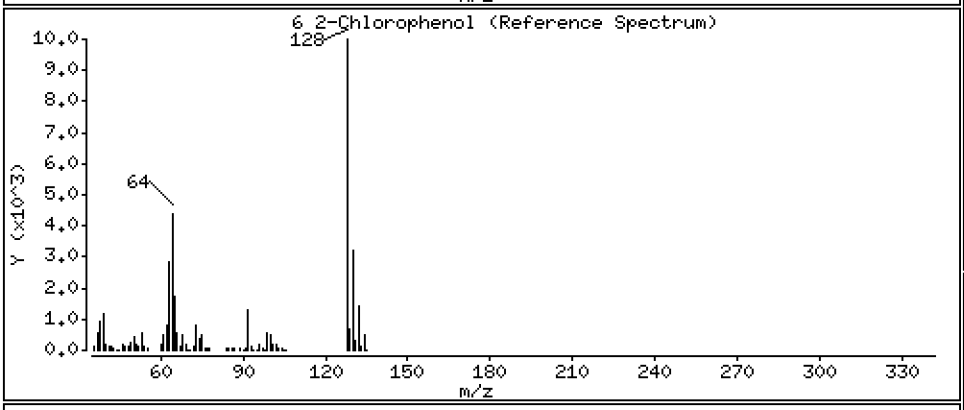
Concentration: 5.294 ug/mL

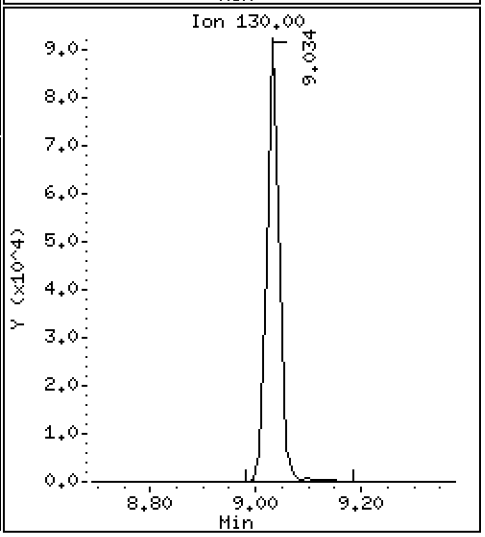


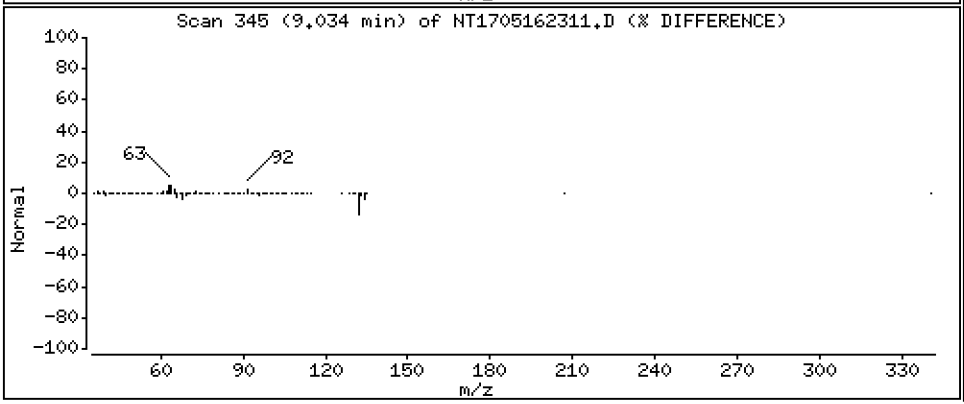












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

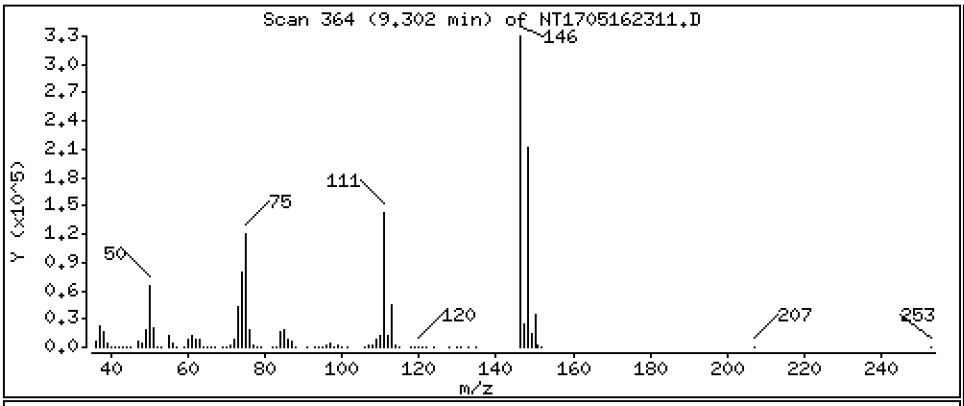
Operator: JGR

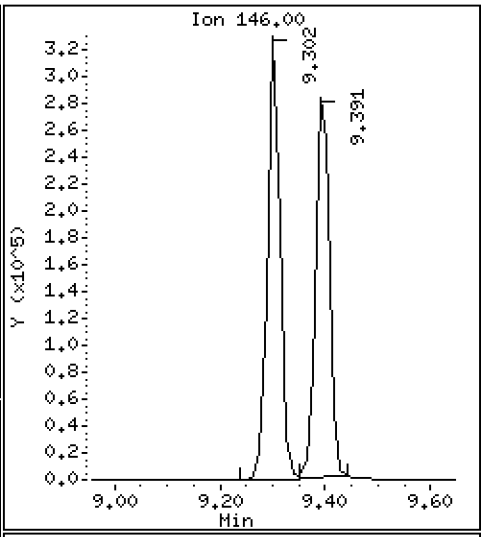
Column phase: ZB-5msi

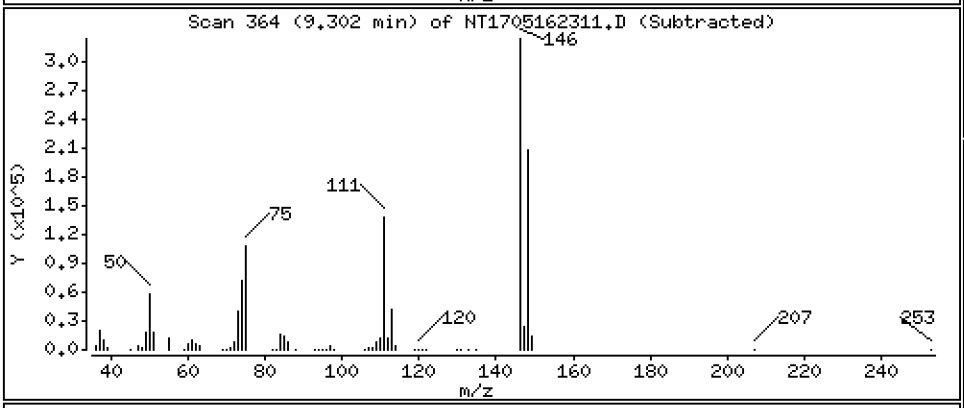
Column diameter: 0.25

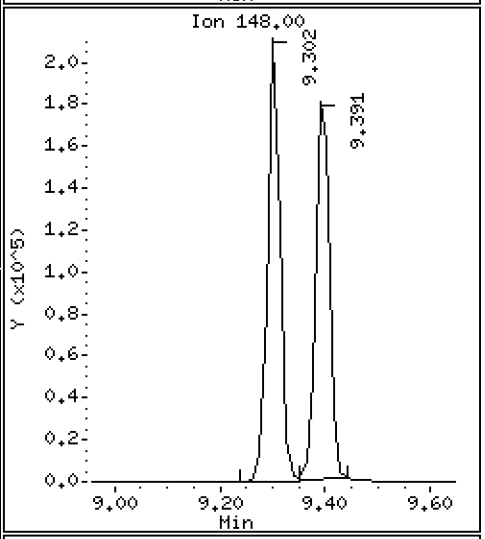
7 1,3-Dichlorobenzene

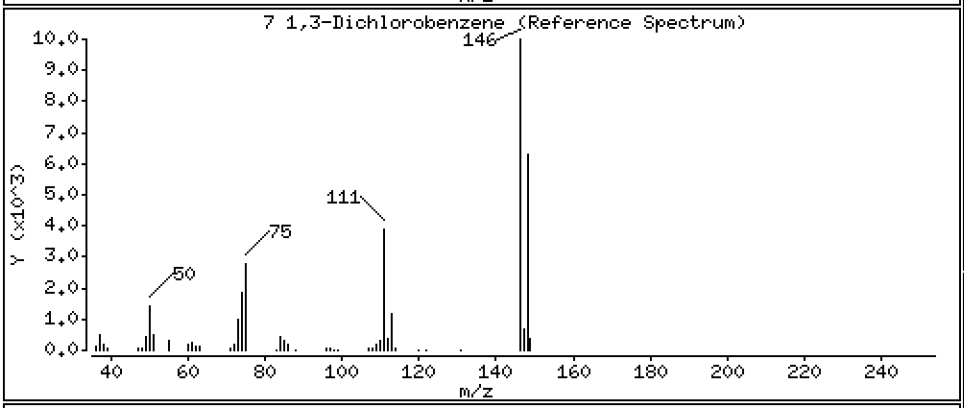
Concentration: 5.319 ug/mL

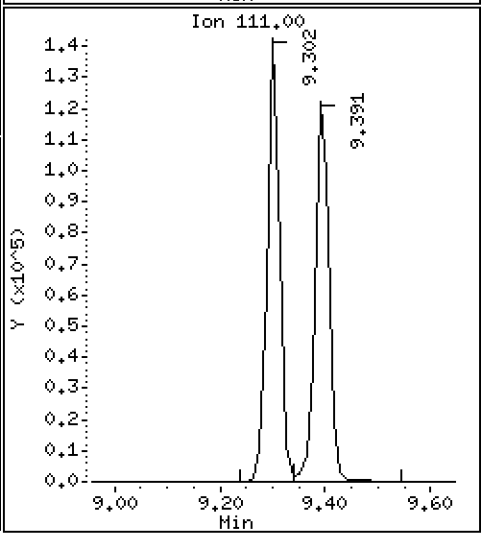


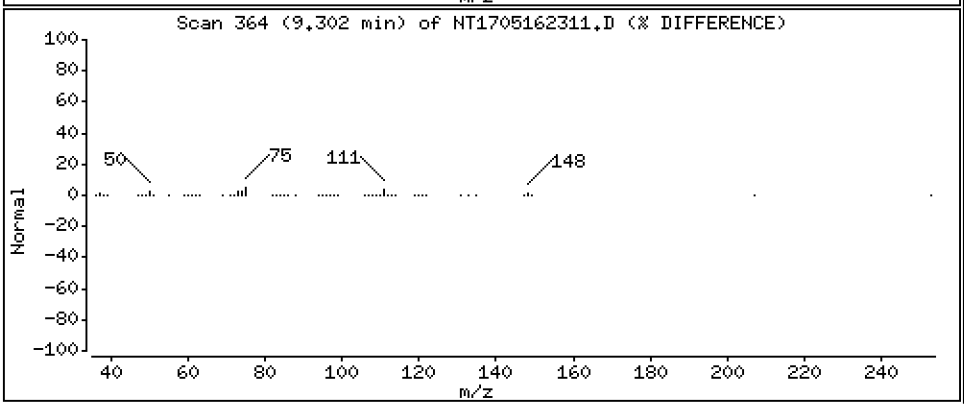












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

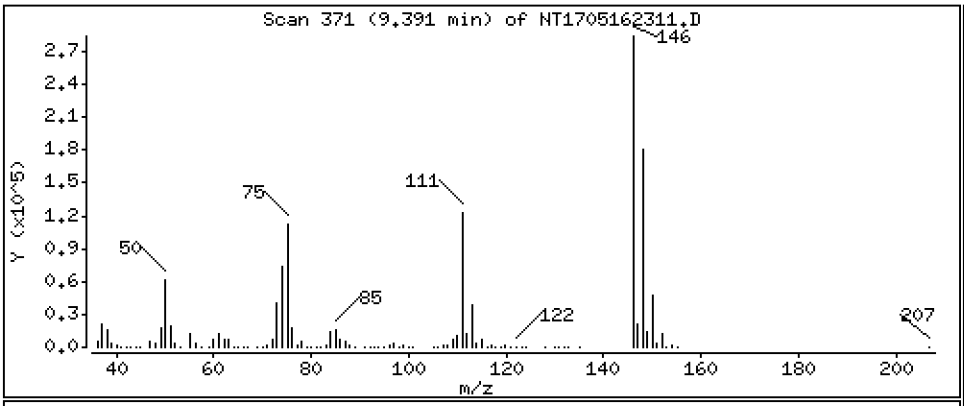
Operator: JGR

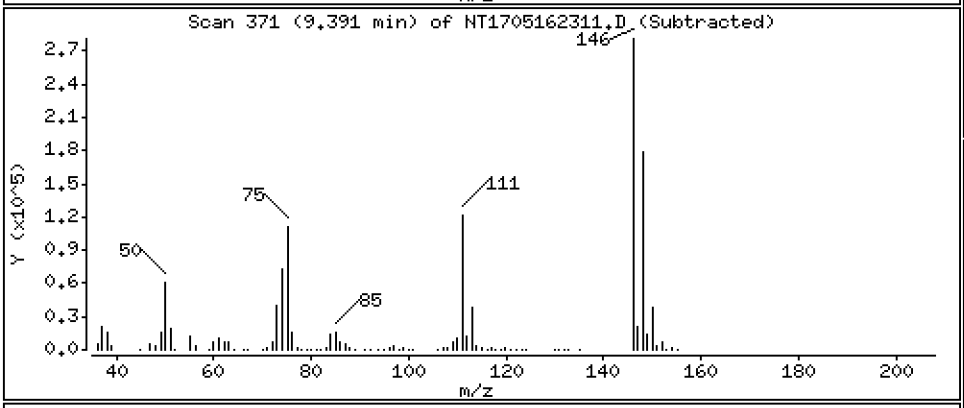
Column phase: ZB-5msi

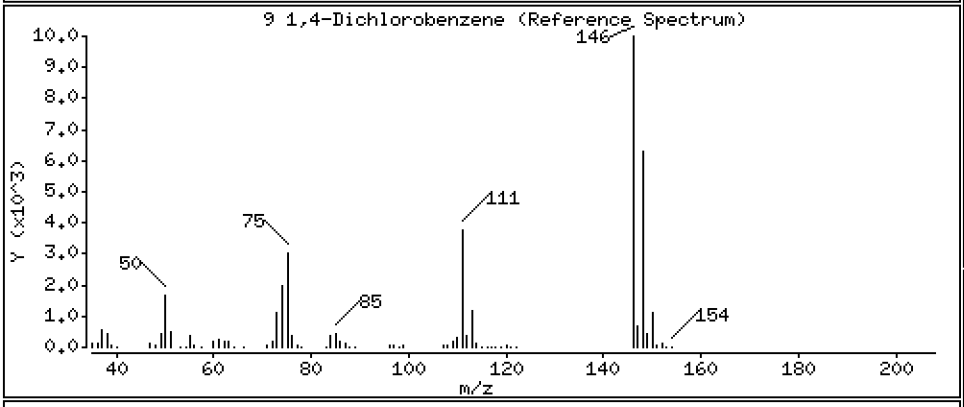
Column diameter: 0.25

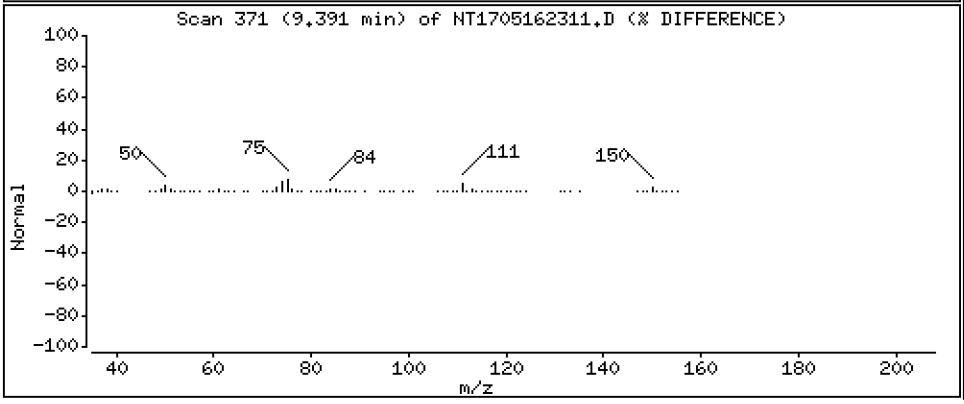
9 1,4-Dichlorobenzene

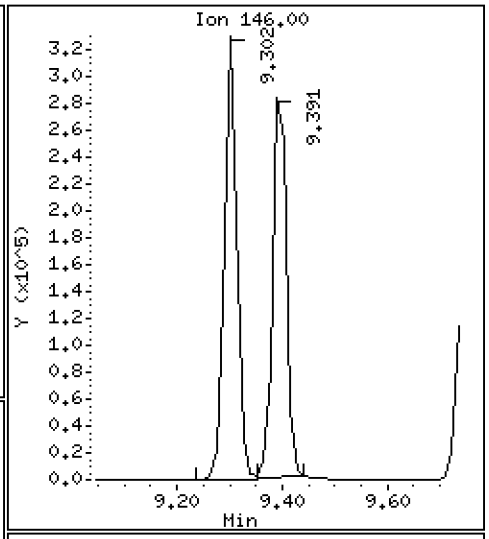
Concentration: 5.071 ug/mL

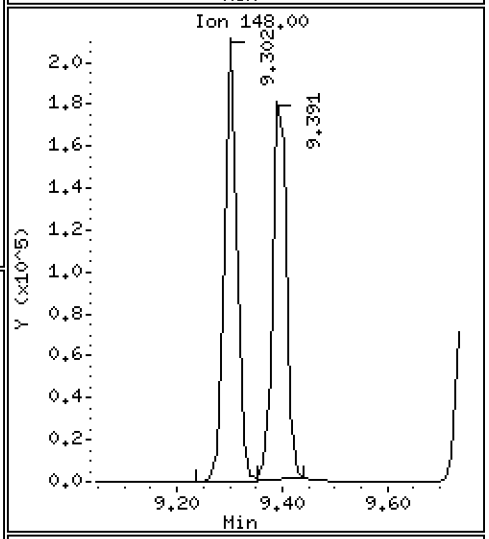


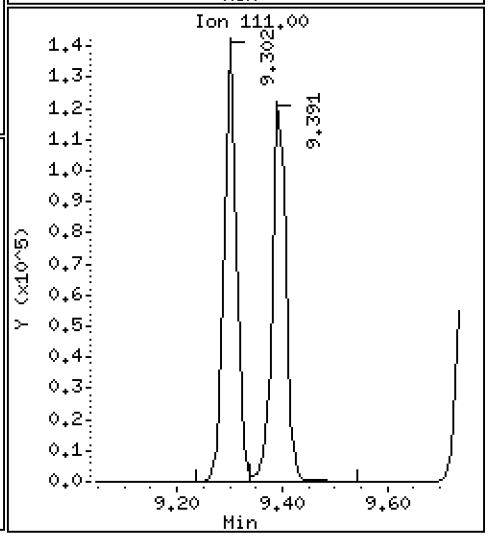












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

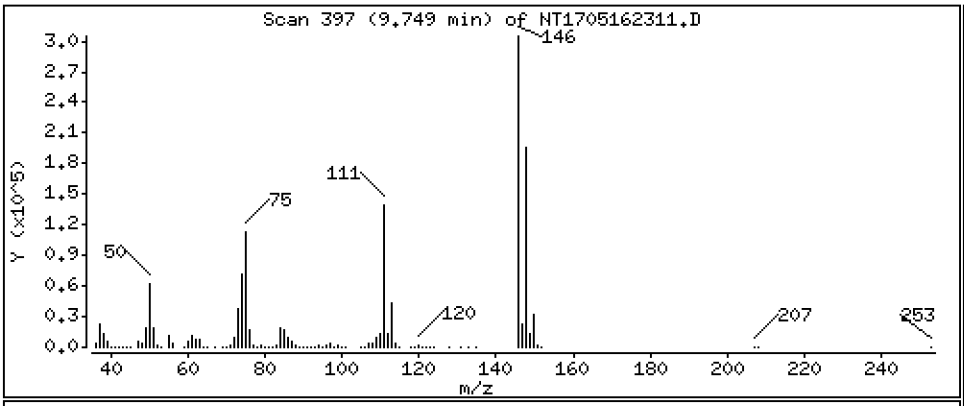
Operator: JGR

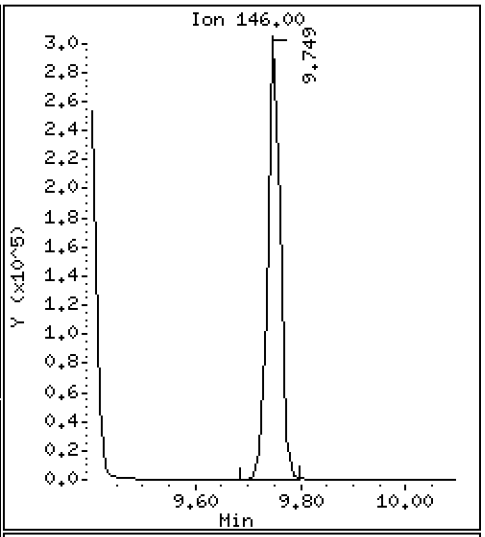
Column phase: ZB-5msi

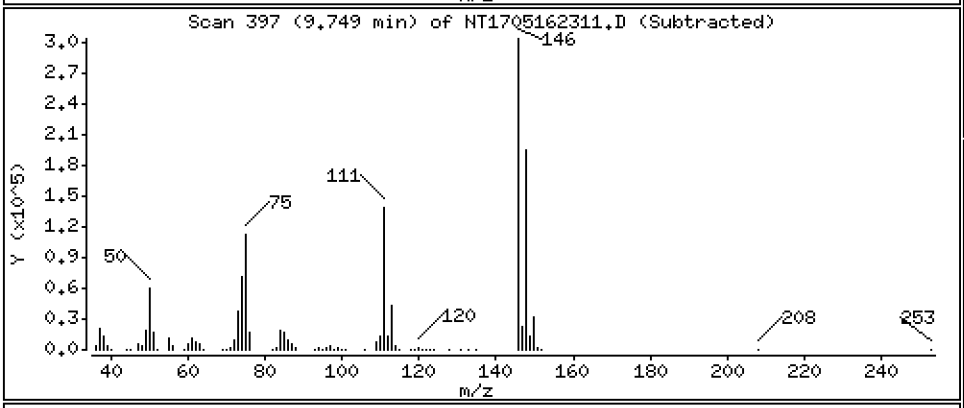
Column diameter: 0.25

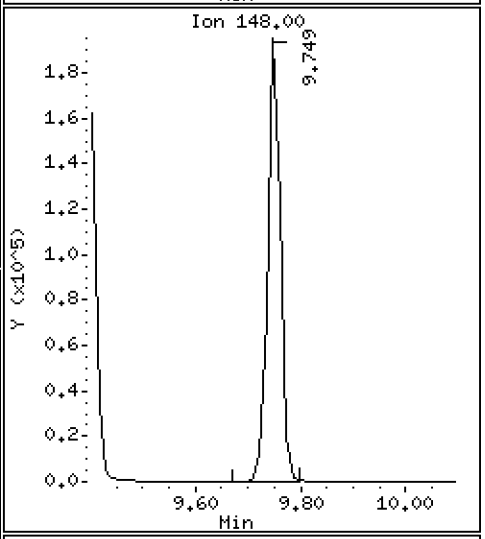
12 1,2-Dichlorobenzene

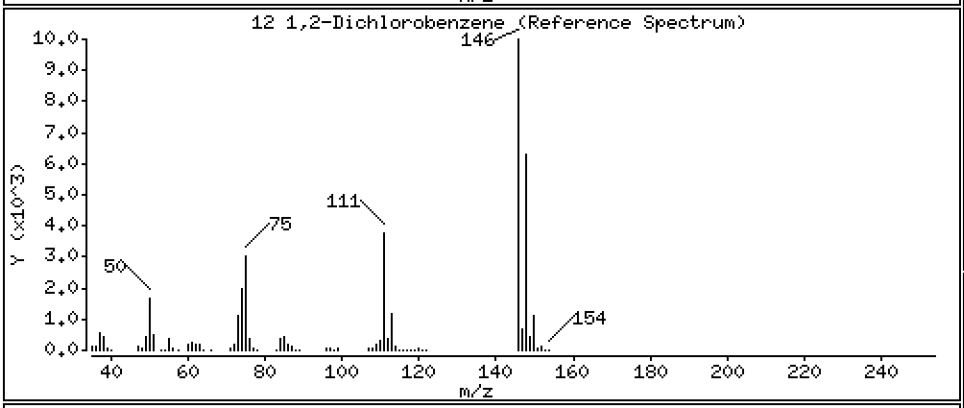
Concentration: 5.258 ug/mL

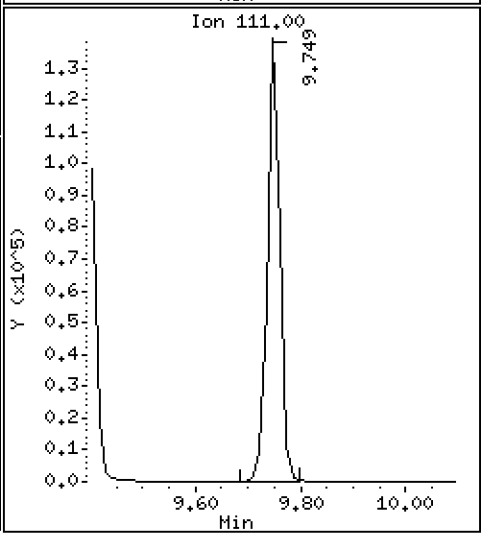


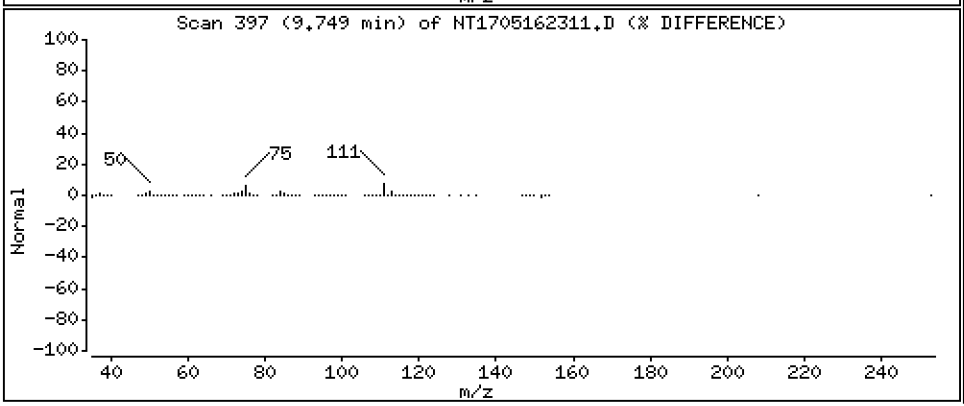












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

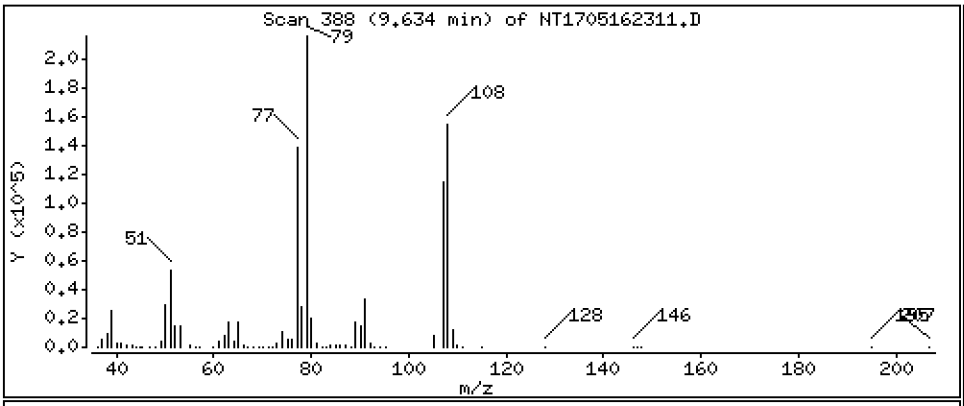
Operator: JGR

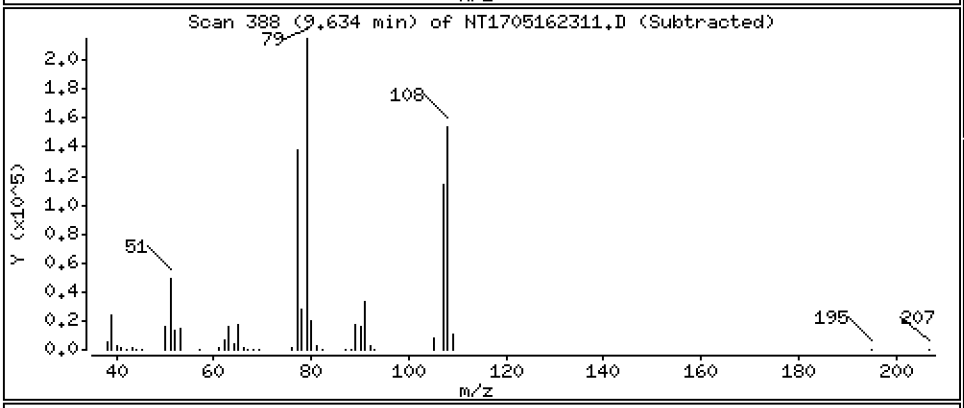
Column phase: ZB-5msi

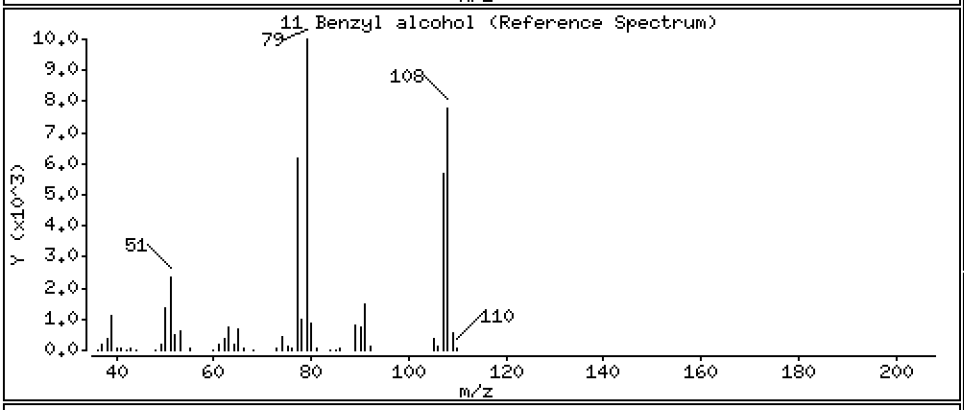
Column diameter: 0.25

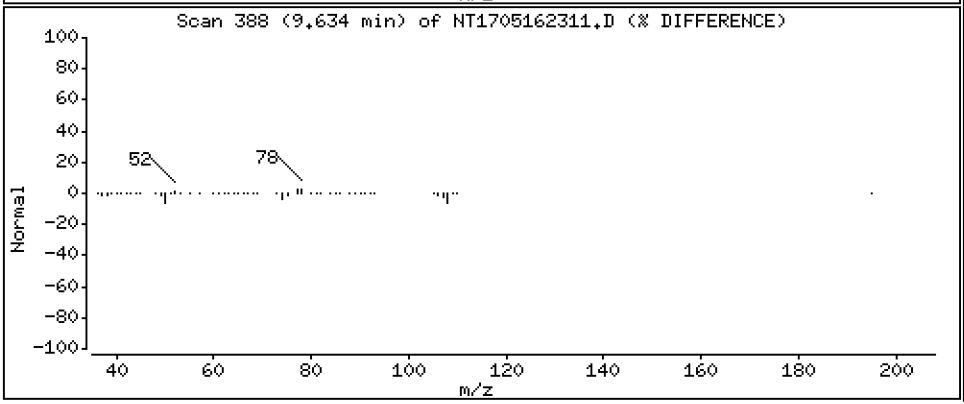
11 Benzyl alcohol

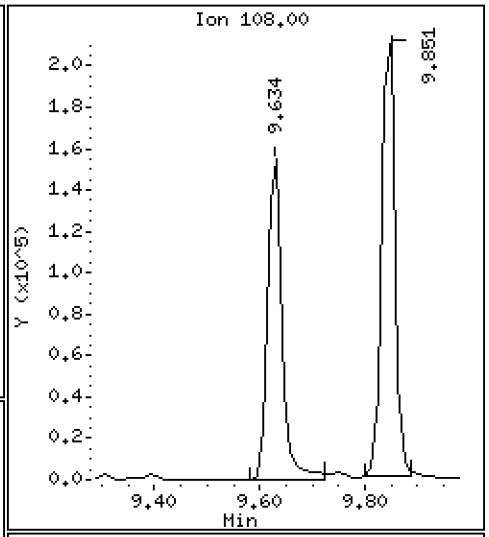
Concentration: 5.274 ug/mL

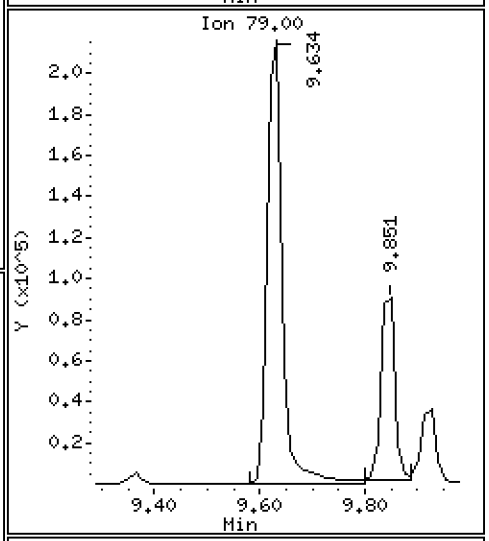


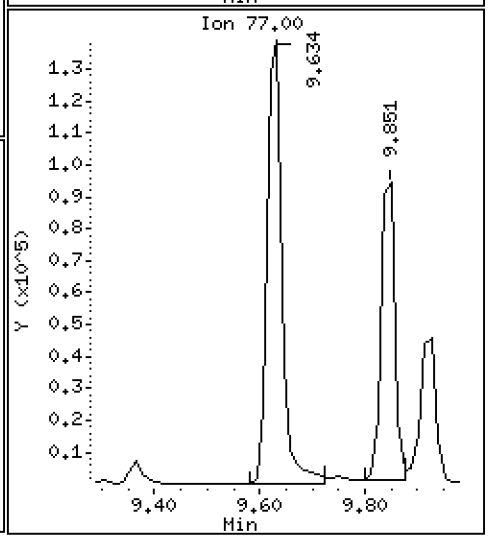












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

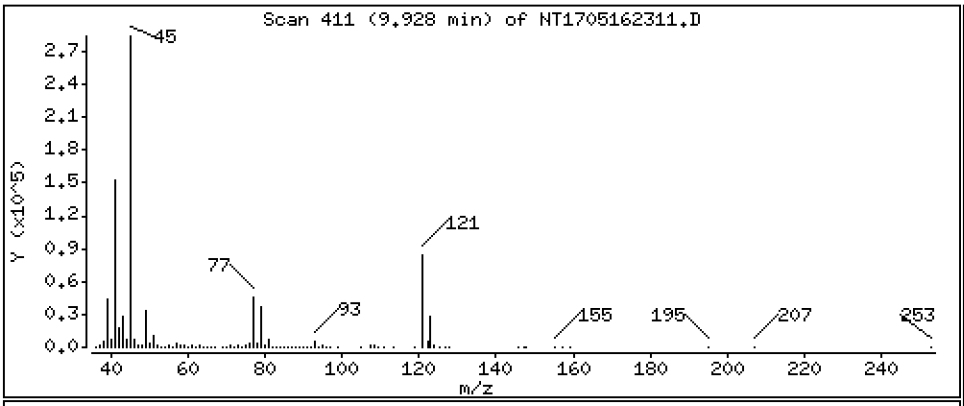
Operator: JGR

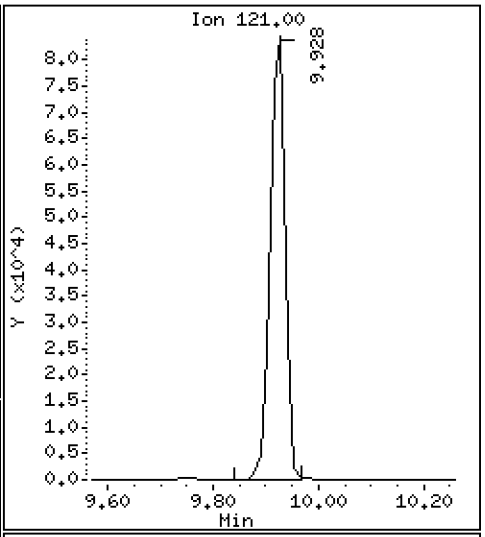
Column phase: ZB-5msi

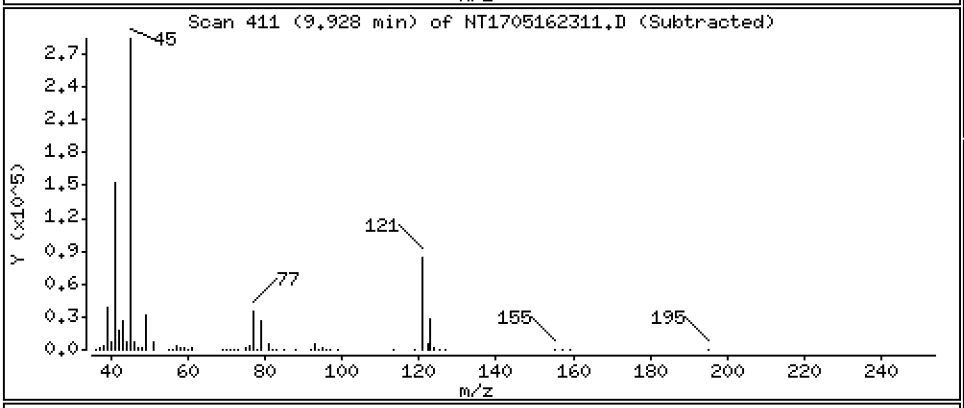
Column diameter: 0.25

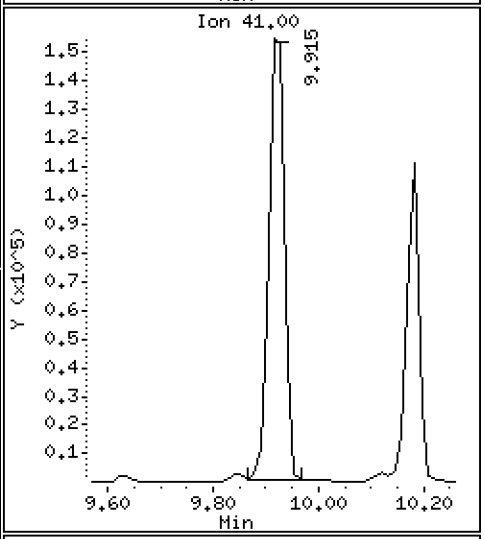
14 2,2'-oxybis(1-Chloropropane)

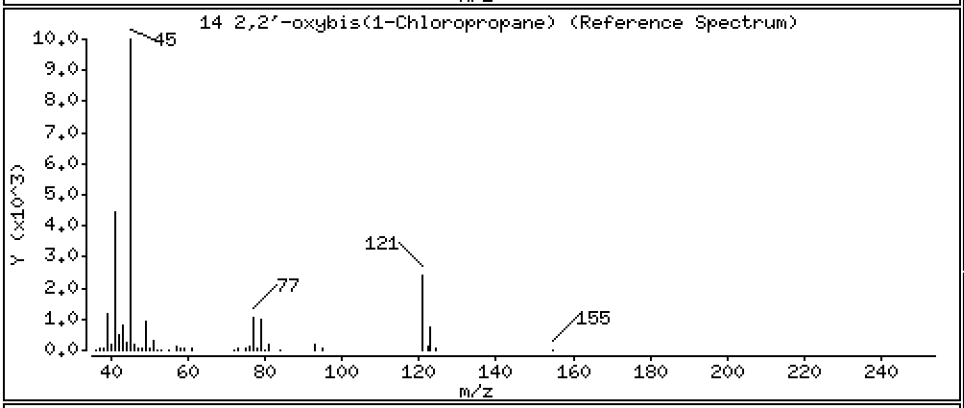
Concentration: 6.179 ug/mL

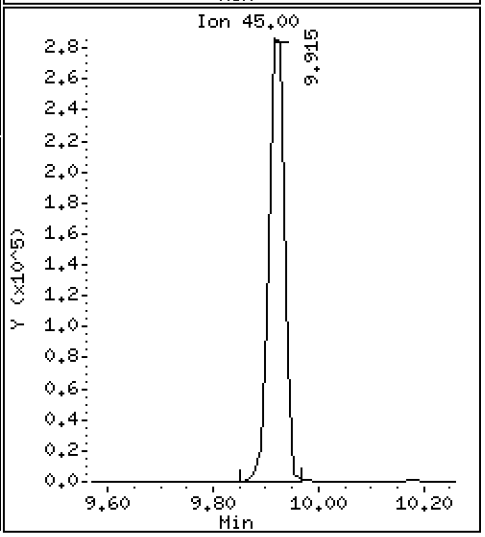


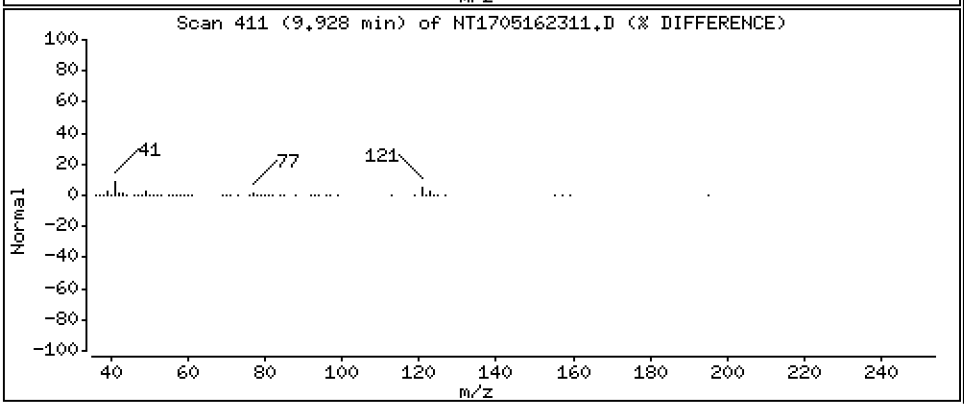












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

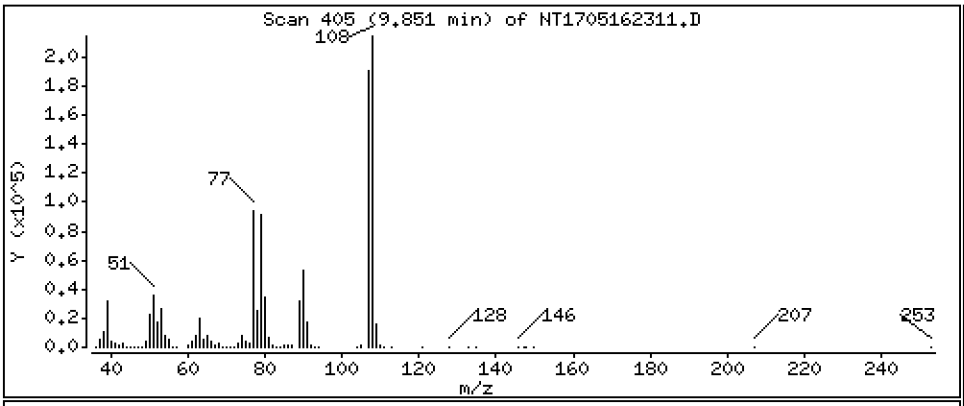
Operator: JGR

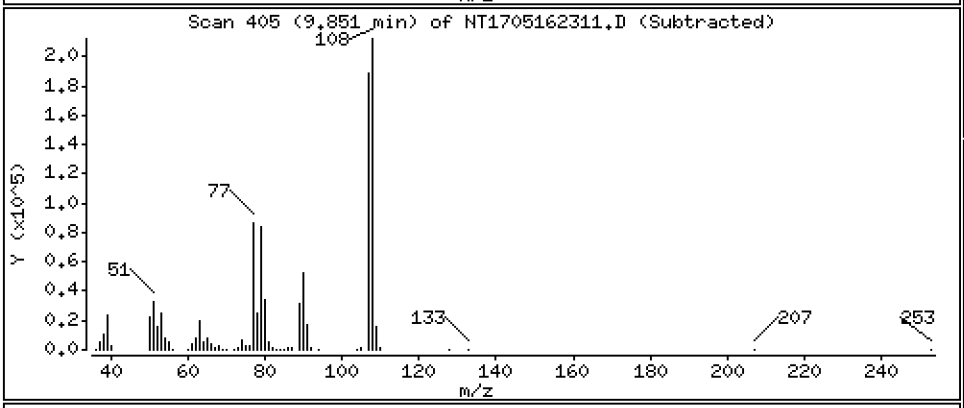
Column phase: ZB-5msi

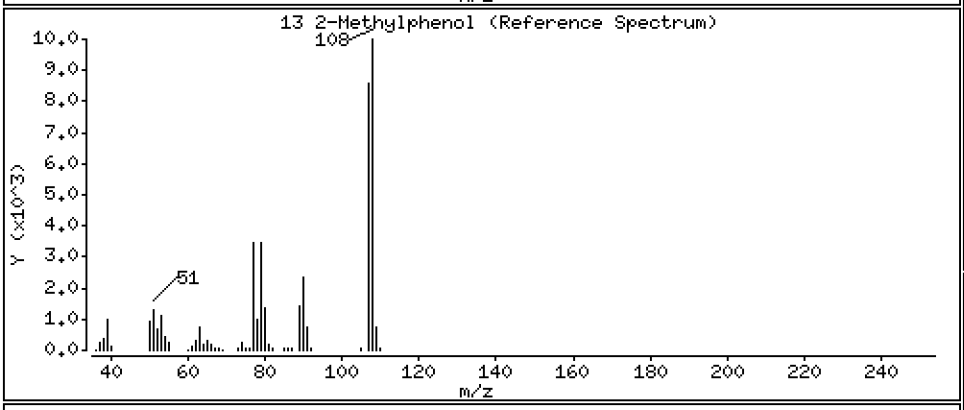
Column diameter: 0.25

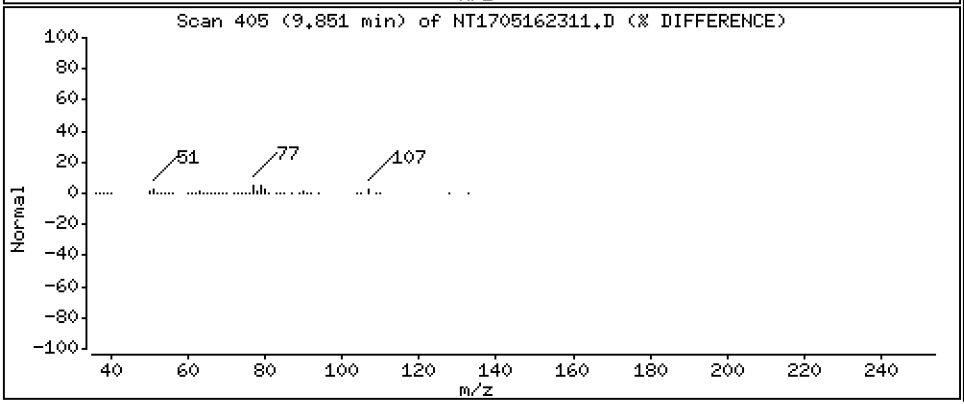
13 2-Methylphenol

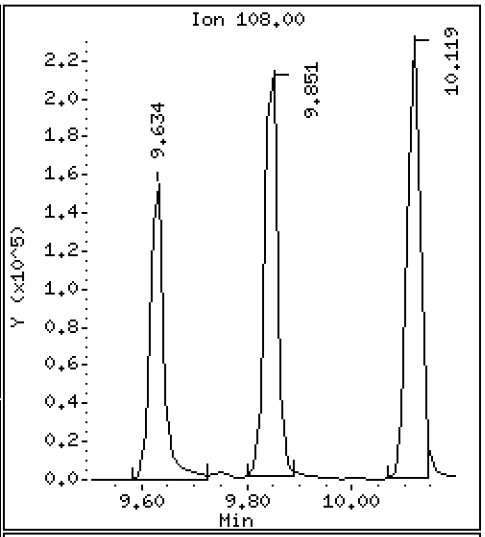
Concentration: 4.229 ug/mL

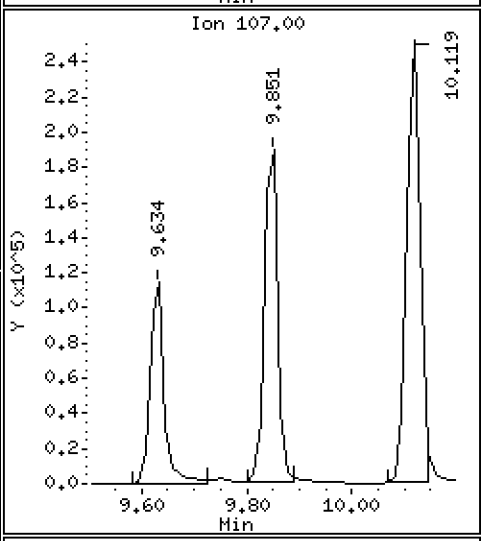


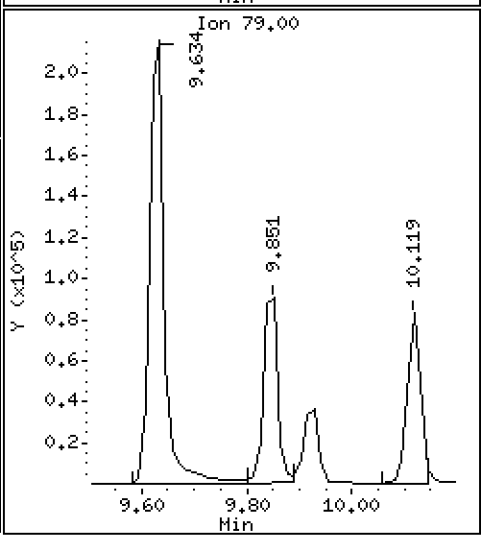












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

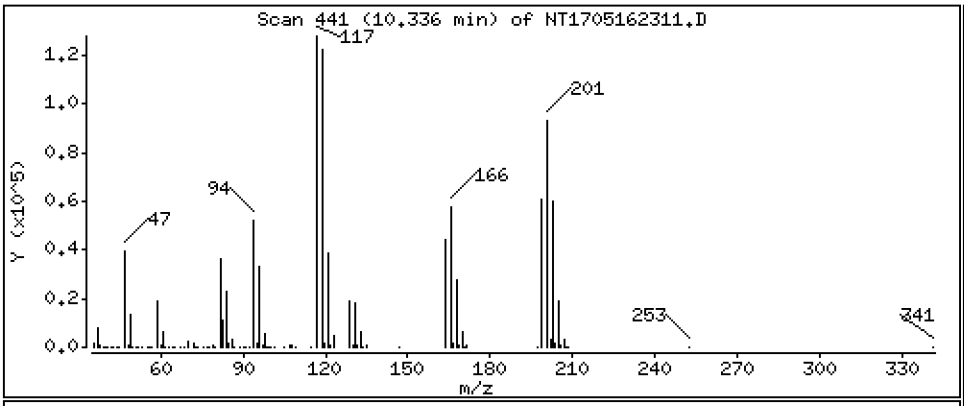
Operator: JGR

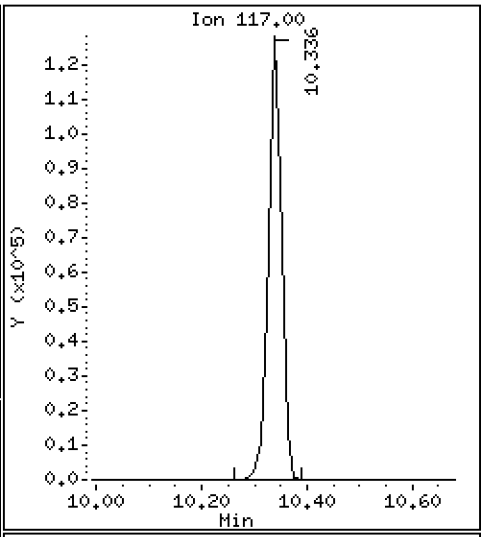
Column phase: ZB-5msi

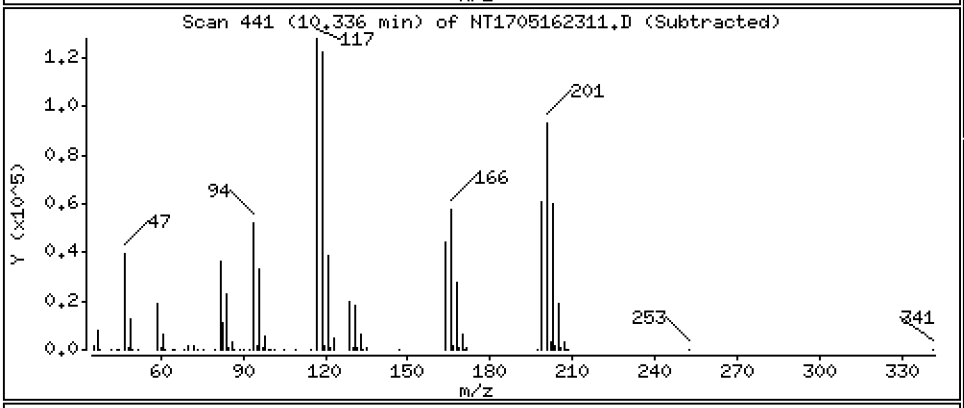
Column diameter: 0.25

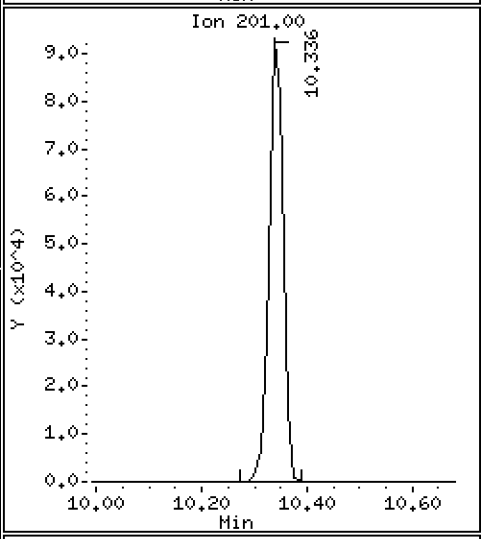
17 Hexachloroethane

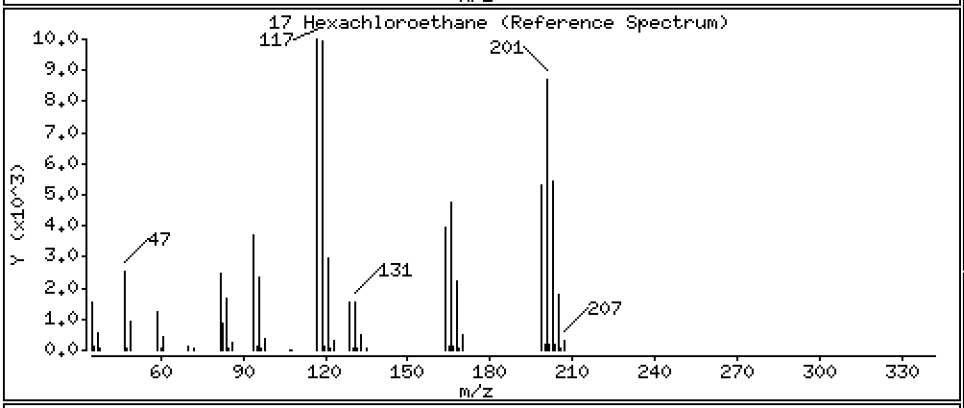
Concentration: 5.419 ug/mL

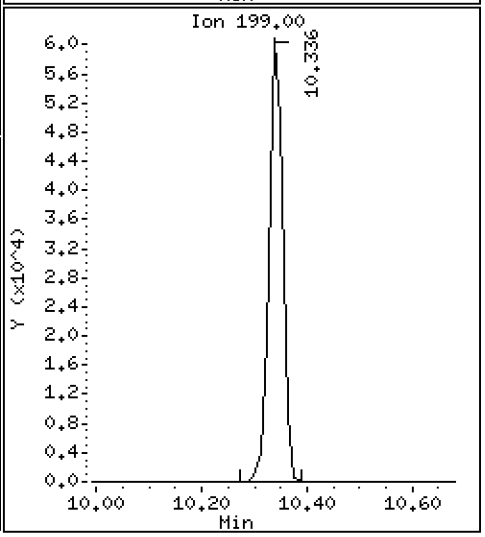


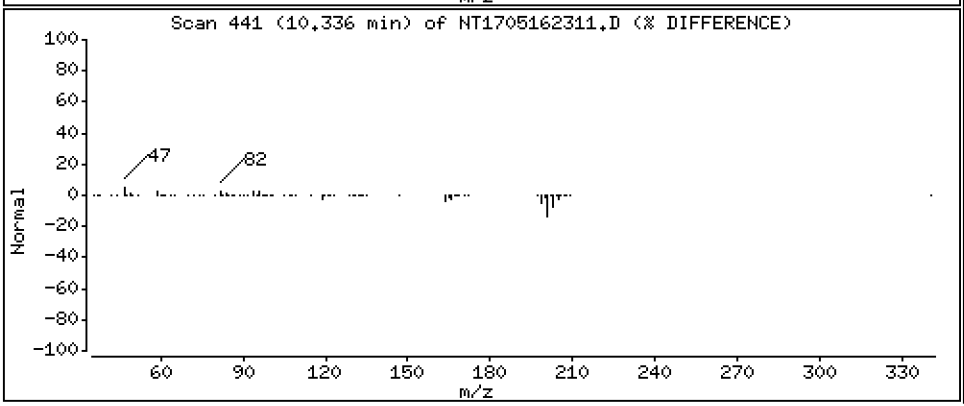












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

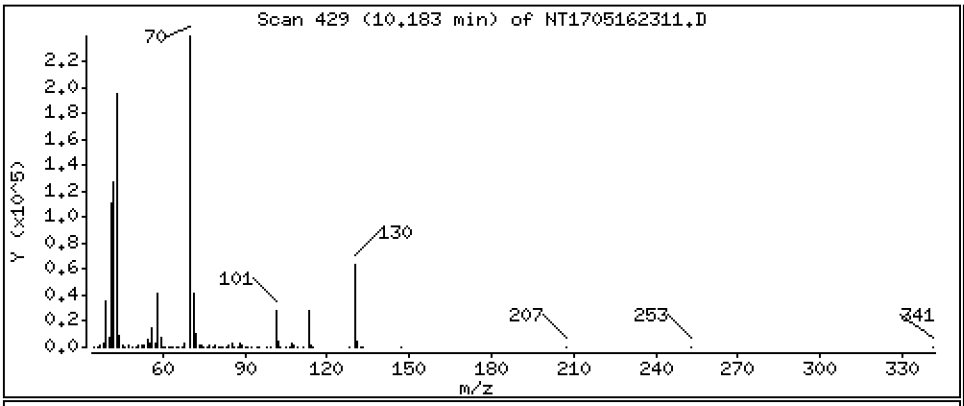
Operator: JGR

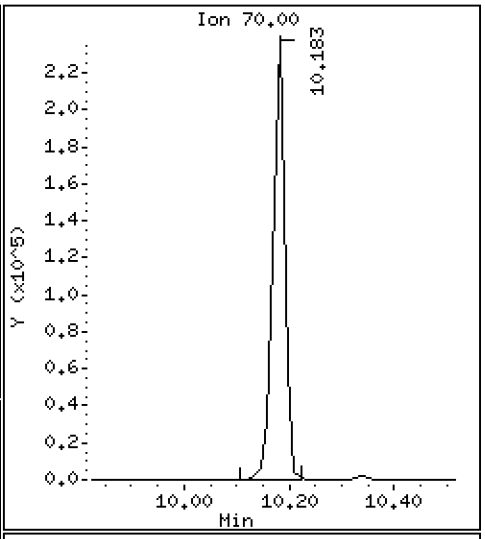
Column phase: ZB-5msi

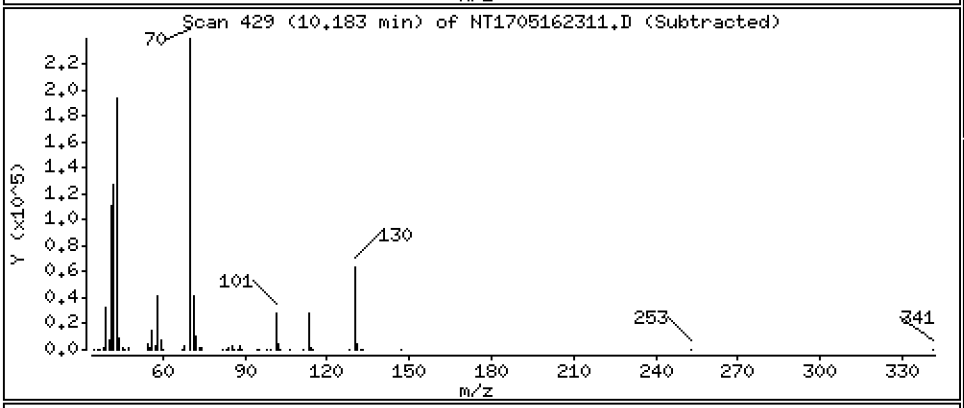
Column diameter: 0.25

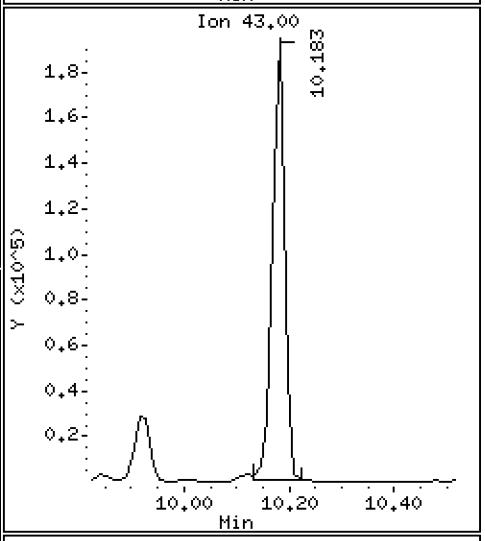
16 N-Nitroso-di-n-propylamine

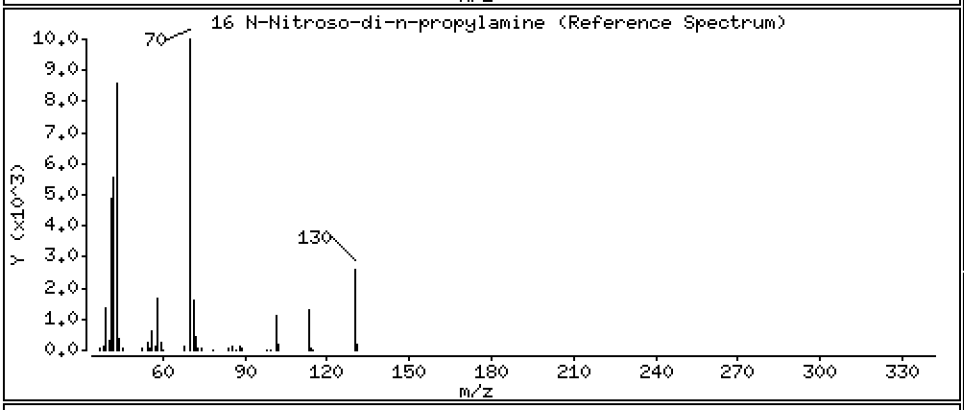
Concentration: 5.517 ug/mL

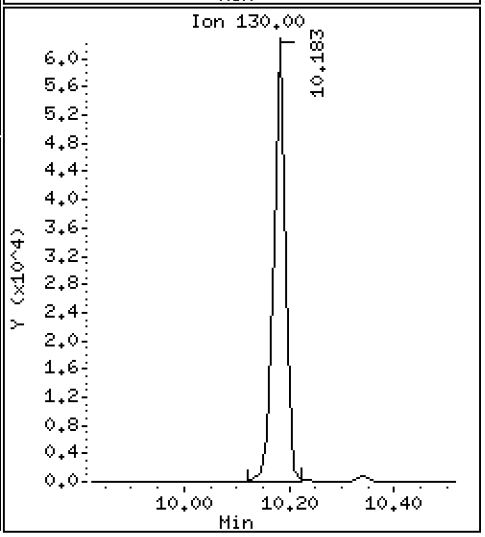


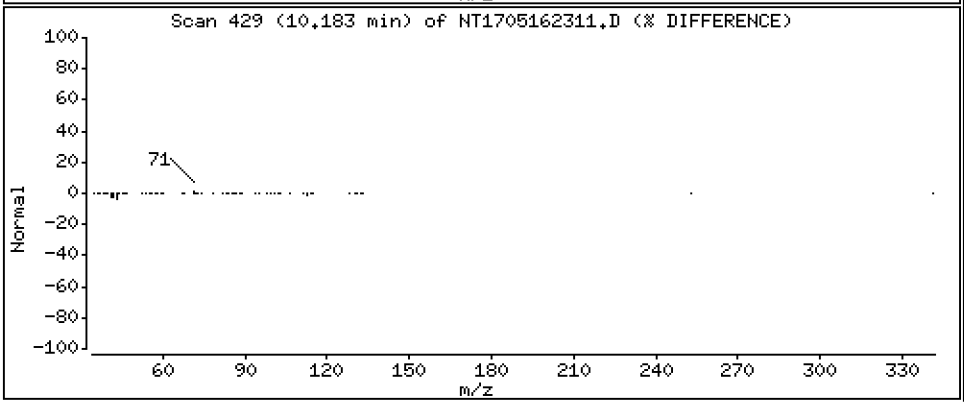












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

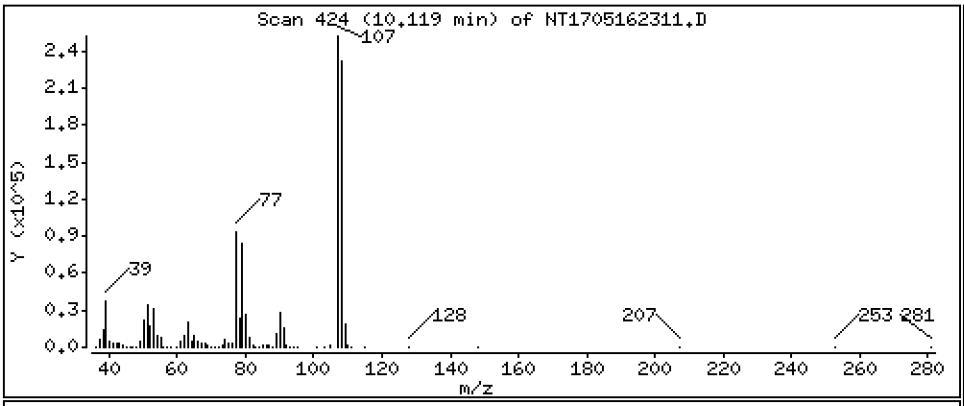
Operator: JGR

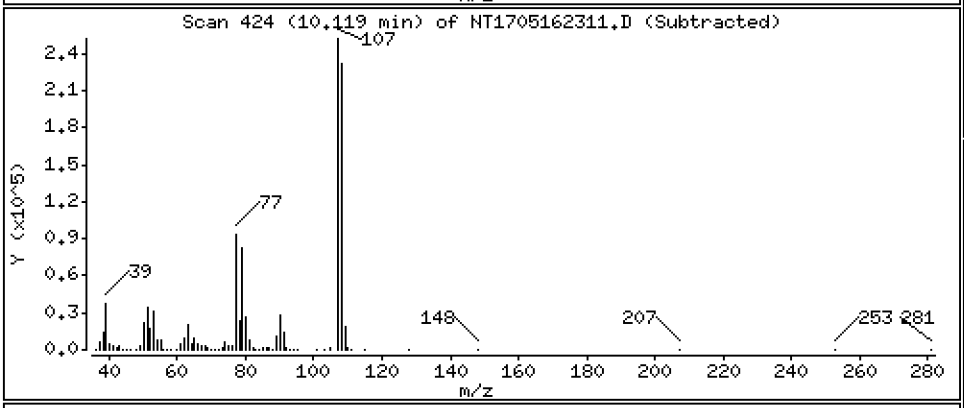
Column phase: ZB-5msi

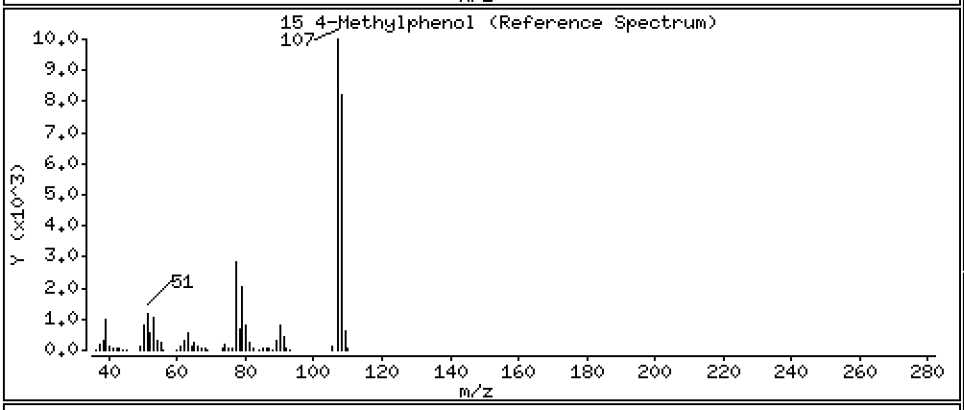
Column diameter: 0.25

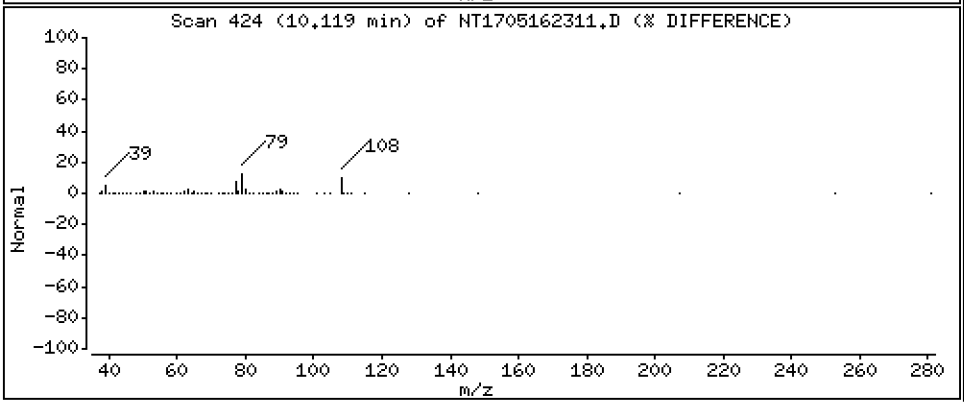
15 4-Methylphenol

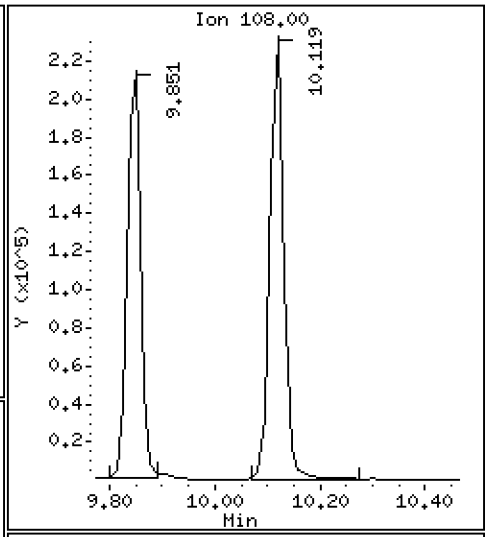
Concentration: 4.661 ug/mL

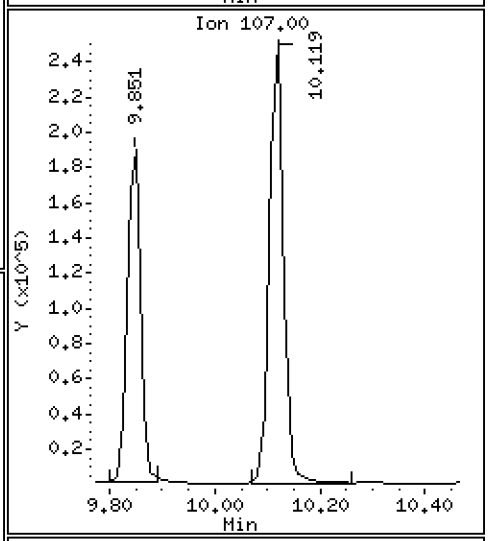


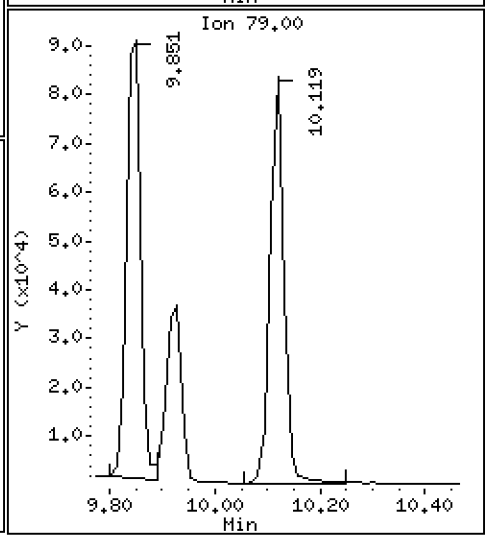












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

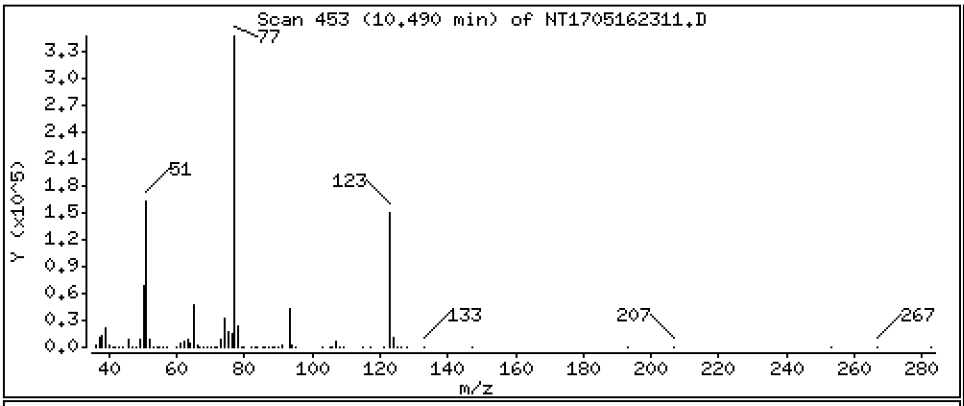
Operator: JGR

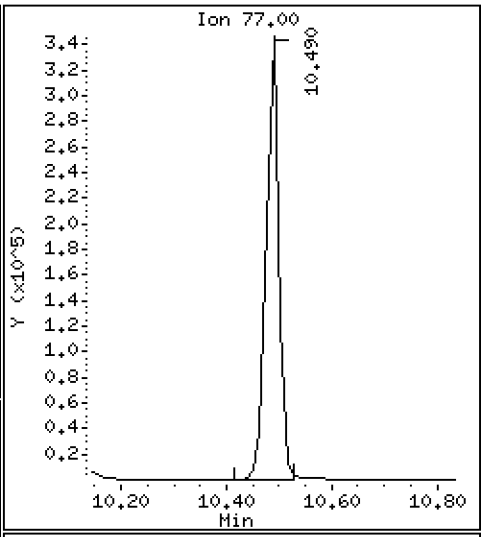
Column phase: ZB-5msi

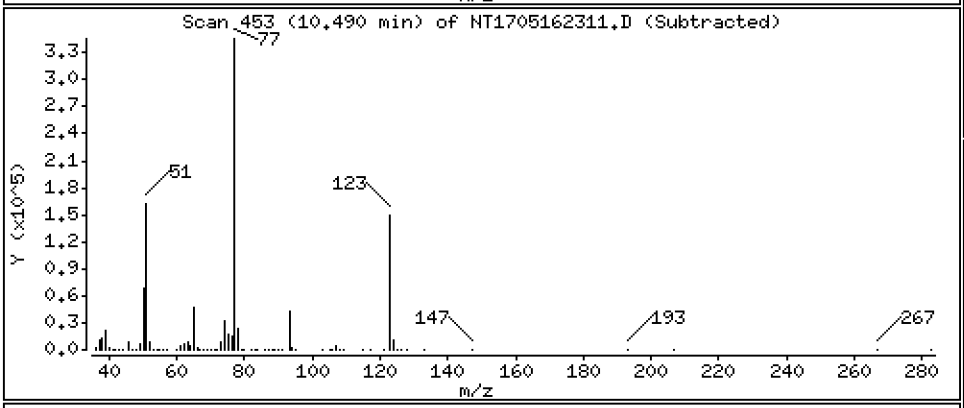
Column diameter: 0.25

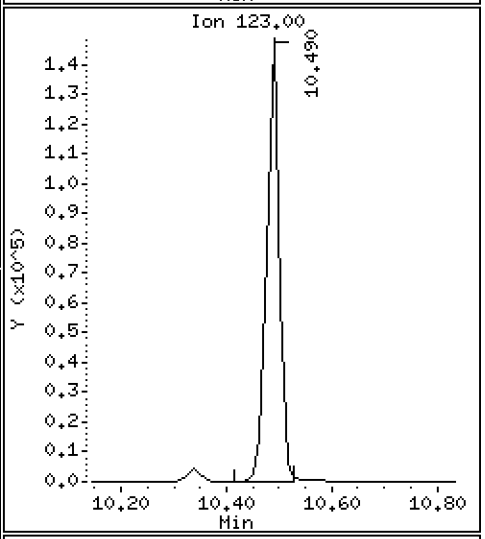
19 Nitrobenzene

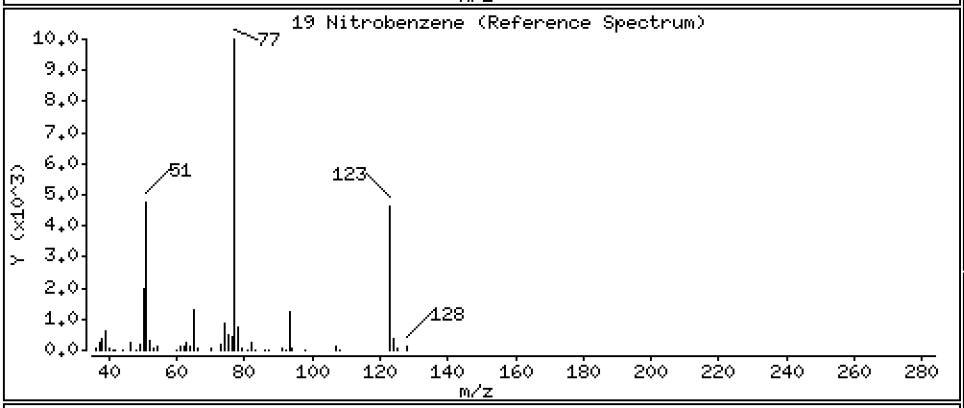
Concentration: 5.329 ug/mL

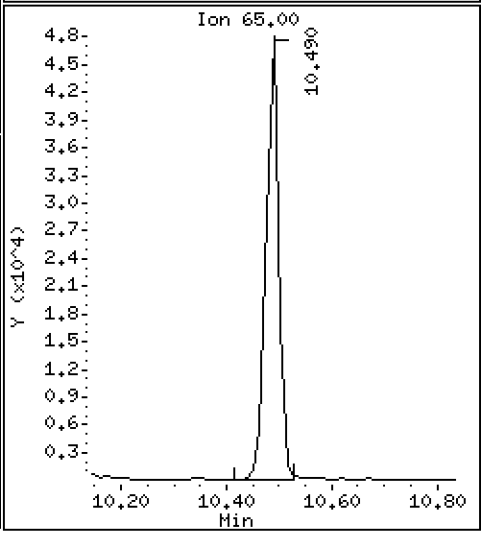


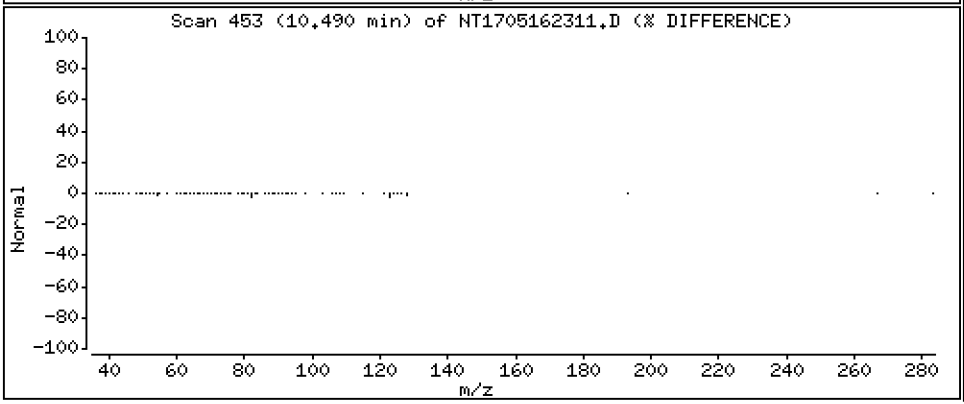












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

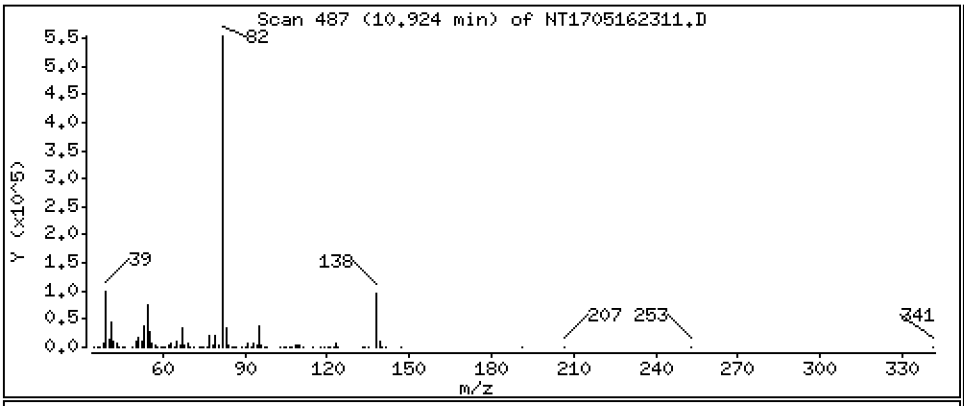
Operator: JGR

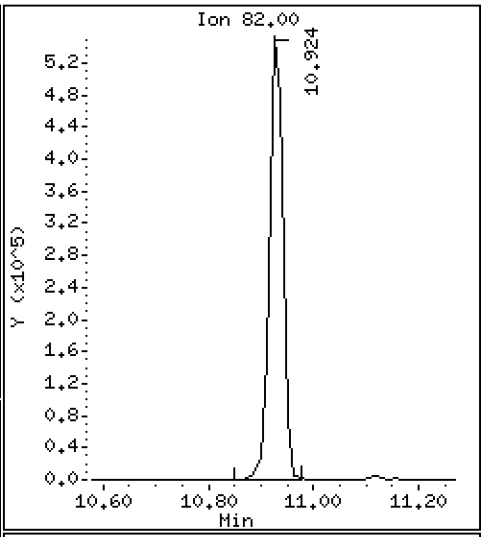
Column phase: ZB-5msi

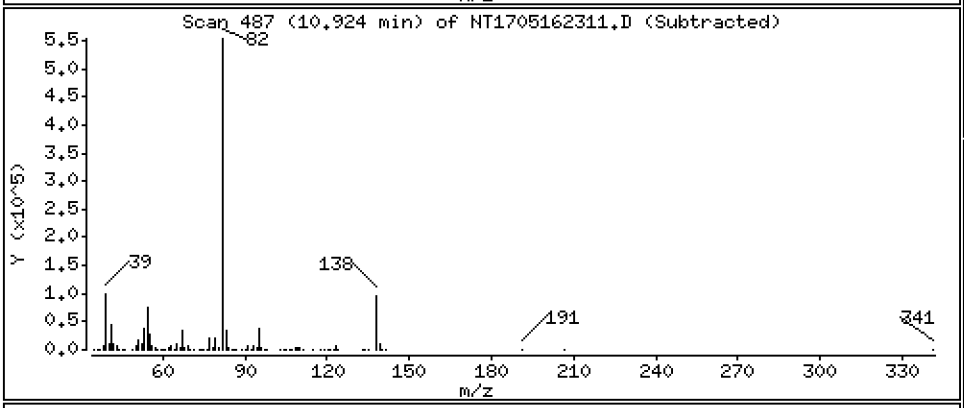
Column diameter: 0.25

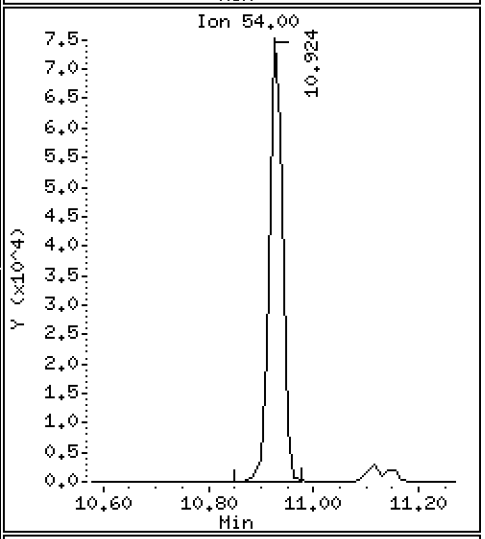
20 Isophorone

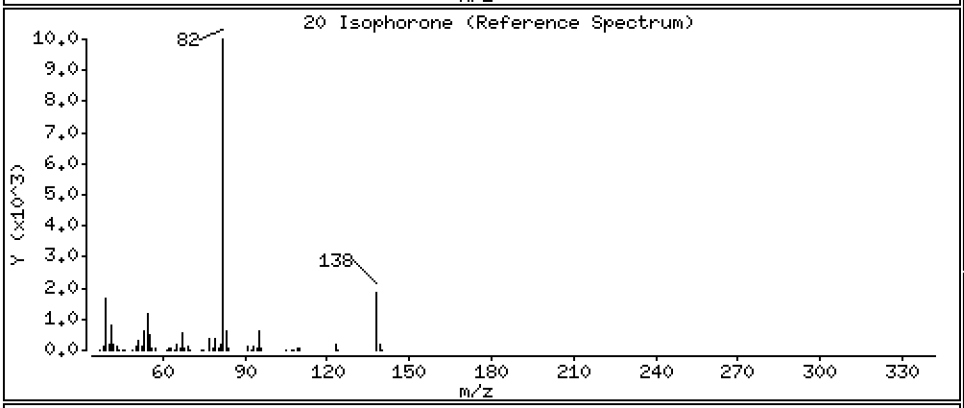
Concentration: 6.943 ug/mL

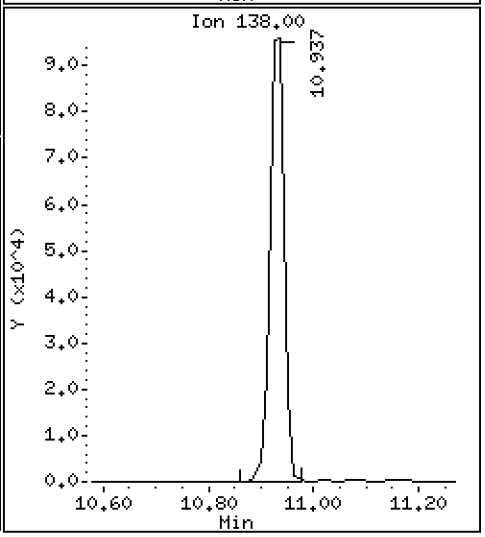


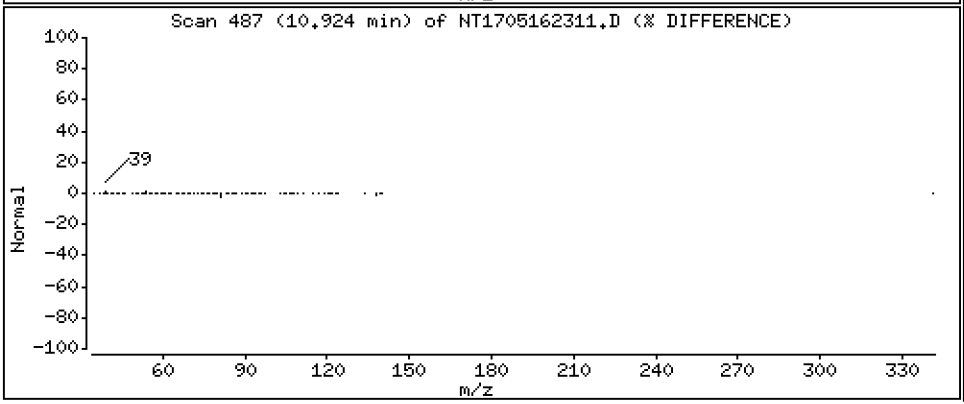












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

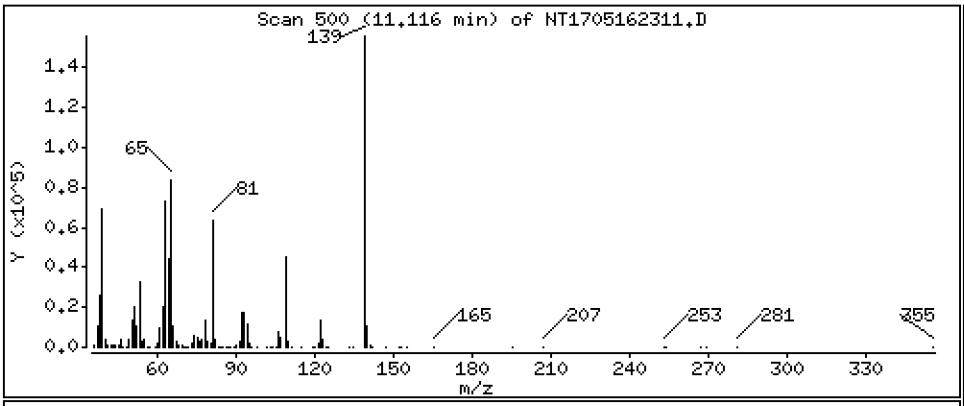
Operator: JGR

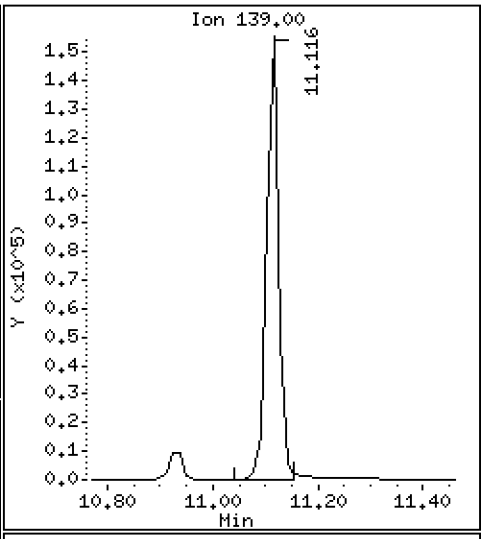
Column phase: ZB-5msi

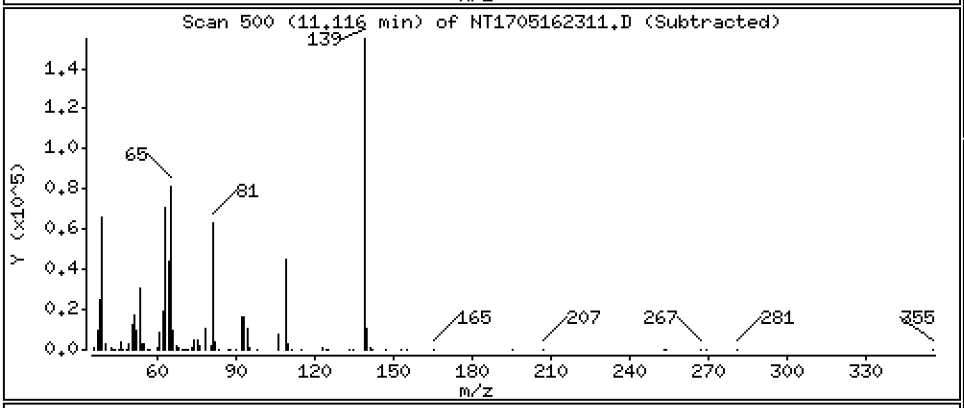
Column diameter: 0.25

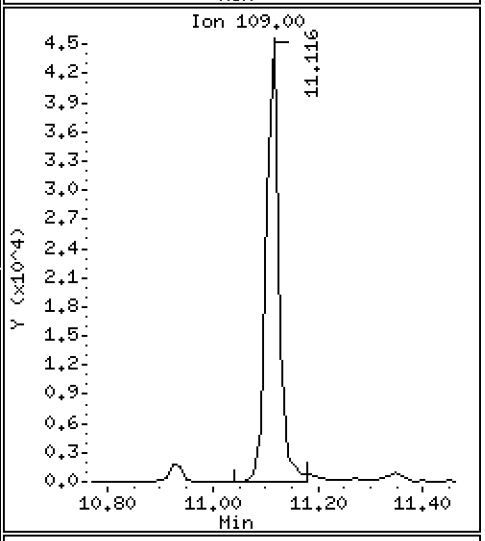
21 2-Nitrophenol

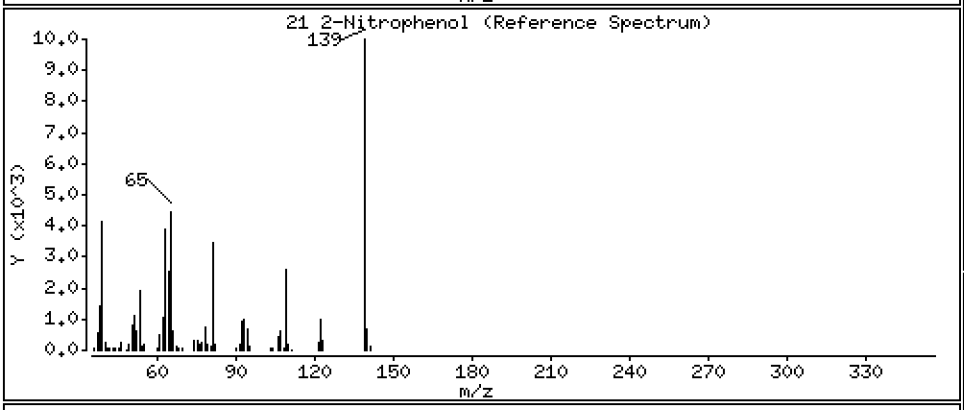
Concentration: 4.899 ug/mL

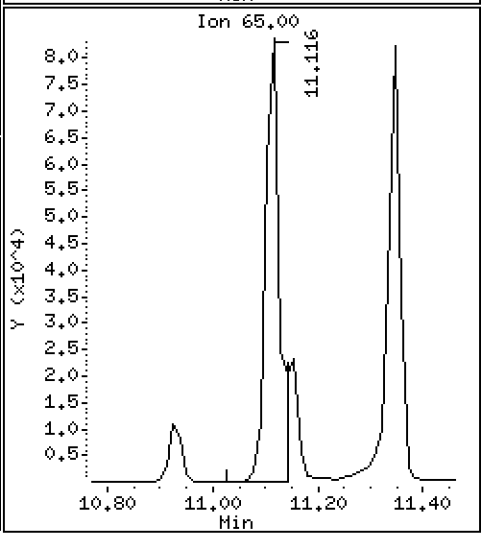


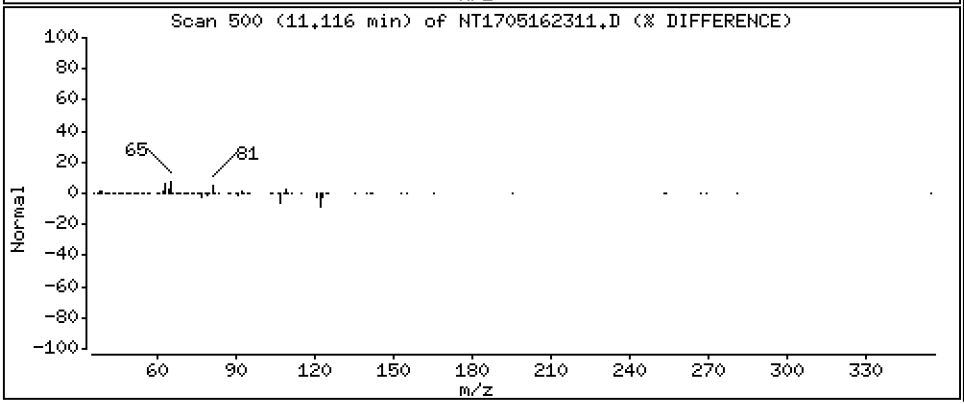












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

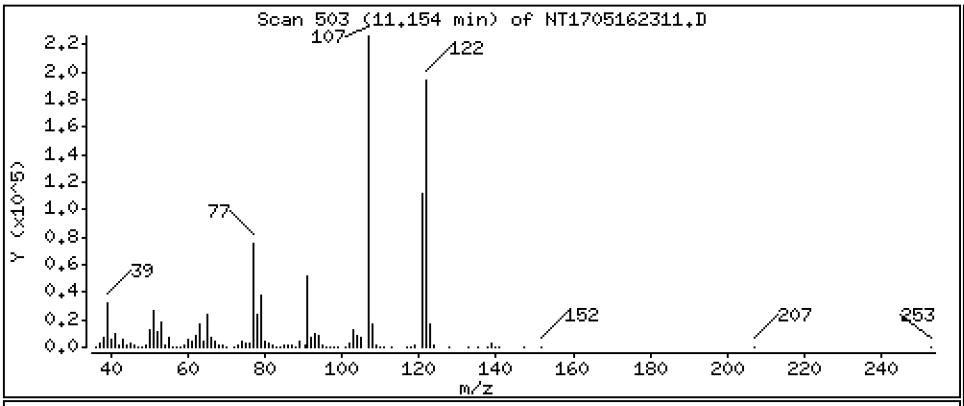
Operator: JGR

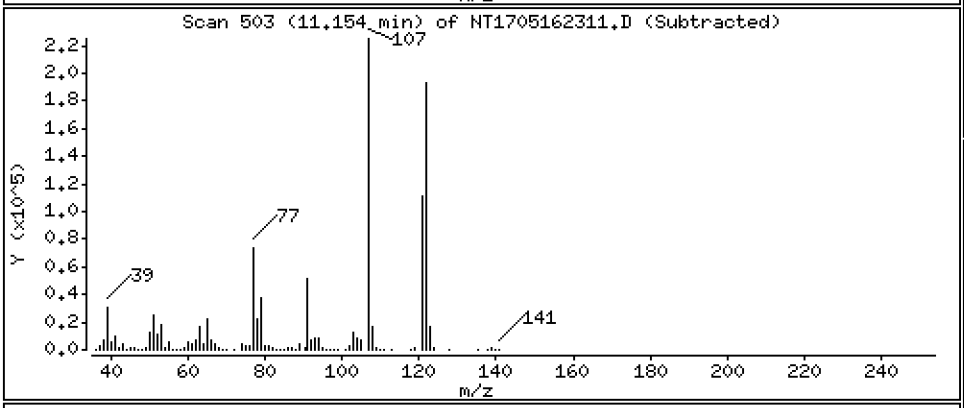
Column phase: ZB-5msi

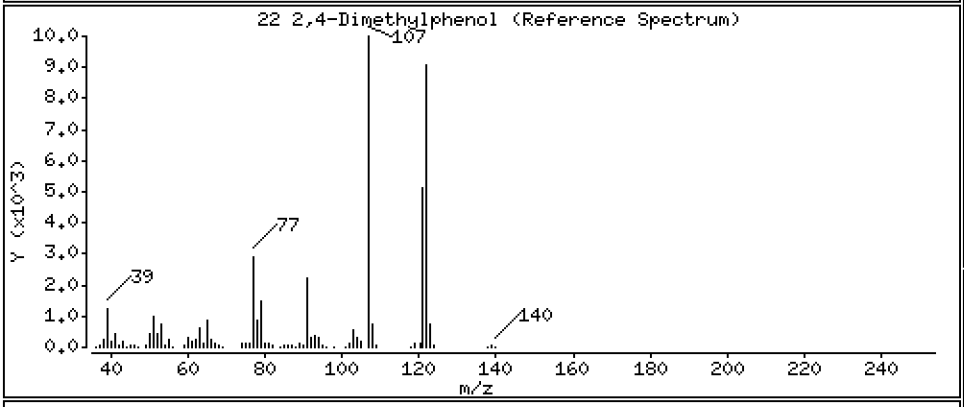
Column diameter: 0.25

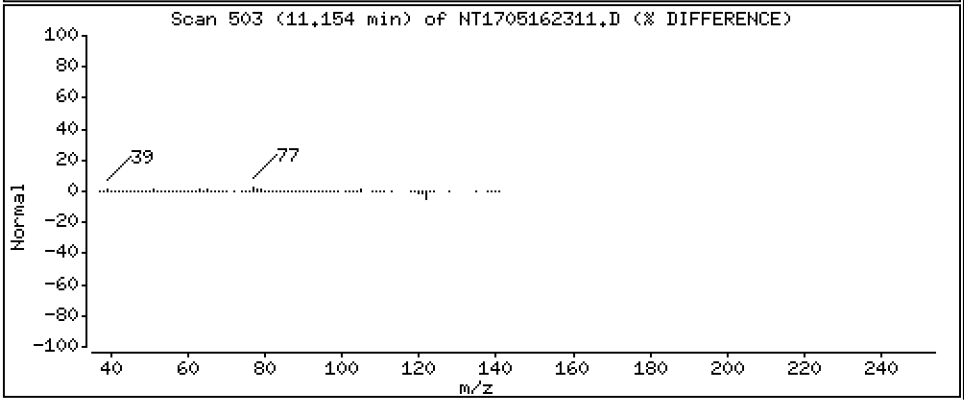
22 2,4-Dimethylphenol

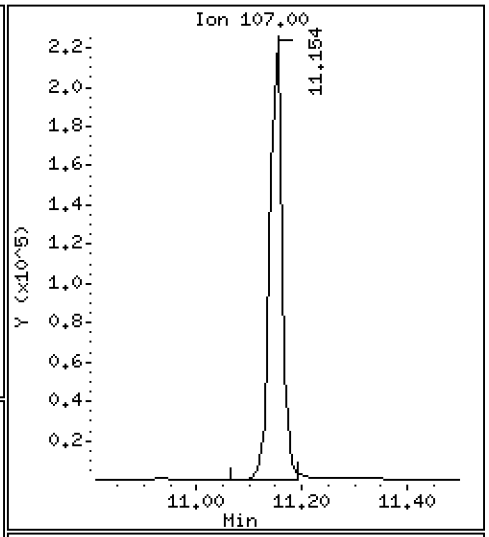
Concentration: 3.788 ug/mL

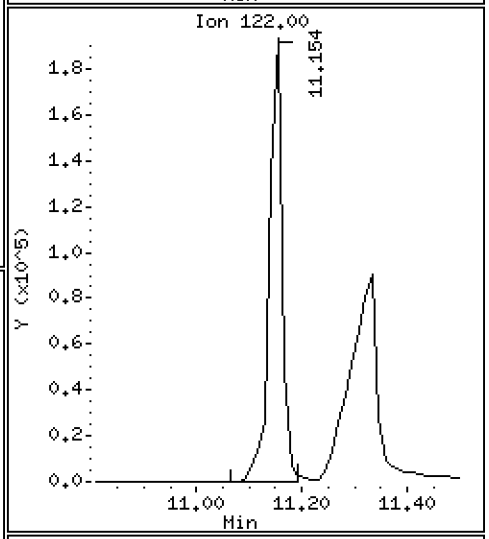


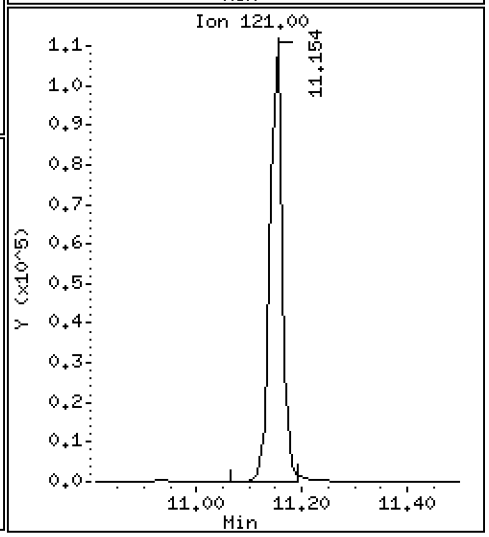












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

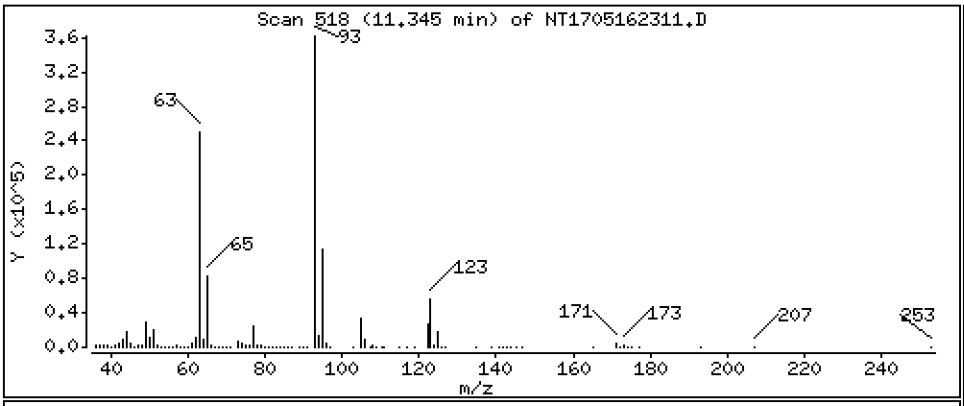
Operator: JGR

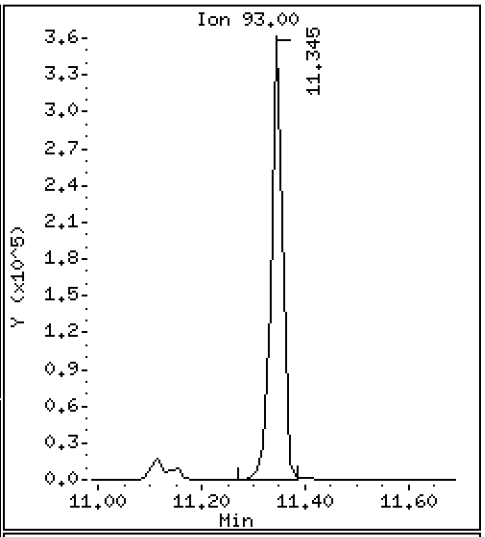
Column phase: ZB-5msi

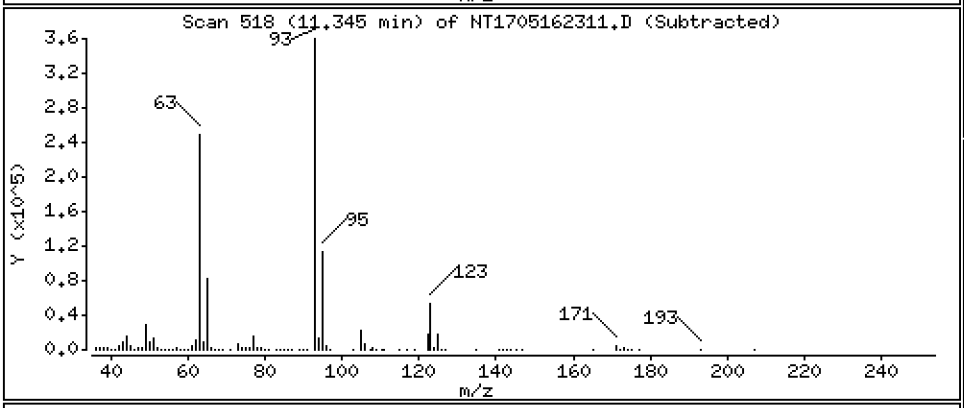
Column diameter: 0.25

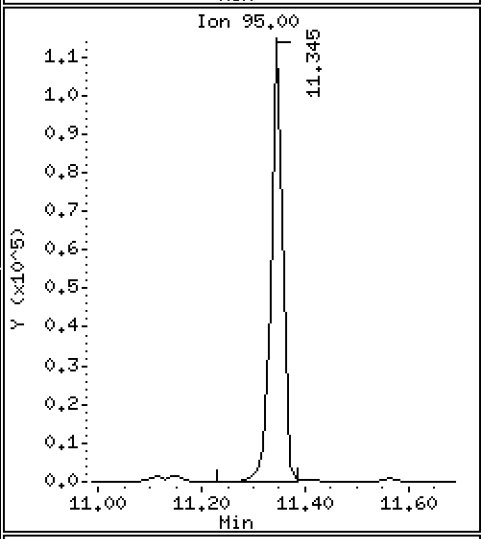
23 Bis(2-Chloroethoxy)methane

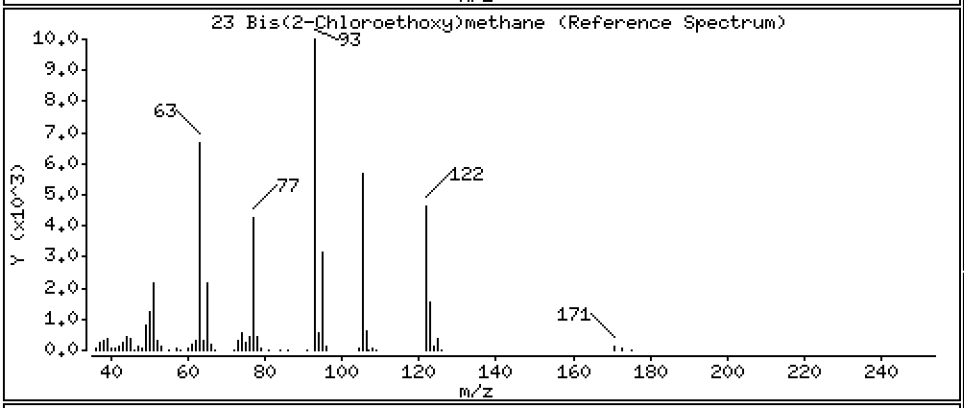
Concentration: 6.232 ug/mL

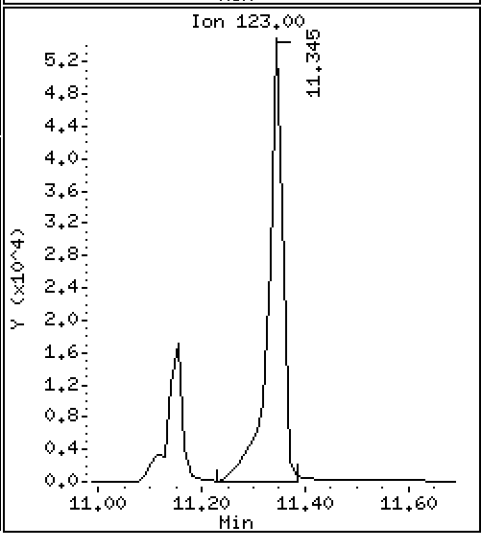


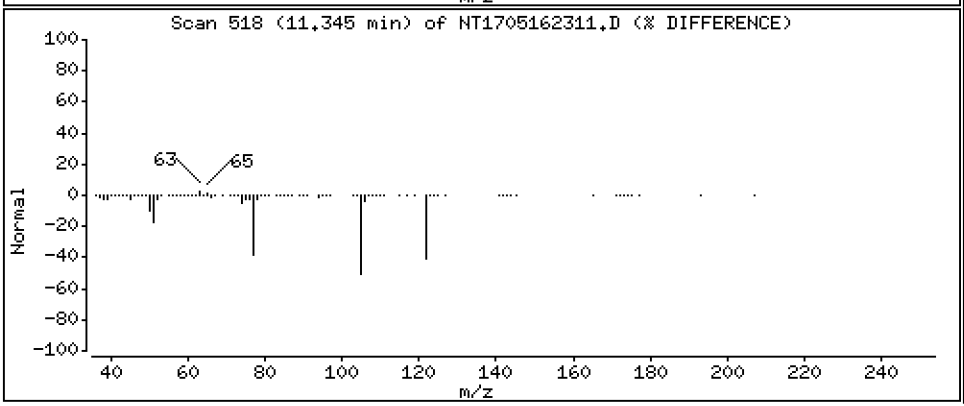












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

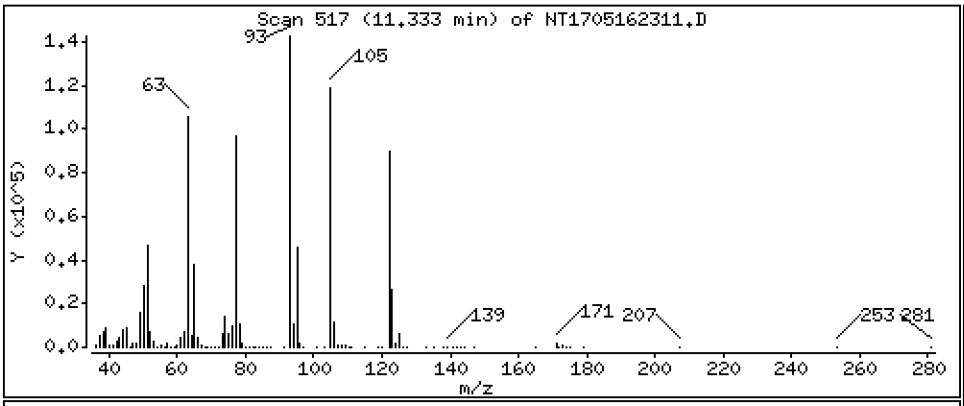
Operator: JGR

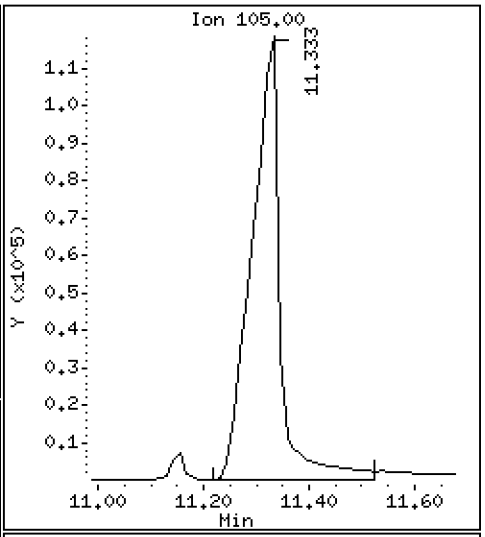
Column phase: ZB-5msi

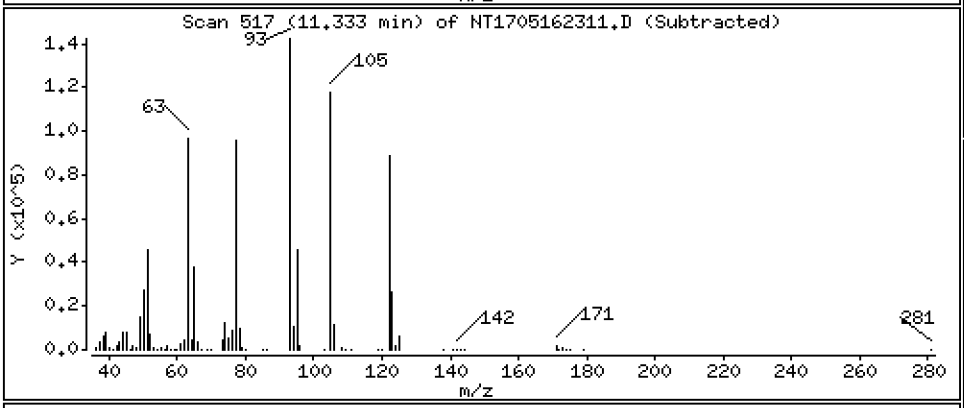
Column diameter: 0.25

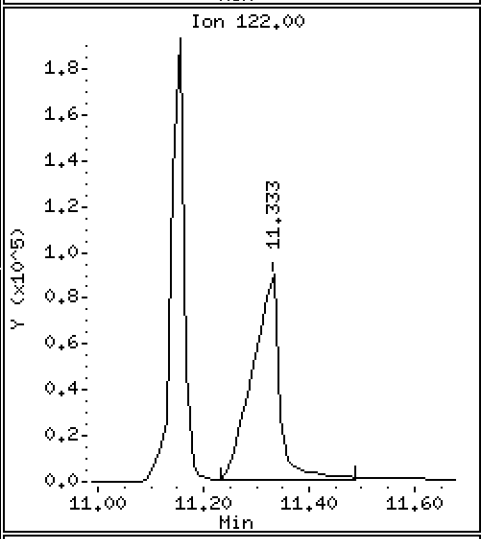
24 Benzoic acid

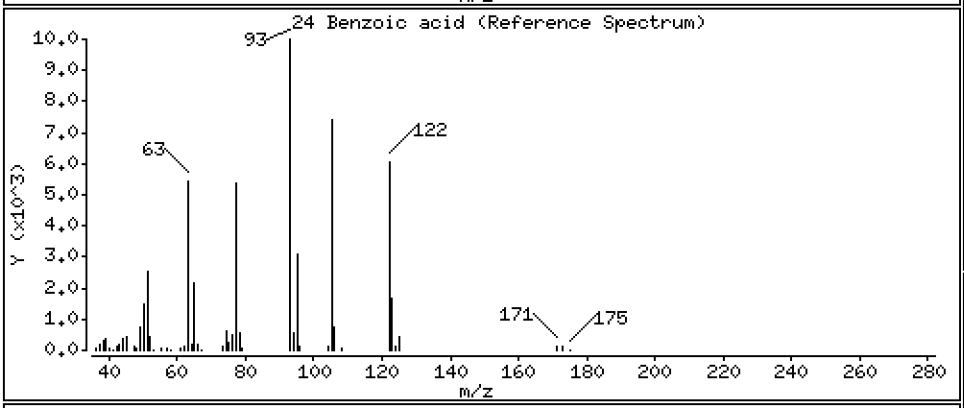
Concentration: 6.761 ug/mL

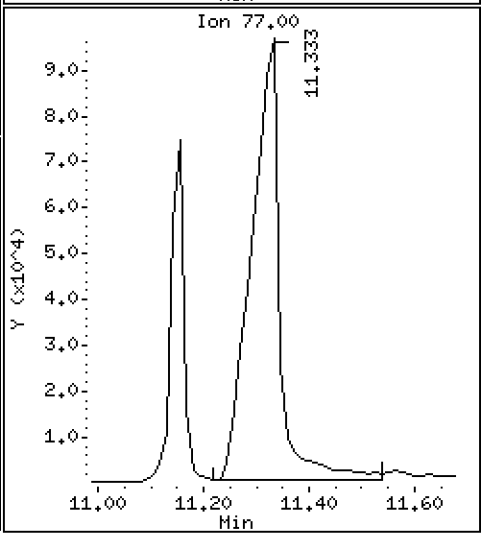


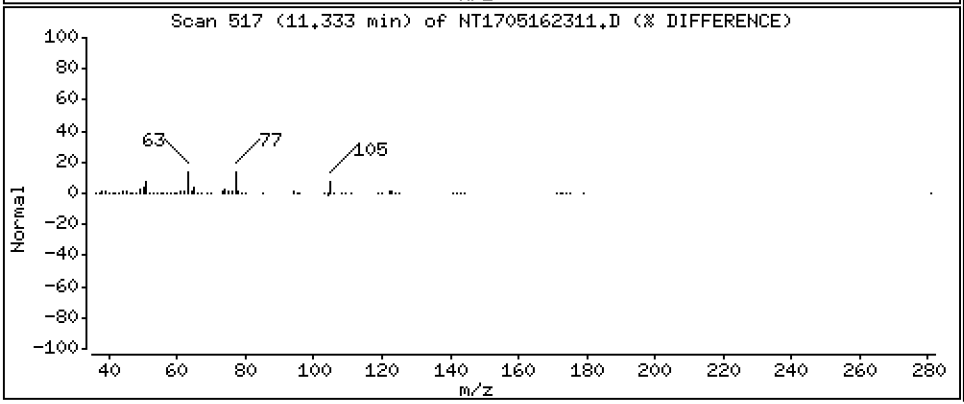












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

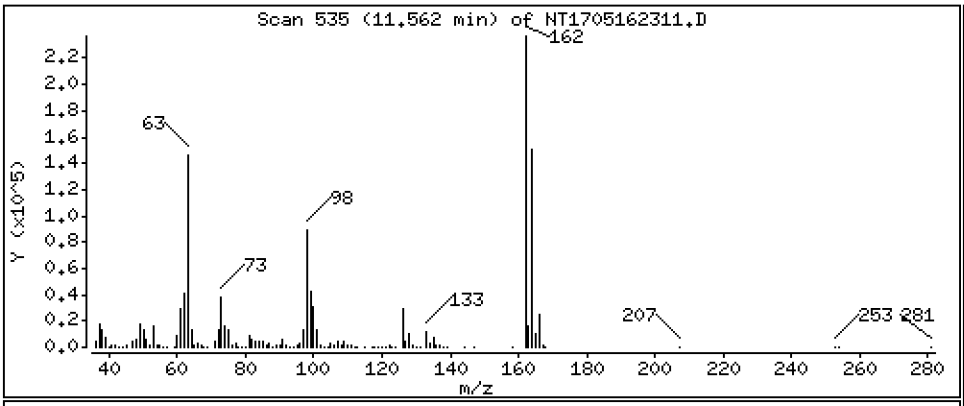
Operator: JGR

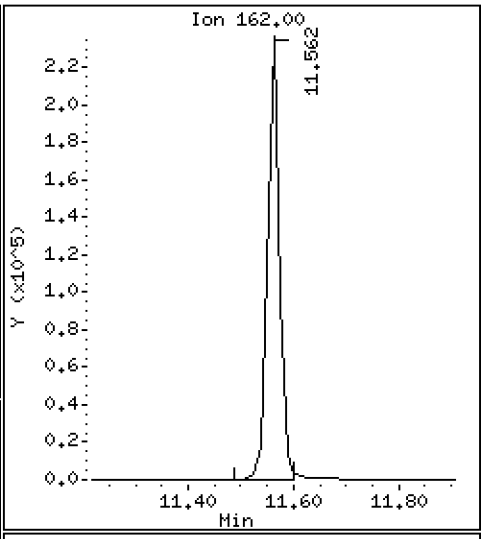
Column phase: ZB-5msi

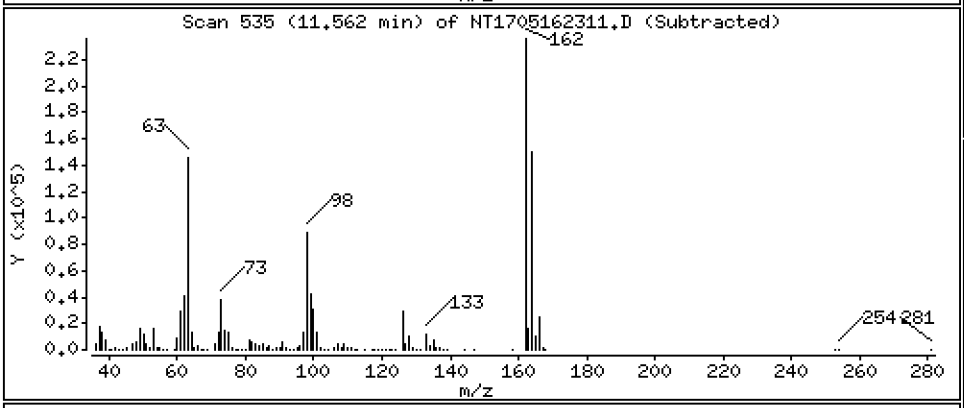
Column diameter: 0.25

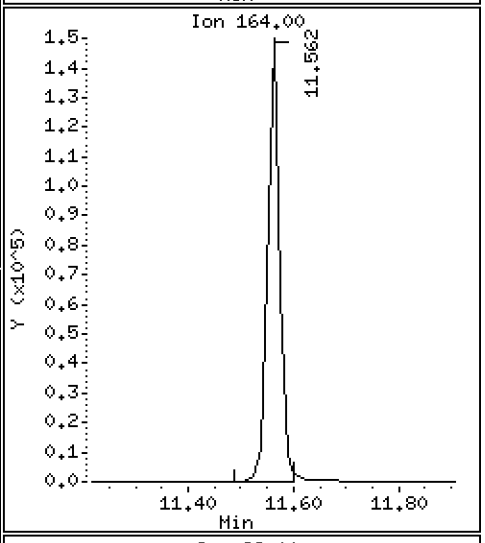
25 2,4-Dichlorophenol

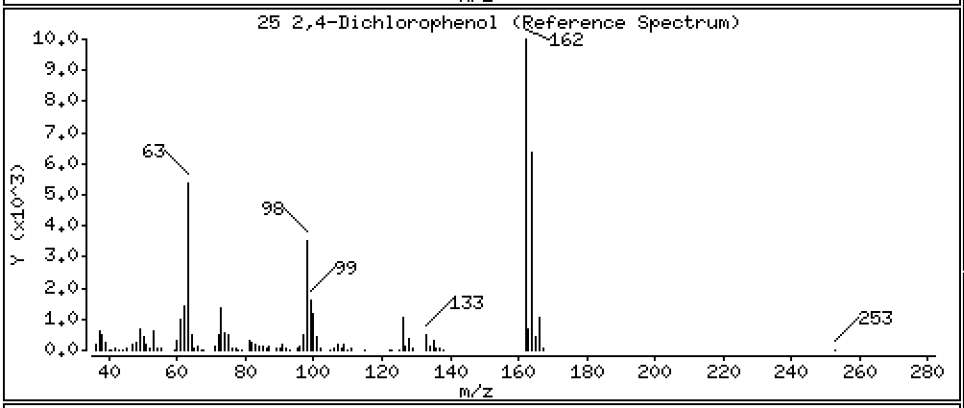
Concentration: 4.707 ug/mL

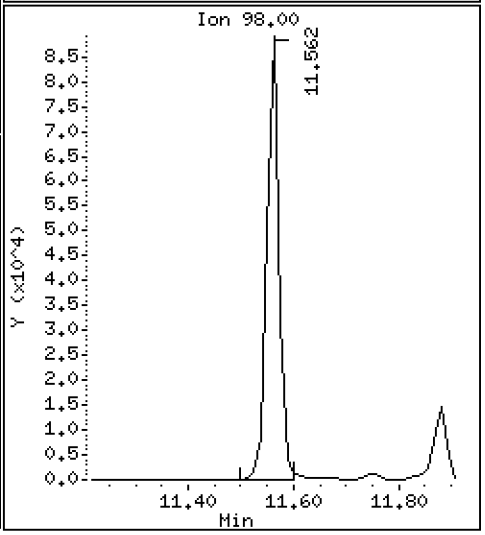


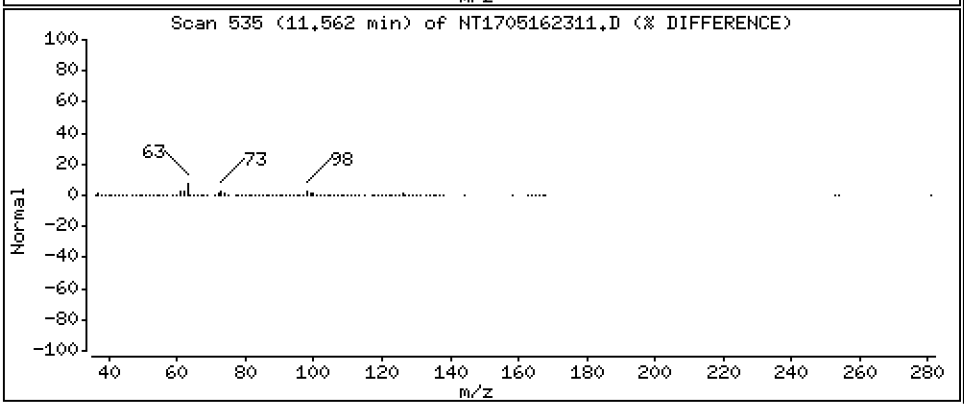












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

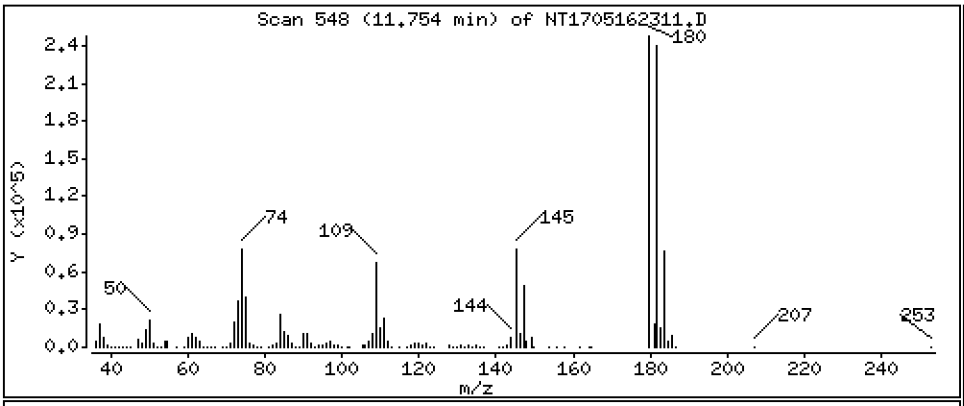
Operator: JGR

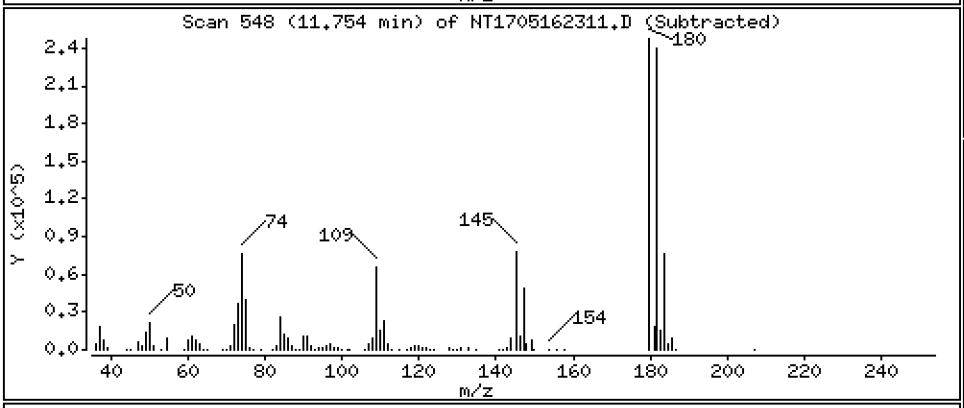
Column phase: ZB-5msi

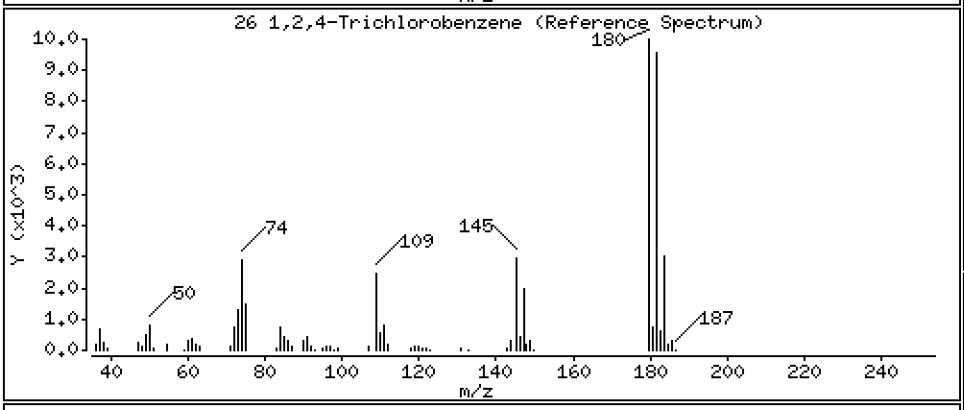
Column diameter: 0.25

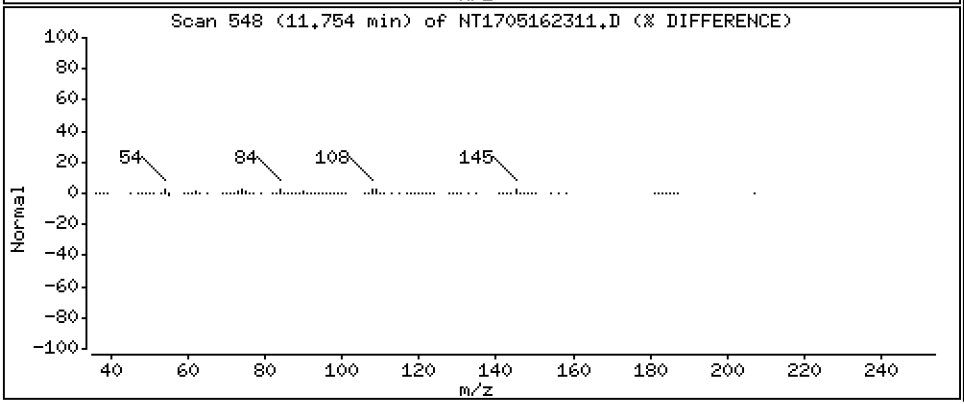
26 1,2,4-Trichlorobenzene

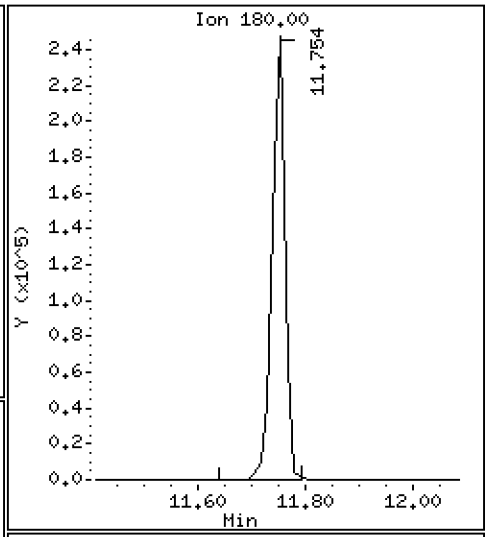
Concentration: 5.879 ug/mL

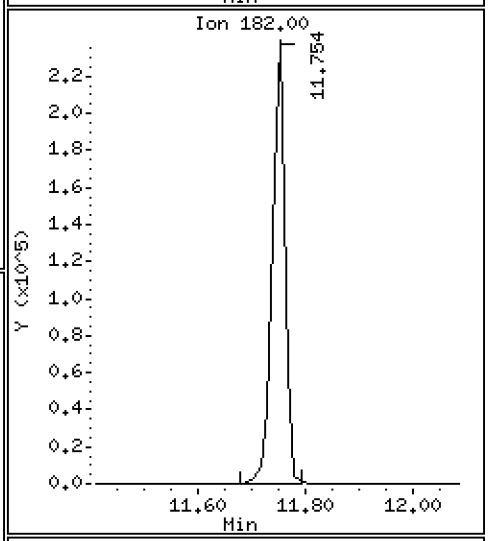


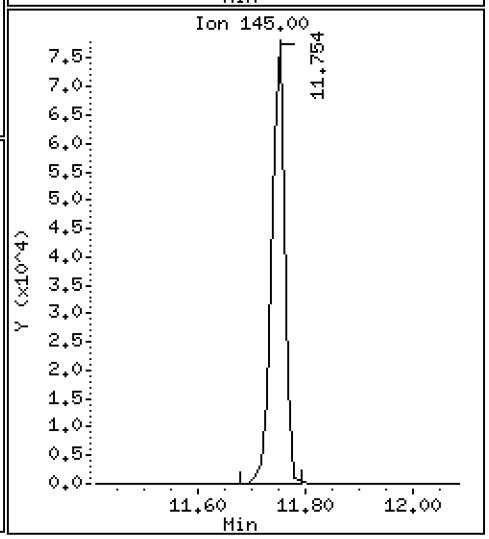












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

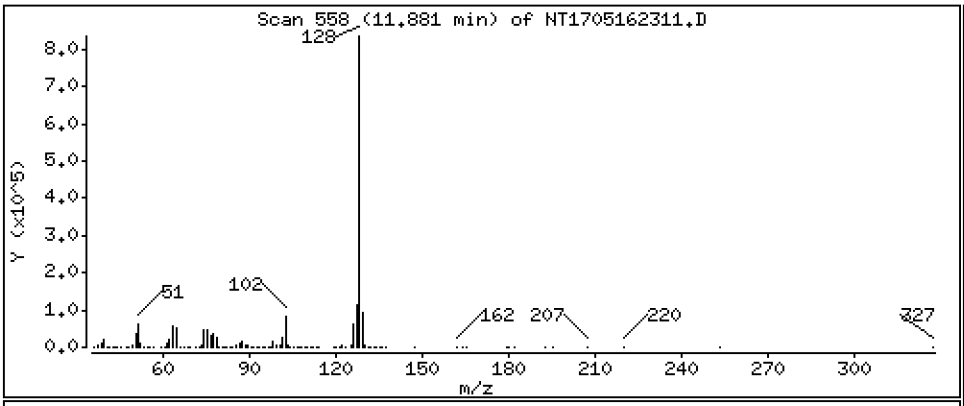
Operator: JGR

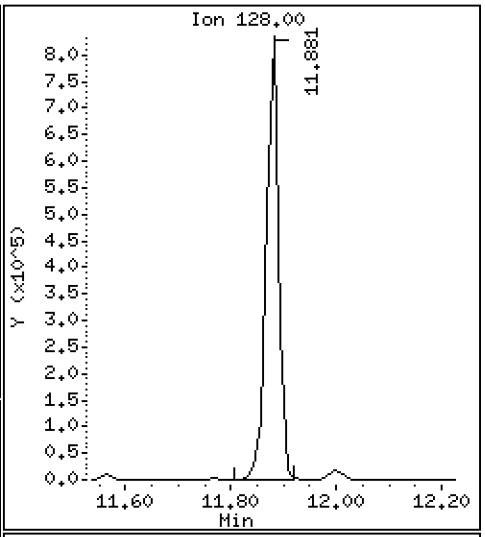
Column phase: ZB-5msi

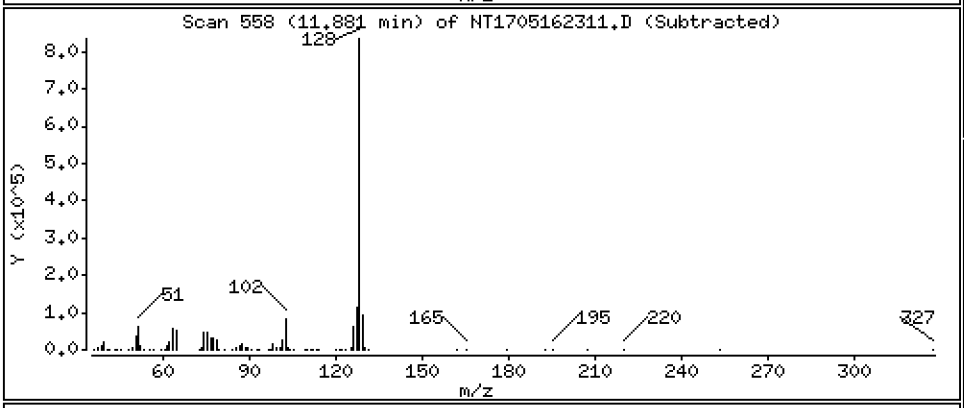
Column diameter: 0.25

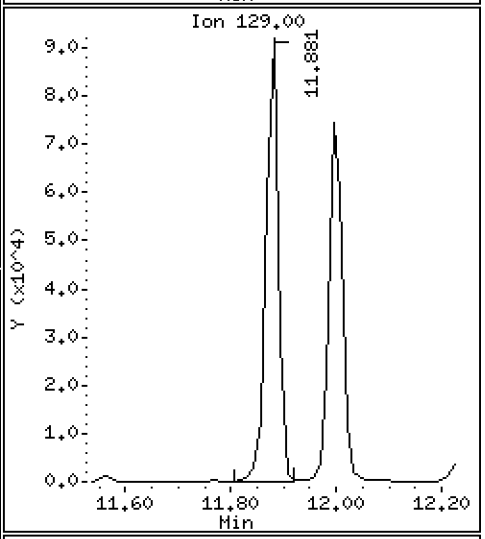
28 Naphthalene

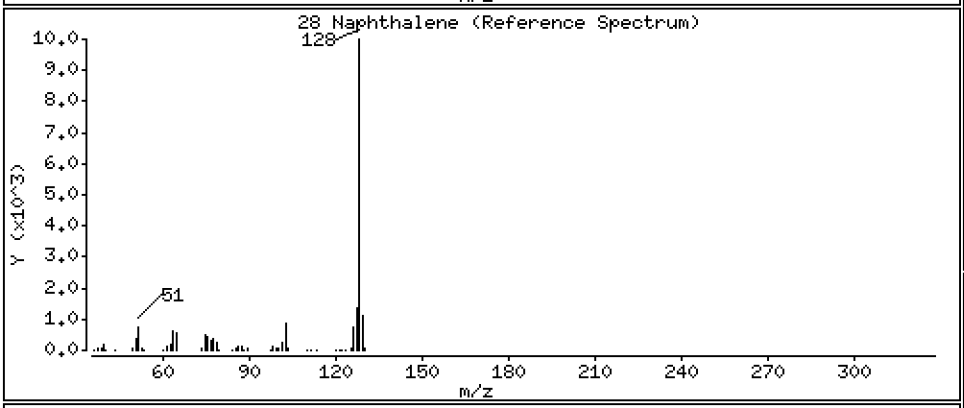
Concentration: 5.129 ug/mL

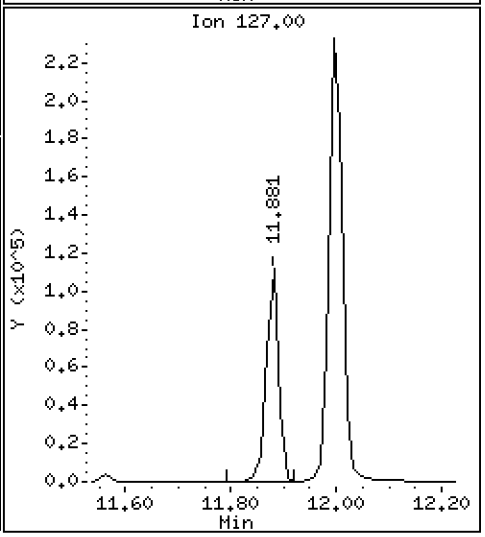


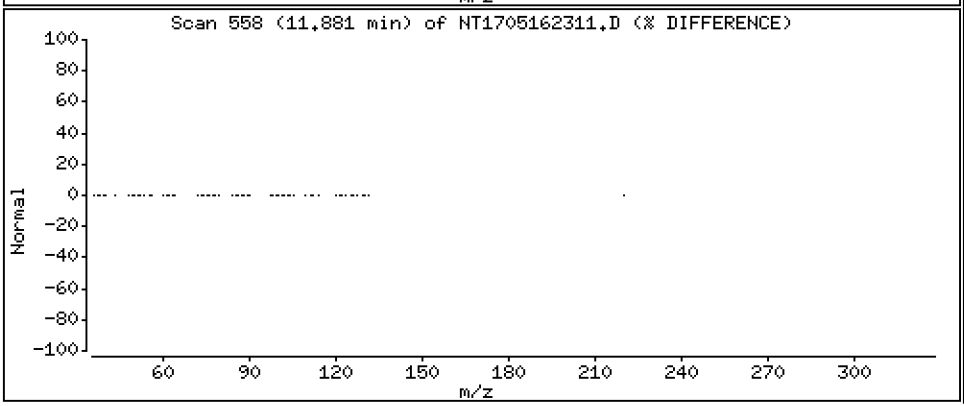












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

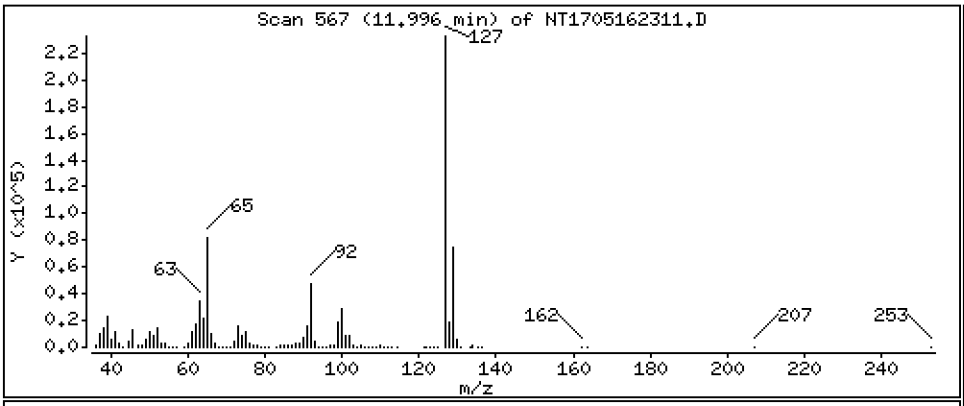
Operator: JGR

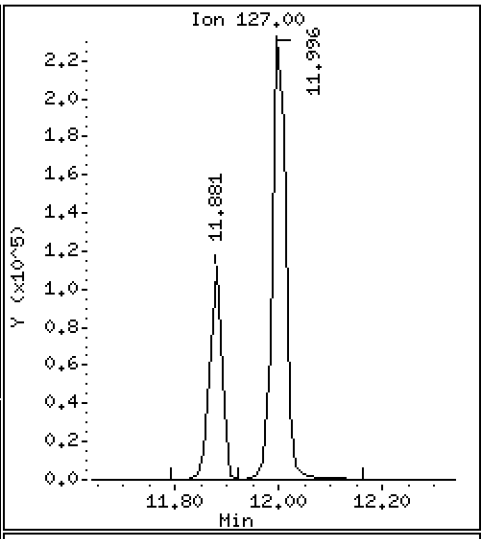
Column phase: ZB-5msi

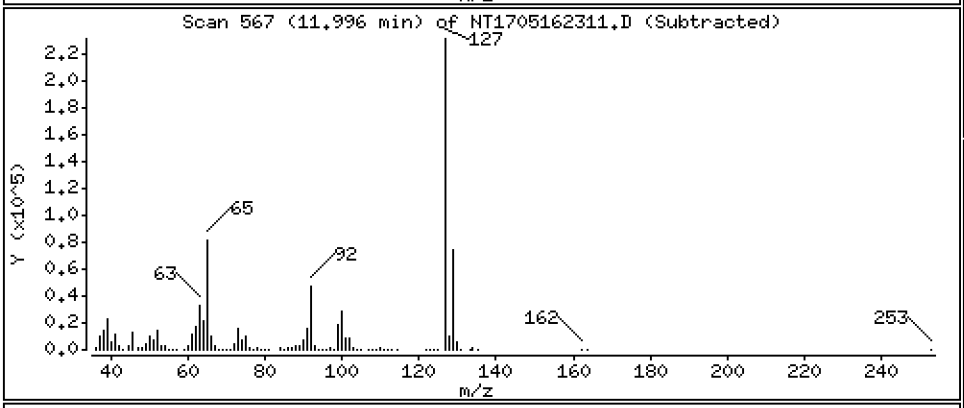
Column diameter: 0.25

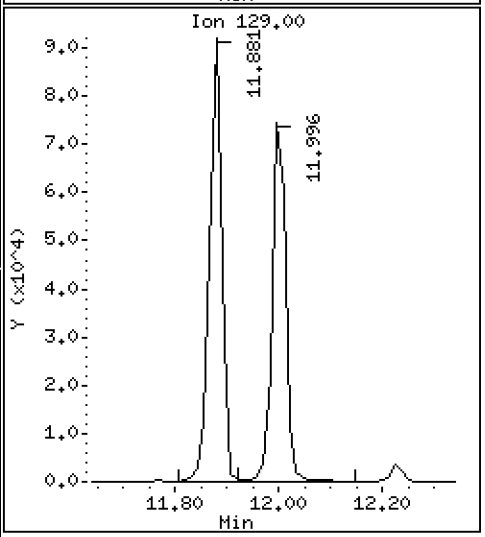
29 4-Chloroaniline

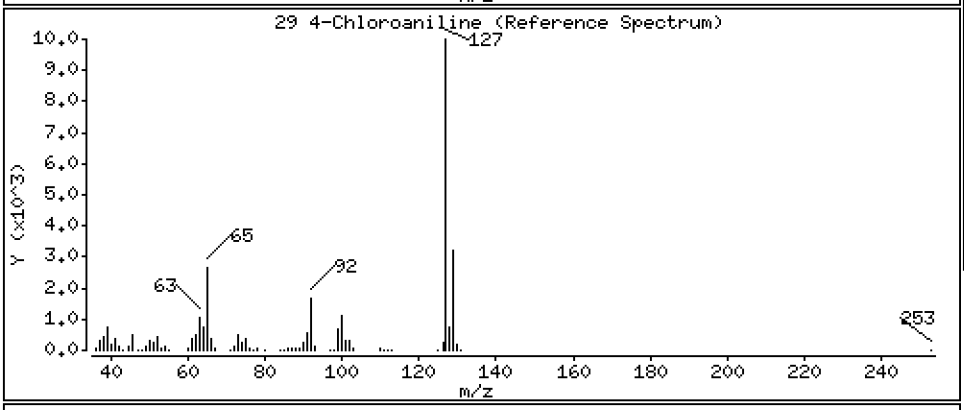
Concentration: 4.488 ug/mL

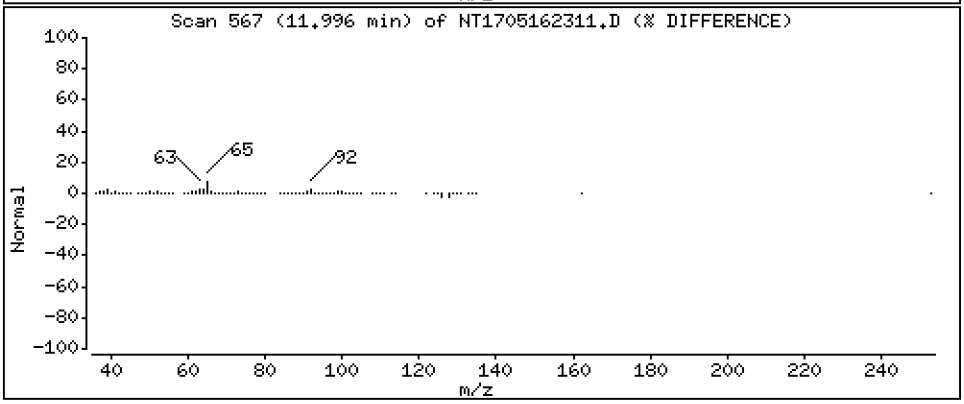












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

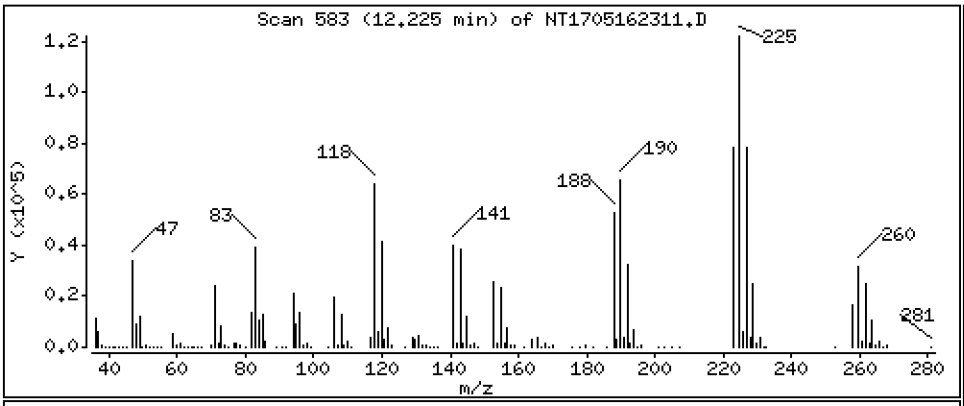
Operator: JGR

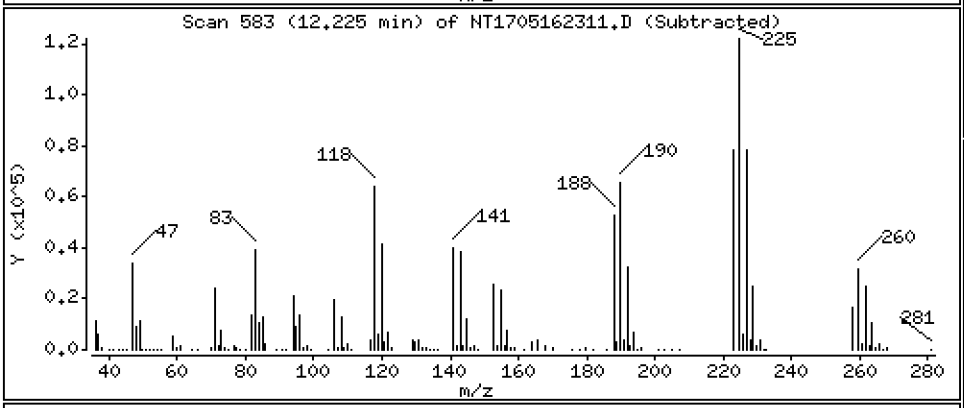
Column phase: ZB-5msi

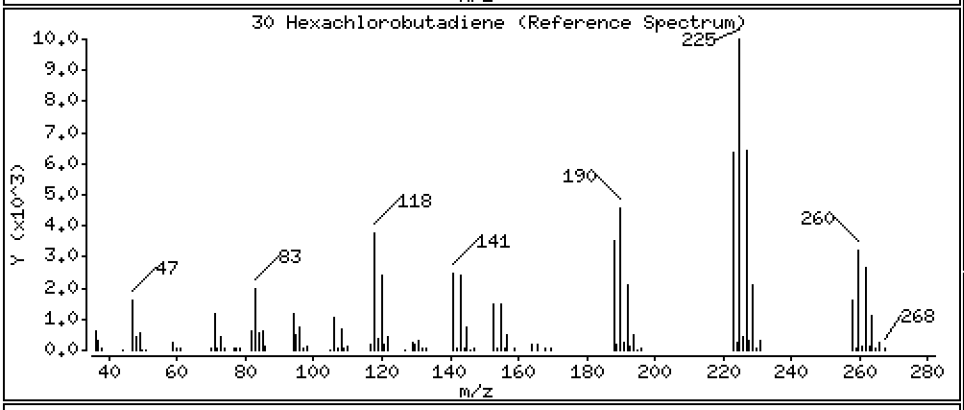
Column diameter: 0.25

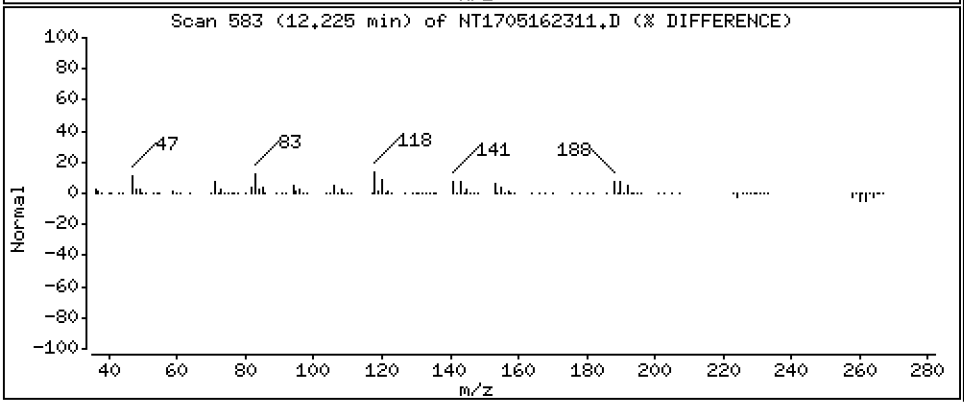
30 Hexachlorobutadiene

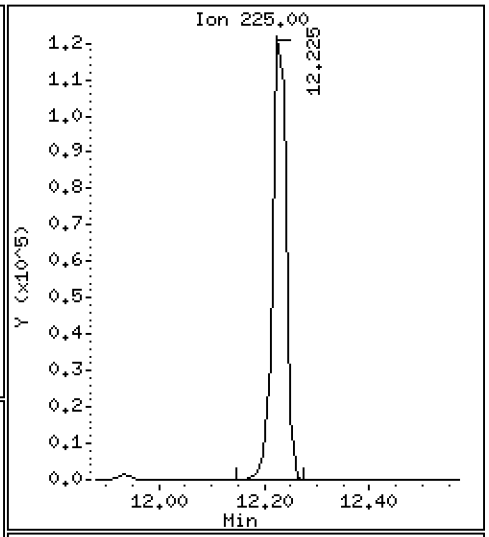
Concentration: 5.241 ug/mL

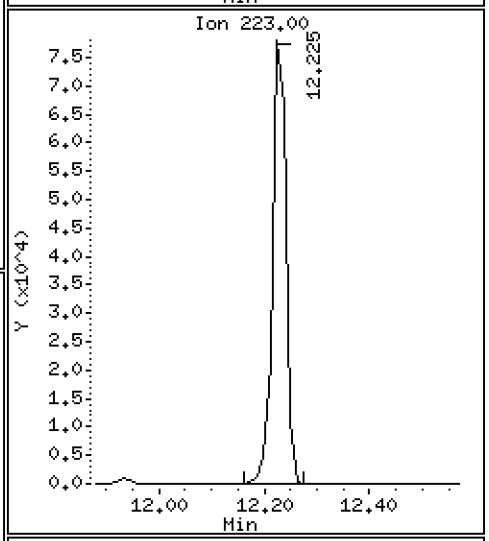


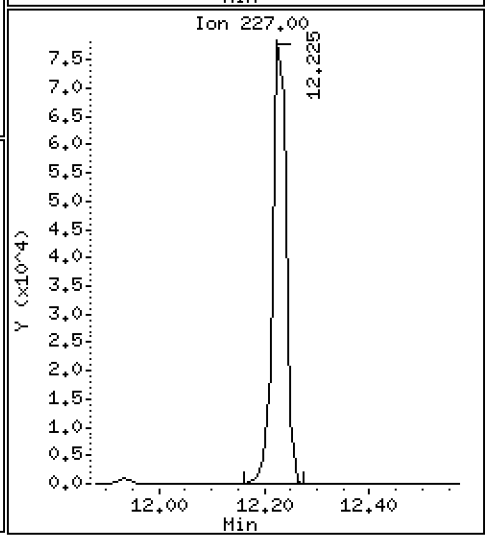












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

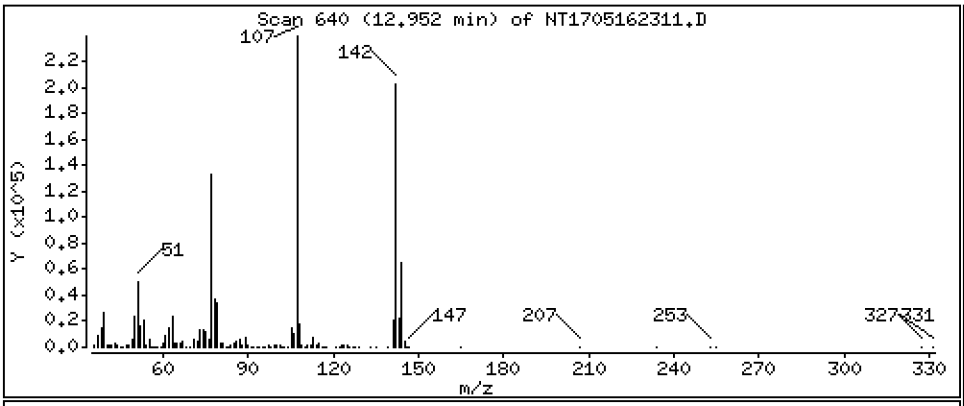
Operator: JGR

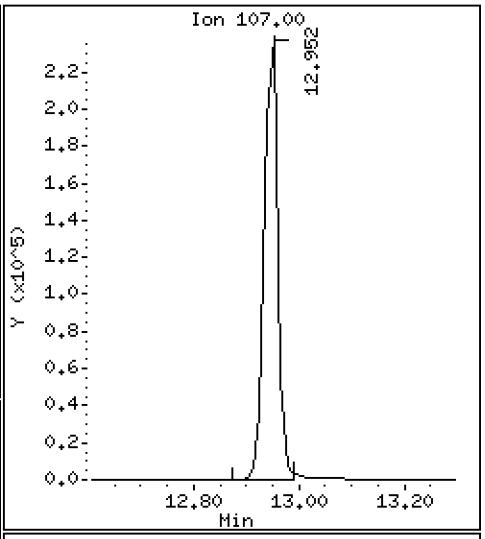
Column phase: ZB-5msi

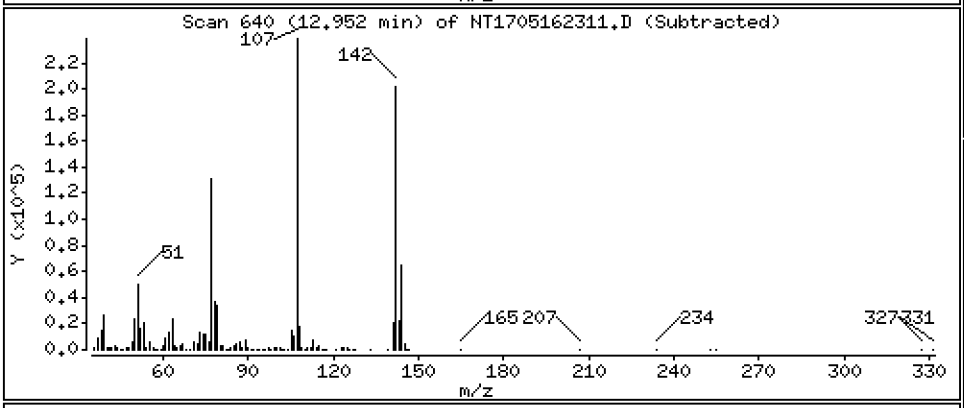
Column diameter: 0.25

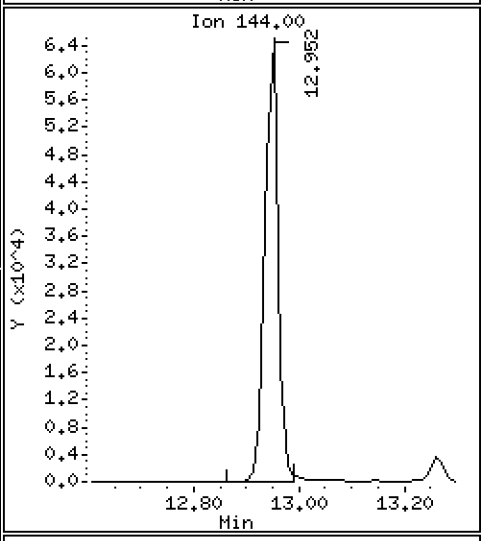
31 4-Chloro-3-methylphenol

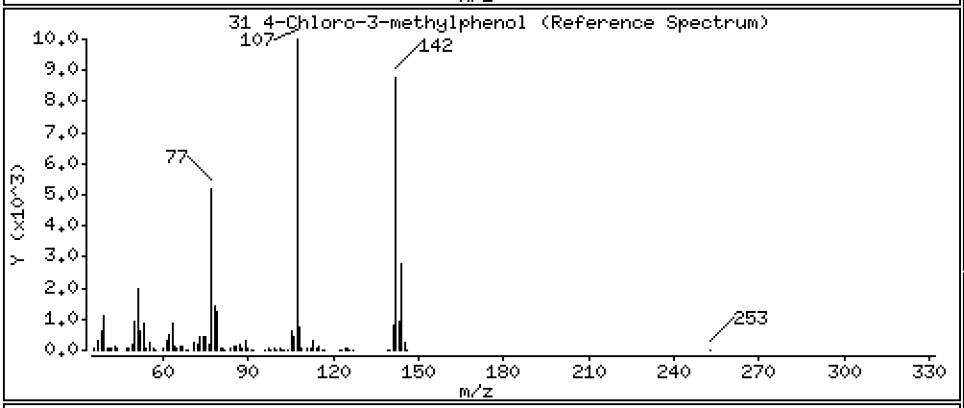
Concentration: 4.878 ug/mL

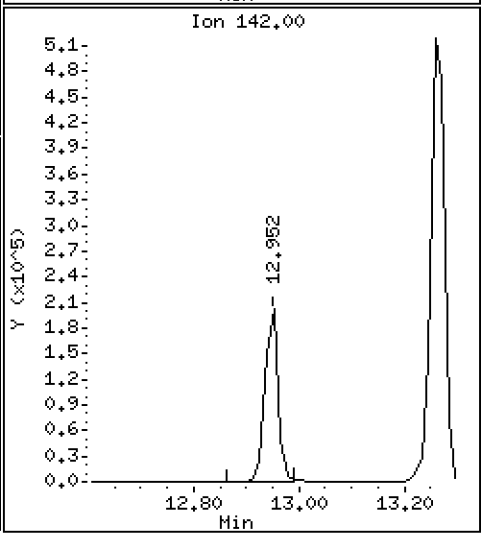


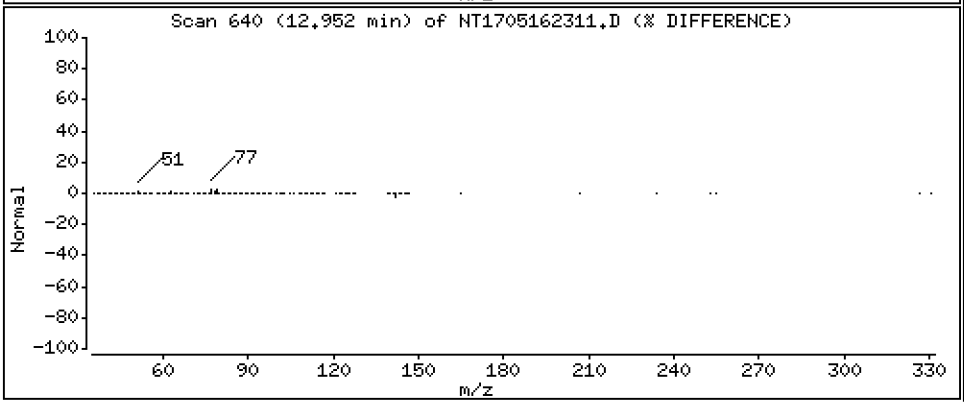












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

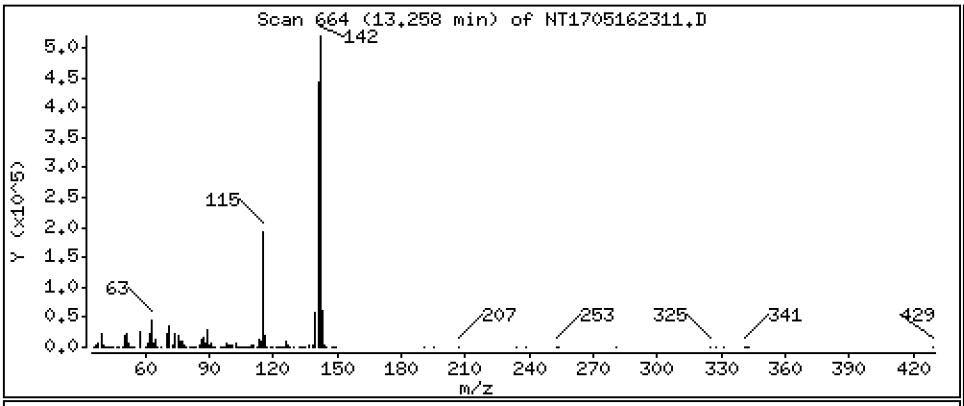
Operator: JGR

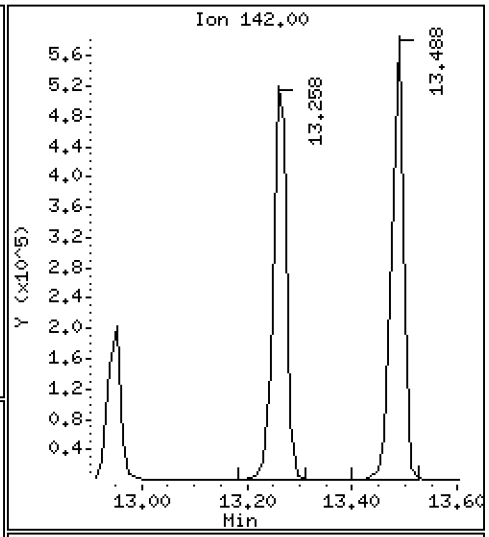
Column phase: ZB-5msi

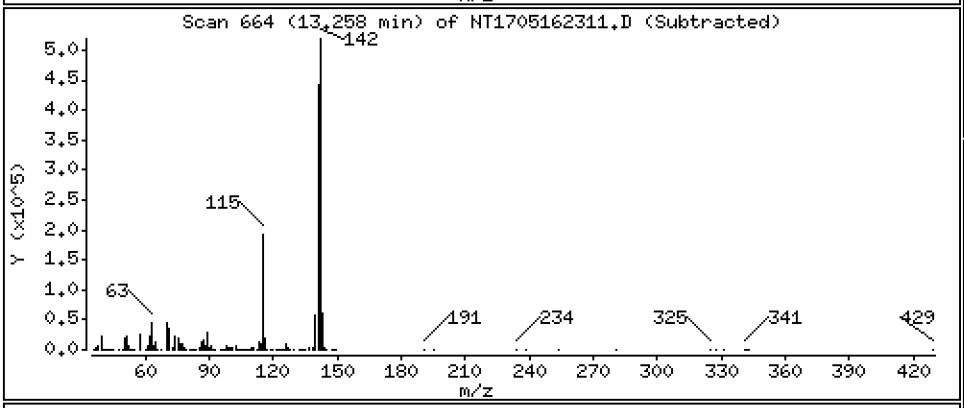
Column diameter: 0.25

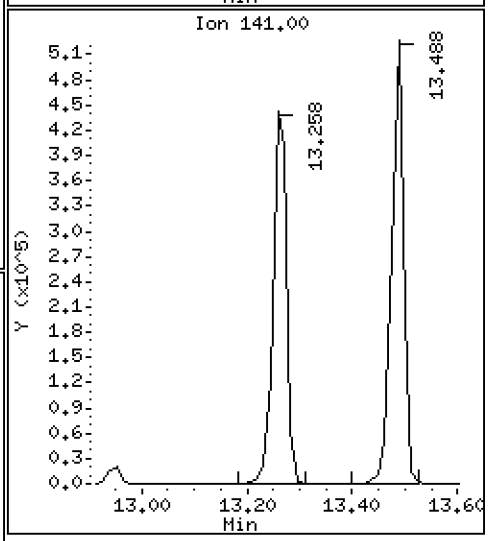
32 2-Methylnaphthalene

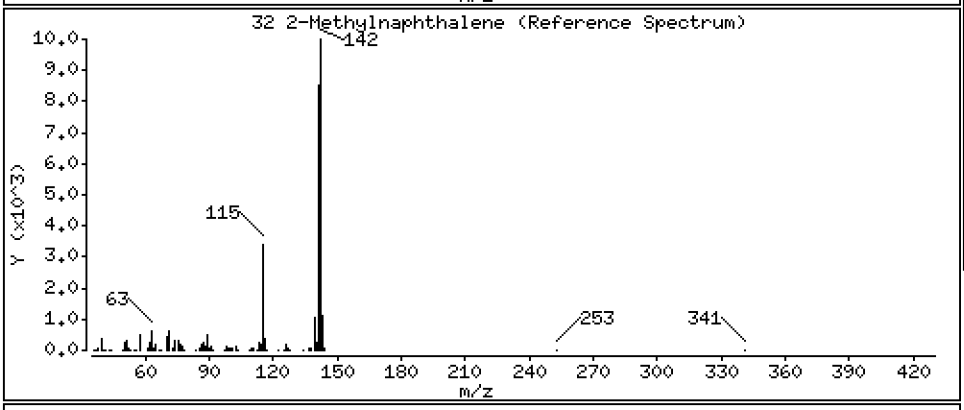
Concentration: 5.028 ug/mL

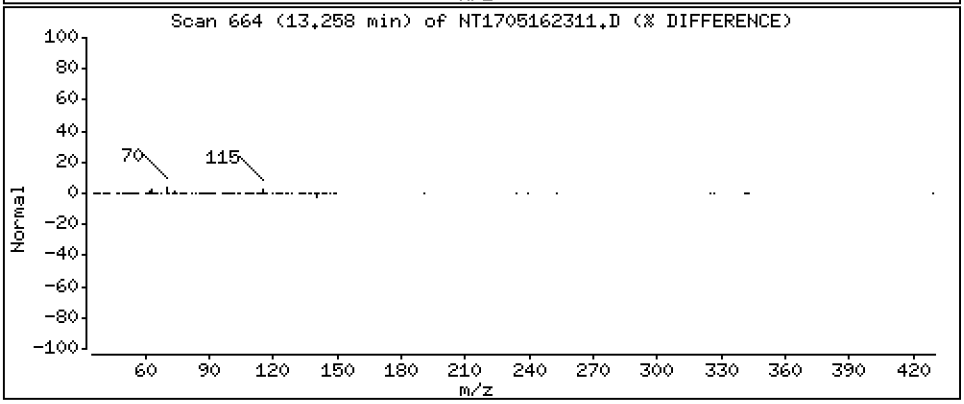












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

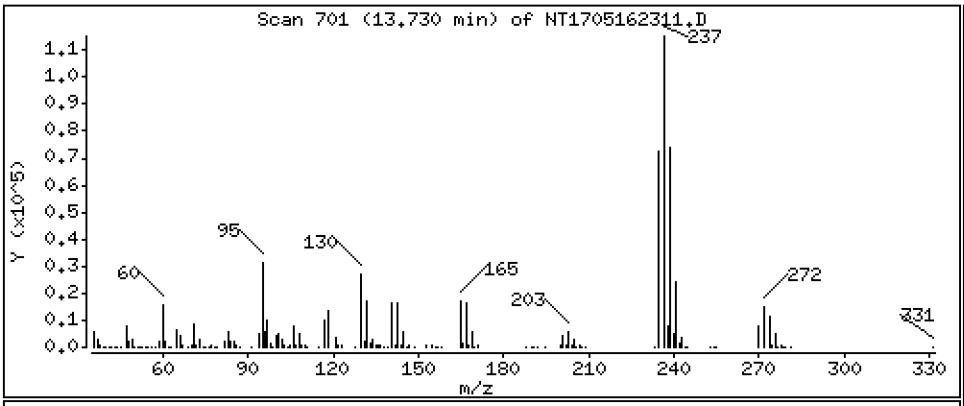
Operator: JGR

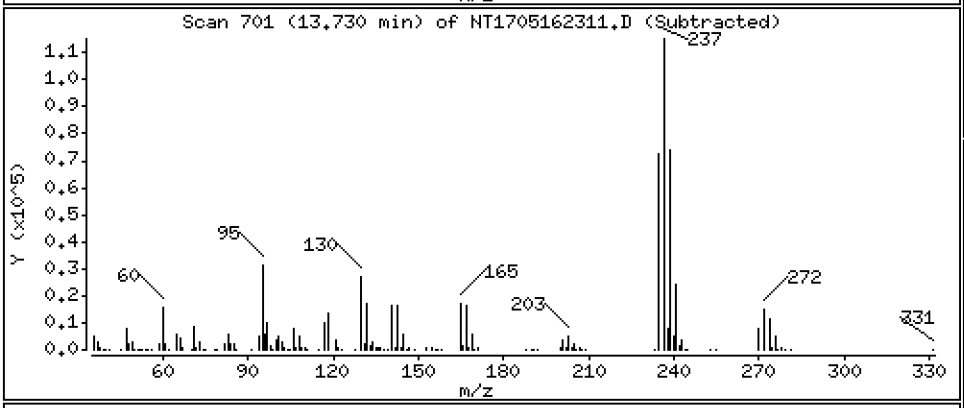
Column phase: ZB-5msi

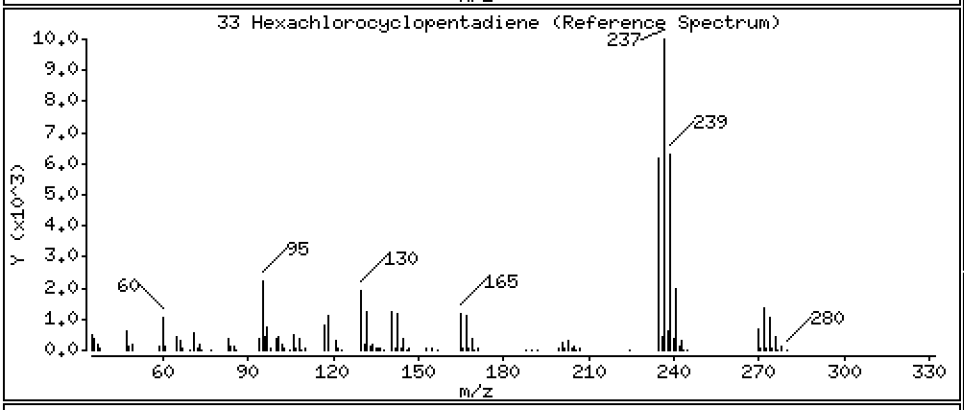
Column diameter: 0.25

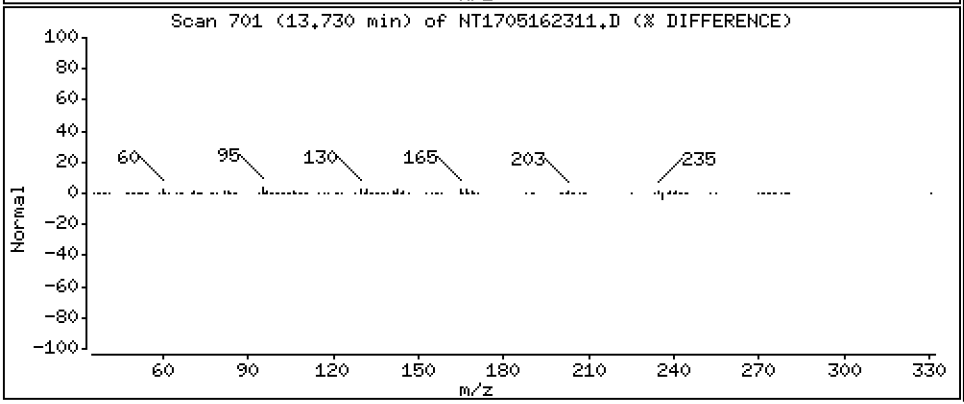
33 Hexachlorocyclopentadiene

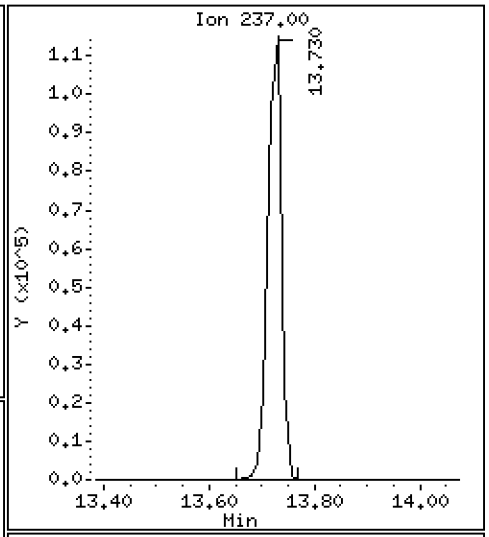
Concentration: 4.219 ug/mL

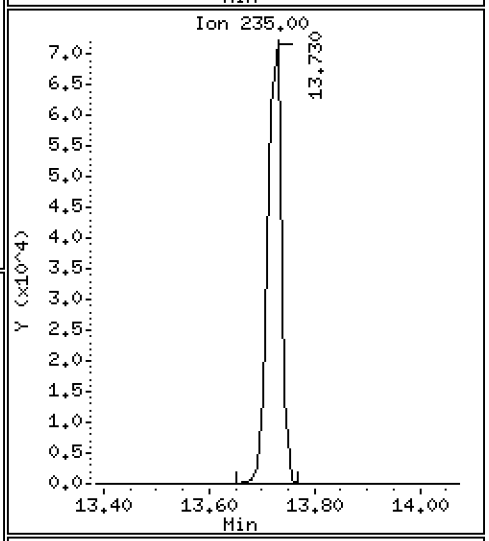


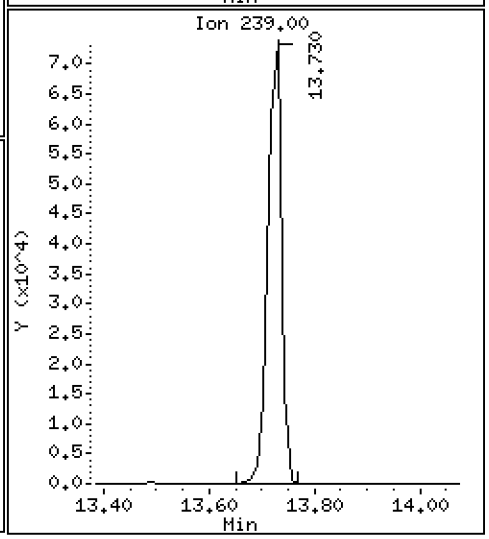












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

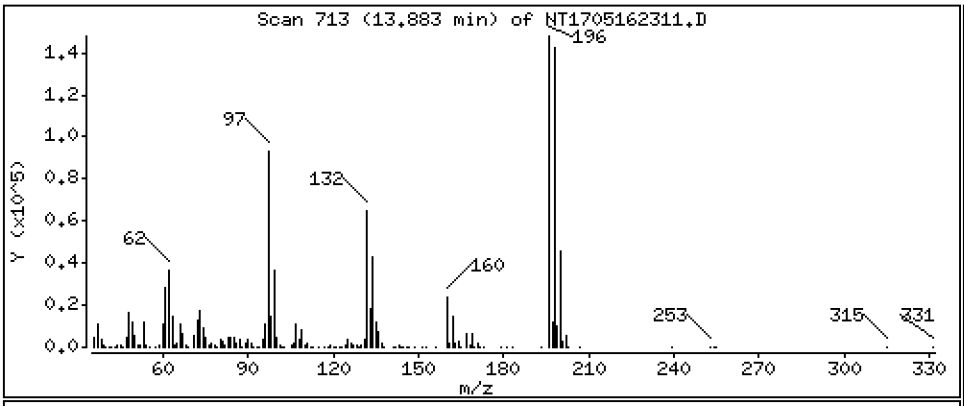
Operator: JGR

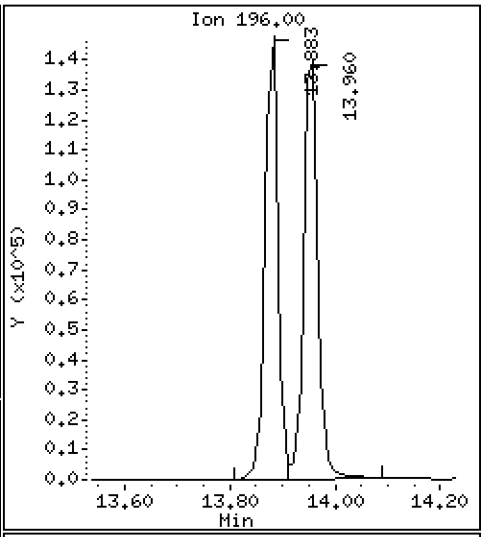
Column phase: ZB-5msi

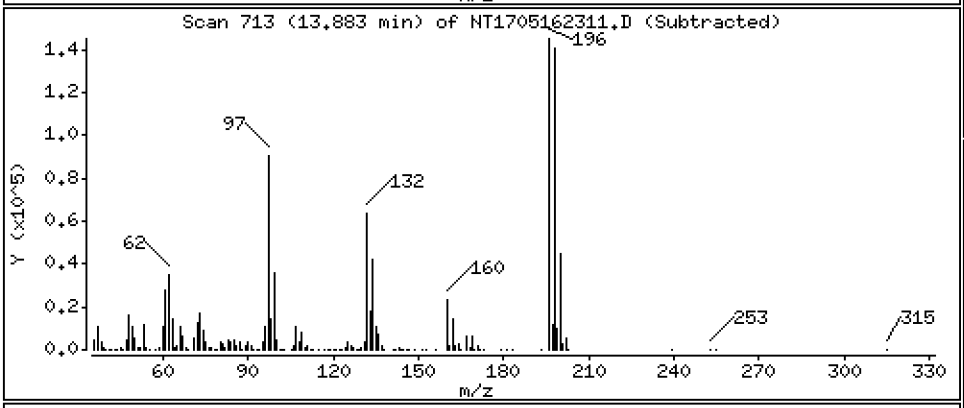
Column diameter: 0.25

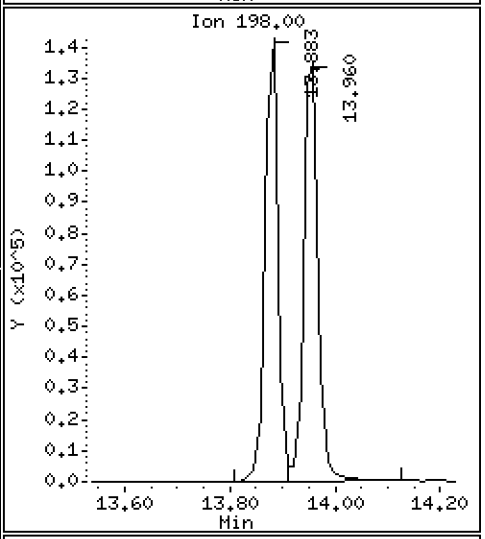
34 2,4,6-Trichlorophenol

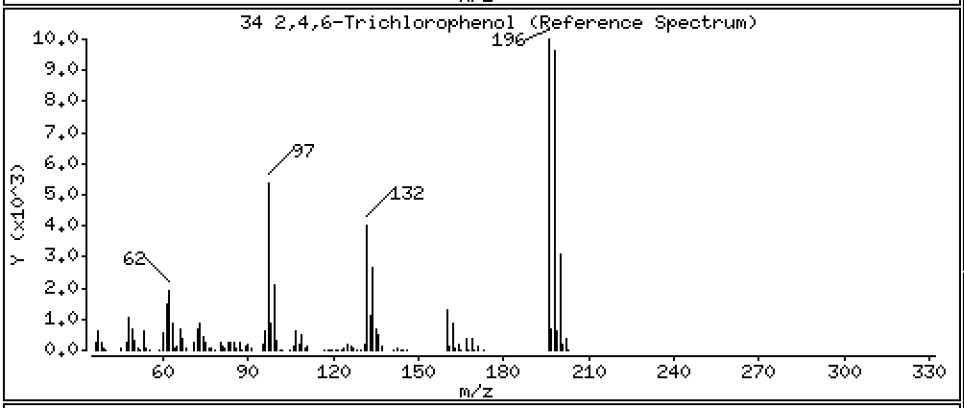
Concentration: 4.794 ug/mL

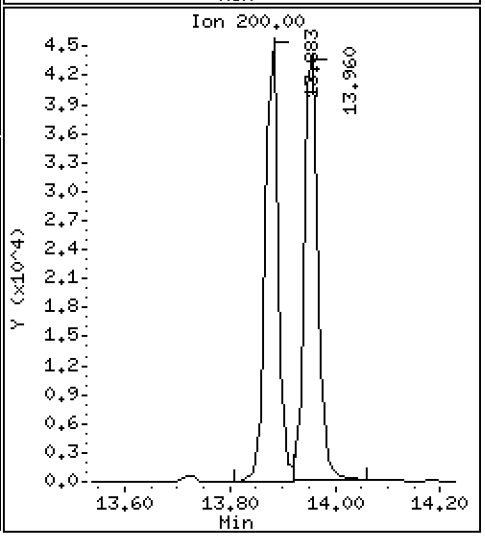


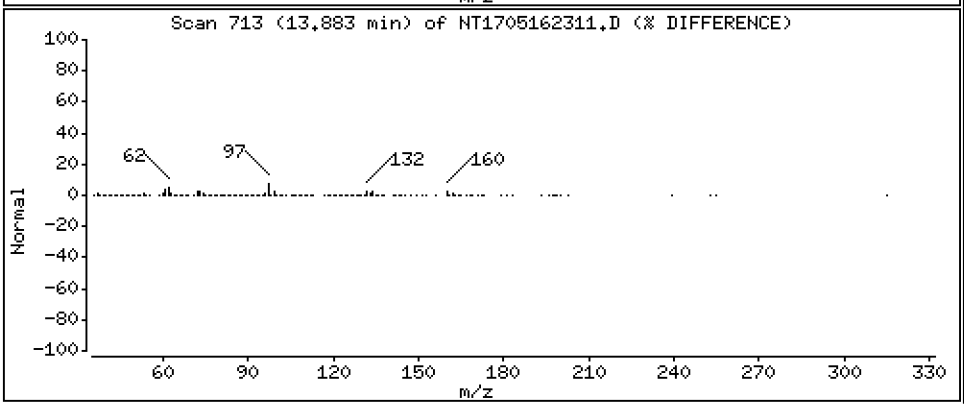












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

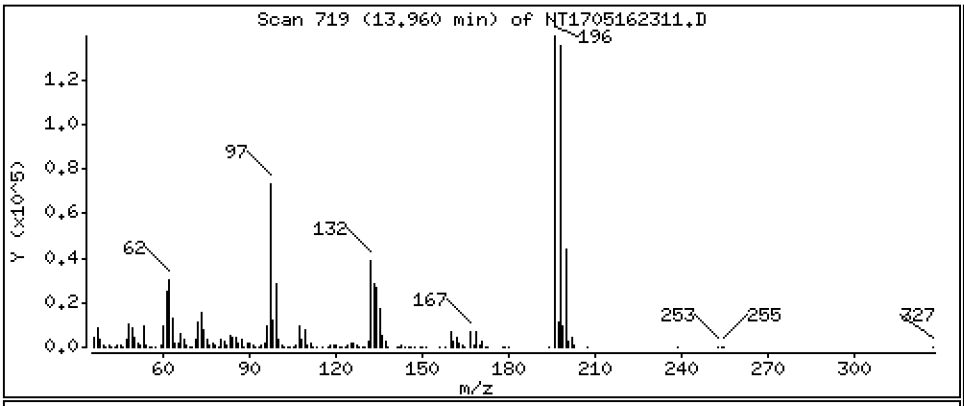
Operator: JGR

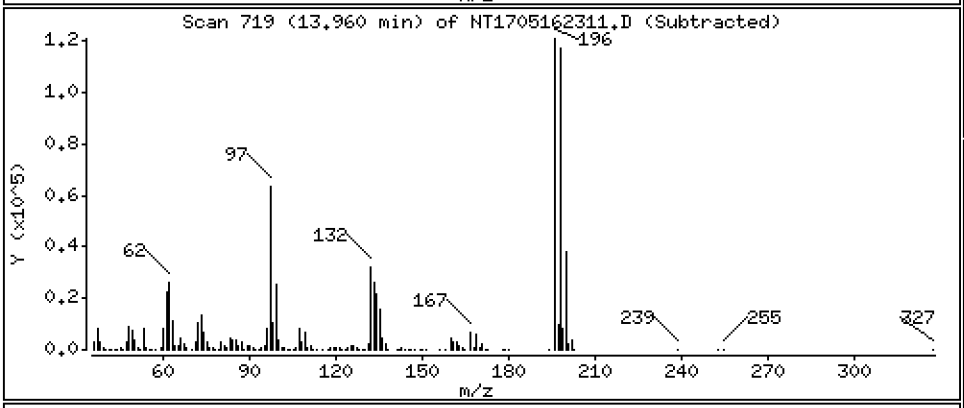
Column phase: ZB-5msi

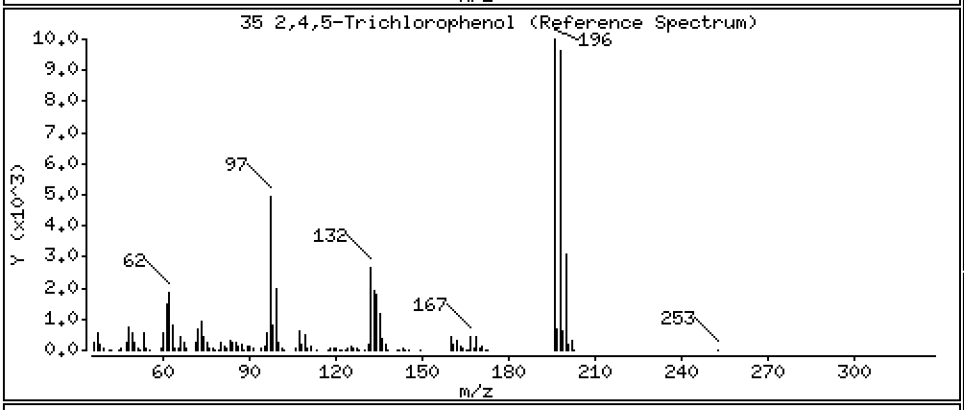
Column diameter: 0.25

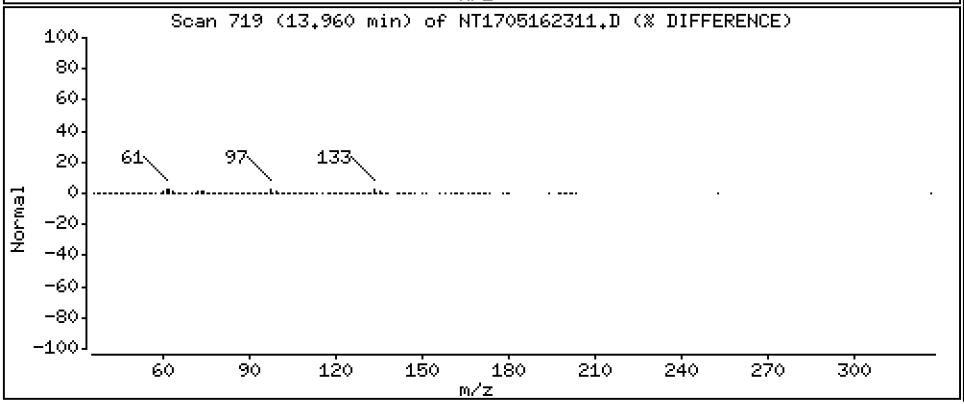
35 2,4,5-Trichlorophenol

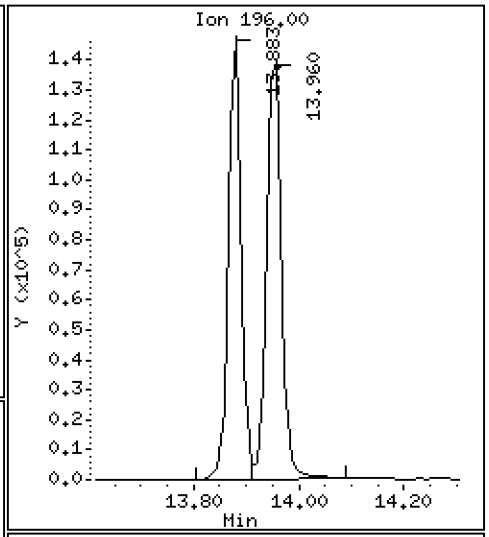
Concentration: 4.837 ug/mL

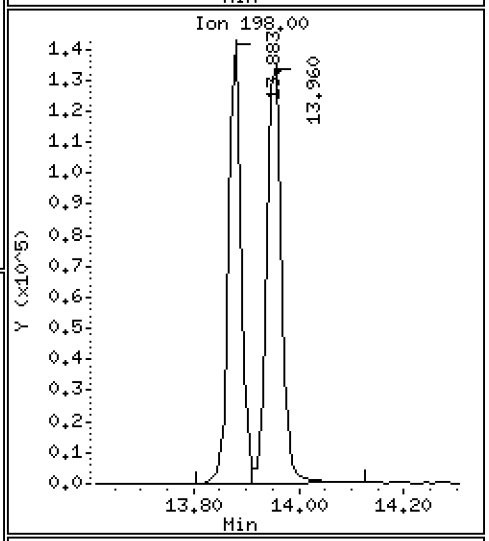


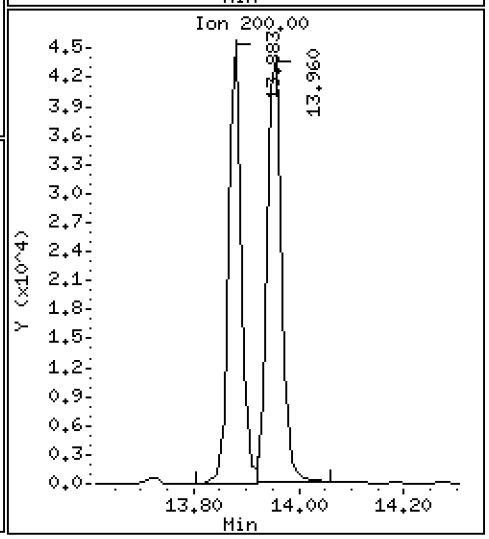












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

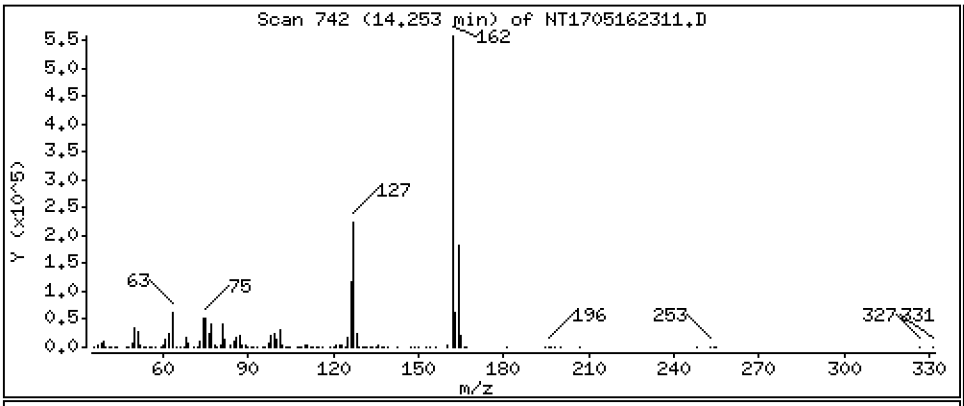
Operator: JGR

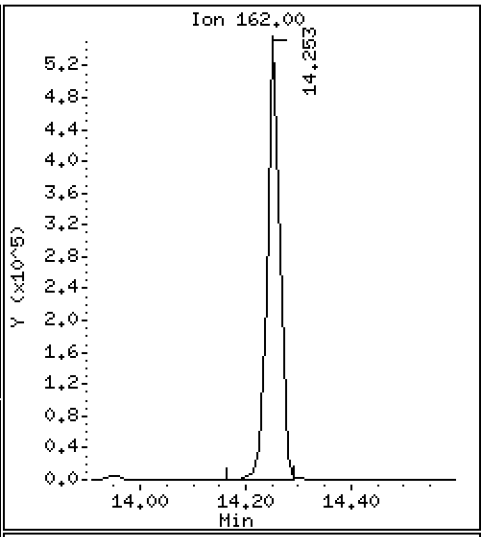
Column phase: ZB-5msi

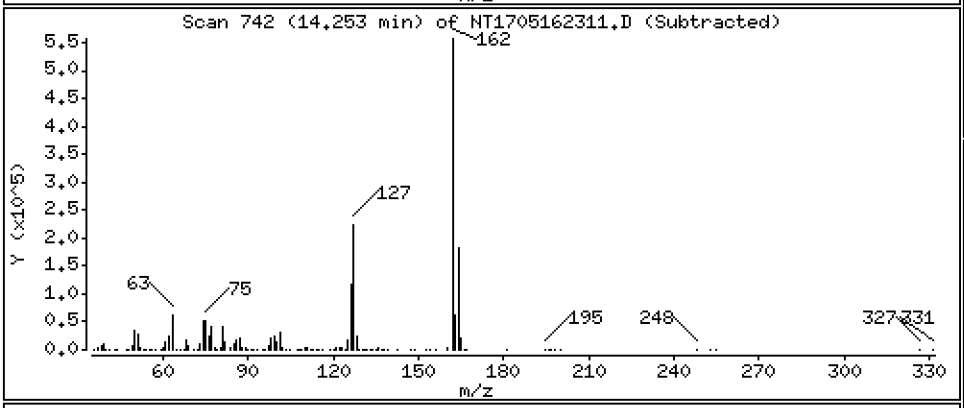
Column diameter: 0.25

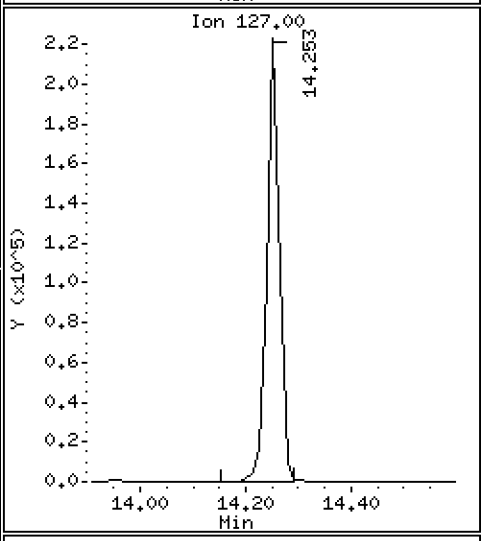
37 2-Chloronaphthalene

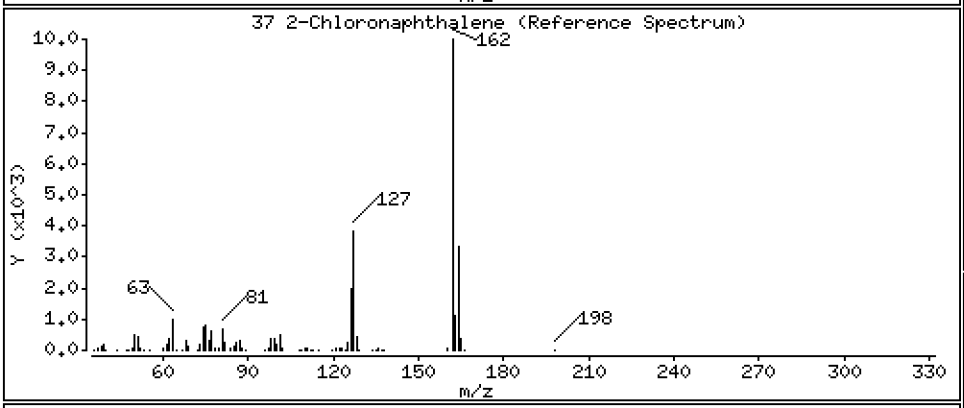
Concentration: 5.401 ug/mL

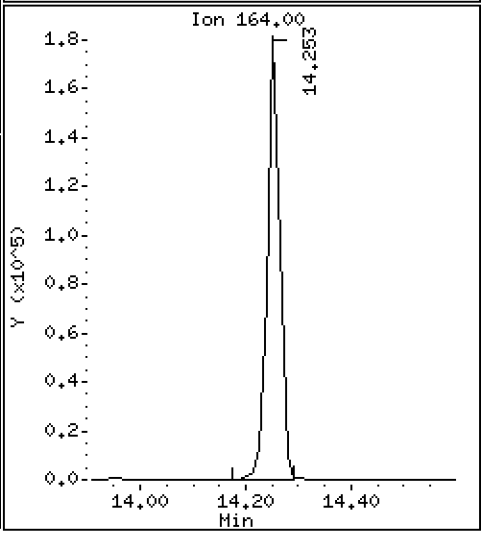


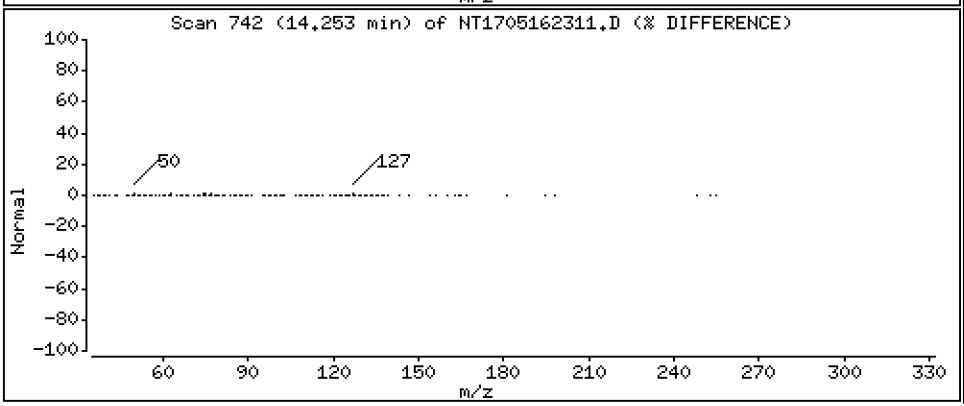












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

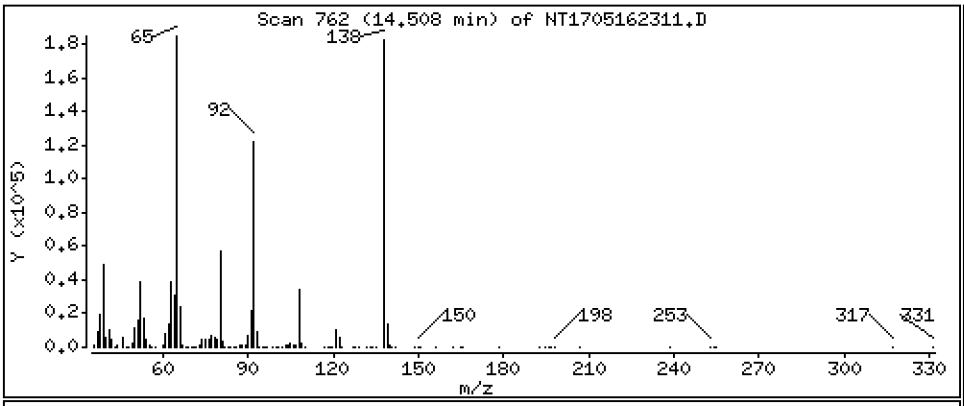
Operator: JGR

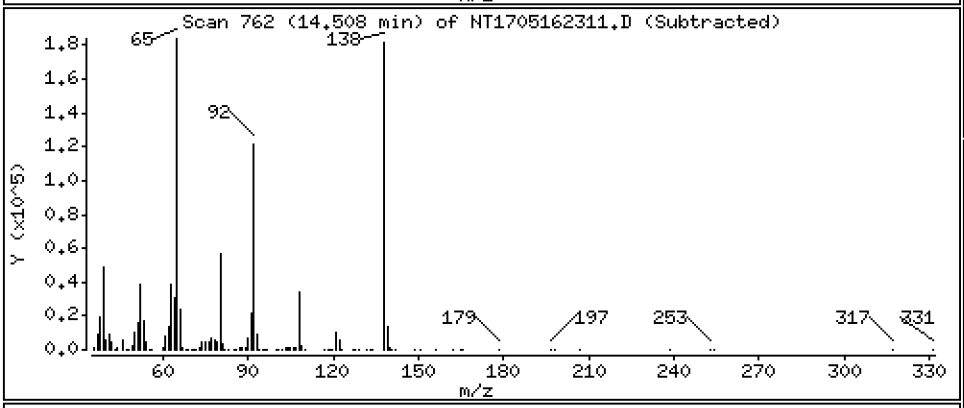
Column phase: ZB-5msi

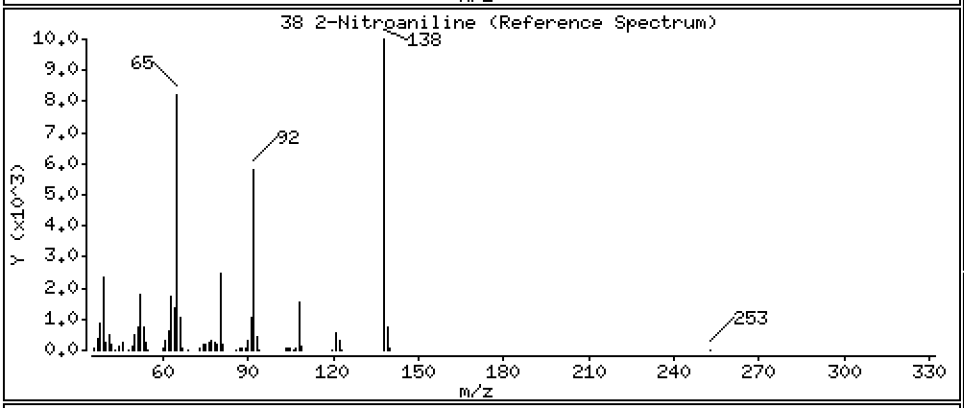
Column diameter: 0.25

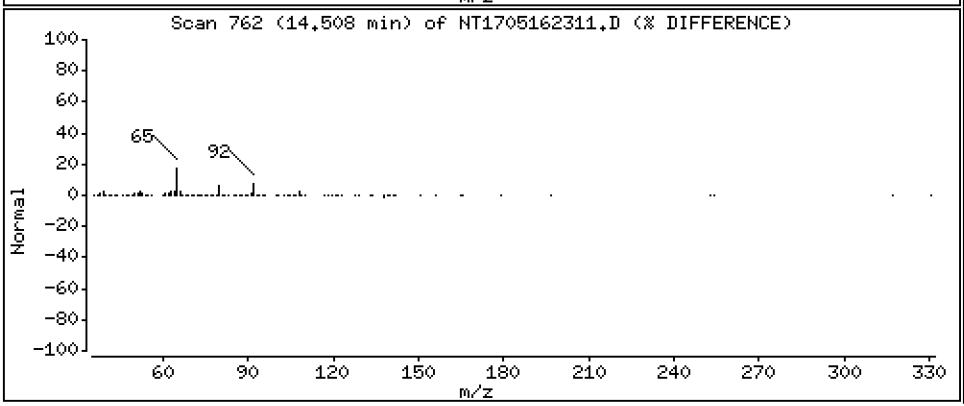
38 2-Nitroaniline

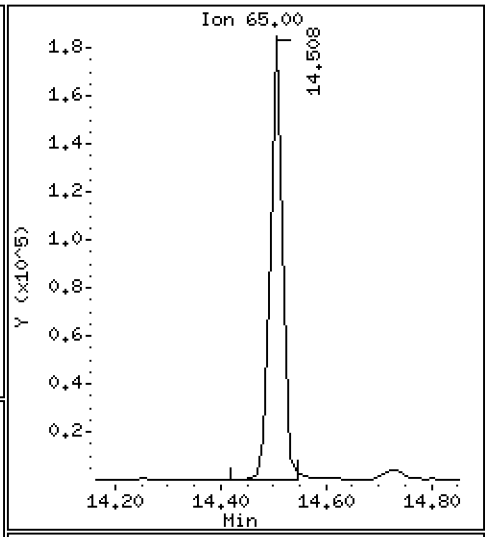
Concentration: 5.356 ug/mL

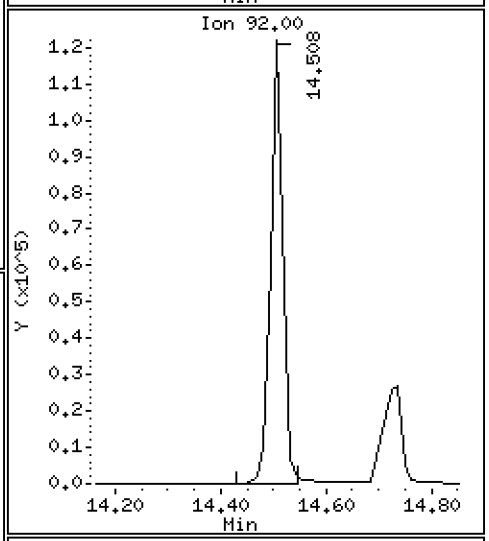


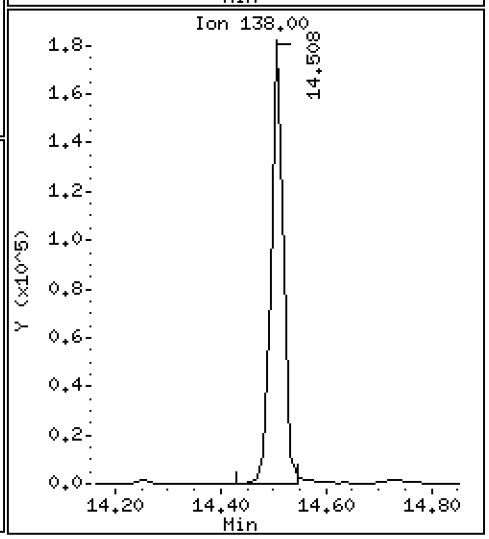












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

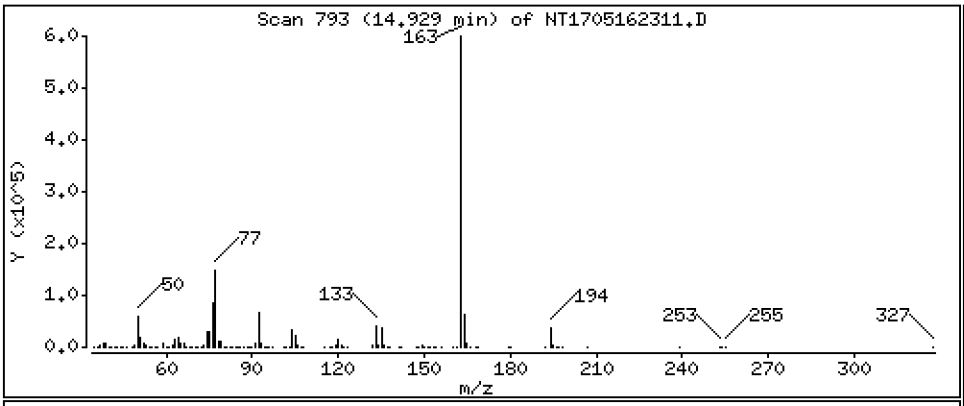
Operator: JGR

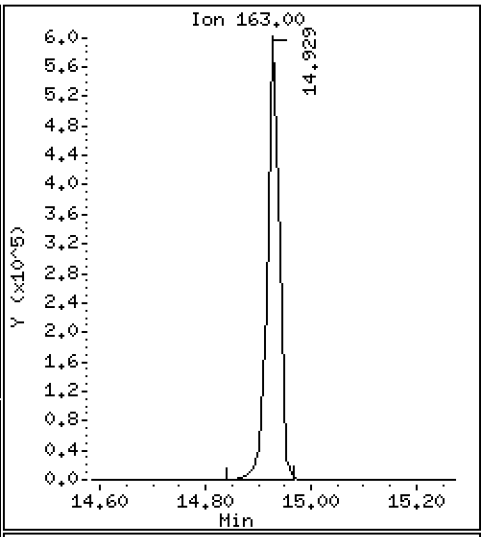
Column phase: ZB-5msi

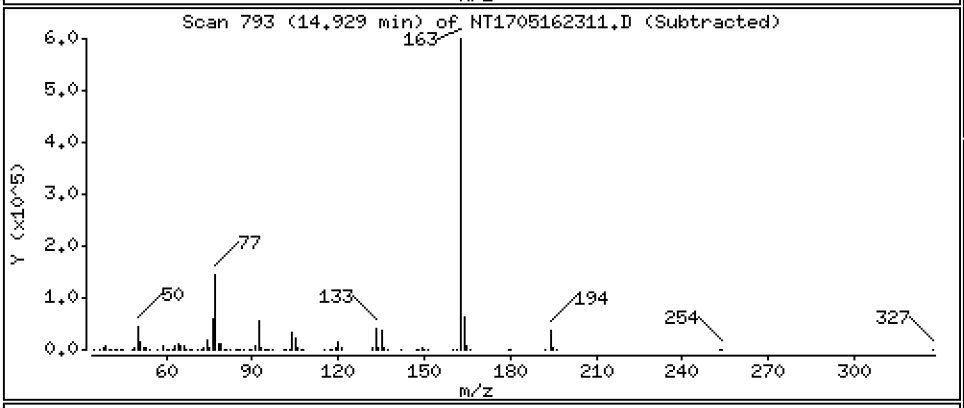
Column diameter: 0.25

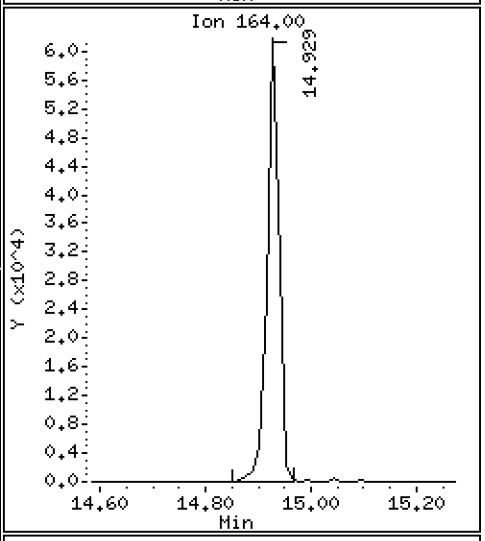
39 Dimethylphthalate

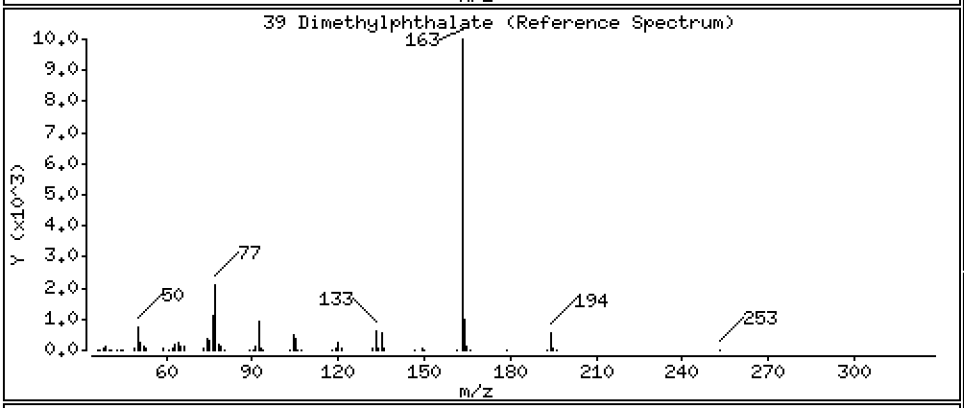
Concentration: 5.418 ug/mL

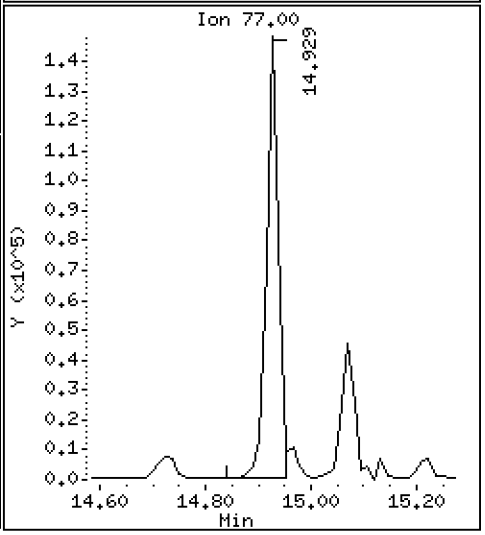


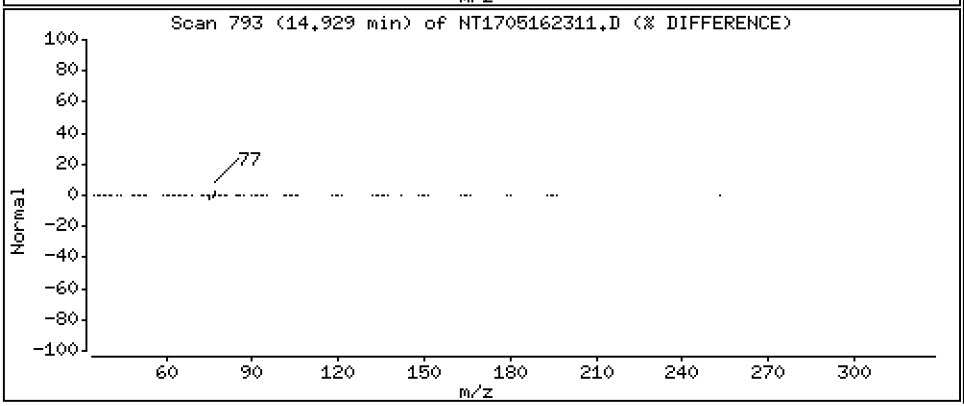












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

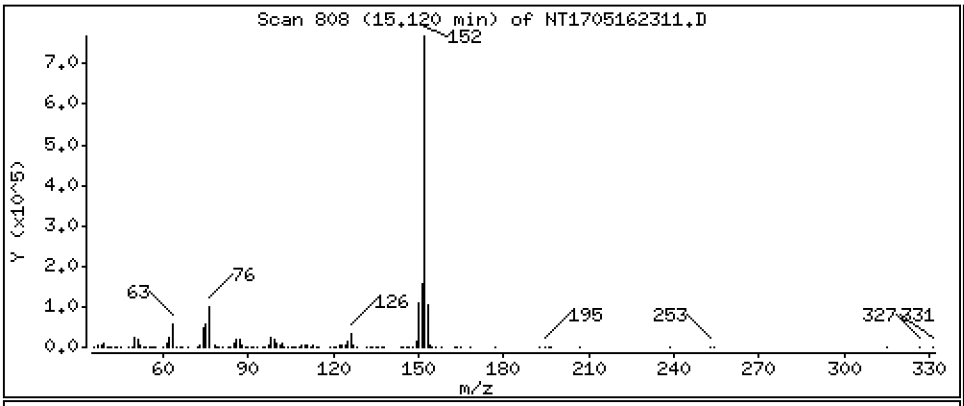
Operator: JGR

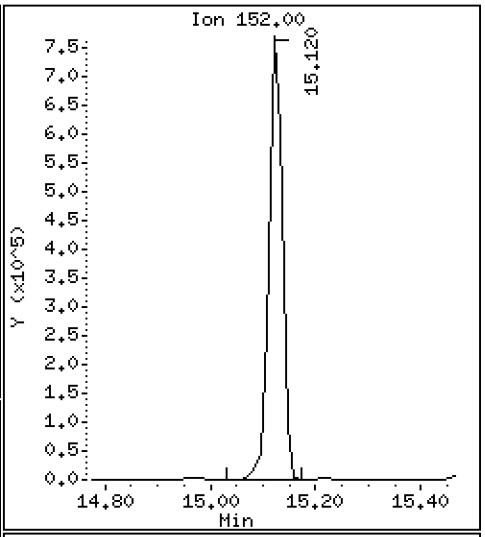
Column phase: ZB-5msi

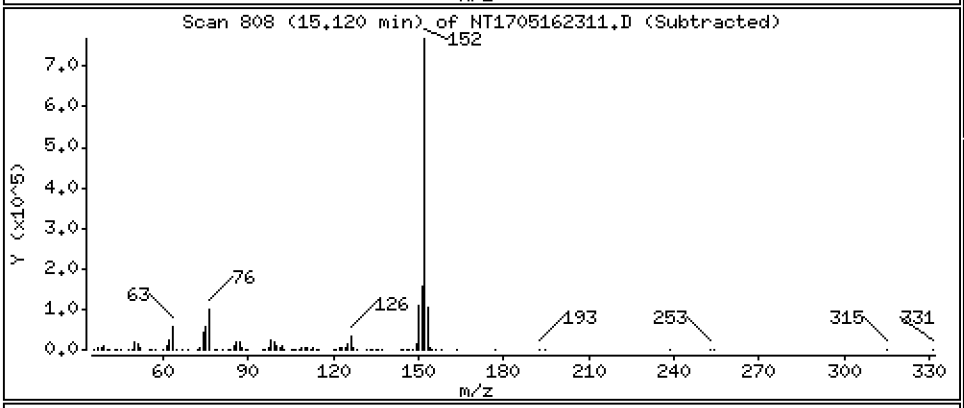
Column diameter: 0.25

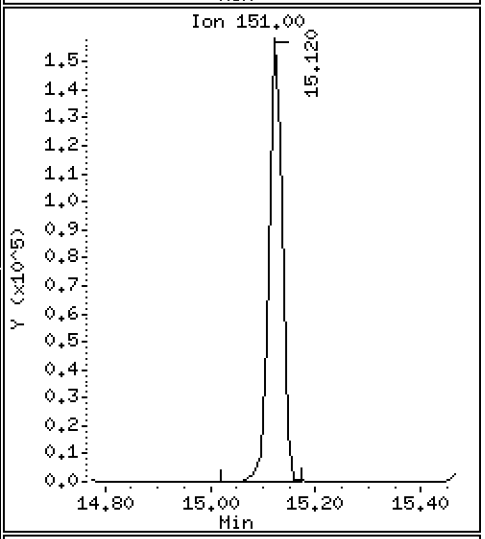
40 Acenaphthylene

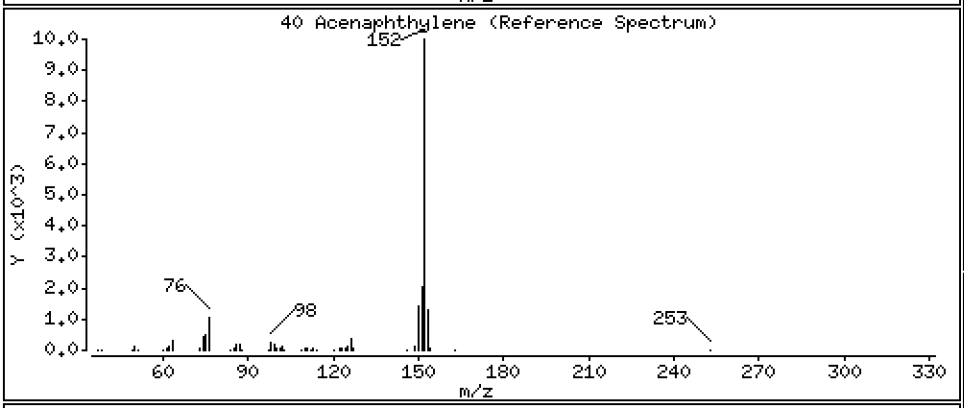
Concentration: 5.282 ug/mL

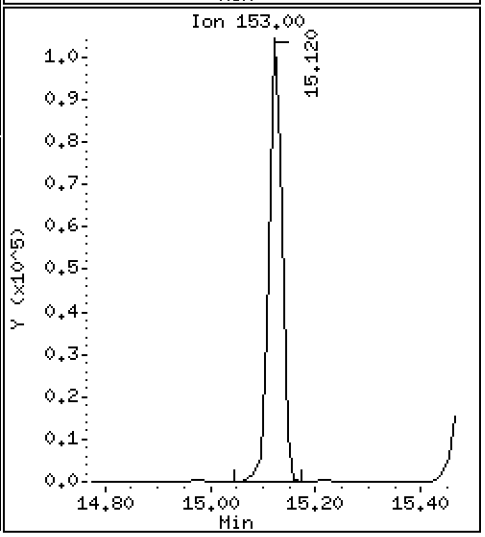


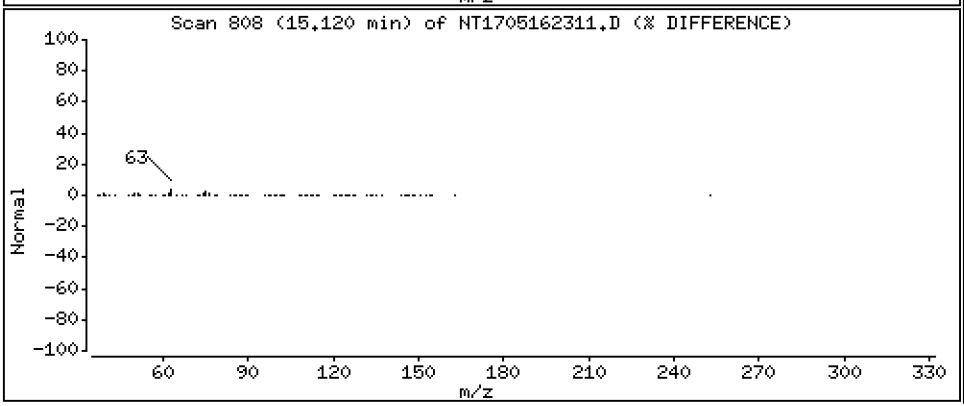












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

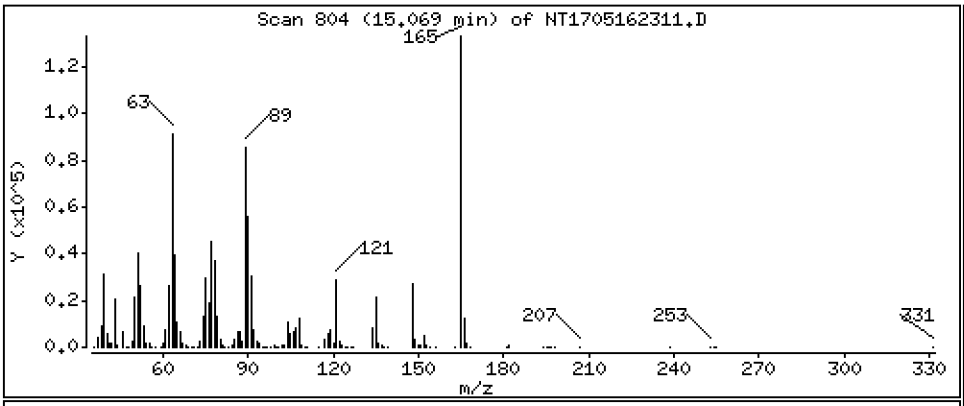
Operator: JGR

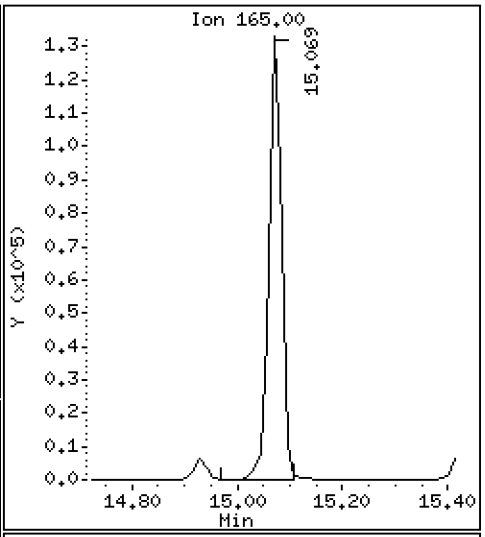
Column phase: ZB-5msi

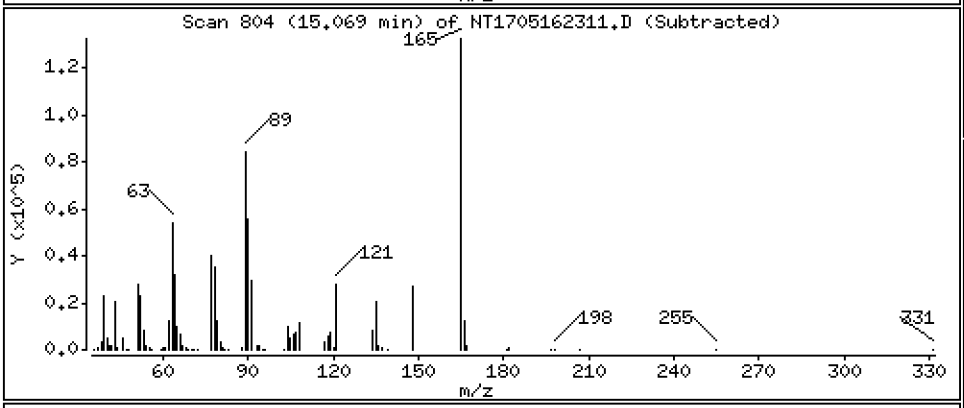
Column diameter: 0.25

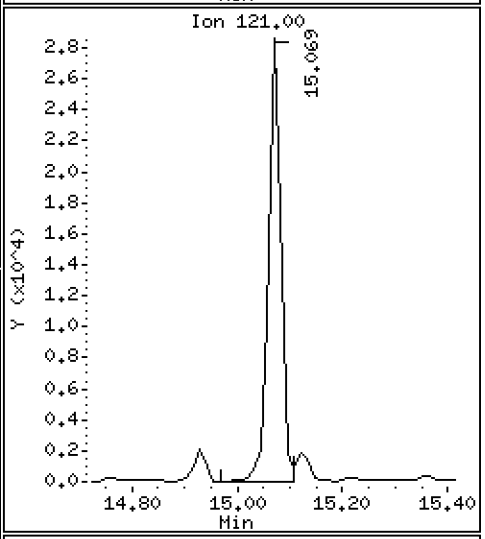
41 2,6-Dinitrotoluene

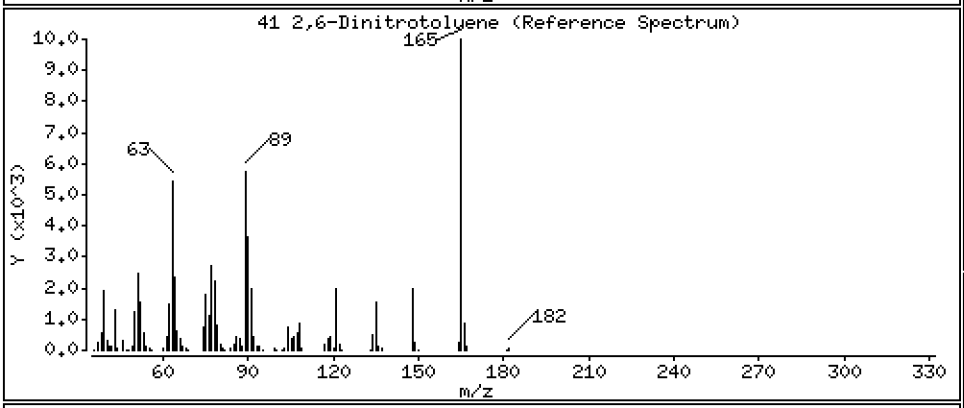
Concentration: 5.404 ug/mL

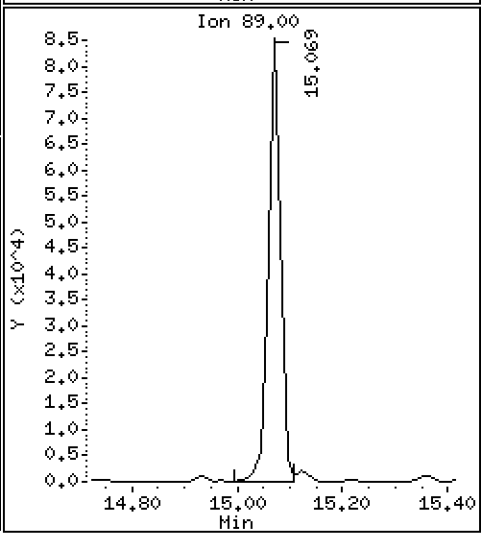


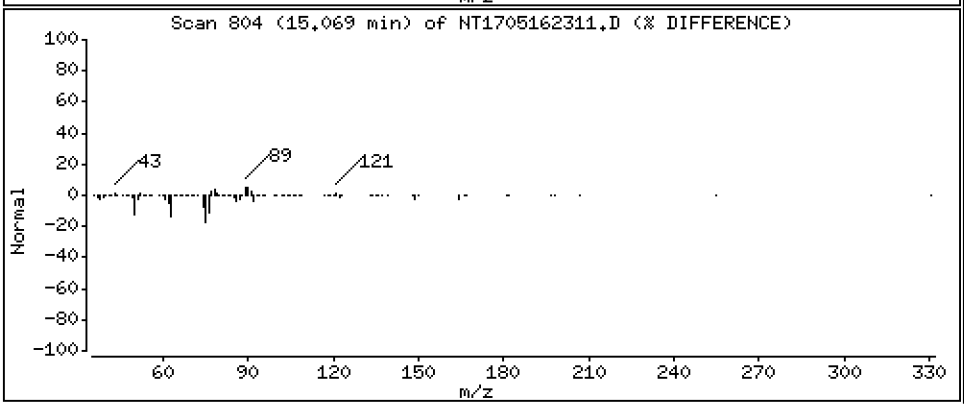












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

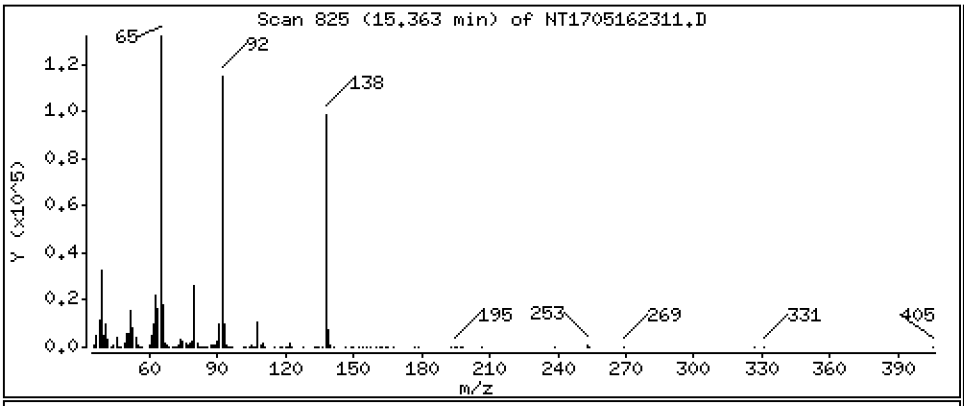
Operator: JGR

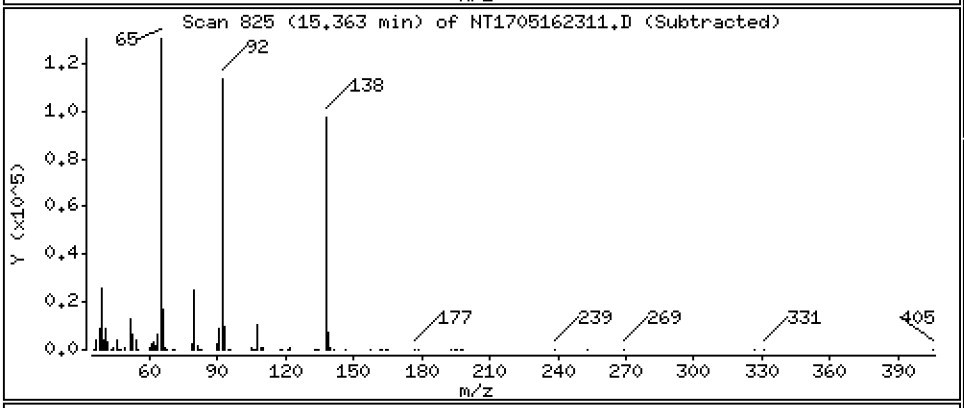
Column phase: ZB-5msi

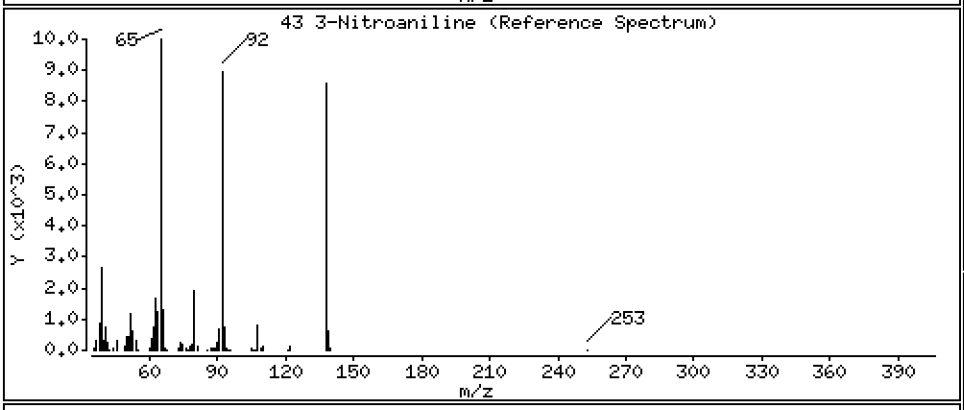
Column diameter: 0.25

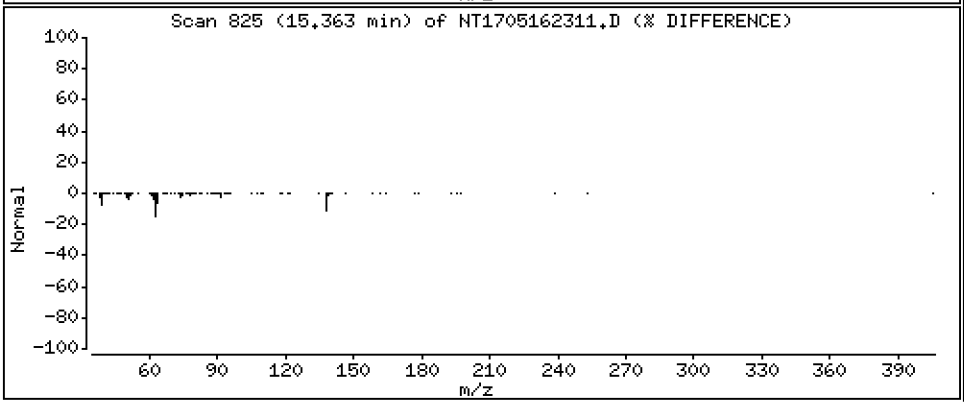
43 3-Nitroaniline

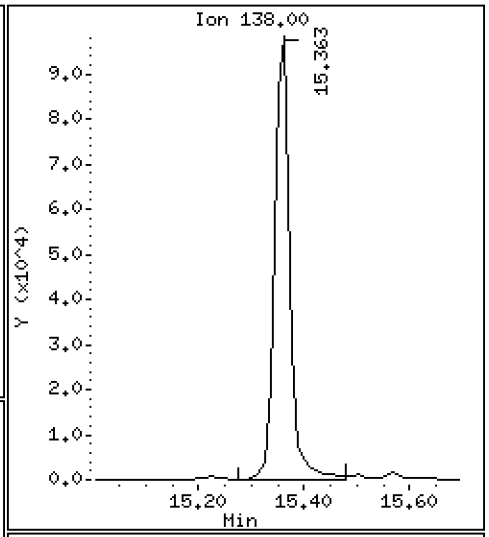
Concentration: 5.169 ug/mL

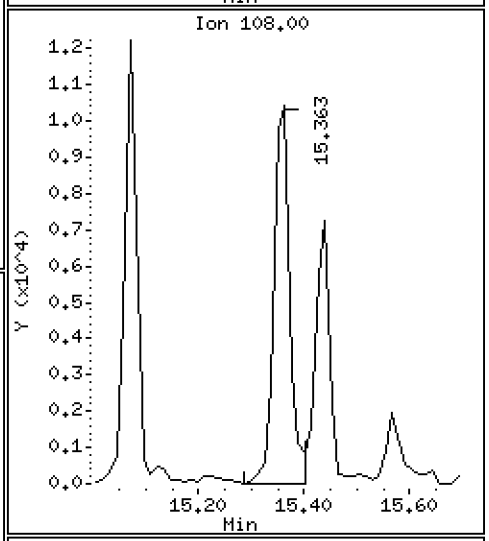


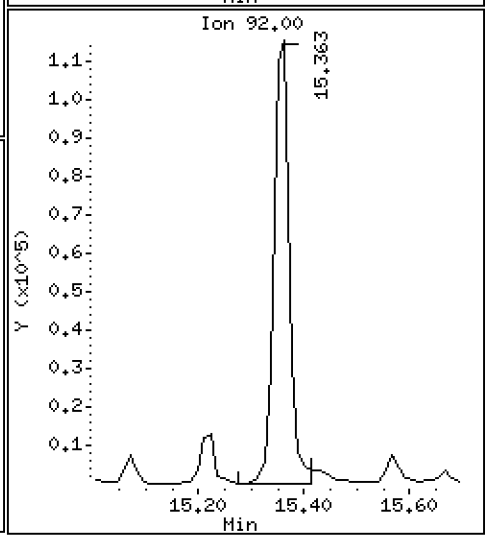












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

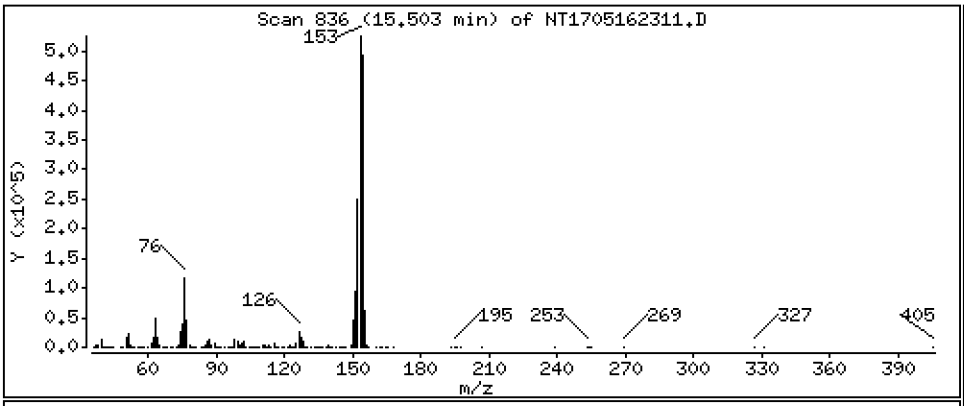
Operator: JGR

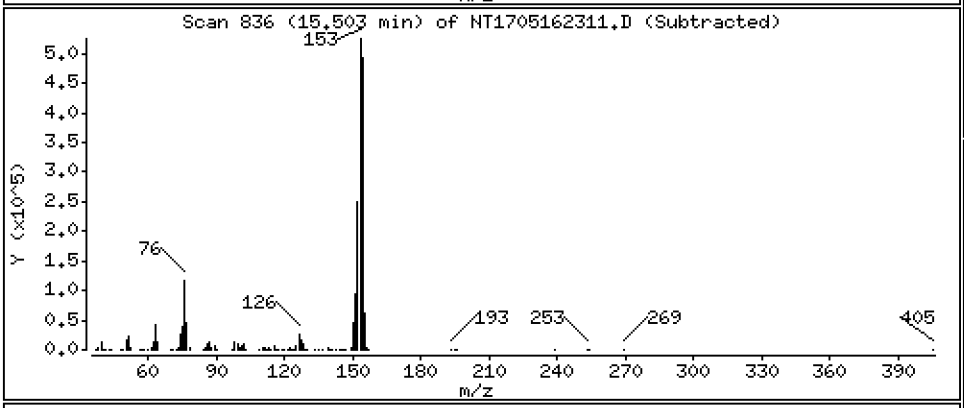
Column phase: ZB-5msi

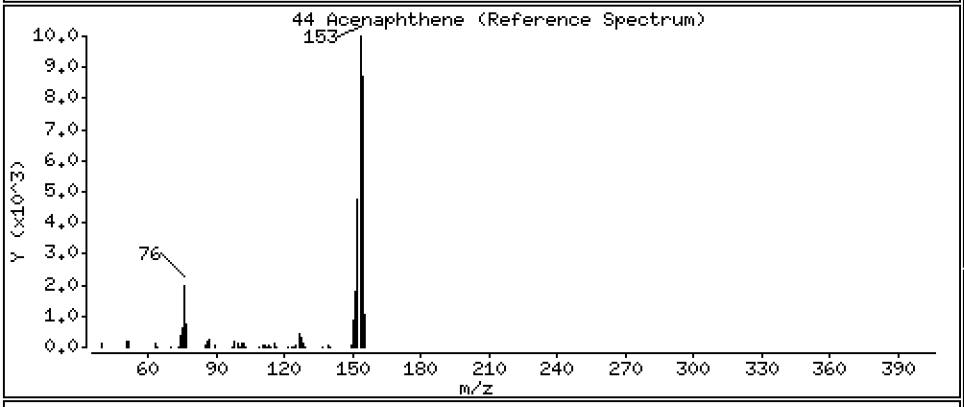
Column diameter: 0.25

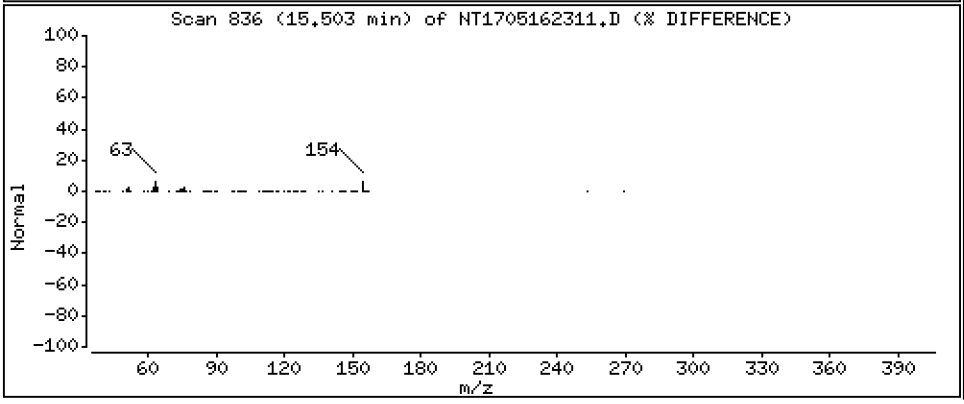
44 Acenaphthene

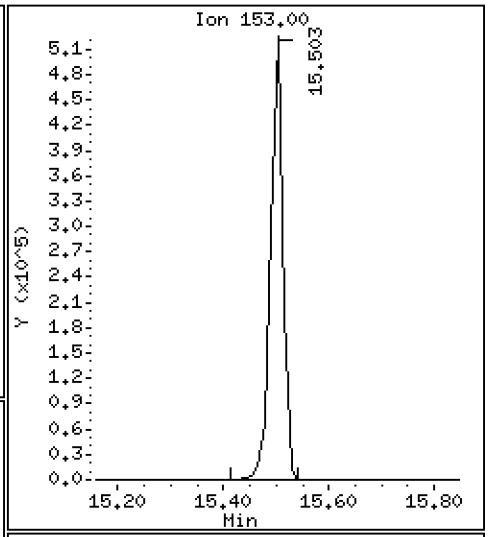
Concentration: 5.283 ug/mL

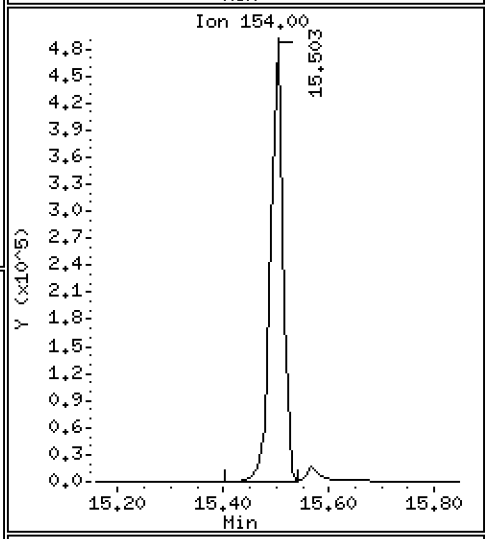


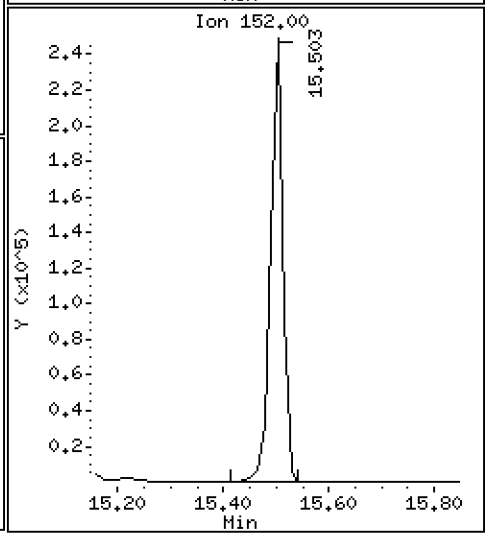












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

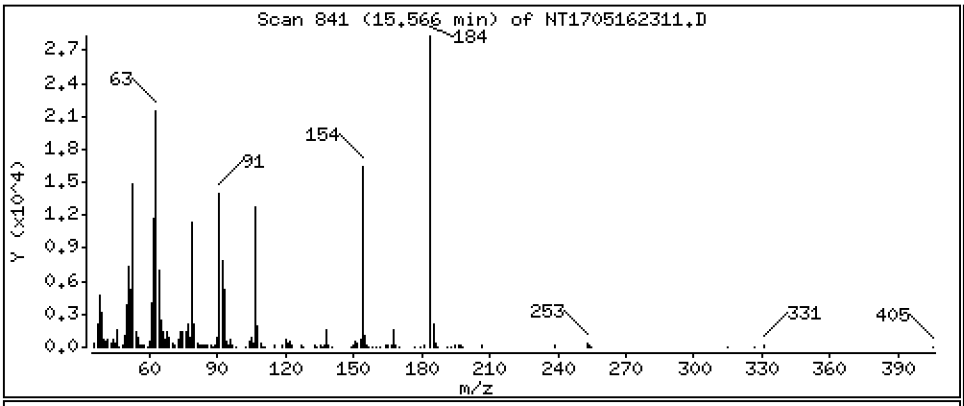
Operator: JGR

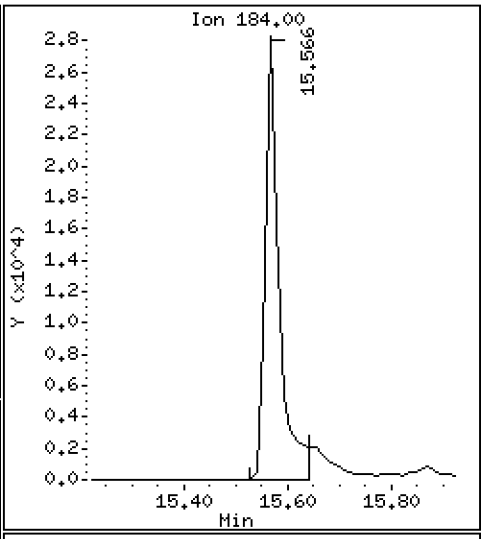
Column phase: ZB-5msi

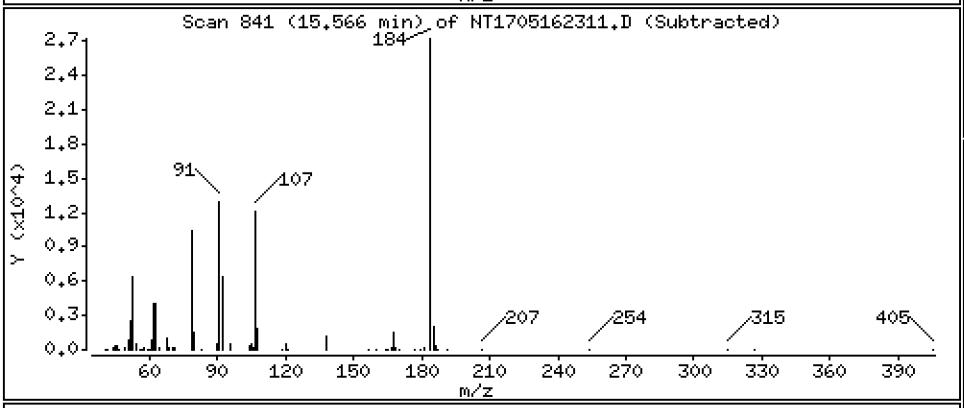
Column diameter: 0.25

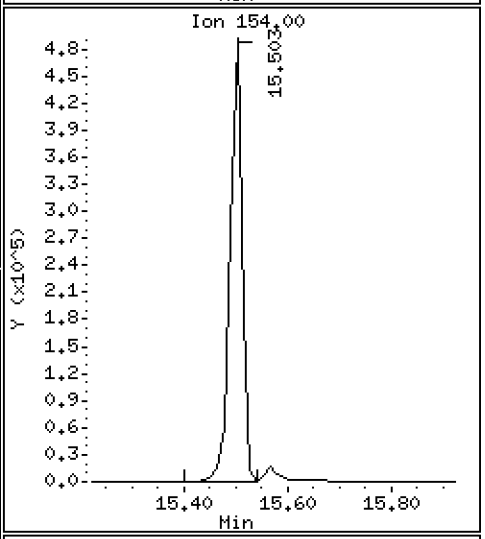
45 2,4-Dinitrophenol

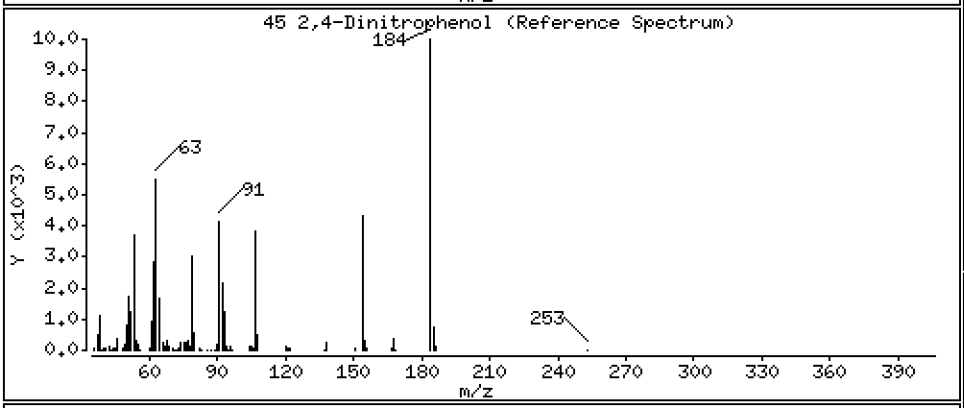
Concentration: 2.119 ug/mL

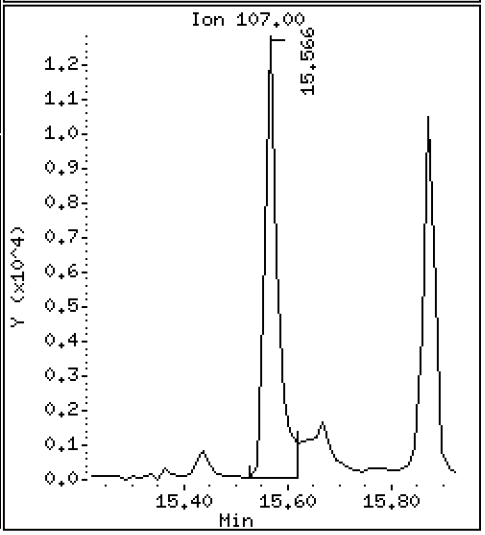


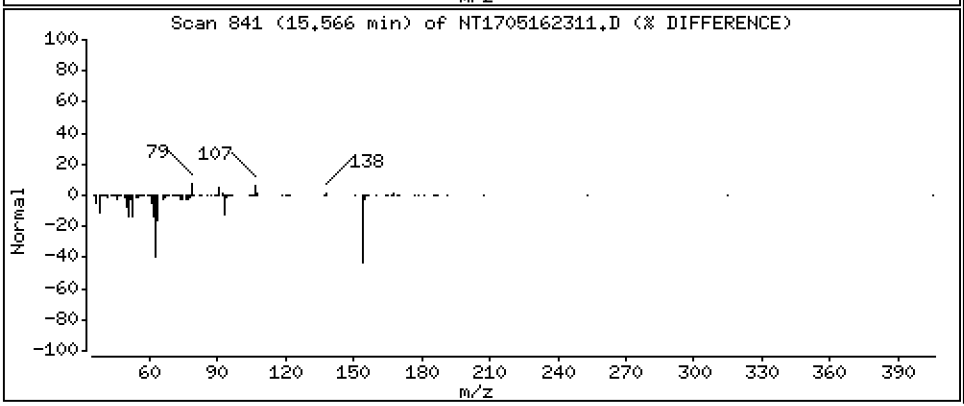












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

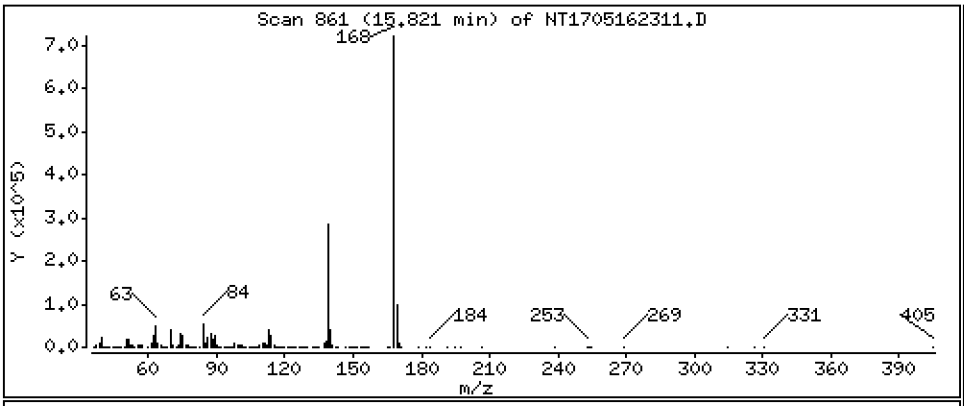
Operator: JGR

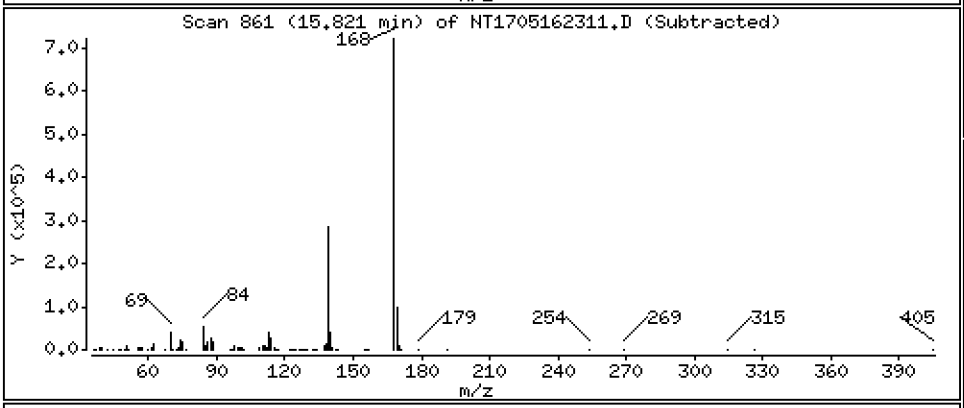
Column phase: ZB-5msi

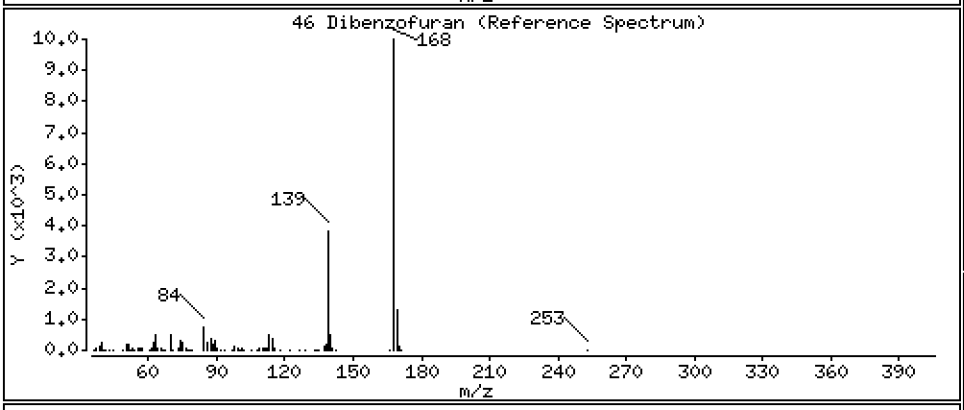
Column diameter: 0.25

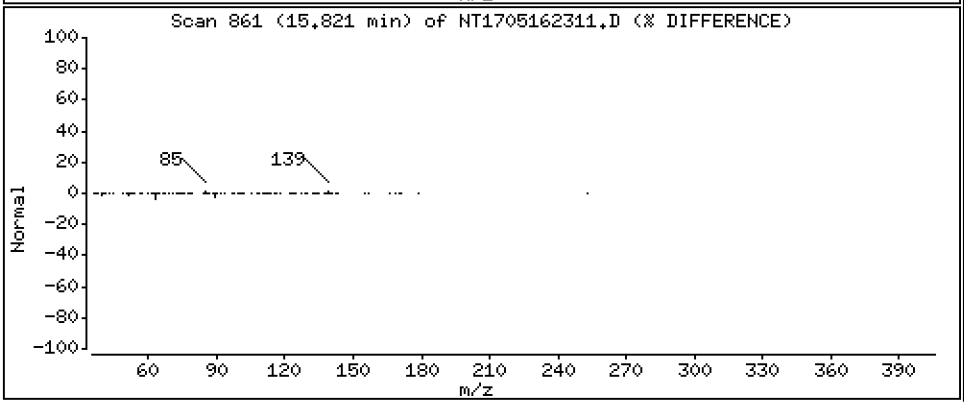
46 Dibenzofuran

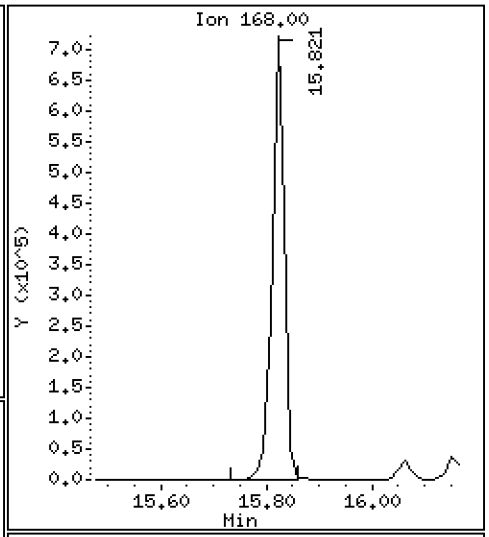
Concentration: 5.163 ug/mL

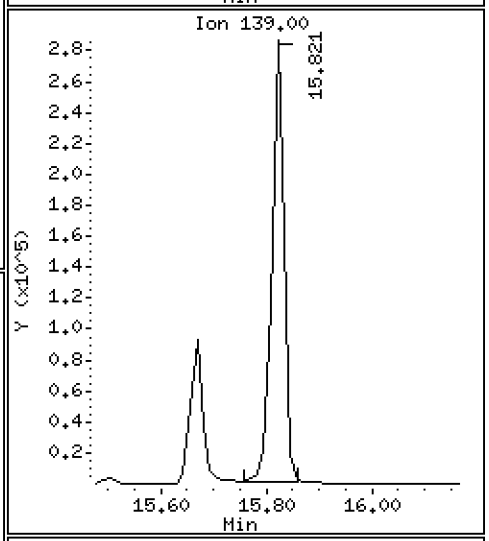


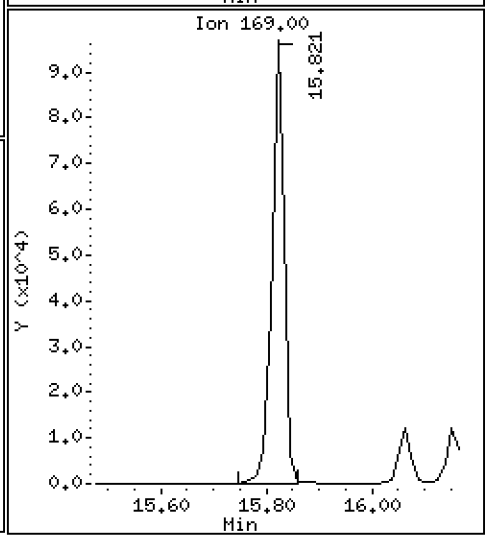












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

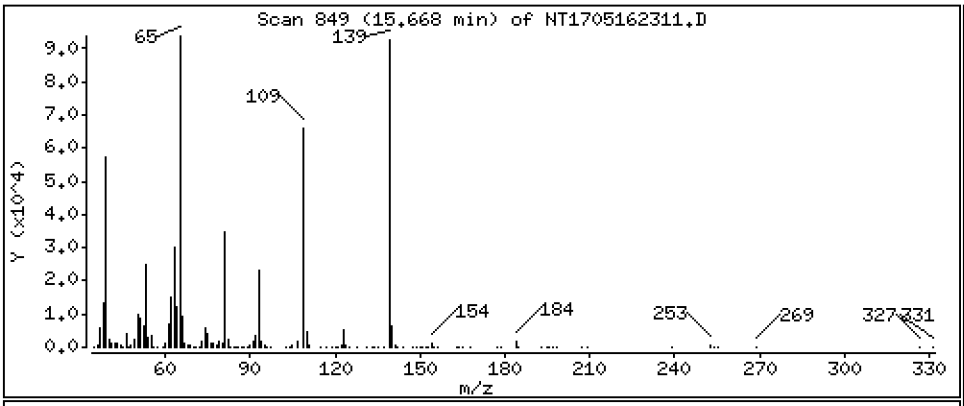
Operator: JGR

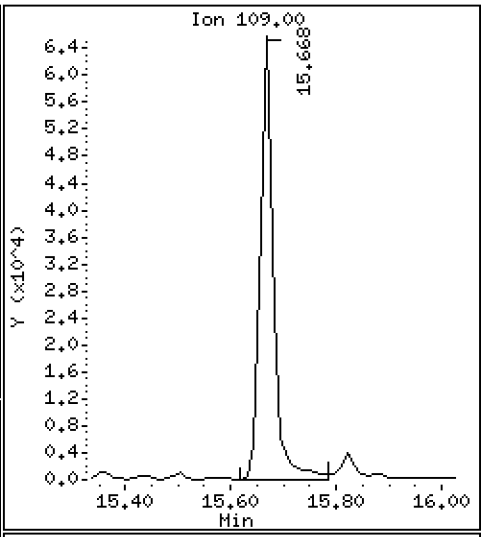
Column phase: ZB-5msi

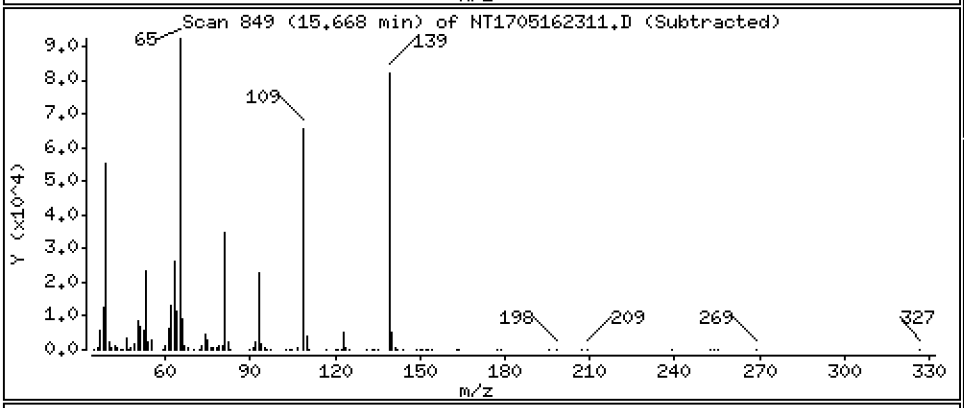
Column diameter: 0.25

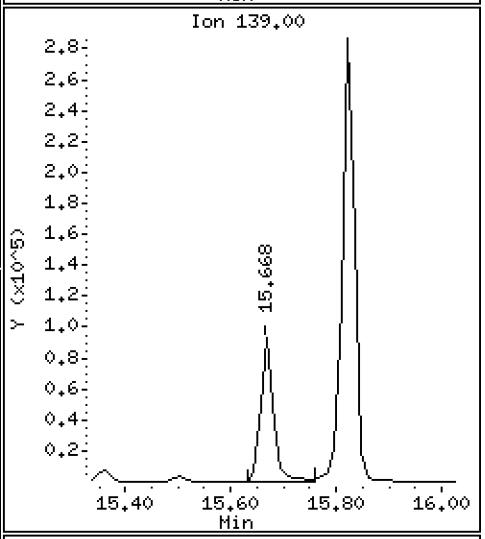
47 4-Nitrophenol

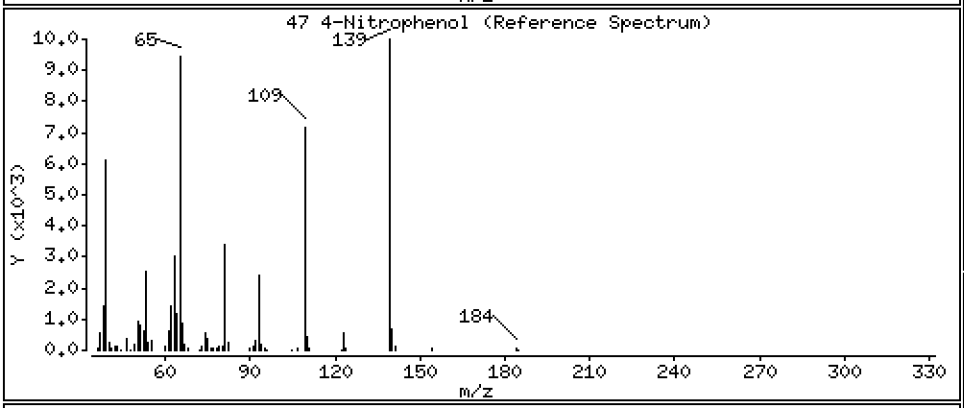
Concentration: 4.504 ug/mL

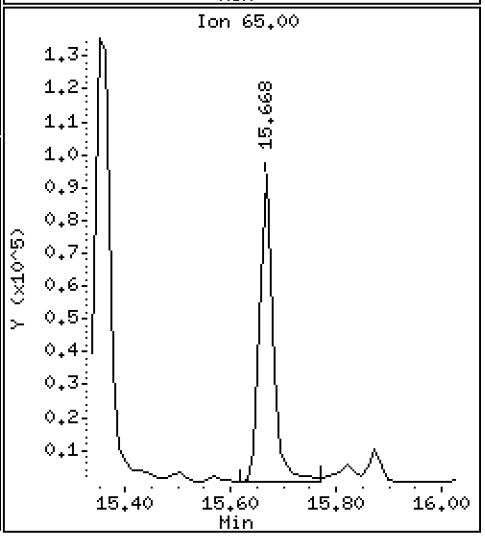


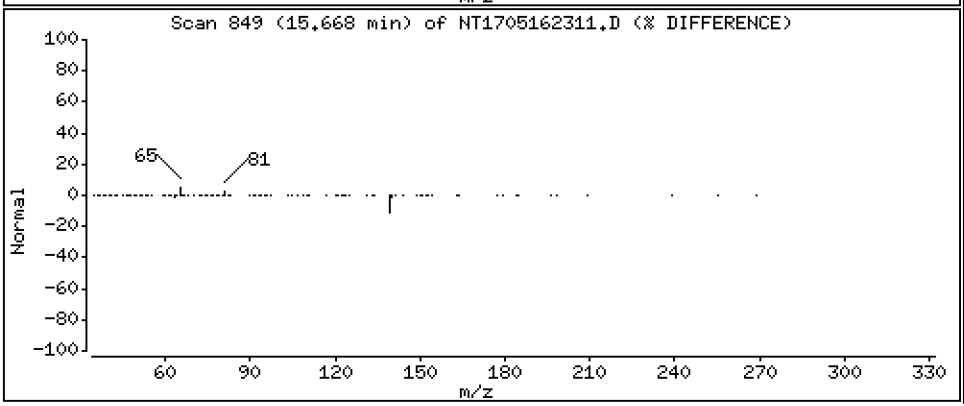












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

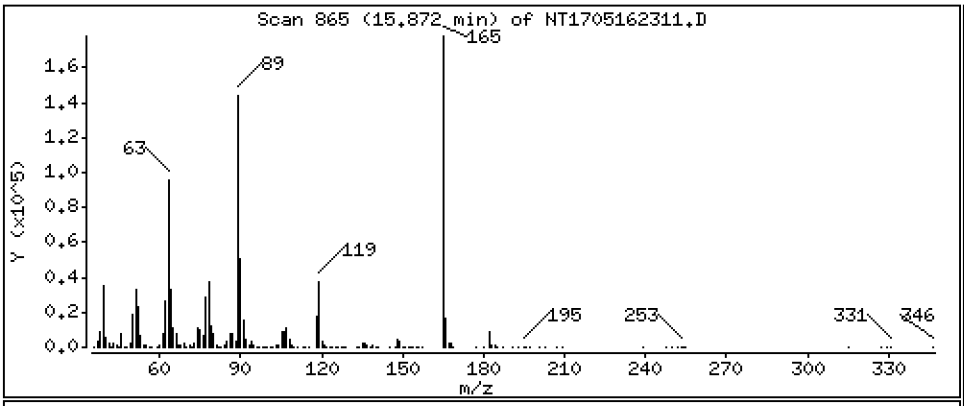
Operator: JGR

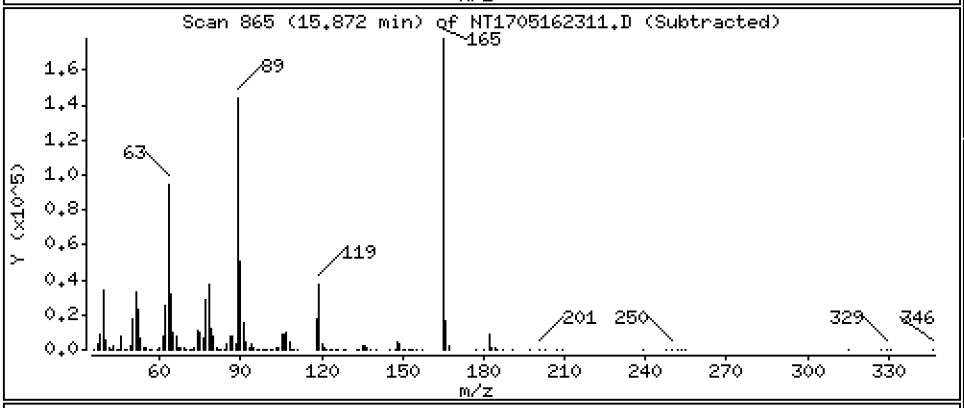
Column phase: ZB-5msi

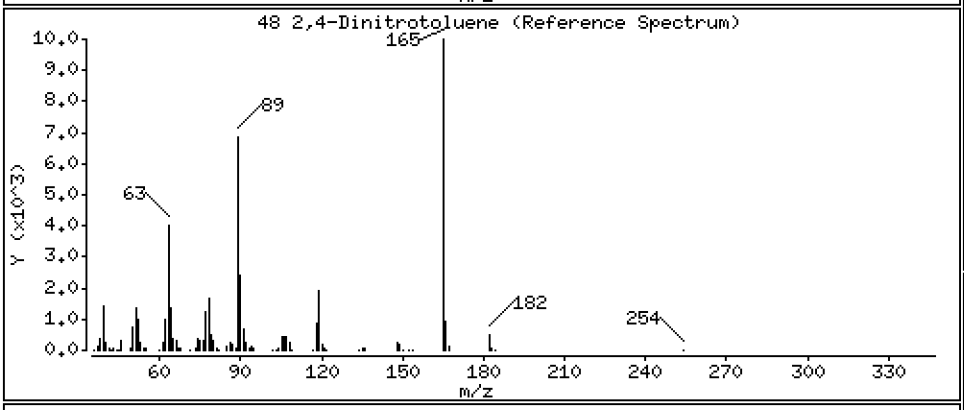
Column diameter: 0.25

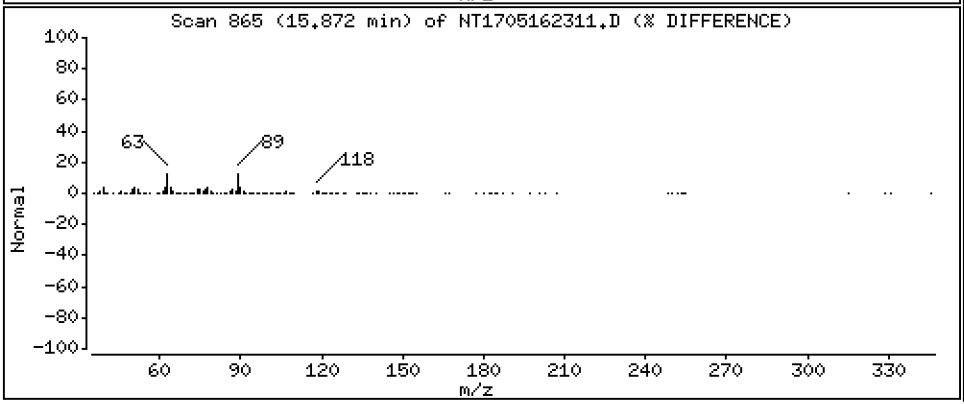
48 2,4-Dinitrotoluene

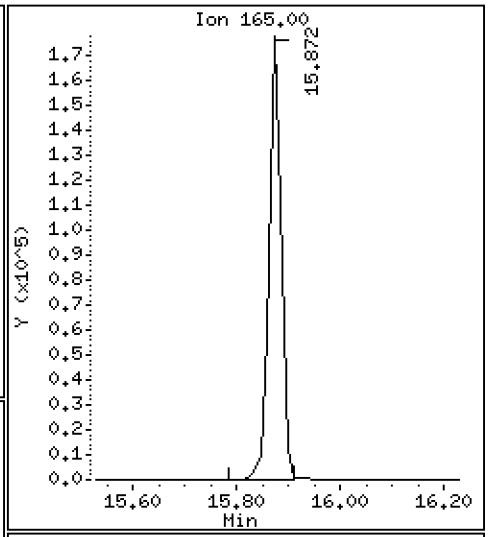
Concentration: 5.269 ug/mL

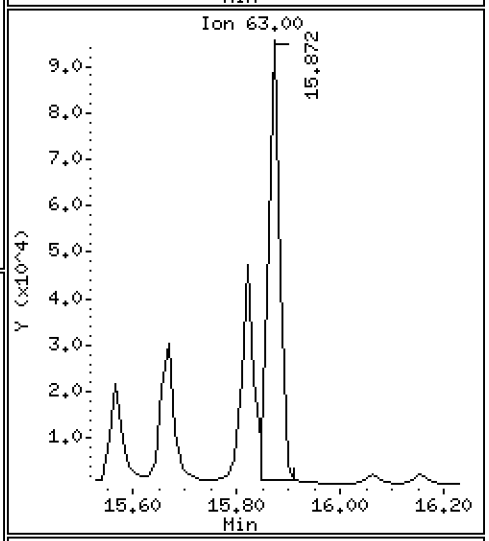


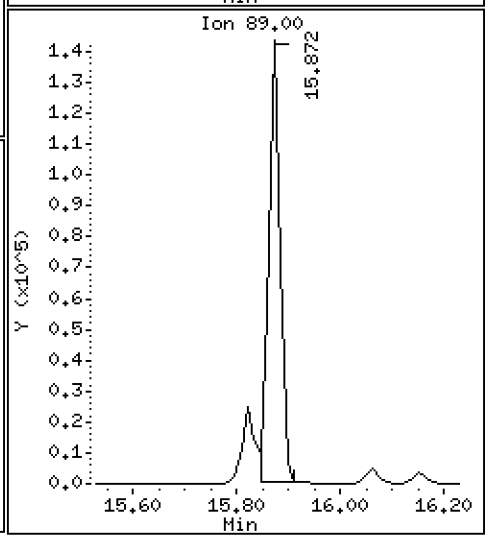












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

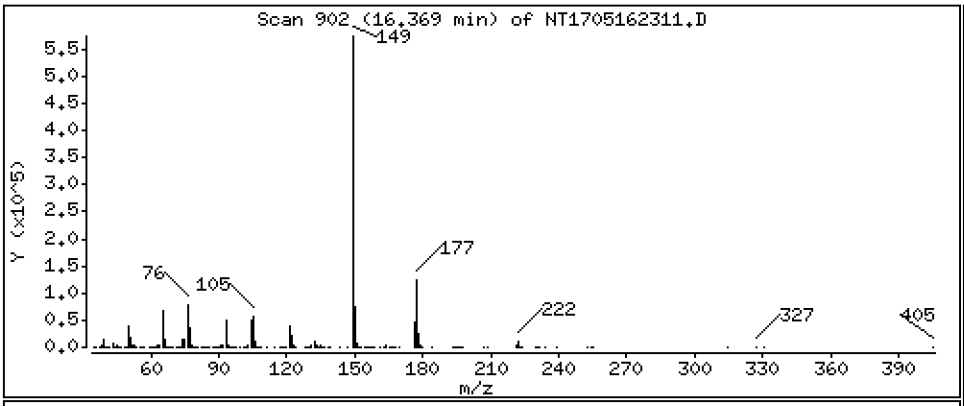
Operator: JGR

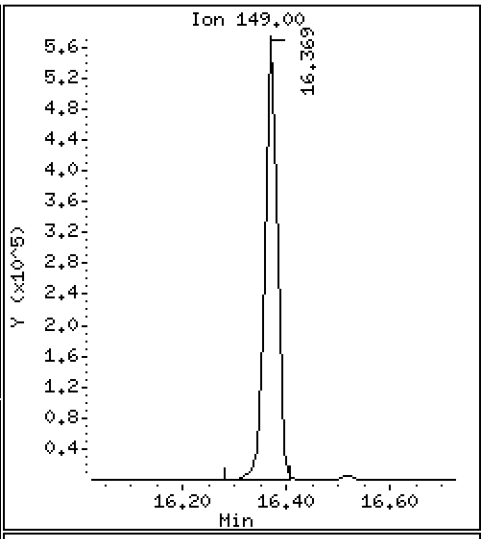
Column phase: ZB-5msi

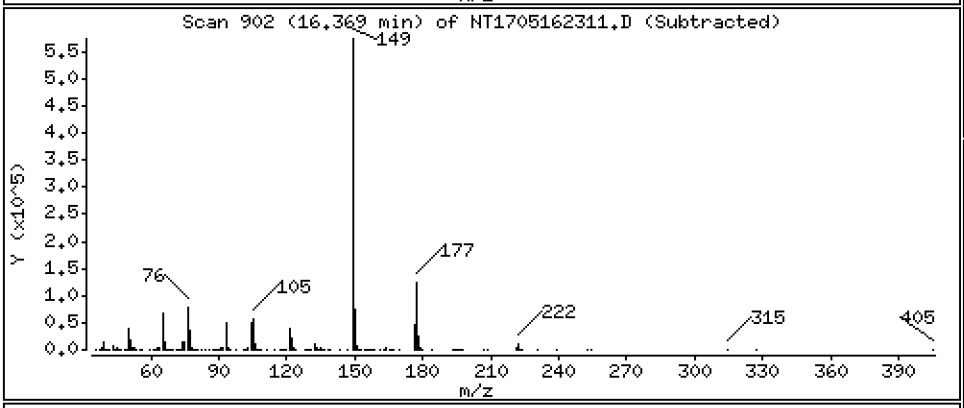
Column diameter: 0.25

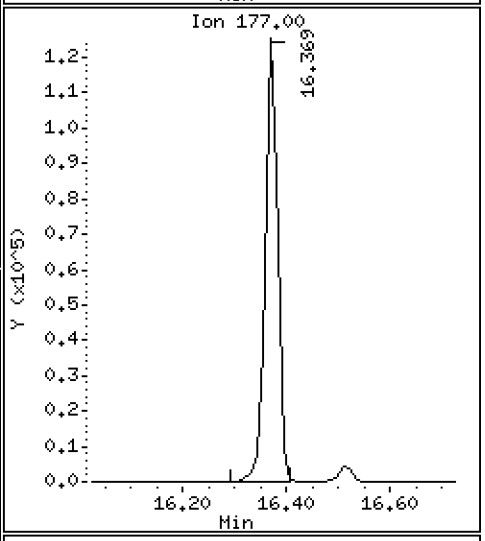
50 Diethylphthalate

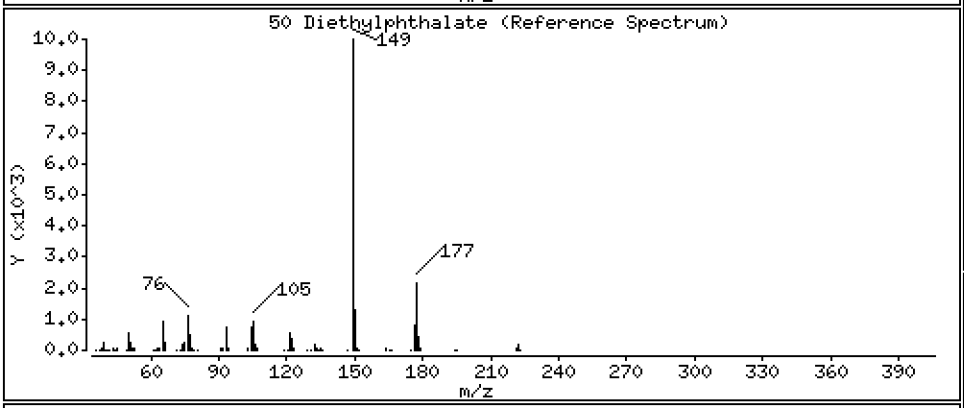
Concentration: 5.494 ug/mL

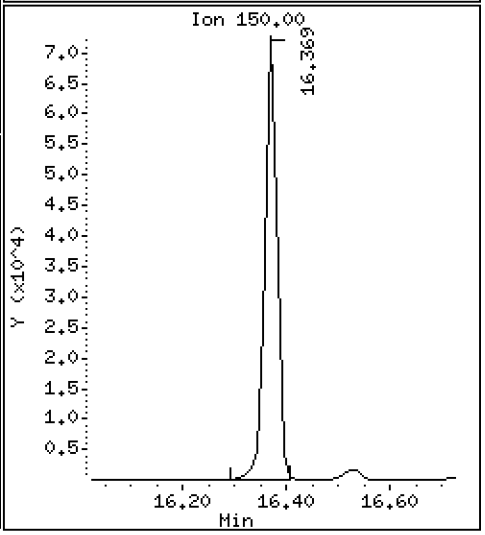


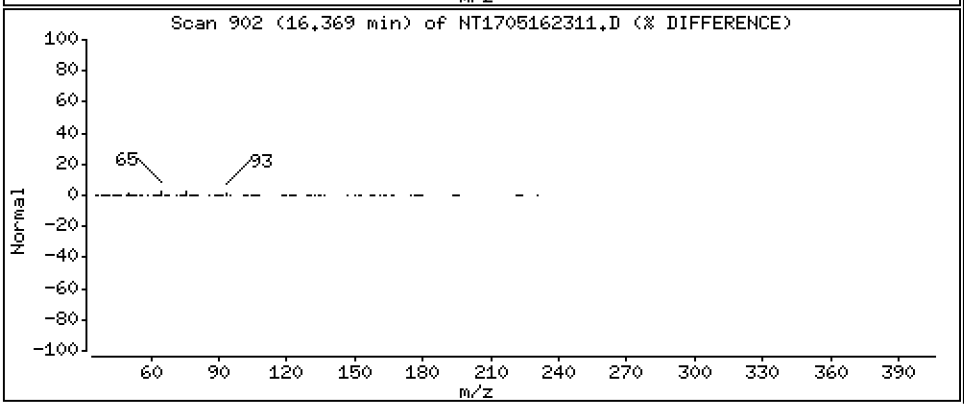












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

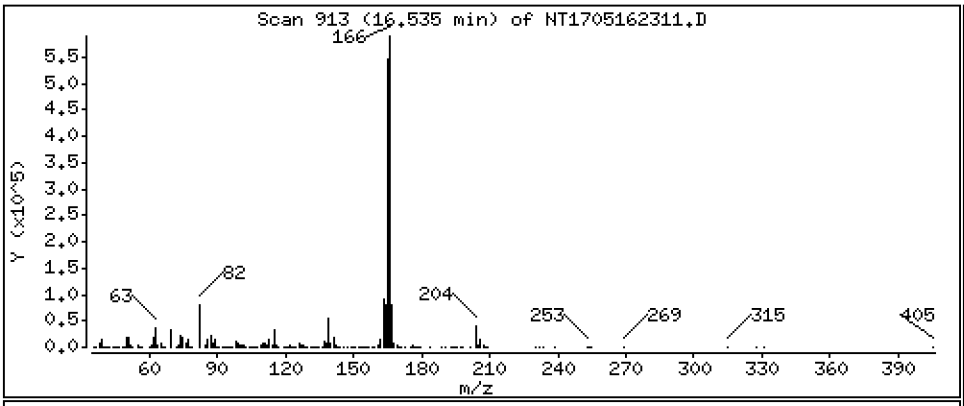
Operator: JGR

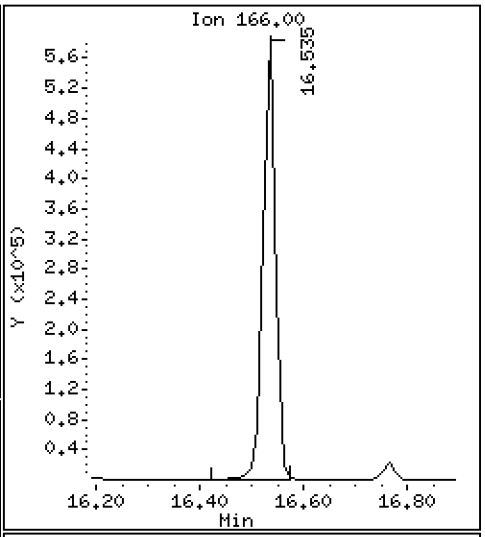
Column phase: ZB-5msi

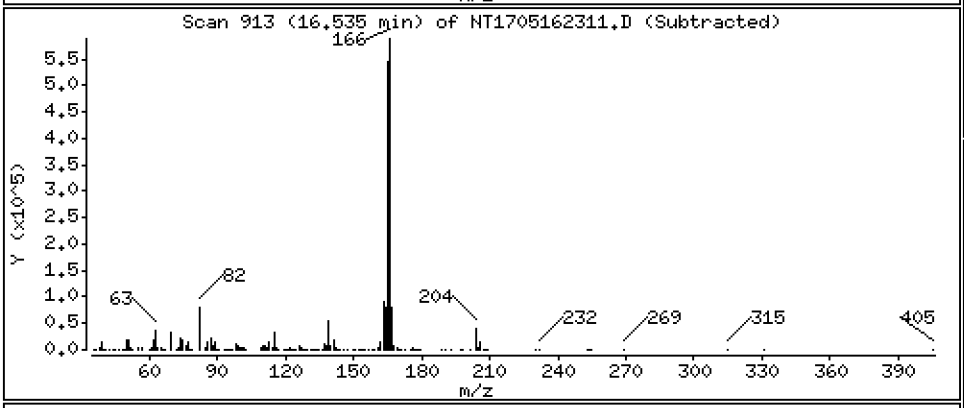
Column diameter: 0.25

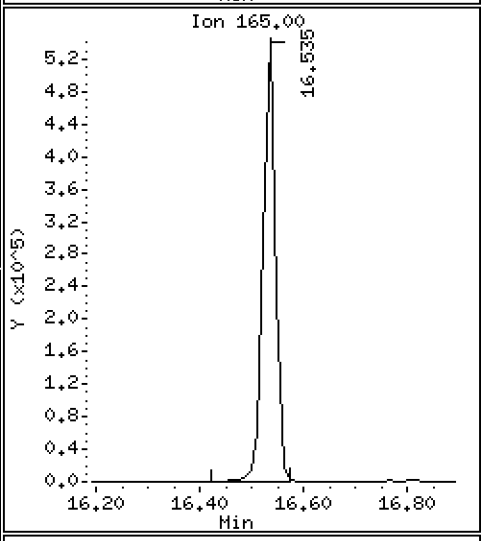
49 Fluorene

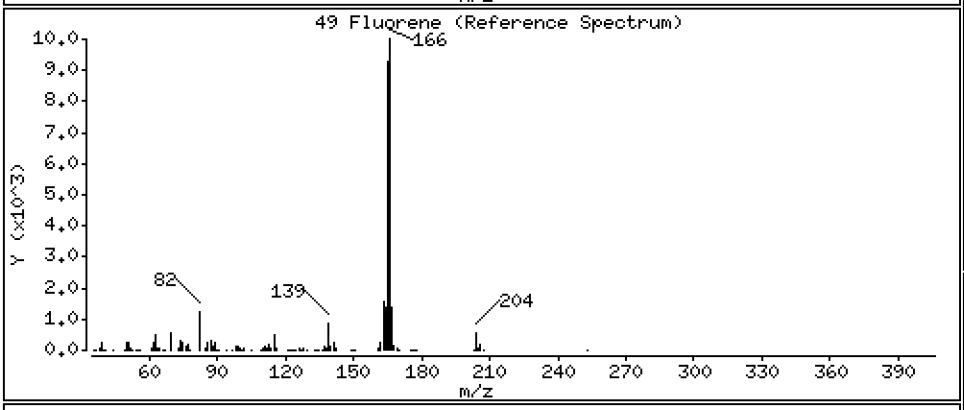
Concentration: 5.398 ug/mL

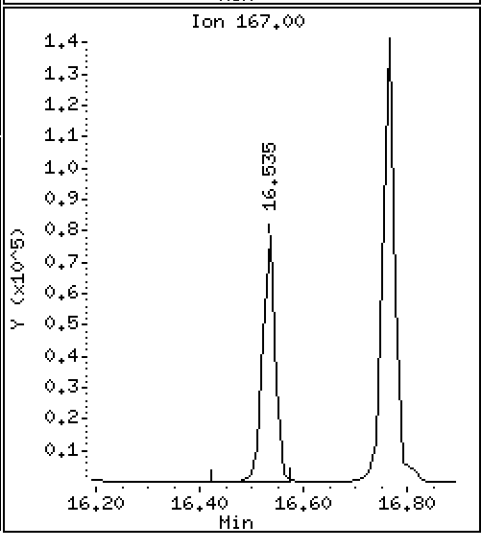


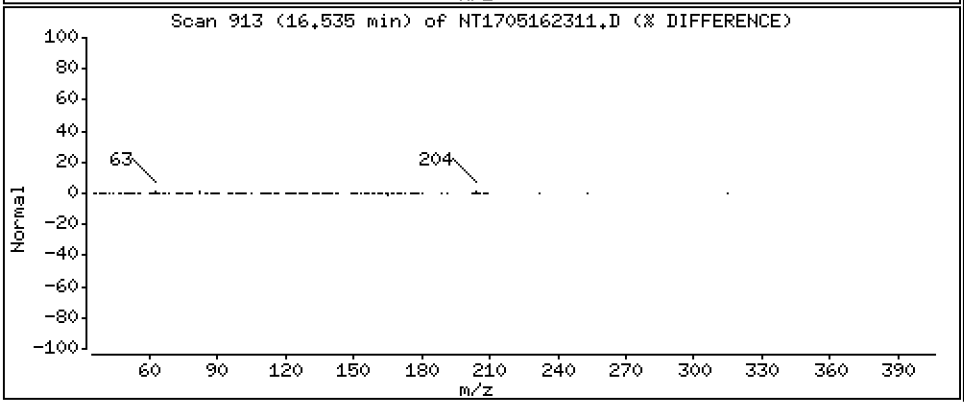












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

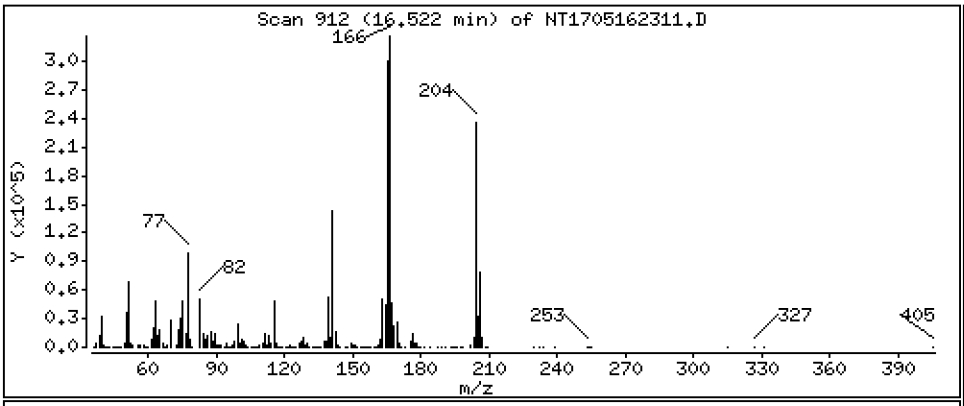
Operator: JGR

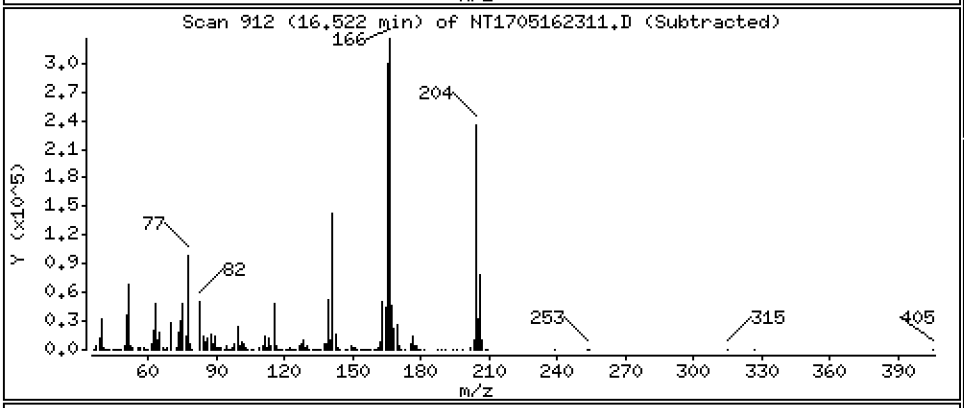
Column phase: ZB-5msi

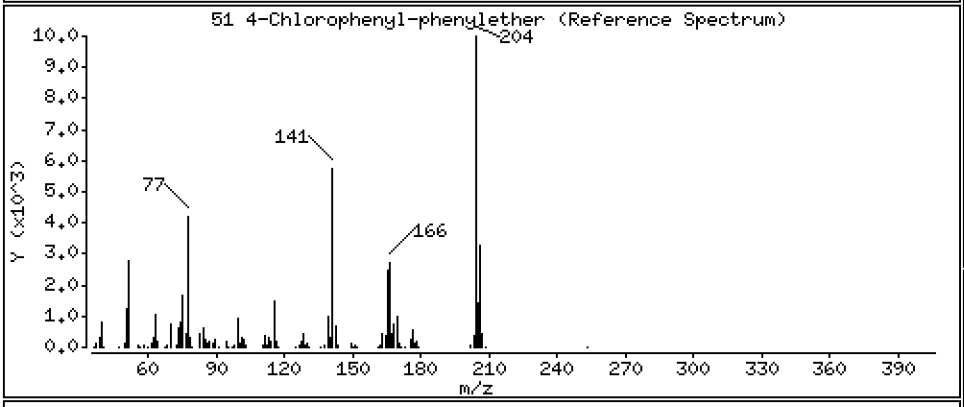
Column diameter: 0.25

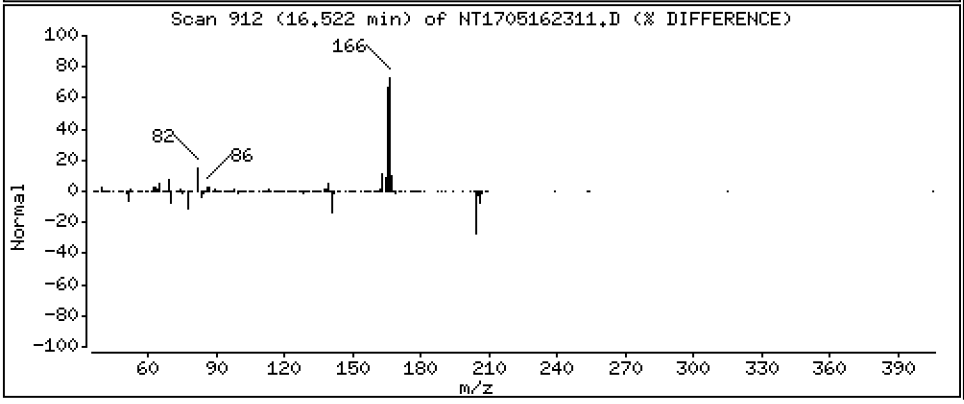
51 4-Chlorophenyl-phenylether

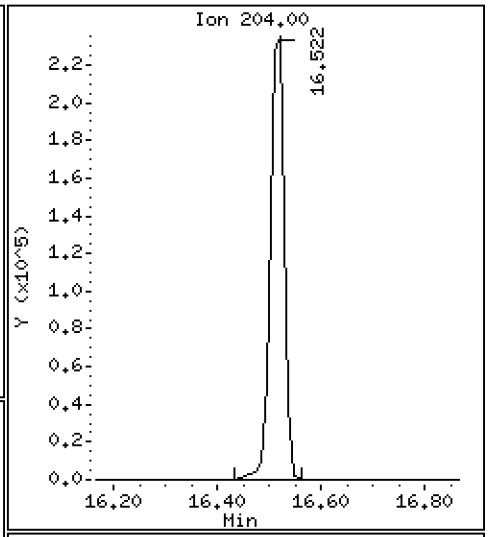
Concentration: 5.462 ug/mL

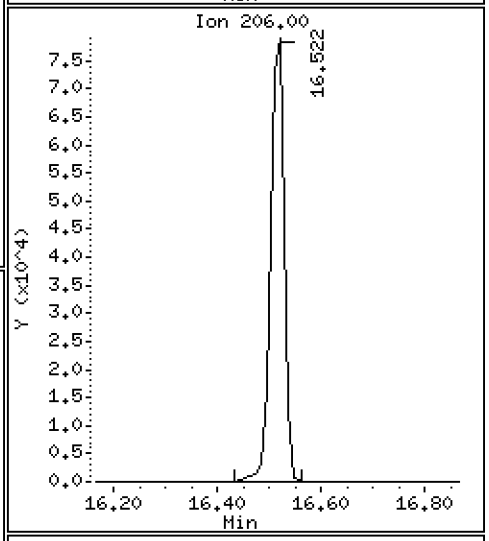


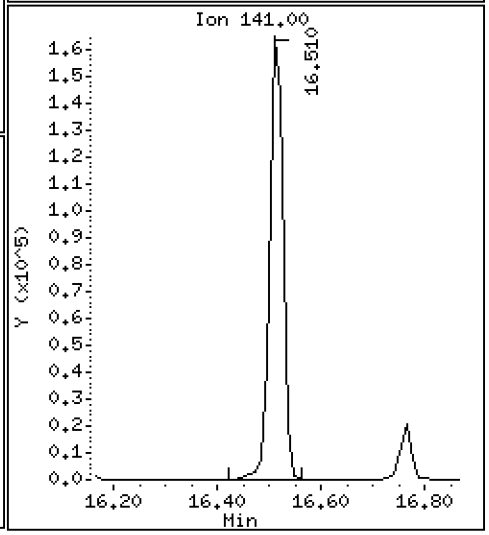












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

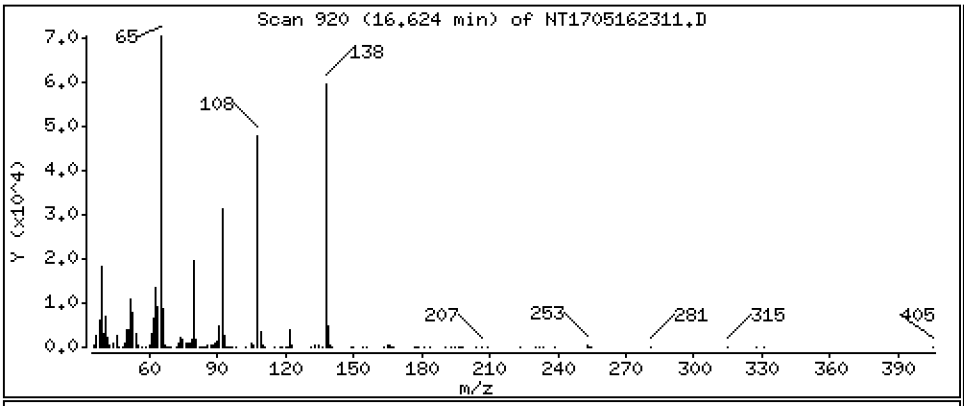
Operator: JGR

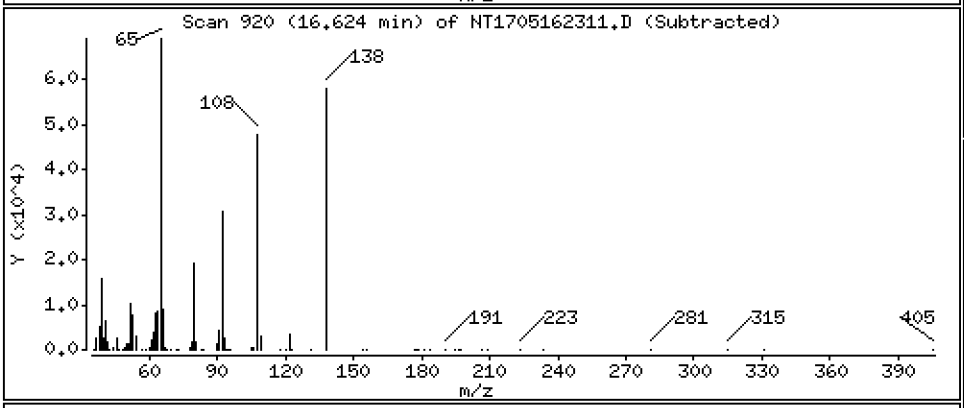
Column phase: ZB-5msi

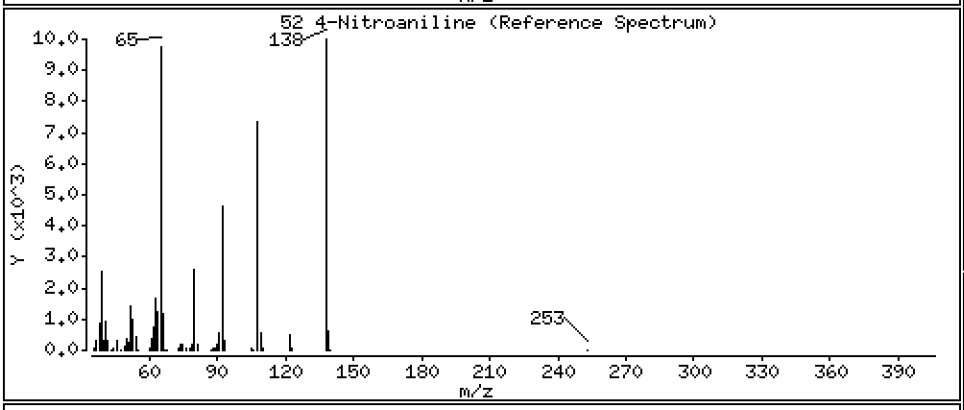
Column diameter: 0.25

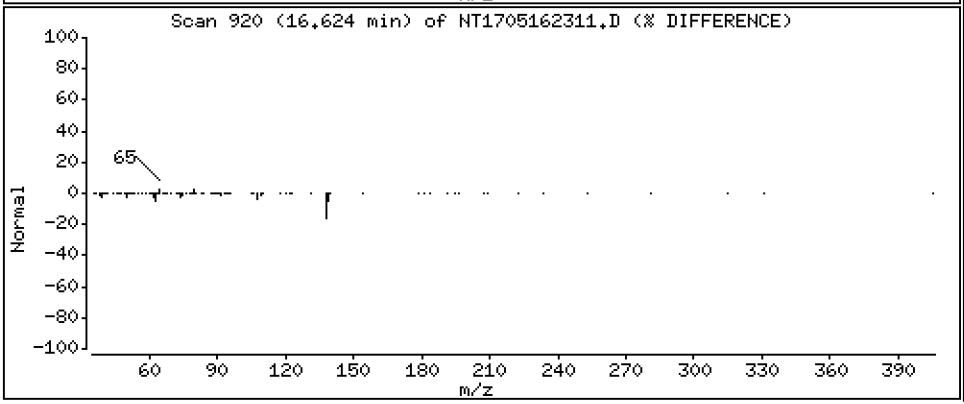
52 4-Nitroaniline

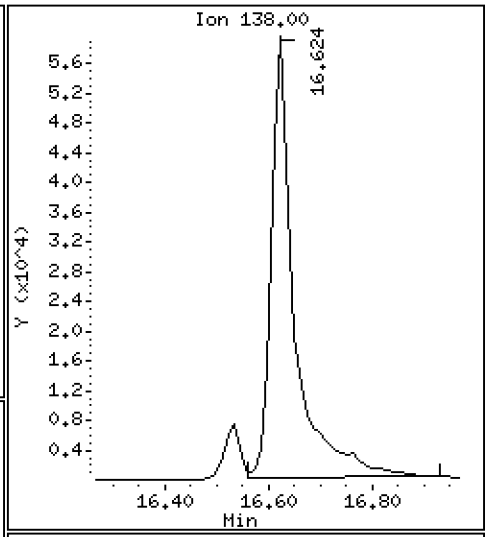
Concentration: 5.108 ug/mL

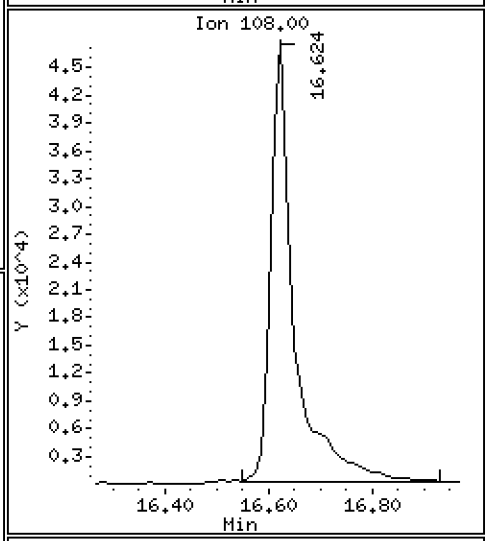


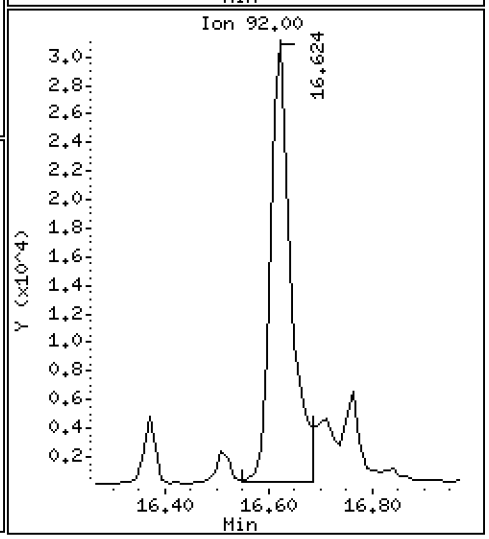












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

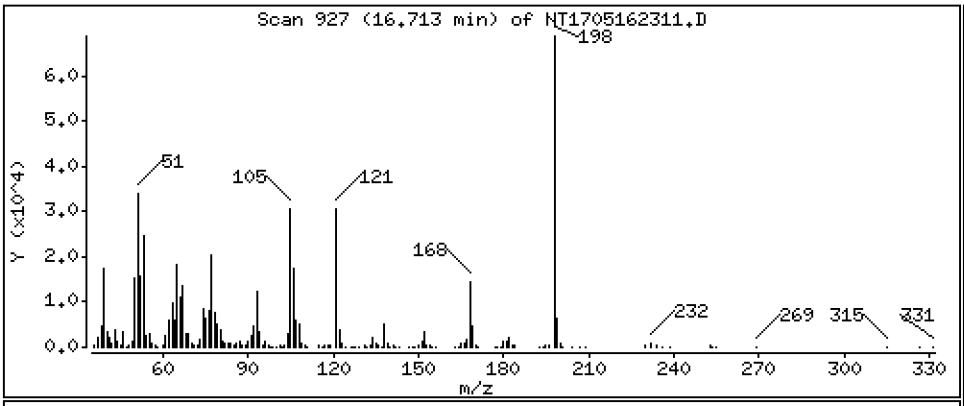
Operator: JGR

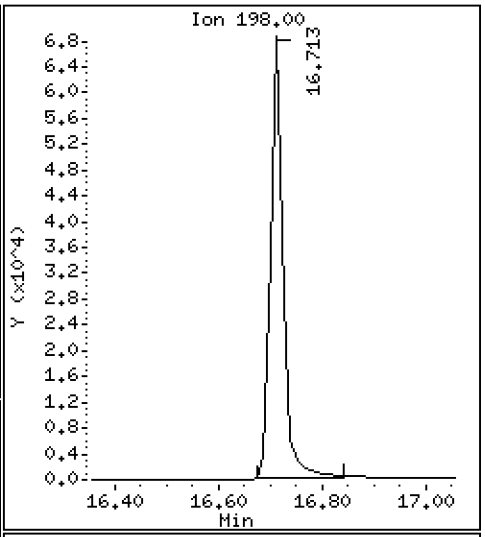
Column phase: ZB-5msi

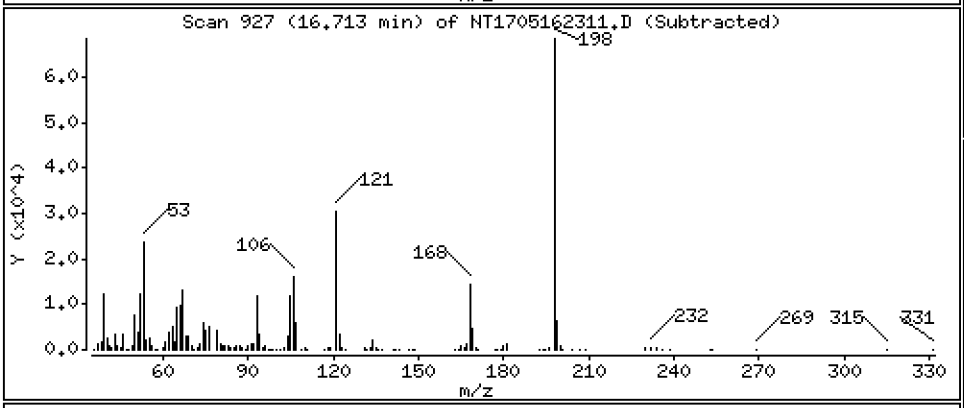
Column diameter: 0.25

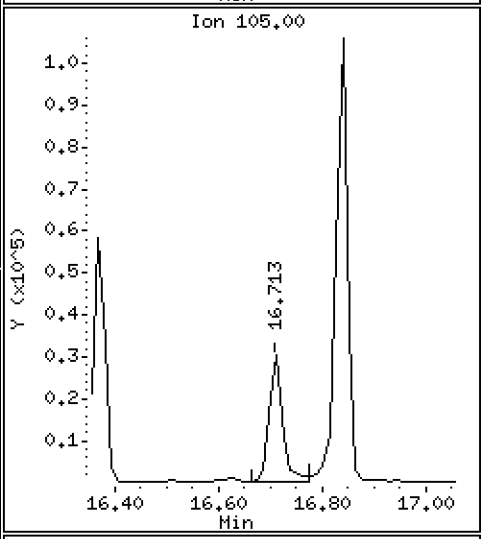
53 4,6-Dinitro-2-methylphenol

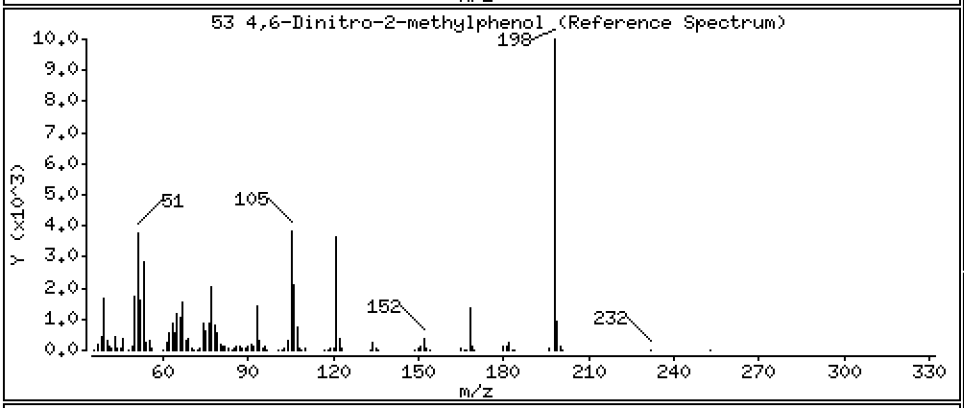
Concentration: 3.355 ug/mL

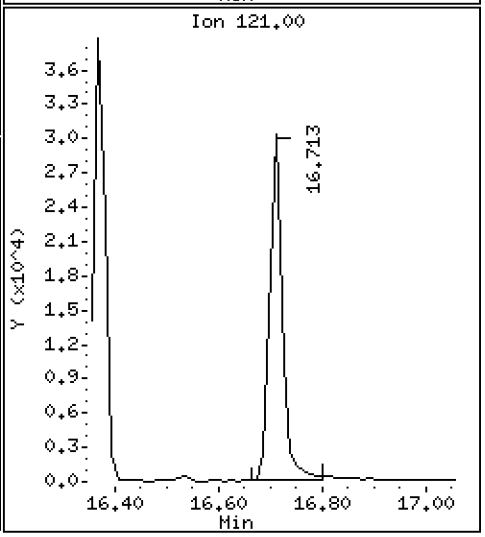


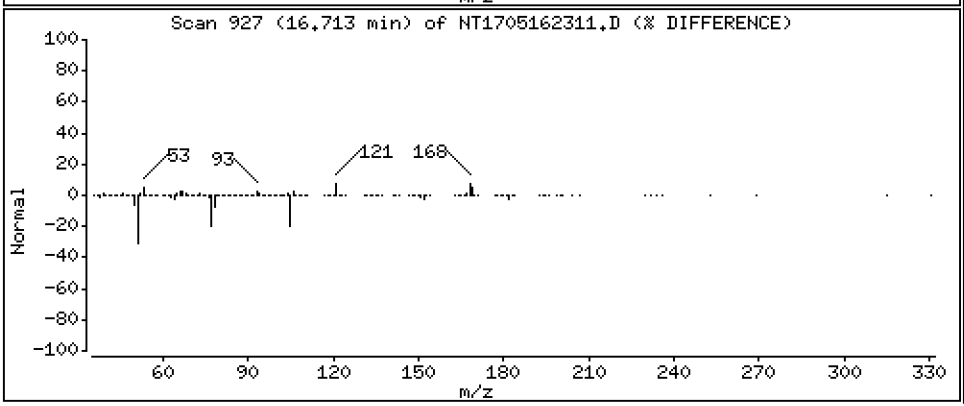












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

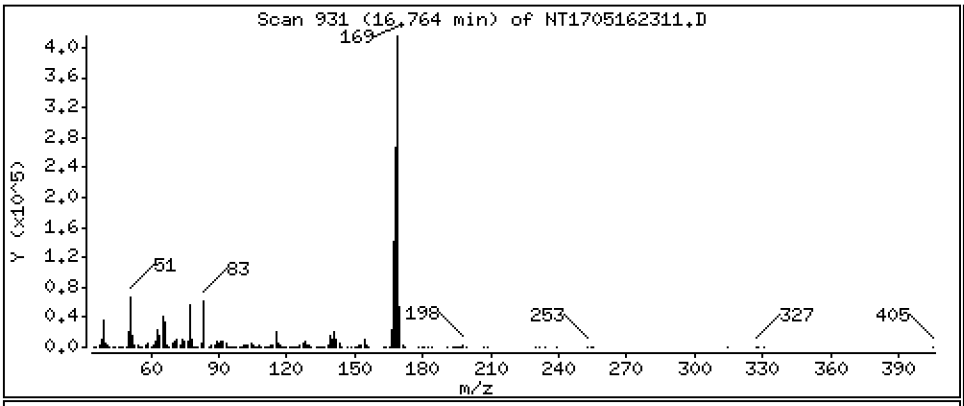
Operator: JGR

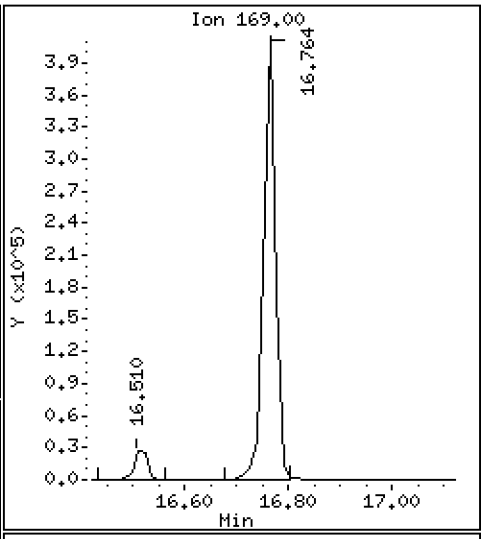
Column phase: ZB-5msi

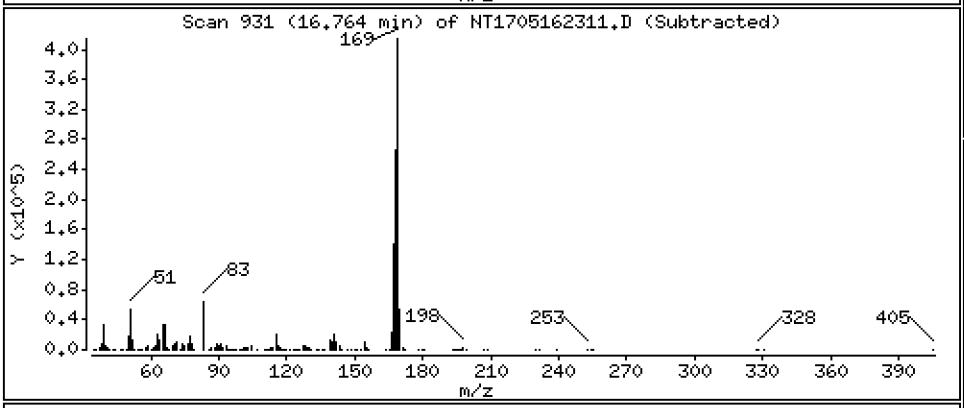
Column diameter: 0.25

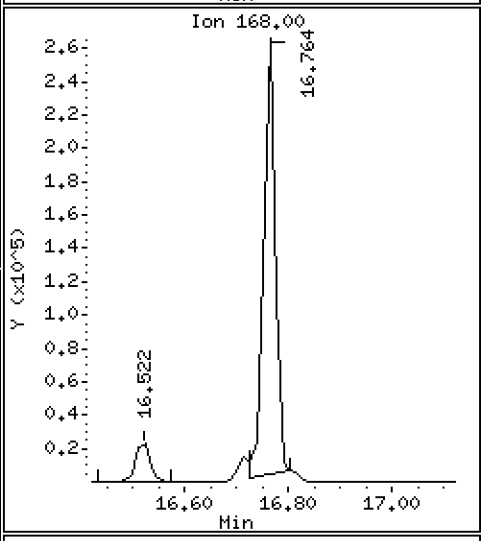
54 N-Nitrosodiphenylamine

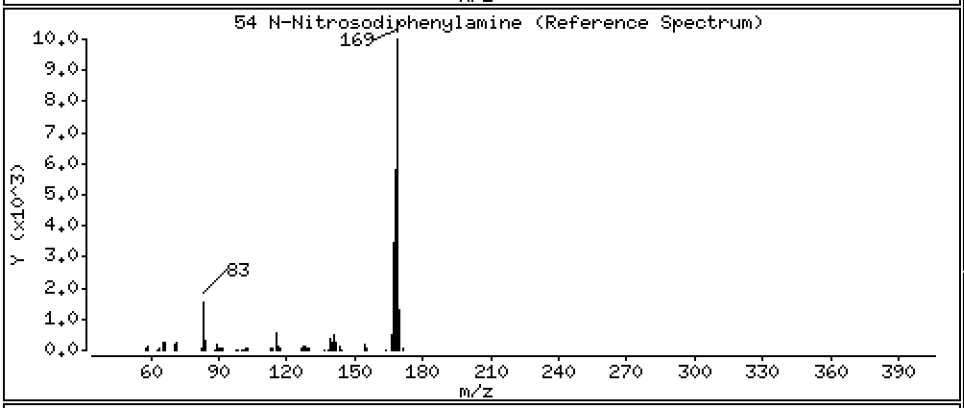
Concentration: 5.470 ug/mL

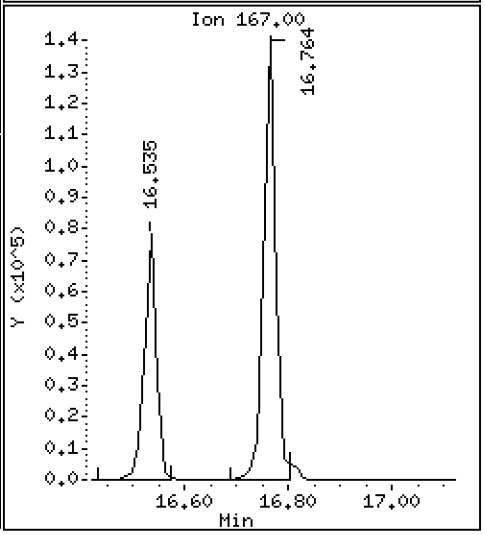


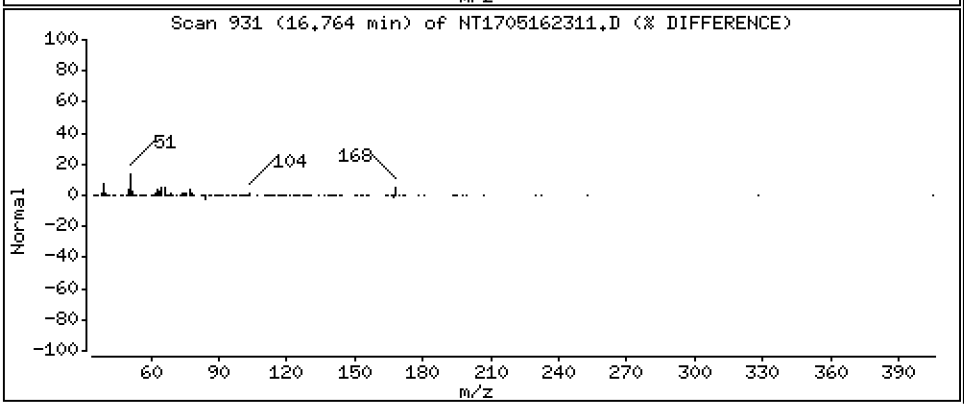












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

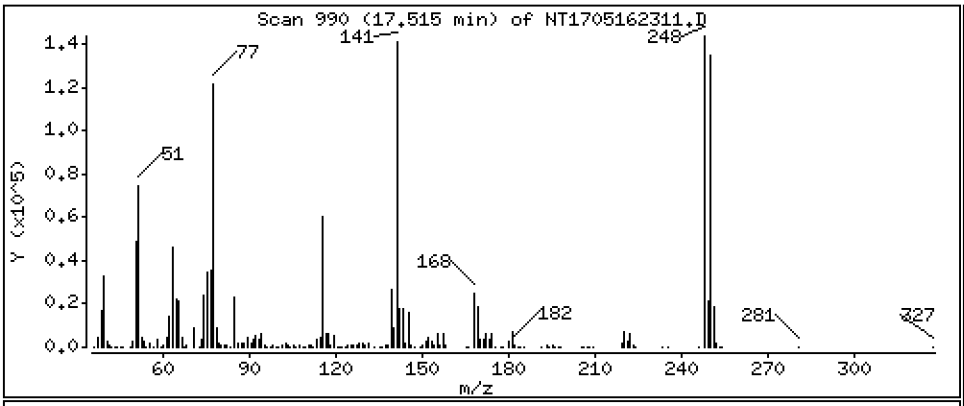
Operator: JGR

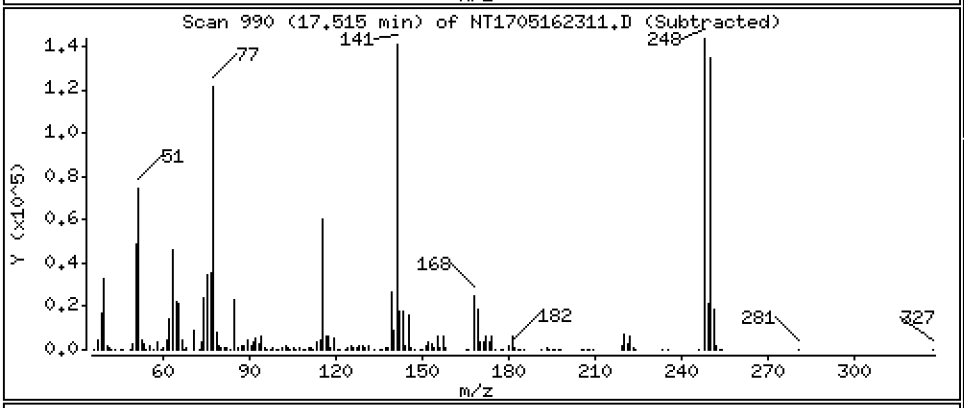
Column phase: ZB-5msi

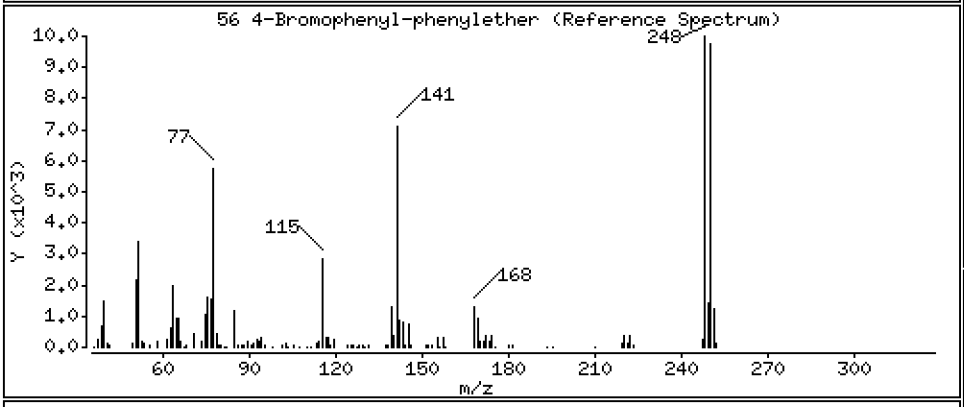
Column diameter: 0.25

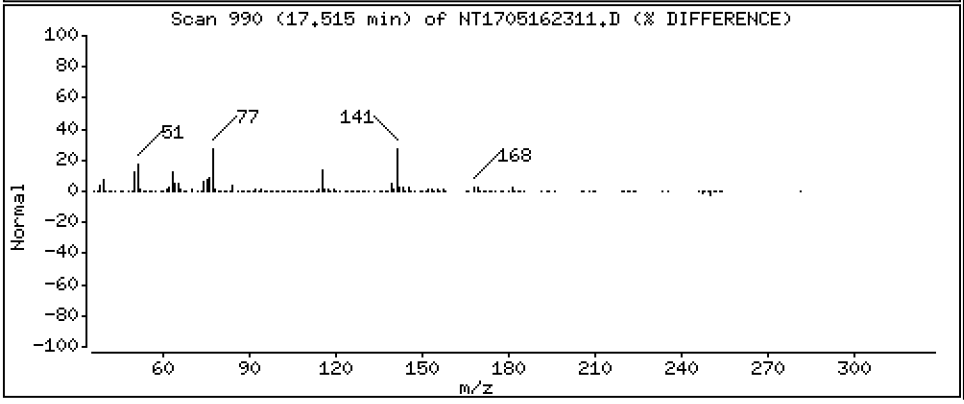
56 4-Bromophenyl-phenylether

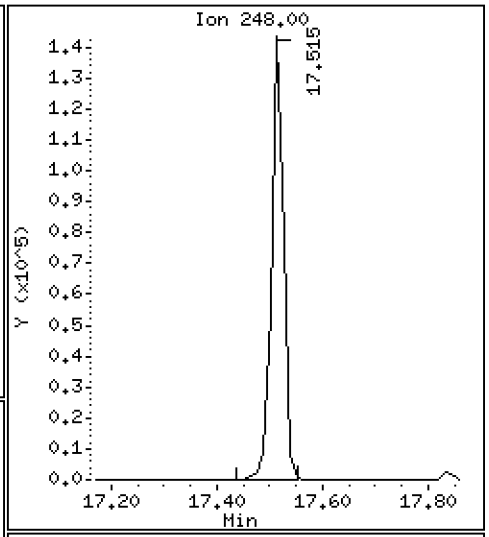
Concentration: 5.420 ug/mL

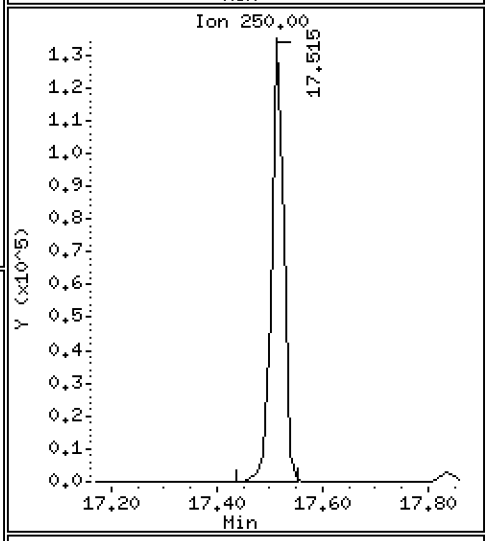


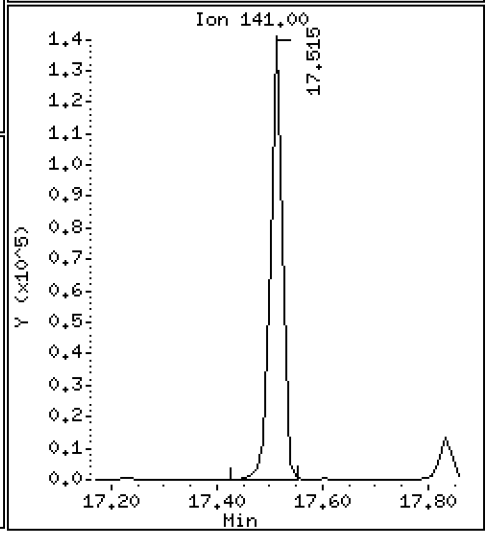












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

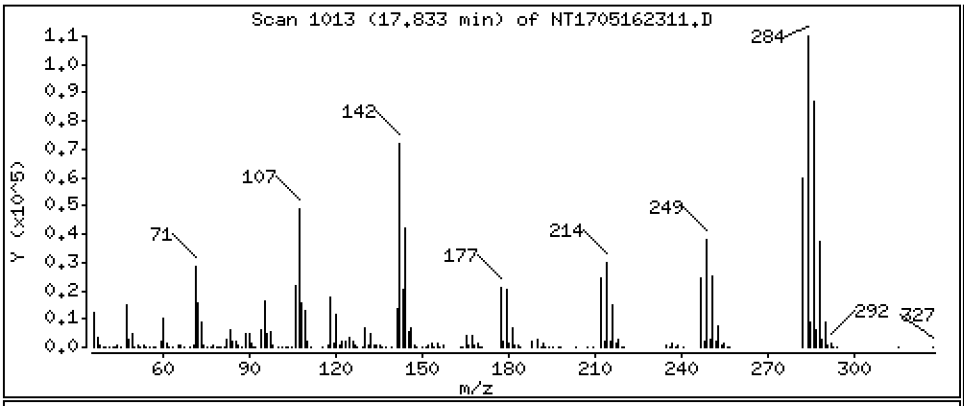
Operator: JGR

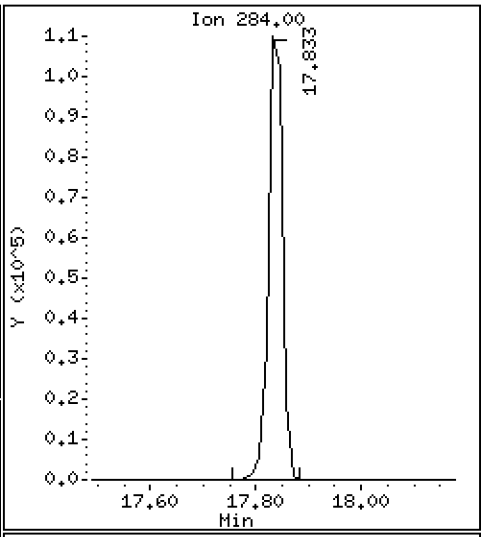
Column phase: ZB-5msi

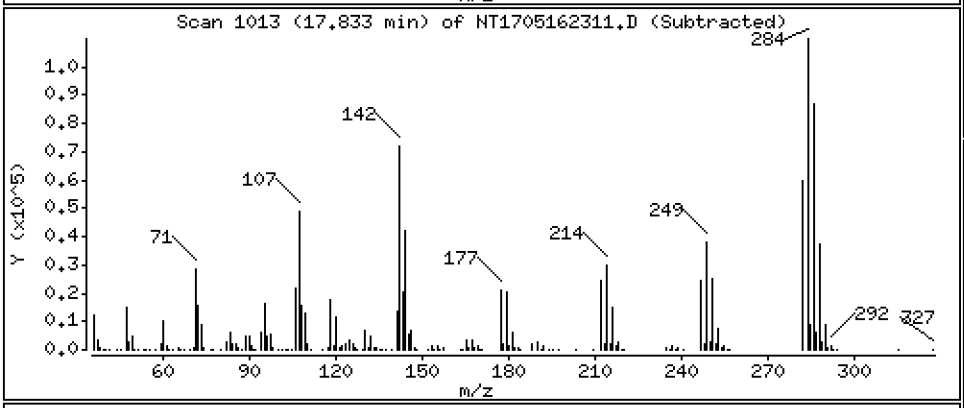
Column diameter: 0.25

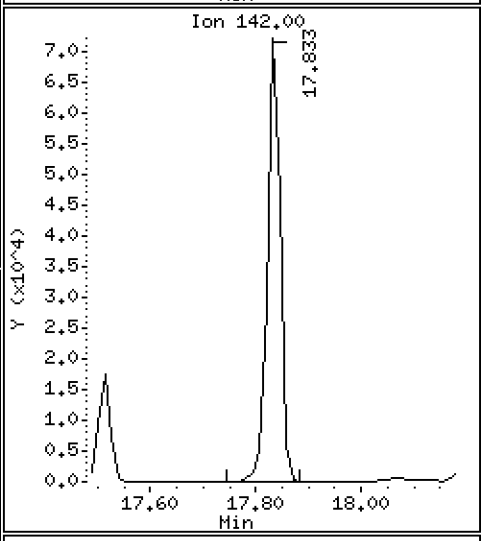
57 Hexachlorobenzene

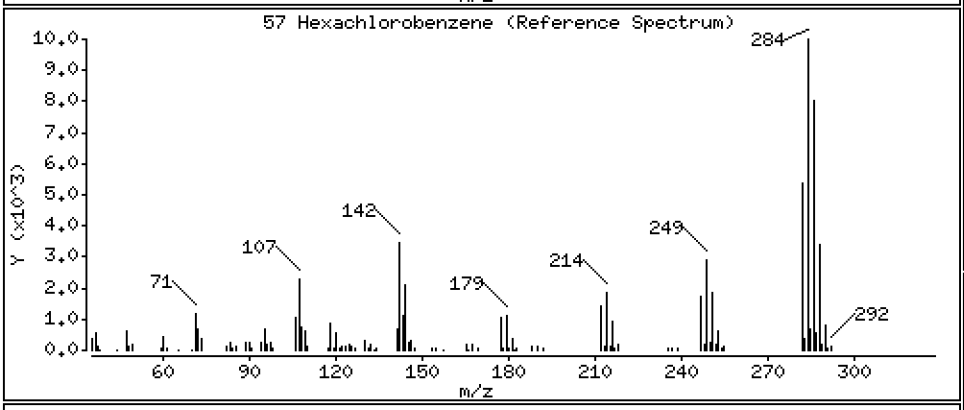
Concentration: 4.913 ug/mL

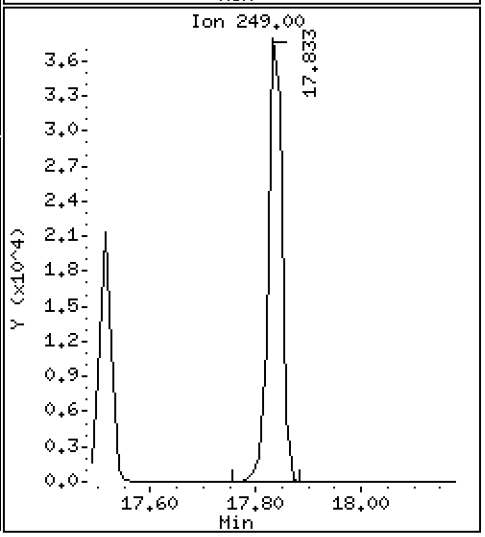


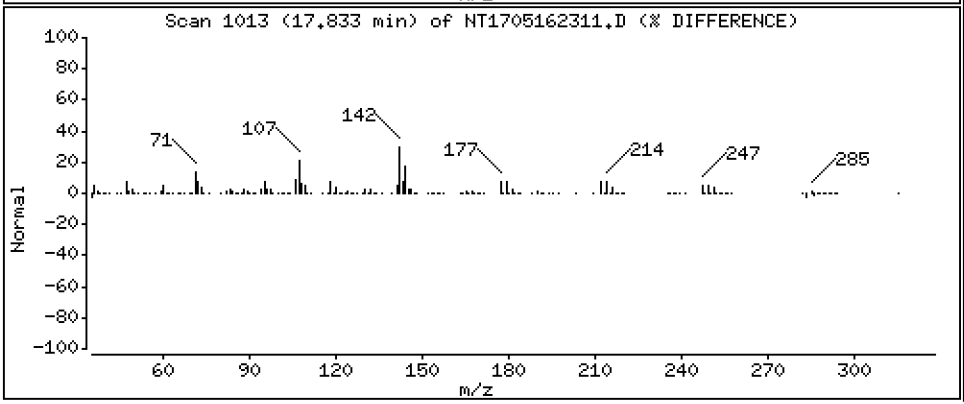












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

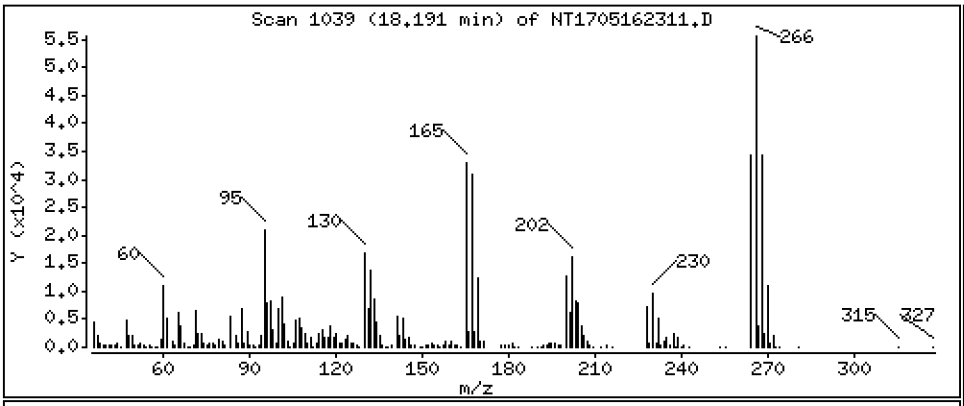
Operator: JGR

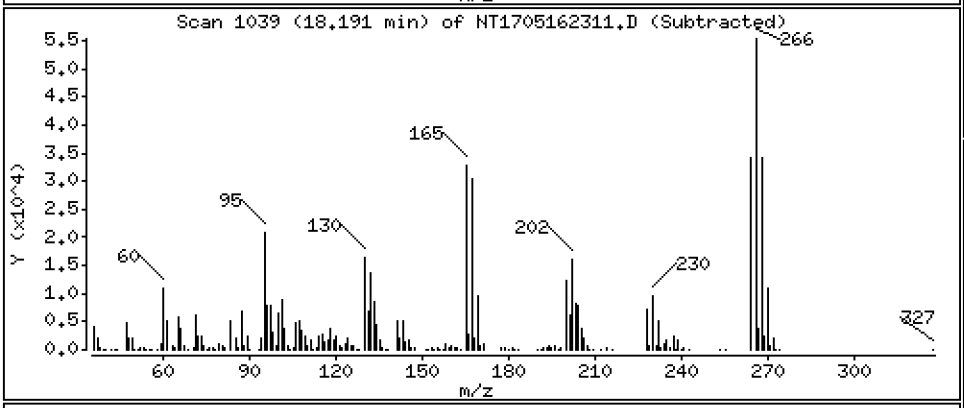
Column phase: ZB-5msi

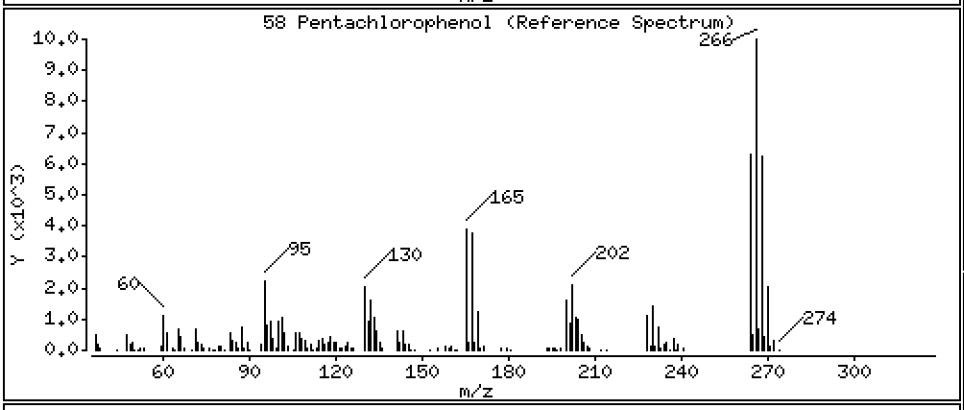
Column diameter: 0.25

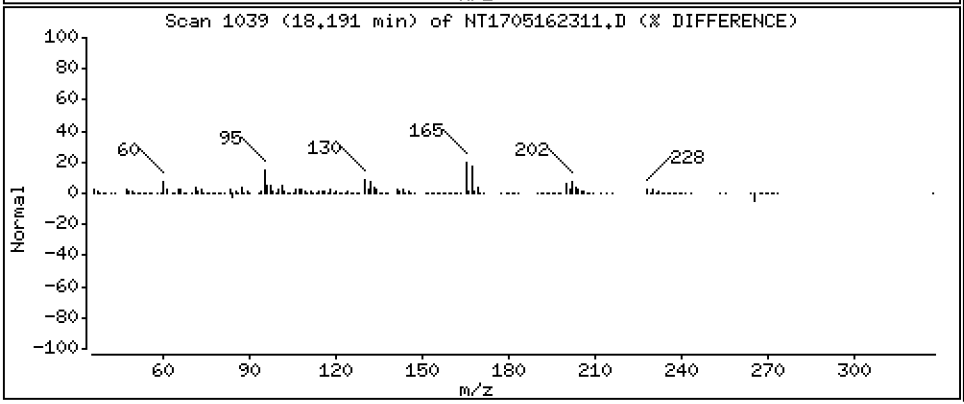
58 Pentachlorophenol

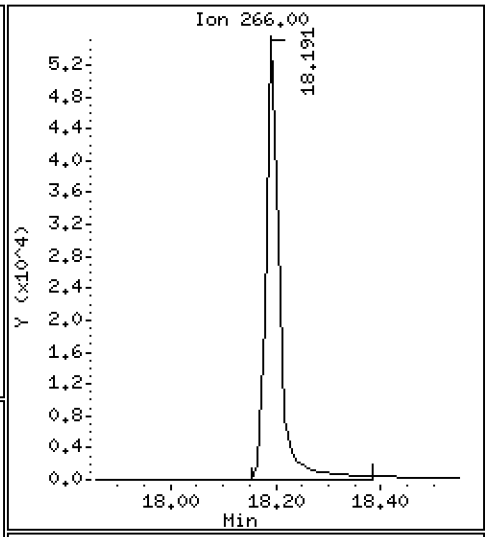
Concentration: 3.943 ug/mL

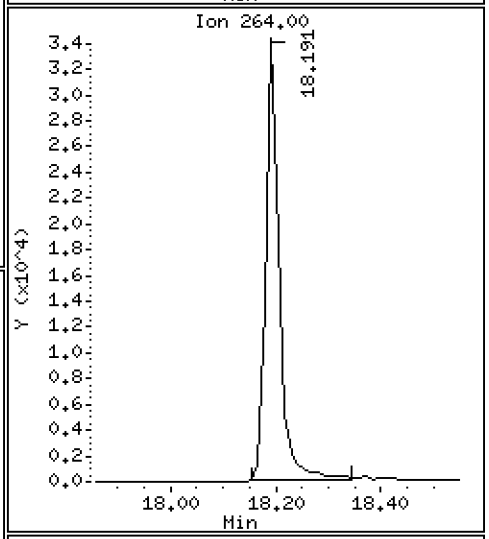


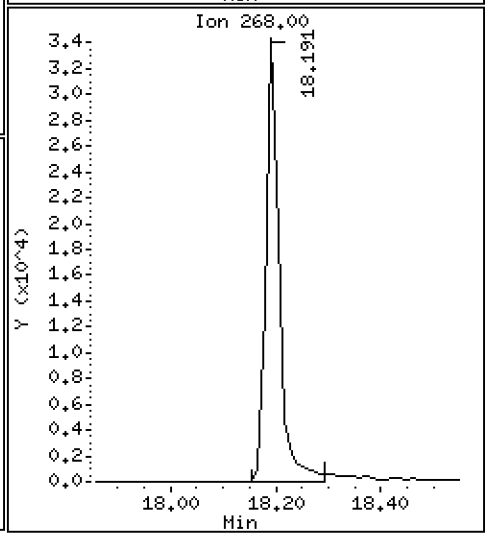












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

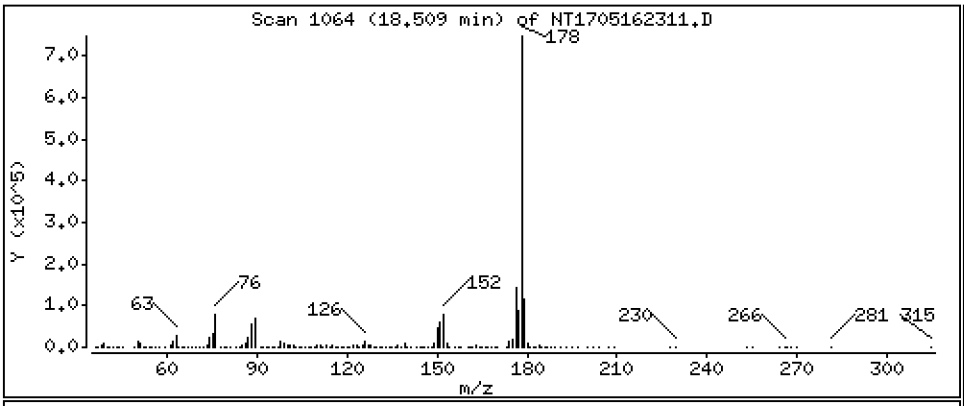
Operator: JGR

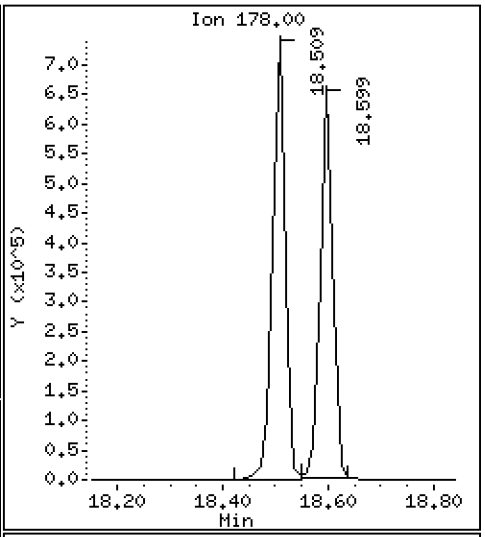
Column phase: ZB-5msi

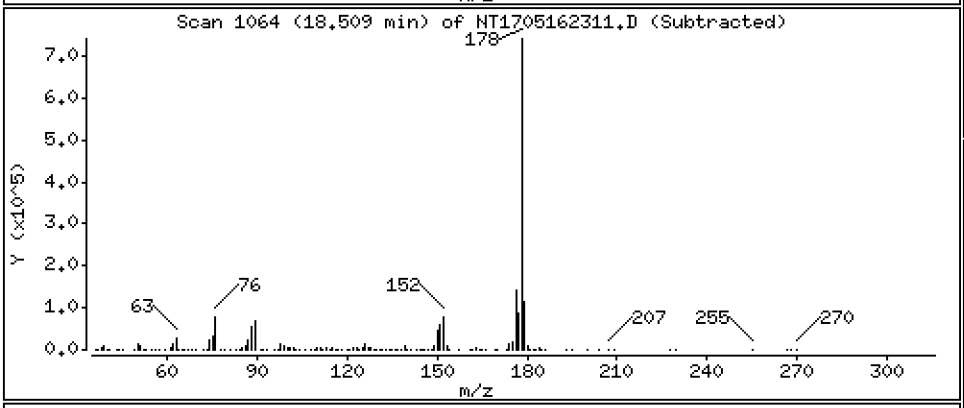
Column diameter: 0.25

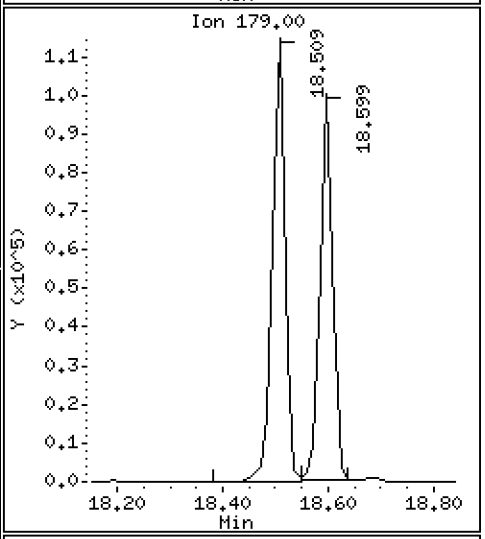
60 Phenanthrene

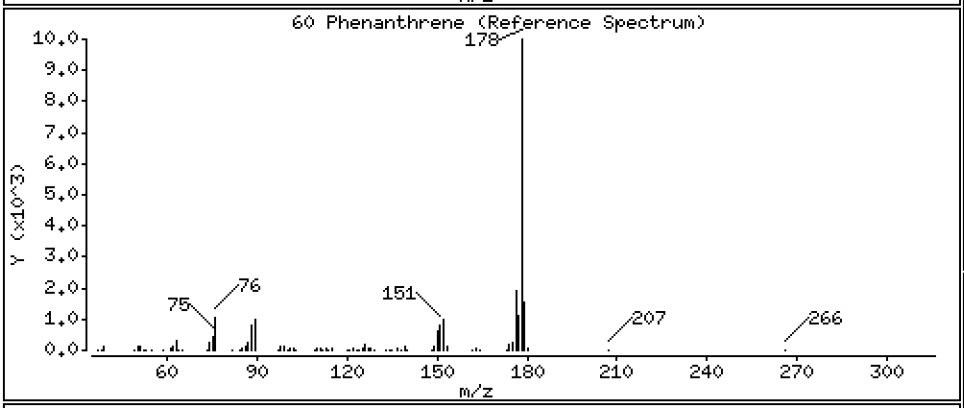
Concentration: 5.039 ug/mL

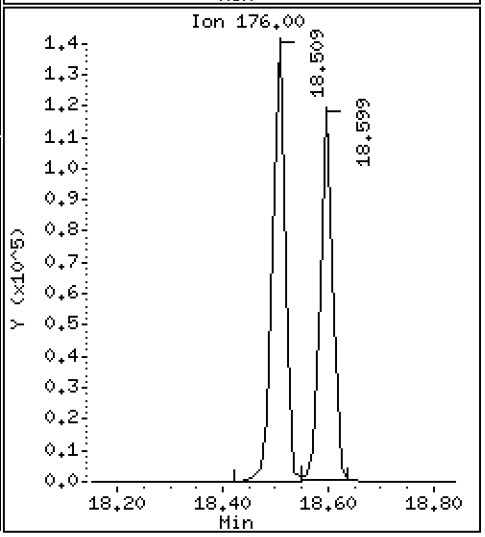


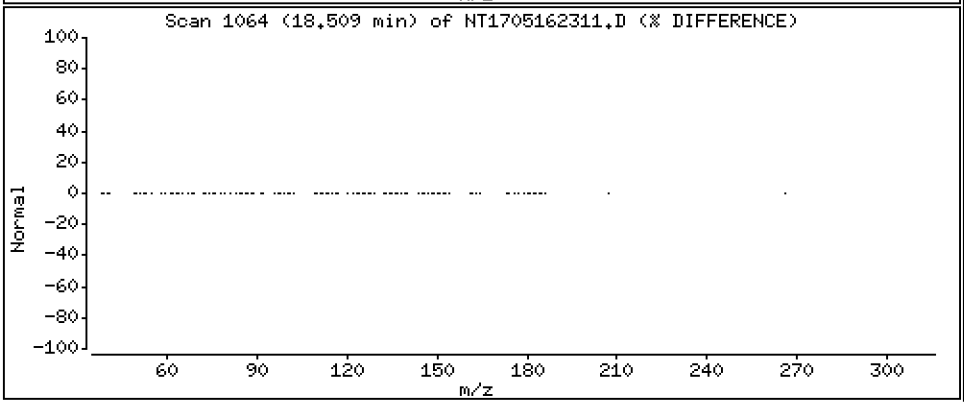












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

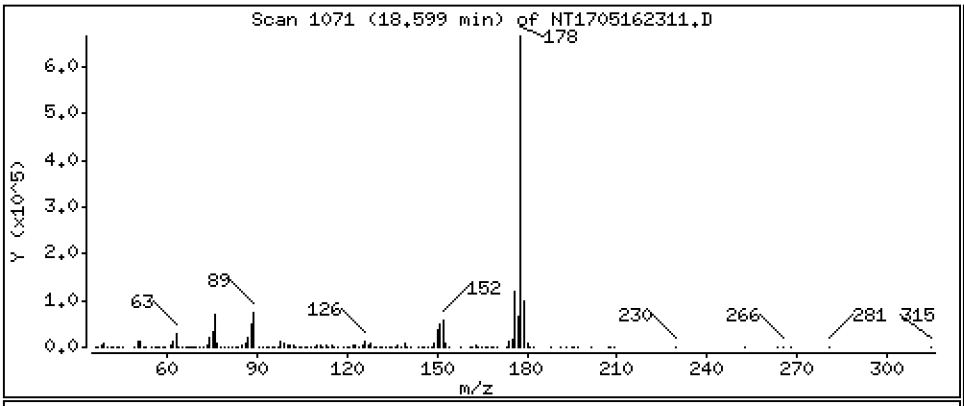
Operator: JGR

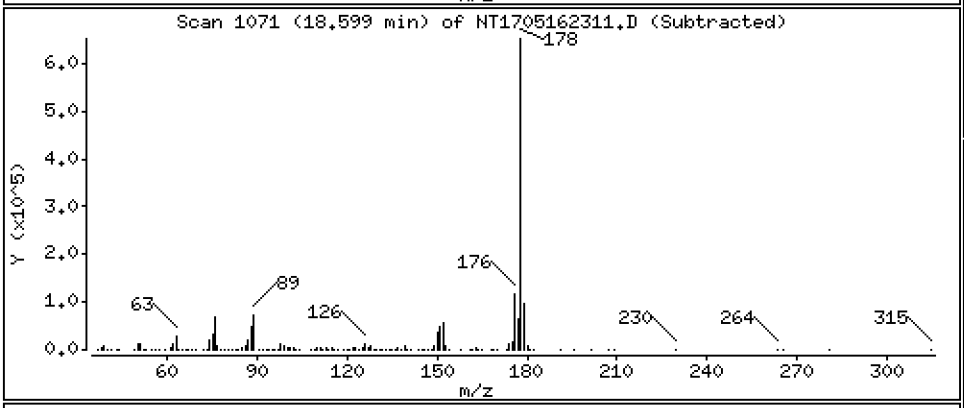
Column phase: ZB-5msi

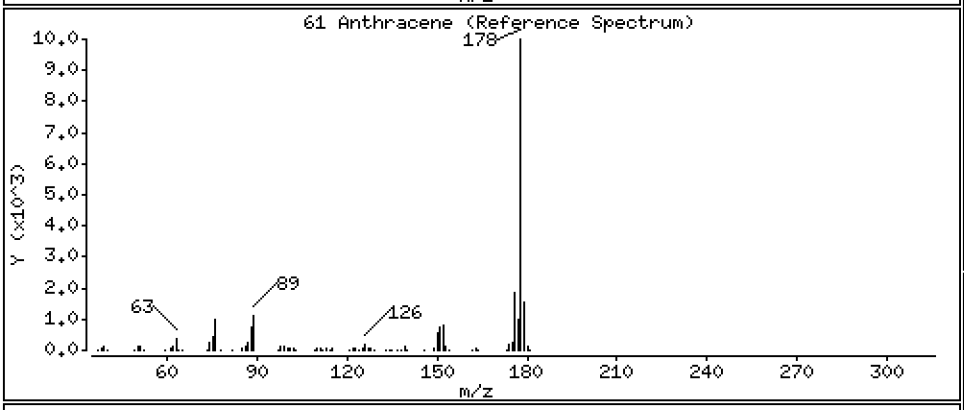
Column diameter: 0.25

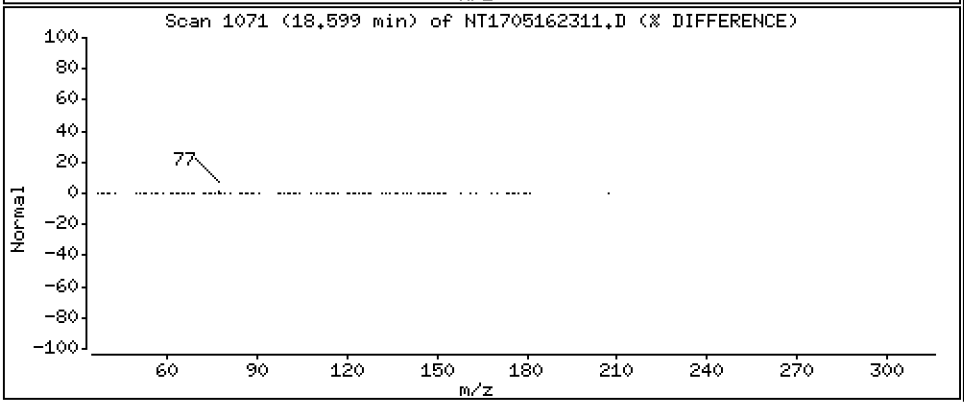
61 Anthracene

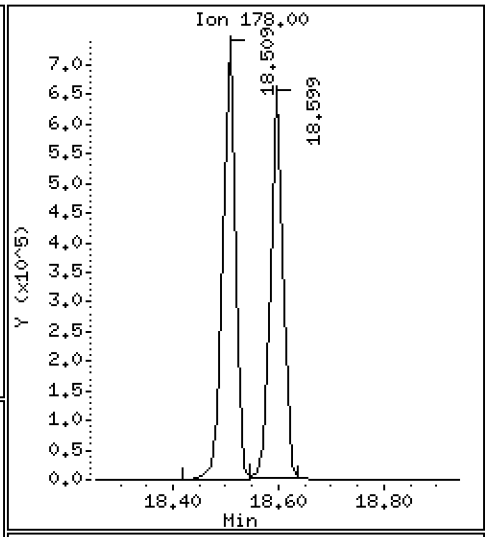
Concentration: 4.530 ug/mL

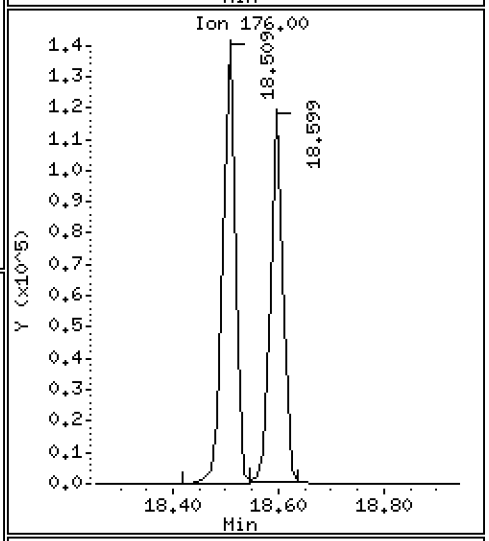


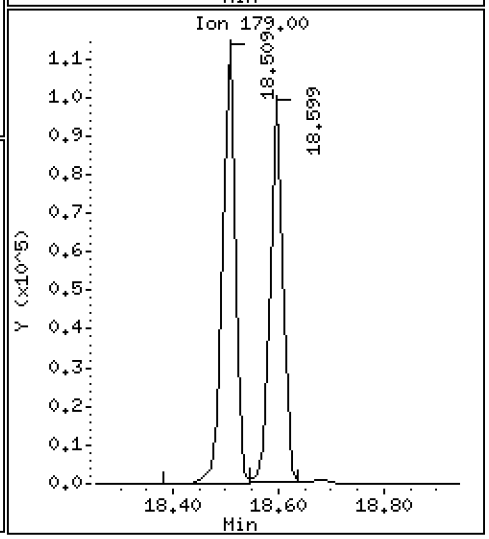












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

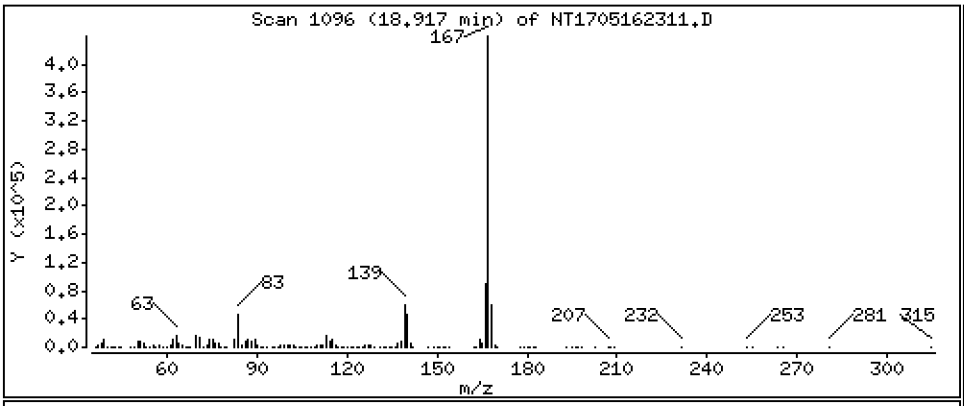
Operator: JGR

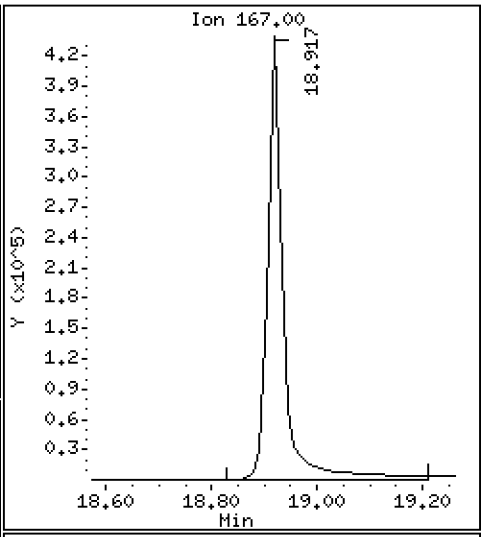
Column phase: ZB-5msi

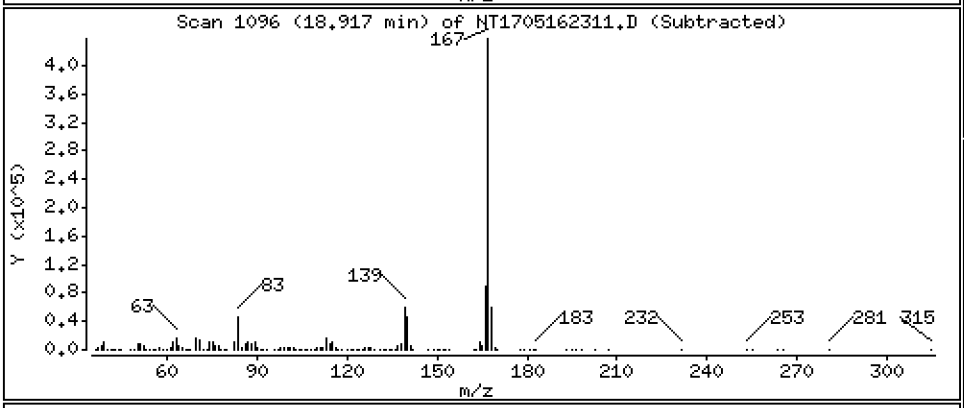
Column diameter: 0.25

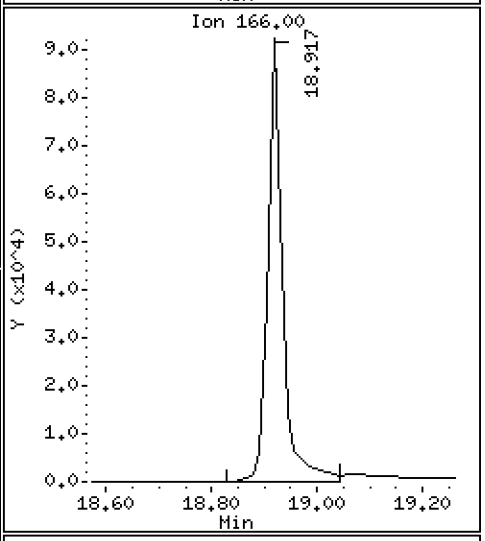
62 Carbazole

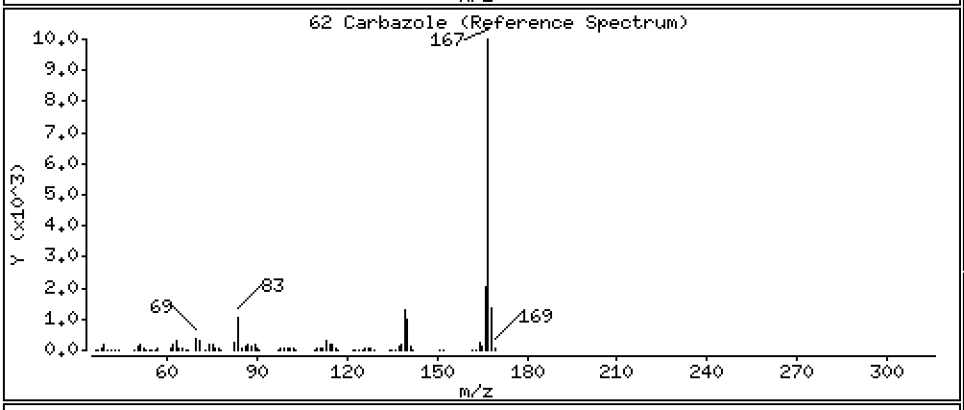
Concentration: 5.938 ug/mL

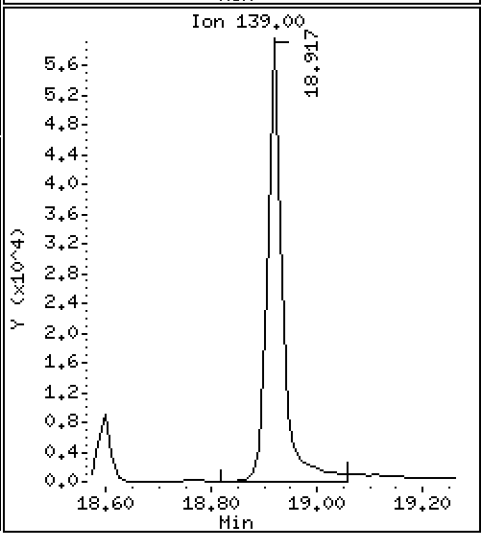


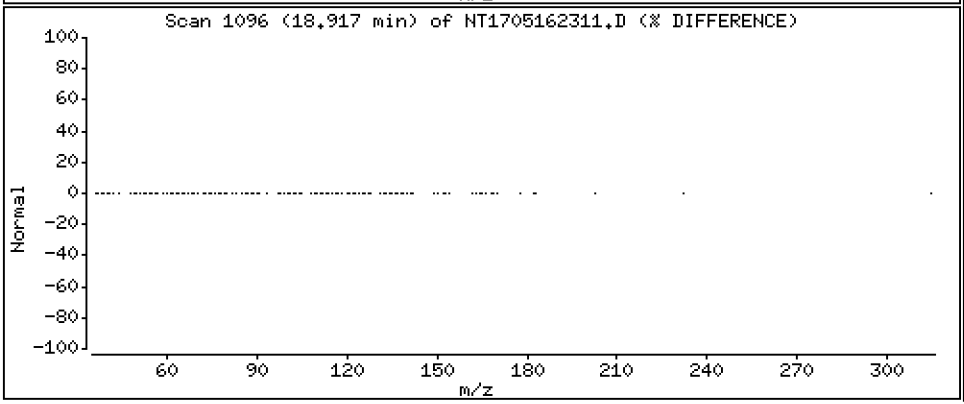












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

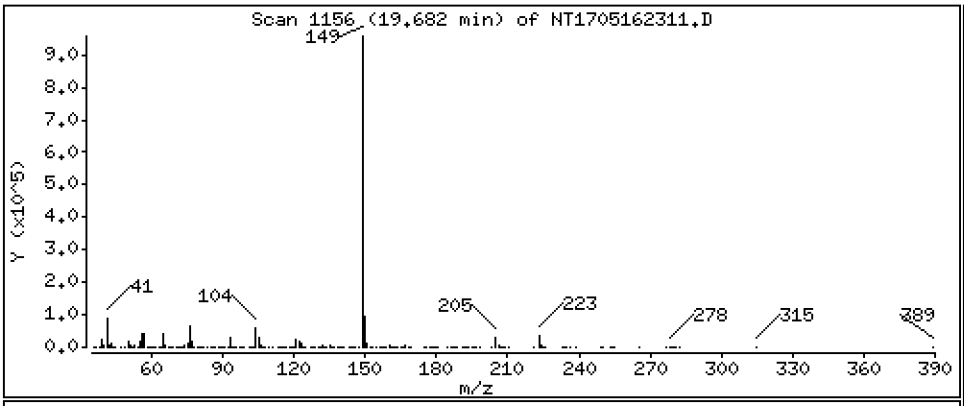
Operator: JGR

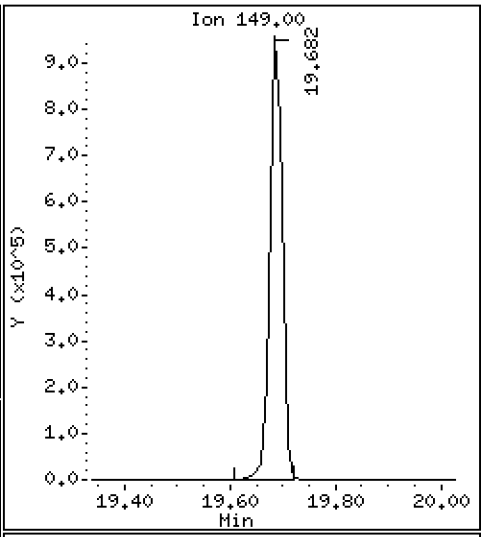
Column phase: ZB-5msi

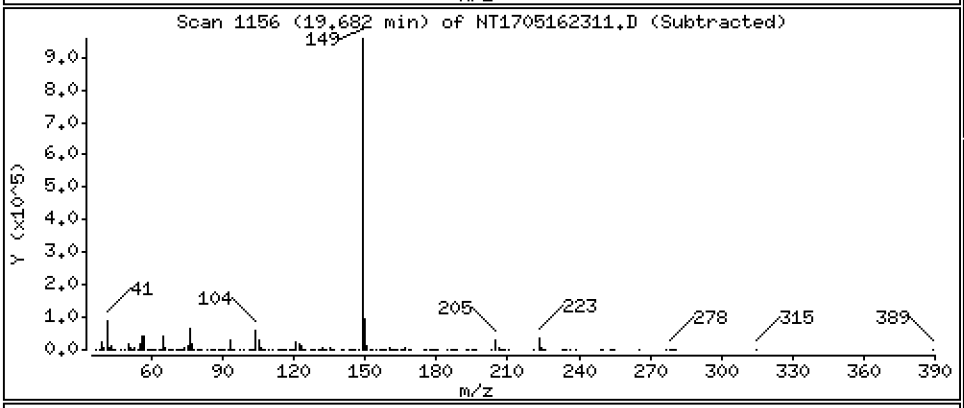
Column diameter: 0.25

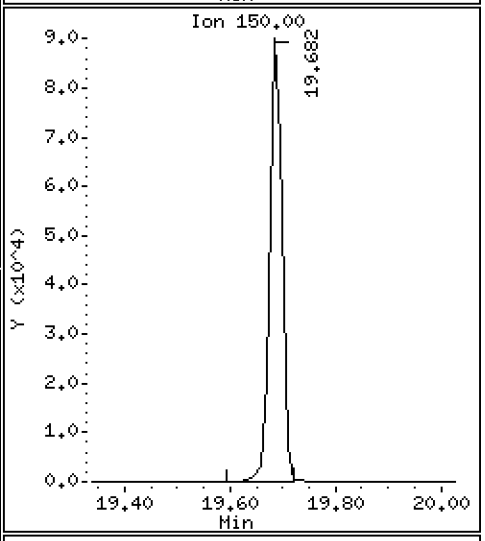
63 Di-n-butylphthalate

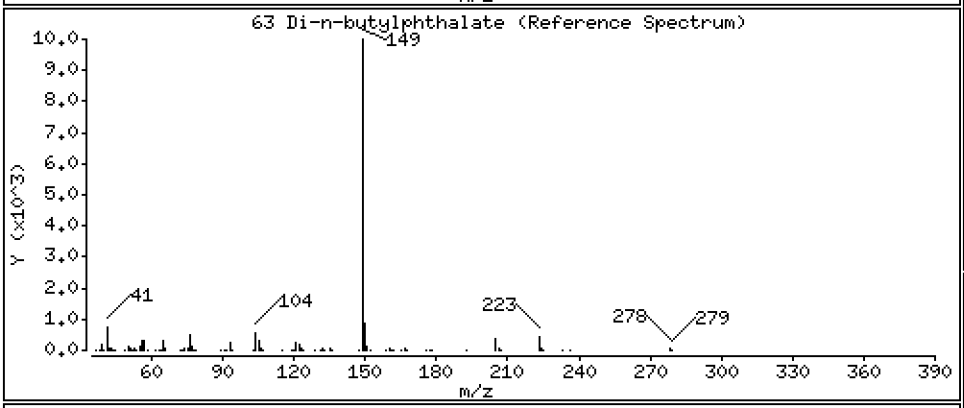
Concentration: 5.642 ug/mL

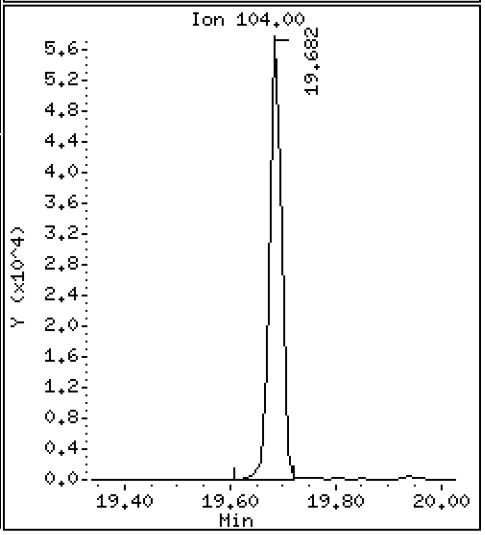


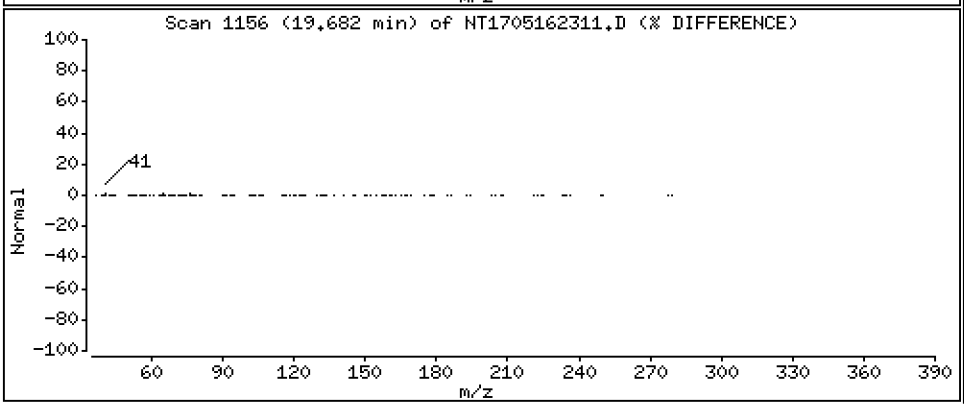












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

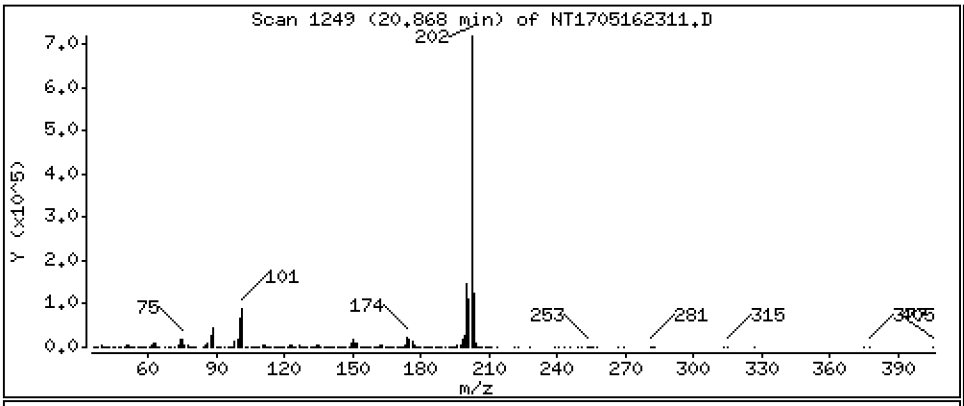
Operator: JGR

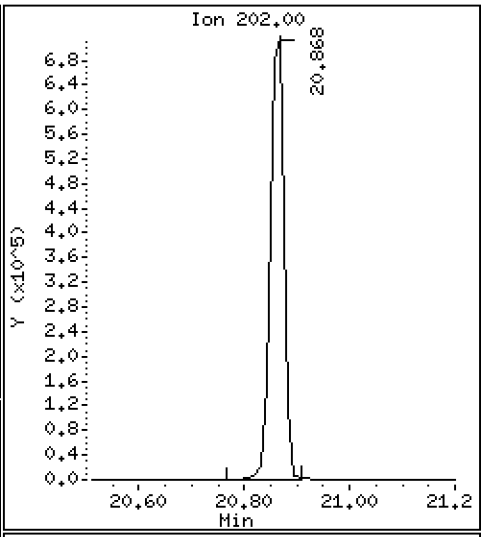
Column phase: ZB-5msi

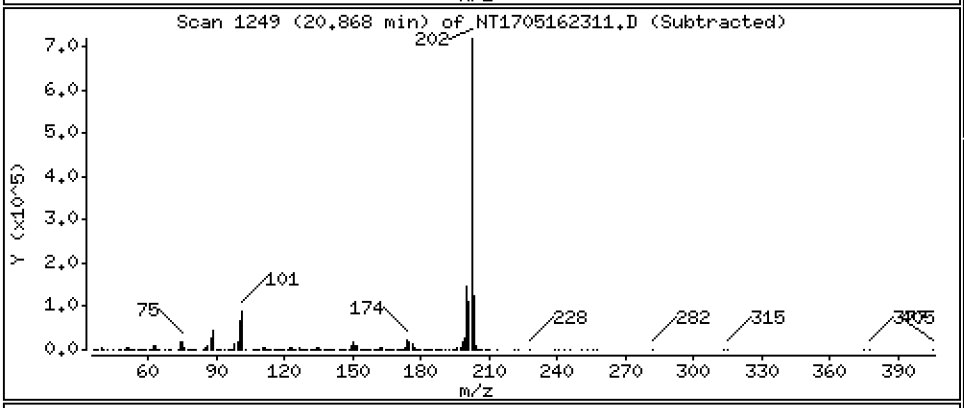
Column diameter: 0.25

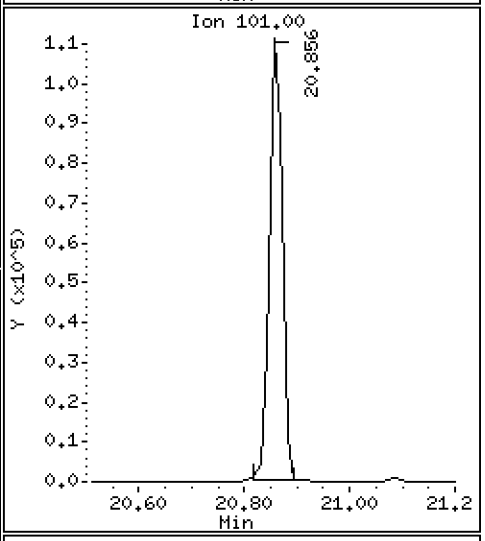
64 Fluoranthene

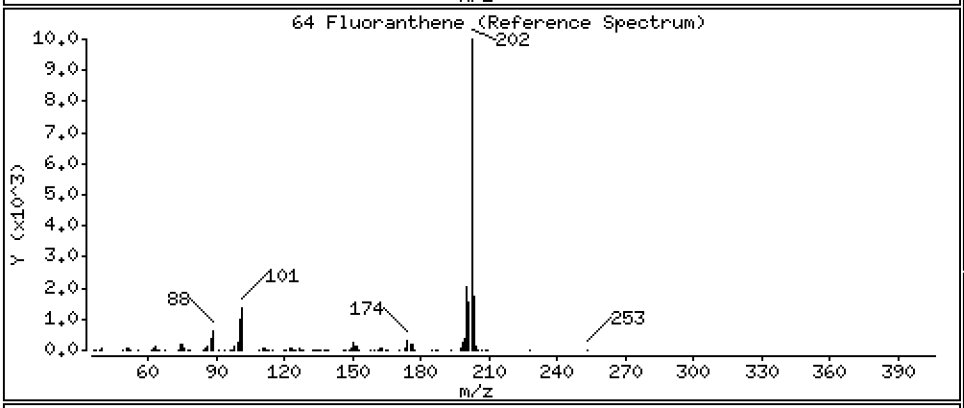
Concentration: 5.467 ug/mL

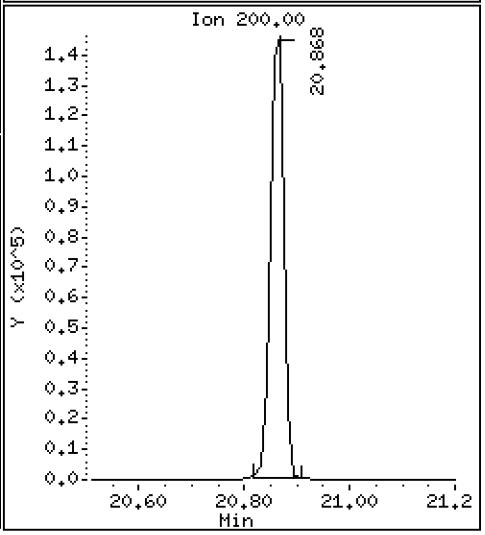


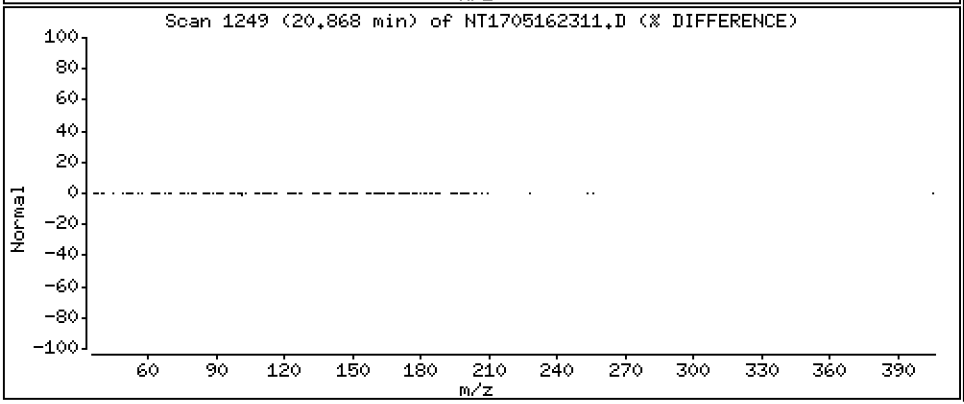












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

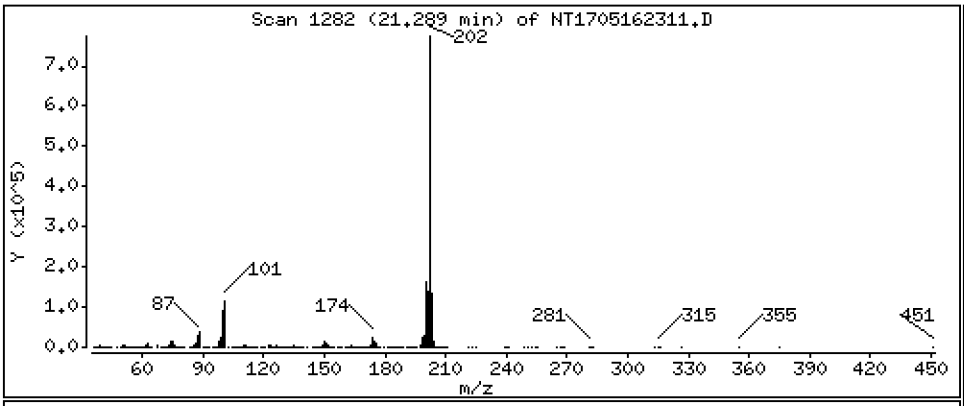
Operator: JGR

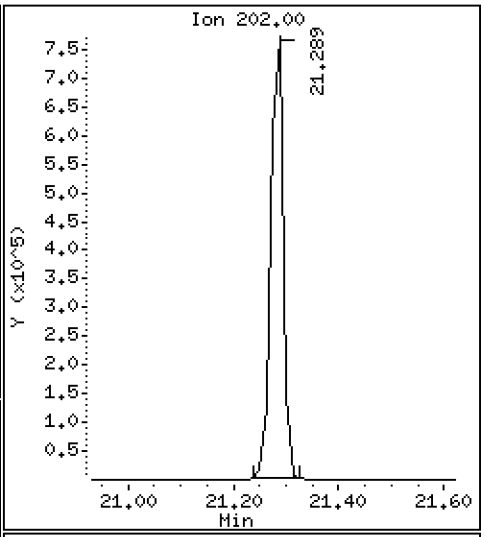
Column phase: ZB-5msi

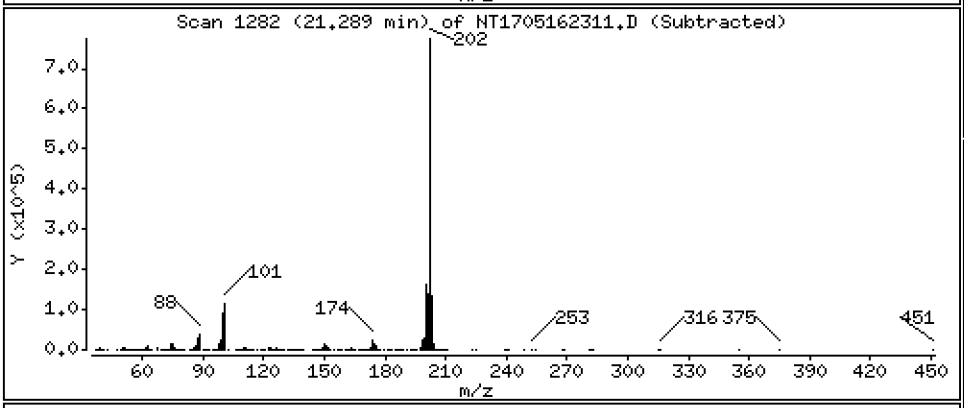
Column diameter: 0.25

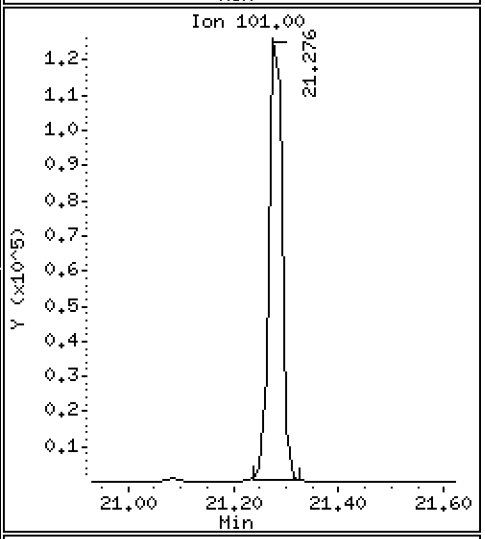
65 Pyrene

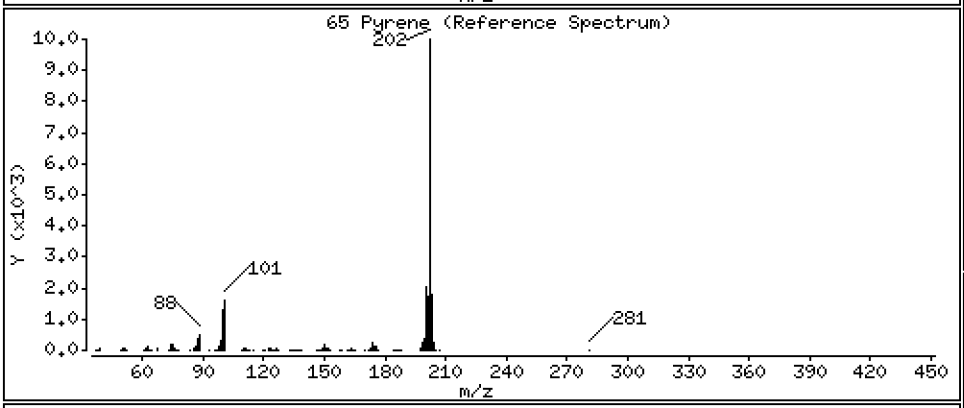
Concentration: 5.265 ug/mL

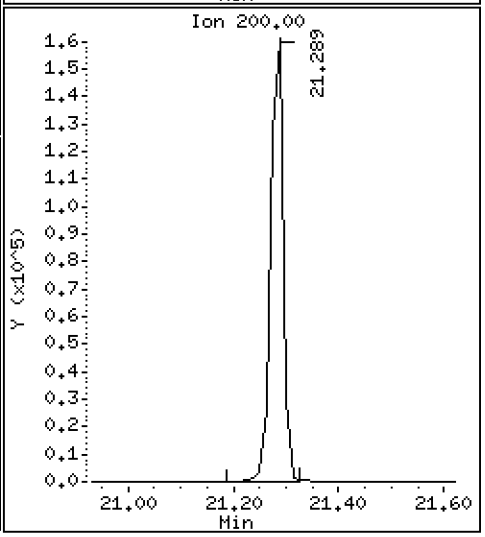


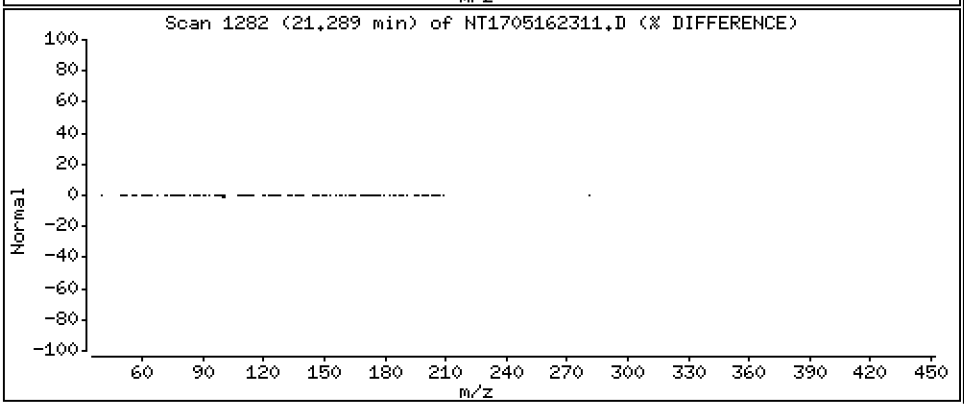












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

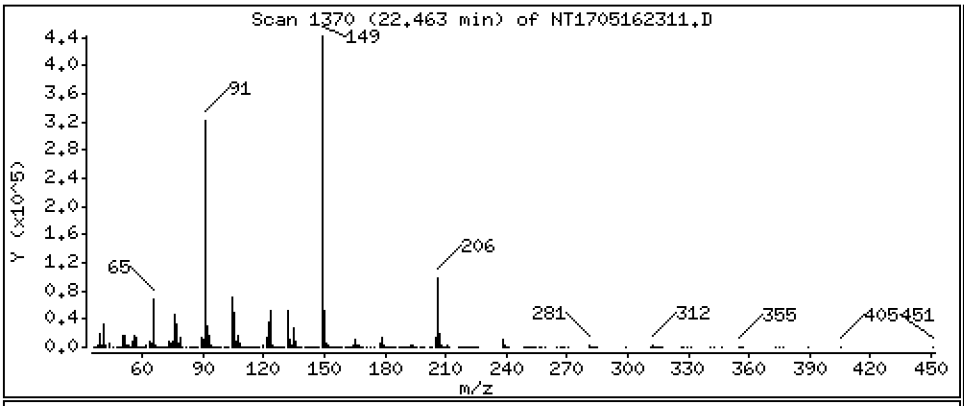
Operator: JGR

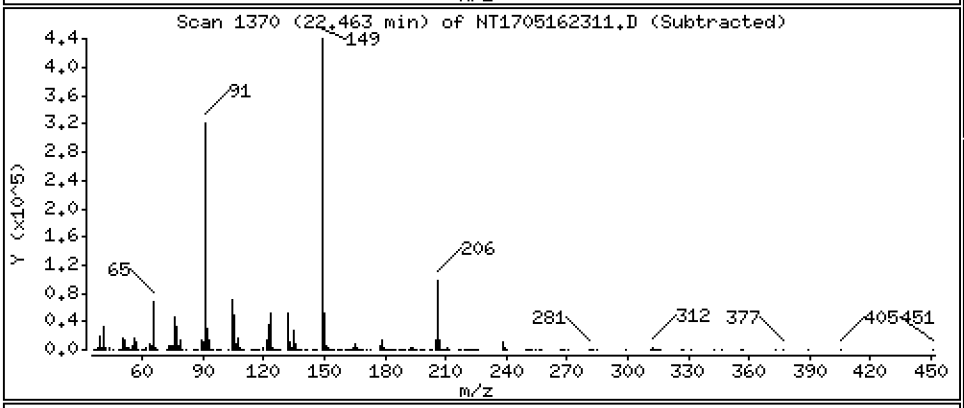
Column phase: ZB-5msi

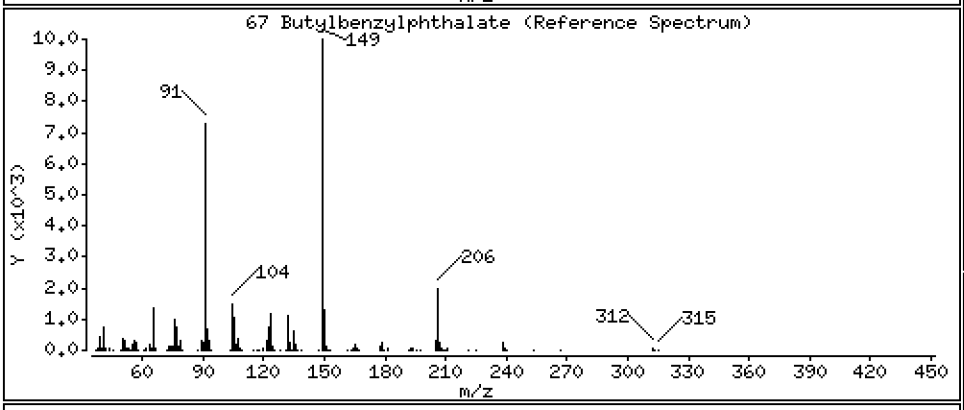
Column diameter: 0.25

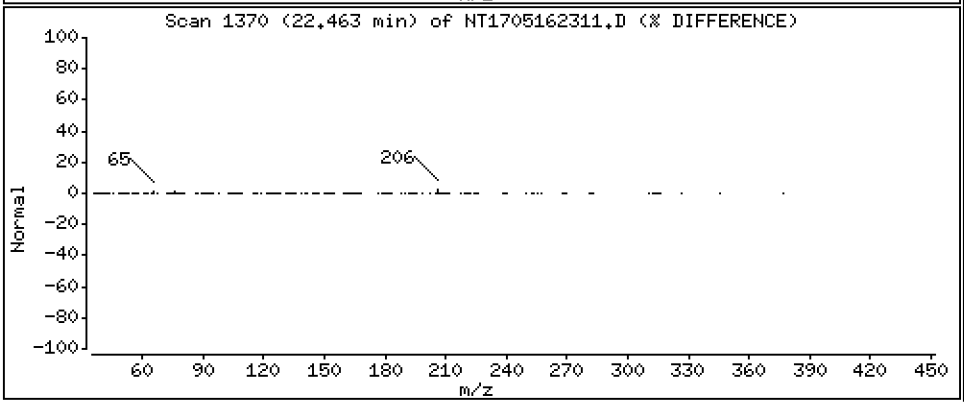
67 Butylbenzylphthalate

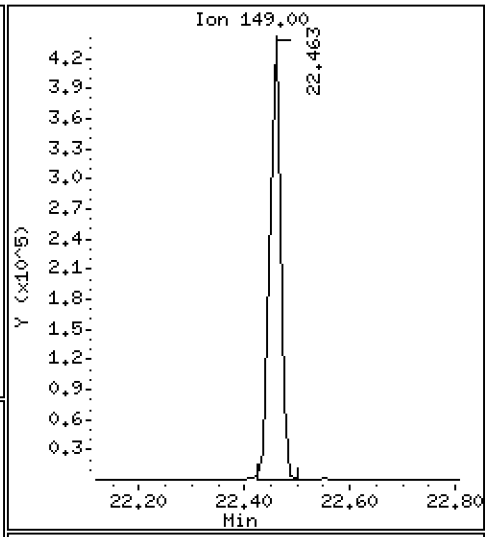
Concentration: 5.825 ug/mL

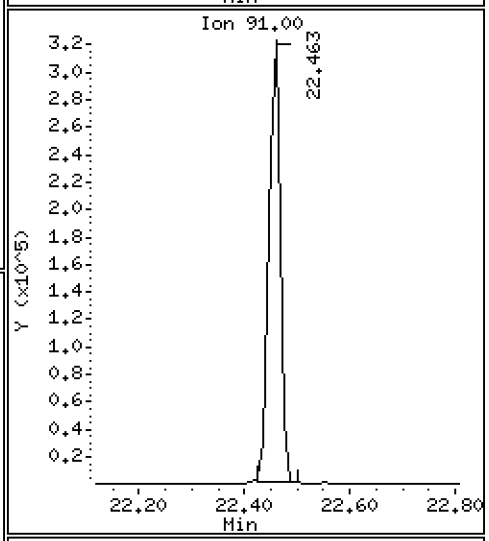


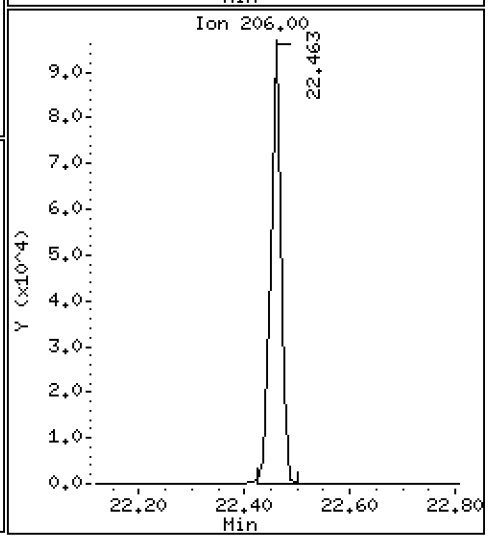












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

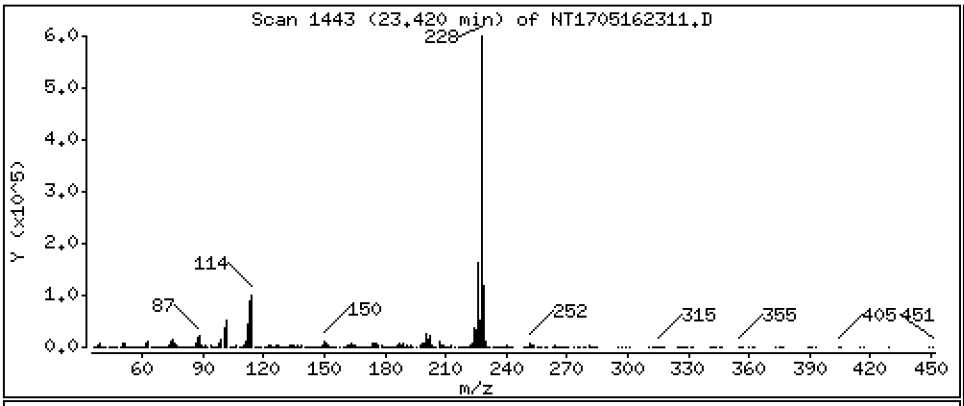
Operator: JGR

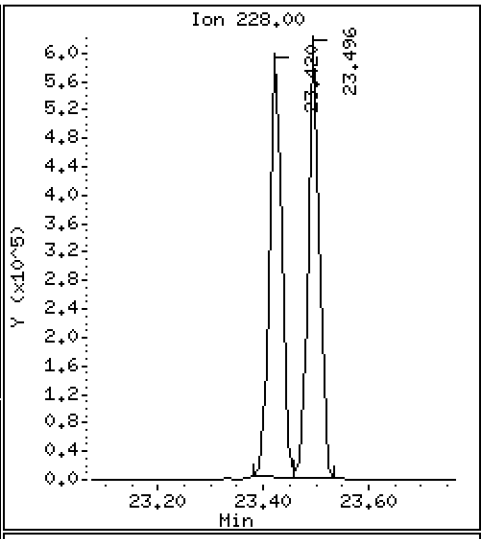
Column phase: ZB-5msi

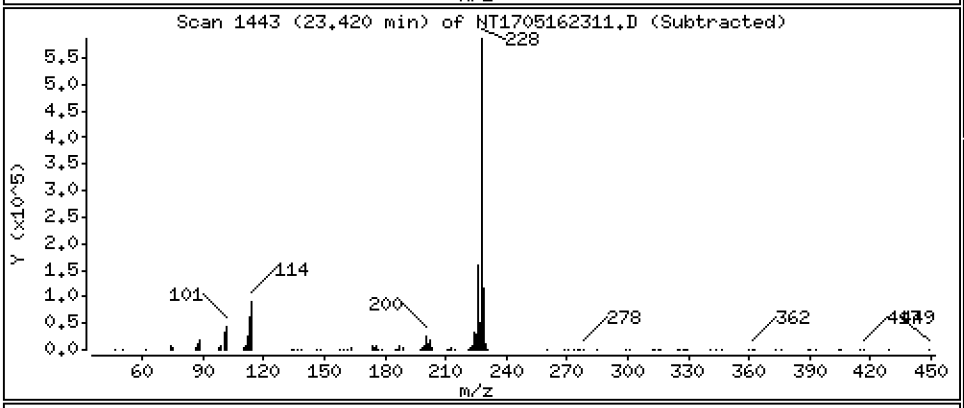
Column diameter: 0.25

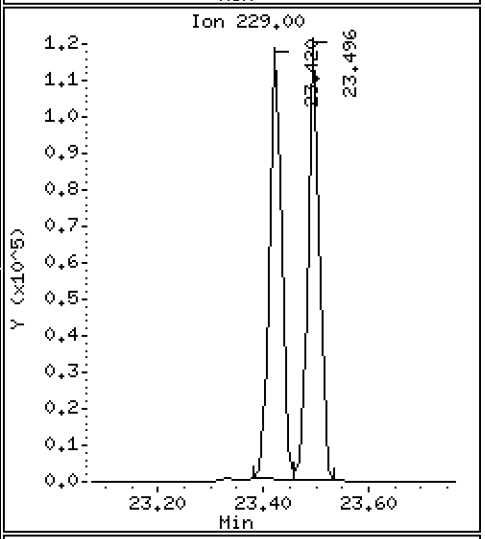
68 Benzo(a)anthracene

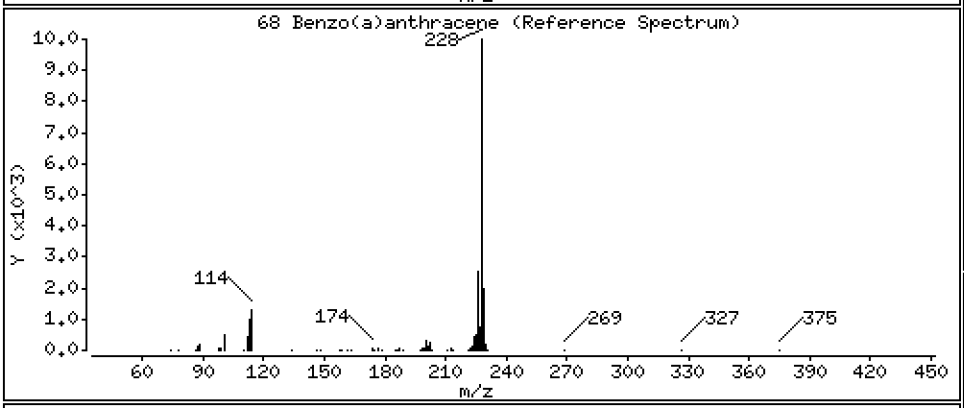
Concentration: 5.064 ug/mL

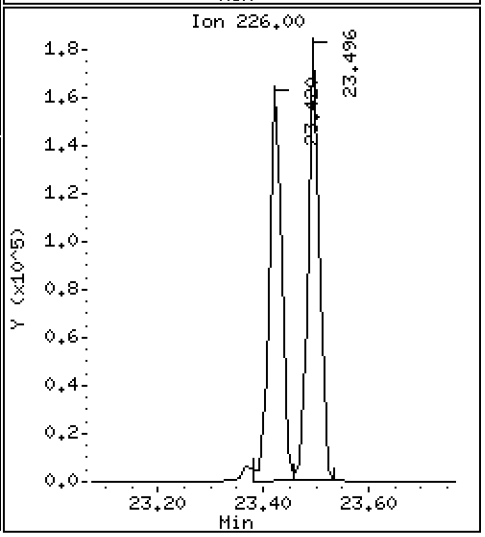


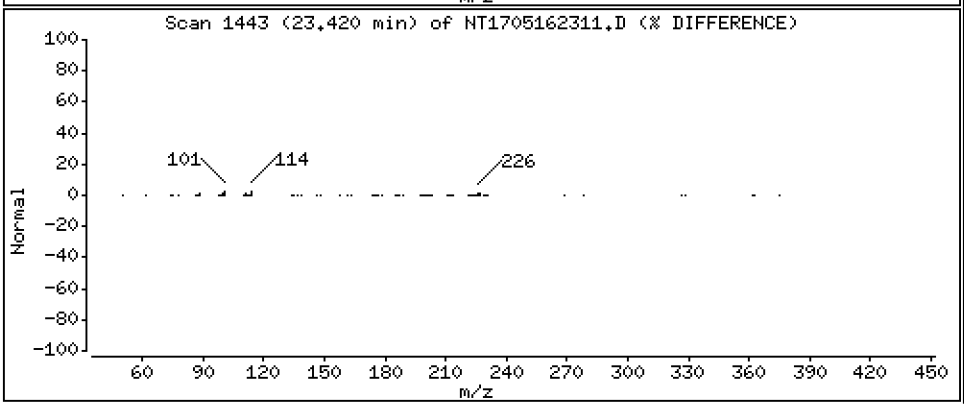












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

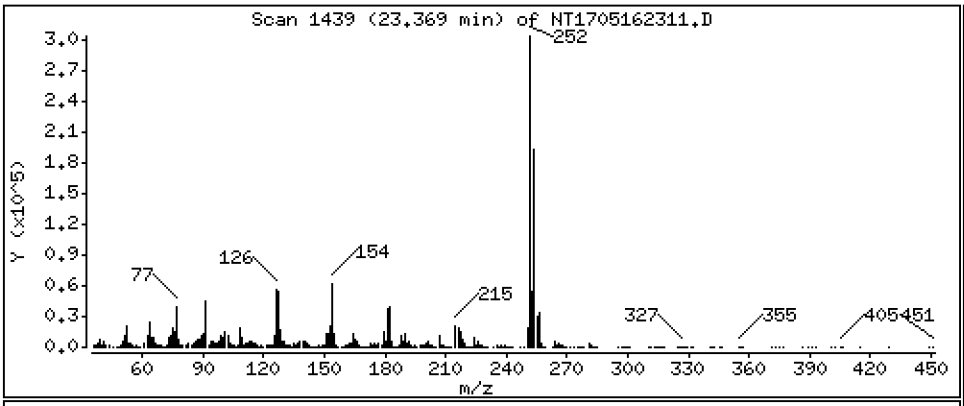
Operator: JGR

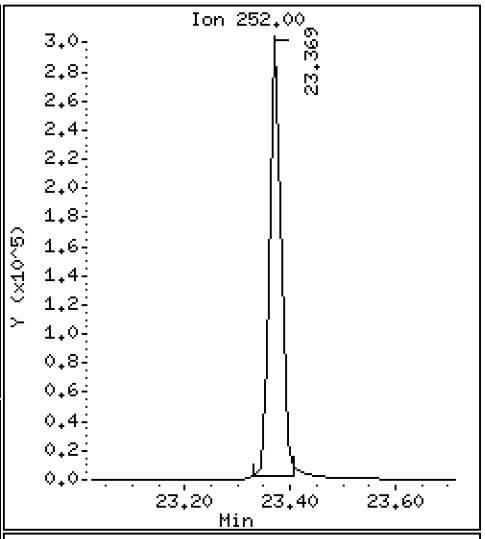
Column phase: ZB-5msi

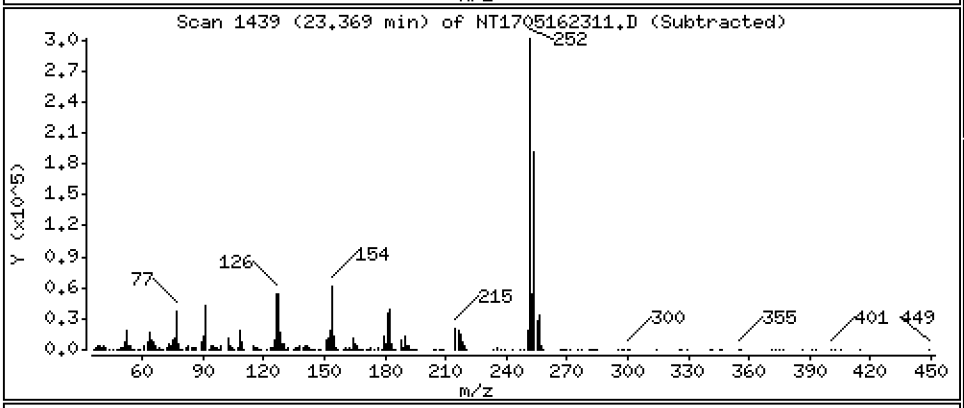
Column diameter: 0.25

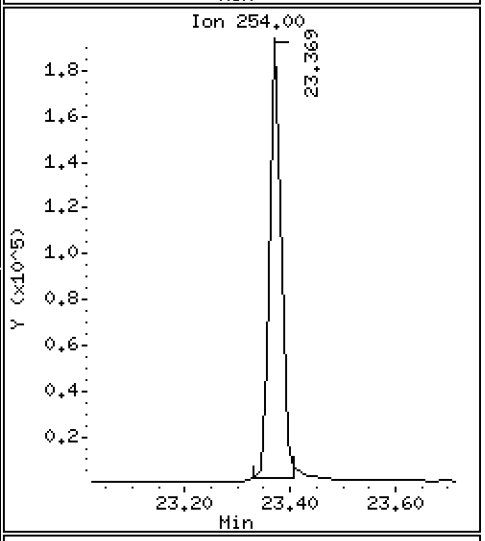
70 3,3'-Dichlorobenzidine

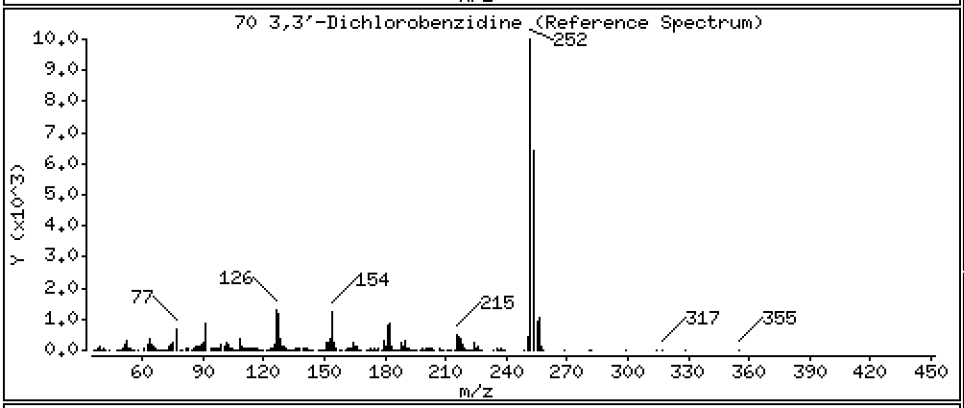
Concentration: 11.99 ug/mL

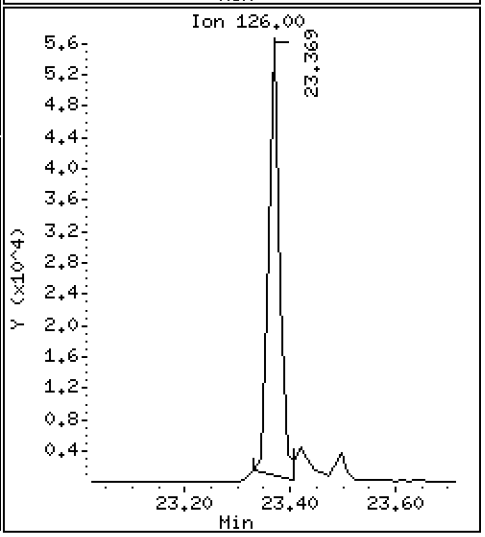


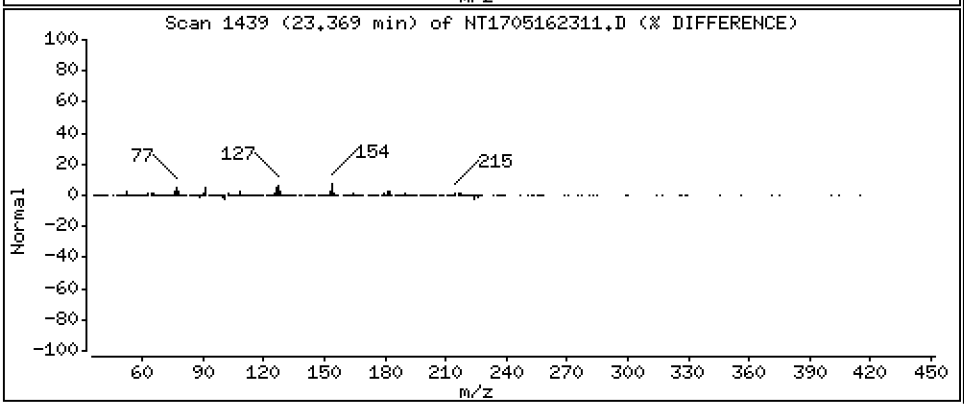












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

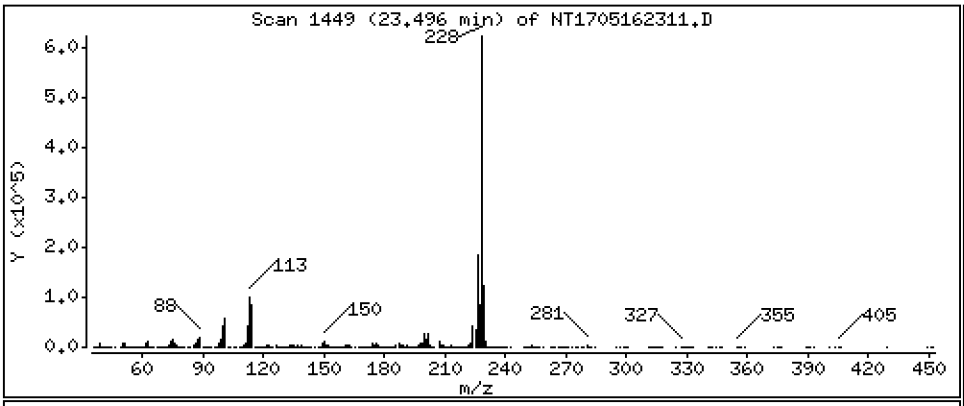
Operator: JGR

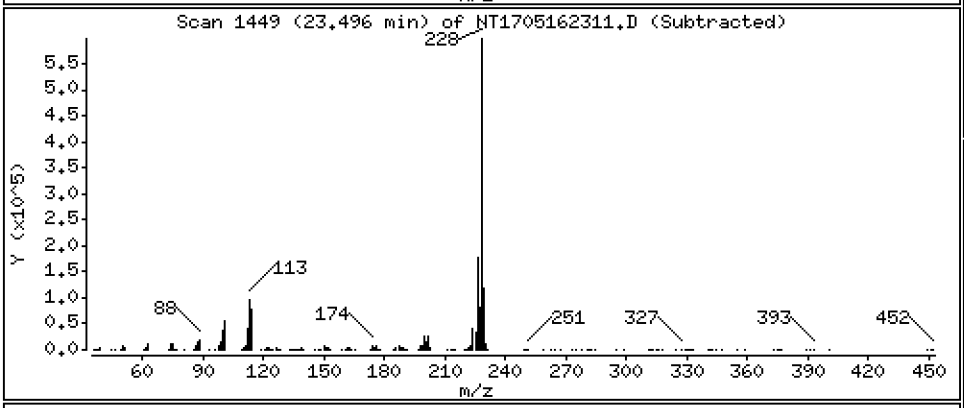
Column phase: ZB-5msi

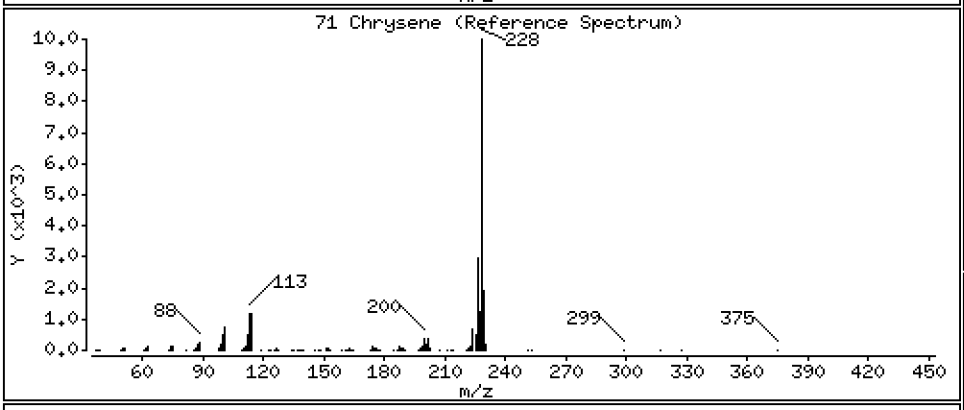
Column diameter: 0.25

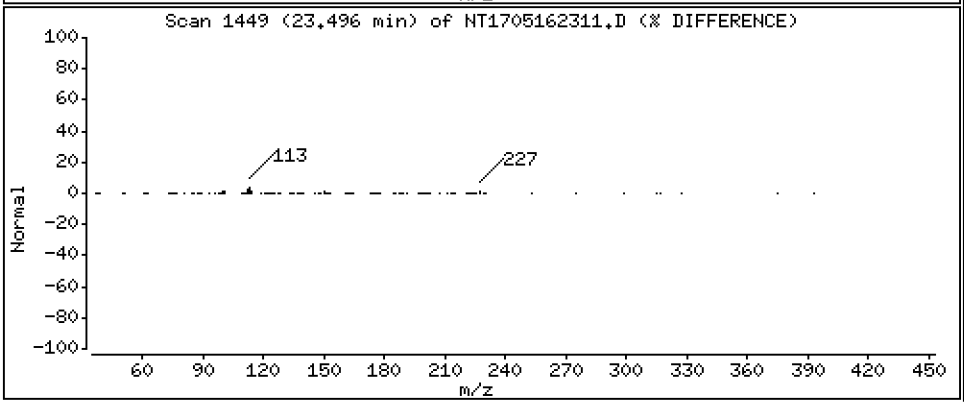
71 Chrysene

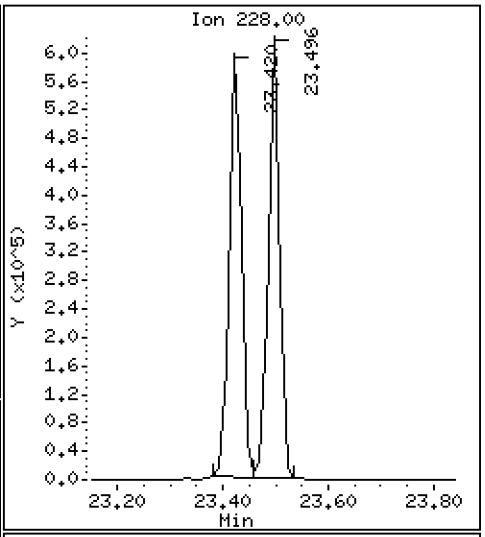
Concentration: 5.018 ug/mL

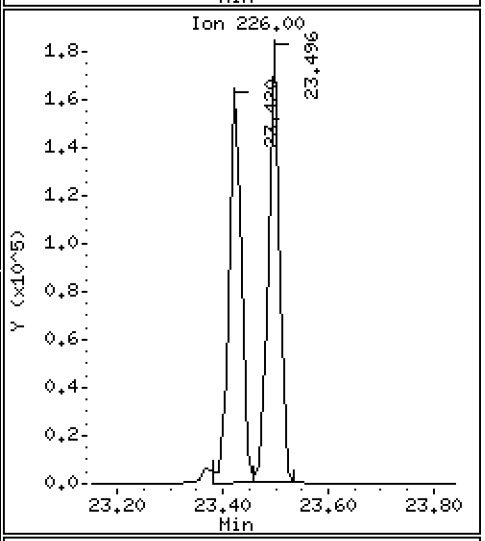


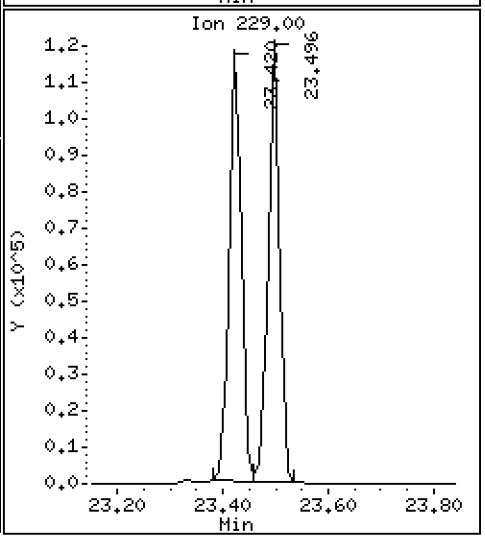












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

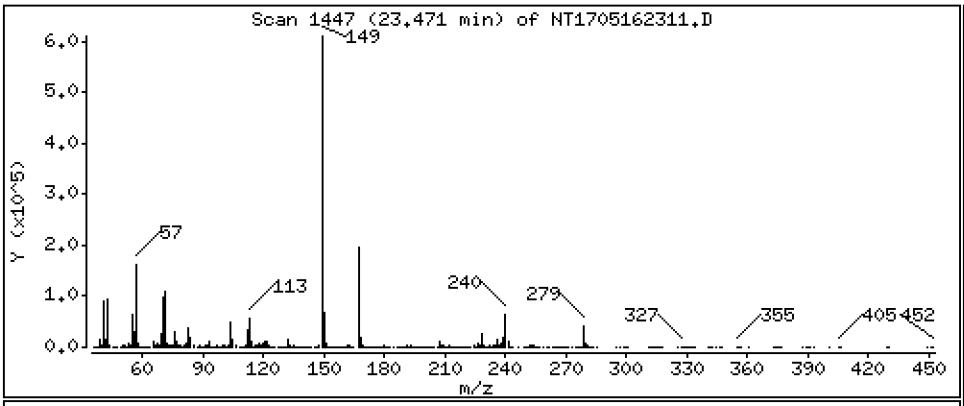
Operator: JGR

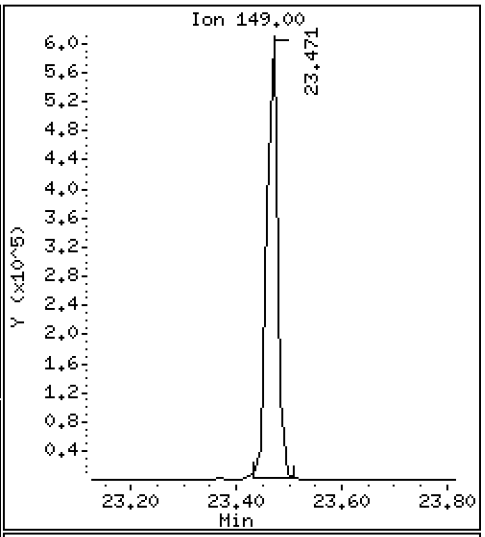
Column phase: ZB-5msi

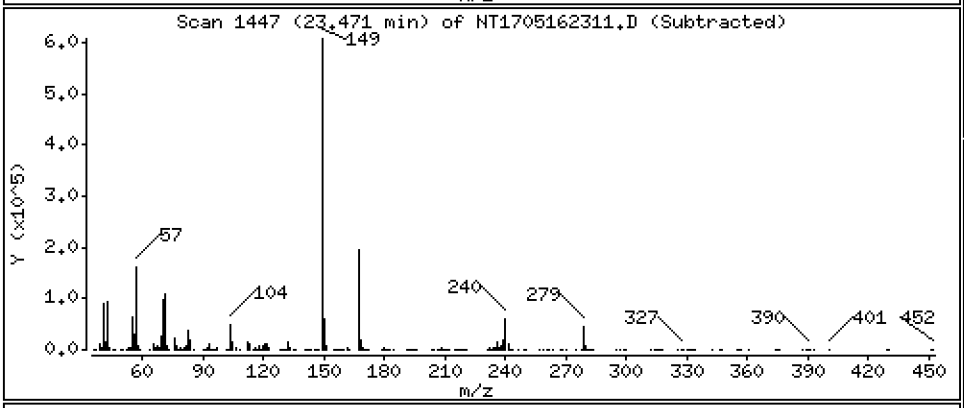
Column diameter: 0.25

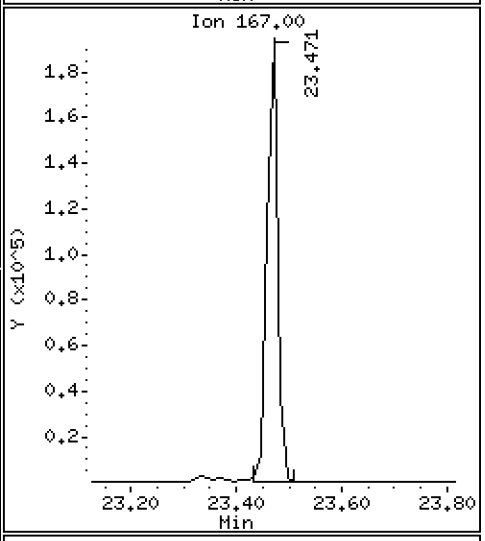
72 bis(2-Ethylhexyl)phthalate

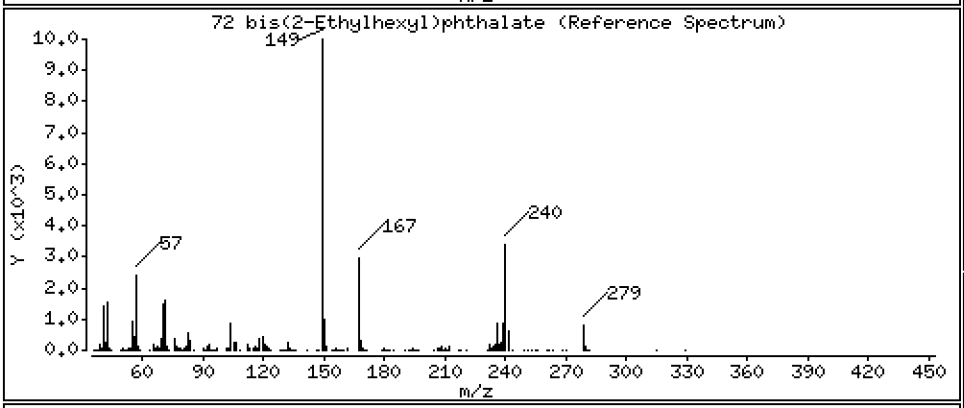
Concentration: 5.792 ug/mL

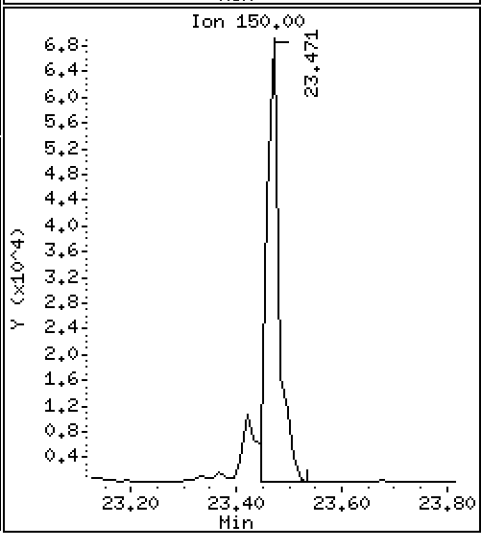


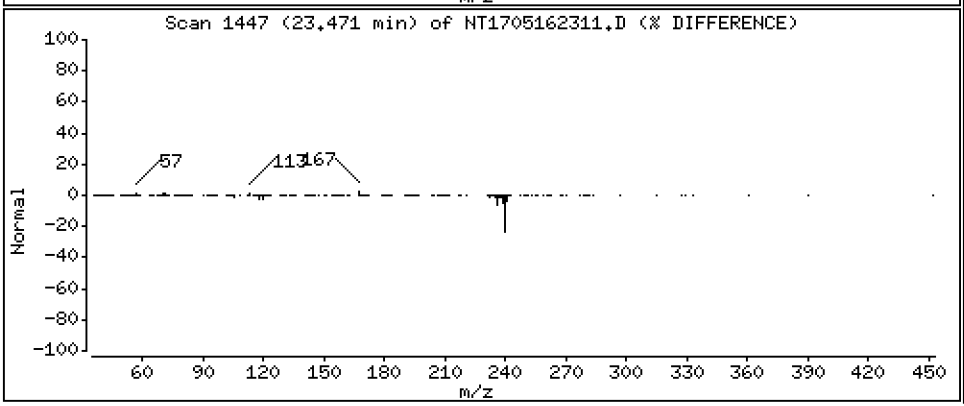












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

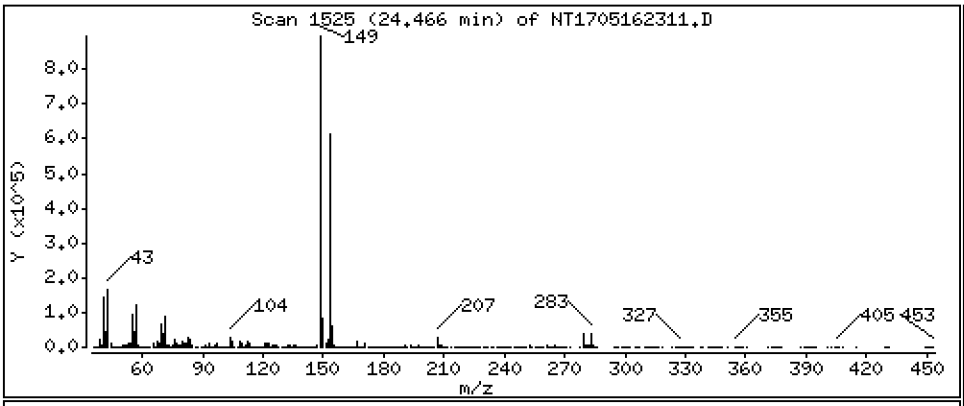
Operator: JGR

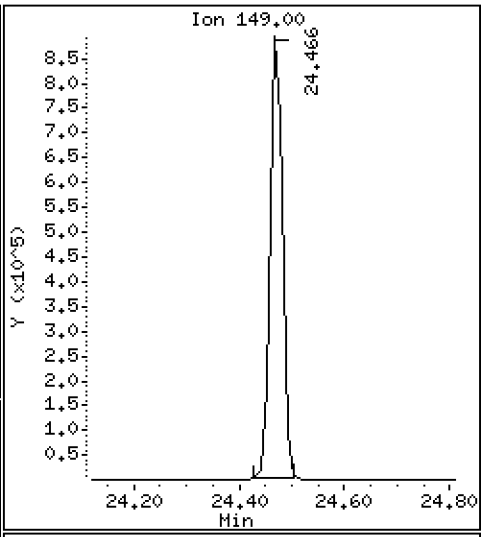
Column phase: ZB-5msi

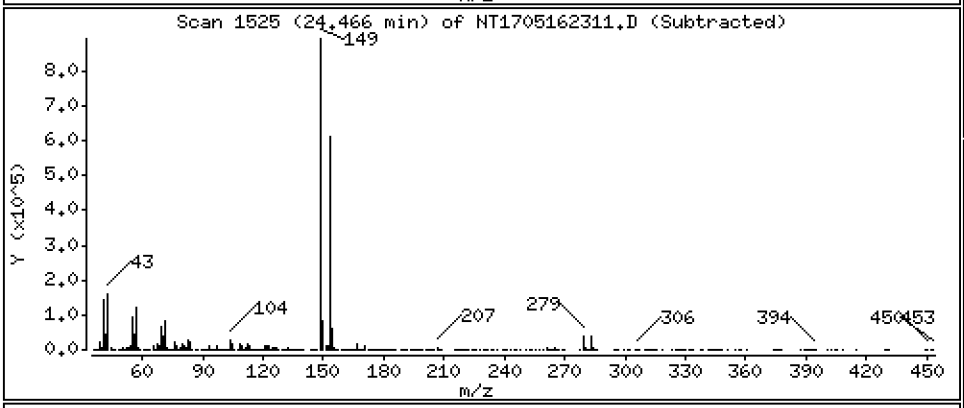
Column diameter: 0.25

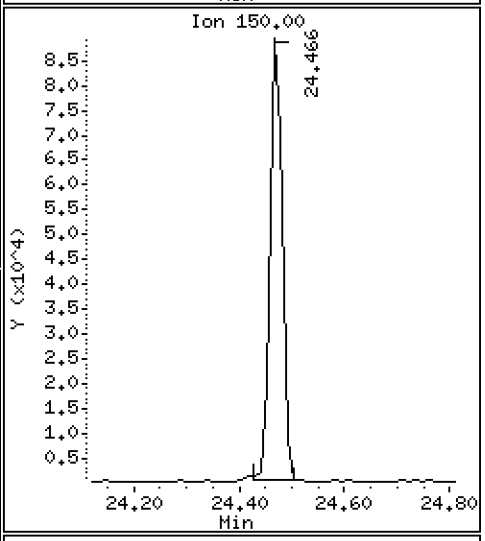
73 Di-n-octylphthalate

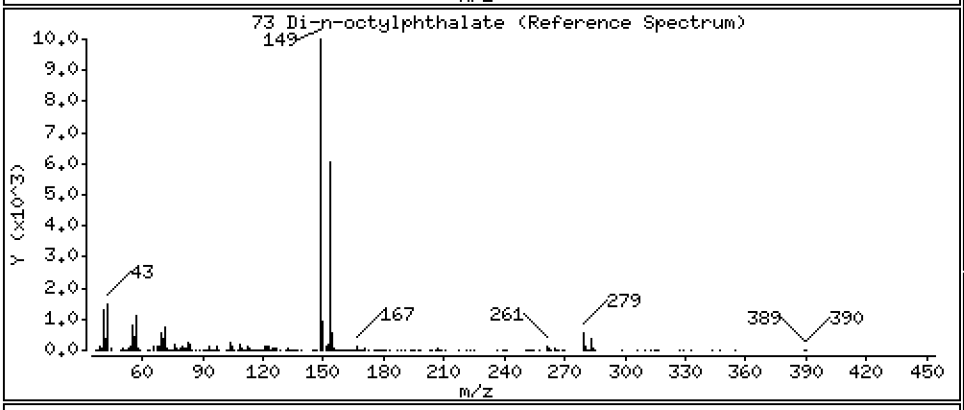
Concentration: 5.482 ug/mL

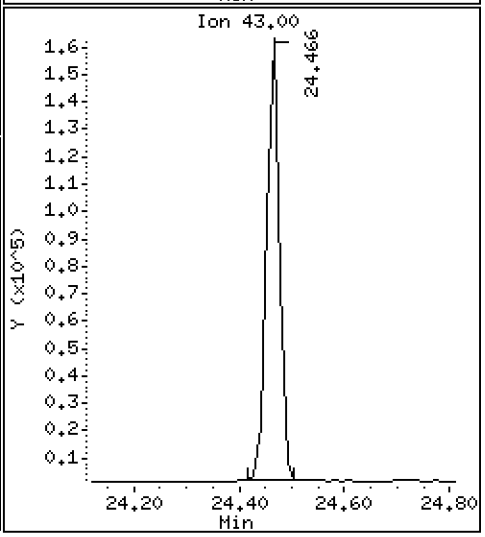


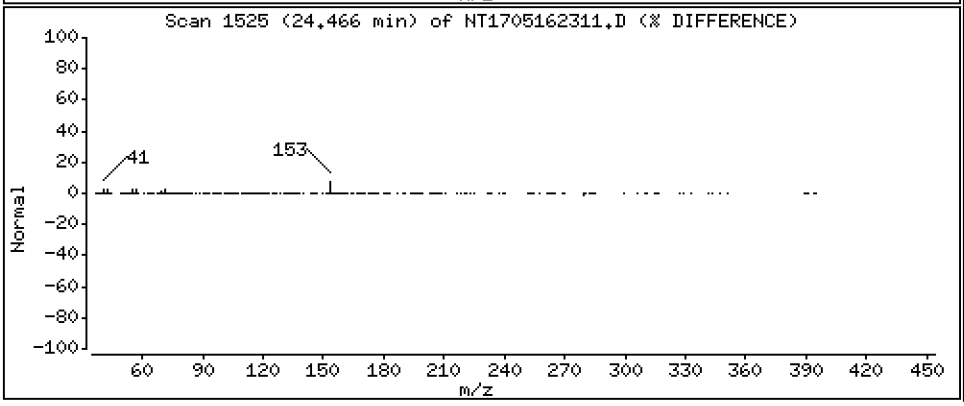












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

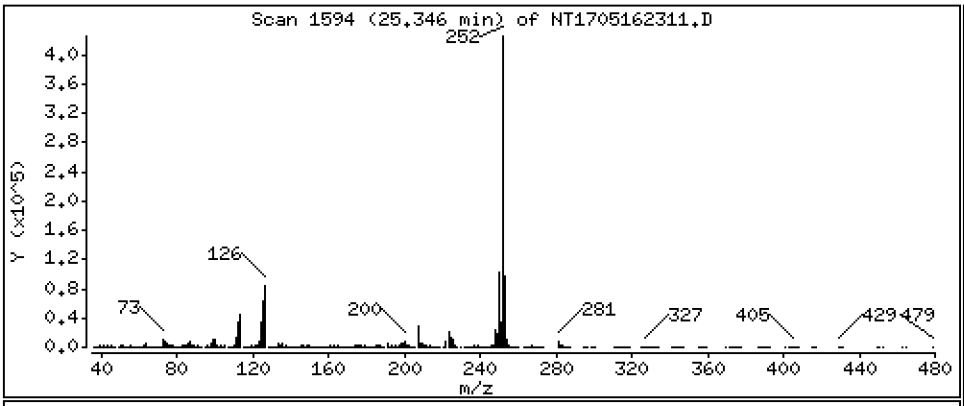
Operator: JGR

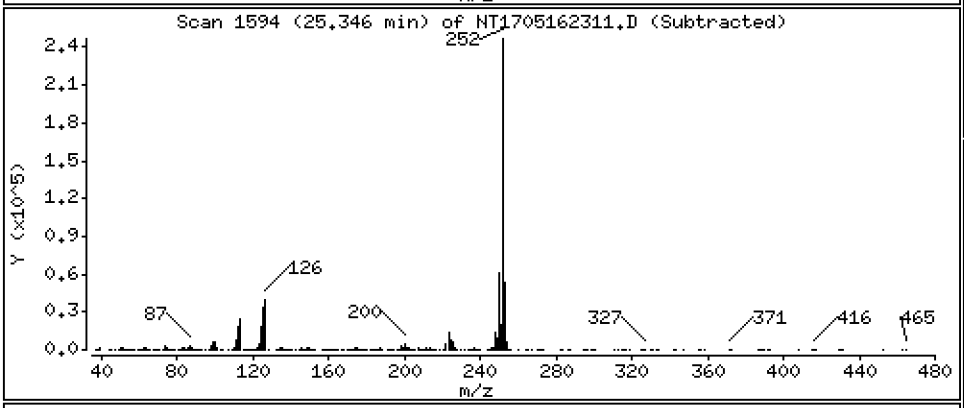
Column phase: ZB-5msi

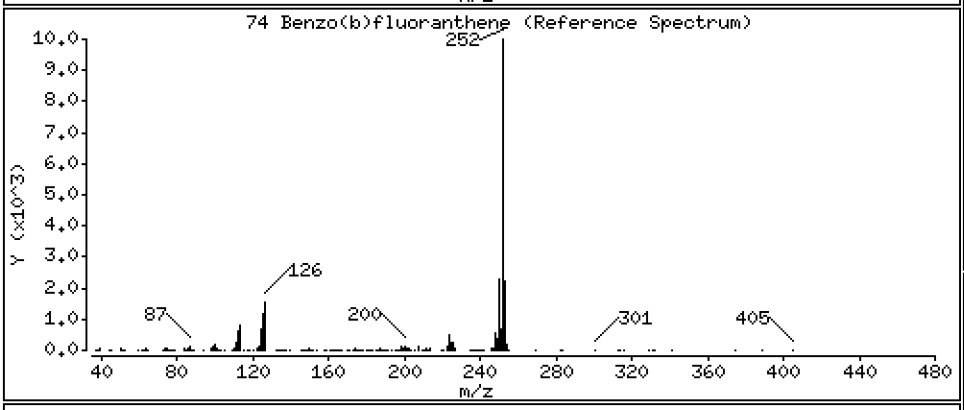
Column diameter: 0.25

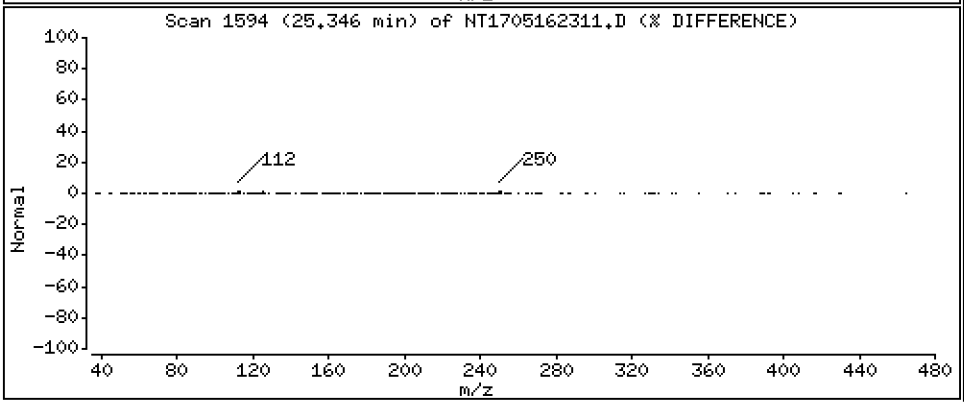
74 Benzo(b)fluoranthene

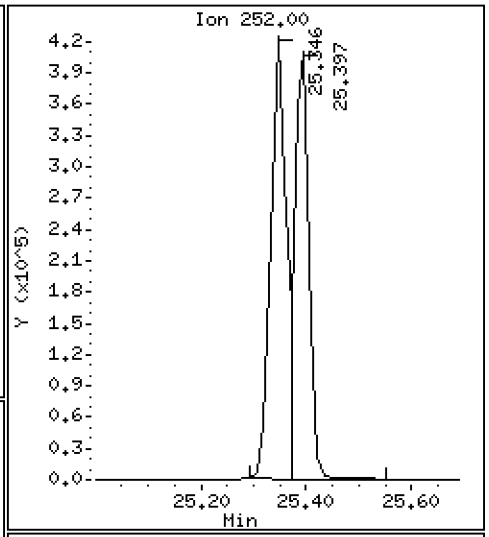
Concentration: 4.912 ug/mL

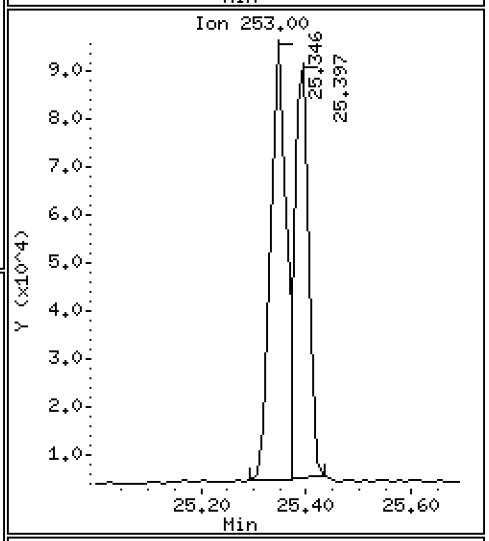


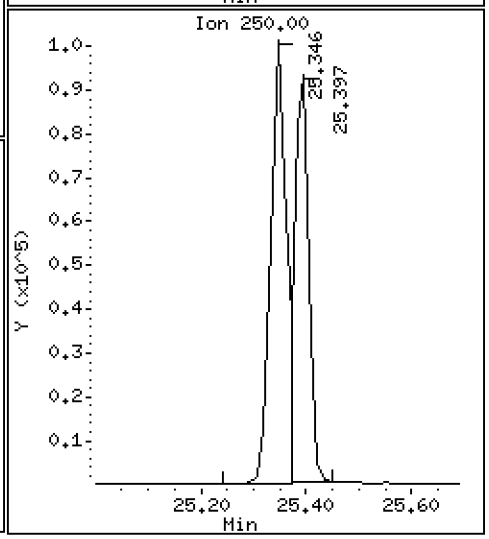












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

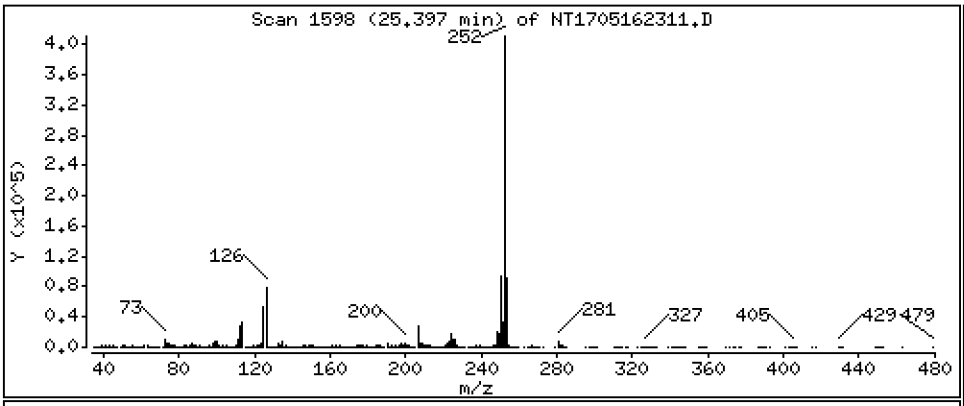
Operator: JGR

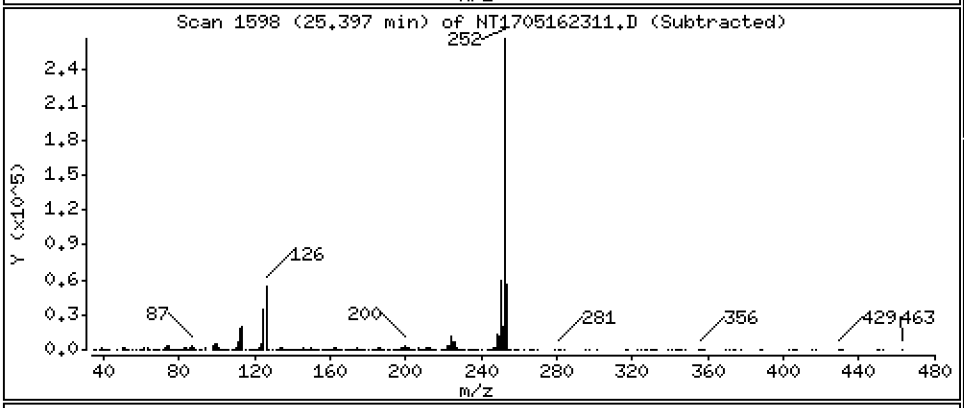
Column phase: ZB-5msi

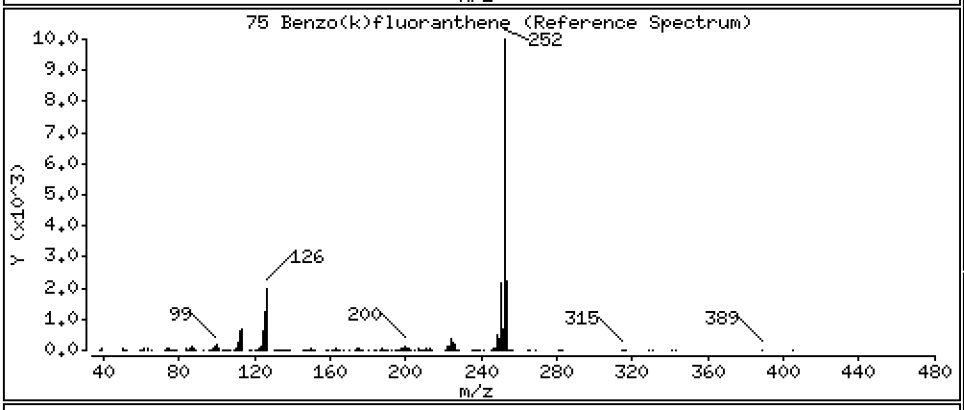
Column diameter: 0.25

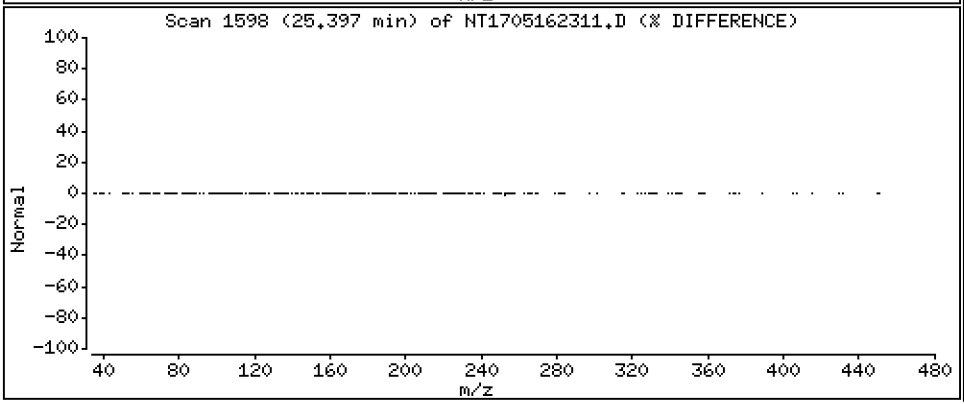
75 Benzo(k)fluoranthene

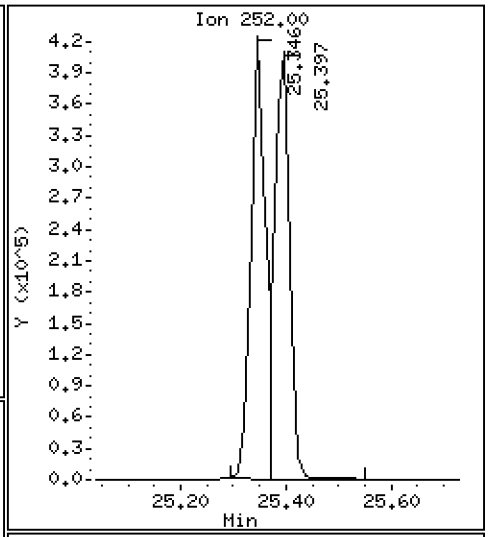
Concentration: 4.965 ug/mL

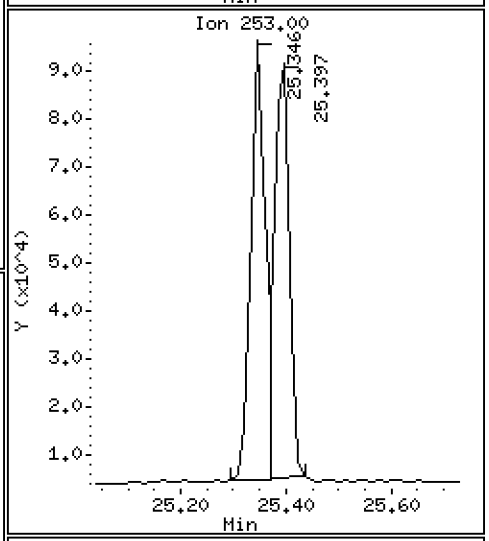


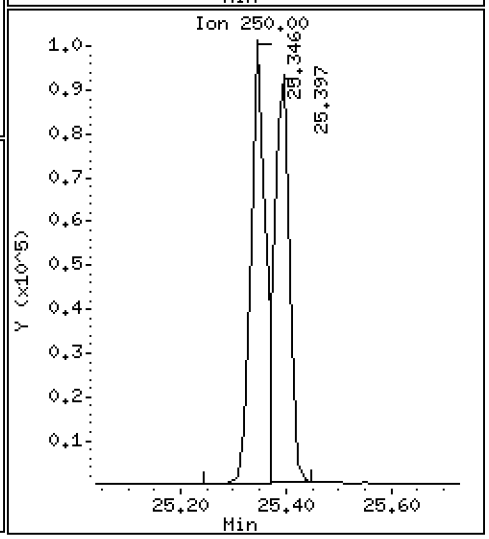












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

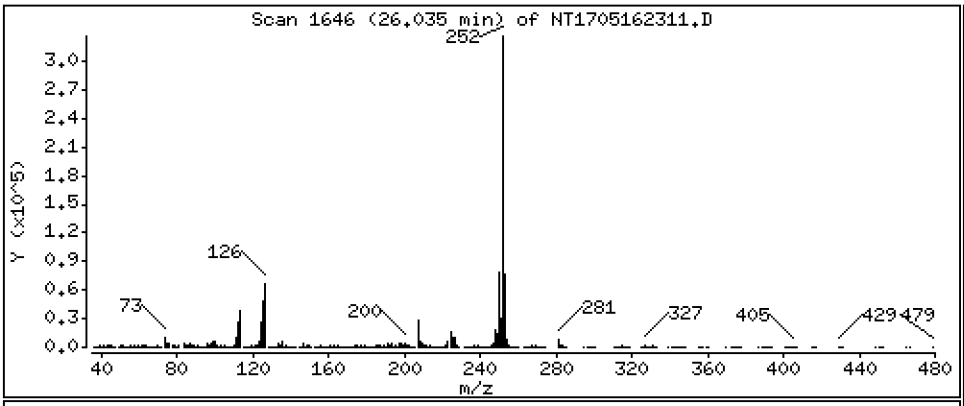
Operator: JGR

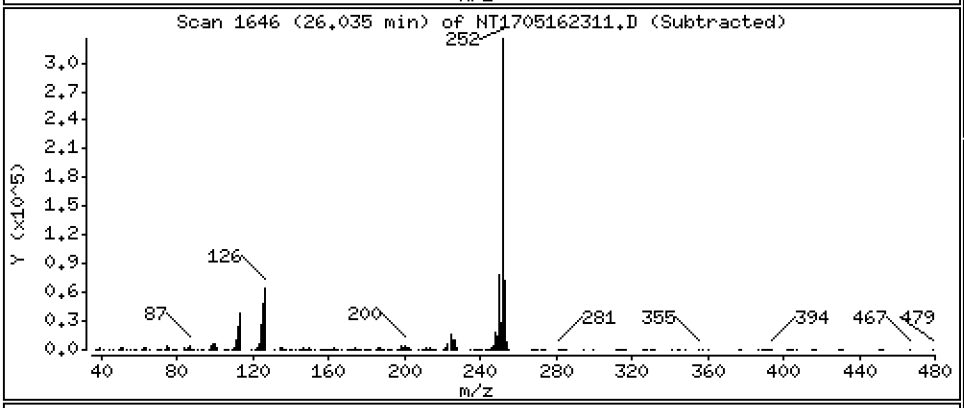
Column phase: ZB-5msi

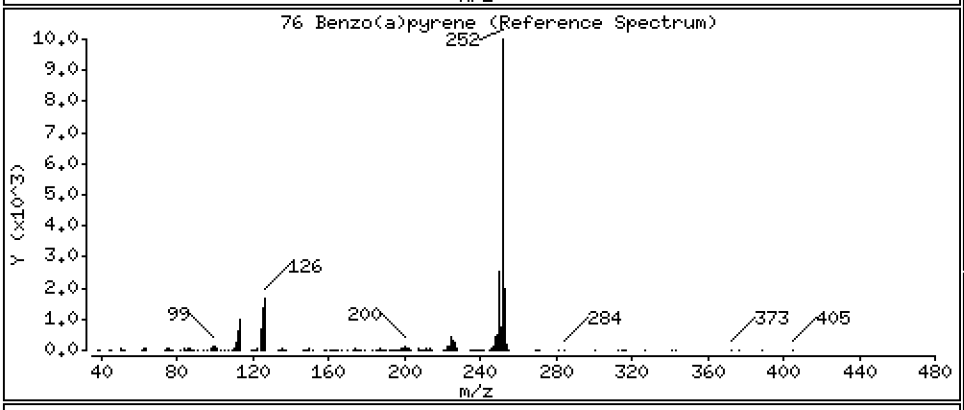
Column diameter: 0.25

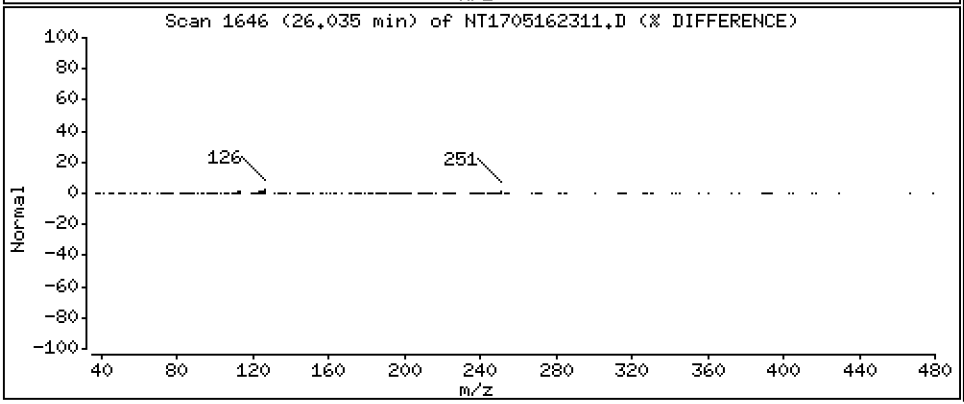
76 Benzo(a)pyrene

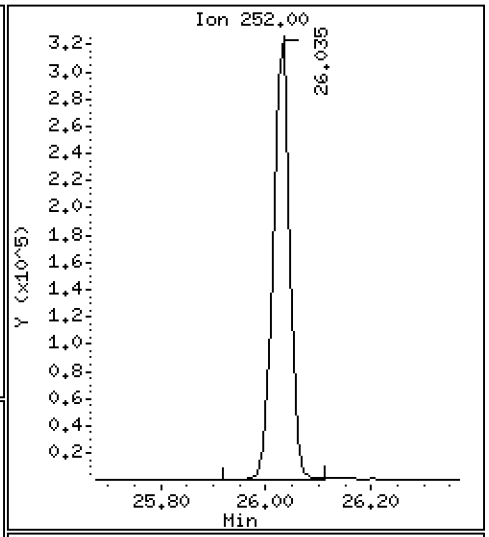
Concentration: 5.172 ug/mL

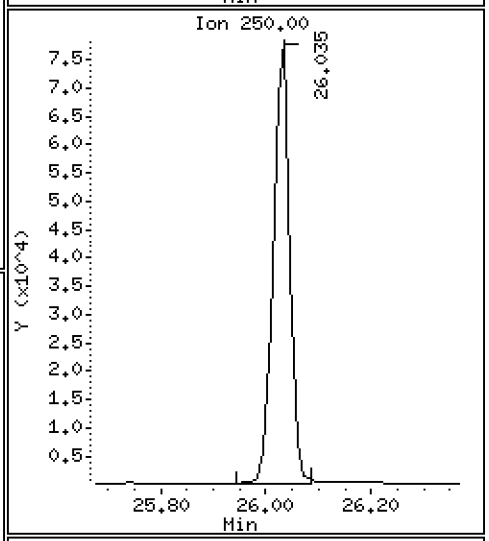


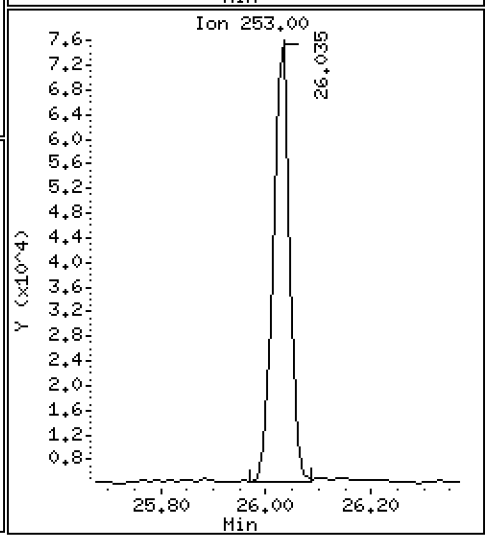












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

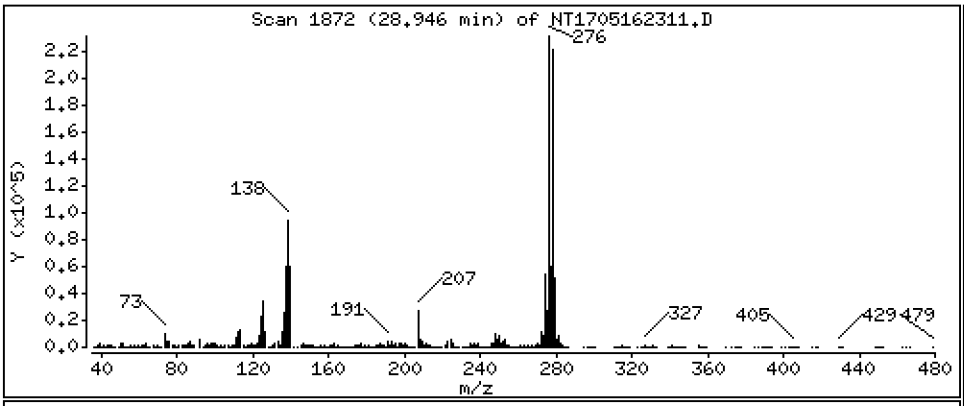
Operator: JGR

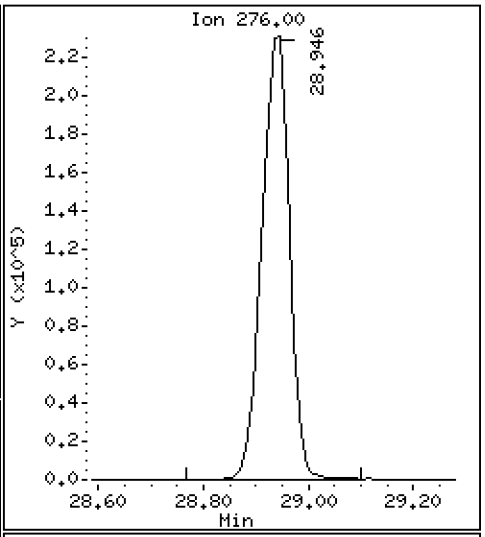
Column phase: ZB-5msi

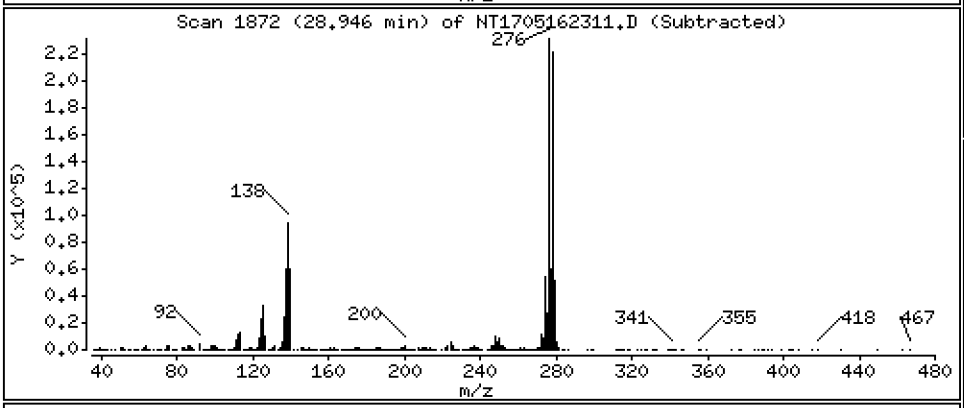
Column diameter: 0.25

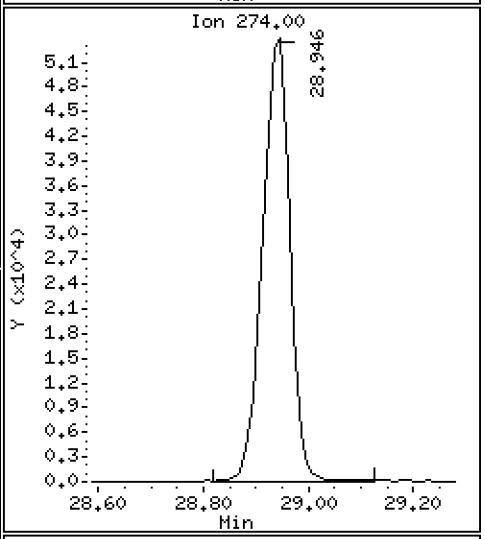
78 Indeno(1,2,3-cd)pyrene

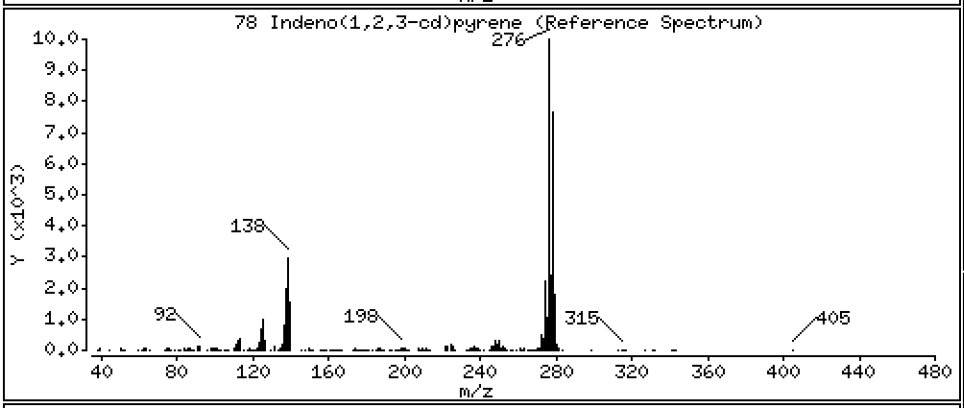
Concentration: 5.029 ug/mL

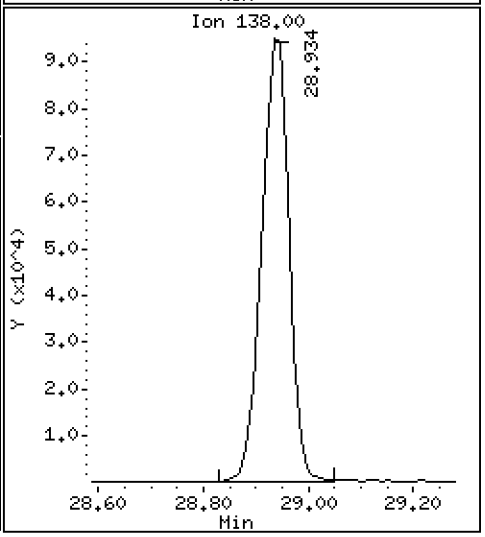


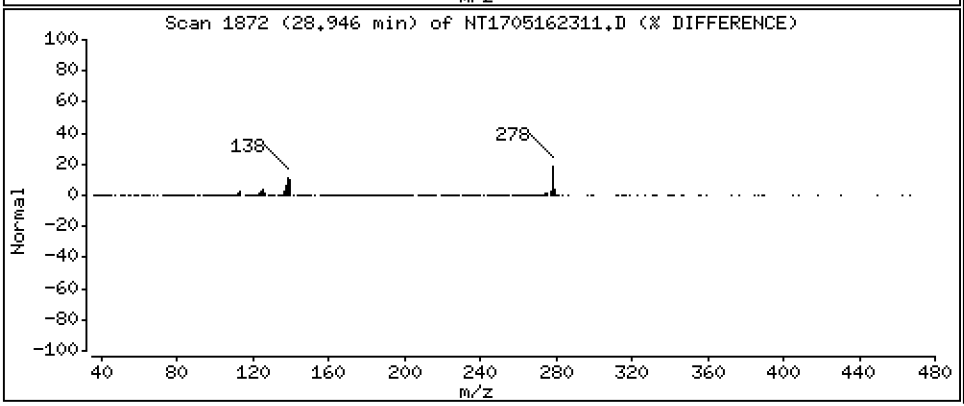












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

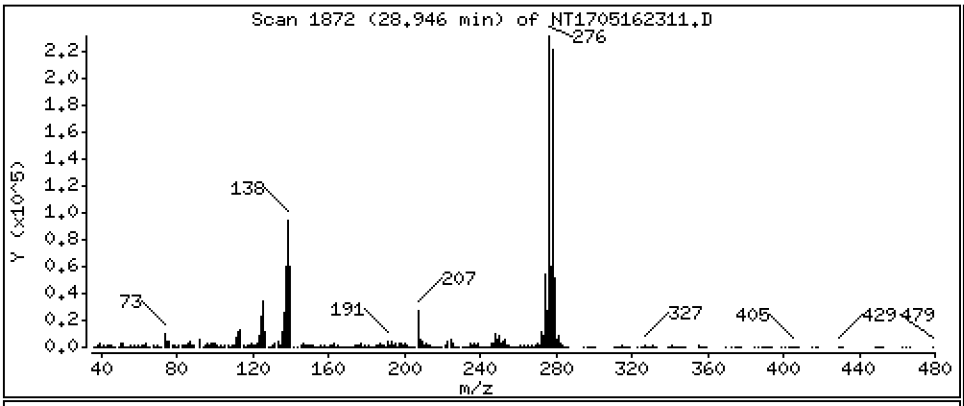
Operator: JGR

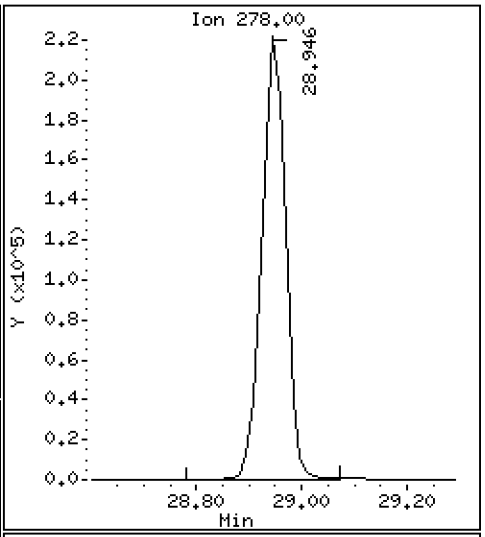
Column phase: ZB-5msi

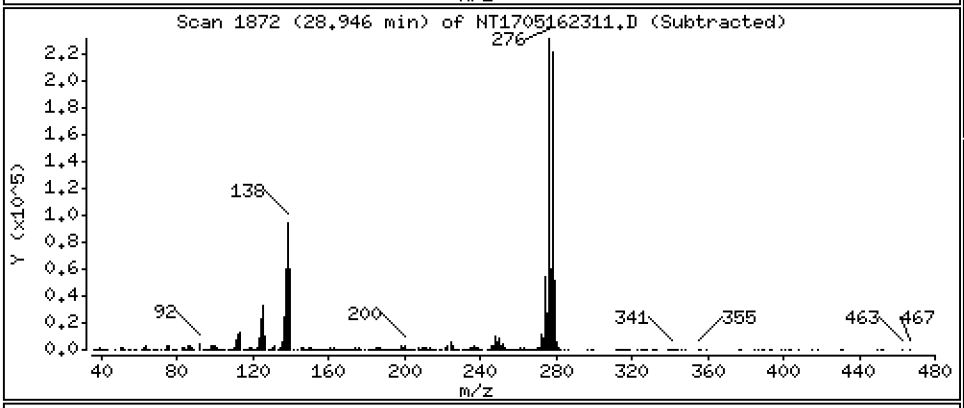
Column diameter: 0.25

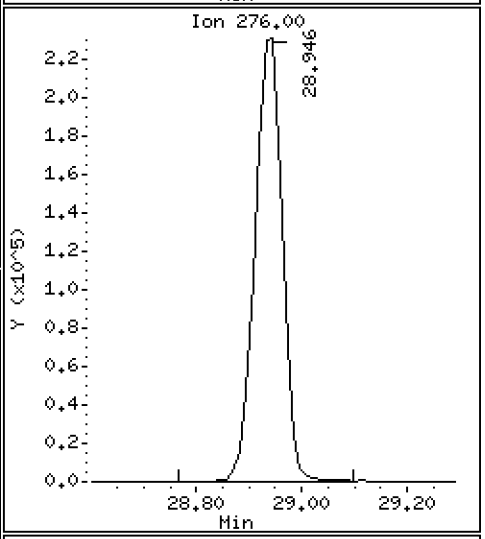
79 Dibenzo(a,h)anthracene

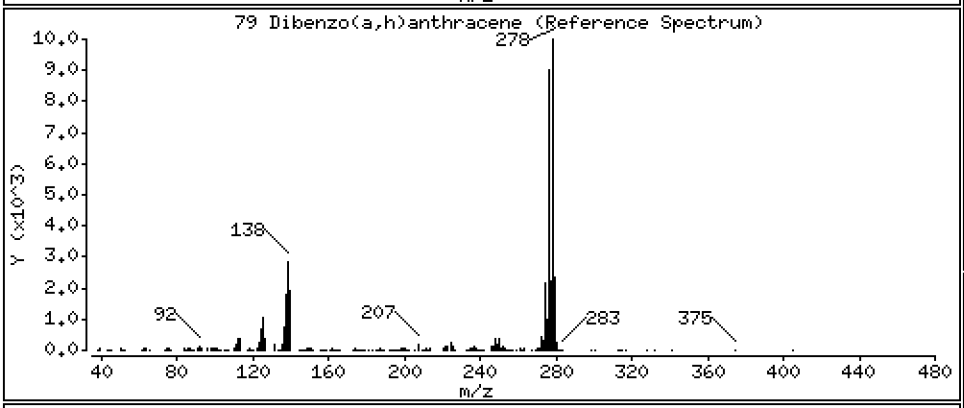
Concentration: 4.970 ug/mL

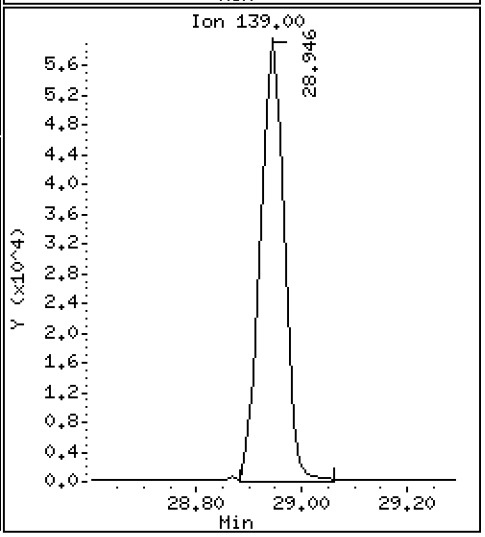


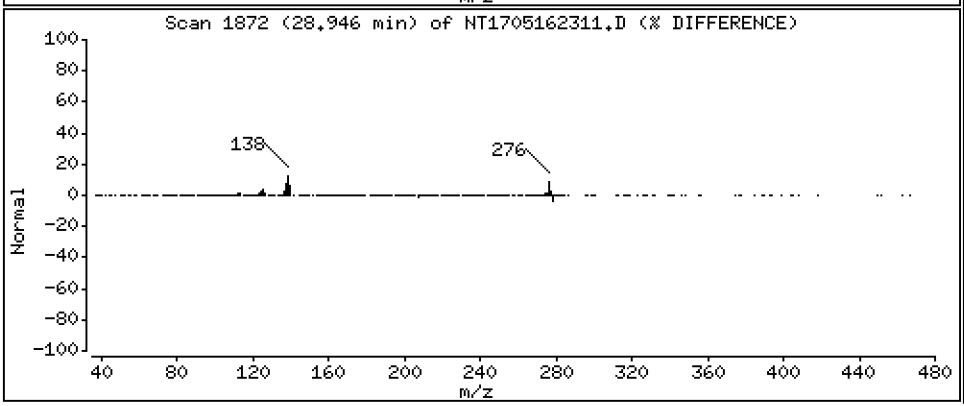












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

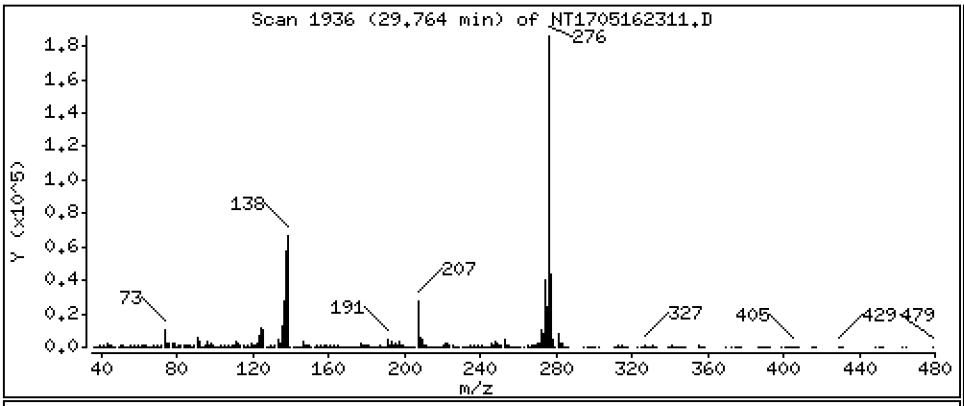
Operator: JGR

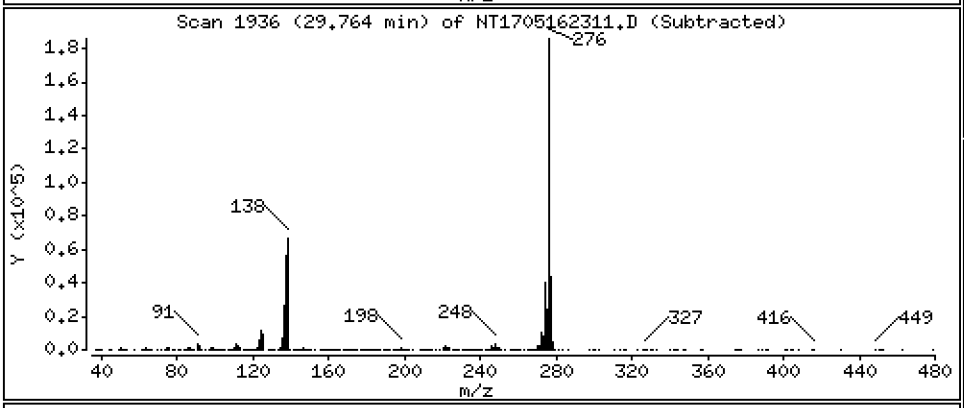
Column phase: ZB-5msi

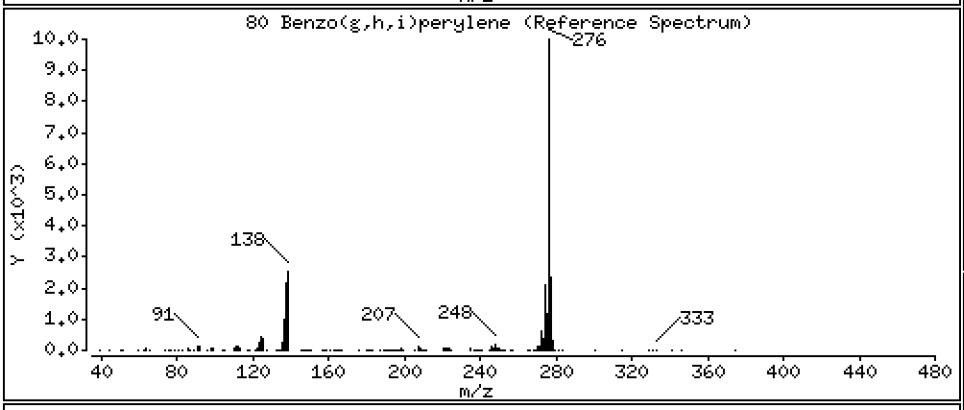
Column diameter: 0.25

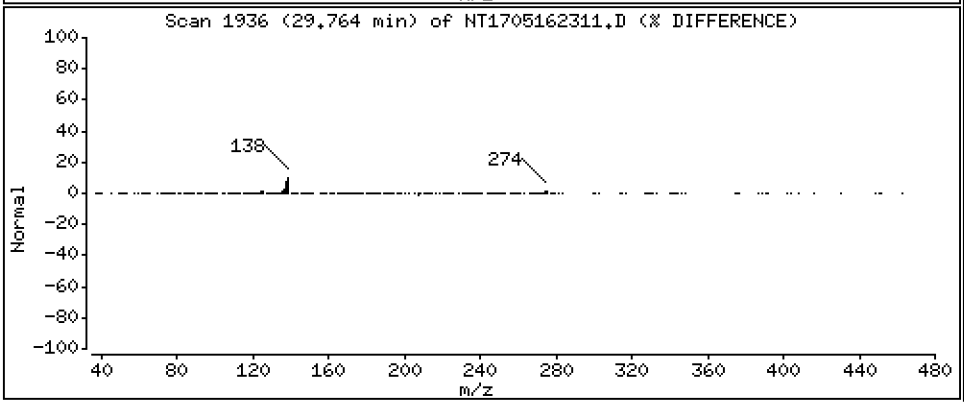
80 Benzo(g,h,i)perylene

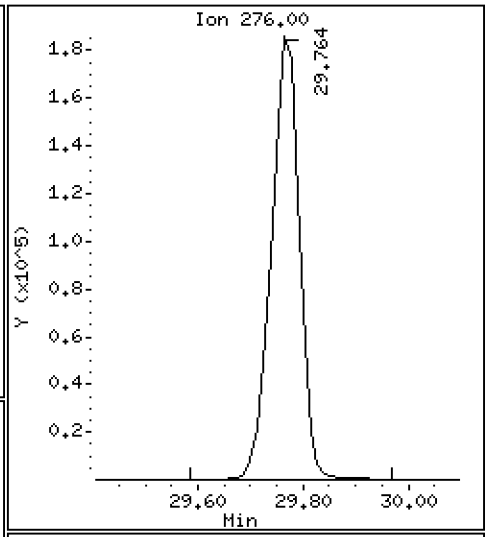
Concentration: 5.054 ug/mL

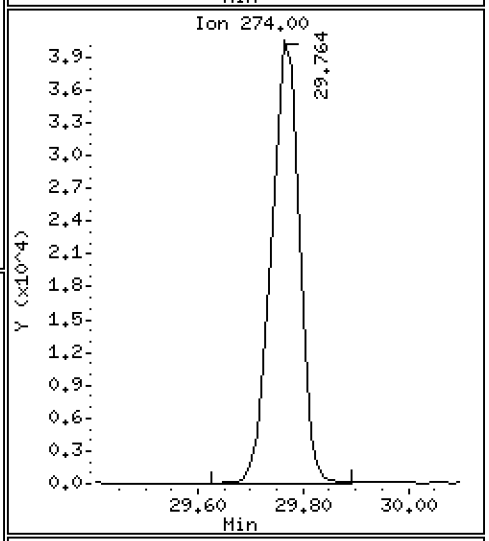


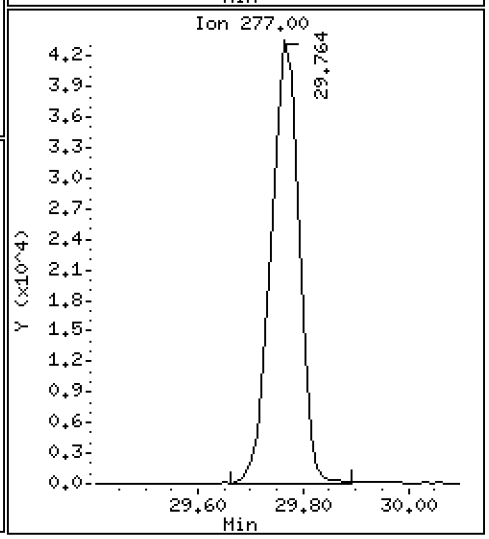












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

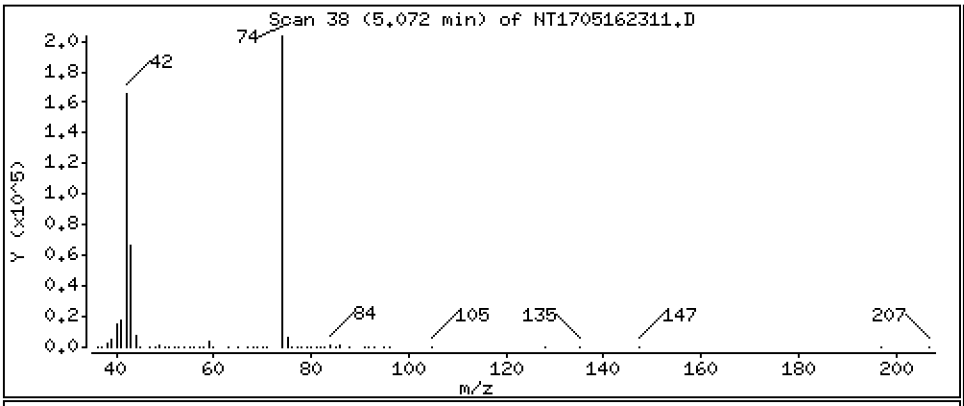
Operator: JGR

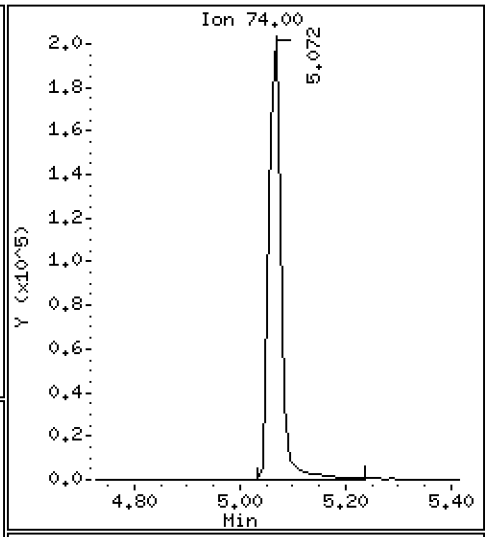
Column phase: ZB-5msi

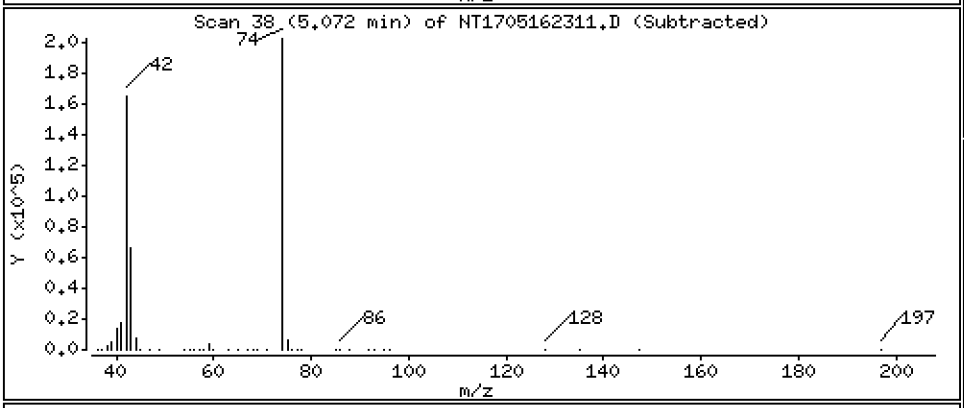
Column diameter: 0.25

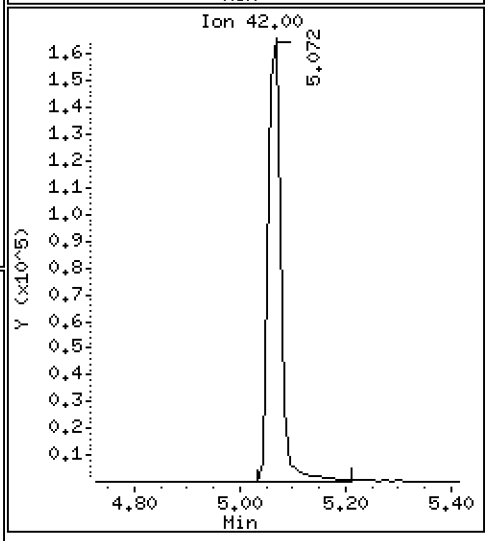
90 N-Nitrosodimethylamine

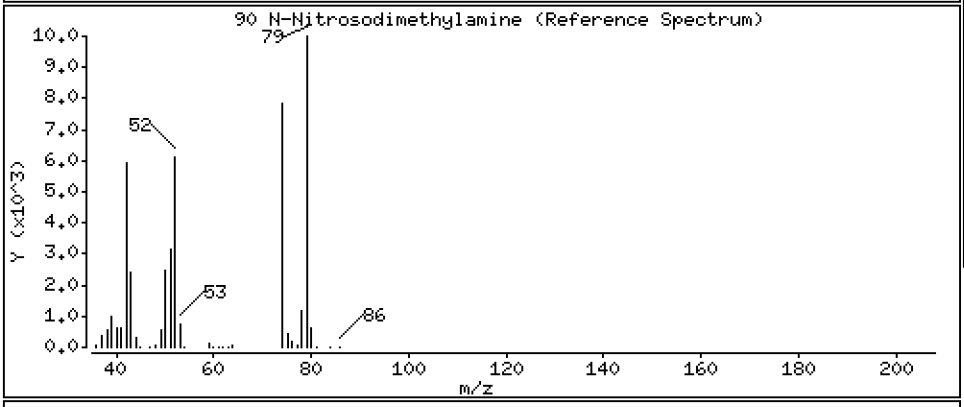
Concentration: 5.767 ug/mL

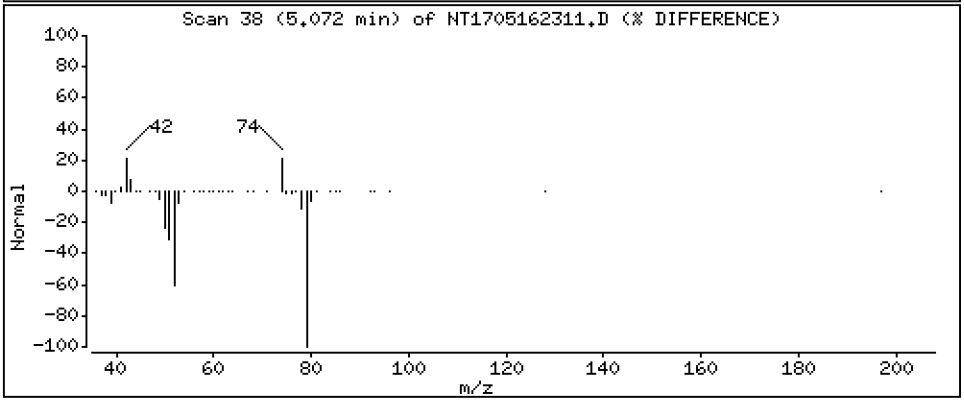












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

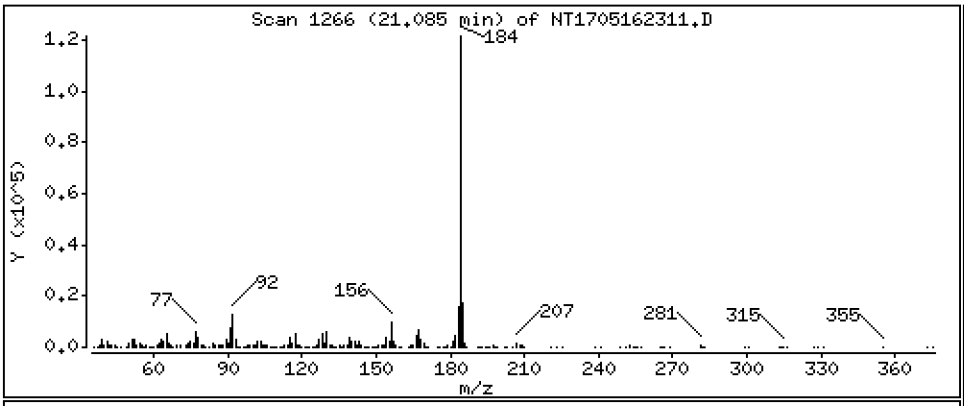
Operator: JGR

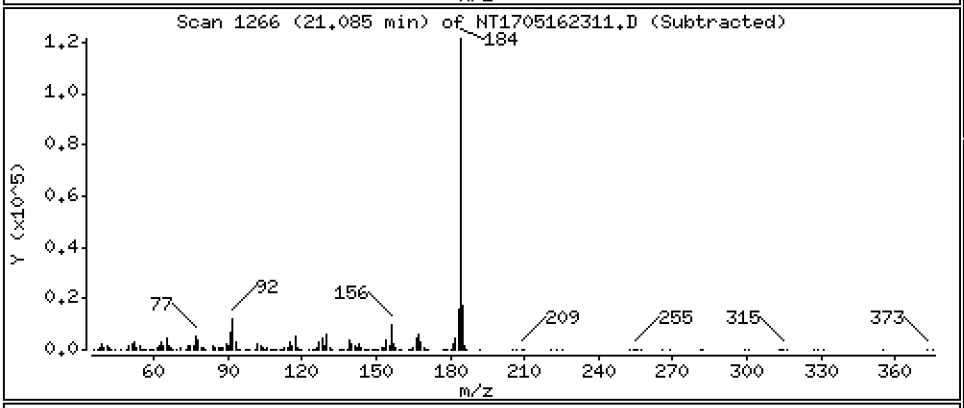
Column phase: ZB-5msi

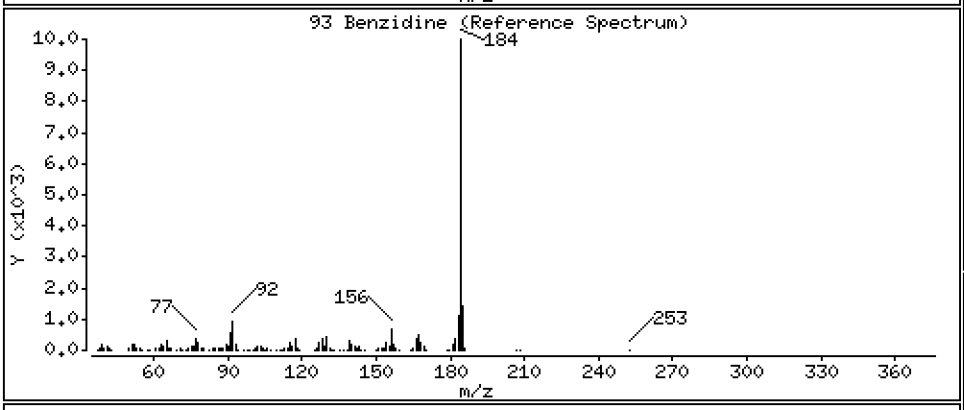
Column diameter: 0.25

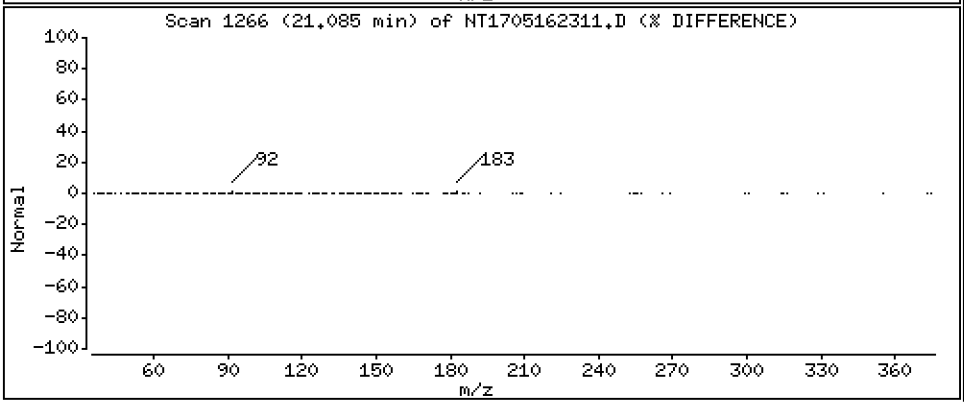
93 Benzidine

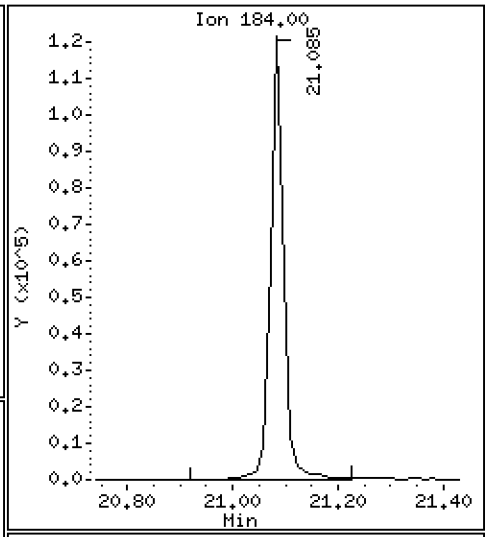
Concentration: 3.457 ug/mL

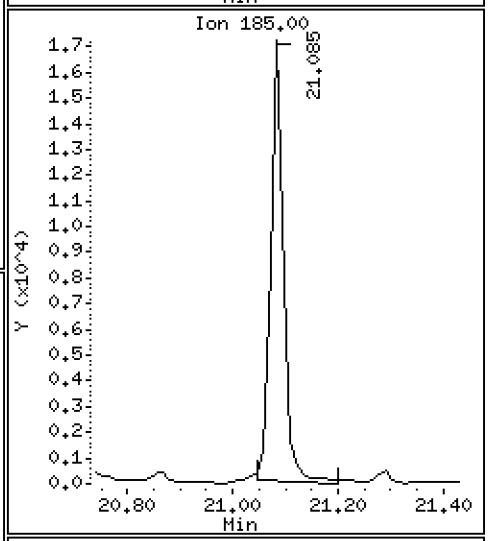


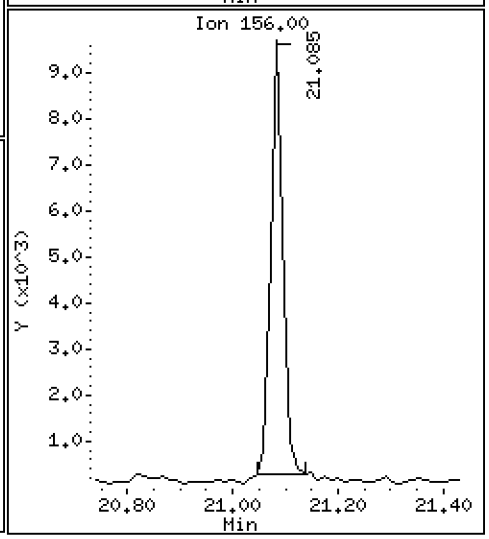












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

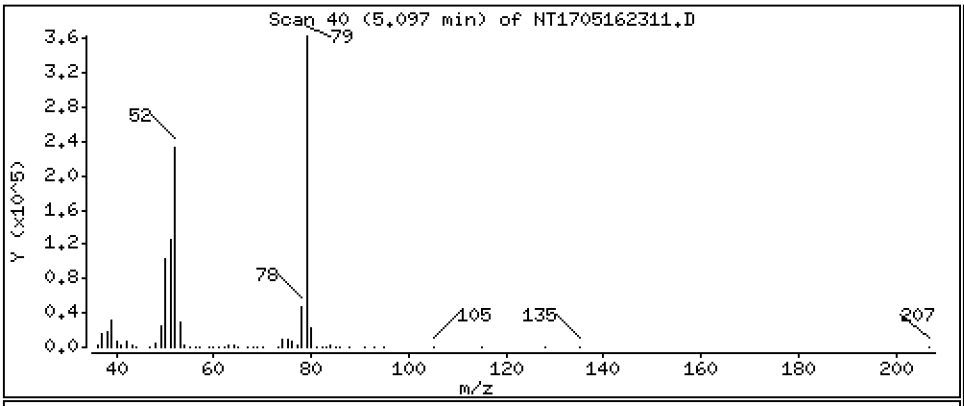
Operator: JGR

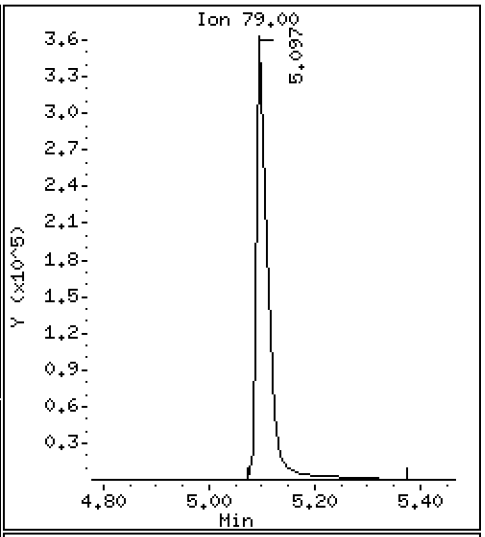
Column phase: ZB-5msi

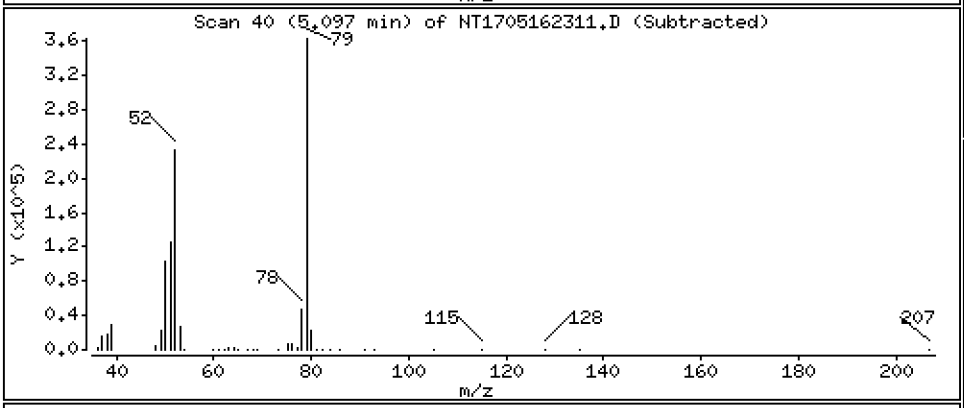
Column diameter: 0.25

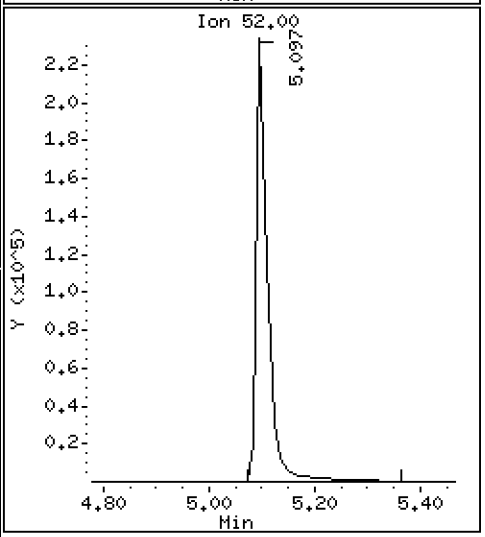
103 Pyridine

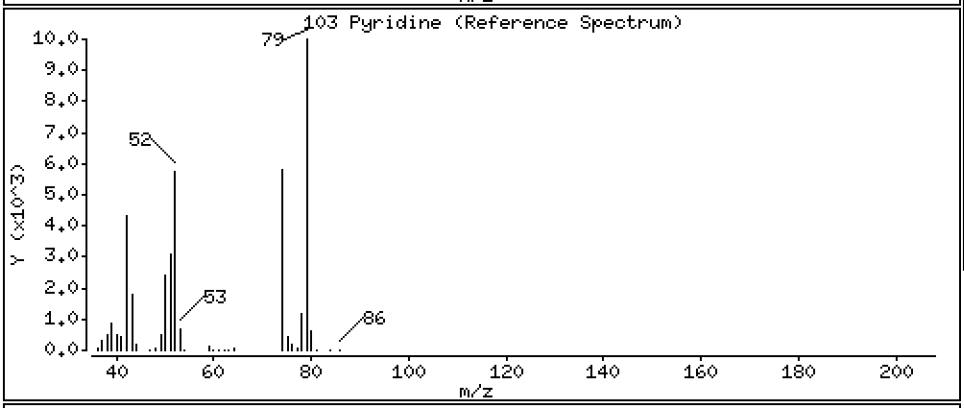
Concentration: 5.811 ug/mL

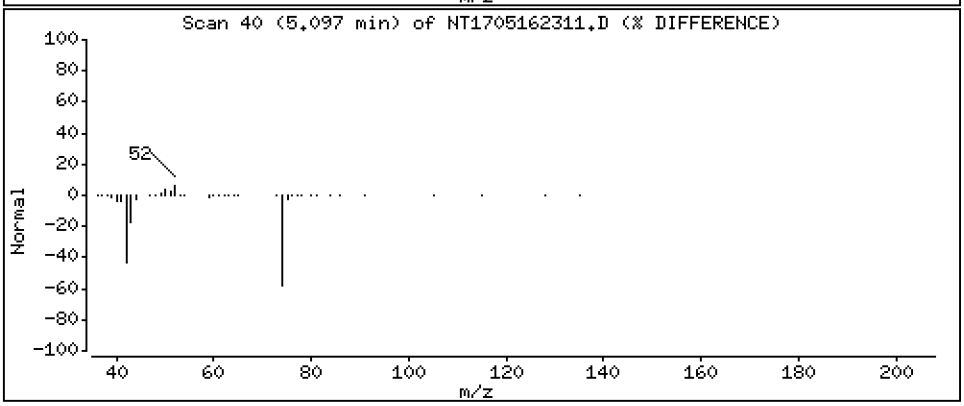












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

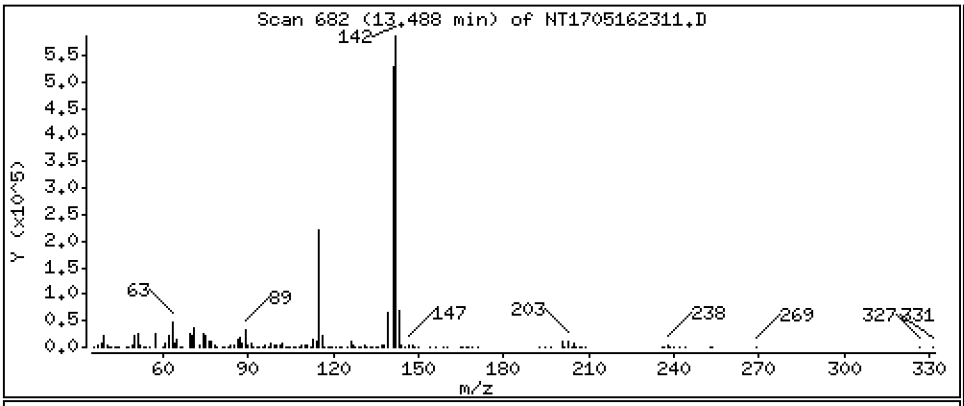
Operator: JGR

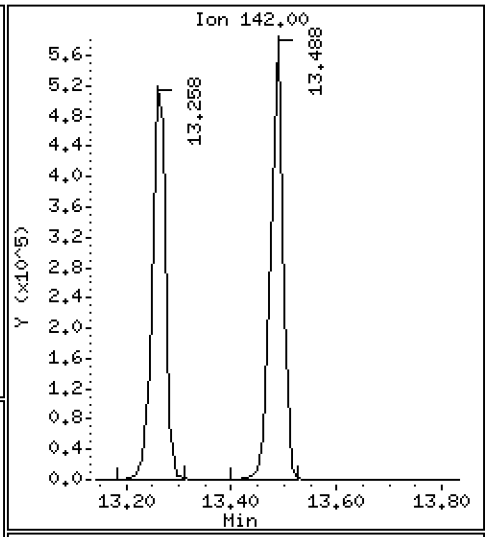
Column phase: ZB-5msi

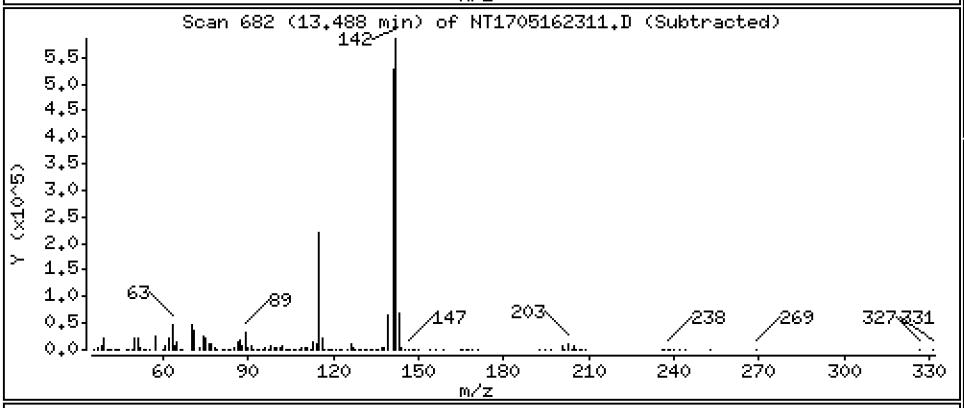
Column diameter: 0.25

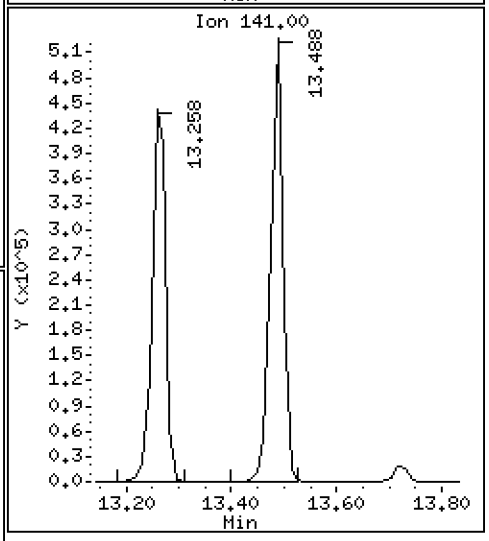
105 1-methylnaphthalene

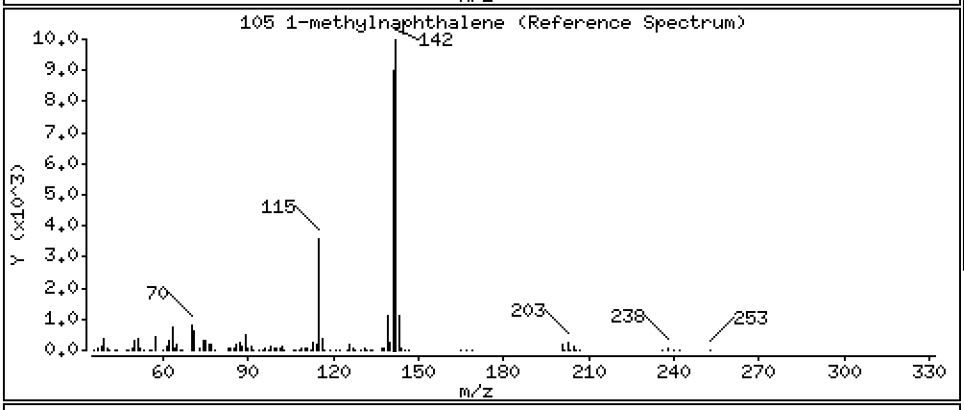
Concentration: 5.250 ug/mL

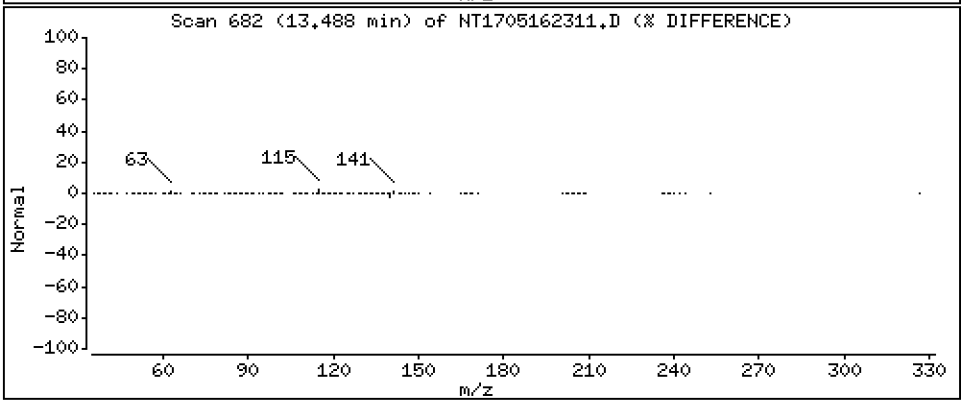












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

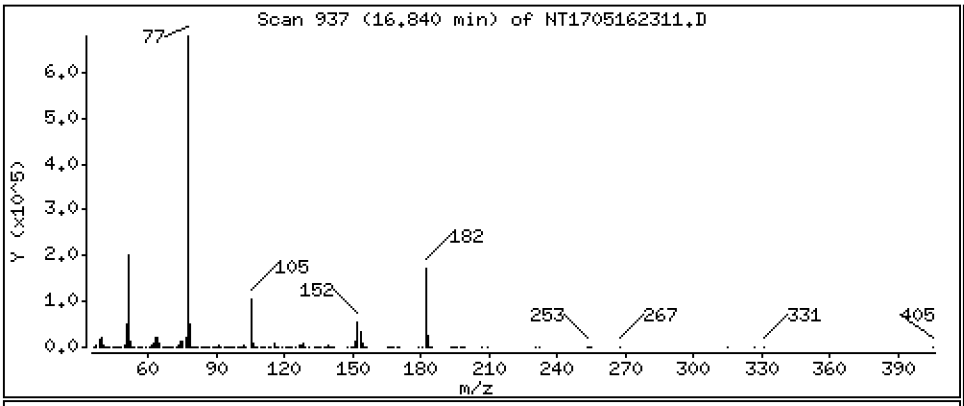
Operator: JGR

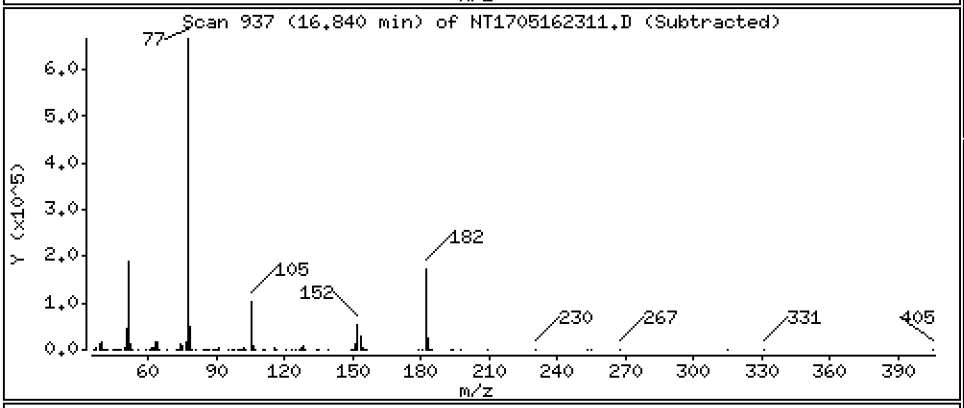
Column phase: ZB-5msi

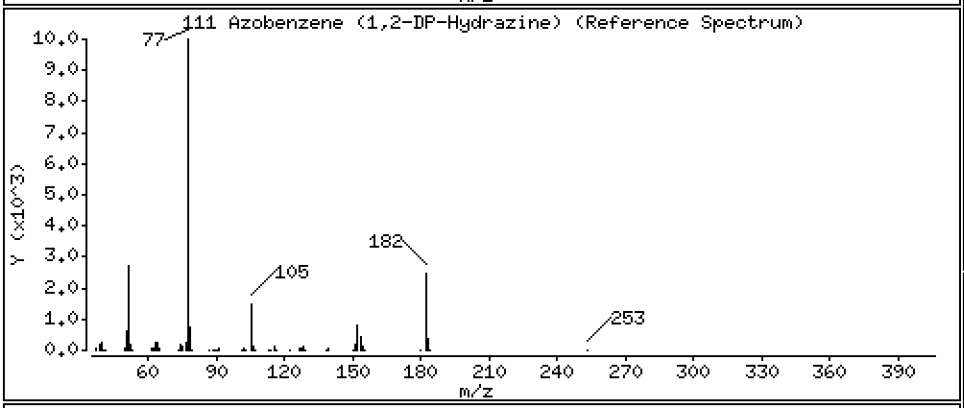
Column diameter: 0.25

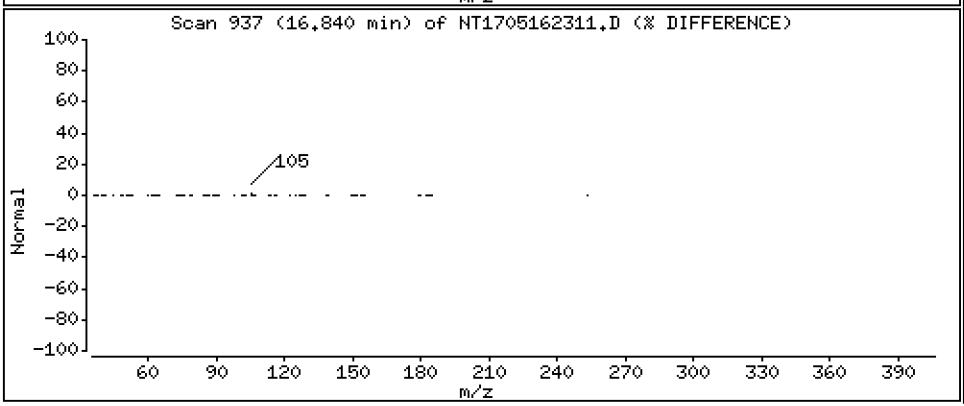
111 Azobenzene (1,2-DP-Hydrazine)

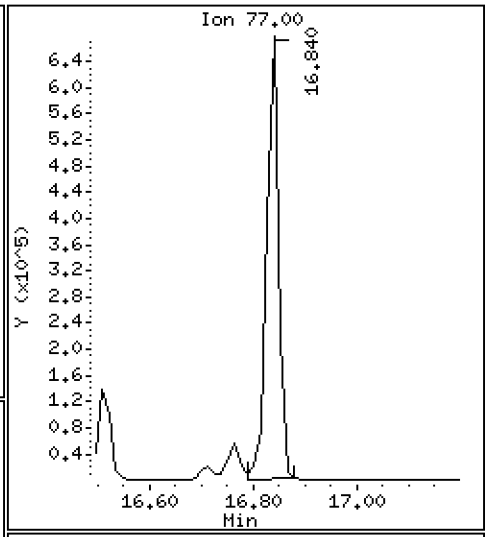
Concentration: 5.338 ug/mL

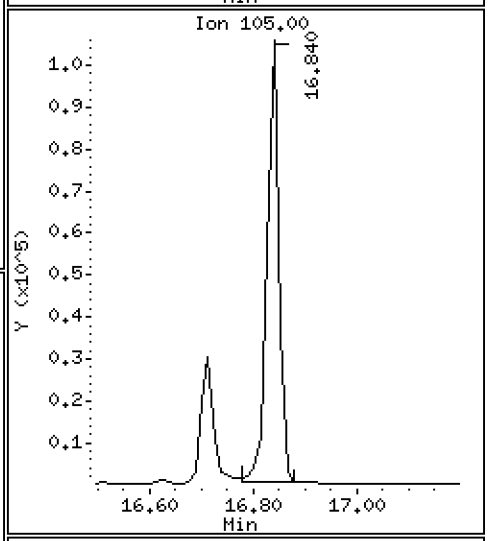


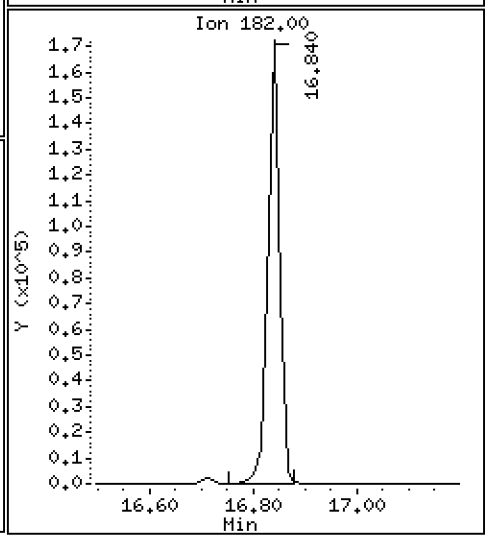












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

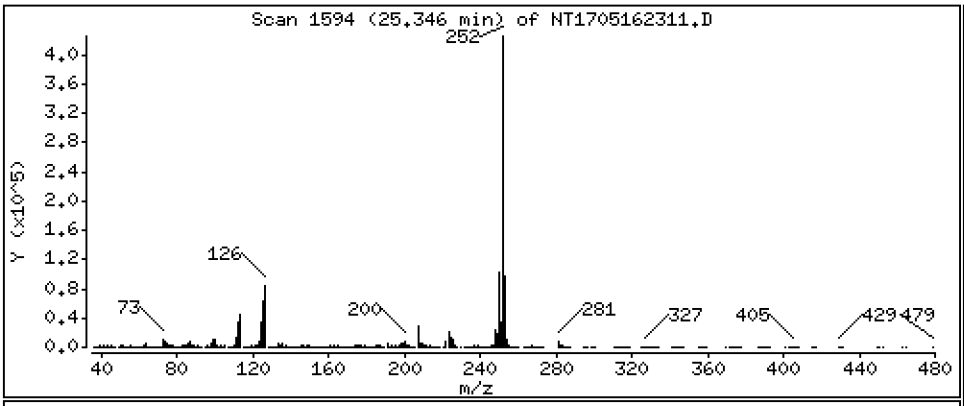
Operator: JGR

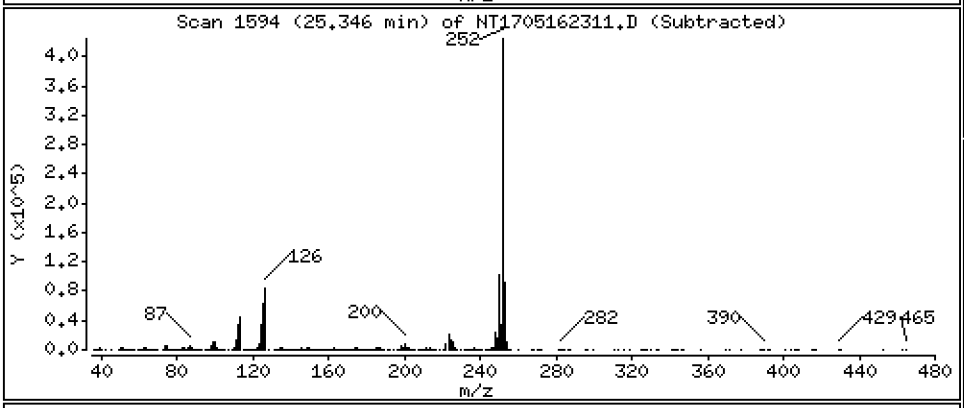
Column phase: ZB-5msi

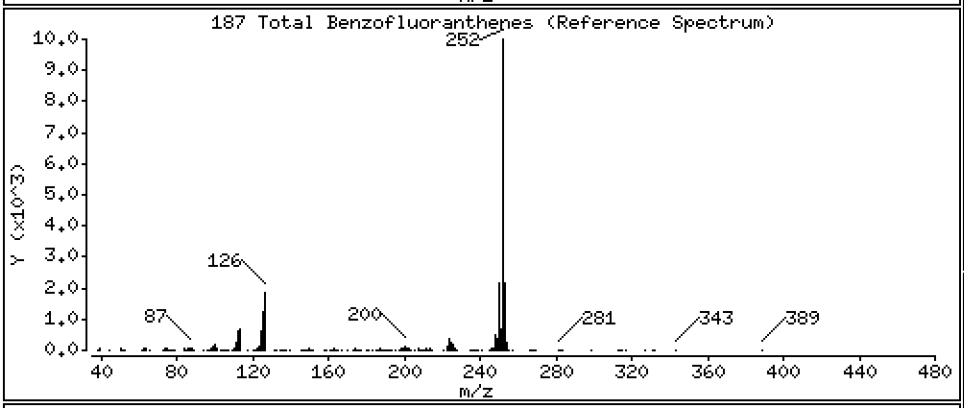
Column diameter: 0.25

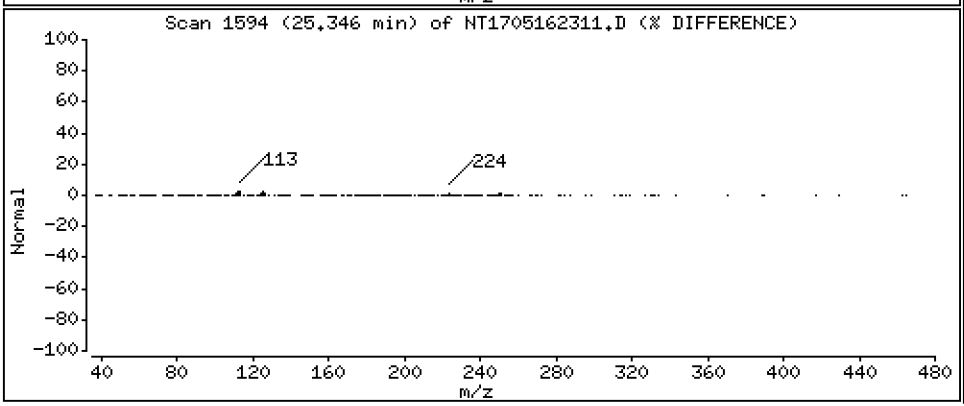
187 Total Benzofluoranthenes

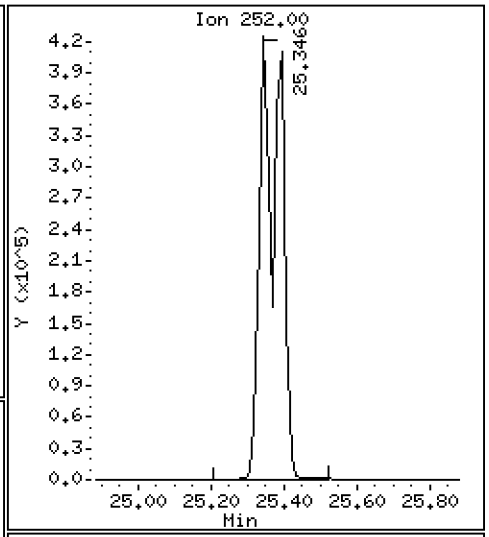
Concentration: 10.02 ug/mL

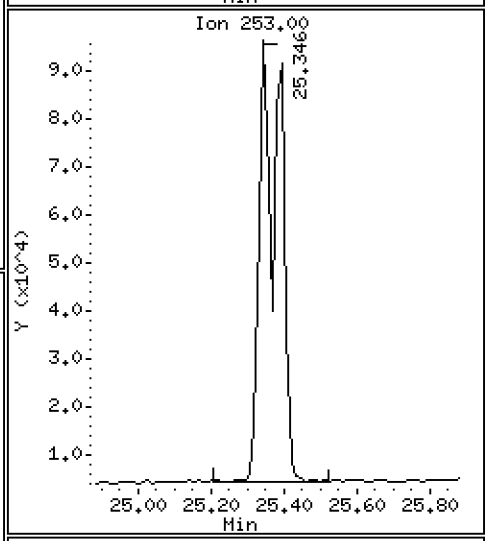


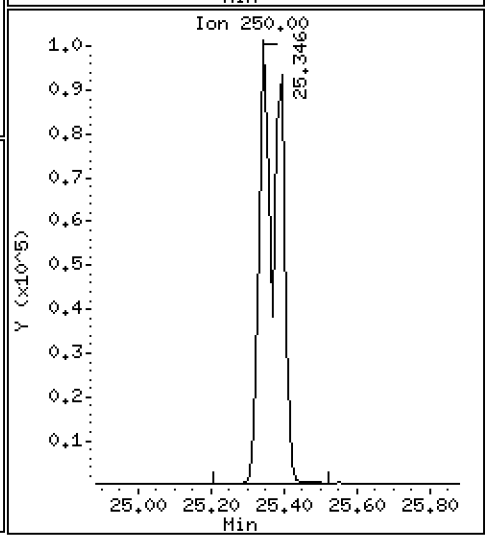












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

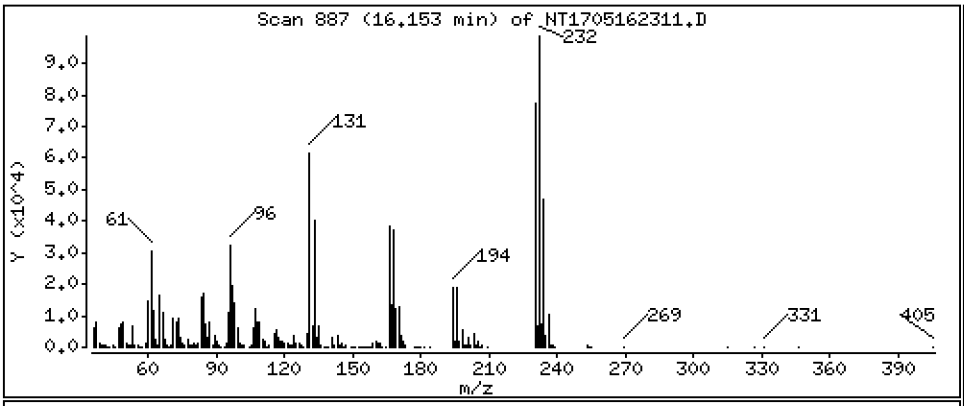
Operator: JGR

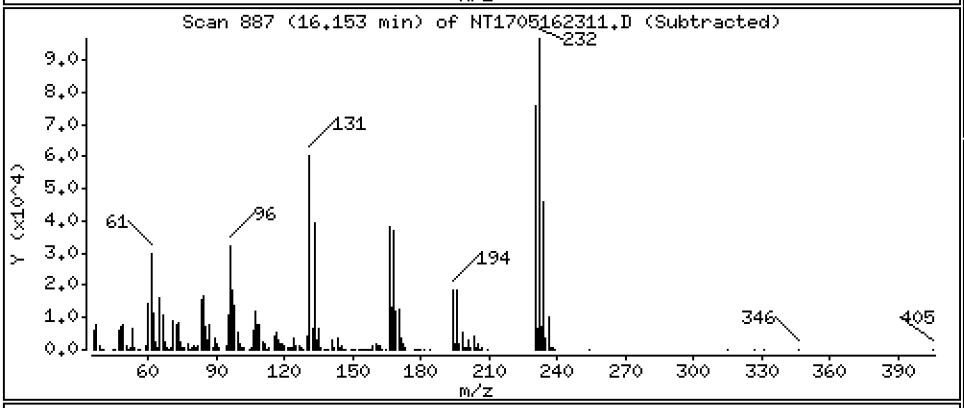
Column phase: ZB-5msi

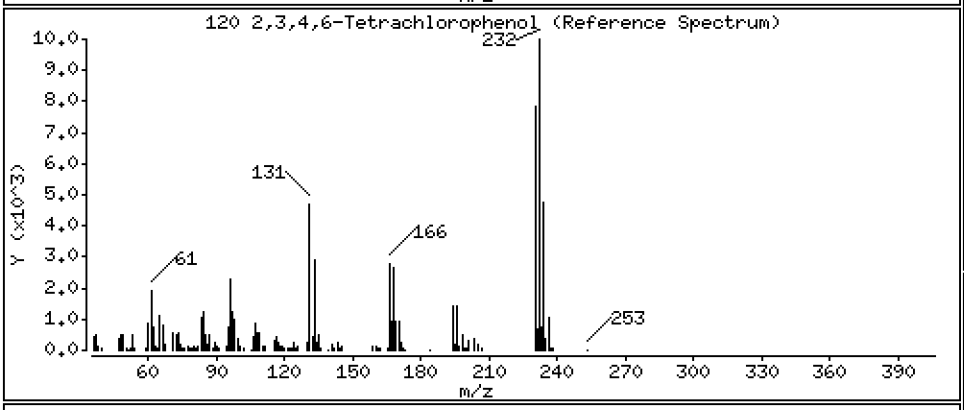
Column diameter: 0.25

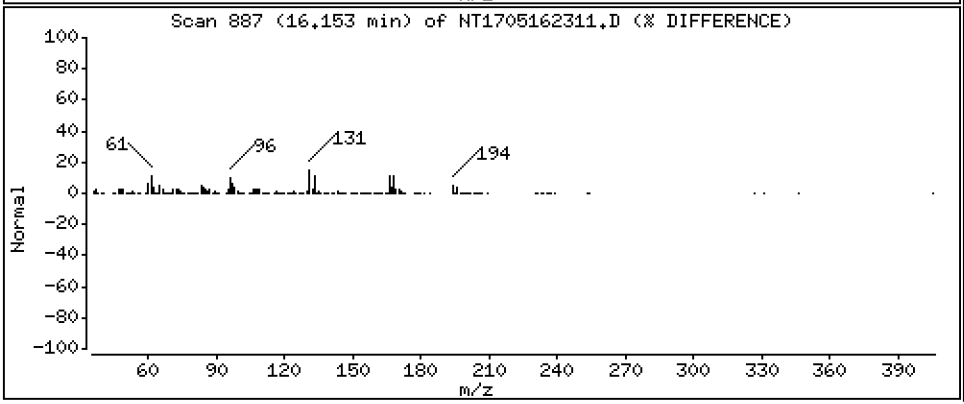
120 2,3,4,6-Tetrachlorophenol

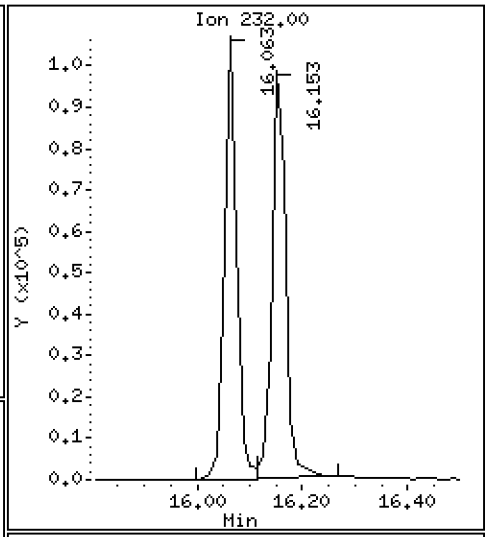
Concentration: 3.283 ug/mL

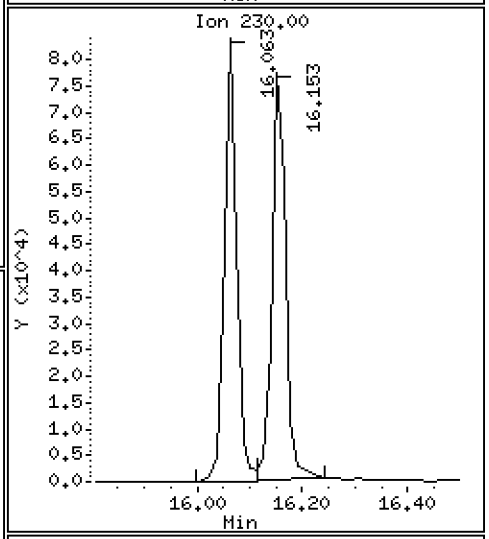


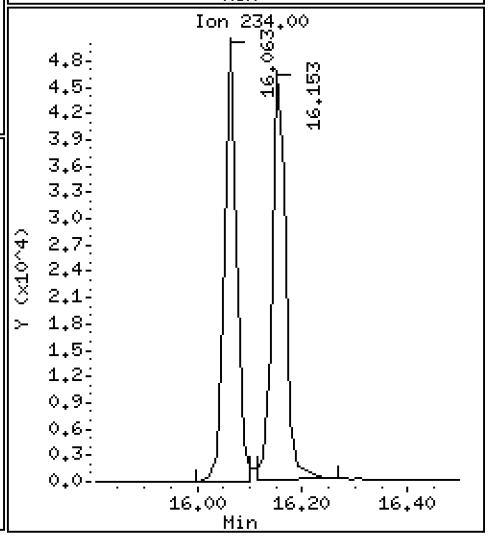












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D
Lab Smp Id: SLE0338-SCV1
Inj Date : 17-MAY-2023 00:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	8.740	8.740	(0.933)	588001	4.82293	4.823
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.906	8.906	(0.951)	494651	5.56554	5.566
	6 2-Chlorophenol	128	9.033	9.033	(0.965)	539006	5.29416	5.294
	7 1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	548081	5.31911	5.319
*	8 1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	265705	4.00000	
	9 1,4-Dichlorobenzene	146	9.390	9.391	(1.003)	521173	5.07146	5.071
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.748	9.748	(1.041)	507921	5.25771	5.258
	11 Benzyl alcohol	108	9.633	9.633	(1.029)	299374	5.27414	5.274
	14 2,2'-oxybis(1-Chloropropane)	121	9.927	9.914	(1.060)	168255	6.17916	6.179
	13 2-Methylphenol	108	9.850	9.851	(1.052)	378927	4.22901	4.229
	17 Hexachloroethane	117	10.336	10.336	(1.104)	222748	5.41856	5.419
	16 N-Nitroso-di-n-propylamine	70	10.183	10.170	(1.087)	378231	5.51734	5.517
	15 4-Methylphenol	108	10.119	10.119	(1.080)	425231	4.66096	4.661
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	10.489	10.489	(0.886)	558517	5.32891	5.329
	20 Isophorone	82	10.924	10.924	(0.922)	996054	6.94254	6.943
	21 2-Nitrophenol	139	11.115	11.115	(0.939)	247403	4.89866	4.899
	22 2,4-Dimethylphenol	107	11.153	11.154	(0.942)	371455	3.78811	3.788
	23 Bis(2-Chloroethoxy)methane	93	11.345	11.345	(0.958)	547968	6.23185	6.232
	24 Benzoic acid	105	11.332	11.333	(0.957)	445958	6.76086	6.761
	25 2,4-Dichlorophenol	162	11.562	11.562	(0.976)	370930	4.70748	4.707
	26 1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	503147	5.87937	5.879
*	27 Naphthalene-d8	136	11.842	11.830	(1.000)	965231	4.00000	
	28 Naphthalene	128	11.881	11.881	(1.003)	1361438	5.12904	5.129
	29 4-Chloroaniline	127	11.995	11.995	(1.013)	469527	4.48751	4.488
	30 Hexachlorobutadiene	225	12.225	12.225	(1.032)	222159	5.24062	5.241
	31 4-Chloro-3-methylphenol	107	12.952	12.952	(1.094)	413906	4.87847	4.878
	32 2-Methylnaphthalene	142	13.258	13.258	(1.120)	955574	5.02794	5.028
	33 Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	201170	4.21896	4.219

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.899)	257193	4.79376	4.794
35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.904)	274739	4.83728	4.837
$ 36	2-Fluorobiphenyl	172	Compound Not Detected.					
37	2-Chloronaphthalene	162	14.252	14.253	(0.923)	885085	5.40065	5.401
38	2-Nitroaniline	65	14.507	14.508	(0.940)	297267	5.35584	5.356
39	Dimethylphthalate	163	14.928	14.929	(0.967)	955980	5.41824	5.418
40	Acenaphthylene	152	15.120	15.120	(0.979)	1374665	5.28203	5.282
41	2,6-Dinitrotoluene	165	15.069	15.069	(0.976)	223225	5.40390	5.404
* 42	Acenaphthene-d10	164	15.438	15.426	(1.000)	512787	4.00000	
43	3-Nitroaniline	138	15.362	15.349	(0.995)	197758	5.16887	5.169
44	Acenaphthene	153	15.502	15.502	(1.004)	859485	5.28316	5.283
45	2,4-Dinitrophenol	184	15.566	15.567	(1.008)	52944	2.11874	2.119
46	Dibenzofuran	168	15.821	15.821	(1.025)	1172327	5.16305	5.163
47	4-Nitrophenol	109	15.668	15.681	(1.015)	114450	4.50365	4.504
48	2,4-Dinitrotoluene	165	15.872	15.872	(1.028)	284935	5.26937	5.269
50	Diethylphthalate	149	16.369	16.369	(1.060)	945291	5.49374	5.494
49	Fluorene	166	16.535	16.535	(1.071)	1165179	5.39758	5.398
51	4-Chlorophenyl-phenylether	204	16.522	16.509	(1.070)	542088	5.46212	5.462
52	4-Nitroaniline	138	16.624	16.611	(1.077)	184970	5.10772	5.108
53	4,6-Dinitro-2-methylphenol	198	16.713	16.713	(0.905)	113822	3.35487	3.355
54	N-Nitrosodiphenylamine	169	16.764	16.764	(0.908)	651392	5.46976	5.470
$ 55	2,4,6-Tribromophenol	330	Compound Not Detected.					
56	4-Bromophenyl-phenylether	248	17.514	17.515	(0.949)	226164	5.42020	5.420
57	Hexachlorobenzene	284	17.833	17.833	(0.966)	208878	4.91276	4.913
58	Pentachlorophenol	266	18.190	18.203	(0.985)	98895	3.94337	3.943
* 59	Phenanthrene-d10	188	18.458	18.458	(1.000)	850147	4.00000	
60	Phenanthrene	178	18.509	18.496	(1.003)	1250084	5.03943	5.039
61	Anthracene	178	18.598	18.598	(1.008)	1054910	4.52965	4.530
62	Carbazole	167	18.917	18.918	(1.025)	896606	5.93842	5.938
63	Di-n-butylphthalate	149	19.682	19.682	(1.066)	1586517	5.64164	5.642
64	Fluoranthene	202	20.868	20.855	(0.890)	1308113	5.46710	5.467
65	Pyrene	202	21.289	21.276	(0.908)	1277121	5.26528	5.265
$ 66	Terphenyl-d14	244	Compound Not Detected.					
67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	632335	5.82476	5.825
68	Benzo(a)anthracene	228	23.419	23.419	(0.998)	953848	5.06413	5.064
* 69	Chrysene-d12	240	23.457	23.445	(1.000)	511511	4.00000	
70	3,3'-Dichlorobenzidine	252	23.368	23.369	(0.996)	459041	11.9948	11.99
71	Chrysene	228	23.496	23.496	(1.002)	889381	5.01800	5.018
72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	875291	5.79218	5.792
* 134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1044471	4.00000	
73	Di-n-octylphthalate	149	24.465	24.465	(1.000)	1451463	5.48238	5.482
74	Benzo(b)fluoranthene	252	25.345	25.345	(0.969)	887996	4.91157	4.912
75	Benzo(k)fluoranthene	252	25.396	25.384	(0.971)	848094	4.96504	4.965(H)
76	Benzo(a)pyrene	252	26.034	26.022	(0.996)	736579	5.17185	5.172
* 77	Perylene-d12	264	26.149	26.149	(1.000)	456008	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.946	28.933	(1.107)	830811	5.02922	5.029
79	Dibenzo(a,h)anthracene	278	28.946	28.946	(1.107)	689006	4.96953	4.970
80	Benzo(g,h,i)perylene	276	29.764	29.751	(1.138)	689189	5.05448	5.054
90	N-Nitrosodimethylamine	74	5.071	5.071	(0.542)	334608	5.76731	5.767
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	21.085	21.085	(0.899)	208933	3.45722	3.457
103	Pyridine	79	5.097	5.122	(0.544)	534742	5.81084	5.811
105	1-methylnaphthalene	142	13.487	13.487	(1.139)	925646	5.25003	5.250
111	Azobenzene (1,2-DP-Hydrazine)	77	16.840	16.840	(1.091)	1072104	5.33771	5.338

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.345	25.384	(0.969)	1625913	10.0183	10.02
120 2,3,4,6-Tetrachlorophenol	232	16.152	16.152	(1.046)	210743	3.28296	3.283

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162311.D
Lab Smp Id: SLE0338-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	265705	-7.45
27 Naphthalene-d8	1056758	528379	2113516	965231	-8.66
42 Acenaphthene-d10	587510	293755	1175020	512787	-12.72
59 Phenanthrene-d10	933575	466788	1867150	850147	-8.94
69 Chrysene-d12	576570	288285	1153140	511511	-11.28
134 Di-n-octylphthala	1181651	590826	2363302	1044471	-11.61
77 Perylene-d12	491359	245680	982718	456008	-7.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	-0.00
77 Perylene-d12	26.15	25.65	26.65	26.15	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162311.D

Lab ID: SLE0338-SCV1
nt17.i, ABN.m, 17-MAY-2023 00:29

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

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.008	0.000	1.0083	2,4-Dinitrophenol

RRT check based on Ccal File: NT1705162308.D

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

LOW-CONCENTRATION CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLF0008-LCV1
Sequence: SLF0008
Standard ID: L005946

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.20000	0.2	-11.8	50.00
4-Methylphenol	0.20000	0.2	-8.1	50.00
Naphthalene	0.20000	0.2	2.4	50.00
2-Methylnaphthalene	0.20000	0.2	-3.1	50.00
Acenaphthylene	0.20000	0.2	4.0	50.00
Dimethylphthalate	0.20000	0.2	5.1	50.00
Acenaphthene	0.20000	0.2	-0.5	50.00
Dibenzofuran	0.20000	0.2	1.6	50.00
Fluorene	0.20000	0.2	1.7	50.00
Phenanthrene	0.20000	0.2	1.2	50.00
Anthracene	0.20000	0.2	-9.1	50.00
Fluoranthene	0.20000	0.2	-7.8	50.00
Pyrene	0.20000	0.2	-3.9	50.00
Butylbenzylphthalate	0.20000	0.2	-5.5	50.00
Benzo(a)anthracene	0.20000	0.2	9.8	50.00
Chrysene	0.20000	0.2	1.5	50.00
bis(2-Ethylhexyl)phthalate	0.20000	0.2	-7.5	50.00
Benzofluoranthenes, Total	0.40000	0.4	1.4	50.00
Benzo(a)pyrene	0.20000	0.2	0.3	50.00
Indeno(1,2,3-cd)pyrene	0.20000	0.2	-1.1	50.00
Dibenzo(a,h)anthracene	0.20000	0.2	-4.3	50.00
Benzo(g,h,i)perylene	0.20000	0.2	-3.6	50.00
2-Fluorophenol	0.30000	0.228	-24.1	50.00
Phenol-d5	0.30000	0.280	-6.7	50.00
2-Chlorophenol-d4	0.30000	0.297	-1.0	50.00
1,2-Dichlorobenzene-d4	0.20000	0.204	2.0	50.00
Nitrobenzene-d5	0.20000	0.188	-6.2	50.00
2-Fluorobiphenyl	0.20000	0.207	3.6	50.00
2,4,6-Tribromophenol	0.30000	0.271	-9.7	50.00

LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLF0008-LCV1
Sequence: SLF0008
Standard ID: L005946

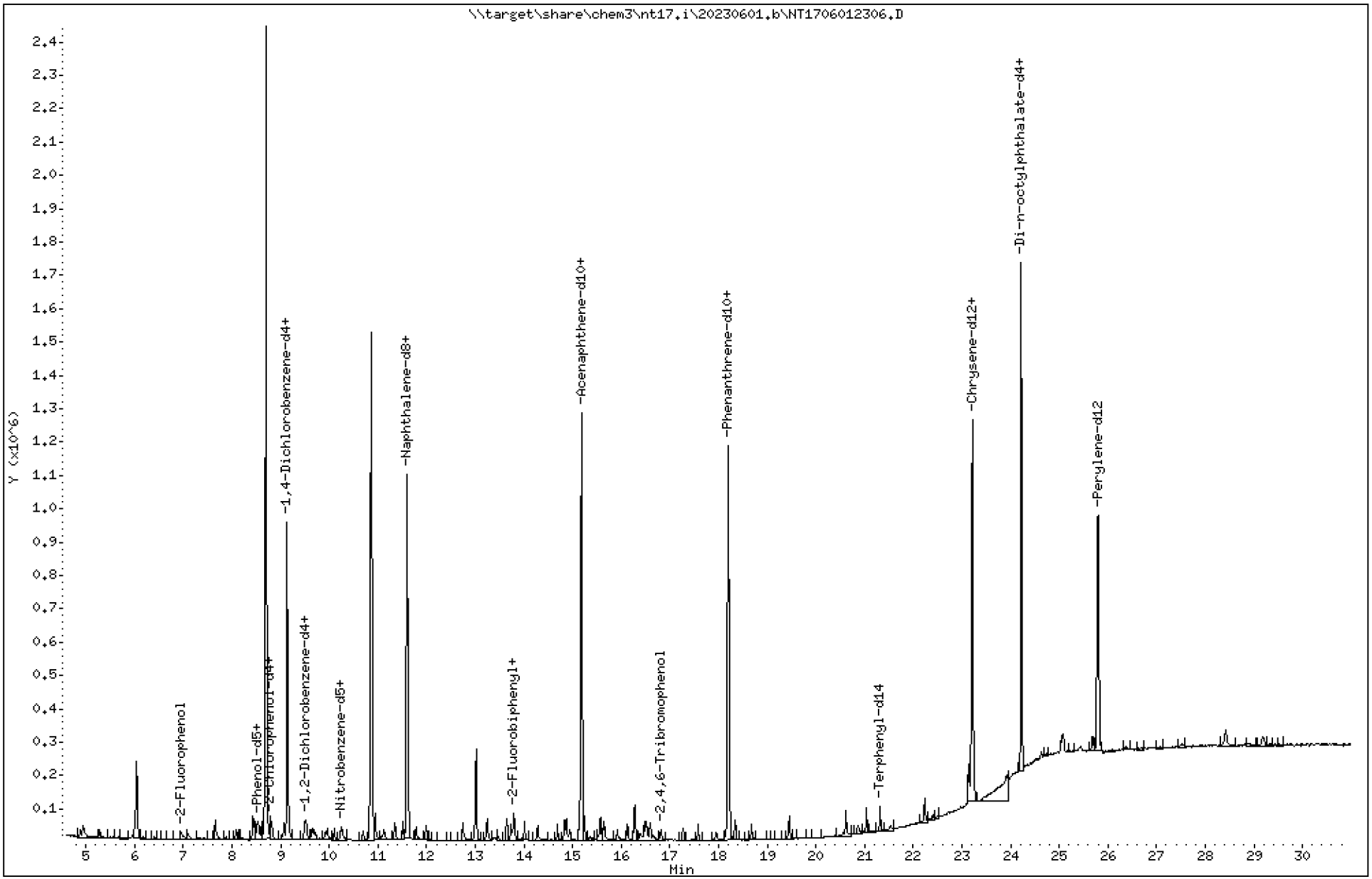
p-Terphenyl-d14	0.20000	0.206	3.0	50.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D
Date : 01-JUN-2023 15:12
Client ID:
Sample Info: SLF0008-LCV1

Instrument: nt17.i
Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

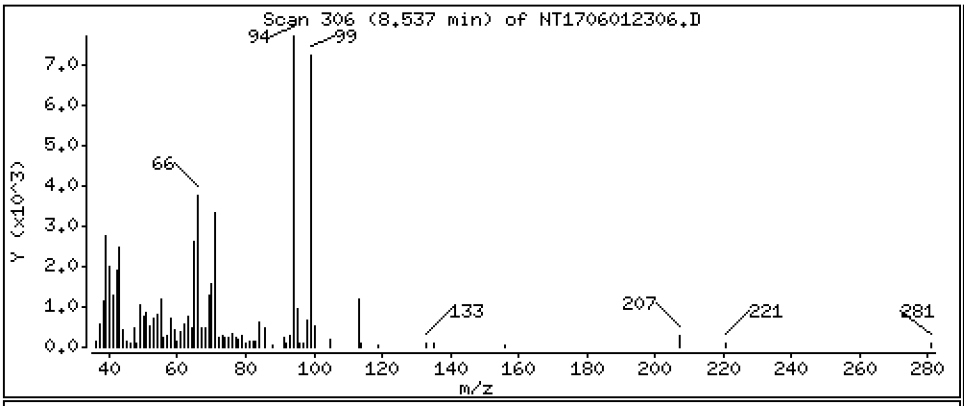
Operator: VTS

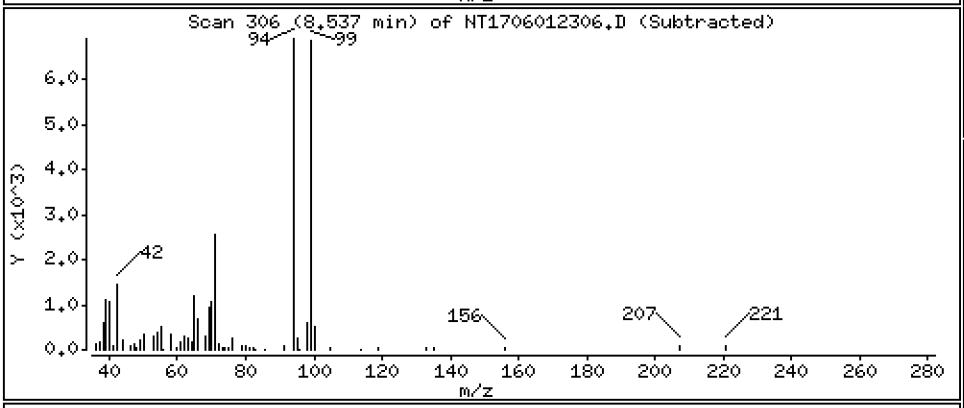
Column phase: ZB-5msi

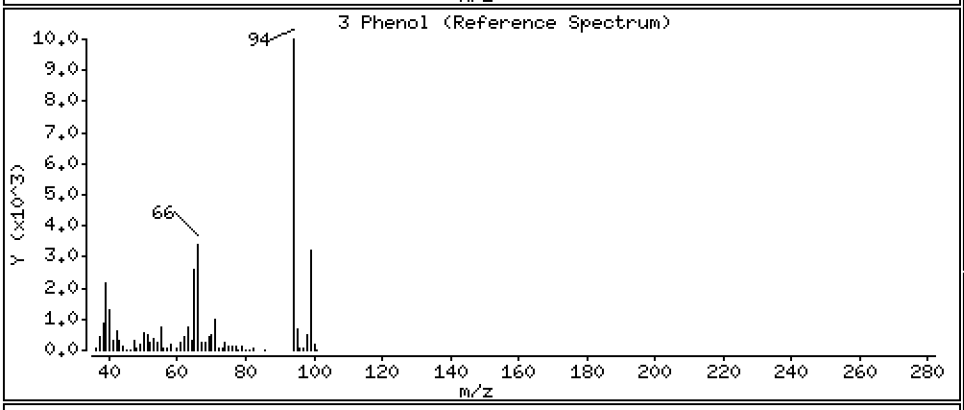
Column diameter: 0.25

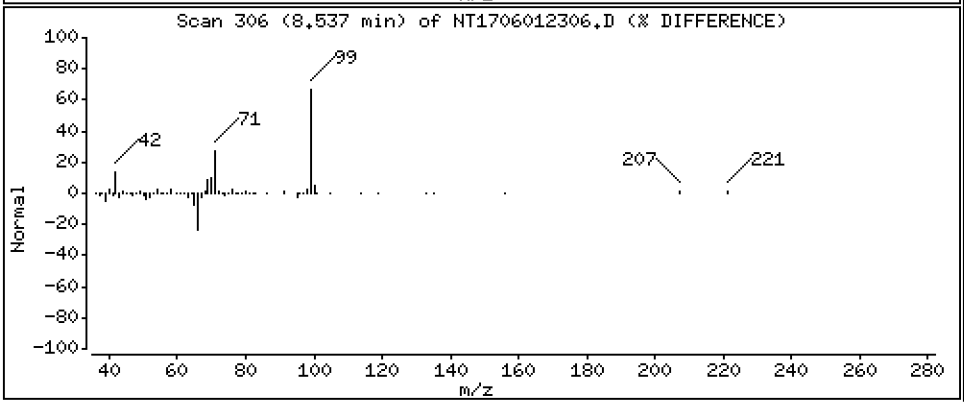
3 Phenol

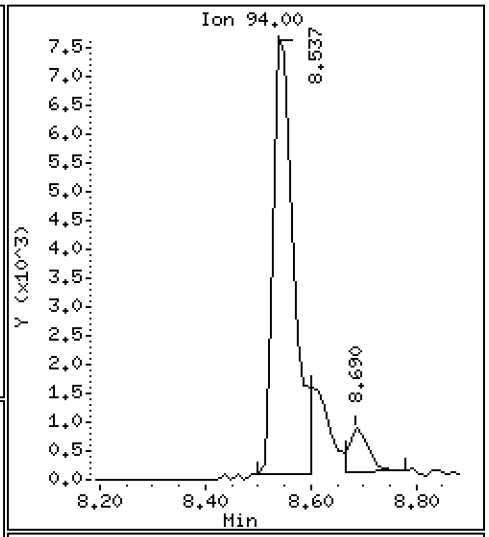
Concentration: 0.1763 ug/mL

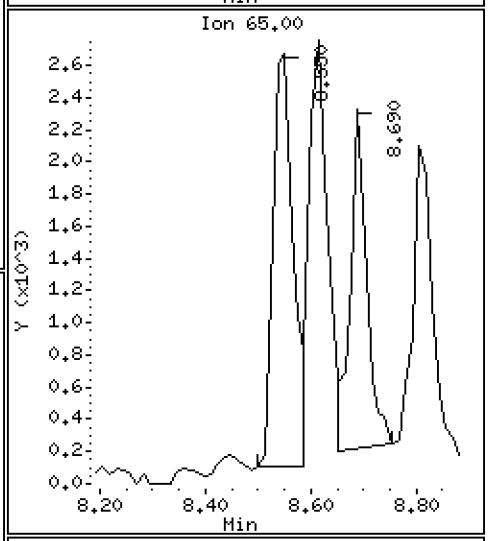


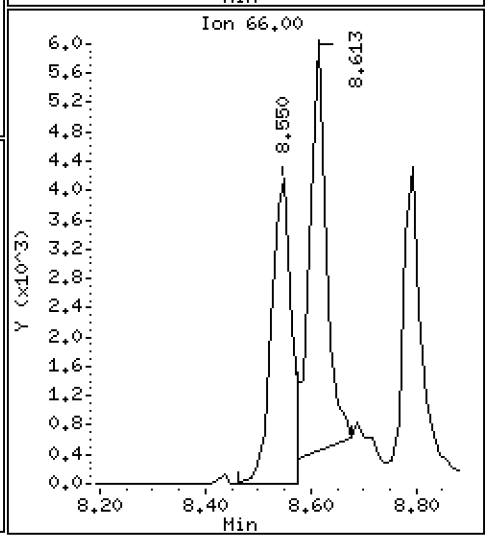












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

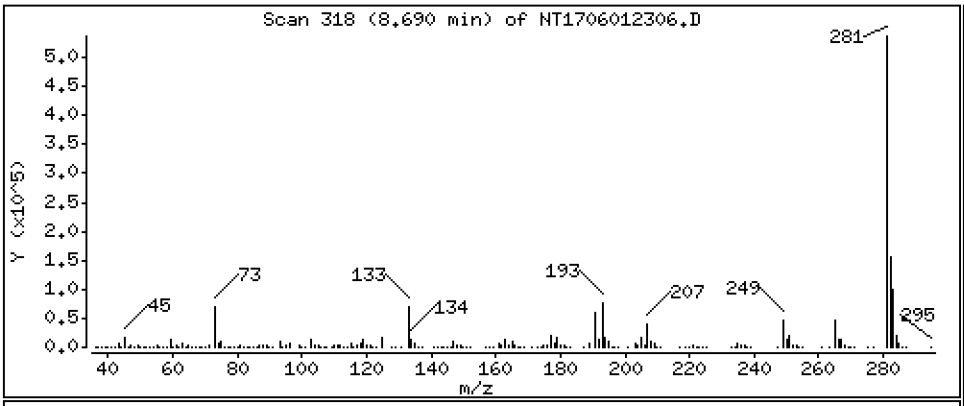
Operator: VTS

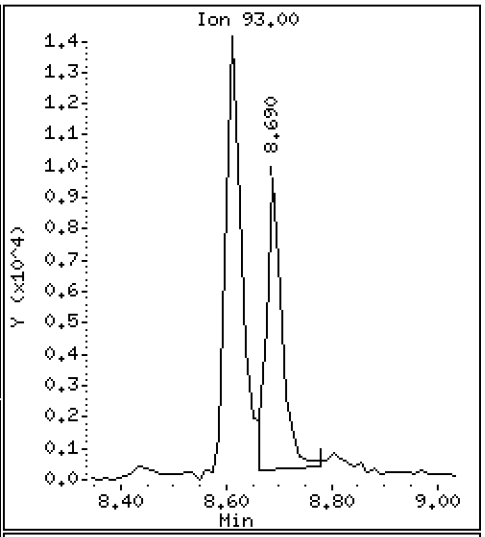
Column phase: ZB-5msi

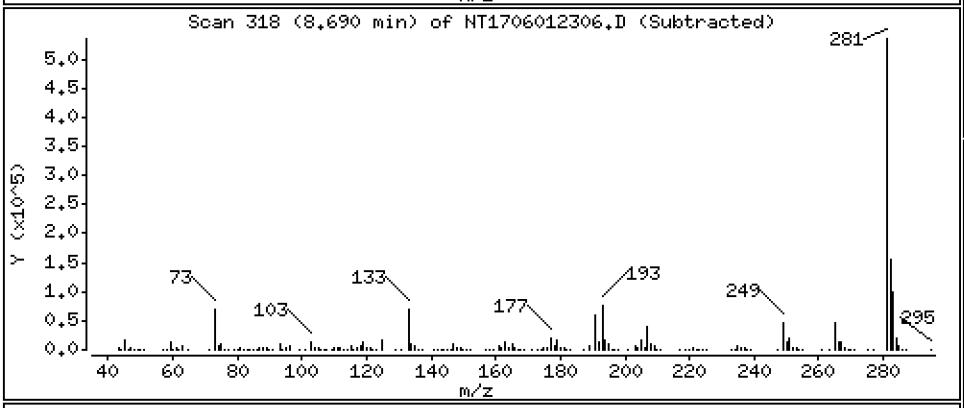
Column diameter: 0.25

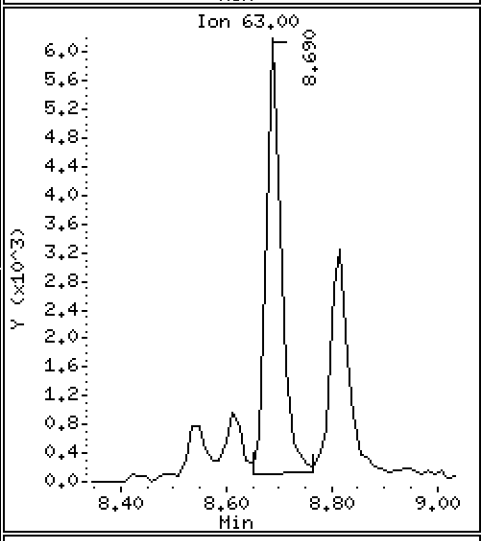
4 Bis(2-Chloroethyl)ether

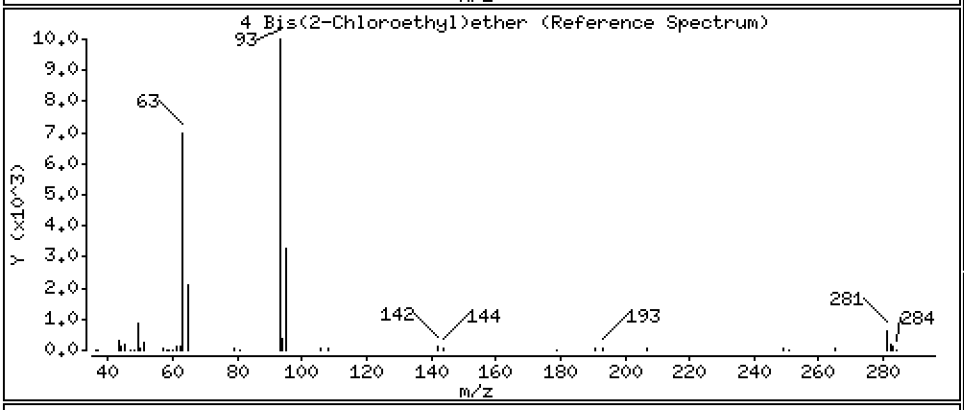
Concentration: 0.2234 ug/mL

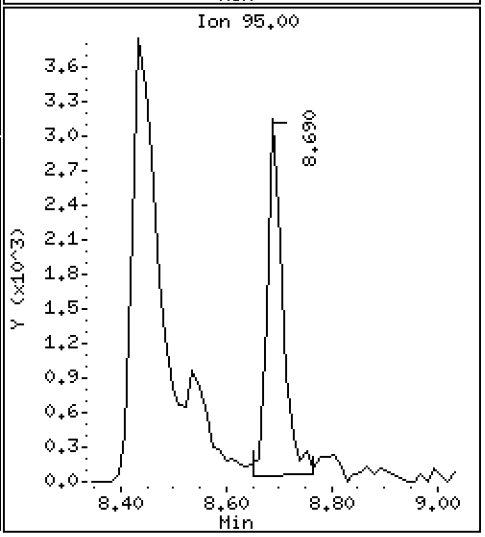


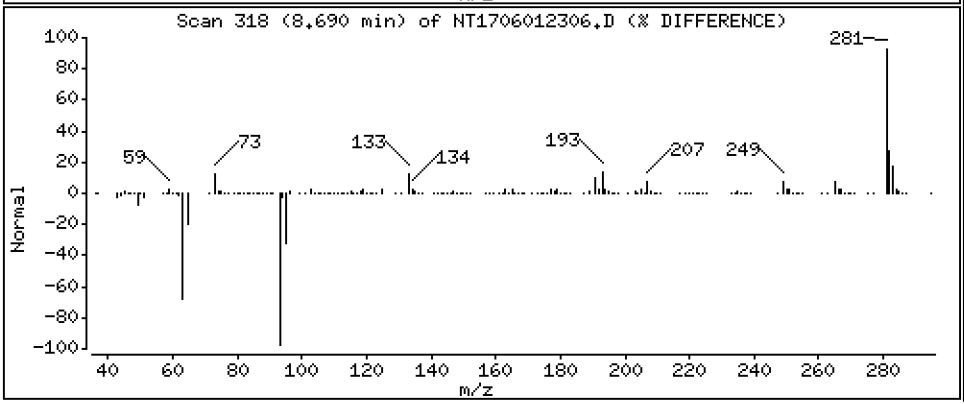












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

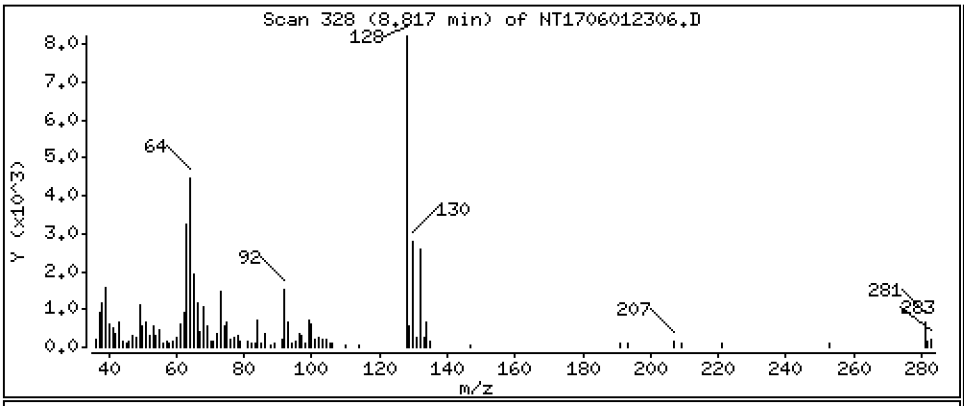
Operator: VTS

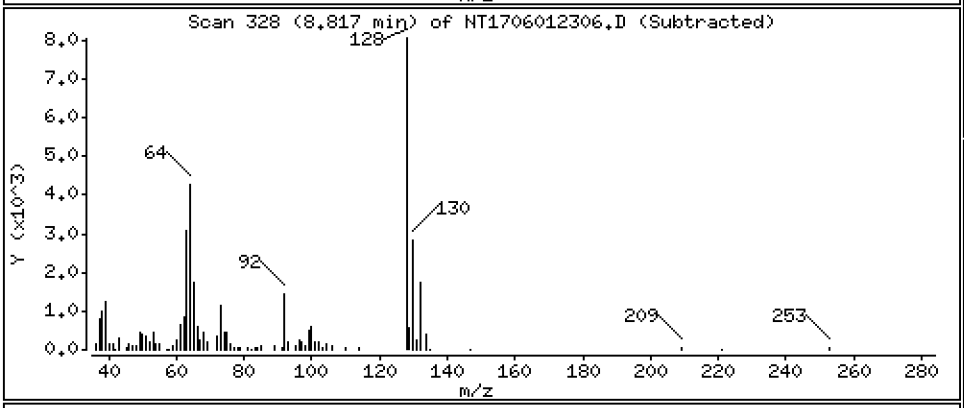
Column phase: ZB-5msi

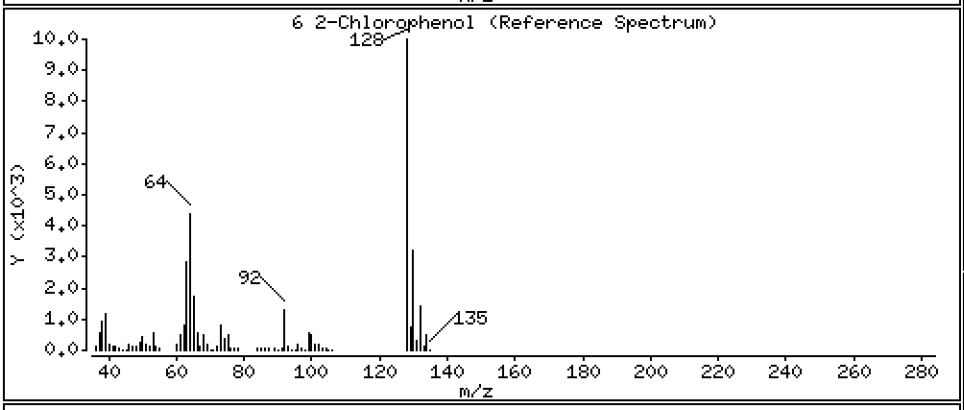
Column diameter: 0.25

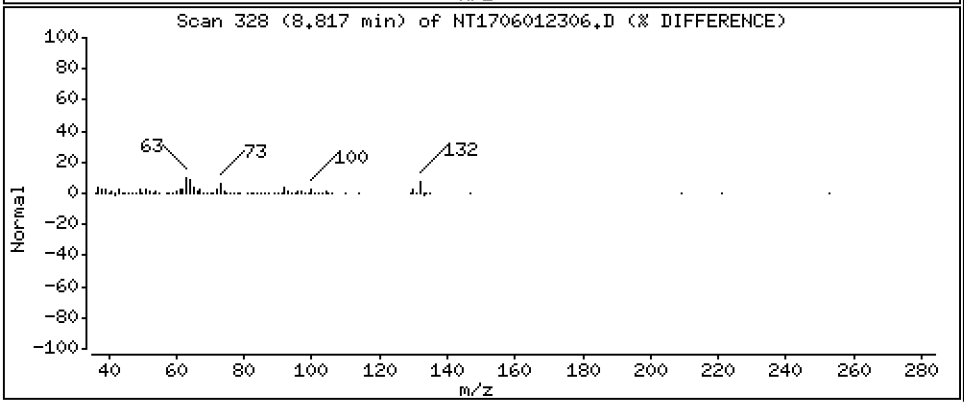
6 2-Chlorophenol

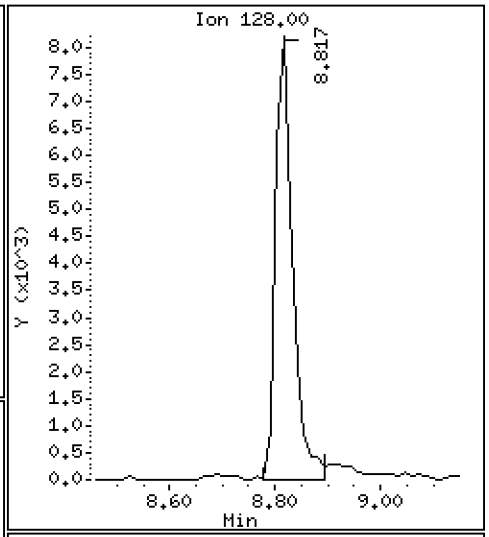
Concentration: 0.1874 ug/mL

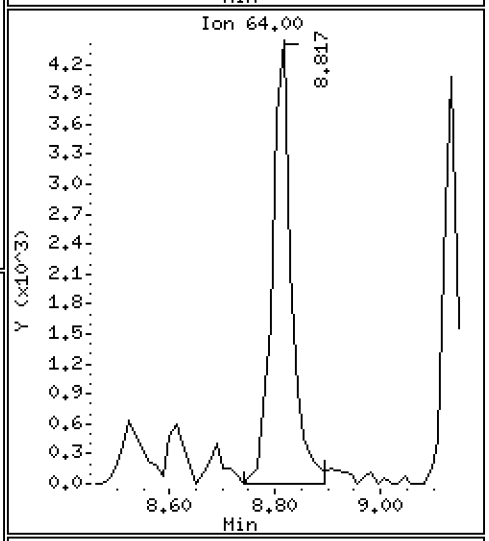


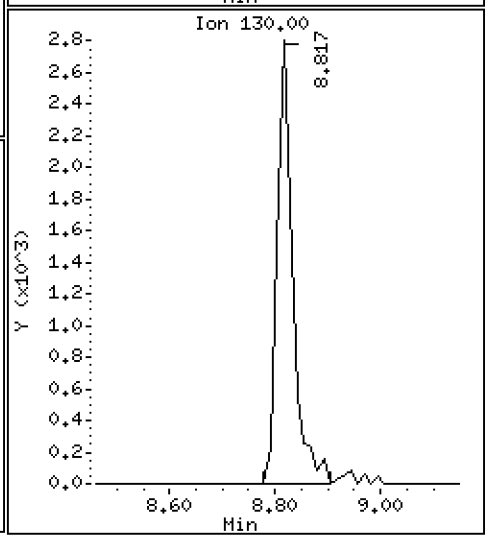












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

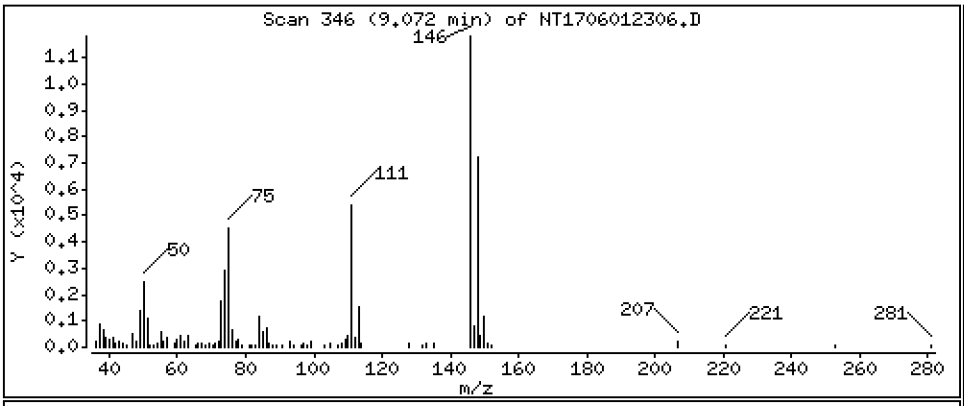
Operator: VTS

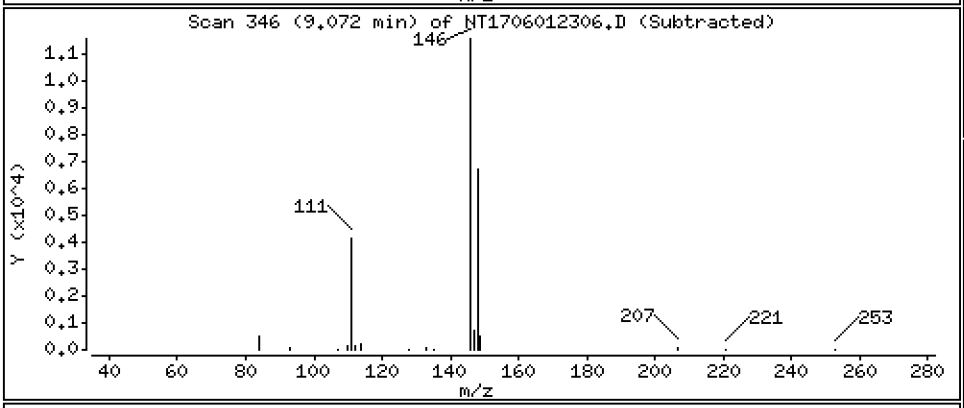
Column phase: ZB-5msi

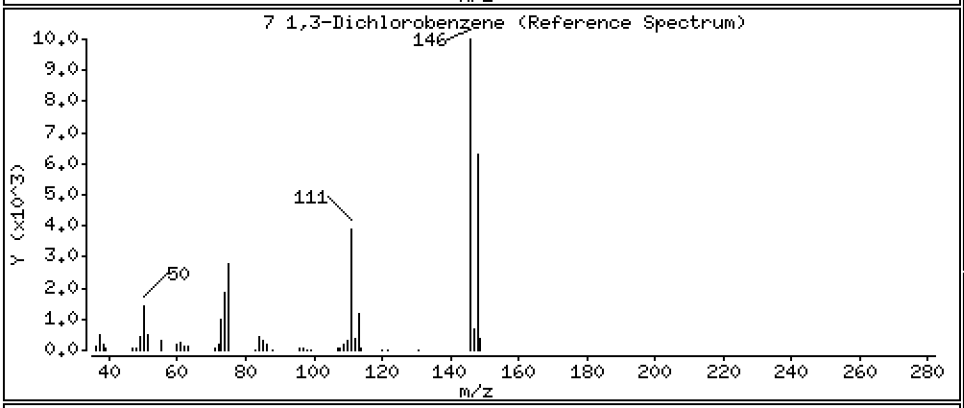
Column diameter: 0.25

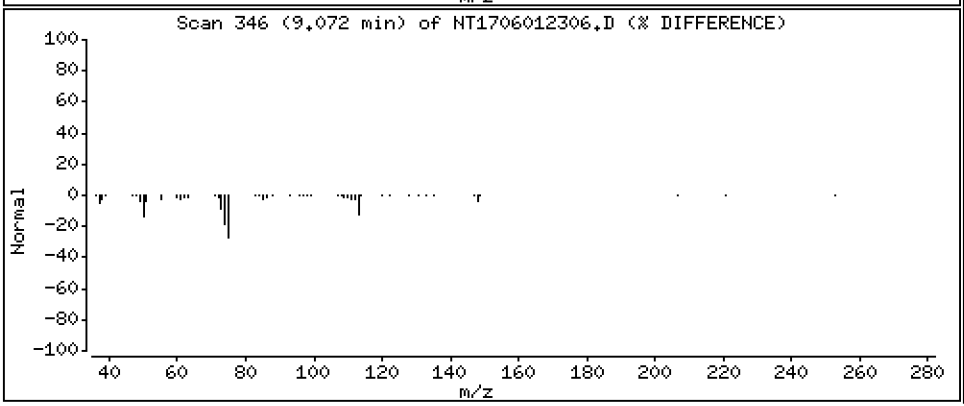
7 1,3-Dichlorobenzene

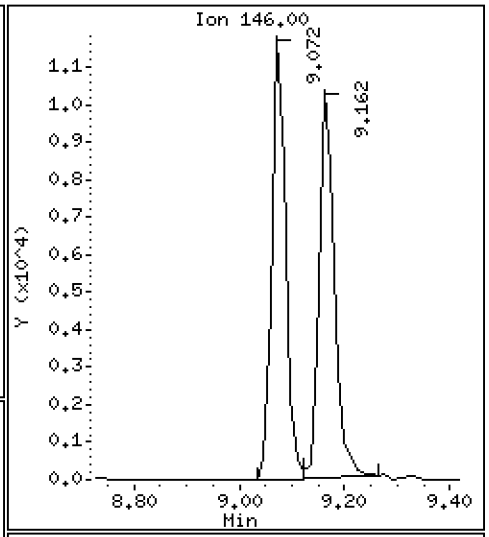
Concentration: 0.2146 ug/mL

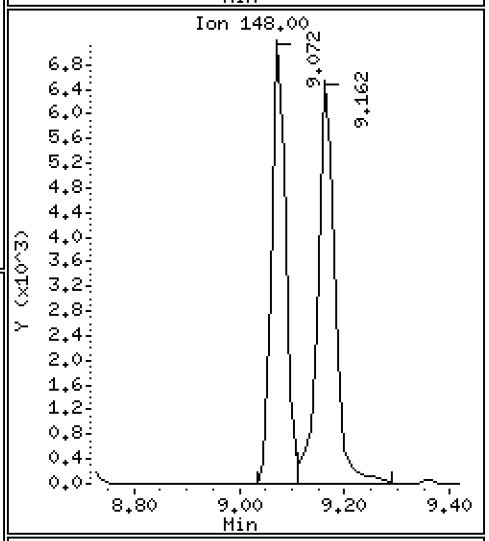


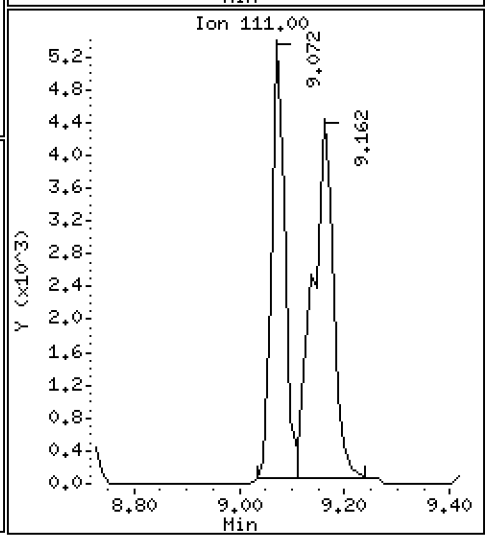












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

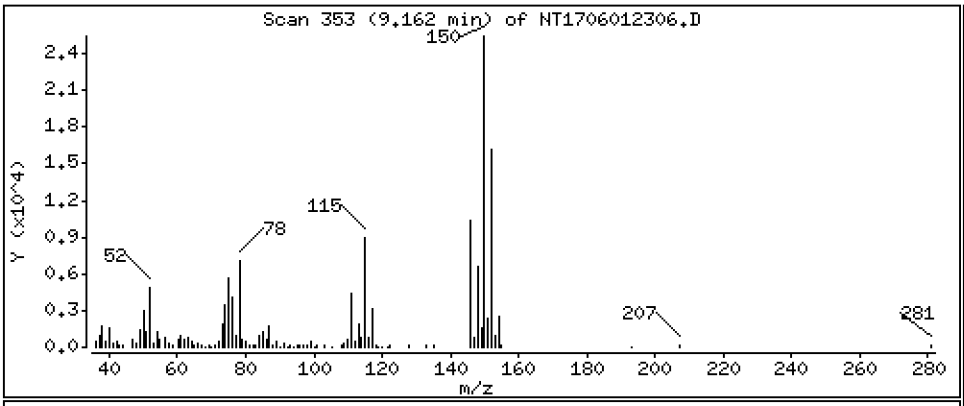
Operator: VTS

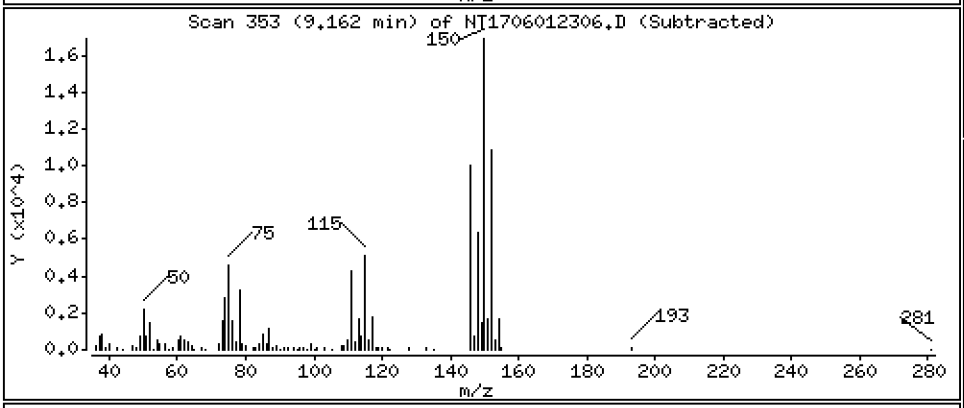
Column phase: ZB-5msi

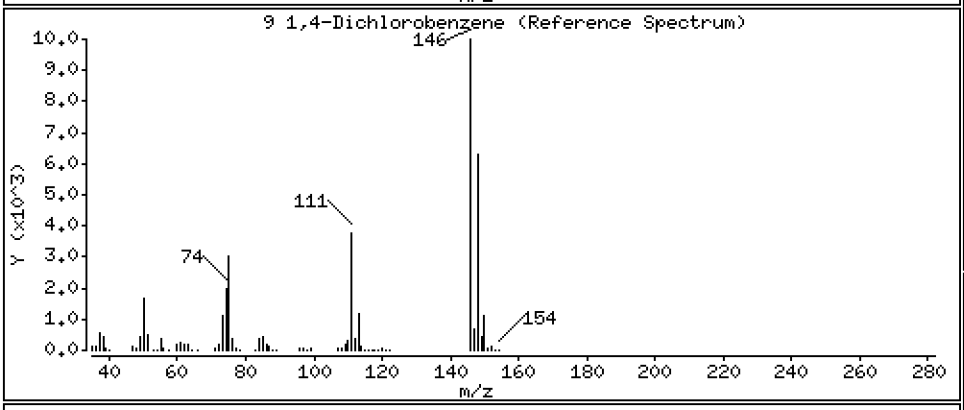
Column diameter: 0.25

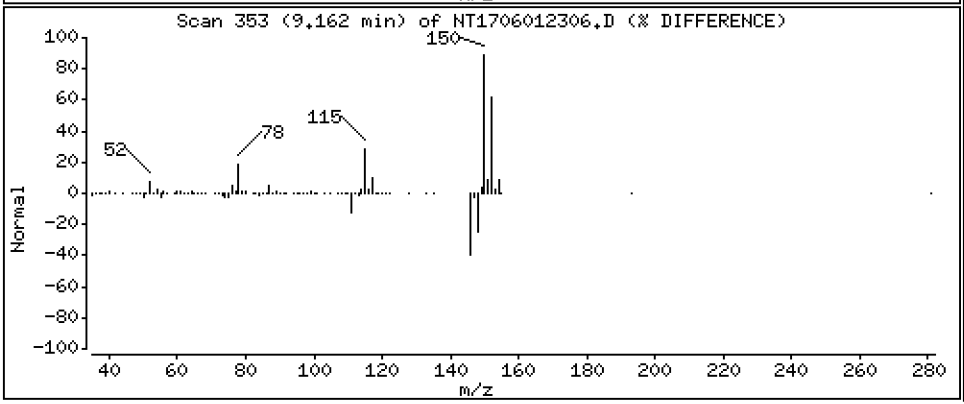
9 1,4-Dichlorobenzene

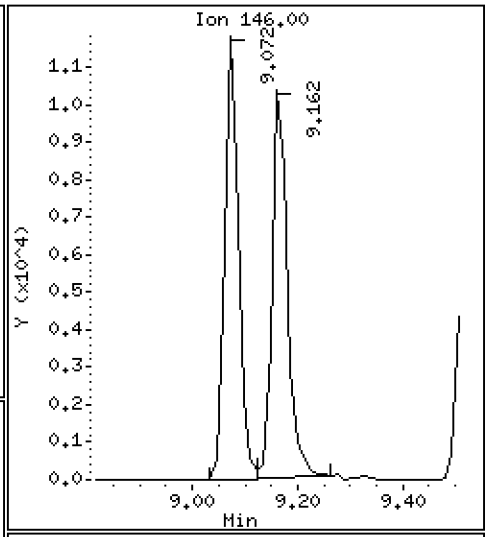
Concentration: 0.2071 ug/mL

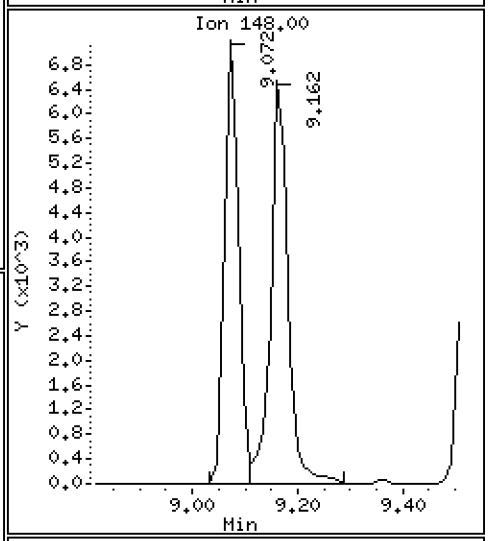


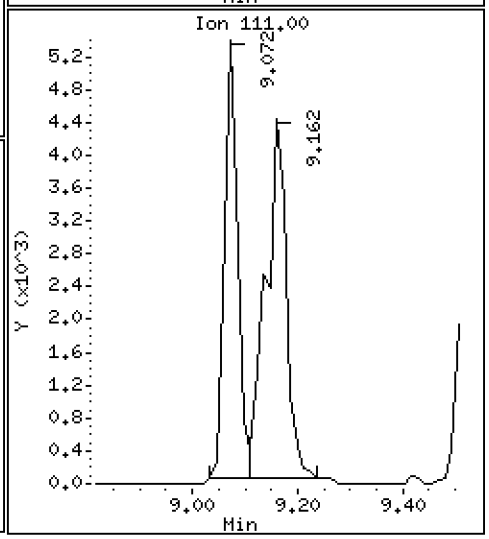












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

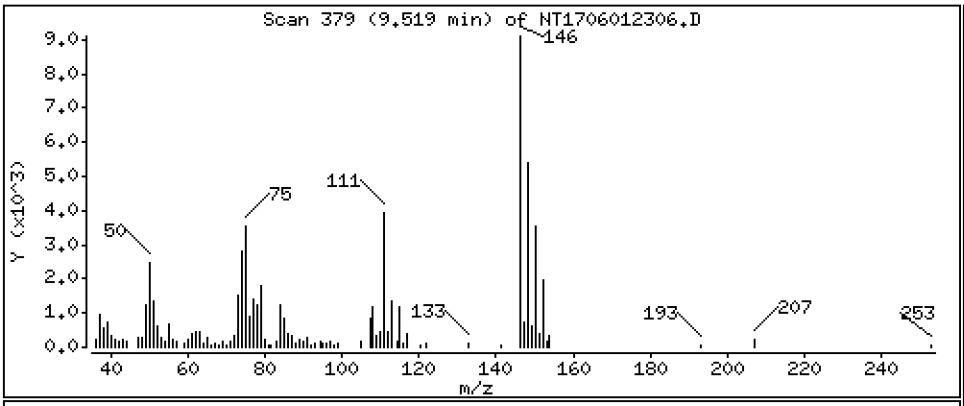
Operator: VTS

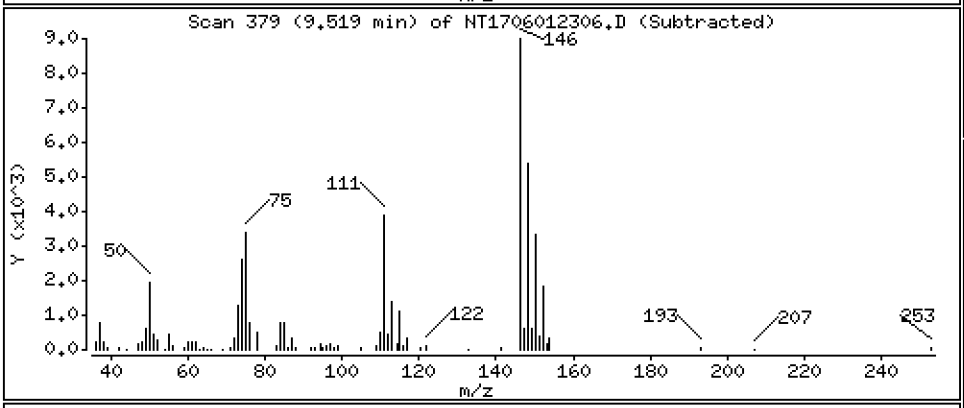
Column phase: ZB-5msi

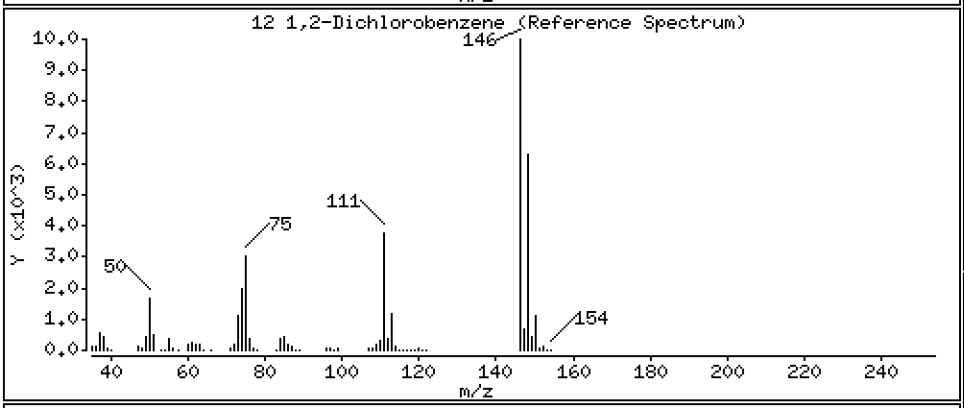
Column diameter: 0.25

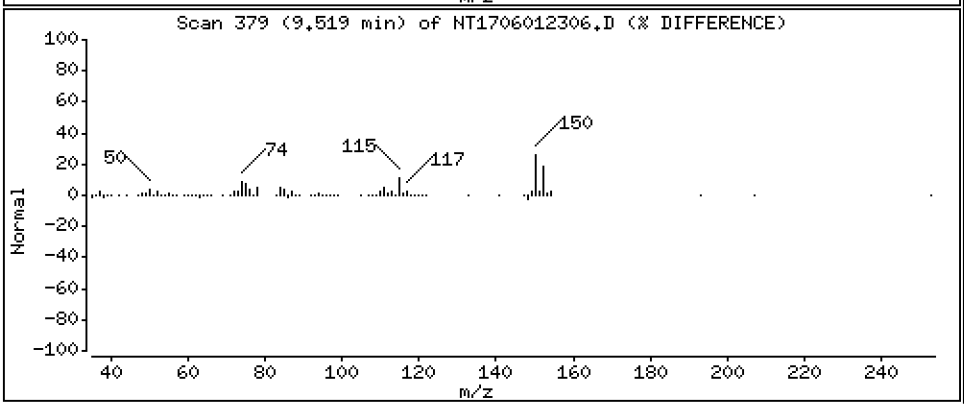
12 1,2-Dichlorobenzene

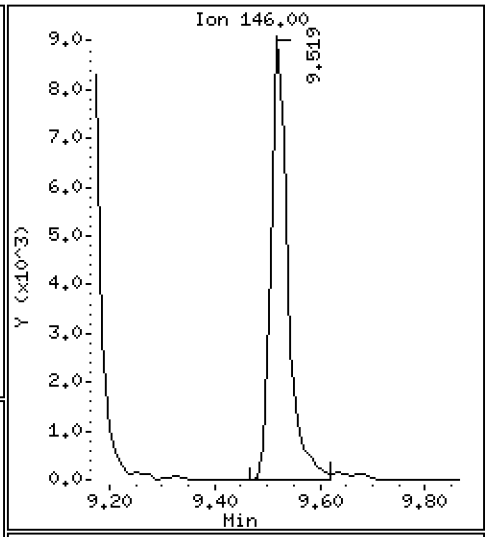
Concentration: 0.2157 ug/mL

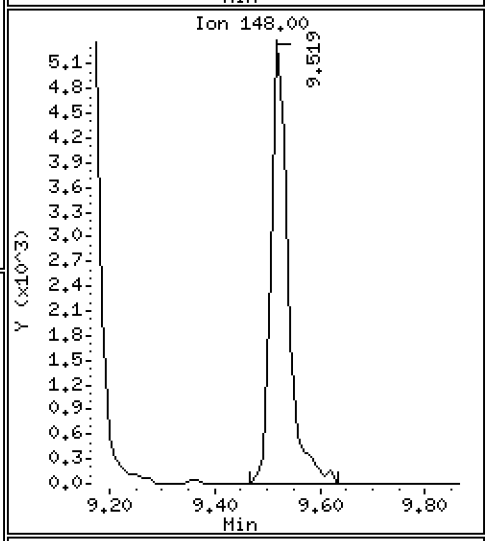


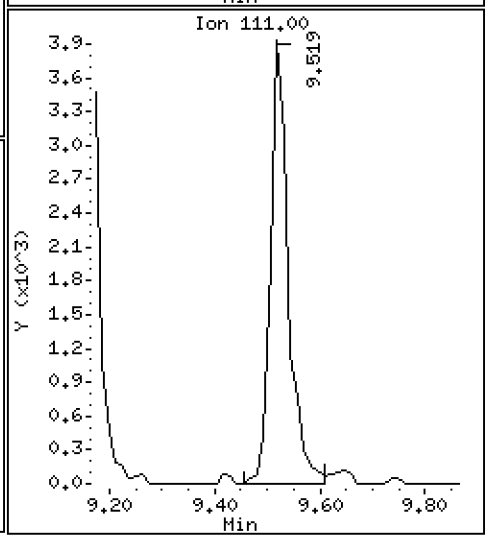












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

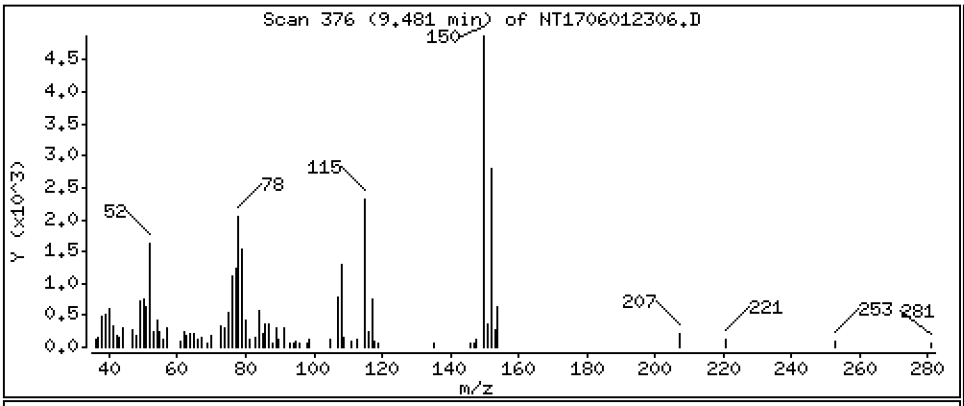
Operator: VTS

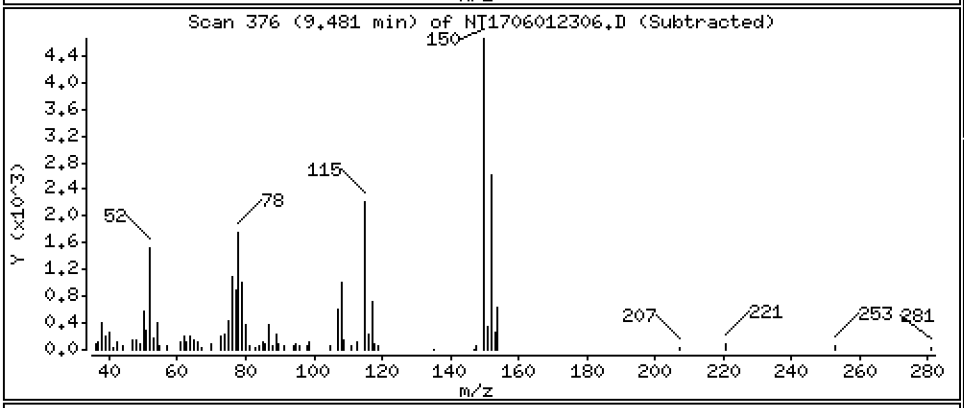
Column phase: ZB-5msi

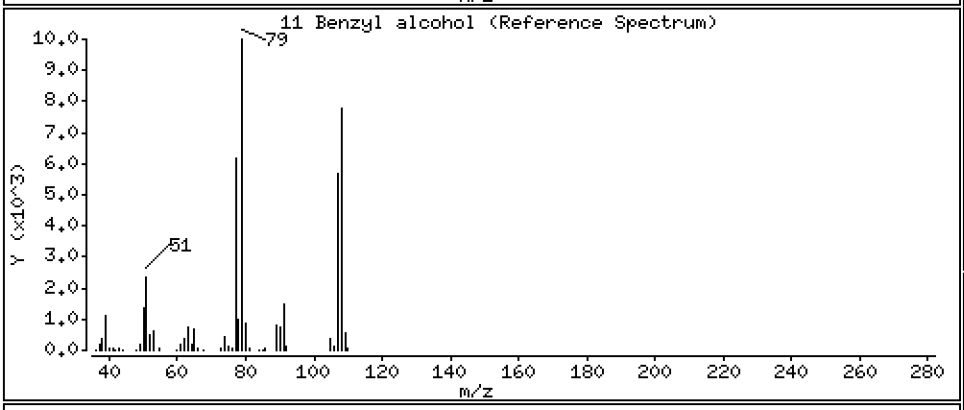
Column diameter: 0.25

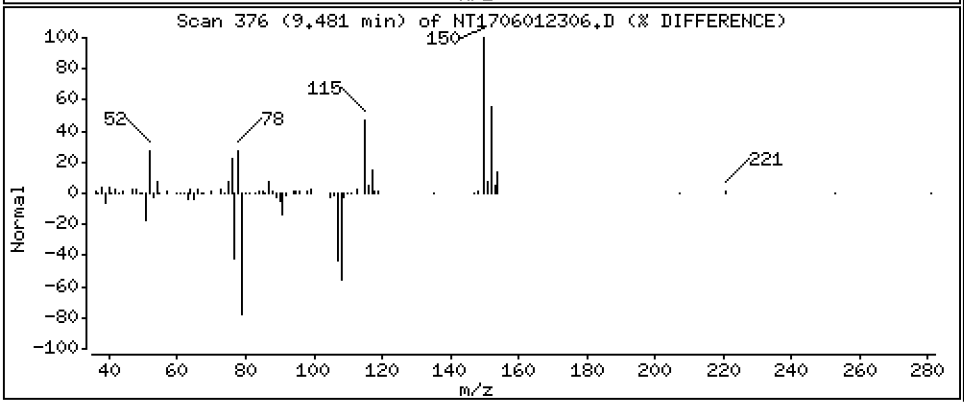
11 Benzyl alcohol

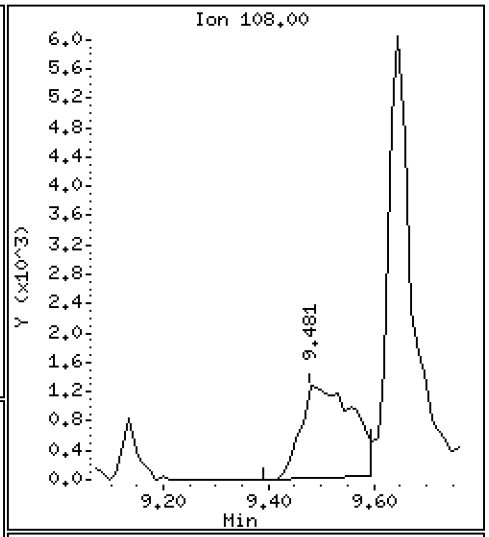
Concentration: 0.1569 ug/mL

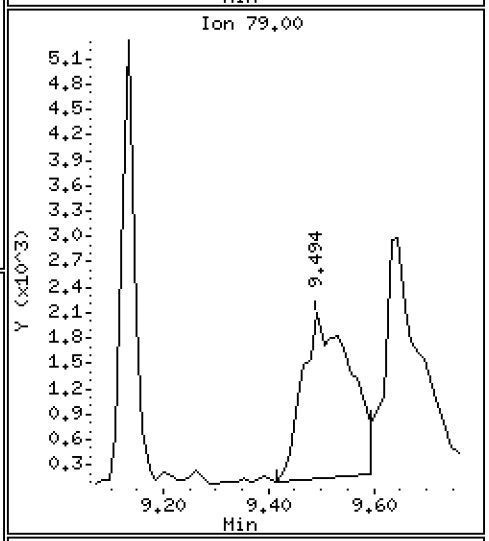


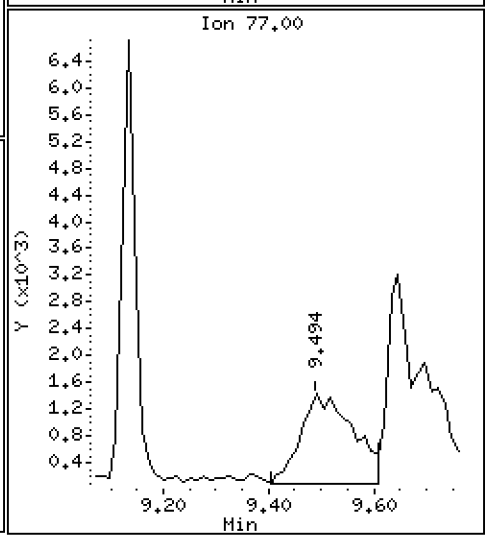












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

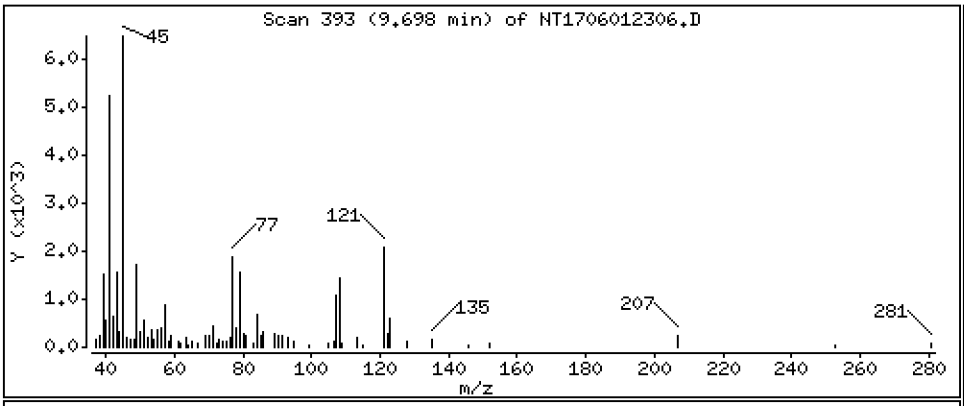
Operator: VTS

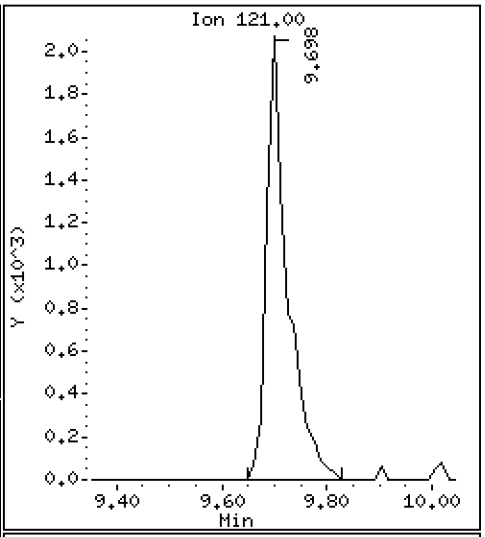
Column phase: ZB-5msi

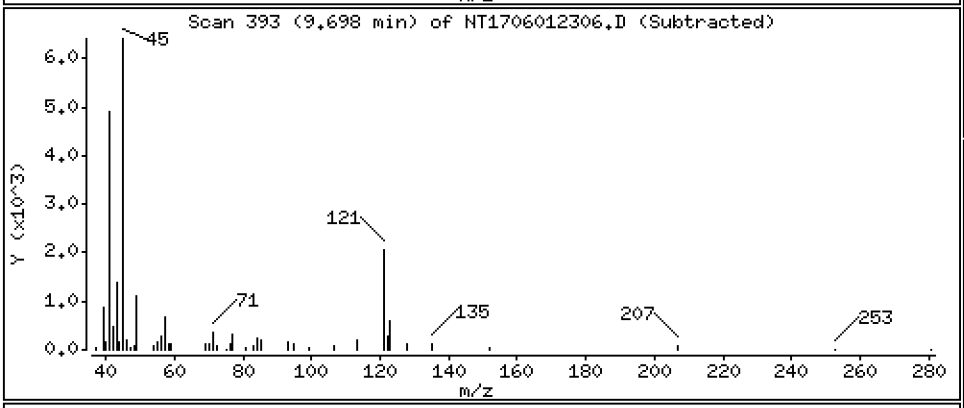
Column diameter: 0.25

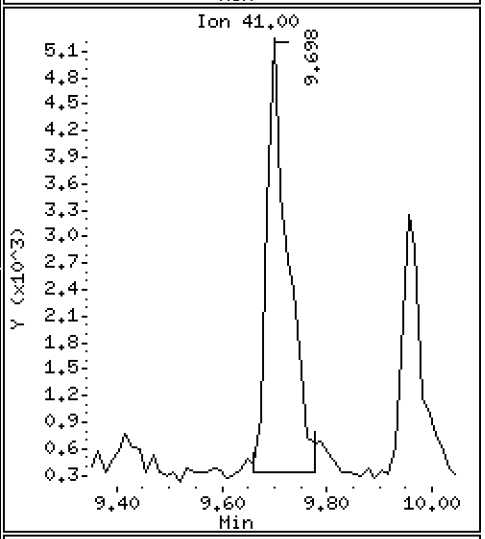
14 2,2'-oxybis(1-Chloropropane)

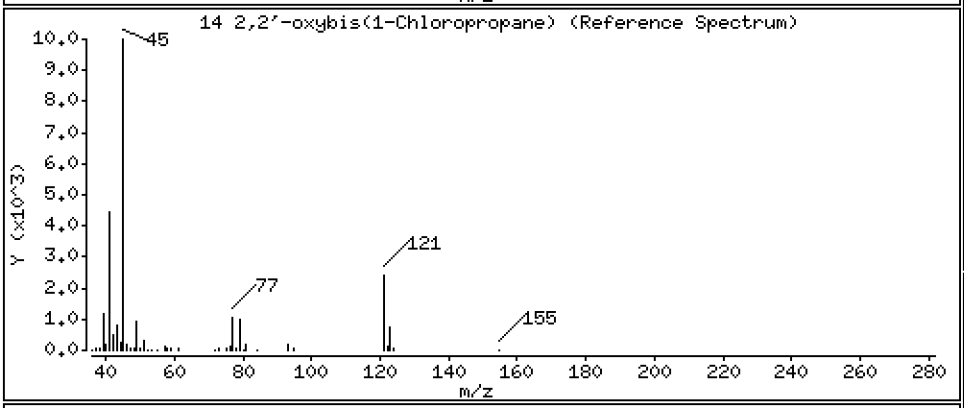
Concentration: 0.2494 ug/mL

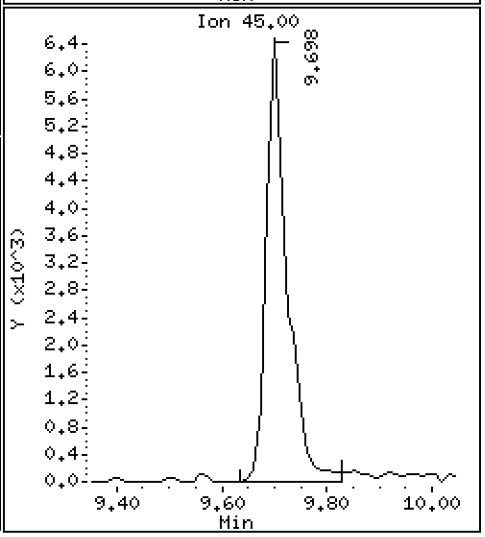


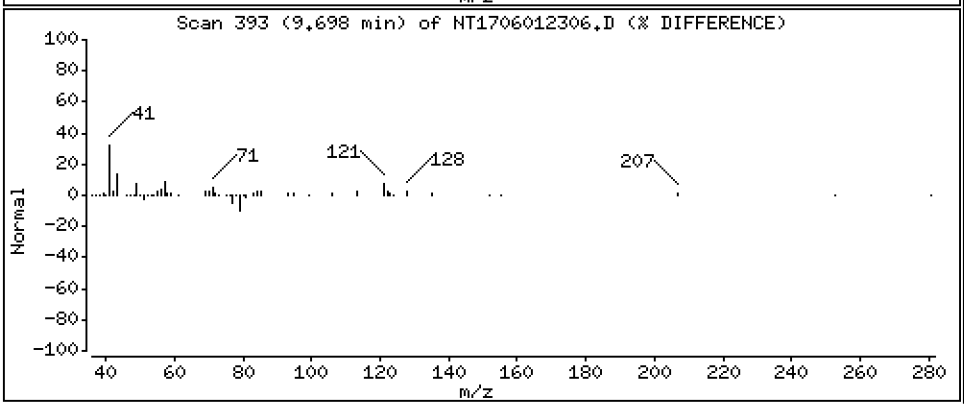












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

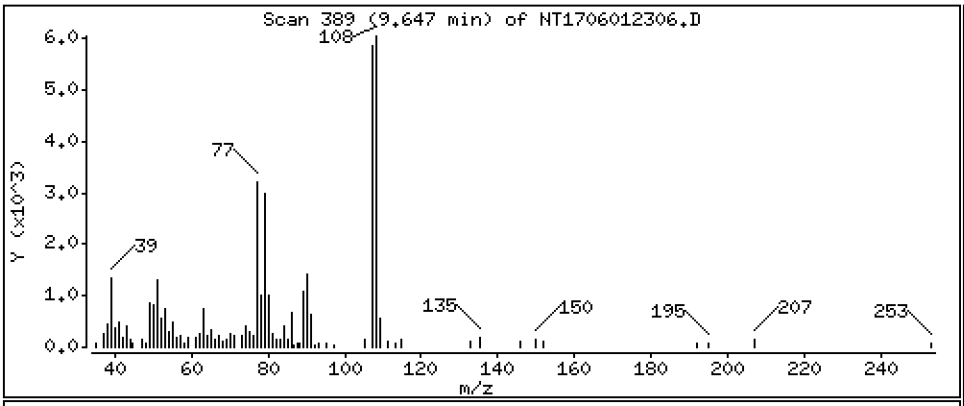
Operator: VTS

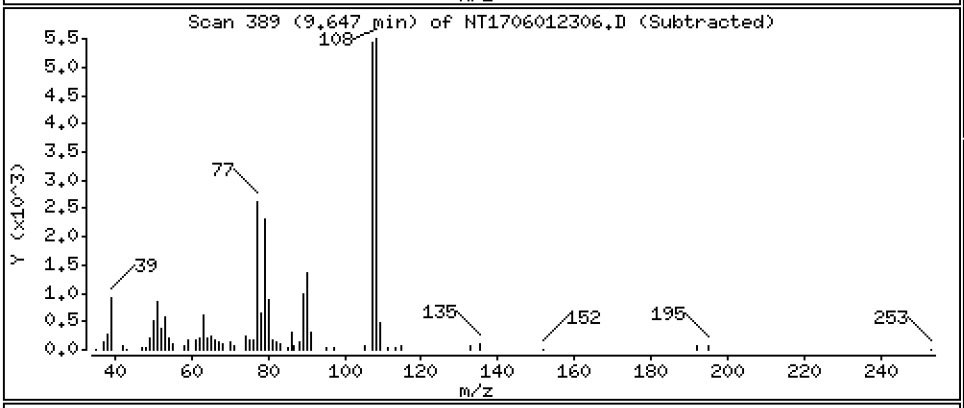
Column phase: ZB-5msi

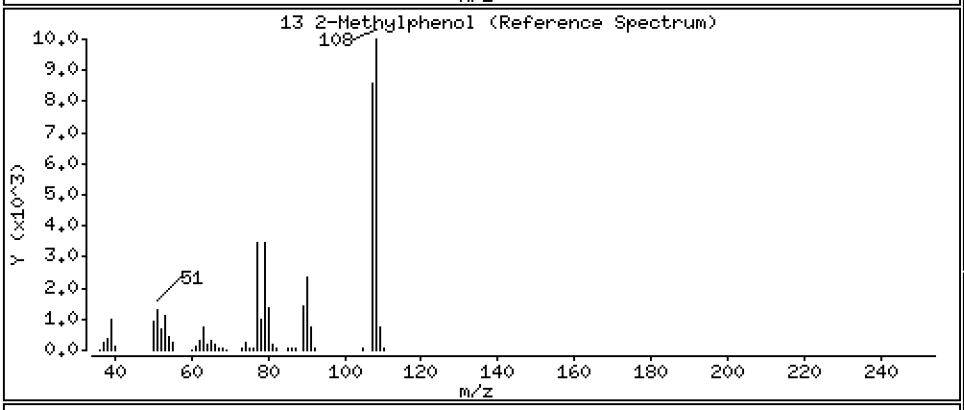
Column diameter: 0.25

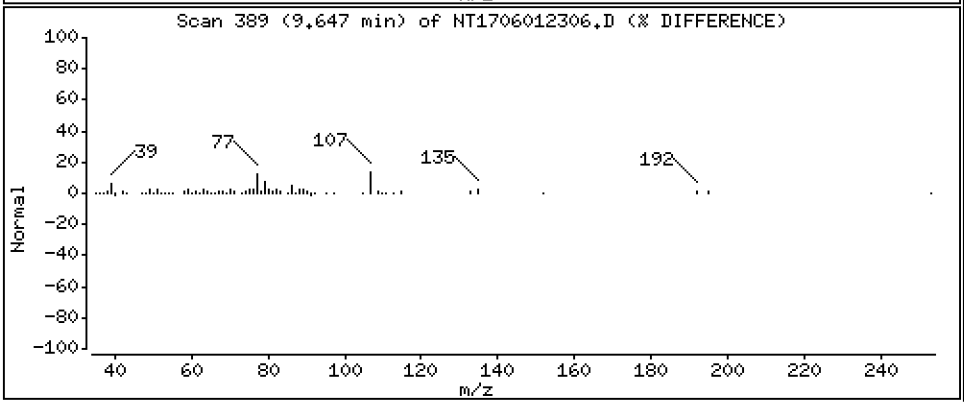
13 2-Methylphenol

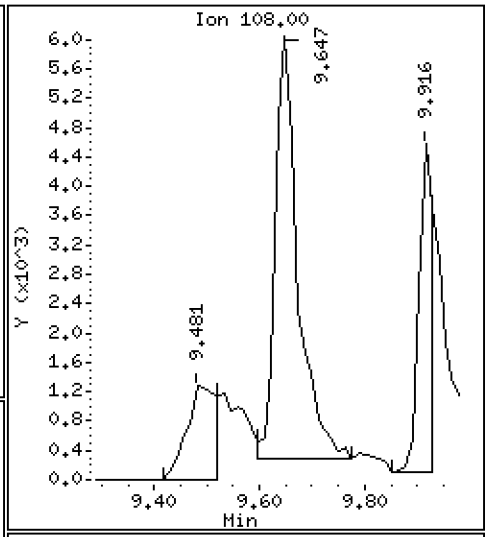
Concentration: 0.1978 ug/mL

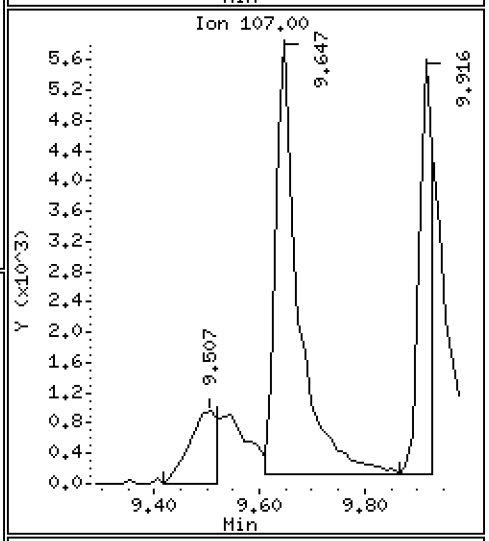


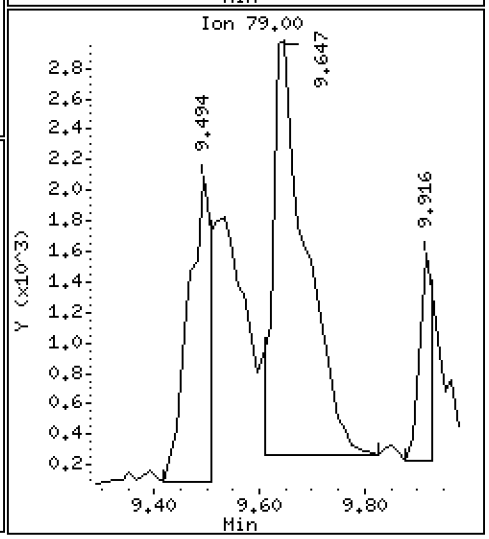












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

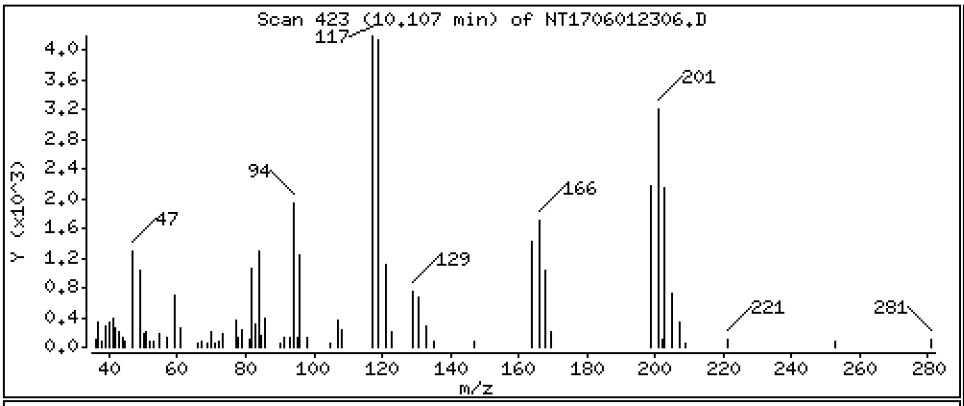
Operator: VTS

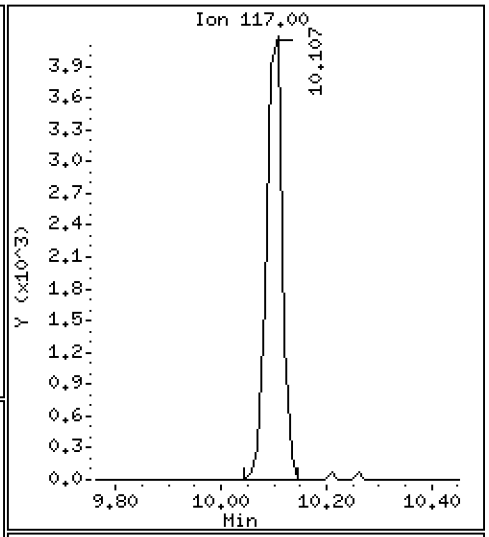
Column phase: ZB-5msi

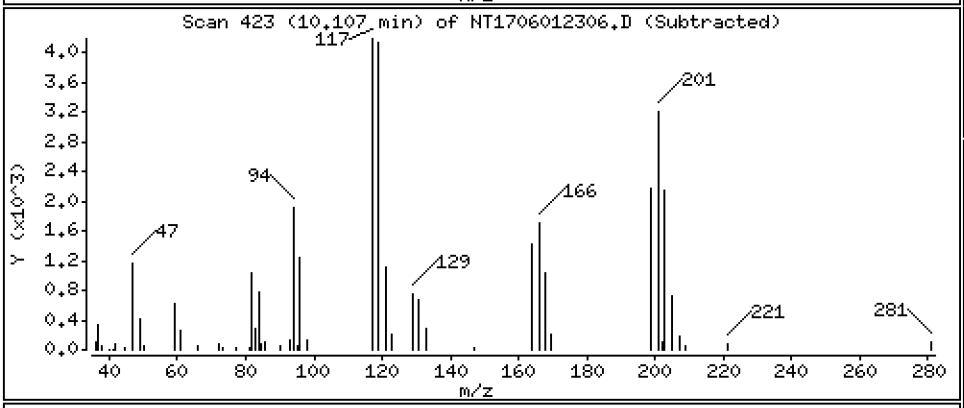
Column diameter: 0.25

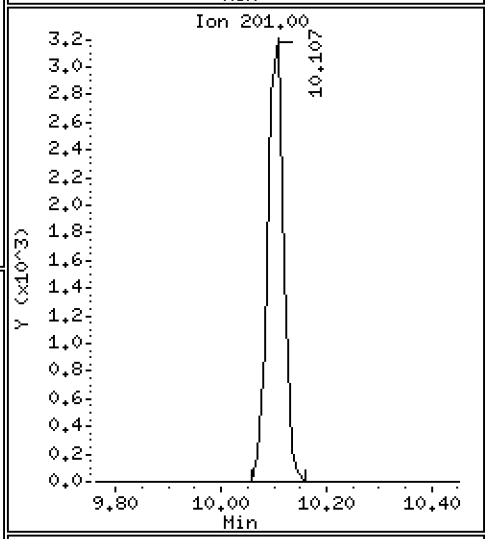
17 Hexachloroethane

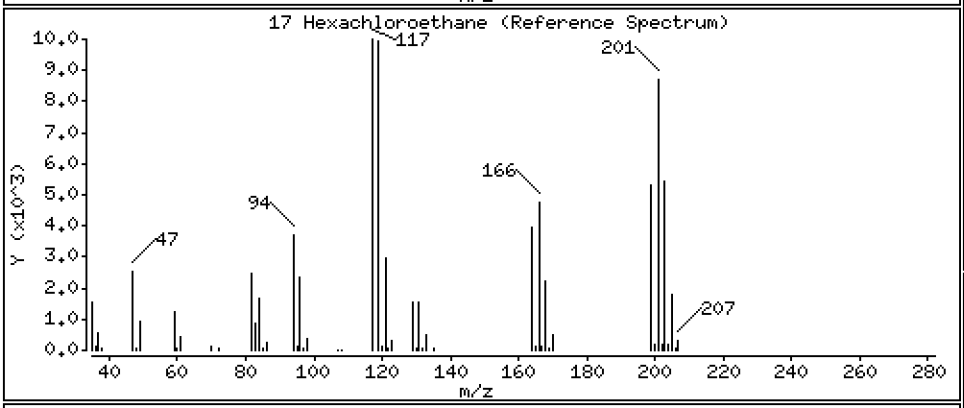
Concentration: 0.2219 ug/mL

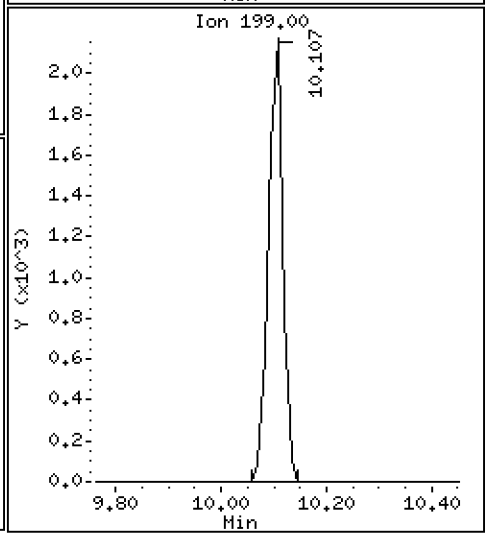


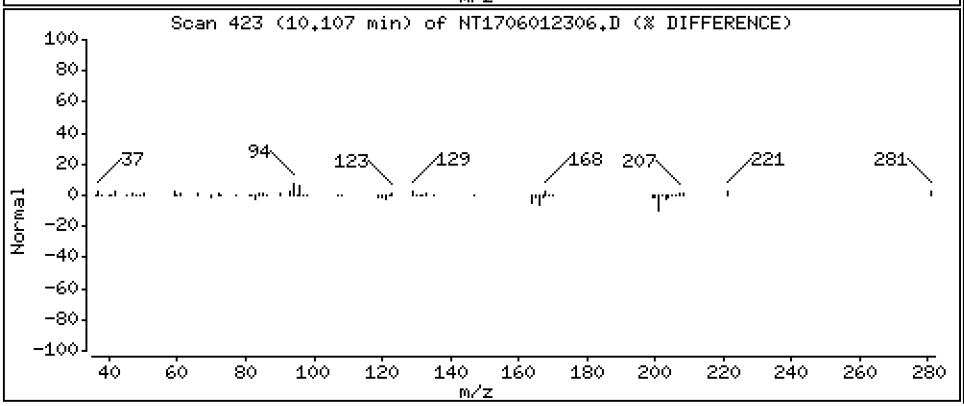












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

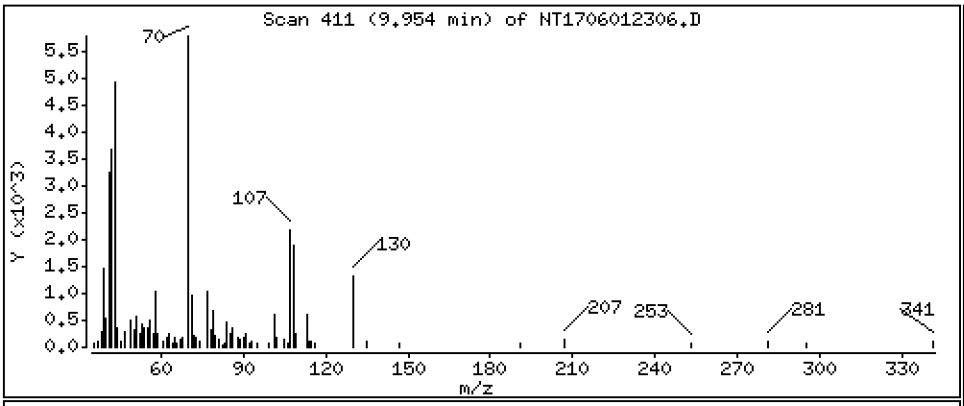
Operator: VTS

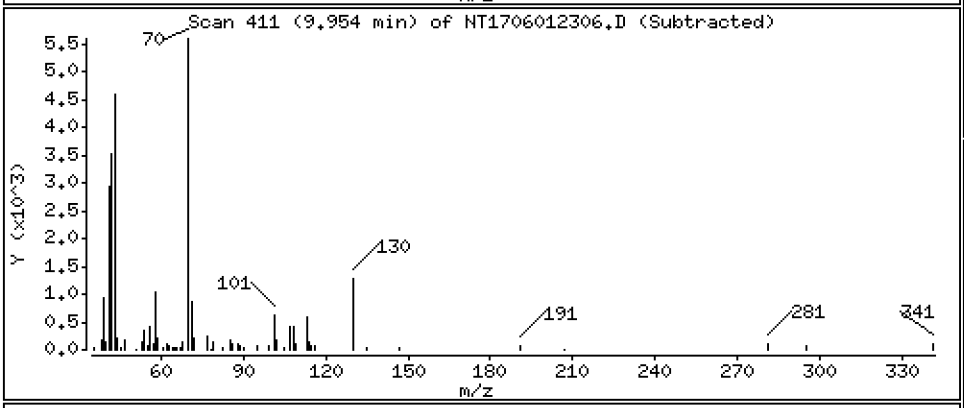
Column phase: ZB-5msi

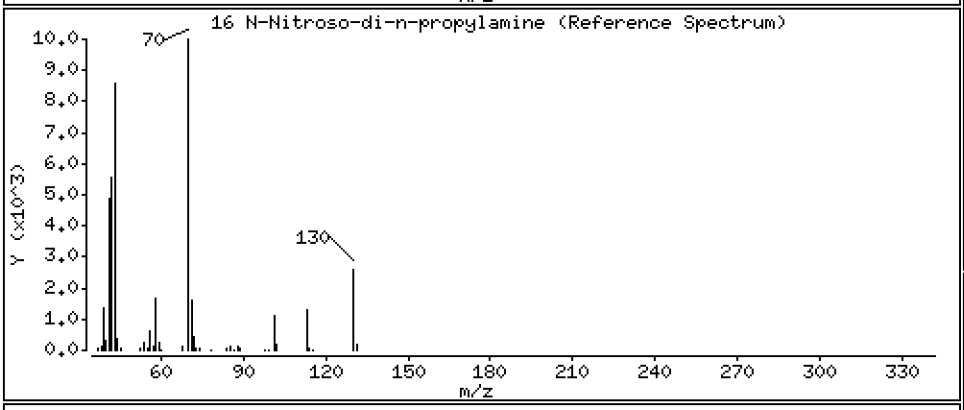
Column diameter: 0.25

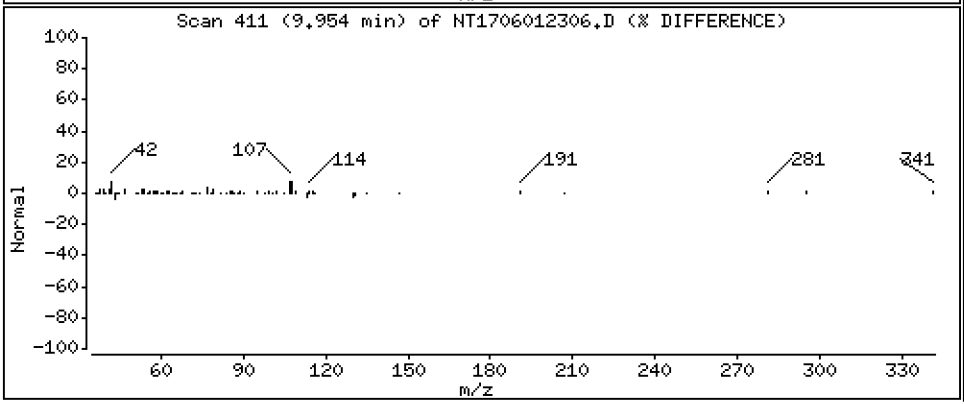
16 N-Nitroso-di-n-propylamine

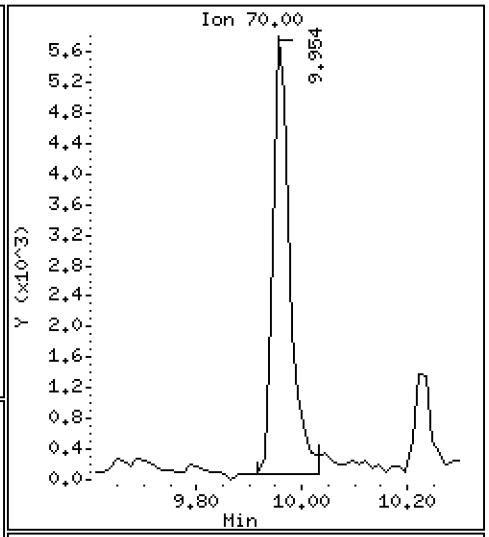
Concentration: 0.1932 ug/mL

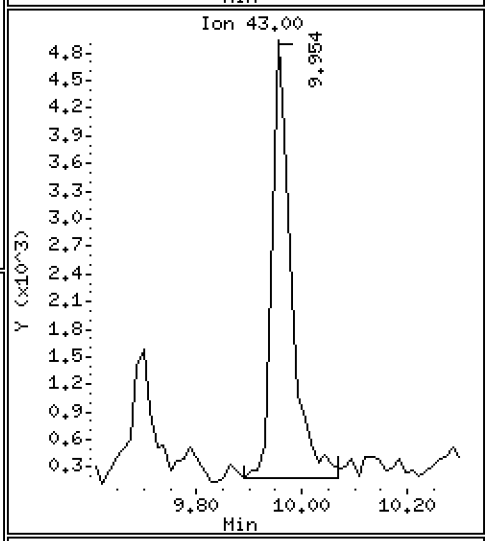


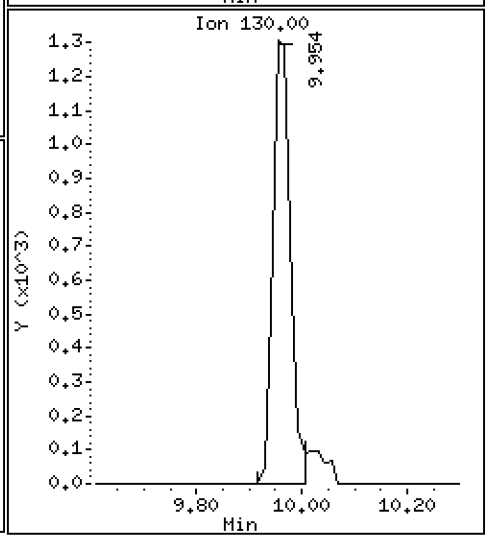












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

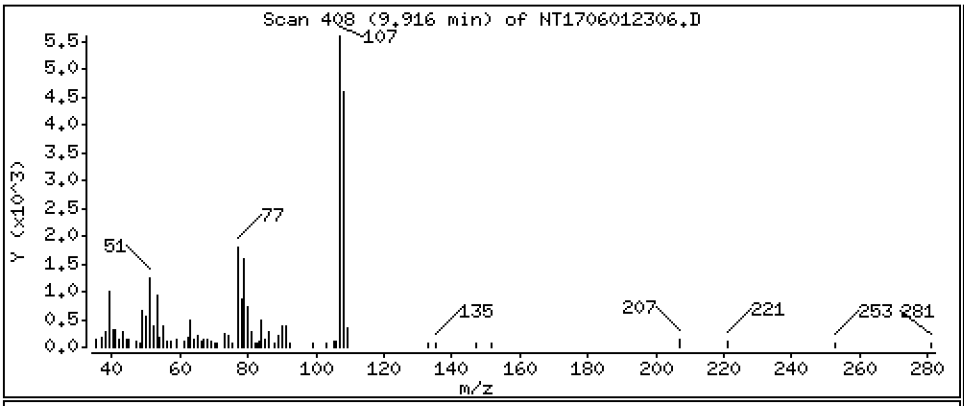
Operator: VTS

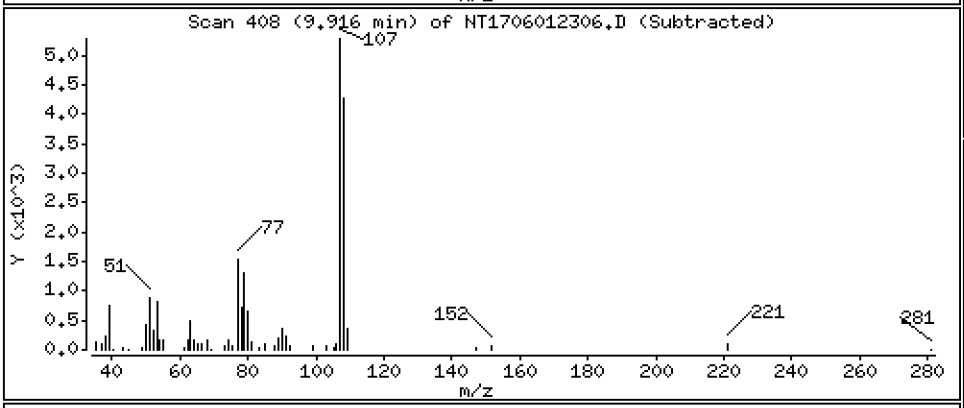
Column phase: ZB-5msi

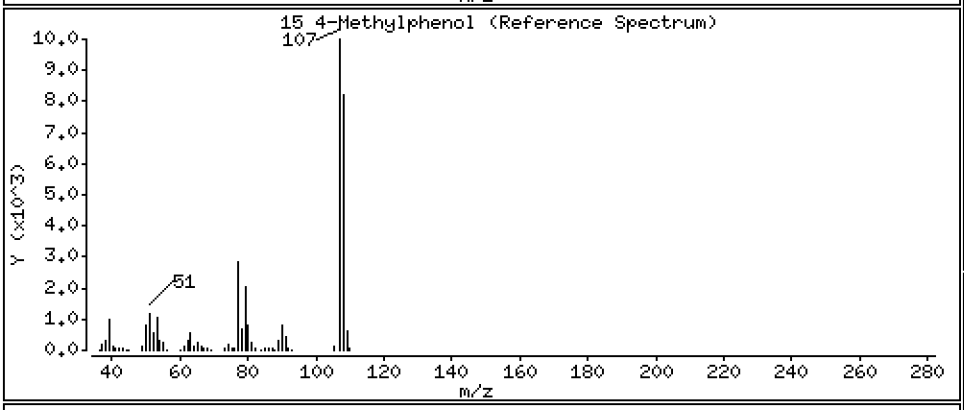
Column diameter: 0.25

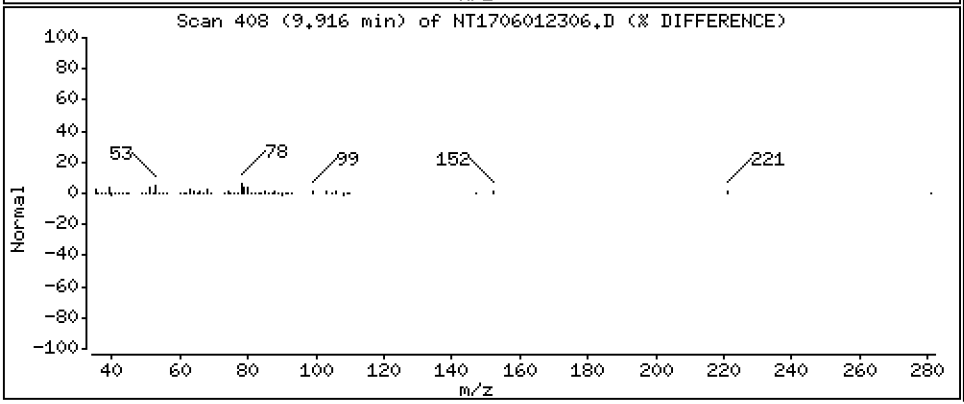
15 4-Methylphenol

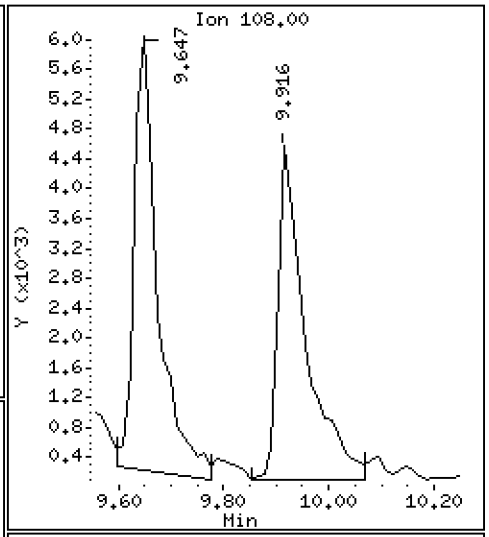
Concentration: 0.1839 ug/mL

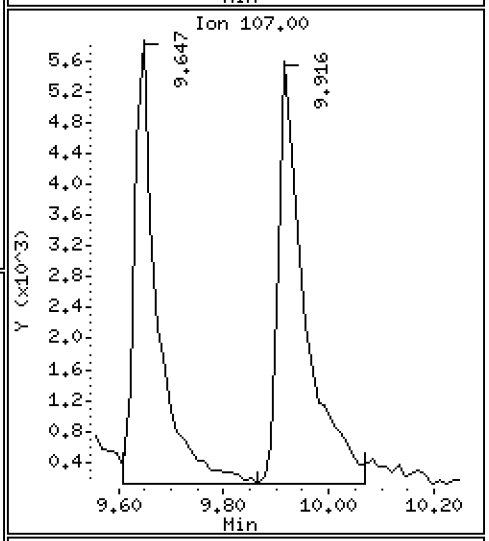


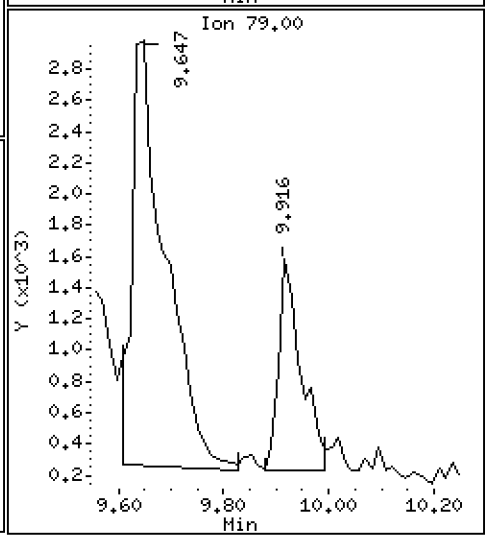












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

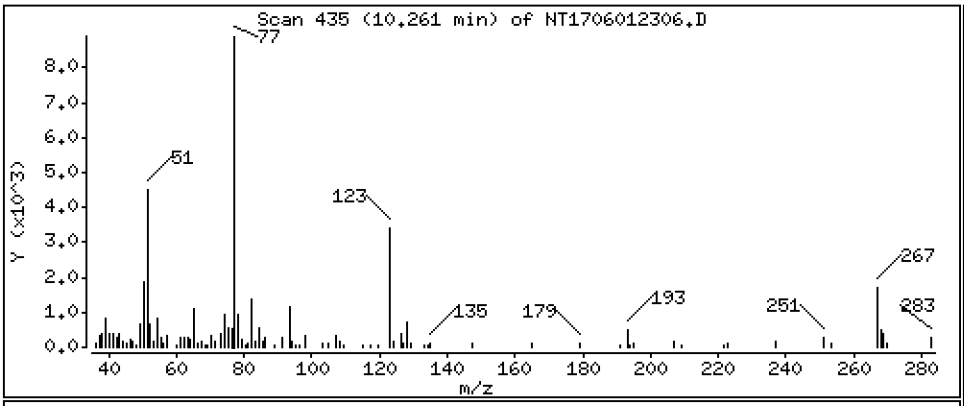
Operator: VTS

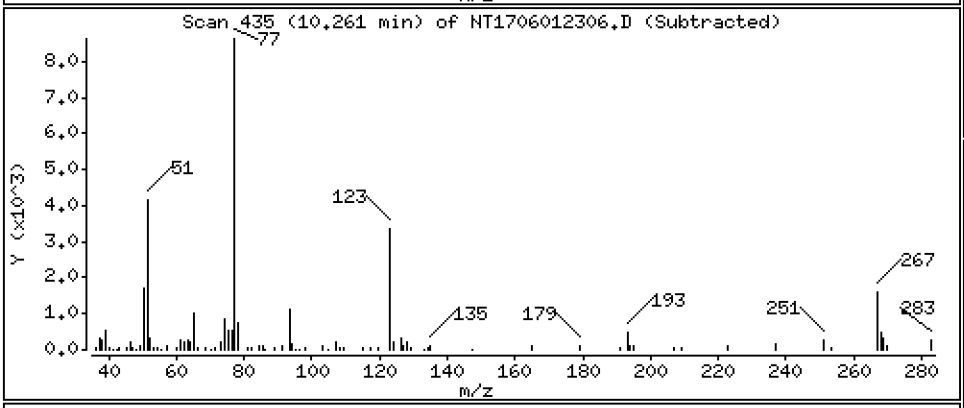
Column phase: ZB-5msi

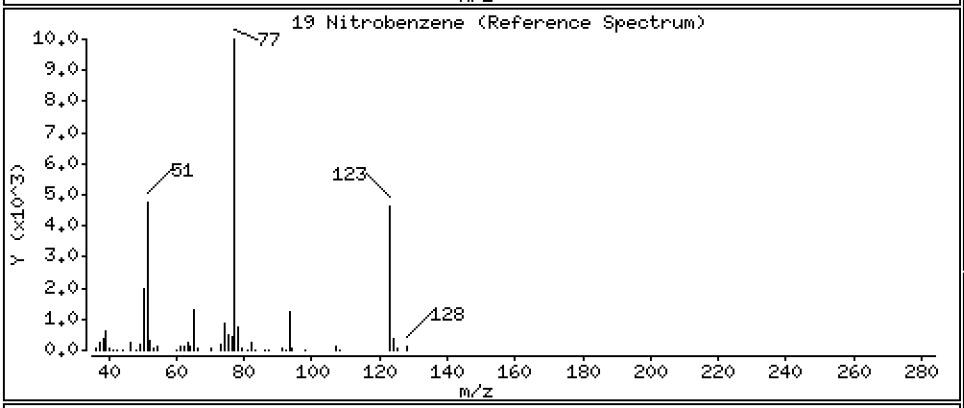
Column diameter: 0.25

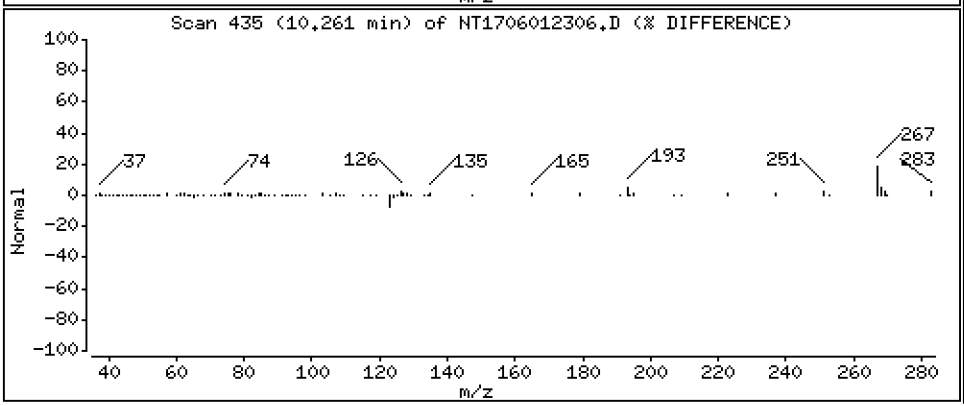
19 Nitrobenzene

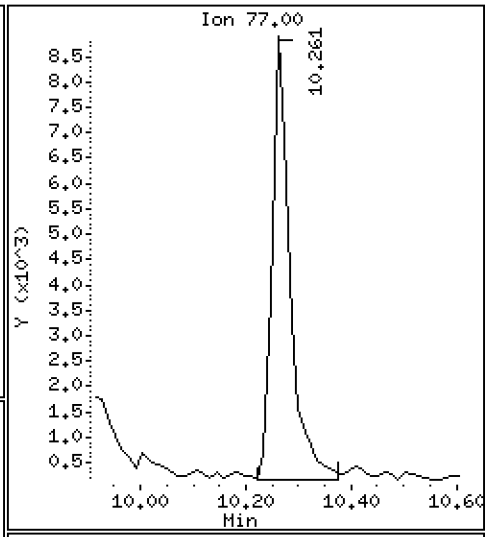
Concentration: 0.2007 ug/mL

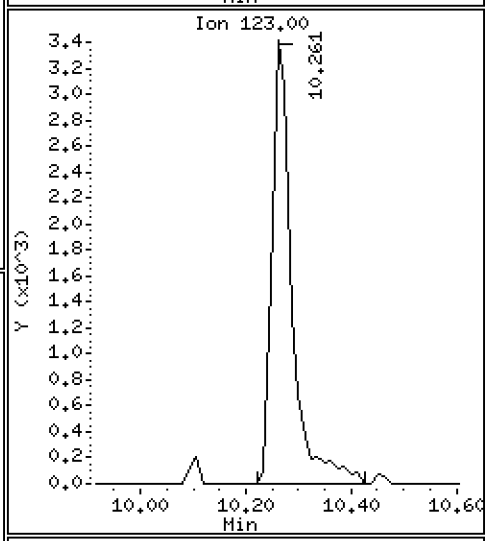


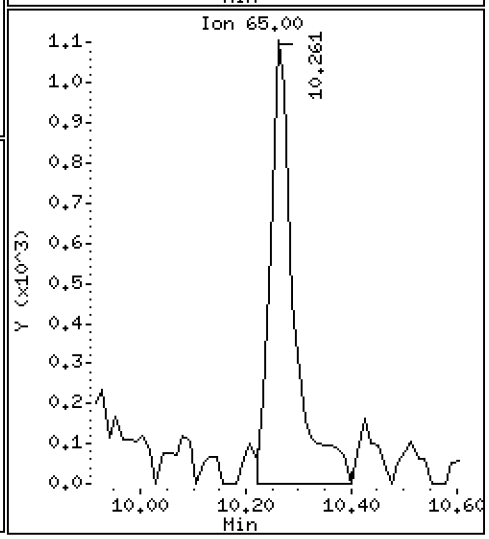












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

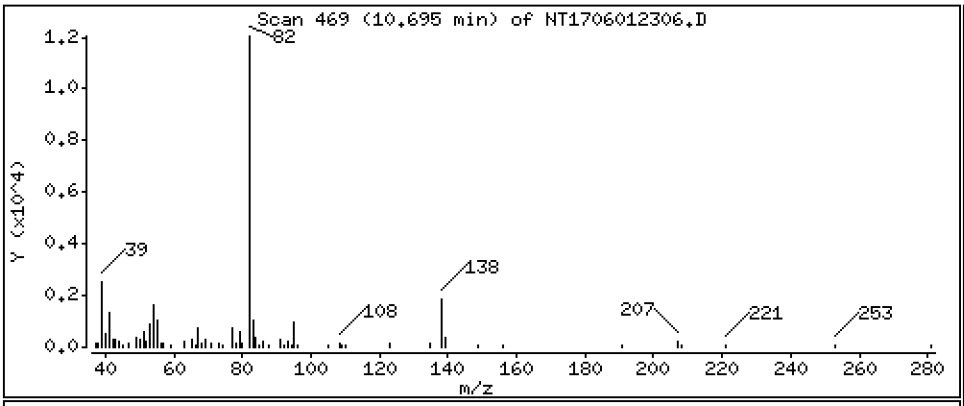
Operator: VTS

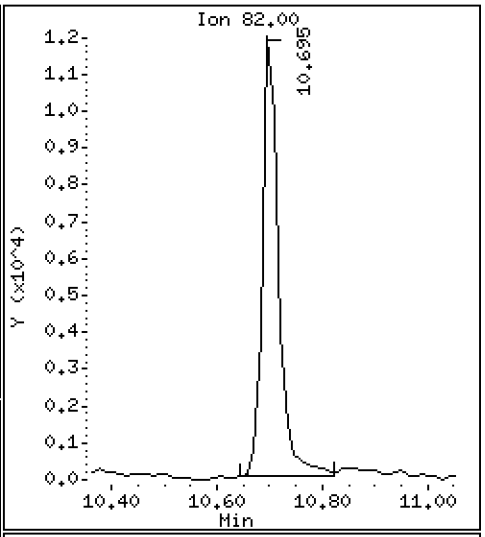
Column phase: ZB-5msi

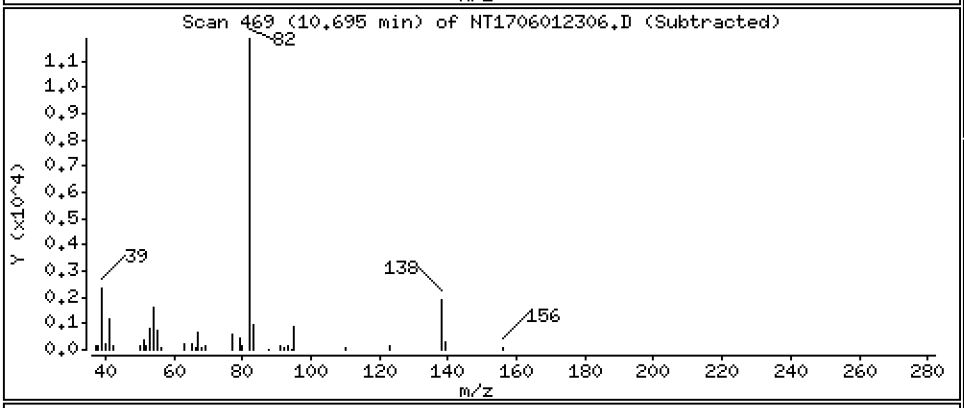
Column diameter: 0.25

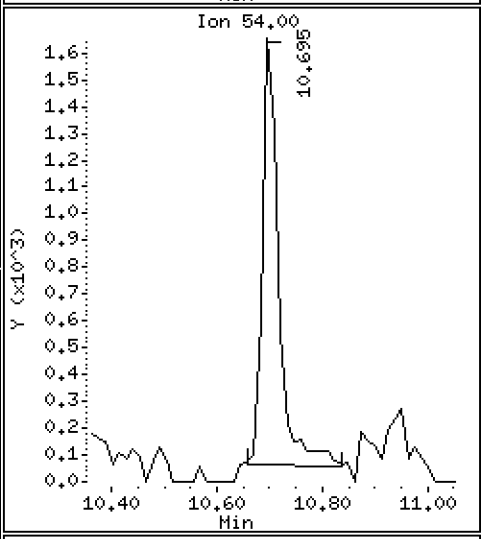
20 Isophorone

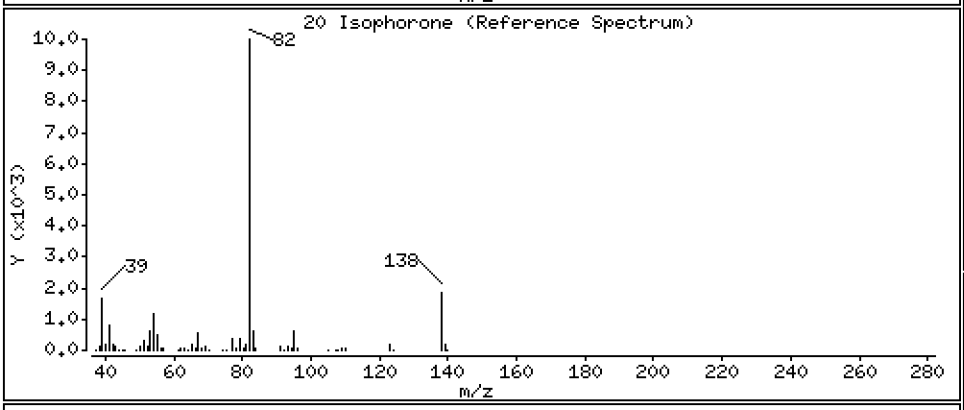
Concentration: 0.2115 ug/mL

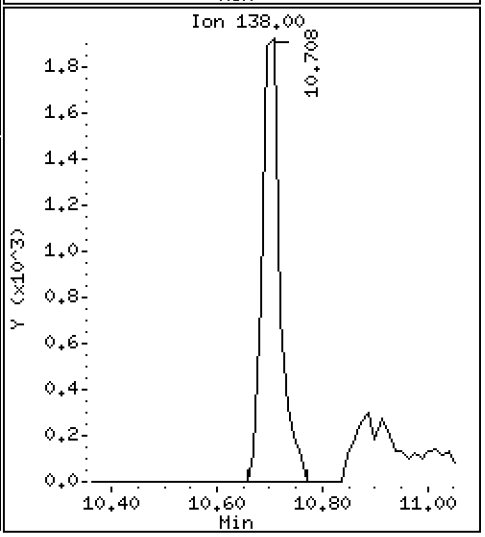


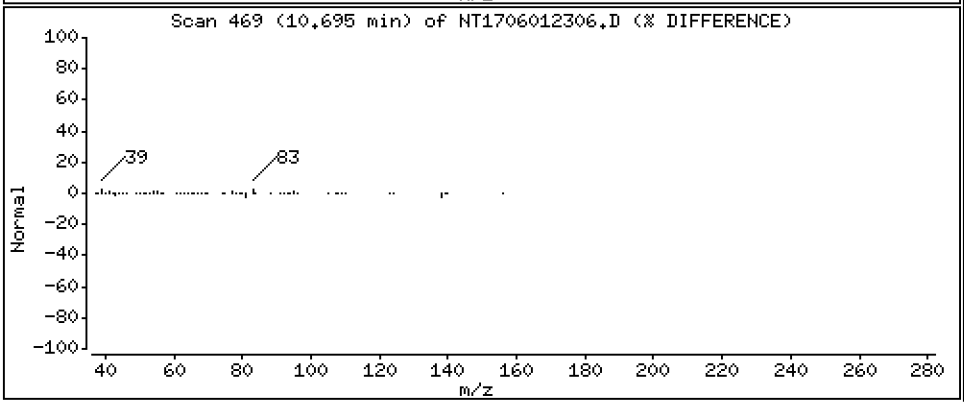












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

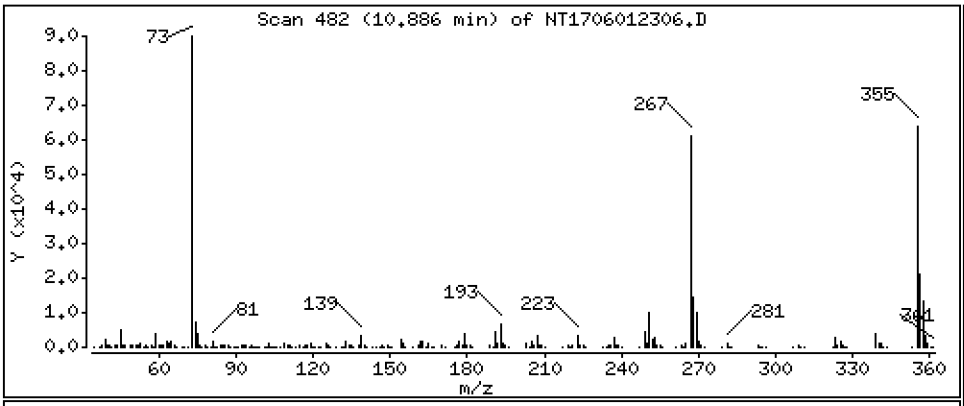
Operator: VTS

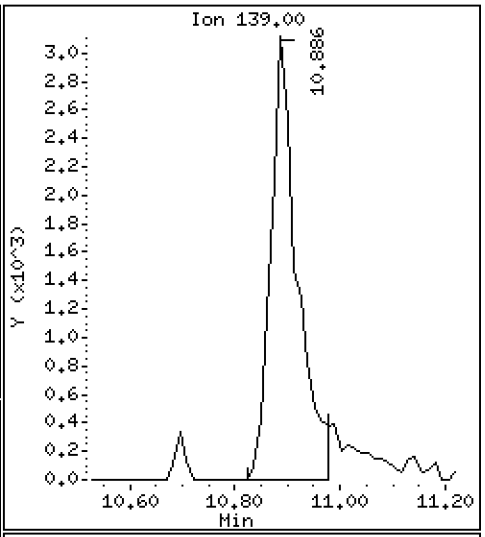
Column phase: ZB-5msi

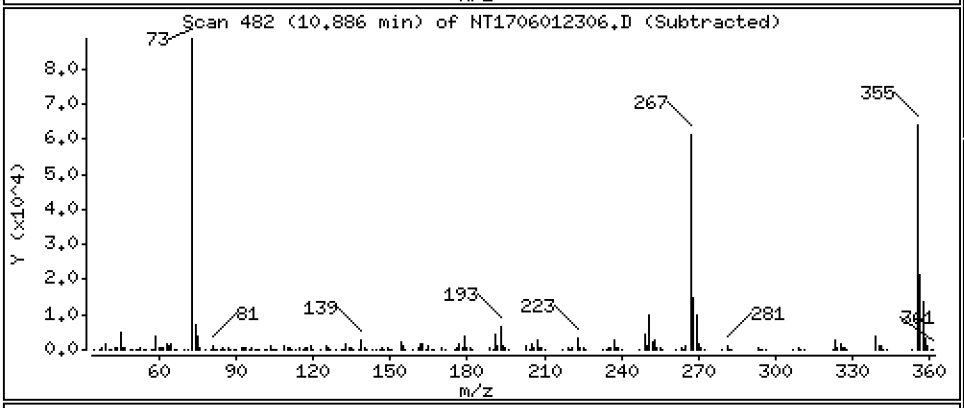
Column diameter: 0.25

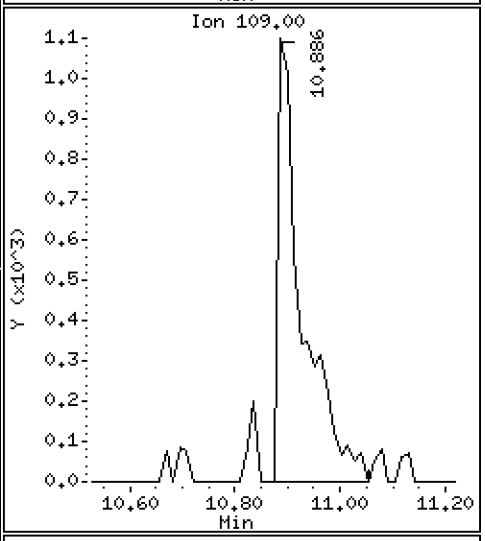
21 2-Nitrophenol

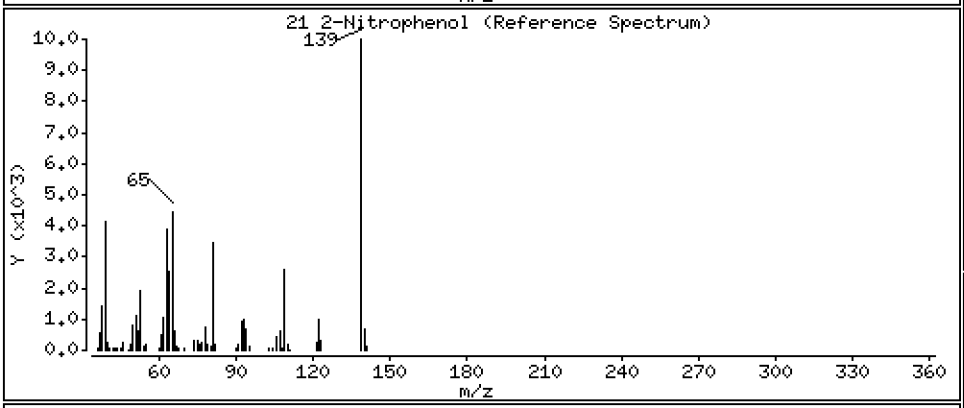
Concentration: 0.2227 ug/mL

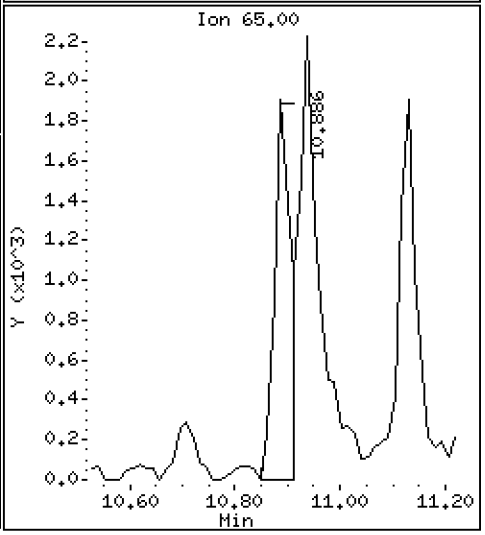


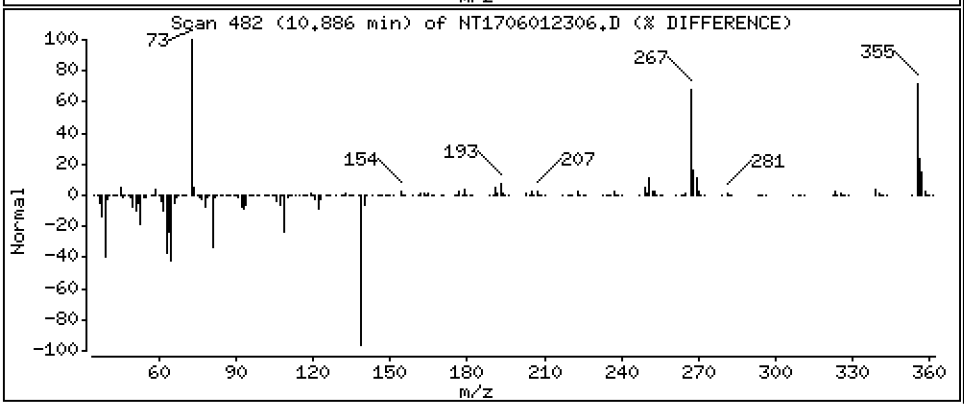












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

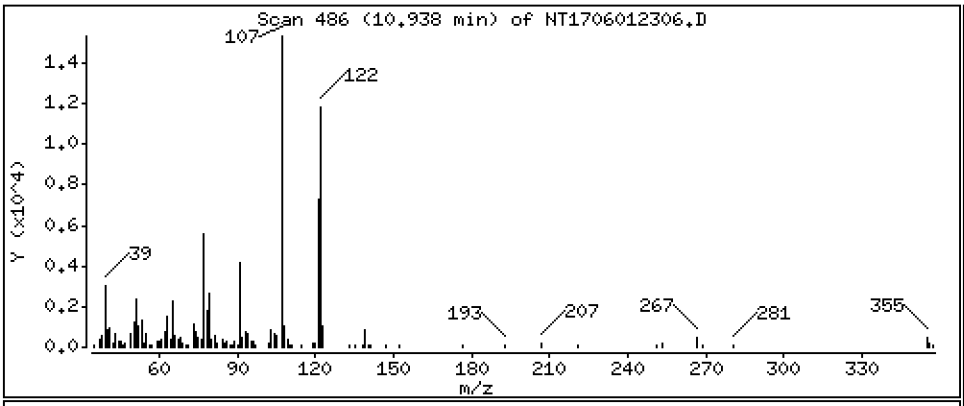
Operator: VTS

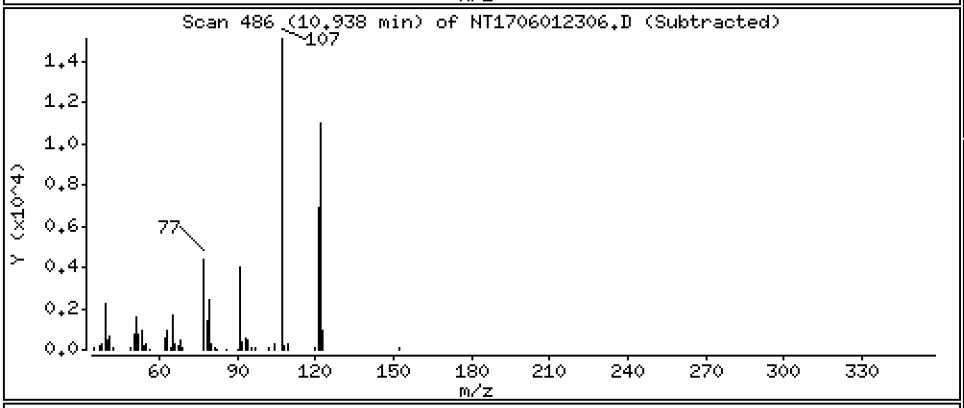
Column phase: ZB-5msi

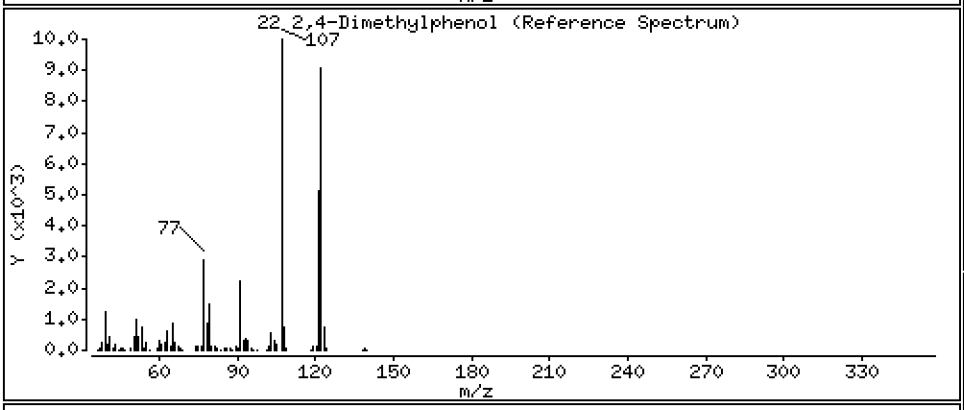
Column diameter: 0.25

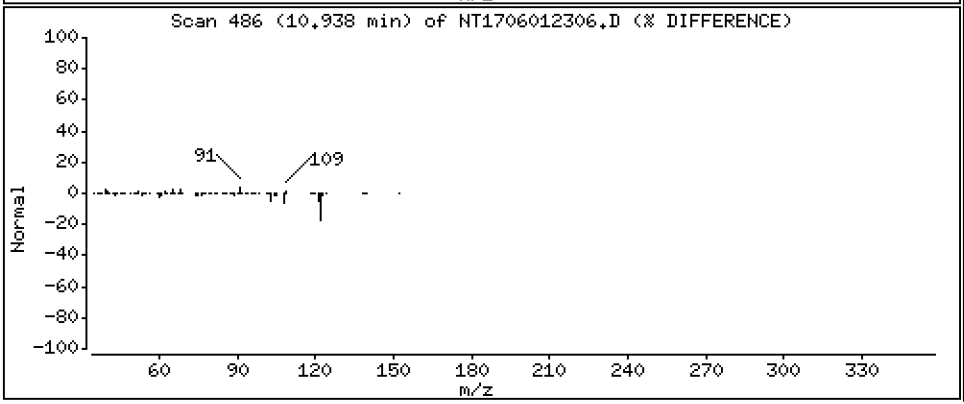
22 2,4-Dimethylphenol

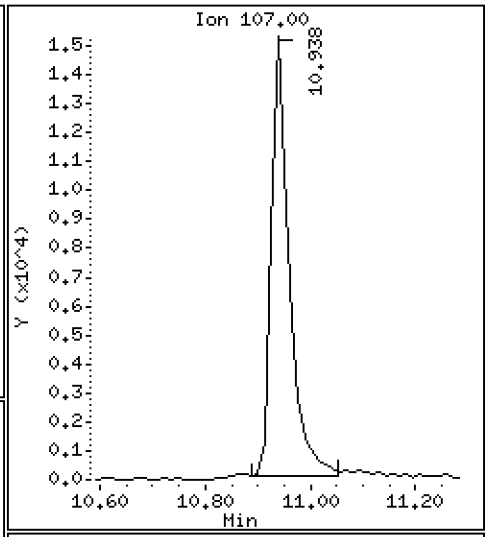
Concentration: 0.3734 ug/mL

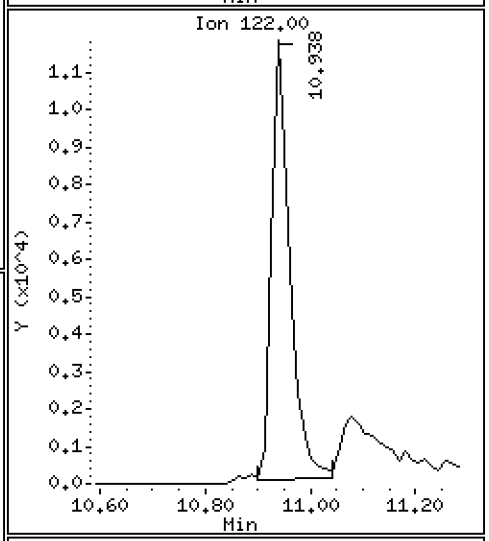


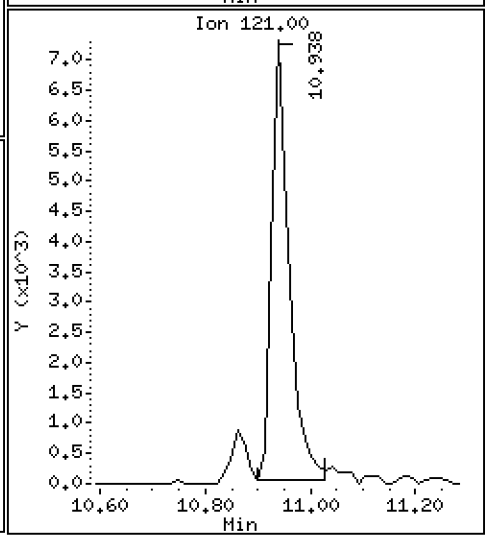












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

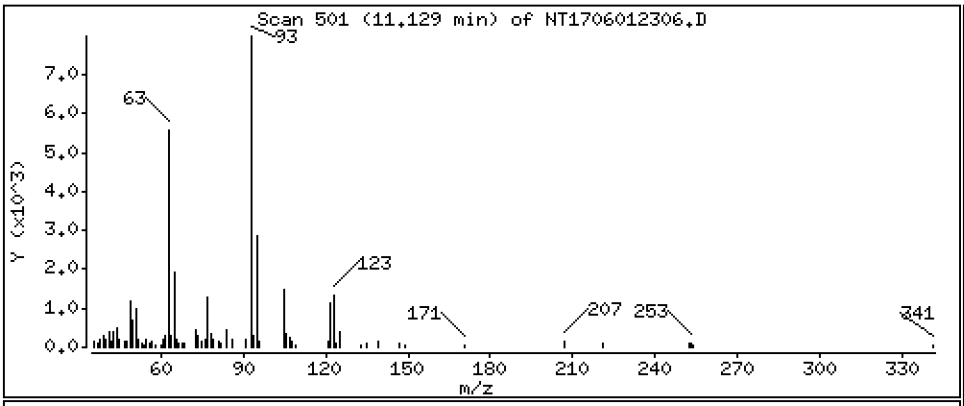
Operator: VTS

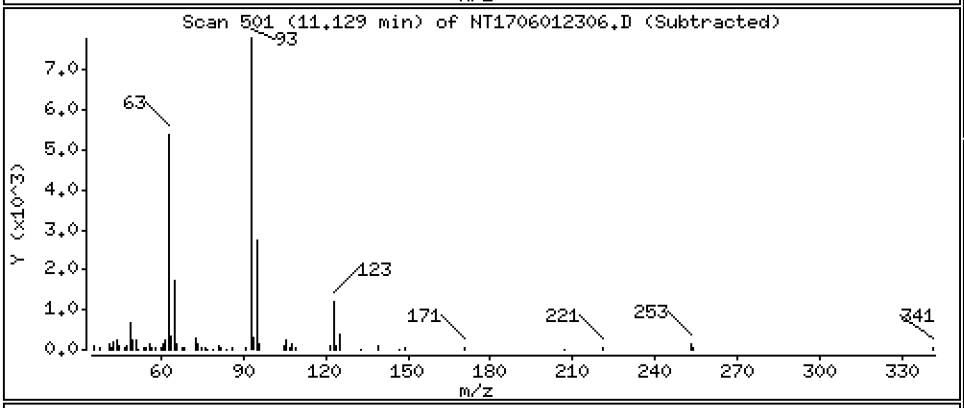
Column phase: ZB-5msi

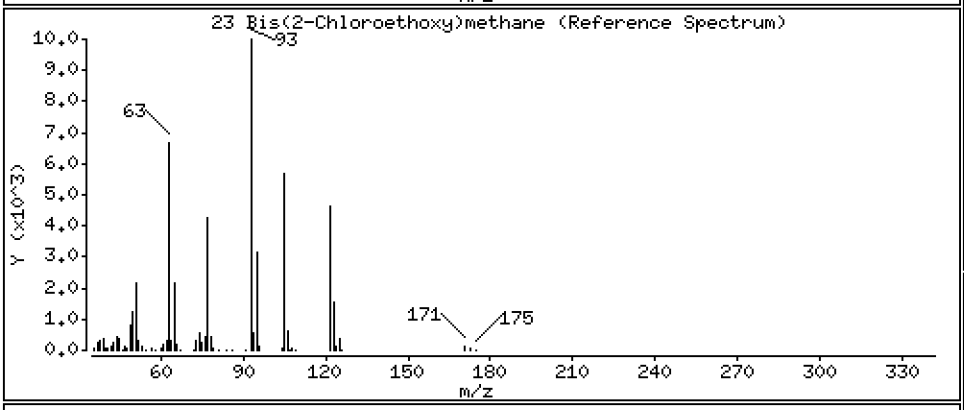
Column diameter: 0.25

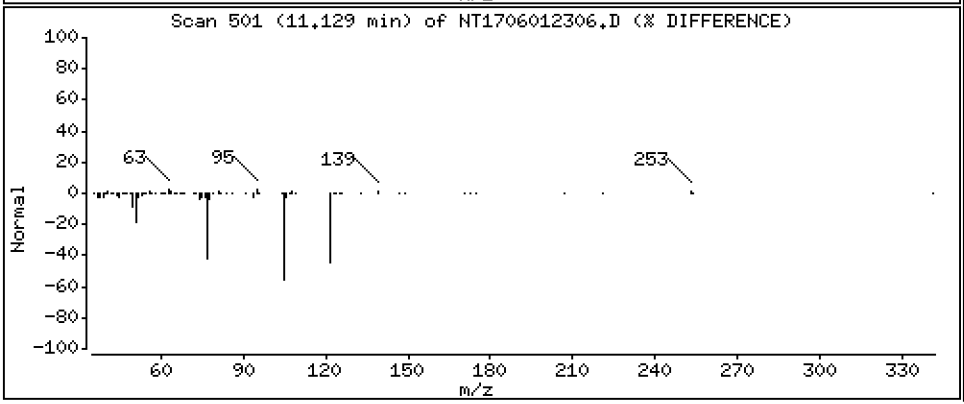
23 Bis(2-Chloroethoxy)methane

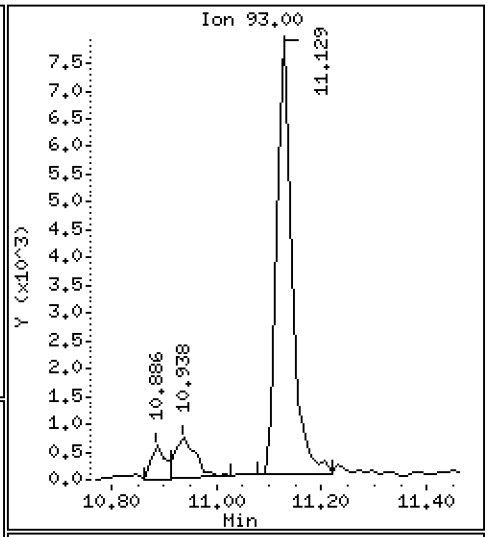
Concentration: 0.1872 ug/mL

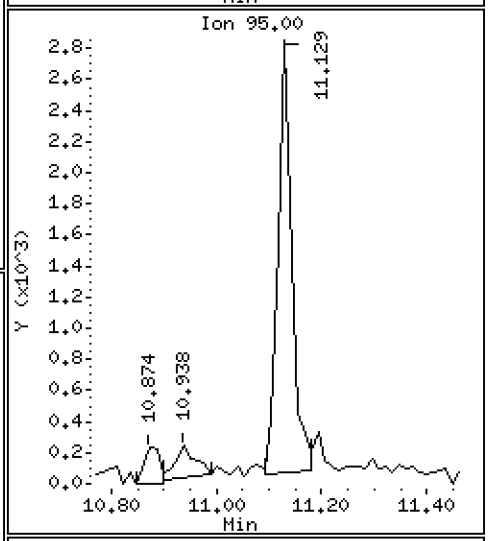


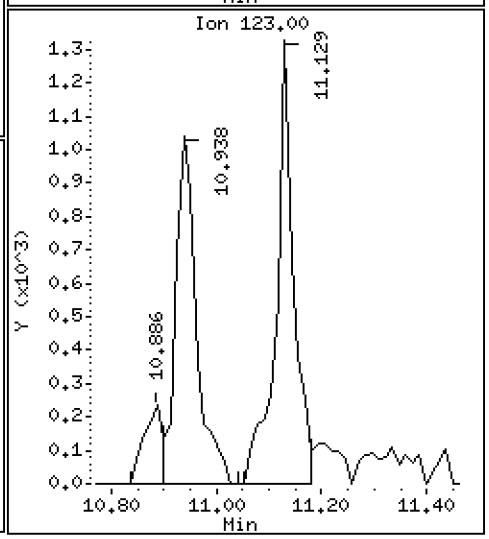












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

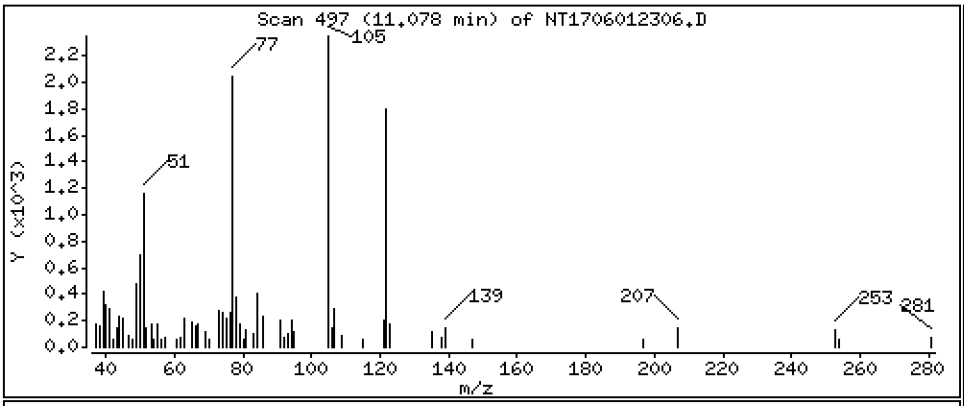
Operator: VTS

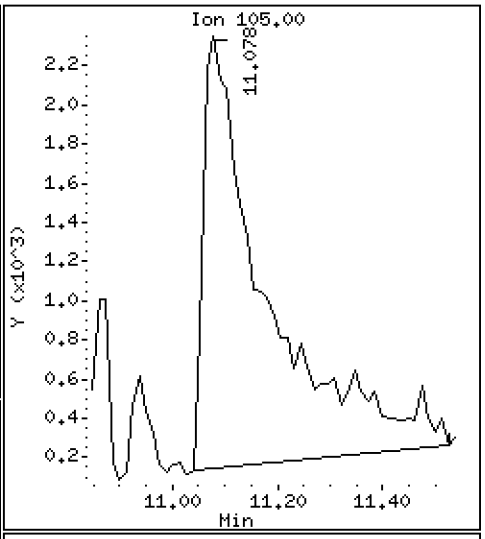
Column phase: ZB-5msi

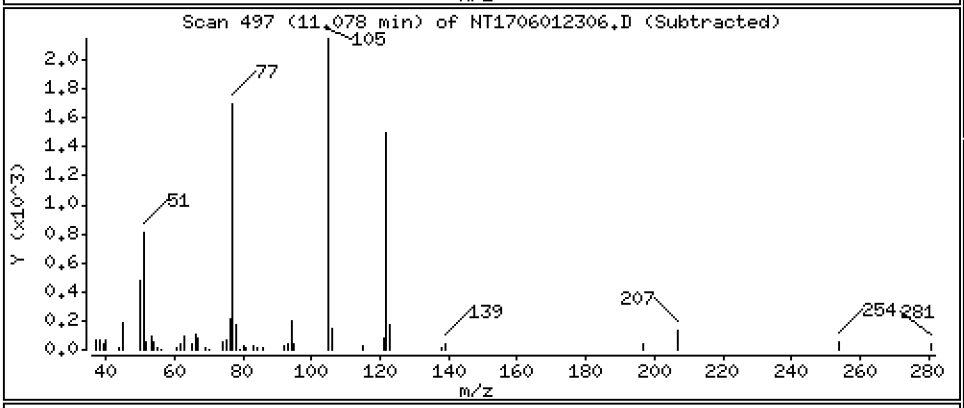
Column diameter: 0.25

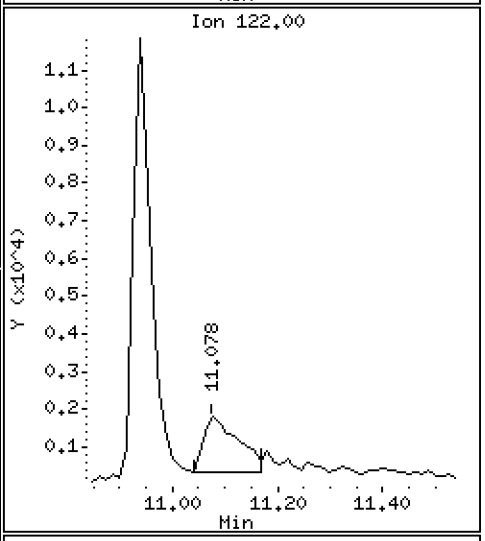
24 Benzoic acid

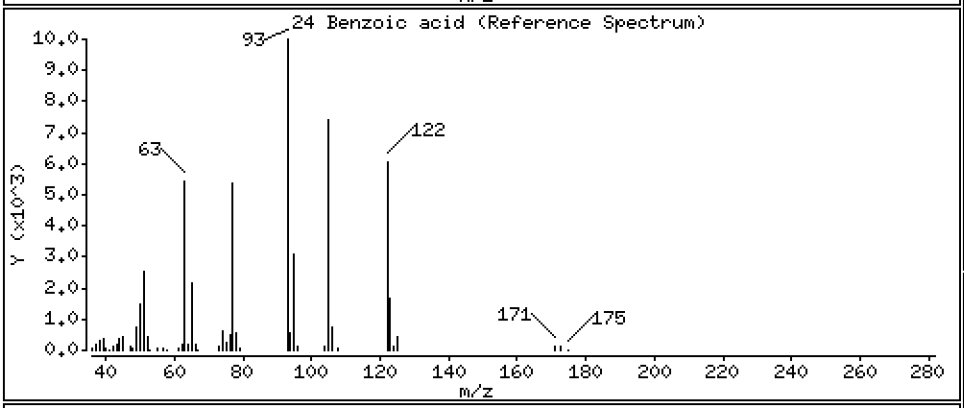
Concentration: 0.2977 ug/mL

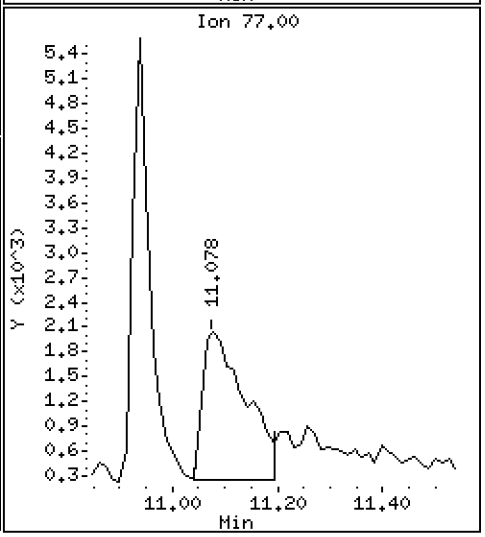


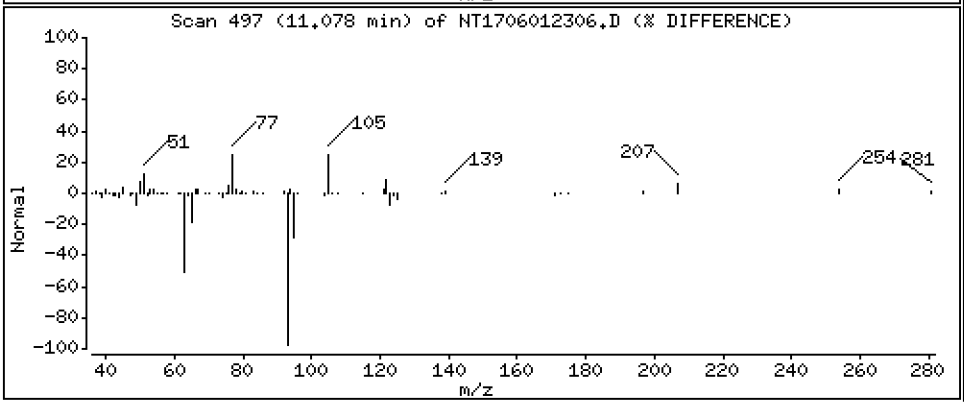












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

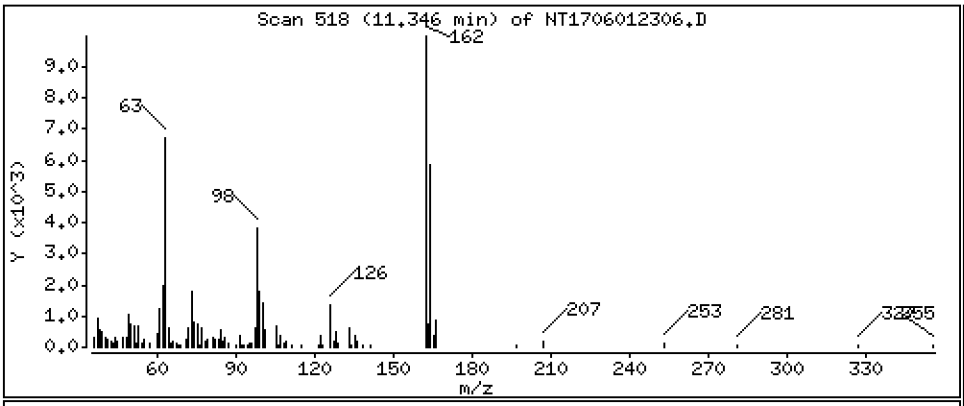
Operator: VTS

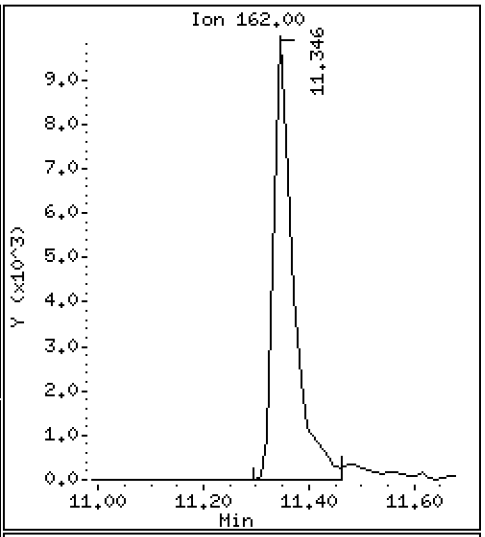
Column phase: ZB-5msi

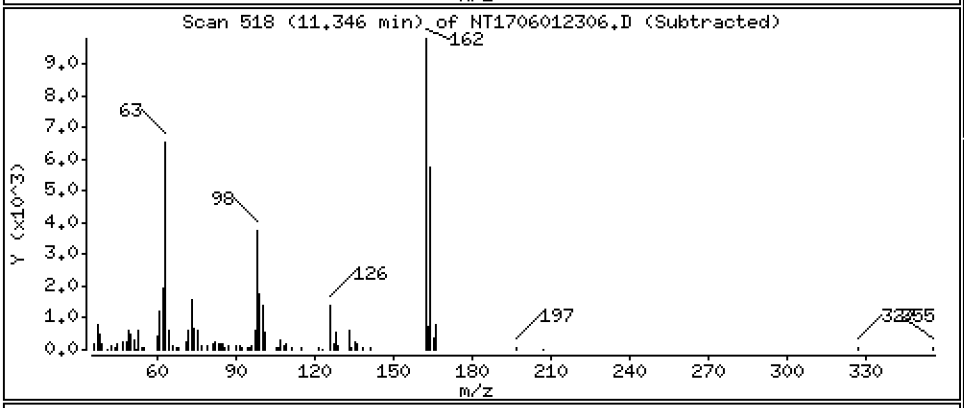
Column diameter: 0.25

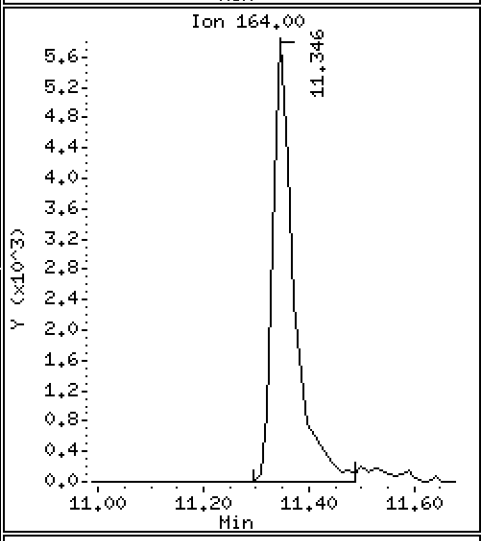
25 2,4-Dichlorophenol

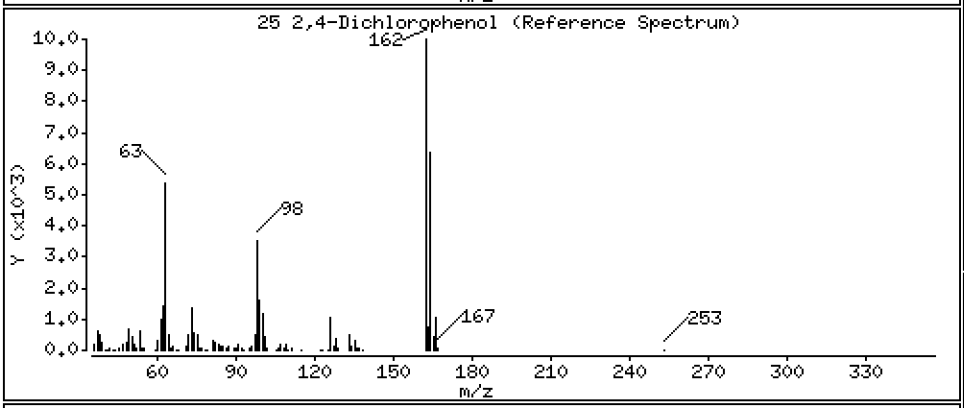
Concentration: 0.3839 ug/mL

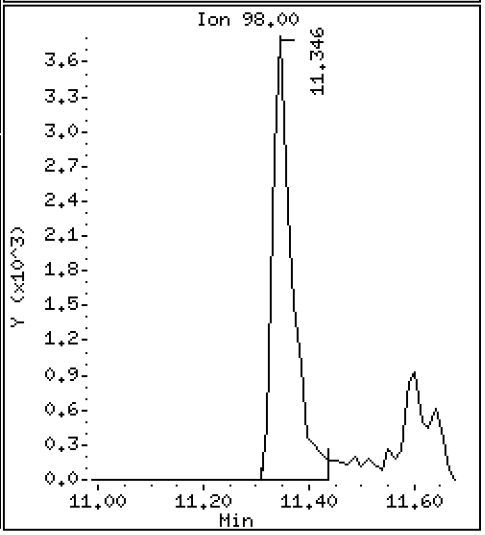


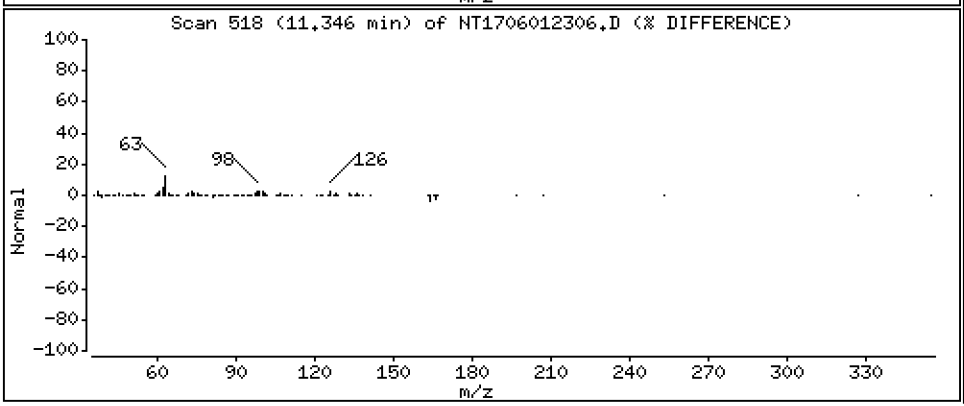












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

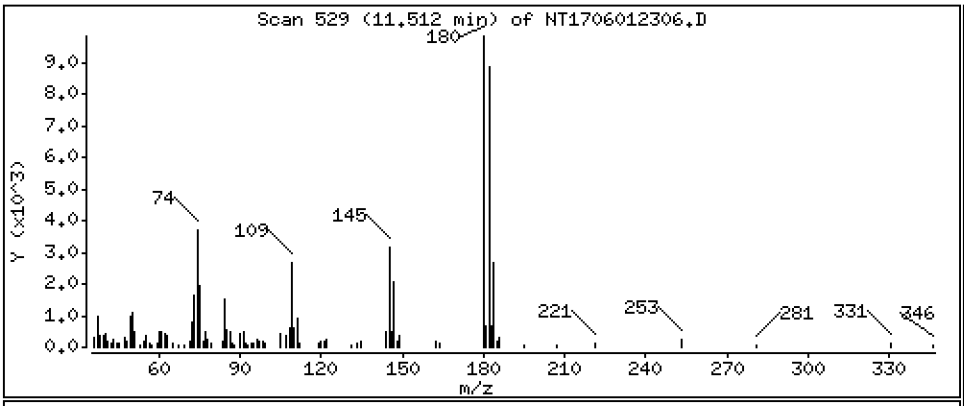
Operator: VTS

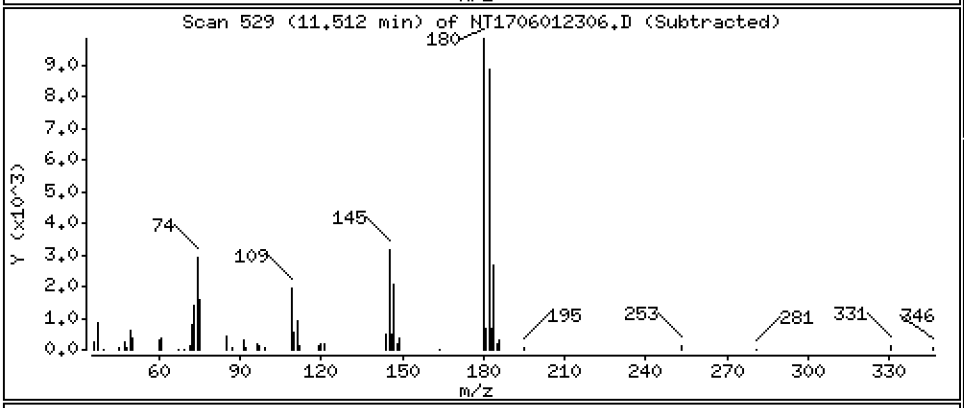
Column phase: ZB-5msi

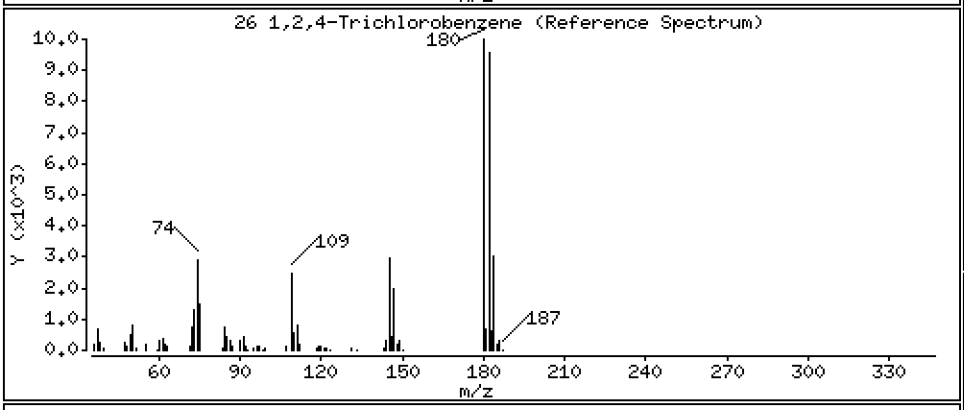
Column diameter: 0.25

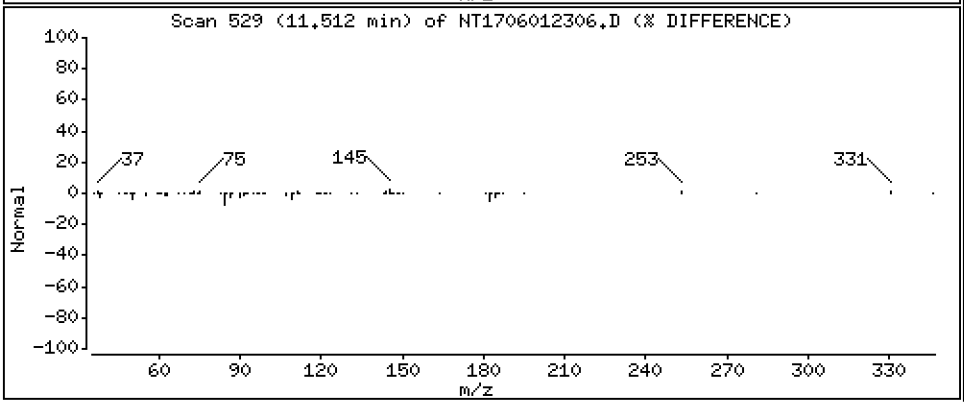
26 1,2,4-Trichlorobenzene

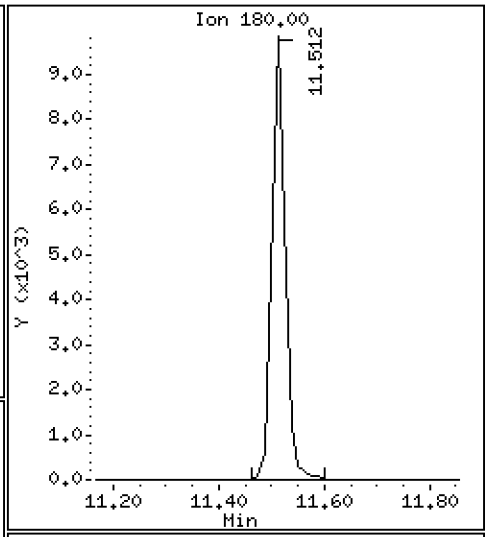
Concentration: 0.2073 ug/mL

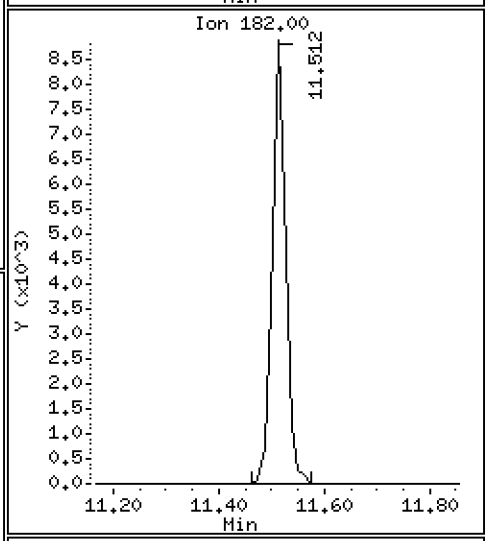


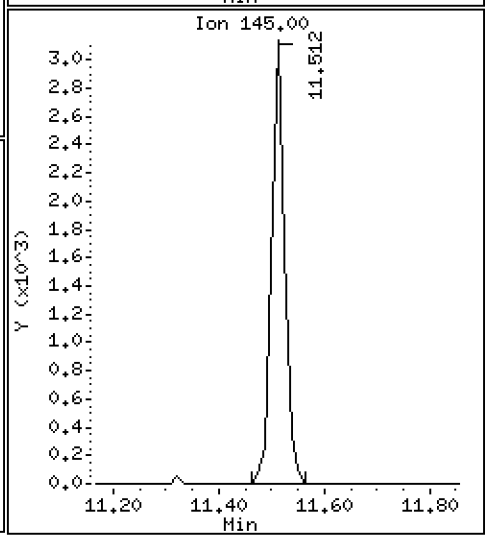












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

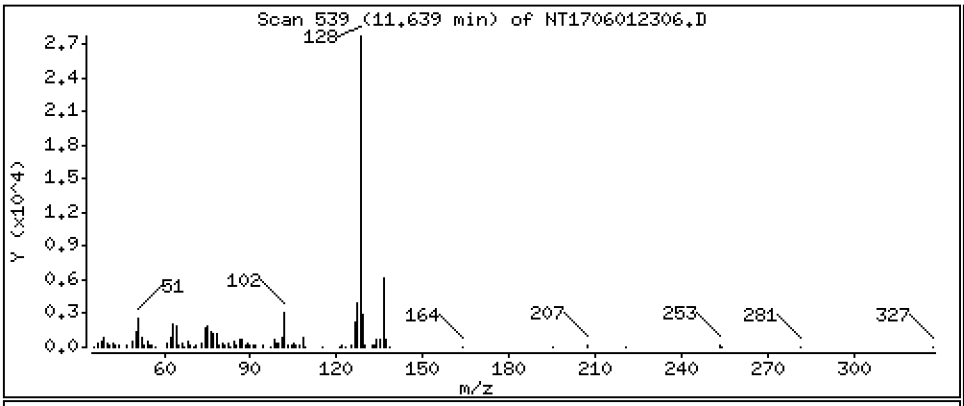
Operator: VTS

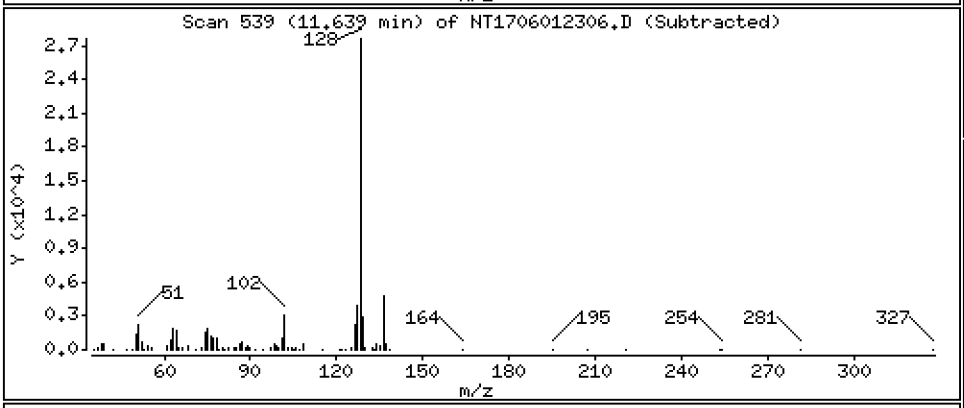
Column phase: ZB-5msi

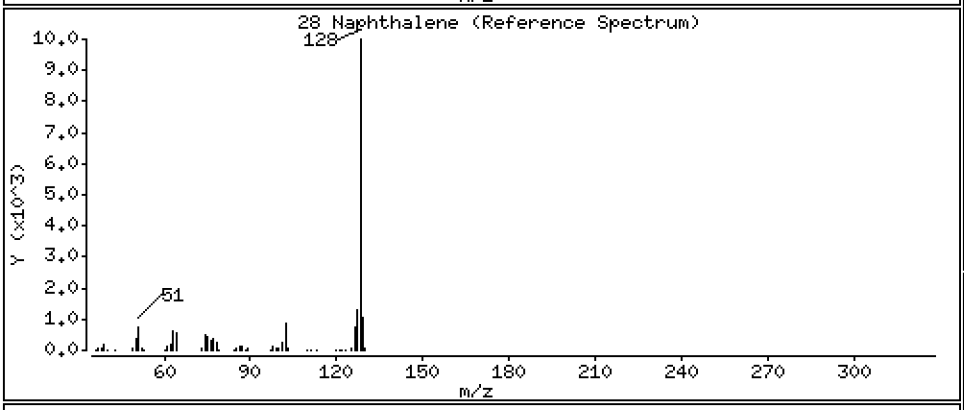
Column diameter: 0.25

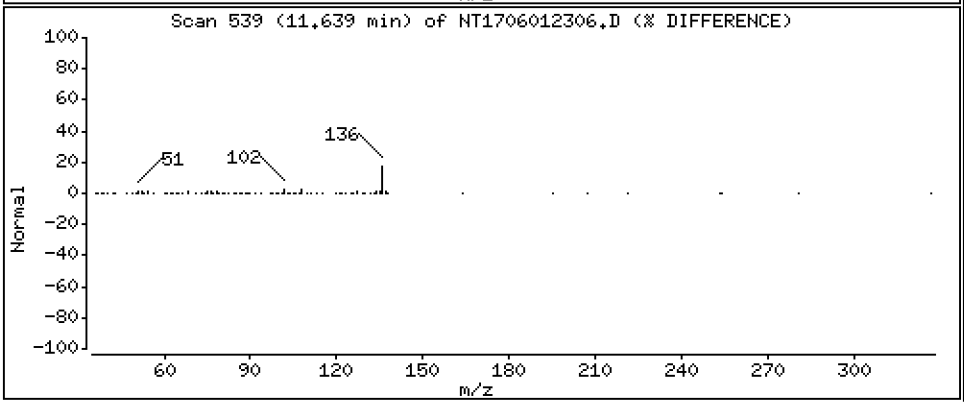
28 Naphthalene

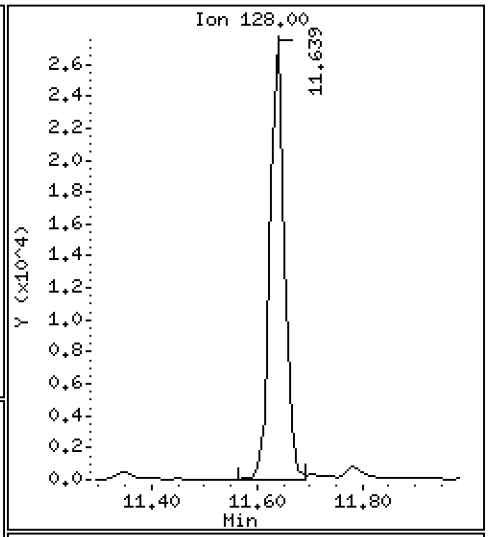
Concentration: 0.2048 ug/mL

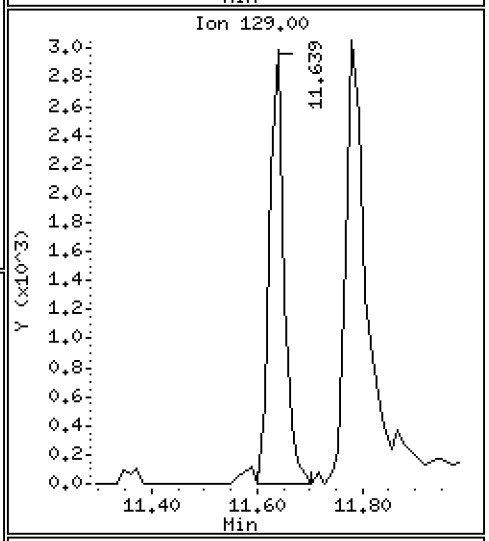


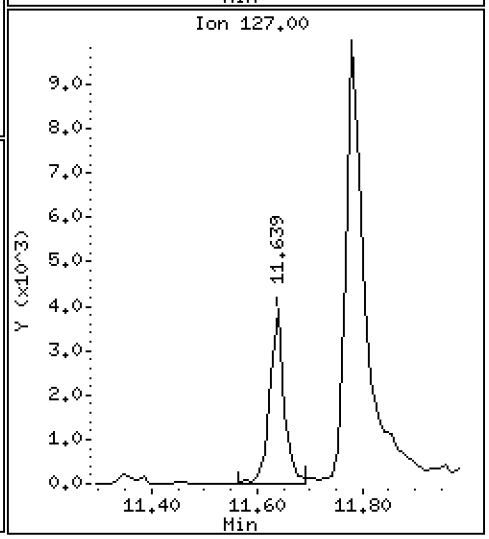












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

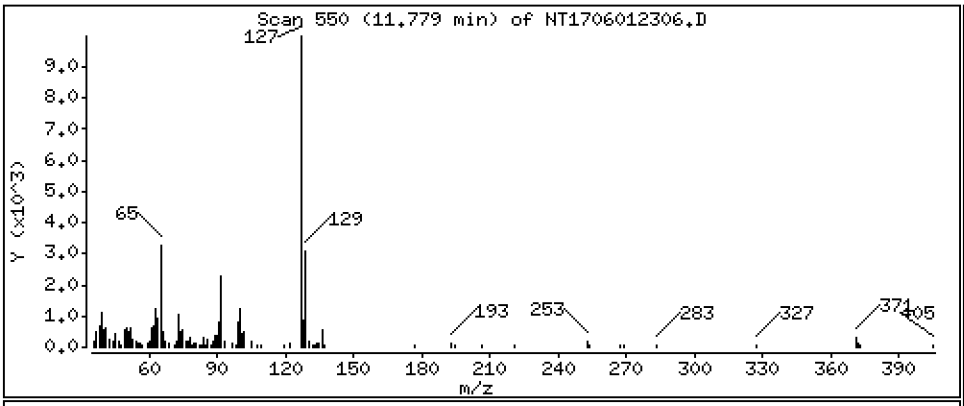
Operator: VTS

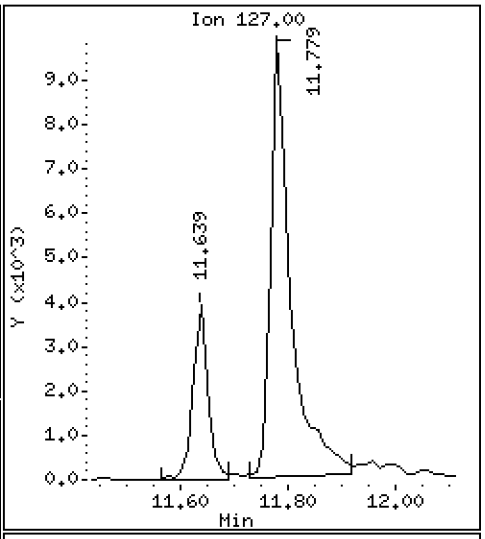
Column phase: ZB-5msi

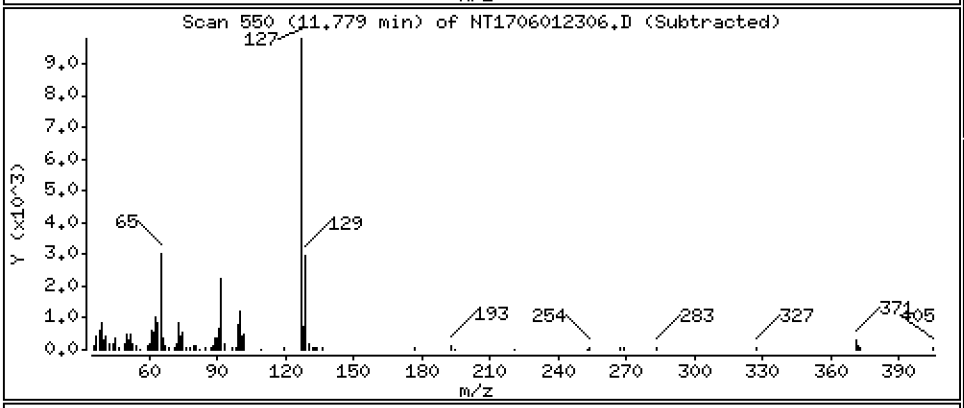
Column diameter: 0.25

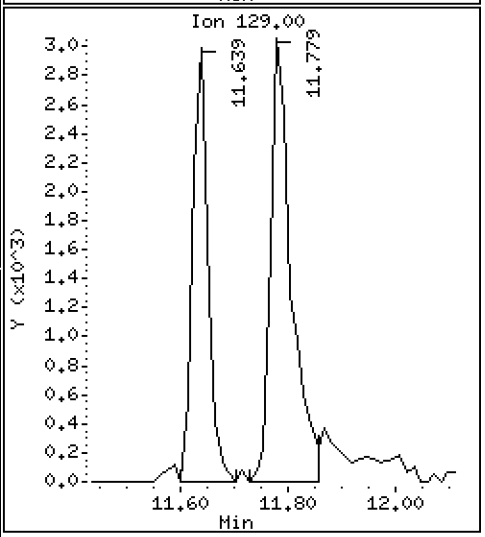
29 4-Chloroaniline

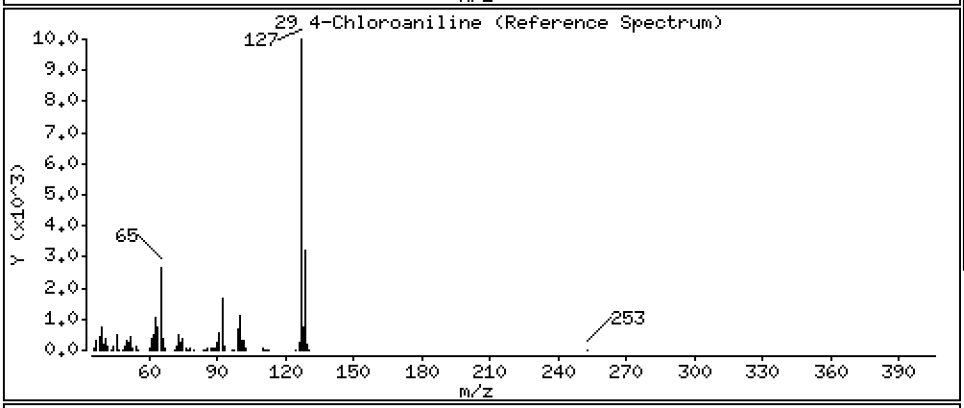
Concentration: 0.2906 ug/mL

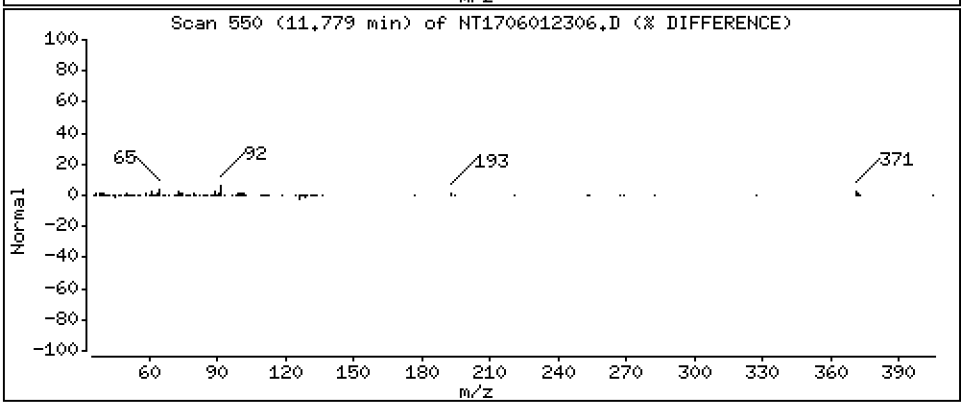












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

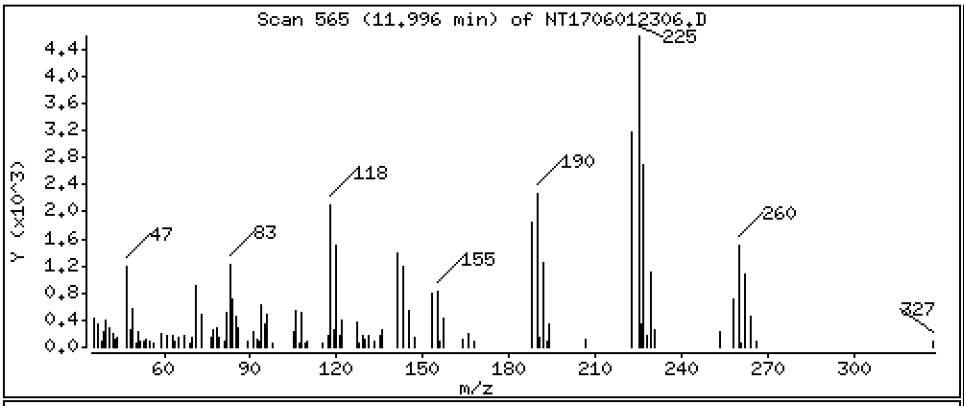
Operator: VTS

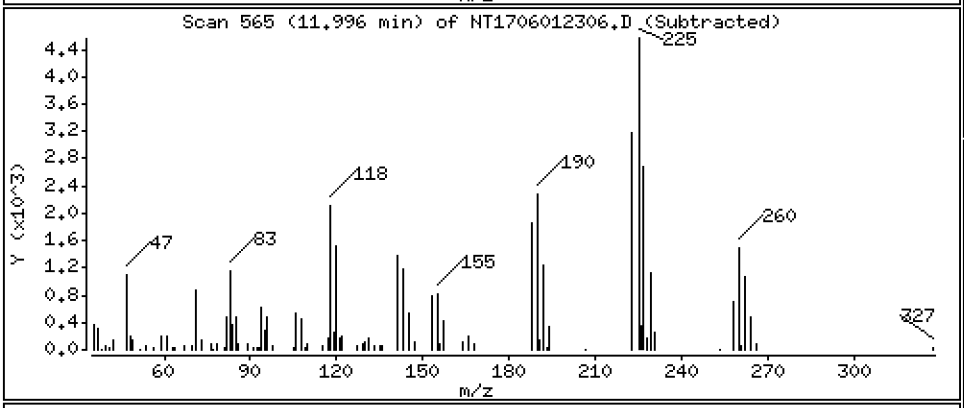
Column phase: ZB-5msi

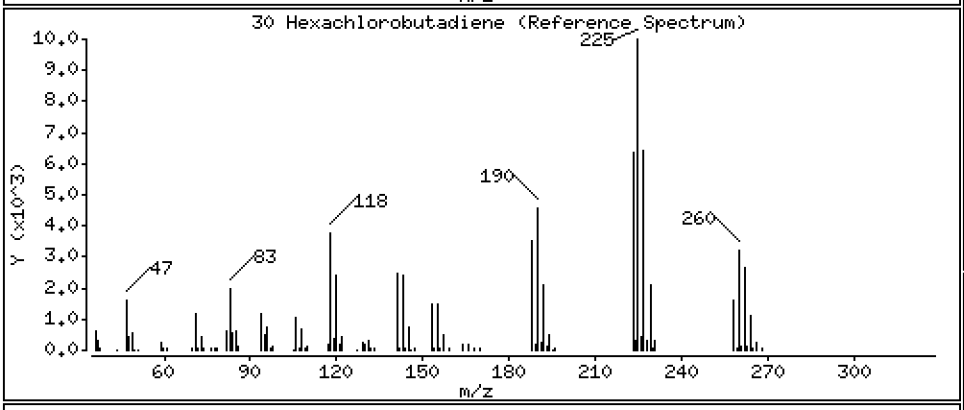
Column diameter: 0.25

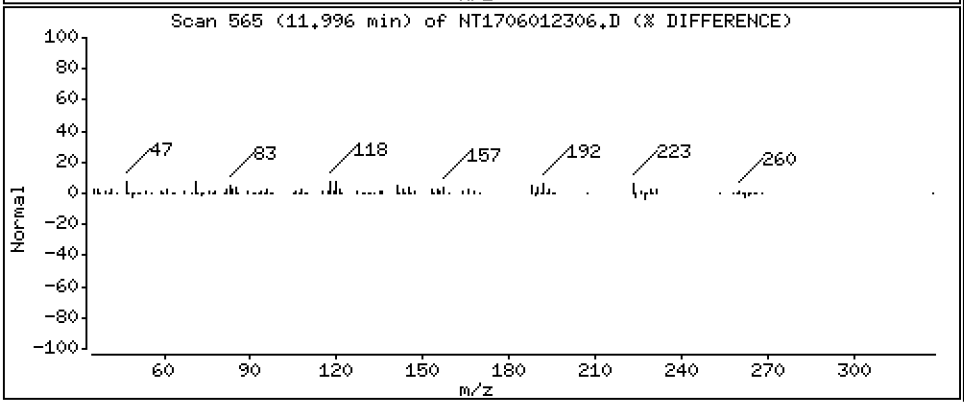
30 Hexachlorobutadiene

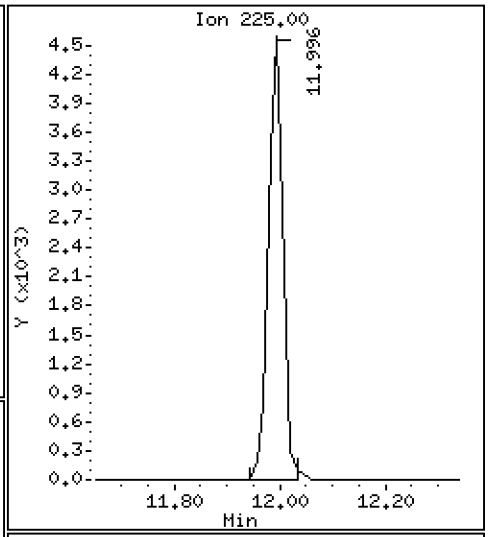
Concentration: 0.2130 ug/mL

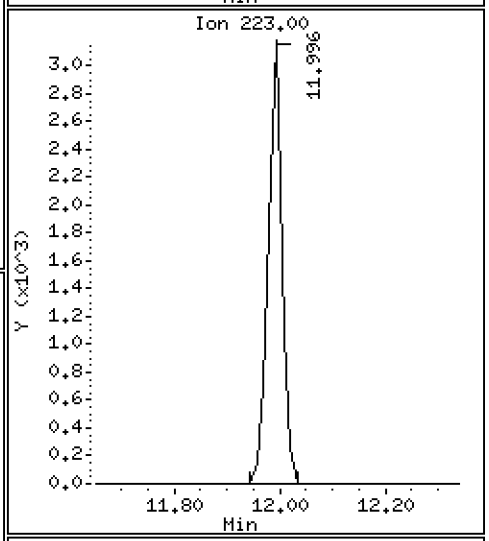


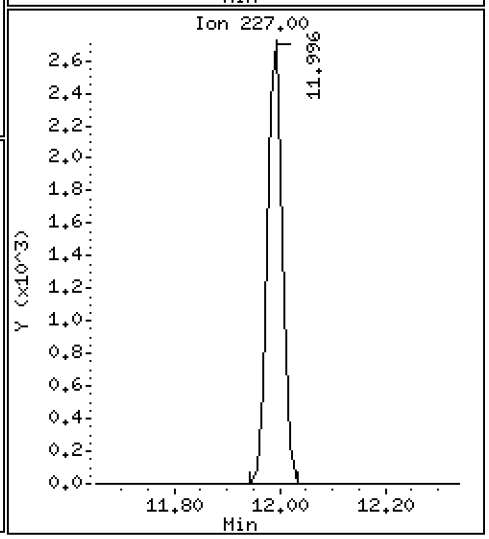












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

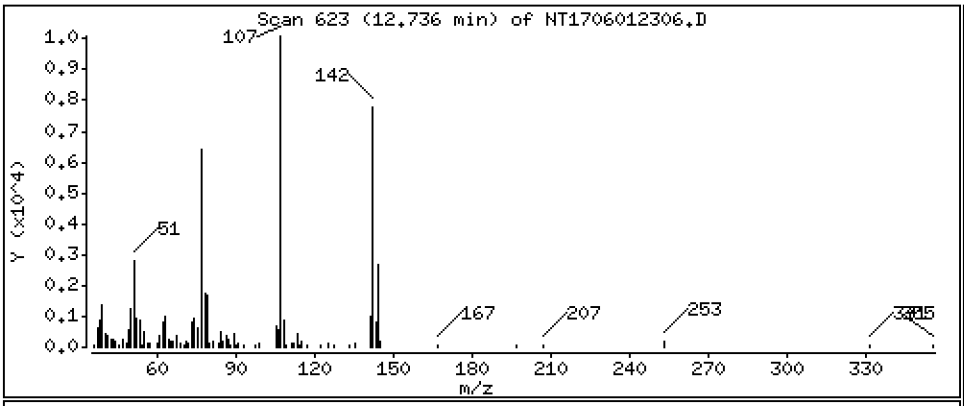
Operator: VTS

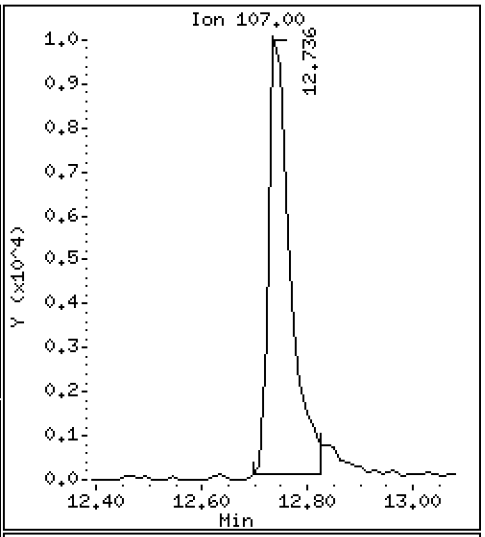
Column phase: ZB-5msi

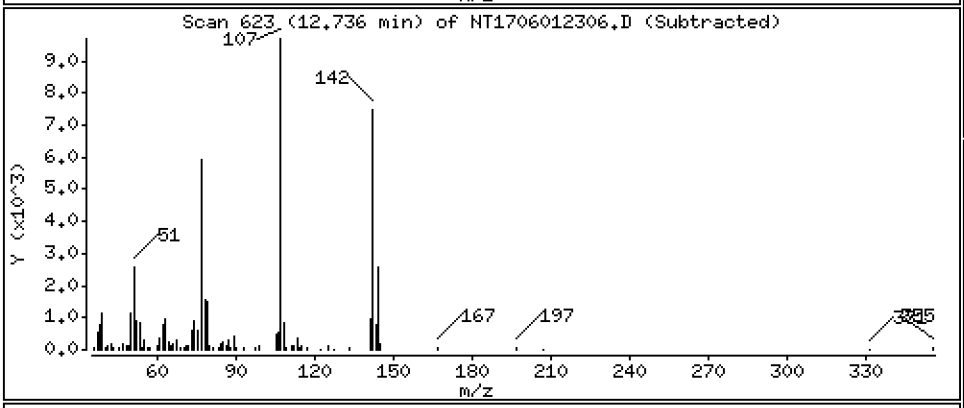
Column diameter: 0.25

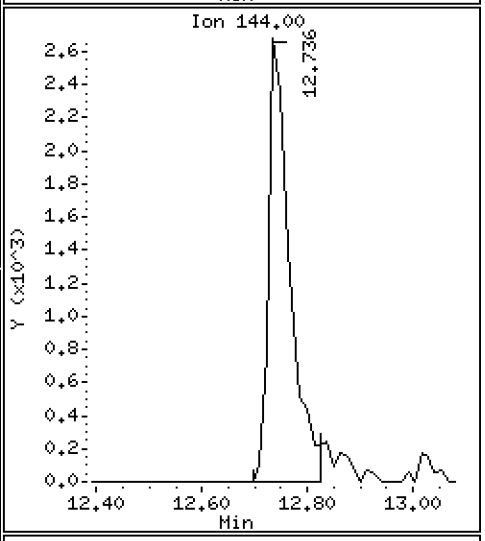
31 4-Chloro-3-methylphenol

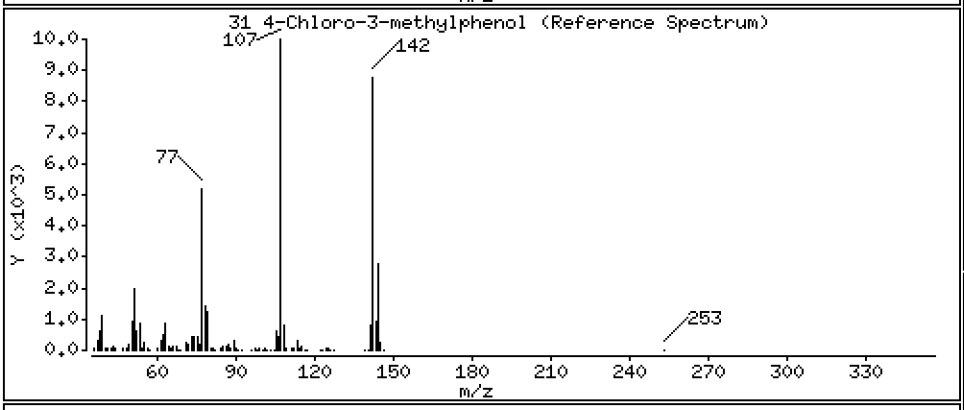
Concentration: 0.3369 ug/mL

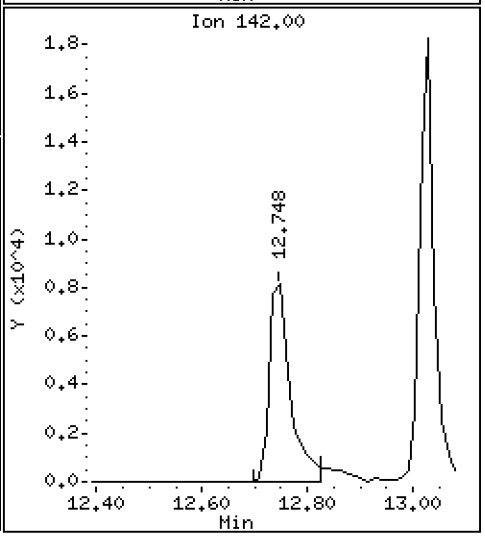


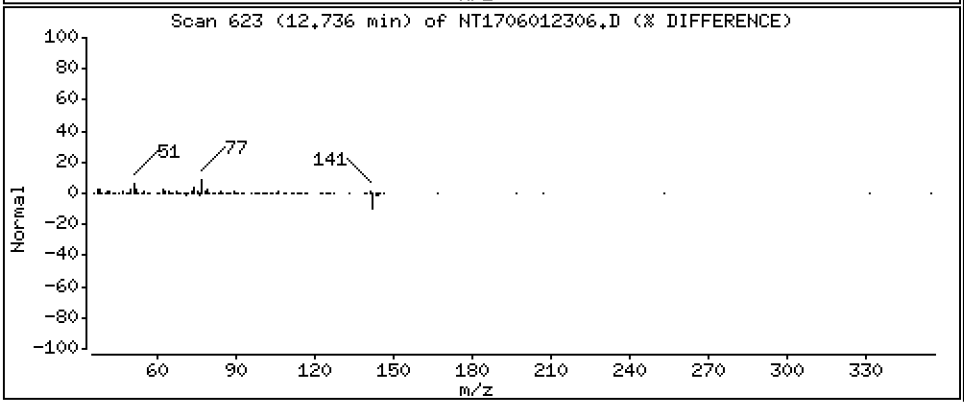












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

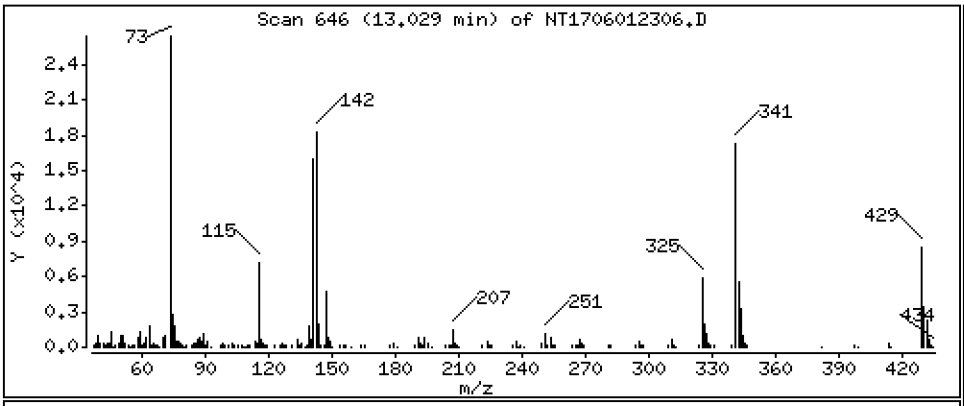
Operator: VTS

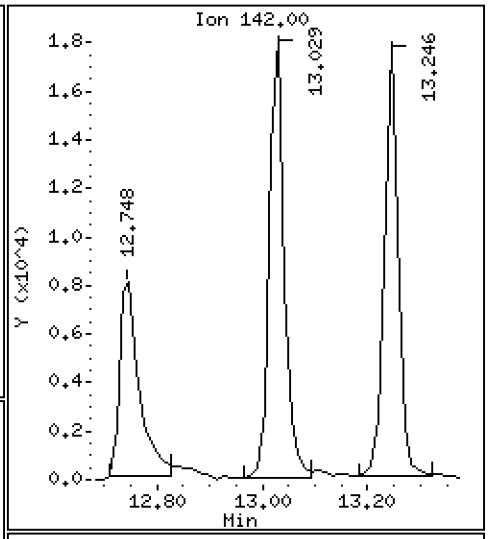
Column phase: ZB-5msi

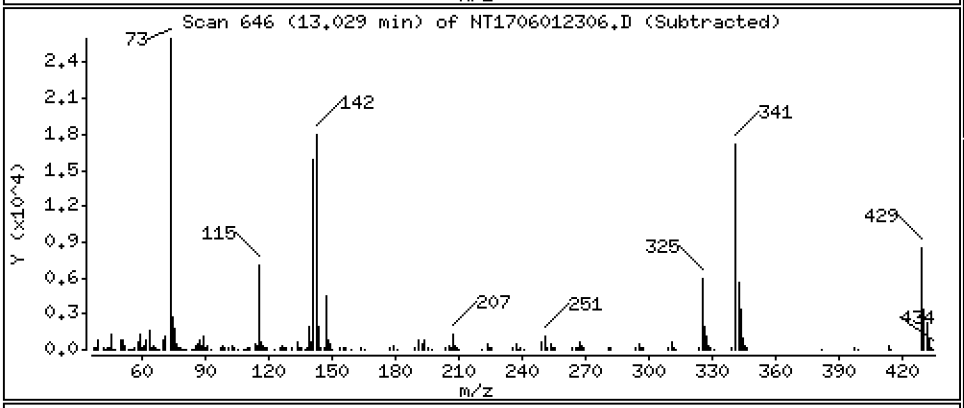
Column diameter: 0.25

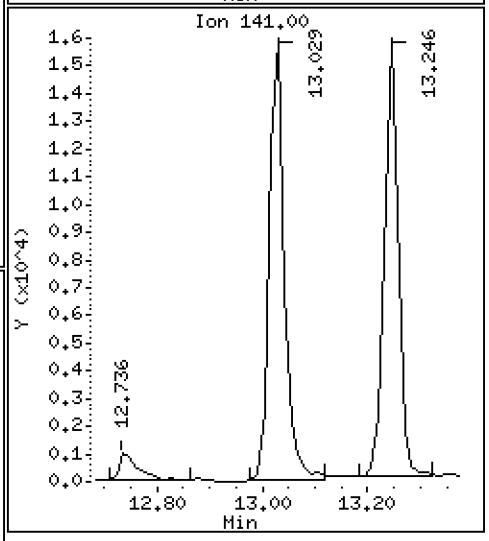
32 2-Methylnaphthalene

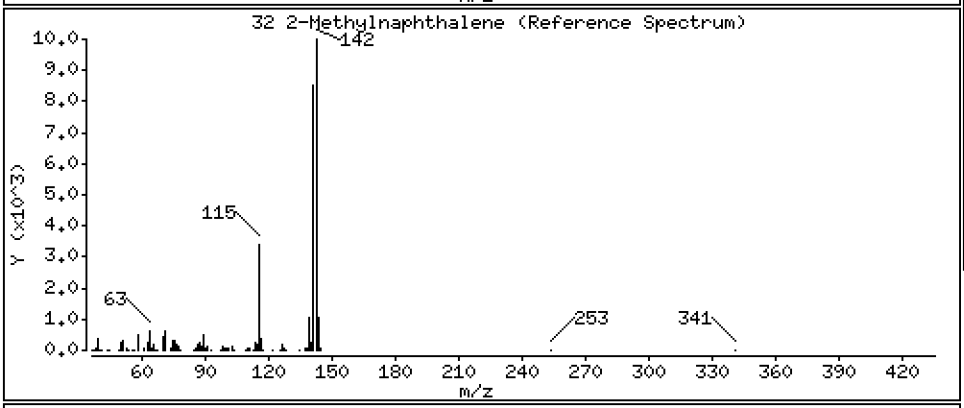
Concentration: 0.1938 ug/mL

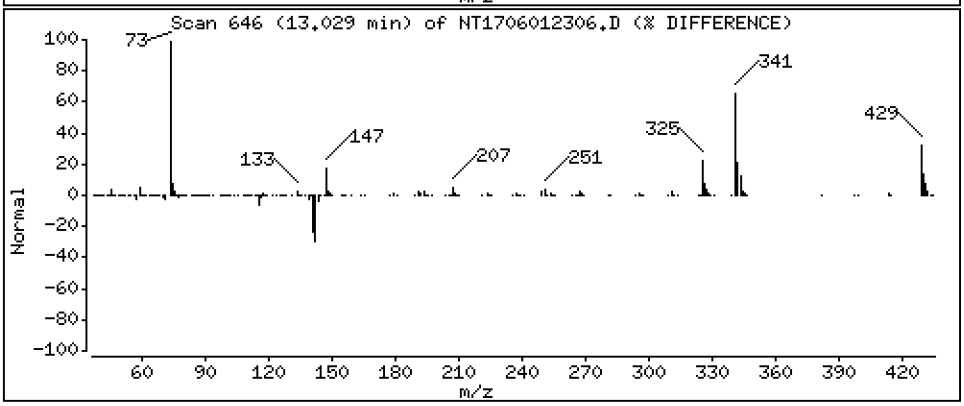












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

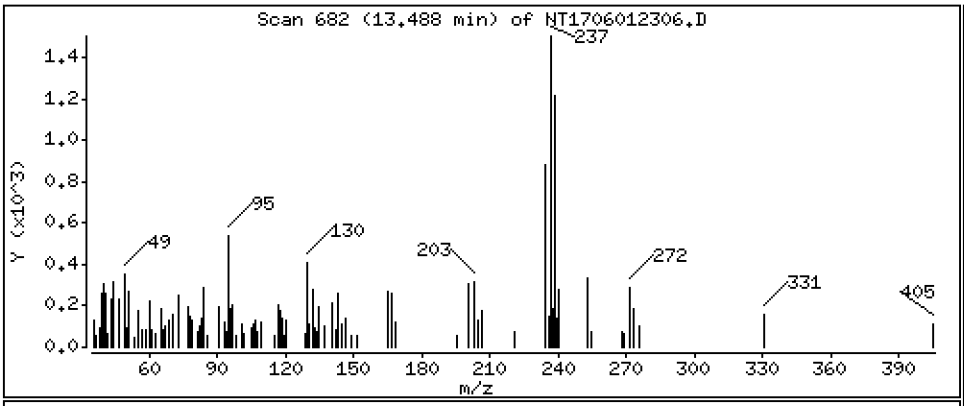
Operator: VTS

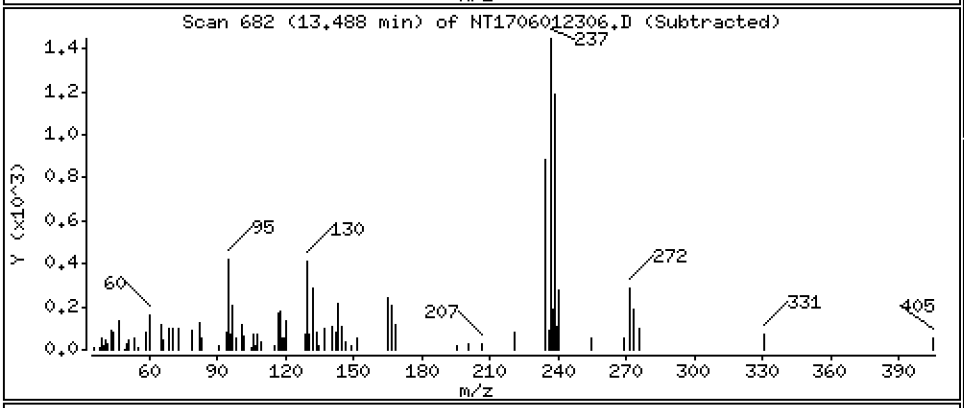
Column phase: ZB-5msi

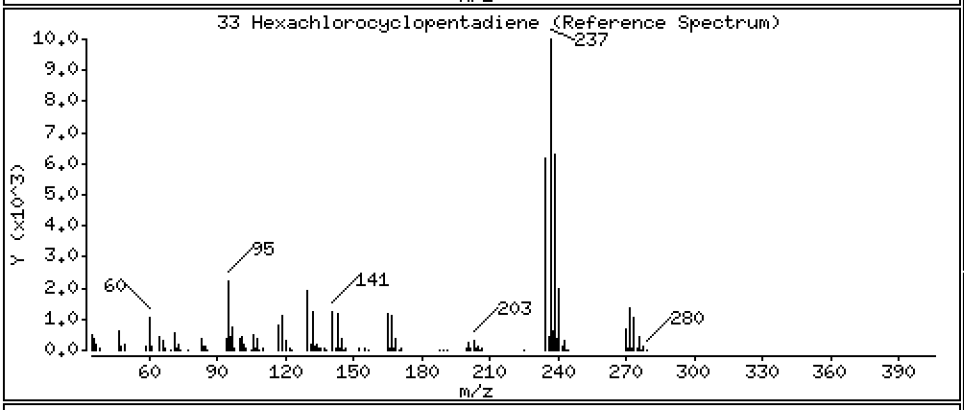
Column diameter: 0.25

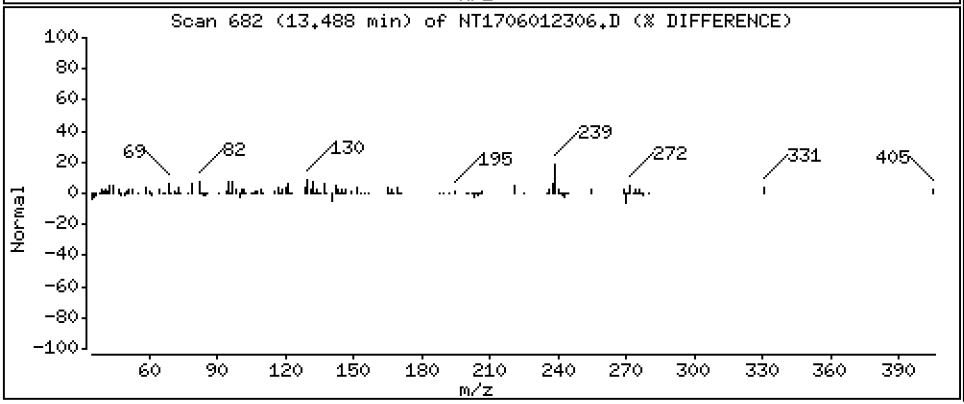
33 Hexachlorocyclopentadiene

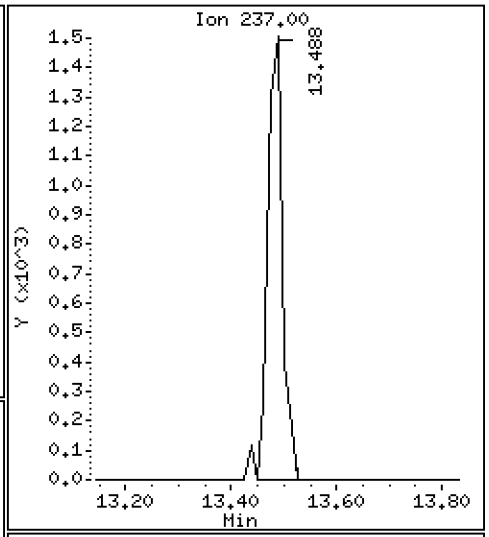
Concentration: 0.05957 ug/mL

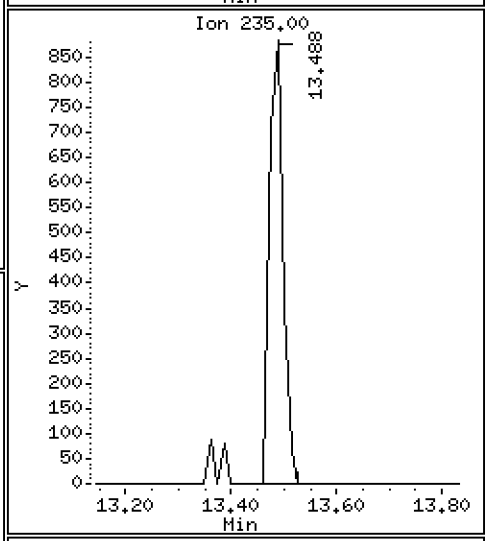


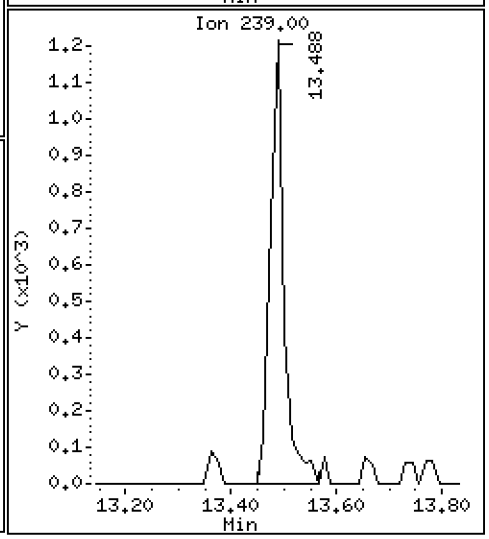












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

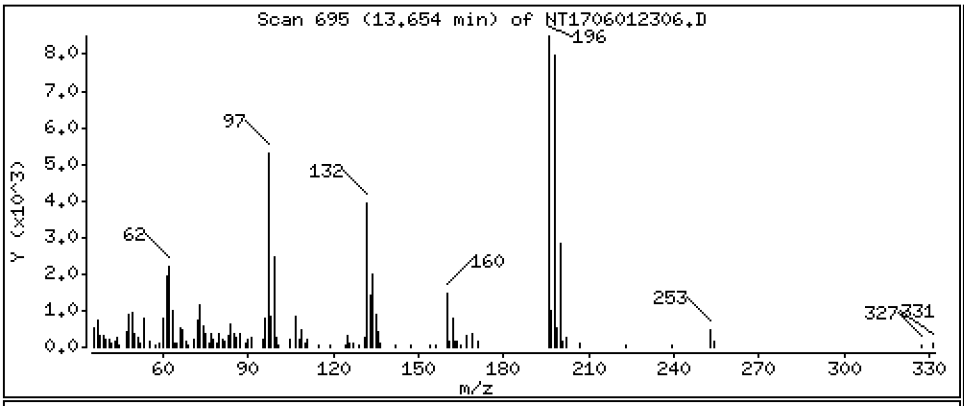
Operator: VTS

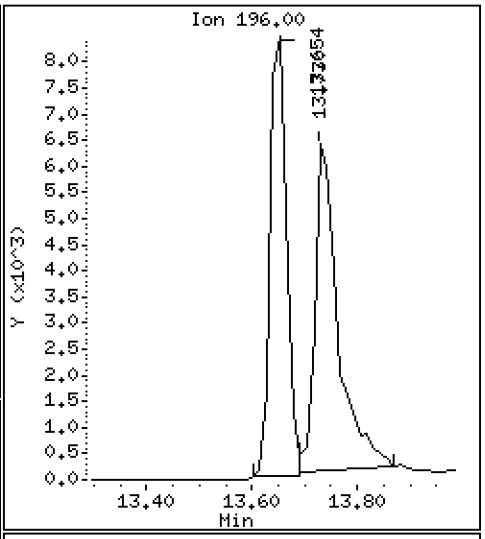
Column phase: ZB-5msi

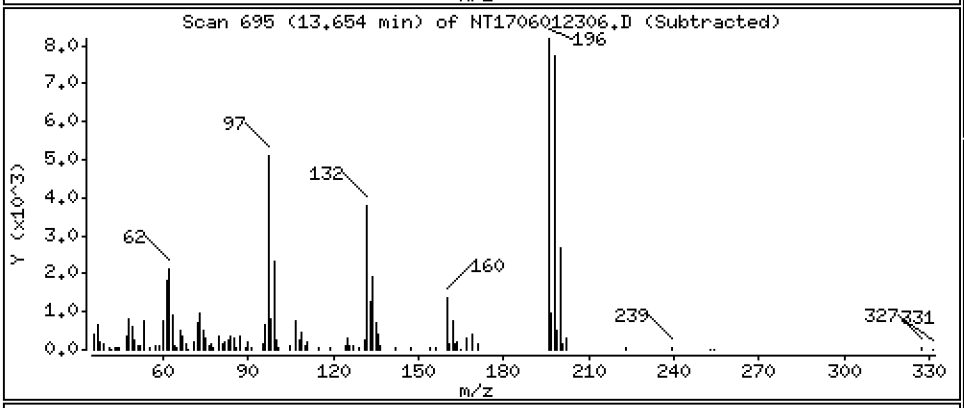
Column diameter: 0.25

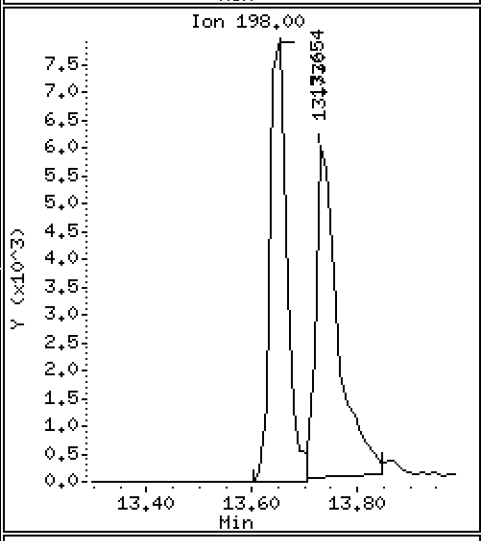
34 2,4,6-Trichlorophenol

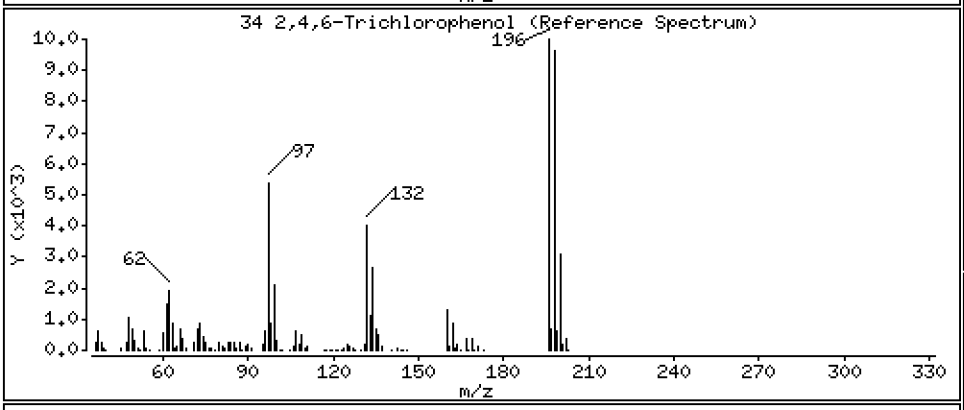
Concentration: 0.3375 ug/mL

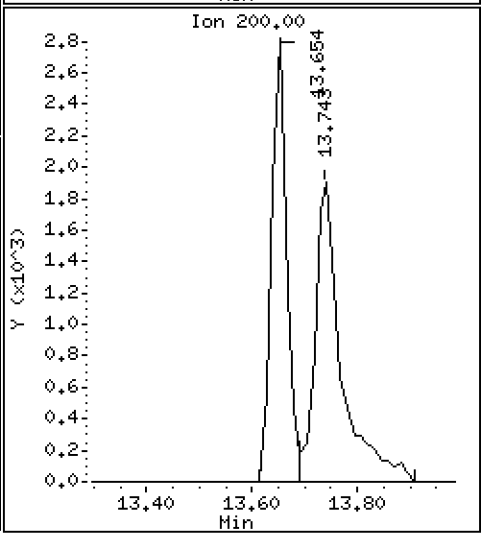


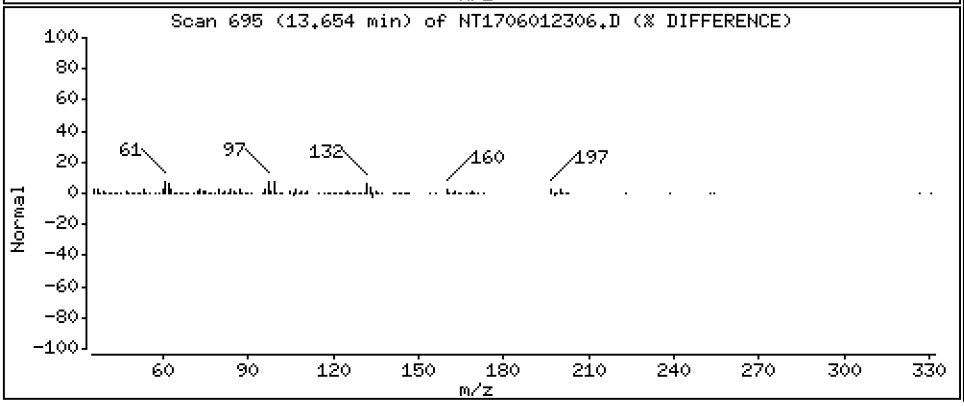












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

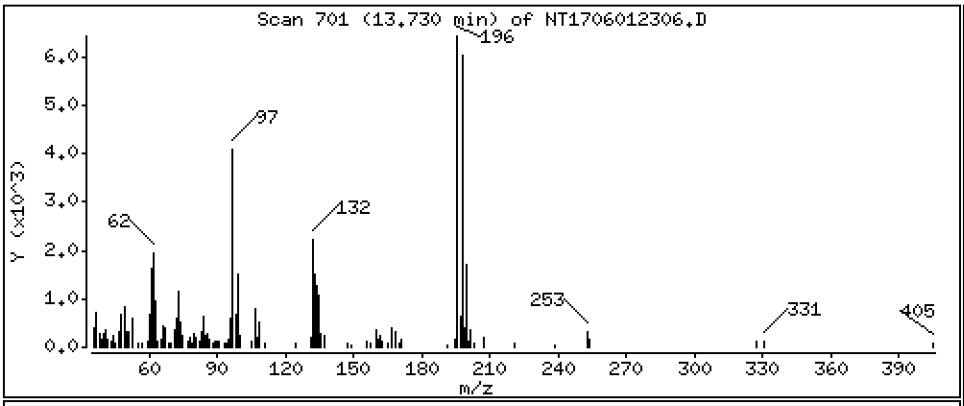
Operator: VTS

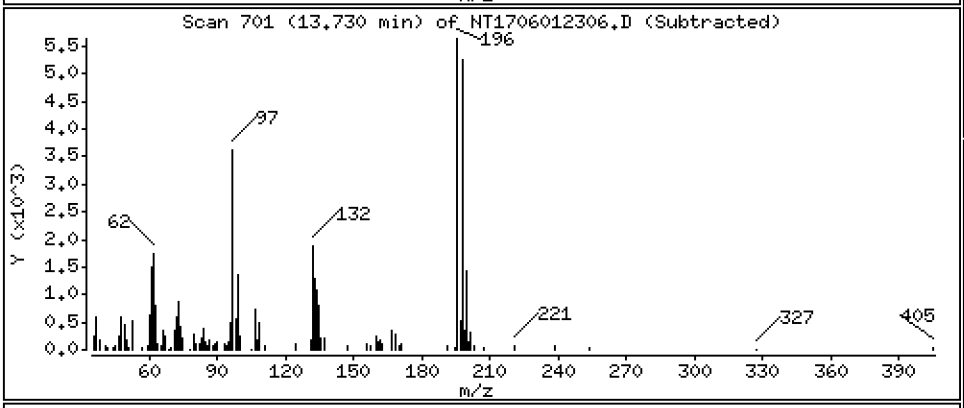
Column phase: ZB-5msi

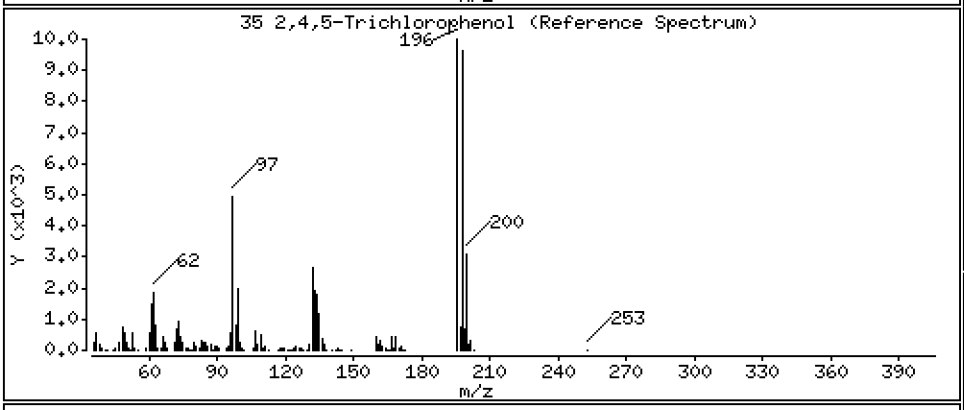
Column diameter: 0.25

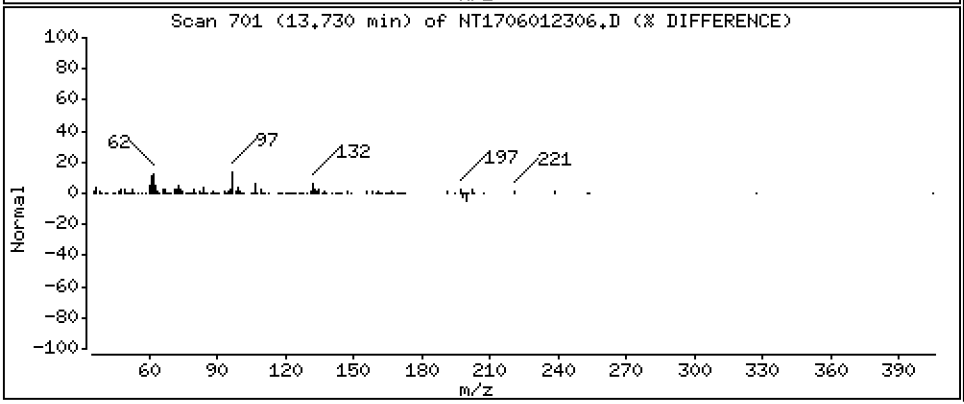
35 2,4,5-Trichlorophenol

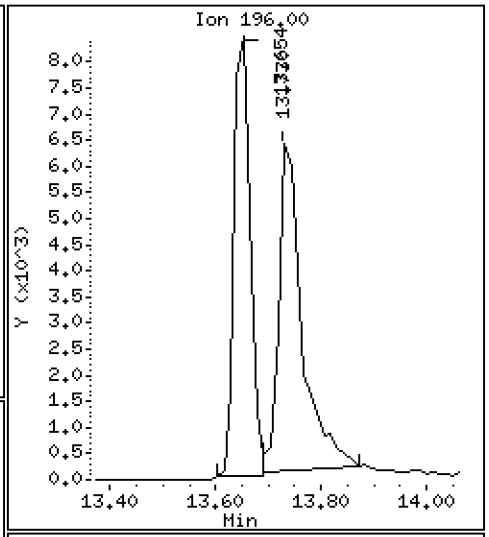
Concentration: 0.3535 ug/mL

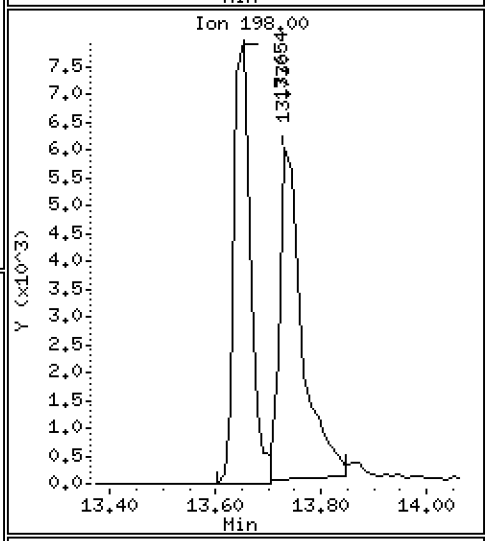


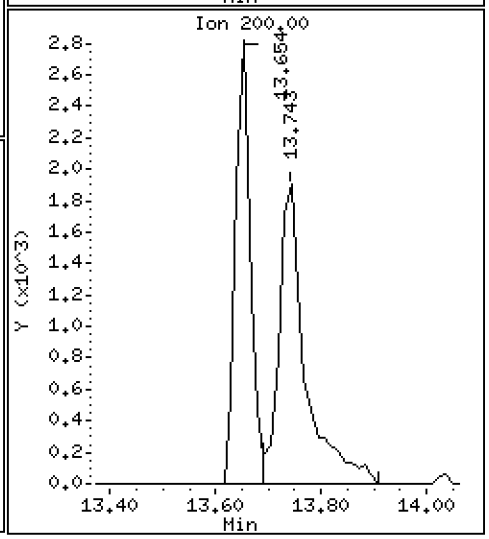












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

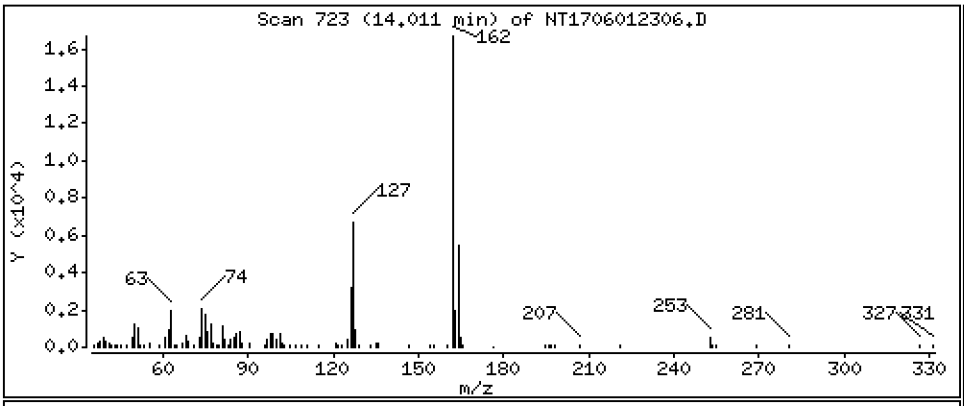
Operator: VTS

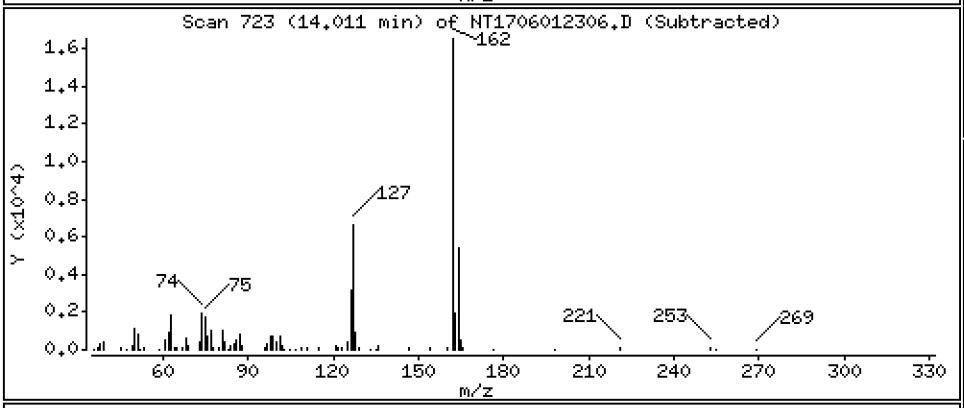
Column phase: ZB-5msi

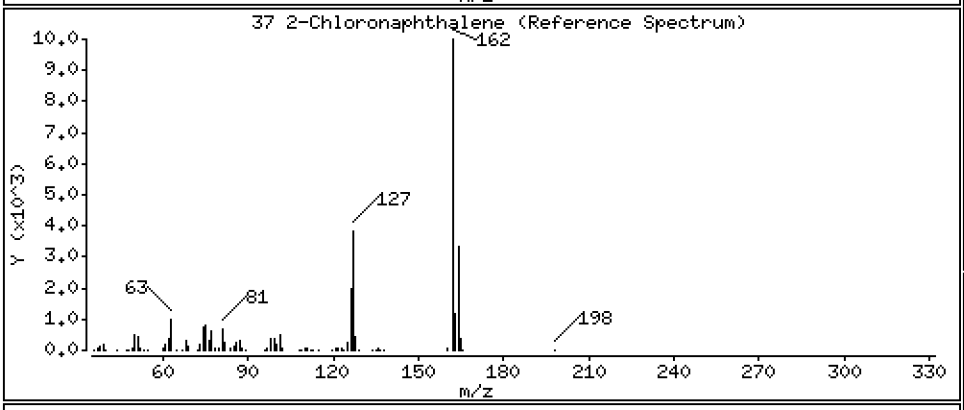
Column diameter: 0.25

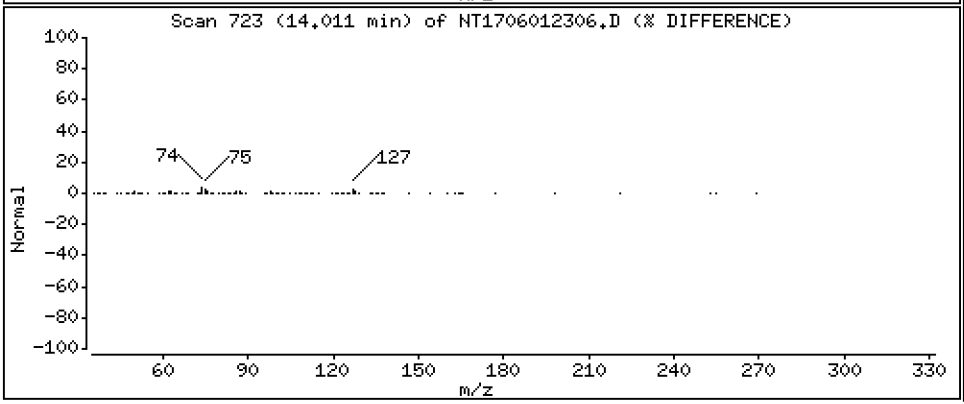
37 2-Chloronaphthalene

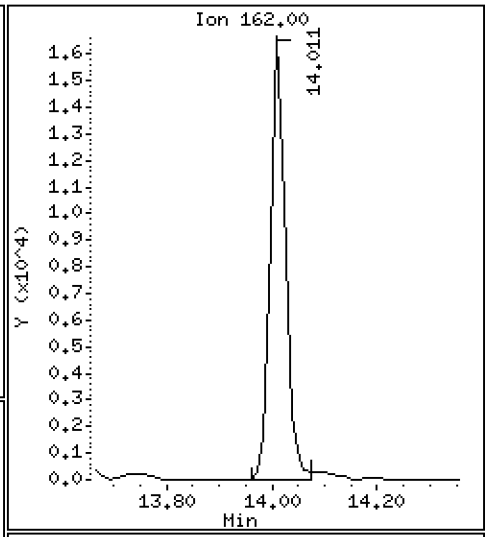
Concentration: 0.2006 ug/mL

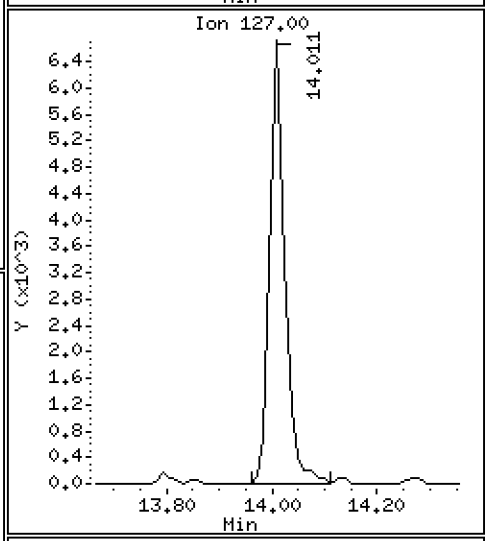


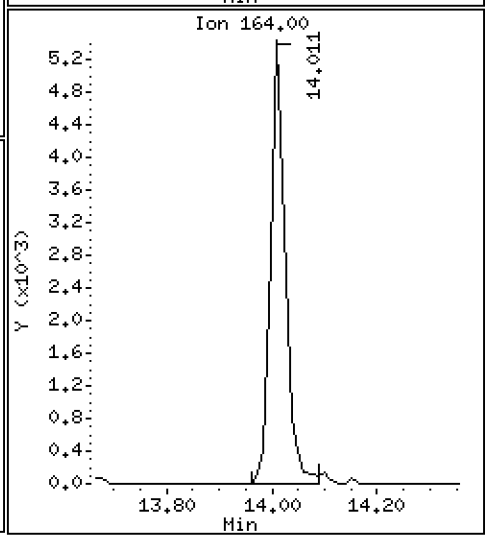












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

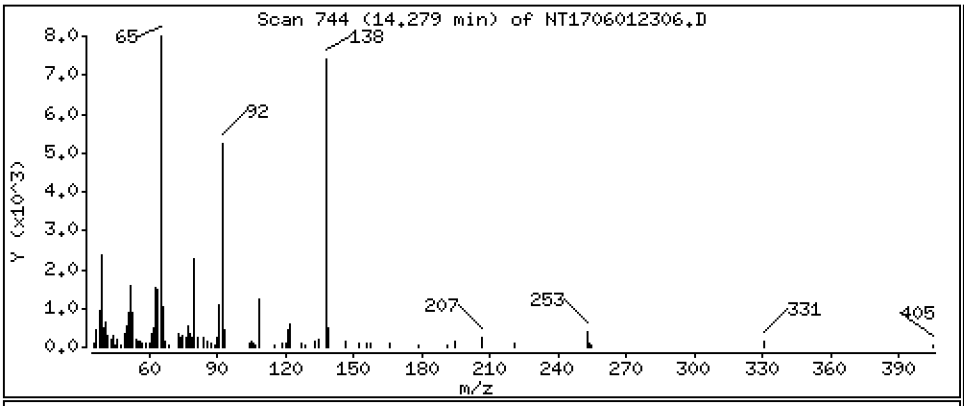
Operator: VTS

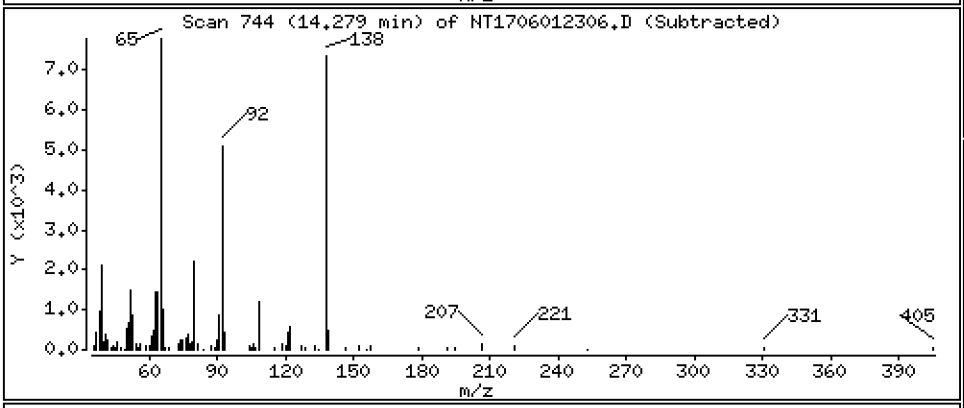
Column phase: ZB-5msi

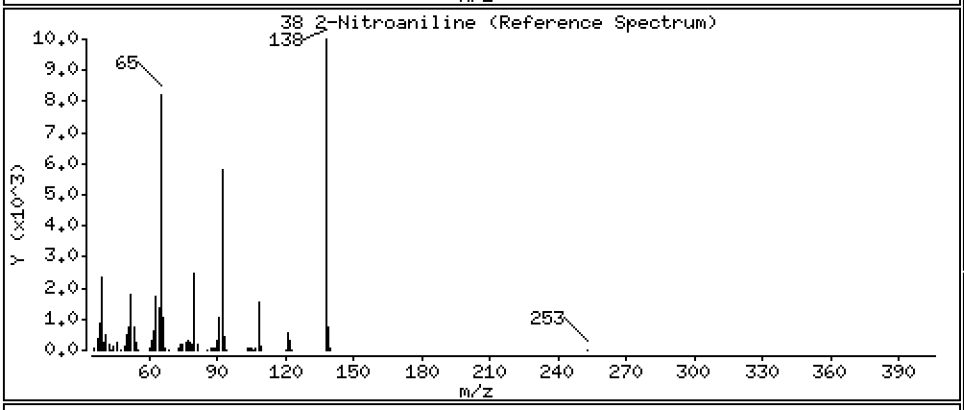
Column diameter: 0.25

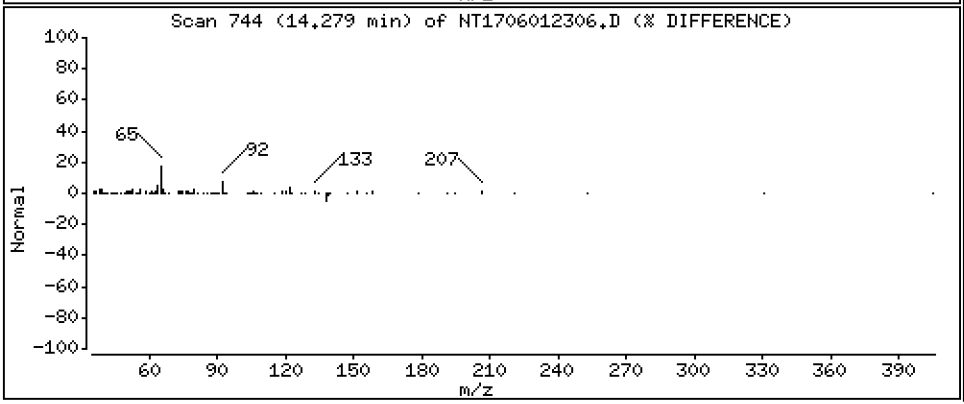
38 2-Nitroaniline

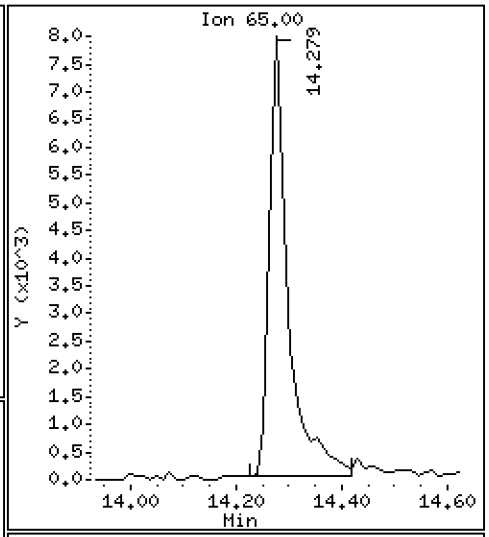
Concentration: 0.3655 ug/mL

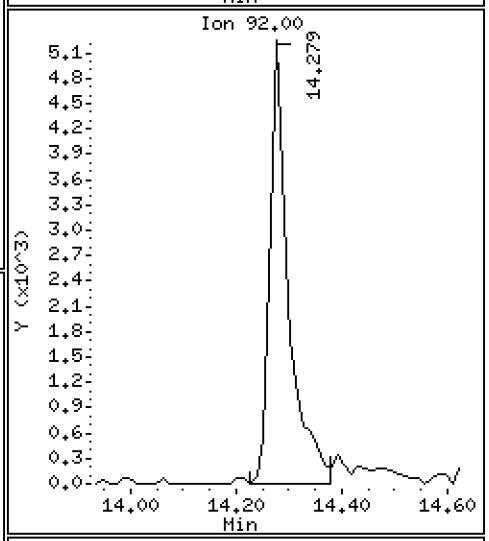


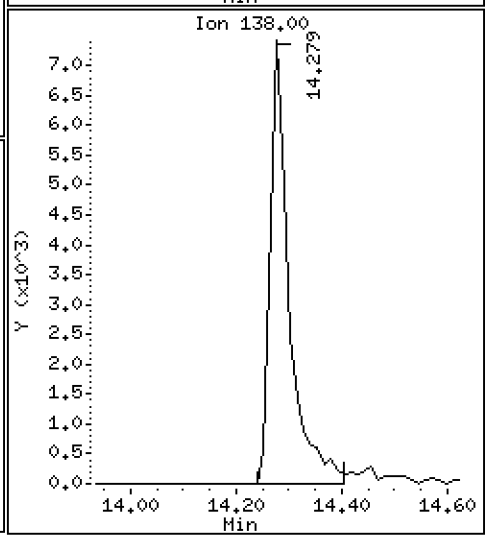












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

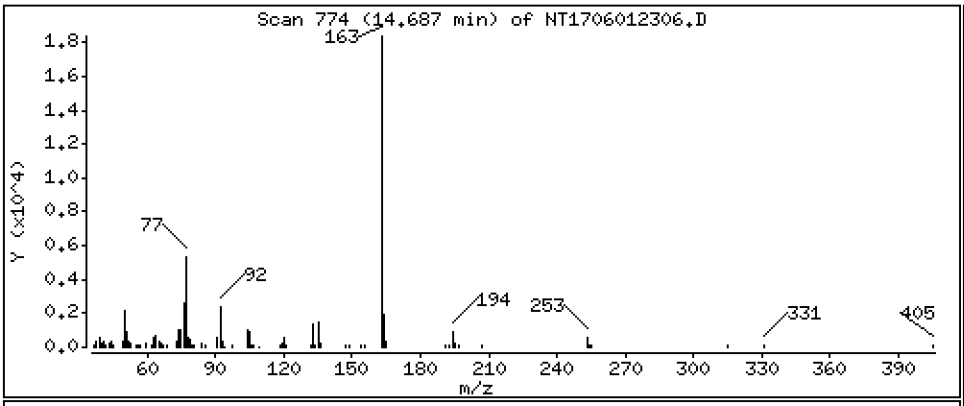
Operator: VTS

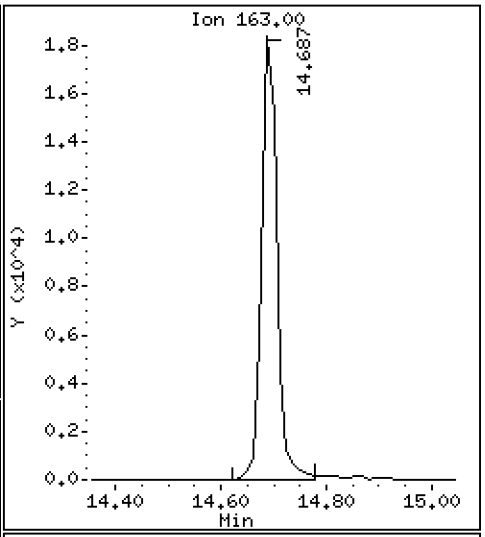
Column phase: ZB-5msi

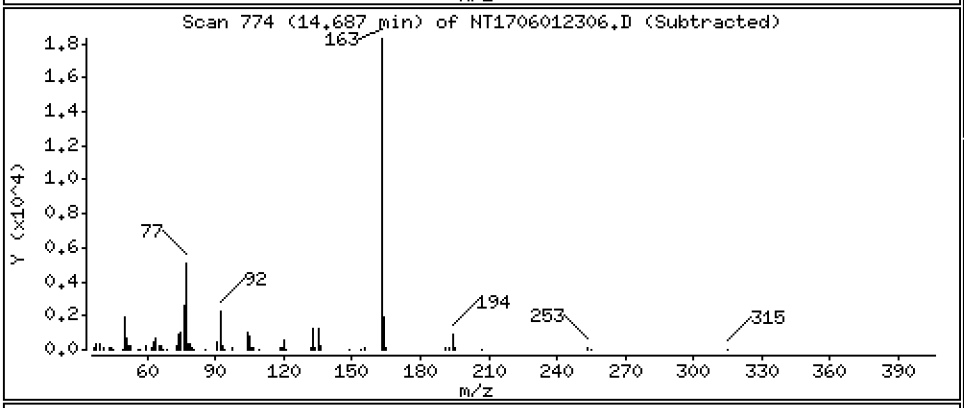
Column diameter: 0.25

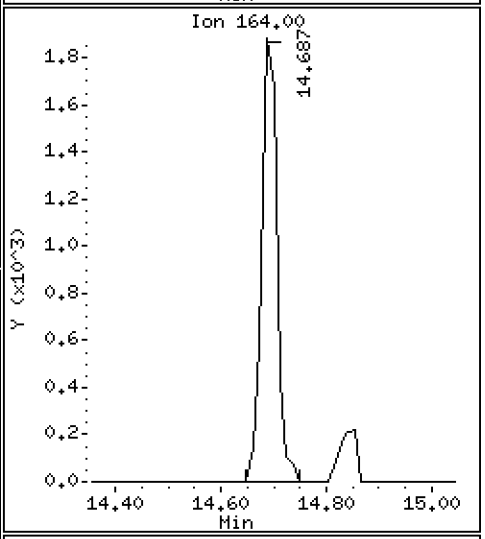
39 Dimethylphthalate

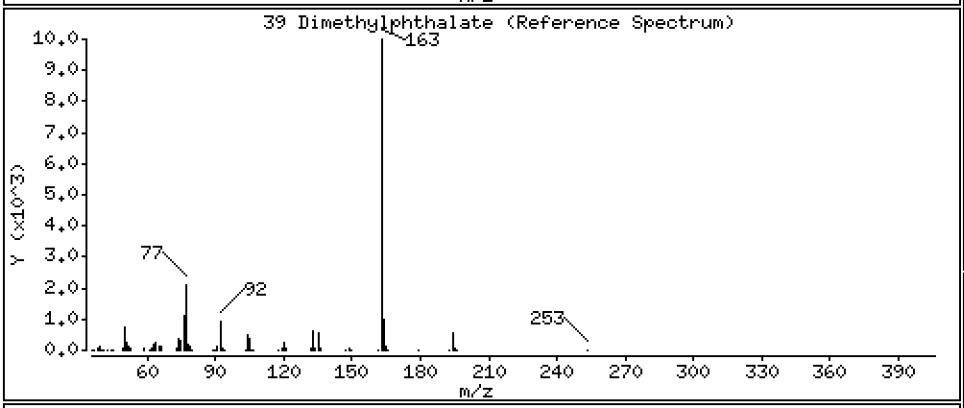
Concentration: 0.2102 ug/mL

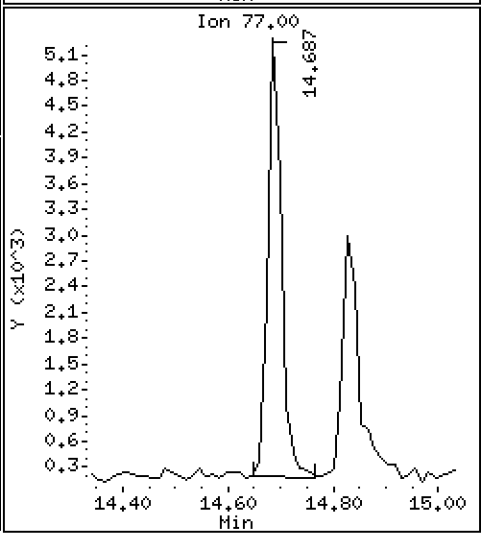


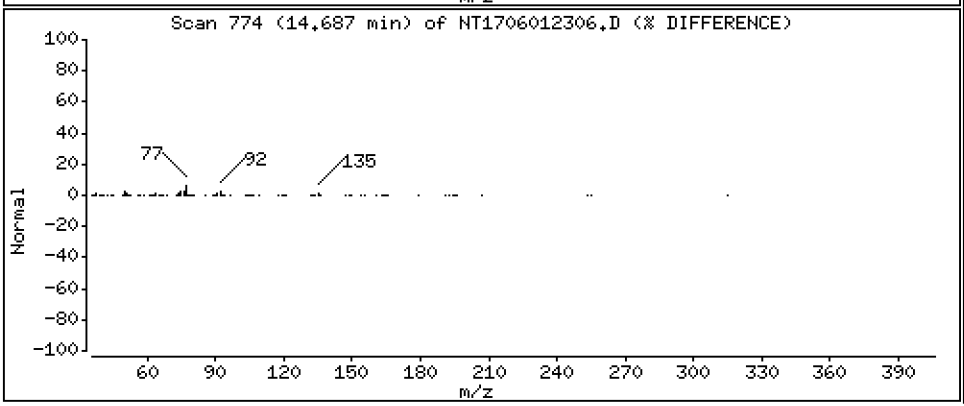












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

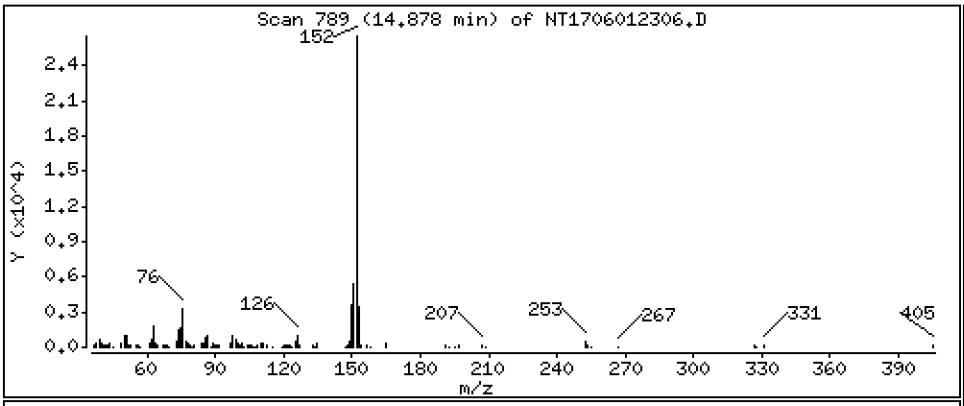
Operator: VTS

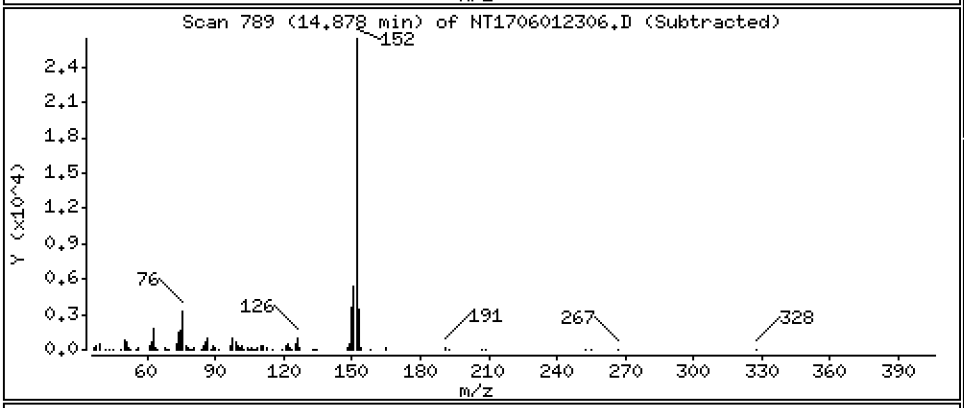
Column phase: ZB-5msi

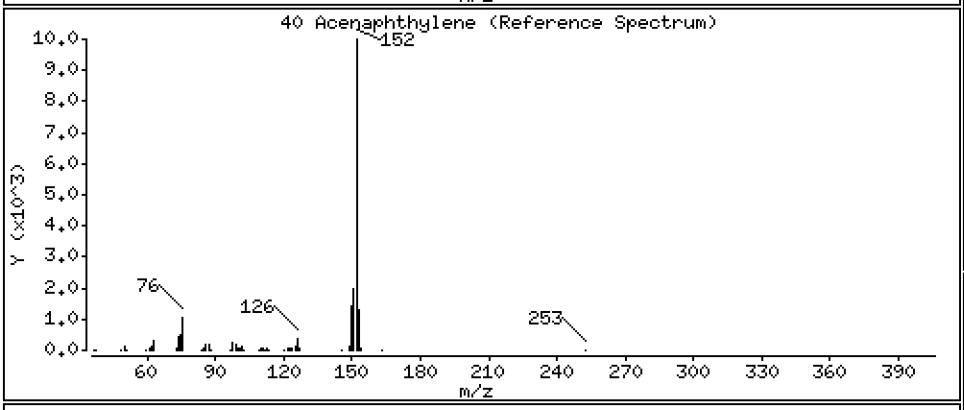
Column diameter: 0.25

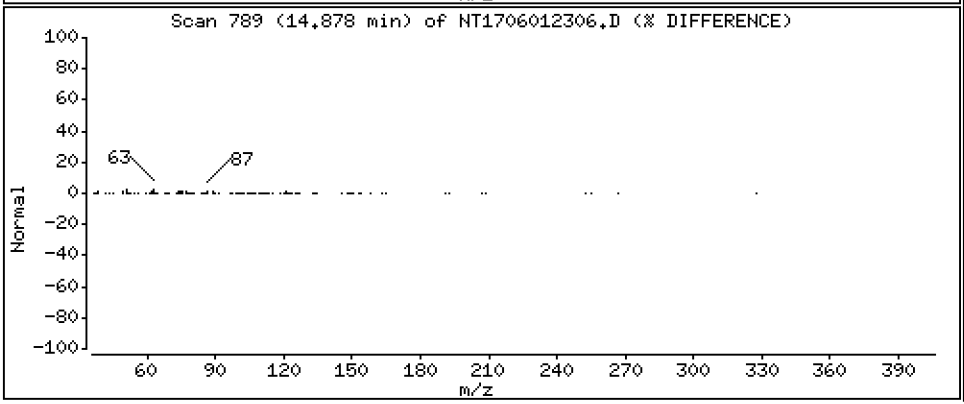
40 Acenaphthylene

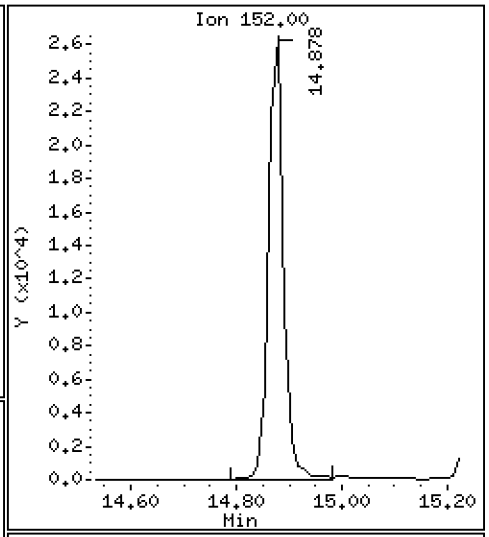
Concentration: 0.2080 ug/mL

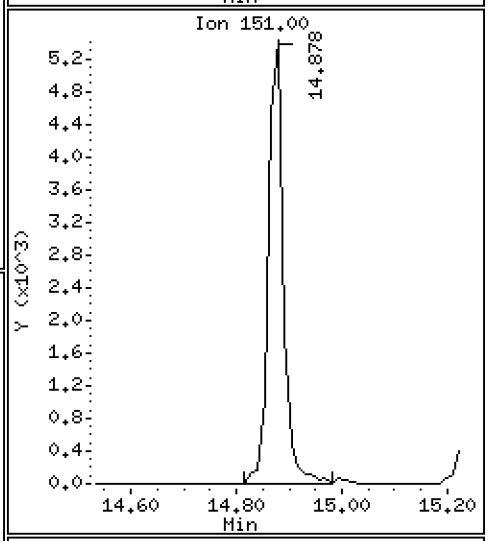


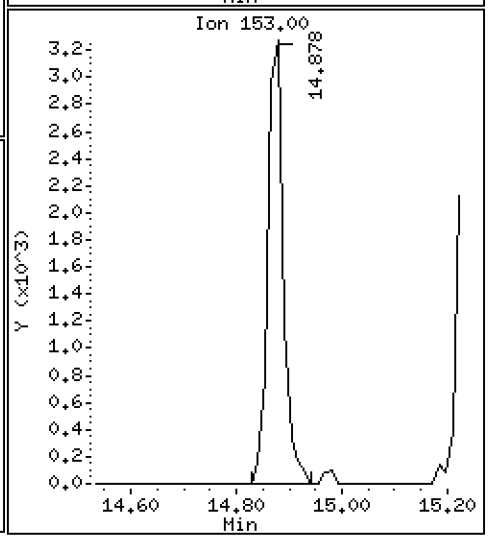












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

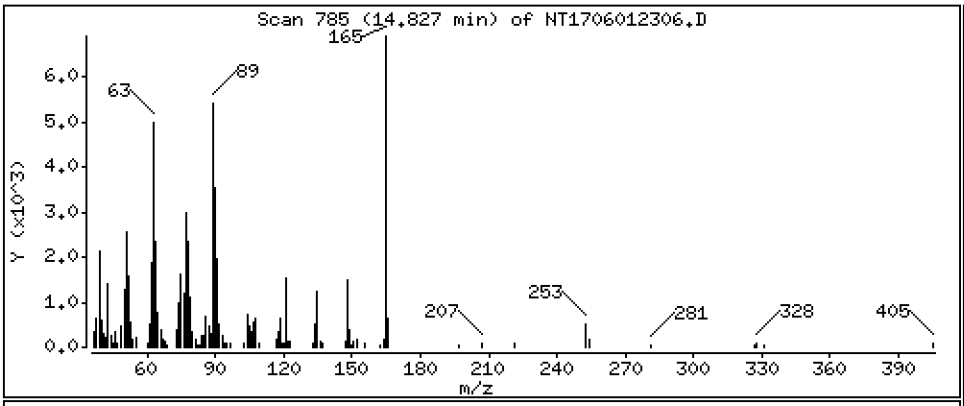
Operator: VTS

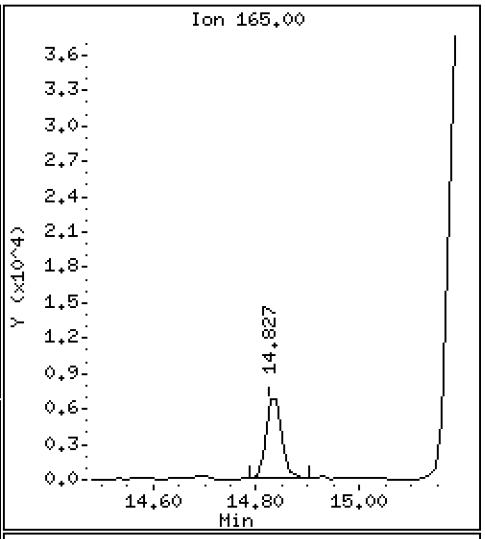
Column phase: ZB-5msi

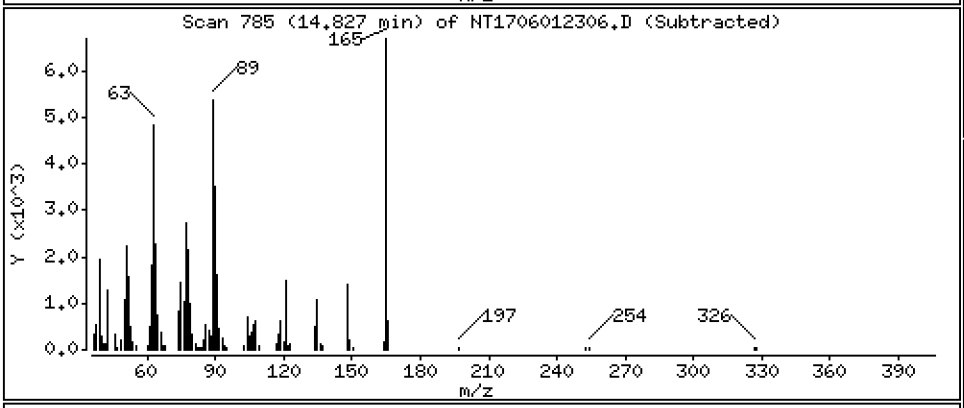
Column diameter: 0.25

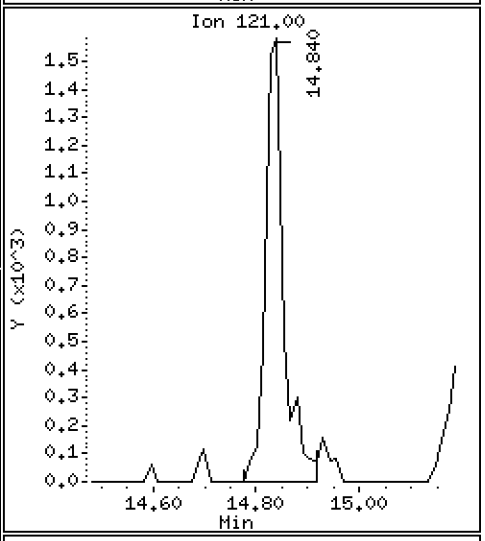
41 2,6-Dinitrotoluene

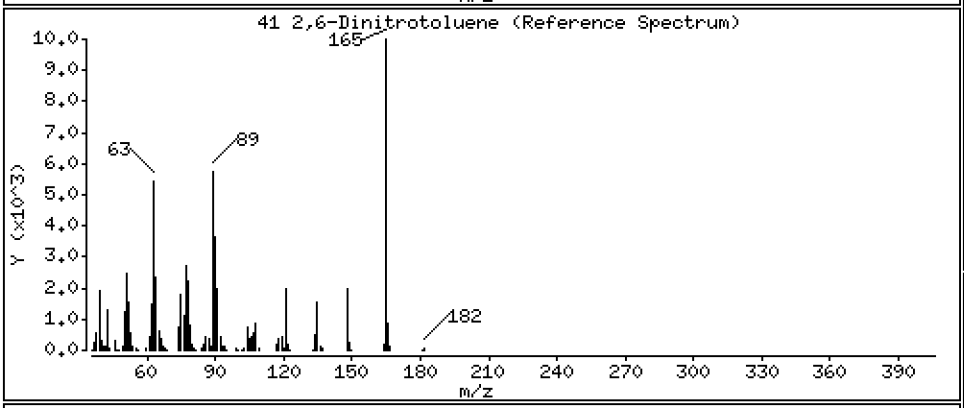
Concentration: 0.3496 ug/mL

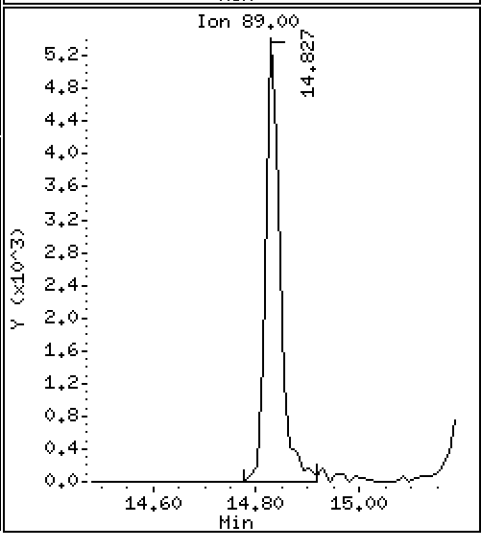


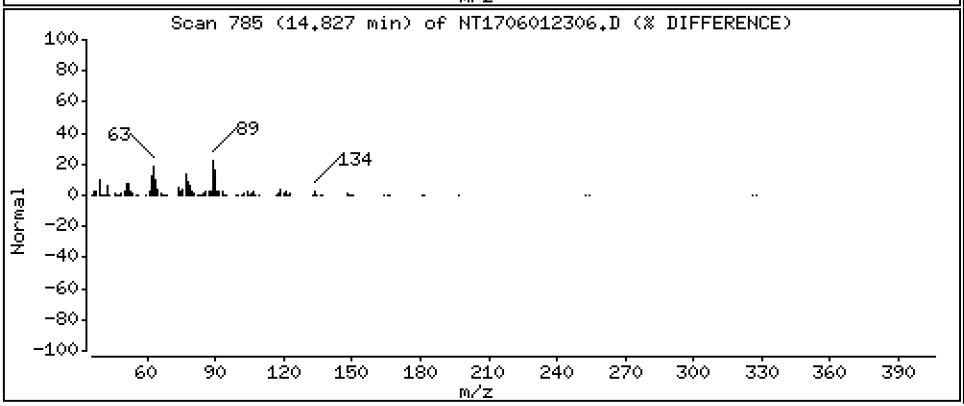












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

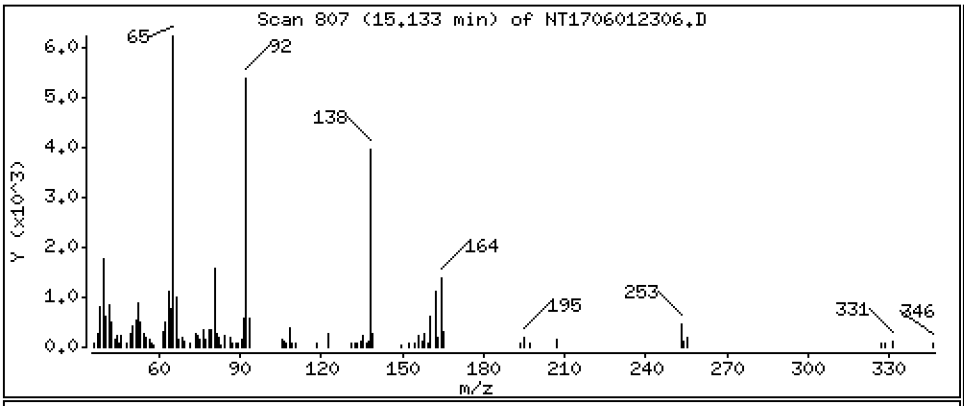
Operator: VTS

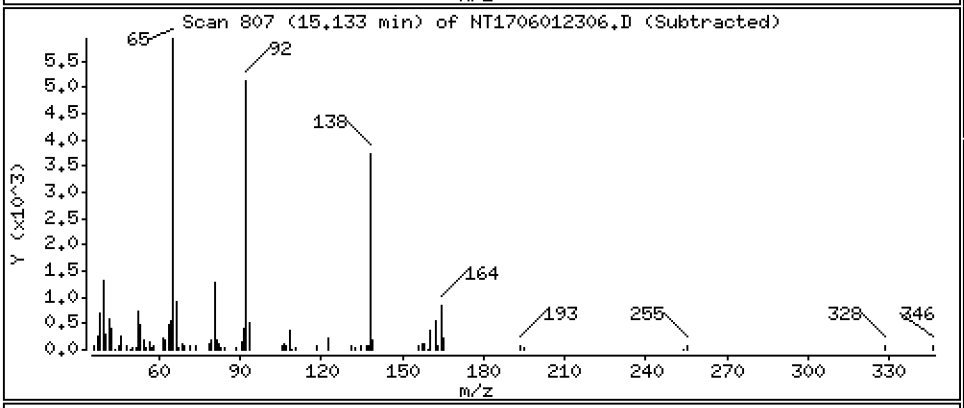
Column phase: ZB-5msi

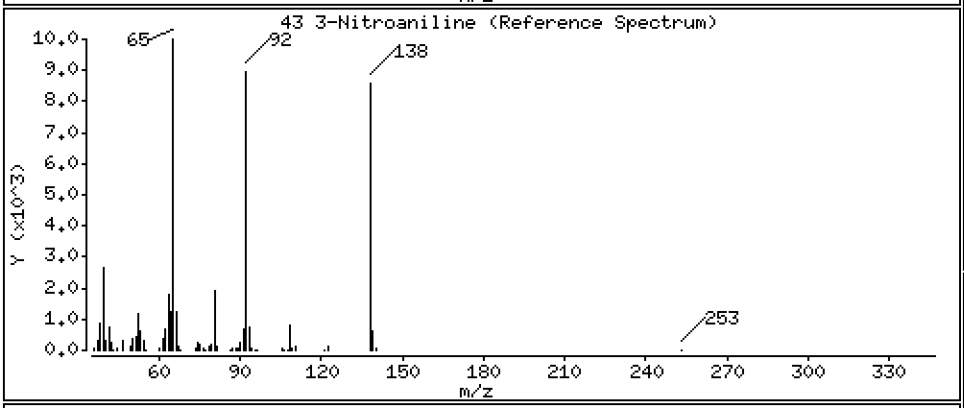
Column diameter: 0.25

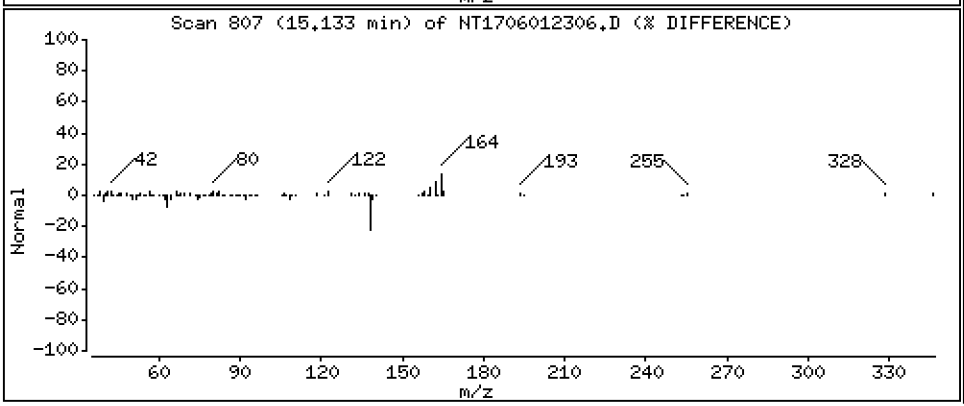
43 3-Nitroaniline

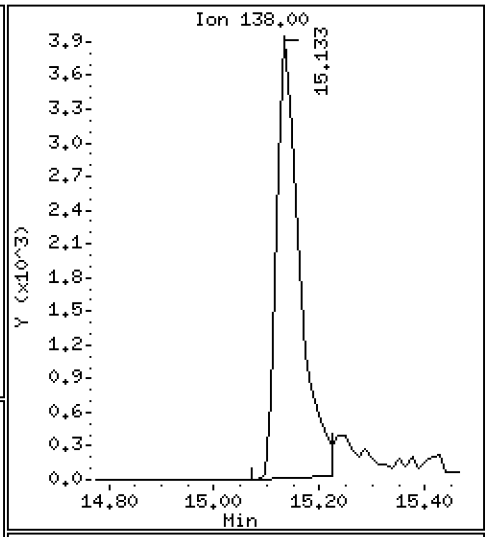
Concentration: 0.3242 ug/mL

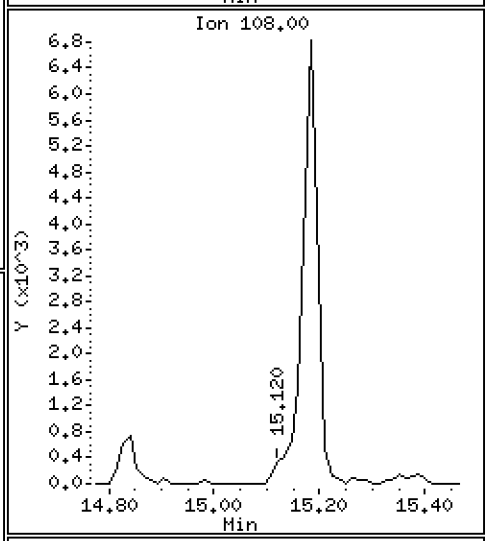


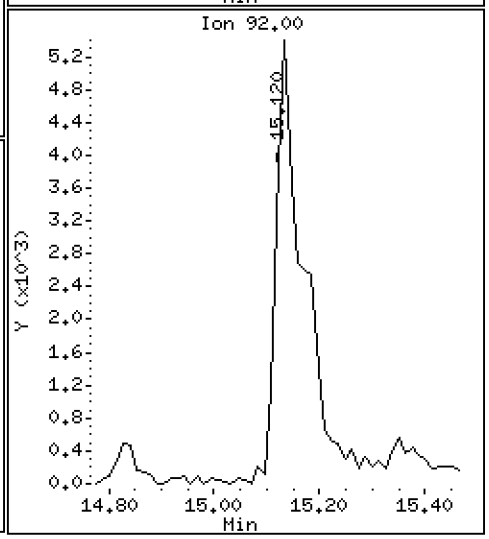












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

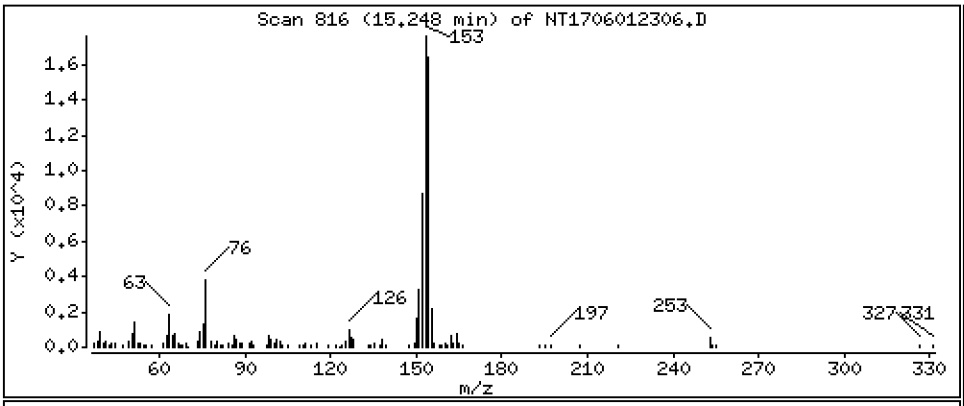
Operator: VTS

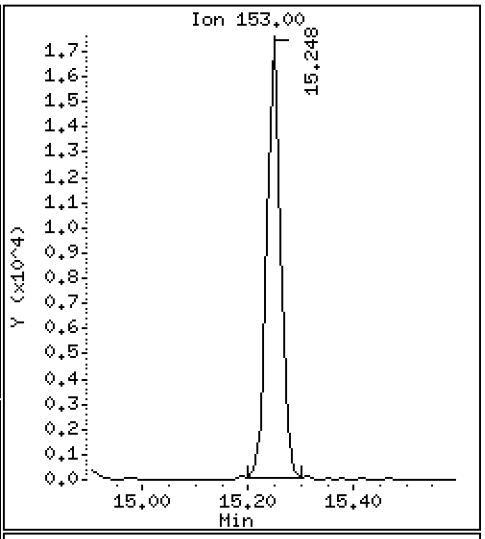
Column phase: ZB-5msi

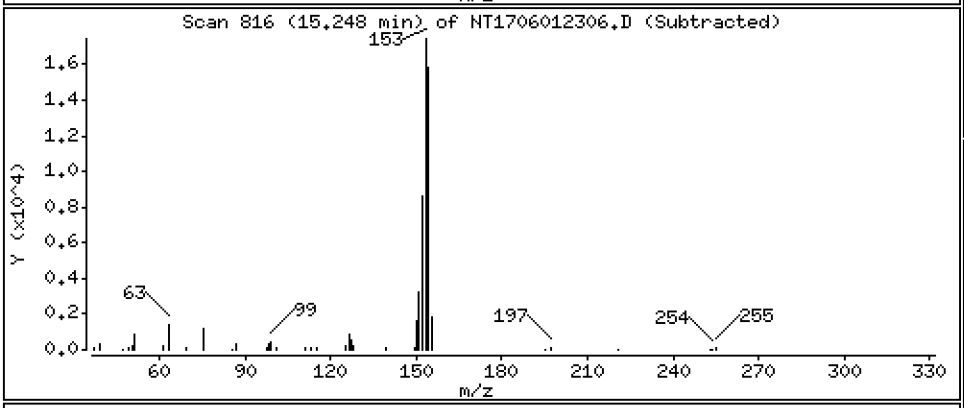
Column diameter: 0.25

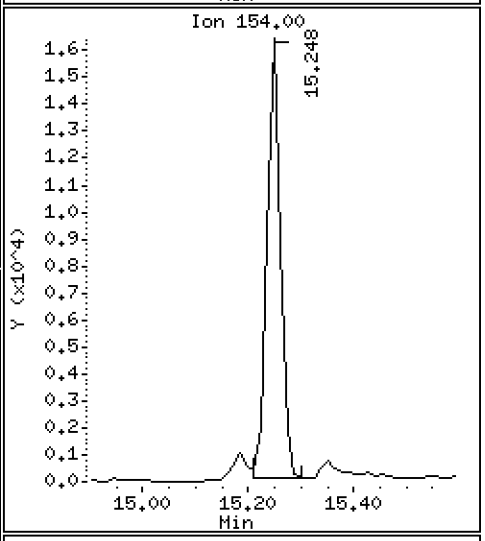
44 Acenaphthene

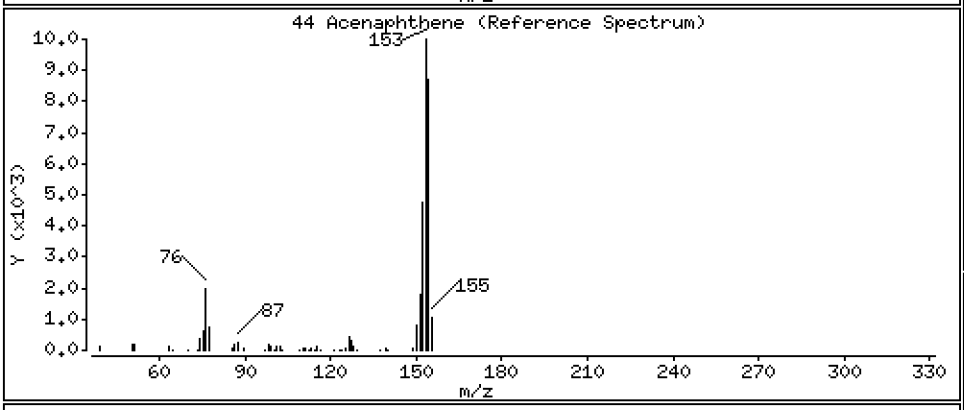
Concentration: 0.1990 ug/mL

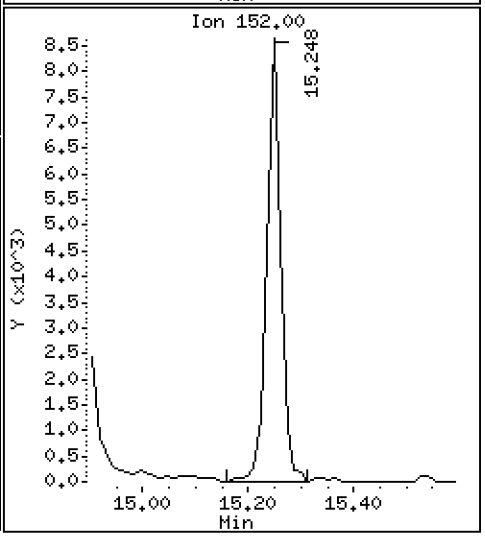


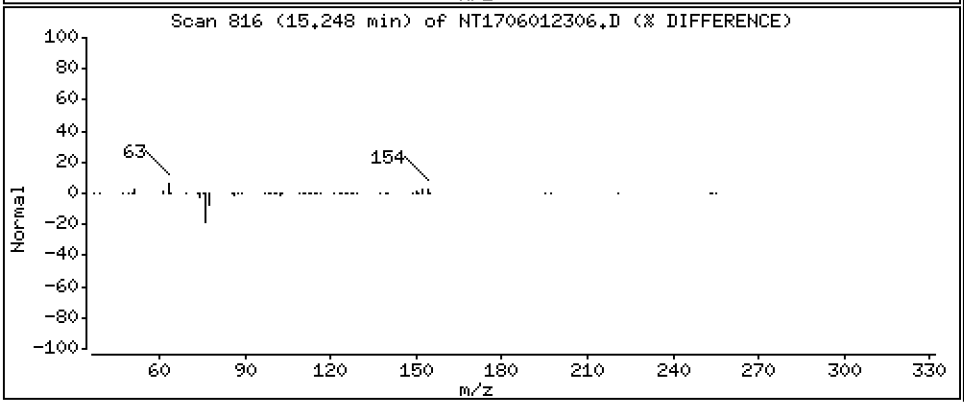












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

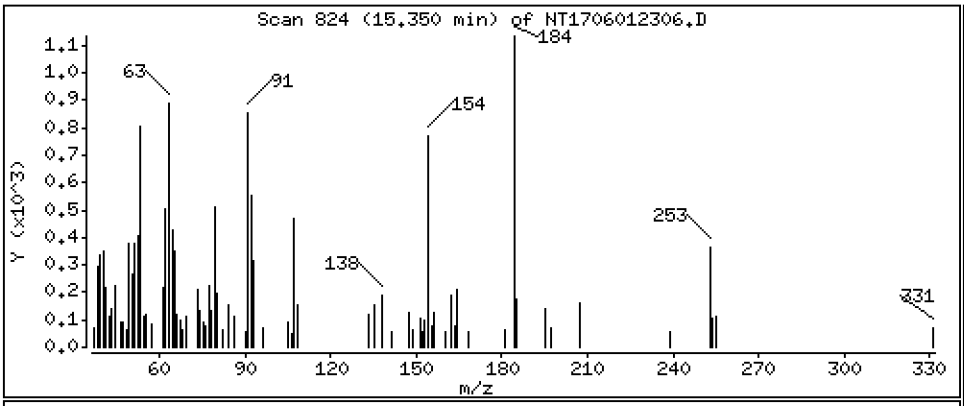
Operator: VTS

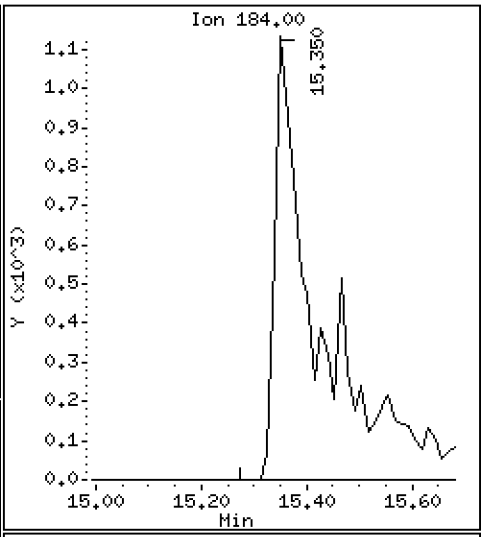
Column phase: ZB-5msi

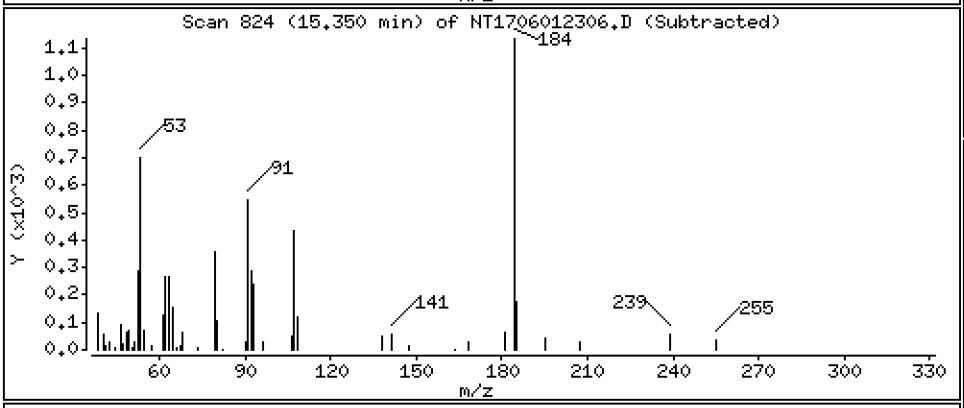
Column diameter: 0.25

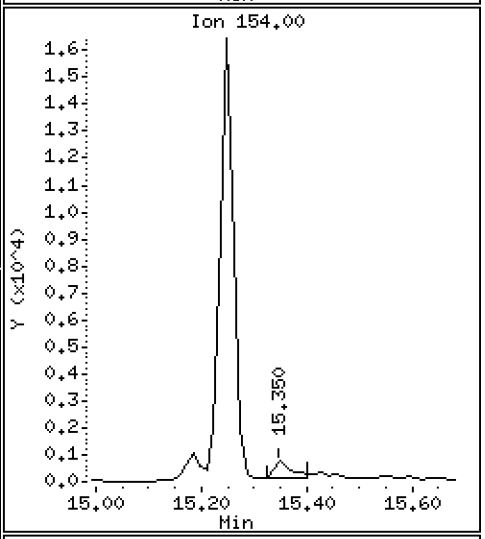
45 2,4-Dinitrophenol

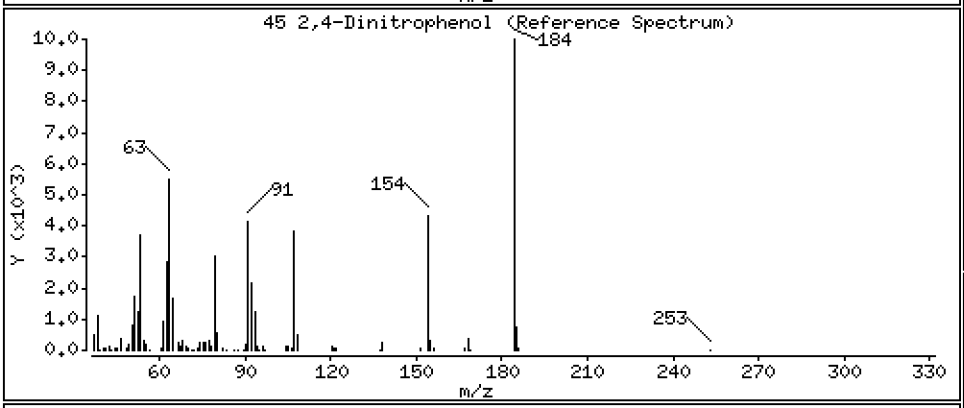
Concentration: 0.2702 ug/mL

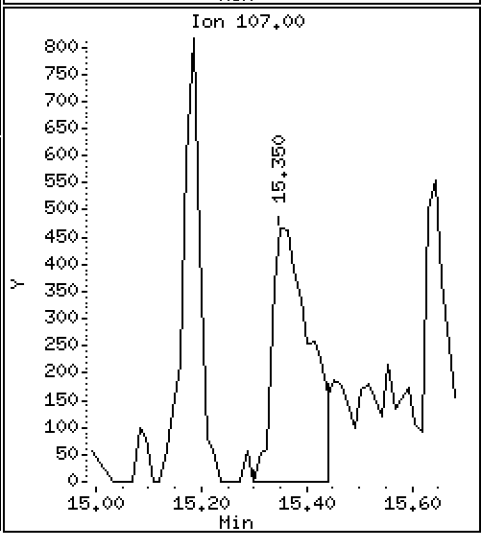


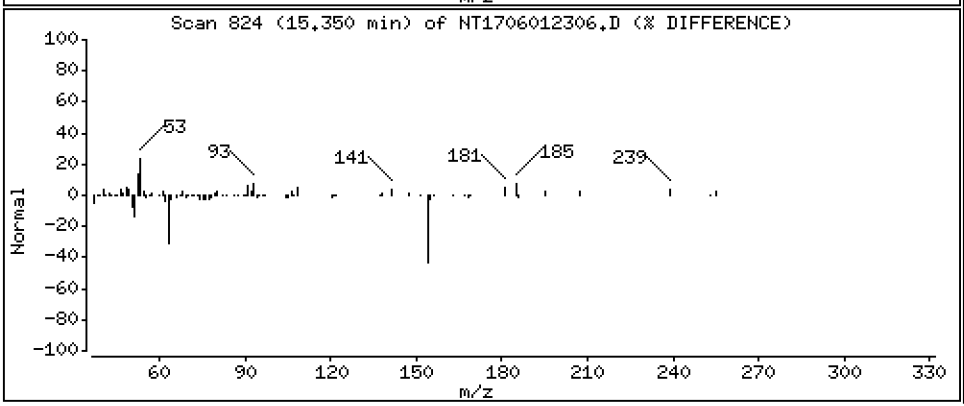












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

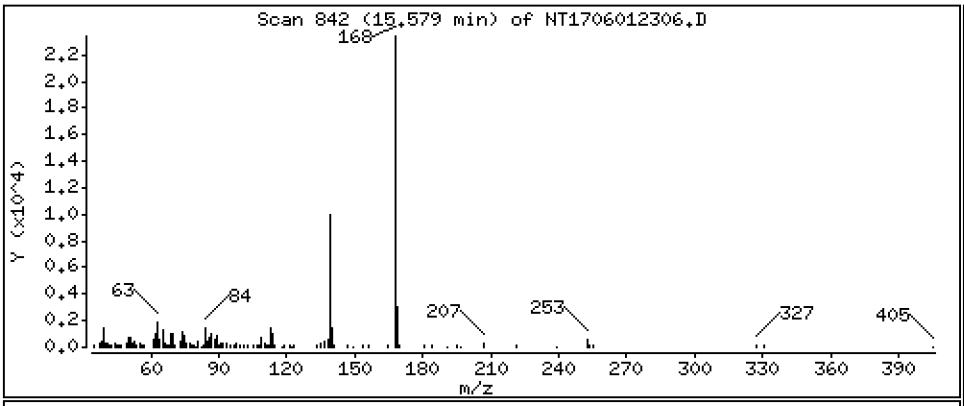
Operator: VTS

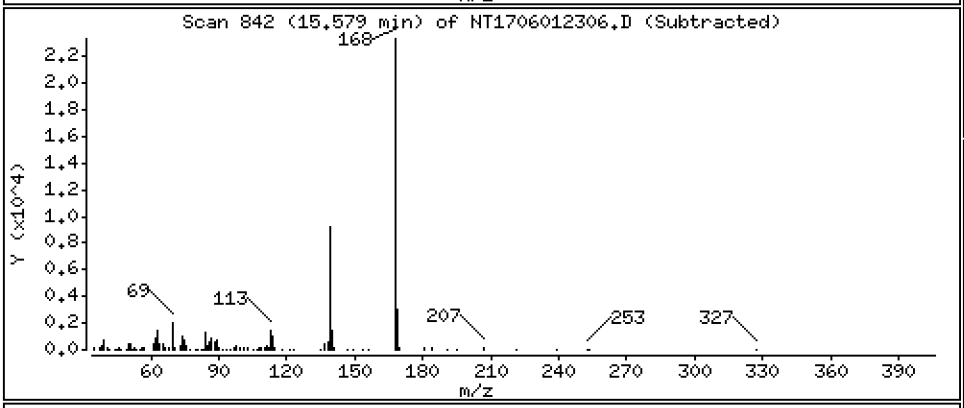
Column phase: ZB-5msi

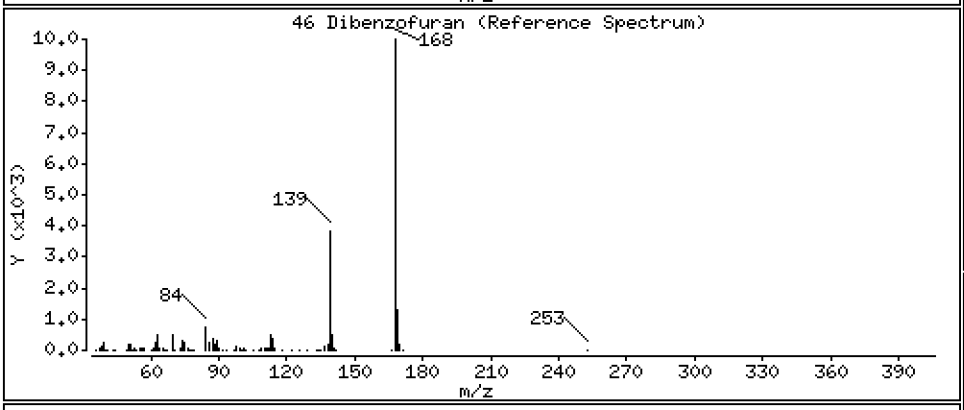
Column diameter: 0.25

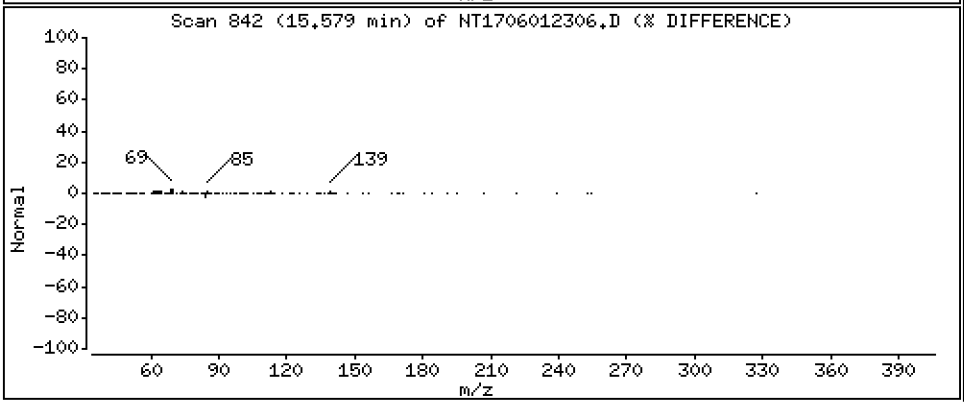
46 Dibenzofuran

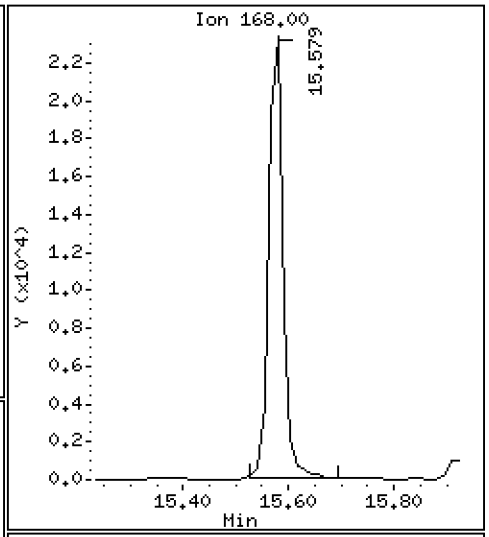
Concentration: 0.2032 ug/mL

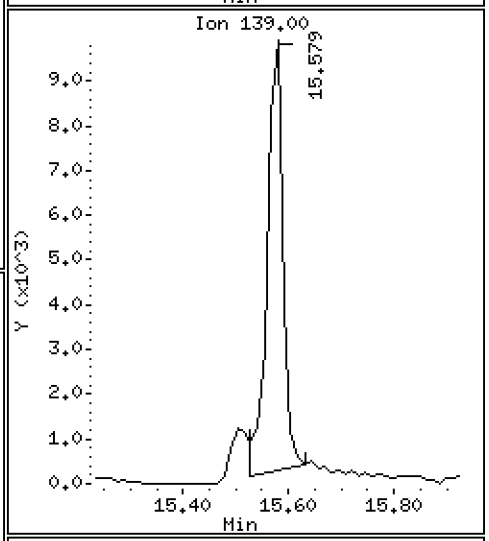


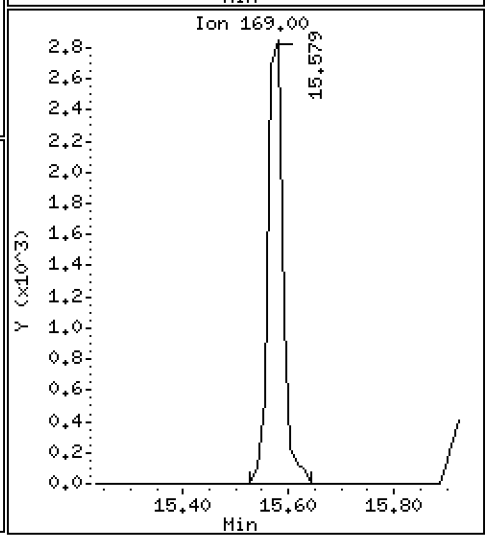












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

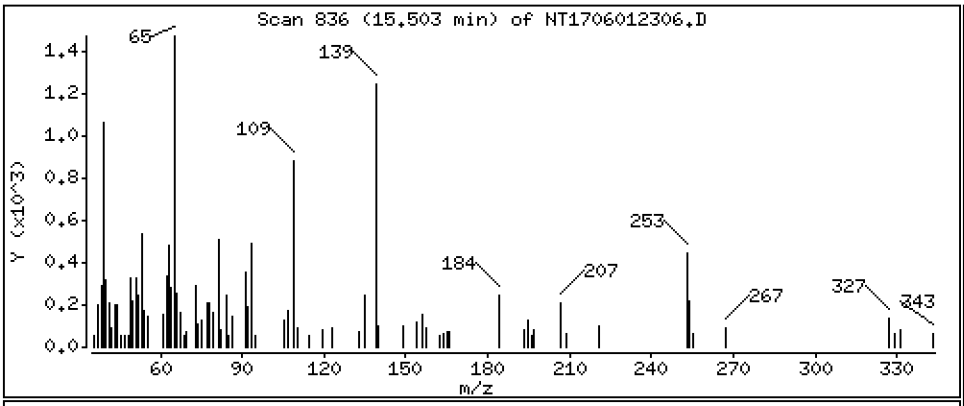
Operator: VTS

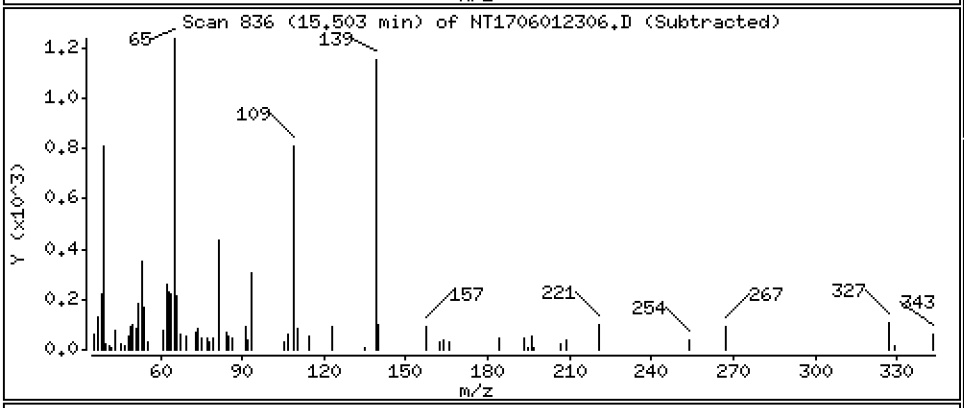
Column phase: ZB-5msi

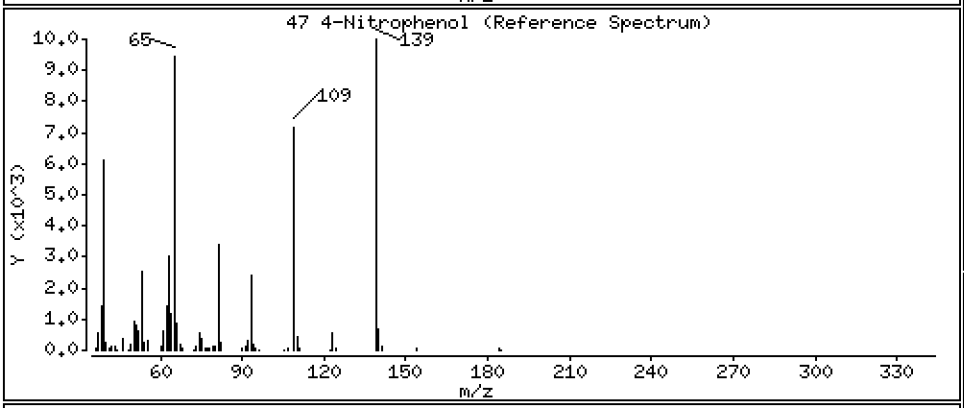
Column diameter: 0.25

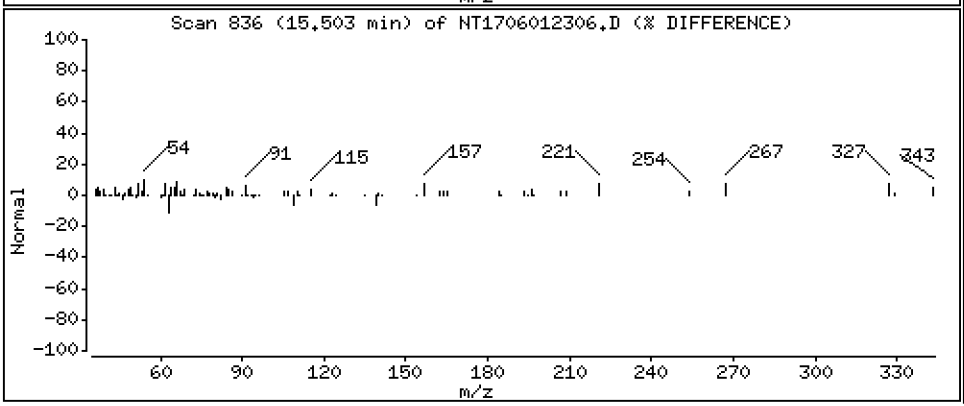
47 4-Nitrophenol

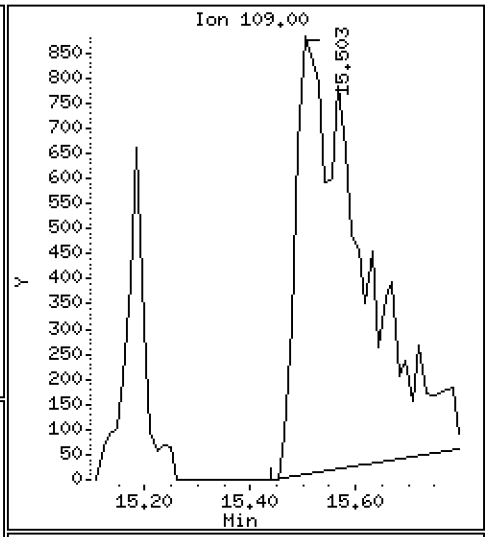
Concentration: 0.3105 ug/mL

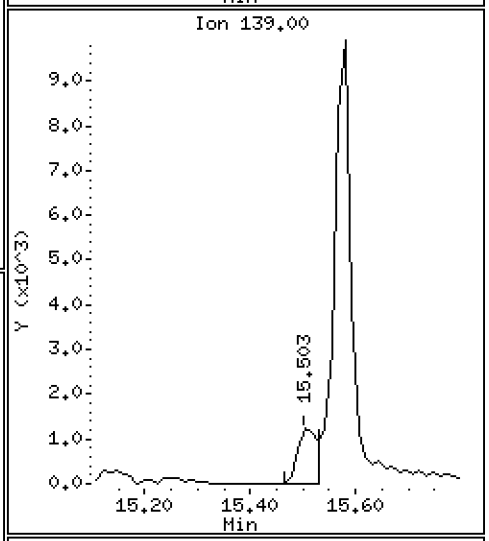


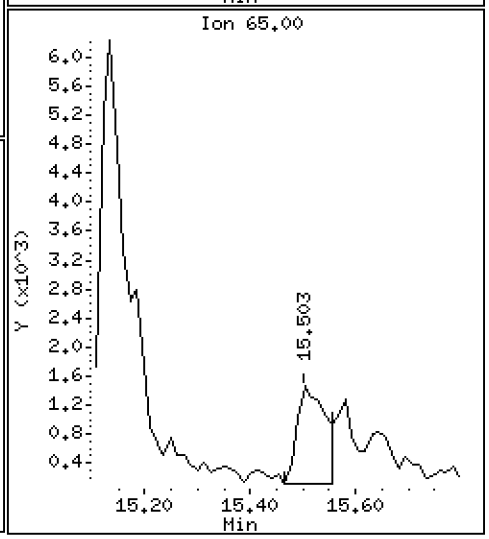












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

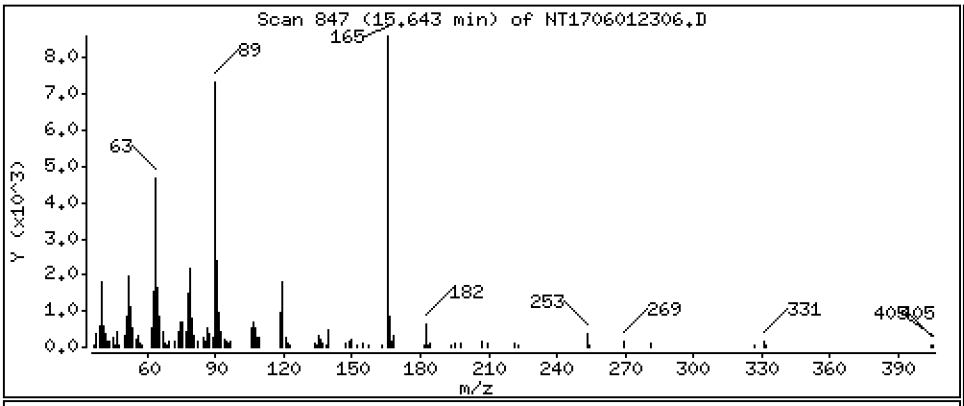
Operator: VTS

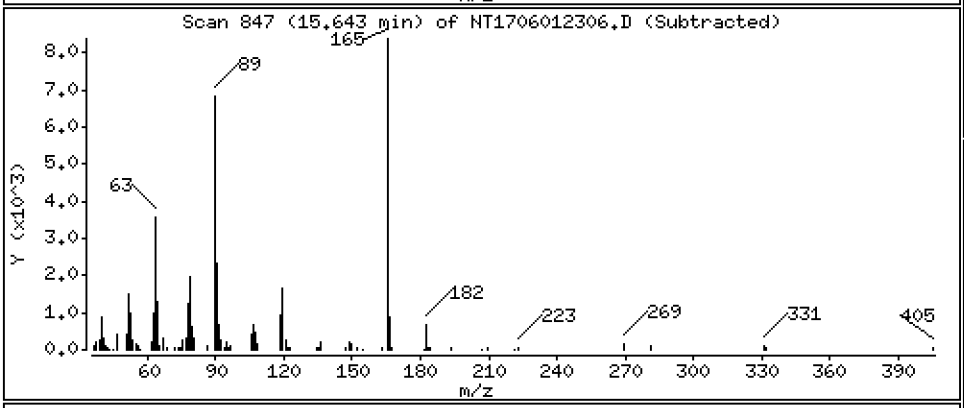
Column phase: ZB-5msi

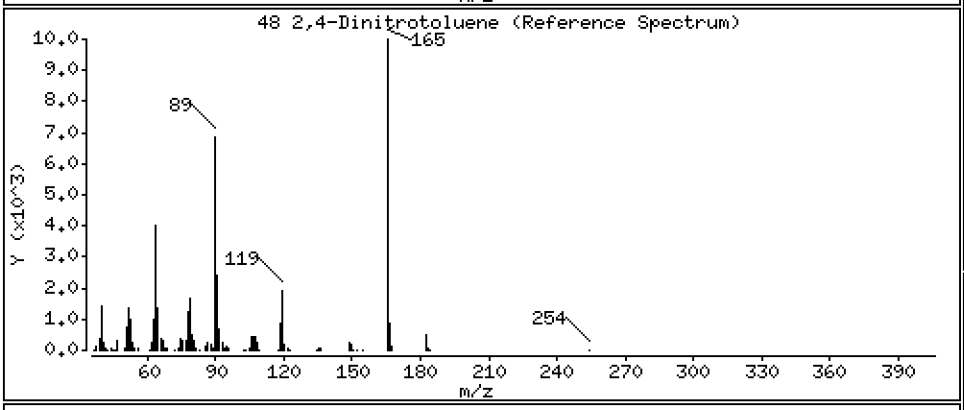
Column diameter: 0.25

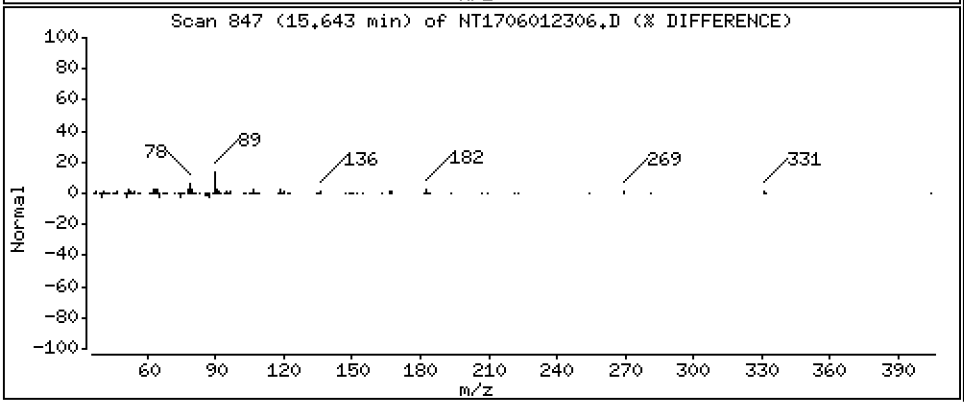
48 2,4-Dinitrotoluene

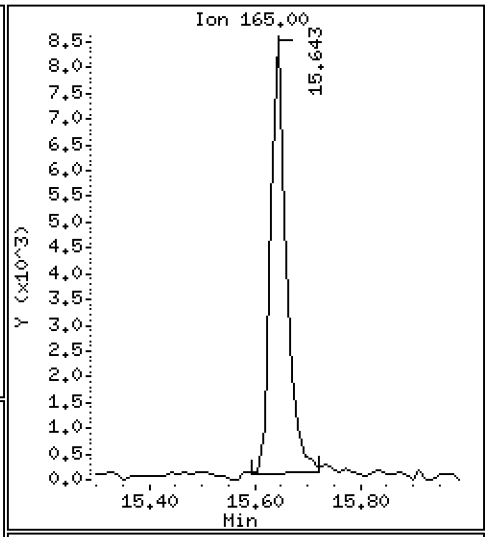
Concentration: 0.3334 ug/mL

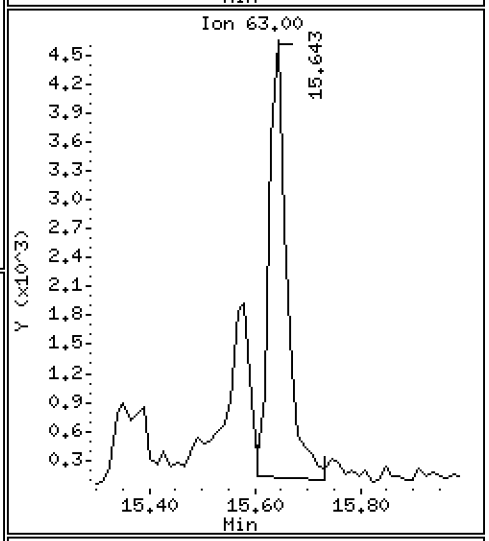


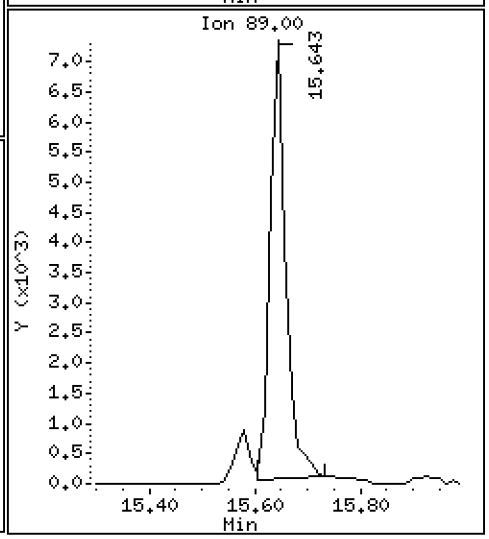












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

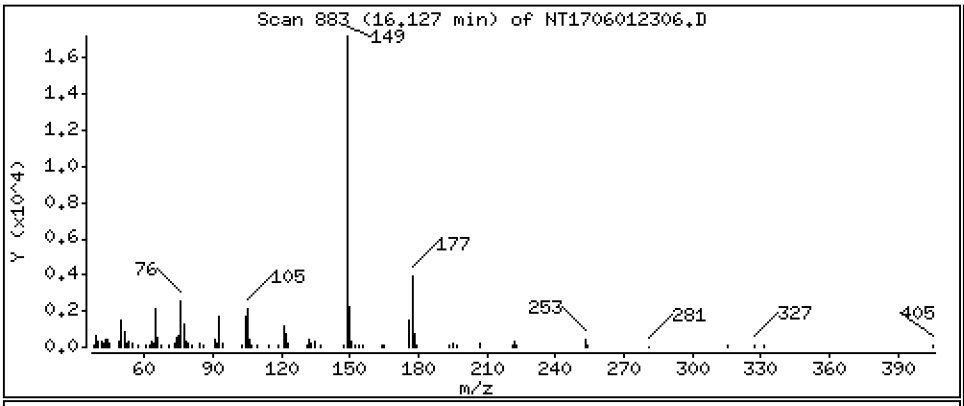
Operator: VTS

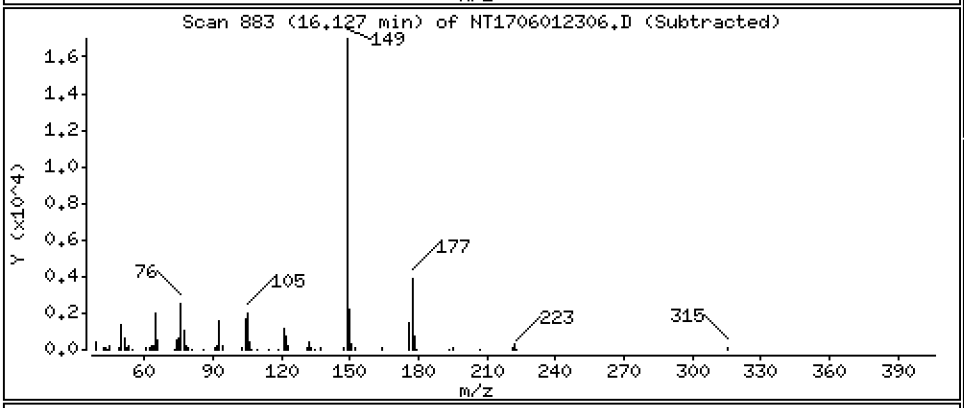
Column phase: ZB-5msi

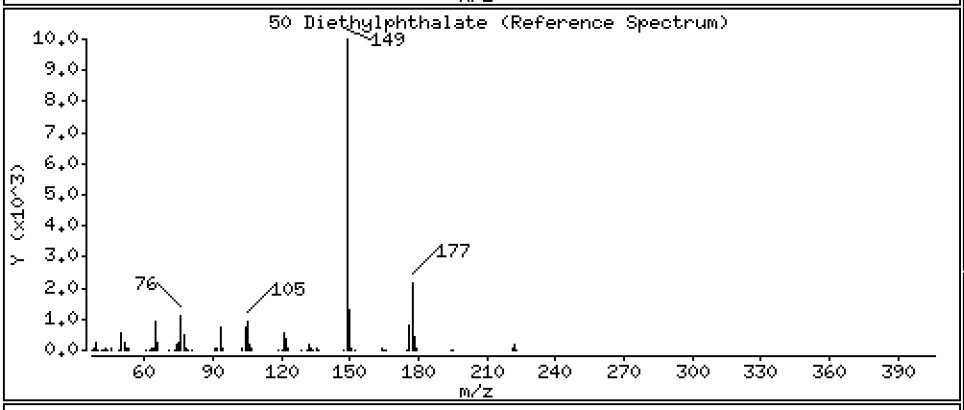
Column diameter: 0.25

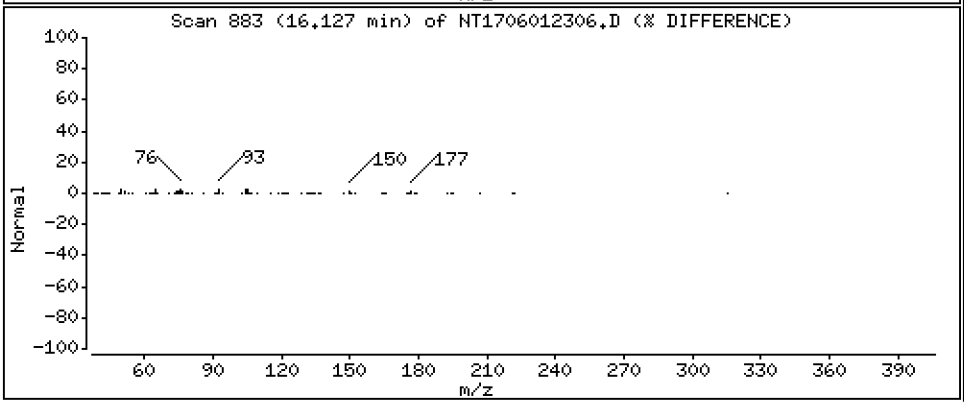
50 Diethylphthalate

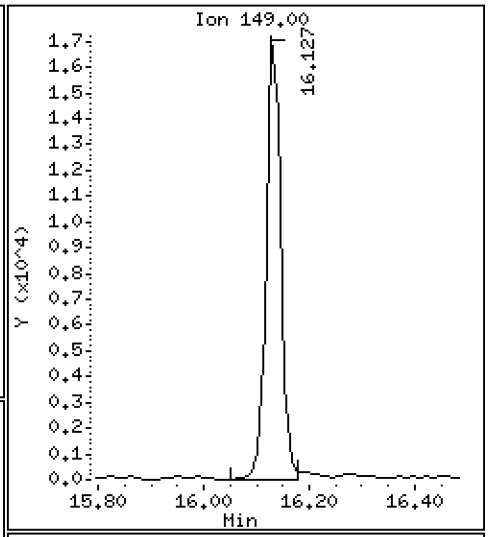
Concentration: 0.1966 ug/mL

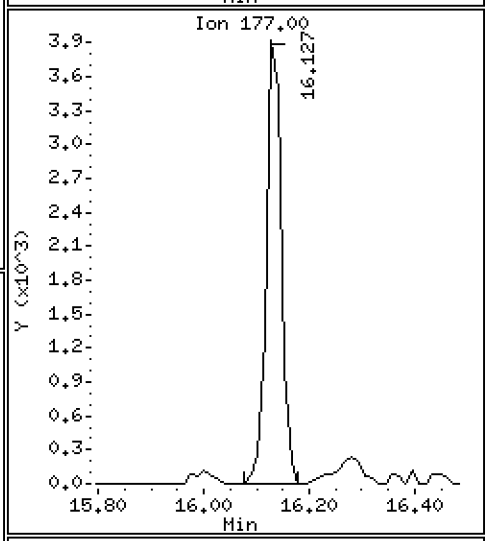


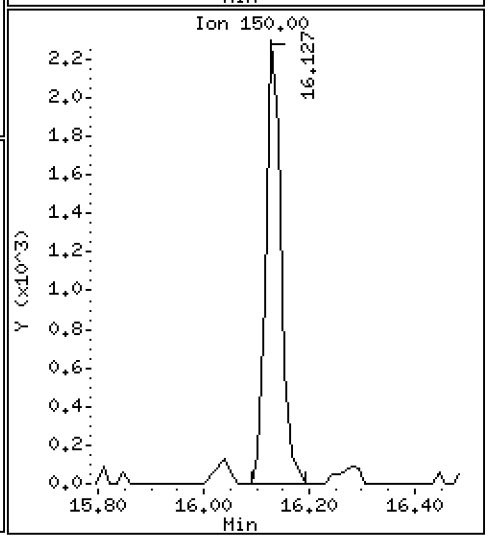












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

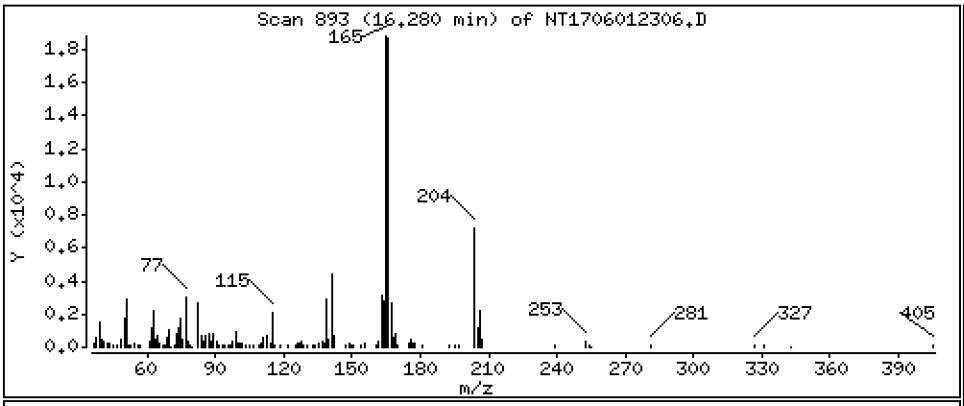
Operator: VTS

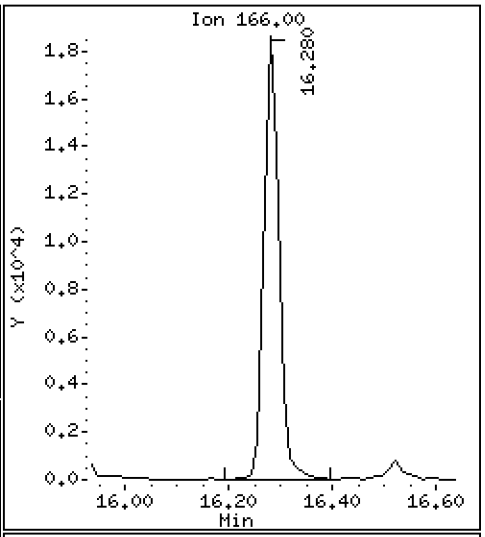
Column phase: ZB-5msi

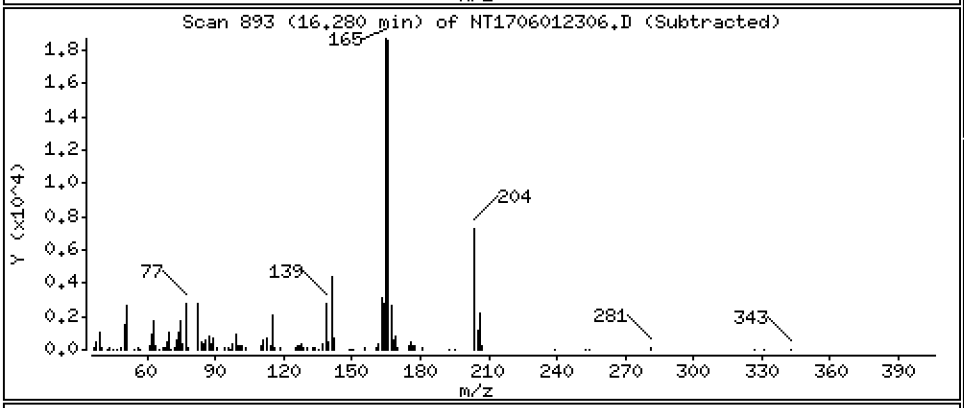
Column diameter: 0.25

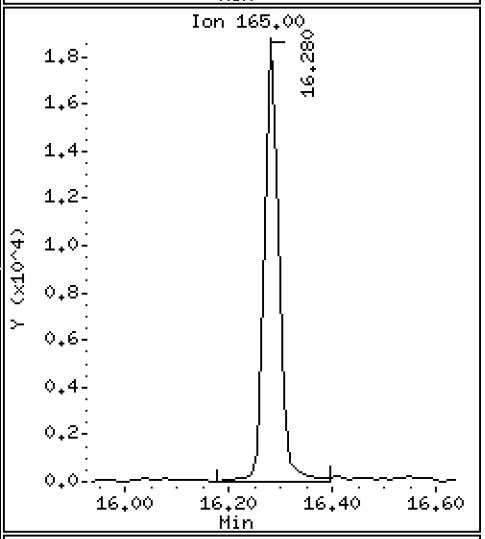
49 Fluorene

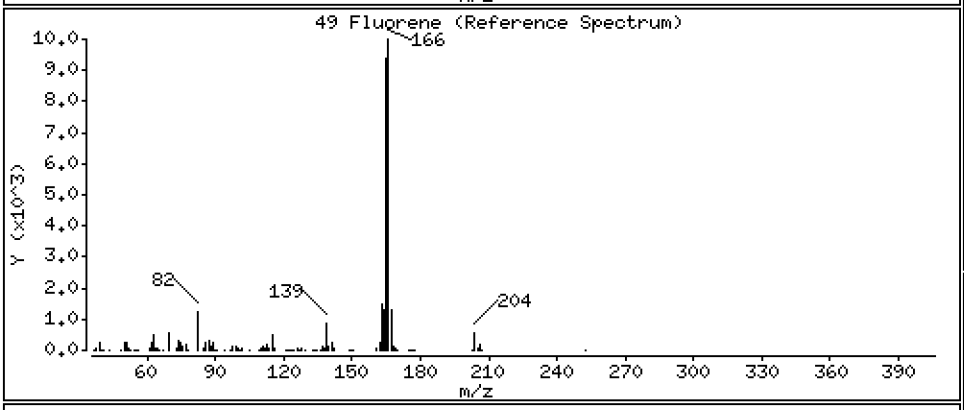
Concentration: 0.2035 ug/mL

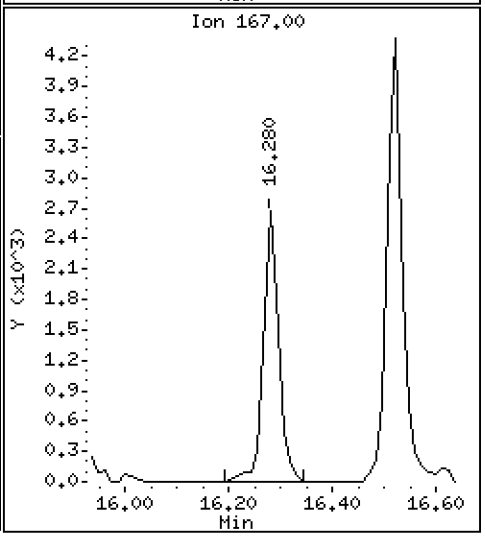


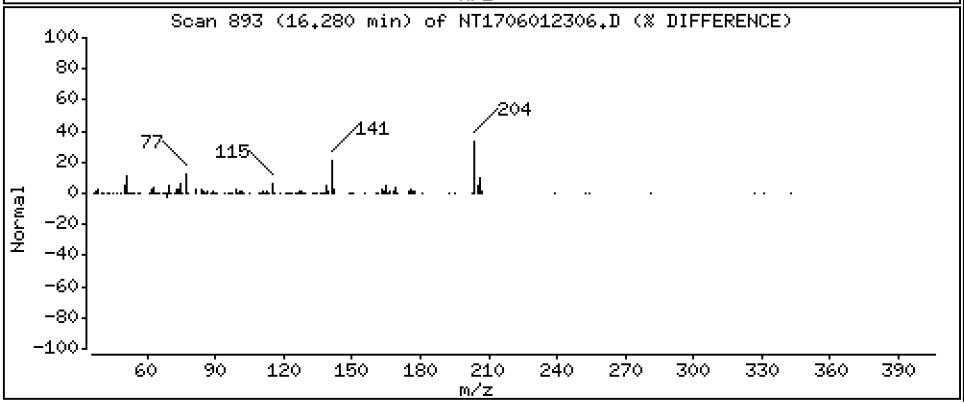












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

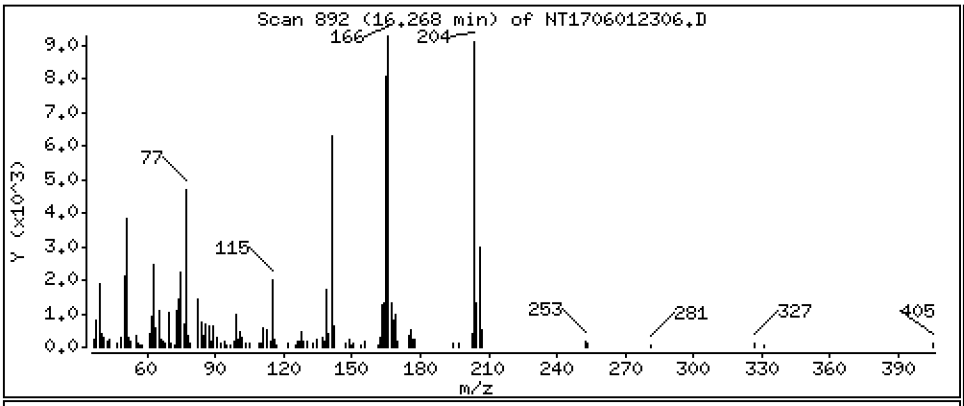
Operator: VTS

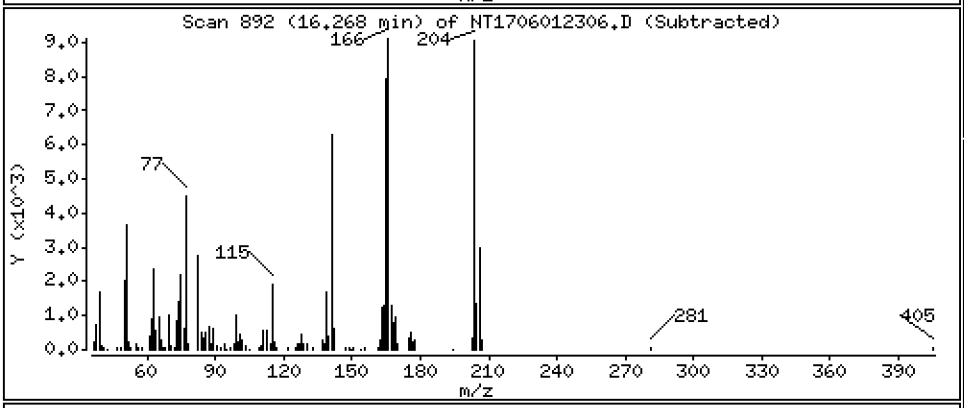
Column phase: ZB-5msi

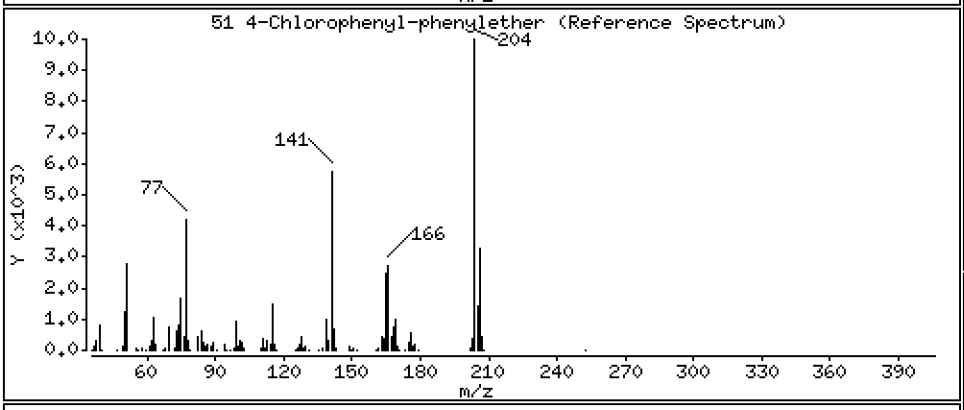
Column diameter: 0.25

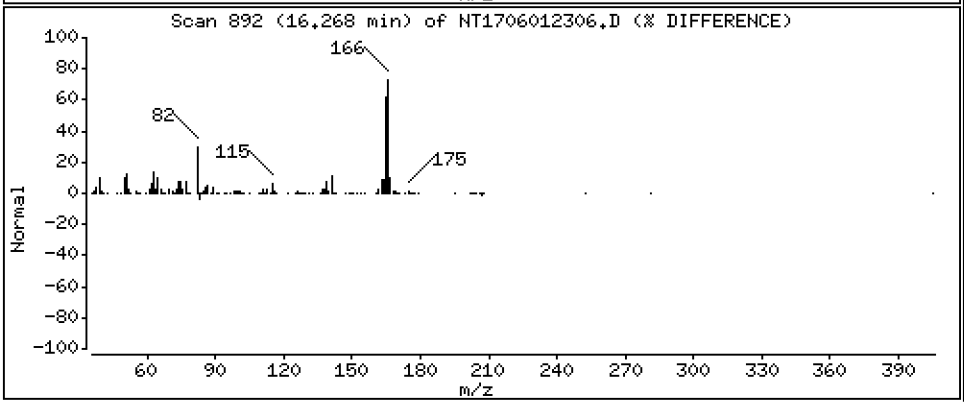
51 4-Chlorophenyl-phenylether

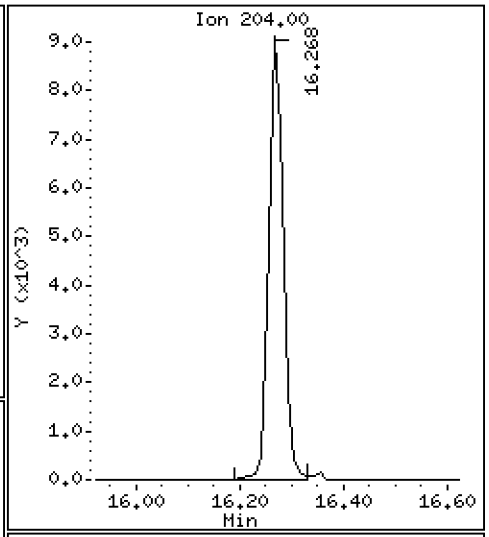
Concentration: 0.2196 ug/mL

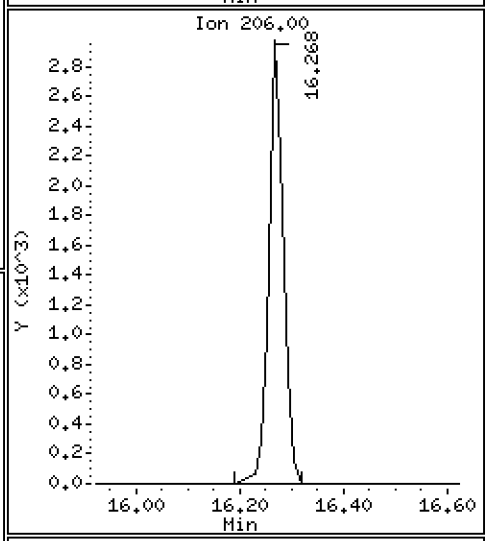


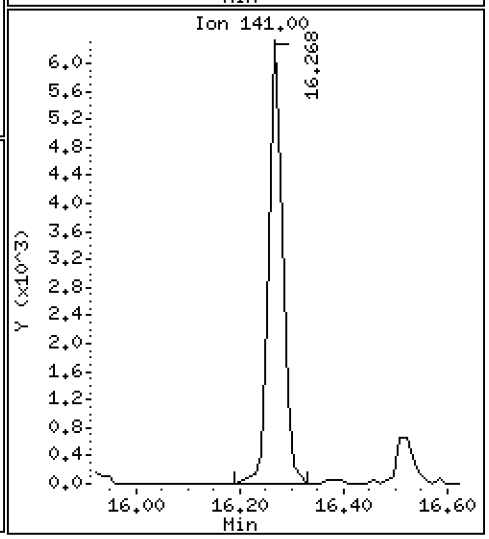












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

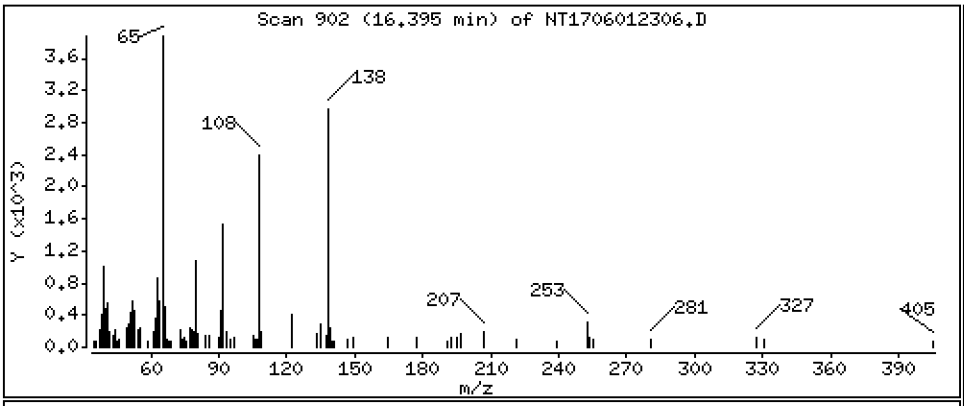
Operator: VTS

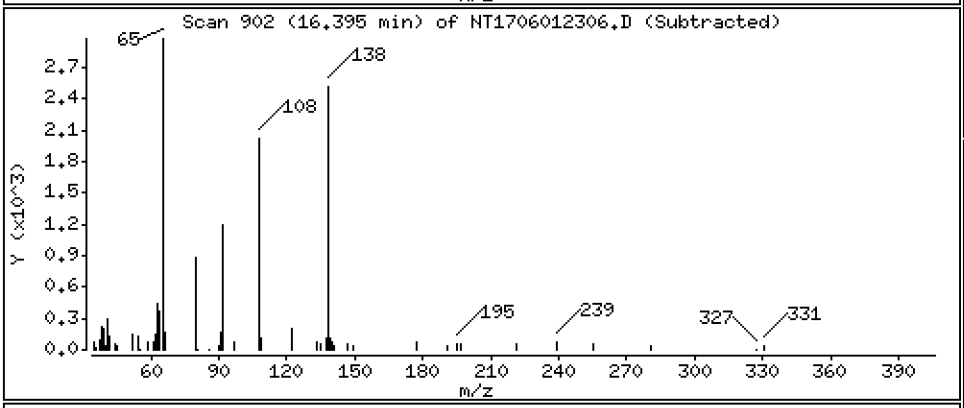
Column phase: ZB-5msi

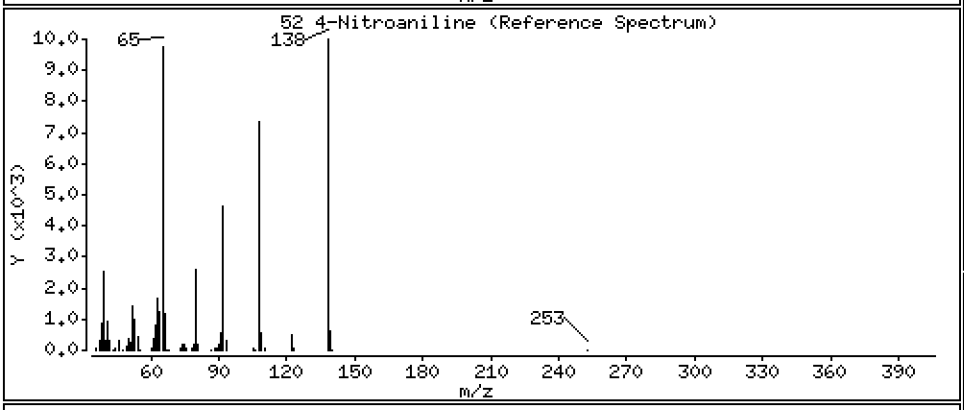
Column diameter: 0.25

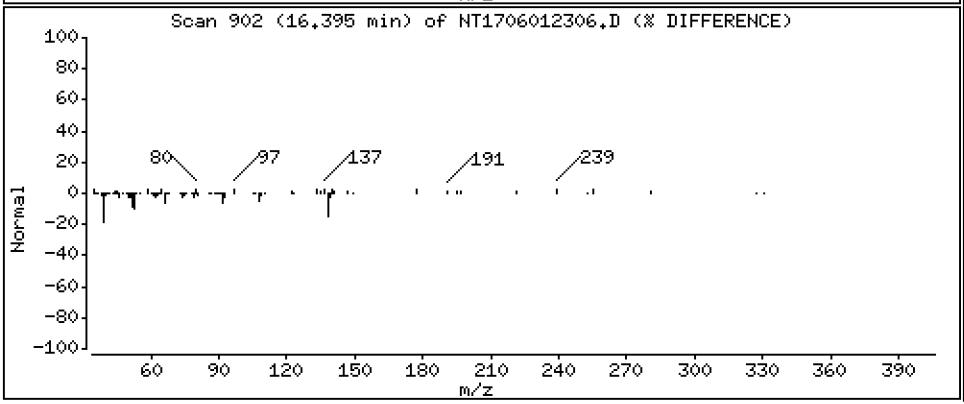
52 4-Nitroaniline

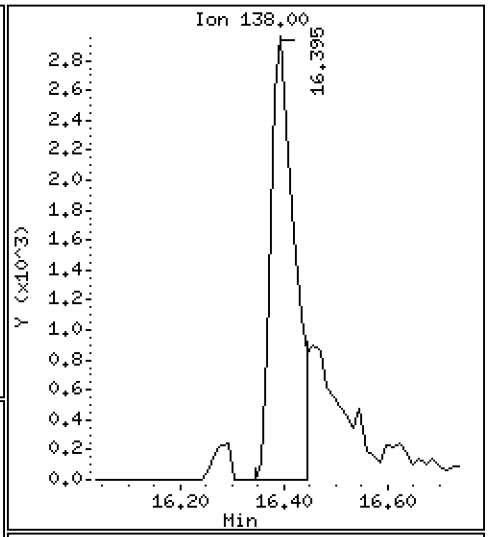
Concentration: 0.2635 ug/mL

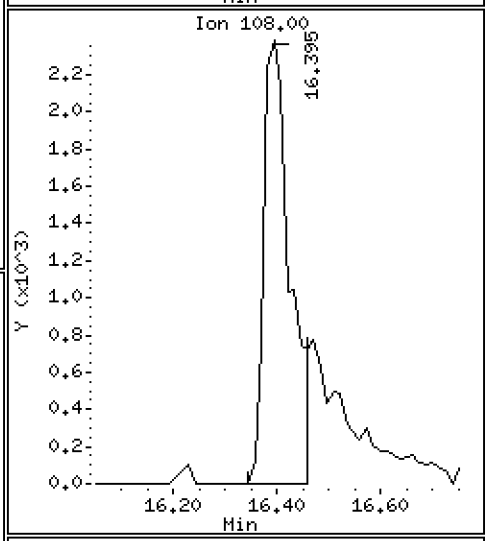


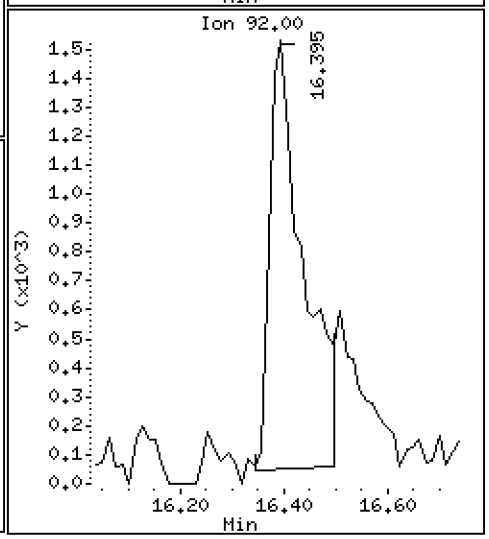












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

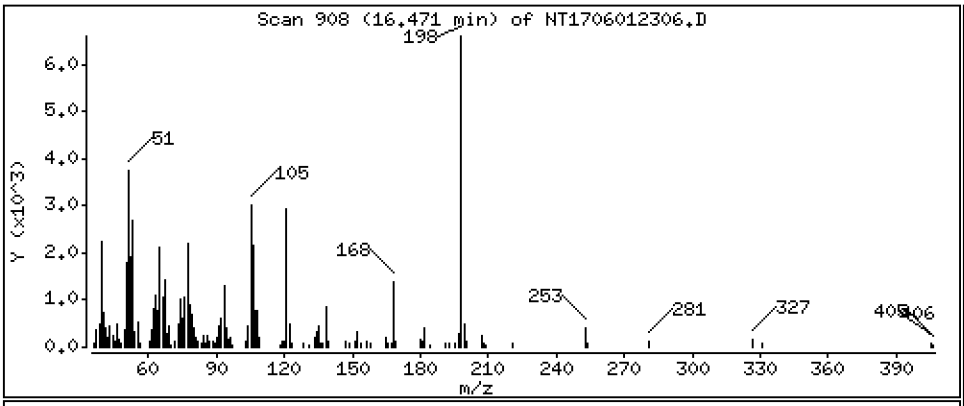
Operator: VTS

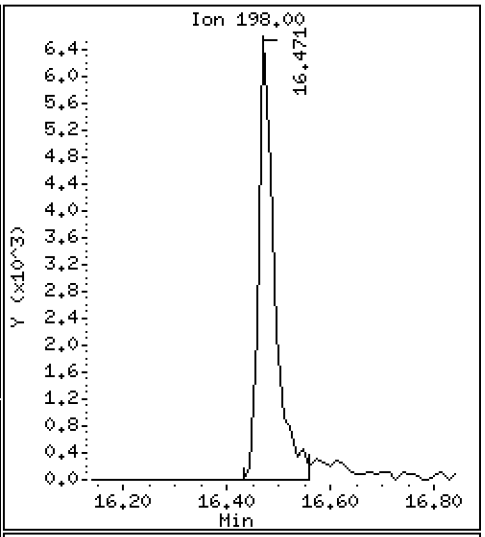
Column phase: ZB-5msi

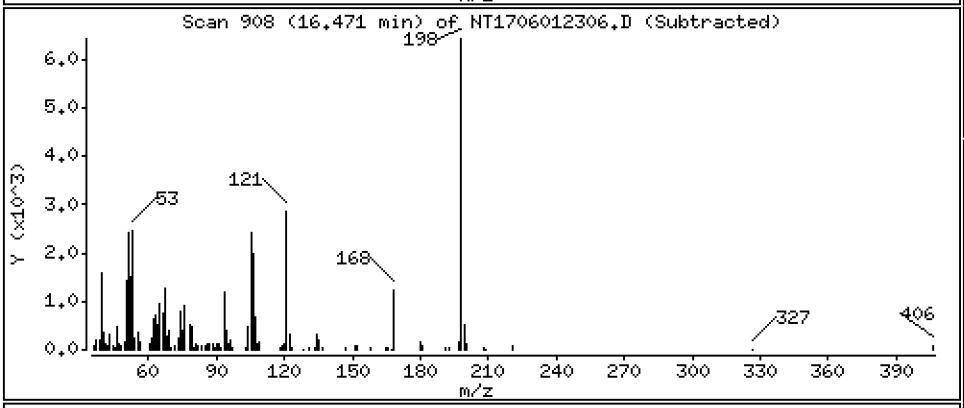
Column diameter: 0.25

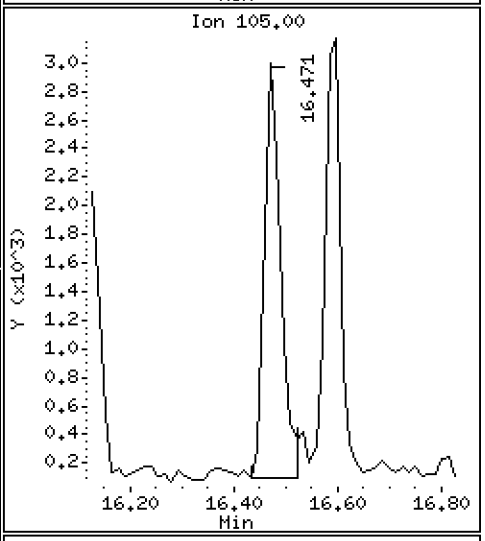
53 4,6-Dinitro-2-methylphenol

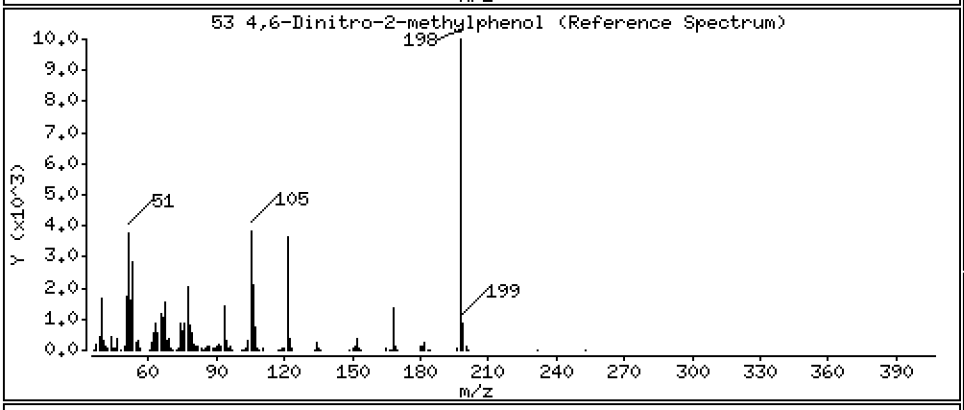
Concentration: 0.3975 ug/mL

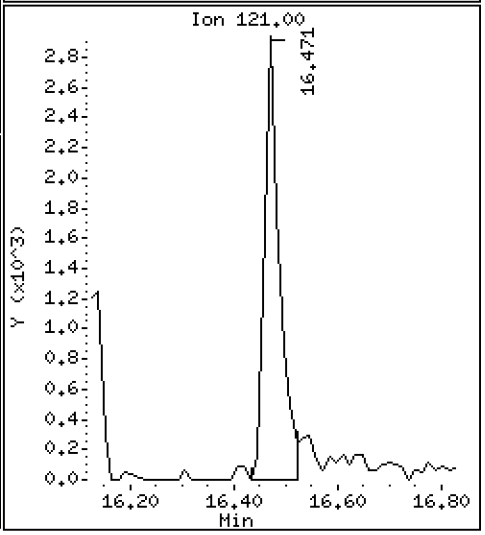


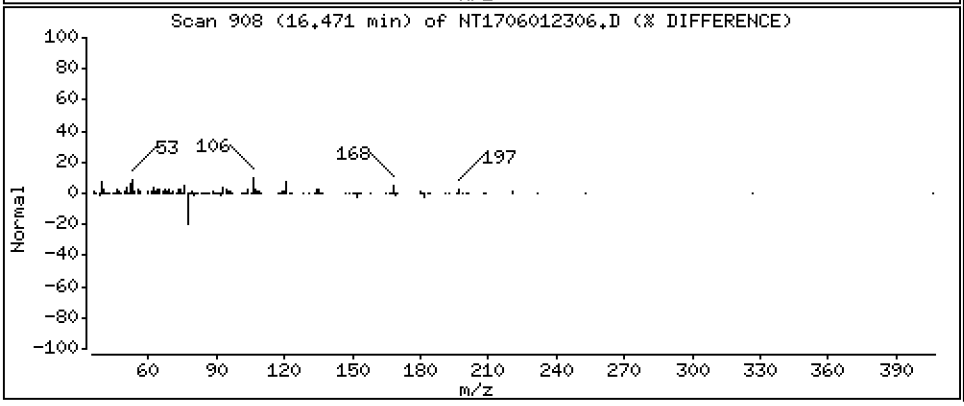












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

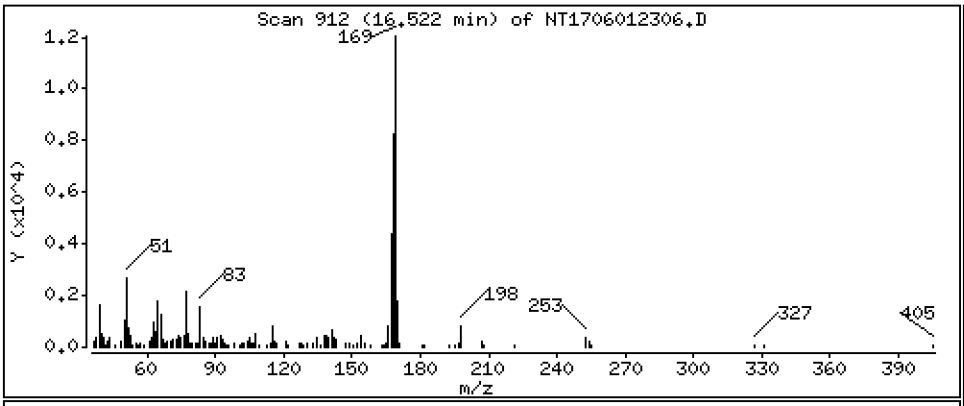
Operator: VTS

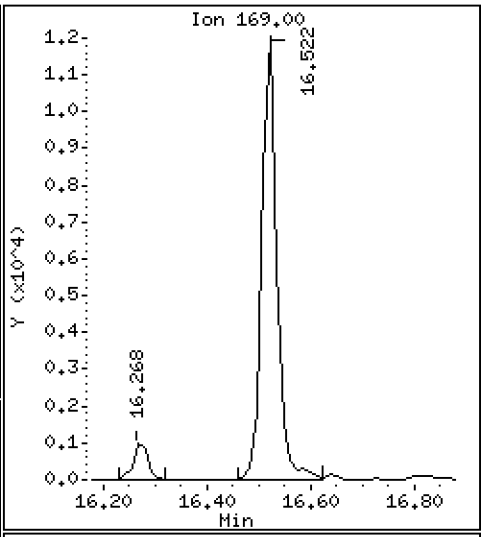
Column phase: ZB-5msi

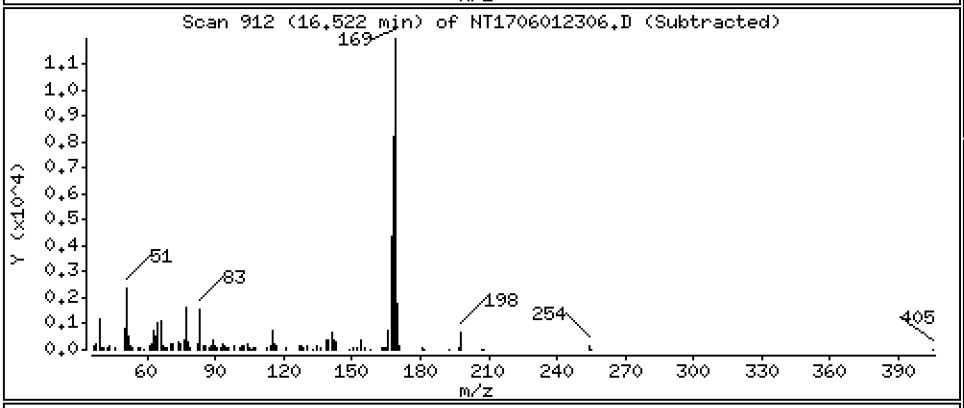
Column diameter: 0.25

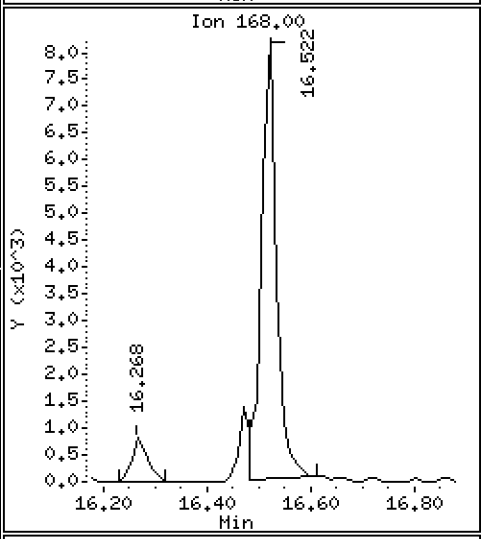
54 N-Nitrosodiphenylamine

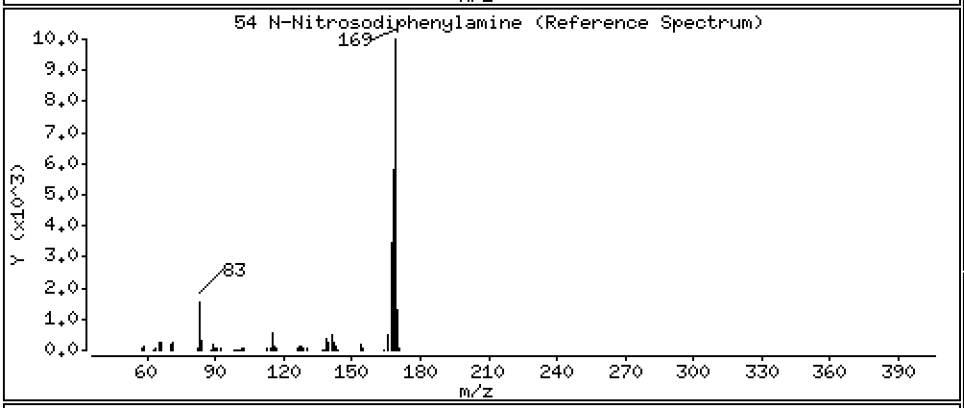
Concentration: 0.1939 ug/mL

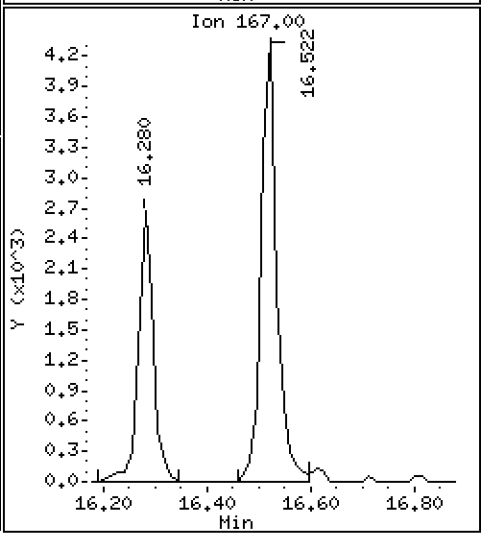


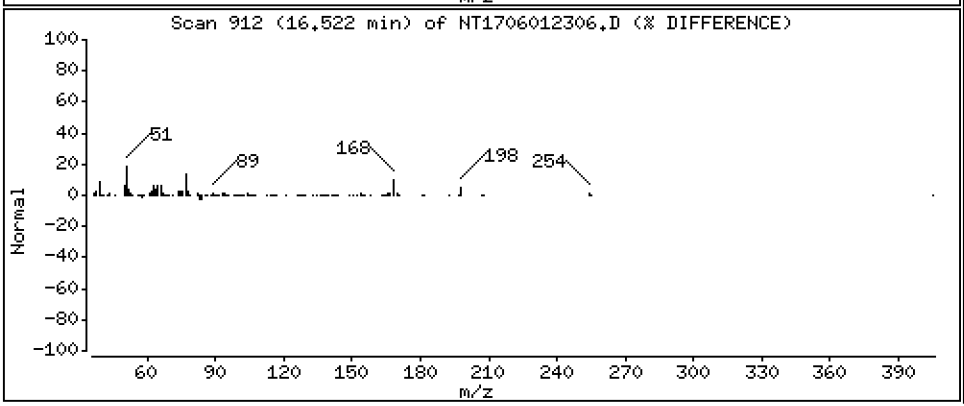












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

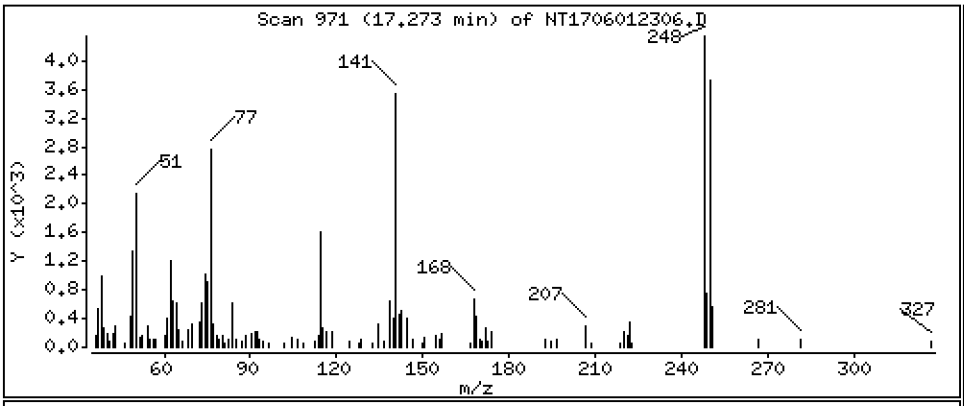
Operator: VTS

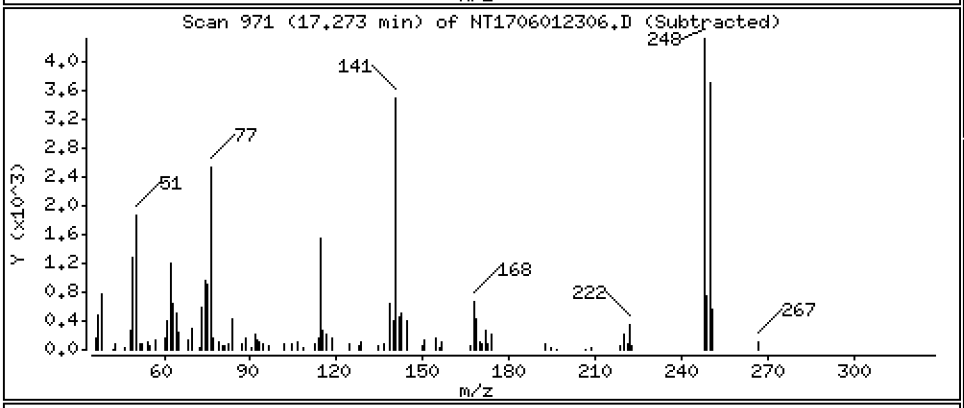
Column phase: ZB-5msi

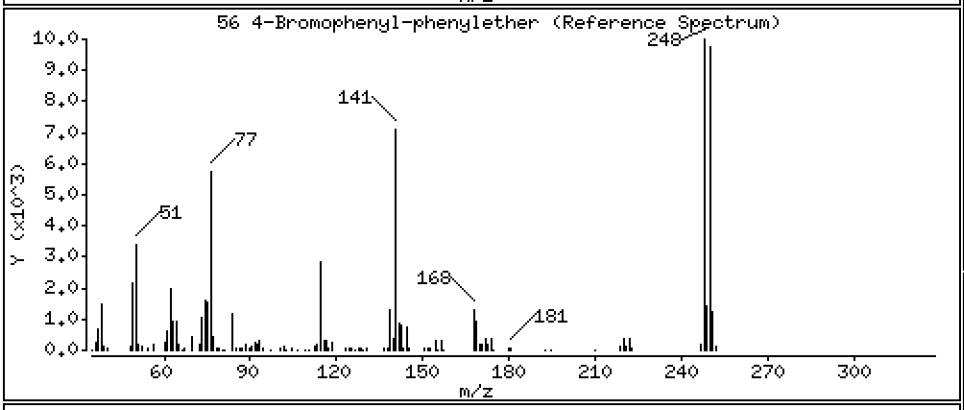
Column diameter: 0.25

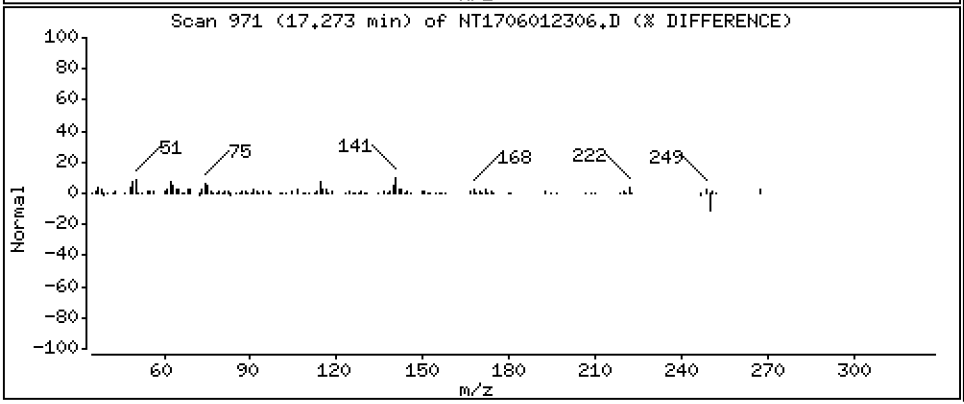
56 4-Bromophenyl-phenylether

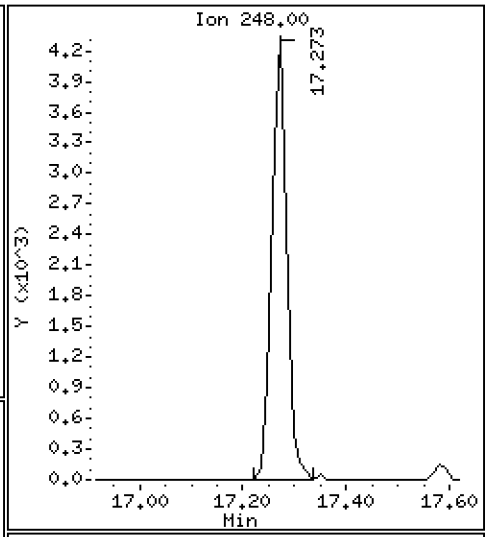
Concentration: 0.1972 ug/mL

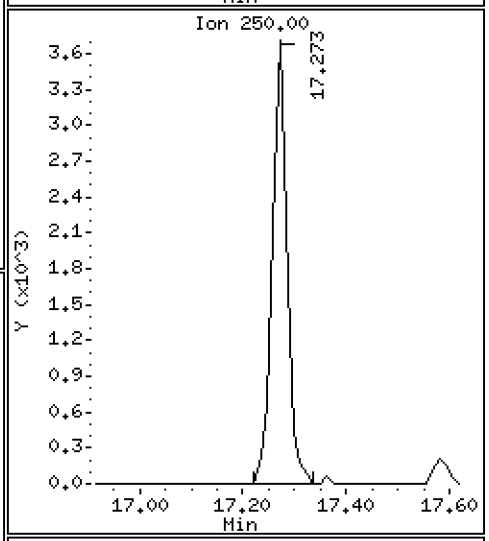


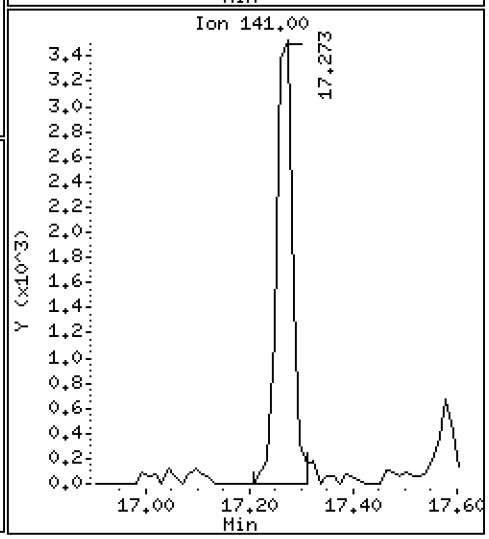












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

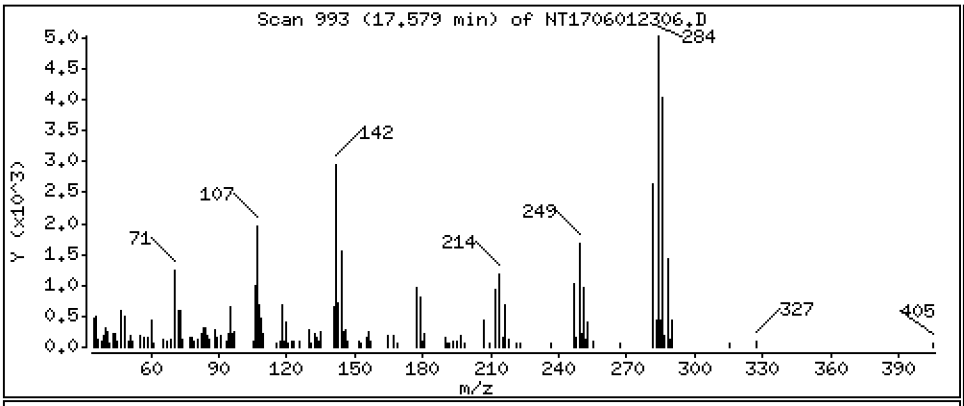
Operator: VTS

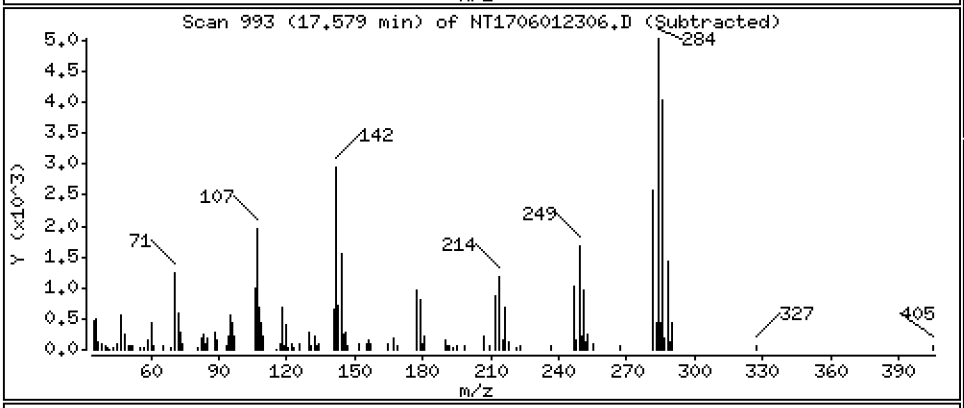
Column phase: ZB-5msi

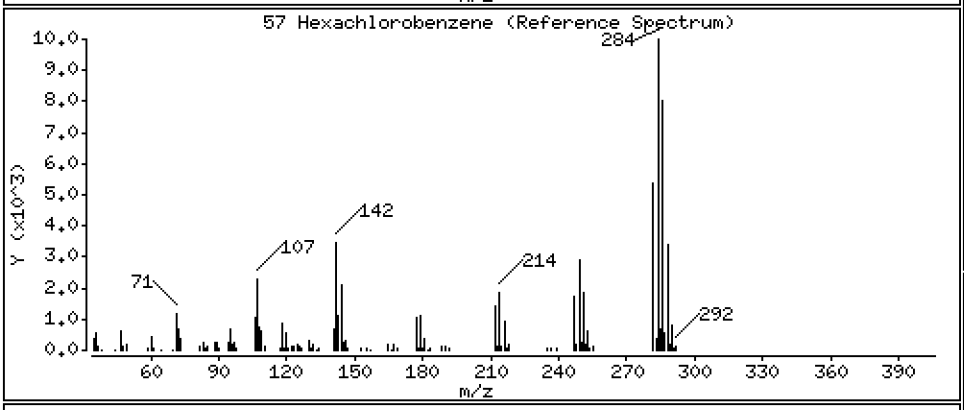
Column diameter: 0.25

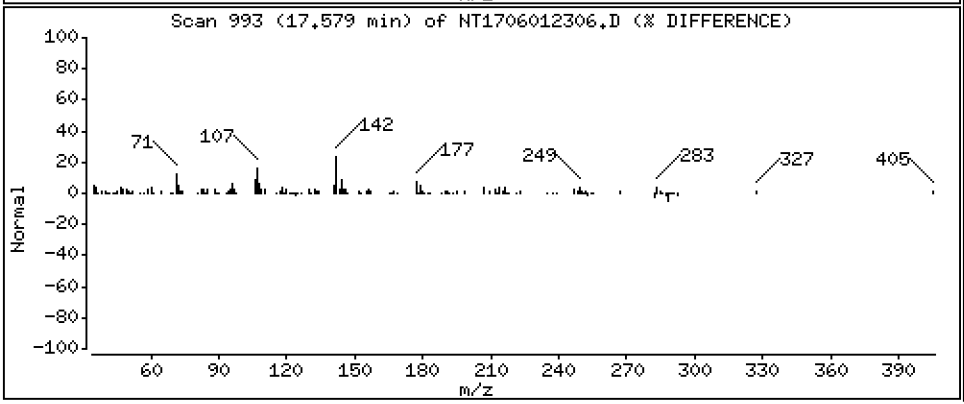
57 Hexachlorobenzene

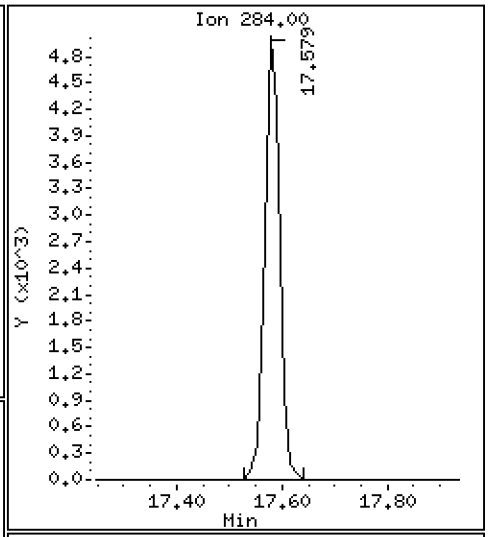
Concentration: 0.2236 ug/mL

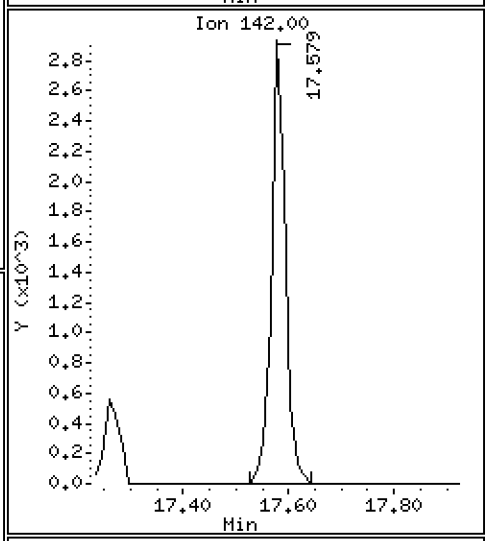


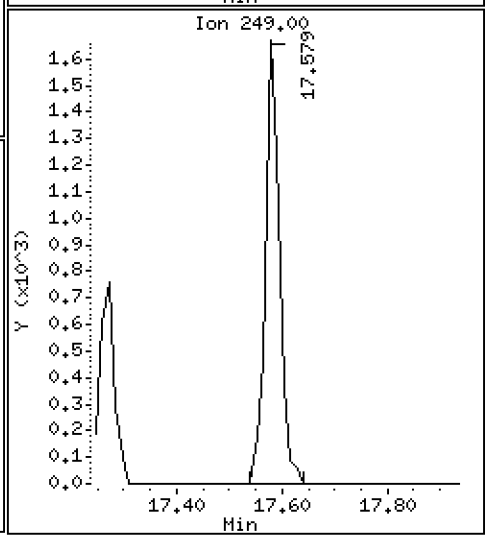












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

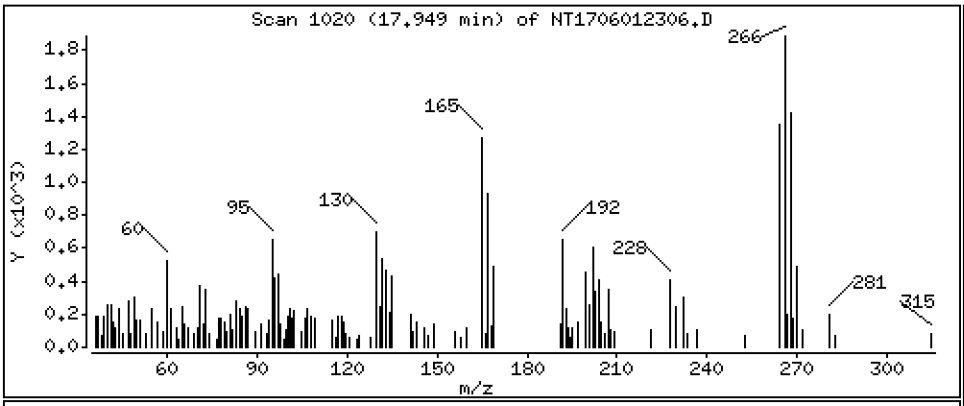
Operator: VTS

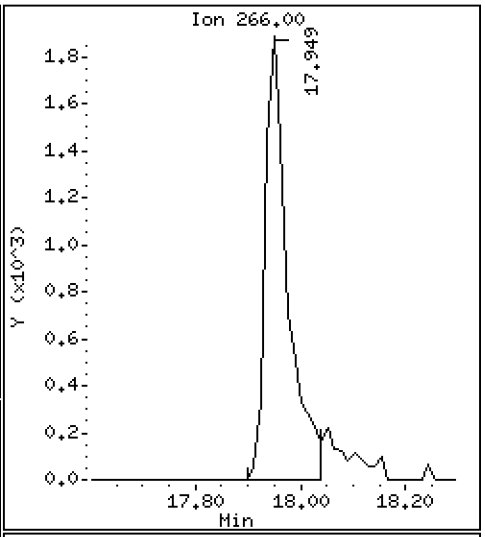
Column phase: ZB-5msi

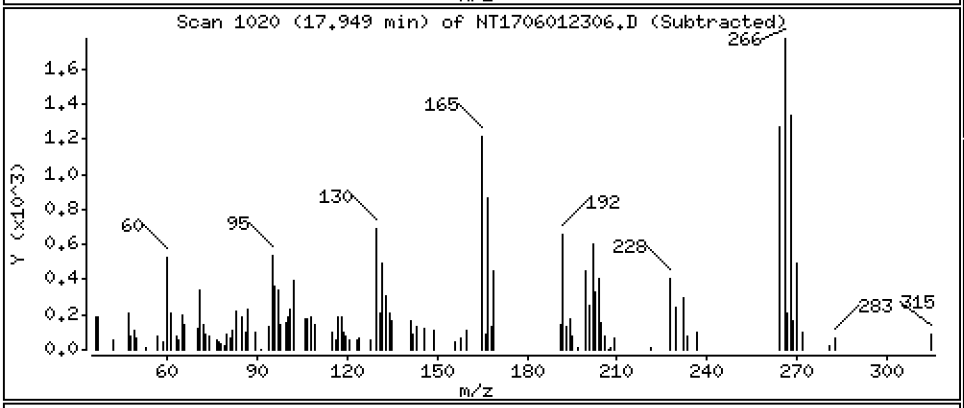
Column diameter: 0.25

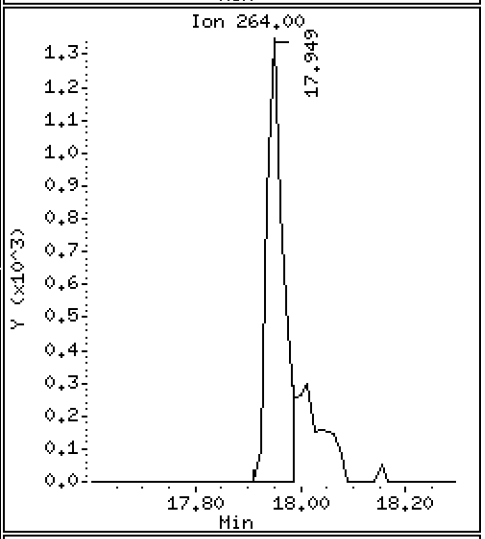
58 Pentachlorophenol

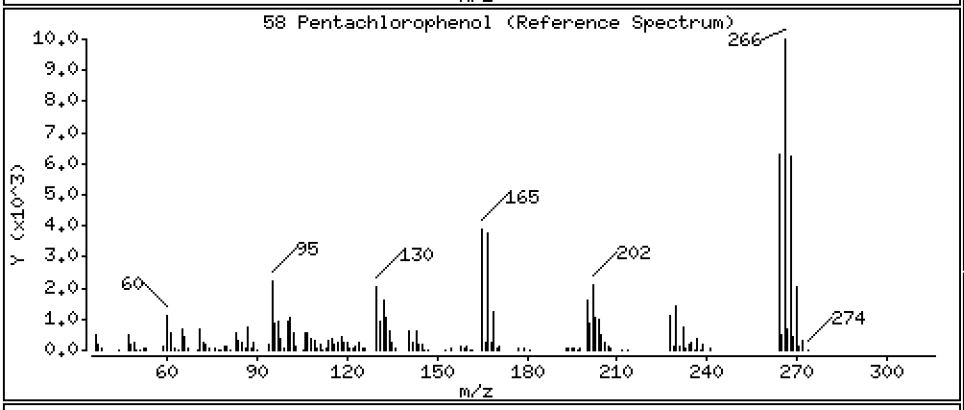
Concentration: 0.2209 ug/mL

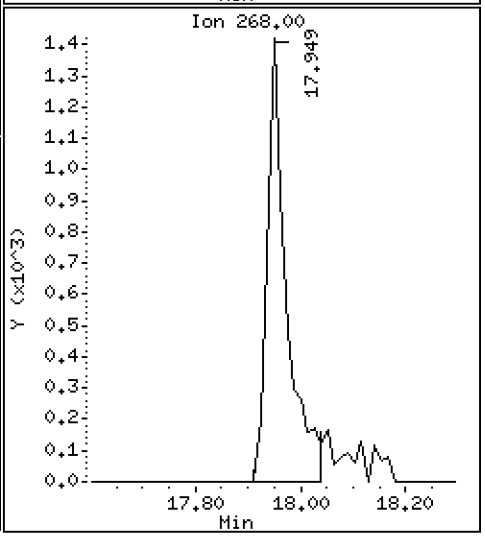


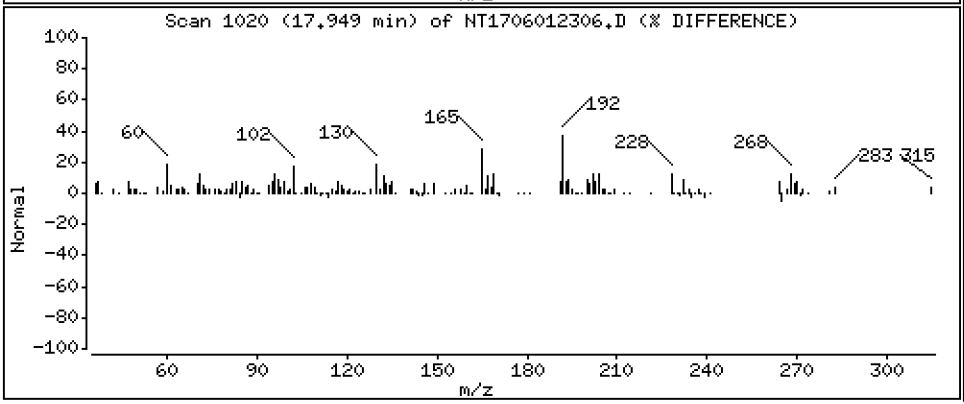












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

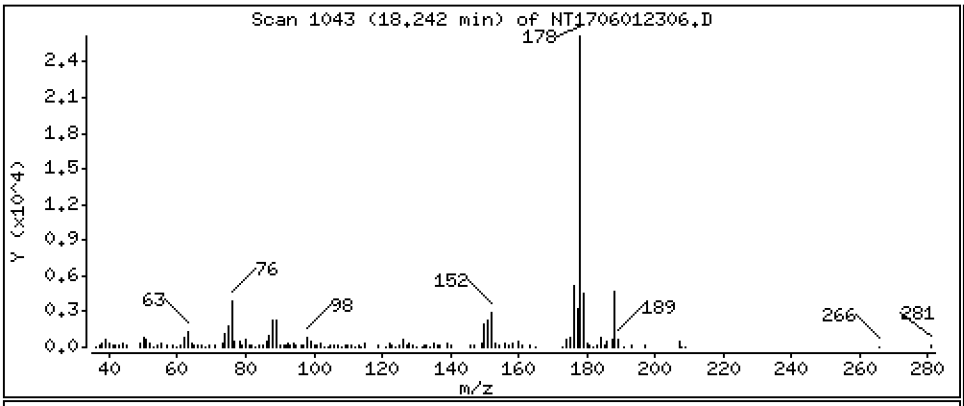
Operator: VTS

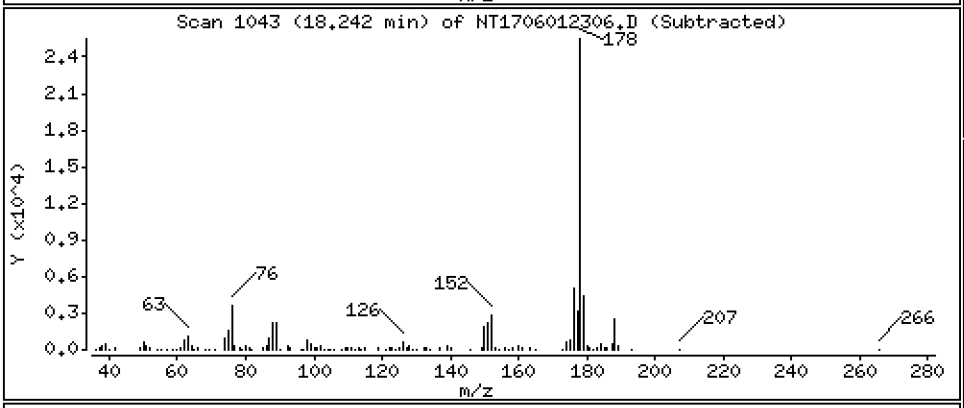
Column phase: ZB-5msi

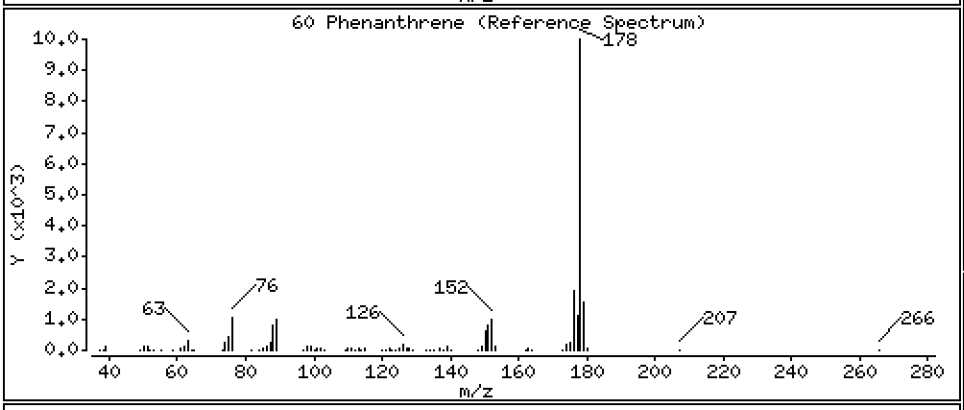
Column diameter: 0.25

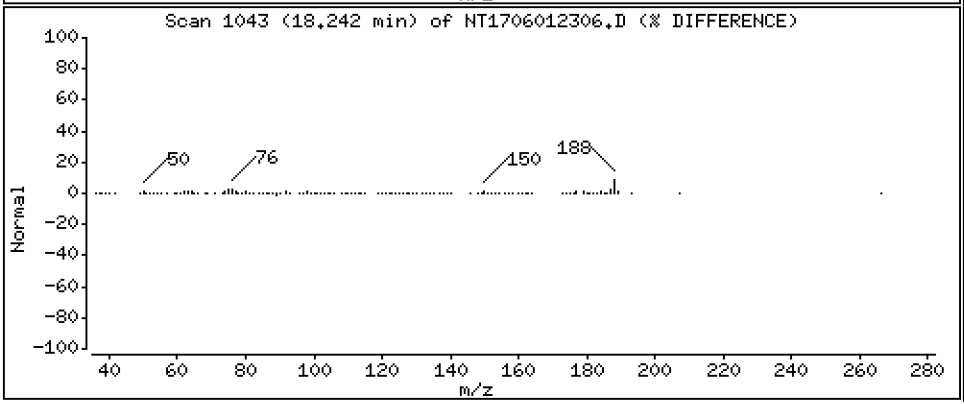
60 Phenanthrene

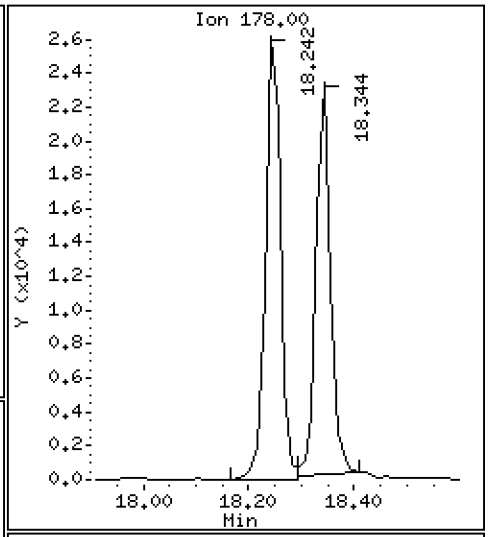
Concentration: 0.2025 ug/mL

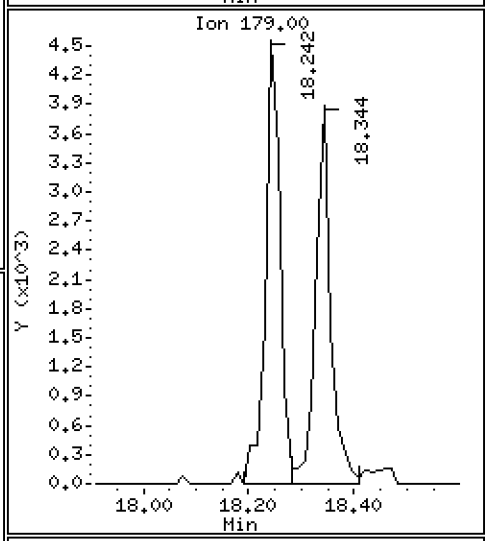


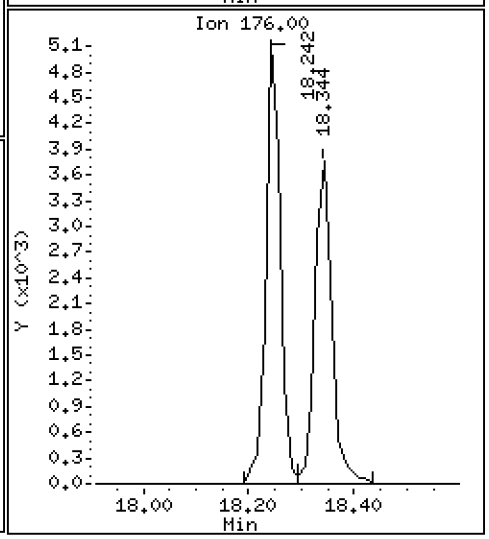












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

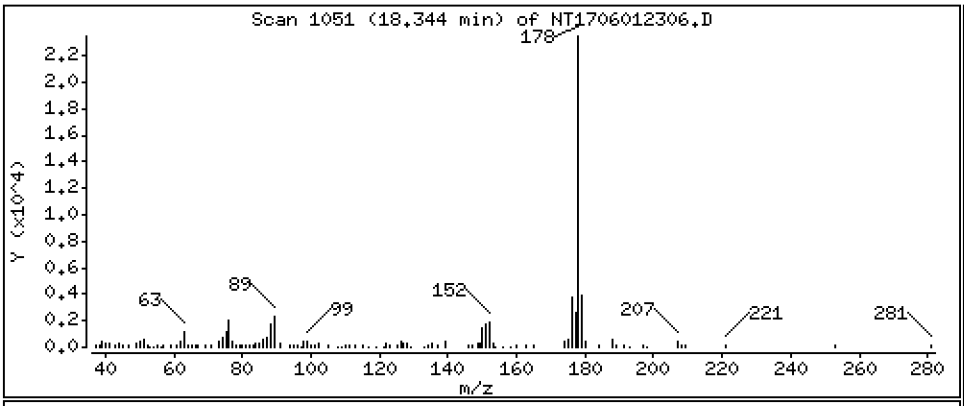
Operator: VTS

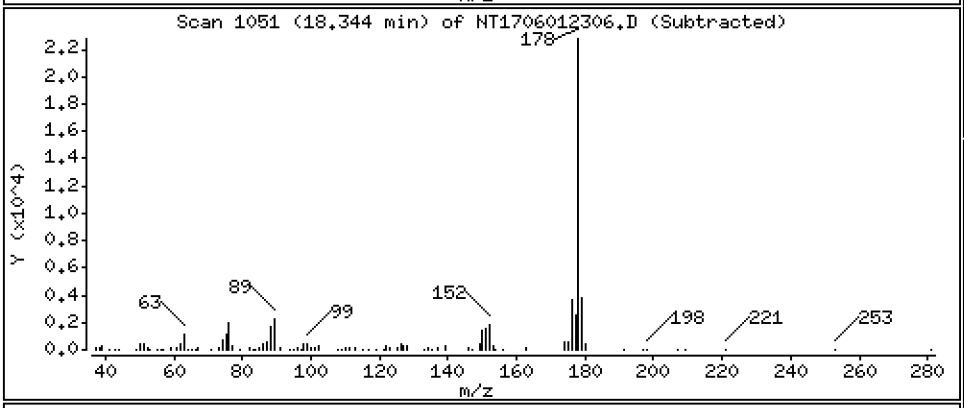
Column phase: ZB-5msi

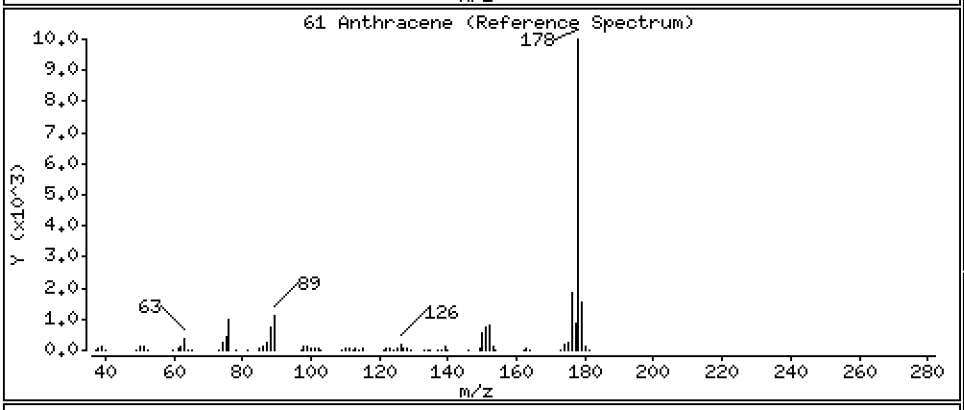
Column diameter: 0.25

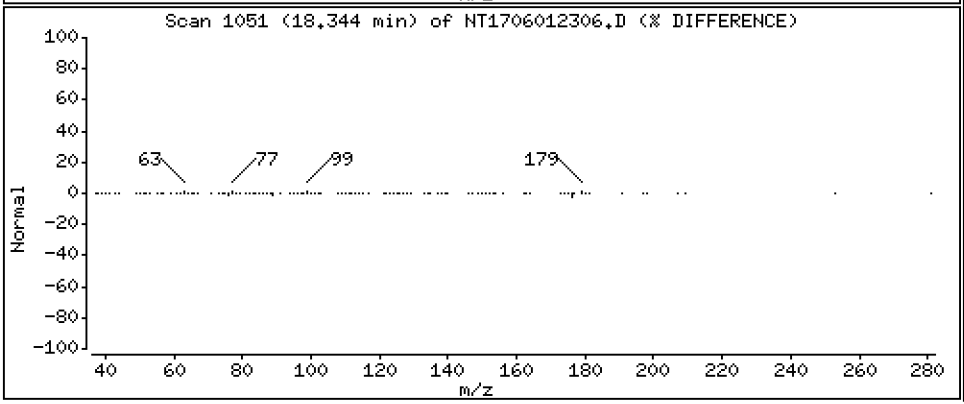
61 Anthracene

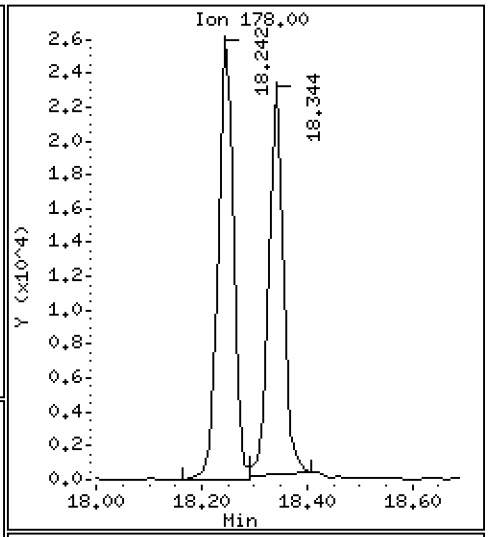
Concentration: 0.1819 ug/mL

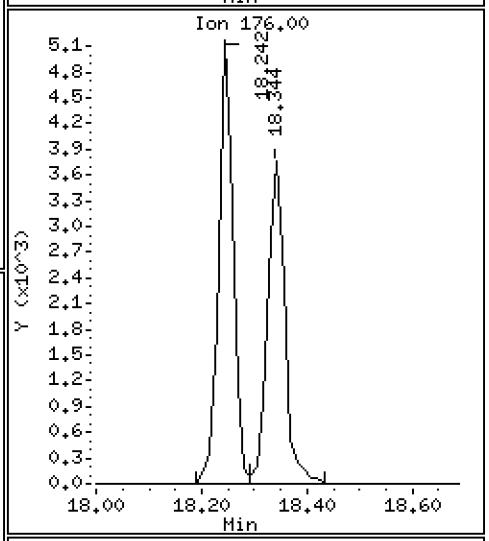


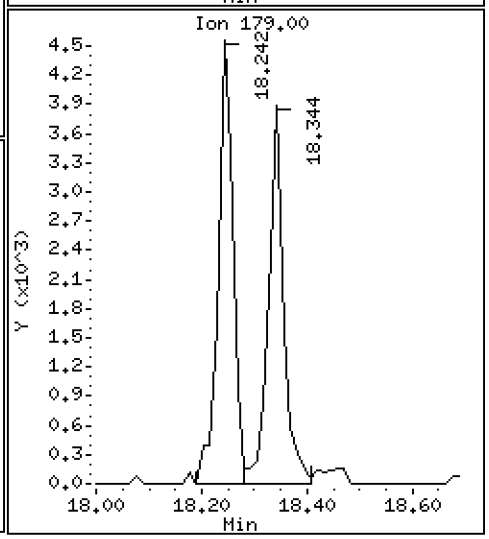












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

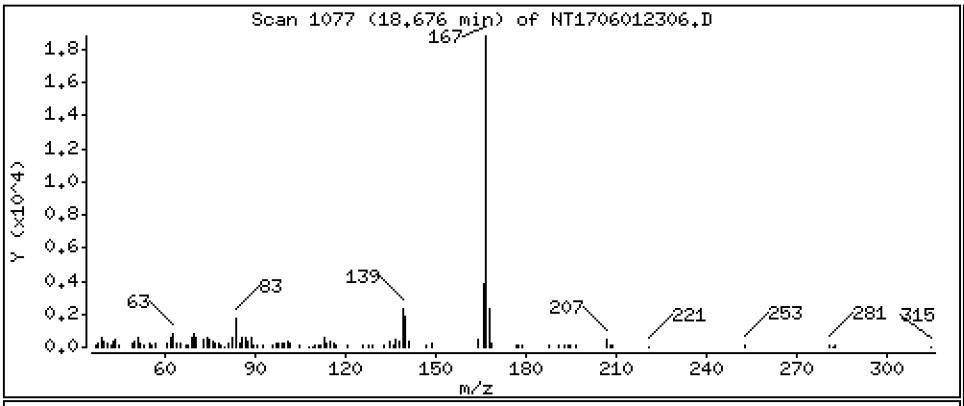
Operator: VTS

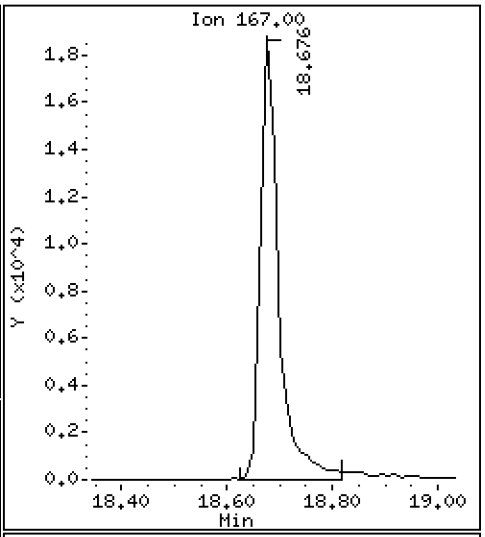
Column phase: ZB-5msi

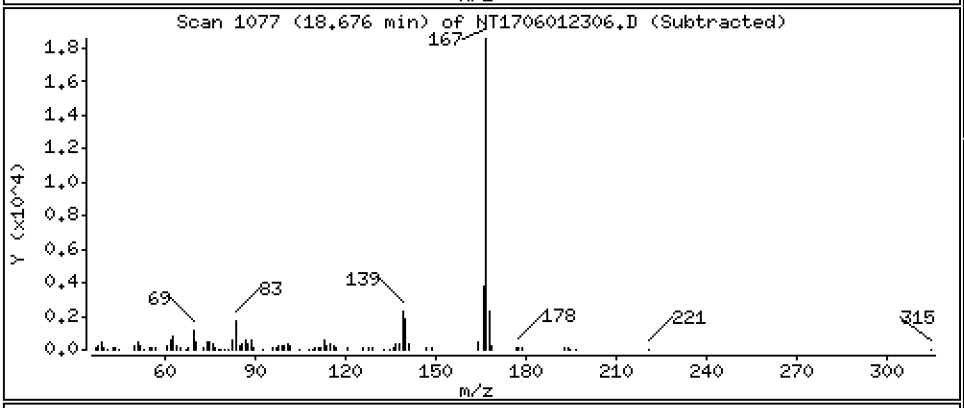
Column diameter: 0.25

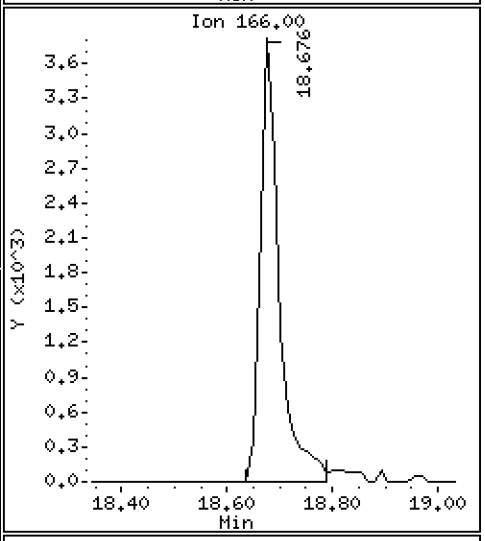
62 Carbazole

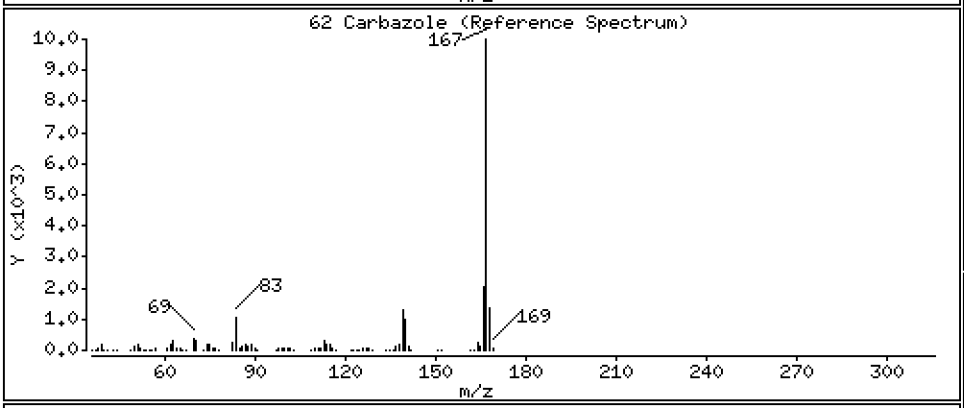
Concentration: 0.2978 ug/mL

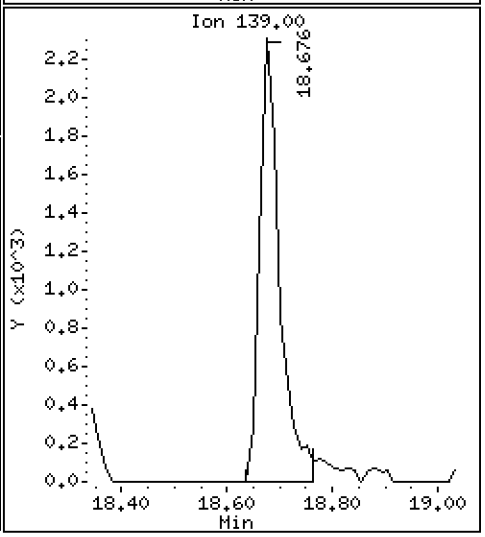


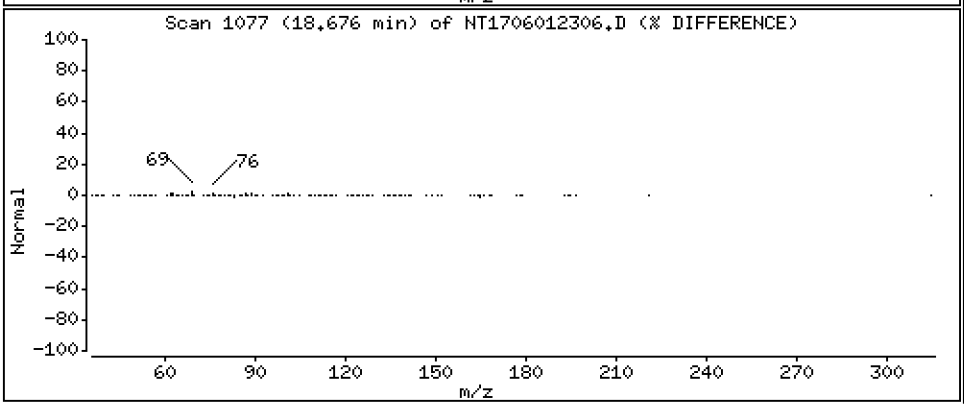












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

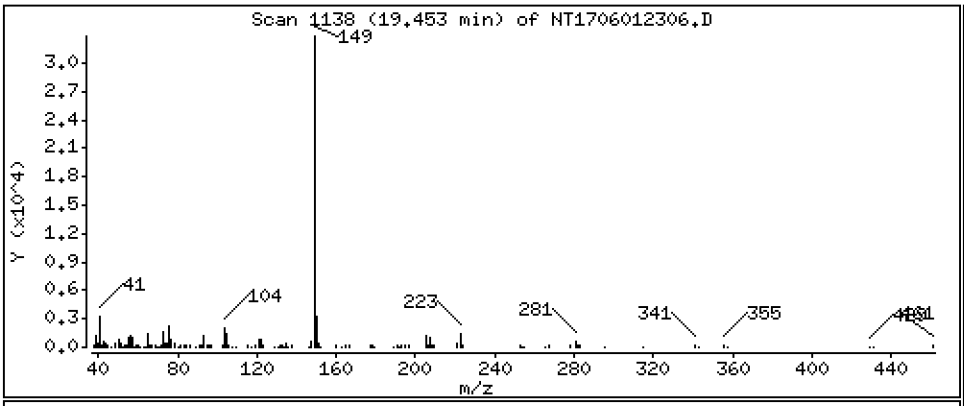
Operator: VTS

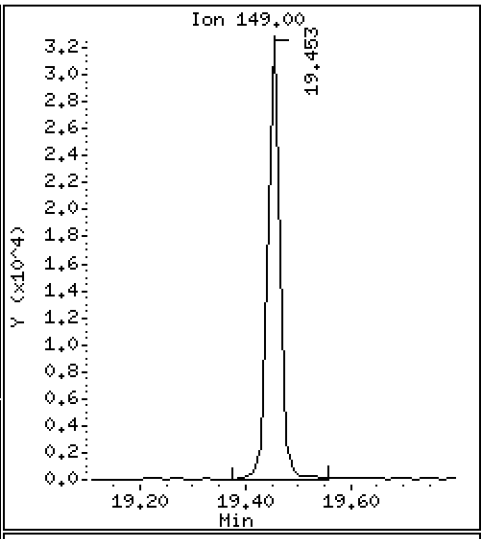
Column phase: ZB-5msi

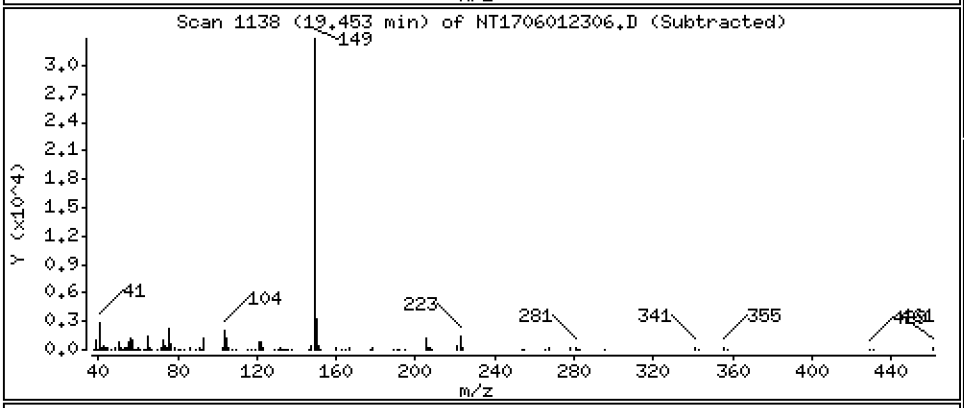
Column diameter: 0.25

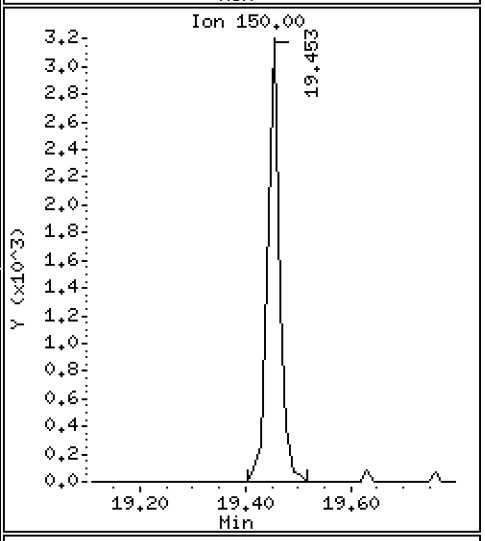
63 Di-n-butylphthalate

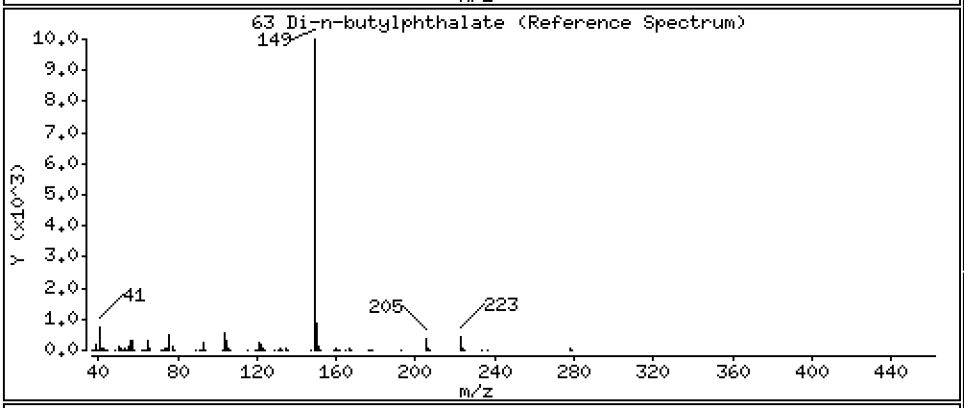
Concentration: 0.1884 ug/mL

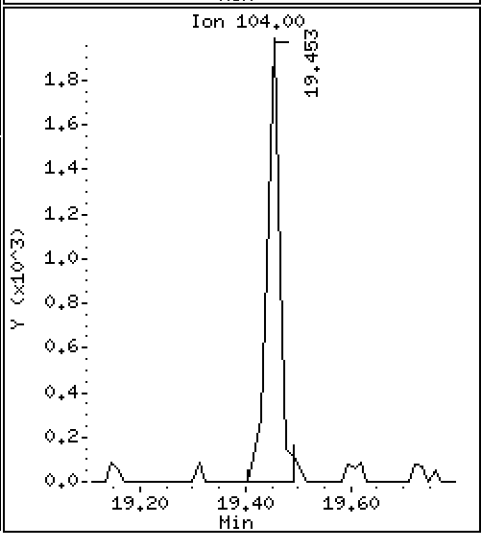


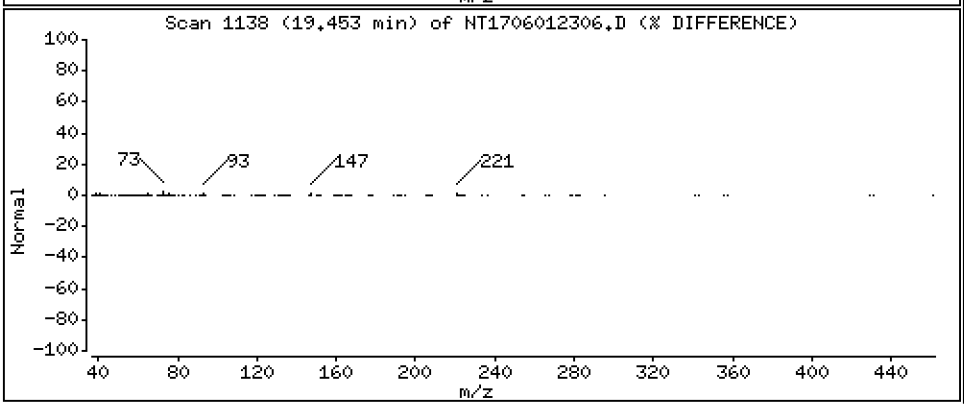












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

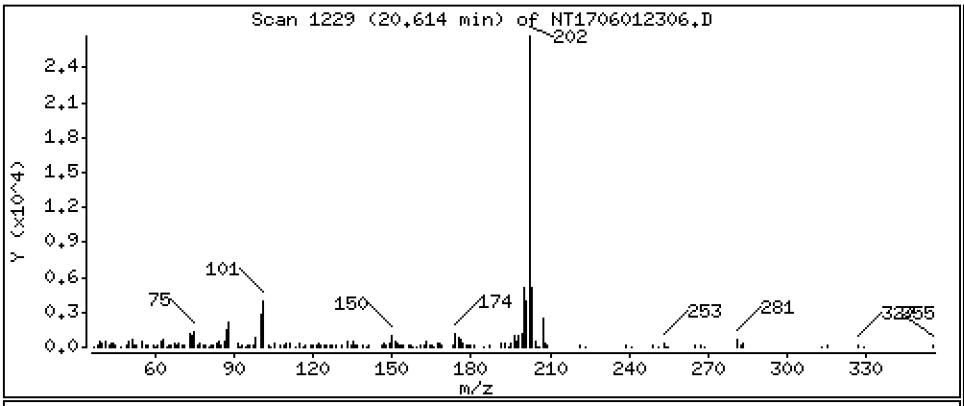
Operator: VTS

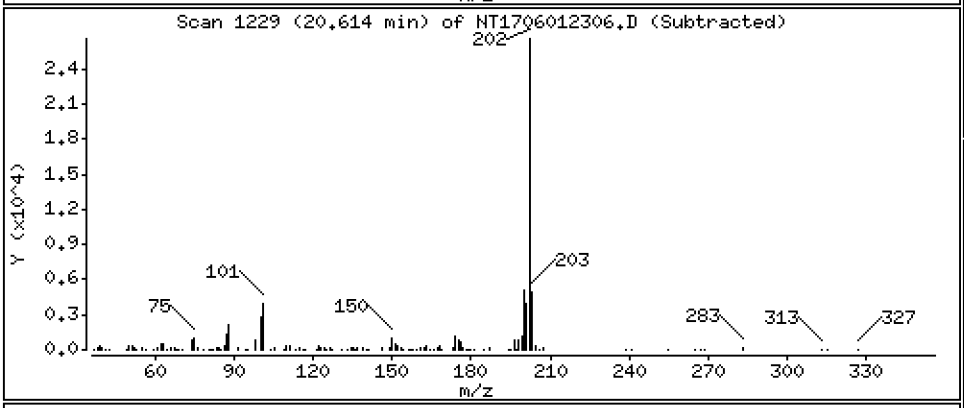
Column phase: ZB-5msi

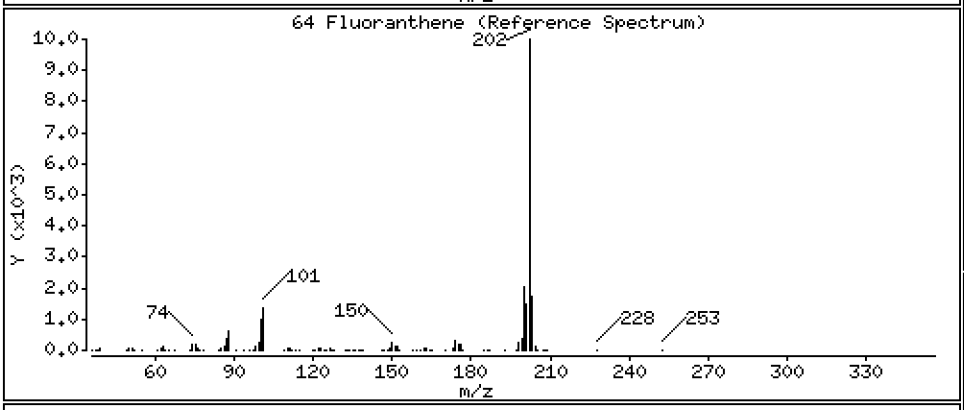
Column diameter: 0.25

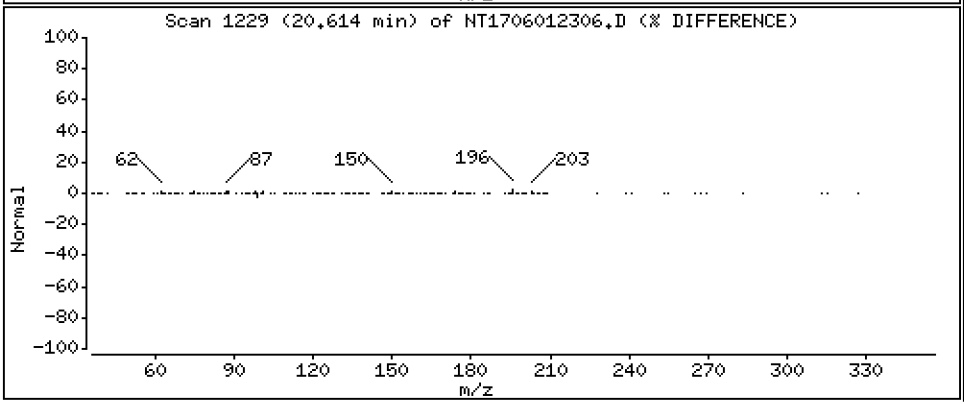
64 Fluoranthene

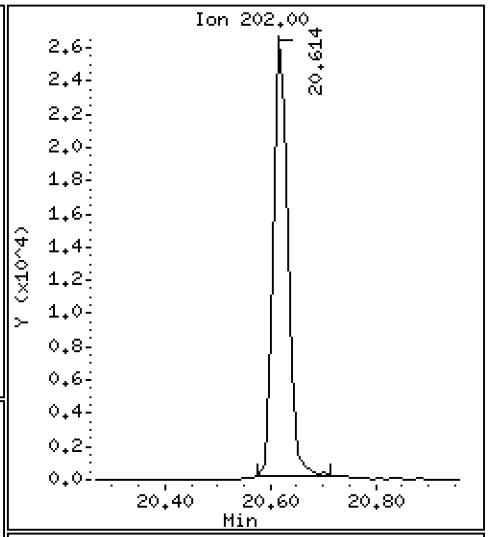
Concentration: 0.1843 ug/mL

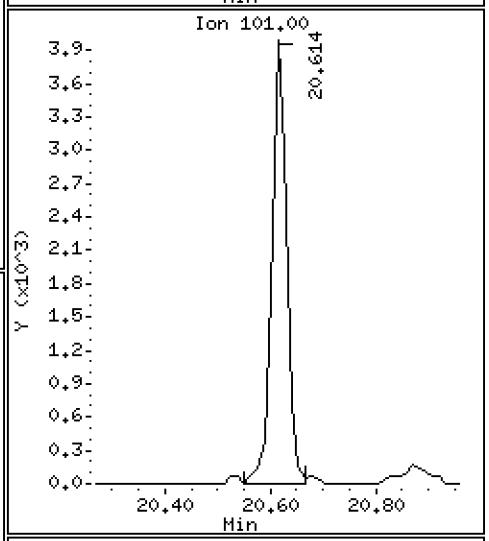


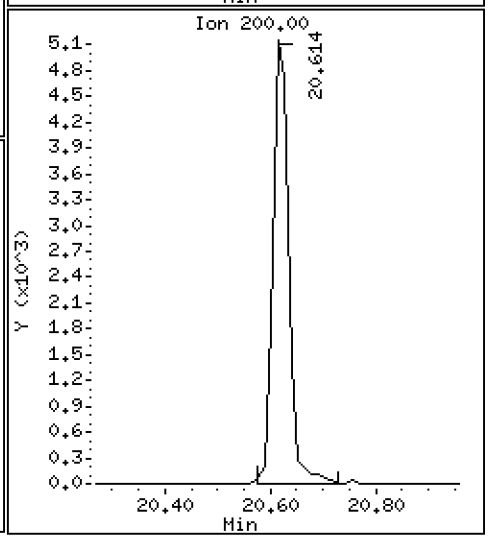












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

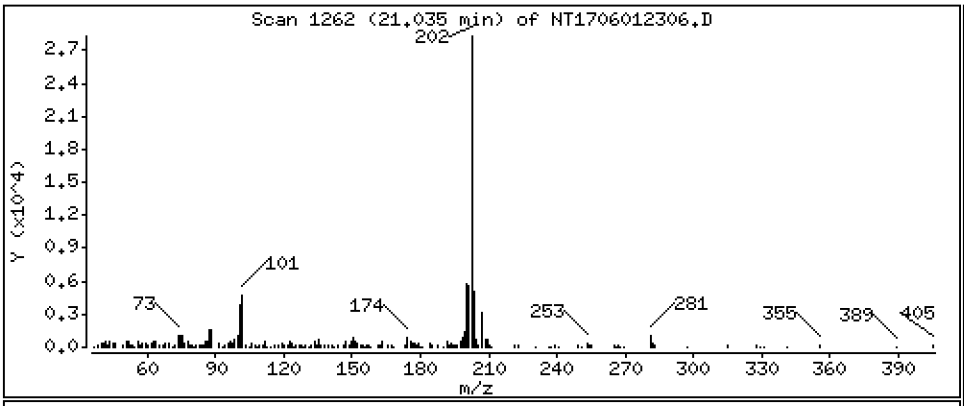
Operator: VTS

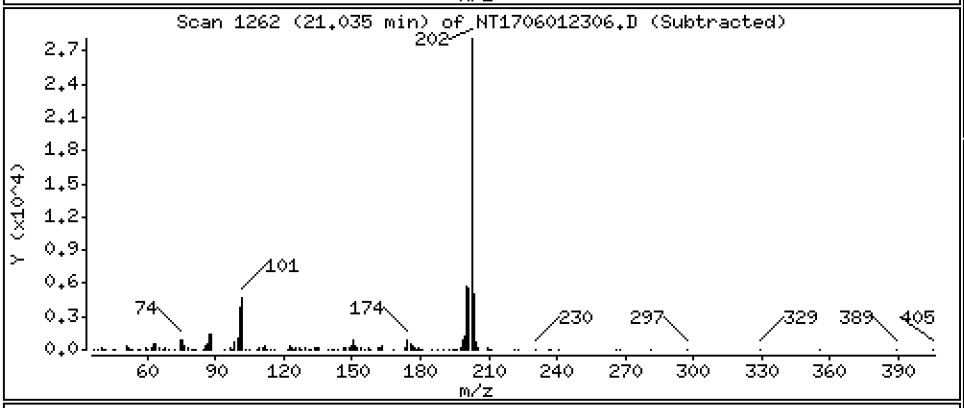
Column phase: ZB-5msi

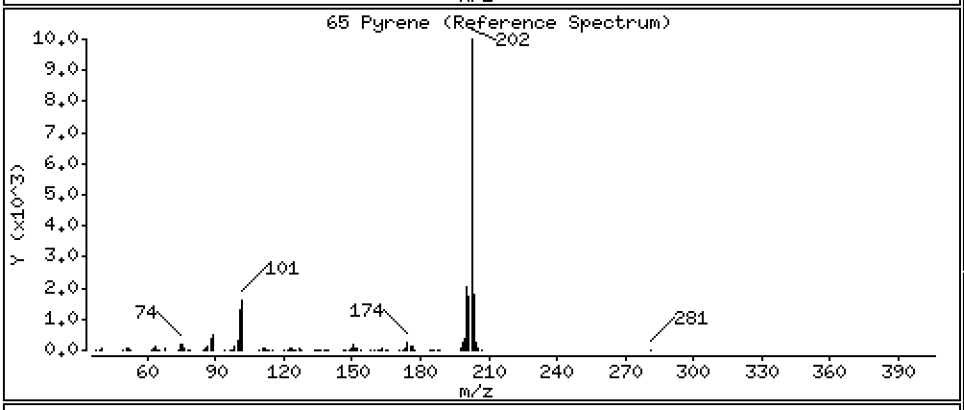
Column diameter: 0.25

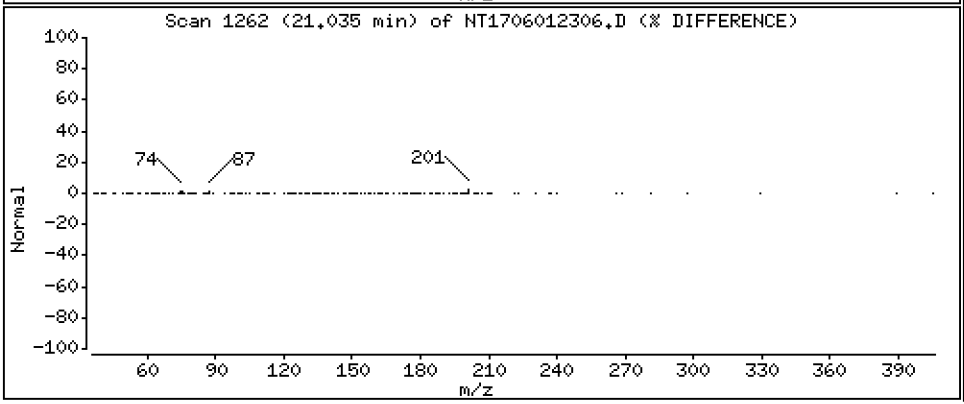
65 Pyrene

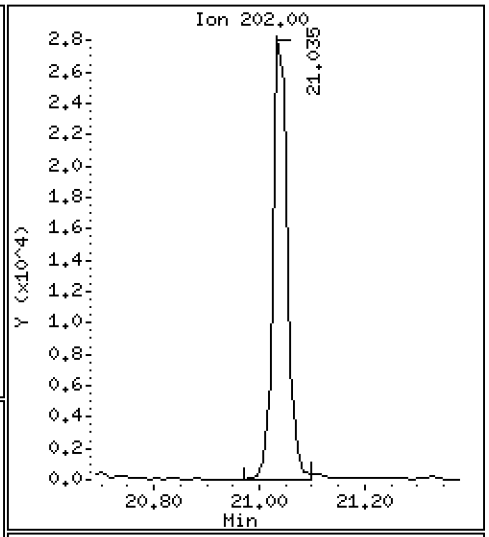
Concentration: 0.1922 ug/mL

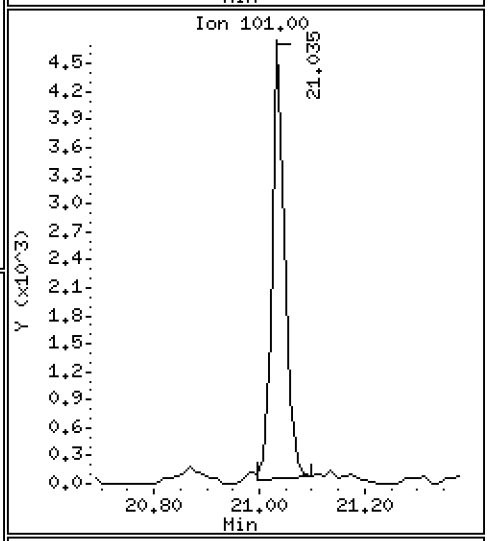


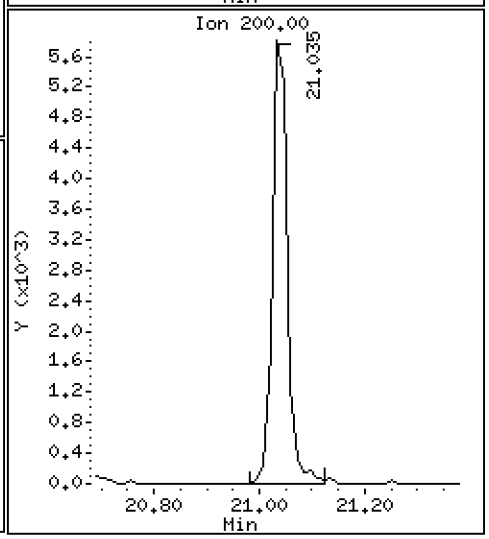












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

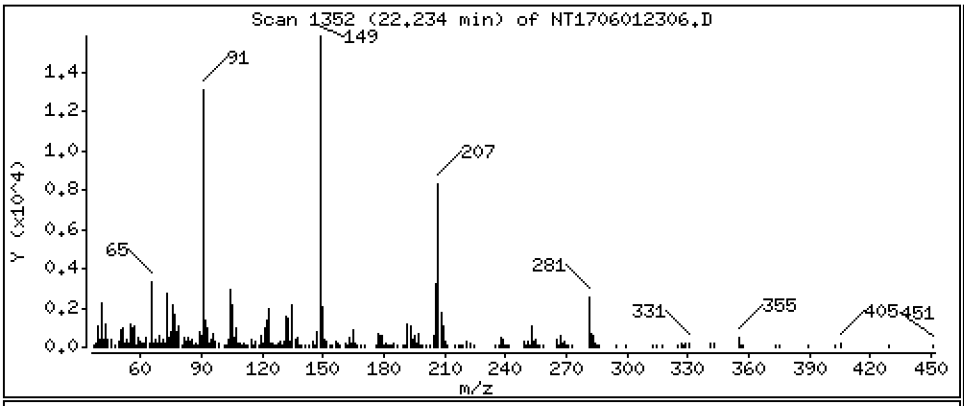
Operator: VTS

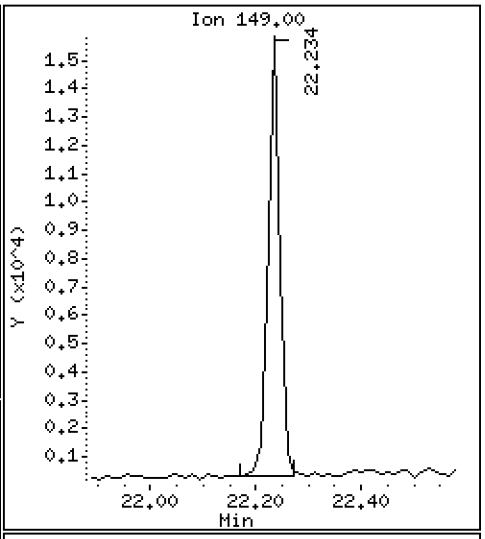
Column phase: ZB-5msi

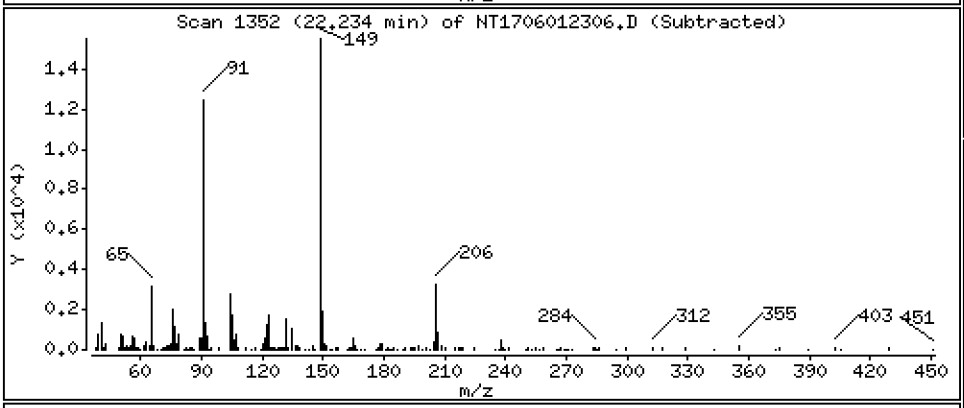
Column diameter: 0.25

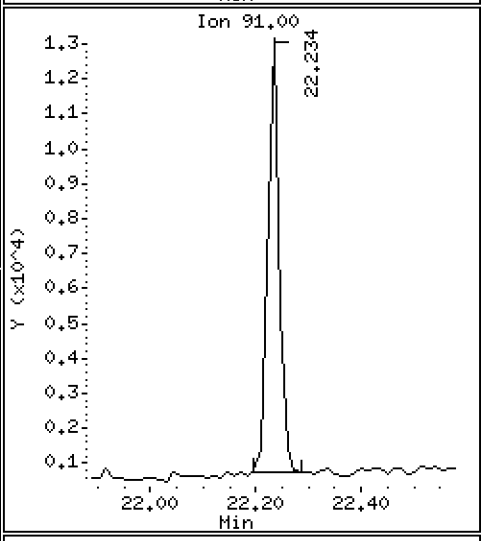
67 Butylbenzylphthalate

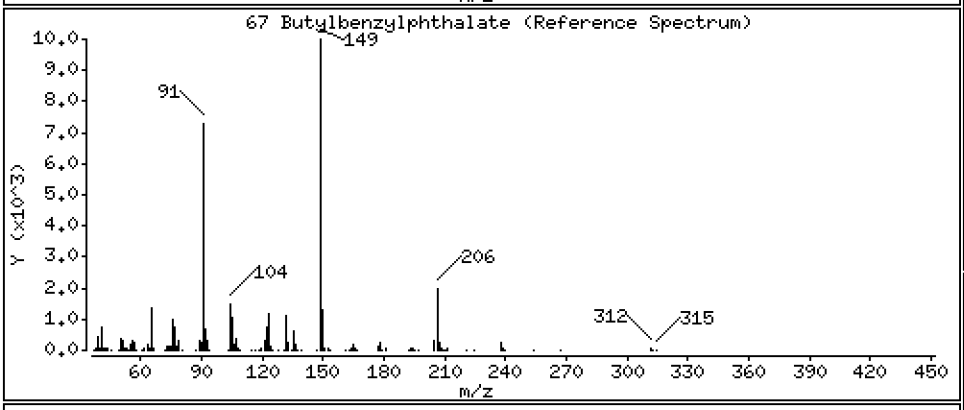
Concentration: 0.1890 ug/mL

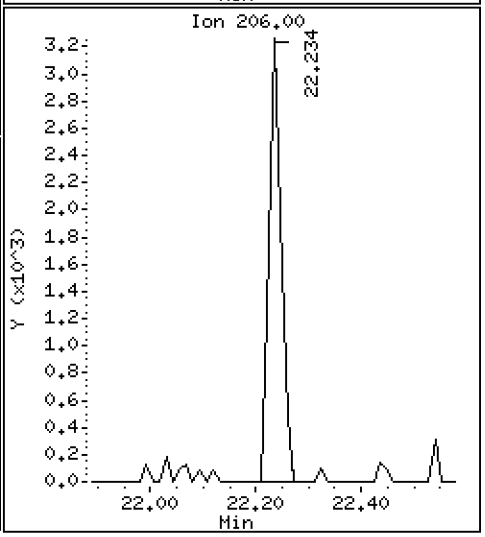


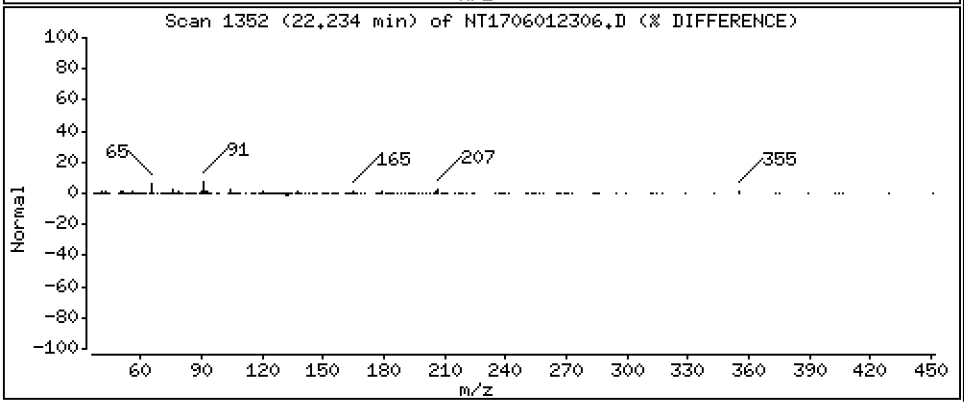












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

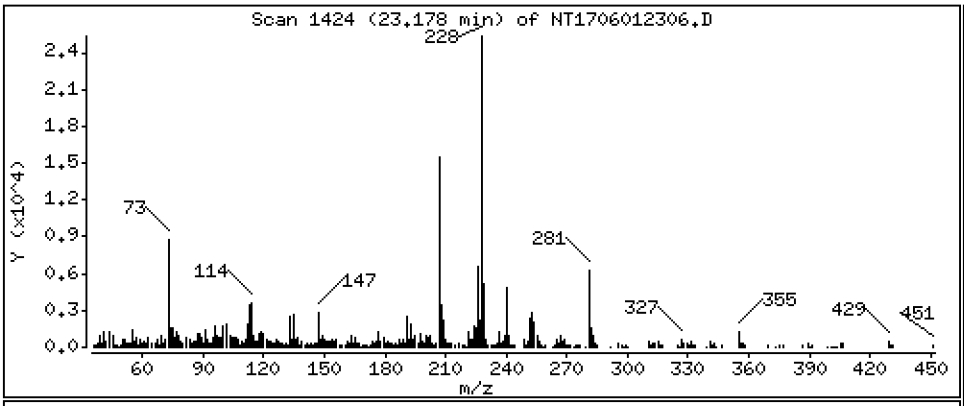
Operator: VTS

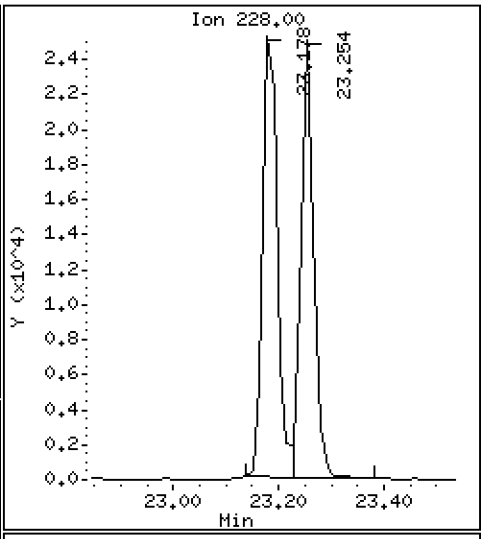
Column phase: ZB-5msi

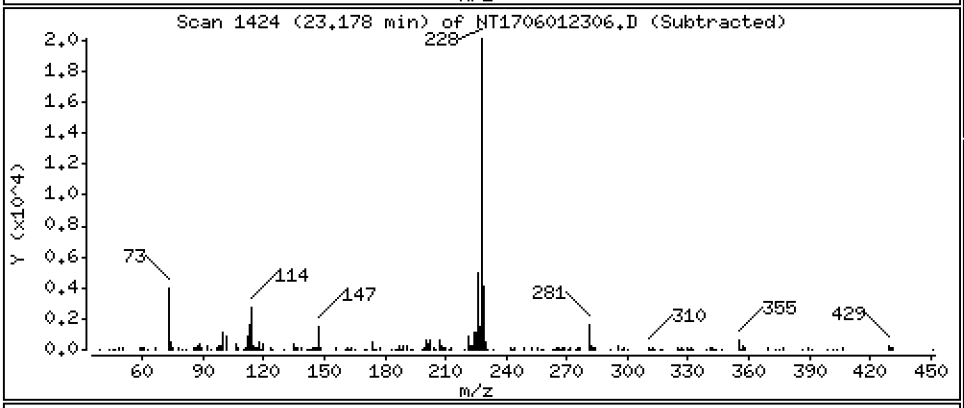
Column diameter: 0.25

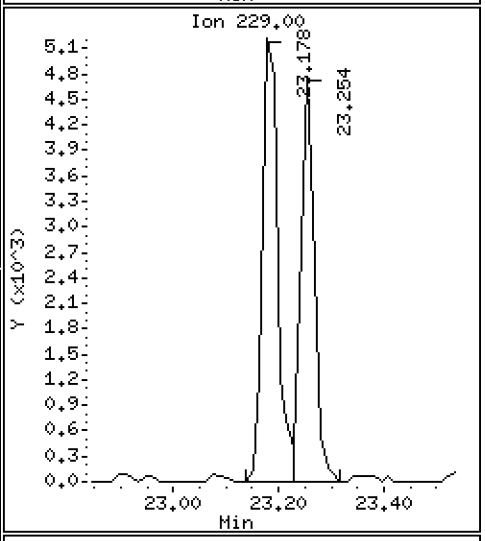
68 Benzo(a)anthracene

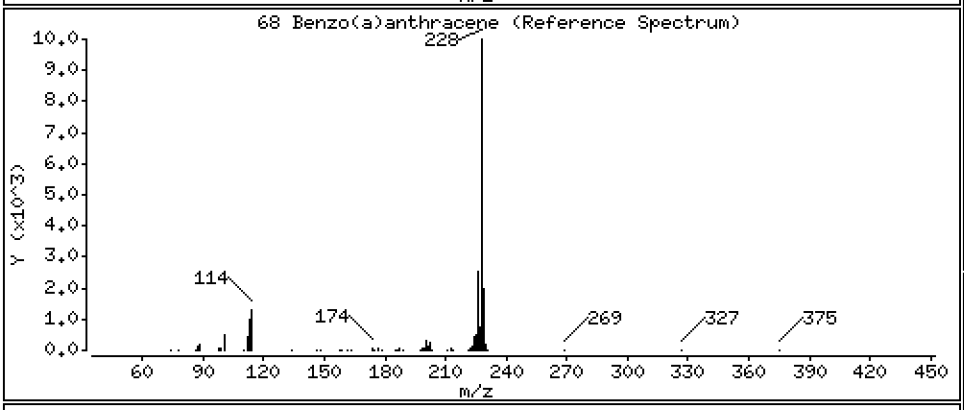
Concentration: 0.2196 ug/mL

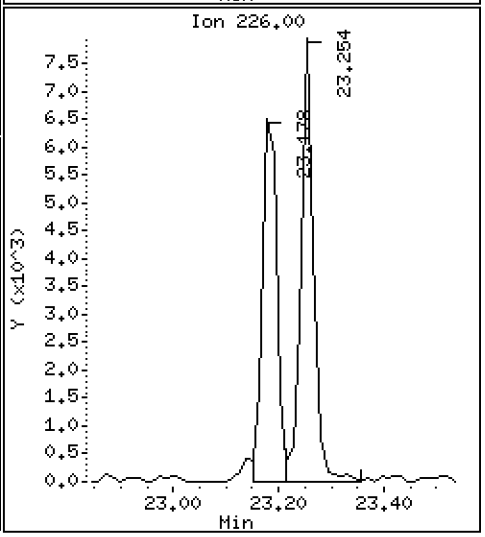


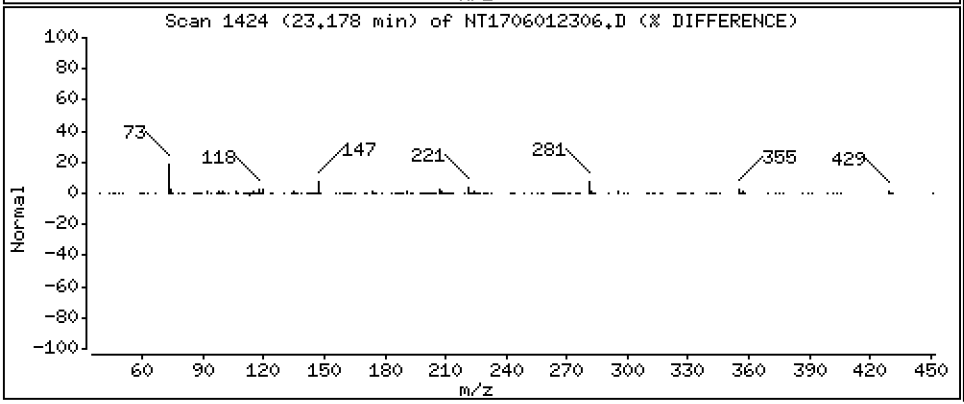












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

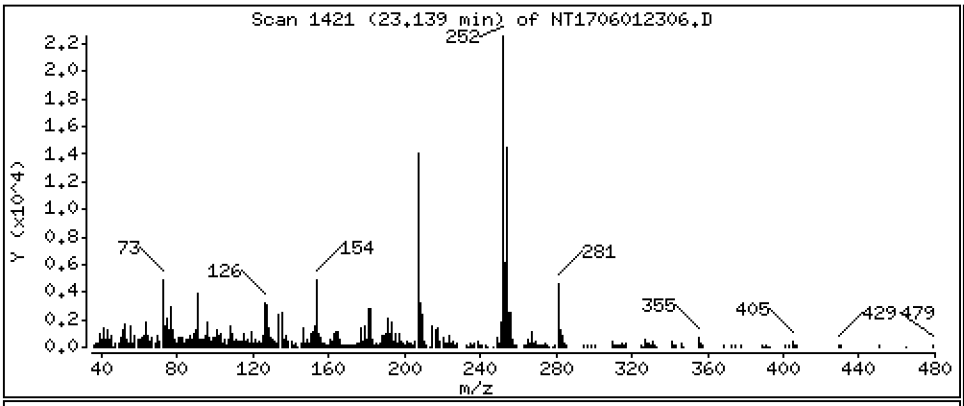
Operator: VTS

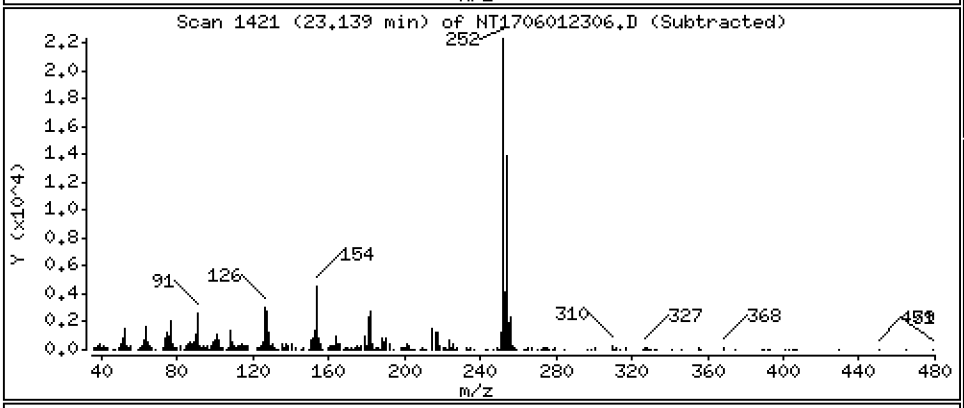
Column phase: ZB-5msi

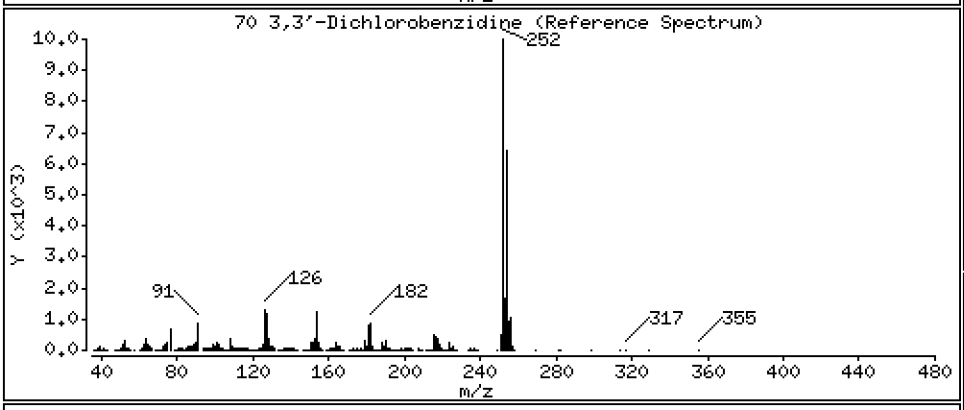
Column diameter: 0.25

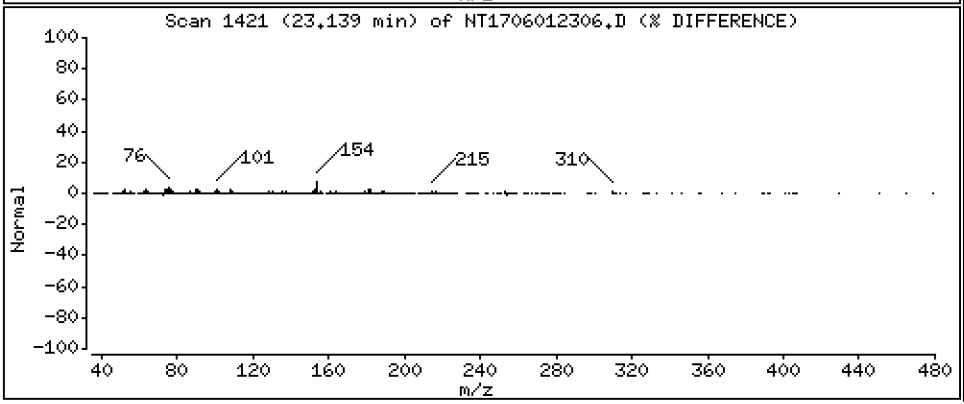
70 3,3'-Dichlorobenzidine

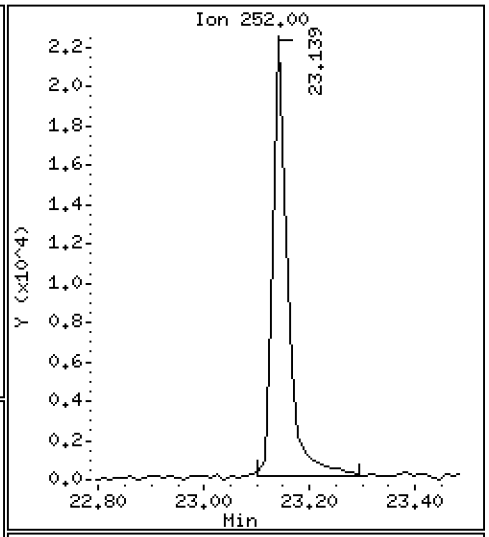
Concentration: 1.033 ug/mL

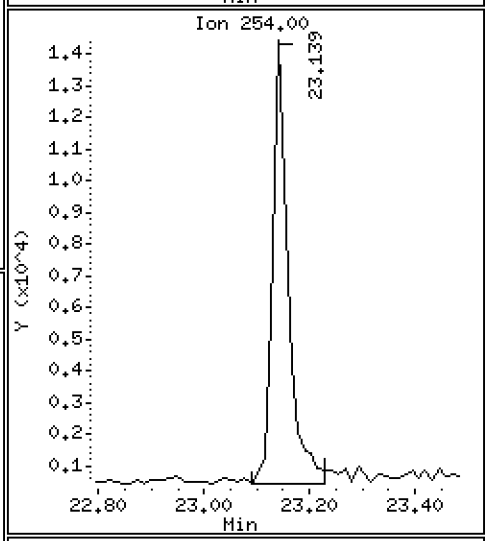


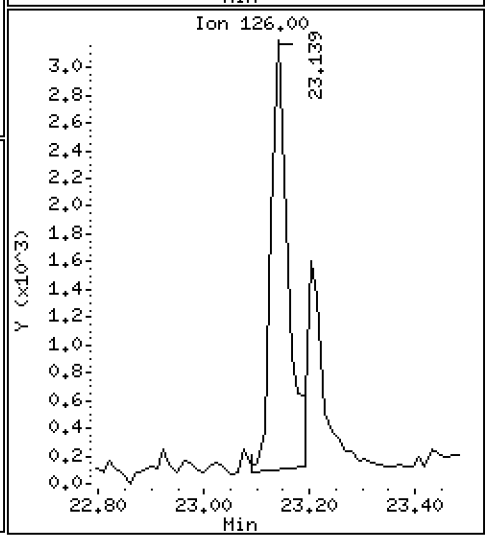












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

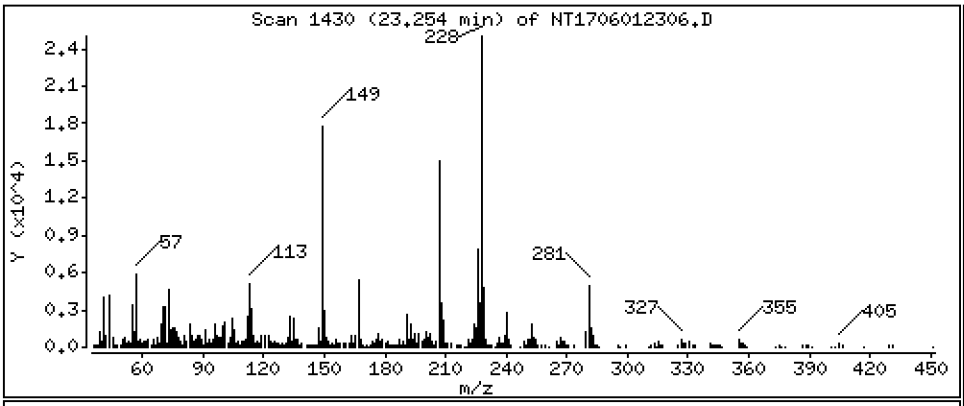
Operator: VTS

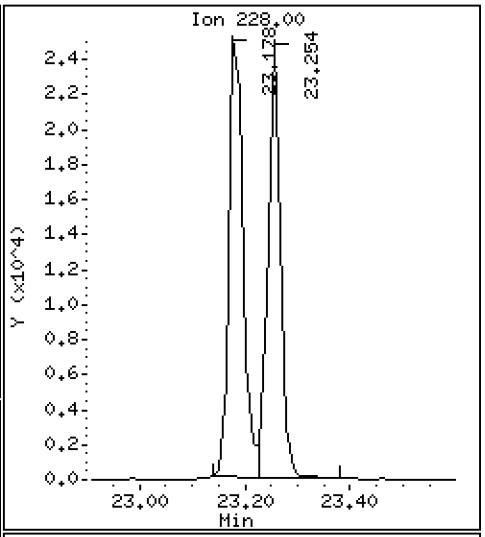
Column phase: ZB-5msi

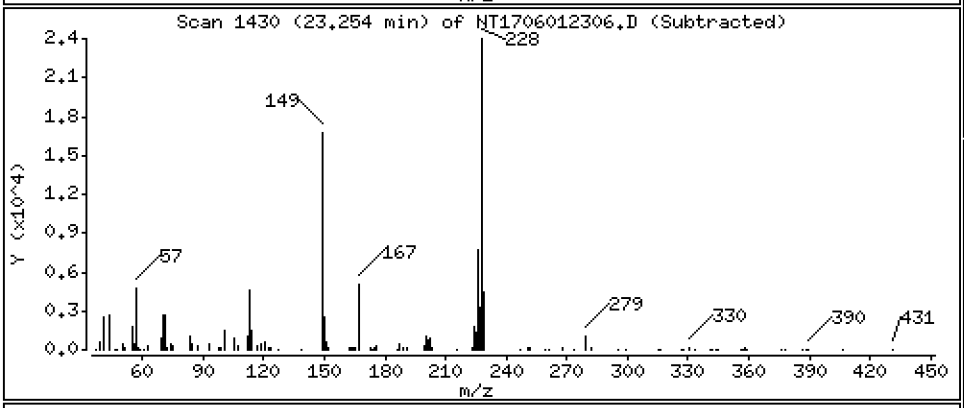
Column diameter: 0.25

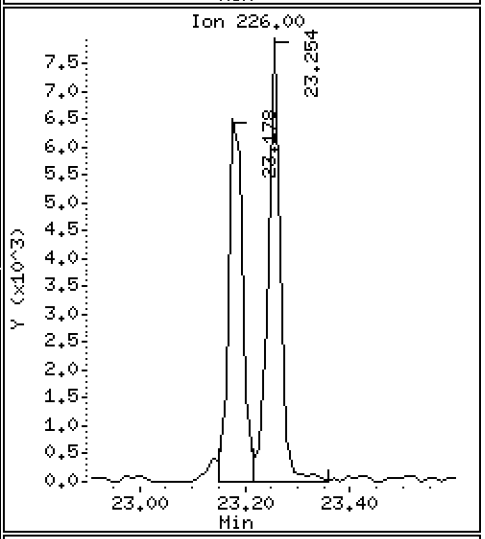
71 Chrysene

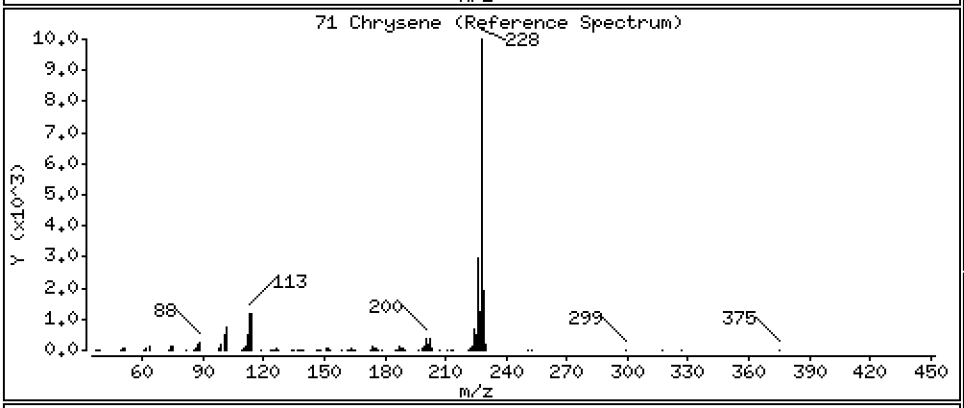
Concentration: 0.2031 ug/mL

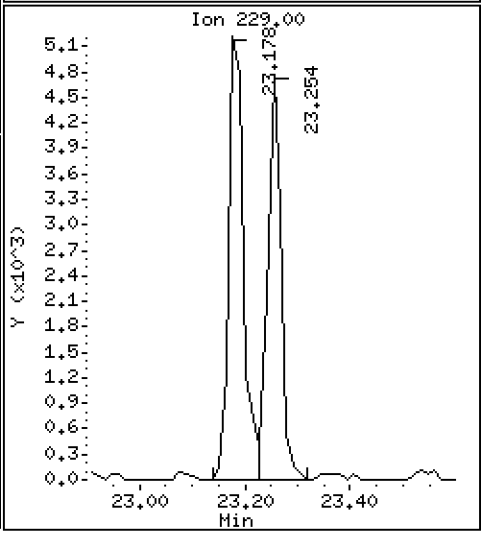


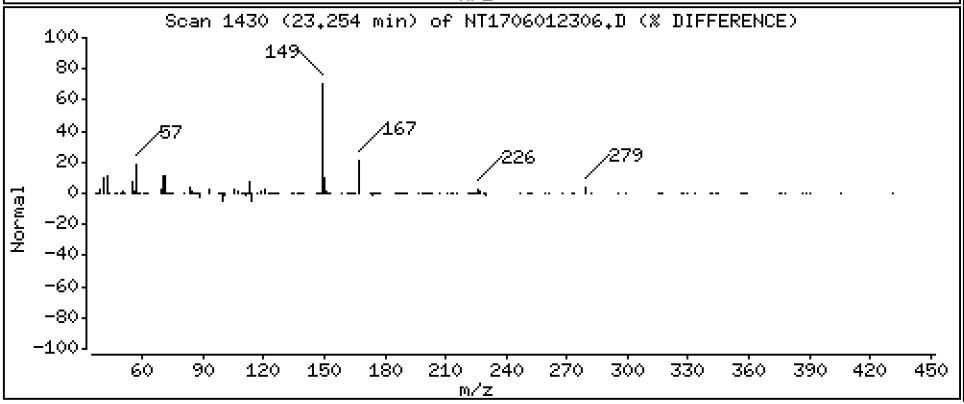












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

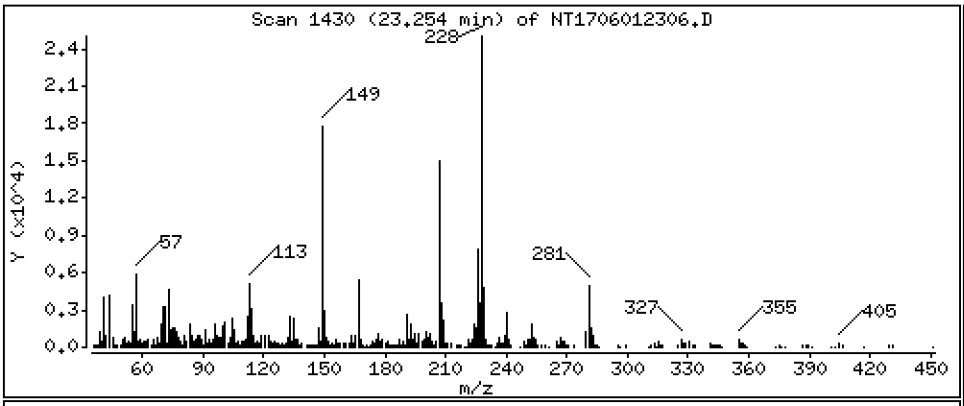
Operator: VTS

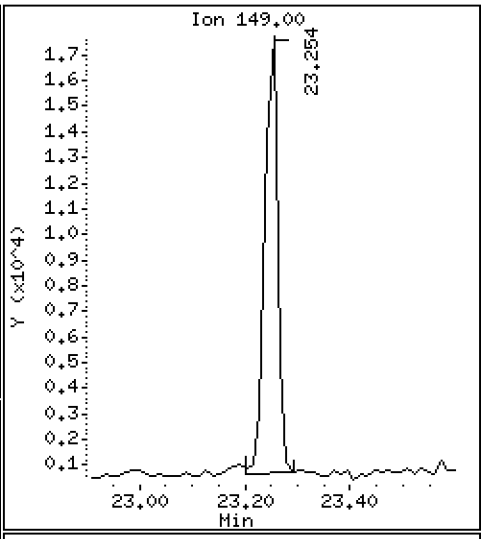
Column phase: ZB-5msi

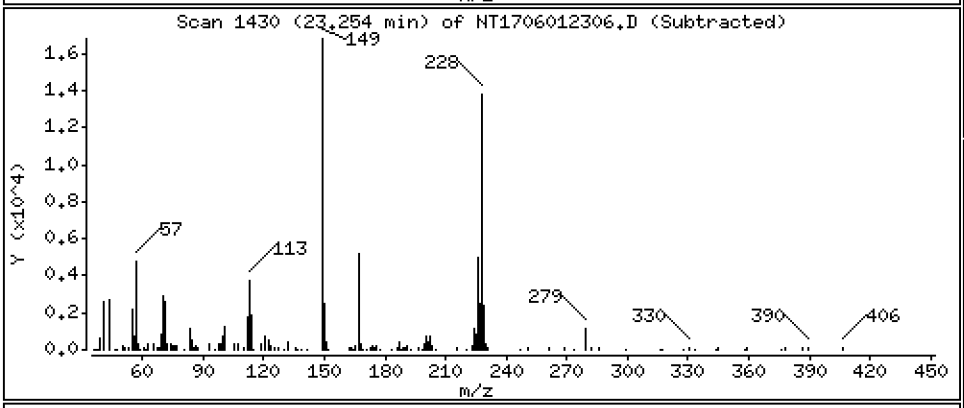
Column diameter: 0.25

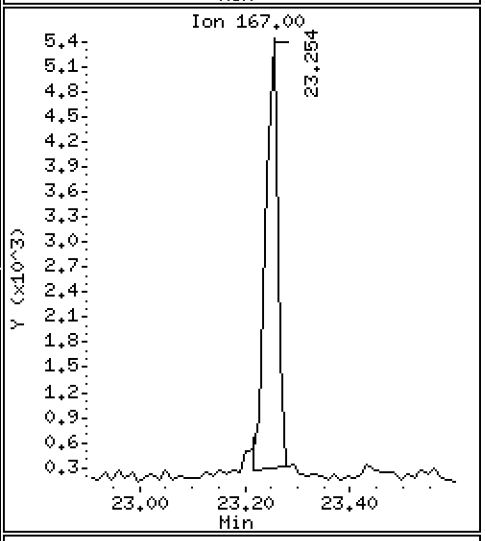
72 bis(2-Ethylhexyl)phthalate

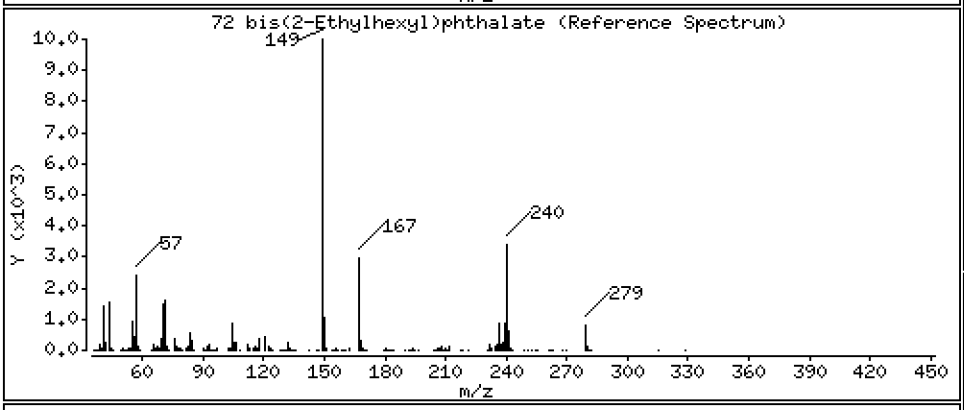
Concentration: 0.1851 ug/mL

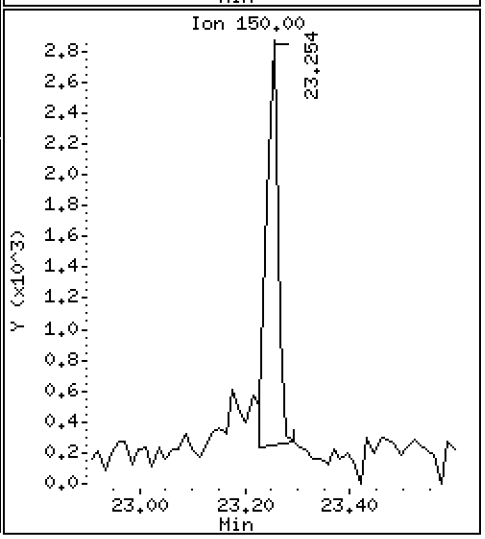


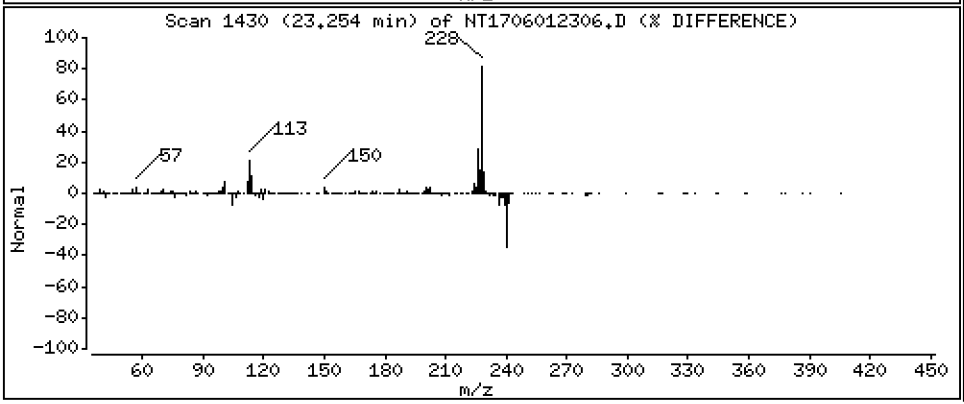












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

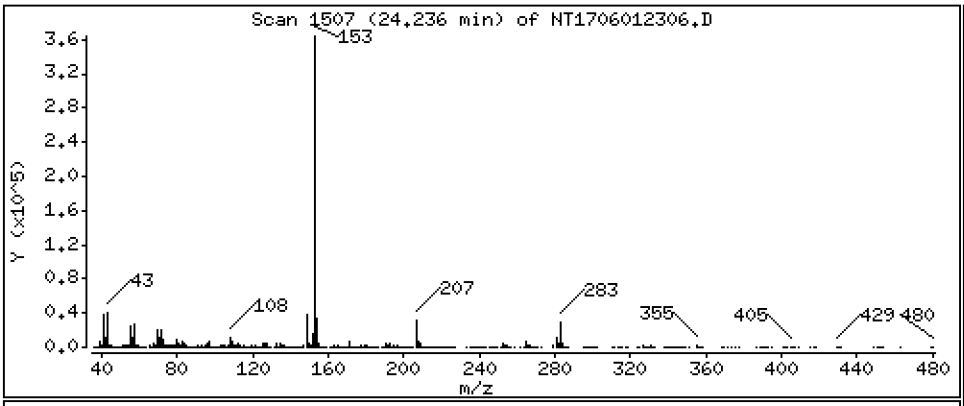
Operator: VTS

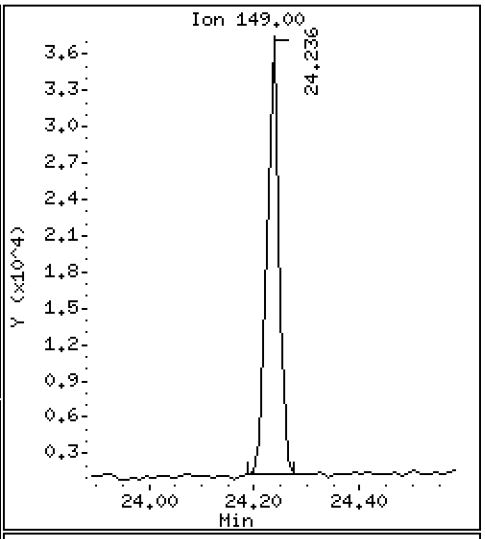
Column phase: ZB-5msi

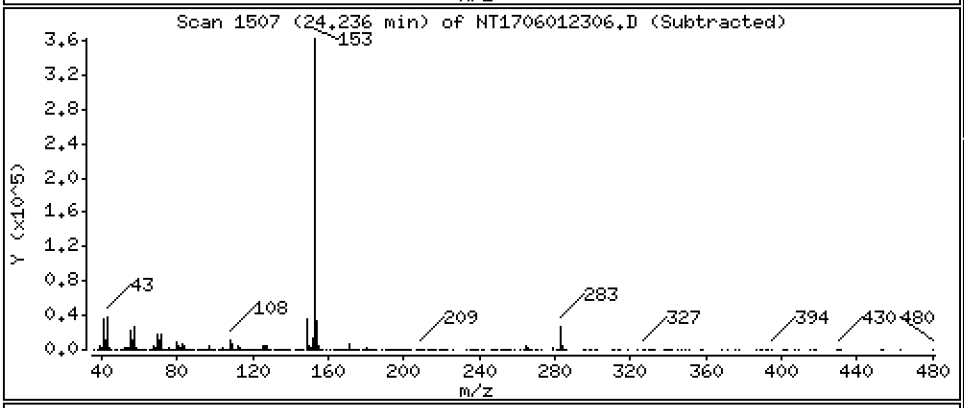
Column diameter: 0.25

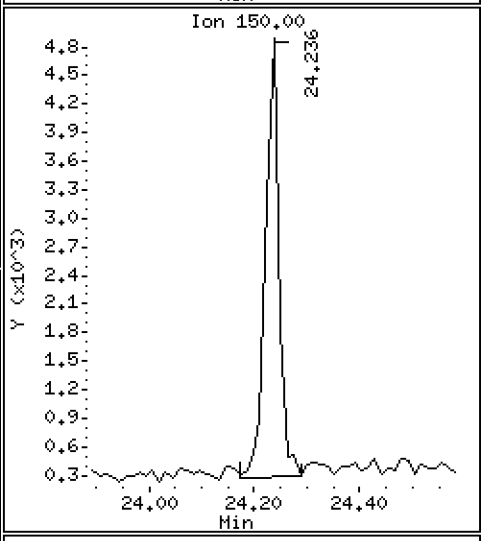
73 Di-n-octylphthalate

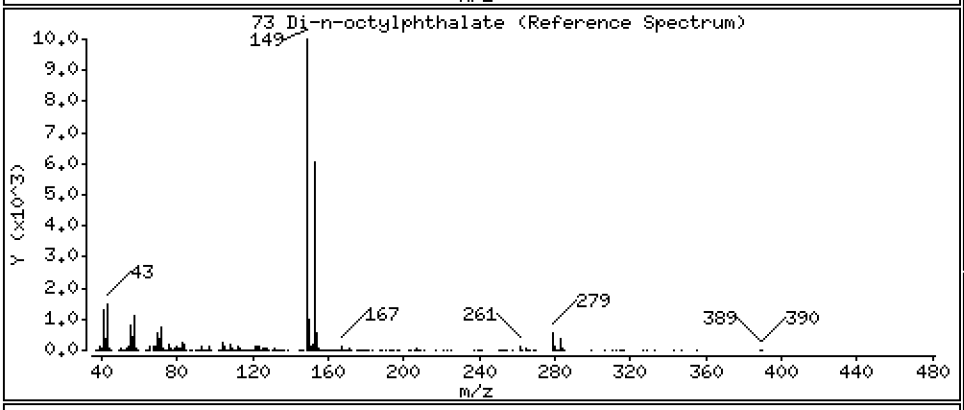
Concentration: 0.2051 ug/mL

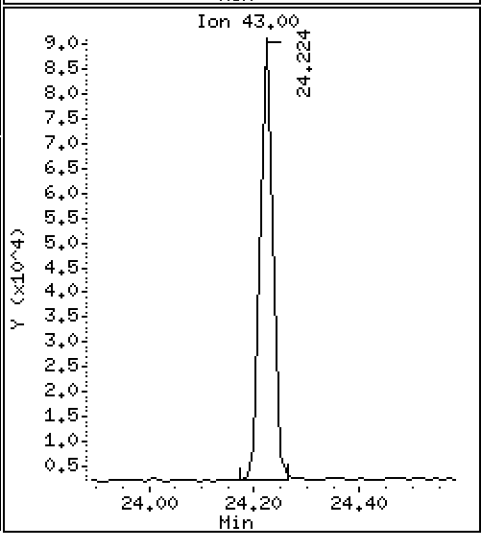


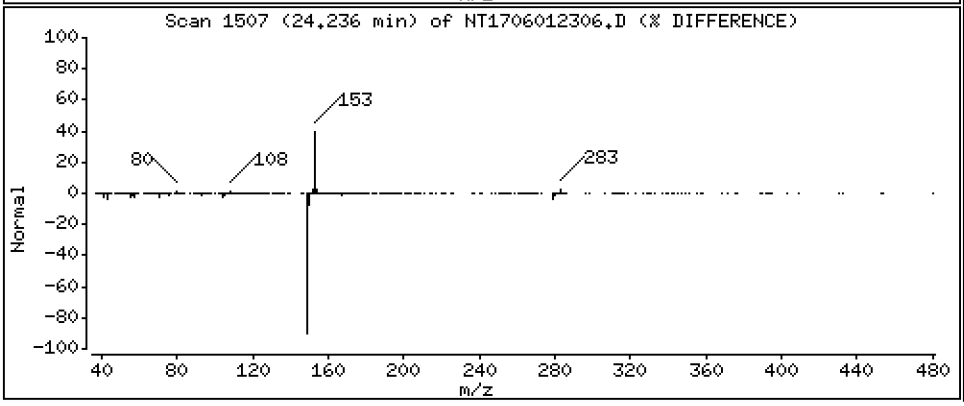












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

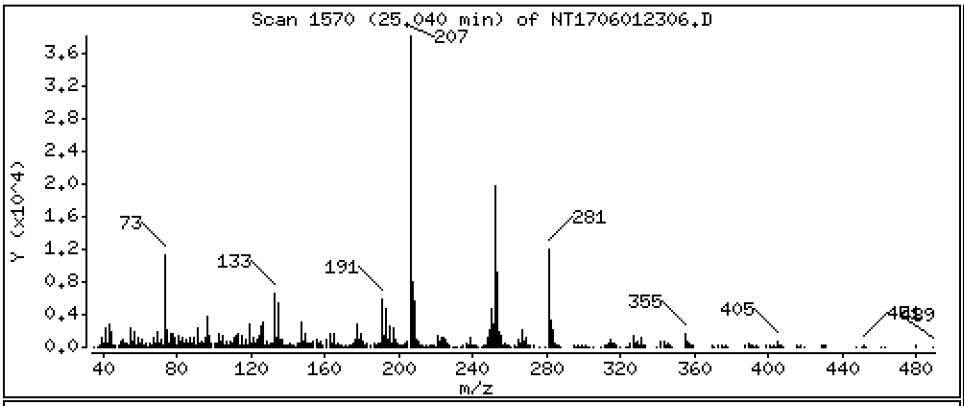
Operator: VTS

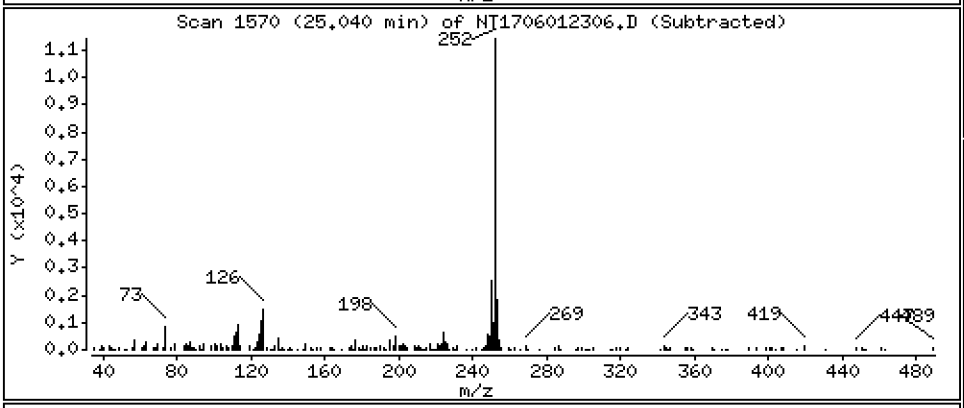
Column phase: ZB-5msi

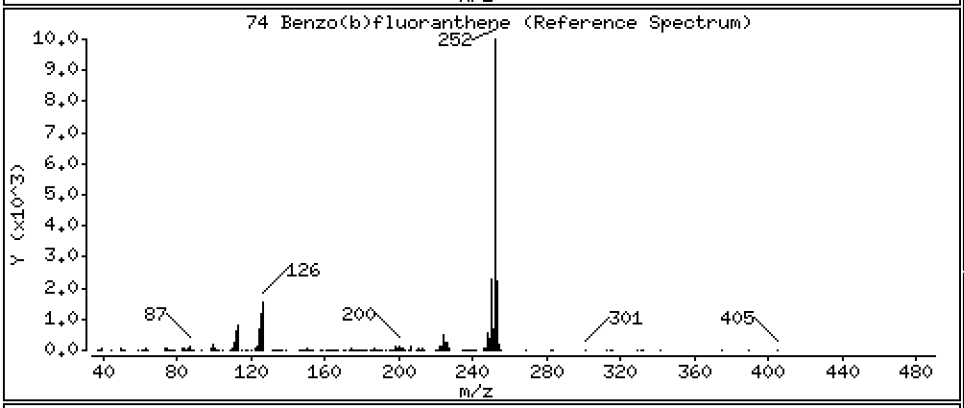
Column diameter: 0.25

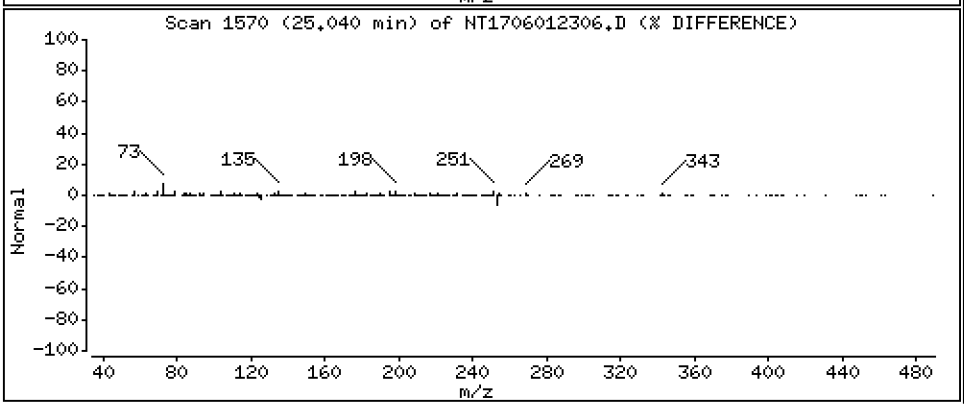
74 Benzo(b)fluoranthene

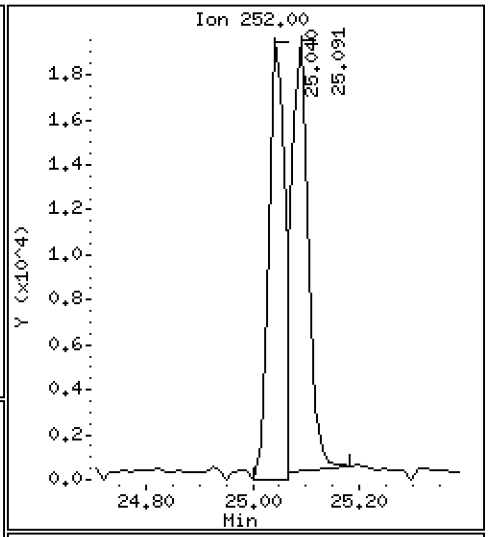
Concentration: 0.1895 ug/mL

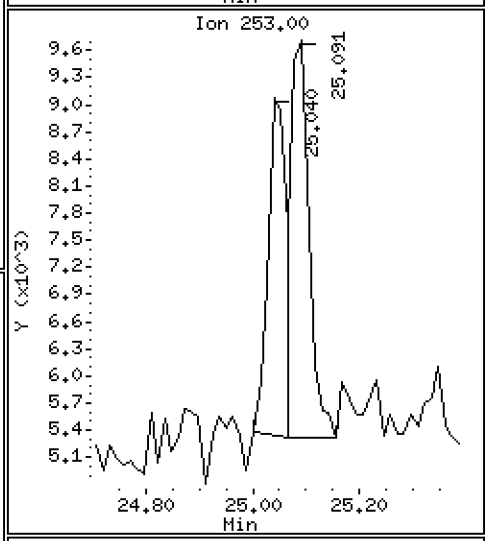


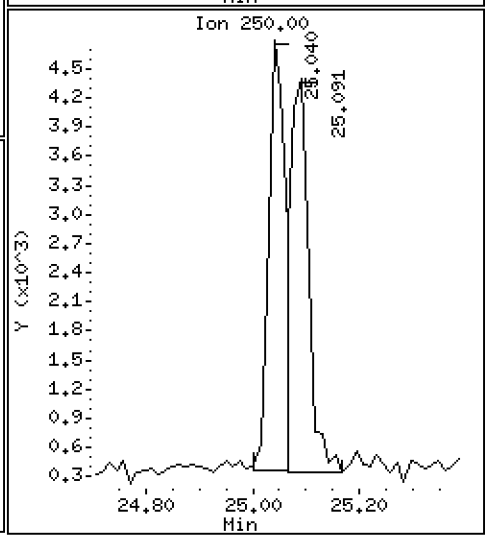












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

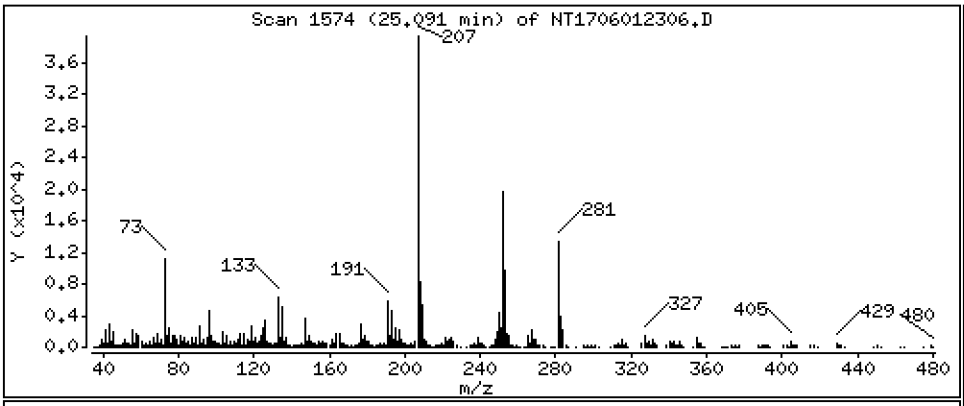
Operator: VTS

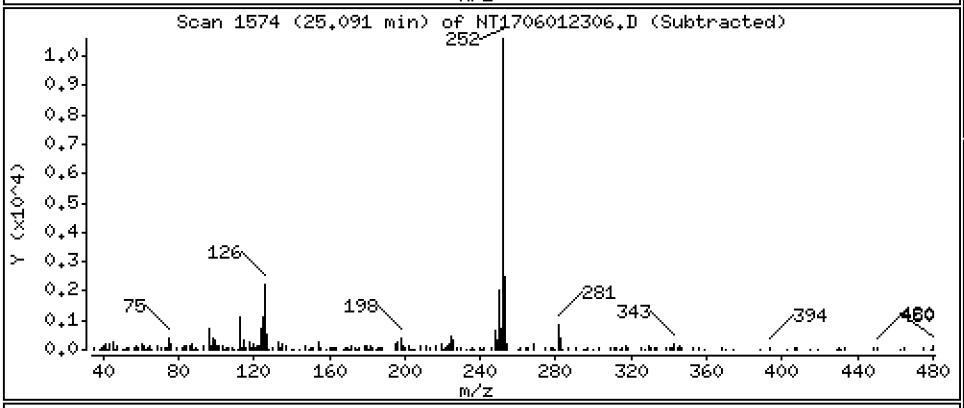
Column phase: ZB-5msi

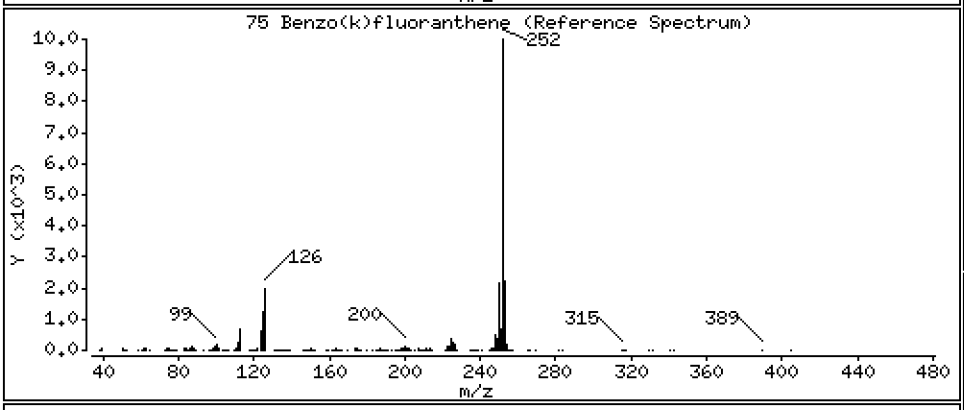
Column diameter: 0.25

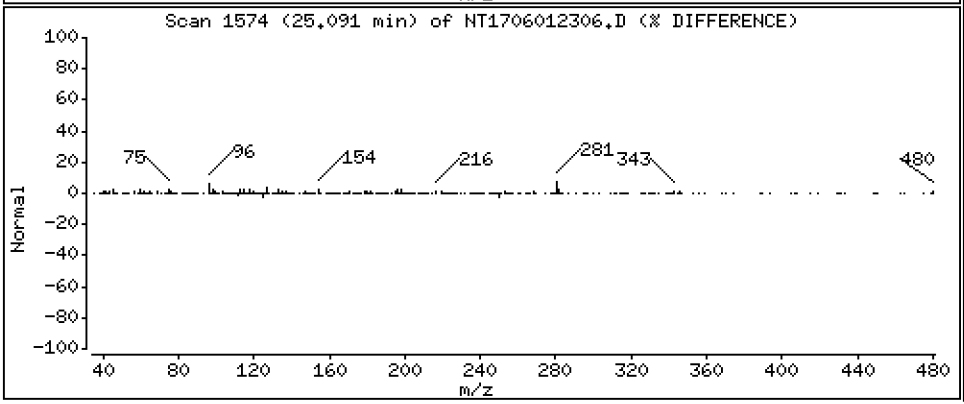
75 Benzo(k)fluoranthene

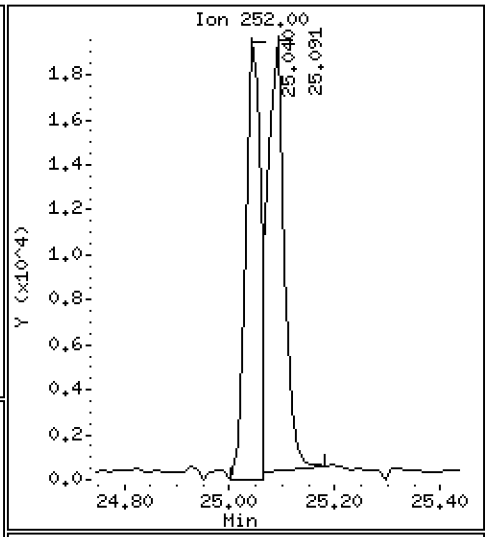
Concentration: 0.2045 ug/mL

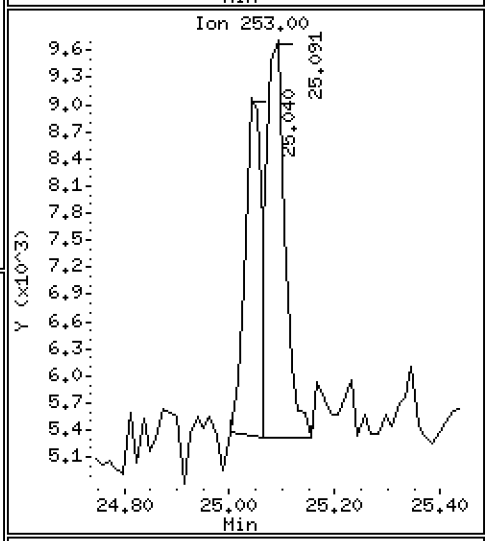


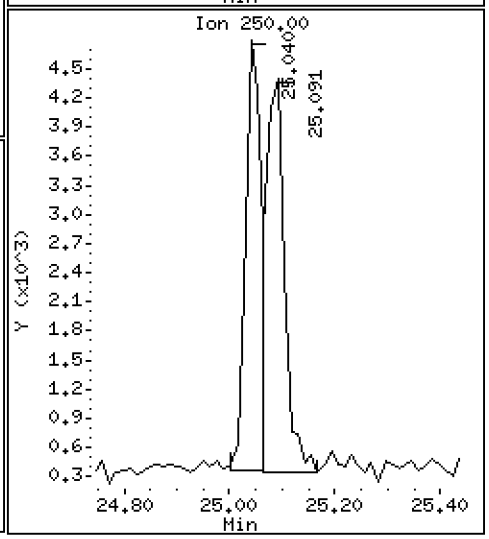












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

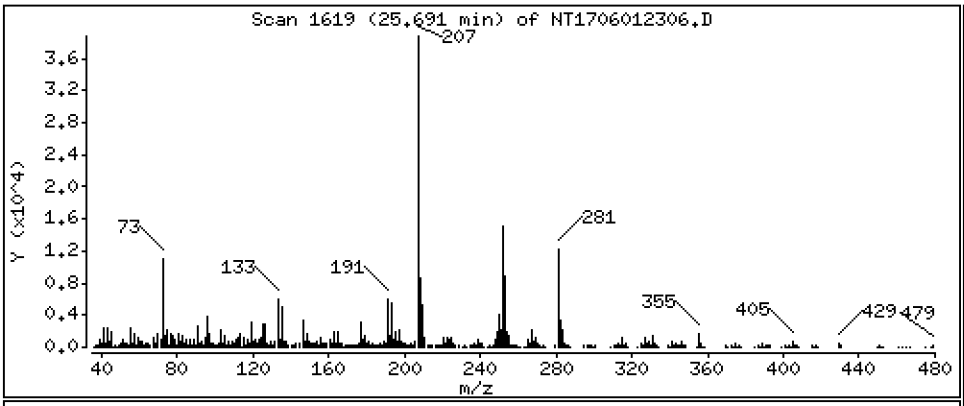
Operator: VTS

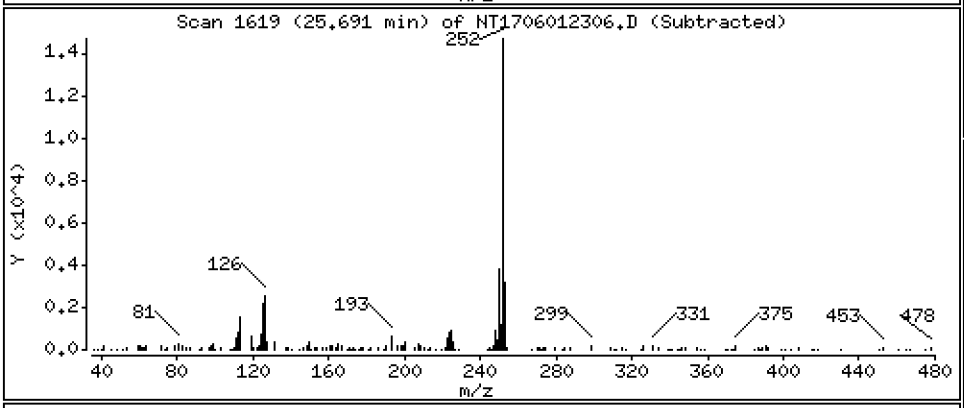
Column phase: ZB-5msi

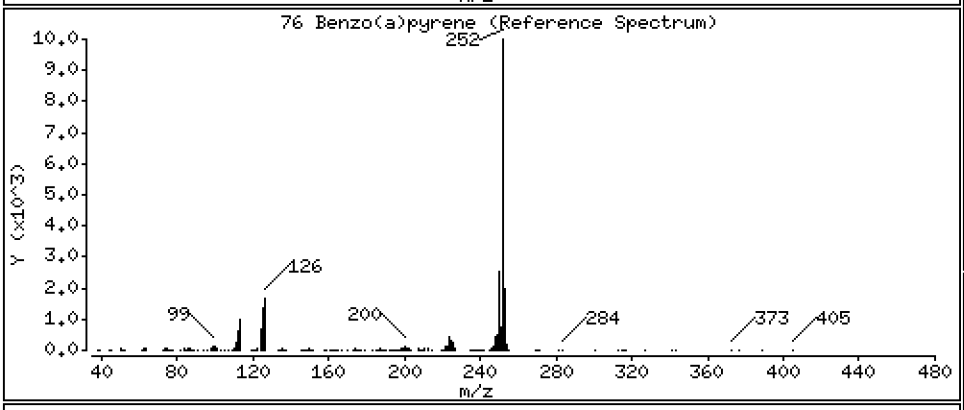
Column diameter: 0.25

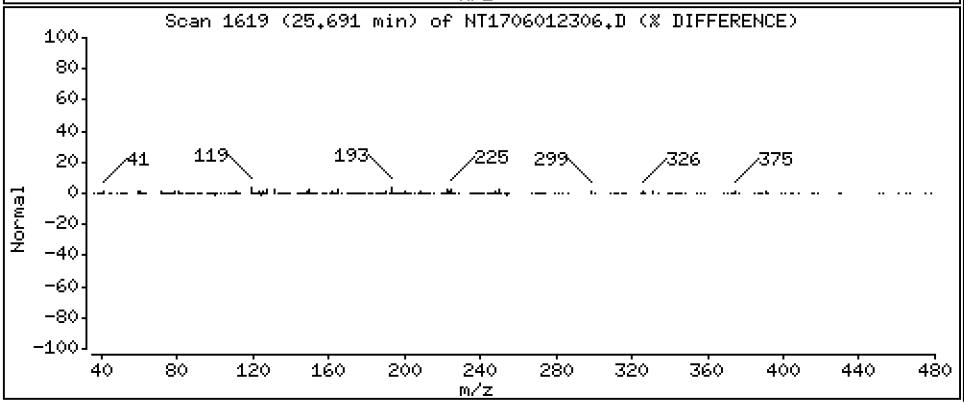
76 Benzo(a)pyrene

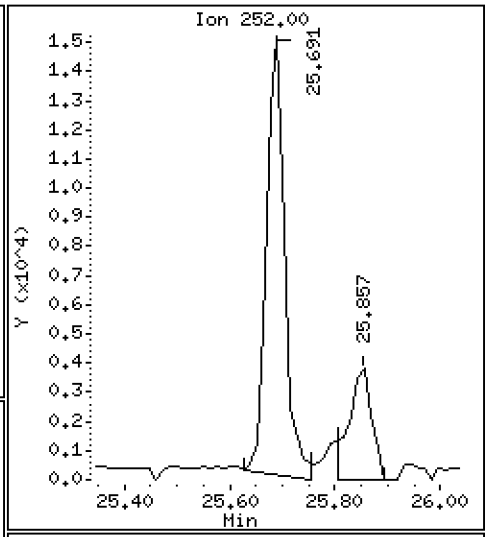
Concentration: 0.2005 ug/mL

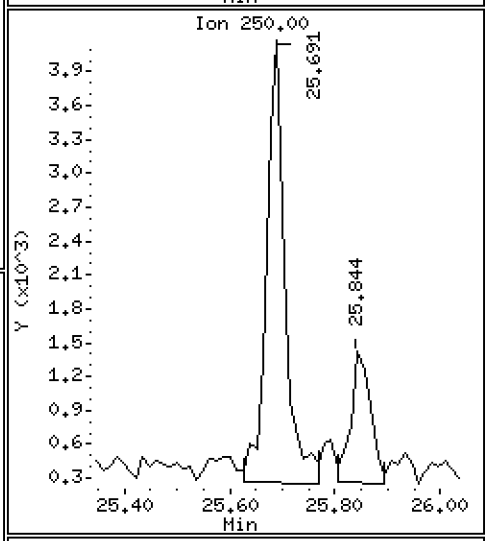


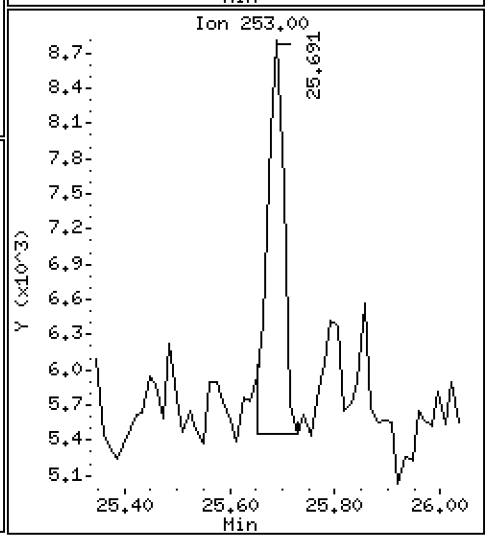












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

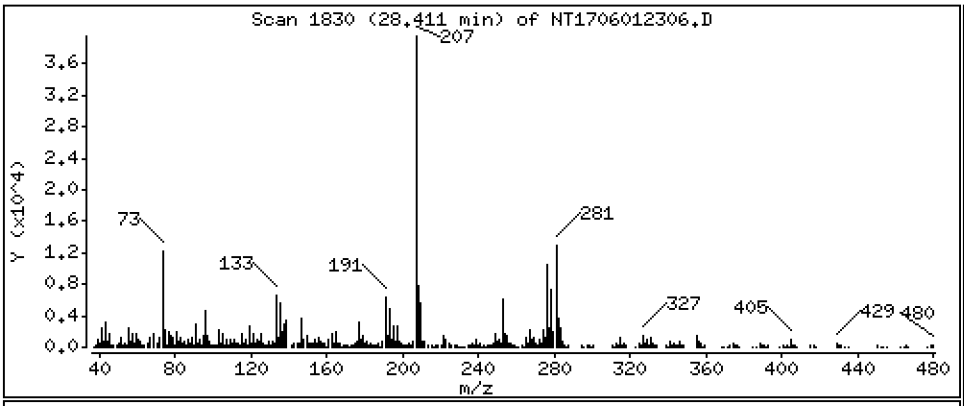
Operator: VTS

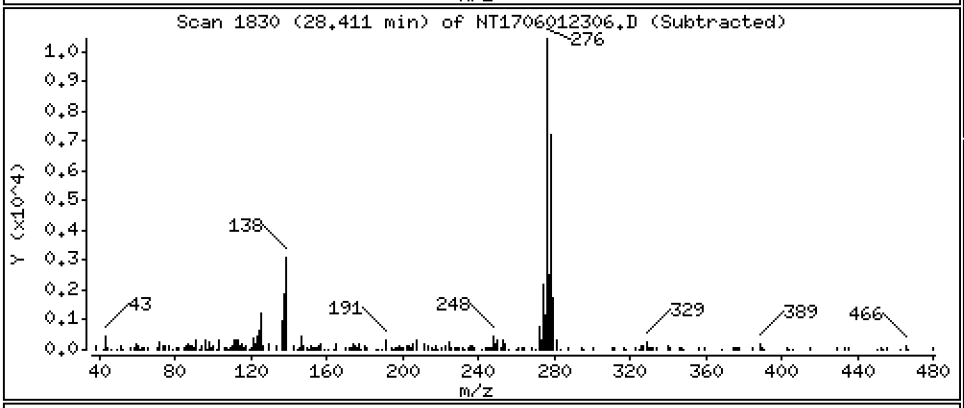
Column phase: ZB-5msi

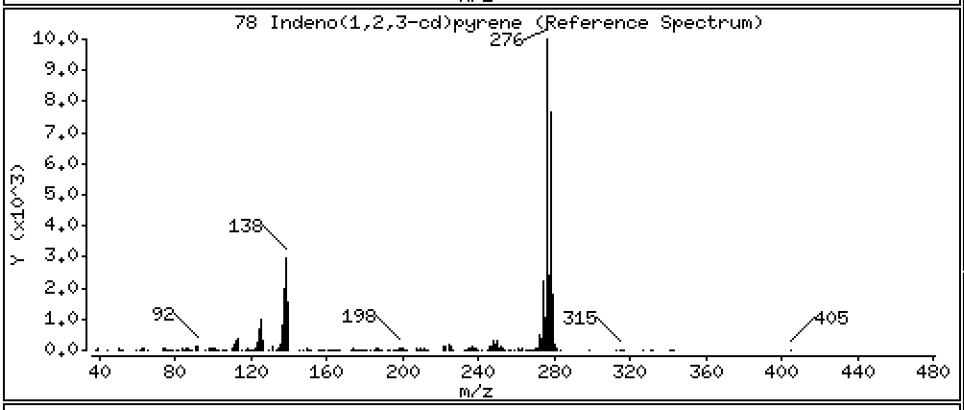
Column diameter: 0.25

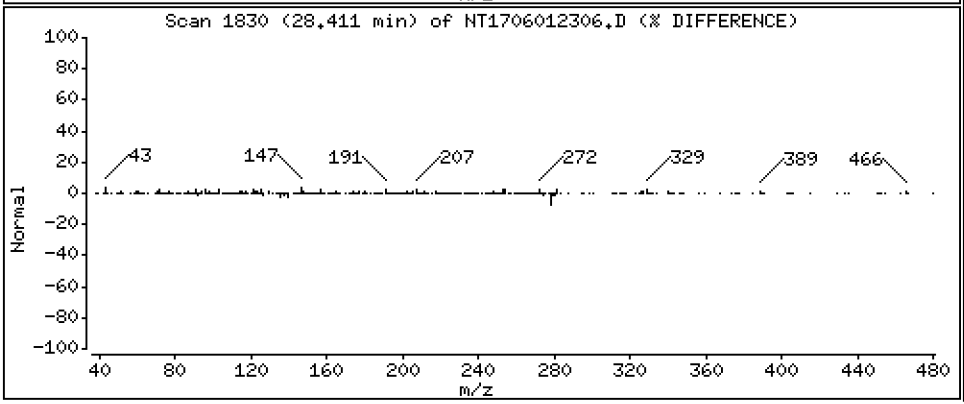
78 Indeno(1,2,3-cd)pyrene

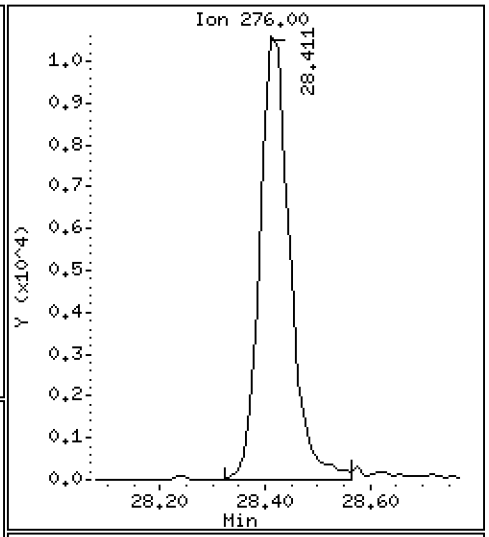
Concentration: 0.1979 ug/mL

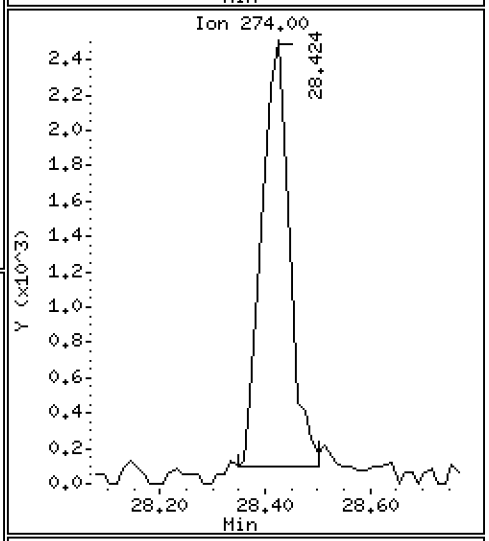


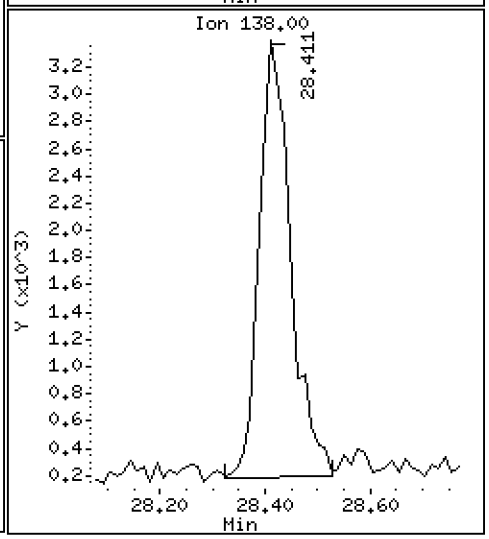












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

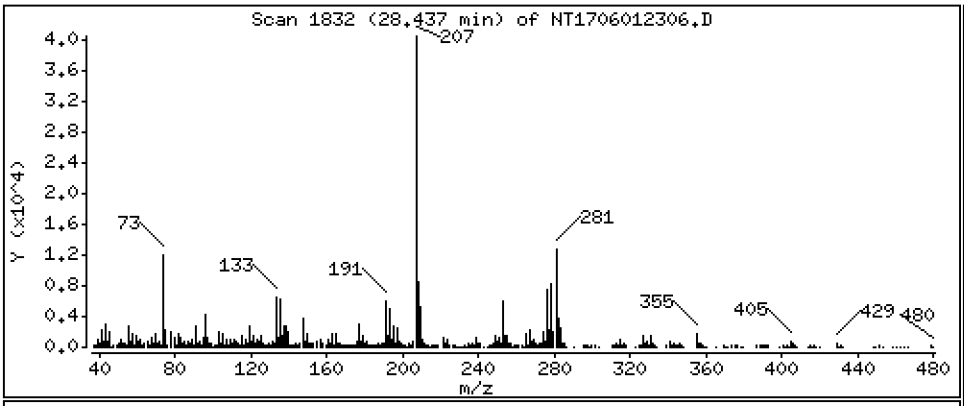
Operator: VTS

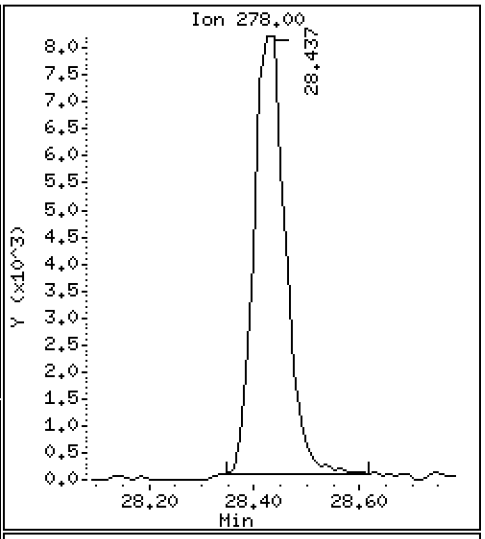
Column phase: ZB-5msi

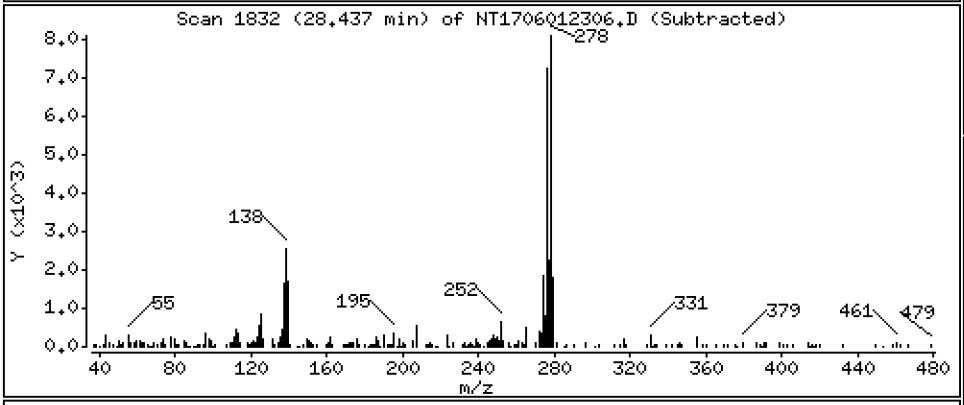
Column diameter: 0.25

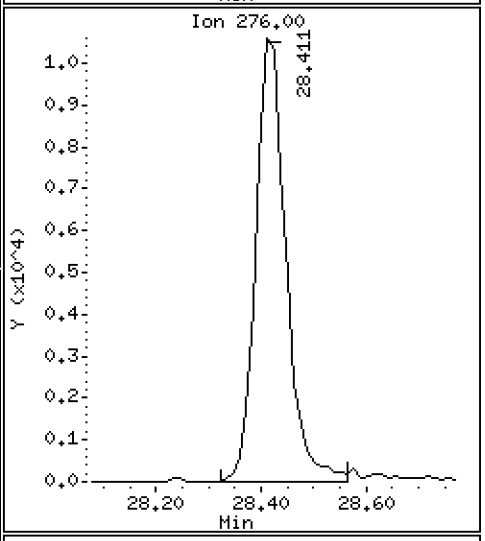
79 Dibenzo(a,h)anthracene

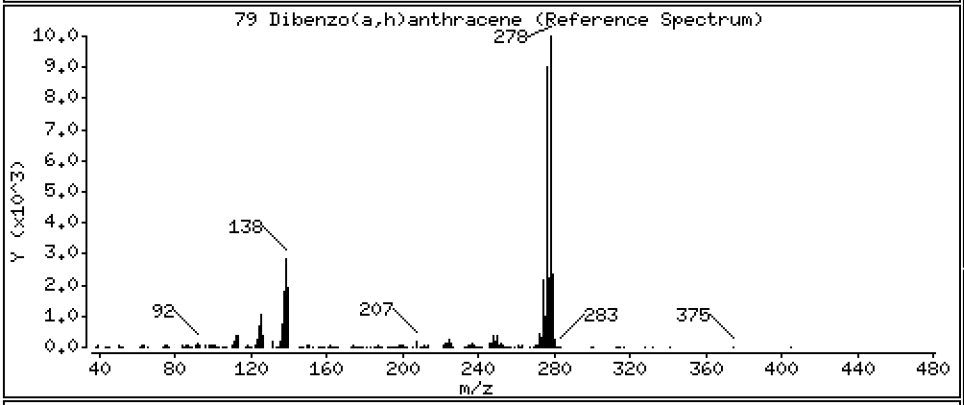
Concentration: 0.1914 ug/mL

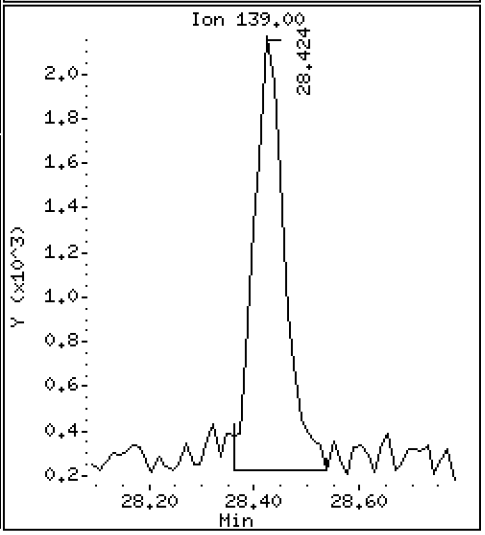


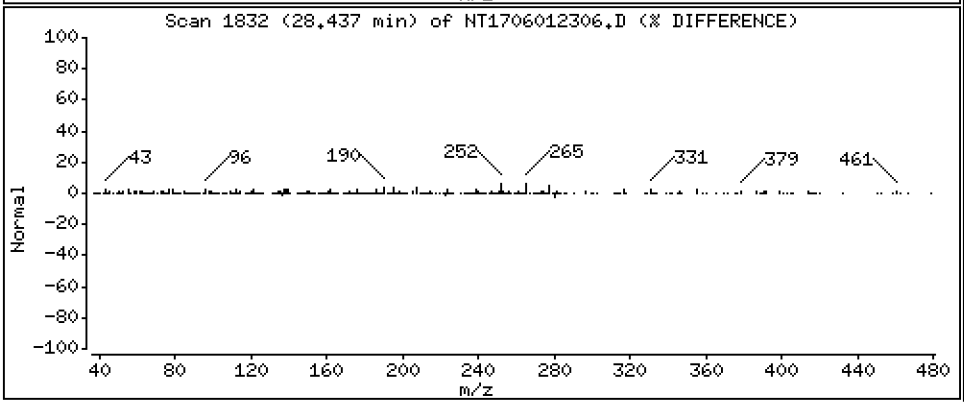












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

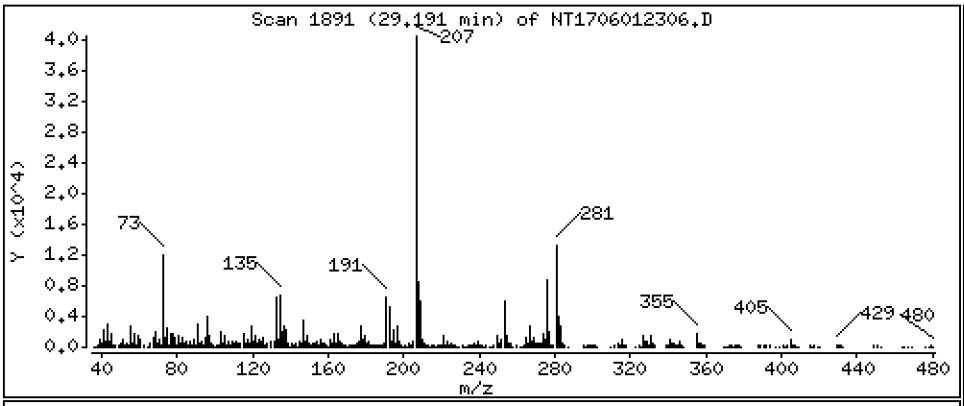
Operator: VTS

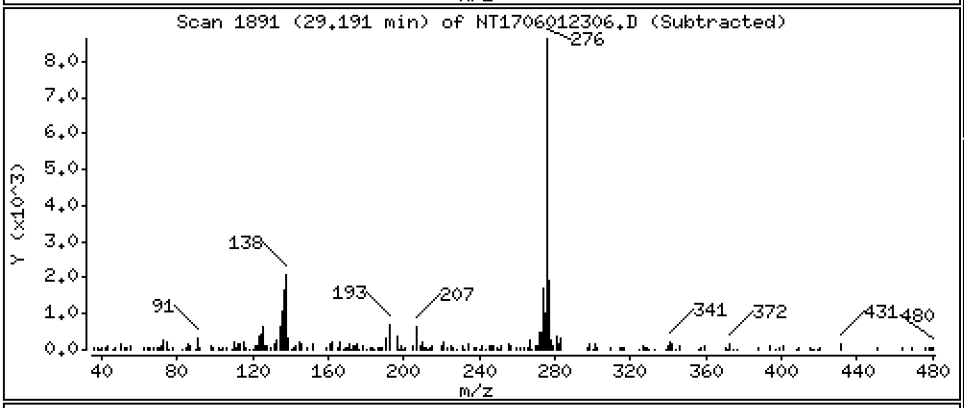
Column phase: ZB-5msi

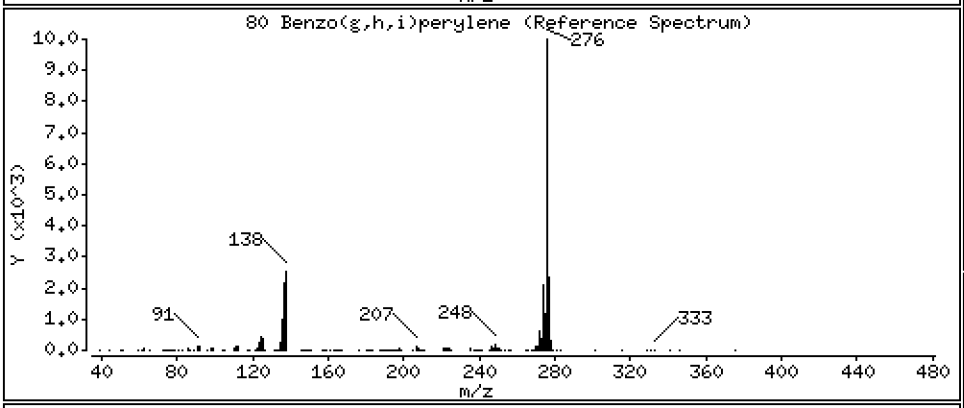
Column diameter: 0.25

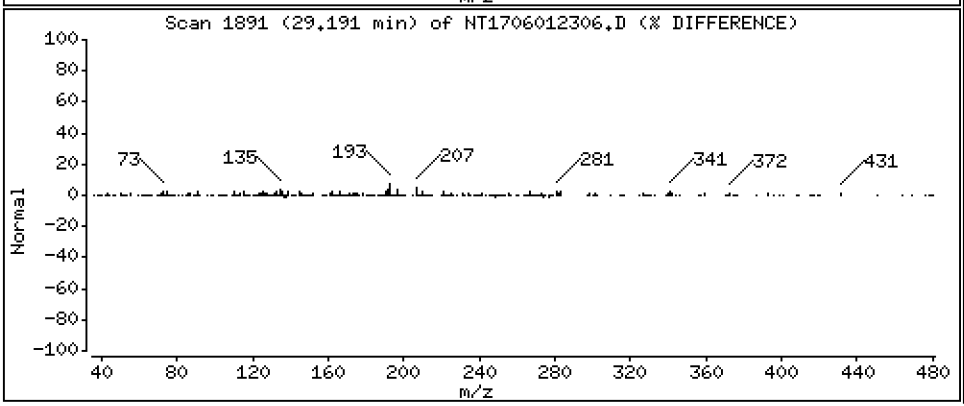
80 Benzo(g,h,i)perylene

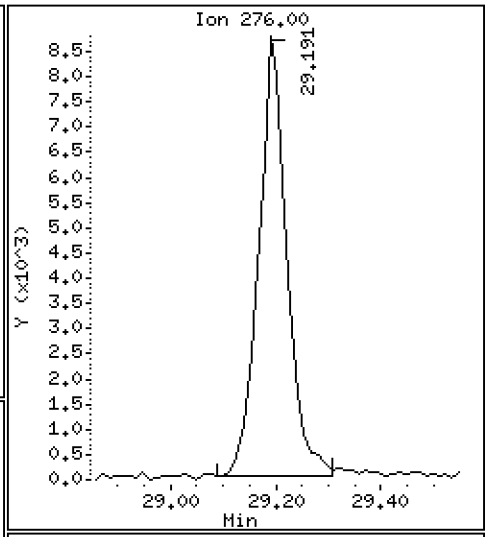
Concentration: 0.1929 ug/mL

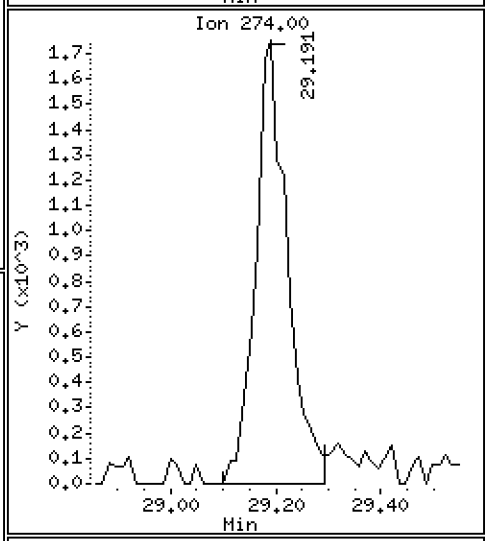


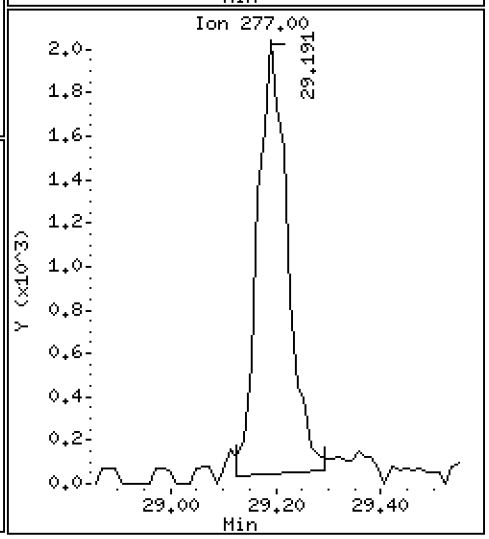












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

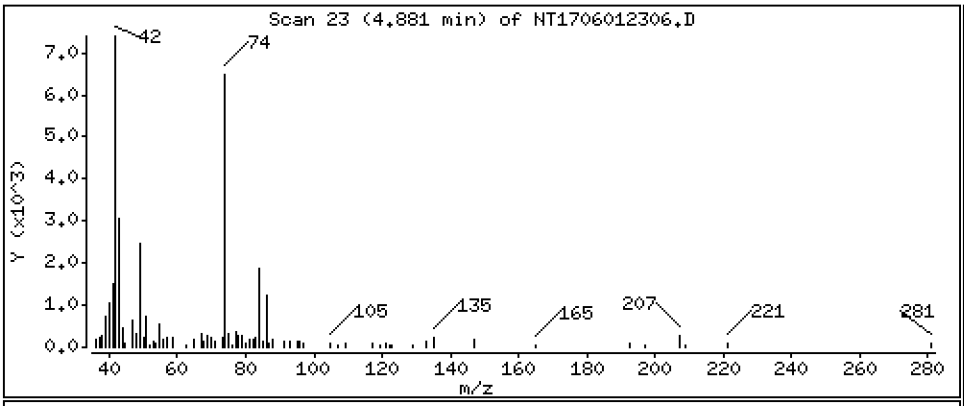
Operator: VTS

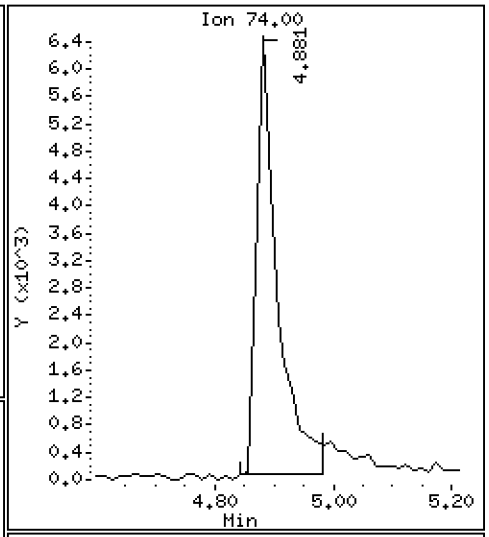
Column phase: ZB-5msi

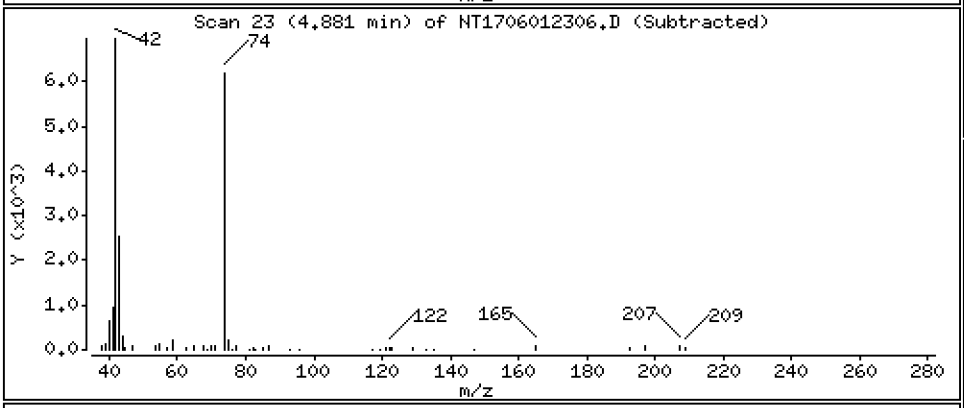
Column diameter: 0.25

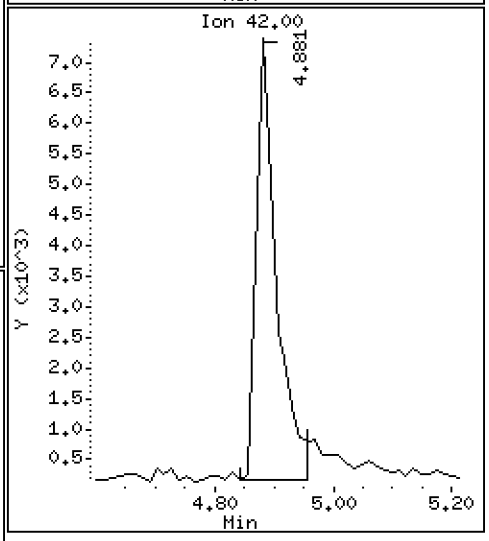
90 N-Nitrosodimethylamine

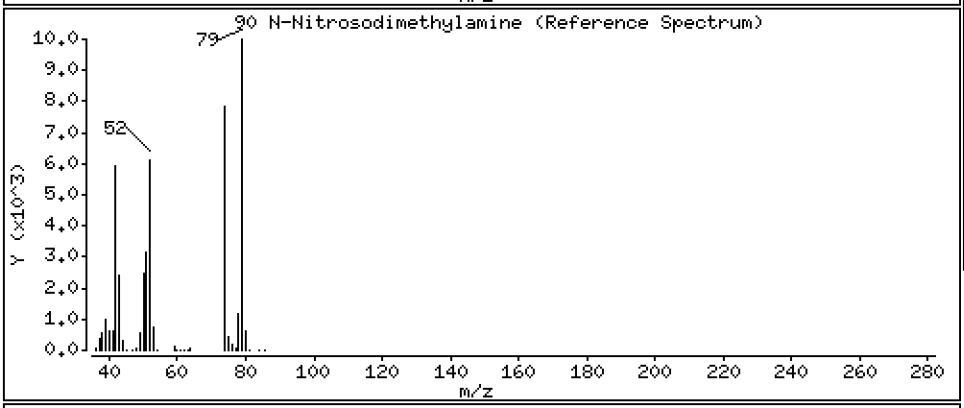
Concentration: 0.2784 ug/mL

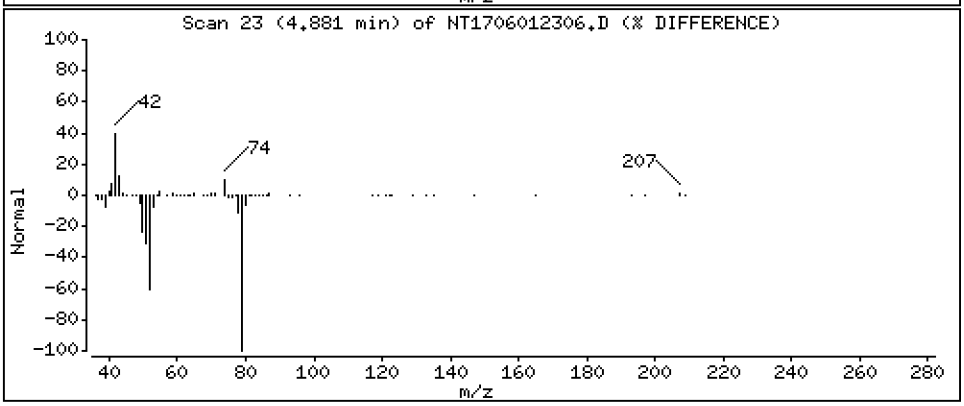












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

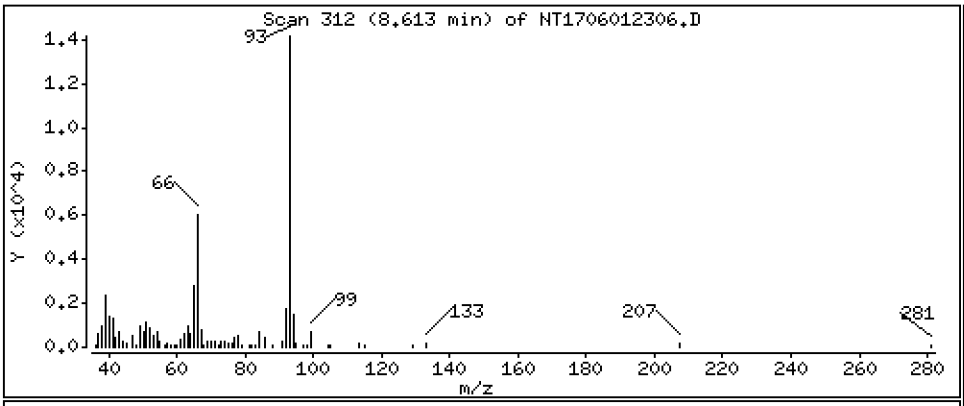
Operator: VTS

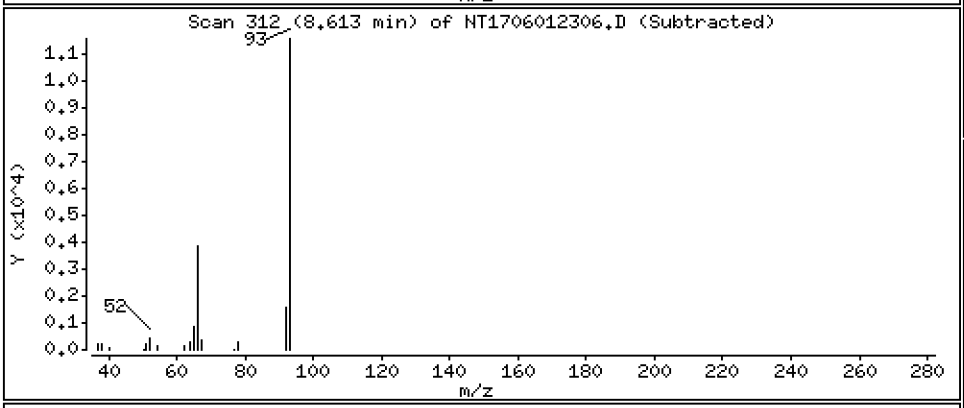
Column phase: ZB-5msi

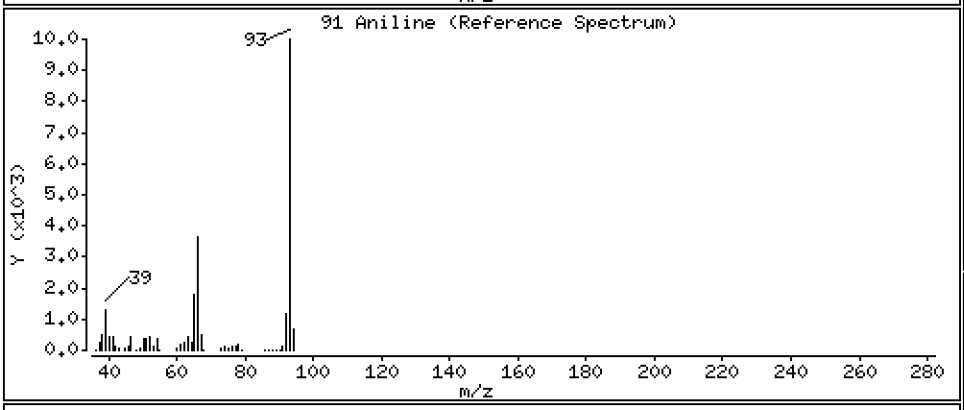
Column diameter: 0.25

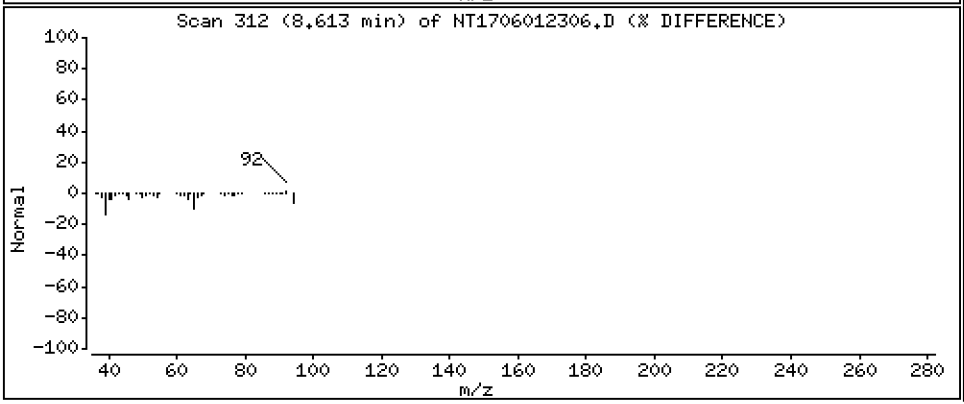
91 Aniline

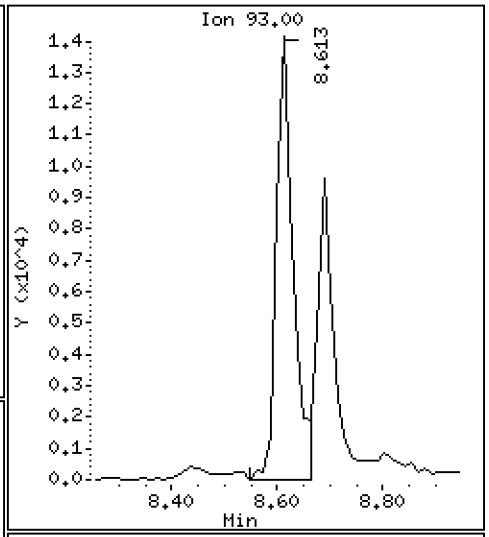
Concentration: 0.3178 ug/mL

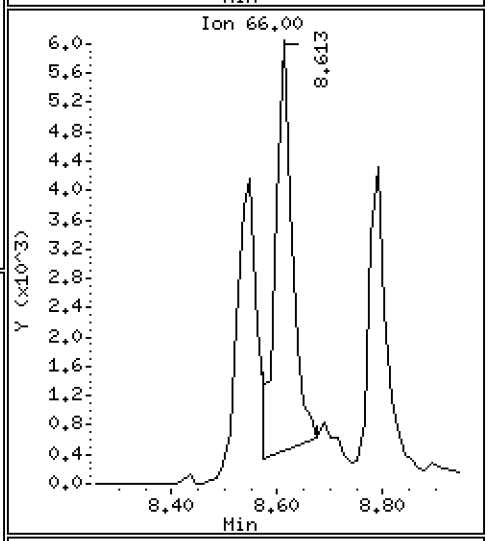


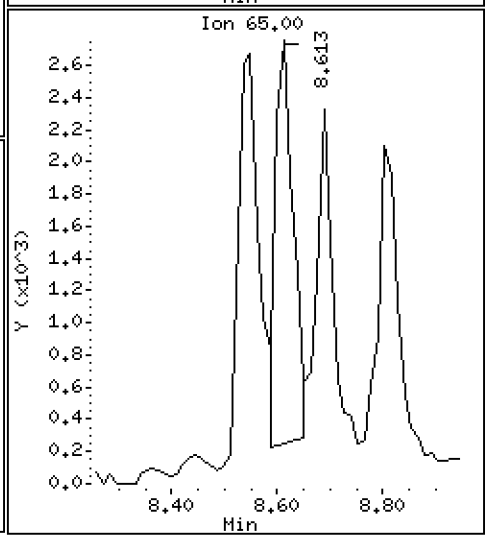












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

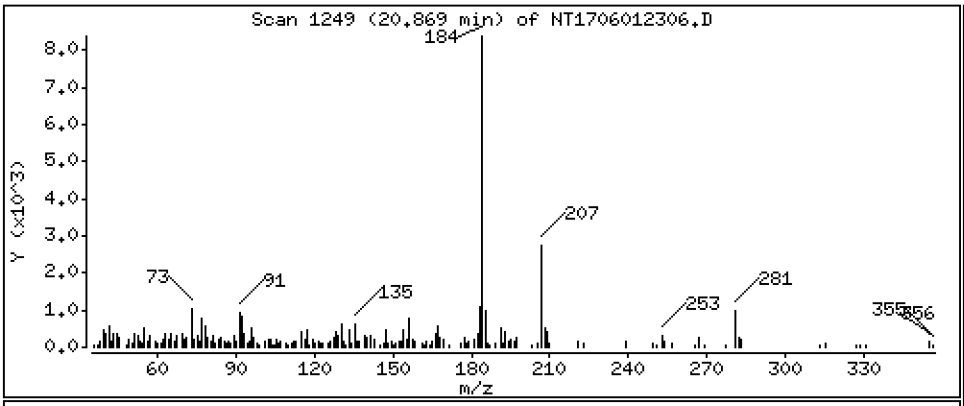
Operator: VTS

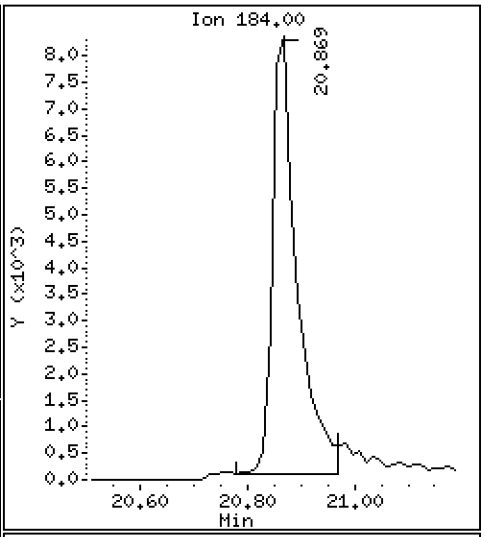
Column phase: ZB-5msi

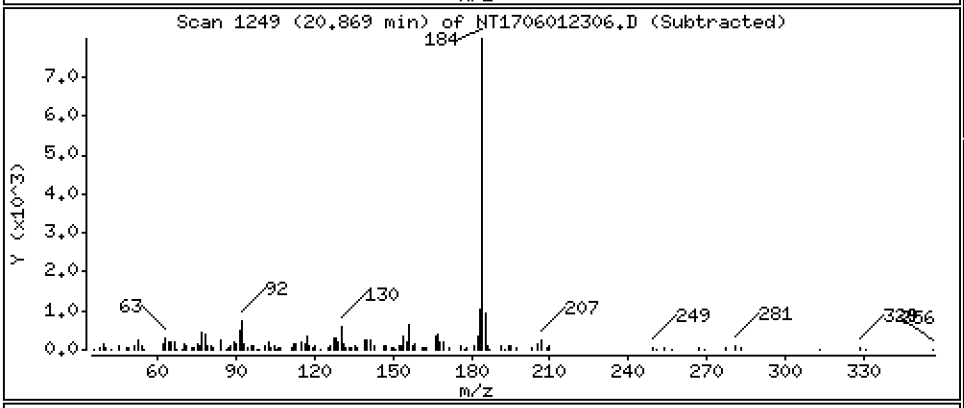
Column diameter: 0.25

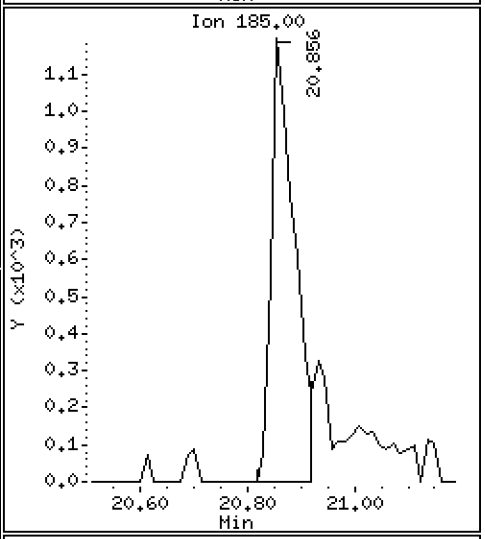
93 Benzidine

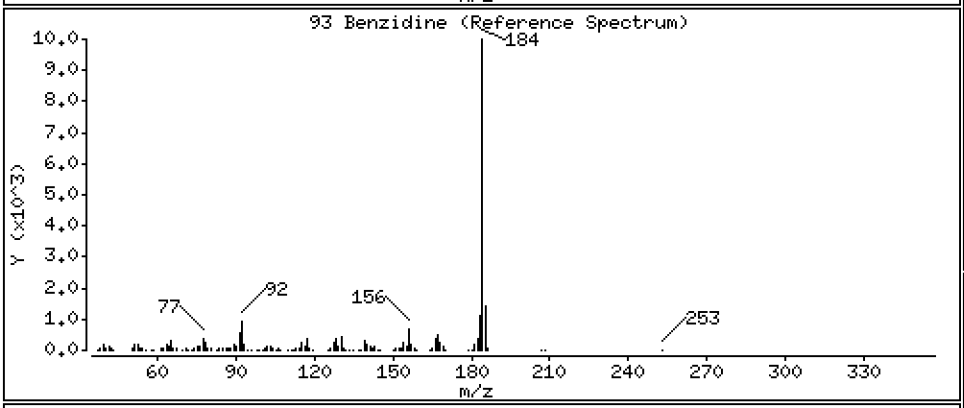
Concentration: 0.3812 ug/mL

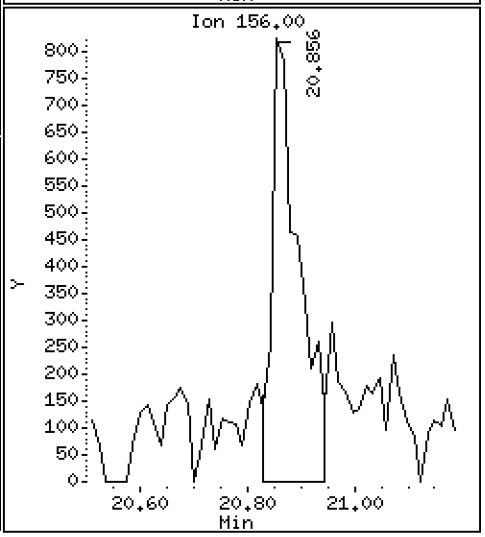


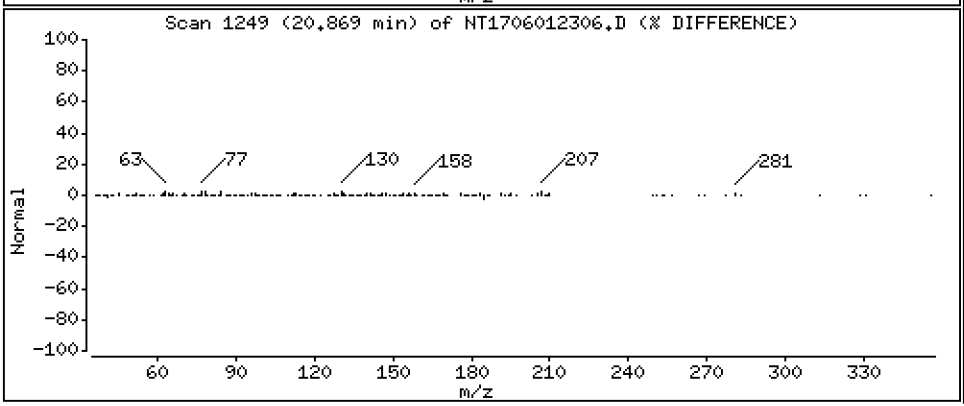












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

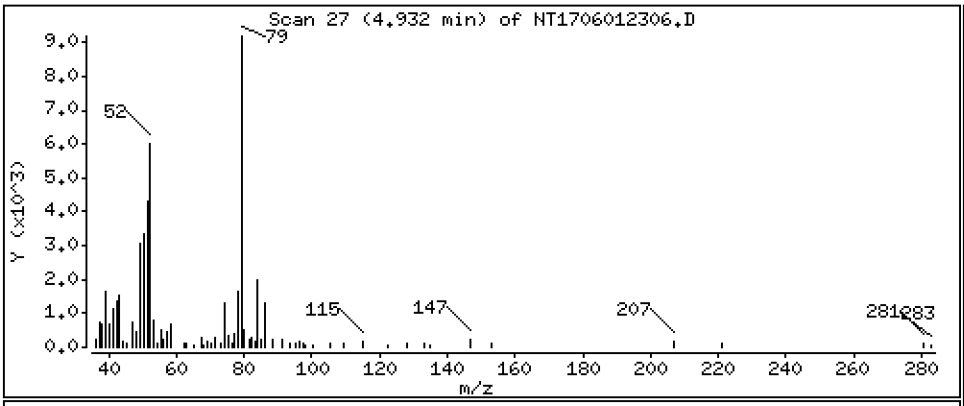
Operator: VTS

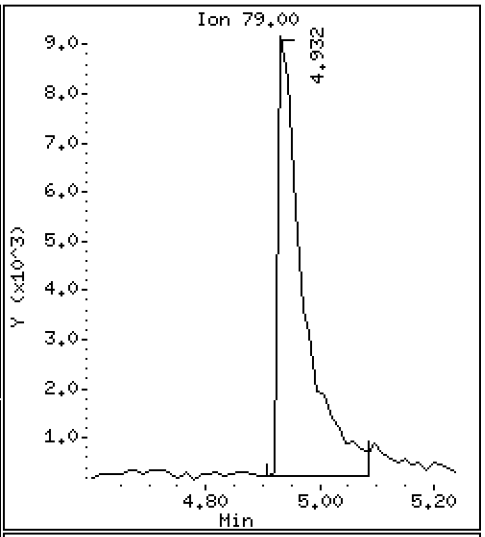
Column phase: ZB-5msi

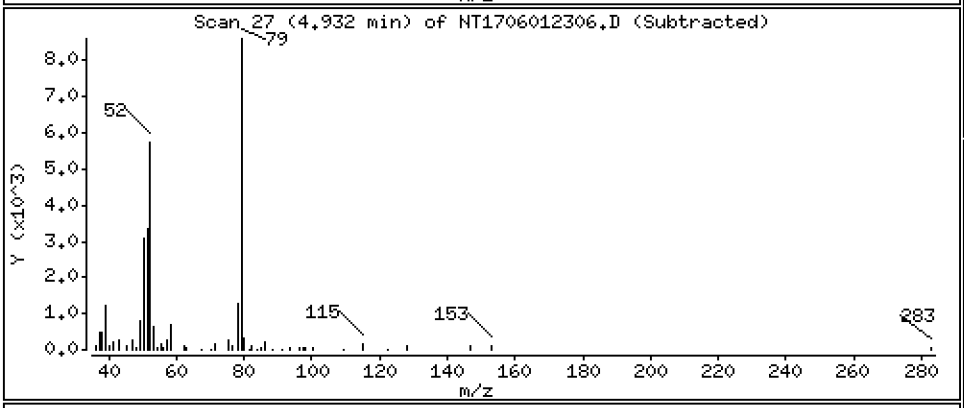
Column diameter: 0.25

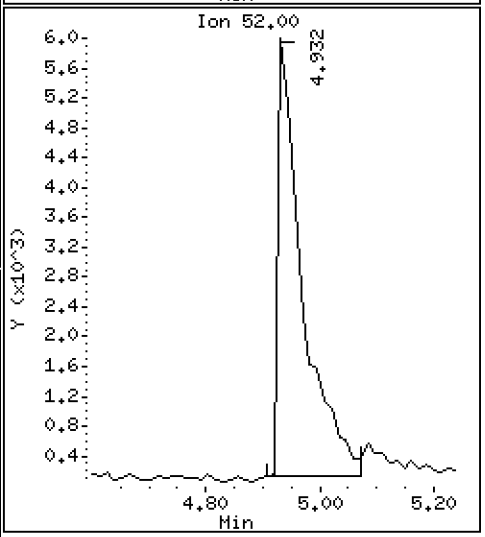
103 Pyridine

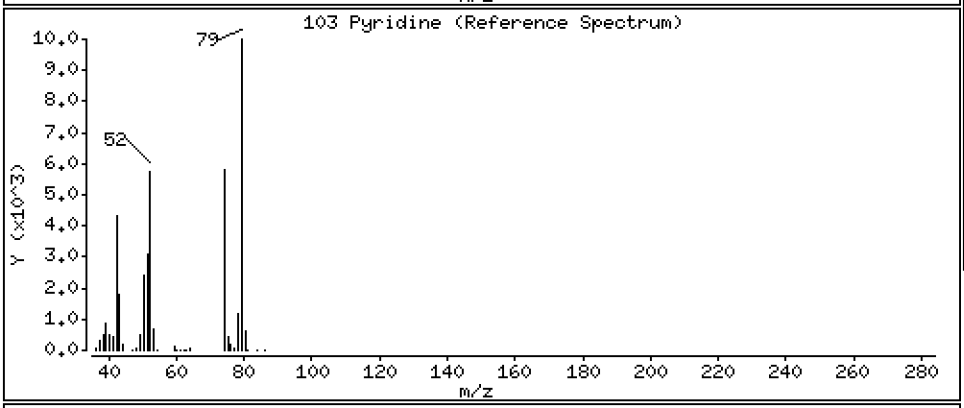
Concentration: 0.3128 ug/mL

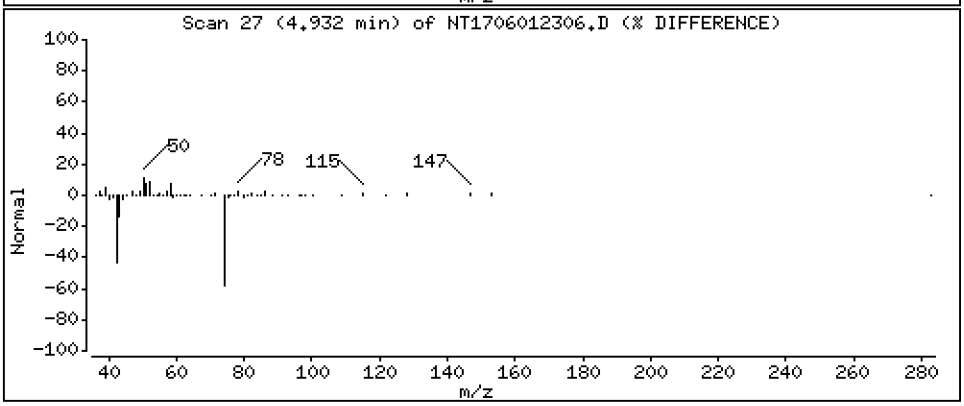












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

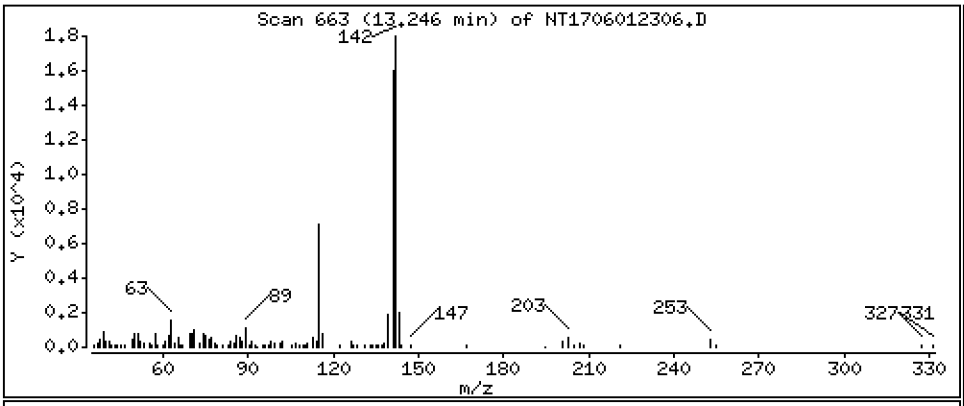
Operator: VTS

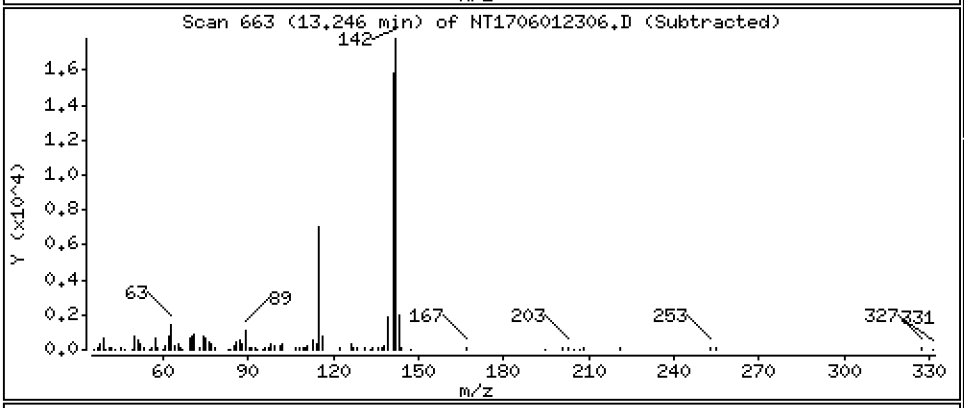
Column phase: ZB-5msi

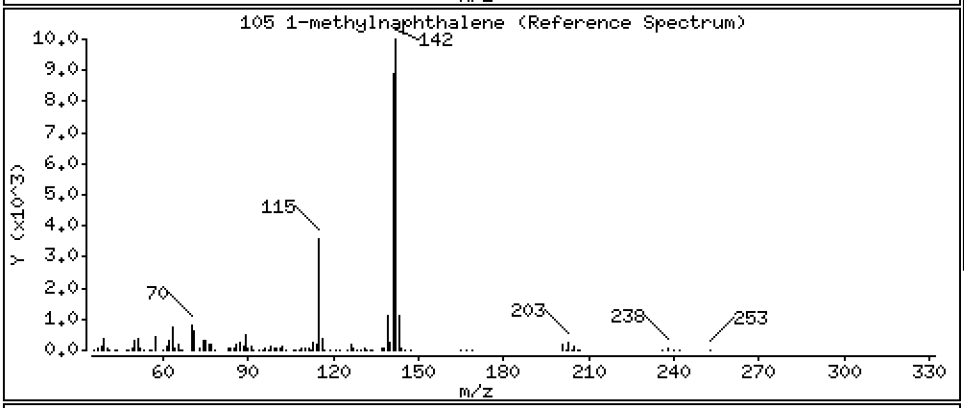
Column diameter: 0.25

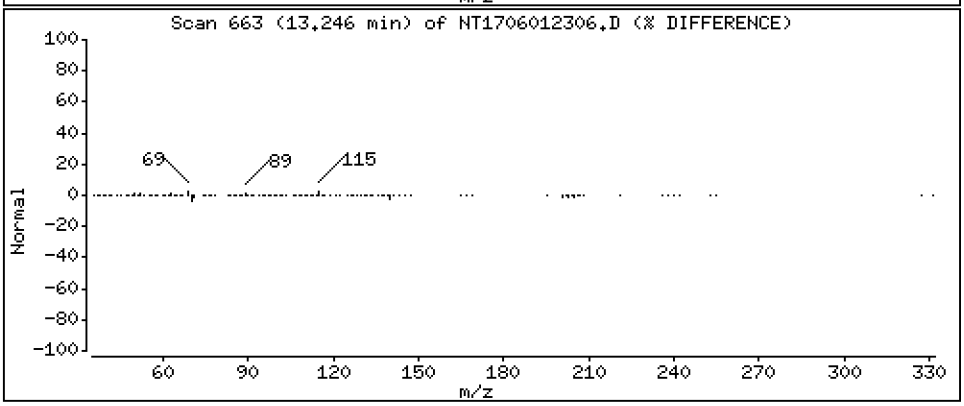
105 1-methylnaphthalene

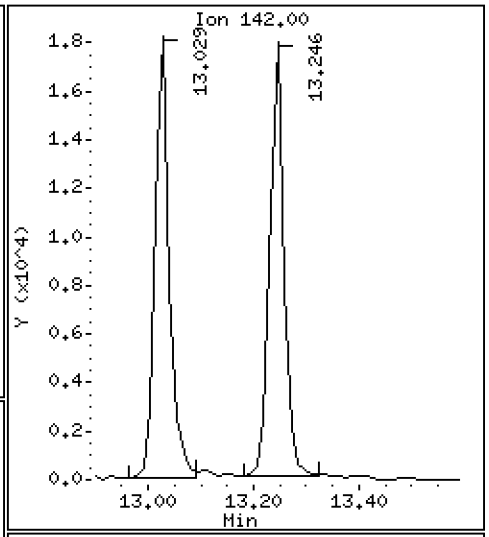
Concentration: 0.1878 ug/mL

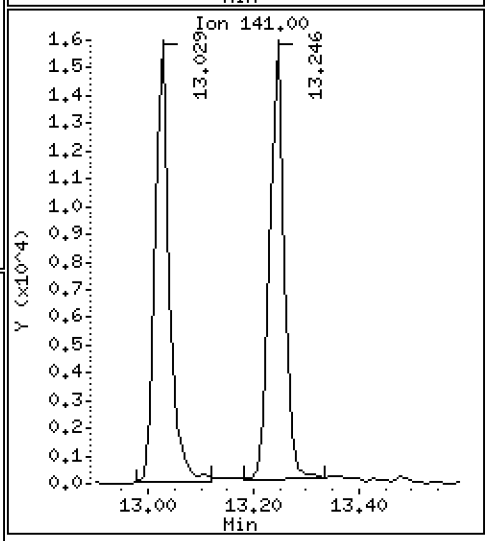












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

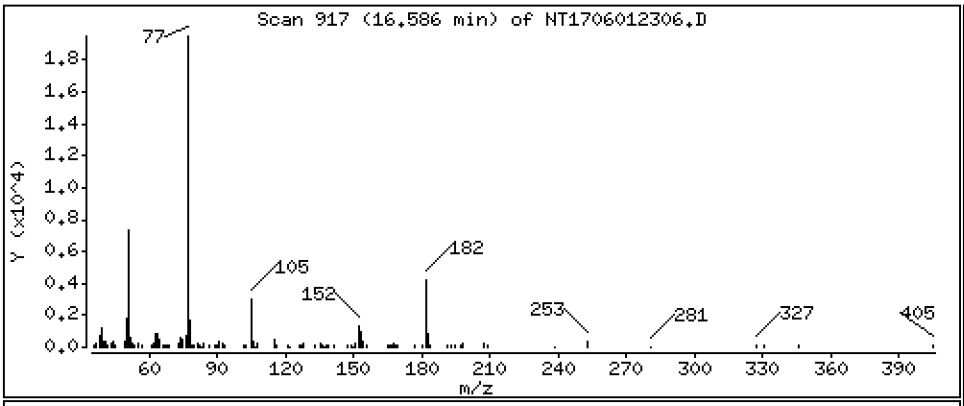
Operator: VTS

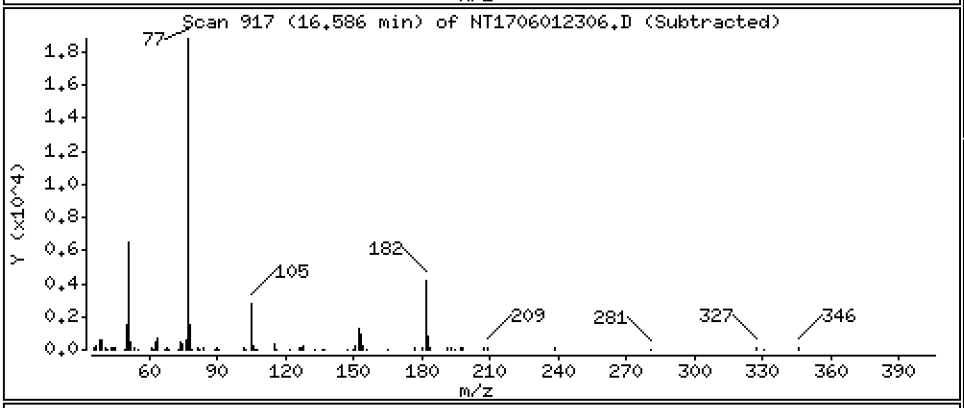
Column phase: ZB-5msi

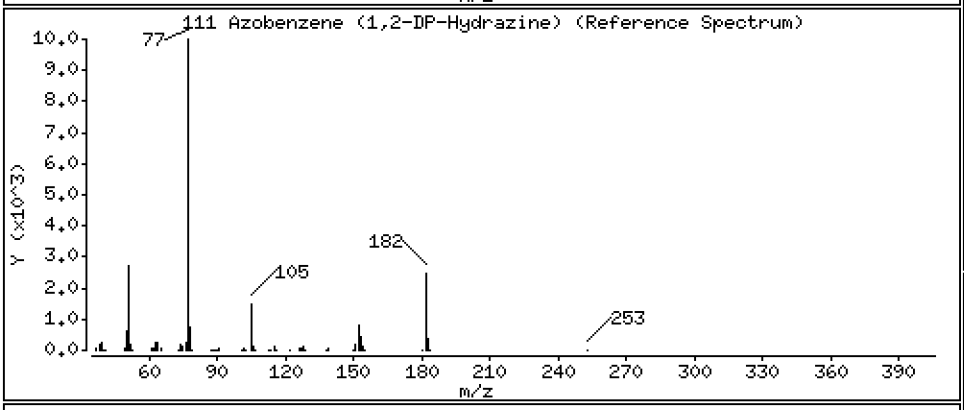
Column diameter: 0.25

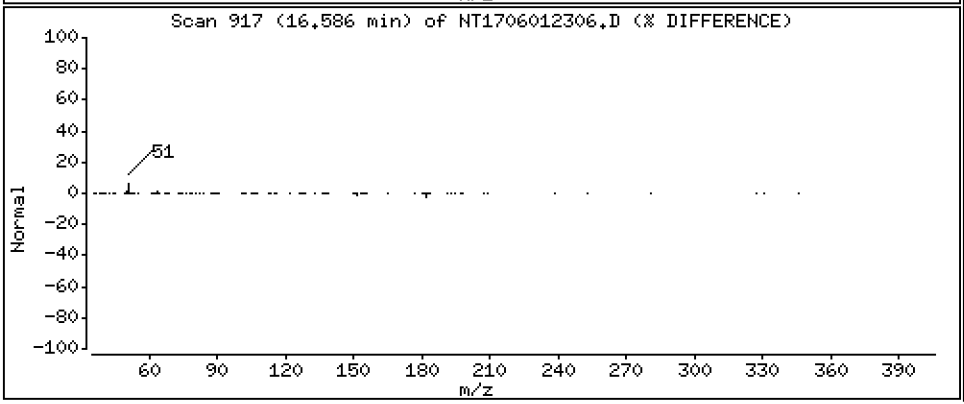
111 Azobenzene (1,2-DP-Hydrazine)

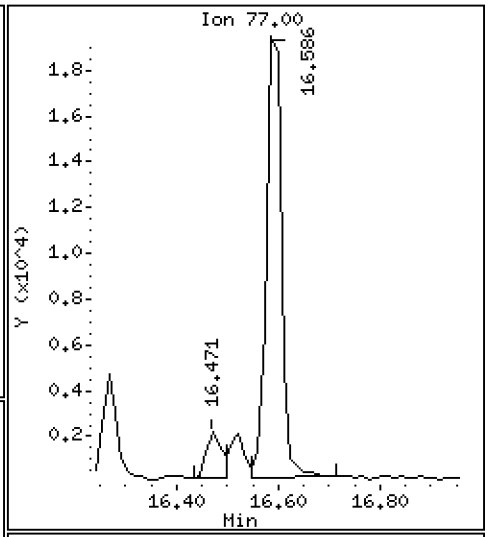
Concentration: 0.2032 ug/mL

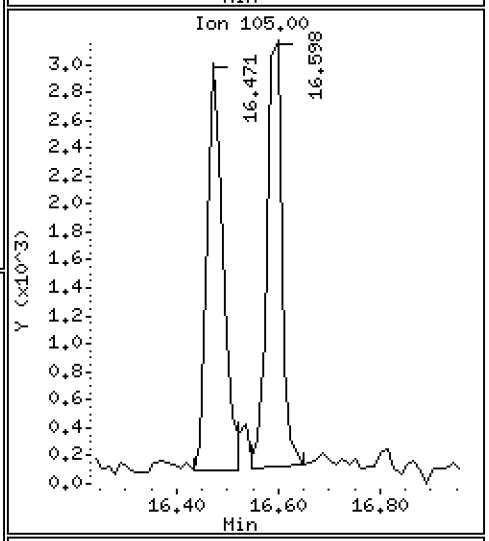


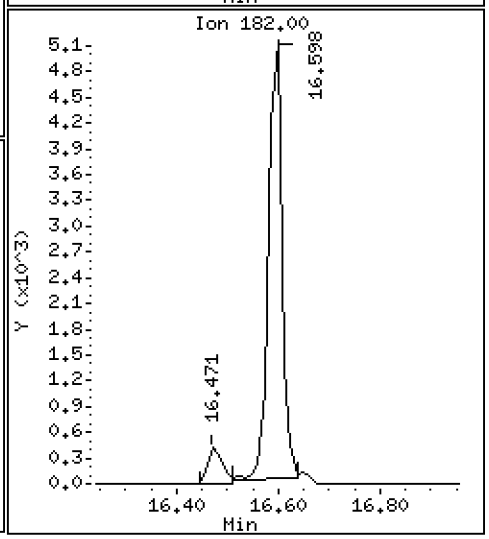












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

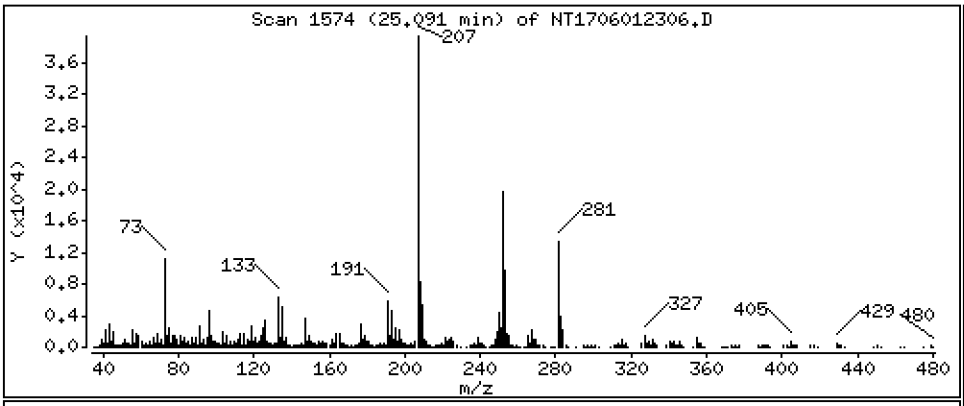
Operator: VTS

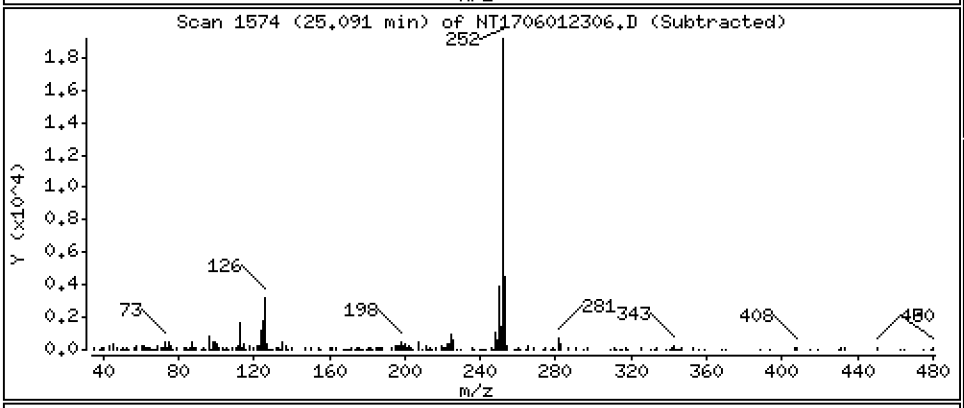
Column phase: ZB-5msi

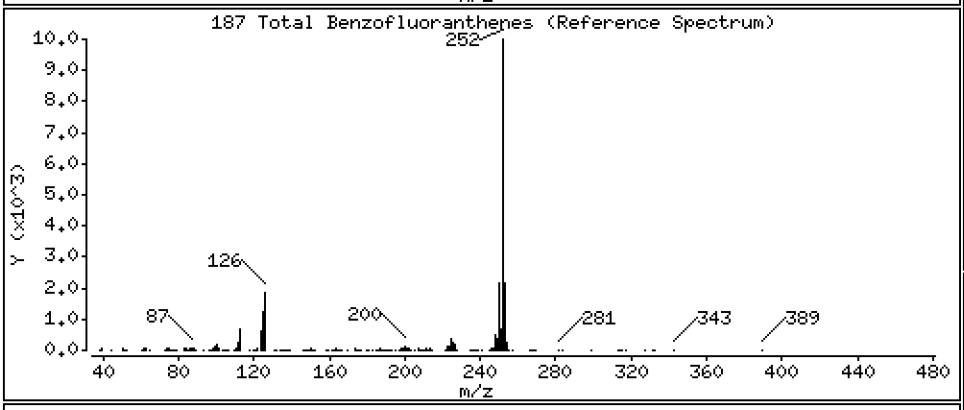
Column diameter: 0.25

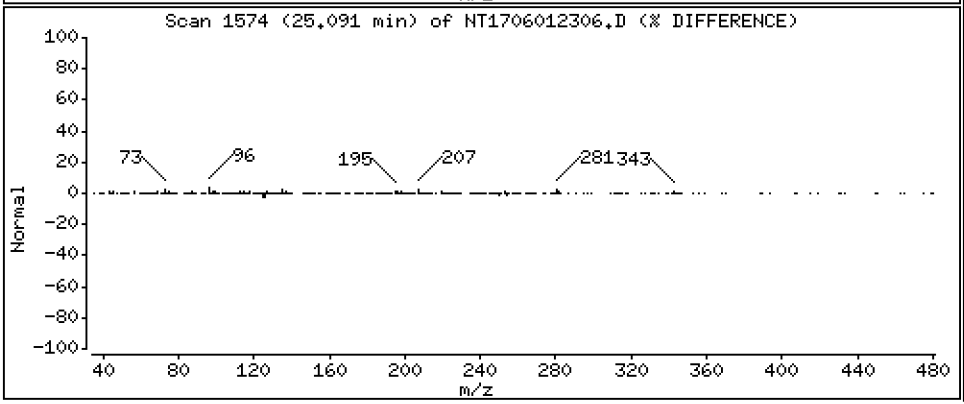
187 Total Benzofluoranthenes

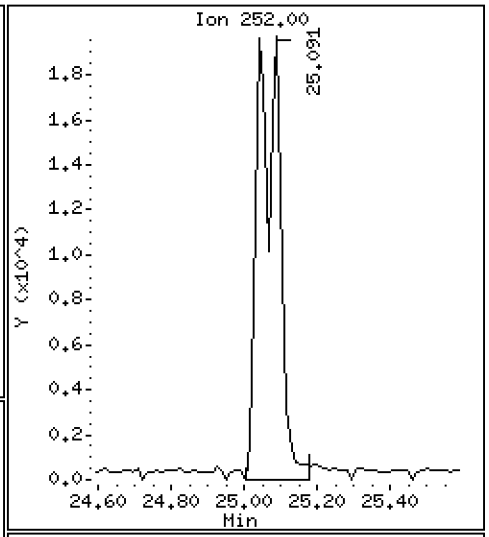
Concentration: 0.4057 ug/mL

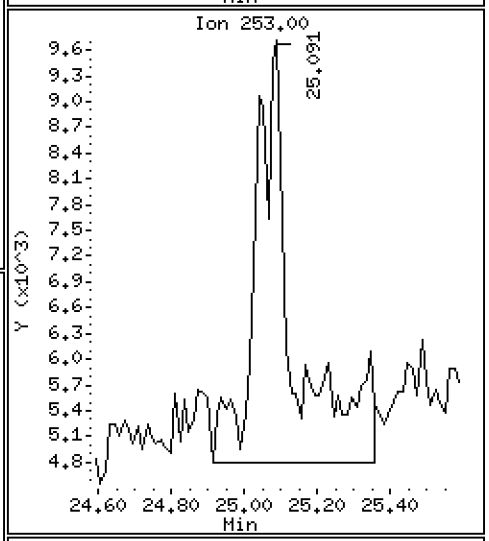


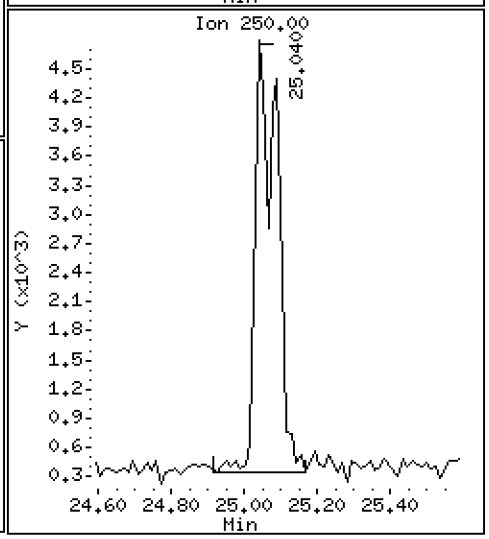












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

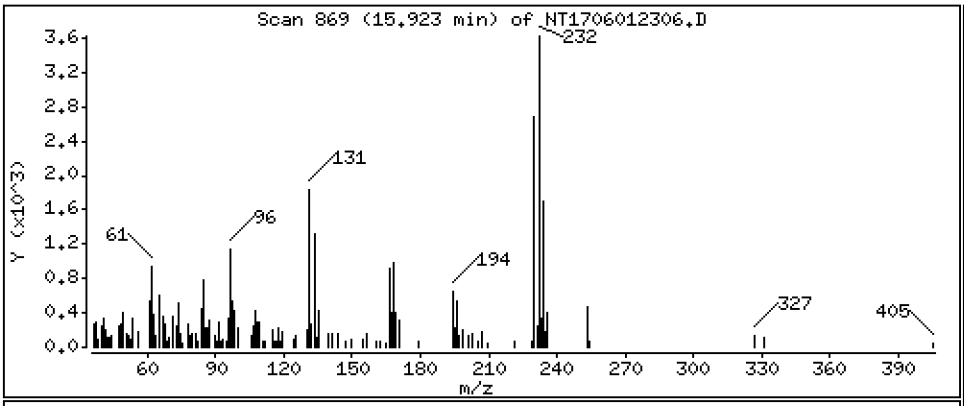
Operator: VTS

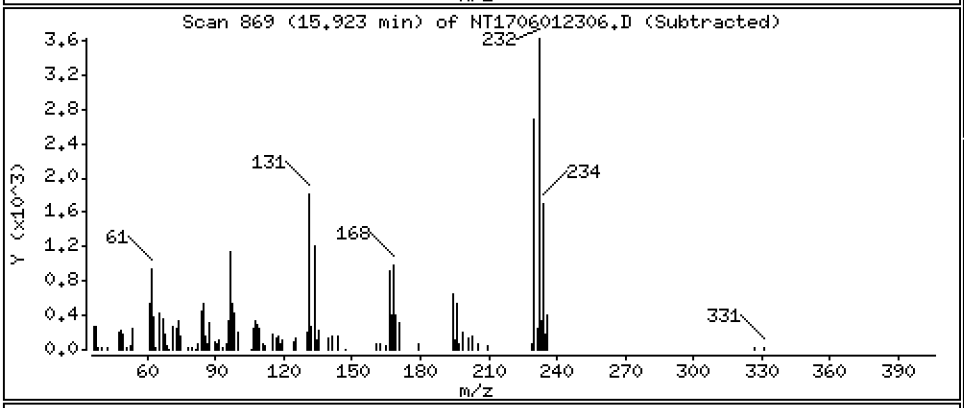
Column phase: ZB-5msi

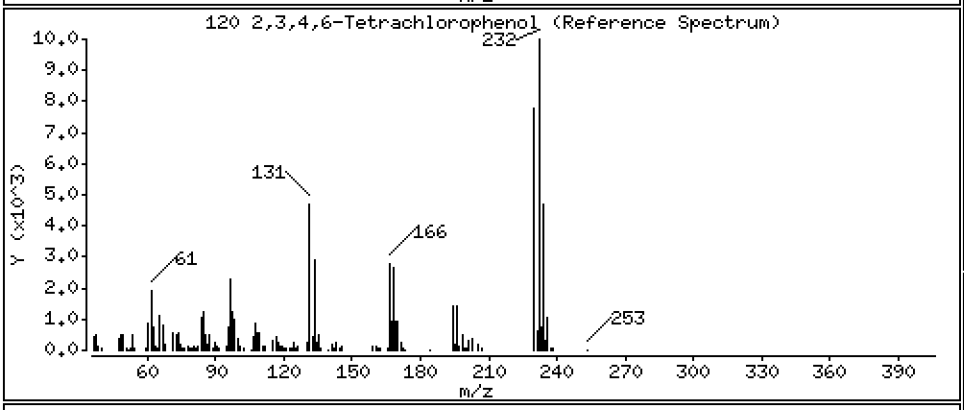
Column diameter: 0.25

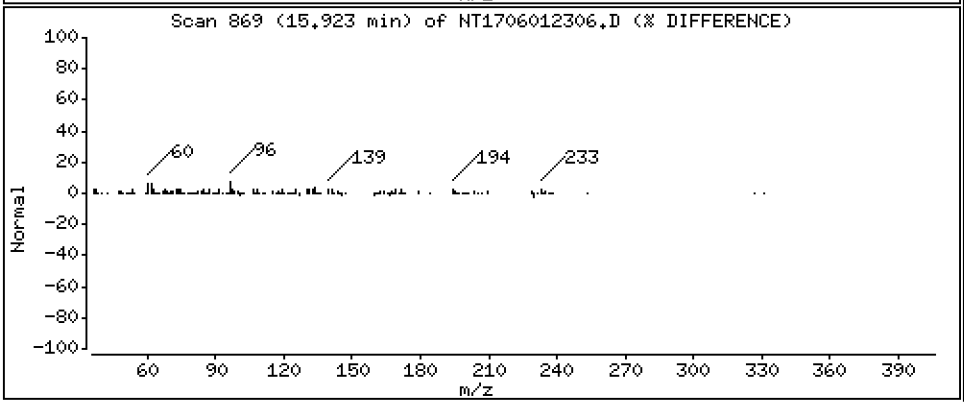
120 2,3,4,6-Tetrachlorophenol

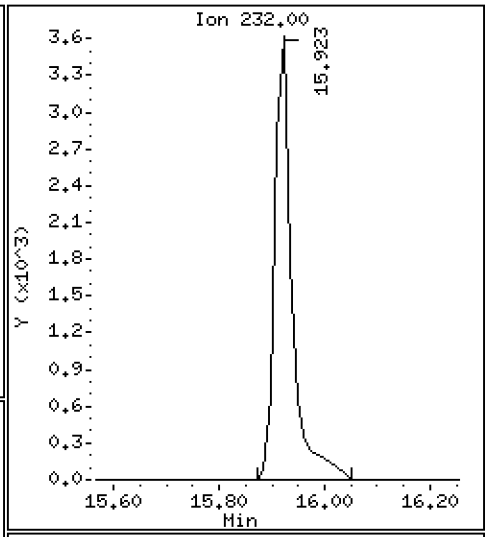
Concentration: 0.1511 ug/mL

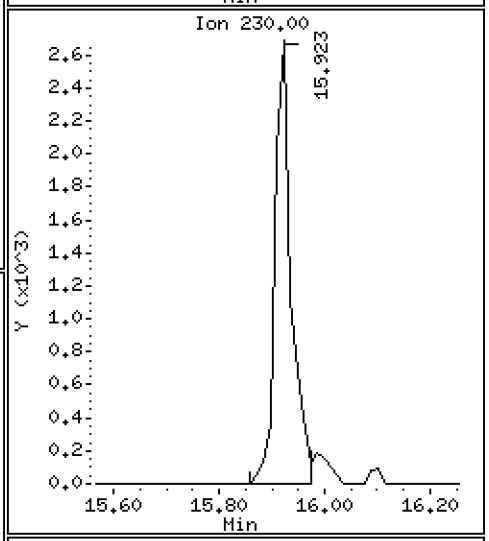


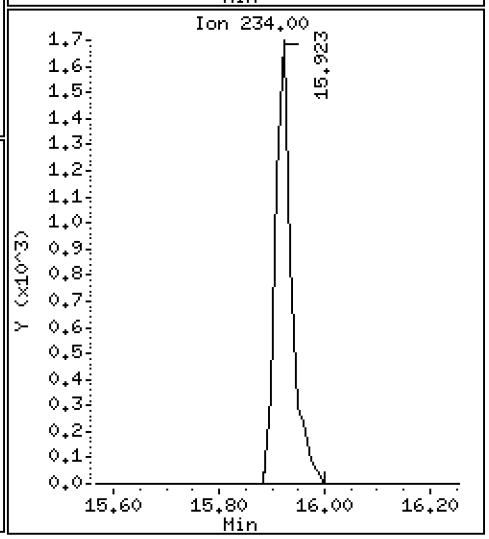












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D
Lab Smp Id: SLF0008-LCV1
Inj Date : 01-JUN-2023 15:12
Operator : VTS Inst ID: nt17.i
Smp Info : SLF0008-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.969	6.944	(0.763)	19423	0.22757	0.2276
$	2 Phenol-d5	99	8.524	8.511	(0.933)	31599	0.27976	0.2798
	3 Phenol	94	8.537	8.537	(0.934)	21095	0.17633	0.1763
$	5 2-Chlorophenol-d4	132	8.791	8.779	(0.962)	26867	0.29696	0.2970
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	19481	0.22337	0.2234
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	18721	0.18739	0.1874
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	21701	0.21462	0.2146
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	260733	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	20886	0.20711	0.2071
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	12978	0.20408	0.2041
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	20450	0.21572	0.2157
	11 Benzyl alcohol	108	9.481	9.417	(1.038)	8740	0.15691	0.1569(M)
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	6664	0.24940	0.2494
	13 2-Methylphenol	108	9.647	9.634	(1.056)	17390	0.19778	0.1978
	17 Hexachloroethane	117	10.107	10.107	(1.106)	8950	0.22187	0.2219
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	12997	0.19321	0.1932
	15 4-Methylphenol	108	9.915	9.902	(1.085)	16464	0.18390	0.1839
$	18 Nitrobenzene-d5	82	10.234	10.222	(0.882)	20087	0.18752	0.1875
	19 Nitrobenzene	77	10.260	10.260	(0.884)	20509	0.20067	0.2007
	20 Isophorone	82	10.694	10.707	(0.922)	29588	0.21149	0.2115
	21 2-Nitrophenol	139	10.886	10.873	(0.938)	10966	0.22267	0.2227
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	35700	0.37336	0.3734
	23 Bis(2-Chloroethoxy)methane	93	11.129	11.116	(0.959)	16053	0.18722	0.1872
	24 Benzoic acid	105	11.077	11.192	(0.955)	19148	0.29770	0.2977(M)
	25 2,4-Dichlorophenol	162	11.346	11.333	(0.978)	29494	0.38386	0.3839
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	17300	0.20731	0.2073
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	941208	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	53001	0.20477	0.2048
	29 4-Chloroaniline	127	11.779	11.766	(1.015)	29647	0.29058	0.2906
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	8804	0.21298	0.2130
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	27869	0.33686	0.3369
	32 2-Methylnaphthalene	142	13.028	13.028	(1.123)	35910	0.19377	0.1938
	33 Hexachlorocyclopentadiene	237	13.487	13.487	(0.888)	2789	0.05957	0.05957

		QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.653	13.641	(0.899)	17778	0.33746	0.3375
35	2,4,5-Trichlorophenol	196	13.730	13.717	(0.904)	19714	0.35349	0.3535
$ 36	2-Fluorobiphenyl	172	13.794	13.794	(0.908)	41118	0.20729	0.2073
37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	32283	0.20061	0.2006
38	2-Nitroaniline	65	14.278	14.278	(0.940)	19918	0.36547	0.3655
39	Dimethylphthalate	163	14.686	14.699	(0.967)	36422	0.21023	0.2102
40	Acenaphthylene	152	14.878	14.878	(0.980)	53160	0.20803	0.2080
41	2,6-Dinitrotoluene	165	14.827	14.839	(0.976)	14182	0.34965	0.3496
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	503513	4.00000	
43	3-Nitroaniline	138	15.133	15.120	(0.997)	12180	0.32422	0.3242(M)
44	Acenaphthene	153	15.247	15.247	(1.004)	31794	0.19903	0.1990
45	2,4-Dinitrophenol	184	15.349	15.337	(1.011)	6608	0.27023	0.2702(M)
46	Dibenzofuran	168	15.579	15.579	(1.026)	45300	0.20318	0.2032
47	4-Nitrophenol	109	15.502	15.451	(1.021)	7747	0.31046	0.3105(M)
48	2,4-Dinitrotoluene	165	15.643	15.643	(1.030)	17701	0.33338	0.3334
50	Diethylphthalate	149	16.127	16.140	(1.062)	33210	0.19656	0.1966
49	Fluorene	166	16.280	16.280	(1.072)	43129	0.20347	0.2035
51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	21399	0.21959	0.2196
52	4-Nitroaniline	138	16.394	16.382	(1.080)	9368	0.26345	0.2635
53	4,6-Dinitro-2-methylphenol	198	16.471	16.483	(0.905)	14100	0.39746	0.3975
54	N-Nitrosodiphenylamine	169	16.522	16.522	(0.908)	24147	0.19391	0.1939
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	5950	0.27091	0.2709
56	4-Bromophenyl-phenylether	248	17.272	17.272	(0.949)	8606	0.19725	0.1972
57	Hexachlorobenzene	284	17.578	17.591	(0.966)	9942	0.22363	0.2236
58	Pentachlorophenol	266	17.948	17.948	(0.986)	5693	0.22087	0.2209
* 59	Phenanthrene-d10	188	18.203	18.203	(1.000)	888941	4.00000	
60	Phenanthrene	178	18.241	18.254	(1.002)	52514	0.20246	0.2025
61	Anthracene	178	18.343	18.343	(1.008)	44291	0.18188	0.1819
62	Carbazole	167	18.675	18.688	(1.026)	43967	0.29783	0.2978
63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	55386	0.18836	0.1884
64	Fluoranthene	202	20.613	20.613	(0.888)	51547	0.18431	0.1843
65	Pyrene	202	21.034	21.034	(0.906)	54504	0.19225	0.1922
$ 66	Terphenyl-d14	244	21.315	21.315	(0.918)	41516	0.20599	0.2060
67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	23988	0.18905	0.1890
68	Benzo(a)anthracene	228	23.177	23.190	(0.998)	48355	0.21964	0.2196
* 69	Chrysene-d12	240	23.215	23.215	(1.000)	597881	4.00000	
70	3,3'-Dichlorobenzidine	252	23.139	23.139	(0.997)	44061	1.03296	1.033
71	Chrysene	228	23.254	23.254	(1.002)	42074	0.20309	0.2031
72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	28742	0.18507	0.1851
* 134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1073418	4.00000	
73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	55815	0.20514	0.2051
74	Benzo(b)fluoranthene	252	25.040	25.052	(0.970)	43460	0.18954	0.1895
75	Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	44300	0.20449	0.2045
76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	36216	0.20050	0.2005
* 77	Perylene-d12	264	25.805	25.805	(1.000)	578338	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.411	28.423	(1.101)	41462	0.19790	0.1979
79	Dibenzo(a,h)anthracene	278	28.436	28.436	(1.102)	33655	0.19140	0.1914
80	Benzo(g,h,i)perylene	276	29.190	29.203	(1.131)	33353	0.19287	0.1929
90	N-Nitrosodimethylamine	74	4.880	4.867	(0.534)	15851	0.27842	0.2784
91	Aniline	93	8.613	8.600	(0.943)	31858	0.31777	0.3178
93	Benzidine	184	20.868	20.856	(0.899)	26459	0.38117	0.3812
103	Pyridine	79	4.931	4.893	(0.540)	28247	0.31280	0.3128
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	32290	0.18781	0.1878
111	Azobenzene (1,2-DP-Hydrazine)	77	16.585	16.598	(1.092)	40068	0.20316	0.2032

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.091	25.091	(0.972)	83501	0.40567	0.4057(M)
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.910	(1.049)	9524	0.15110	0.1511

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012306.D
Lab Smp Id: SLF0008-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 13:58
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265417	132709	530834	260733	-1.76
27 Naphthalene-d8	976764	488382	1953528	941208	-3.64
42 Acenaphthene-d10	532567	266284	1065134	503513	-5.46
59 Phenanthrene-d10	966524	483262	1933048	888941	-8.03
69 Chrysene-d12	647716	323858	1295432	597881	-7.69
134 Di-n-octylphthala	1235998	617999	2471996	1073418	-13.15
77 Perylene-d12	613582	306791	1227164	578338	-5.74

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012306.D

Lab ID: SLF0008-LCV1
nt17.i, ABN.m, 01-JUN-2023 15:12

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.038	1.031	0.0070	Benzyl alcohol
0.955	0.965	-0.0099	Benzoic acid

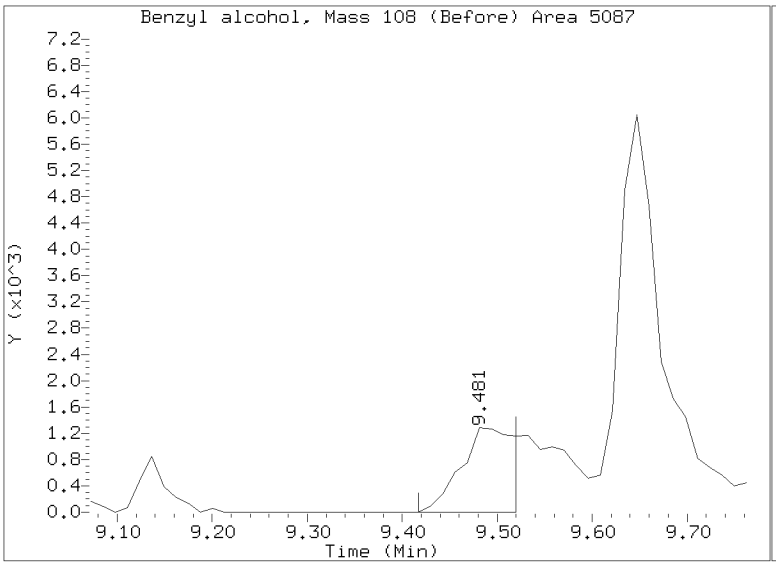
RRT check based on Ccal File: NT1706012304.D

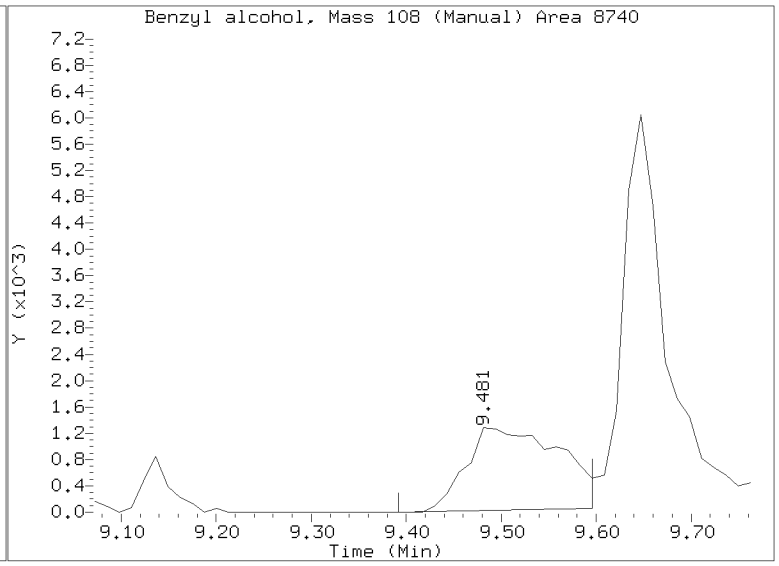
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

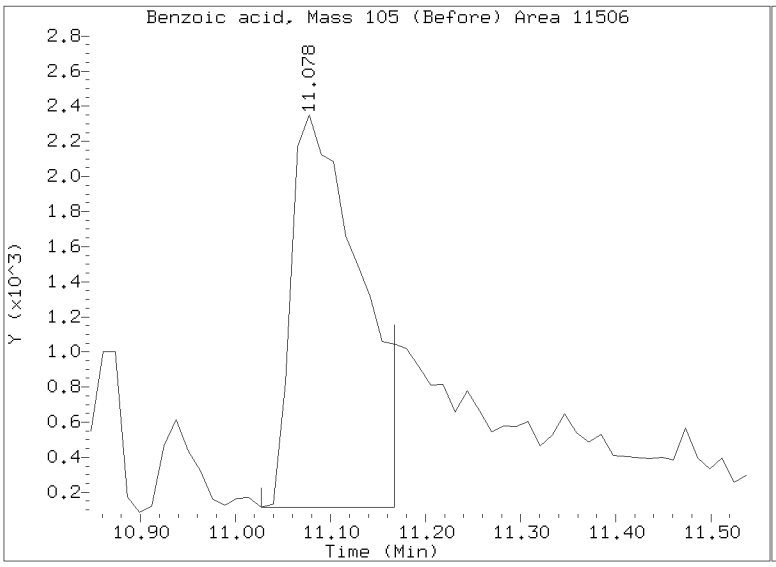
* Only compounds listed in the work order have been verified by the analyst *

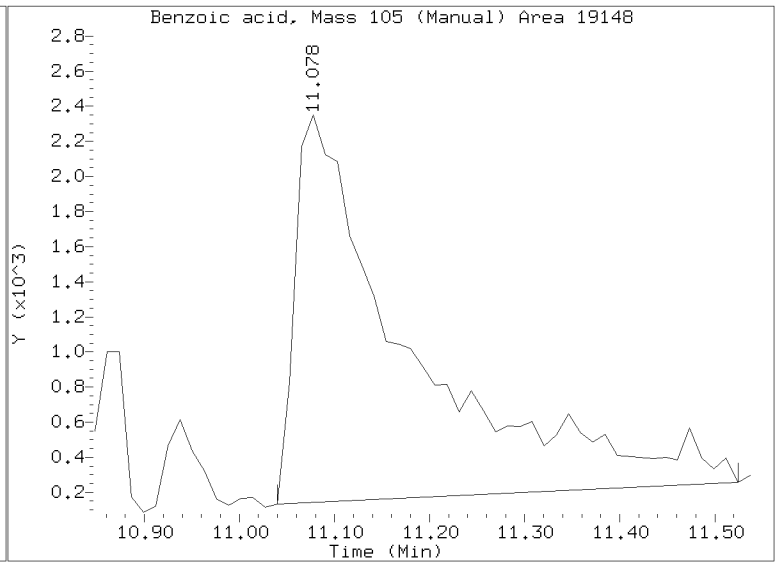
Quant Ion Manual Peak Adjustment Report

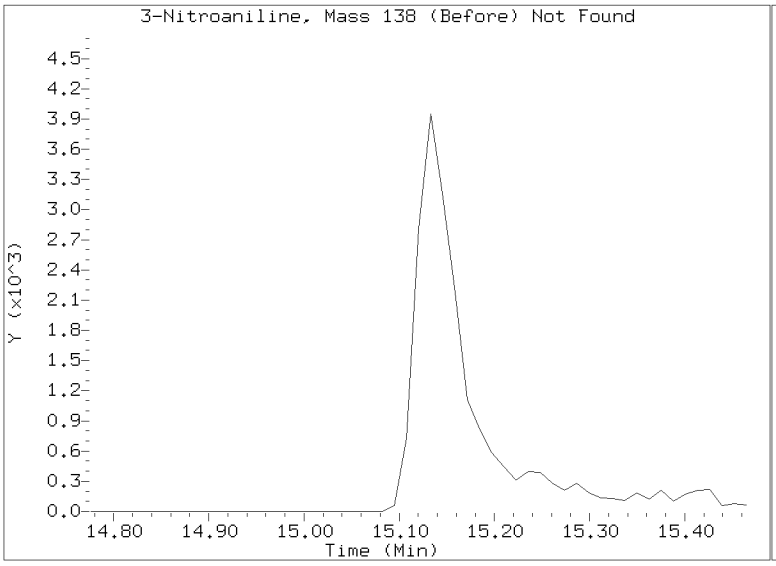
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012306.D
Injection Date: 01-JUN-2023 15:12
Lab ID:SLF0008-LCV1 Client ID:
Report Date: 06/03/2023 10:06

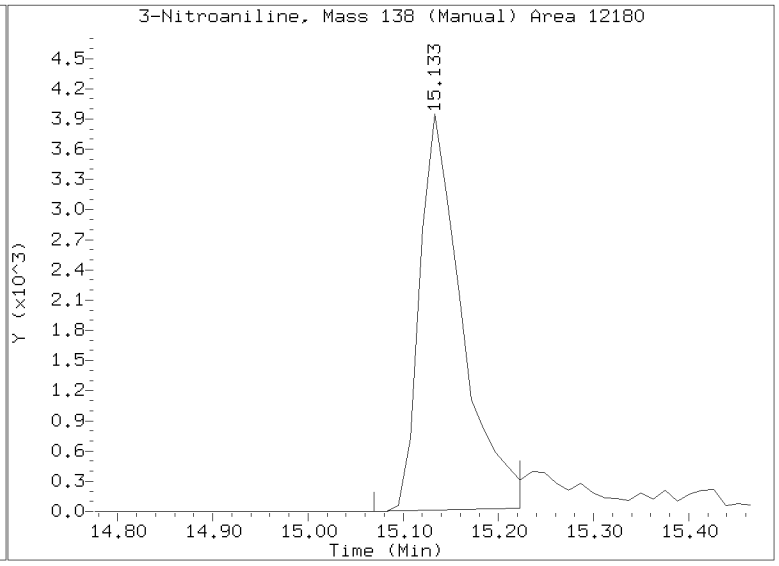






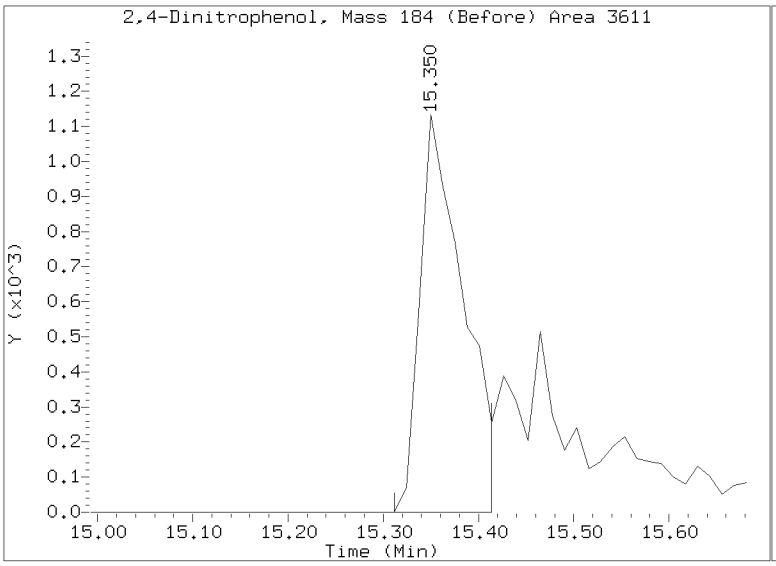


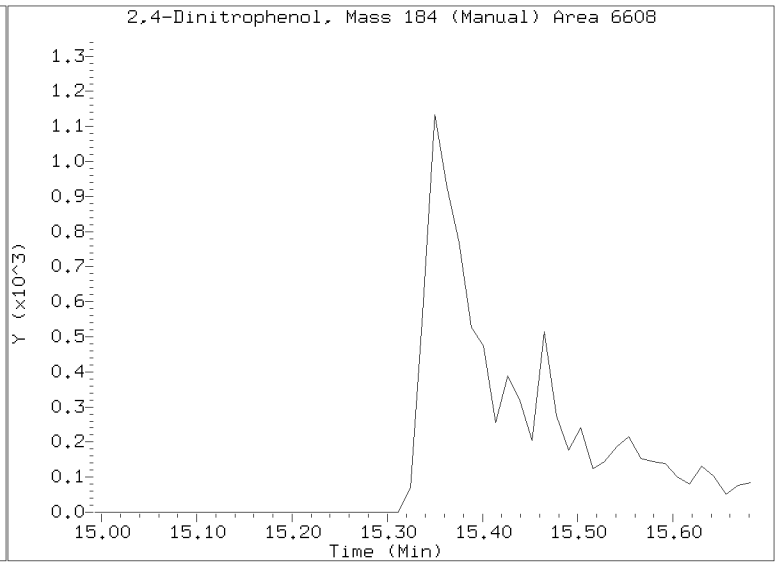


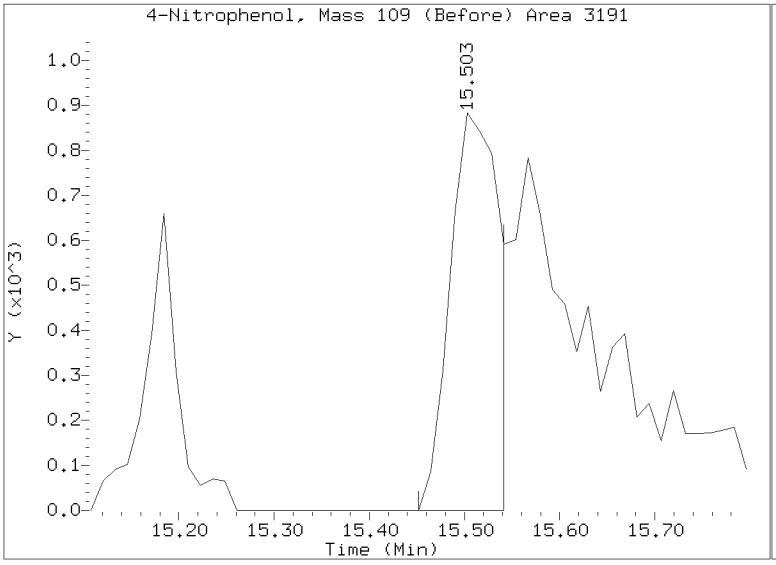


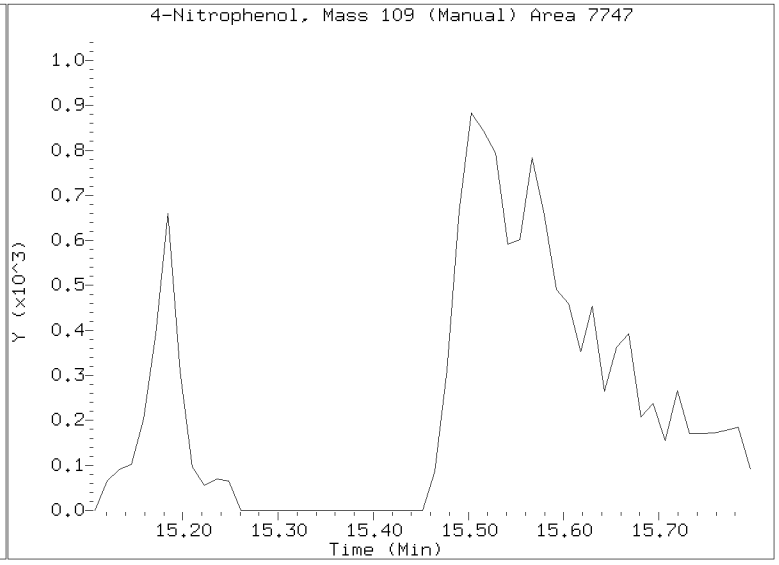
Quant Ion Manual Peak Adjustment Report

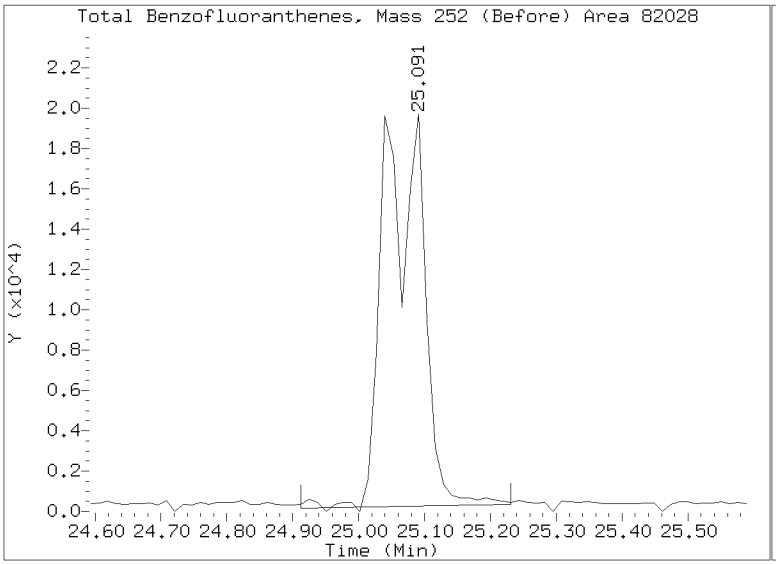
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012306.D
Injection Date: 01-JUN-2023 15:12
Lab ID:SLF0008-LCV1 Client ID:
Report Date: 06/03/2023 10:06

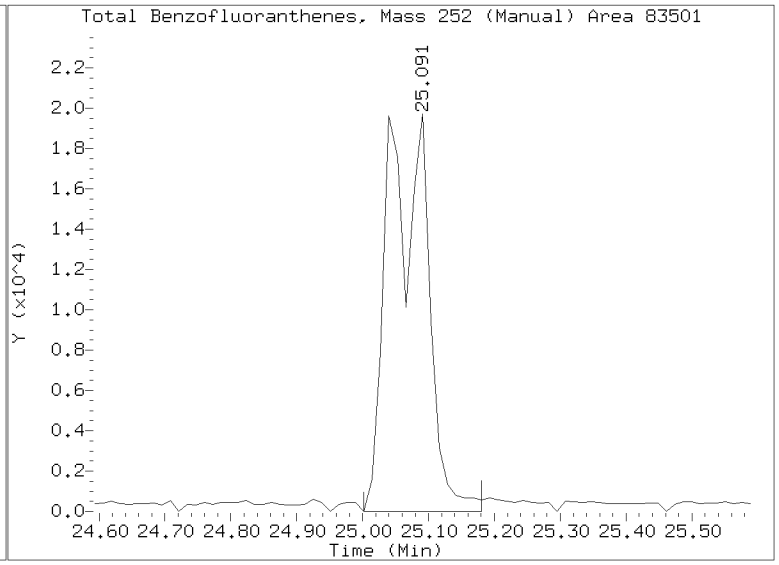












LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLF0008-LCV2
Sequence: SLF0008
Standard ID: L005946

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.20000	0.2	-22.6	50.00
4-Methylphenol	0.20000	0.1	-51.6	50.00
Naphthalene	0.20000	0.2	-0.8	50.00
2-Methylnaphthalene	0.20000	0.2	-10.7	50.00
Acenaphthylene	0.20000	0.2	10.8	50.00
Dimethylphthalate	0.20000	0.2	0.3	50.00
Acenaphthene	0.20000	0.2	2.5	50.00
Dibenzofuran	0.20000	0.2	-4.8	50.00
Fluorene	0.20000	0.2	-17.1	50.00
Phenanthrene	0.20000	0.2	2.6	50.00
Anthracene	0.20000	0.2	-0.7	50.00
Fluoranthene	0.20000	0.2	-0.9	50.00
Pyrene	0.20000	0.2	4.7	50.00
Butylbenzylphthalate	0.20000	0.2	-9.8	50.00
Benzo(a)anthracene	0.20000	0.2	4.7	50.00
Chrysene	0.20000	0.2	10.0	50.00
bis(2-Ethylhexyl)phthalate	0.20000	0.2	15.0	50.00
Benzofluoranthenes, Total	0.40000	0.4	3.4	50.00
Benzo(a)pyrene	0.20000	0.2	14.9	50.00
Indeno(1,2,3-cd)pyrene	0.20000	0.2	-18.7	50.00
Dibenzo(a,h)anthracene	0.20000	0.1	-27.1	50.00
Benzo(g,h,i)perylene	0.20000	0.1	-37.5	50.00
2-Fluorophenol	0.30000	0.180	-40.0	50.00
Phenol-d5	0.30000	0.194	-35.3	50.00
2-Chlorophenol-d4	0.30000	0.241	-19.6	50.00
1,2-Dichlorobenzene-d4	0.20000	0.193	-3.6	50.00
Nitrobenzene-d5	0.20000	0.193	-3.5	50.00
2-Fluorobiphenyl	0.20000	0.189	-5.7	50.00
2,4,6-Tribromophenol	0.30000	0.265	-11.8	50.00

LOW-CONCENTRATION CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLF0008-LCV2
Sequence: SLF0008
Standard ID: L005946

p-Terphenyl-d14	0.20000	0.217	8.5	50.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Page 1

Date : 02-JUN-2023 01:06

Client ID:

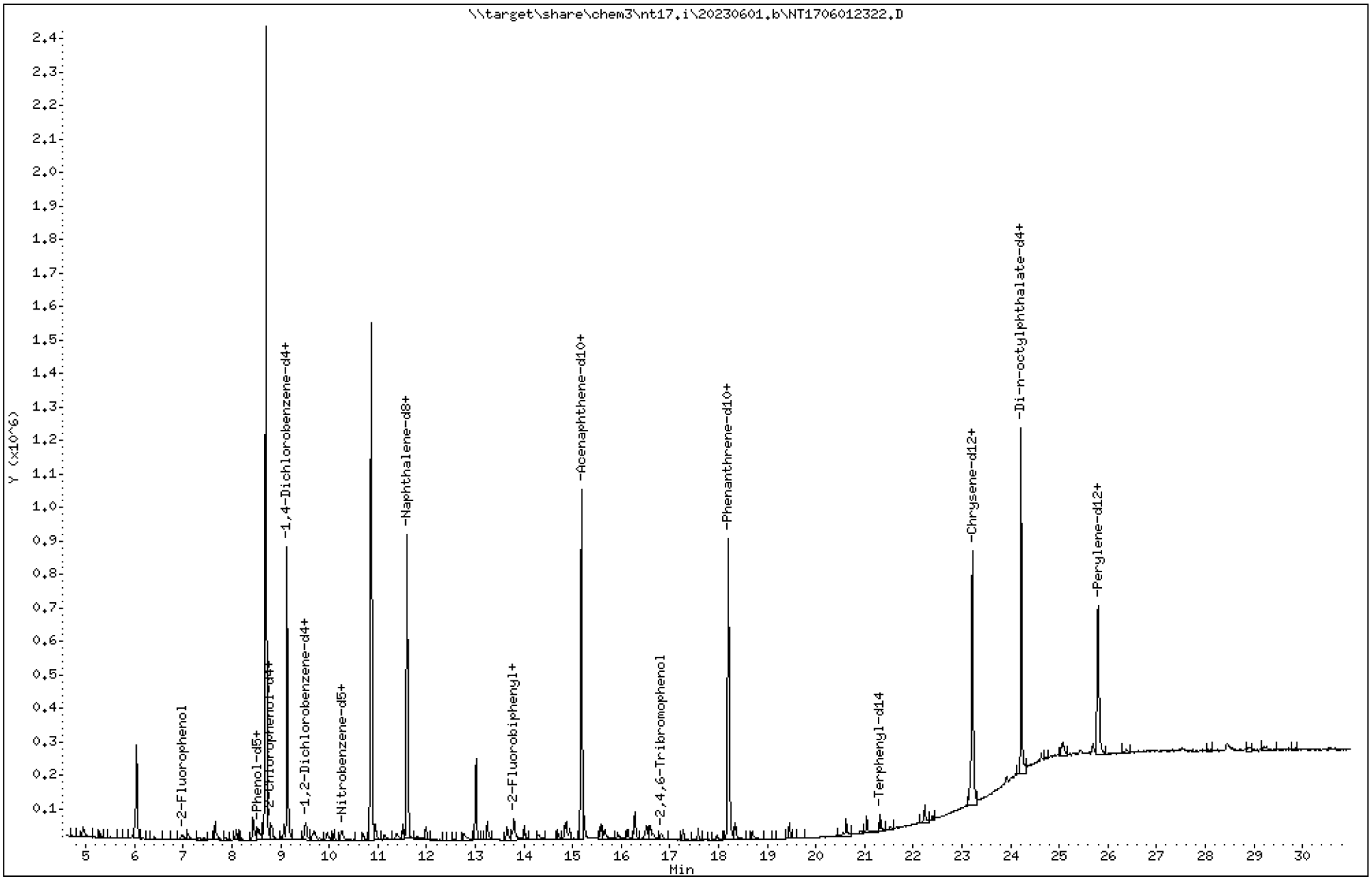
Instrument: nt17.i

Sample Info: BLE0008-LCV2

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

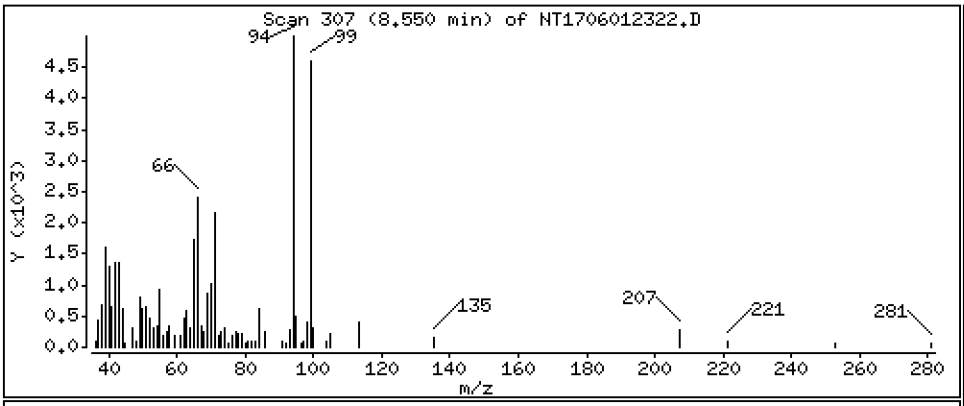
Operator: VTS

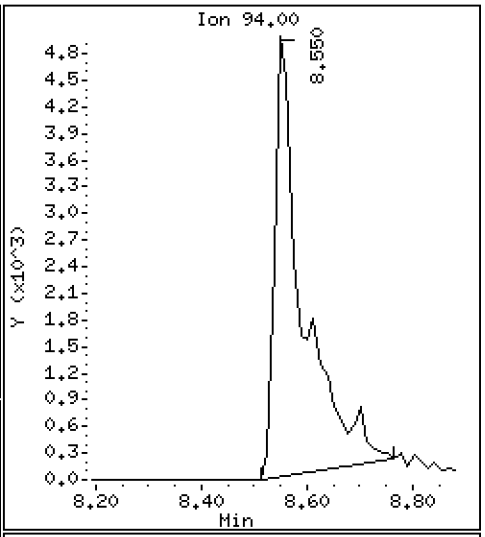
Column phase: ZB-5msi

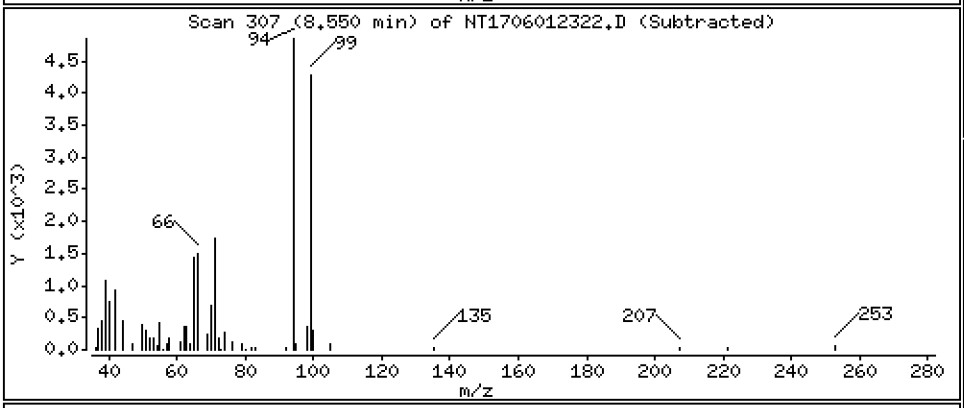
Column diameter: 0.25

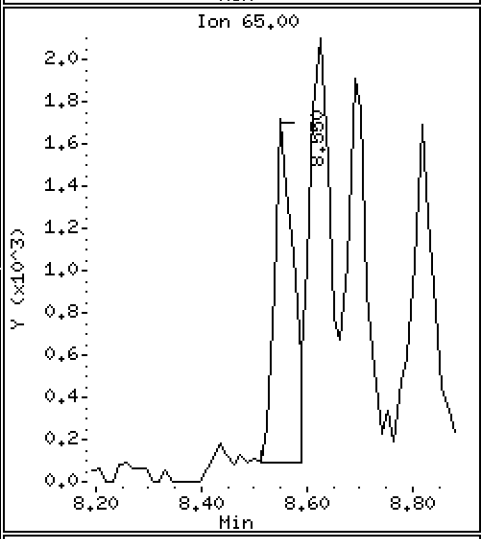
3 Phenol

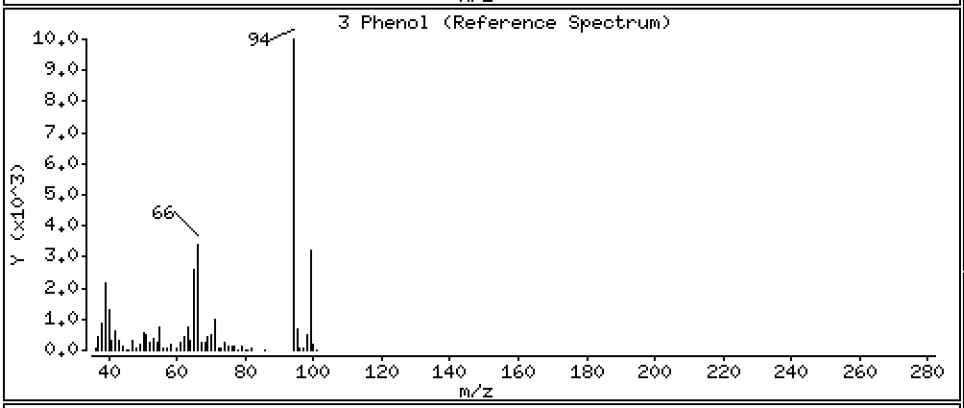
Concentration: 0.1548 ug/mL

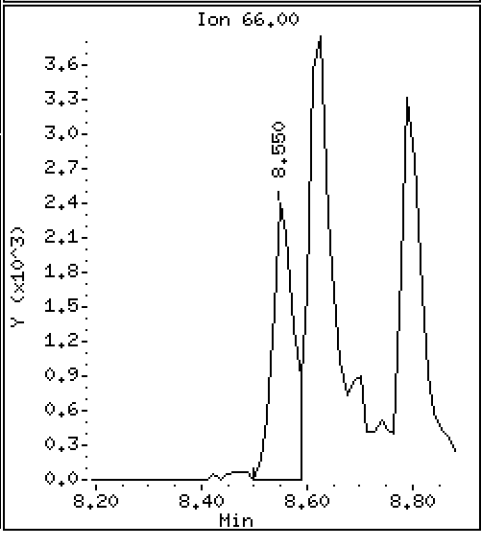


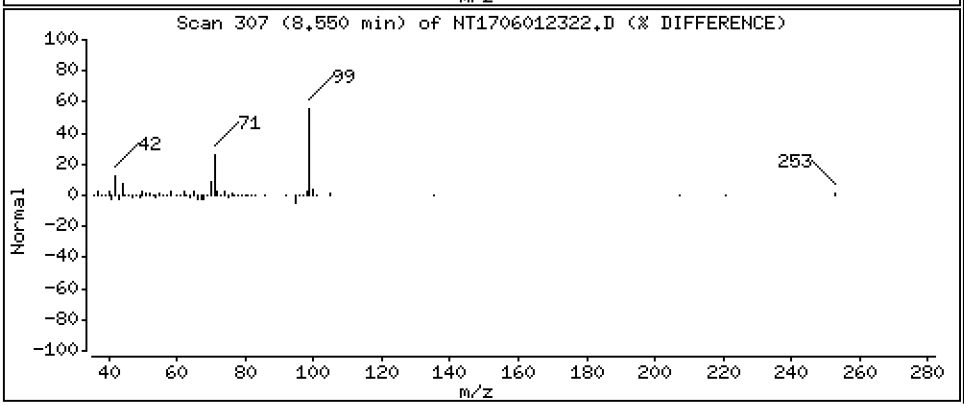












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

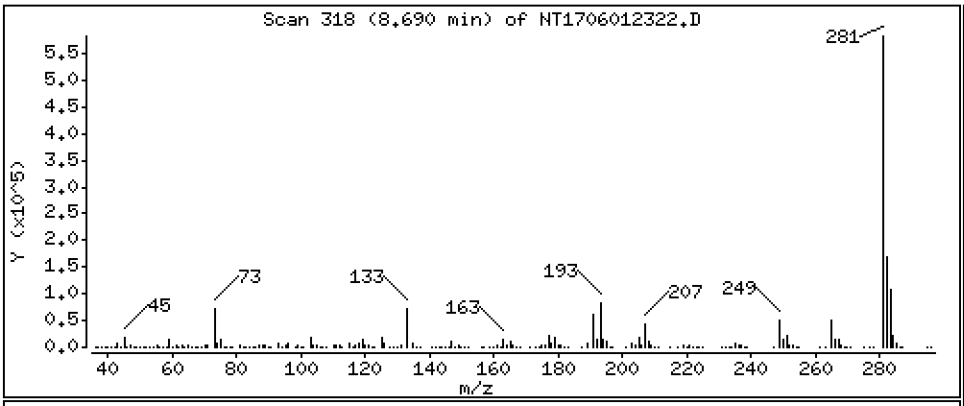
Operator: VTS

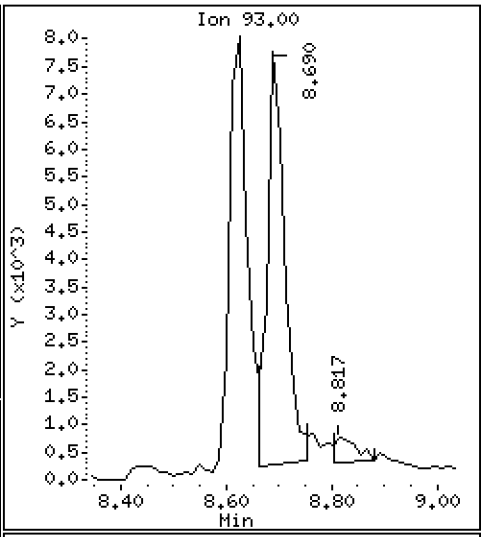
Column phase: ZB-5msi

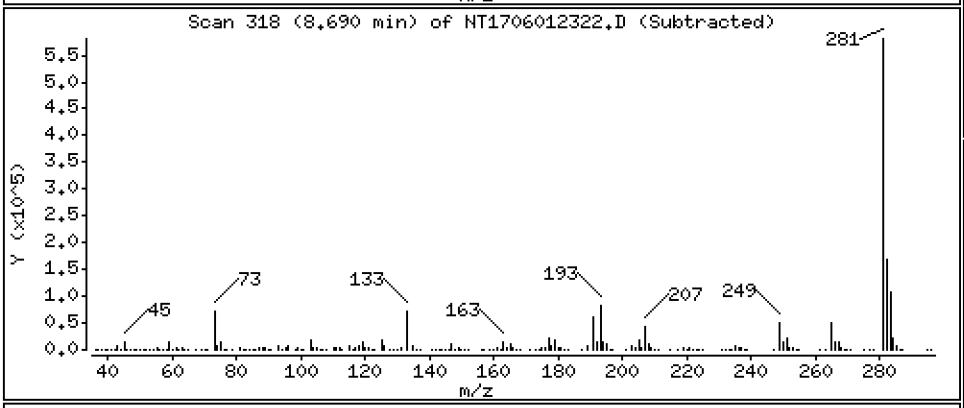
Column diameter: 0.25

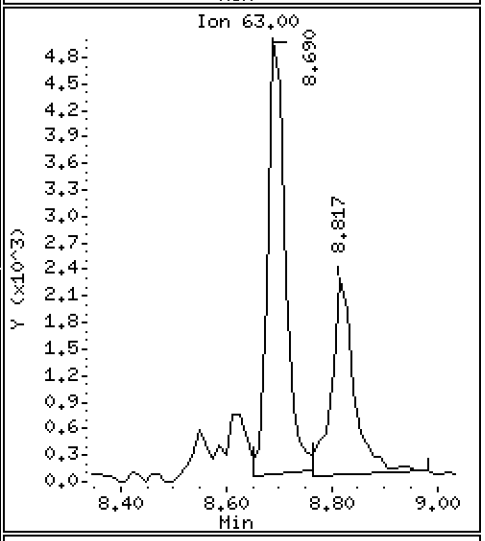
4 Bis(2-Chloroethyl)ether

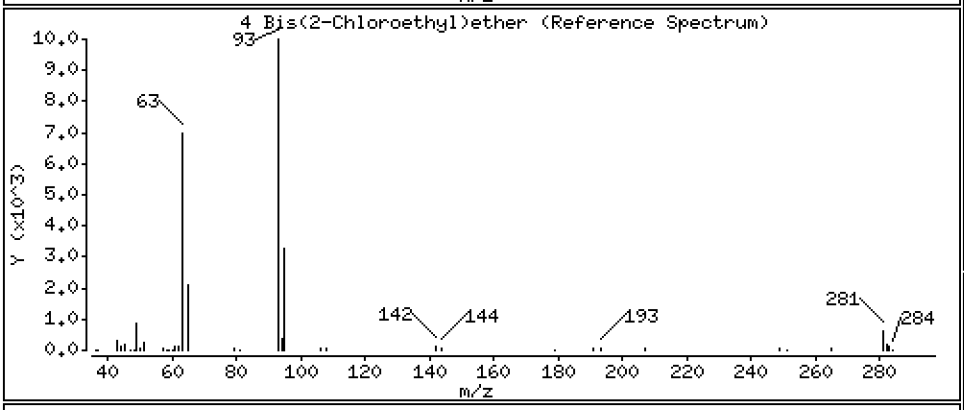
Concentration: 0.1979 ug/mL

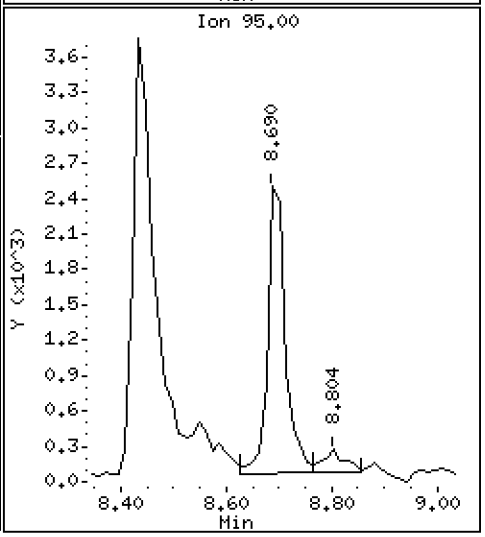


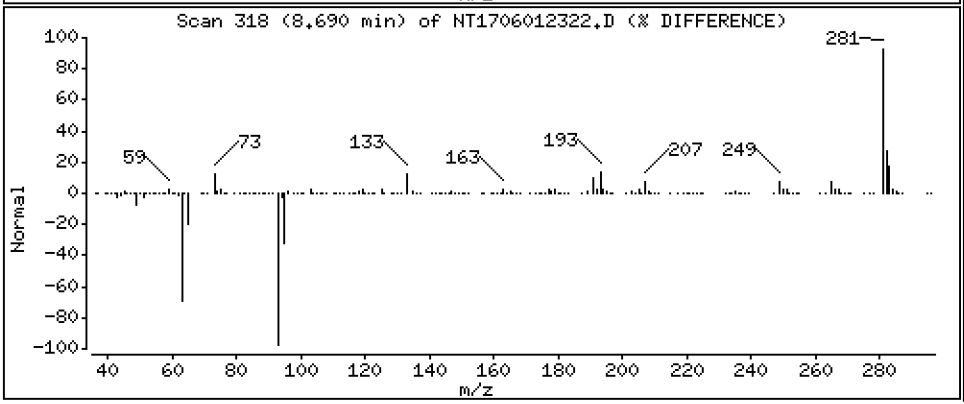












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

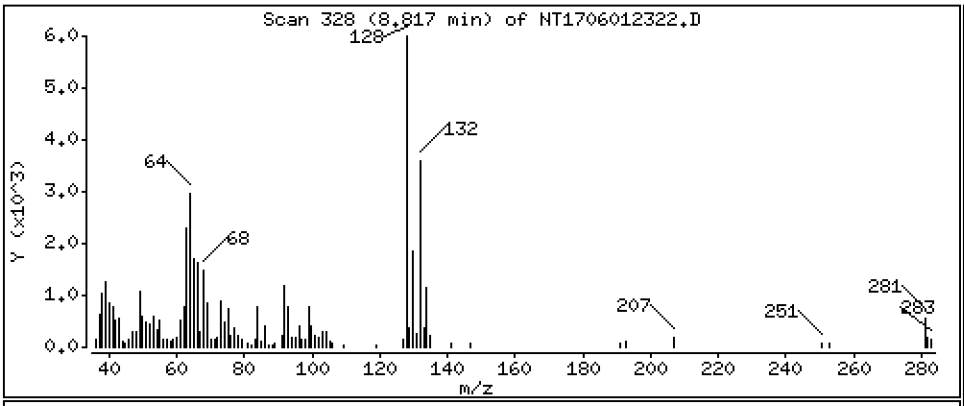
Operator: VTS

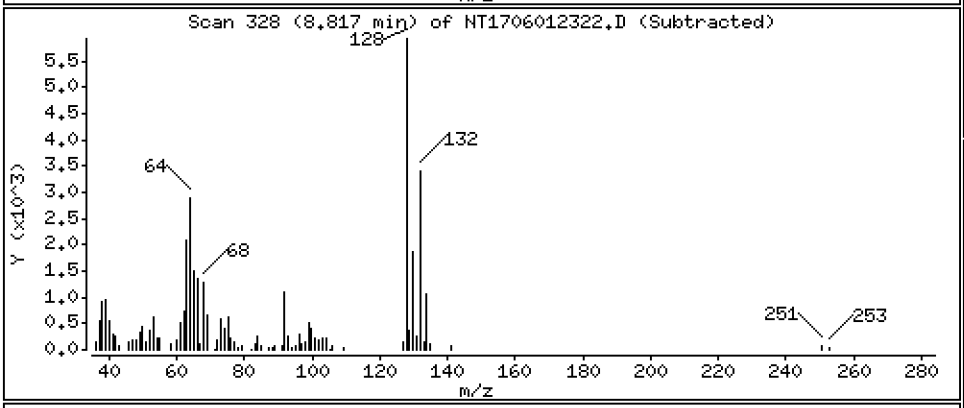
Column phase: ZB-5msi

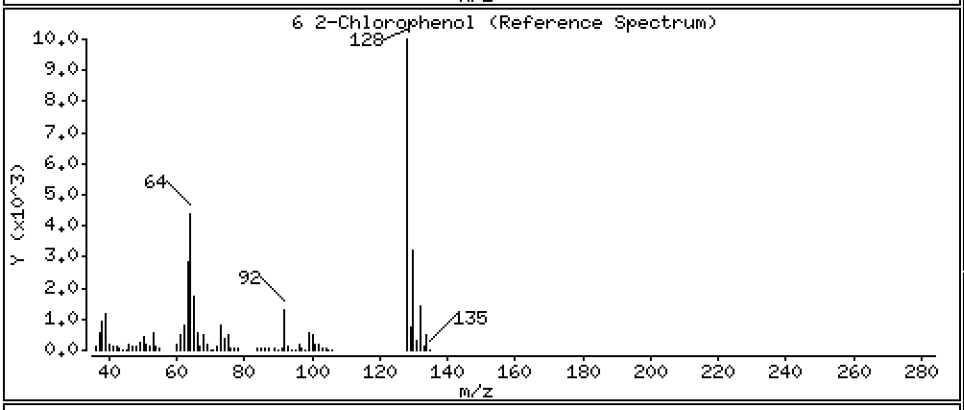
Column diameter: 0.25

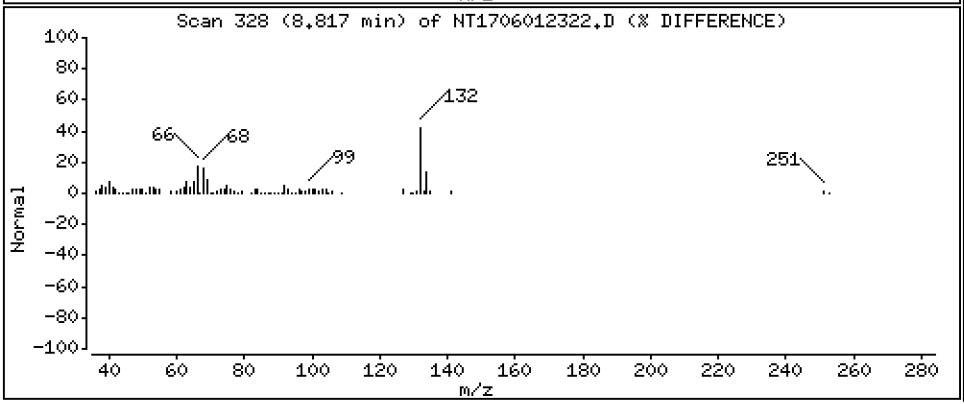
6 2-Chlorophenol

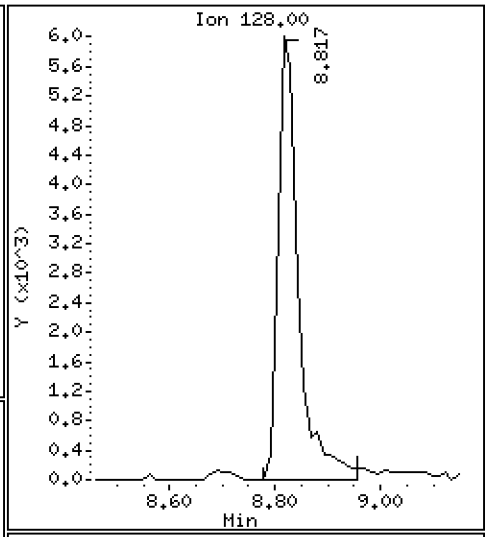
Concentration: 0.1797 ug/mL

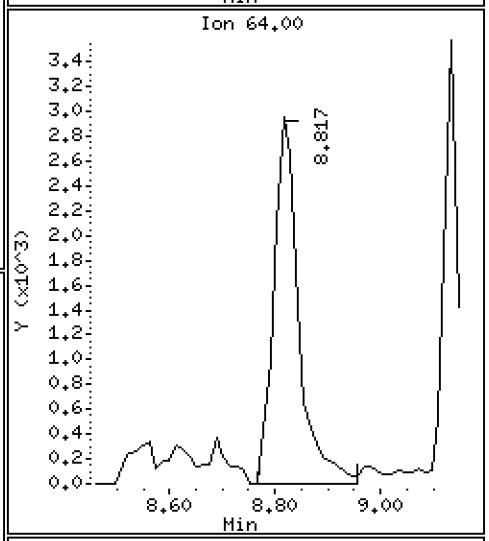


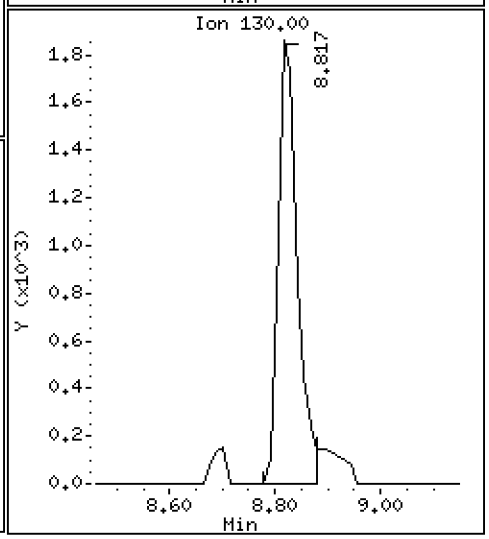












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

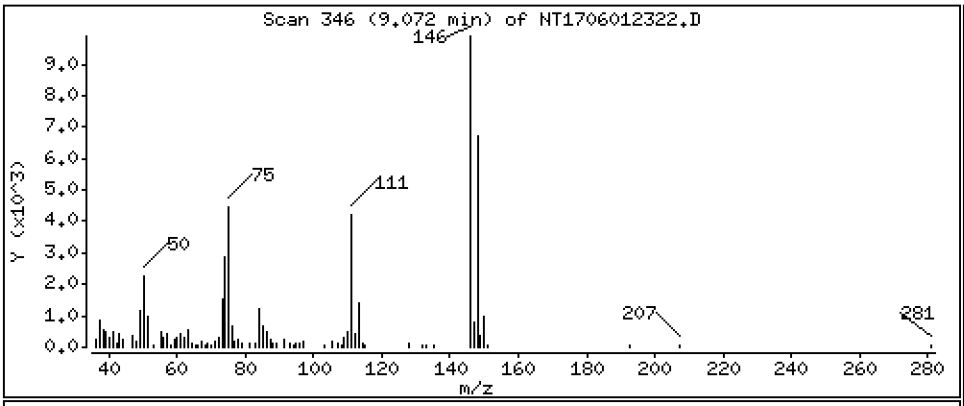
Operator: VTS

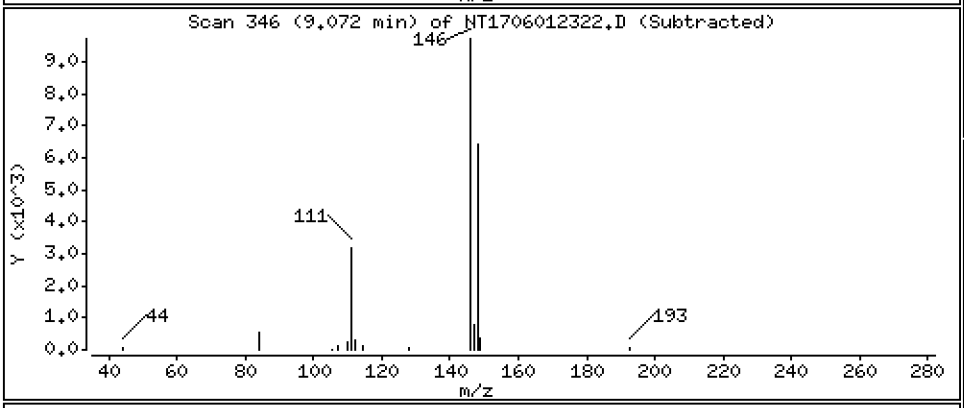
Column phase: ZB-5msi

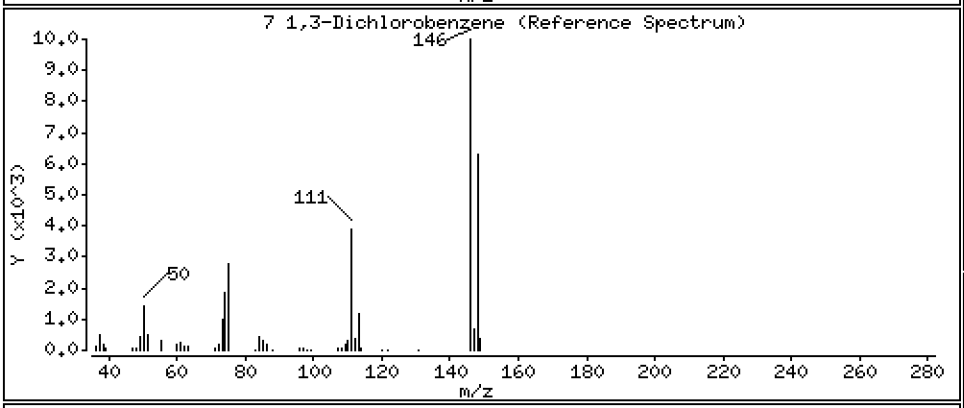
Column diameter: 0.25

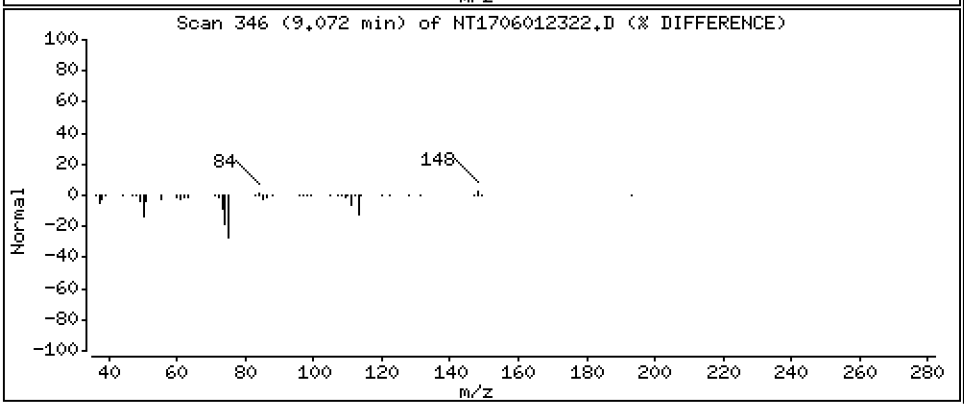
7 1,3-Dichlorobenzene

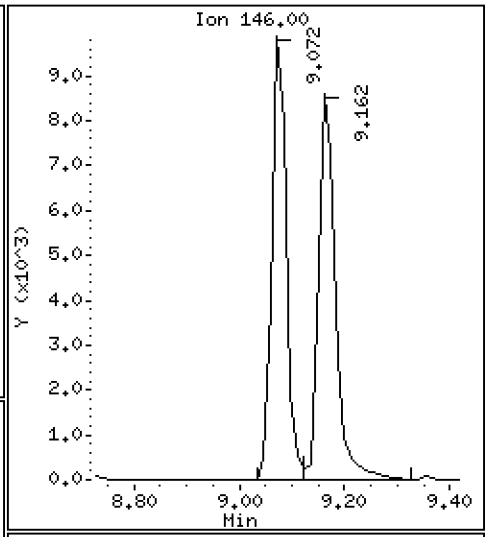
Concentration: 0.1830 ug/mL

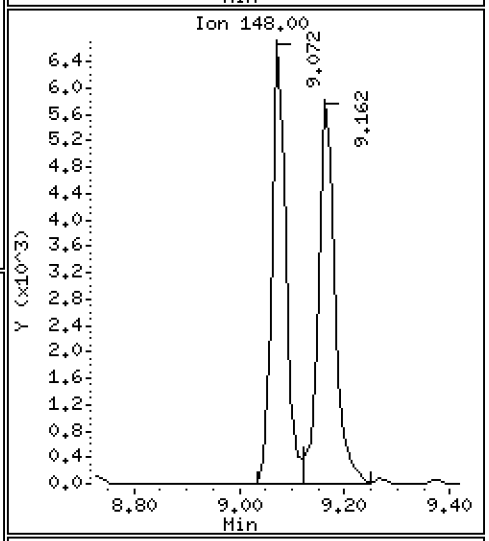


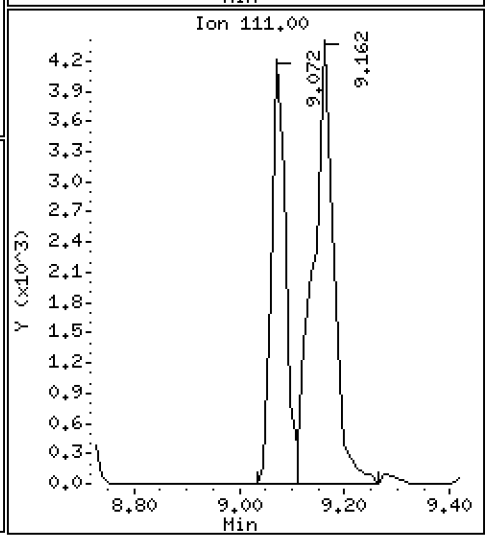












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

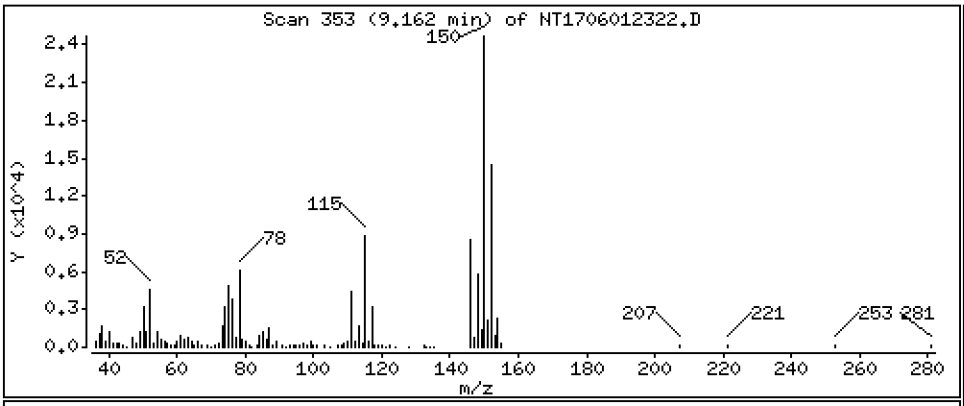
Operator: VTS

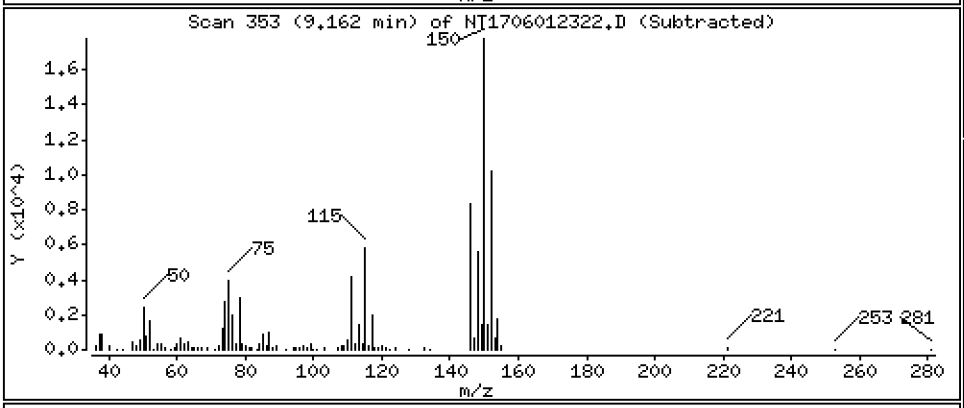
Column phase: ZB-5msi

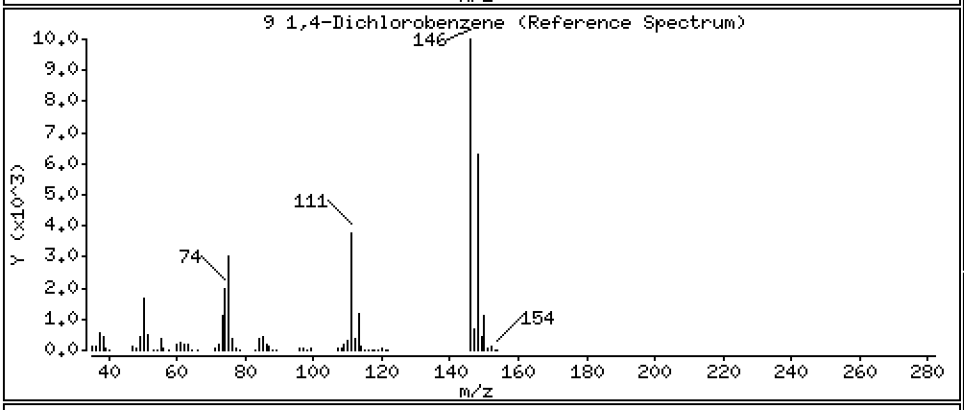
Column diameter: 0.25

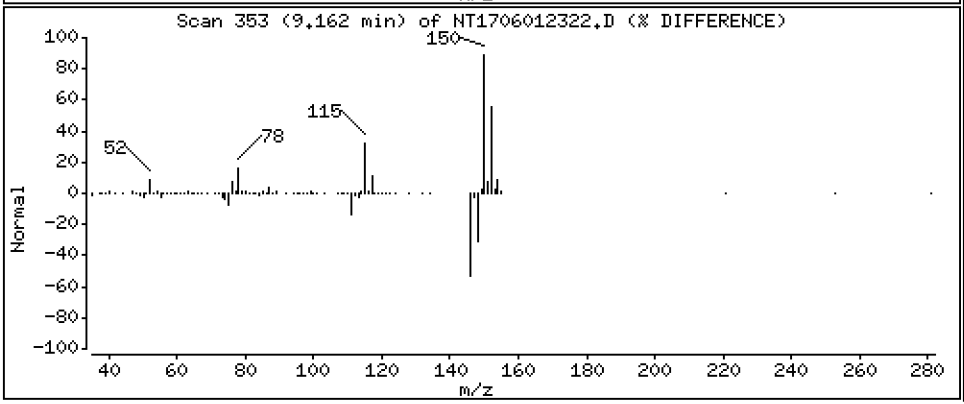
9 1,4-Dichlorobenzene

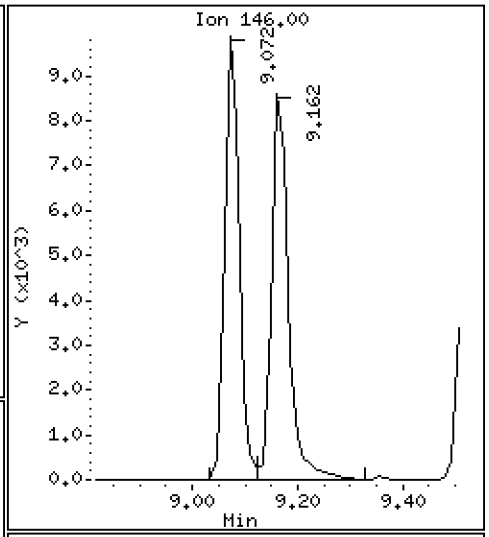
Concentration: 0.2114 ug/mL

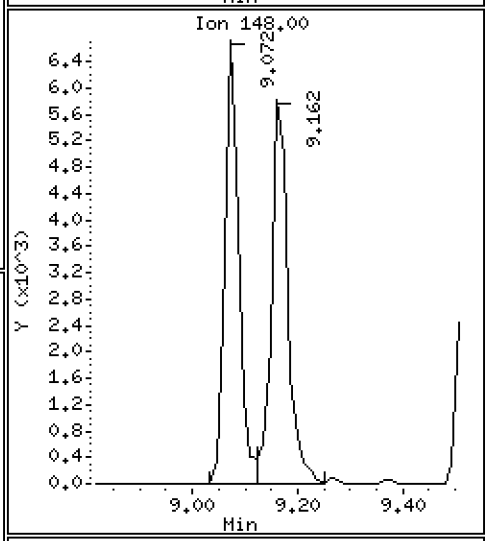


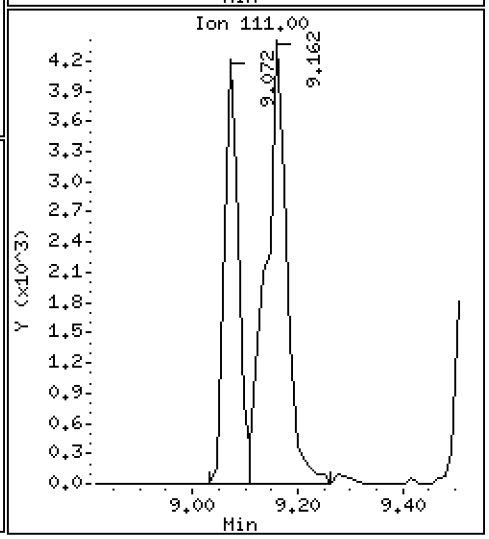












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

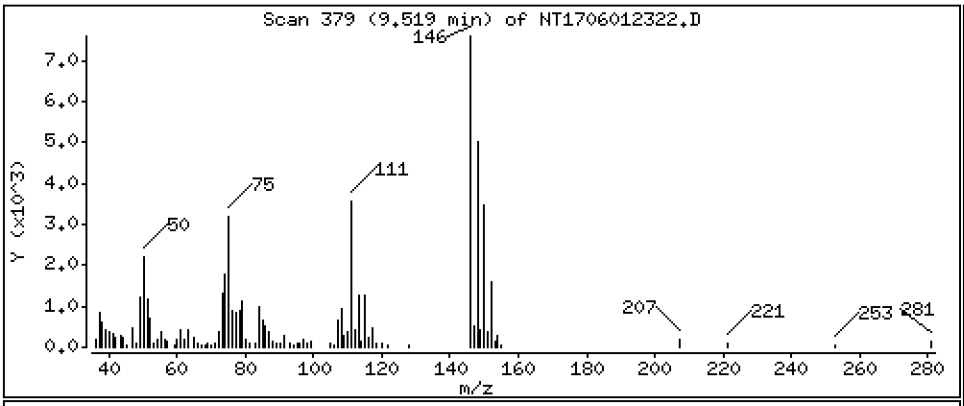
Operator: VTS

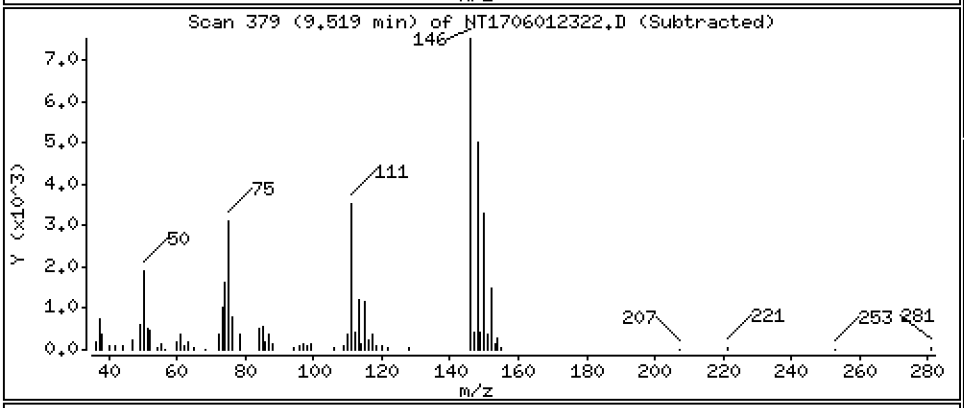
Column phase: ZB-5msi

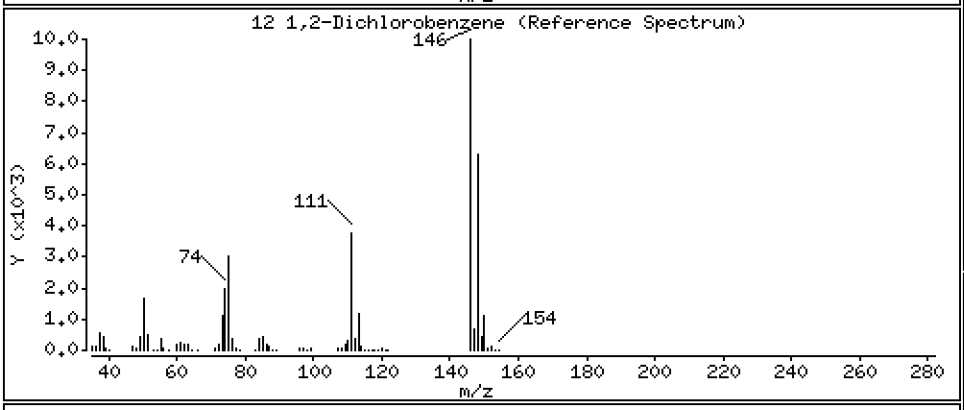
Column diameter: 0.25

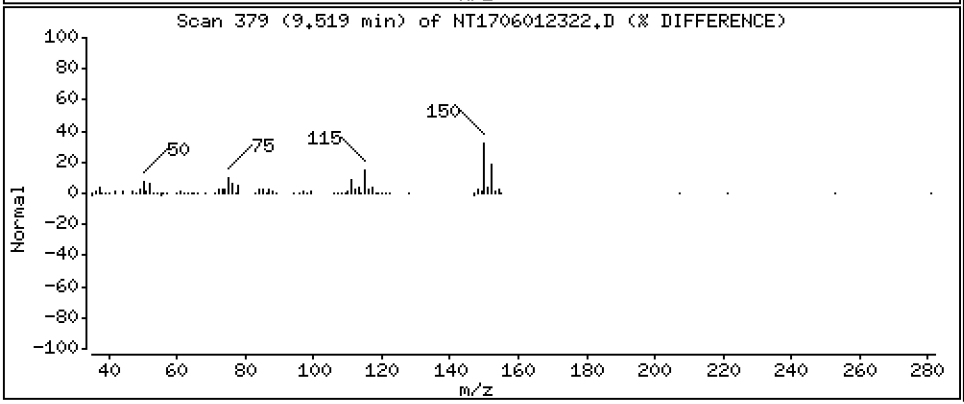
12 1,2-Dichlorobenzene

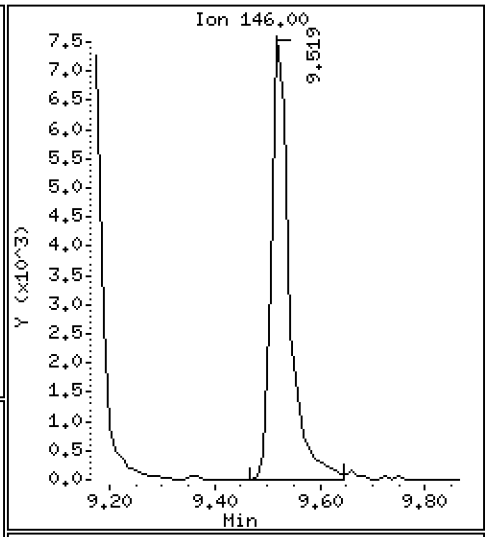
Concentration: 0.1889 ug/mL

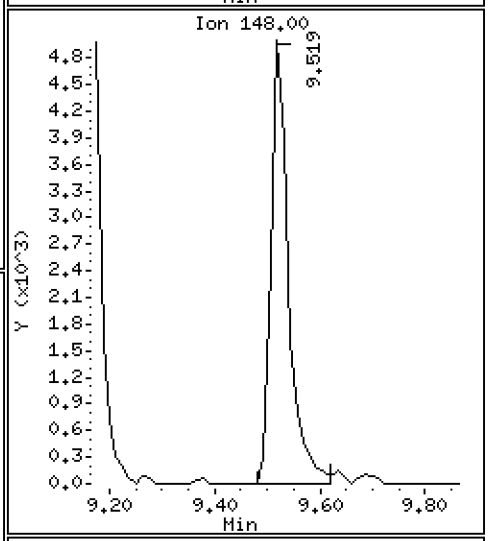


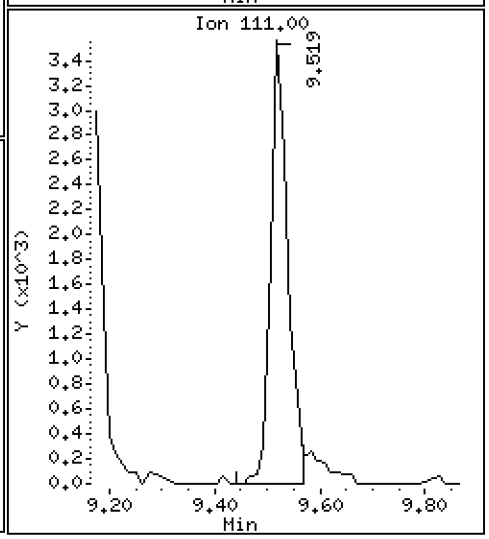












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

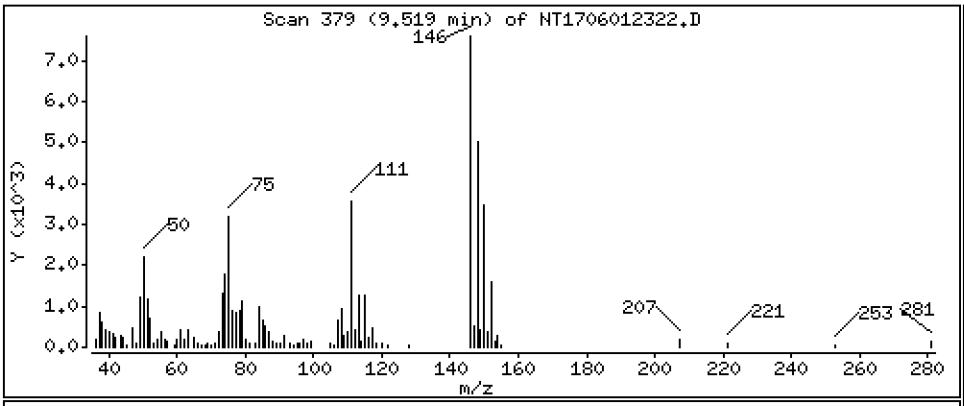
Operator: VTS

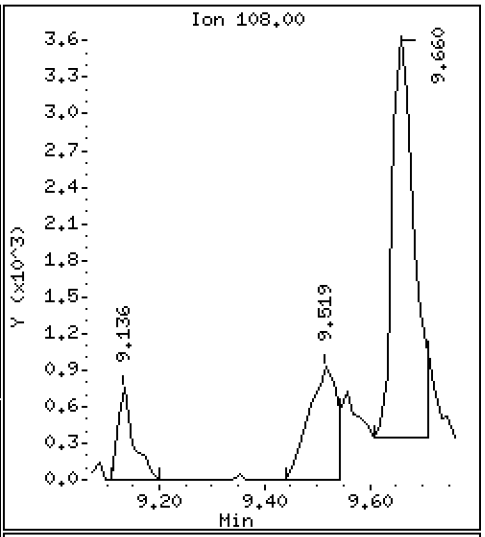
Column phase: ZB-5msi

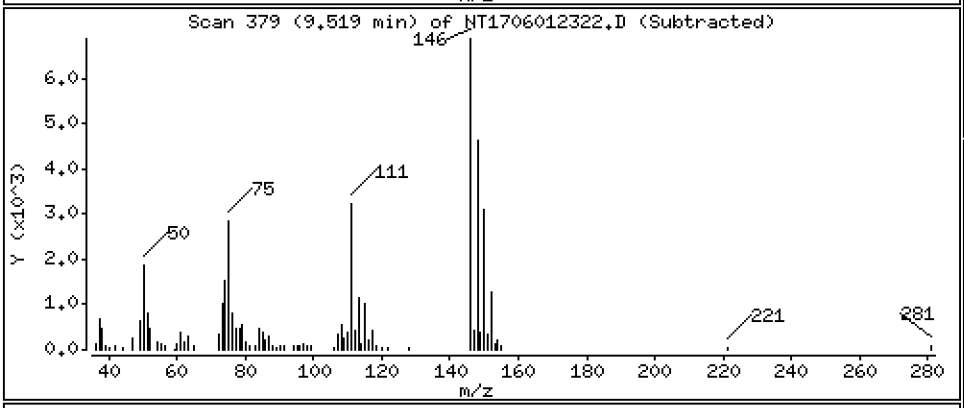
Column diameter: 0.25

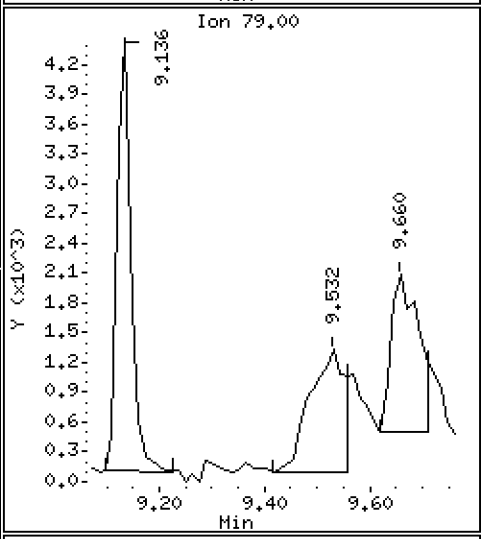
11 Benzyl alcohol

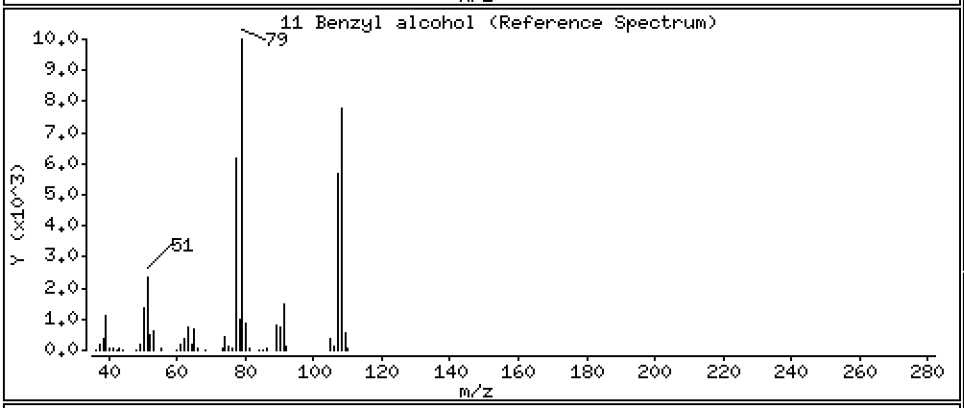
Concentration: 0.06216 ug/mL

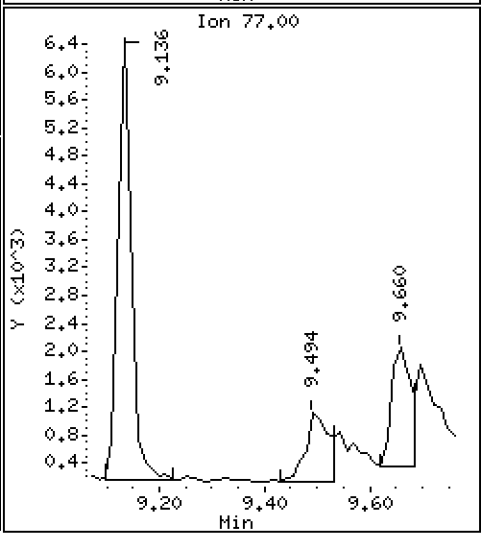


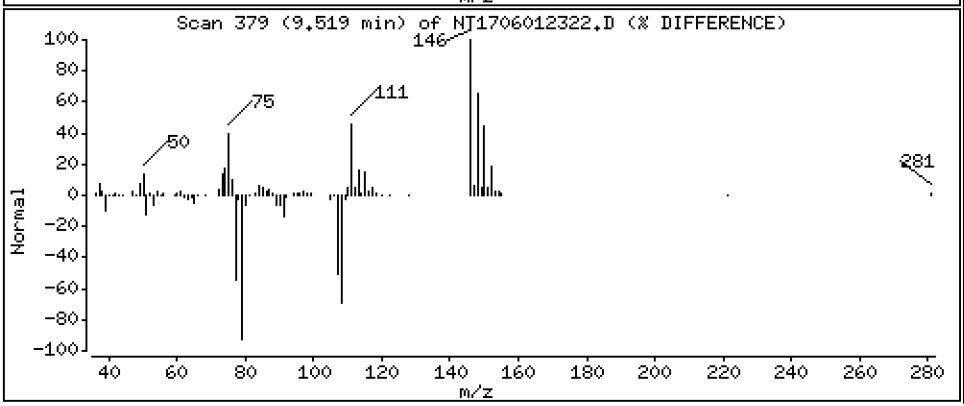












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

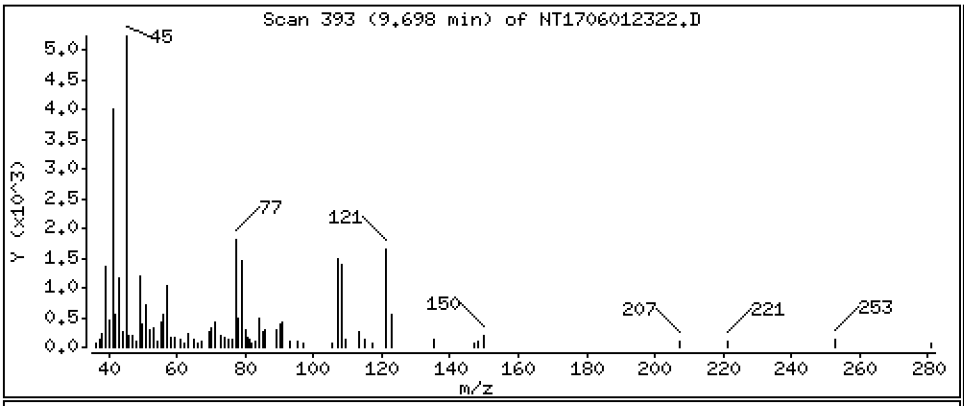
Operator: VTS

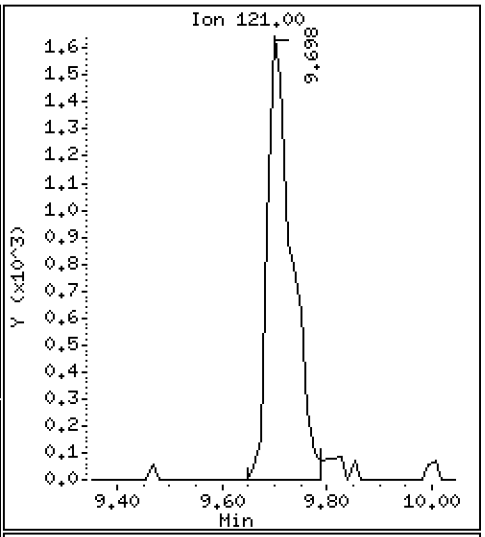
Column phase: ZB-5msi

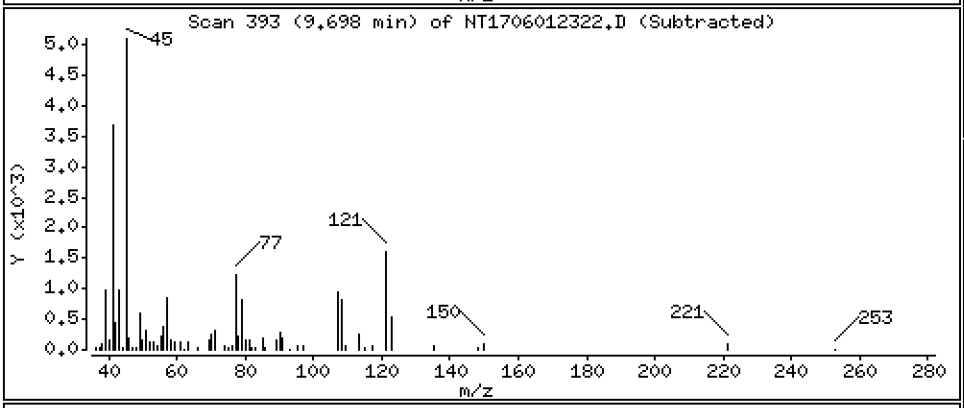
Column diameter: 0.25

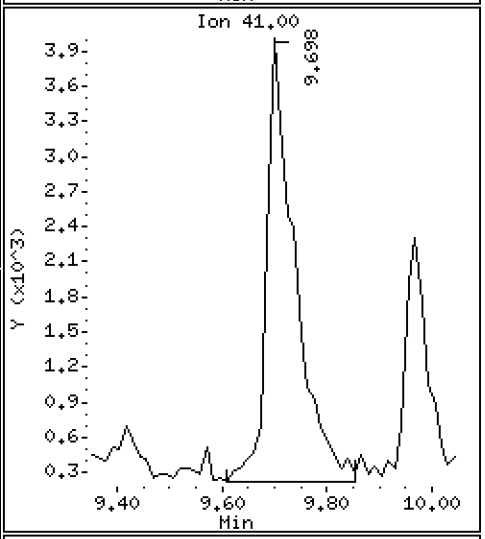
14 2,2'-oxybis(1-Chloropropane)

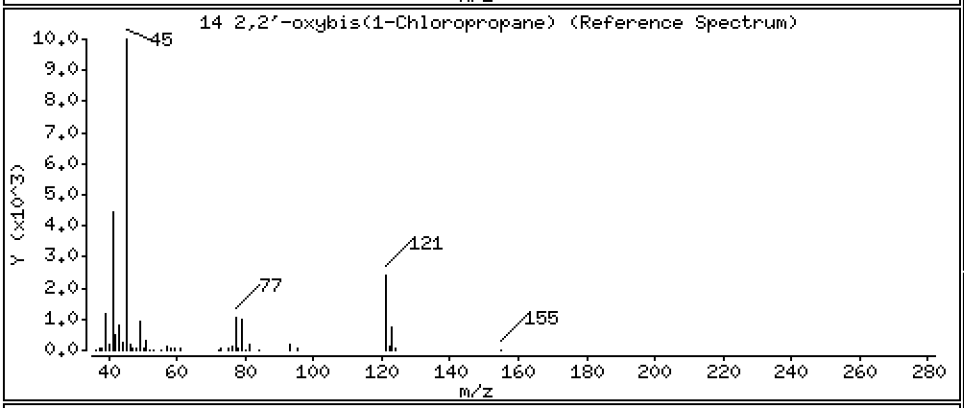
Concentration: 0.1950 ug/mL

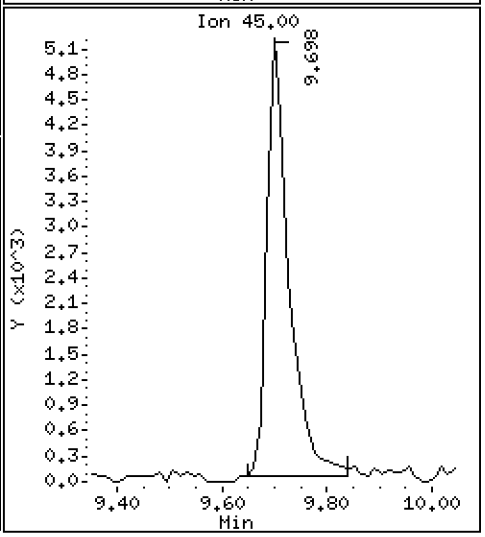


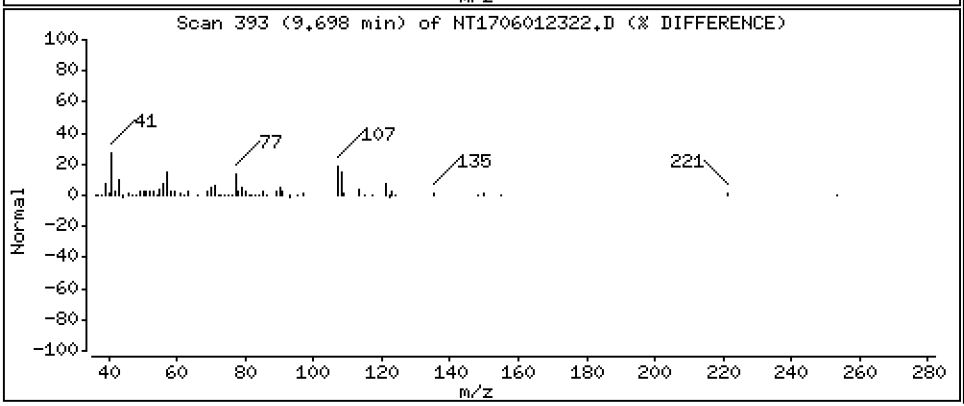












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

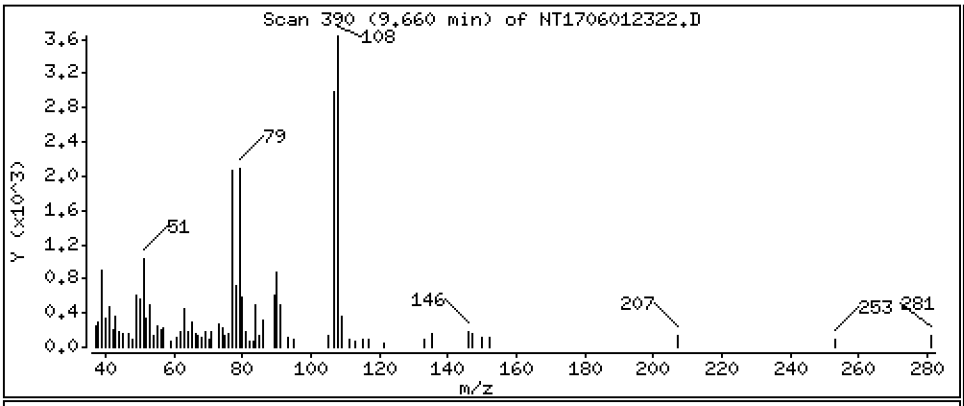
Operator: VTS

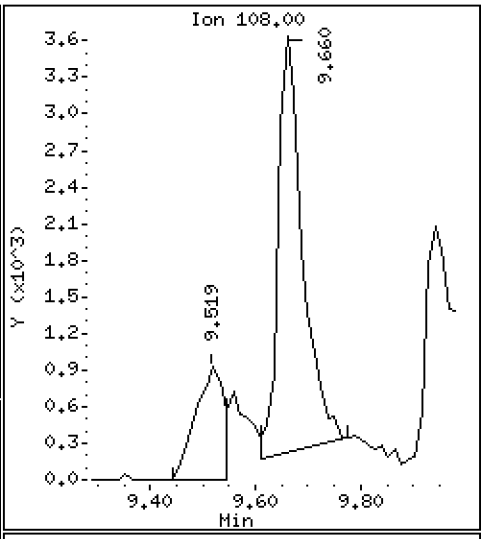
Column phase: ZB-5msi

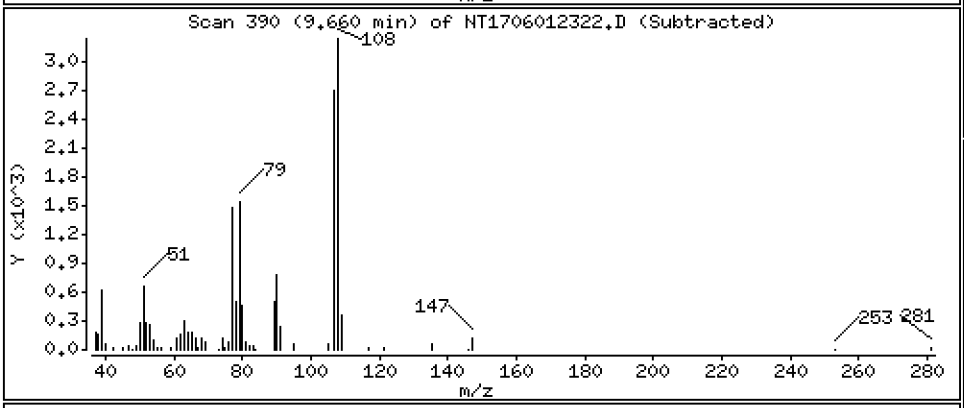
Column diameter: 0.25

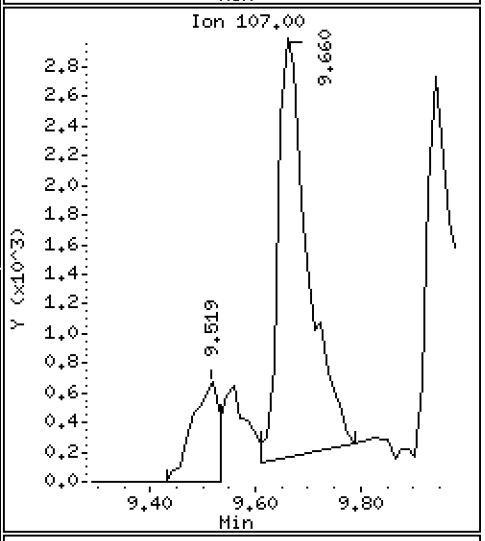
13 2-Methylphenol

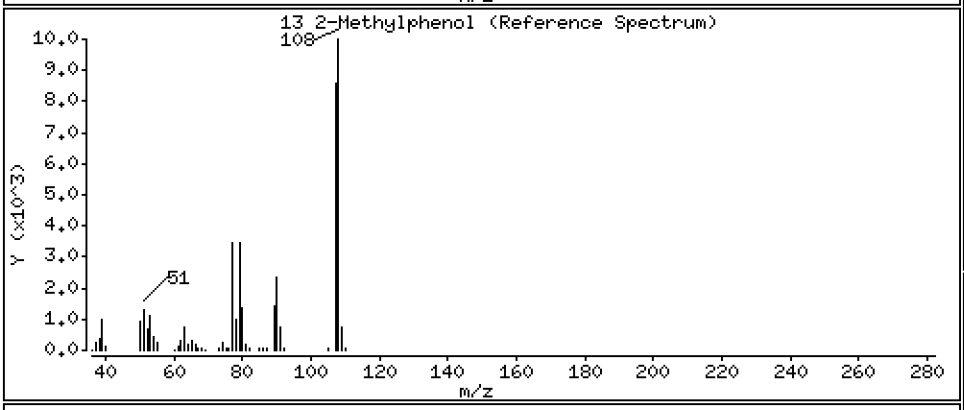
Concentration: 0.1231 ug/mL

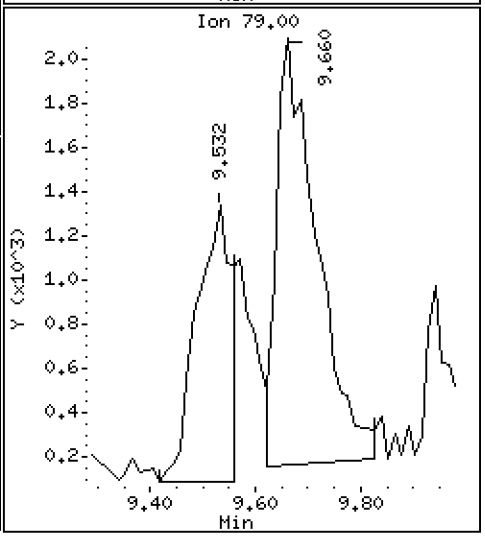


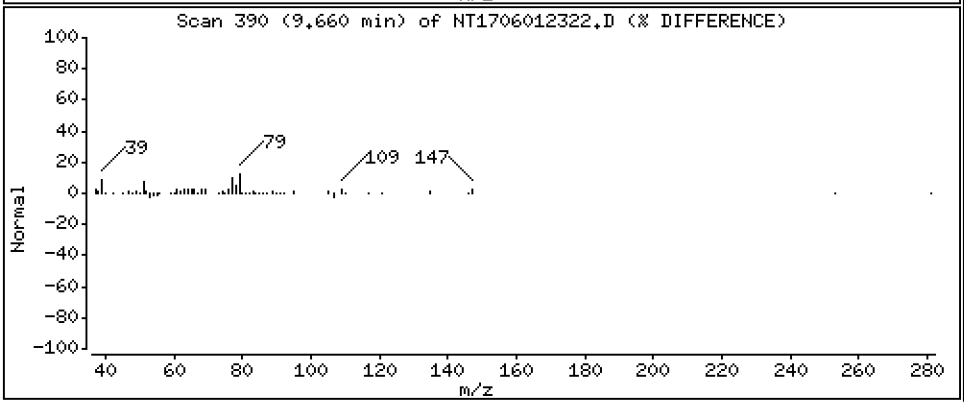












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

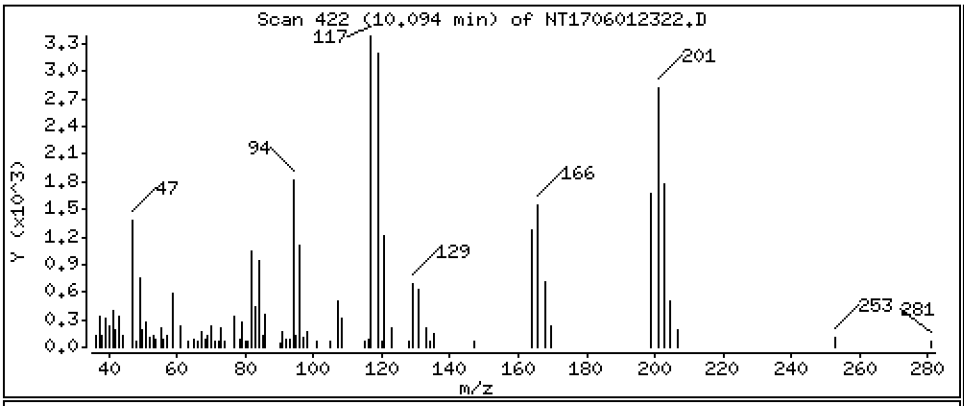
Operator: VTS

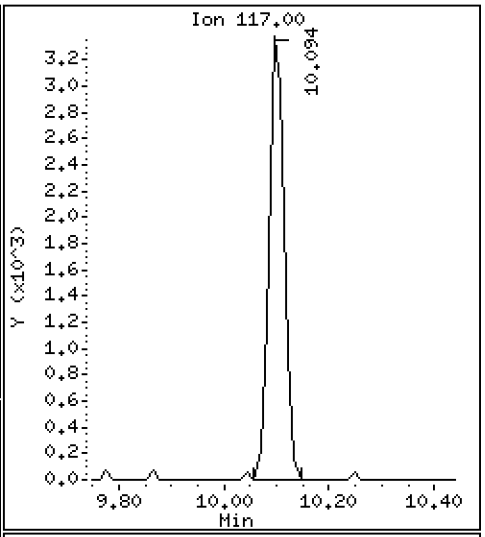
Column phase: ZB-5msi

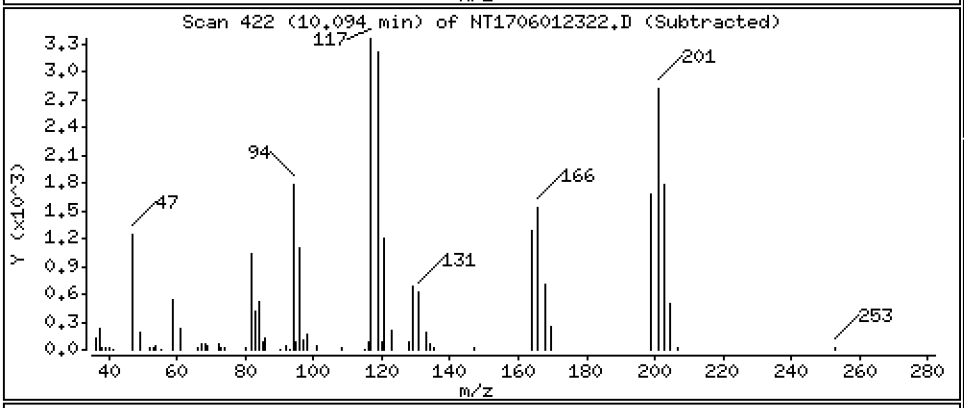
Column diameter: 0.25

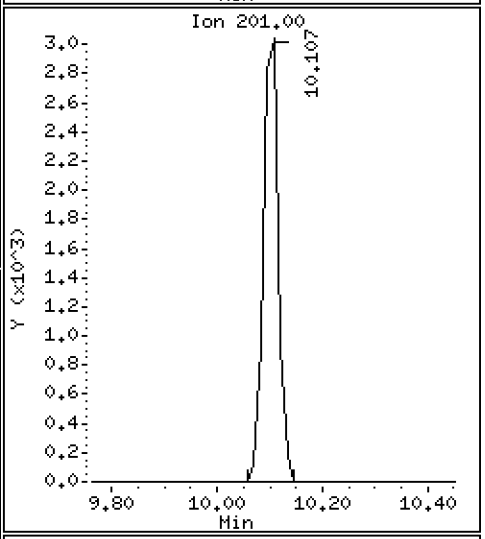
17 Hexachloroethane

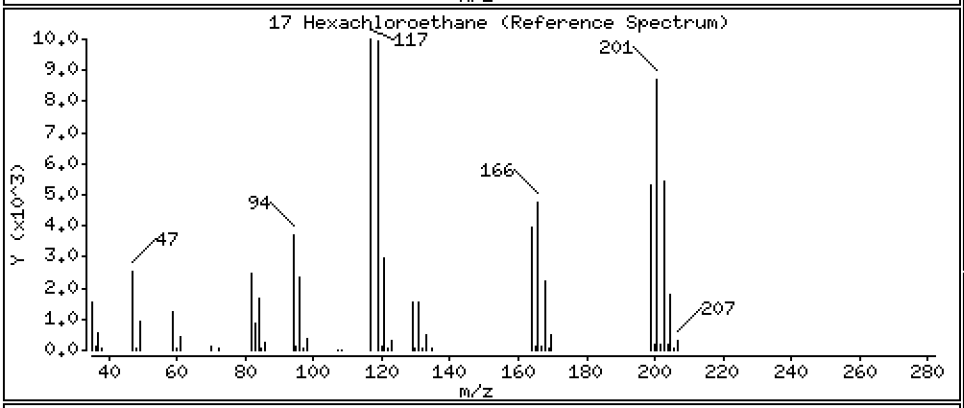
Concentration: 0.1643 ug/mL

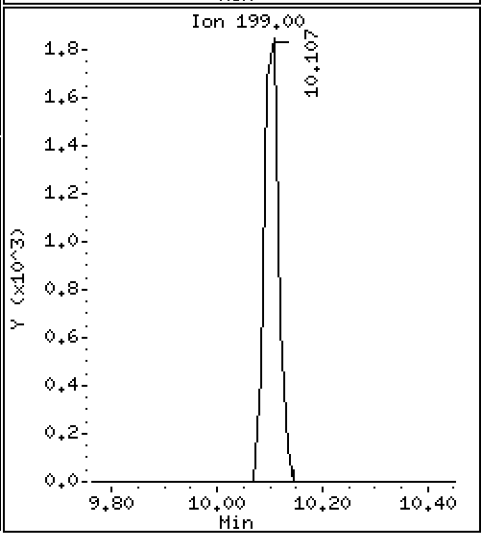


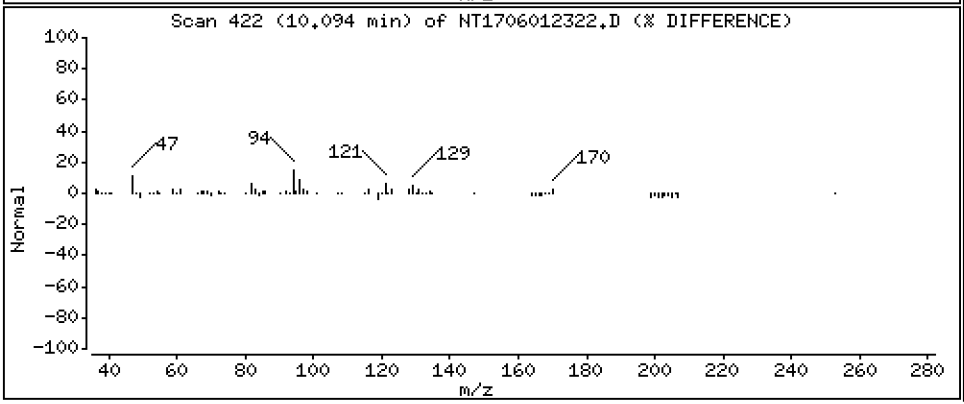












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

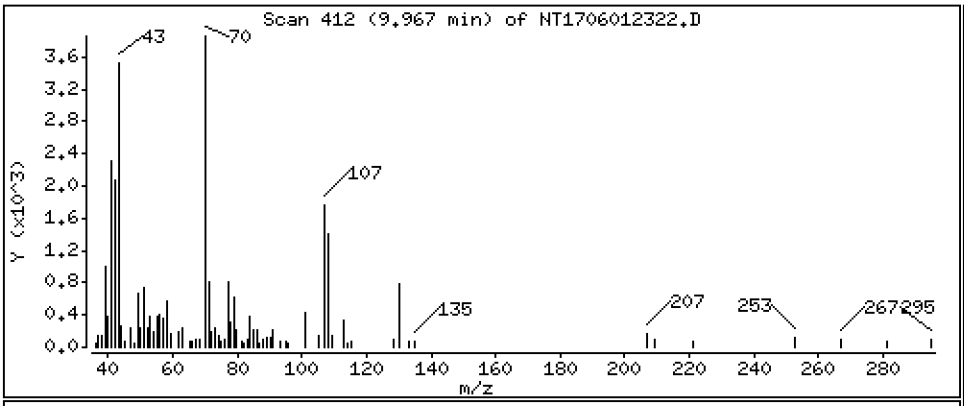
Operator: VTS

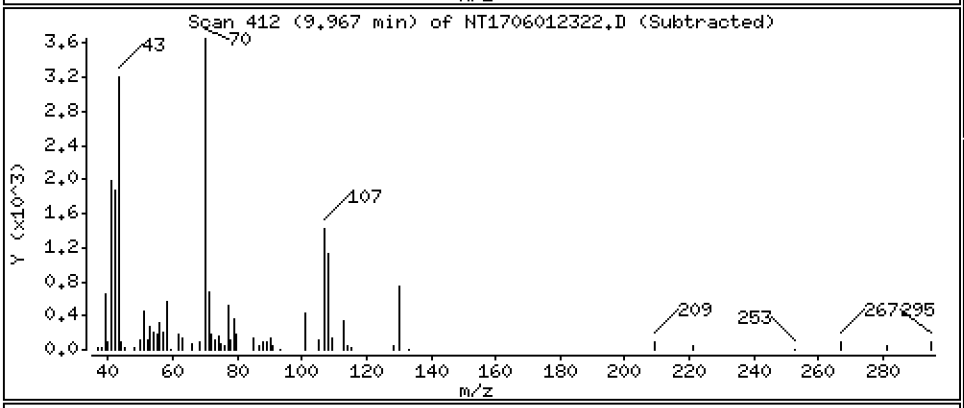
Column phase: ZB-5msi

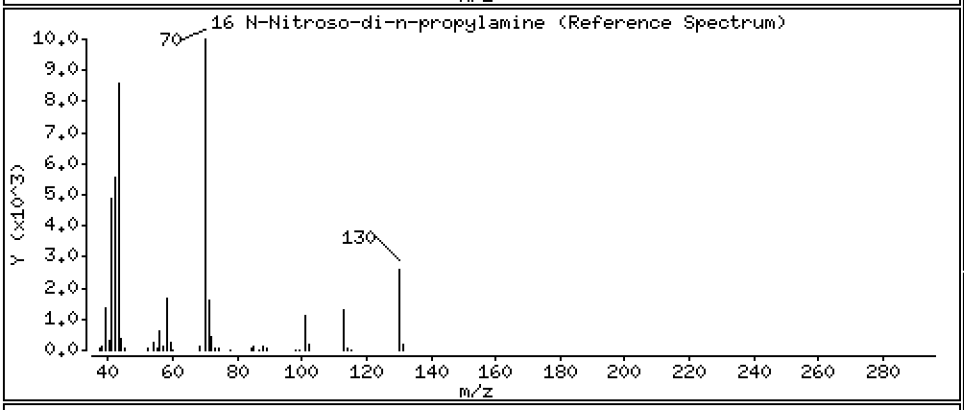
Column diameter: 0.25

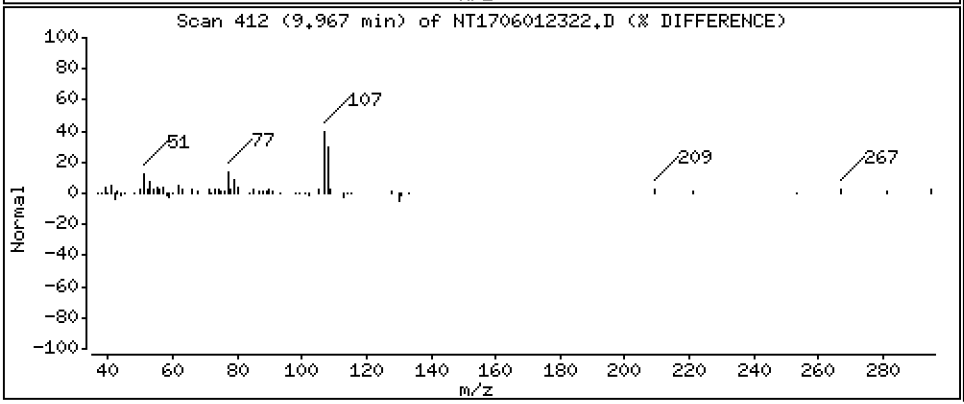
16 N-Nitroso-di-n-propylamine

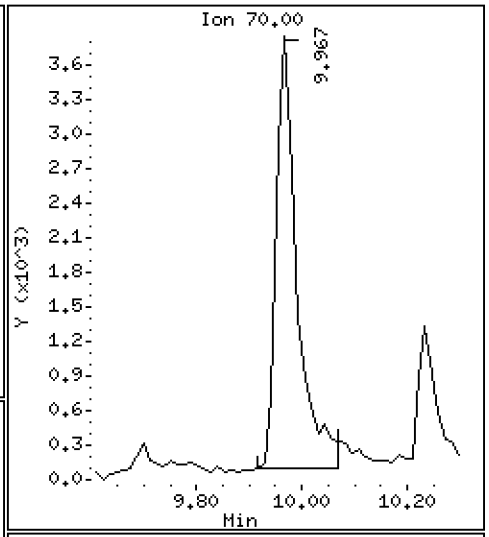
Concentration: 0.1513 ug/mL

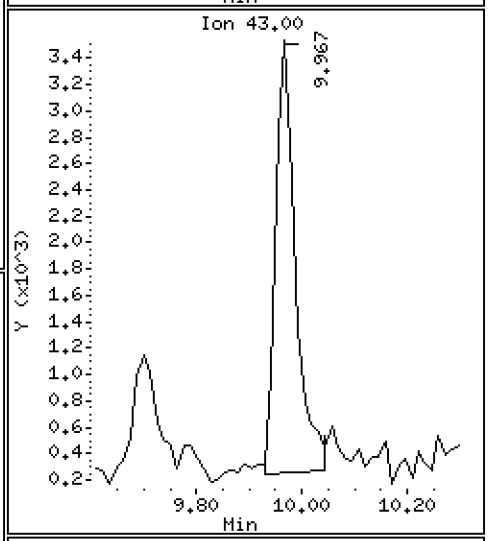


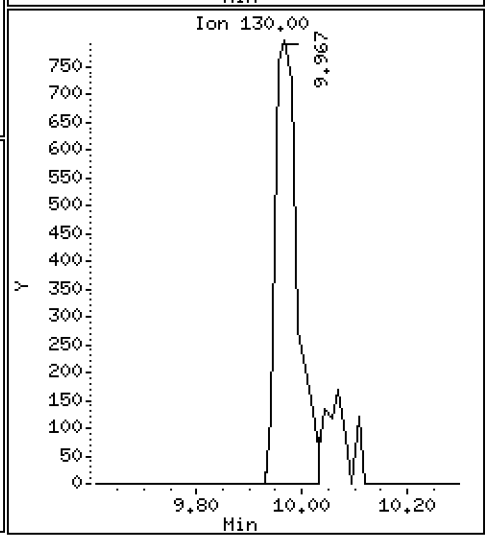












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

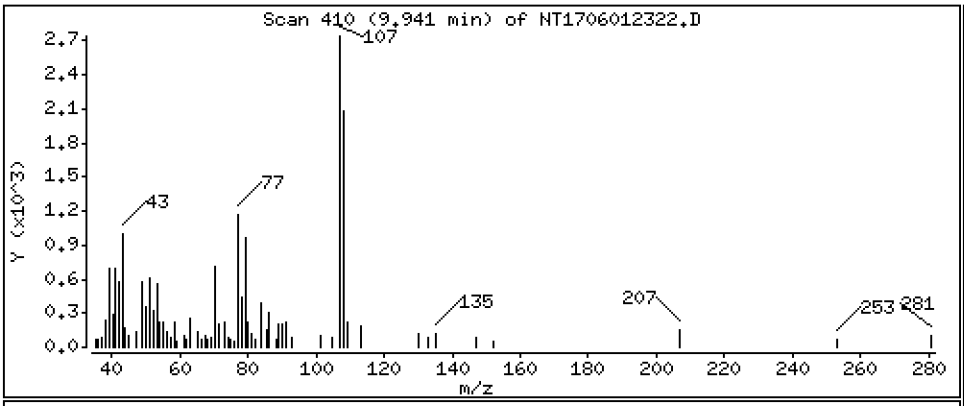
Operator: VTS

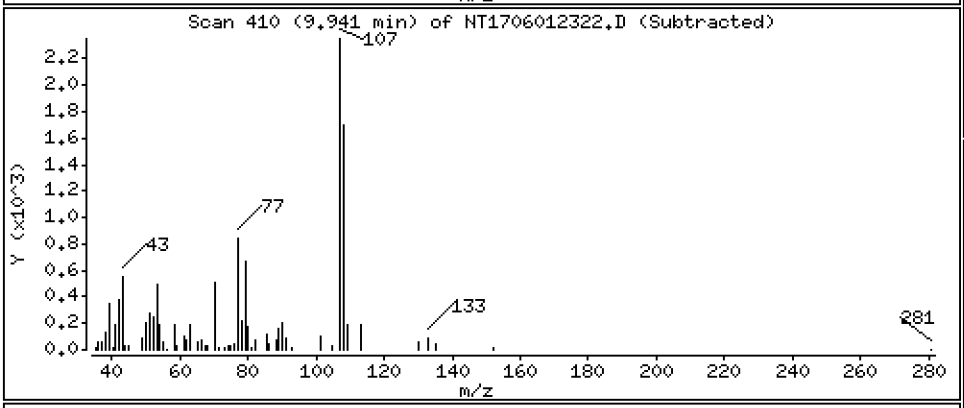
Column phase: ZB-5msi

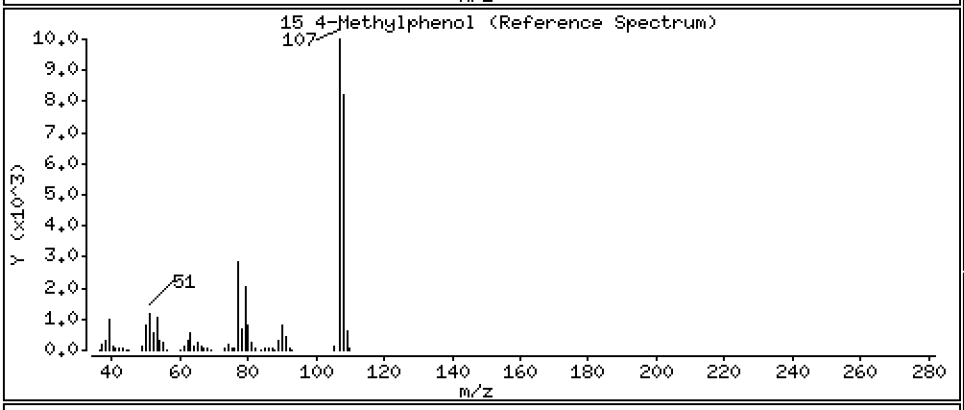
Column diameter: 0.25

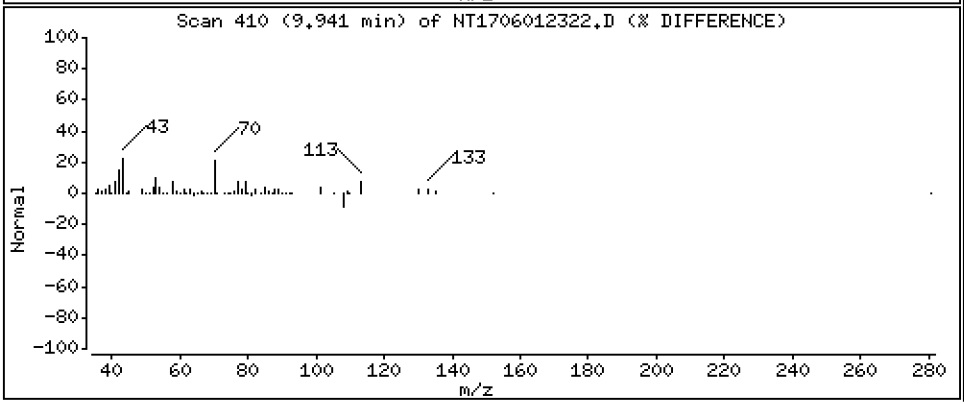
15 4-Methylphenol

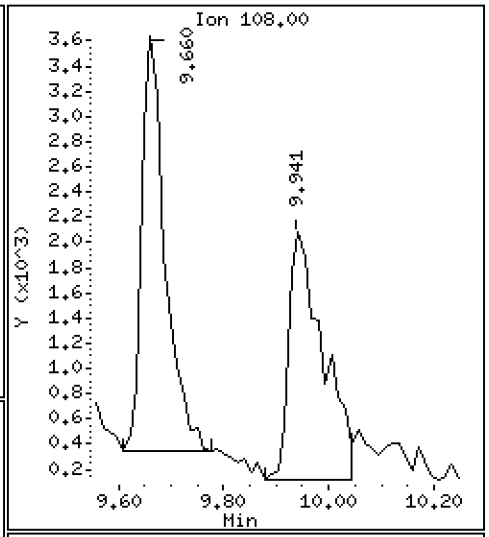
Concentration: 0.09686 ug/mL

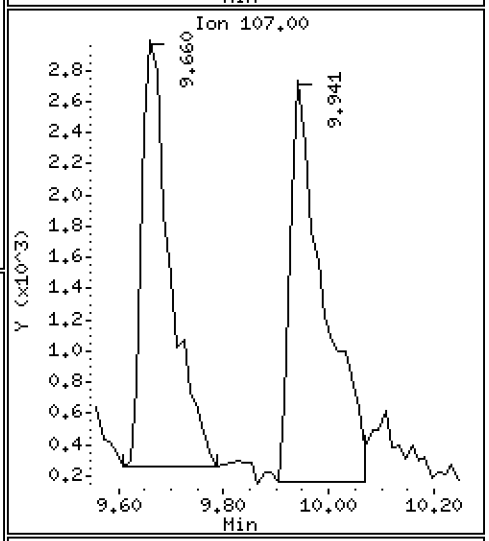


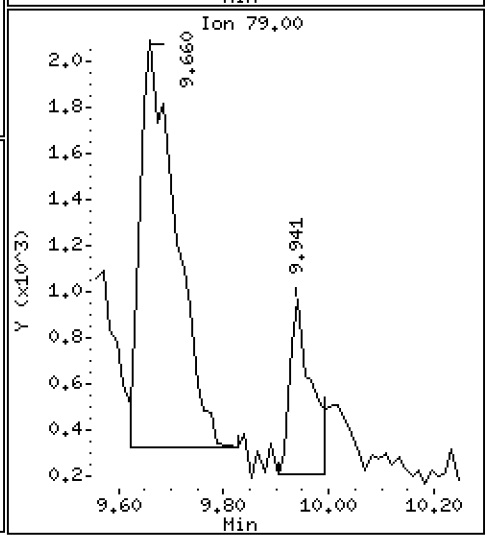












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

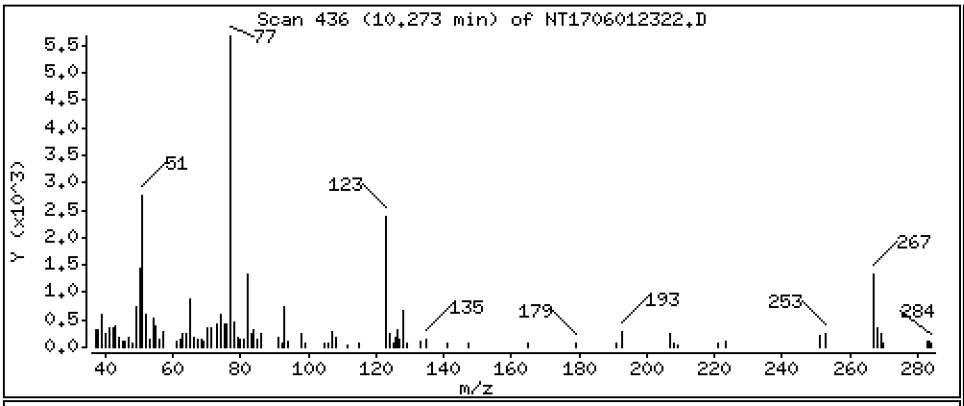
Operator: VTS

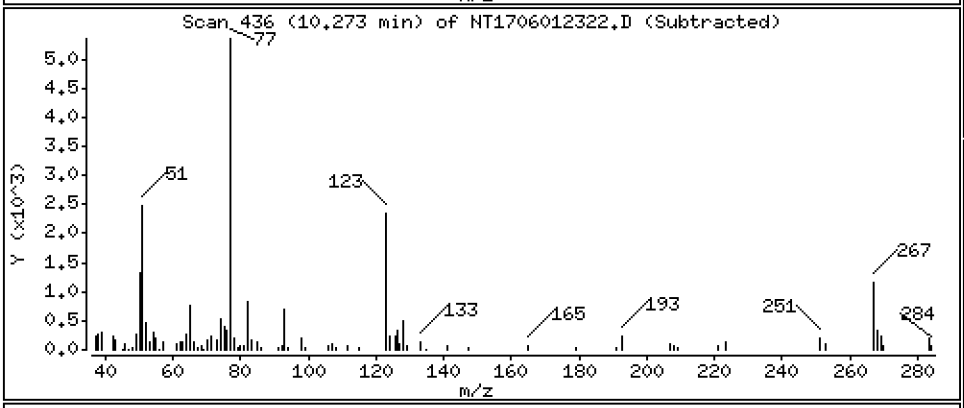
Column phase: ZB-5msi

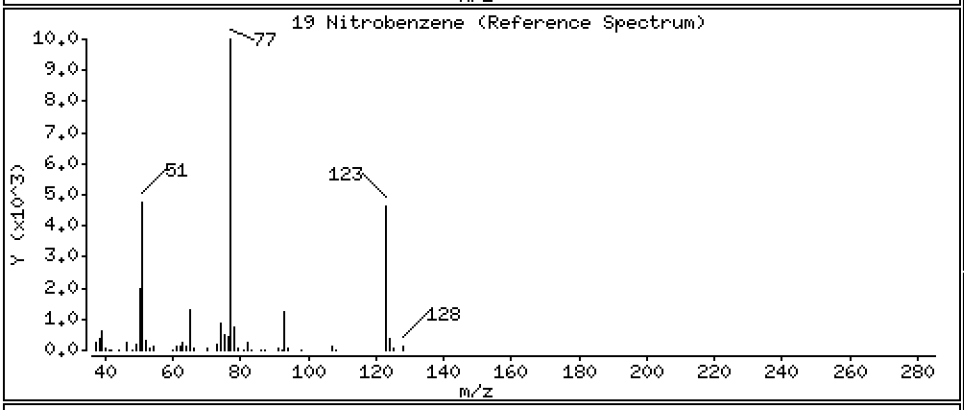
Column diameter: 0.25

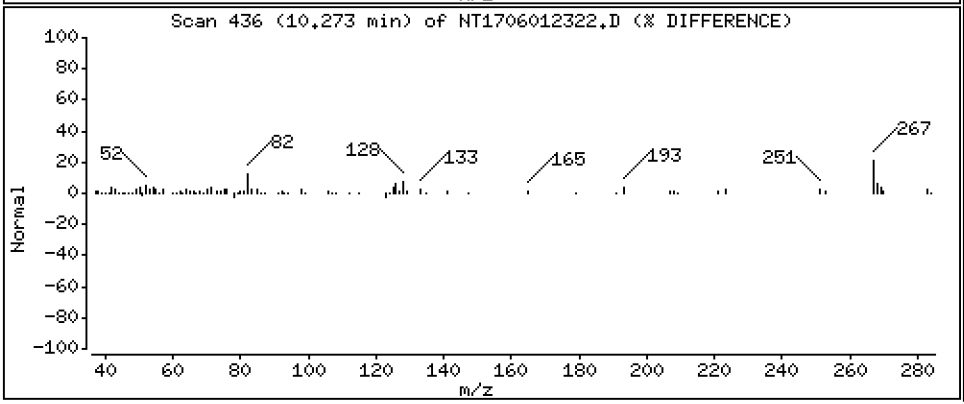
19 Nitrobenzene

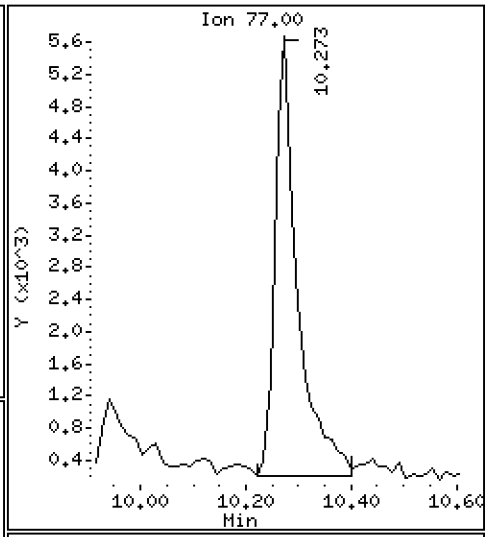
Concentration: 0.1839 ug/mL

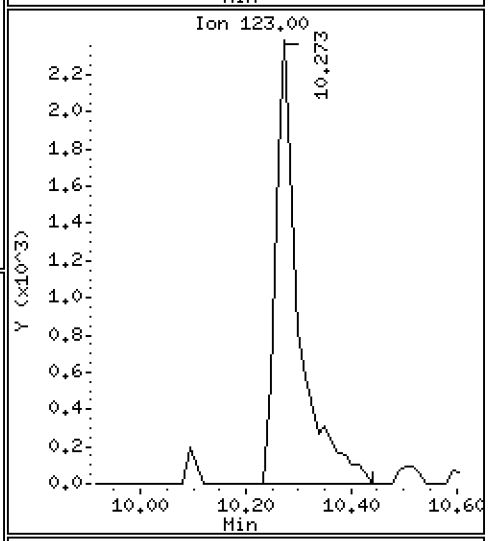


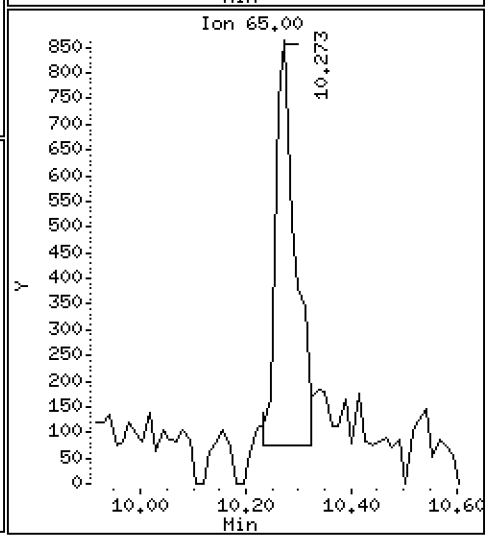












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

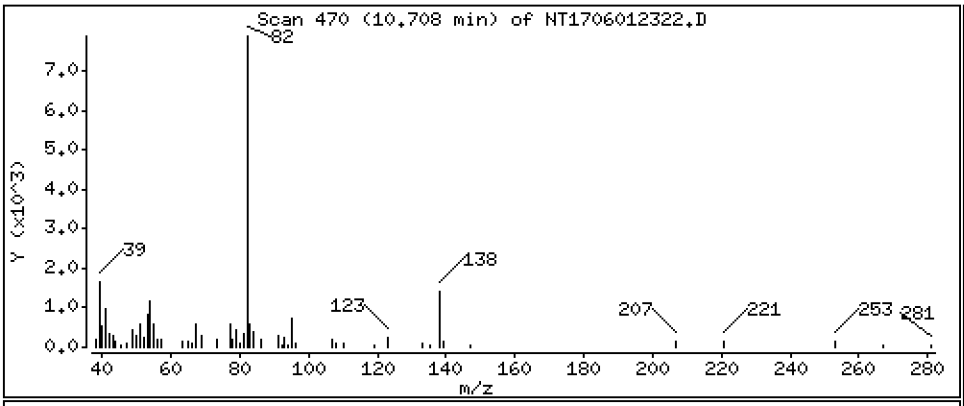
Operator: VTS

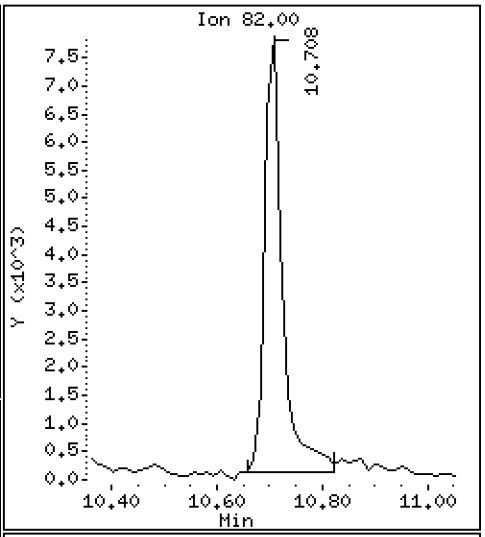
Column phase: ZB-5msi

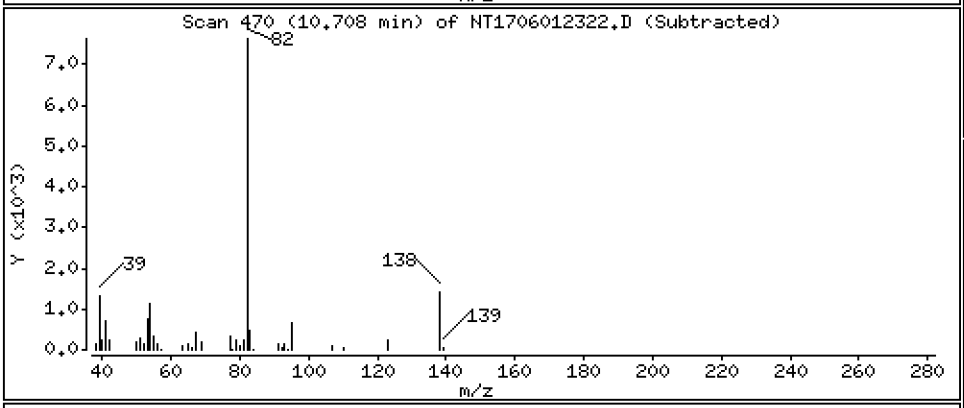
Column diameter: 0.25

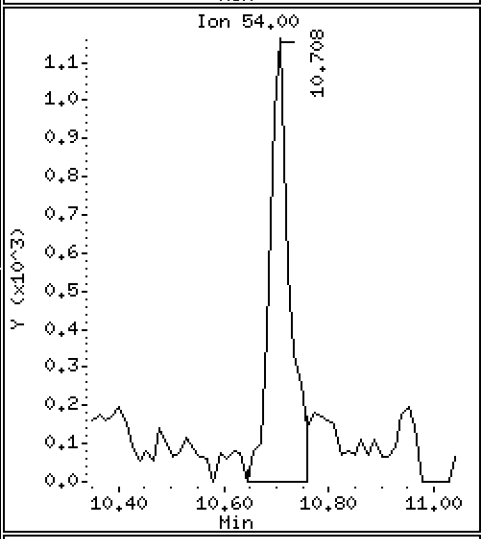
20 Isophorone

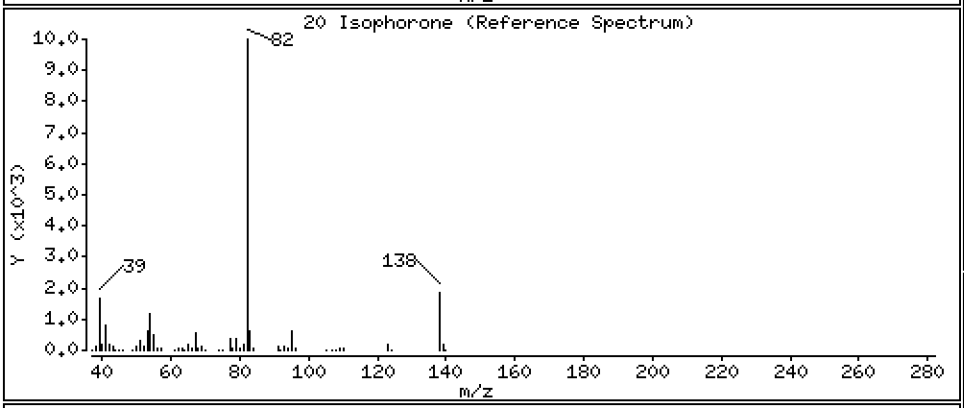
Concentration: 0.1751 ug/mL

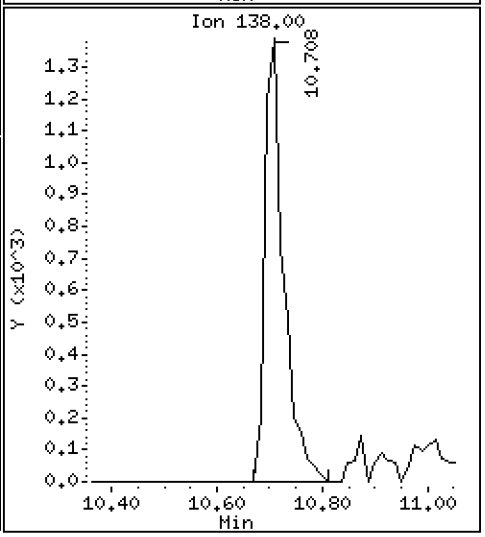


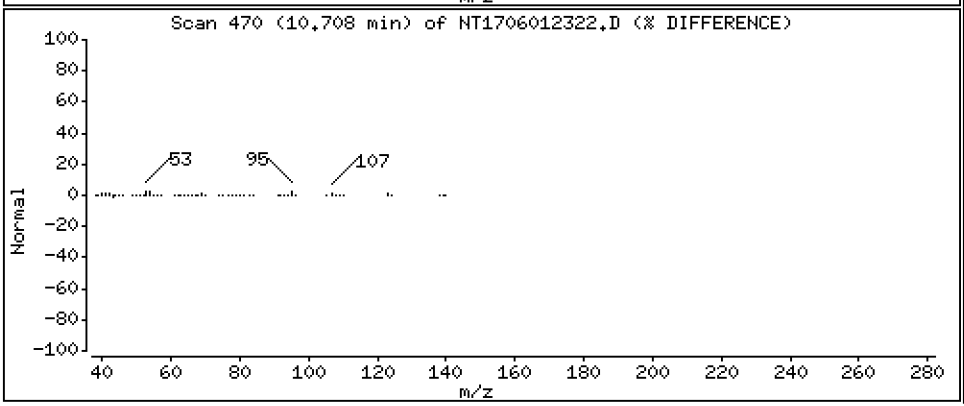












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

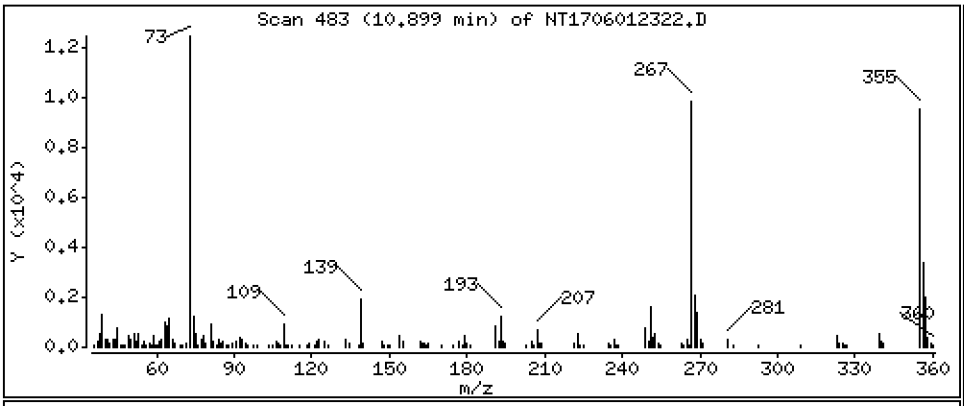
Operator: VTS

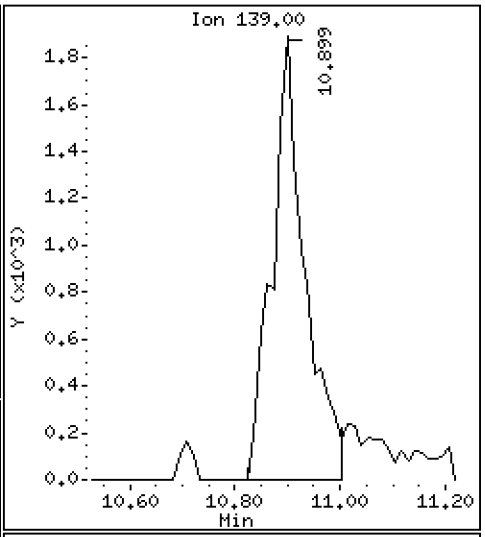
Column phase: ZB-5msi

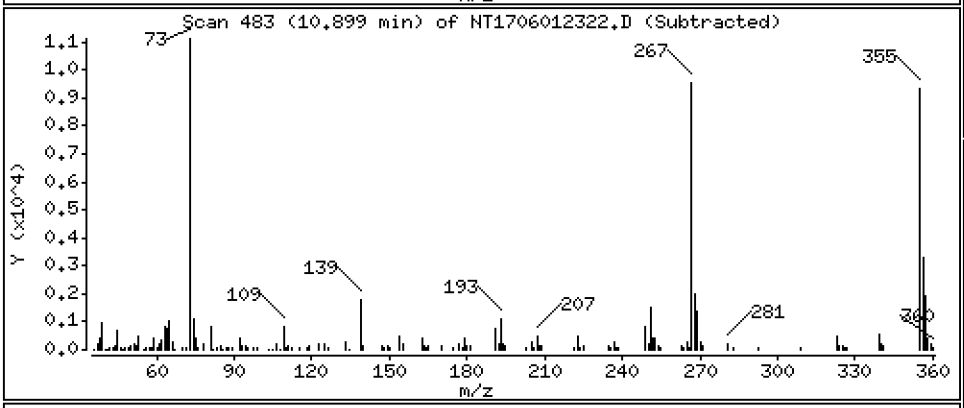
Column diameter: 0.25

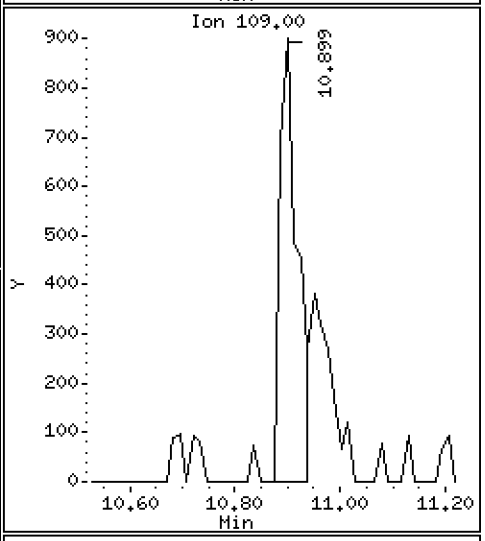
21 2-Nitrophenol

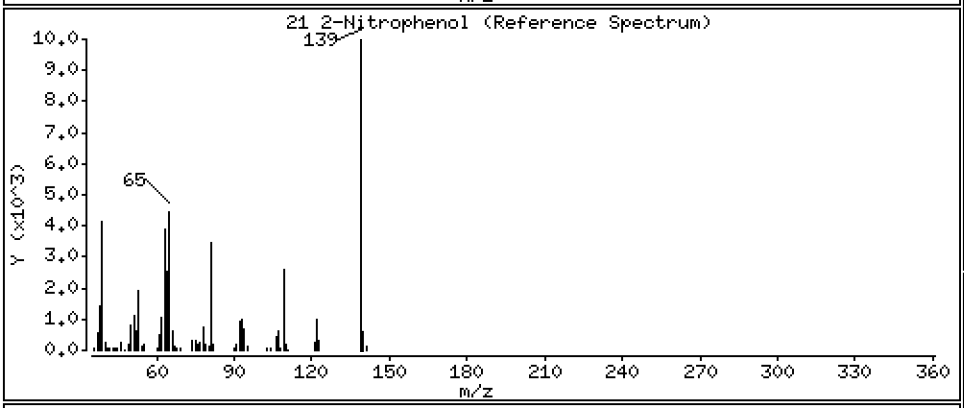
Concentration: 0.1963 ug/mL

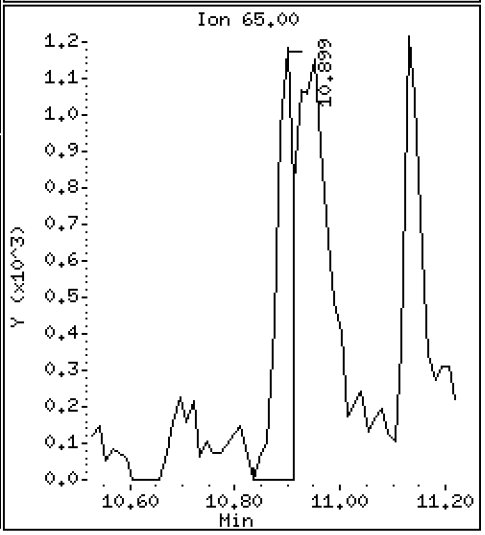


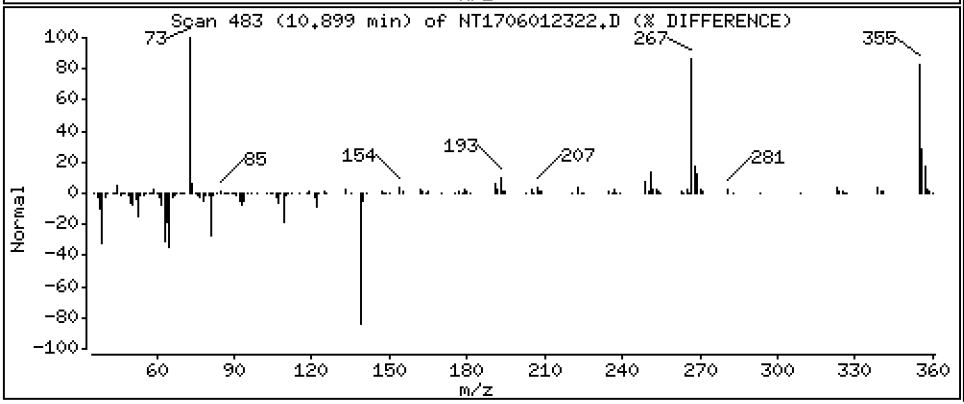












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

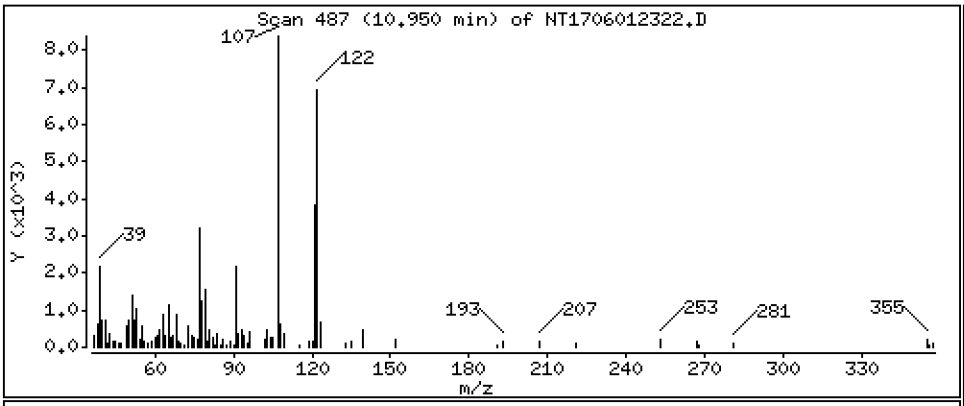
Operator: VTS

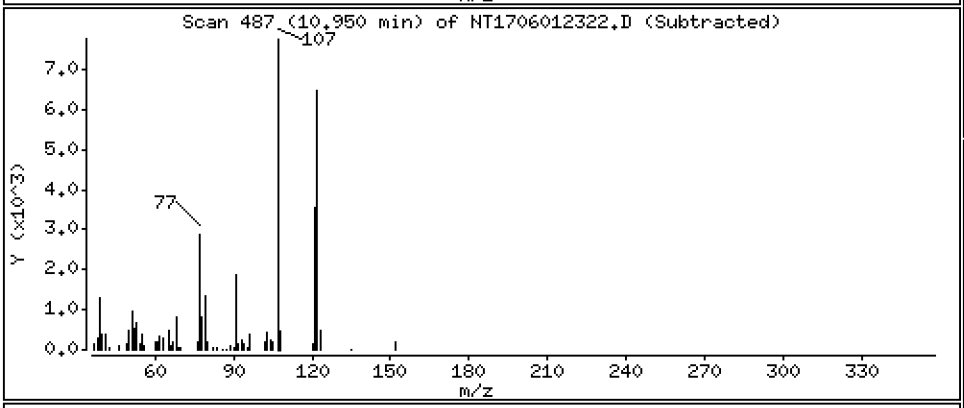
Column phase: ZB-5msi

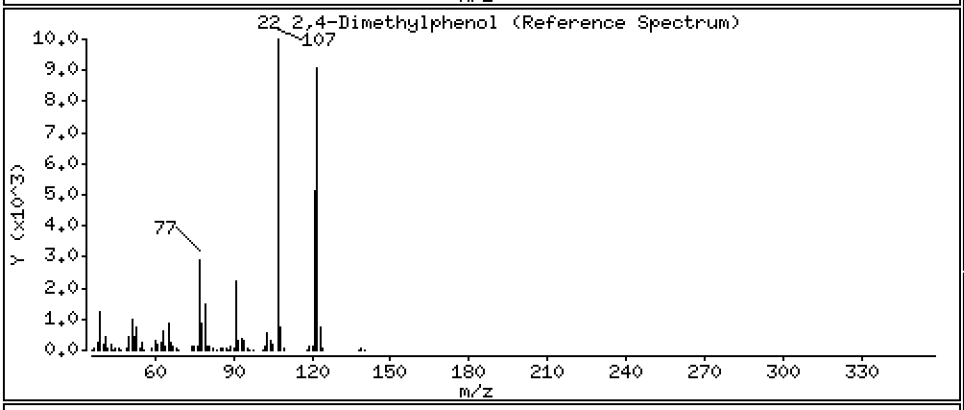
Column diameter: 0.25

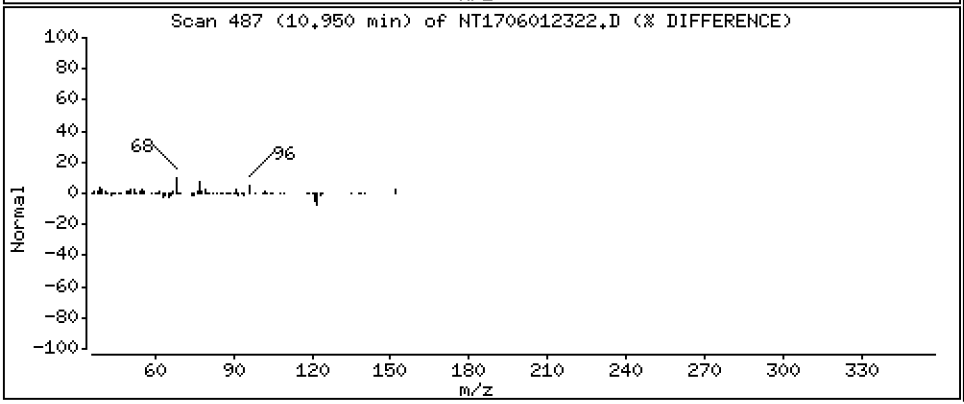
22 2,4-Dimethylphenol

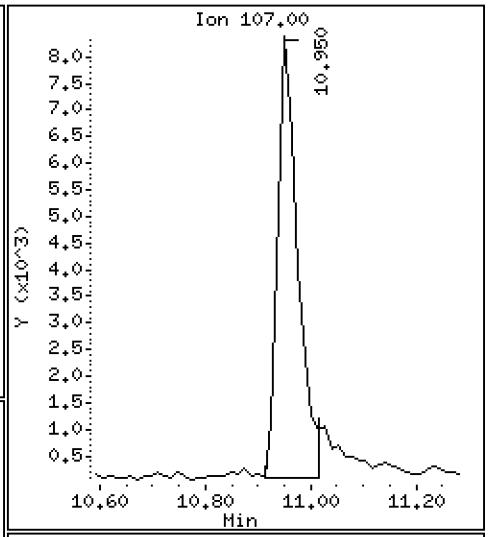
Concentration: 0.2719 ug/mL

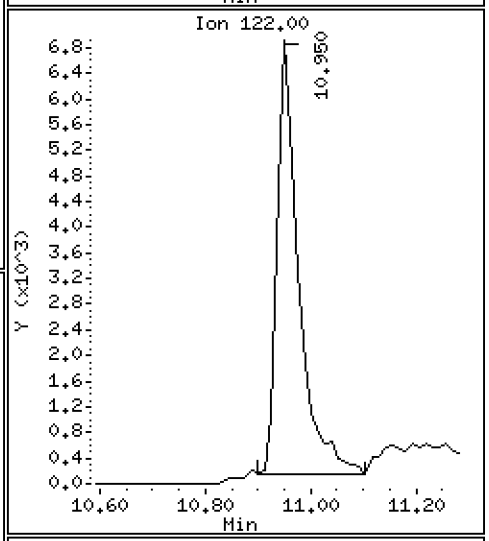


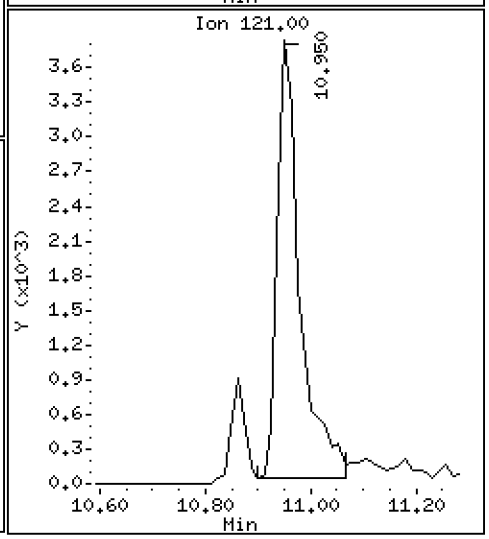












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

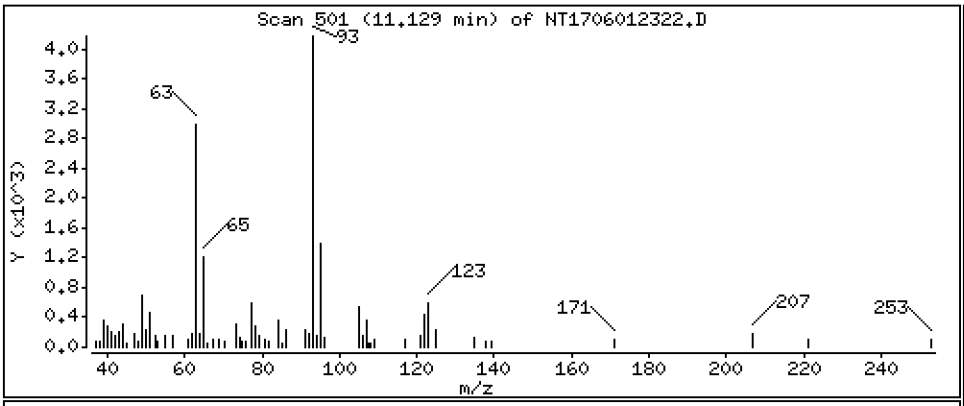
Operator: VTS

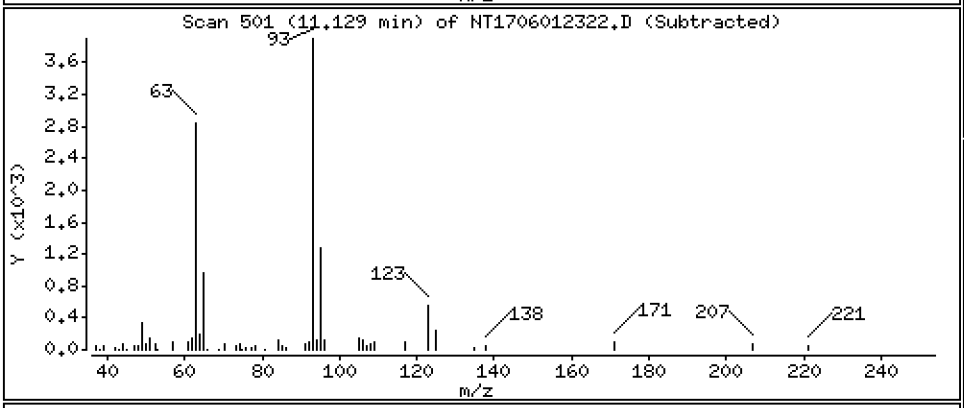
Column phase: ZB-5msi

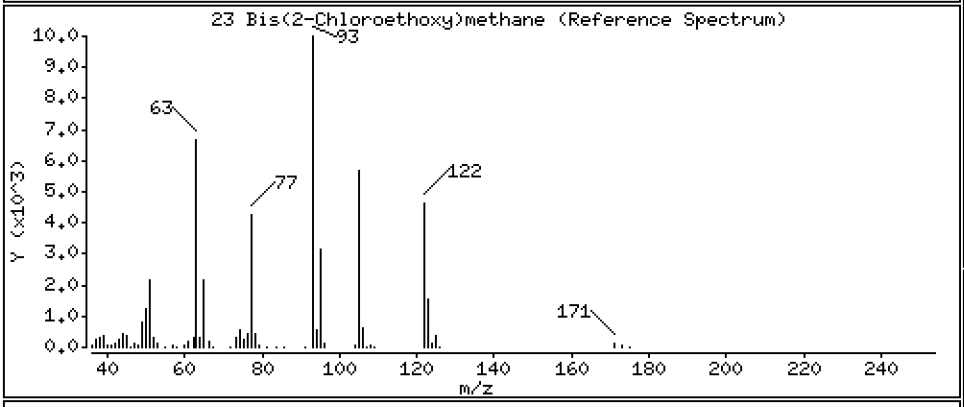
Column diameter: 0.25

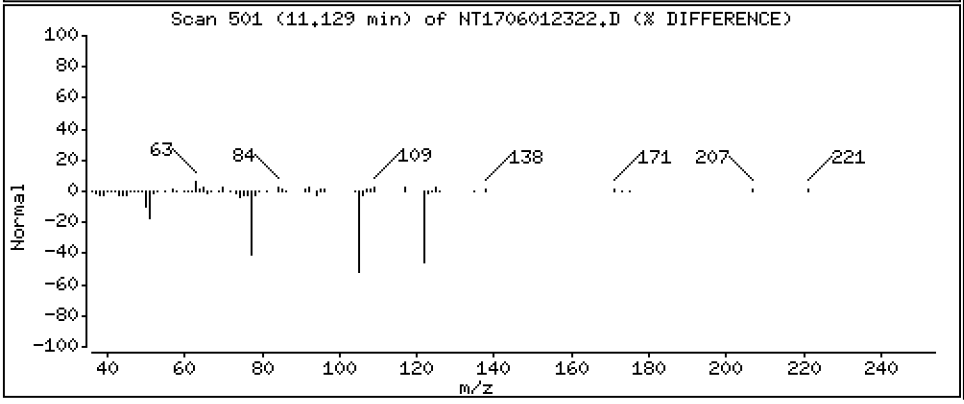
23 Bis(2-Chloroethoxy)methane

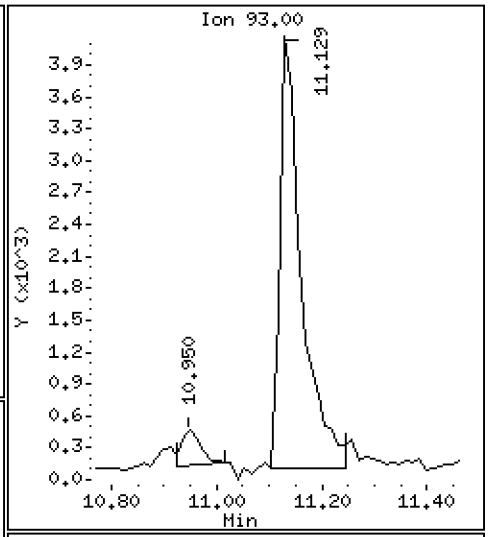
Concentration: 0.1590 ug/mL

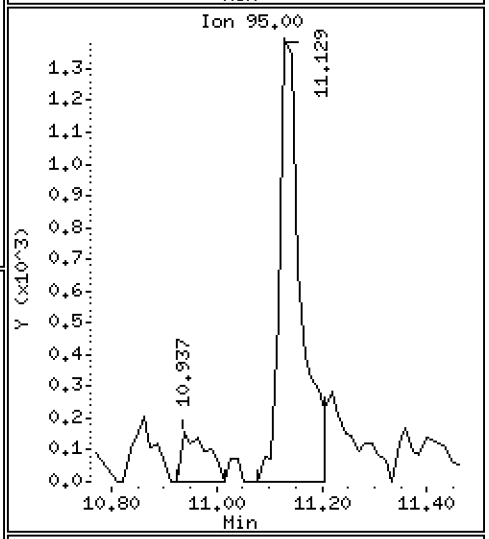


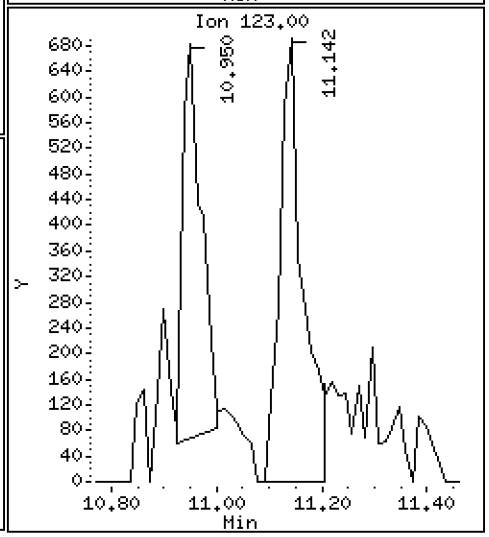












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

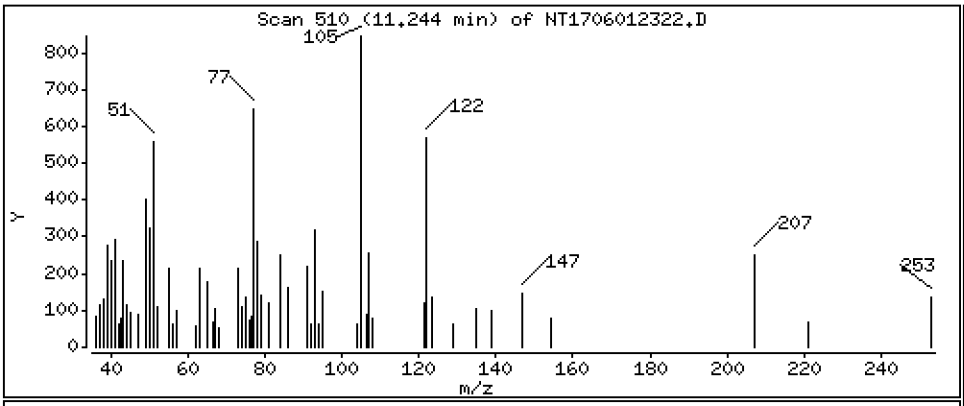
Operator: VTS

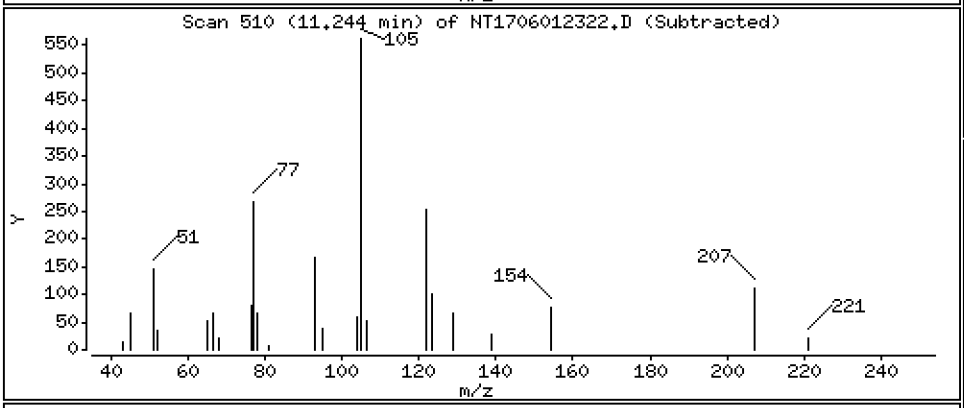
Column phase: ZB-5msi

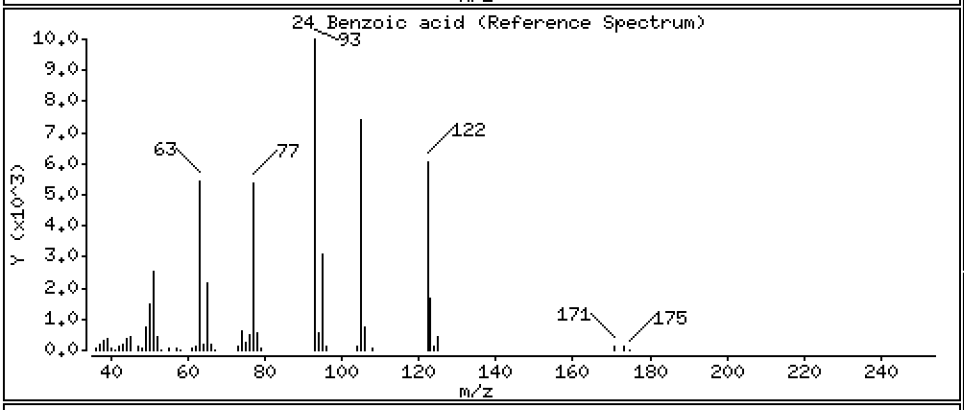
Column diameter: 0.25

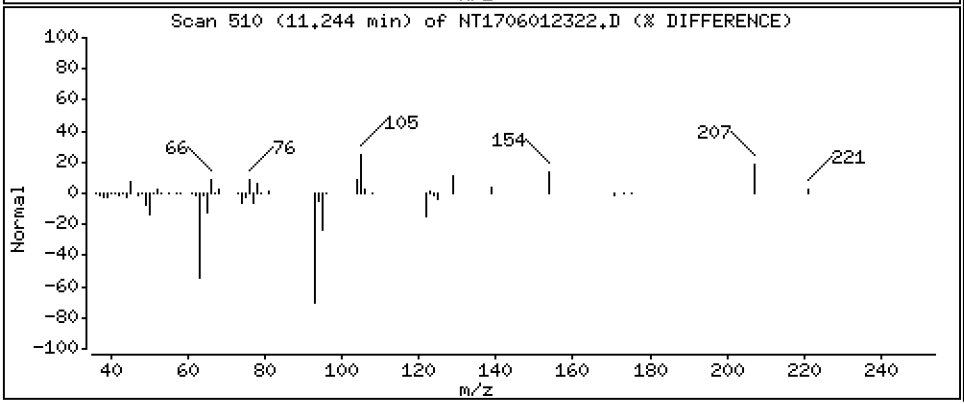
24 Benzoic acid

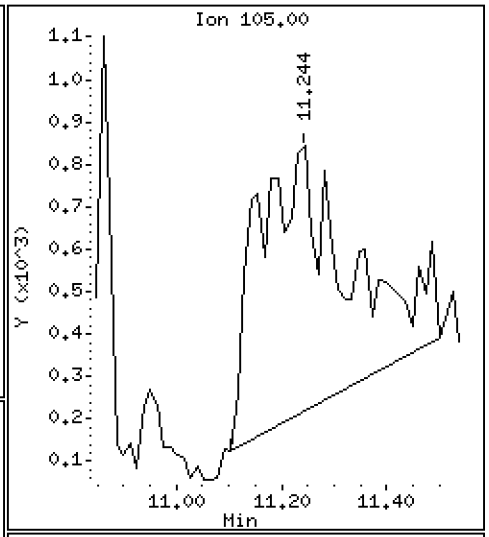
Concentration: 0.1403 ug/mL

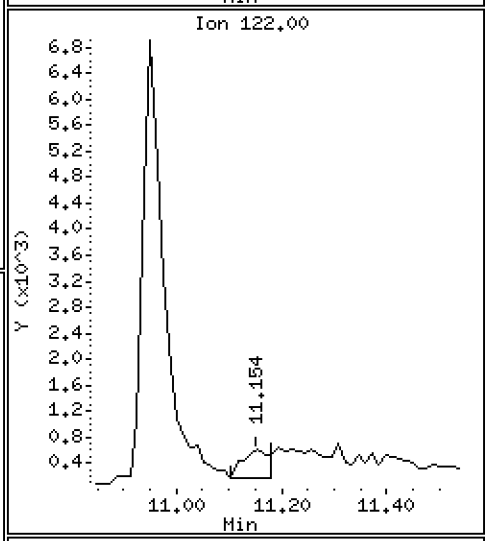


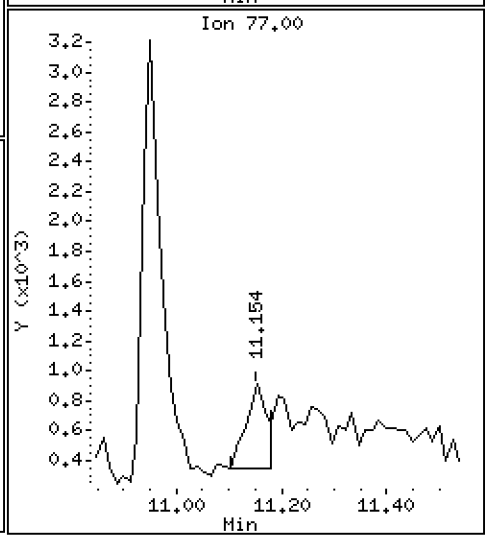












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

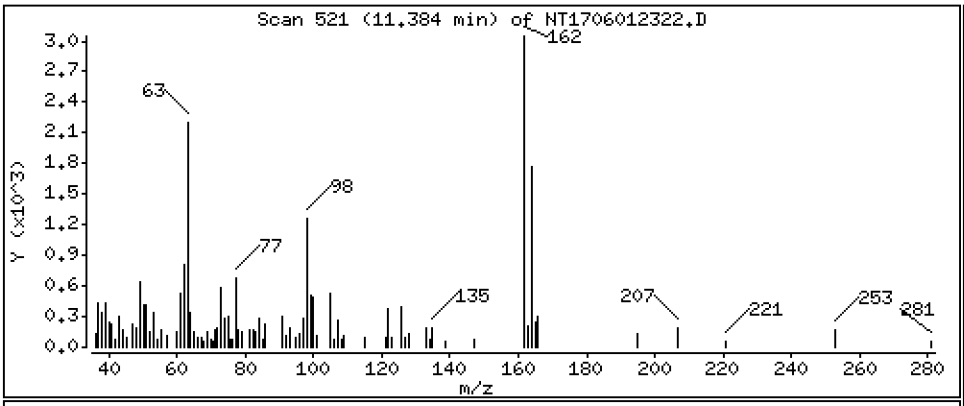
Operator: VTS

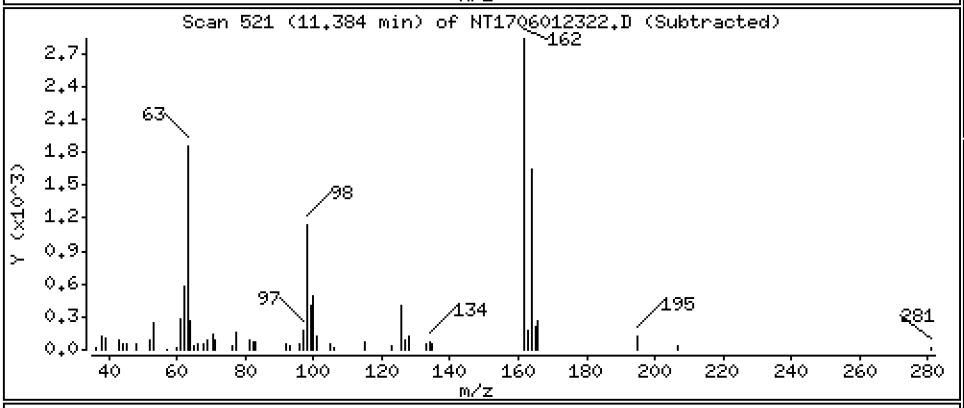
Column phase: ZB-5msi

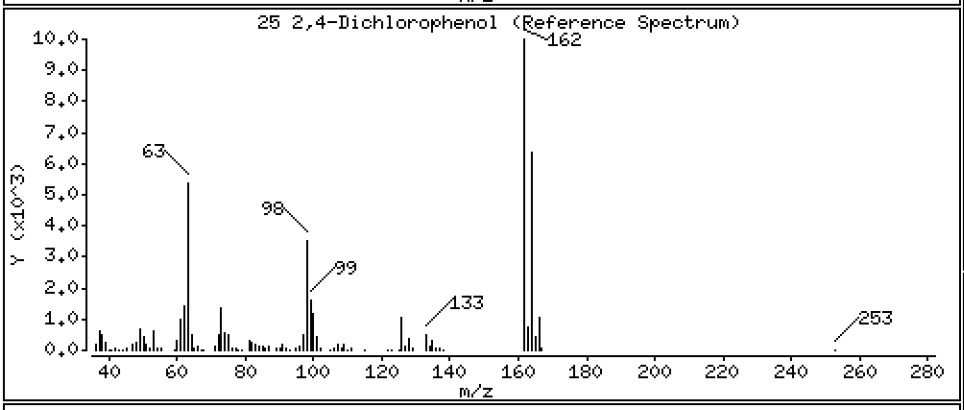
Column diameter: 0.25

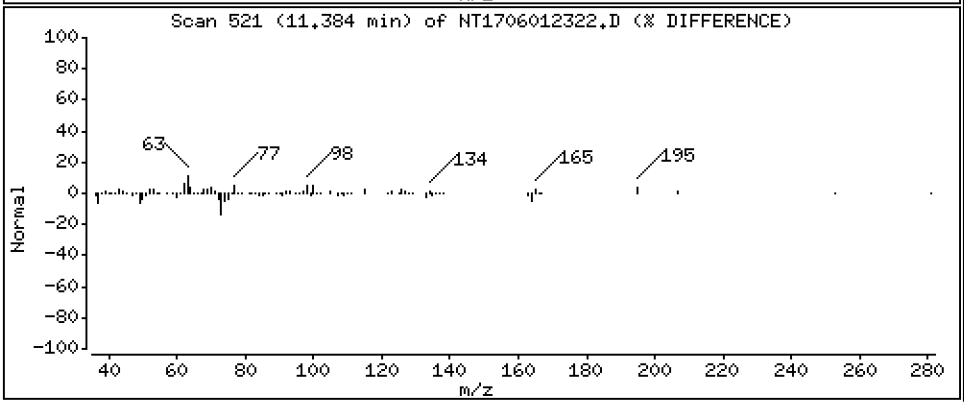
25 2,4-Dichlorophenol

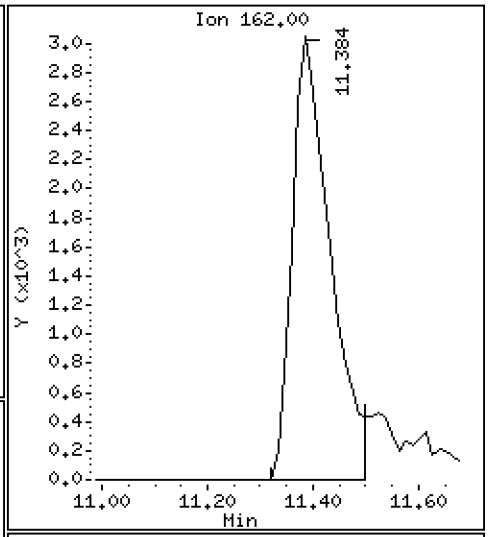
Concentration: 0.2148 ug/mL

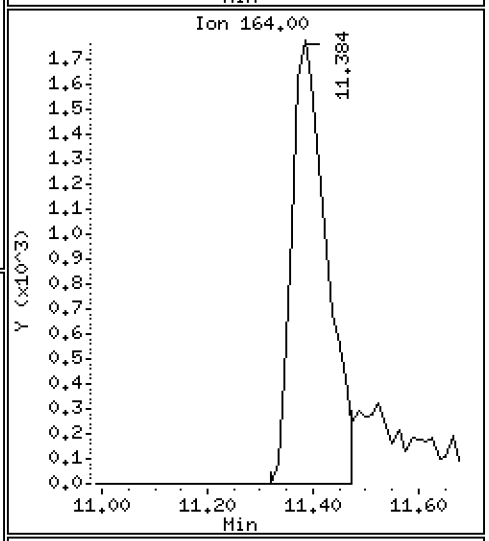


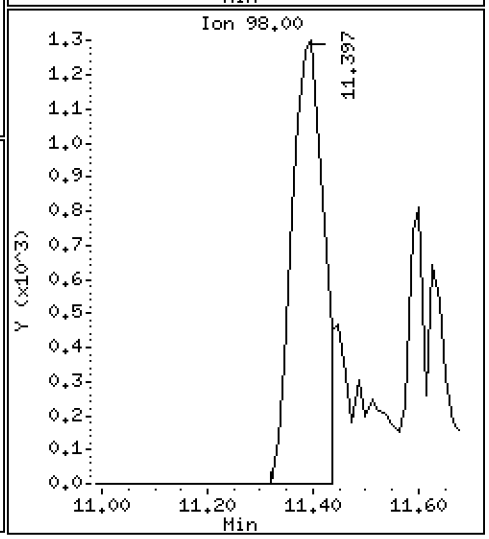












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

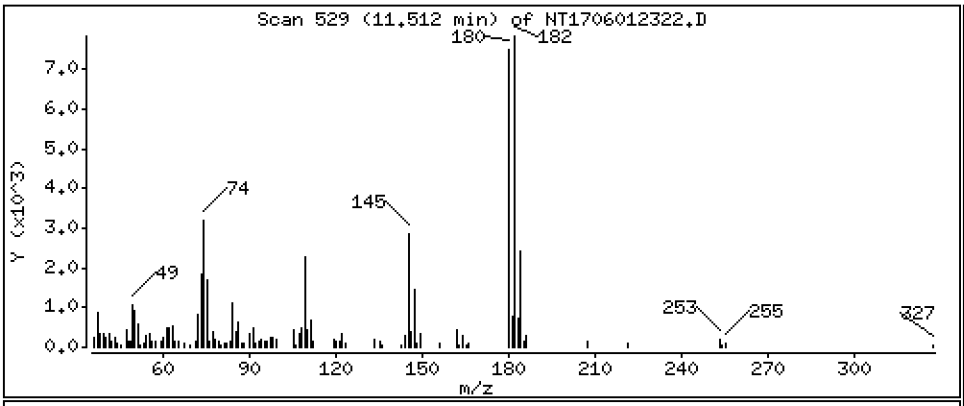
Operator: VTS

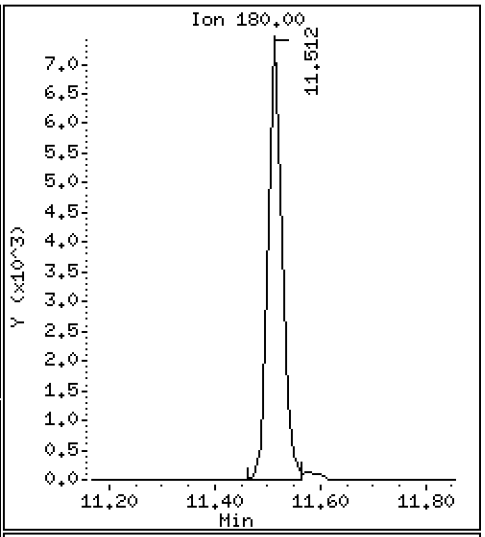
Column phase: ZB-5msi

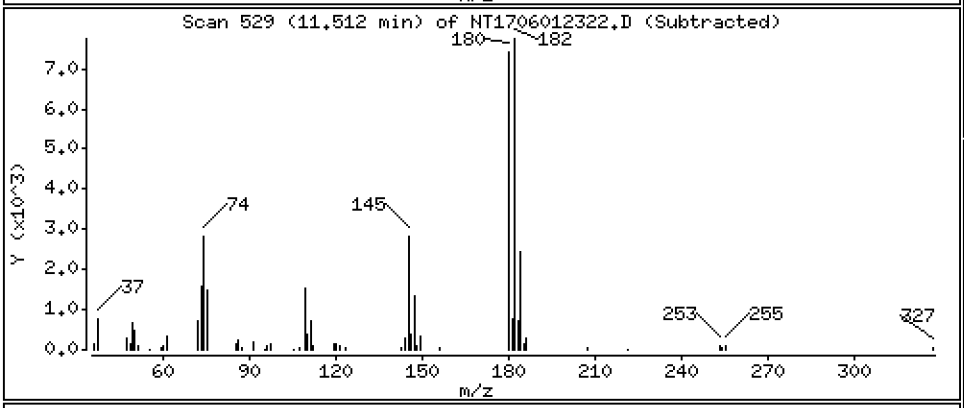
Column diameter: 0.25

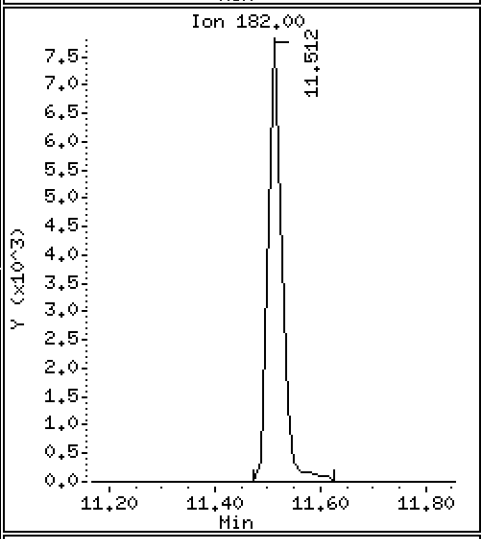
26 1,2,4-Trichlorobenzene

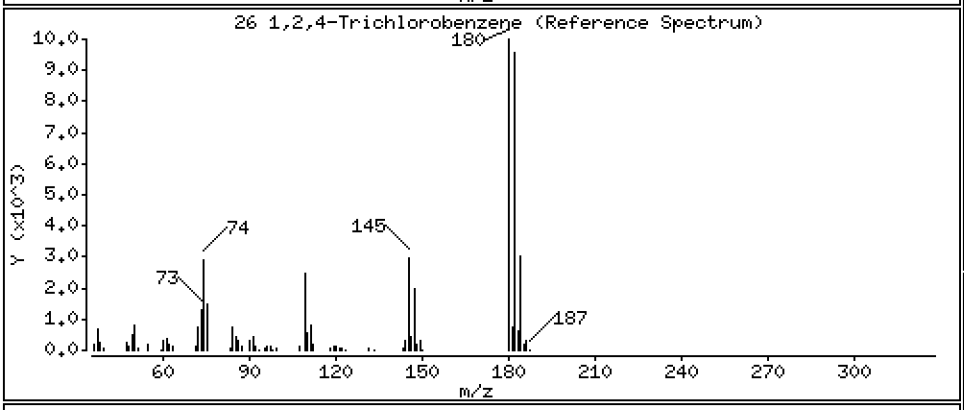
Concentration: 0.1947 ug/mL

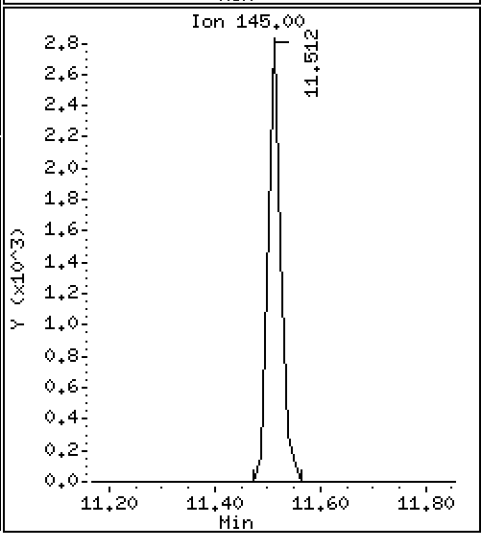


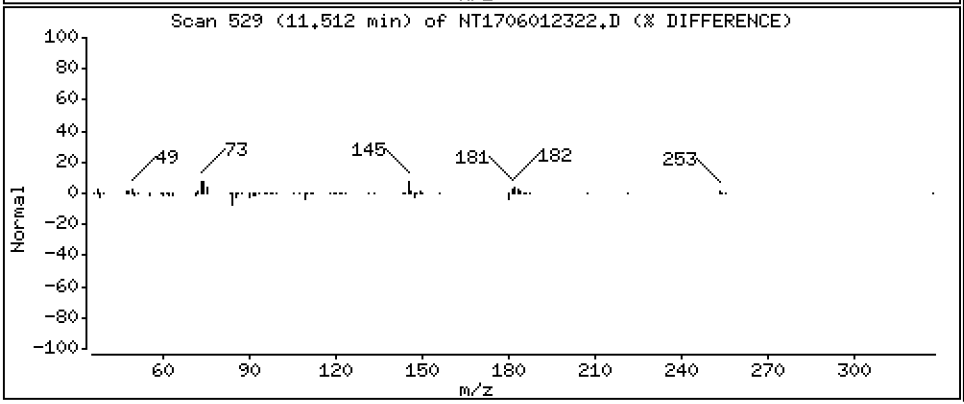












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

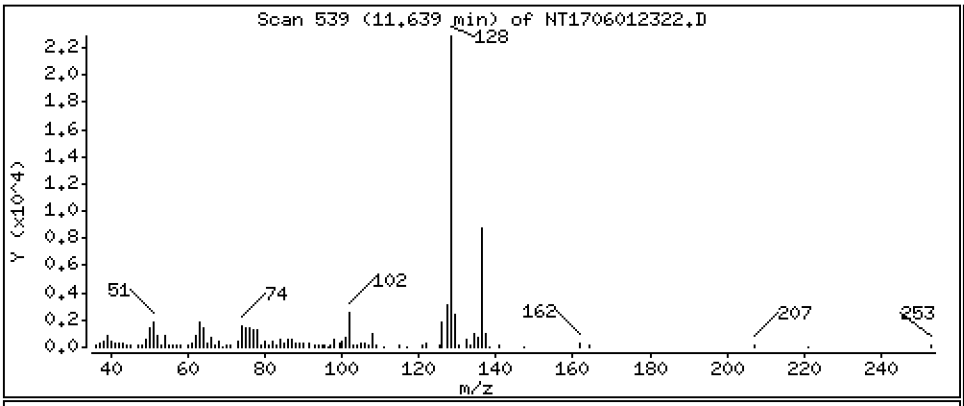
Operator: VTS

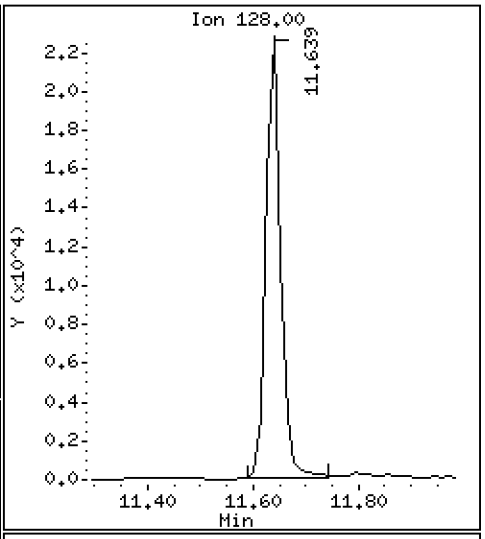
Column phase: ZB-5msi

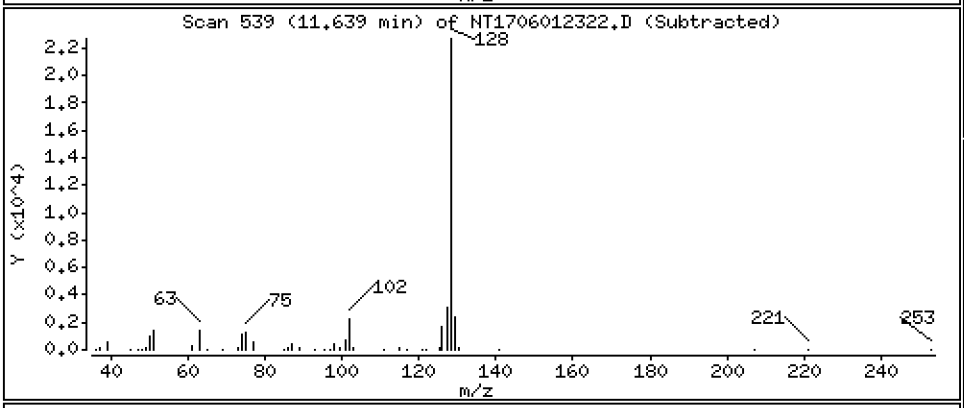
Column diameter: 0.25

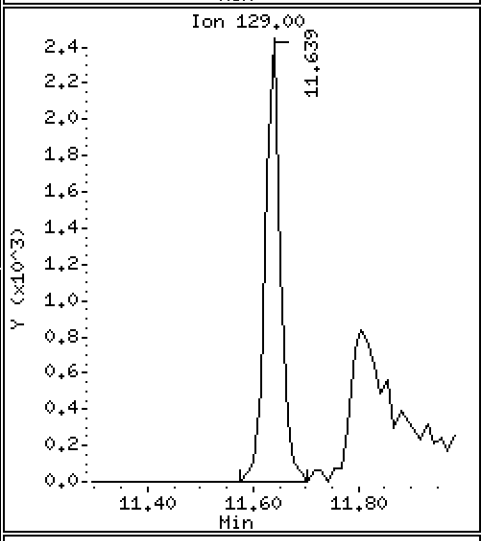
28 Naphthalene

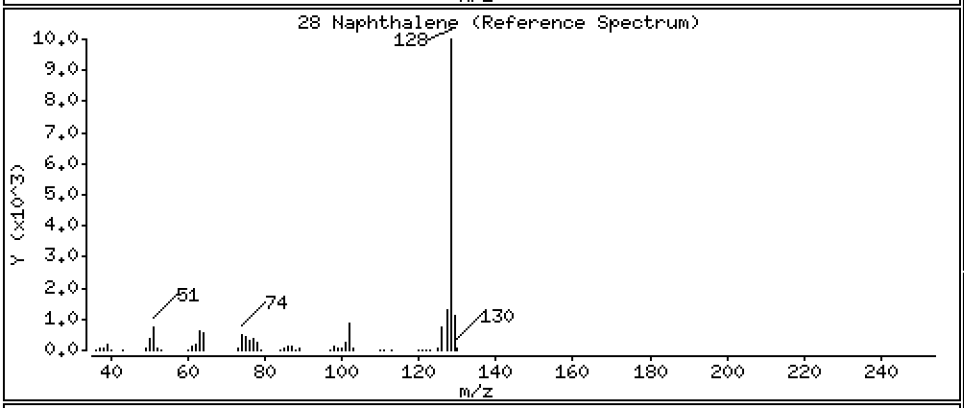
Concentration: 0.1985 ug/mL

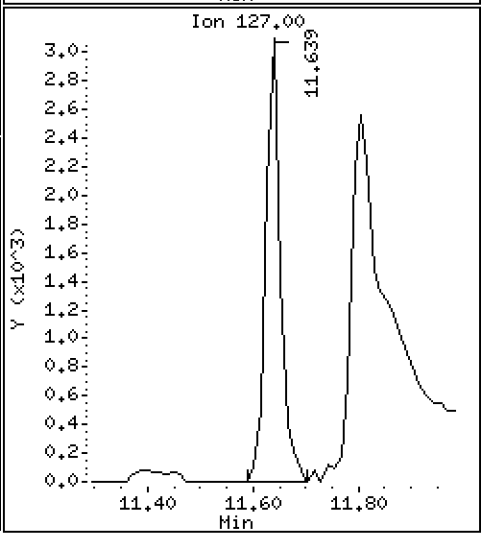


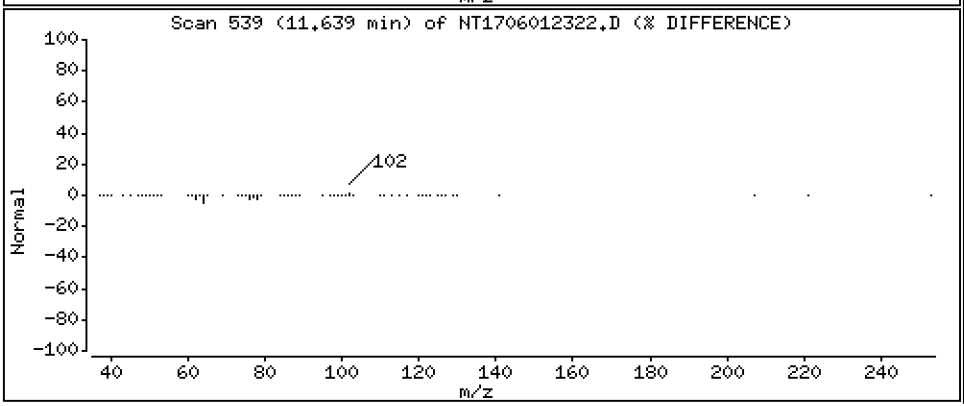












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

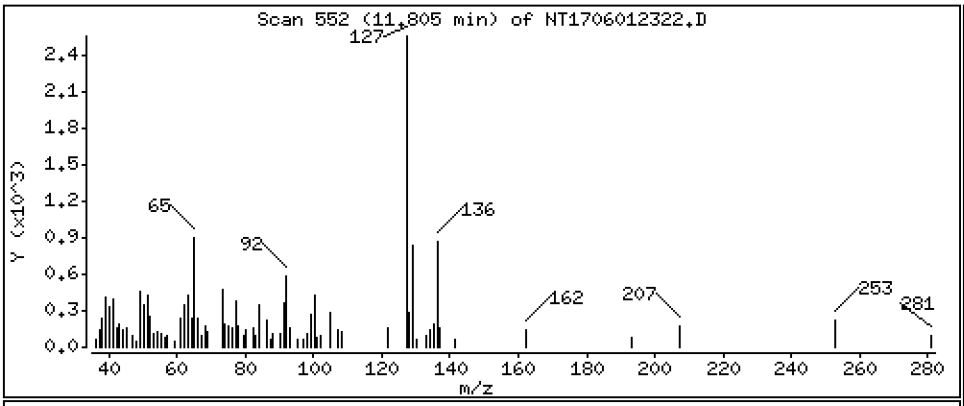
Operator: VTS

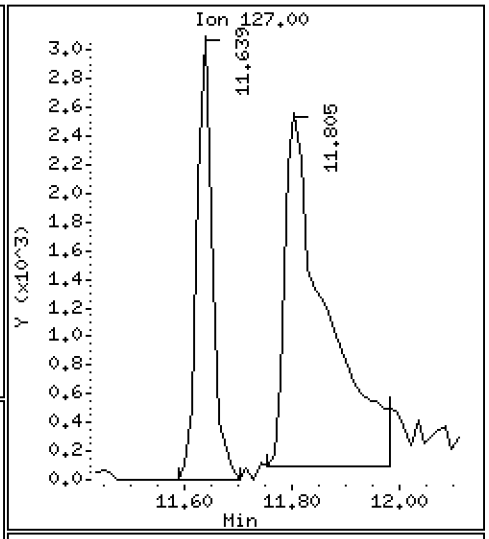
Column phase: ZB-5msi

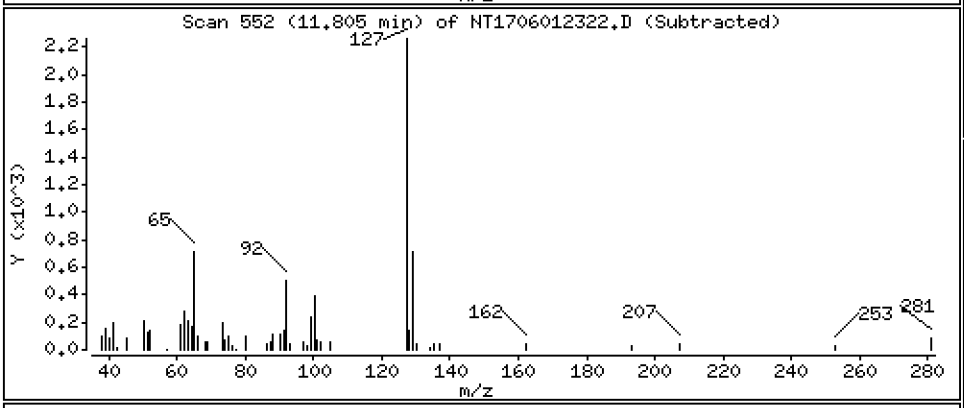
Column diameter: 0.25

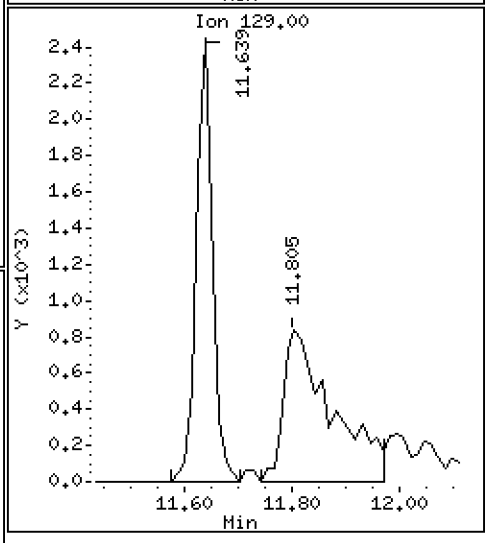
29 4-Chloroaniline

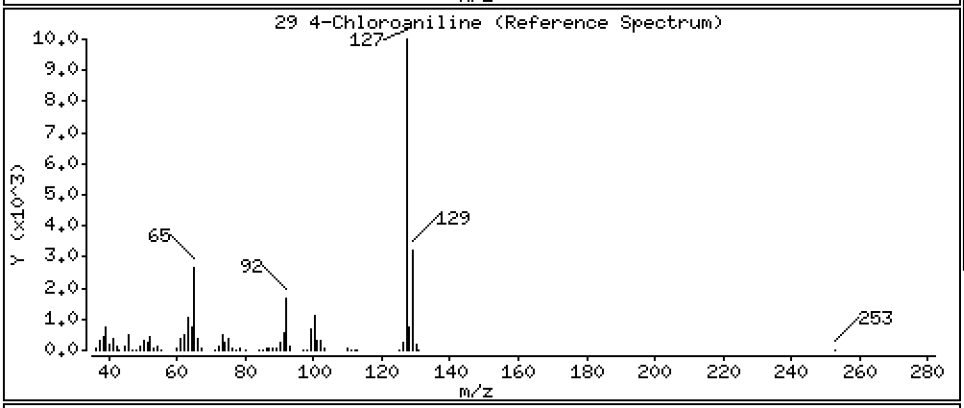
Concentration: 0.1581 ug/mL

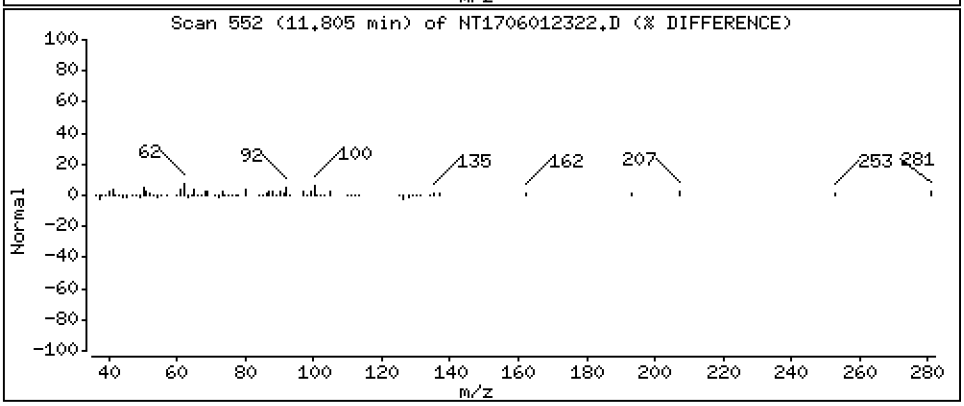












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

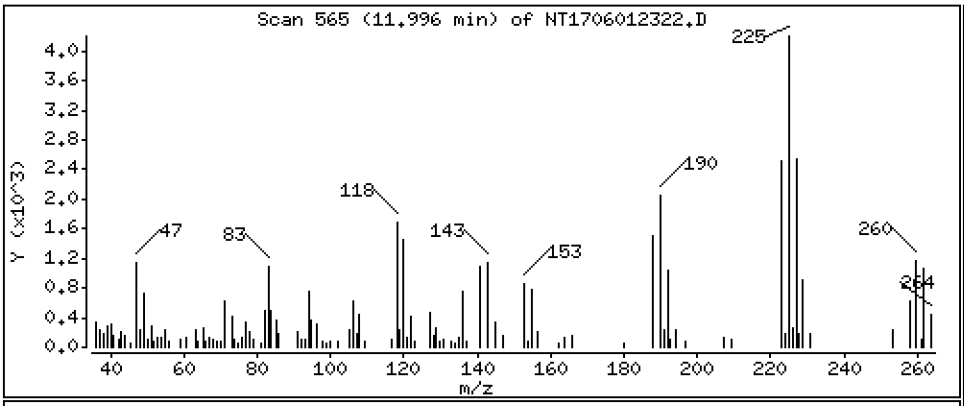
Operator: VTS

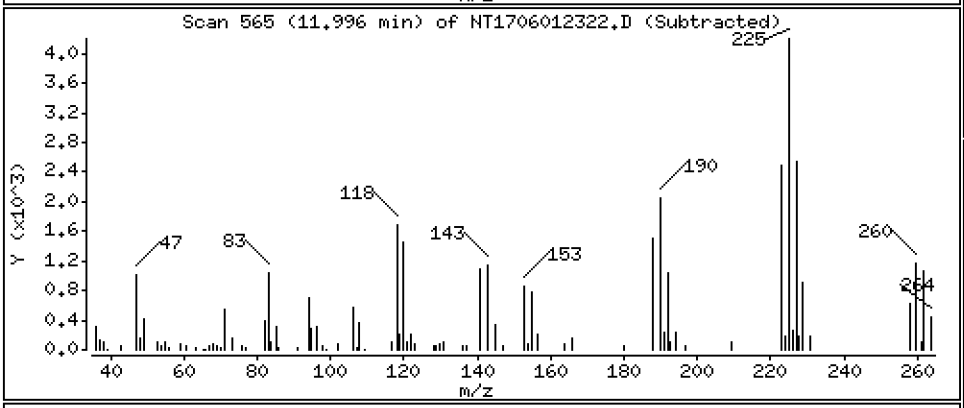
Column phase: ZB-5msi

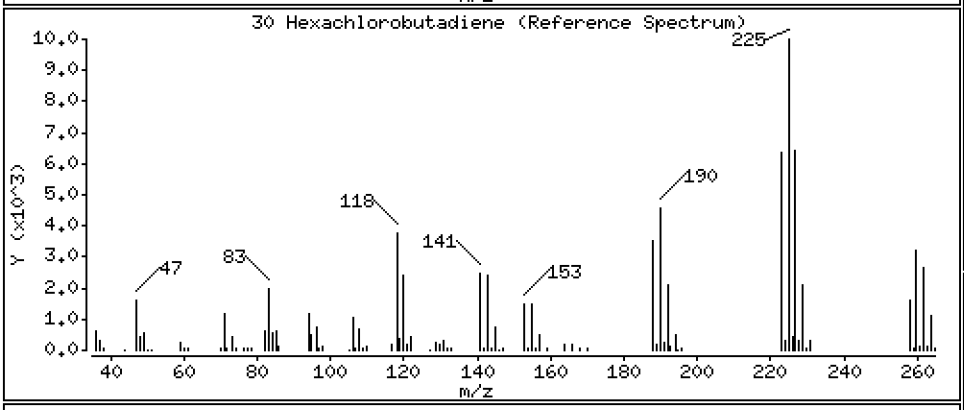
Column diameter: 0.25

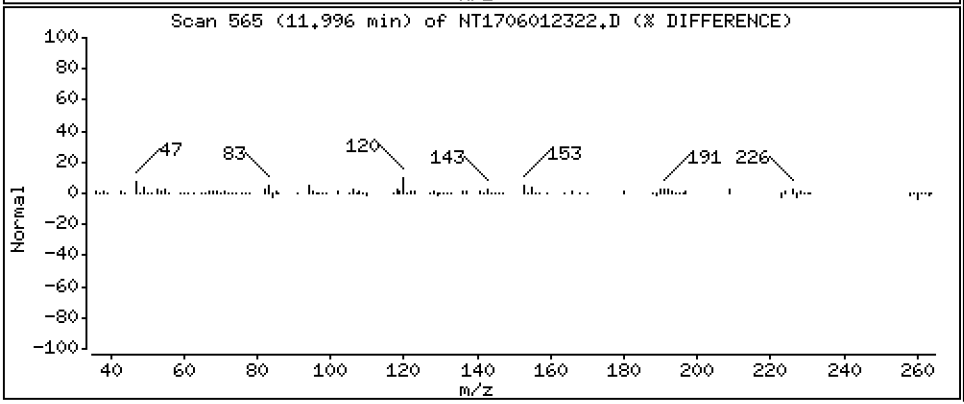
30 Hexachlorobutadiene

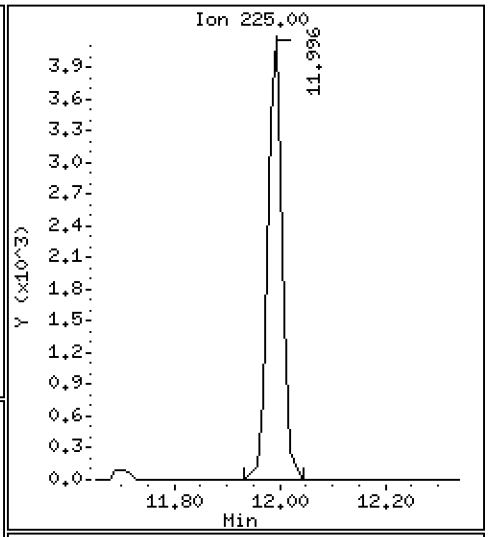
Concentration: 0.2263 ug/mL

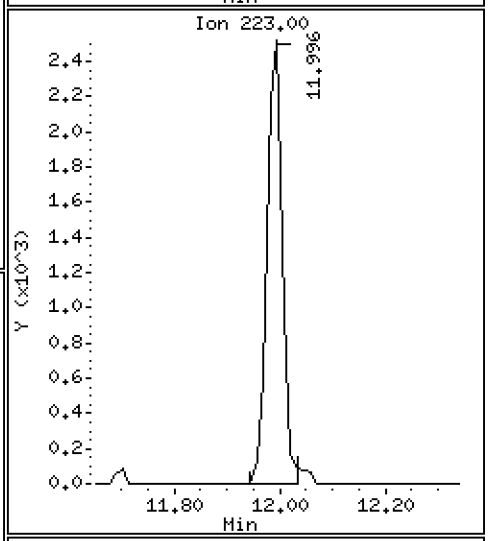


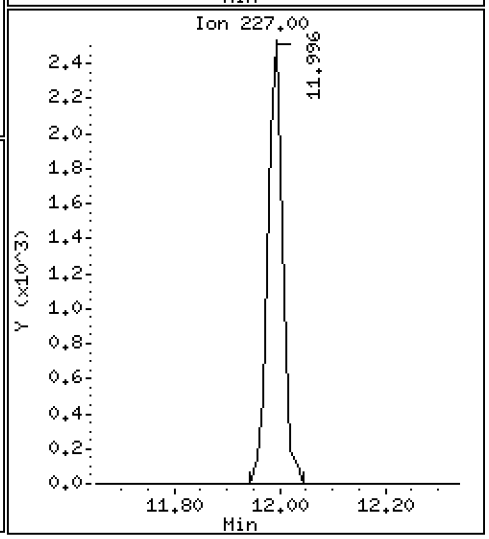












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

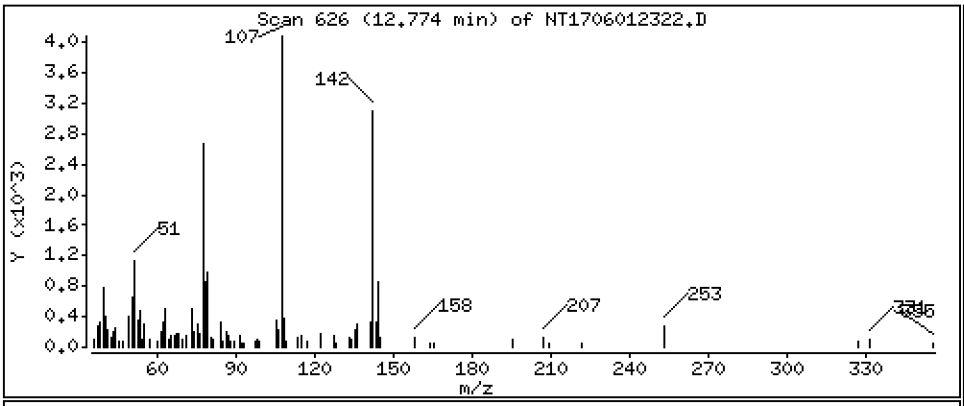
Operator: VTS

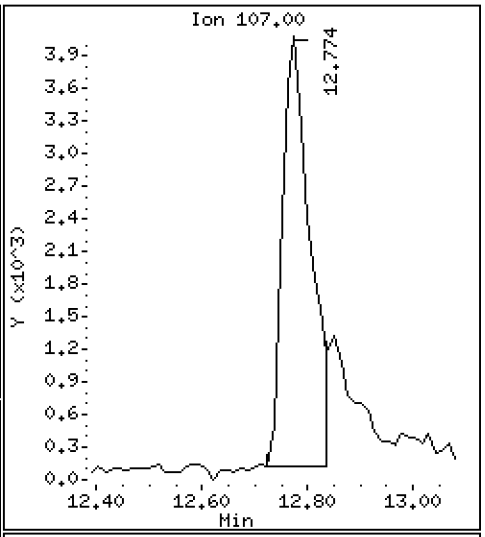
Column phase: ZB-5msi

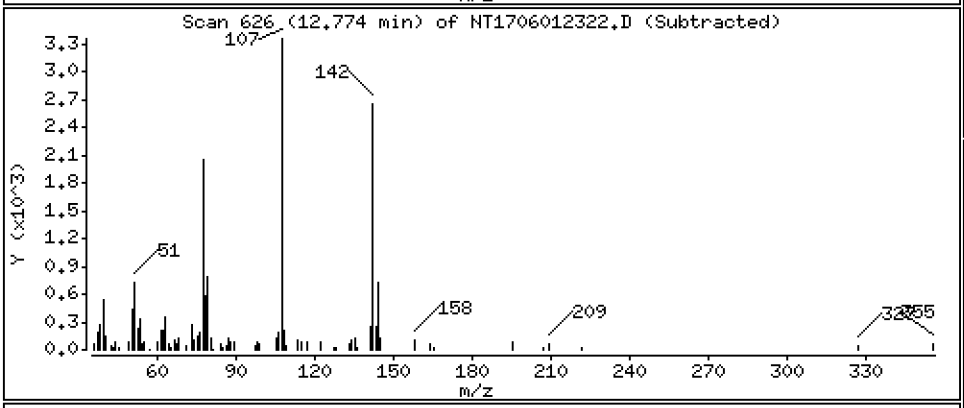
Column diameter: 0.25

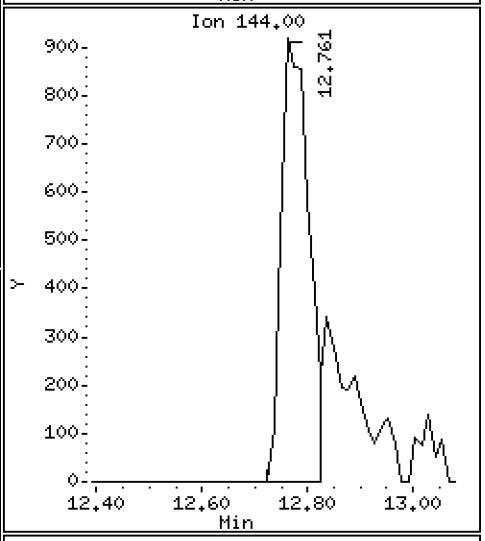
31 4-Chloro-3-methylphenol

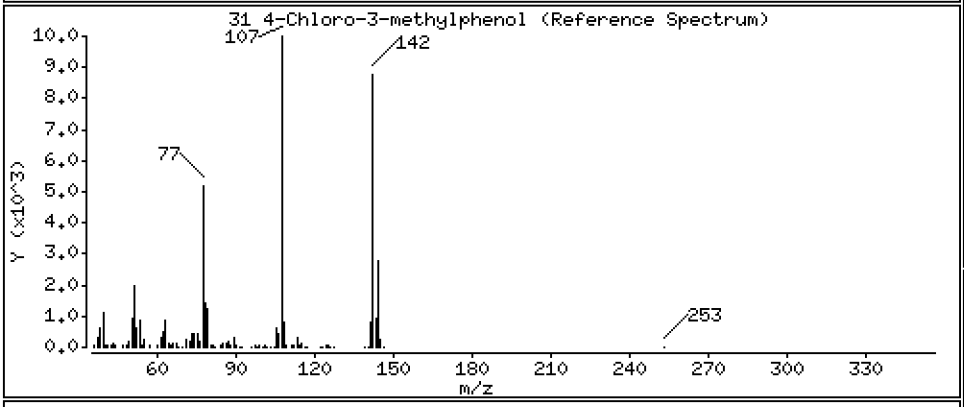
Concentration: 0.2100 ug/mL

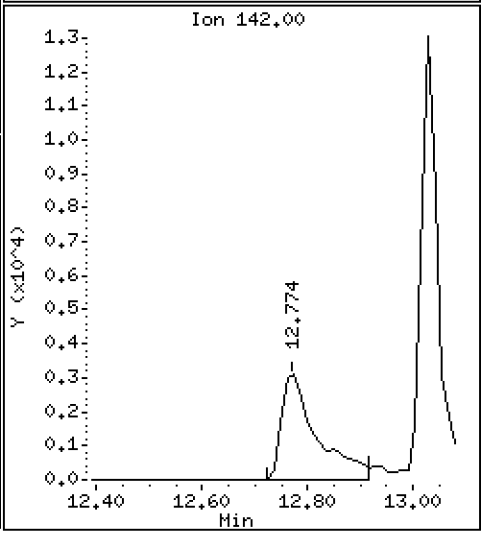


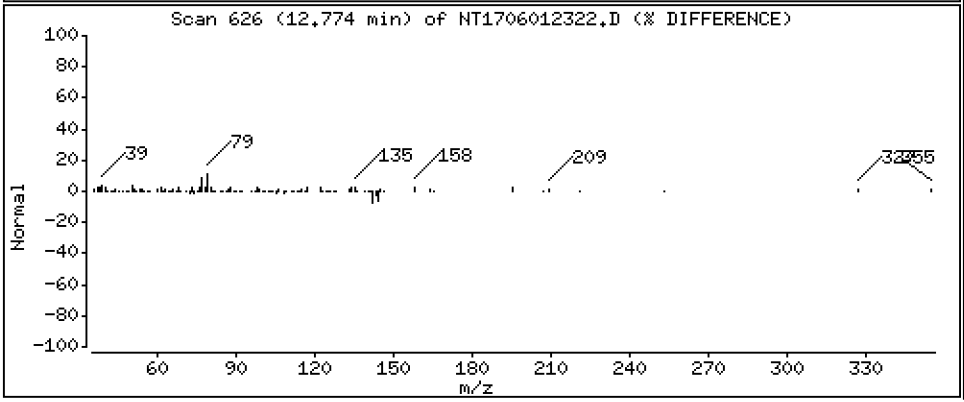












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

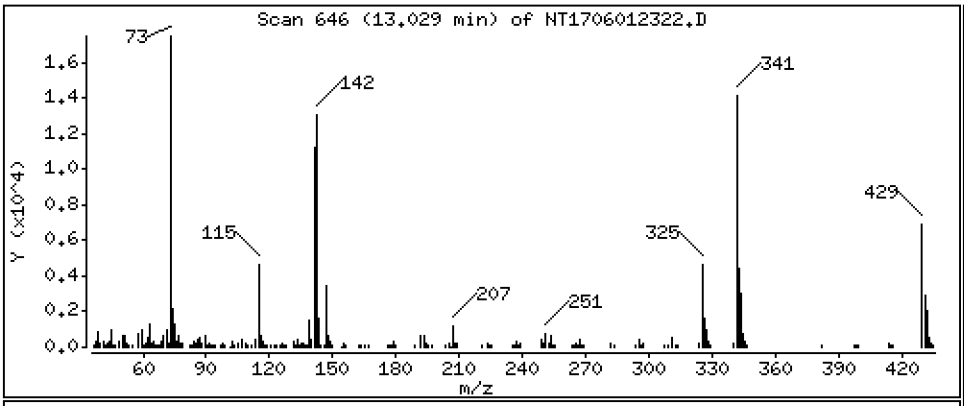
Operator: VTS

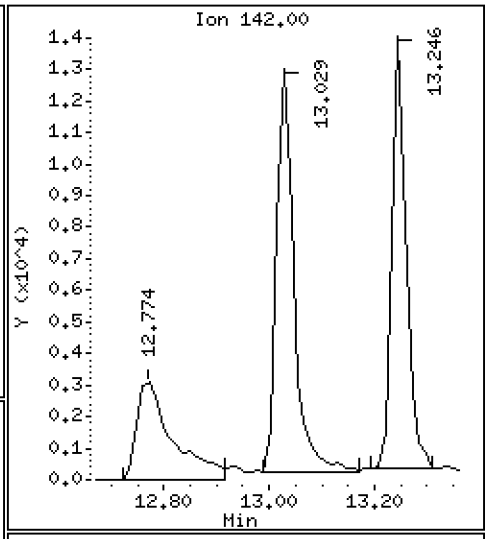
Column phase: ZB-5msi

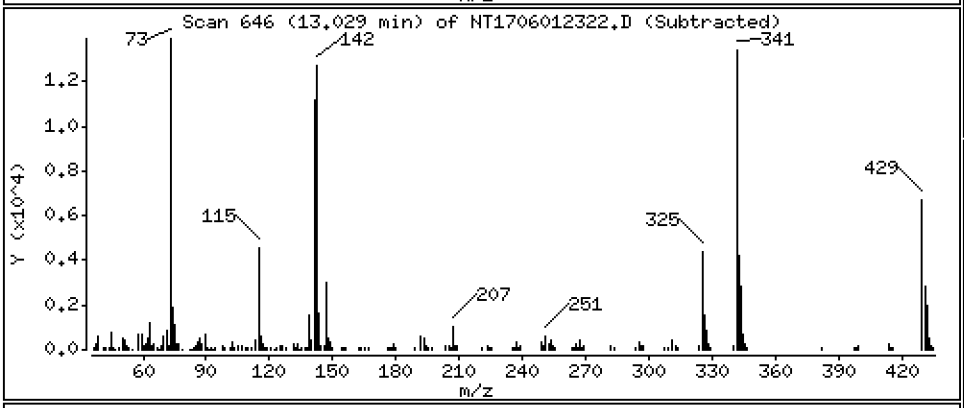
Column diameter: 0.25

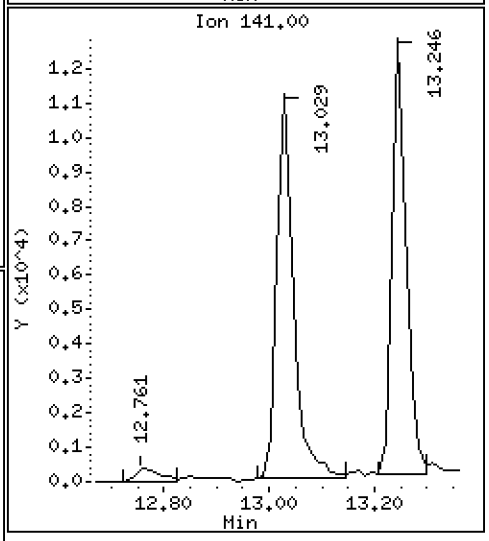
32 2-Methylnaphthalene

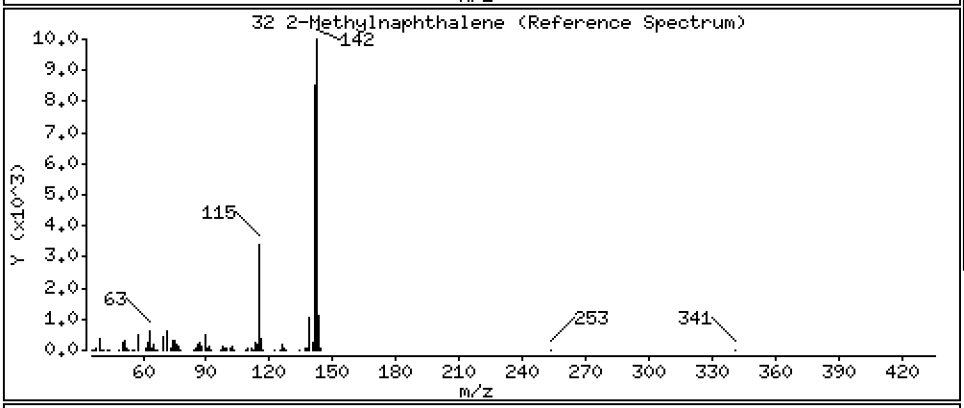
Concentration: 0.1785 ug/mL

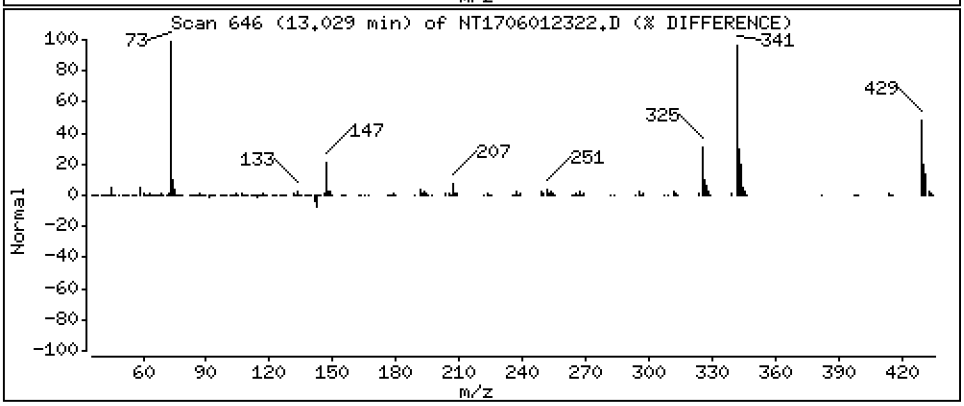












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

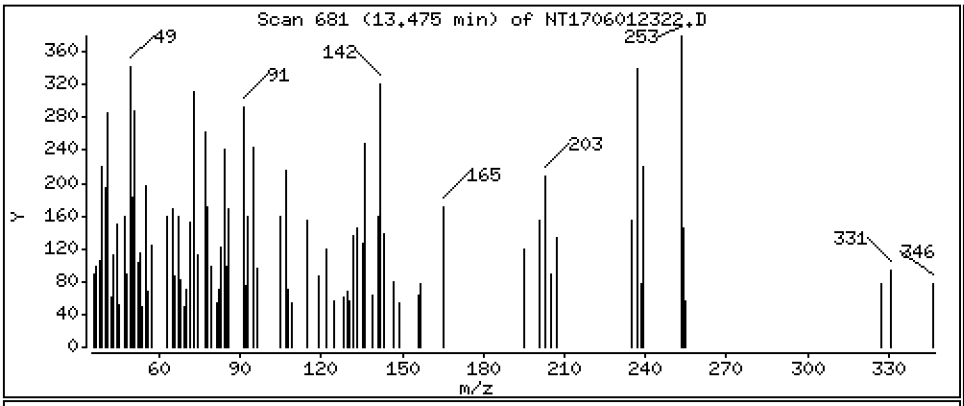
Operator: VTS

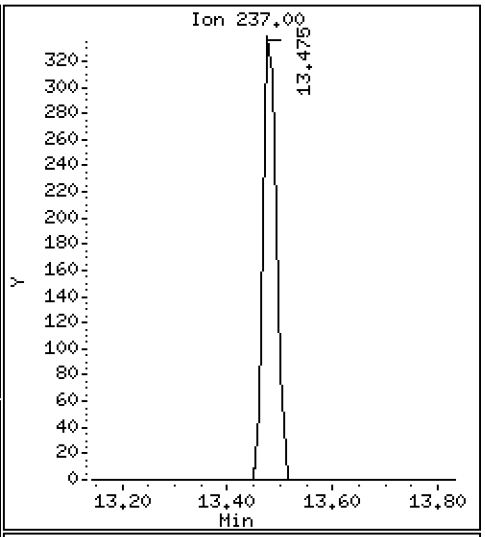
Column phase: ZB-5msi

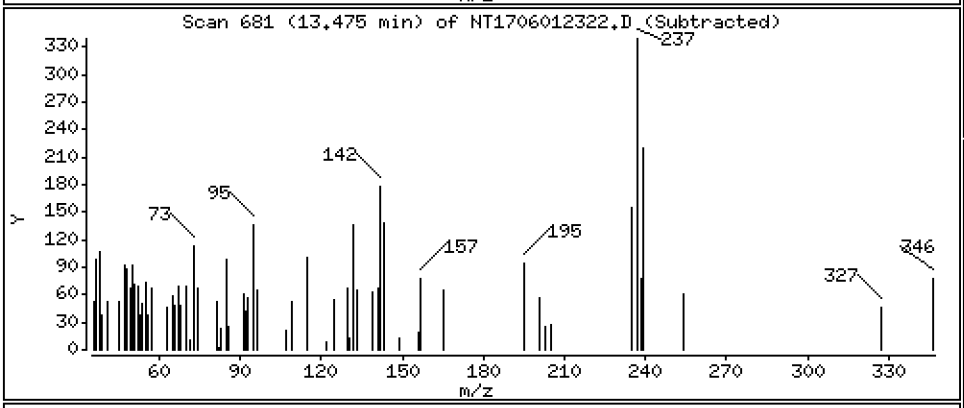
Column diameter: 0.25

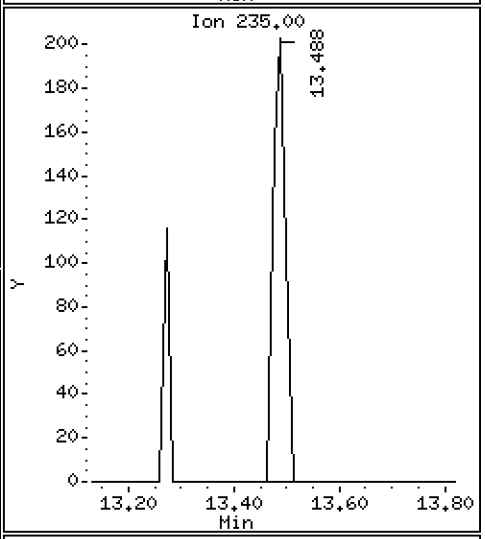
33 Hexachlorocyclopentadiene

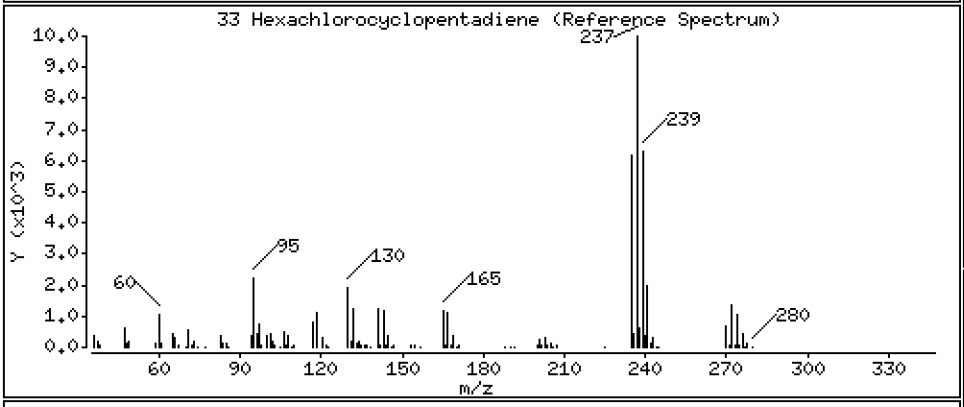
Concentration: 0.01538 ug/mL

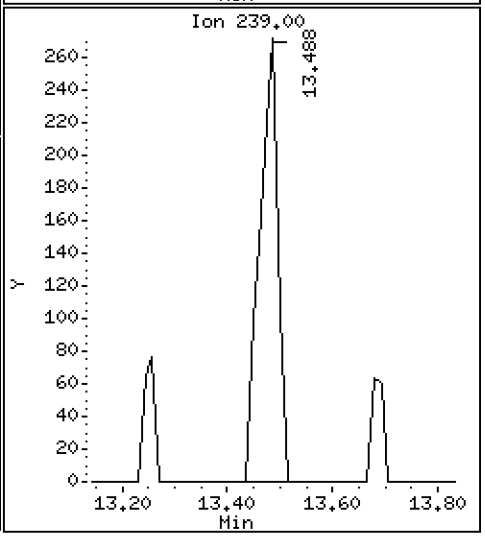


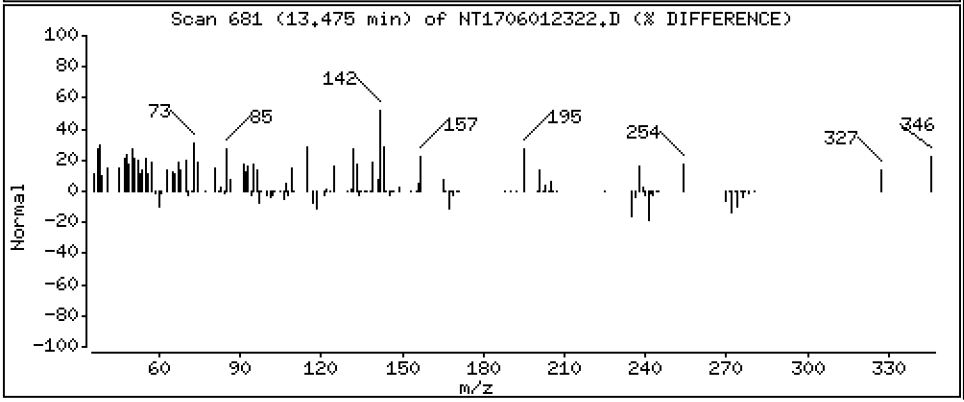












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

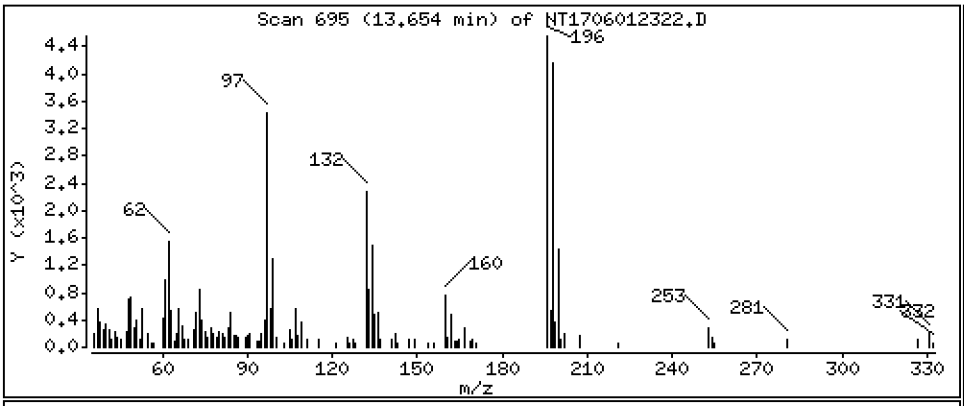
Operator: VTS

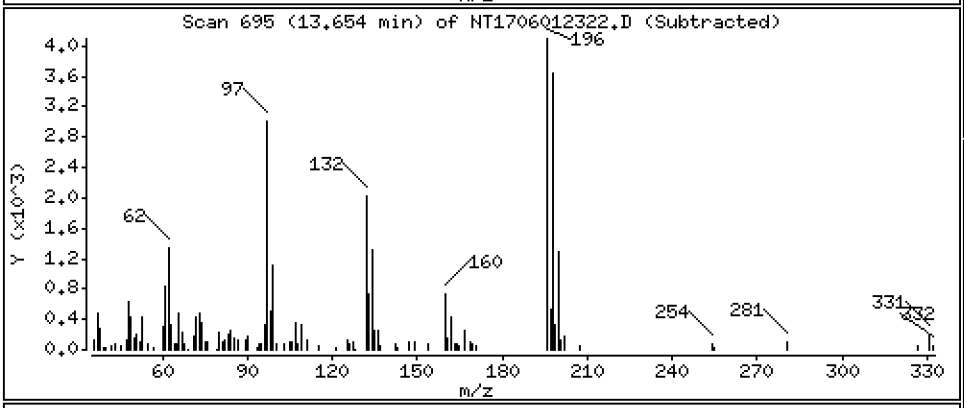
Column phase: ZB-5msi

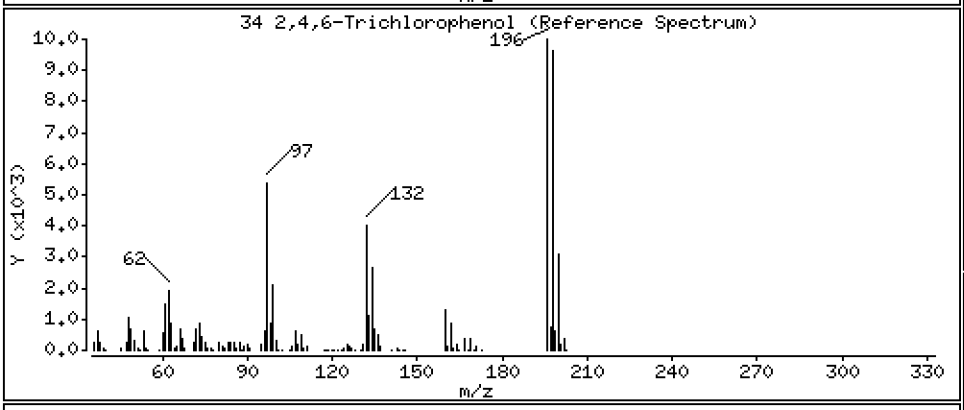
Column diameter: 0.25

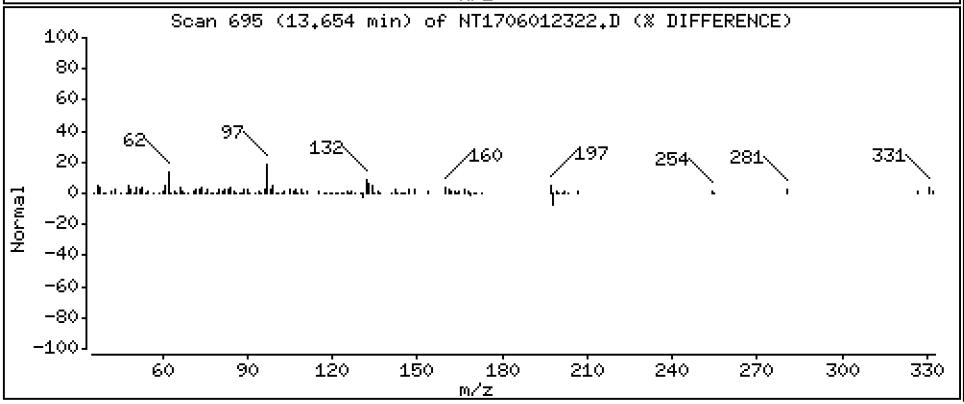
34 2,4,6-Trichlorophenol

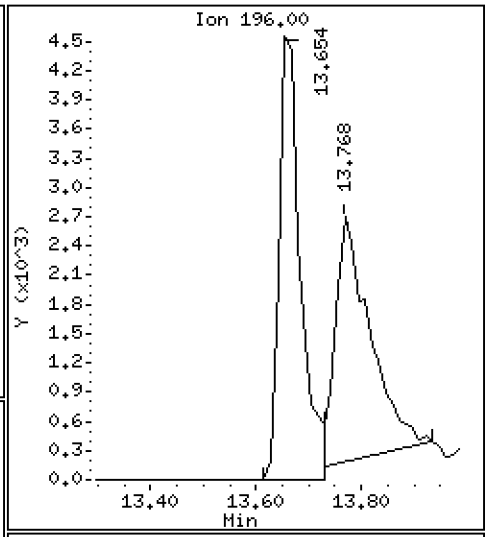
Concentration: 0.2974 ug/mL

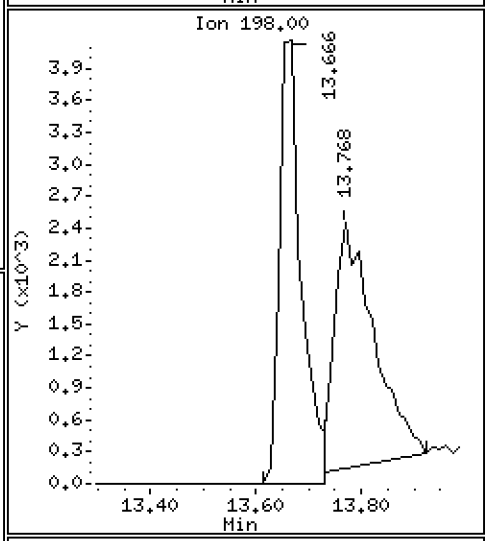


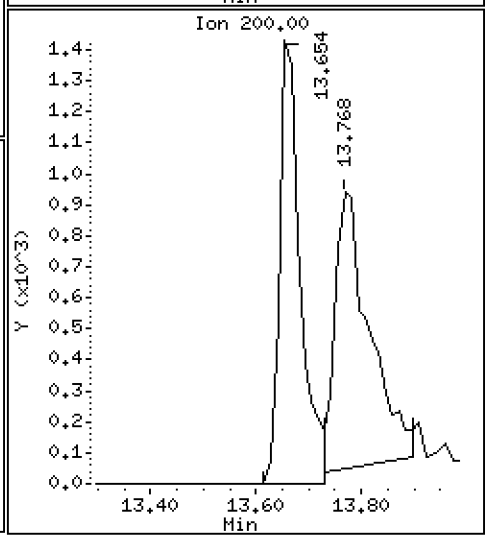












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

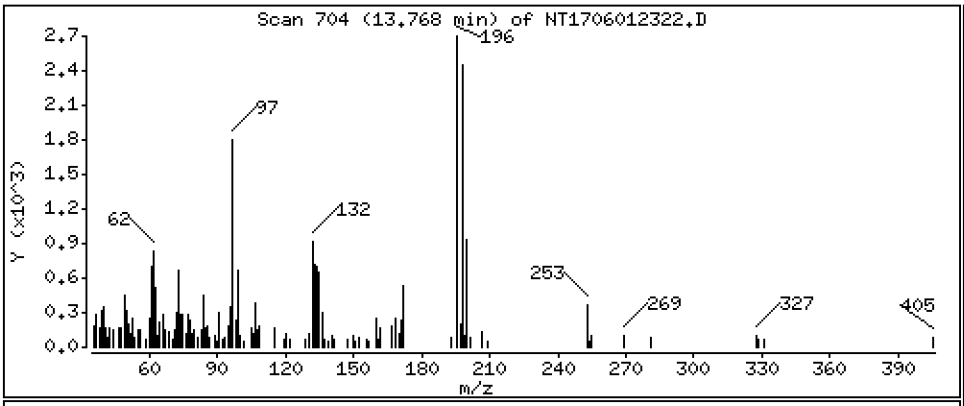
Operator: VTS

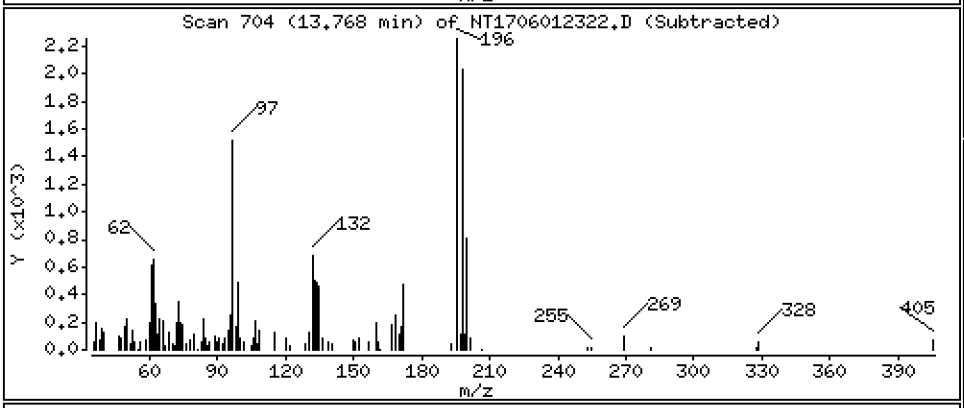
Column phase: ZB-5msi

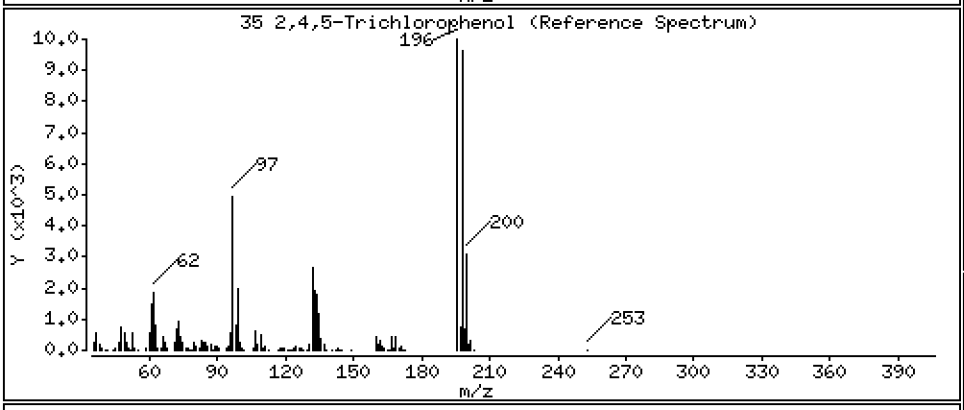
Column diameter: 0.25

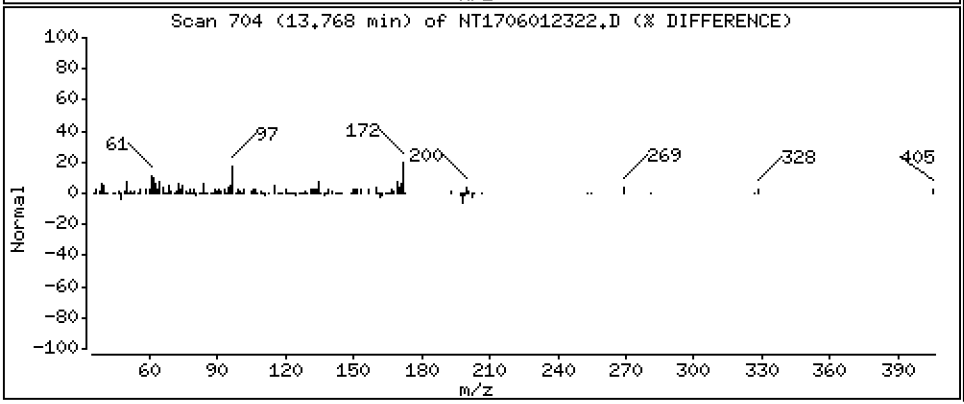
35 2,4,5-Trichlorophenol

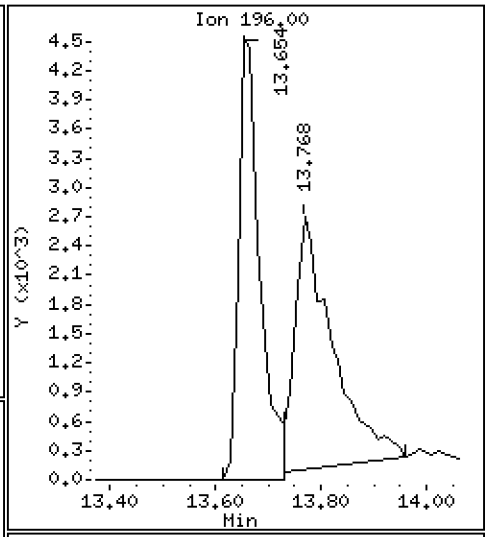
Concentration: 0.2810 ug/mL

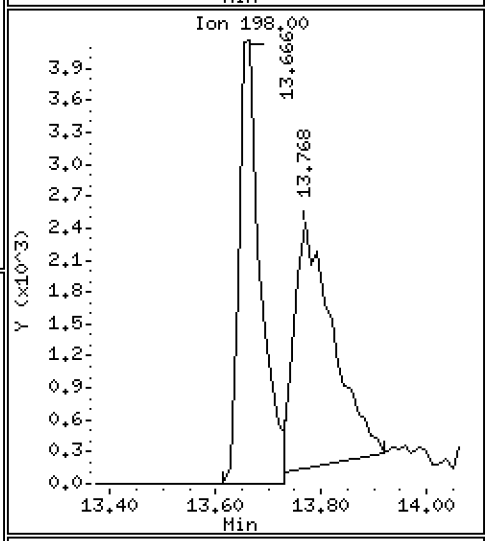


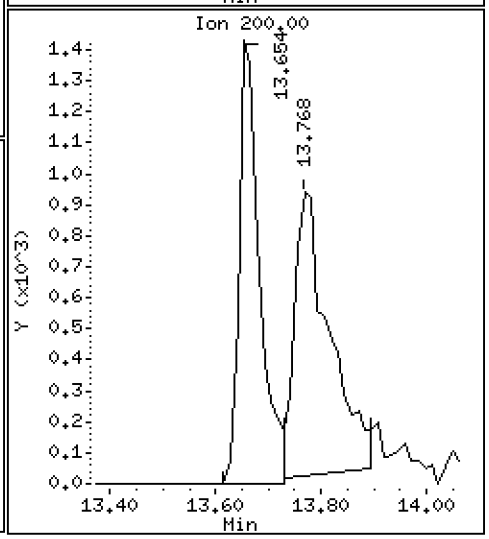












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

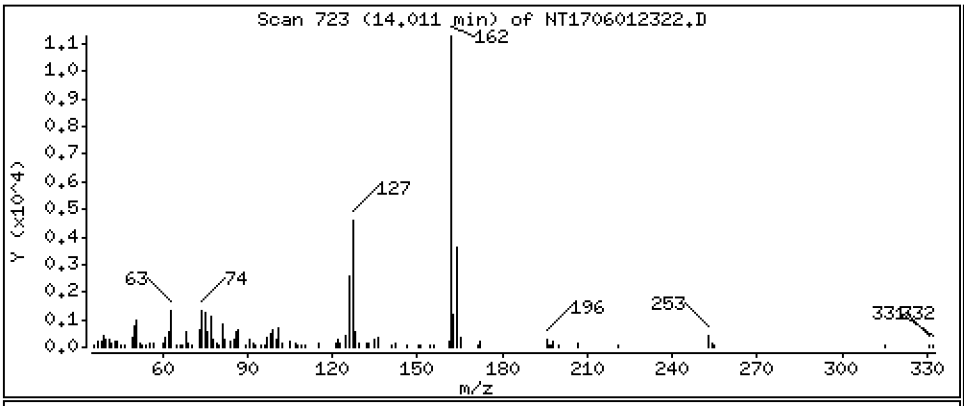
Operator: VTS

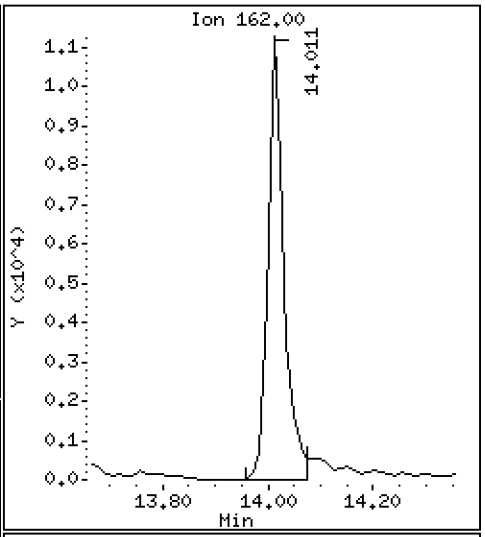
Column phase: ZB-5msi

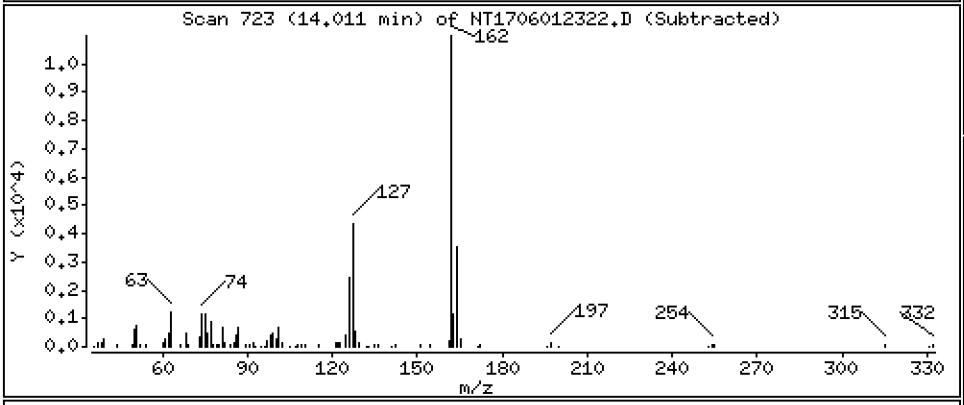
Column diameter: 0.25

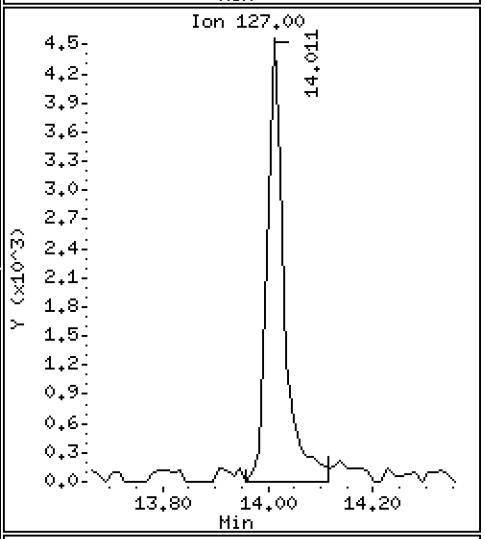
37 2-Chloronaphthalene

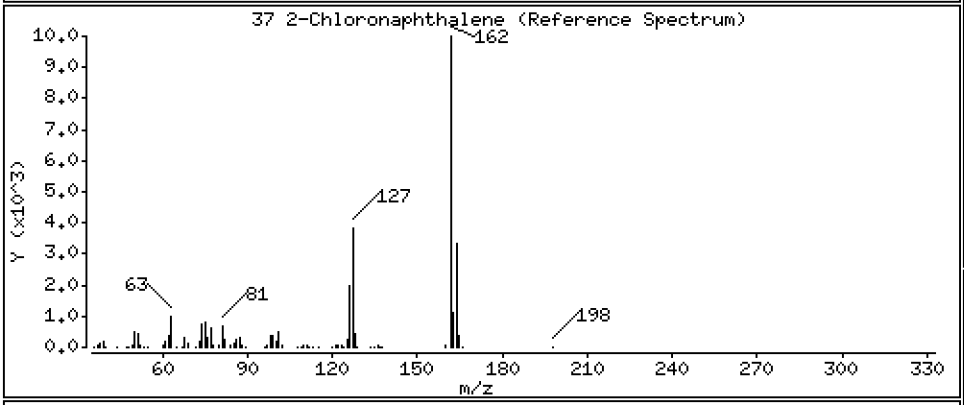
Concentration: 0.1783 ug/mL

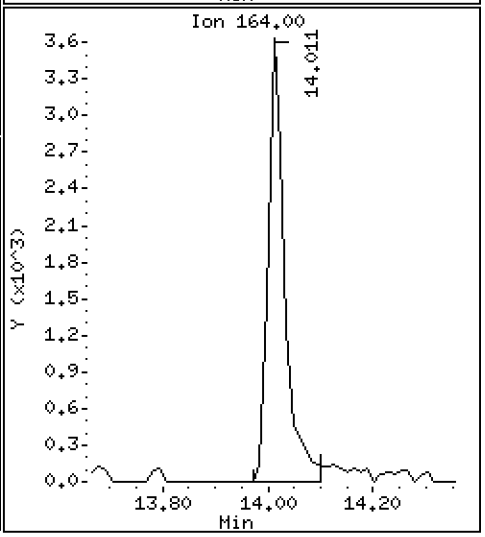


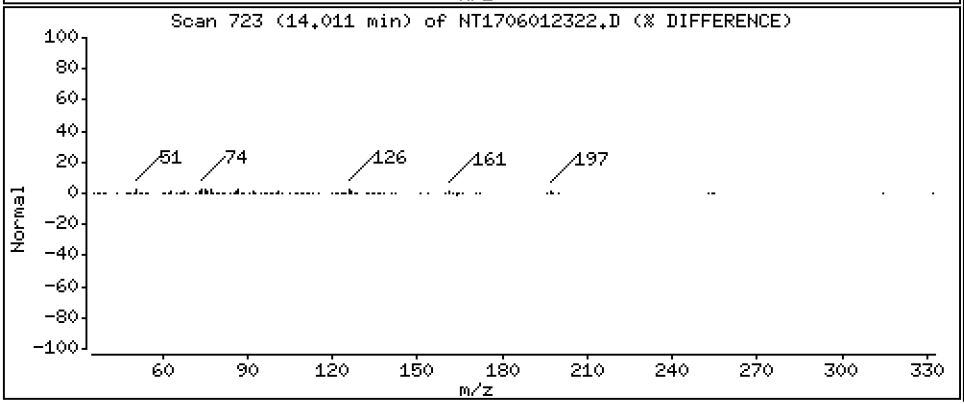












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

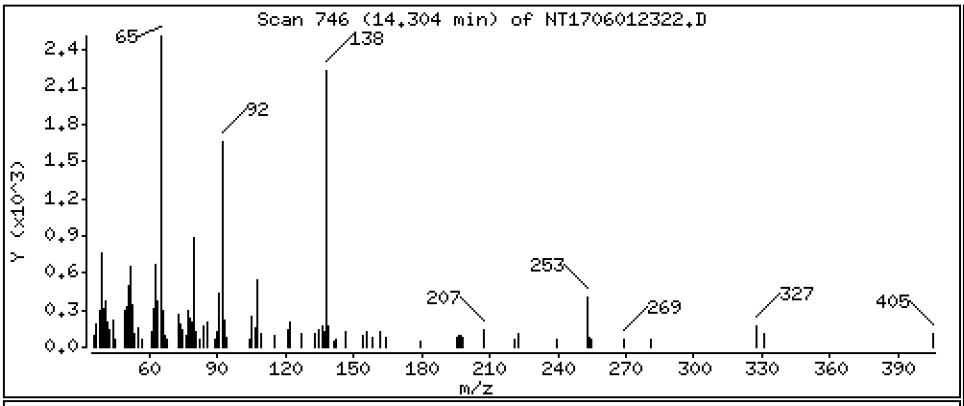
Operator: VTS

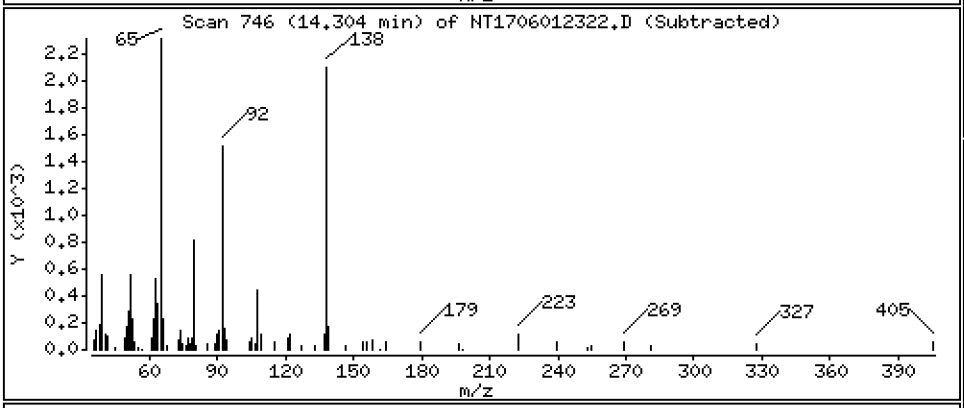
Column phase: ZB-5msi

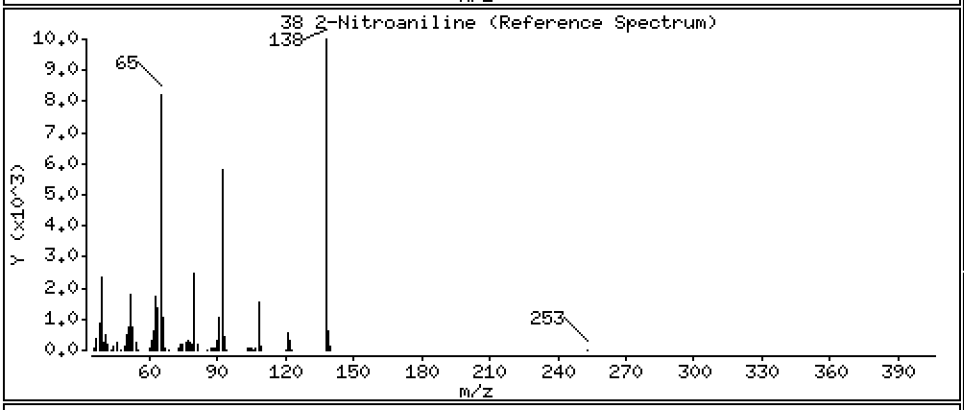
Column diameter: 0.25

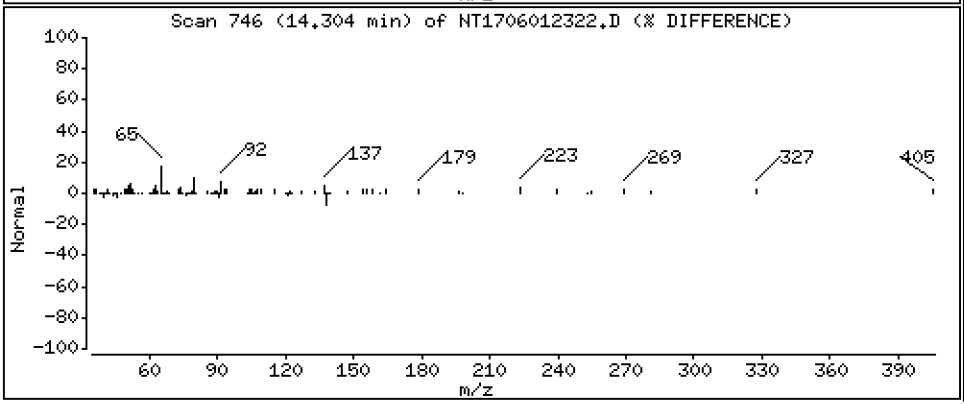
38 2-Nitroaniline

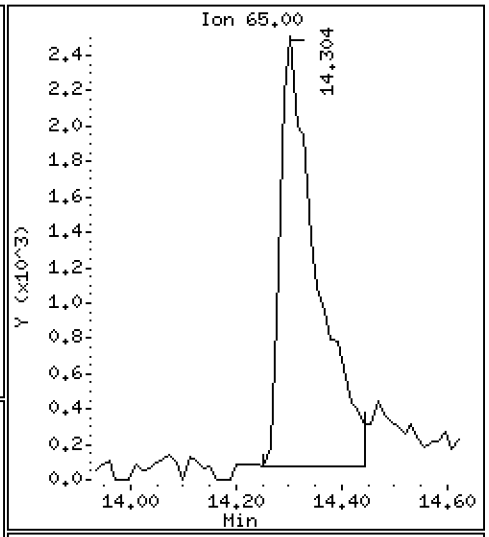
Concentration: 0.2588 ug/mL

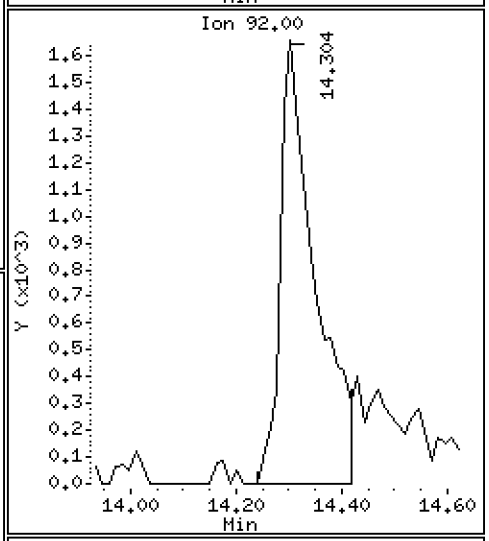


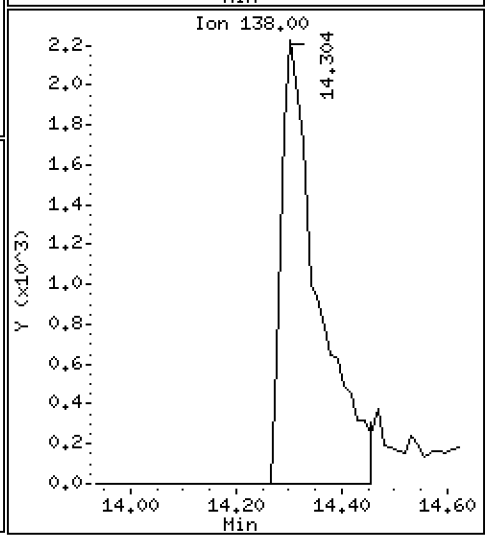












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

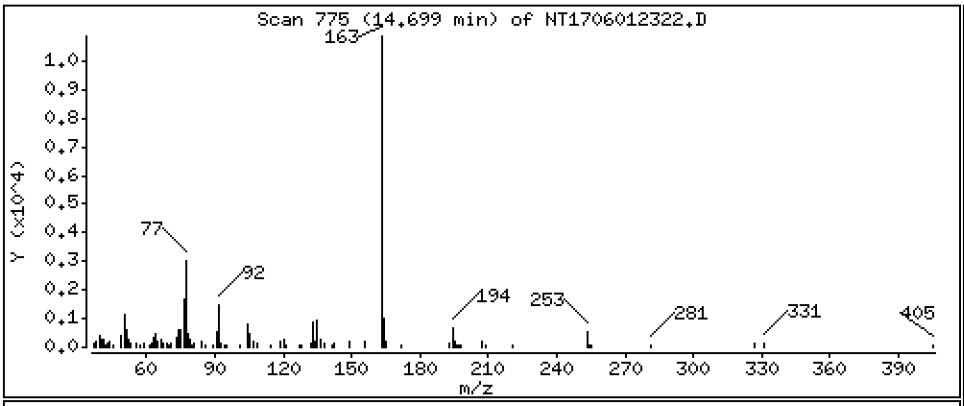
Operator: VTS

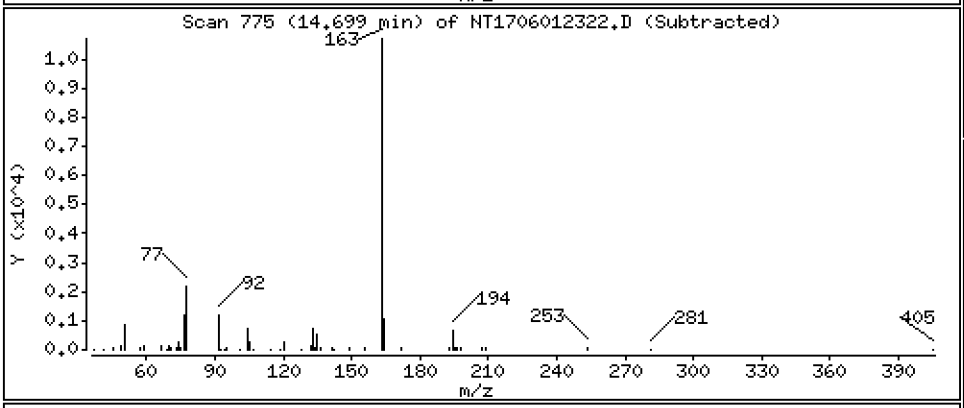
Column phase: ZB-5msi

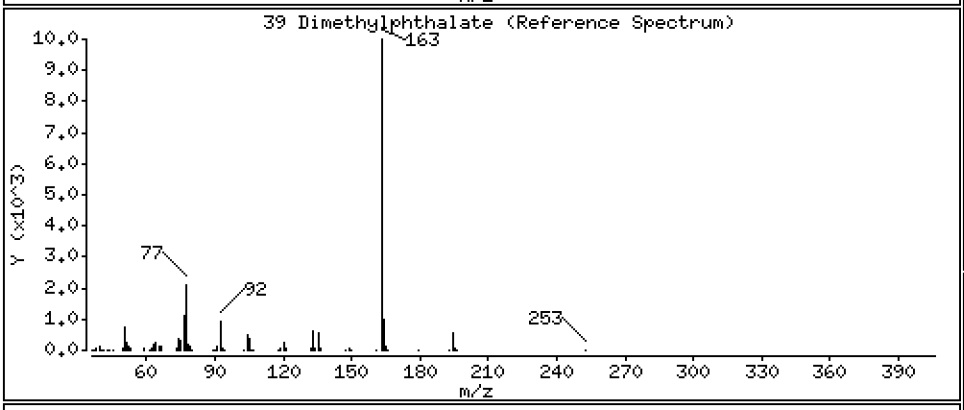
Column diameter: 0.25

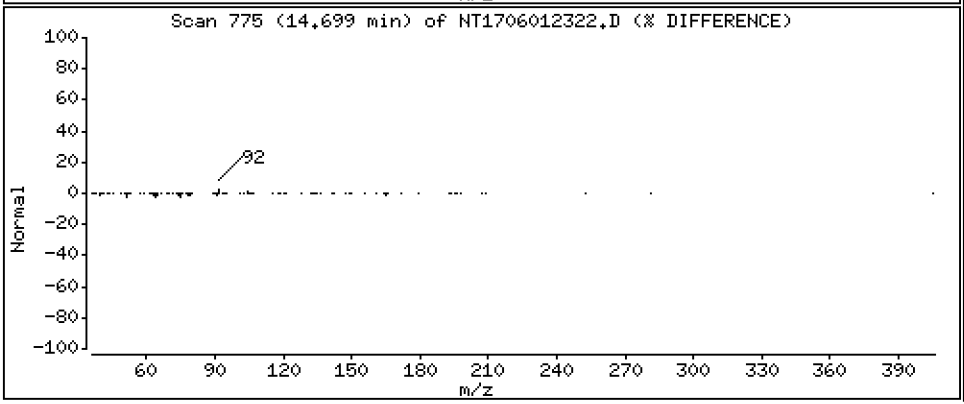
39 Dimethylphthalate

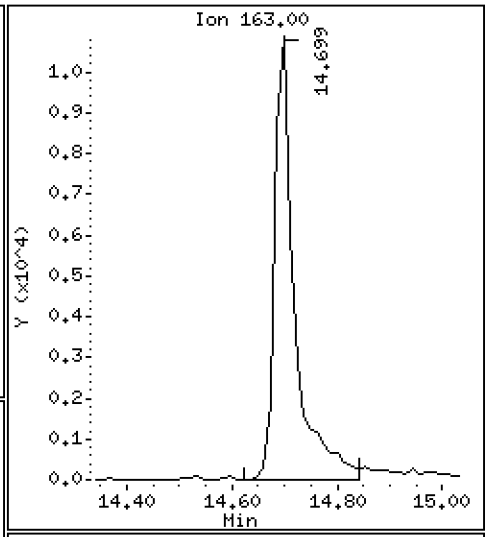
Concentration: 0.2006 ug/mL

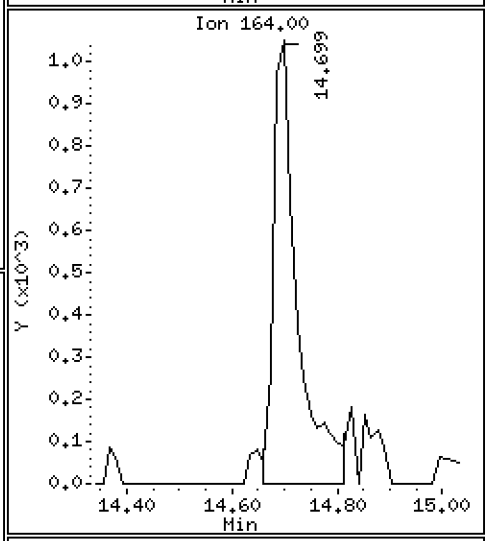


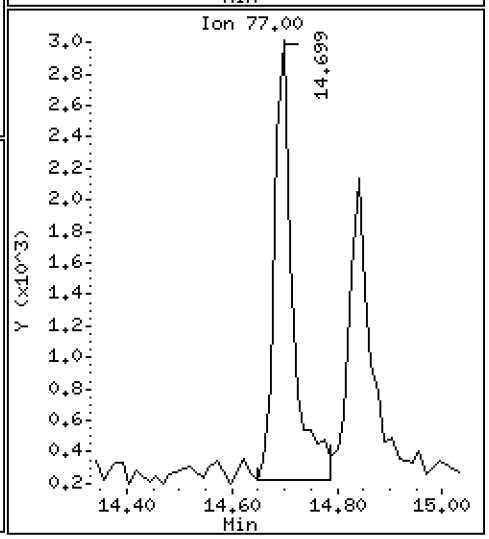












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

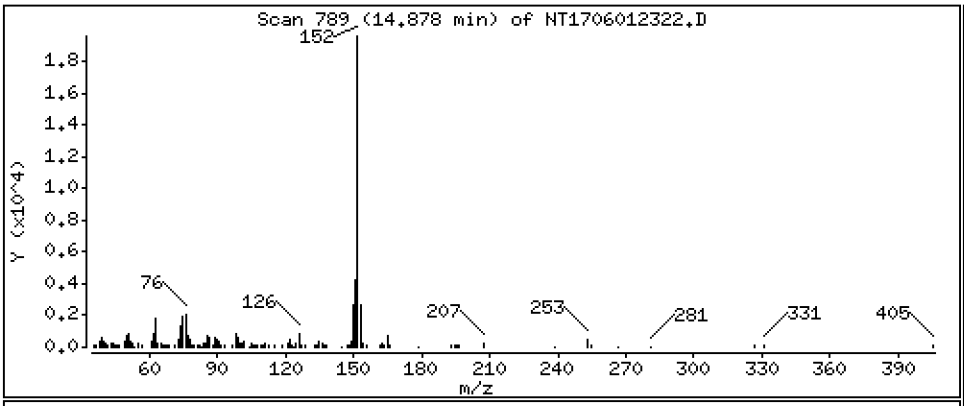
Operator: VTS

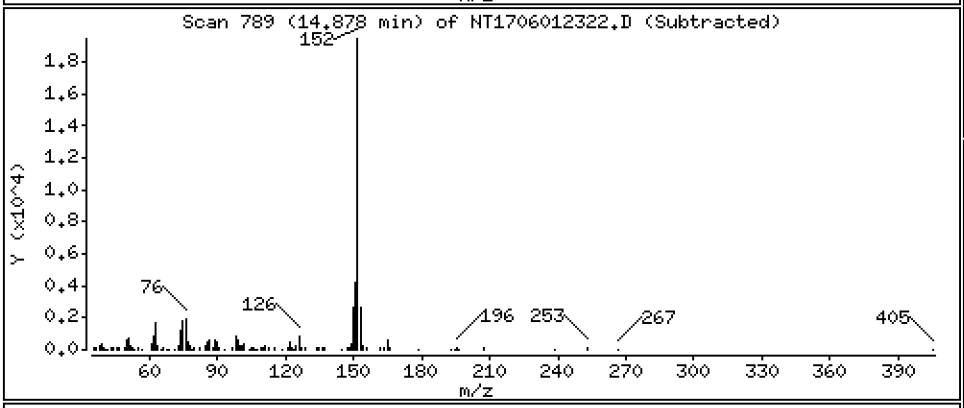
Column phase: ZB-5msi

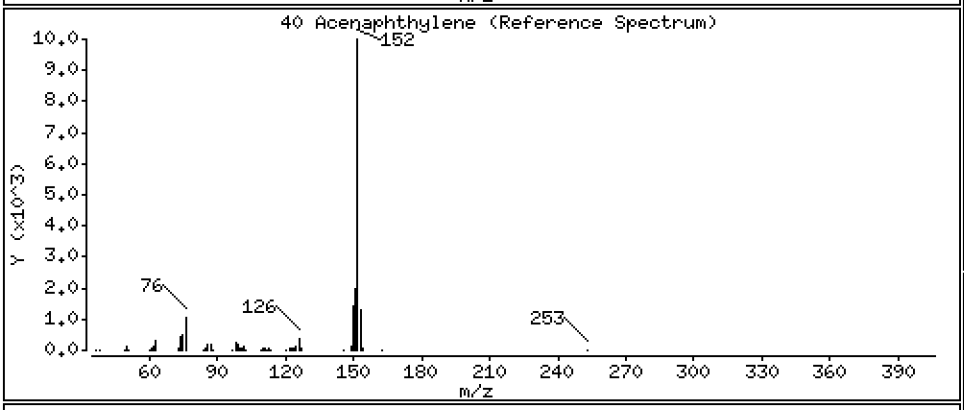
Column diameter: 0.25

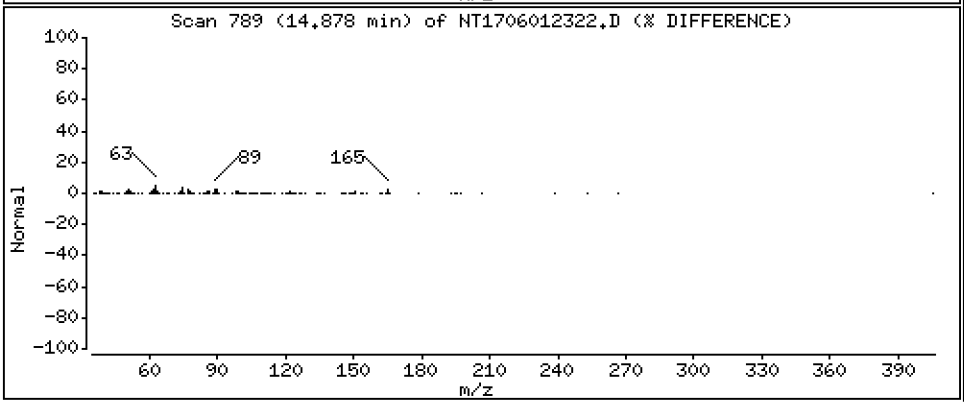
40 Acenaphthylene

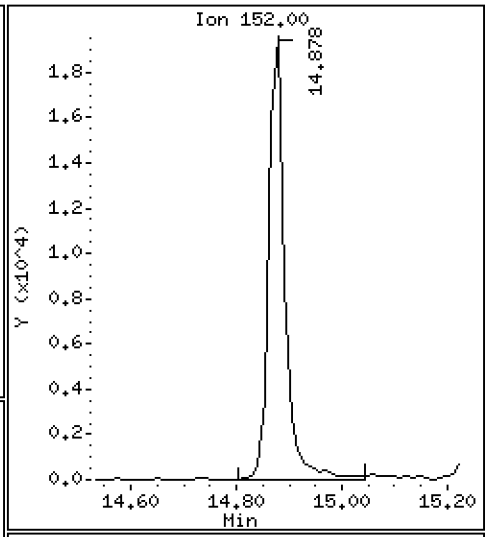
Concentration: 0.2217 ug/mL

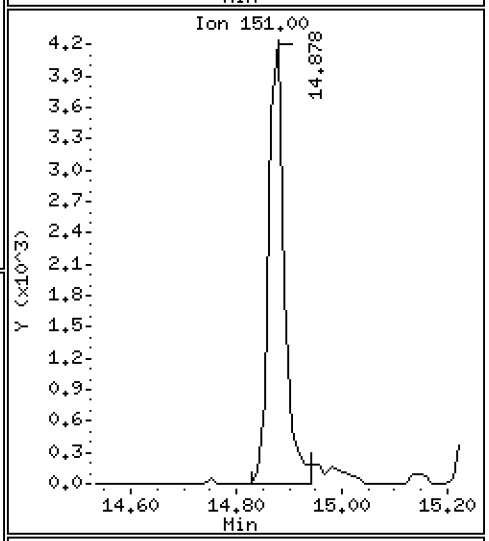


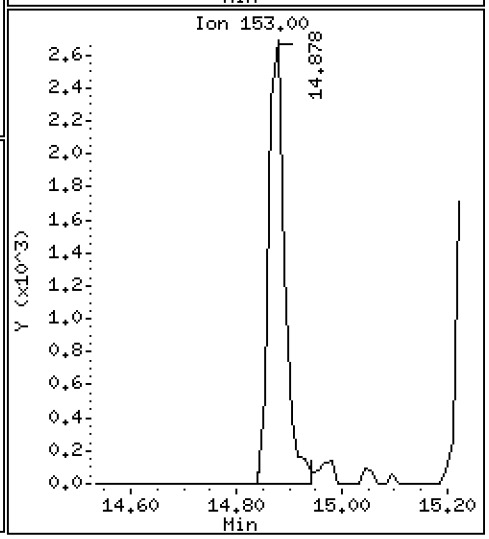












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

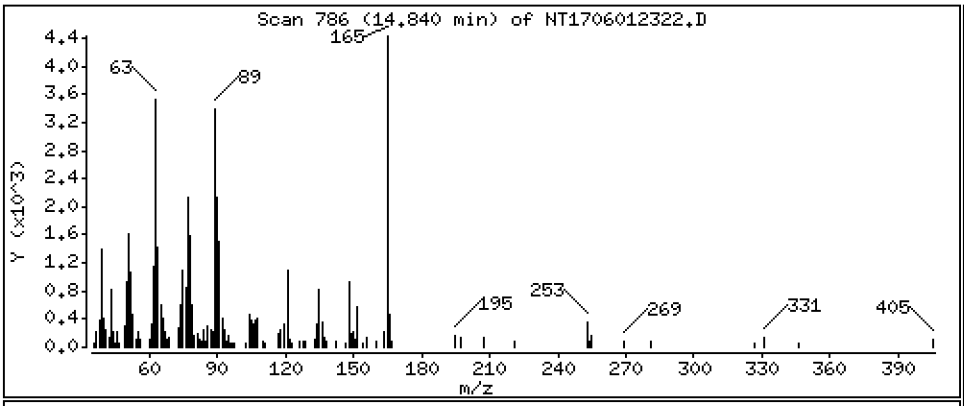
Operator: VTS

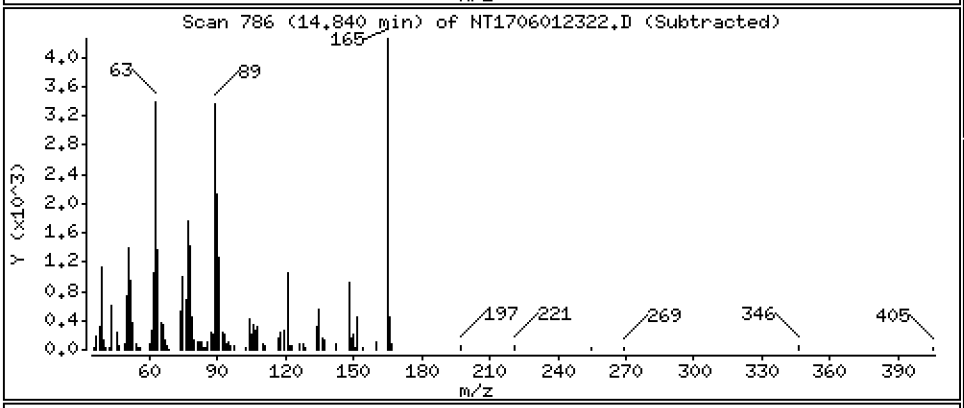
Column phase: ZB-5msi

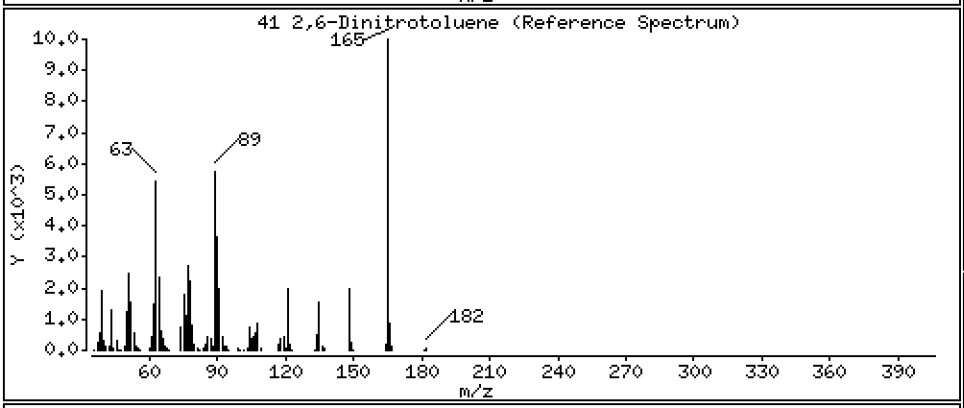
Column diameter: 0.25

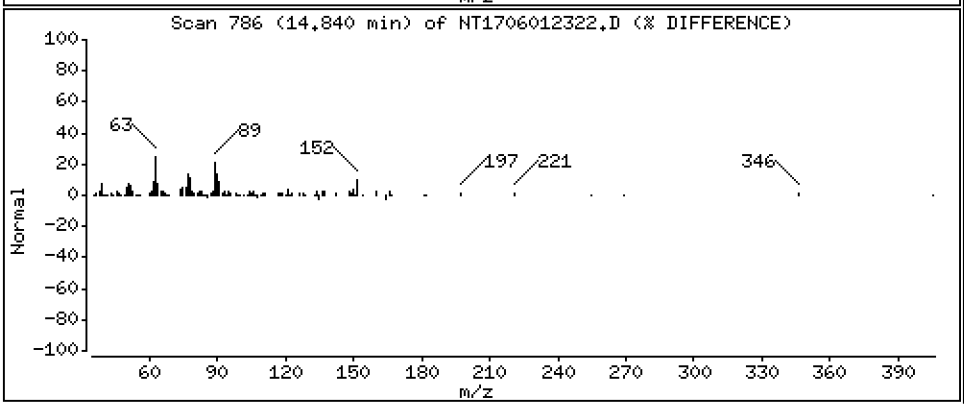
41 2,6-Dinitrotoluene

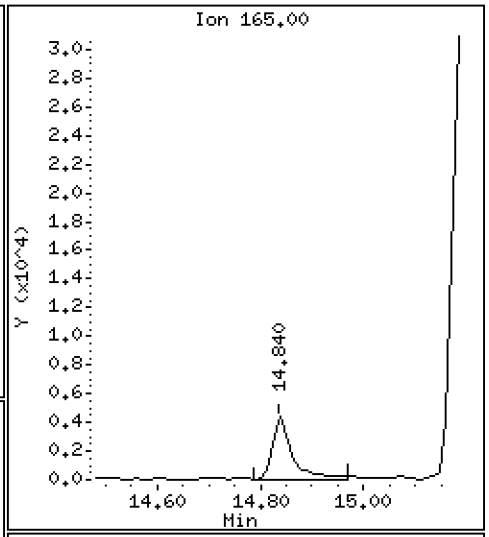
Concentration: 0.3560 ug/mL

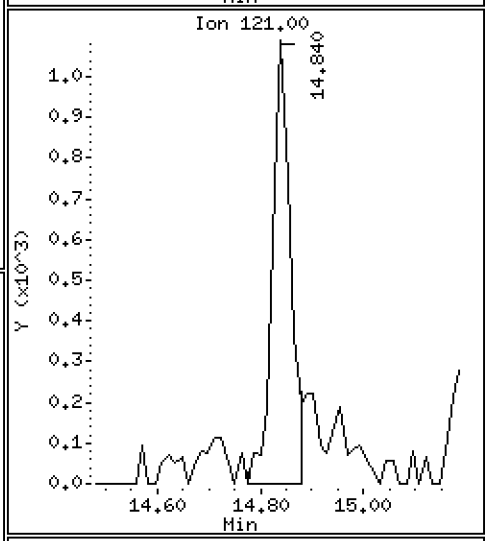


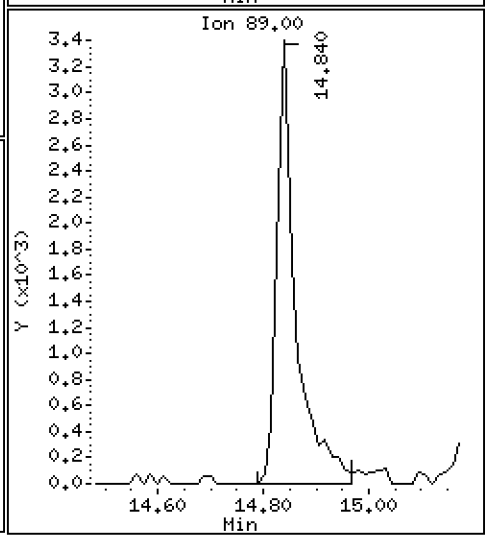












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

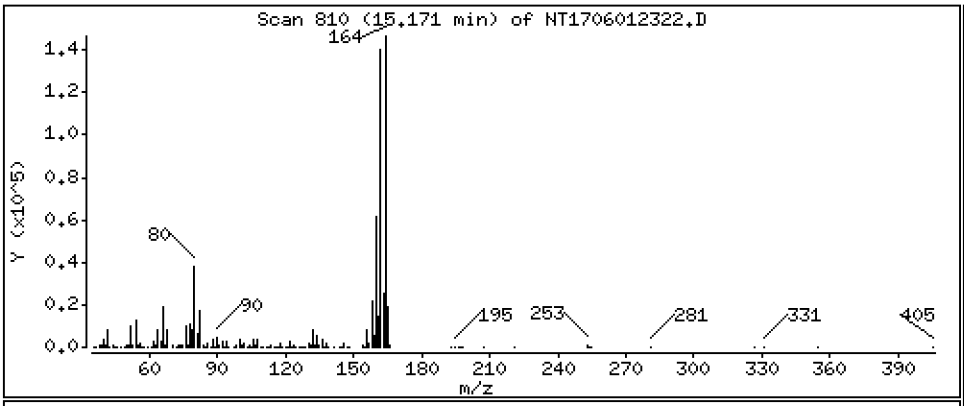
Operator: VTS

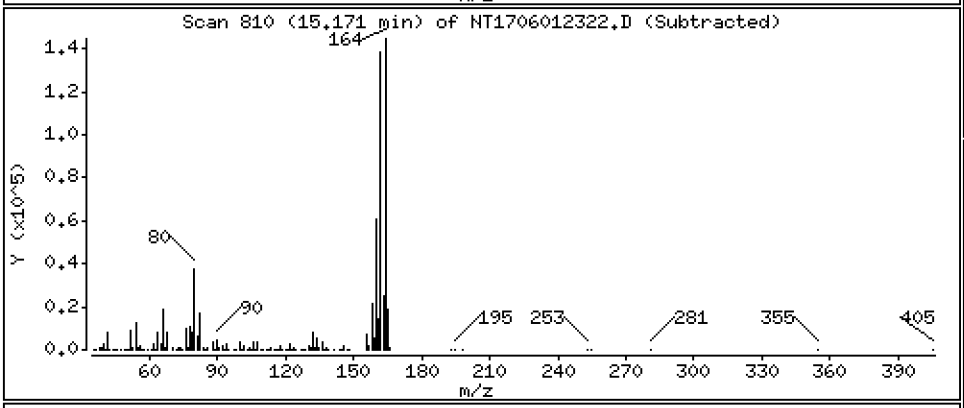
Column phase: ZB-5msi

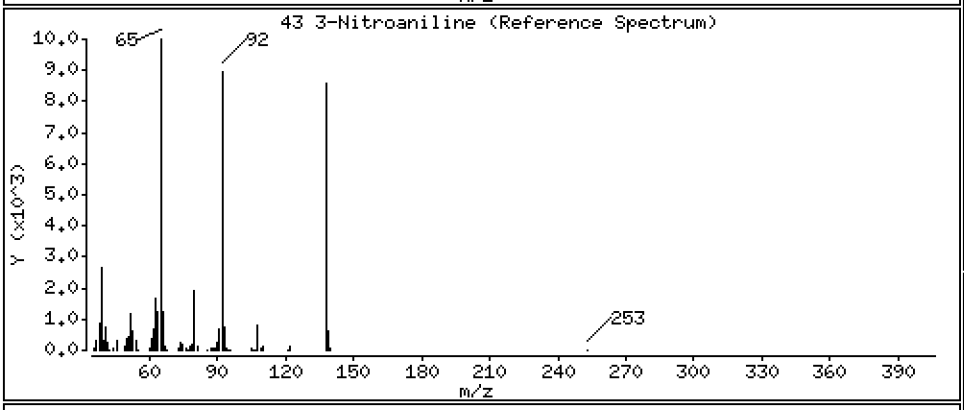
Column diameter: 0.25

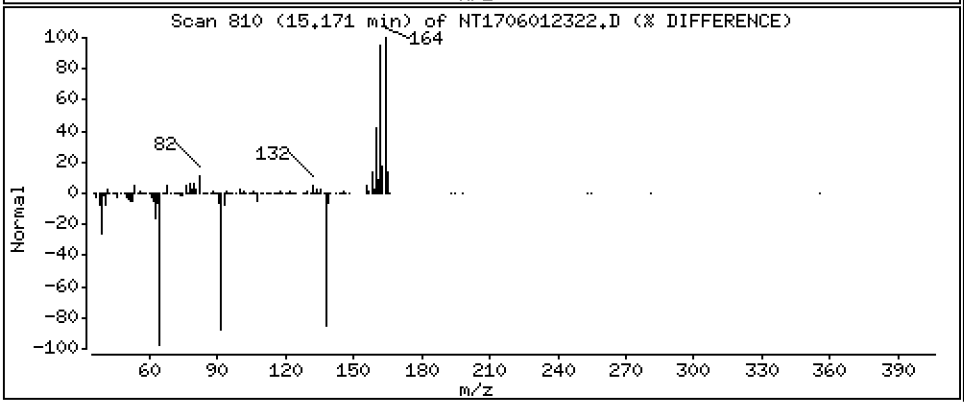
43 3-Nitroaniline

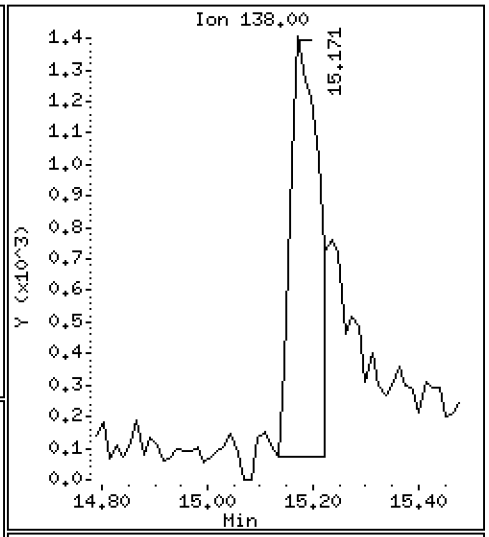
Concentration: 0.1591 ug/mL

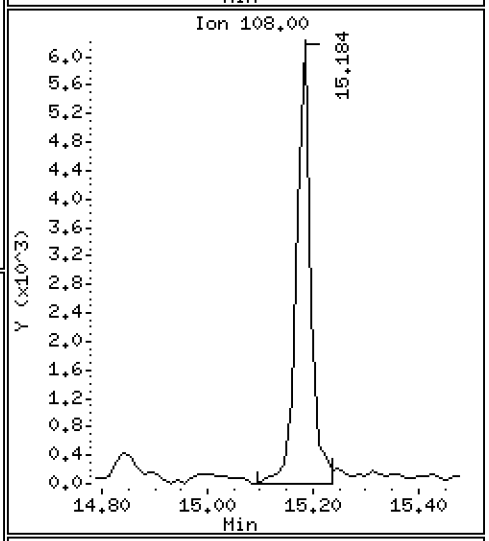


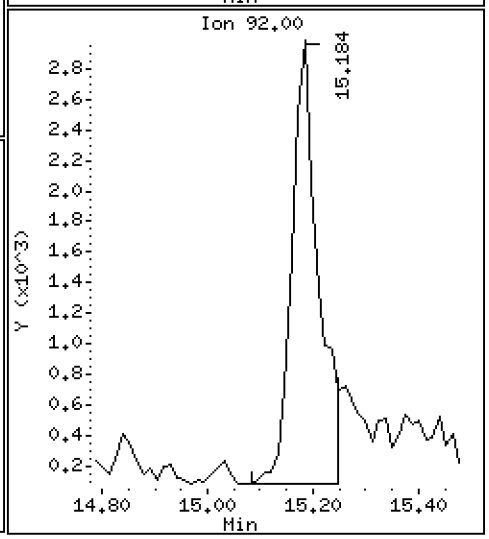












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

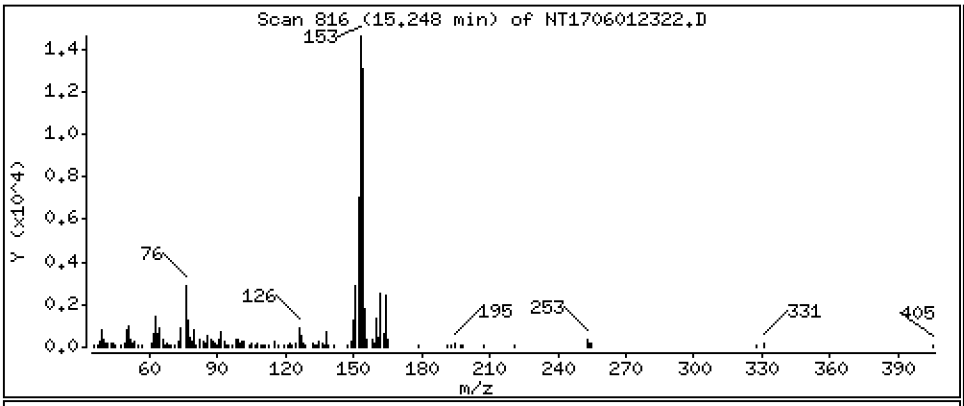
Operator: VTS

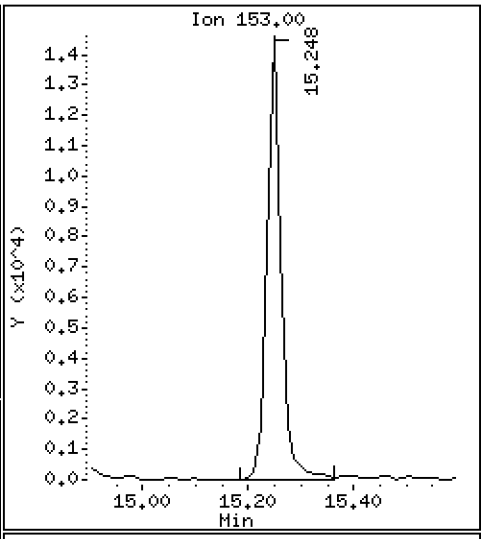
Column phase: ZB-5msi

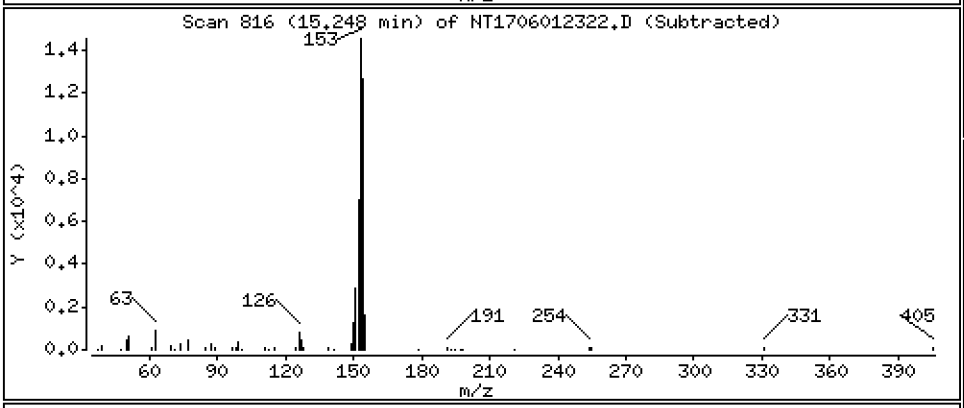
Column diameter: 0.25

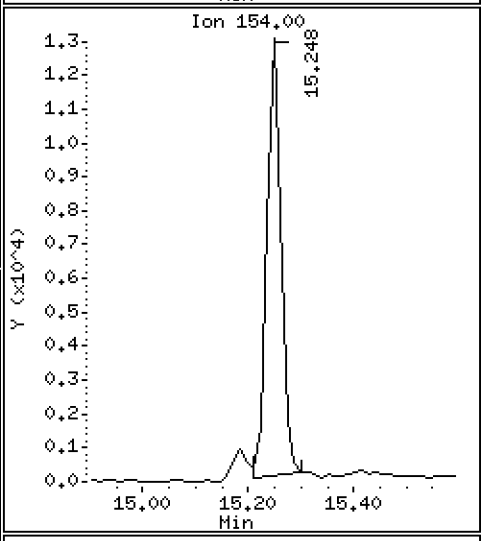
44 Acenaphthene

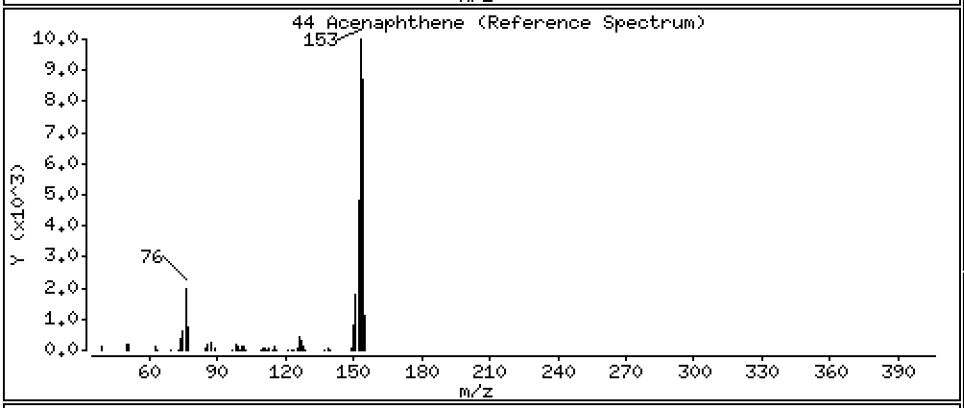
Concentration: 0.2049 ug/mL

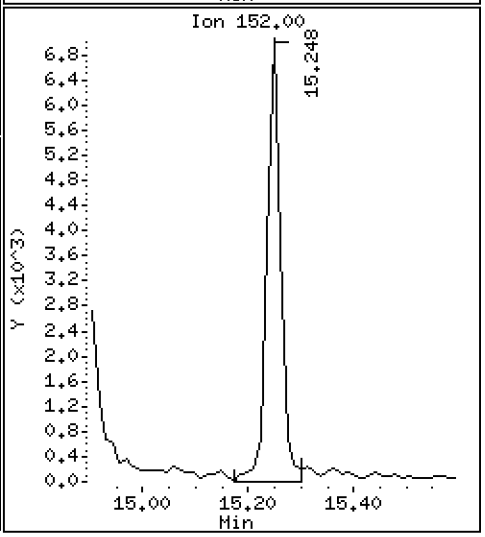


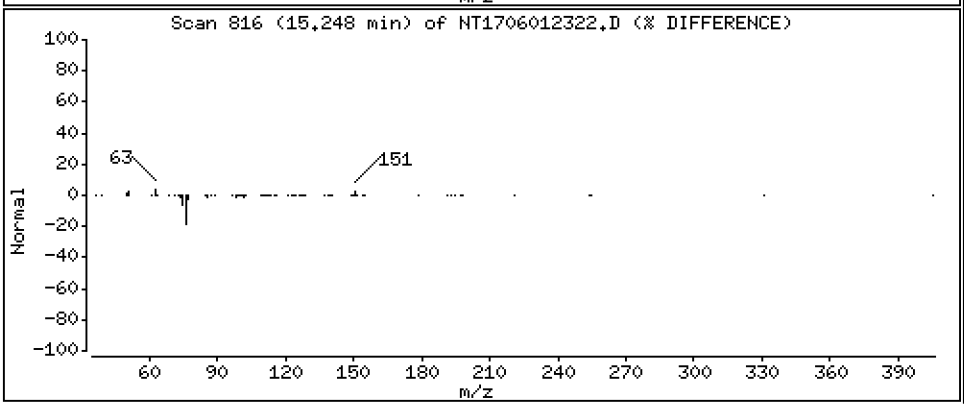












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

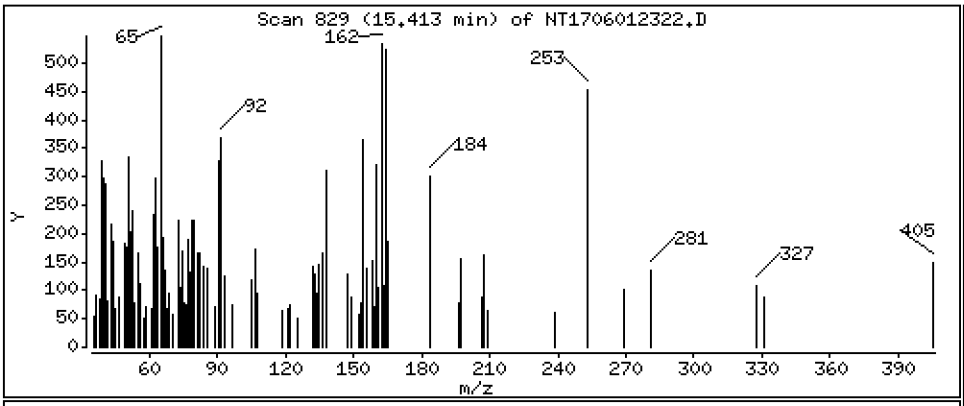
Operator: VTS

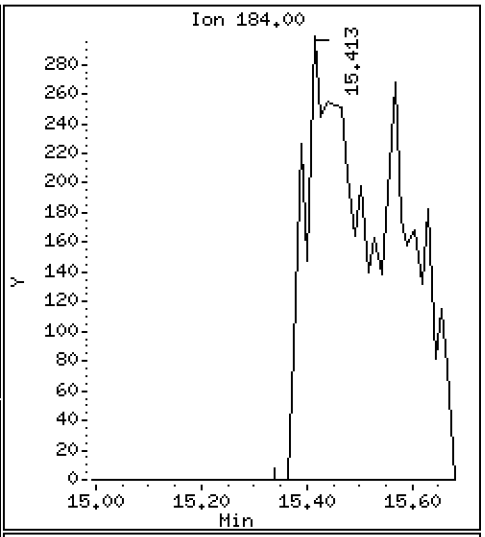
Column phase: ZB-5msi

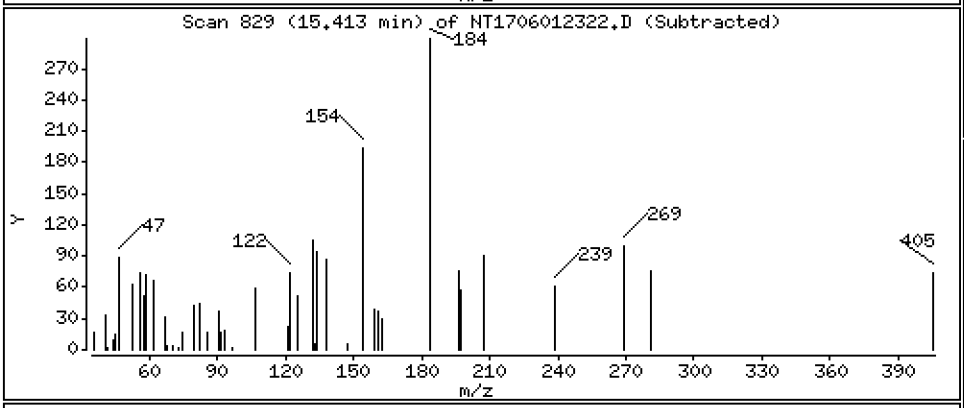
Column diameter: 0.25

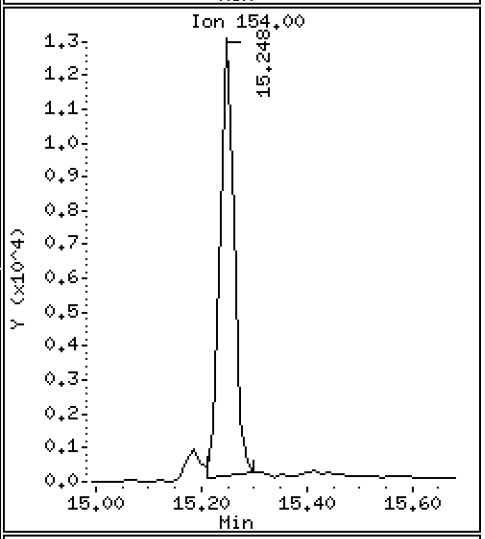
45 2,4-Dinitrophenol

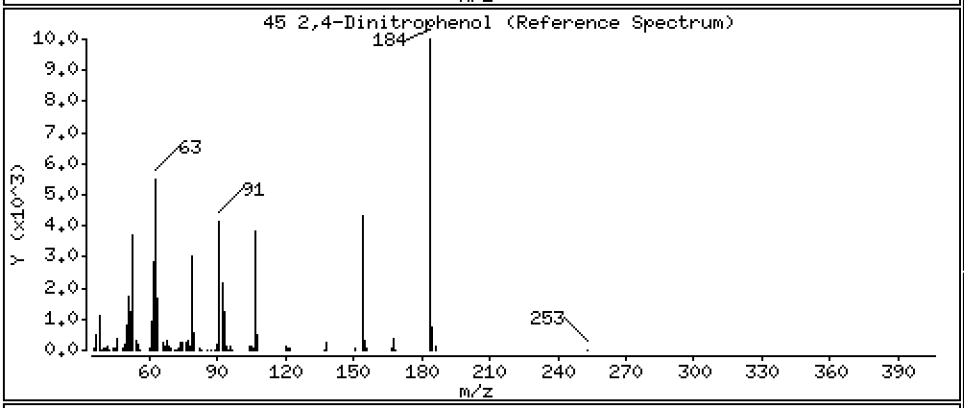
Concentration: 0.1626 ug/mL

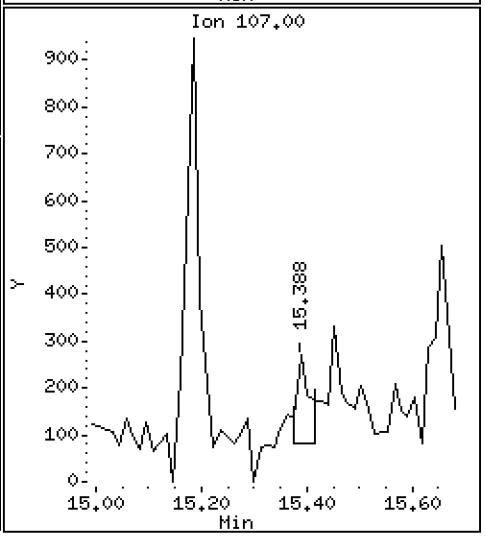


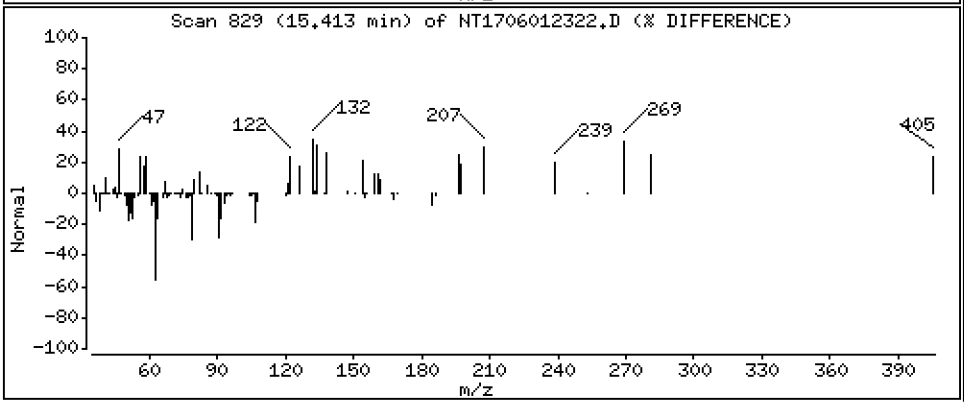












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

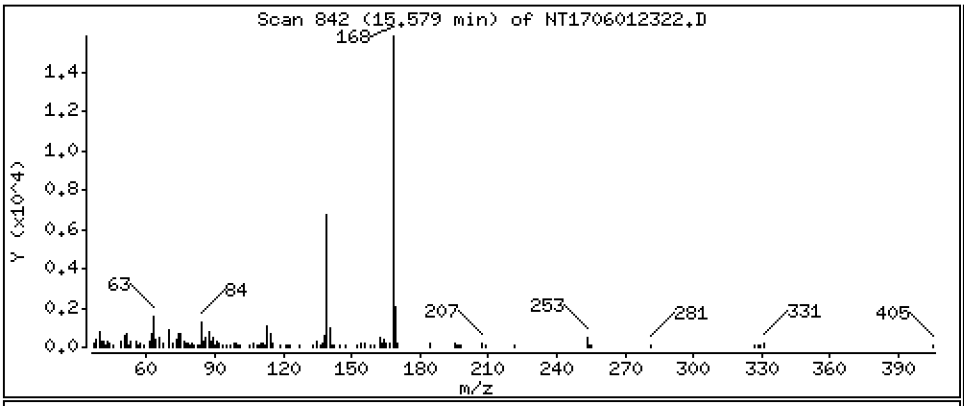
Operator: VTS

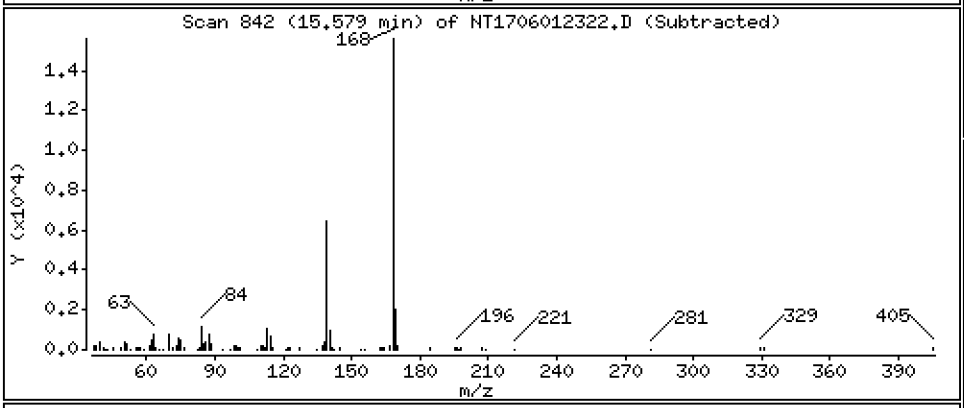
Column phase: ZB-5msi

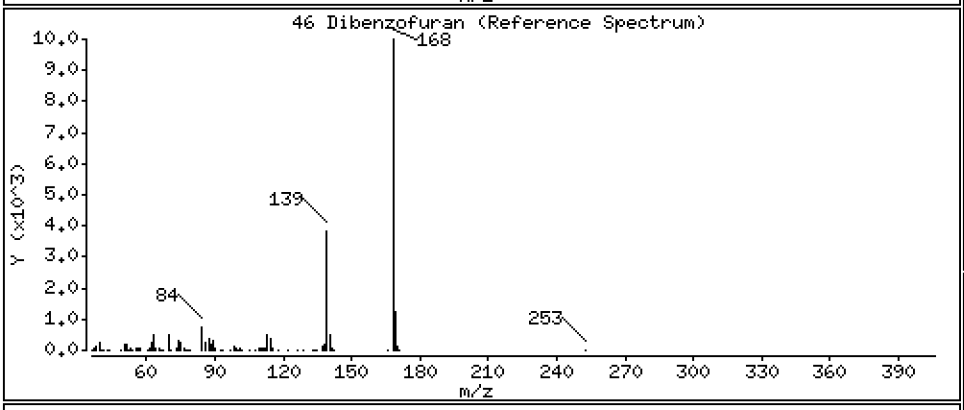
Column diameter: 0.25

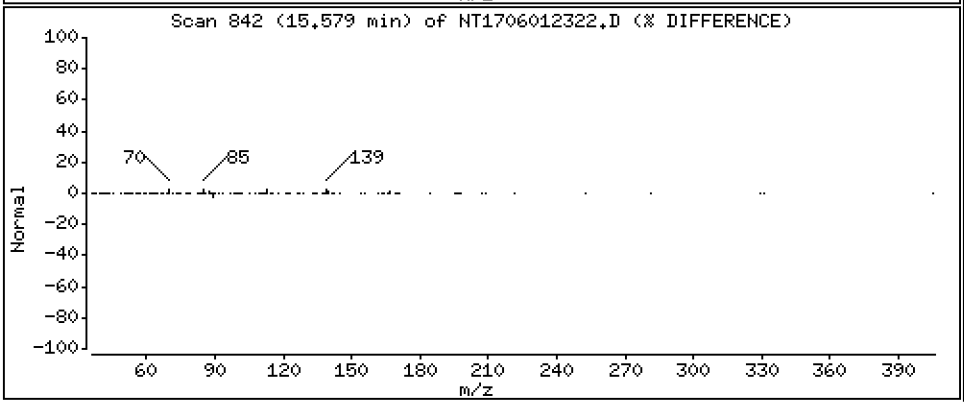
46 Dibenzofuran

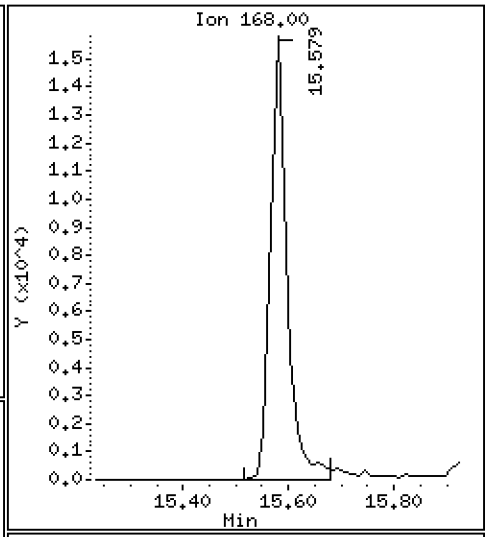
Concentration: 0.1904 ug/mL

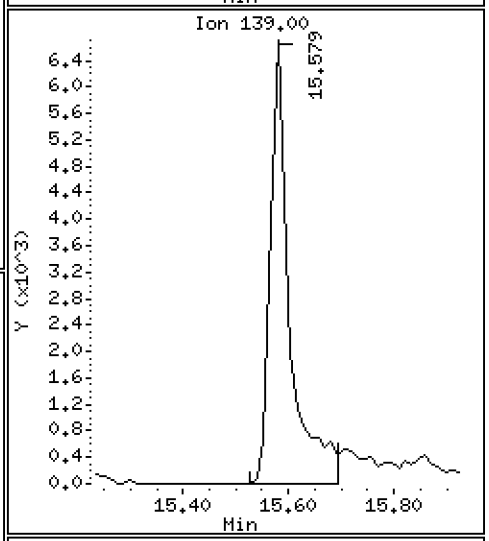


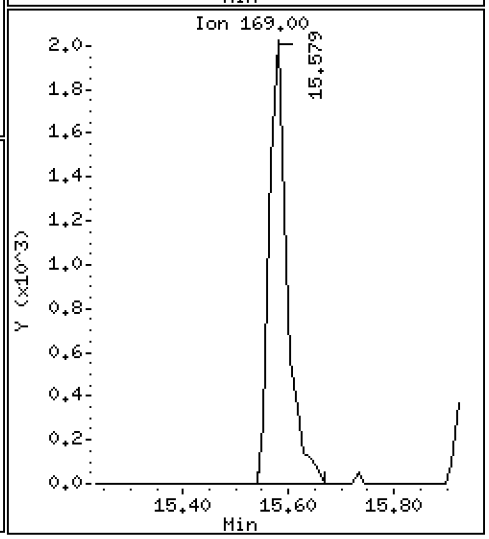












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

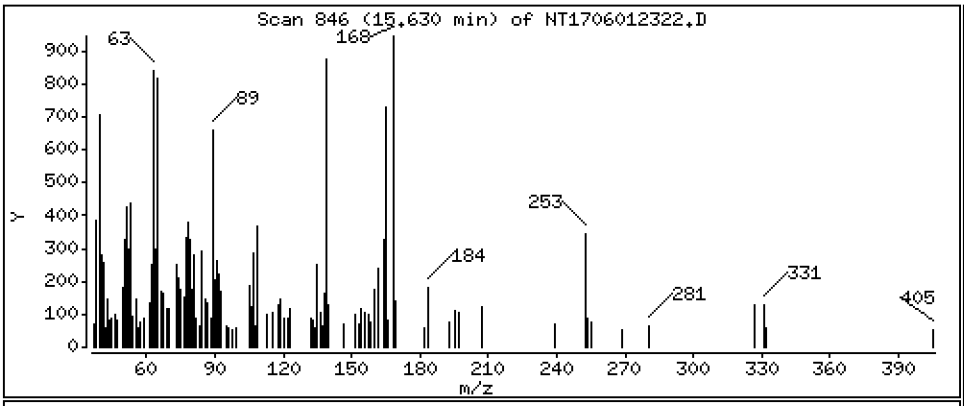
Operator: VTS

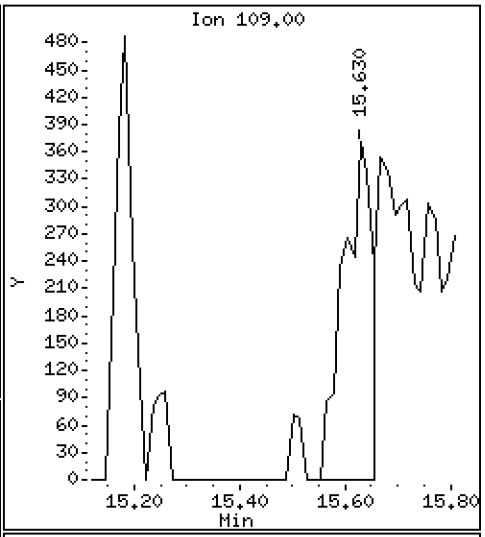
Column phase: ZB-5msi

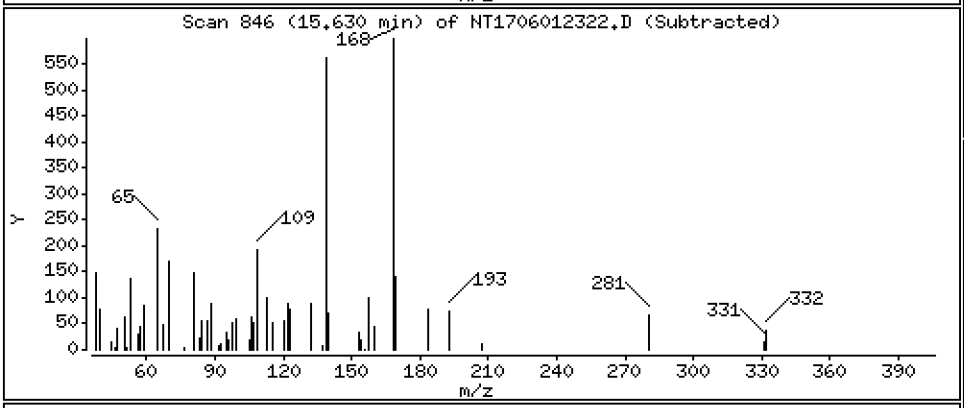
Column diameter: 0.25

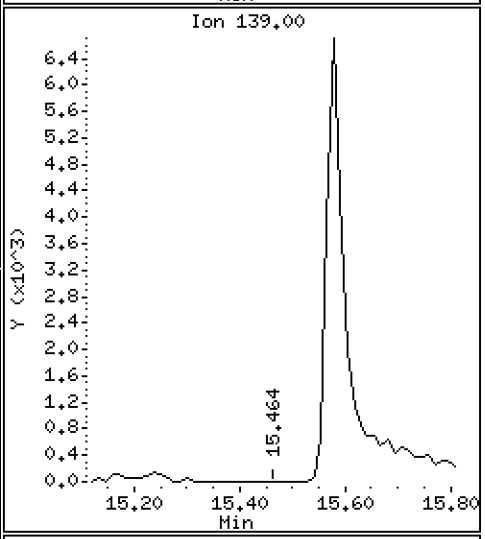
47 4-Nitrophenol

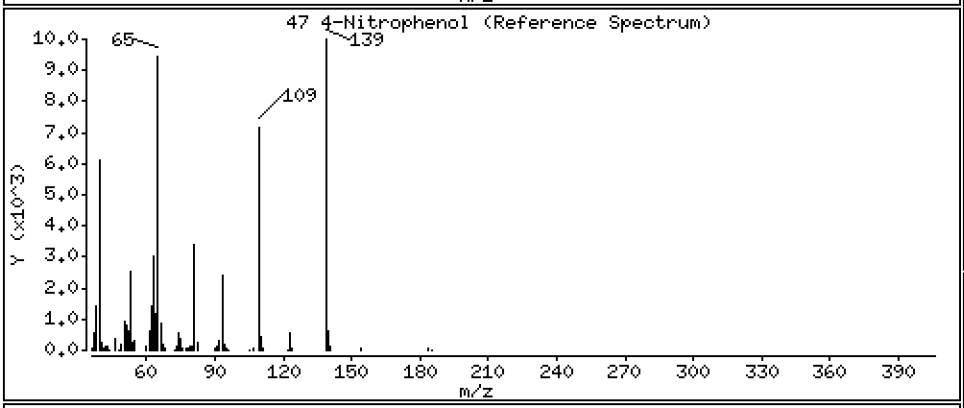
Concentration: 0.06900 ug/mL

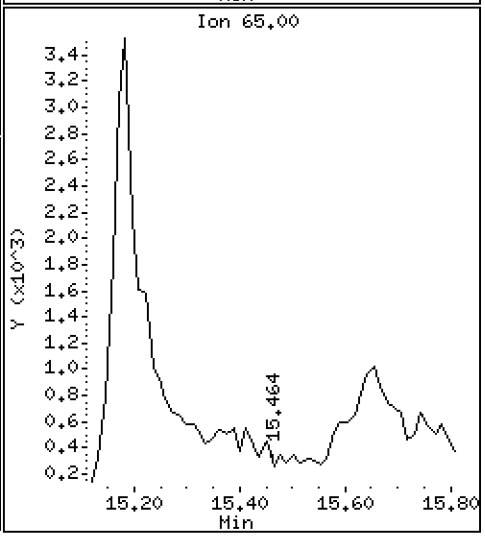


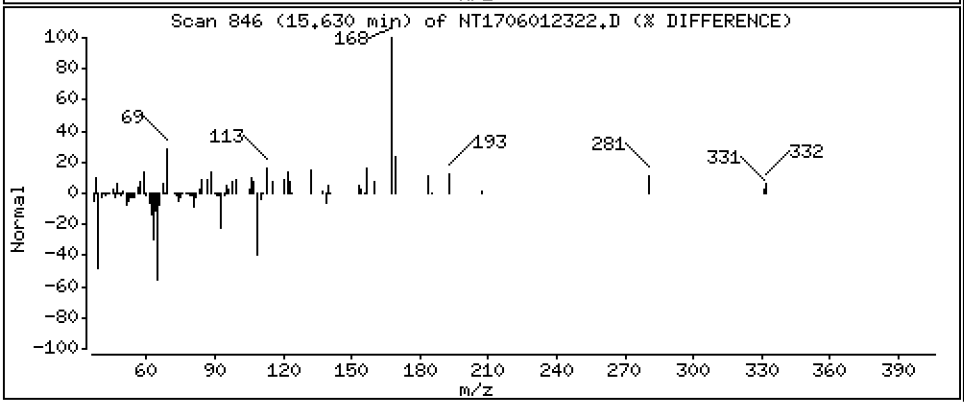












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

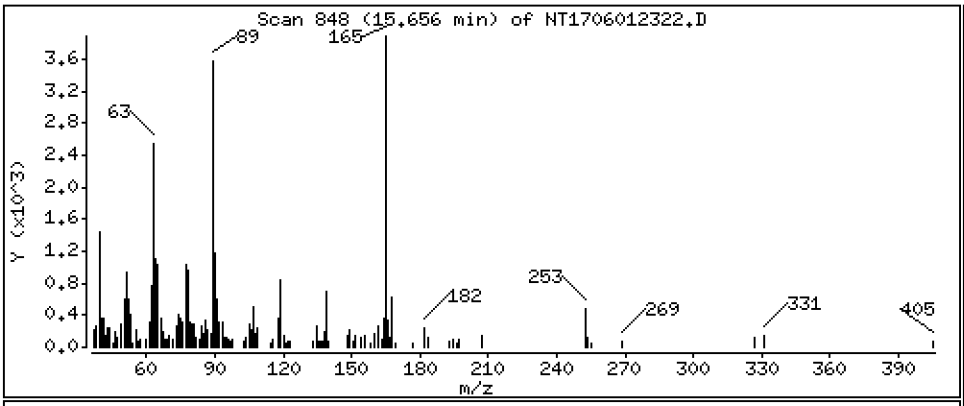
Operator: VTS

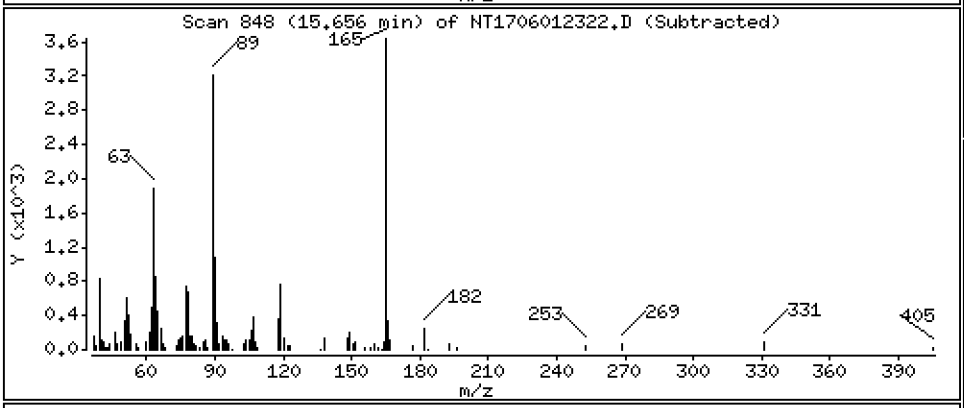
Column phase: ZB-5msi

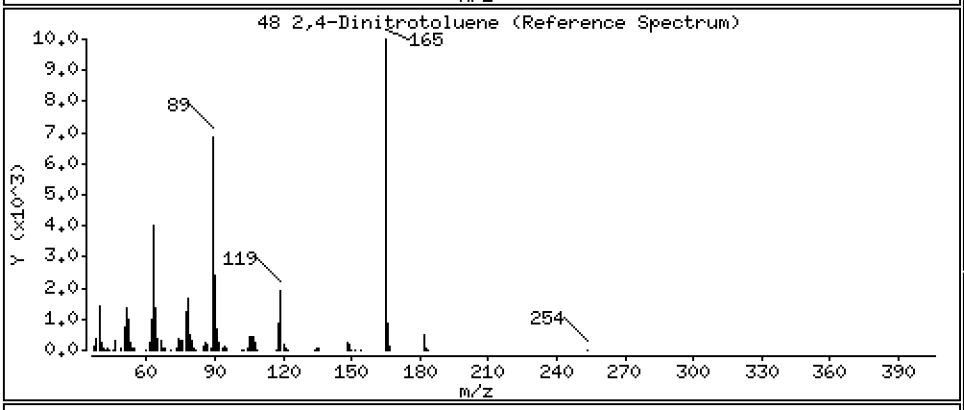
Column diameter: 0.25

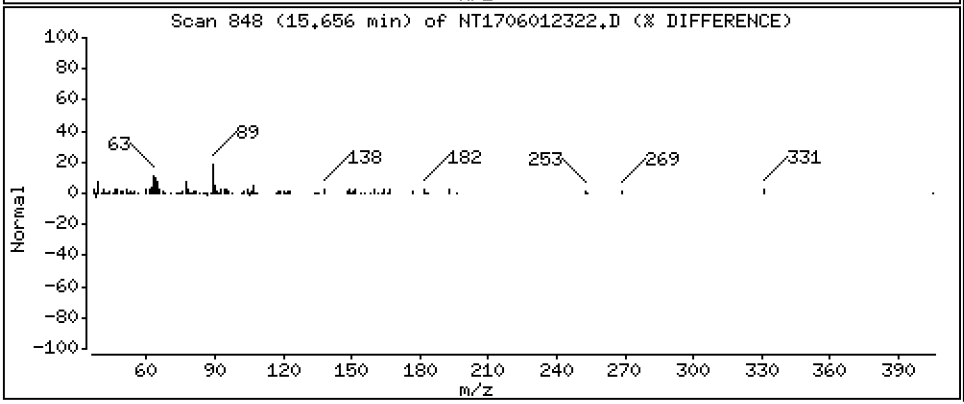
48 2,4-Dinitrotoluene

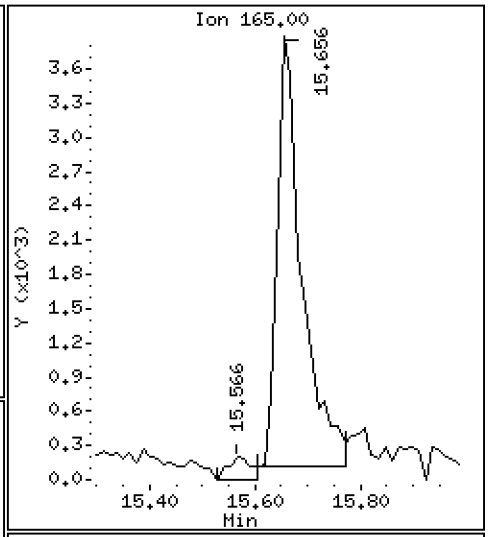
Concentration: 0.2838 ug/mL

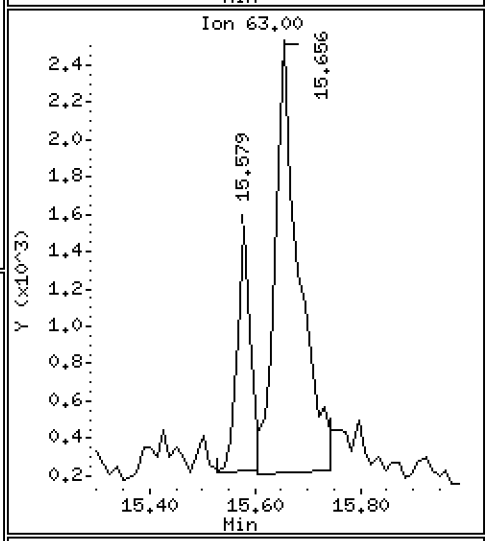


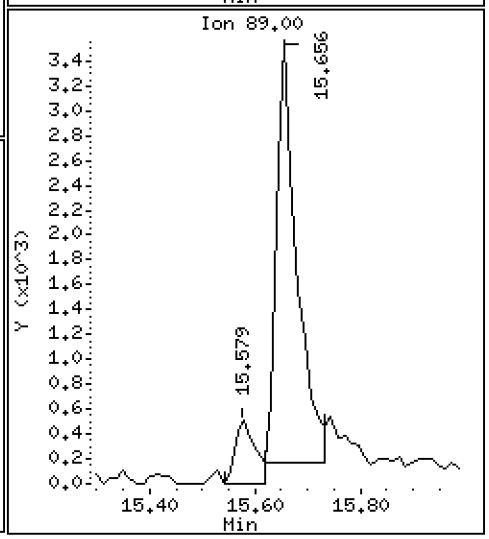












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

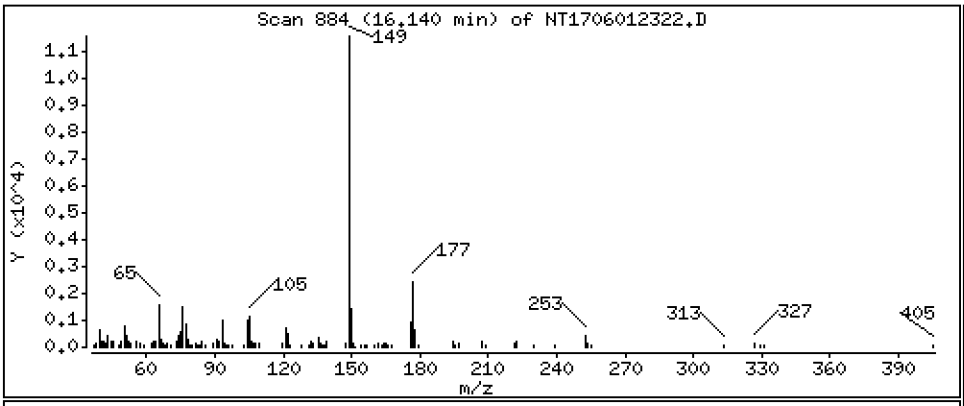
Operator: VTS

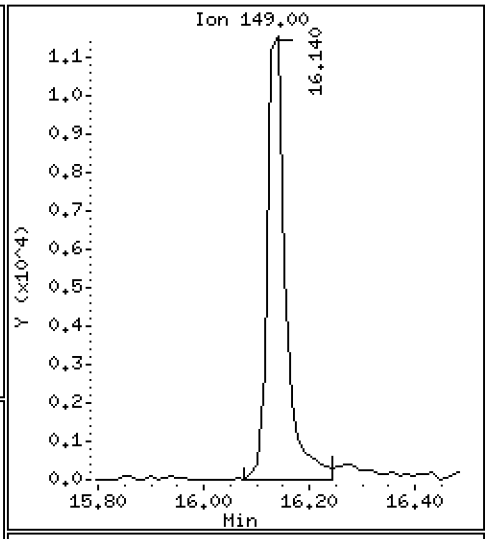
Column phase: ZB-5msi

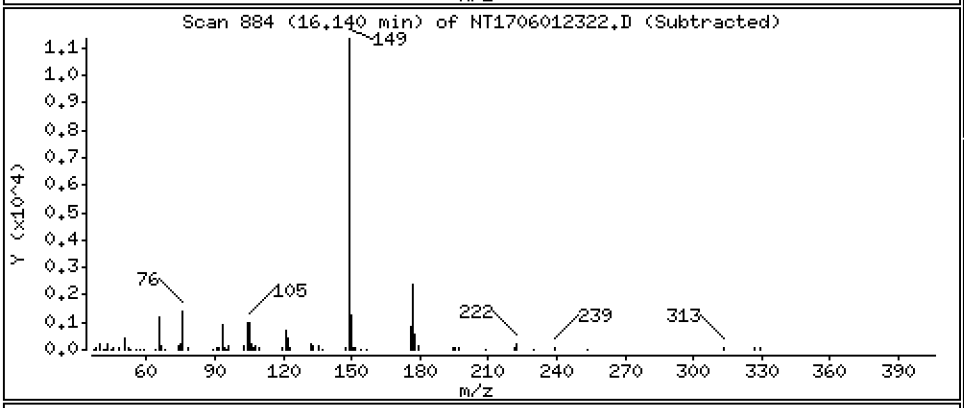
Column diameter: 0.25

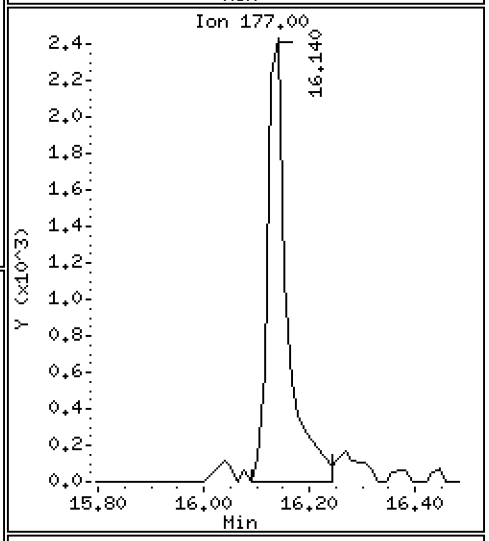
50 Diethylphthalate

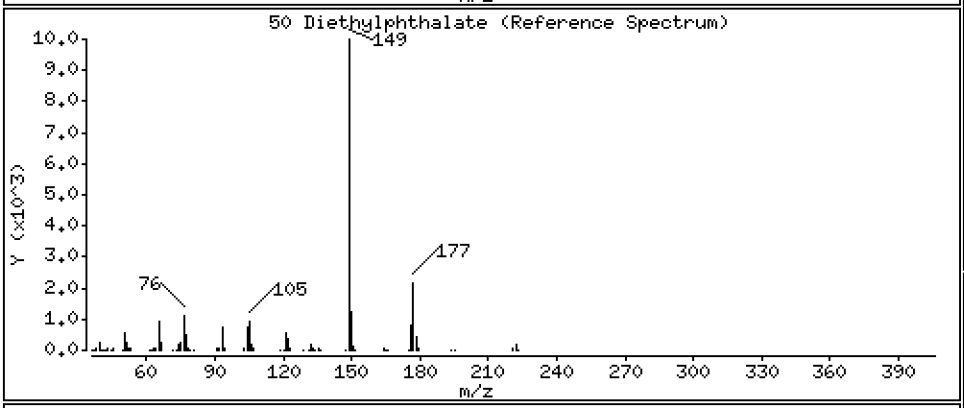
Concentration: 0.2315 ug/mL

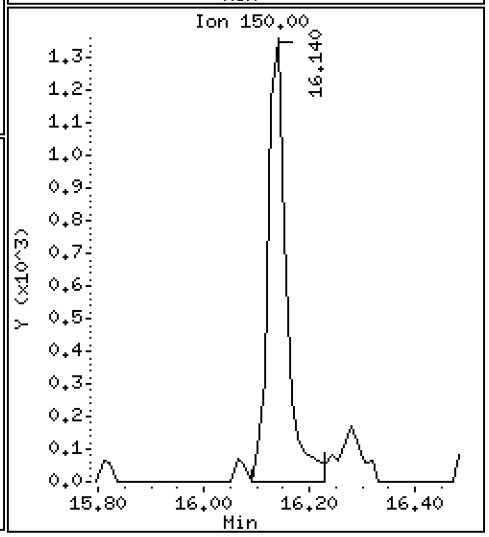


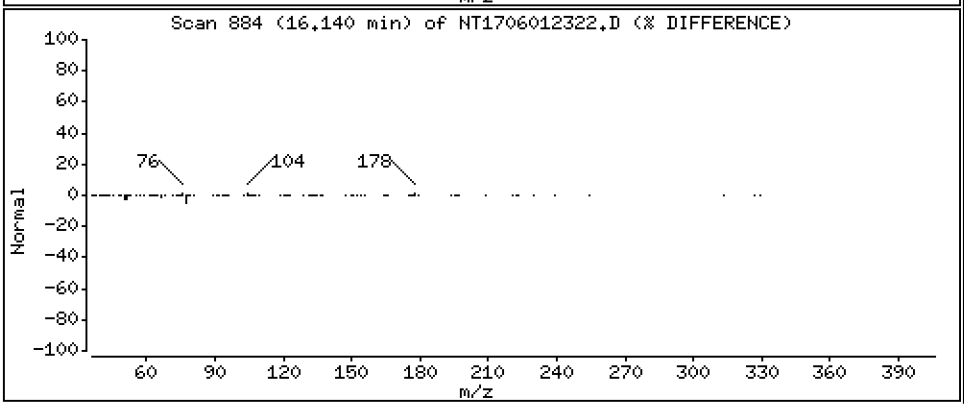












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

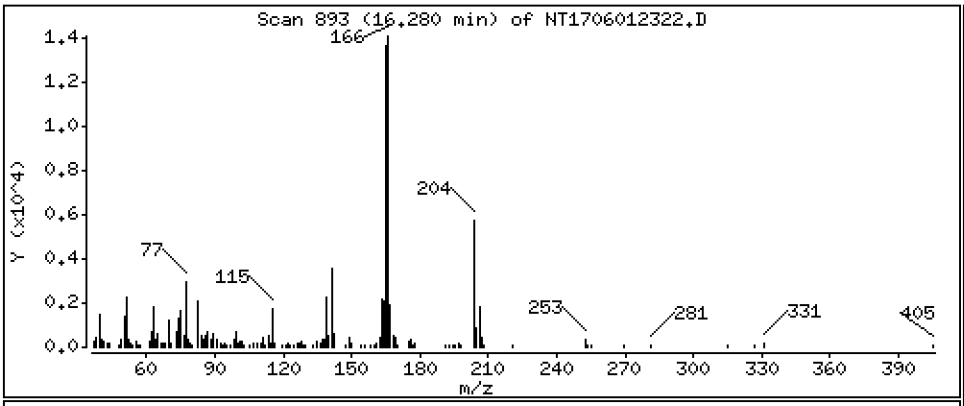
Operator: VTS

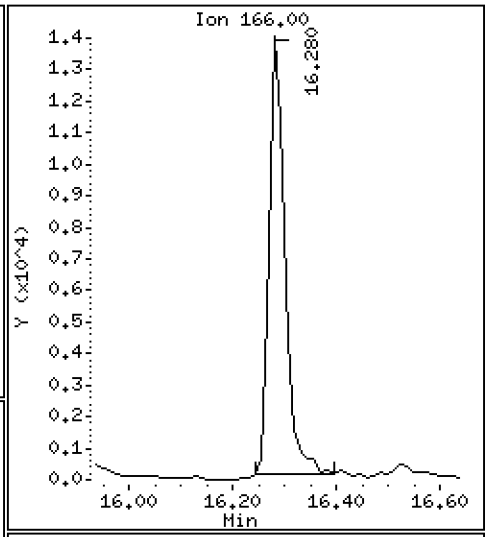
Column phase: ZB-5msi

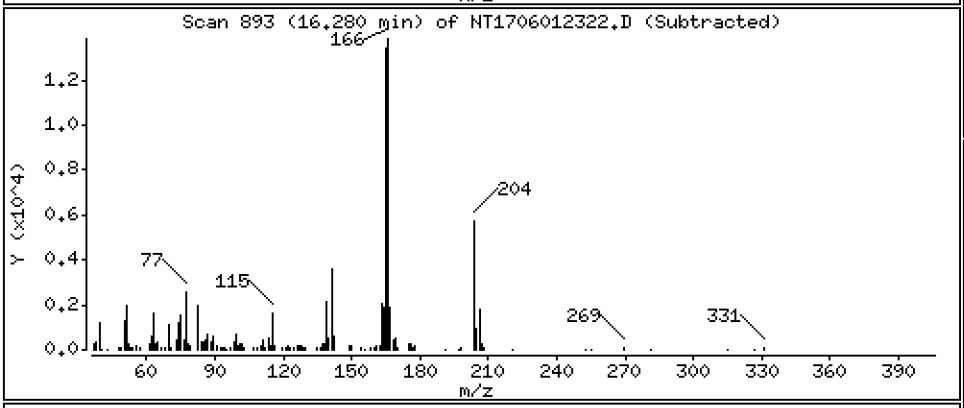
Column diameter: 0.25

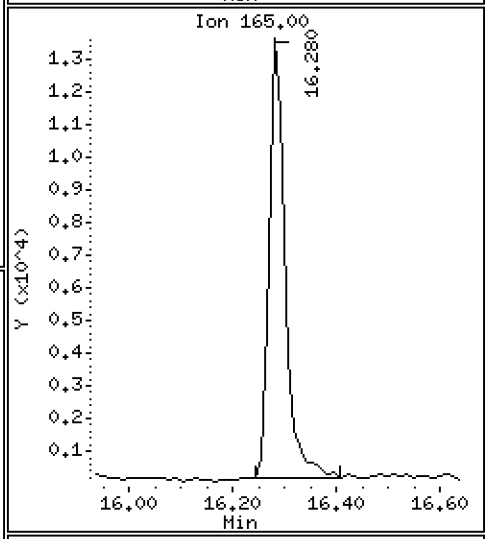
49 Fluorene

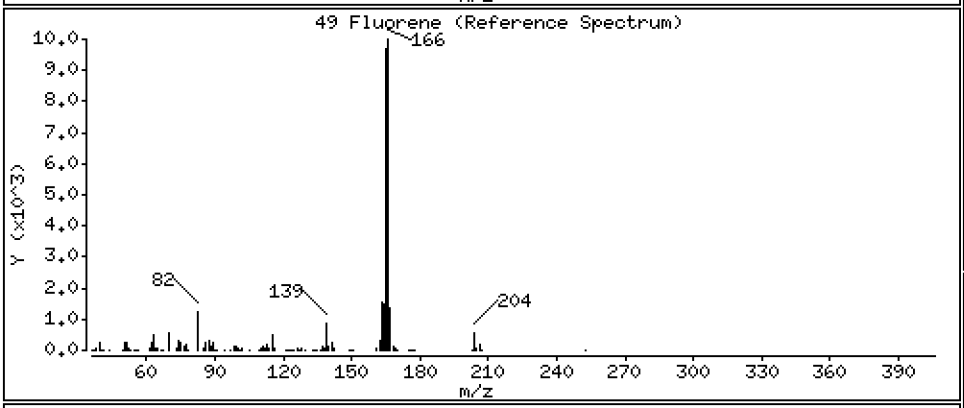
Concentration: 0.1658 ug/mL

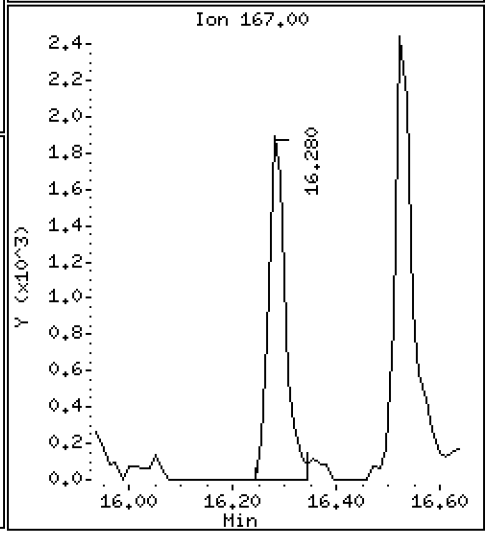


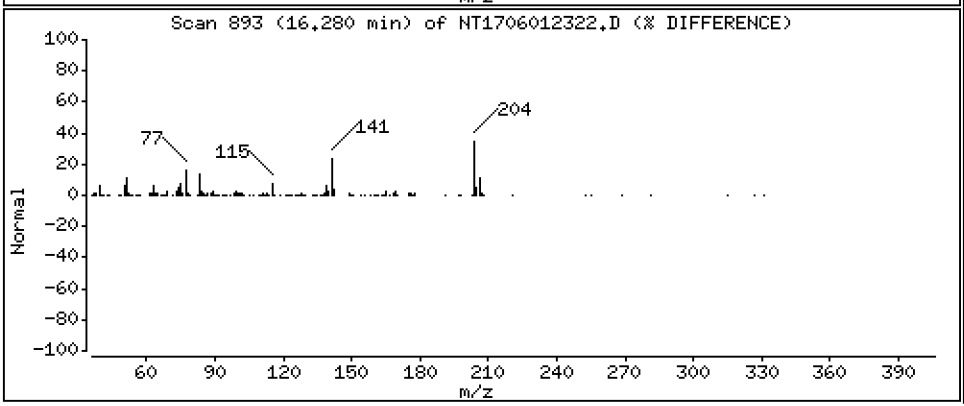












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

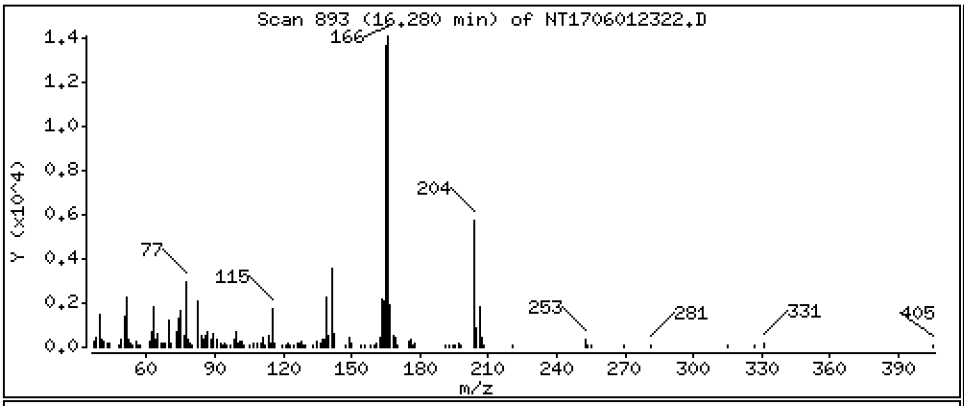
Operator: VTS

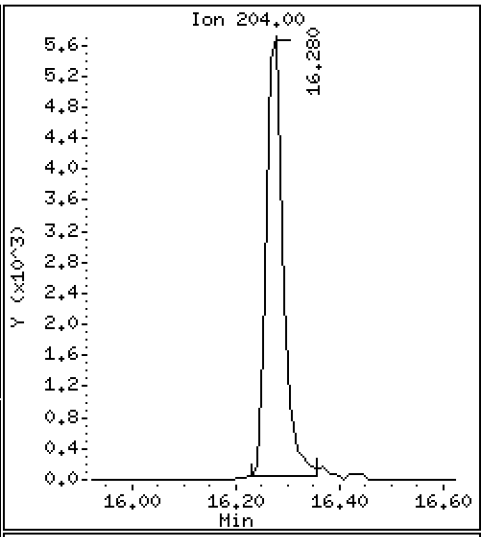
Column phase: ZB-5msi

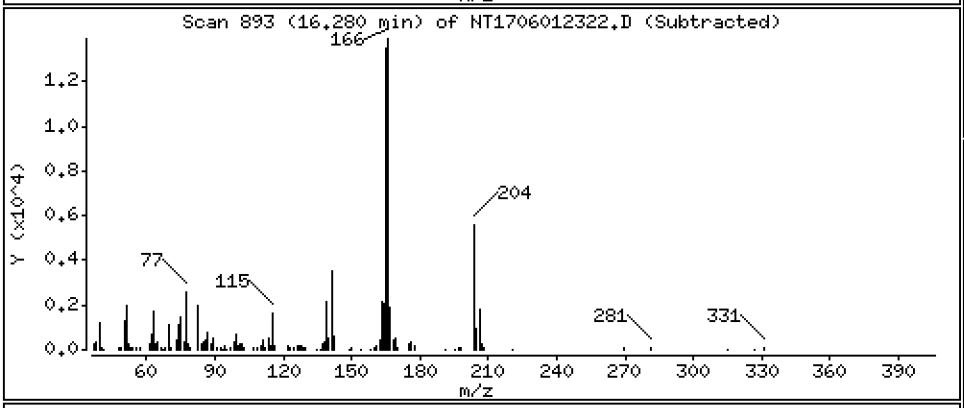
Column diameter: 0.25

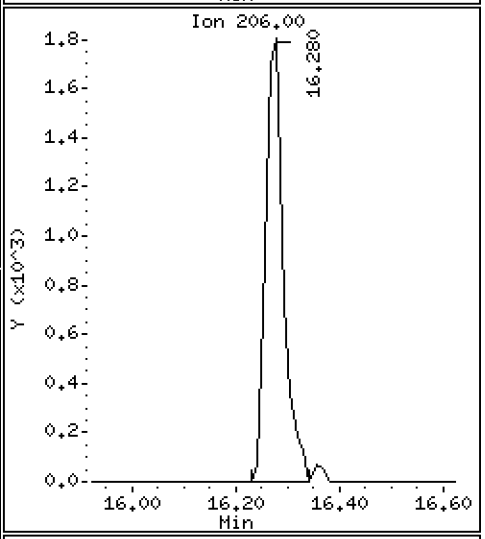
51 4-Chlorophenyl-phenylether

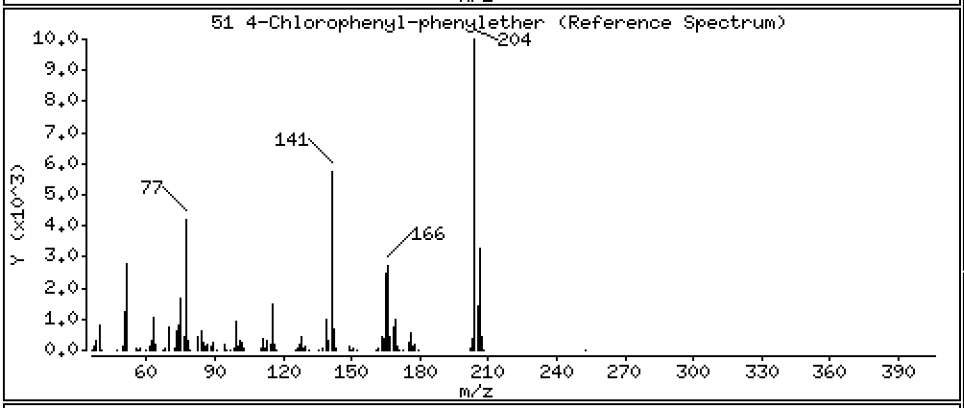
Concentration: 0.1576 ug/mL

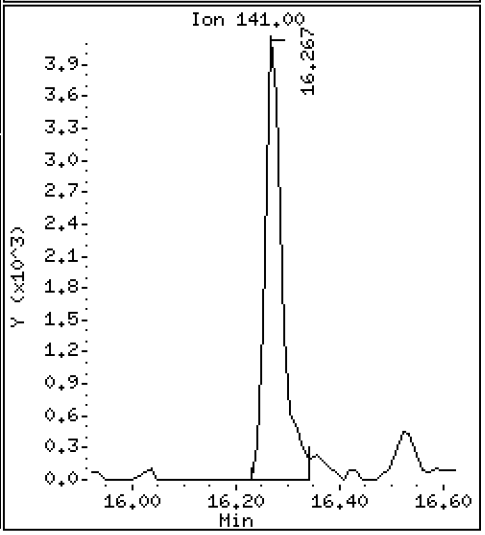


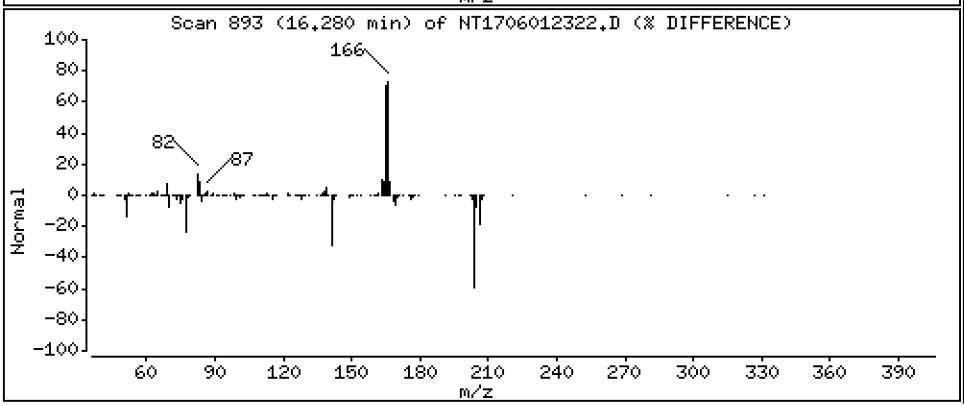












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

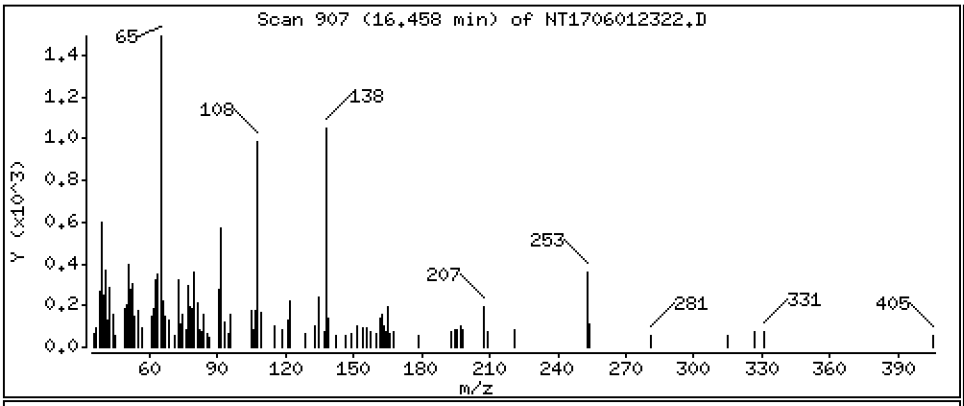
Operator: VTS

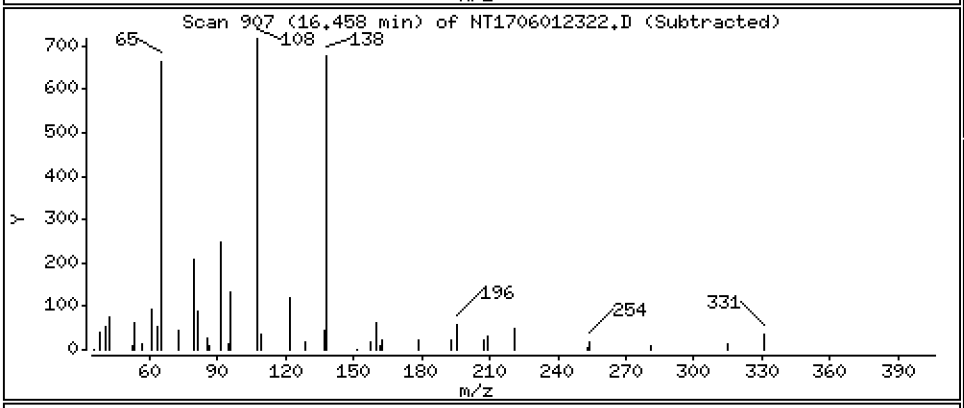
Column phase: ZB-5msi

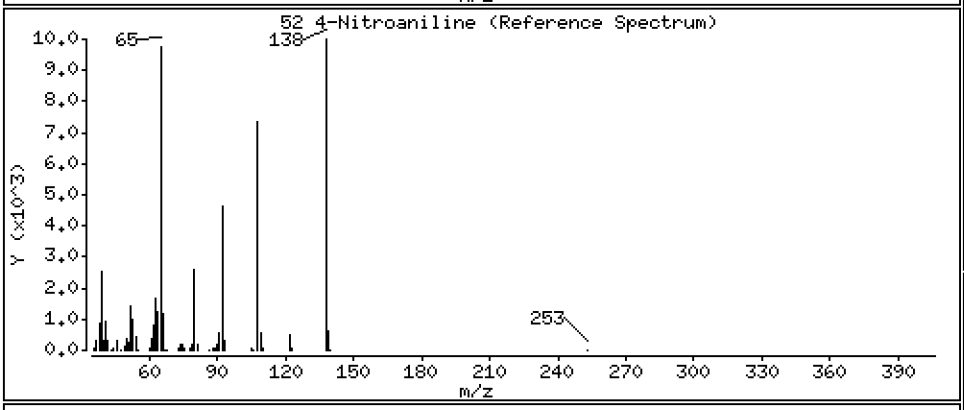
Column diameter: 0.25

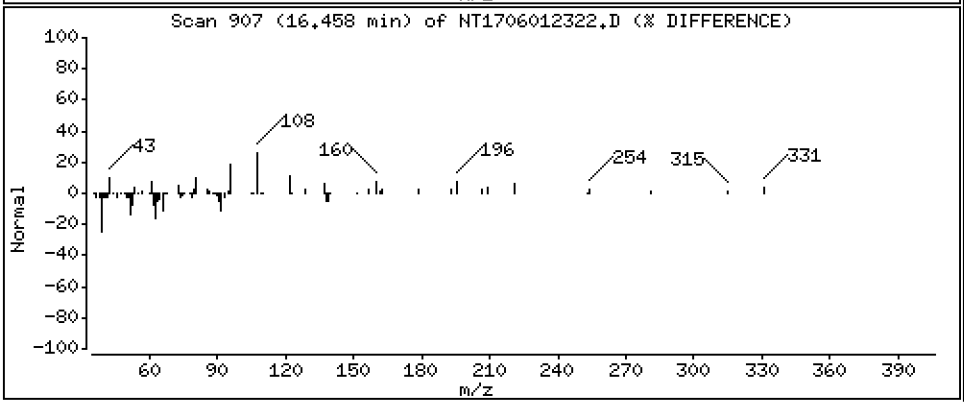
52 4-Nitroaniline

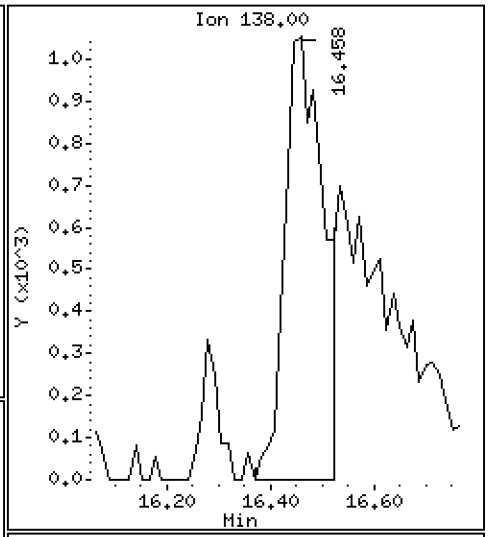
Concentration: 0.1836 ug/mL

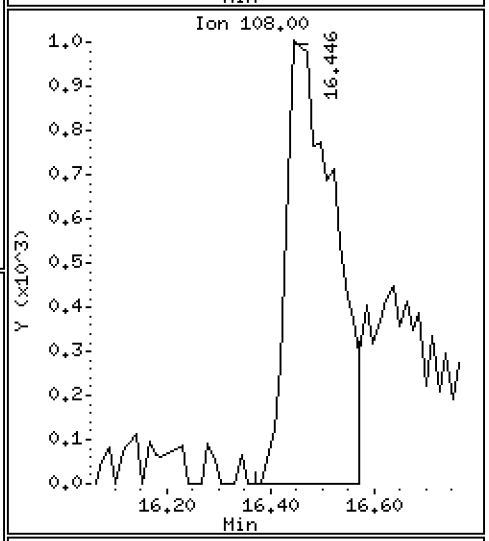


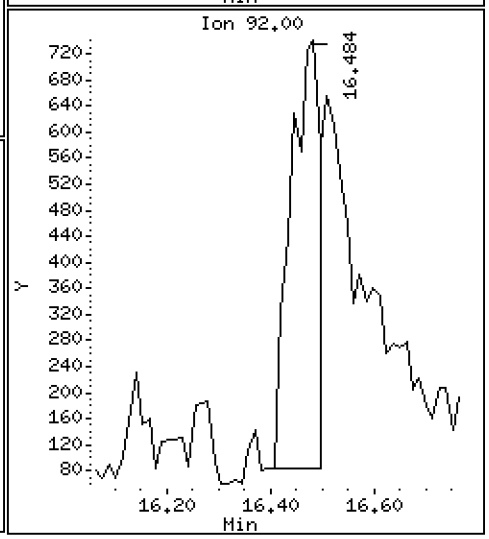












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

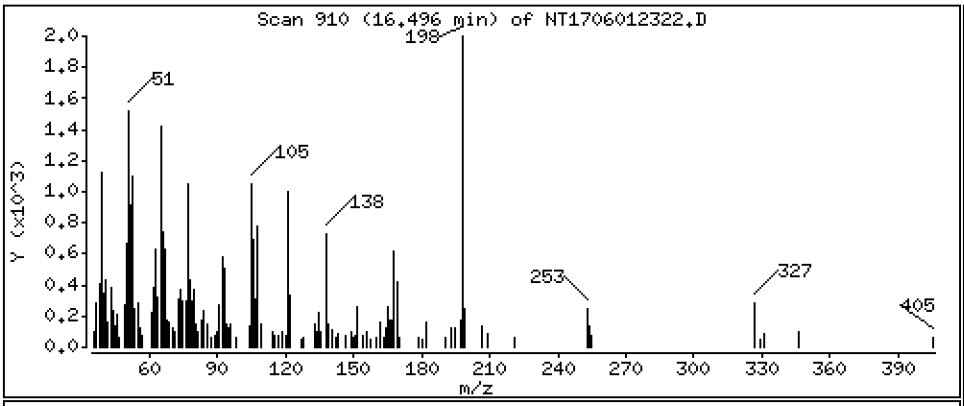
Operator: VTS

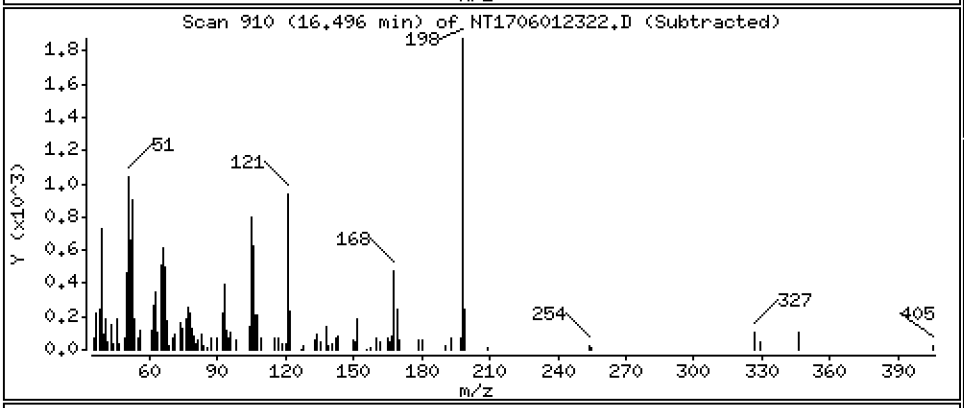
Column phase: ZB-5msi

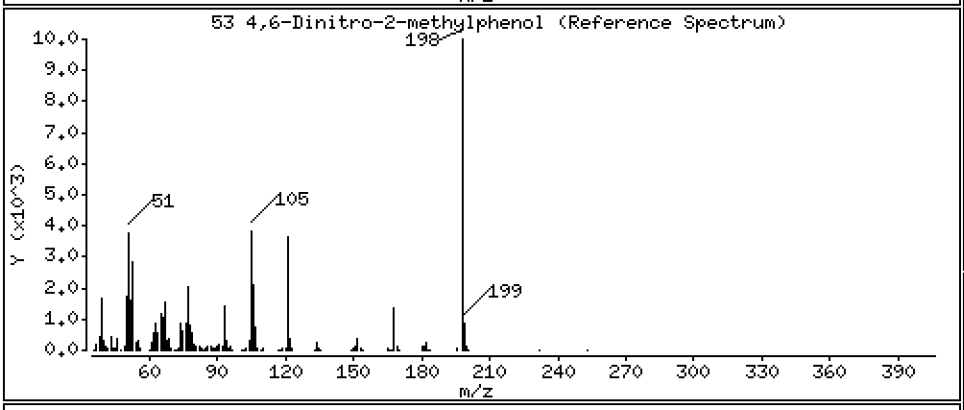
Column diameter: 0.25

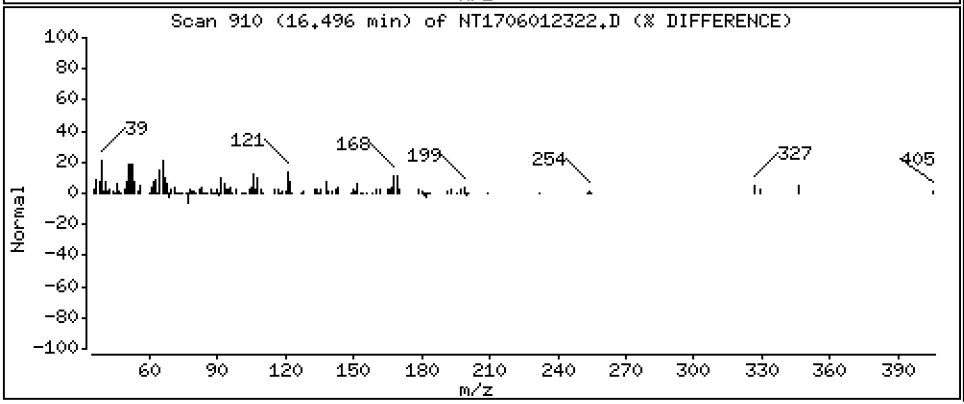
53 4,6-Dinitro-2-methylphenol

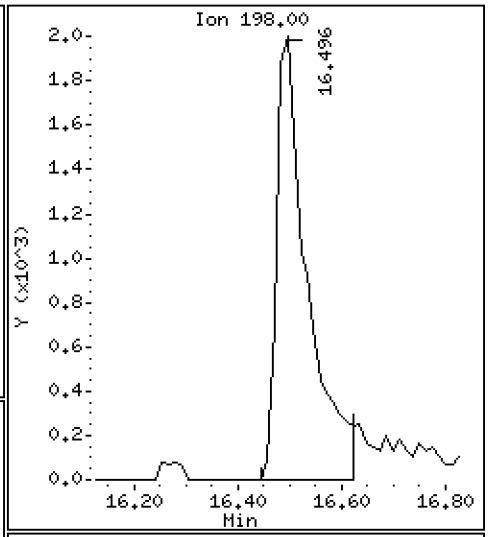
Concentration: 0.2918 ug/mL

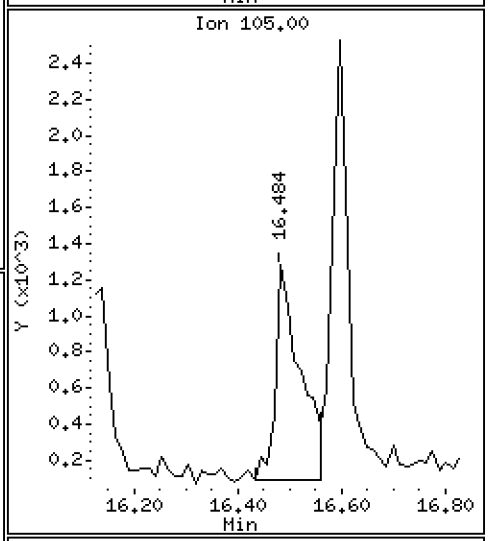


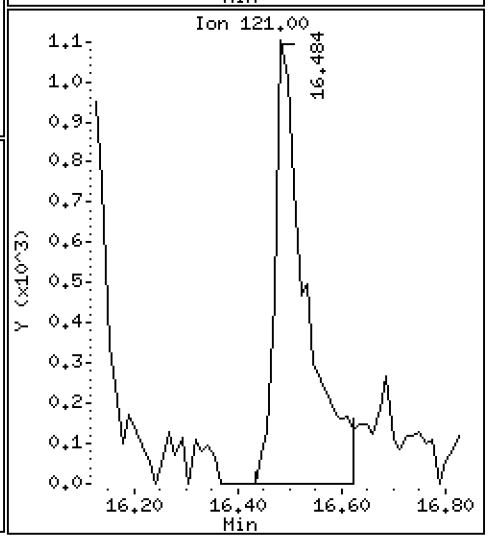












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

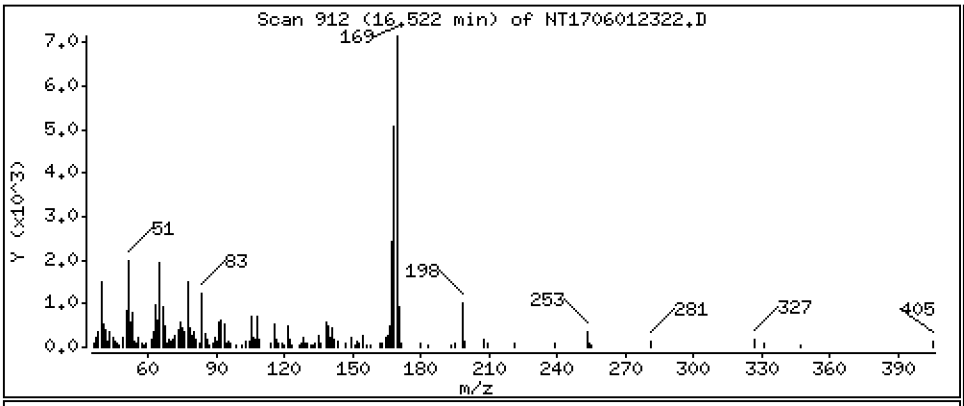
Operator: VTS

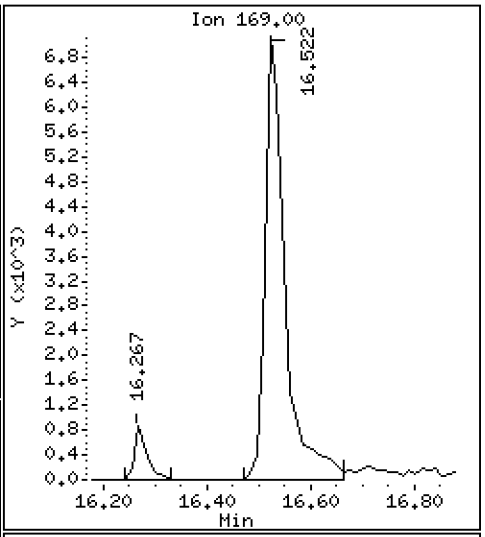
Column phase: ZB-5msi

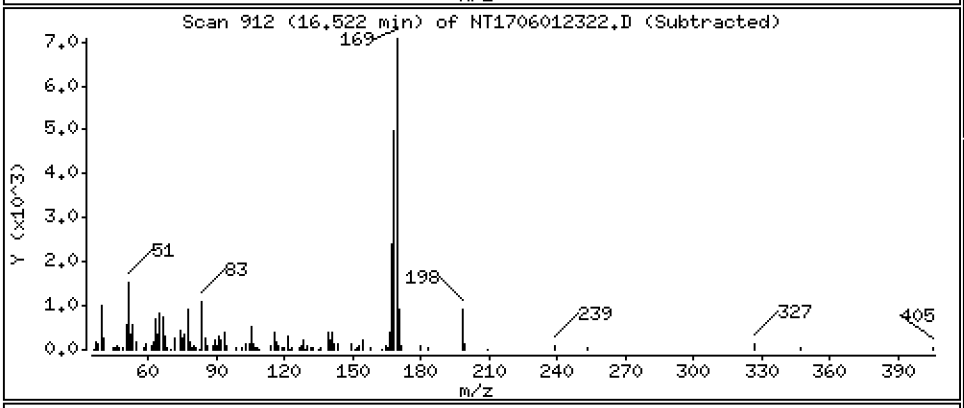
Column diameter: 0.25

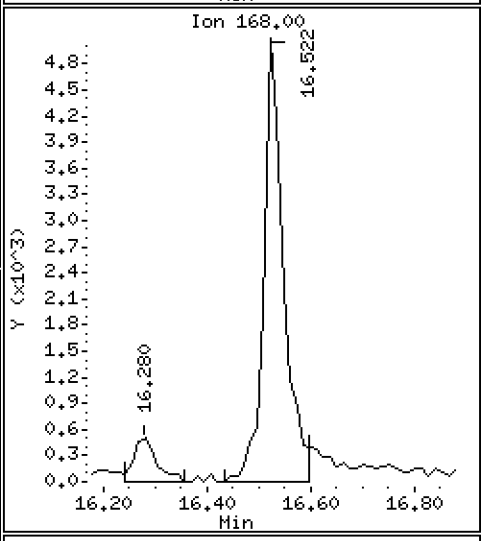
54 N-Nitrosodiphenylamine

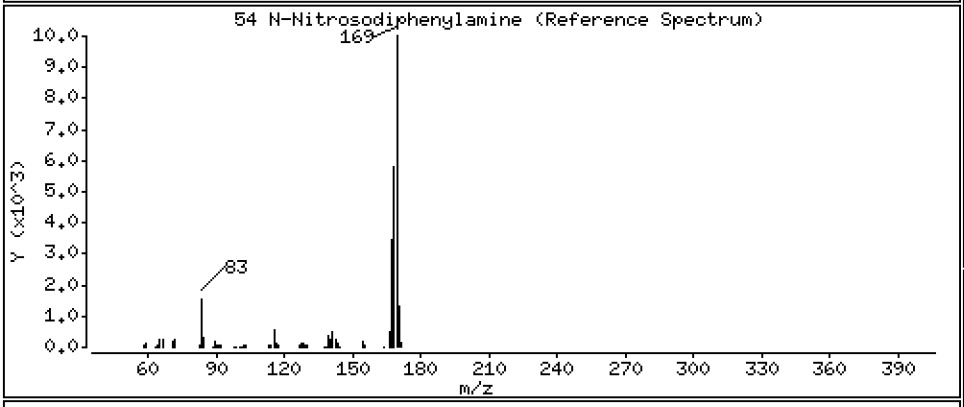
Concentration: 0.1887 ug/mL

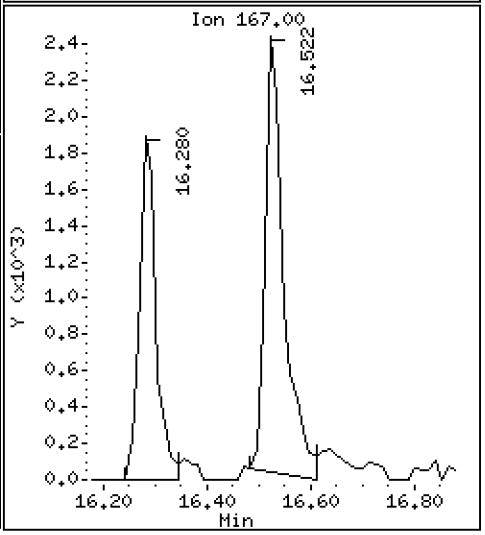


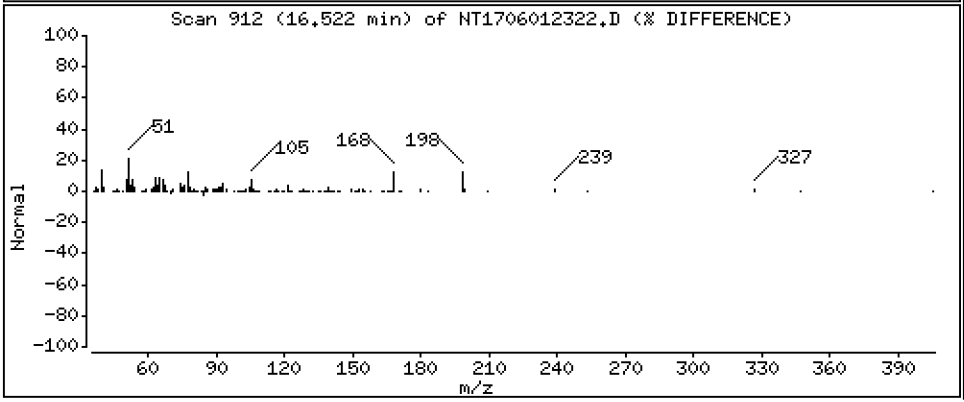












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

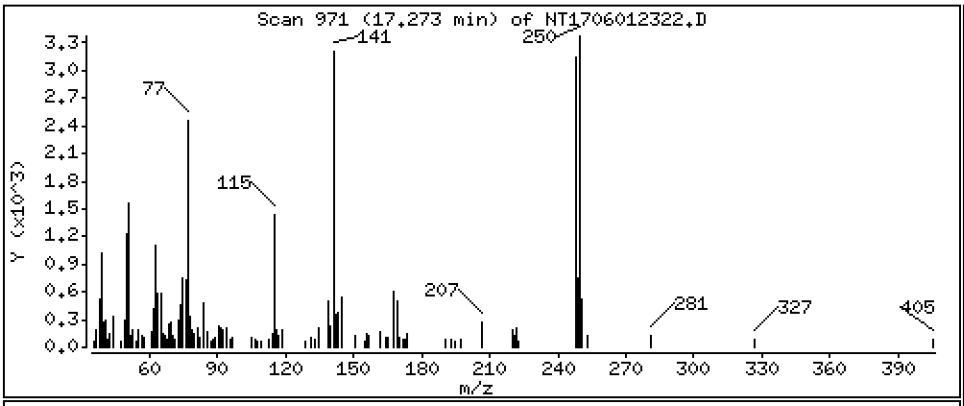
Operator: VTS

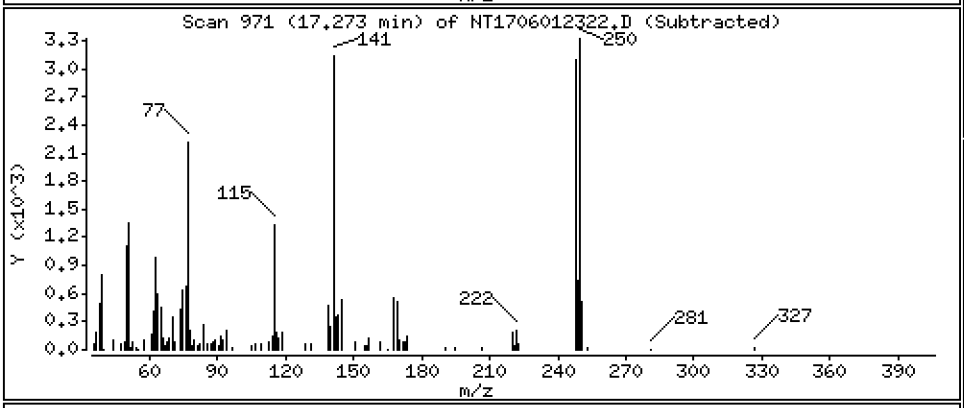
Column phase: ZB-5msi

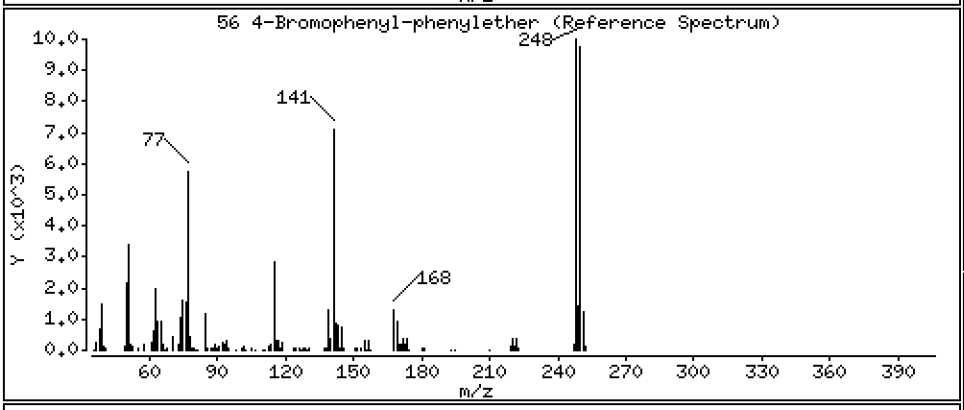
Column diameter: 0.25

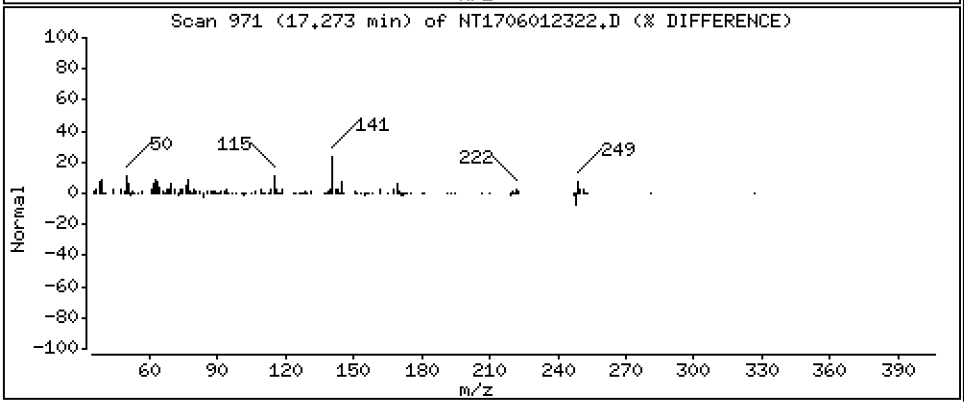
56 4-Bromophenyl-phenylether

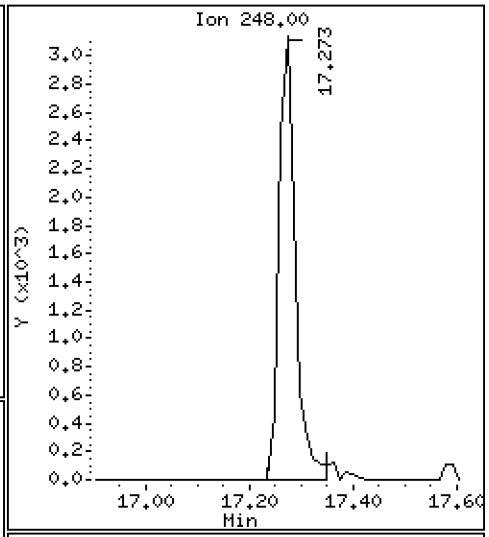
Concentration: 0.2026 ug/mL

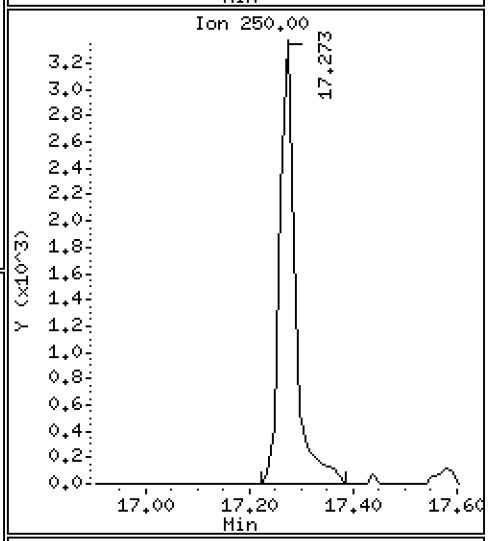


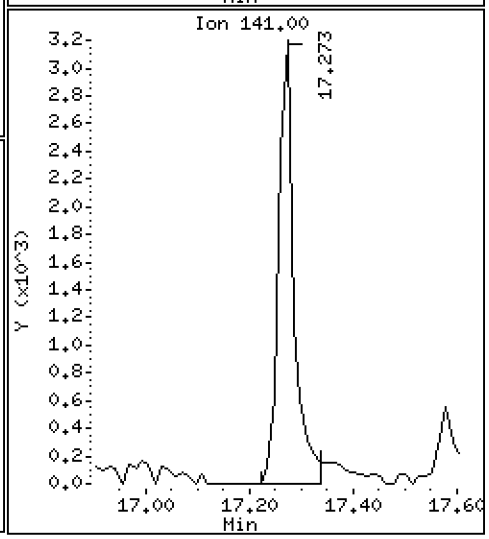












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

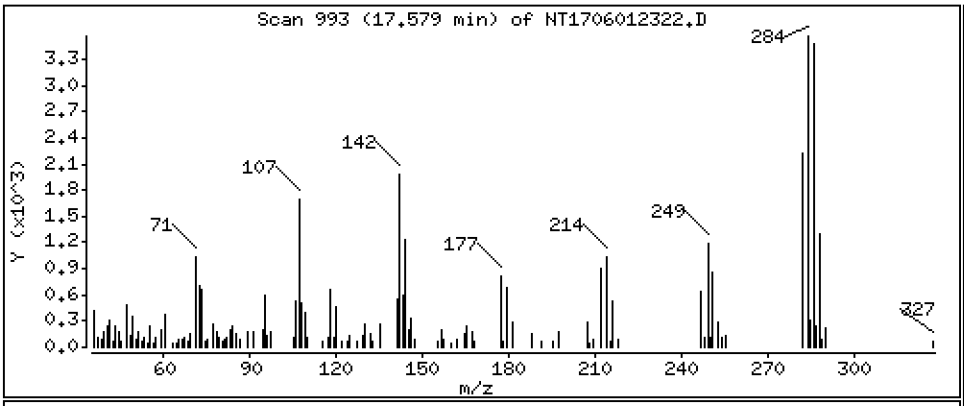
Operator: VTS

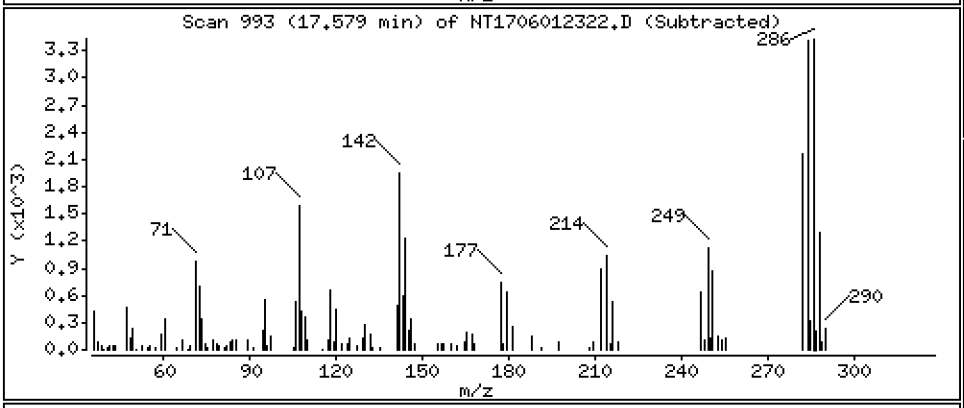
Column phase: ZB-5msi

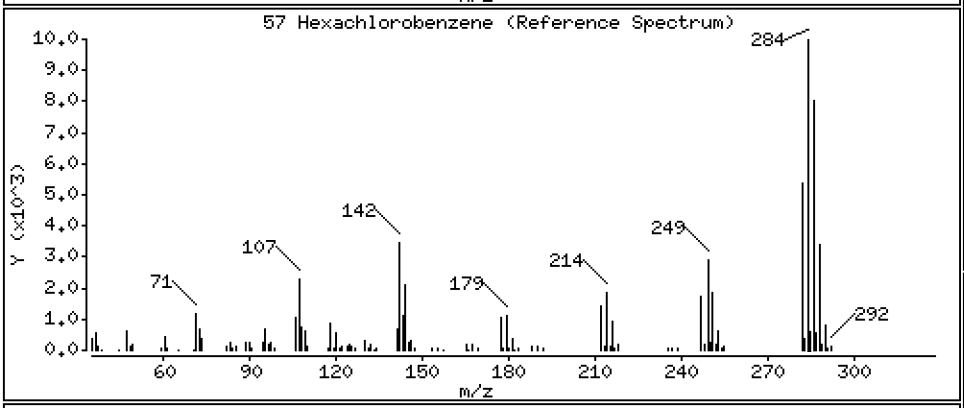
Column diameter: 0.25

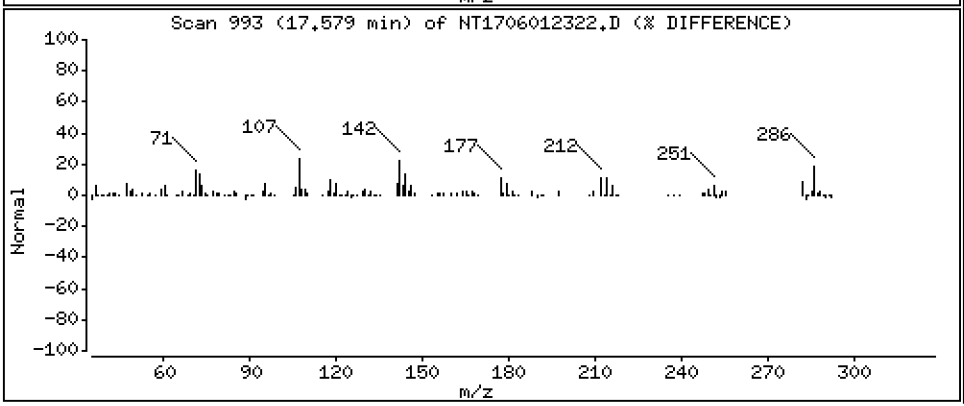
57 Hexachlorobenzene

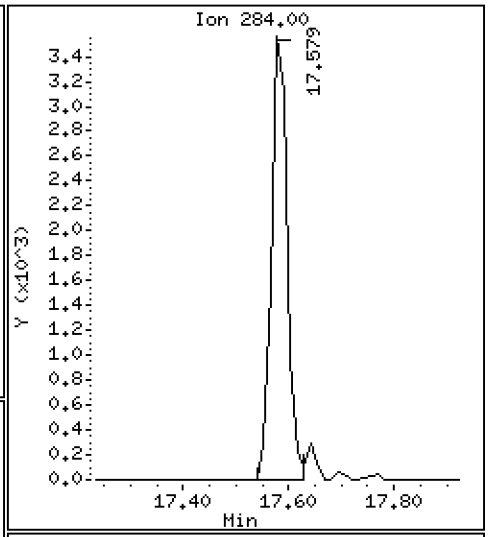
Concentration: 0.2115 ug/mL

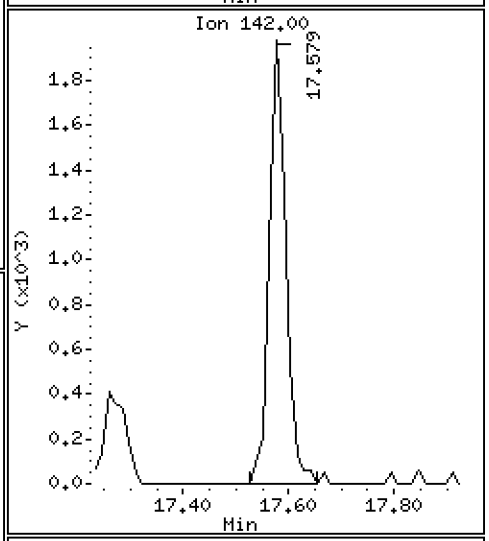


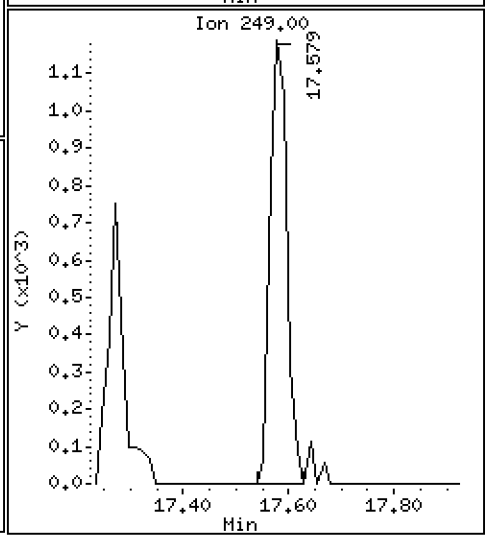












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

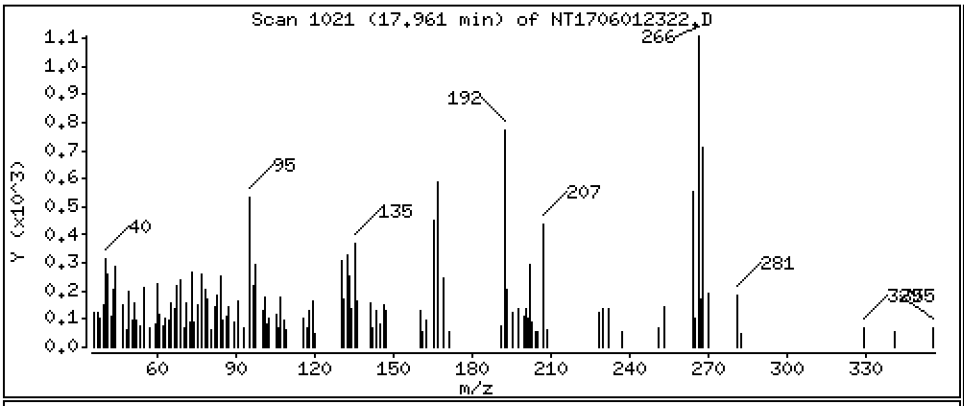
Operator: VTS

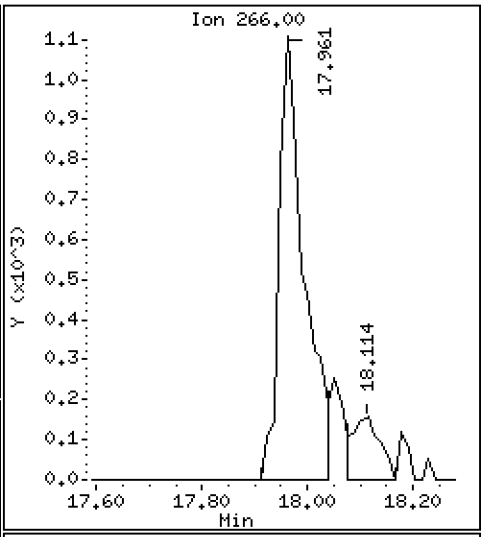
Column phase: ZB-5msi

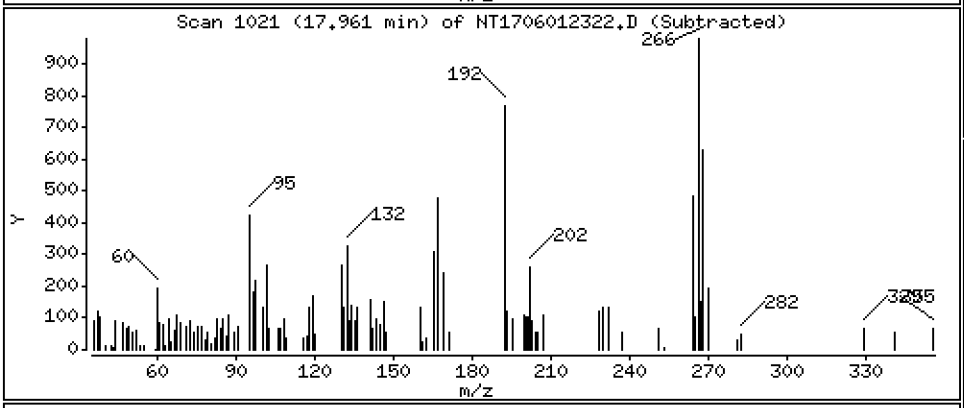
Column diameter: 0.25

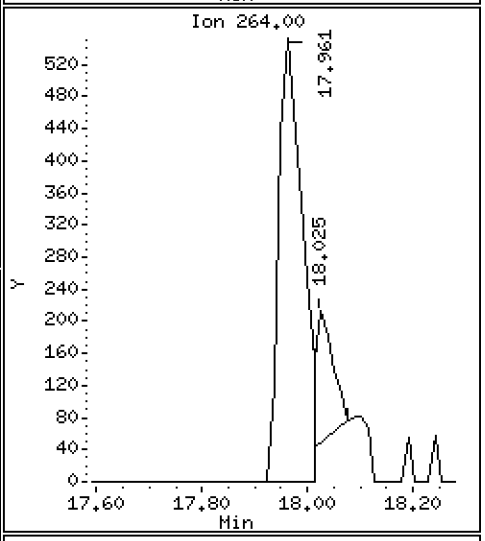
58 Pentachlorophenol

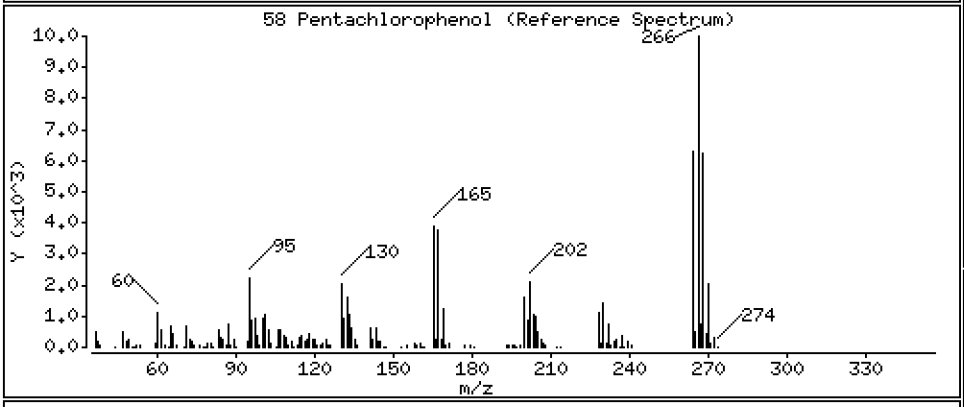
Concentration: 0.1803 ug/mL

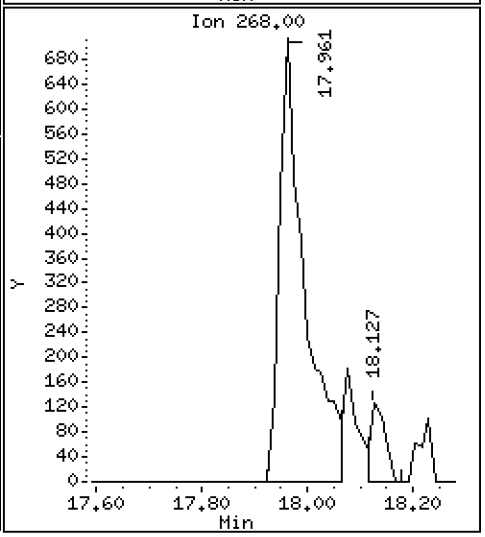


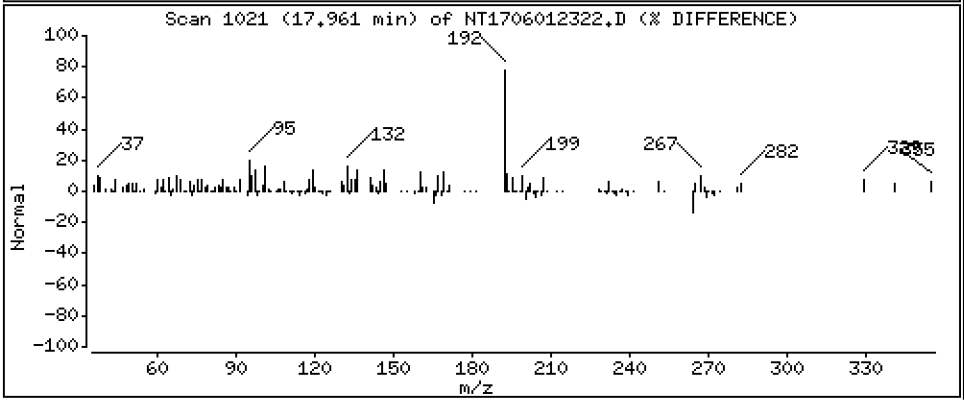












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

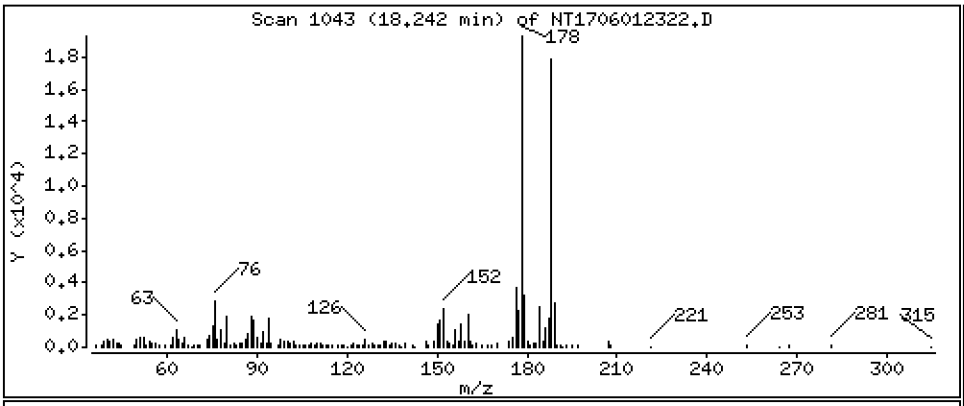
Operator: VTS

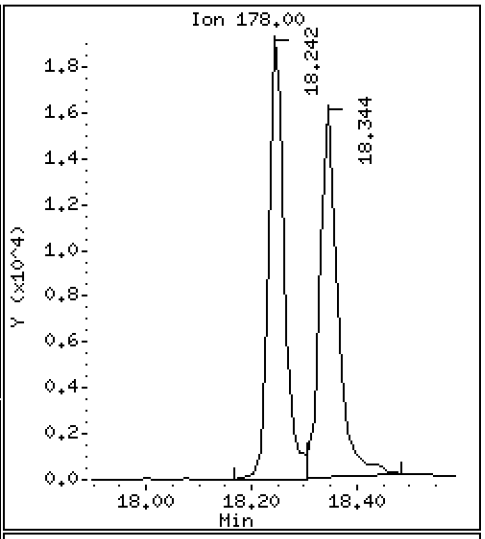
Column phase: ZB-5msi

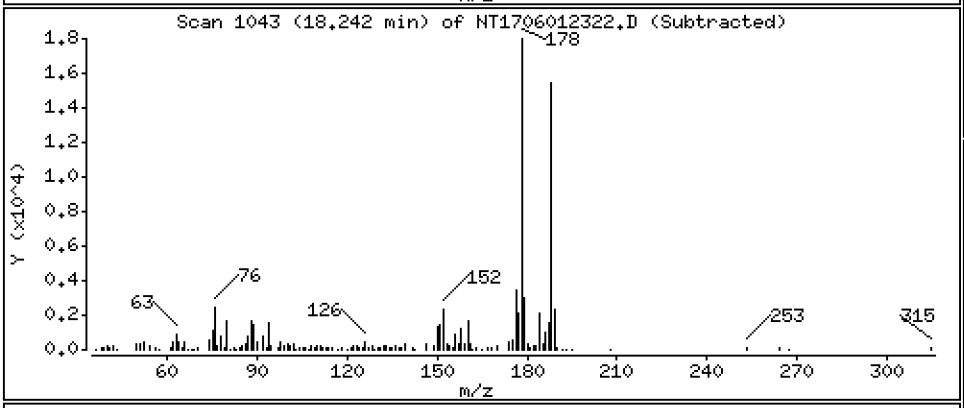
Column diameter: 0.25

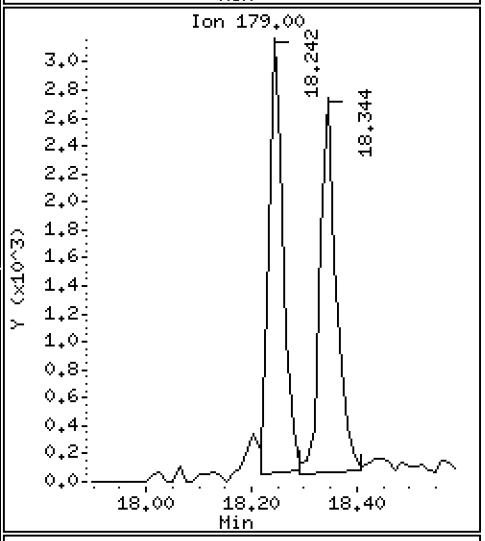
60 Phenanthrene

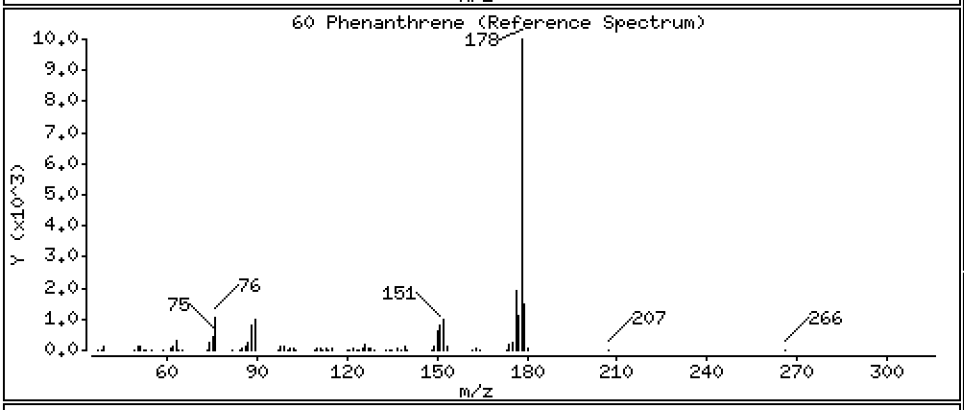
Concentration: 0.2053 ug/mL

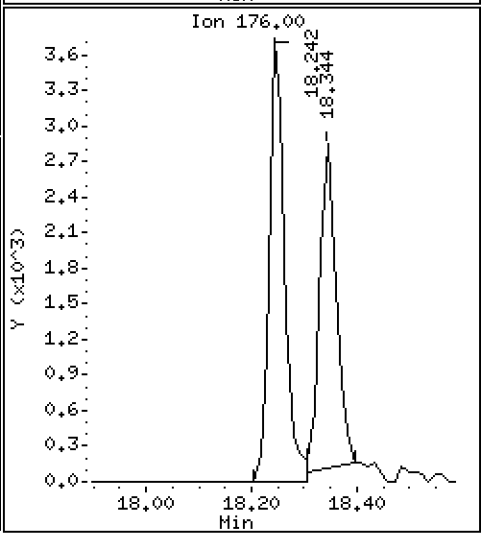


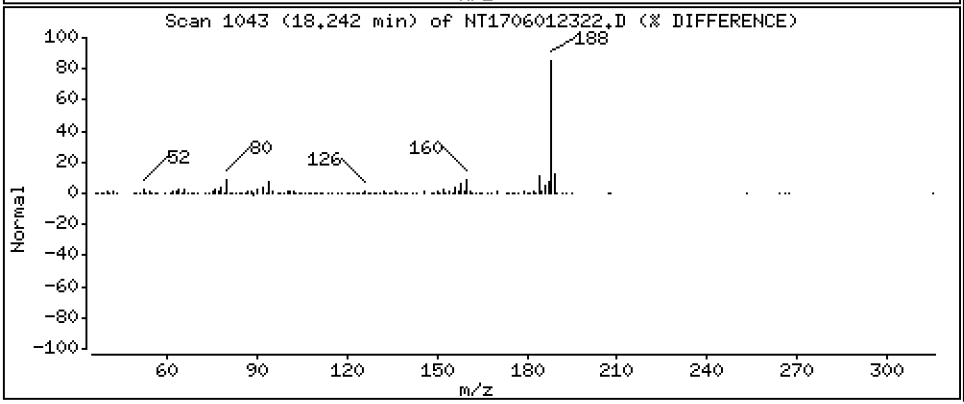












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

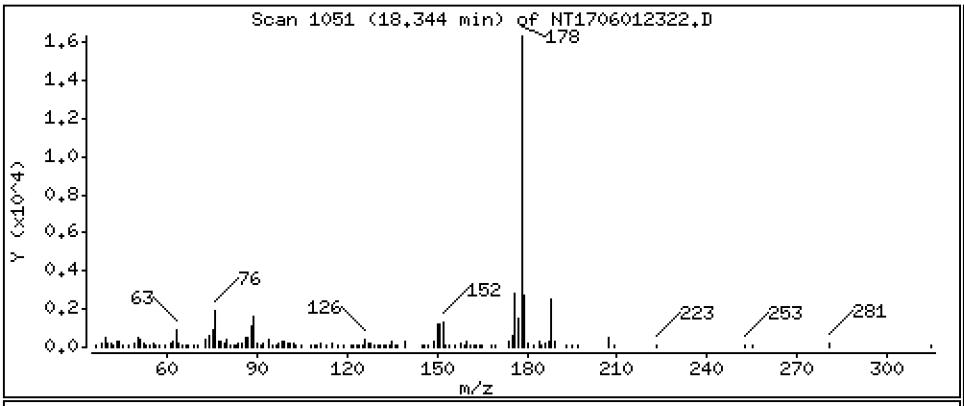
Operator: VTS

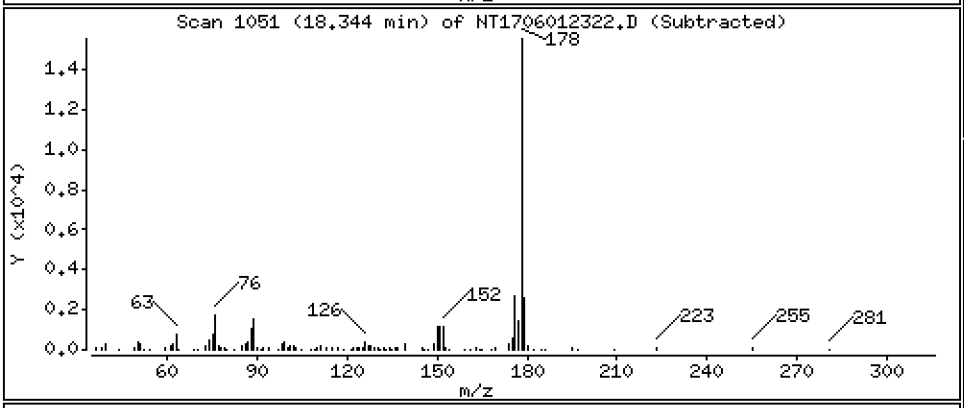
Column phase: ZB-5msi

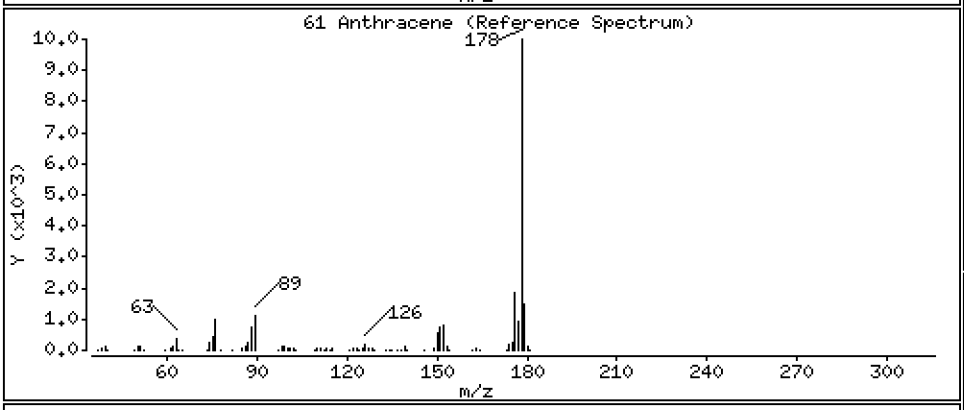
Column diameter: 0.25

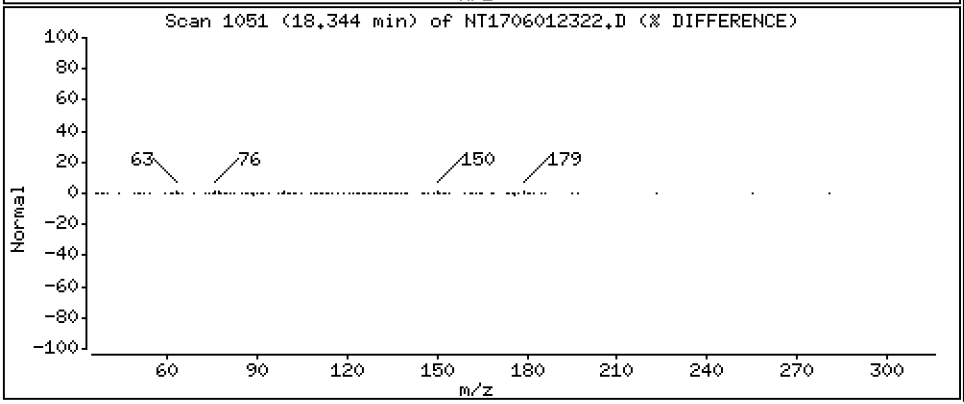
61 Anthracene

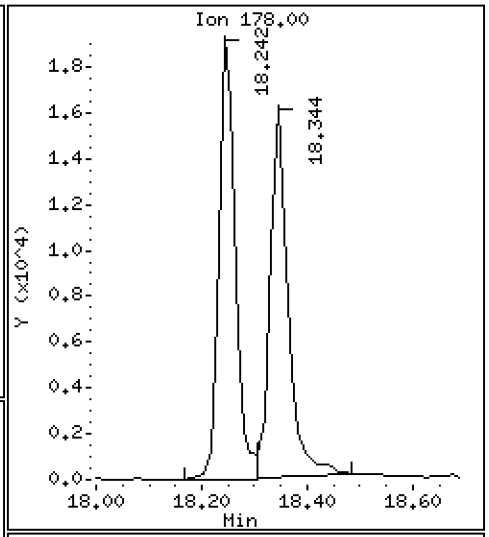
Concentration: 0.1985 ug/mL

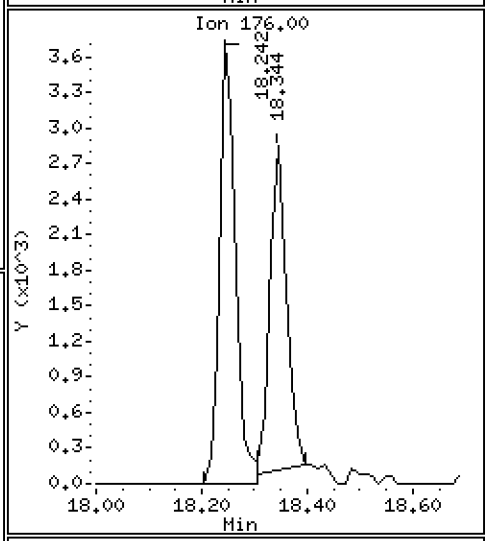


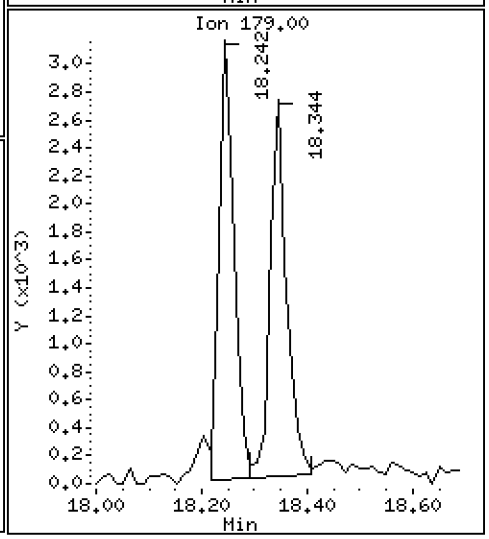












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

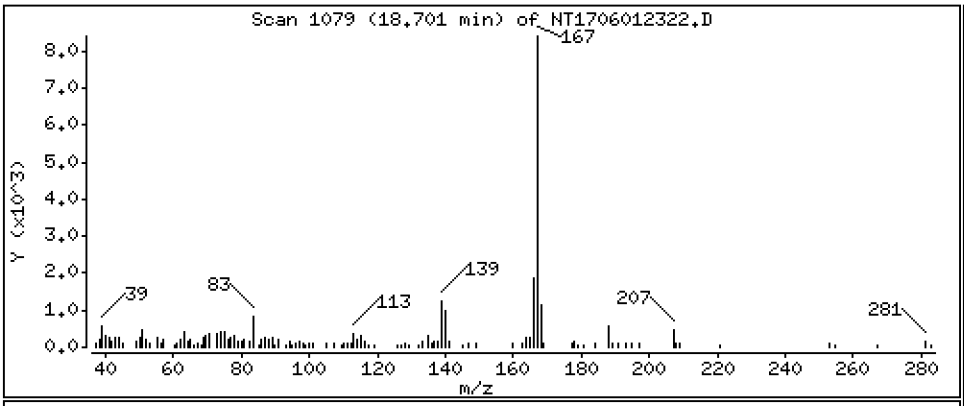
Operator: VTS

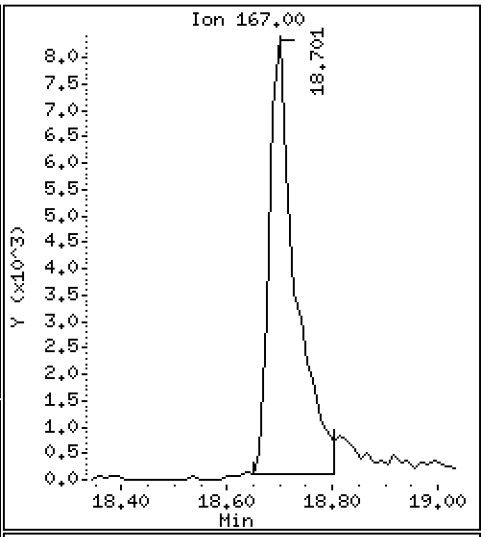
Column phase: ZB-5msi

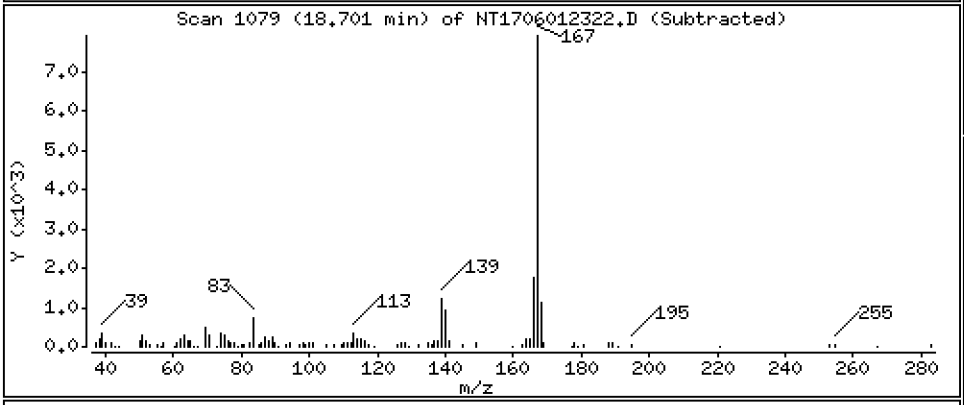
Column diameter: 0.25

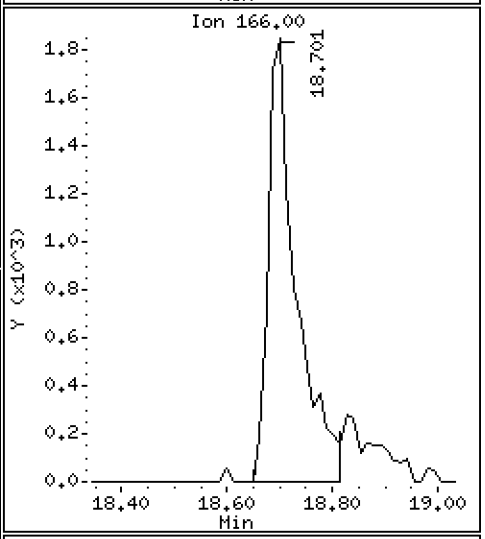
62 Carbazole

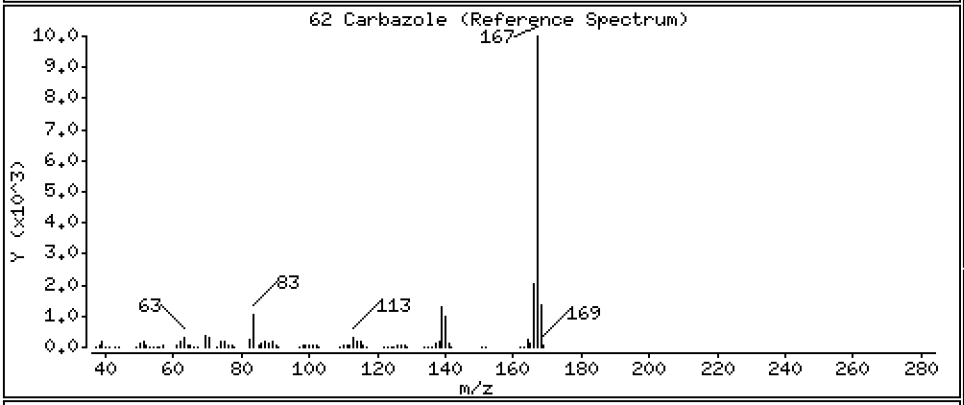
Concentration: 0.2423 ug/mL

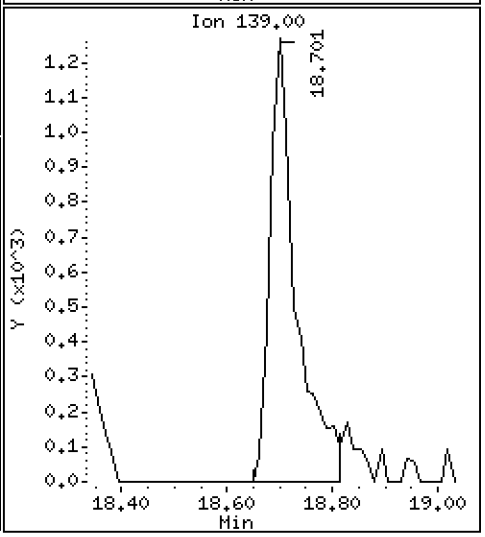


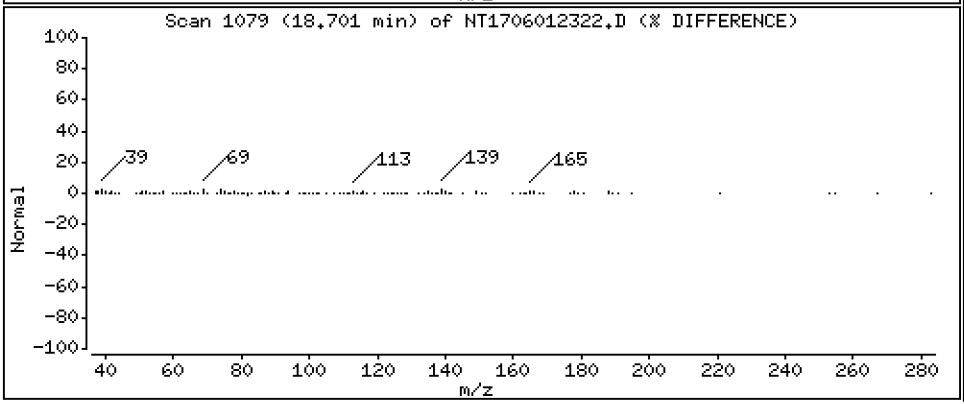












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

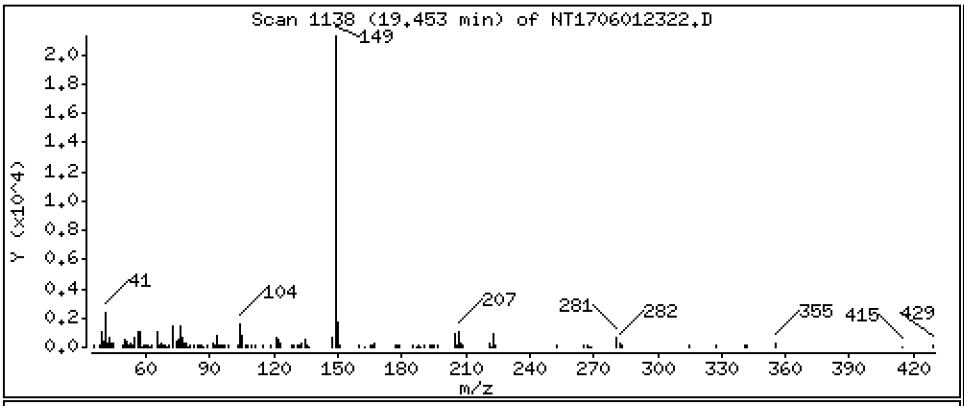
Operator: VTS

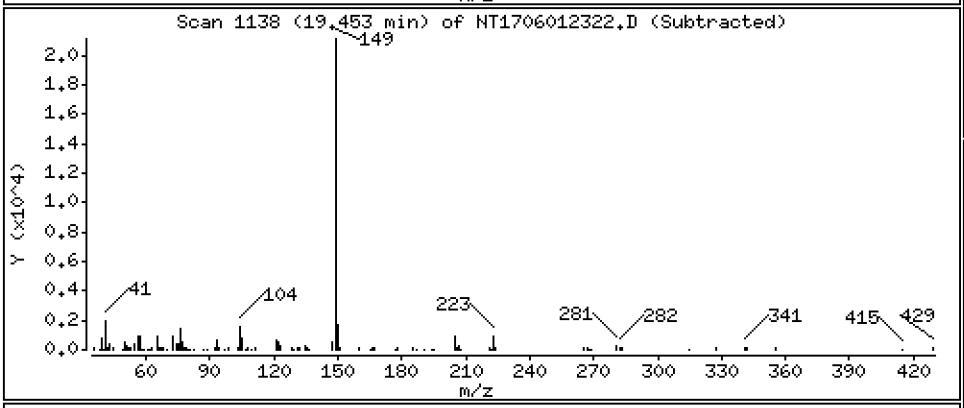
Column phase: ZB-5msi

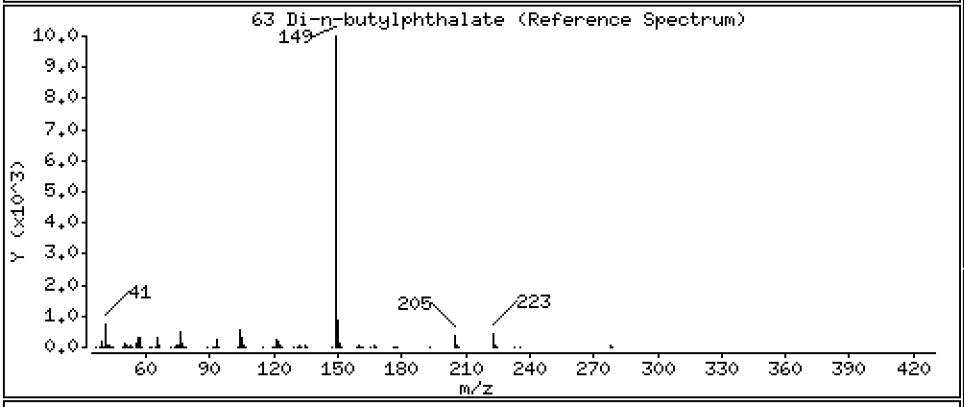
Column diameter: 0.25

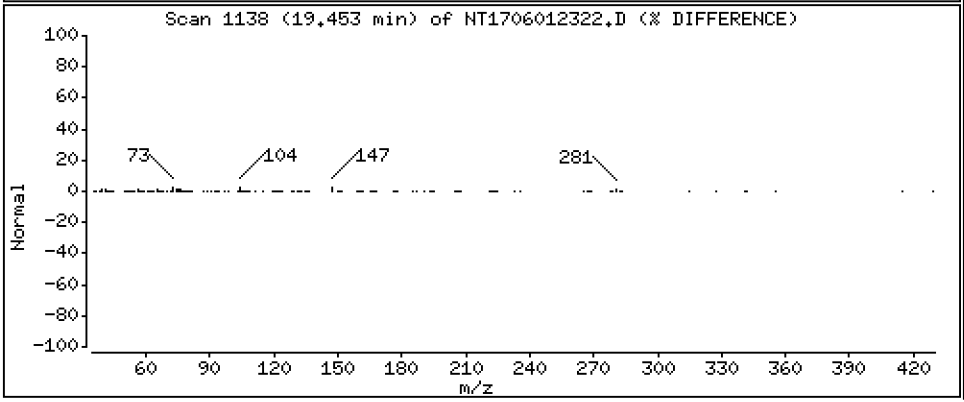
63 Di-n-butylphthalate

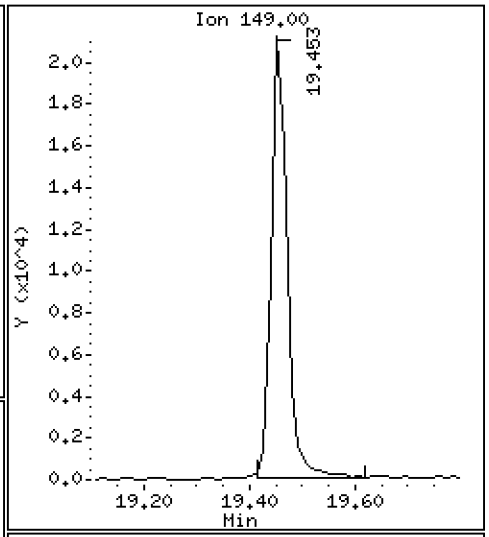
Concentration: 0.1826 ug/mL

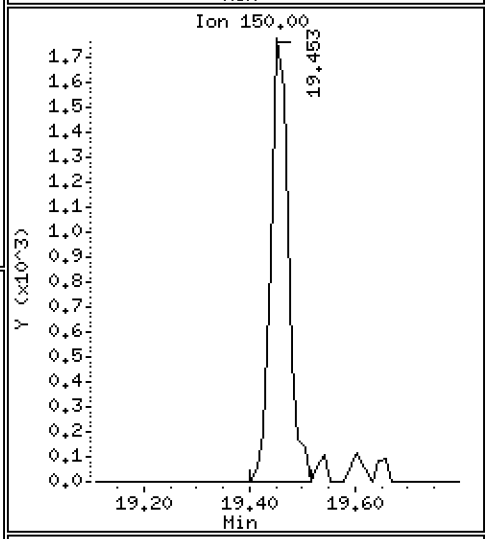


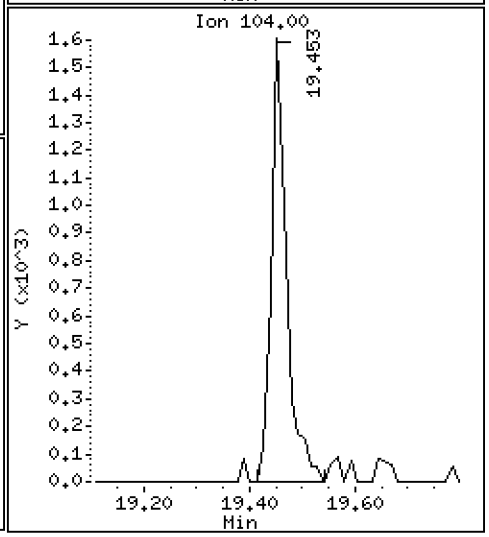












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

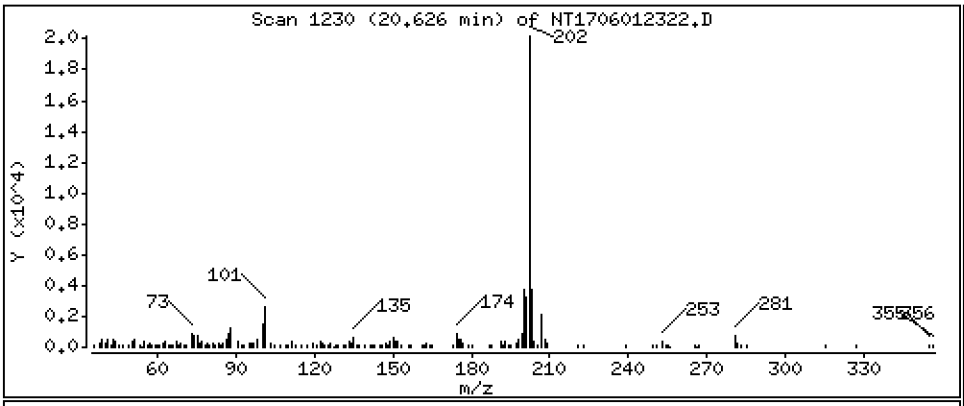
Operator: VTS

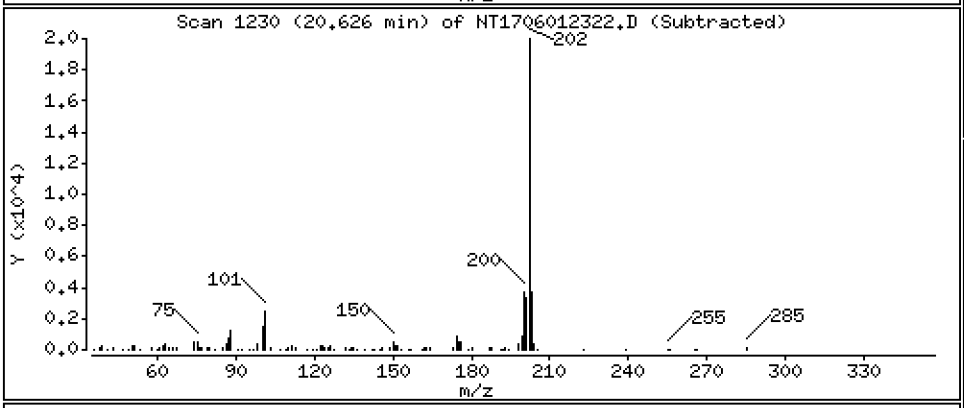
Column phase: ZB-5msi

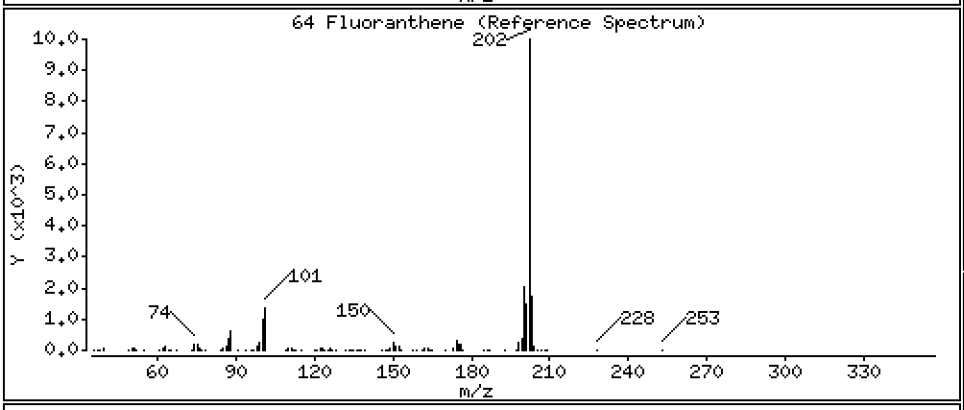
Column diameter: 0.25

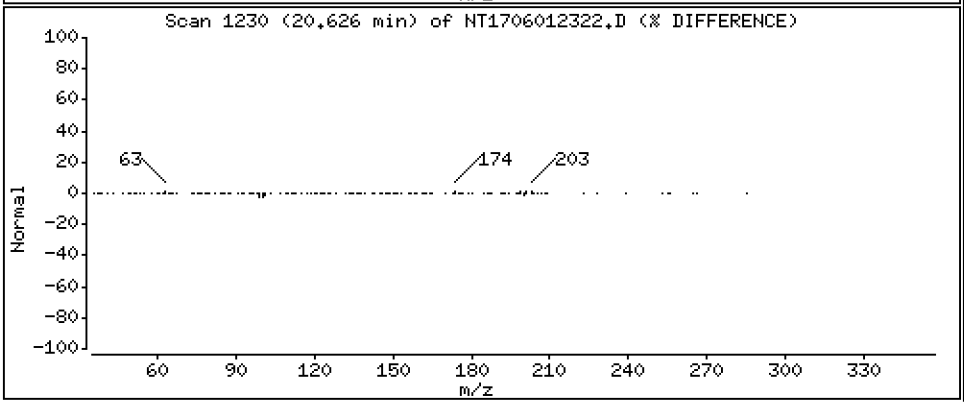
64 Fluoranthene

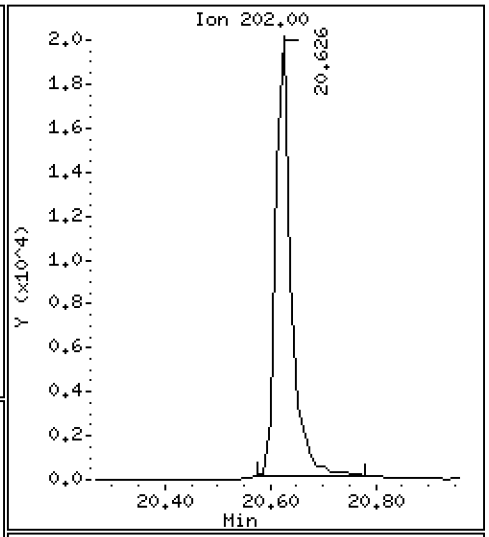
Concentration: 0.1981 ug/mL

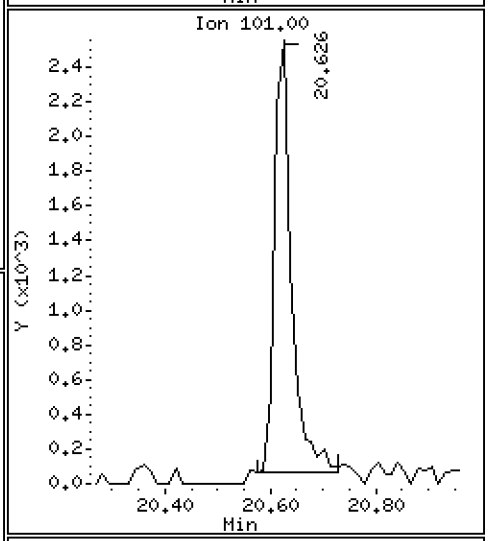


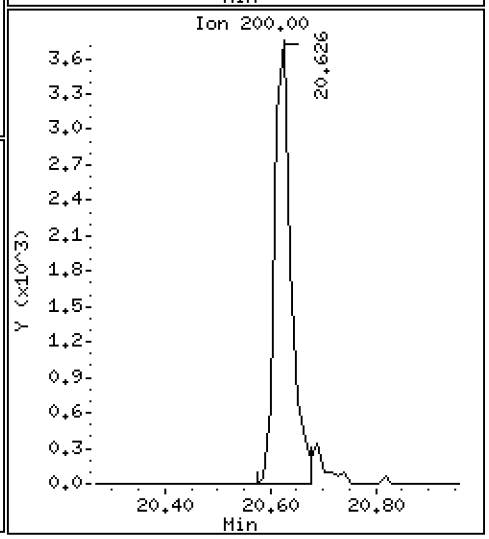












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

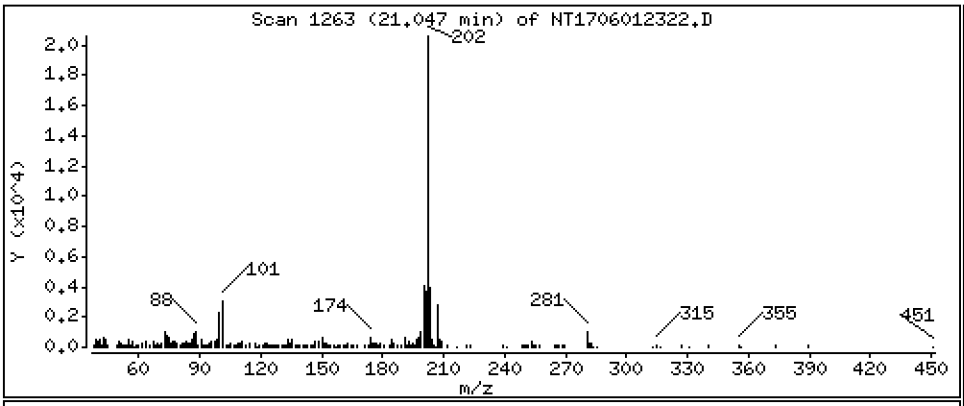
Operator: VTS

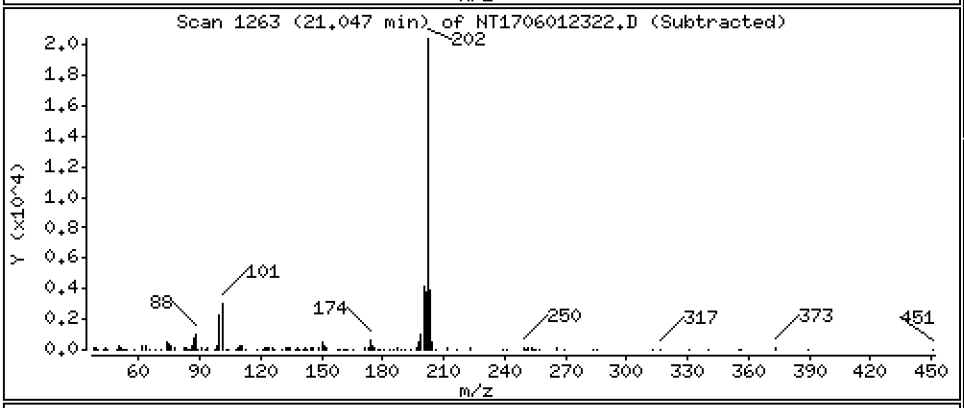
Column phase: ZB-5msi

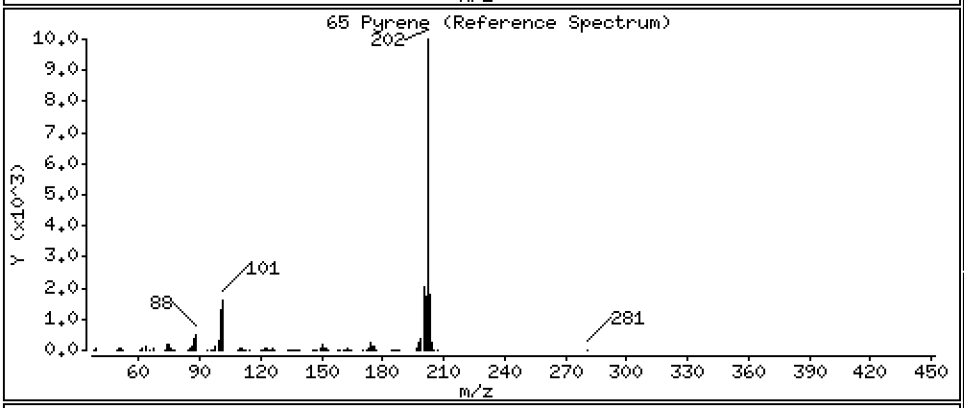
Column diameter: 0.25

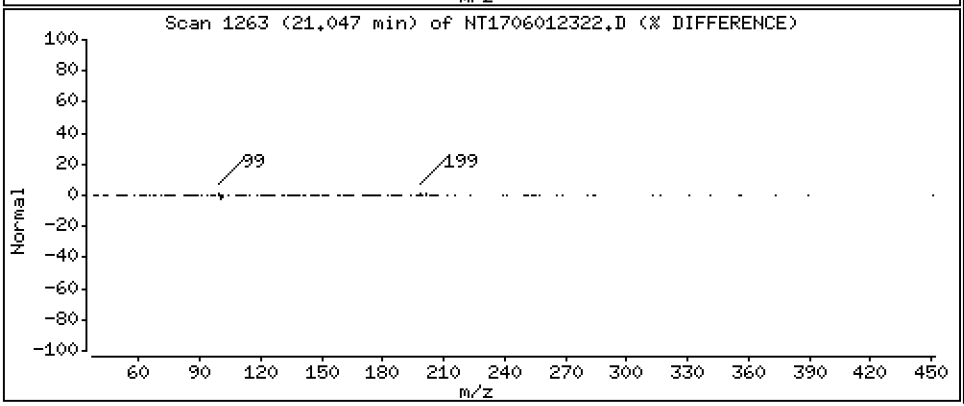
65 Pyrene

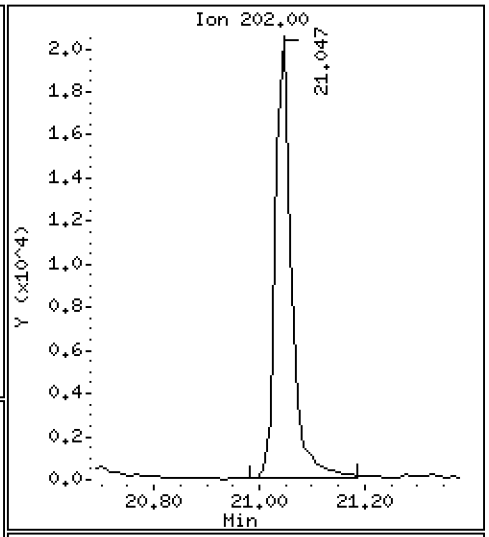
Concentration: 0.2094 ug/mL

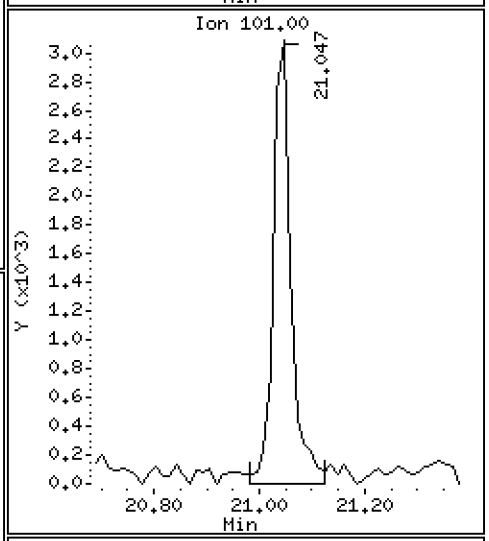


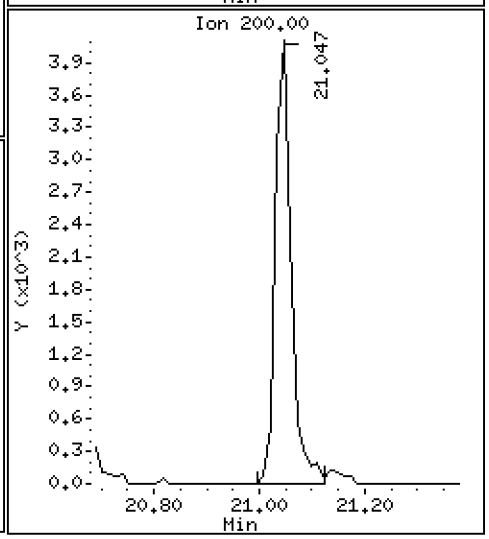












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

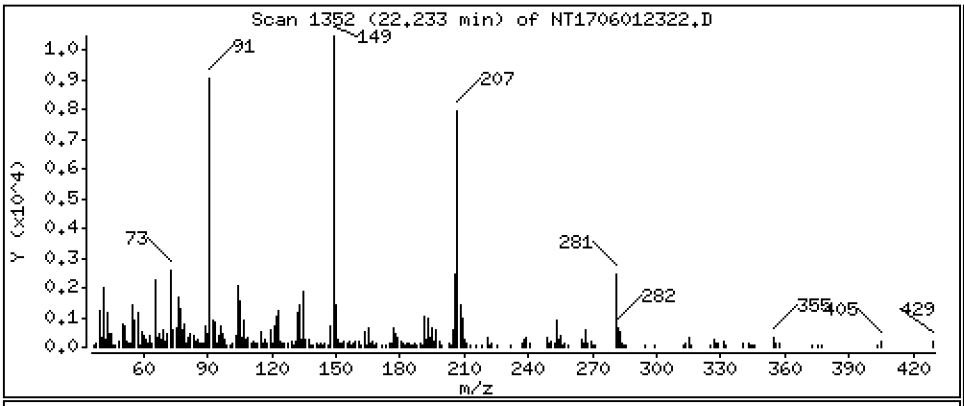
Operator: VTS

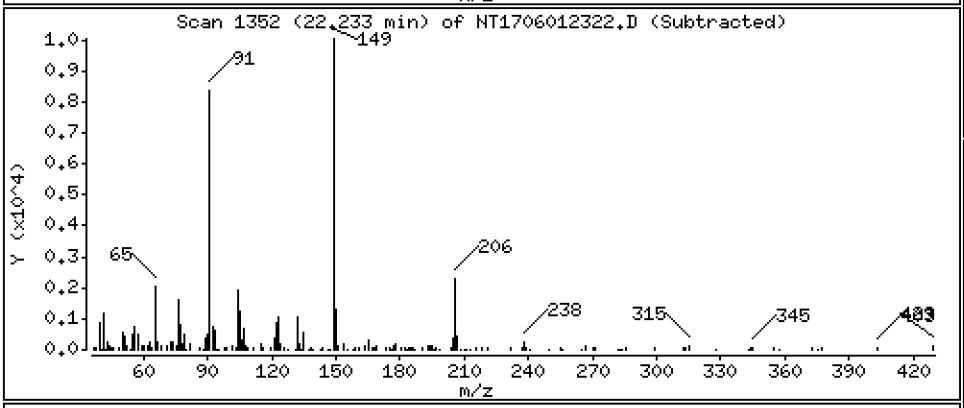
Column phase: ZB-5msi

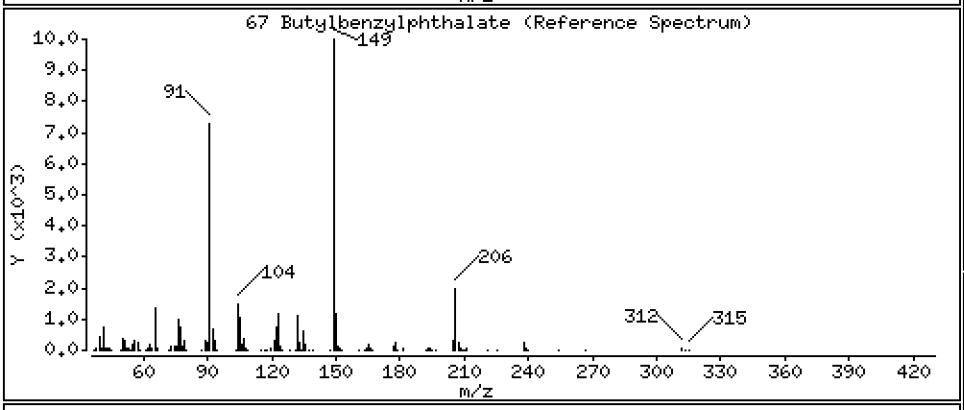
Column diameter: 0.25

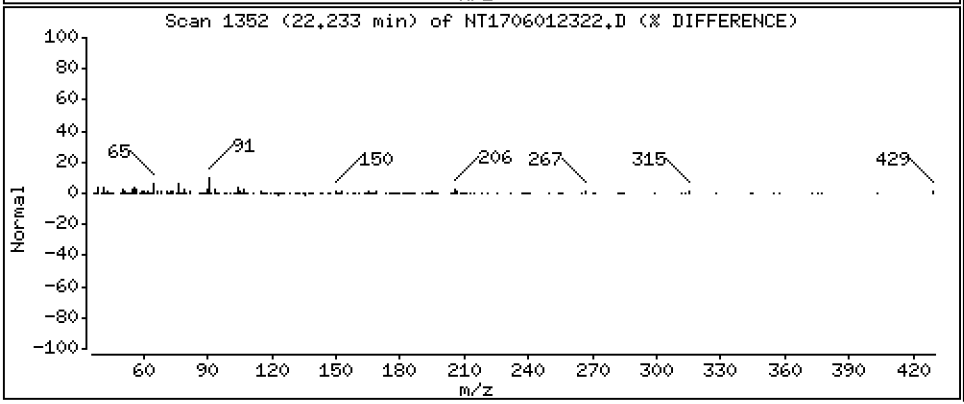
67 Butylbenzylphthalate

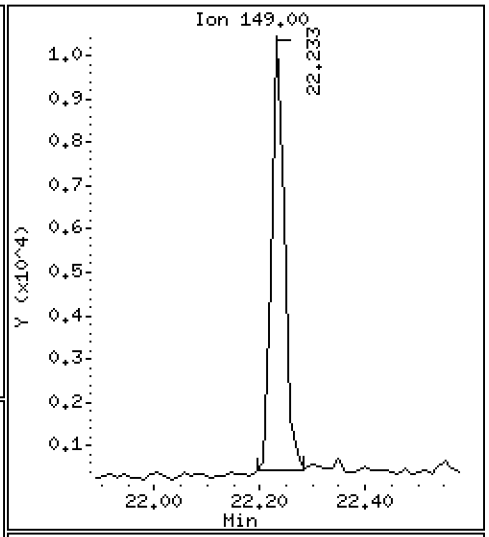
Concentration: 0.1803 ug/mL

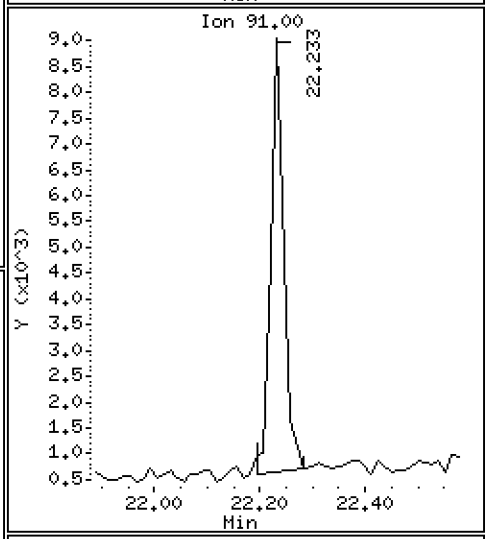


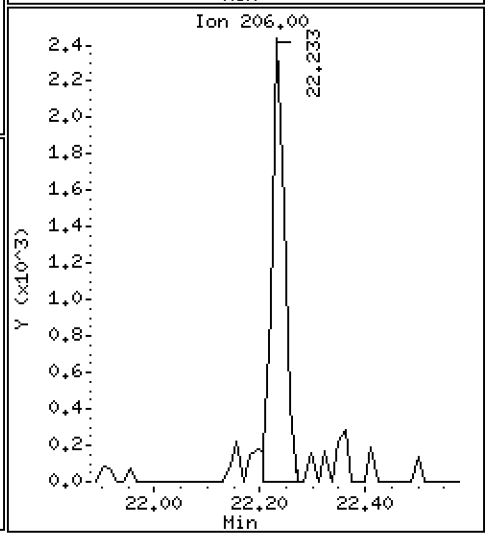












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

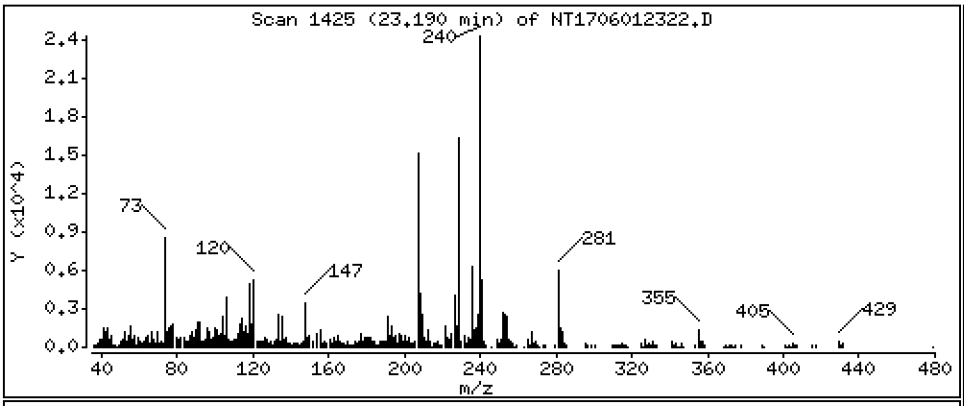
Operator: VTS

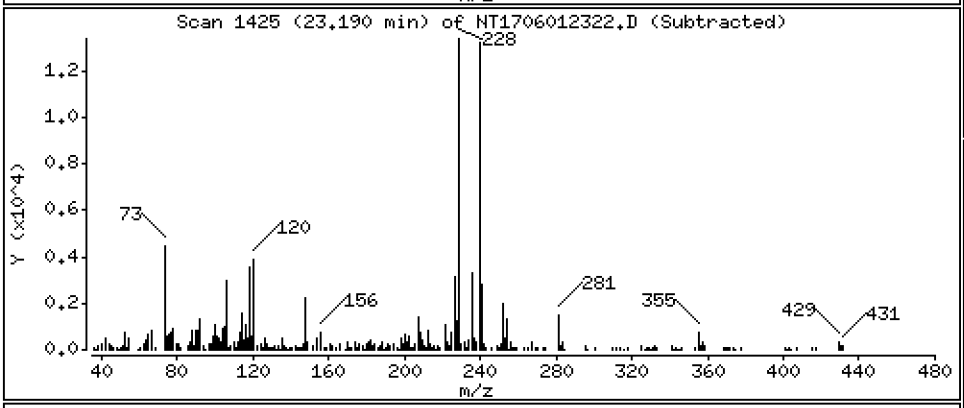
Column phase: ZB-5msi

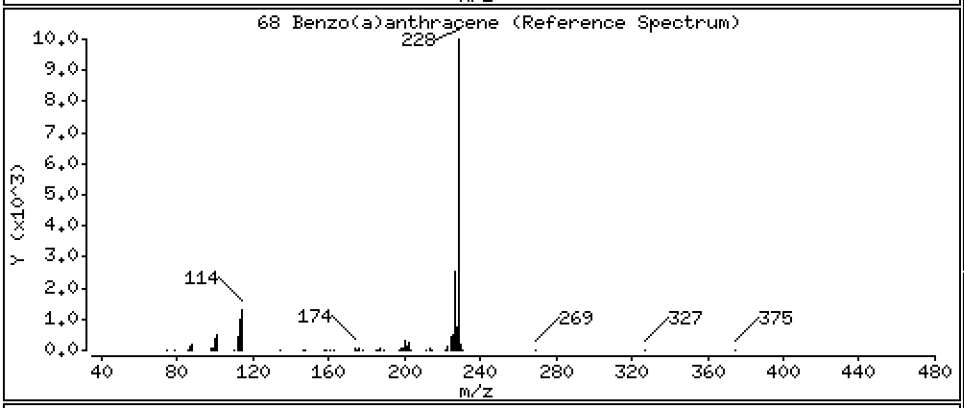
Column diameter: 0.25

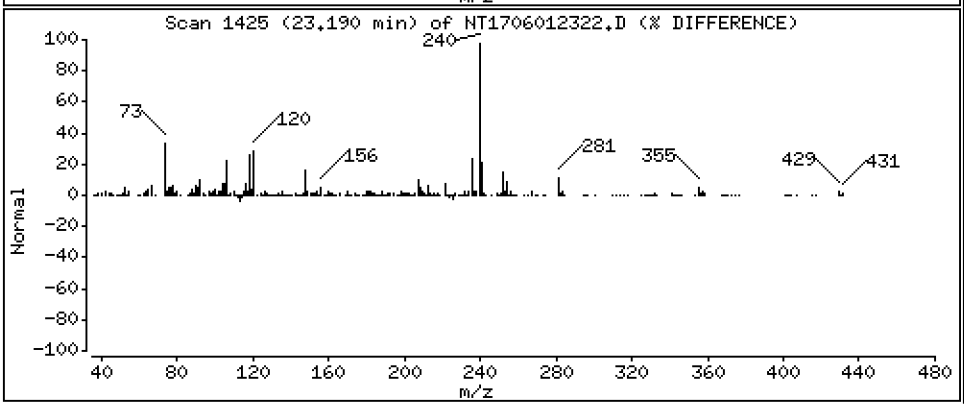
68 Benzo(a)anthracene

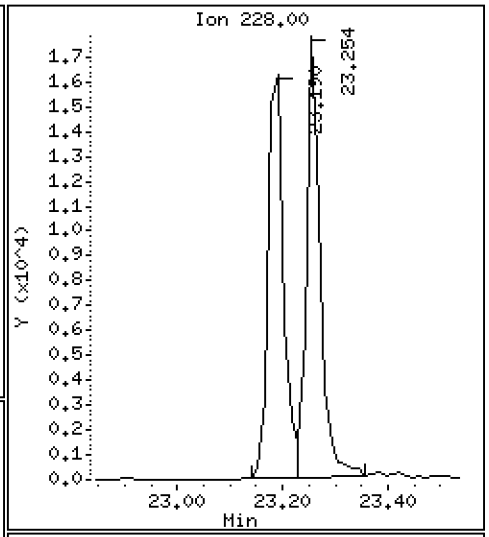
Concentration: 0.2094 ug/mL

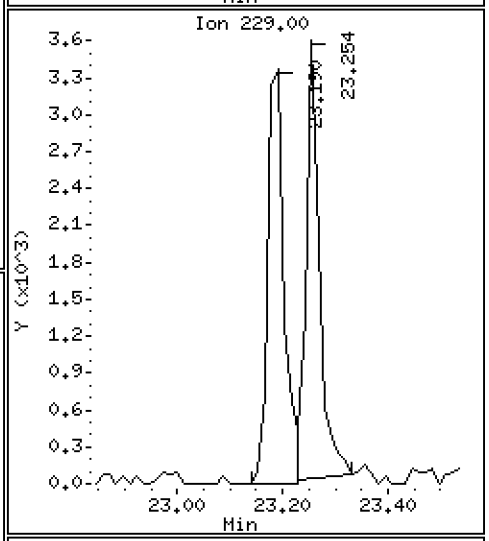


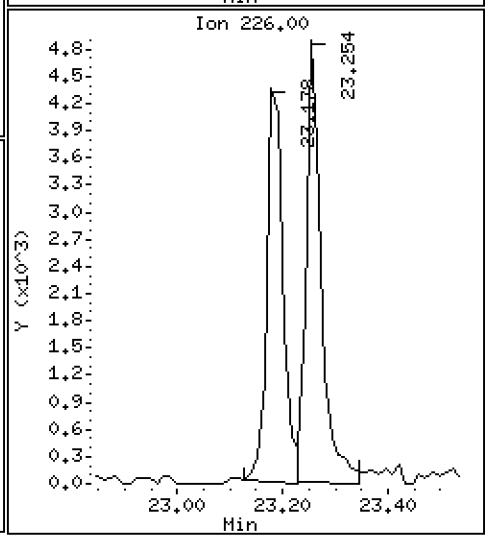












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

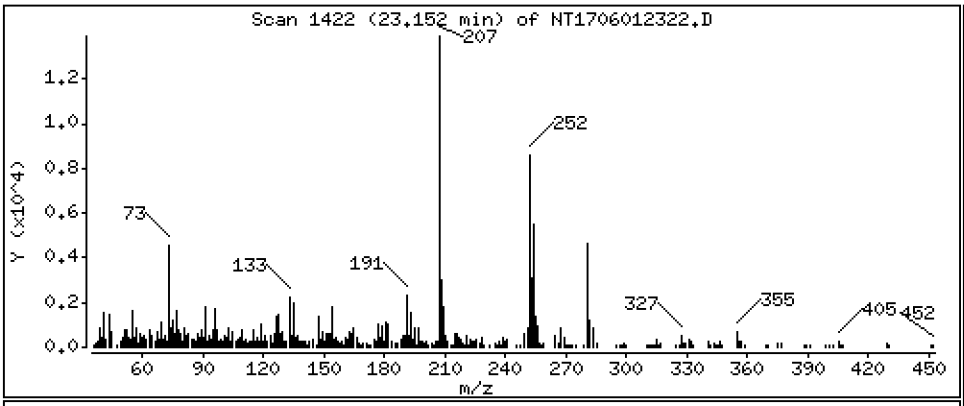
Operator: VTS

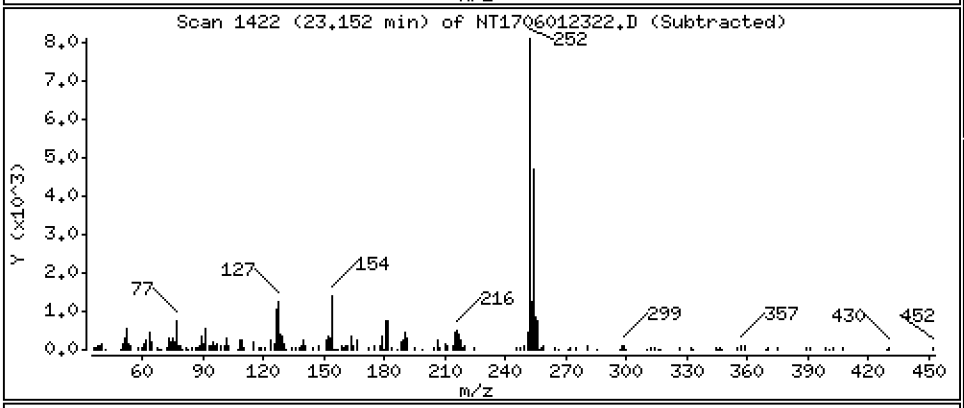
Column phase: ZB-5msi

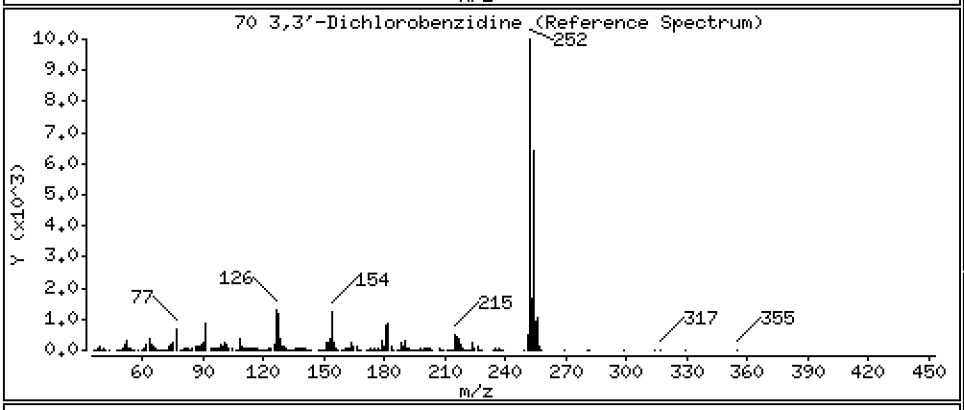
Column diameter: 0.25

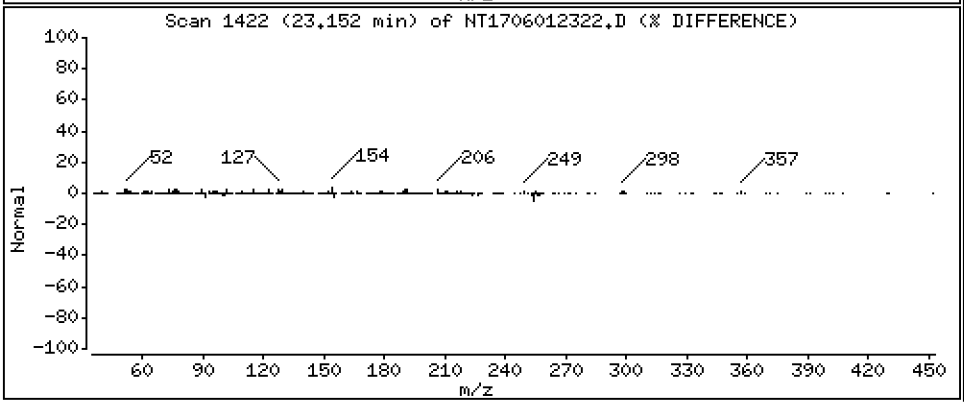
70 3,3'-Dichlorobenzidine

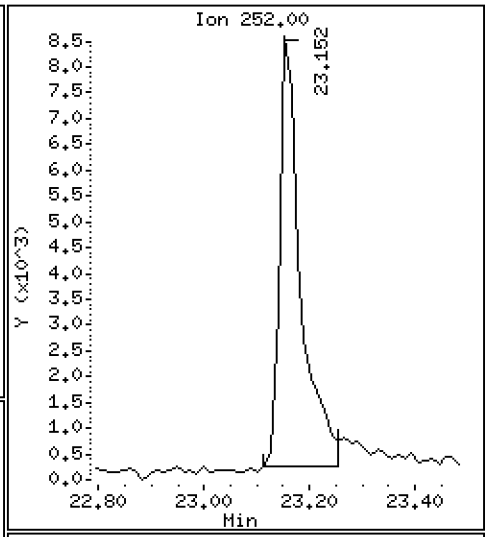
Concentration: 0.7446 ug/mL

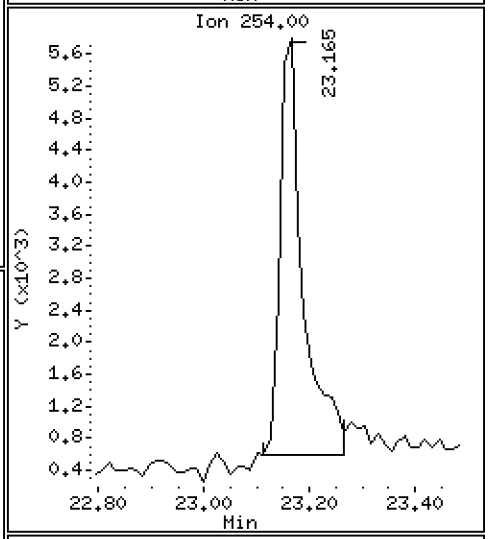


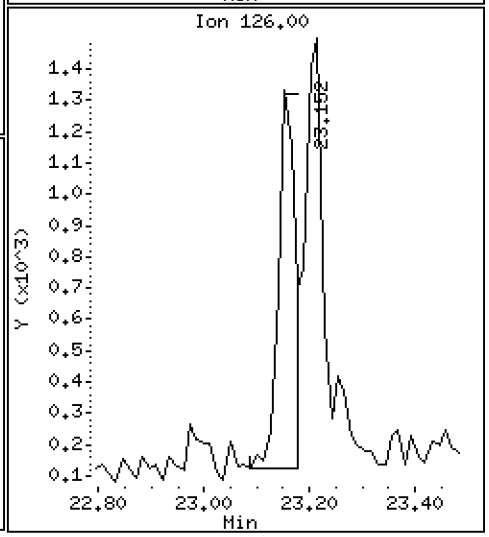












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

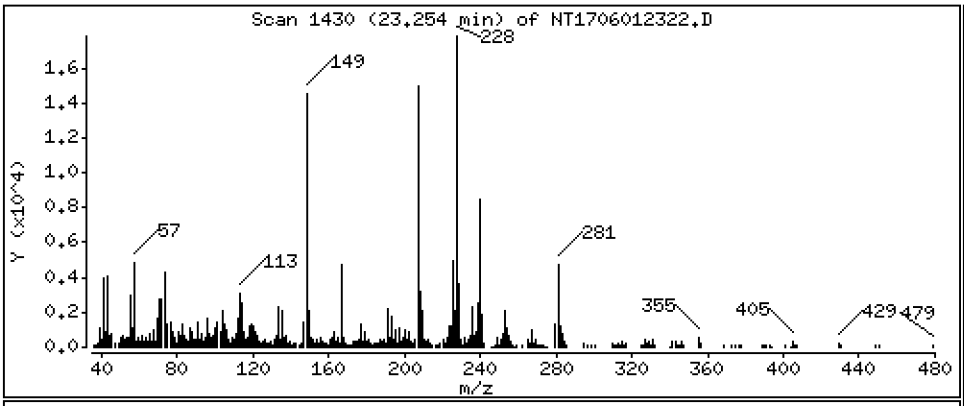
Operator: VTS

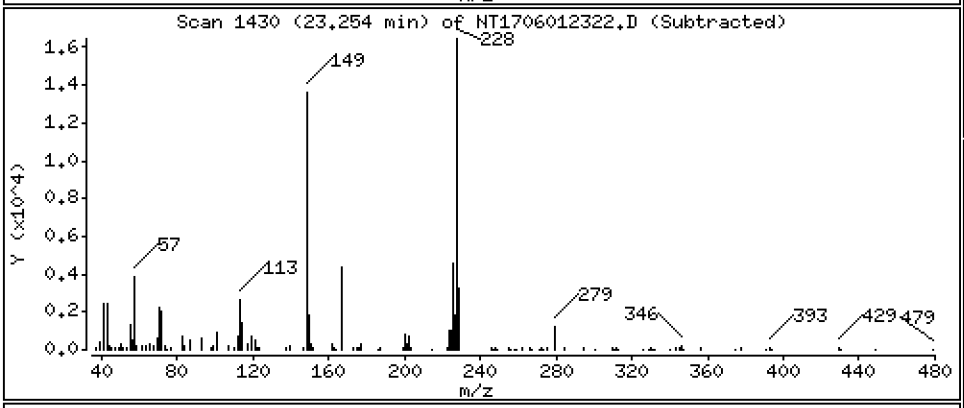
Column phase: ZB-5msi

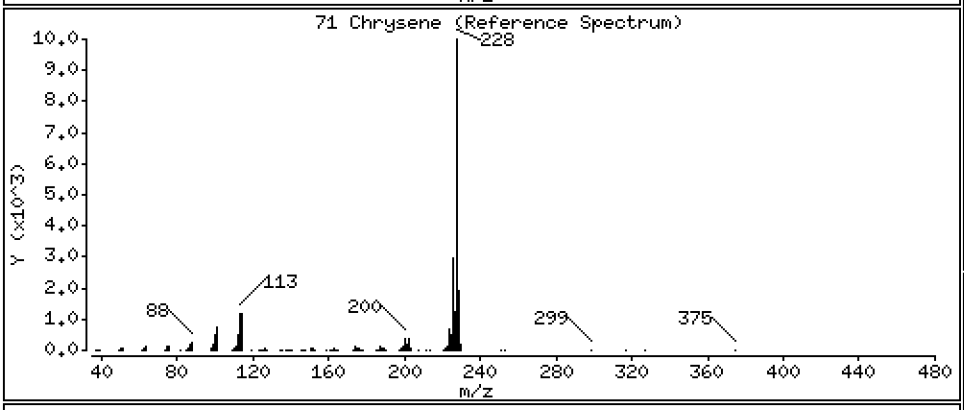
Column diameter: 0.25

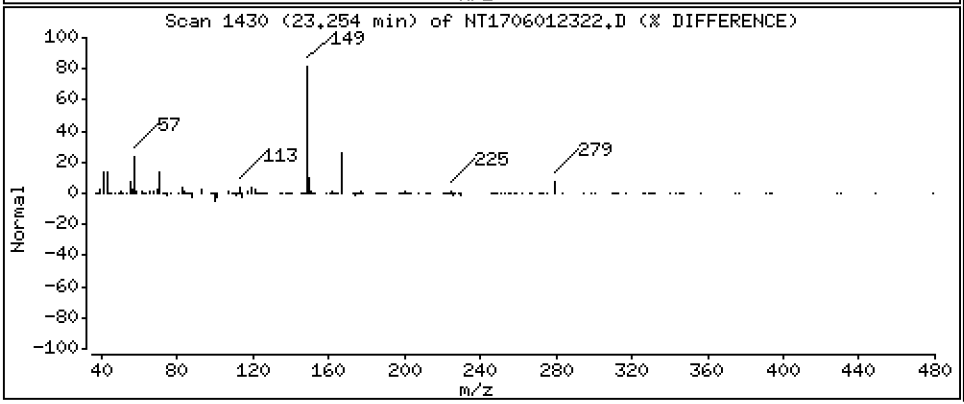
71 Chrysene

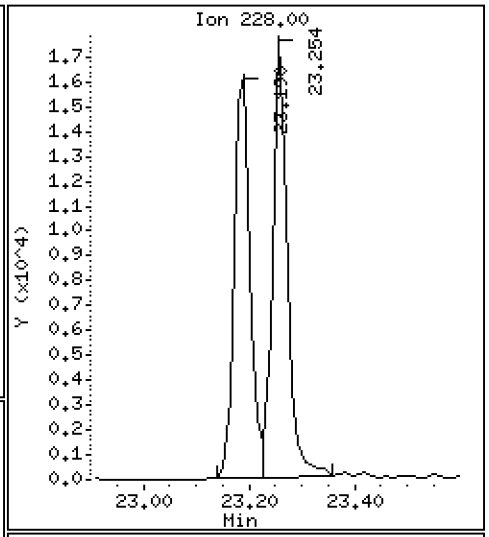
Concentration: 0.2200 ug/mL

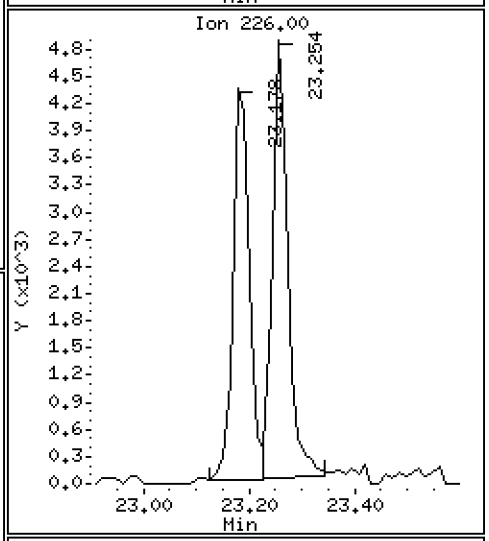


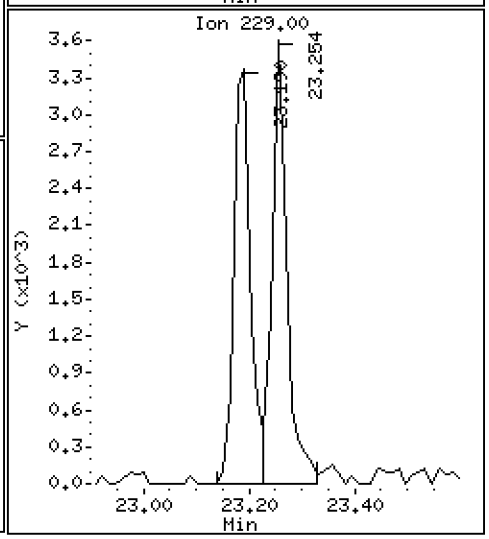












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

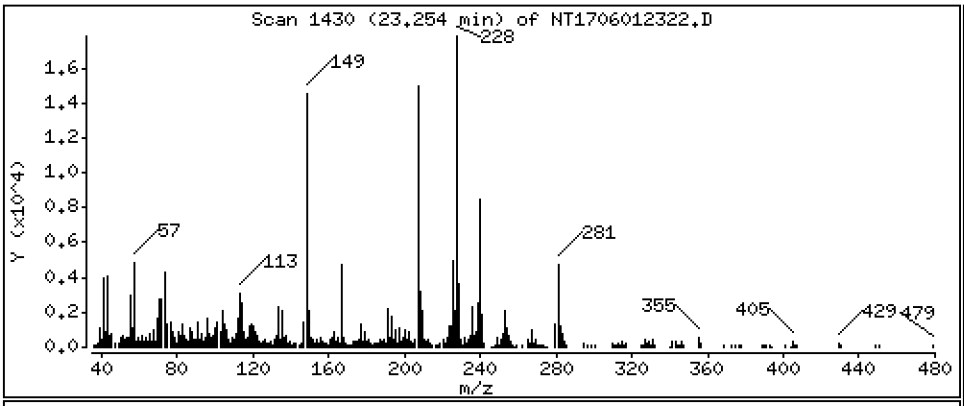
Operator: VTS

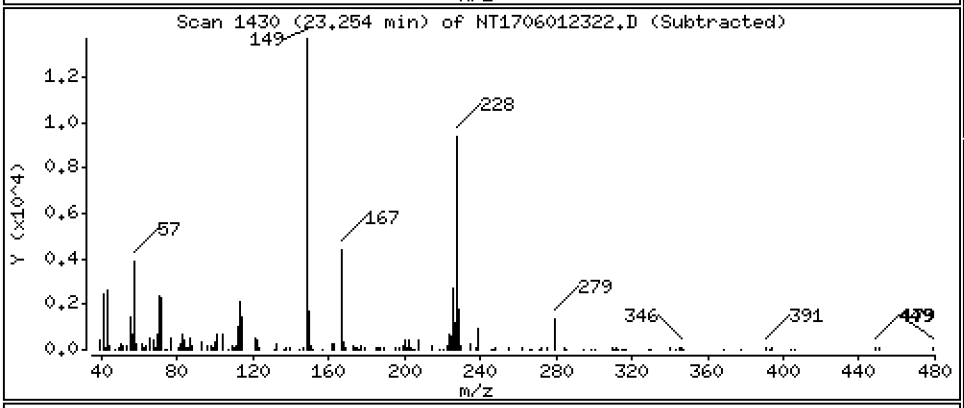
Column phase: ZB-5msi

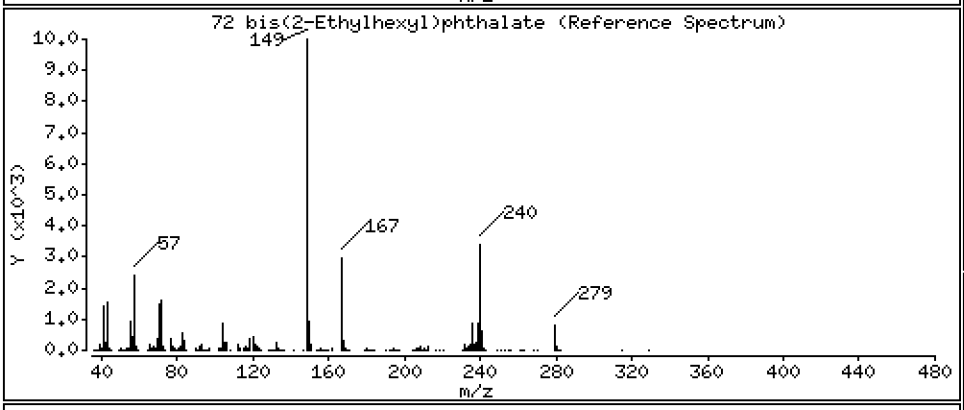
Column diameter: 0.25

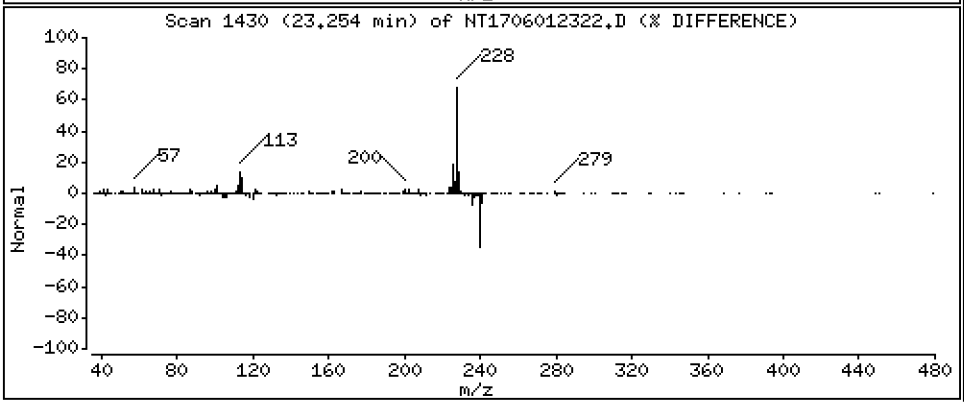
72 bis(2-Ethylhexyl)phthalate

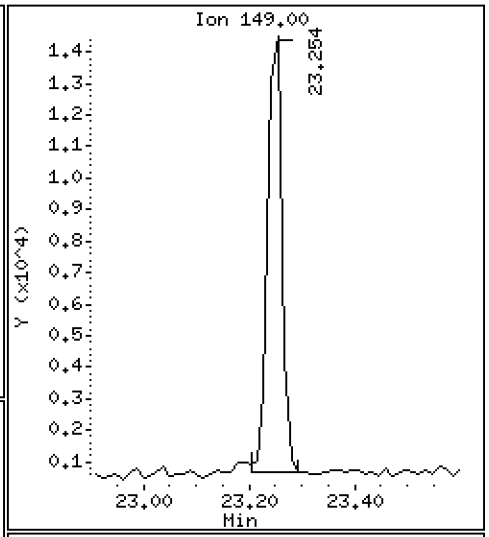
Concentration: 0.2300 ug/mL

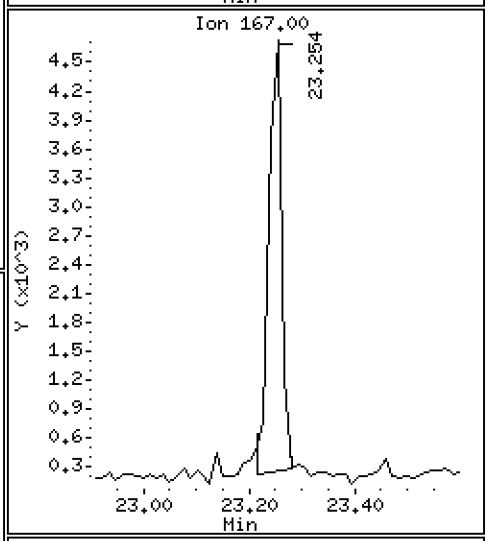


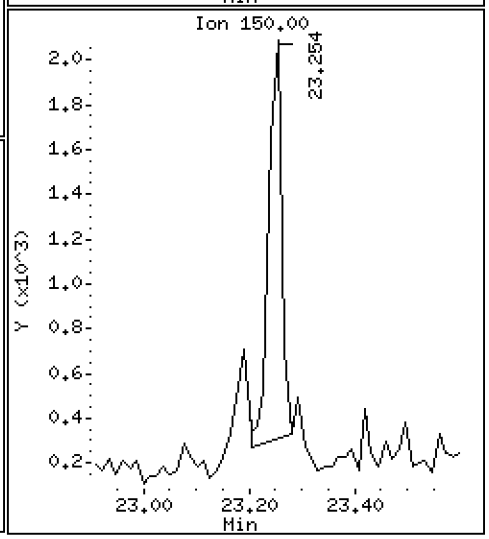












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

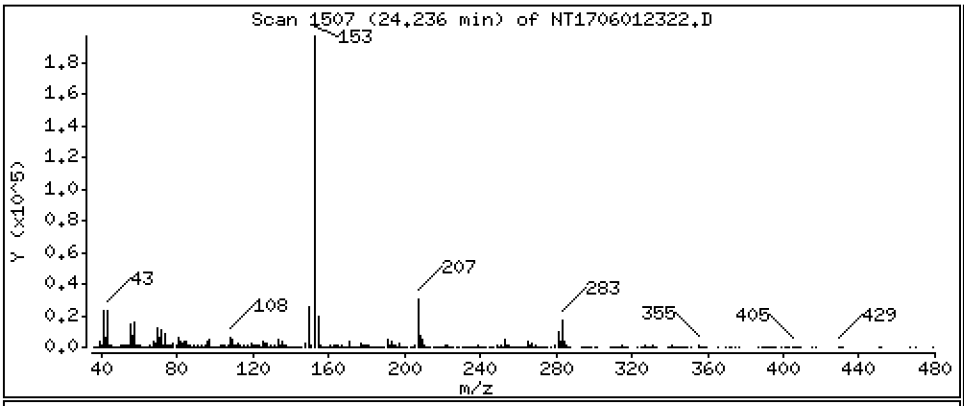
Operator: VTS

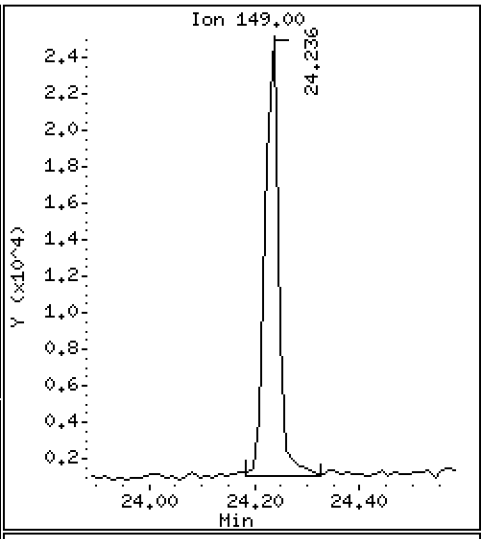
Column phase: ZB-5msi

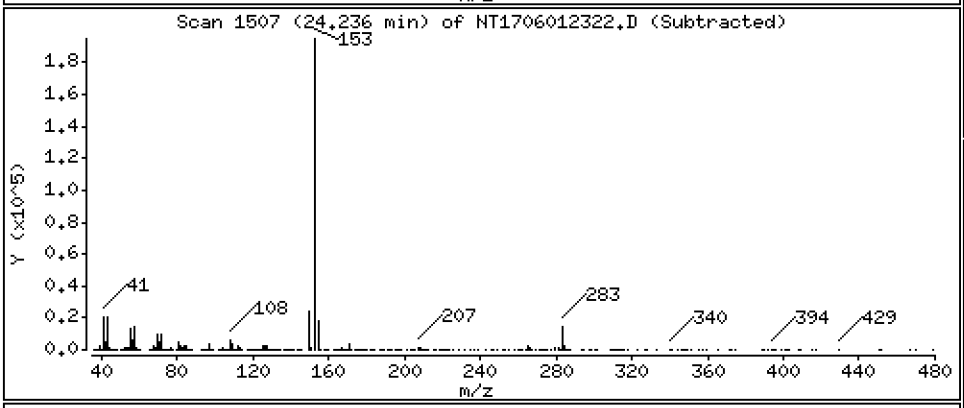
Column diameter: 0.25

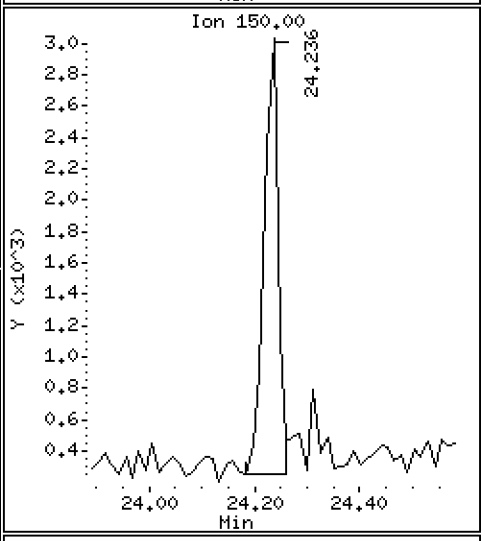
73 Di-n-octylphthalate

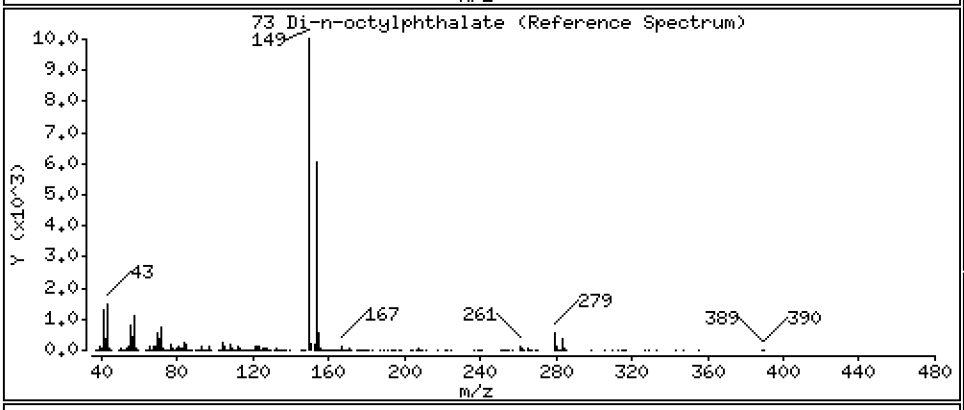
Concentration: 0.2203 ug/mL

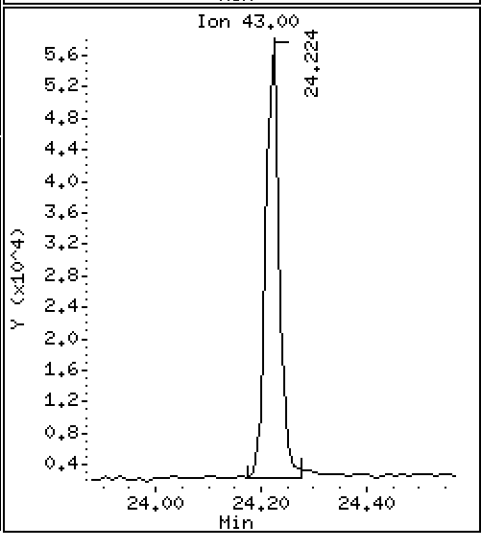


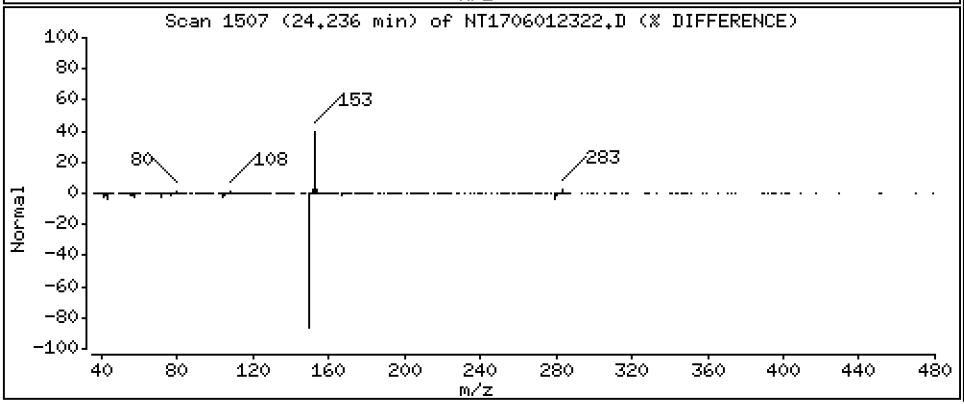












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

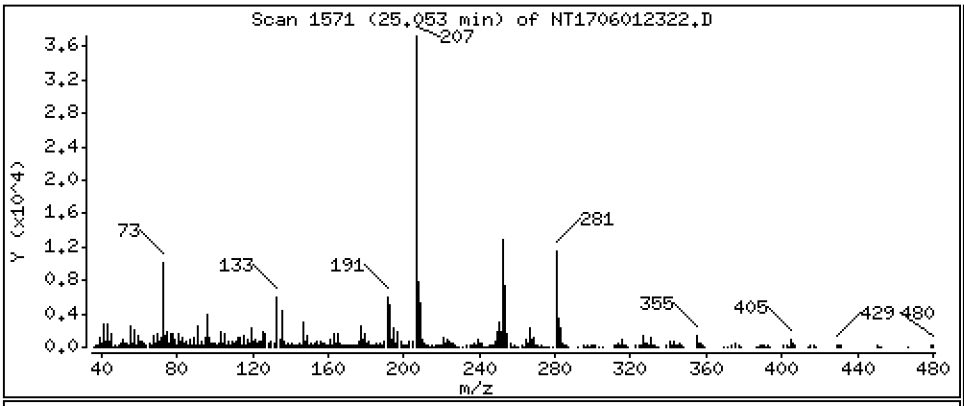
Operator: VTS

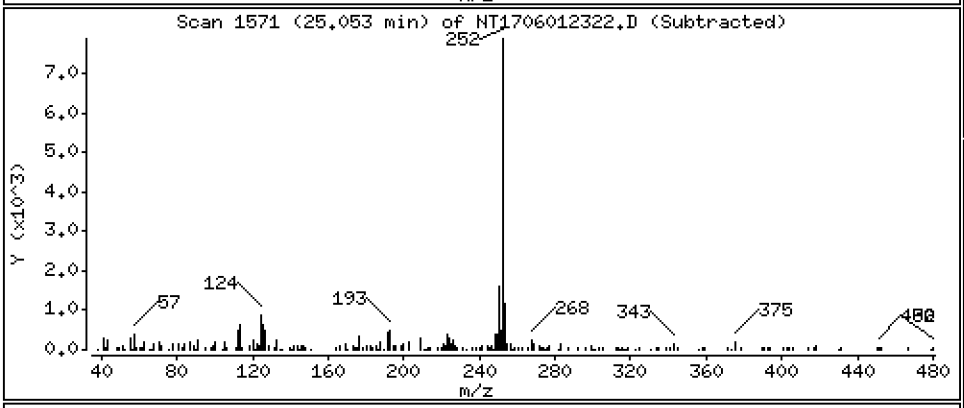
Column phase: ZB-5msi

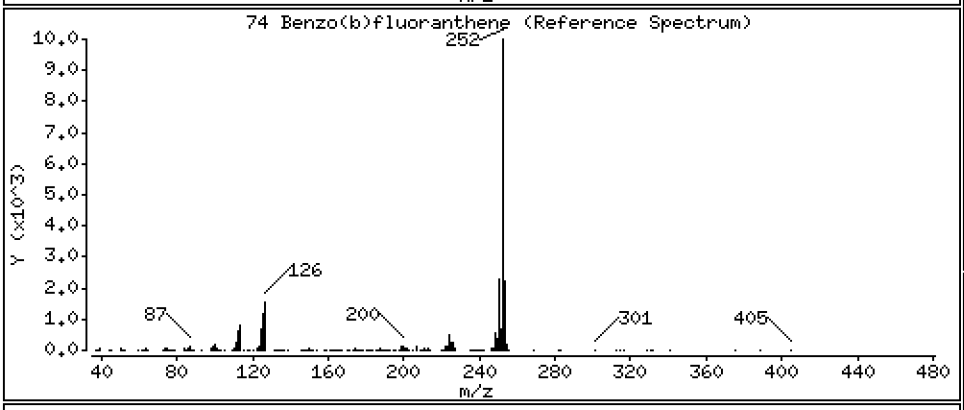
Column diameter: 0.25

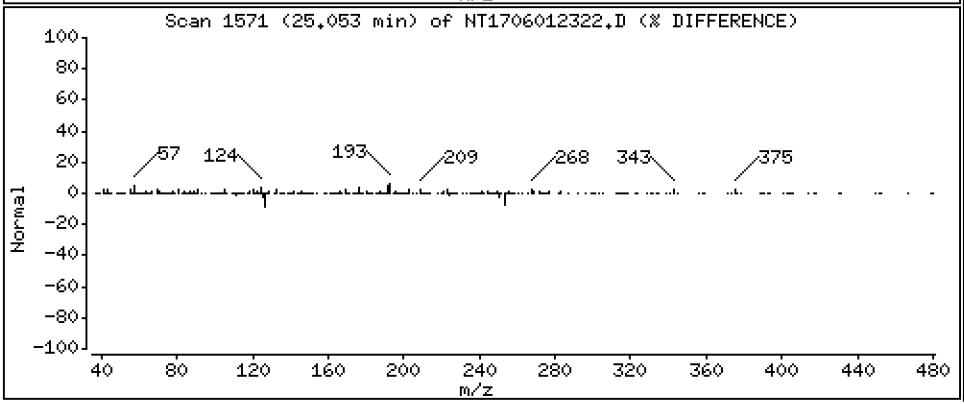
74 Benzo(b)fluoranthene

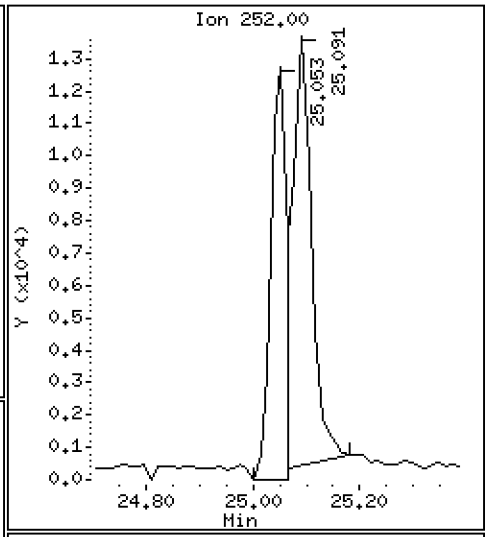
Concentration: 0.1761 ug/mL

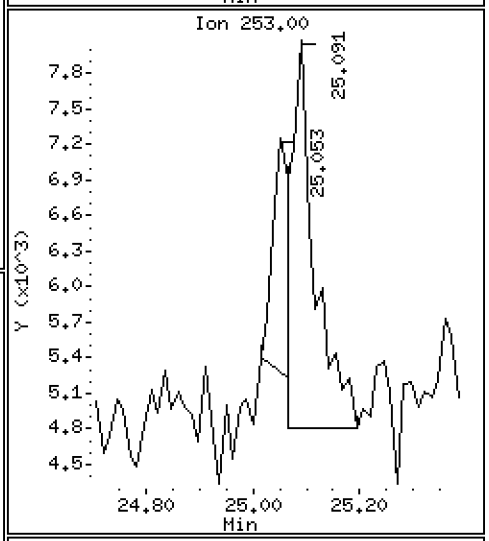


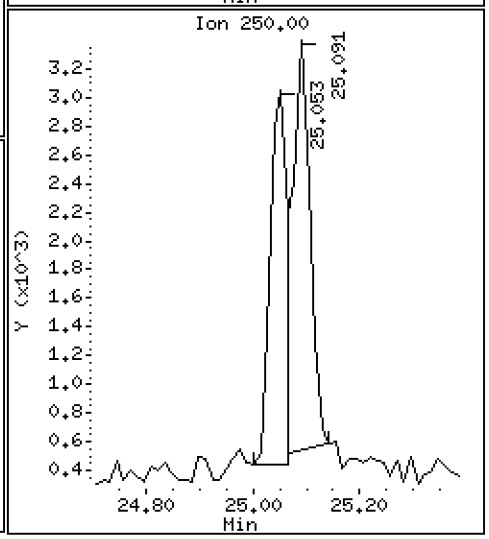












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

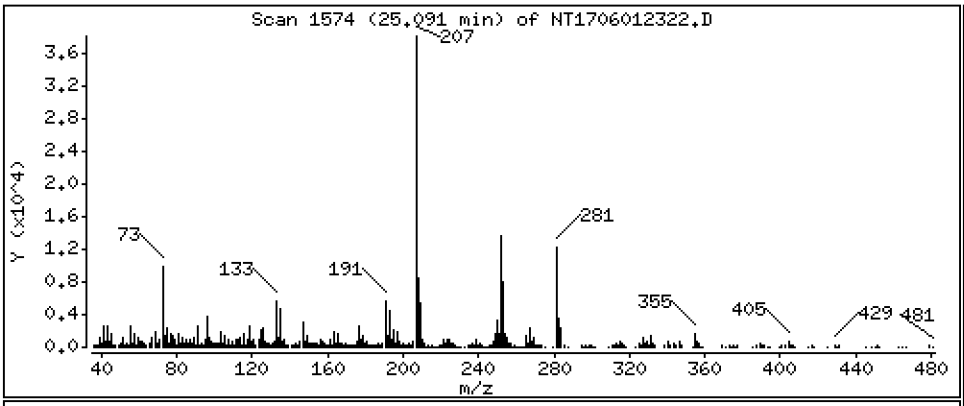
Operator: VTS

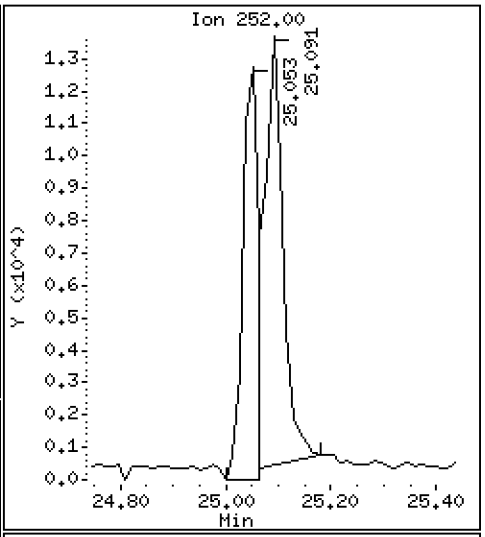
Column phase: ZB-5msi

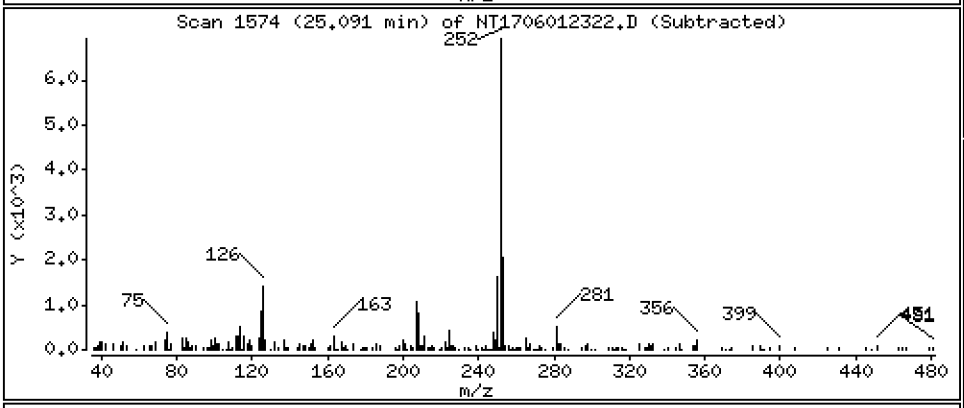
Column diameter: 0.25

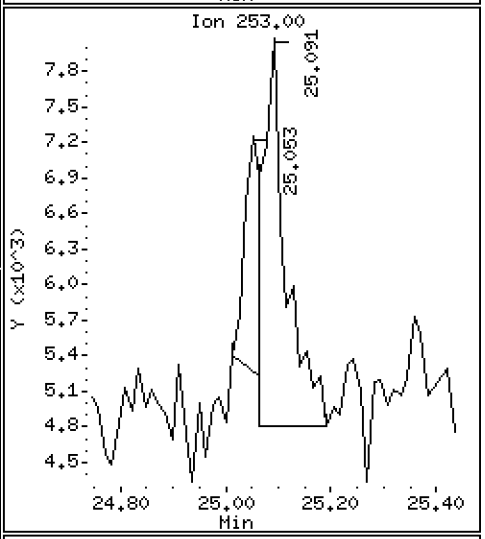
75 Benzo(k)fluoranthene

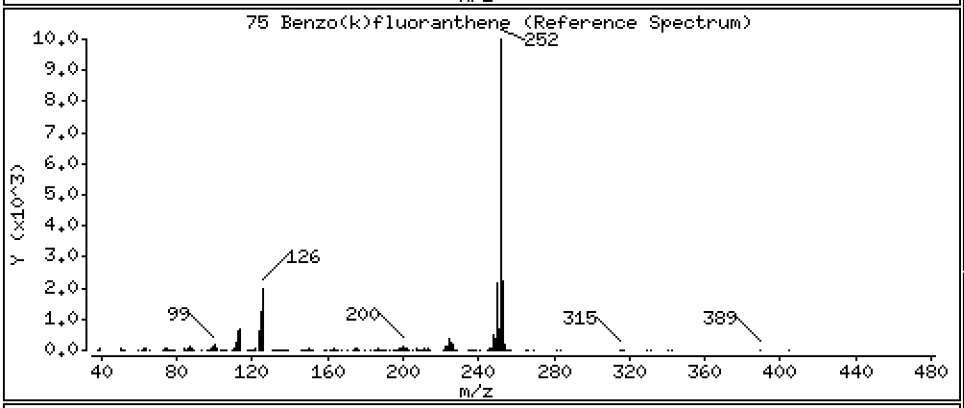
Concentration: 0.2391 ug/mL

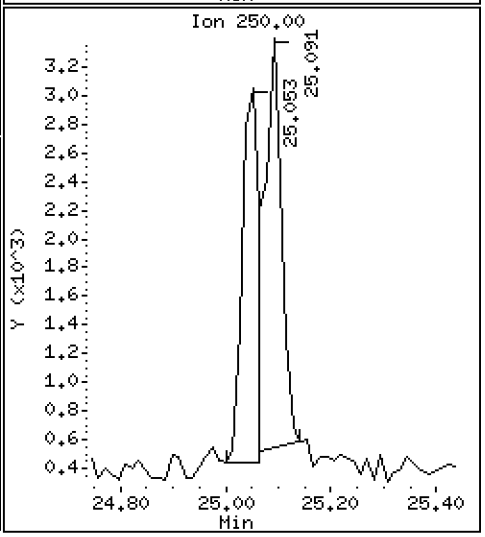


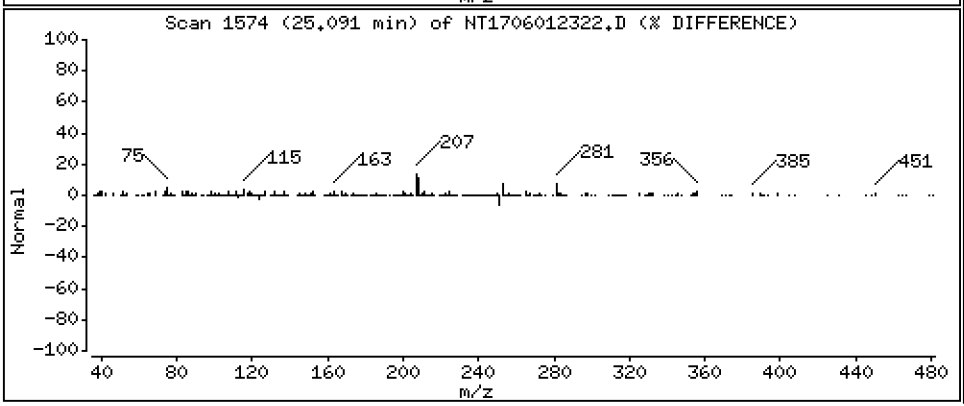












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

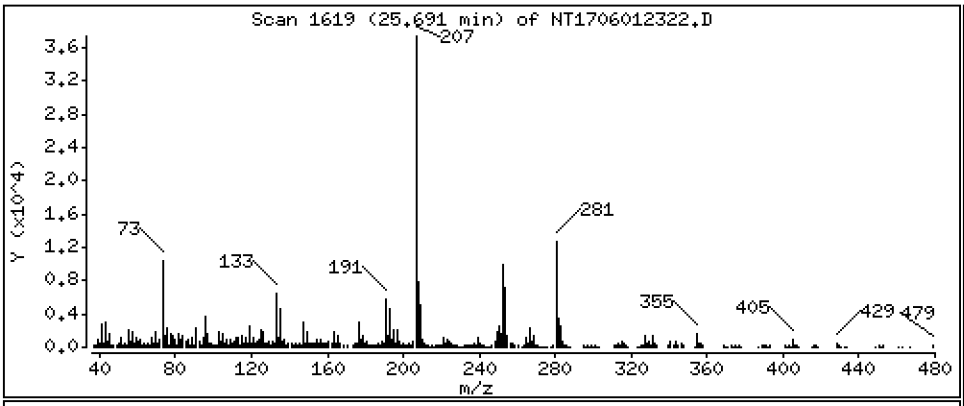
Operator: VTS

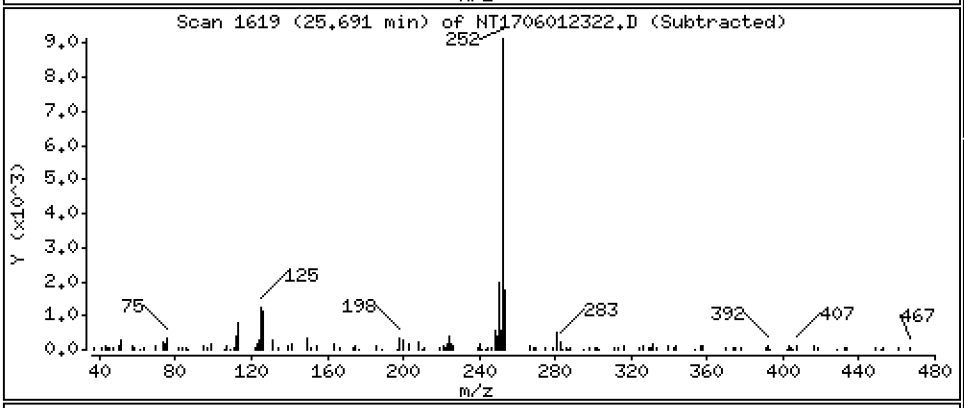
Column phase: ZB-5msi

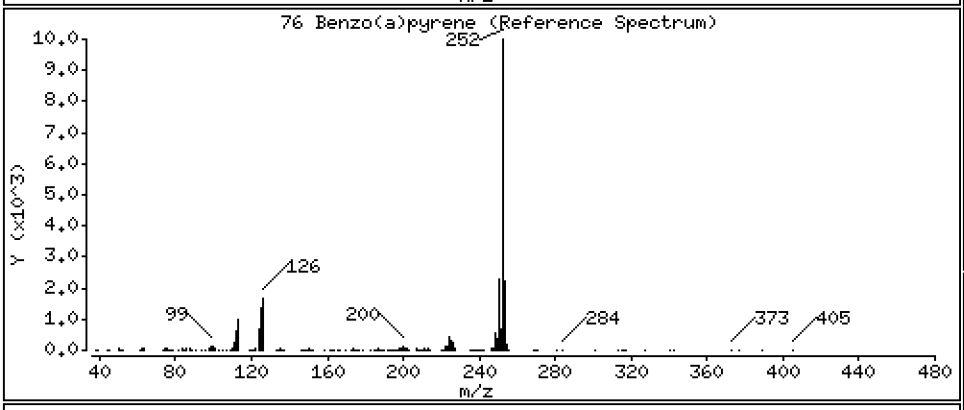
Column diameter: 0.25

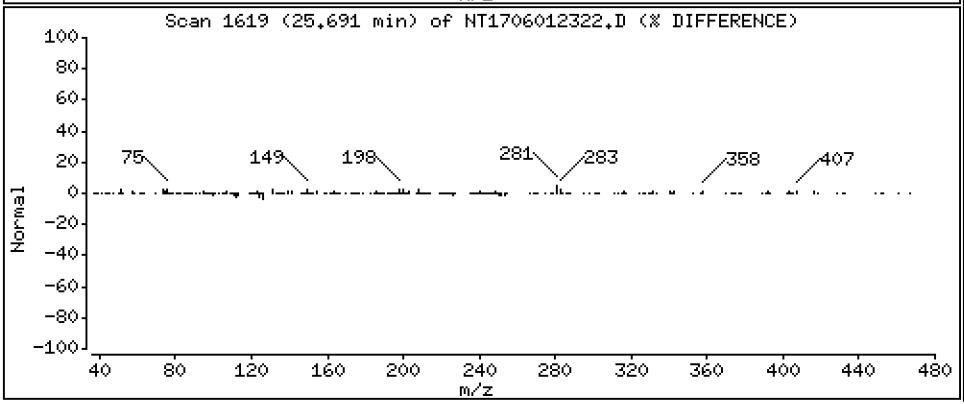
76 Benzo(a)pyrene

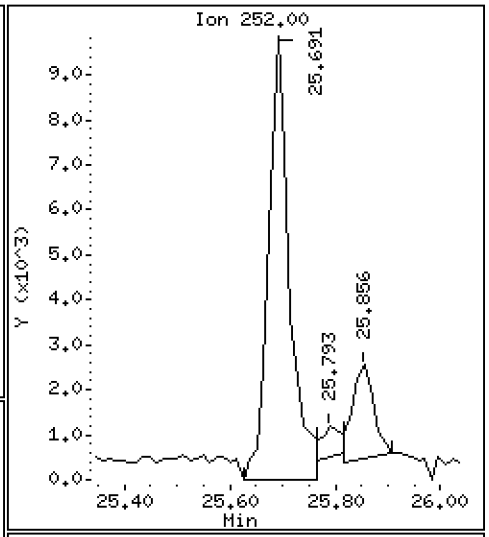
Concentration: 0.2298 ug/mL

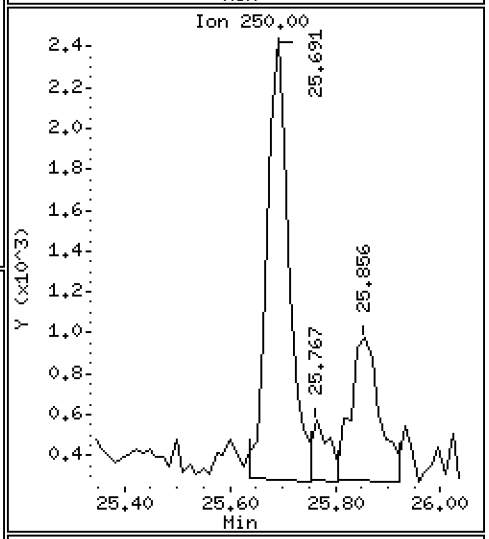


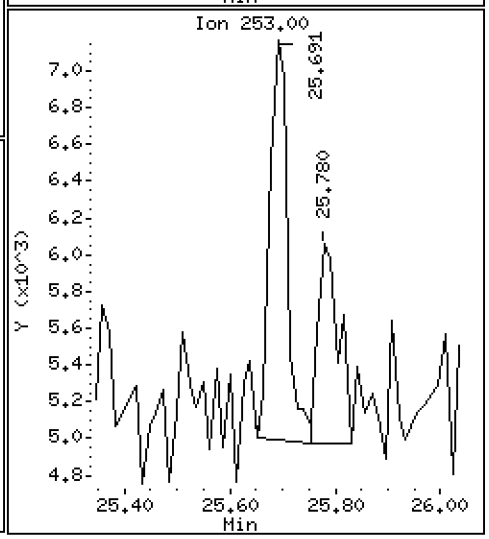












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

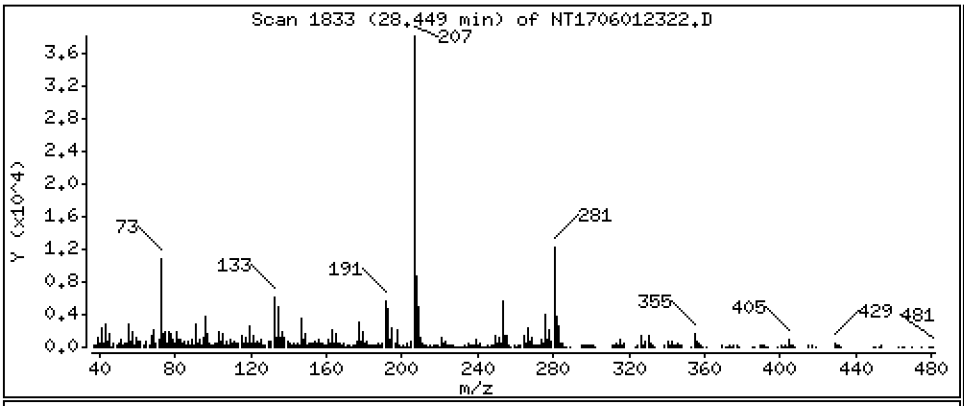
Operator: VTS

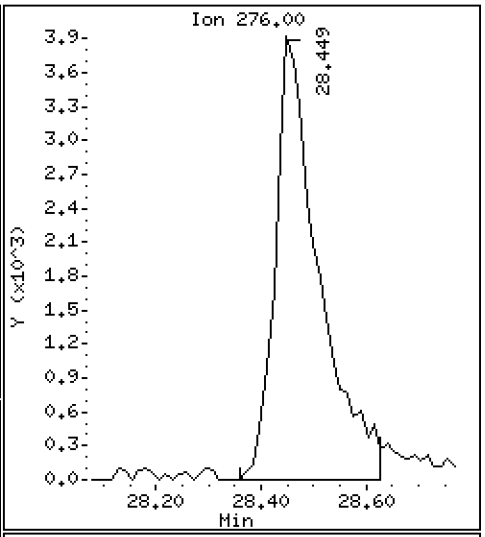
Column phase: ZB-5msi

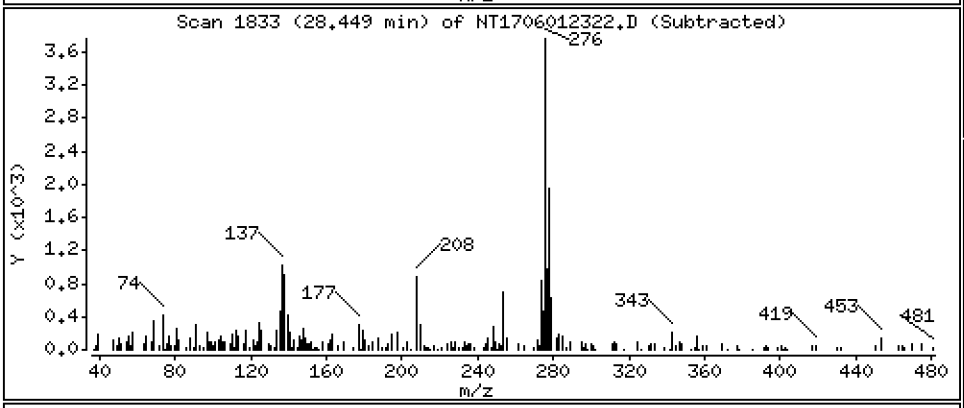
Column diameter: 0.25

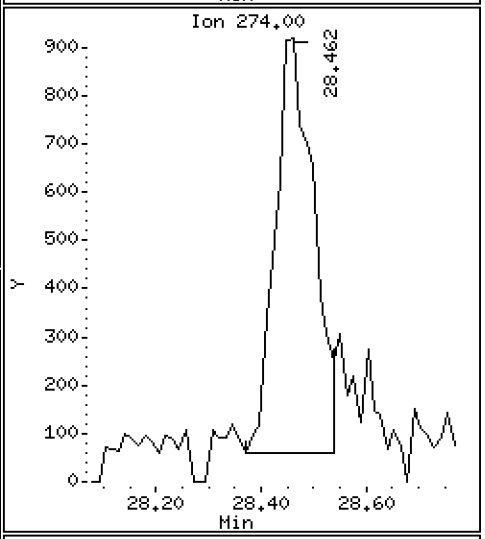
78 Indeno(1,2,3-cd)pyrene

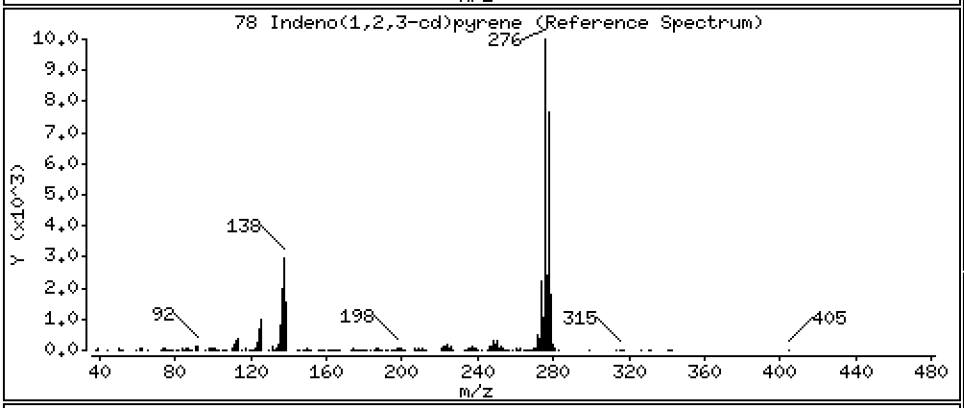
Concentration: 0.1627 ug/mL

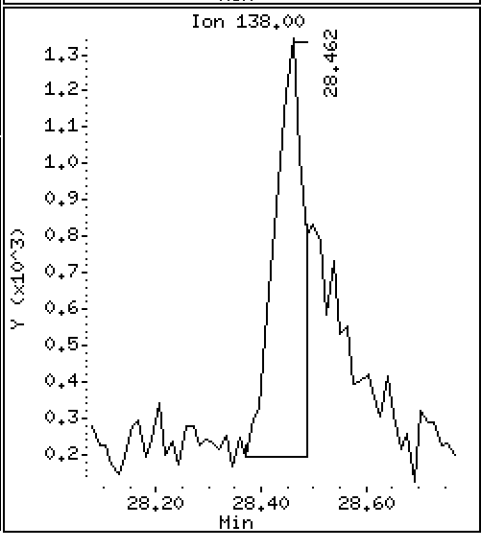


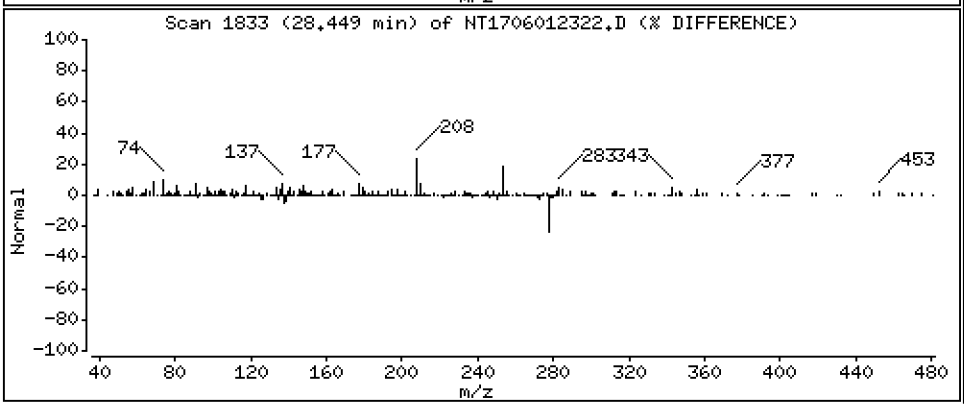












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

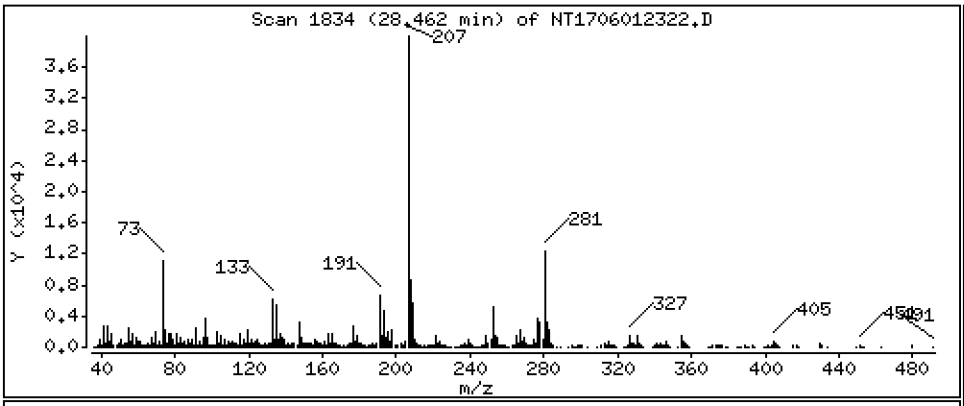
Operator: VTS

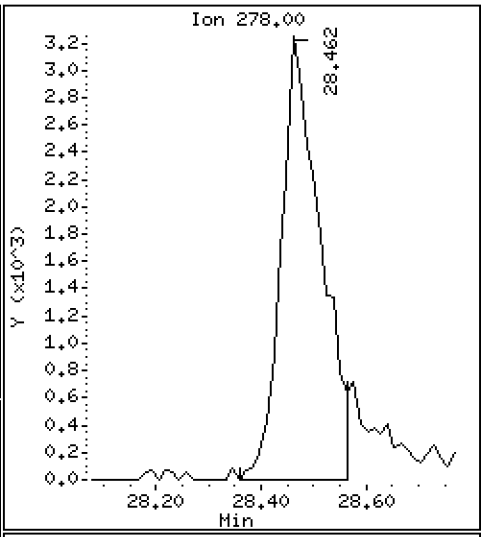
Column phase: ZB-5msi

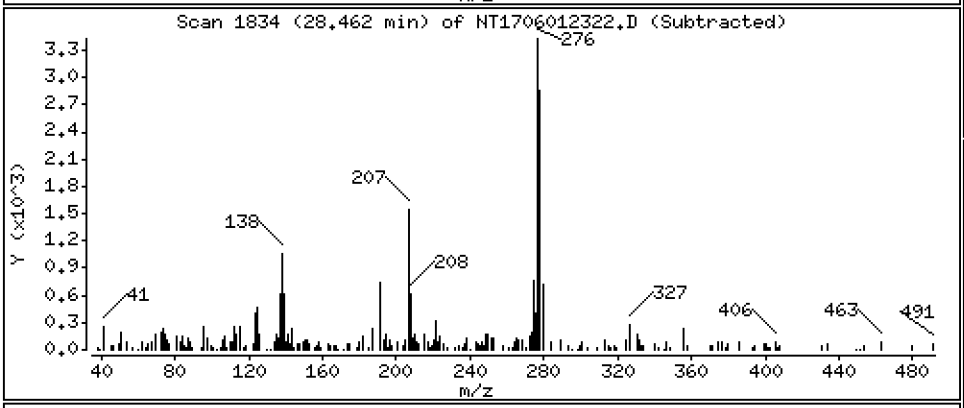
Column diameter: 0.25

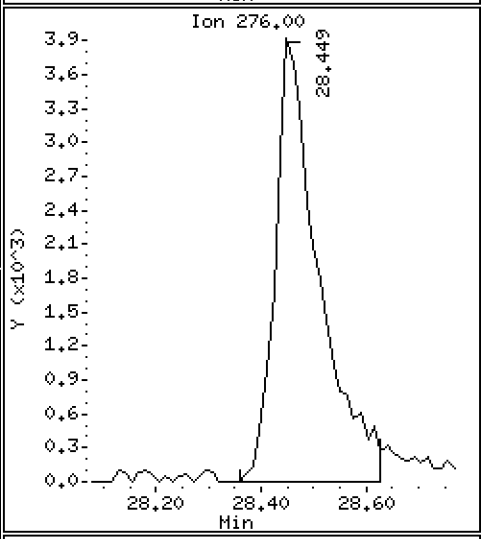
79 Dibenzo(a,h)anthracene

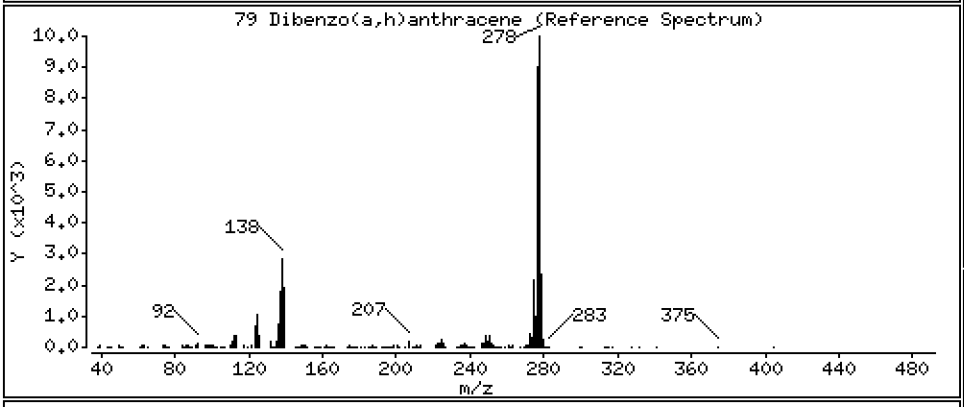
Concentration: 0.1458 ug/mL

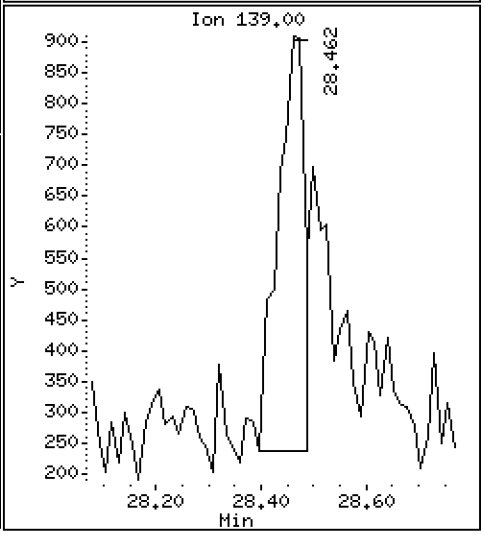


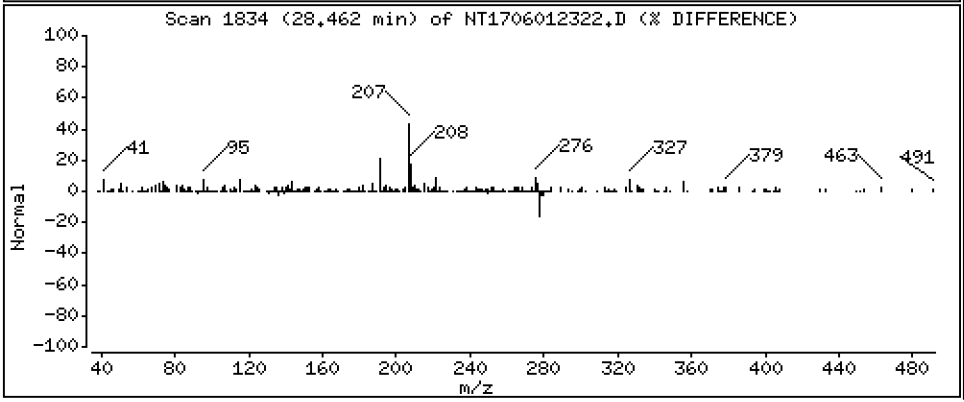












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

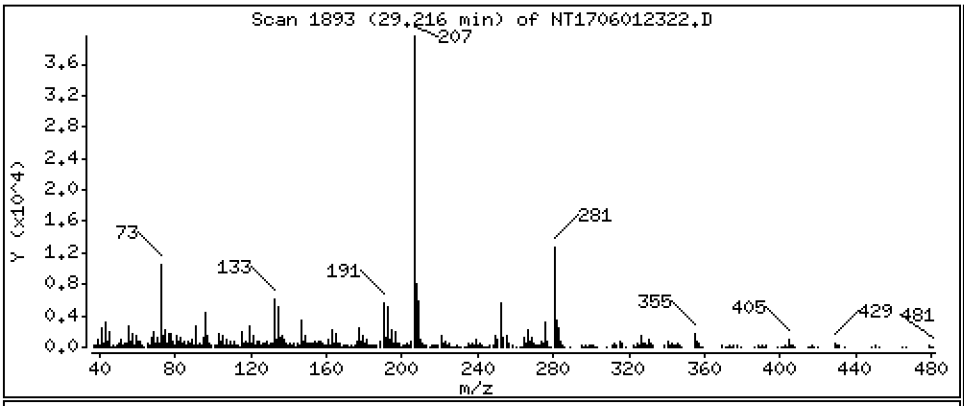
Operator: VTS

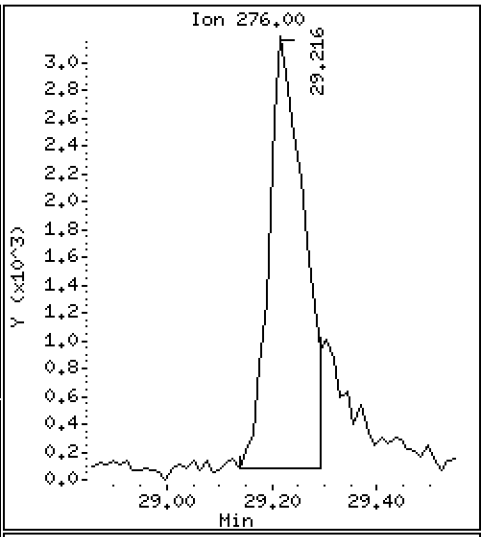
Column phase: ZB-5msi

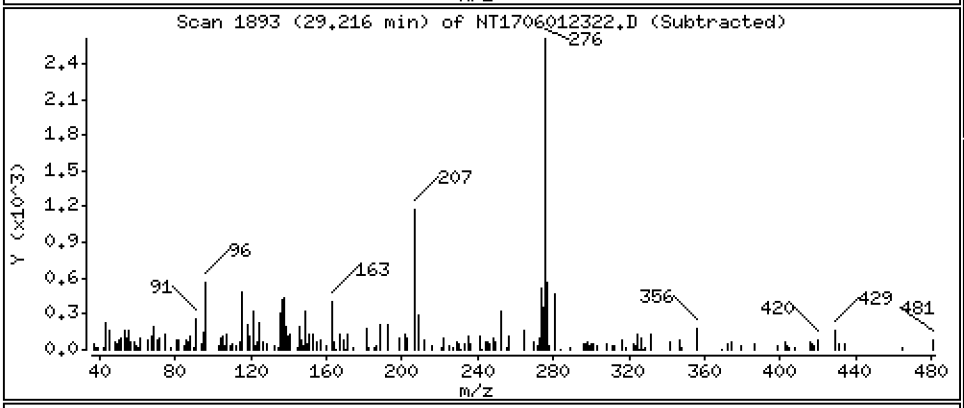
Column diameter: 0.25

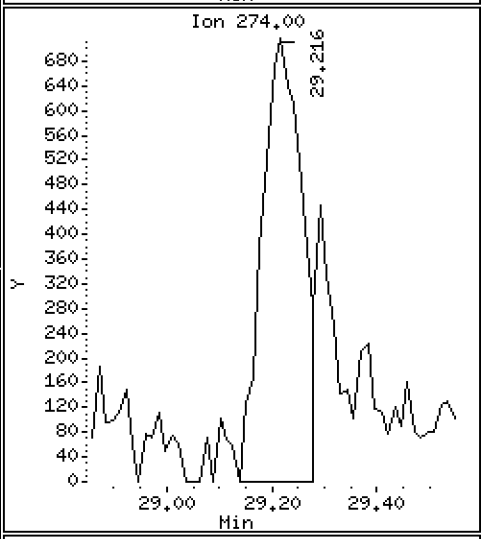
80 Benzo(g,h,i)perylene

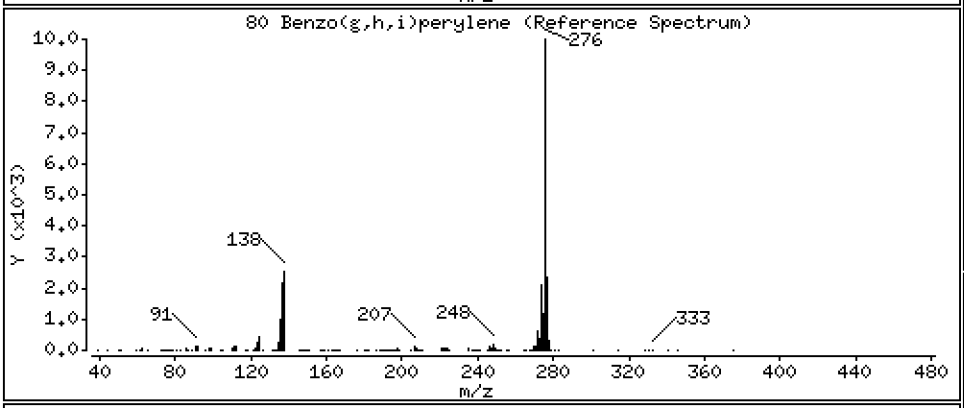
Concentration: 0.1250 ug/mL

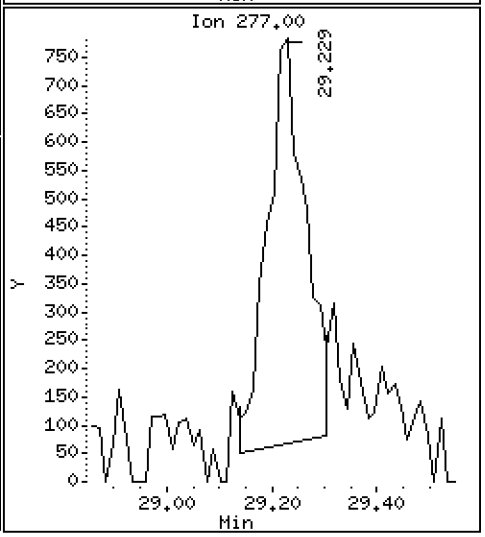


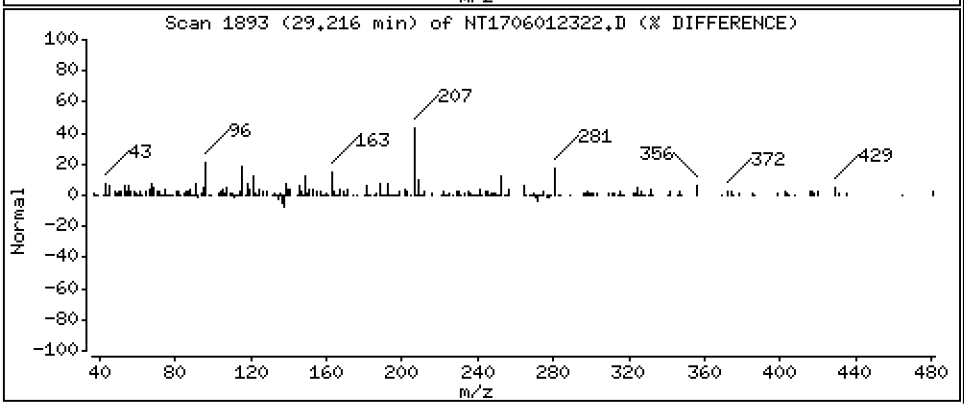












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

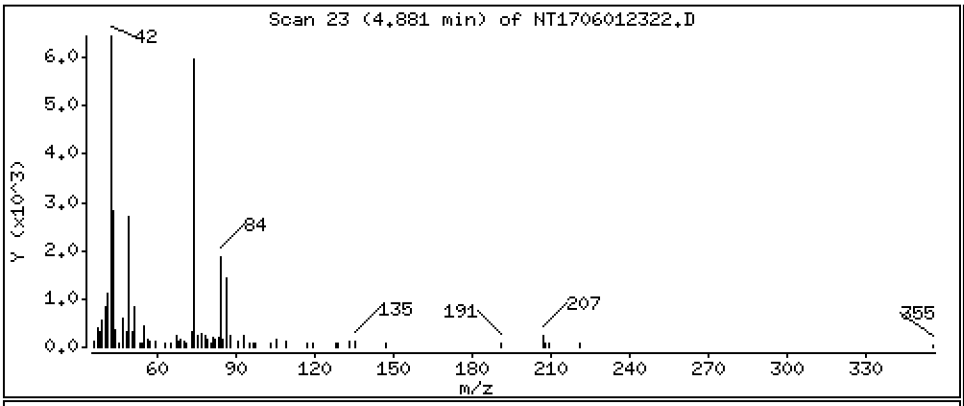
Operator: VTS

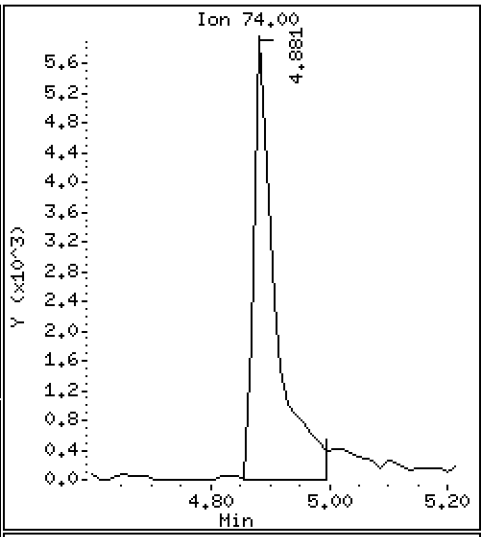
Column phase: ZB-5msi

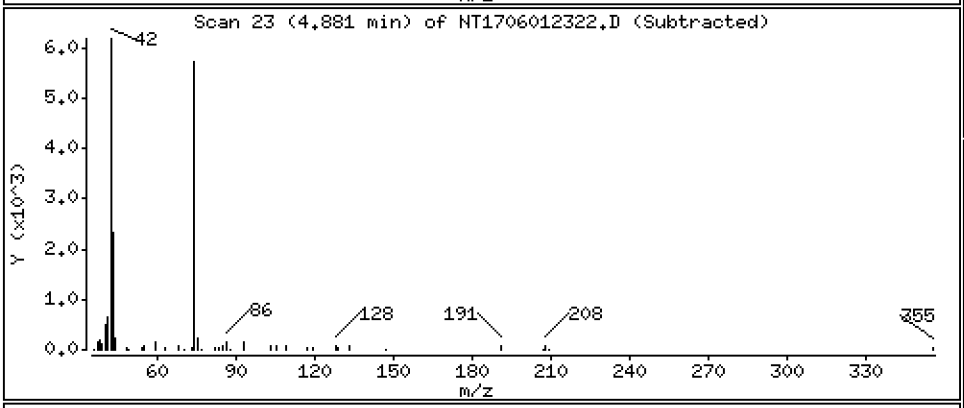
Column diameter: 0.25

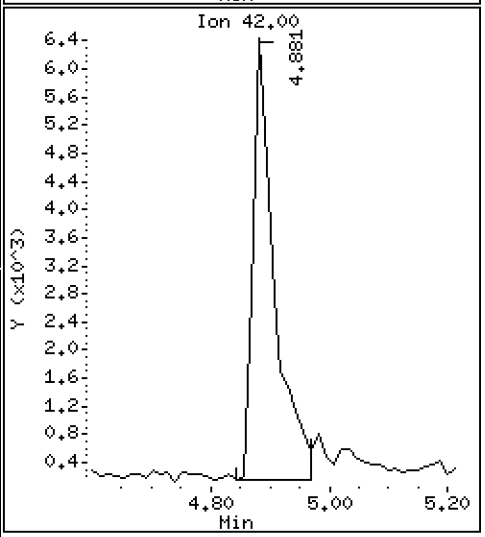
90 N-Nitrosodimethylamine

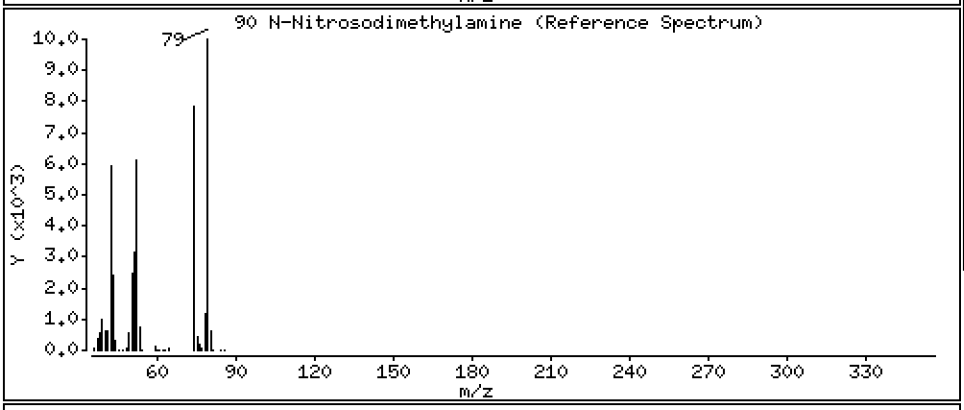
Concentration: 0.2630 ug/mL

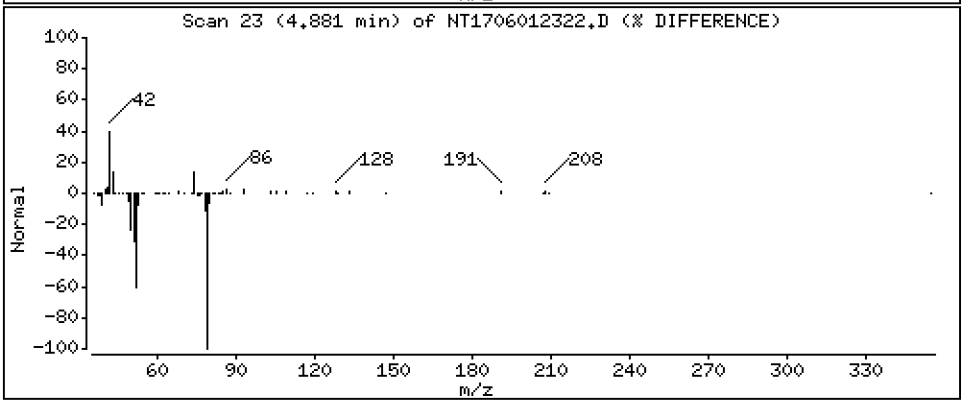












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

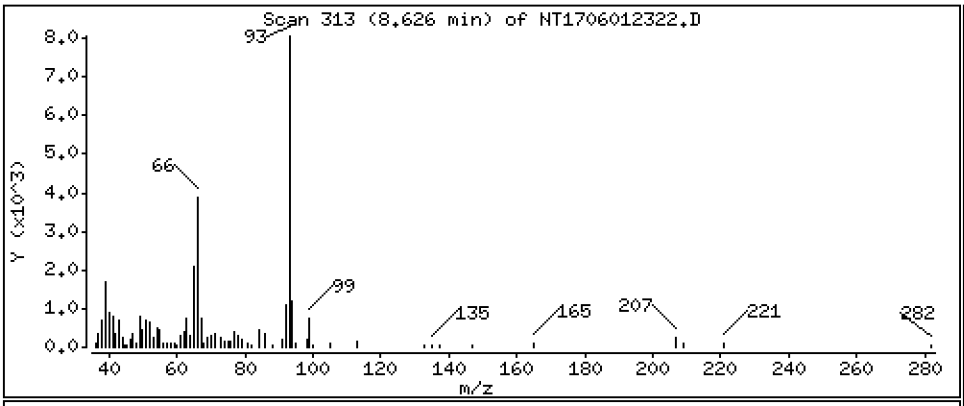
Operator: VTS

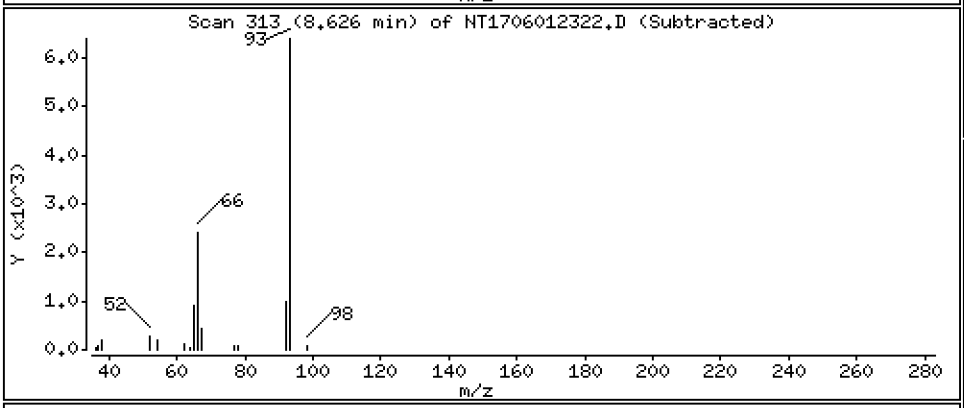
Column phase: ZB-5msi

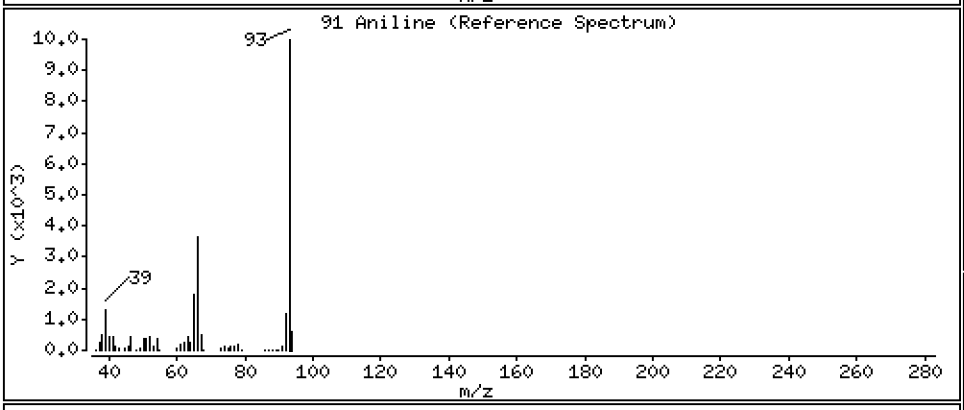
Column diameter: 0.25

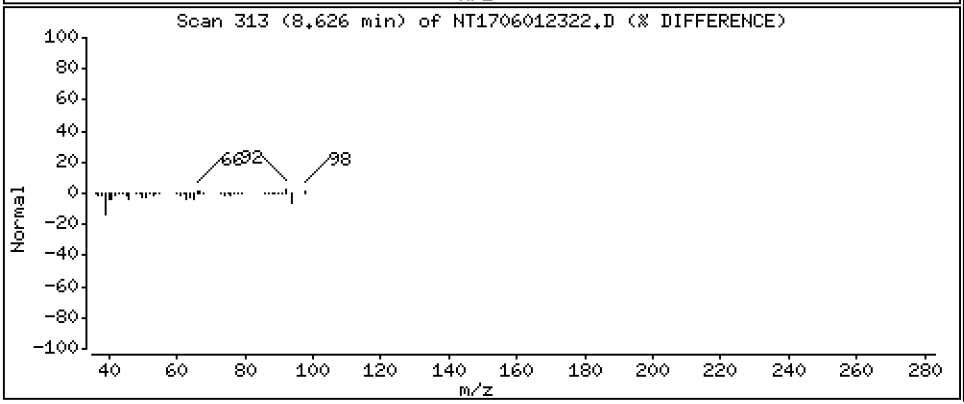
91 Aniline

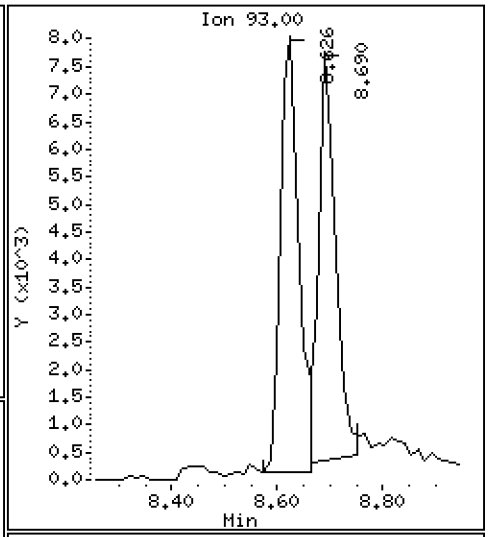
Concentration: 0.1895 ug/mL

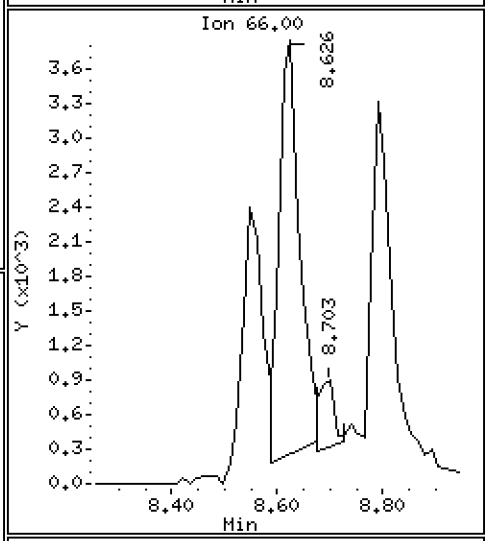


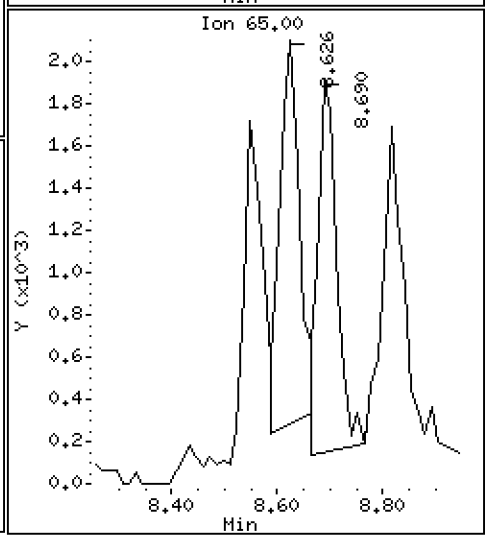












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

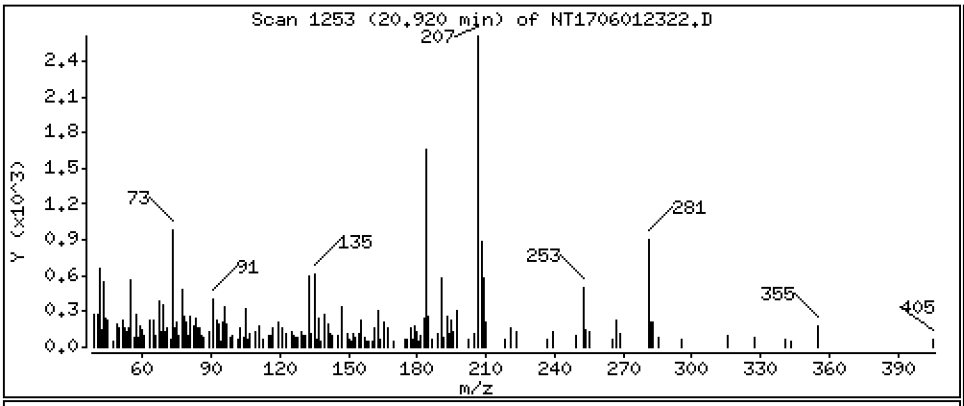
Operator: VTS

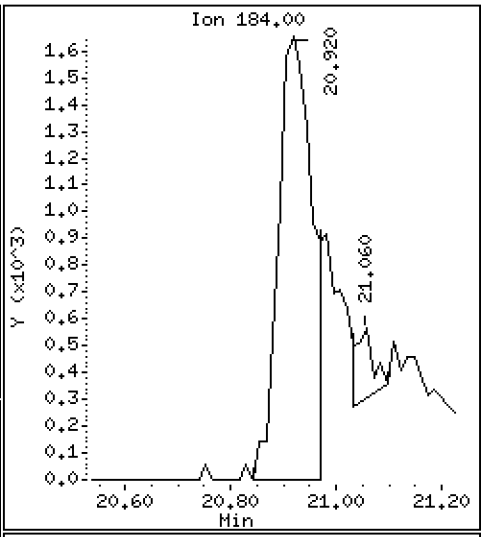
Column phase: ZB-5msi

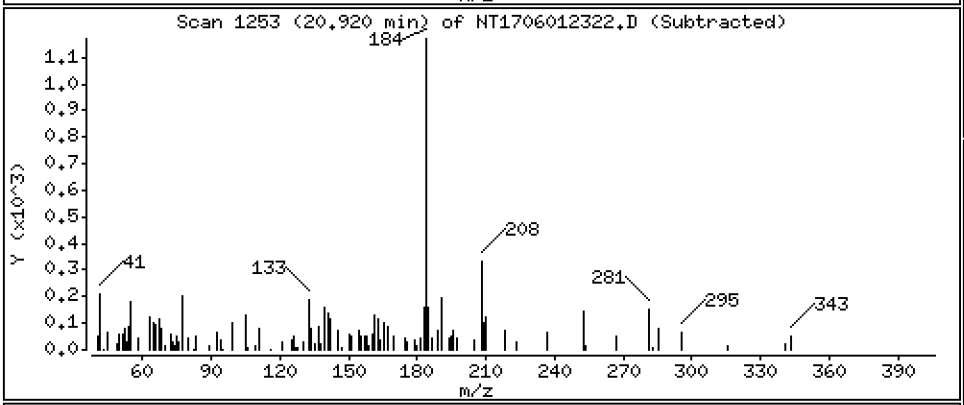
Column diameter: 0.25

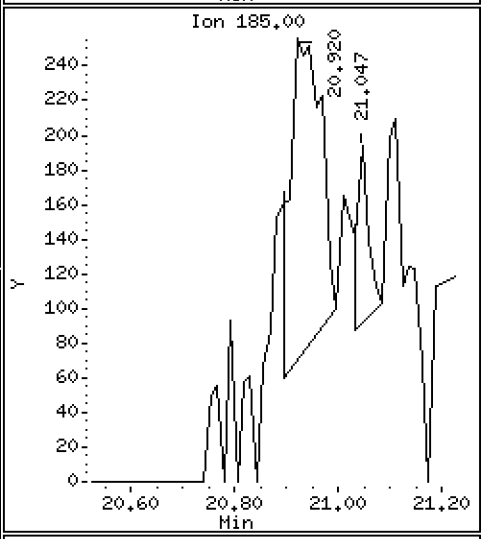
93 Benzidine

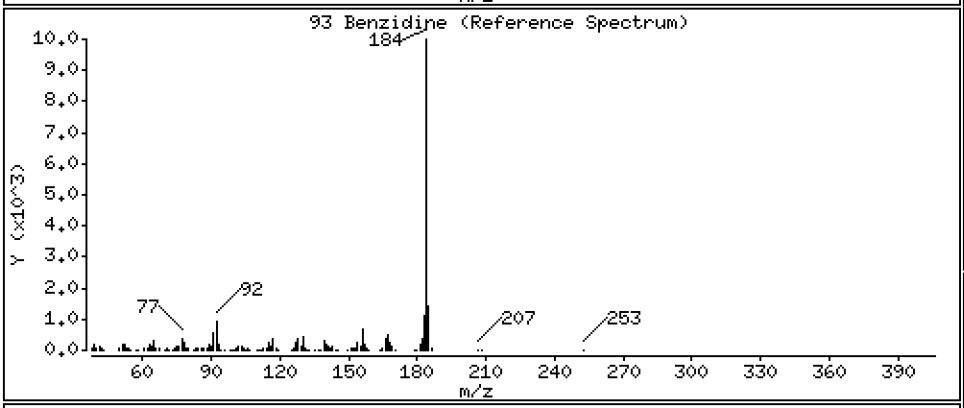
Concentration: 0.1449 ug/mL

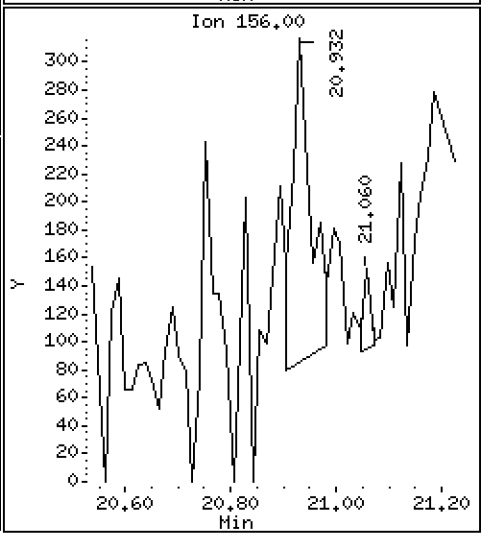


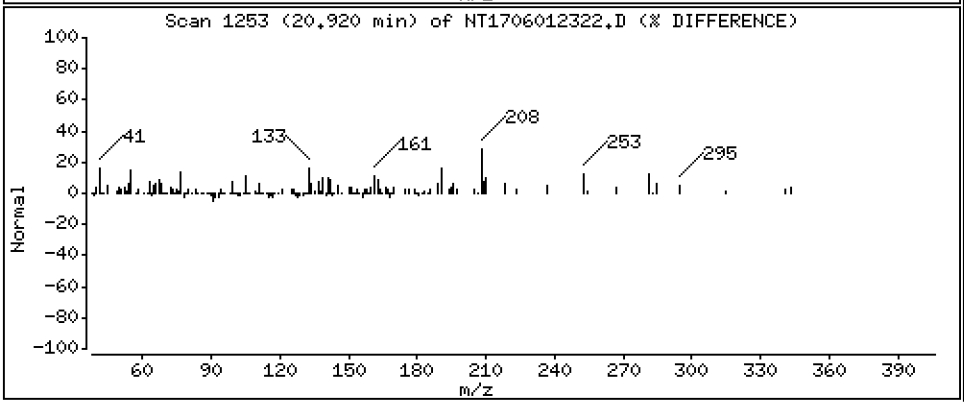












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

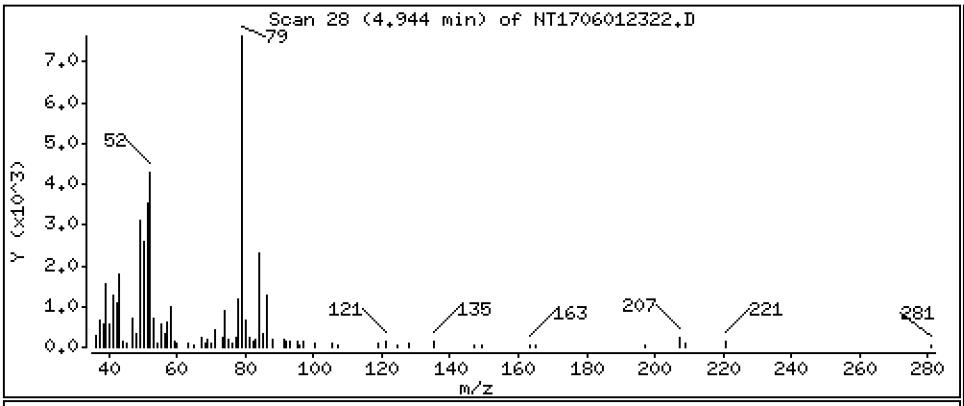
Operator: VTS

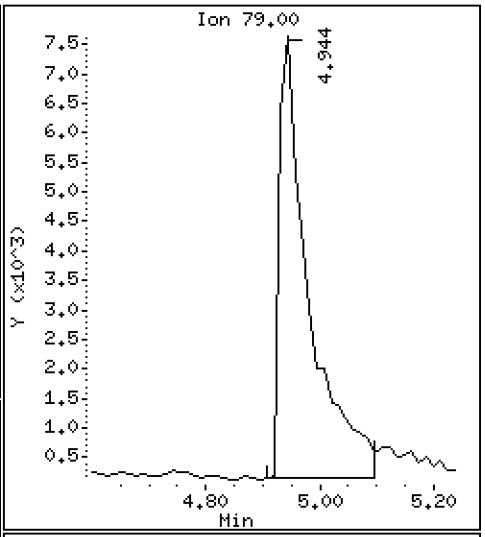
Column phase: ZB-5msi

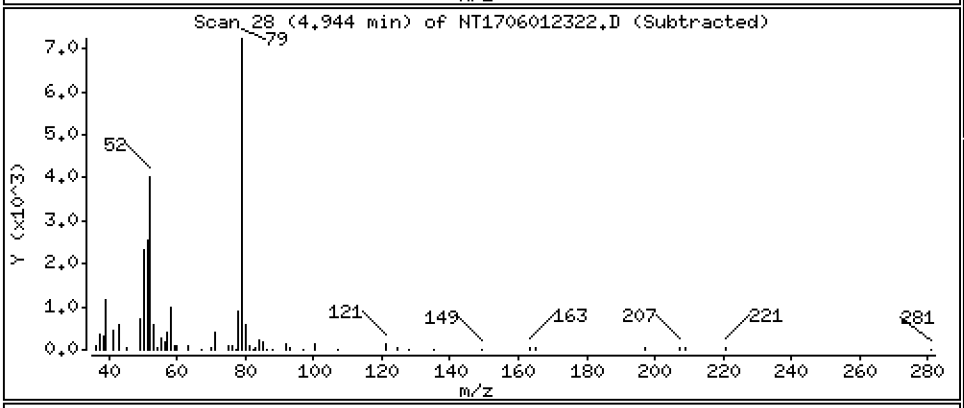
Column diameter: 0.25

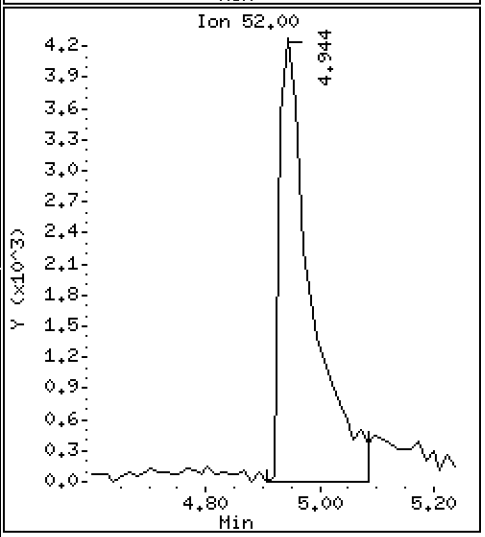
103 Pyridine

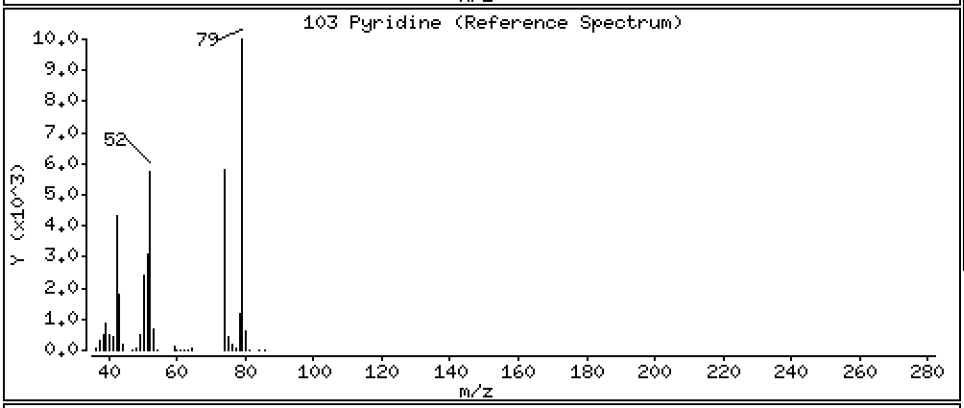
Concentration: 0.2893 ug/mL

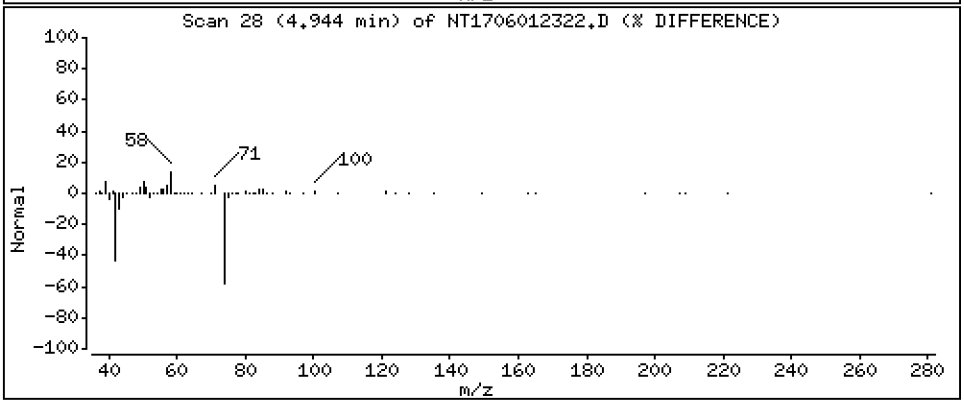












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

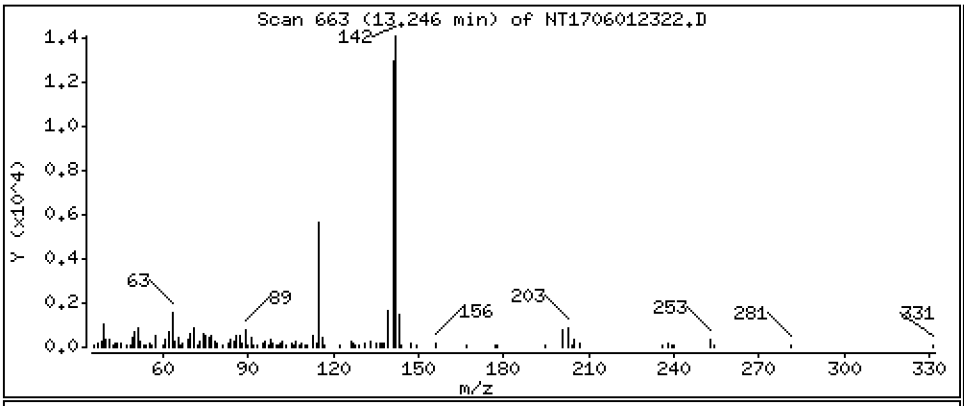
Operator: VTS

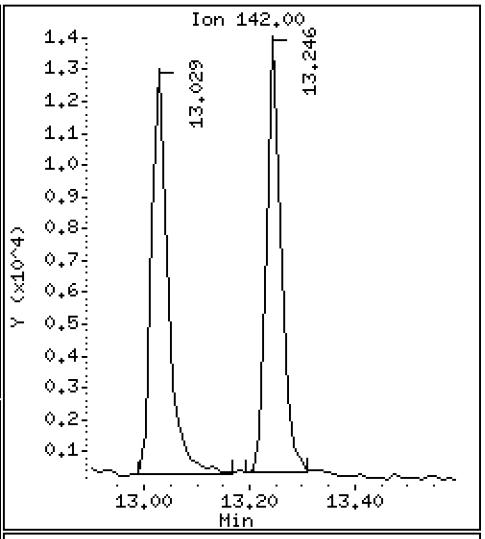
Column phase: ZB-5msi

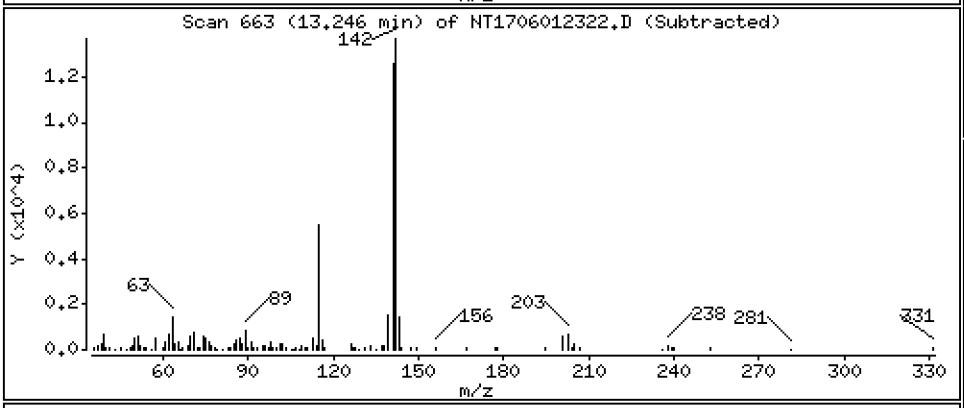
Column diameter: 0.25

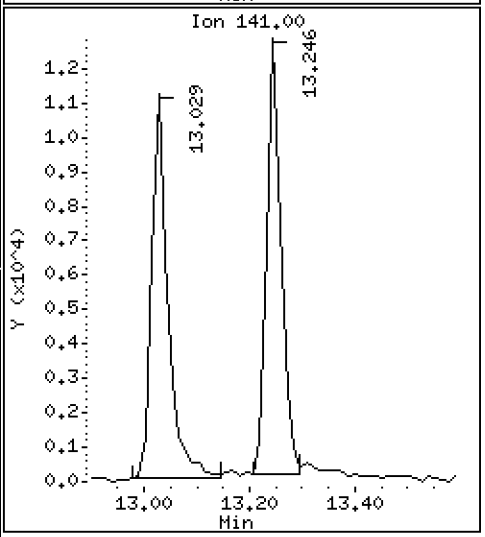
105 1-methylnaphthalene

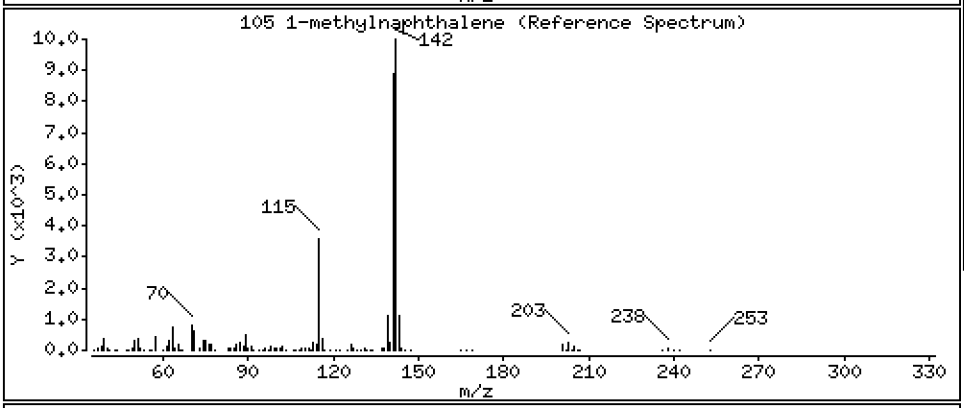
Concentration: 0.1755 ug/mL

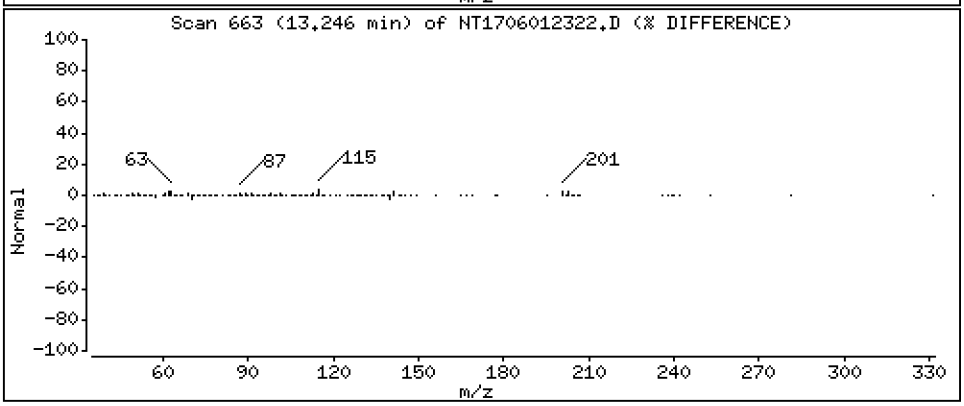












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

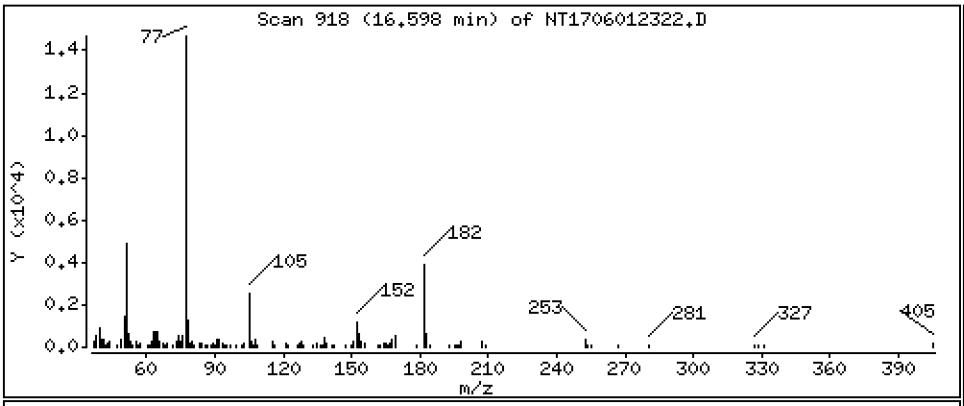
Operator: VTS

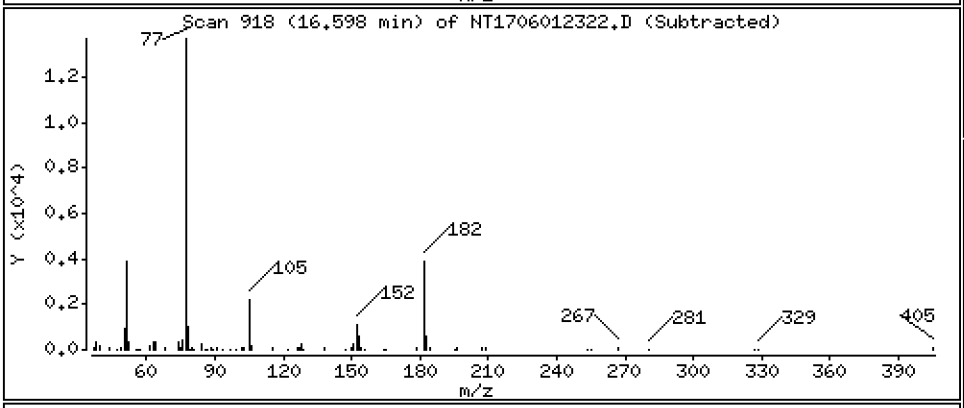
Column phase: ZB-5msi

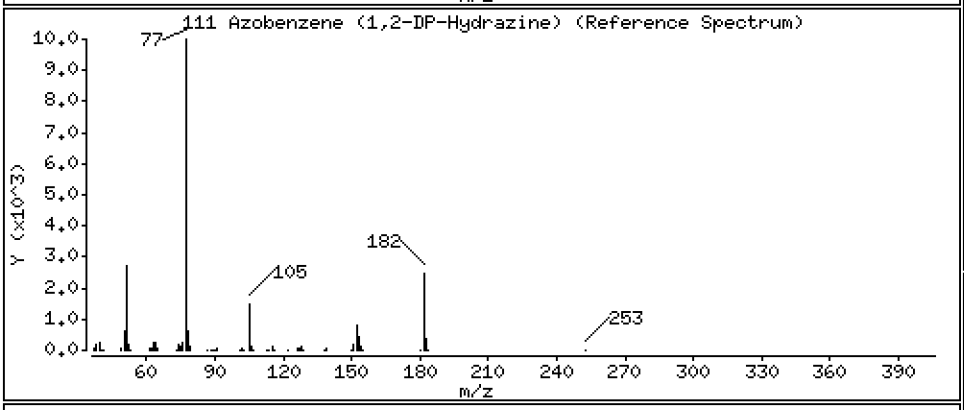
Column diameter: 0.25

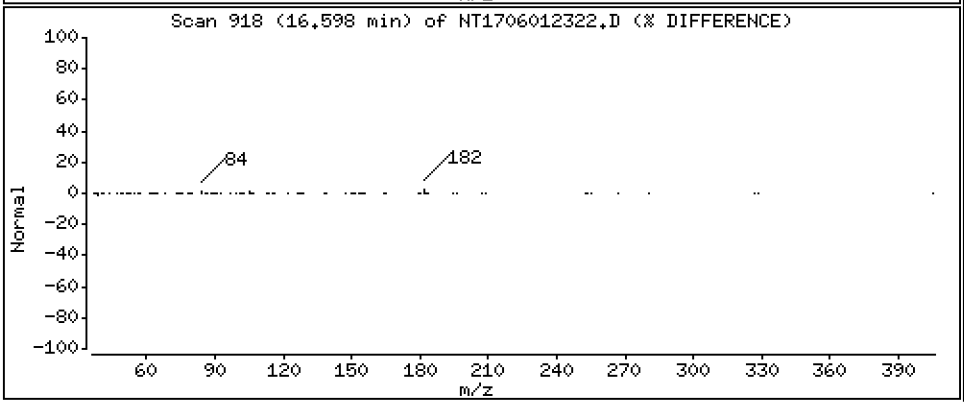
111 Azobenzene (1,2-DP-Hydrazine)

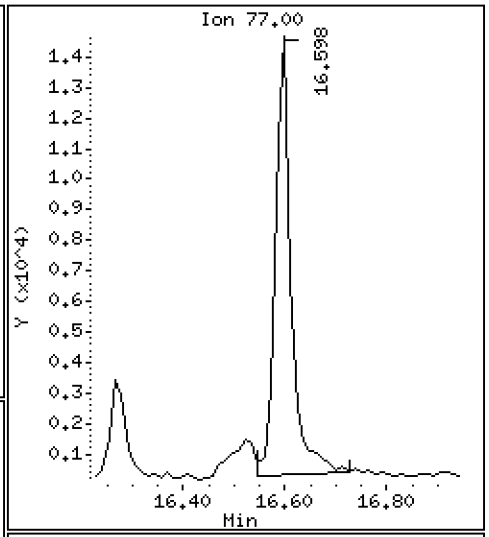
Concentration: 0.1931 ug/mL

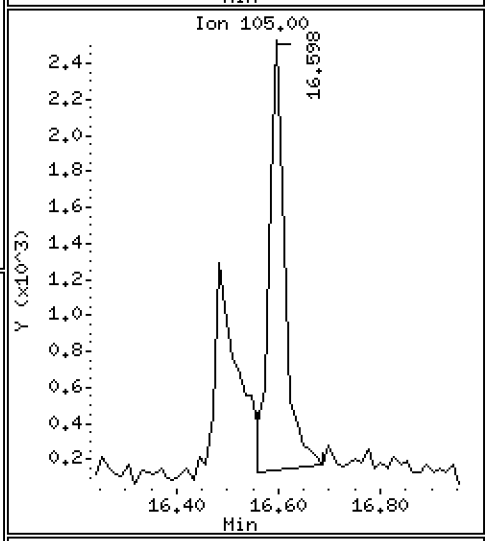


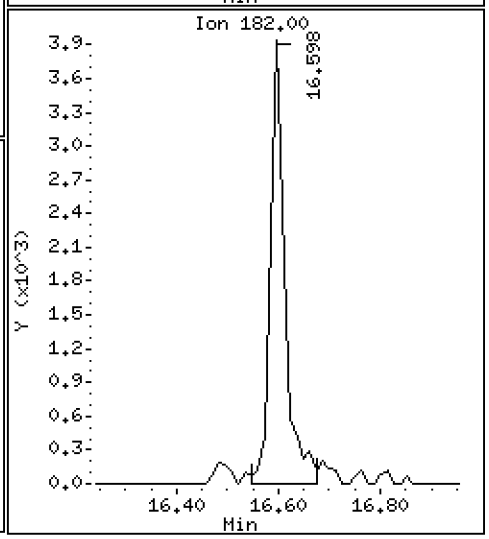












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

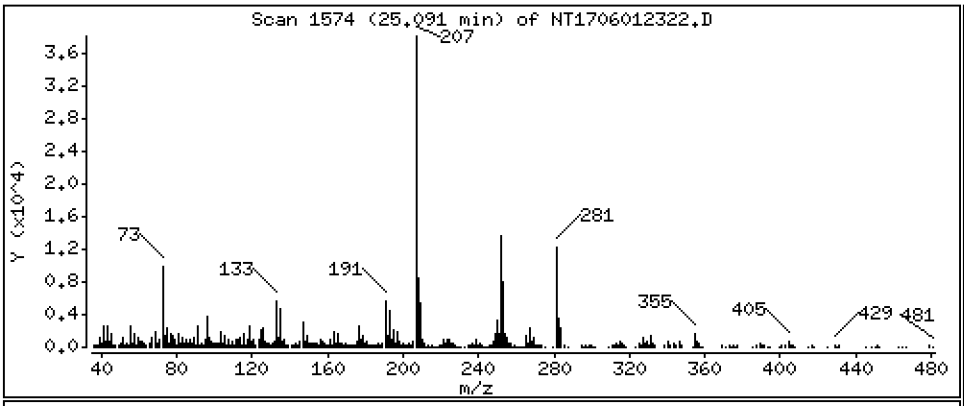
Operator: VTS

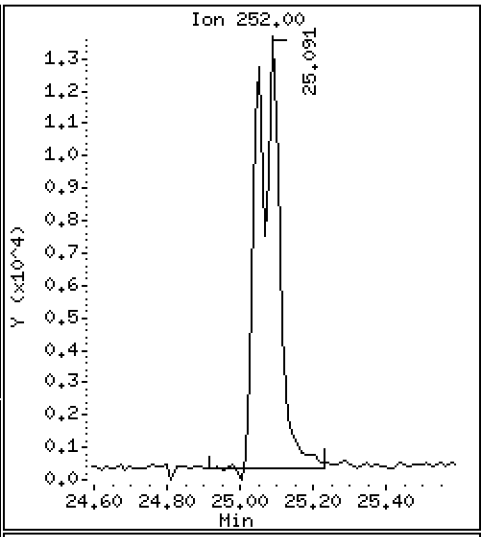
Column phase: ZB-5msi

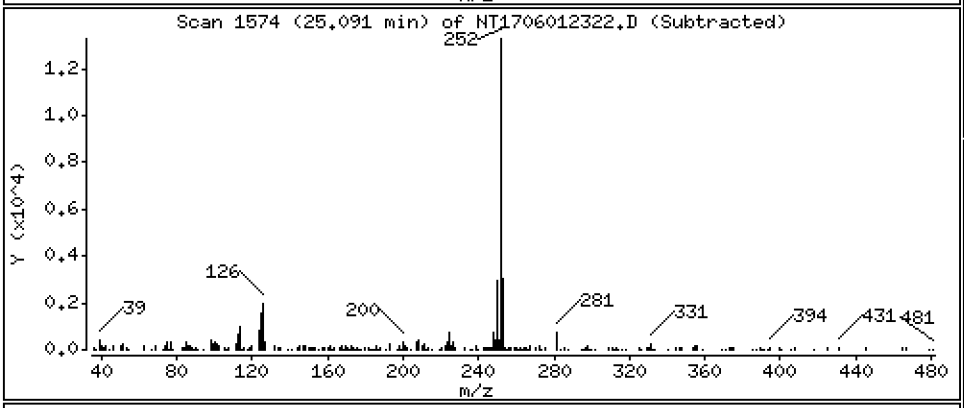
Column diameter: 0.25

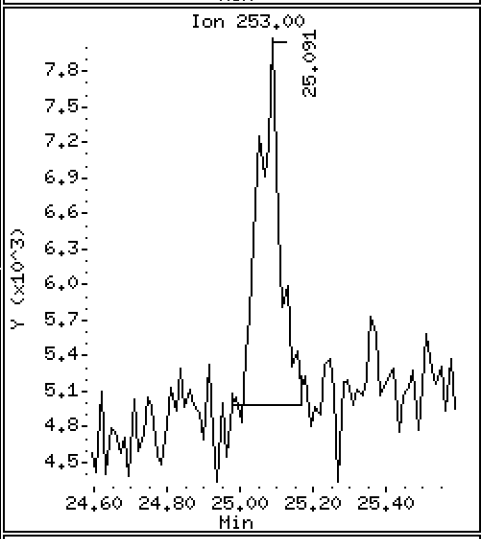
187 Total Benzofluoranthenes

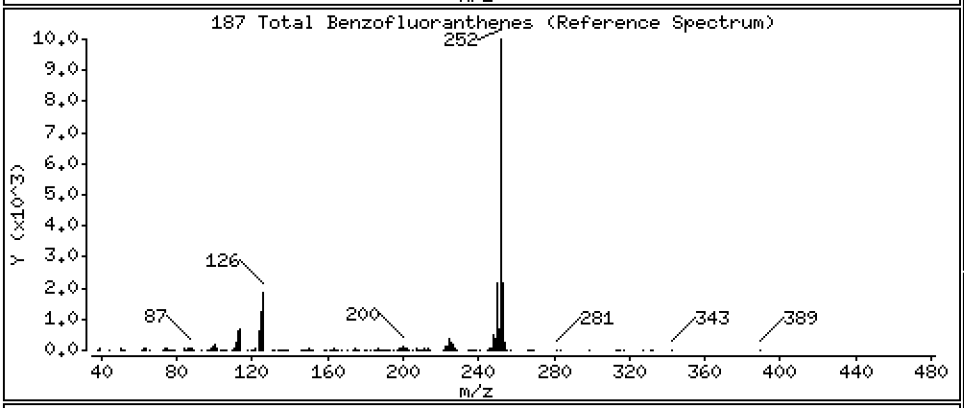
Concentration: 0.4136 ug/mL

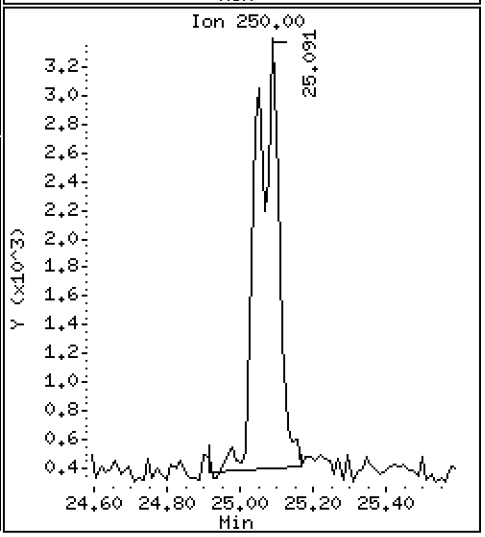


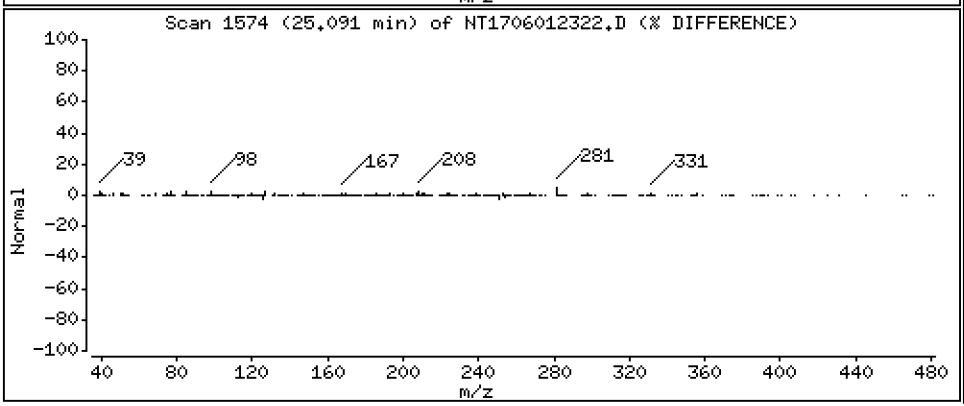












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

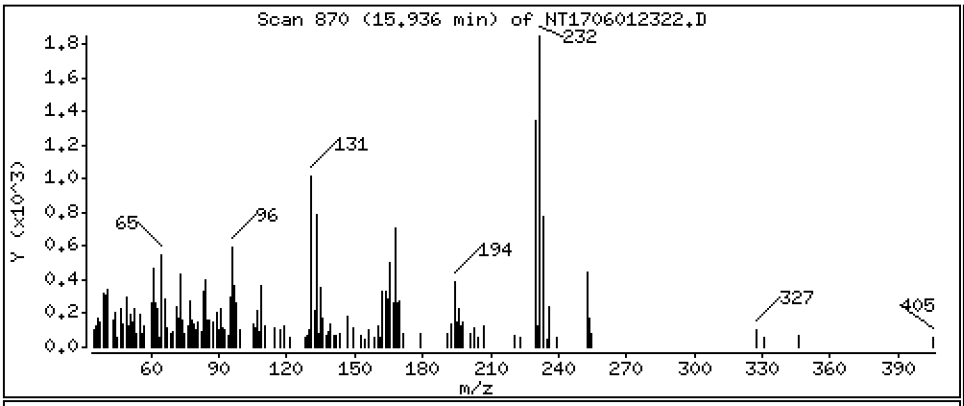
Operator: VTS

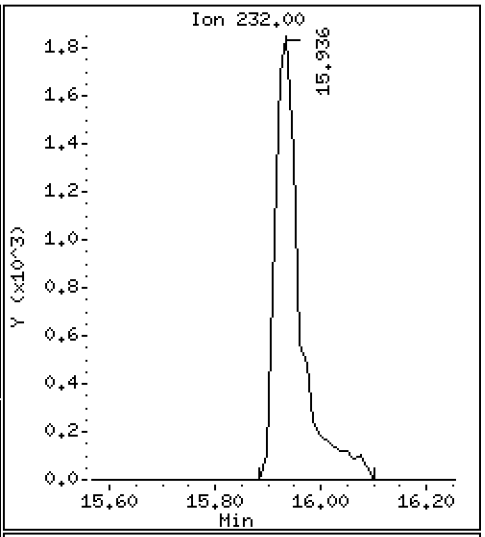
Column phase: ZB-5msi

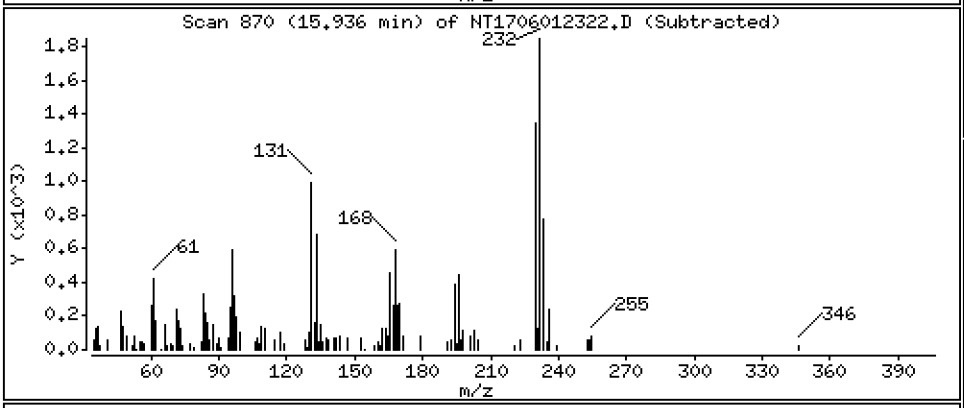
Column diameter: 0.25

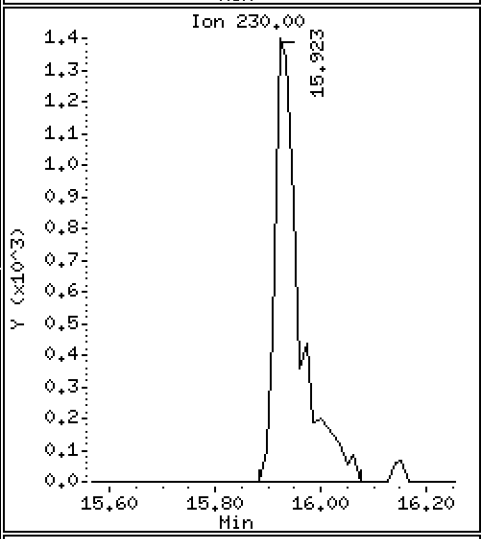
120 2,3,4,6-Tetrachlorophenol

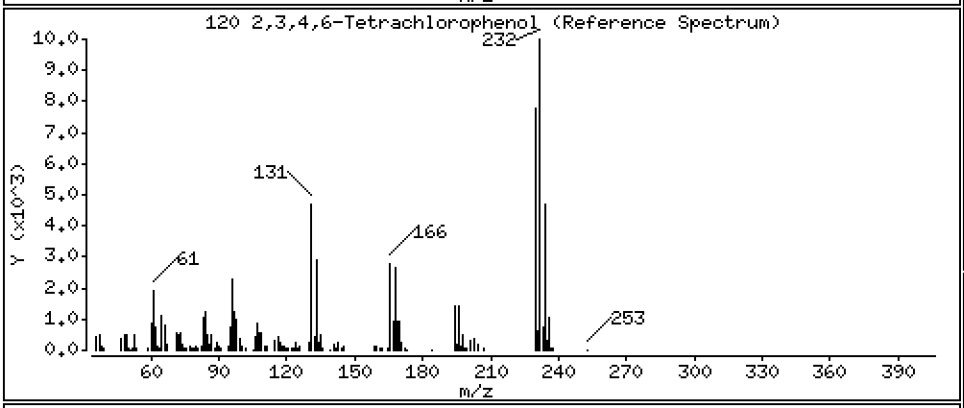
Concentration: 0.1285 ug/mL

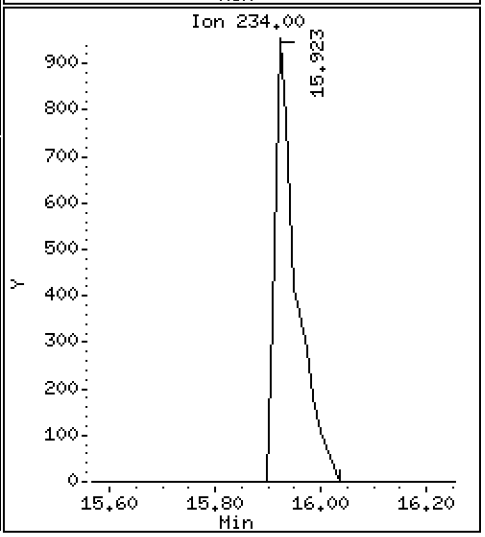


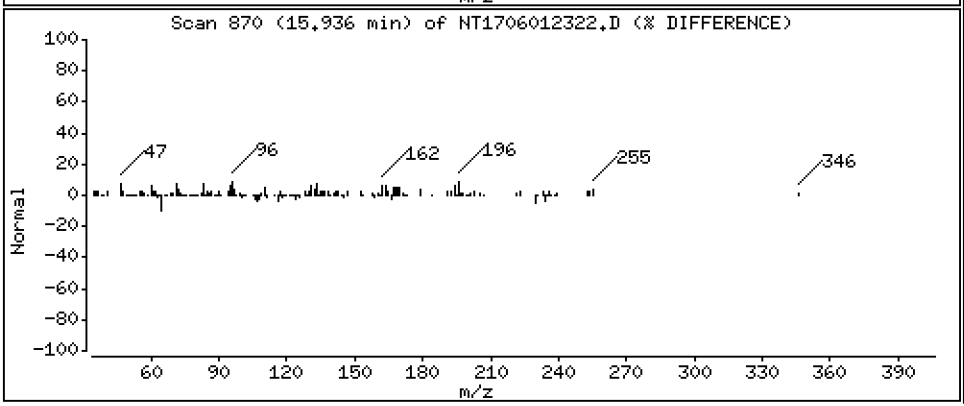












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D
Lab Smp Id: BLE0008-LCV2
Inj Date : 02-JUN-2023 01:06
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0008-LCV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.982	6.944	(0.764)	15827	0.17990	0.1799
$	2 Phenol-d5	99	8.536	8.511	(0.934)	22588	0.19402	0.1940
	3 Phenol	94	8.549	8.536	(0.936)	19090	0.15481	0.1548(M)
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	22506	0.24134	0.2413
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	17793	0.19793	0.1979
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	18506	0.17971	0.1797
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	19068	0.18296	0.1830
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	268750	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	21973	0.21139	0.2114
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	12642	0.19287	0.1929
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	18454	0.18886	0.1889
	11 Benzyl alcohol	108	9.519	9.417	(1.042)	3569	0.06216	0.06216
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	5370	0.19498	0.1950
	13 2-Methylphenol	108	9.659	9.634	(1.057)	11158	0.12312	0.1231
	17 Hexachloroethane	117	10.094	10.094	(1.105)	6830	0.16426	0.1643
	16 N-Nitroso-di-n-propylamine	70	9.966	9.953	(1.091)	10491	0.15130	0.1513
	15 4-Methylphenol	108	9.941	9.902	(1.088)	8938	0.09686	0.09686
$	18 Nitrobenzene-d5	82	10.234	10.222	(0.882)	17662	0.19300	0.1930
	19 Nitrobenzene	77	10.273	10.260	(0.886)	16058	0.18392	0.1839
	20 Isophorone	82	10.707	10.707	(0.923)	20930	0.17512	0.1751
	21 2-Nitrophenol	139	10.899	10.873	(0.940)	8258	0.19629	0.1963
	22 2,4-Dimethylphenol	107	10.950	10.937	(0.944)	22209	0.27189	0.2719
	23 Bis(2-Chloroethoxy)methane	93	11.128	11.116	(0.959)	11645	0.15898	0.1590
	24 Benzoic acid	105	11.243	11.192	(0.969)	7707	0.14026	0.1403(MH)
	25 2,4-Dichlorophenol	162	11.384	11.333	(0.981)	14100	0.21481	0.2148
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	13882	0.19473	0.1947
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	804059	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	43885	0.19847	0.1985
	29 4-Chloroaniline	127	11.804	11.766	(1.018)	13777	0.15807	0.1581
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	7991	0.22629	0.2263
	31 4-Chloro-3-methylphenol	107	12.773	12.735	(1.101)	14840	0.20997	0.2100
	32 2-Methylnaphthalene	142	13.028	13.016	(1.123)	28264	0.17853	0.1785
	33 Hexachlorocyclopentadiene	237	13.475	13.487	(0.887)	599	0.01538	0.01538

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.653	13.640	(0.899)	13032	0.29743	0.2974
	35	2,4,5-Trichlorophenol	196	13.768	13.717	(0.907)	13036	0.28105	0.2810
$	36	2-Fluorobiphenyl	172	13.793	13.793	(0.908)	31120	0.18863	0.1886
	37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	23870	0.17835	0.1783
	38	2-Nitroaniline	65	14.304	14.278	(0.942)	11731	0.25880	0.2588
	39	Dimethylphthalate	163	14.699	14.686	(0.968)	28912	0.20065	0.2006
	40	Acenaphthylene	152	14.878	14.878	(0.980)	47114	0.22167	0.2217
	41	2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	12011	0.35604	0.3560
*	42	Acenaphthene-d10	164	15.184	15.184	(1.000)	418780	4.00000	
	43	3-Nitroaniline	138	15.171	15.133	(0.999)	4972	0.15913	0.1591
	44	Acenaphthene	153	15.247	15.247	(1.004)	27228	0.20494	0.2049
	45	2,4-Dinitrophenol	184	15.413	15.337	(1.015)	3307	0.16263	0.1626(M)
	46	Dibenzofuran	168	15.579	15.579	(1.026)	35312	0.19043	0.1904
	47	4-Nitrophenol	109	15.630	15.464	(1.029)	1432	0.06900	0.06900(M)
	48	2,4-Dinitrotoluene	165	15.655	15.642	(1.031)	12531	0.28376	0.2838
	50	Diethylphthalate	149	16.140	16.140	(1.063)	32525	0.23146	0.2315
	49	Fluorene	166	16.280	16.280	(1.072)	29231	0.16581	0.1658
	51	4-Chlorophenyl-phenylether	204	16.280	16.267	(1.072)	12774	0.15760	0.1576
	52	4-Nitroaniline	138	16.458	16.407	(1.084)	5430	0.18360	0.1836
	53	4,6-Dinitro-2-methylphenol	198	16.496	16.471	(0.906)	8277	0.29178	0.2918
	54	N-Nitrosodiphenylamine	169	16.521	16.521	(0.908)	18793	0.18874	0.1887
$	55	2,4,6-Tribromophenol	330	16.827	16.814	(1.108)	4835	0.26468	0.2647
	56	4-Bromophenyl-phenylether	248	17.272	17.260	(0.949)	7067	0.20256	0.2026
	57	Hexachlorobenzene	284	17.578	17.578	(0.966)	7519	0.21151	0.2115
	58	Pentachlorophenol	266	17.961	17.935	(0.987)	3715	0.18028	0.1803
*	59	Phenanthrene-d10	188	18.203	18.203	(1.000)	710823	4.00000	
	60	Phenanthrene	178	18.241	18.241	(1.002)	42575	0.20527	0.2053
	61	Anthracene	178	18.343	18.343	(1.008)	38656	0.19852	0.1985
	62	Carbazole	167	18.700	18.688	(1.027)	28584	0.24229	0.2423
	63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	42929	0.18258	0.1826
	64	Fluoranthene	202	20.626	20.613	(0.888)	41213	0.19811	0.1981
	65	Pyrene	202	21.047	21.034	(0.907)	44163	0.20941	0.2094
$	66	Terphenyl-d14	244	21.327	21.315	(0.919)	32519	0.21691	0.2169
	67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	17022	0.18034	0.1803
	68	Benzo(a)anthracene	228	23.190	23.190	(0.999)	34295	0.20942	0.2094
*	69	Chrysene-d12	240	23.215	23.215	(1.000)	444729	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.152	23.139	(0.997)	23599	0.74464	0.7446
	71	Chrysene	228	23.254	23.254	(1.002)	33897	0.21997	0.2200
	72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	25575	0.23003	0.2300
*	134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	768456	4.00000	
	73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	42902	0.22025	0.2203
	74	Benzo(b)fluoranthene	252	25.052	25.052	(0.971)	27073	0.17606	0.1761
	75	Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	34735	0.23909	0.2391
	76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	27830	0.22975	0.2298
*	77	Perylene-d12	264	25.805	25.805	(1.000)	387840	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.449	28.423	(1.102)	22858	0.16269	0.1627
	79	Dibenzo(a,h)anthracene	278	28.462	28.423	(1.103)	17194	0.14581	0.1458
	80	Benzo(g,h,i)perylene	276	29.216	29.203	(1.132)	14499	0.12502	0.1250
	90	N-Nitrosodimethylamine	74	4.880	4.867	(0.534)	15435	0.26302	0.2630
	91	Aniline	93	8.626	8.600	(0.944)	19581	0.18949	0.1895
	93	Benzidine	184	20.919	20.881	(0.901)	7472	0.14490	0.1449
	103	Pyridine	79	4.944	4.893	(0.541)	26924	0.28926	0.2893
	105	1-methylnaphthalene	142	13.245	13.245	(1.142)	25781	0.17553	0.1755
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.598	16.585	(1.093)	31672	0.19308	0.1931

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.091	25.091	(0.972)	57091	0.41360	0.4136
120 2,3,4,6-Tetrachlorophenol	232	15.936	15.910	(1.050)	6737	0.12851	0.1285

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012322.D
Lab Smp Id: BLE0008-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	268750	4.57
27 Naphthalene-d8	932905	466453	1865810	804059	-13.81
42 Acenaphthene-d10	509574	254787	1019148	418780	-17.82
59 Phenanthrene-d10	912749	456375	1825498	710823	-22.12
69 Chrysene-d12	578011	289006	1156022	444729	-23.06
134 Di-n-octylphthala	1181490	590745	2362980	768456	-34.96
77 Perylene-d12	513683	256842	1027366	387840	-24.50

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	-0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	-0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012322.D

Lab ID: BLE0008-LCV2
nt17.i, ABN.m, 02-JUN-2023 01:06

RT	CO-ELUTION COMPOUNDS
9.519	1,2-Dichlorobenzene and Benzyl alcohol

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.042	1.031	0.0112	Benzyl alcohol
1.015	1.010	0.0050	2,4-Dinitrophenol
1.029	1.018	0.0109	4-Nitrophenol
0.541	0.536	0.0056	Pyridine

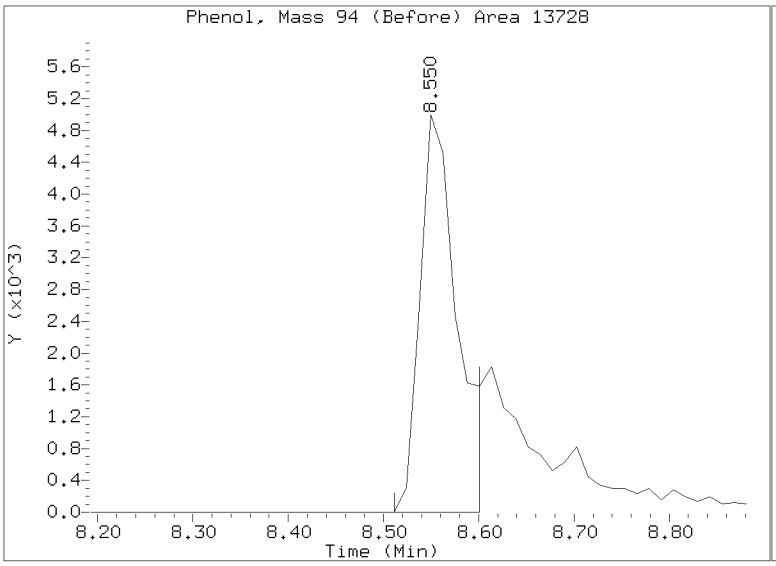
RRT check based on Ccal File: NT1706012320.D

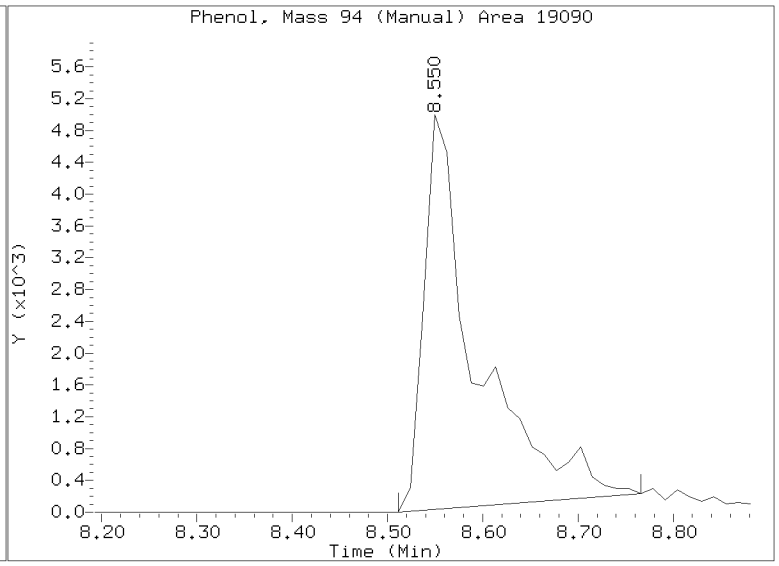
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

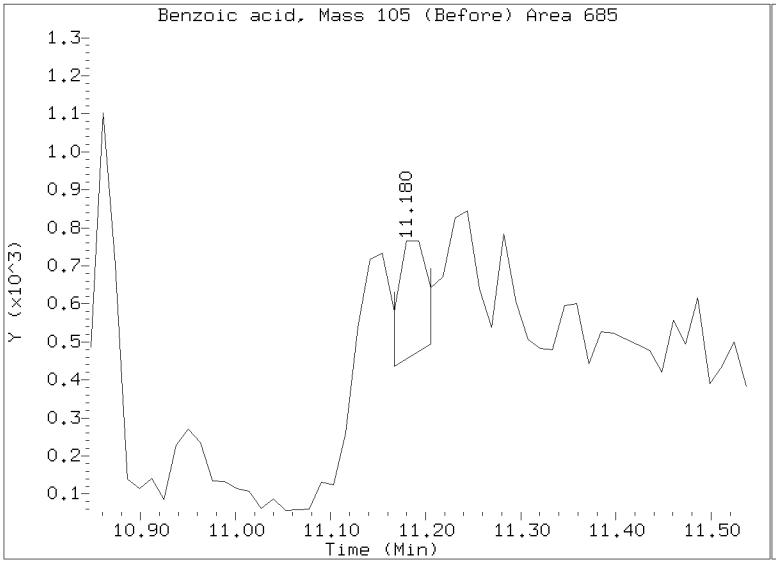
* Only compounds listed in the work order have been verified by the analyst *

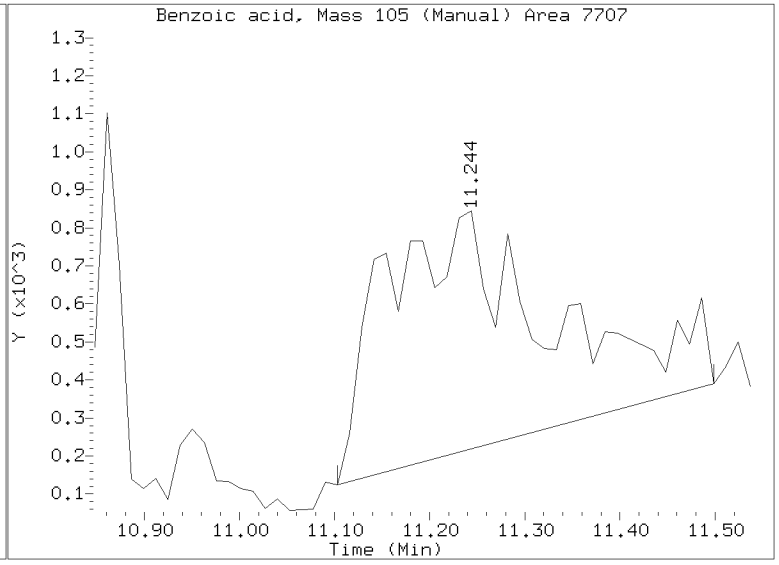
Quant Ion Manual Peak Adjustment Report

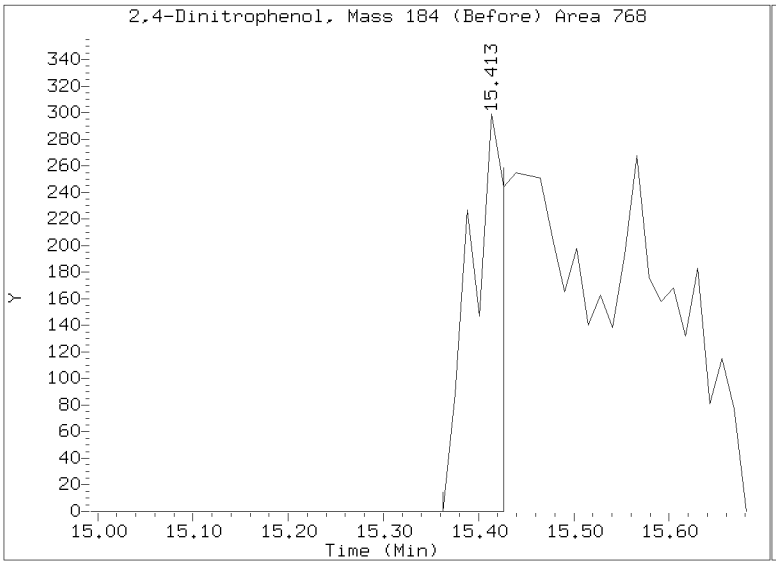
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012322.D
Injection Date: 02-JUN-2023 01:06
Lab ID:BLE0008-LCV2 Client ID:
Report Date: 06/03/2023 10:34

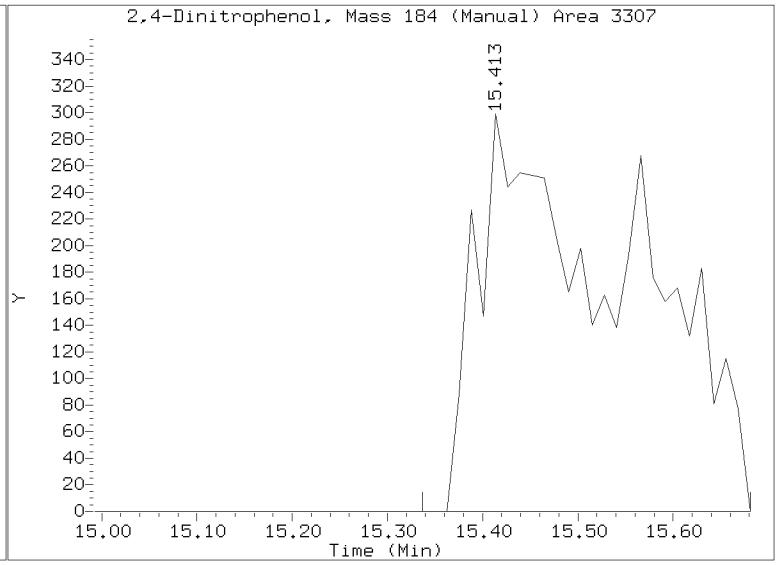






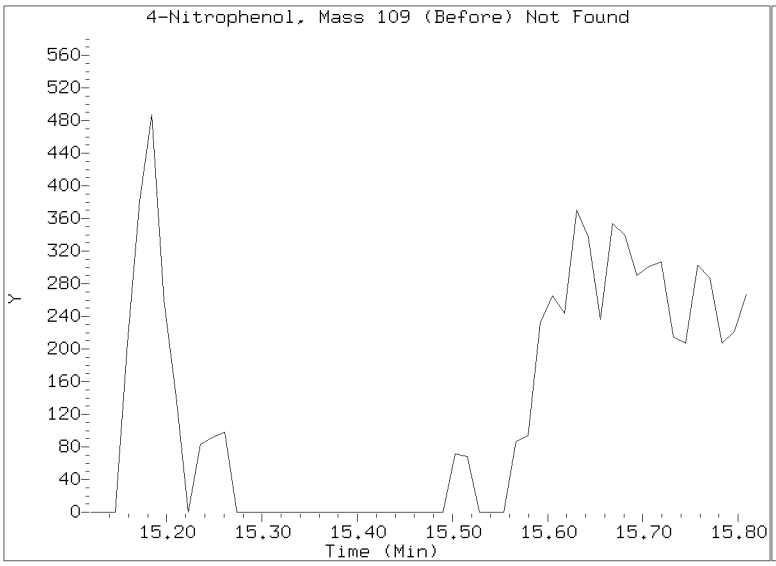


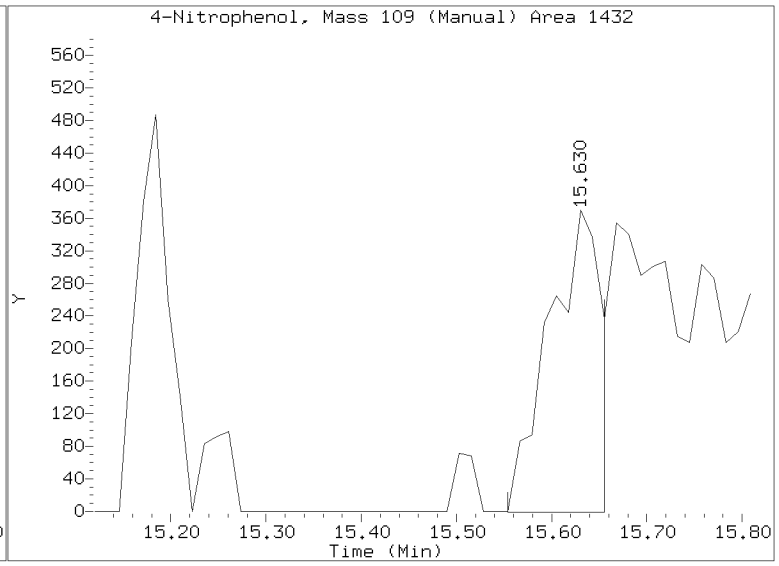




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012322.D
Injection Date: 02-JUN-2023 01:06
Lab ID:BLE0008-LCV2 Client ID:
Report Date: 06/03/2023 10:34





LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLF0008-LCV3
Sequence: SLF0008
Standard ID: L005946

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.20000	0.2	-16.1	50.00
4-Methylphenol	0.20000	0.1	-46.2	50.00
Naphthalene	0.20000	0.2	0.7	50.00
2-Methylnaphthalene	0.20000	0.2	-14.3	50.00
Acenaphthylene	0.20000	0.2	6.1	50.00
Dimethylphthalate	0.20000	0.2	-10.1	50.00
Acenaphthene	0.20000	0.2	0.6	50.00
Dibenzofuran	0.20000	0.2	2.6	50.00
Fluorene	0.20000	0.2	-19.1	50.00
Phenanthrene	0.20000	0.2	-8.1	50.00
Anthracene	0.20000	0.2	-15.8	50.00
Fluoranthene	0.20000	0.2	-1.4	50.00
Pyrene	0.20000	0.2	-1.1	50.00
Butylbenzylphthalate	0.20000	0.2	-0.6	50.00
Benzo(a)anthracene	0.20000	0.2	1.2	50.00
Chrysene	0.20000	0.2	11.9	50.00
bis(2-Ethylhexyl)phthalate	0.20000	0.2	16.3	50.00
Benzofluoranthenes, Total	0.40000	0.4	1.0	50.00
Benzo(a)pyrene	0.20000	0.2	-11.2	50.00
Indeno(1,2,3-cd)pyrene	0.20000	0.1	-43.0	50.00
Dibenzo(a,h)anthracene	0.20000	0.1	-38.0	50.00
Benzo(g,h,i)perylene	0.20000	0.1	-34.2	50.00
2-Fluorophenol	0.30000	0.195	-35.0	50.00
Phenol-d5	0.30000	0.226	-24.6	50.00
2-Chlorophenol-d4	0.30000	0.313	4.5	50.00
1,2-Dichlorobenzene-d4	0.20000	0.211	5.5	50.00
Nitrobenzene-d5	0.20000	0.191	-4.7	50.00
2-Fluorobiphenyl	0.20000	0.213	6.6	50.00
2,4,6-Tribromophenol	0.30000	0.255	-14.9	50.00

LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

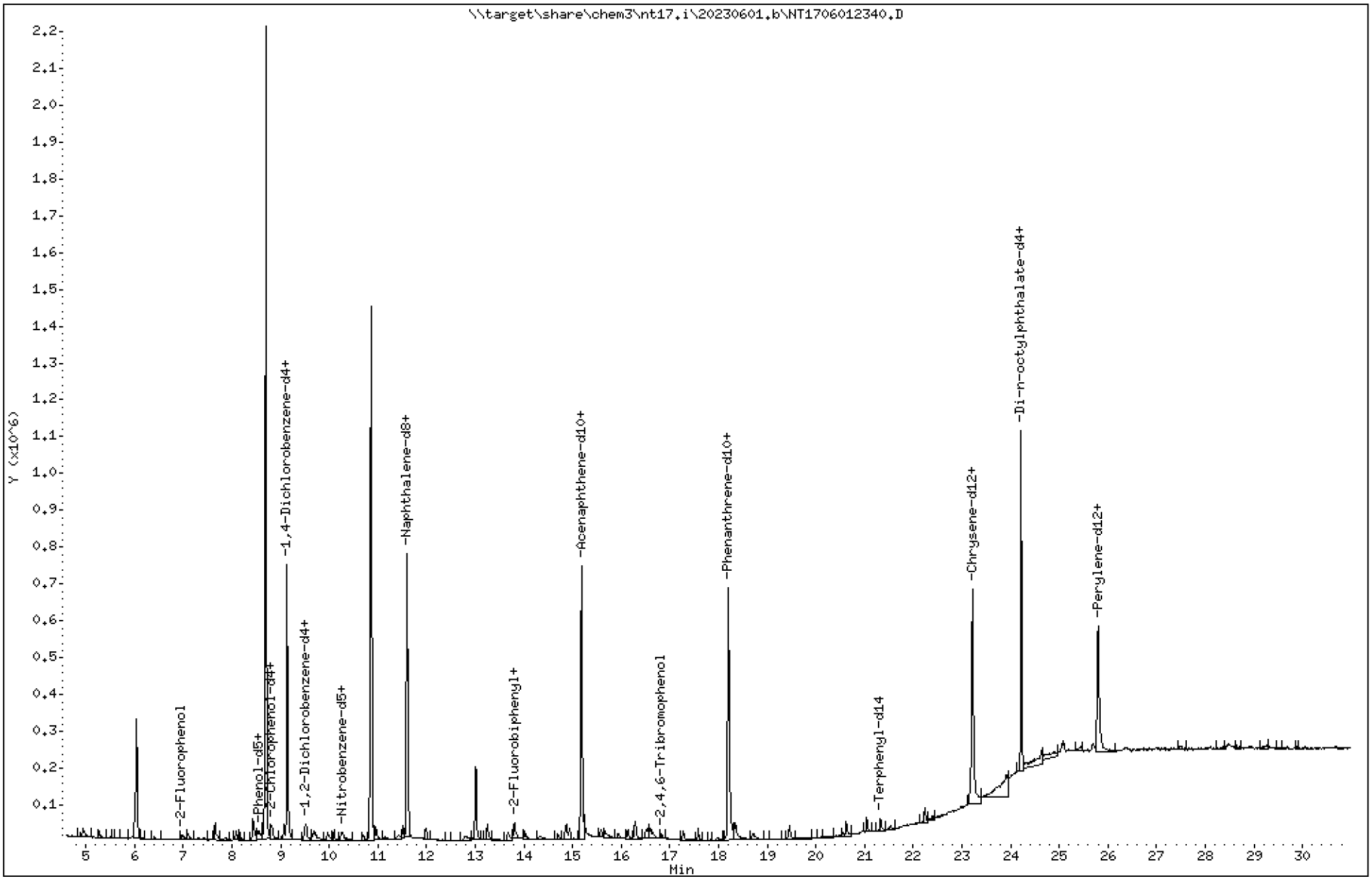
Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00065
Laboratory ID: SLF0008-LCV3
Sequence: SLF0008
Standard ID: L005946

p-Terphenyl-d14	0.20000	0.213	6.6	50.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D
Date : 02-JUN-2023 12:16
Client ID:
Sample Info: SLE0008-LCV3

Instrument: nt17.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

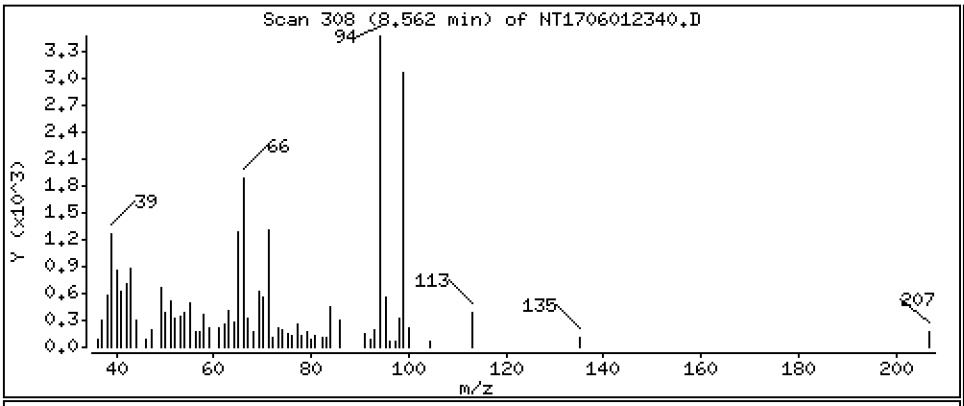
Operator: VTS

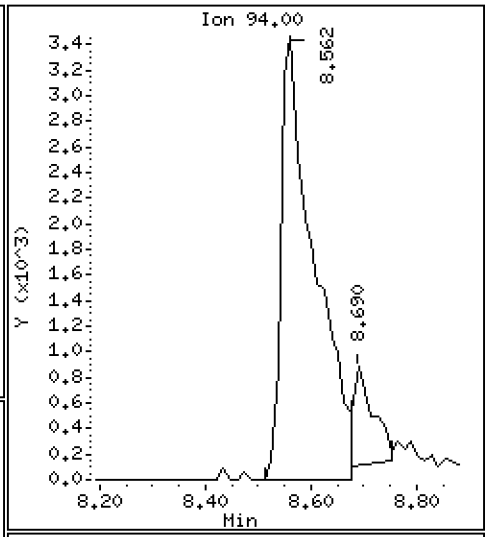
Column phase: ZB-5msi

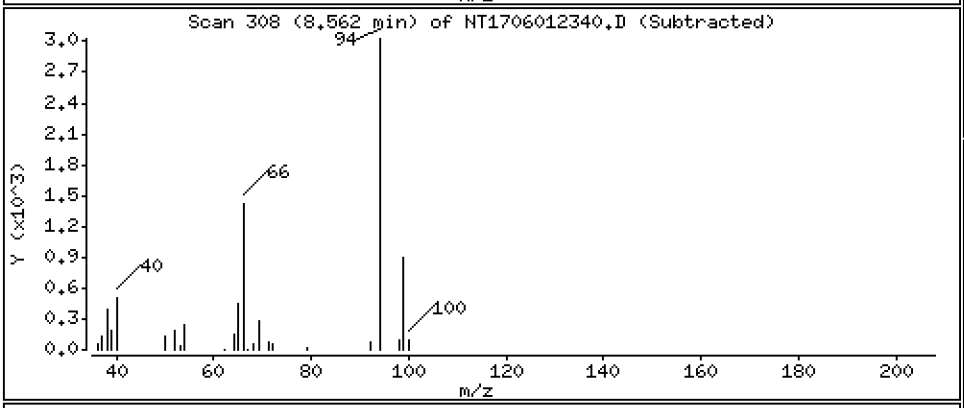
Column diameter: 0.25

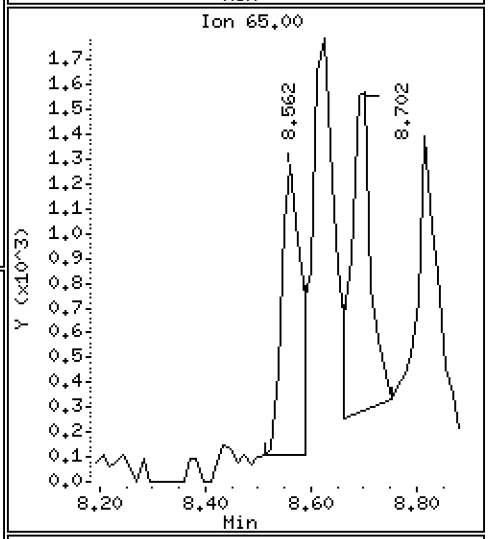
3 Phenol

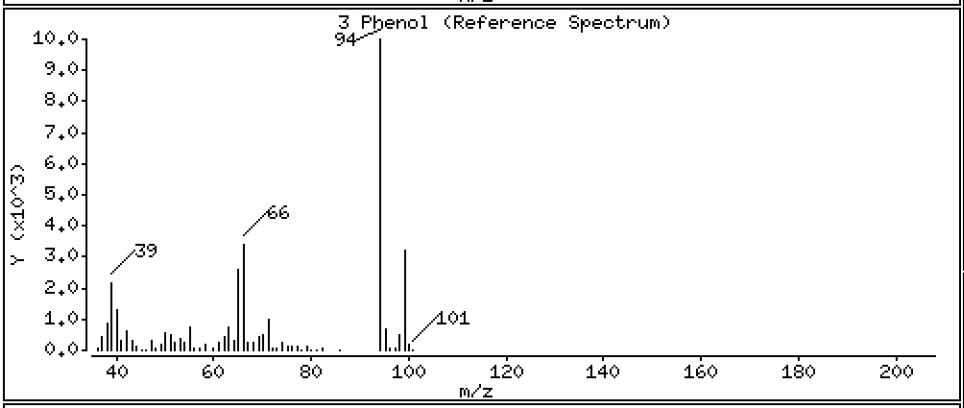
Concentration: 0.1679 ug/mL

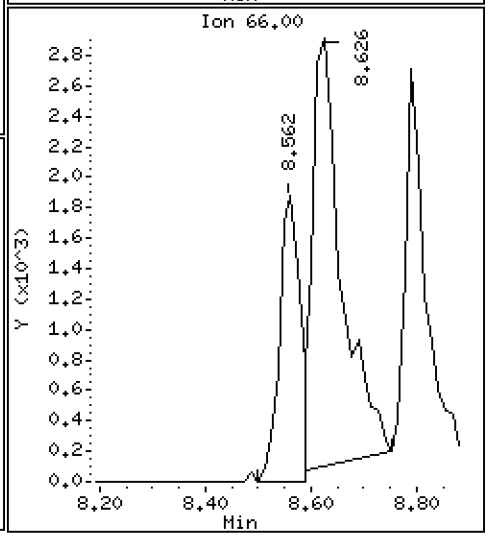


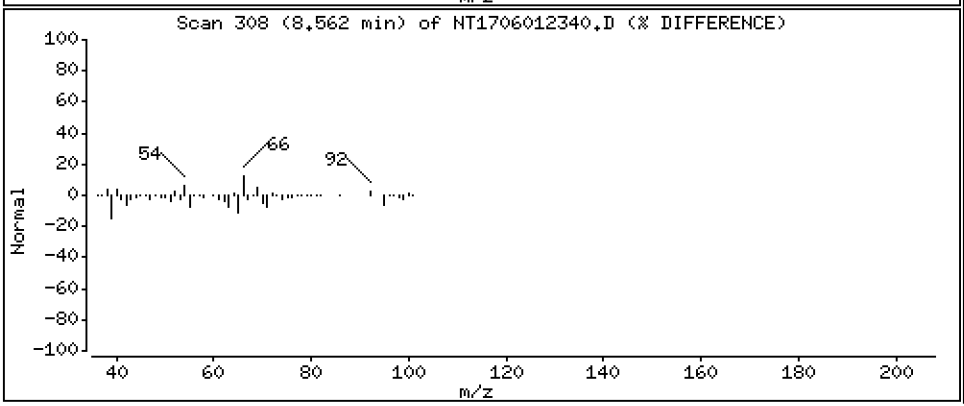












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

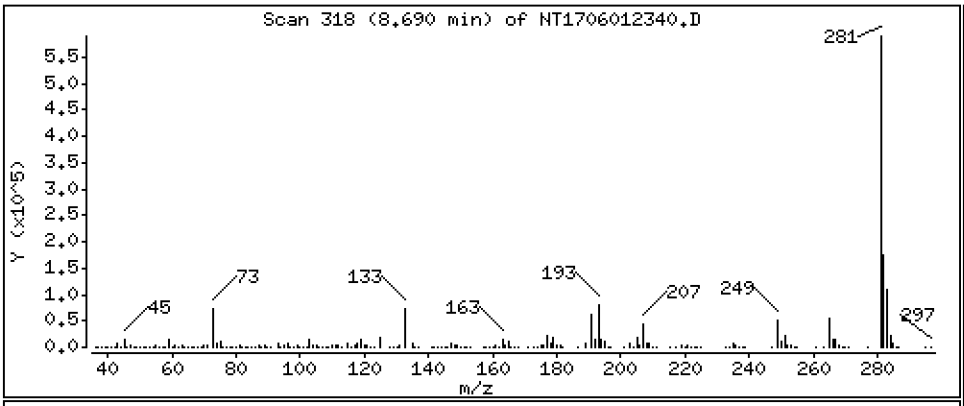
Operator: VTS

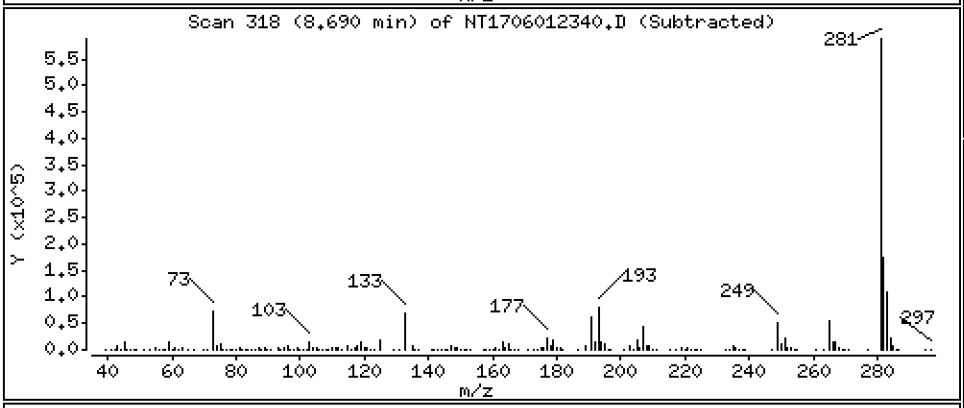
Column phase: ZB-5msi

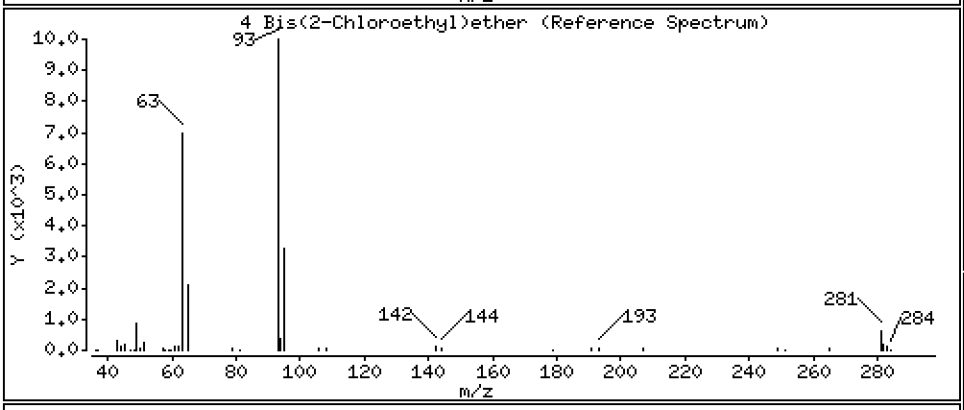
Column diameter: 0.25

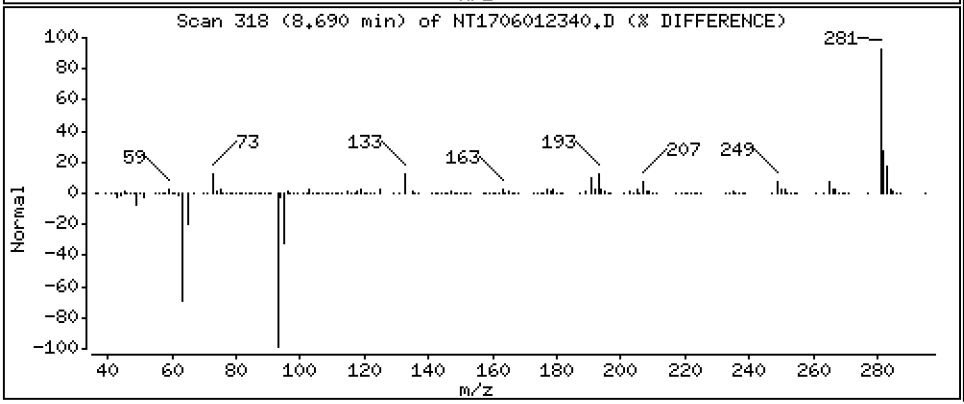
4 Bis(2-Chloroethyl)ether

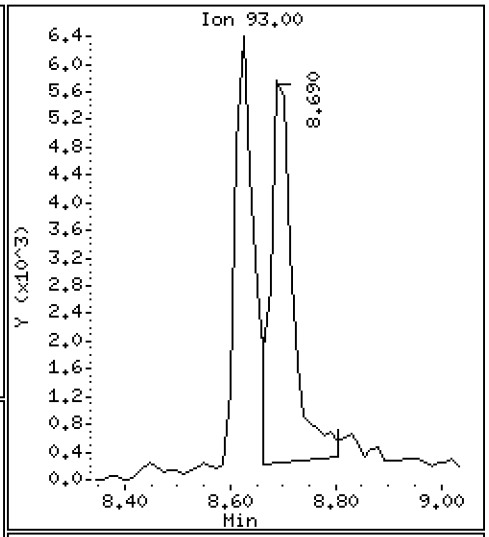
Concentration: 0.2495 ug/mL

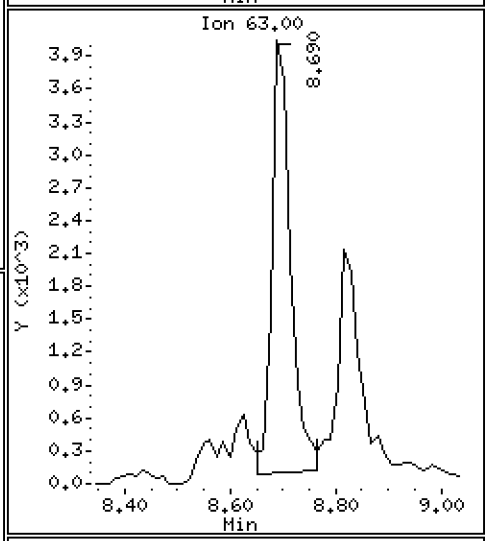


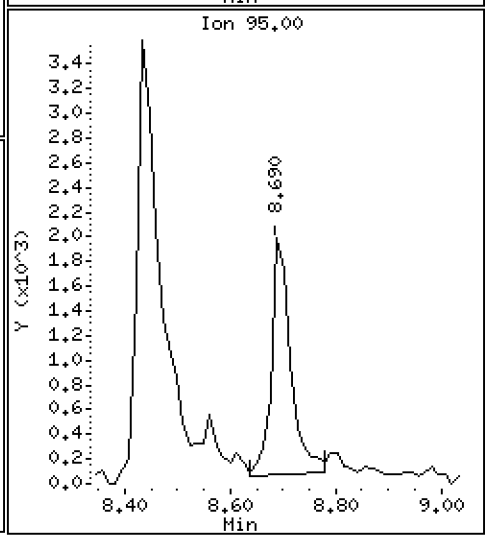












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

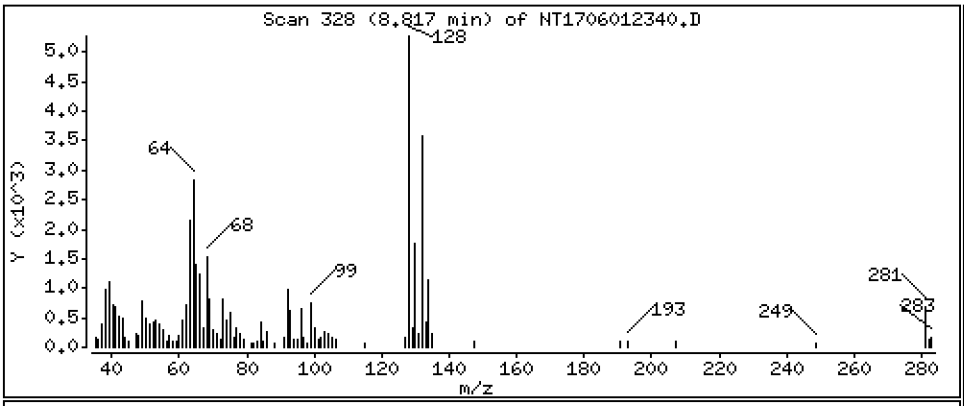
Operator: VTS

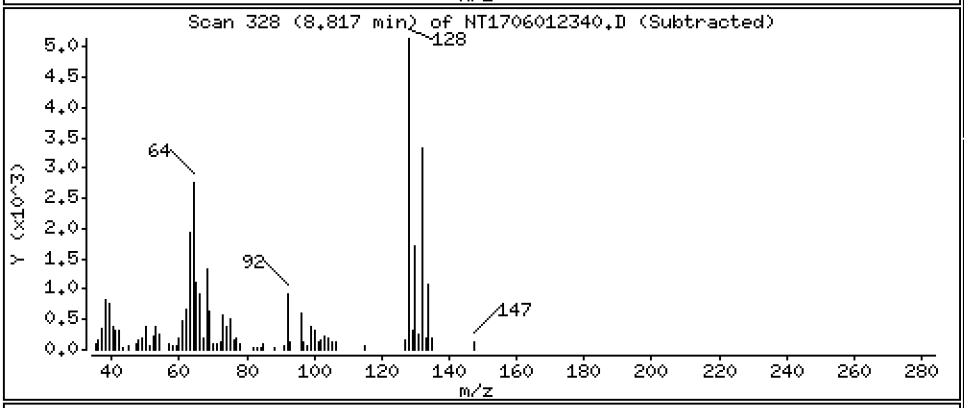
Column phase: ZB-5msi

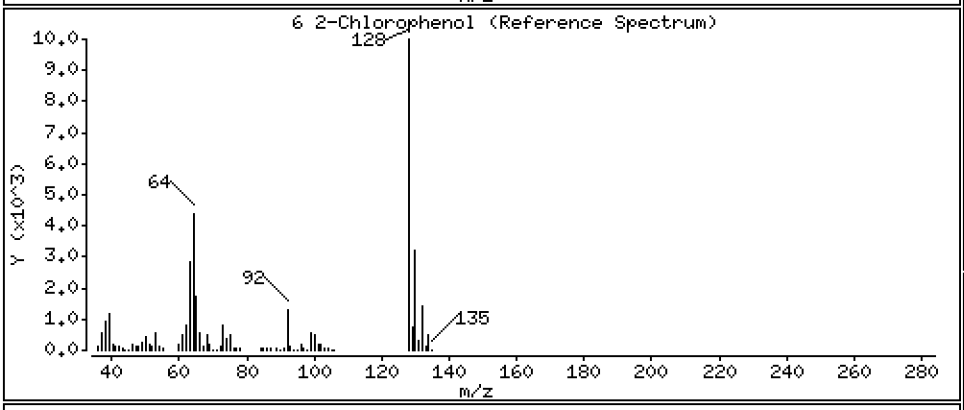
Column diameter: 0.25

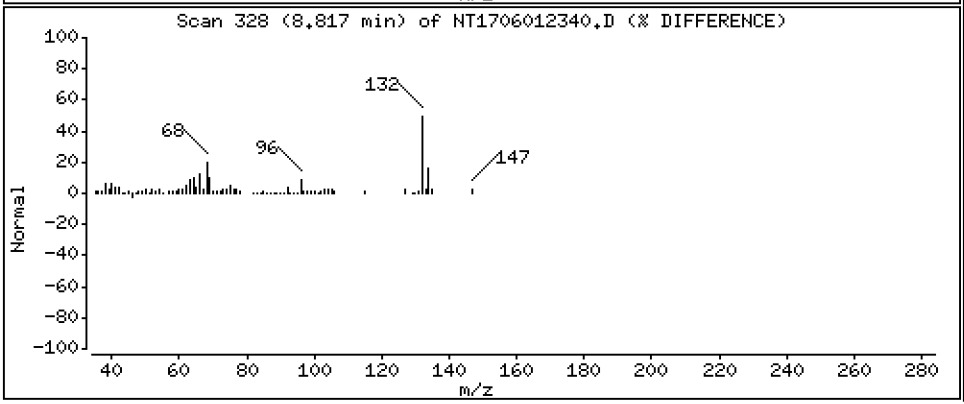
6 2-Chlorophenol

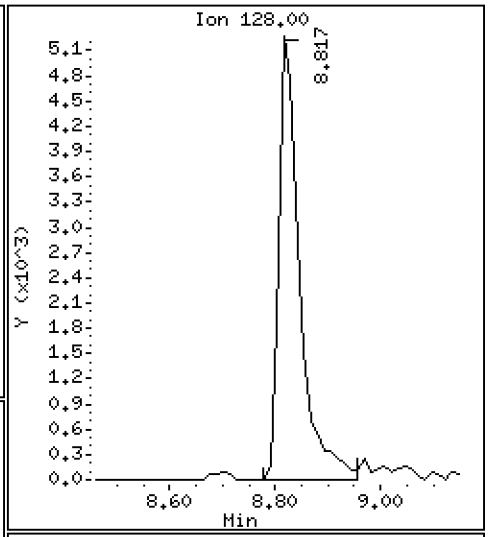
Concentration: 0.2146 ug/mL

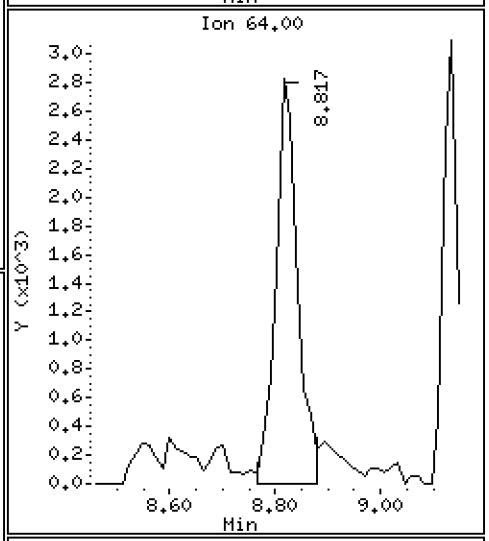


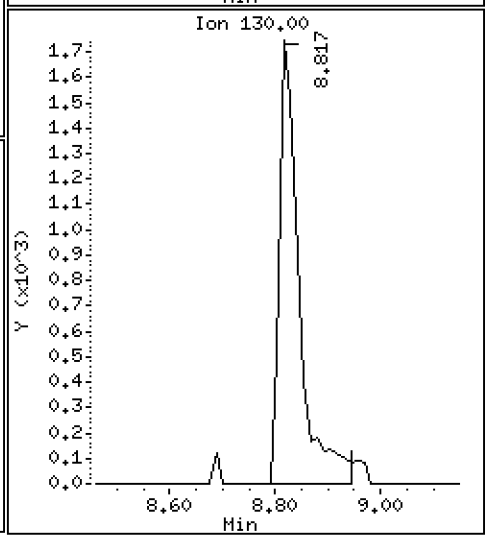












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

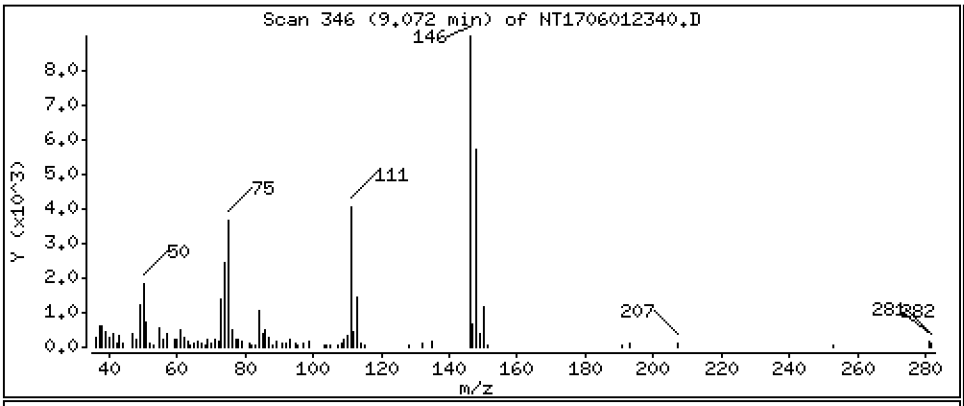
Operator: VTS

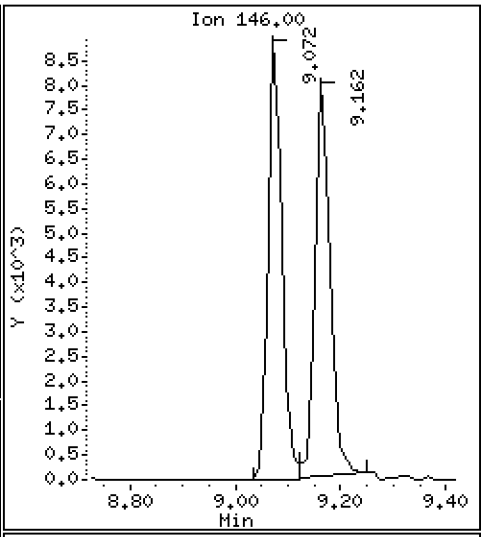
Column phase: ZB-5msi

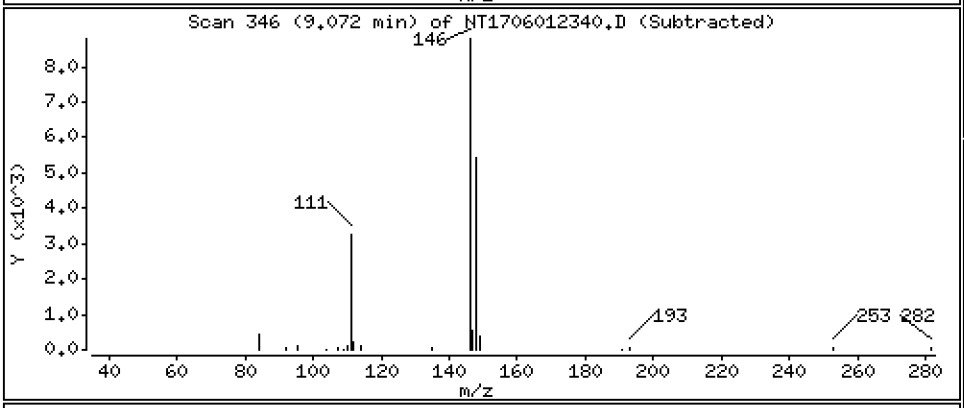
Column diameter: 0.25

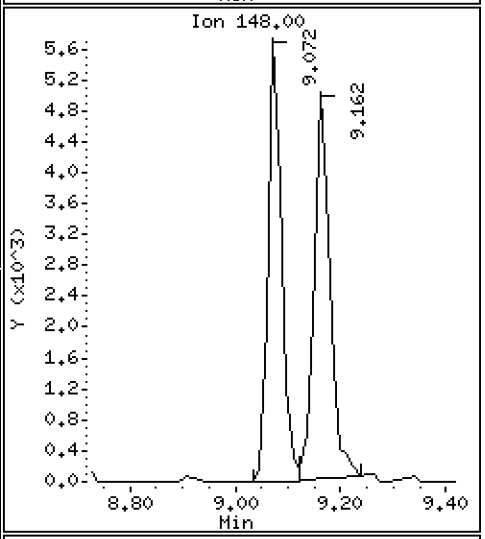
7 1,3-Dichlorobenzene

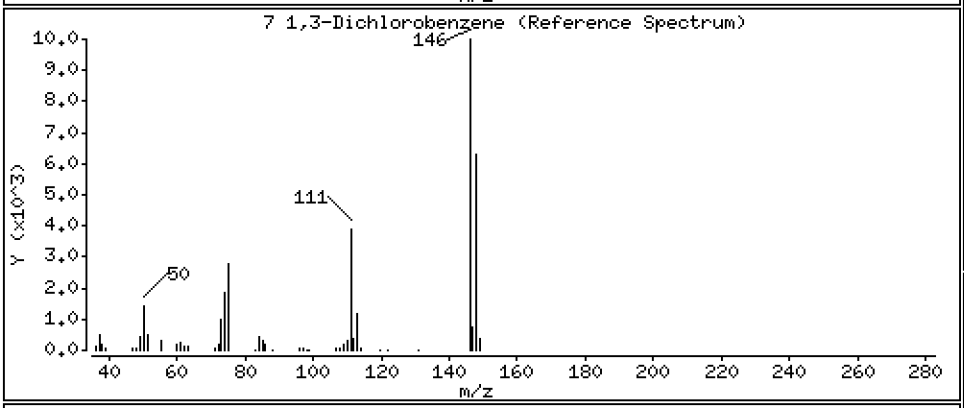
Concentration: 0.2117 ug/mL

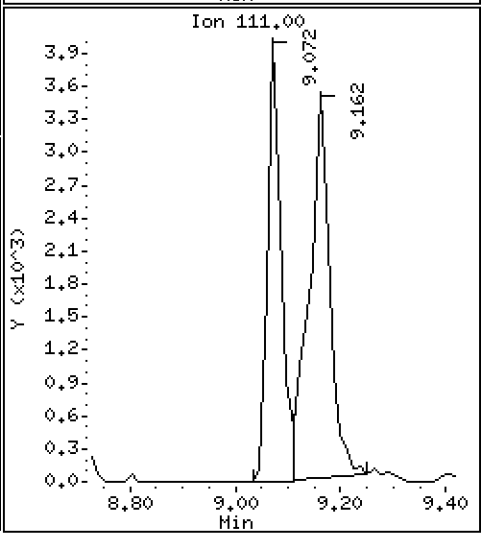


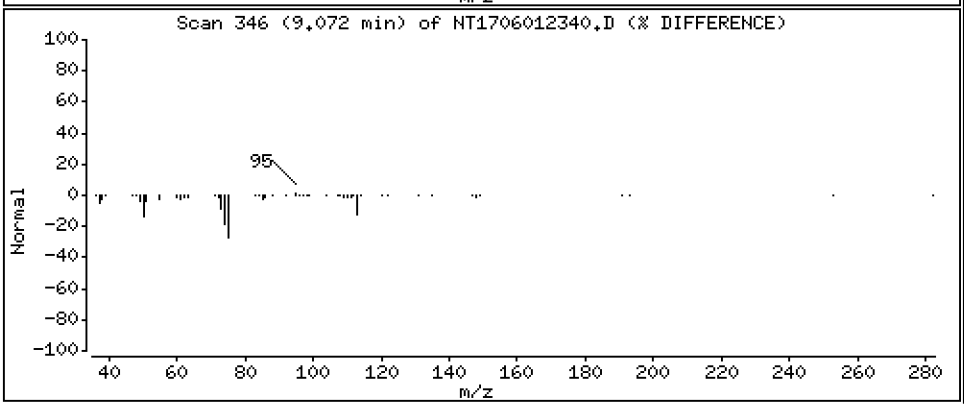












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

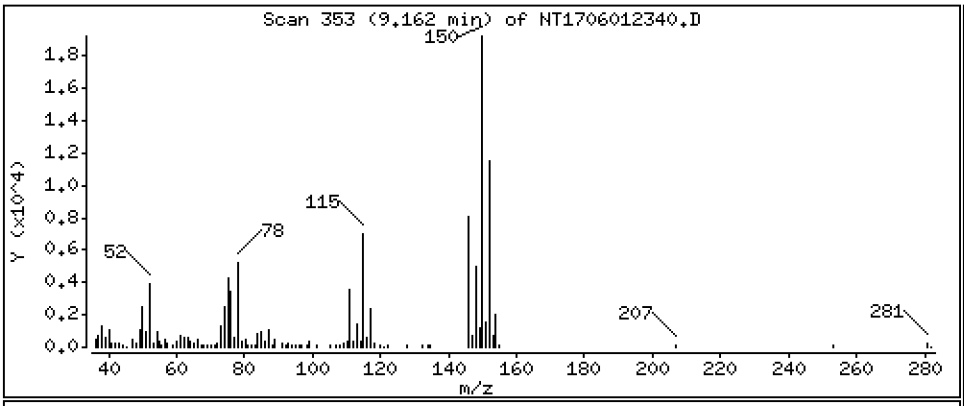
Operator: VTS

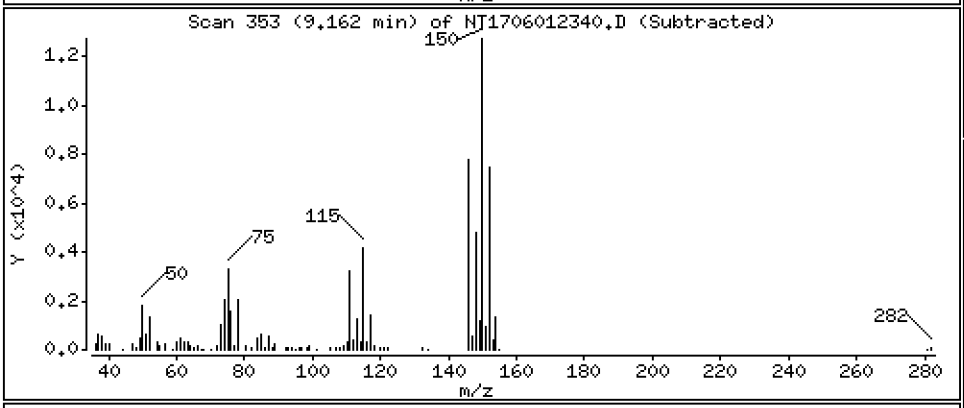
Column phase: ZB-5msi

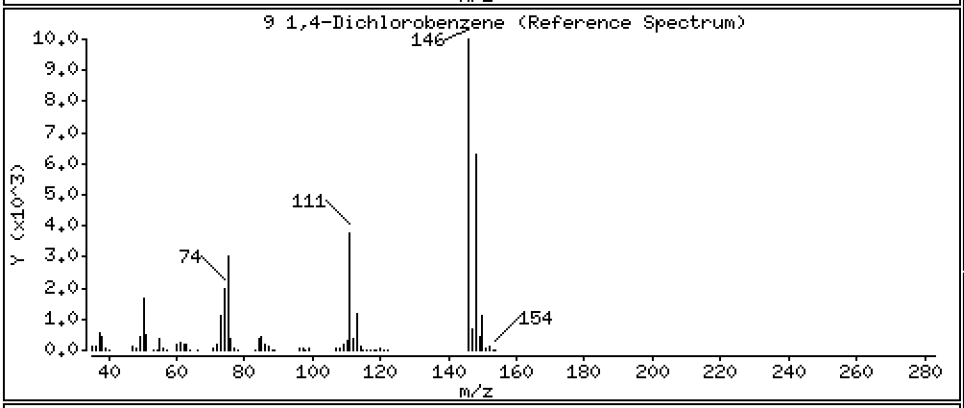
Column diameter: 0.25

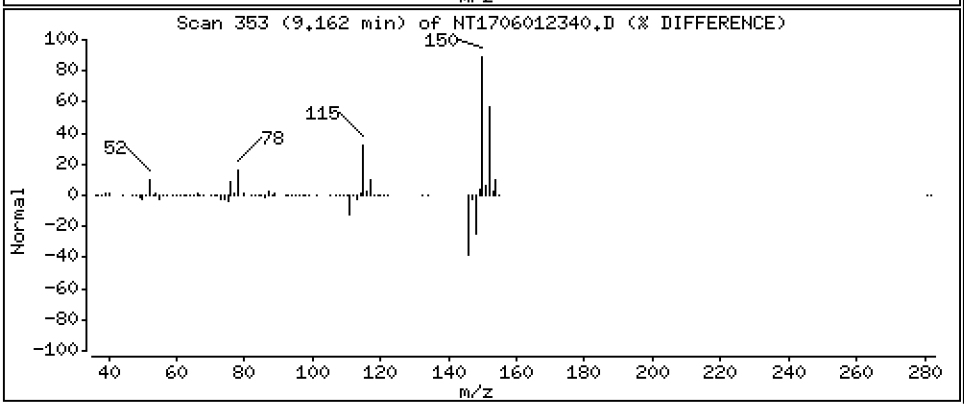
9 1,4-Dichlorobenzene

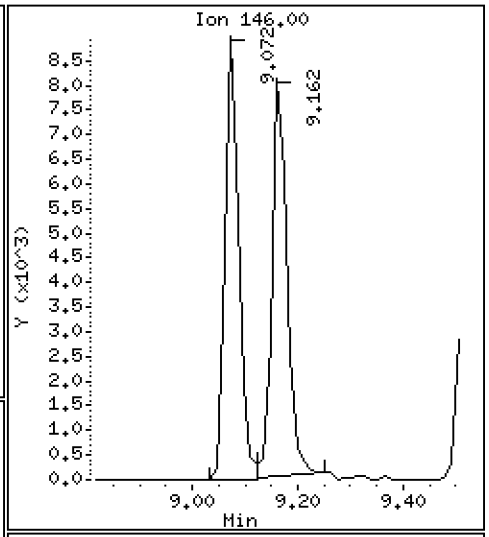
Concentration: 0.2045 ug/mL

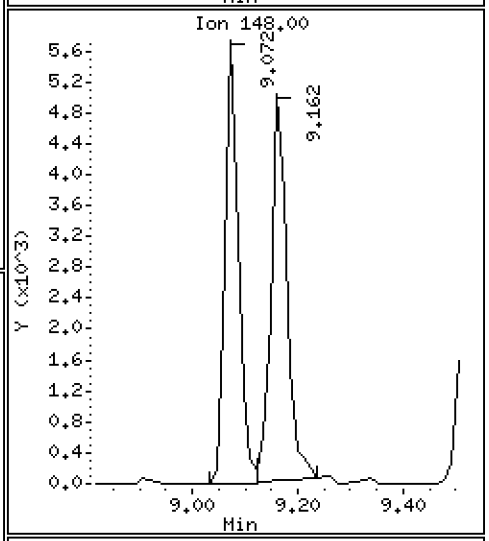


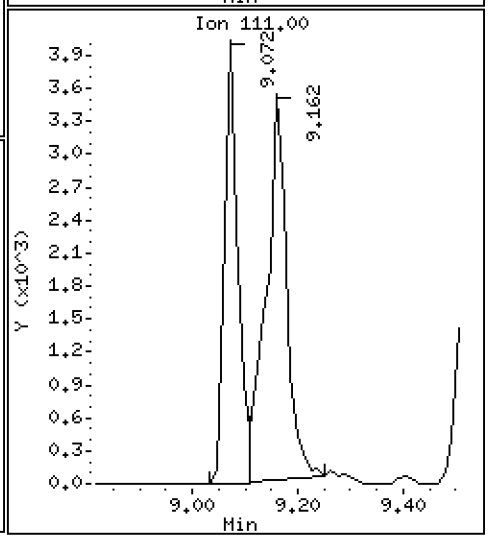












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

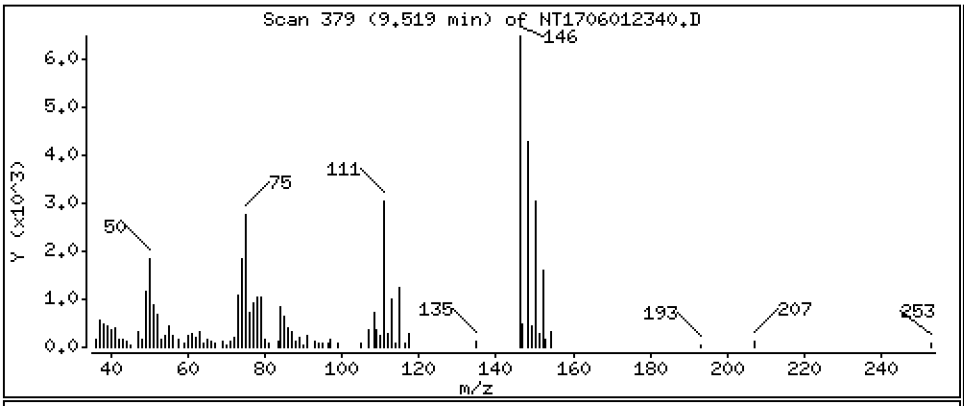
Operator: VTS

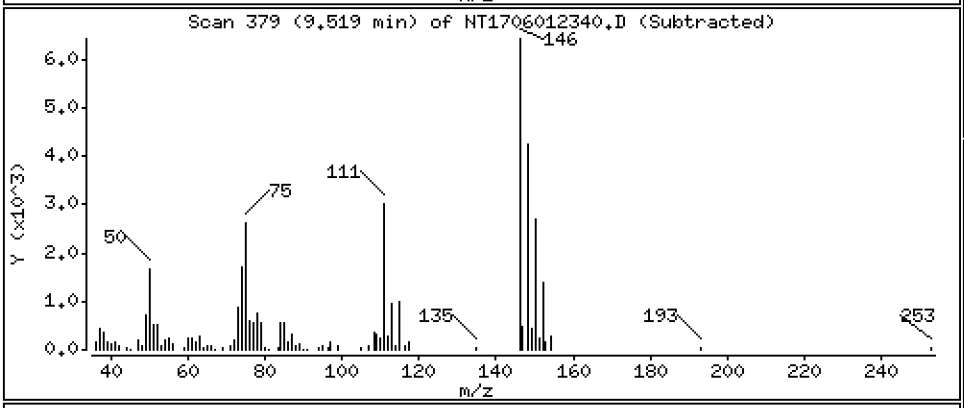
Column phase: ZB-5msi

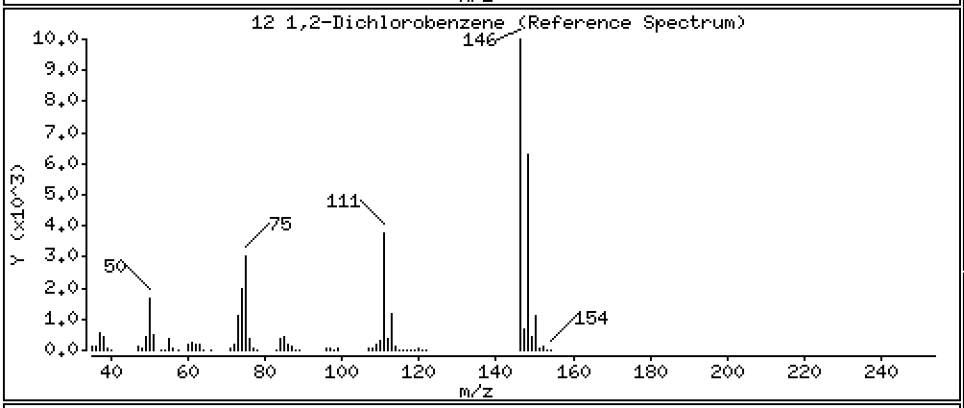
Column diameter: 0.25

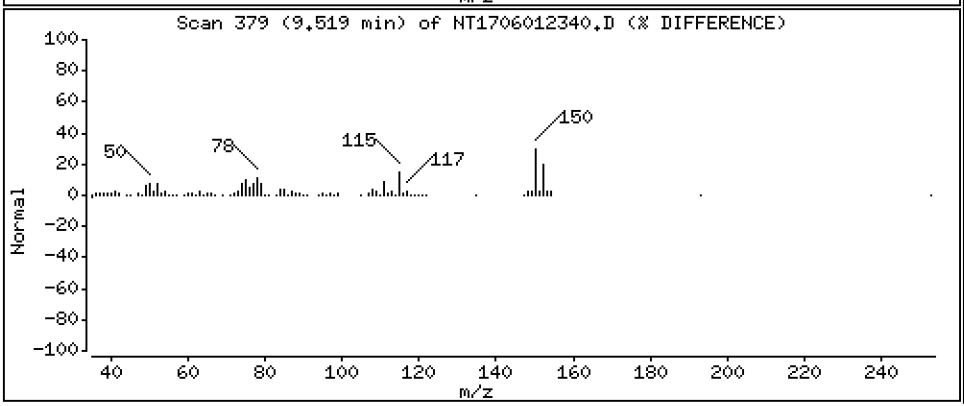
12 1,2-Dichlorobenzene

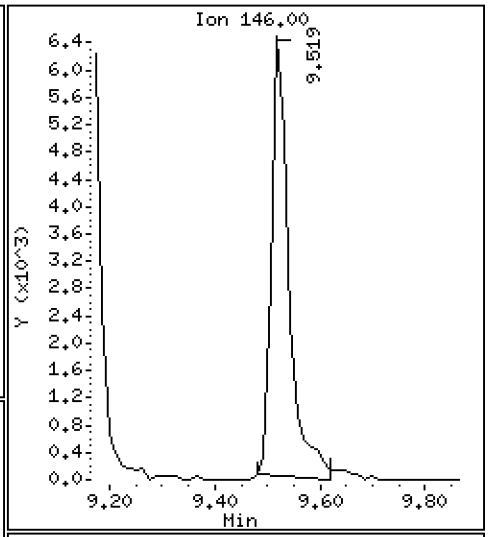
Concentration: 0.2051 ug/mL

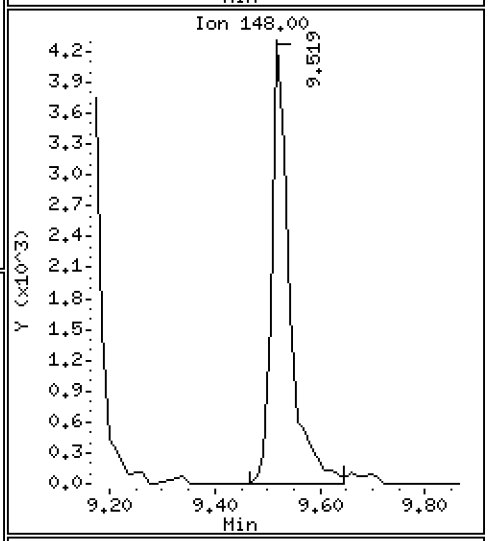


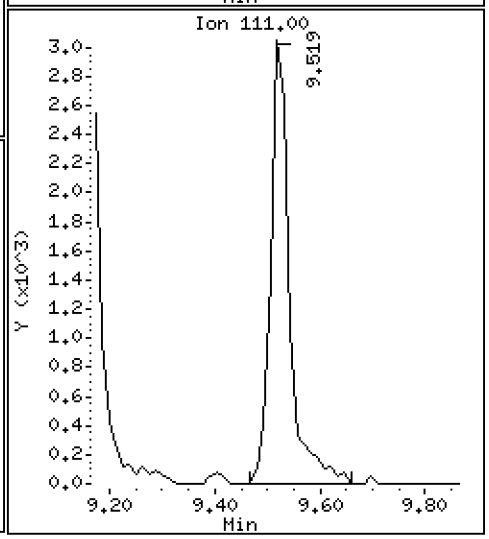












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

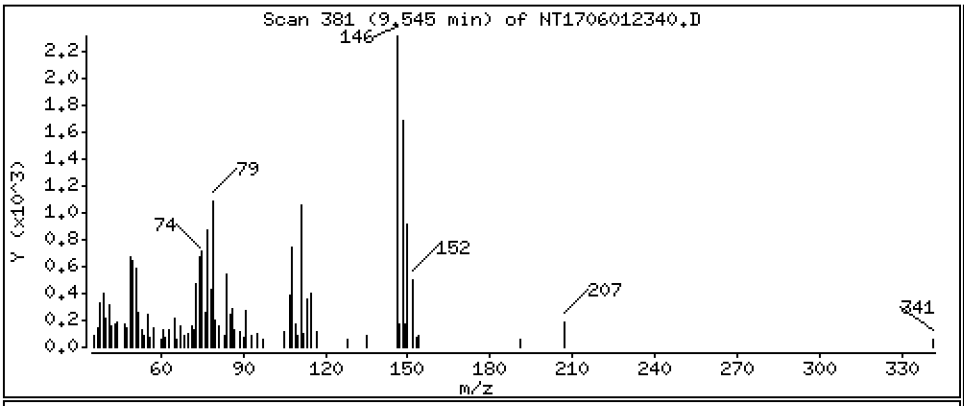
Operator: VTS

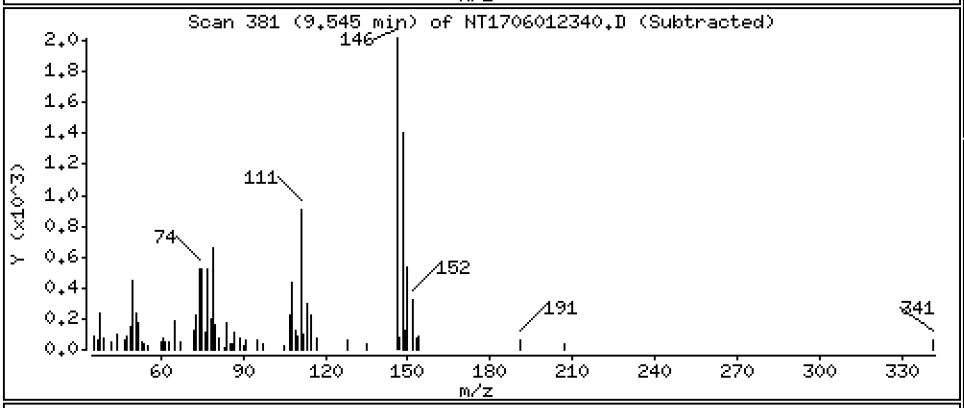
Column phase: ZB-5msi

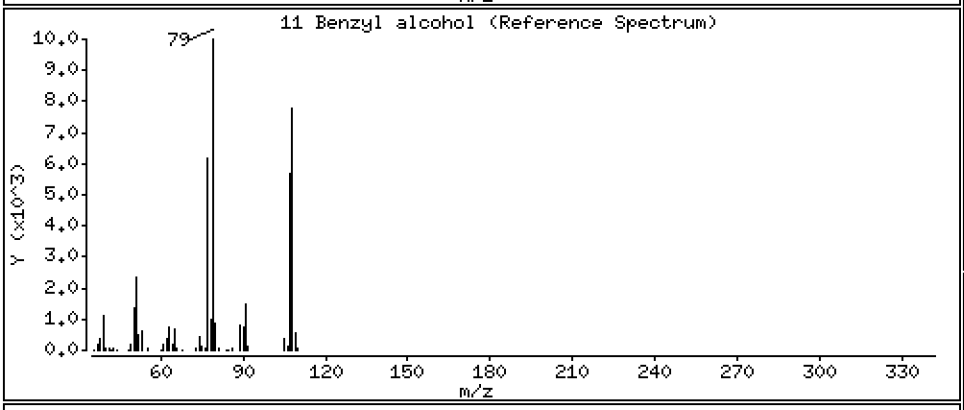
Column diameter: 0.25

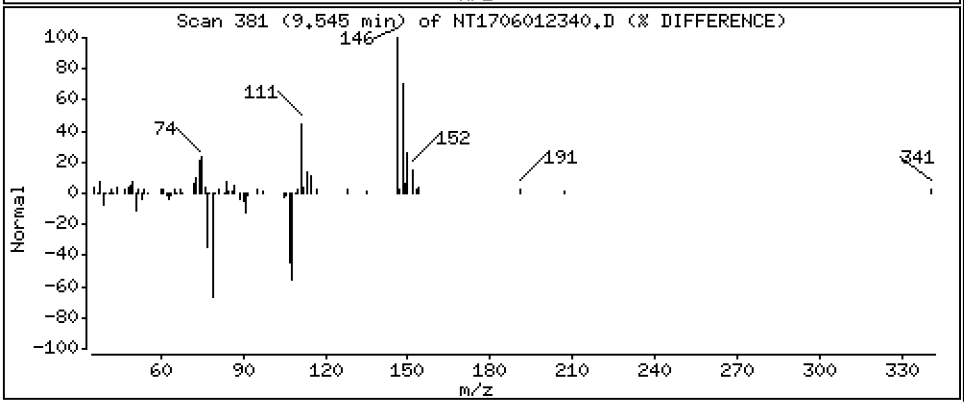
11 Benzyl alcohol

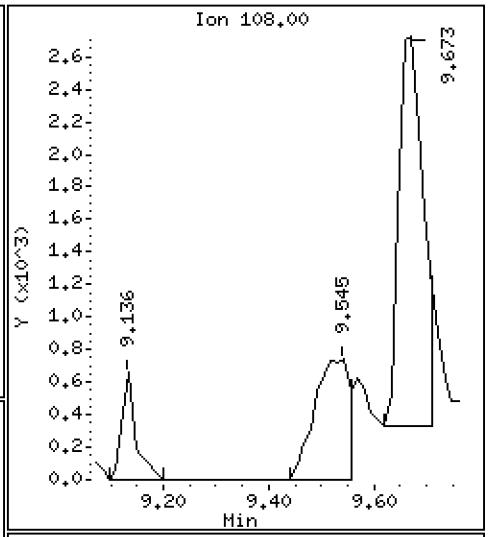
Concentration: 0.08110 ug/mL

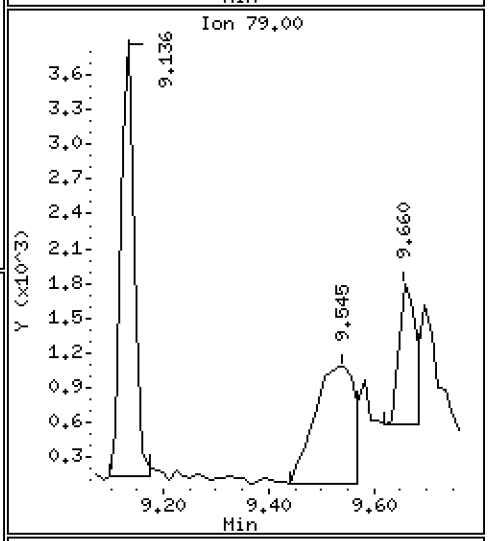


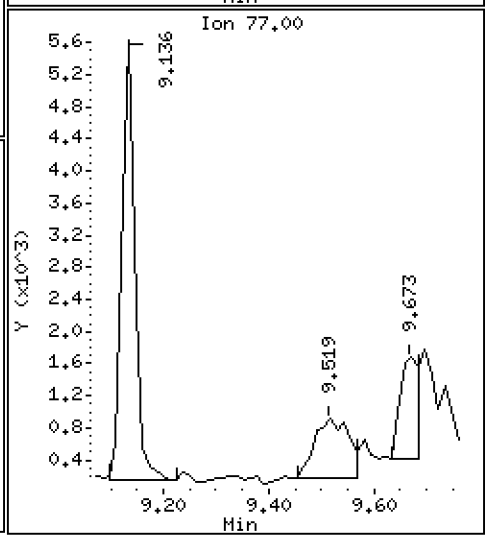












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

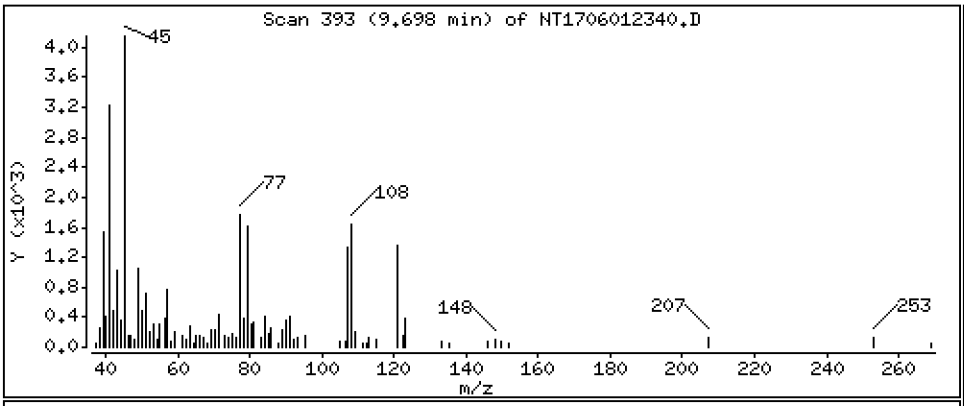
Operator: VTS

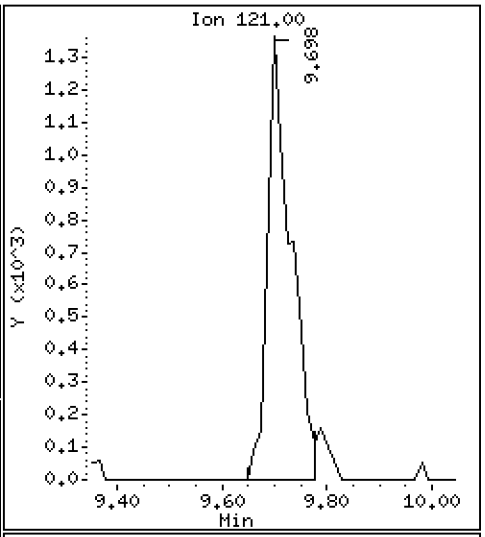
Column phase: ZB-5msi

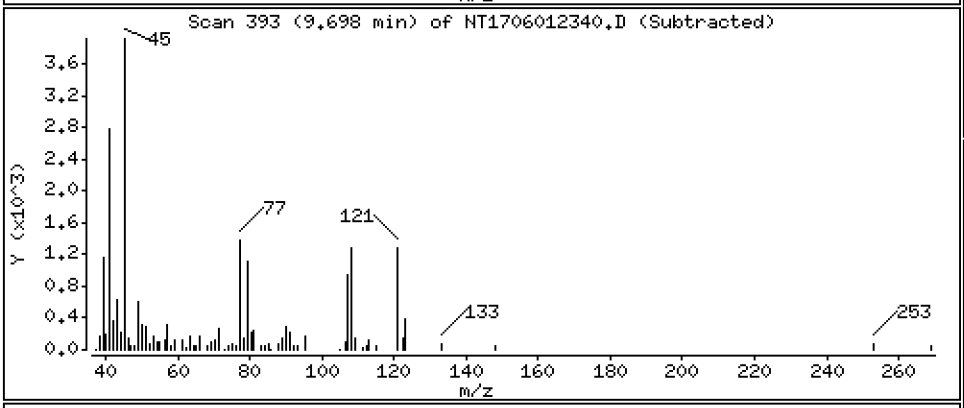
Column diameter: 0.25

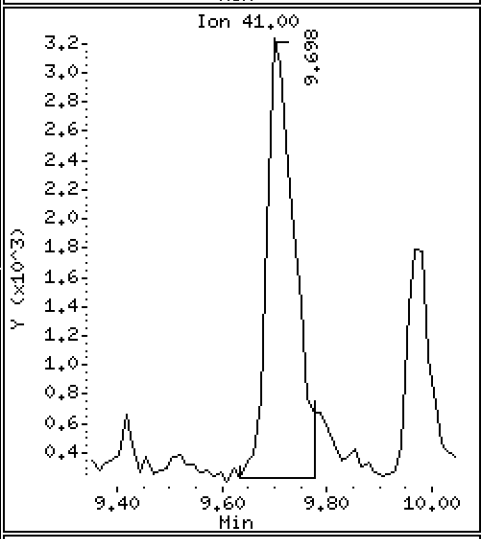
14 2,2'-oxybis(1-Chloropropane)

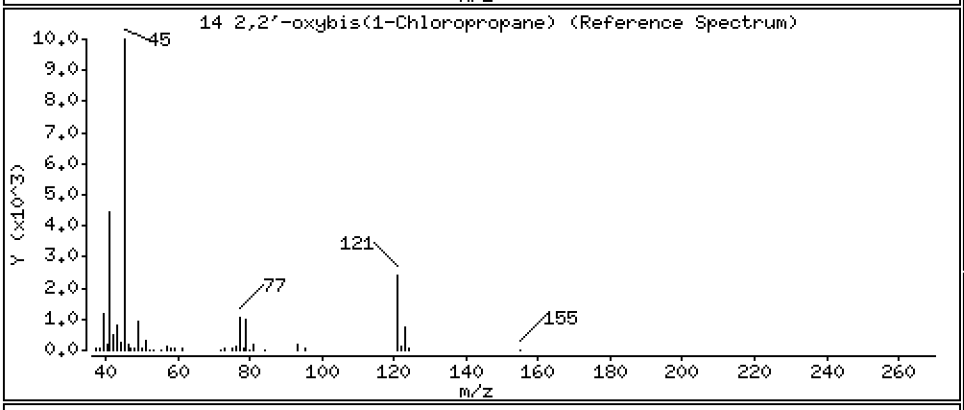
Concentration: 0.2071 ug/mL

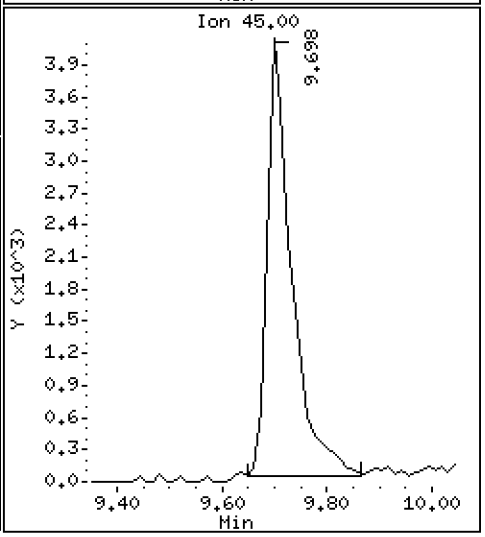


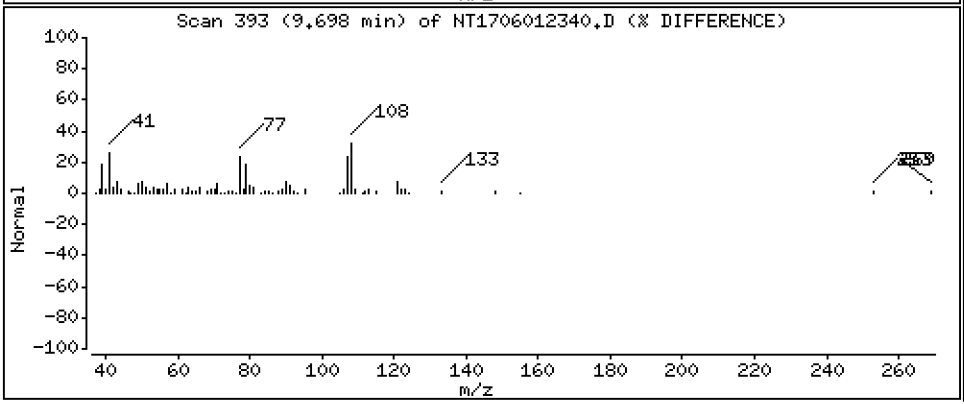












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

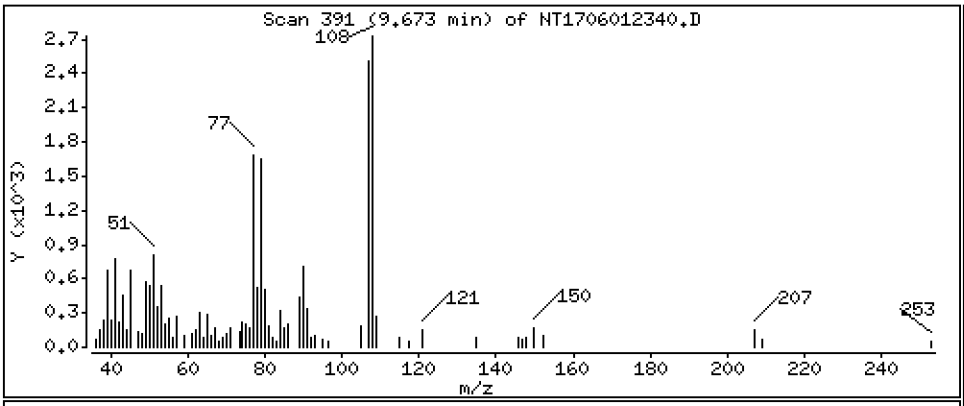
Operator: VTS

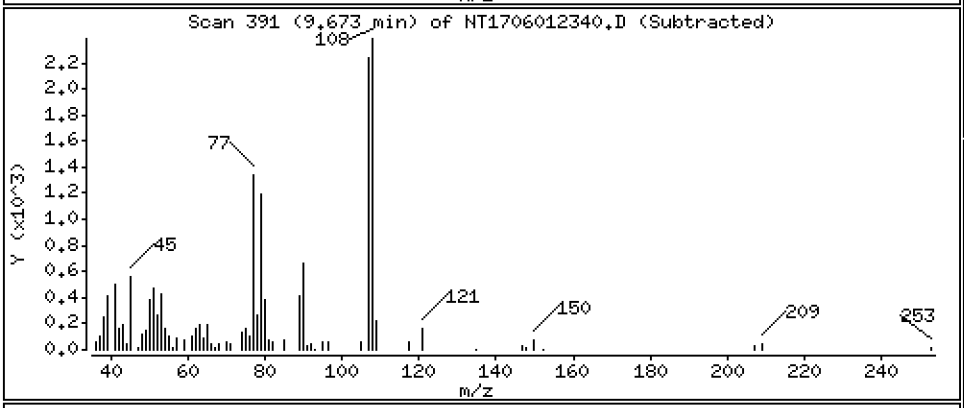
Column phase: ZB-5msi

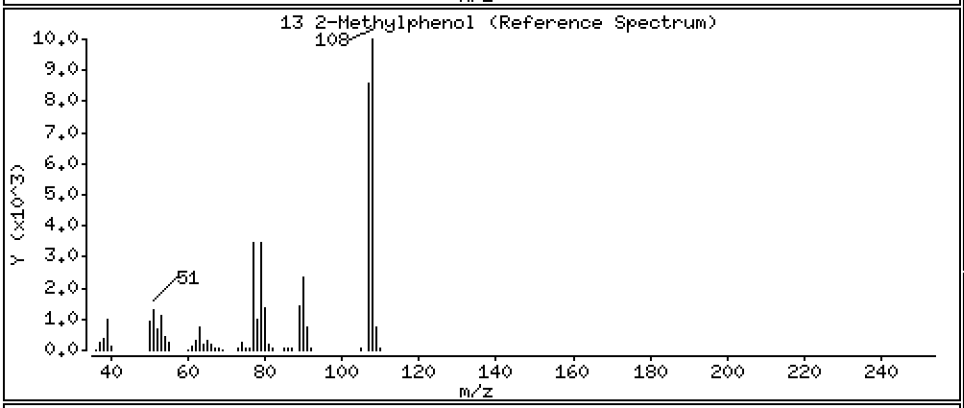
Column diameter: 0.25

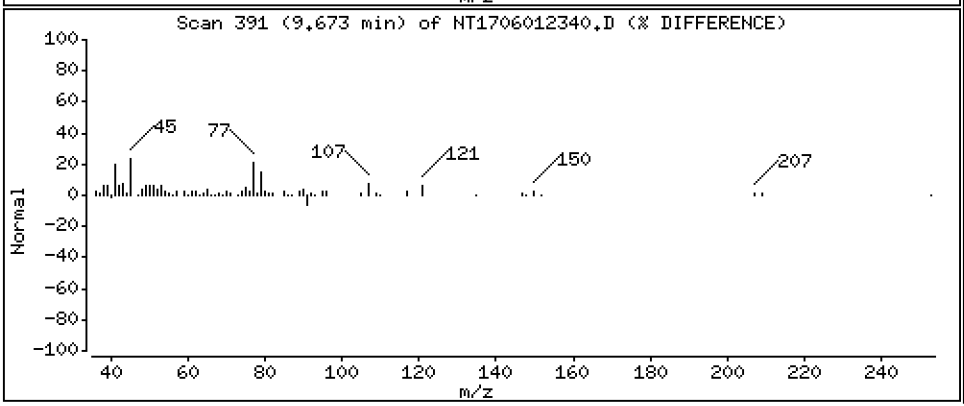
13 2-Methylphenol

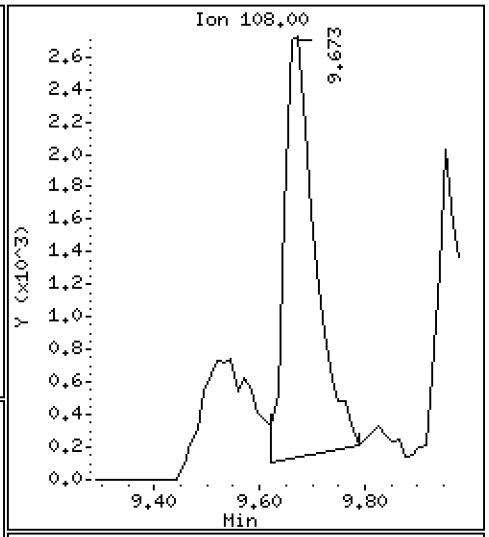
Concentration: 0.1546 ug/mL

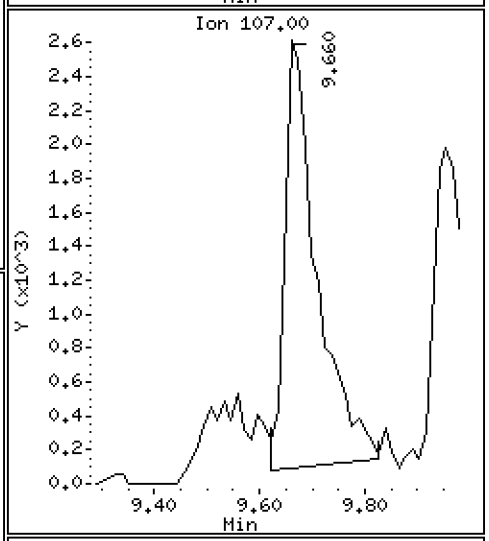


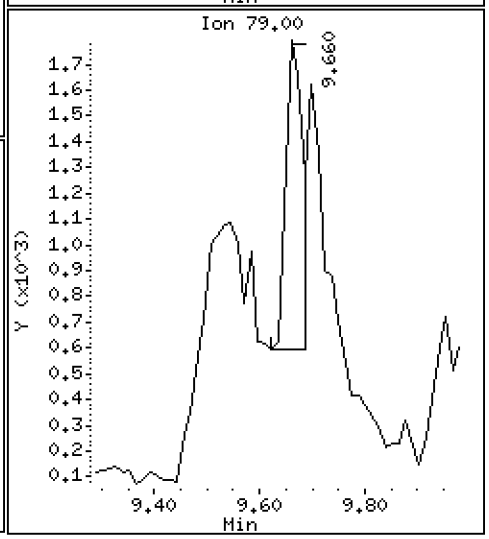












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

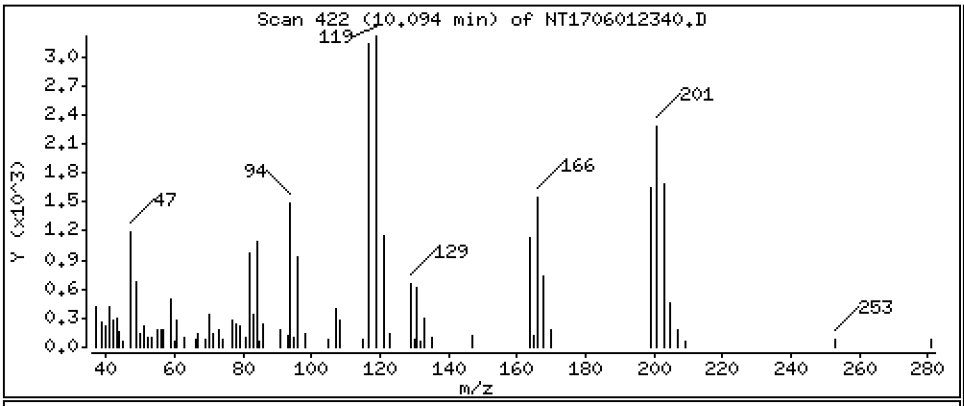
Operator: VTS

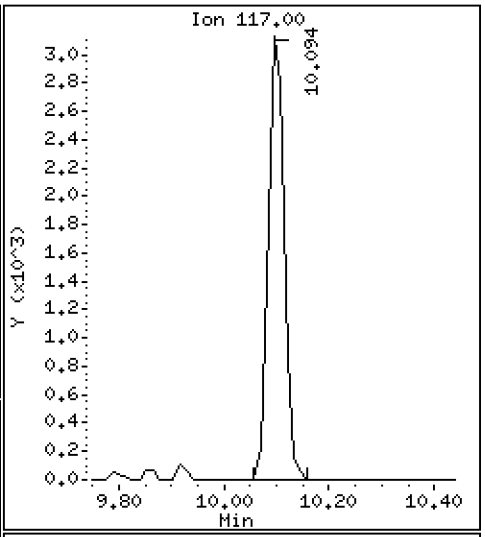
Column phase: ZB-5msi

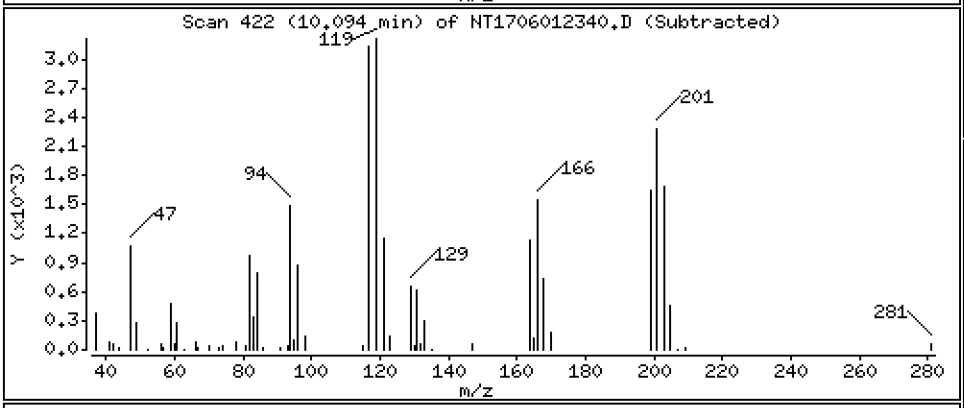
Column diameter: 0.25

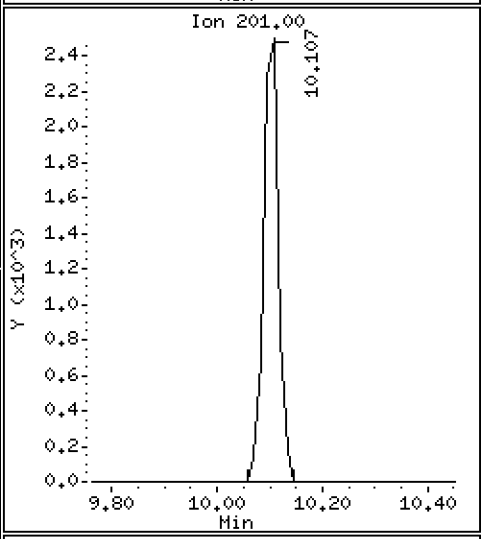
17 Hexachloroethane

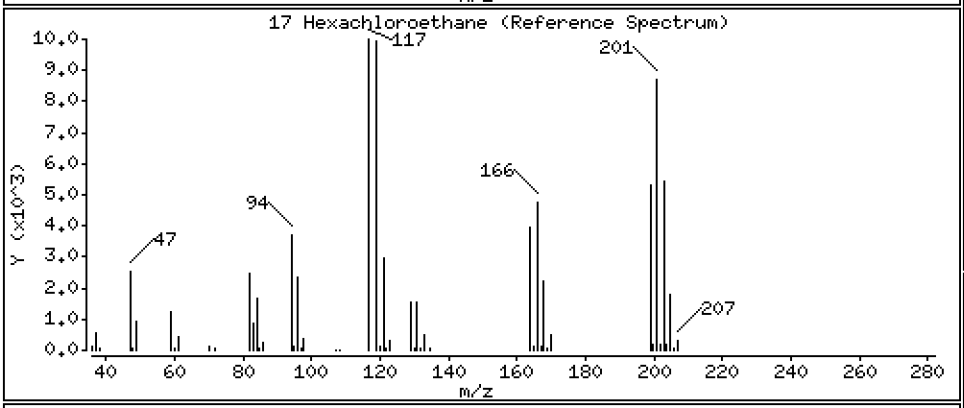
Concentration: 0.2128 ug/mL

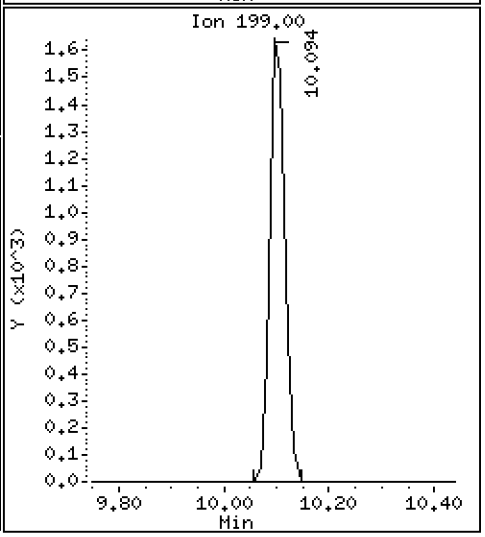


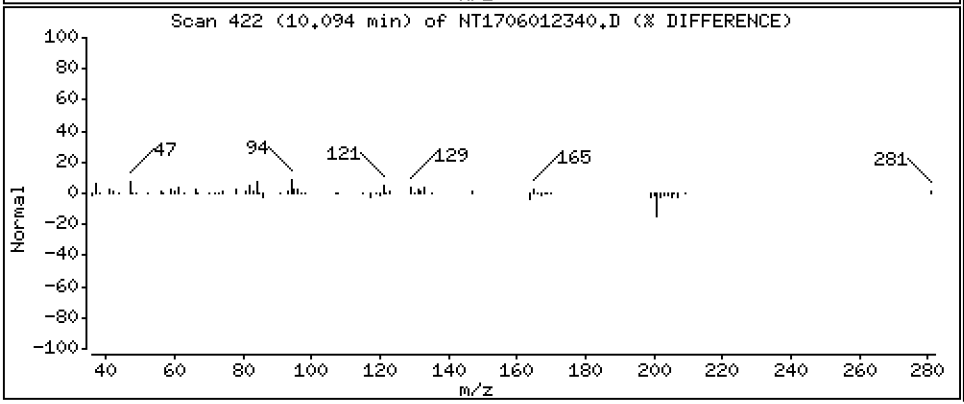












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

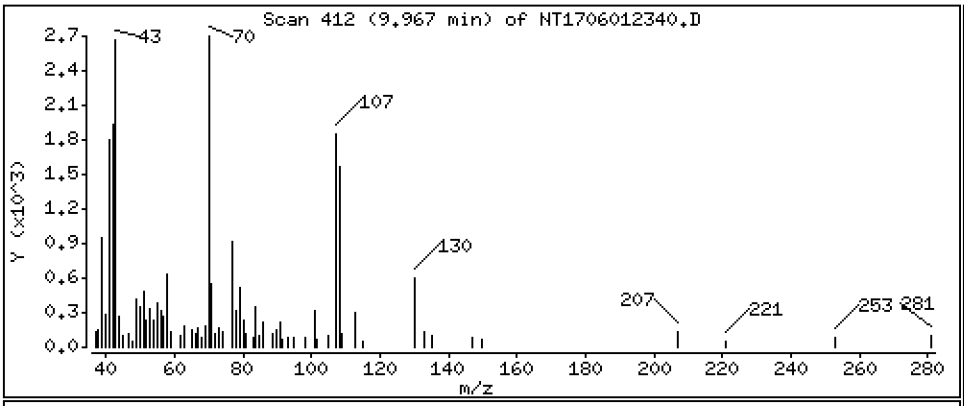
Operator: VTS

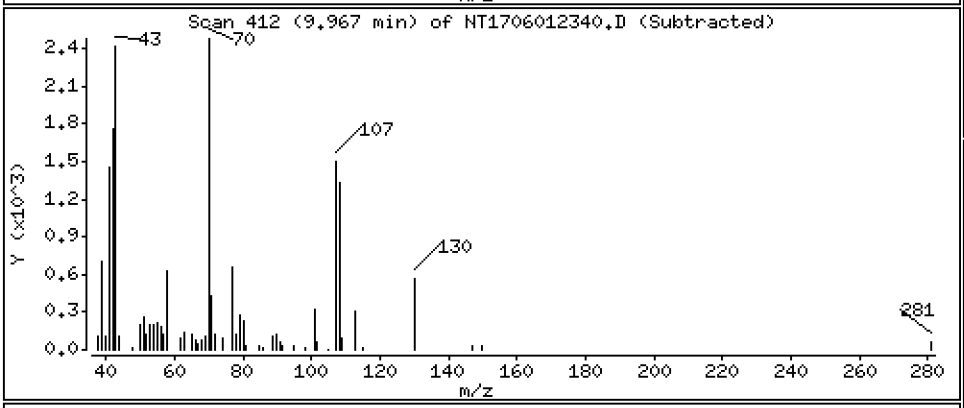
Column phase: ZB-5msi

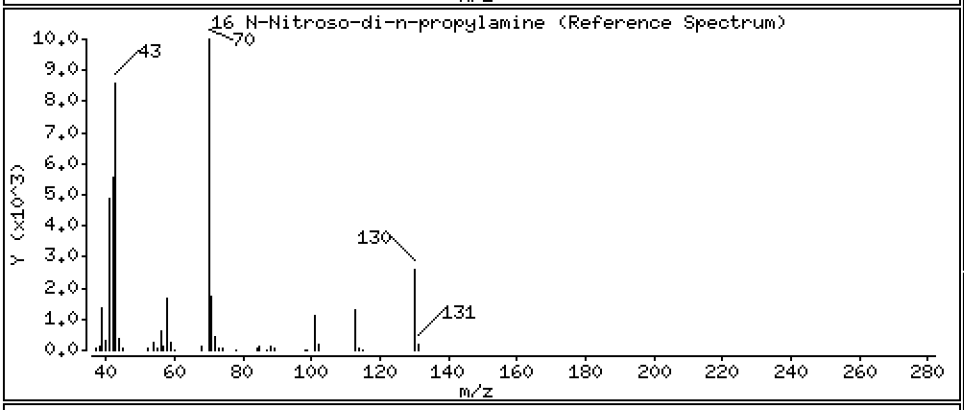
Column diameter: 0.25

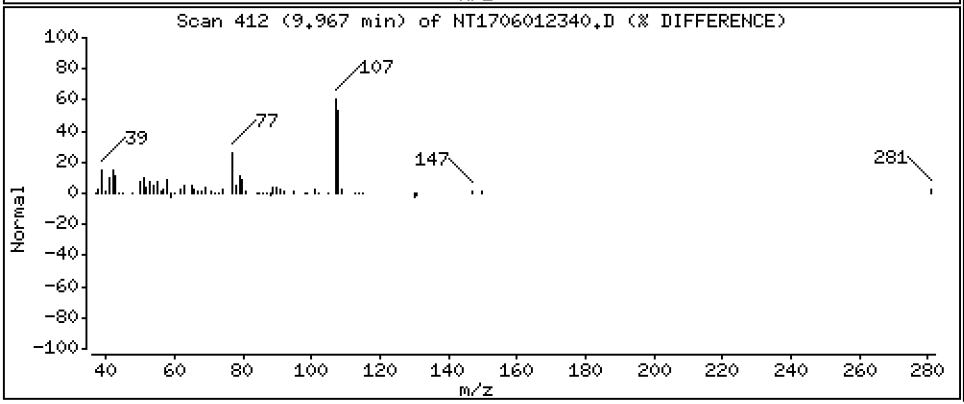
16 N-Nitroso-di-n-propylamine

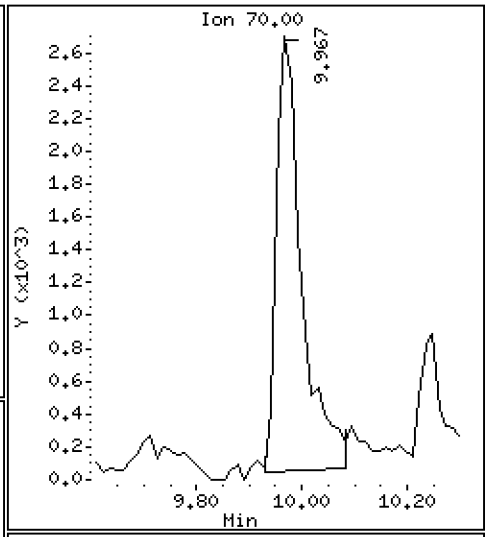
Concentration: 0.1725 ug/mL

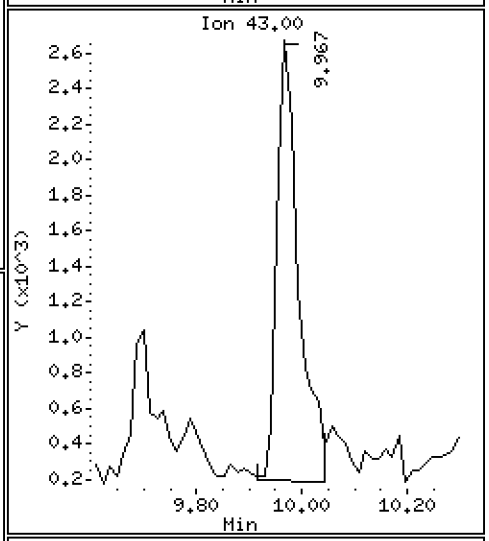


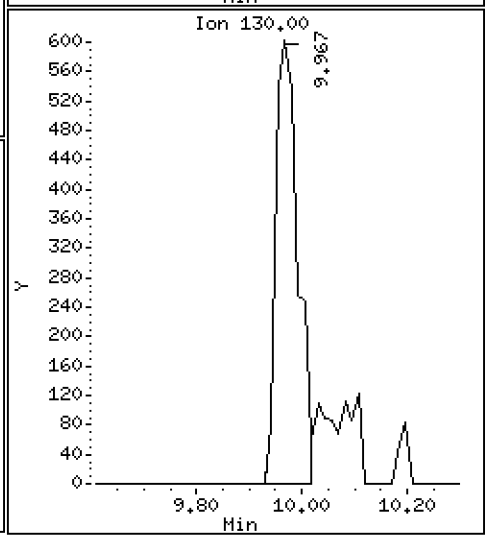












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

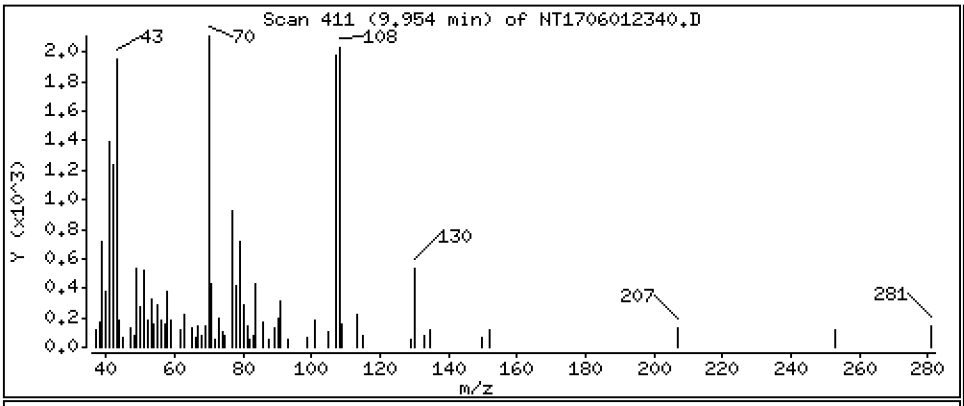
Operator: VTS

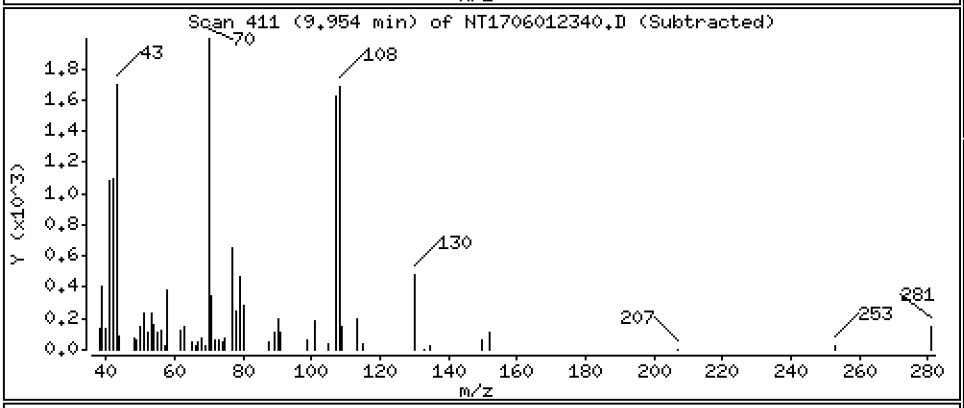
Column phase: ZB-5msi

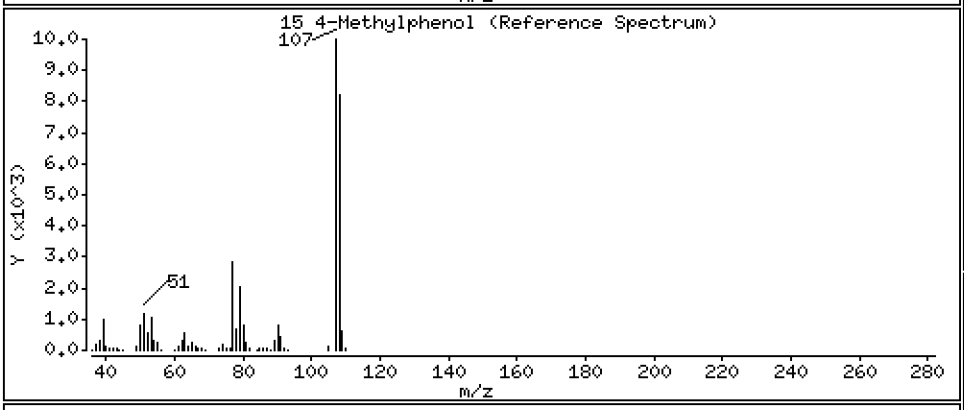
Column diameter: 0.25

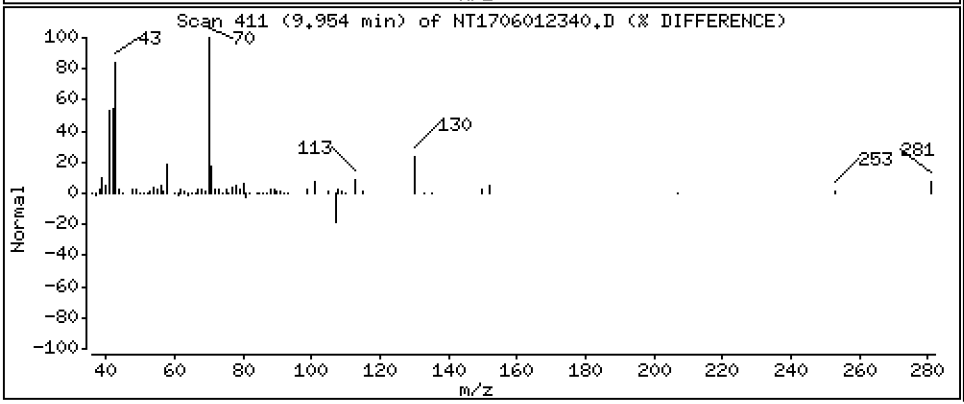
15 4-Methylphenol

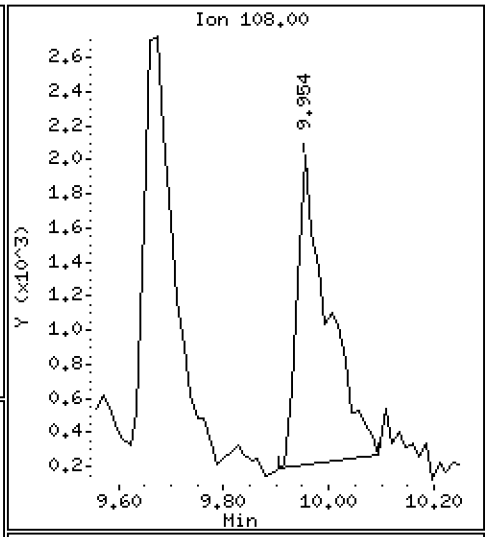
Concentration: 0.1077 ug/mL

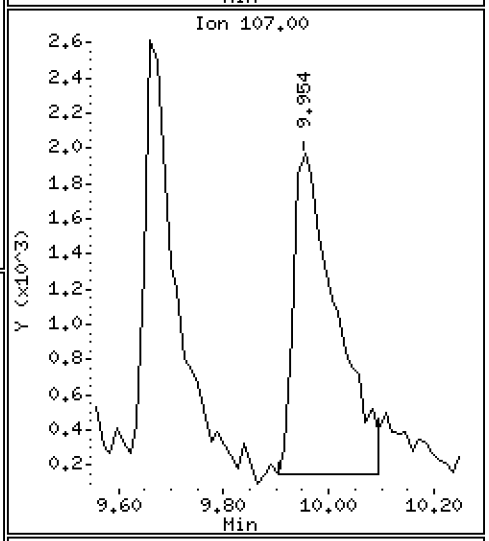


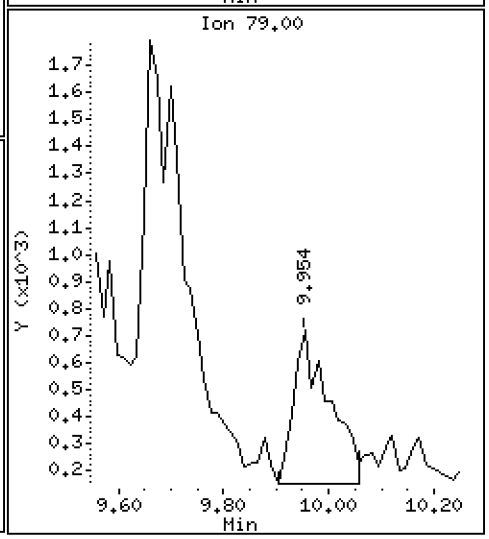












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

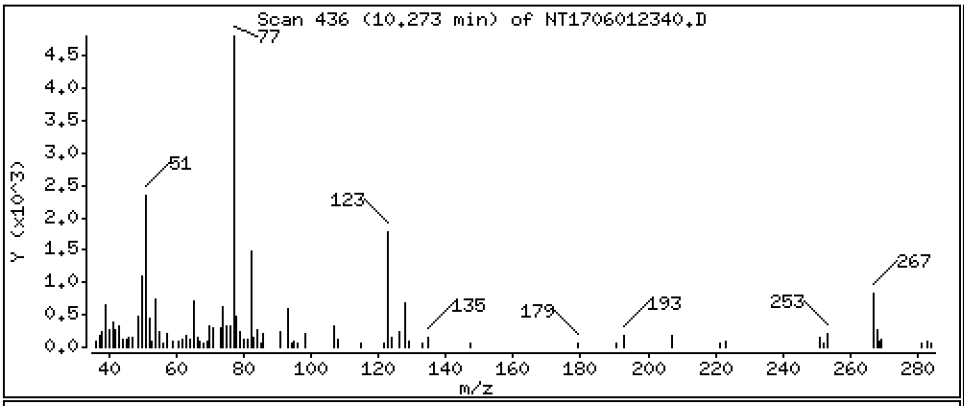
Operator: VTS

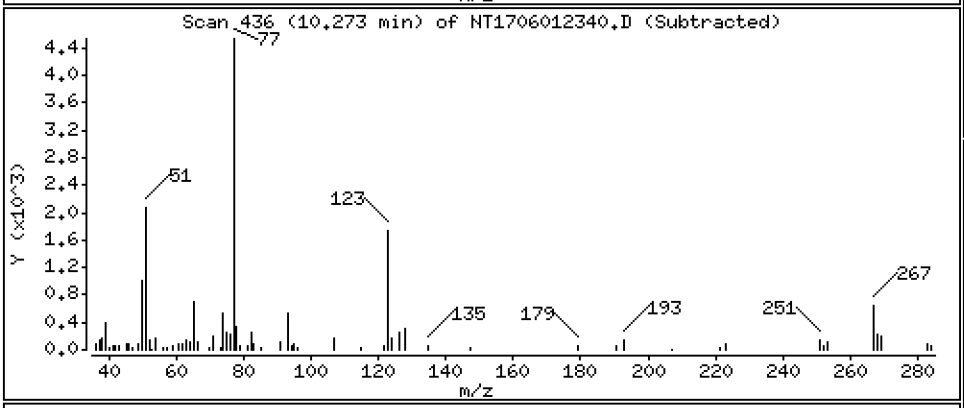
Column phase: ZB-5msi

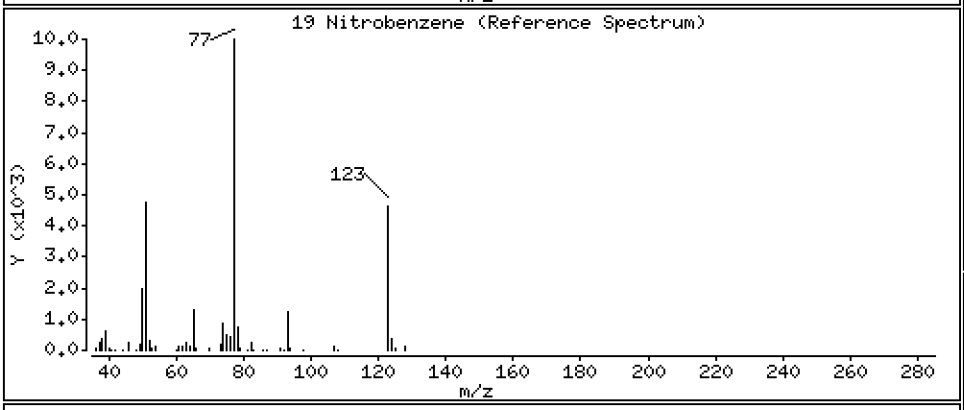
Column diameter: 0.25

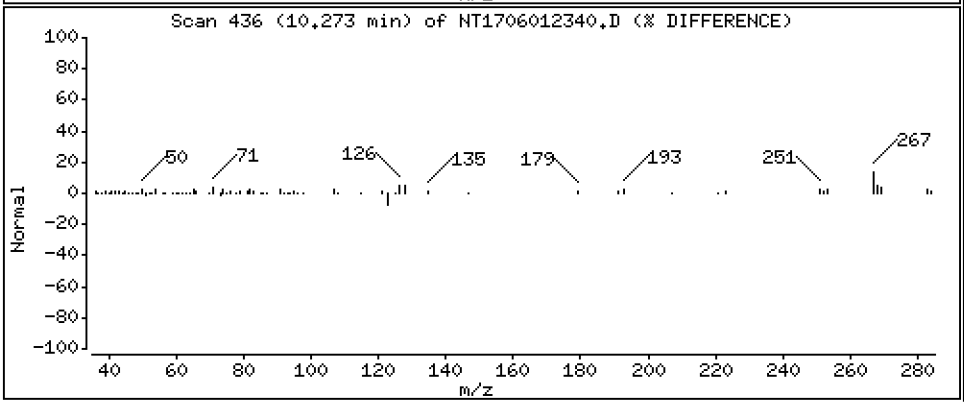
19 Nitrobenzene

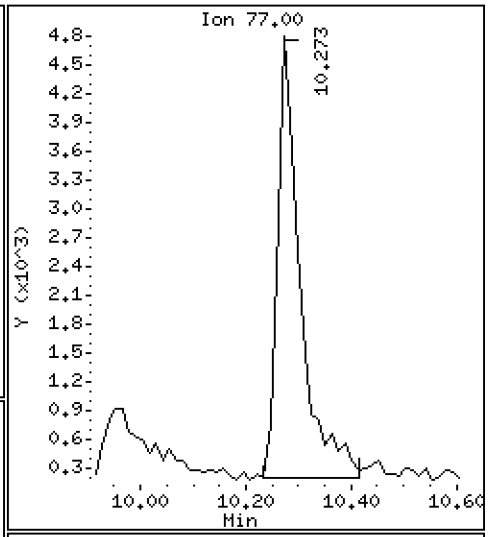
Concentration: 0.1837 ug/mL

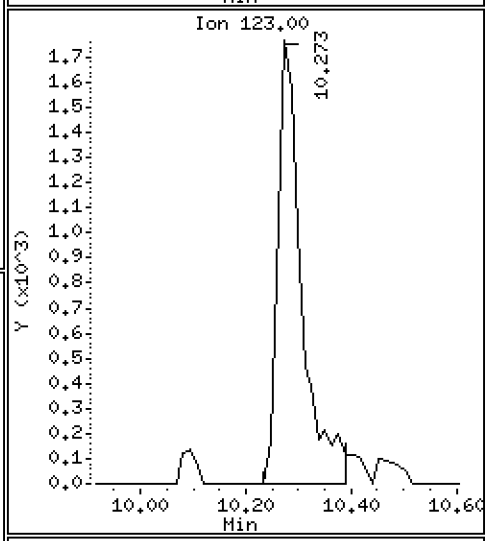


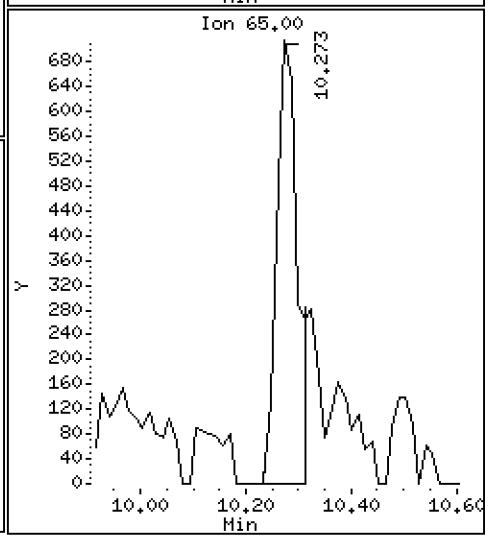












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

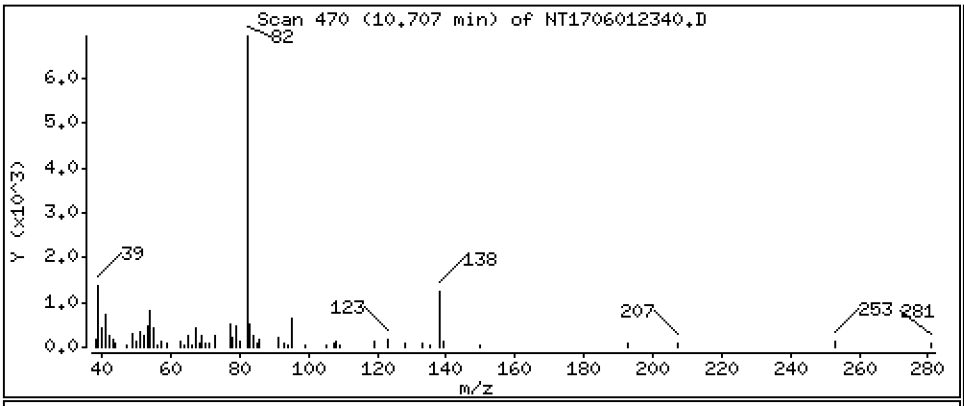
Operator: VTS

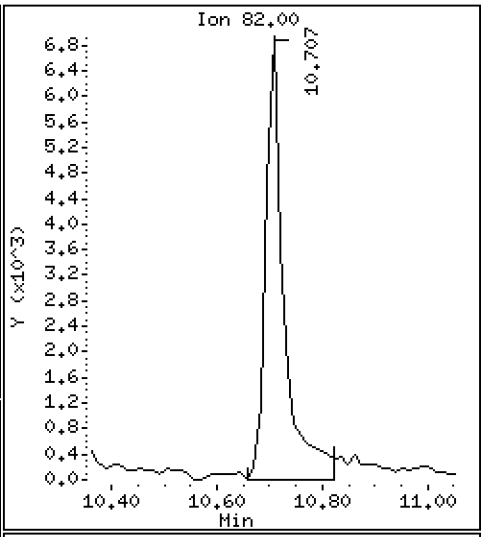
Column phase: ZB-5msi

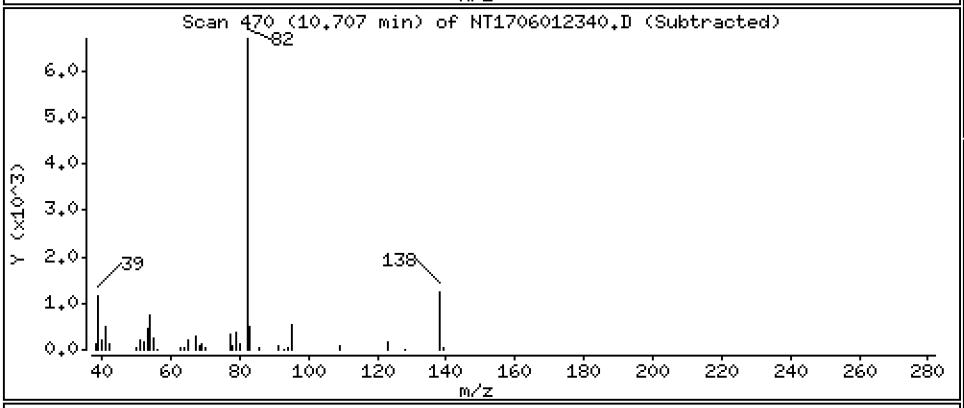
Column diameter: 0.25

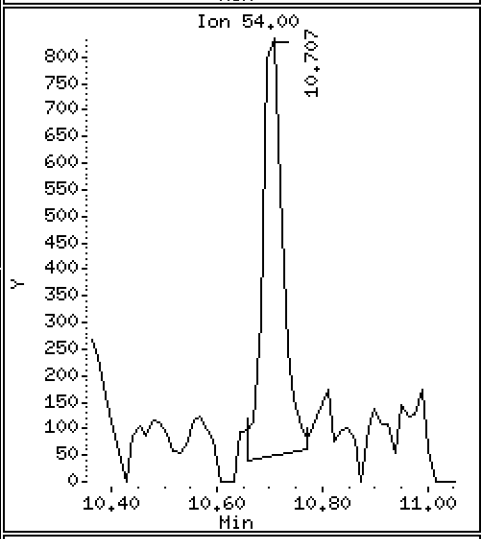
20 Isophorone

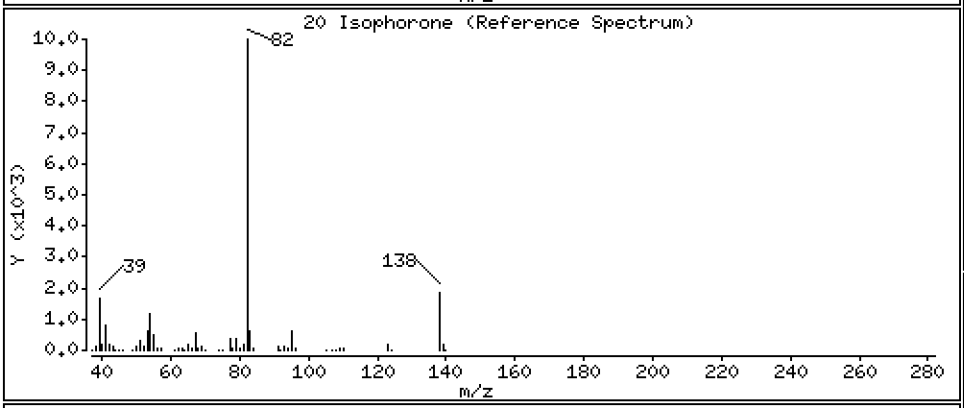
Concentration: 0.1855 ug/mL

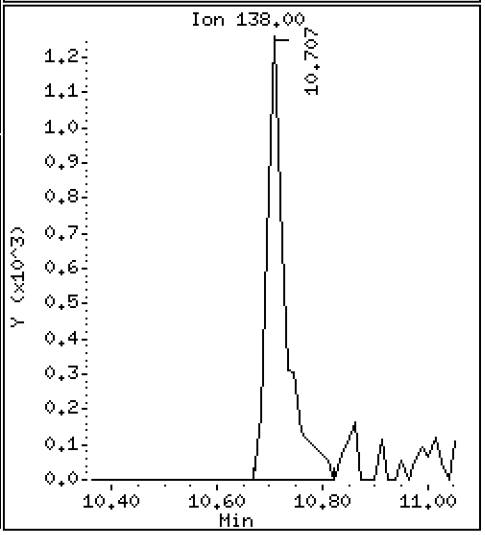


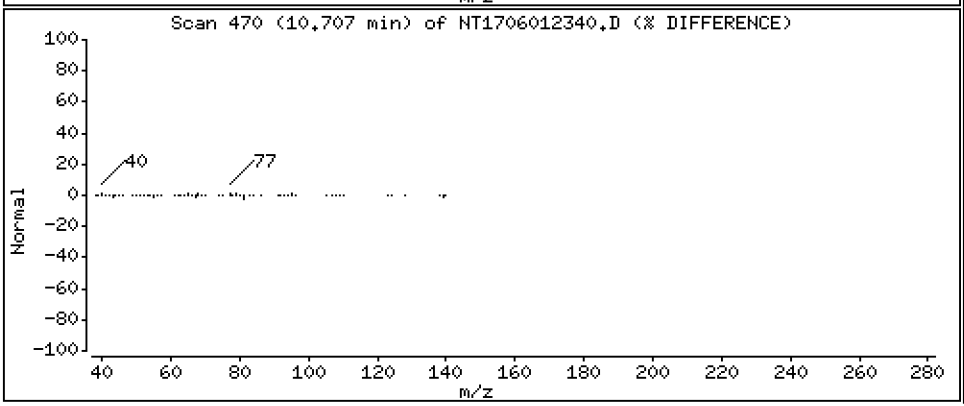












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

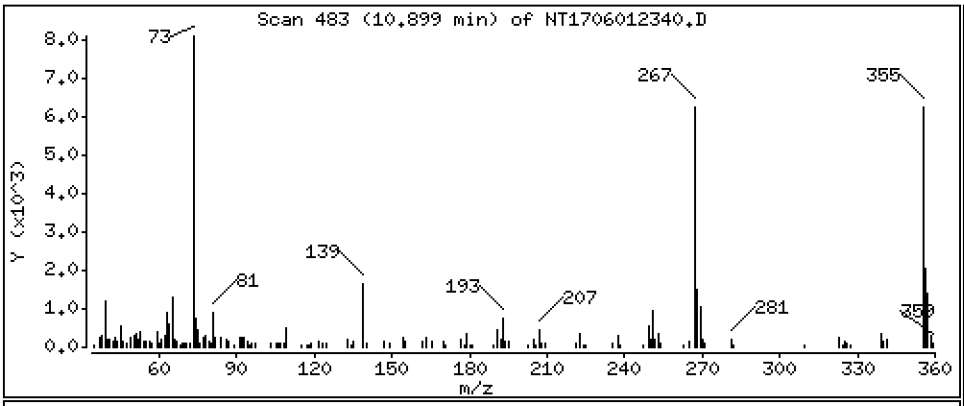
Operator: VTS

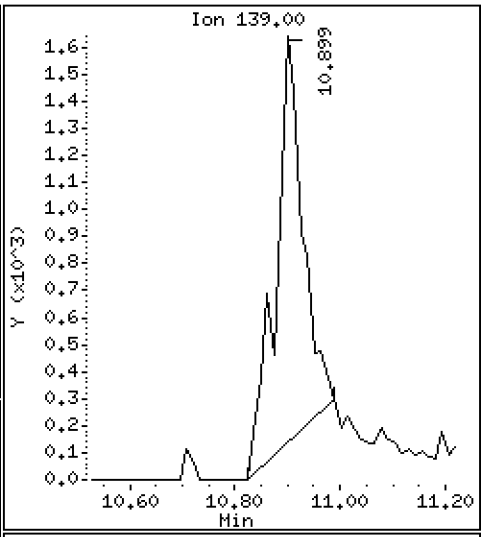
Column phase: ZB-5msi

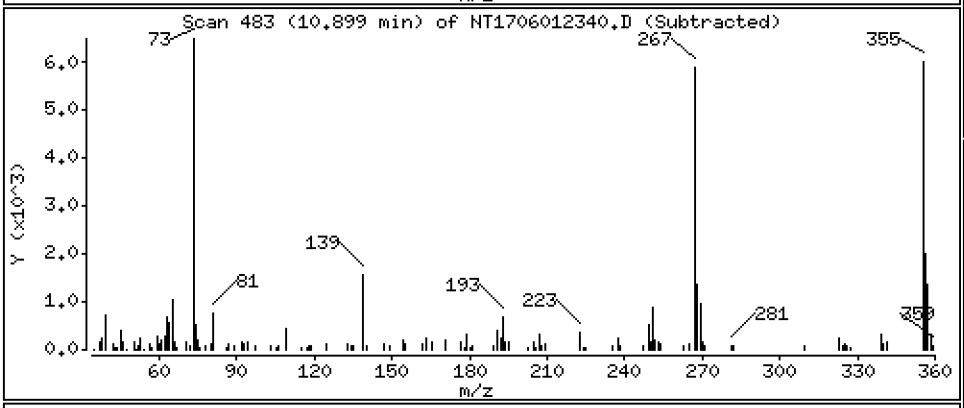
Column diameter: 0.25

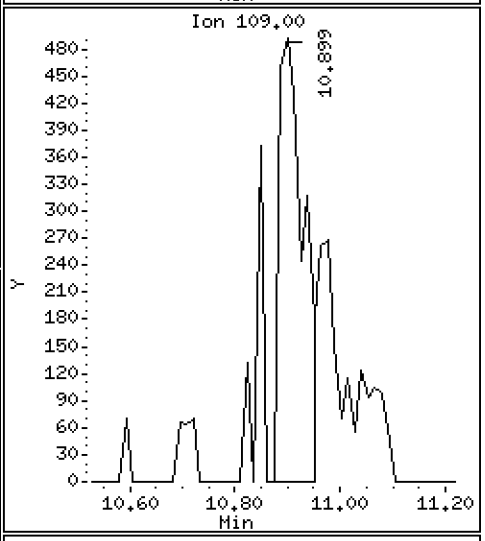
21 2-Nitrophenol

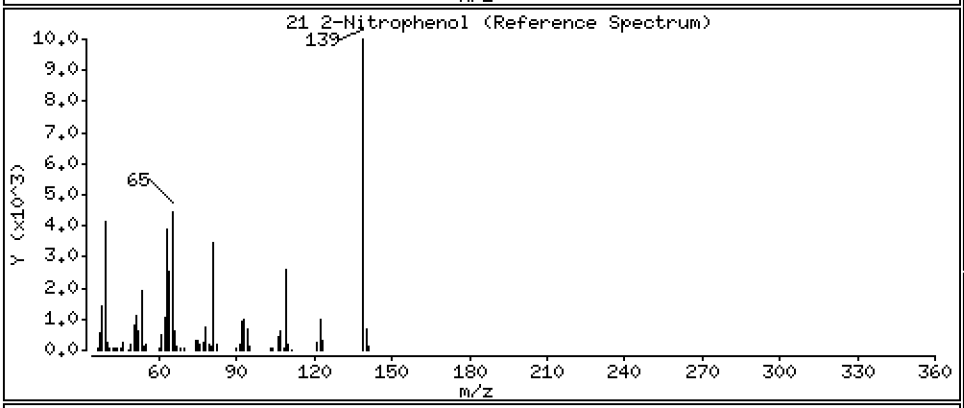
Concentration: 0.1482 ug/mL

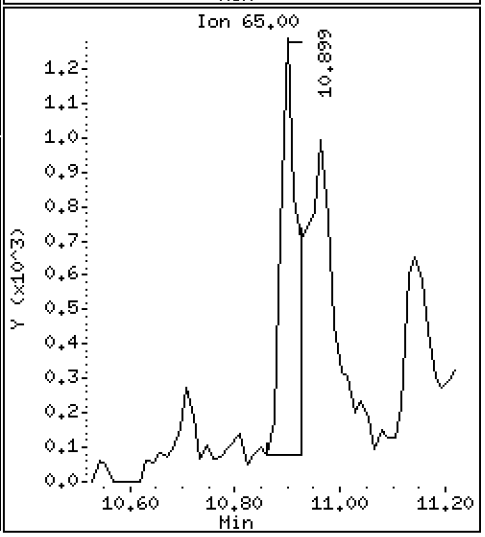


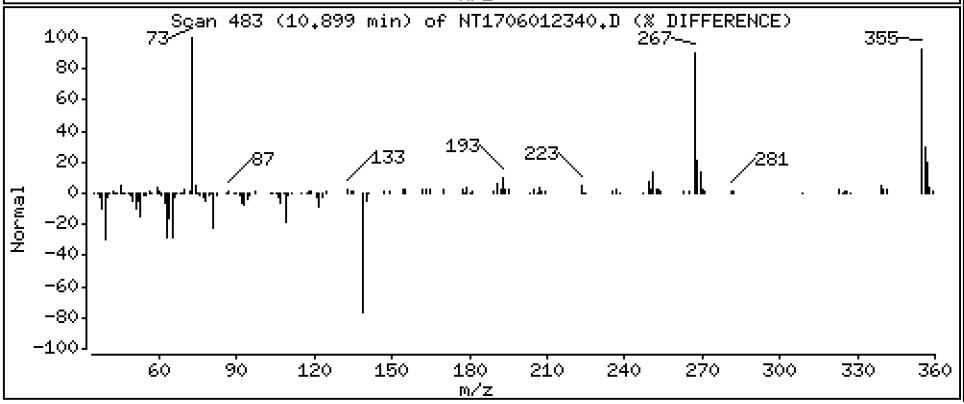












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

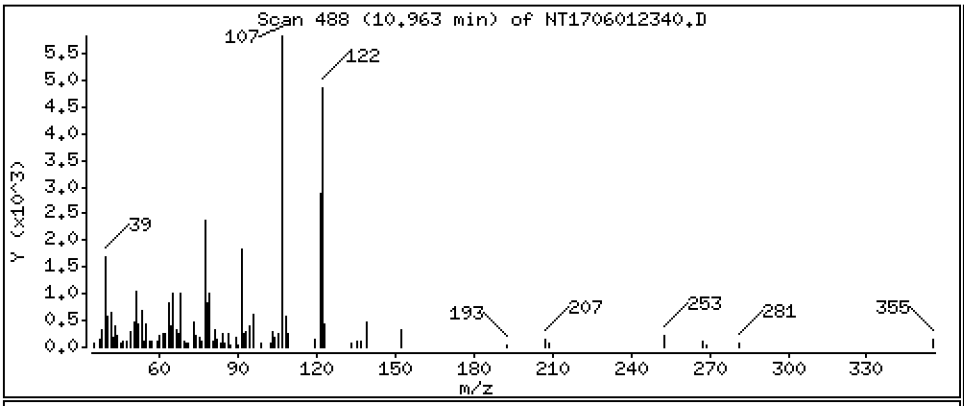
Operator: VTS

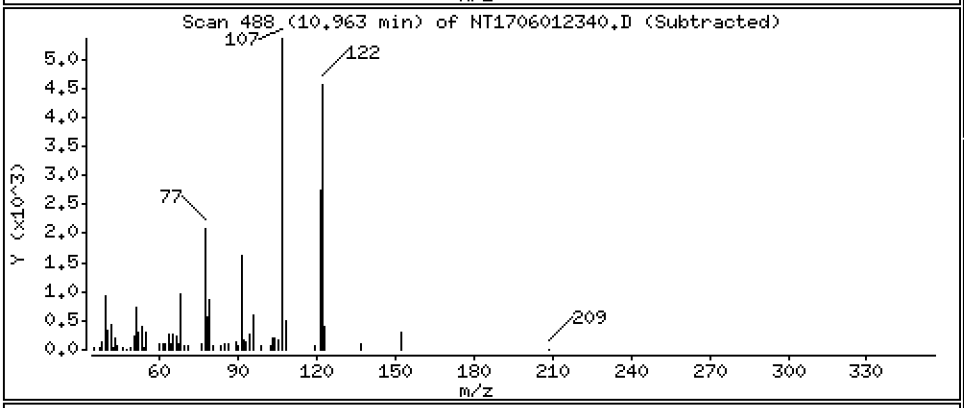
Column phase: ZB-5msi

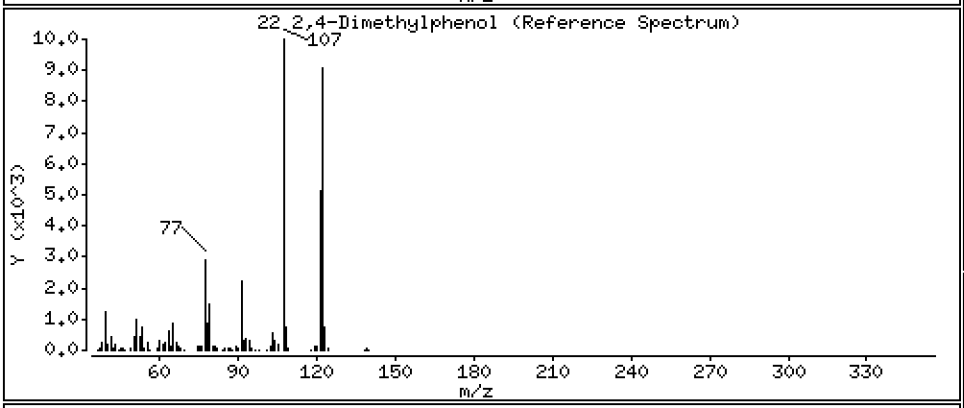
Column diameter: 0.25

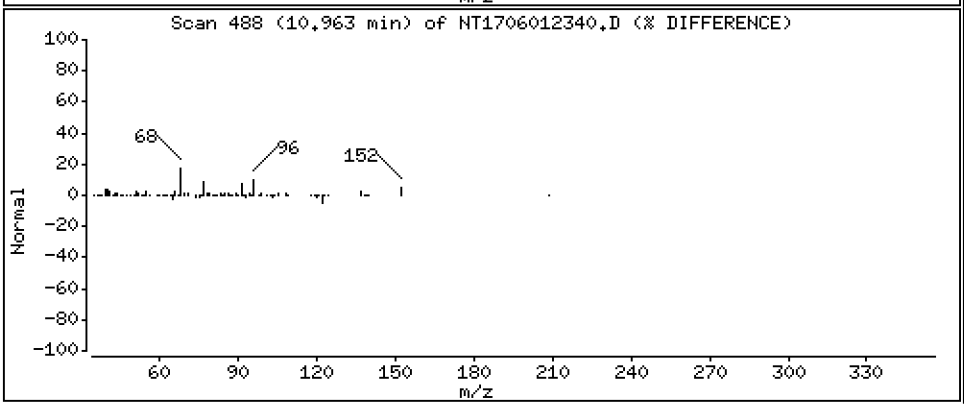
22 2,4-Dimethylphenol

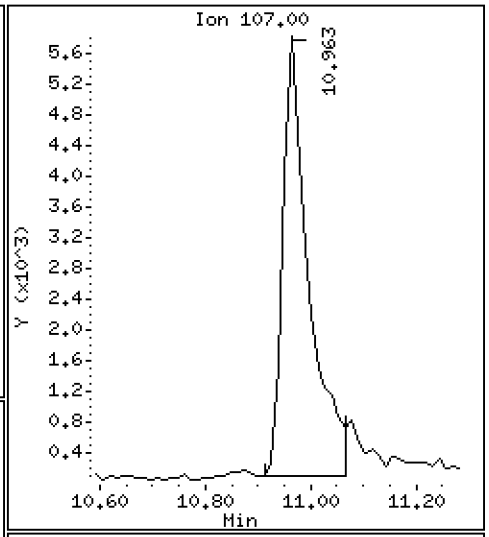
Concentration: 0.2808 ug/mL

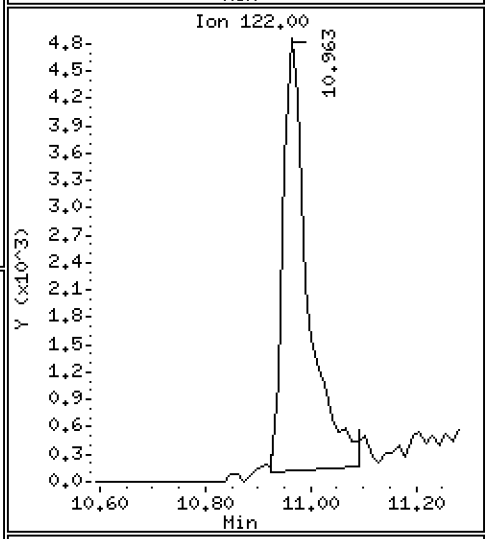


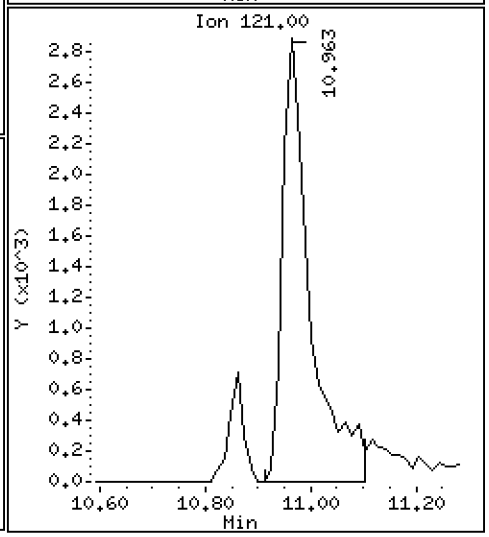












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

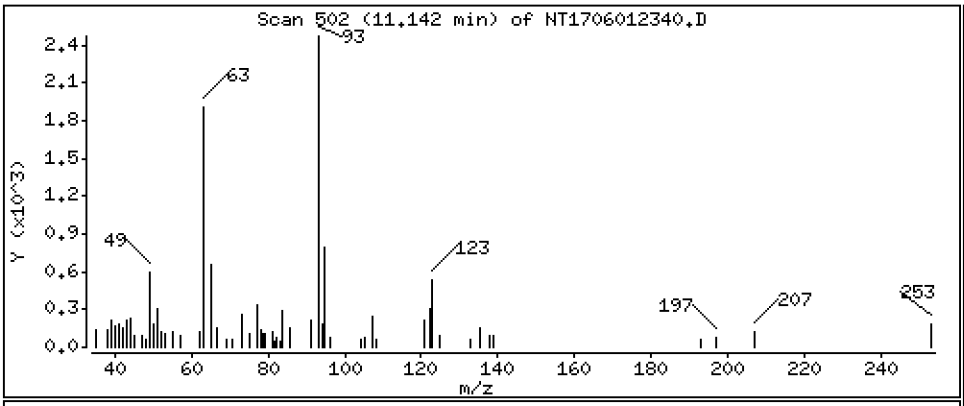
Operator: VTS

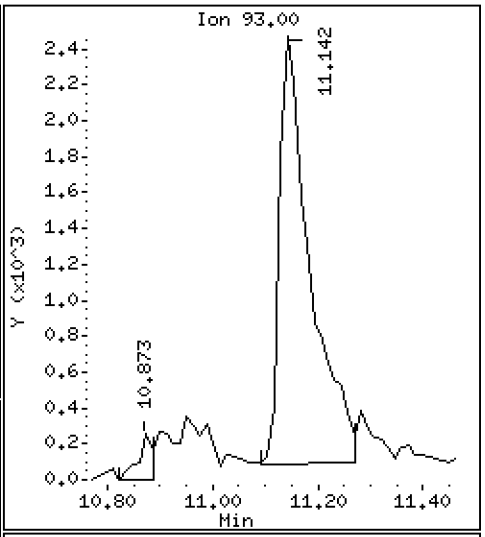
Column phase: ZB-5msi

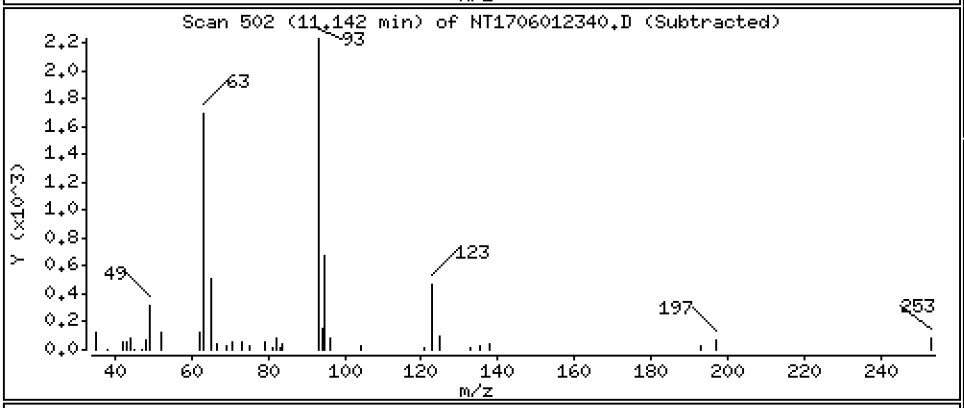
Column diameter: 0.25

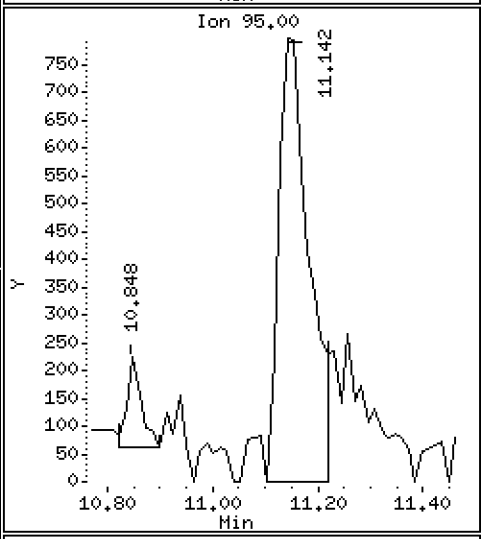
23 Bis(2-Chloroethoxy)methane

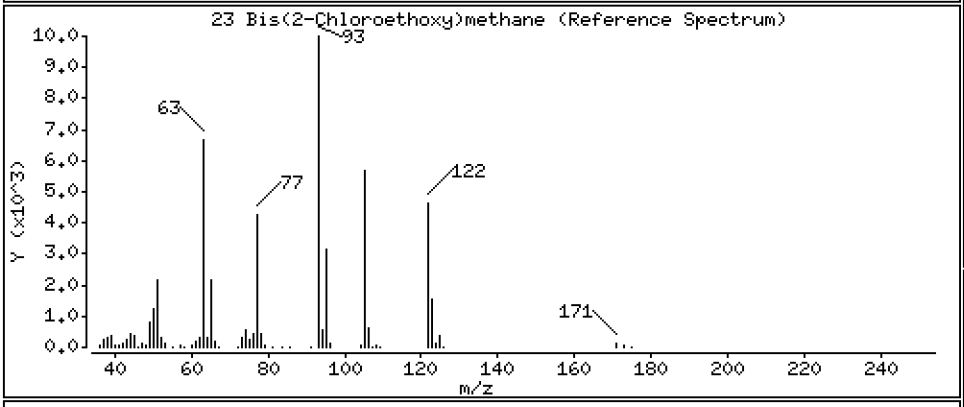
Concentration: 0.1541 ug/mL

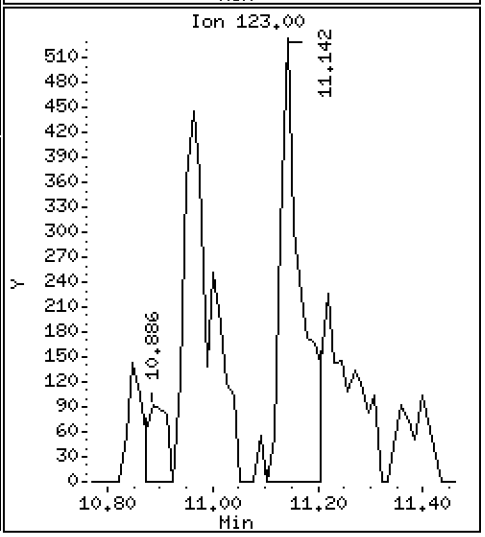


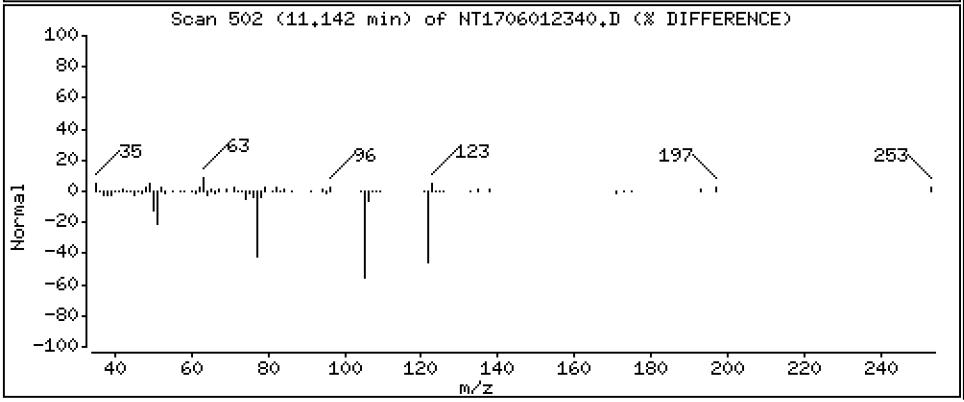












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

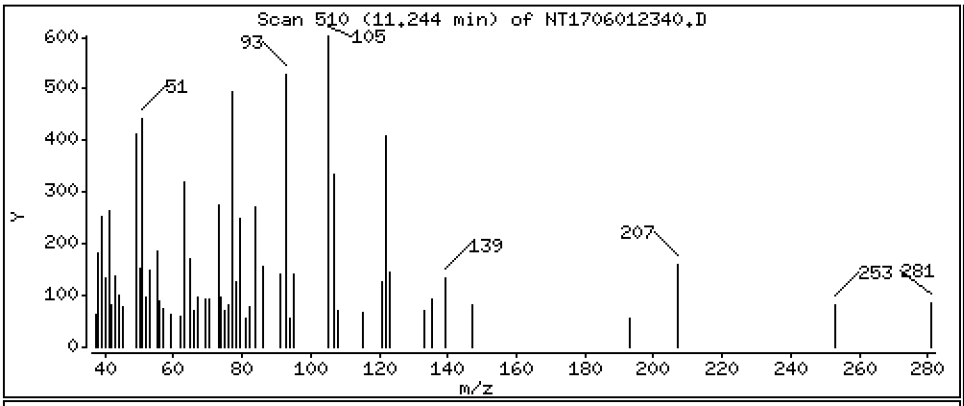
Operator: VTS

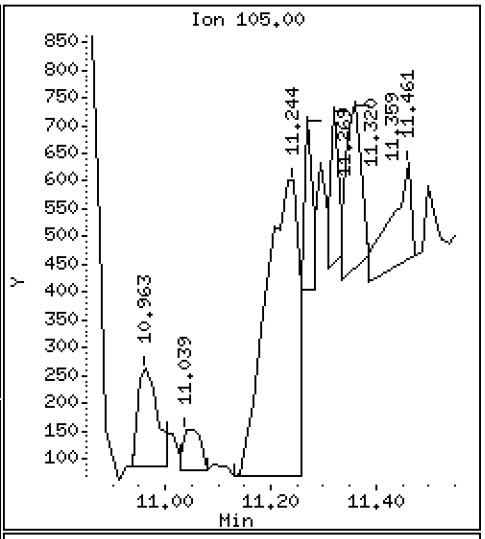
Column phase: ZB-5msi

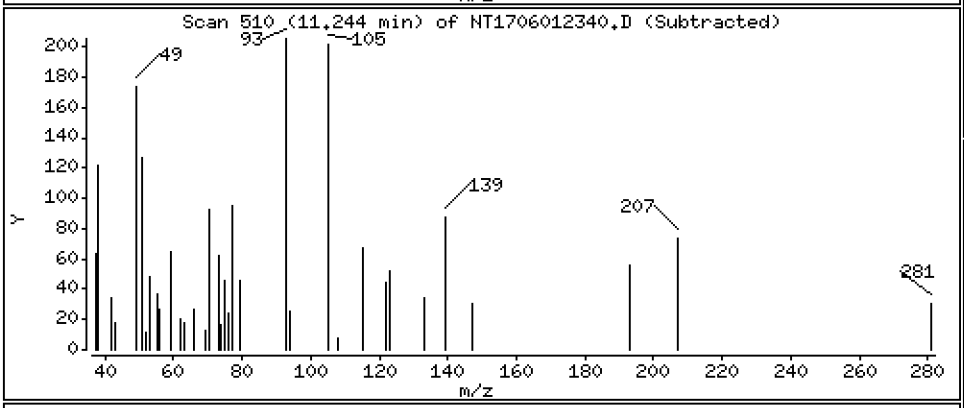
Column diameter: 0.25

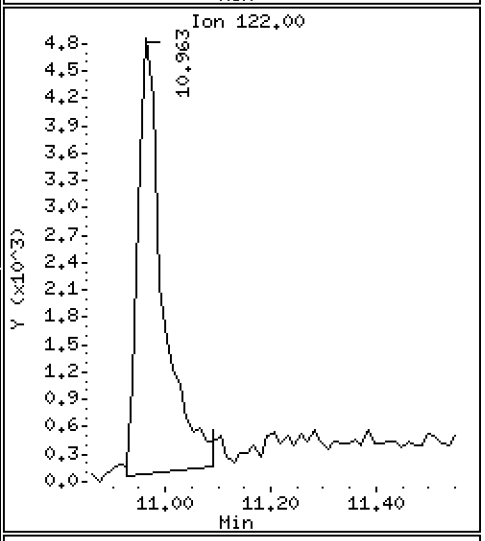
24 Benzoic acid

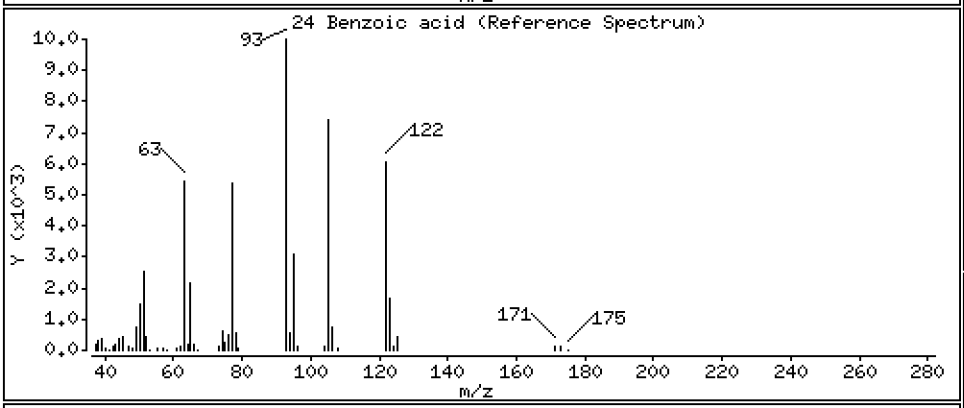
Concentration: 0.05034 ug/mL

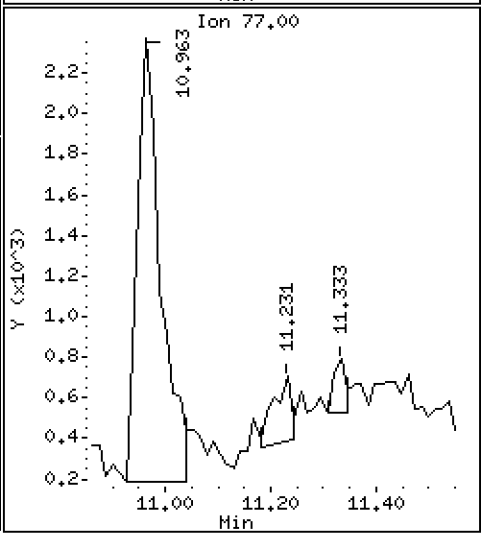


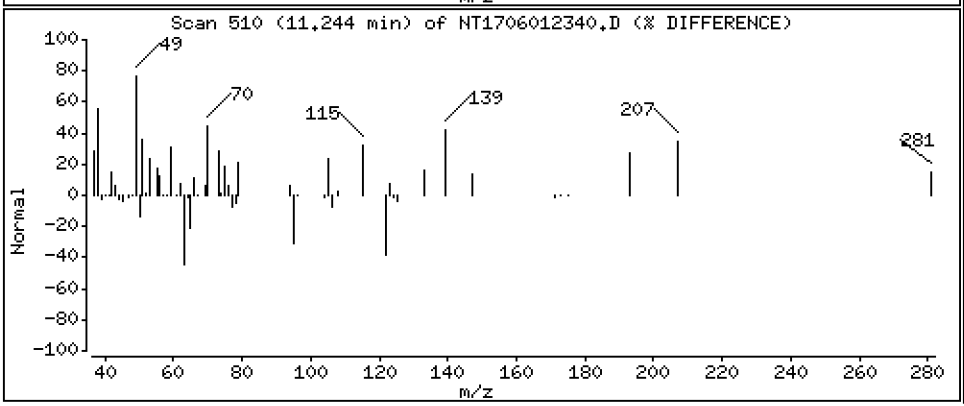












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

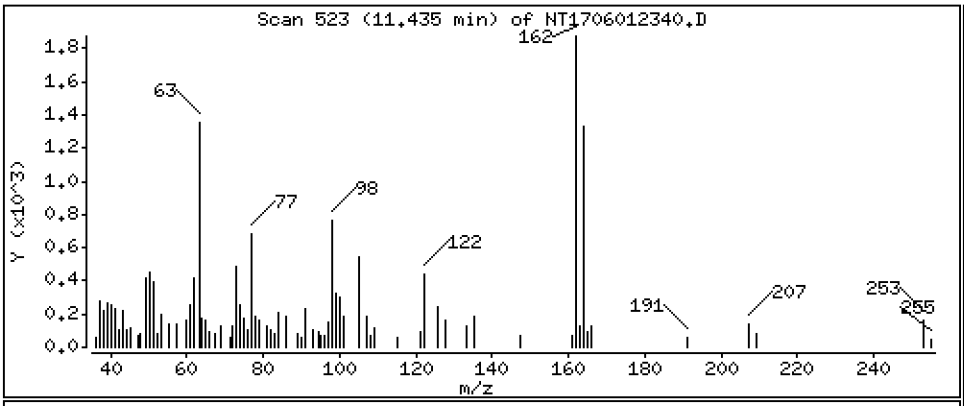
Operator: VTS

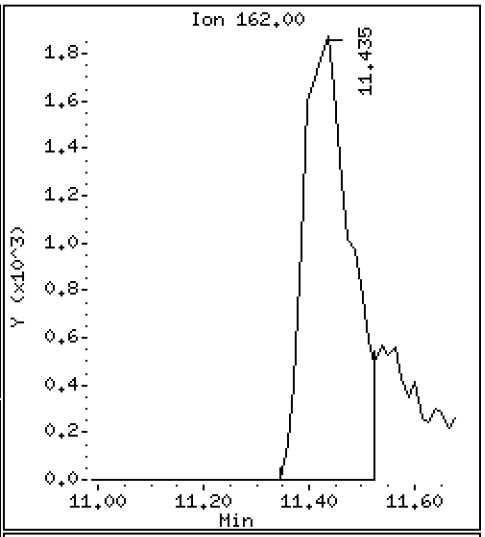
Column phase: ZB-5msi

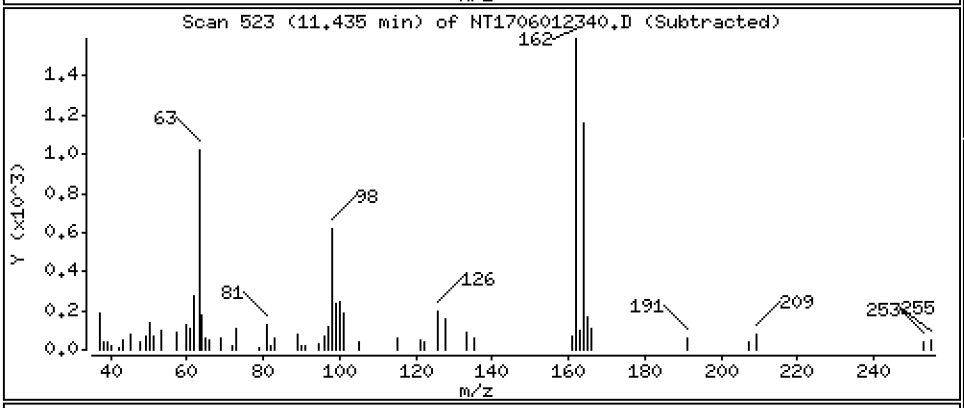
Column diameter: 0.25

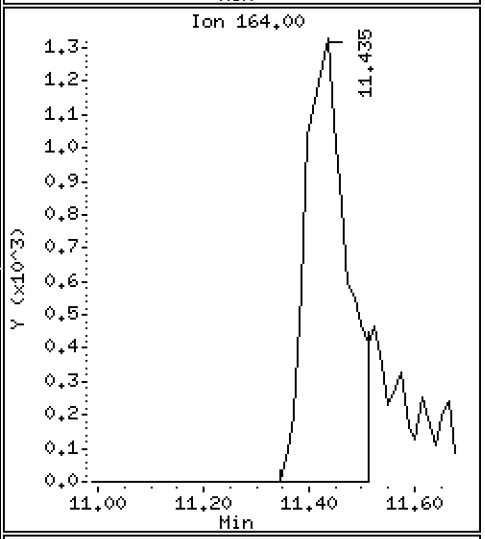
25 2,4-Dichlorophenol

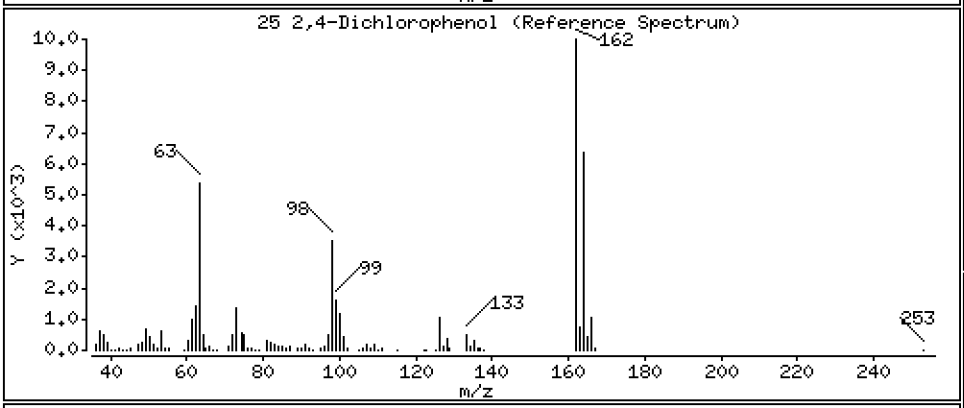
Concentration: 0.1867 ug/mL

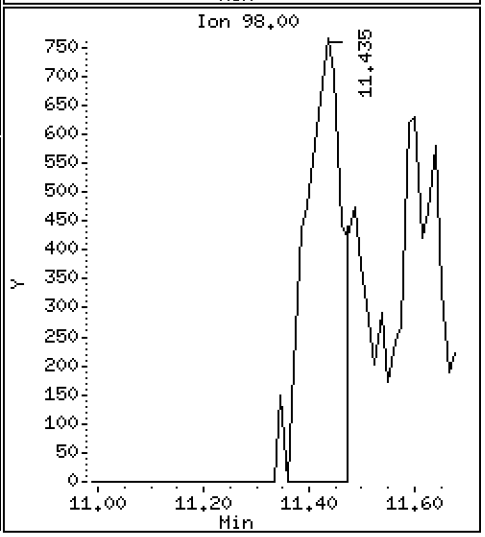


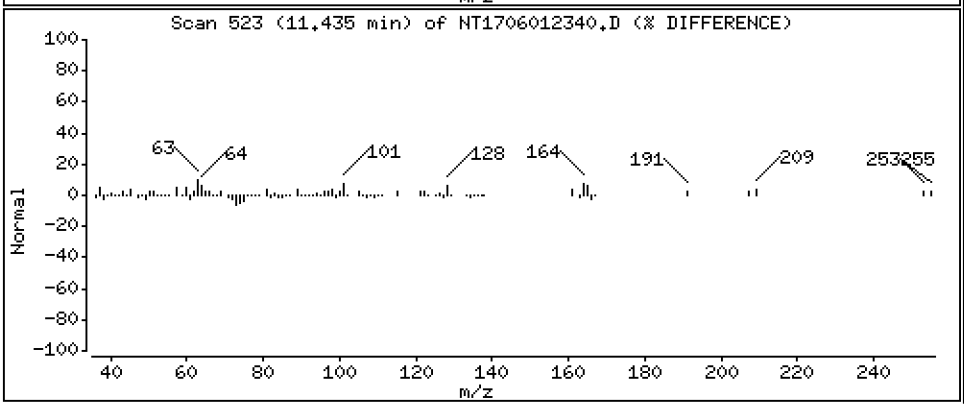












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

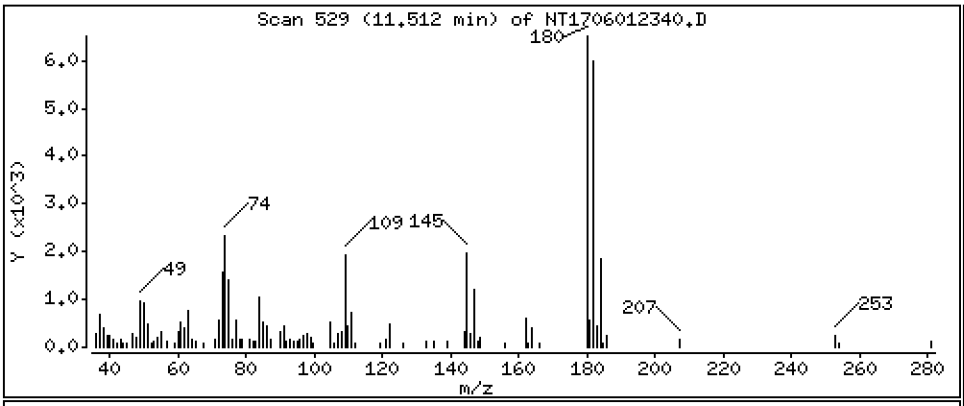
Operator: VTS

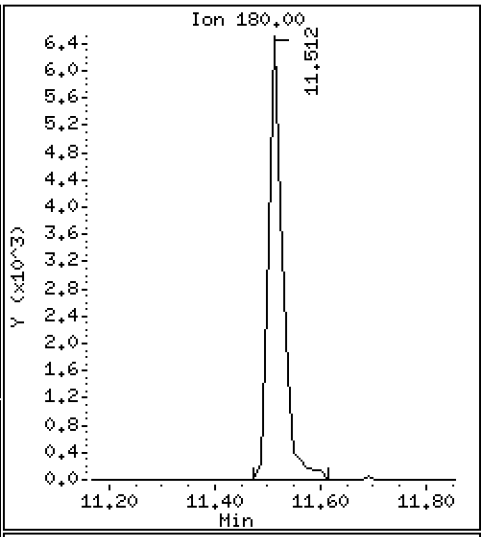
Column phase: ZB-5msi

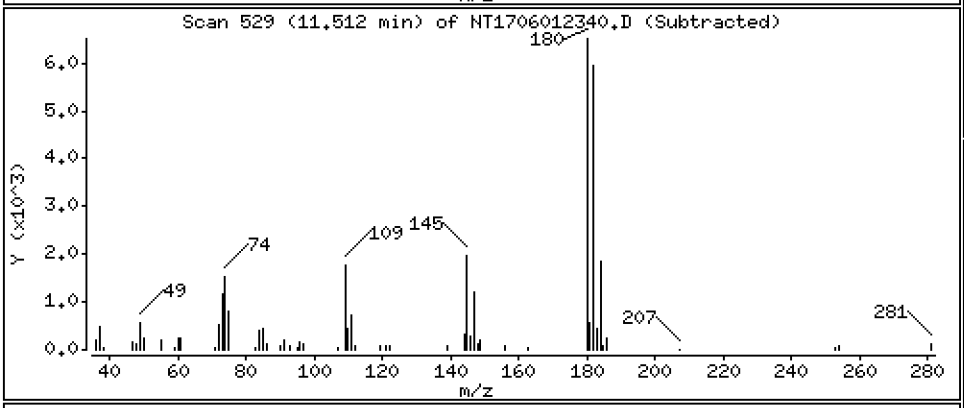
Column diameter: 0.25

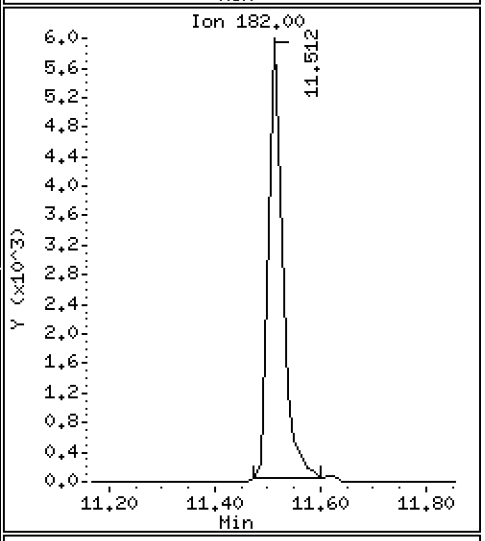
26 1,2,4-Trichlorobenzene

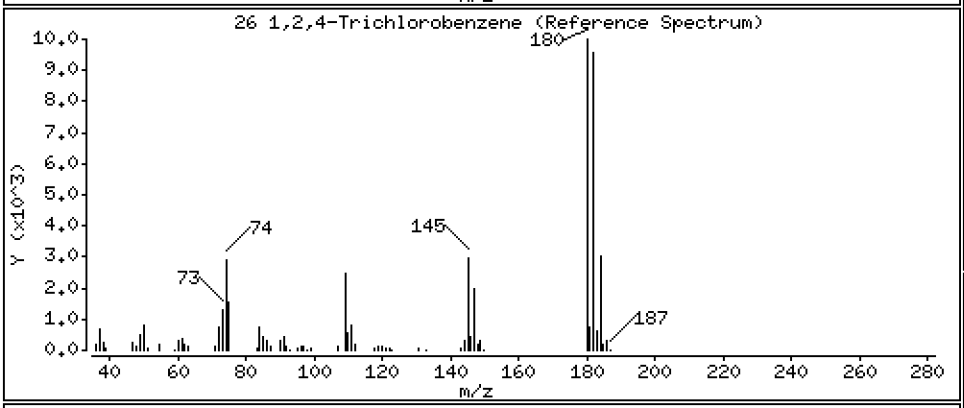
Concentration: 0.1989 ug/mL

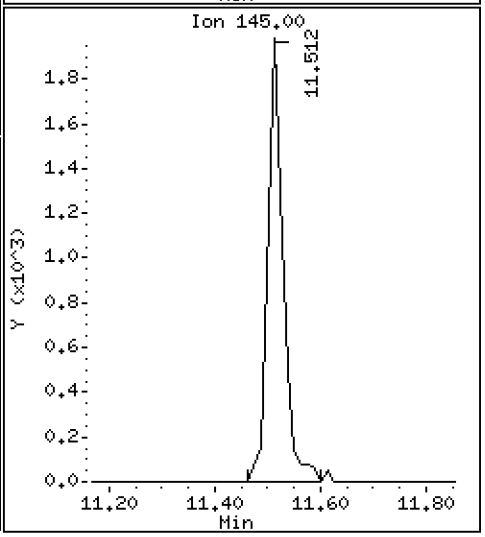


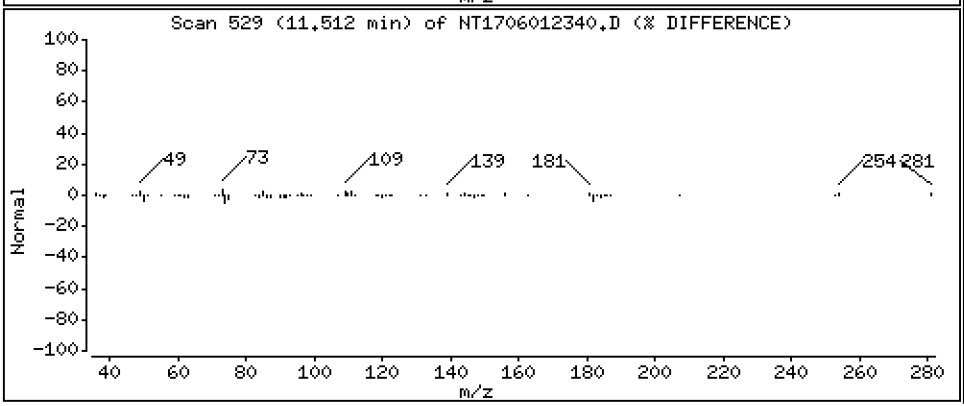












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

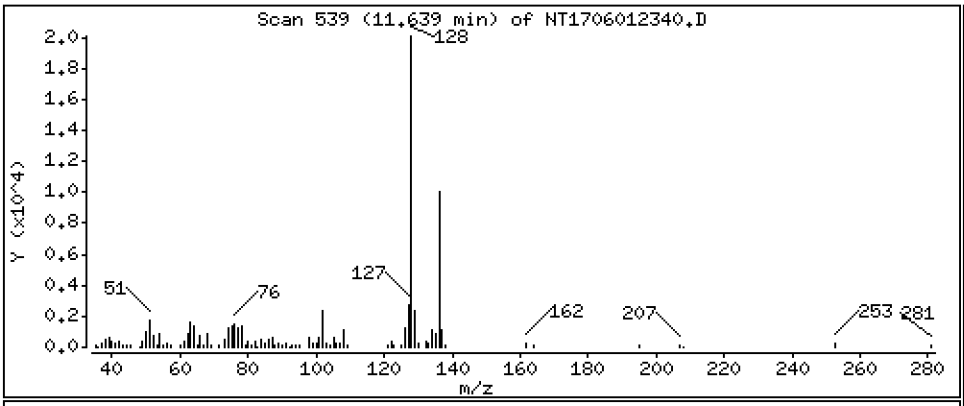
Operator: VTS

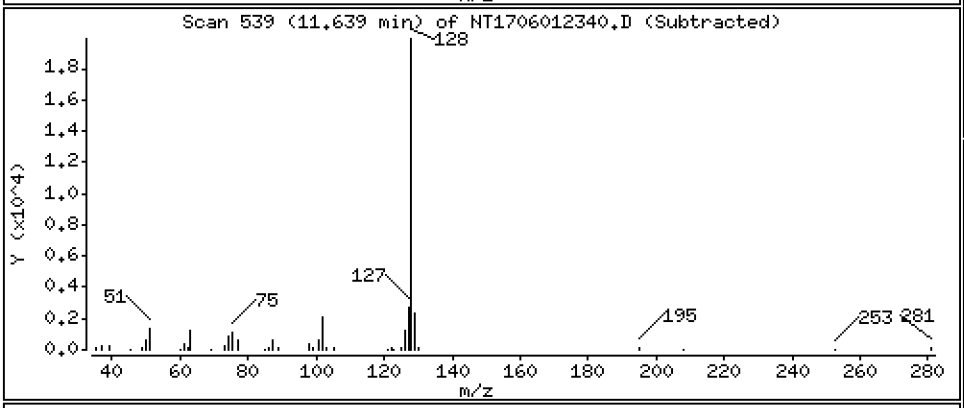
Column phase: ZB-5msi

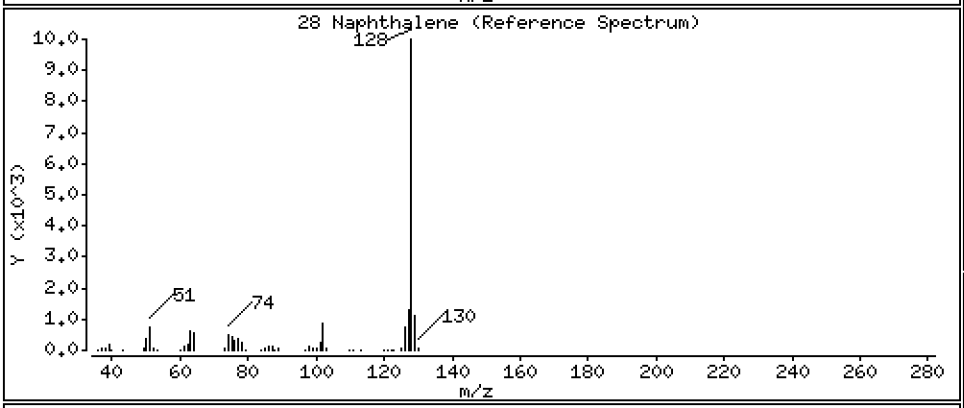
Column diameter: 0.25

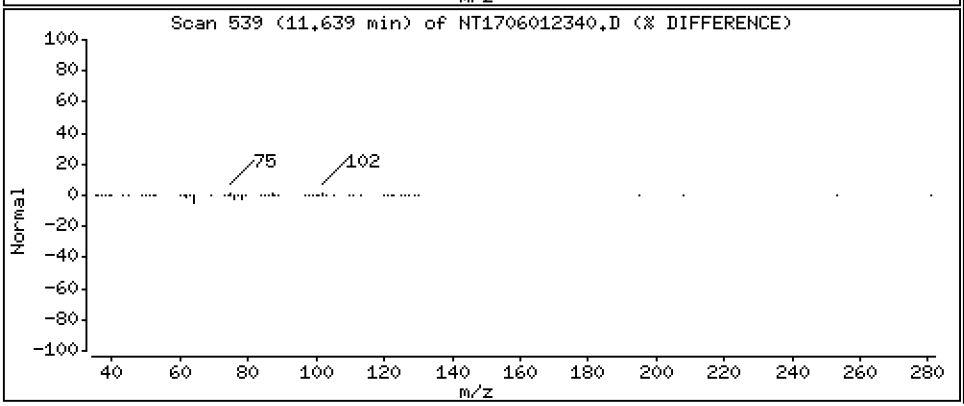
28 Naphthalene

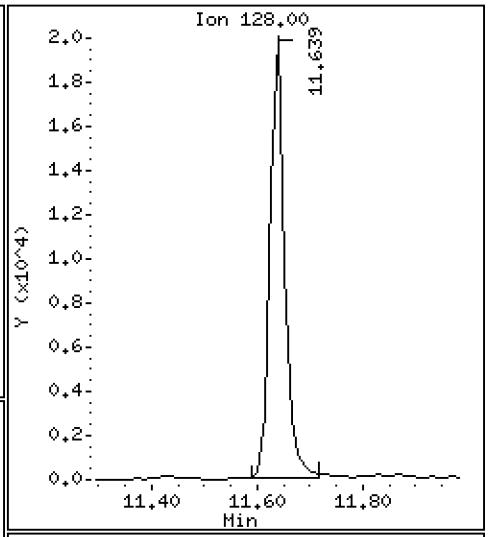
Concentration: 0.2013 ug/mL

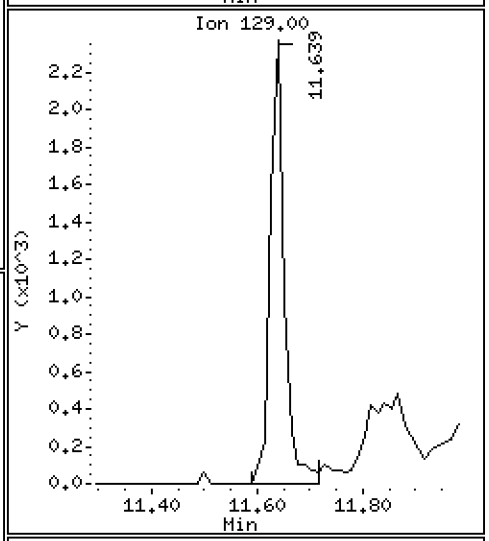


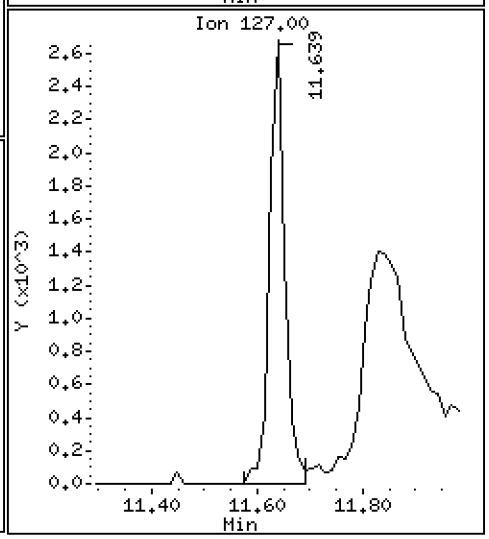












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

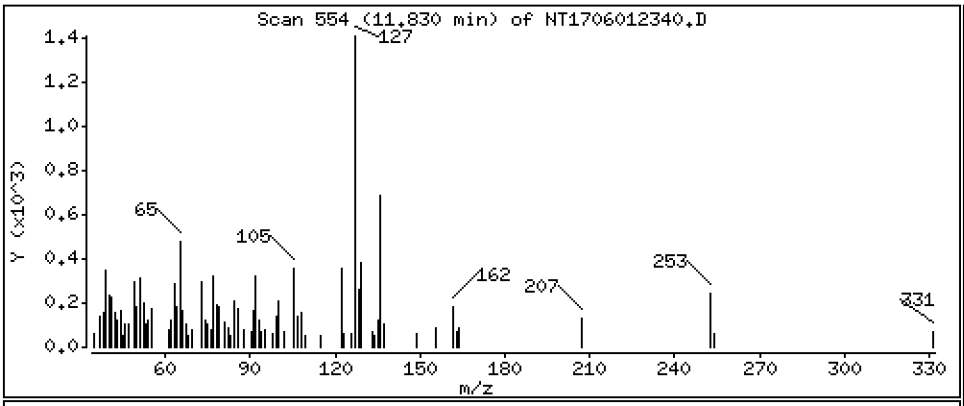
Operator: VTS

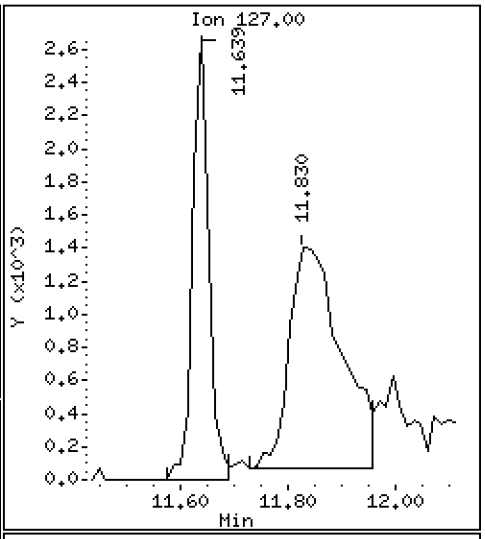
Column phase: ZB-5msi

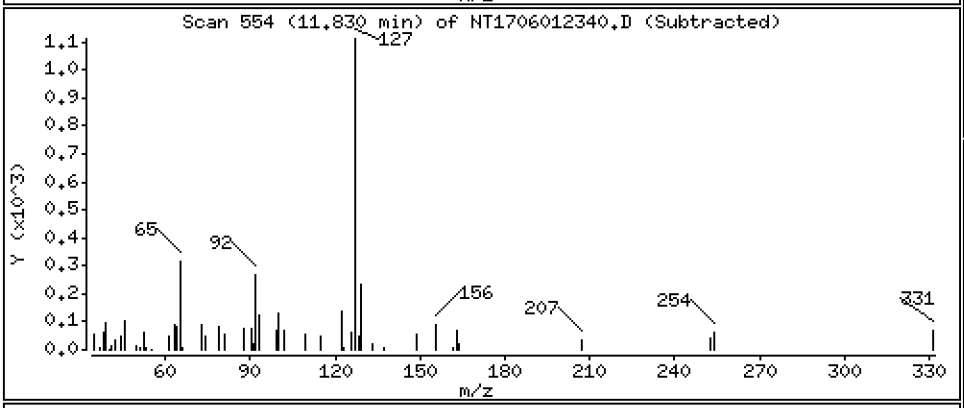
Column diameter: 0.25

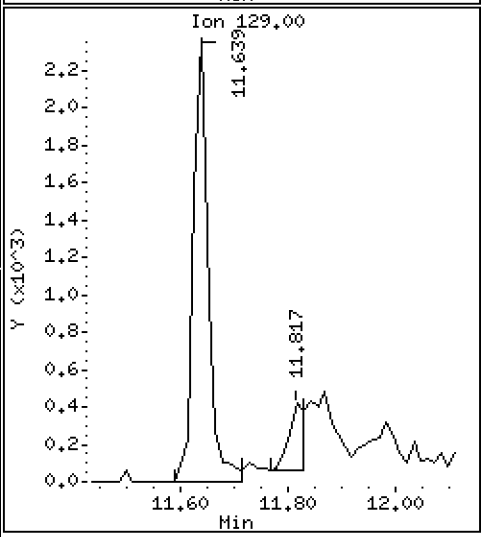
29 4-Chloroaniline

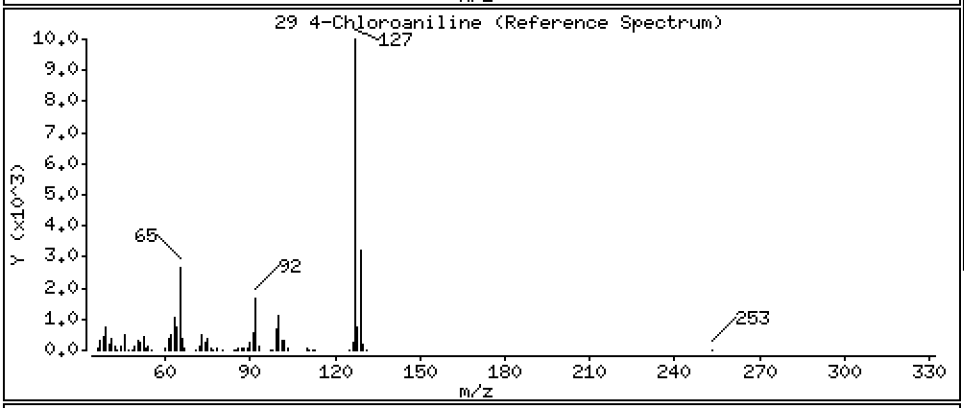
Concentration: 0.1207 ug/mL

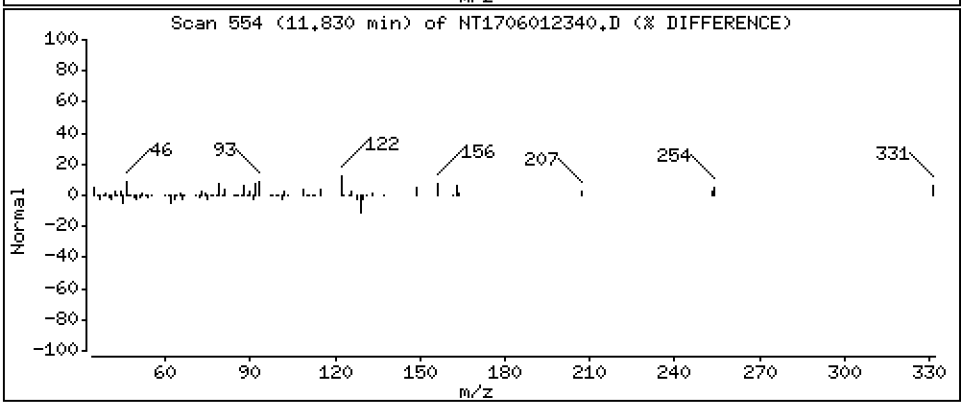












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

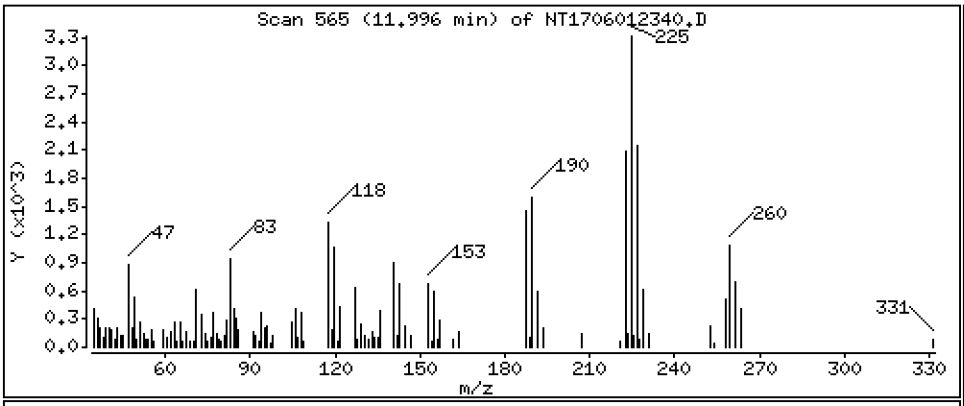
Operator: VTS

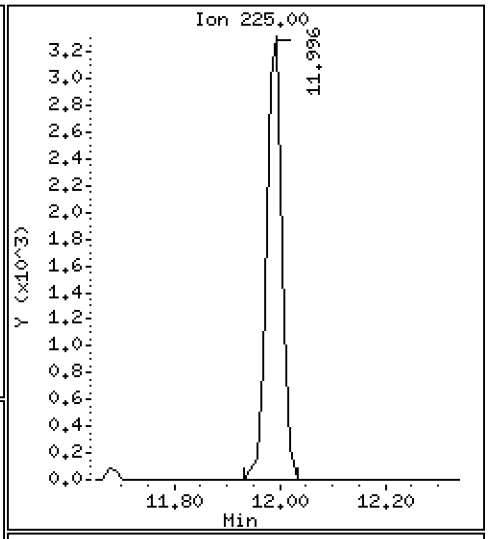
Column phase: ZB-5msi

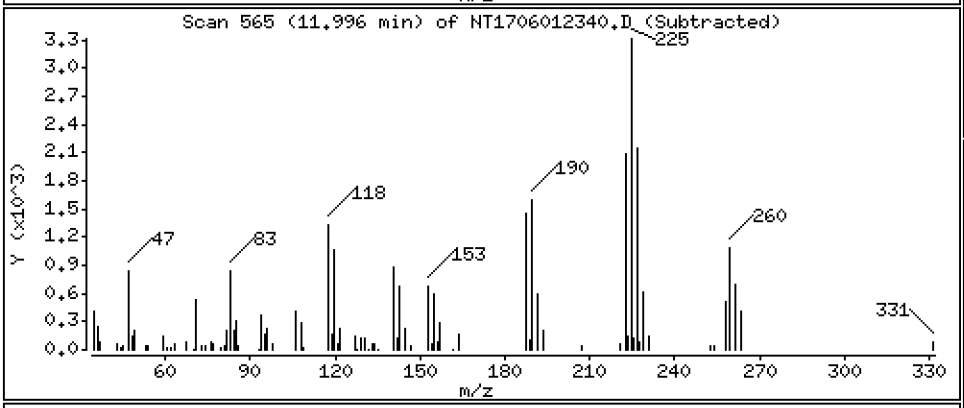
Column diameter: 0.25

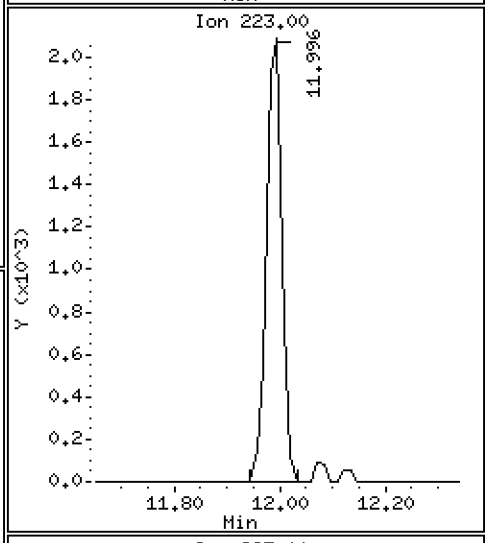
30 Hexachlorobutadiene

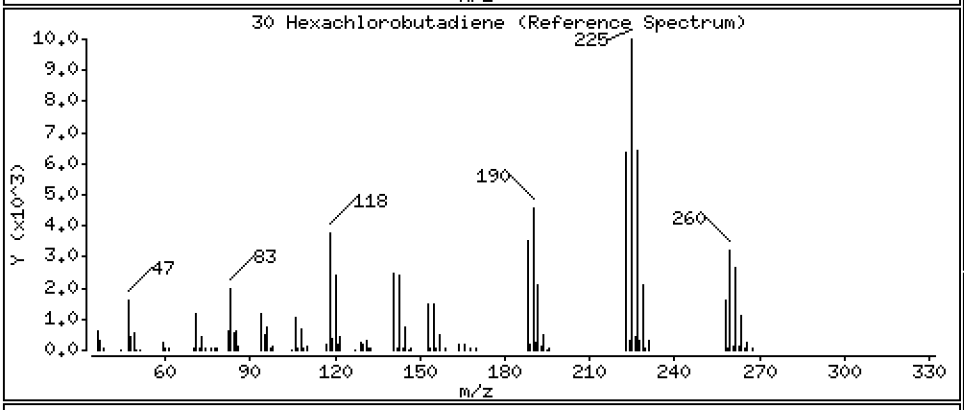
Concentration: 0.2211 ug/mL

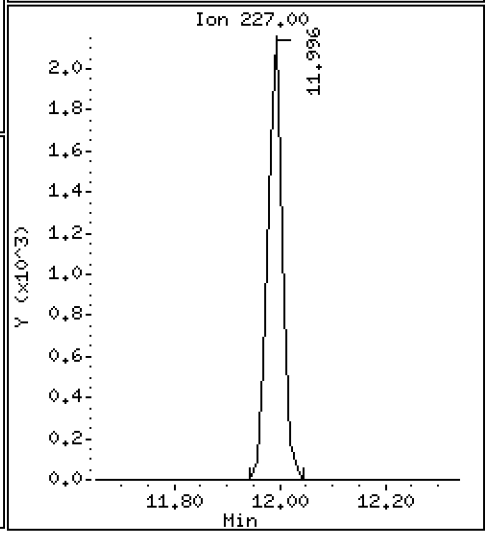


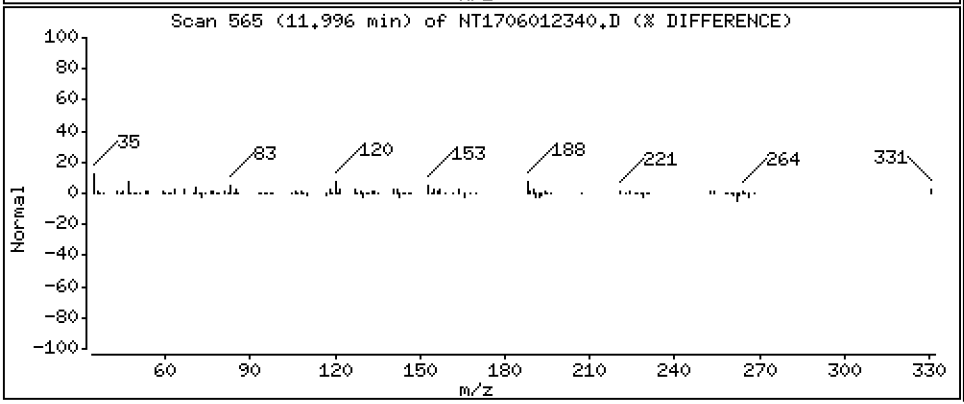












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

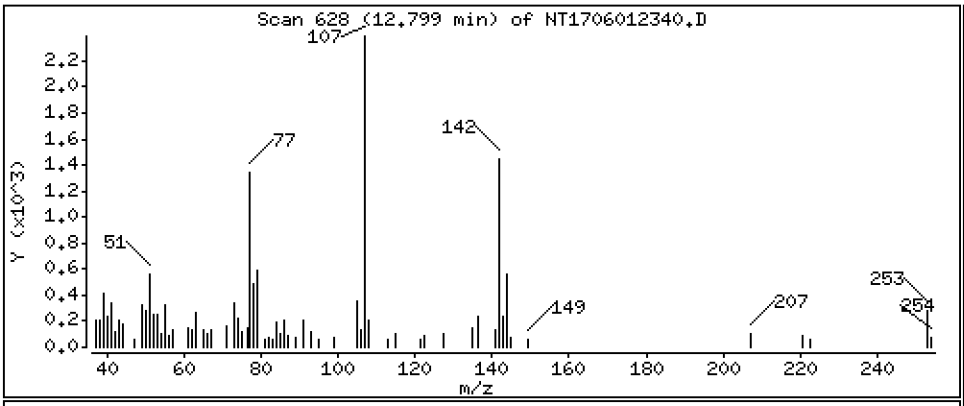
Operator: VTS

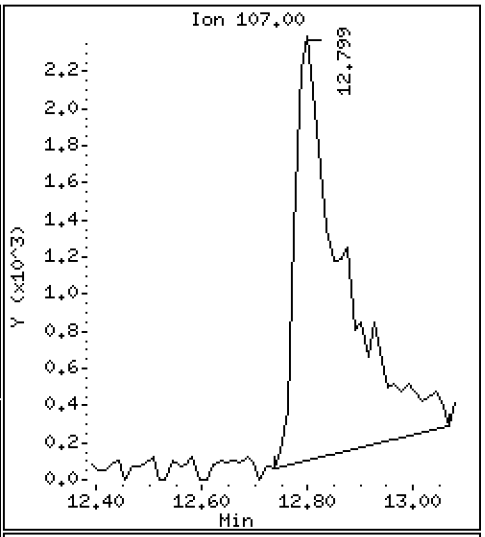
Column phase: ZB-5msi

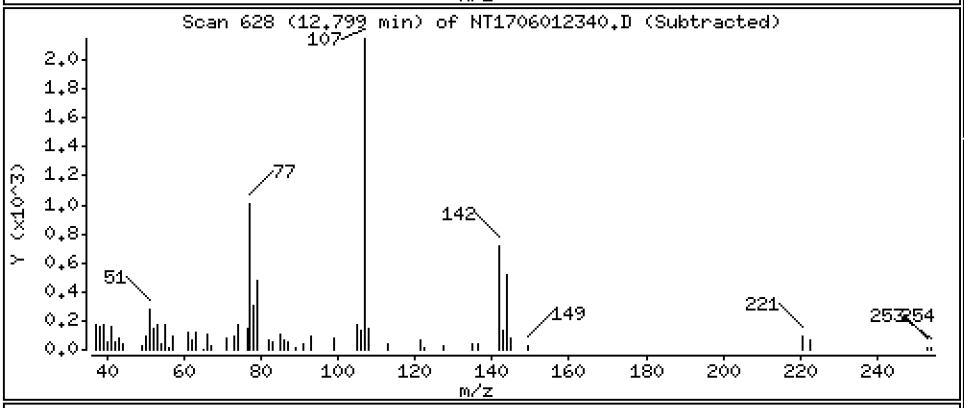
Column diameter: 0.25

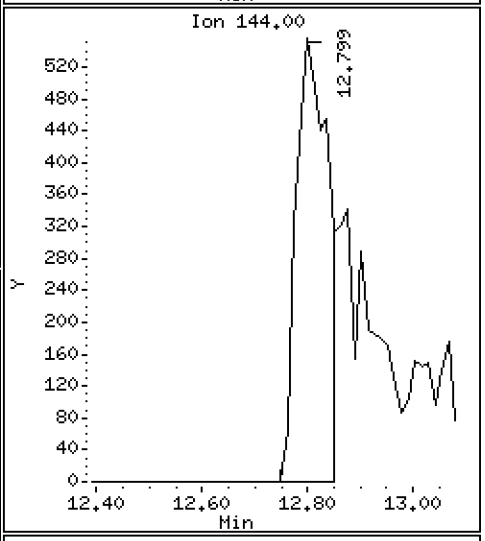
31 4-Chloro-3-methylphenol

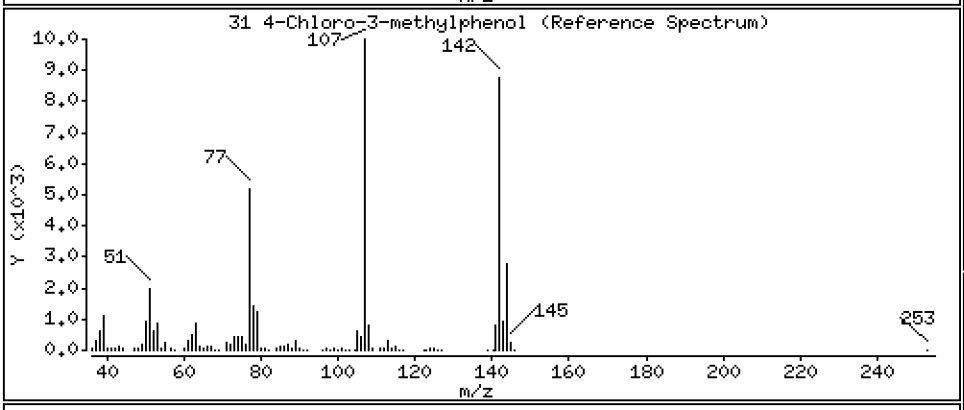
Concentration: 0.2354 ug/mL

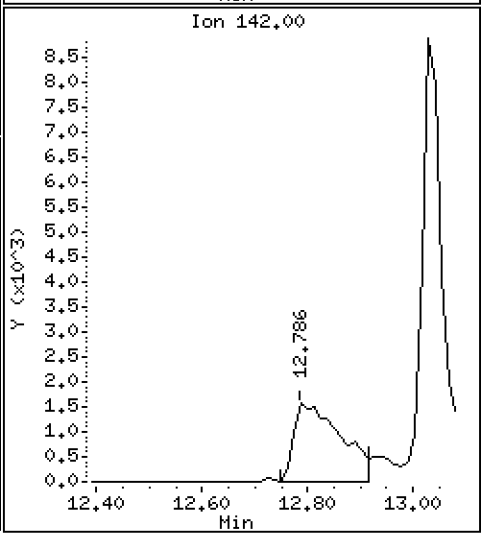


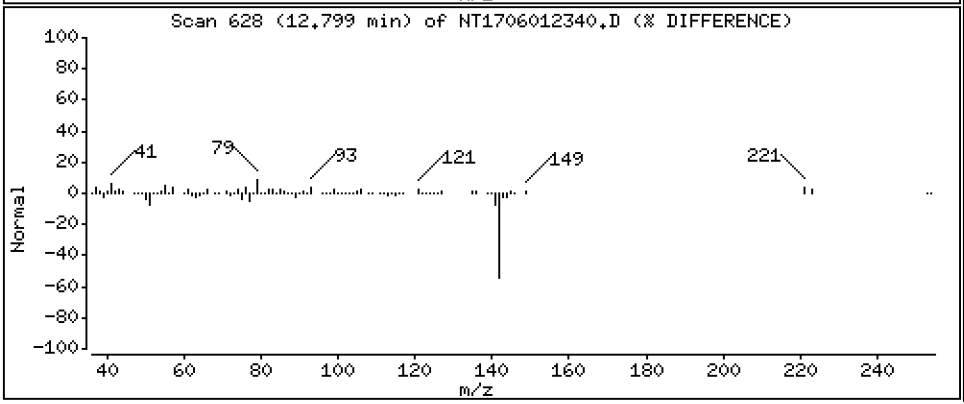












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

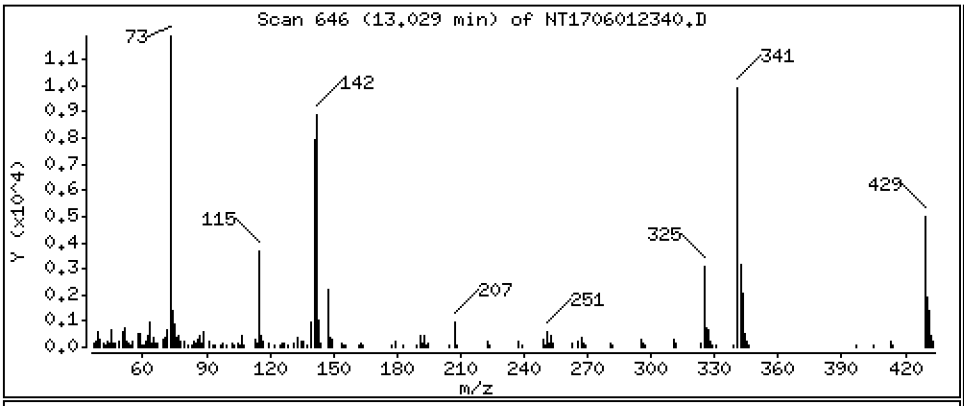
Operator: VTS

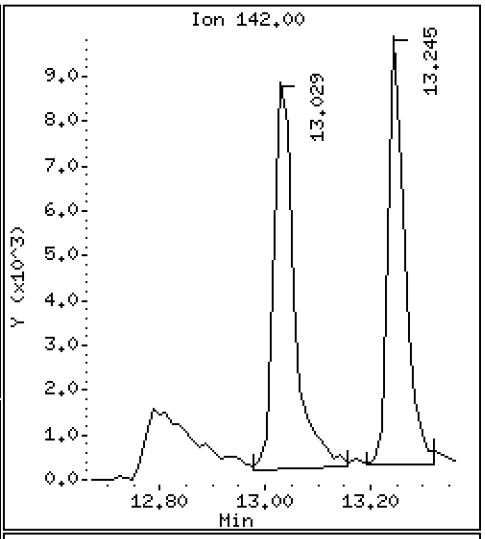
Column phase: ZB-5msi

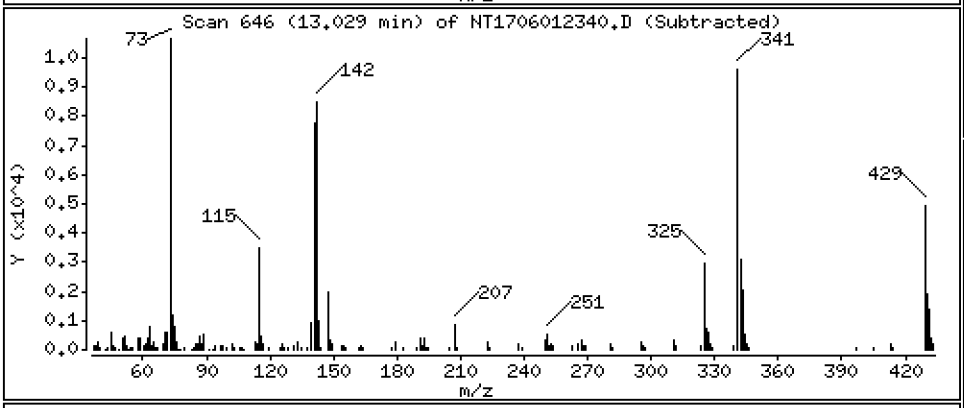
Column diameter: 0.25

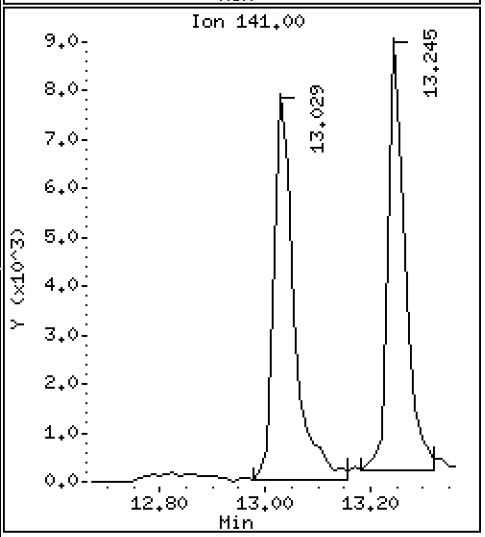
32 2-Methylnaphthalene

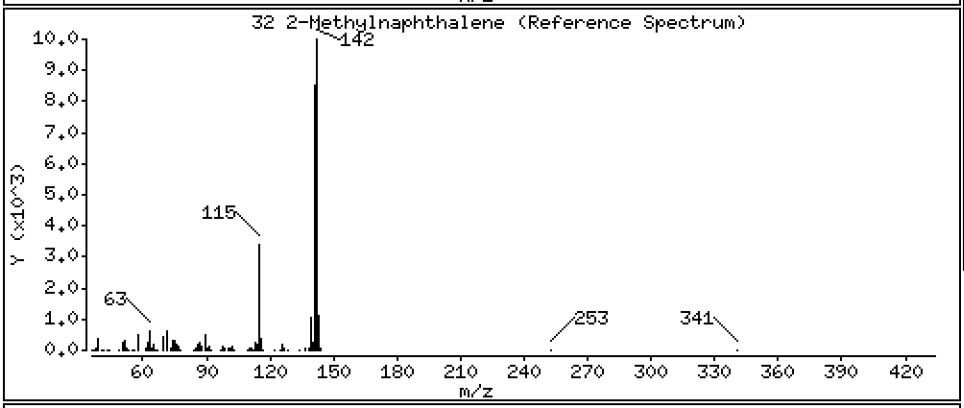
Concentration: 0.1714 ug/mL

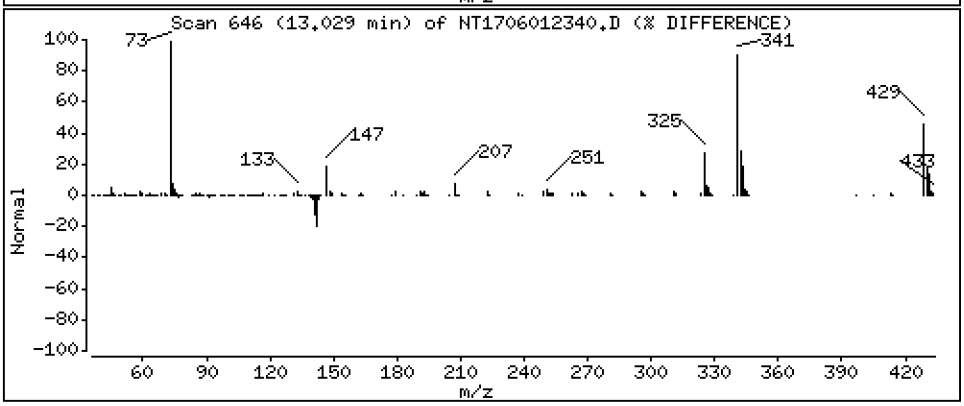












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

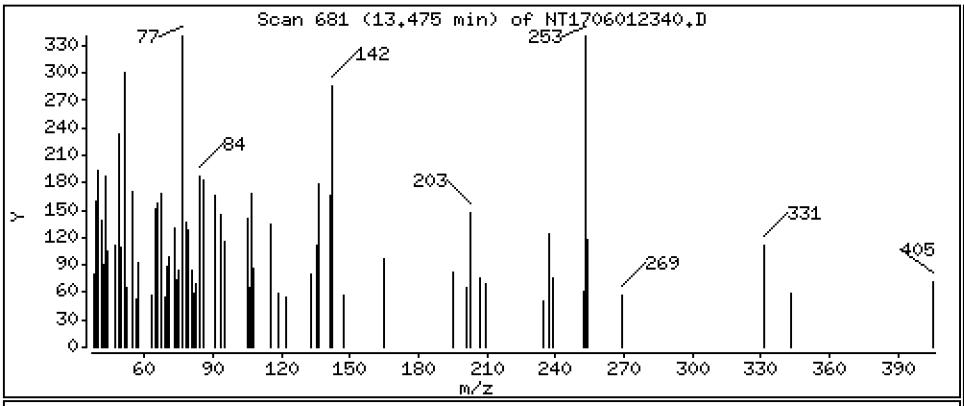
Operator: VTS

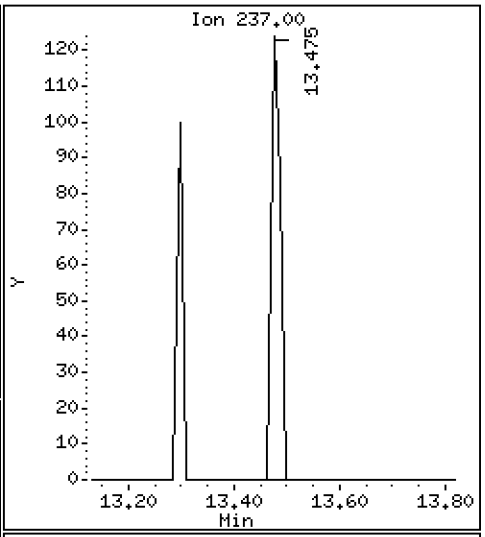
Column phase: ZB-5msi

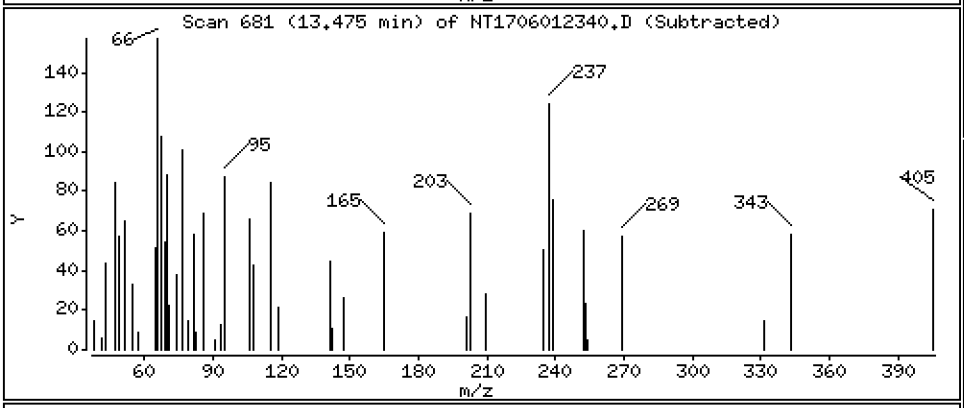
Column diameter: 0.25

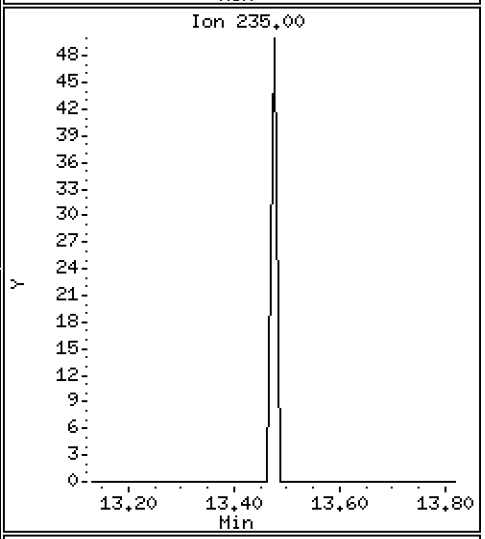
33 Hexachlorocyclopentadiene

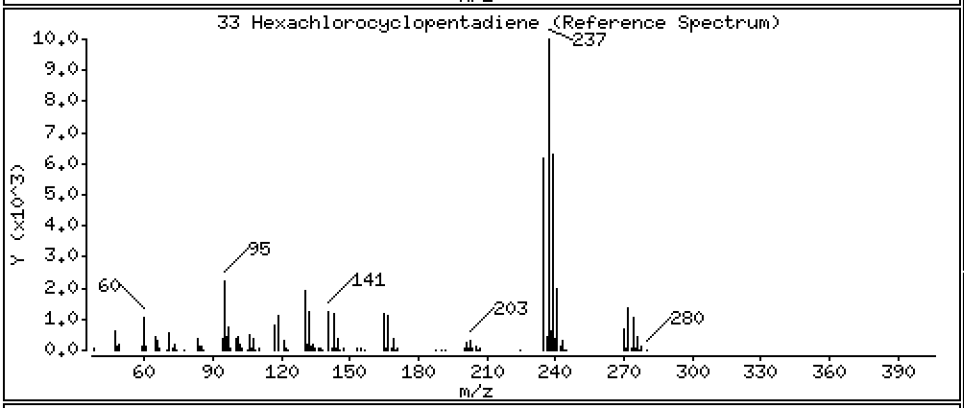
Concentration: 0.005475 ug/mL

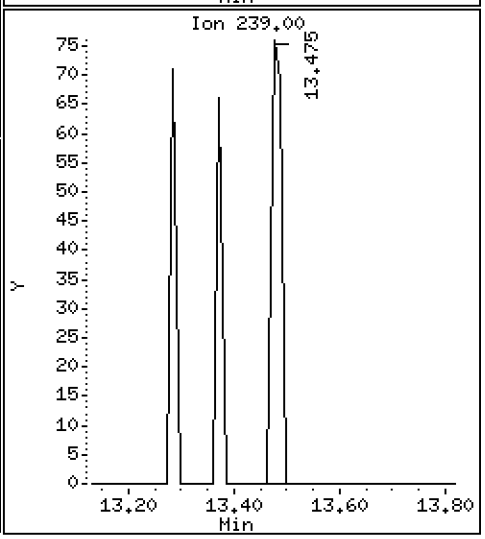


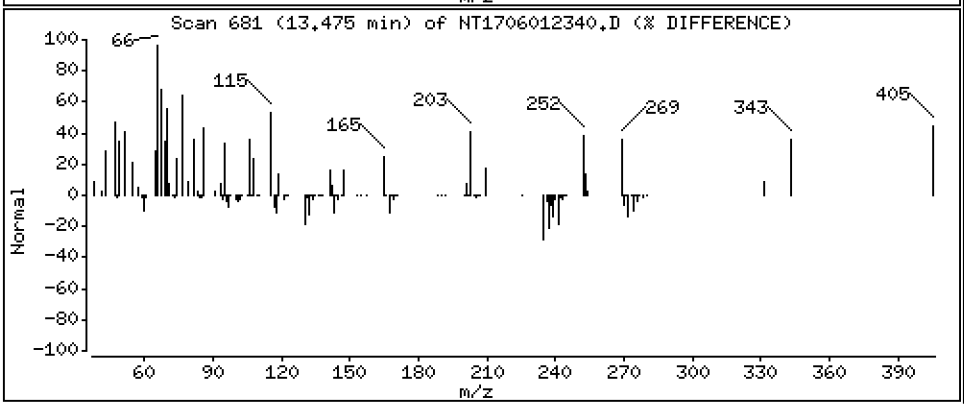












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

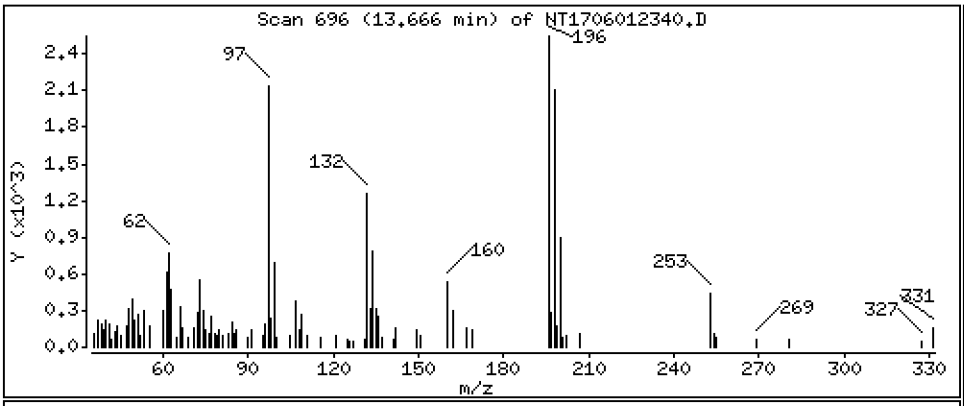
Operator: VTS

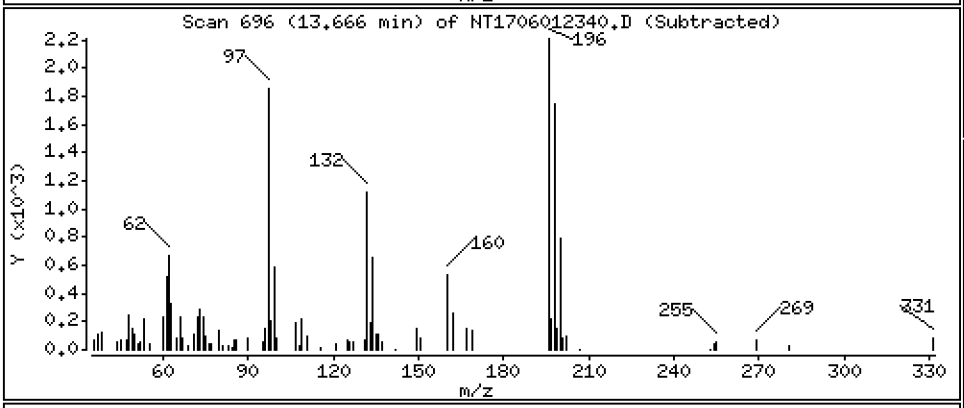
Column phase: ZB-5msi

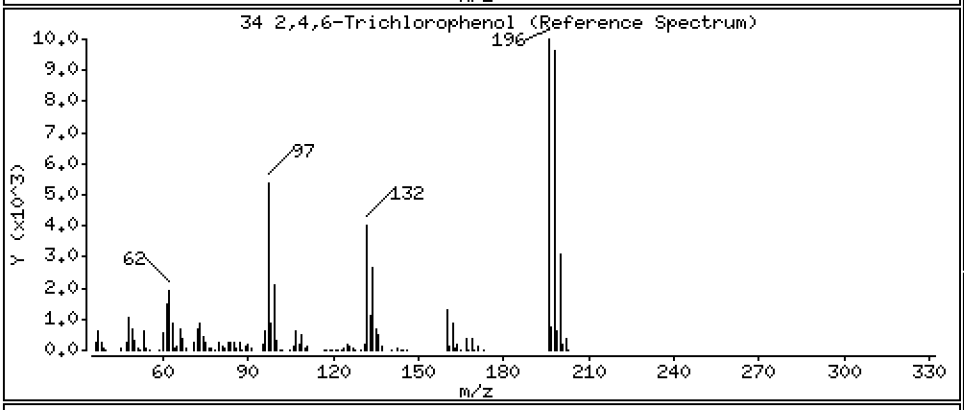
Column diameter: 0.25

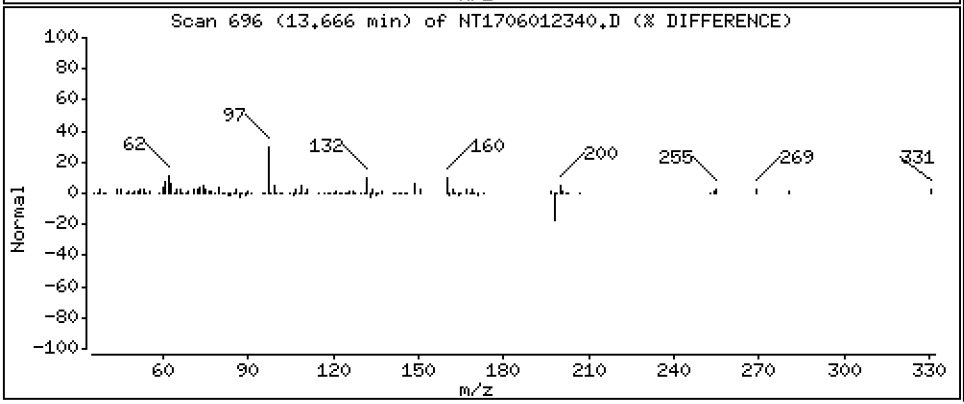
34 2,4,6-Trichlorophenol

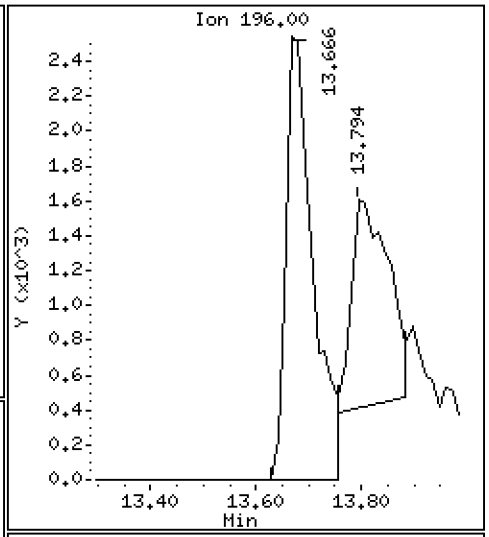
Concentration: 0.2813 ug/mL

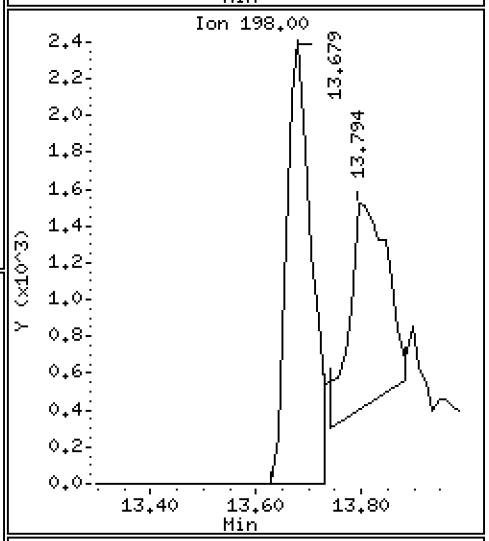


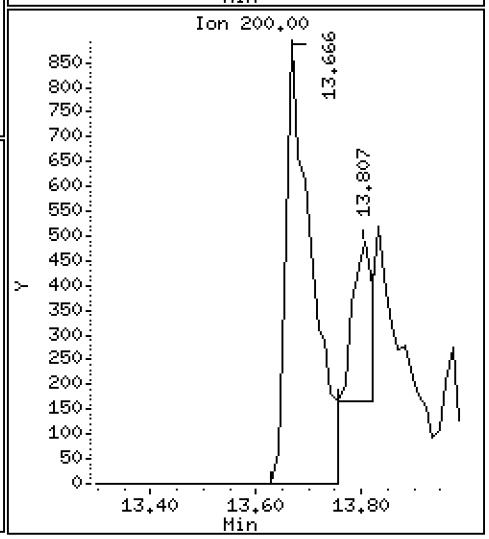












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

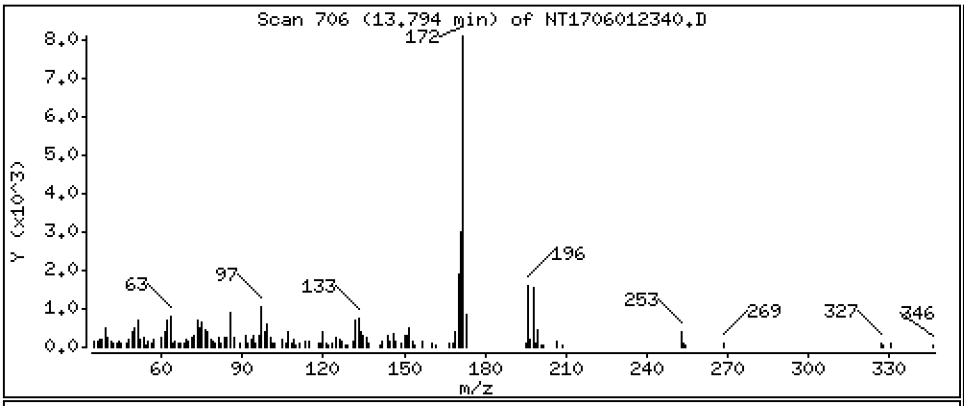
Operator: VTS

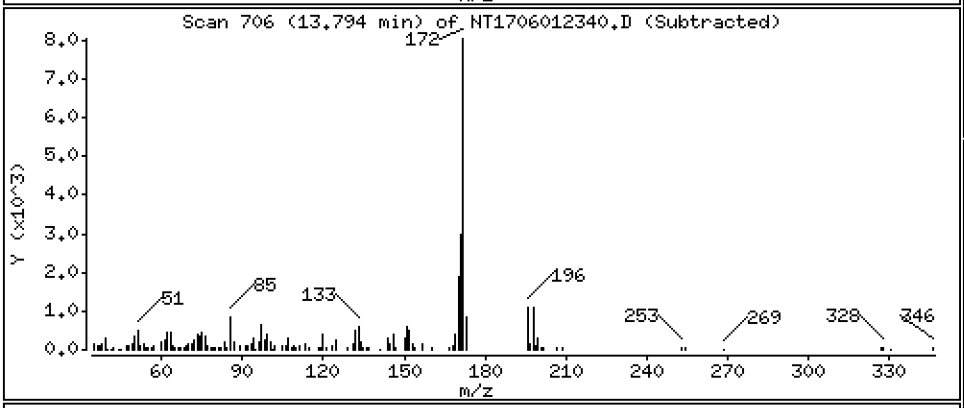
Column phase: ZB-5msi

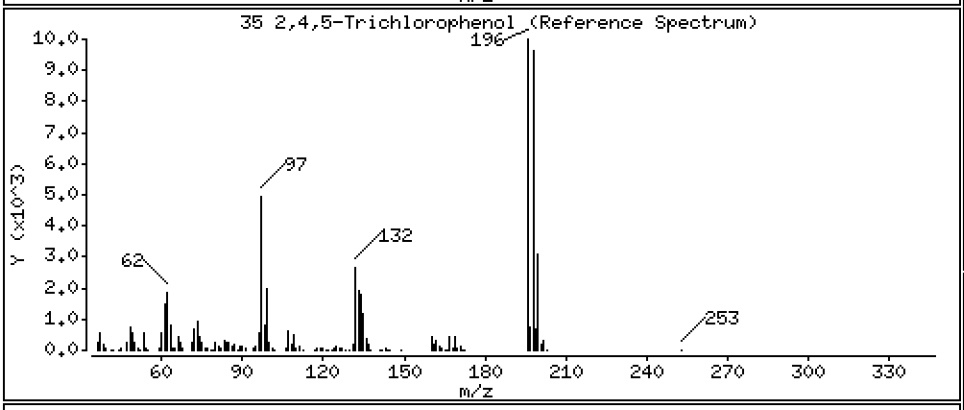
Column diameter: 0.25

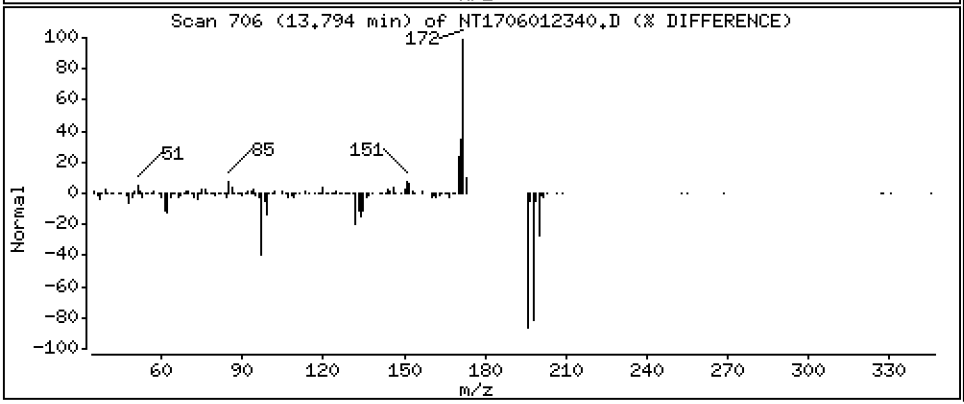
35 2,4,5-Trichlorophenol

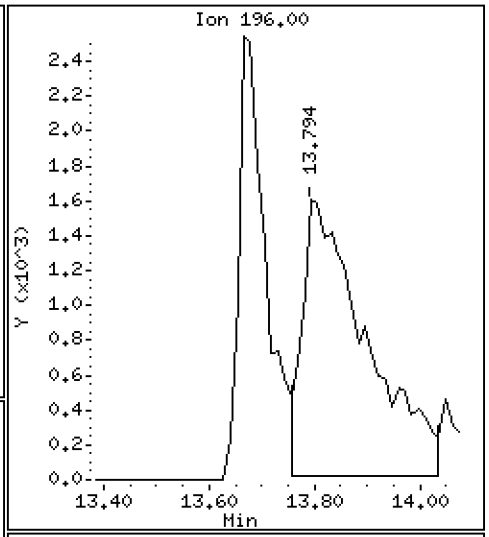
Concentration: 0.3958 ug/mL

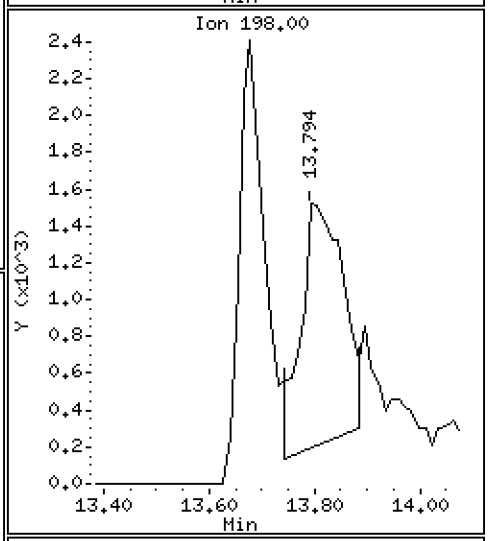


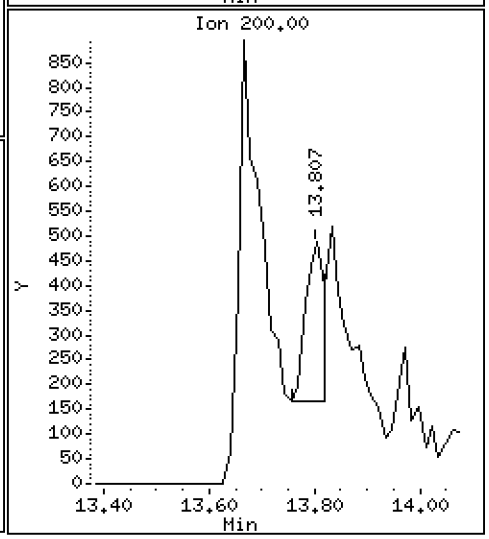












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

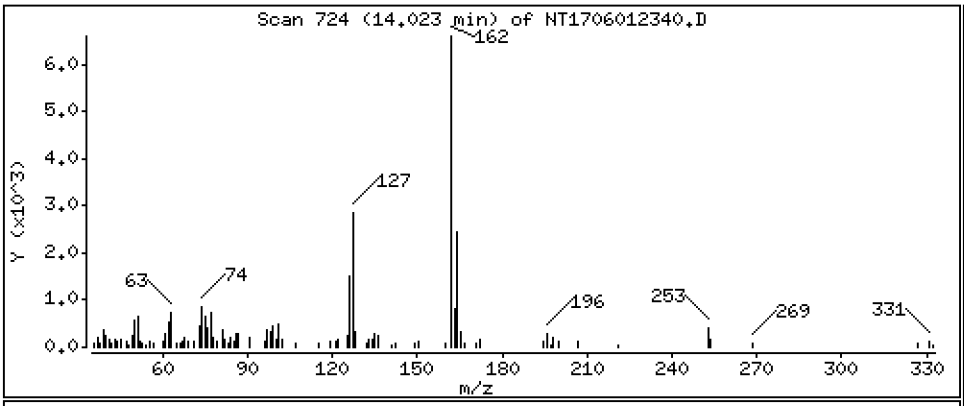
Operator: VTS

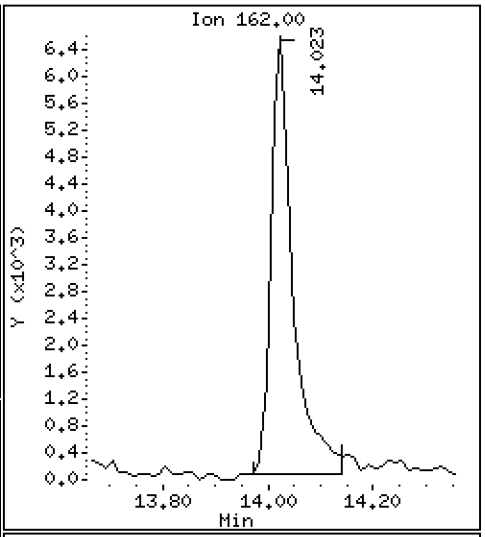
Column phase: ZB-5msi

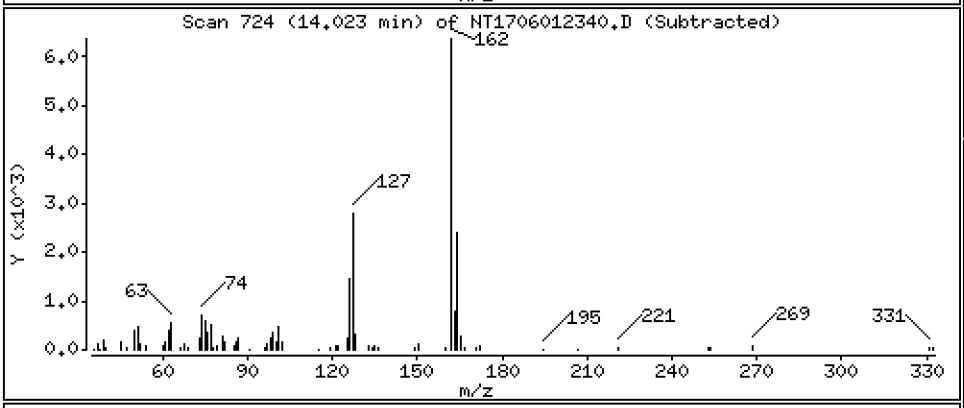
Column diameter: 0.25

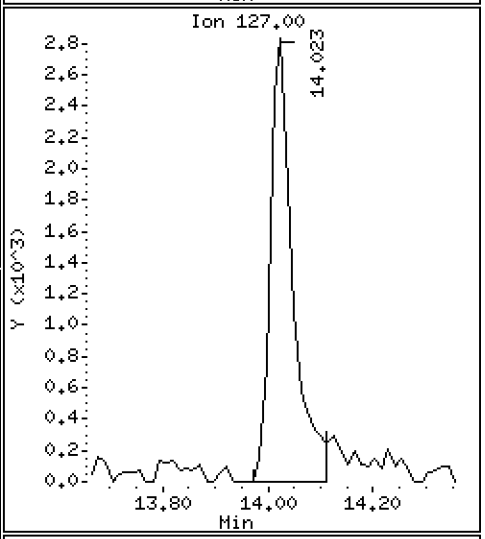
37 2-Chloronaphthalene

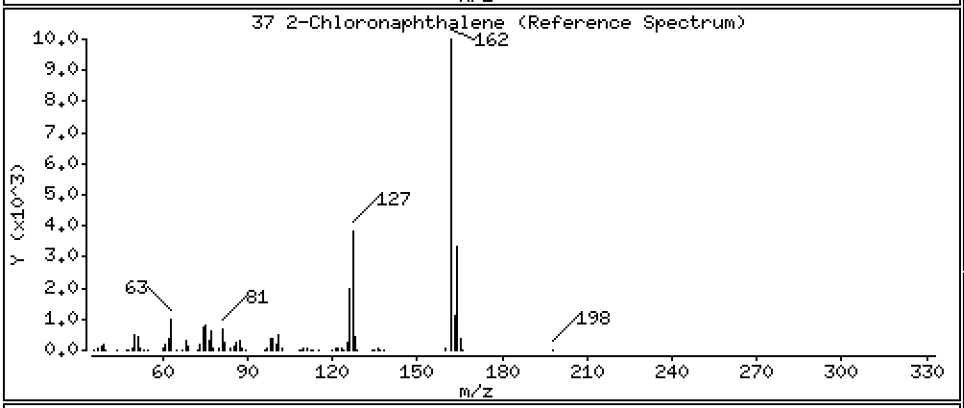
Concentration: 0.1899 ug/mL

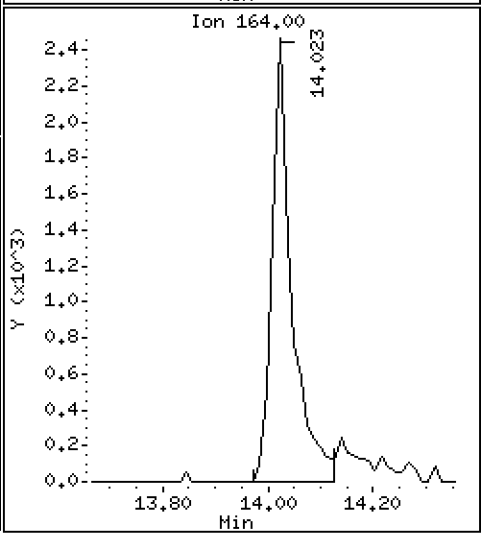


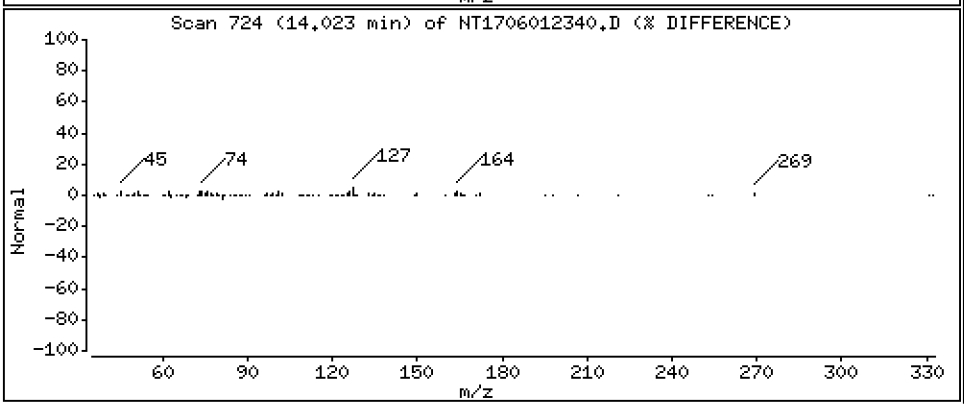












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

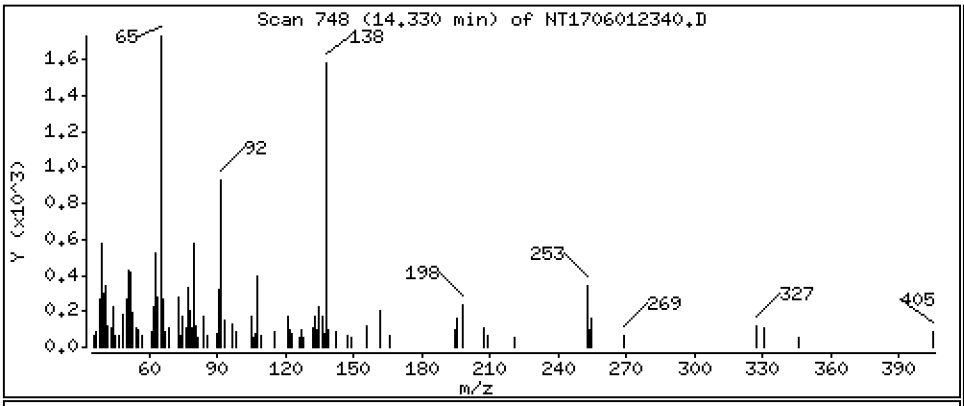
Operator: VTS

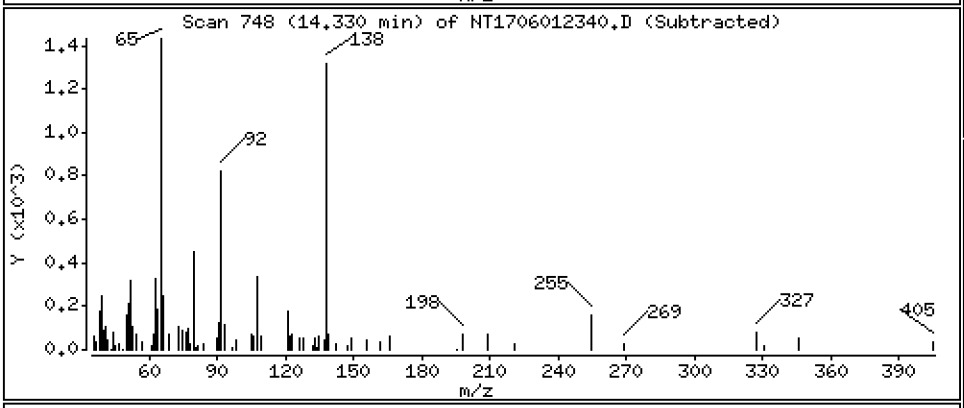
Column phase: ZB-5msi

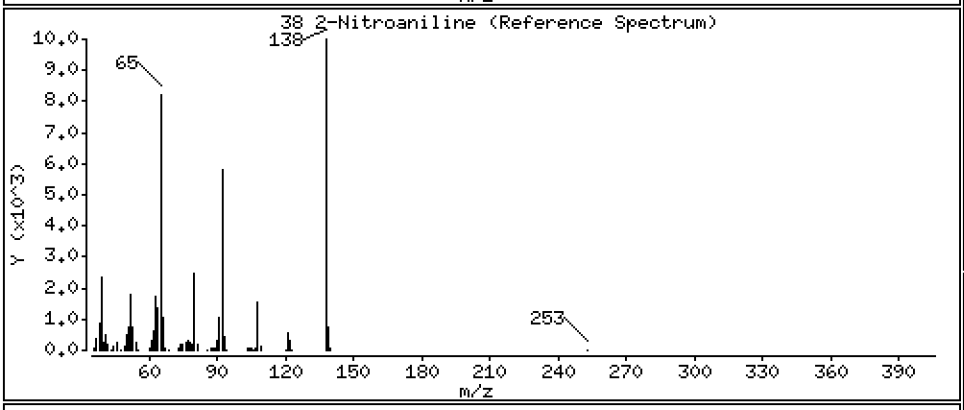
Column diameter: 0.25

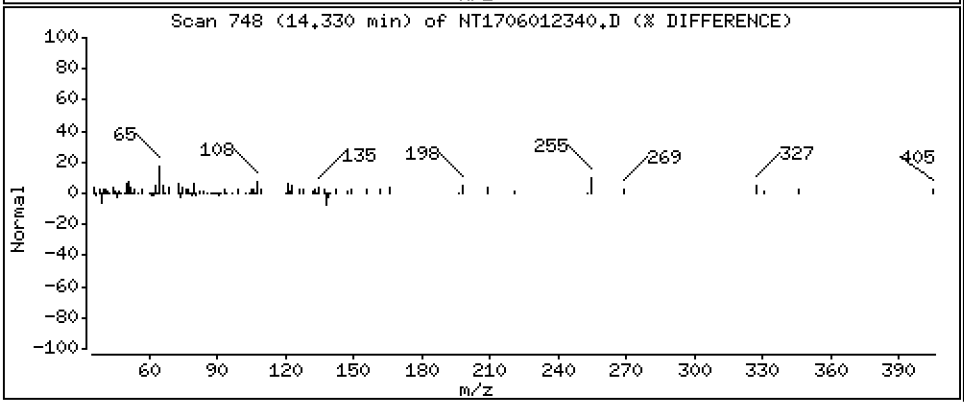
38 2-Nitroaniline

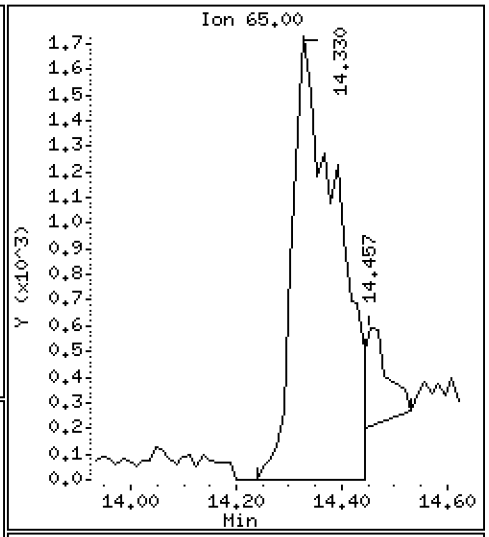
Concentration: 0.3067 ug/mL

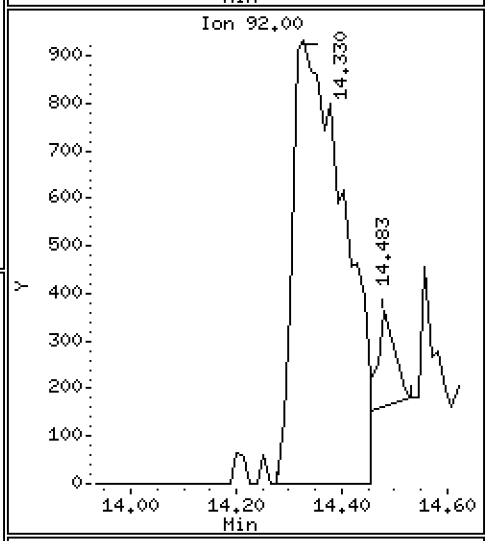


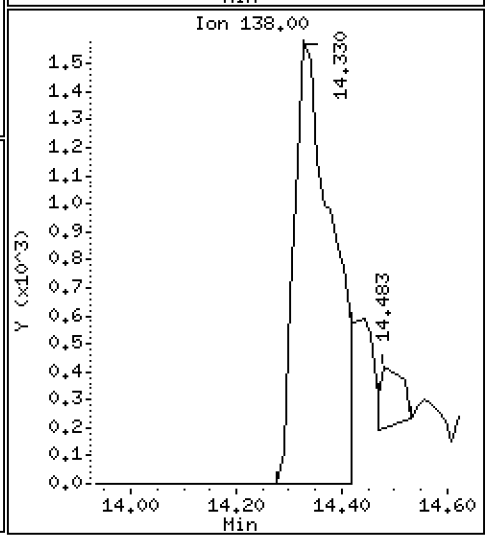












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

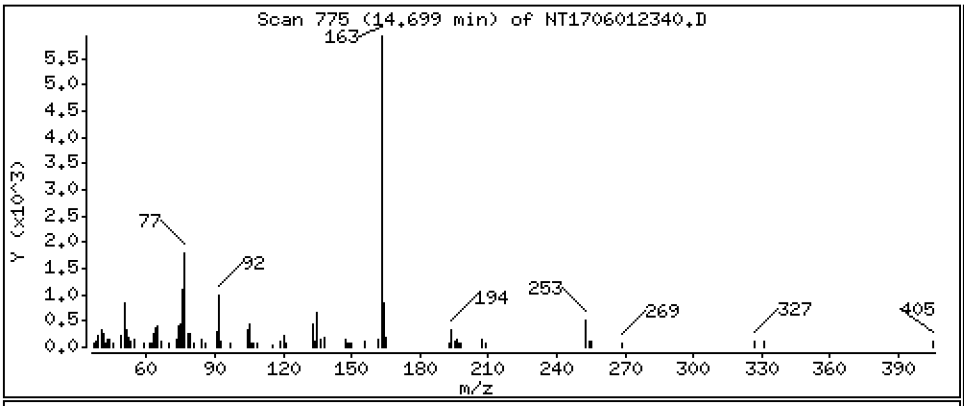
Operator: VTS

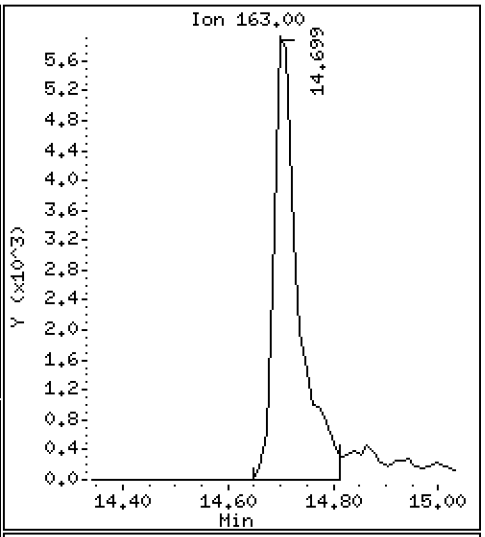
Column phase: ZB-5msi

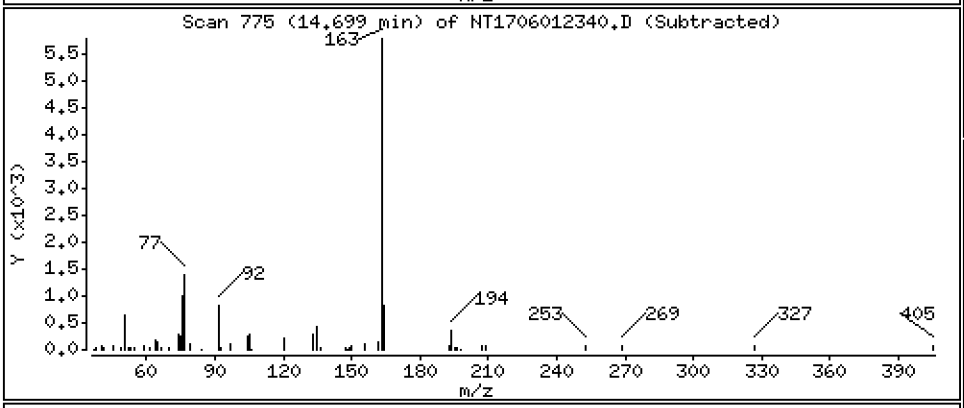
Column diameter: 0.25

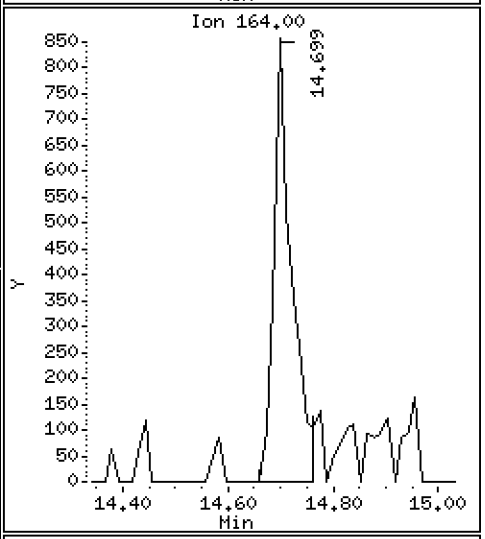
39 Dimethylphthalate

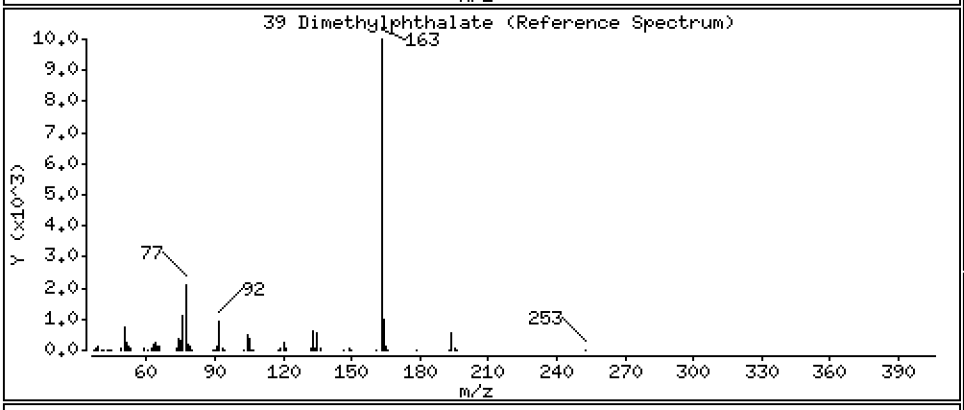
Concentration: 0.1798 ug/mL

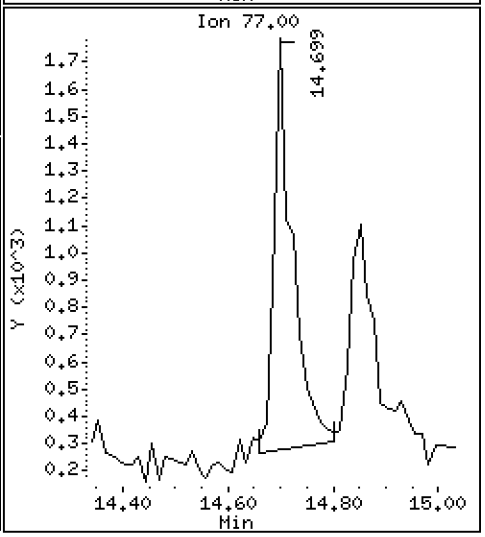


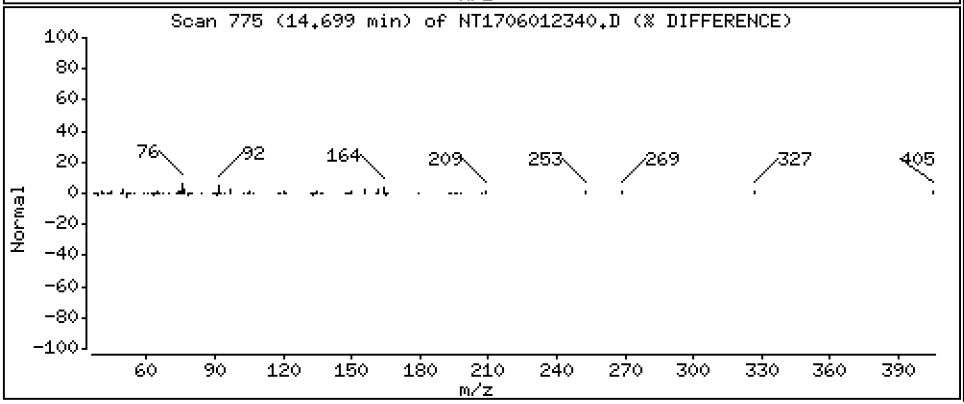












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

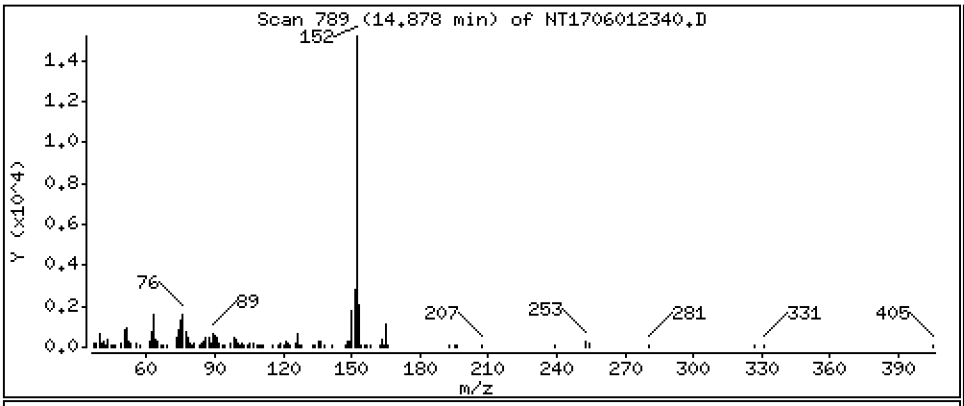
Operator: VTS

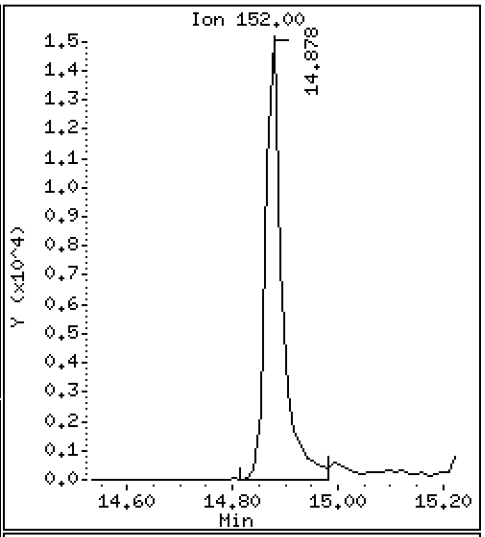
Column phase: ZB-5msi

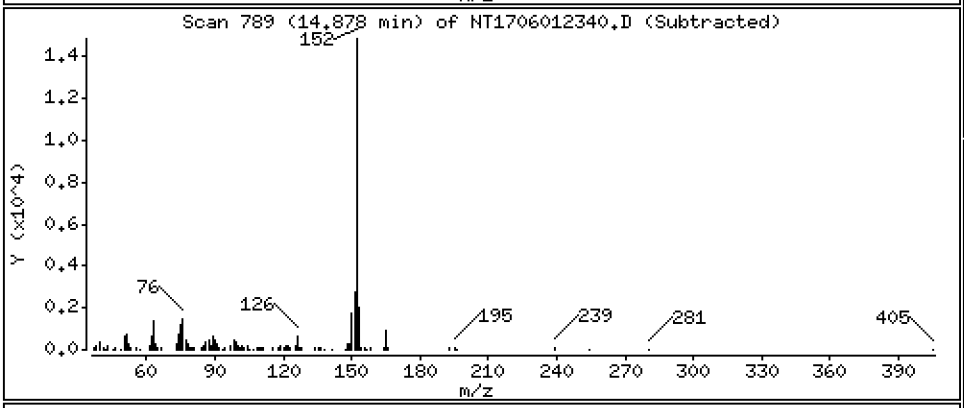
Column diameter: 0.25

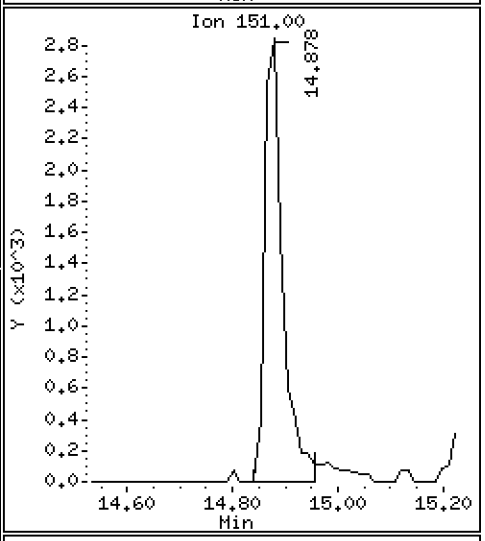
40 Acenaphthylene

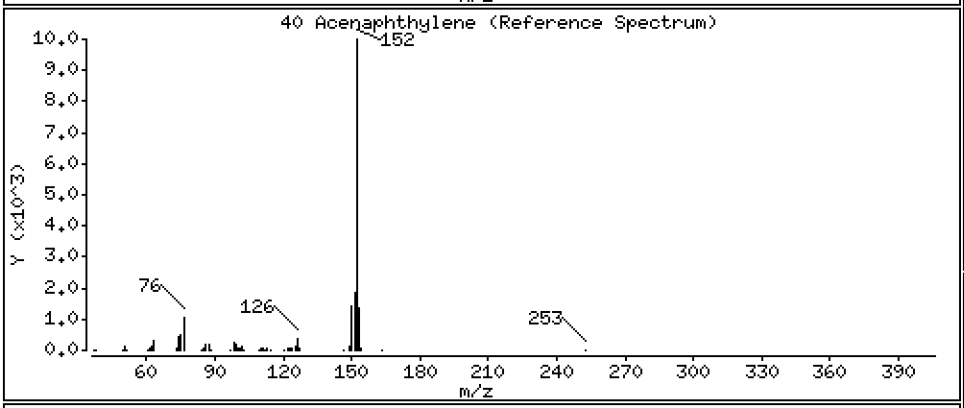
Concentration: 0.2122 ug/mL

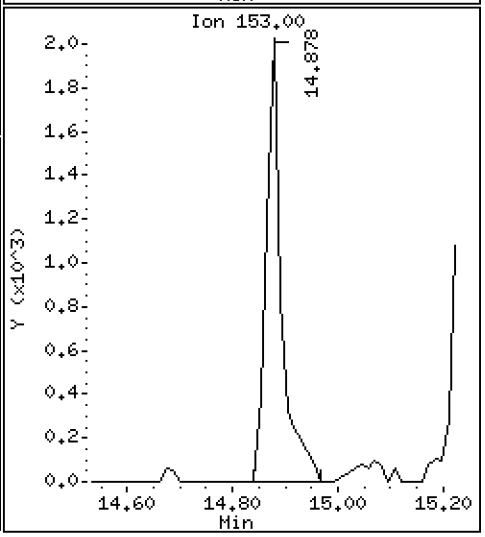


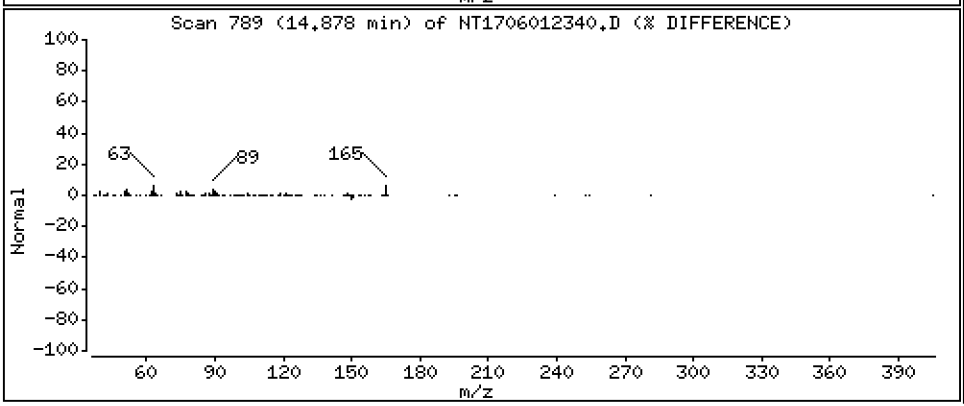












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

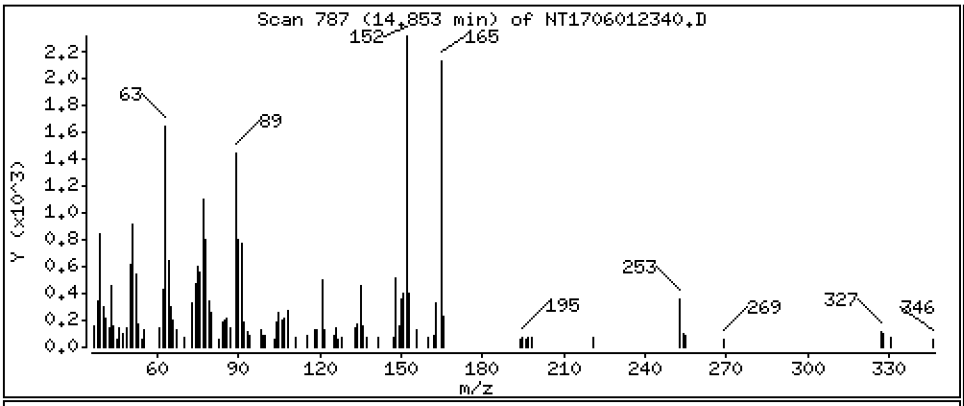
Operator: VTS

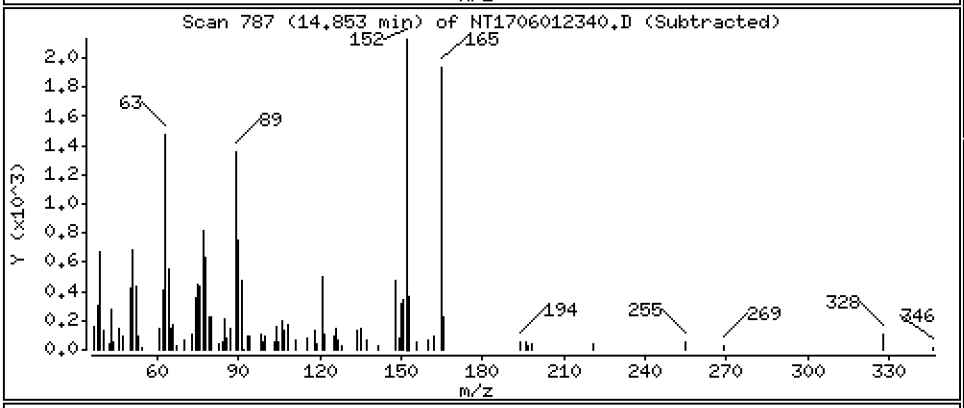
Column phase: ZB-5msi

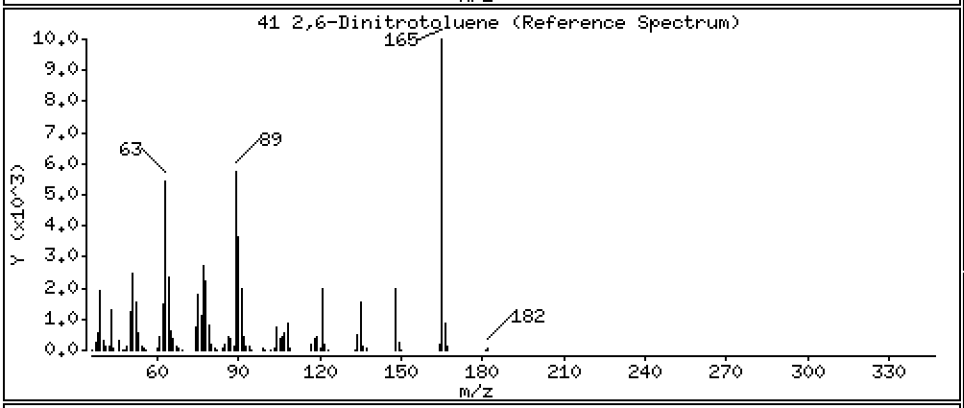
Column diameter: 0.25

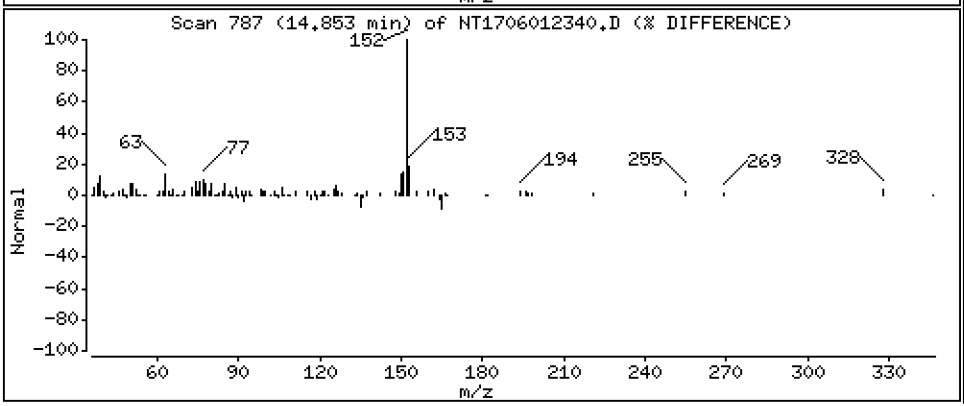
41 2,6-Dinitrotoluene

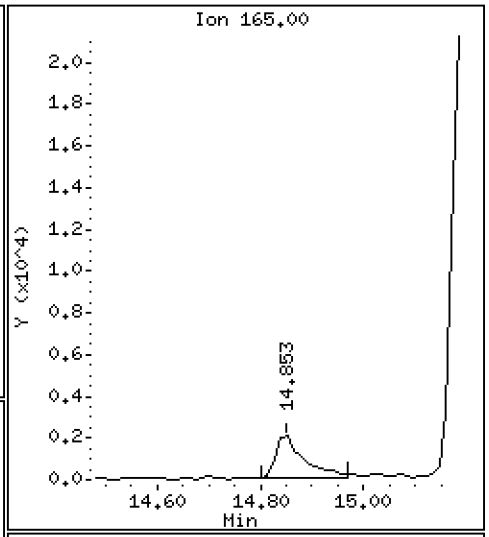
Concentration: 0.3093 ug/mL

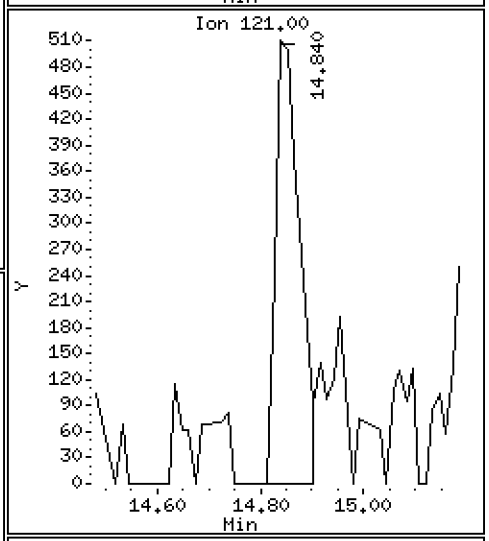


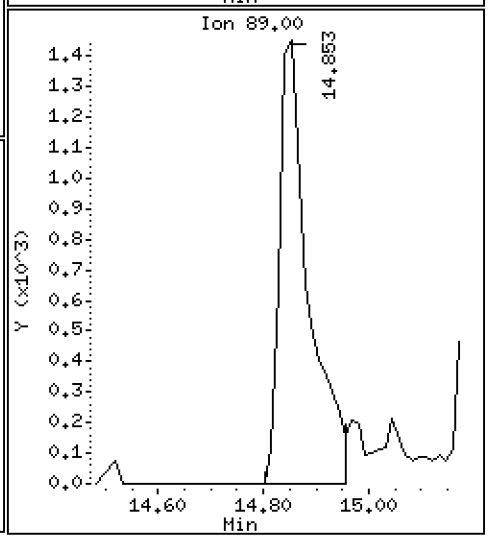












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

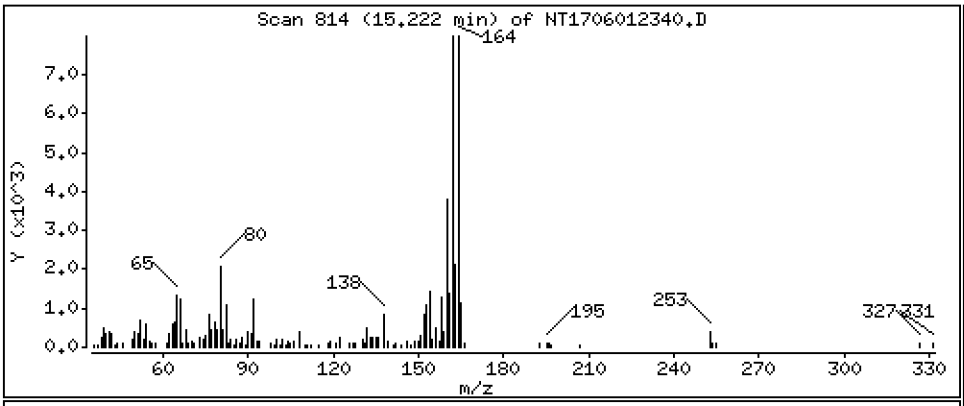
Operator: VTS

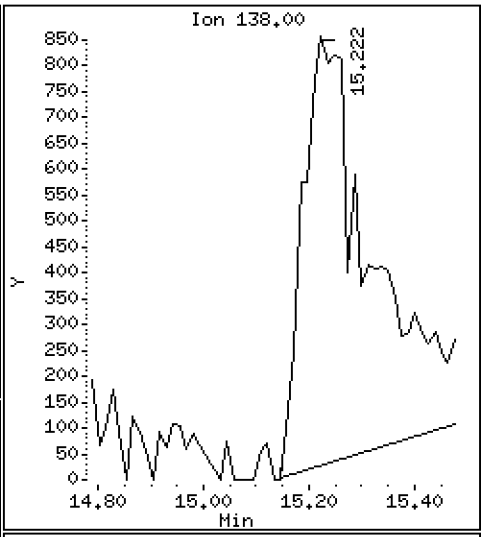
Column phase: ZB-5msi

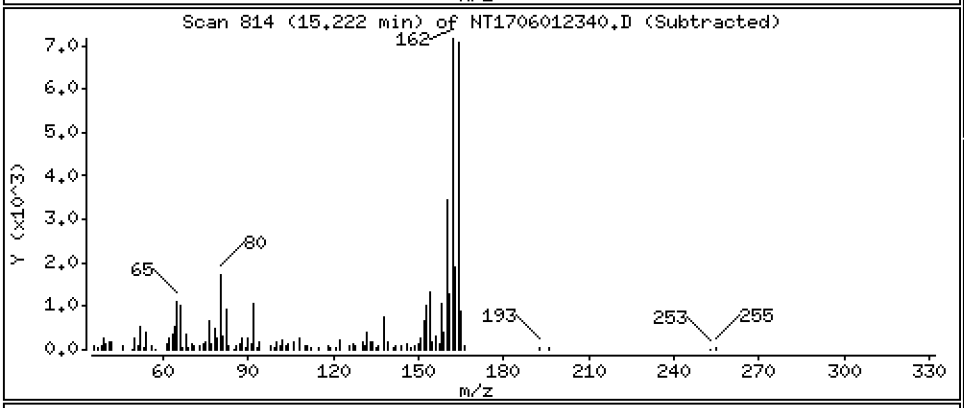
Column diameter: 0.25

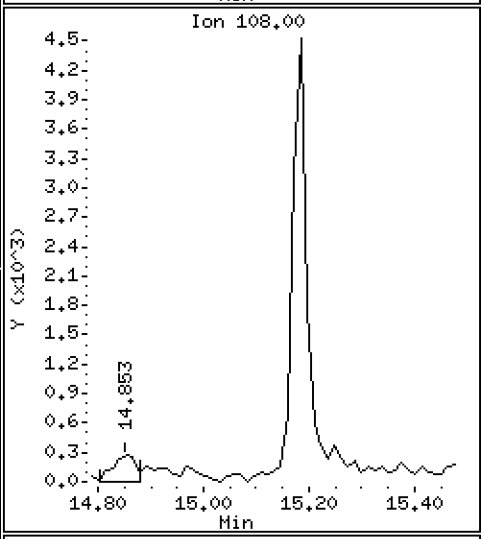
43 3-Nitroaniline

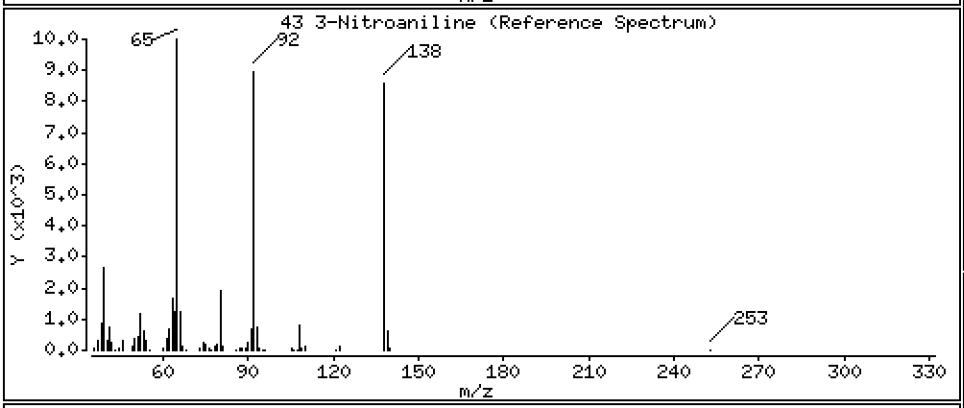
Concentration: 0.3343 ug/mL

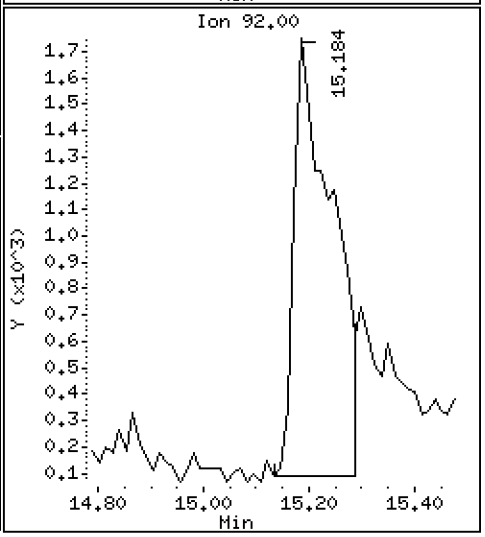


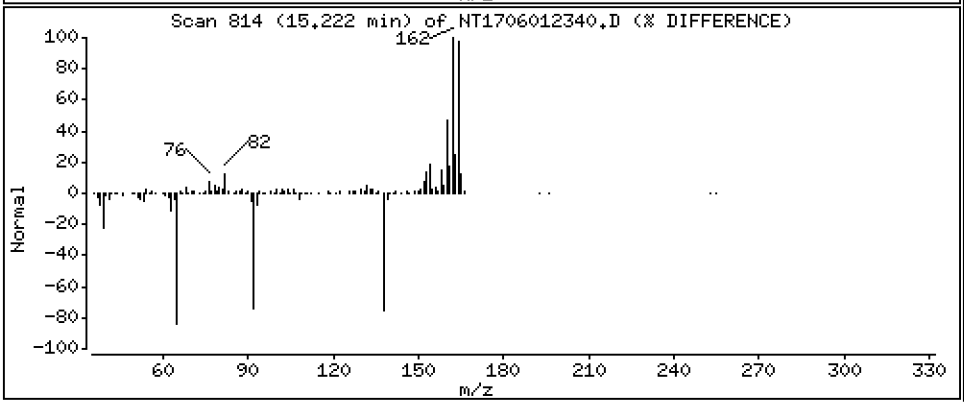












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

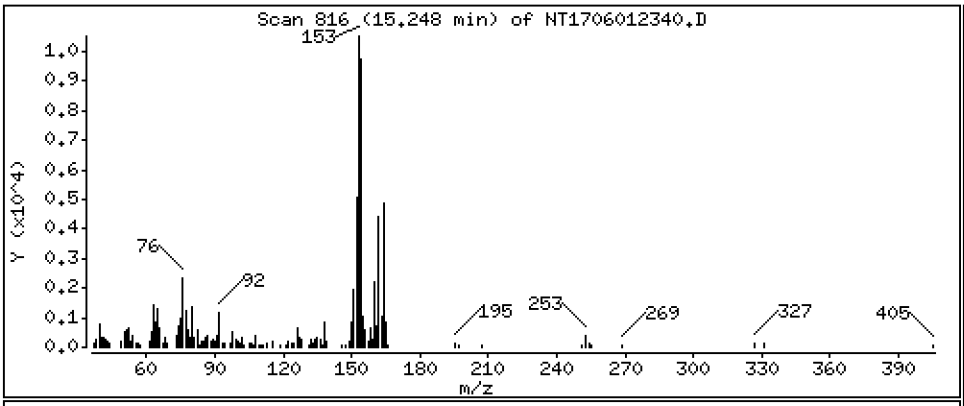
Operator: VTS

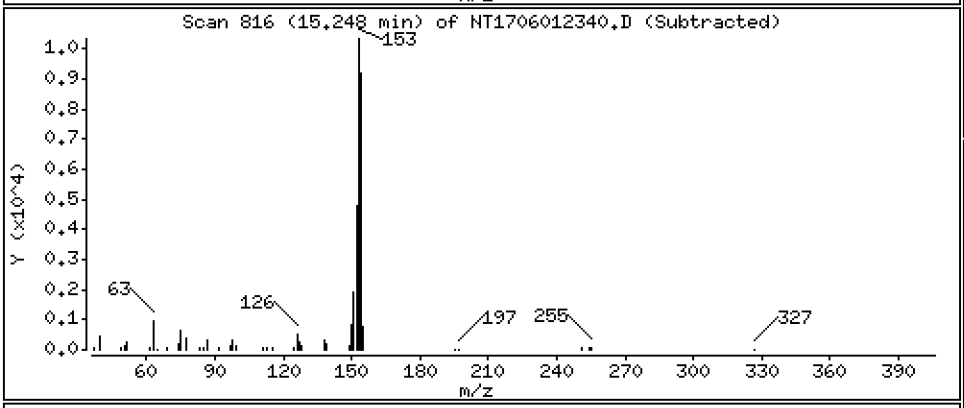
Column phase: ZB-5msi

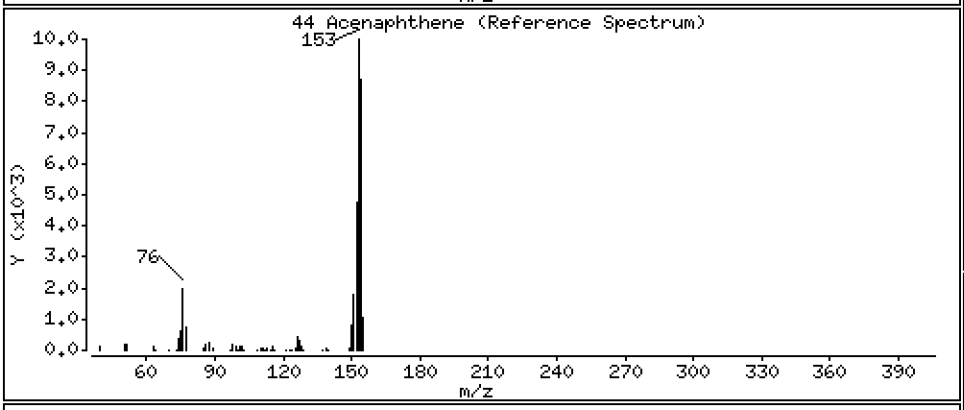
Column diameter: 0.25

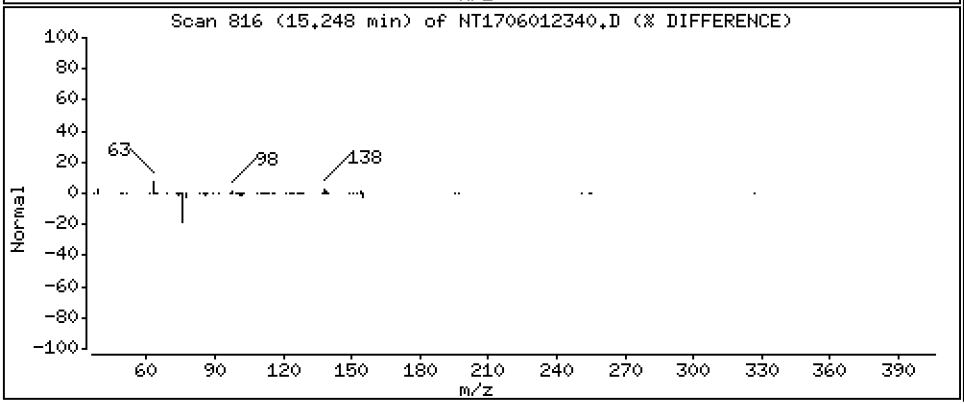
44 Acenaphthene

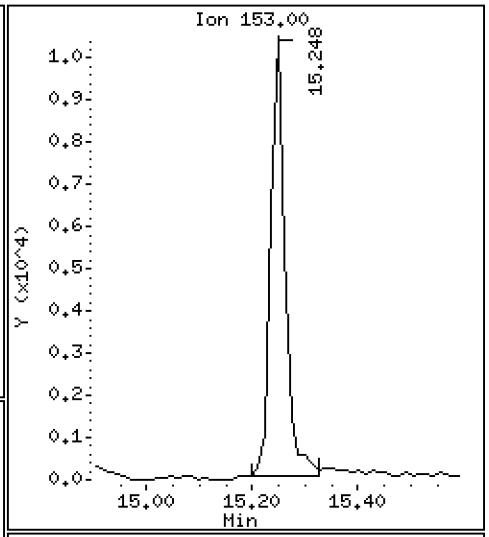
Concentration: 0.2011 ug/mL

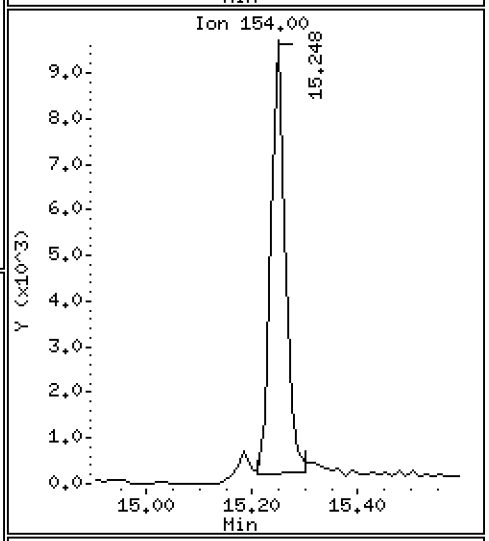


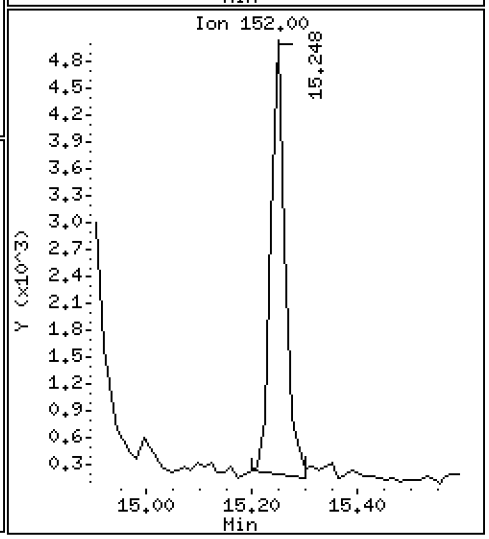












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

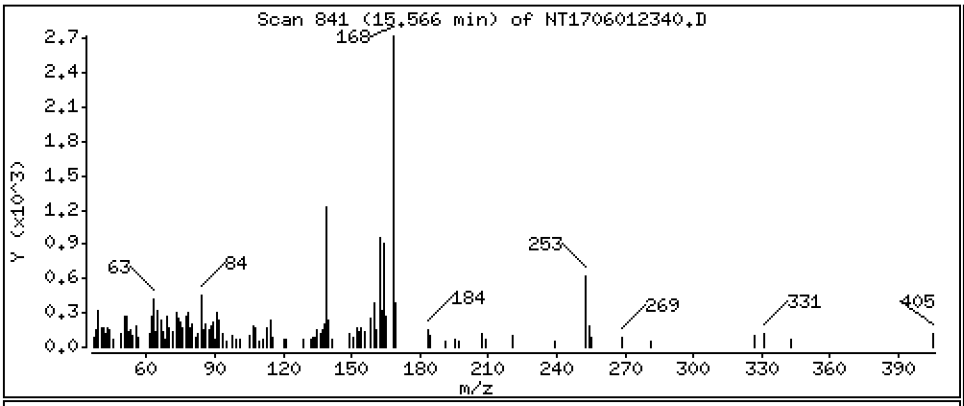
Operator: VTS

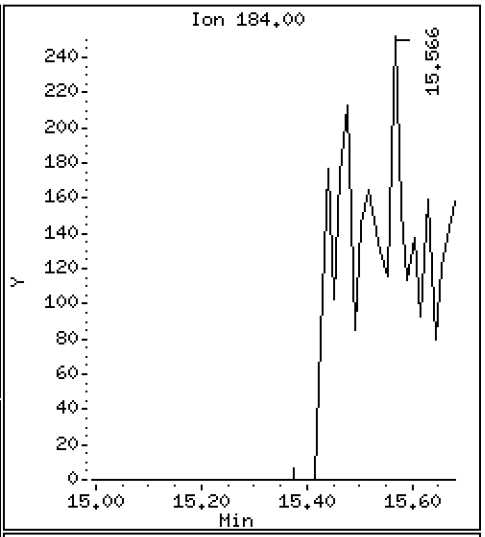
Column phase: ZB-5msi

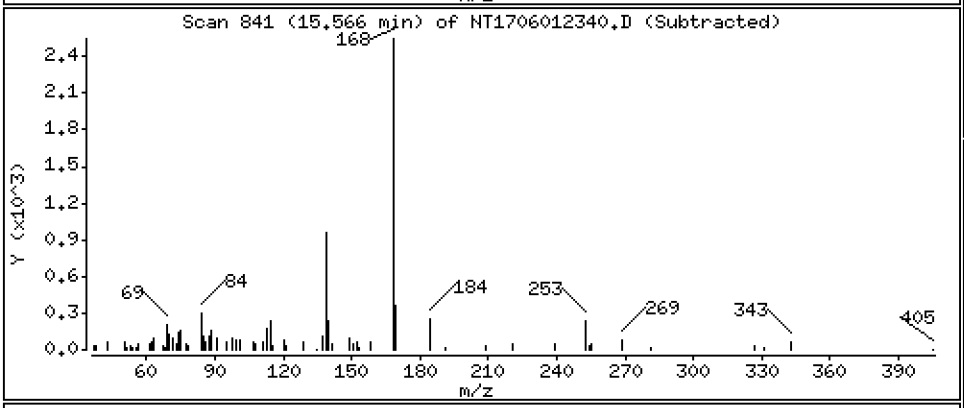
Column diameter: 0.25

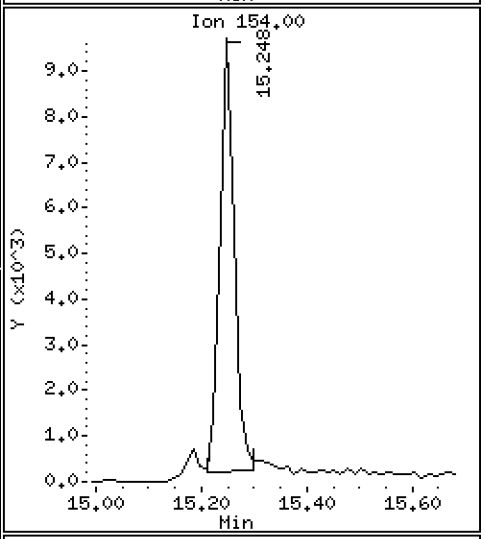
45 2,4-Dinitrophenol

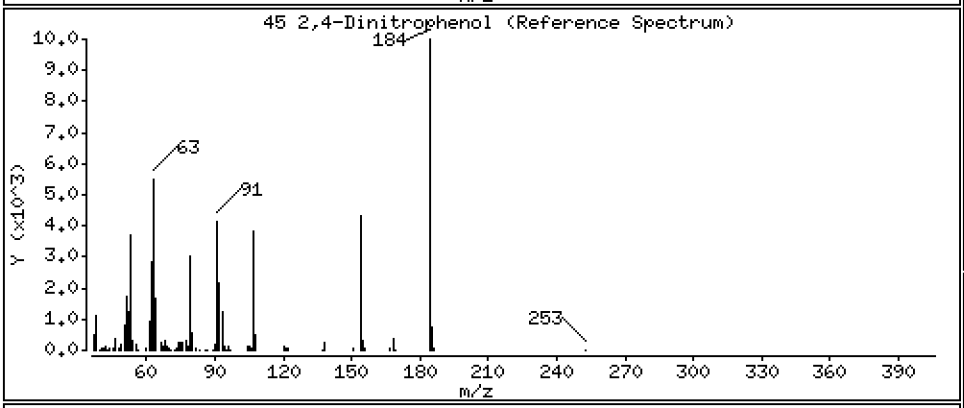
Concentration: 0.1729 ug/mL

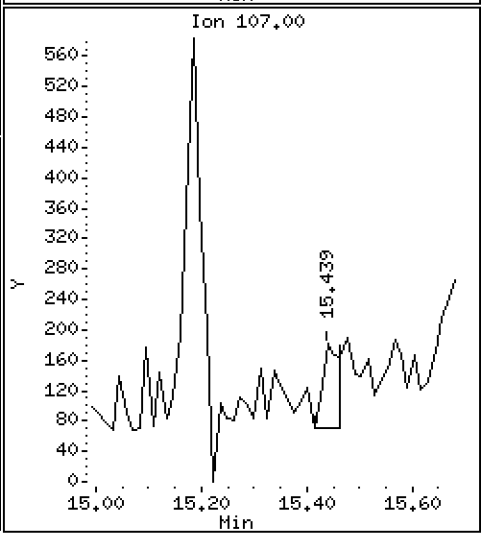


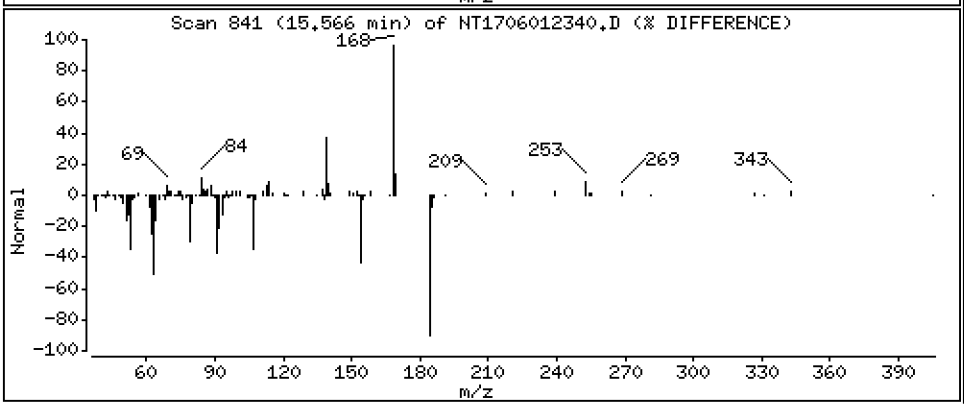












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

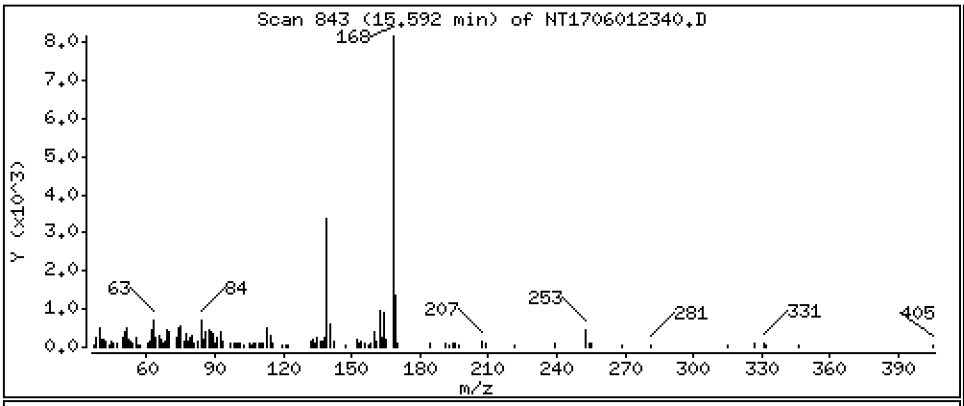
Operator: VTS

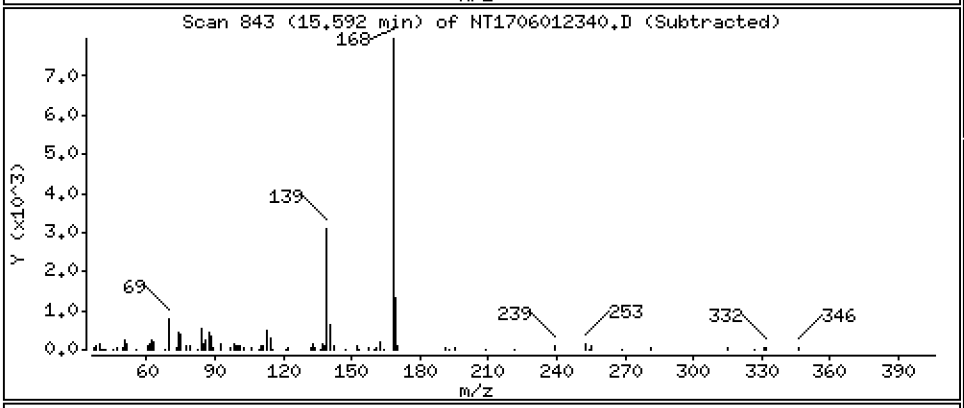
Column phase: ZB-5msi

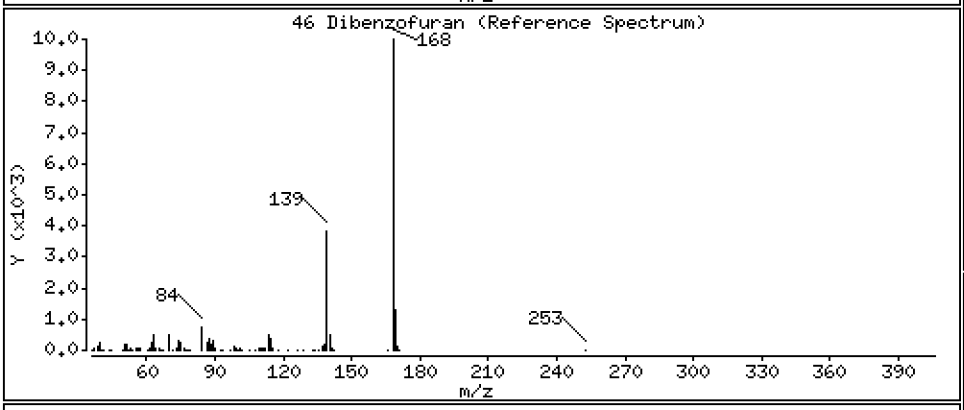
Column diameter: 0.25

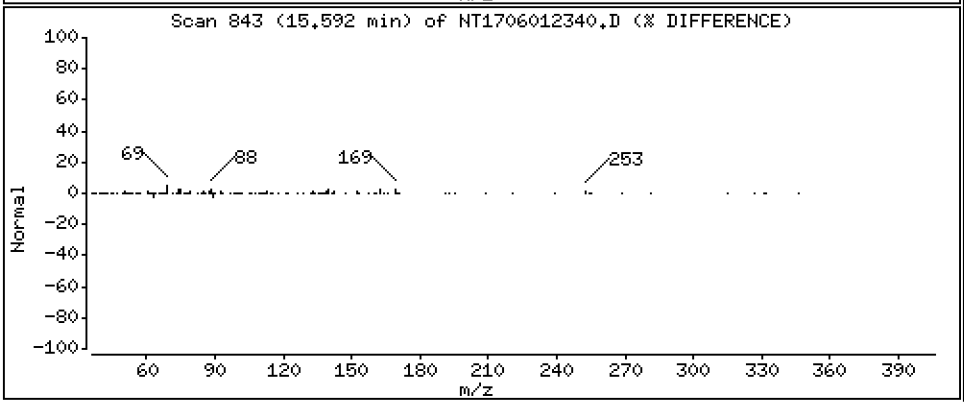
46 Dibenzofuran

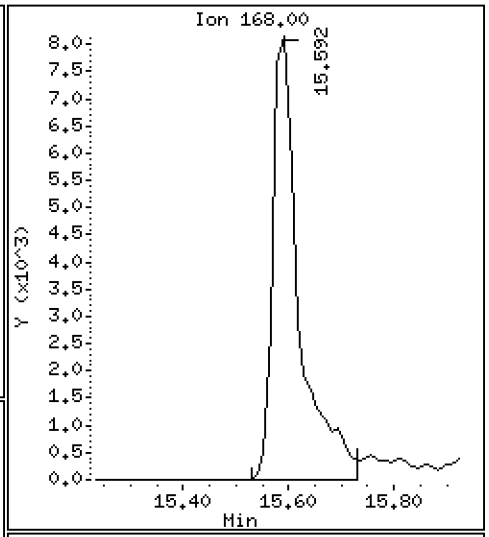
Concentration: 0.2052 ug/mL

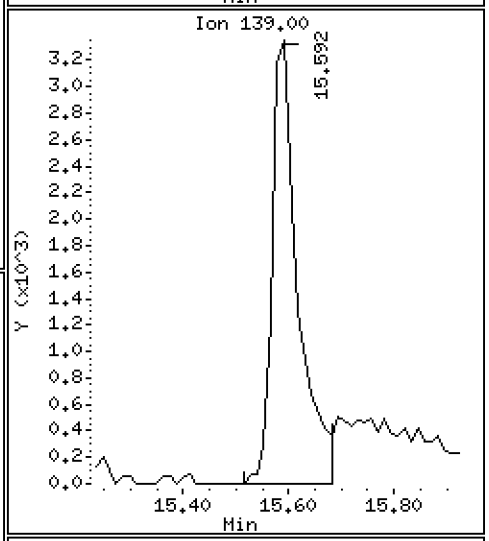


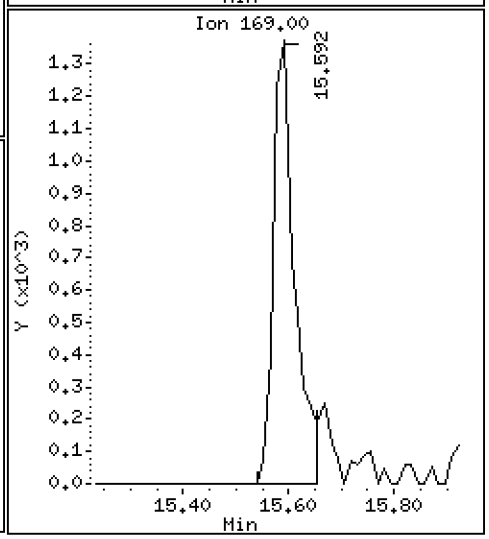












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

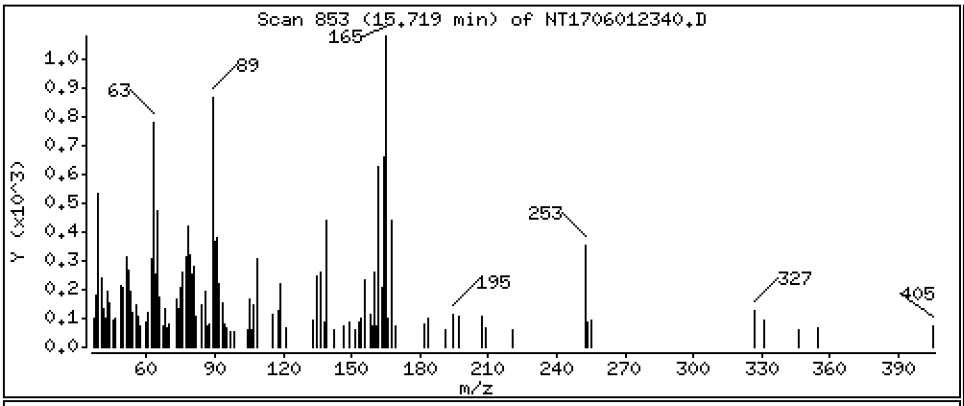
Operator: VTS

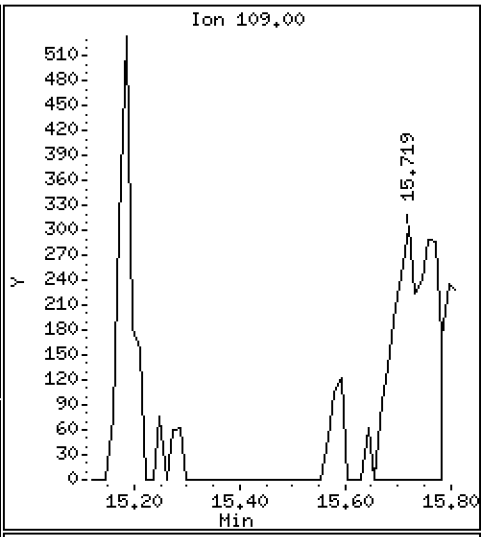
Column phase: ZB-5msi

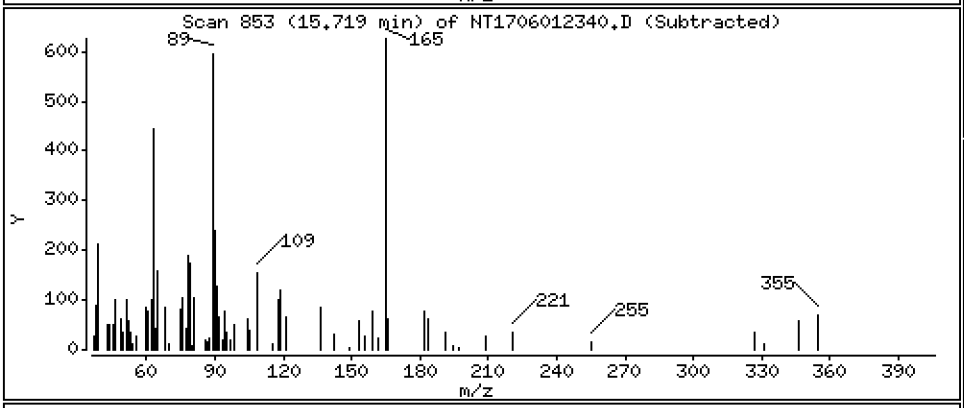
Column diameter: 0.25

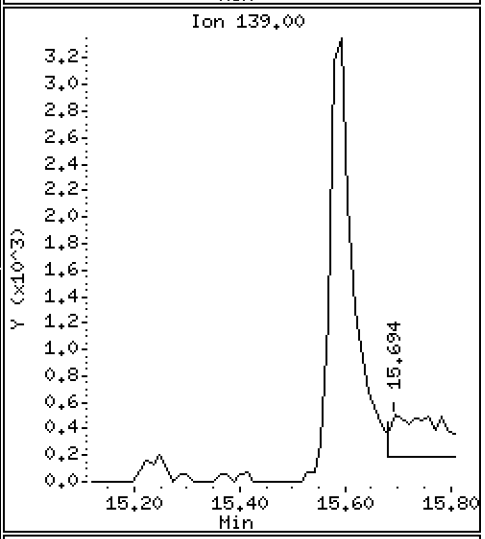
47 4-Nitrophenol

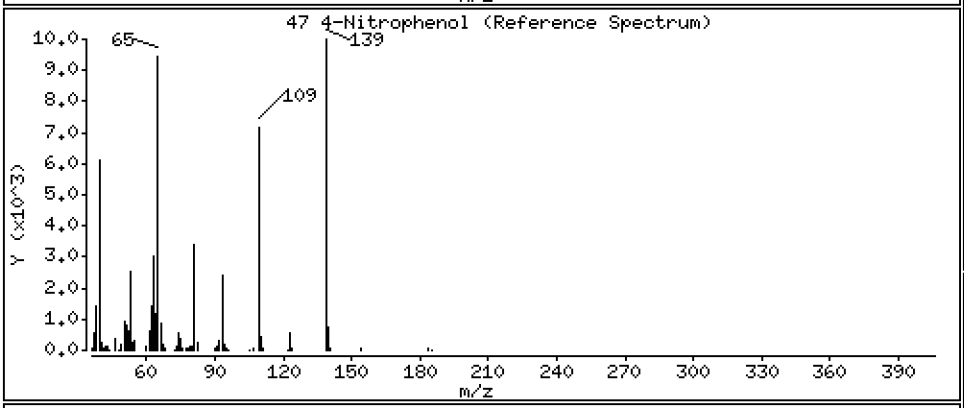
Concentration: 0.1085 ug/mL

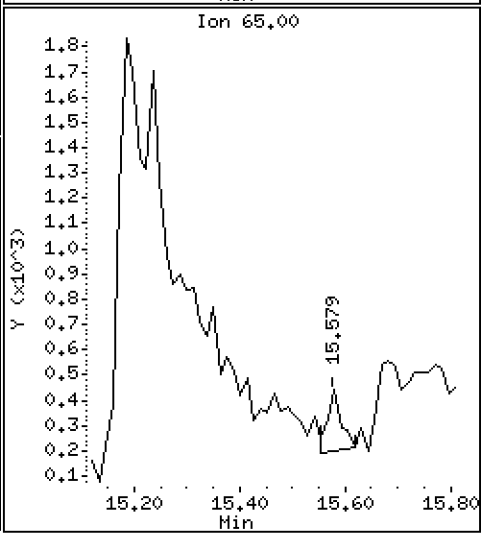


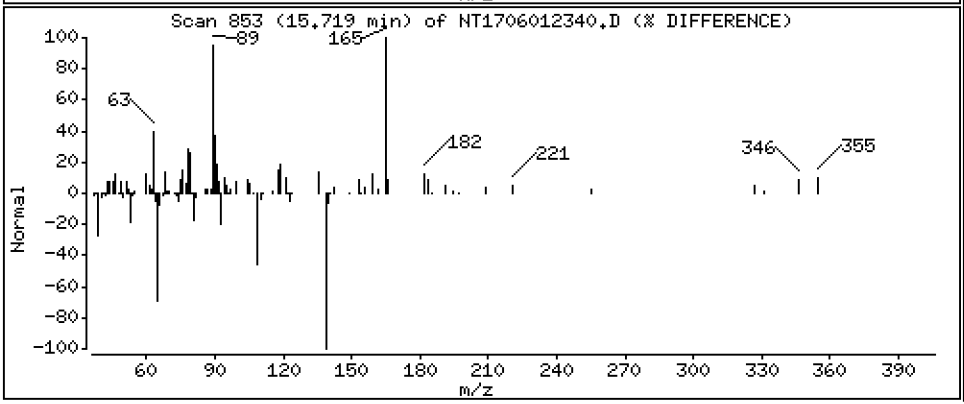












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

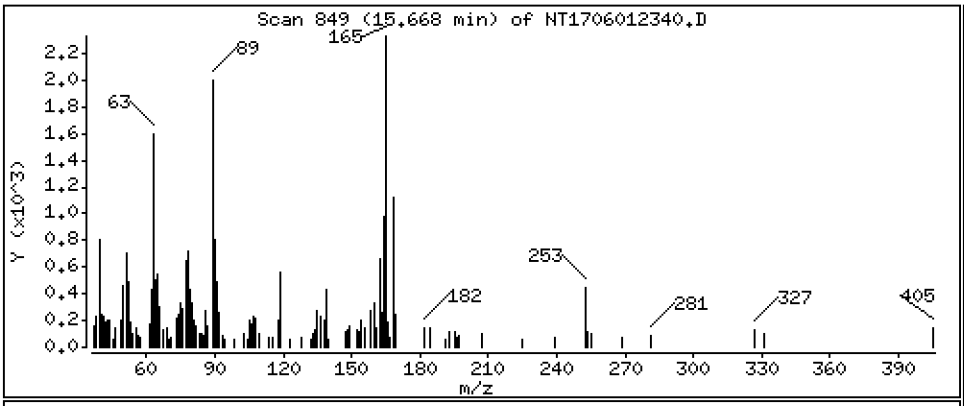
Operator: VTS

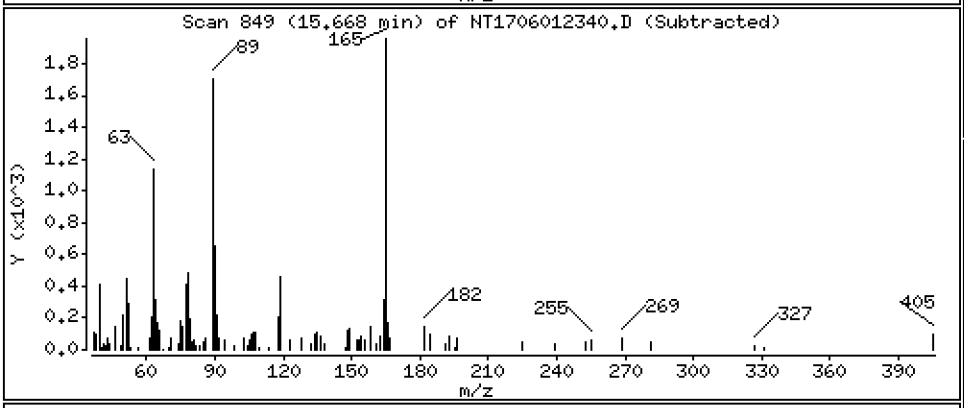
Column phase: ZB-5msi

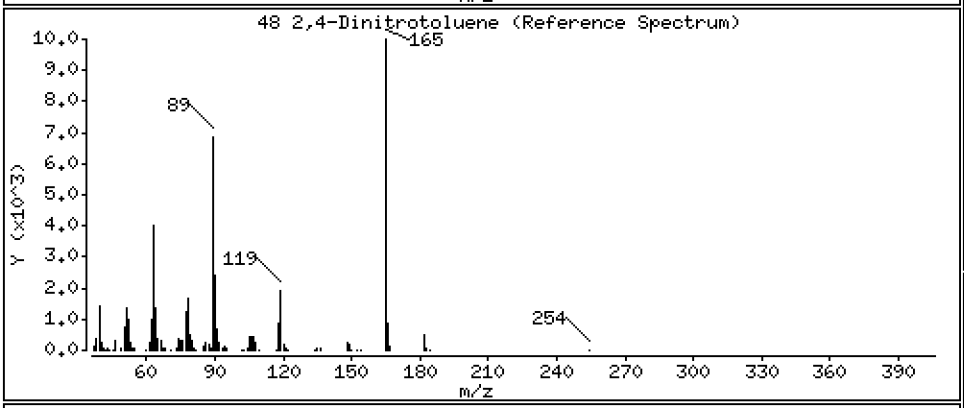
Column diameter: 0.25

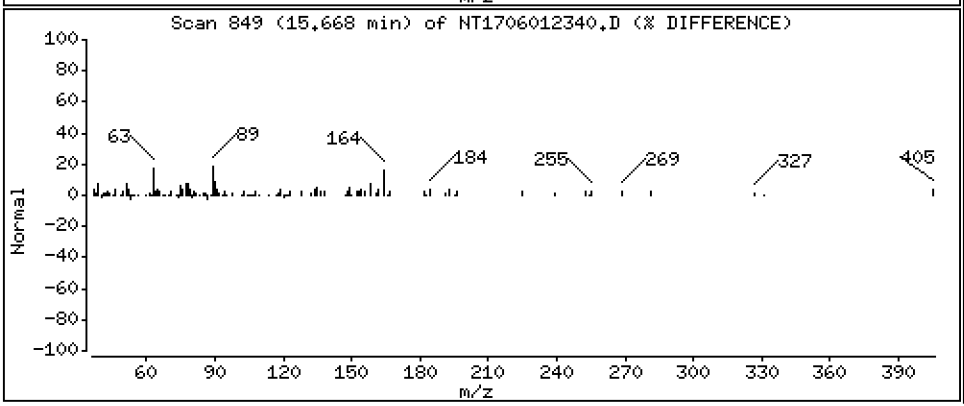
48 2,4-Dinitrotoluene

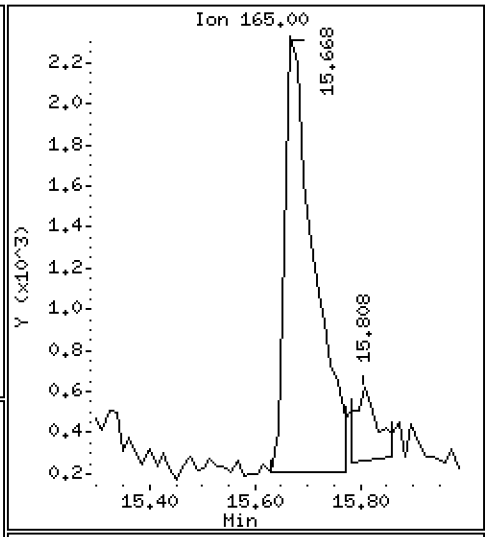
Concentration: 0.2509 ug/mL

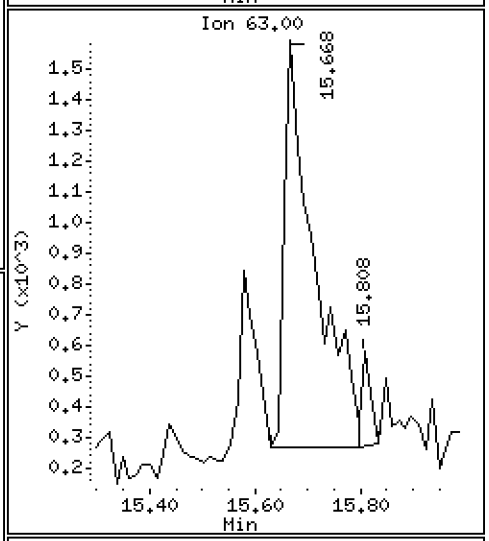


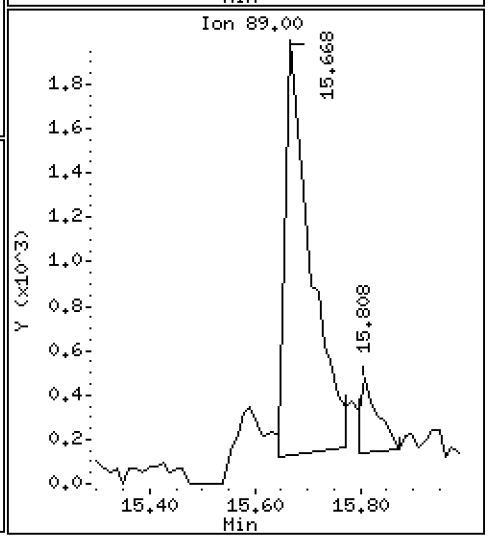












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

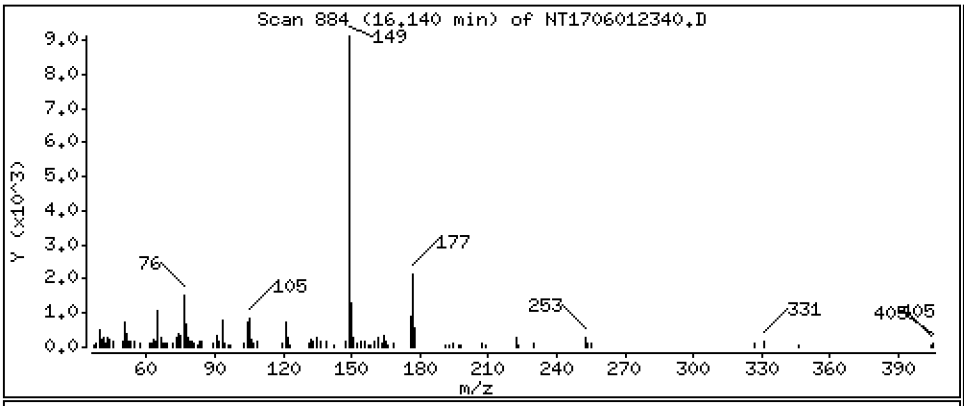
Operator: VTS

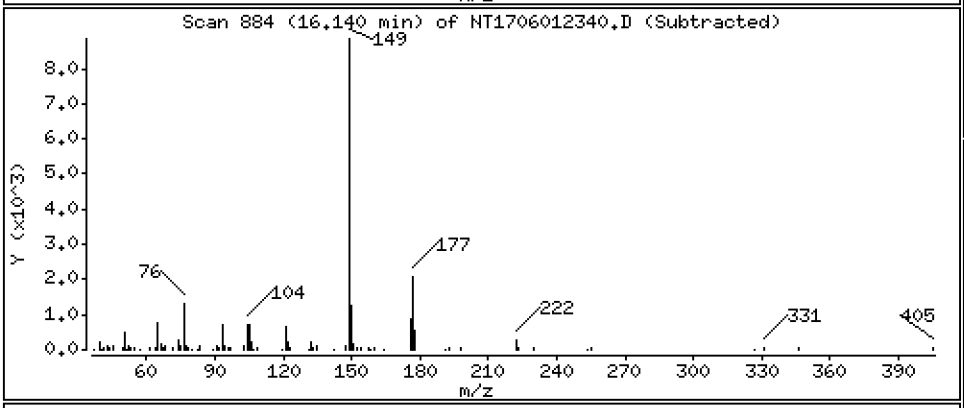
Column phase: ZB-5msi

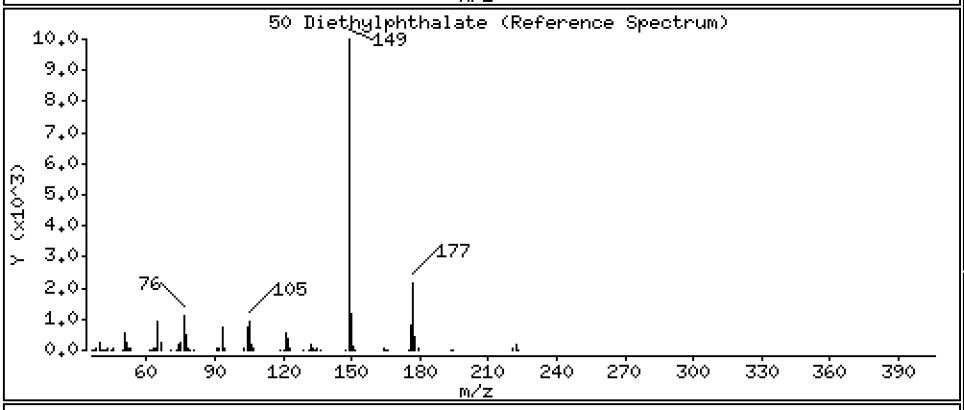
Column diameter: 0.25

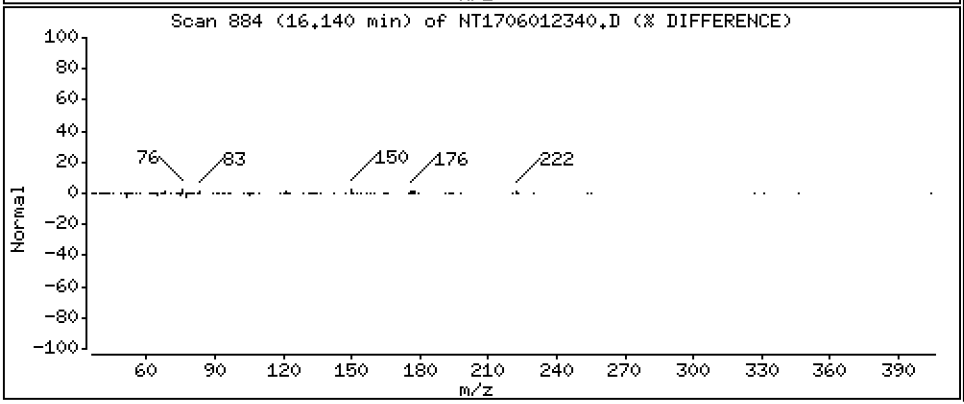
50 Diethylphthalate

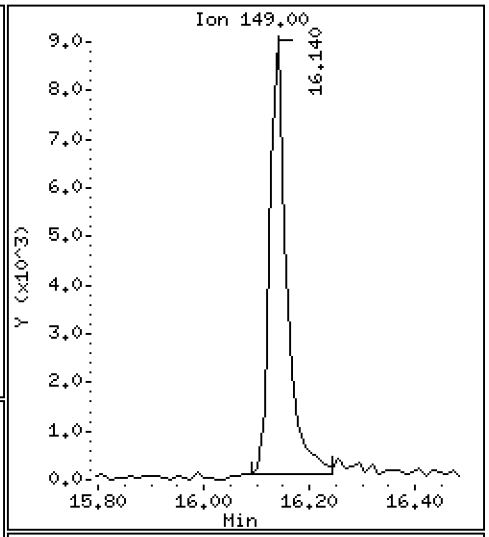
Concentration: 0.2258 ug/mL

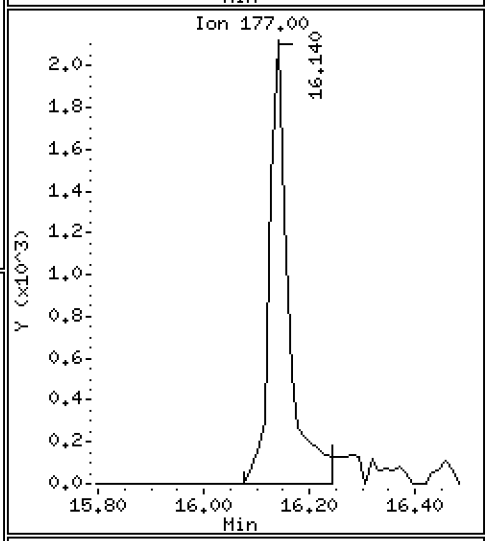


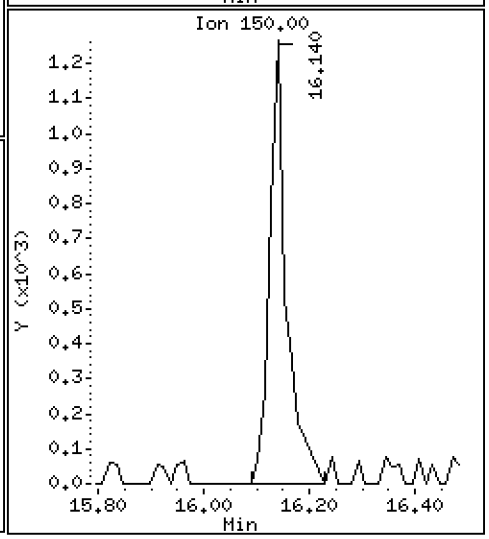












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

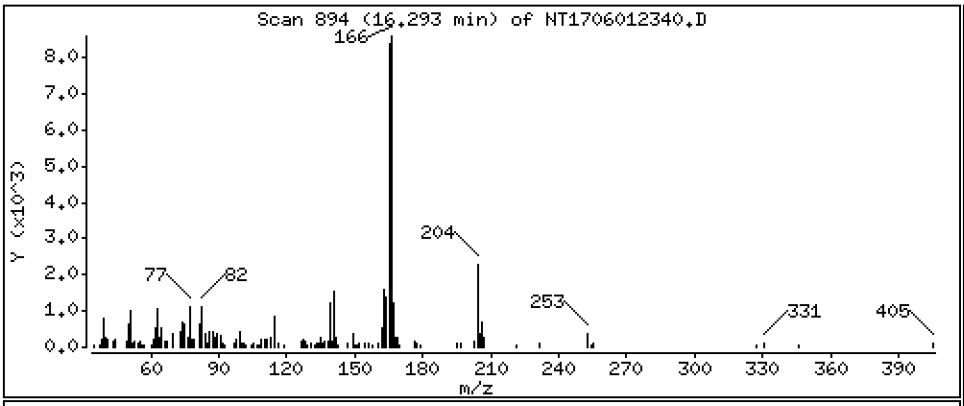
Operator: VTS

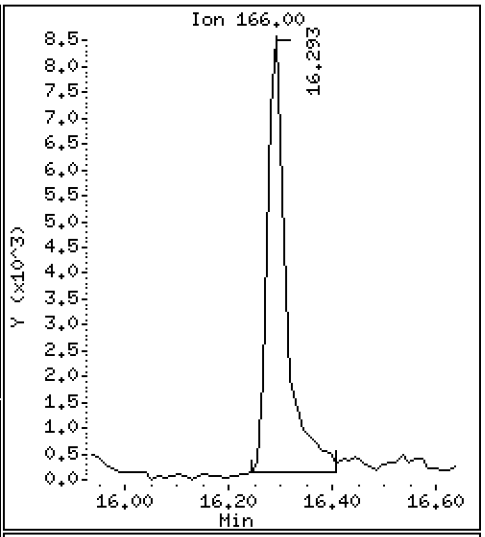
Column phase: ZB-5msi

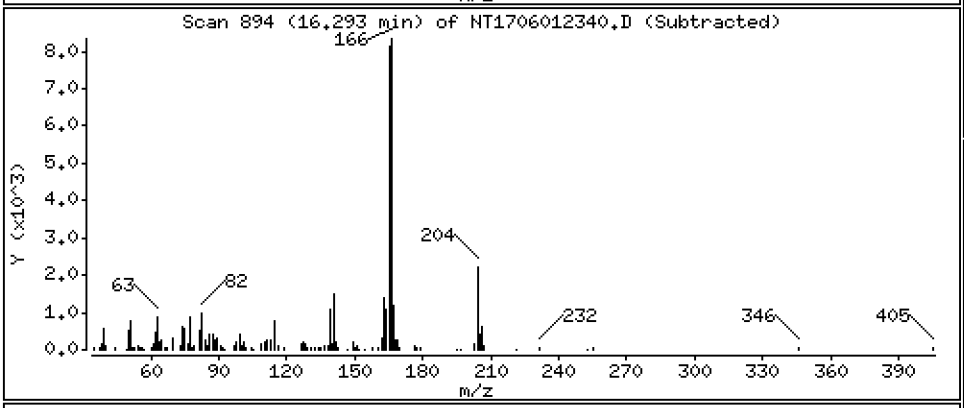
Column diameter: 0.25

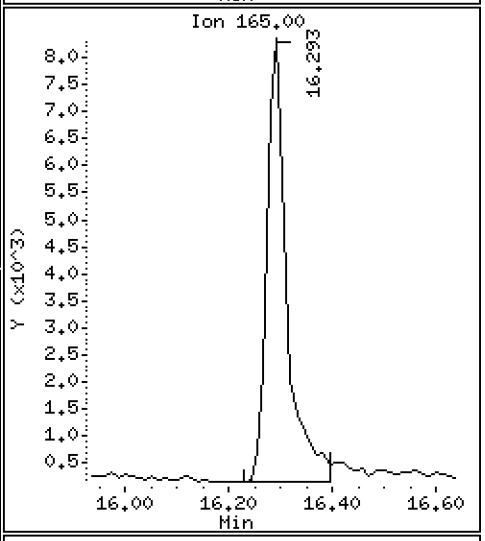
49 Fluorene

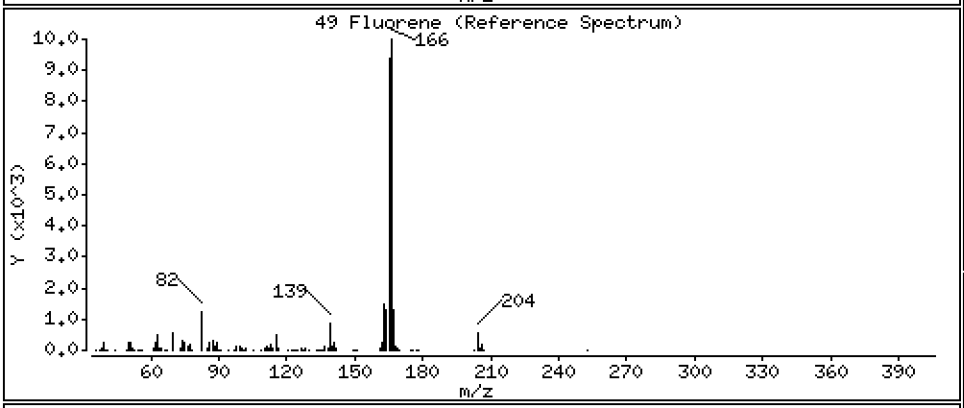
Concentration: 0.1617 ug/mL

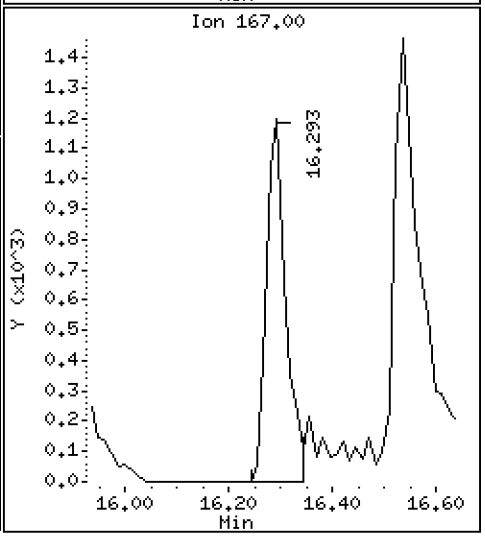


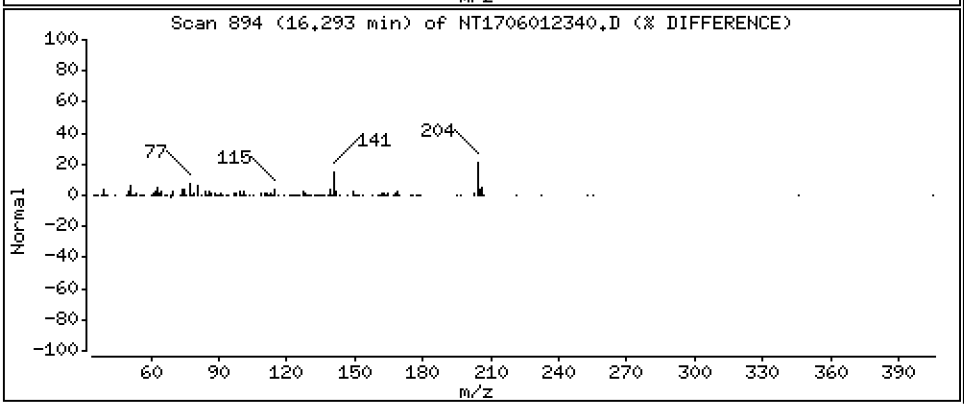












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

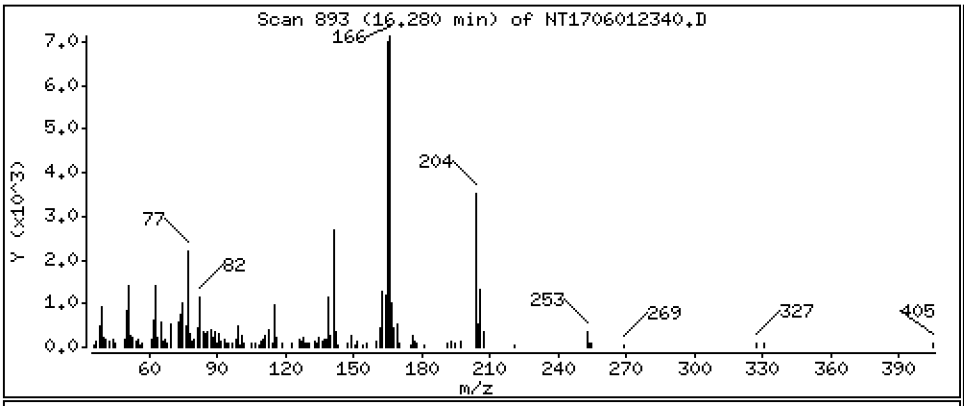
Operator: VTS

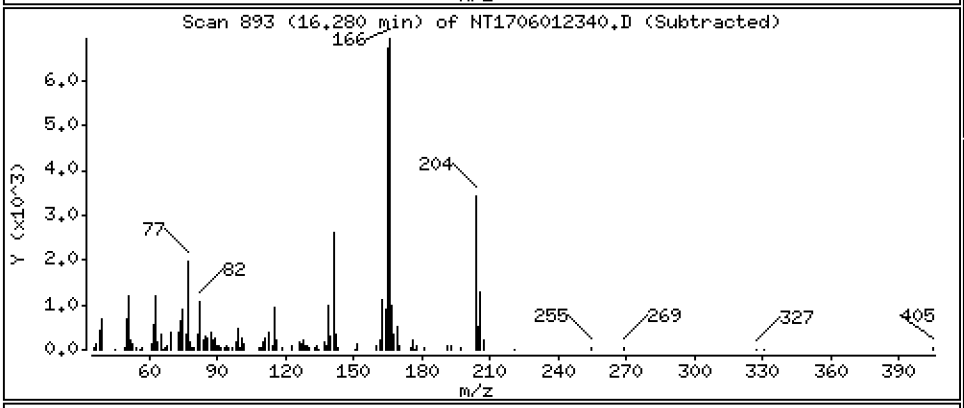
Column phase: ZB-5msi

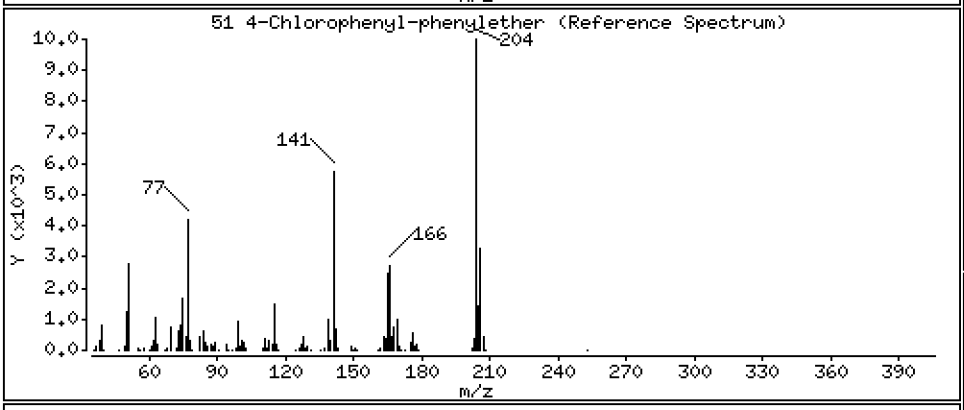
Column diameter: 0.25

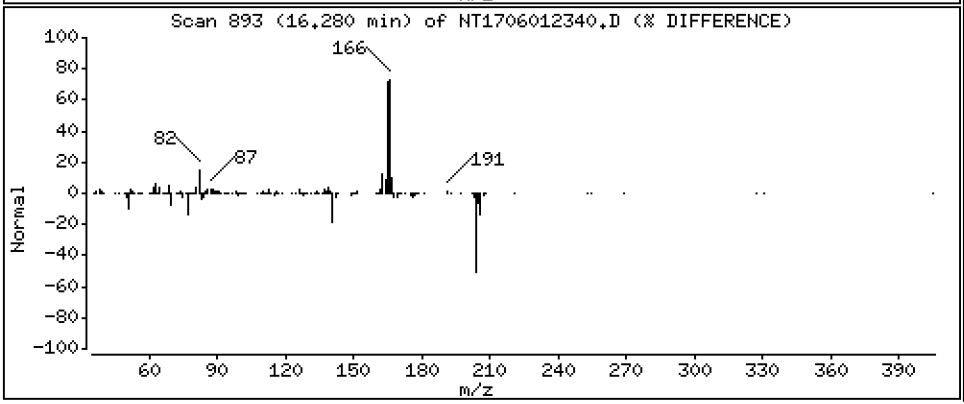
51 4-Chlorophenyl-phenylether

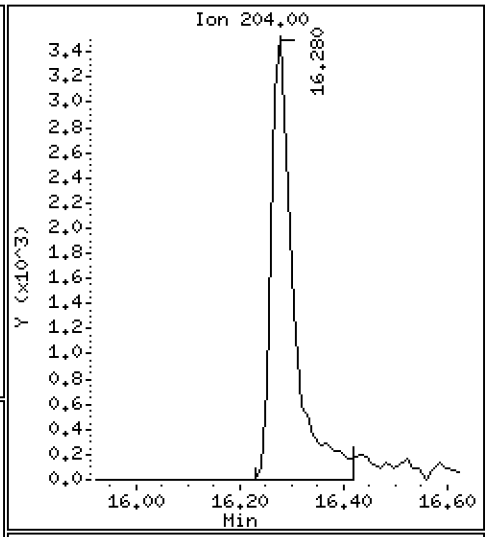
Concentration: 0.1755 ug/mL

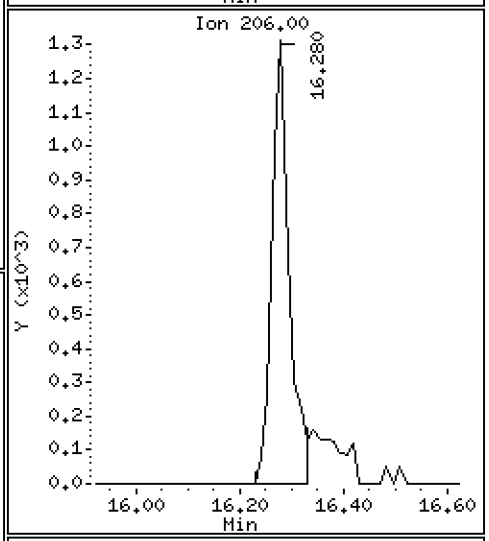


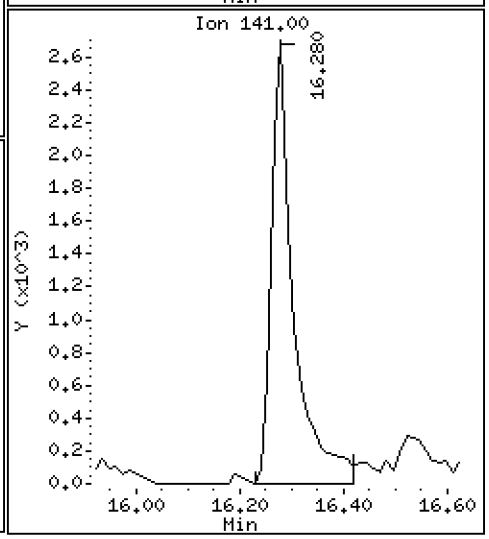












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

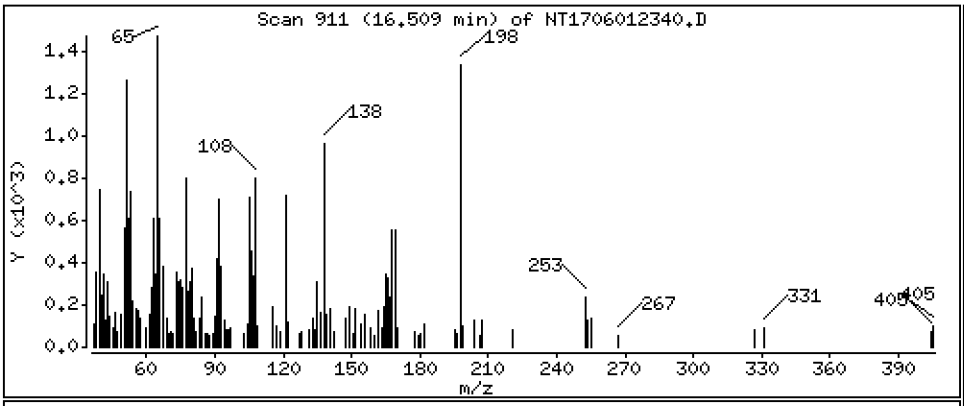
Operator: VTS

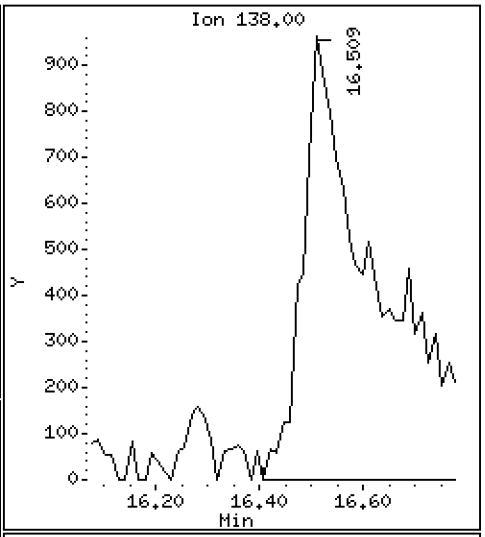
Column phase: ZB-5msi

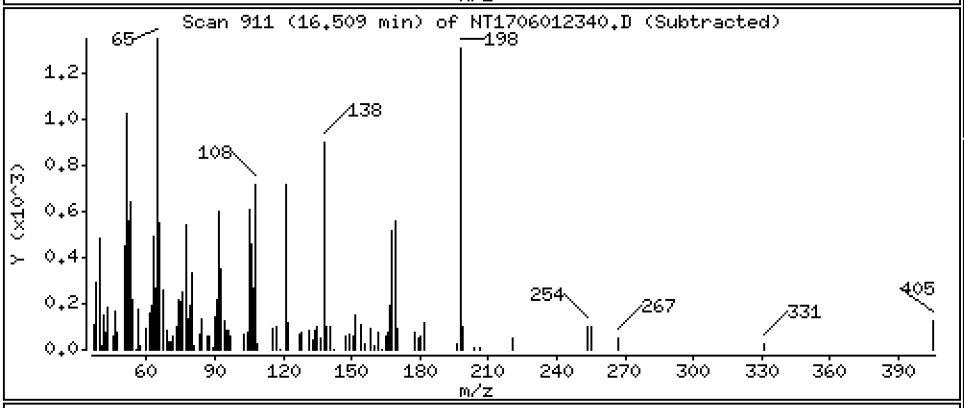
Column diameter: 0.25

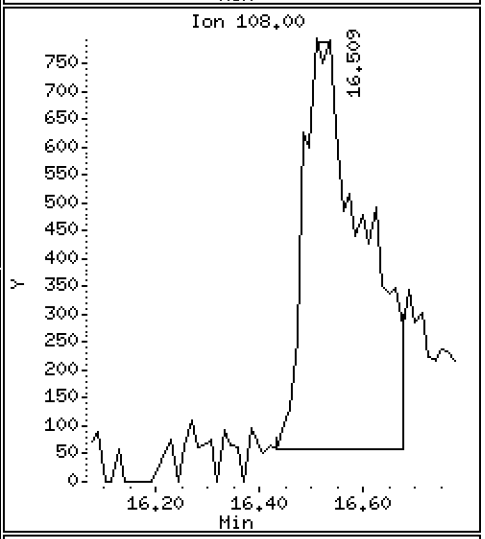
52 4-Nitroaniline

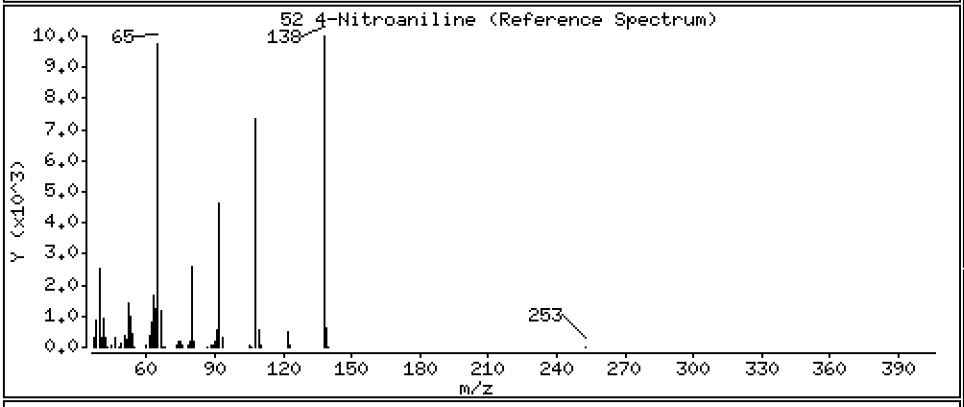
Concentration: 0.5278 ug/mL

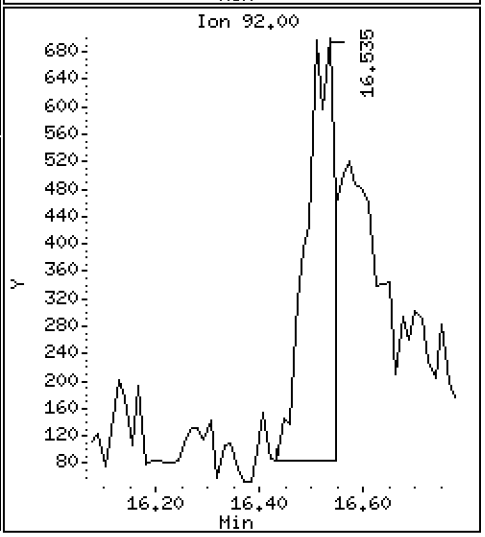


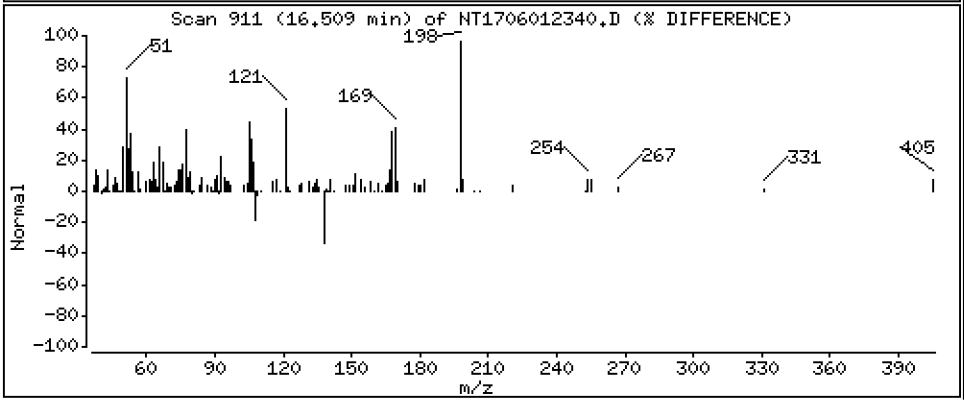












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

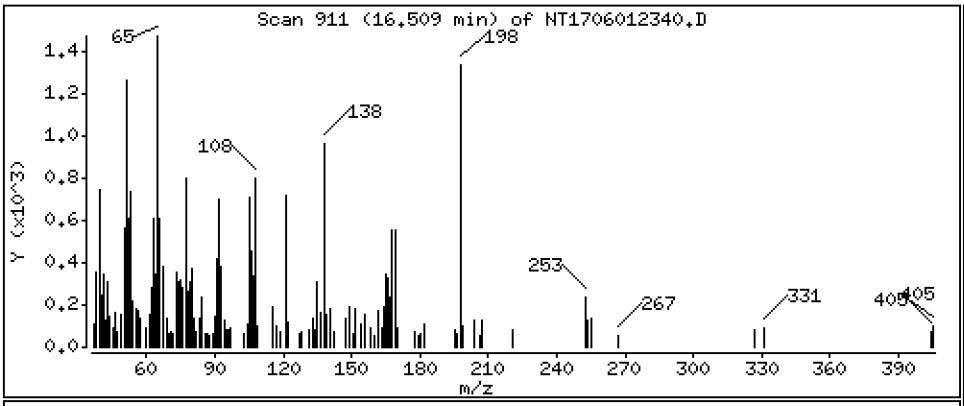
Operator: VTS

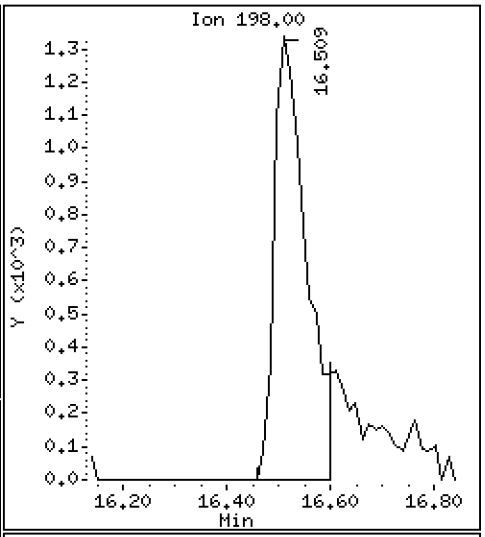
Column phase: ZB-5msi

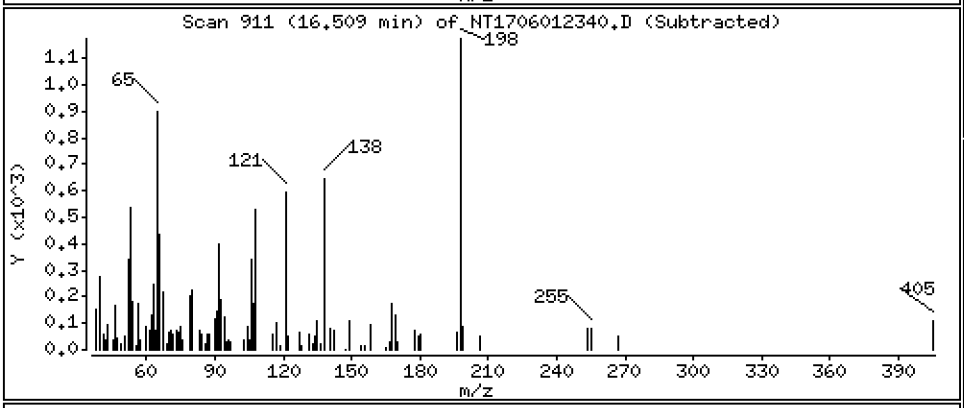
Column diameter: 0.25

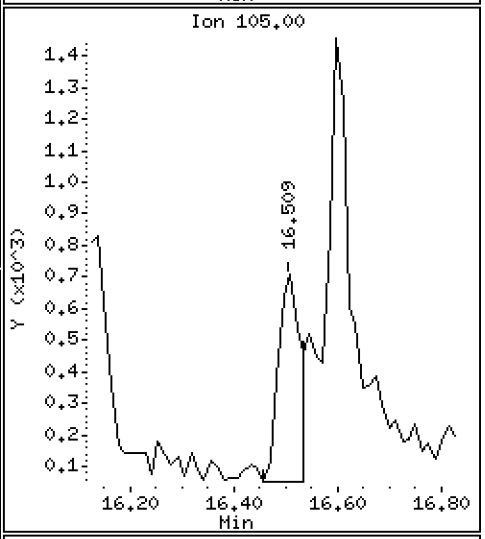
53 4,6-Dinitro-2-methylphenol

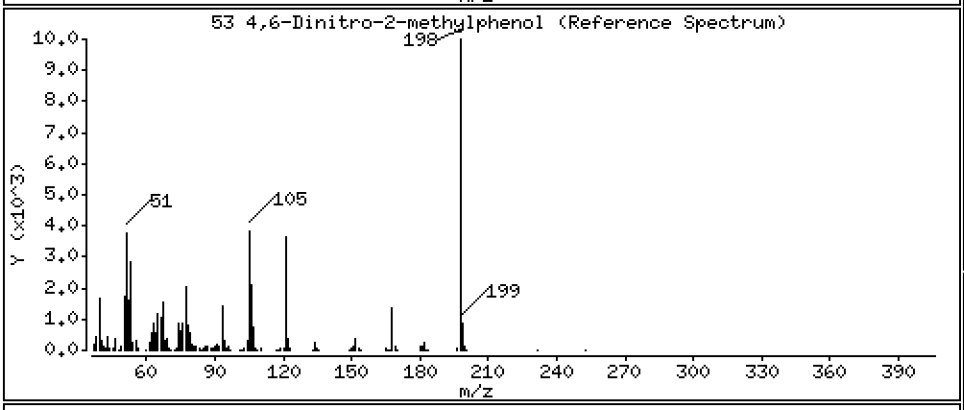
Concentration: 0.2433 ug/mL

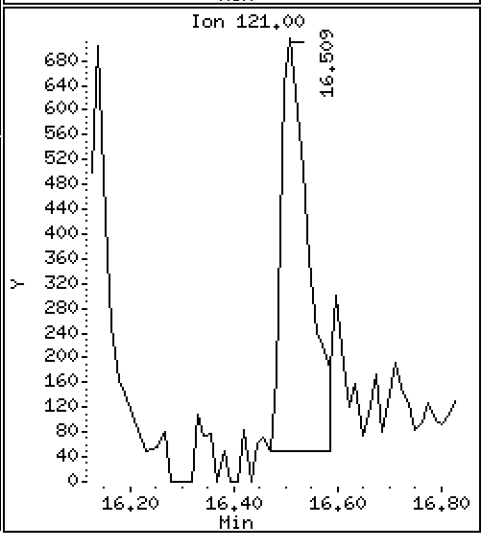


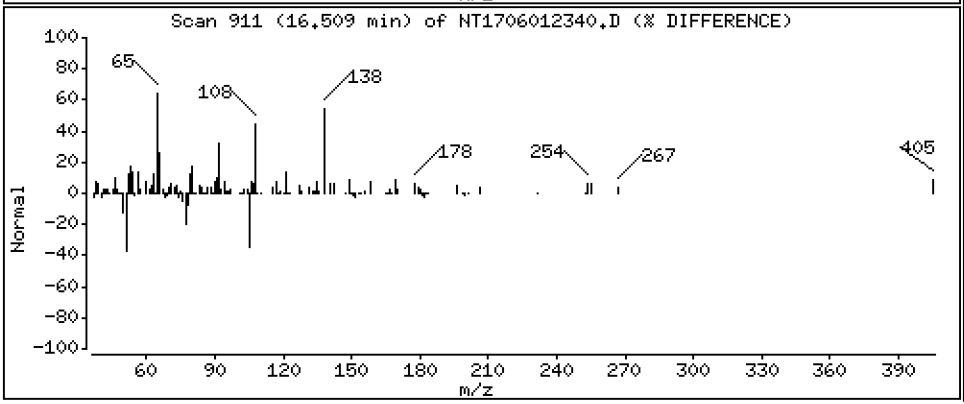












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

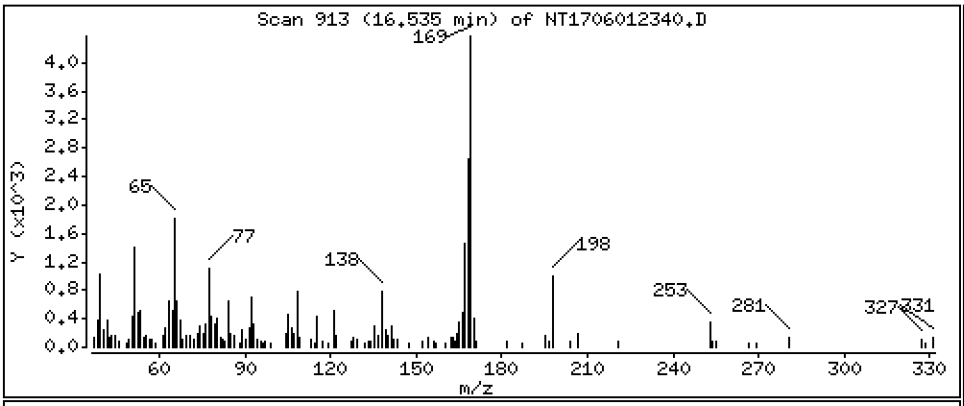
Operator: VTS

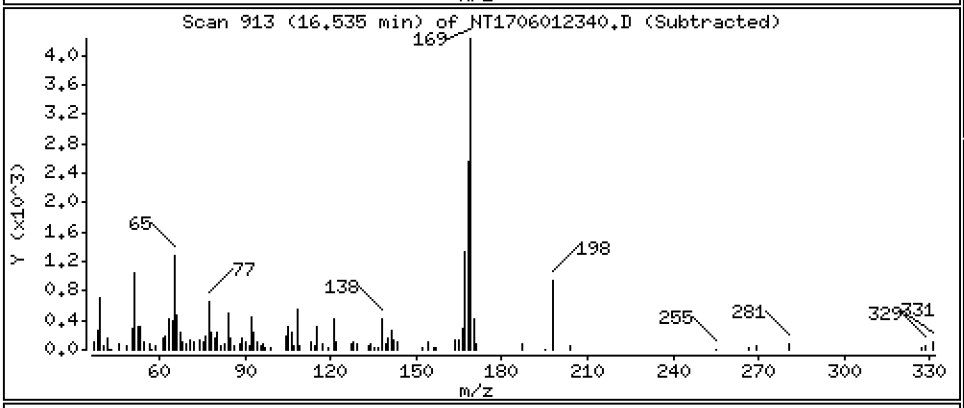
Column phase: ZB-5msi

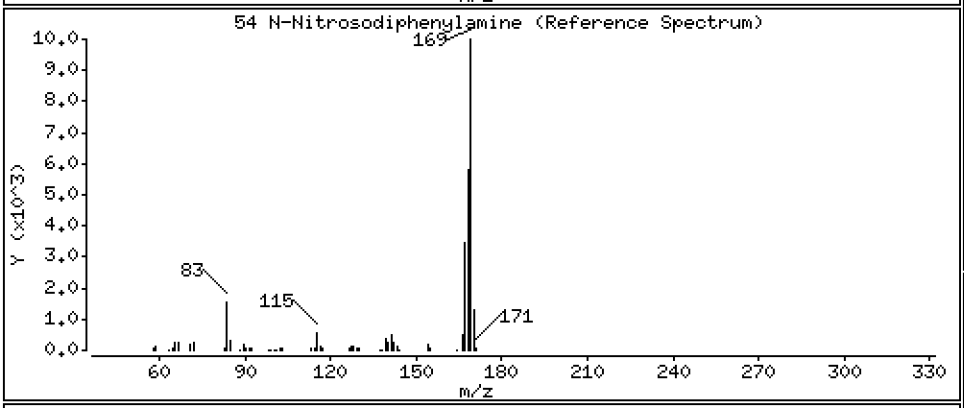
Column diameter: 0.25

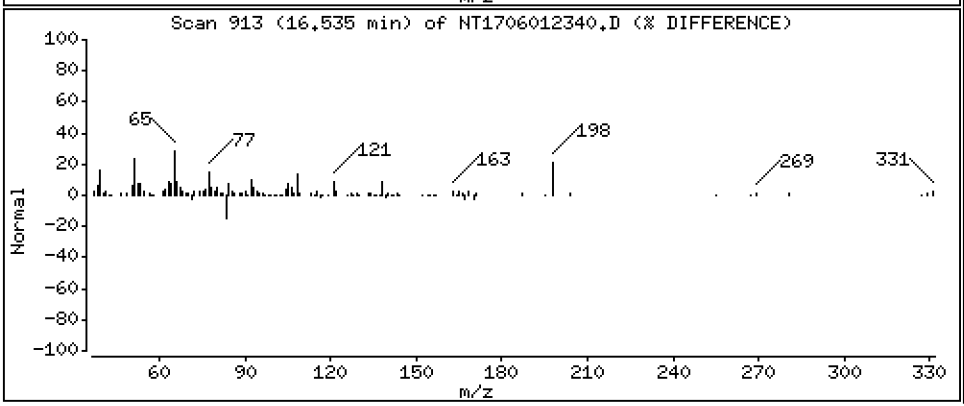
54 N-Nitrosodiphenylamine

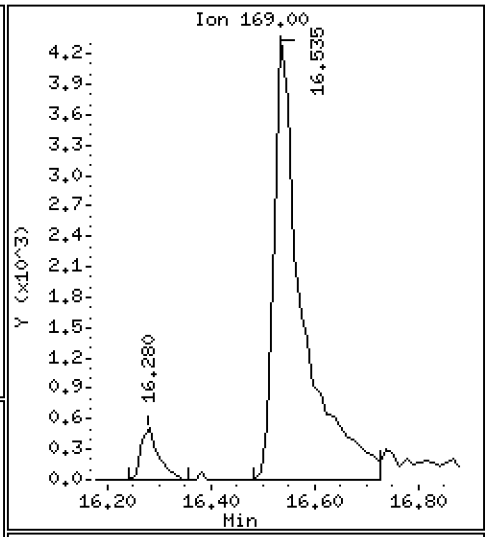
Concentration: 0.2001 ug/mL

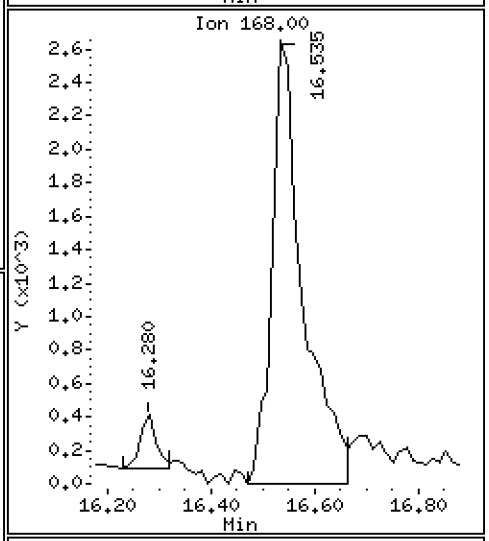


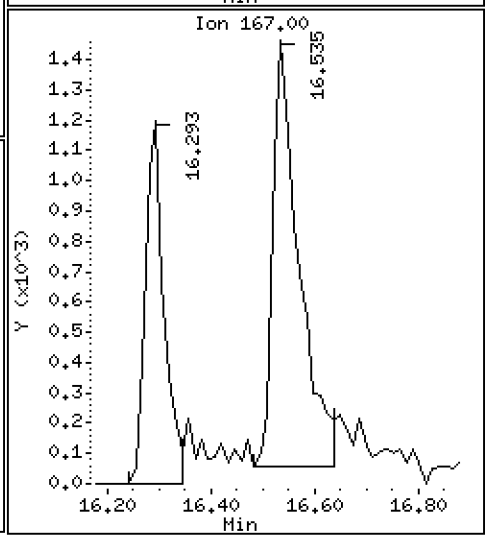












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

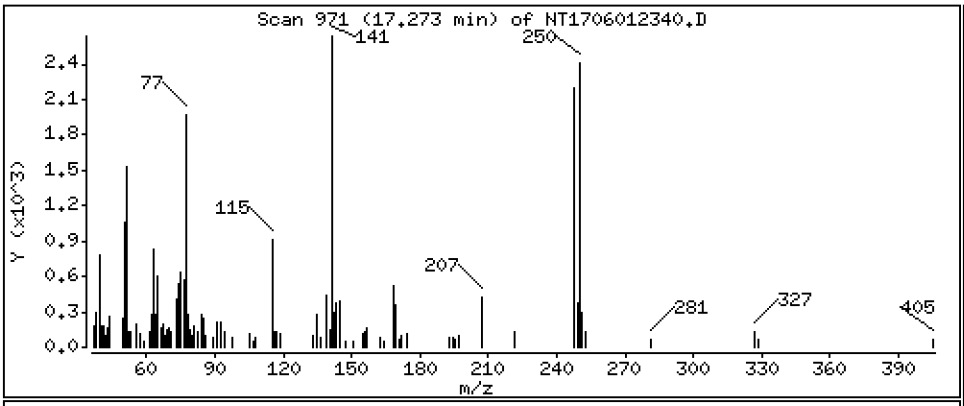
Operator: VTS

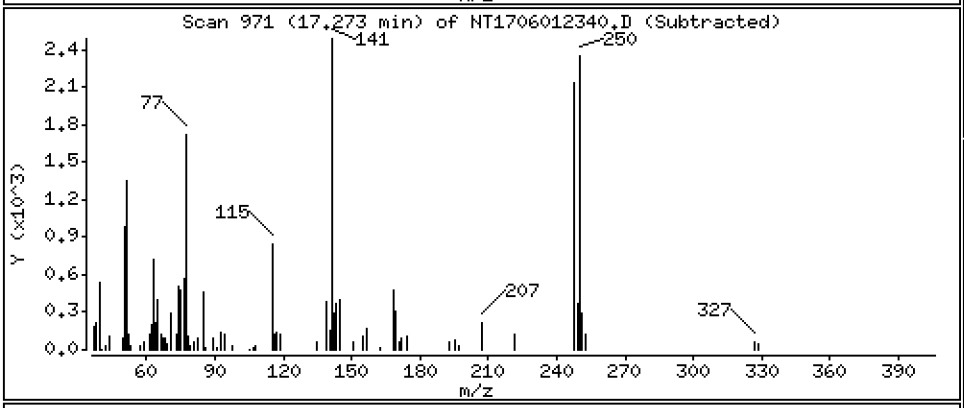
Column phase: ZB-5msi

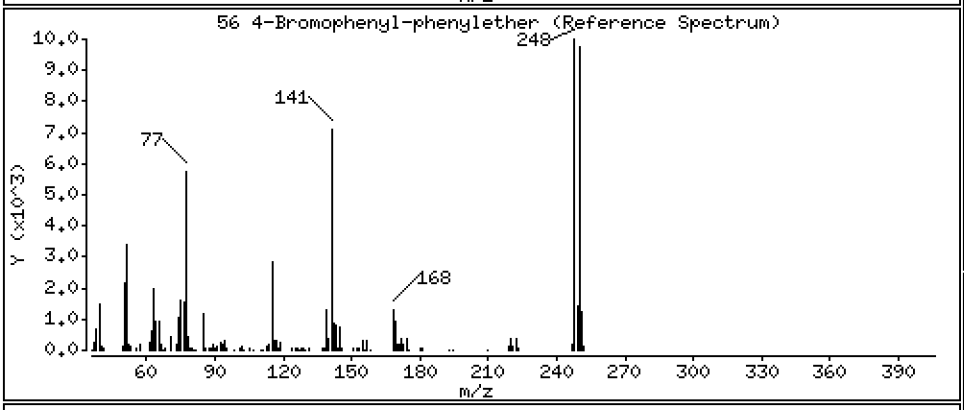
Column diameter: 0.25

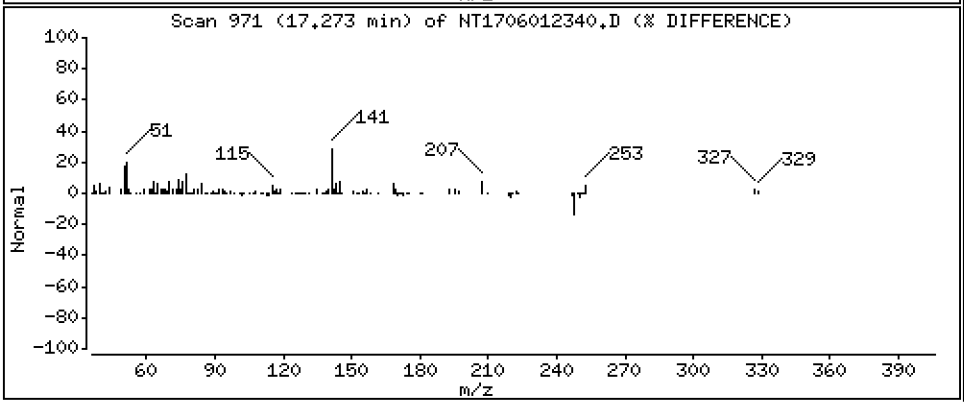
56 4-Bromophenyl-phenylether

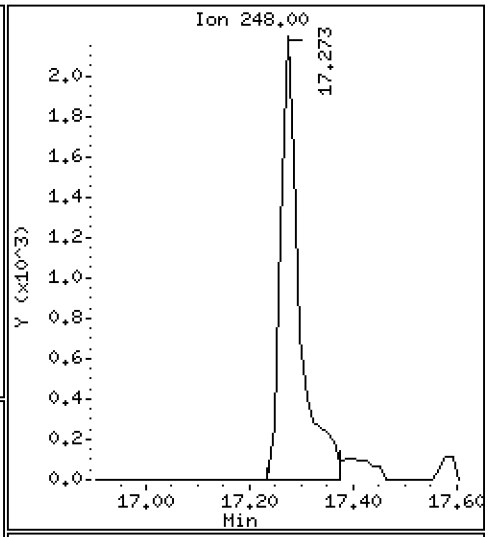
Concentration: 0.1951 ug/mL

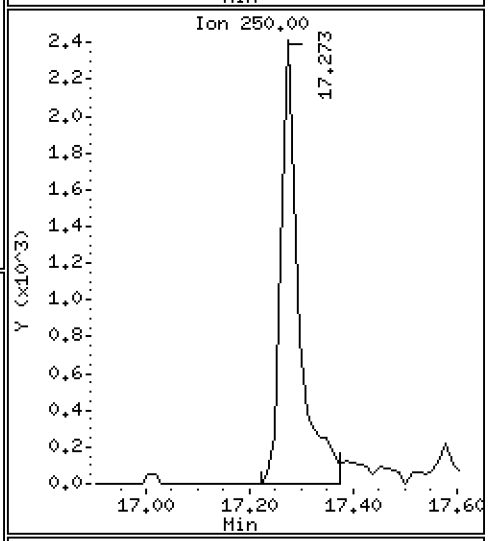


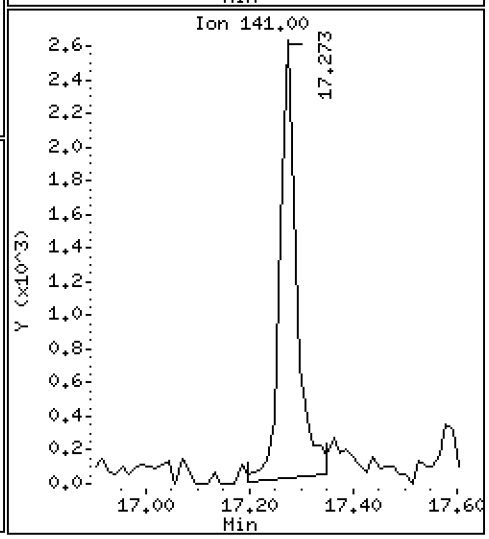












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

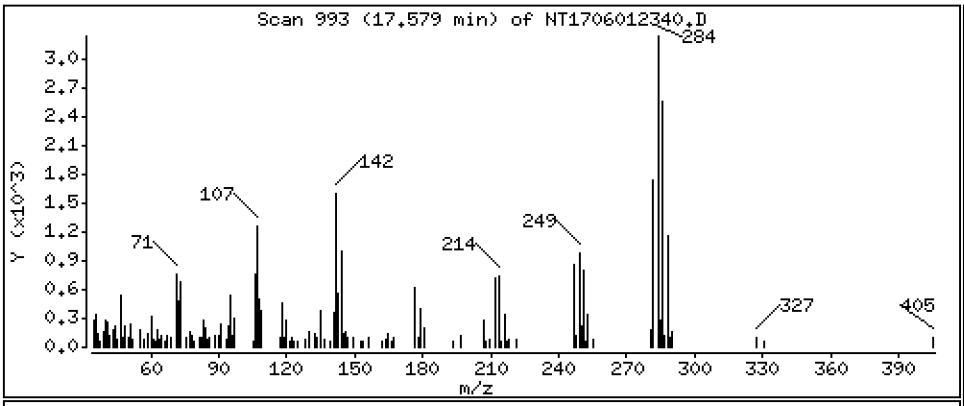
Operator: VTS

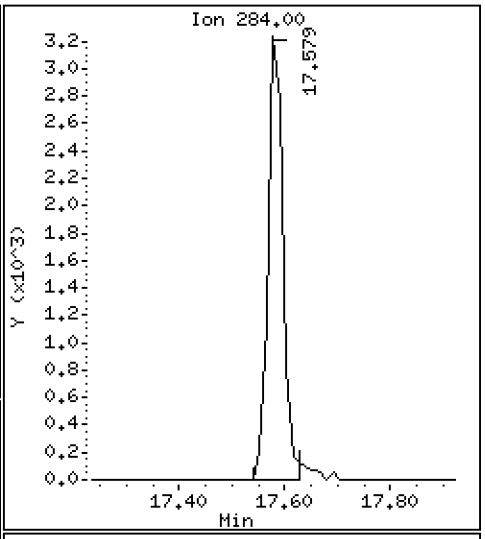
Column phase: ZB-5msi

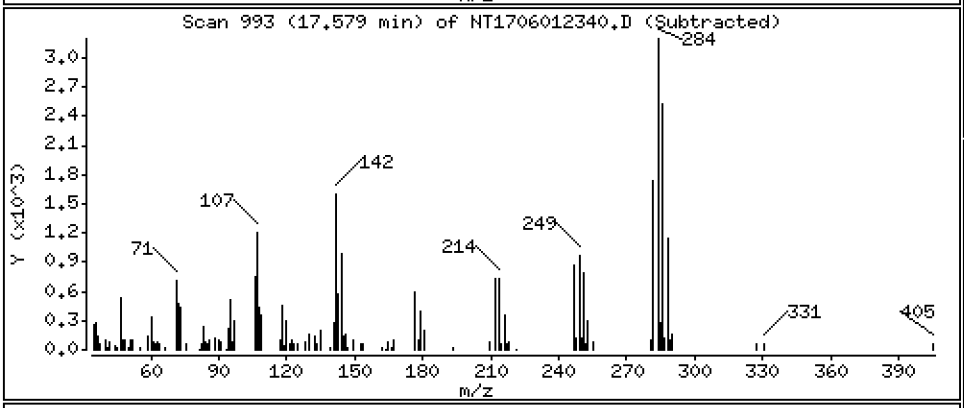
Column diameter: 0.25

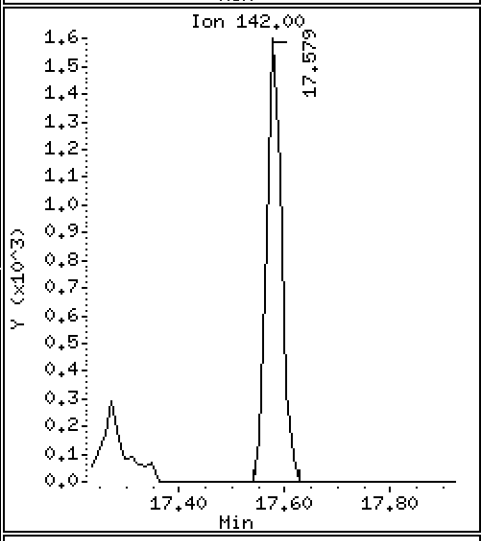
57 Hexachlorobenzene

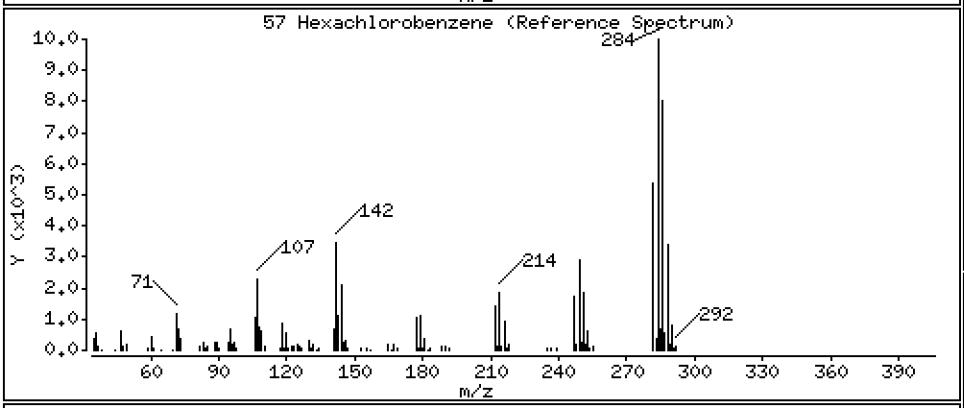
Concentration: 0.2176 ug/mL

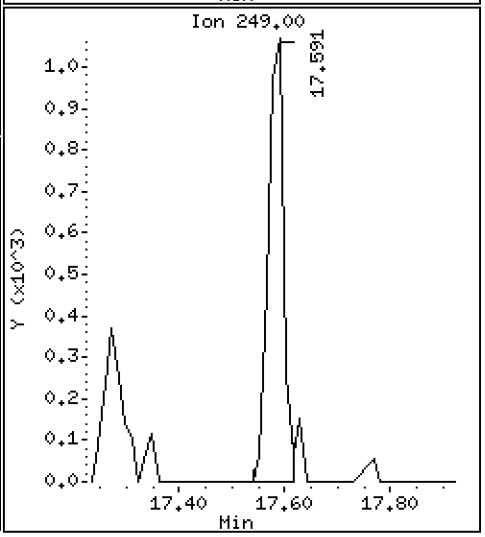


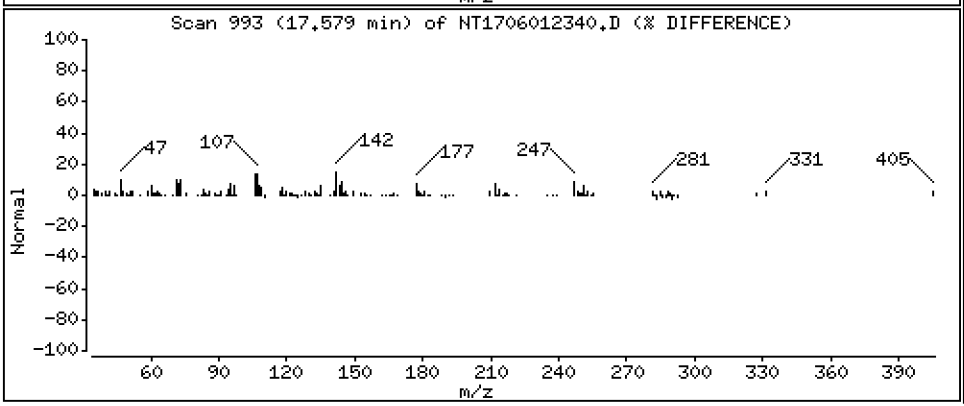












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

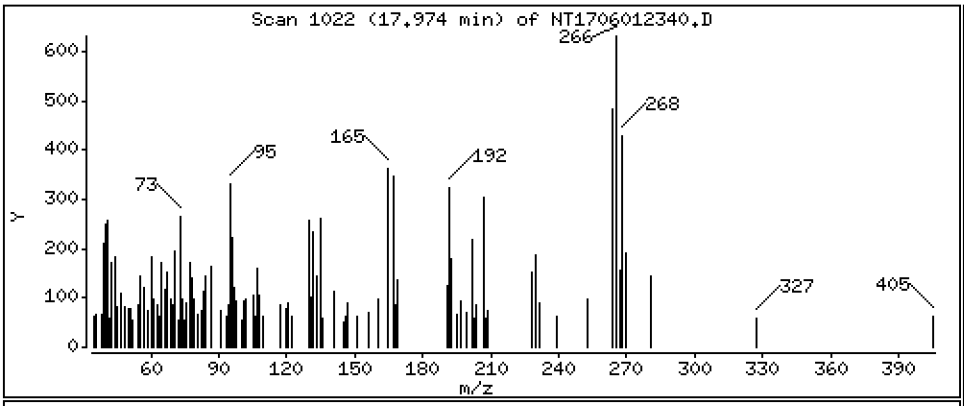
Operator: VTS

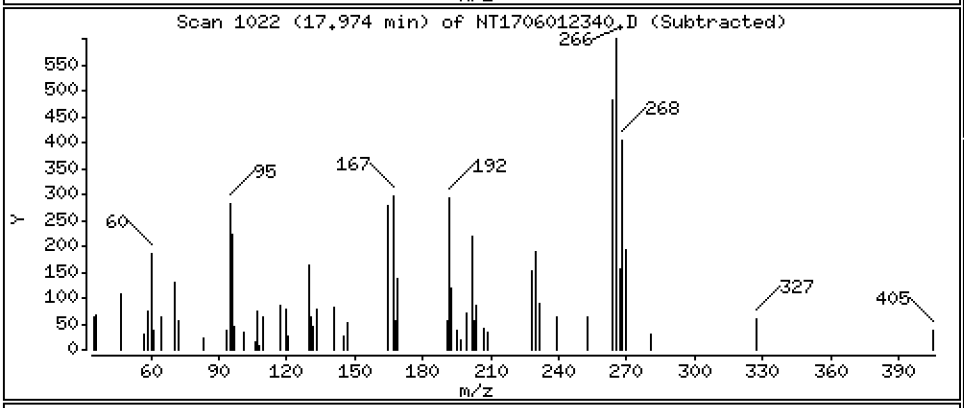
Column phase: ZB-5msi

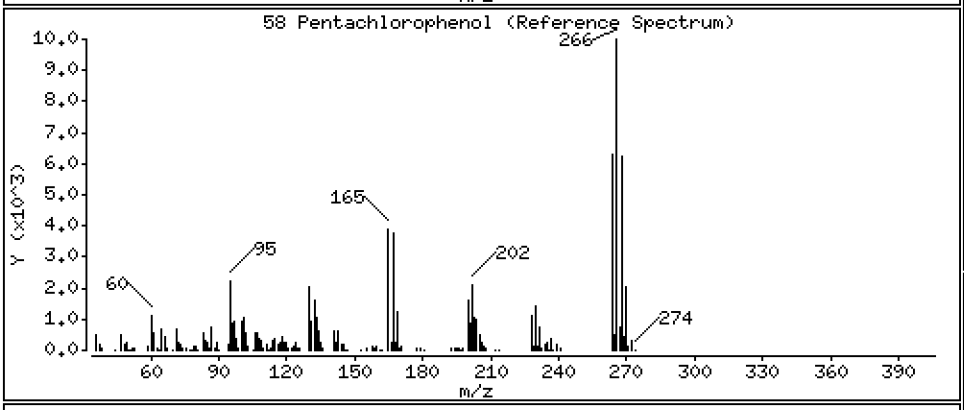
Column diameter: 0.25

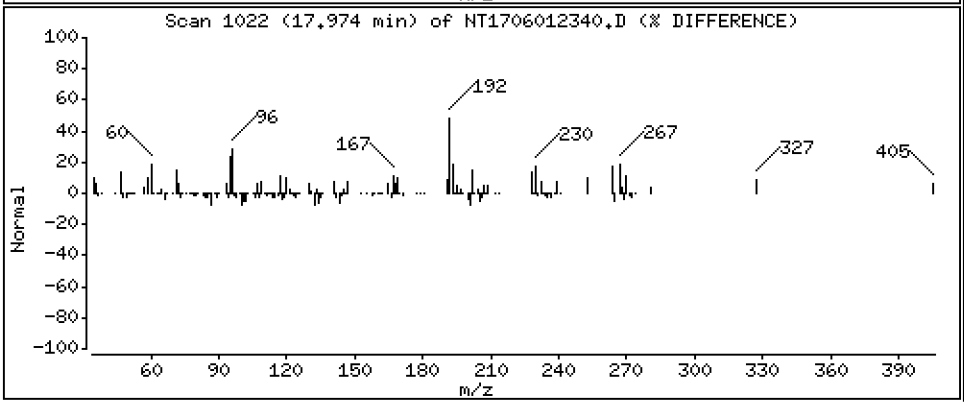
58 Pentachlorophenol

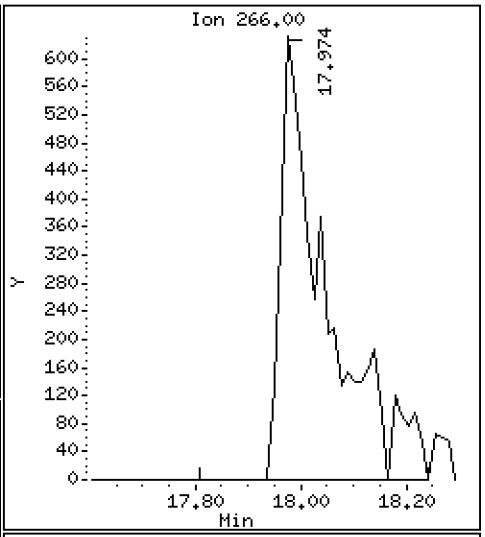
Concentration: 0.2210 ug/mL

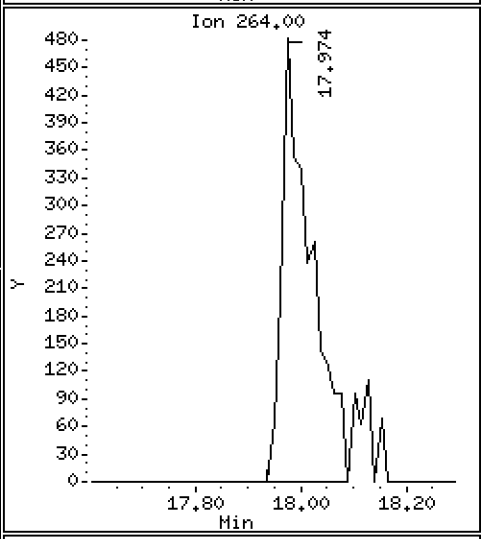


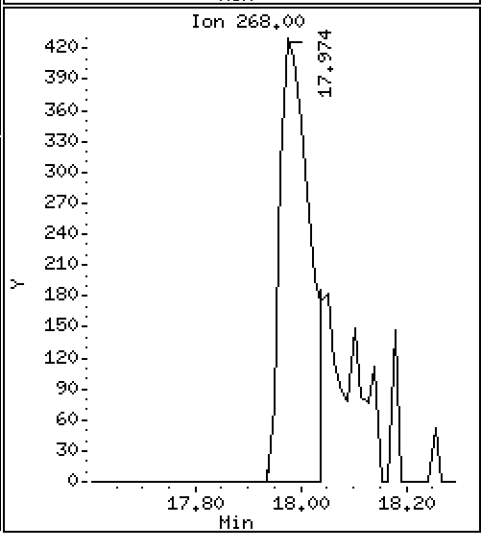












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

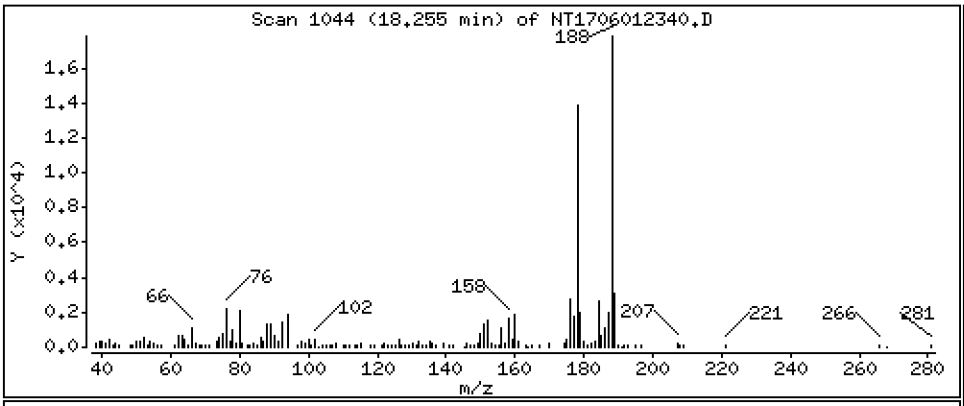
Operator: VTS

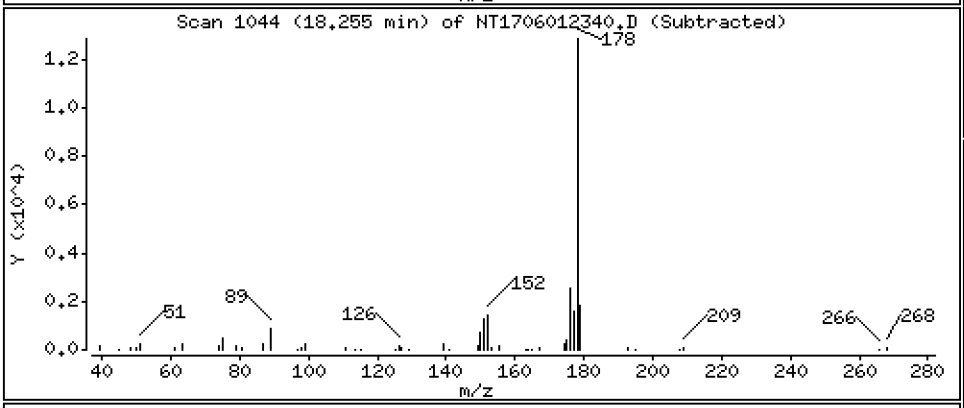
Column phase: ZB-5msi

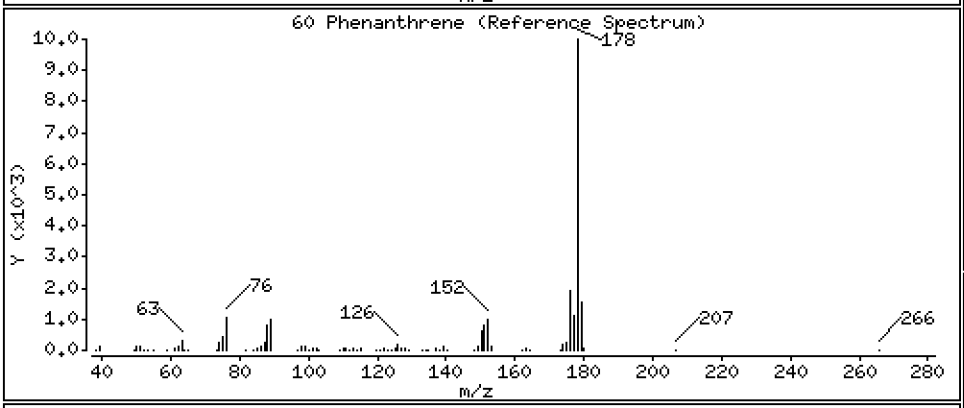
Column diameter: 0.25

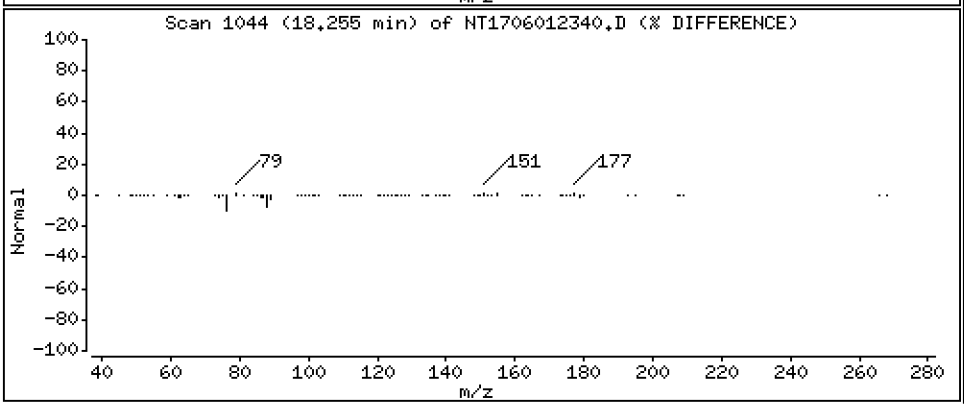
60 Phenanthrene

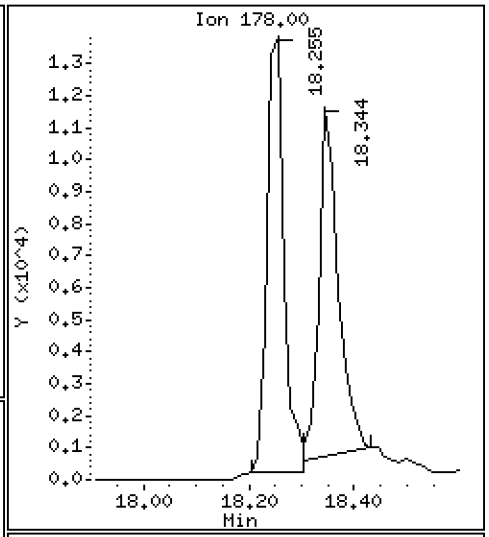
Concentration: 0.1838 ug/mL

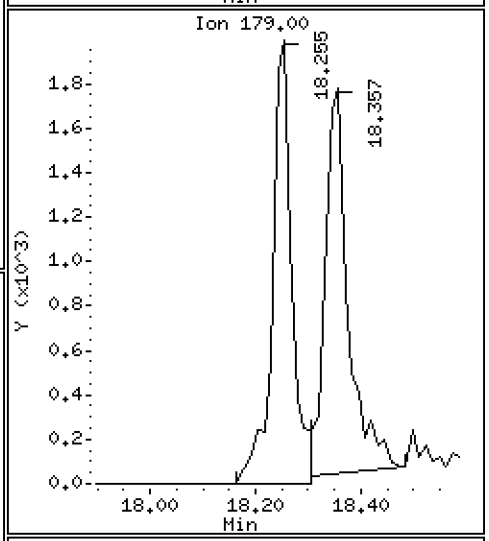


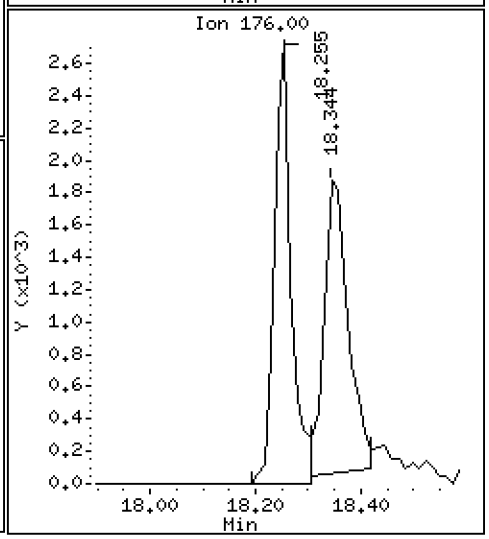












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

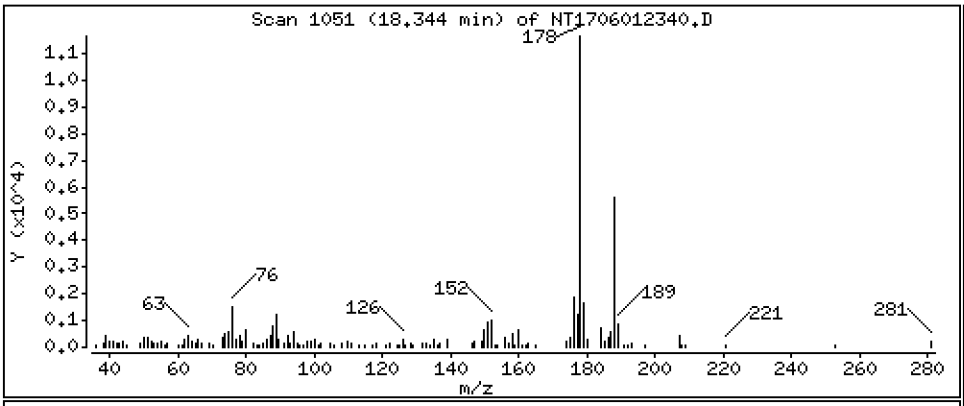
Operator: VTS

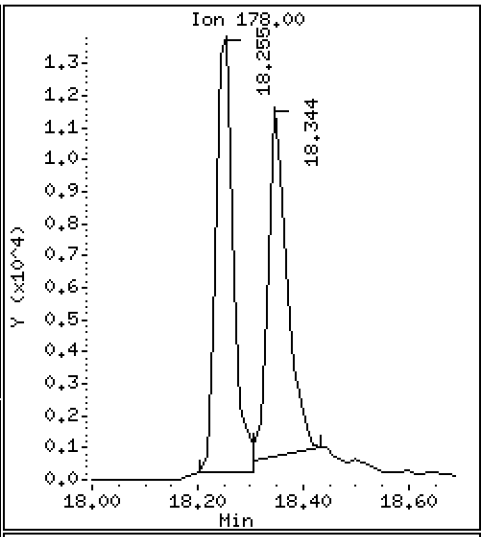
Column phase: ZB-5msi

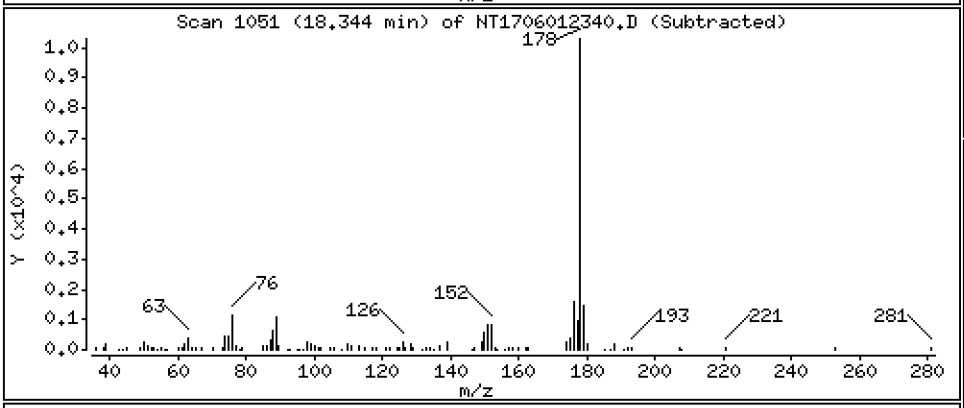
Column diameter: 0.25

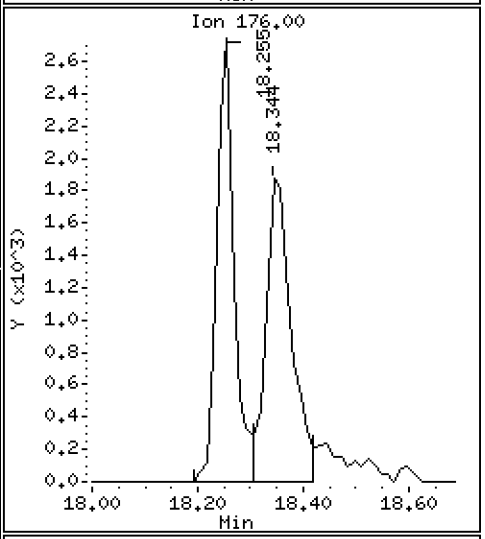
61 Anthracene

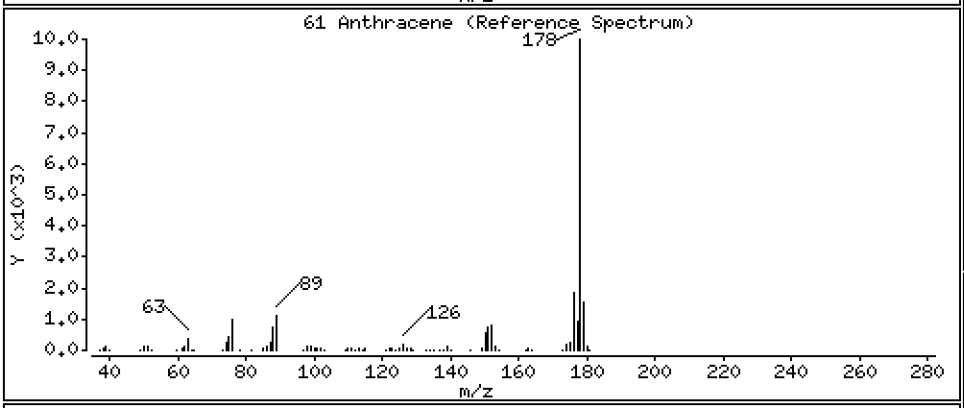
Concentration: 0.1685 ug/mL

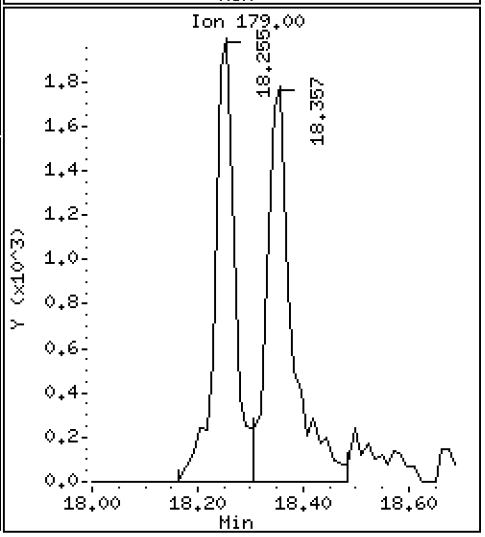


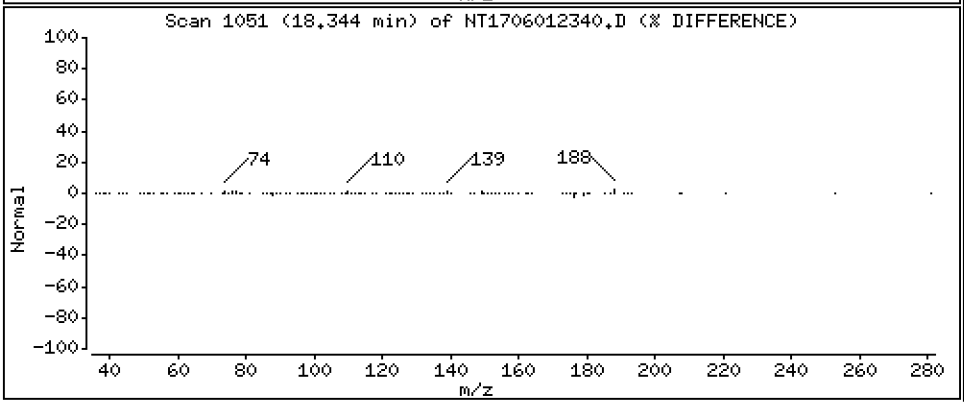












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

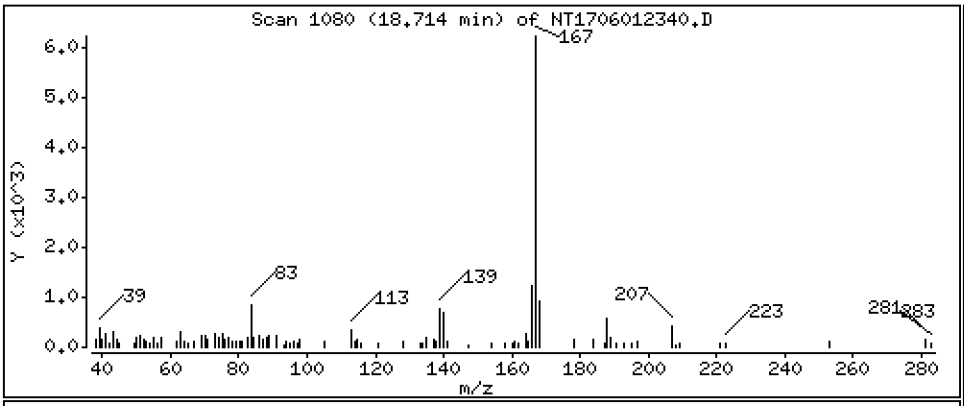
Operator: VTS

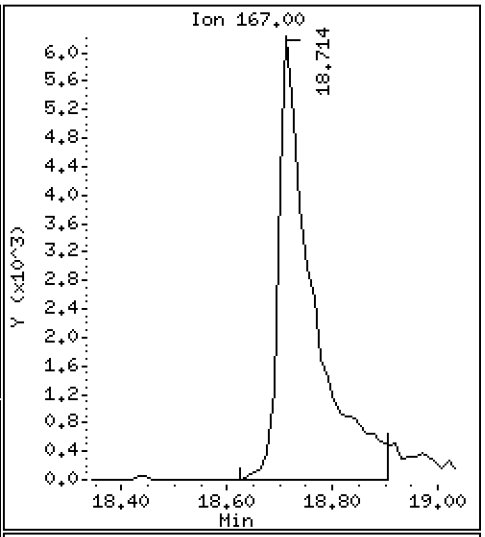
Column phase: ZB-5msi

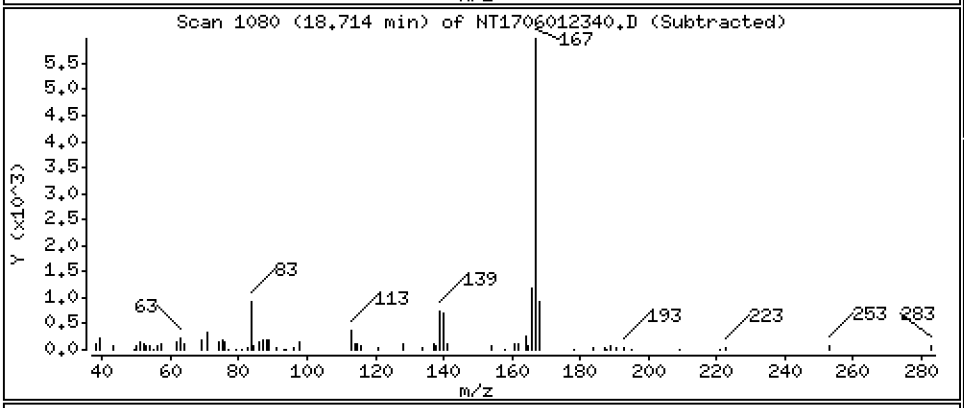
Column diameter: 0.25

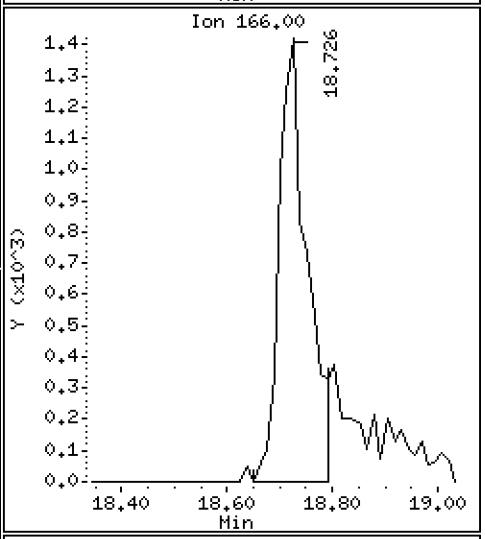
62 Carbazole

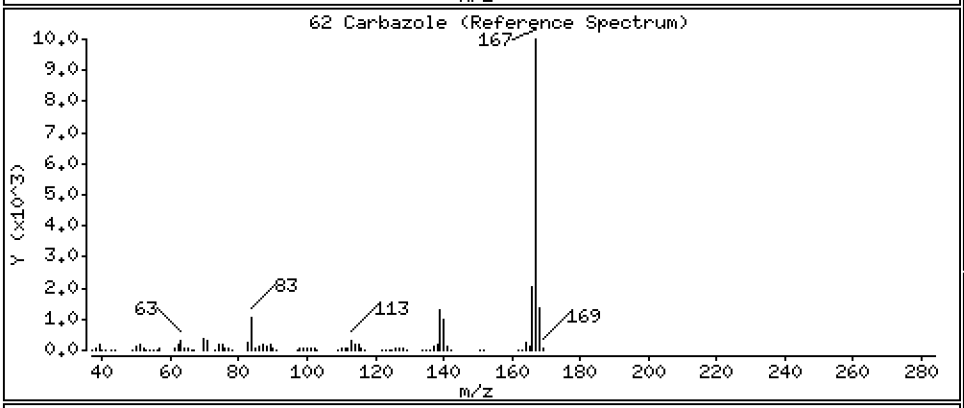
Concentration: 0.2854 ug/mL

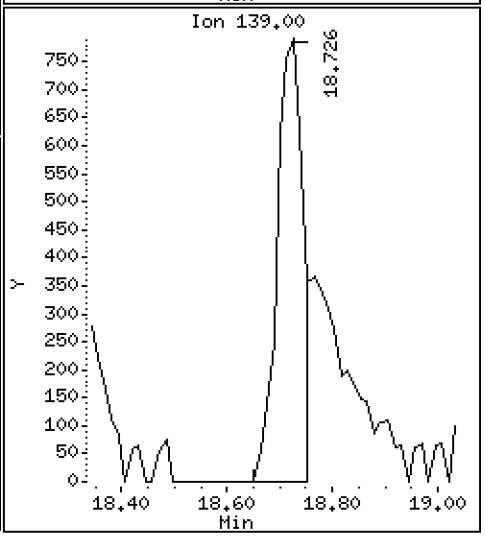


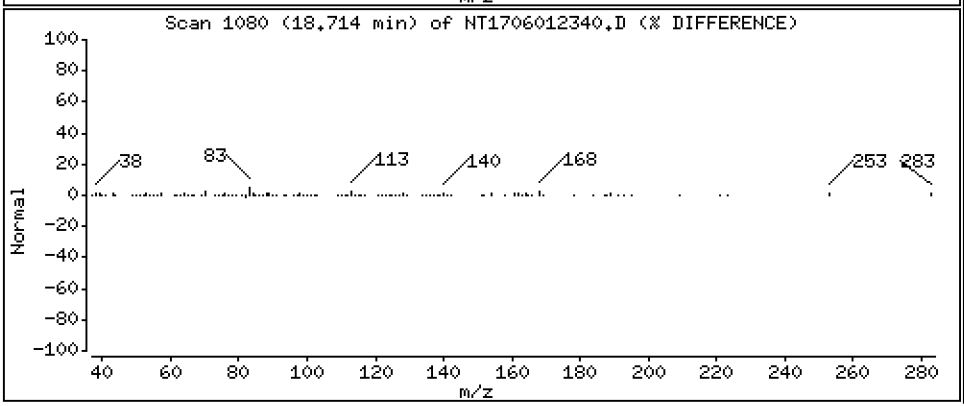












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

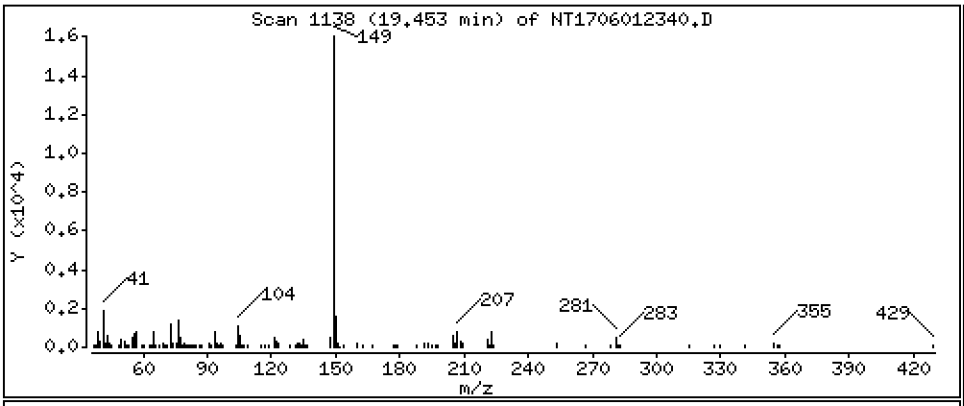
Operator: VTS

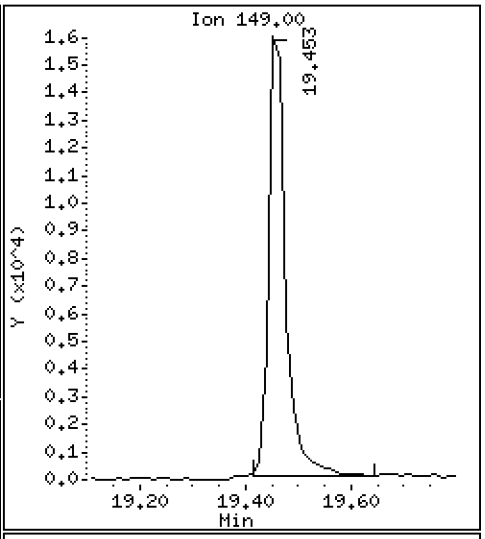
Column phase: ZB-5msi

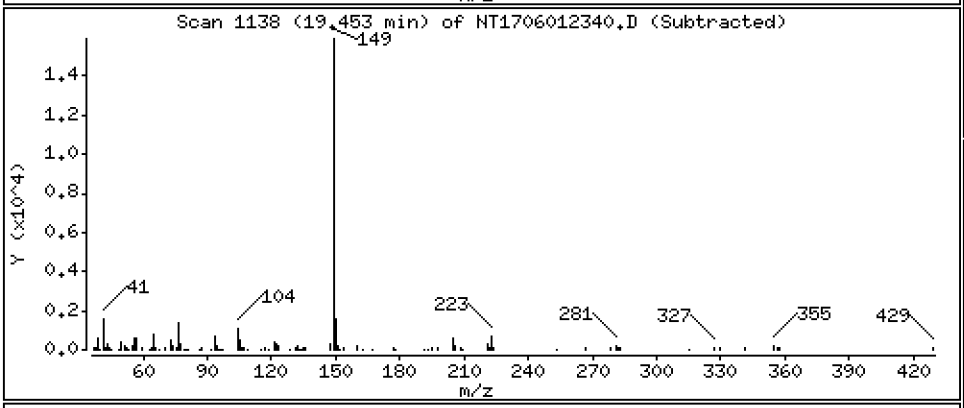
Column diameter: 0.25

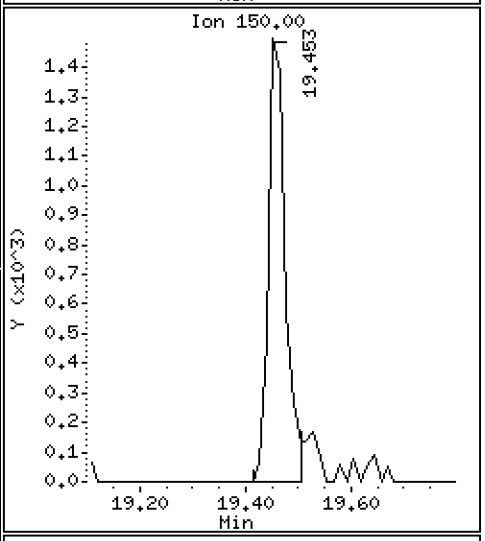
63 Di-n-butylphthalate

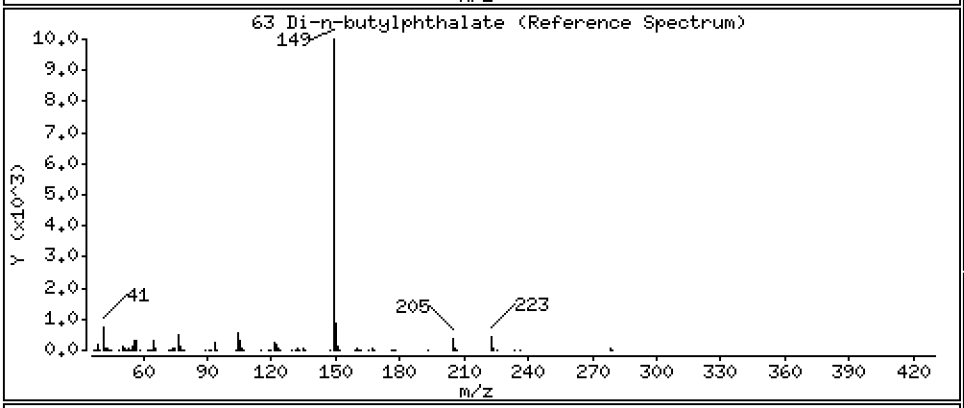
Concentration: 0.1827 ug/mL

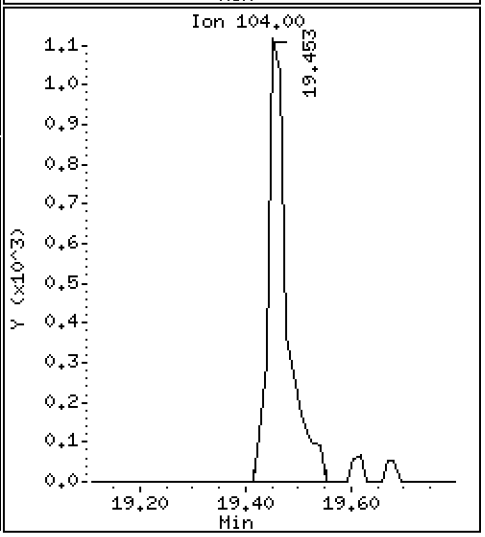


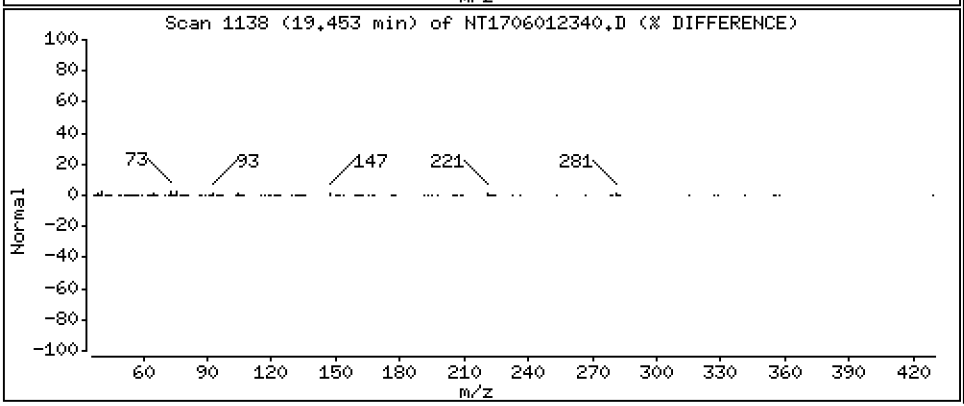












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

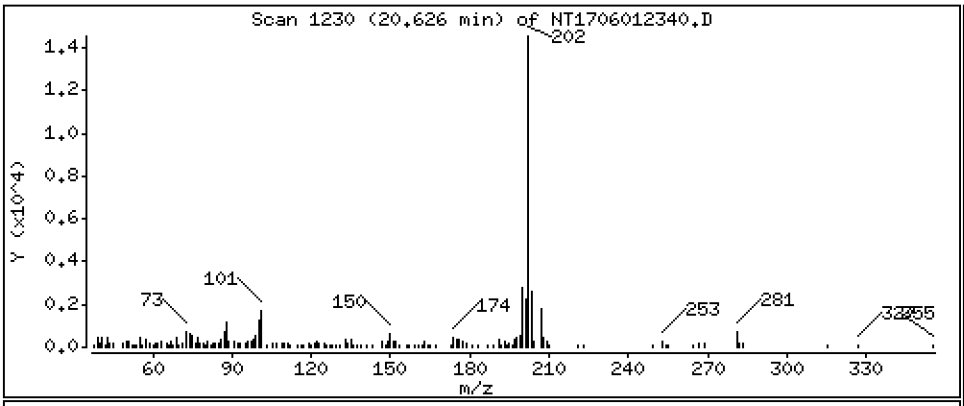
Operator: VTS

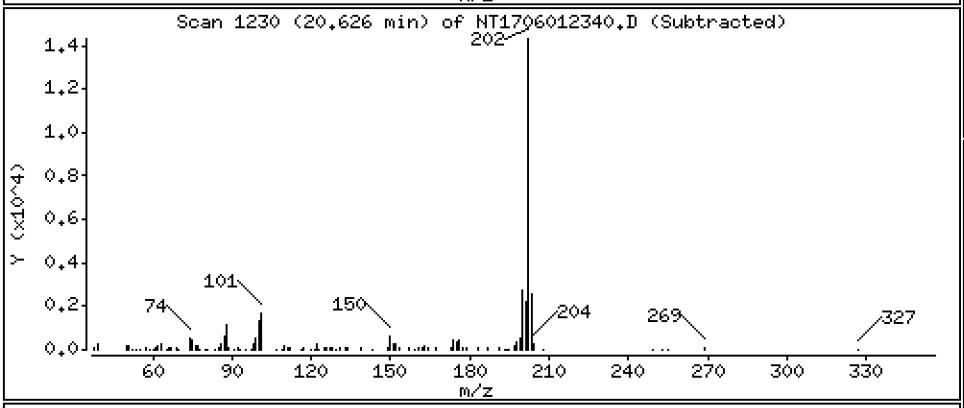
Column phase: ZB-5msi

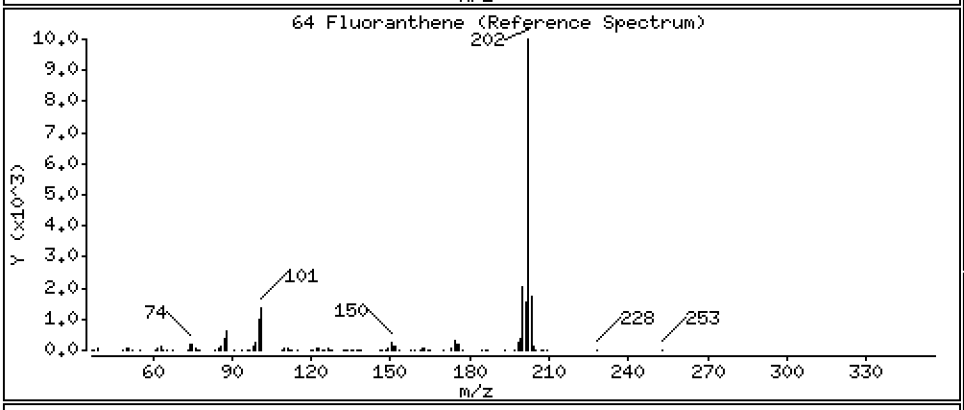
Column diameter: 0.25

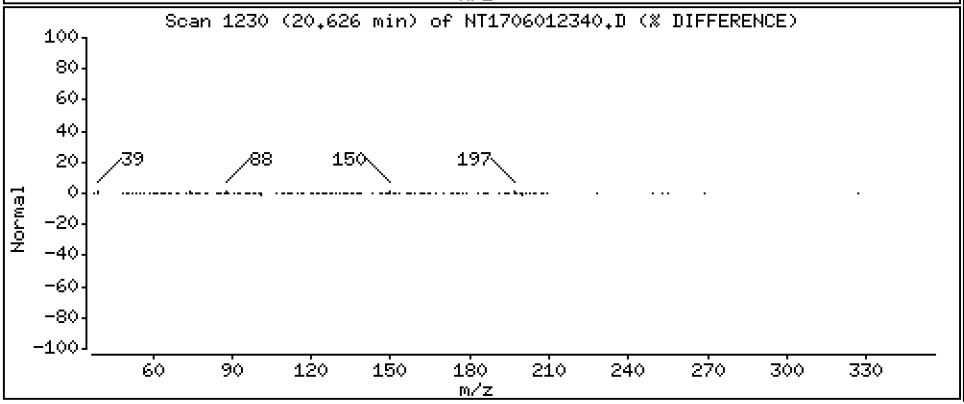
64 Fluoranthene

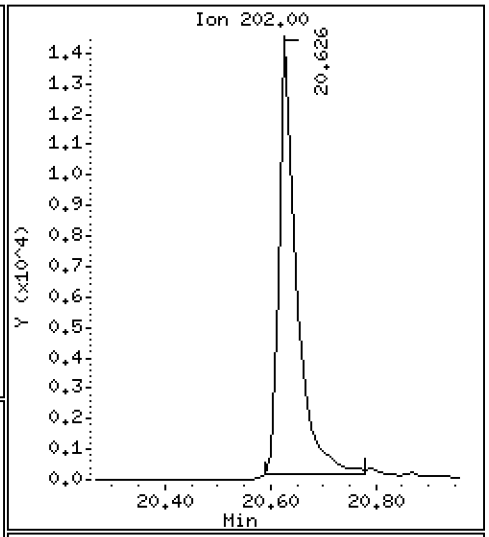
Concentration: 0.1971 ug/mL

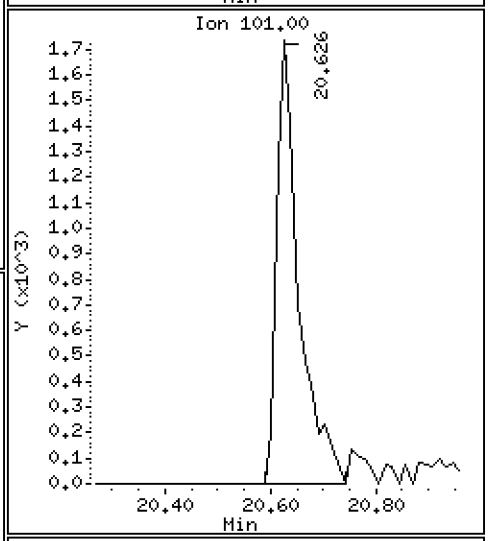


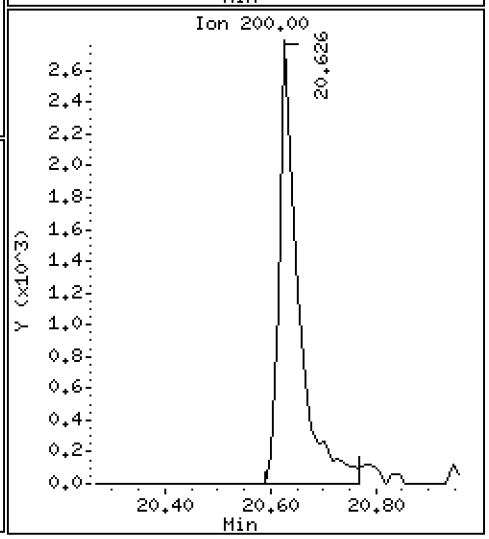












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

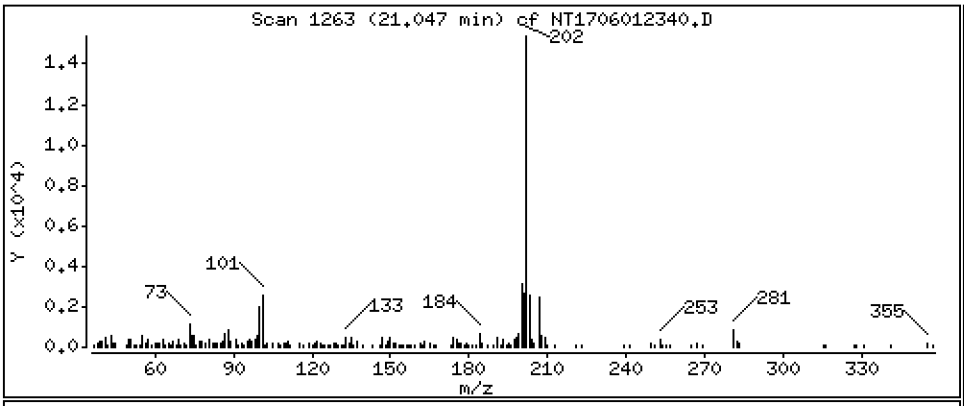
Operator: VTS

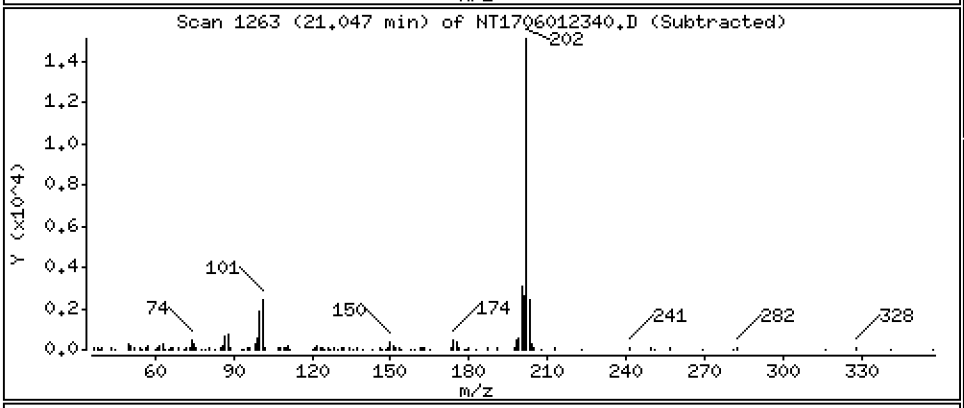
Column phase: ZB-5msi

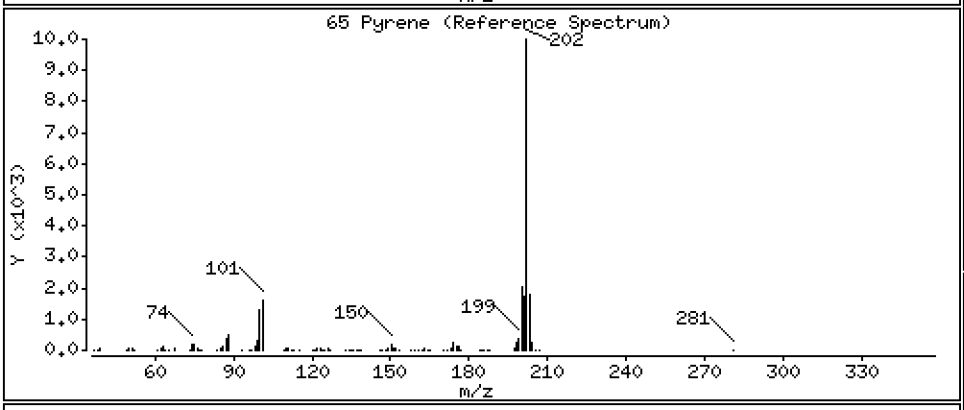
Column diameter: 0.25

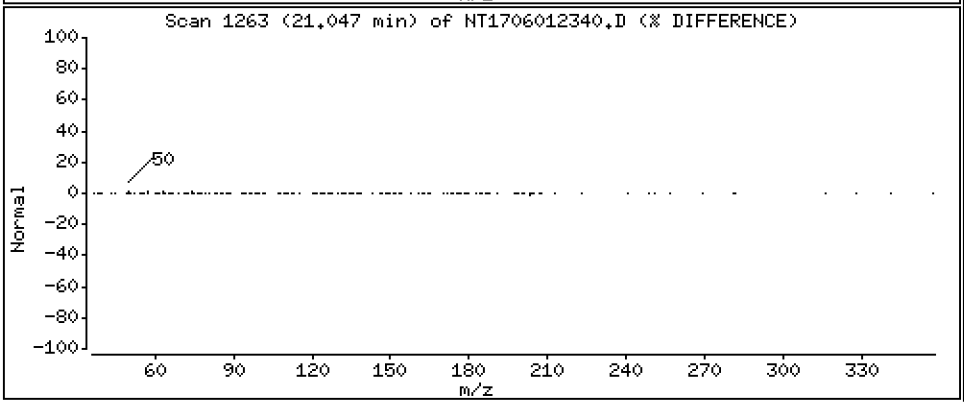
65 Pyrene

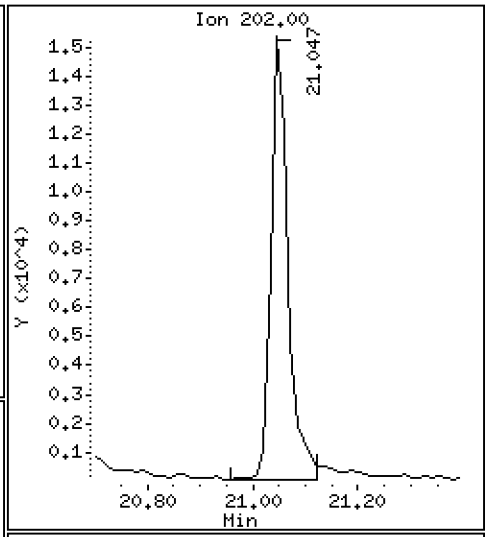
Concentration: 0.1977 ug/mL

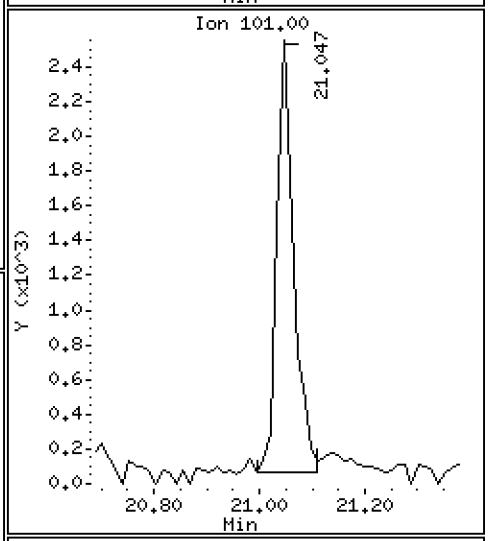


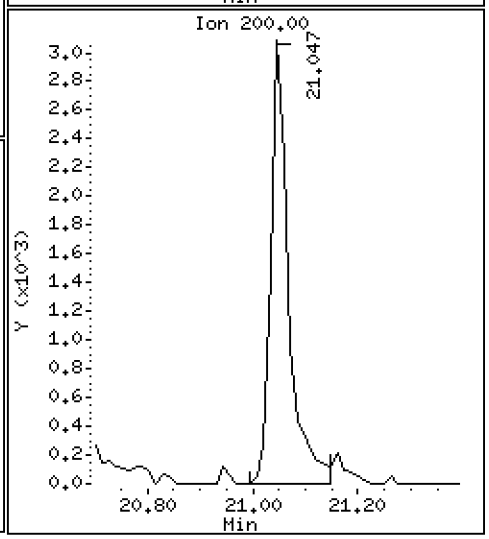












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

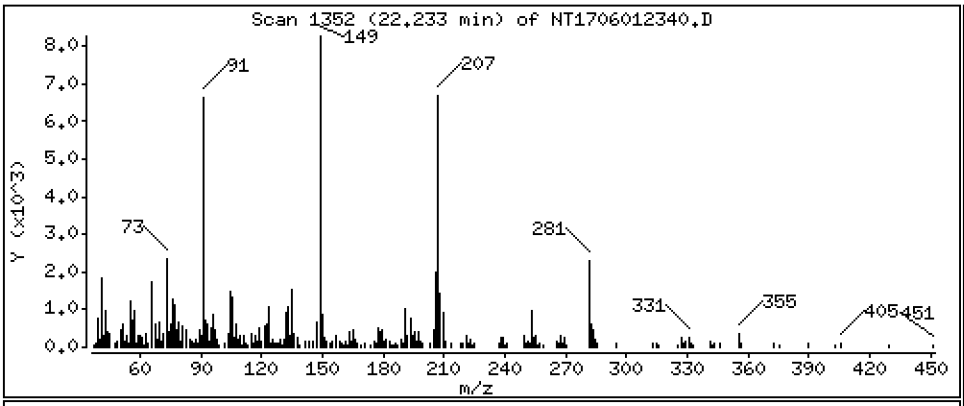
Operator: VTS

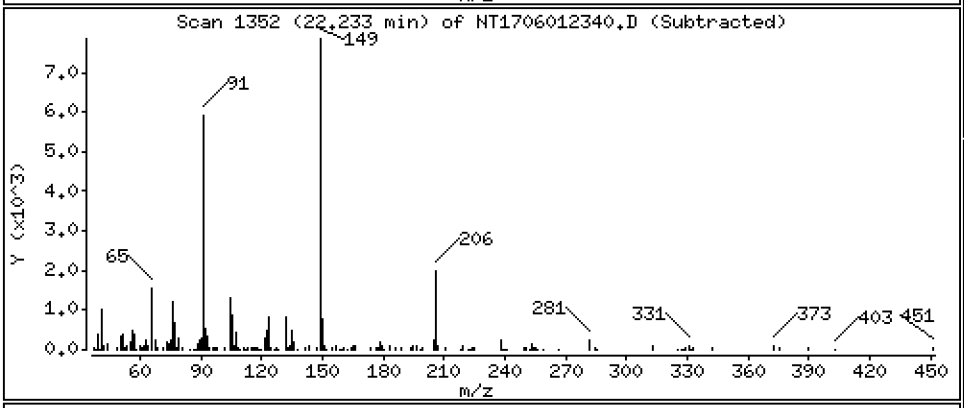
Column phase: ZB-5msi

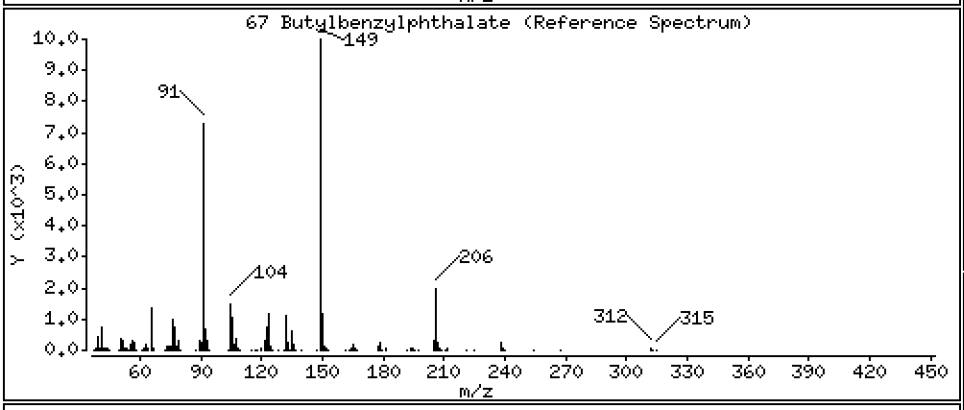
Column diameter: 0.25

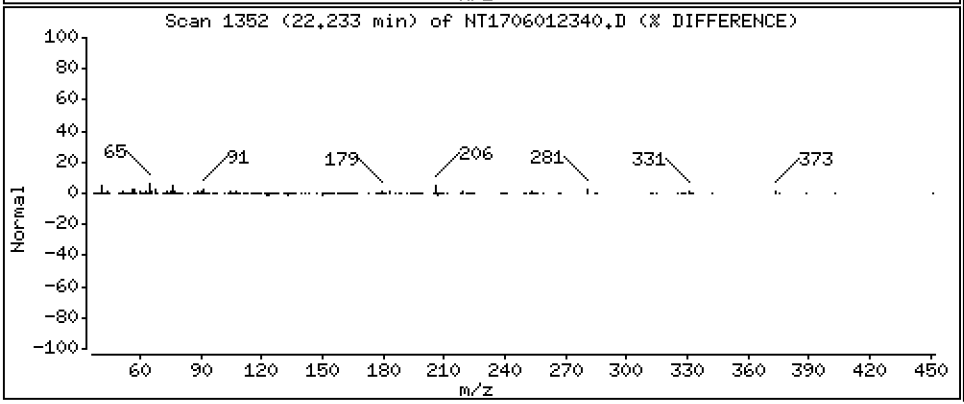
67 Butylbenzylphthalate

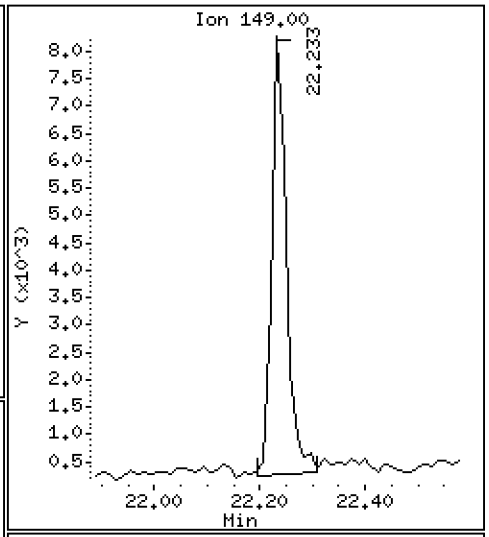
Concentration: 0.1987 ug/mL

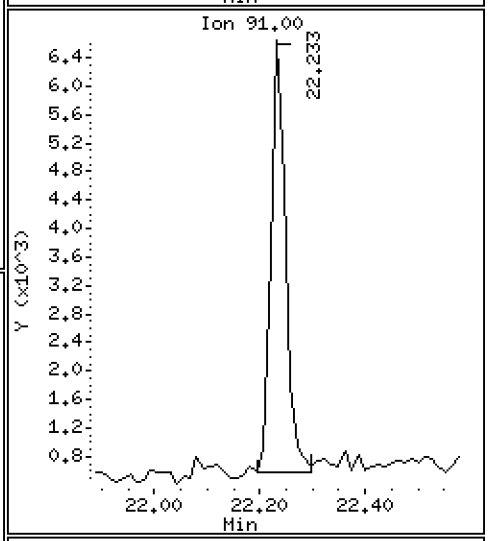


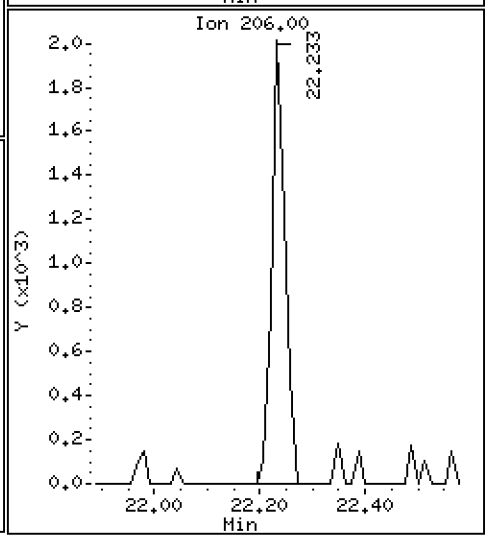












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

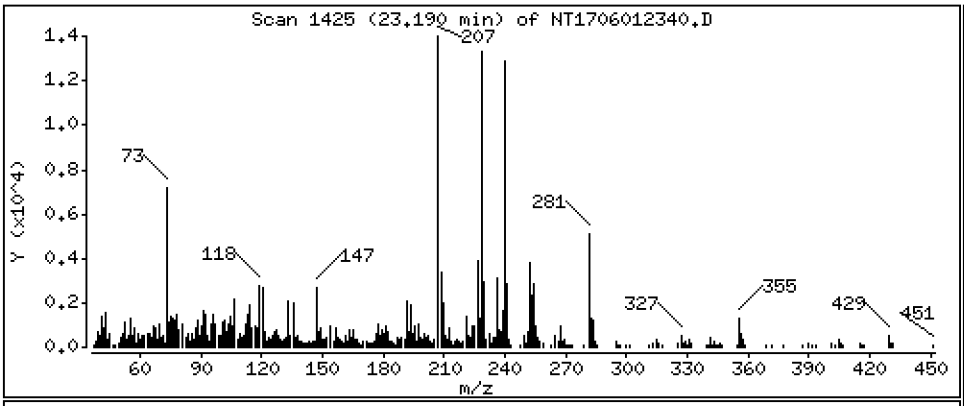
Operator: VTS

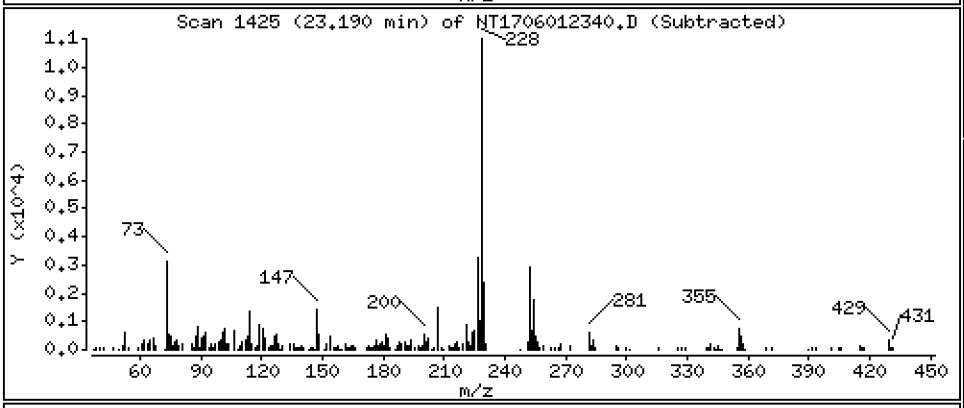
Column phase: ZB-5msi

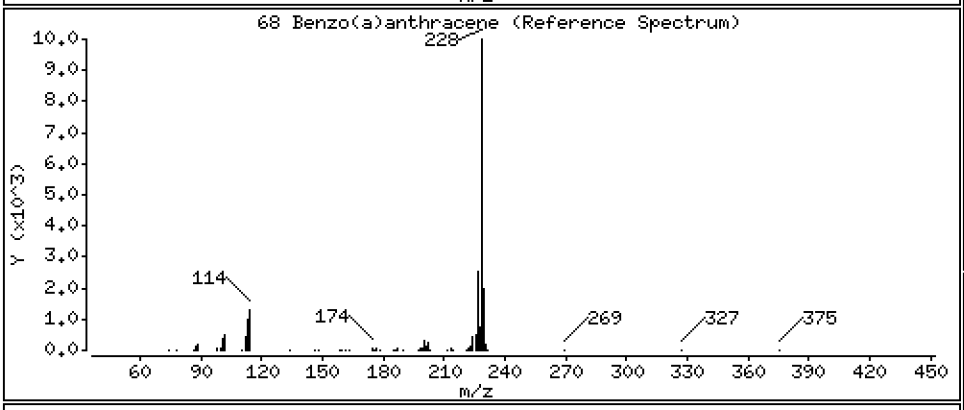
Column diameter: 0.25

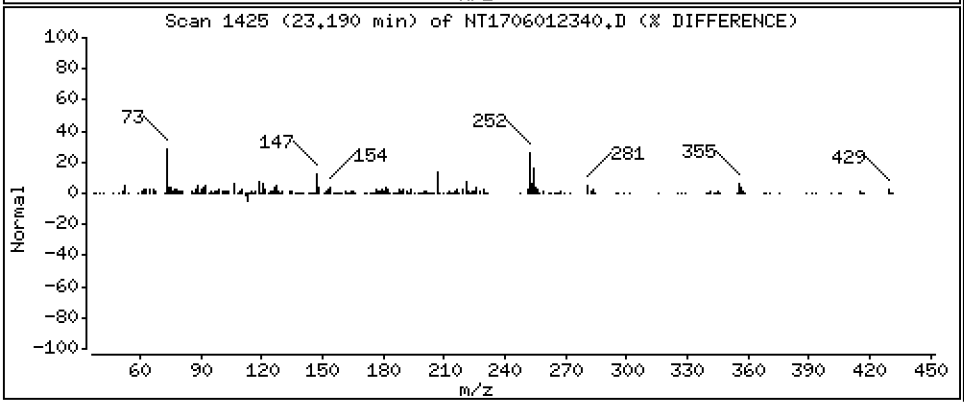
68 Benzo(a)anthracene

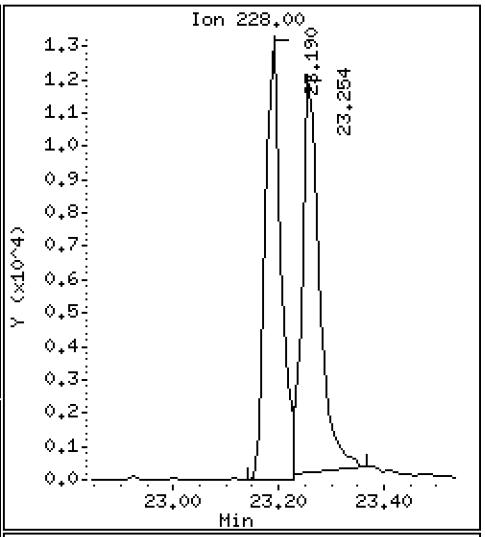
Concentration: 0.2023 ug/mL

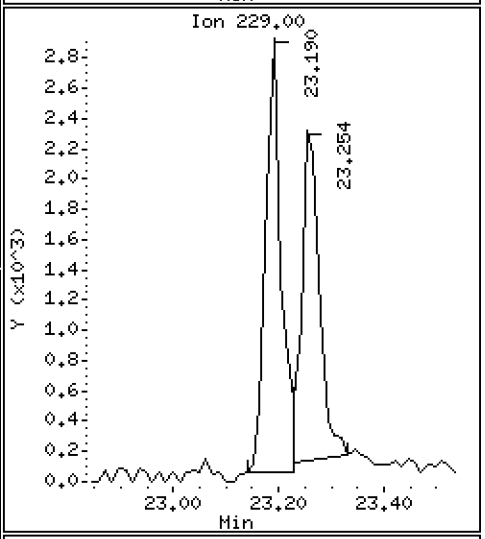


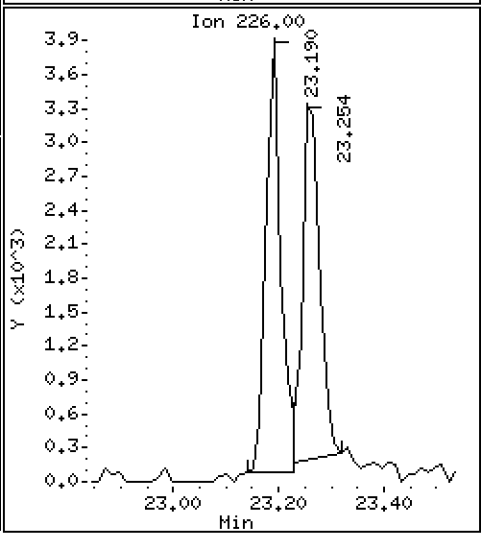












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

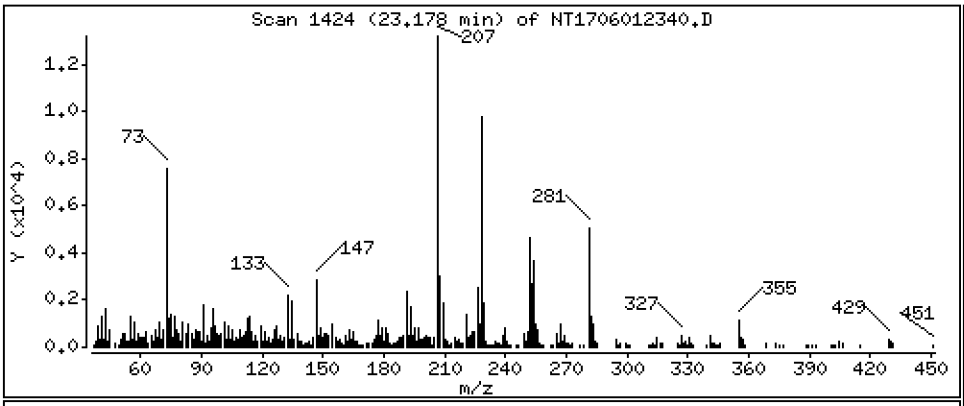
Operator: VTS

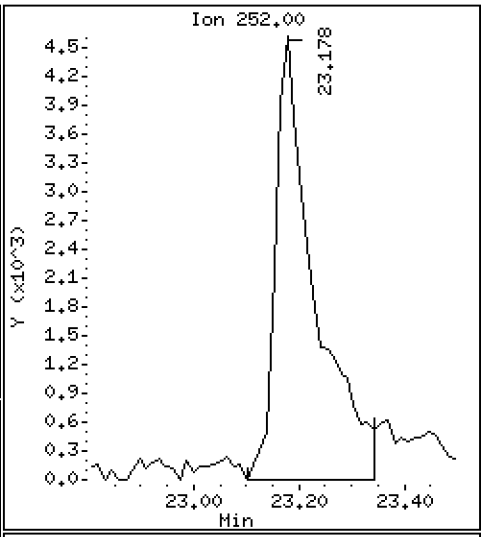
Column phase: ZB-5msi

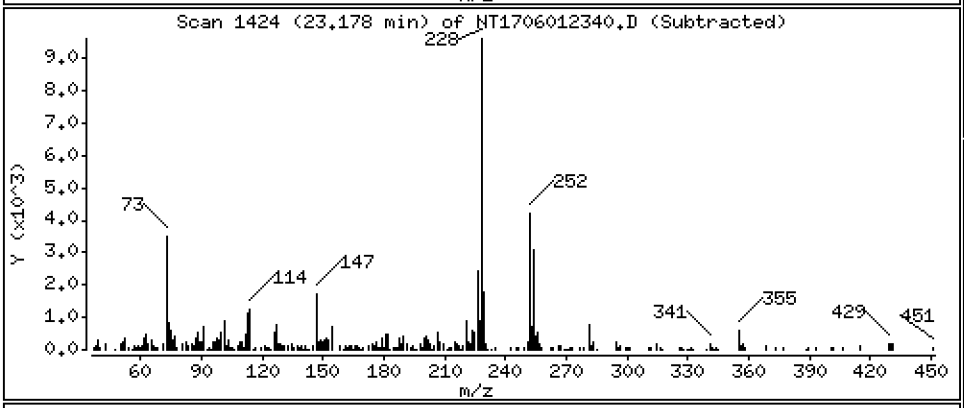
Column diameter: 0.25

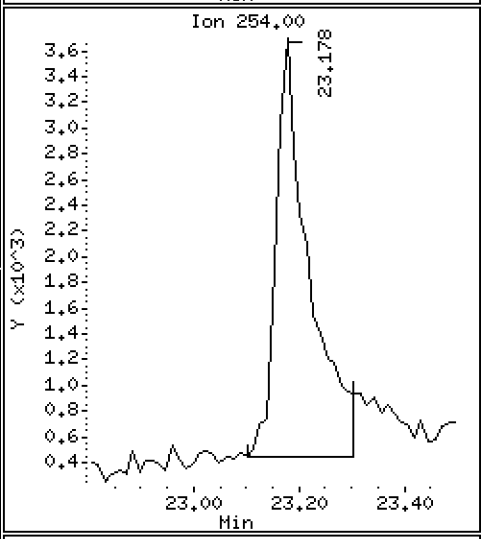
70 3,3'-Dichlorobenzidine

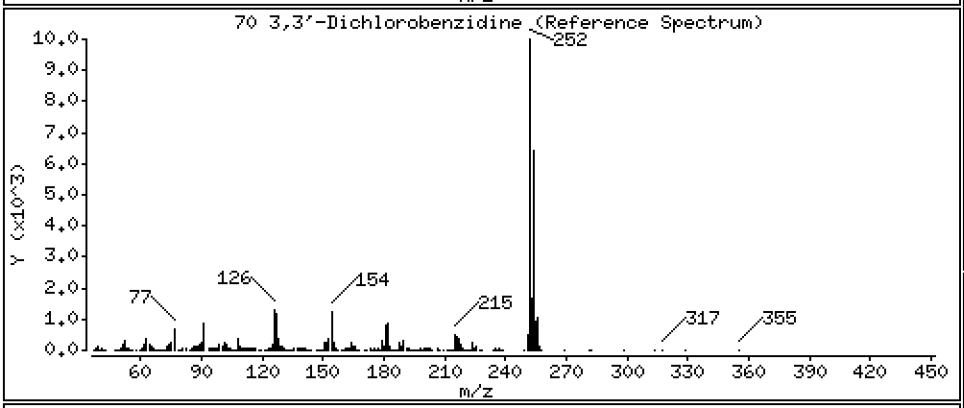
Concentration: 0.9204 ug/mL

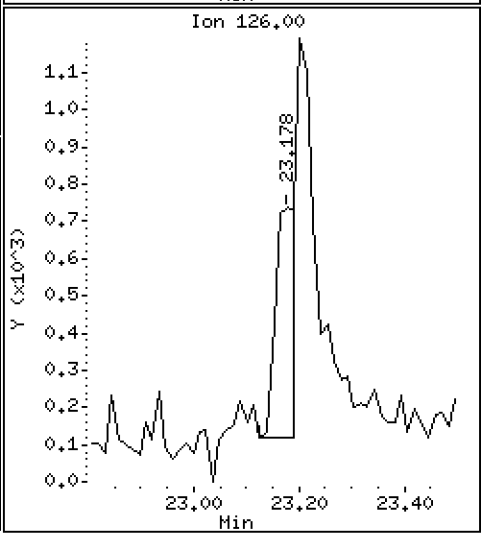


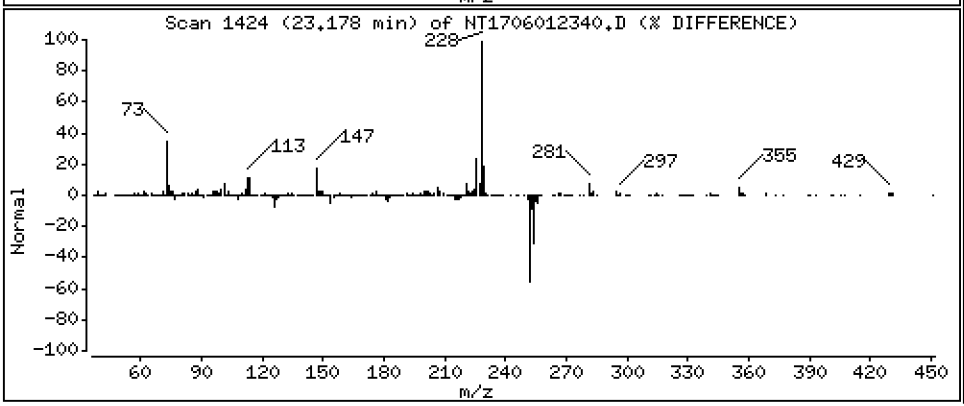












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

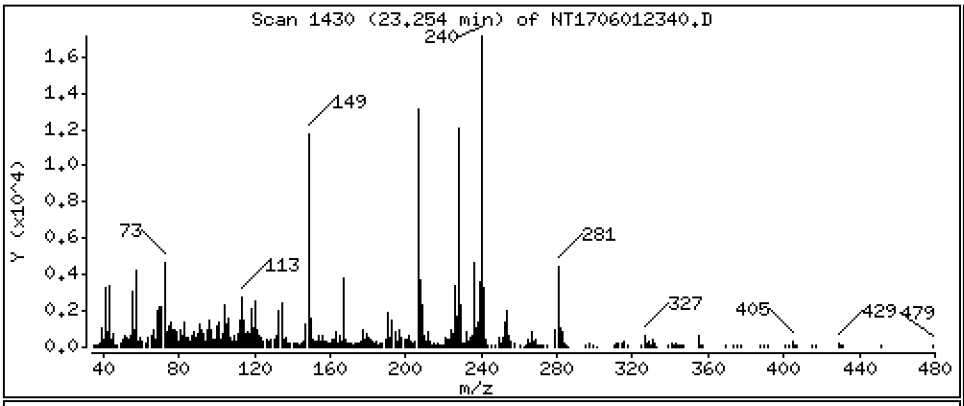
Operator: VTS

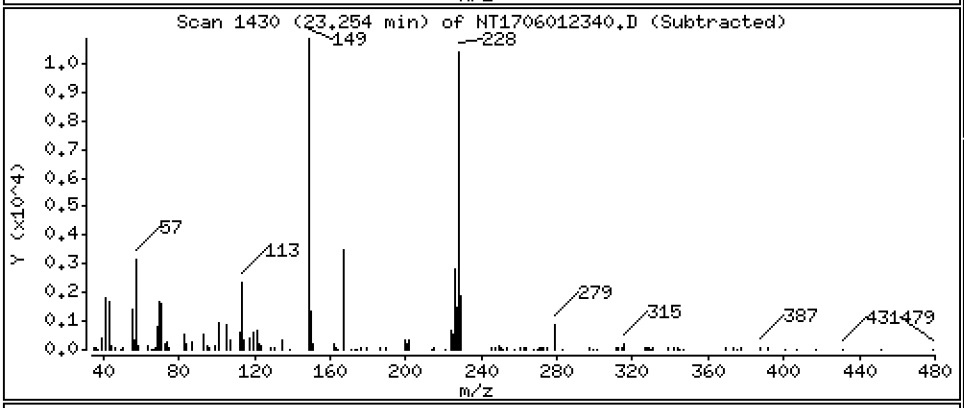
Column phase: ZB-5msi

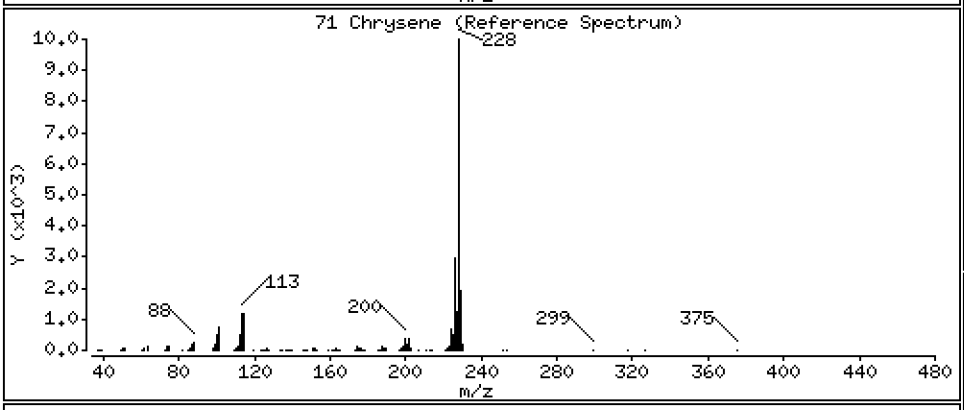
Column diameter: 0.25

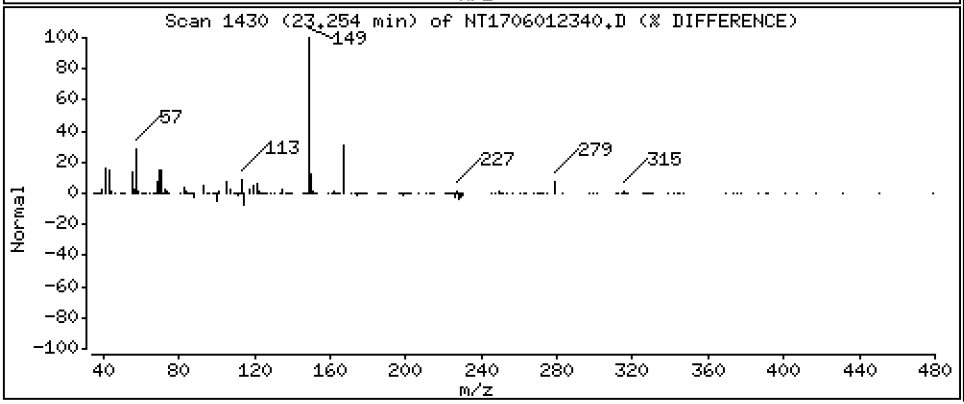
71 Chrysene

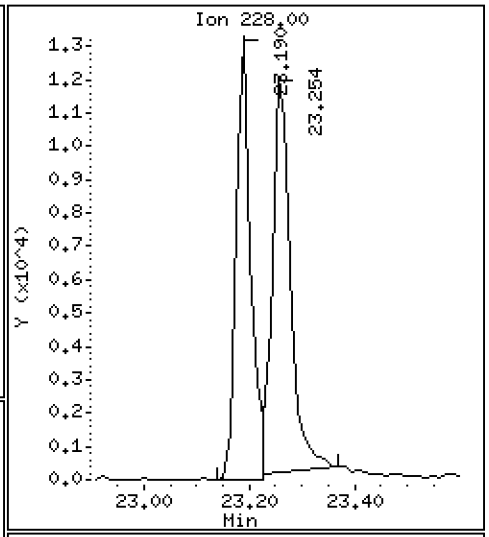
Concentration: 0.2238 ug/mL

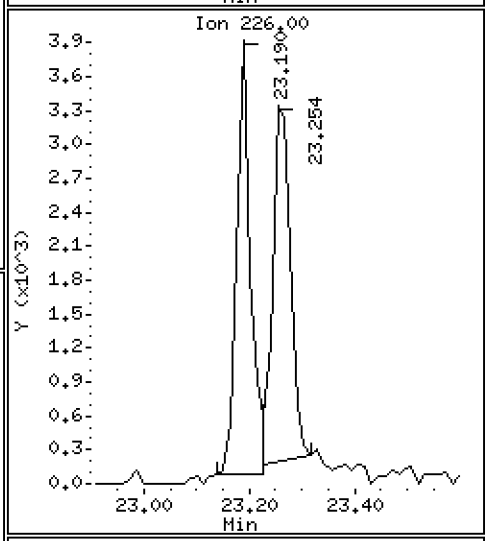


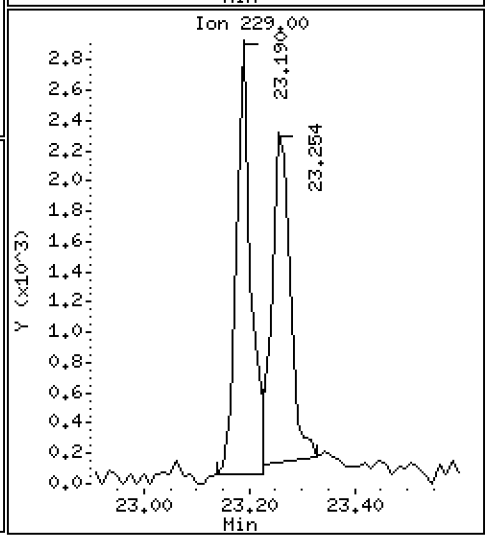












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

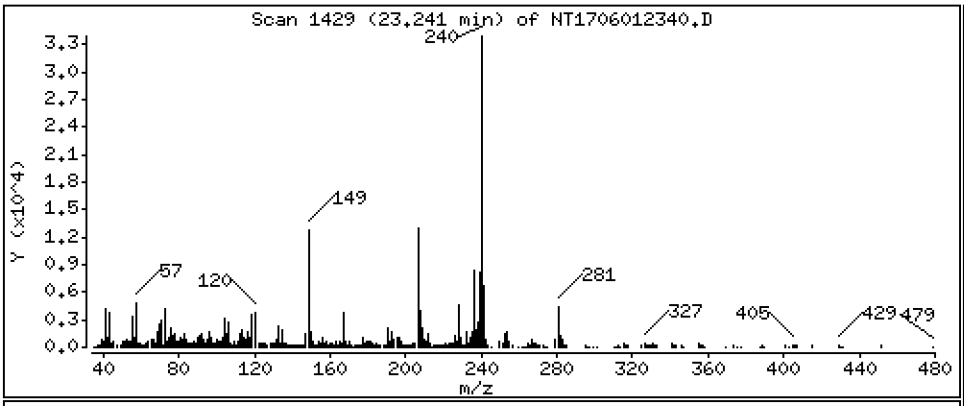
Operator: VTS

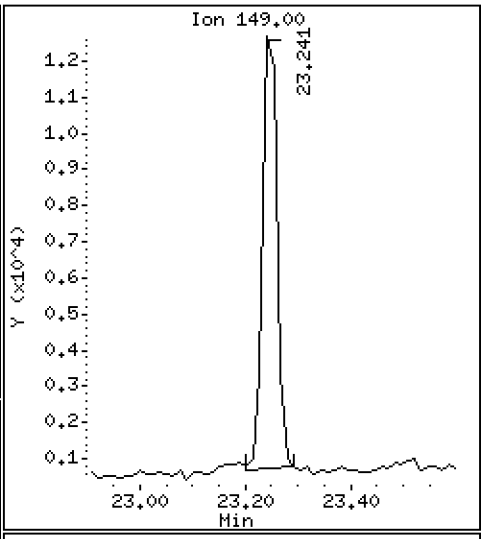
Column phase: ZB-5msi

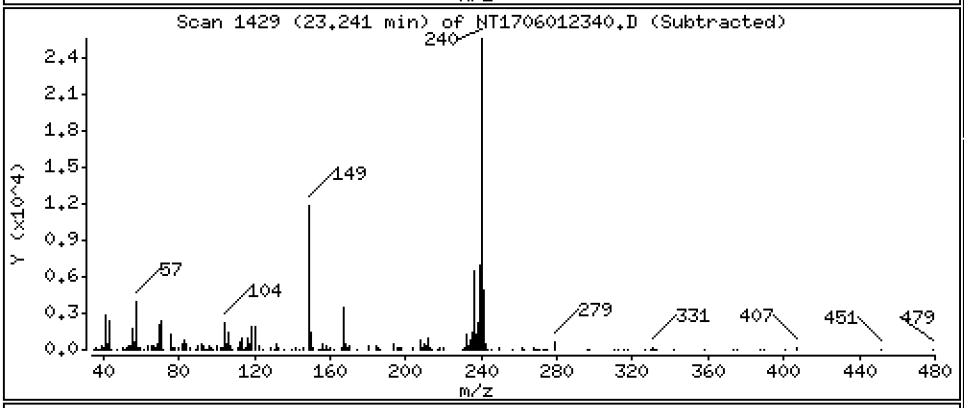
Column diameter: 0.25

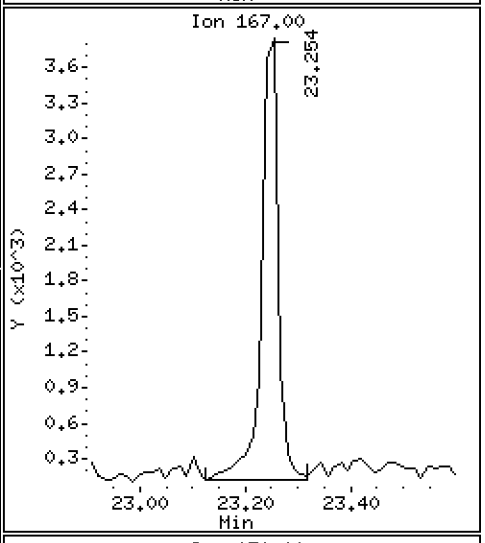
72 bis(2-Ethylhexyl)phthalate

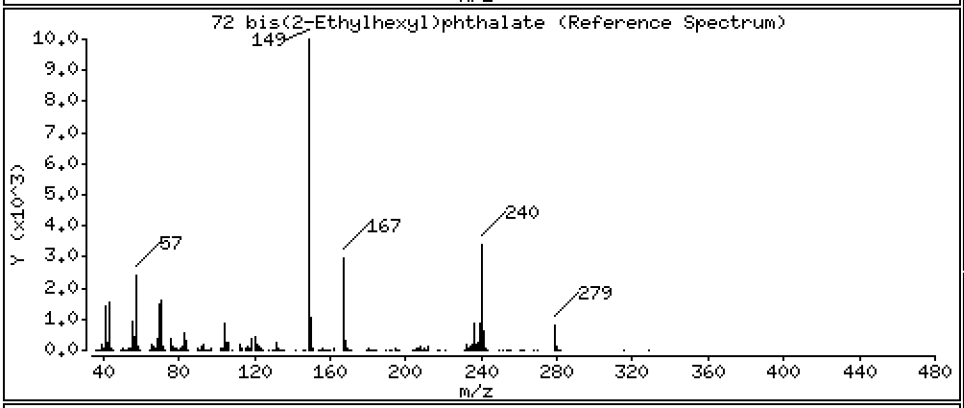
Concentration: 0.2325 ug/mL

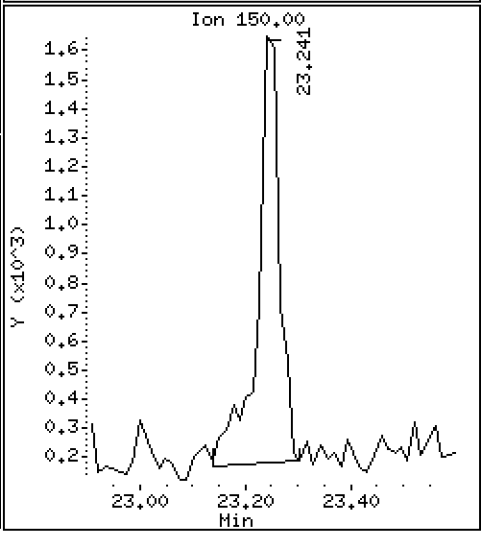


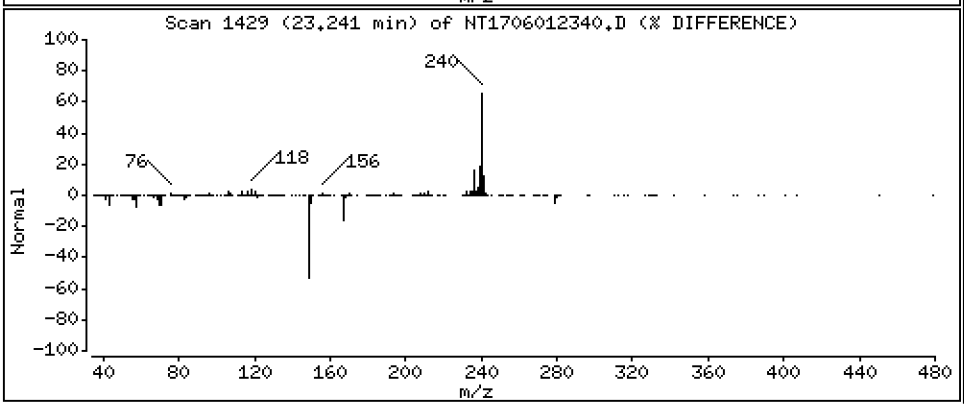












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

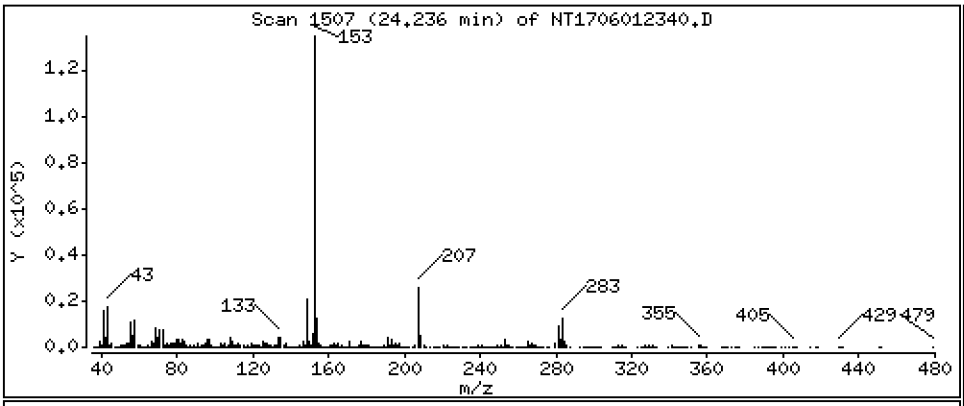
Operator: VTS

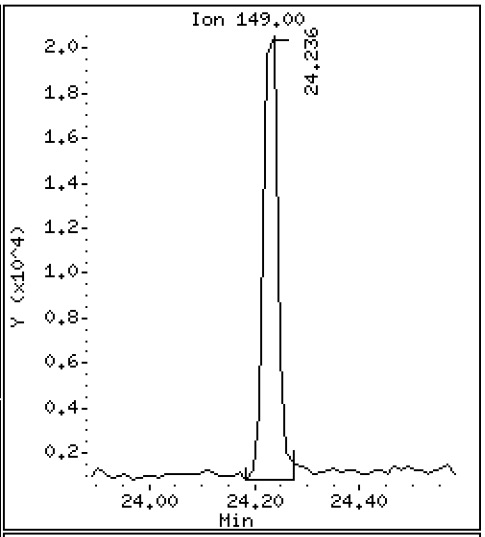
Column phase: ZB-5msi

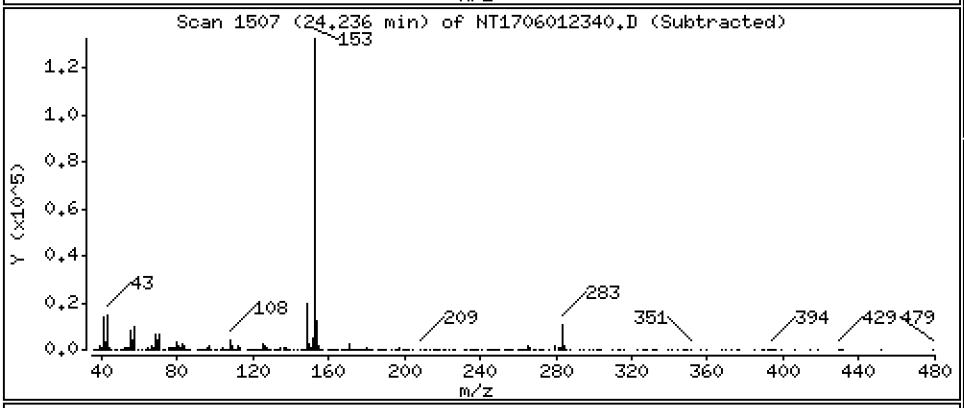
Column diameter: 0.25

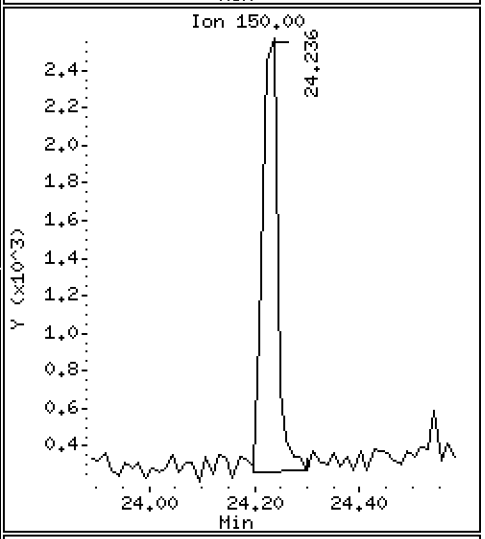
73 Di-n-octylphthalate

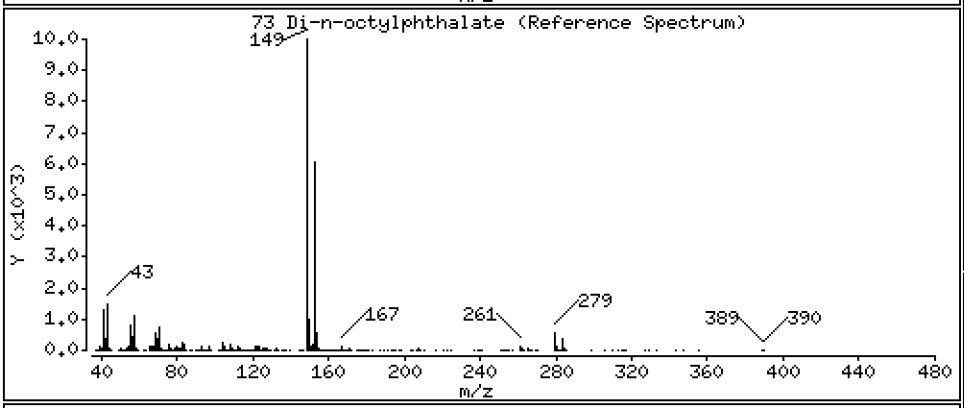
Concentration: 0.2271 ug/mL

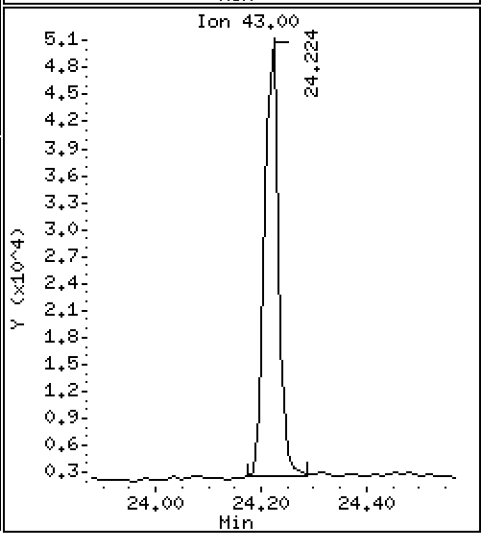


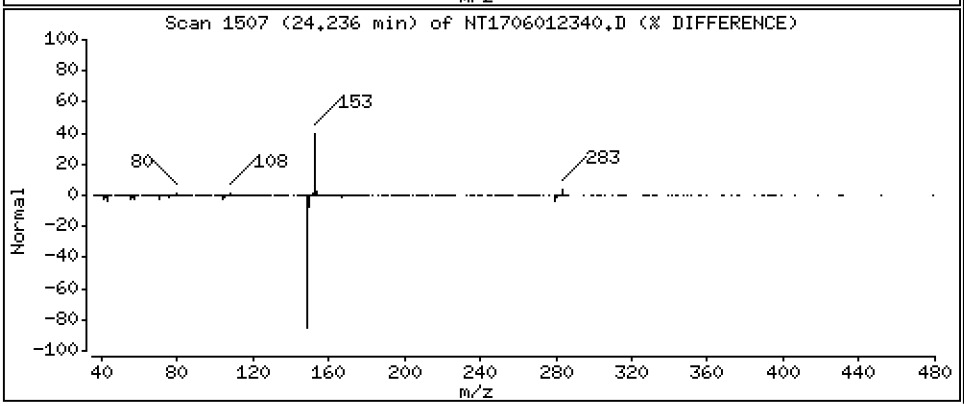












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

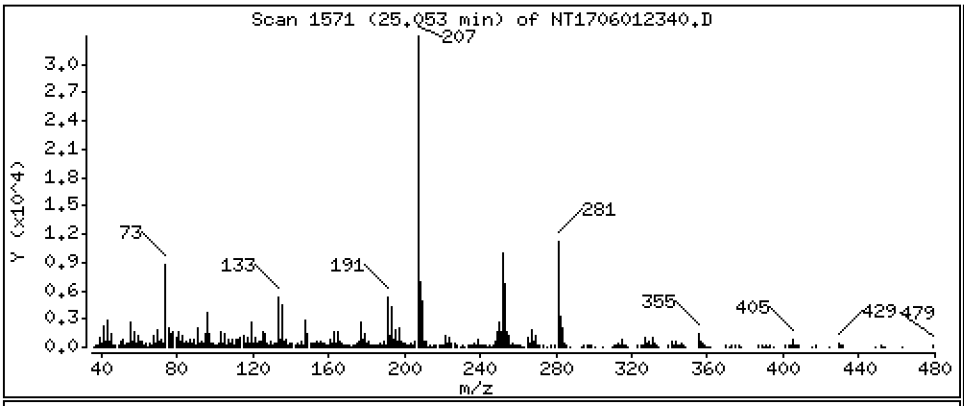
Operator: VTS

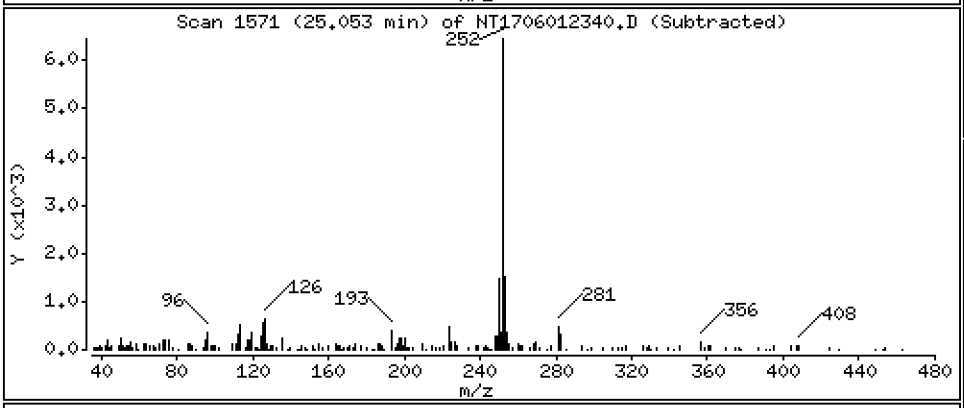
Column phase: ZB-5msi

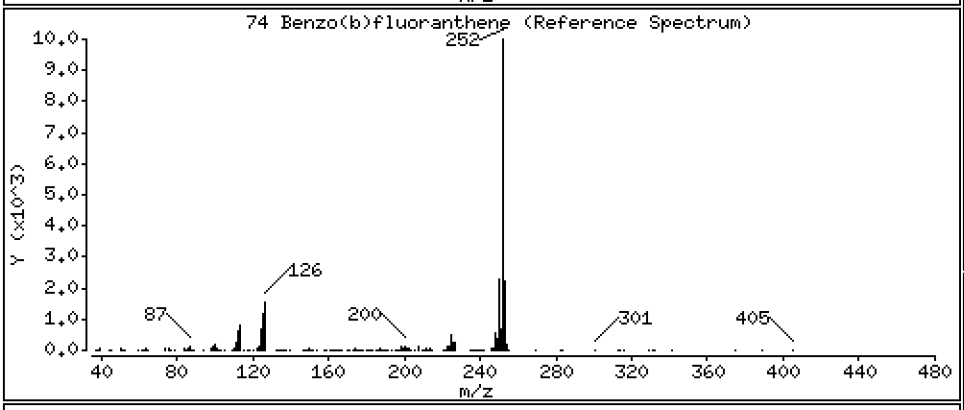
Column diameter: 0.25

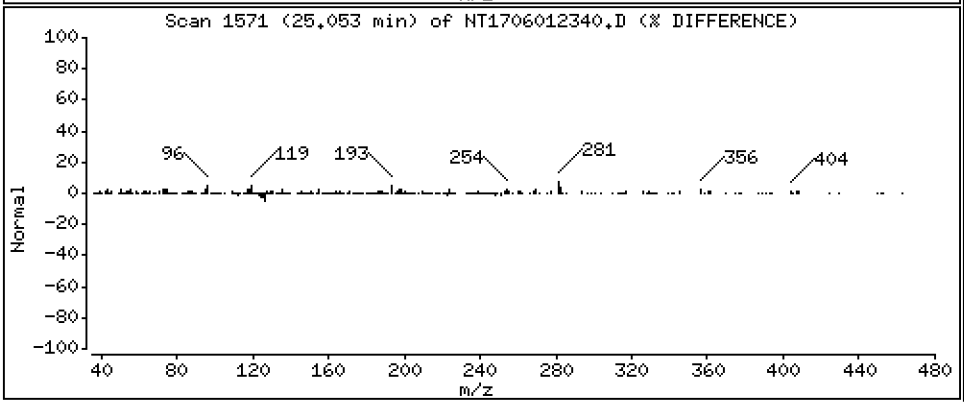
74 Benzo(b)fluoranthene

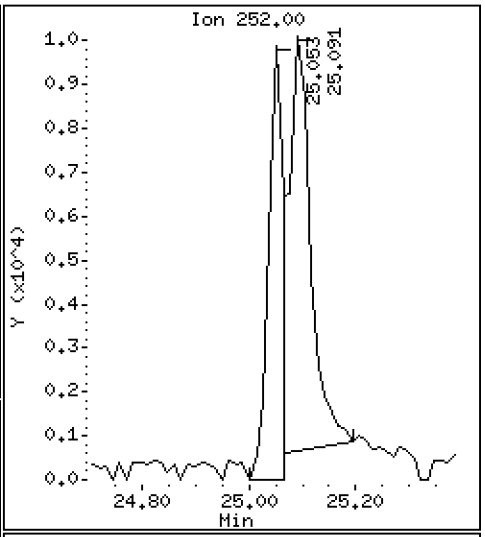
Concentration: 0.1531 ug/mL

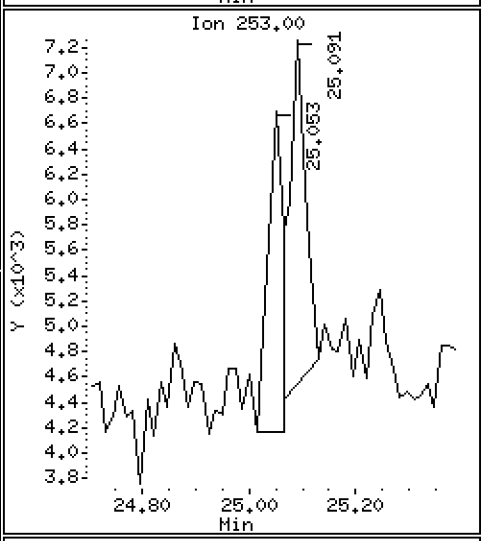


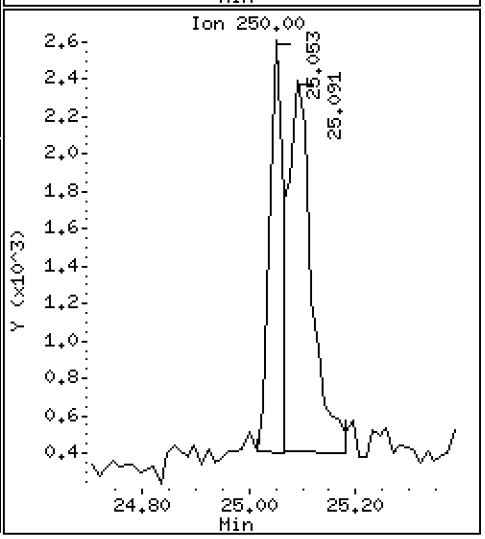












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

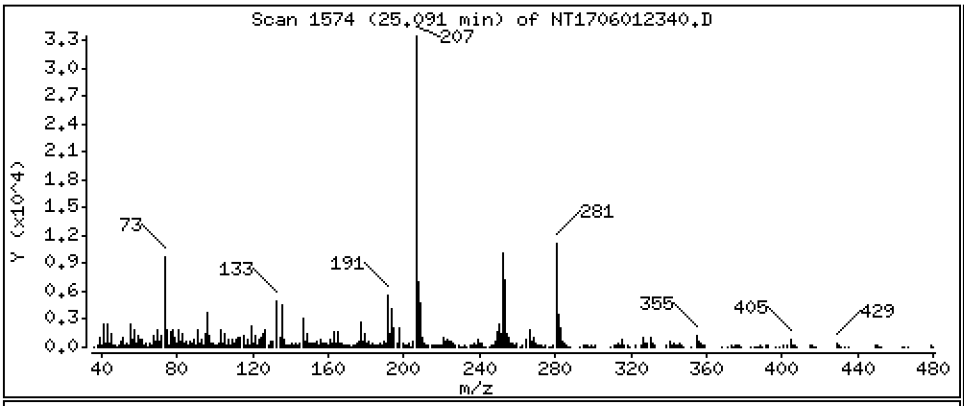
Operator: VTS

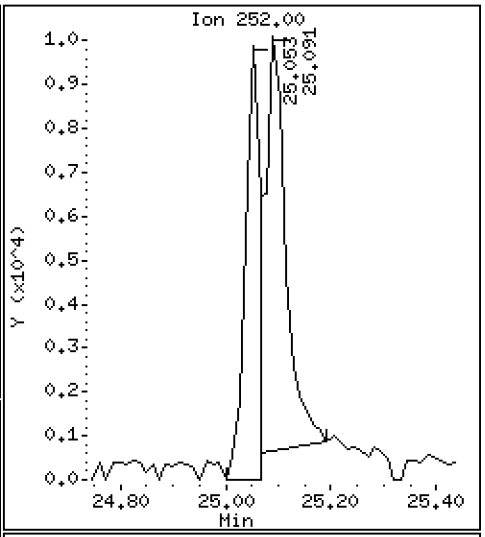
Column phase: ZB-5msi

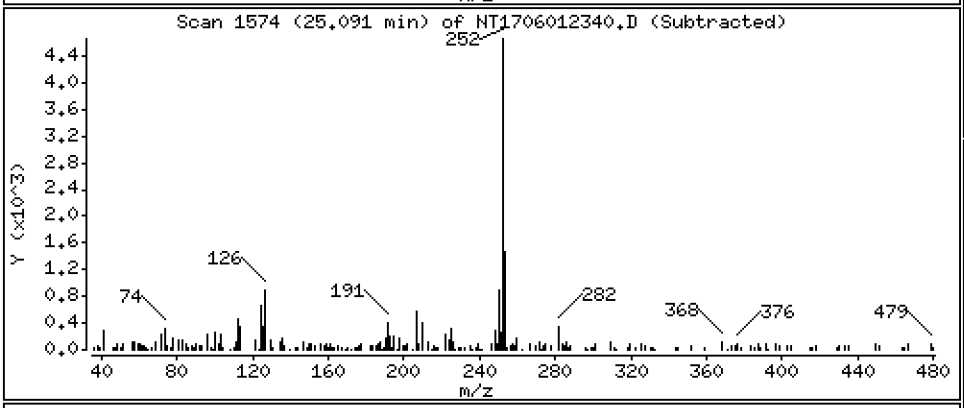
Column diameter: 0.25

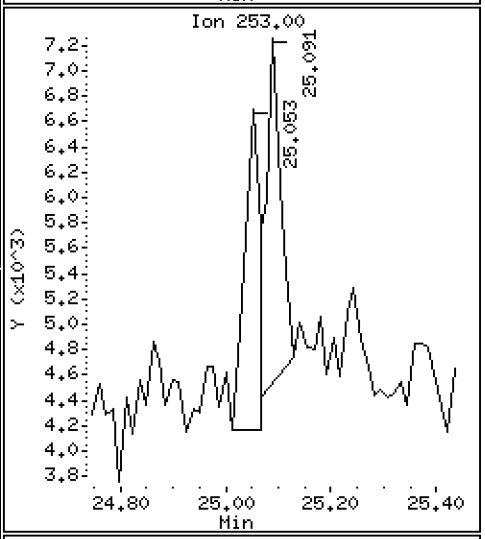
75 Benzo(k)fluoranthene

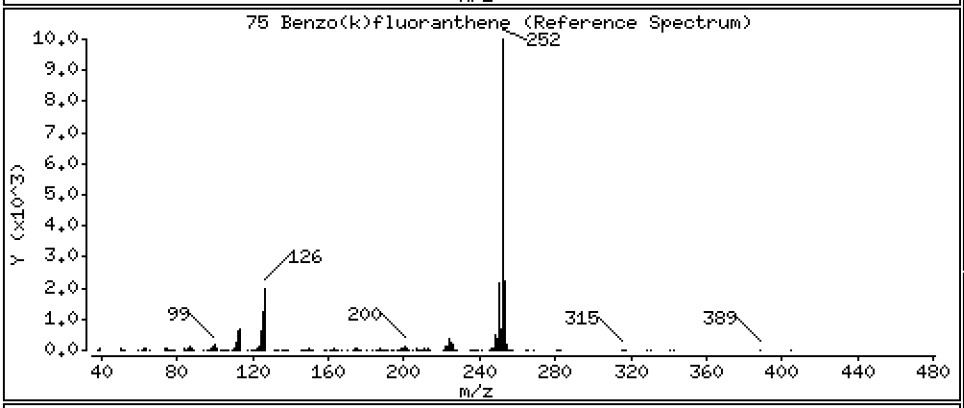
Concentration: 0.2379 ug/mL

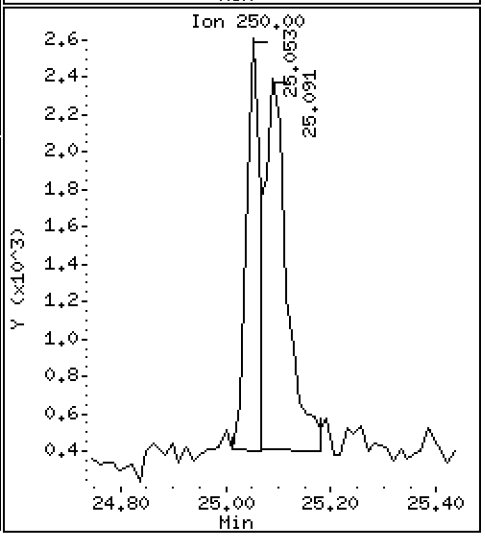


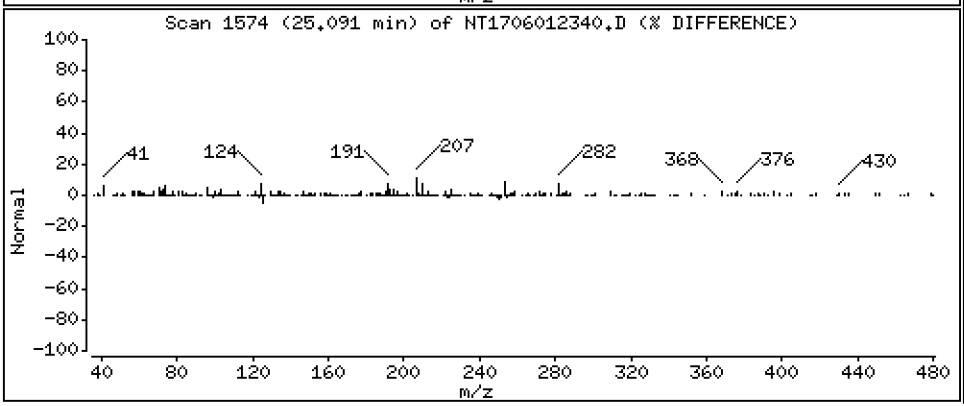












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

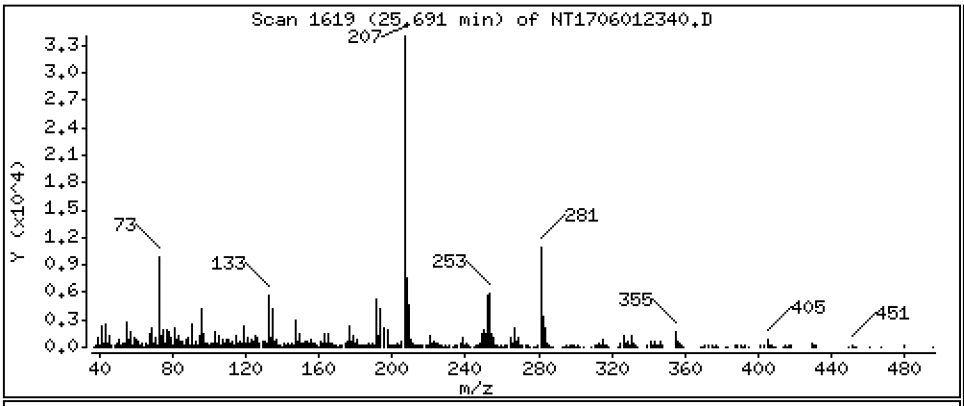
Operator: VTS

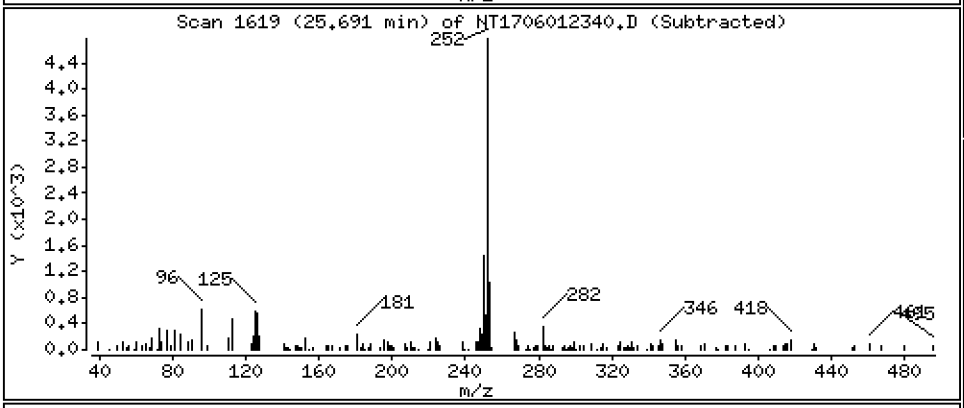
Column phase: ZB-5msi

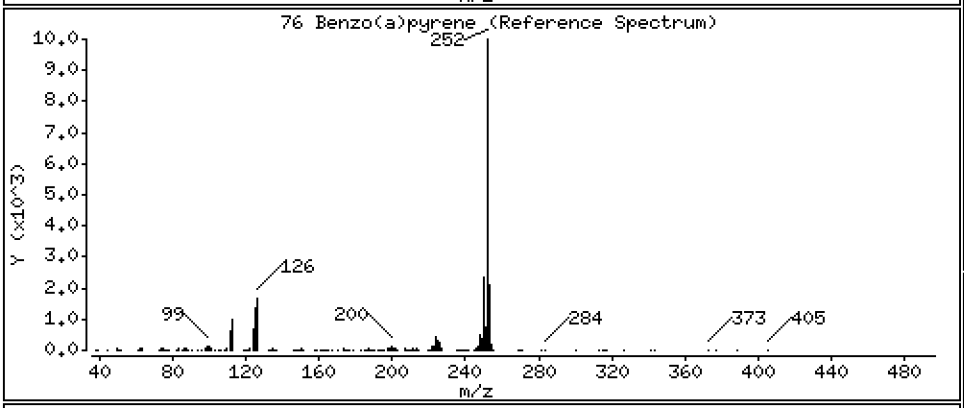
Column diameter: 0.25

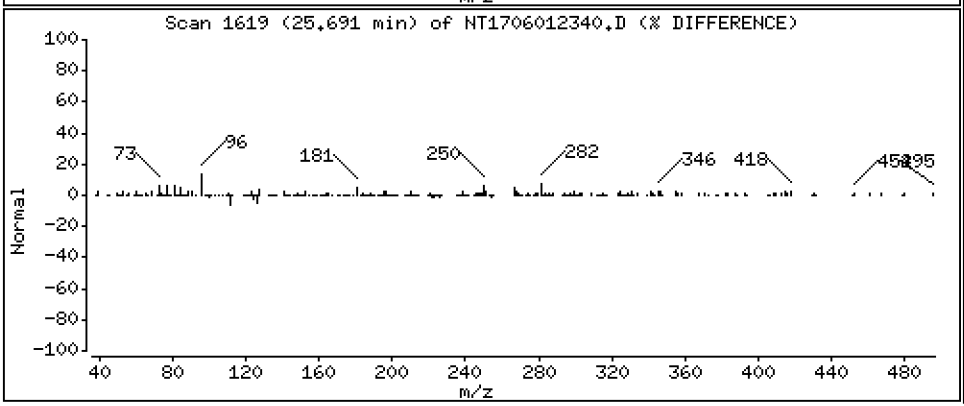
76 Benzo(a)pyrene

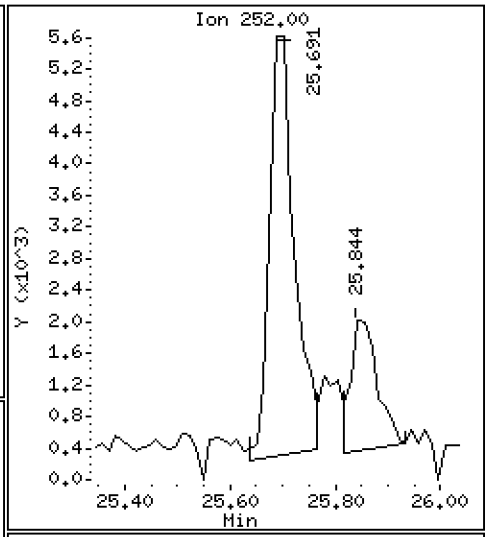
Concentration: 0.1776 ug/mL

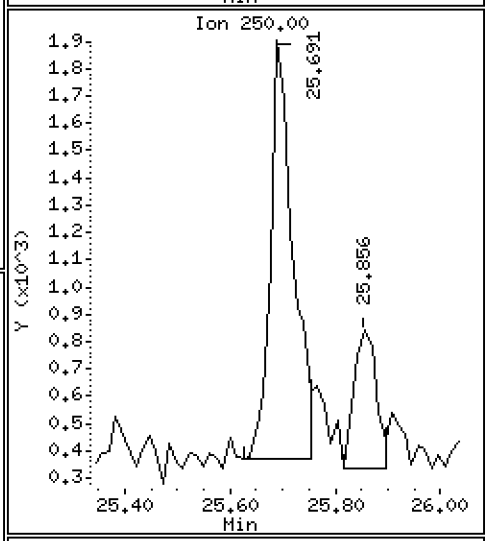


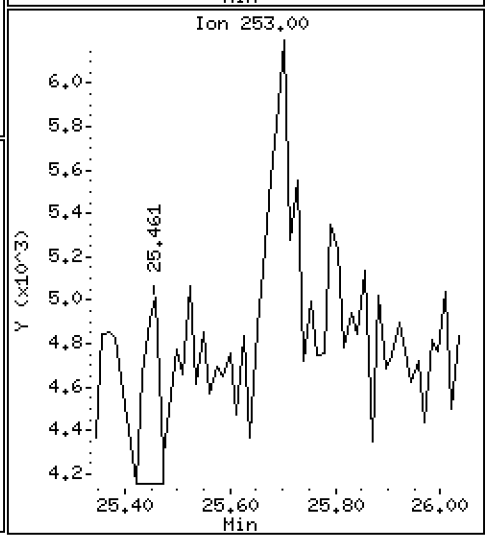












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

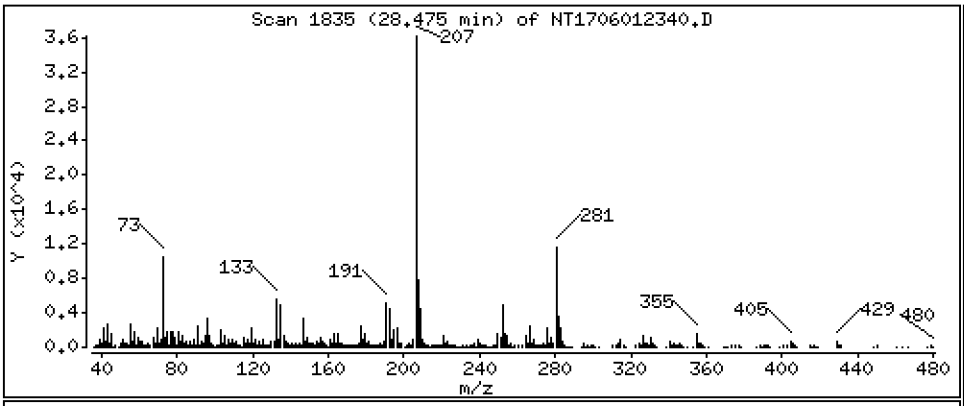
Operator: VTS

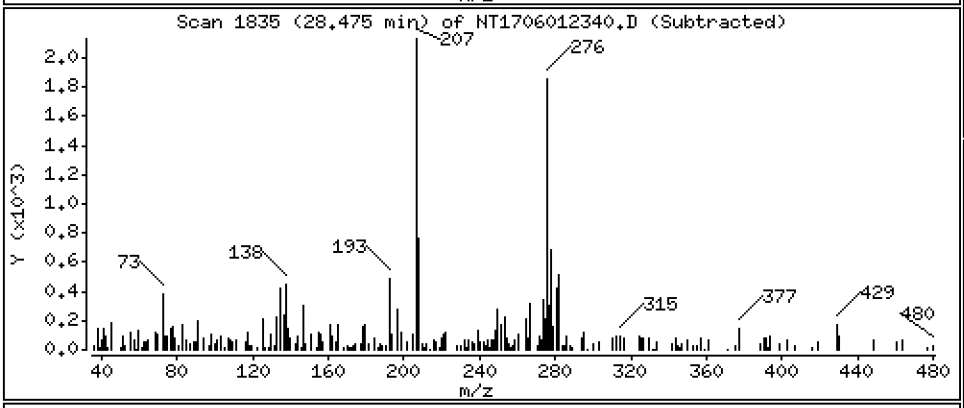
Column phase: ZB-5msi

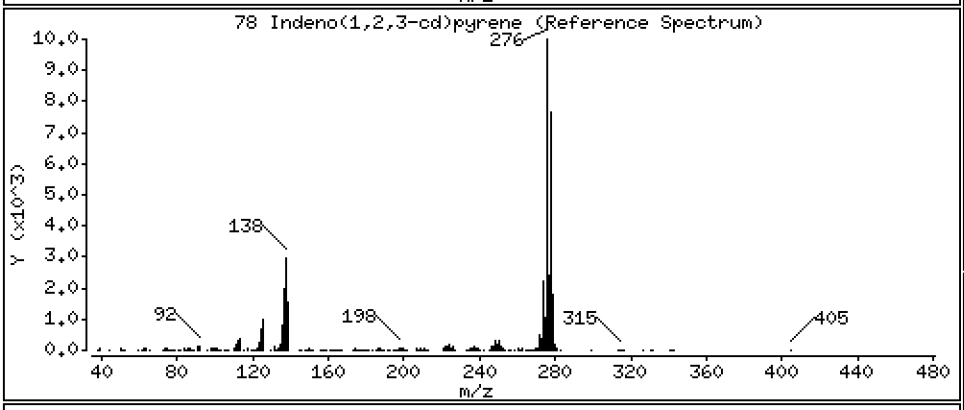
Column diameter: 0.25

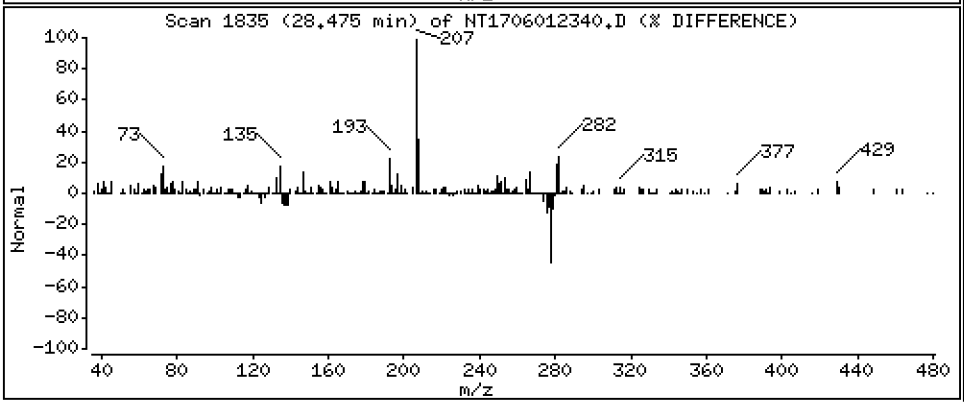
78 Indeno(1,2,3-cd)pyrene

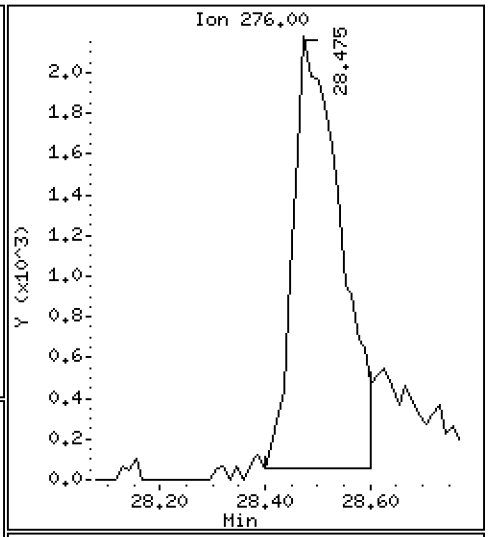
Concentration: 0.1139 ug/mL

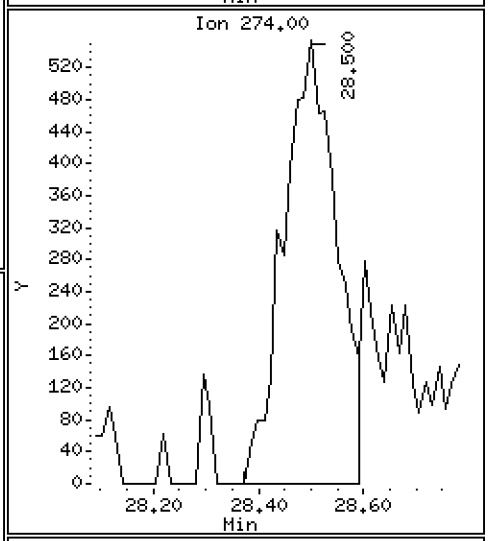


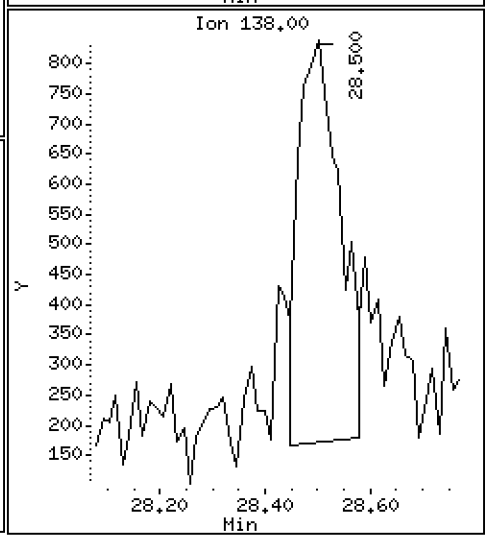












Date : 02-JUN-2023 12:16

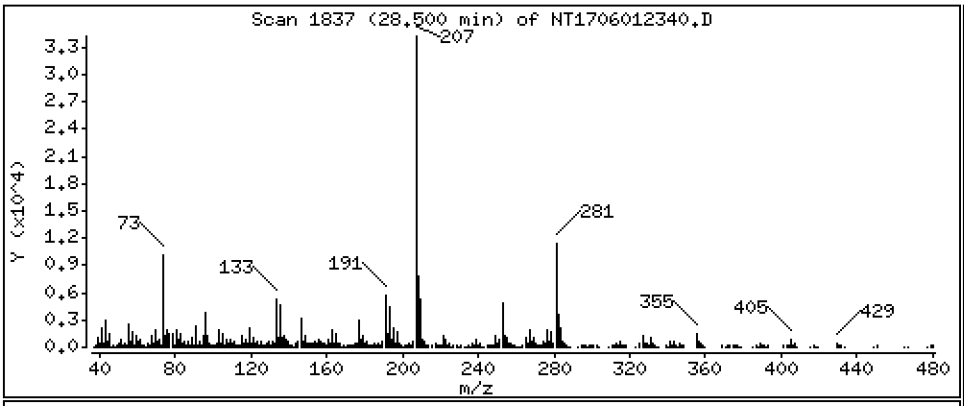
Client ID: Instrument: nt17.i

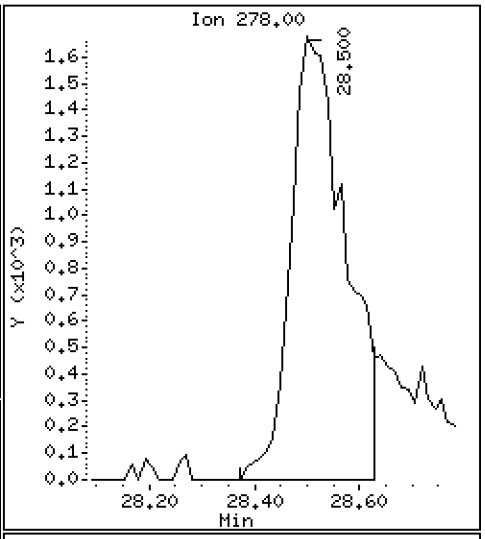
Sample Info: SLE0008-LCV3

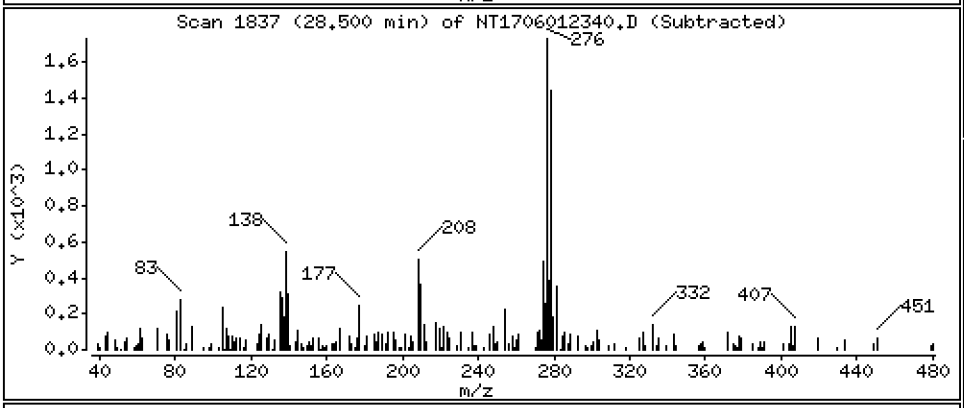
Operator: VTS

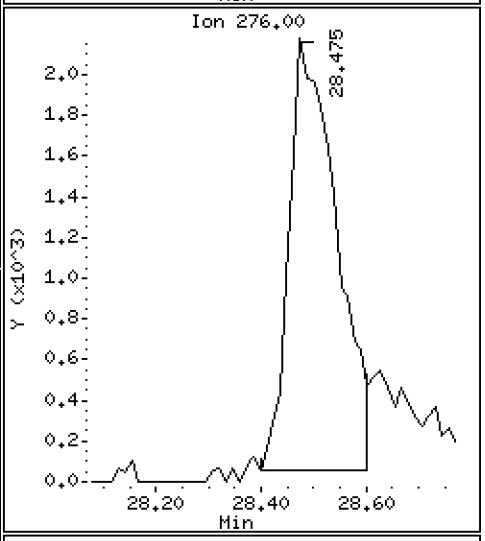
Column phase: ZB-5msi Column diameter: 0.25

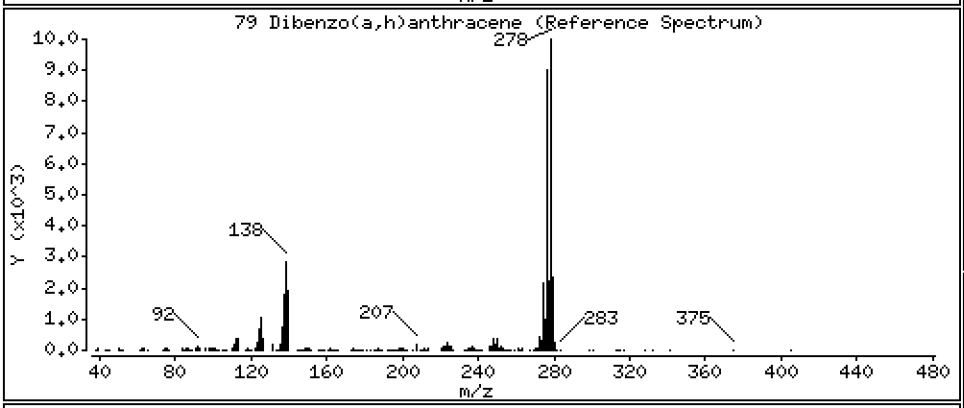
79 Dibenzo(a,h)anthracene Concentration: 0.1239 ug/mL

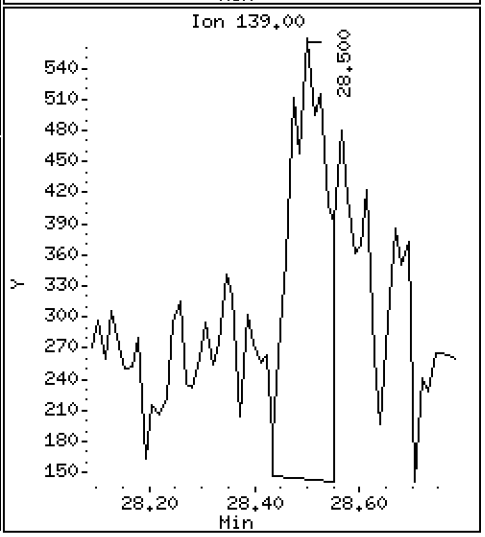


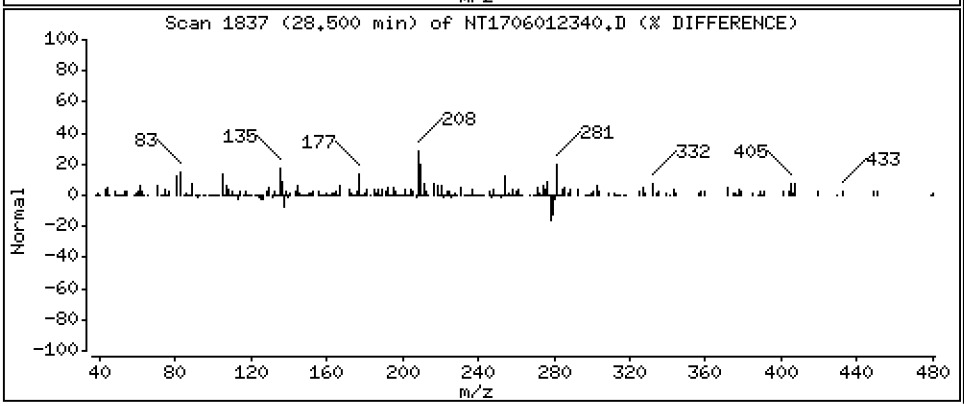












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

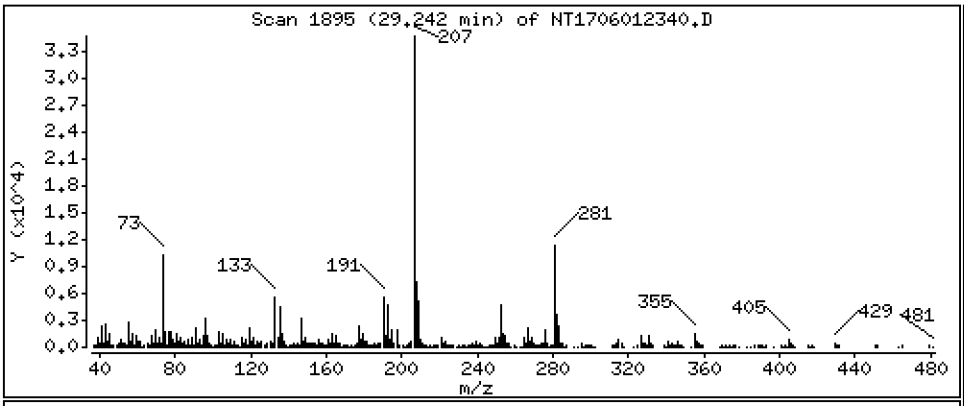
Operator: VTS

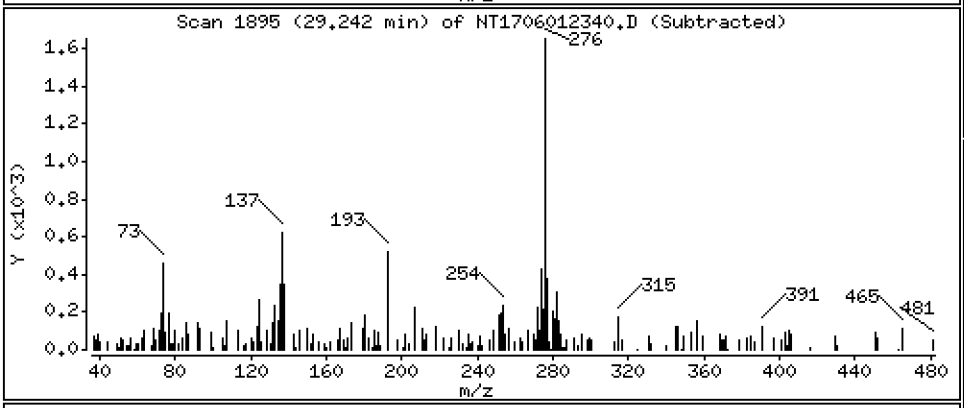
Column phase: ZB-5msi

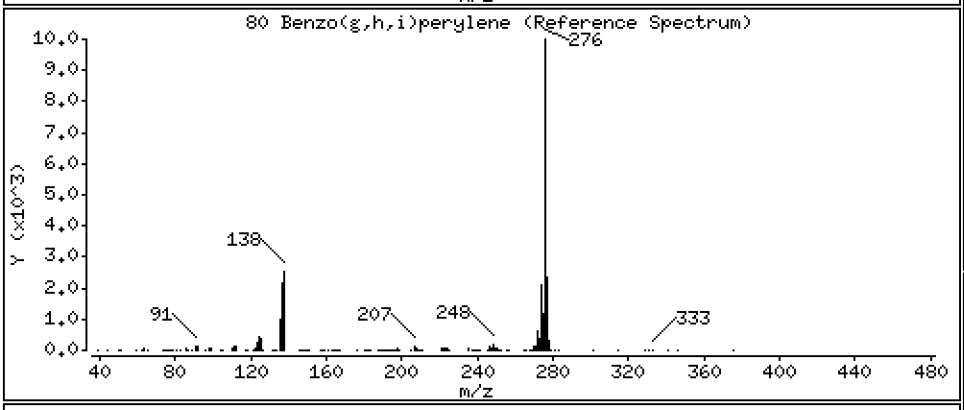
Column diameter: 0.25

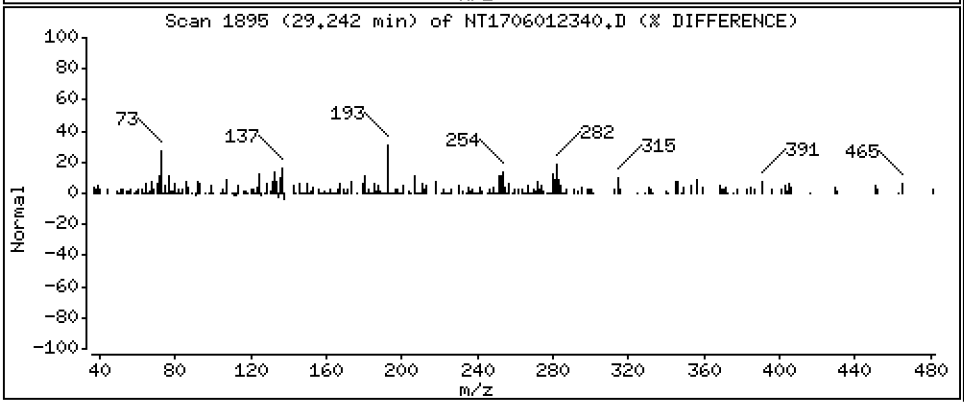
80 Benzo(g,h,i)perylene

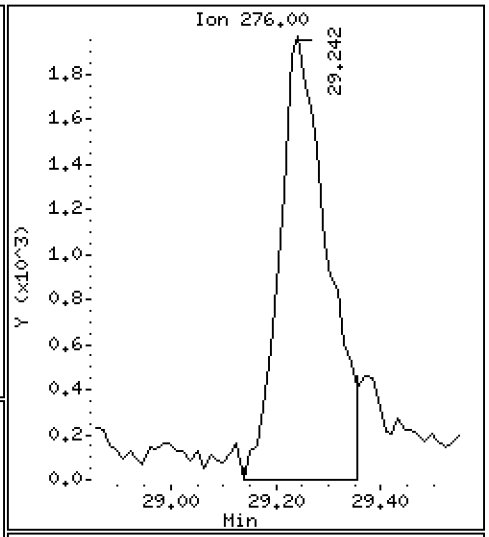
Concentration: 0.1316 ug/mL

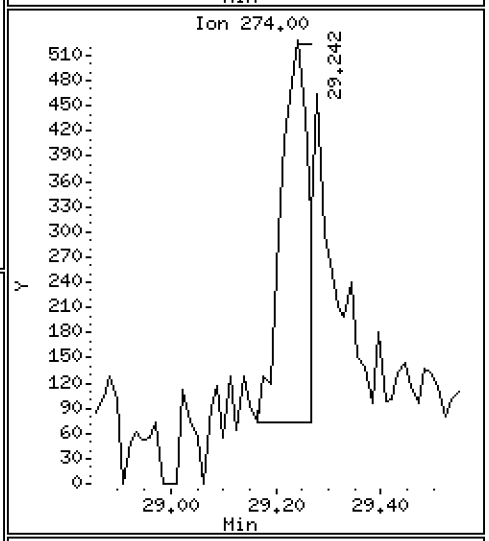


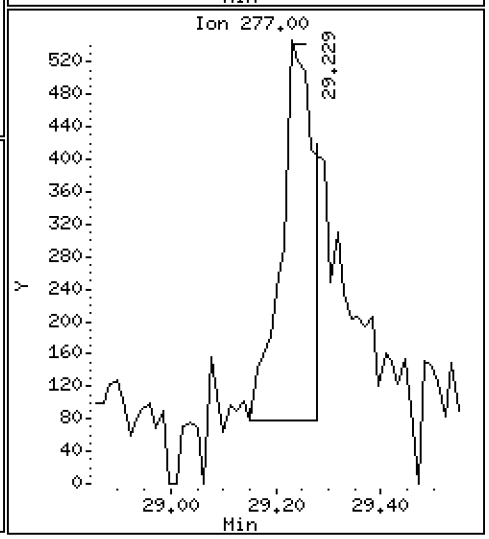












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

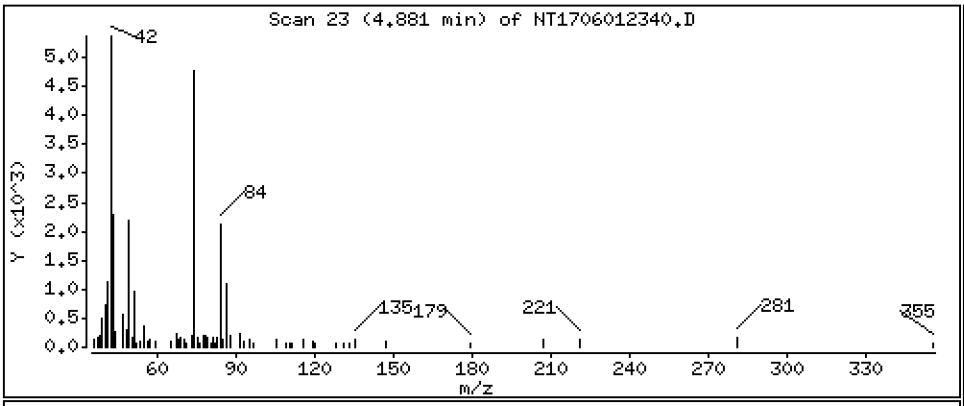
Operator: VTS

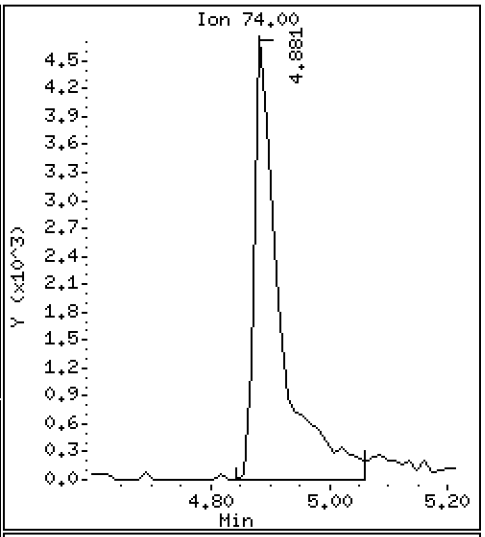
Column phase: ZB-5msi

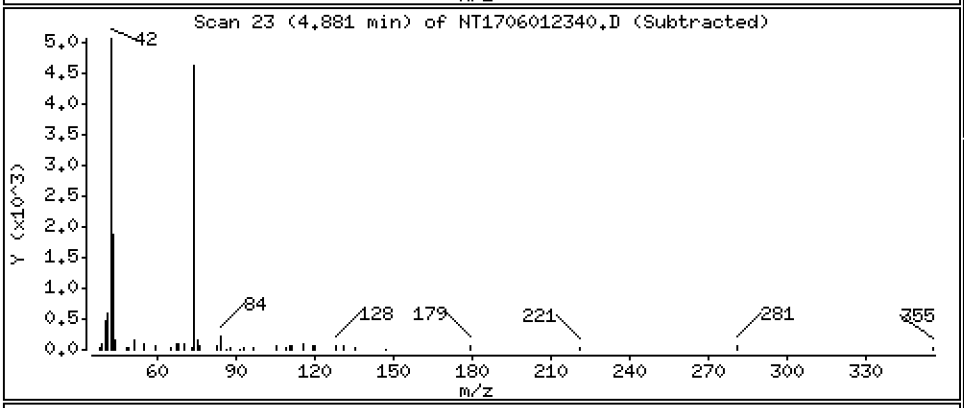
Column diameter: 0.25

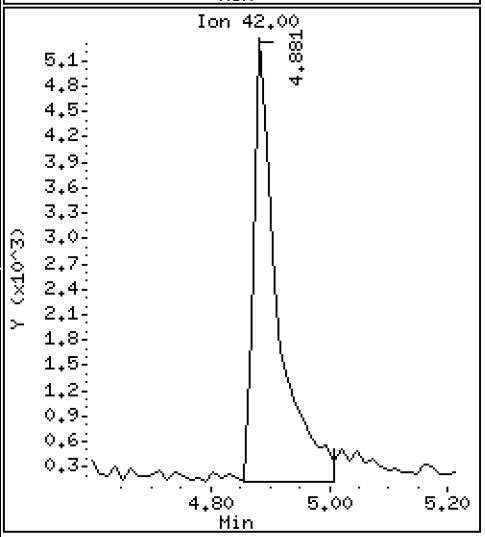
90 N-Nitrosodimethylamine

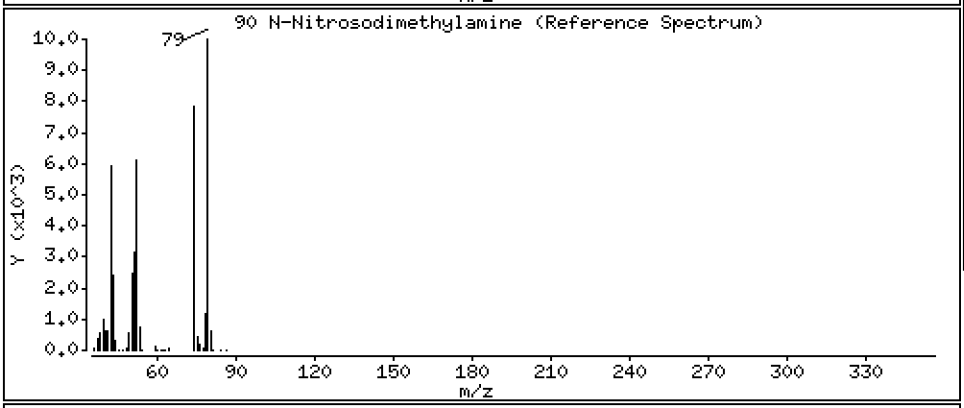
Concentration: 0.3335 ug/mL

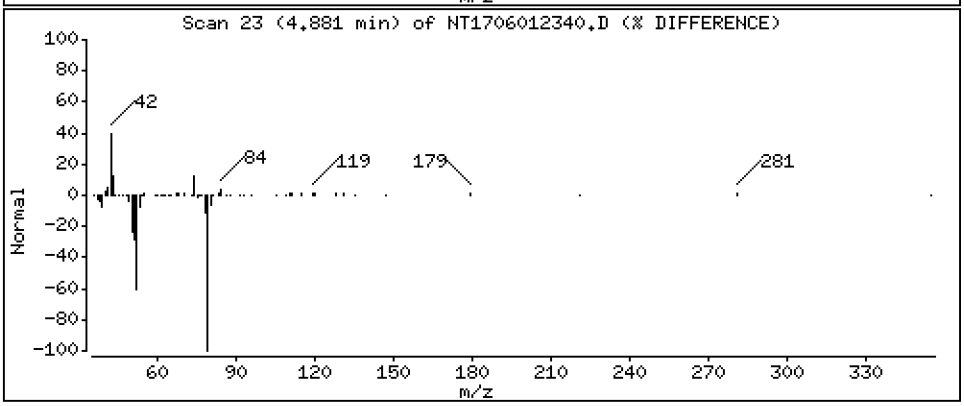












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

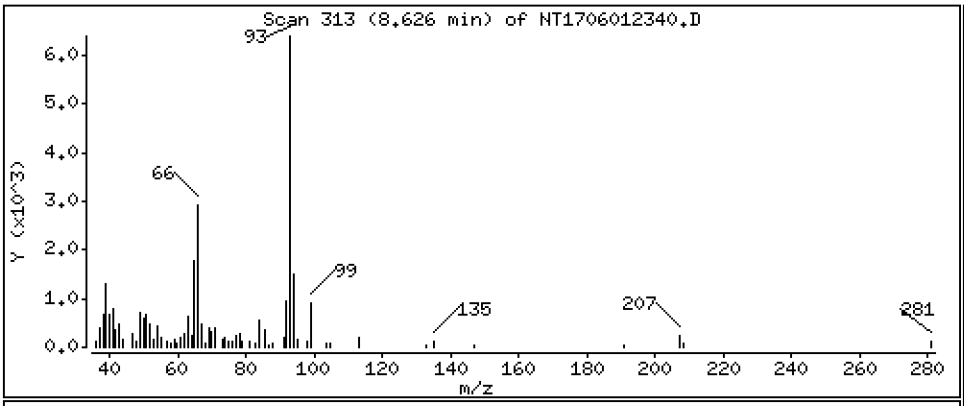
Operator: VTS

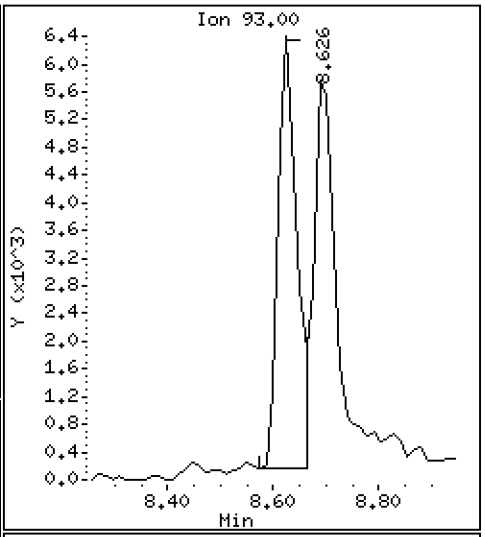
Column phase: ZB-5msi

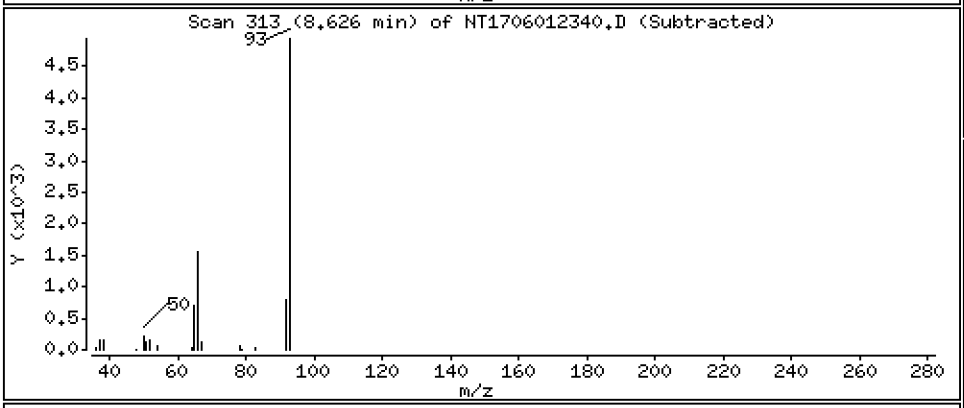
Column diameter: 0.25

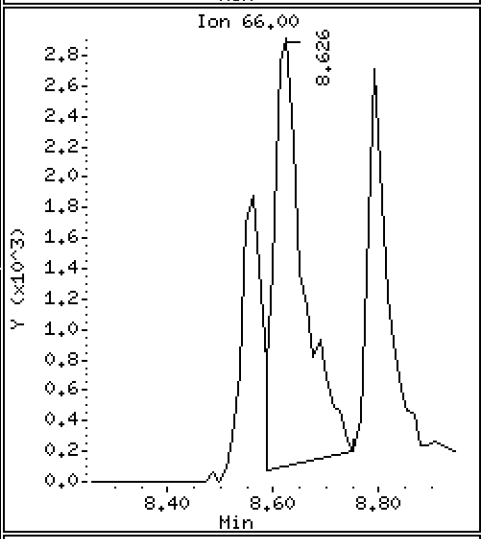
91 Aniline

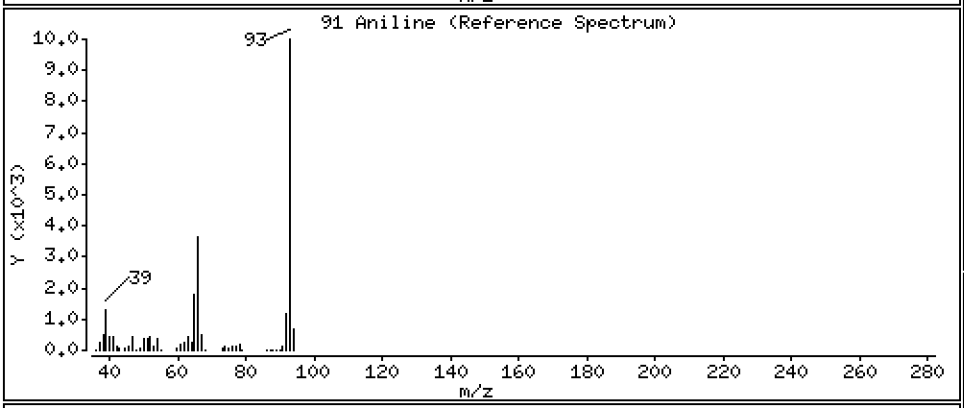
Concentration: 0.2030 ug/mL

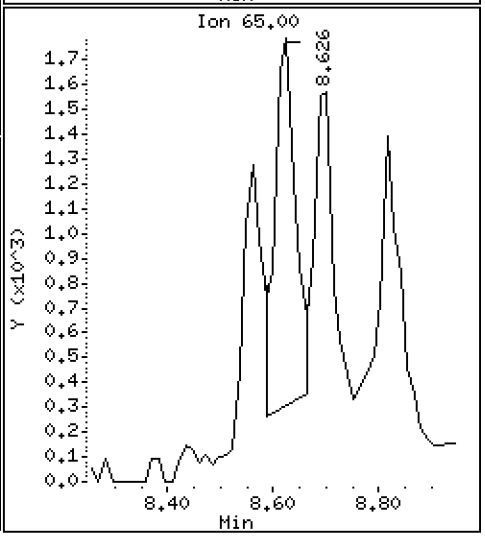


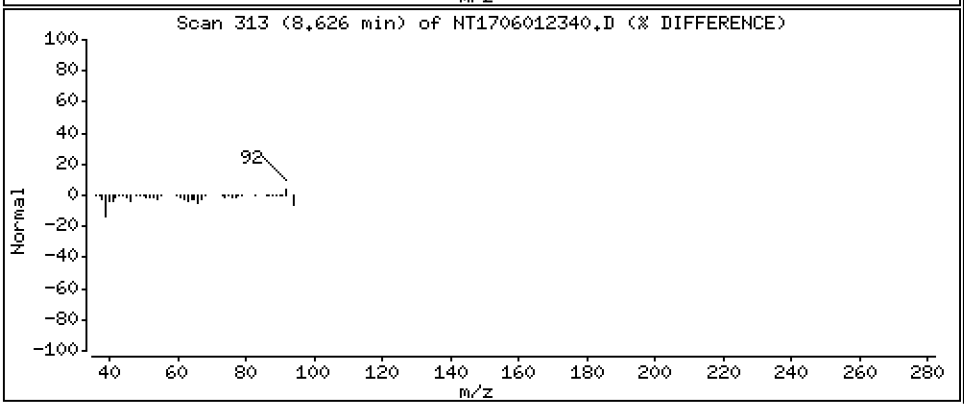












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

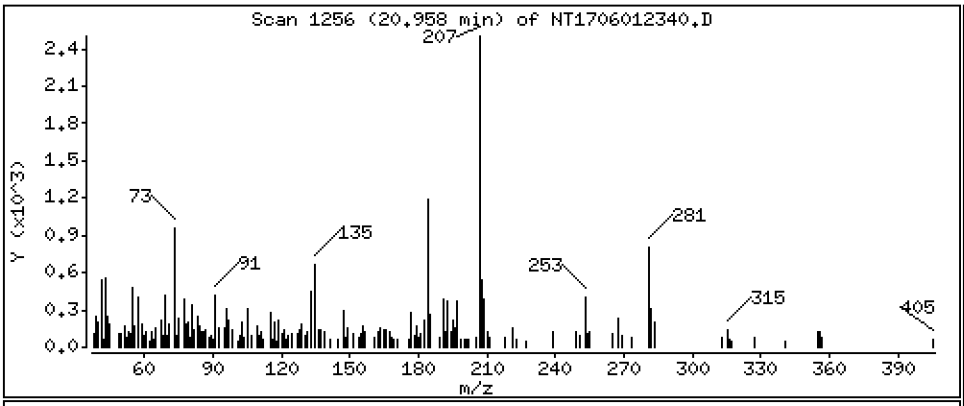
Operator: VTS

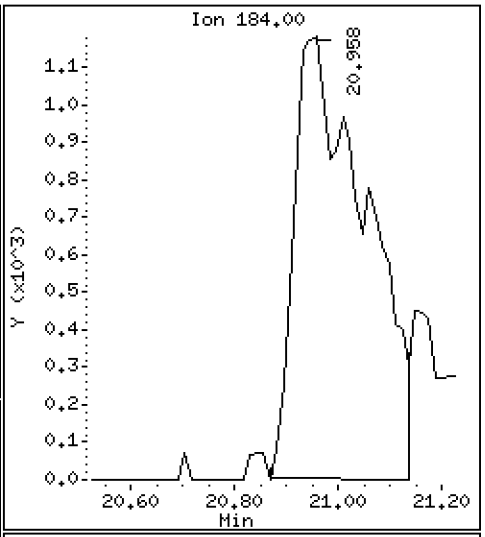
Column phase: ZB-5msi

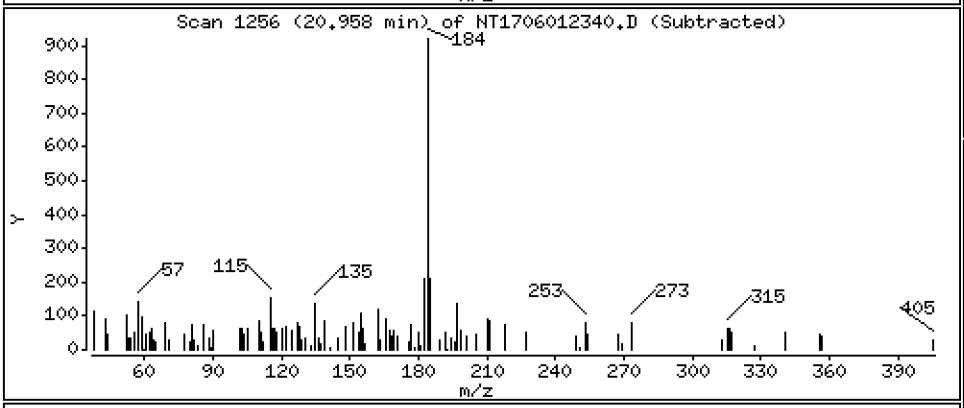
Column diameter: 0.25

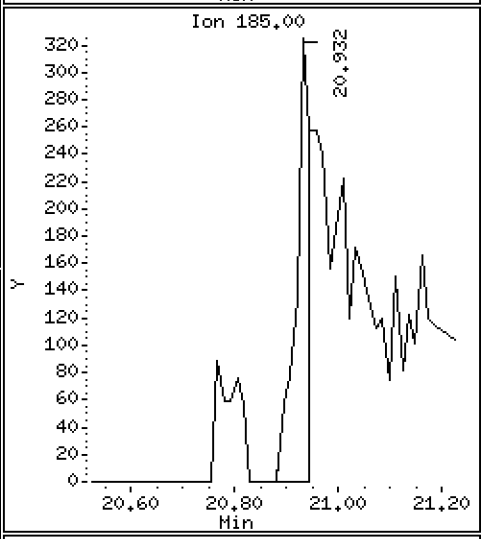
93 Benzidine

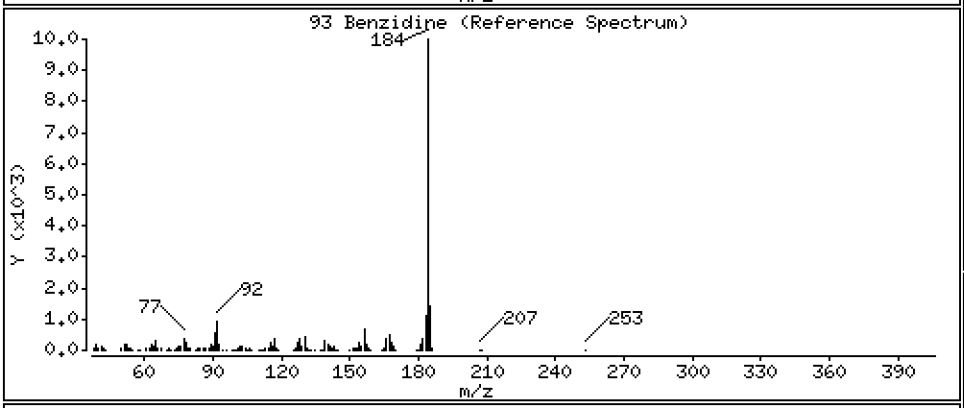
Concentration: 0.2683 ug/mL

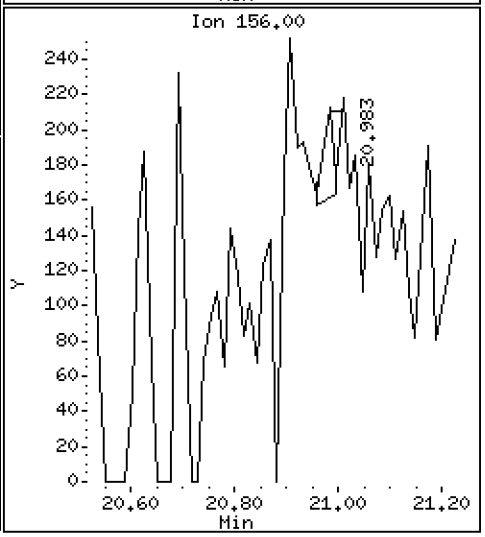


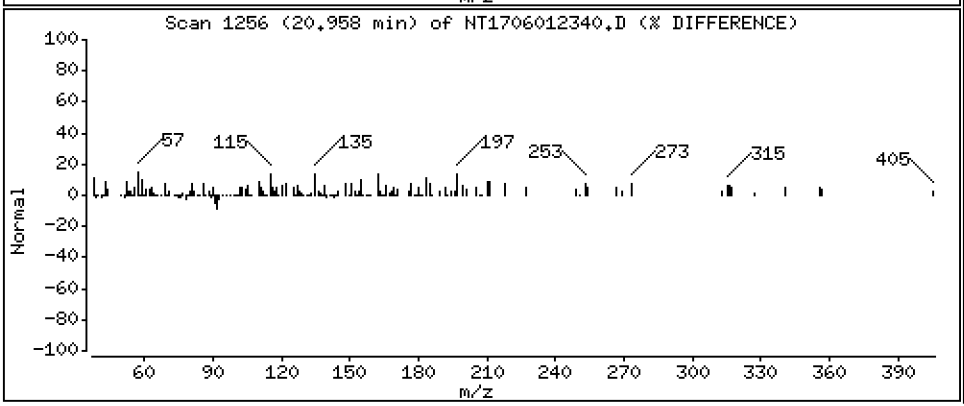












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

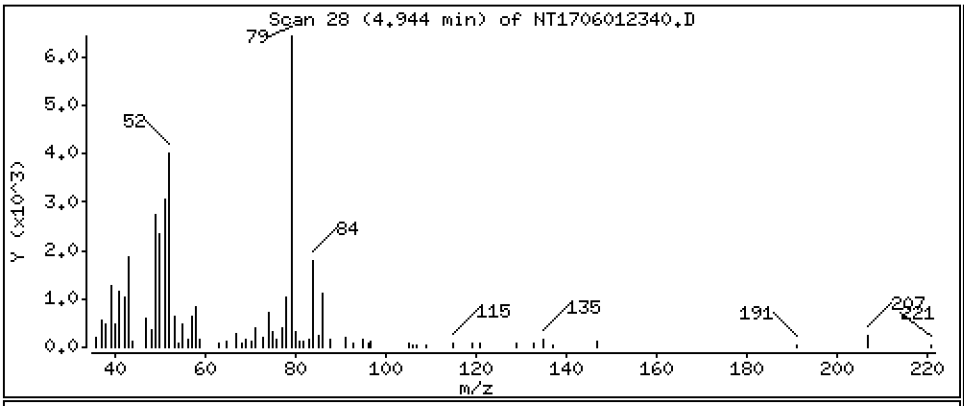
Operator: VTS

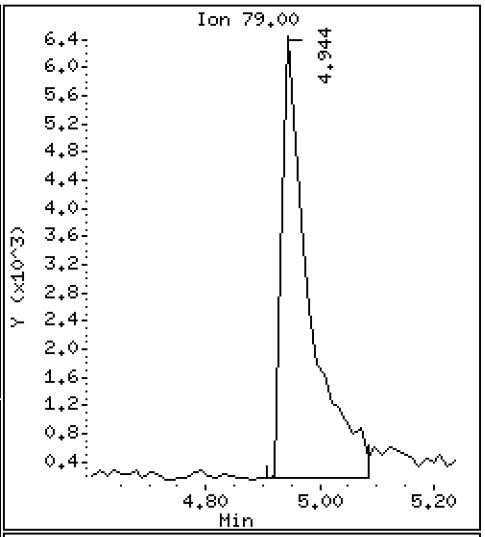
Column phase: ZB-5msi

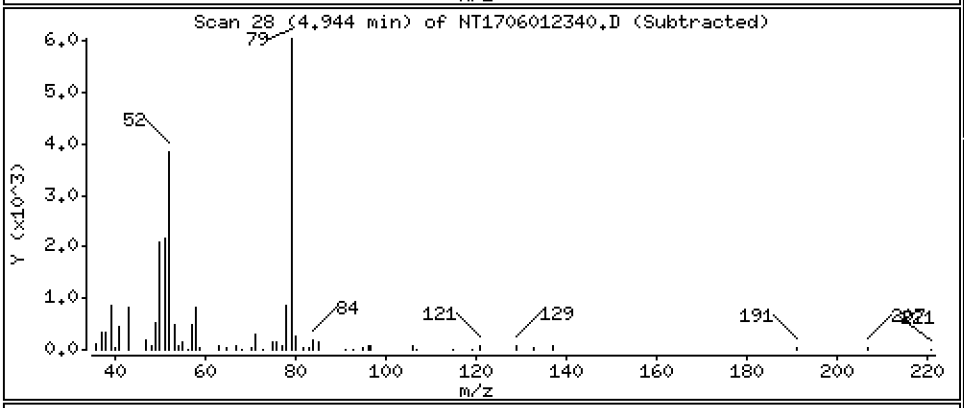
Column diameter: 0.25

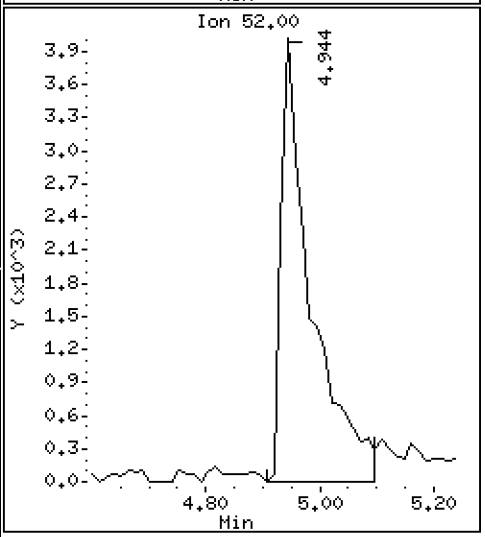
103 Pyridine

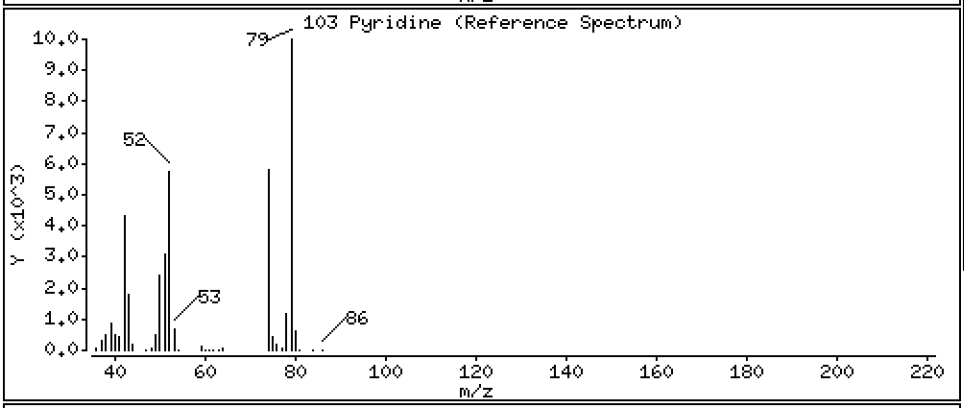
Concentration: 0.3024 ug/mL

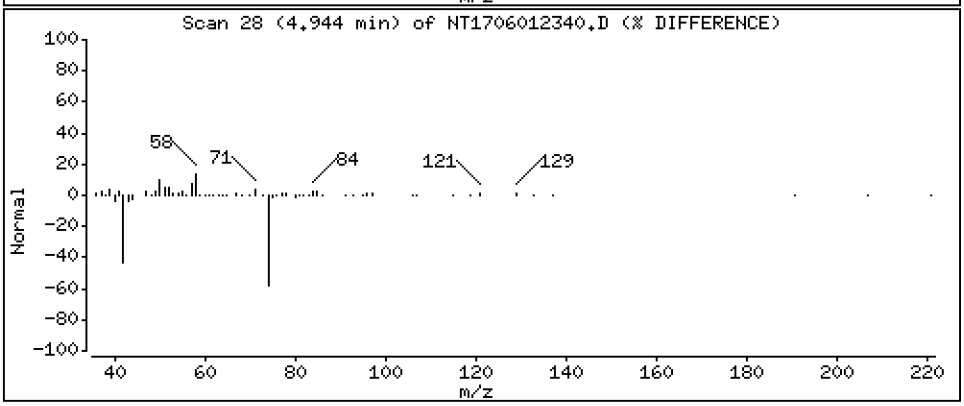












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

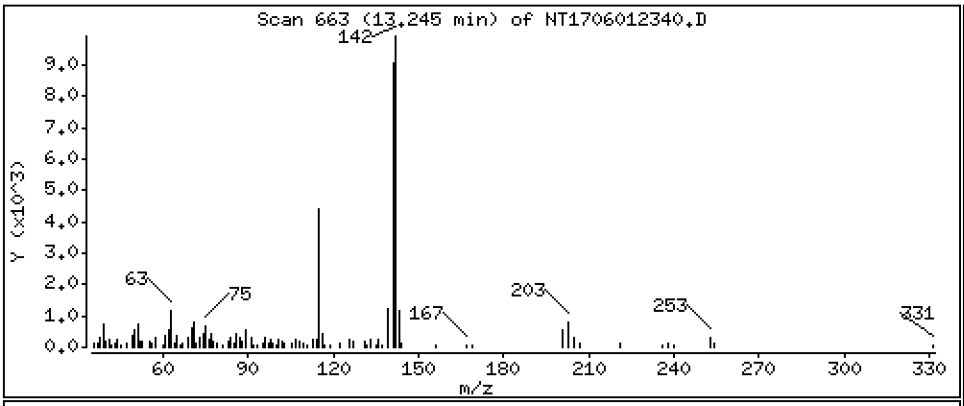
Operator: VTS

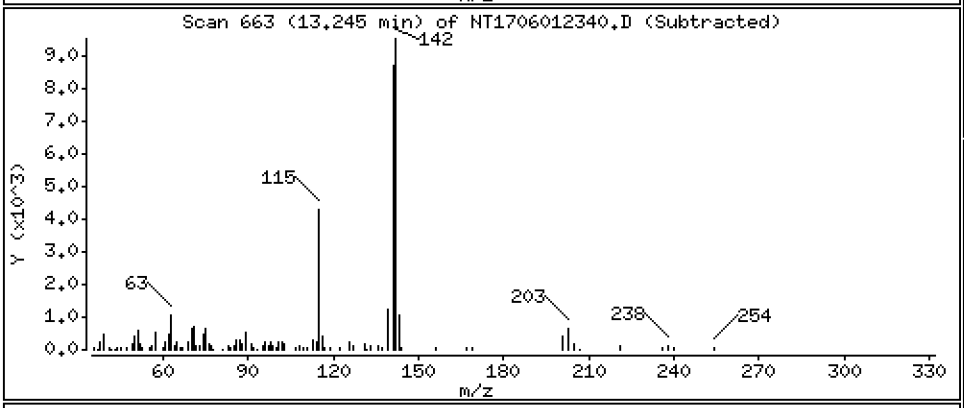
Column phase: ZB-5msi

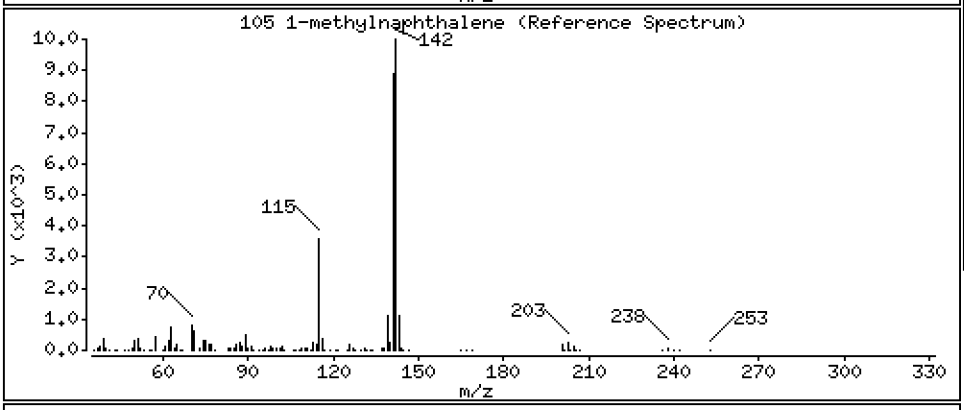
Column diameter: 0.25

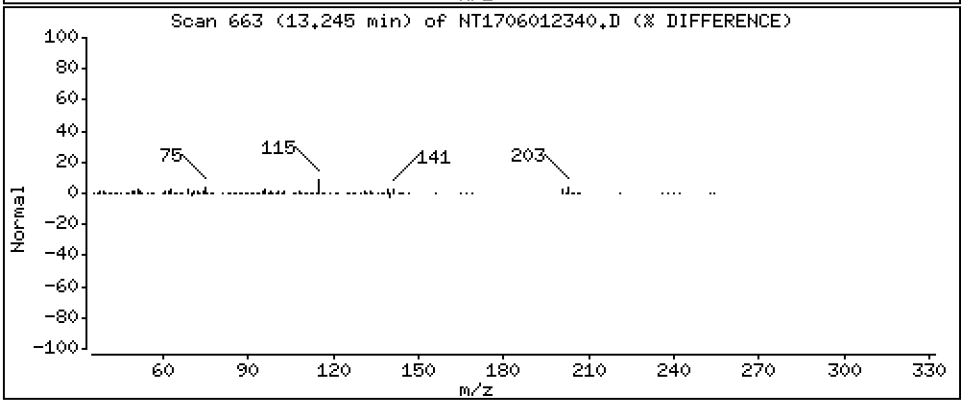
105 1-methylnaphthalene

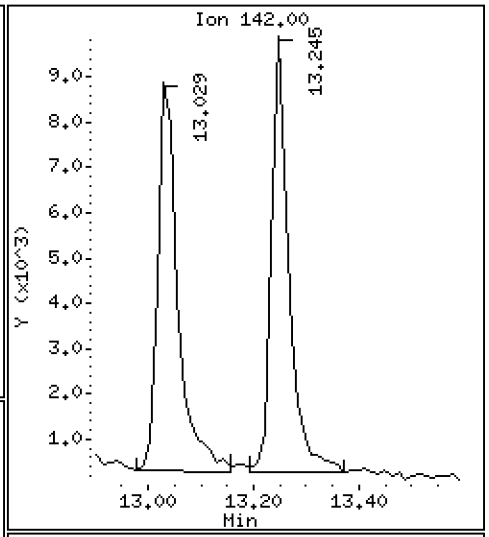
Concentration: 0.1740 ug/mL

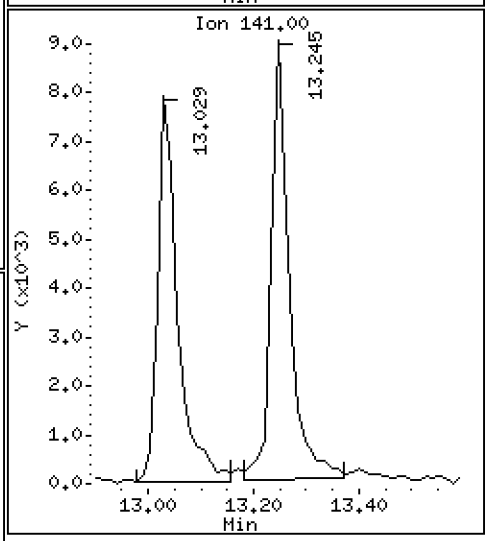












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

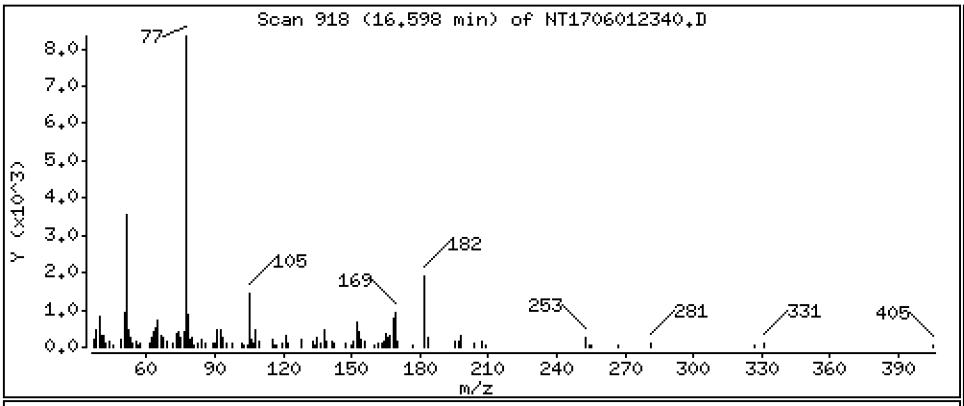
Operator: VTS

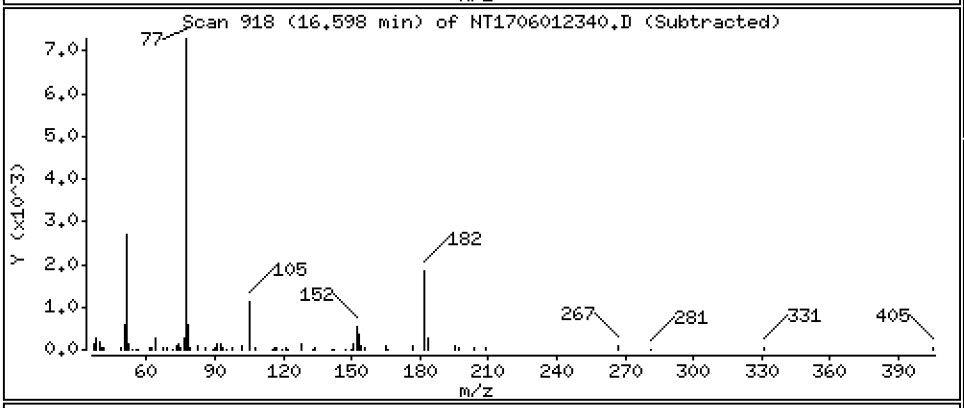
Column phase: ZB-5msi

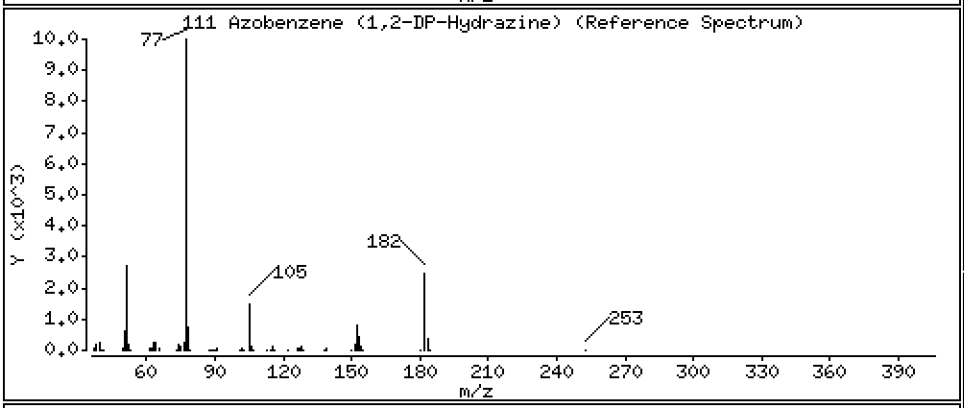
Column diameter: 0.25

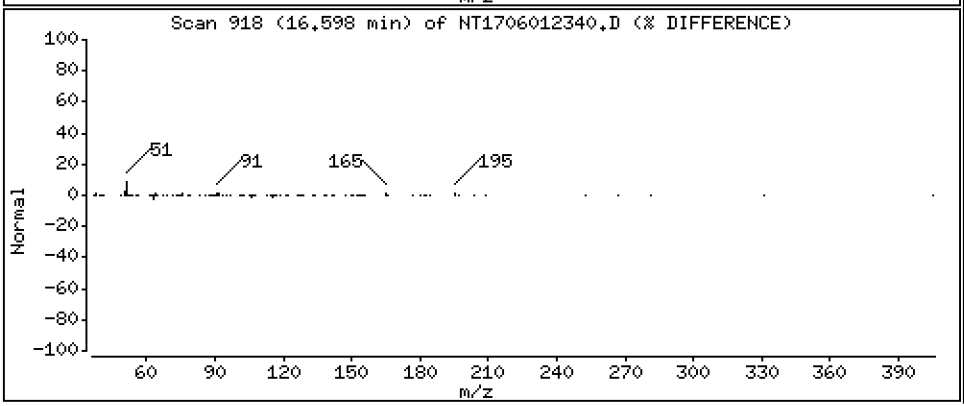
111 Azobenzene (1,2-DP-Hydrazine)

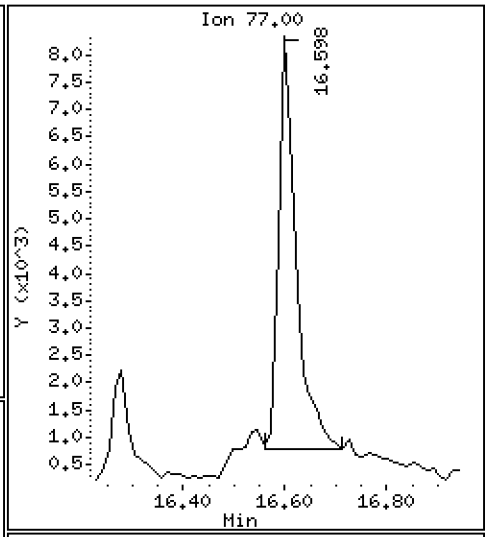
Concentration: 0.1494 ug/mL

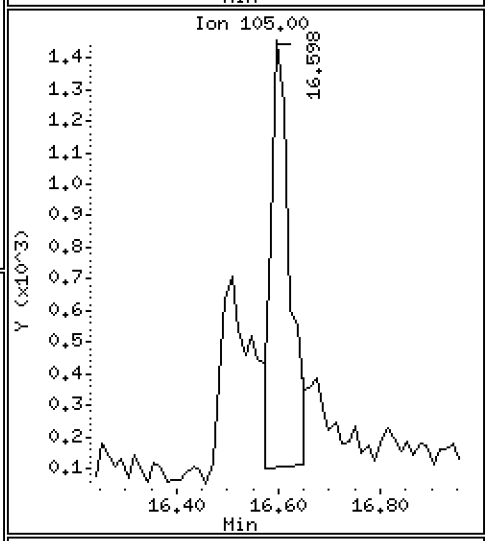


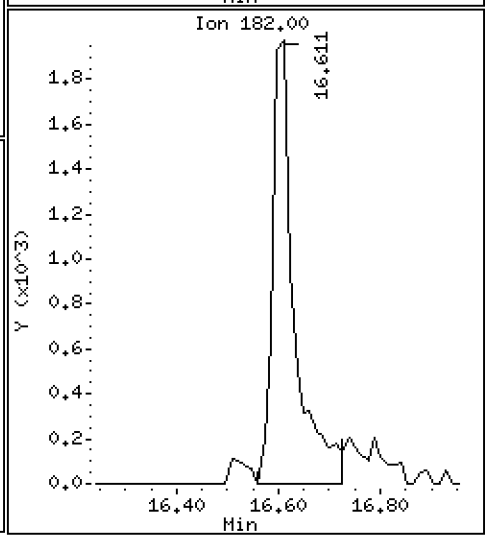












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

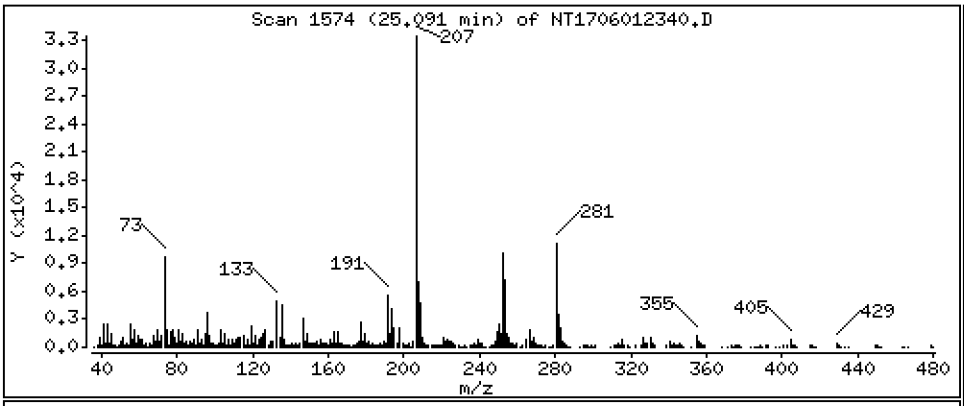
Operator: VTS

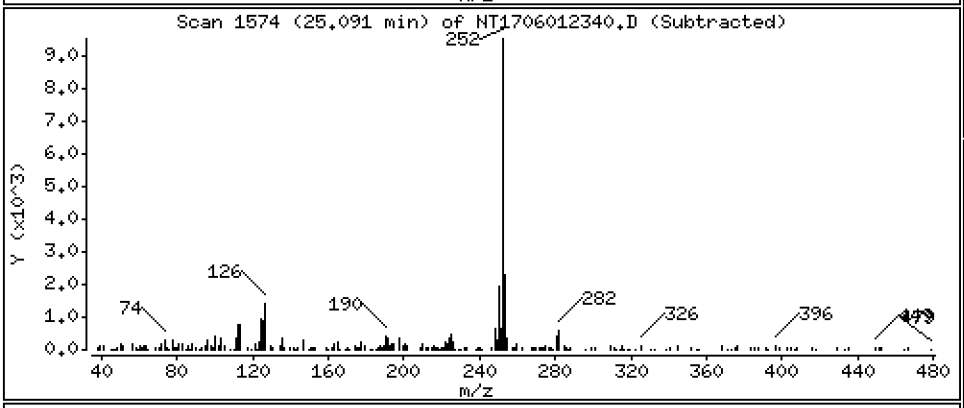
Column phase: ZB-5msi

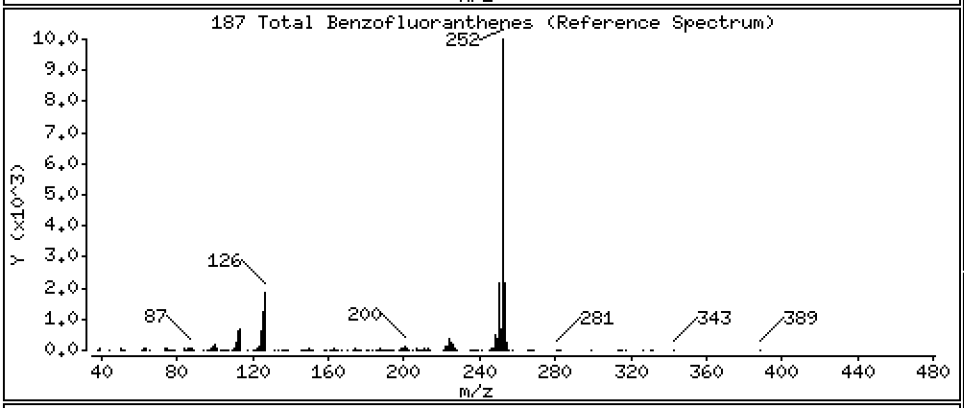
Column diameter: 0.25

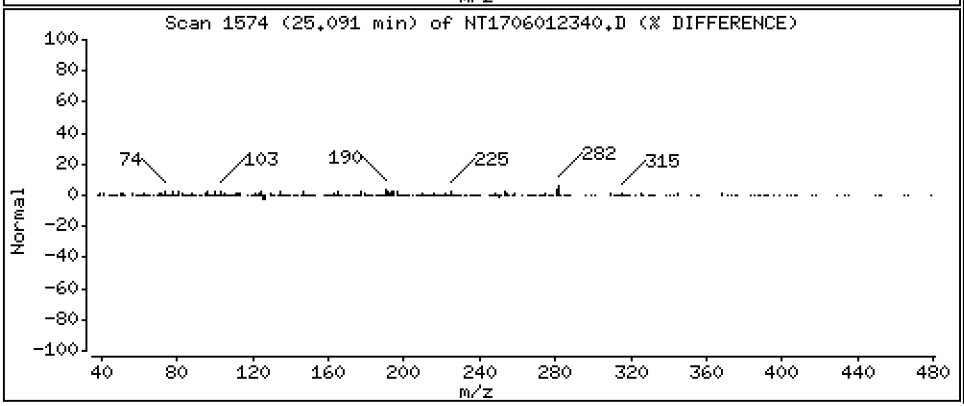
187 Total Benzofluoranthenes

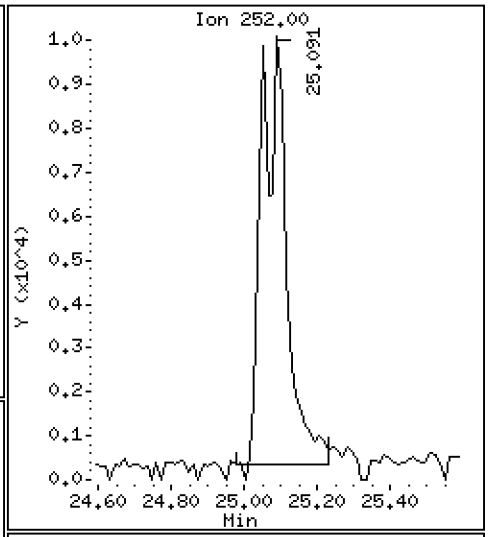
Concentration: 0.4040 ug/mL

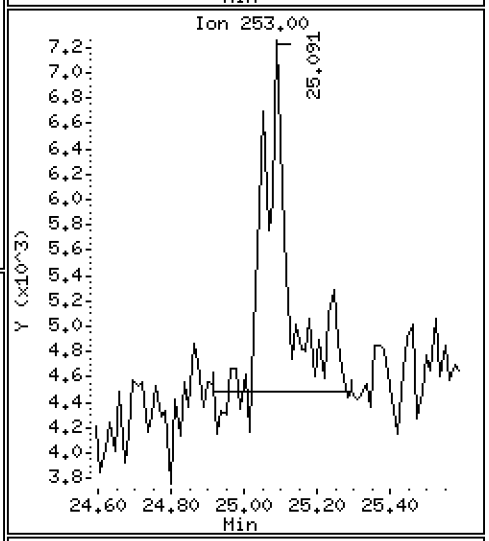


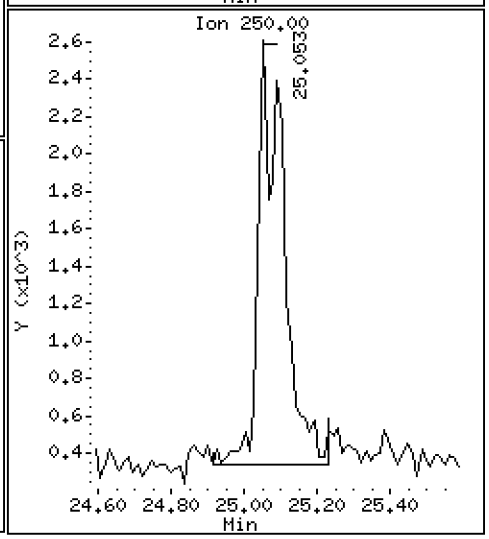












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

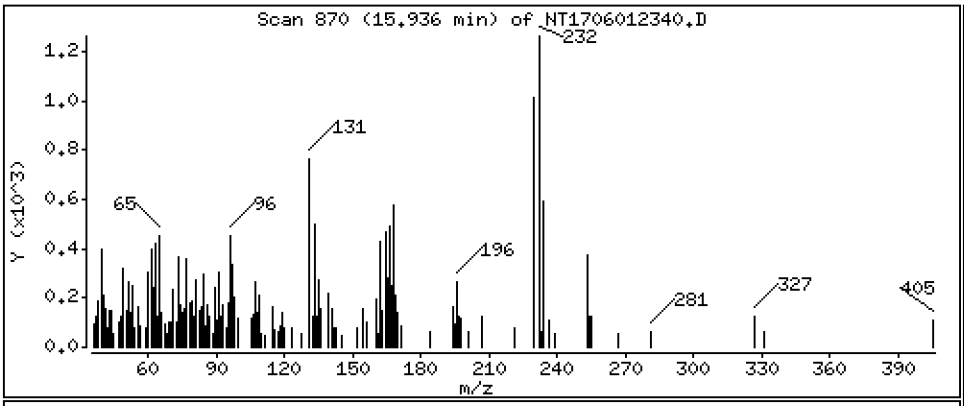
Operator: VTS

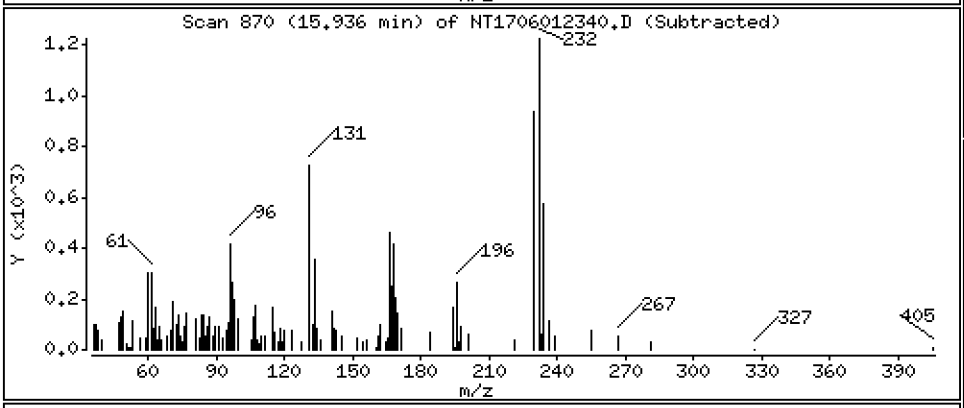
Column phase: ZB-5msi

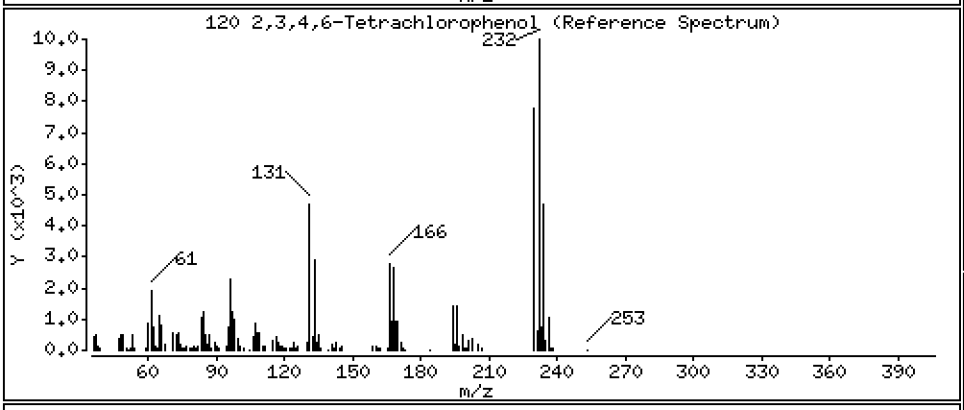
Column diameter: 0.25

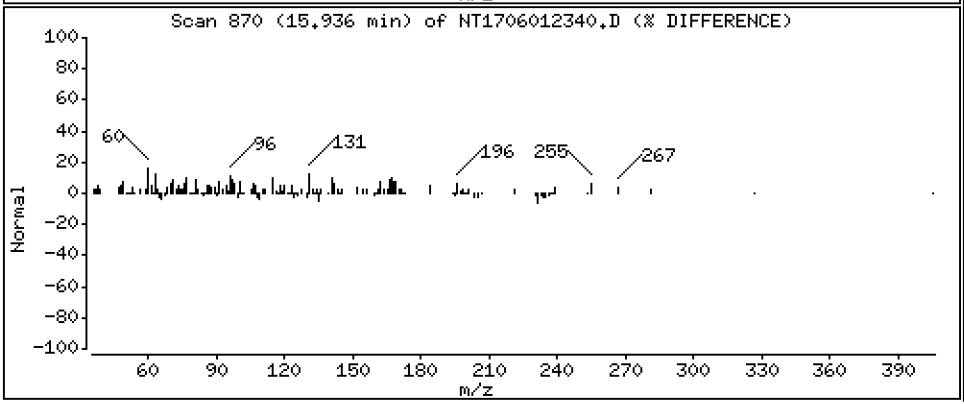
120 2,3,4,6-Tetrachlorophenol

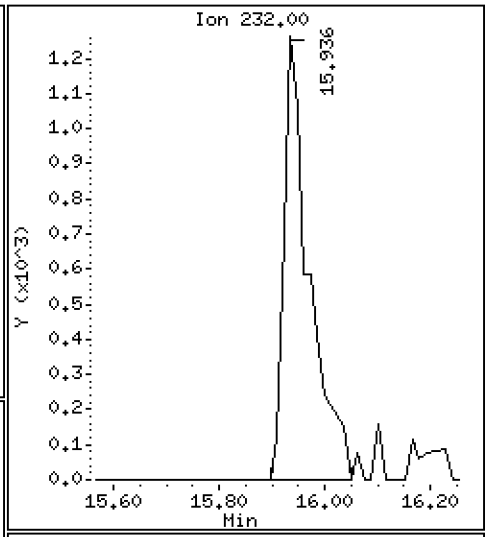
Concentration: 0.1198 ug/mL

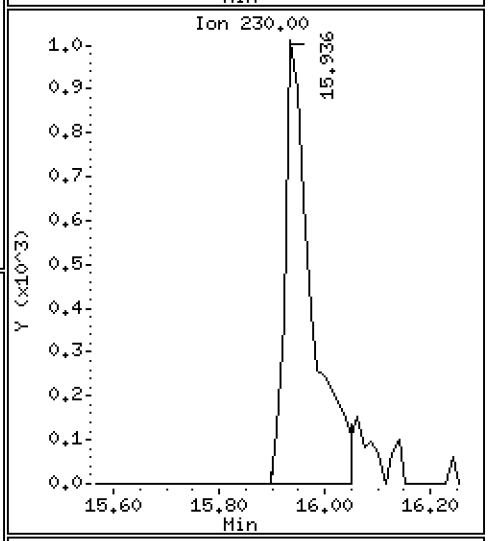


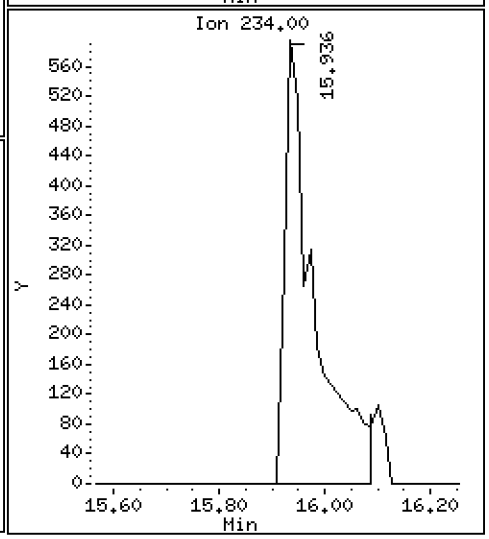












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D
Lab Smp Id: SLE0008-LCV3
Inj Date : 02-JUN-2023 12:16
Operator : VTS Inst ID: nt17.i
Smp Info : SLE0008-LCV3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:44 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1	2-Fluorophenol	112	6.982	6.944	(0.764)	12854	0.19505	0.1950
$	2	Phenol-d5	99	8.536	8.511	(0.934)	19725	0.22617	0.2262
	3	Phenol	94	8.562	8.536	(0.937)	15506	0.16786	0.1679
$	5	2-Chlorophenol-d4	132	8.791	8.778	(0.962)	21900	0.31349	0.3135
	4	Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	16800	0.24947	0.2495
	6	2-Chlorophenol	128	8.817	8.804	(0.965)	16557	0.21463	0.2146
	7	1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	16531	0.21174	0.2117
*	8	1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	201322	4.00000	
	9	1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	15927	0.20455	0.2045
$	10	1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	10362	0.21103	0.2110
	12	1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	15009	0.20505	0.2051
	11	Benzyl alcohol	108	9.544	9.417	(1.045)	3488	0.08110	0.08110
	14	2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	4272	0.20706	0.2071
	13	2-Methylphenol	108	9.672	9.634	(1.059)	10494	0.15457	0.1546
	17	Hexachloroethane	117	10.094	10.094	(1.105)	6629	0.21283	0.2128
	16	N-Nitroso-di-n-propylamine	70	9.966	9.953	(1.091)	8961	0.17252	0.1725
	15	4-Methylphenol	108	9.953	9.902	(1.090)	7443	0.10767	0.1077(M)
$	18	Nitrobenzene-d5	82	10.234	10.222	(0.882)	15043	0.19057	0.1906
	19	Nitrobenzene	77	10.273	10.260	(0.886)	13833	0.18368	0.1837
	20	Isophorone	82	10.707	10.707	(0.923)	19124	0.18550	0.1855
	21	2-Nitrophenol	139	10.899	10.873	(0.940)	5380	0.14825	0.1482(M)
	22	2,4-Dimethylphenol	107	10.962	10.937	(0.945)	19784	0.28078	0.2808
	23	Bis(2-Chloroethoxy)methane	93	11.141	11.116	(0.960)	9736	0.15409	0.1541
	24	Benzoic acid	105	11.243	11.205	(0.969)	2386	0.05034	0.05034
	25	2,4-Dichlorophenol	162	11.435	11.333	(0.986)	10572	0.18672	0.1867
	26	1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	12229	0.19887	0.1989
*	27	Naphthalene-d8	136	11.600	11.600	(1.000)	693572	4.00000	
	28	Naphthalene	128	11.638	11.638	(1.003)	38398	0.20132	0.2013
	29	4-Chloroaniline	127	11.829	11.766	(1.020)	9076	0.12072	0.1207
	30	Hexachlorobutadiene	225	11.995	11.995	(1.034)	6736	0.22114	0.2211
	31	4-Chloro-3-methylphenol	107	12.799	12.735	(1.103)	14350	0.23538	0.2354(M)
	32	2-Methylnaphthalene	142	13.028	13.015	(1.123)	23405	0.17139	0.1714
	33	Hexachlorocyclopentadiene	237	13.475	13.475	(0.887)	159	0.00547	0.005475

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.666	13.640	(0.900)	9192	0.28129	0.2813
	35 2,4,5-Trichlorophenol	196	13.793	13.730	(0.908)	13691	0.39576	0.3958(MH)
$	36 2-Fluorobiphenyl	172	13.806	13.793	(0.909)	26230	0.21318	0.2132
	37 2-Chloronaphthalene	162	14.023	14.010	(0.924)	18956	0.18990	0.1899
	38 2-Nitroaniline	65	14.329	14.278	(0.944)	10370	0.30675	0.3067
	39 Dimethylphthalate	163	14.699	14.686	(0.968)	19319	0.17977	0.1798
	40 Acenaphthylene	152	14.878	14.878	(0.980)	33630	0.21215	0.2122
	41 2,6-Dinitrotoluene	165	14.852	14.839	(0.978)	7783	0.30934	0.3093
*	42 Acenaphthene-d10	164	15.184	15.184	(1.000)	312332	4.00000	
	43 3-Nitroaniline	138	15.222	15.133	(1.003)	7791	0.33433	0.3343(M)
	44 Acenaphthene	153	15.247	15.247	(1.004)	19928	0.20111	0.2011
	45 2,4-Dinitrophenol	184	15.566	15.336	(1.025)	2622	0.17289	0.1729(M)
	46 Dibenzofuran	168	15.591	15.579	(1.027)	28379	0.20520	0.2052
	47 4-Nitrophenol	109	15.719	15.464	(1.035)	1680	0.10854	0.1085(M)
	48 2,4-Dinitrotoluene	165	15.668	15.642	(1.032)	8265	0.25094	0.2509
	50 Diethylphthalate	149	16.139	16.139	(1.063)	23663	0.22578	0.2258
	49 Fluorene	166	16.292	16.280	(1.073)	21263	0.16172	0.1617
	51 4-Chlorophenyl-phenylether	204	16.280	16.267	(1.072)	10610	0.17552	0.1755
	52 4-Nitroaniline	138	16.509	16.420	(1.087)	11642	0.52781	0.5278(M)
	53 4,6-Dinitro-2-methylphenol	198	16.509	16.483	(0.907)	5770	0.24329	0.2433
	54 N-Nitrosodiphenylamine	169	16.534	16.521	(0.908)	16656	0.20007	0.2001
$	55 2,4,6-Tribromophenol	330	16.839	16.814	(1.109)	3478	0.25529	0.2553
	56 4-Bromophenyl-phenylether	248	17.272	17.259	(0.949)	5692	0.19514	0.1951
	57 Hexachlorobenzene	284	17.578	17.578	(0.966)	6468	0.21762	0.2176
	58 Pentachlorophenol	266	17.973	17.948	(0.987)	3808	0.22099	0.2210(M)
*	59 Phenanthrene-d10	188	18.203	18.203	(1.000)	594291	4.00000	
	60 Phenanthrene	178	18.254	18.254	(1.003)	31879	0.18384	0.1838
	61 Anthracene	178	18.343	18.343	(1.008)	27431	0.16849	0.1685
	62 Carbazole	167	18.713	18.688	(1.028)	28164	0.28541	0.2854
	63 Di-n-butylphthalate	149	19.453	19.453	(1.069)	35916	0.18270	0.1827
	64 Fluoranthene	202	20.626	20.613	(0.888)	34022	0.19711	0.1971
	65 Pyrene	202	21.047	21.047	(0.907)	34597	0.19773	0.1977
$	66 Terphenyl-d14	244	21.327	21.314	(0.919)	26528	0.21327	0.2133
	67 Butylbenzylphthalate	149	22.233	22.233	(0.958)	15563	0.19873	0.1987
	68 Benzo(a)anthracene	228	23.190	23.190	(0.999)	27491	0.20233	0.2023
*	69 Chrysene-d12	240	23.215	23.215	(1.000)	368988	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.177	23.152	(0.998)	24218	0.92038	0.9204
	71 Chrysene	228	23.254	23.254	(1.002)	28618	0.22383	0.2238
	72 bis(2-Ethylhexyl)phthalate	149	23.241	23.254	(0.959)	22156	0.23252	0.2325
*	134 Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	658589	4.00000	
	73 Di-n-octylphthalate	149	24.236	24.236	(1.001)	37912	0.22710	0.2271
	74 Benzo(b)fluoranthene	252	25.052	25.052	(0.971)	19493	0.15309	0.1531
	75 Benzo(k)fluoranthene	252	25.090	25.090	(0.972)	28626	0.23795	0.2379
	76 Benzo(a)pyrene	252	25.690	25.690	(0.996)	17816	0.17762	0.1776
*	77 Perylene-d12	264	25.805	25.805	(1.000)	321164	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.474	28.423	(1.103)	13257	0.11394	0.1139
	79 Dibenzo(a,h)anthracene	278	28.500	28.436	(1.104)	12101	0.12393	0.1239
	80 Benzo(g,h,i)perylene	276	29.241	29.203	(1.133)	12636	0.13158	0.1316
	90 N-Nitrosodimethylamine	74	4.880	4.867	(0.534)	14662	0.33353	0.3335
	91 Aniline	93	8.626	8.600	(0.944)	15717	0.20303	0.2030
	93 Benzidine	184	20.957	20.868	(0.903)	11488	0.26833	0.2683(M)
	103 Pyridine	79	4.944	4.893	(0.541)	21086	0.30241	0.3024
	105 1-methylnaphthalene	142	13.245	13.245	(1.142)	22045	0.17401	0.1740
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.598	16.585	(1.093)	18272	0.14936	0.1494

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.090	25.090	(0.972)	46182	0.40403	0.4040
120 2,3,4,6-Tetrachlorophenol	232	15.935	15.910	(1.050)	4686	0.11985	0.1198

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012340.D
Lab Smp Id: SLE0008-LCV3
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 02-JUN-2023
Calibration Time: 11:02
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223423	111712	446846	201322	-9.89
27 Naphthalene-d8	810178	405089	1620356	693572	-14.39
42 Acenaphthene-d10	450990	225495	901980	312332	-30.75
59 Phenanthrene-d10	792538	396269	1585076	594291	-25.01
69 Chrysene-d12	499734	249867	999468	368988	-26.16
134 Di-n-octylphthala	1036983	518492	2073966	658589	-36.49
77 Perylene-d12	439413	219707	878826	321164	-26.91

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	-0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	-0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012340.D

Lab ID: SLE0008-LCV3
nt17.i, ABN.m, 02-JUN-2023 12:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.045	1.031	0.0140	Benzyl alcohol
1.089	1.084	0.0056	4-Methylphenol
0.986	0.977	0.0088	2,4-Dichlorophenol
1.020	1.014	0.0055	4-Chloroaniline
1.103	1.098	0.0055	4-Chloro-3-methylphenol
1.003	0.997	0.0059	3-Nitroaniline
1.025	1.010	0.0151	2,4-Dinitrophenol
1.035	1.018	0.0168	4-Nitrophenol
1.087	1.081	0.0059	4-Nitroaniline
0.541	0.536	0.0056	Pyridine

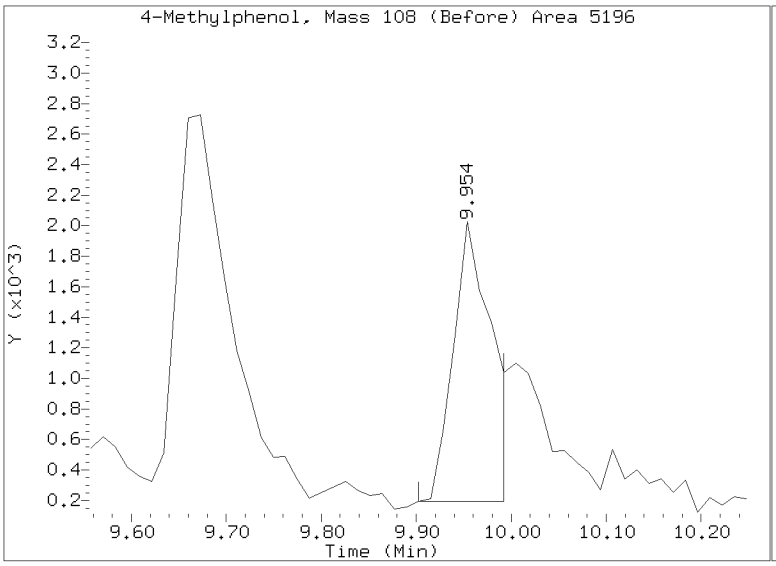
RRT check based on Ccal File: NT1706012338.D

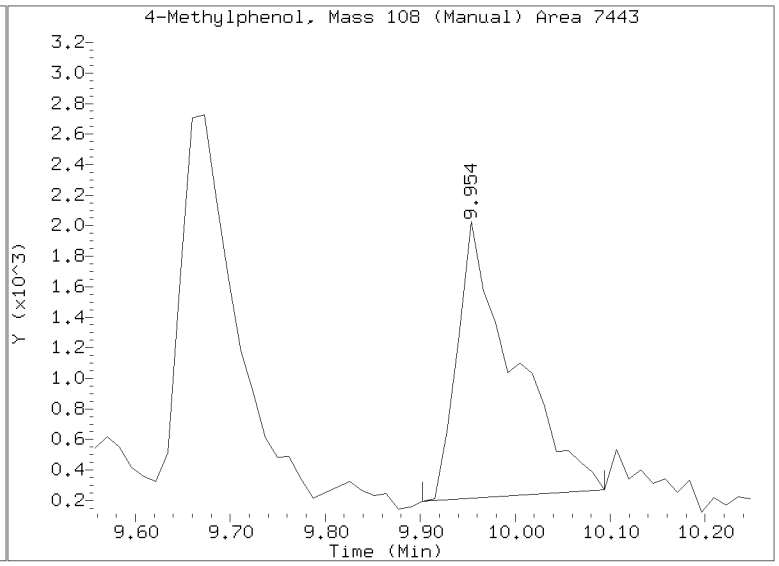
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

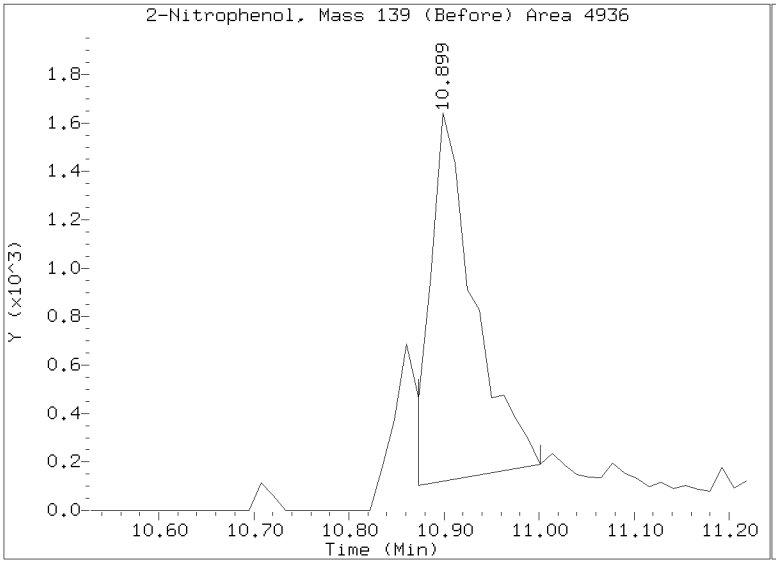
* Only compounds listed in the work order have been verified by the analyst *

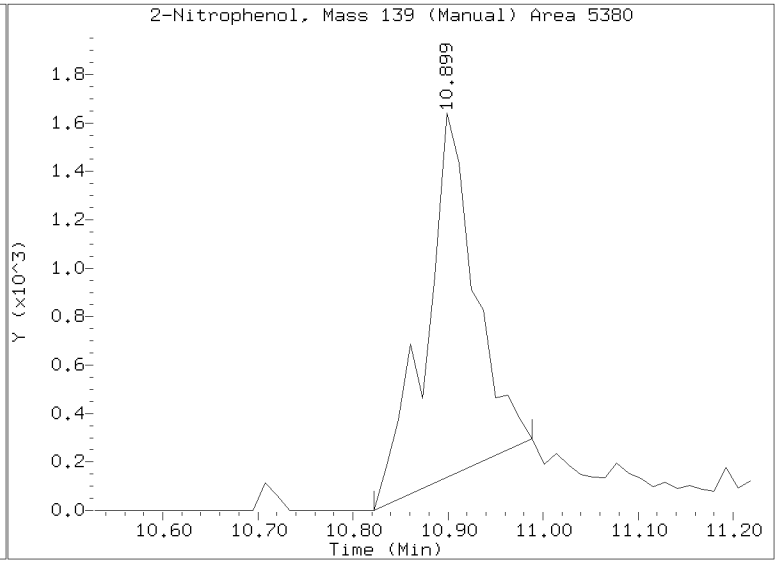
Quant Ion Manual Peak Adjustment Report

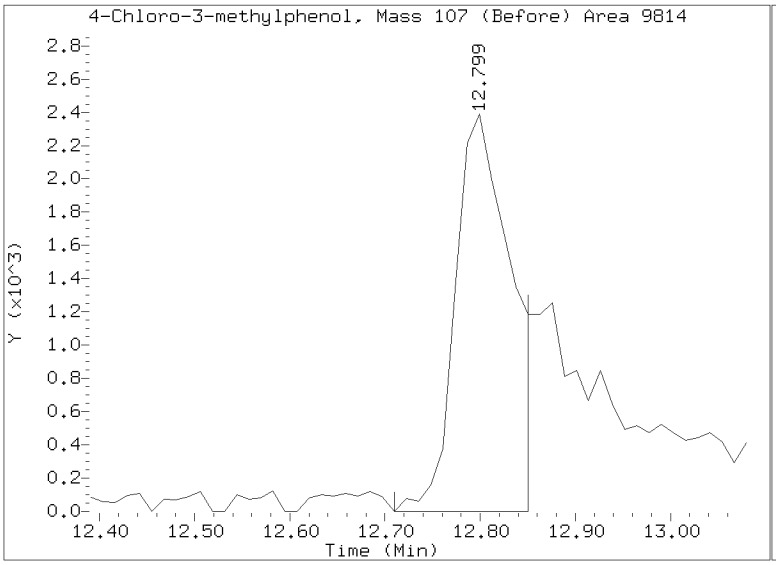
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012340.D
Injection Date: 02-JUN-2023 12:16
Lab ID:SLE0008-LCV3 Client ID:
Report Date: 06/03/2023 10:44

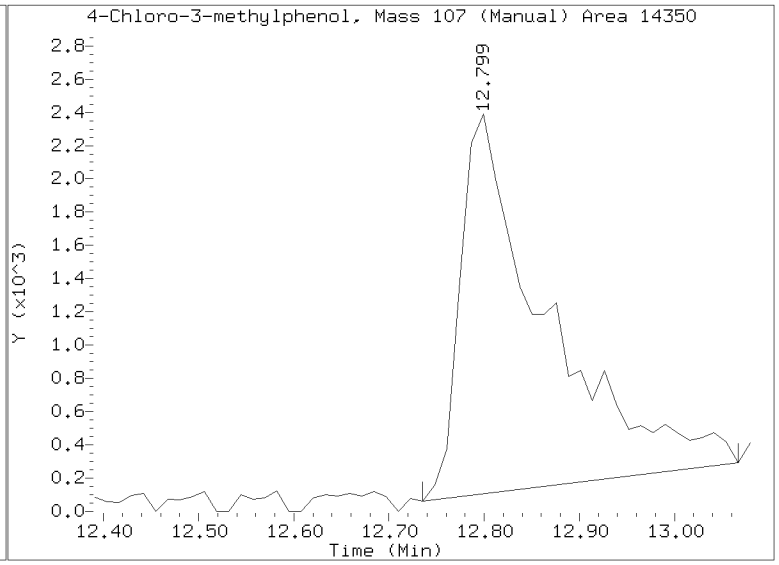






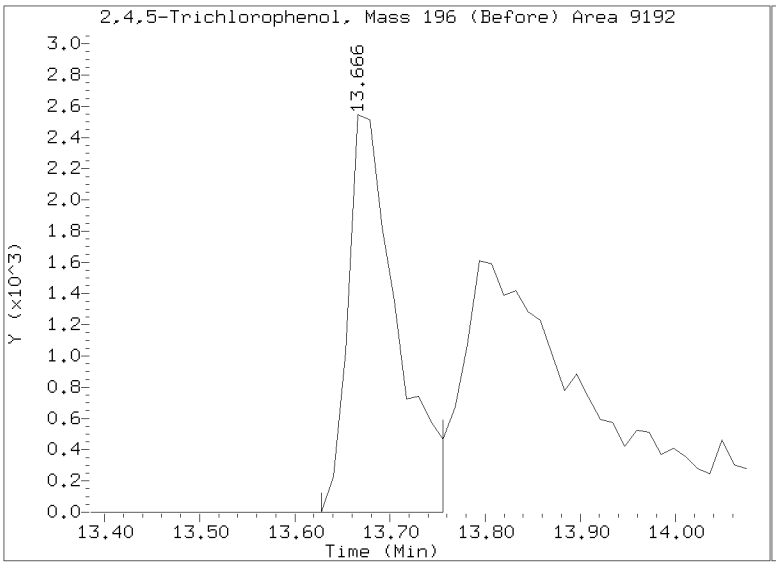


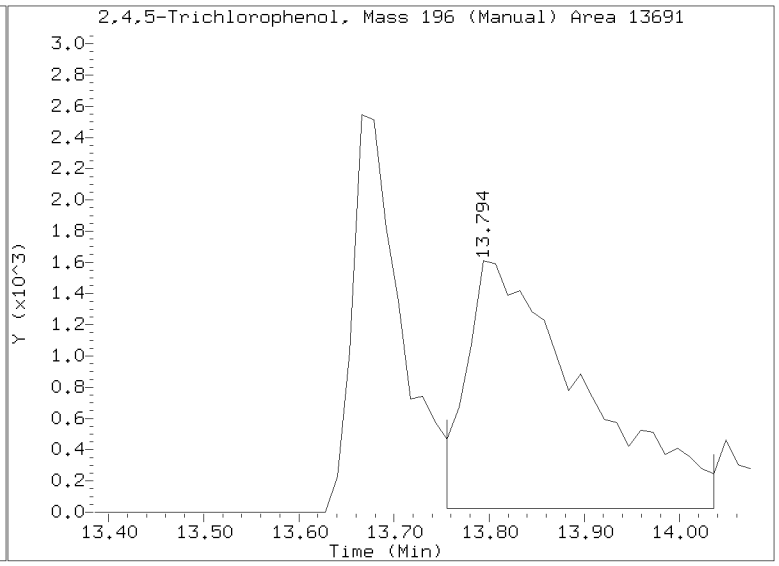


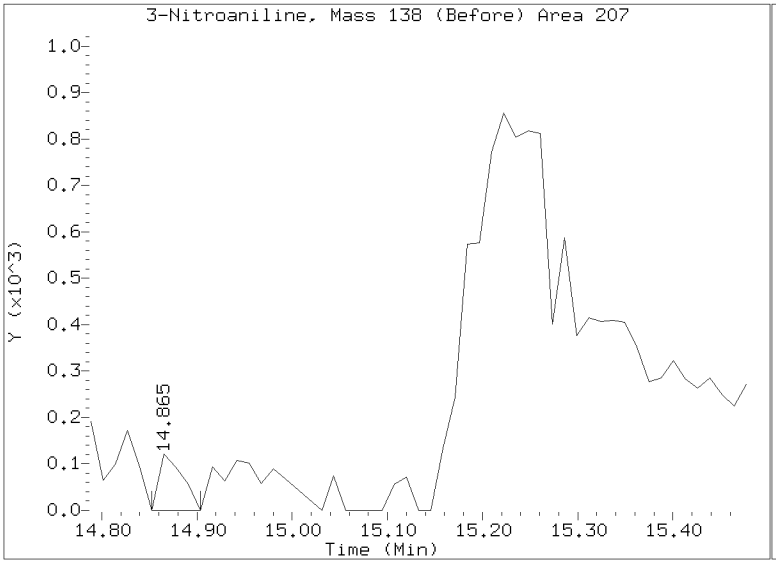


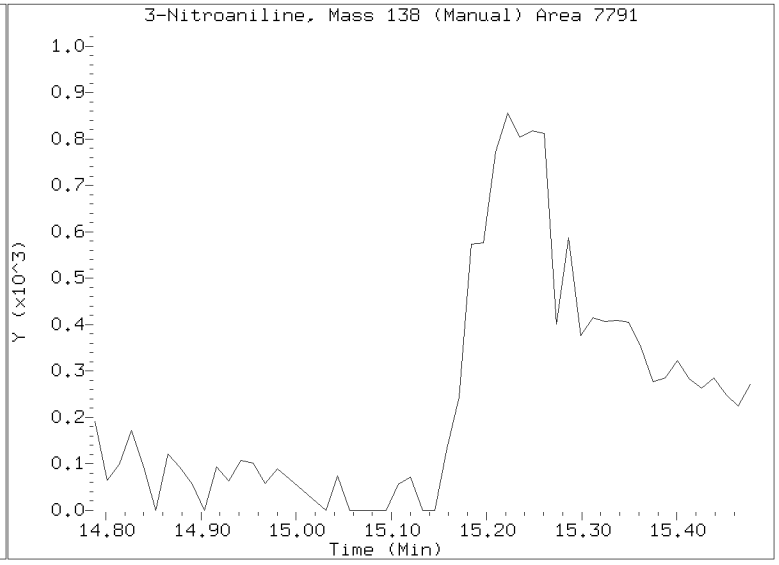
Quant Ion Manual Peak Adjustment Report

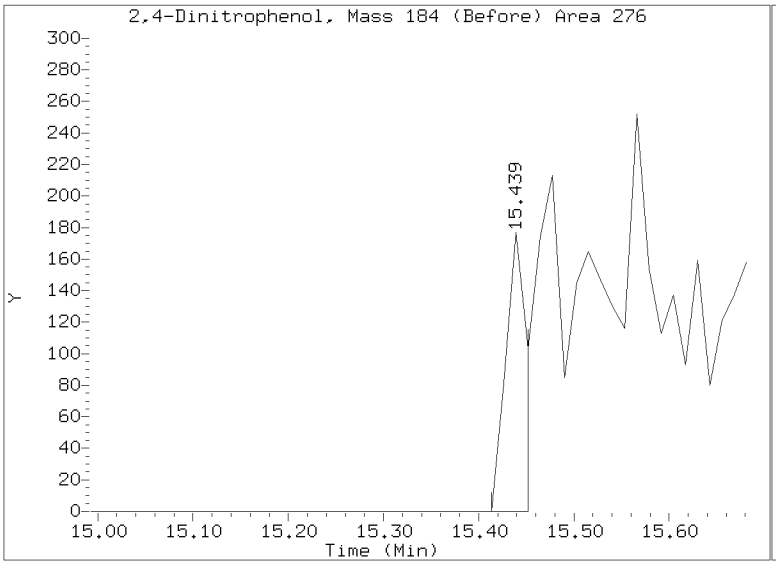
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012340.D
Injection Date: 02-JUN-2023 12:16
Lab ID:SLE0008-LCV3 Client ID:
Report Date: 06/03/2023 10:44

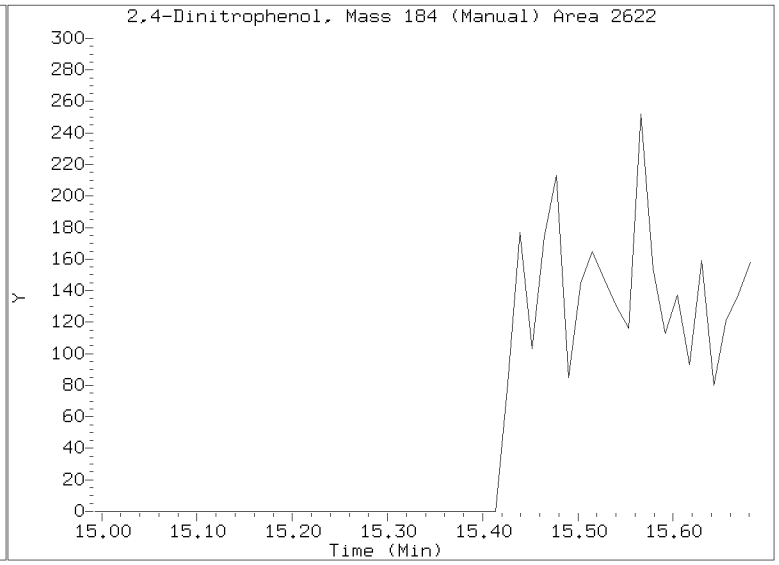






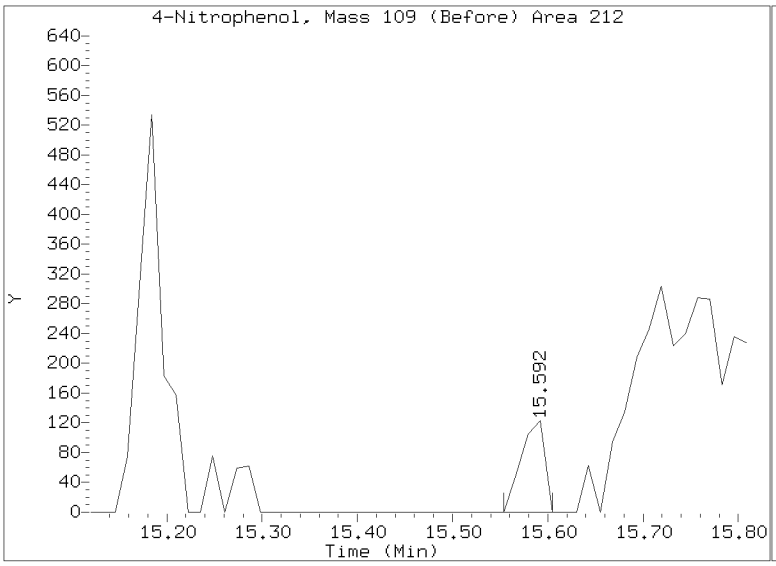


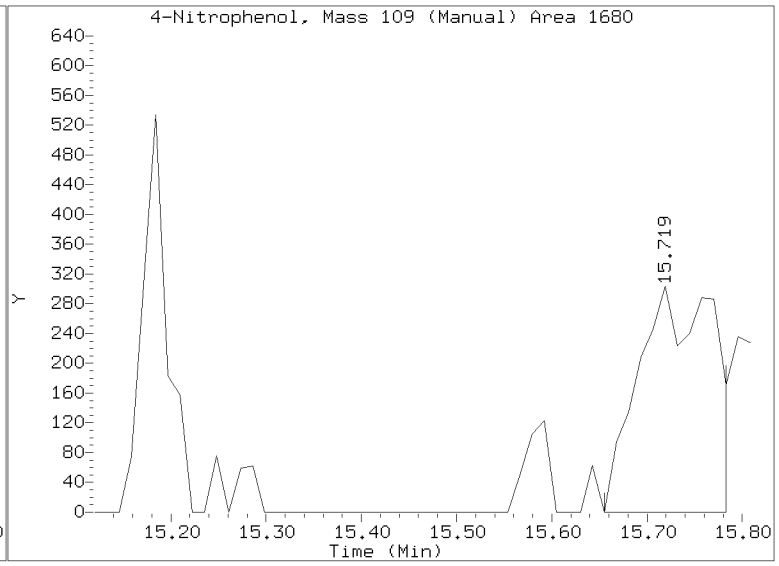


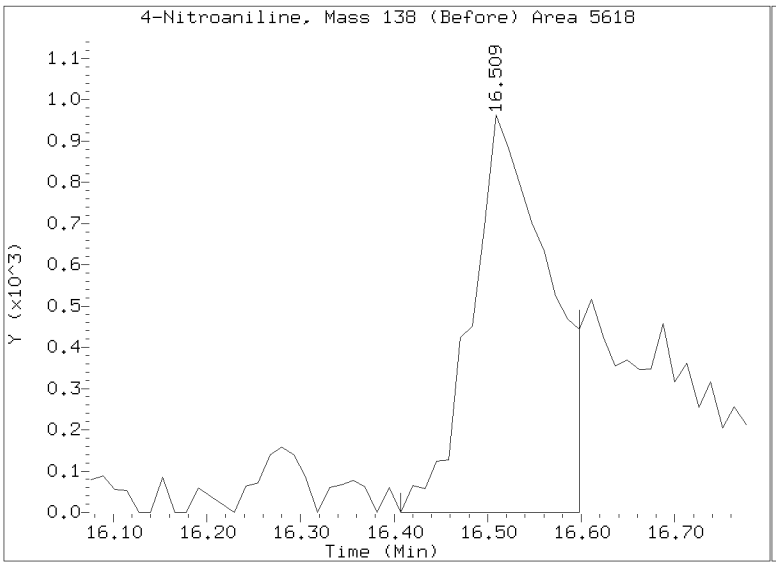


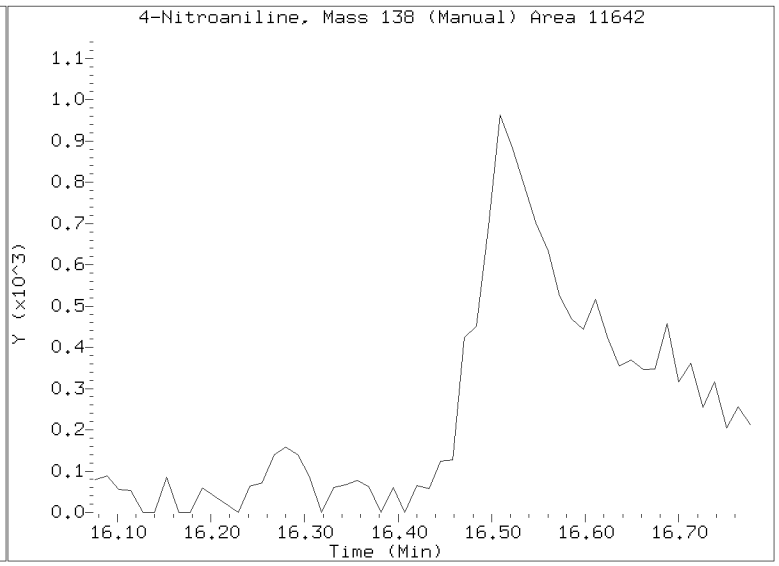
Quant Ion Manual Peak Adjustment Report

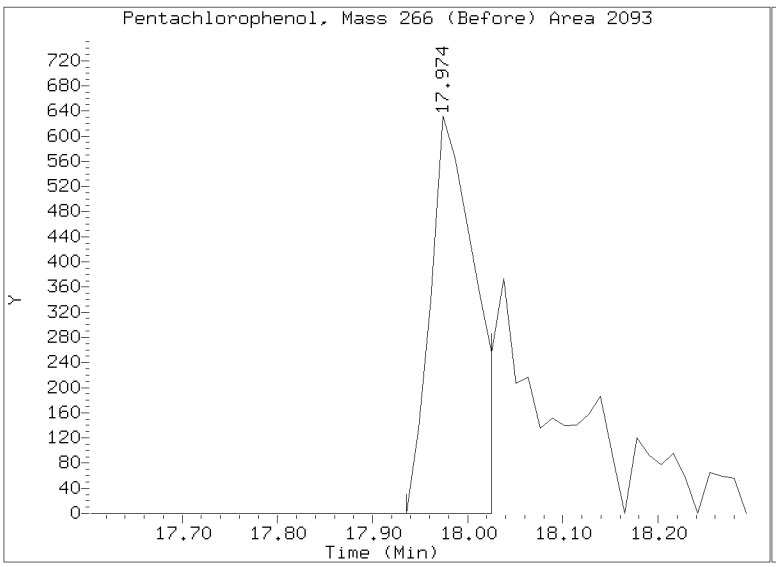
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012340.D
Injection Date: 02-JUN-2023 12:16
Lab ID:SLE0008-LCV3 Client ID:
Report Date: 06/03/2023 10:44

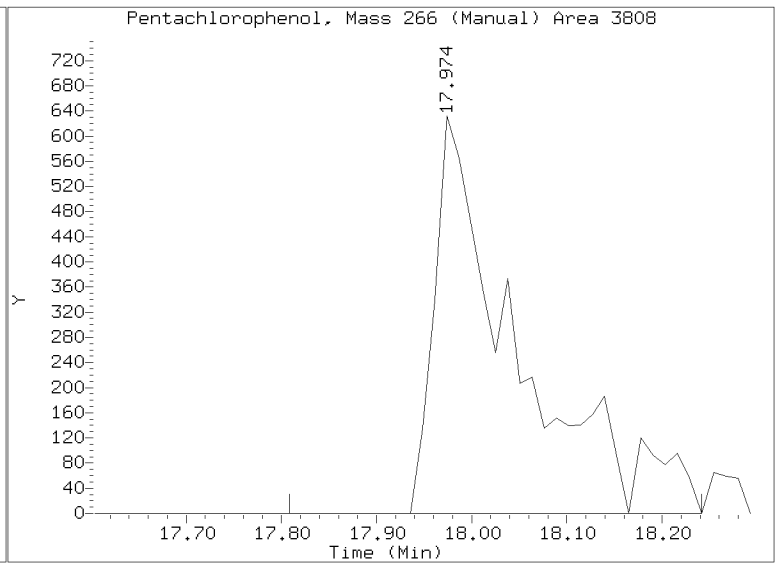






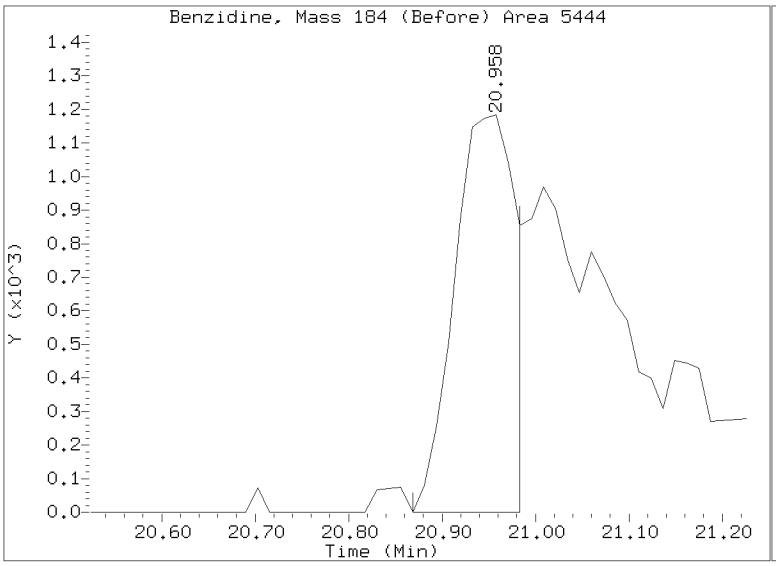


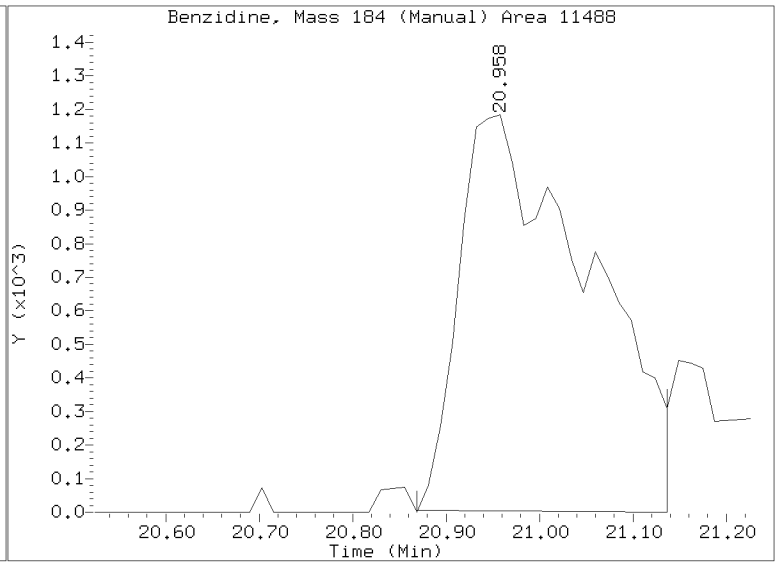




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012340.D
Injection Date: 02-JUN-2023 12:16
Lab ID:SLE0008-LCV3 Client ID:
Report Date: 06/03/2023 10:44





Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012304.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/01/23
Lab Sample ID:	SLF0008-ICV1	Injection Time:	13:58
Sequence Name:	ABN 5		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Phenol	A	5.0000	5.2	1.8353850	1.9173120		4.5	+/-20
4-Methylphenol	A	5.0000	5.1	1.3734410	1.4096040		2.6	+/-20
Naphthalene	A	5.0000	4.9	1.0999940	1.0817220		-1.7	+/-20
2-Methylnaphthalene	A	5.0000	5.1	0.7875944	0.8076006		2.5	+/-20
Acenaphthylene	A	5.0000	5.1	2.0301060	2.0753350		2.2	+/-20
Dimethylphthalate	A	5.0000	5.2	1.3763	1.4396550		4.6	+/-20
Acenaphthene	A	5.0000	5.1	1.2690180	1.2972720		2.2	+/-20
Dibenzofuran	A	5.0000	5.1	1.7711910	1.8034970		1.8	+/-20
Fluorene	A	5.0000	5.6	1.6839010	1.8975810		12.7	+/-20
Phenanthrene	A	5.0000	4.9	1.1671410	1.1355310		-2.7	+/-20
Anthracene	A	5.0000	4.9	1.0957620	1.0730750		-2.1	+/-20
Fluoranthene	A	5.0000	4.9	1.8710850	1.8185650		-2.8	+/-20
Pyrene	A	5.0000	4.8	1.8967730	1.8270010		-3.7	+/-20
Butylbenzylphthalate	A	5.0000	4.6	0.8489339	0.7890310		-7.1	+/-20
Benzo(a)anthracene	A	5.0000	5.1	1.4729210	1.5143610		2.8	+/-20
Chrysene	A	5.0000	5.1	1.3859970	1.4260870		2.9	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	5.1	0.5787277	181315.2000		1.4	+/-20
Benzofluoranthenes, Total	A	10.000	9.7	1.4236150	1.3758530		-3.4	+/-20
Benzo(a)pyrene	A	5.0000	4.9	1.2492830	1.2282190		-1.7	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.9	1.4490690	1.4254320		-1.6	+/-20
Dibenzo(a,h)anthracene	A	5.0000	4.9	1.2161710	1.1955900		-1.7	+/-20
Benzo(g,h,i)perylene	A	5.0000	4.7	1.1960510	1.1275400		-5.7	+/-20
2-Fluorophenol	A	7.5000	7.75	1.3093930	1.3524820		3.3	+/-20
Phenol-d5	A	7.5000	7.94	1.7328160	1.8342800		5.9	+/-20
2-Chlorophenol-d4	A	7.5000	8.39	1.3879870	1.5534440		11.9	+/-20
1,2-Dichlorobenzene-d4	A	5.0000	5.11	0.9755818	0.9965933		2.2	+/-20
Nitrobenzene-d5	A	5.0000	5.19	0.4552457	0.4725719		3.8	+/-20
2-Fluorobiphenyl	A	5.0000	5.09	1.5758130	1.6040870		1.8	+/-20
2,4,6-Tribromophenol	A	7.5000	7.95	0.1414414	0.1848576		5.9	+/-20
p-Terphenyl-d14	A	5.0000	5.09	1.3483810	1.3730250		1.8	+/-20

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012304.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/01/23
Lab Sample ID:	SLF0008-ICV1	Injection Time:	13:58
Sequence Name:	ABN 5		

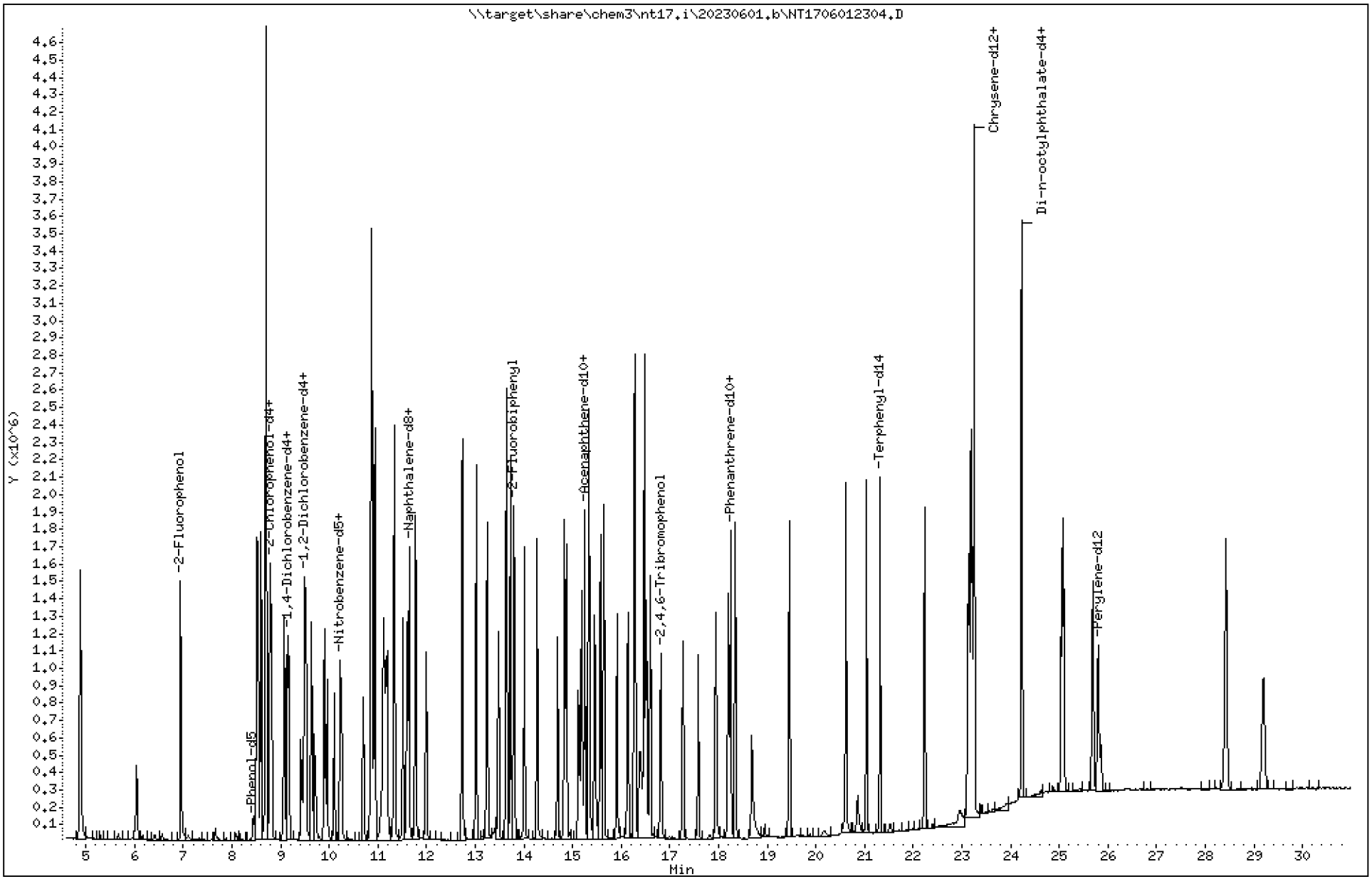
		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	74521.0400	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	263513.0000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	142608.8000	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	231763.7000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	143610.7000	1.0000		0.0	
Di-n-Octylphthalate-d4	A		4000	285983.8000				
Perylene-d12	A	4.0000	4.0	123763.9000	1.0000		0.0	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012304.D
Date : 01-JUN-2023 13:58
Client ID:
Sample Info: SLF0008-ICV1

Instrument: nt17.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012304.D
Lab Smp Id: SLF0008-ICV1
Inj Date : 01-JUN-2023 13:58
Operator : VTS Inst ID: nt17.i
Smp Info : SLF0008-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.944	6.944	(0.760)	673072	7.50000	7.747
$	2 Phenol-d5	99	8.511	8.511	(0.932)	912842	7.50000	7.939
	3 Phenol	94	8.537	8.537	(0.934)	636109	5.00000	5.223
$	5 2-Chlorophenol-d4	132	8.779	8.779	(0.961)	773082	7.50000	8.394
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	464648	5.00000	5.234
	6 2-Chlorophenol	128	8.804	8.804	(0.964)	547166	5.00000	5.380
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	511296	5.00000	4.967
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	265417	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	560345	5.00000	5.459
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	330641	5.00000	5.108
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	480167	5.00000	4.976
	11 Benzyl alcohol	108	9.417	9.417	(1.031)	300790	5.00000	5.305
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	154832	5.00000	5.692
	13 2-Methylphenol	108	9.634	9.634	(1.055)	447550	5.00000	5.000
	17 Hexachloroethane	117	10.107	10.107	(1.106)	210981	5.00000	5.138
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	355840	5.00000	5.196
	15 4-Methylphenol	108	9.902	9.902	(1.084)	467666	5.00000	5.132
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	576989	5.00000	5.190
	19 Nitrobenzene	77	10.260	10.260	(0.884)	544077	5.00000	5.130
	20 Isophorone	82	10.707	10.707	(0.923)	810025	5.00000	5.579
	21 2-Nitrophenol	139	10.873	10.873	(0.937)	291425	5.00000	5.702
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	910391	10.0000	9.175
	23 Bis(2-Chloroethoxy)methane	93	11.116	11.116	(0.958)	429139	5.00000	4.823
	24 Benzoic acid	105	11.192	11.192	(0.965)	1415934	20.0000	21.21
	25 2,4-Dichlorophenol	162	11.333	11.333	(0.977)	854819	10.0000	10.72
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	401282	5.00000	4.634
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	976764	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	1320734	5.00000	4.917
	29 4-Chloroaniline	127	11.766	11.766	(1.014)	1104890	10.0000	10.44
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	226268	5.00000	5.275
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	930111	10.0000	10.83
	32 2-Methylnaphthalene	142	13.028	13.028	(1.123)	986044	5.00000	5.127
	33 Hexachlorocyclopentadiene	237	13.487	13.487	(0.888)	342230	10.0000	6.911

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.641	13.641	(0.898)	574397	10.0000	10.31
35	2,4,5-Trichlorophenol	196	13.717	13.717	(0.903)	633940	10.0000	10.75
$ 36	2-Fluorobiphenyl	172	13.794	13.794	(0.908)	1067855	5.00000	5.090
37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	851561	5.00000	5.003
38	2-Nitroaniline	65	14.278	14.278	(0.940)	643364	10.0000	11.16
39	Dimethylphthalate	163	14.699	14.699	(0.968)	958391	5.00000	5.230
40	Acenaphthylene	152	14.878	14.878	(0.980)	1381569	5.00000	5.111
41	2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	459947	10.0000	10.72
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	532567	4.00000	
43	3-Nitroaniline	138	15.120	15.120	(0.996)	362179	10.0000	9.115
44	Acenaphthene	153	15.247	15.247	(1.004)	863605	5.00000	5.111
45	2,4-Dinitrophenol	184	15.337	15.337	(1.010)	583209	20.0000	21.63
46	Dibenzofuran	168	15.579	15.579	(1.026)	1200604	5.00000	5.091
47	4-Nitrophenol	109	15.451	15.451	(1.018)	295004	10.0000	11.18
48	2,4-Dinitrotoluene	165	15.643	15.643	(1.030)	624642	10.0000	11.12
50	Diethylphthalate	149	16.140	16.140	(1.063)	933669	5.00000	5.225
49	Fluorene	166	16.280	16.280	(1.072)	1263236	5.00000	5.634
51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	552733	5.00000	5.363
52	4-Nitroaniline	138	16.382	16.382	(1.079)	393973	10.0000	10.48
53	4,6-Dinitro-2-methylphenol	198	16.483	16.483	(0.906)	738856	20.0000	19.16
54	N-Nitrosodiphenylamine	169	16.522	16.522	(0.908)	597892	5.00000	4.416
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	184592	7.50000	7.946
56	4-Bromophenyl-phenylether	248	17.272	17.272	(0.949)	242912	5.00000	5.121
57	Hexachlorobenzene	284	17.591	17.591	(0.966)	254645	5.00000	5.268
58	Pentachlorophenol	266	17.948	17.948	(0.986)	285956	10.0000	9.745
* 59	Phenanthrene-d10	188	18.203	18.203	(1.000)	966524	4.00000	
60	Phenanthrene	178	18.254	18.254	(1.003)	1371898	5.00000	4.865
61	Anthracene	178	18.343	18.343	(1.008)	1296441	5.00000	4.896
62	Carbazole	167	18.688	18.688	(1.027)	957115	5.00000	5.601
63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	1604408	5.00000	5.018
64	Fluoranthene	202	20.613	20.613	(0.888)	1472392	5.00000	4.860
65	Pyrene	202	21.034	21.034	(0.906)	1479222	5.00000	4.816
$ 66	Terphenyl-d14	244	21.315	21.315	(0.918)	1111663	5.00000	5.091
67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	638835	5.00000	4.647
68	Benzo(a)anthracene	228	23.190	23.190	(0.999)	1226095	5.00000	5.141
* 69	Chrysene-d12	240	23.215	23.215	(1.000)	647716	4.00000	
70	3,3'-Dichlorobenzidine	252	23.139	23.139	(0.997)	616429	15.0000	12.68
71	Chrysene	228	23.254	23.254	(1.002)	1154624	5.00000	5.145
72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	906576	5.00000	5.070
* 134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1235998	4.00000	
73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	1519661	5.00000	4.851
74	Benzo(b)fluoranthene	252	25.052	25.052	(0.971)	1086815	5.00000	4.468
75	Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	1227326	5.00000	5.340
76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	942016	5.00000	4.916
* 77	Perylene-d12	264	25.805	25.805	(1.000)	613582	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.423	28.423	(1.101)	1093274	5.00000	4.918
79	Dibenzo(a,h)anthracene	278	28.436	28.436	(1.102)	916991	5.00000	4.915
80	Benzo(g,h,i)perylene	276	29.203	29.203	(1.132)	864798	5.00000	4.714
90	N-Nitrosodimethylamine	74	4.867	4.867	(0.533)	559667	10.0000	9.657
91	Aniline	93	8.600	8.600	(0.941)	1043548	10.0000	10.23
93	Benzidine	184	20.856	20.856	(0.898)	243730	10.0000	3.190
103	Pyridine	79	4.893	4.893	(0.536)	826650	10.0000	8.993
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	880056	5.00000	4.933
111	Azobenzene (1,2-DP-Hydrazine)	77	16.598	16.598	(1.093)	1091603	5.00000	5.233

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.091	25.091	(0.972)	2110497	10.0000	9.665
120 2,3,4,6-Tetrachlorophenol	232	15.910	15.910	(1.048)	301539	5.00000	4.523

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012304.D
Lab Smp Id: SLF0008-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 13:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265417	132709	530834	265417	0.00
27 Naphthalene-d8	976764	488382	1953528	976764	0.00
42 Acenaphthene-d10	532567	266284	1065134	532567	0.00
59 Phenanthrene-d10	966524	483262	1933048	966524	0.00
69 Chrysene-d12	647716	323858	1295432	647716	0.00
134 Di-n-octylphthala	1235998	617999	2471996	1235998	0.00
77 Perylene-d12	613582	306791	1227164	613582	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012304.D

Lab ID: SLF0008-ICV1
nt17.i, ABN.m, 01-JUN-2023 13:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b

Instrument: nt17.i Date: 01-JUN-2023 Method: ABN.m

INITIAL CAL: 09-MAY-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1706012304.D 01-JUN-2023 13:58

Compound	%D
Hexachlorocyclopentadiene	-30.9
Benzidine	-68.1

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012320.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/01/23
Lab Sample ID:	SLF0008-ICV2	Injection Time:	23:52
Sequence Name:	ABN 5		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Phenol	A	5.0000	5.0	1.8353850	1.8520740		0.9	+/-20	
4-Methylphenol	A	5.0000	5.0	1.3734410	1.3729030		-0.04	+/-20	
Naphthalene	A	5.0000	4.9	1.0999940	1.0734920		-2.4	+/-20	
2-Methylnaphthalene	A	5.0000	5.1	0.7875944	0.8028316		1.9	+/-20	
Acenaphthylene	A	5.0000	5.0	2.0301060	2.0293940		-0.04	+/-20	
Dimethylphthalate	A	5.0000	5.3	1.3763	1.4464520		5.1	+/-20	
Acenaphthene	A	5.0000	5.1	1.2690180	1.2854330		1.3	+/-20	
Dibenzofuran	A	5.0000	5.2	1.7711910	1.8340950		3.6	+/-20	
Fluorene	A	5.0000	5.5	1.6839010	1.8688460		11.0	+/-20	
Phenanthrene	A	5.0000	4.8	1.1671410	1.1228330		-3.8	+/-20	
Anthracene	A	5.0000	5.2	1.0957620	1.1316790		3.3	+/-20	
Fluoranthene	A	5.0000	4.9	1.8710850	1.8236770		-2.5	+/-20	
Pyrene	A	5.0000	4.8	1.8967730	1.8357420		-3.2	+/-20	
Butylbenzylphthalate	A	5.0000	4.9	0.8489339	0.8365003		-1.5	+/-20	
Benzo(a)anthracene	A	5.0000	5.1	1.4729210	1.5144740		2.8	+/-20	
Chrysene	A	5.0000	5.2	1.3859970	1.4436970		4.2	+/-20	
bis(2-Ethylhexyl)phthalate	A	5.0000	5.0	0.5787277	171533.0000		0.3	+/-20	
Benzofluoranthenes, Total	A	10.000	10.2	1.4236150	1.4470090		1.6	+/-20	
Benzo(a)pyrene	A	5.0000	4.9	1.2492830	1.2271510		-1.8	+/-20	
Indeno(1,2,3-cd)pyrene	A	5.0000	4.3	1.4490690	1.2566050		-13.3	+/-20	
Dibenzo(a,h)anthracene	A	5.0000	4.6	1.2161710	1.1125340		-8.5	+/-20	
Benzo(g,h,i)perylene	A	5.0000	3.7	1.1960510	0.8778737		-26.6	+/-20	*
2-Fluorophenol	A	7.5000	7.70	1.3093930	1.3450470		2.7	+/-20	
Phenol-d5	A	7.5000	7.68	1.7328160	1.7745180		2.4	+/-20	
2-Chlorophenol-d4	A	7.5000	7.56	1.3879870	1.3987730		0.8	+/-20	
1,2-Dichlorobenzene-d4	A	5.0000	5.15	0.9755818	1.0049440		3.0	+/-20	
Nitrobenzene-d5	A	5.0000	5.21	0.4552457	0.4747527		4.3	+/-20	
2-Fluorobiphenyl	A	5.0000	5.11	1.5758130	1.6105010		2.2	+/-20	
2,4,6-Tribromophenol	A	7.5000	8.42	0.1414414	0.1958415		12.2	+/-20	
p-Terphenyl-d14	A	5.0000	5.22	1.3483810	1.4071360		4.4	+/-20	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012320.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/01/23
Lab Sample ID:	SLF0008-ICV2	Injection Time:	23:52
Sequence Name:	ABN 5		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	74521.0400	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	263513.0000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	142608.8000	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	231763.7000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	143610.7000	1.0000		0.0	
Di-n-Octylphthalate-d4	A		4000	285983.8000				
Perylene-d12	A	4.0000	4.0	123763.9000	1.0000		0.0	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012320.D

Page 1

Date : 01-JUN-2023 23:52

Client ID:

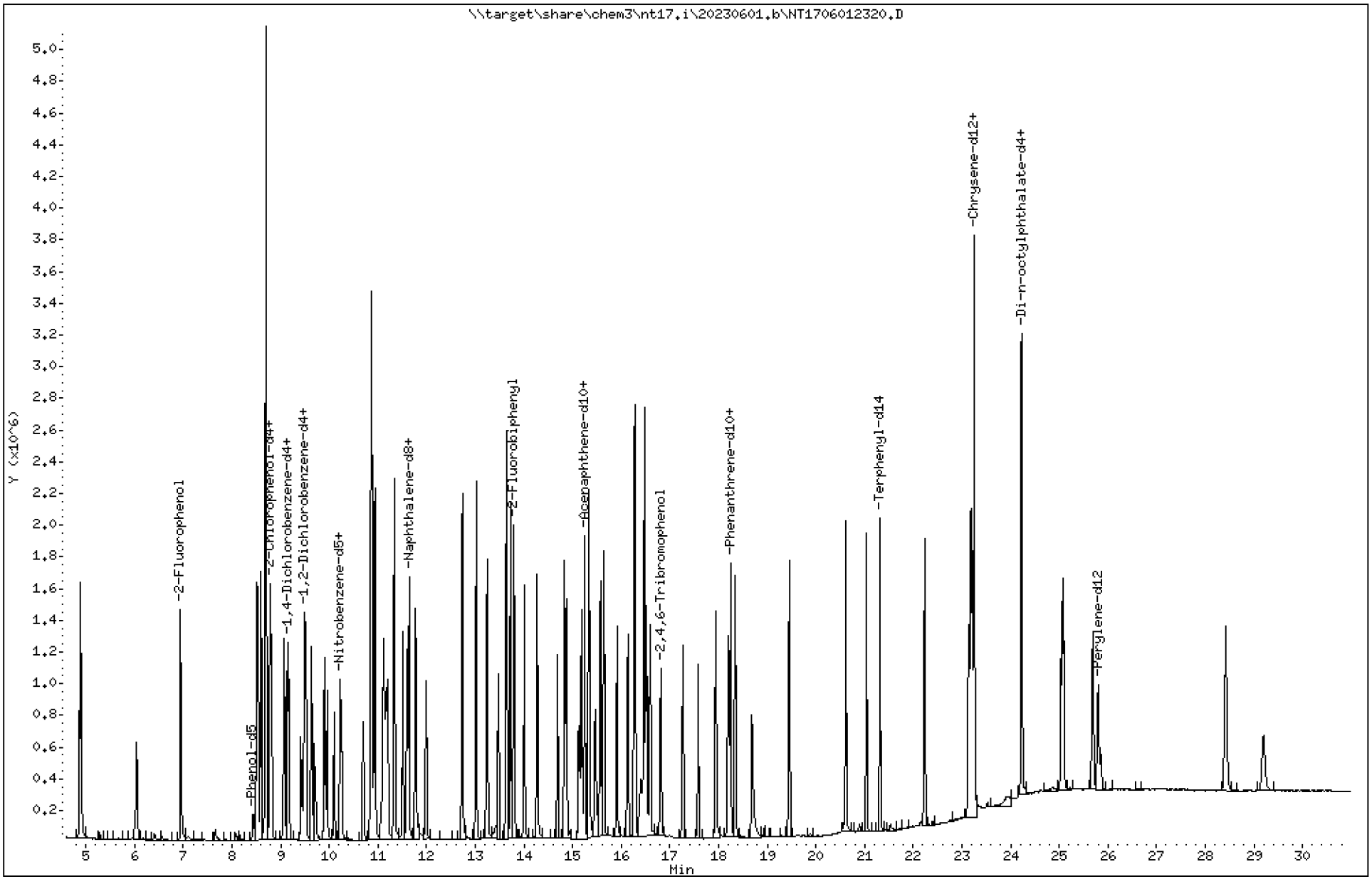
Instrument: nt17.i

Sample Info: SLF0008-ICV2

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012320.D
Lab Smp Id: SLF0008-ICV2
Inj Date : 01-JUN-2023 23:52
Operator : VTS Inst ID: nt17.i
Smp Info : SLF0008-ICV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.944	6.944	(0.760)	648162	7.50000	7.704
$	2 Phenol-d5	99	8.511	8.511	(0.932)	855119	7.50000	7.680
	3 Phenol	94	8.536	8.536	(0.934)	594995	5.00000	5.045
$	5 2-Chlorophenol-d4	132	8.778	8.778	(0.961)	674052	7.50000	7.558
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	472907	5.00000	5.501
	6 2-Chlorophenol	128	8.804	8.804	(0.964)	535126	5.00000	5.434
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	487321	5.00000	4.889
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	257007	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	541727	5.00000	5.450
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	322847	5.00000	5.150
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	469303	5.00000	5.022
	11 Benzyl alcohol	108	9.417	9.417	(1.031)	284636	5.00000	5.184
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	130354	5.00000	4.949
	13 2-Methylphenol	108	9.634	9.634	(1.055)	415597	5.00000	4.795
	17 Hexachloroethane	117	10.094	10.094	(1.105)	197711	5.00000	4.972
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	342104	5.00000	5.159
	15 4-Methylphenol	108	9.902	9.902	(1.084)	441057	5.00000	4.998
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	553624	5.00000	5.214
	19 Nitrobenzene	77	10.260	10.260	(0.884)	525258	5.00000	5.185
	20 Isophorone	82	10.707	10.707	(0.923)	776045	5.00000	5.596
	21 2-Nitrophenol	139	10.873	10.873	(0.937)	284660	5.00000	5.832
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	874203	10.0000	9.224
	23 Bis(2-Chloroethoxy)methane	93	11.116	11.116	(0.958)	417510	5.00000	4.913
	24 Benzoic acid	105	11.192	11.192	(0.965)	1366569	20.0000	21.44
	25 2,4-Dichlorophenol	162	11.333	11.333	(0.977)	810996	10.0000	10.65
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	391861	5.00000	4.738
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	932905	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	1251832	5.00000	4.880
	29 4-Chloroaniline	127	11.766	11.766	(1.014)	950995	10.0000	9.404
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	211297	5.00000	5.157
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	873762	10.0000	10.66
	32 2-Methylnaphthalene	142	13.016	13.016	(1.122)	936207	5.00000	5.097
	33 Hexachlorocyclopentadiene	237	13.487	13.487	(0.888)	295882	10.0000	6.244

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.640	13.640	(0.898)	558223	10.0000	10.47
	35	2,4,5-Trichlorophenol	196	13.717	13.717	(0.903)	607382	10.0000	10.76
$	36	2-Fluorobiphenyl	172	13.793	13.793	(0.908)	1025837	5.00000	5.110
	37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	812522	5.00000	4.989
	38	2-Nitroaniline	65	14.278	14.278	(0.940)	672172	10.0000	12.19
	39	Dimethylphthalate	163	14.686	14.686	(0.967)	921343	5.00000	5.255
	40	Acenaphthylene	152	14.878	14.878	(0.980)	1292658	5.00000	4.998
	41	2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	428064	10.0000	10.43
*	42	Acenaphthene-d10	164	15.184	15.184	(1.000)	509574	4.00000	
	43	3-Nitroaniline	138	15.133	15.133	(0.997)	303388	10.0000	7.980
	44	Acenaphthene	153	15.247	15.247	(1.004)	818779	5.00000	5.065
	45	2,4-Dinitrophenol	184	15.337	15.337	(1.010)	546101	20.0000	21.19
	46	Dibenzofuran	168	15.579	15.579	(1.026)	1168259	5.00000	5.178
	47	4-Nitrophenol	109	15.464	15.464	(1.018)	246826	10.0000	9.774
	48	2,4-Dinitrotoluene	165	15.642	15.642	(1.030)	591091	10.0000	11.00
	50	Diethylphthalate	149	16.140	16.140	(1.063)	889195	5.00000	5.200
	49	Fluorene	166	16.280	16.280	(1.072)	1190394	5.00000	5.549
	51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	536691	5.00000	5.442
	52	4-Nitroaniline	138	16.407	16.407	(1.081)	309234	10.0000	8.593
	53	4,6-Dinitro-2-methylphenol	198	16.471	16.471	(0.905)	696875	20.0000	19.13
	54	N-Nitrosodiphenylamine	169	16.521	16.521	(0.908)	597213	5.00000	4.671
$	55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	187117	7.50000	8.418
	56	4-Bromophenyl-phenylether	248	17.260	17.260	(0.948)	236640	5.00000	5.282
	57	Hexachlorobenzene	284	17.578	17.578	(0.966)	241635	5.00000	5.293
	58	Pentachlorophenol	266	17.935	17.935	(0.985)	284383	10.0000	10.24
*	59	Phenanthrene-d10	188	18.203	18.203	(1.000)	912749	4.00000	
	60	Phenanthrene	178	18.241	18.241	(1.002)	1281081	5.00000	4.810
	61	Anthracene	178	18.343	18.343	(1.008)	1291174	5.00000	5.164
	62	Carbazole	167	18.688	18.688	(1.027)	1069917	5.00000	6.547
	63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	1510536	5.00000	5.003
	64	Fluoranthene	202	20.613	20.613	(0.888)	1317632	5.00000	4.873
	65	Pyrene	202	21.034	21.034	(0.906)	1326349	5.00000	4.839
$	66	Terphenyl-d14	244	21.315	21.315	(0.918)	1016675	5.00000	5.218
	67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	604383	5.00000	4.927
	68	Benzo(a)anthracene	228	23.190	23.190	(0.999)	1094228	5.00000	5.141
*	69	Chrysene-d12	240	23.215	23.215	(1.000)	578011	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.139	23.139	(0.997)	611257	15.0000	14.00
	71	Chrysene	228	23.254	23.254	(1.002)	1043091	5.00000	5.208
	72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	857665	5.00000	5.017
*	134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1181490	4.00000	
	73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	1459875	5.00000	4.875
	74	Benzo(b)fluoranthene	252	25.052	25.052	(0.971)	959390	5.00000	4.711
	75	Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	1075722	5.00000	5.591
	76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	787958	5.00000	4.911
*	77	Perylene-d12	264	25.805	25.805	(1.000)	513683	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.423	28.423	(1.101)	806871	5.00000	4.336
	79	Dibenzo(a,h)anthracene	278	28.423	28.423	(1.101)	714362	5.00000	4.574
	80	Benzo(g,h,i)perylene	276	29.203	29.203	(1.132)	563686	5.00000	3.670
	90	N-Nitrosodimethylamine	74	4.867	4.867	(0.533)	549029	10.0000	9.783
	91	Aniline	93	8.600	8.600	(0.941)	1000435	10.0000	10.12
	93	Benzidine	184	20.881	20.881	(0.899)	42922	10.0000	0.6387
	103	Pyridine	79	4.893	4.893	(0.536)	796548	10.0000	8.949
	105	1-methylnaphthalene	142	13.245	13.245	(1.142)	842050	5.00000	4.941
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.585	16.585	(1.092)	1047499	5.00000	5.248

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.091	25.091	(0.972)	1858260	10.0000	10.16
120 2,3,4,6-Tetrachlorophenol	232	15.910	15.910	(1.048)	302333	5.00000	4.739

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012320.D
Lab Smp Id: SLF0008-ICV2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 13:58
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	257007	0.00
27 Naphthalene-d8	932905	466453	1865810	932905	0.00
42 Acenaphthene-d10	509574	254787	1019148	509574	0.00
59 Phenanthrene-d10	912749	456375	1825498	912749	0.00
69 Chrysene-d12	578011	289006	1156022	578011	0.00
134 Di-n-octylphthala	1181490	590745	2362980	1181490	0.00
77 Perylene-d12	513683	256842	1027366	513683	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012320.D

Lab ID: SLF0008-ICV2
nt17.i, ABN.m, 01-JUN-2023 23:52

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

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b

Instrument: nt17.i Date: 01-JUN-2023 Method: ABN.m

INITIAL CAL: 09-MAY-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1706012320.D 01-JUN-2023 23:52

Compound	%D
Hexachlorocyclopentadiene	-37.6
2-Nitroaniline	21.87
3-Nitroaniline	-20.20
Carbazole	30.9
Benzo(g,h,i)perylene	-26.60
Benzidine	-93.6

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012338.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/02/23
Lab Sample ID:	SLF0008-ICV3	Injection Time:	11:02
Sequence Name:	ABN 5		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Phenol	A	5.0000	5.1	1.8353850	1.8647680		1.6	+/-20	
4-Methylphenol	A	5.0000	5.0	1.3734410	1.3783360		0.4	+/-20	
Naphthalene	A	5.0000	4.9	1.0999940	1.0839790		-1.5	+/-20	
2-Methylnaphthalene	A	5.0000	5.0	0.7875944	0.7926545		0.6	+/-20	
Acenaphthylene	A	5.0000	5.0	2.0301060	2.0187110		-0.6	+/-20	
Dimethylphthalate	A	5.0000	5.2	1.3763	1.4196500		3.1	+/-20	
Acenaphthene	A	5.0000	5.0	1.2690180	1.2651310		-0.3	+/-20	
Dibenzofuran	A	5.0000	5.1	1.7711910	1.8045760		1.9	+/-20	
Fluorene	A	5.0000	5.5	1.6839010	1.8552340		10.2	+/-20	
Phenanthrene	A	5.0000	4.9	1.1671410	1.1368330		-2.6	+/-20	
Anthracene	A	5.0000	5.2	1.0957620	1.1324910		3.4	+/-20	
Fluoranthene	A	5.0000	5.0	1.8710850	1.8691180		-0.1	+/-20	
Pyrene	A	5.0000	4.9	1.8967730	1.8505860		-2.4	+/-20	
Butylbenzylphthalate	A	5.0000	5.0	0.8489339	0.8442619		-0.6	+/-20	
Benzo(a)anthracene	A	5.0000	5.1	1.4729210	1.5153870		2.9	+/-20	
Chrysene	A	5.0000	5.1	1.3859970	1.4126940		1.9	+/-20	
bis(2-Ethylhexyl)phthalate	A	5.0000	4.9	0.5787277	148445.4000		-1.1	+/-20	
Benzofluoranthenes, Total	A	10.000	10.3	1.4236150	1.4688200		3.2	+/-20	
Benzo(a)pyrene	A	5.0000	5.0	1.2492830	1.2497550		0.04	+/-20	
Indeno(1,2,3-cd)pyrene	A	5.0000	4.0	1.4490690	1.1593120		-20.0	+/-20	
Dibenzo(a,h)anthracene	A	5.0000	4.2	1.2161710	1.0228810		-15.9	+/-20	
Benzo(g,h,i)perylene	A	5.0000	3.3	1.1960510	0.7886794		-34.1	+/-20	*
2-Fluorophenol	A	7.5000	7.88	1.3093930	1.3750970		5.0	+/-20	
Phenol-d5	A	7.5000	7.73	1.7328160	1.7854750		3.0	+/-20	
2-Chlorophenol-d4	A	7.5000	7.56	1.3879870	1.3993690		0.8	+/-20	
1,2-Dichlorobenzene-d4	A	5.0000	5.04	0.9755818	0.9836695		0.8	+/-20	
Nitrobenzene-d5	A	5.0000	5.25	0.4552457	0.4780470		5.0	+/-20	
2-Fluorobiphenyl	A	5.0000	5.06	1.5758130	1.5940360		1.2	+/-20	
2,4,6-Tribromophenol	A	7.5000	8.23	0.1414414	0.1914248		9.7	+/-20	
p-Terphenyl-d14	A	5.0000	5.36	1.3483810	1.4442		7.1	+/-20	

* Values outside of QC limits

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012338.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/02/23
Lab Sample ID:	SLF0008-ICV3	Injection Time:	11:02
Sequence Name:	ABN 5		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	74521.0400	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	263513.0000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	142608.8000	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	231763.7000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	143610.7000	1.0000		0.0	
Di-n-Octylphthalate-d4	A		4000	285983.8000				
Perylene-d12	A	4.0000	4.0	123763.9000	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012338.D

Date : 02-JUN-2023 11:02

Client ID:

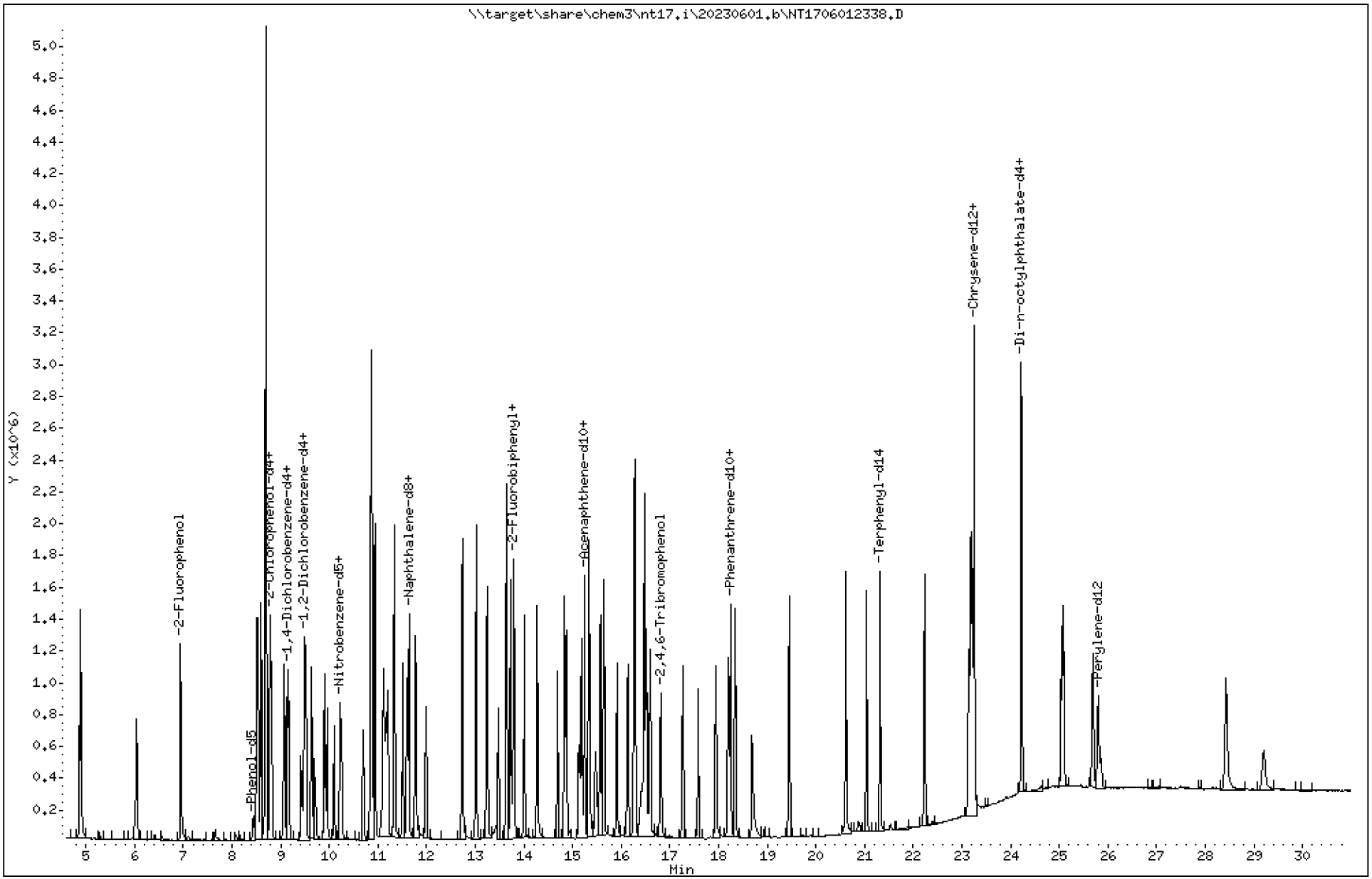
Instrument: nt17.i

Sample Info: SLF0008-ICV3

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012338.D
Lab Smp Id: SLF0008-ICV3
Inj Date : 02-JUN-2023 11:02
Operator : VTS Inst ID: nt17.i
Smp Info : SLF0008-ICV3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:44 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
		QUANT SIG					CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1 2-Fluorophenol	112	6.944	6.944	(0.760)	576053	7.50000	7.876
$	2 Phenol-d5	99	8.511	8.511	(0.932)	747968	7.50000	7.728
	3 Phenol	94	8.536	8.536	(0.934)	520790	5.00000	5.080
$	5 2-Chlorophenol-d4	132	8.778	8.778	(0.961)	586221	7.50000	7.562
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	417785	5.00000	5.590
	6 2-Chlorophenol	128	8.804	8.804	(0.964)	403541	5.00000	4.714
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	426564	5.00000	4.923
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	223423	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	475464	5.00000	5.502
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	274718	5.00000	5.041
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	406018	5.00000	4.998
	11 Benzyl alcohol	108	9.417	9.417	(1.031)	246742	5.00000	5.170
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	113375	5.00000	4.952
	13 2-Methylphenol	108	9.634	9.634	(1.055)	364977	5.00000	4.844
	17 Hexachloroethane	117	10.094	10.094	(1.105)	171536	5.00000	4.962
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	304045	5.00000	5.275
	15 4-Methylphenol	108	9.902	9.902	(1.084)	384940	5.00000	5.018
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	484129	5.00000	5.250
	19 Nitrobenzene	77	10.260	10.260	(0.884)	449307	5.00000	5.107
	20 Isophorone	82	10.707	10.707	(0.923)	682817	5.00000	5.670
	21 2-Nitrophenol	139	10.873	10.873	(0.937)	246213	5.00000	5.808
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	768168	10.0000	9.333
	23 Bis(2-Chloroethoxy)methane	93	11.116	11.116	(0.958)	360903	5.00000	4.890
	24 Benzoic acid	105	11.205	11.205	(0.966)	1157033	20.0000	20.90
	25 2,4-Dichlorophenol	162	11.333	11.333	(0.977)	712177	10.0000	10.77
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	337234	5.00000	4.695
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	810178	4.00000	
	28 Naphthalene	128	11.638	11.638	(1.003)	1097770	5.00000	4.927
	29 4-Chloroaniline	127	11.766	11.766	(1.014)	822999	10.0000	9.371
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	187423	5.00000	5.267
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	768073	10.0000	10.79
	32 2-Methylnaphthalene	142	13.015	13.015	(1.122)	802739	5.00000	5.032
	33 Hexachlorocyclopentadiene	237	13.475	13.475	(0.887)	215200	10.0000	5.132

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.640	13.640	(0.898)	482291	10.0000	10.22
35	2,4,5-Trichlorophenol	196	13.730	13.730	(0.904)	519061	10.0000	10.39
$ 36	2-Fluorobiphenyl	172	13.793	13.793	(0.908)	898618	5.00000	5.058
37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	717810	5.00000	4.980
38	2-Nitroaniline	65	14.278	14.278	(0.940)	526999	10.0000	10.80
39	Dimethylphthalate	163	14.686	14.686	(0.967)	800310	5.00000	5.157
40	Acenaphthylene	152	14.878	14.878	(0.980)	1138023	5.00000	4.972
41	2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	380034	10.0000	10.46
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	450990	4.00000	
43	3-Nitroaniline	138	15.133	15.133	(0.997)	290529	10.0000	8.634
44	Acenaphthene	153	15.247	15.247	(1.004)	713202	5.00000	4.985
45	2,4-Dinitrophenol	184	15.336	15.336	(1.010)	453617	20.0000	19.94
46	Dibenzofuran	168	15.579	15.579	(1.026)	1017307	5.00000	5.094
47	4-Nitrophenol	109	15.464	15.464	(1.018)	197044	10.0000	8.816
48	2,4-Dinitrotoluene	165	15.642	15.642	(1.030)	521910	10.0000	10.97
50	Diethylphthalate	149	16.139	16.139	(1.063)	791517	5.00000	5.230
49	Fluorene	166	16.280	16.280	(1.072)	1045865	5.00000	5.509
51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	482650	5.00000	5.530
52	4-Nitroaniline	138	16.420	16.420	(1.081)	274981	10.0000	8.634
53	4,6-Dinitro-2-methylphenol	198	16.483	16.483	(0.906)	597098	20.0000	18.88
54	N-Nitrosodiphenylamine	169	16.521	16.521	(0.908)	523512	5.00000	4.715
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	161870	7.50000	8.228
56	4-Bromophenyl-phenylether	248	17.259	17.259	(0.948)	206659	5.00000	5.313
57	Hexachlorobenzene	284	17.578	17.578	(0.966)	213429	5.00000	5.385
58	Pentachlorophenol	266	17.948	17.948	(0.986)	242739	10.0000	10.07
* 59	Phenanthrene-d10	188	18.203	18.203	(1.000)	792538	4.00000	
60	Phenanthrene	178	18.254	18.254	(1.003)	1126229	5.00000	4.870
61	Anthracene	178	18.343	18.343	(1.008)	1121928	5.00000	5.168
62	Carbazole	167	18.688	18.688	(1.027)	912475	5.00000	6.440
63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	1338032	5.00000	5.104
64	Fluoranthene	202	20.613	20.613	(0.888)	1167577	5.00000	4.995
65	Pyrene	202	21.047	21.047	(0.907)	1156001	5.00000	4.878
$ 66	Terphenyl-d14	244	21.314	21.314	(0.918)	902145	5.00000	5.355
67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	527383	5.00000	4.972
68	Benzo(a)anthracene	228	23.190	23.190	(0.999)	946613	5.00000	5.144
* 69	Chrysene-d12	240	23.215	23.215	(1.000)	499734	4.00000	
70	3,3'-Dichlorobenzidine	252	23.152	23.152	(0.997)	575941	15.0000	15.17
71	Chrysene	228	23.254	23.254	(1.002)	882464	5.00000	5.096
72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	742227	5.00000	4.947
* 134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1036983	4.00000	
73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	1292551	5.00000	4.917
74	Benzo(b)fluoranthene	252	25.052	25.052	(0.971)	811505	5.00000	4.658
75	Benzo(k)fluoranthene	252	25.090	25.090	(0.972)	944340	5.00000	5.737
76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	686448	5.00000	5.002
* 77	Perylene-d12	264	25.805	25.805	(1.000)	439413	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.423	28.423	(1.101)	636771	5.00000	4.000
79	Dibenzo(a,h)anthracene	278	28.436	28.436	(1.102)	561834	5.00000	4.205
80	Benzo(g,h,i)perylene	276	29.203	29.203	(1.132)	433195	5.00000	3.297
90	N-Nitrosodimethylamine	74	4.867	4.867	(0.533)	478599	10.0000	9.810
91	Aniline	93	8.600	8.600	(0.941)	877632	10.0000	10.22
93	Benzidine	184	20.868	20.868	(0.899)	104548	10.0000	1.788
103	Pyridine	79	4.893	4.893	(0.536)	701922	10.0000	9.071
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	750845	5.00000	5.074
111	Azobenzene (1,2-DP-Hydrazine)	77	16.585	16.585	(1.092)	914483	5.00000	5.177

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.090	25.090	(0.972)	1613546	10.0000	10.32
120 2,3,4,6-Tetrachlorophenol	232	15.910	15.910	(1.048)	251211	5.00000	4.450

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012338.D
Lab Smp Id: SLF0008-ICV3
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	223423	-13.07
27 Naphthalene-d8	932905	466453	1865810	810178	-13.16
42 Acenaphthene-d10	509574	254787	1019148	450990	-11.50
59 Phenanthrene-d10	912749	456375	1825498	792538	-13.17
69 Chrysene-d12	578011	289006	1156022	499734	-13.54
134 Di-n-octylphthala	1181490	590745	2362980	1036983	-12.23
77 Perylene-d12	513683	256842	1027366	439413	-14.46

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	-0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	-0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012338.D

Lab ID: SLF0008-ICV3
nt17.i, ABN.m, 02-JUN-2023 11:02

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b

Instrument: nt17.i Date: 02-JUN-2023 Method: ABN.m

INITIAL CAL: 09-MAY-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1706012338.D 02-JUN-2023 11:02

Compound	%D
Hexachlorocyclopentadiene	-48.7
Carbazole	28.8
Benzo(g,h,i)perylene	-34.06
Benzidine	-82.1

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1705162311.D	Calibration Date:	05/20/2023
Sequence:	SLE0338	Injection Date:	05/17/23
Lab Sample ID:	SLE0338-SCV1	Injection Time:	00:29
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	4.8	1.8353850	1.7703870		-3.5	+/-20
bis(2-chloroethyl) ether	A	5.0000	5.6	1.3379870	1.4893240		11.3	+/-20
2-Chlorophenol	A	5.0000	5.3	1.5326990	1.6228700		5.9	+/-20
1,3-Dichlorobenzene	A	5.0000	5.3	1.5511950	1.6501940		6.4	+/-20
1,4-Dichlorobenzene	A	5.0000	5.1	1.5470660	1.5691780		1.4	+/-20
1,2-Dichlorobenzene	A	5.0000	5.3	1.4543210	1.5292780		5.2	+/-20
Benzyl Alcohol	A	5.0000	5.3	0.8545202	0.9013726		5.5	+/-20
2,2'-Oxybis(1-chloropropane)	A	5.0000	6.2	0.4099195	0.5065919		23.6	+/-20
2-Methylphenol	A	5.0000	4.2	1.3488930	1.1408950		-15.4	+/-20
Hexachloroethane	A	5.0000	5.4	0.6188571	0.6706626		8.4	+/-20
N-Nitroso-di-n-Propylamine	A	5.0000	5.5	1.0320180	1.1388000		10.3	+/-20
4-Methylphenol	A	5.0000	4.7	1.3734410	1.2803100		-6.8	+/-20
Nitrobenzene	A	5.0000	5.3	0.4343371	0.4629085		6.6	+/-20
Isophorone	A	5.0000	6.9	0.5945569	0.8255466		38.9	+/-20
2-Nitrophenol	A	5.0000	4.9	0.2092939	0.2050518		-2.0	+/-20
2,4-Dimethylphenol	A	5.0000	3.8	0.4063609	0.3078683		-24.2	+/-20
Bis(2-Chloroethoxy)methane	A	5.0000	6.2	0.3643905	0.4541653		24.6	+/-20
2,4-Dichlorophenol	A	5.0000	4.7	0.3265369	0.3074331		-5.9	+/-20
1,2,4-Trichlorobenzene	A	5.0000	5.9	0.3546444	0.4170169		17.6	+/-20
Naphthalene	A	5.0000	5.1	1.0999940	1.1283830		2.6	+/-20
Benzoic acid	A	10.000	6.8	0.2083430	0.1848088		-32.4	+/-20
4-Chloroaniline	A	5.0000	4.5	0.4335951	0.3891520		-10.2	+/-20
Hexachlorobutadiene	A	5.0000	5.2	0.1756752	0.1841292		4.8	+/-20
4-Chloro-3-Methylphenol	A	5.0000	4.9	0.3515982	0.3430524		-2.4	+/-20
2-Methylnaphthalene	A	5.0000	5.0	0.7875944	0.7919961		0.6	+/-20
Hexachlorocyclopentadiene	A	5.0000	4.2	0.2851479	0.3138457		-15.6	+/-20
2,4,6-Trichlorophenol	A	5.0000	4.8	0.4185098	0.4012473		-4.1	+/-20
2,4,5-Trichlorophenol	A	5.0000	4.8	0.4430396	0.4286209		-3.3	+/-20
2-Chloronaphthalene	A	5.0000	5.4	1.2783860	1.3808230		8.0	+/-20
2-Nitroaniline	A	5.0000	5.4	0.4329542	0.4637668		7.1	+/-20
Acenaphthylene	A	5.0000	5.3	2.0301060	2.1446180		5.6	+/-20
Dimethylphthalate	A	5.0000	5.4	1.3763000	1.4914260		8.4	+/-20
2,6-Dinitrotoluene	A	5.0000	5.4	0.3222248	0.3482538		8.1	+/-20

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E

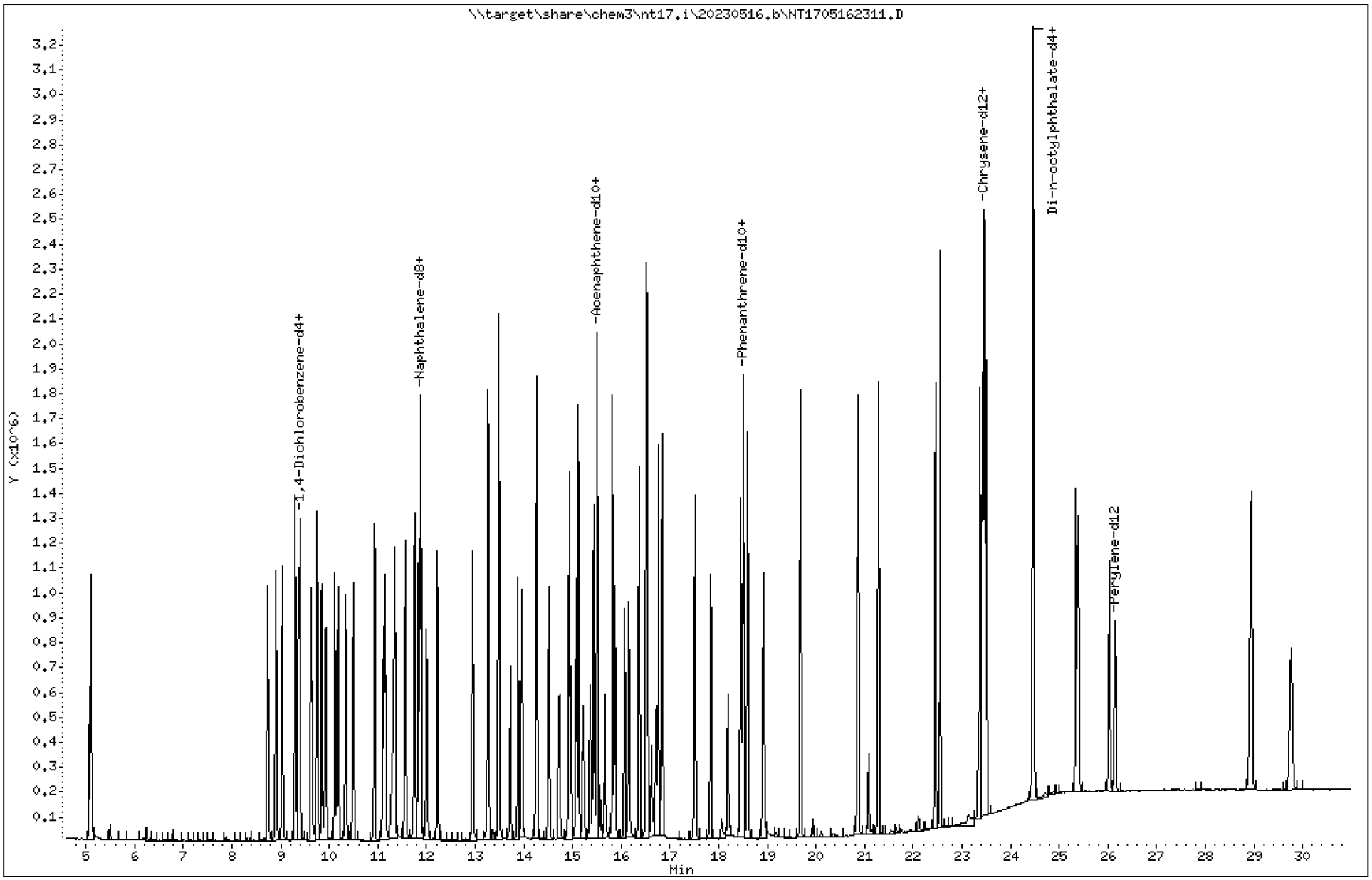
Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1705162311.D	Calibration Date:	05/20/2023
Sequence:	SLE0338	Injection Date:	05/17/23
Lab Sample ID:	SLE0338-SCV1	Injection Time:	00:29
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Acenaphthene	A	5.0000	5.3	1.2690180	1.3408840		5.7	+/-20
3-Nitroaniline	A	5.0000	5.2	0.2984432	0.3085226		3.4	+/-20
2,4-Dinitrophenol	A	5.0000	2.1	0.1541125	0.0825980		-57.6	+/-20
Dibenzofuran	A	5.0000	5.2	1.7711910	1.8289500		3.3	+/-20
4-Nitrophenol	A	5.0000	4.5	0.1664767	0.1785537		-9.9	+/-20
2,4-Dinitrotoluene	A	5.0000	5.3	0.4218034	0.4445276		5.4	+/-20
Fluorene	A	5.0000	5.4	1.6839010	1.8177980		8.0	+/-20
4-Chlorophenylphenyl ether	A	5.0000	5.5	0.7741612	0.8457125		9.2	+/-20
Diethyl phthalate	A	5.0000	5.5	1.3422100	1.4747500		9.9	+/-20
4-Nitroaniline	A	5.0000	5.1	0.2824863	0.2885721		2.2	+/-20
4,6-Dinitro-2-methylphenol	A	5.0000	3.4	0.1119544	0.1071081		-32.9	+/-20
N-Nitrosodiphenylamine	A	5.0000	5.5	0.5603251	0.6129688		9.4	+/-20
4-Bromophenyl phenyl ether	A	5.0000	5.4	0.1963243	0.2128234		8.4	+/-20
Hexachlorobenzene	A	5.0000	4.9	0.2000477	0.1965571		-1.7	+/-20
Pentachlorophenol	A	5.0000	3.9	0.0936571	0.0930616		-21.1	+/-20
Phenanthrene	A	5.0000	5.0	1.1671410	1.1763460		0.8	+/-20
Anthracene	A	5.0000	4.5	1.0957620	0.9926848		-9.4	+/-20
Carbazole	A	5.0000	5.9	0.8459395	0.8437186		18.8	+/-20
Di-n-Butylphthalate	A	5.0000	5.6	1.3231390	1.4929340		12.8	+/-20
Fluoranthene	A	5.0000	5.5	1.8710850	2.0458810		9.3	+/-20
Pyrene	A	5.0000	5.3	1.8967730	1.9974090		5.3	+/-20
Butylbenzylphthalate	A	5.0000	5.8	0.8489339	0.9889680		16.5	+/-20
Benzo(a)anthracene	A	5.0000	5.1	1.4729210	1.4918120		1.3	+/-20
3,3'-Dichlorobenzidine	A	10.000	12.0	0.3736402	0.3589686		19.9	+/-20
Chrysene	A	5.0000	5.0	1.3859970	1.3909860		0.4	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	5.8	0.5787277	0.6704186		15.8	+/-20
Di-n-Octylphthalate	A	5.0000	5.5	1.0139120	1.1117310		9.6	+/-20
Benzofluoranthenes, Total	A	10.000	10.0	1.4236150	1.4262140		0.2	+/-20
Benzo(a)pyrene	A	5.0000	5.2	1.2492830	1.2922210		3.4	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	5.0	1.4490690	1.4575380		0.6	+/-20
Dibenzo(a,h)anthracene	A	5.0000	5.0	1.2161710	1.2087610		-0.6	+/-20
Benzo(g,h,i)perylene	A	5.0000	5.1	1.1960510	1.2090820		1.1	+/-20
1-Methylnaphthalene	A	5.0000	5.3	0.7306547	0.7671913		5.0	+/-20

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D
Date : 17-MAY-2023 00:29
Client ID:
Sample Info: SLE0338-SCV1

Instrument: nt17.i
Operator: JGR
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

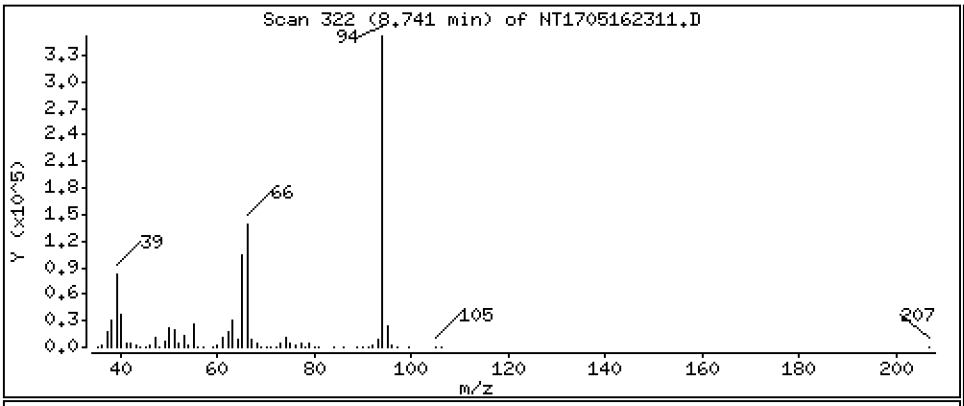
Operator: JGR

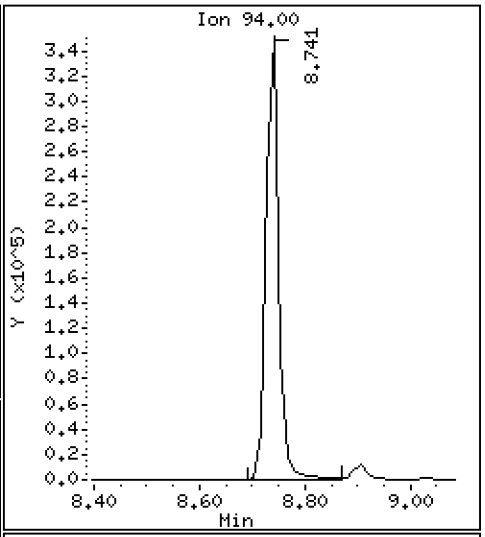
Column phase: ZB-5msi

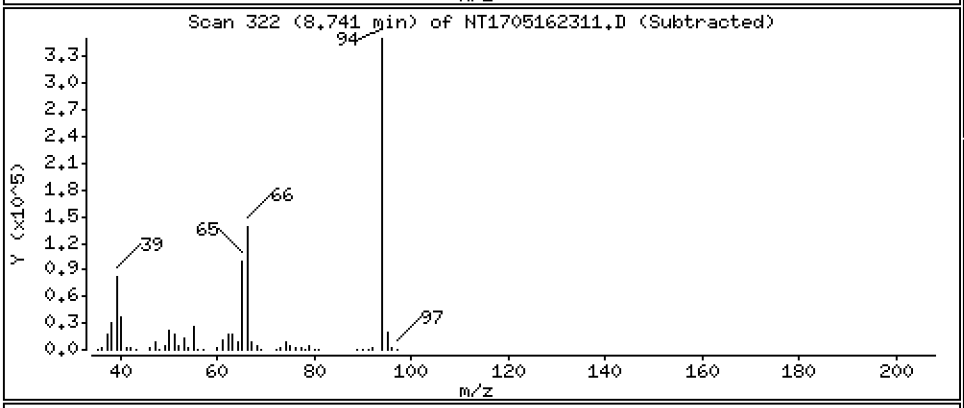
Column diameter: 0.25

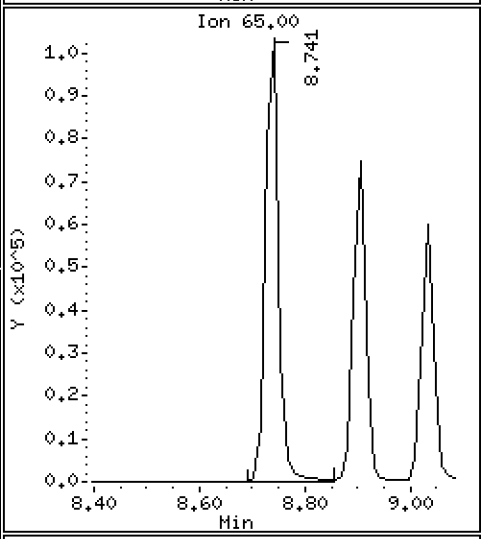
3 Phenol

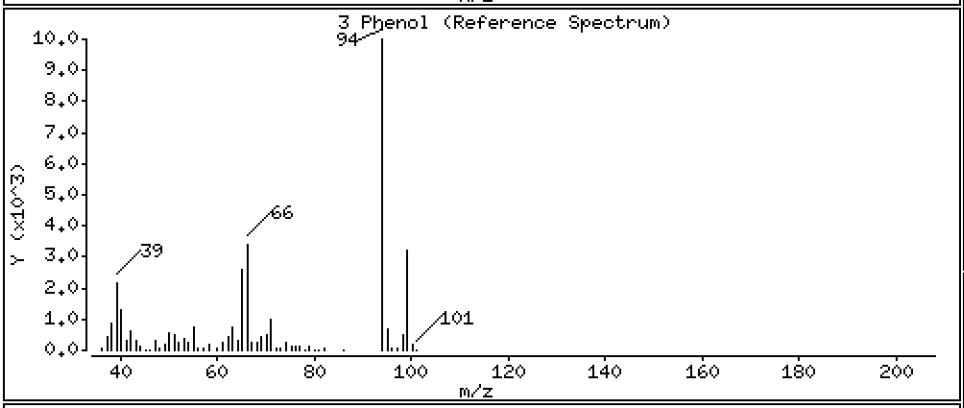
Concentration: 4.823 ug/mL

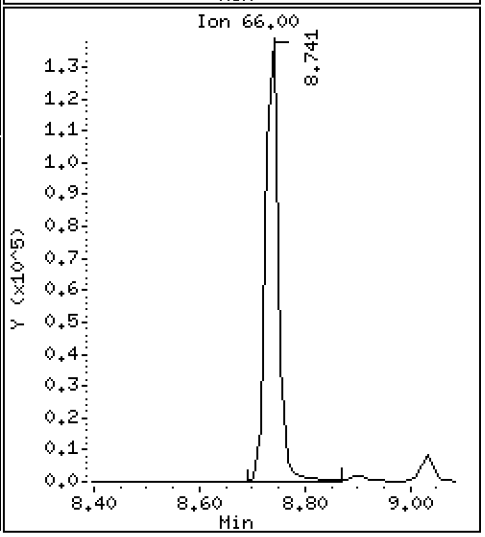


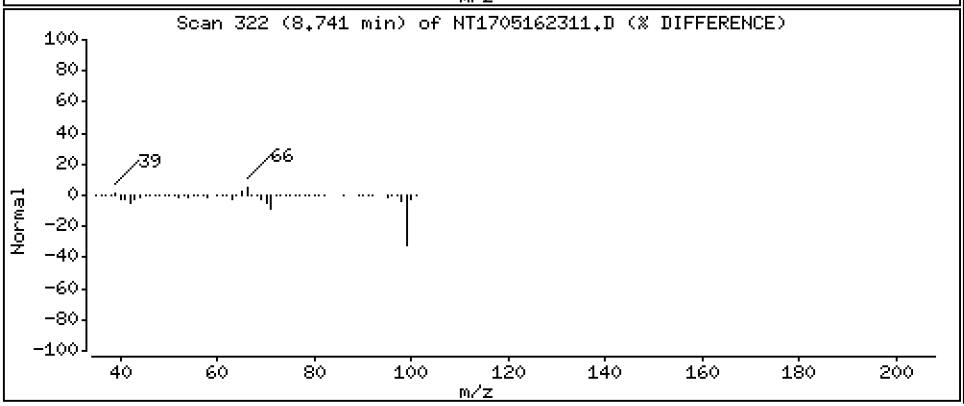












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

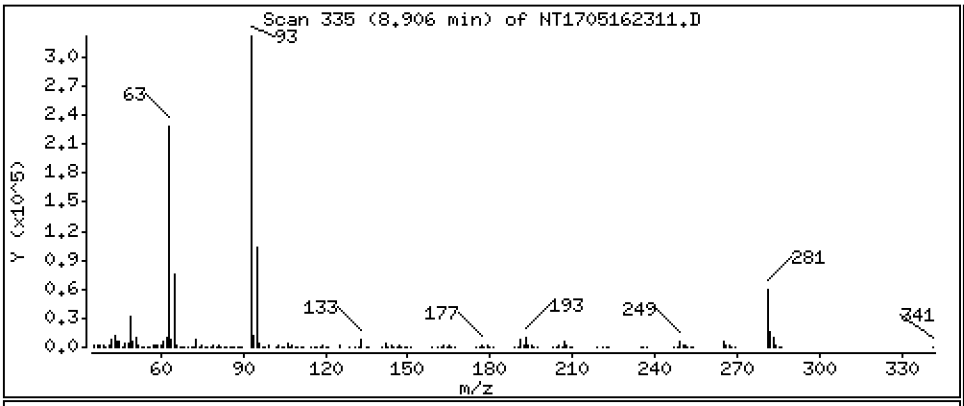
Operator: JGR

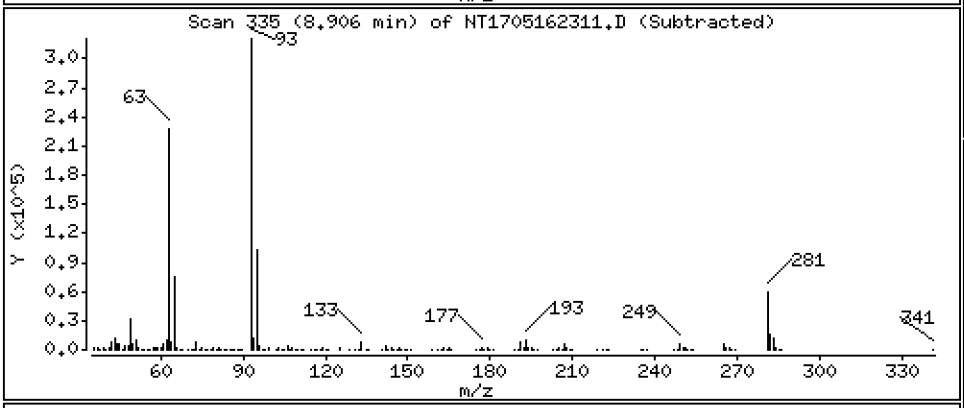
Column phase: ZB-5msi

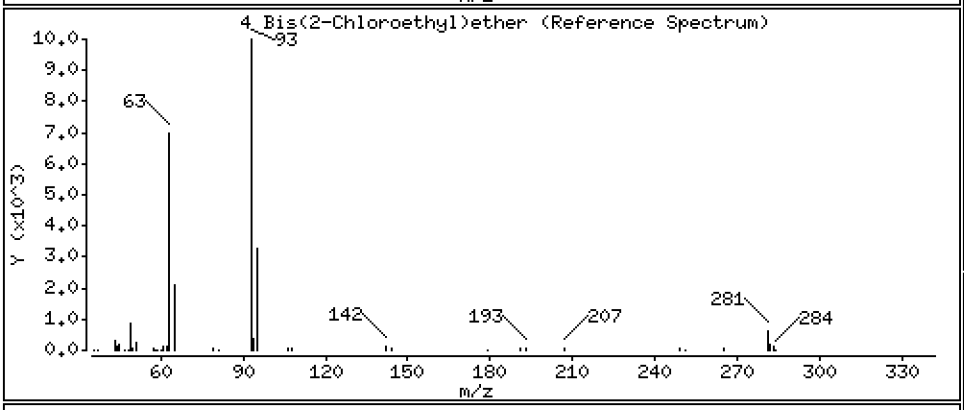
Column diameter: 0.25

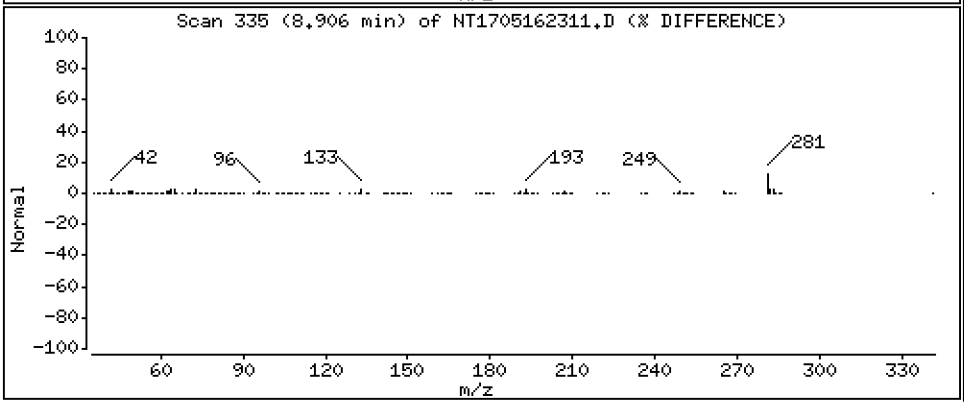
4 Bis(2-Chloroethyl)ether

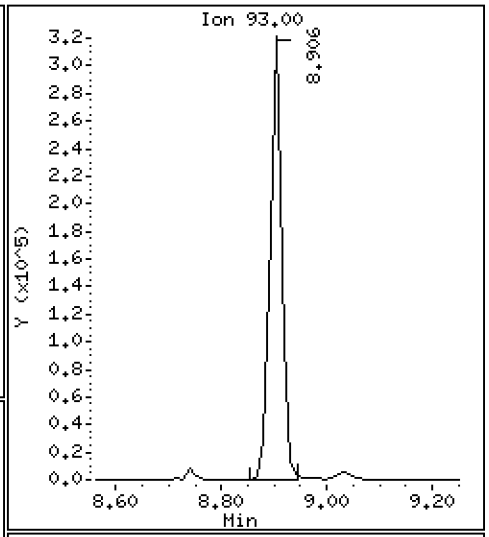
Concentration: 5.566 ug/mL

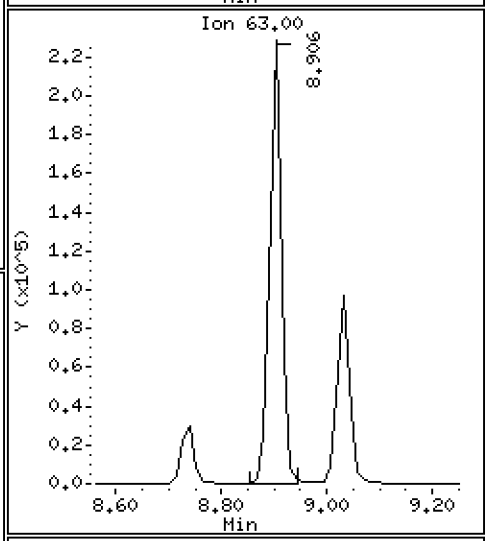


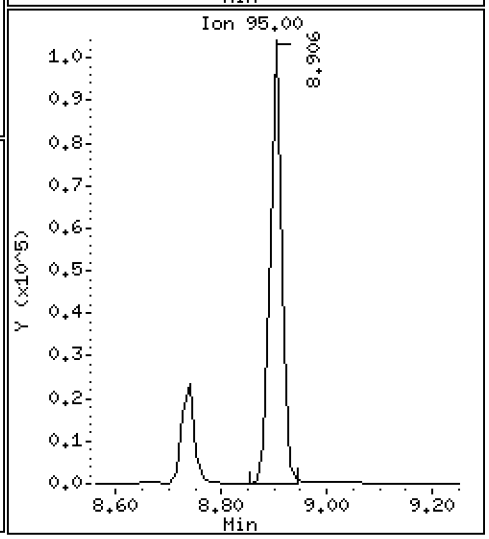












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

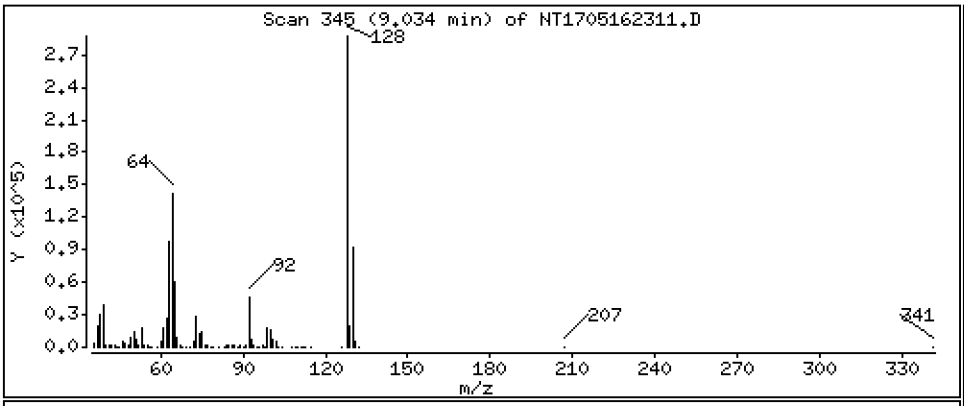
Operator: JGR

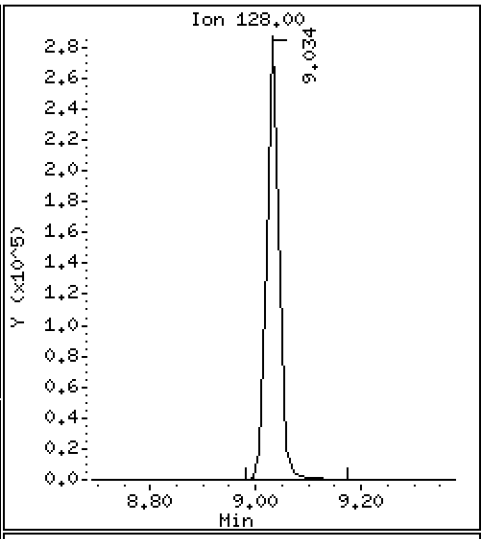
Column phase: ZB-5msi

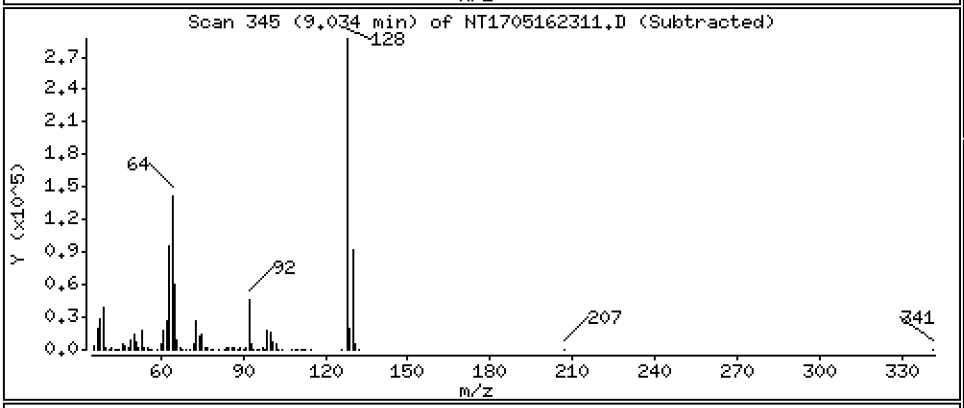
Column diameter: 0.25

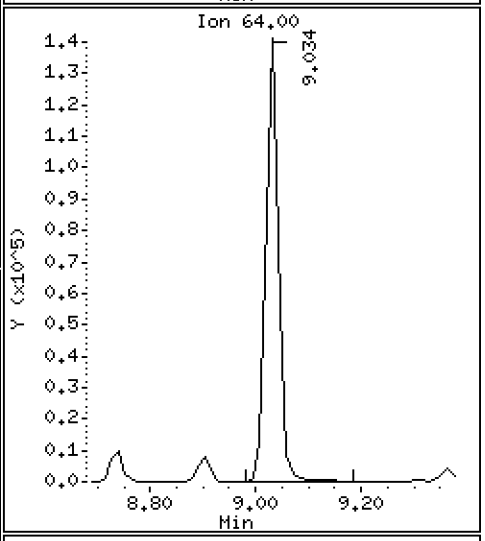
6 2-Chlorophenol

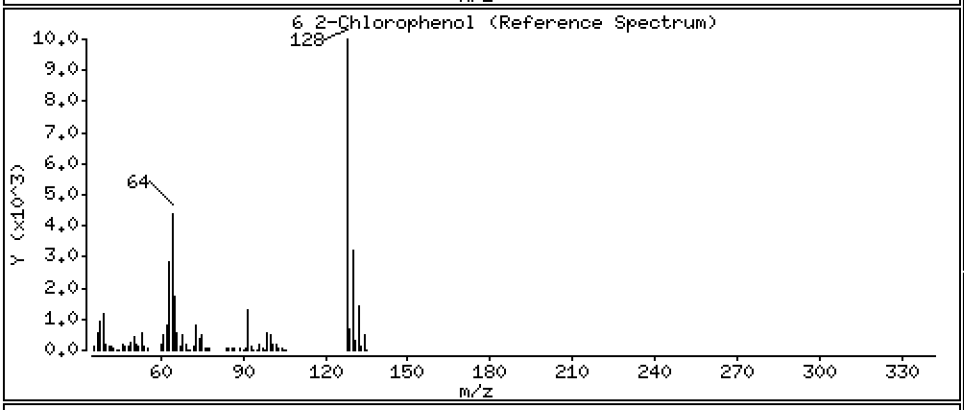
Concentration: 5.294 ug/mL

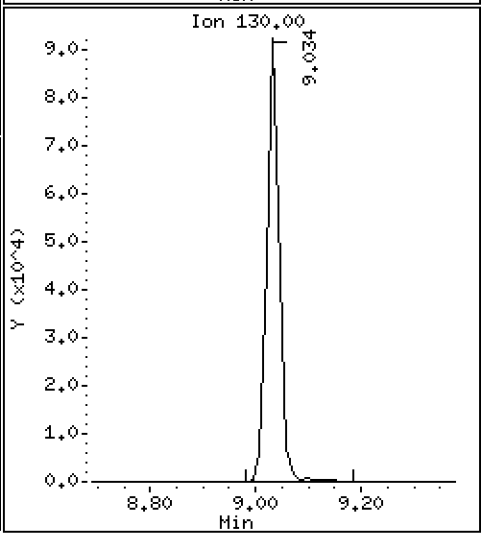


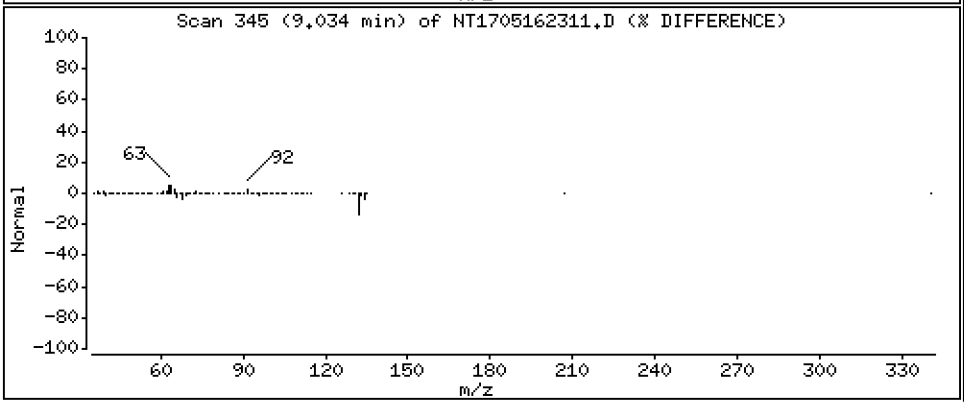












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

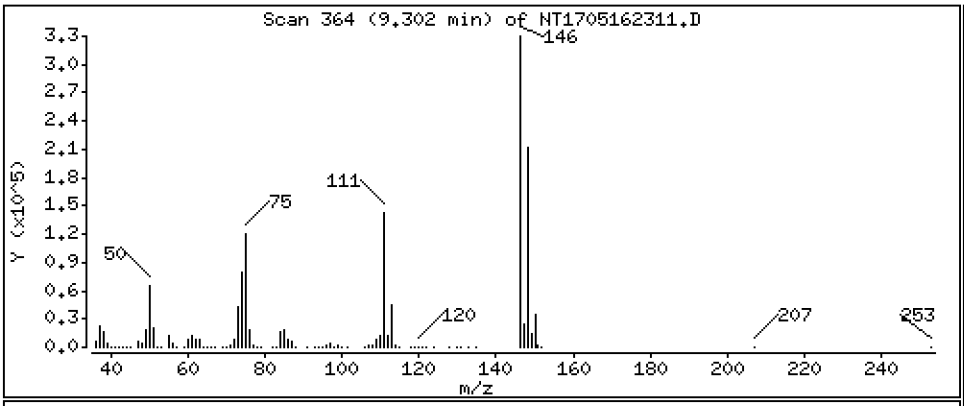
Operator: JGR

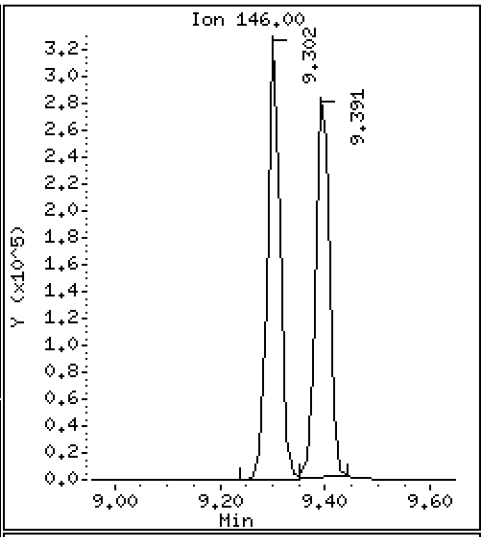
Column phase: ZB-5msi

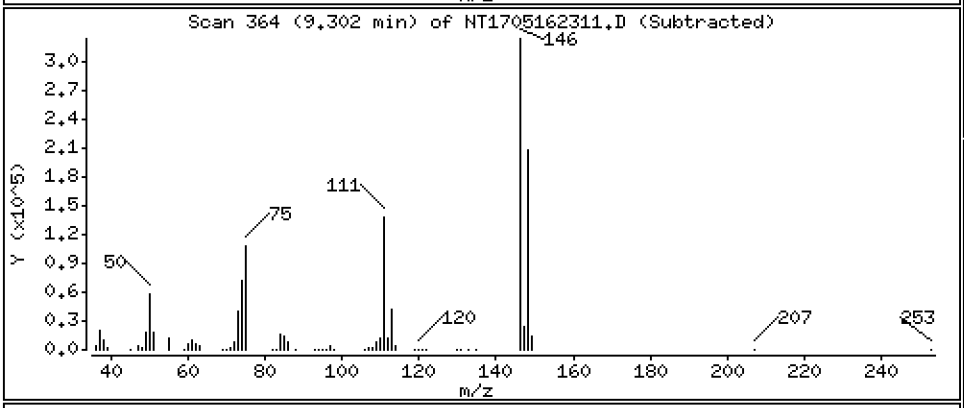
Column diameter: 0.25

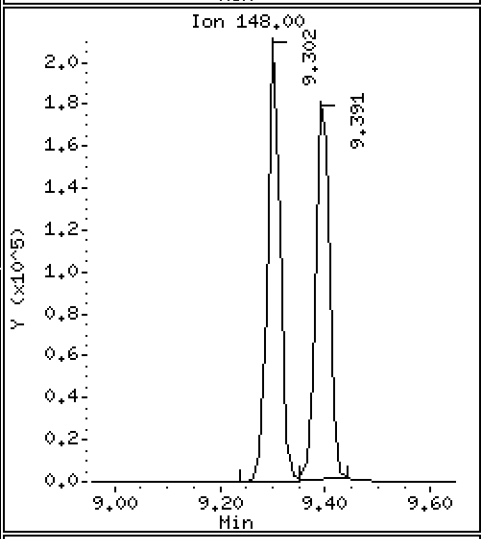
7 1,3-Dichlorobenzene

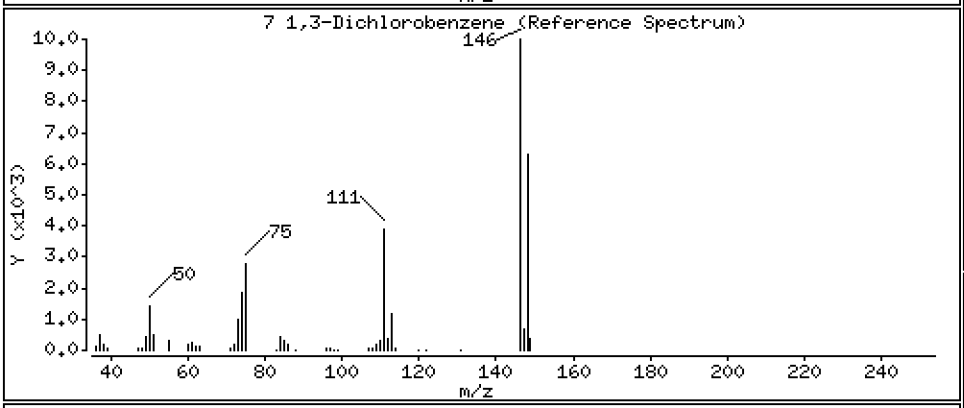
Concentration: 5.319 ug/mL

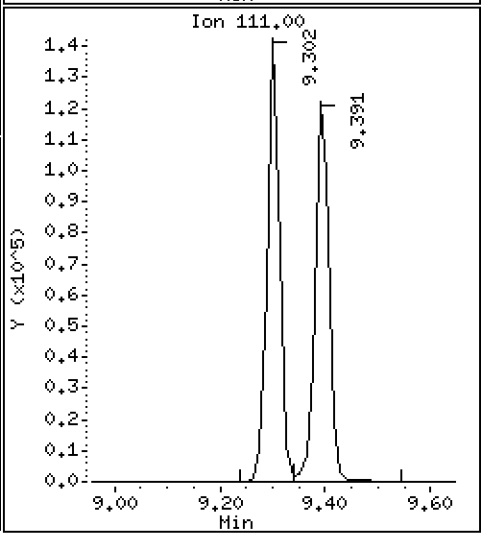


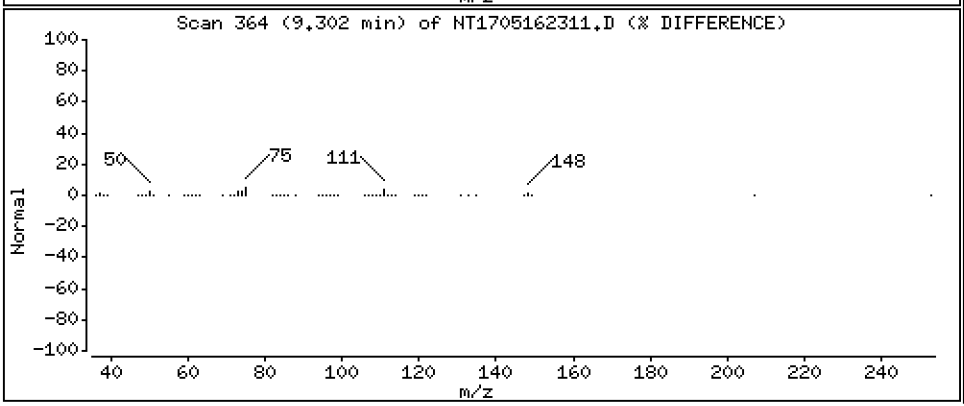












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

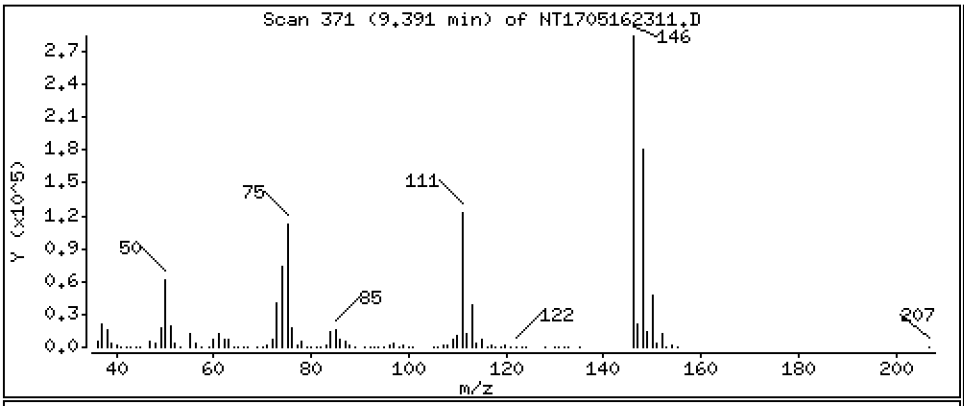
Operator: JGR

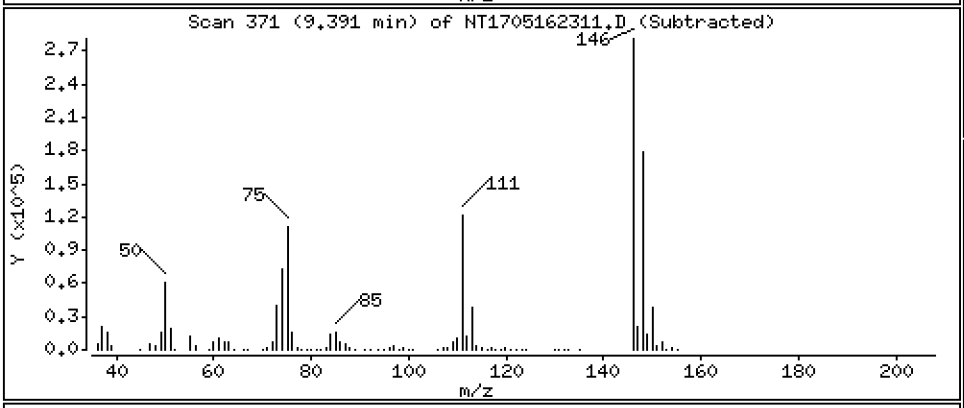
Column phase: ZB-5msi

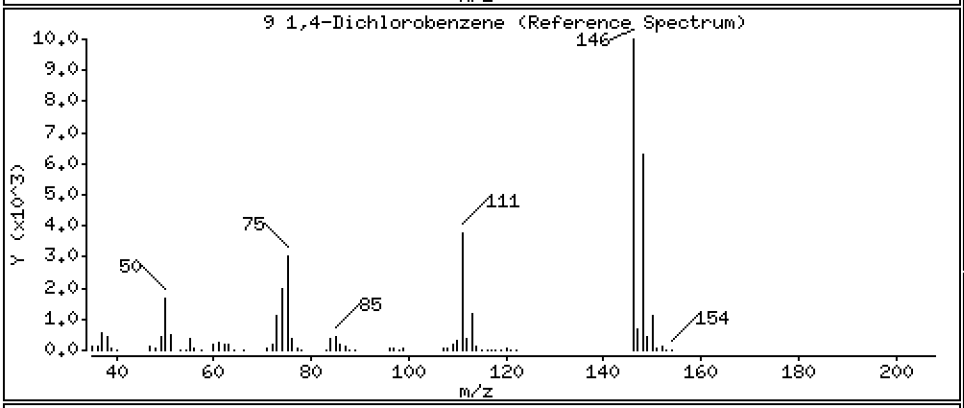
Column diameter: 0.25

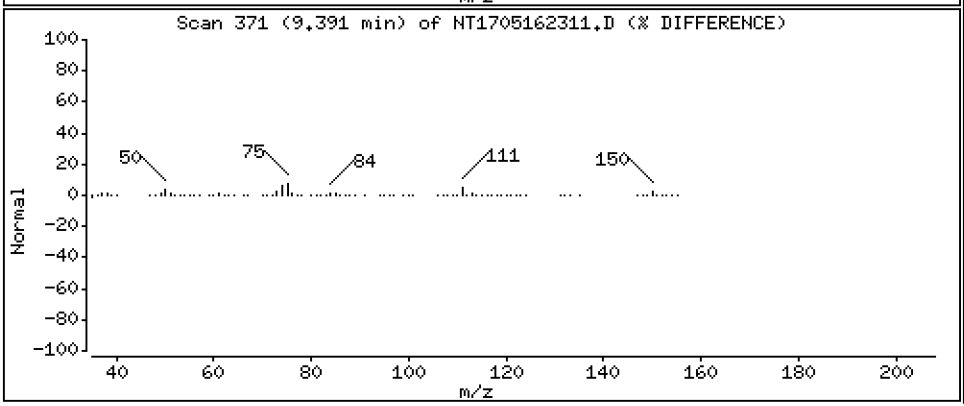
9 1,4-Dichlorobenzene

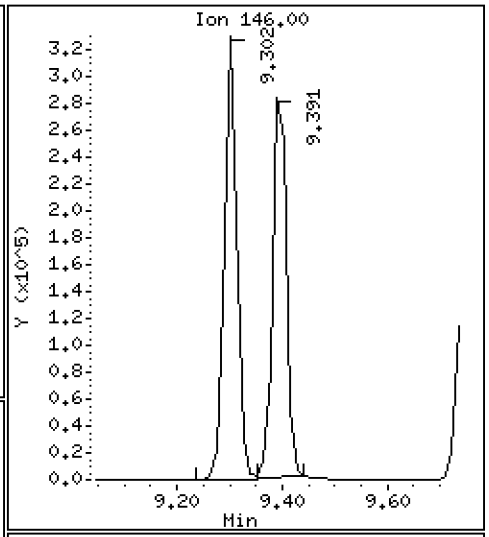
Concentration: 5.071 ug/mL

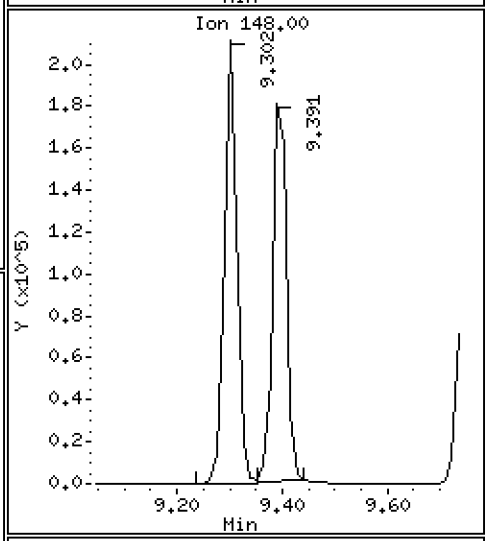


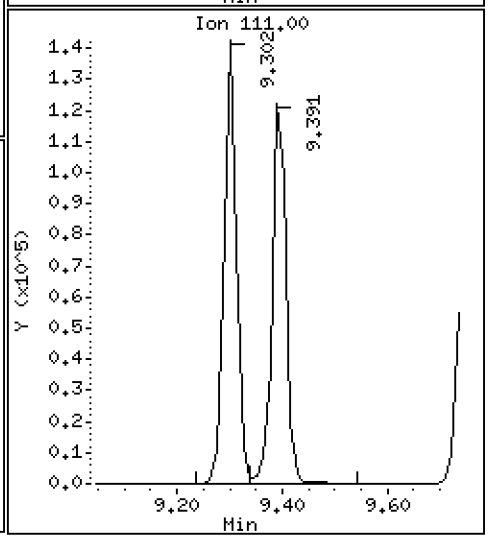












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

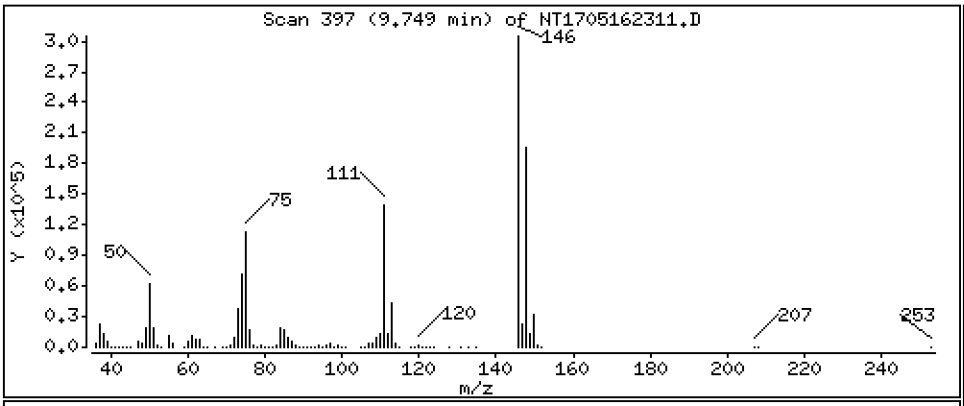
Operator: JGR

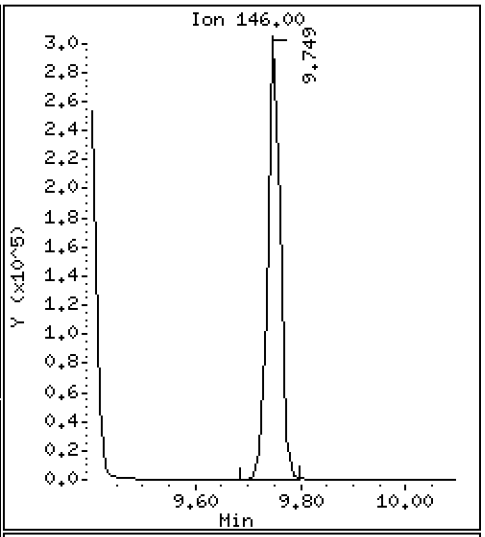
Column phase: ZB-5msi

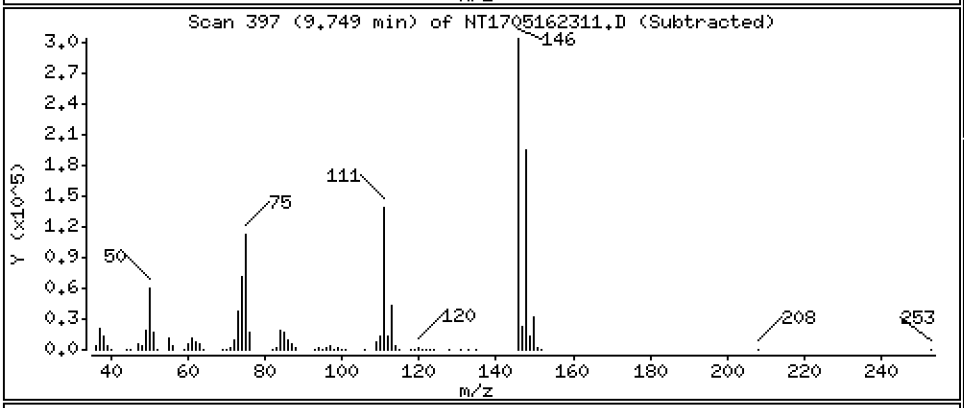
Column diameter: 0.25

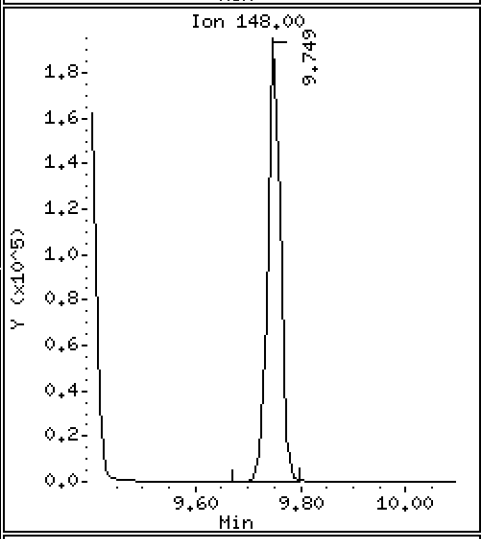
12 1,2-Dichlorobenzene

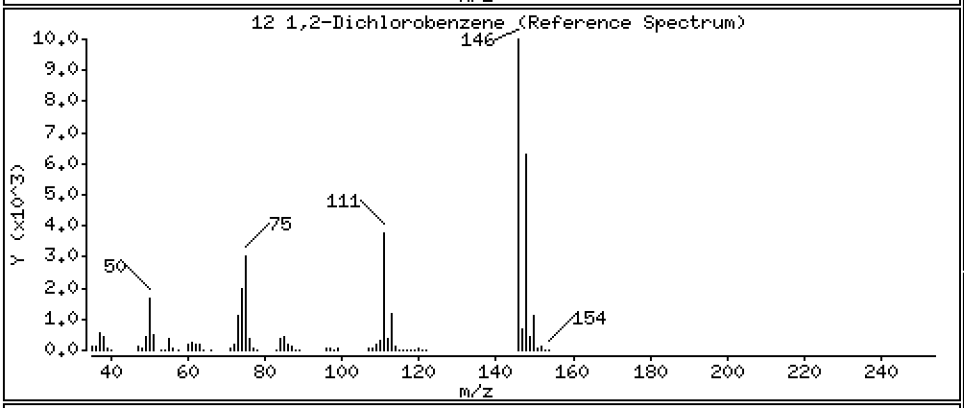
Concentration: 5.258 ug/mL

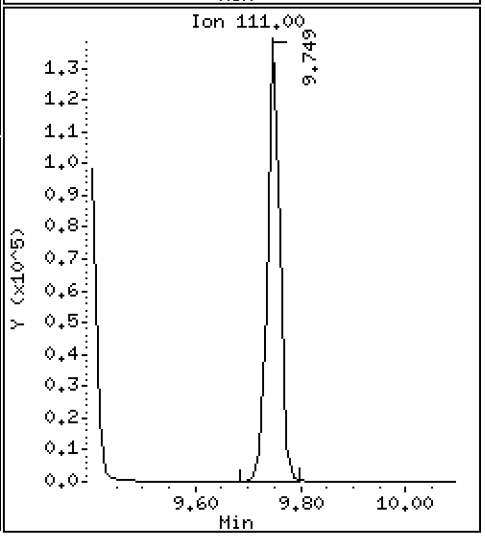


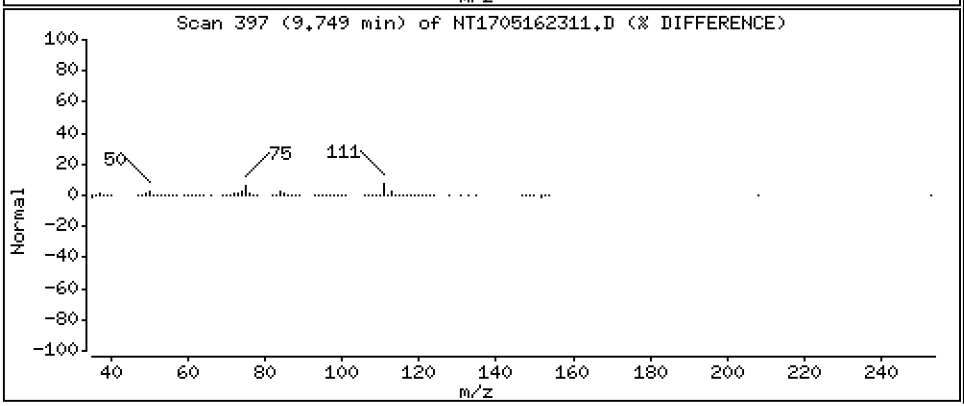












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

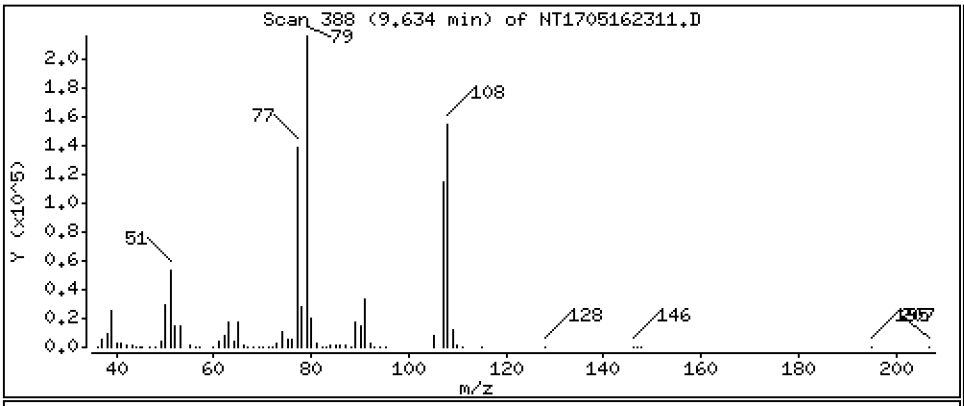
Operator: JGR

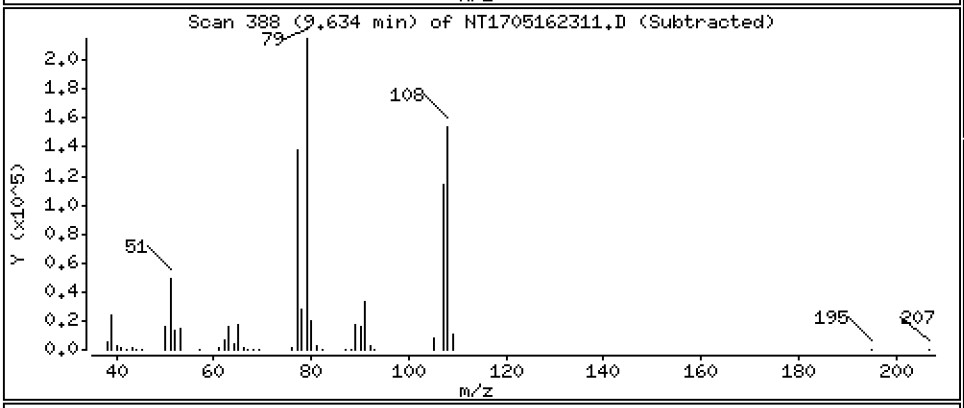
Column phase: ZB-5msi

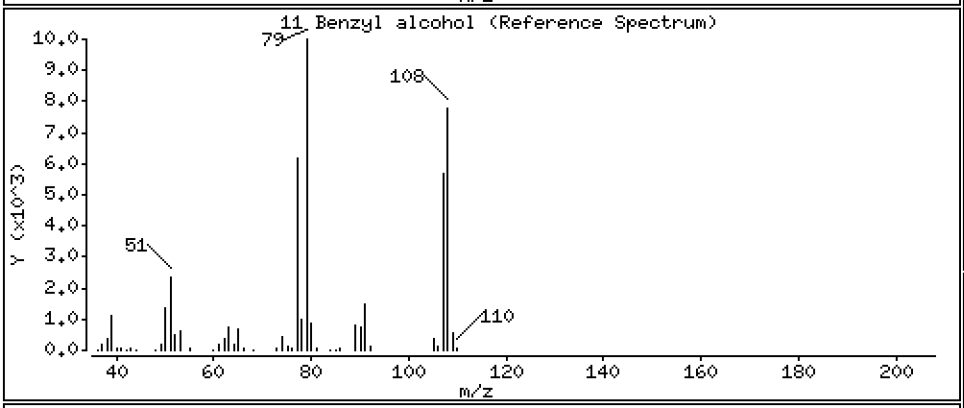
Column diameter: 0.25

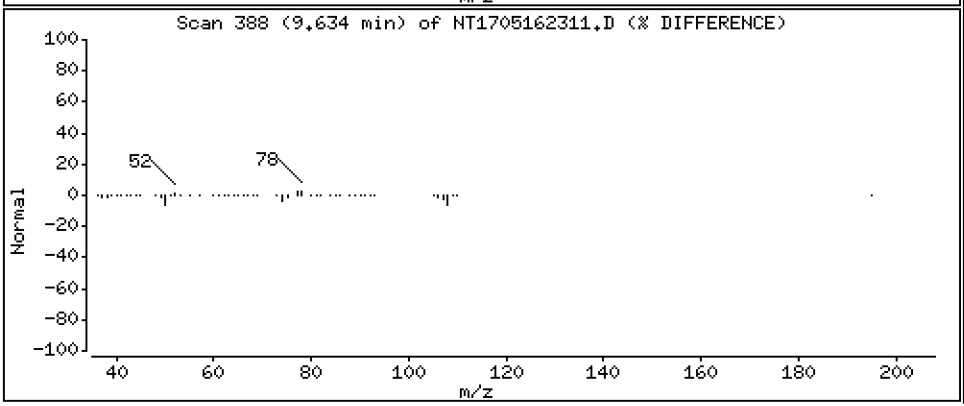
11 Benzyl alcohol

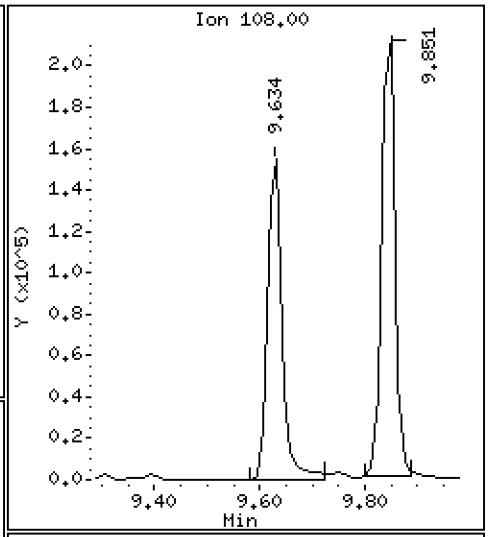
Concentration: 5.274 ug/mL

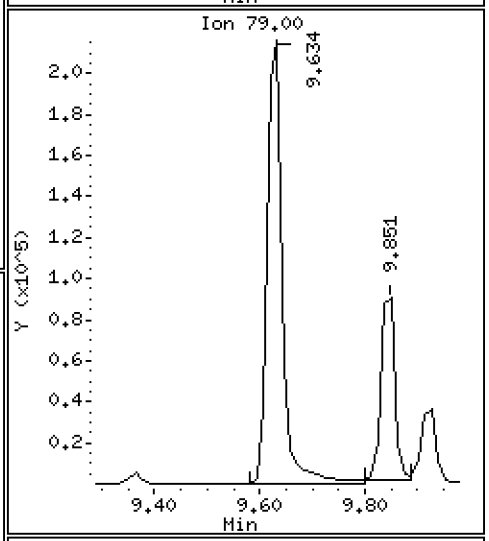


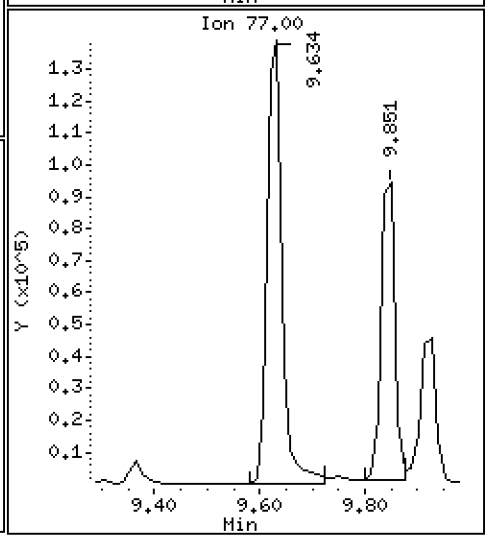












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

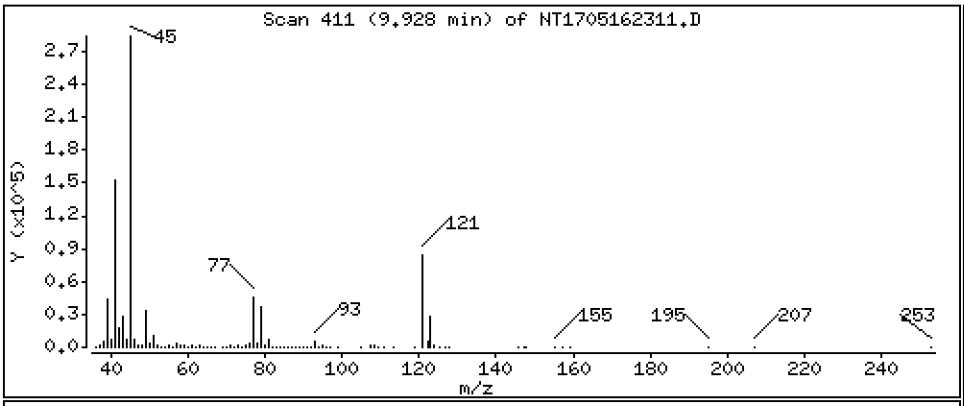
Operator: JGR

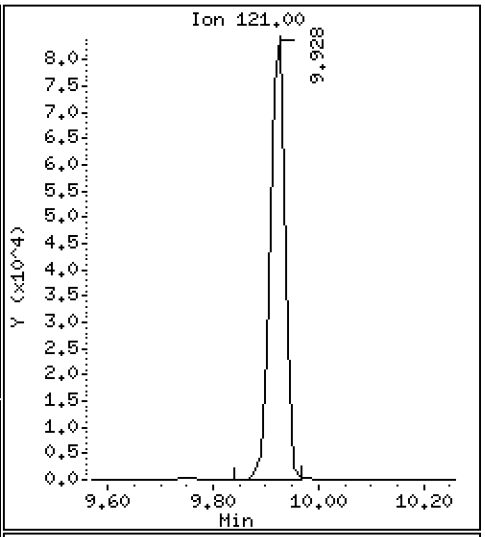
Column phase: ZB-5msi

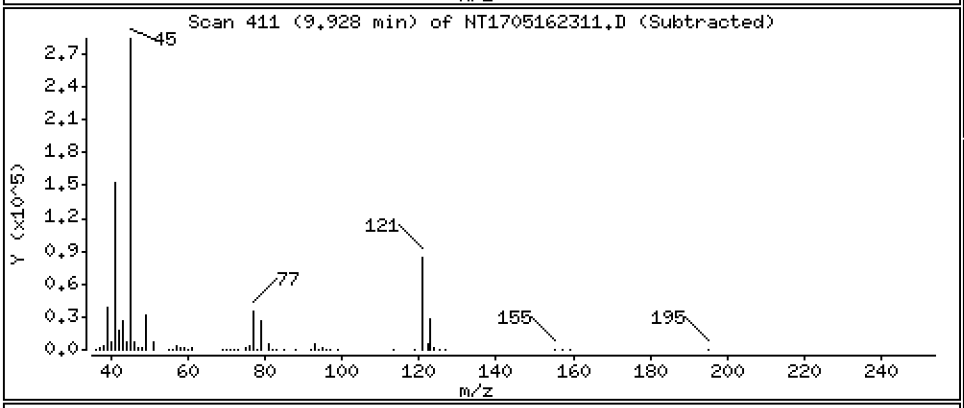
Column diameter: 0.25

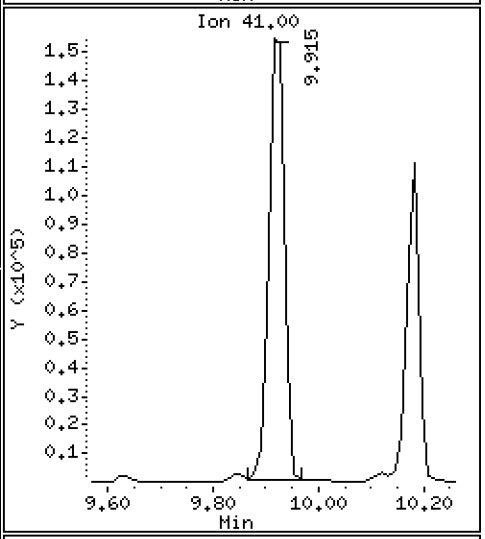
14 2,2'-oxybis(1-Chloropropane)

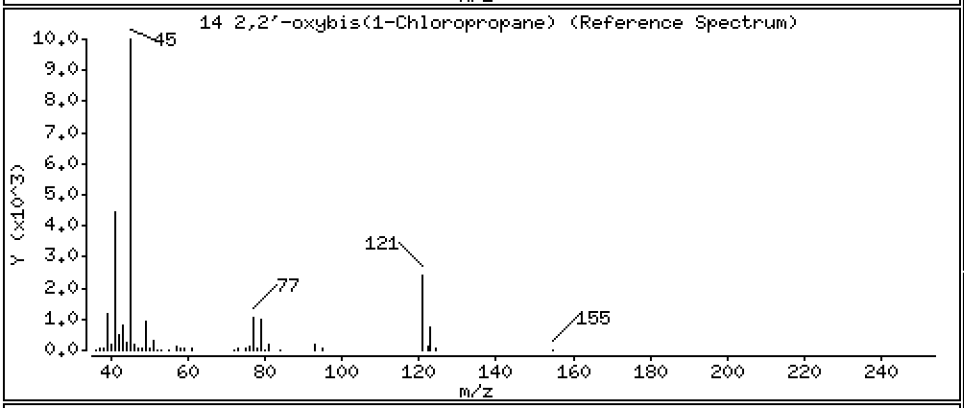
Concentration: 6.179 ug/mL

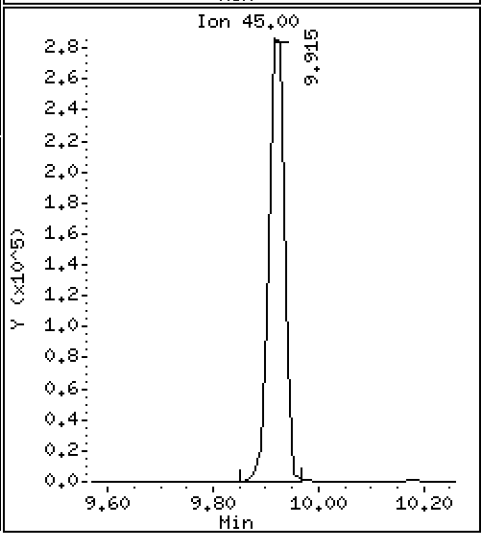


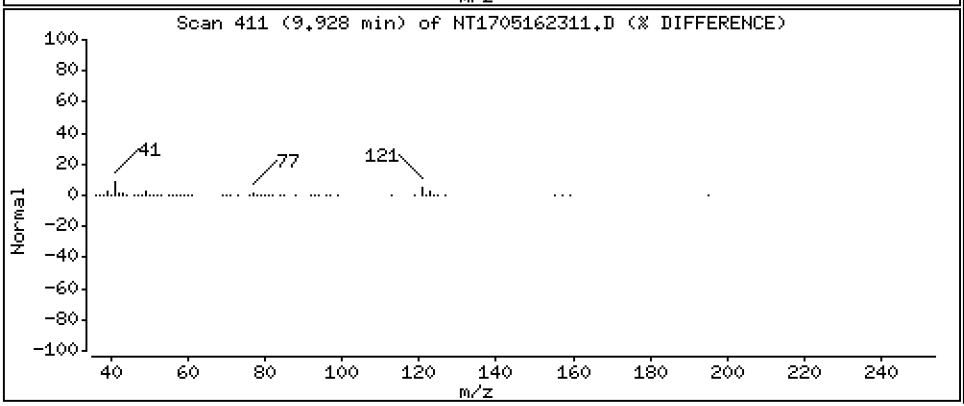












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

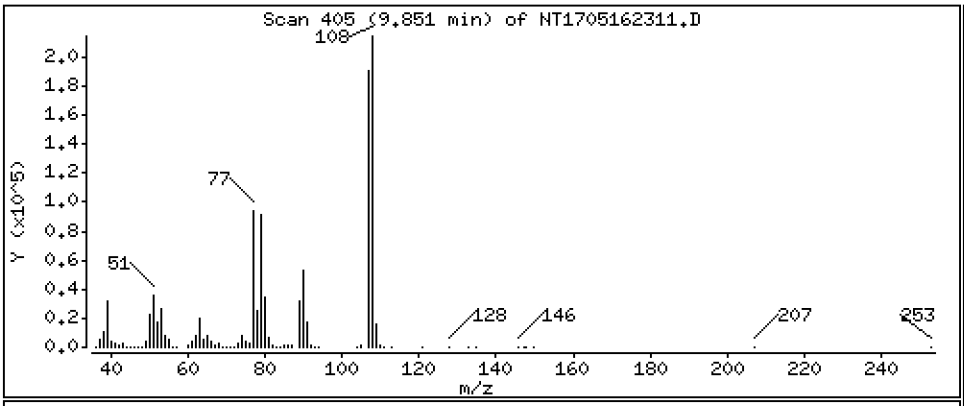
Operator: JGR

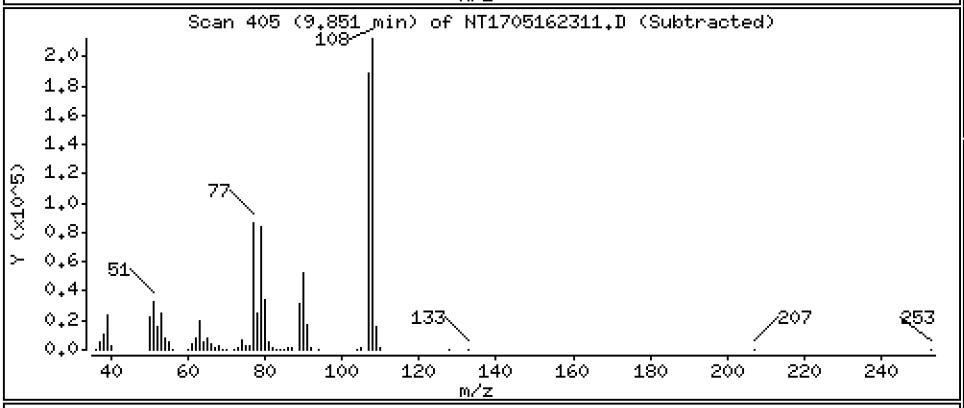
Column phase: ZB-5msi

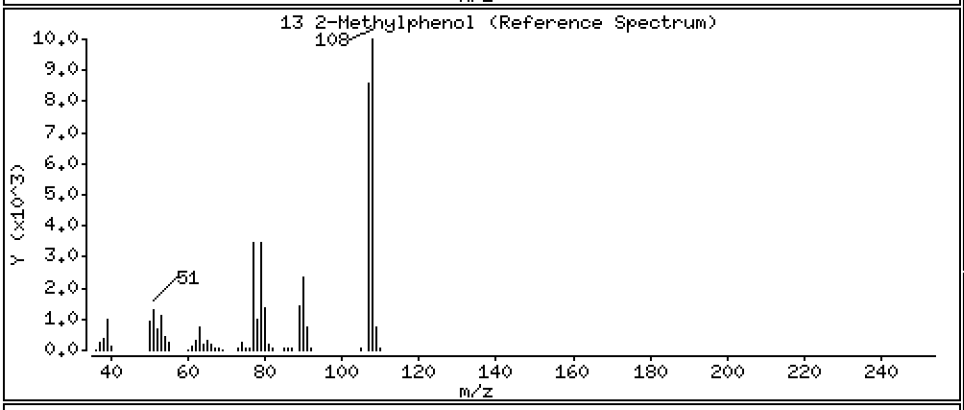
Column diameter: 0.25

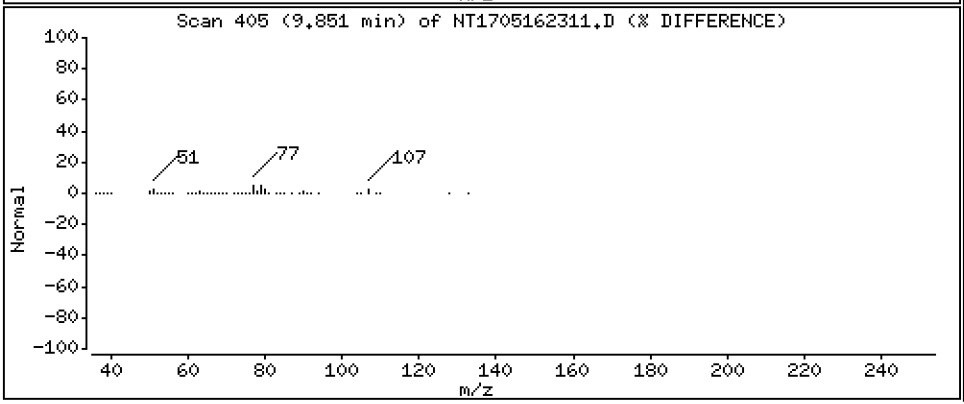
13 2-Methylphenol

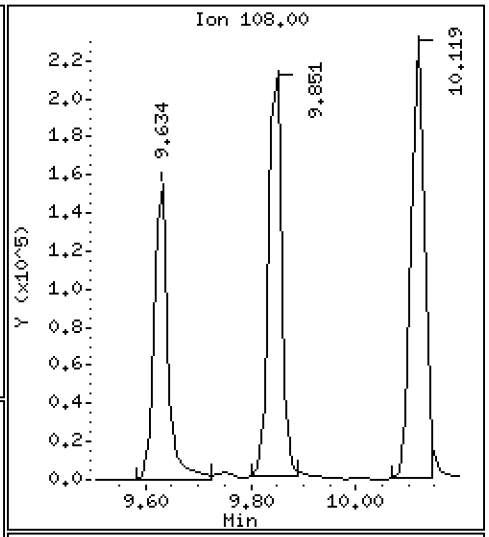
Concentration: 4.229 ug/mL

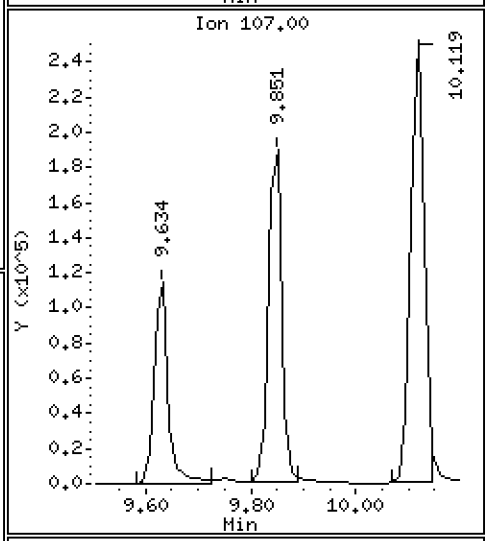


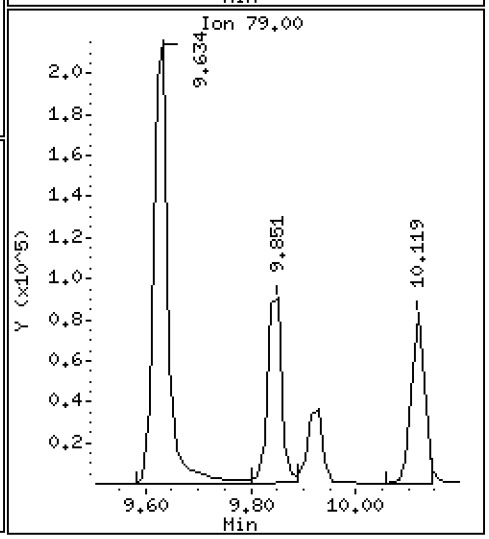












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

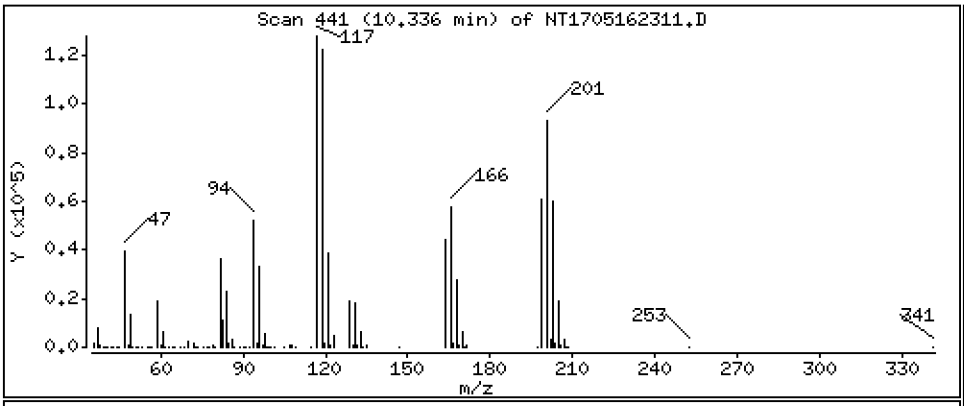
Operator: JGR

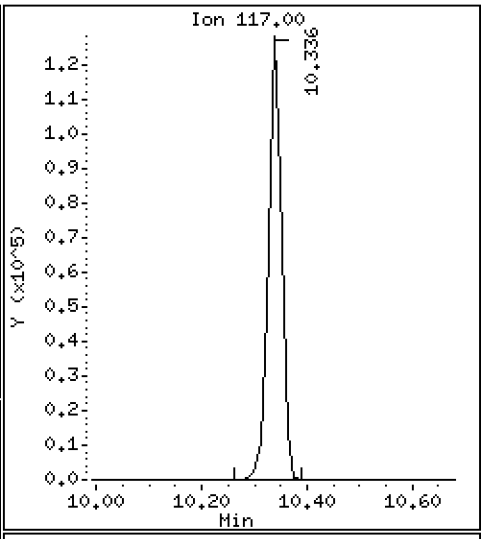
Column phase: ZB-5msi

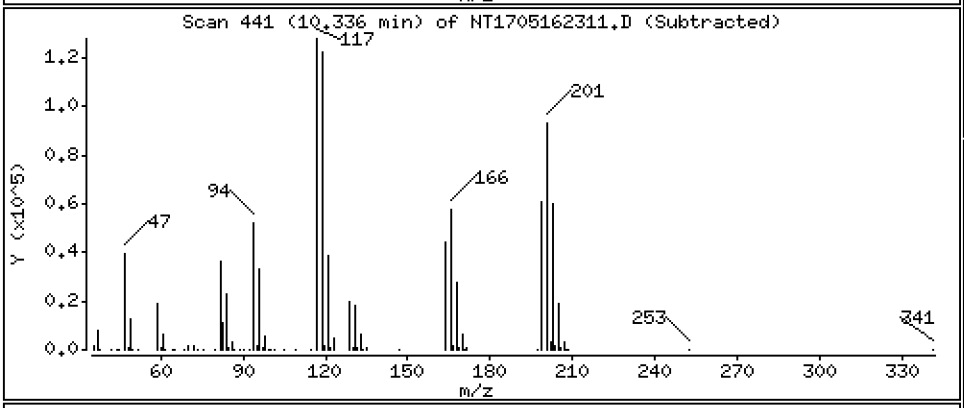
Column diameter: 0.25

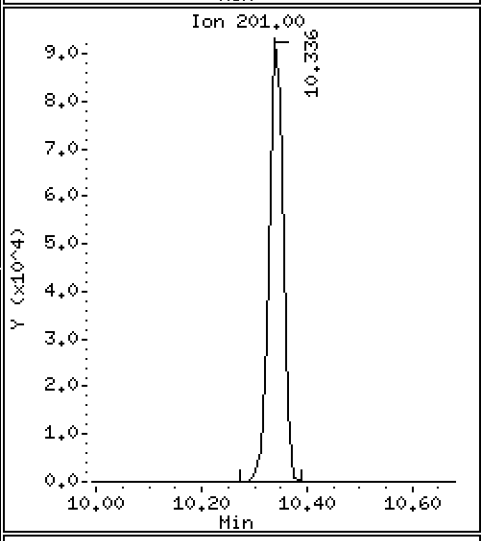
17 Hexachloroethane

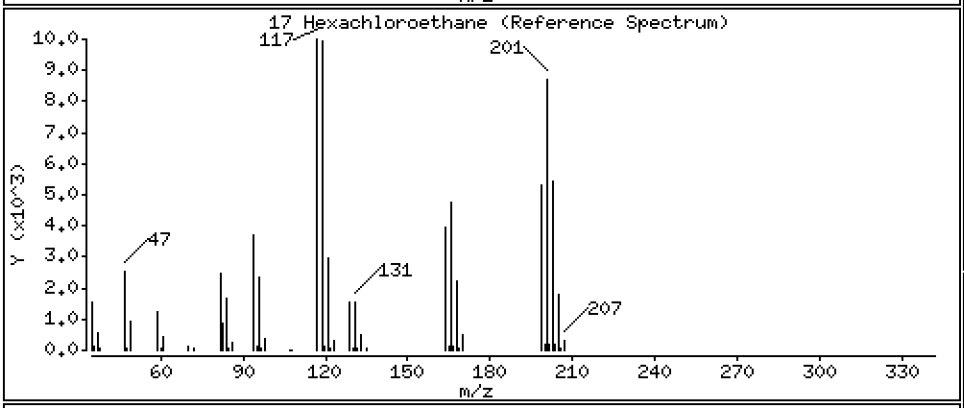
Concentration: 5.419 ug/mL

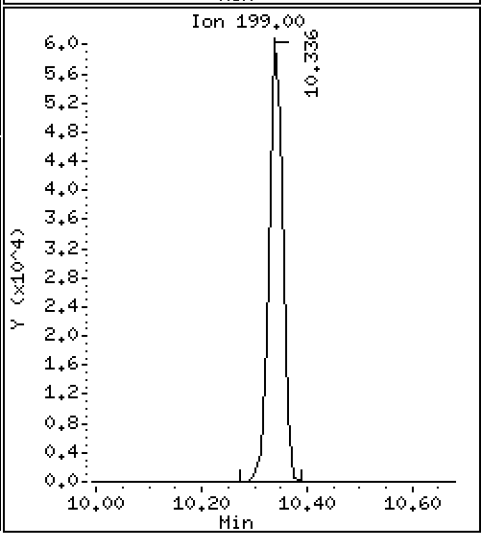


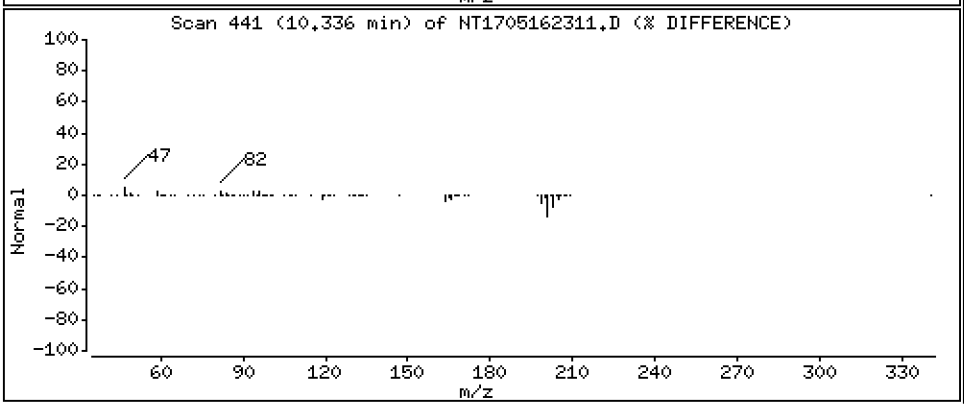












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

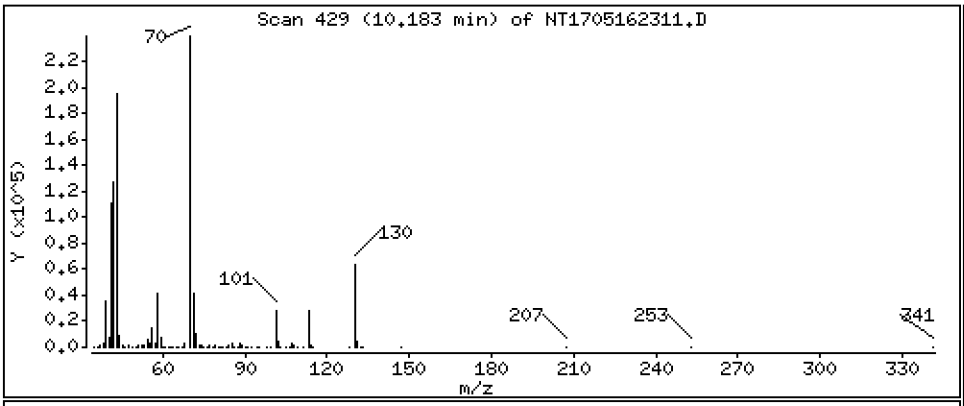
Operator: JGR

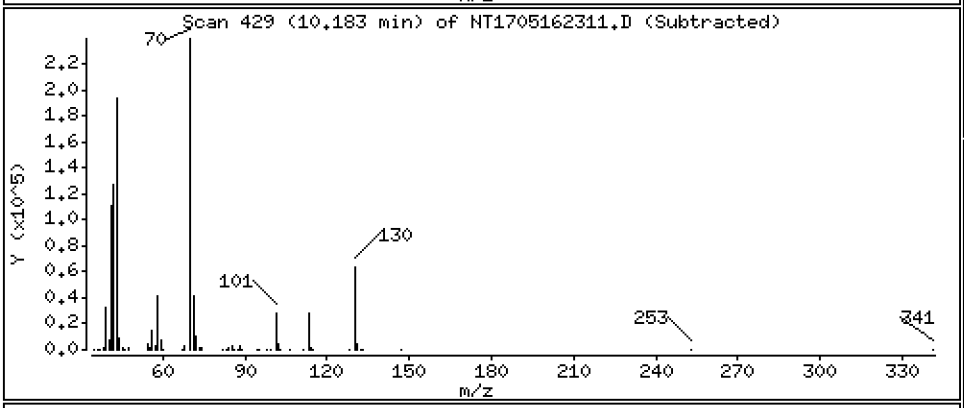
Column phase: ZB-5msi

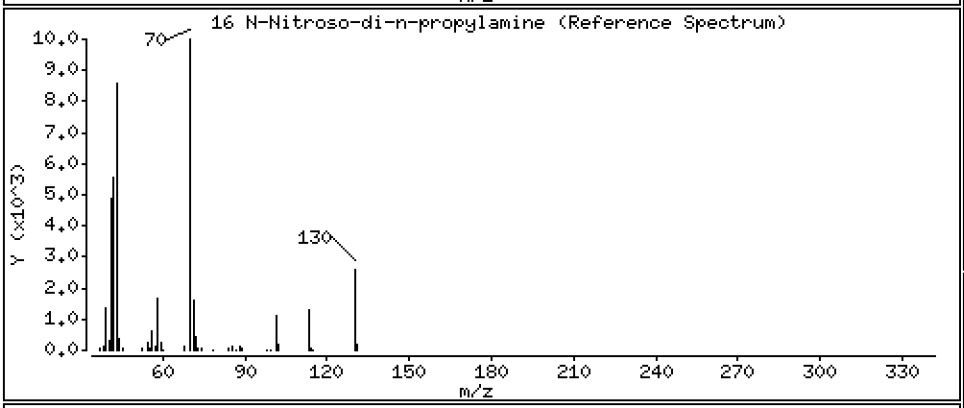
Column diameter: 0.25

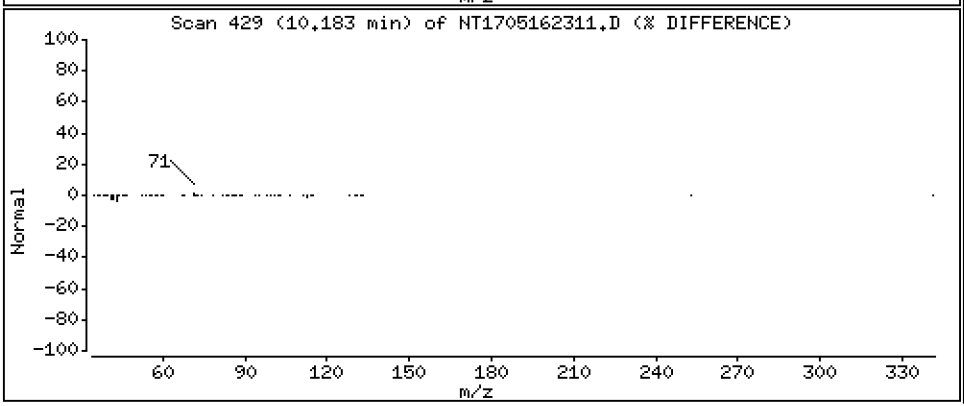
16 N-Nitroso-di-n-propylamine

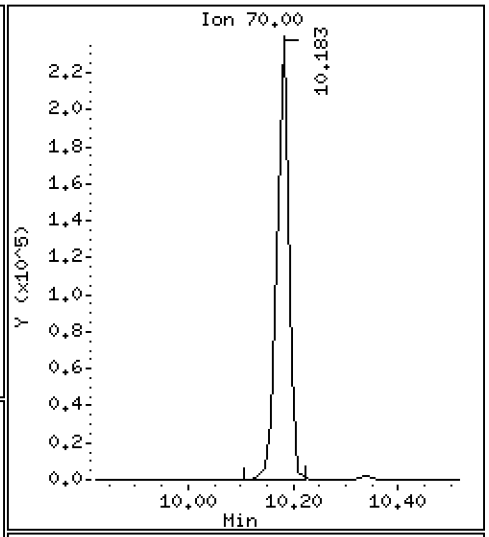
Concentration: 5.517 ug/mL

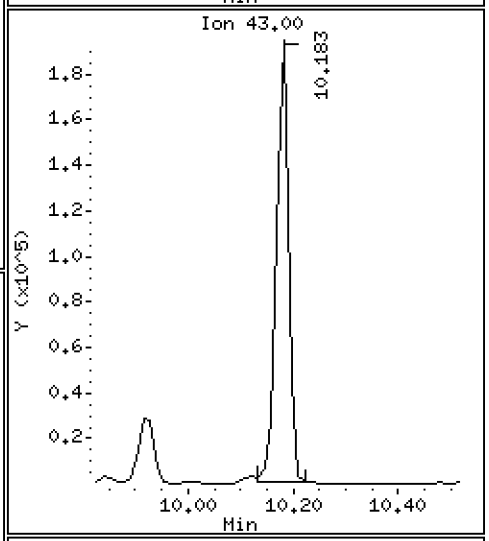


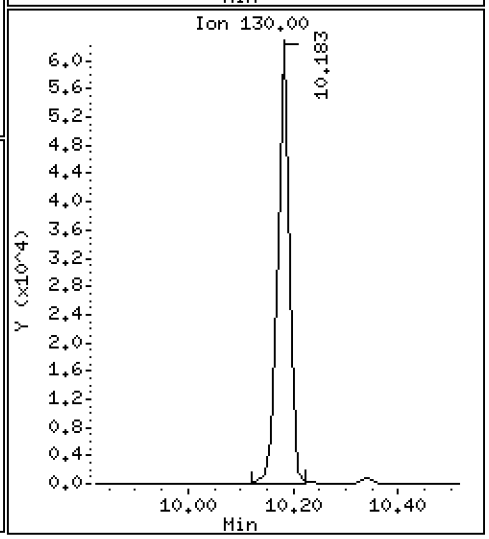












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

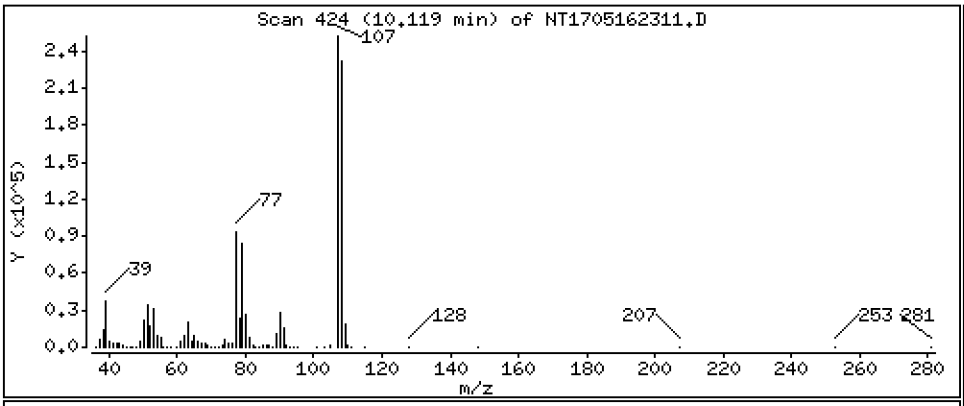
Operator: JGR

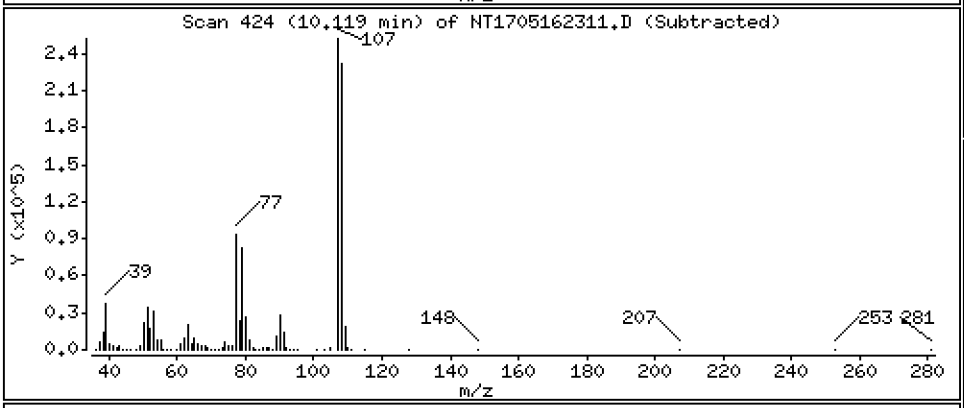
Column phase: ZB-5msi

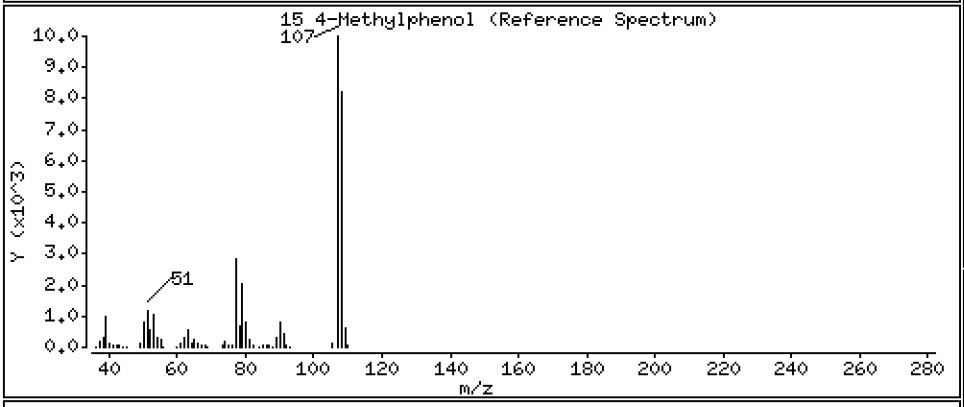
Column diameter: 0.25

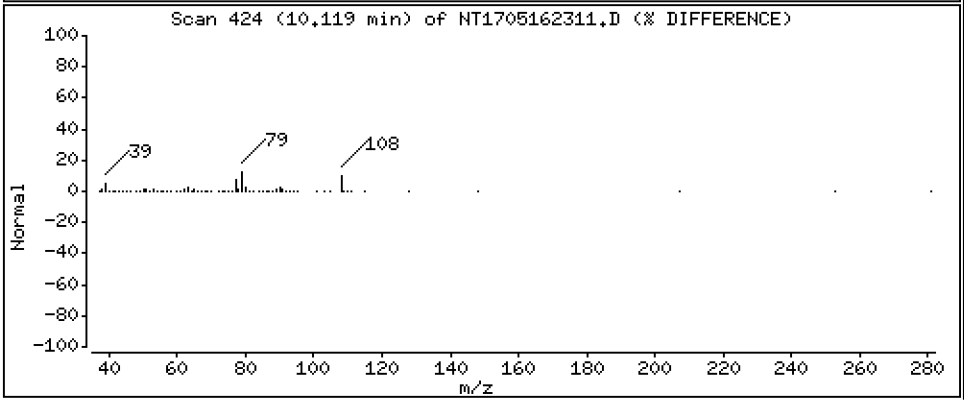
15 4-Methylphenol

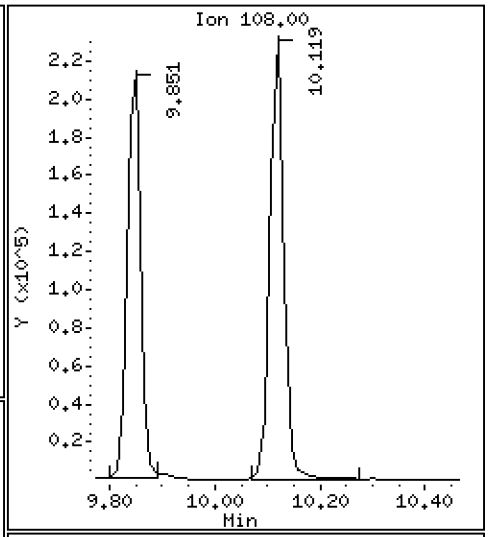
Concentration: 4.661 ug/mL

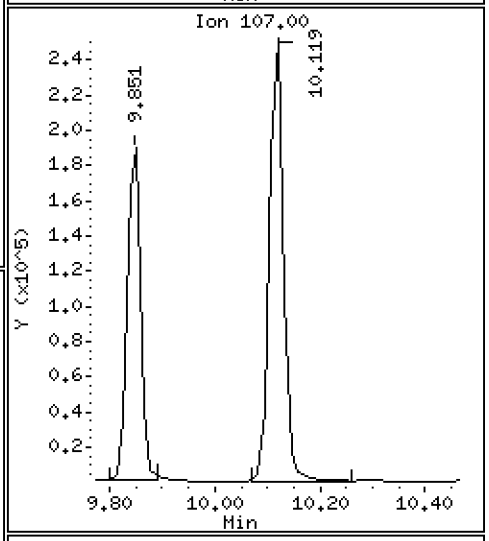


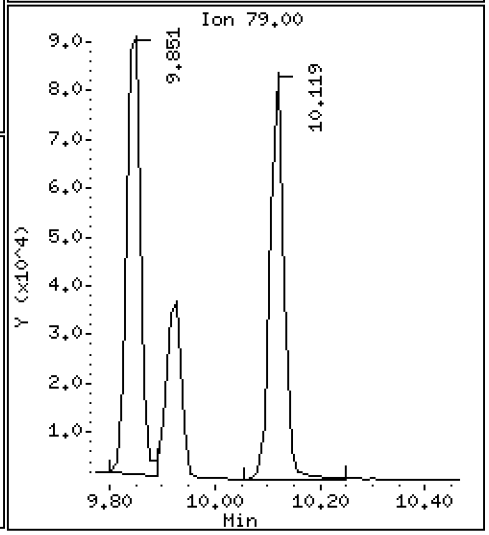












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

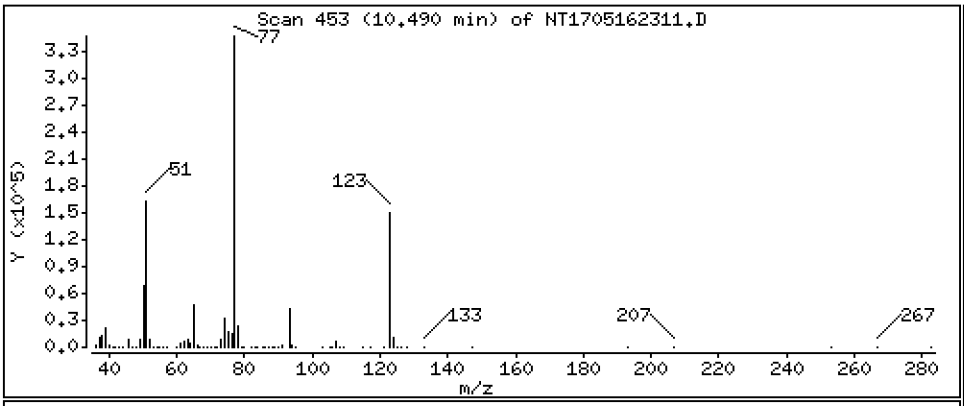
Operator: JGR

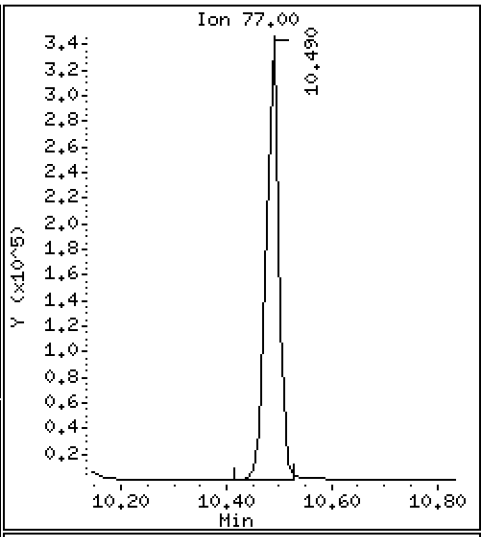
Column phase: ZB-5msi

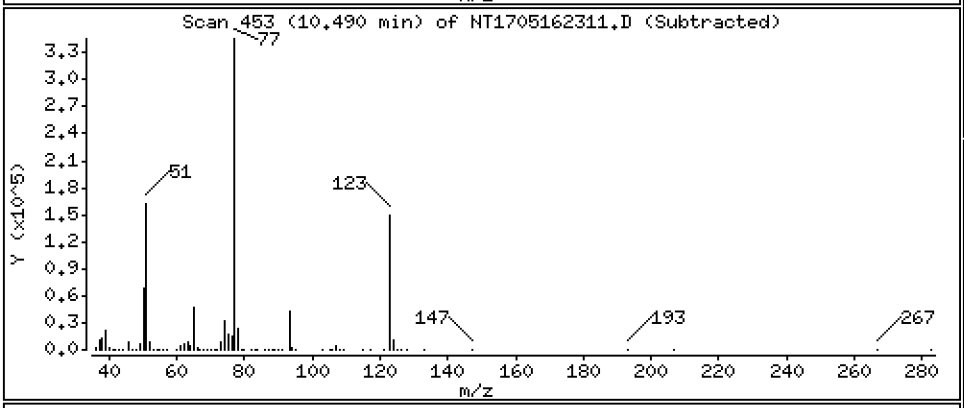
Column diameter: 0.25

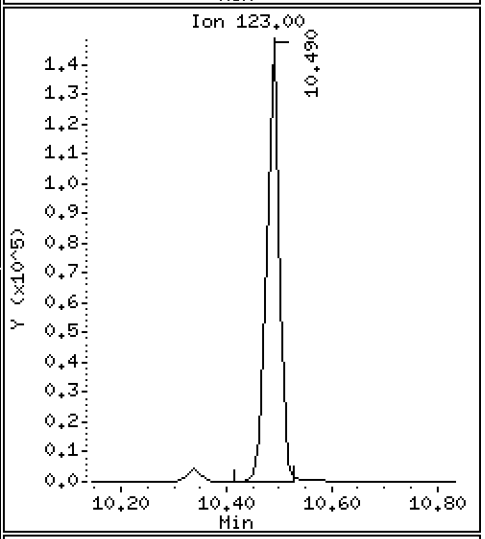
19 Nitrobenzene

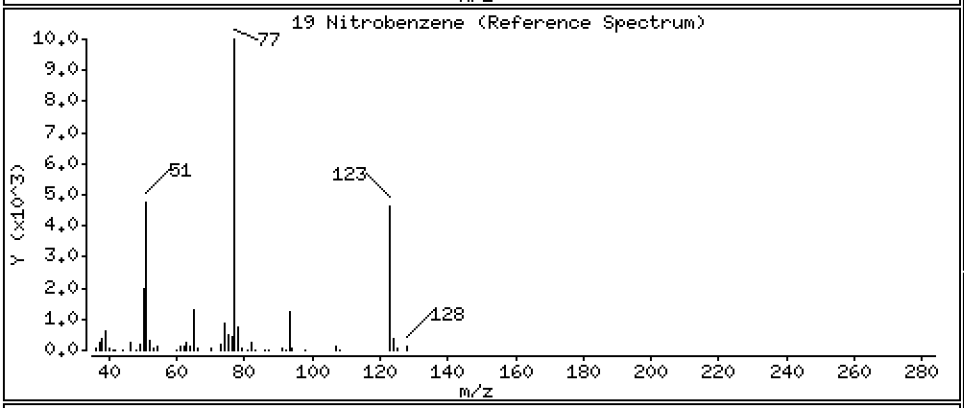
Concentration: 5.329 ug/mL

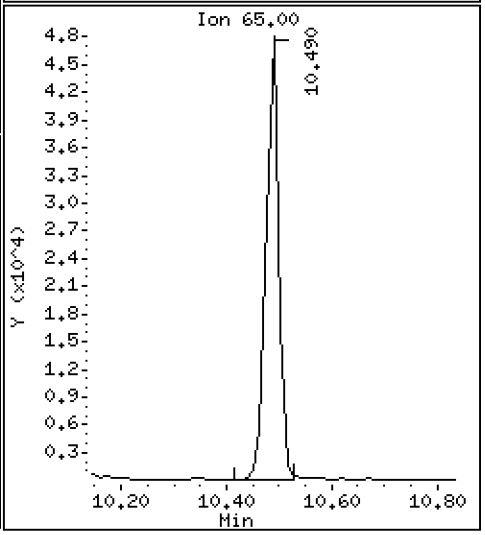


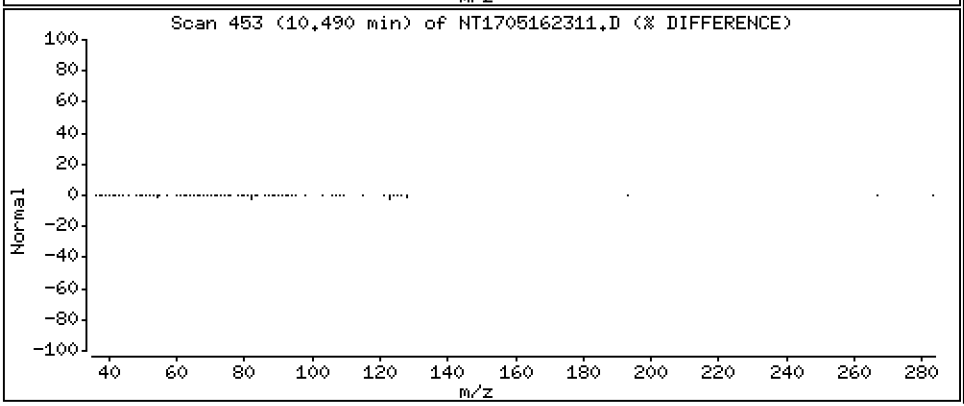












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

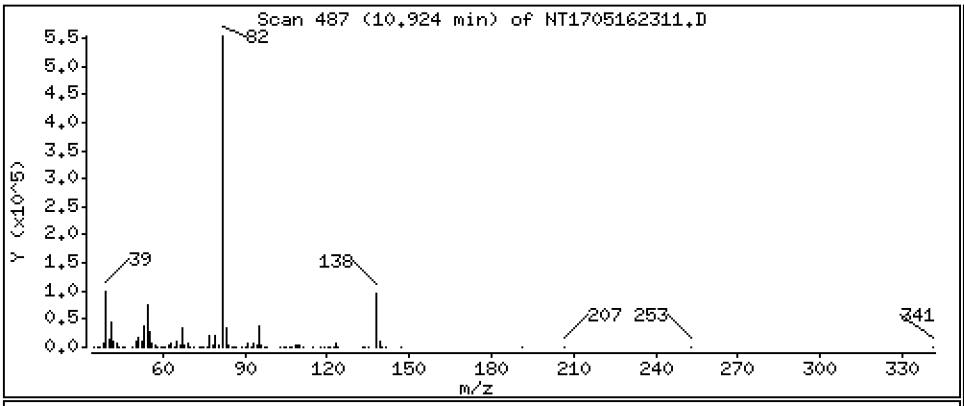
Operator: JGR

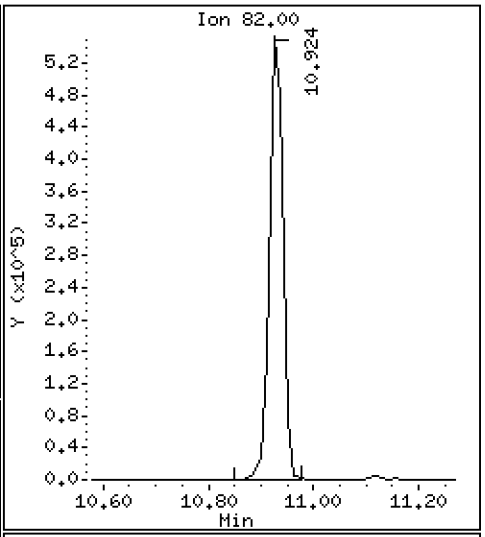
Column phase: ZB-5msi

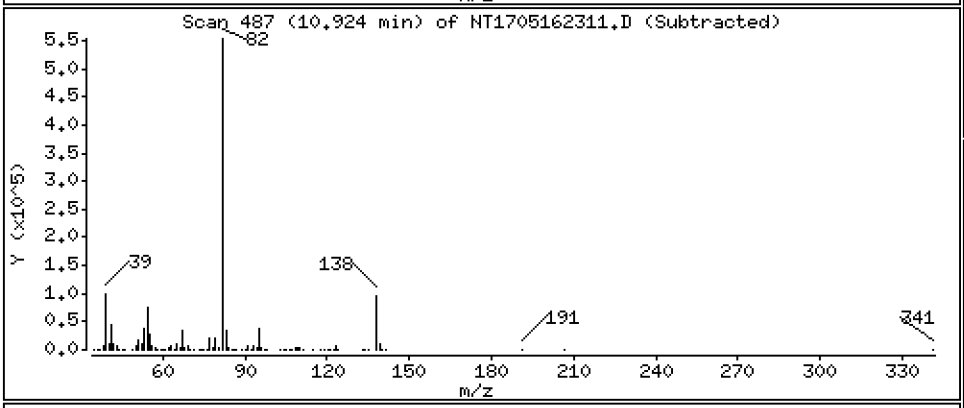
Column diameter: 0.25

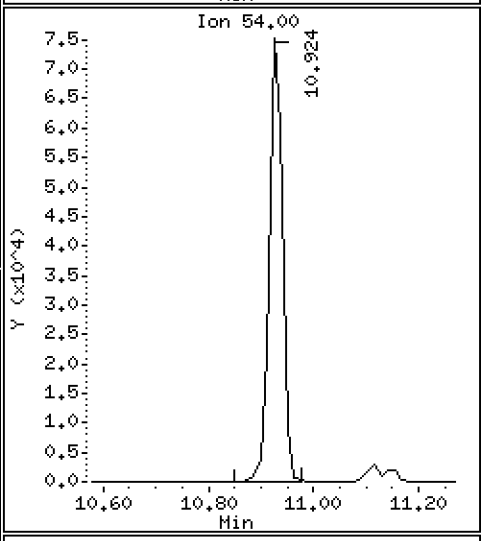
20 Isophorone

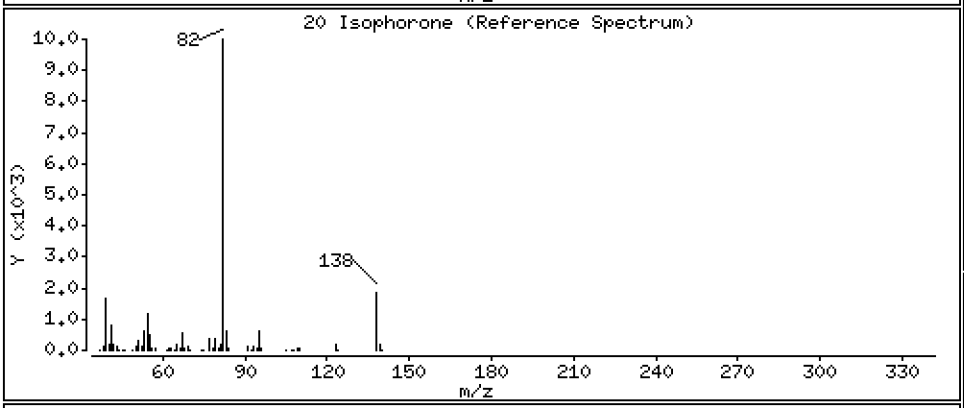
Concentration: 6.943 ug/mL

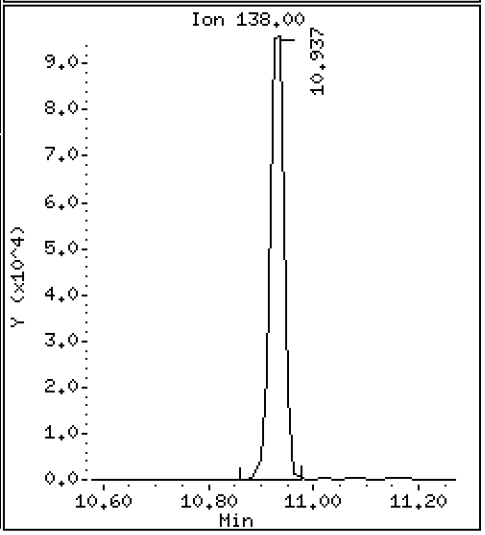


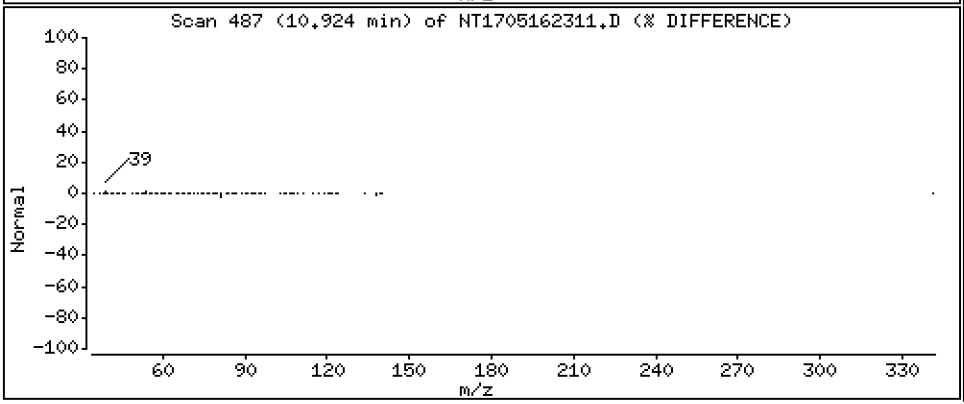












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

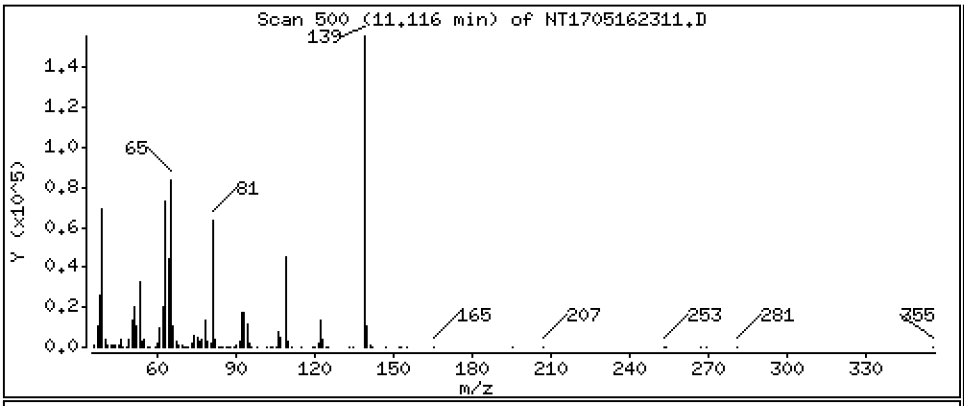
Operator: JGR

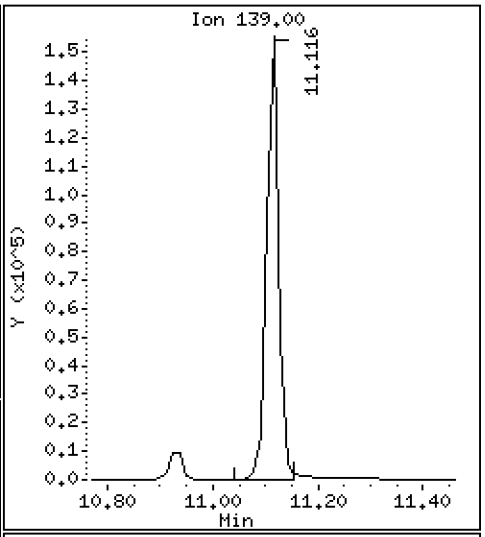
Column phase: ZB-5msi

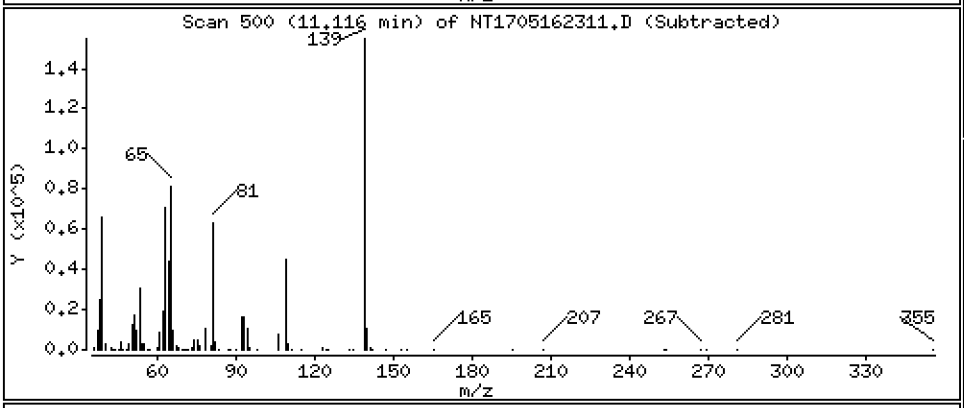
Column diameter: 0.25

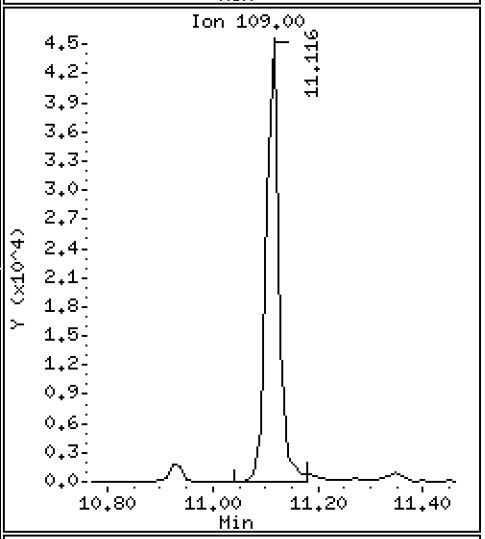
21 2-Nitrophenol

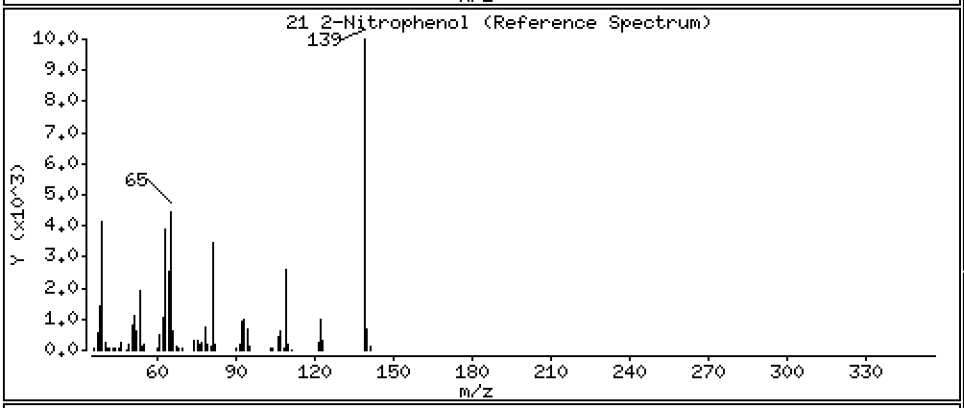
Concentration: 4.899 ug/mL

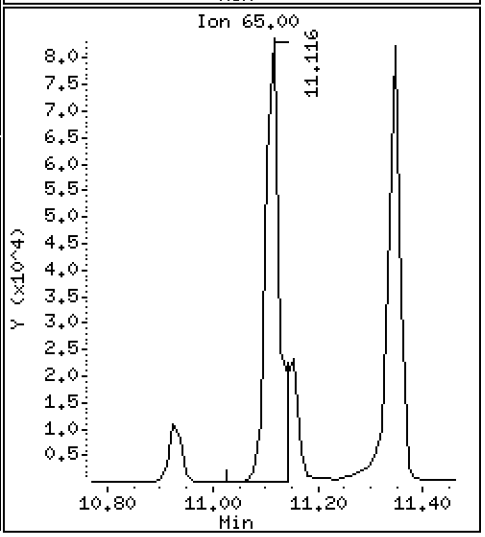


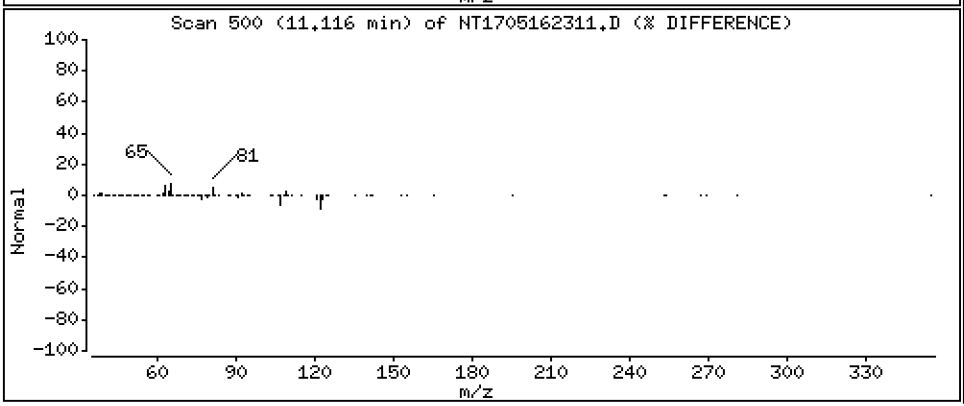












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

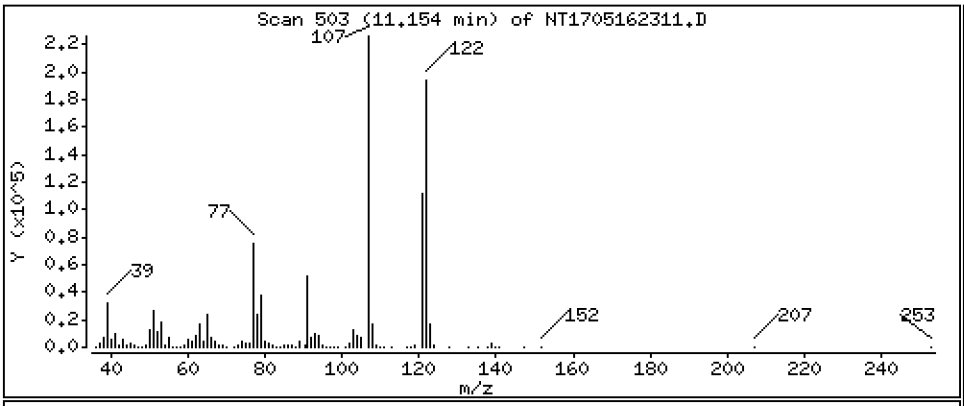
Operator: JGR

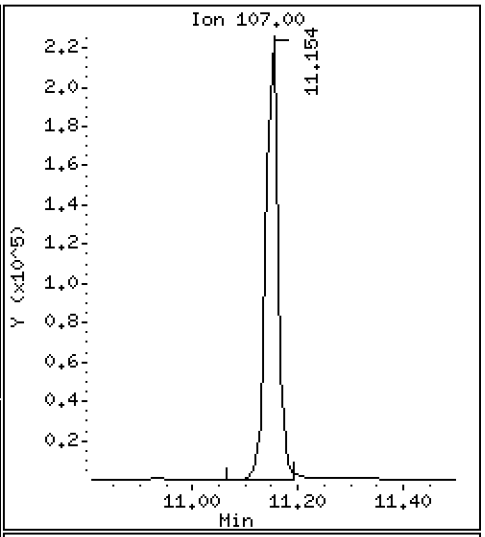
Column phase: ZB-5msi

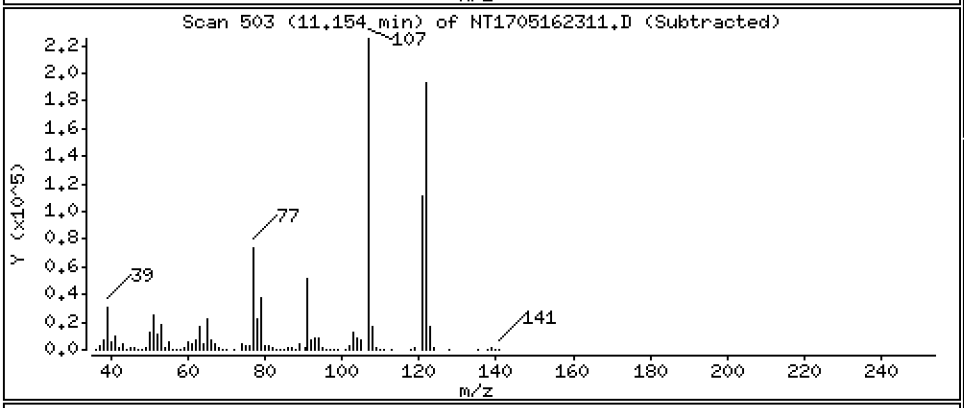
Column diameter: 0.25

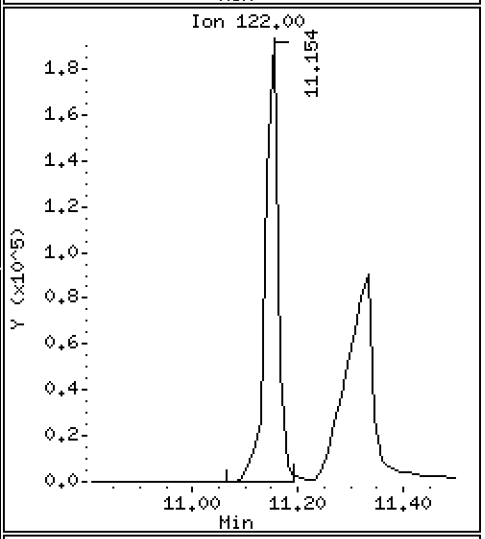
22 2,4-Dimethylphenol

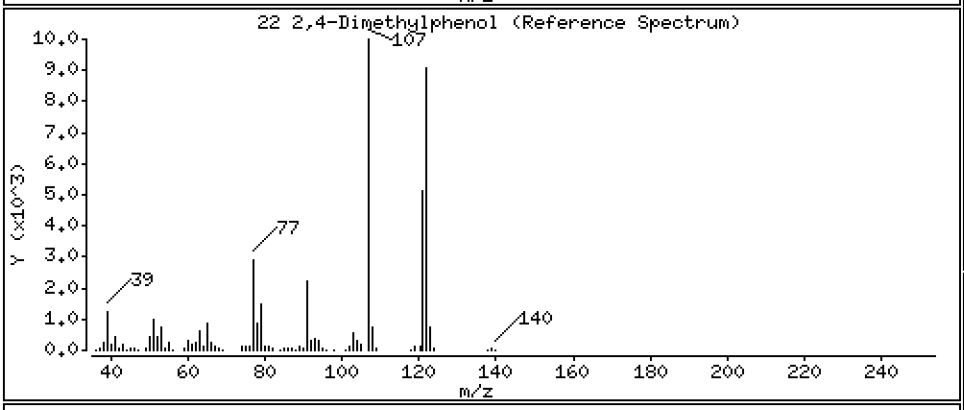
Concentration: 3.788 ug/mL

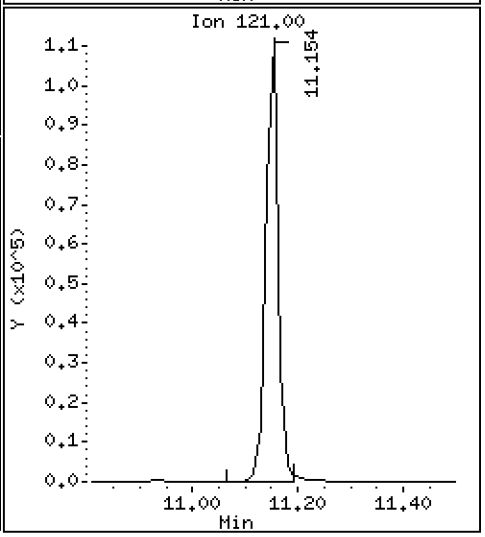


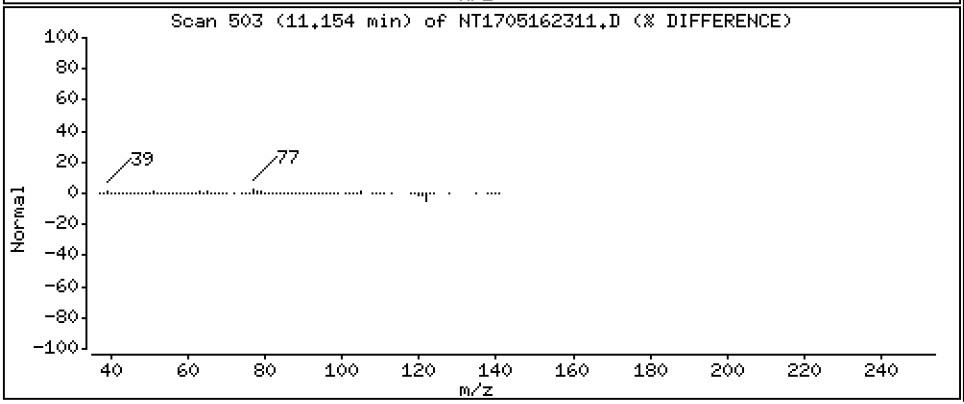












Date : 17-MAY-2023 00:29

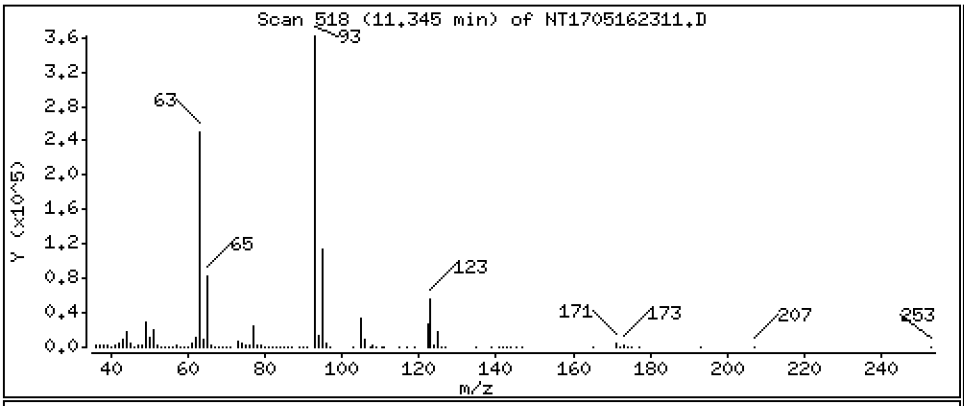
Client ID: Instrument: nt17.i

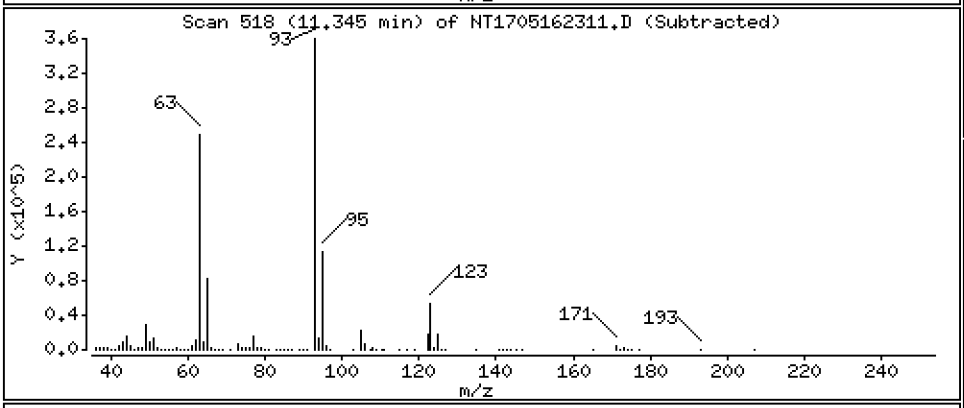
Sample Info: SLE0338-SCV1

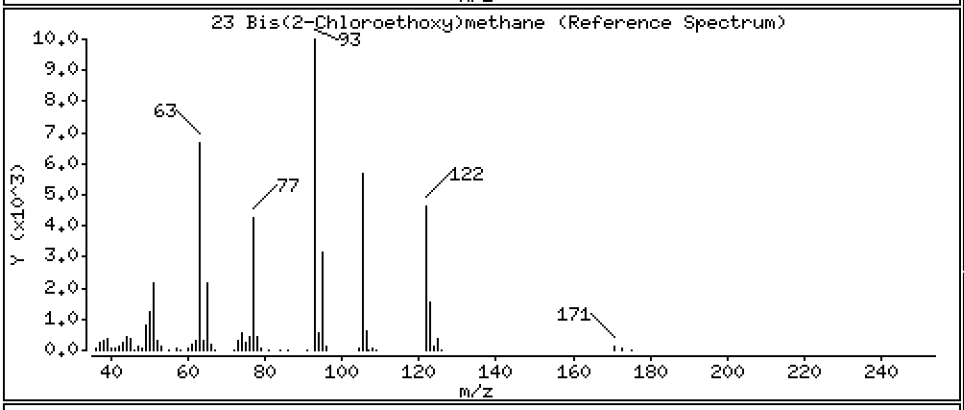
Operator: JGR

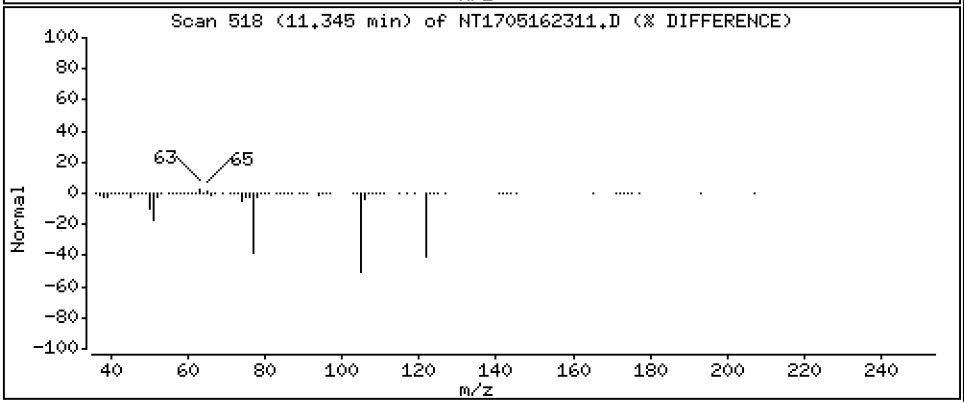
Column phase: ZB-5msi Column diameter: 0.25

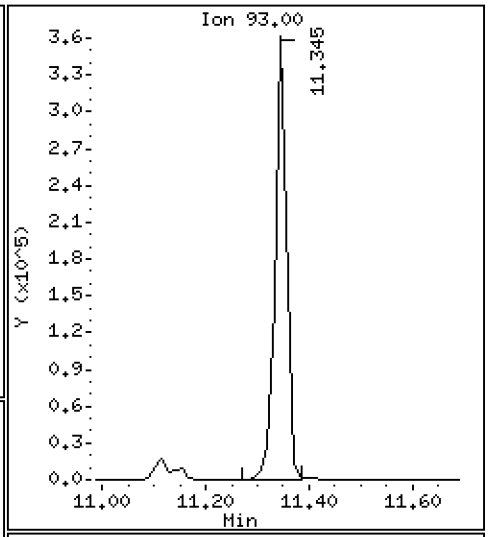
23 Bis(2-Chloroethoxy)methane Concentration: 6.232 ug/mL

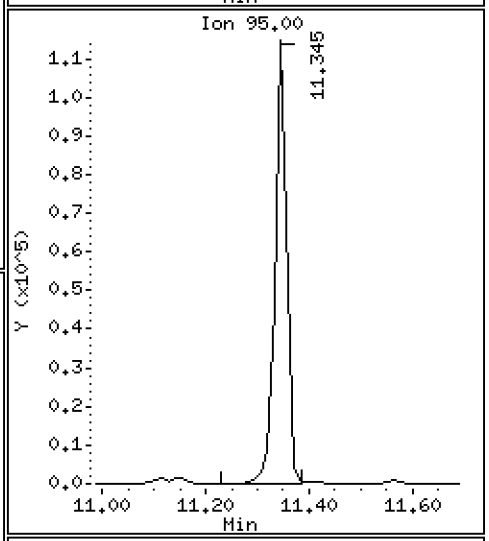


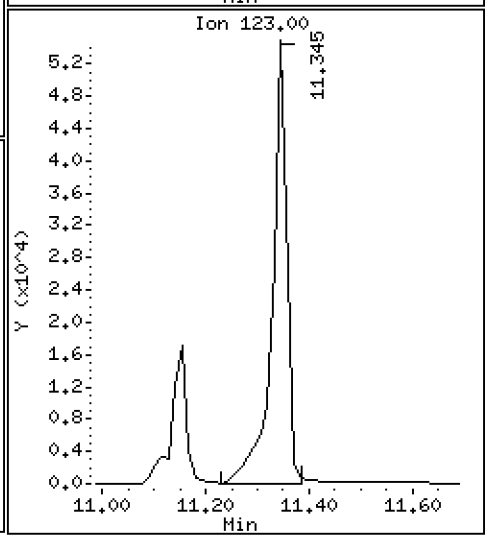












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

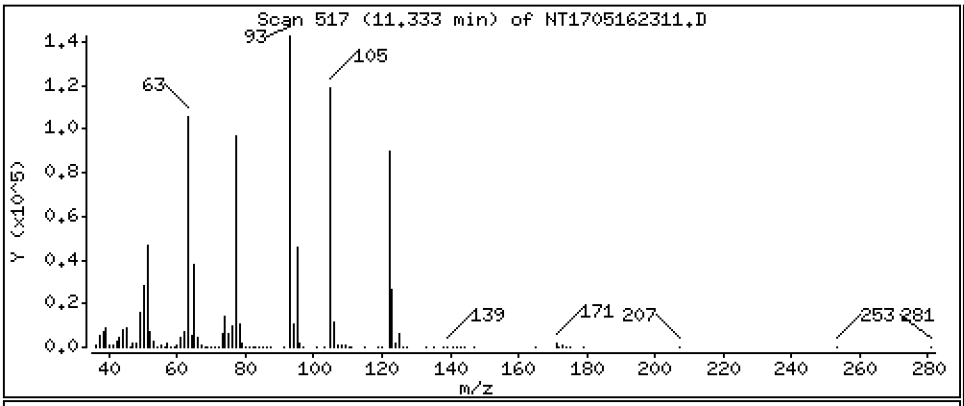
Operator: JGR

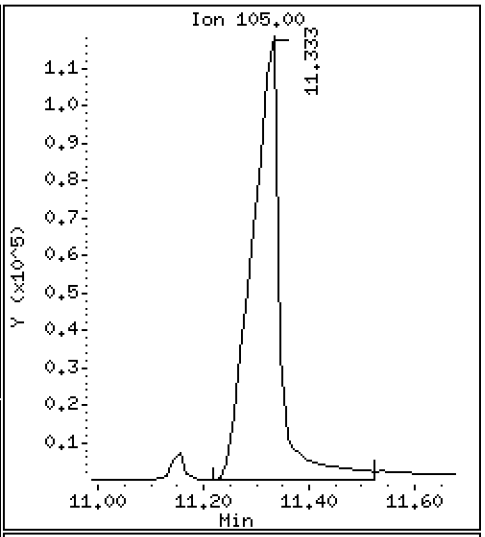
Column phase: ZB-5msi

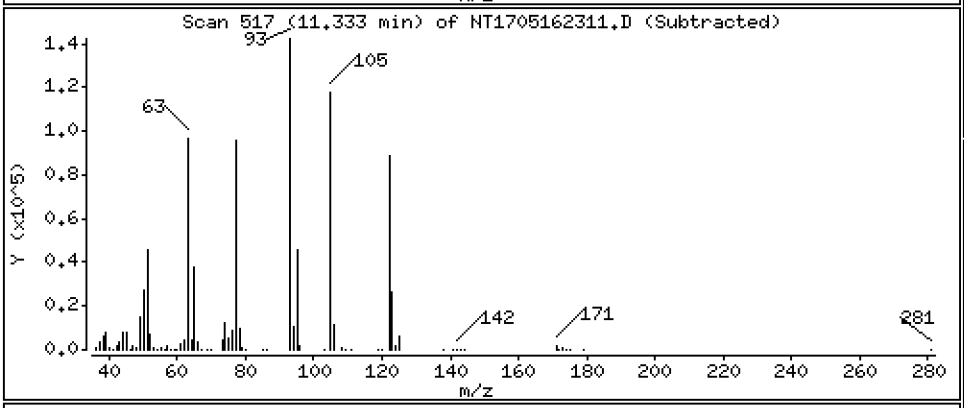
Column diameter: 0.25

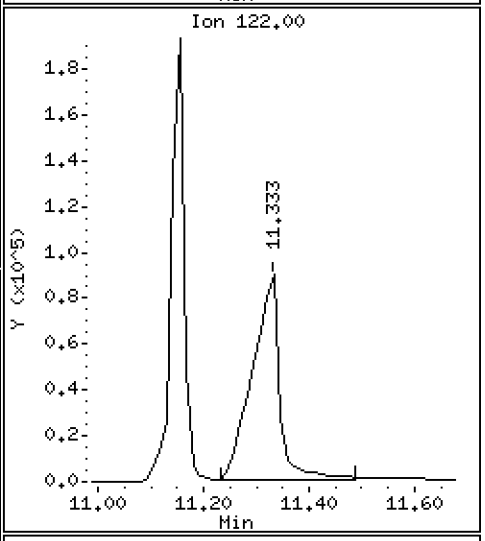
24 Benzoic acid

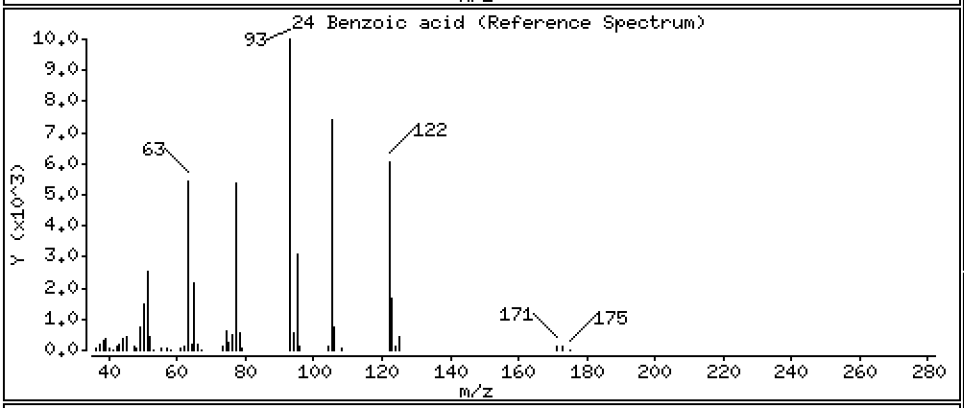
Concentration: 6.761 ug/mL

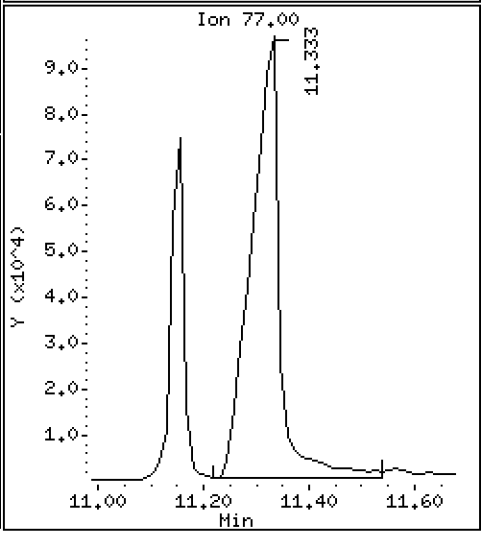


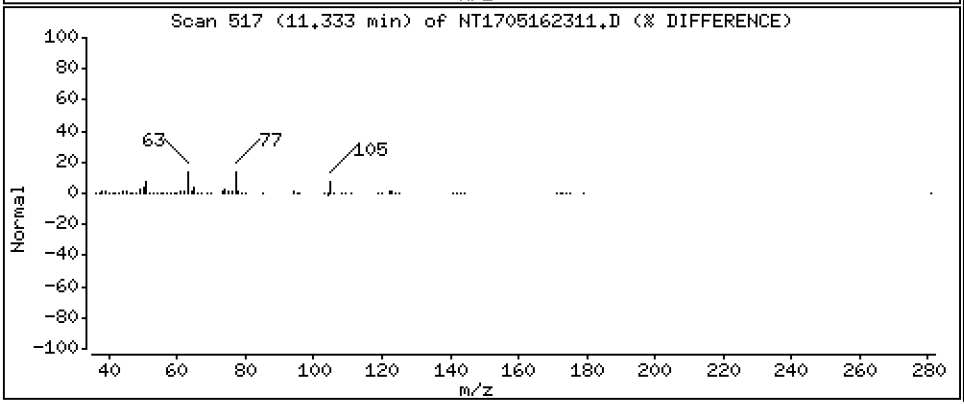












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

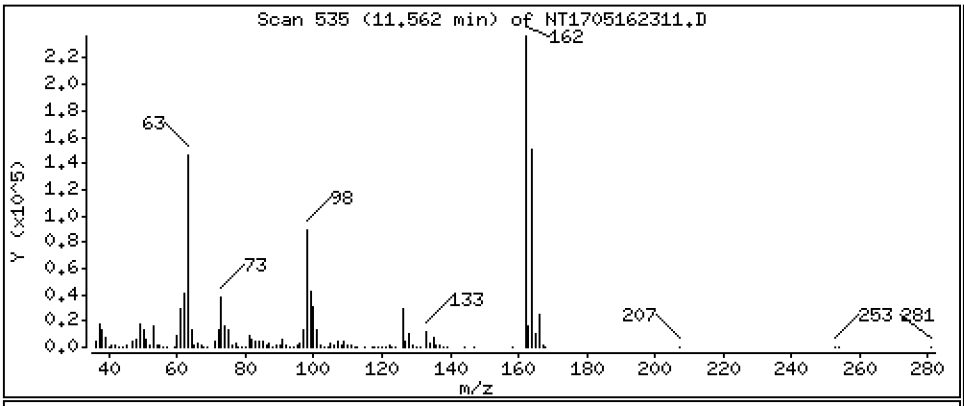
Operator: JGR

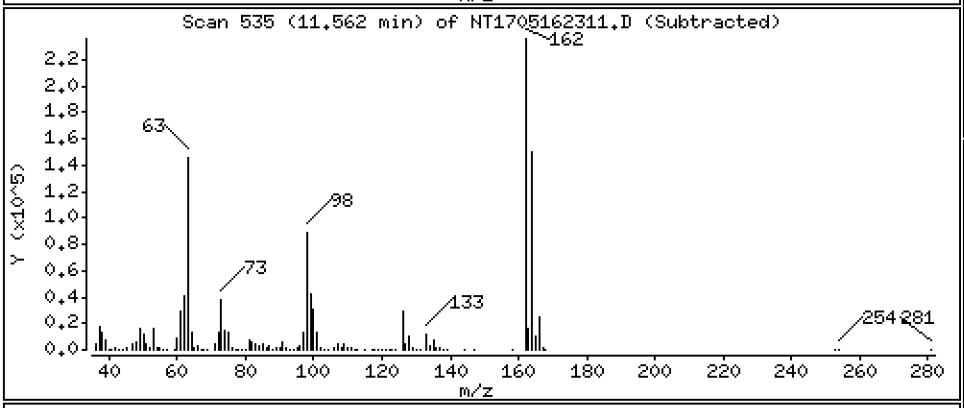
Column phase: ZB-5msi

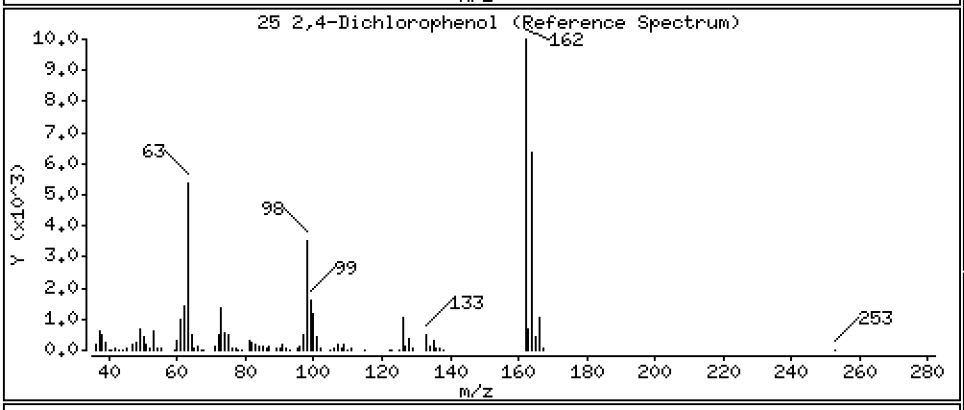
Column diameter: 0.25

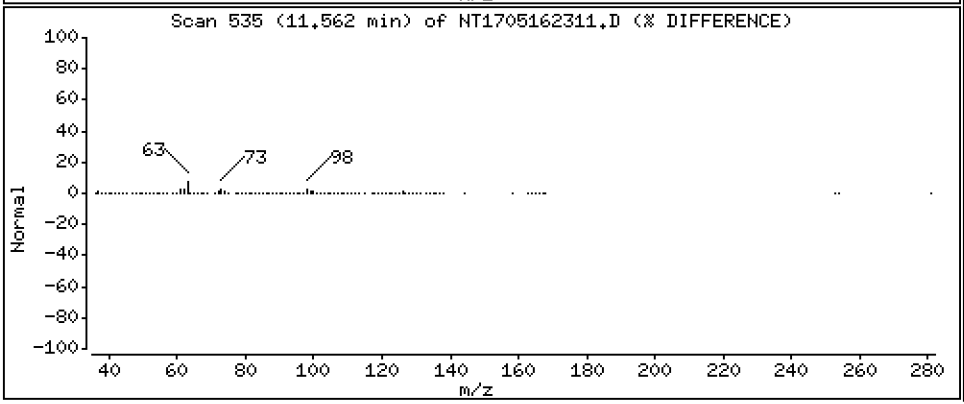
25 2,4-Dichlorophenol

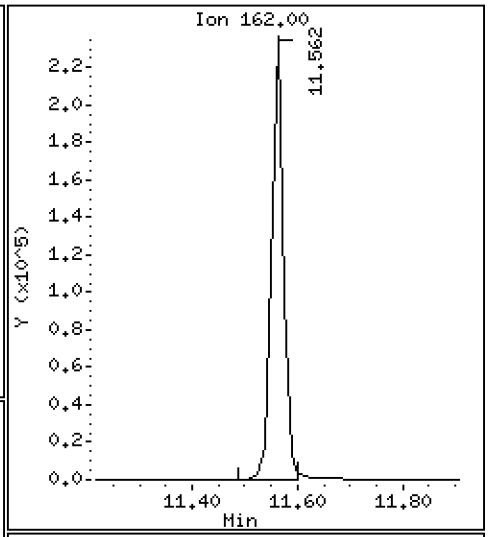
Concentration: 4.707 ug/mL

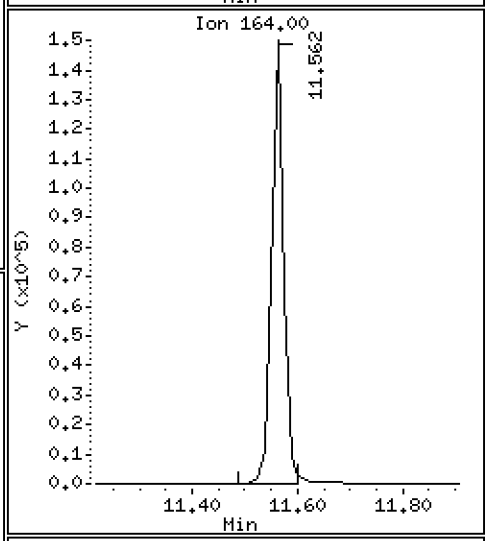


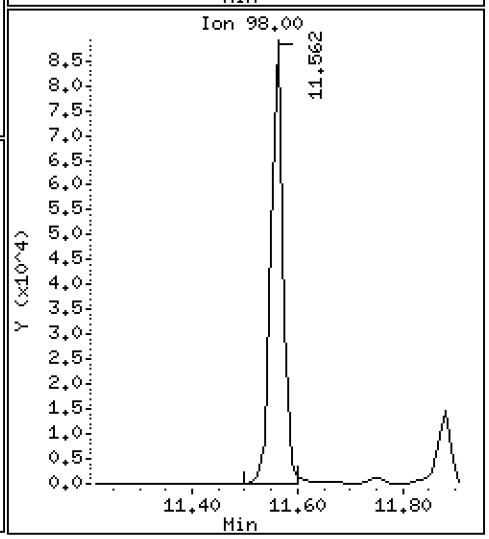












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

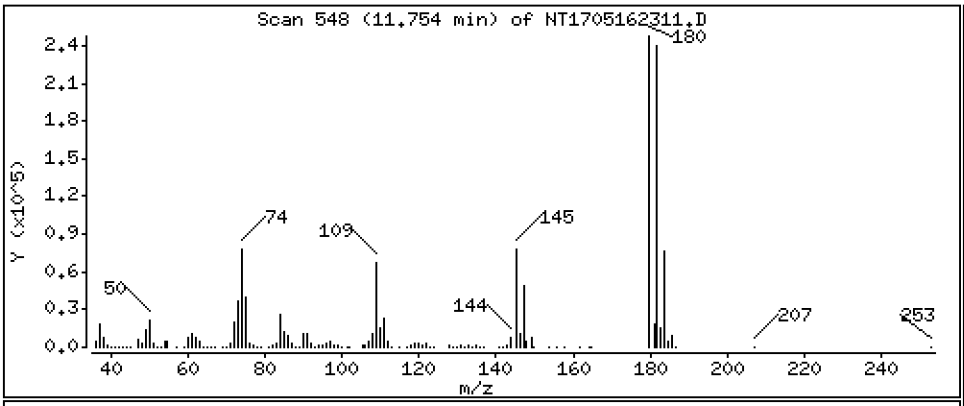
Operator: JGR

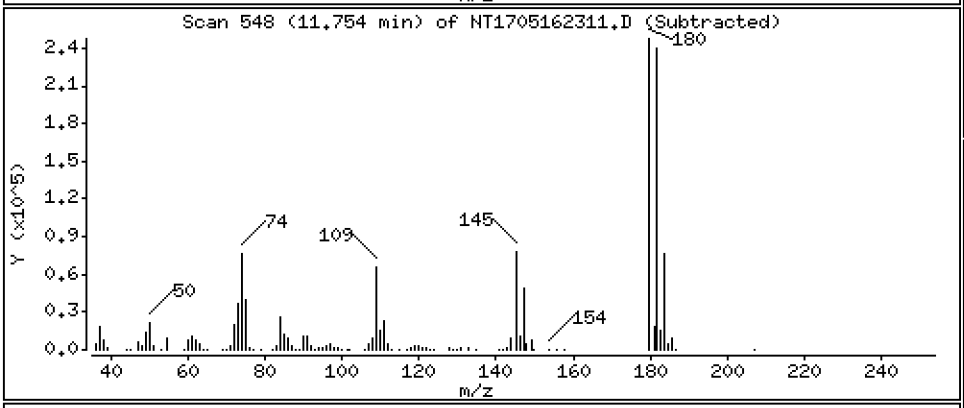
Column phase: ZB-5msi

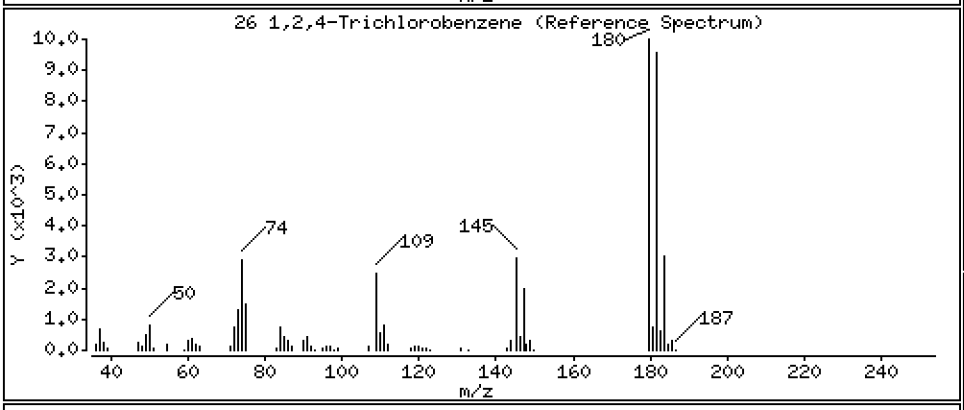
Column diameter: 0.25

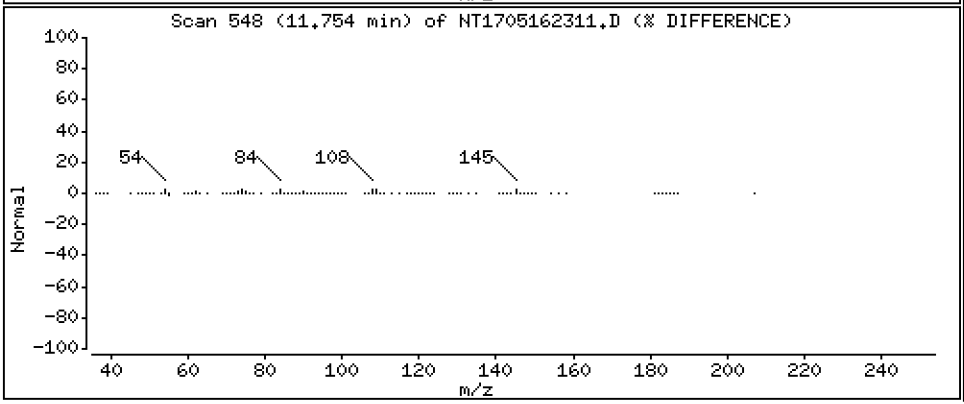
26 1,2,4-Trichlorobenzene

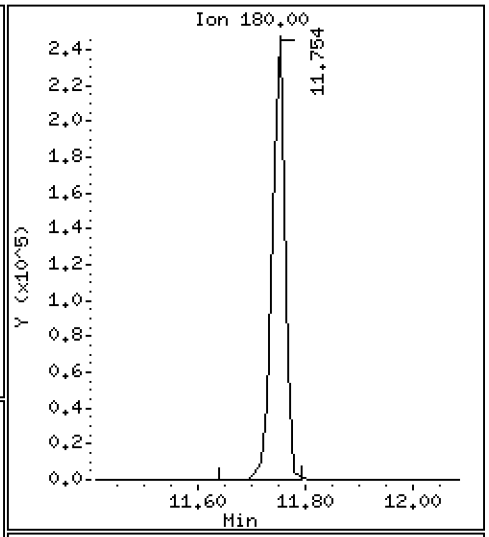
Concentration: 5.879 ug/mL

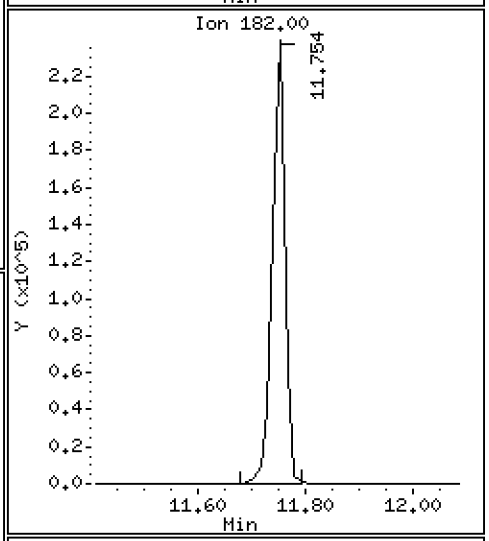


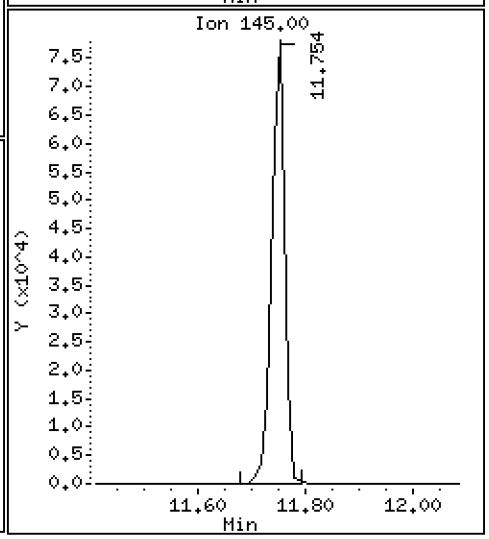












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

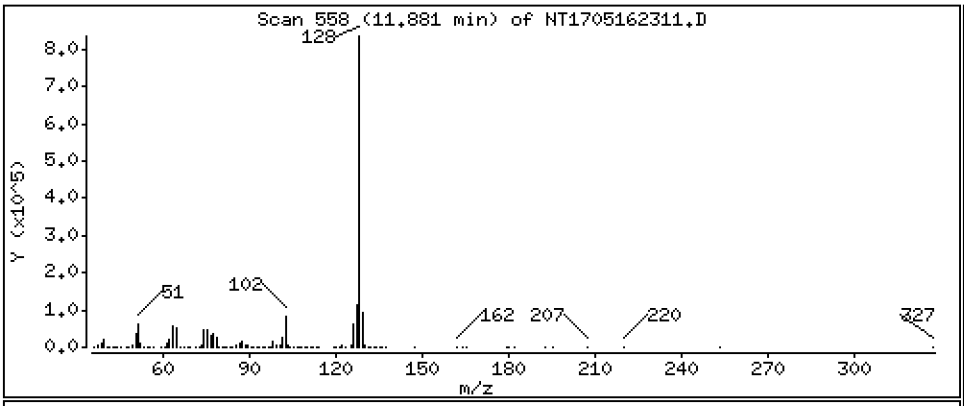
Operator: JGR

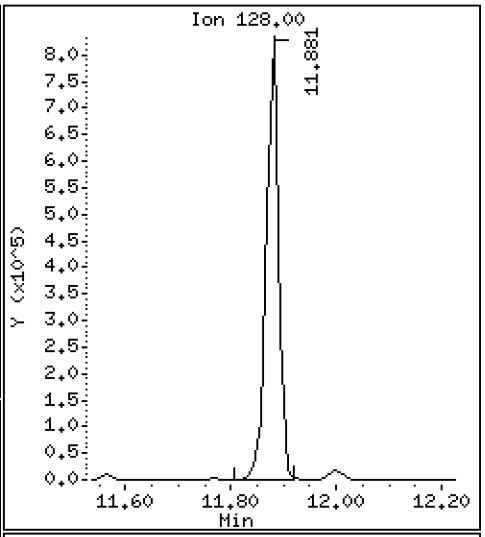
Column phase: ZB-5msi

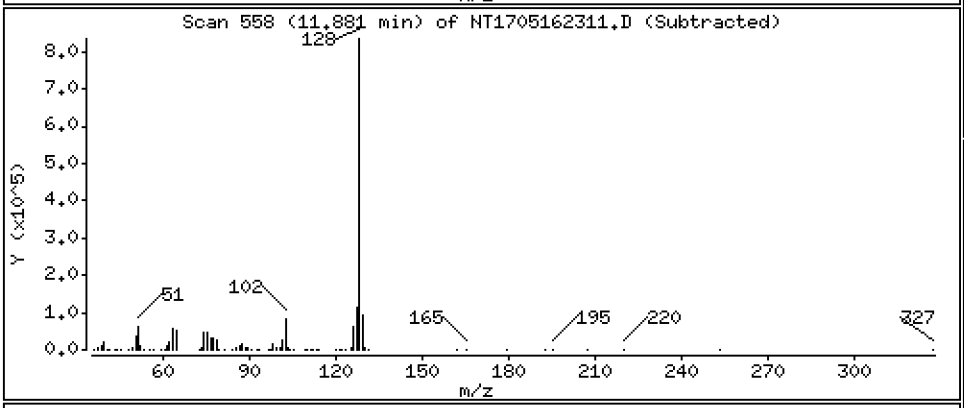
Column diameter: 0.25

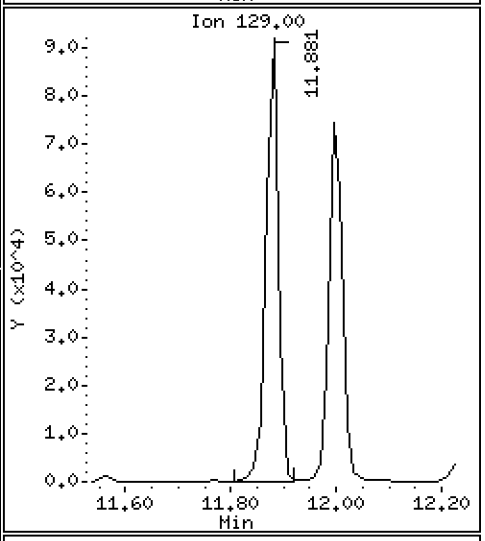
28 Naphthalene

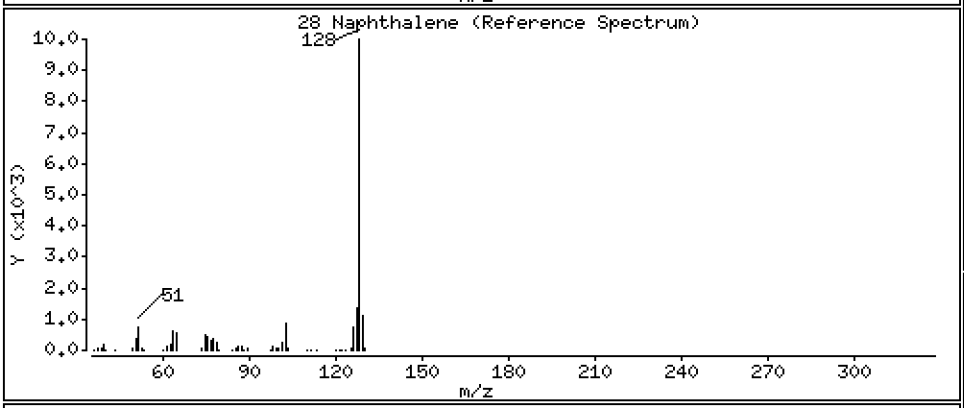
Concentration: 5.129 ug/mL

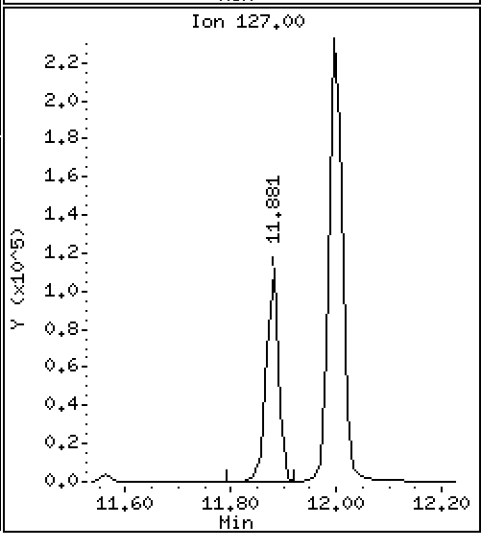


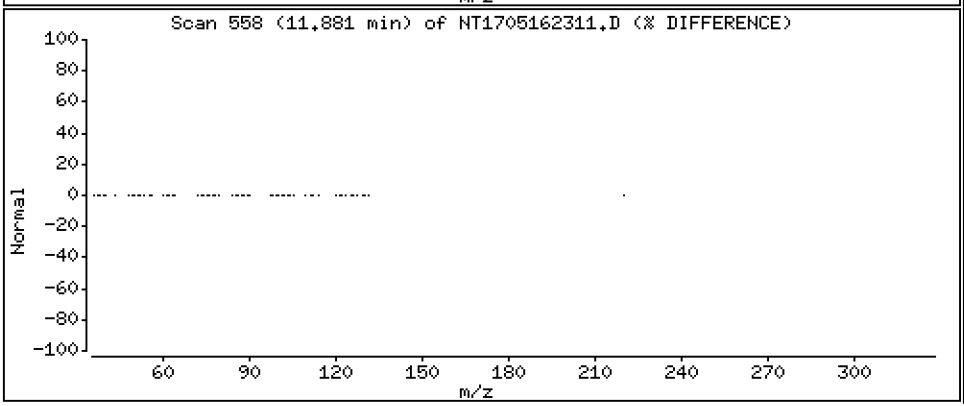












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

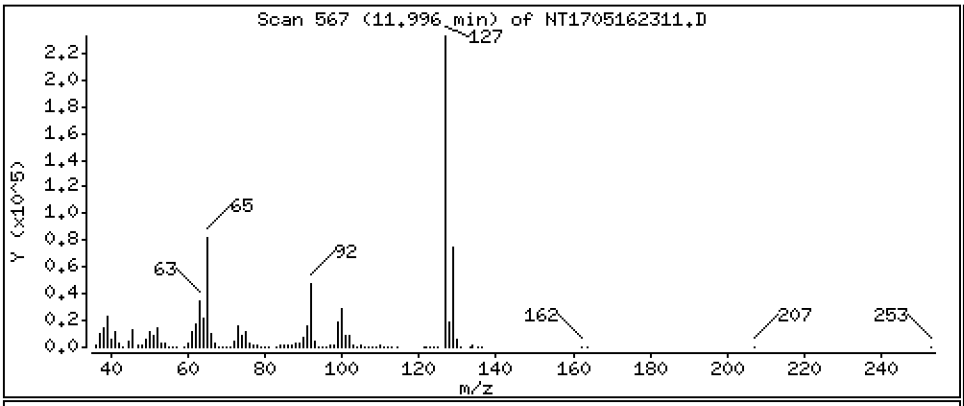
Operator: JGR

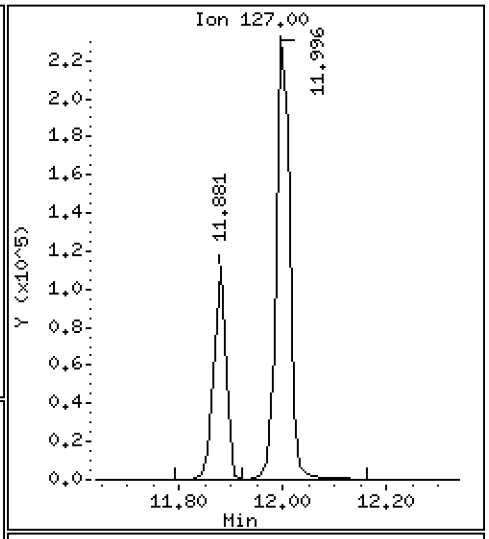
Column phase: ZB-5msi

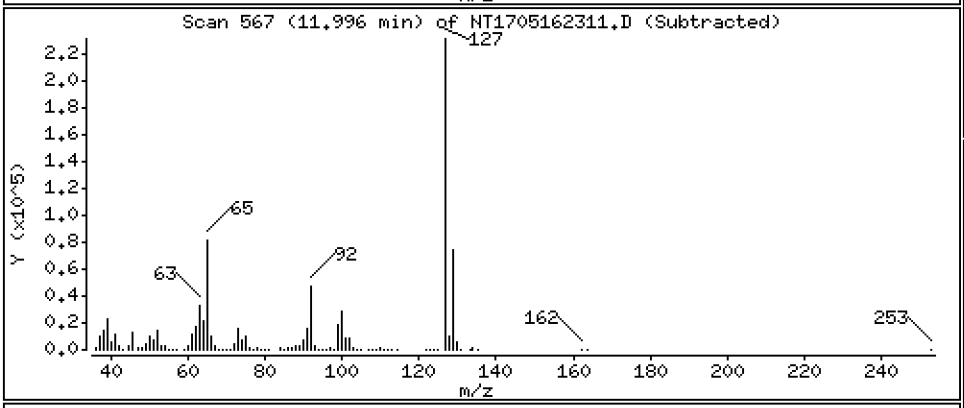
Column diameter: 0.25

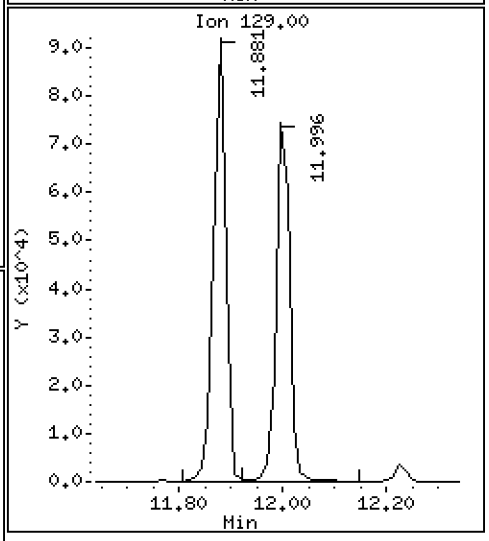
29 4-Chloroaniline

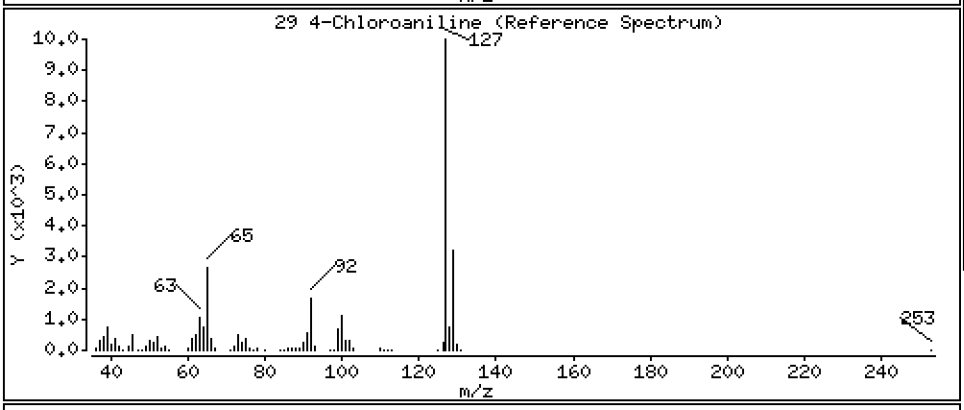
Concentration: 4.488 ug/mL

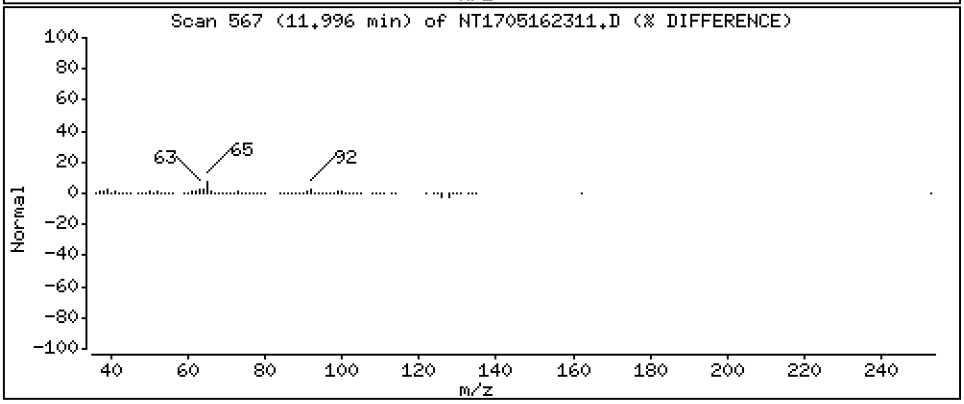












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

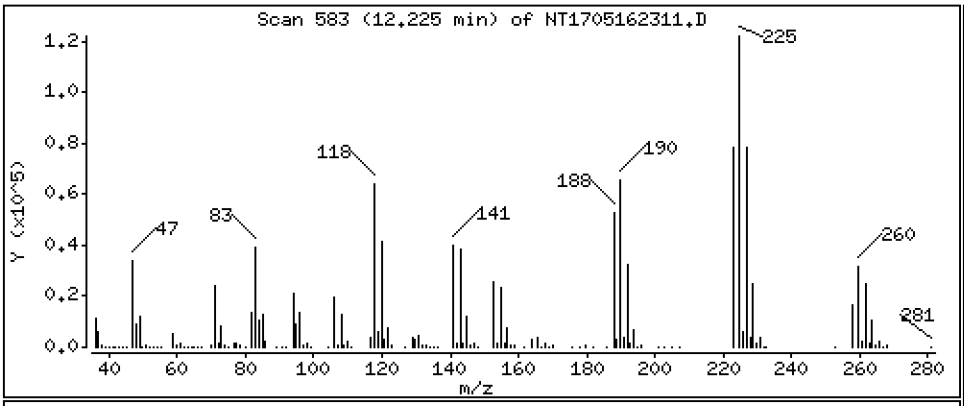
Operator: JGR

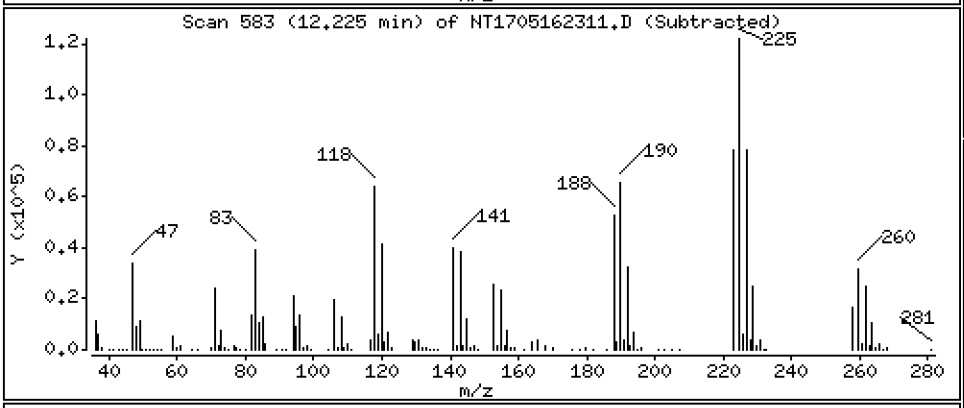
Column phase: ZB-5msi

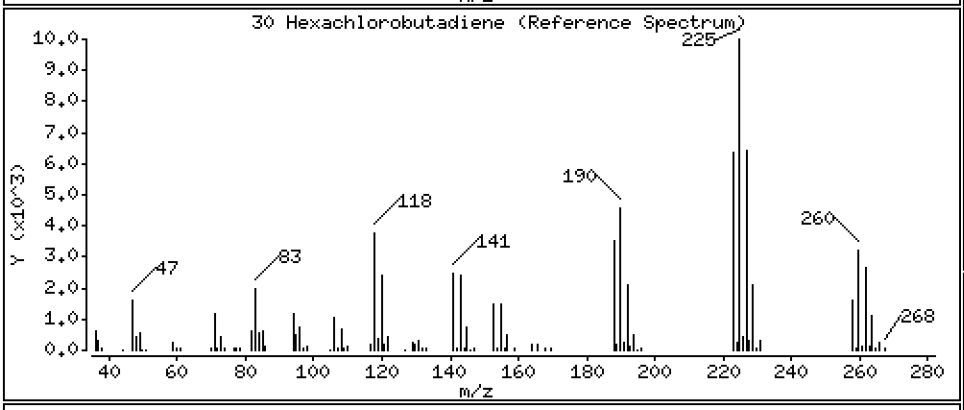
Column diameter: 0.25

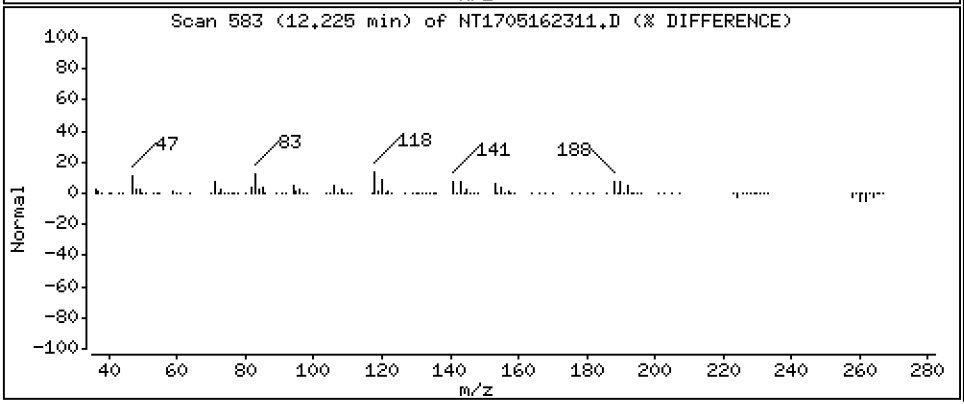
30 Hexachlorobutadiene

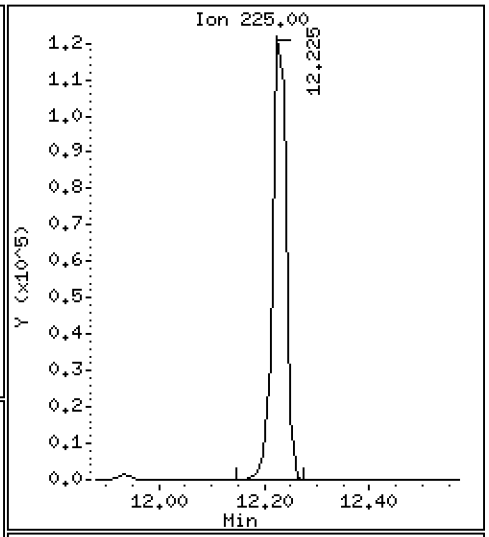
Concentration: 5.241 ug/mL

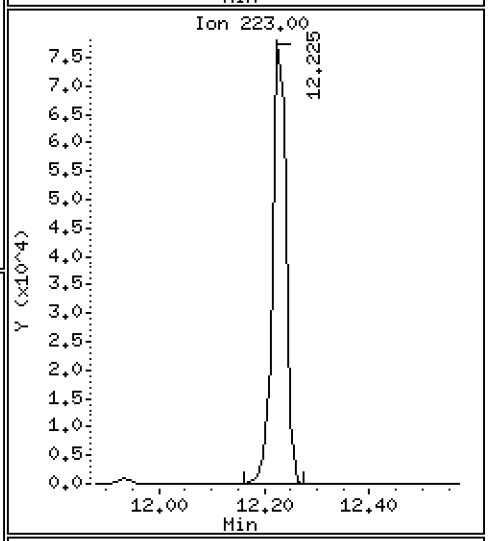


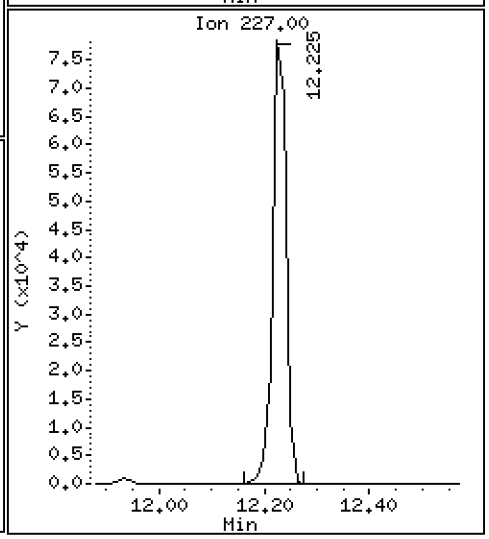












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

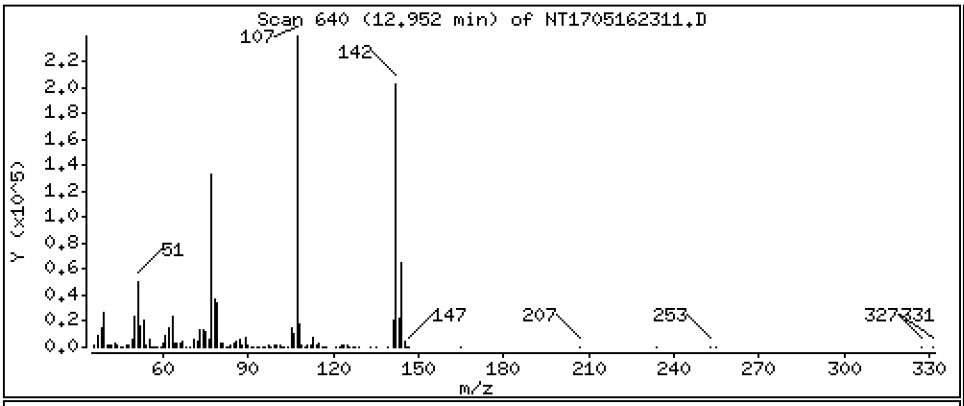
Operator: JGR

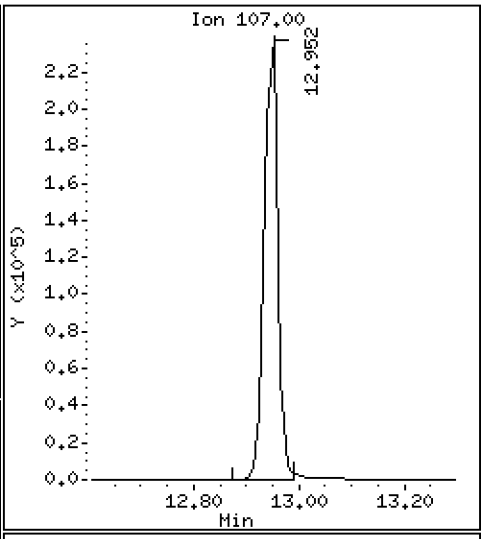
Column phase: ZB-5msi

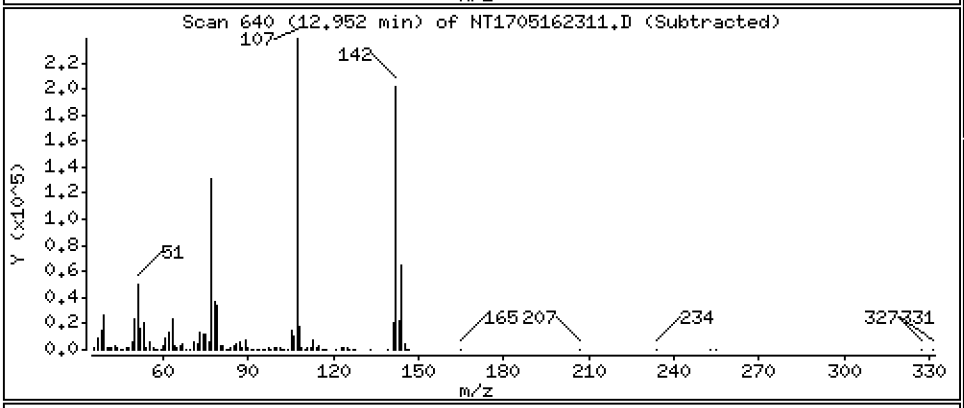
Column diameter: 0.25

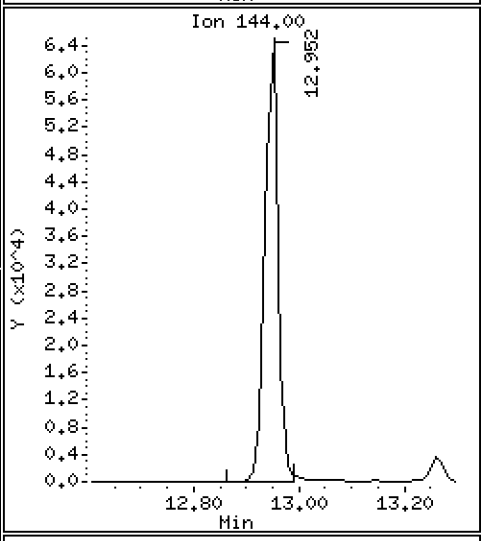
31 4-Chloro-3-methylphenol

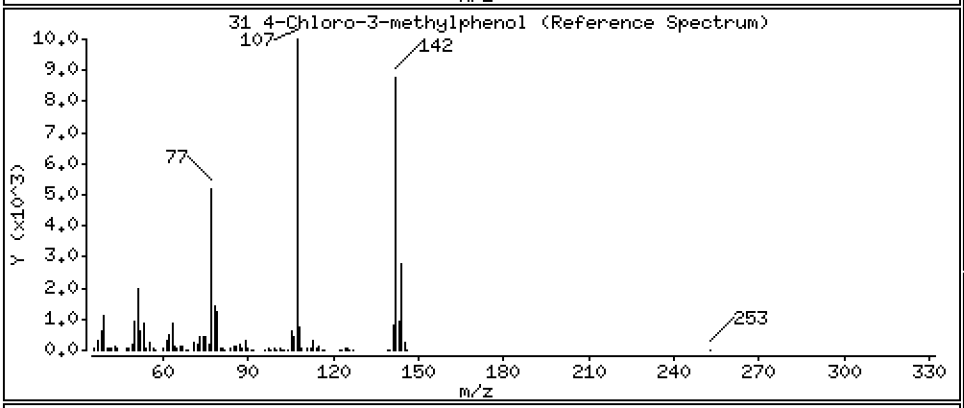
Concentration: 4.878 ug/mL

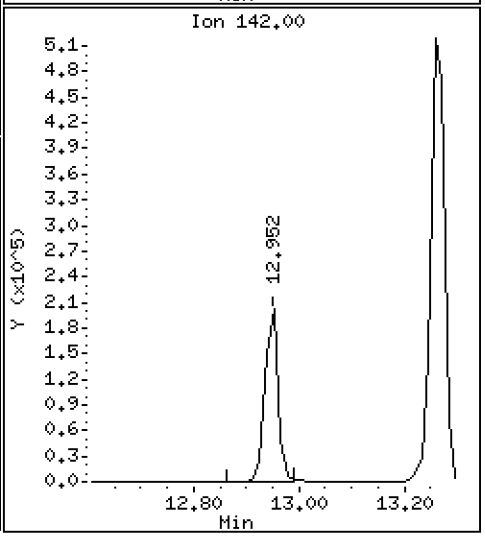


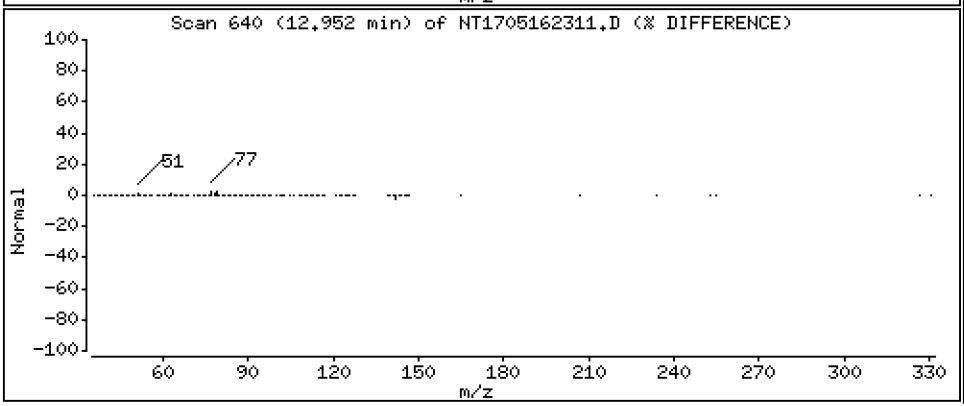












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

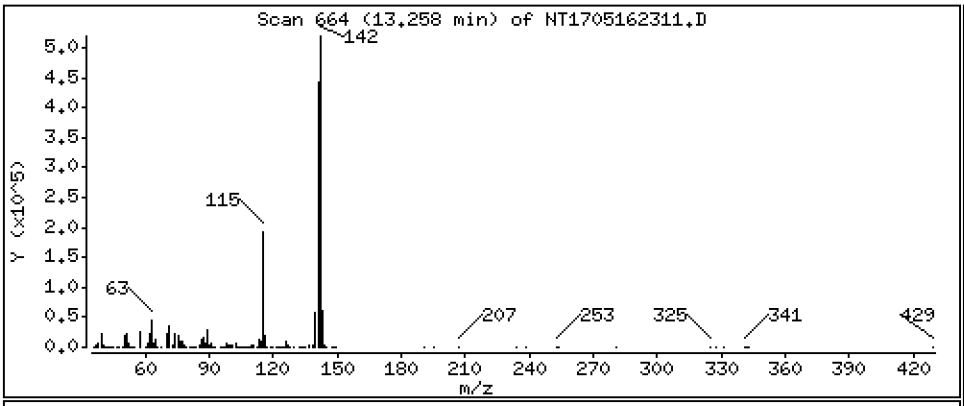
Operator: JGR

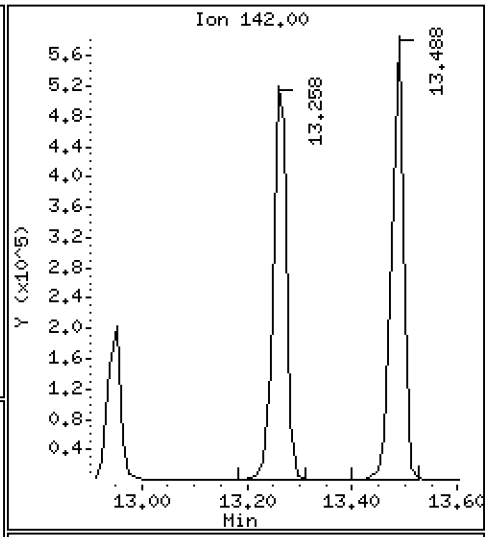
Column phase: ZB-5msi

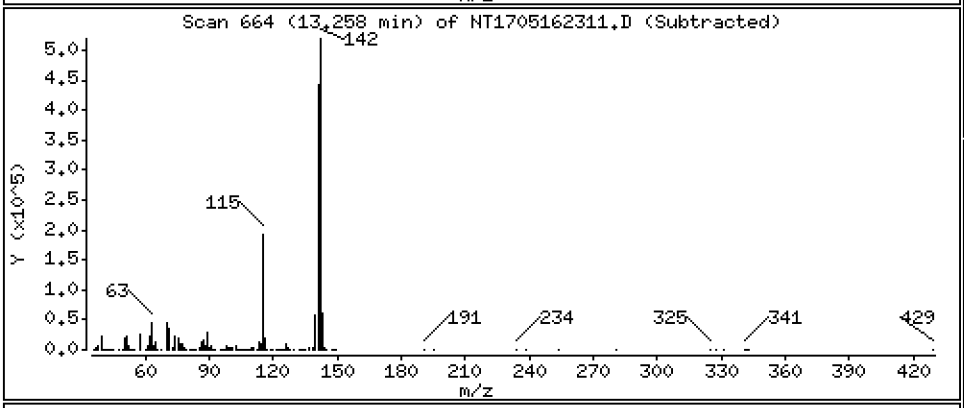
Column diameter: 0.25

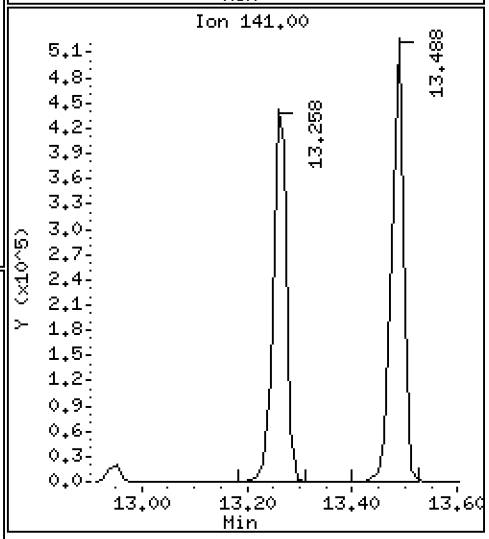
32 2-Methylnaphthalene

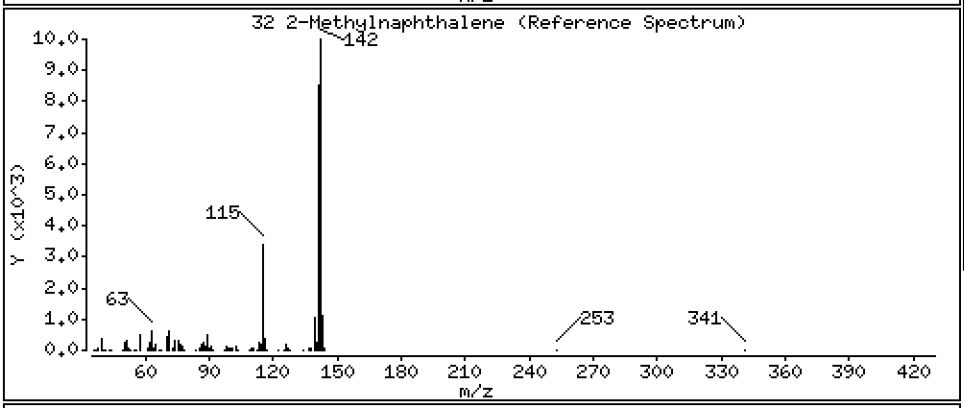
Concentration: 5.028 ug/mL

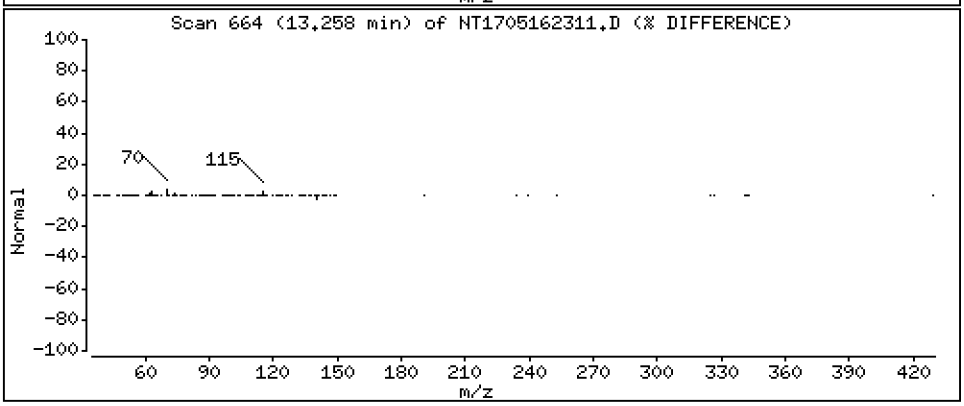












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

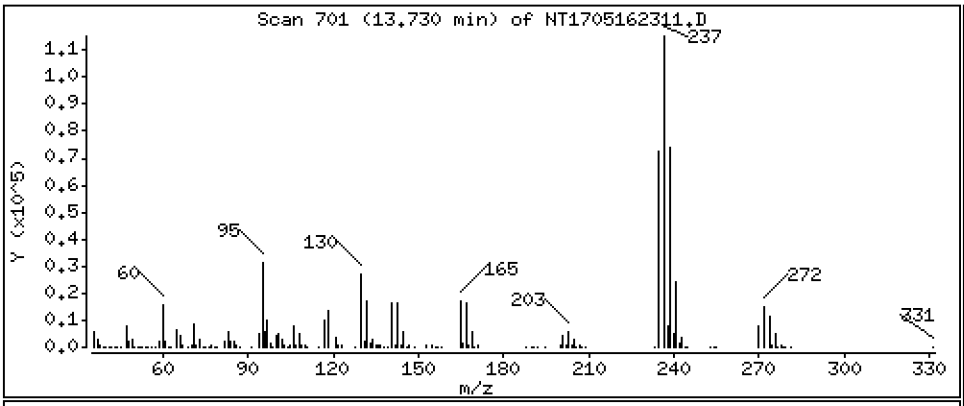
Operator: JGR

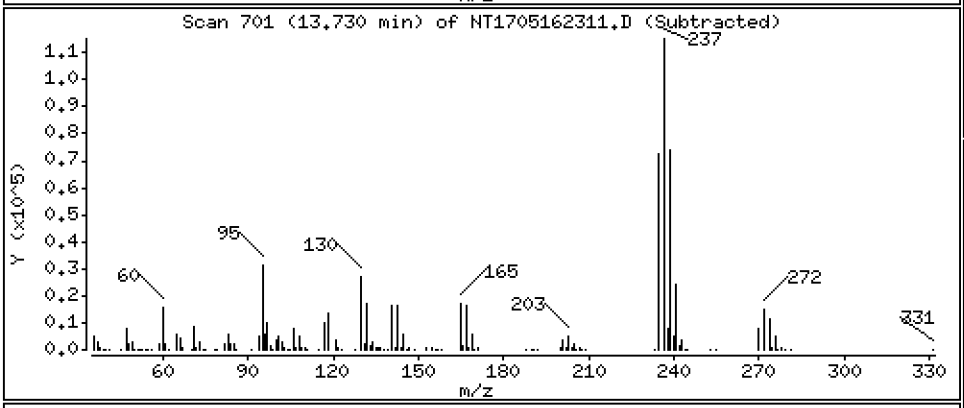
Column phase: ZB-5msi

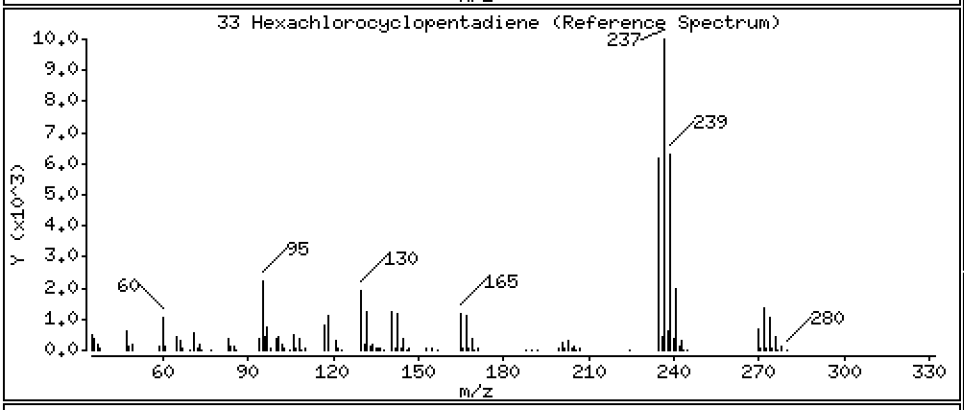
Column diameter: 0.25

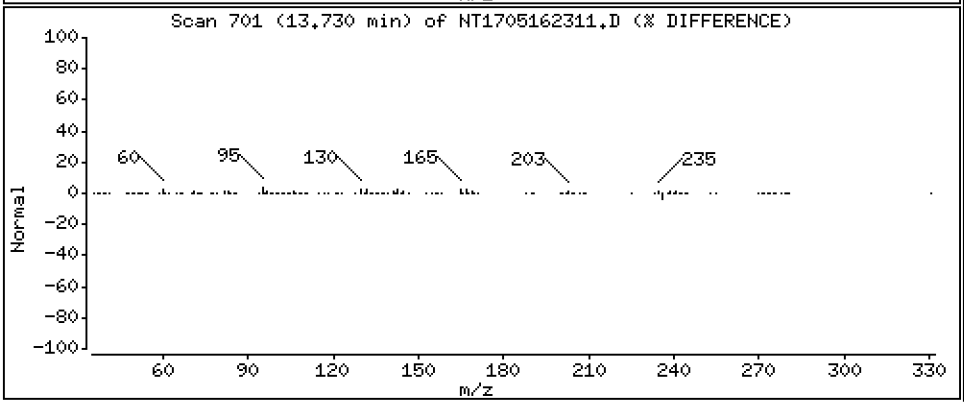
33 Hexachlorocyclopentadiene

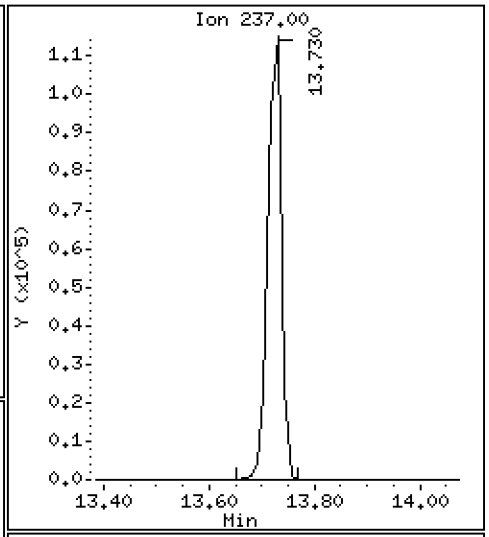
Concentration: 4.219 ug/mL

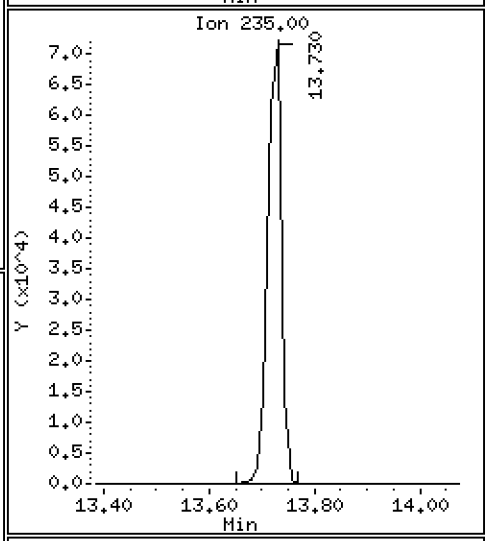


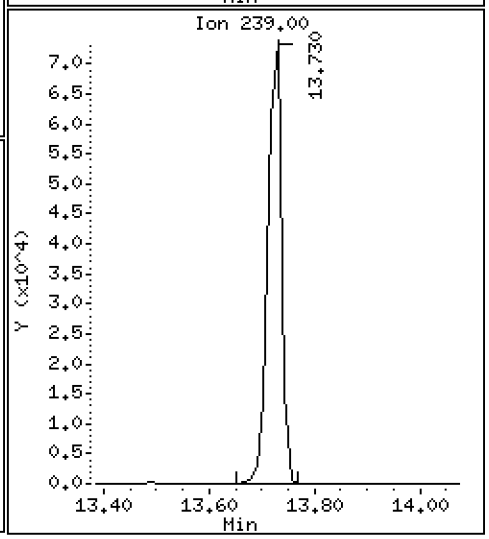












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

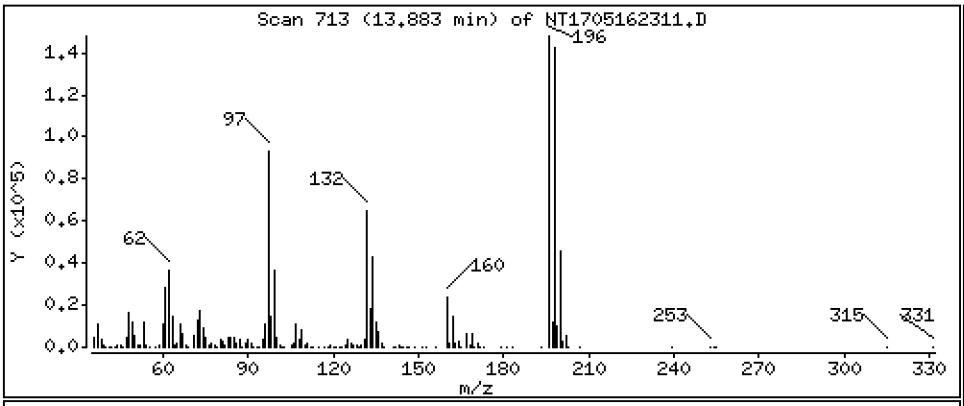
Operator: JGR

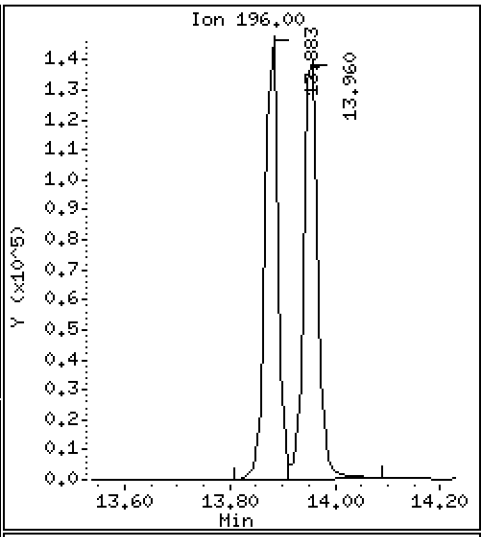
Column phase: ZB-5msi

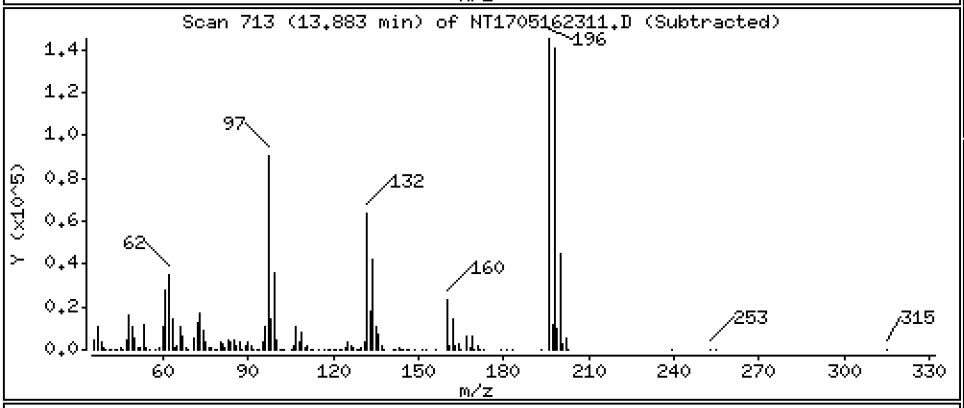
Column diameter: 0.25

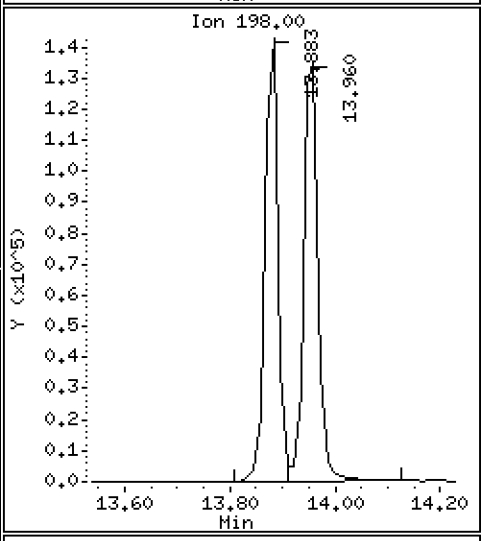
34 2,4,6-Trichlorophenol

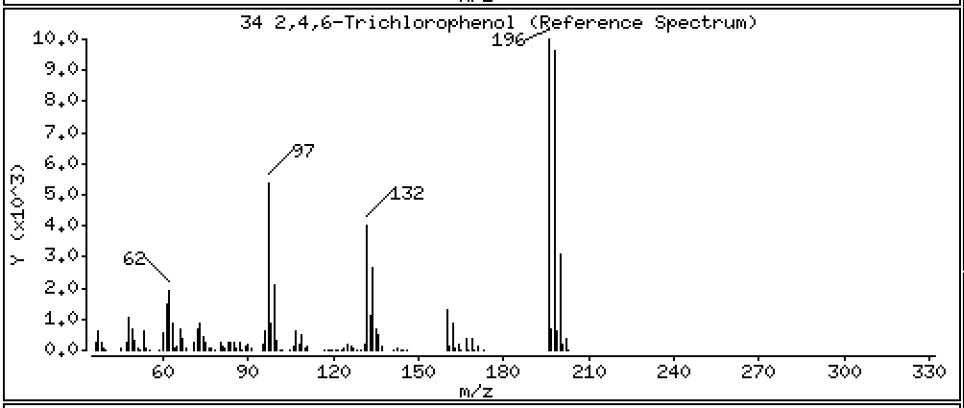
Concentration: 4.794 ug/mL

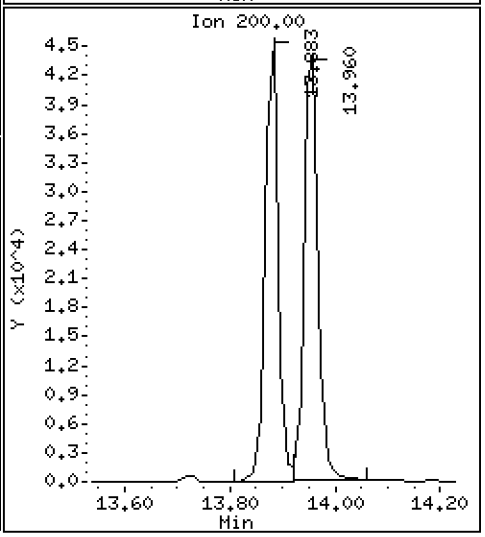


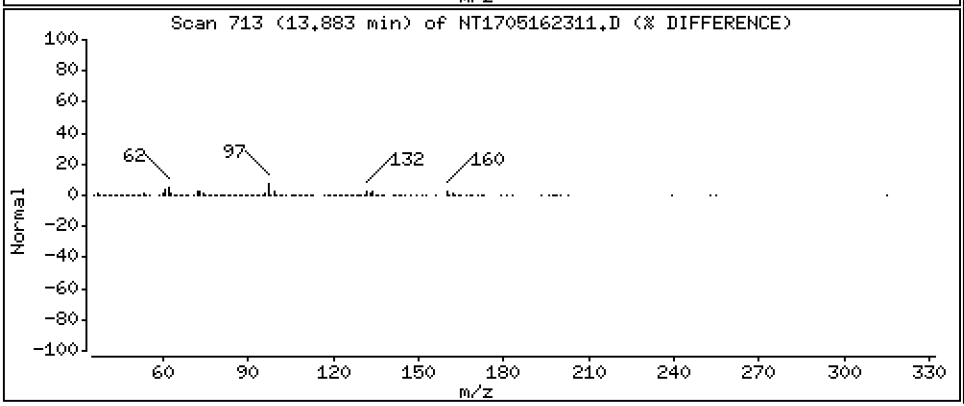












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

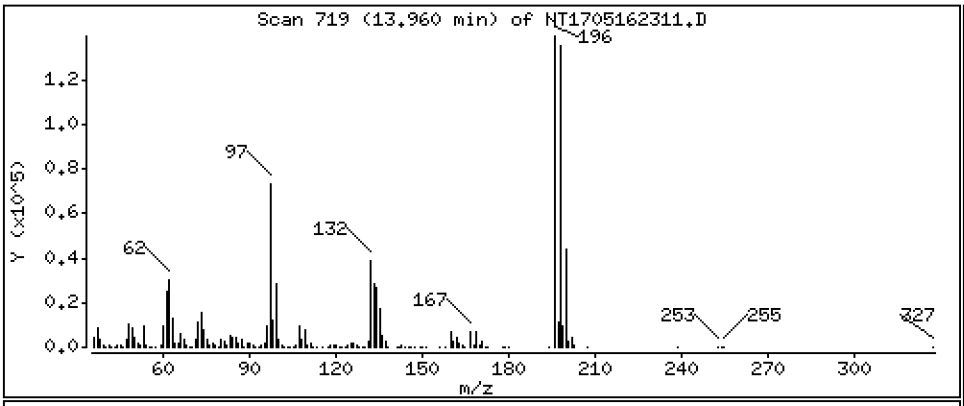
Operator: JGR

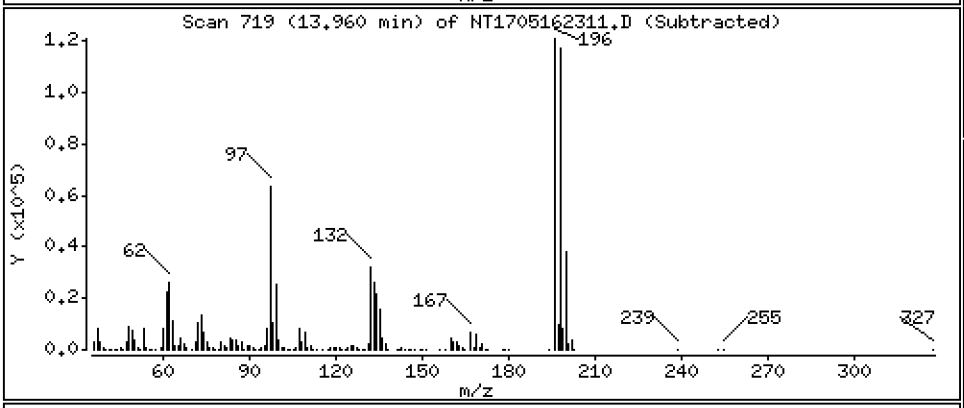
Column phase: ZB-5msi

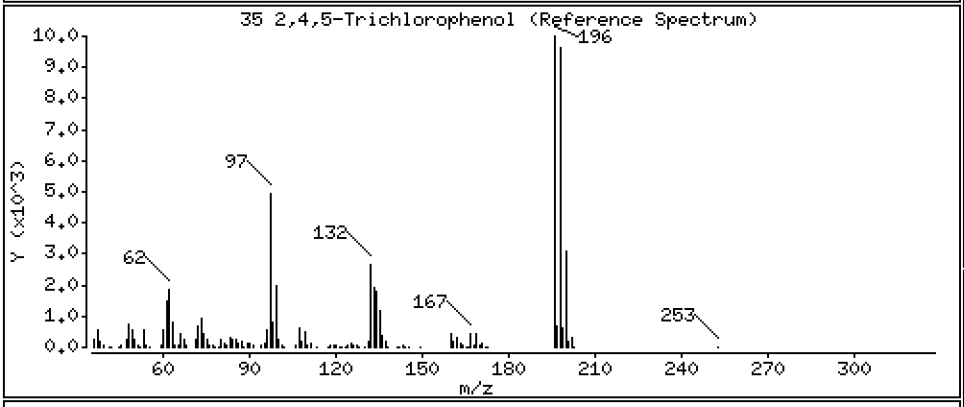
Column diameter: 0.25

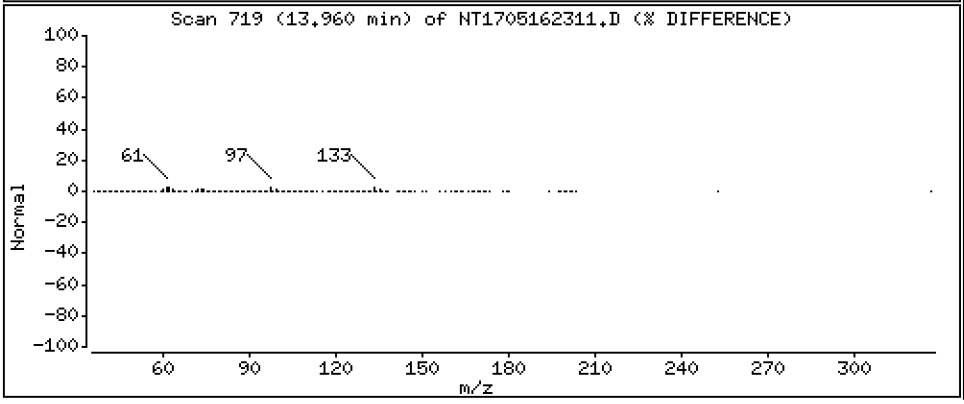
35 2,4,5-Trichlorophenol

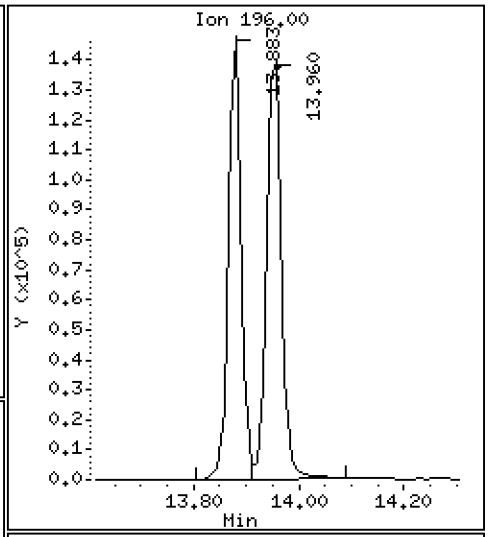
Concentration: 4.837 ug/mL

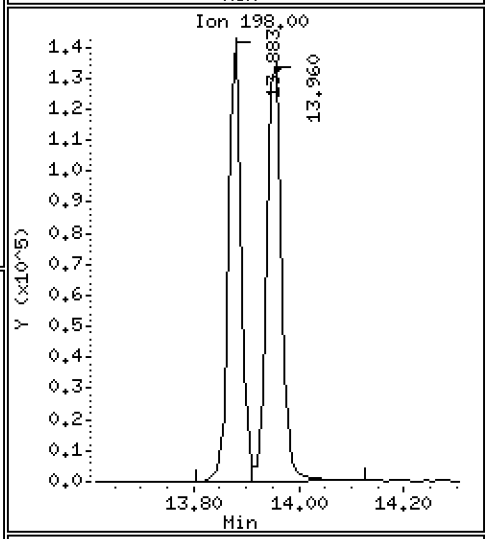


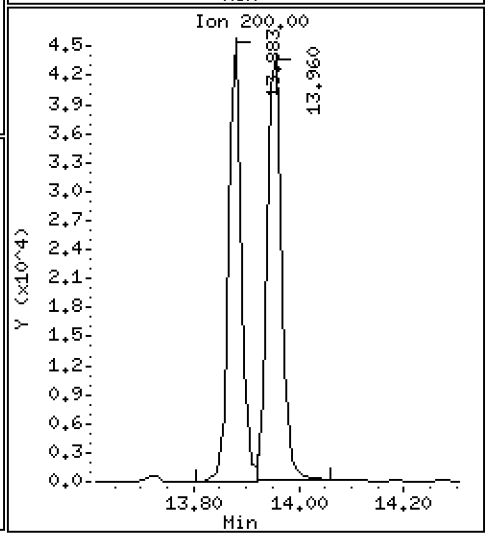












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

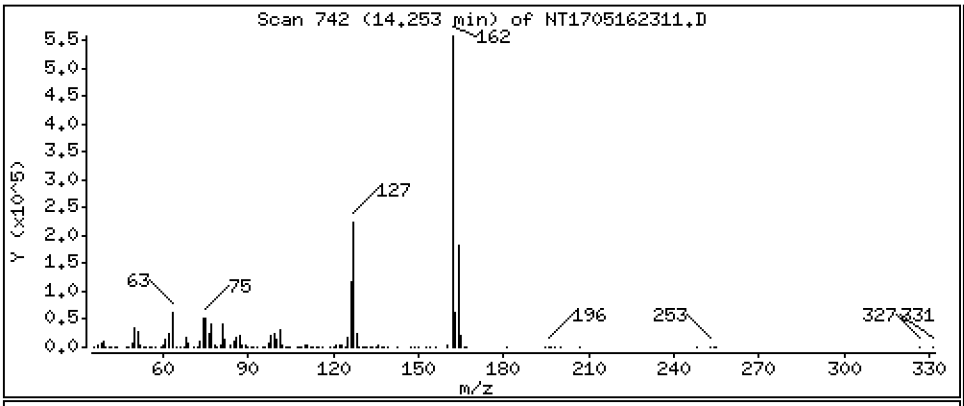
Operator: JGR

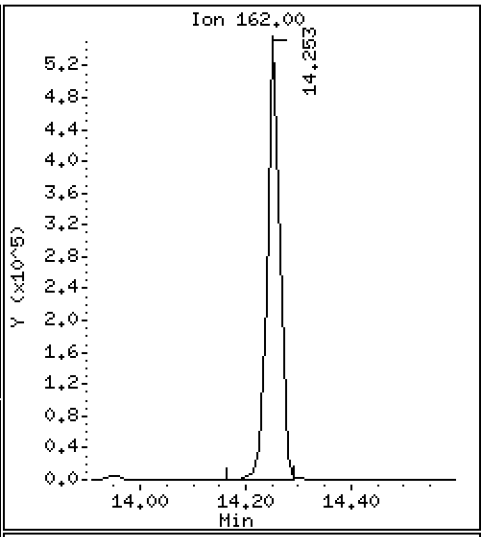
Column phase: ZB-5msi

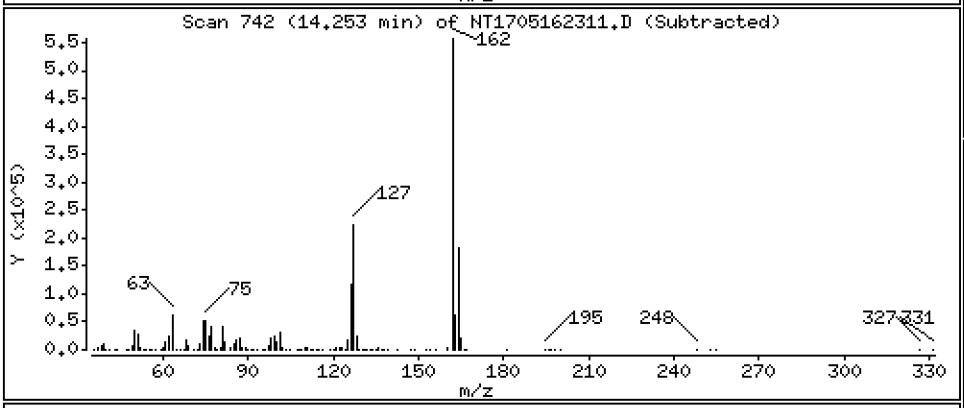
Column diameter: 0.25

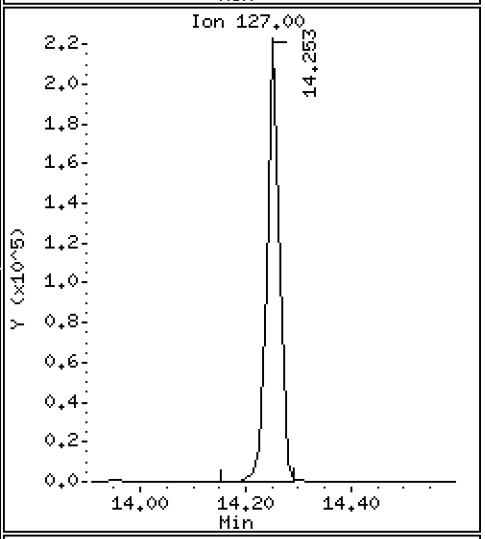
37 2-Chloronaphthalene

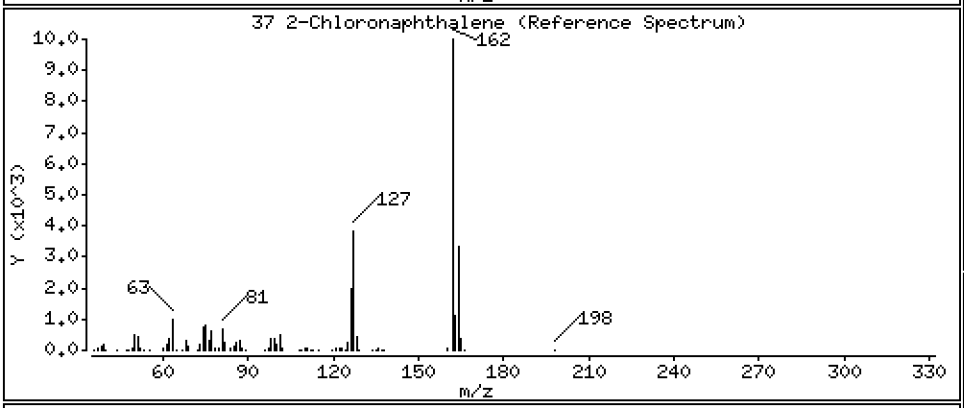
Concentration: 5.401 ug/mL

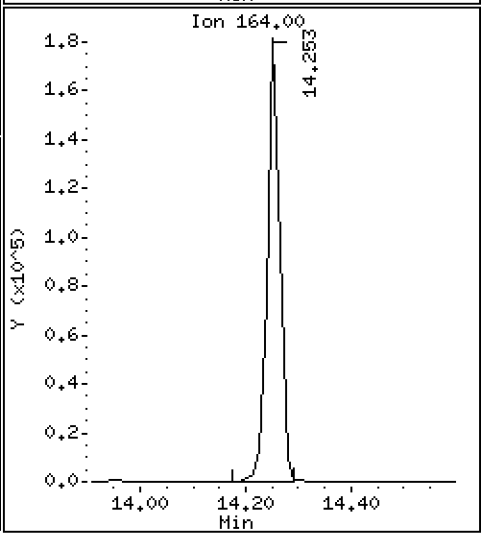


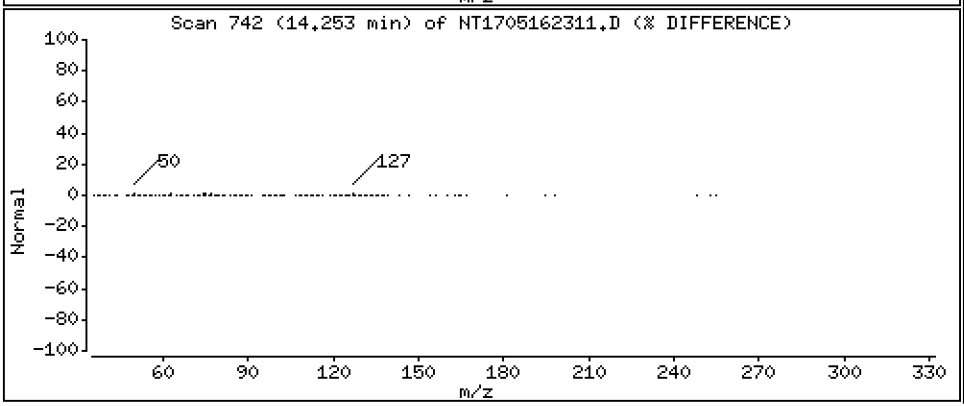












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

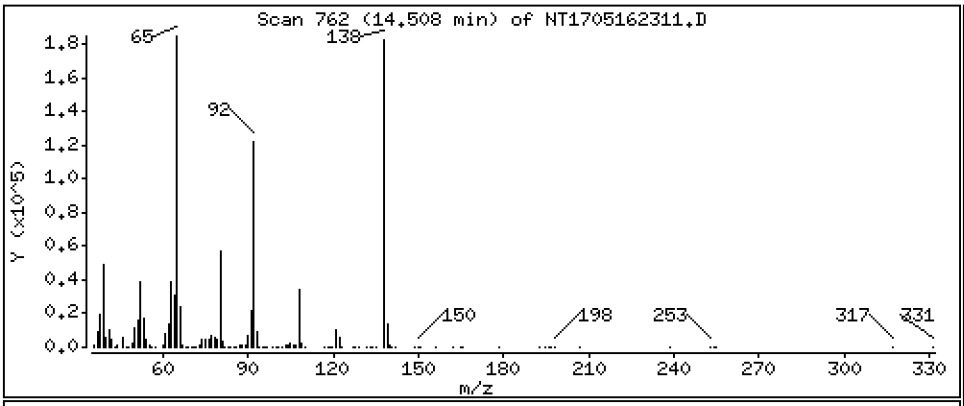
Operator: JGR

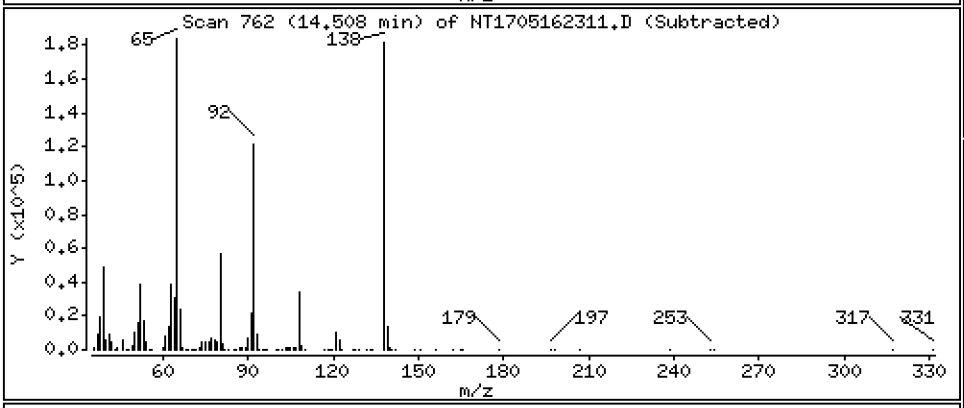
Column phase: ZB-5msi

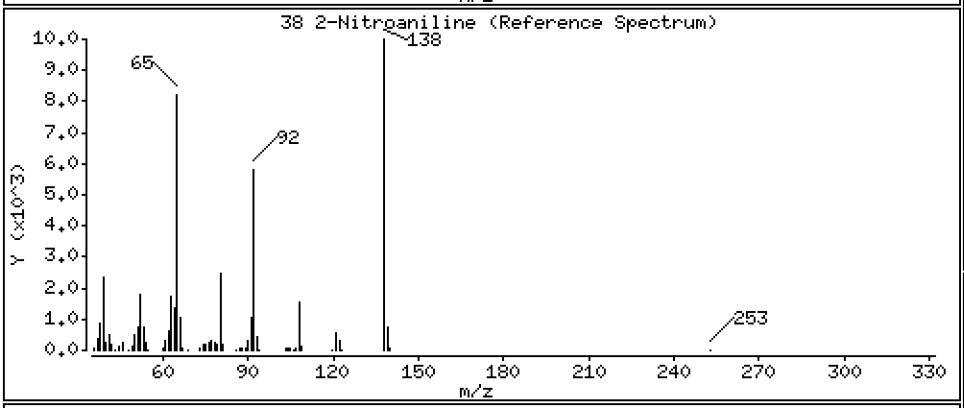
Column diameter: 0.25

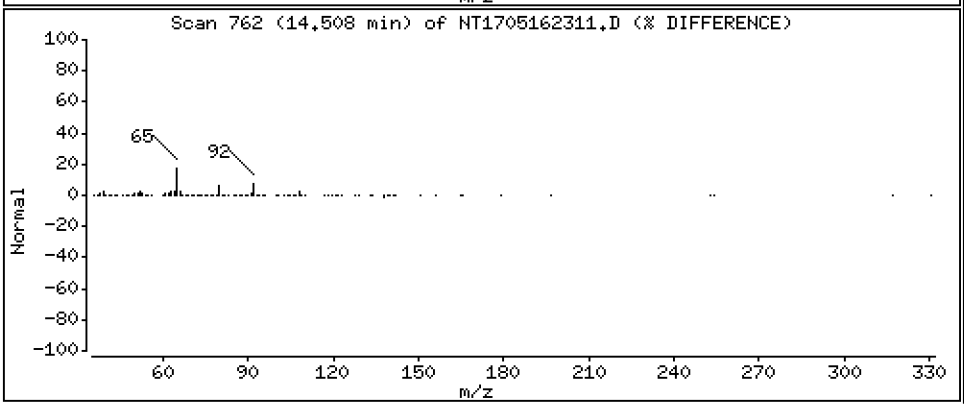
38 2-Nitroaniline

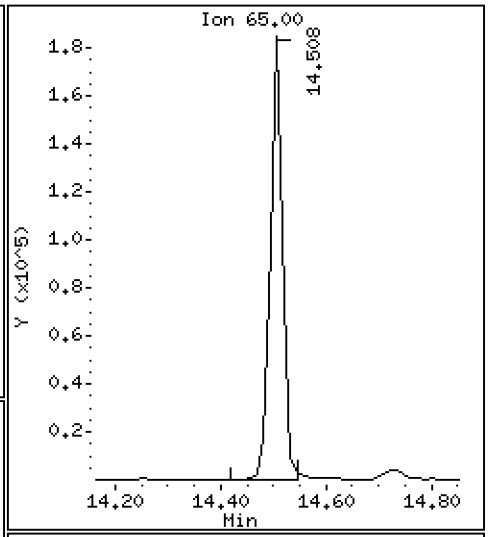
Concentration: 5.356 ug/mL

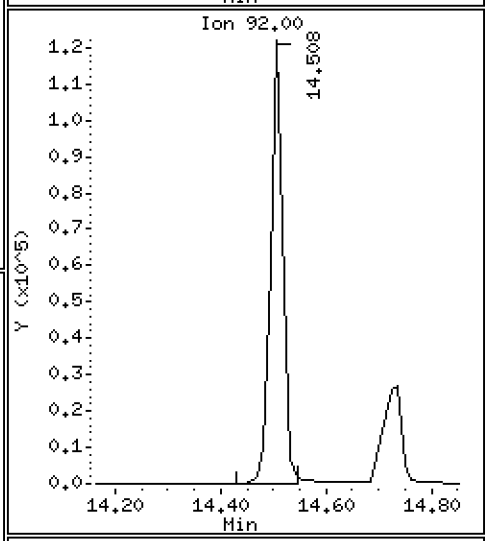


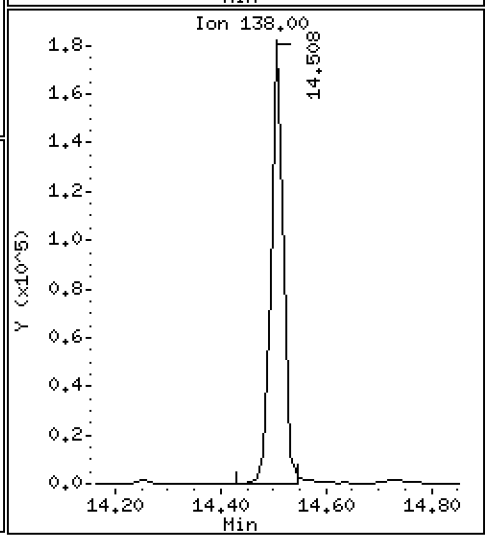












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

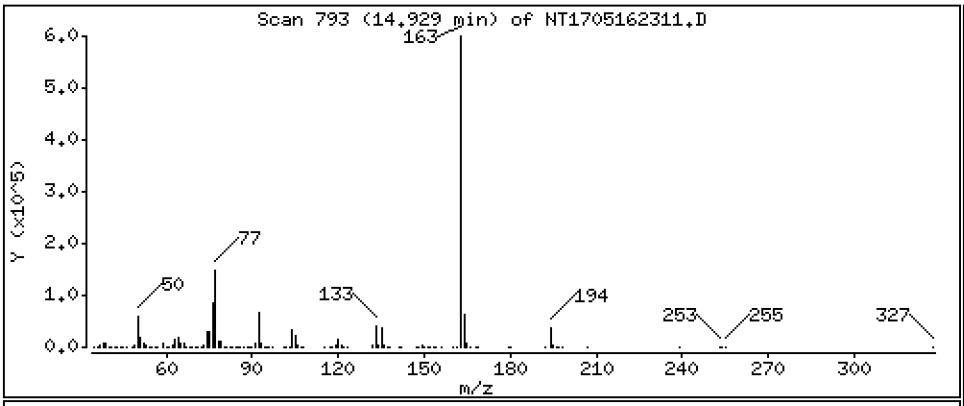
Operator: JGR

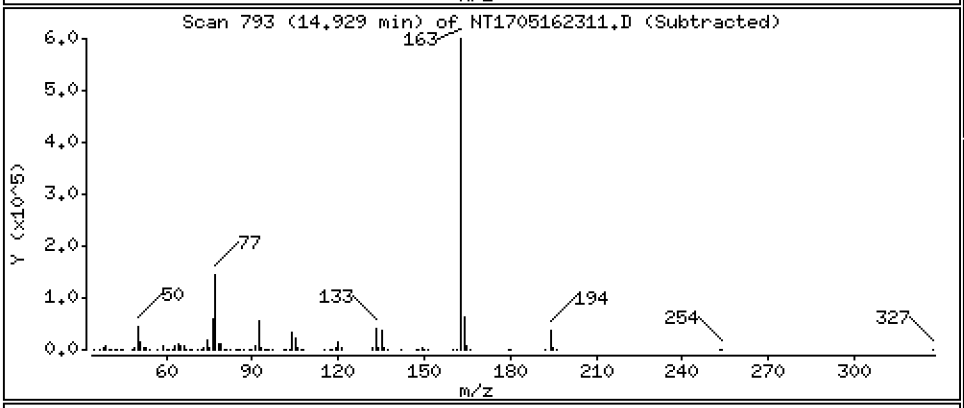
Column phase: ZB-5msi

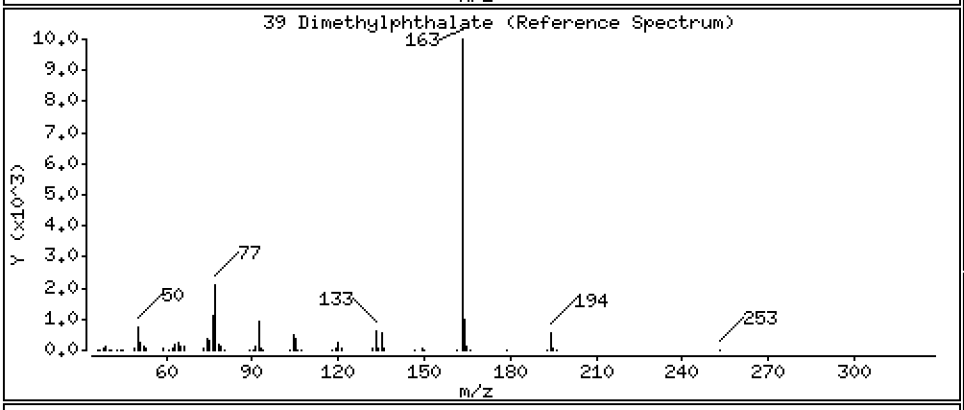
Column diameter: 0.25

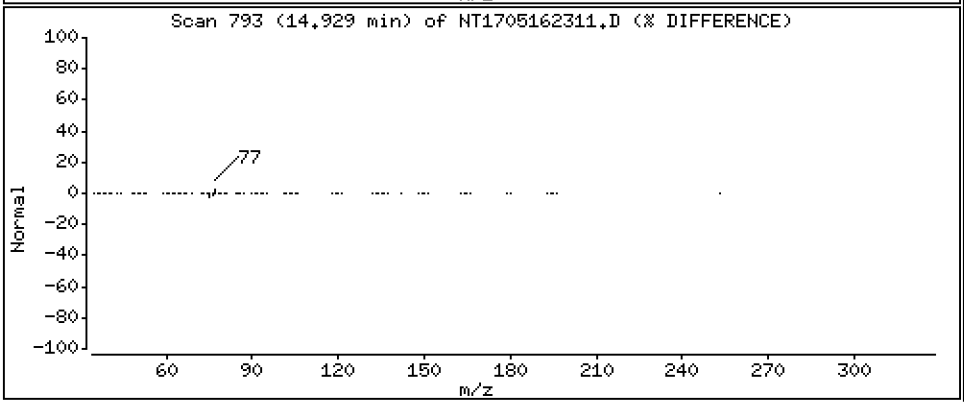
39 Dimethylphthalate

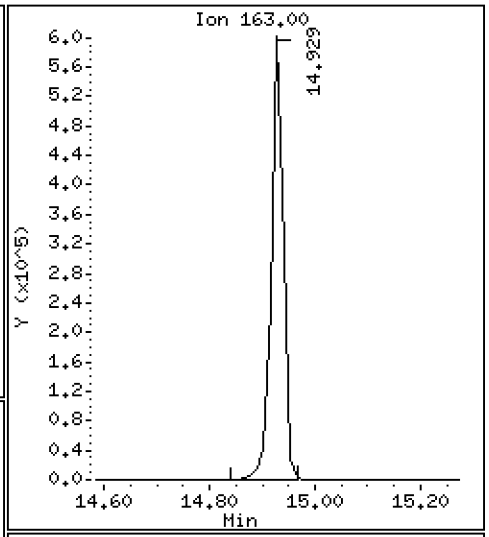
Concentration: 5.418 ug/mL

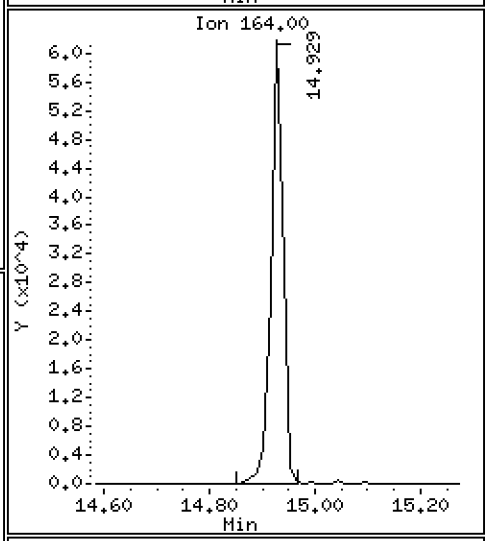


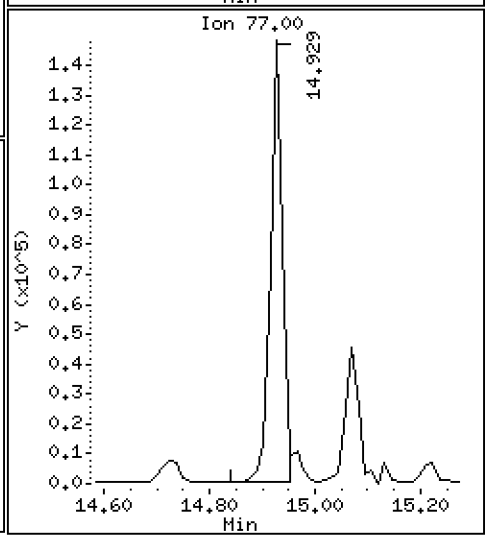












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

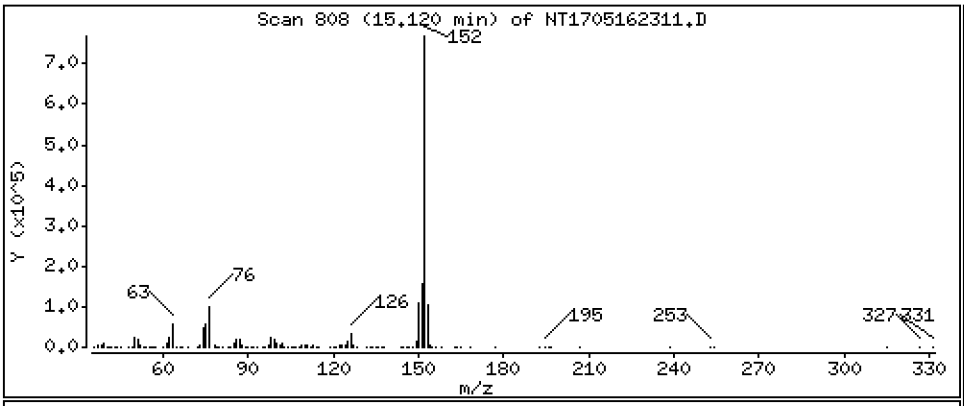
Operator: JGR

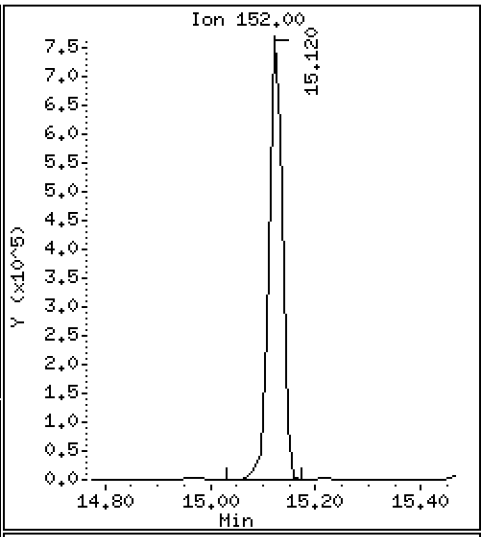
Column phase: ZB-5msi

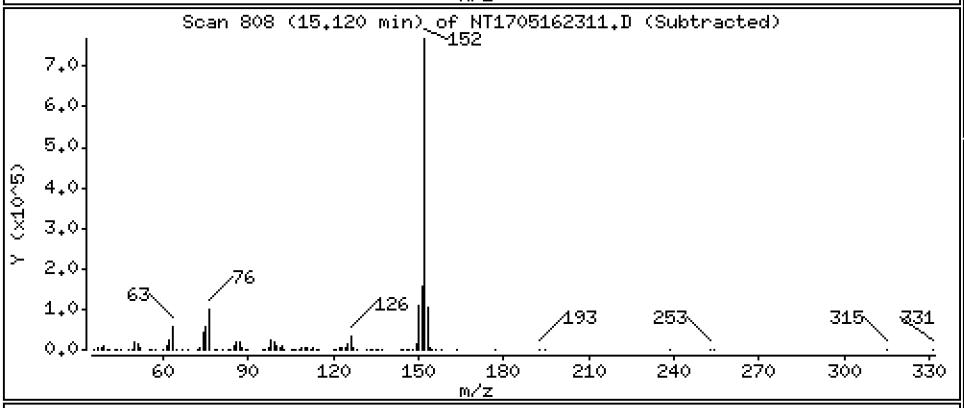
Column diameter: 0.25

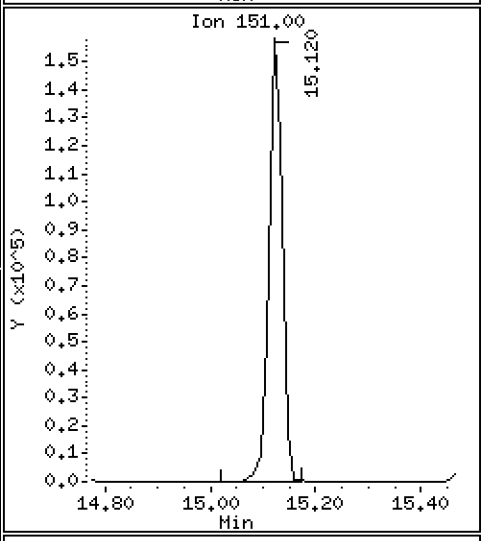
40 Acenaphthylene

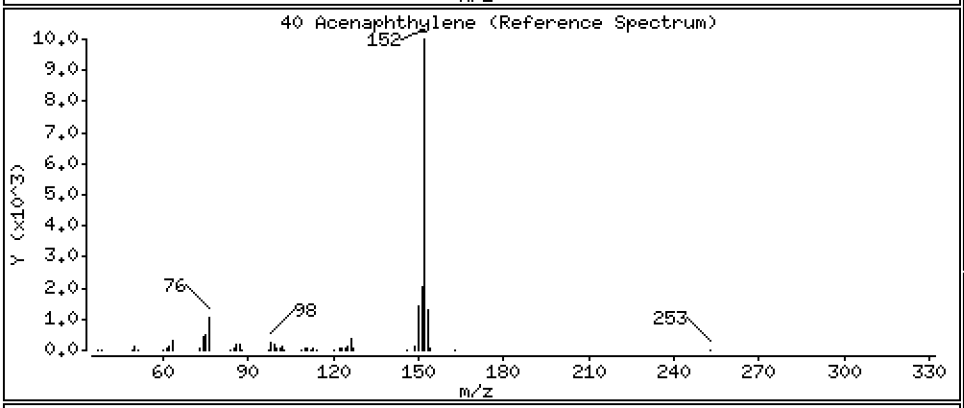
Concentration: 5.282 ug/mL

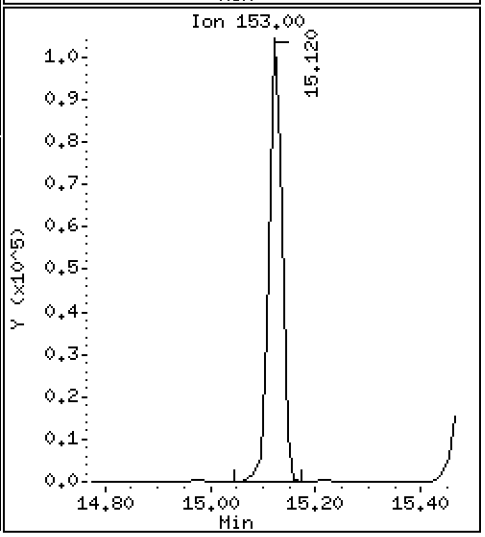


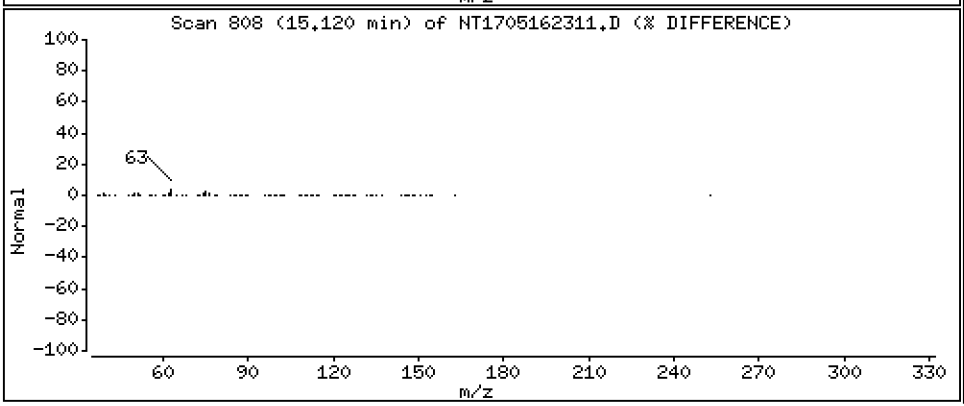












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

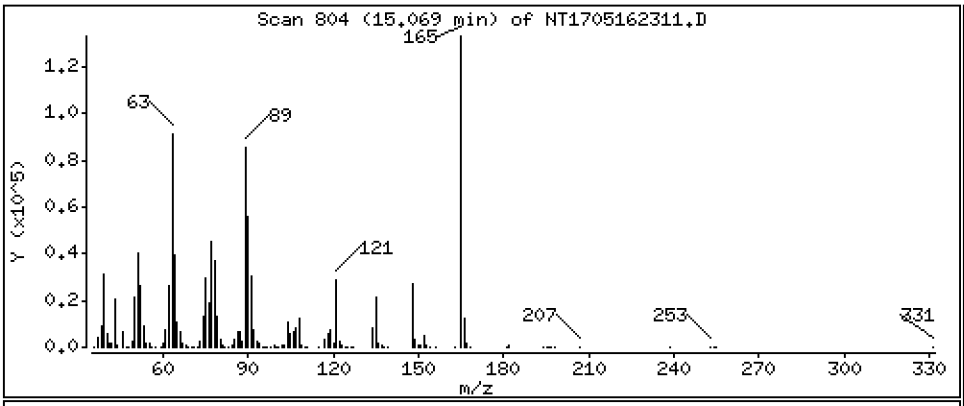
Operator: JGR

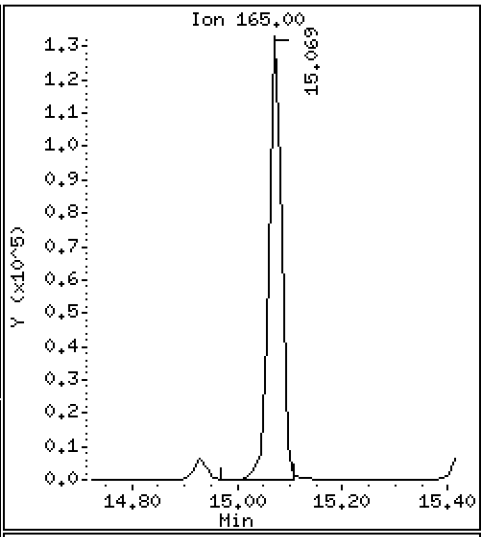
Column phase: ZB-5msi

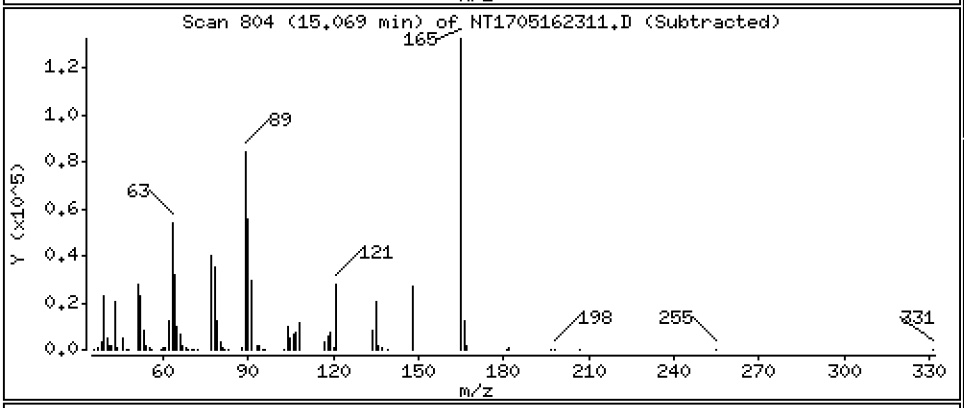
Column diameter: 0.25

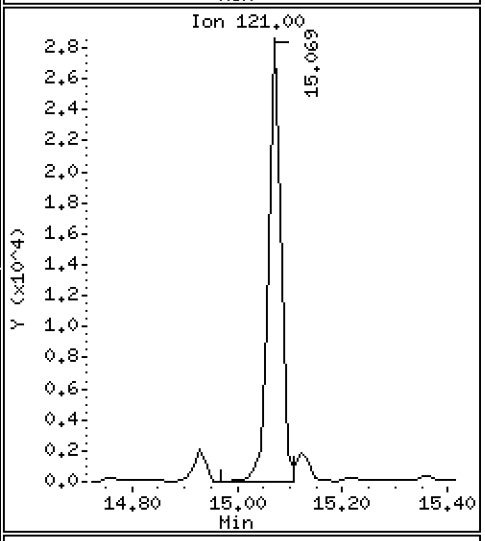
41 2,6-Dinitrotoluene

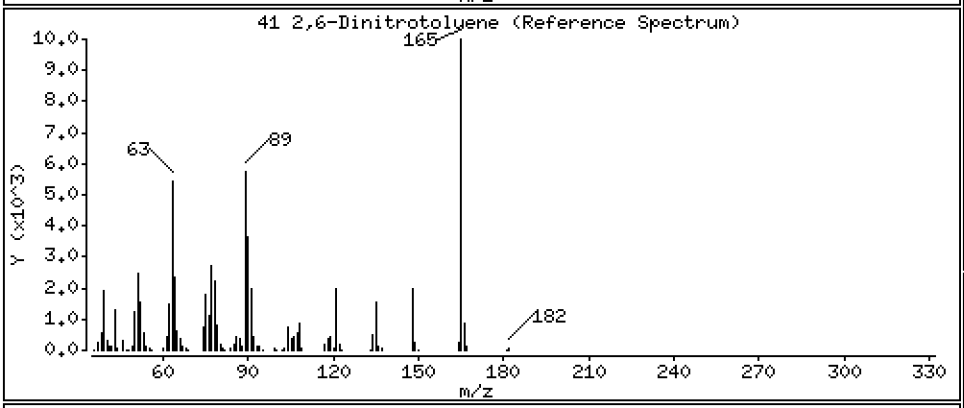
Concentration: 5.404 ug/mL

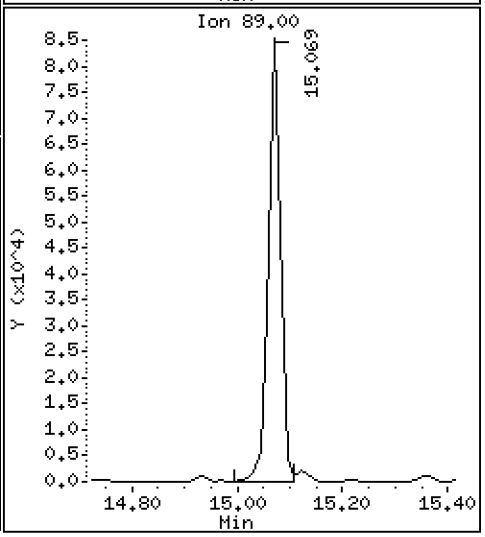


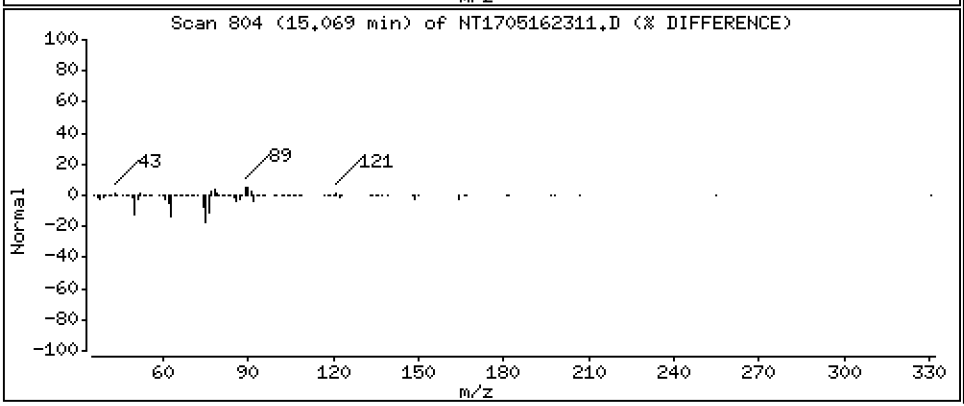












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

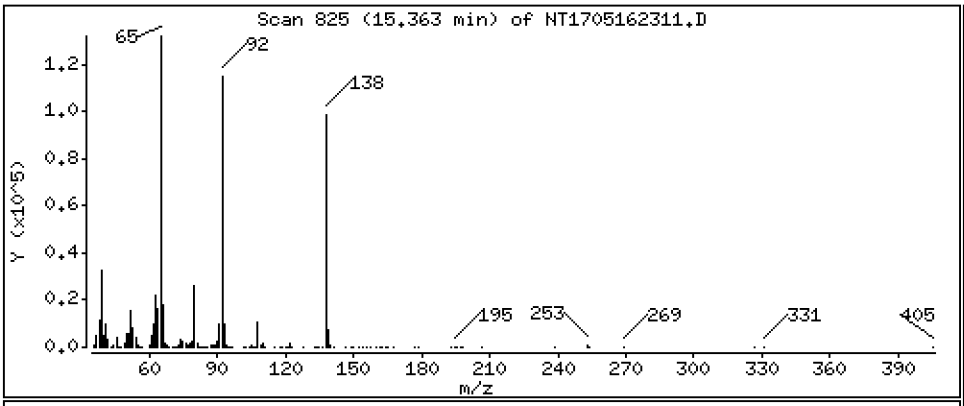
Operator: JGR

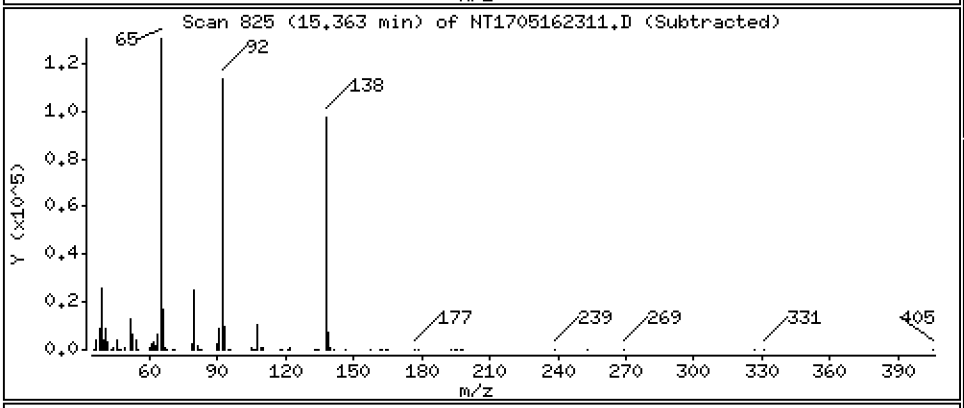
Column phase: ZB-5msi

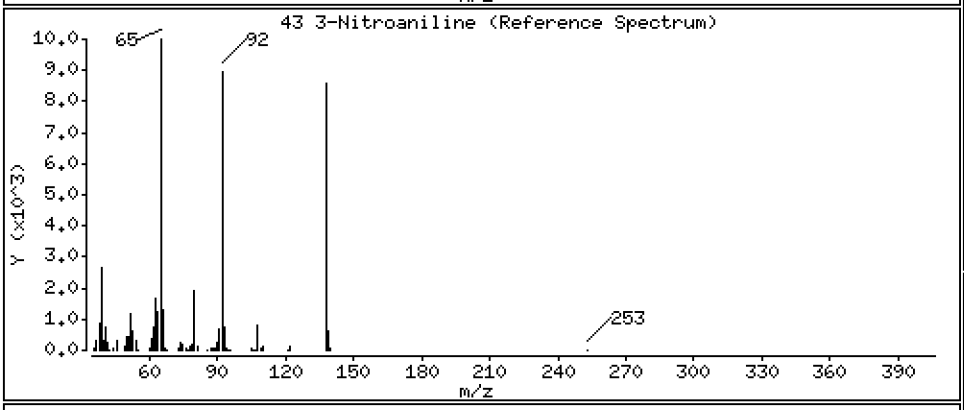
Column diameter: 0.25

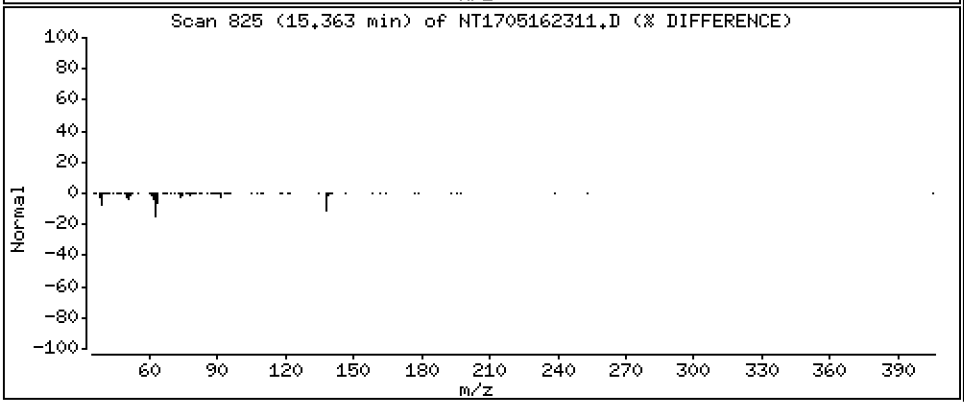
43 3-Nitroaniline

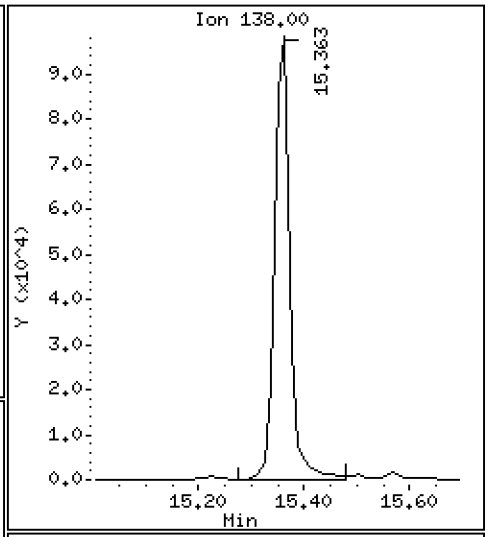
Concentration: 5.169 ug/mL

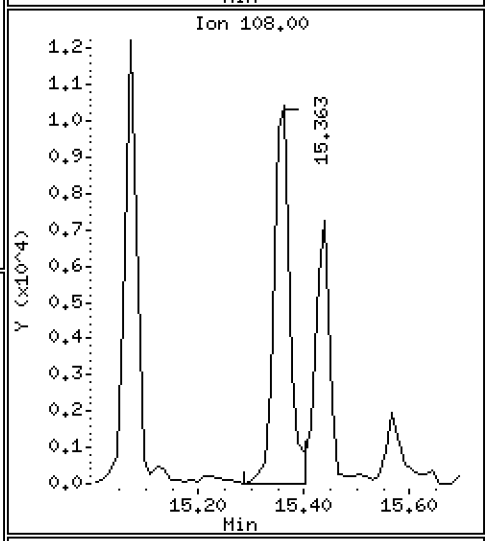


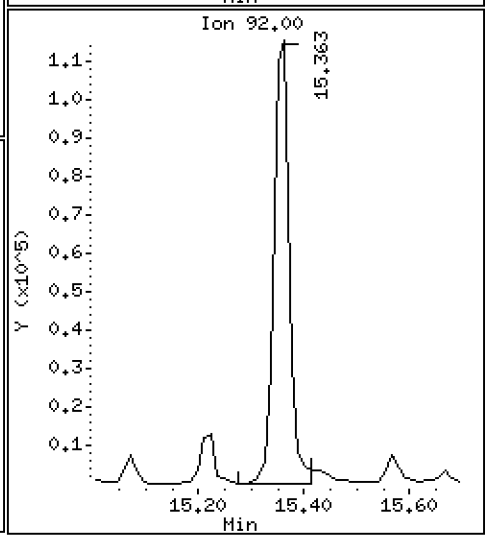












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

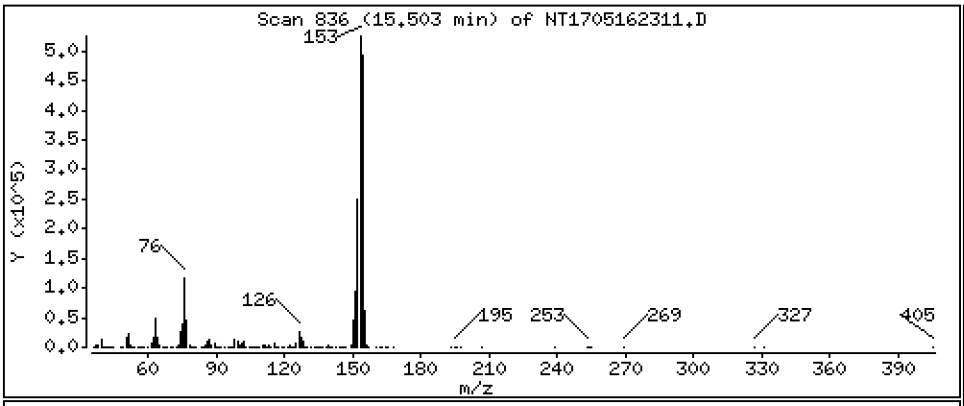
Operator: JGR

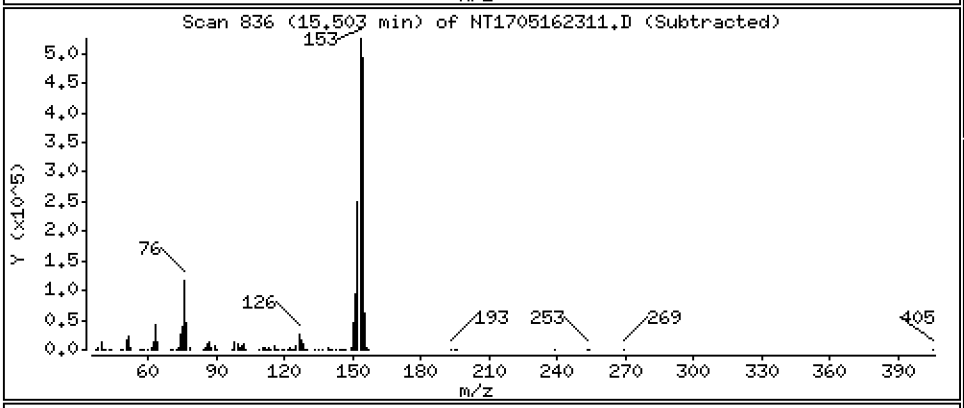
Column phase: ZB-5msi

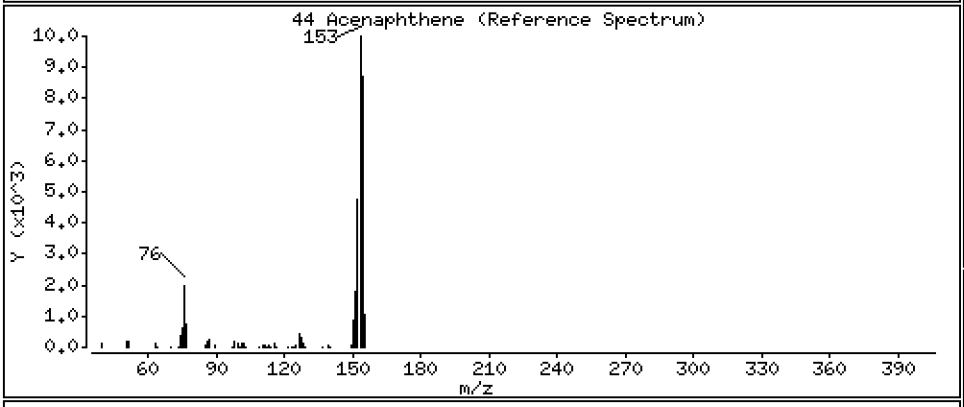
Column diameter: 0.25

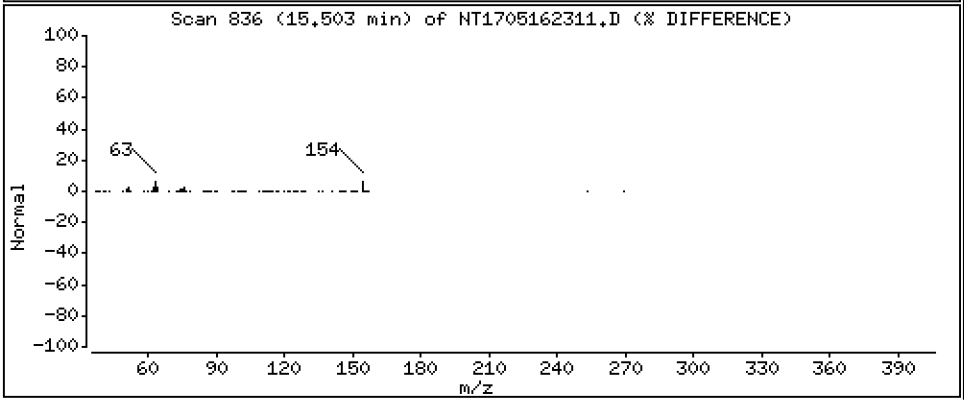
44 Acenaphthene

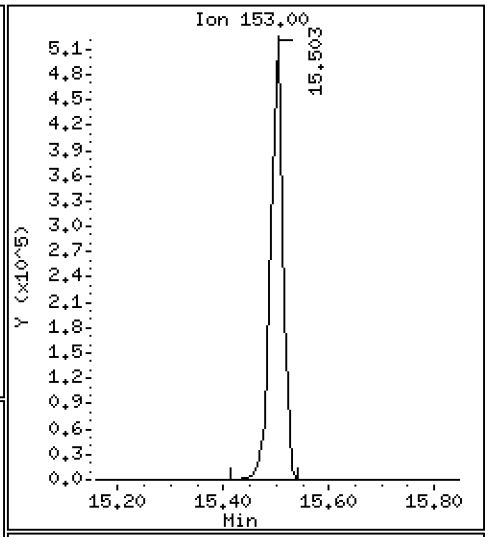
Concentration: 5.283 ug/mL

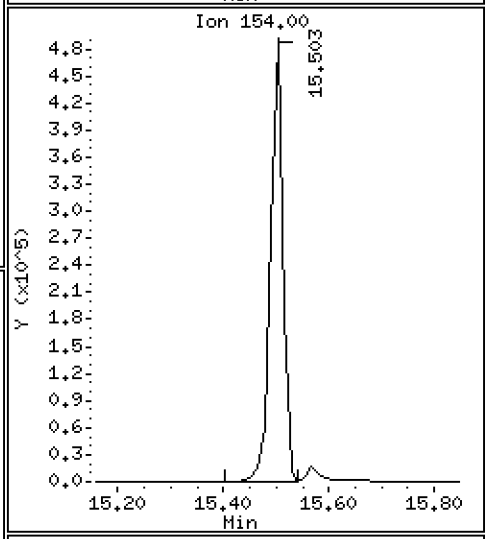


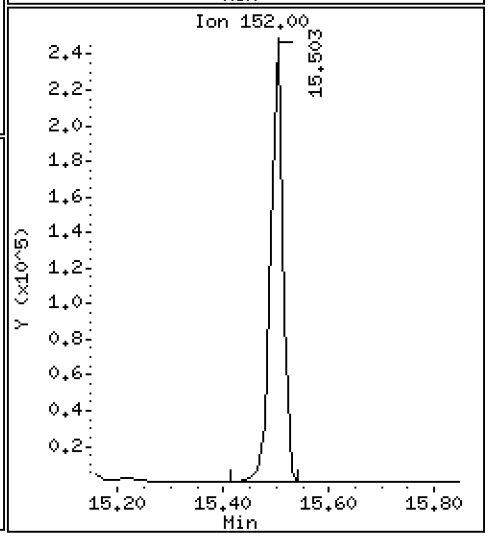












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

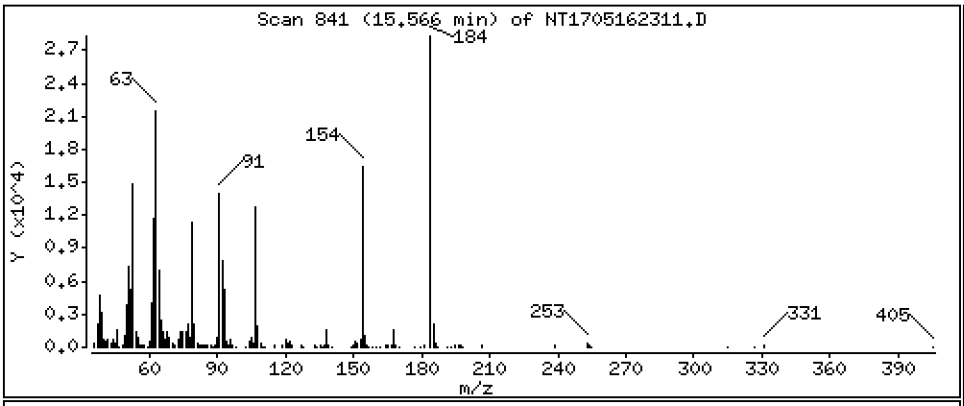
Operator: JGR

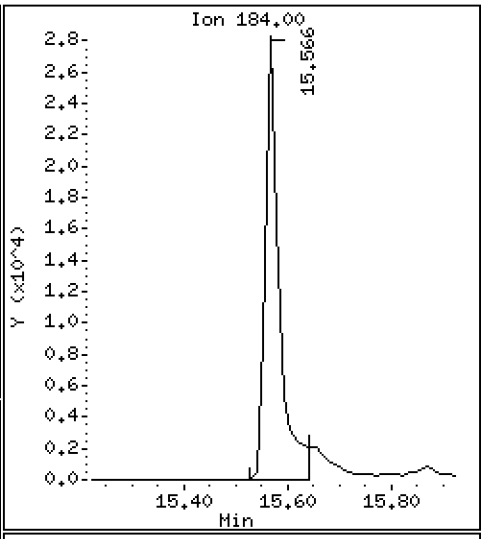
Column phase: ZB-5msi

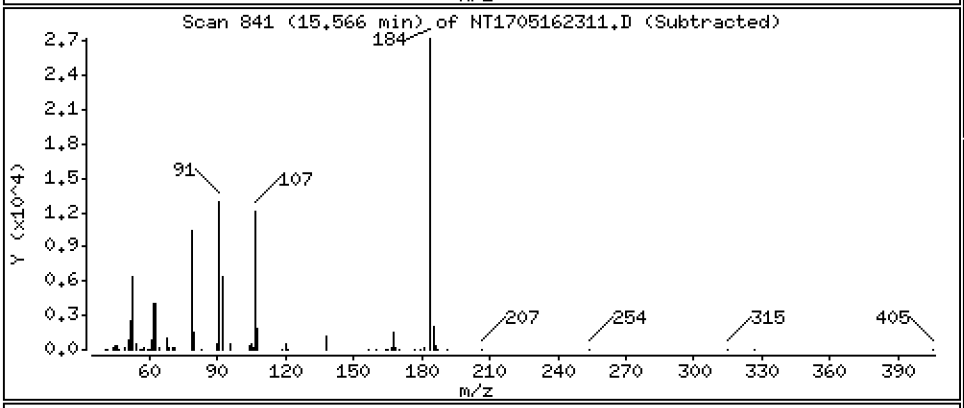
Column diameter: 0.25

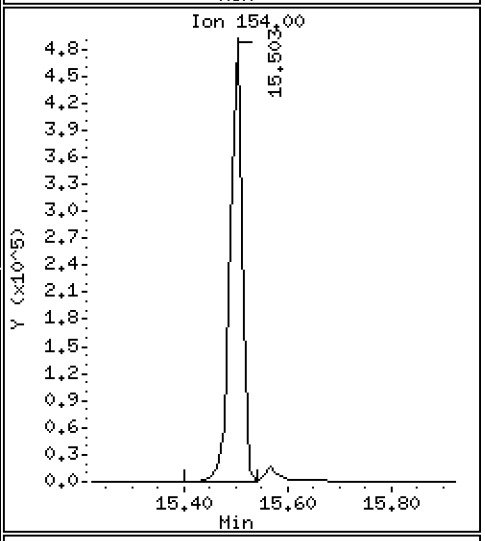
45 2,4-Dinitrophenol

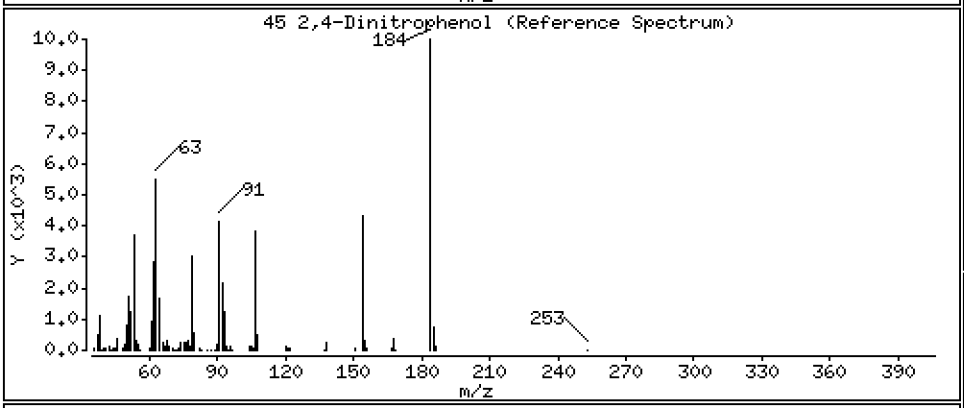
Concentration: 2.119 ug/mL

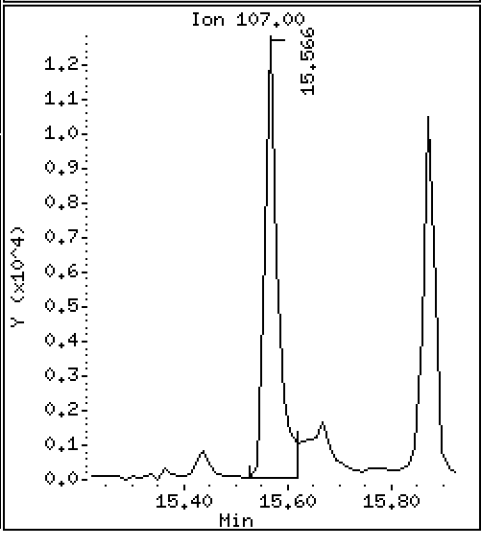


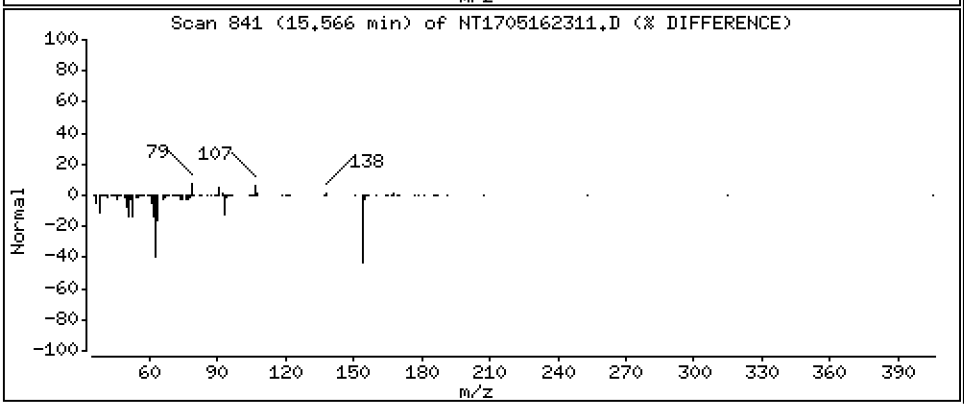












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

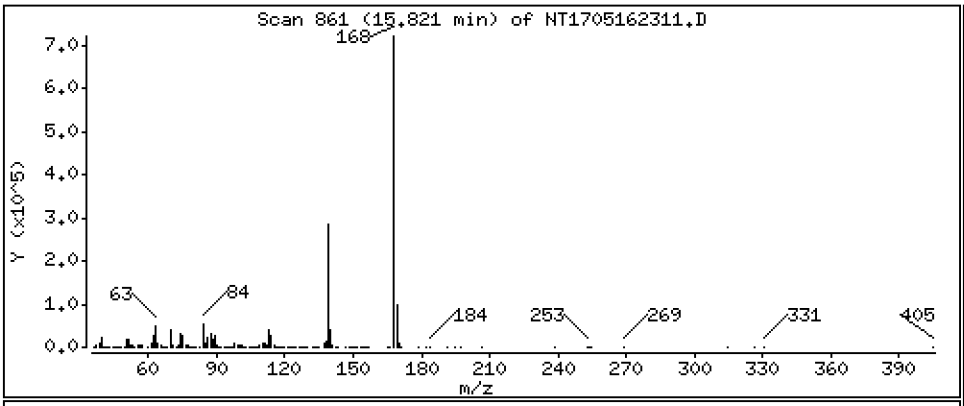
Operator: JGR

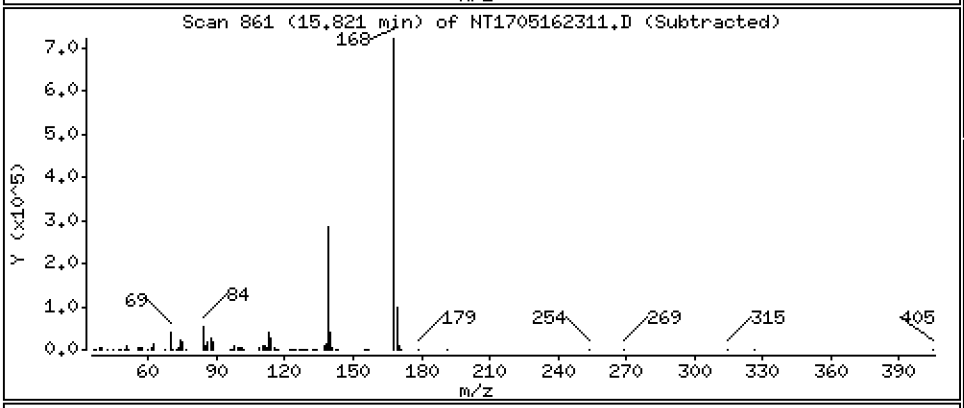
Column phase: ZB-5msi

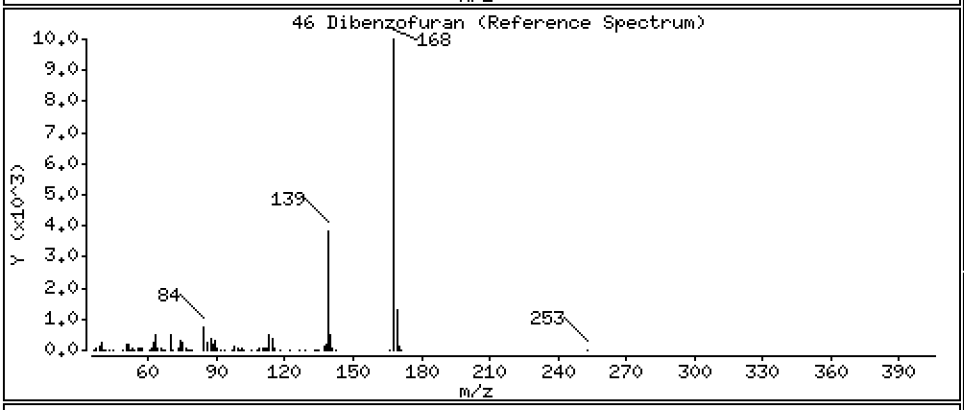
Column diameter: 0.25

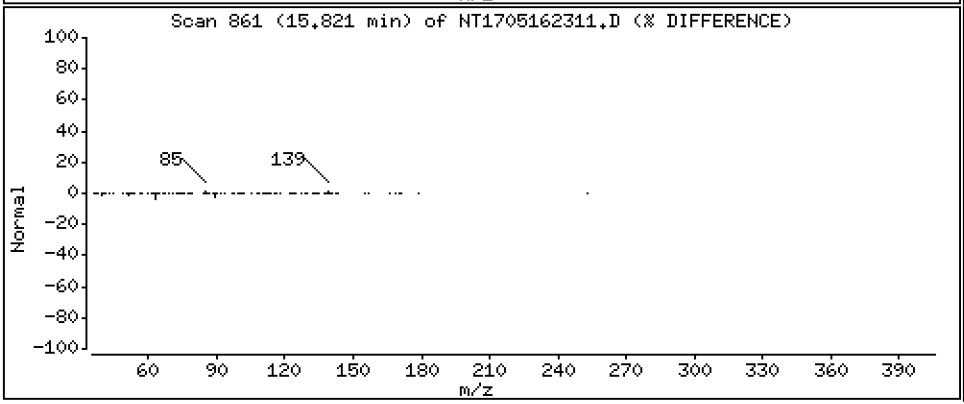
46 Dibenzofuran

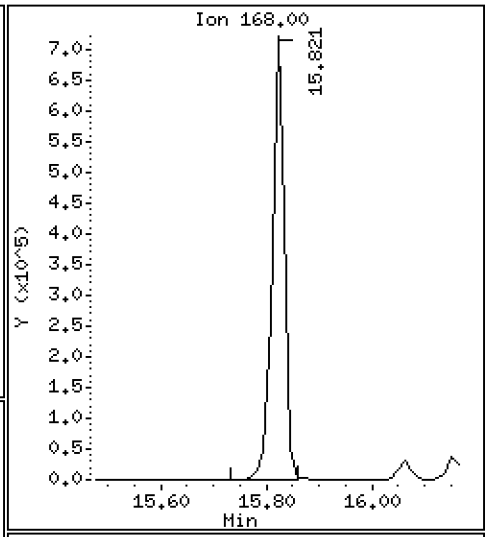
Concentration: 5.163 ug/mL

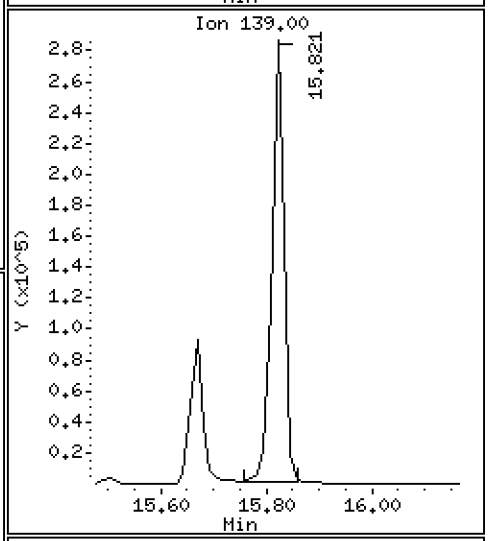


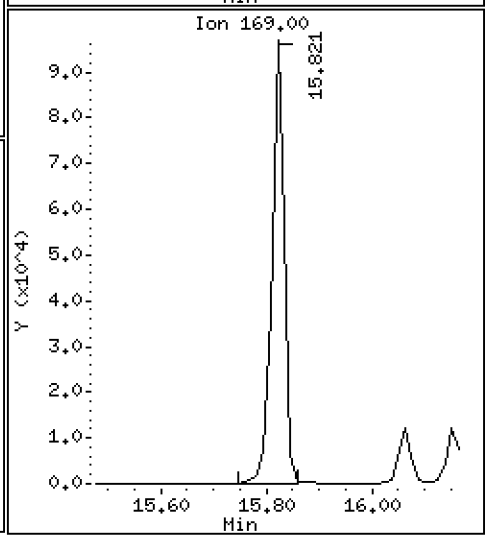












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

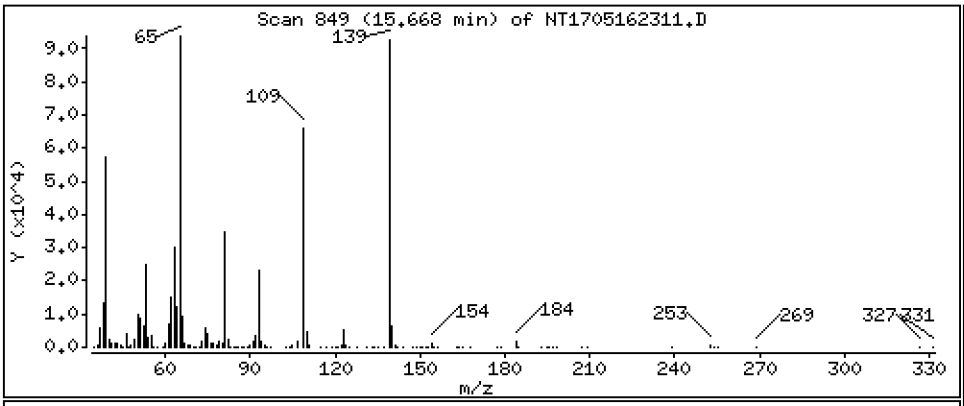
Operator: JGR

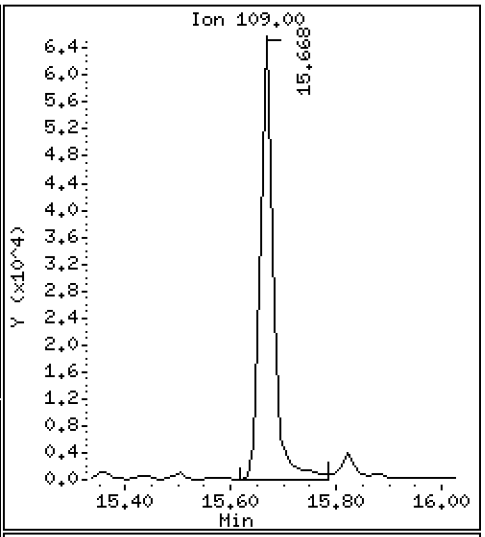
Column phase: ZB-5msi

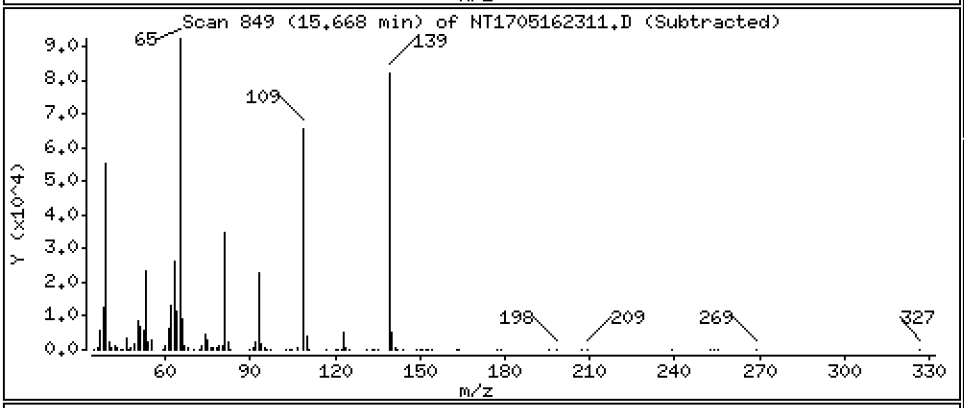
Column diameter: 0.25

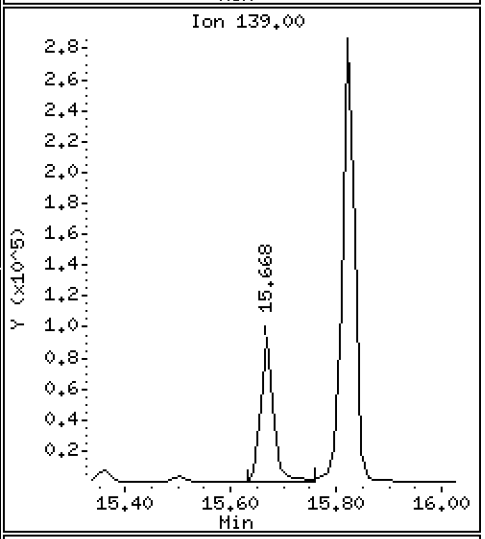
47 4-Nitrophenol

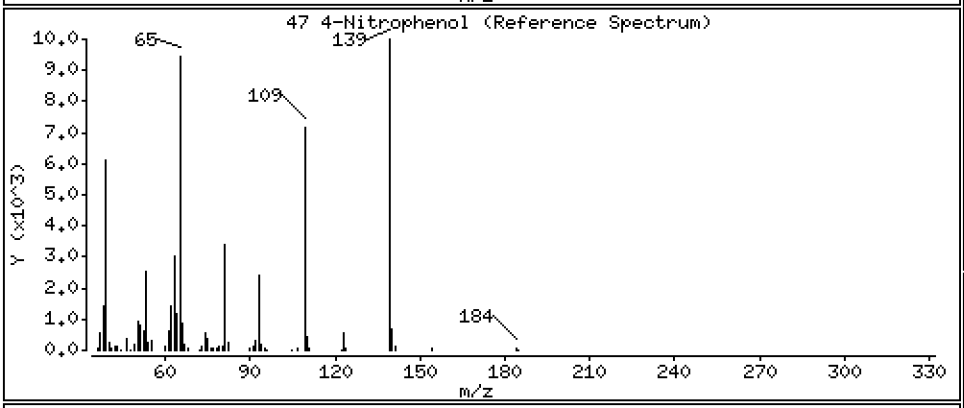
Concentration: 4.504 ug/mL

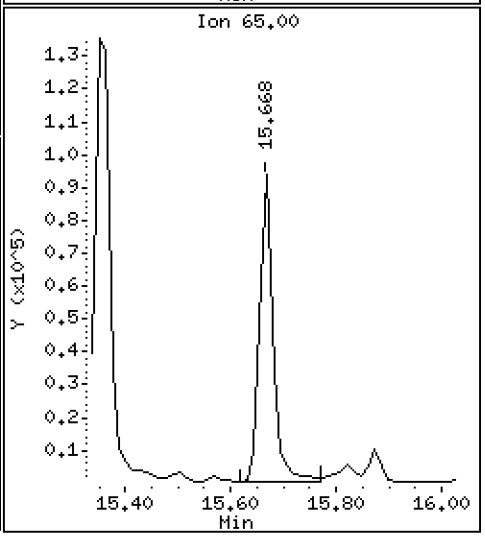


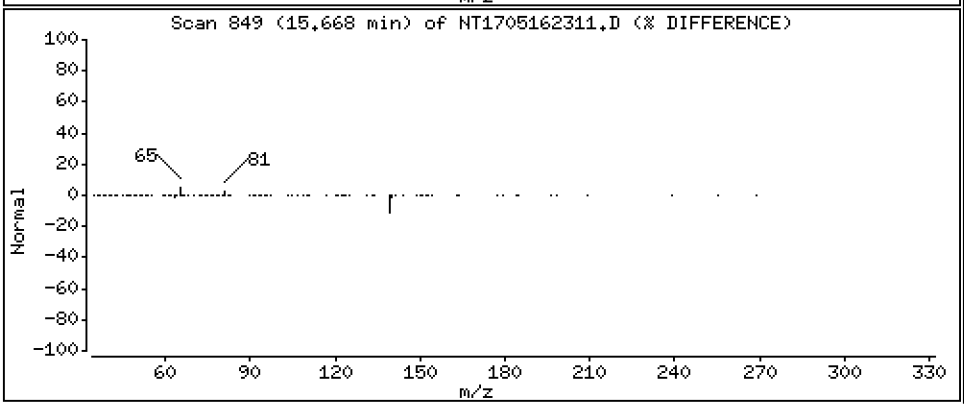












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

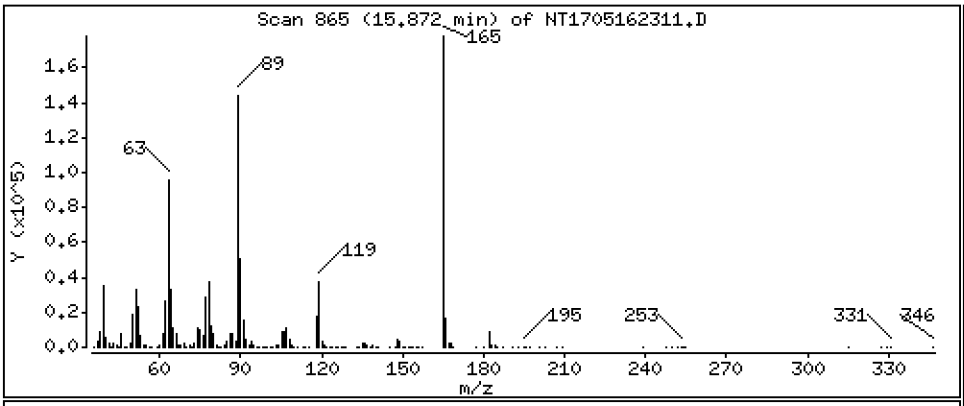
Operator: JGR

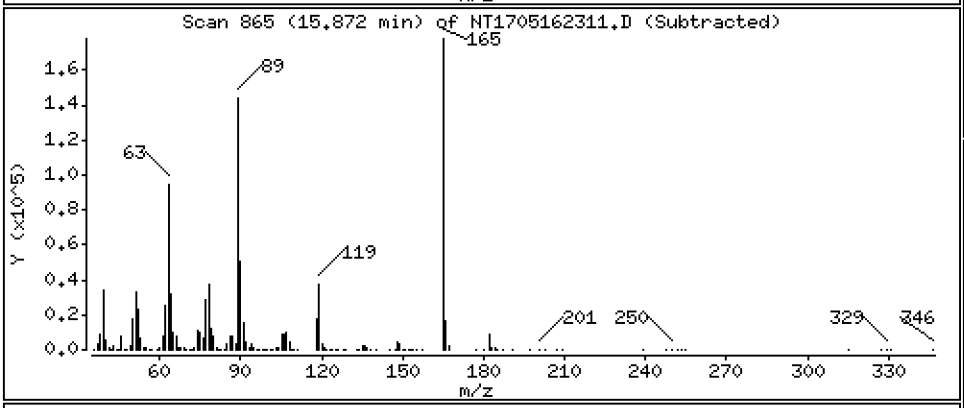
Column phase: ZB-5msi

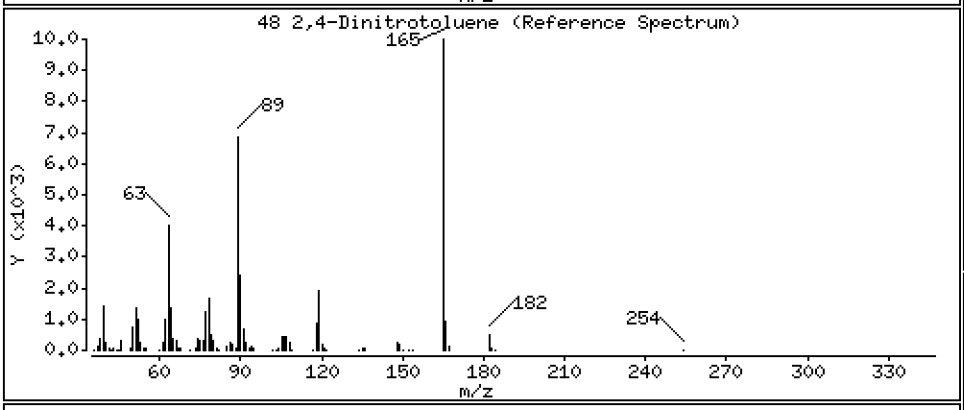
Column diameter: 0.25

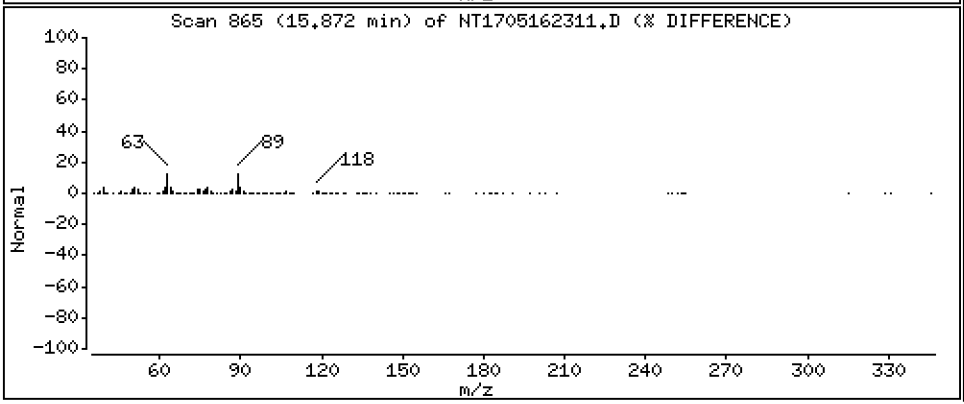
48 2,4-Dinitrotoluene

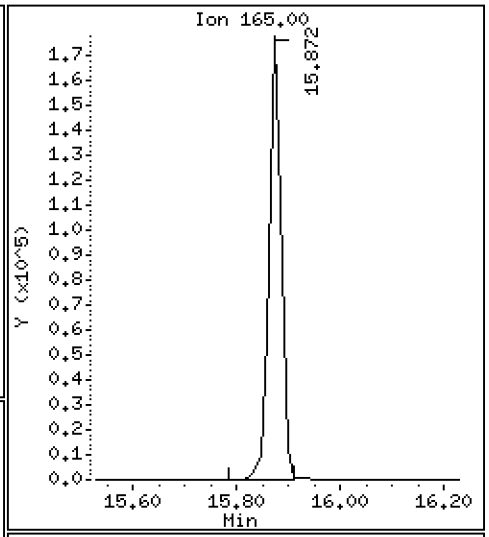
Concentration: 5.269 ug/mL

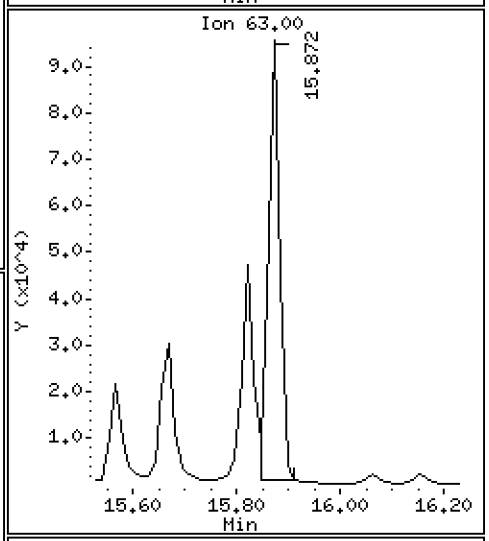


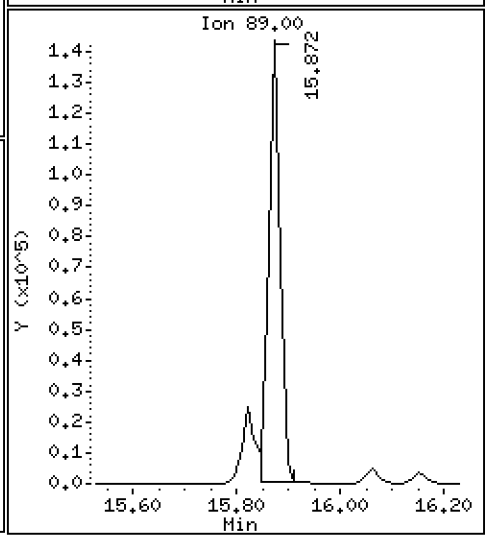












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

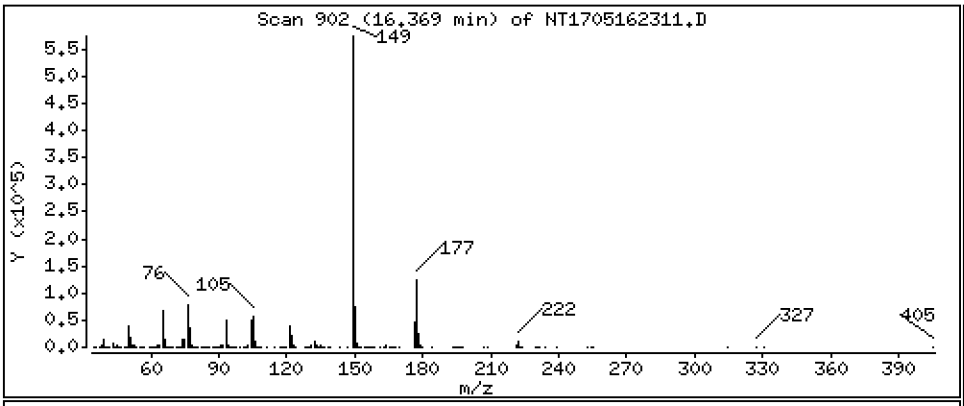
Operator: JGR

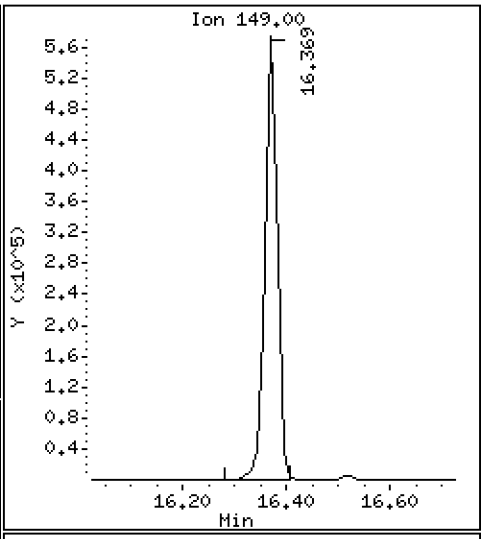
Column phase: ZB-5msi

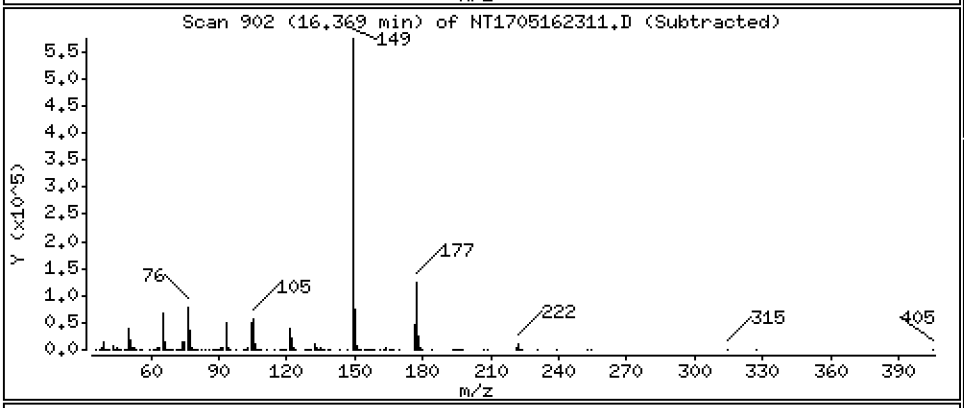
Column diameter: 0.25

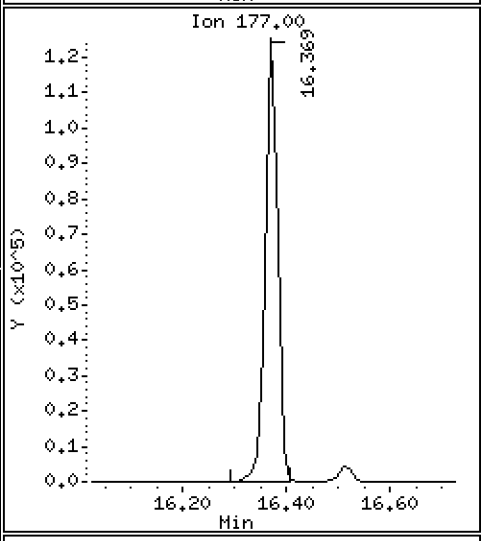
50 Diethylphthalate

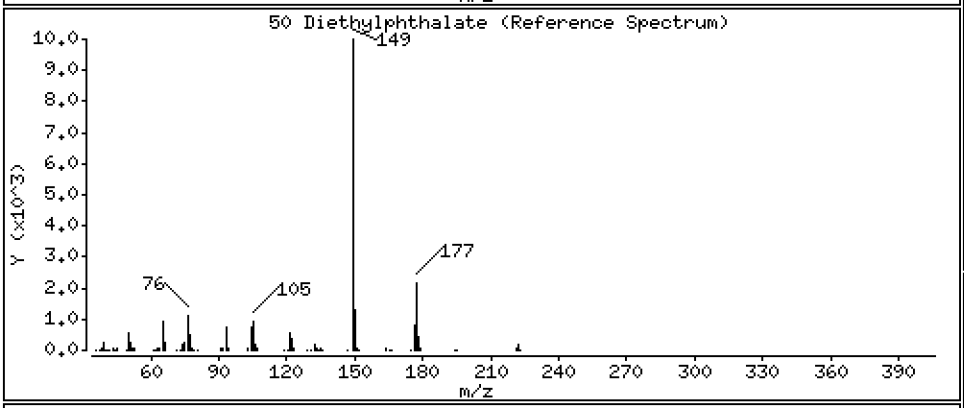
Concentration: 5.494 ug/mL

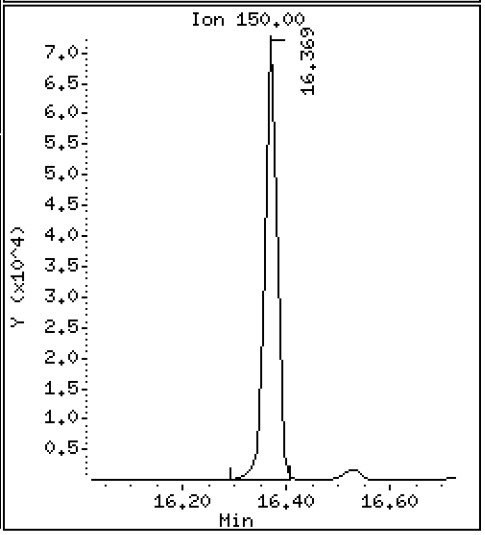


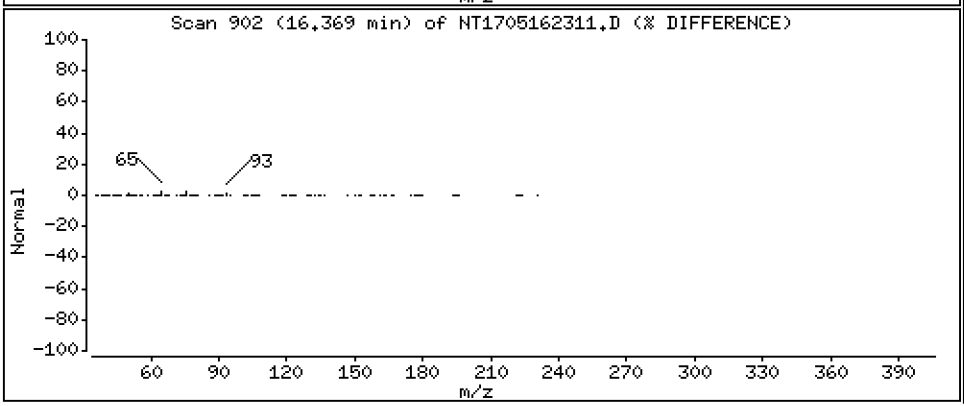












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

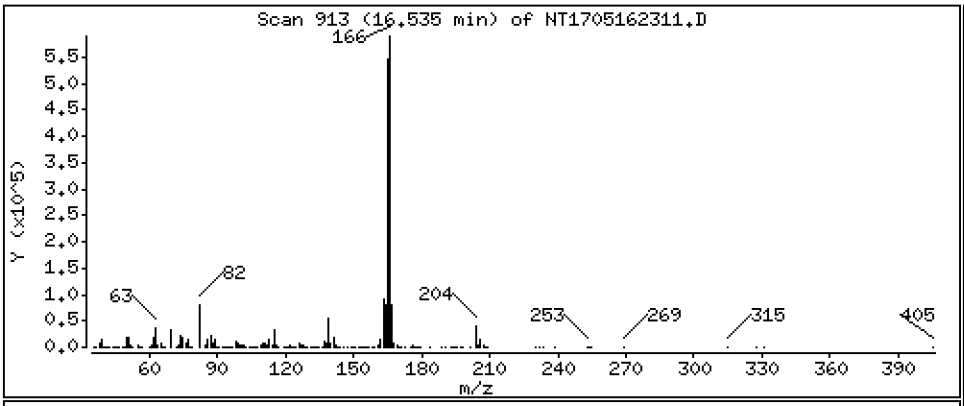
Operator: JGR

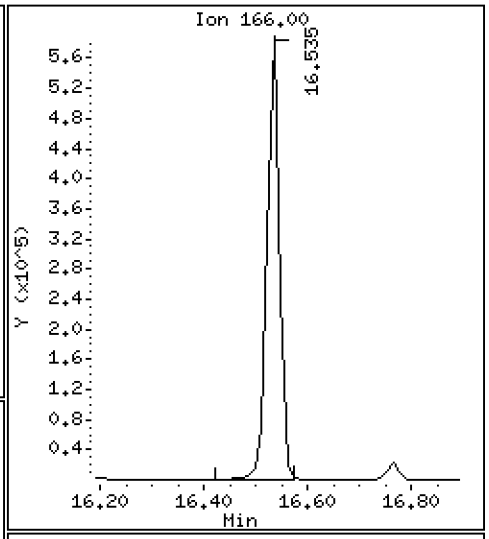
Column phase: ZB-5msi

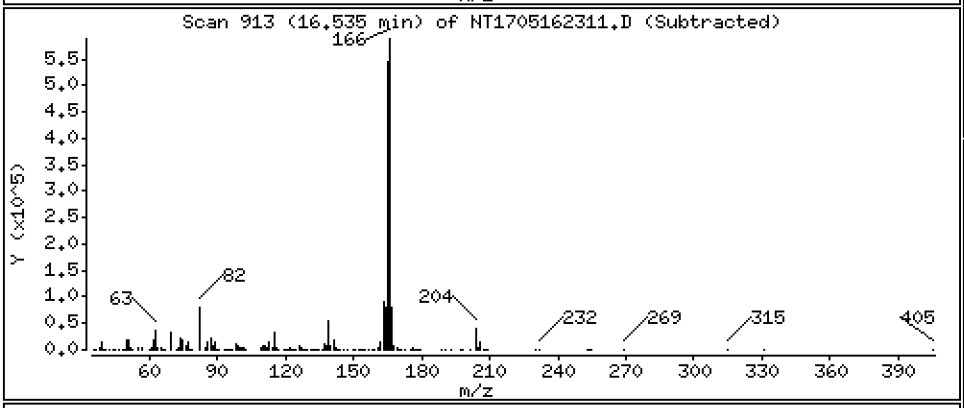
Column diameter: 0.25

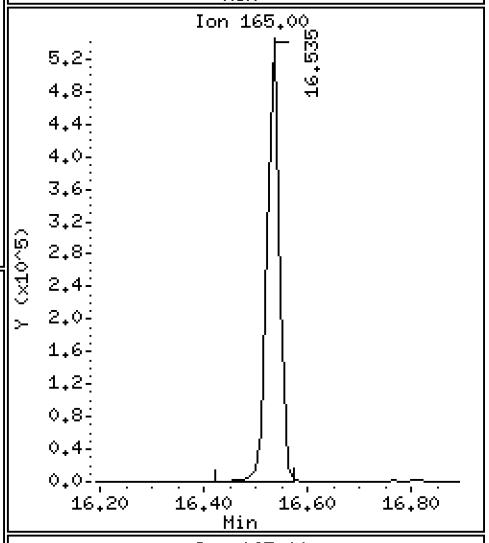
49 Fluorene

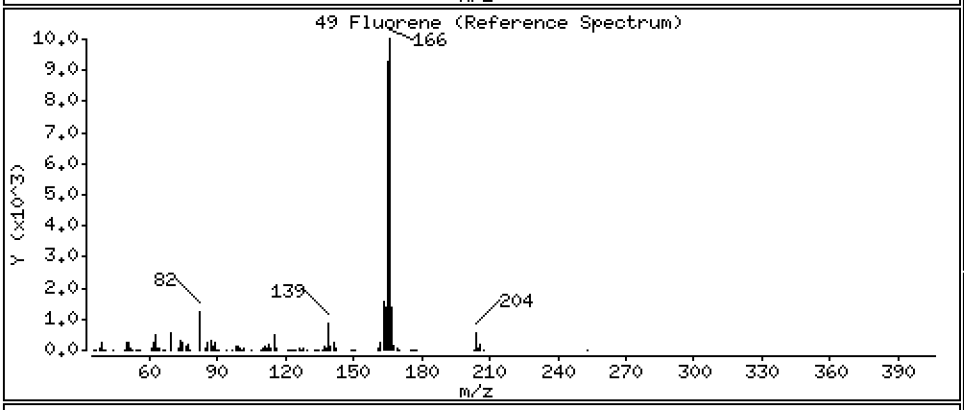
Concentration: 5.398 ug/mL

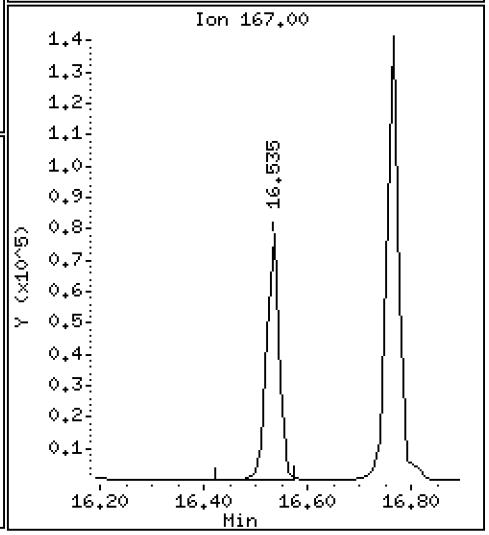


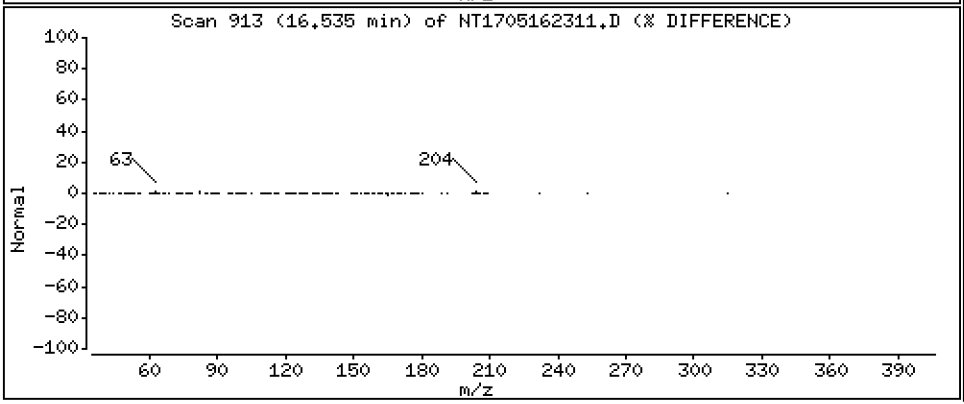












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

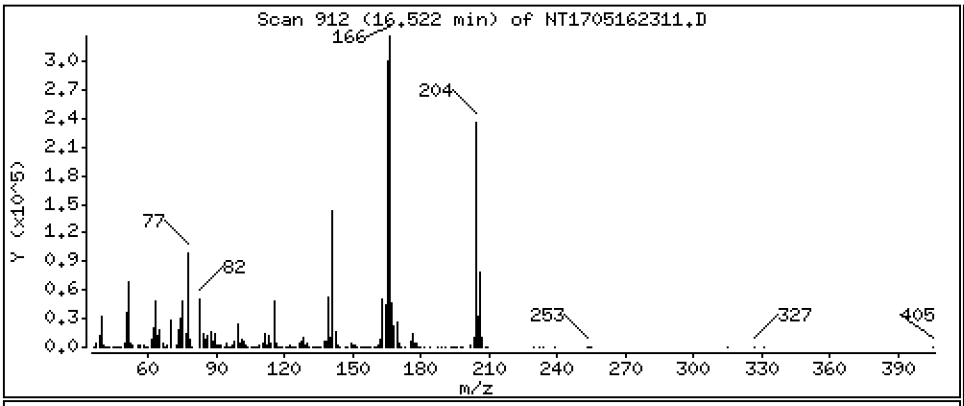
Operator: JGR

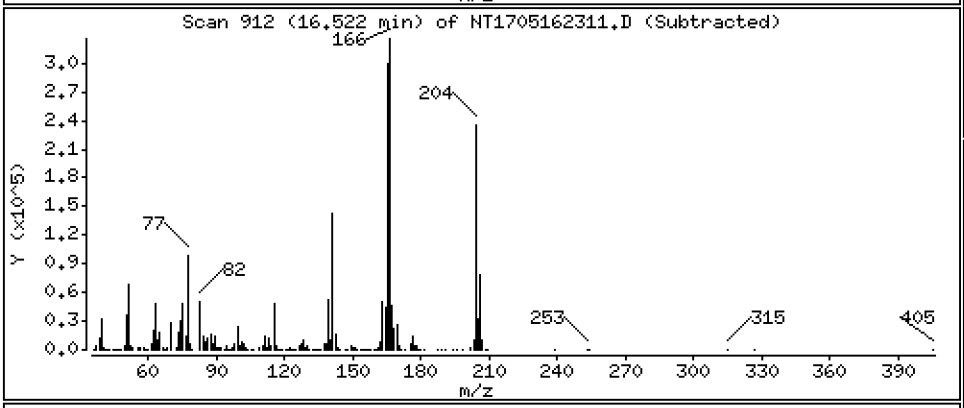
Column phase: ZB-5msi

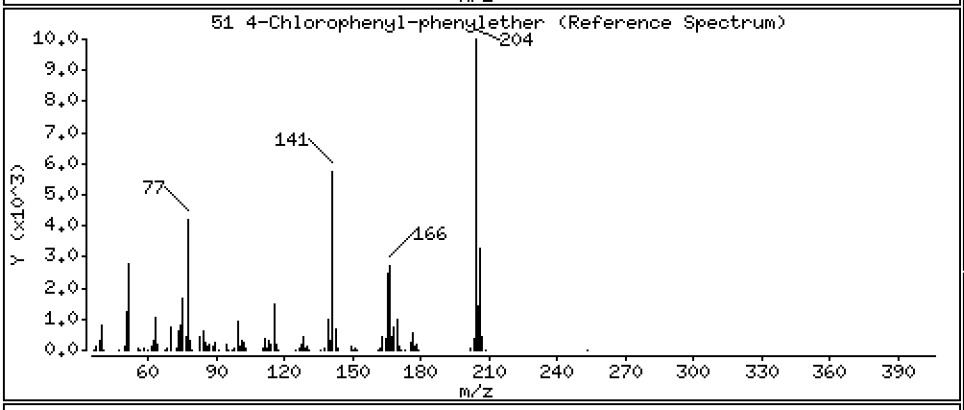
Column diameter: 0.25

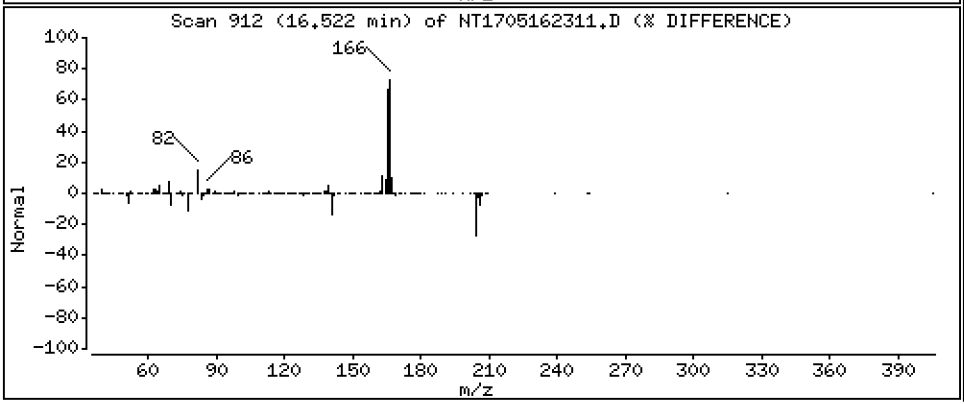
51 4-Chlorophenyl-phenylether

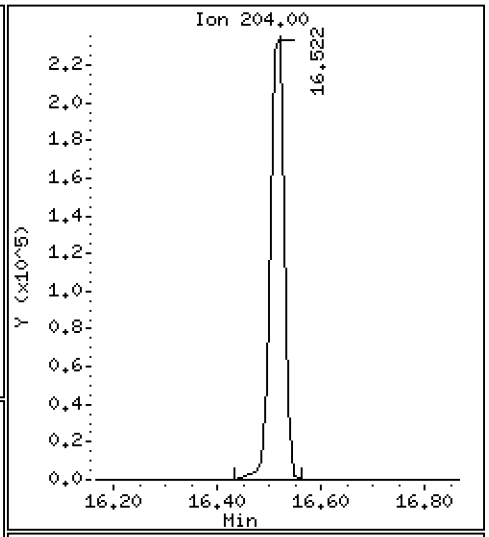
Concentration: 5.462 ug/mL

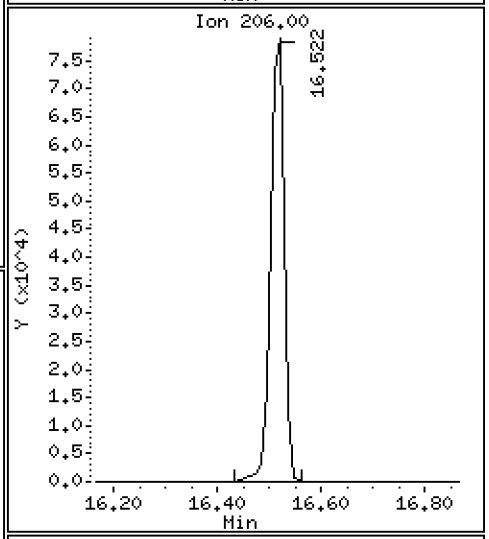


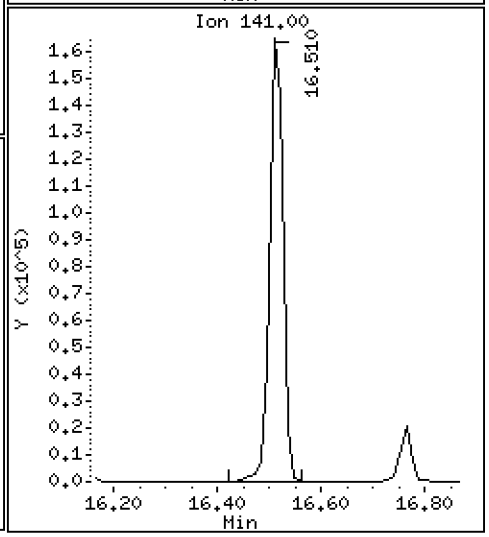












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

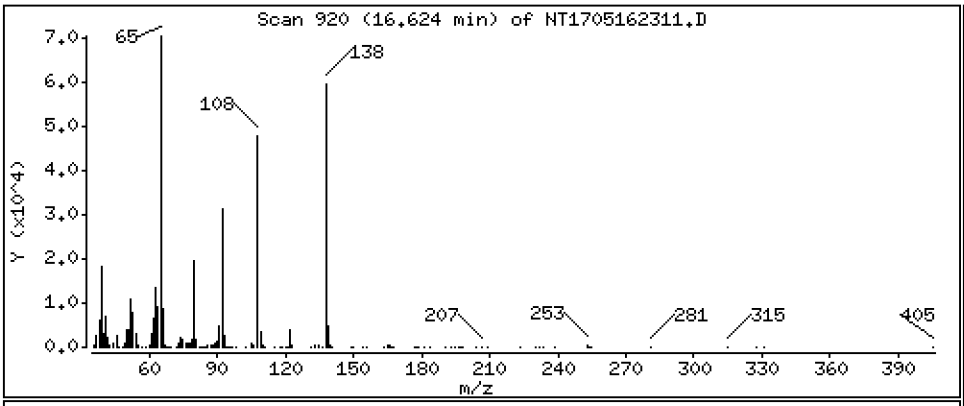
Operator: JGR

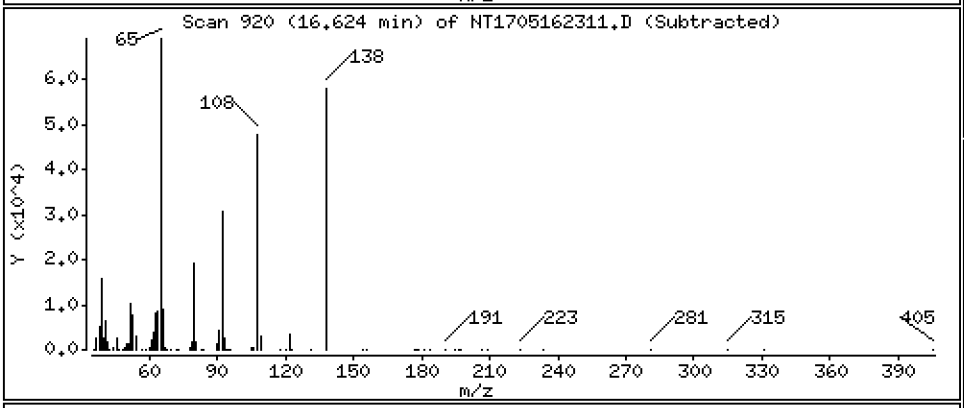
Column phase: ZB-5msi

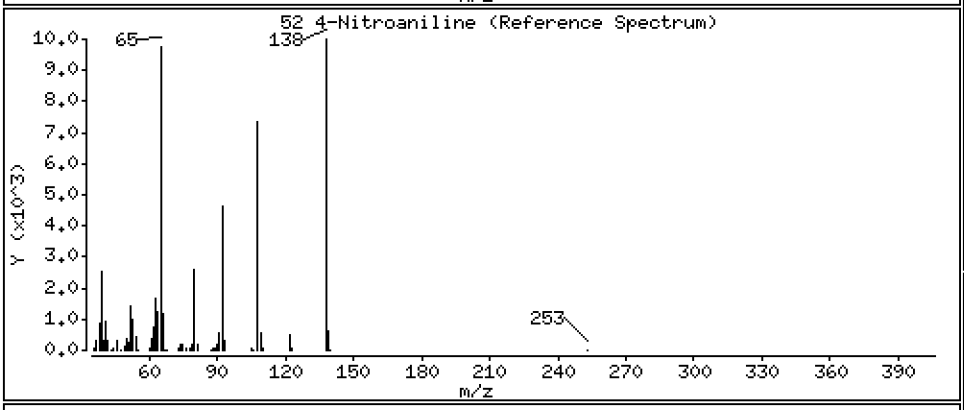
Column diameter: 0.25

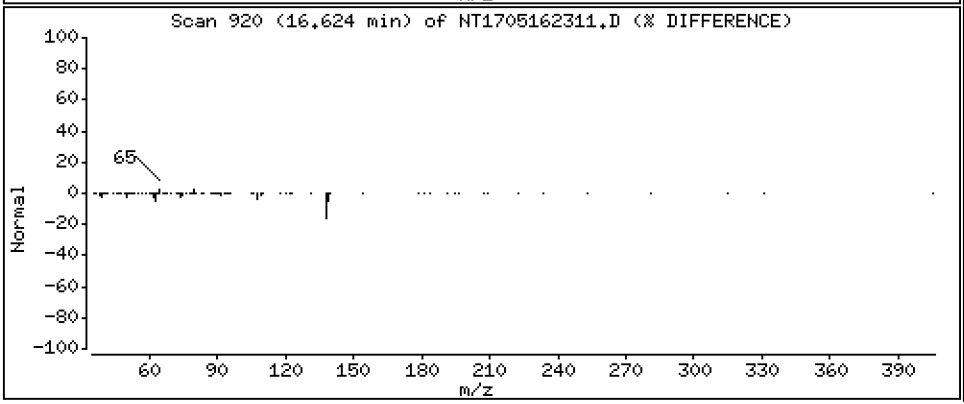
52 4-Nitroaniline

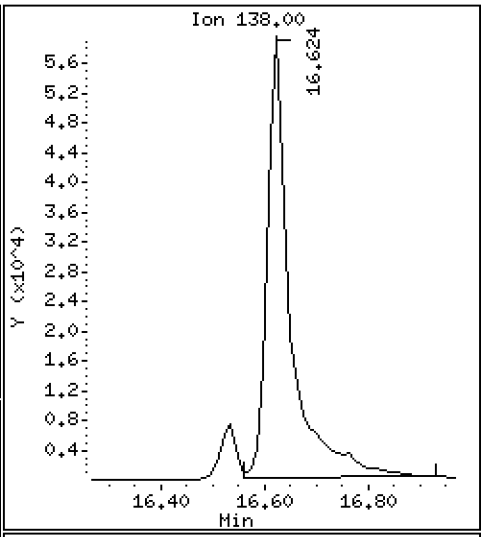
Concentration: 5.108 ug/mL

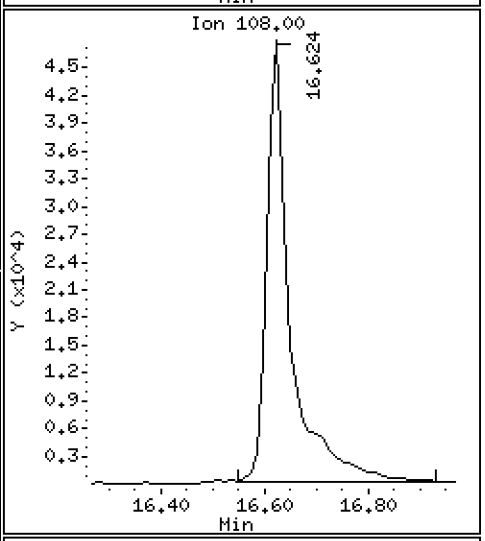


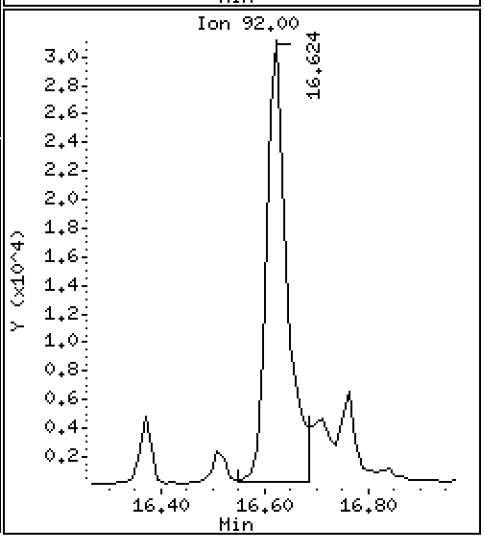












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

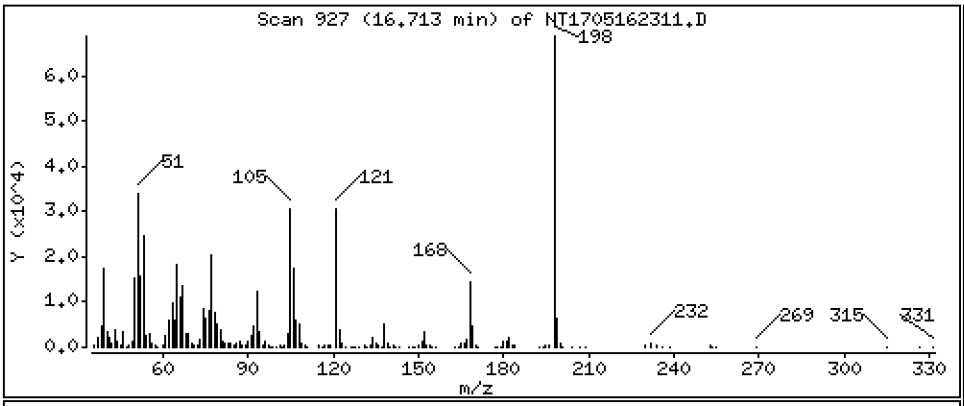
Operator: JGR

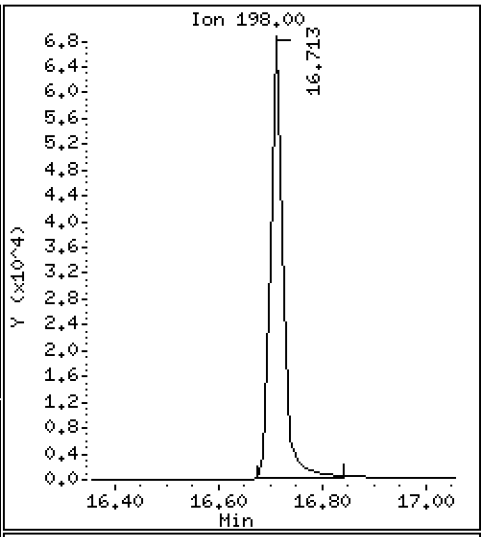
Column phase: ZB-5msi

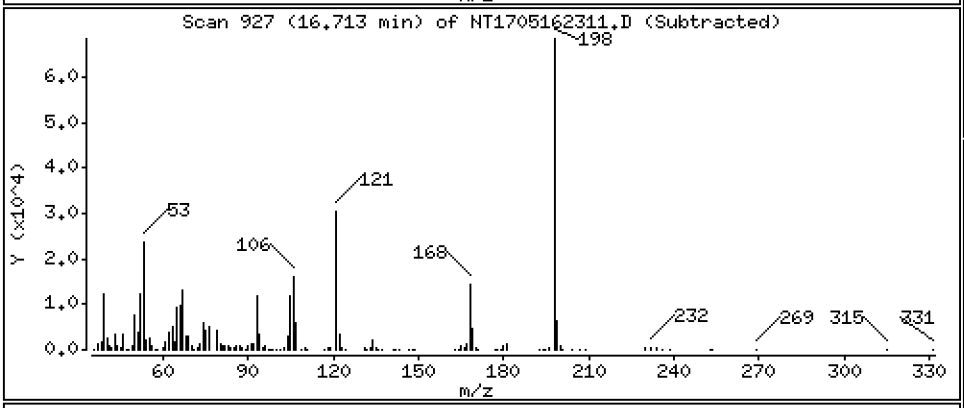
Column diameter: 0.25

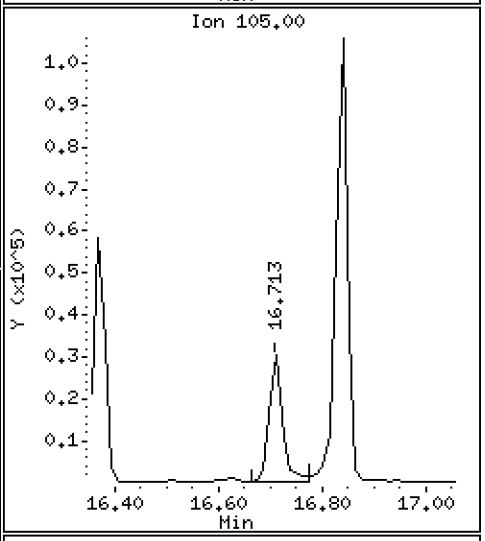
53 4,6-Dinitro-2-methylphenol

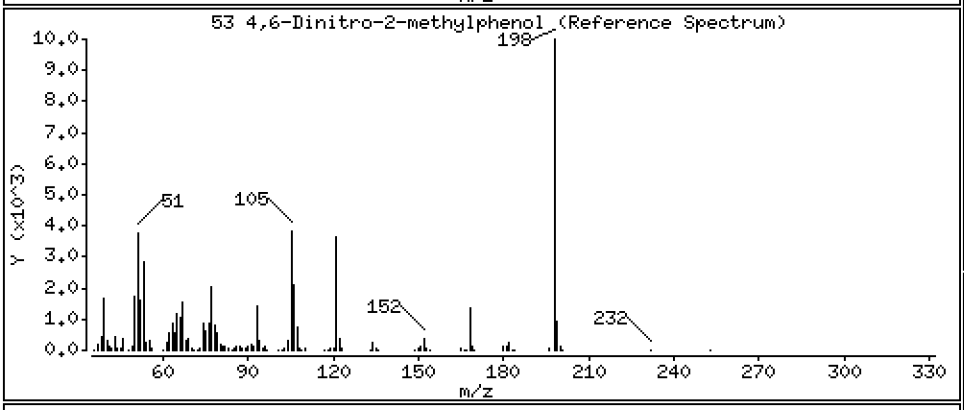
Concentration: 3.355 ug/mL

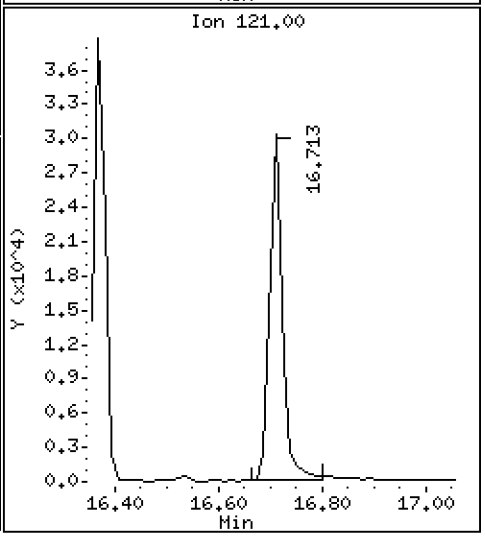


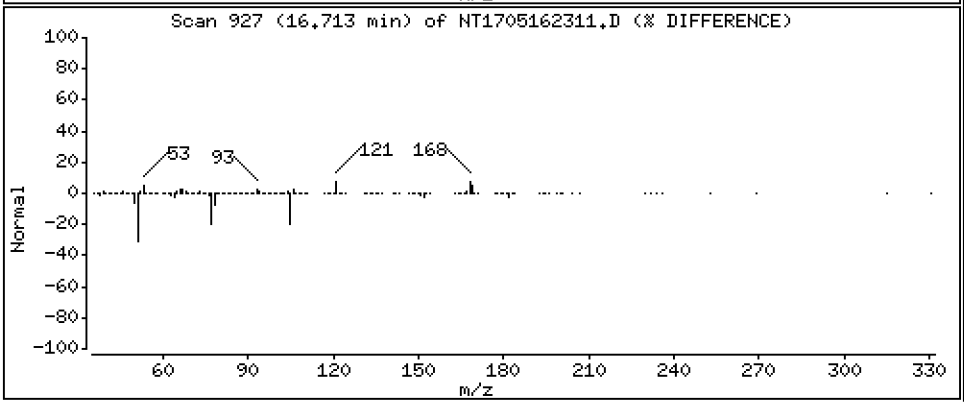












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

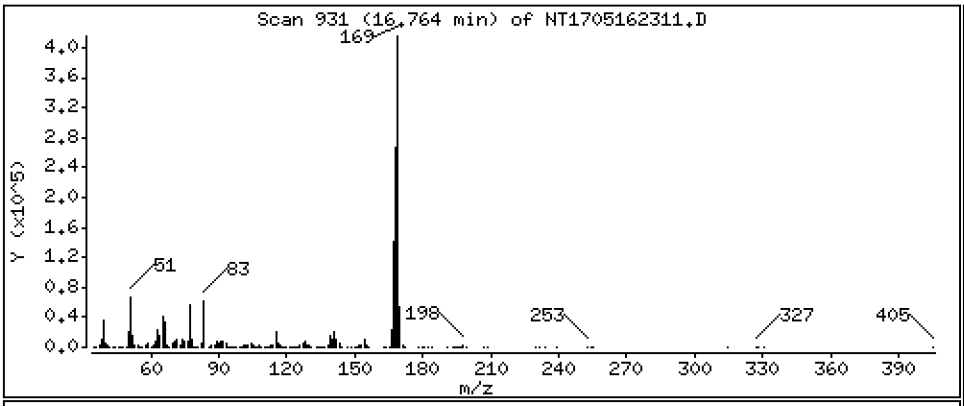
Operator: JGR

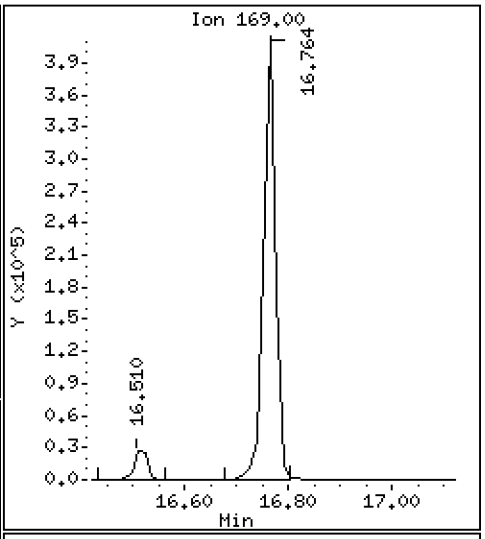
Column phase: ZB-5msi

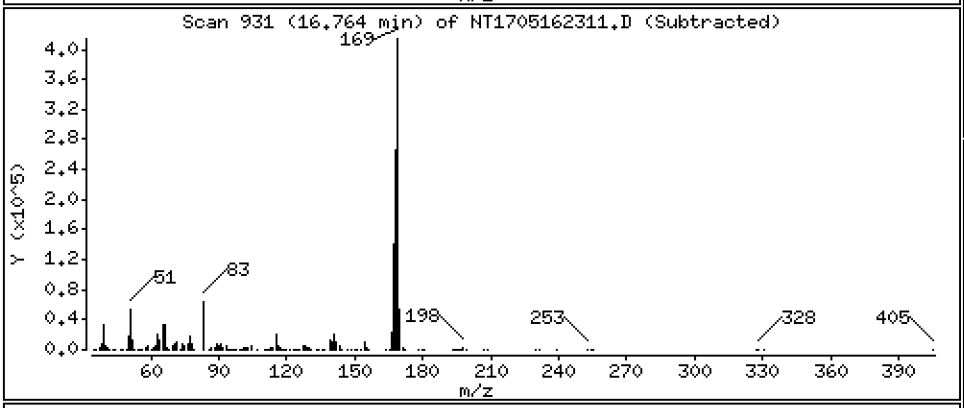
Column diameter: 0.25

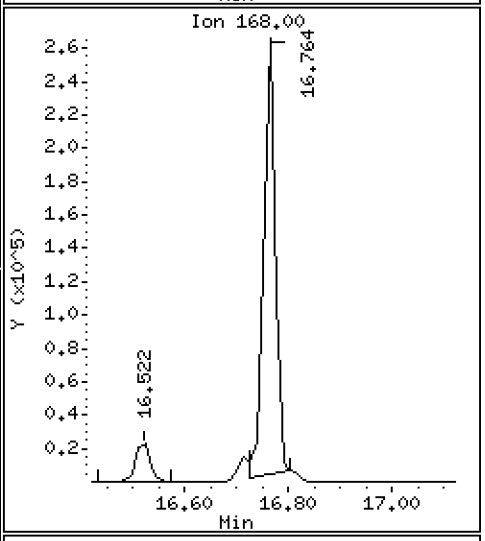
54 N-Nitrosodiphenylamine

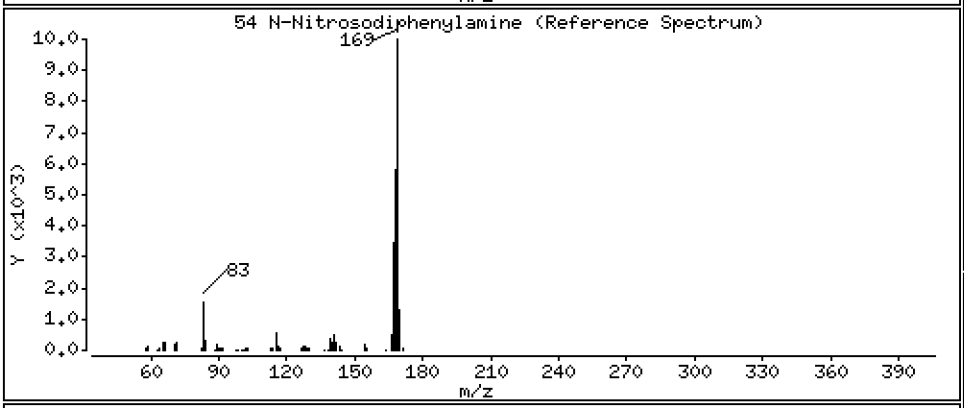
Concentration: 5.470 ug/mL

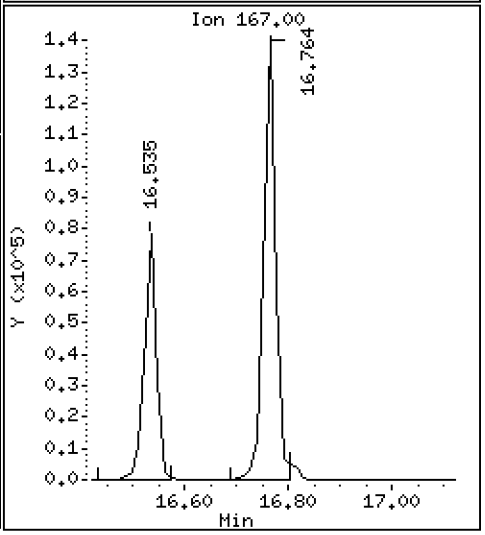


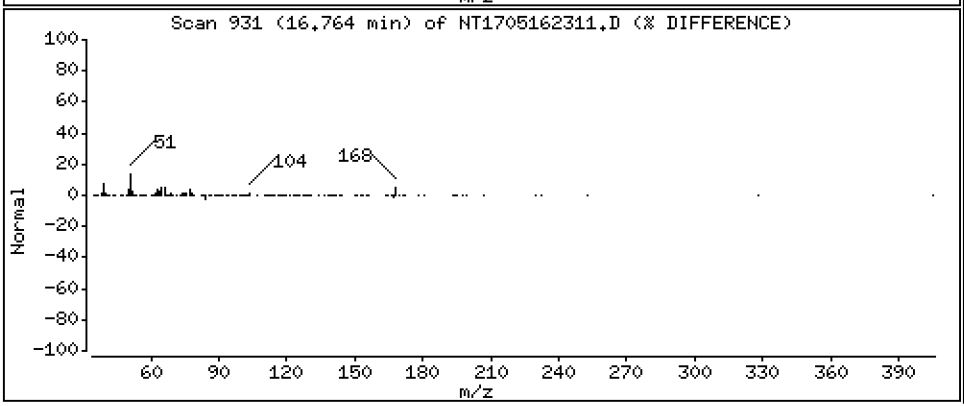












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

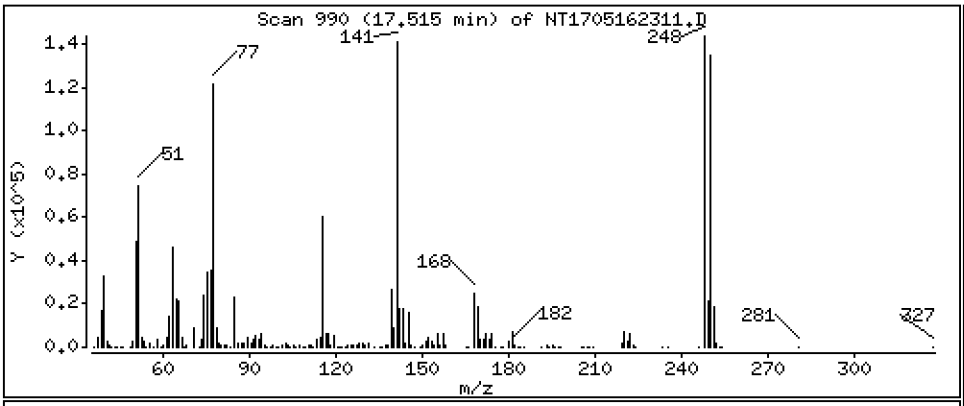
Operator: JGR

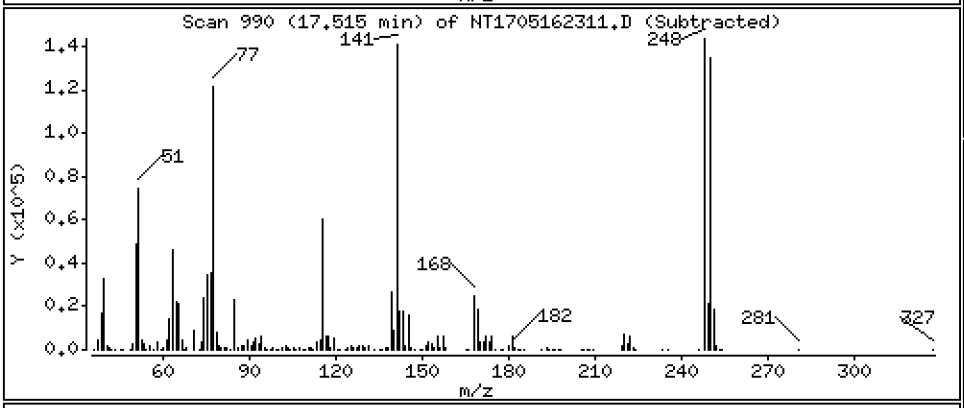
Column phase: ZB-5msi

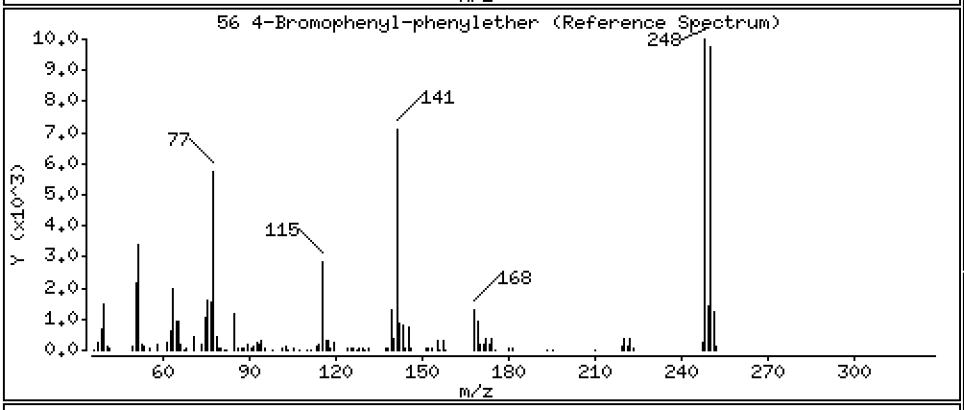
Column diameter: 0.25

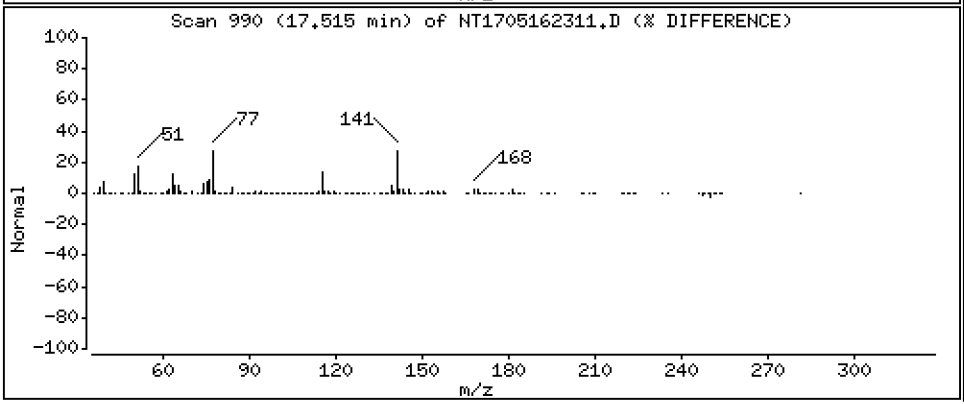
56 4-Bromophenyl-phenylether

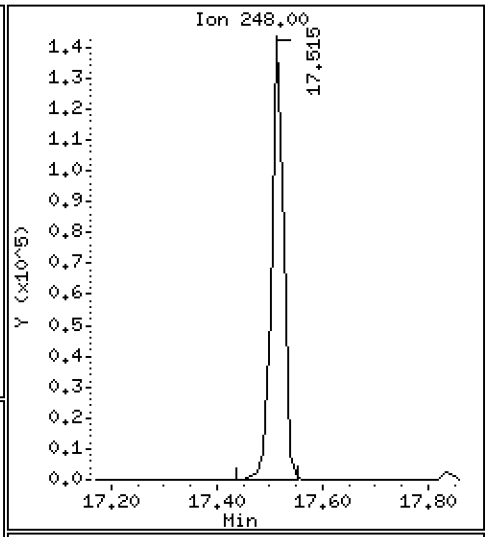
Concentration: 5.420 ug/mL

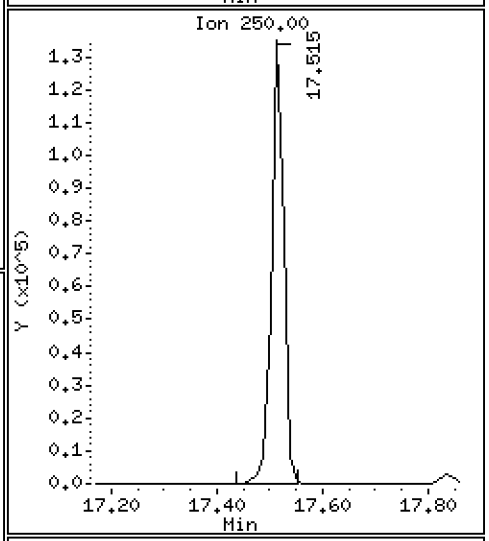


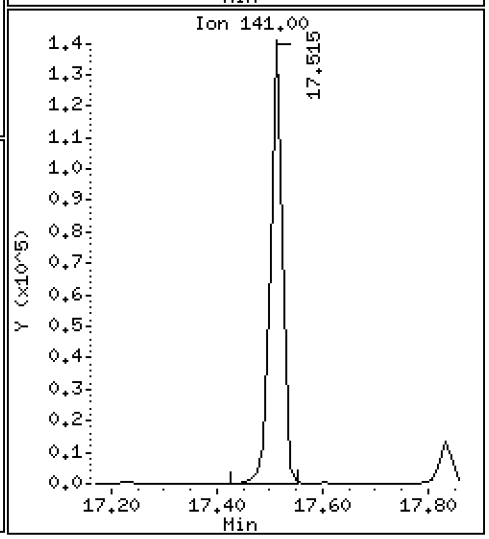












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

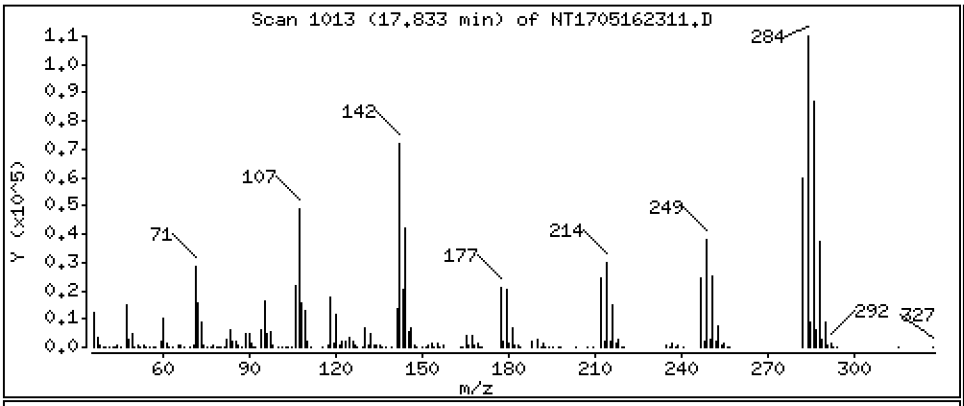
Operator: JGR

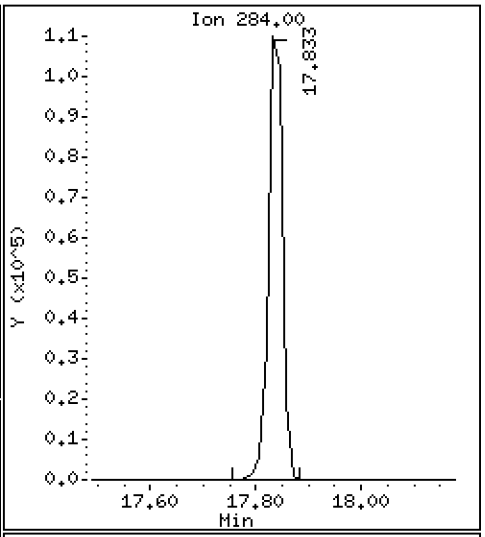
Column phase: ZB-5msi

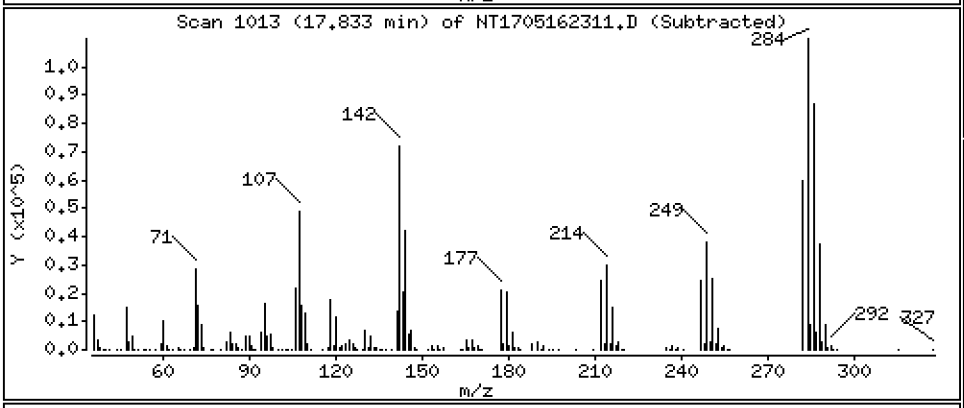
Column diameter: 0.25

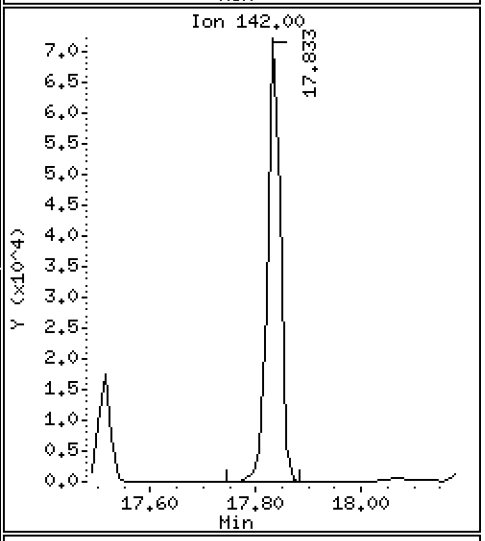
57 Hexachlorobenzene

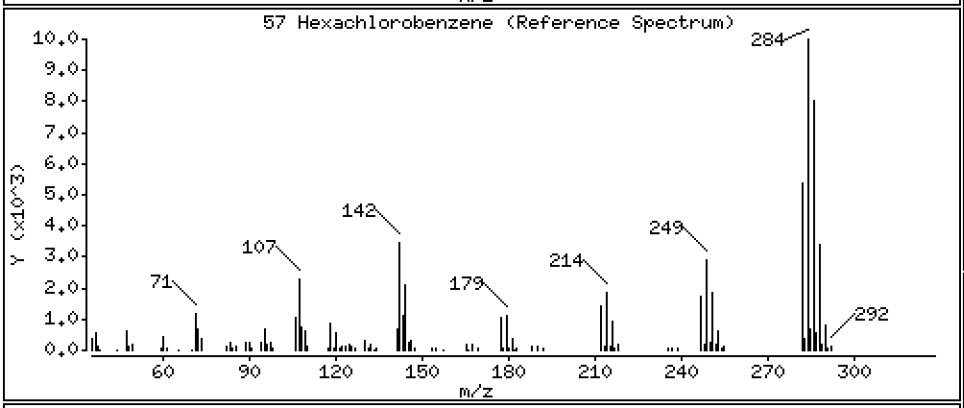
Concentration: 4.913 ug/mL

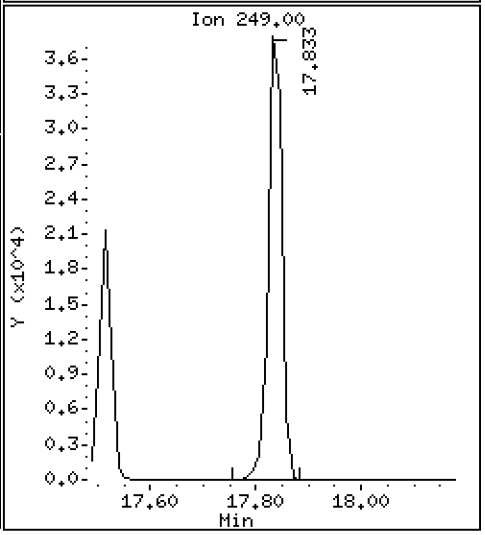


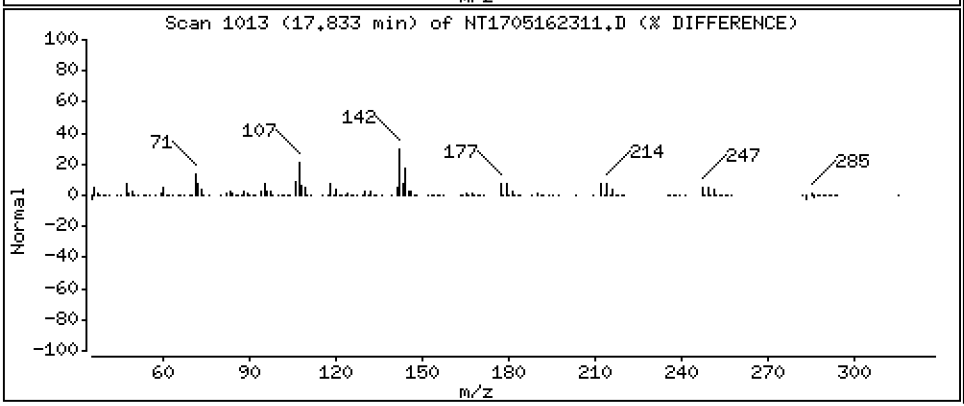












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

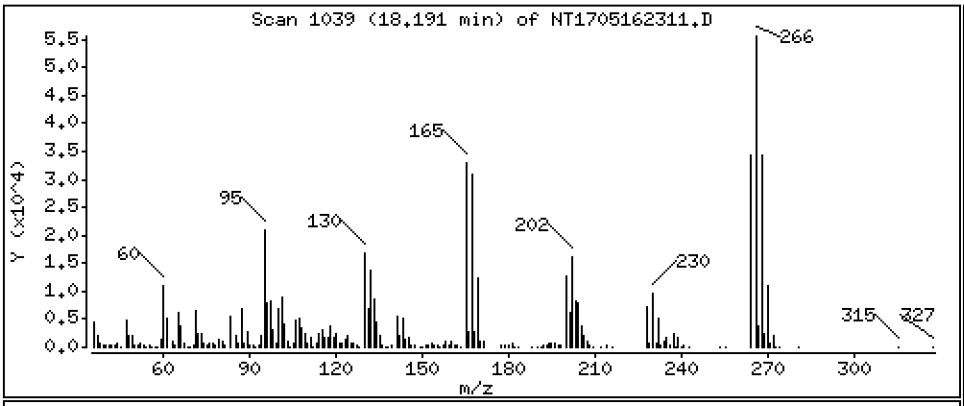
Operator: JGR

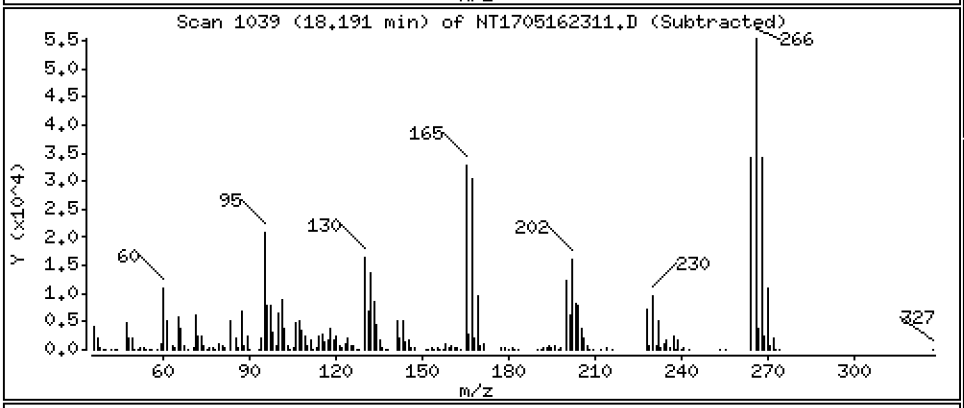
Column phase: ZB-5msi

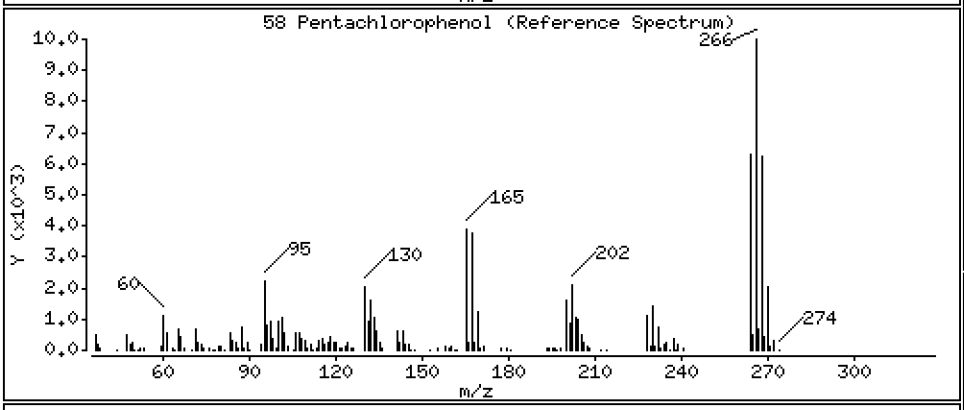
Column diameter: 0.25

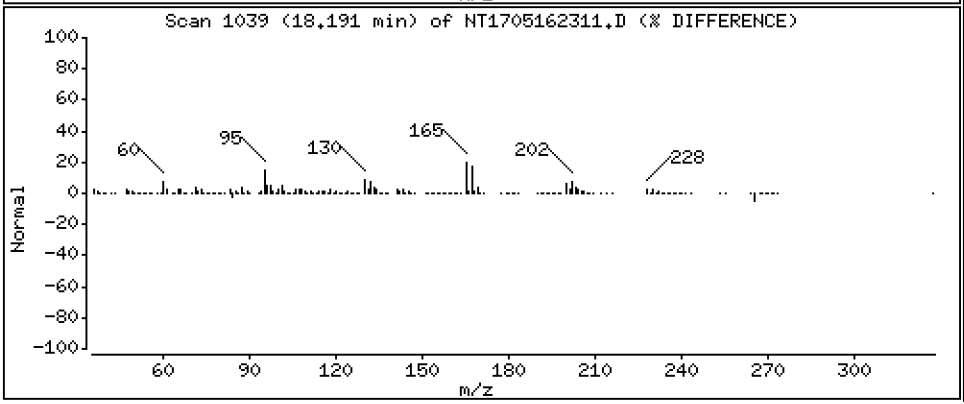
58 Pentachlorophenol

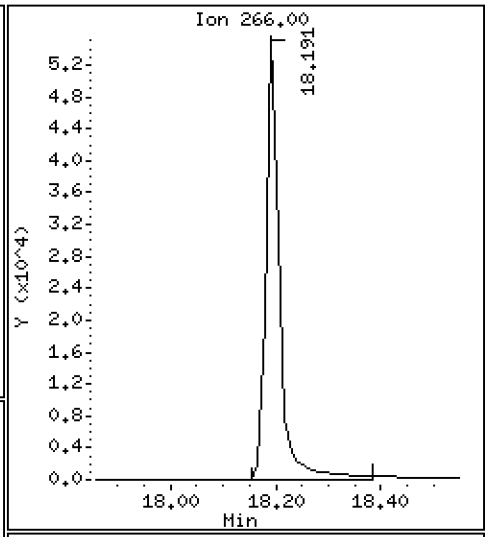
Concentration: 3.943 ug/mL

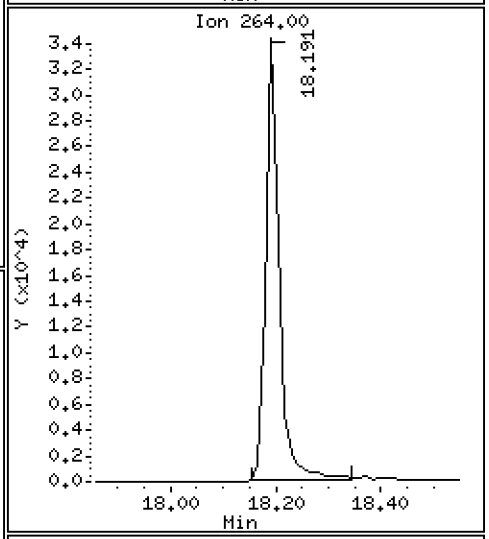


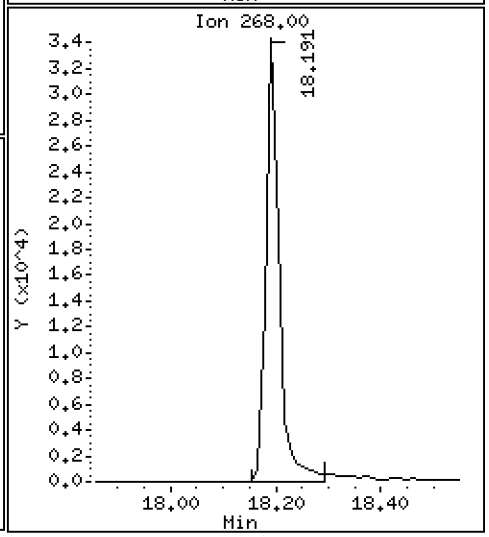












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

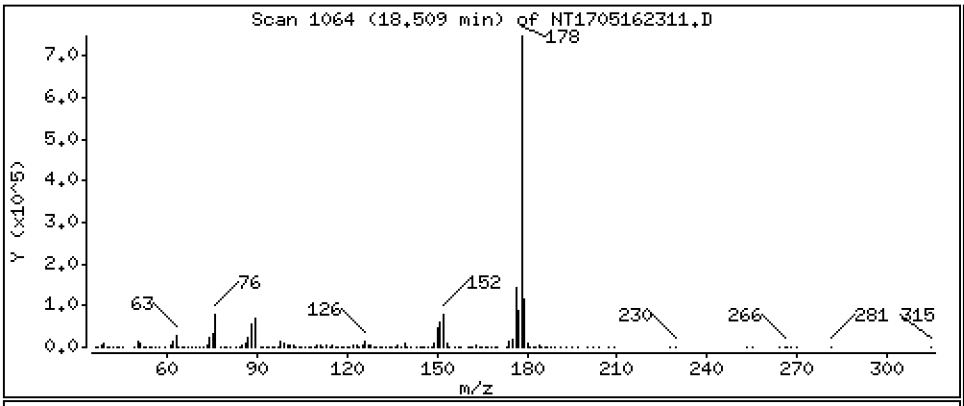
Operator: JGR

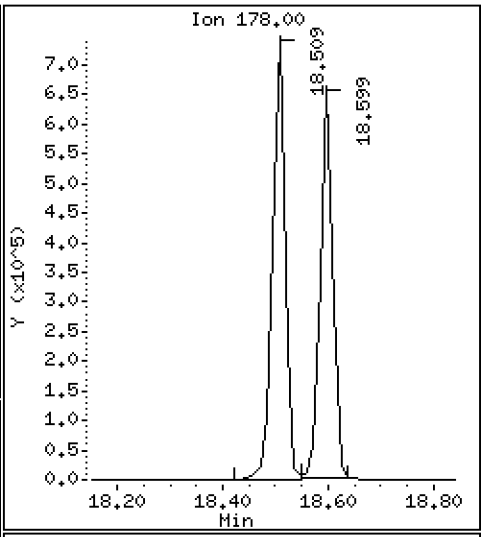
Column phase: ZB-5msi

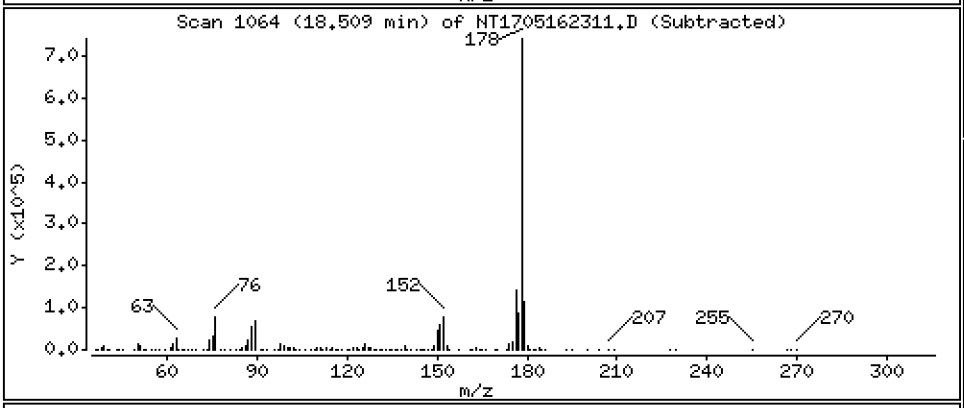
Column diameter: 0.25

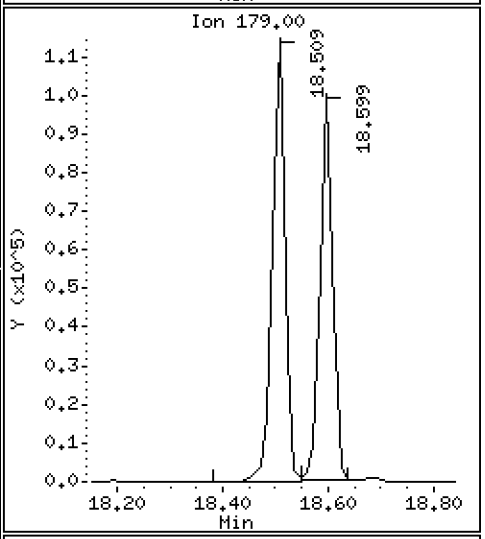
60 Phenanthrene

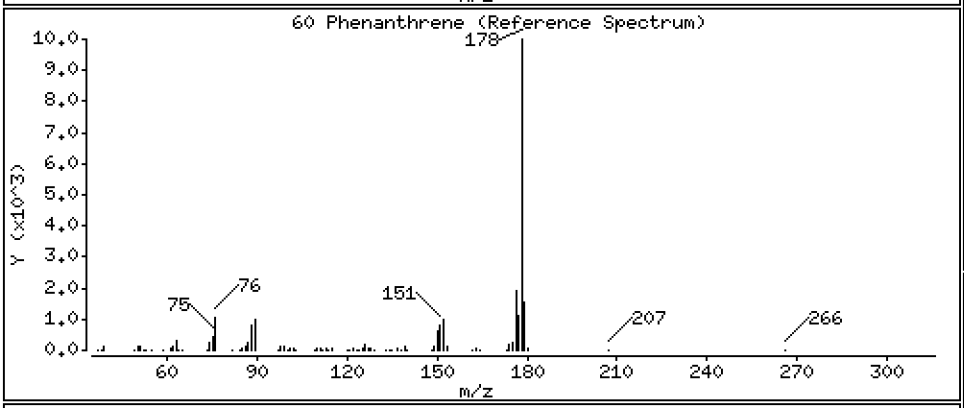
Concentration: 5.039 ug/mL

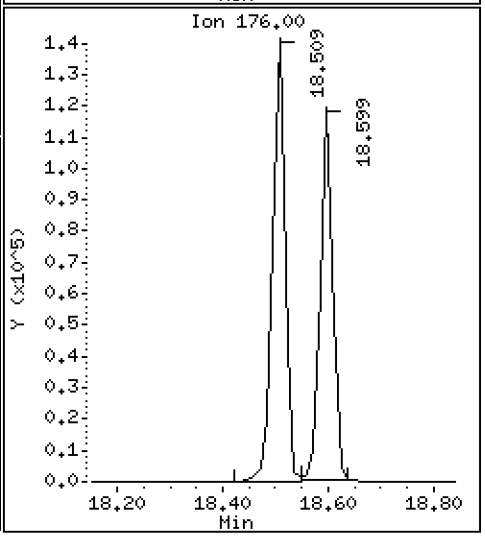


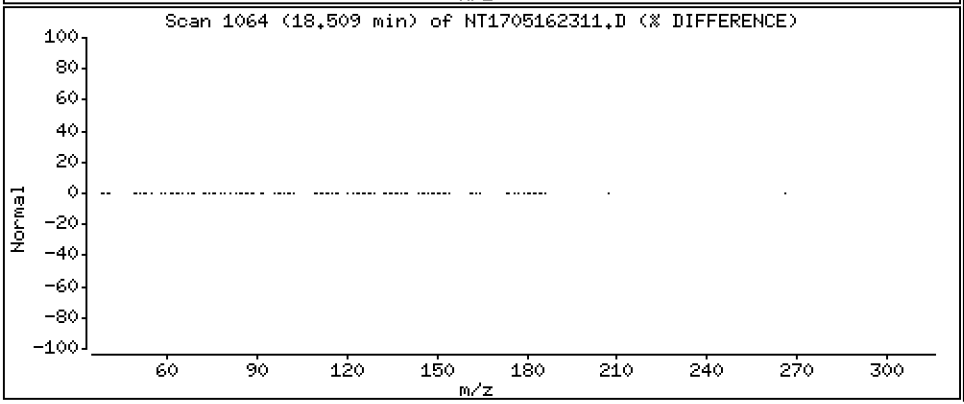












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

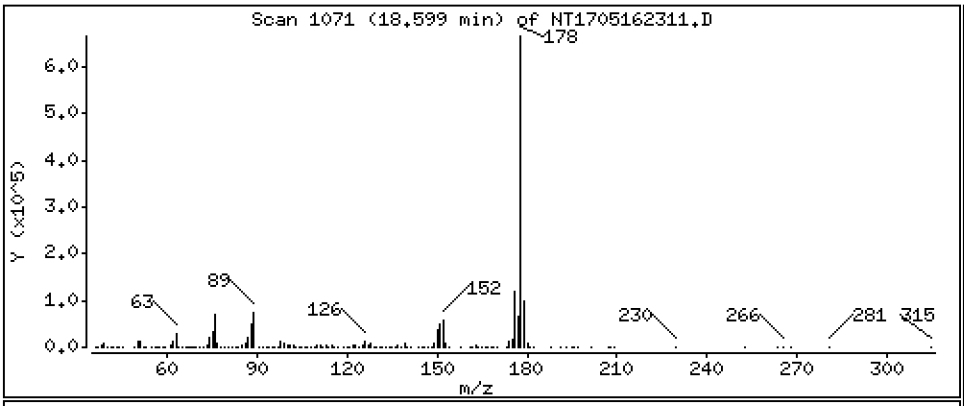
Operator: JGR

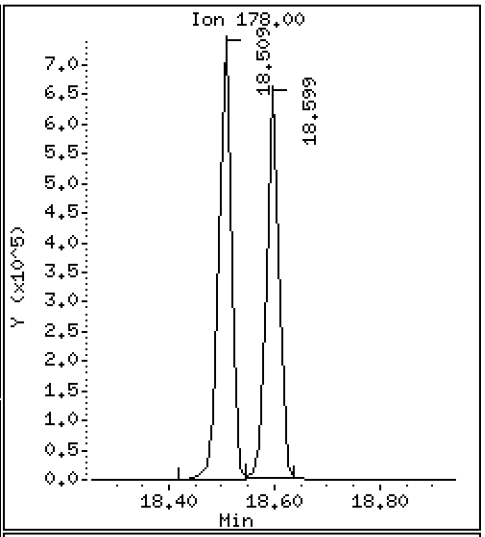
Column phase: ZB-5msi

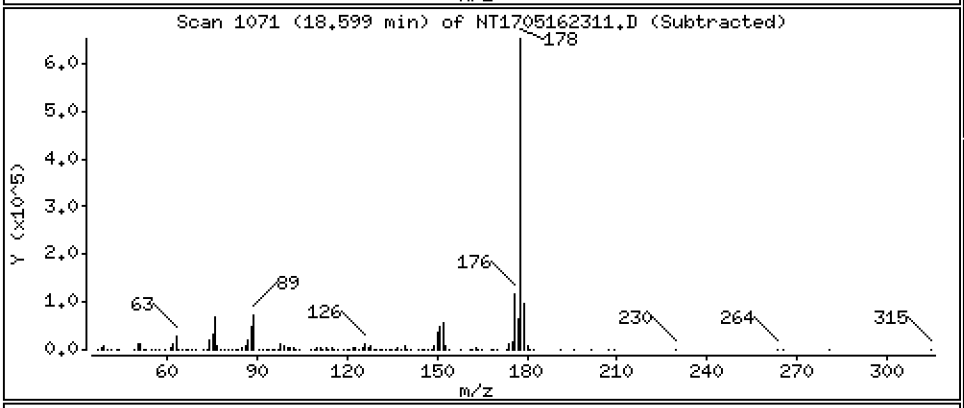
Column diameter: 0.25

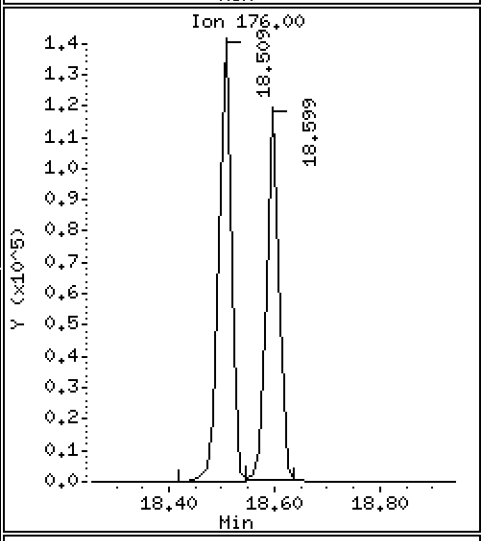
61 Anthracene

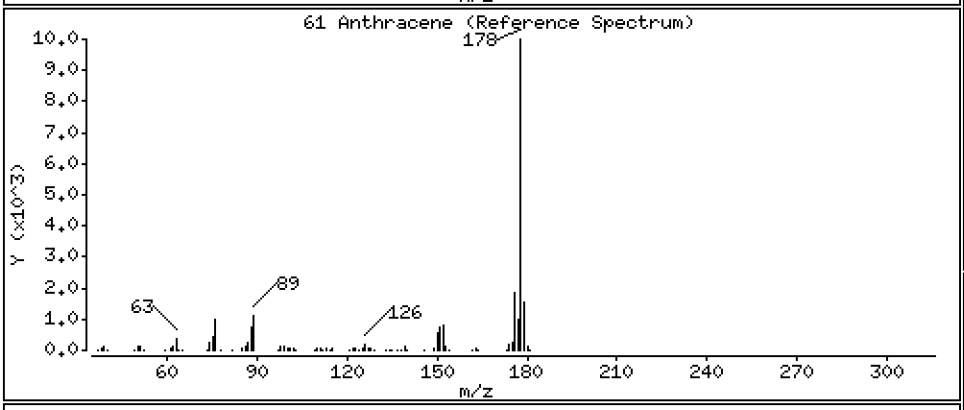
Concentration: 4.530 ug/mL

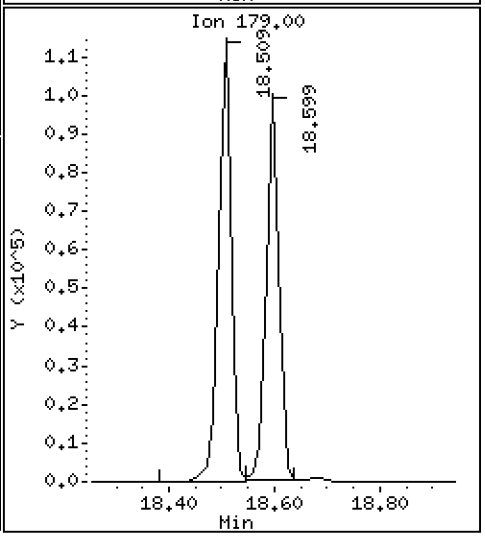


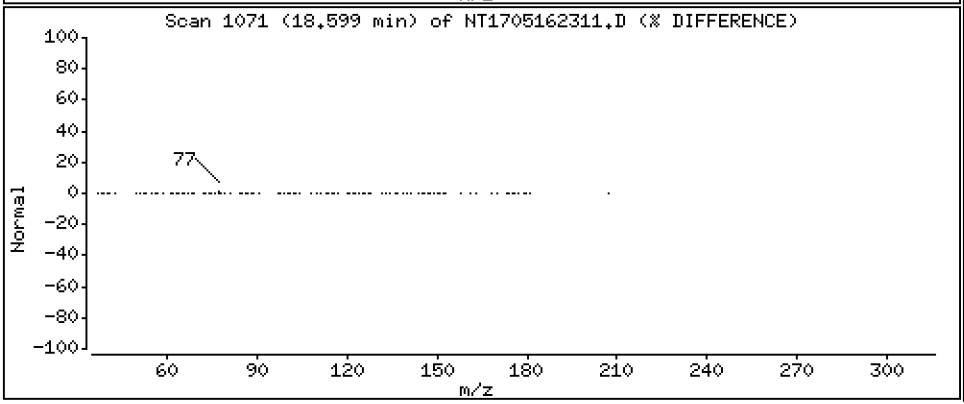












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

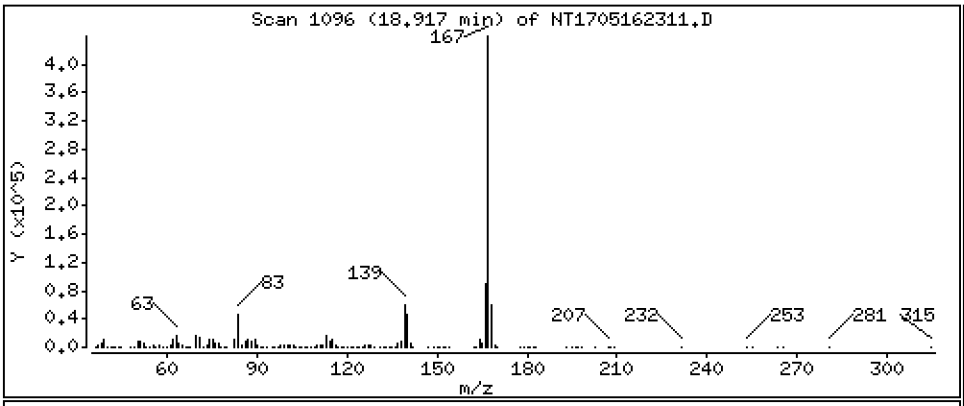
Operator: JGR

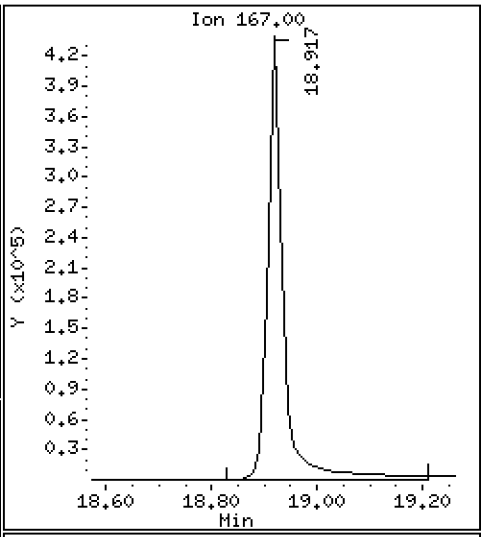
Column phase: ZB-5msi

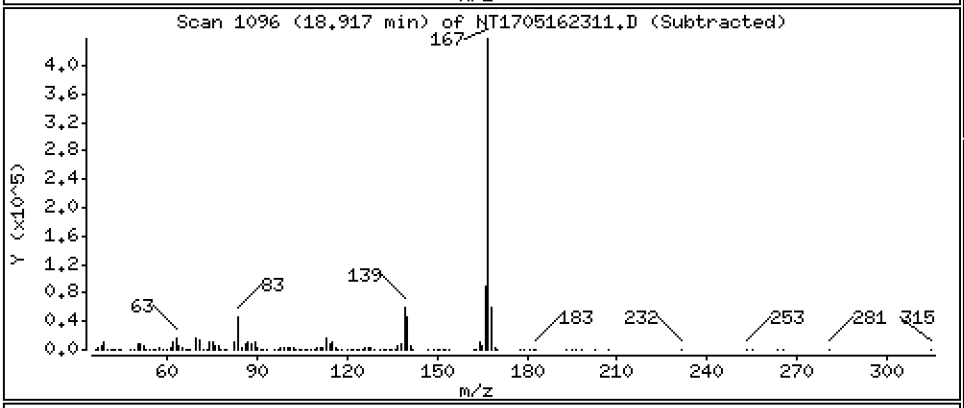
Column diameter: 0.25

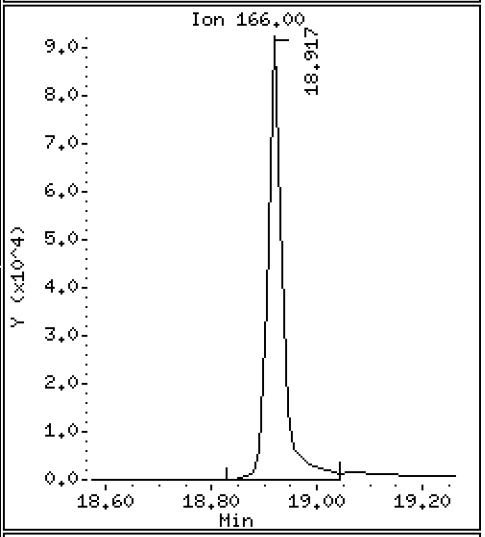
62 Carbazole

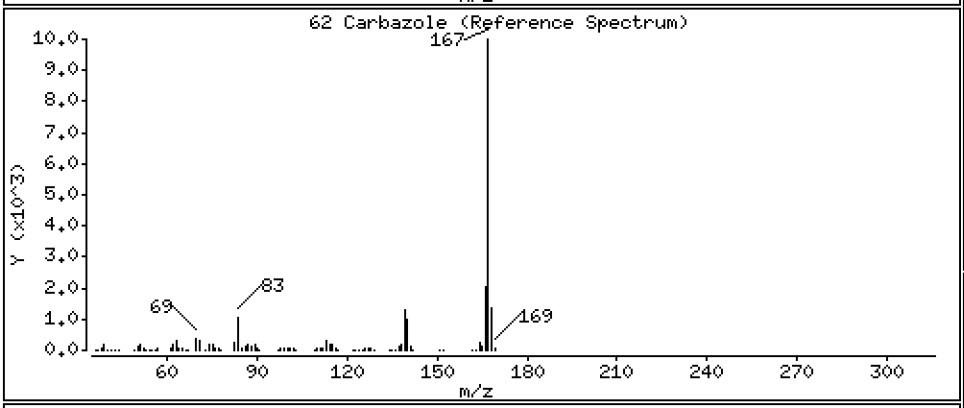
Concentration: 5.938 ug/mL

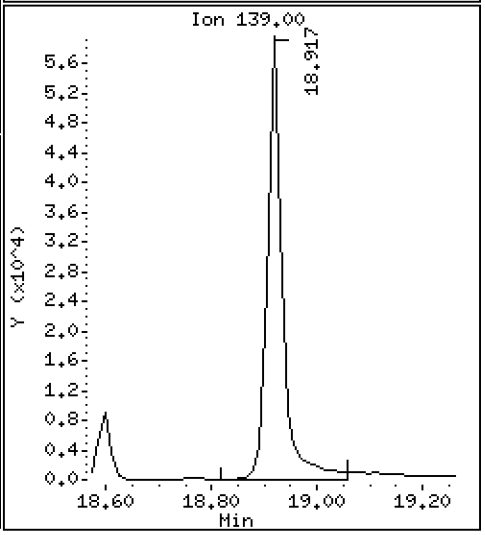


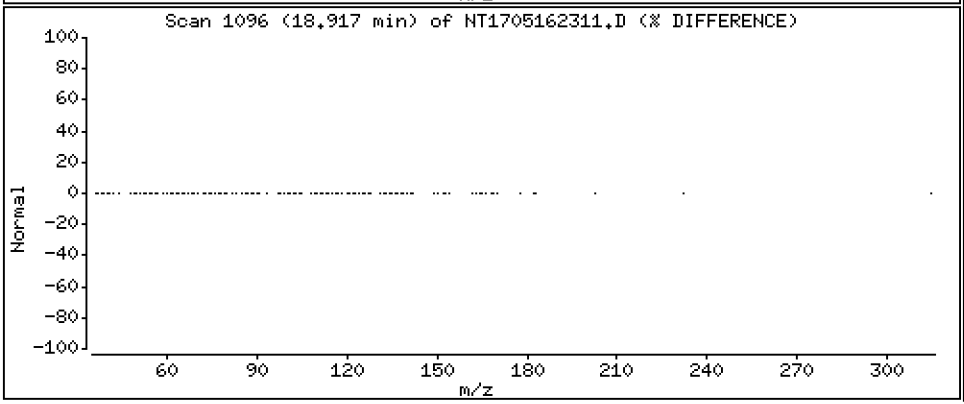












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

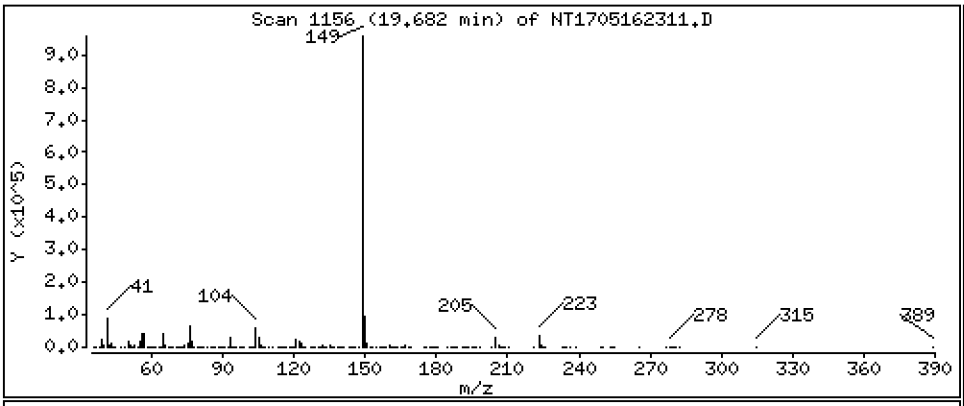
Operator: JGR

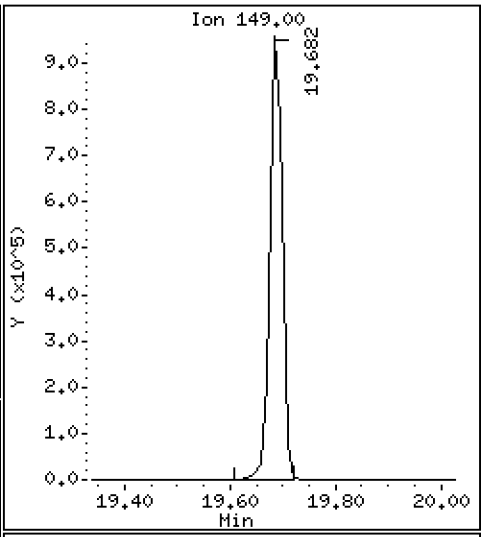
Column phase: ZB-5msi

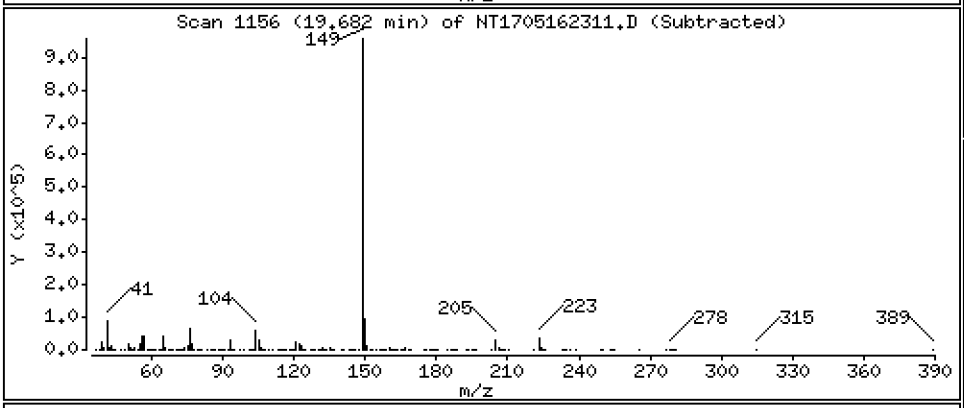
Column diameter: 0.25

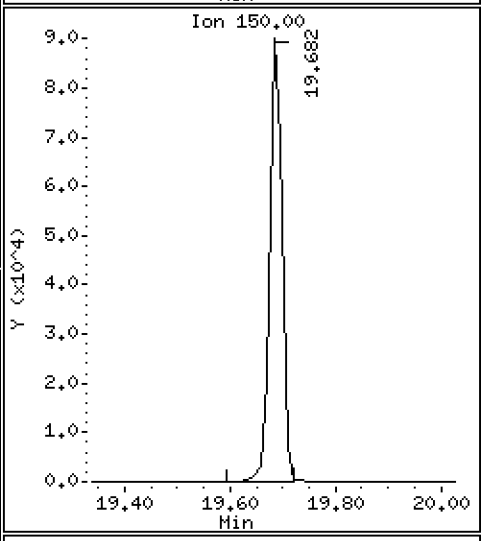
63 Di-n-butylphthalate

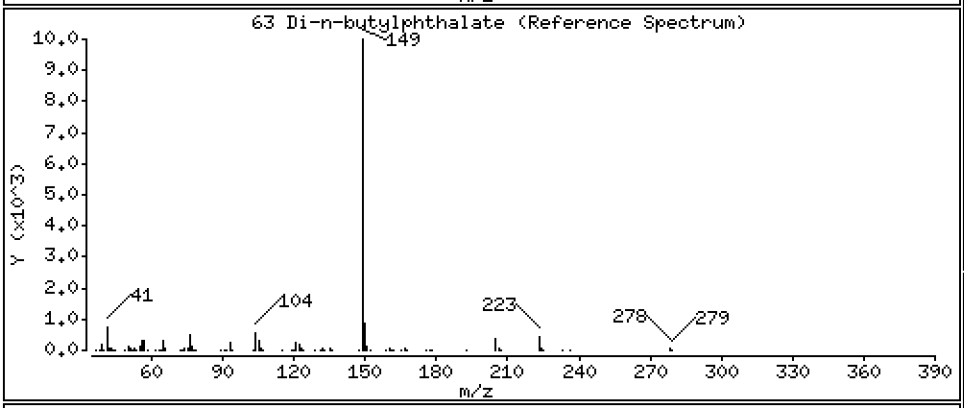
Concentration: 5.642 ug/mL

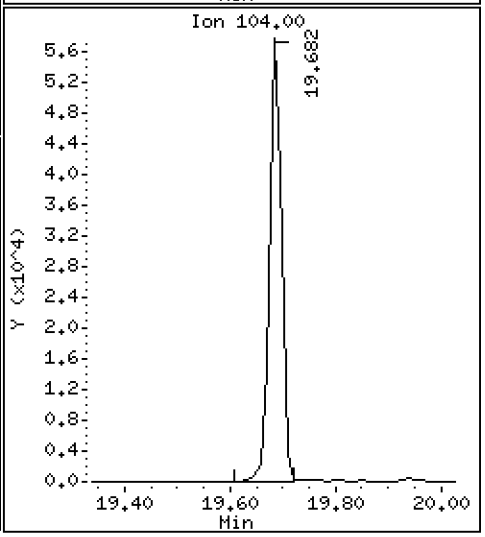


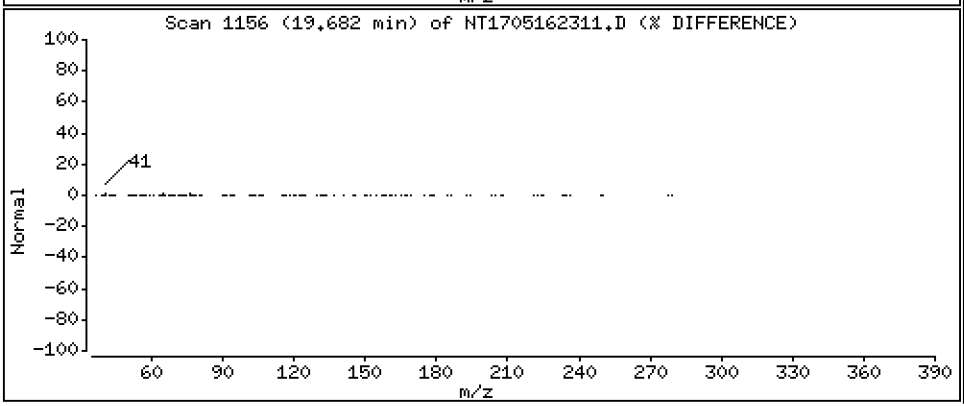












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

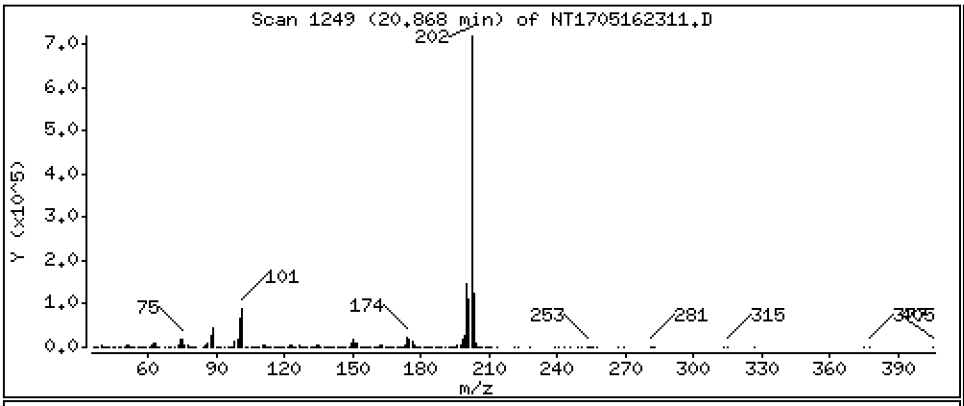
Operator: JGR

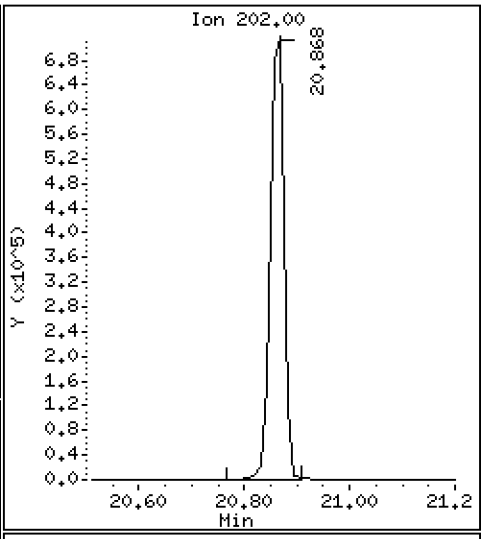
Column phase: ZB-5msi

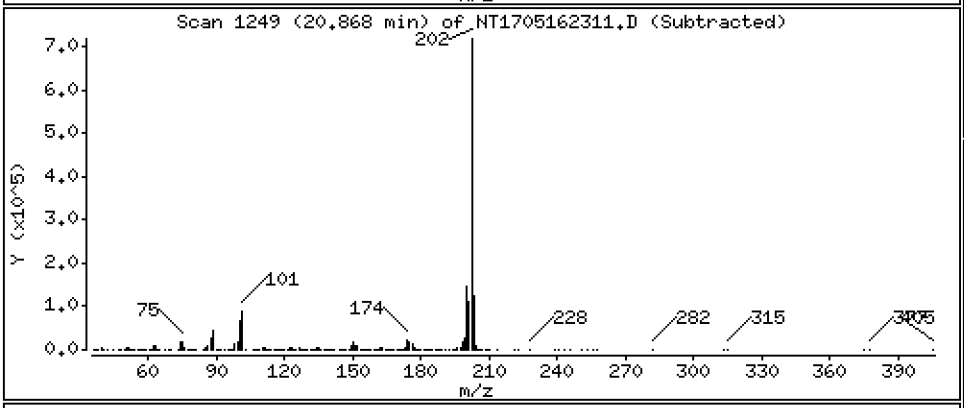
Column diameter: 0.25

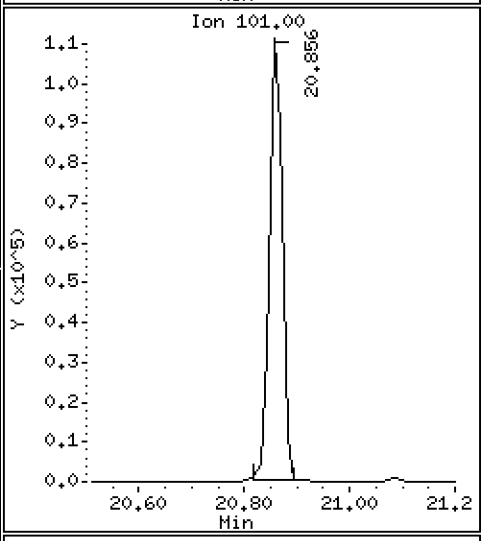
64 Fluoranthene

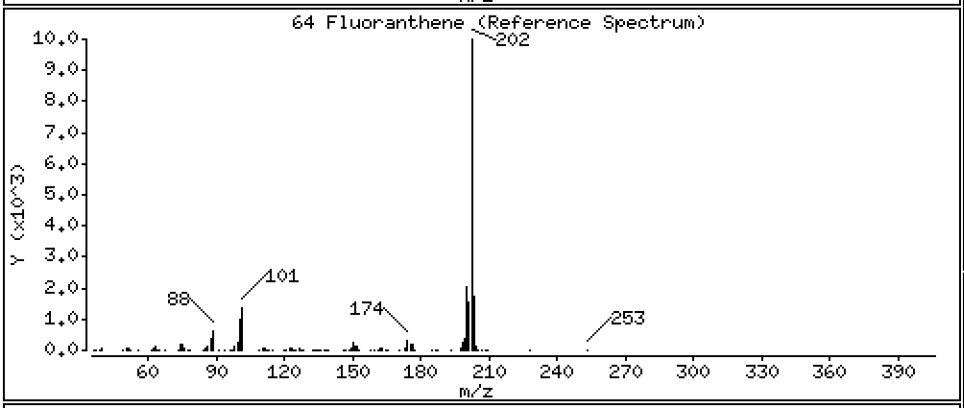
Concentration: 5.467 ug/mL

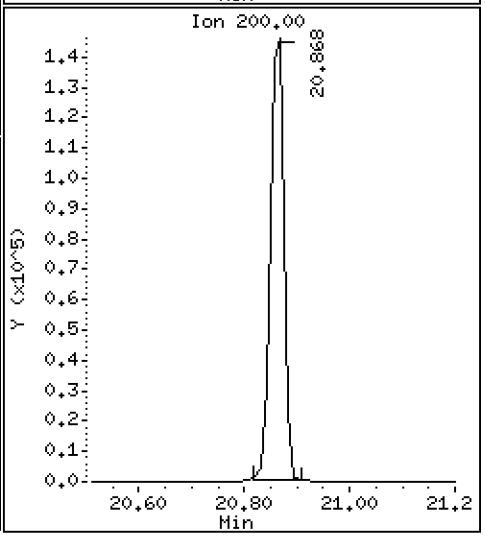


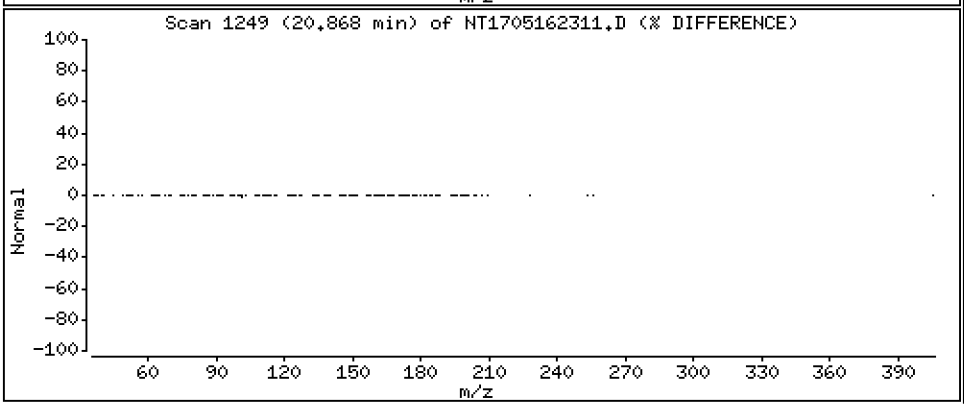












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

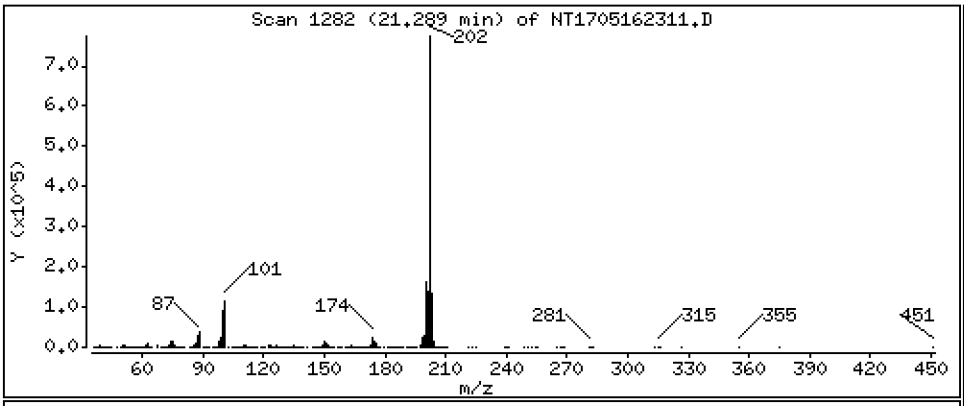
Operator: JGR

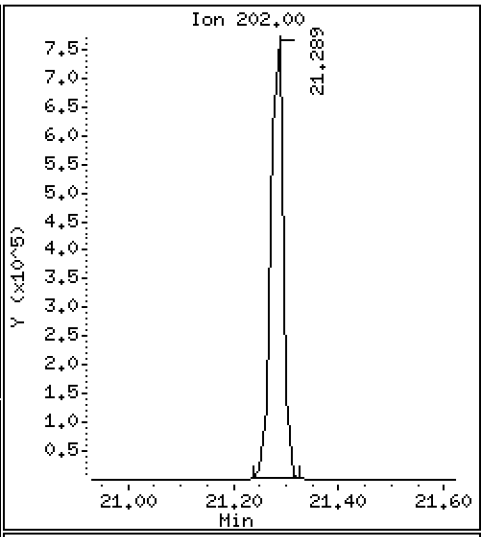
Column phase: ZB-5msi

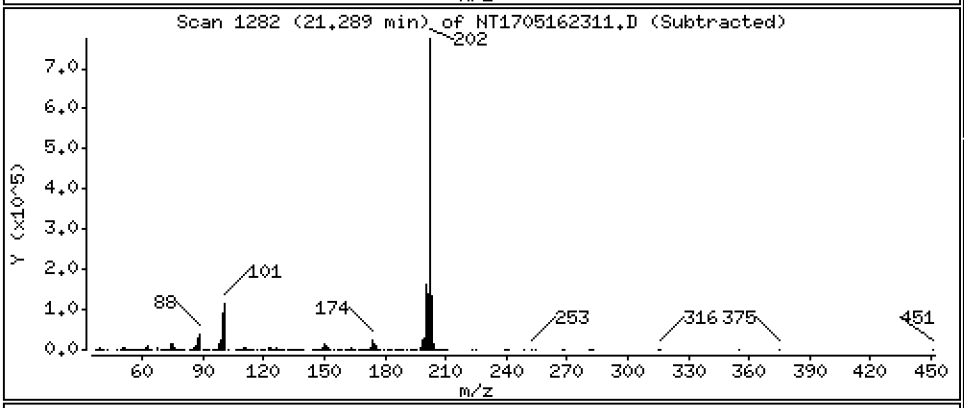
Column diameter: 0.25

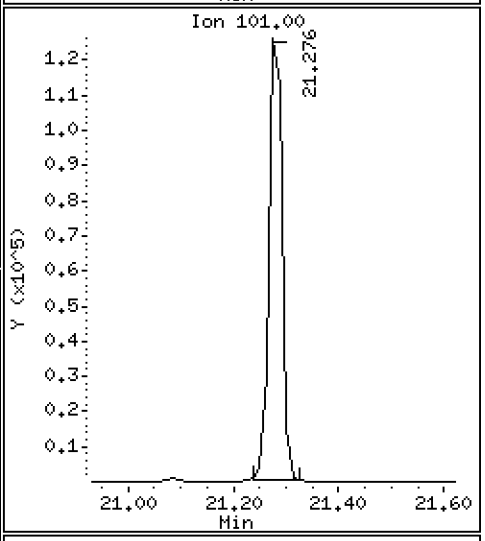
65 Pyrene

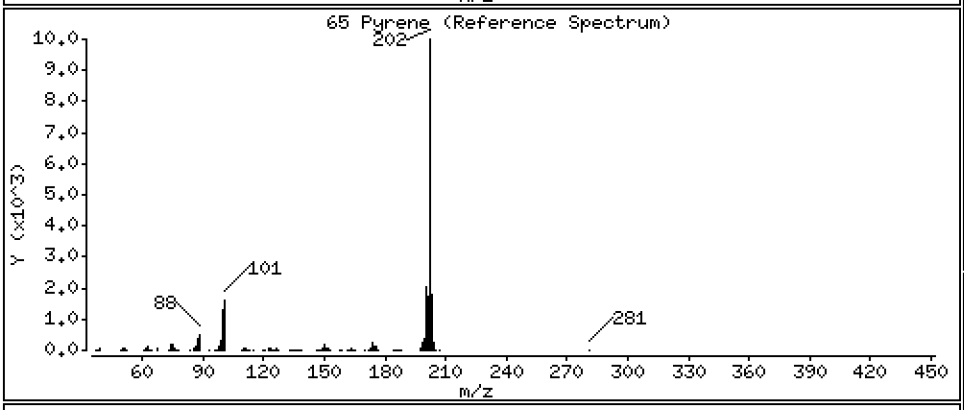
Concentration: 5.265 ug/mL

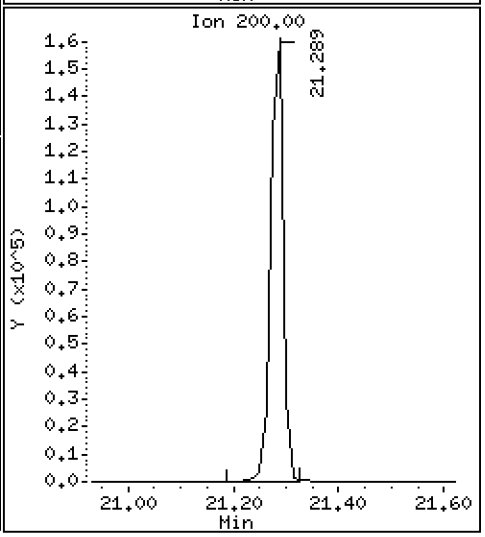


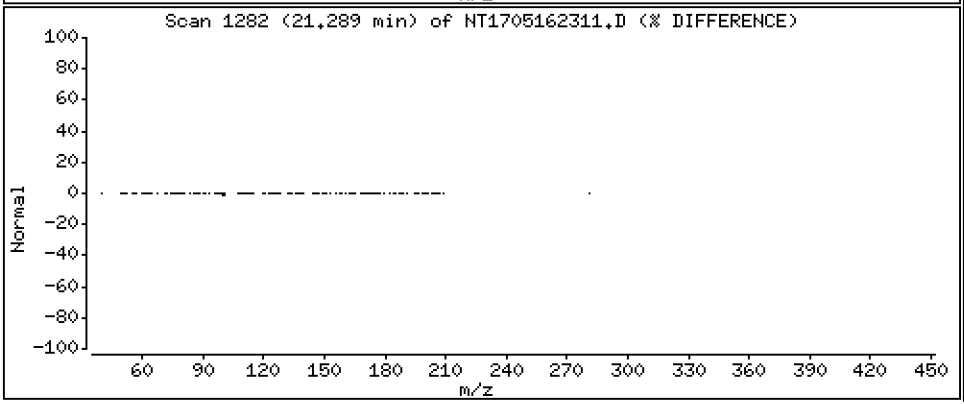












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

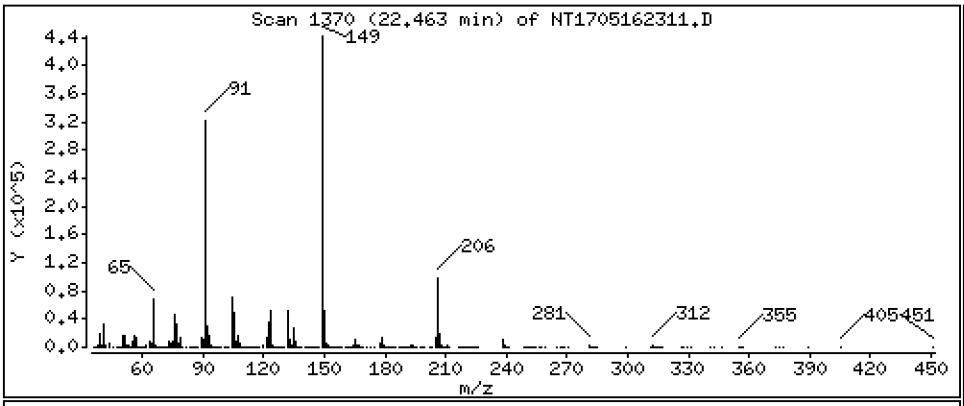
Operator: JGR

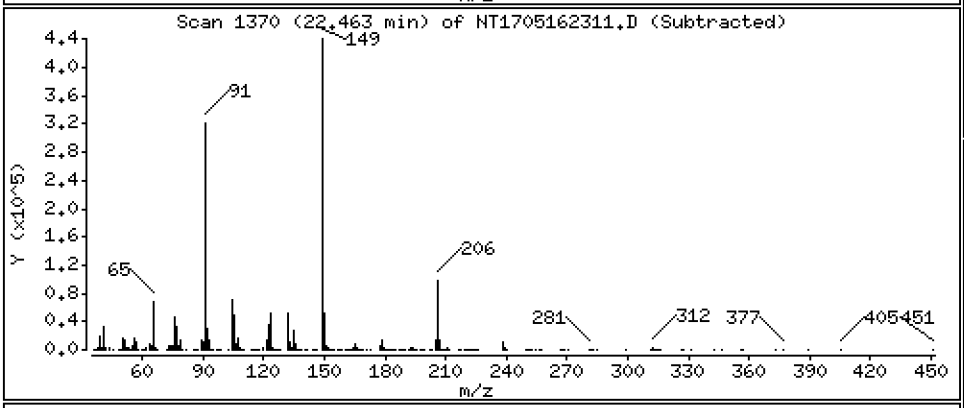
Column phase: ZB-5msi

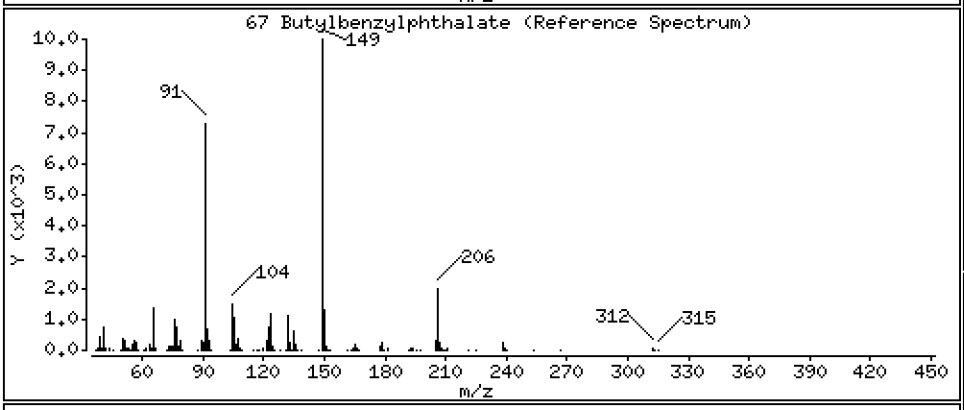
Column diameter: 0.25

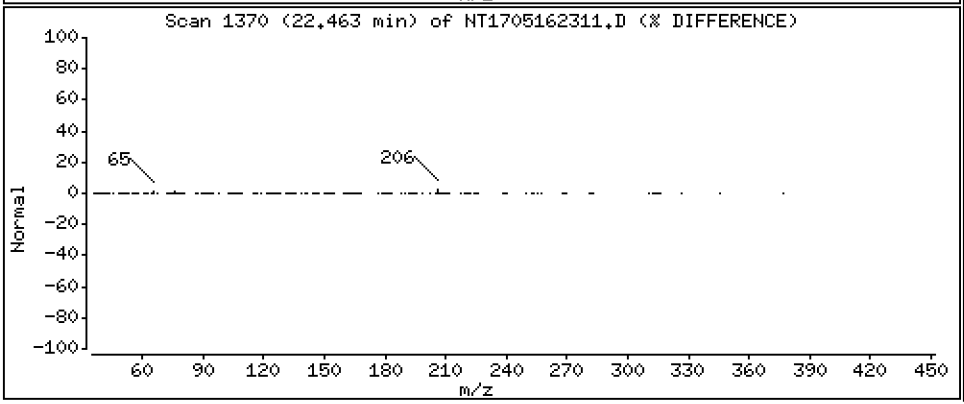
67 Butylbenzylphthalate

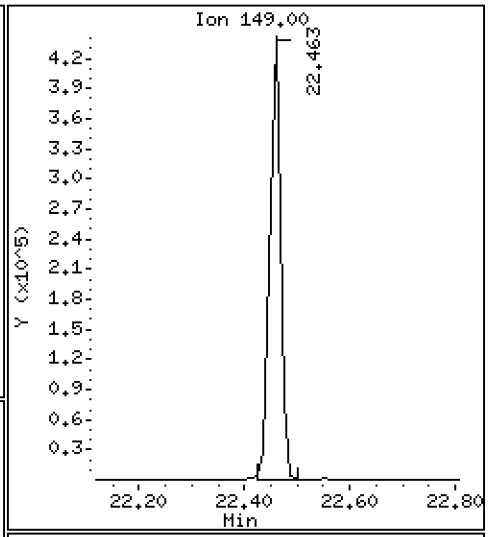
Concentration: 5.825 ug/mL

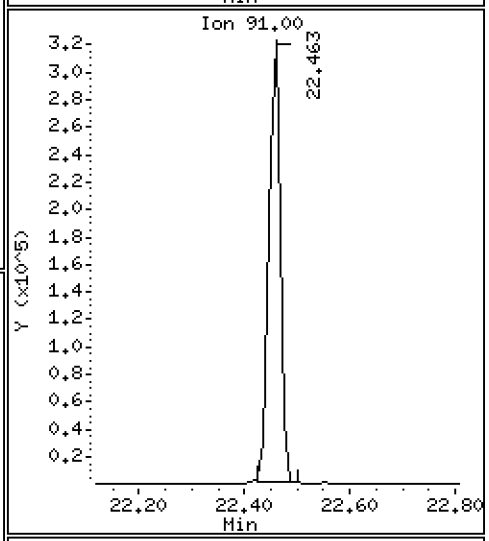


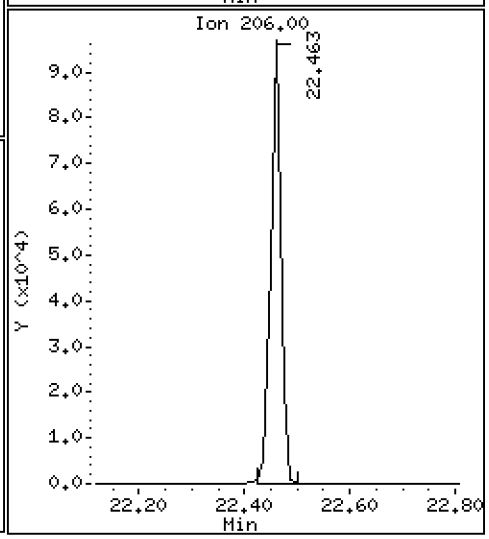












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

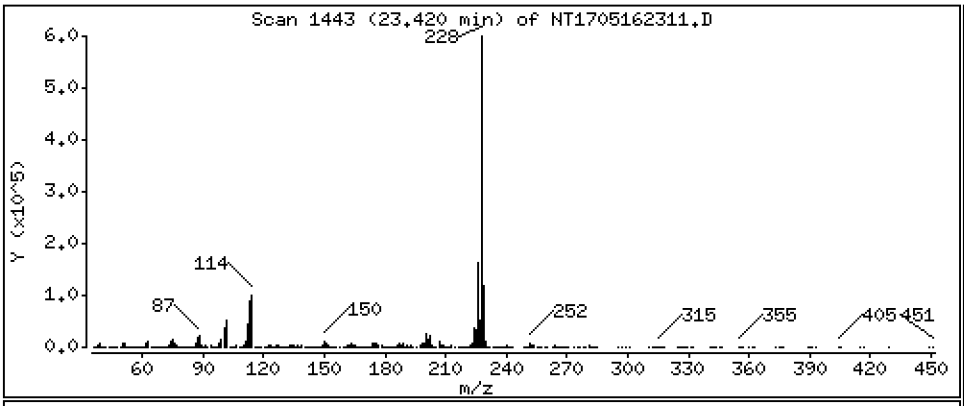
Operator: JGR

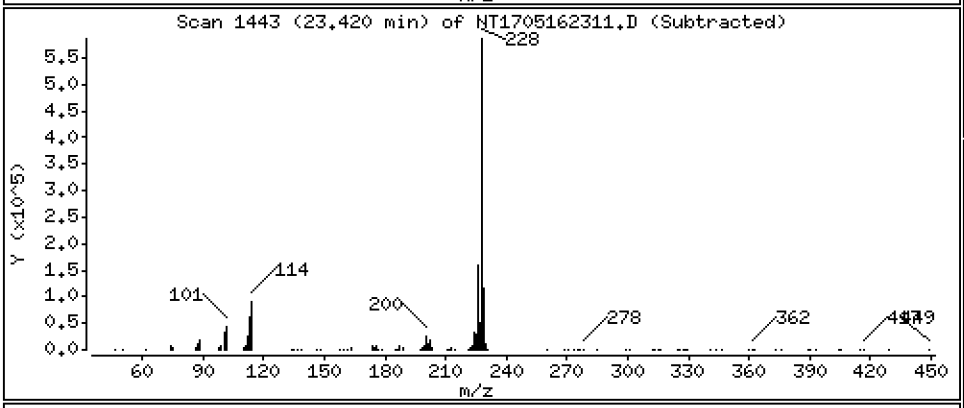
Column phase: ZB-5msi

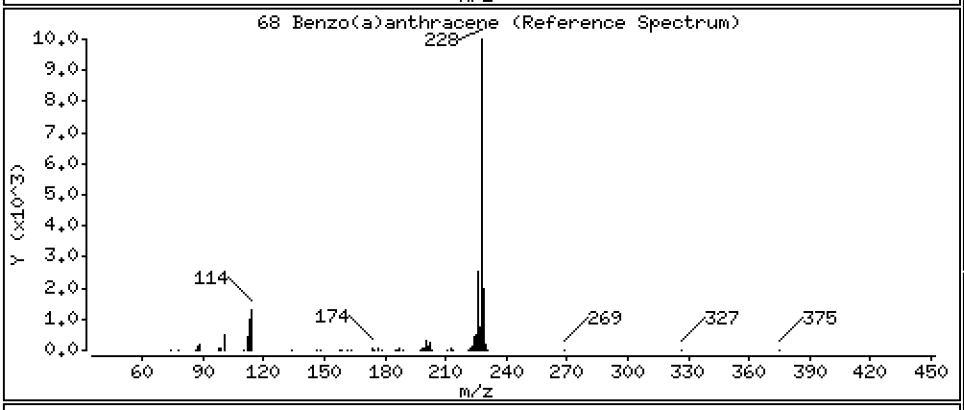
Column diameter: 0.25

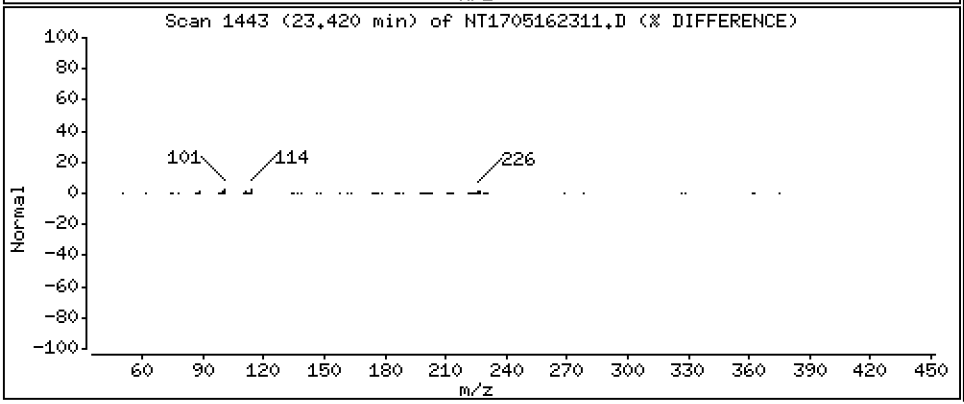
68 Benzo(a)anthracene

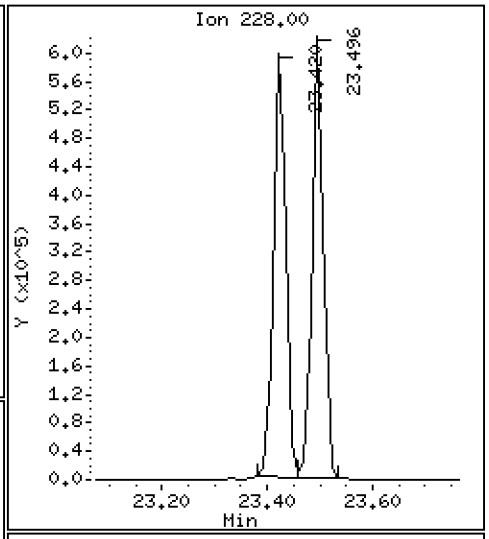
Concentration: 5.064 ug/mL

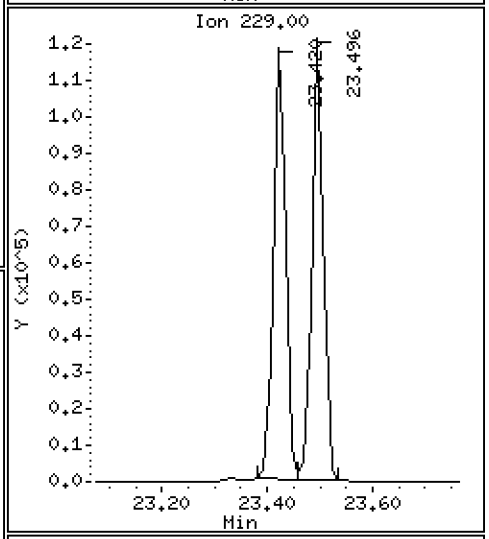


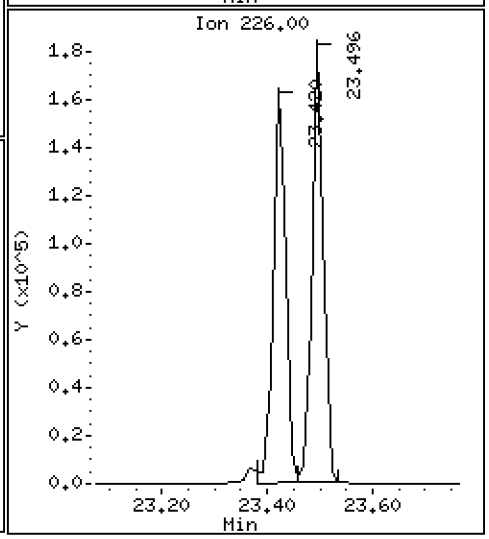












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

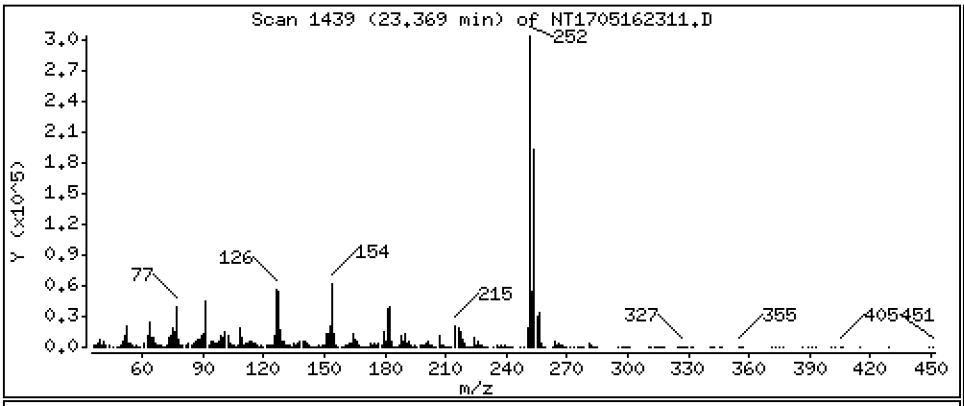
Operator: JGR

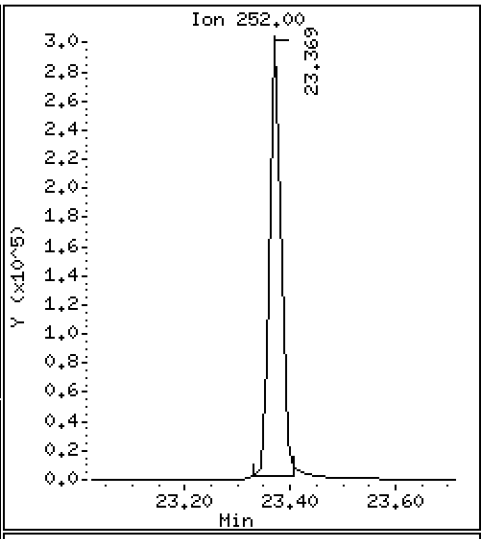
Column phase: ZB-5msi

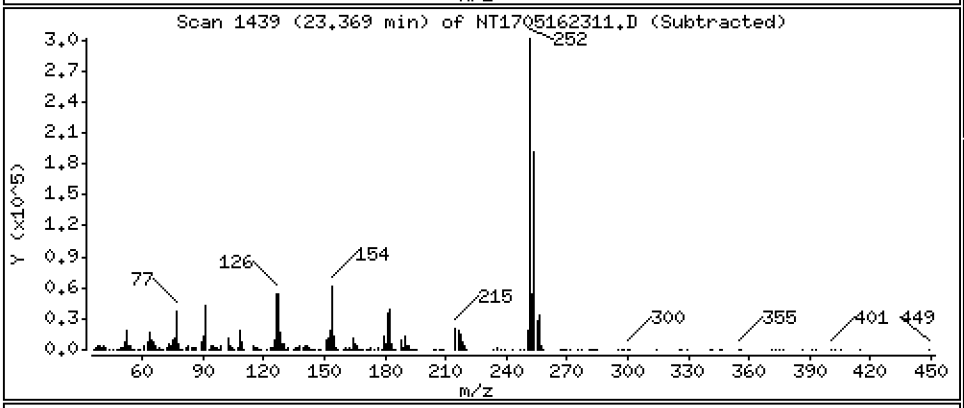
Column diameter: 0.25

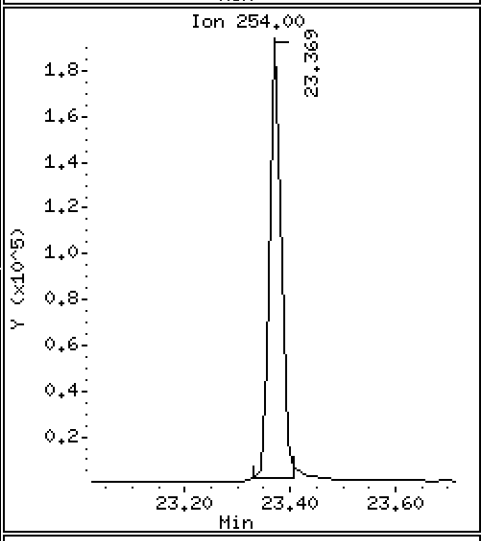
70 3,3'-Dichlorobenzidine

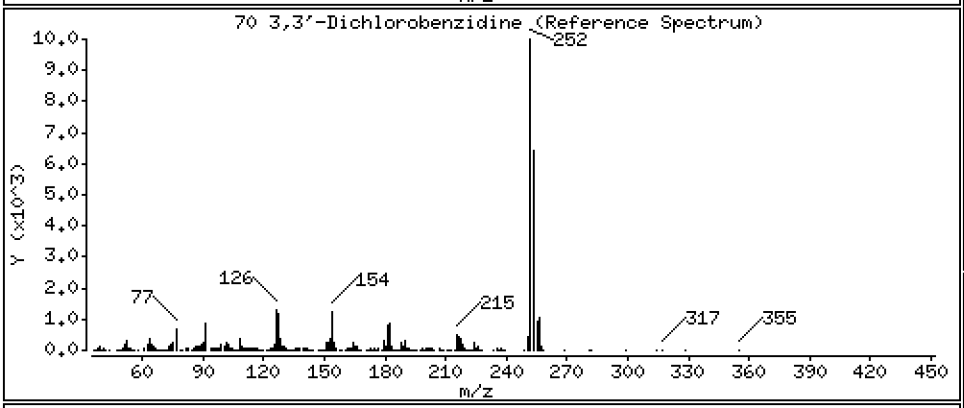
Concentration: 11.99 ug/mL

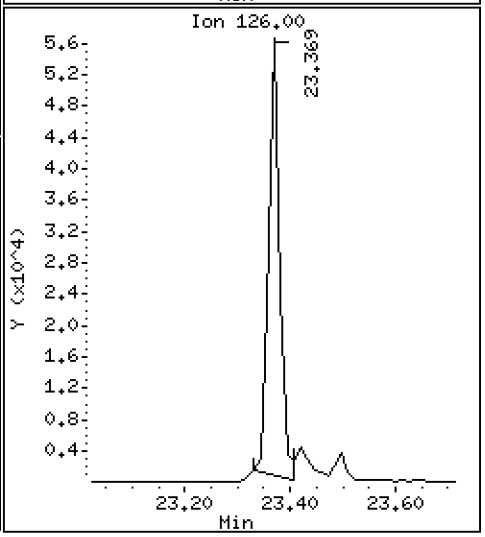


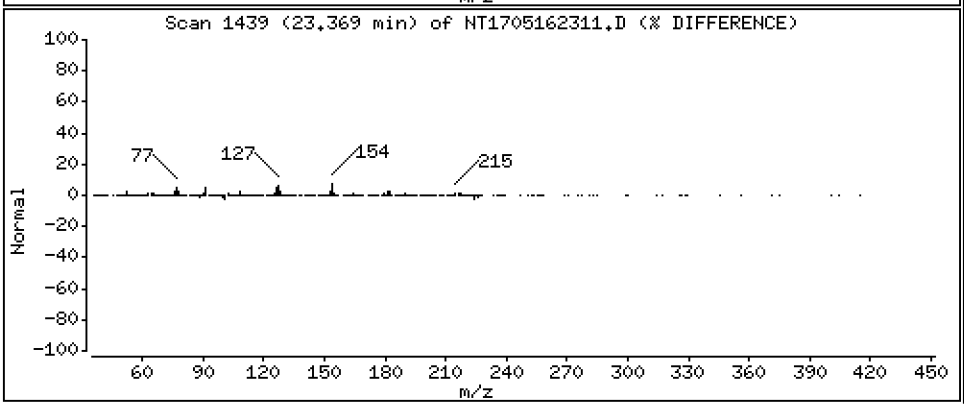












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

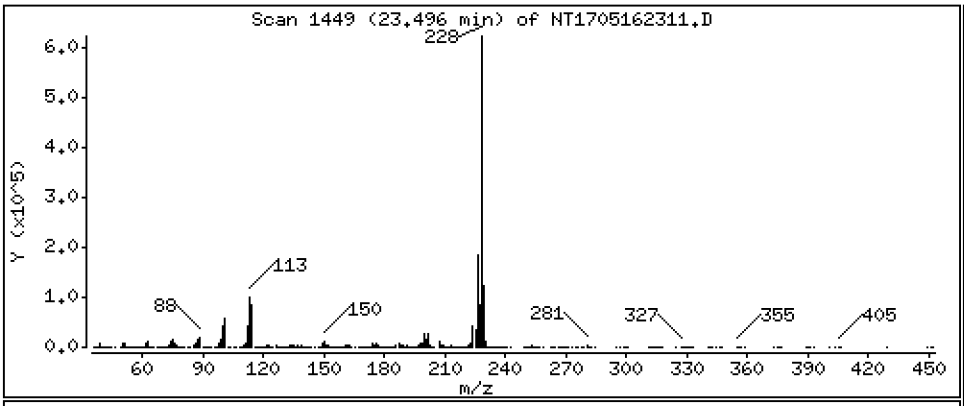
Operator: JGR

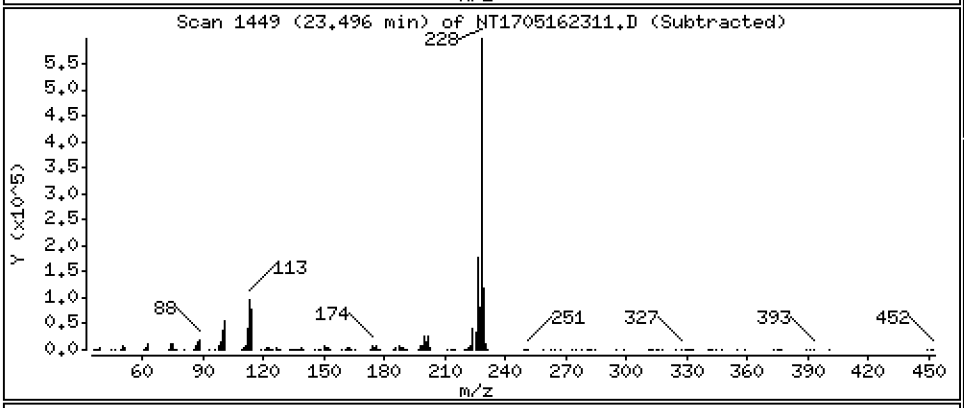
Column phase: ZB-5msi

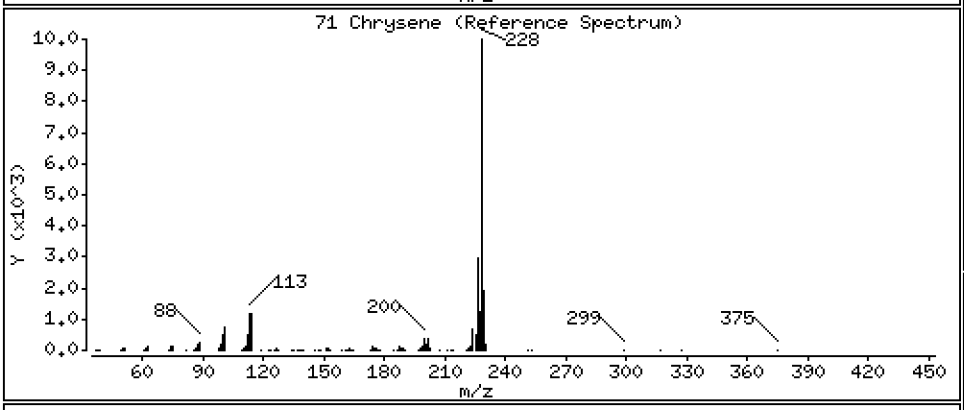
Column diameter: 0.25

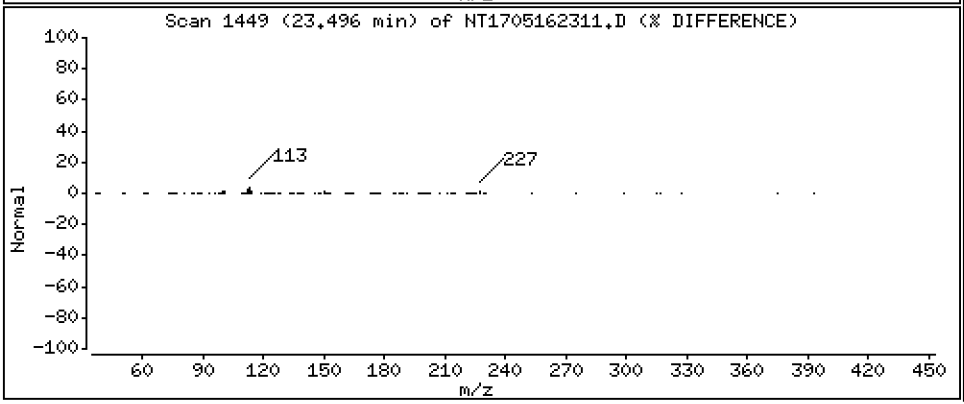
71 Chrysene

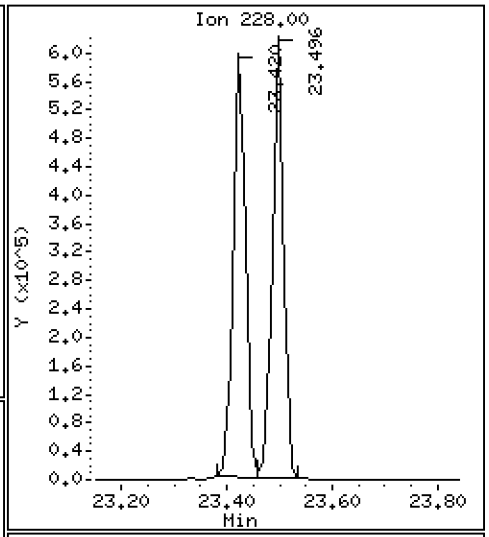
Concentration: 5.018 ug/mL

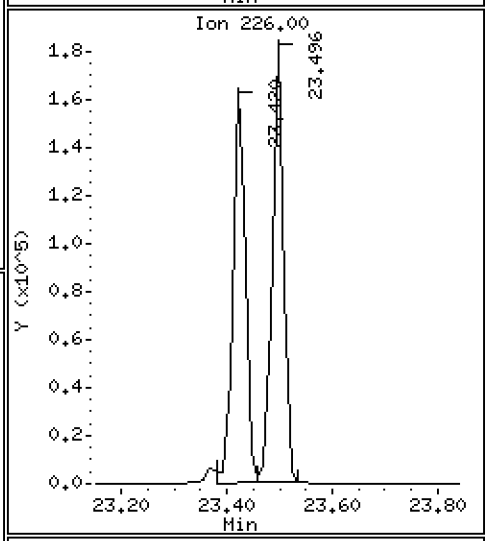


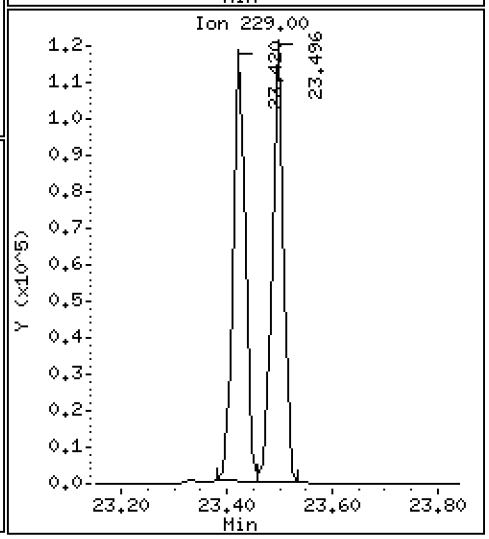












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

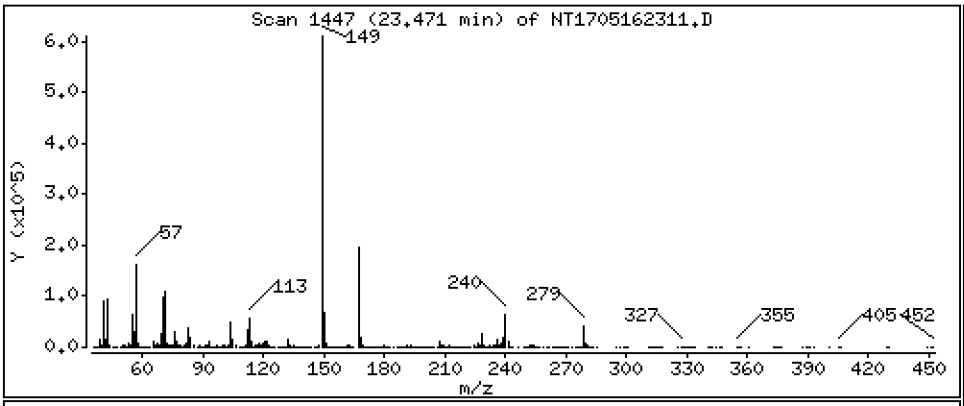
Operator: JGR

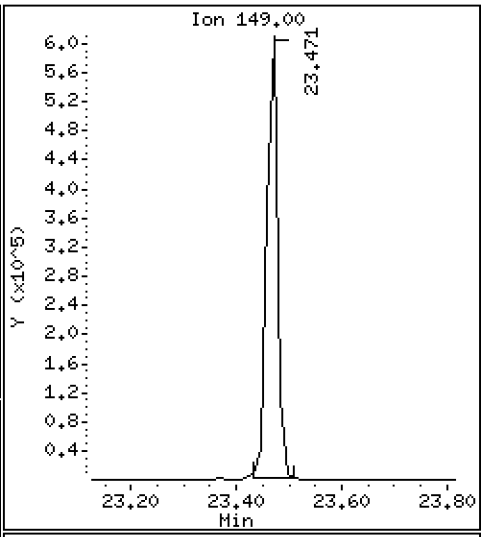
Column phase: ZB-5msi

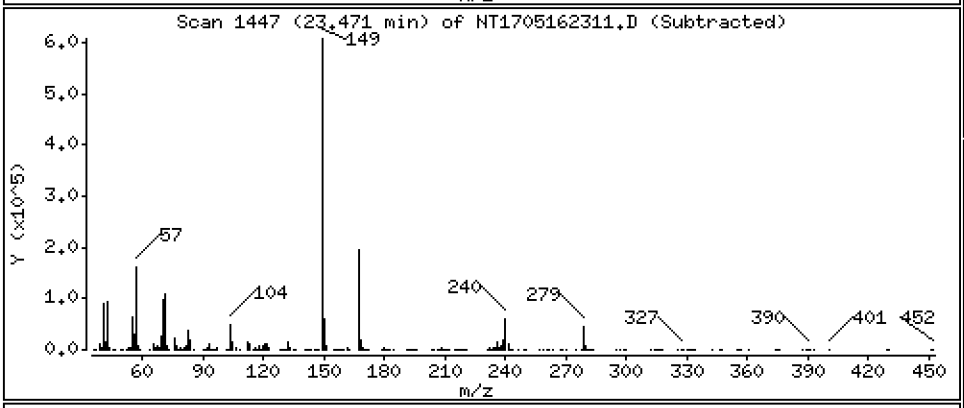
Column diameter: 0.25

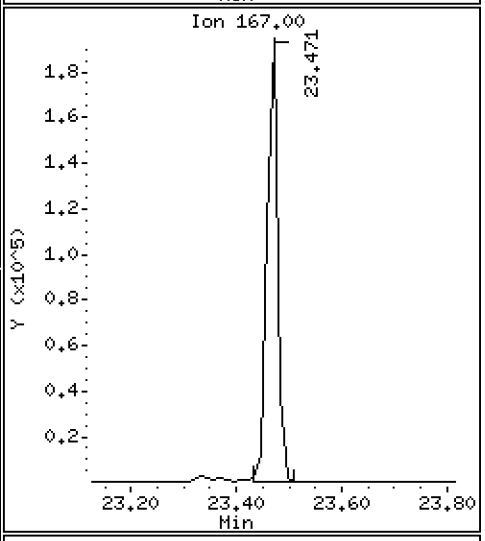
72 bis(2-Ethylhexyl)phthalate

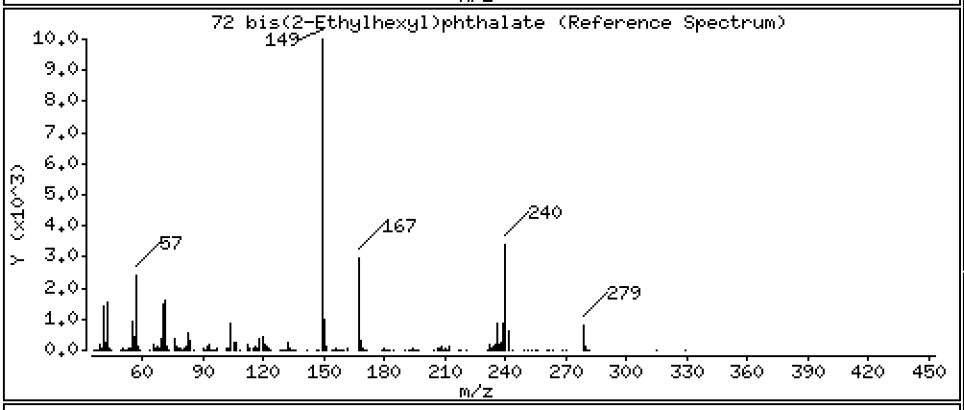
Concentration: 5.792 ug/mL

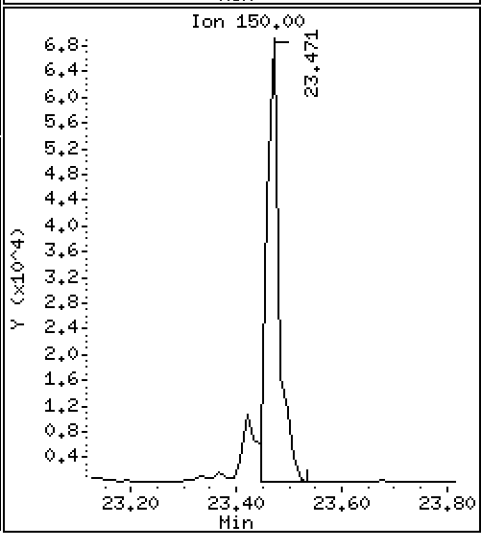


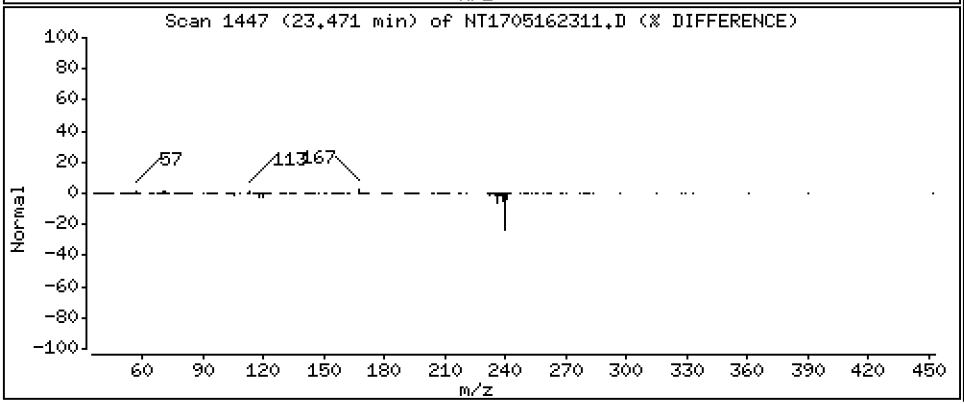












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

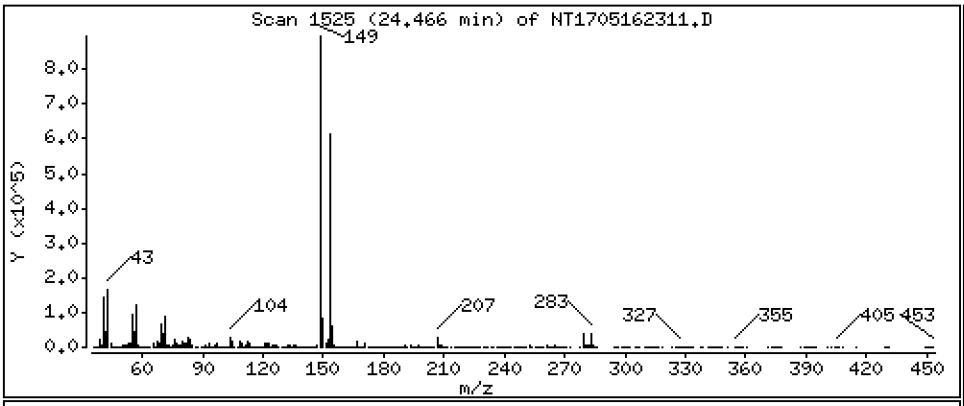
Operator: JGR

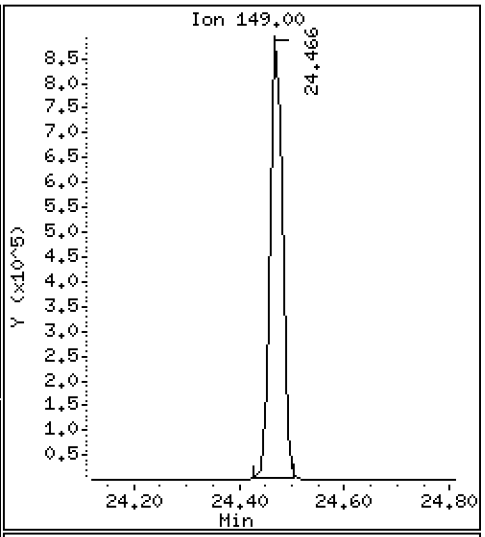
Column phase: ZB-5msi

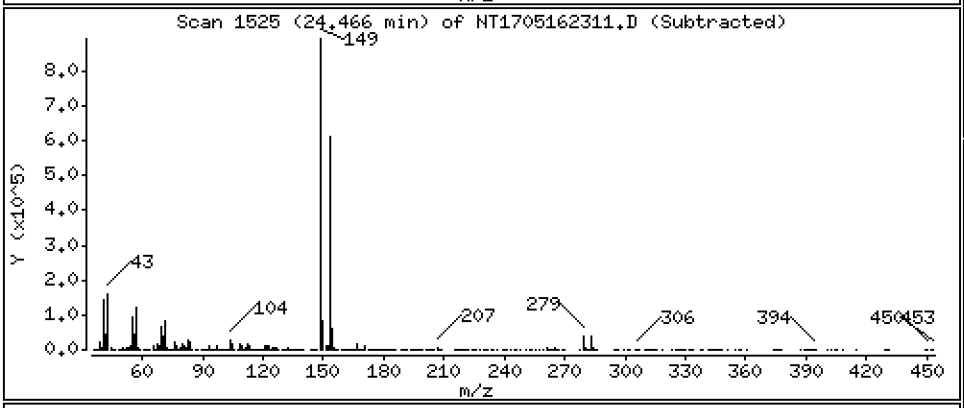
Column diameter: 0.25

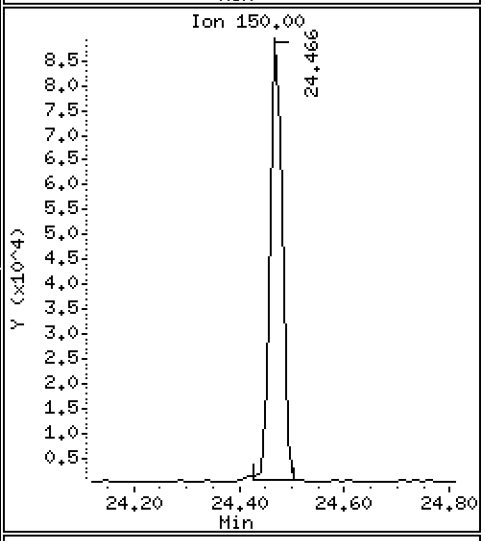
73 Di-n-octylphthalate

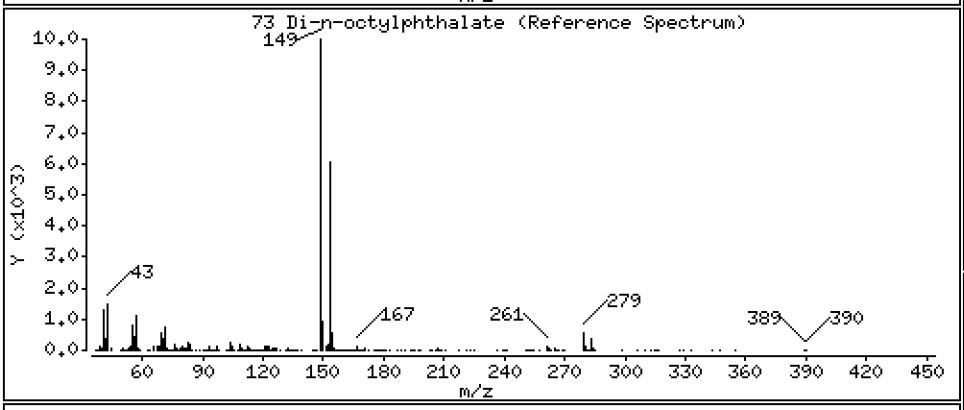
Concentration: 5.482 ug/mL

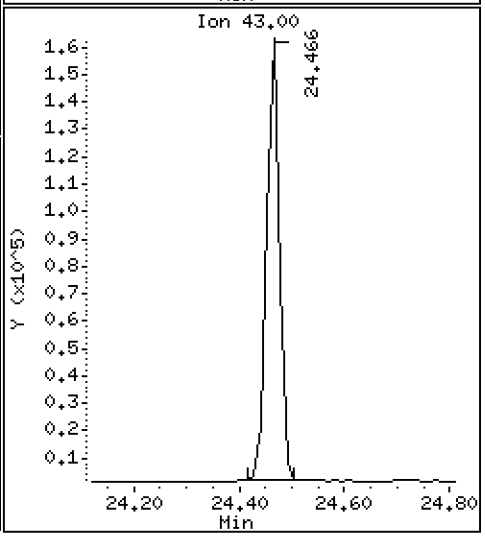


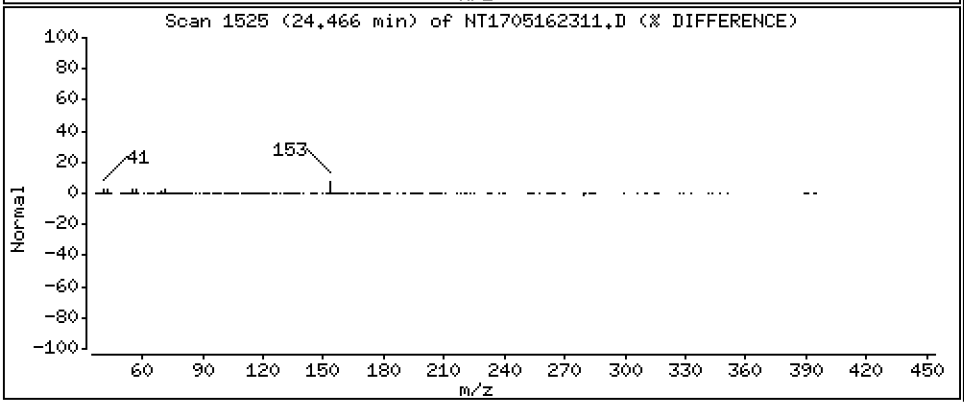












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

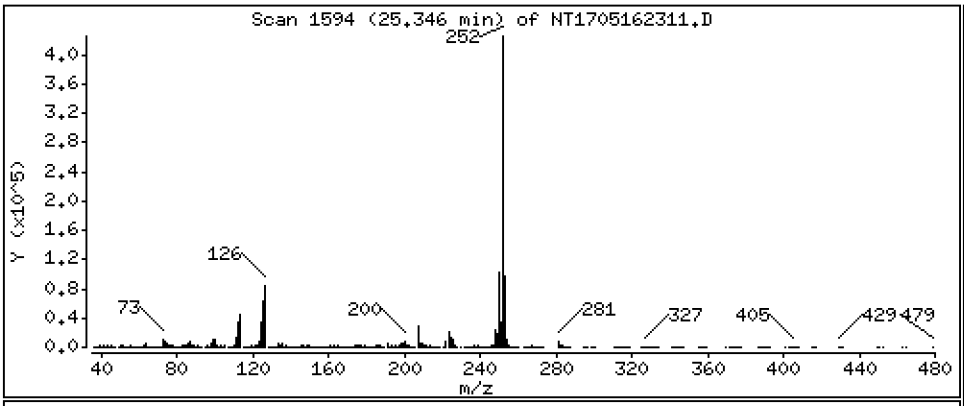
Operator: JGR

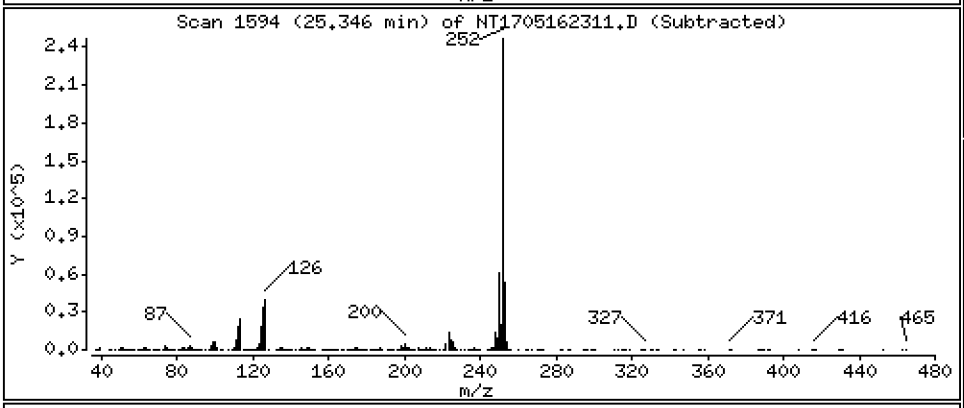
Column phase: ZB-5msi

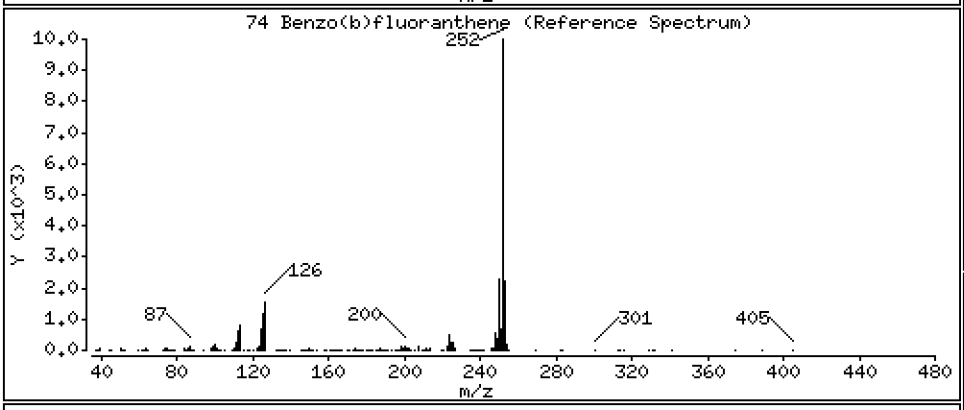
Column diameter: 0.25

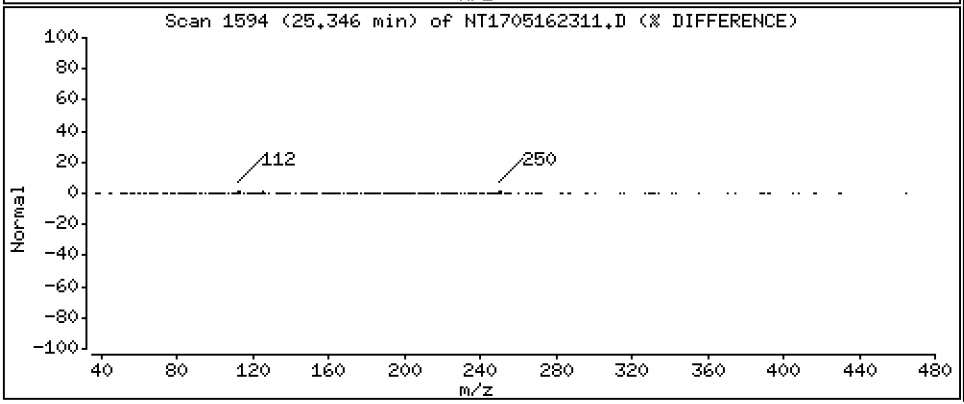
74 Benzo(b)fluoranthene

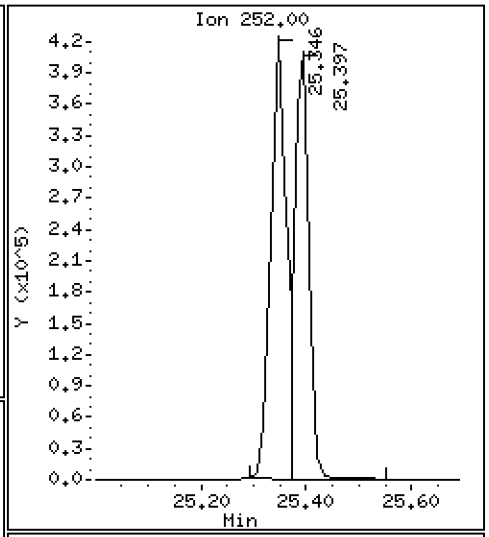
Concentration: 4.912 ug/mL

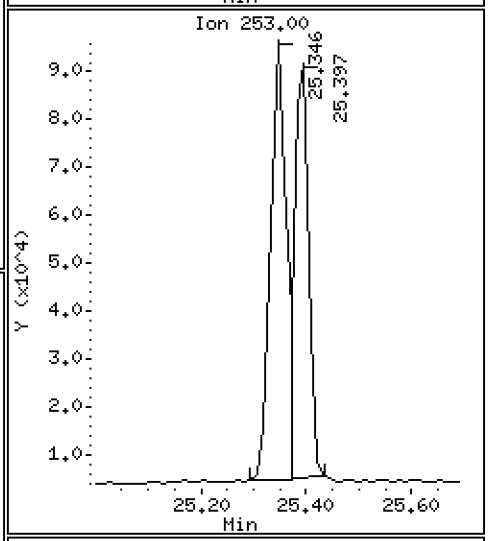


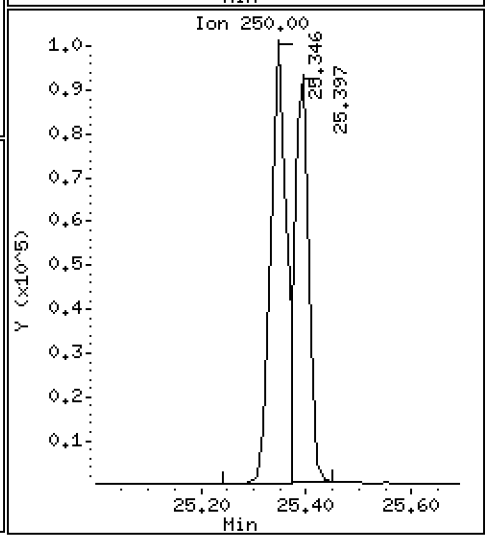












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

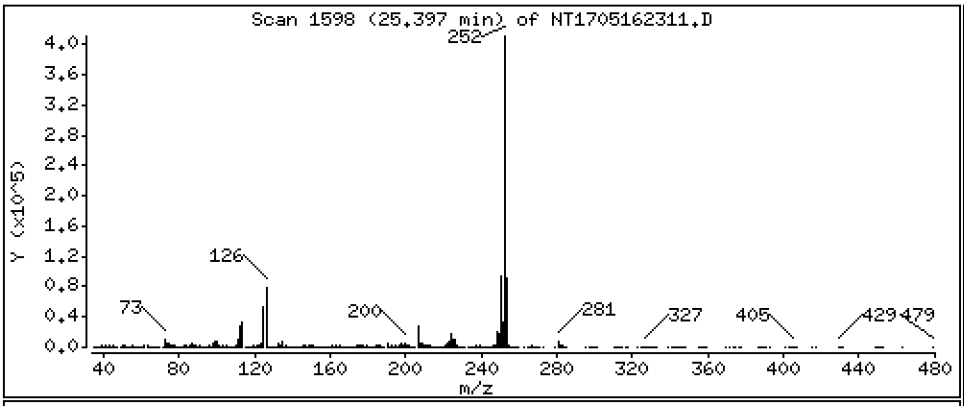
Operator: JGR

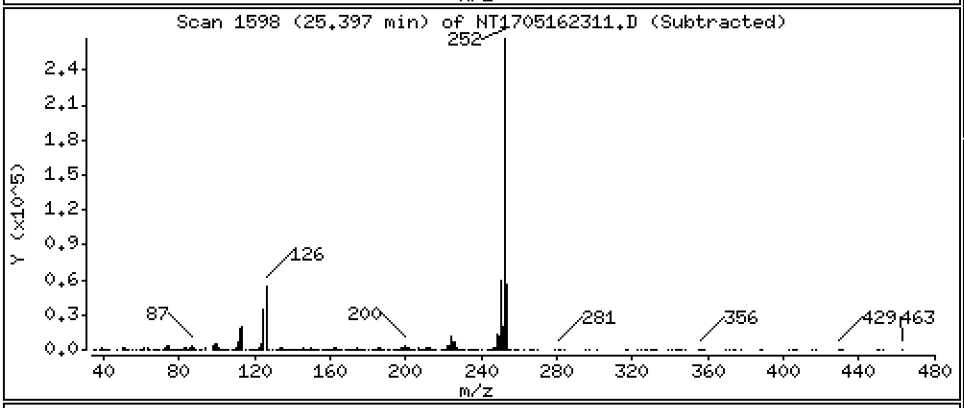
Column phase: ZB-5msi

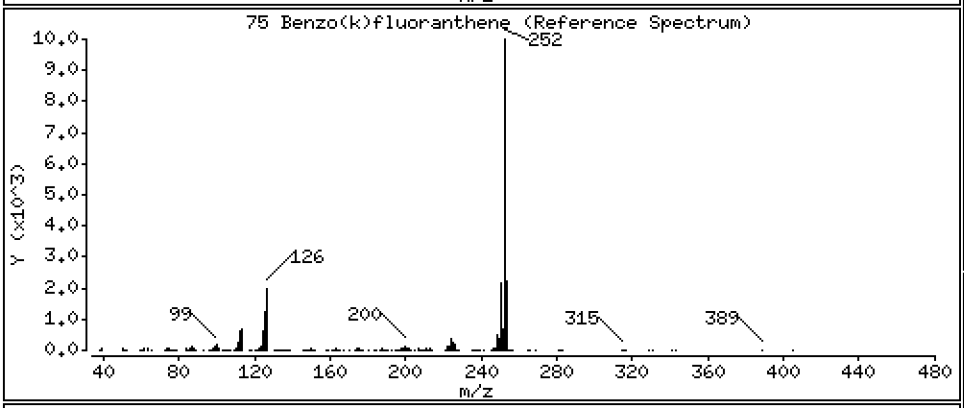
Column diameter: 0.25

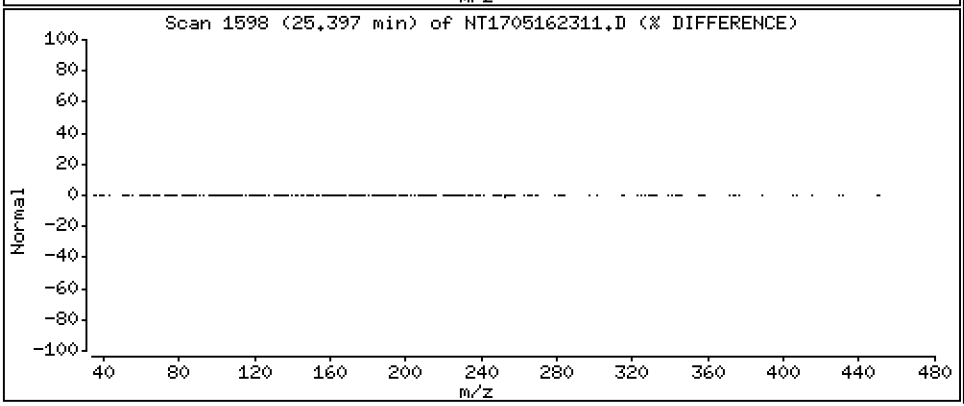
75 Benzo(k)fluoranthene

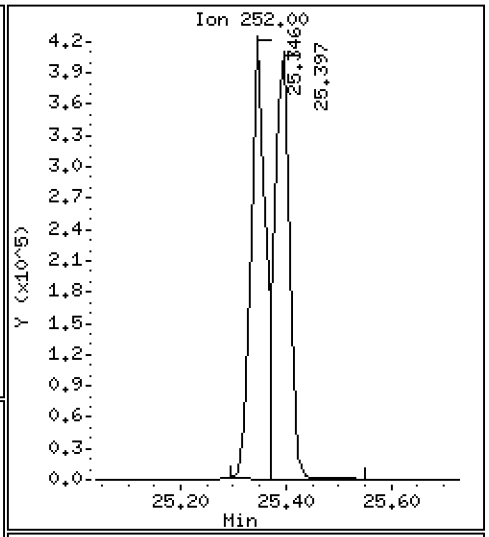
Concentration: 4.965 ug/mL

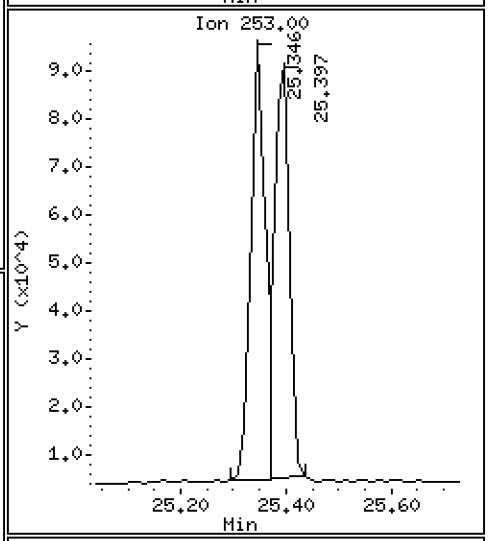


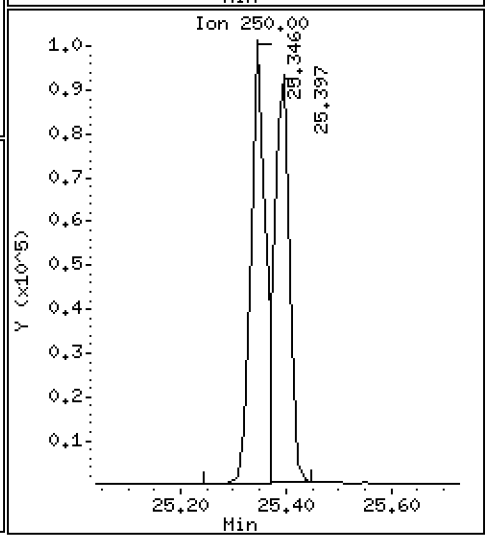












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

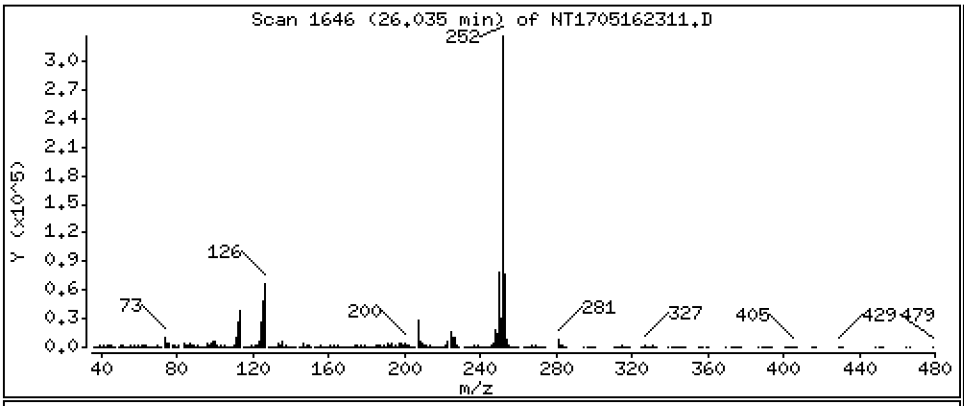
Operator: JGR

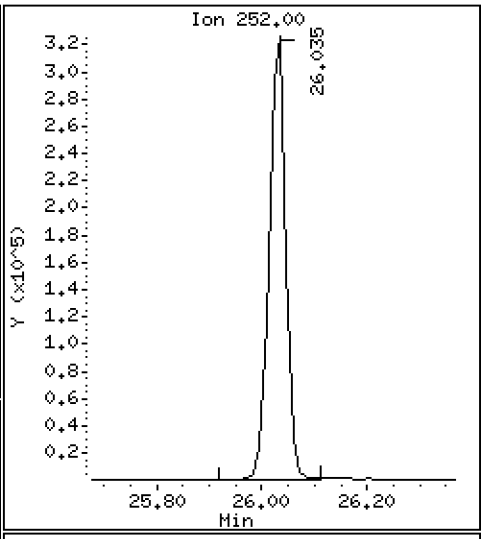
Column phase: ZB-5msi

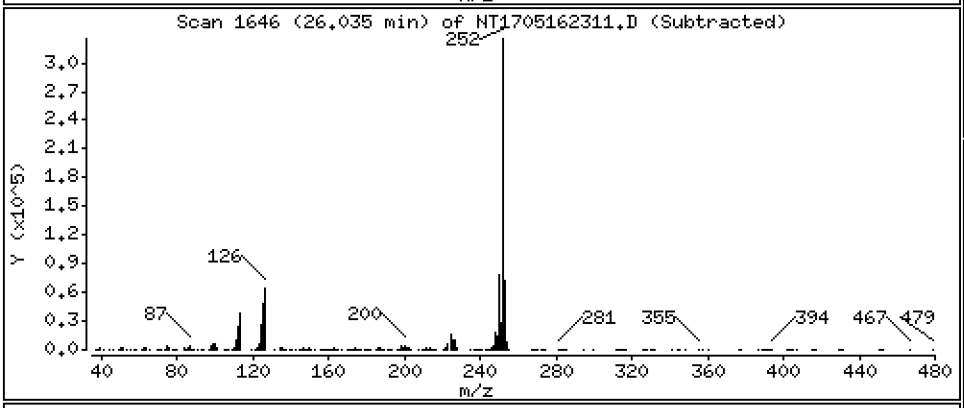
Column diameter: 0.25

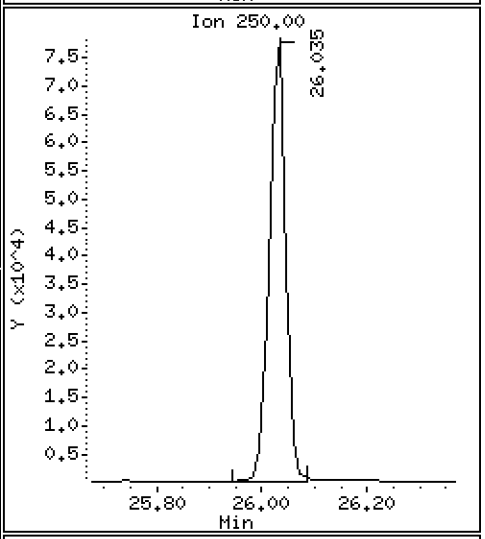
76 Benzo(a)pyrene

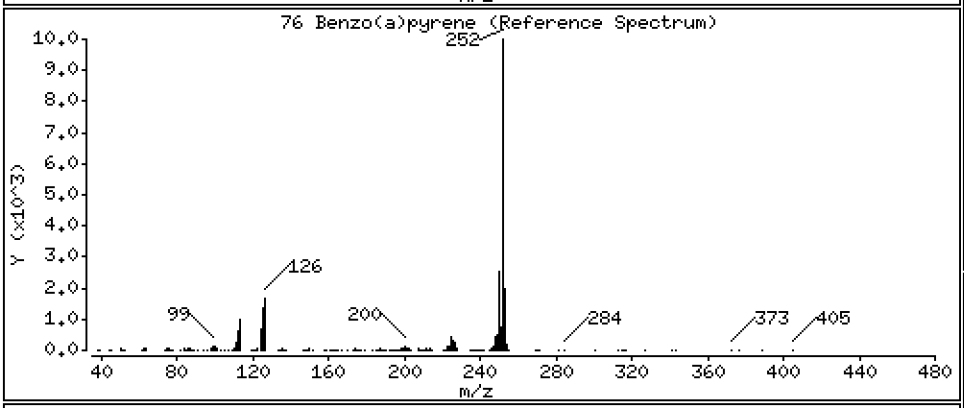
Concentration: 5.172 ug/mL

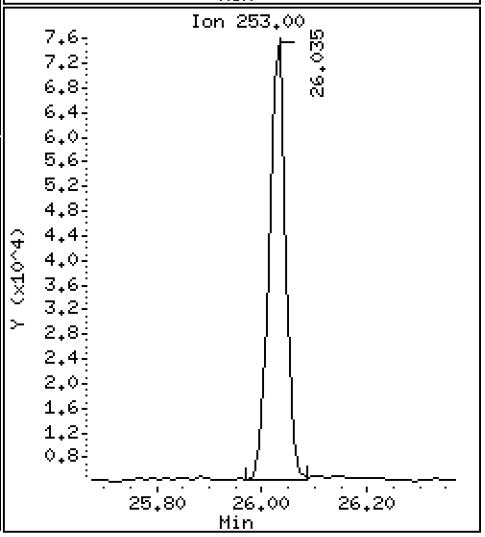


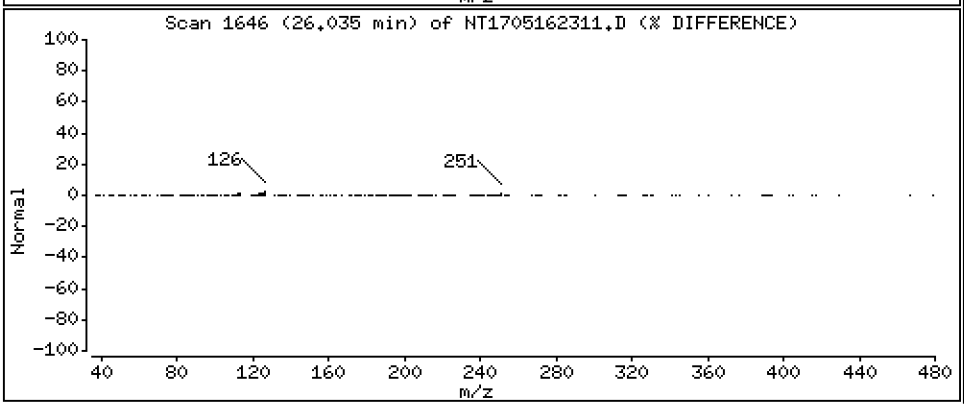












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

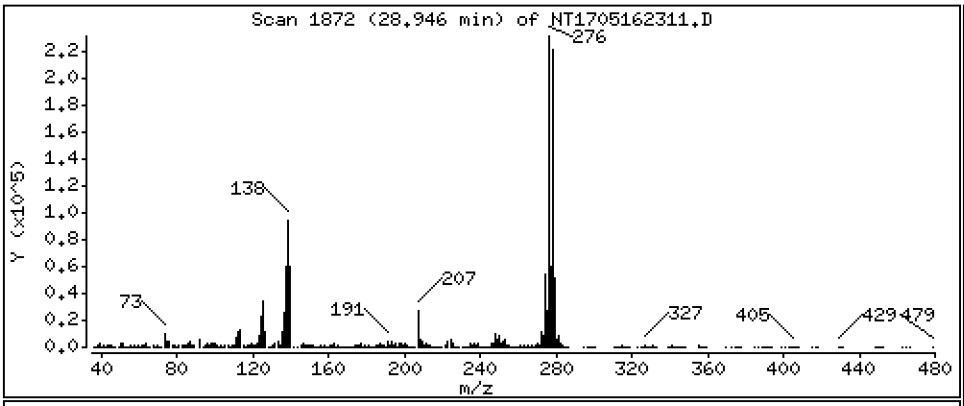
Operator: JGR

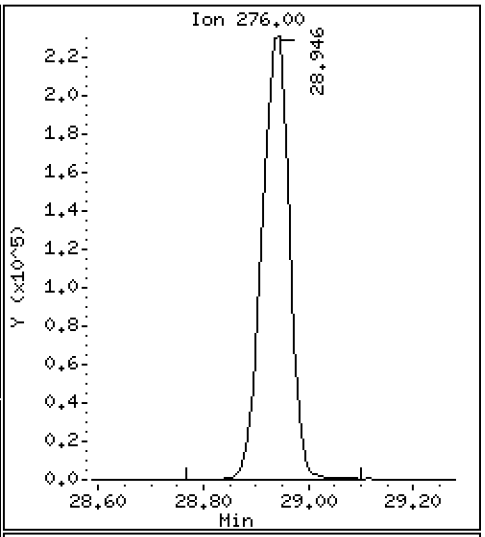
Column phase: ZB-5msi

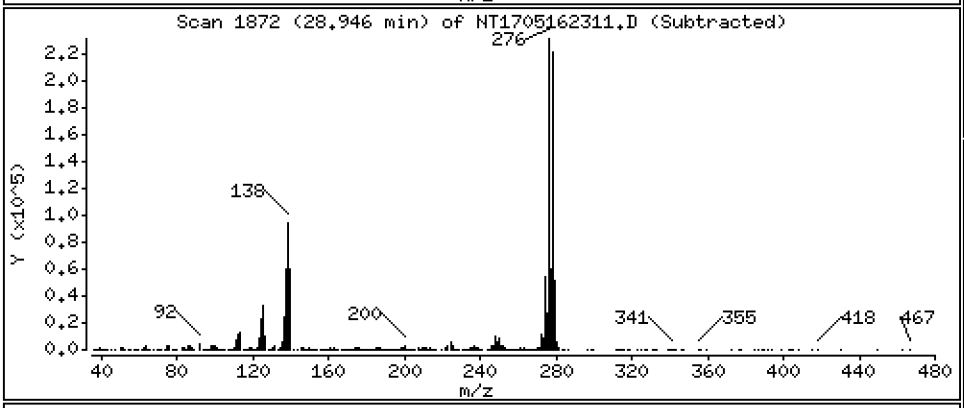
Column diameter: 0.25

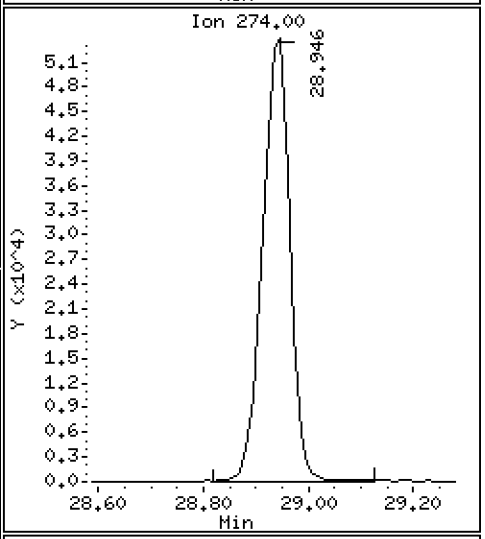
78 Indeno(1,2,3-cd)pyrene

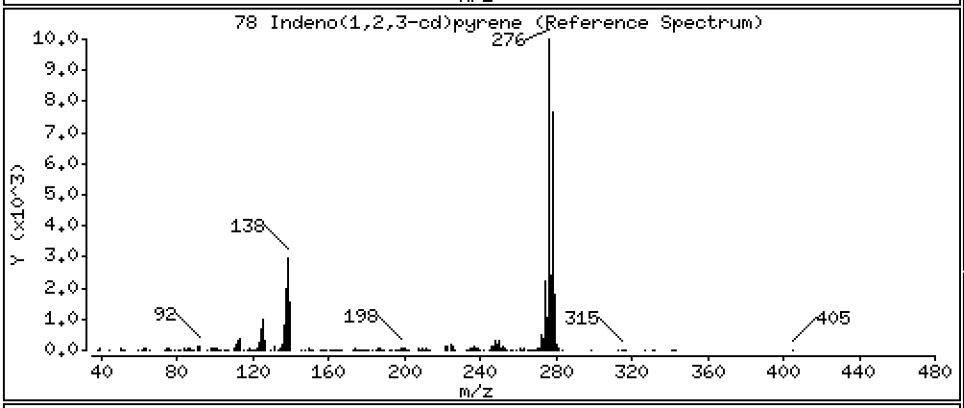
Concentration: 5.029 ug/mL

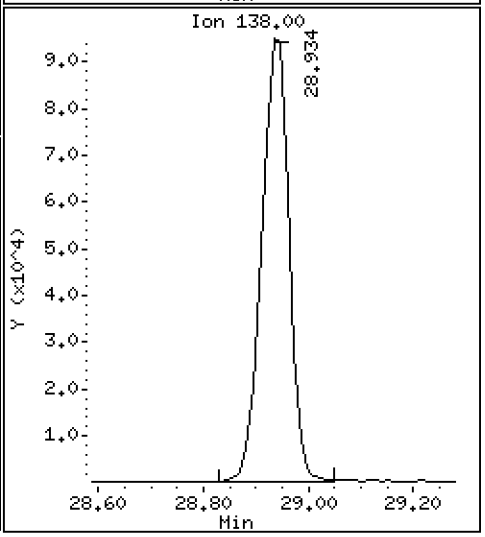


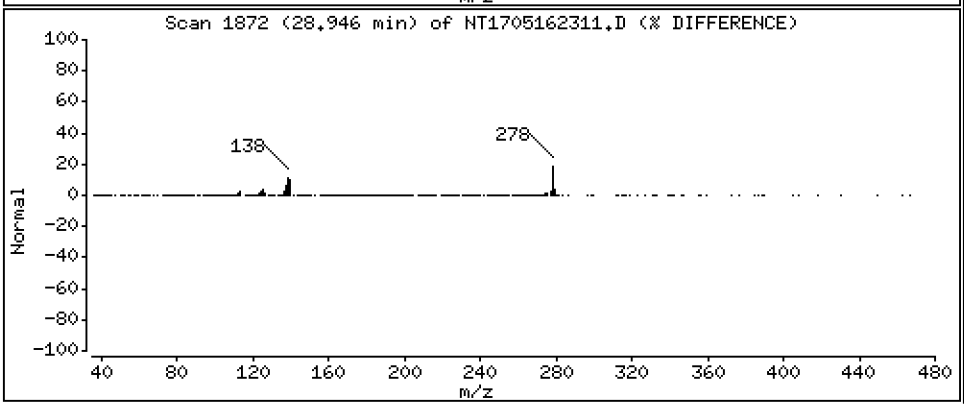












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

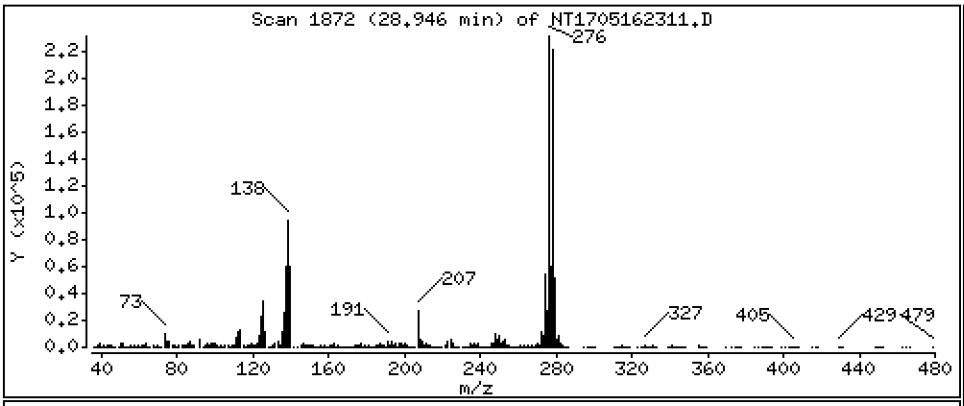
Operator: JGR

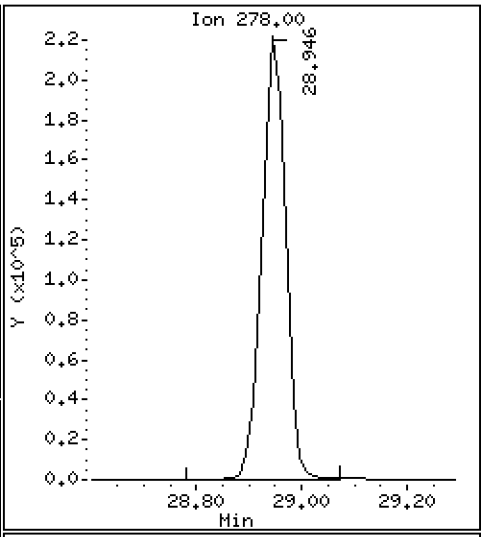
Column phase: ZB-5msi

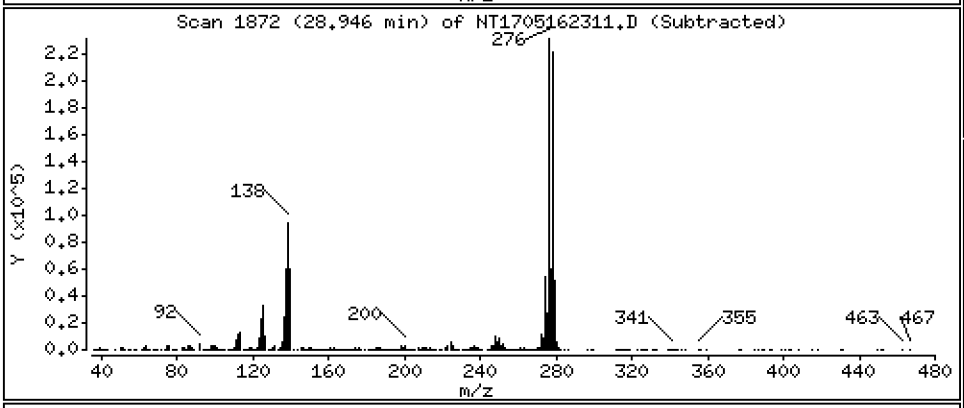
Column diameter: 0.25

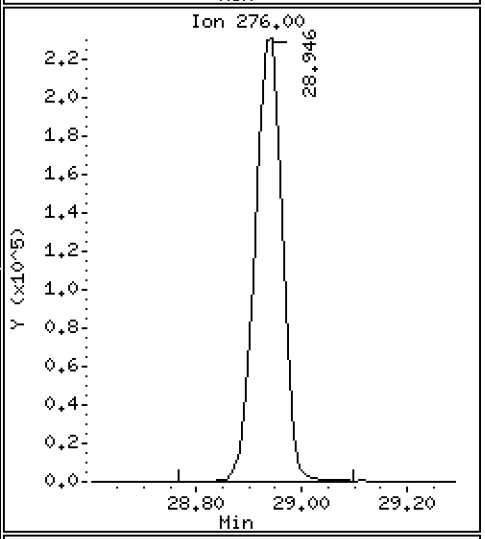
79 Dibenzo(a,h)anthracene

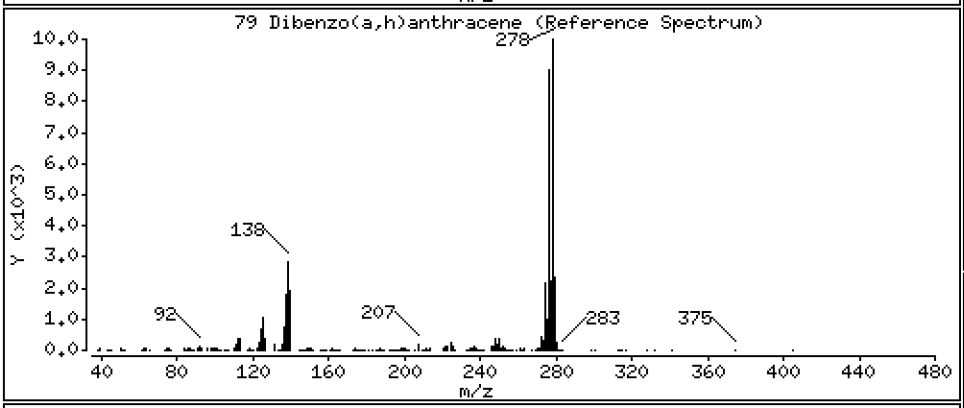
Concentration: 4.970 ug/mL

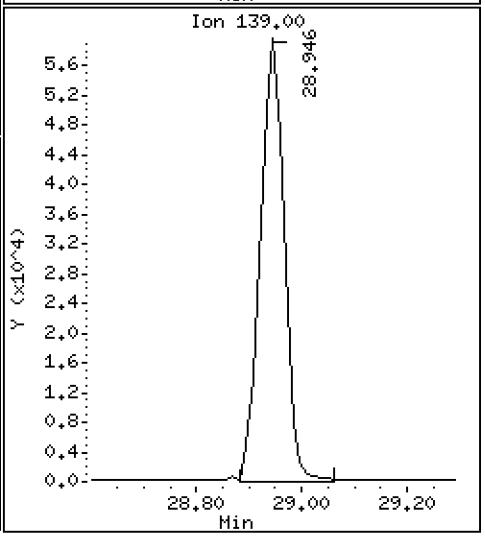


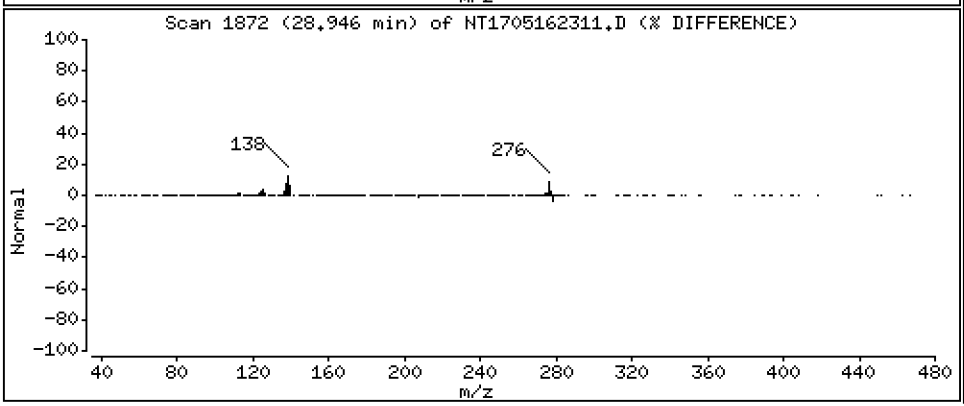












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

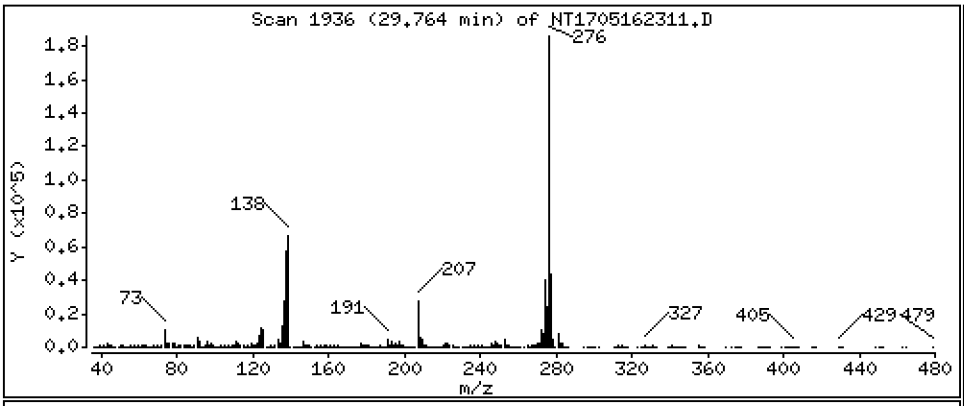
Operator: JGR

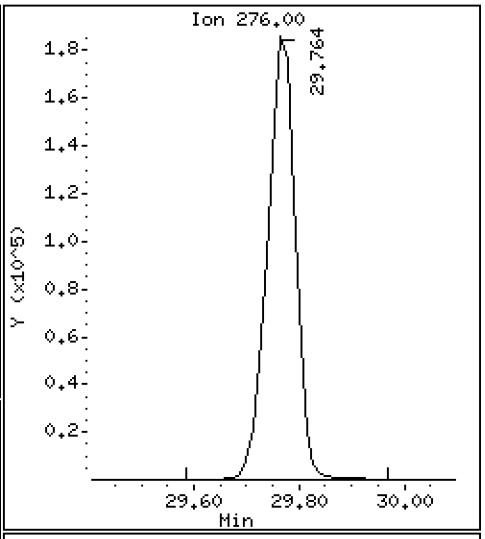
Column phase: ZB-5msi

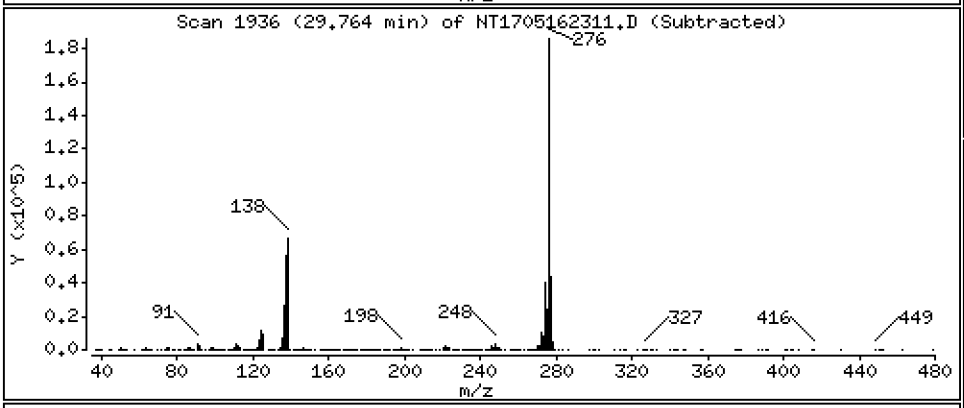
Column diameter: 0.25

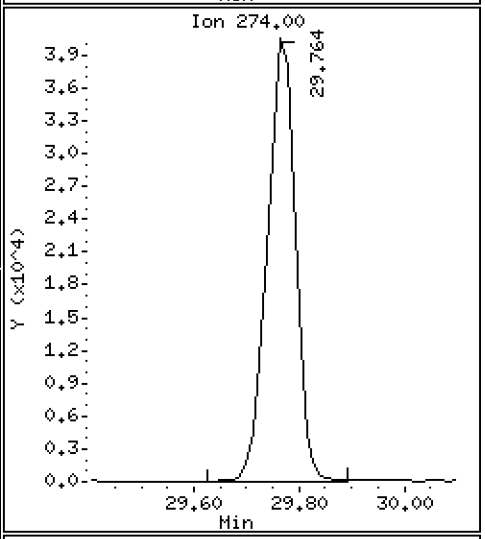
80 Benzo(g,h,i)perylene

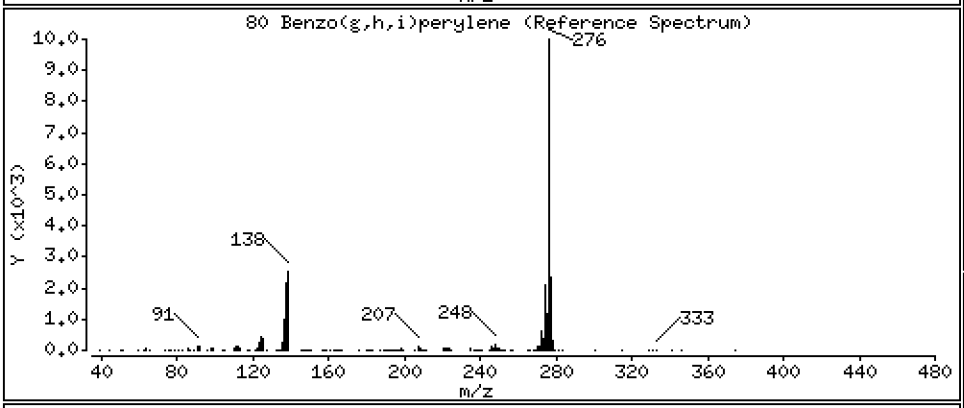
Concentration: 5.054 ug/mL

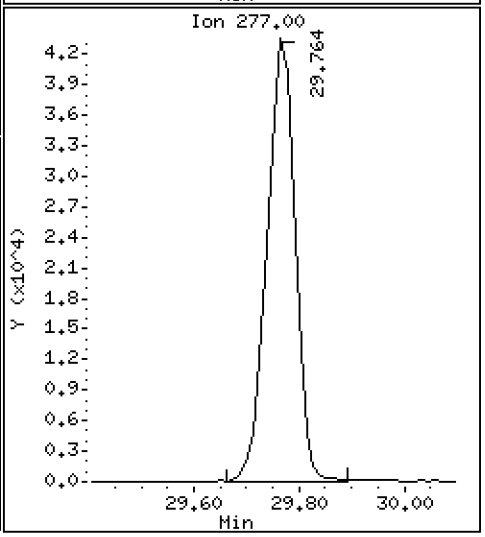


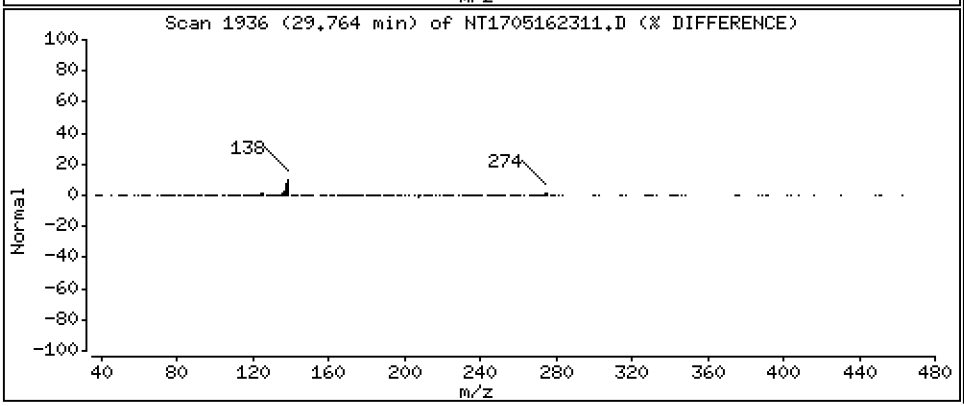












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

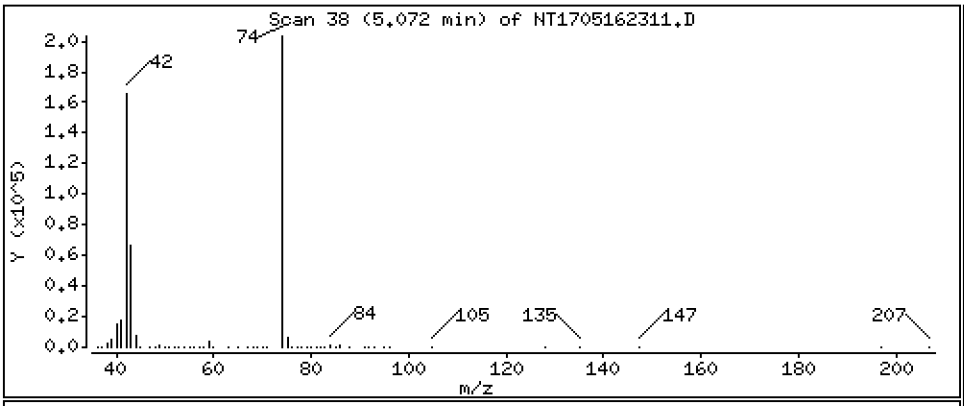
Operator: JGR

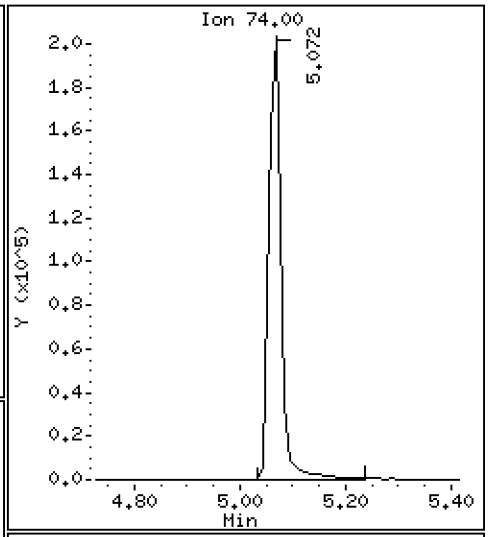
Column phase: ZB-5msi

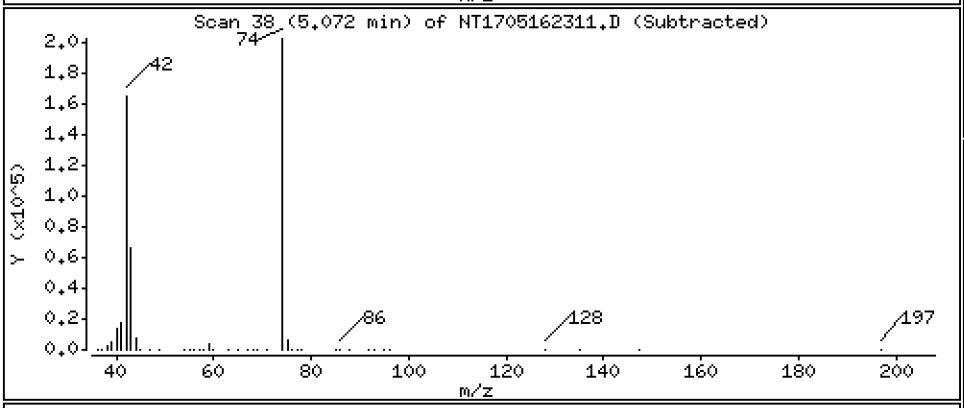
Column diameter: 0.25

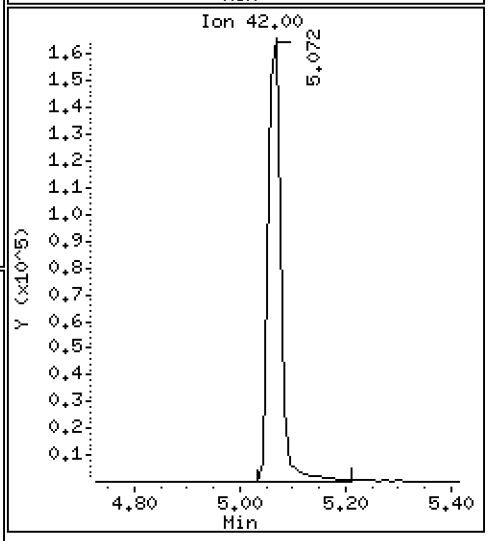
90 N-Nitrosodimethylamine

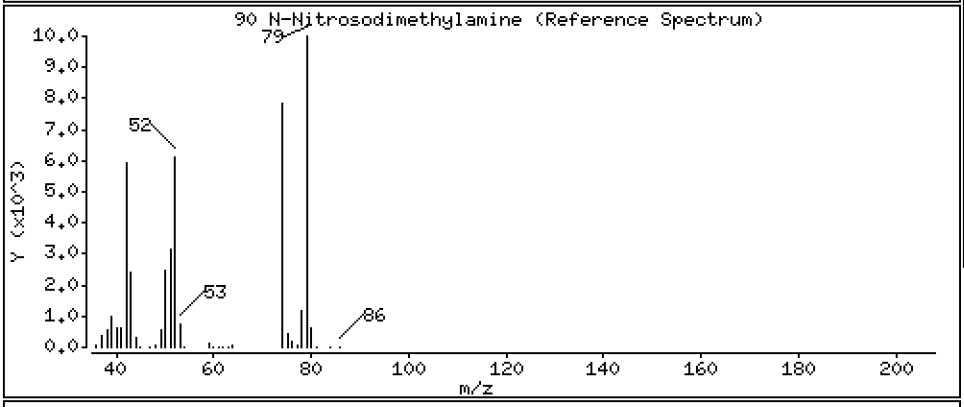
Concentration: 5.767 ug/mL

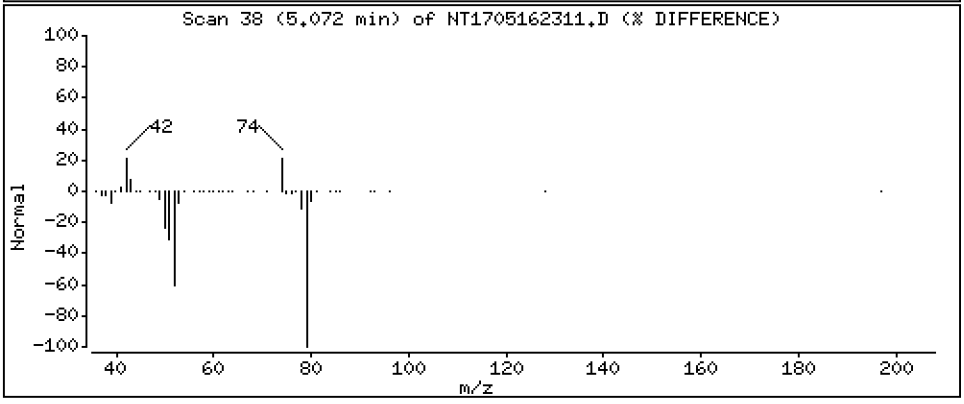












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

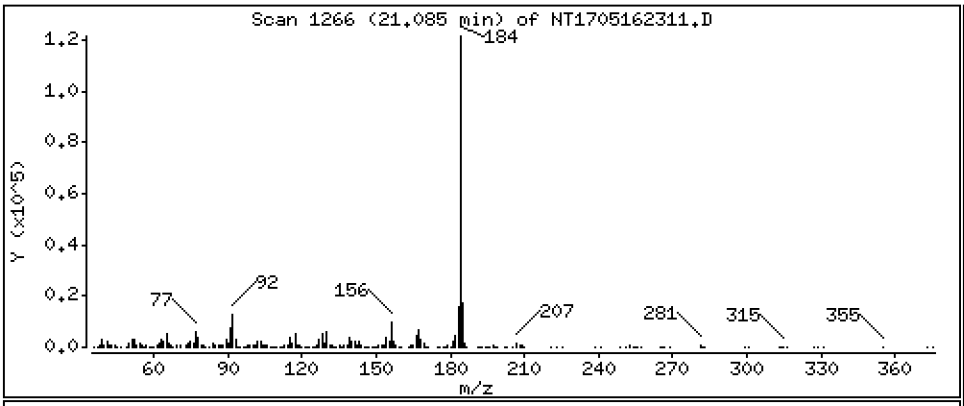
Operator: JGR

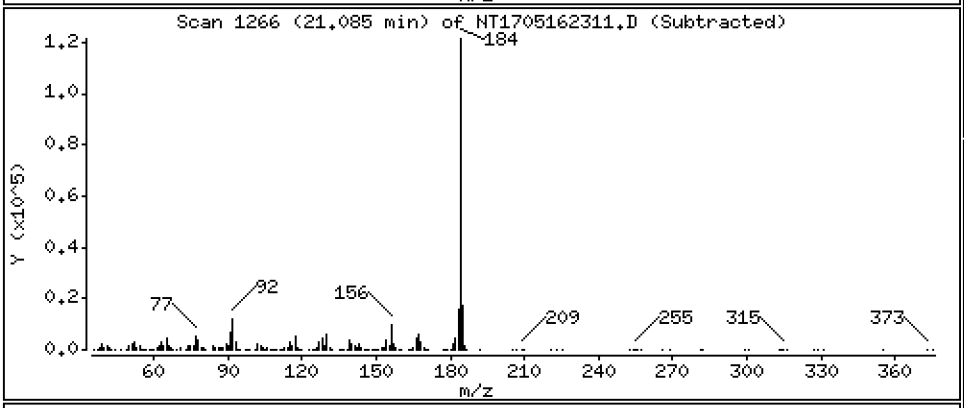
Column phase: ZB-5msi

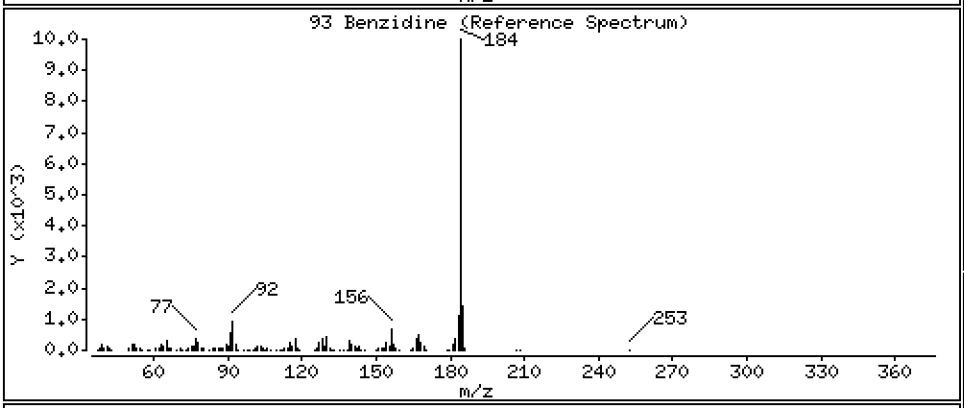
Column diameter: 0.25

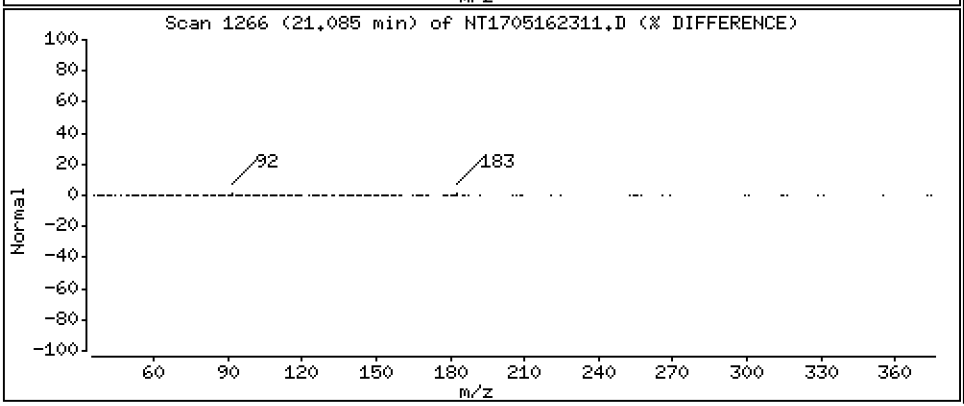
93 Benzidine

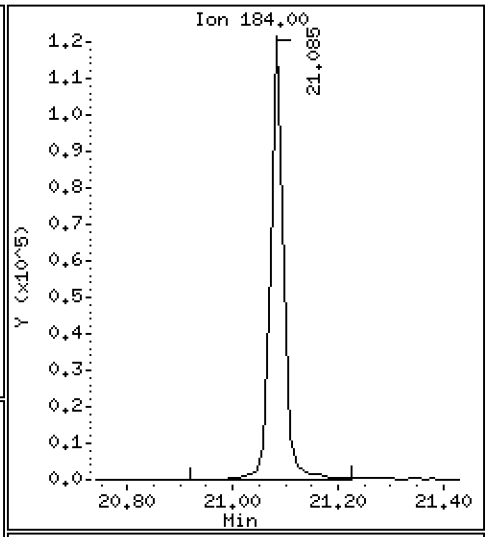
Concentration: 3.457 ug/mL

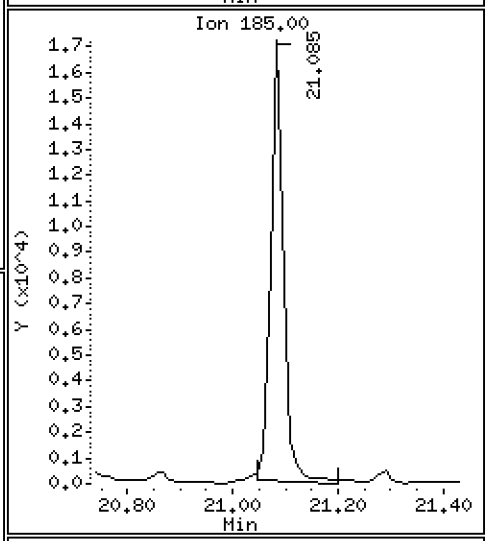


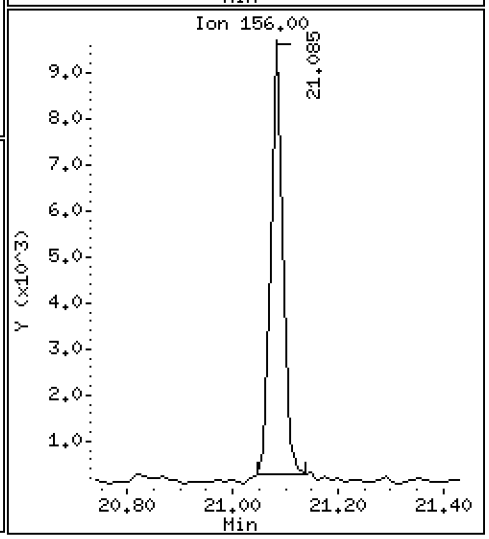












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

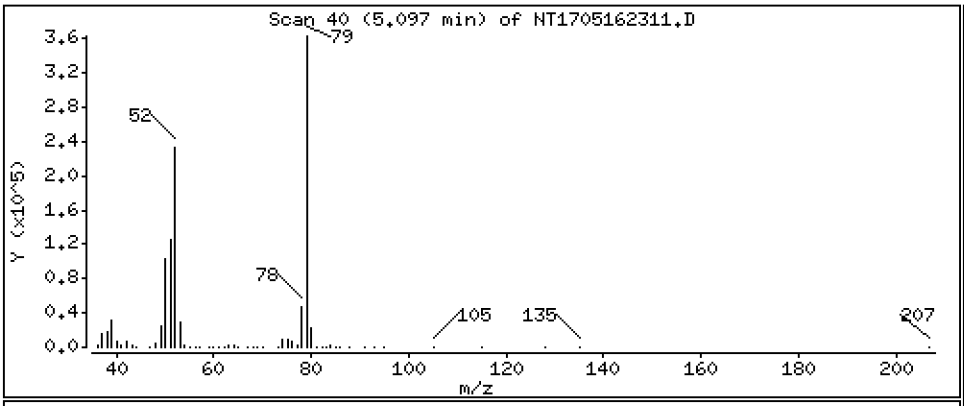
Operator: JGR

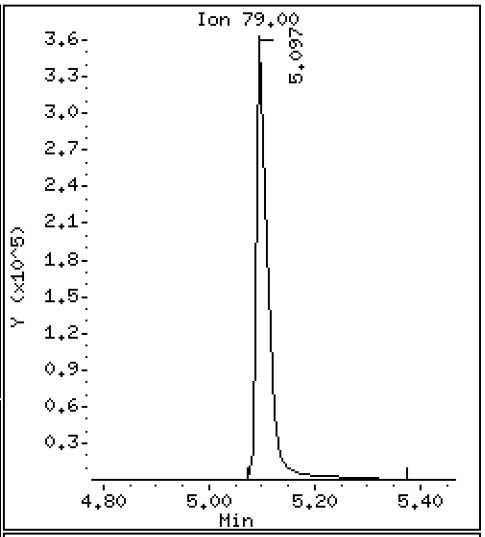
Column phase: ZB-5msi

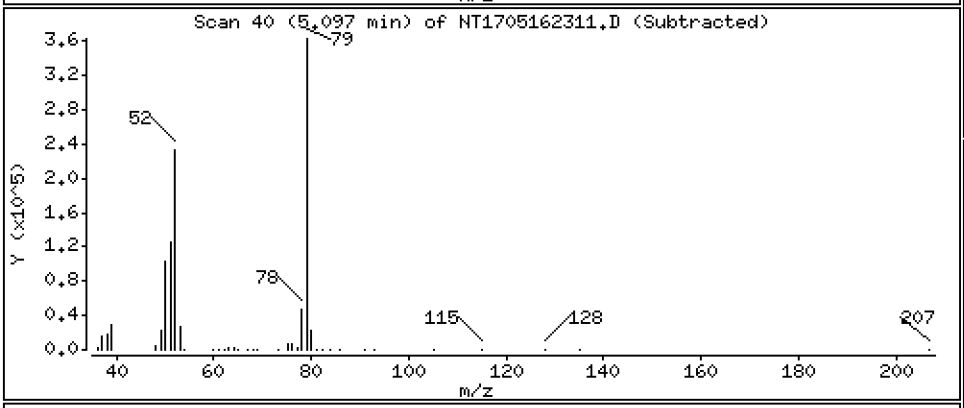
Column diameter: 0.25

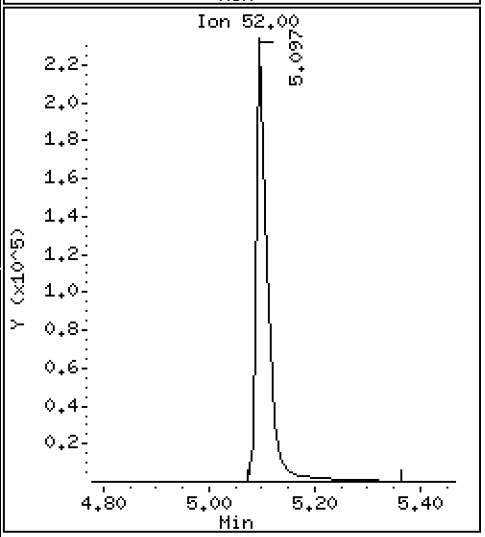
103 Pyridine

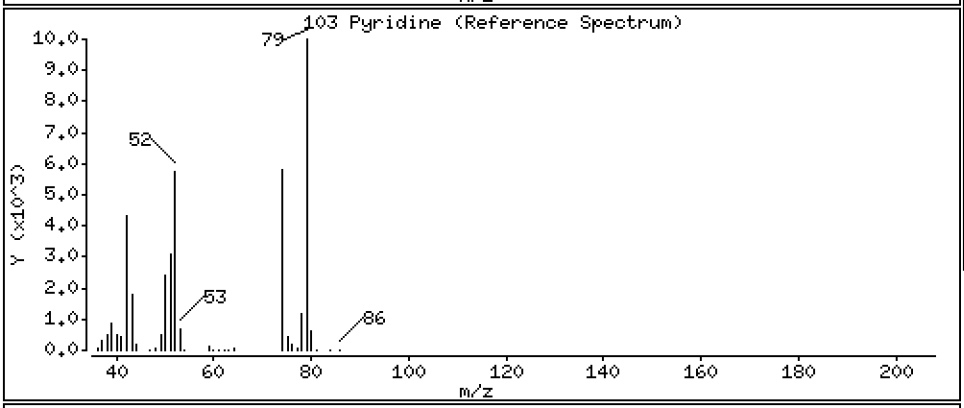
Concentration: 5.811 ug/mL

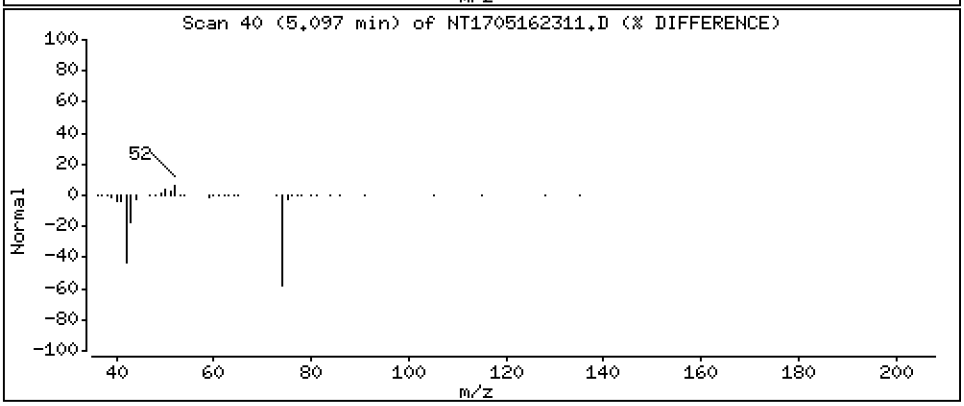












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

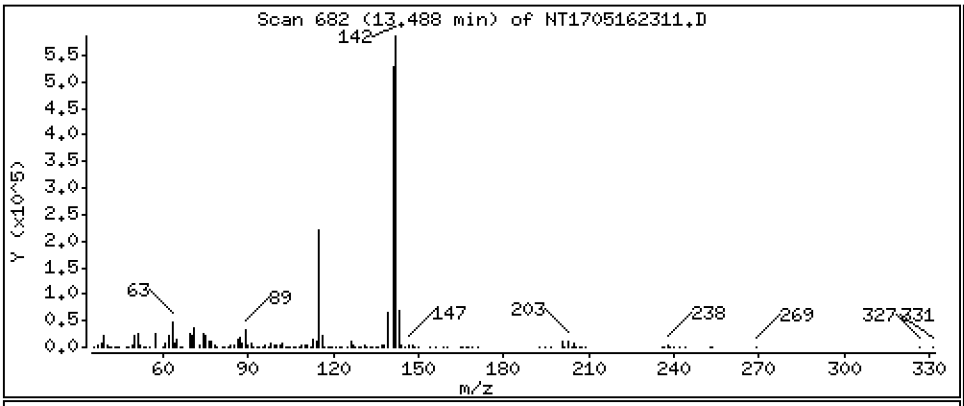
Operator: JGR

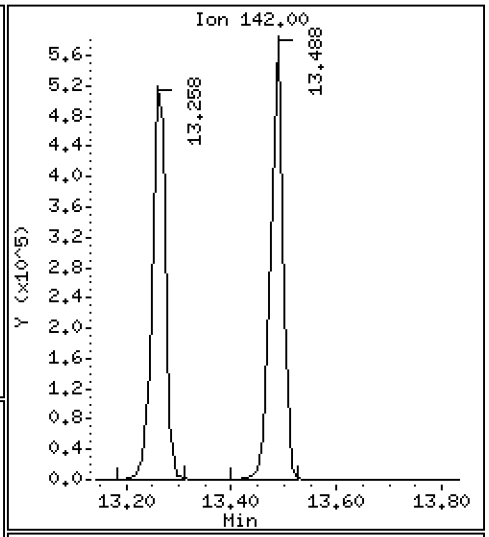
Column phase: ZB-5msi

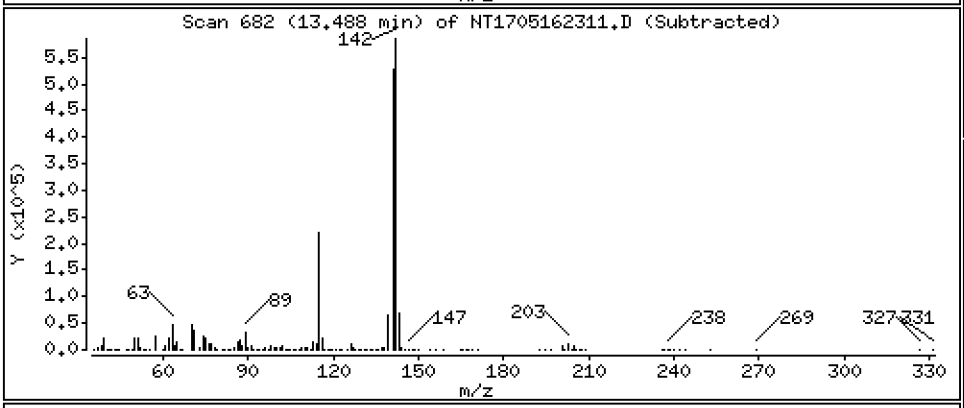
Column diameter: 0.25

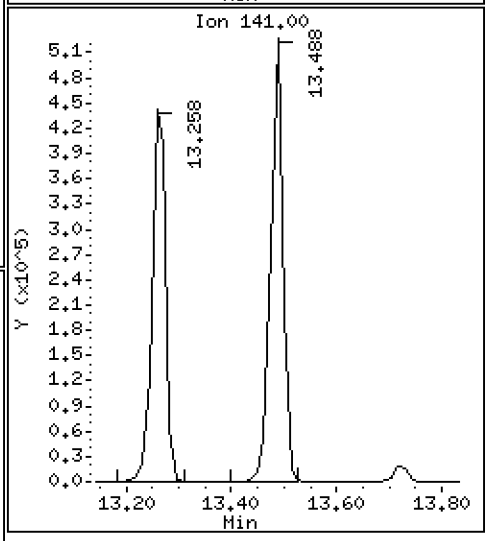
105 1-methylnaphthalene

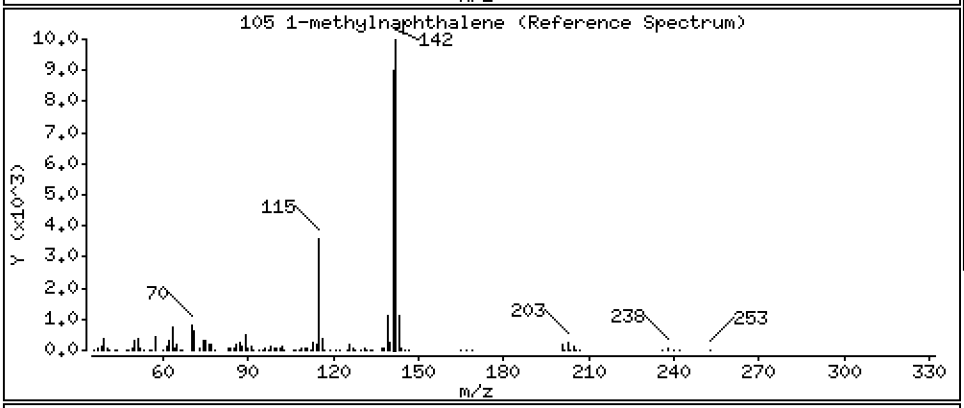
Concentration: 5.250 ug/mL

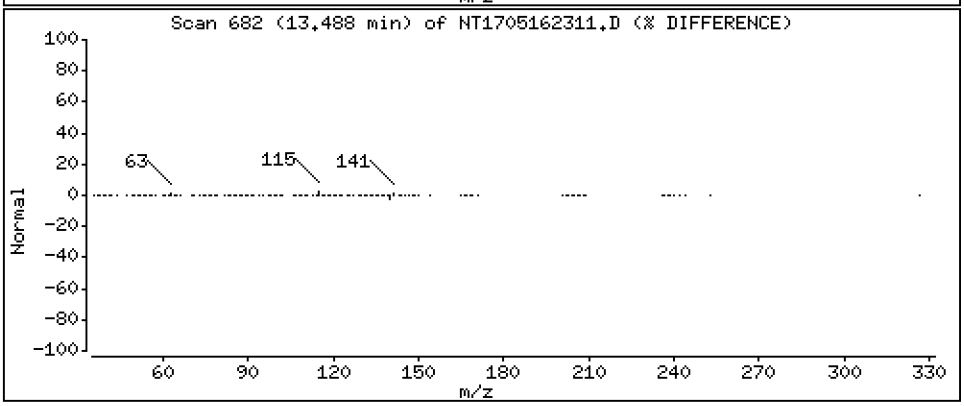












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

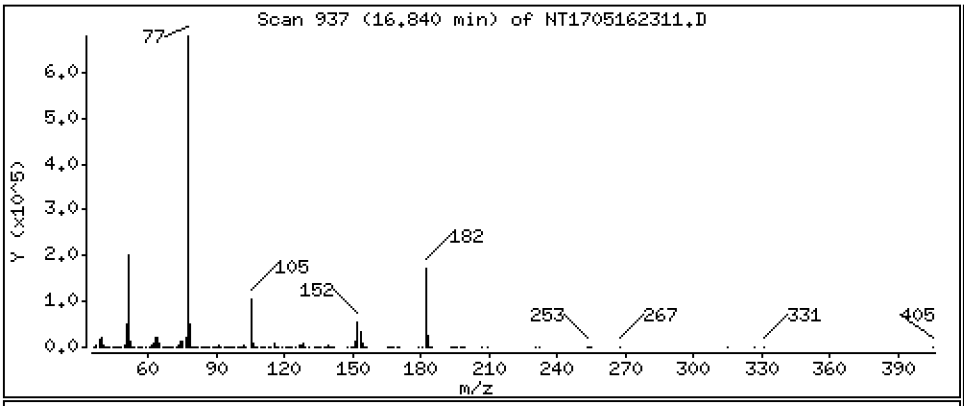
Operator: JGR

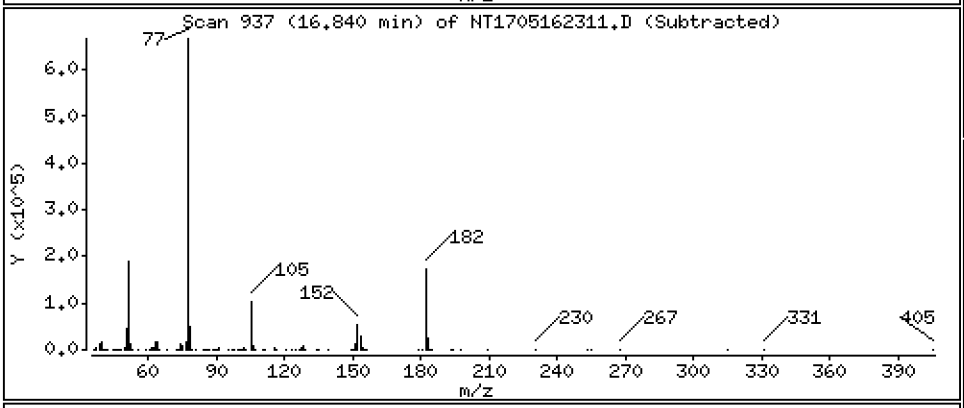
Column phase: ZB-5msi

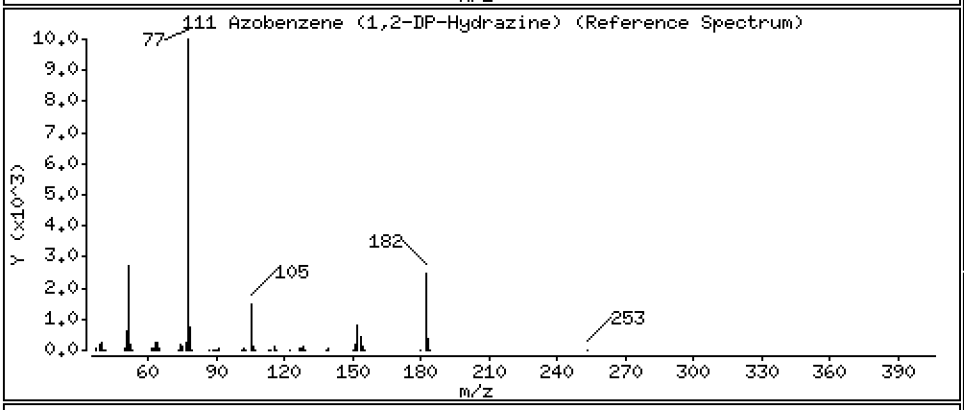
Column diameter: 0.25

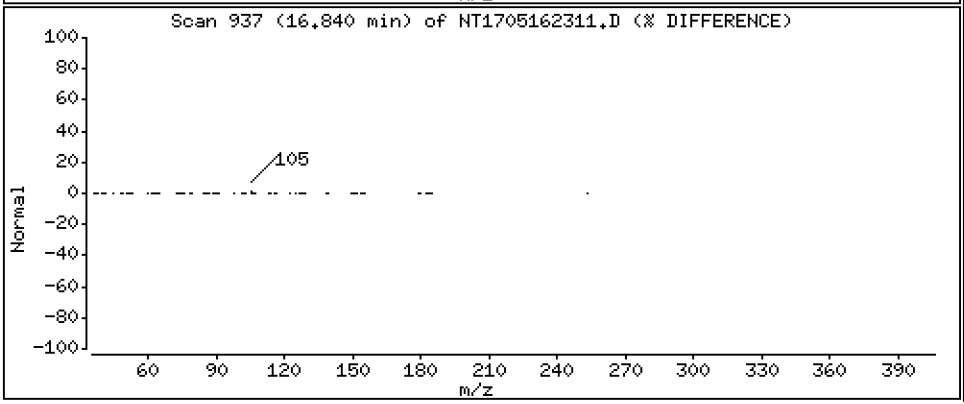
111 Azobenzene (1,2-DP-Hydrazine)

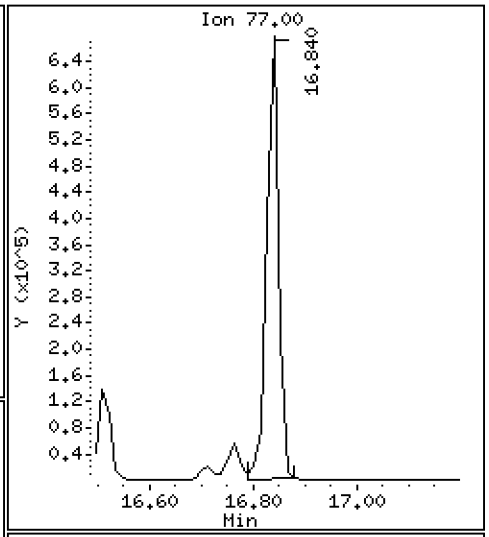
Concentration: 5.338 ug/mL

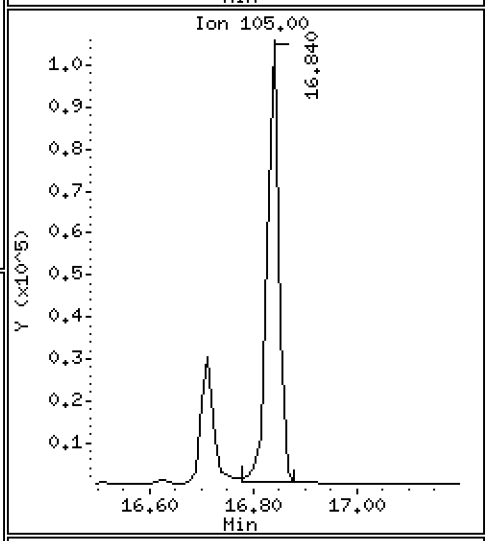


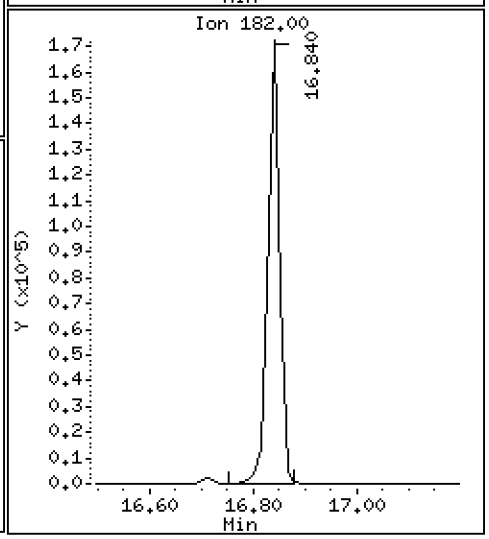












Date : 17-MAY-2023 00:29

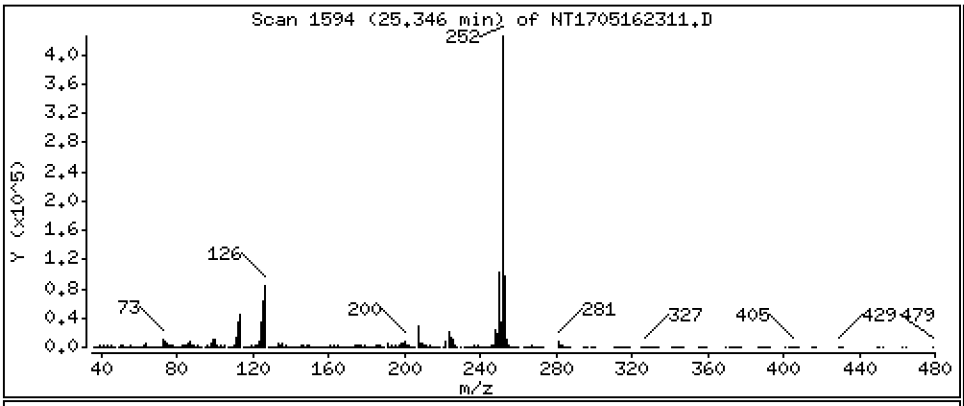
Client ID: Instrument: nt17.i

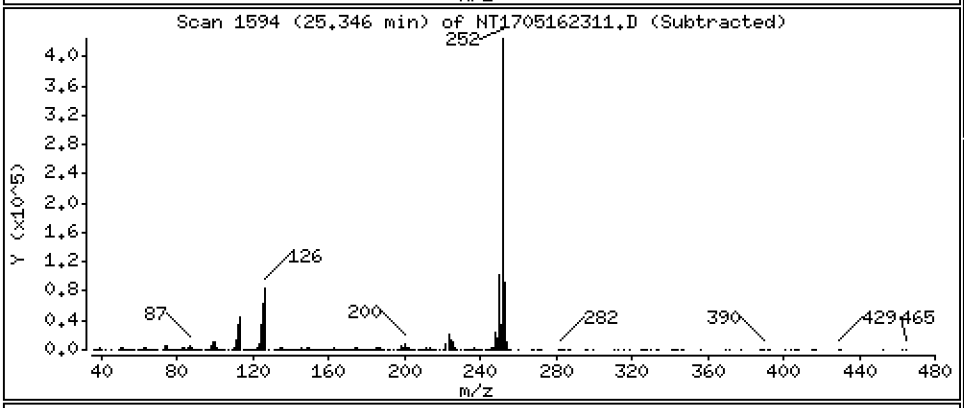
Sample Info: SLE0338-SCV1

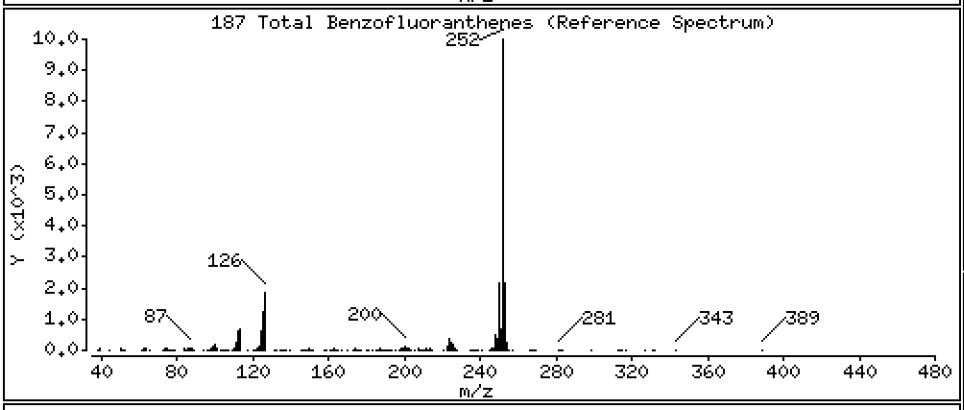
Operator: JGR

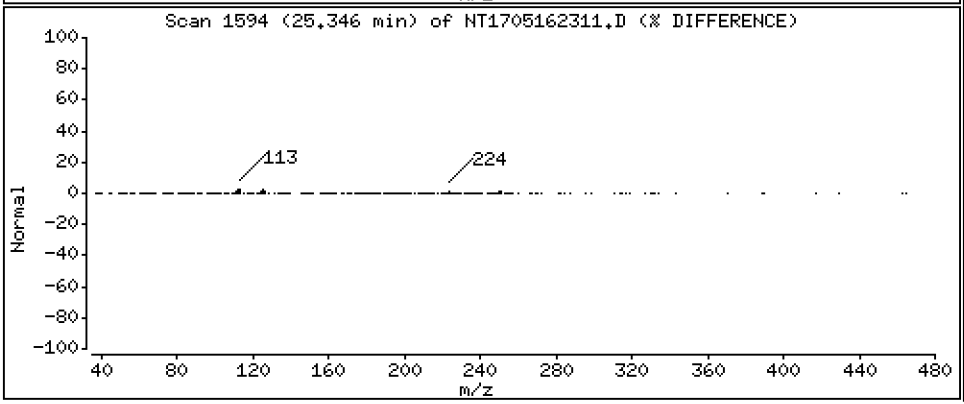
Column phase: ZB-5msi Column diameter: 0.25

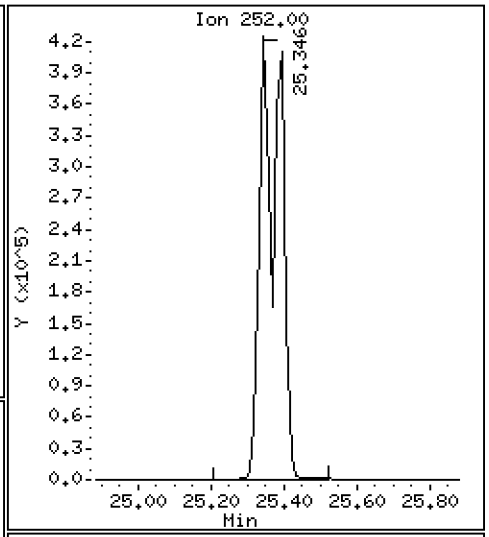
187 Total Benzofluoranthenes Concentration: 10.02 ug/mL

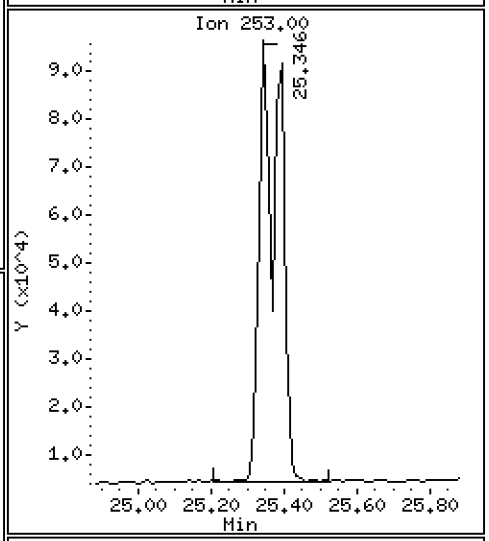


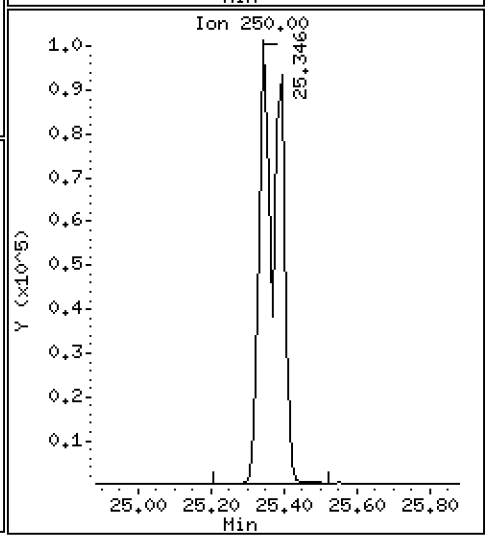












Data File: \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0338-SCV1

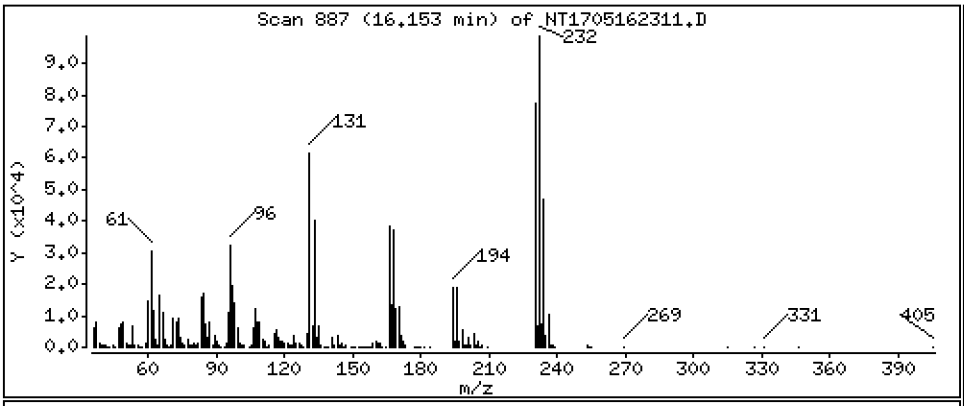
Operator: JGR

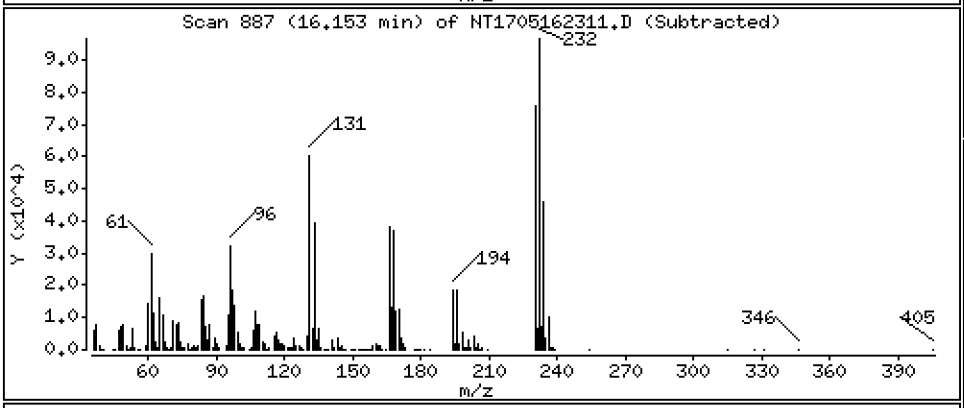
Column phase: ZB-5msi

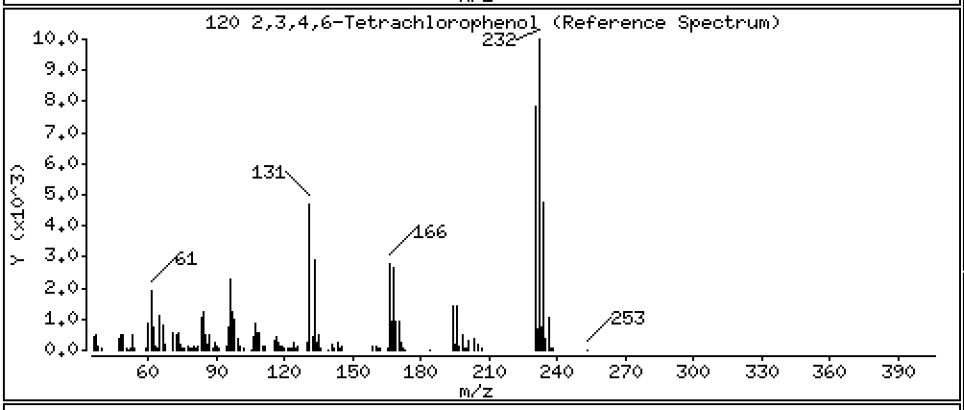
Column diameter: 0.25

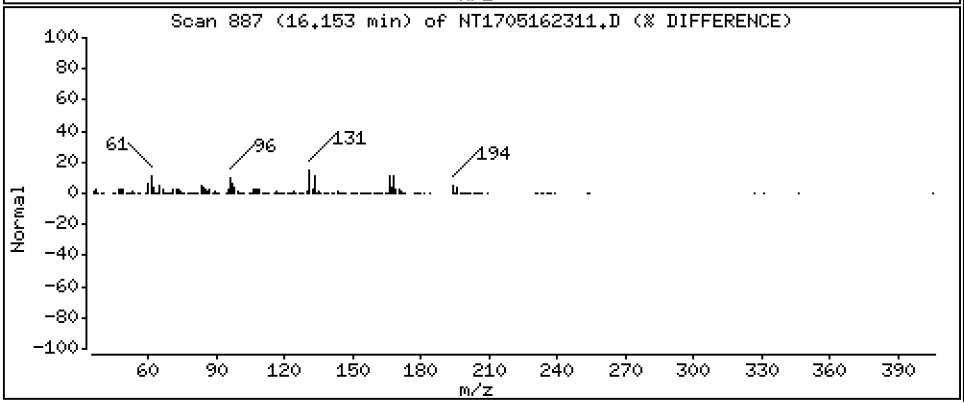
120 2,3,4,6-Tetrachlorophenol

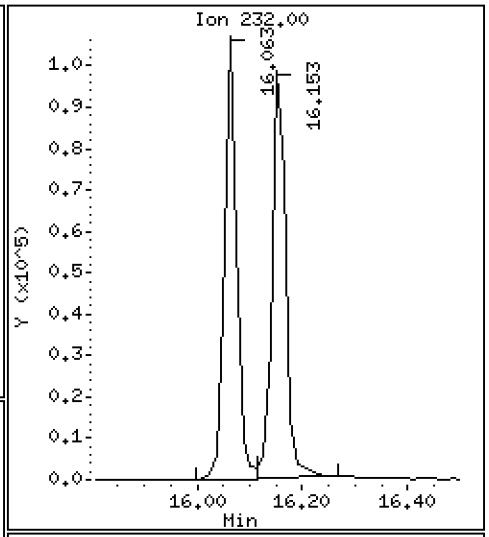
Concentration: 3.283 ug/mL

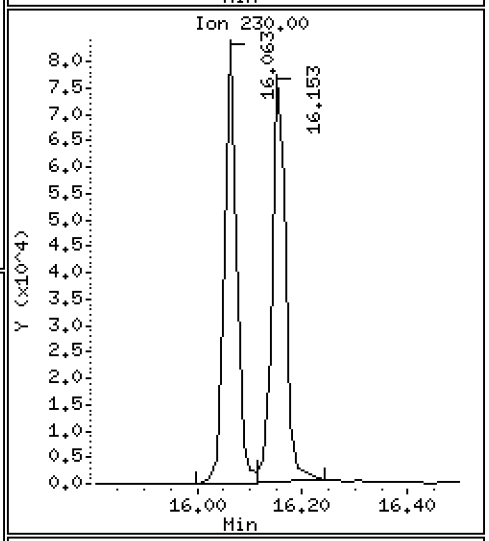


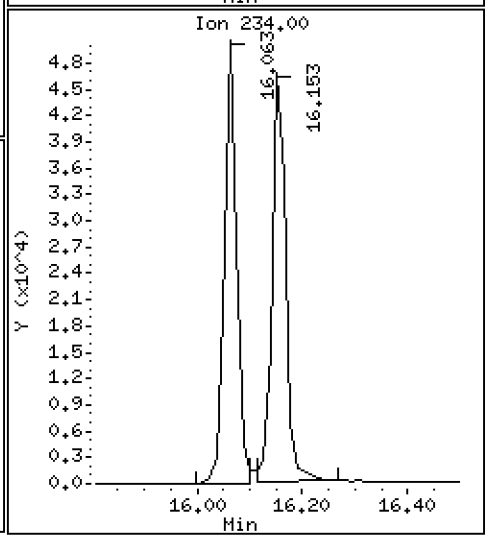












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230516.b\NT1705162311.D
Lab Smp Id: SLE0338-SCV1
Inj Date : 17-MAY-2023 00:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0338-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230516.b\ABN.m
Meth Date : 20-May-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	8.740	8.740	(0.933)	588001	4.82293	4.823
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.906	8.906	(0.951)	494651	5.56554	5.566
6	2-Chlorophenol	128	9.033	9.033	(0.965)	539006	5.29416	5.294
7	1,3-Dichlorobenzene	146	9.301	9.301	(0.993)	548081	5.31911	5.319
* 8	1,4-Dichlorobenzene-d4	152	9.365	9.365	(1.000)	265705	4.00000	
9	1,4-Dichlorobenzene	146	9.390	9.391	(1.003)	521173	5.07146	5.071
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.748	9.748	(1.041)	507921	5.25771	5.258
11	Benzyl alcohol	108	9.633	9.633	(1.029)	299374	5.27414	5.274
14	2,2'-oxybis(1-Chloropropane)	121	9.927	9.914	(1.060)	168255	6.17916	6.179
13	2-Methylphenol	108	9.850	9.851	(1.052)	378927	4.22901	4.229
17	Hexachloroethane	117	10.336	10.336	(1.104)	222748	5.41856	5.419
16	N-Nitroso-di-n-propylamine	70	10.183	10.170	(1.087)	378231	5.51734	5.517
15	4-Methylphenol	108	10.119	10.119	(1.080)	425231	4.66096	4.661
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	10.489	10.489	(0.886)	558517	5.32891	5.329
20	Isophorone	82	10.924	10.924	(0.922)	996054	6.94254	6.943
21	2-Nitrophenol	139	11.115	11.115	(0.939)	247403	4.89866	4.899
22	2,4-Dimethylphenol	107	11.153	11.154	(0.942)	371455	3.78811	3.788
23	Bis(2-Chloroethoxy)methane	93	11.345	11.345	(0.958)	547968	6.23185	6.232
24	Benzoic acid	105	11.332	11.333	(0.957)	445958	6.76086	6.761
25	2,4-Dichlorophenol	162	11.562	11.562	(0.976)	370930	4.70748	4.707
26	1,2,4-Trichlorobenzene	180	11.753	11.753	(0.992)	503147	5.87937	5.879
* 27	Naphthalene-d8	136	11.842	11.830	(1.000)	965231	4.00000	
28	Naphthalene	128	11.881	11.881	(1.003)	1361438	5.12904	5.129
29	4-Chloroaniline	127	11.995	11.995	(1.013)	469527	4.48751	4.488
30	Hexachlorobutadiene	225	12.225	12.225	(1.032)	222159	5.24062	5.241
31	4-Chloro-3-methylphenol	107	12.952	12.952	(1.094)	413906	4.87847	4.878
32	2-Methylnaphthalene	142	13.258	13.258	(1.120)	955574	5.02794	5.028
33	Hexachlorocyclopentadiene	237	13.730	13.730	(0.889)	201170	4.21896	4.219

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.883	13.883	(0.899)	257193	4.79376	4.794
	35	2,4,5-Trichlorophenol	196	13.959	13.959	(0.904)	274739	4.83728	4.837
$	36	2-Fluorobiphenyl	172	Compound Not Detected.					
	37	2-Chloronaphthalene	162	14.252	14.253	(0.923)	885085	5.40065	5.401
	38	2-Nitroaniline	65	14.507	14.508	(0.940)	297267	5.35584	5.356
	39	Dimethylphthalate	163	14.928	14.929	(0.967)	955980	5.41824	5.418
	40	Acenaphthylene	152	15.120	15.120	(0.979)	1374665	5.28203	5.282
	41	2,6-Dinitrotoluene	165	15.069	15.069	(0.976)	223225	5.40390	5.404
*	42	Acenaphthene-d10	164	15.438	15.426	(1.000)	512787	4.00000	
	43	3-Nitroaniline	138	15.362	15.349	(0.995)	197758	5.16887	5.169
	44	Acenaphthene	153	15.502	15.502	(1.004)	859485	5.28316	5.283
	45	2,4-Dinitrophenol	184	15.566	15.567	(1.008)	52944	2.11874	2.119
	46	Dibenzofuran	168	15.821	15.821	(1.025)	1172327	5.16305	5.163
	47	4-Nitrophenol	109	15.668	15.681	(1.015)	114450	4.50365	4.504
	48	2,4-Dinitrotoluene	165	15.872	15.872	(1.028)	284935	5.26937	5.269
	50	Diethylphthalate	149	16.369	16.369	(1.060)	945291	5.49374	5.494
	49	Fluorene	166	16.535	16.535	(1.071)	1165179	5.39758	5.398
	51	4-Chlorophenyl-phenylether	204	16.522	16.509	(1.070)	542088	5.46212	5.462
	52	4-Nitroaniline	138	16.624	16.611	(1.077)	184970	5.10772	5.108
	53	4,6-Dinitro-2-methylphenol	198	16.713	16.713	(0.905)	113822	3.35487	3.355
	54	N-Nitrosodiphenylamine	169	16.764	16.764	(0.908)	651392	5.46976	5.470
$	55	2,4,6-Tribromophenol	330	Compound Not Detected.					
	56	4-Bromophenyl-phenylether	248	17.514	17.515	(0.949)	226164	5.42020	5.420
	57	Hexachlorobenzene	284	17.833	17.833	(0.966)	208878	4.91276	4.913
	58	Pentachlorophenol	266	18.190	18.203	(0.985)	98895	3.94337	3.943
*	59	Phenanthrene-d10	188	18.458	18.458	(1.000)	850147	4.00000	
	60	Phenanthrene	178	18.509	18.496	(1.003)	1250084	5.03943	5.039
	61	Anthracene	178	18.598	18.598	(1.008)	1054910	4.52965	4.530
	62	Carbazole	167	18.917	18.918	(1.025)	896606	5.93842	5.938
	63	Di-n-butylphthalate	149	19.682	19.682	(1.066)	1586517	5.64164	5.642
	64	Fluoranthene	202	20.868	20.855	(0.890)	1308113	5.46710	5.467
	65	Pyrene	202	21.289	21.276	(0.908)	1277121	5.26528	5.265
$	66	Terphenyl-d14	244	Compound Not Detected.					
	67	Butylbenzylphthalate	149	22.462	22.462	(0.958)	632335	5.82476	5.825
	68	Benzo(a)anthracene	228	23.419	23.419	(0.998)	953848	5.06413	5.064
*	69	Chrysene-d12	240	23.457	23.445	(1.000)	511511	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.368	23.369	(0.996)	459041	11.9948	11.99
	71	Chrysene	228	23.496	23.496	(1.002)	889381	5.01800	5.018
	72	bis(2-Ethylhexyl)phthalate	149	23.470	23.470	(0.959)	875291	5.79218	5.792
*	134	Di-n-octylphthalate-d4	153	24.465	24.465	(1.000)	1044471	4.00000	
	73	Di-n-octylphthalate	149	24.465	24.465	(1.000)	1451463	5.48238	5.482
	74	Benzo(b)fluoranthene	252	25.345	25.345	(0.969)	887996	4.91157	4.912
	75	Benzo(k)fluoranthene	252	25.396	25.384	(0.971)	848094	4.96504	4.965(H)
	76	Benzo(a)pyrene	252	26.034	26.022	(0.996)	736579	5.17185	5.172
*	77	Perylene-d12	264	26.149	26.149	(1.000)	456008	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.946	28.933	(1.107)	830811	5.02922	5.029
	79	Dibenzo(a,h)anthracene	278	28.946	28.946	(1.107)	689006	4.96953	4.970
	80	Benzo(g,h,i)perylene	276	29.764	29.751	(1.138)	689189	5.05448	5.054
	90	N-Nitrosodimethylamine	74	5.071	5.071	(0.542)	334608	5.76731	5.767
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	21.085	21.085	(0.899)	208933	3.45722	3.457
	103	Pyridine	79	5.097	5.122	(0.544)	534742	5.81084	5.811
	105	1-methylnaphthalene	142	13.487	13.487	(1.139)	925646	5.25003	5.250
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.840	16.840	(1.091)	1072104	5.33771	5.338

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.345	25.384	(0.969)	1625913	10.0183	10.02
120 2,3,4,6-Tetrachlorophenol	232	16.152	16.152	(1.046)	210743	3.28296	3.283

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162311.D
Lab Smp Id: SLE0338-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\ABN.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 20:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	287078	143539	574156	265705	-7.45
27 Naphthalene-d8	1056758	528379	2113516	965231	-8.66
42 Acenaphthene-d10	587510	293755	1175020	512787	-12.72
59 Phenanthrene-d10	933575	466788	1867150	850147	-8.94
69 Chrysene-d12	576570	288285	1153140	511511	-11.28
134 Di-n-octylphthala	1181651	590826	2363302	1044471	-11.61
77 Perylene-d12	491359	245680	982718	456008	-7.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.37	8.87	9.87	9.37	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.46	17.96	18.96	18.46	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
134 Di-n-octylphthala	24.47	23.97	24.97	24.47	-0.00
77 Perylene-d12	26.15	25.65	26.65	26.15	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162311.D

Lab ID: SLE0338-SCV1
nt17.i, ABN.m, 17-MAY-2023 00:29

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

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.008	0.000	1.0083	2,4-Dinitrophenol

RRT check based on Ccal File: NT1705162308.D

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012345.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/02/23
Lab Sample ID:	SLF0008-CCV1	Injection Time:	15:22
Sequence Name:	ABN 5		

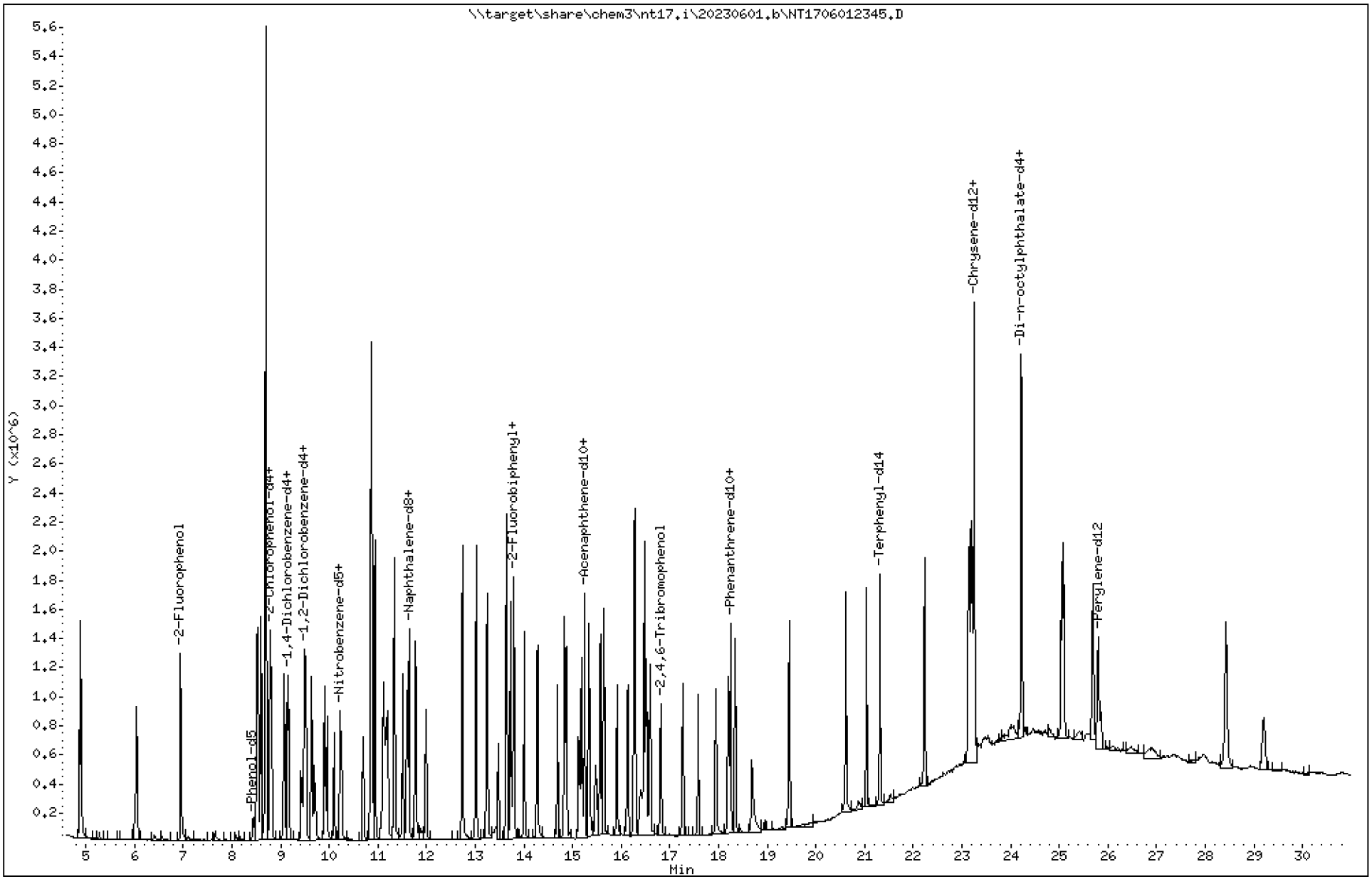
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	5.0	1.8353850	1.8403930		0.3	+/-50
4-Methylphenol	A	5.0000	4.8	1.3734410	1.3298840		-3.2	+/-50
Naphthalene	A	5.0000	4.9	1.0999940	1.0751720		-2.3	+/-50
2-Methylnaphthalene	A	5.0000	5.1	0.7875944	0.7973736		1.2	+/-50
Acenaphthylene	A	5.0000	5.1	2.0301060	2.0691760		1.9	+/-50
Dimethylphthalate	A	5.0000	5.2	1.3763000	1.4410030		4.7	+/-50
Acenaphthene	A	5.0000	5.1	1.2690180	1.2868320		1.4	+/-50
Dibenzofuran	A	5.0000	5.1	1.7711910	1.8092470		2.1	+/-50
Fluorene	A	5.0000	5.6	1.6839010	1.8884260		12.1	+/-50
Phenanthrene	A	5.0000	4.9	1.1671410	1.1504820		-1.4	+/-50
Anthracene	A	5.0000	5.0	1.0957620	1.1050800		0.9	+/-50
Fluoranthene	A	5.0000	4.7	1.8710850	1.7431210		-6.8	+/-50
Pyrene	A	5.0000	4.6	1.8967730	1.7450880		-8.0	+/-50
Butylbenzylphthalate	A	5.0000	5.1	0.8489339	0.8635580		1.7	+/-50
Benzo(a)anthracene	A	5.0000	4.9	1.4729210	1.4481320		-1.7	+/-50
Chrysene	A	5.0000	5.1	1.3859970	1.4264100		2.9	+/-50
bis(2-Ethylhexyl)phthalate	A	5.0000	5.1	0.5787277	156529.8		2.1	+/-50
Benzofluoranthenes, Total	A	10.000	9.6	1.4236150	1.3643580		-4.2	+/-50
Benzo(a)pyrene	A	5.0000	4.8	1.2492830	1.2097410		-3.2	+/-50
Indeno(1,2,3-cd)pyrene	A	5.0000	4.1	1.4490690	1.1917870		-17.8	+/-50
Dibenzo(a,h)anthracene	A	5.0000	4.3	1.2161710	1.0476770		-13.9	+/-50
Benzo(g,h,i)perylene	A	5.0000	3.5	1.1960510	0.8372946		-30.0	+/-50
2-Fluorophenol	A	7.5000	7.84	1.3093930	1.3688230		4.5	+/-50
Phenol-d5	A	7.5000	7.60	1.7328160	1.7569820		1.4	+/-50
2-Chlorophenol-d4	A	7.5000	7.62	1.3879870	1.4094740		1.5	+/-50
1,2-Dichlorobenzene-d4	A	5.0000	4.99	0.9755818	0.9727569		-0.3	+/-50
Nitrobenzene-d5	A	5.0000	5.15	0.4552457	0.4690509		3.0	+/-50
2-Fluorobiphenyl	A	5.0000	5.17	1.5758130	1.6297370		3.4	+/-50
2,4,6-Tribromophenol	A	7.5000	8.18	0.1414414	0.1902164		9.0	+/-50
p-Terphenyl-d14	A	5.0000	4.98	1.3483810	1.3434030		-0.4	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D
Date : 02-JUN-2023 15:22
Client ID:
Sample Info: SLE0008-CCV1

Instrument: nt17.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

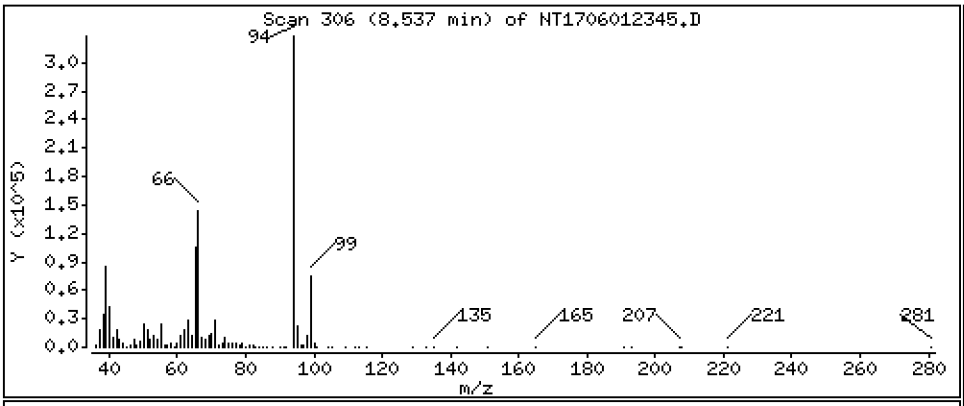
Operator: VTS

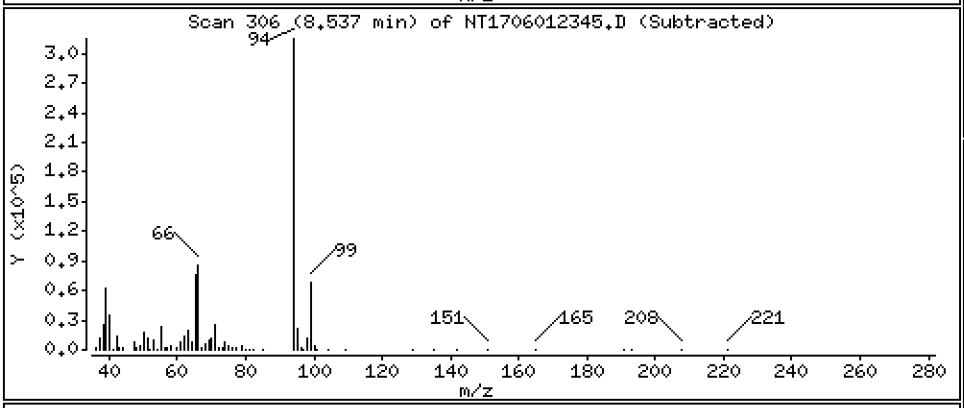
Column phase: ZB-5msi

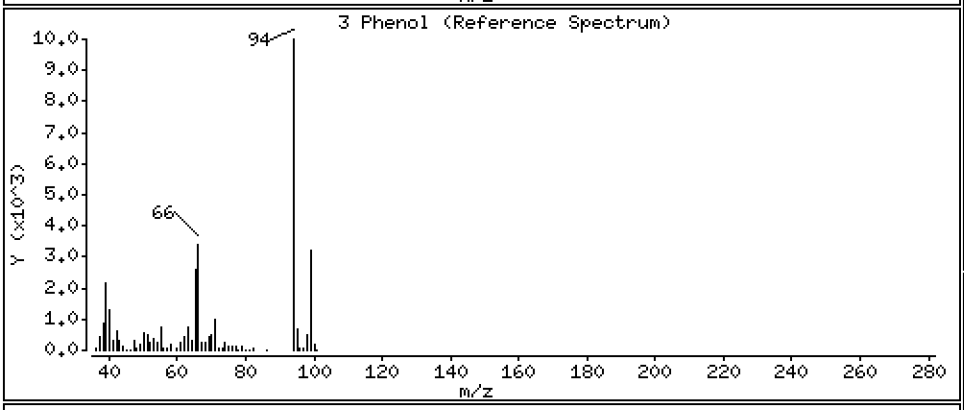
Column diameter: 0.25

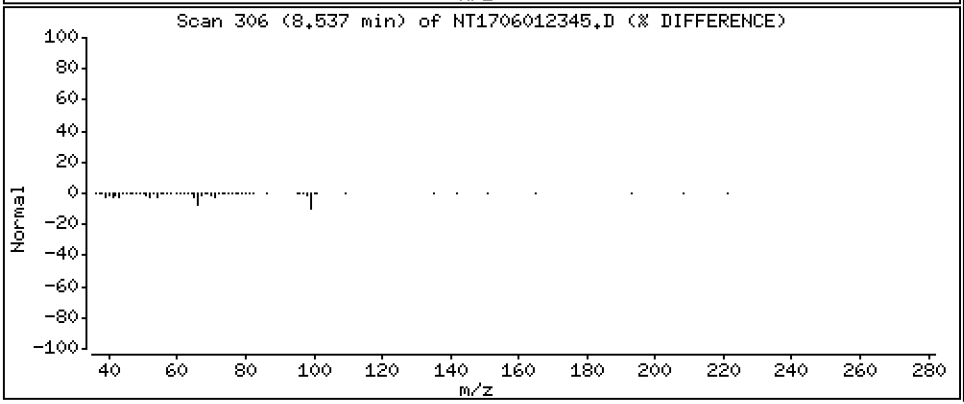
3 Phenol

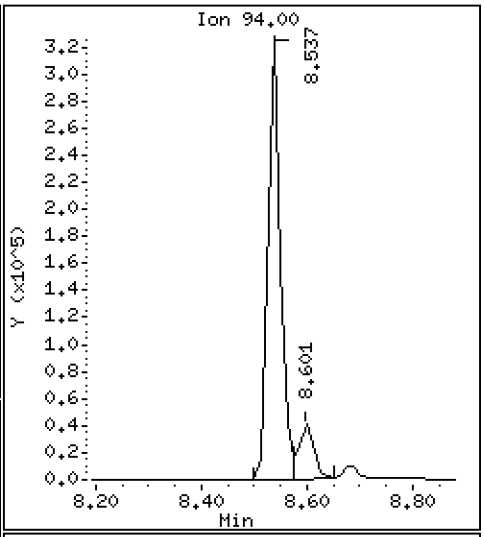
Concentration: 5.014 ug/mL

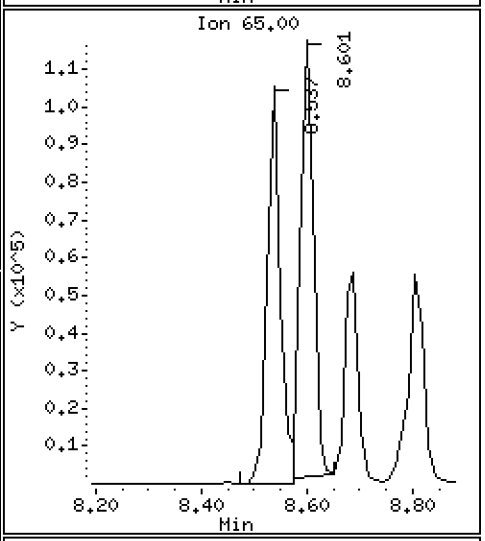


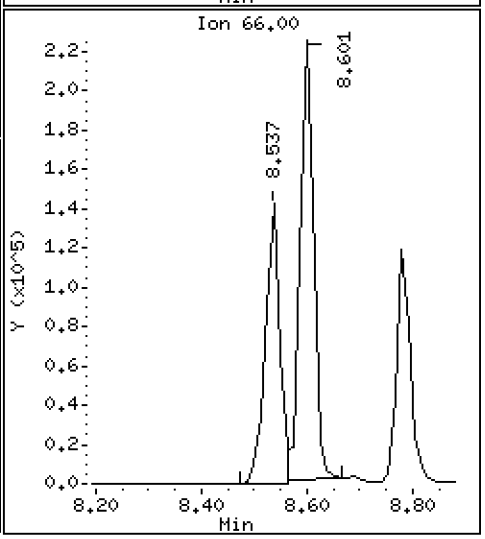












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

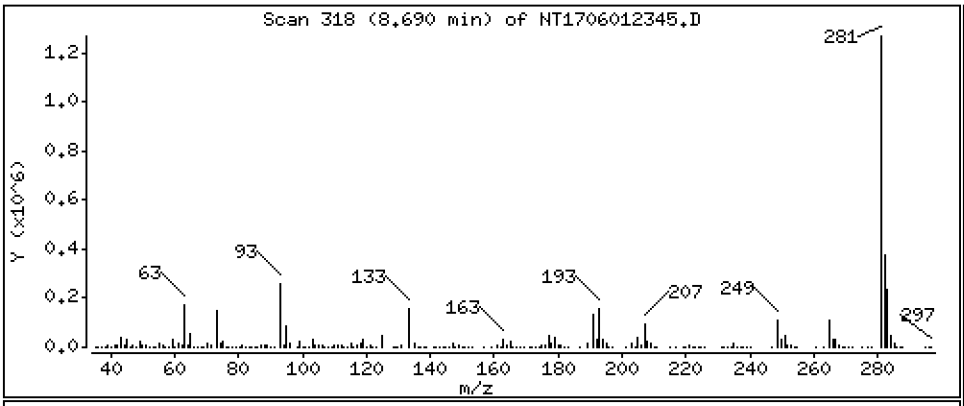
Operator: VTS

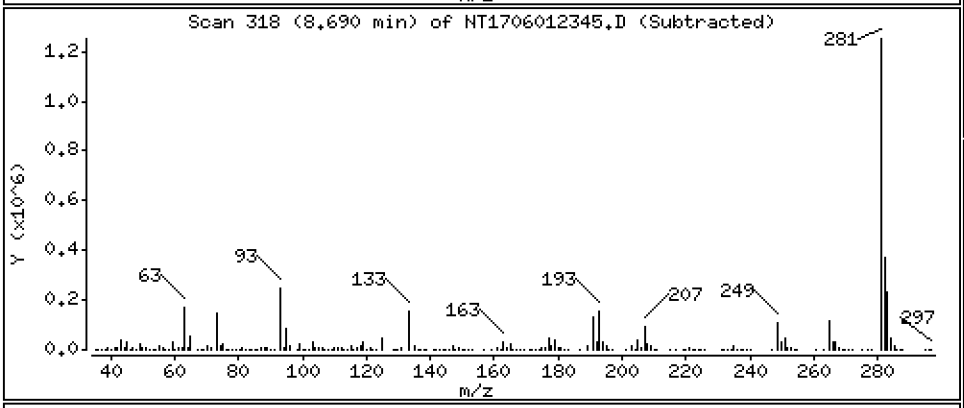
Column phase: ZB-5msi

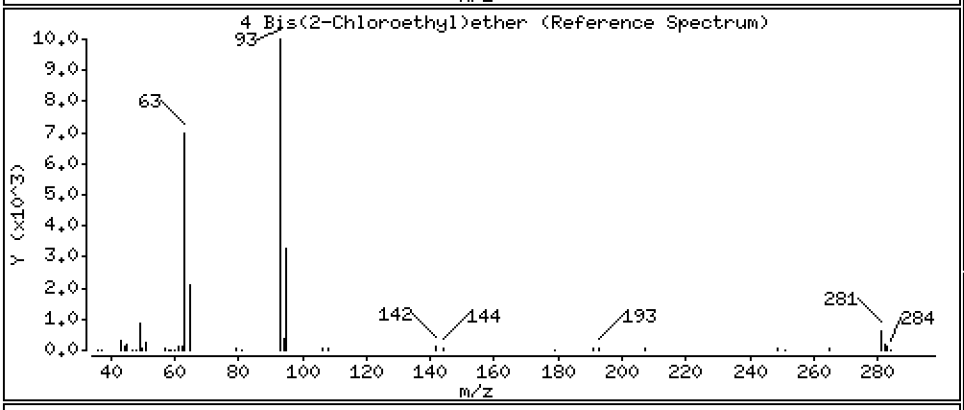
Column diameter: 0.25

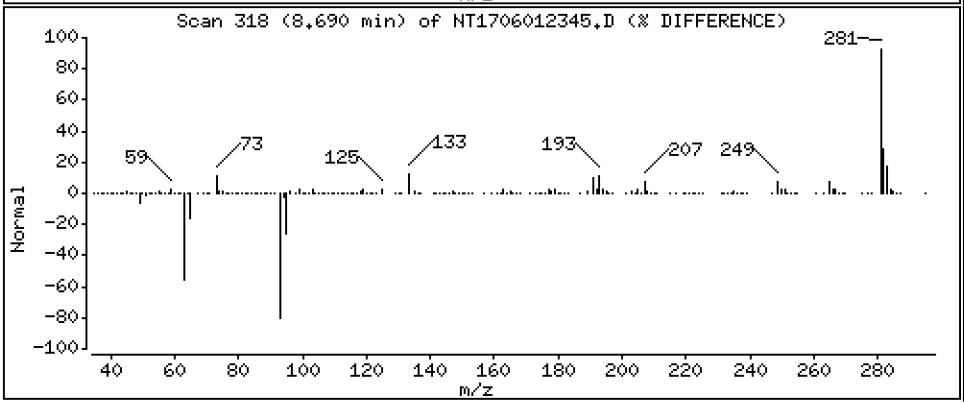
4 Bis(2-Chloroethyl)ether

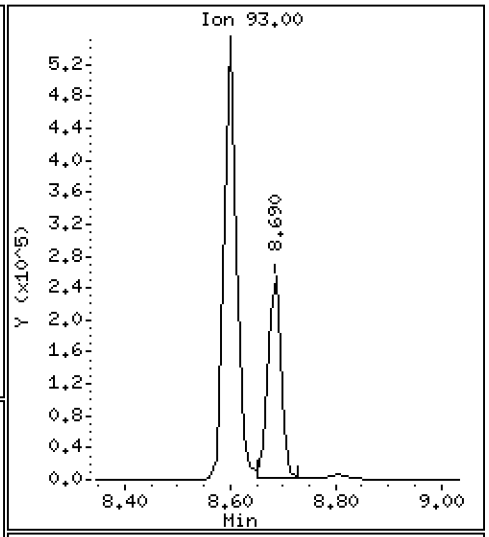
Concentration: 5.558 ug/mL

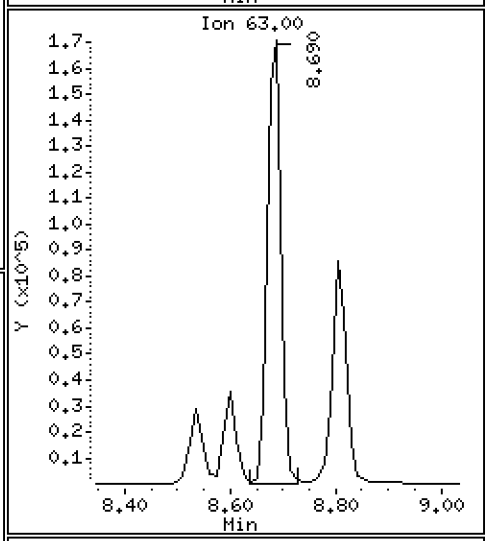


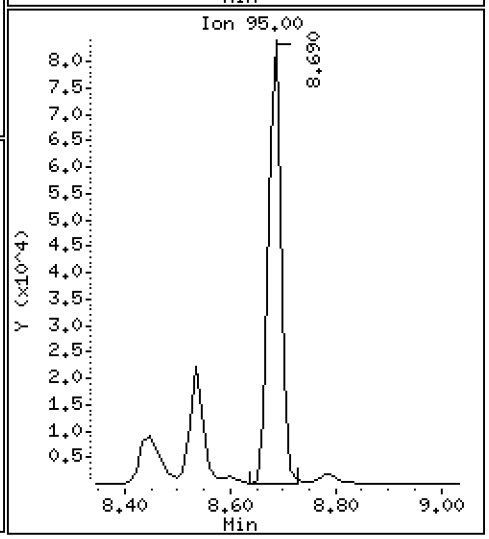












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

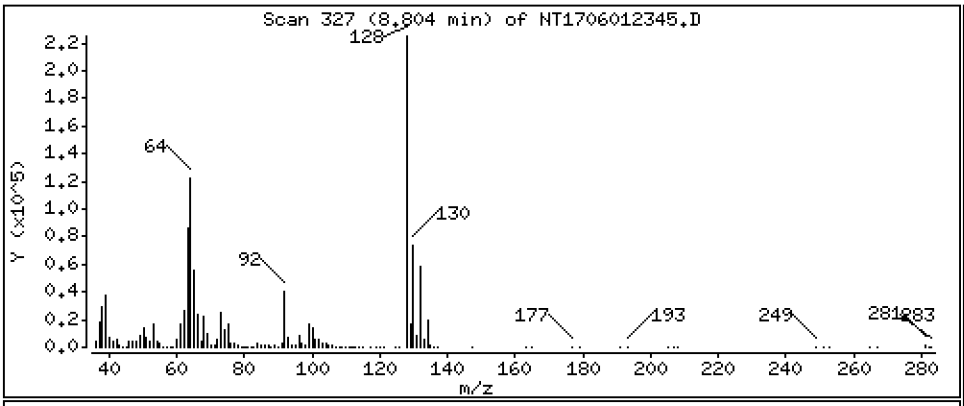
Operator: VTS

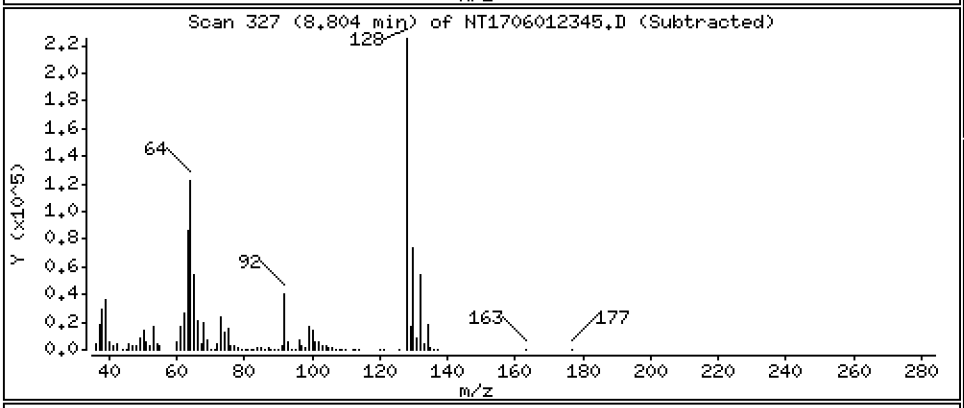
Column phase: ZB-5msi

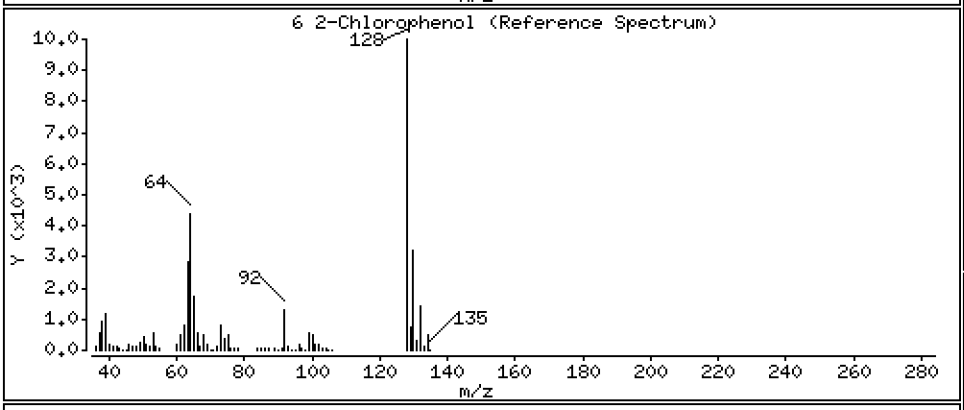
Column diameter: 0.25

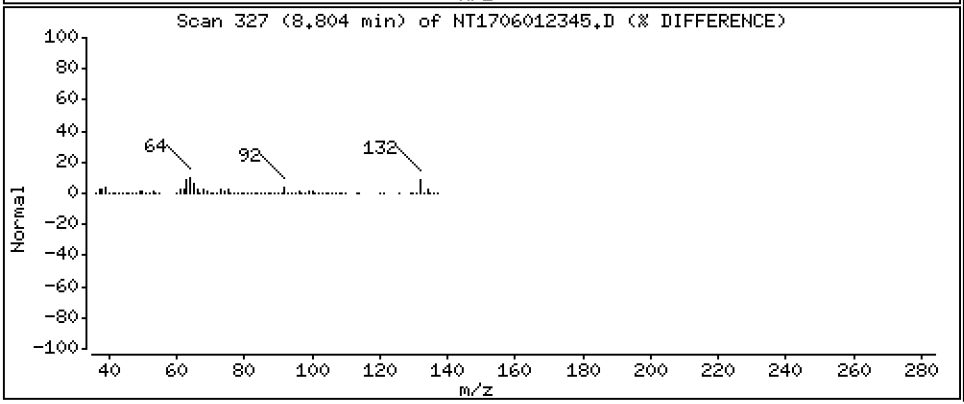
6 2-Chlorophenol

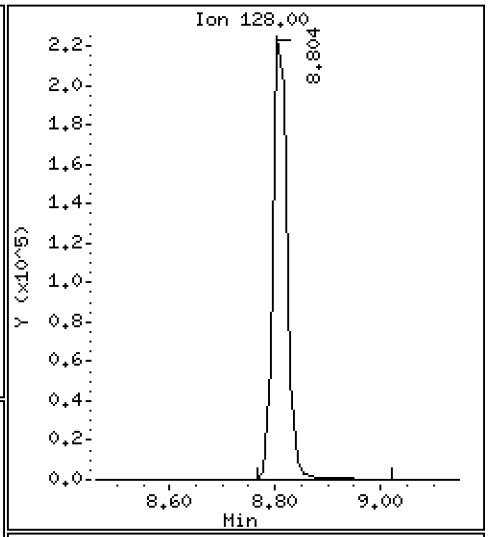
Concentration: 5.234 ug/mL

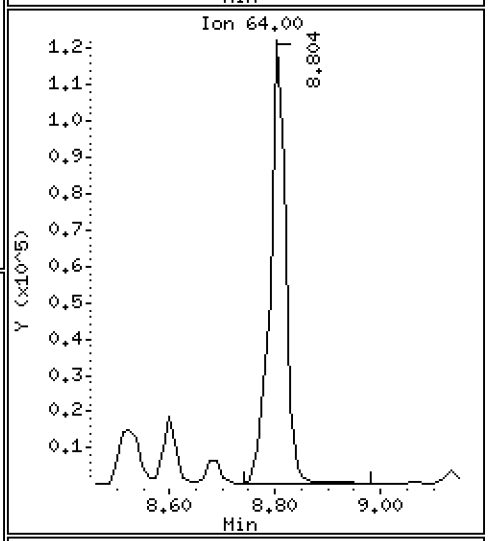


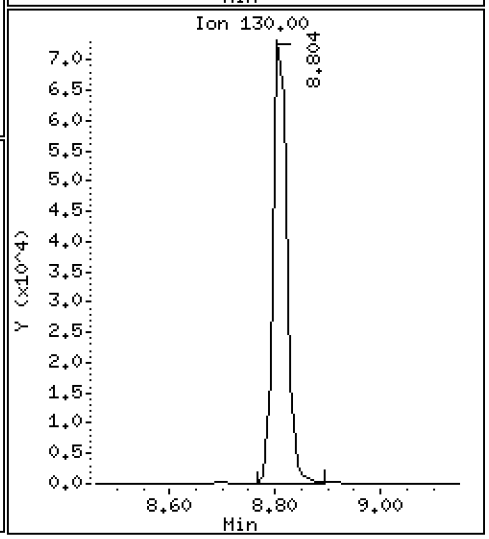












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

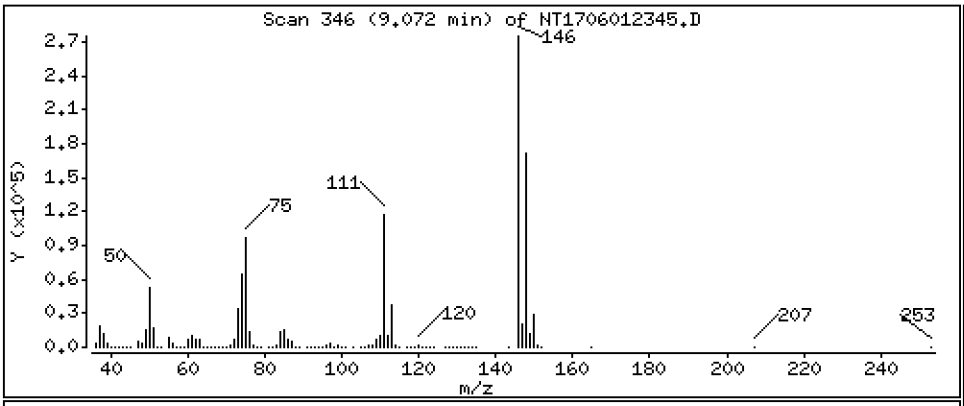
Operator: VTS

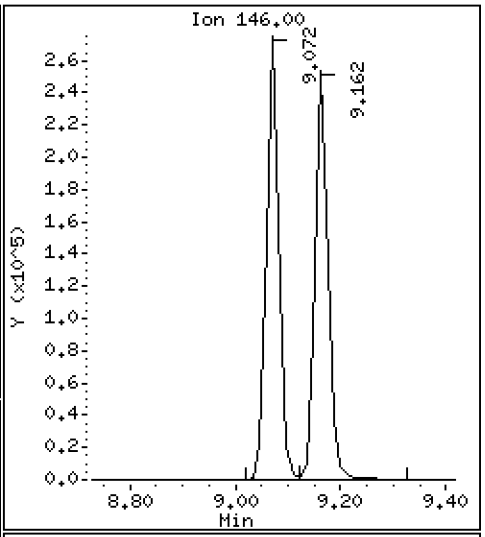
Column phase: ZB-5msi

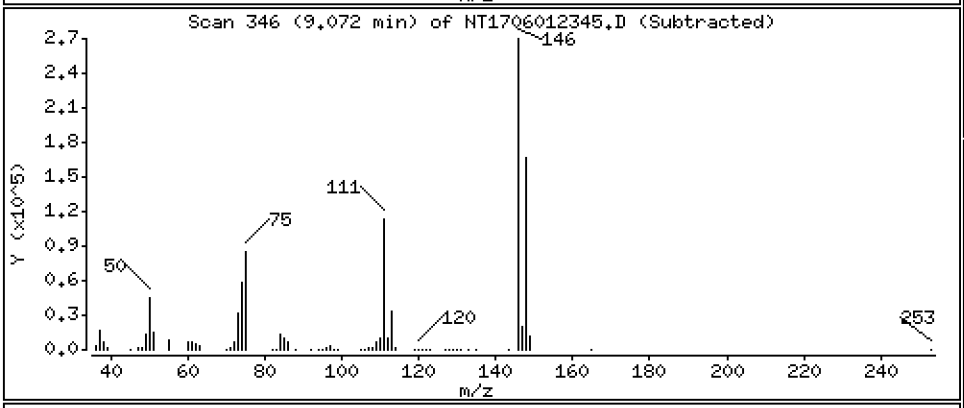
Column diameter: 0.25

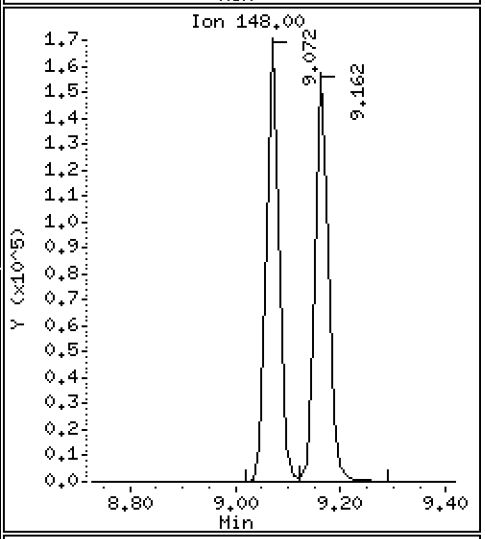
7 1,3-Dichlorobenzene

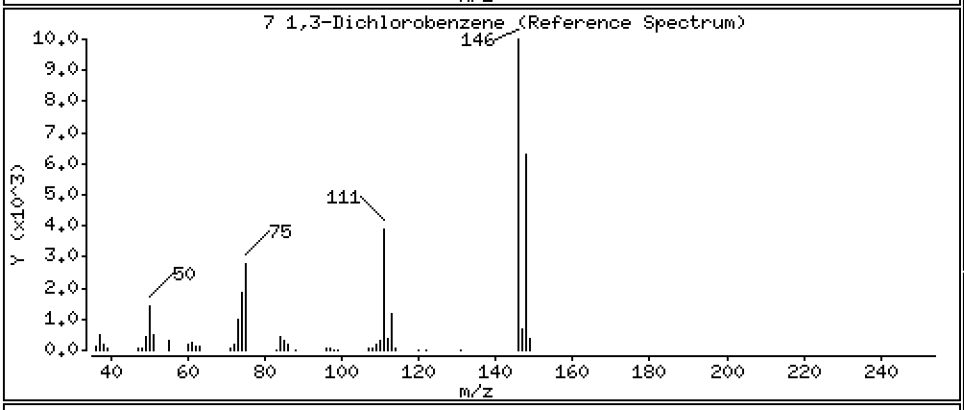
Concentration: 4.970 ug/mL

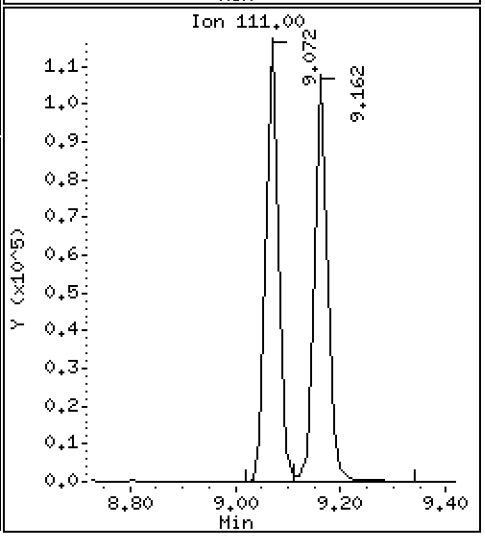


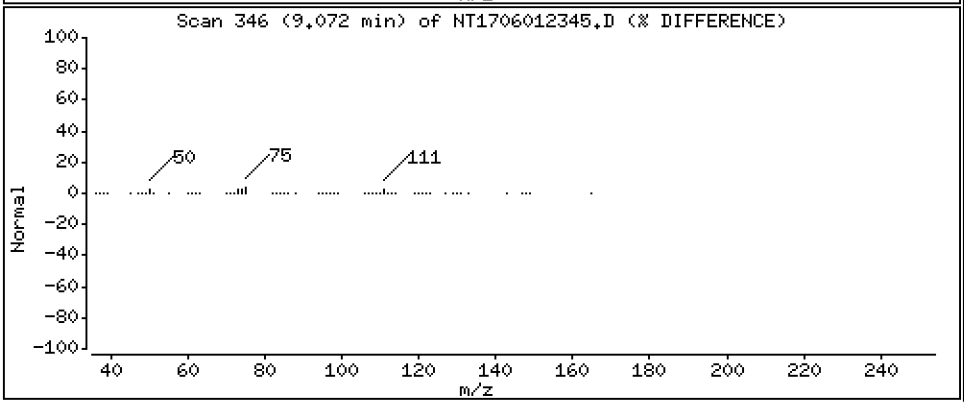












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

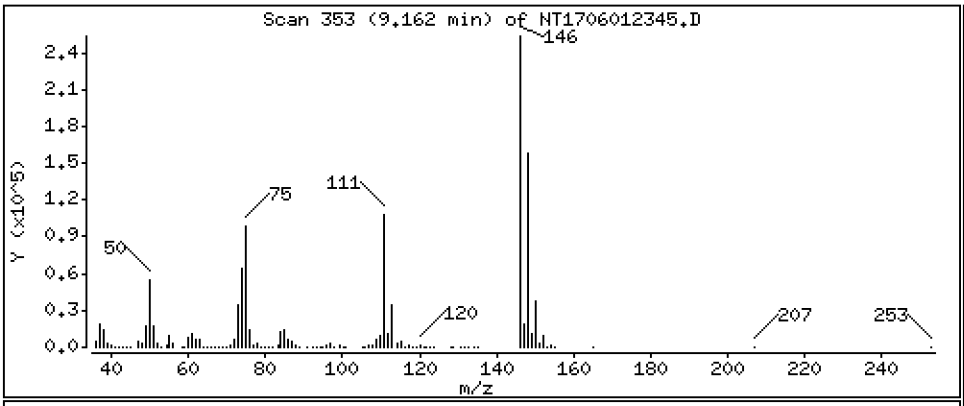
Operator: VTS

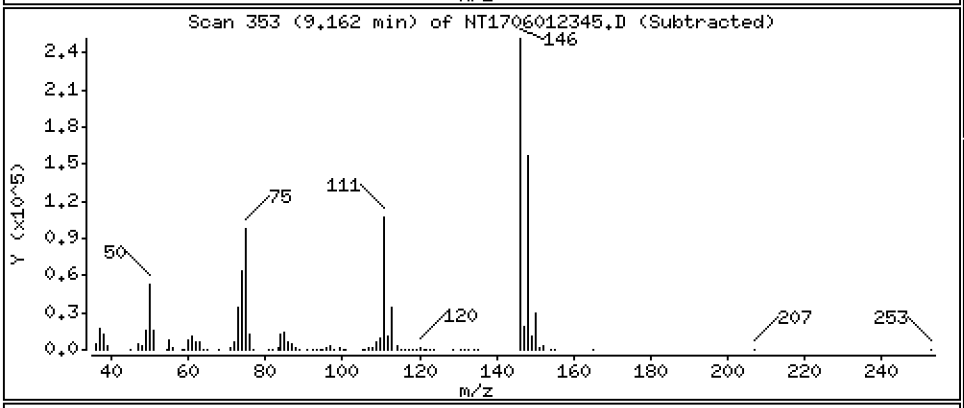
Column phase: ZB-5msi

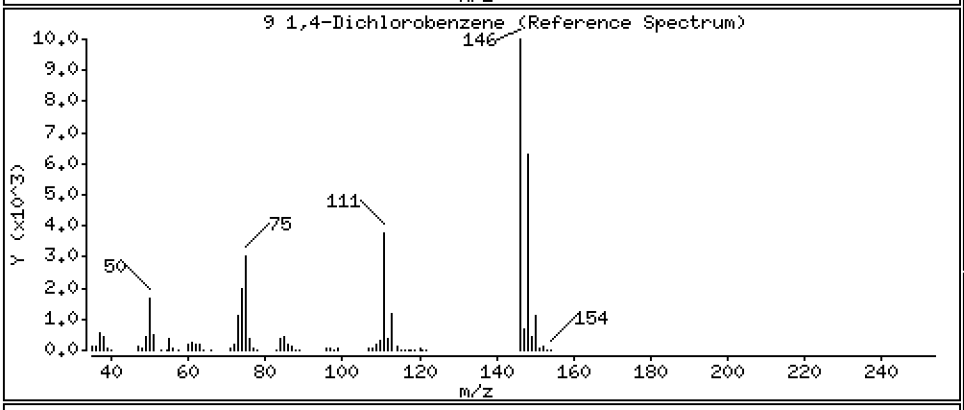
Column diameter: 0.25

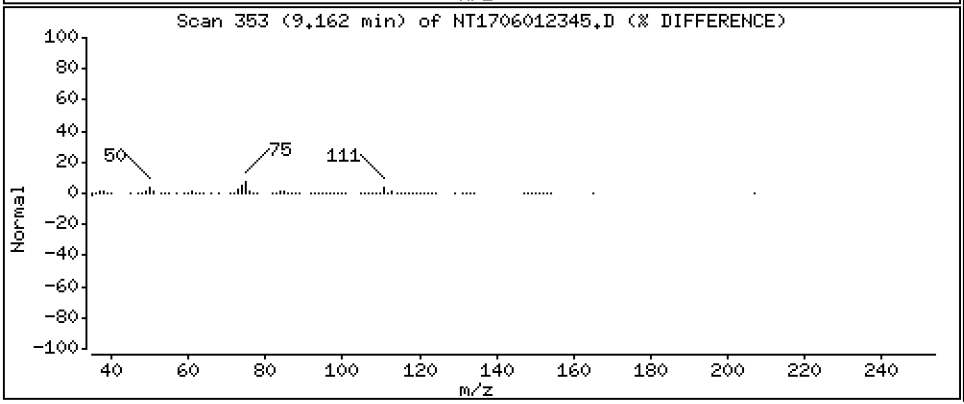
9 1,4-Dichlorobenzene

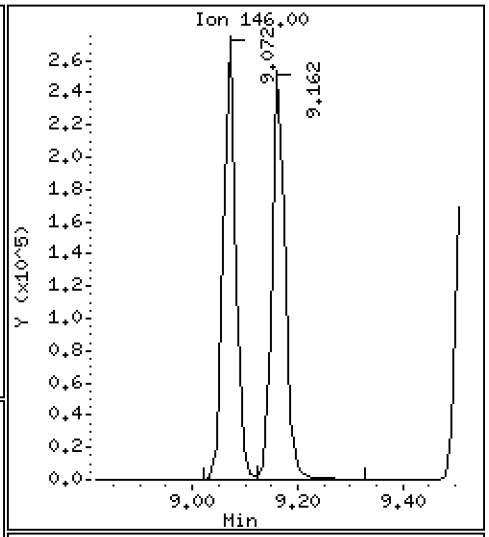
Concentration: 5.515 ug/mL

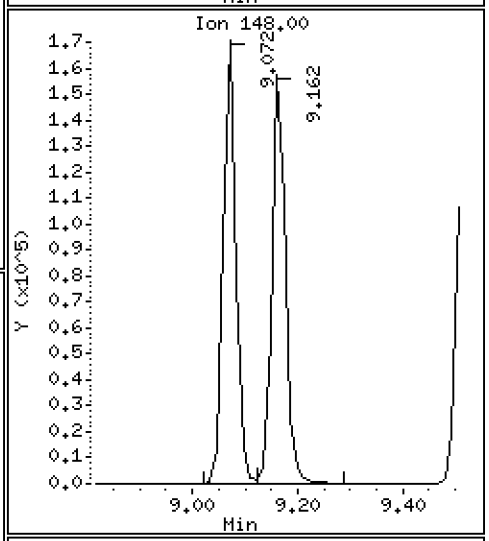


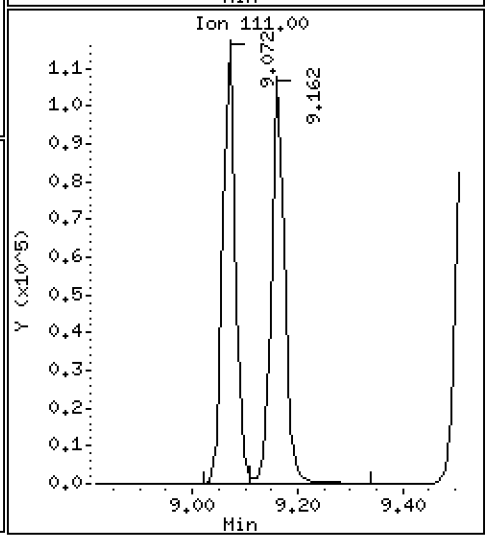












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

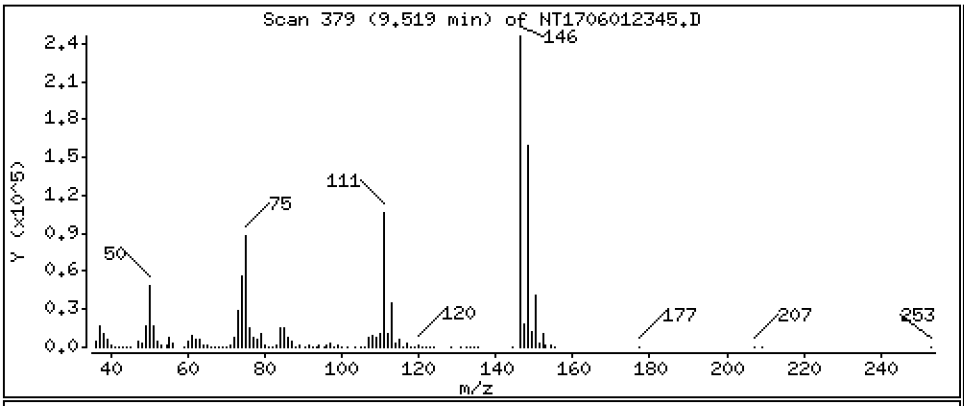
Operator: VTS

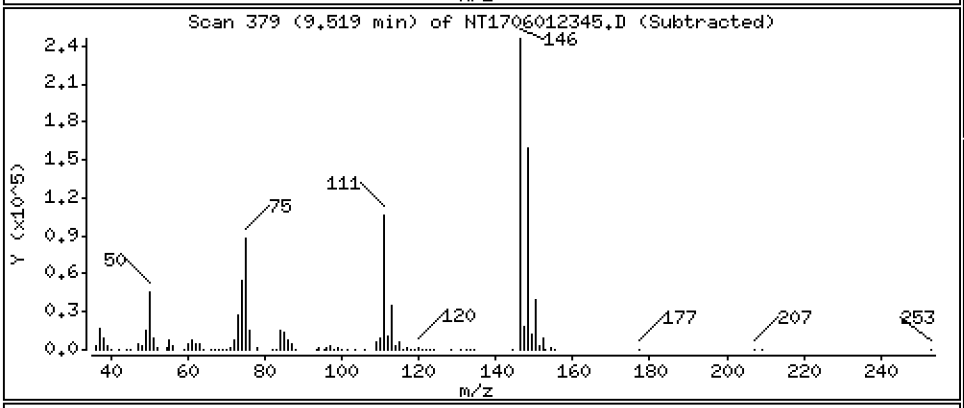
Column phase: ZB-5msi

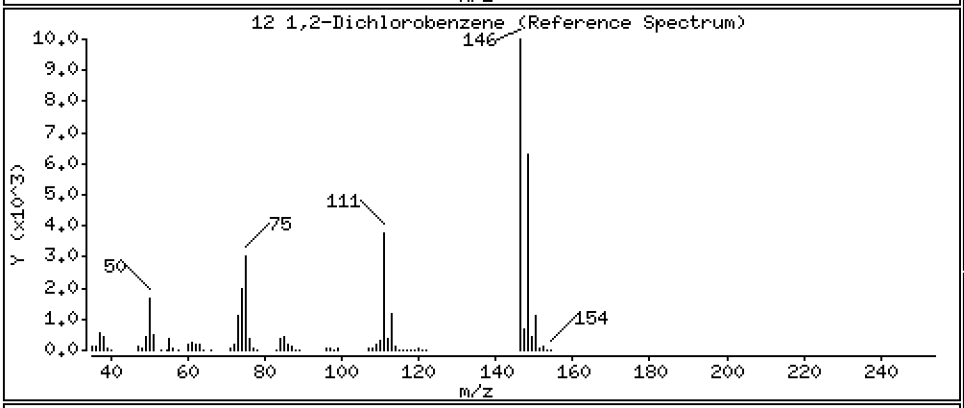
Column diameter: 0.25

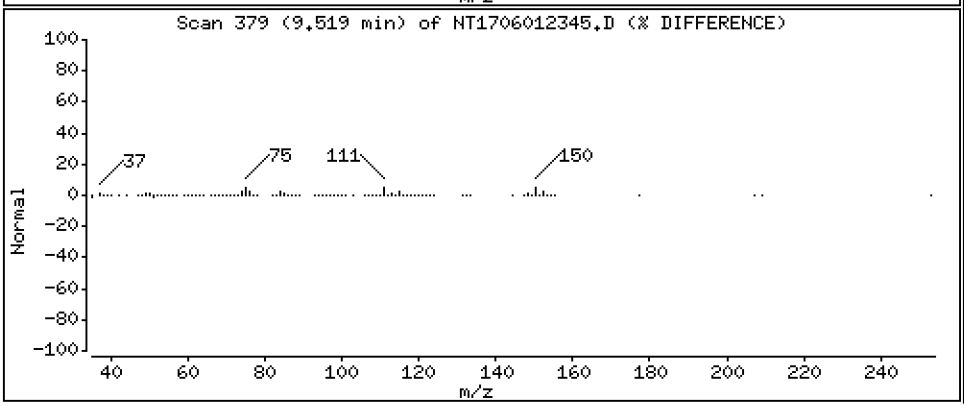
12 1,2-Dichlorobenzene

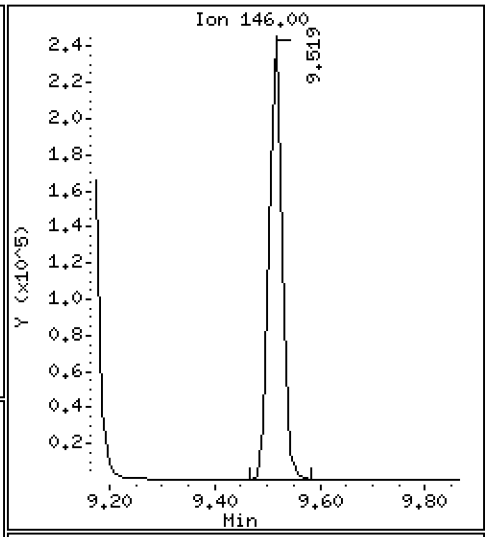
Concentration: 4.973 ug/mL

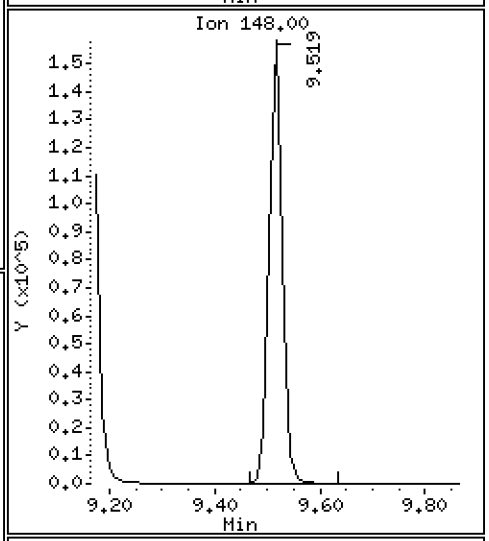


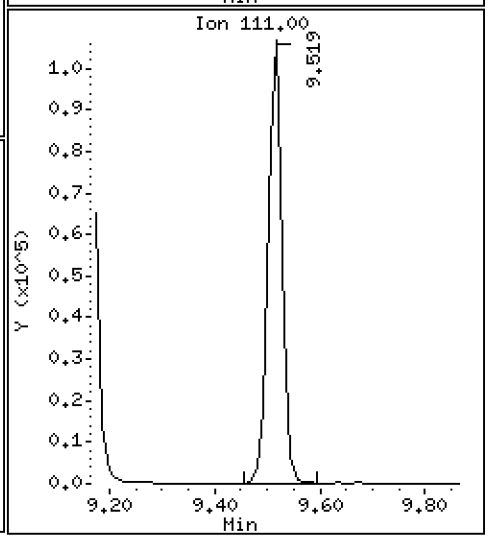












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

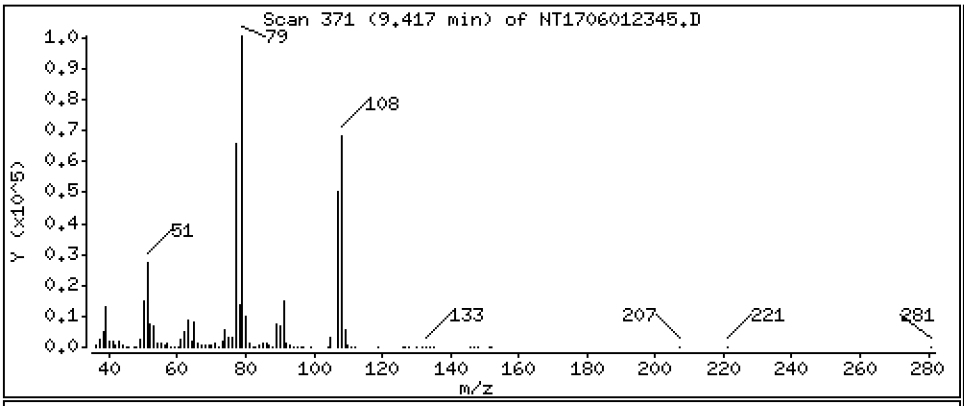
Operator: VTS

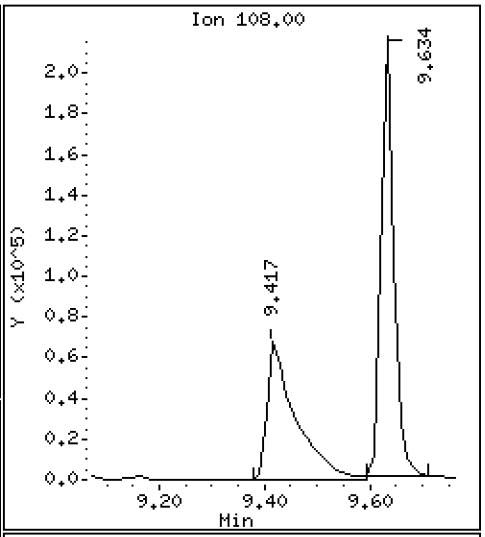
Column phase: ZB-5msi

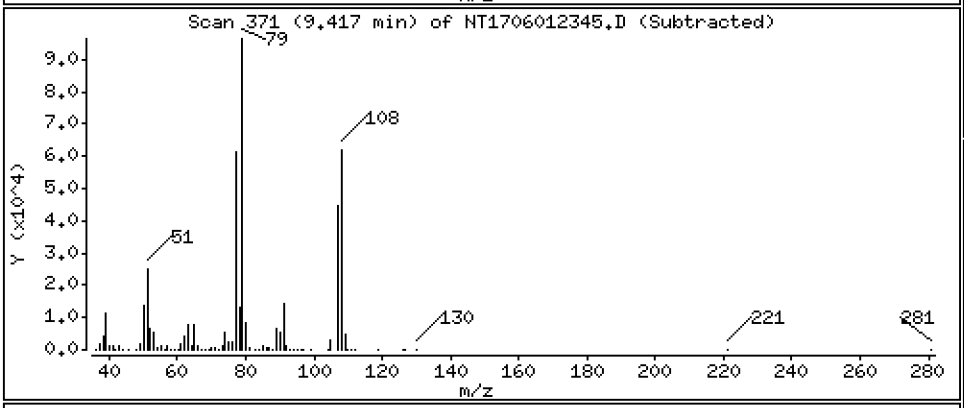
Column diameter: 0.25

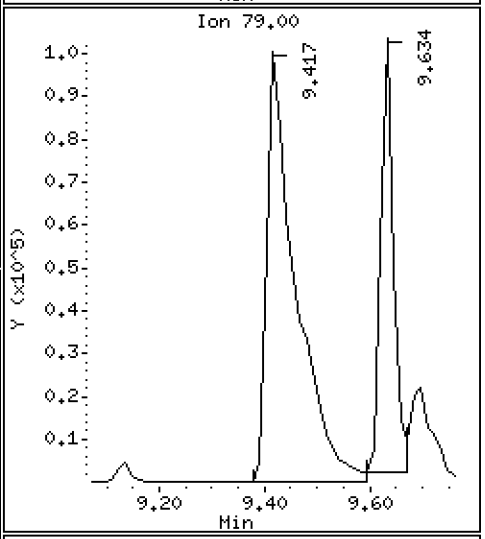
11 Benzyl alcohol

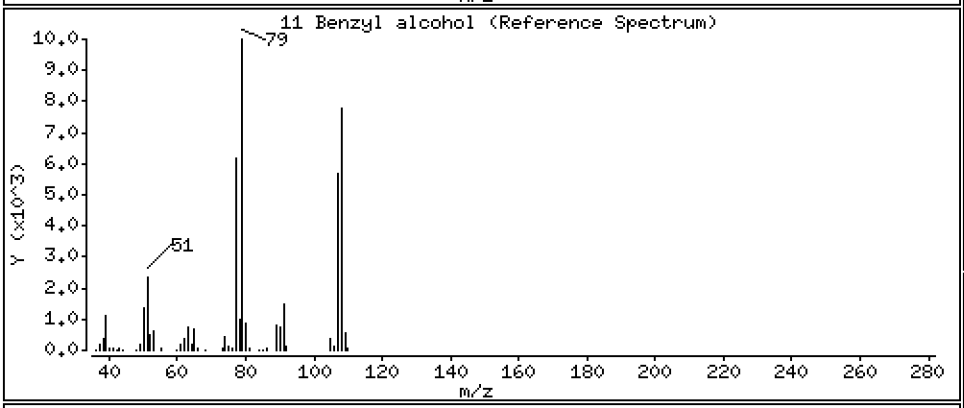
Concentration: 5.062 ug/mL

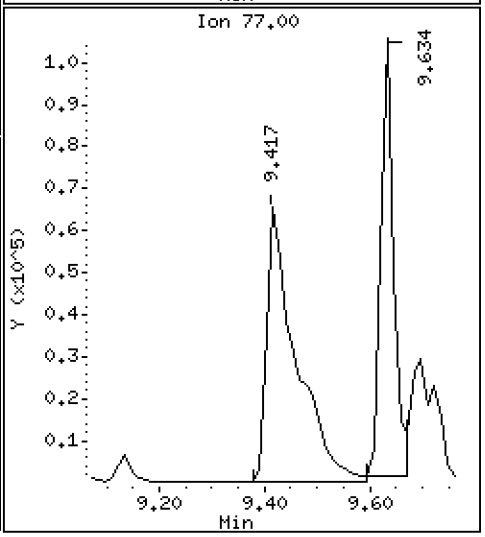


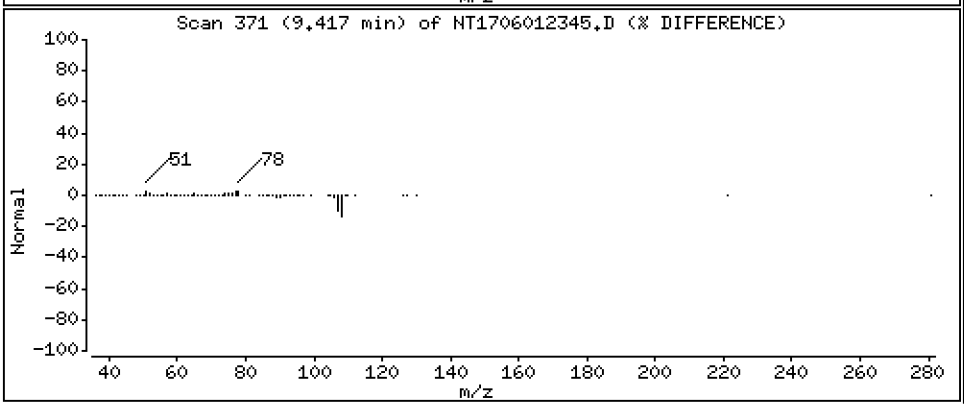












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

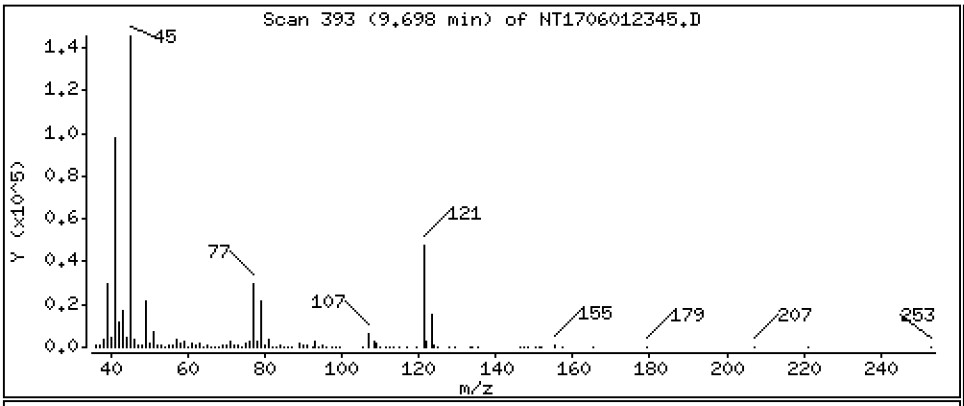
Operator: VTS

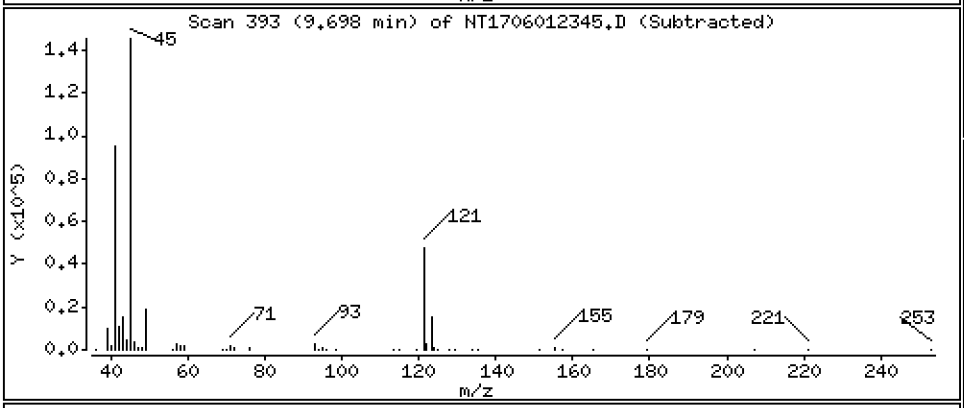
Column phase: ZB-5msi

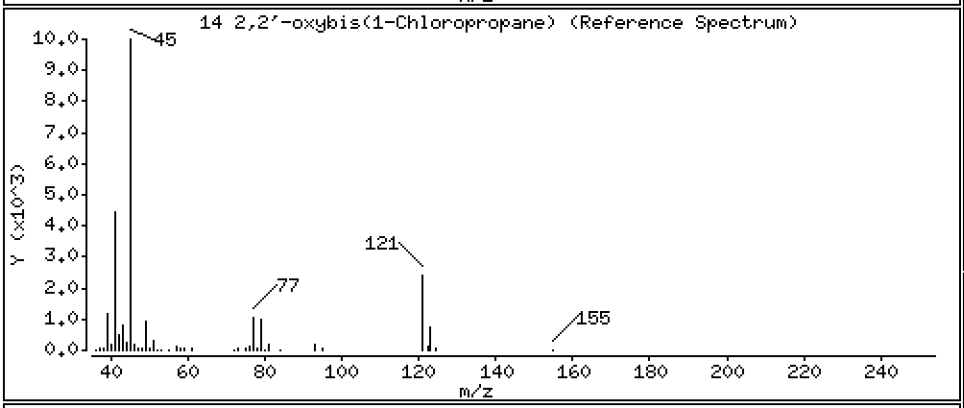
Column diameter: 0.25

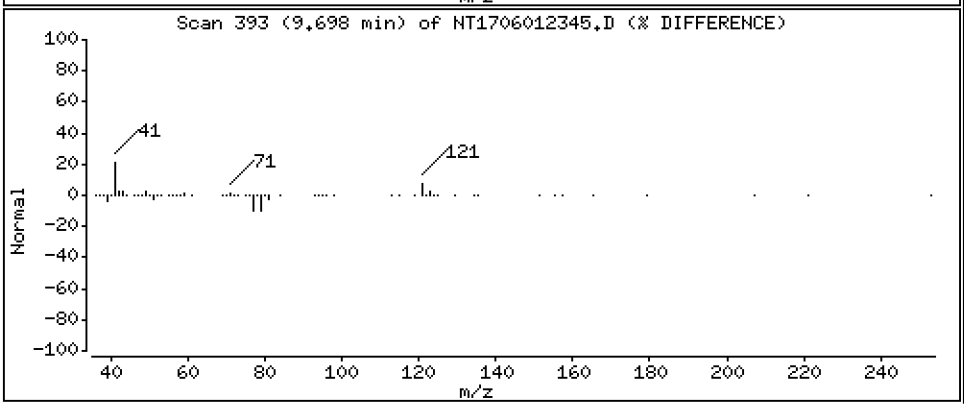
14 2,2'-oxybis(1-Chloropropane)

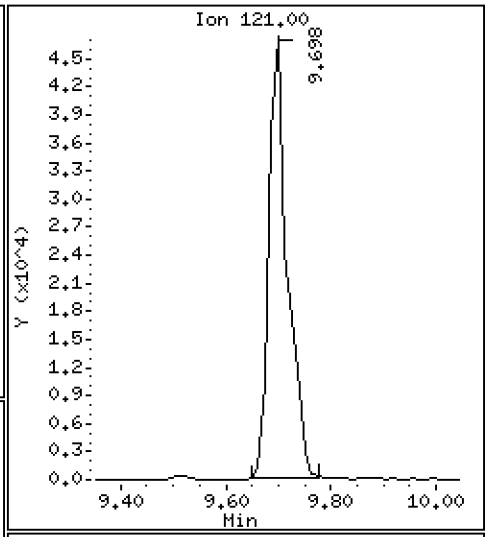
Concentration: 4.793 ug/mL

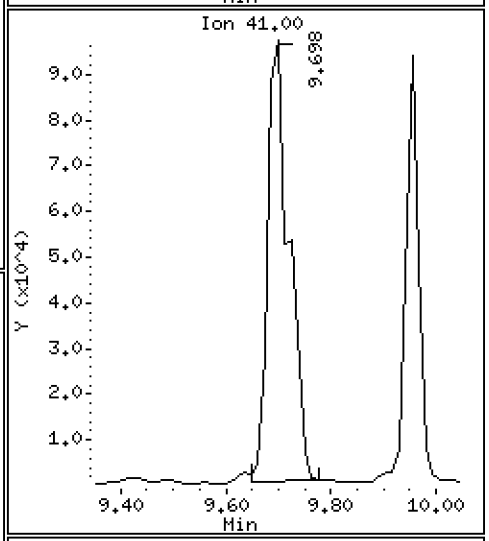


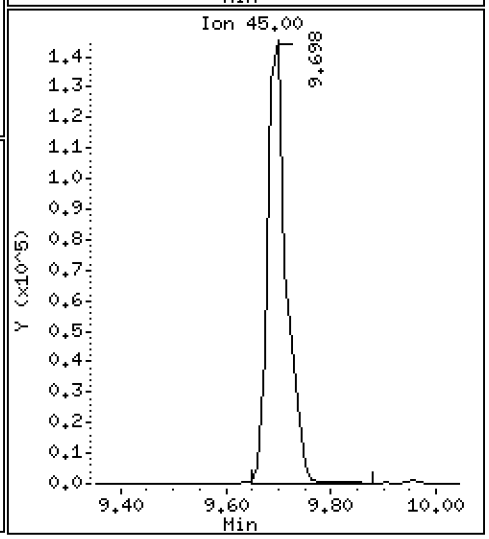












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

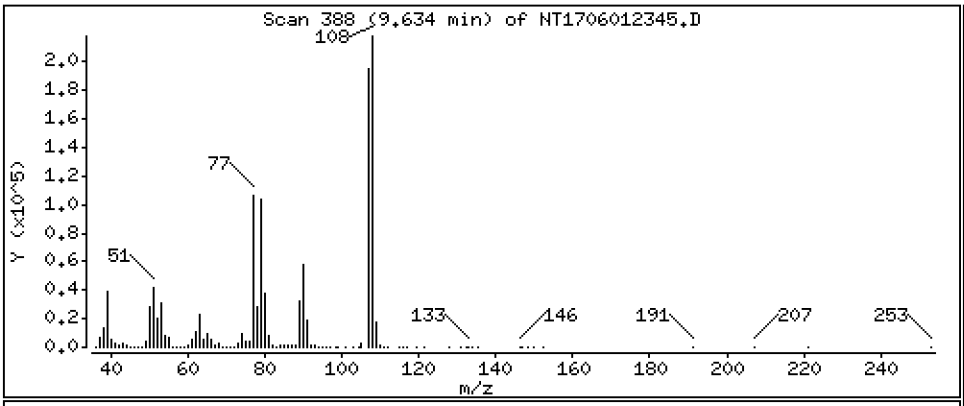
Operator: VTS

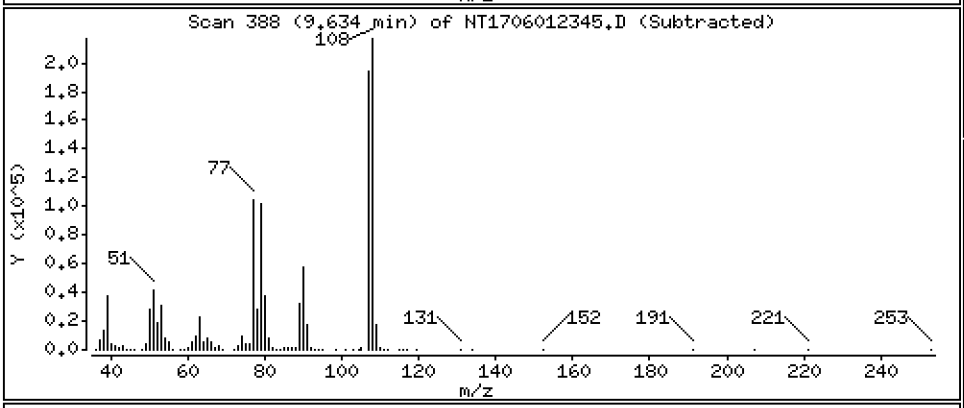
Column phase: ZB-5msi

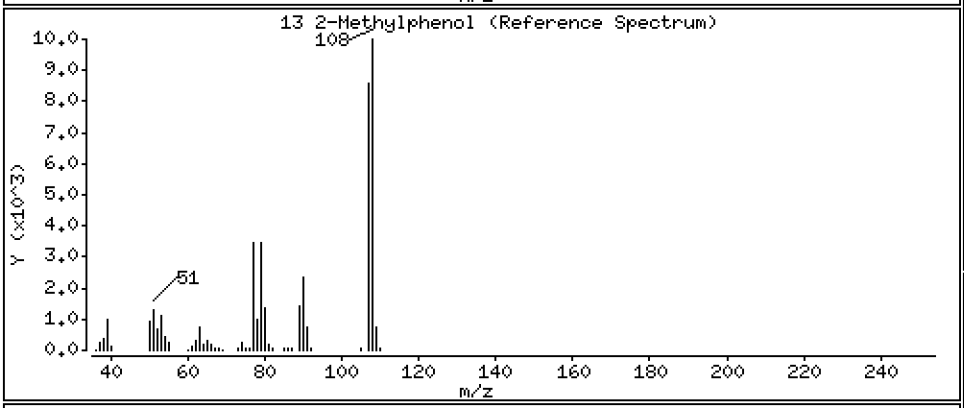
Column diameter: 0.25

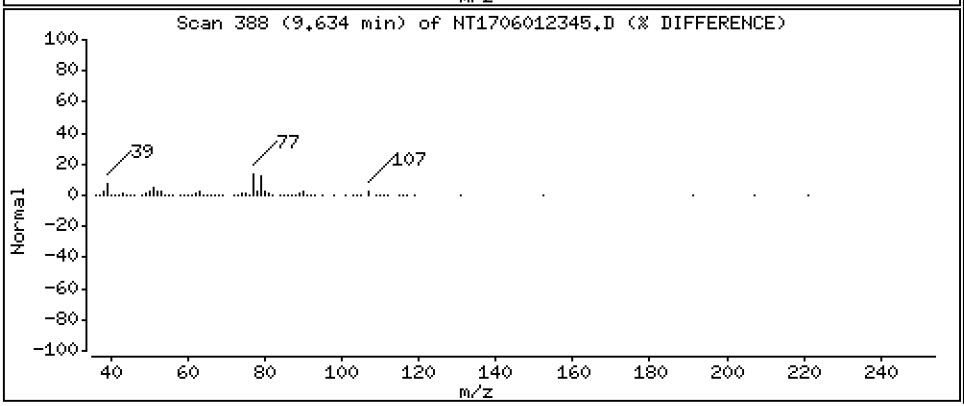
13 2-Methylphenol

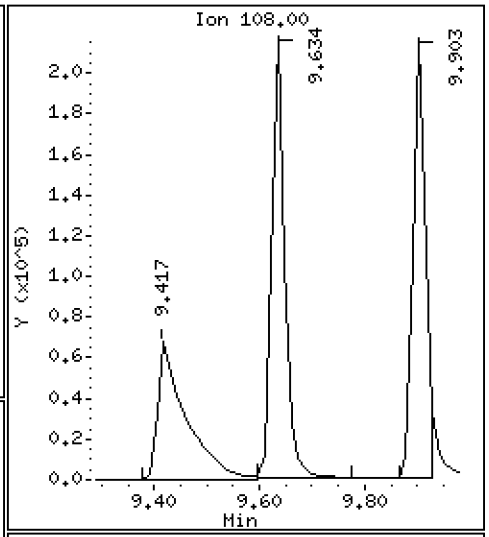
Concentration: 4.717 ug/mL

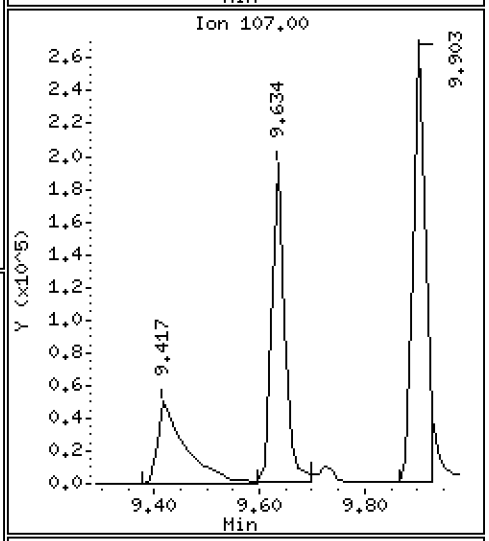


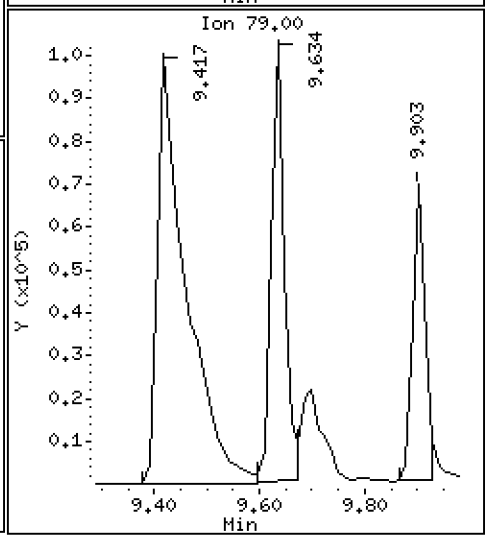












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

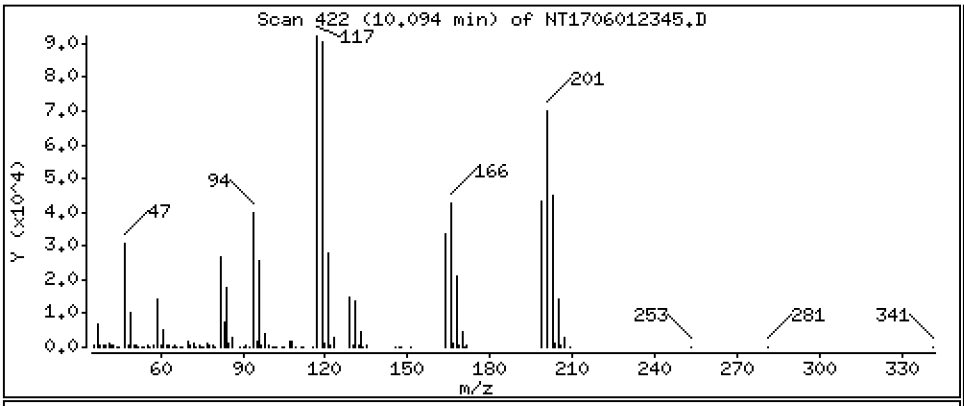
Operator: VTS

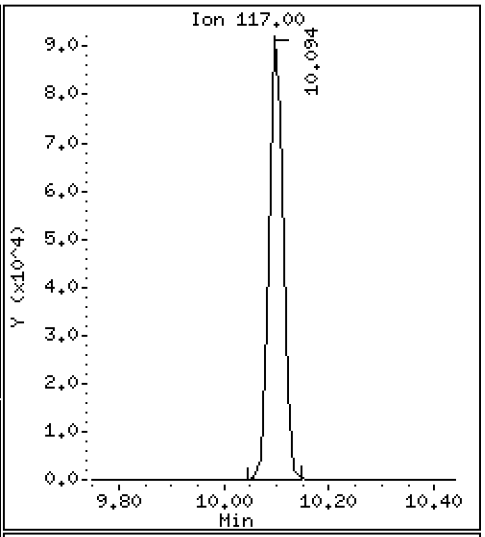
Column phase: ZB-5msi

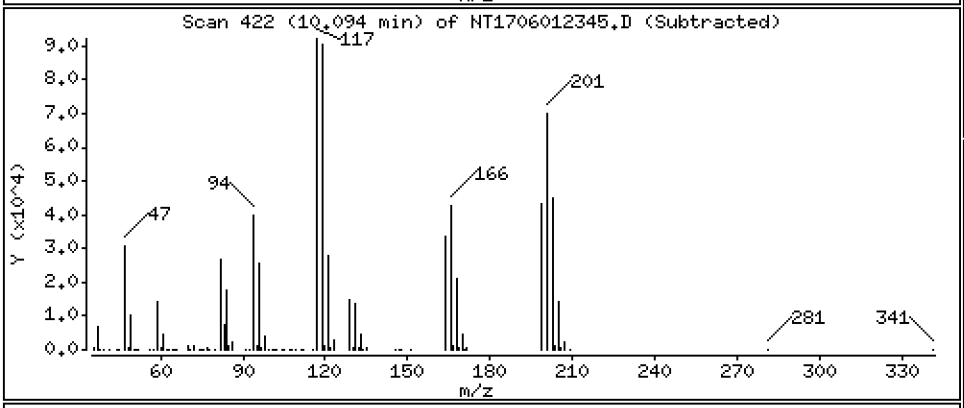
Column diameter: 0.25

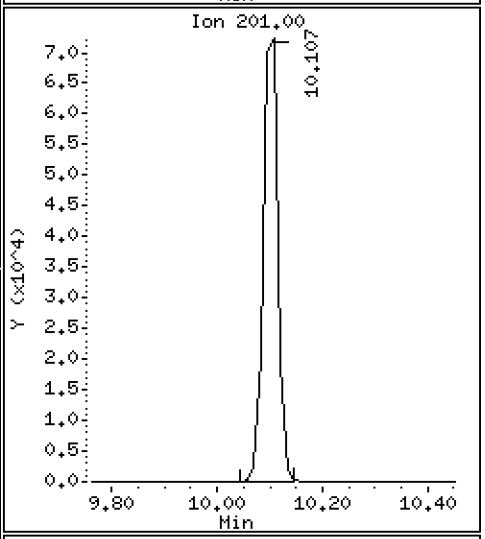
17 Hexachloroethane

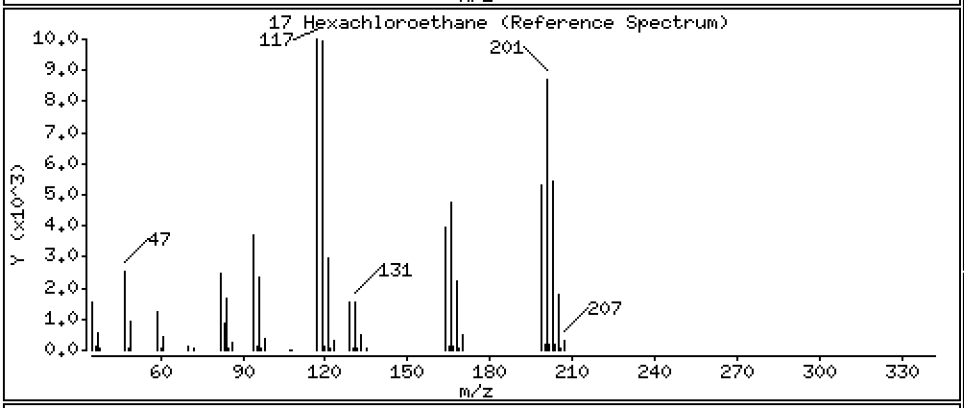
Concentration: 4.756 ug/mL

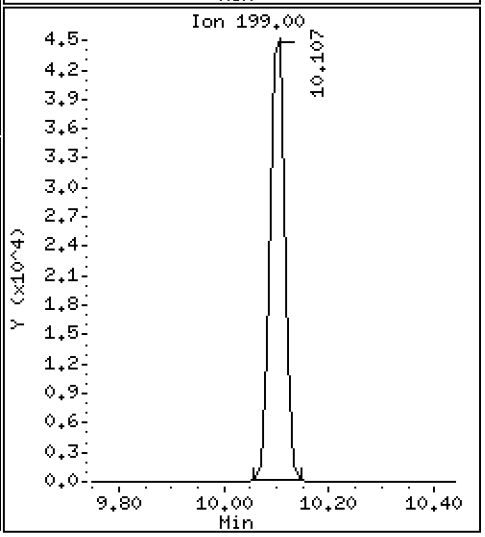


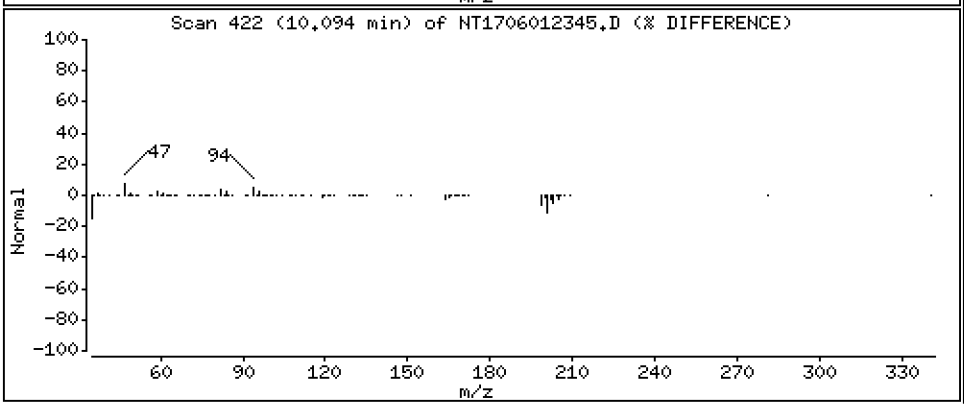












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

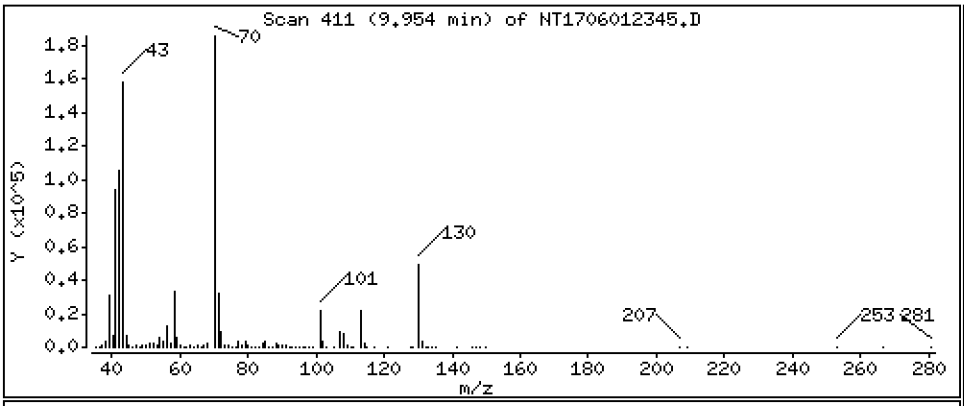
Operator: VTS

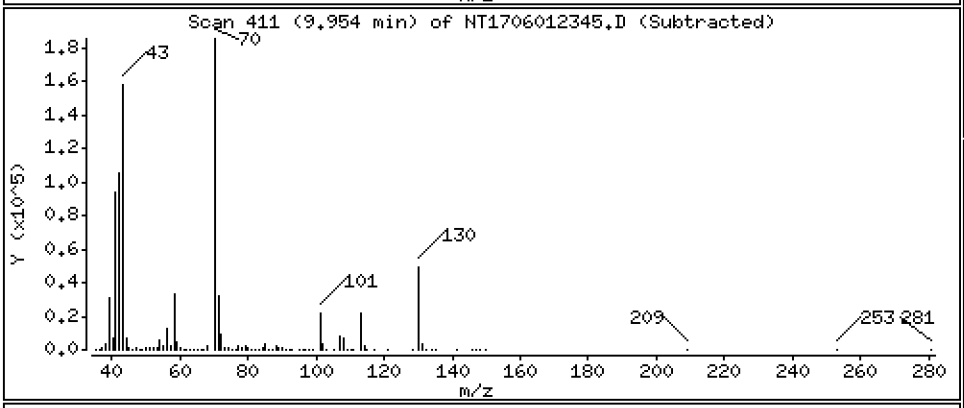
Column phase: ZB-5msi

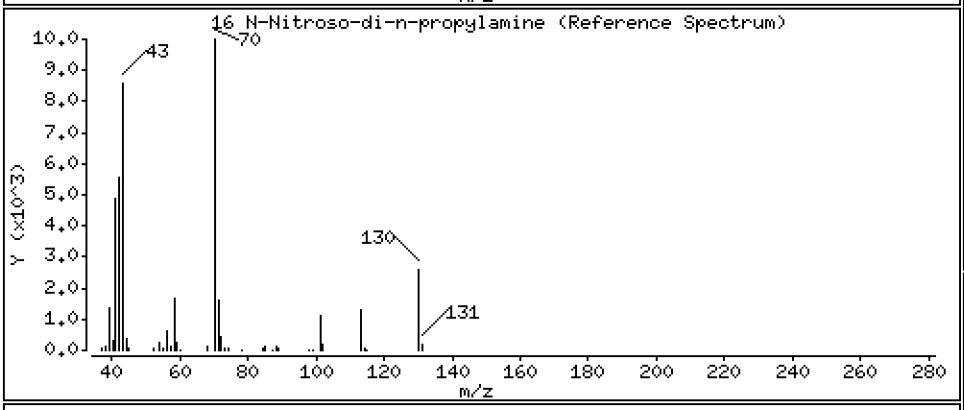
Column diameter: 0.25

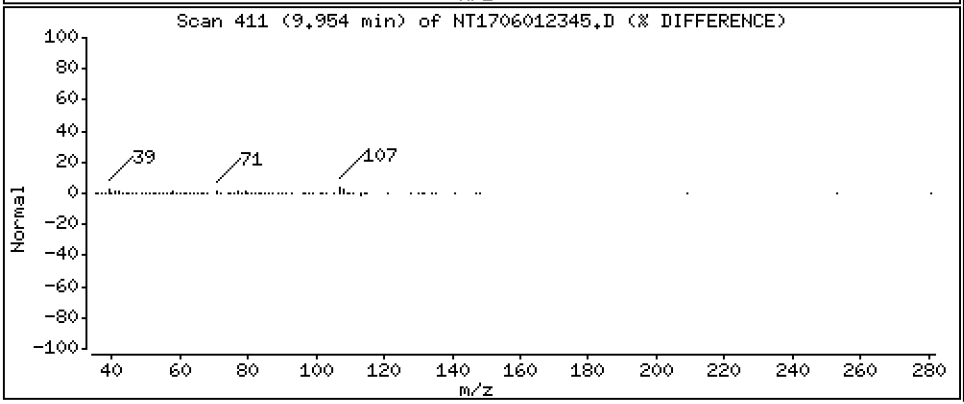
16 N-Nitroso-di-n-propylamine

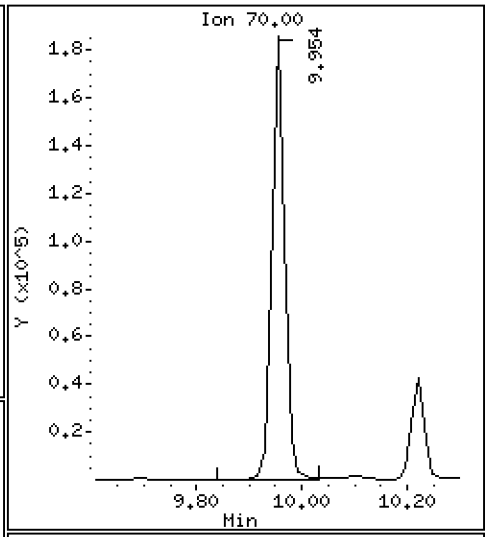
Concentration: 5.152 ug/mL

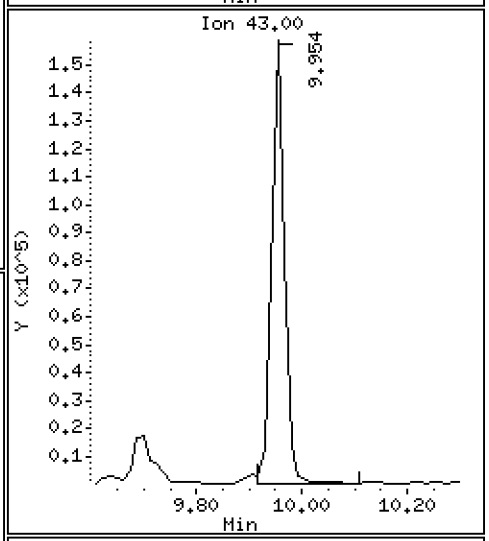


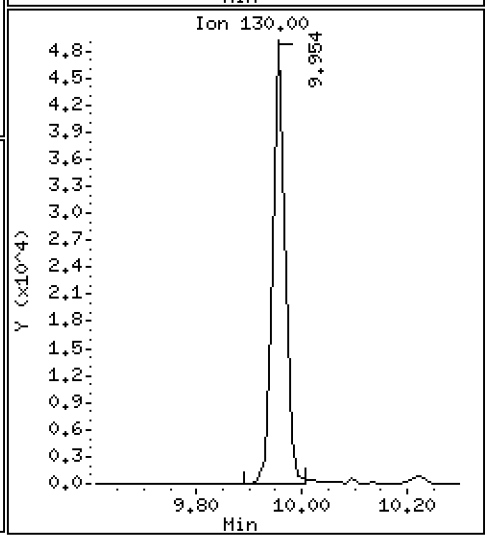












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

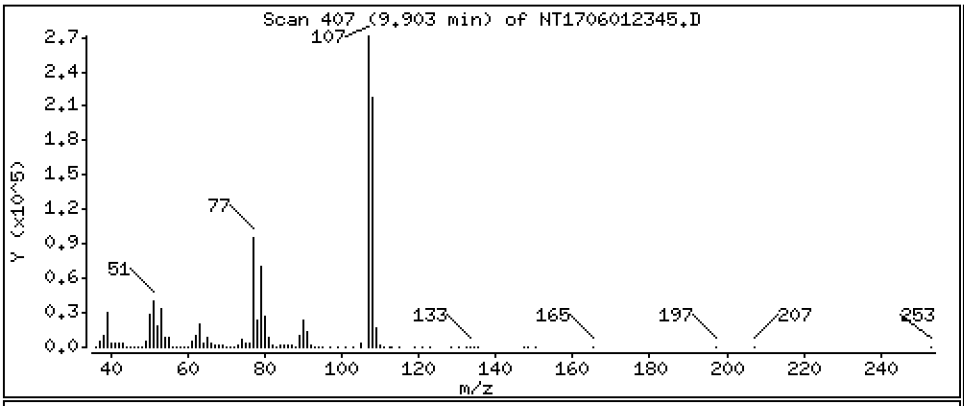
Operator: VTS

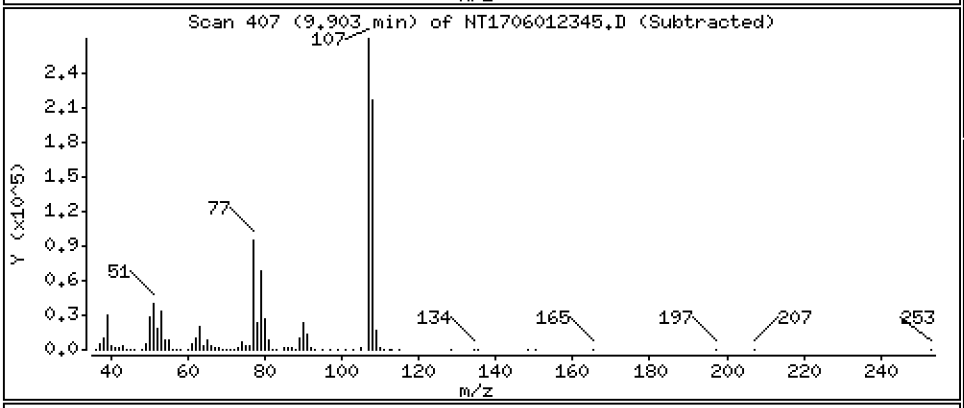
Column phase: ZB-5msi

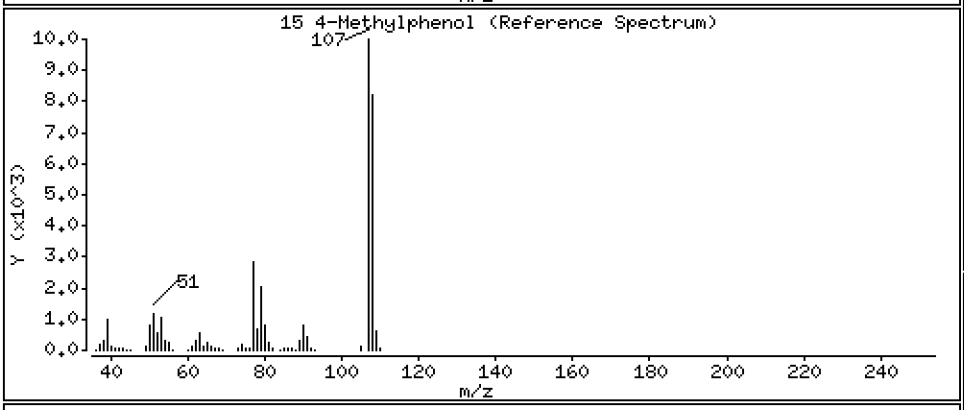
Column diameter: 0.25

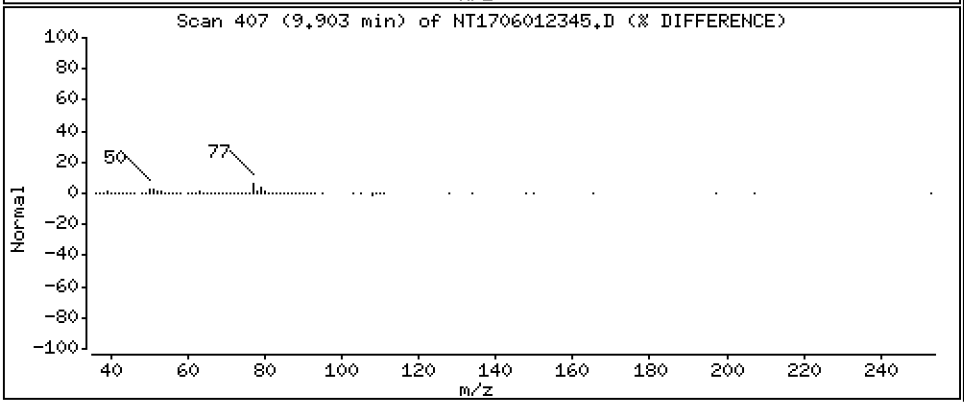
15 4-Methylphenol

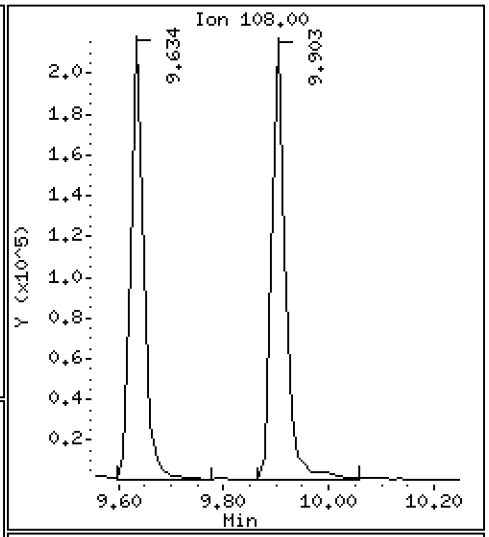
Concentration: 4.841 ug/mL

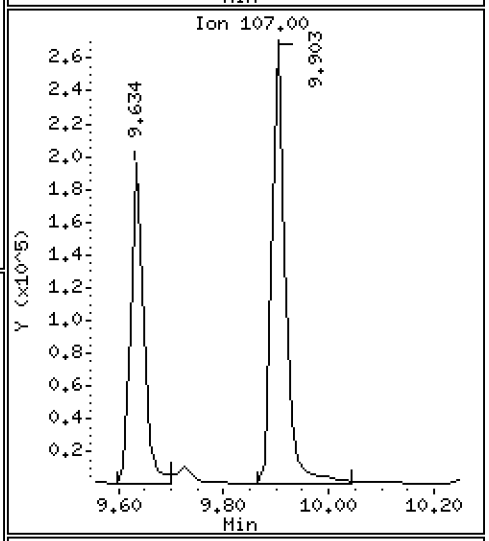


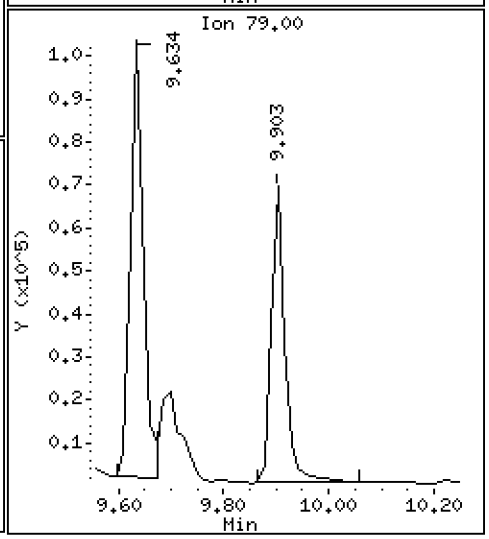












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

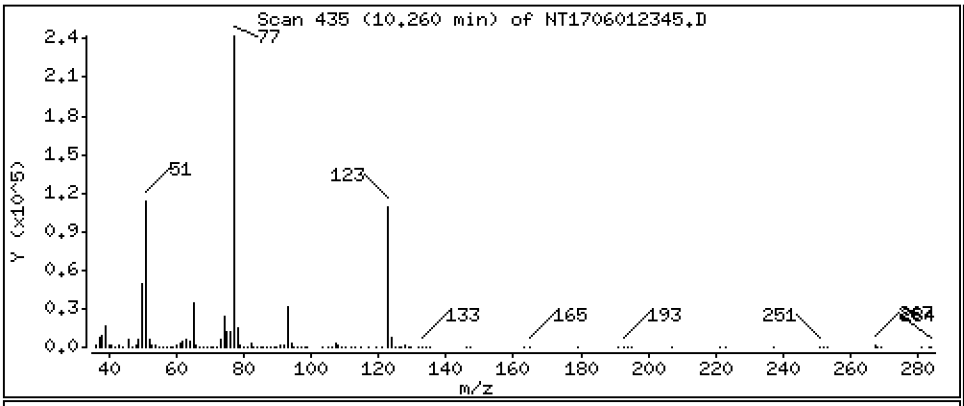
Operator: VTS

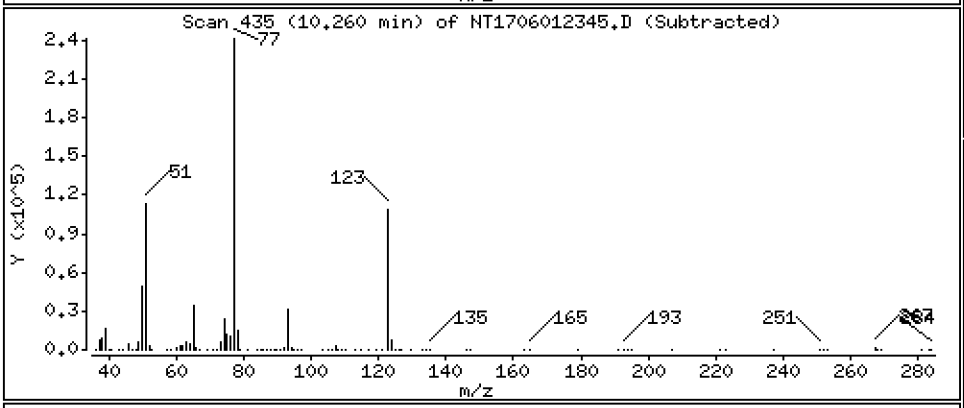
Column phase: ZB-5msi

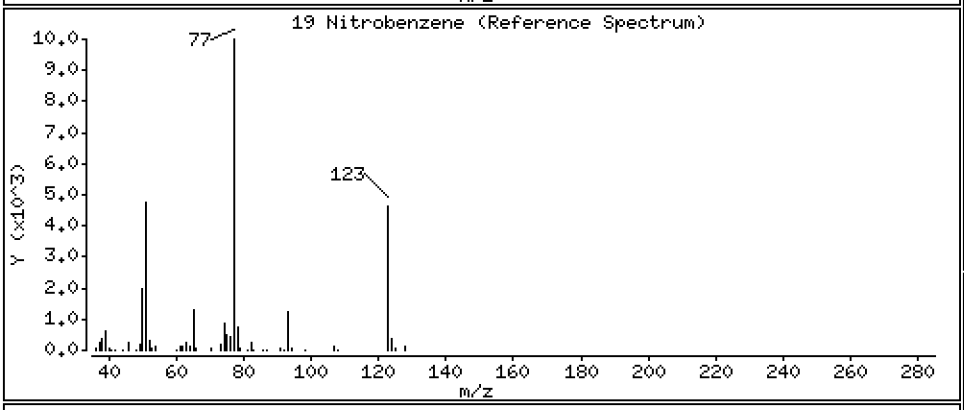
Column diameter: 0.25

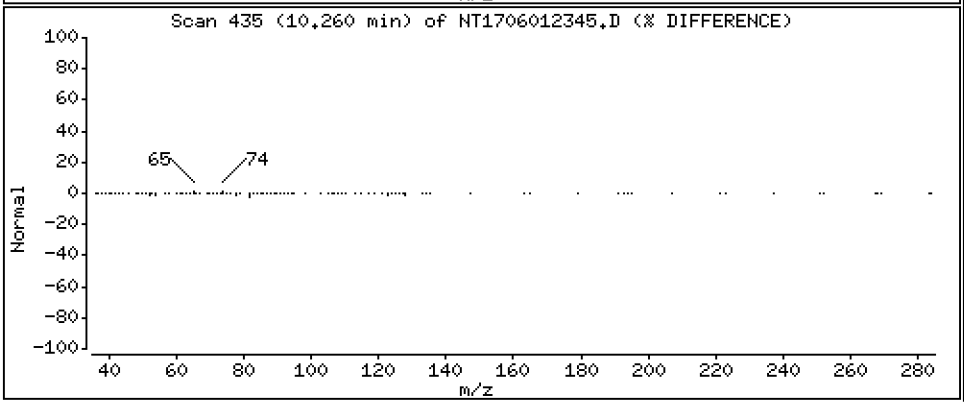
19 Nitrobenzene

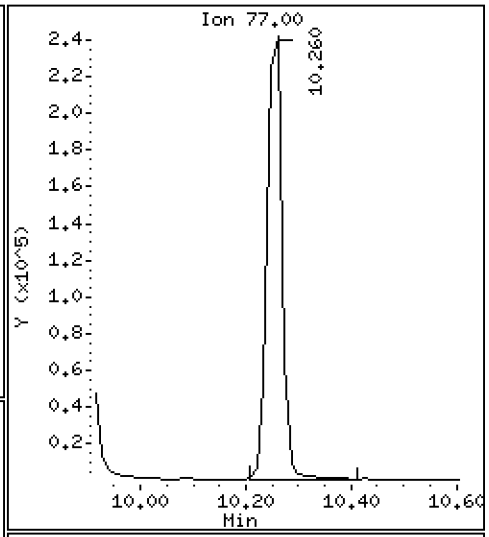
Concentration: 5.068 ug/mL

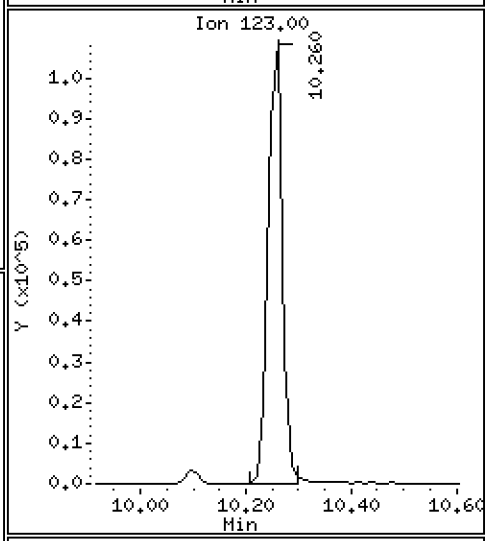


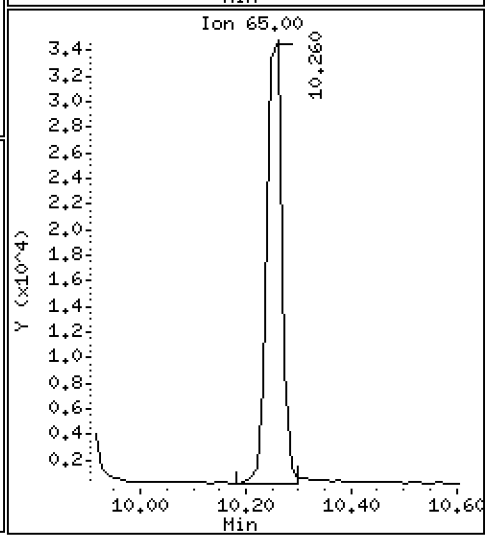












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

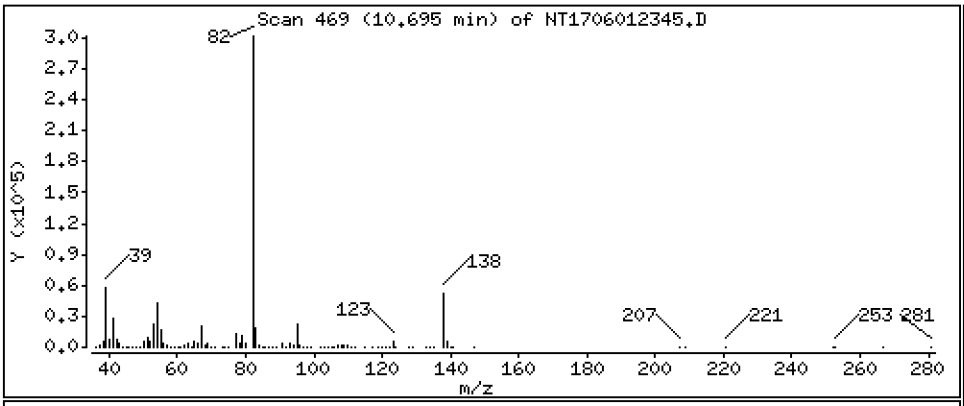
Operator: VTS

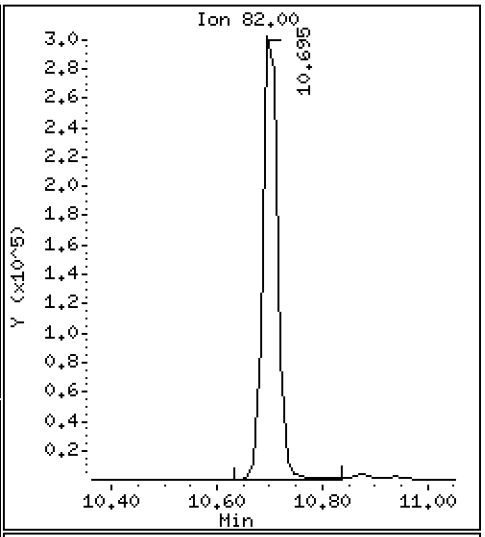
Column phase: ZB-5msi

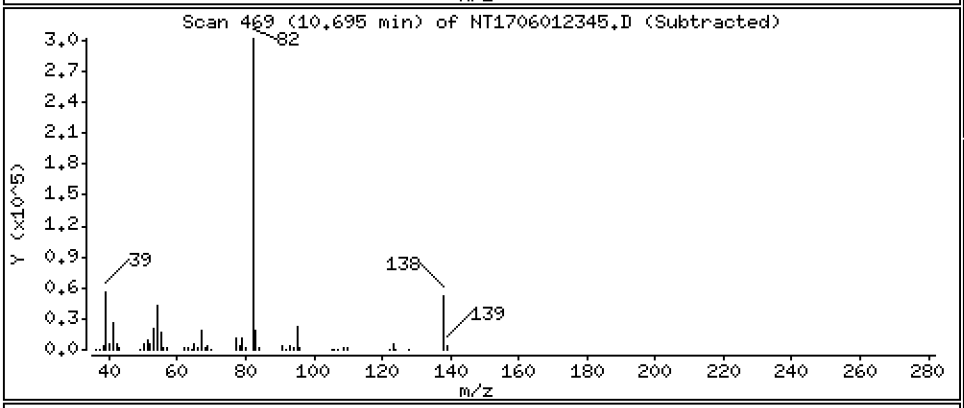
Column diameter: 0.25

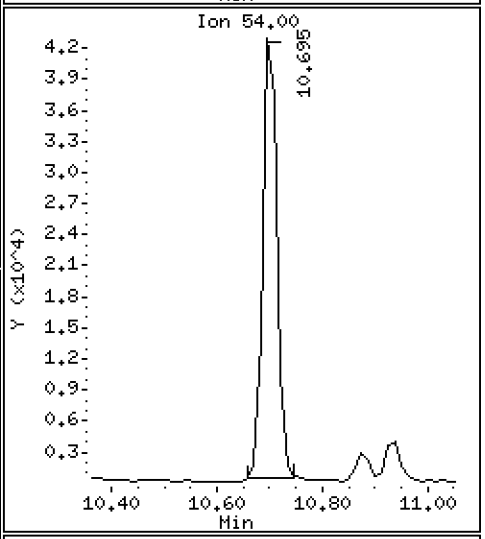
20 Isophorone

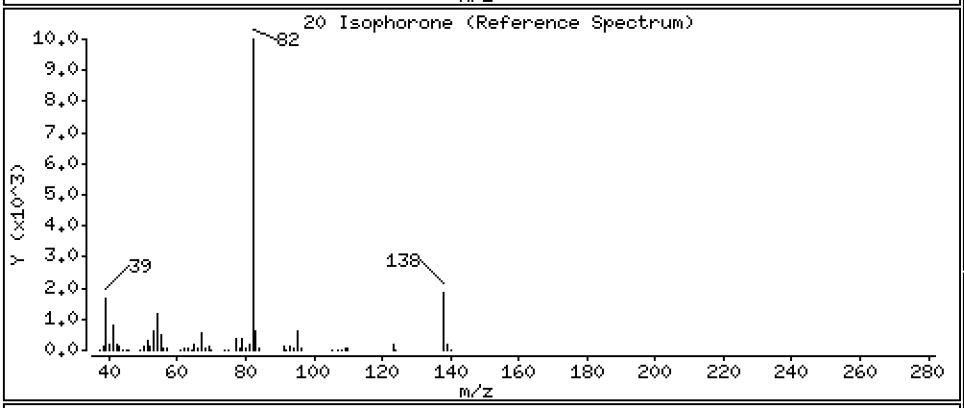
Concentration: 5.543 ug/mL

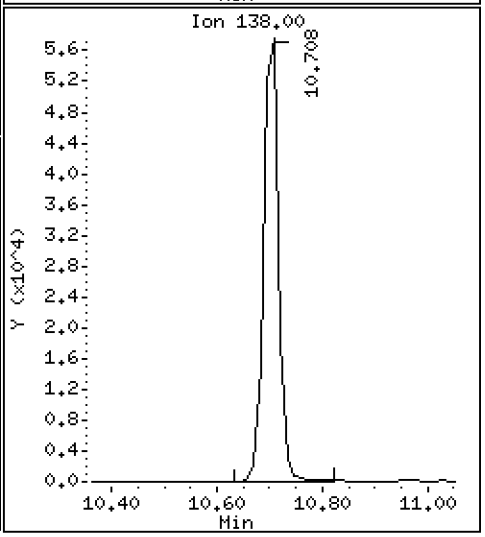


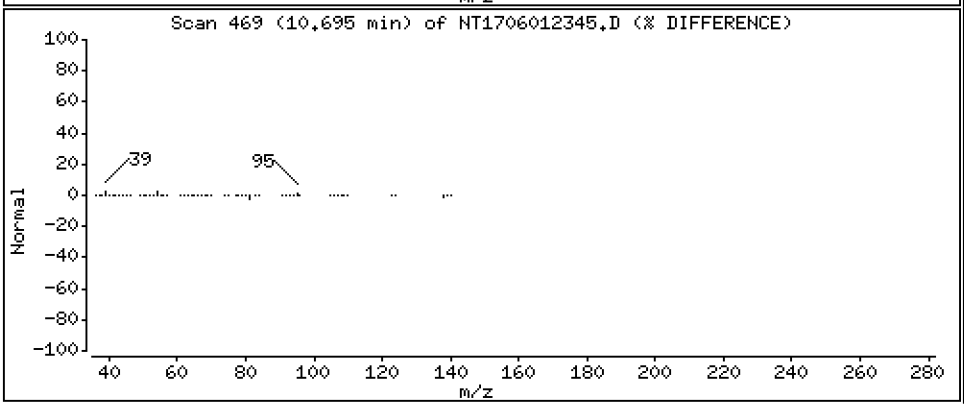












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

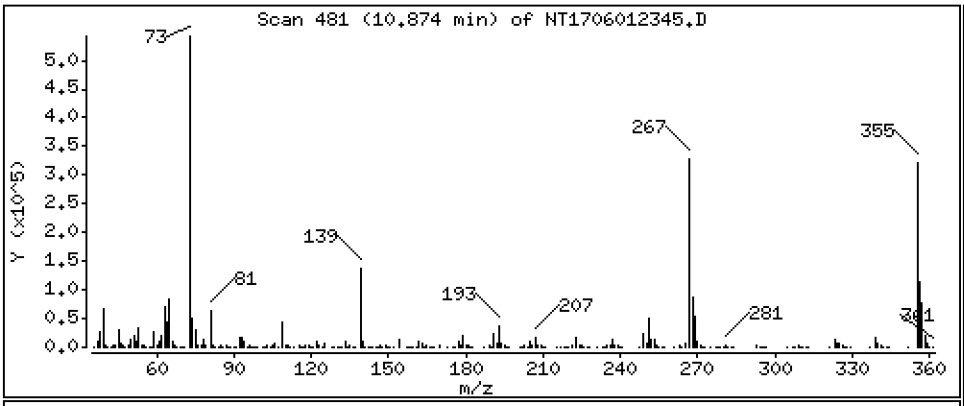
Operator: VTS

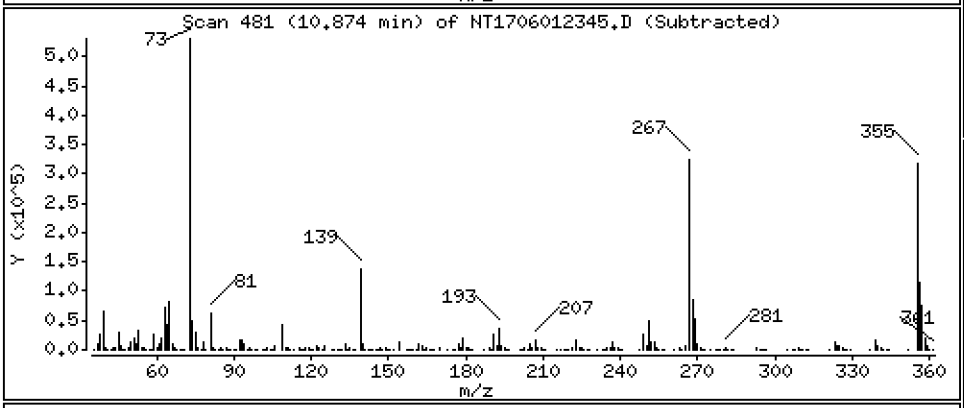
Column phase: ZB-5msi

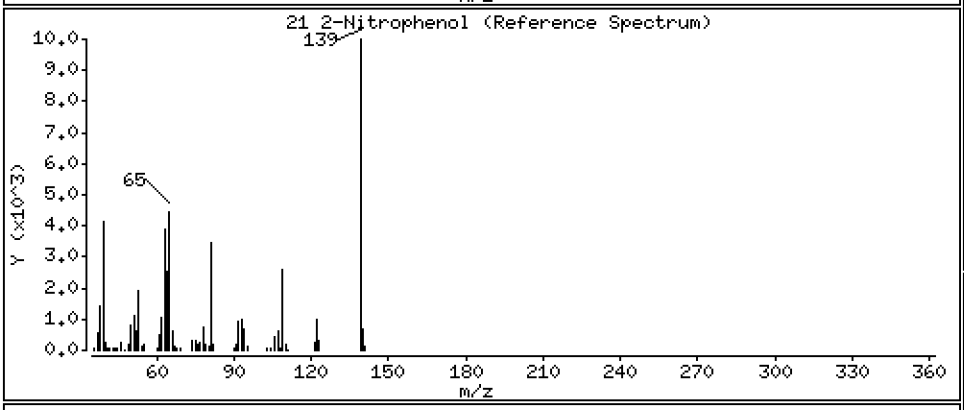
Column diameter: 0.25

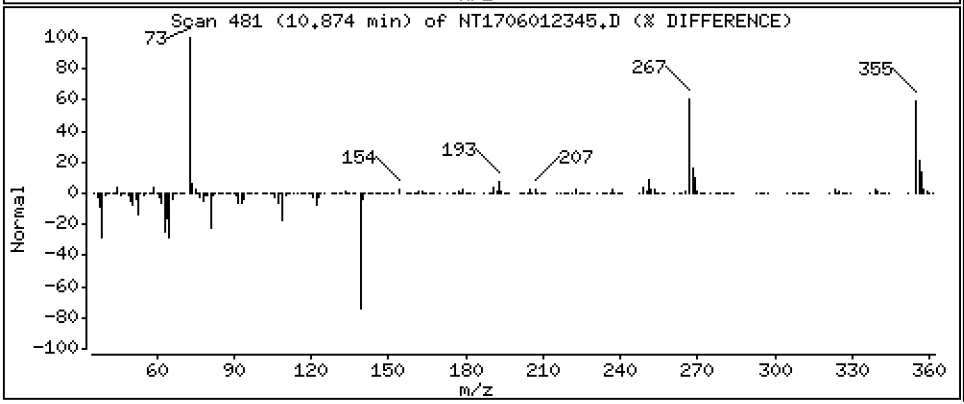
21 2-Nitrophenol

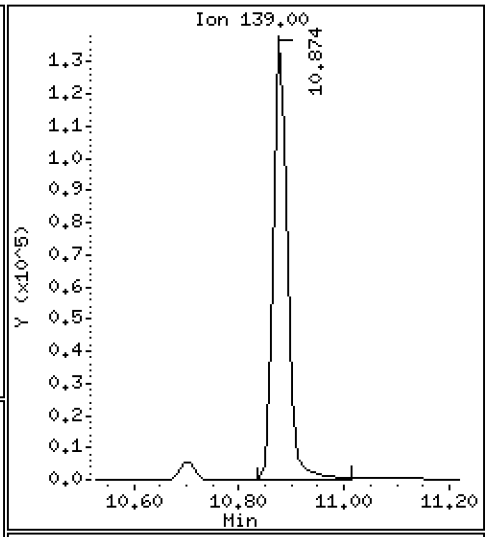
Concentration: 5.819 ug/mL

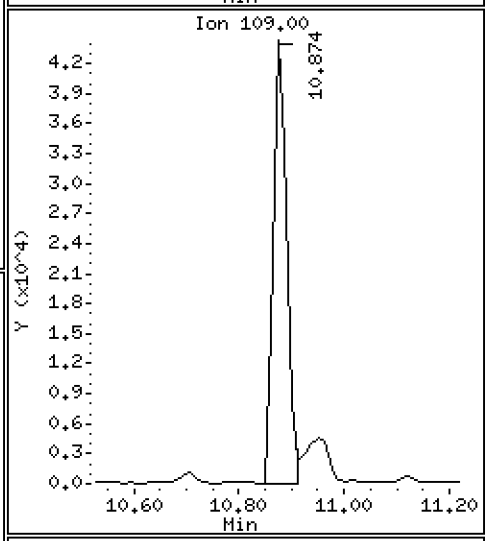


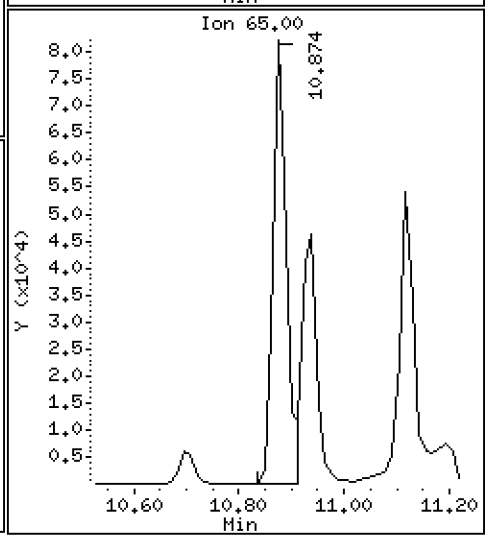












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

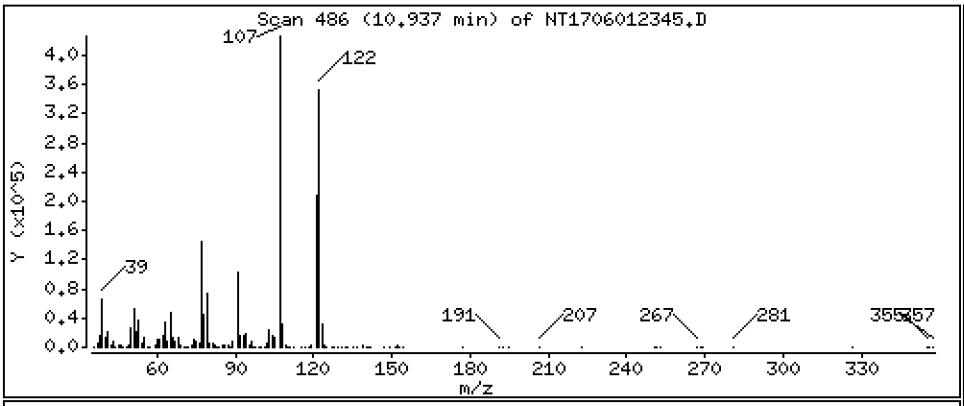
Operator: VTS

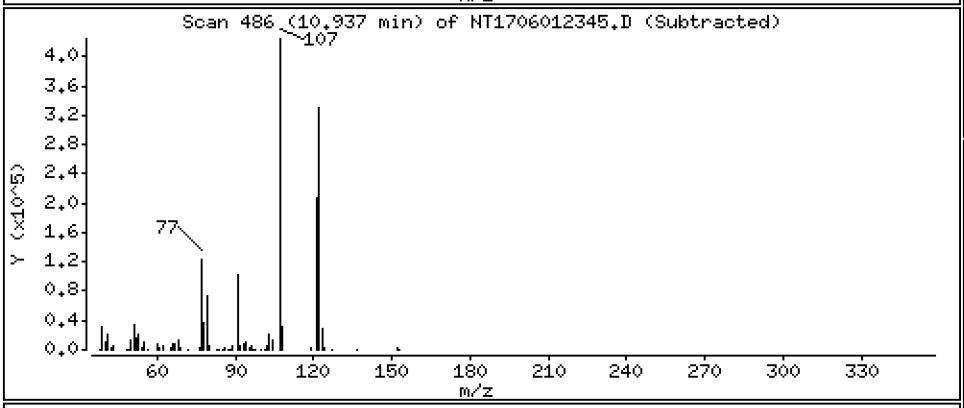
Column phase: ZB-5msi

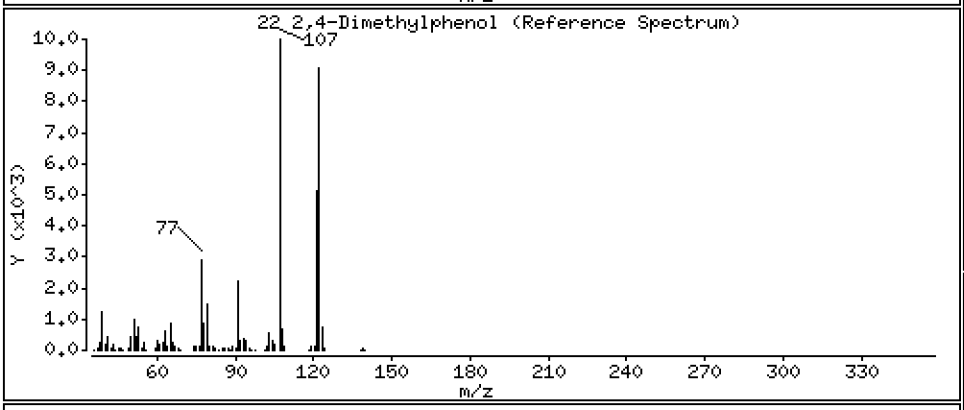
Column diameter: 0.25

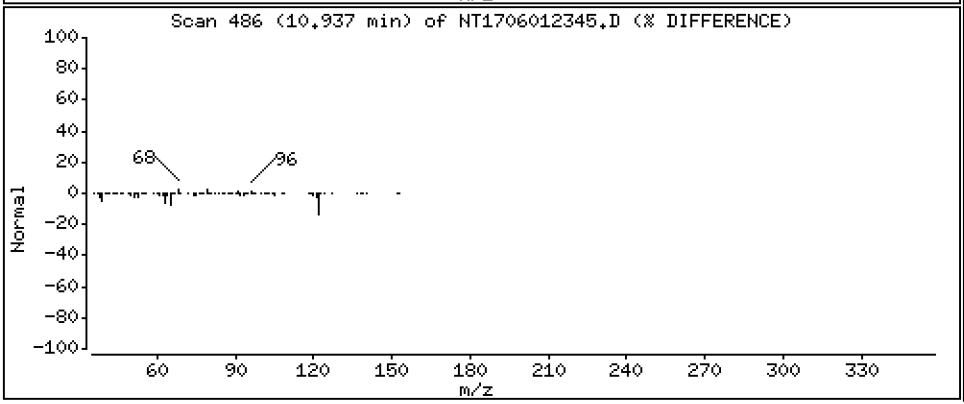
22 2,4-Dimethylphenol

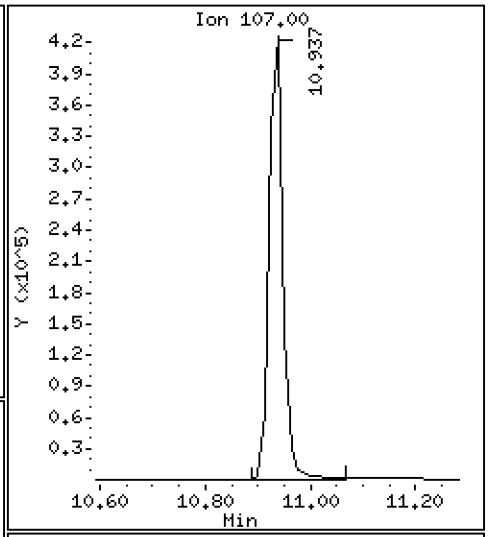
Concentration: 9.090 ug/mL

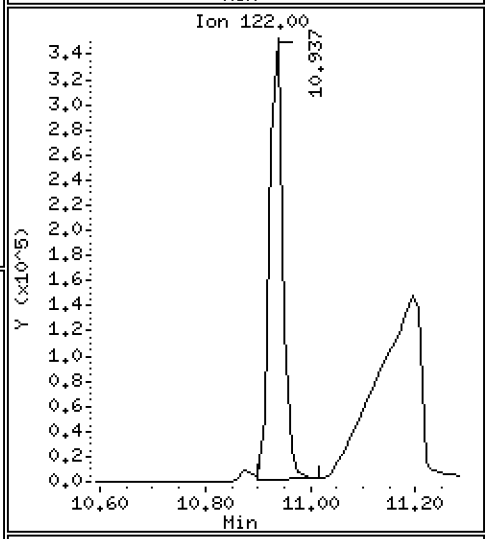


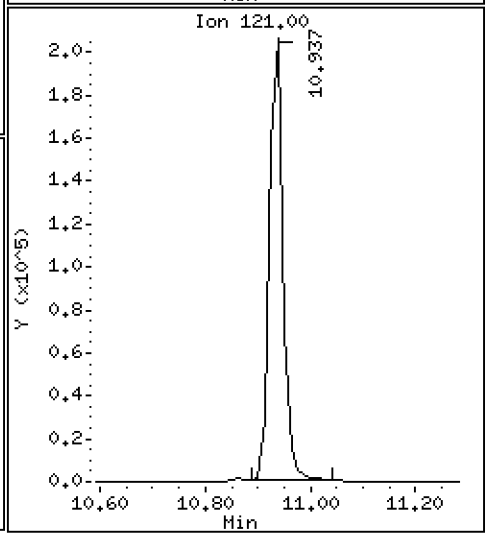












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

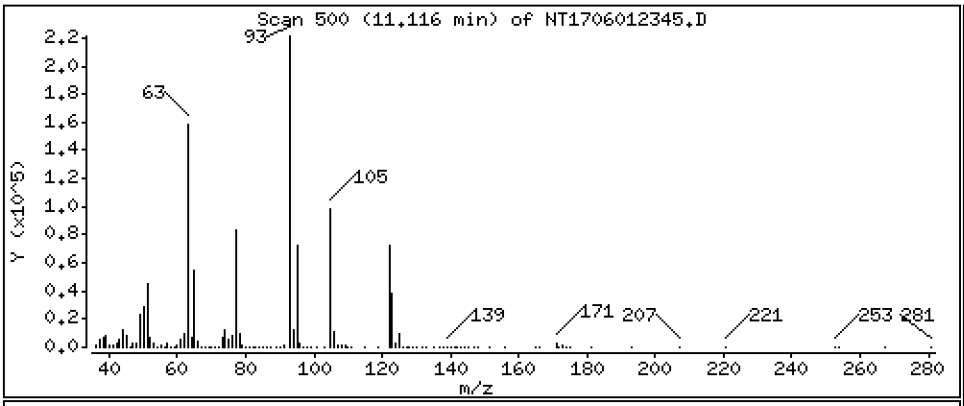
Operator: VTS

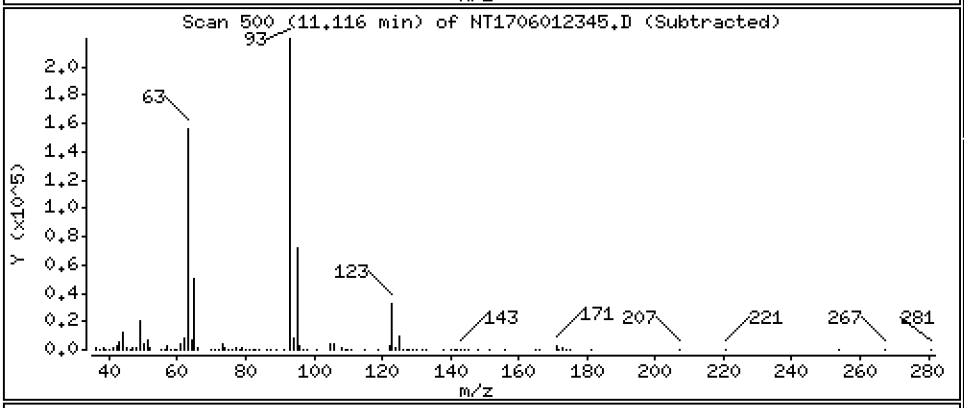
Column phase: ZB-5msi

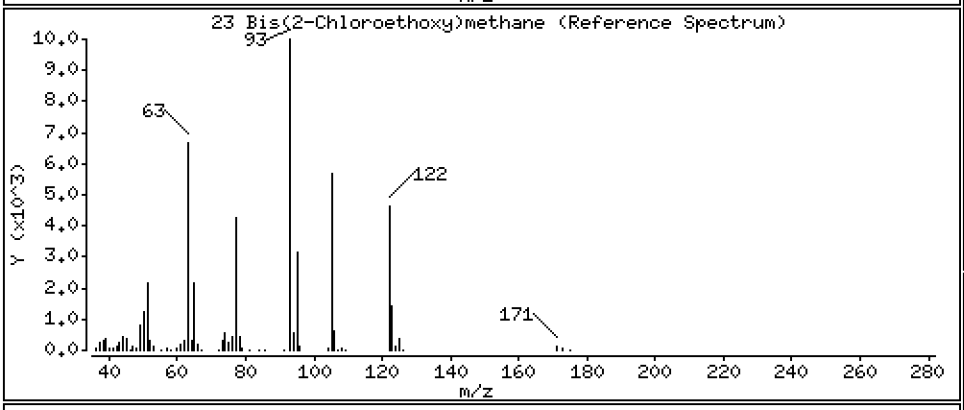
Column diameter: 0.25

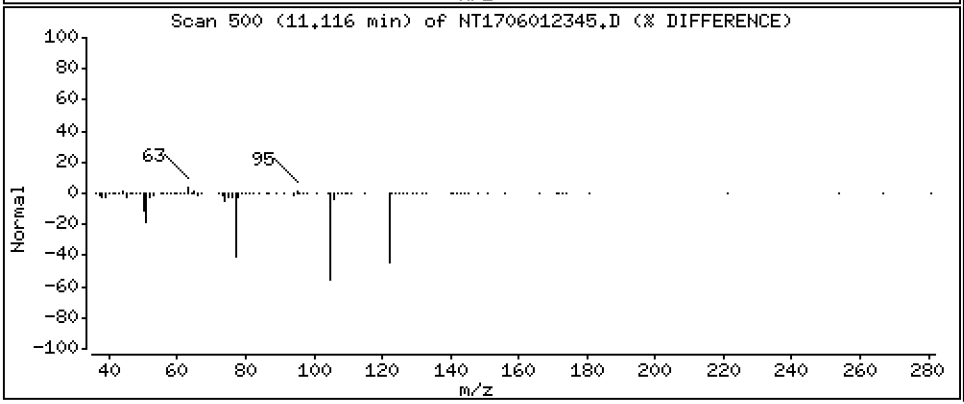
23 Bis(2-Chloroethoxy)methane

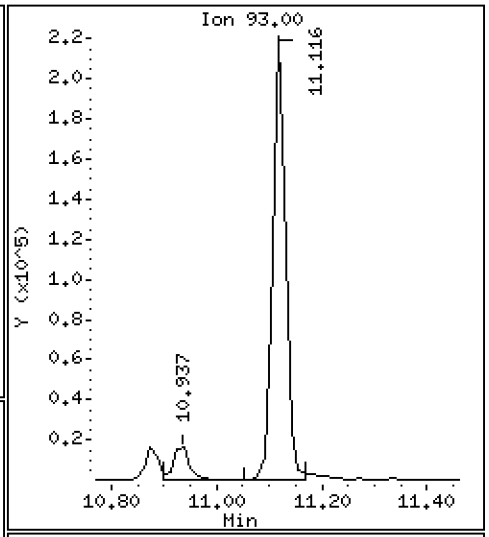
Concentration: 4.851 ug/mL

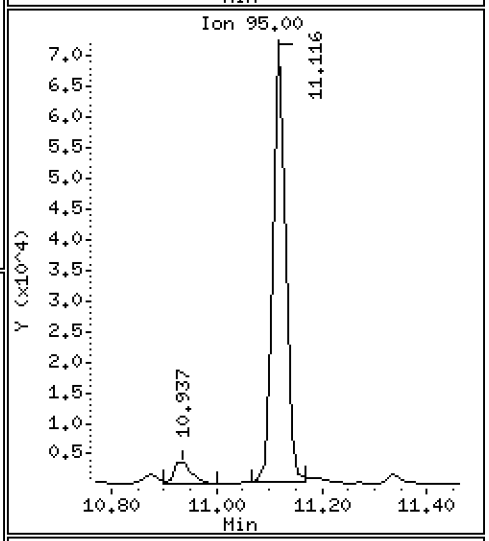


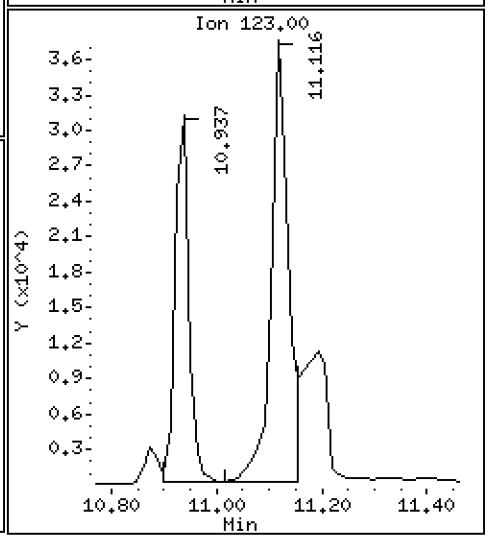












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

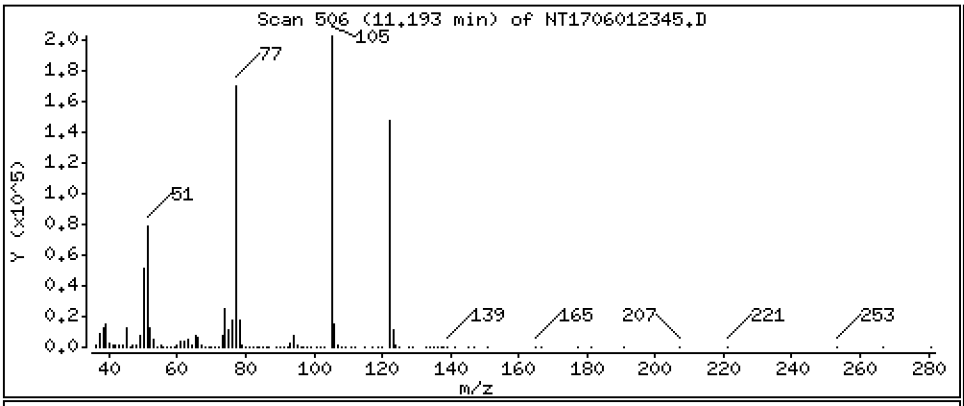
Operator: VTS

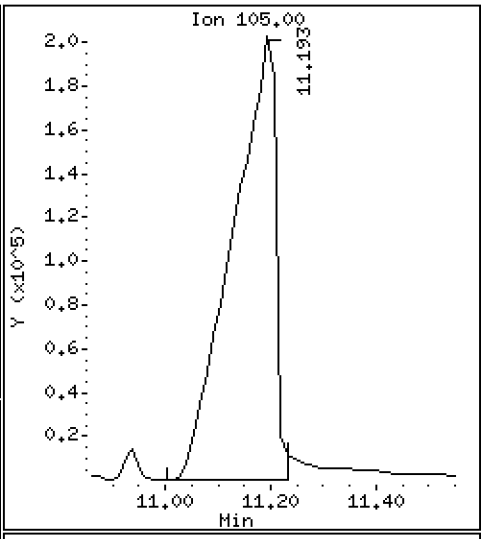
Column phase: ZB-5msi

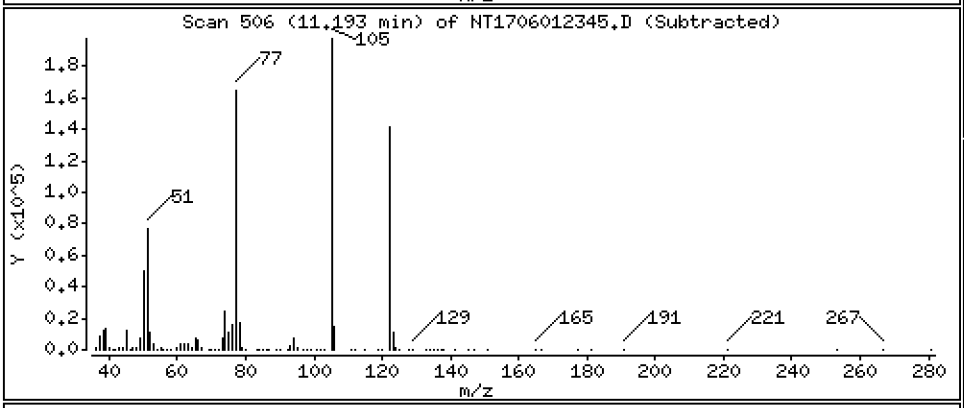
Column diameter: 0.25

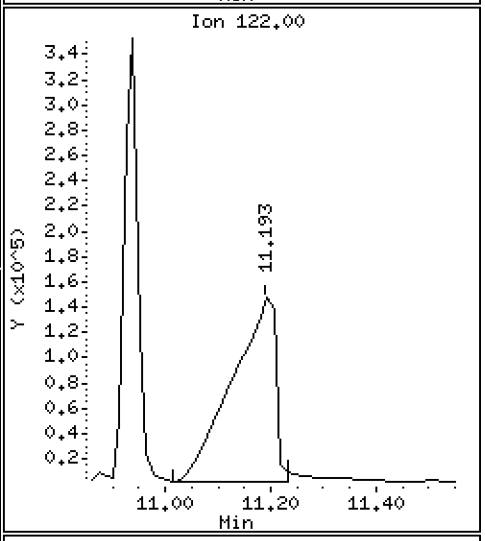
24 Benzoic acid

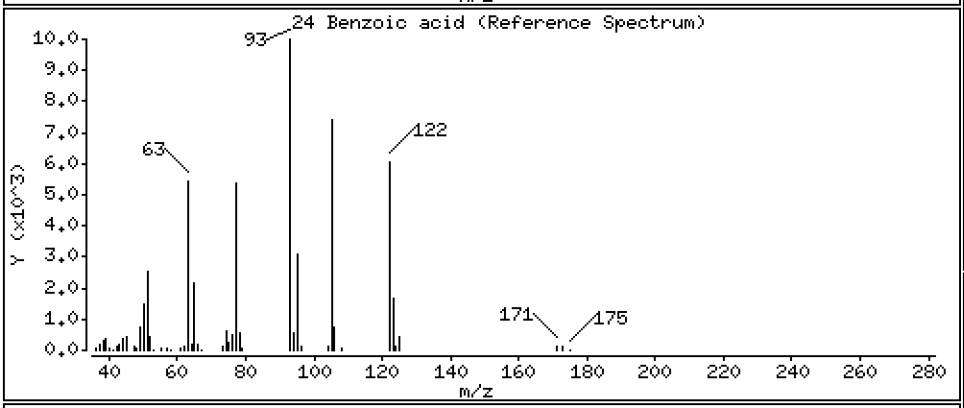
Concentration: 20.09 ug/mL

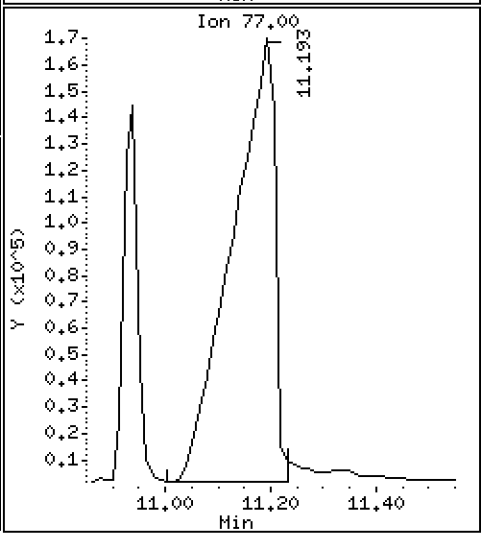


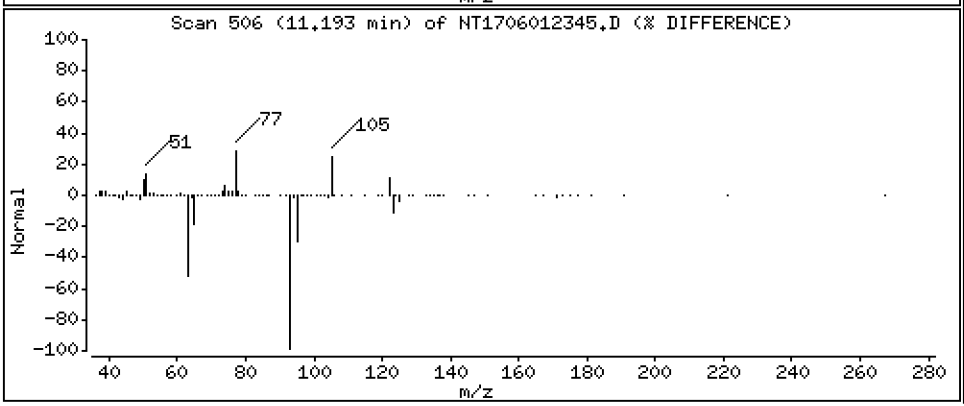












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

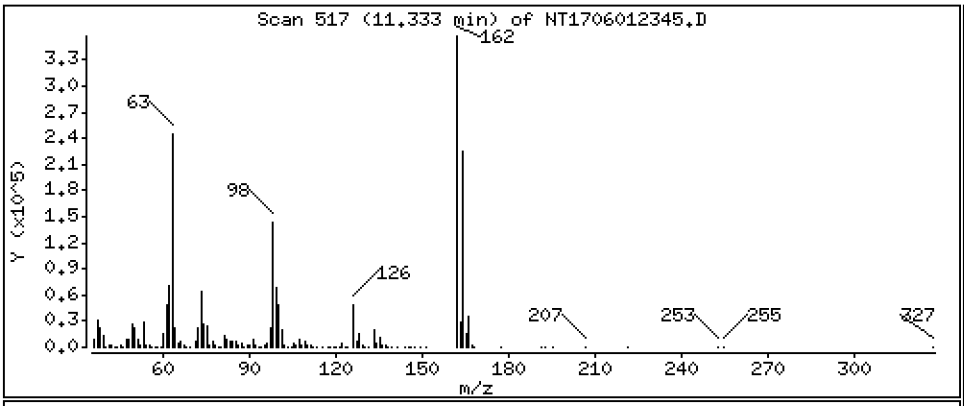
Operator: VTS

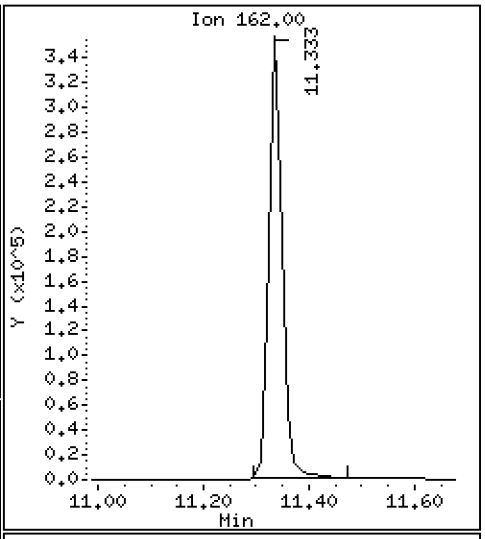
Column phase: ZB-5msi

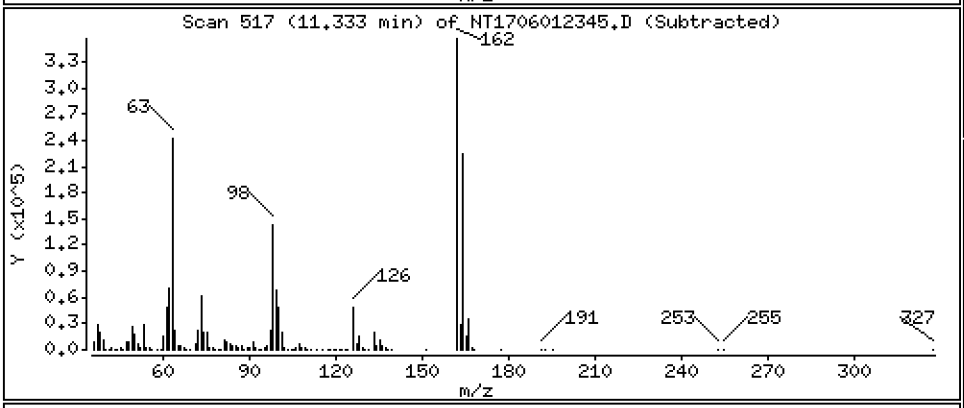
Column diameter: 0.25

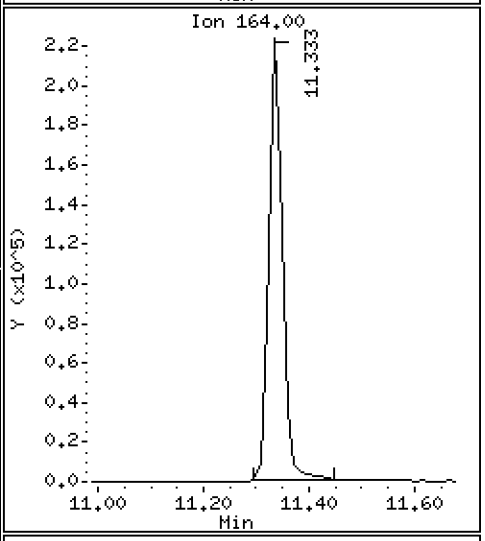
25 2,4-Dichlorophenol

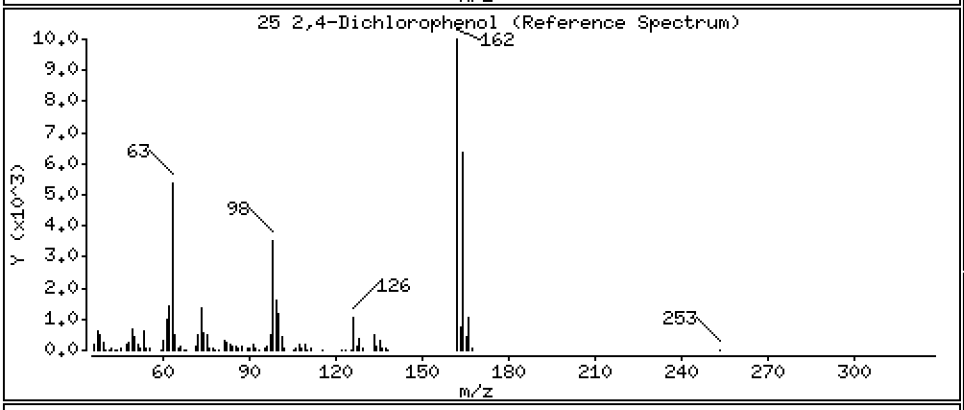
Concentration: 10.56 ug/mL

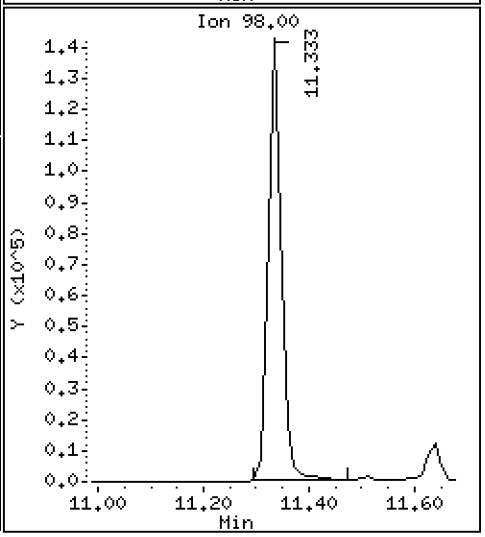


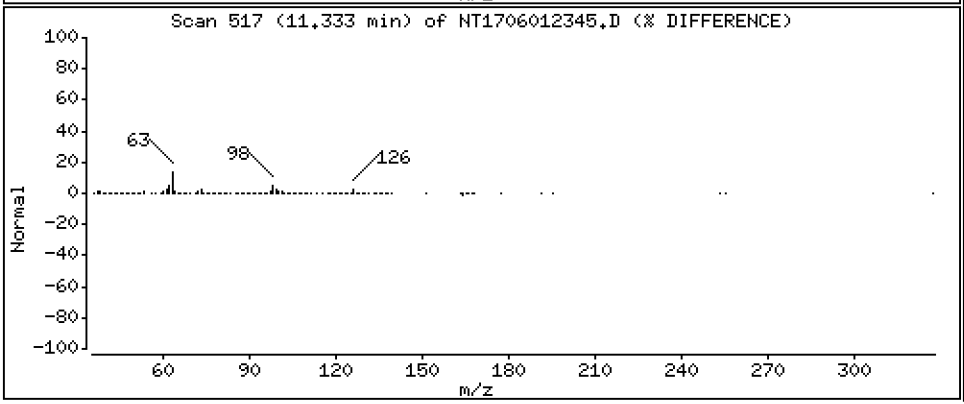












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

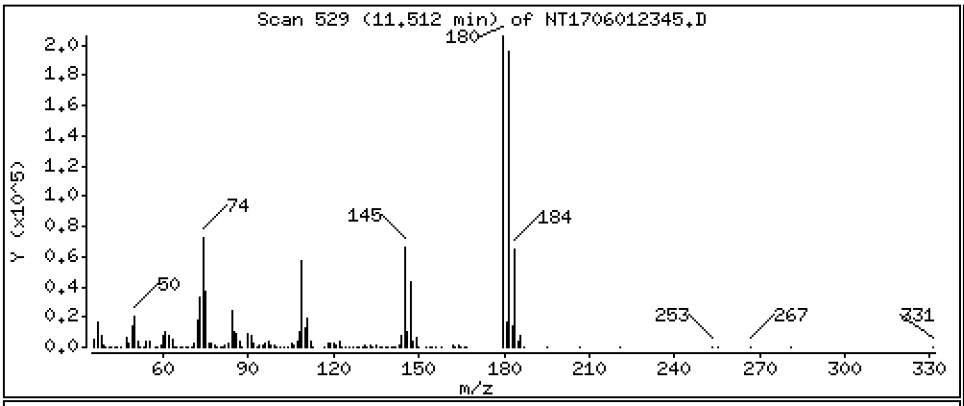
Operator: VTS

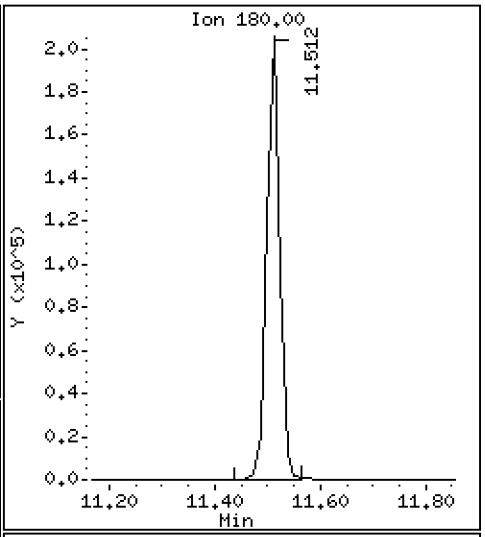
Column phase: ZB-5msi

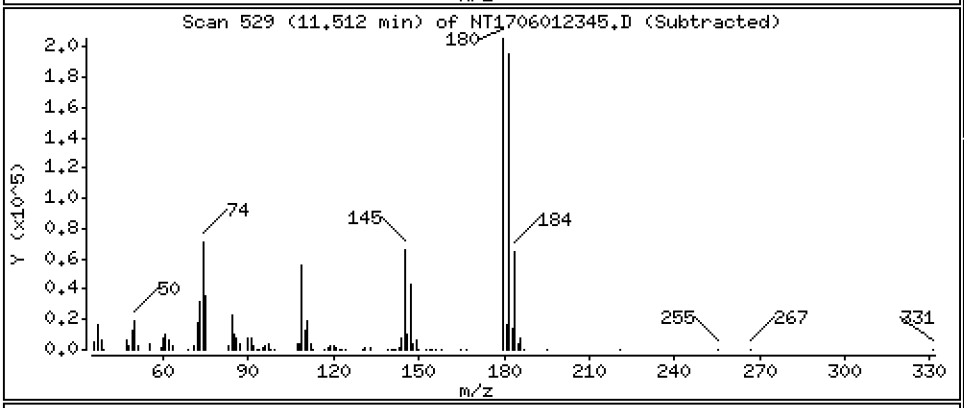
Column diameter: 0.25

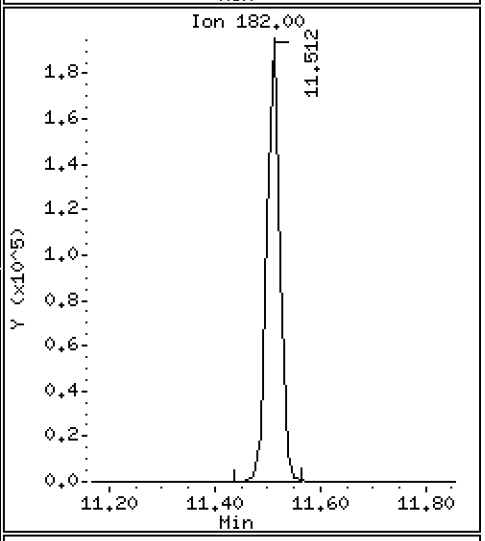
26 1,2,4-Trichlorobenzene

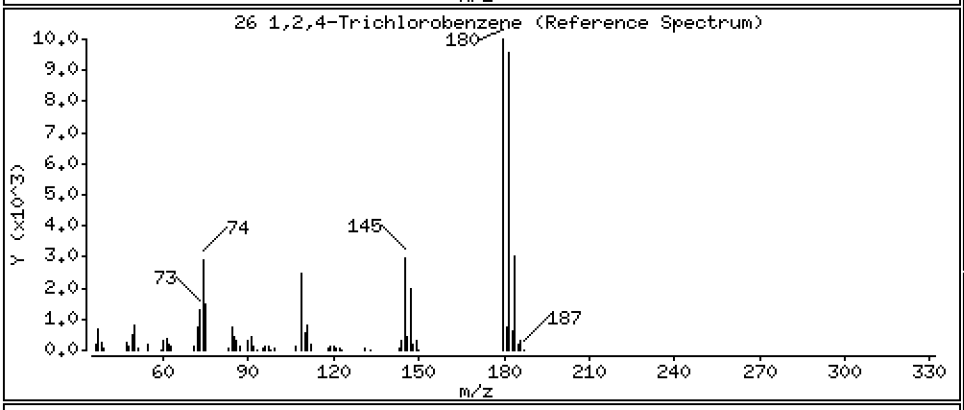
Concentration: 4.706 ug/mL

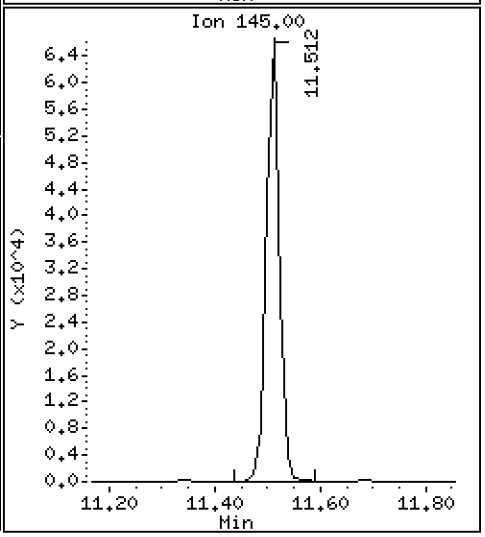


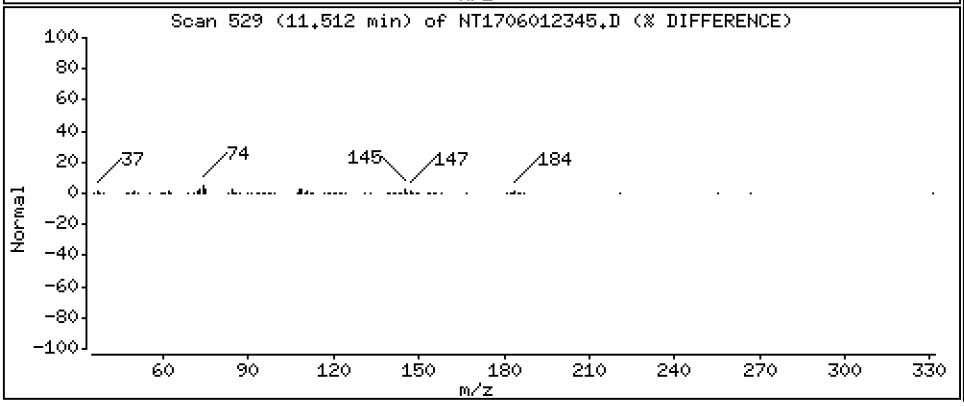












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

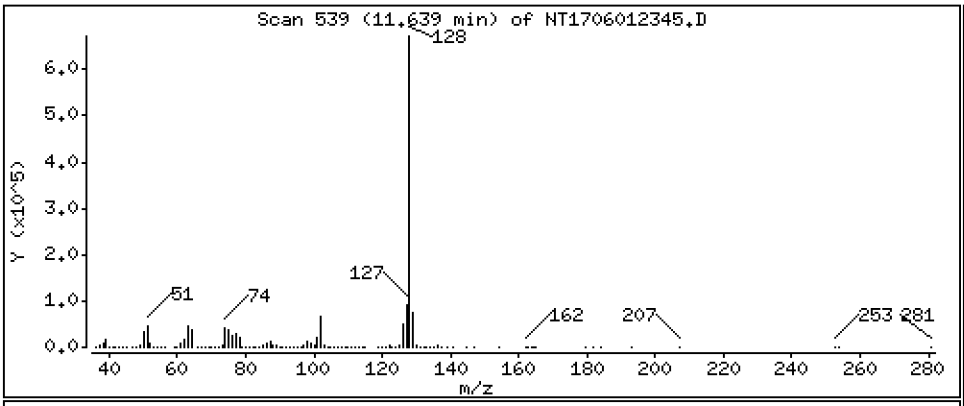
Operator: VTS

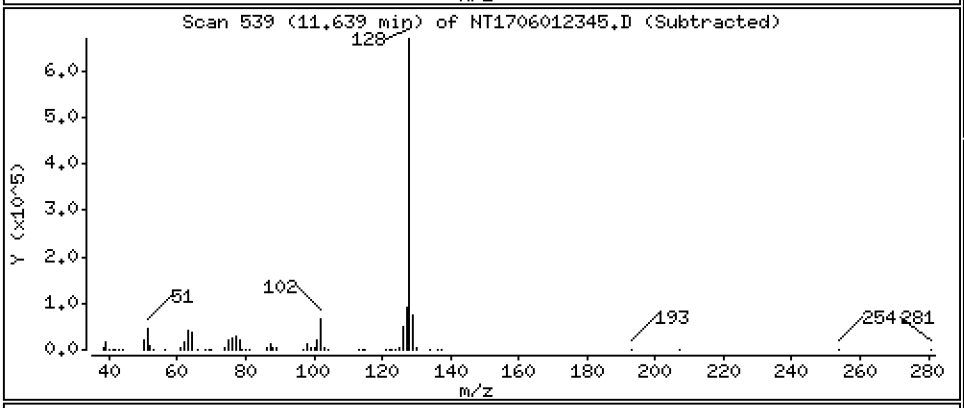
Column phase: ZB-5msi

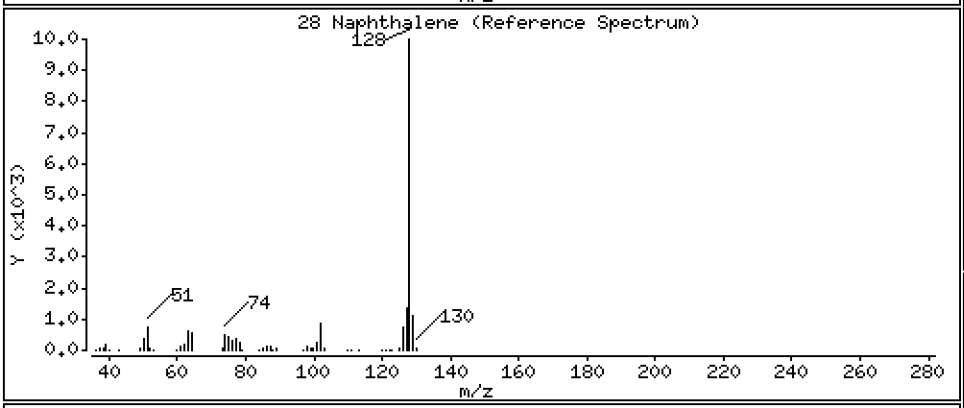
Column diameter: 0.25

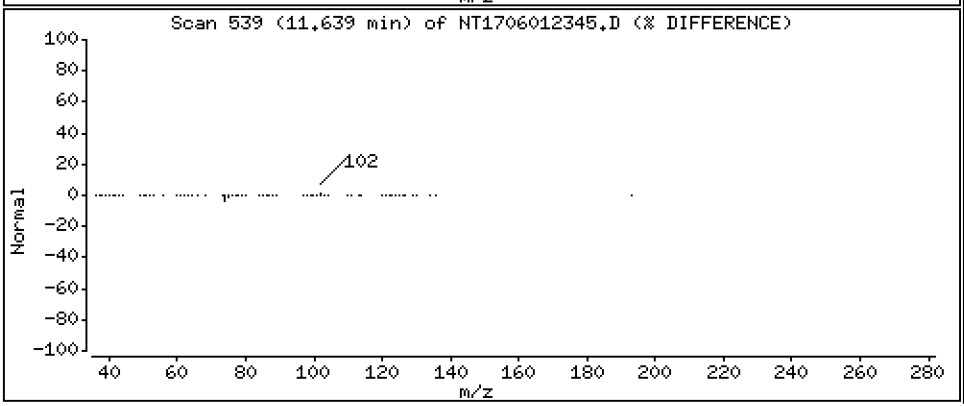
28 Naphthalene

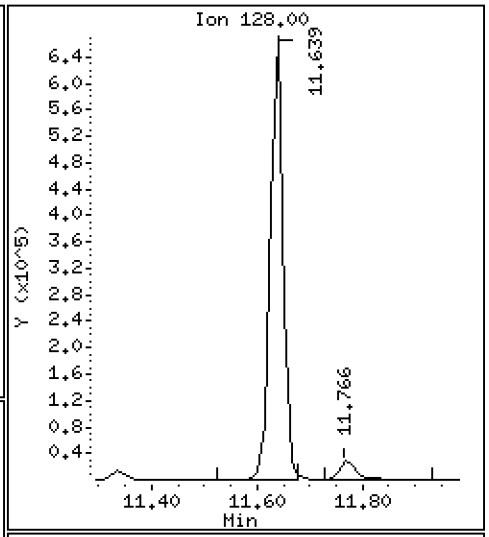
Concentration: 4.887 ug/mL

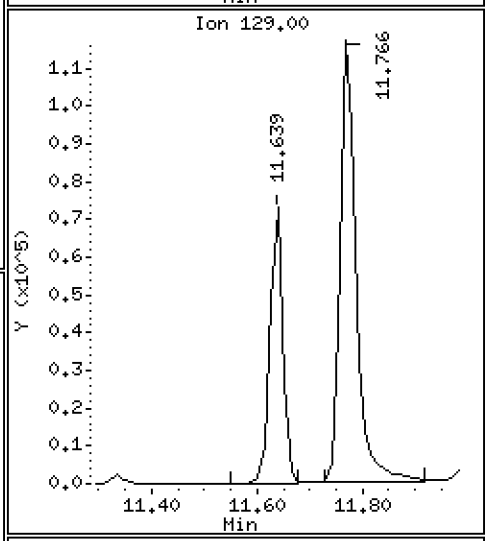


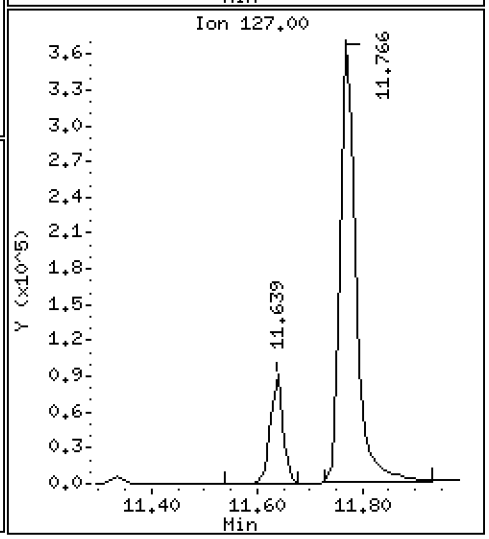












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

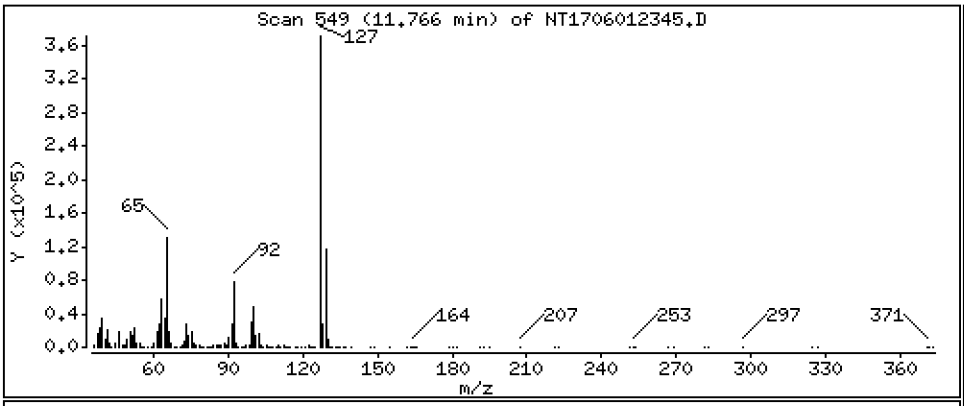
Operator: VTS

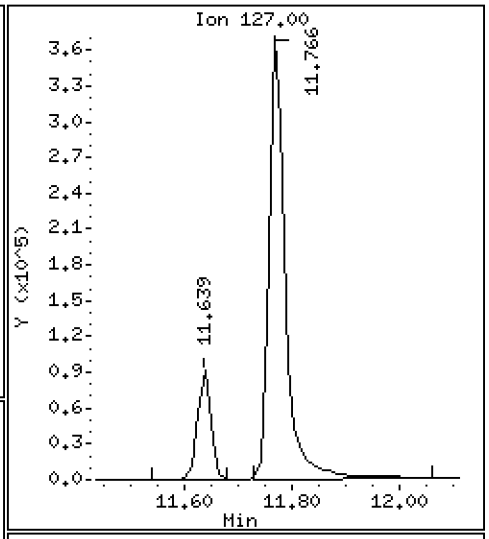
Column phase: ZB-5msi

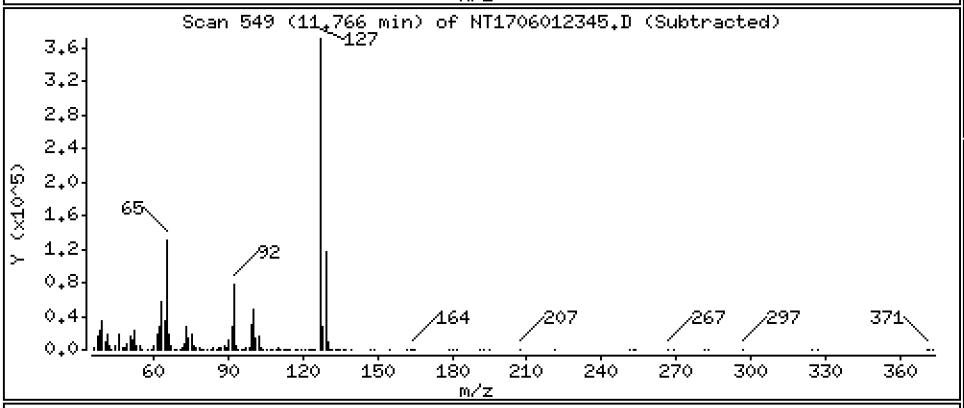
Column diameter: 0.25

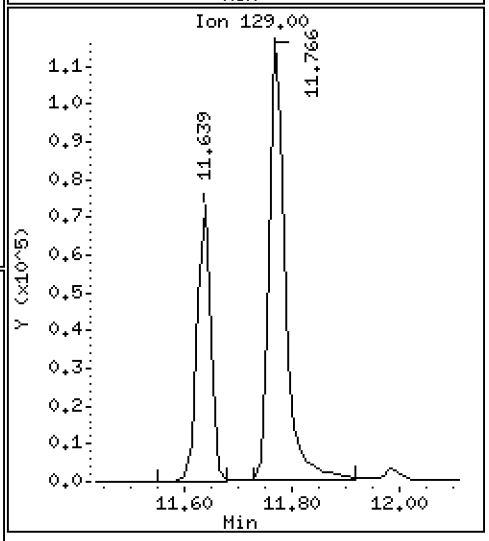
29 4-Chloroaniline

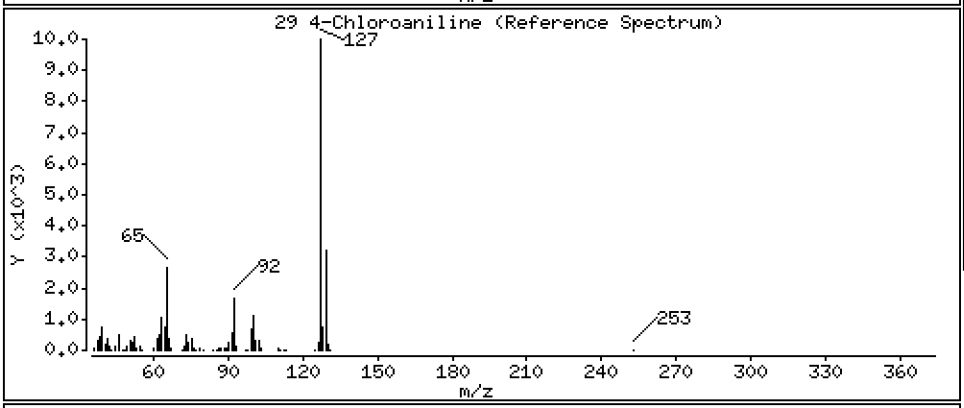
Concentration: 9.438 ug/mL

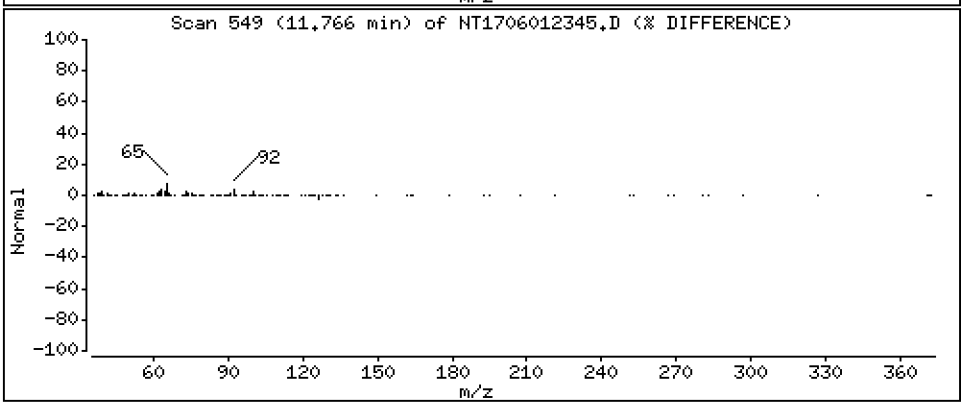












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

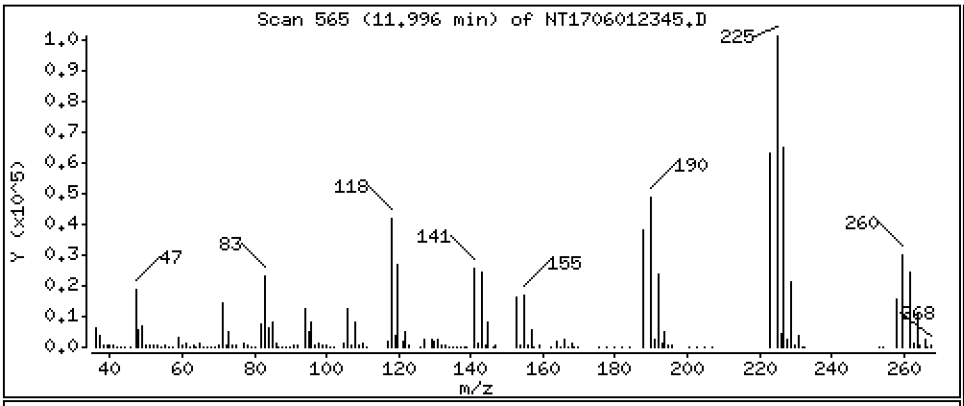
Operator: VTS

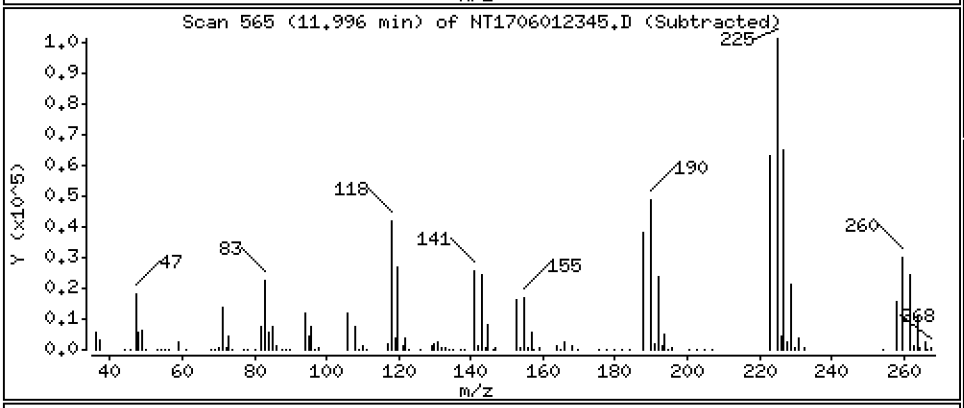
Column phase: ZB-5msi

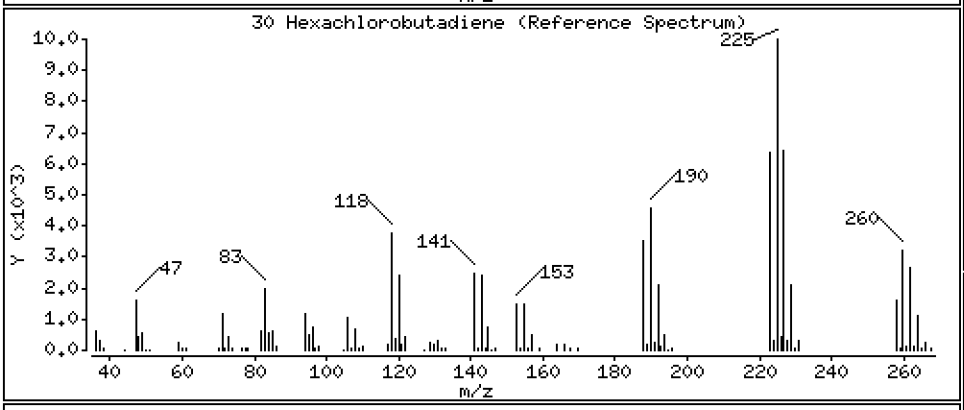
Column diameter: 0.25

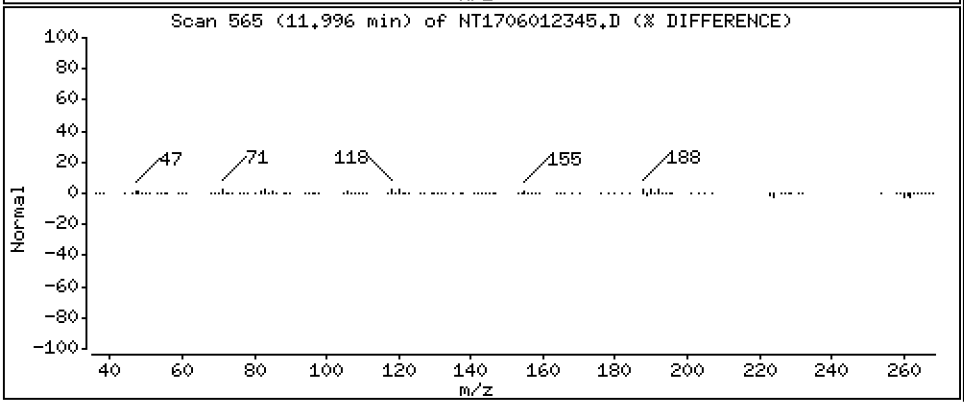
30 Hexachlorobutadiene

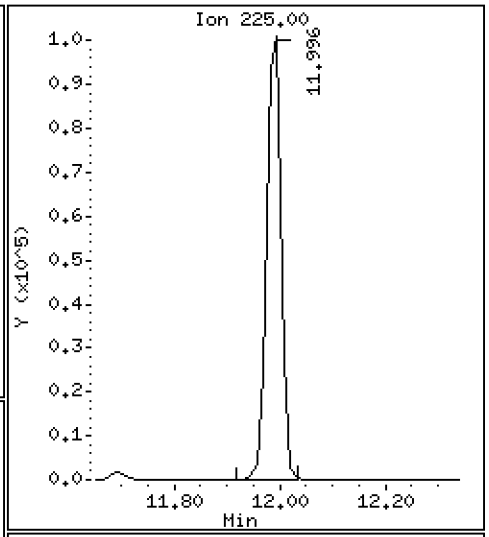
Concentration: 5.255 ug/mL

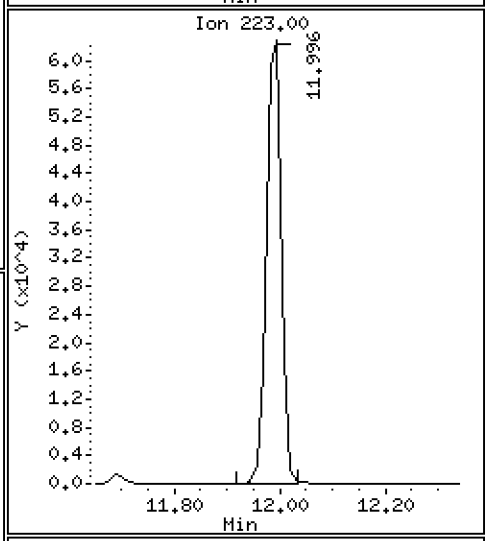


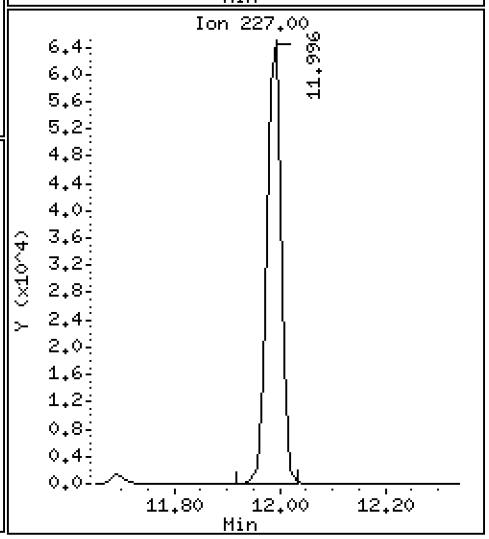












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

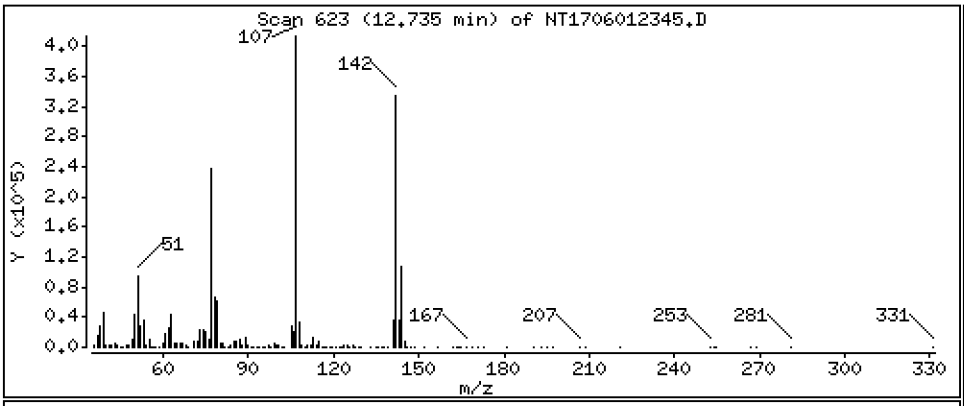
Operator: VTS

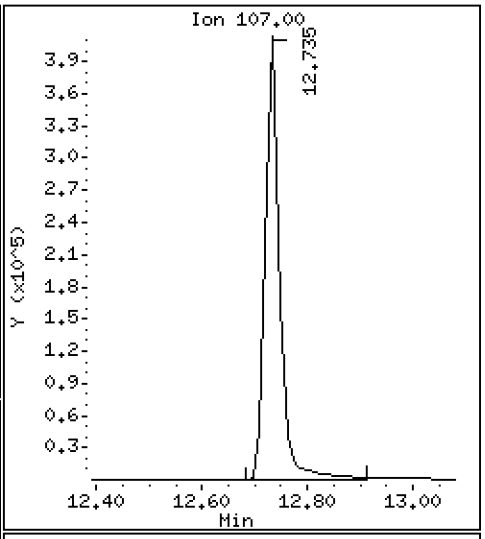
Column phase: ZB-5msi

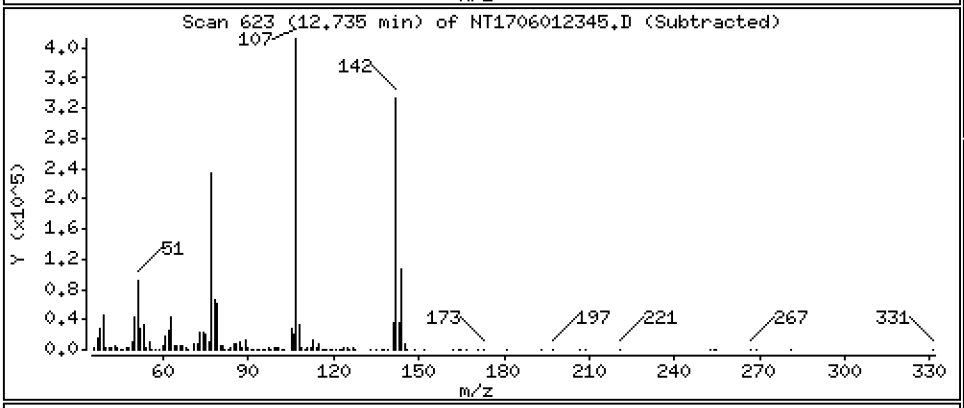
Column diameter: 0.25

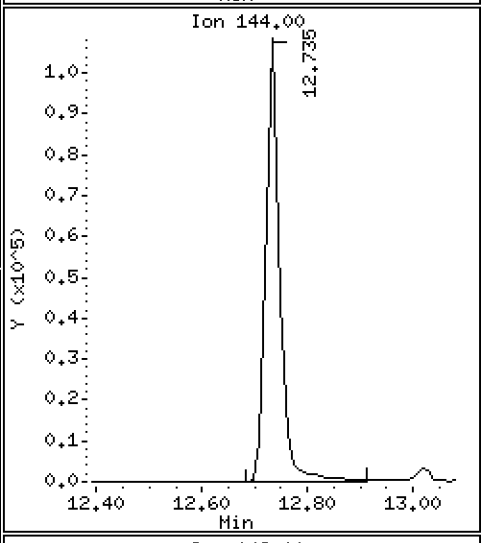
31 4-Chloro-3-methylphenol

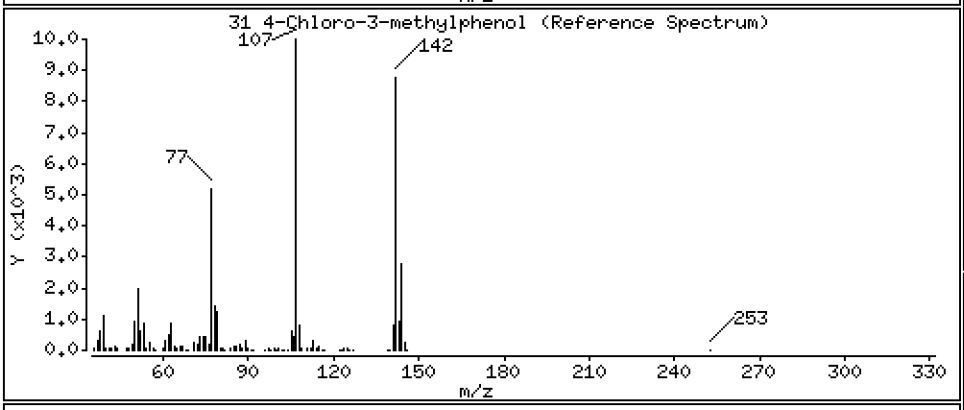
Concentration: 10.36 ug/mL

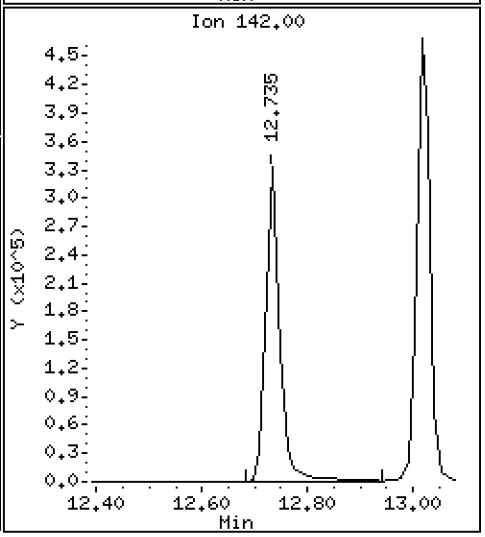


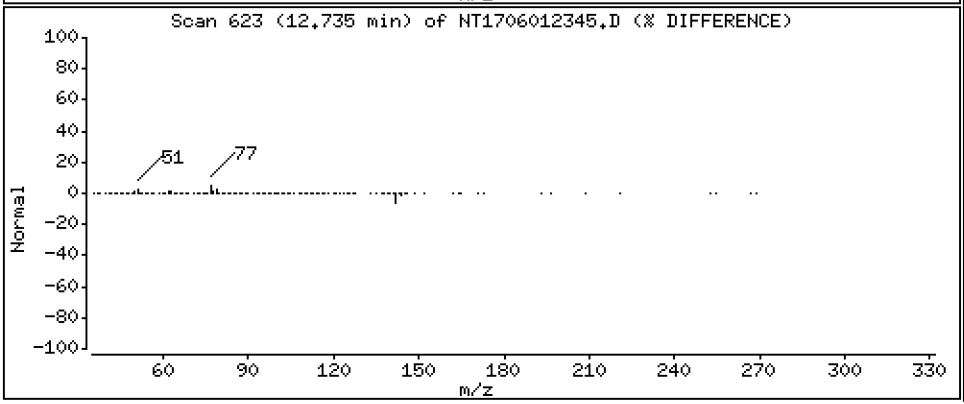












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

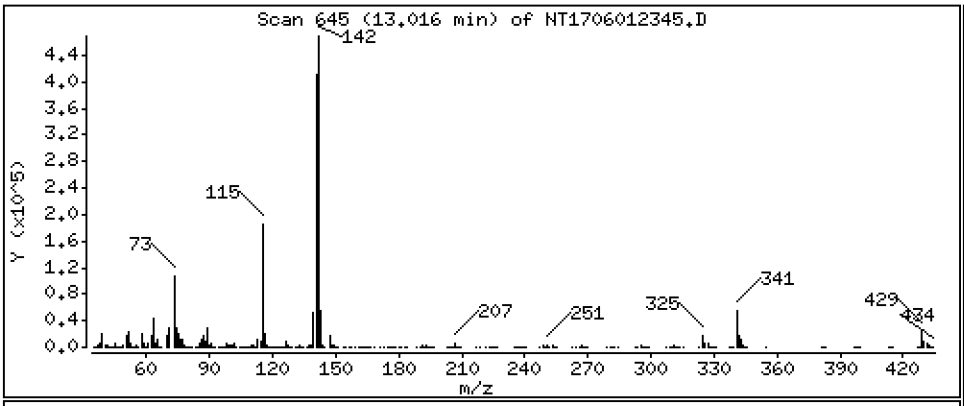
Operator: VTS

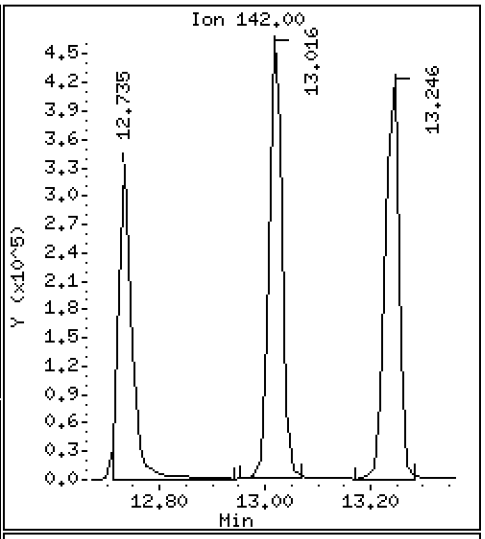
Column phase: ZB-5msi

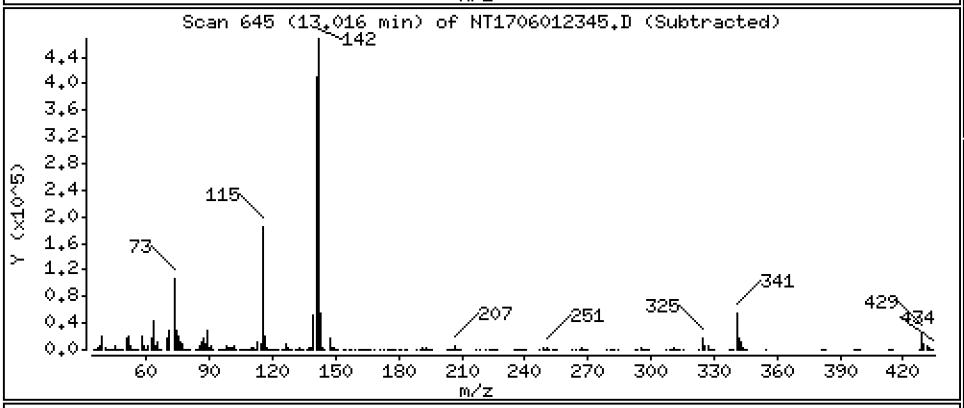
Column diameter: 0.25

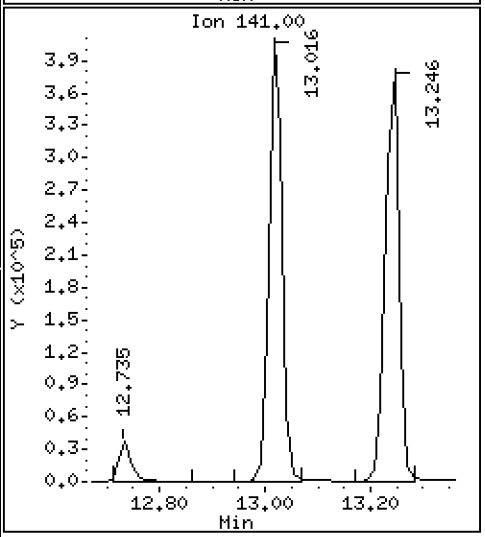
32 2-Methylnaphthalene

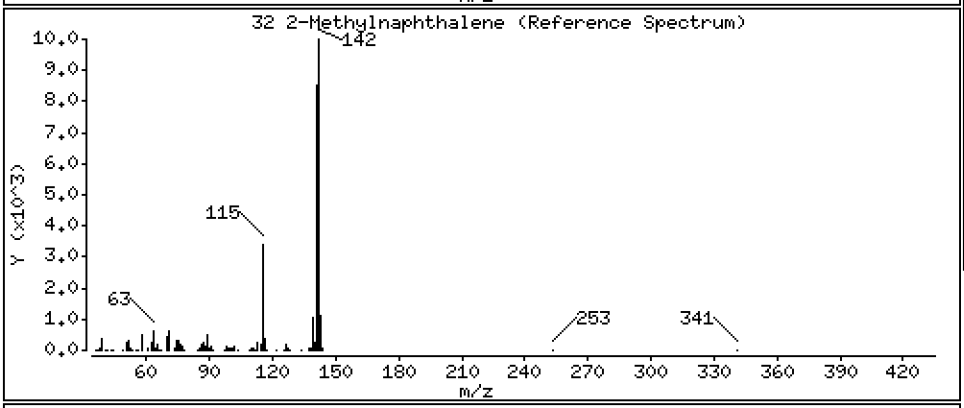
Concentration: 5.062 ug/mL

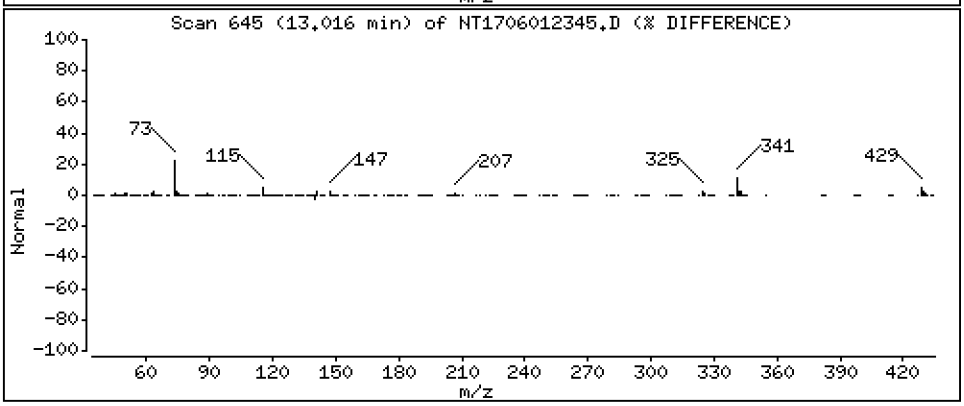












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

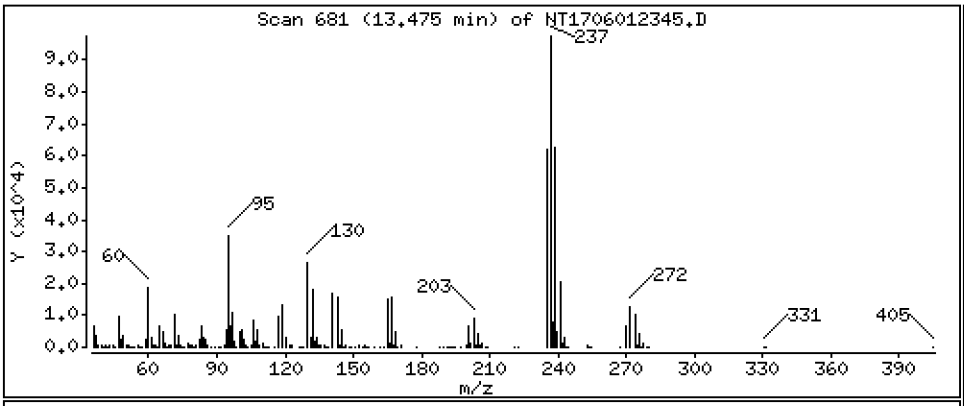
Operator: VTS

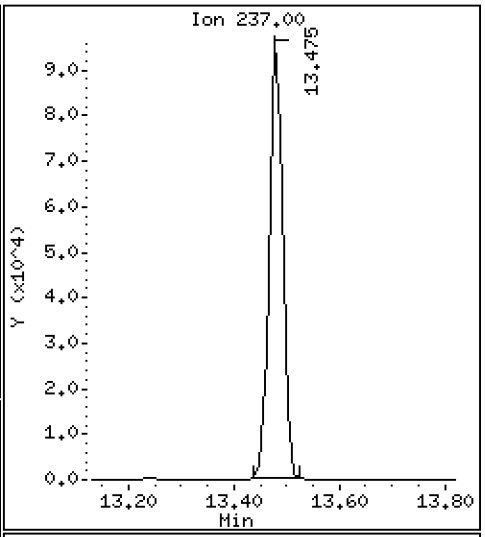
Column phase: ZB-5msi

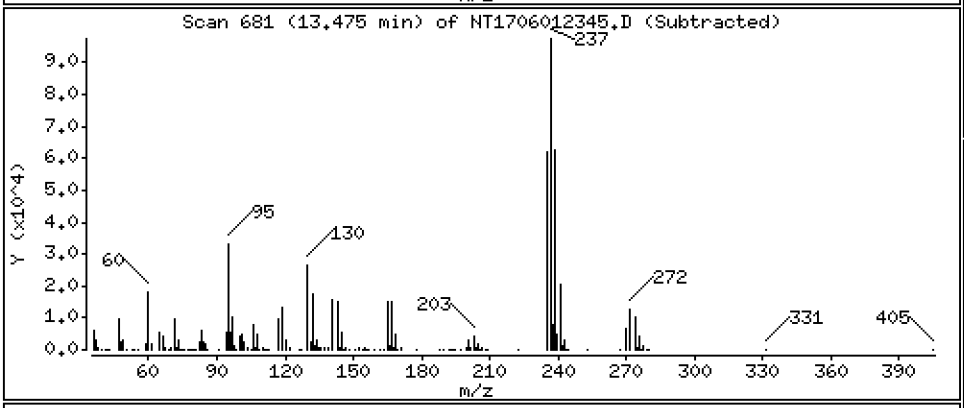
Column diameter: 0.25

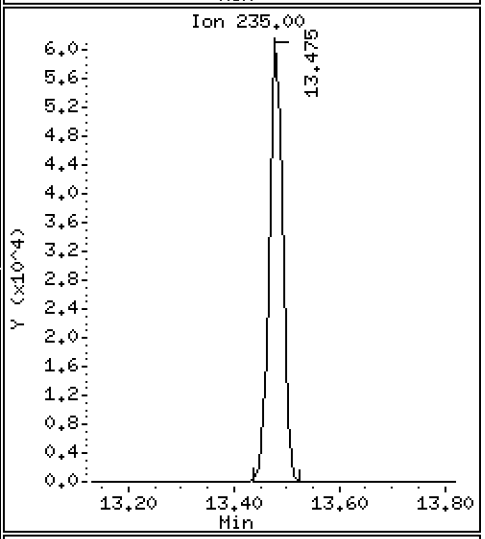
33 Hexachlorocyclopentadiene

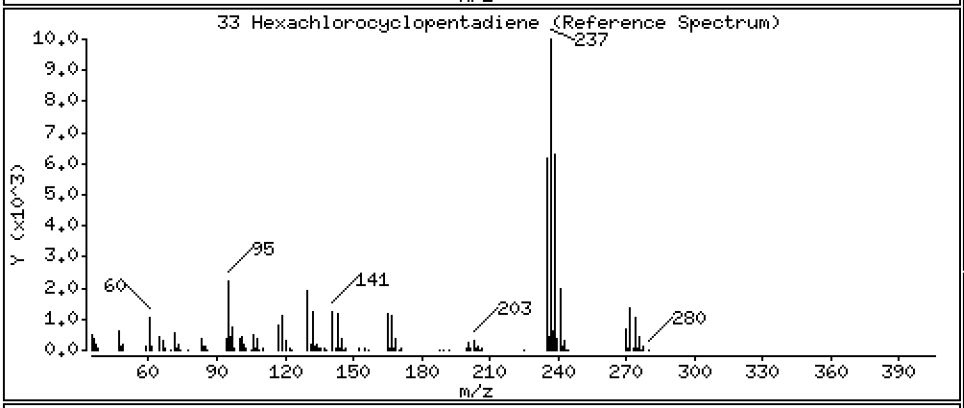
Concentration: 4.014 ug/mL

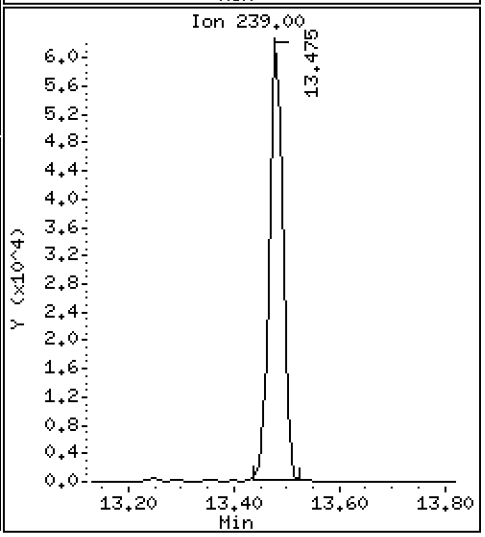


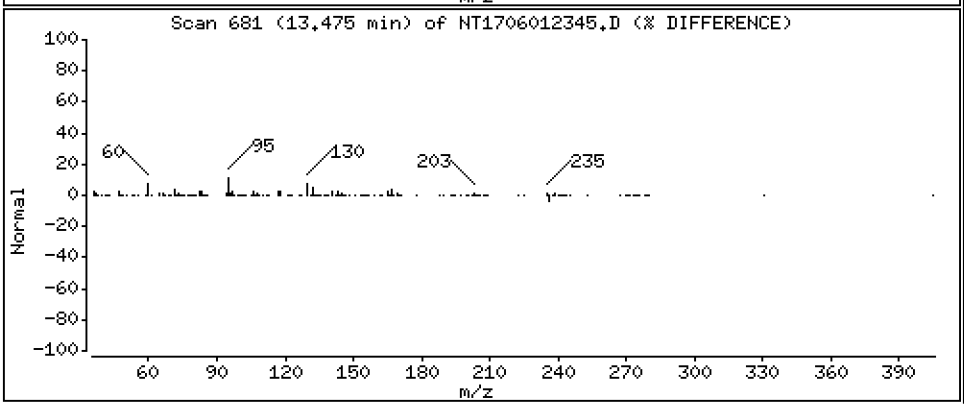












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

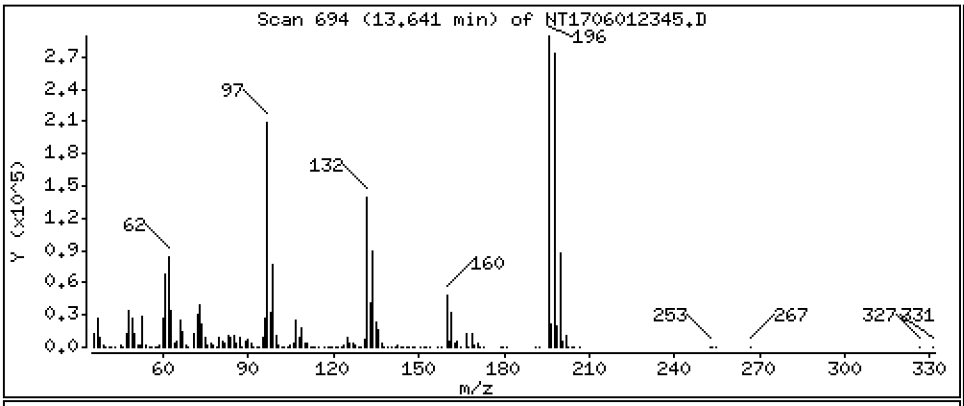
Operator: VTS

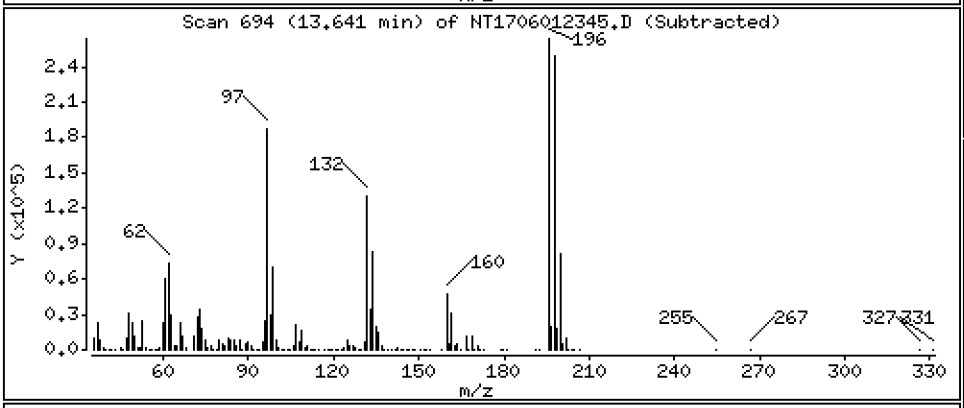
Column phase: ZB-5msi

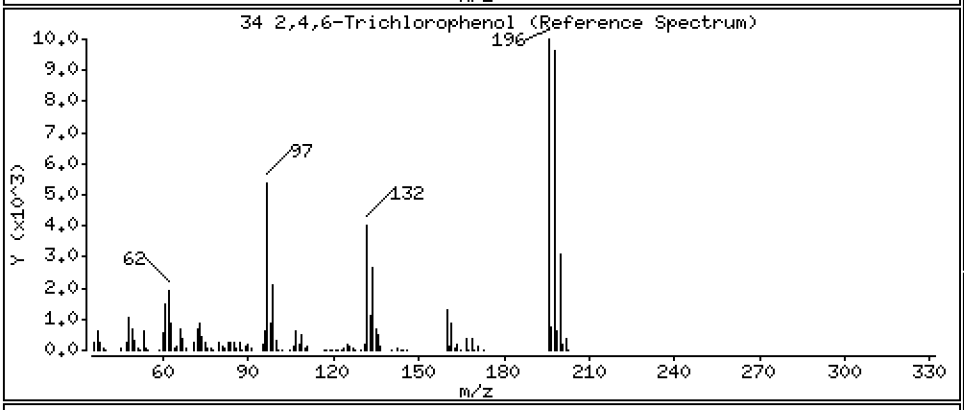
Column diameter: 0.25

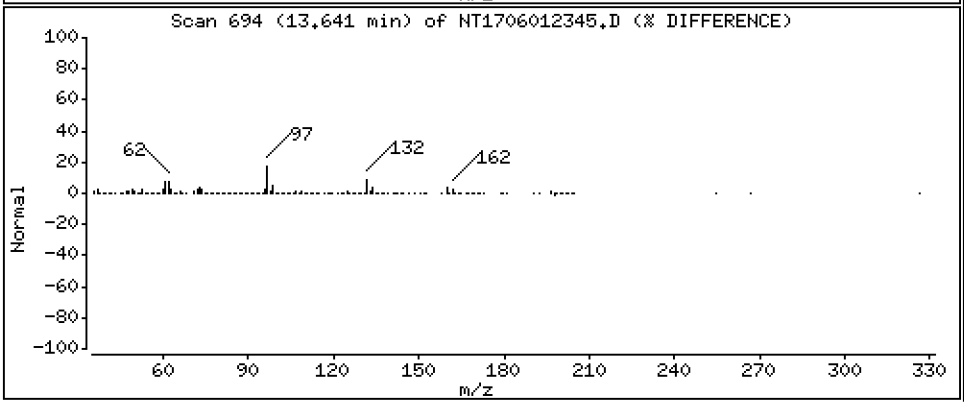
34 2,4,6-Trichlorophenol

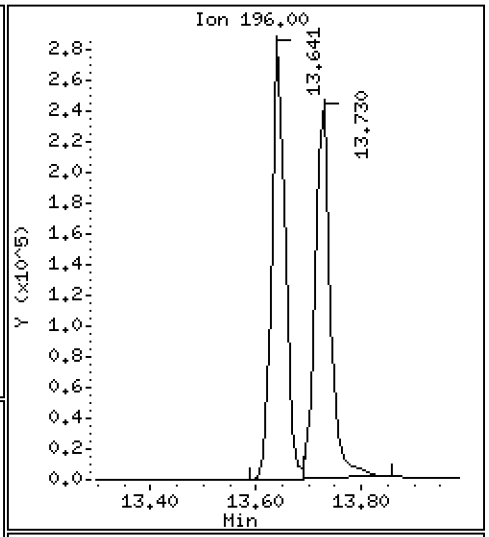
Concentration: 10.49 ug/mL

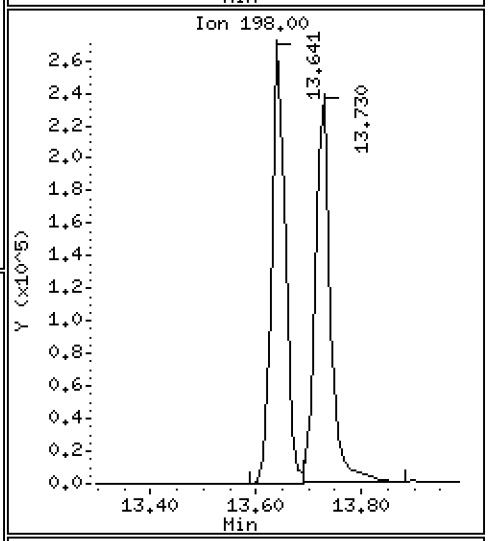


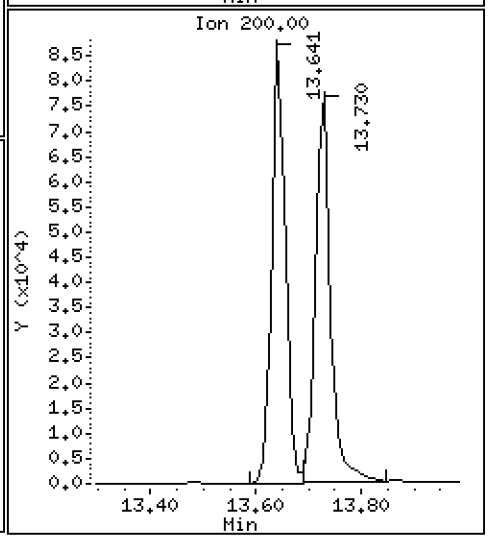












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

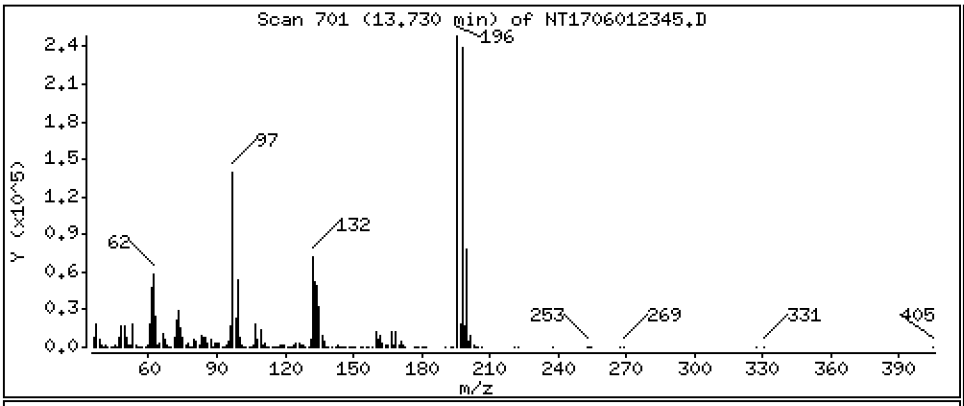
Operator: VTS

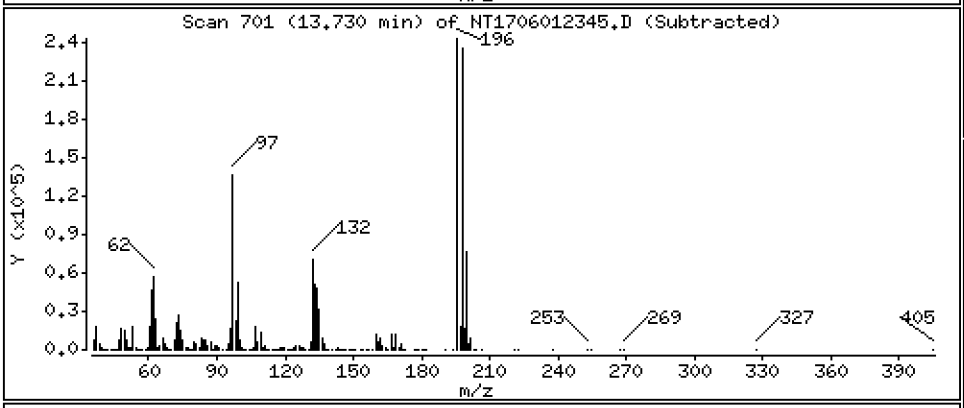
Column phase: ZB-5msi

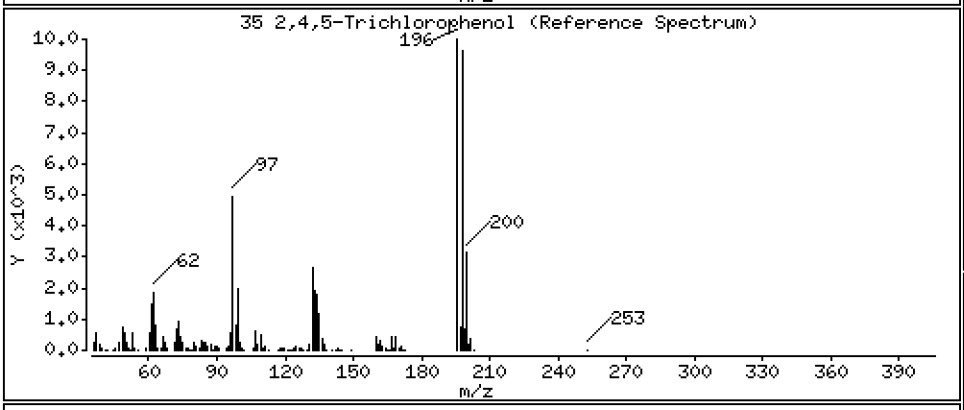
Column diameter: 0.25

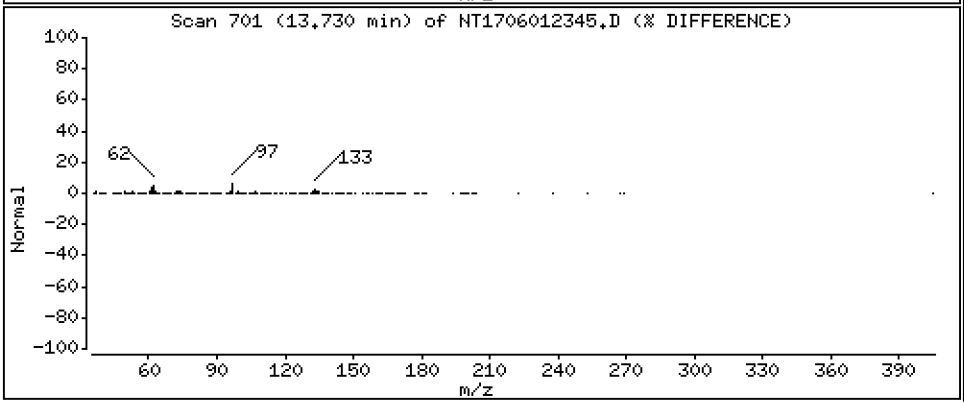
35 2,4,5-Trichlorophenol

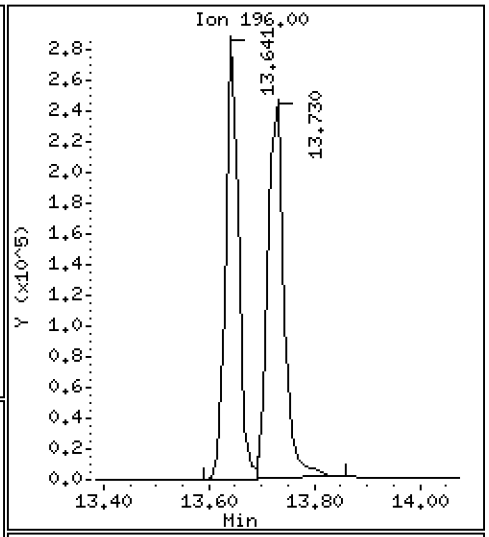
Concentration: 10.34 ug/mL

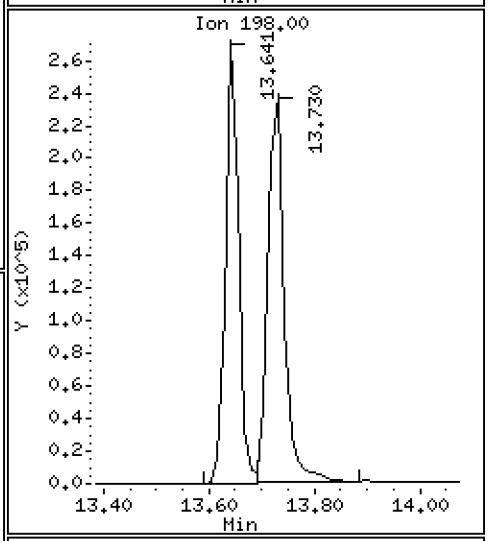


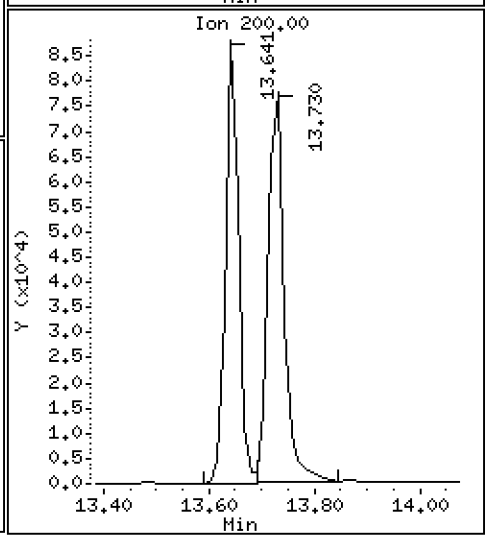












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

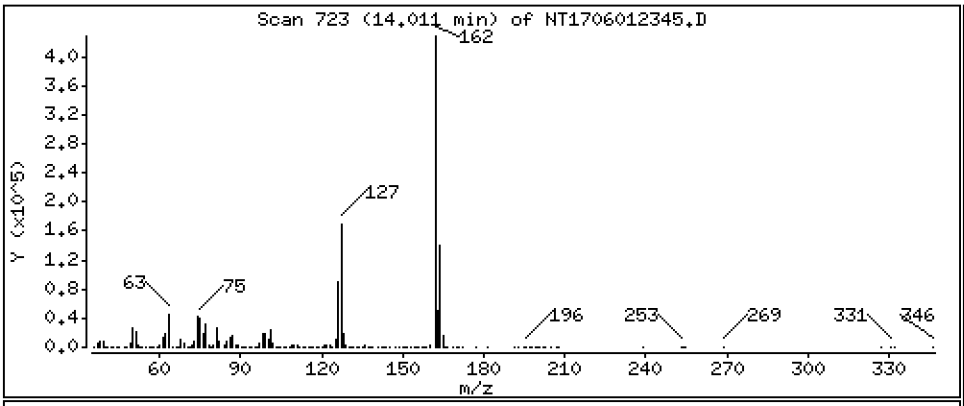
Operator: VTS

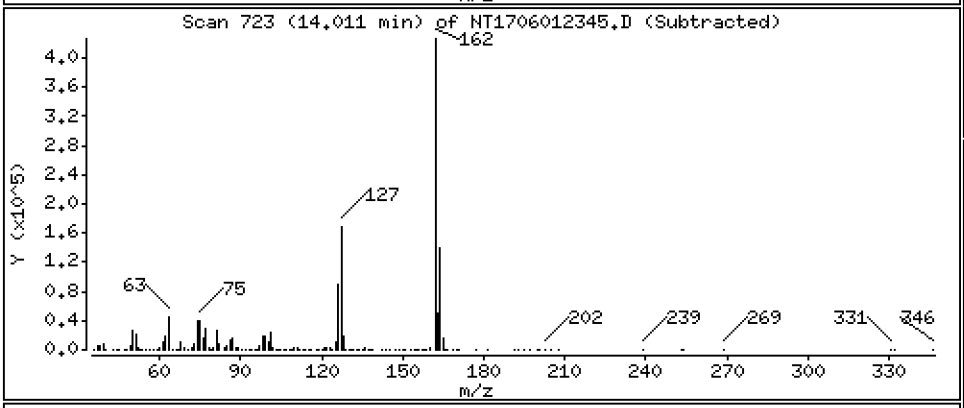
Column phase: ZB-5msi

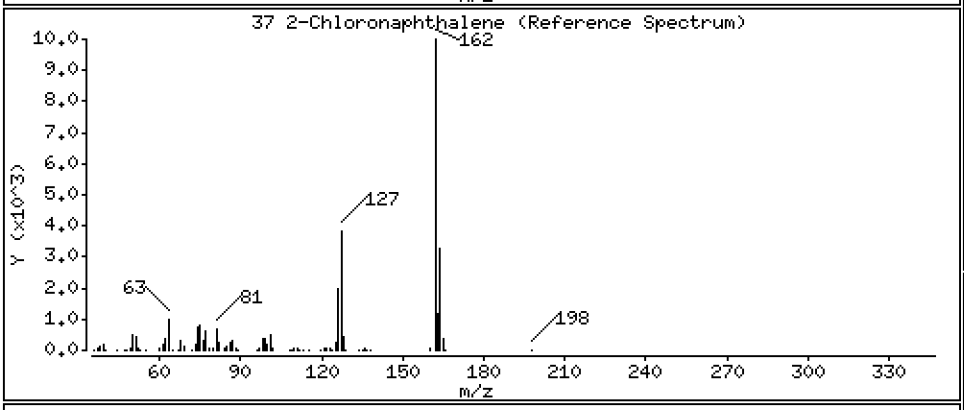
Column diameter: 0.25

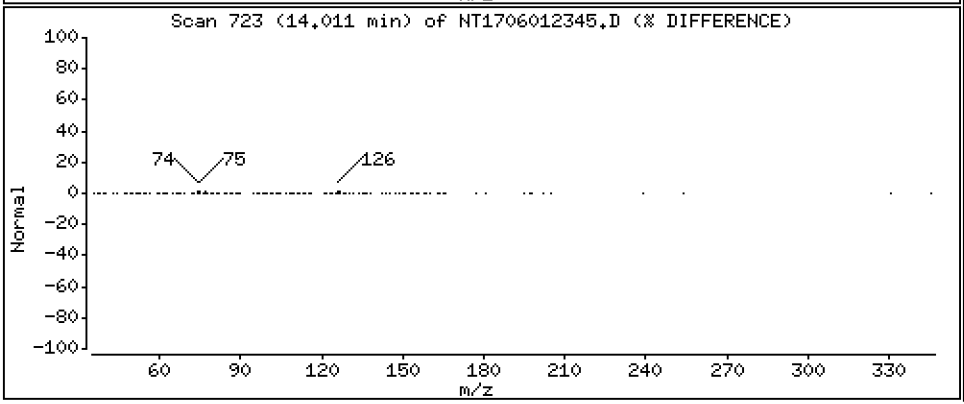
37 2-Chloronaphthalene

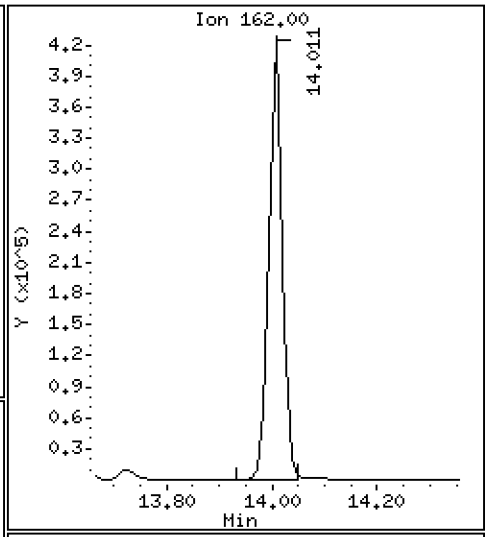
Concentration: 5.086 ug/mL

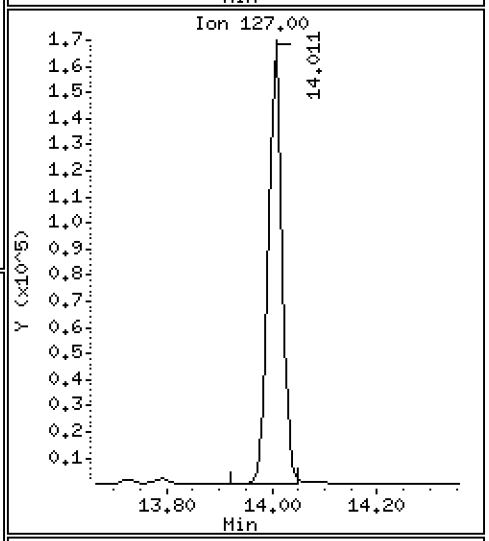


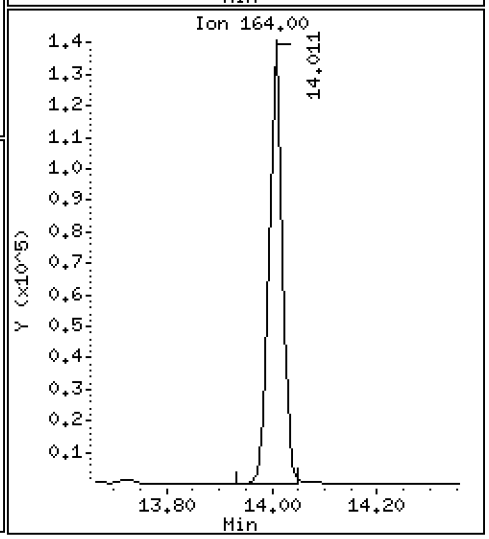












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

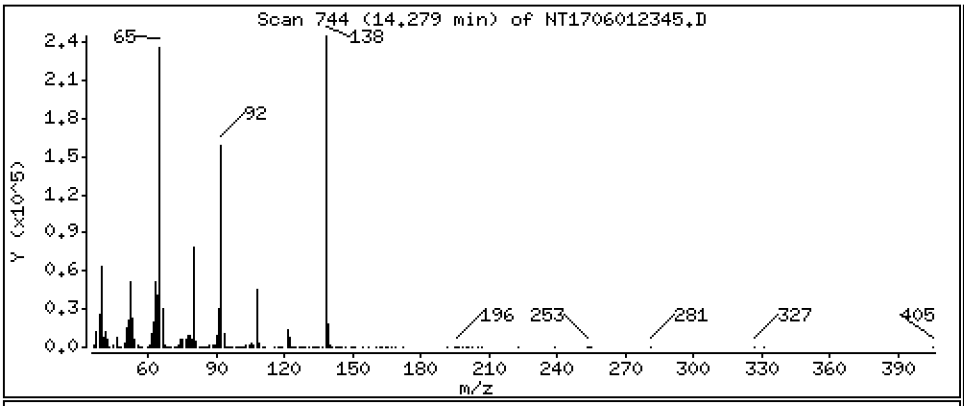
Operator: VTS

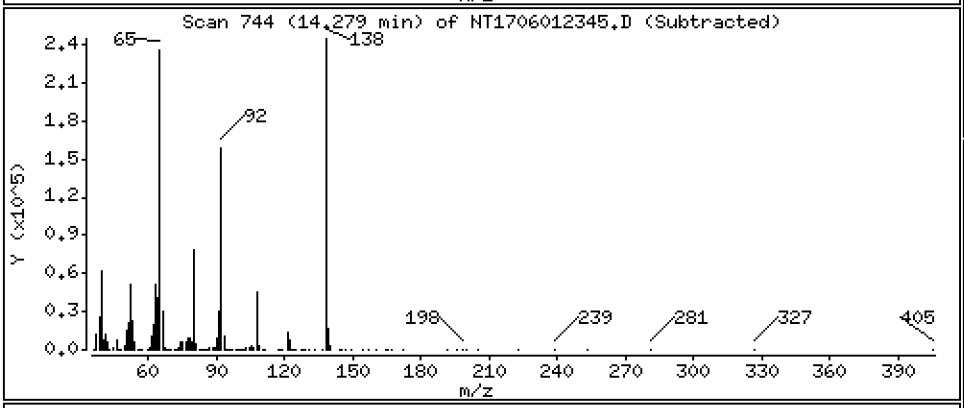
Column phase: ZB-5msi

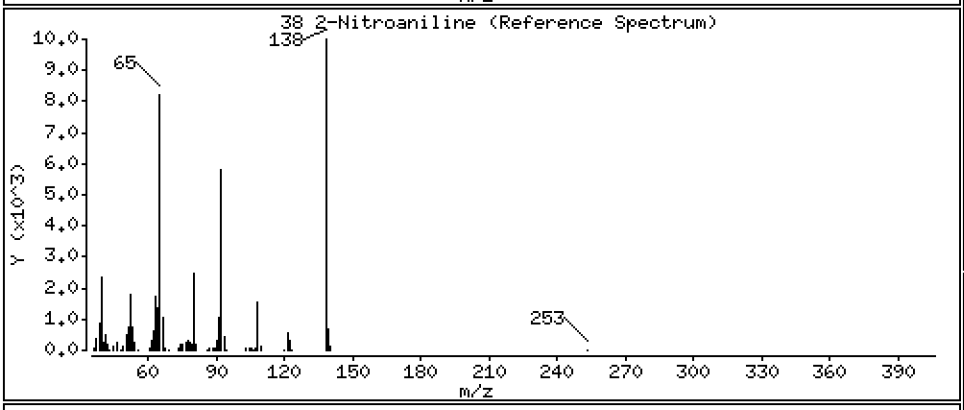
Column diameter: 0.25

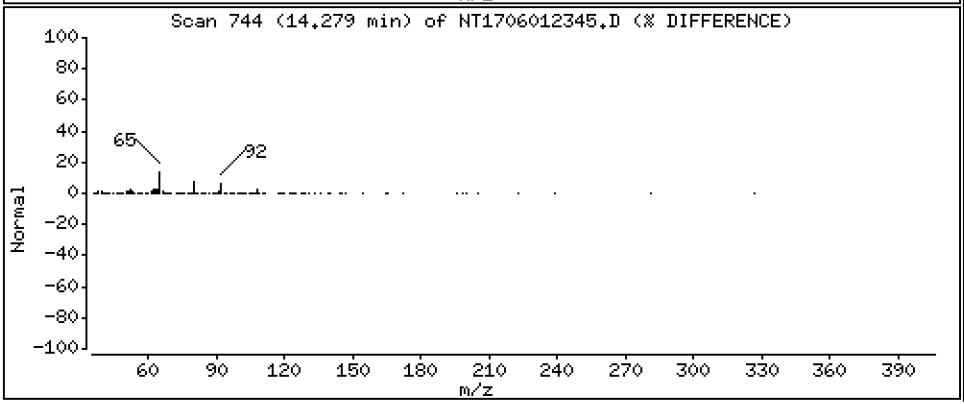
38 2-Nitroaniline

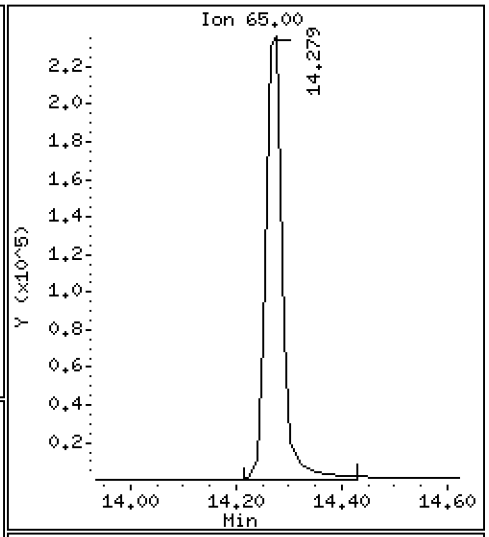
Concentration: 10.79 ug/mL

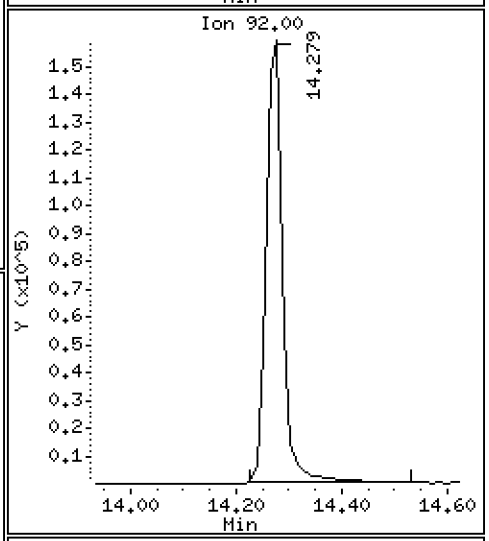


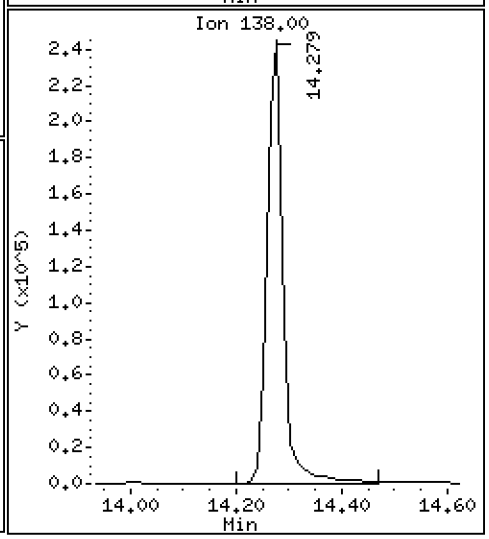












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

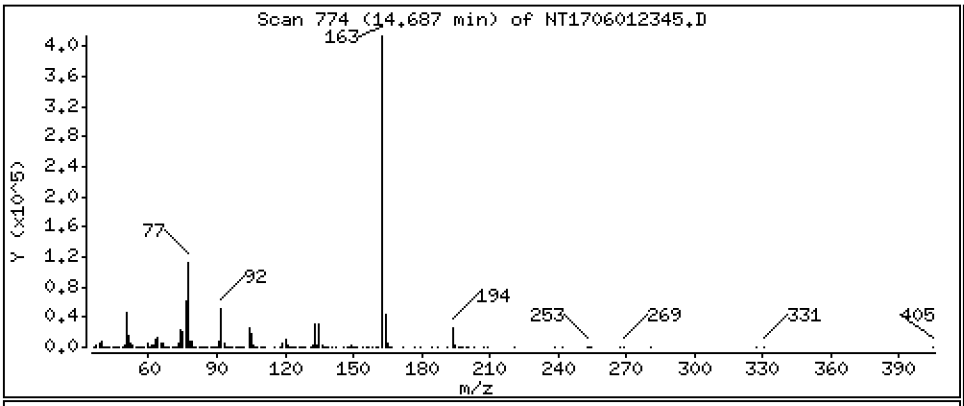
Operator: VTS

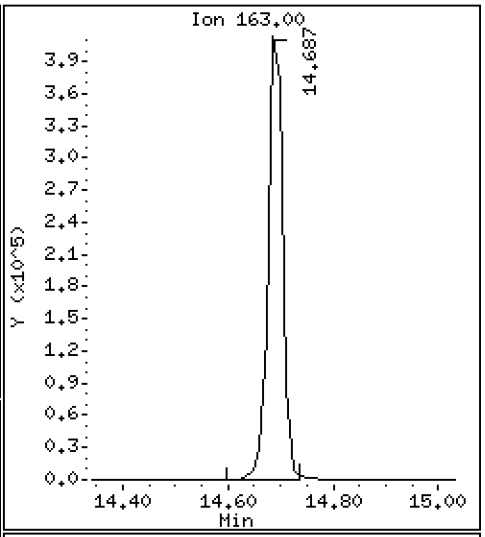
Column phase: ZB-5msi

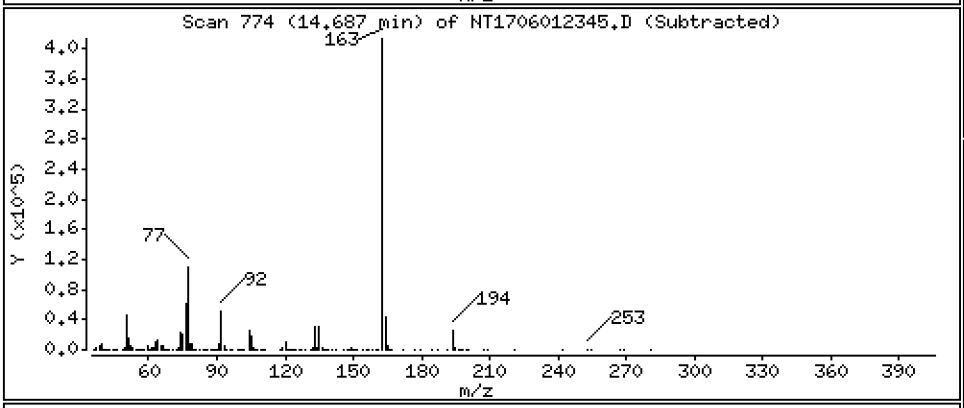
Column diameter: 0.25

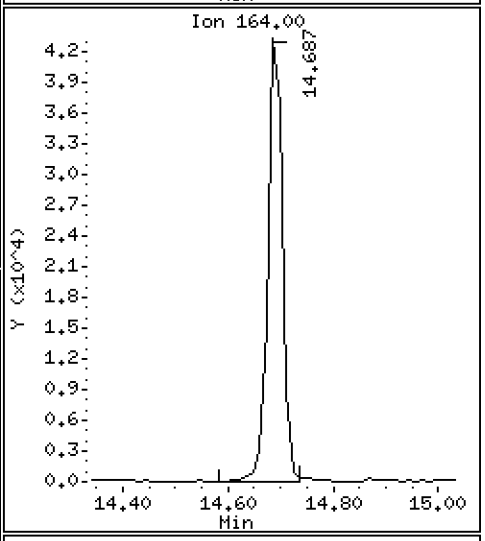
39 Dimethylphthalate

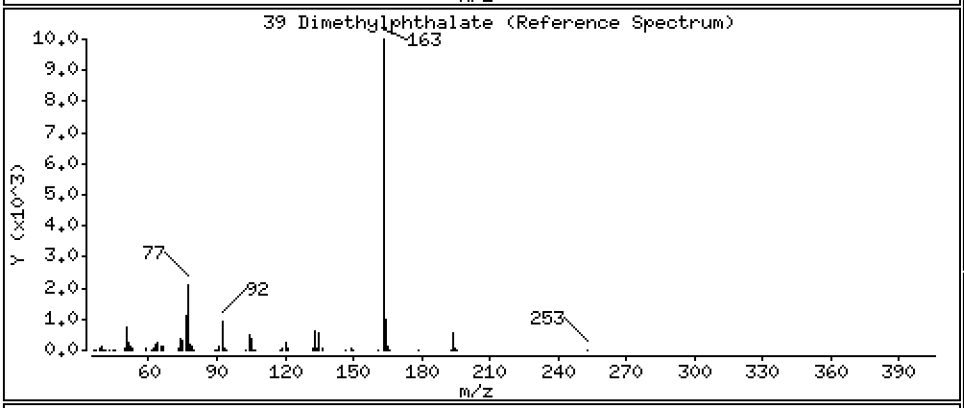
Concentration: 5.235 ug/mL

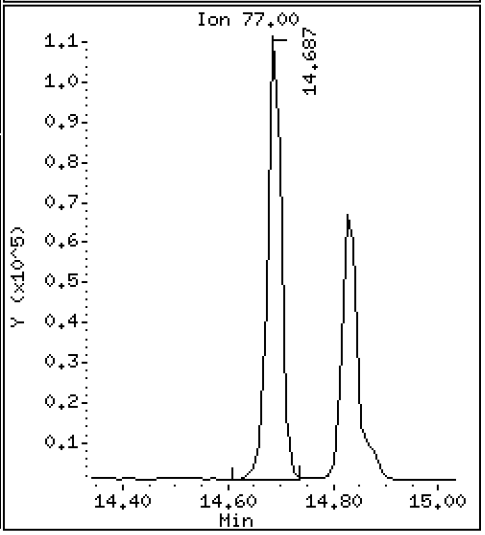


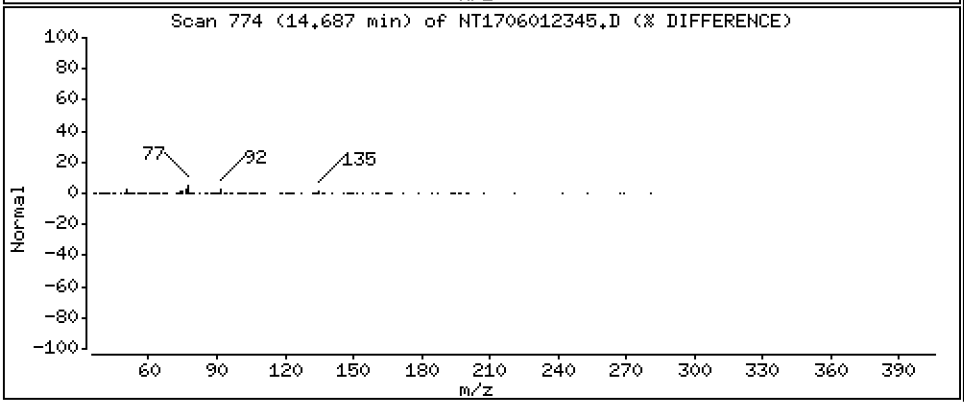












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

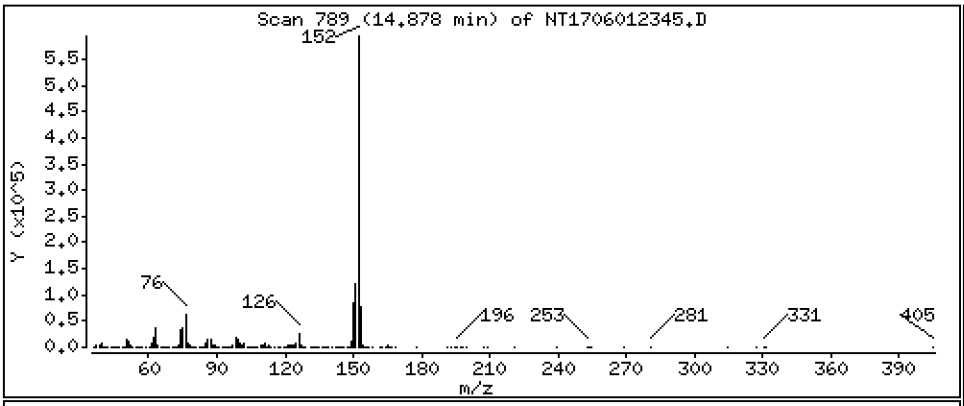
Operator: VTS

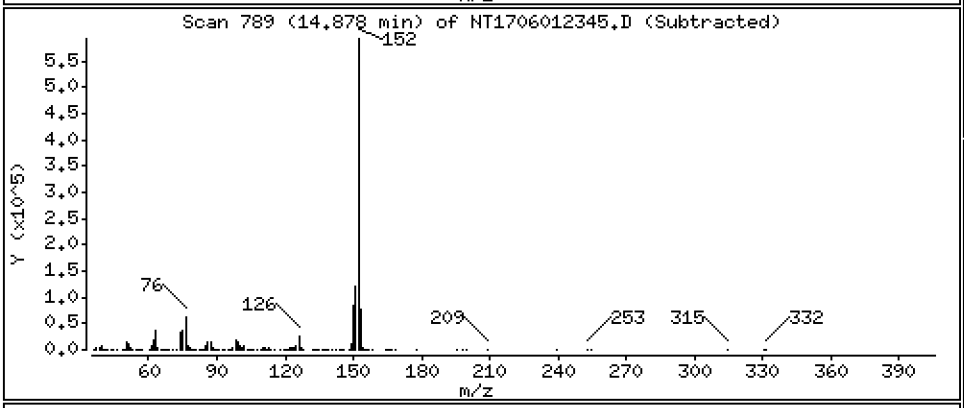
Column phase: ZB-5msi

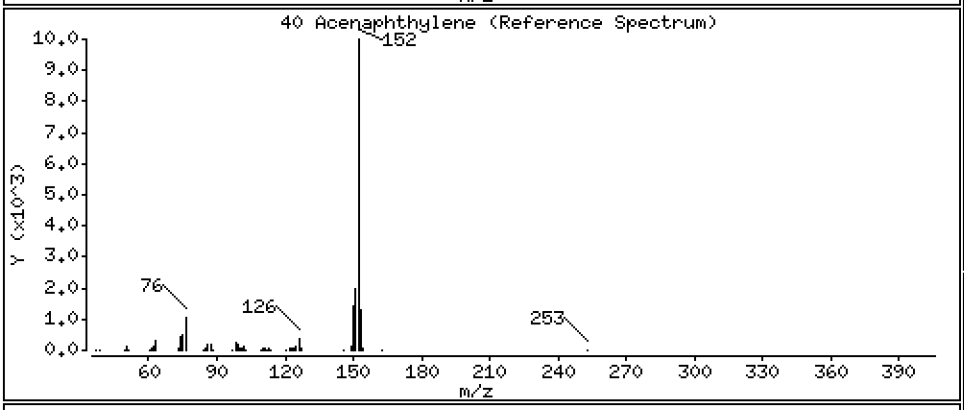
Column diameter: 0.25

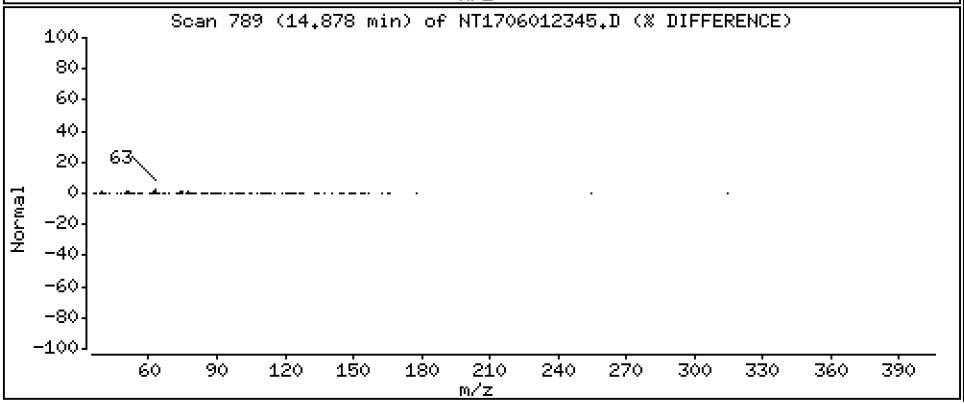
40 Acenaphthylene

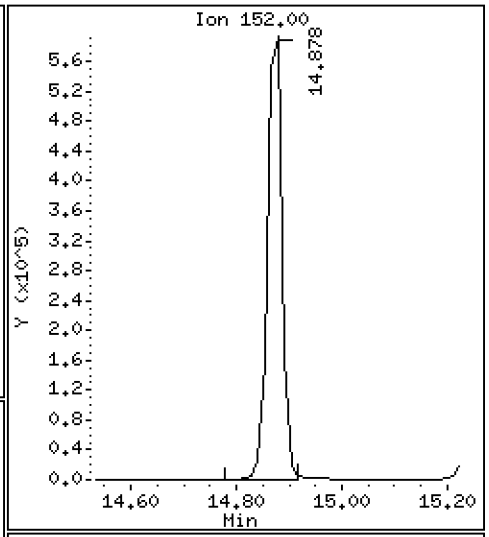
Concentration: 5.096 ug/mL

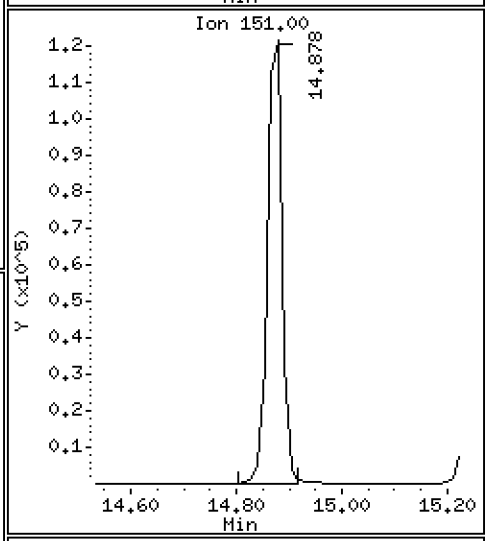


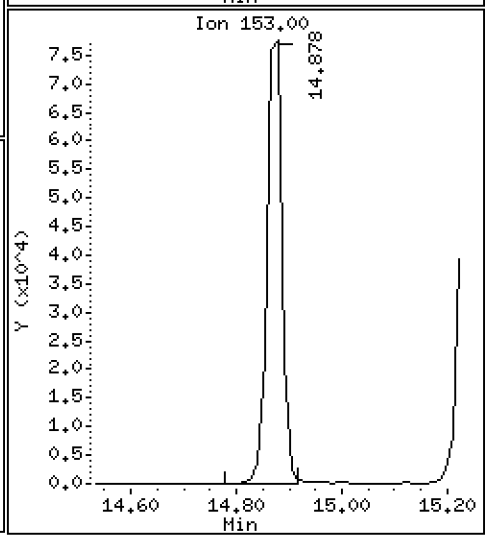












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

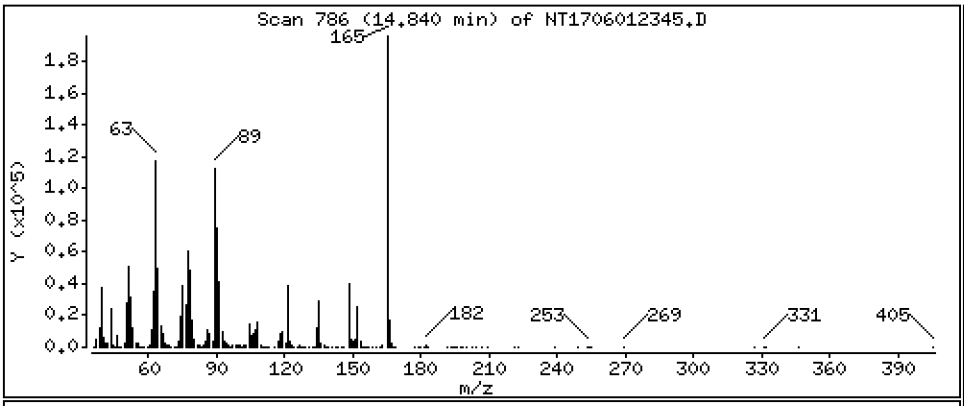
Operator: VTS

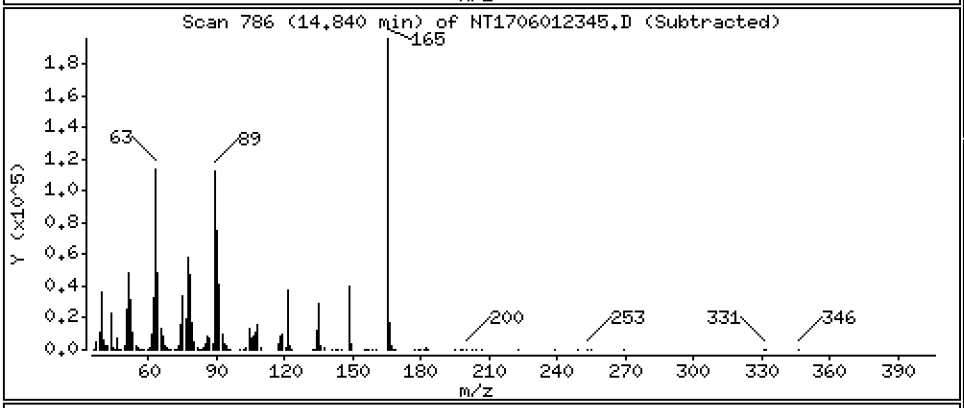
Column phase: ZB-5msi

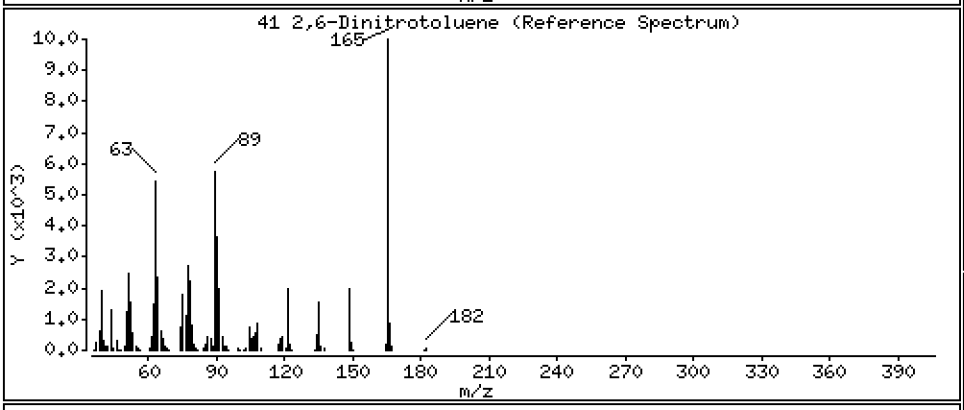
Column diameter: 0.25

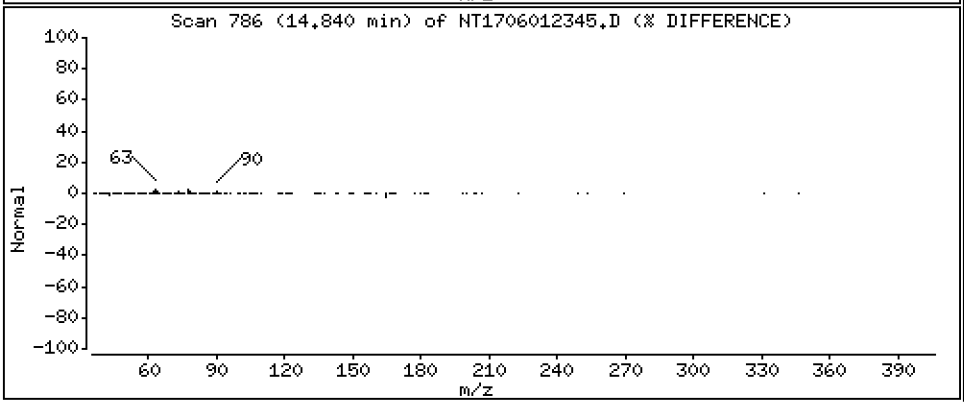
41 2,6-Dinitrotoluene

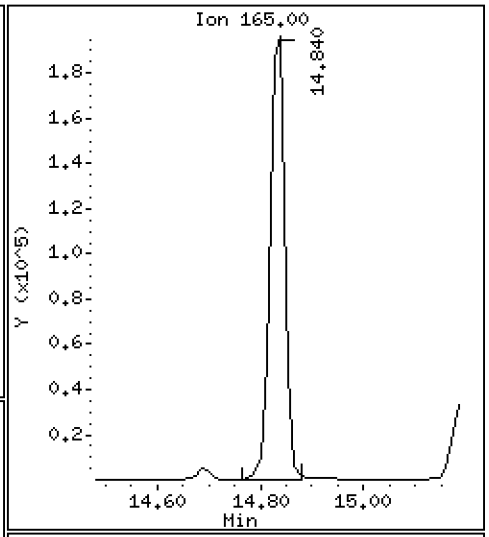
Concentration: 10.61 ug/mL

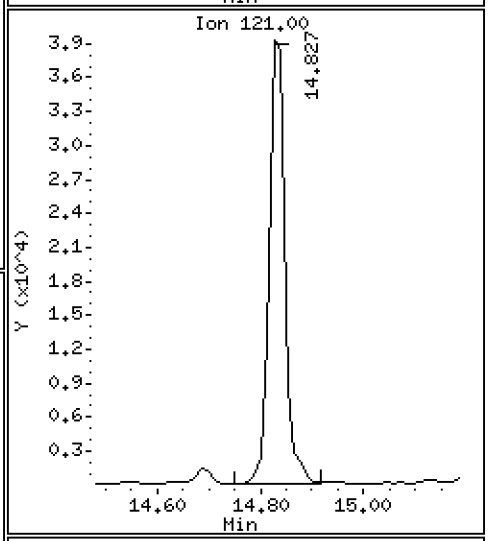


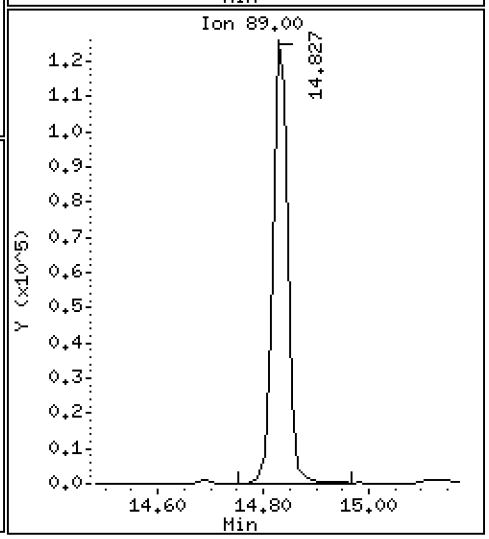












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

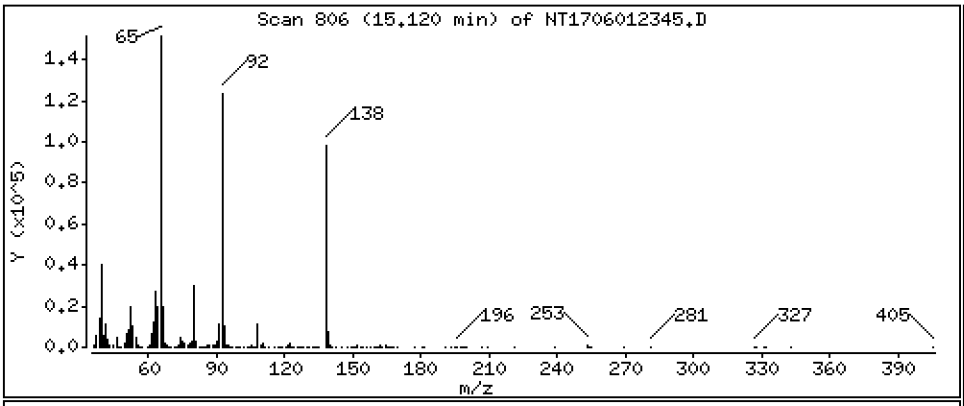
Operator: VTS

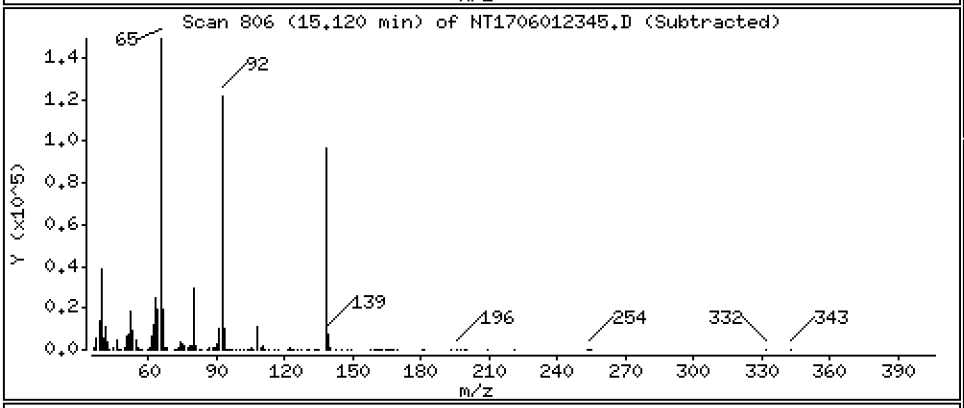
Column phase: ZB-5msi

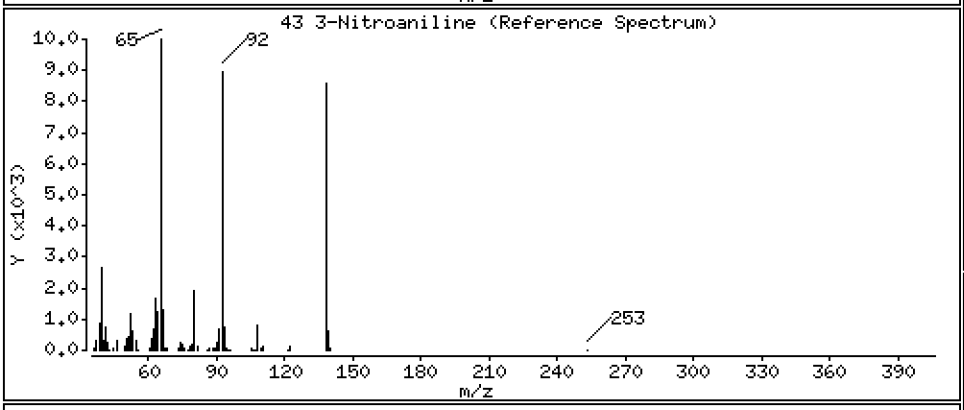
Column diameter: 0.25

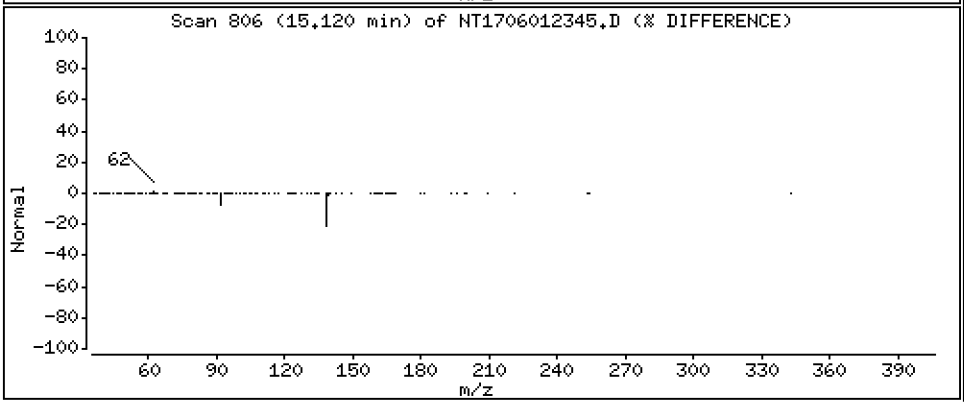
43 3-Nitroaniline

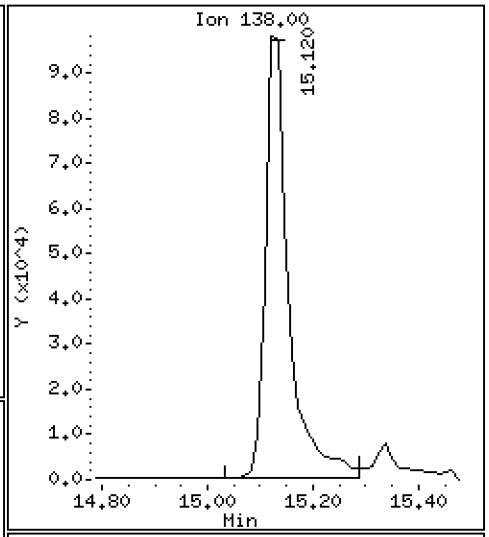
Concentration: 9.058 ug/mL

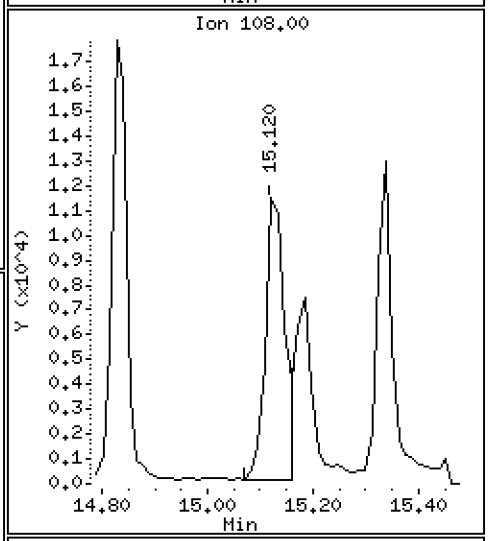


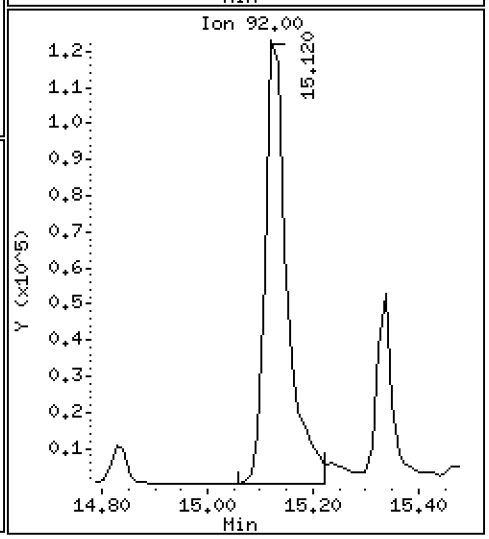












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

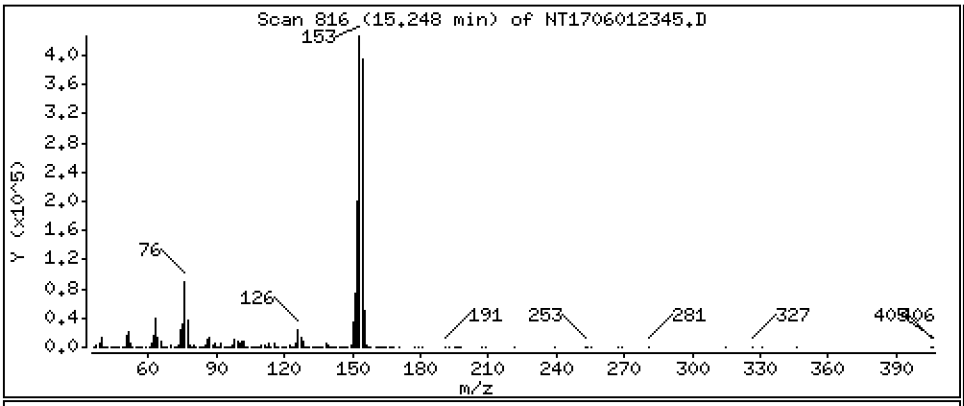
Operator: VTS

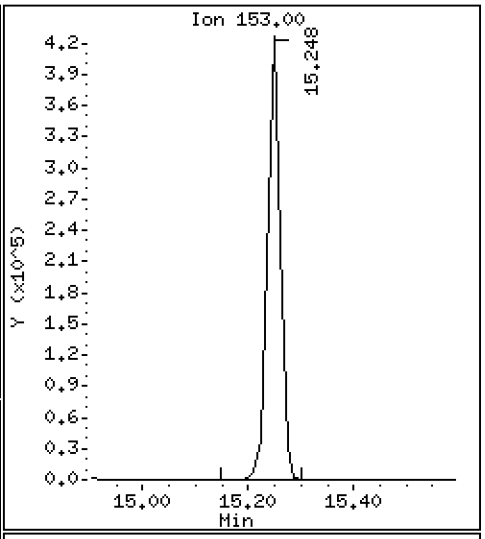
Column phase: ZB-5msi

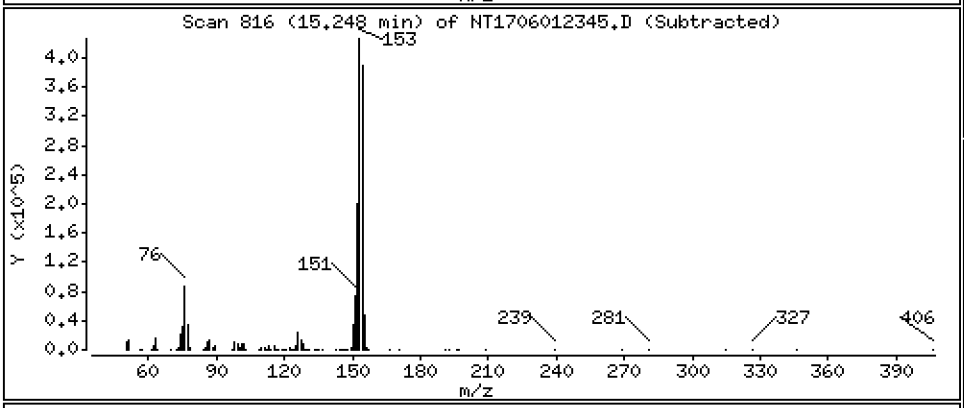
Column diameter: 0.25

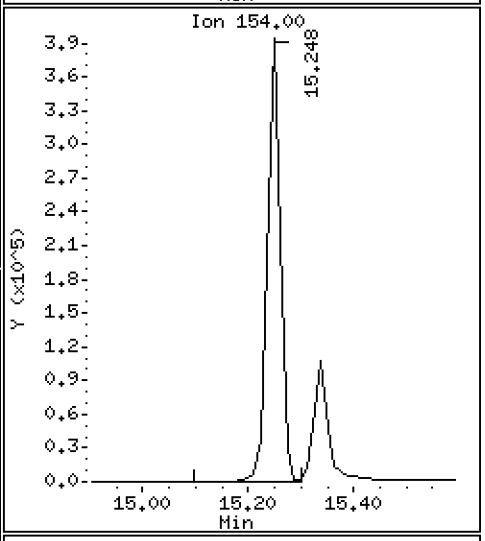
44 Acenaphthene

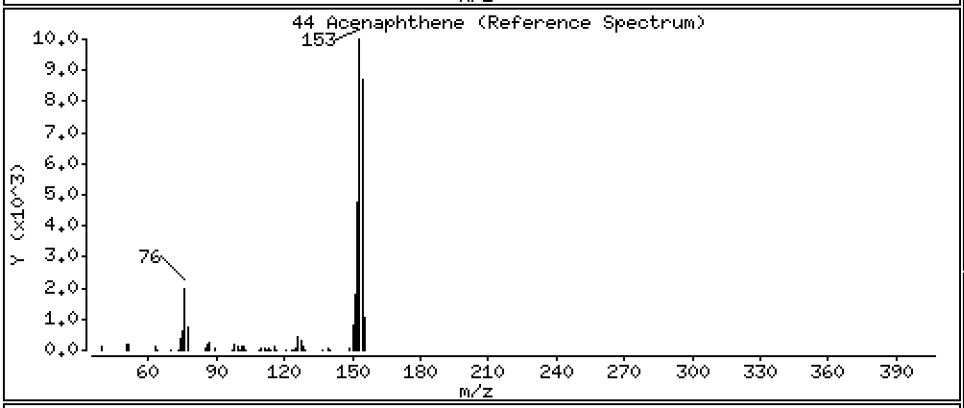
Concentration: 5.070 ug/mL

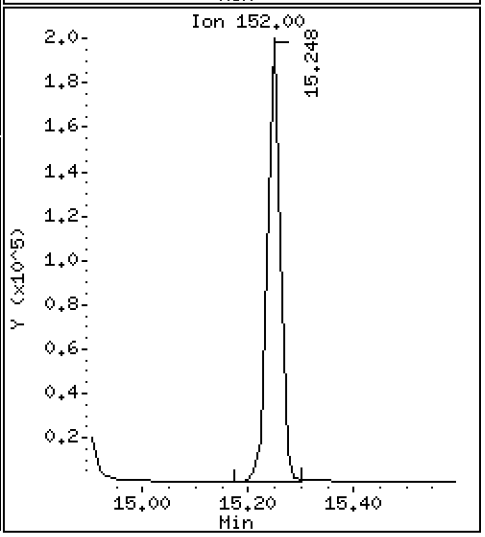


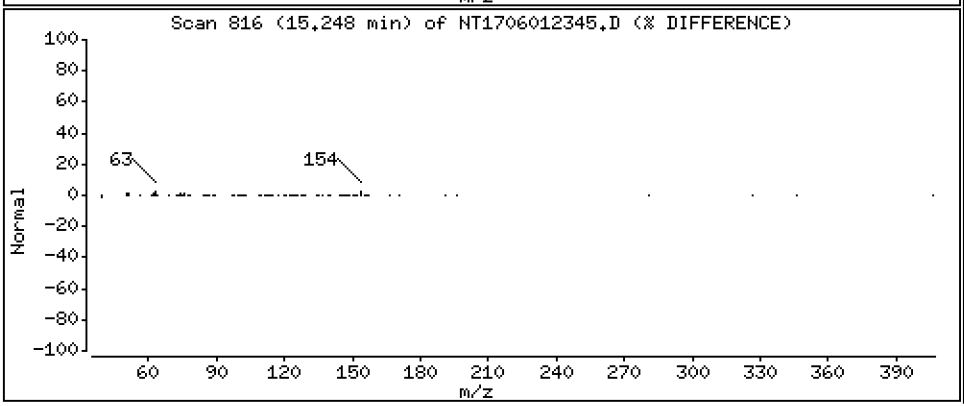












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

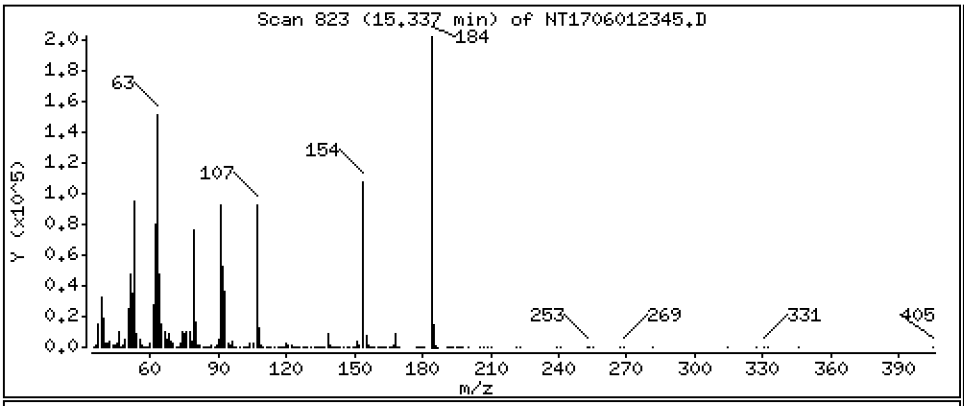
Operator: VTS

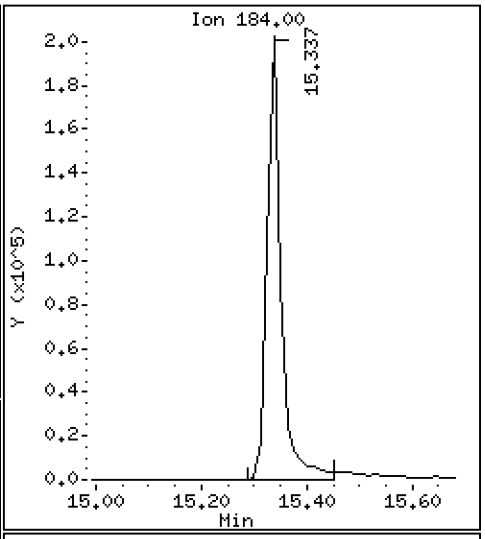
Column phase: ZB-5msi

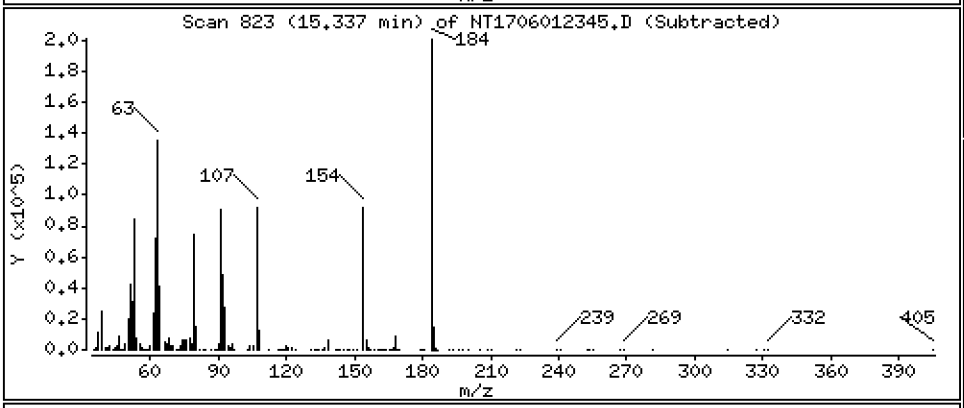
Column diameter: 0.25

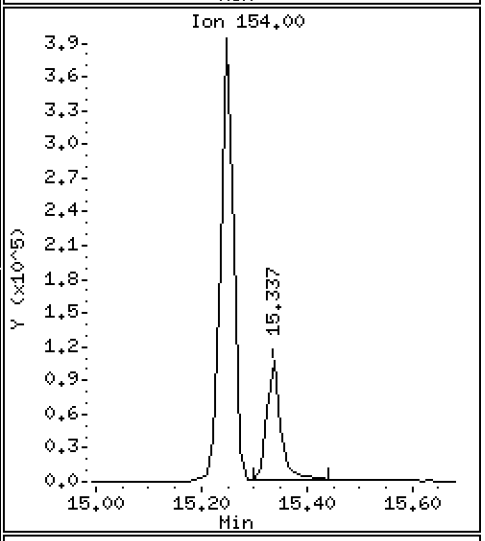
45 2,4-Dinitrophenol

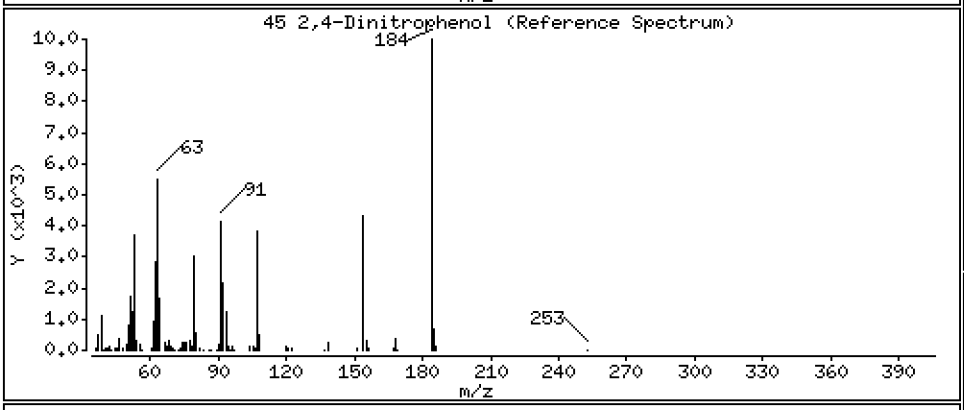
Concentration: 16.58 ug/mL

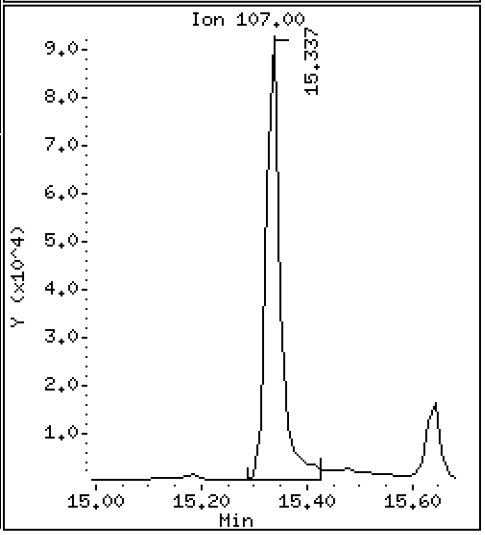


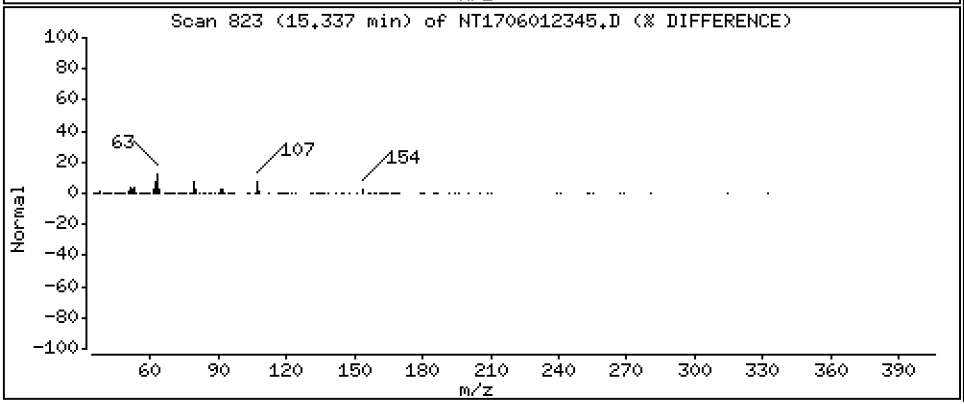












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

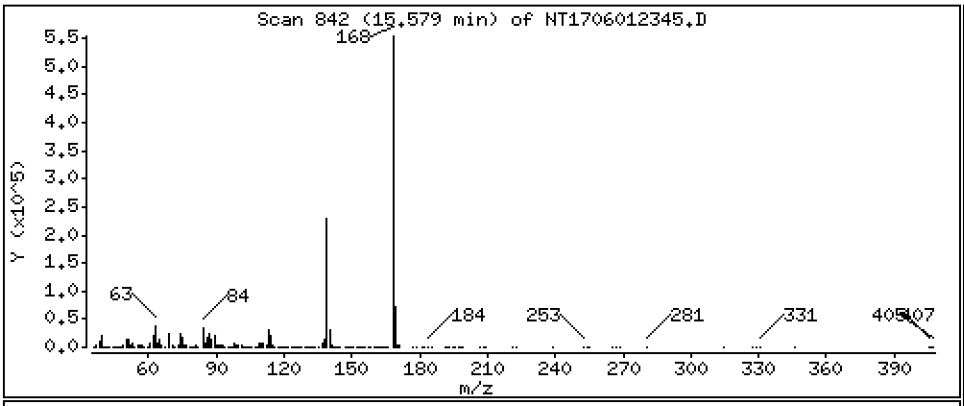
Operator: VTS

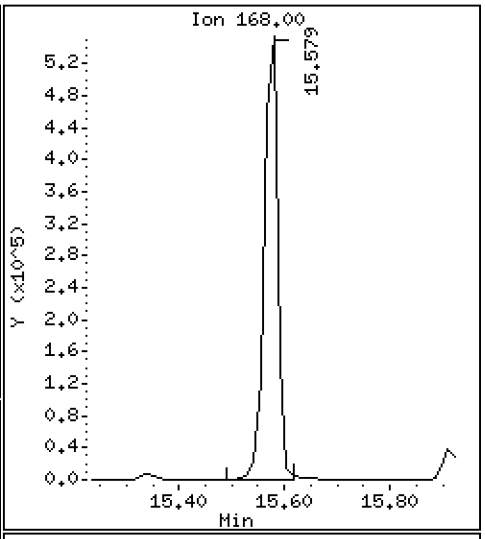
Column phase: ZB-5msi

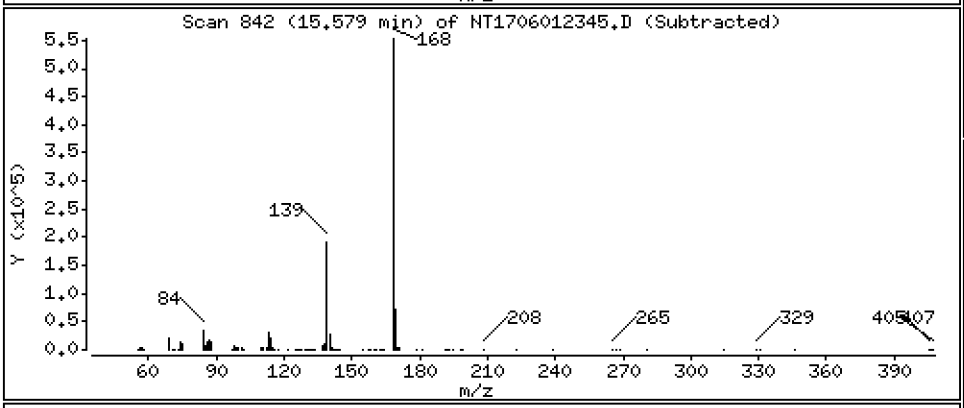
Column diameter: 0.25

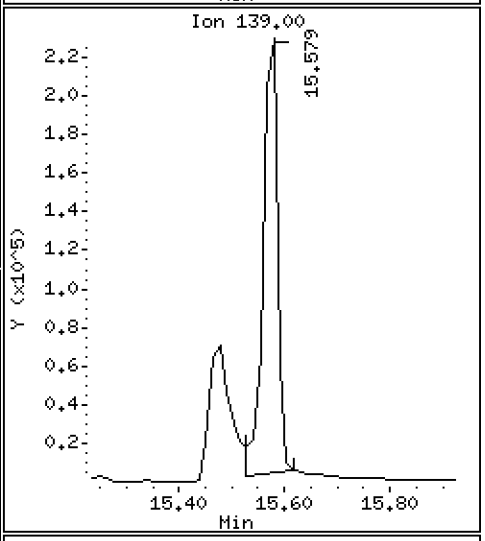
46 Dibenzofuran

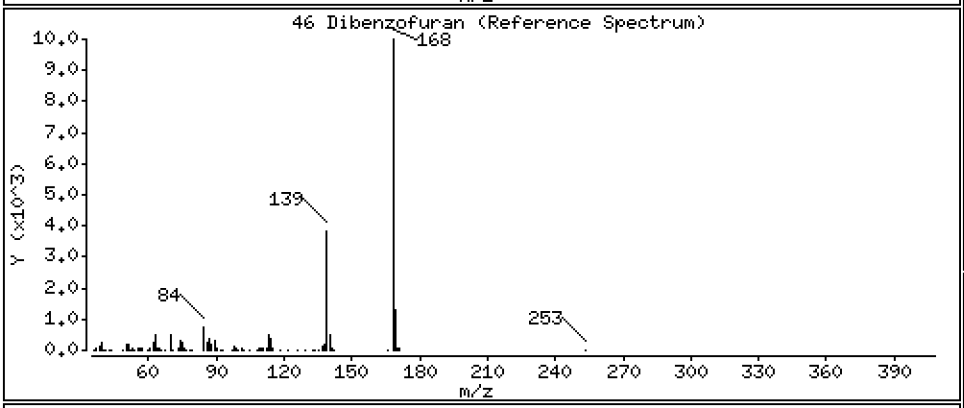
Concentration: 5.107 ug/mL

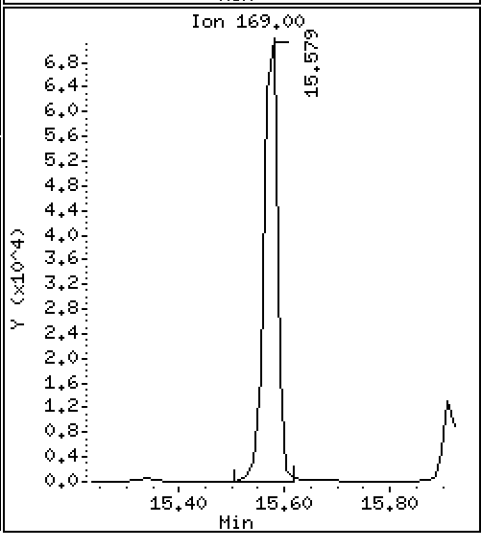


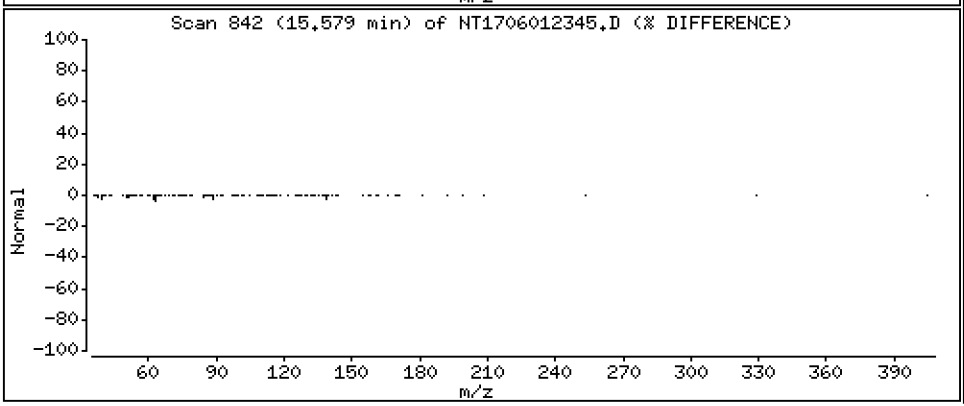












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

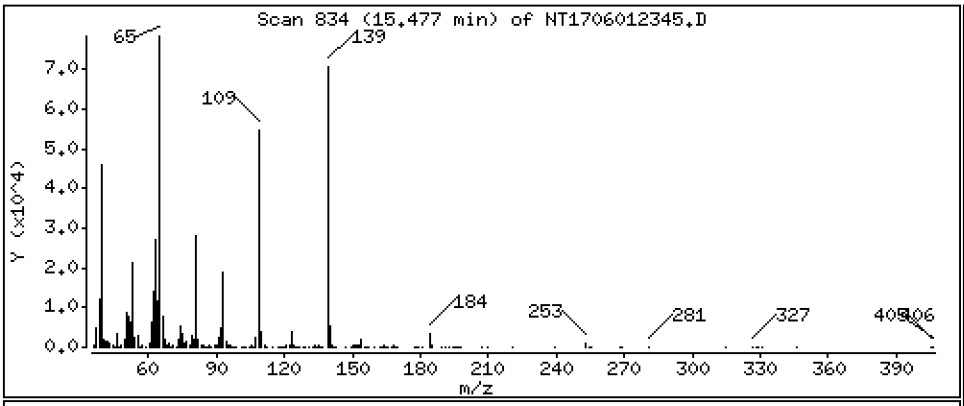
Operator: VTS

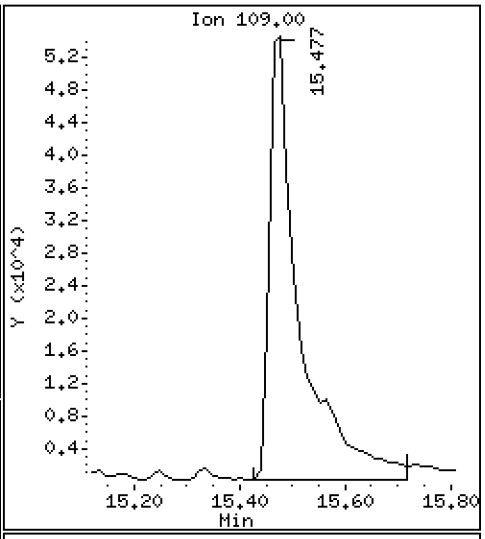
Column phase: ZB-5msi

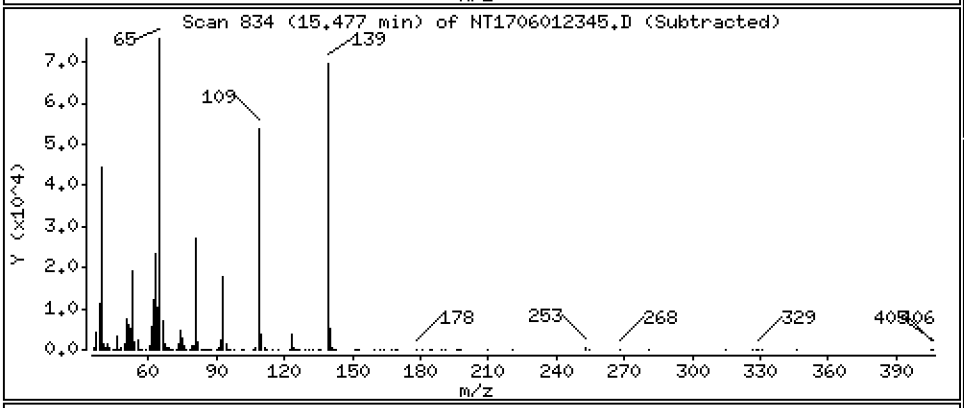
Column diameter: 0.25

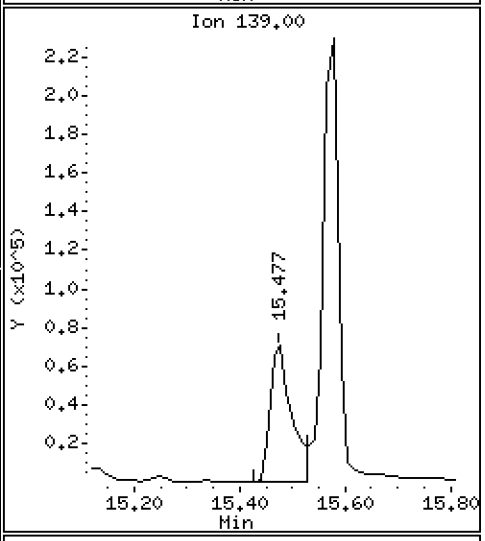
47 4-Nitrophenol

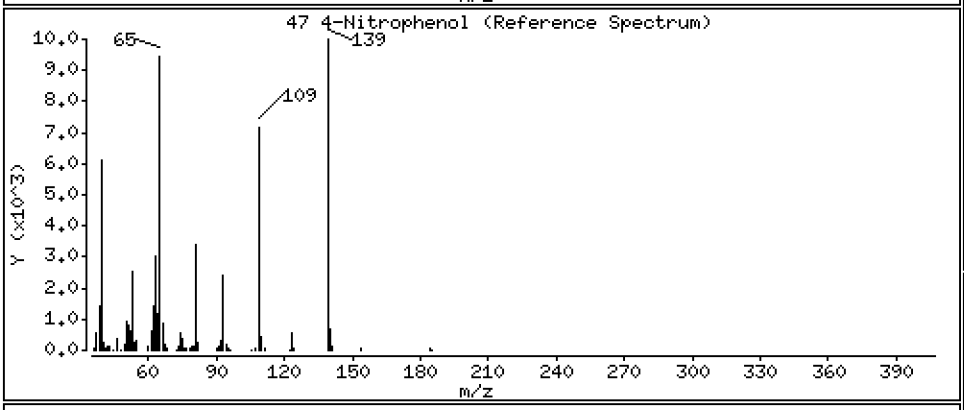
Concentration: 9.875 ug/mL

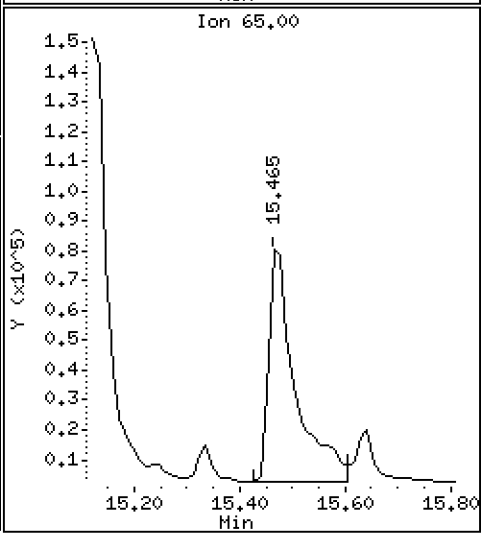


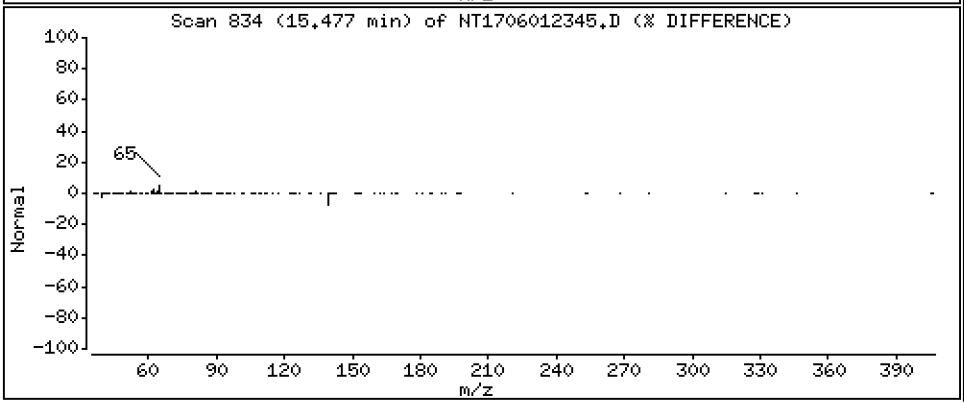












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

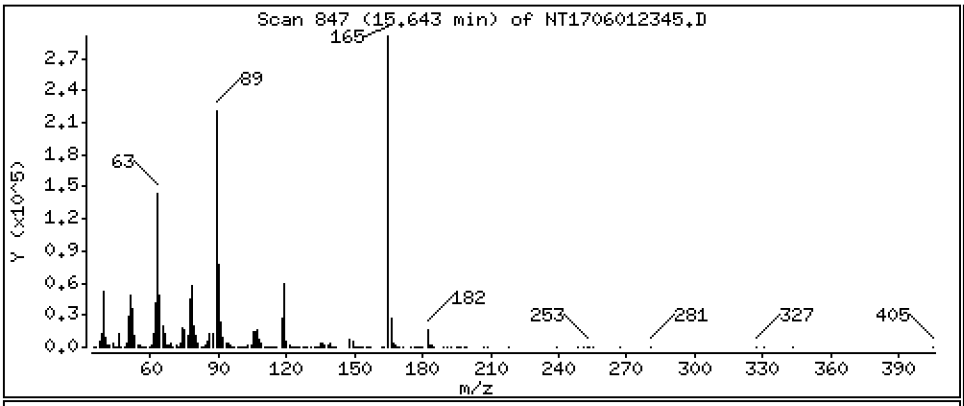
Operator: VTS

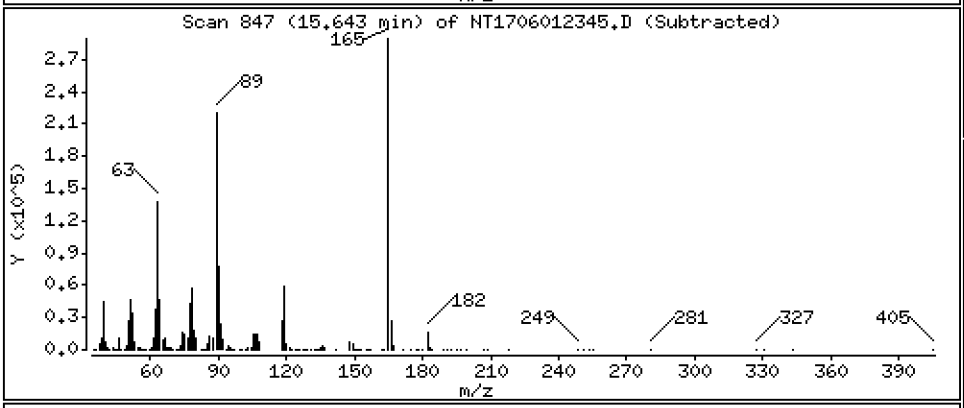
Column phase: ZB-5msi

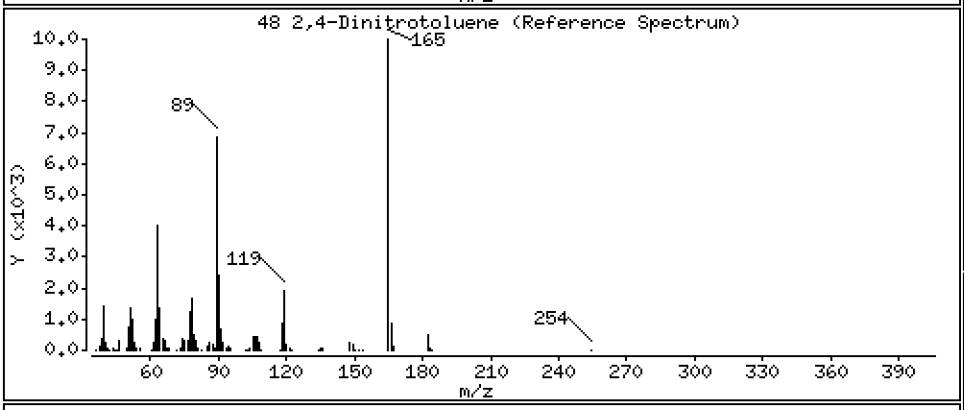
Column diameter: 0.25

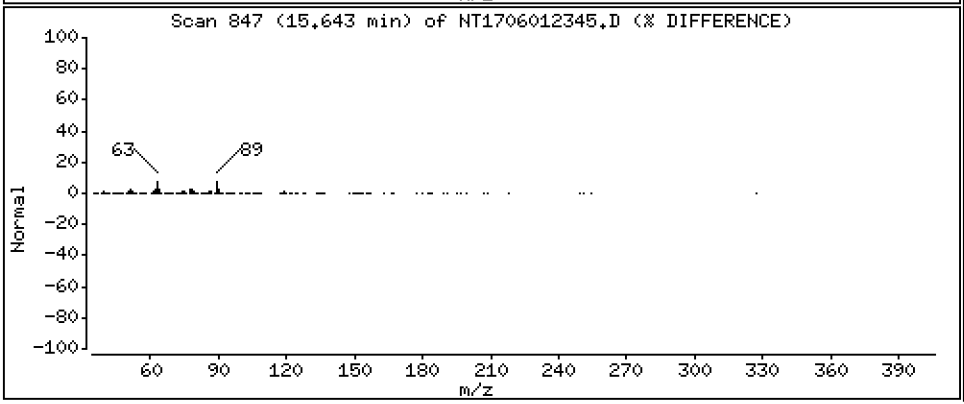
48 2,4-Dinitrotoluene

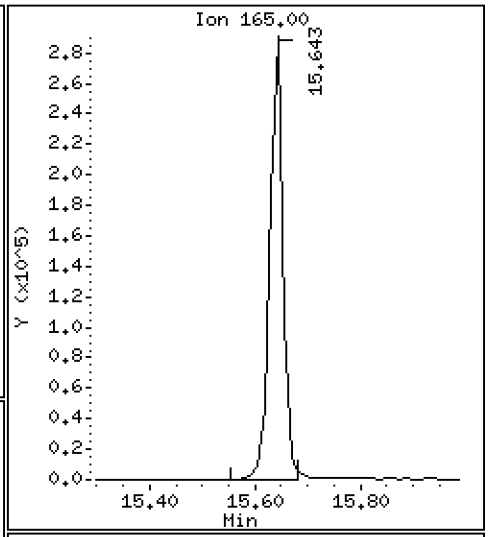
Concentration: 10.63 ug/mL

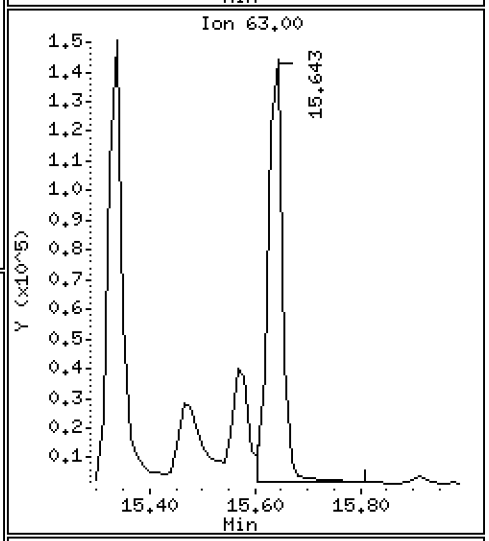


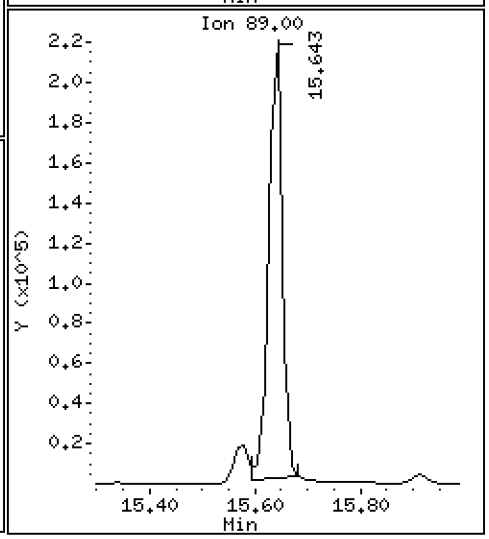












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

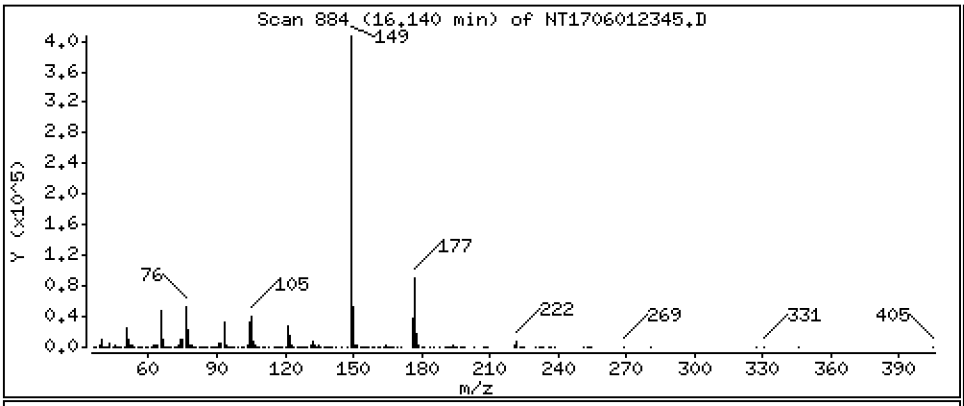
Operator: VTS

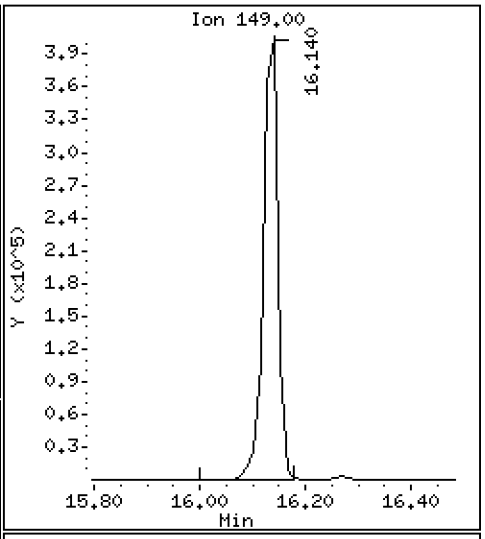
Column phase: ZB-5msi

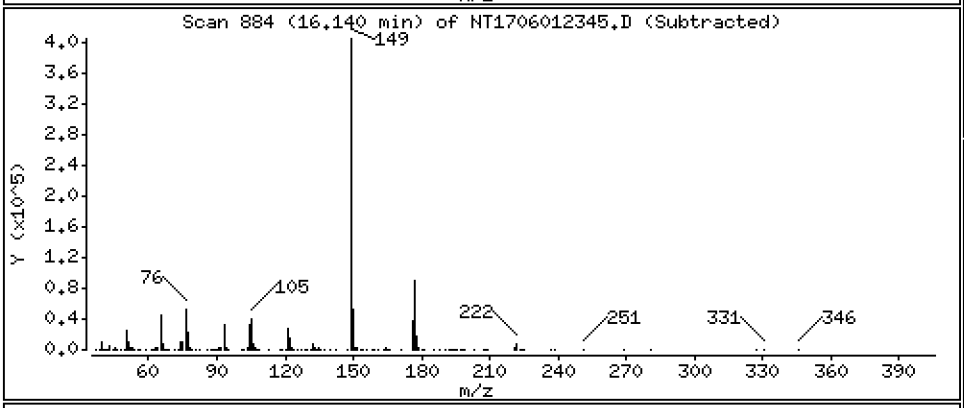
Column diameter: 0.25

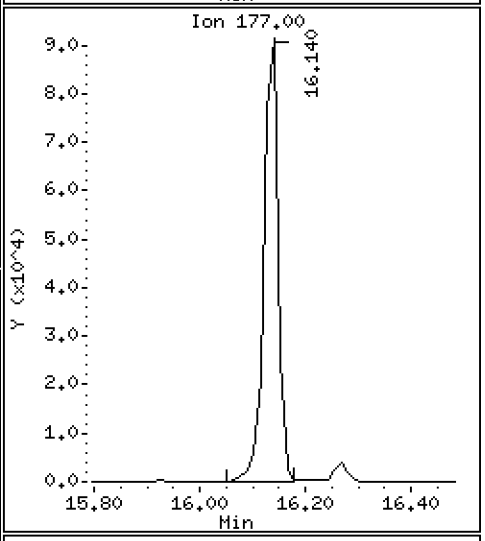
50 Diethylphthalate

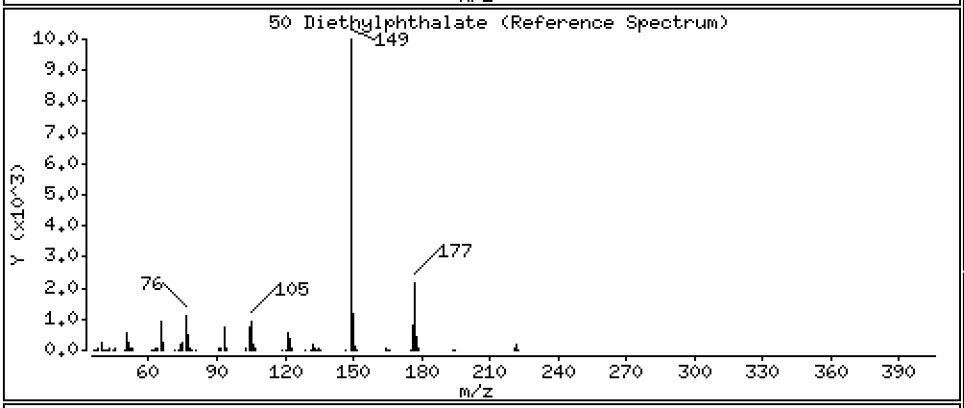
Concentration: 6.097 ug/mL

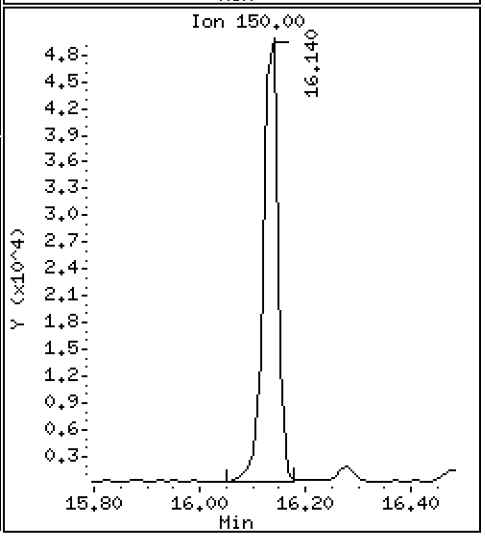


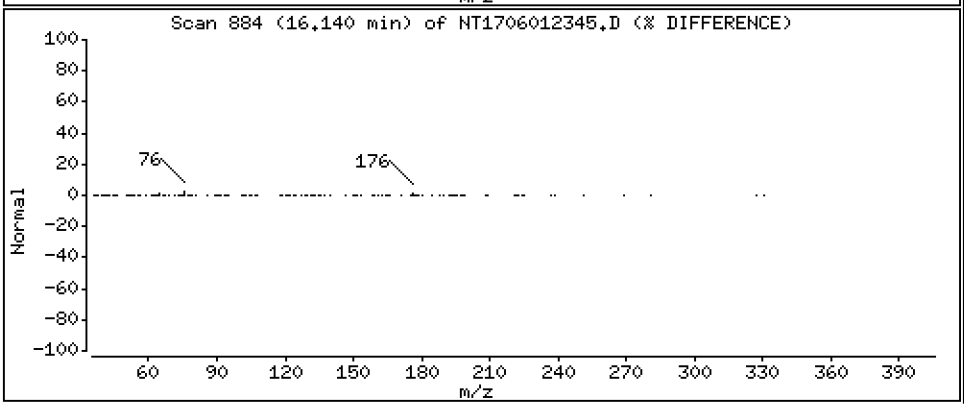












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

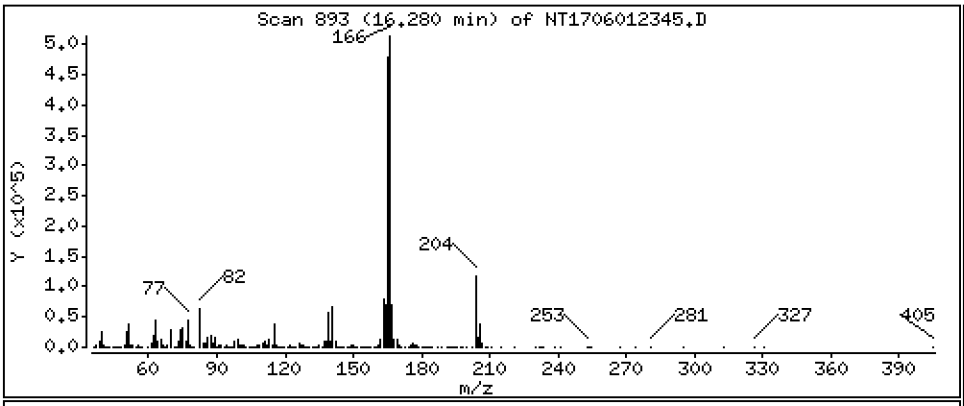
Operator: VTS

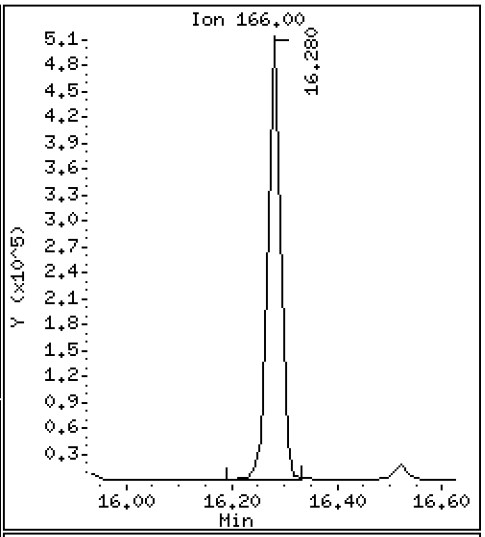
Column phase: ZB-5msi

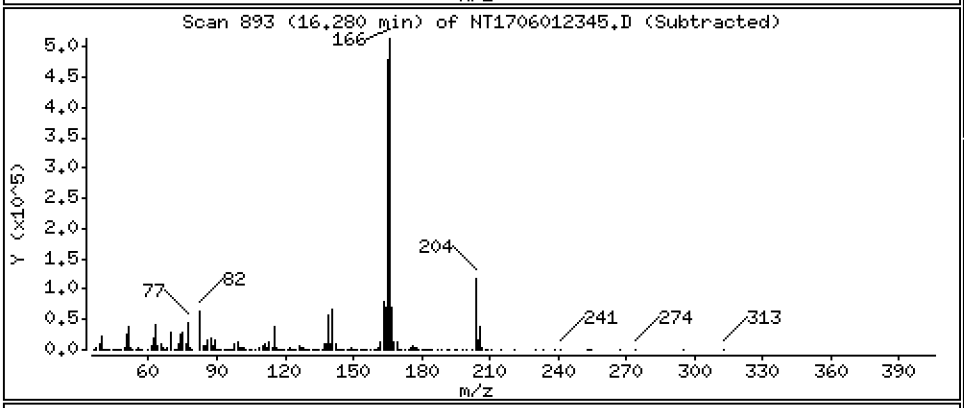
Column diameter: 0.25

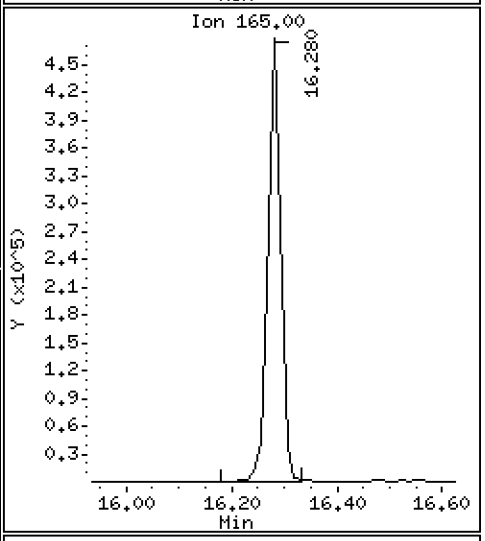
49 Fluorene

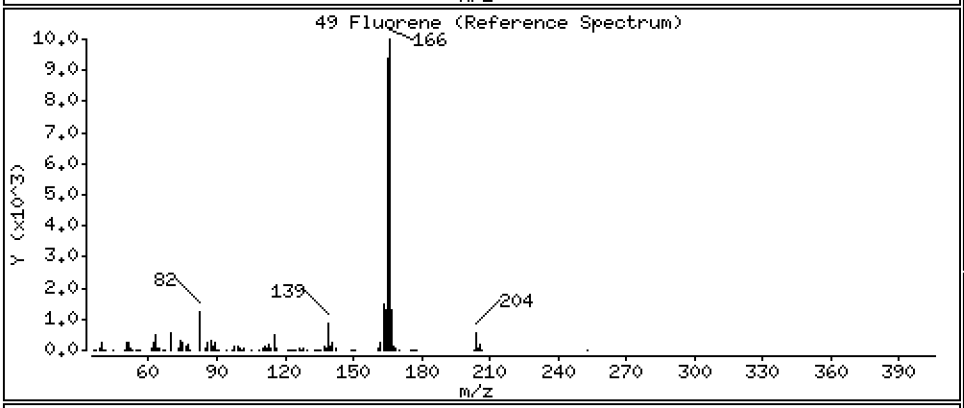
Concentration: 5.607 ug/mL

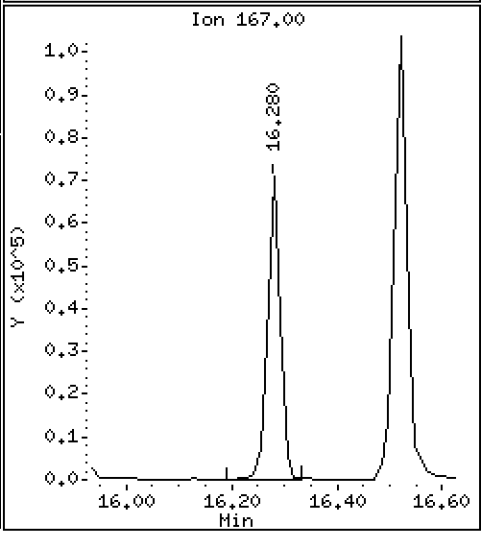


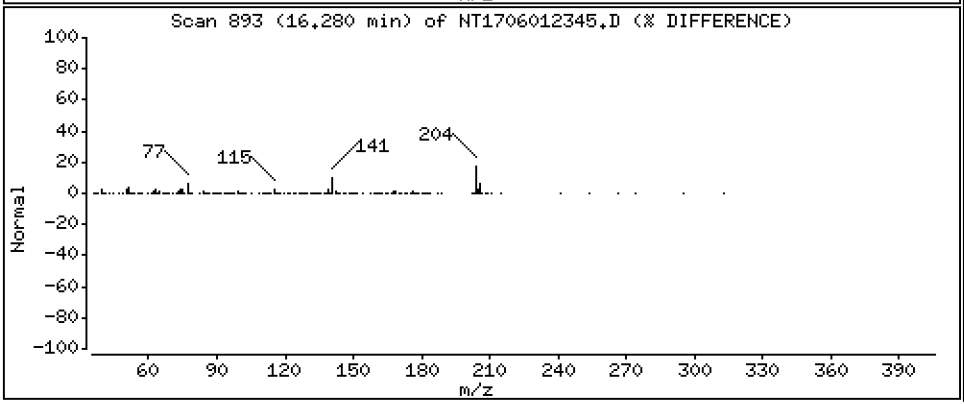












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

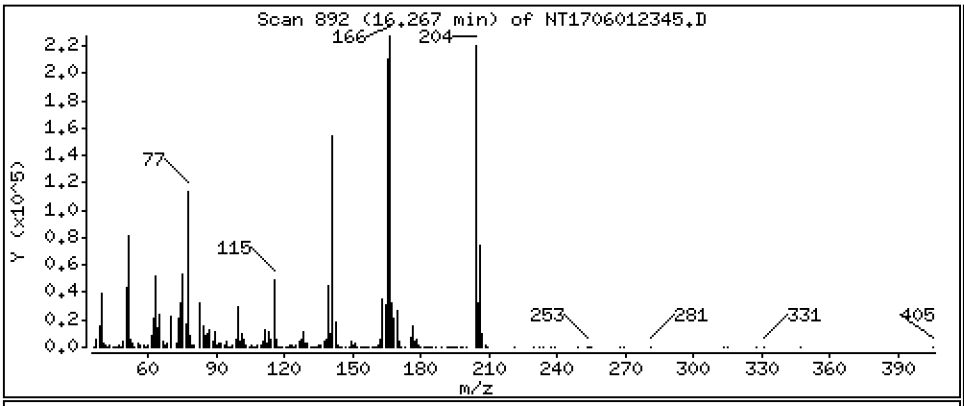
Operator: VTS

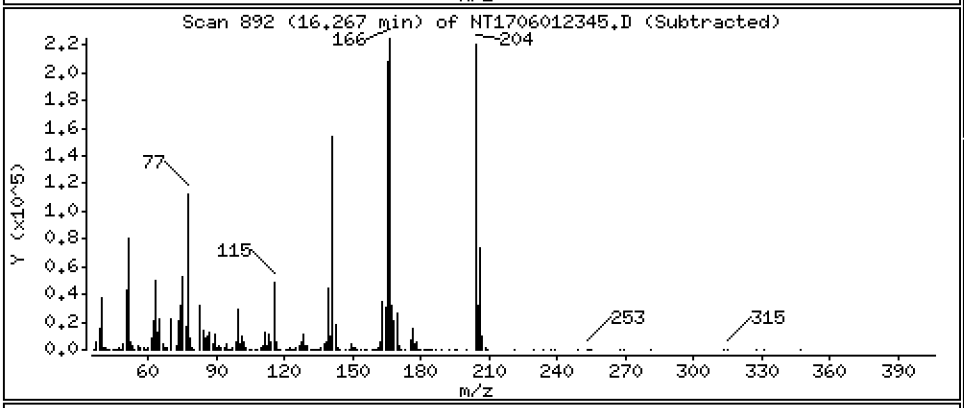
Column phase: ZB-5msi

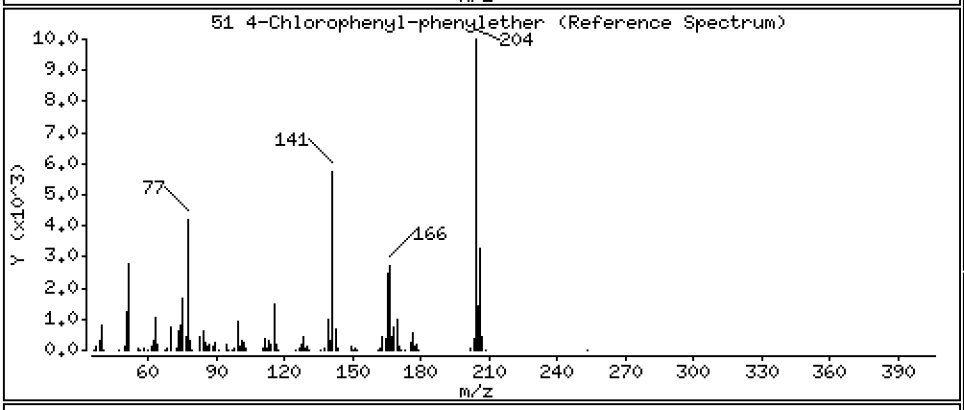
Column diameter: 0.25

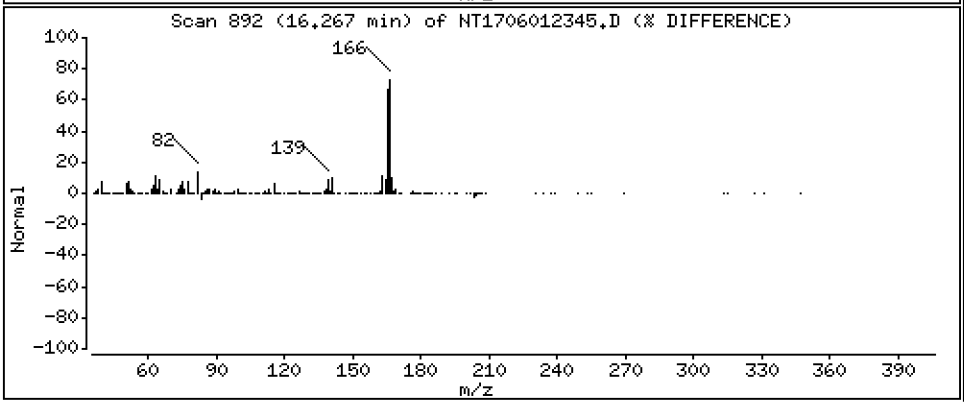
51 4-Chlorophenyl-phenylether

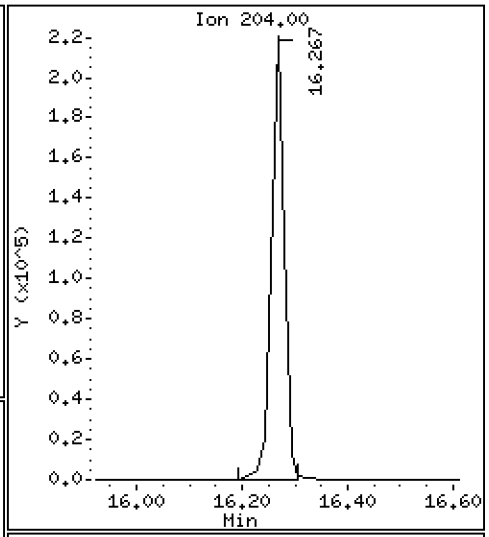
Concentration: 5.448 ug/mL

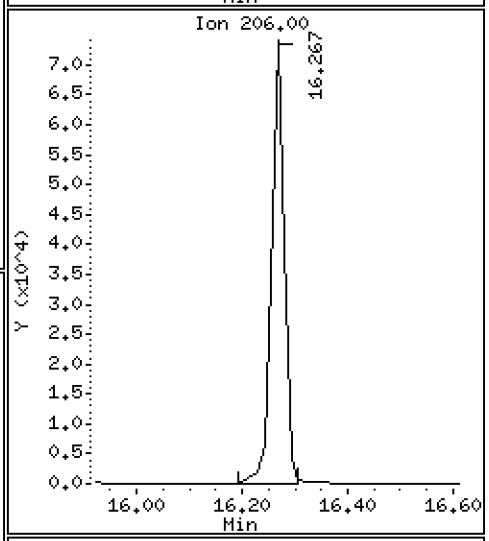


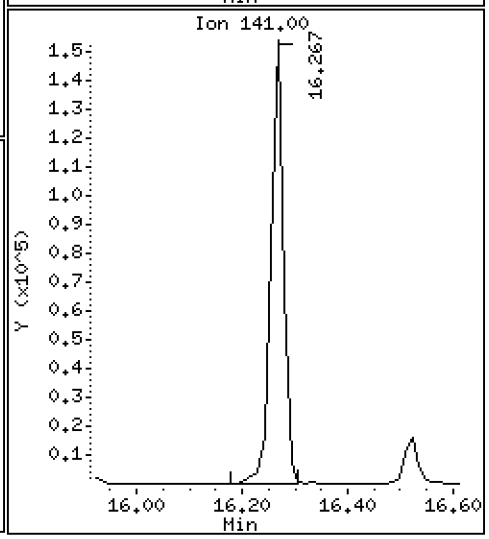












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

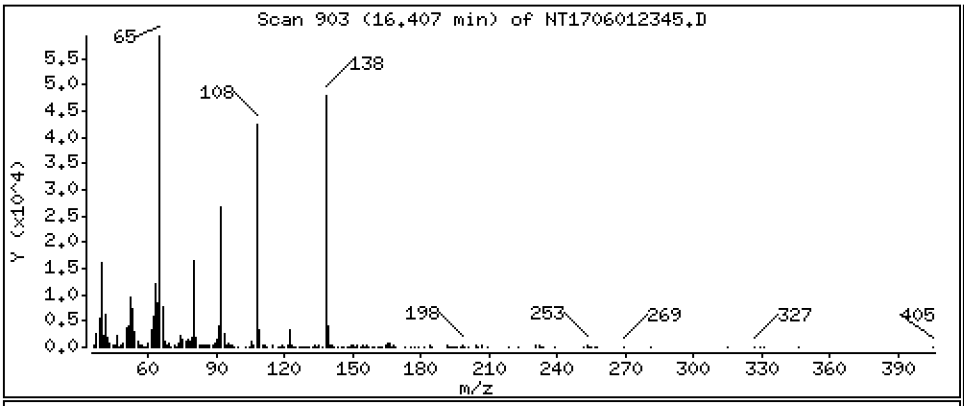
Operator: VTS

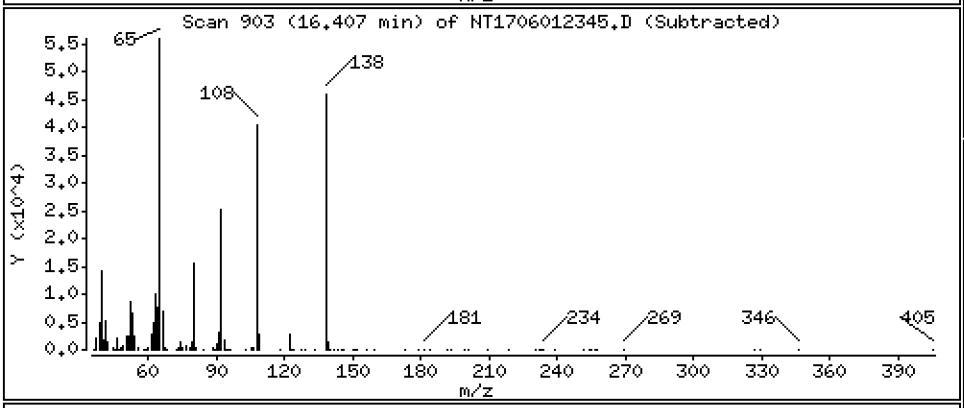
Column phase: ZB-5msi

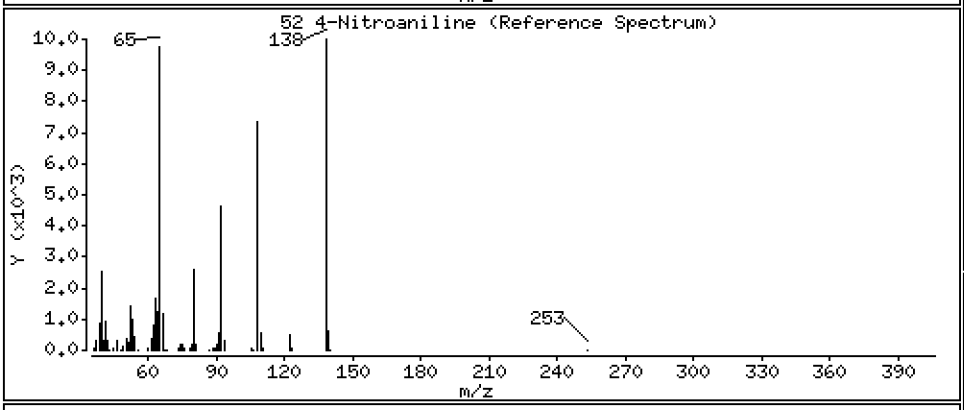
Column diameter: 0.25

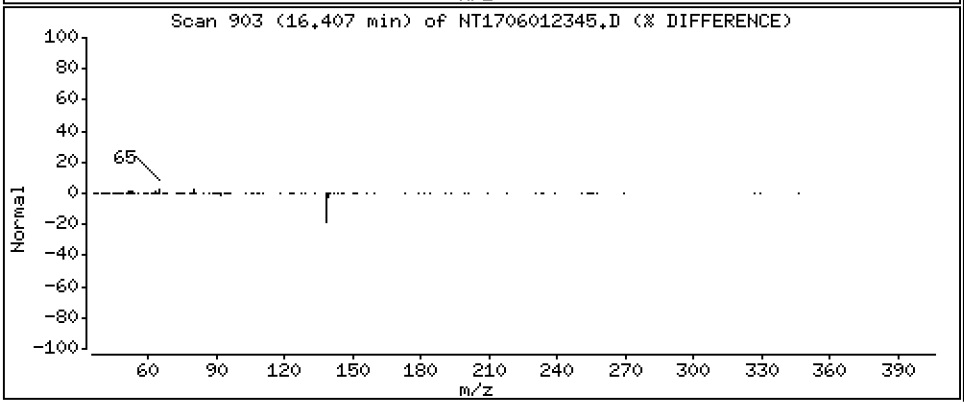
52 4-Nitroaniline

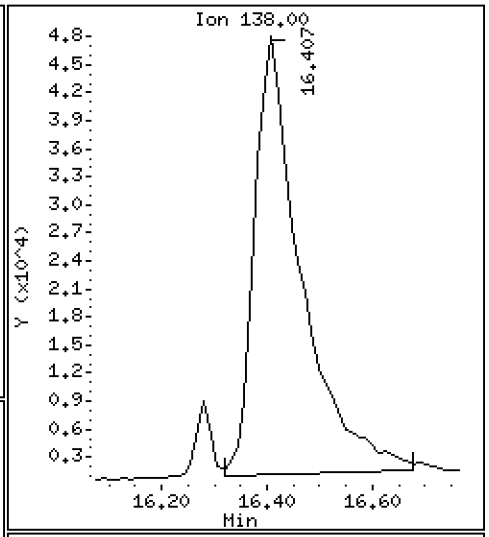
Concentration: 9.038 ug/mL

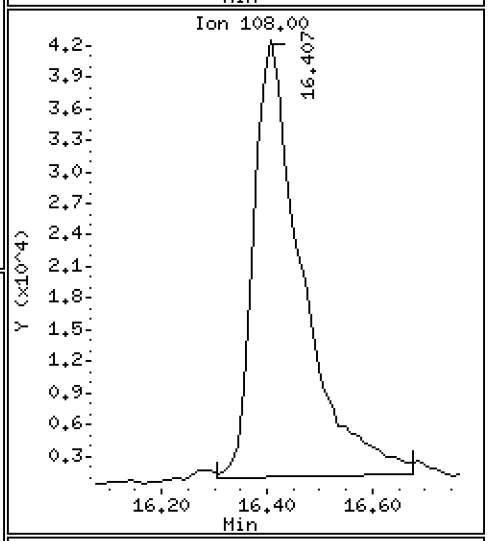


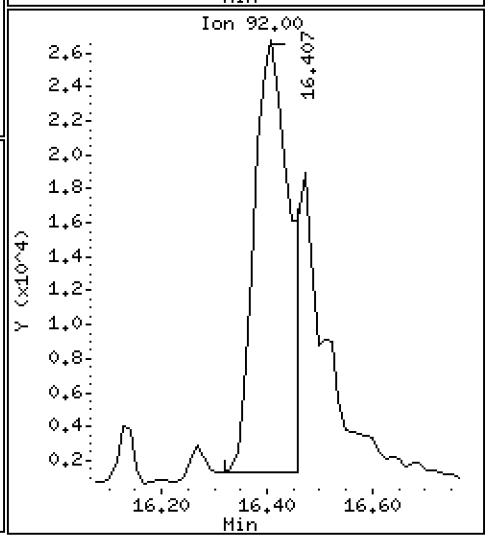












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

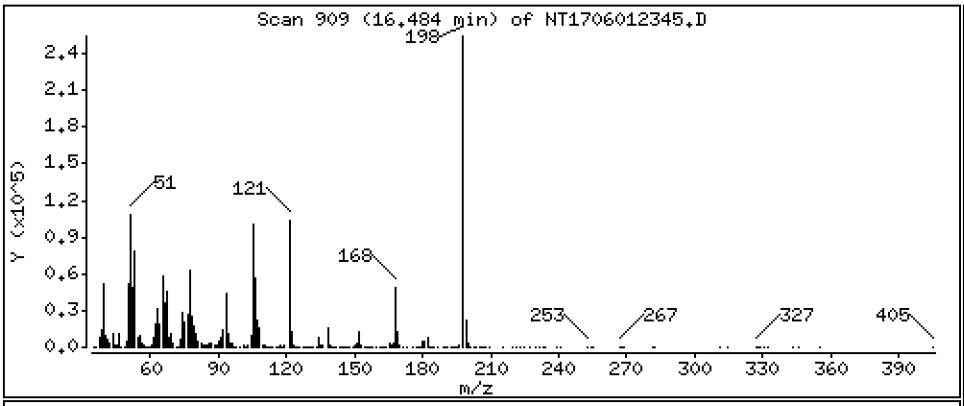
Operator: VTS

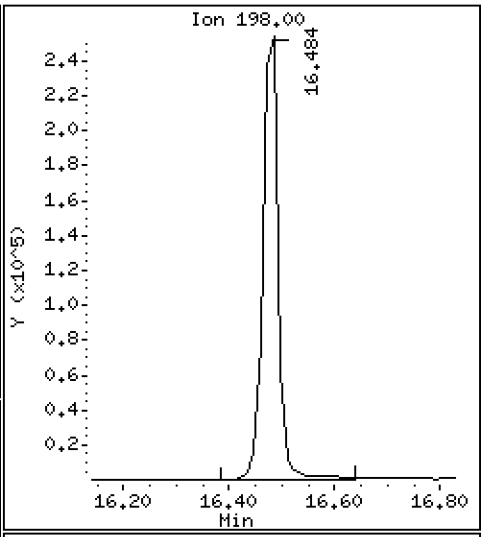
Column phase: ZB-5msi

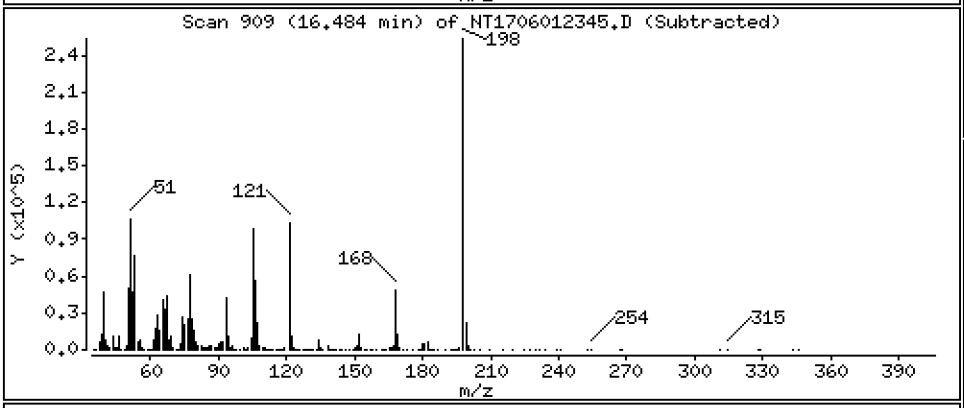
Column diameter: 0.25

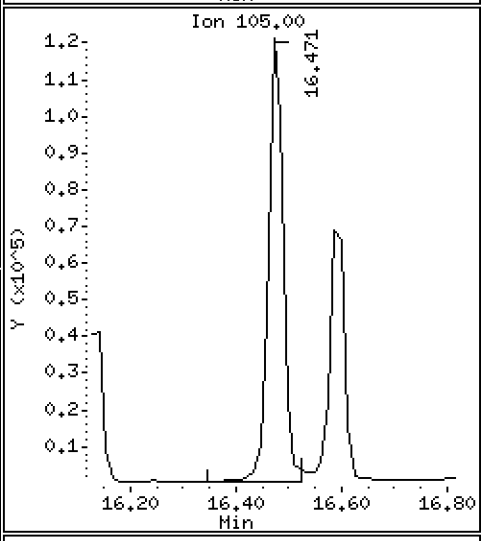
53 4,6-Dinitro-2-methylphenol

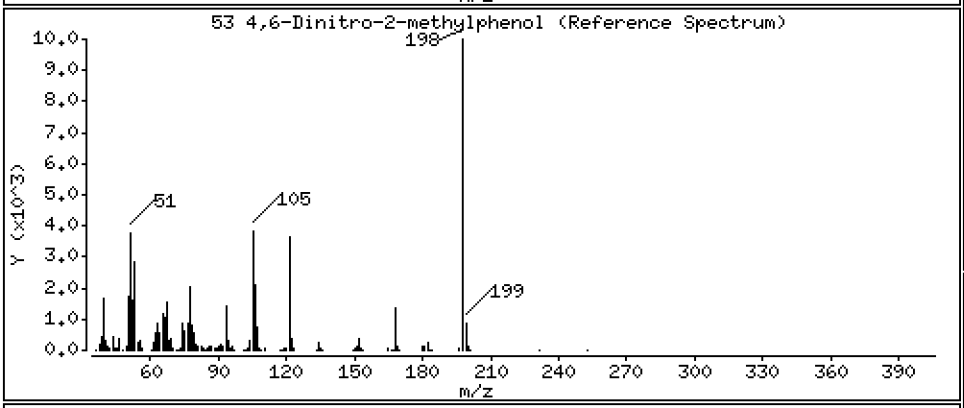
Concentration: 17.64 ug/mL

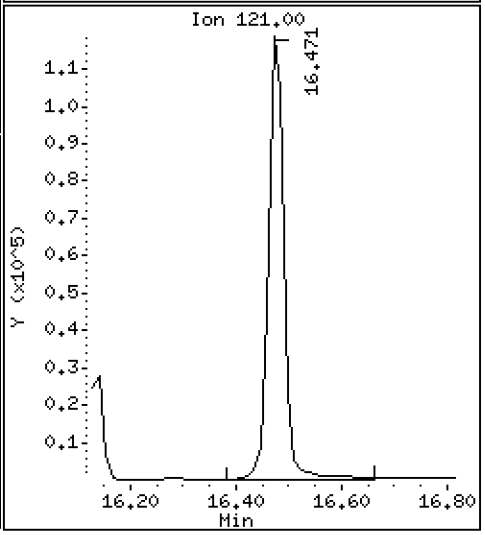


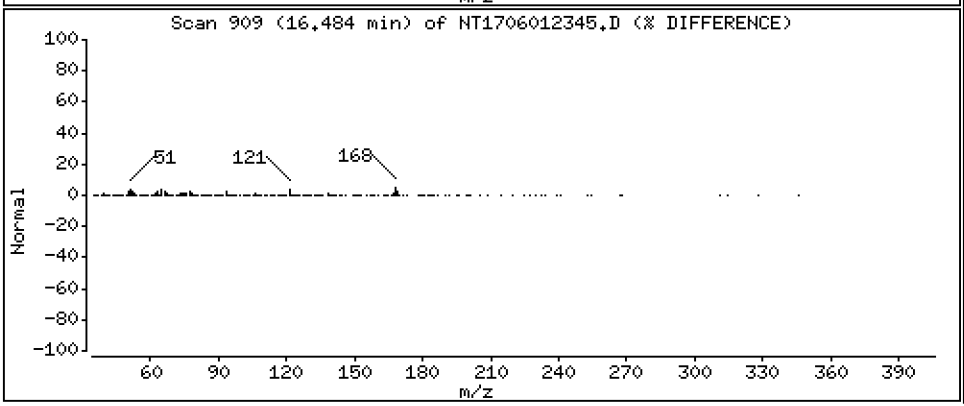












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

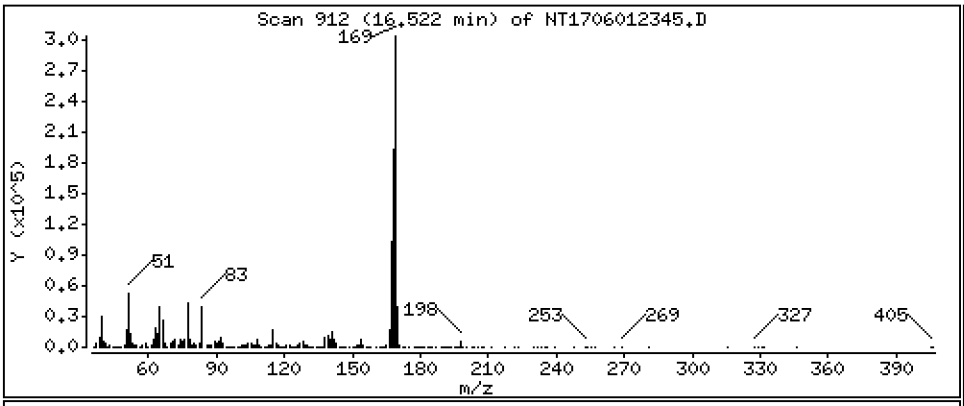
Operator: VTS

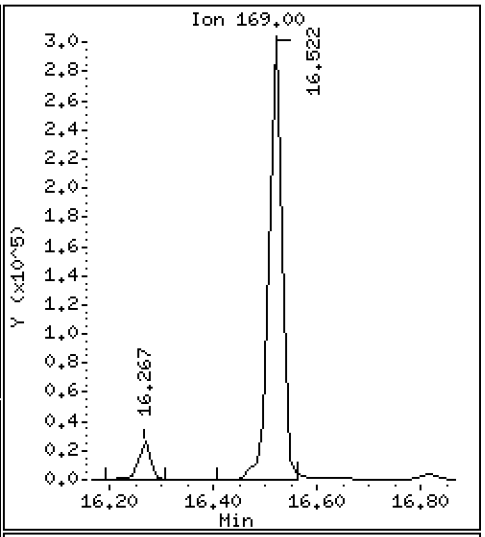
Column phase: ZB-5msi

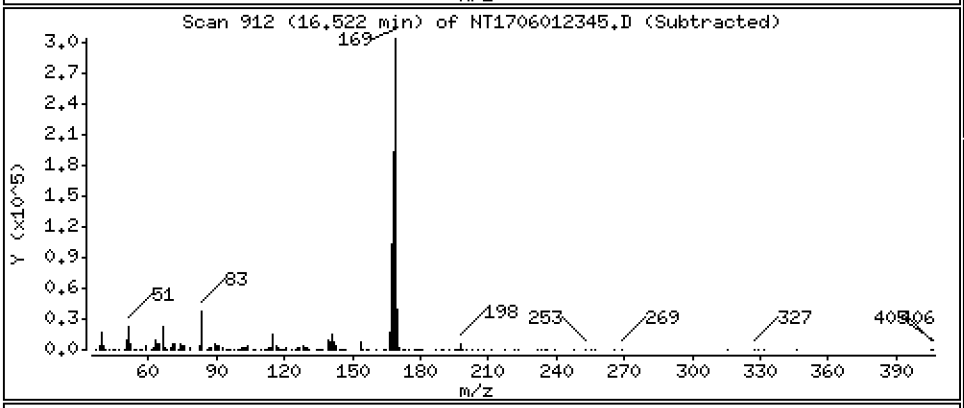
Column diameter: 0.25

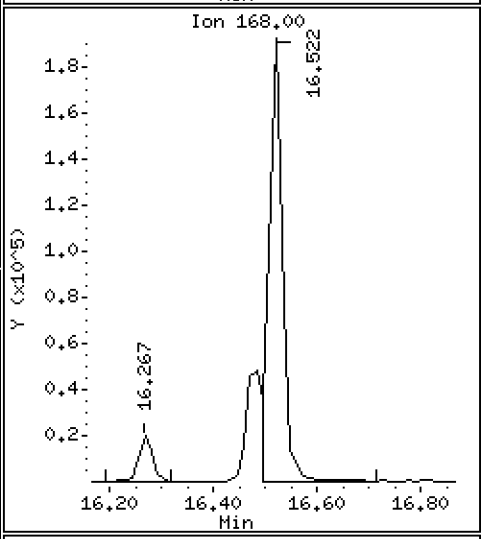
54 N-Nitrosodiphenylamine

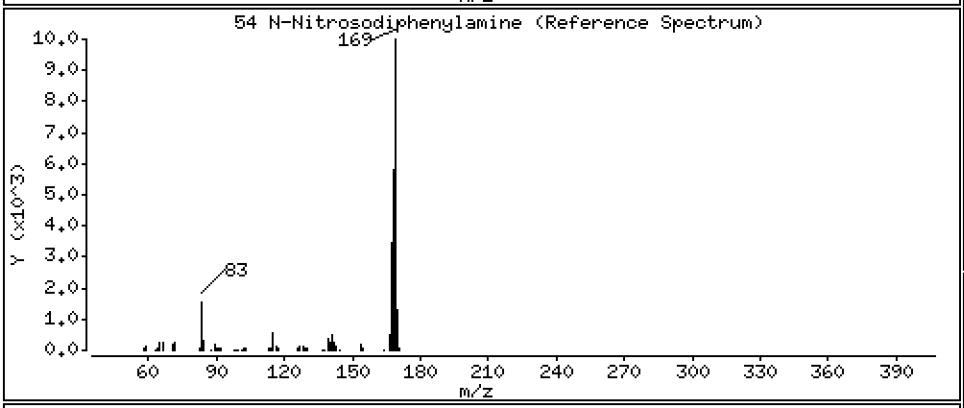
Concentration: 5.062 ug/mL

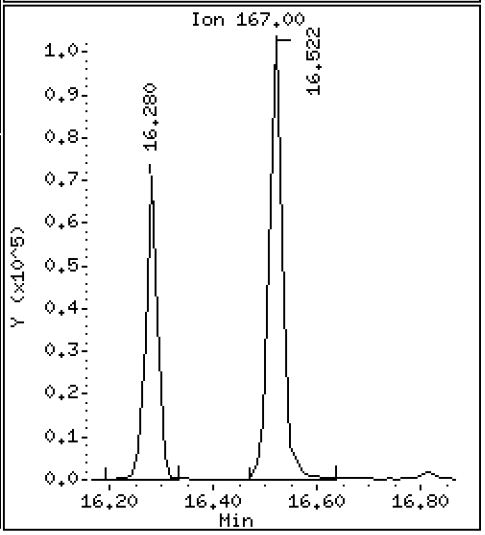


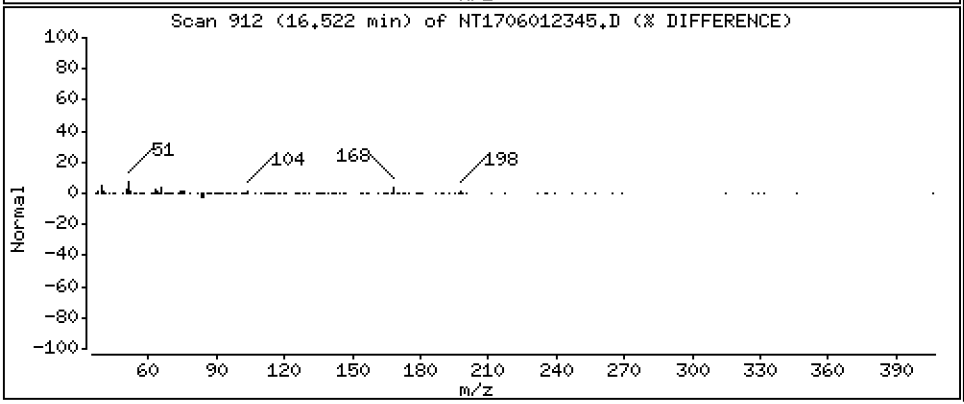












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

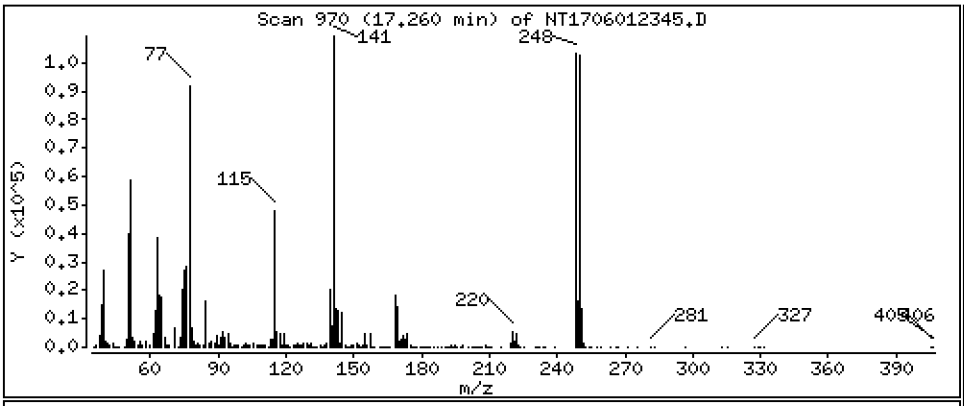
Operator: VTS

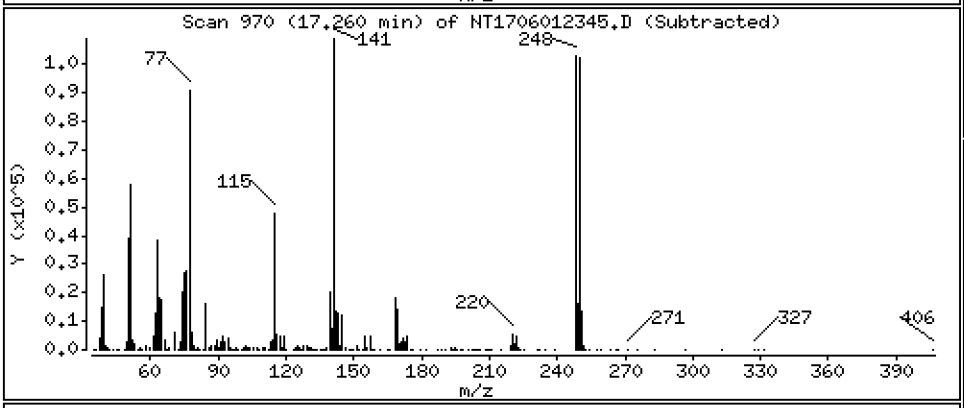
Column phase: ZB-5msi

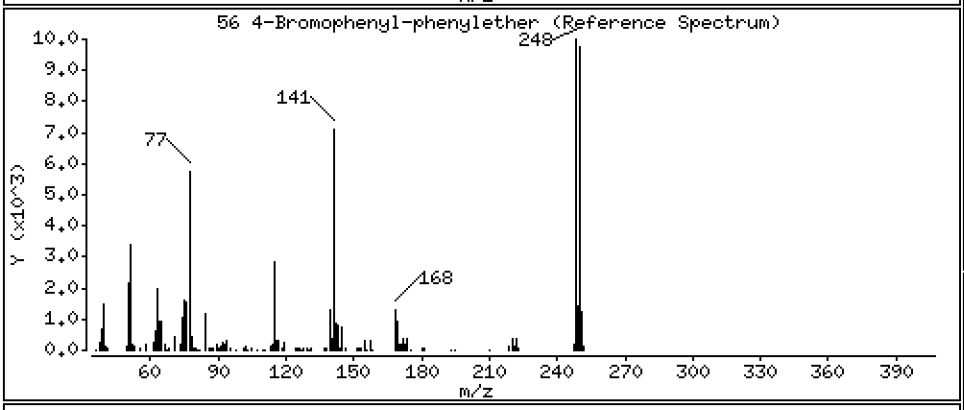
Column diameter: 0.25

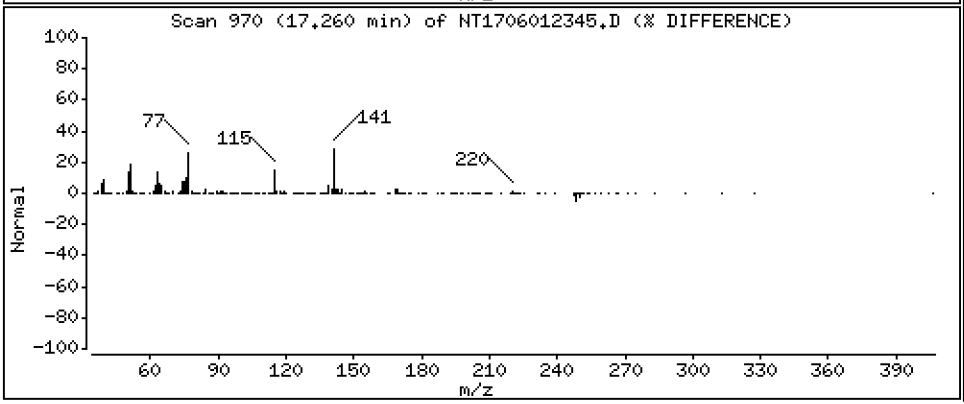
56 4-Bromophenyl-phenylether

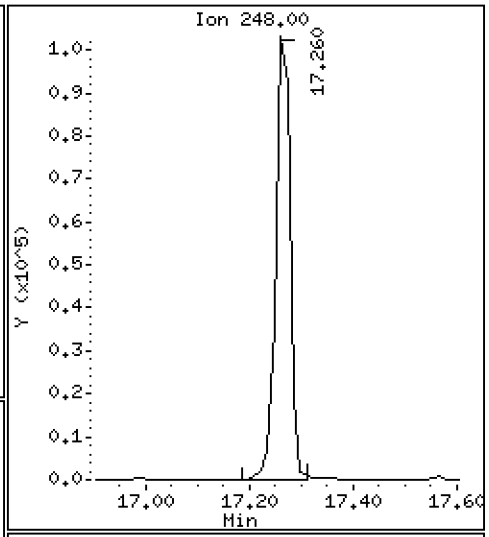
Concentration: 5.475 ug/mL

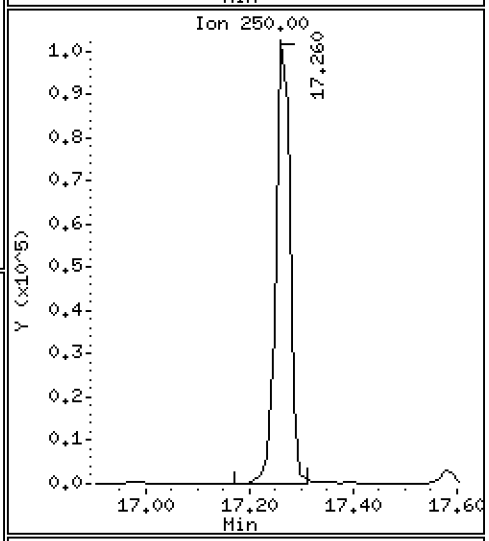


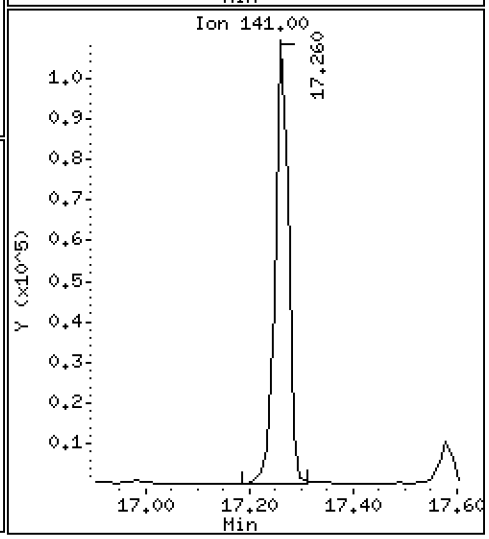












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

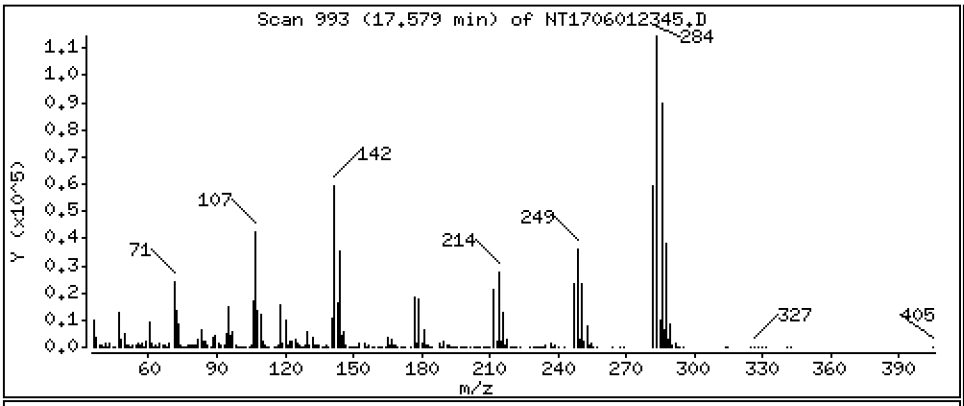
Operator: VTS

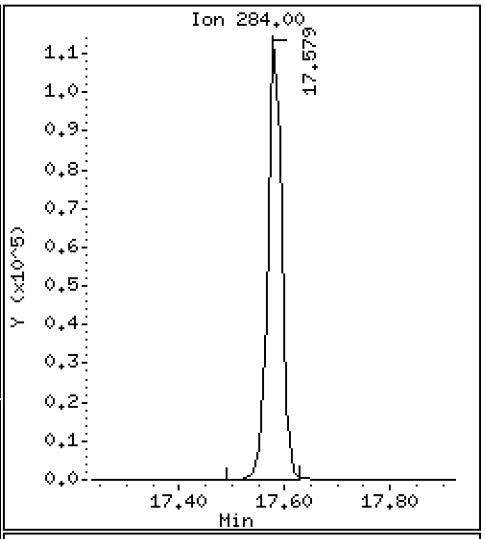
Column phase: ZB-5msi

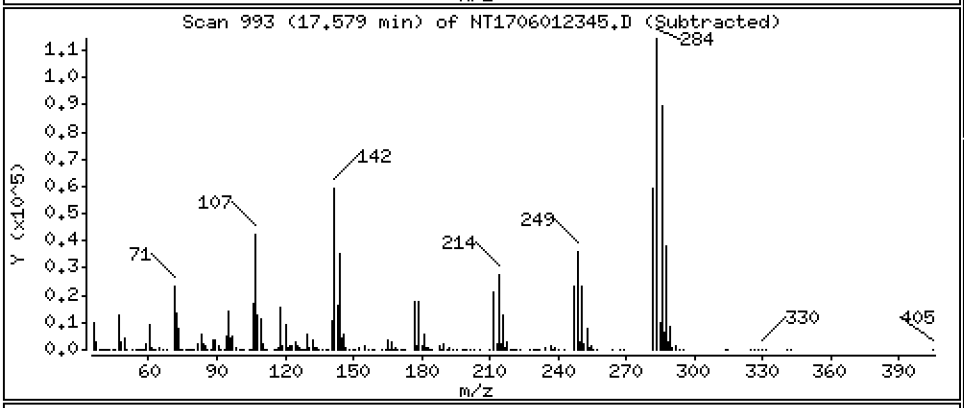
Column diameter: 0.25

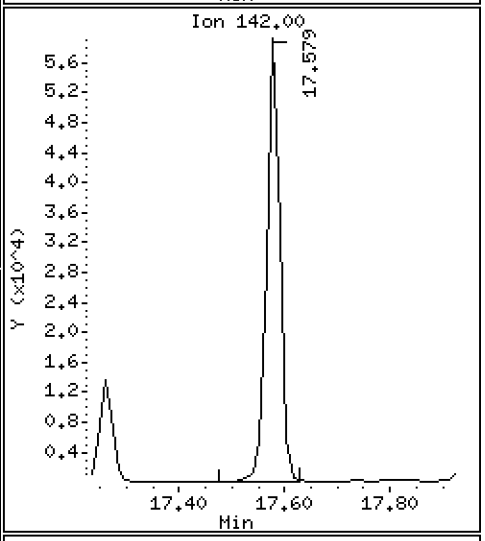
57 Hexachlorobenzene

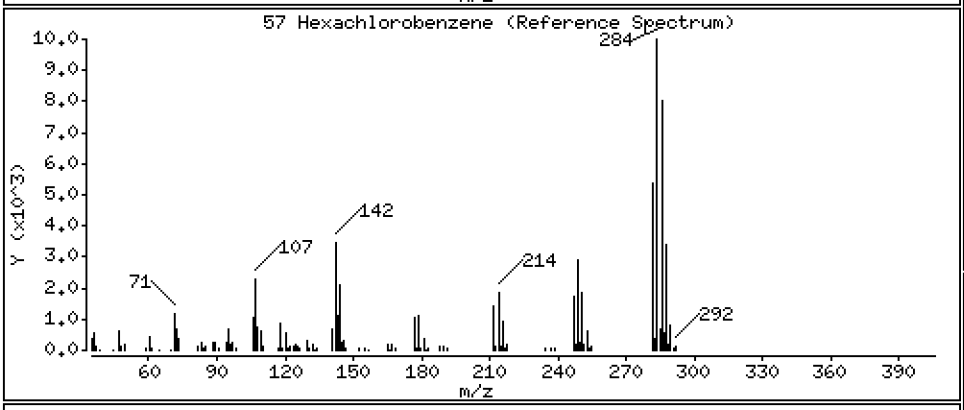
Concentration: 5.656 ug/mL

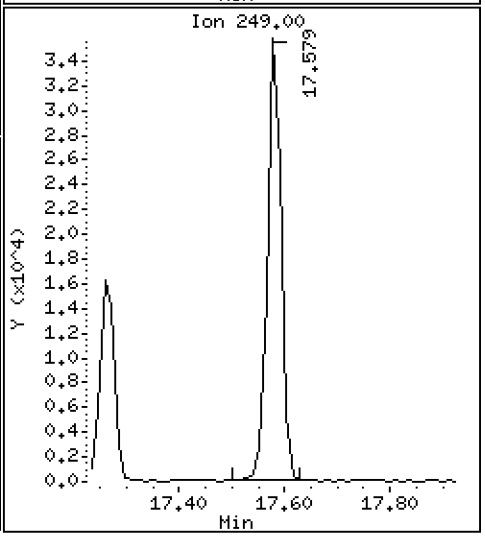


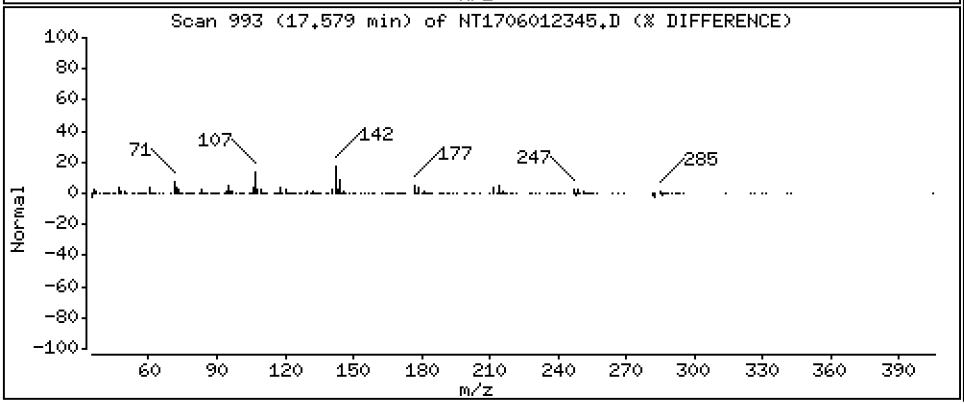












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

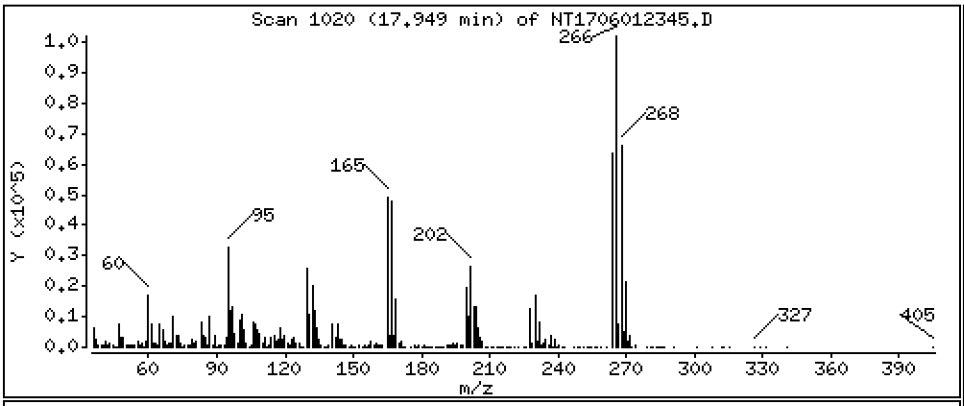
Operator: VTS

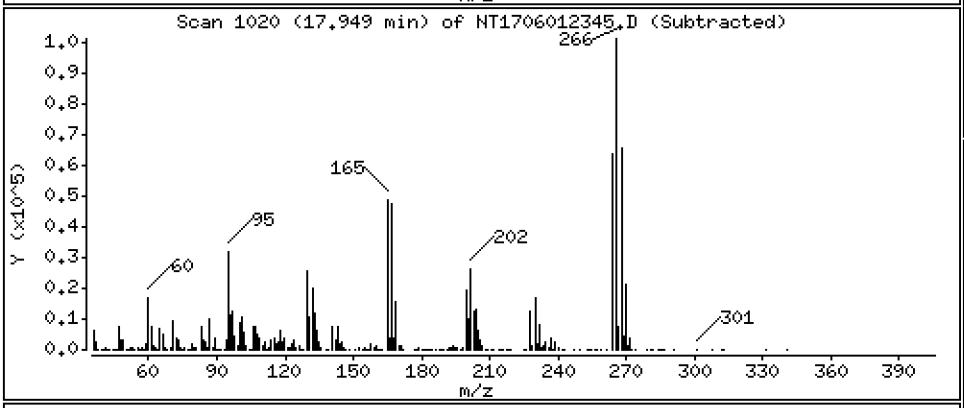
Column phase: ZB-5msi

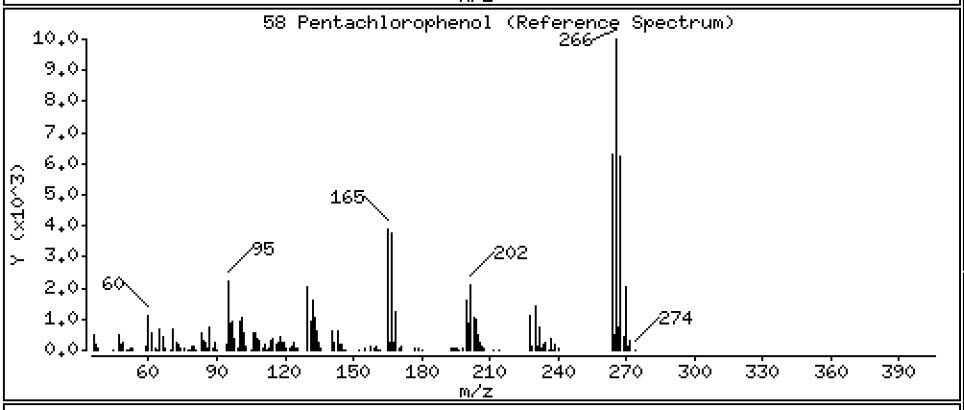
Column diameter: 0.25

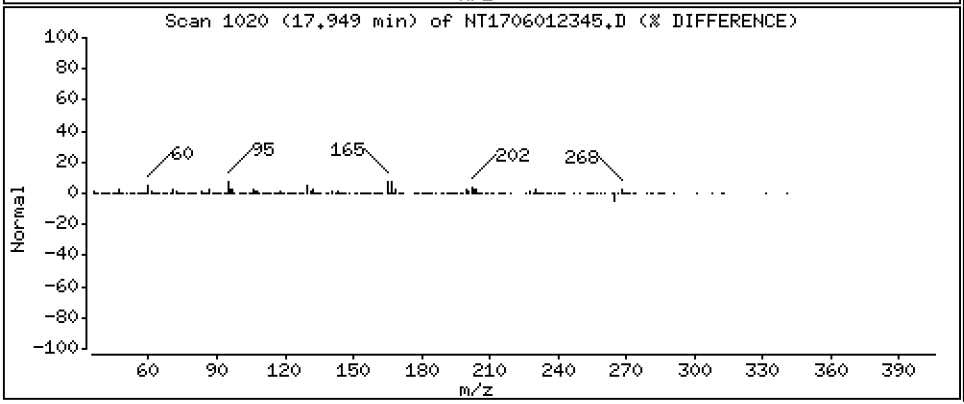
58 Pentachlorophenol

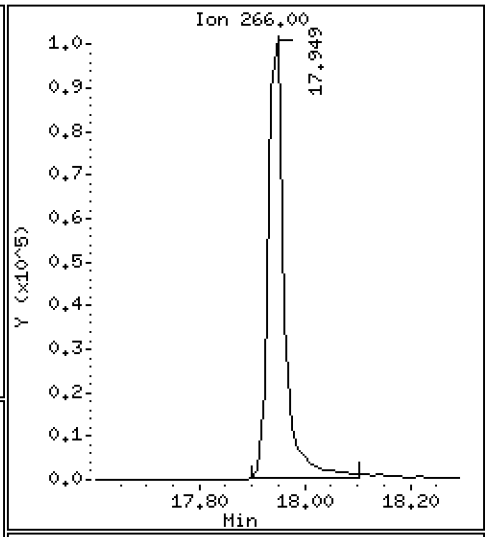
Concentration: 9.511 ug/mL

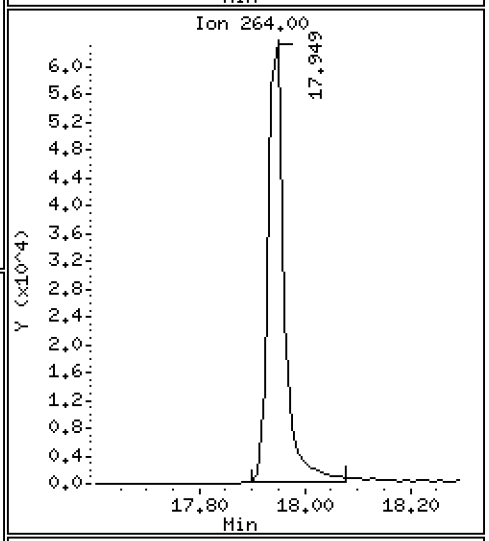


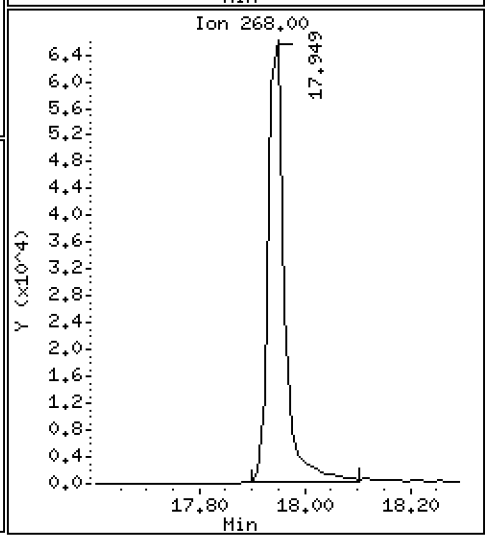












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

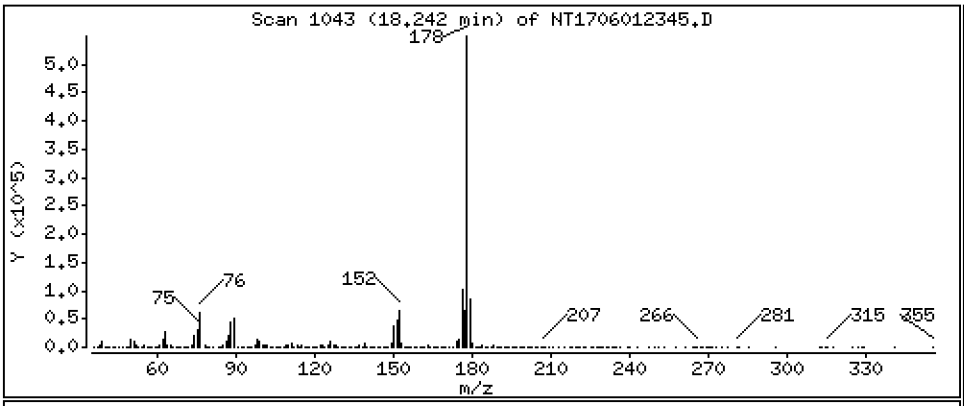
Operator: VTS

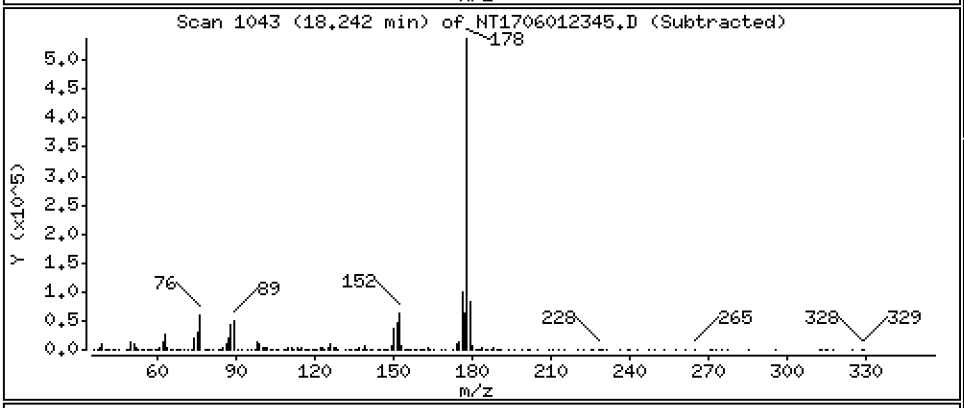
Column phase: ZB-5msi

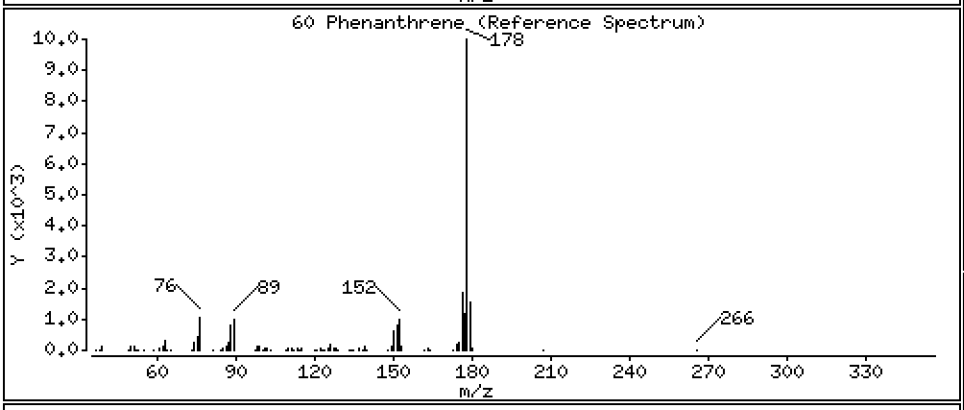
Column diameter: 0.25

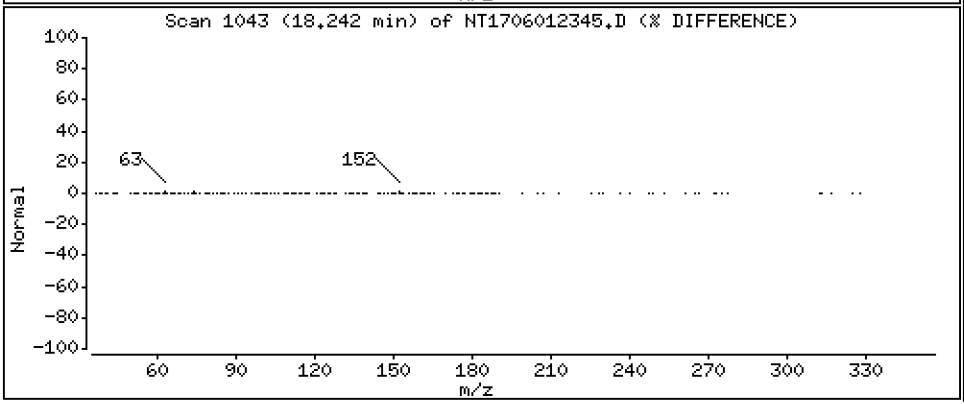
60 Phenanthrene

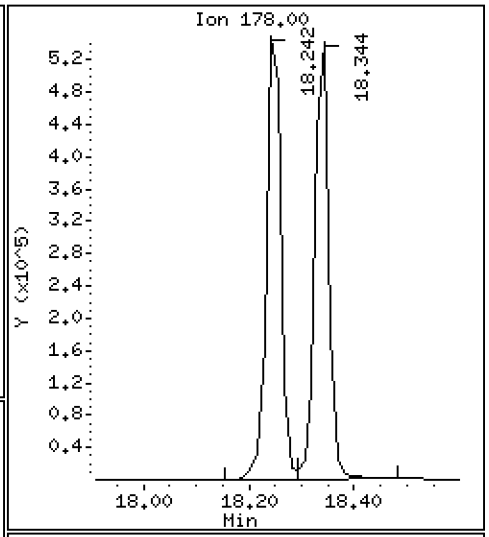
Concentration: 4.929 ug/mL

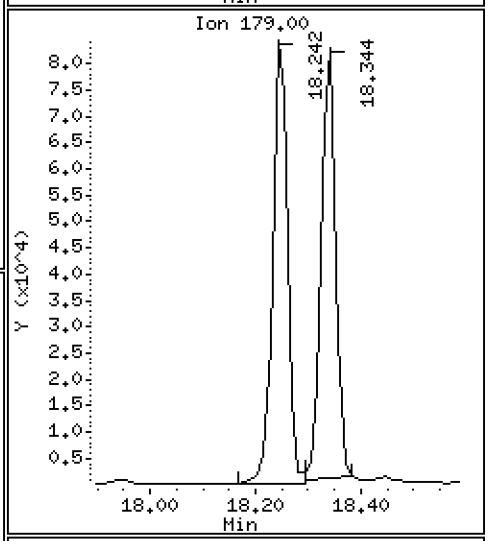


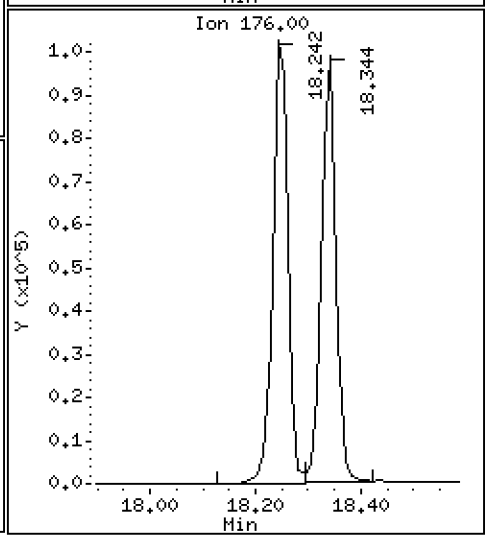












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

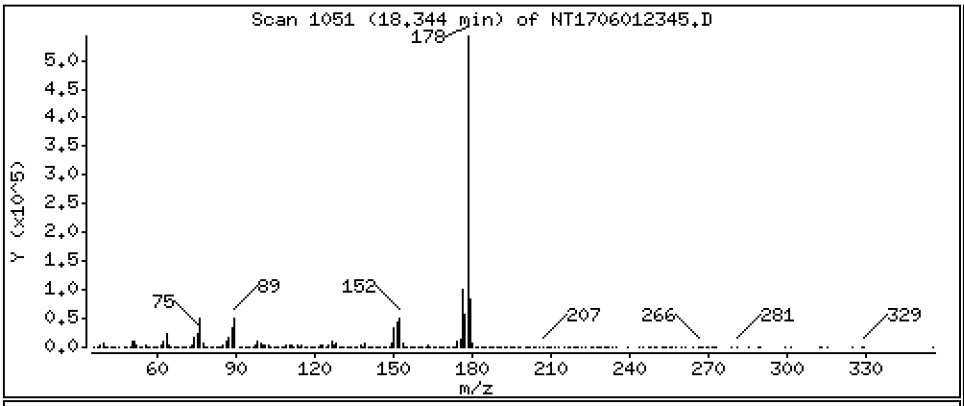
Operator: VTS

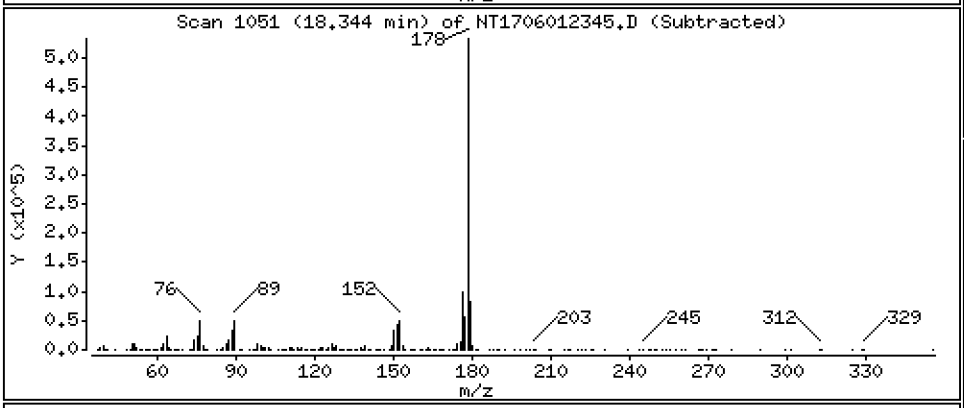
Column phase: ZB-5msi

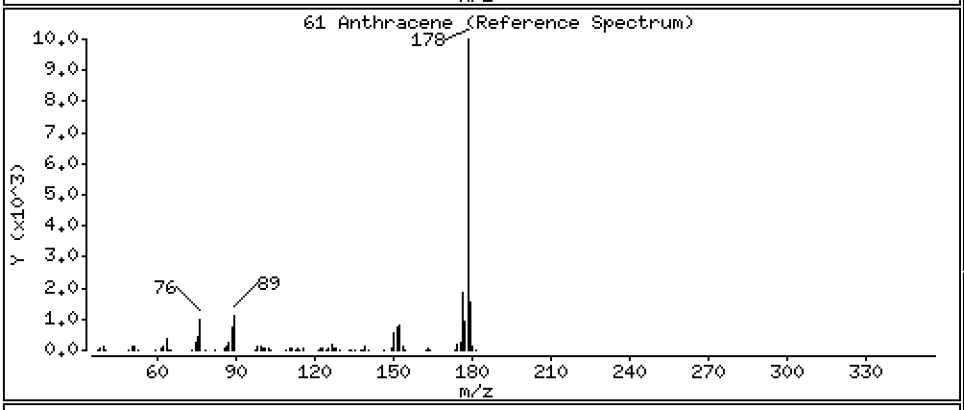
Column diameter: 0.25

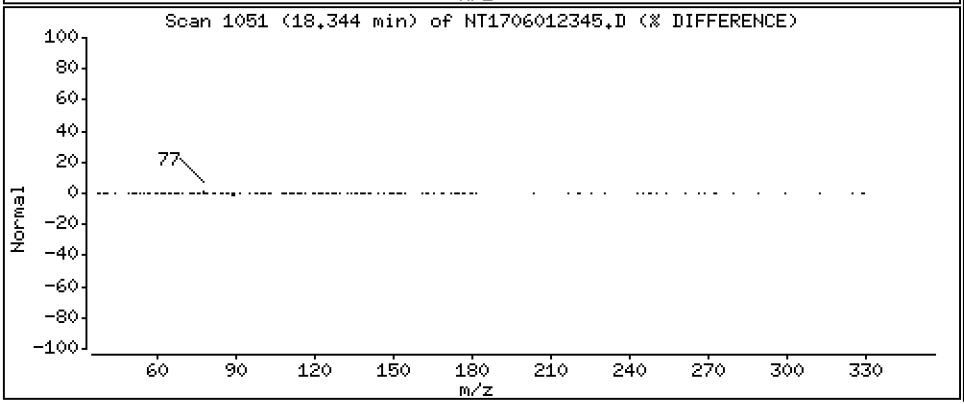
61 Anthracene

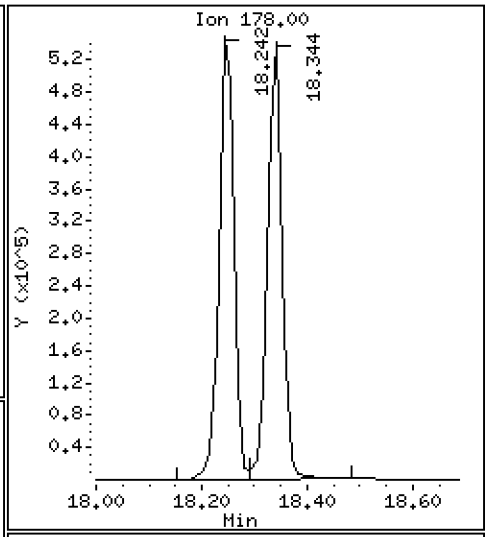
Concentration: 5.043 ug/mL

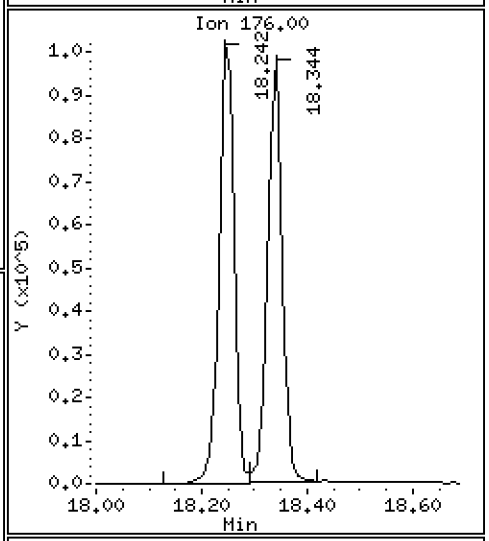


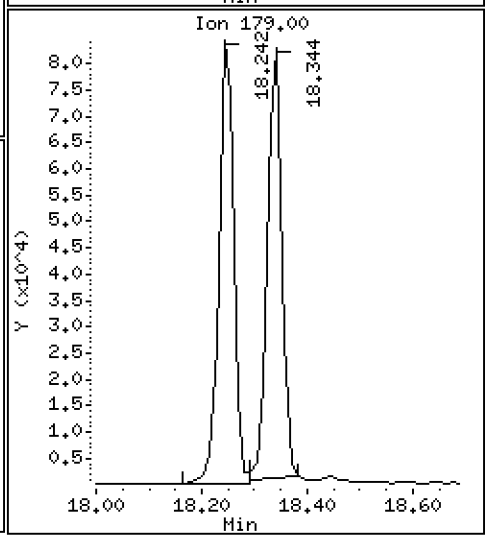












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

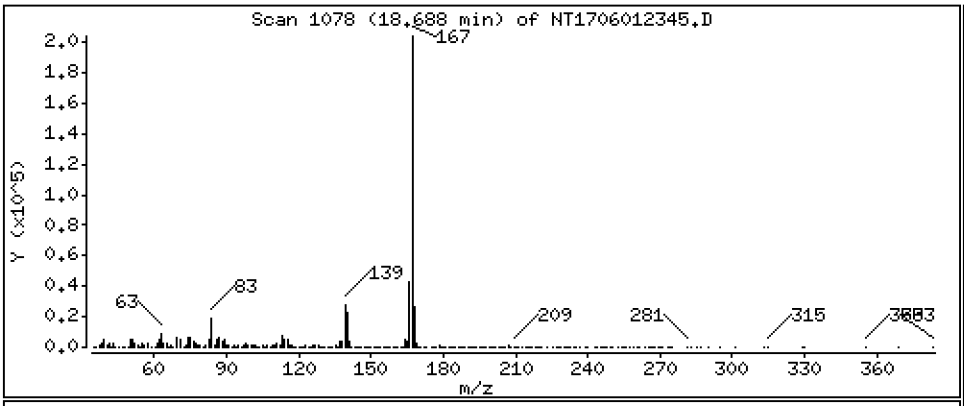
Operator: VTS

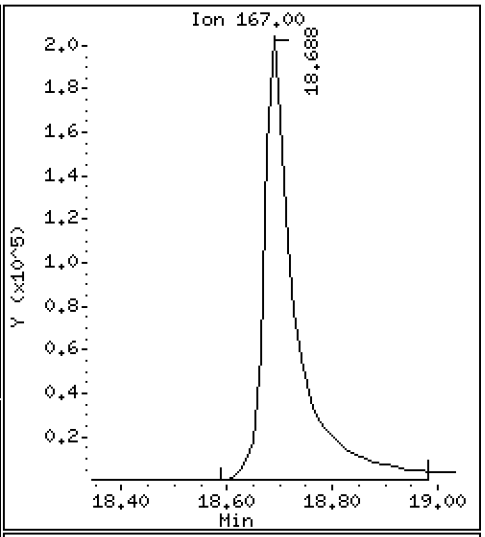
Column phase: ZB-5msi

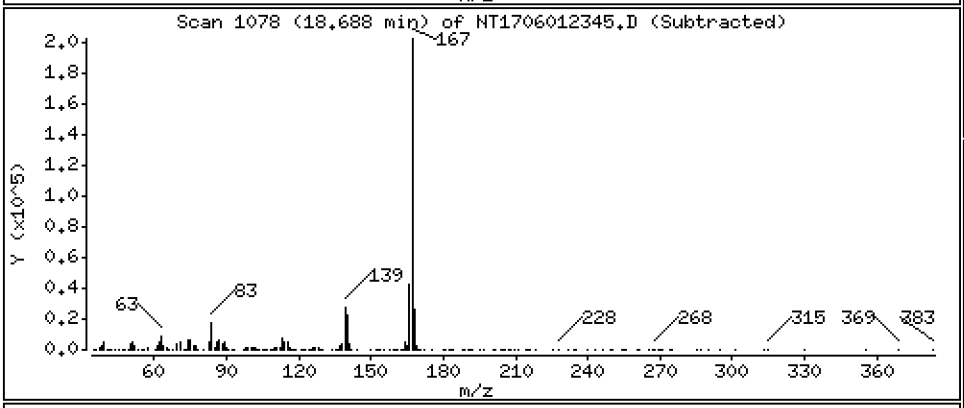
Column diameter: 0.25

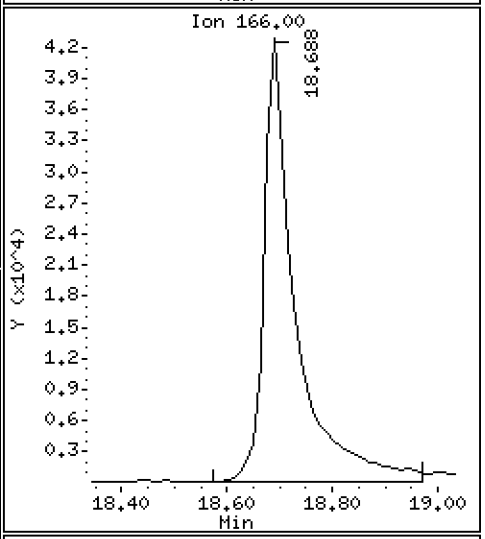
62 Carbazole

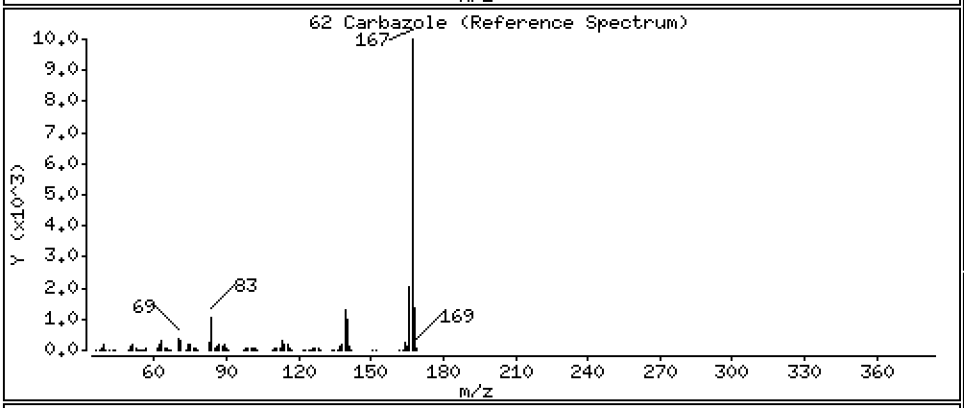
Concentration: 6.373 ug/mL

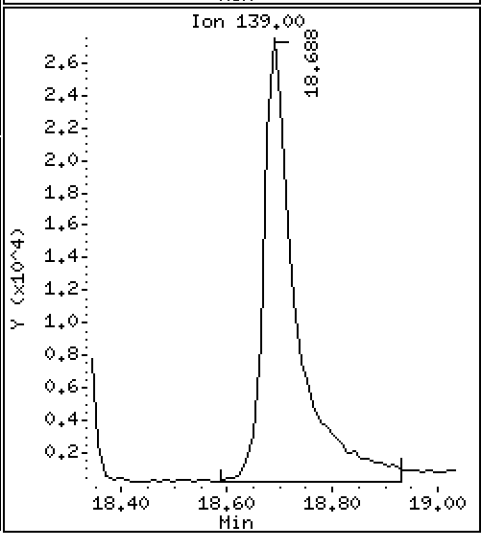


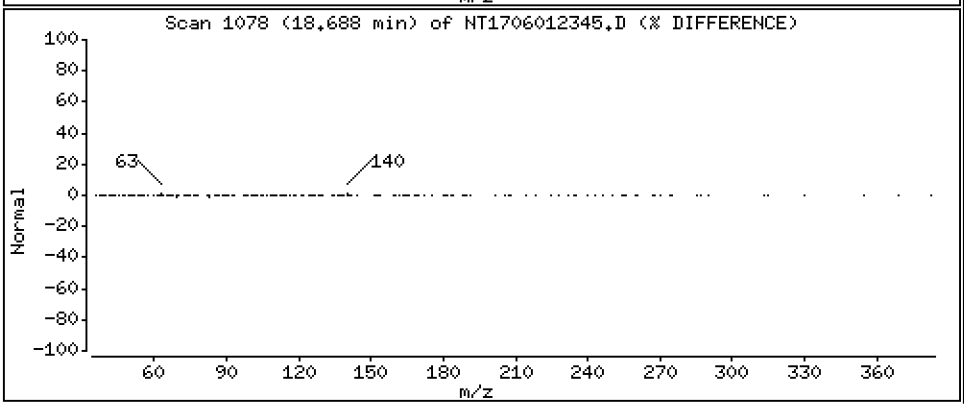












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

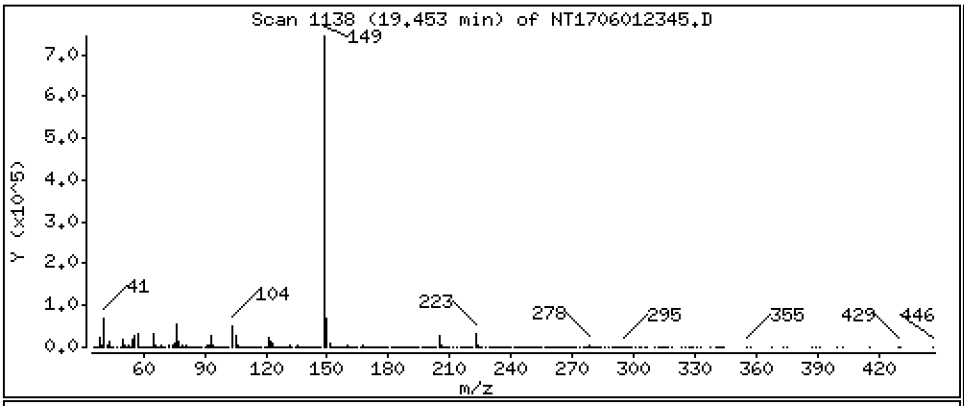
Operator: VTS

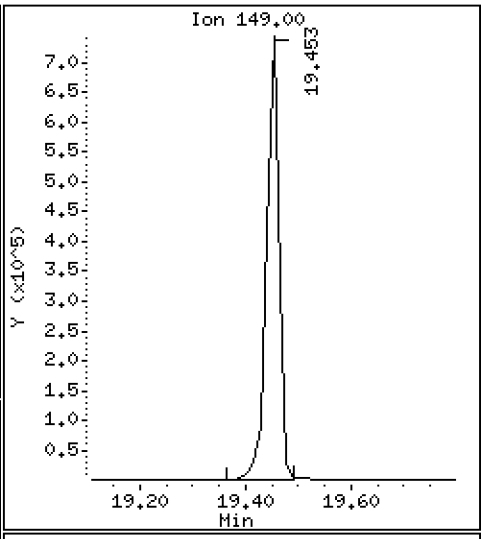
Column phase: ZB-5msi

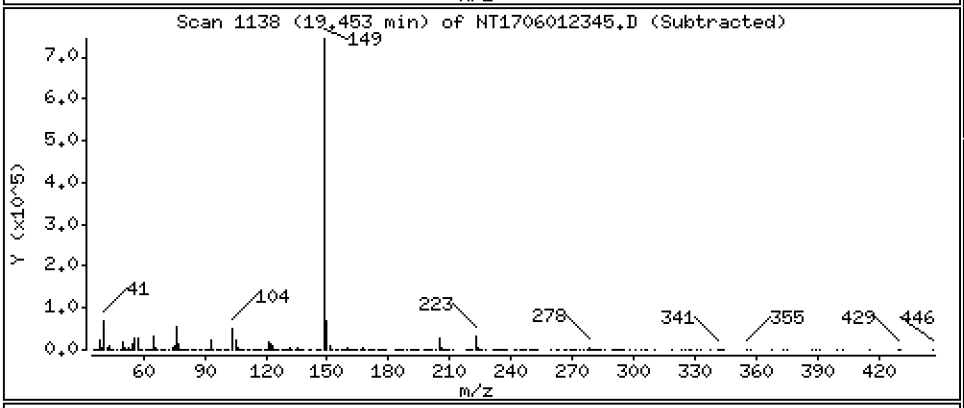
Column diameter: 0.25

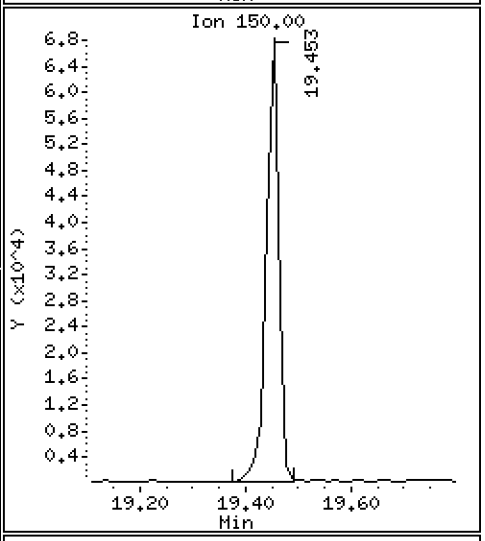
63 Di-n-butylphthalate

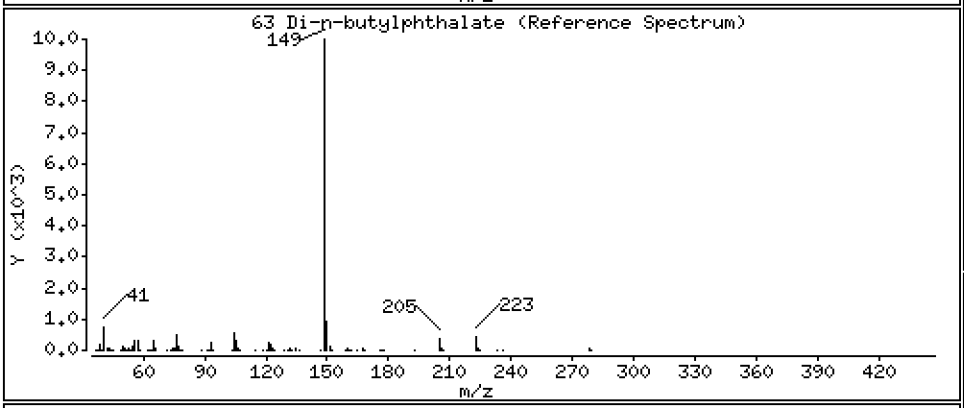
Concentration: 5.155 ug/mL

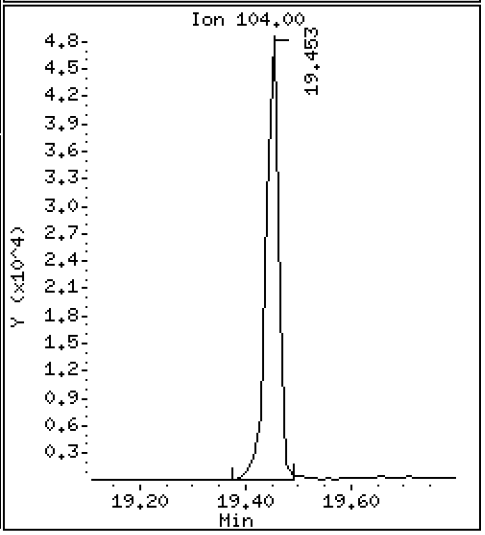


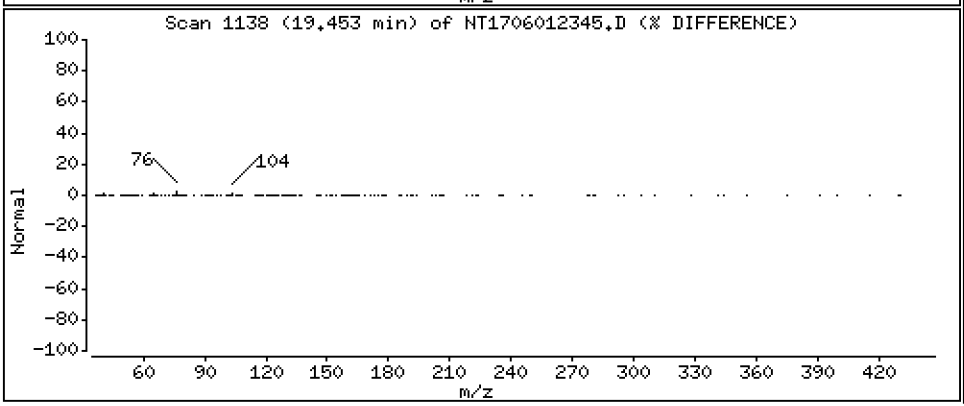












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

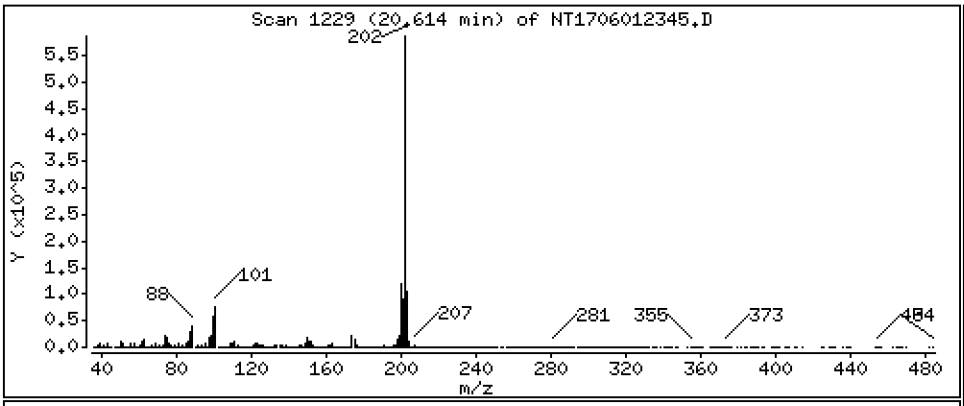
Operator: VTS

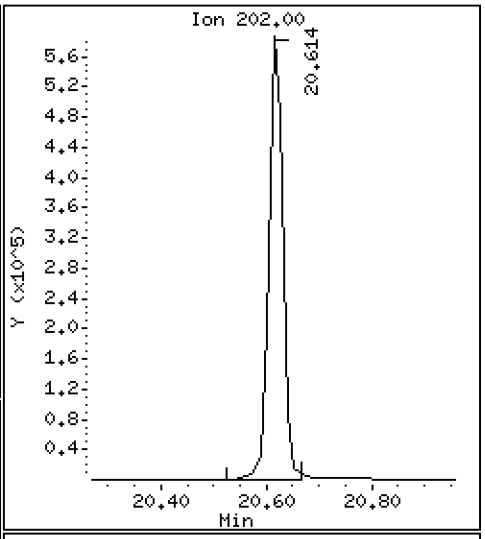
Column phase: ZB-5msi

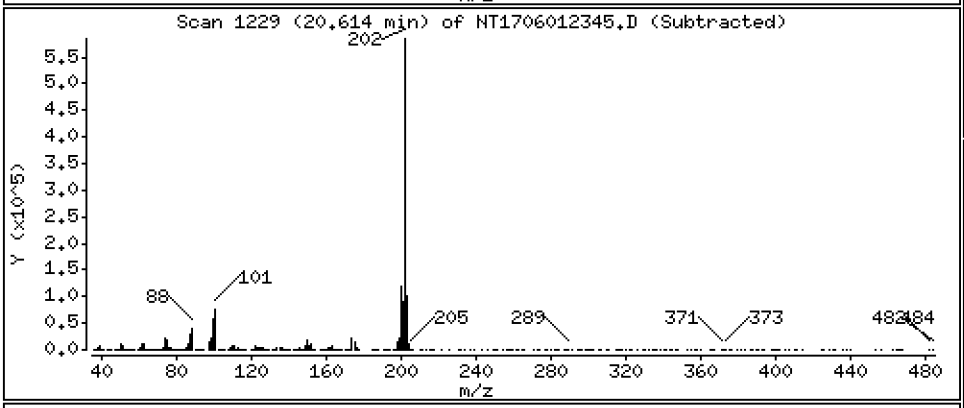
Column diameter: 0.25

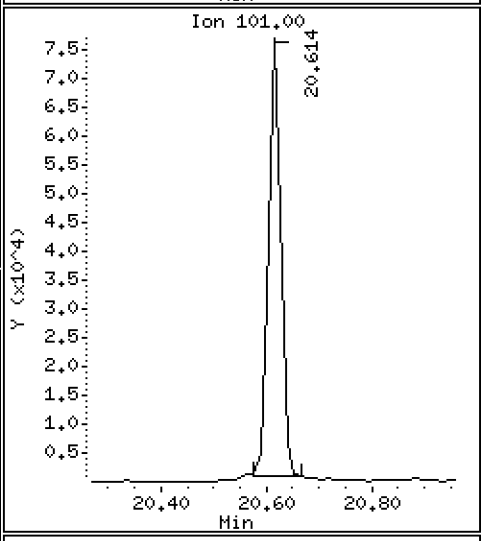
64 Fluoranthene

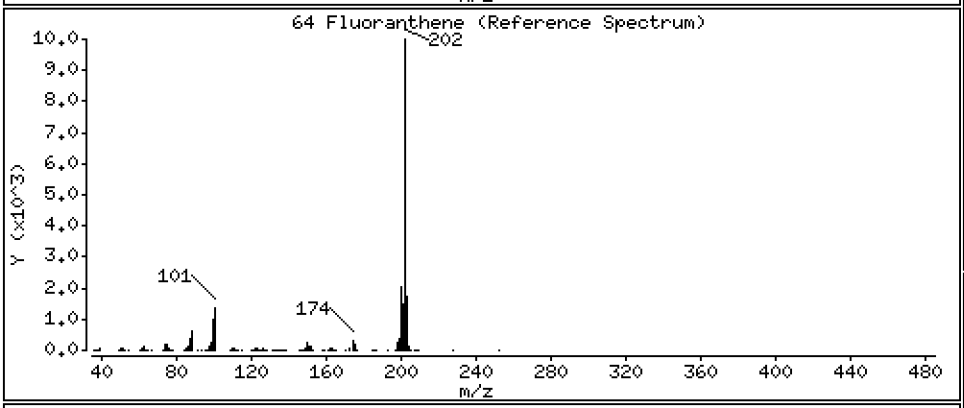
Concentration: 4.658 ug/mL

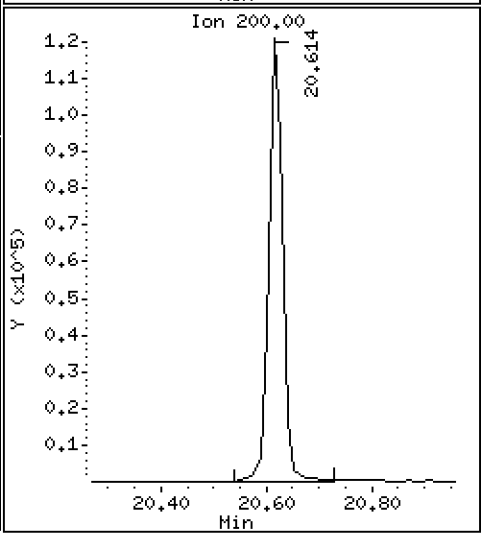


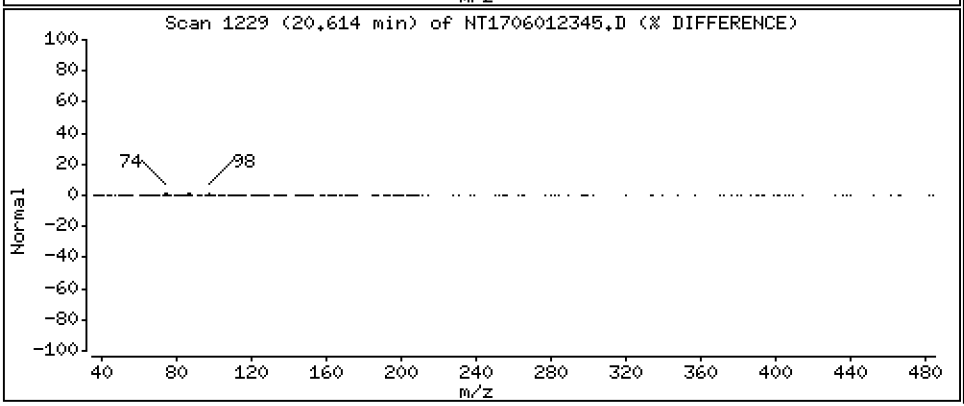












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

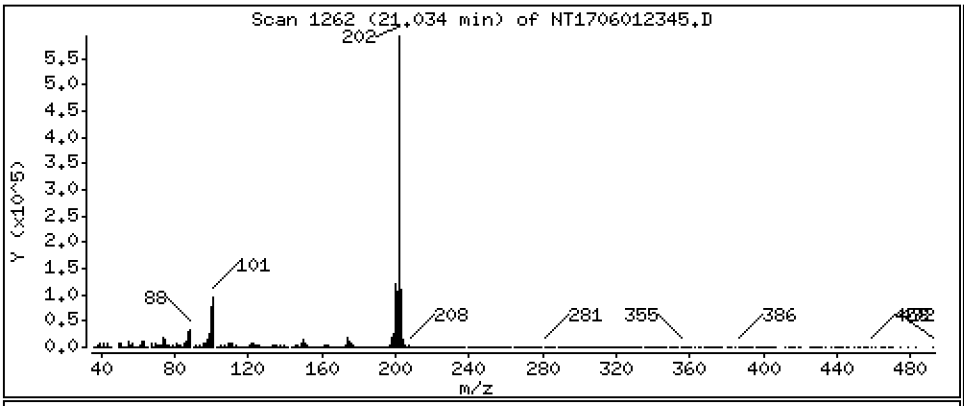
Operator: VTS

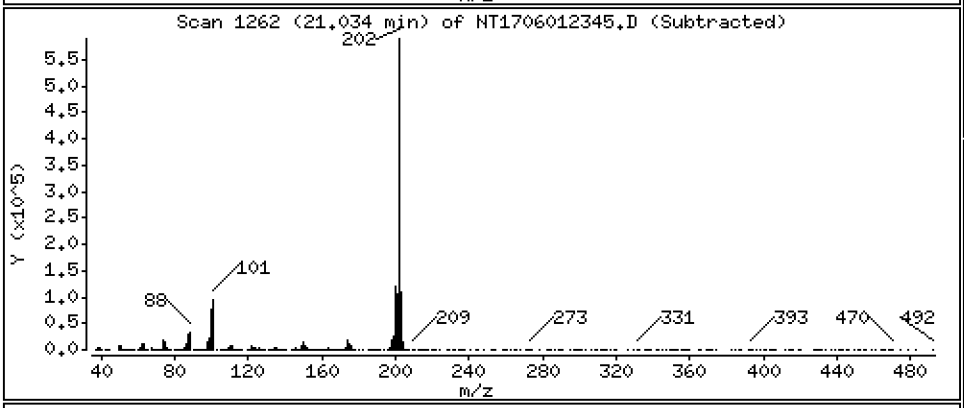
Column phase: ZB-5msi

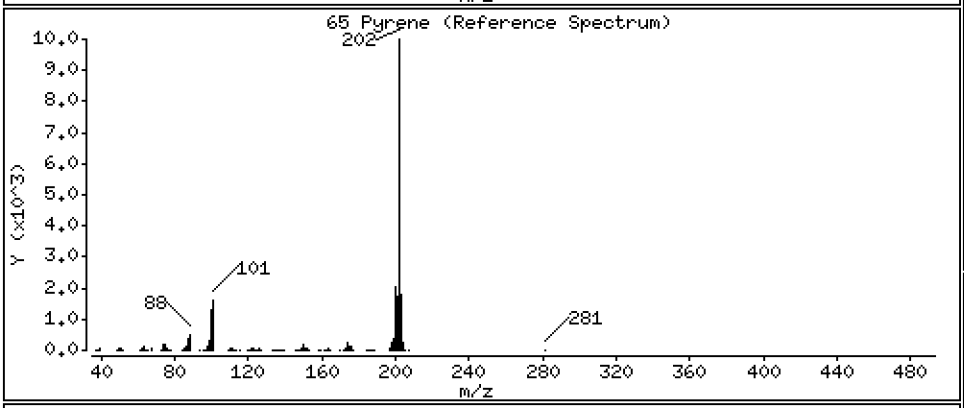
Column diameter: 0.25

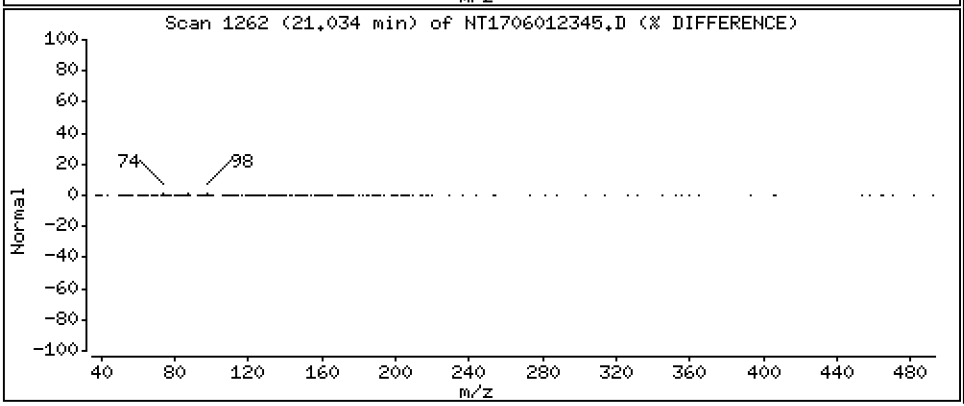
65 Pyrene

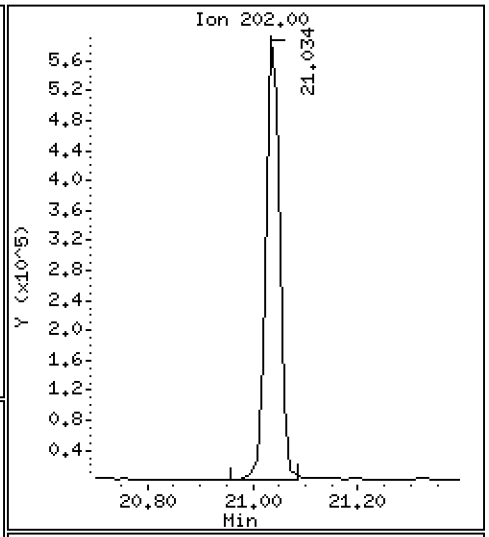
Concentration: 4.600 ug/mL

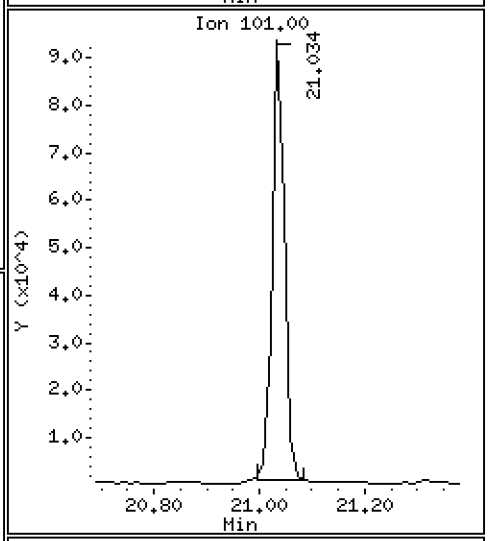


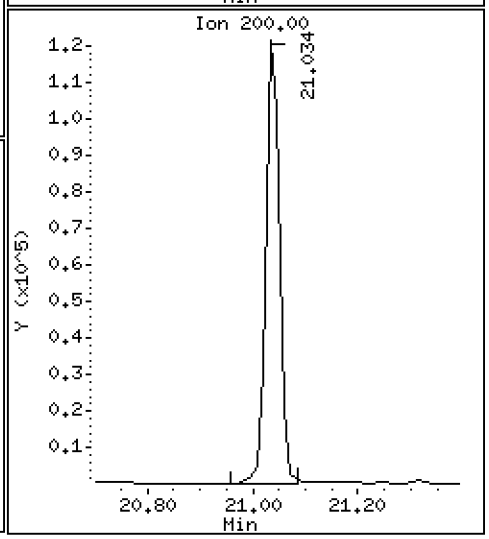












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

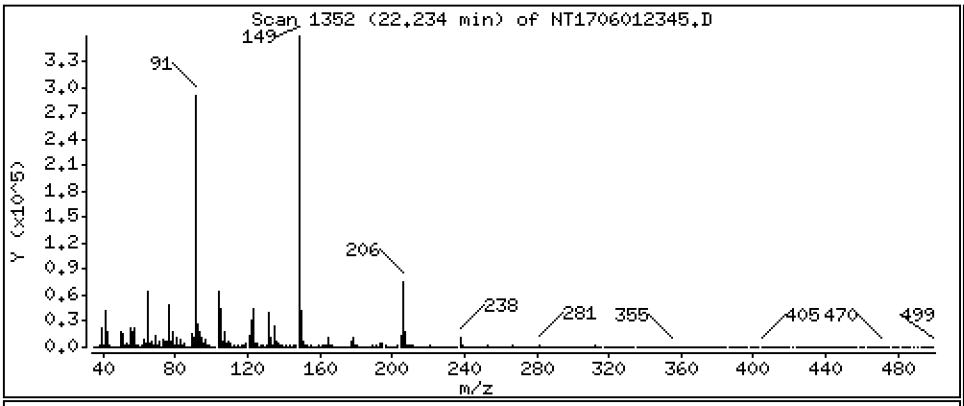
Operator: VTS

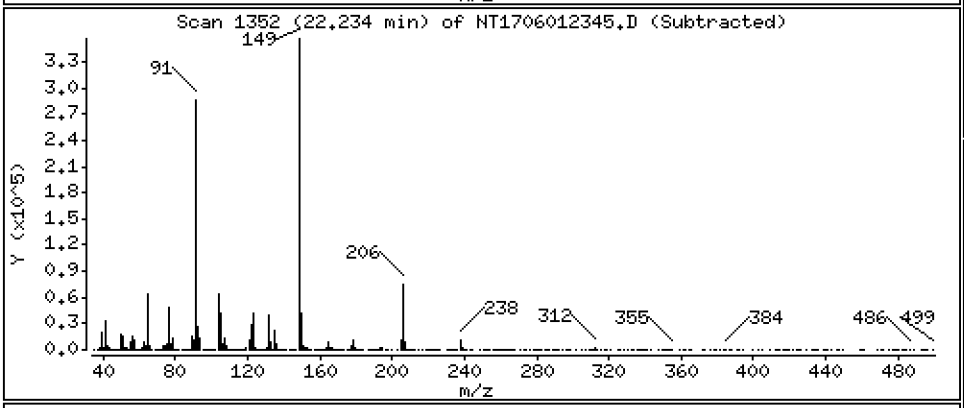
Column phase: ZB-5msi

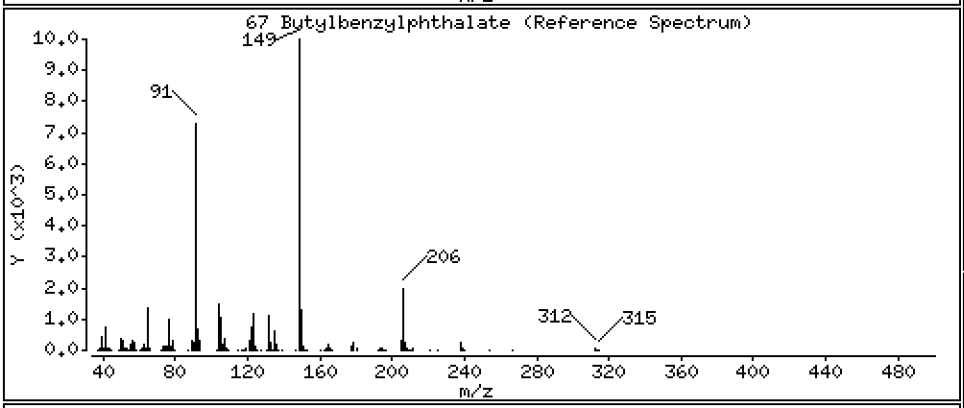
Column diameter: 0.25

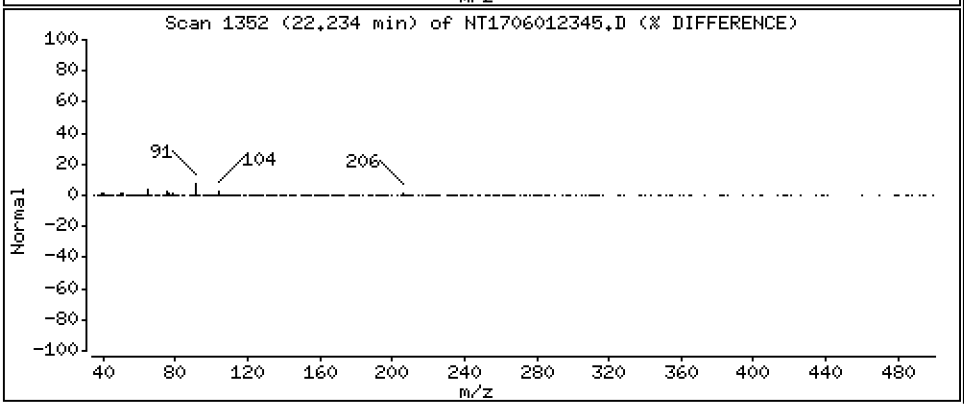
67 Butylbenzylphthalate

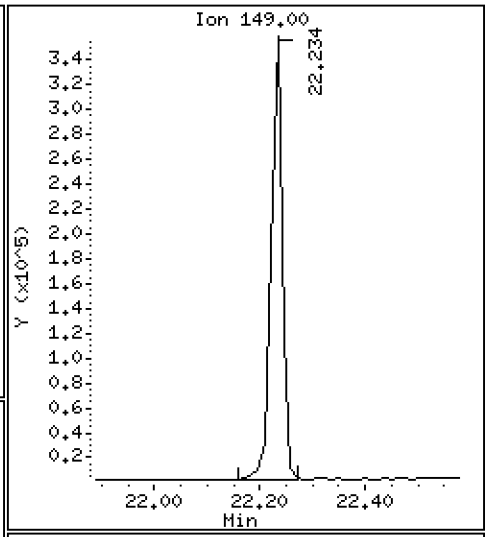
Concentration: 5.086 ug/mL

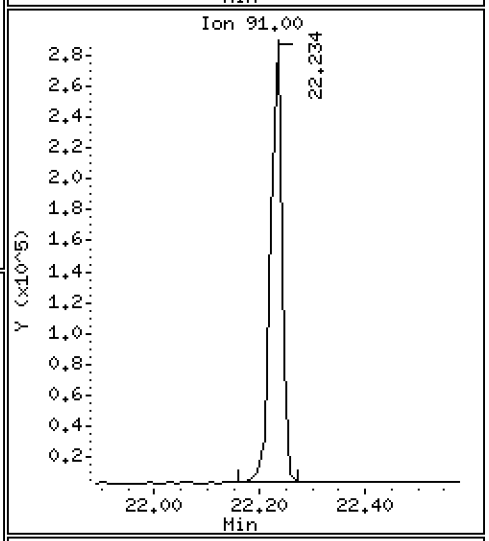


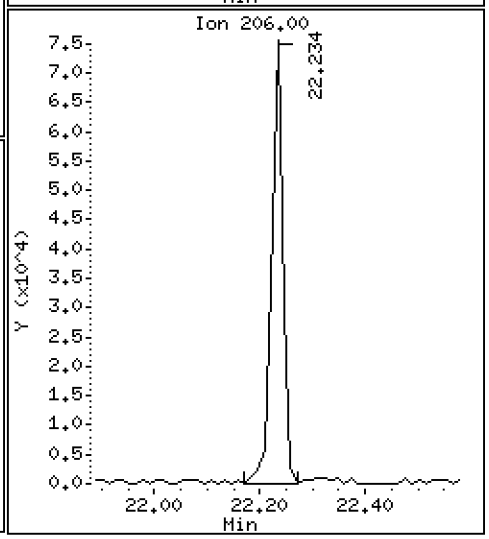












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

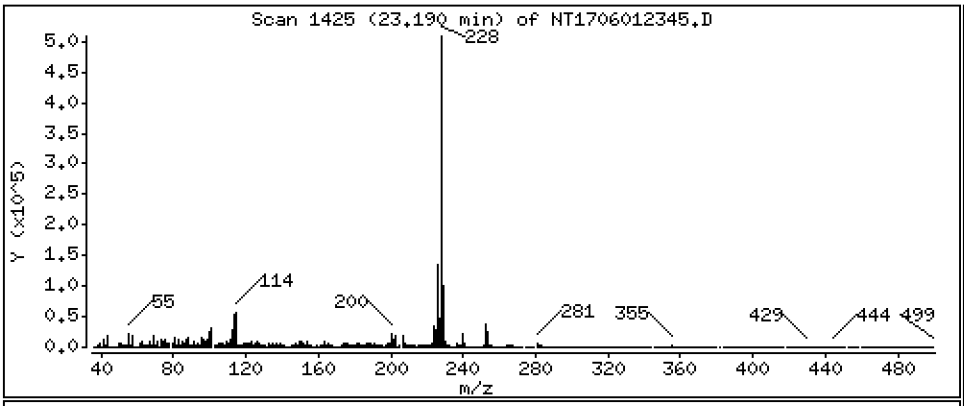
Operator: VTS

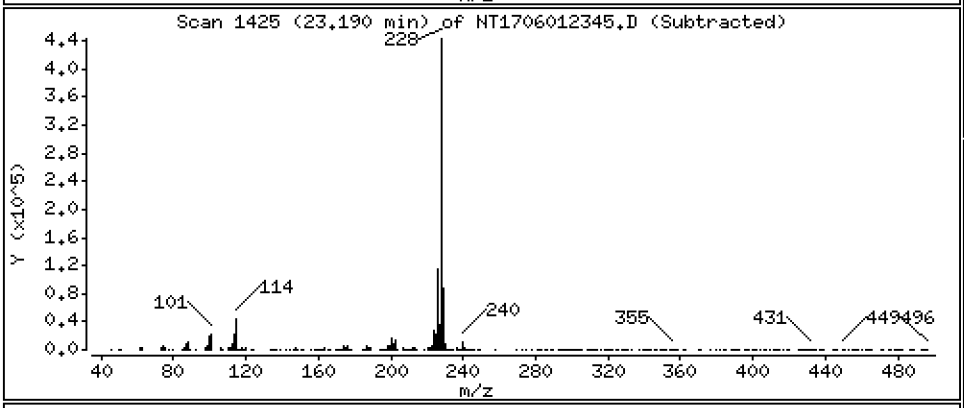
Column phase: ZB-5msi

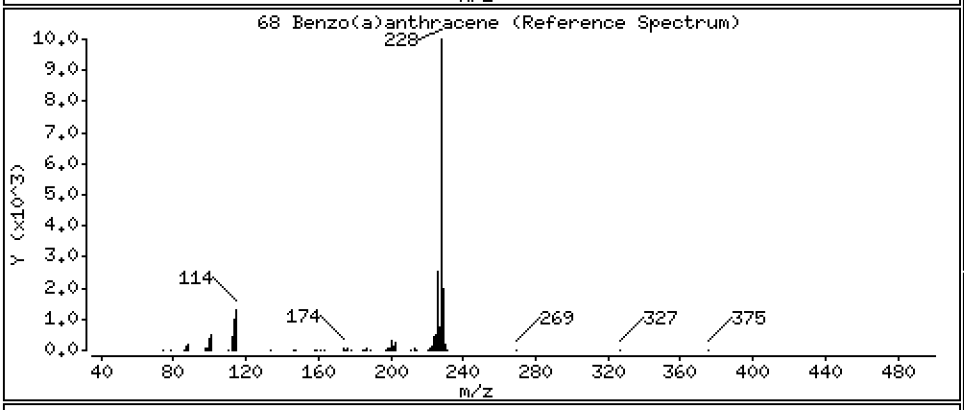
Column diameter: 0.25

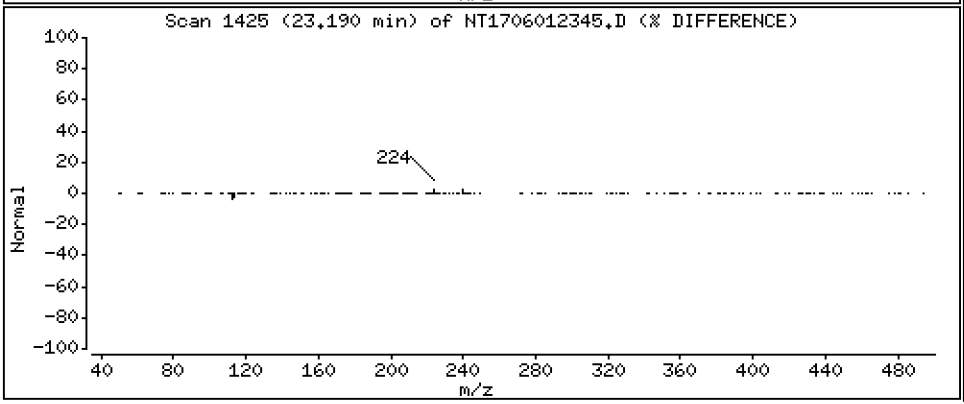
68 Benzo(a)anthracene

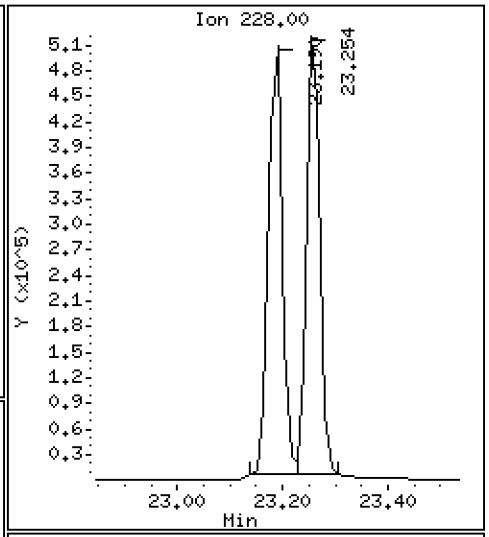
Concentration: 4.916 ug/mL

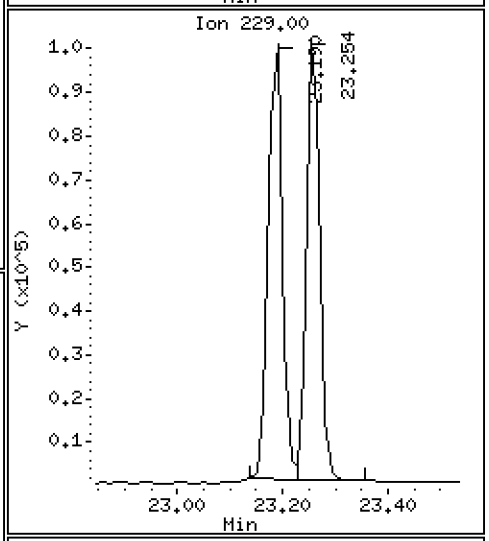


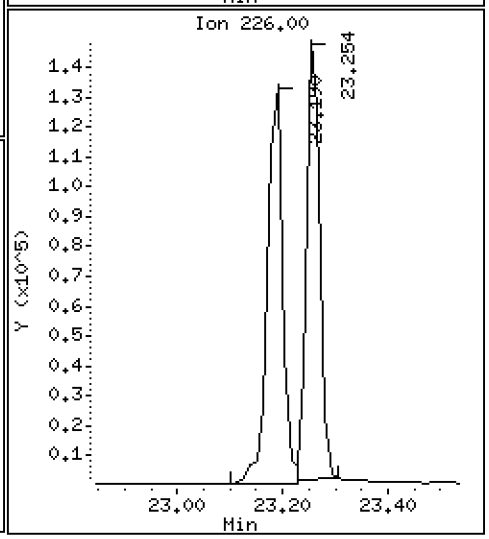












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

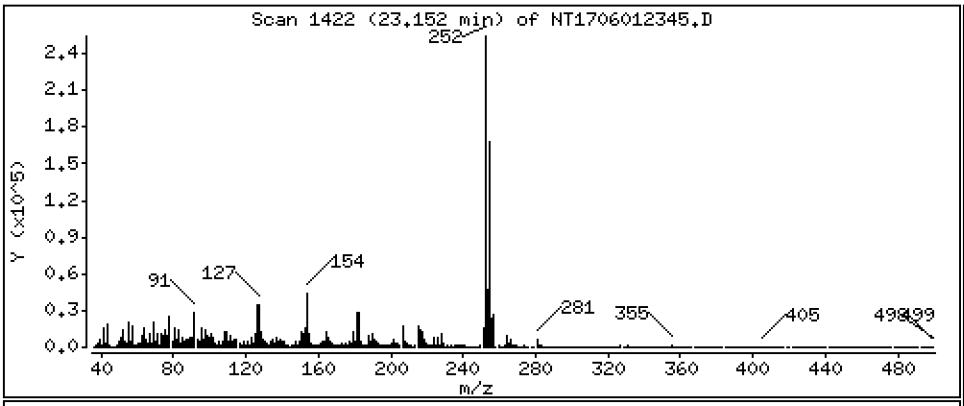
Operator: VTS

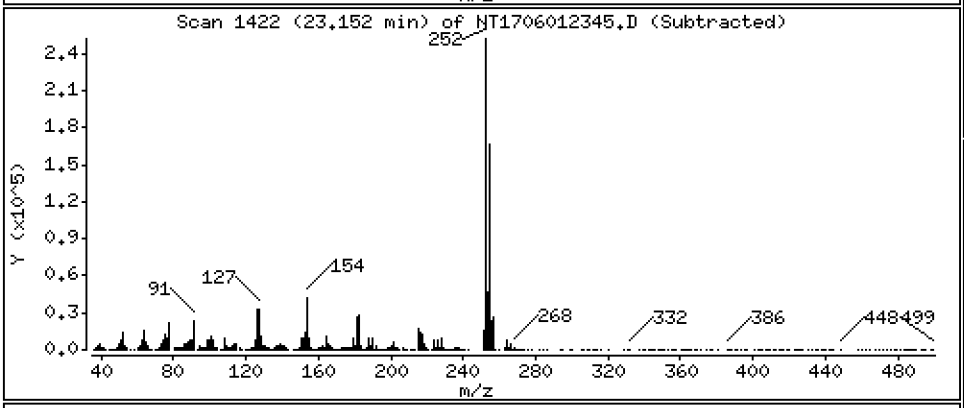
Column phase: ZB-5msi

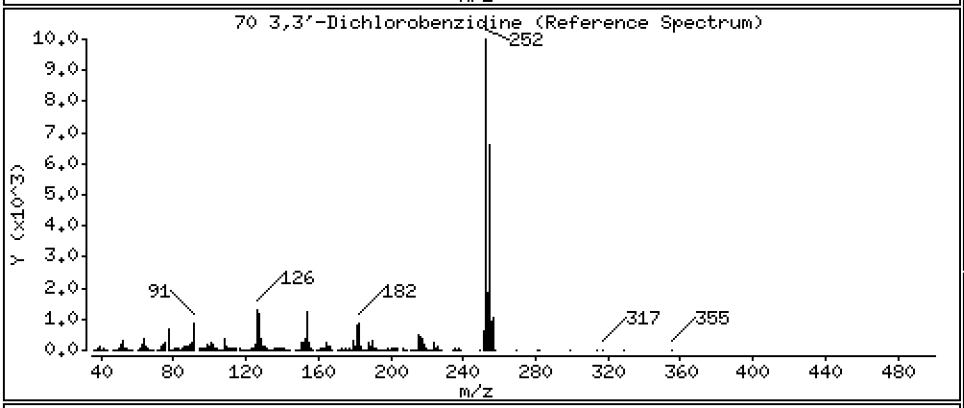
Column diameter: 0.25

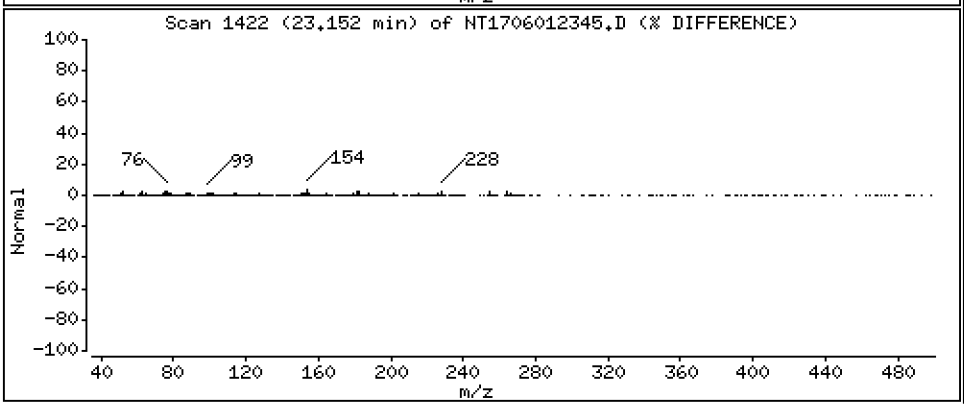
70 3,3'-Dichlorobenzidine

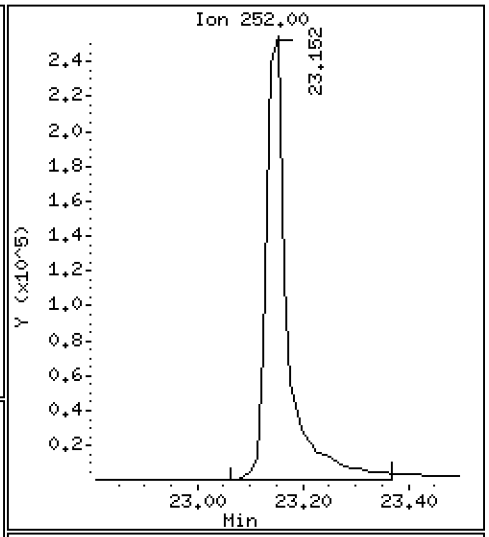
Concentration: 18.46 ug/mL

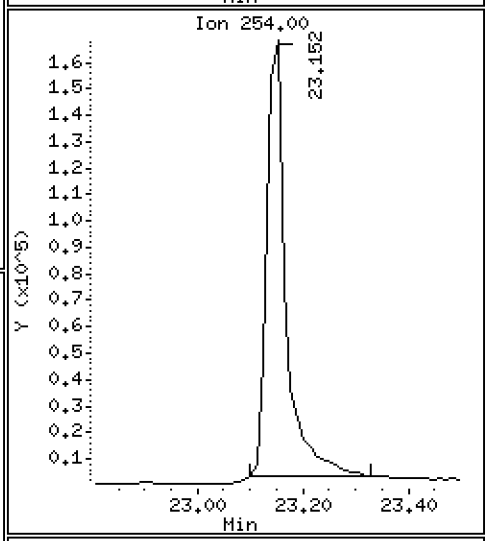


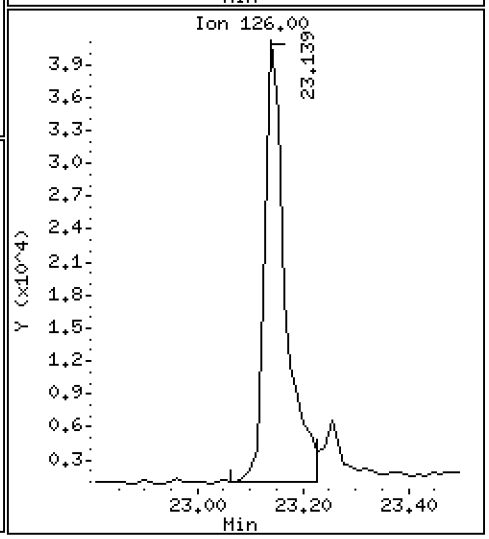












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

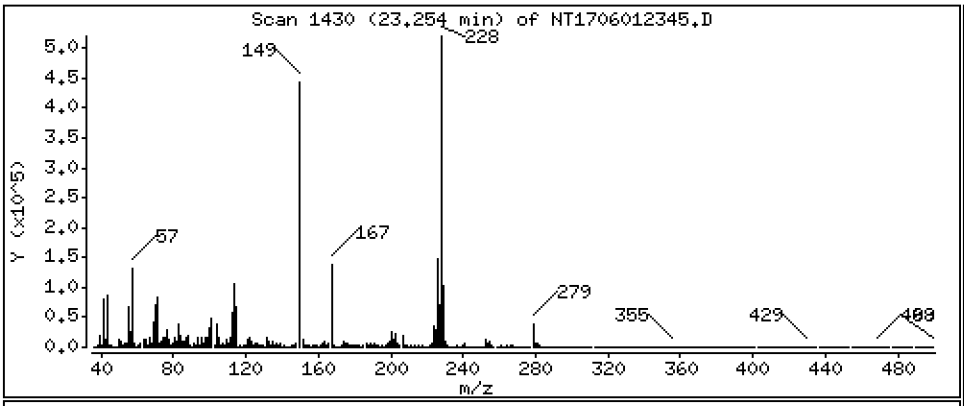
Operator: VTS

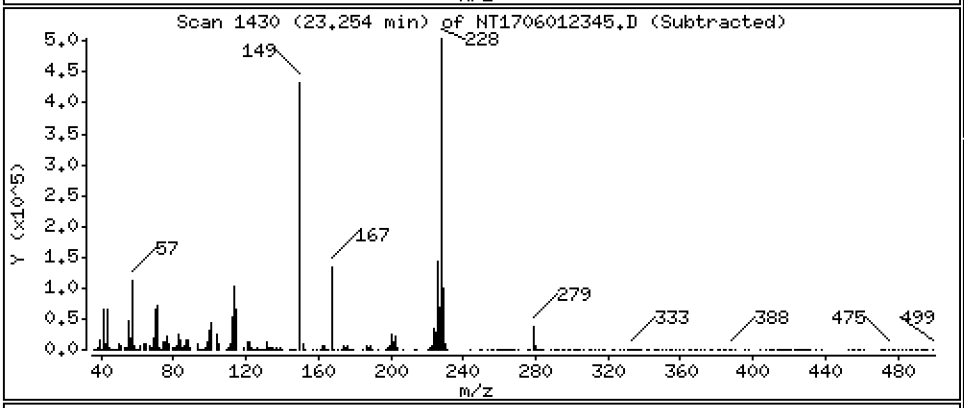
Column phase: ZB-5msi

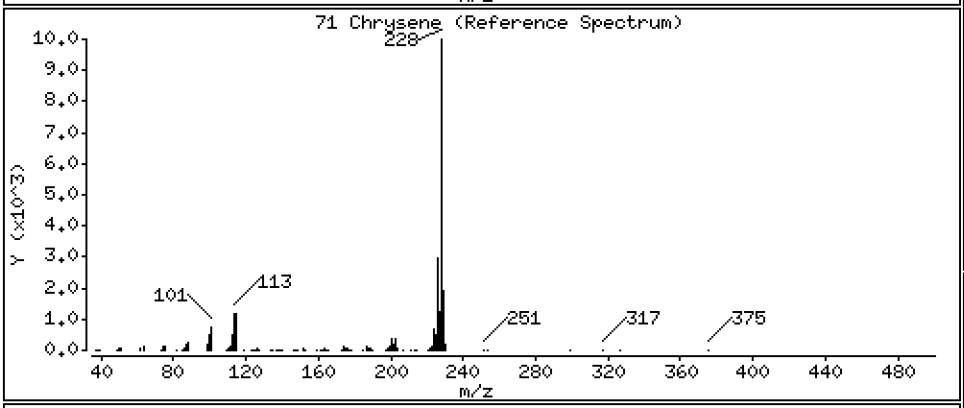
Column diameter: 0.25

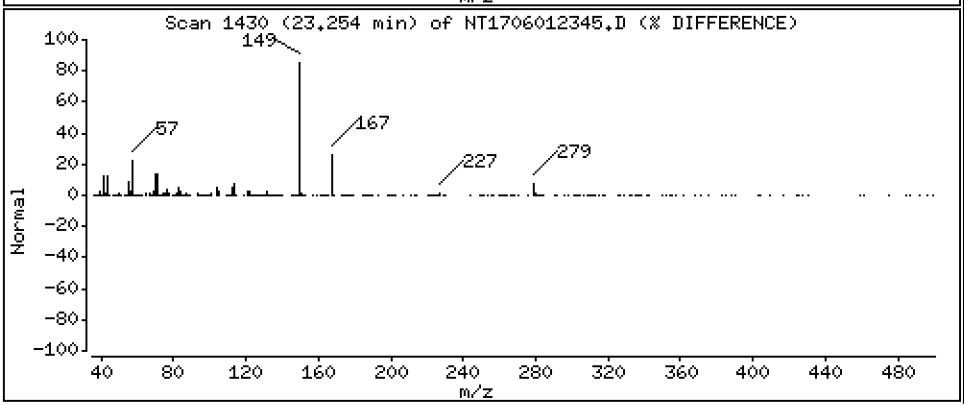
71 Chrysene

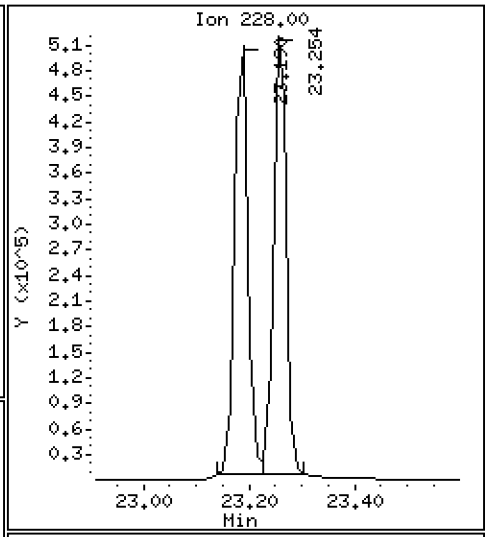
Concentration: 5.146 ug/mL

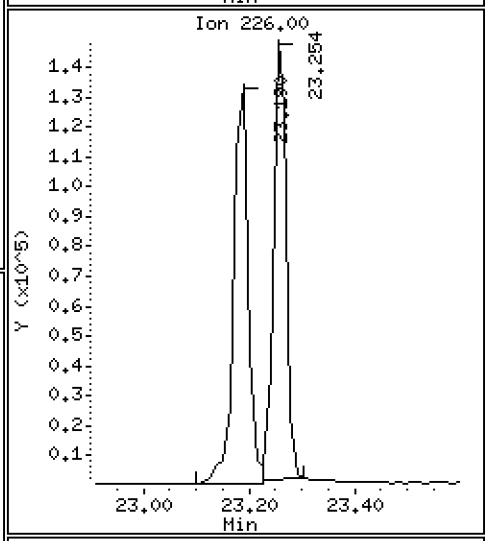


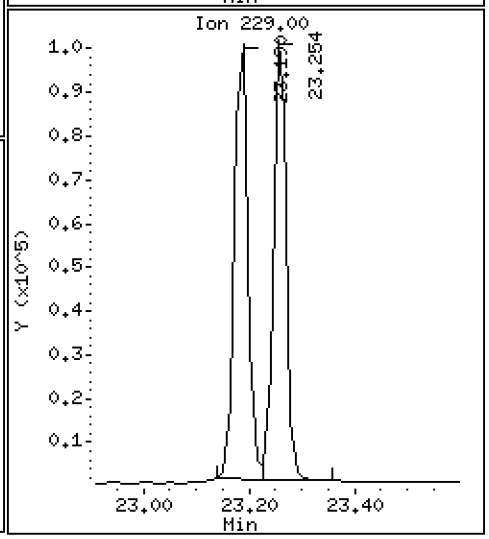












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

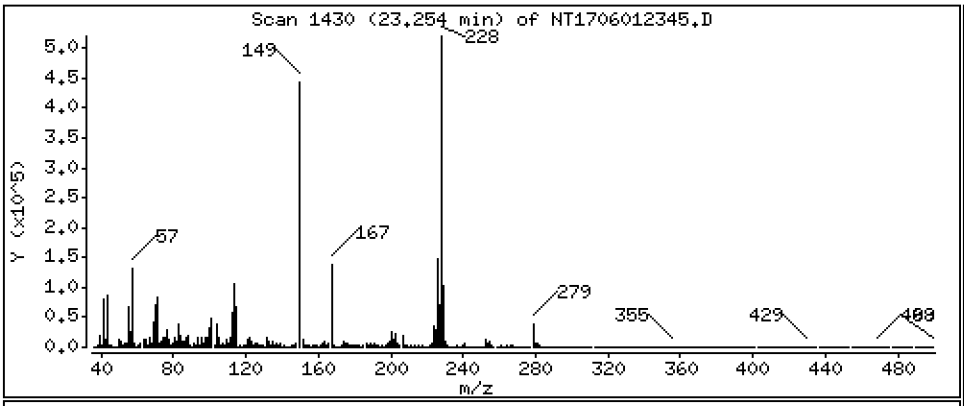
Operator: VTS

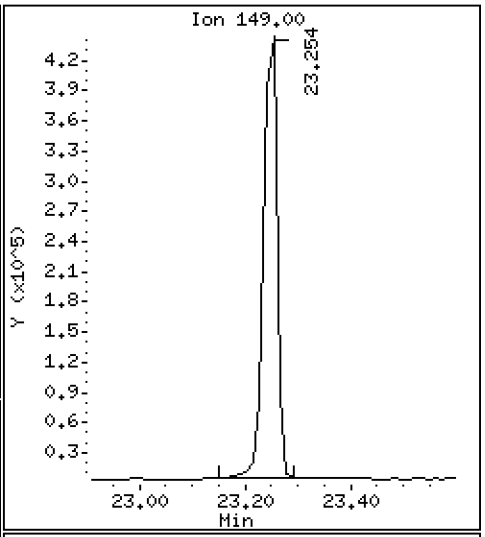
Column phase: ZB-5msi

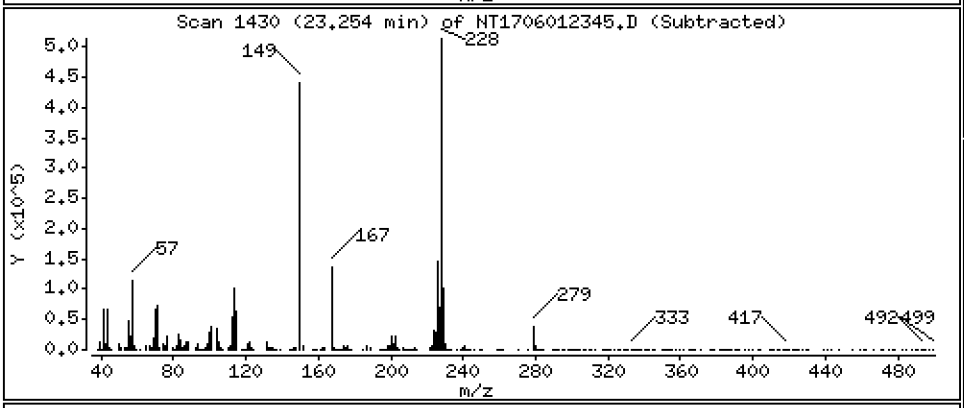
Column diameter: 0.25

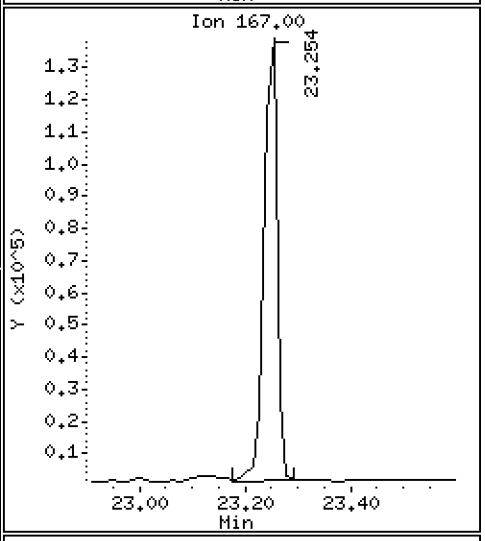
72 bis(2-Ethylhexyl)phthalate

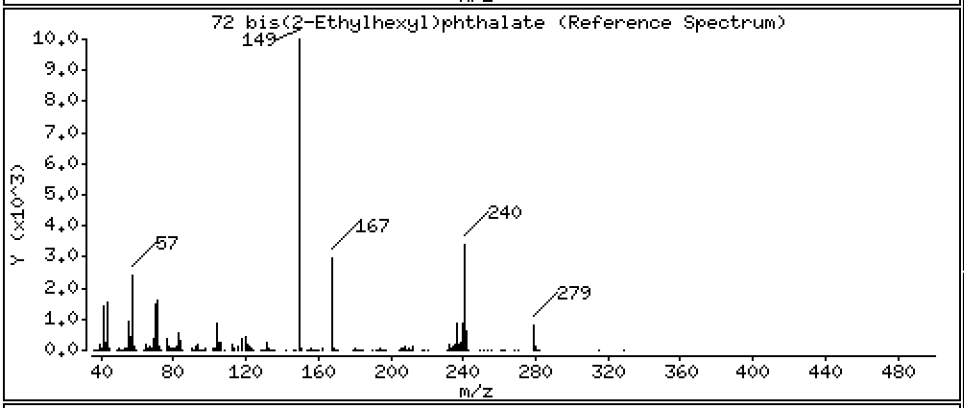
Concentration: 5.107 ug/mL

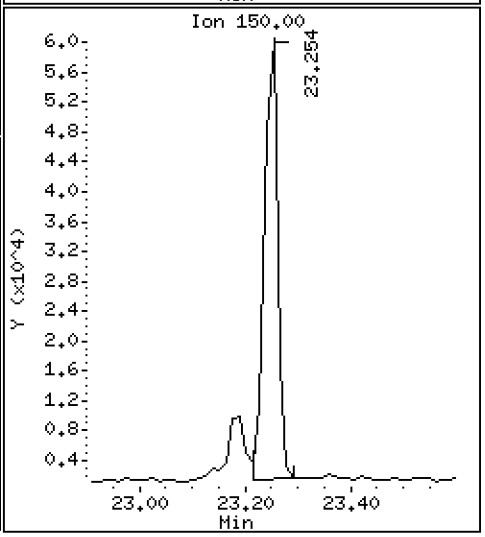


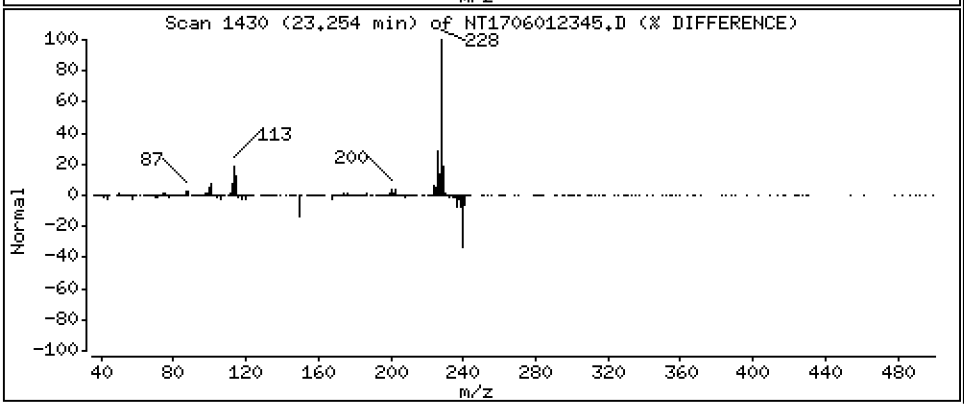












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

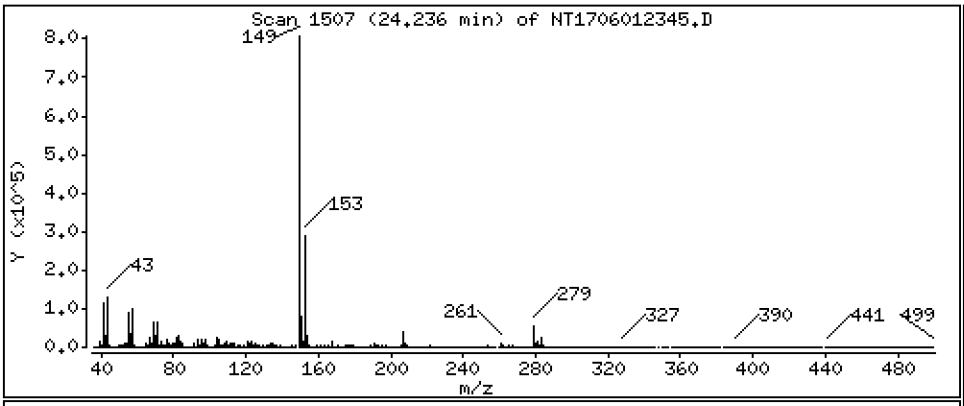
Operator: VTS

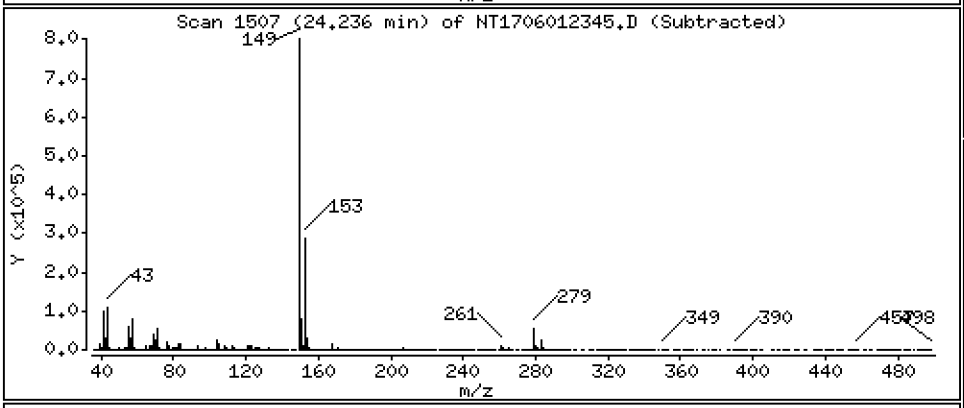
Column phase: ZB-5msi

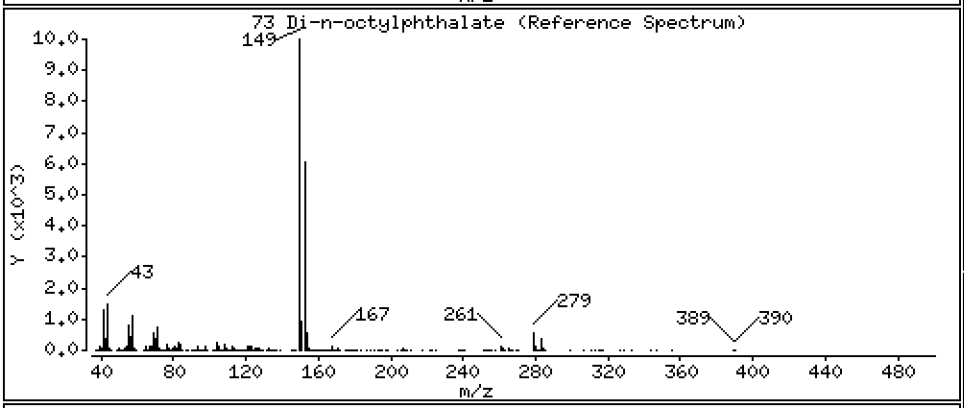
Column diameter: 0.25

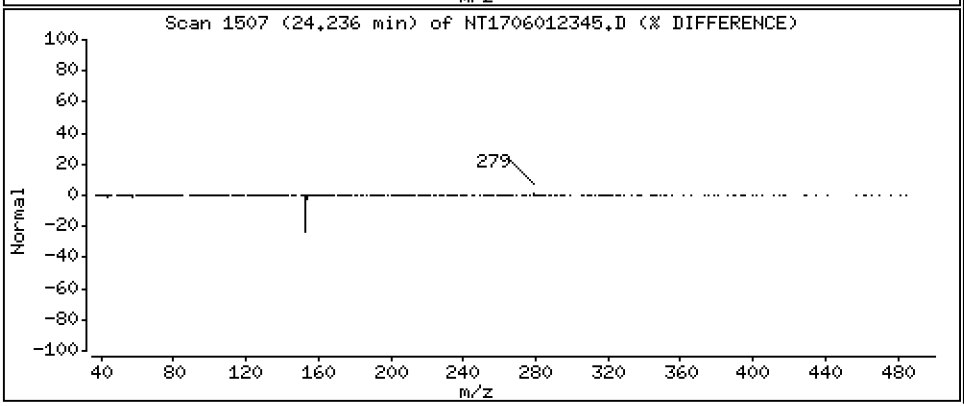
73 Di-n-octylphthalate

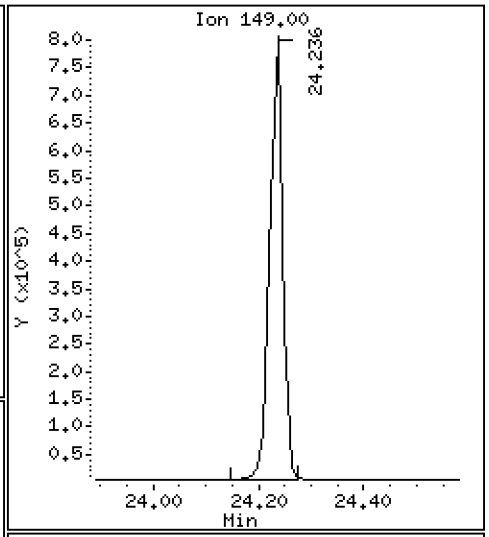
Concentration: 4.904 ug/mL

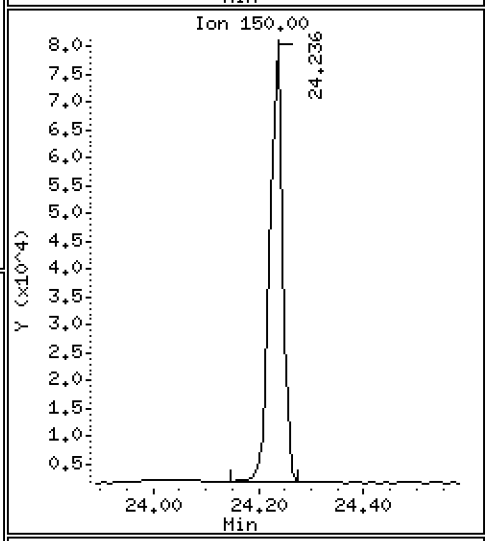


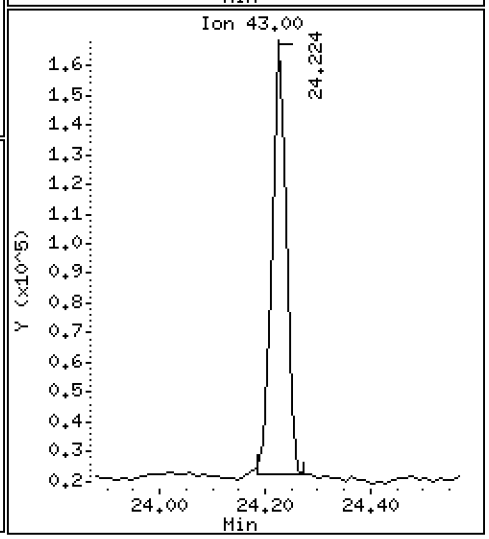












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

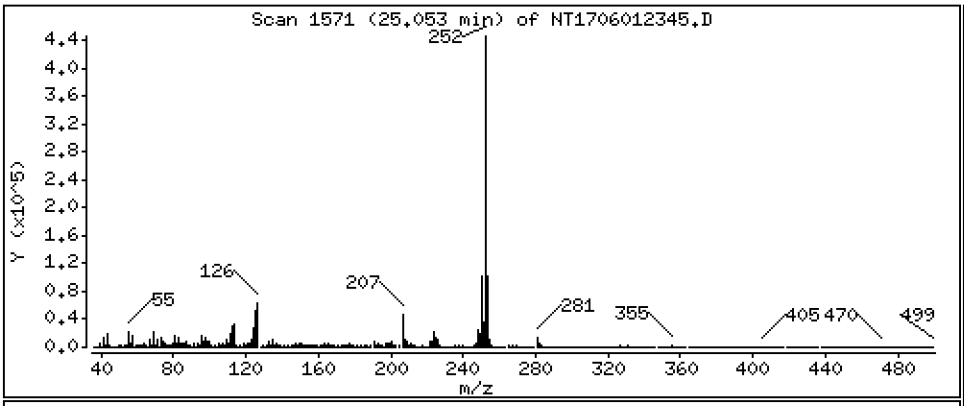
Operator: VTS

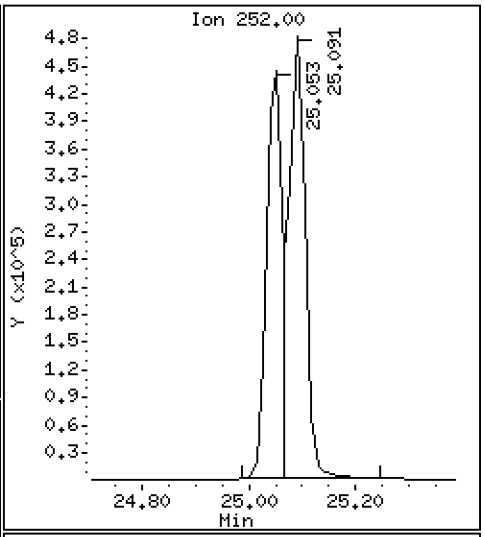
Column phase: ZB-5msi

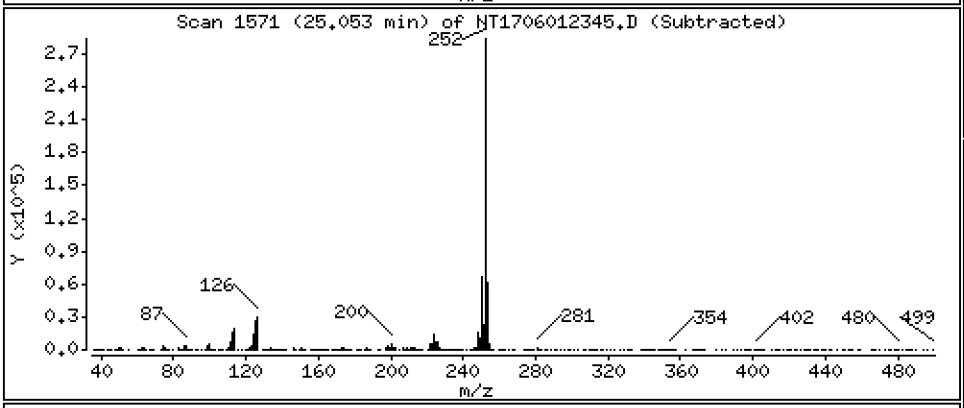
Column diameter: 0.25

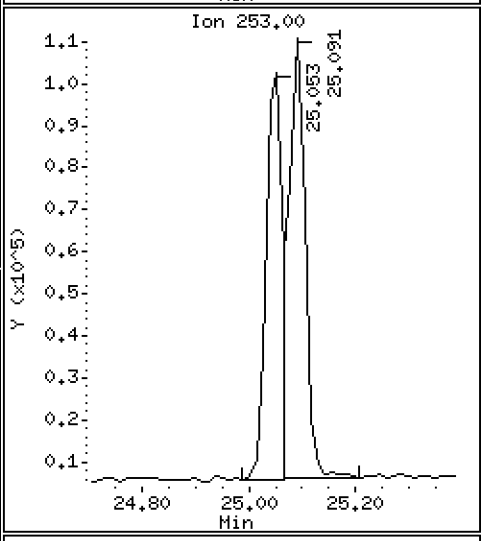
74 Benzo(b)fluoranthene

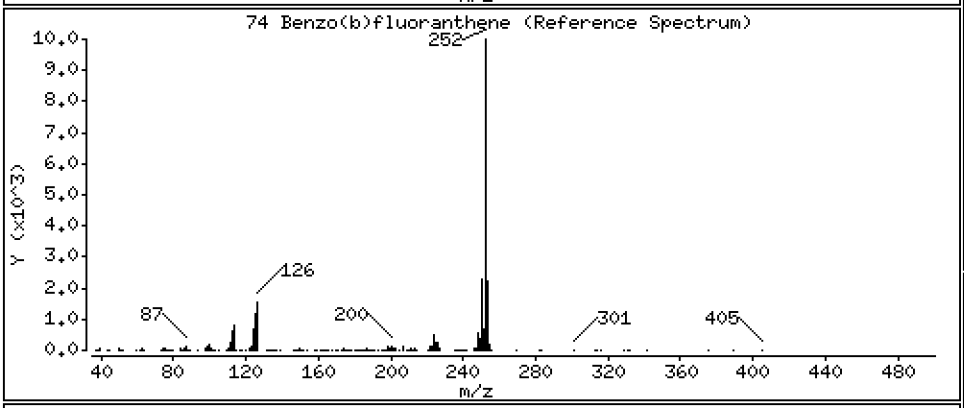
Concentration: 4.302 ug/mL

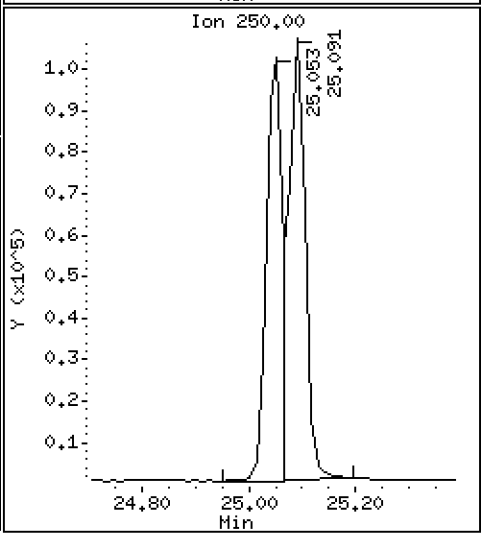


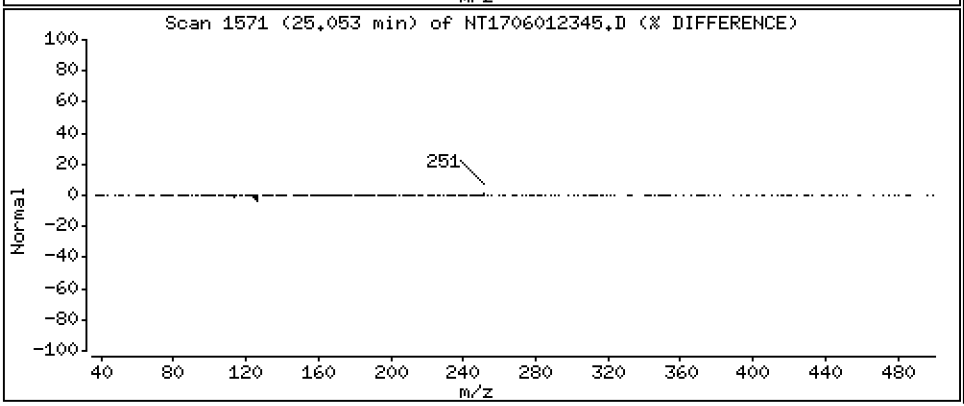












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

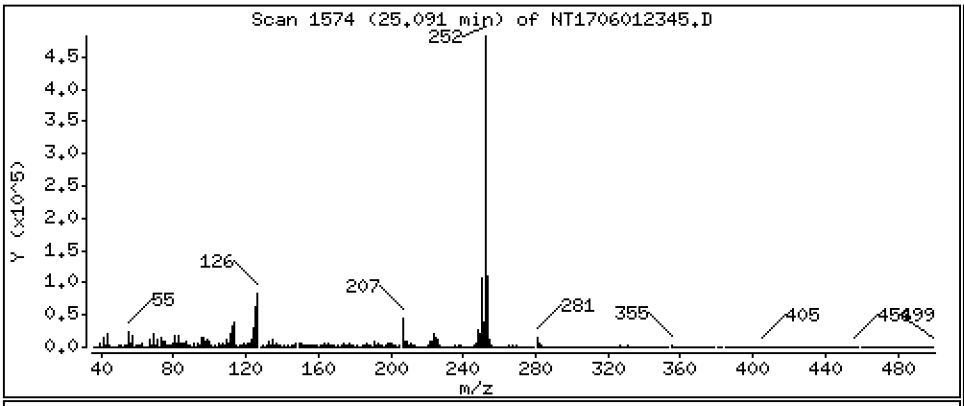
Operator: VTS

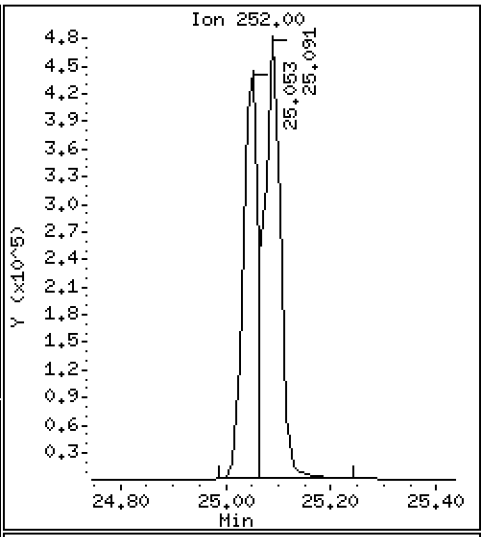
Column phase: ZB-5msi

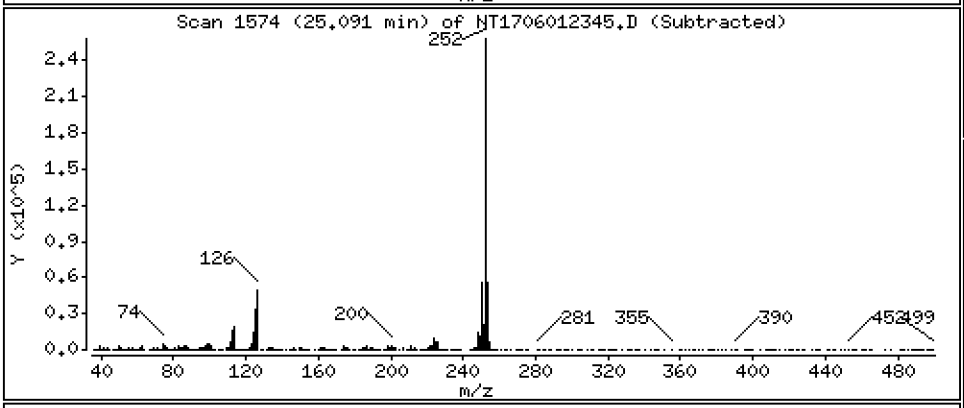
Column diameter: 0.25

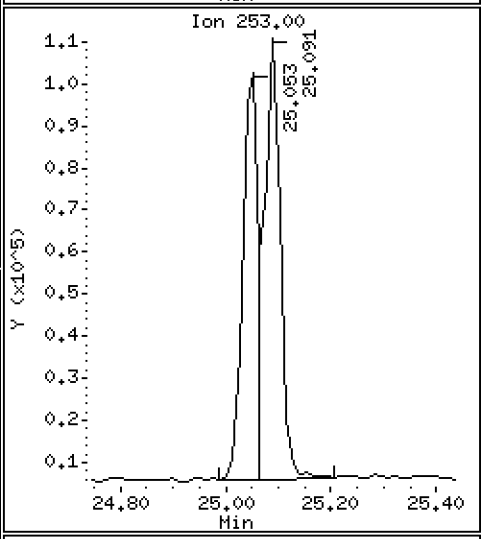
75 Benzo(k)fluoranthene

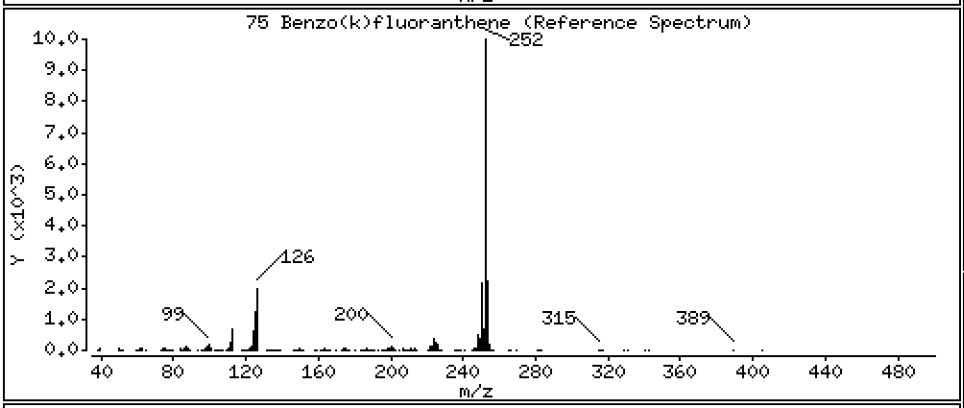
Concentration: 5.339 ug/mL

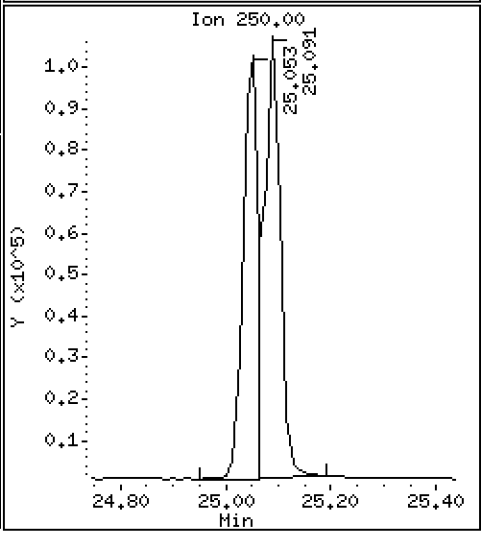


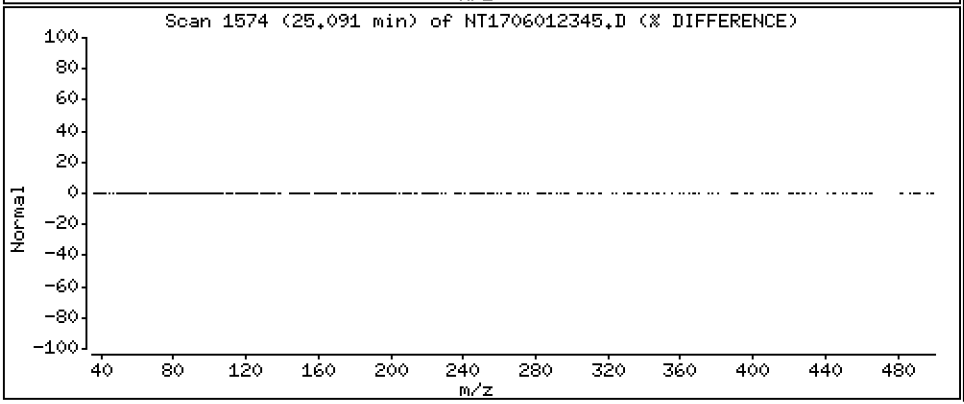












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

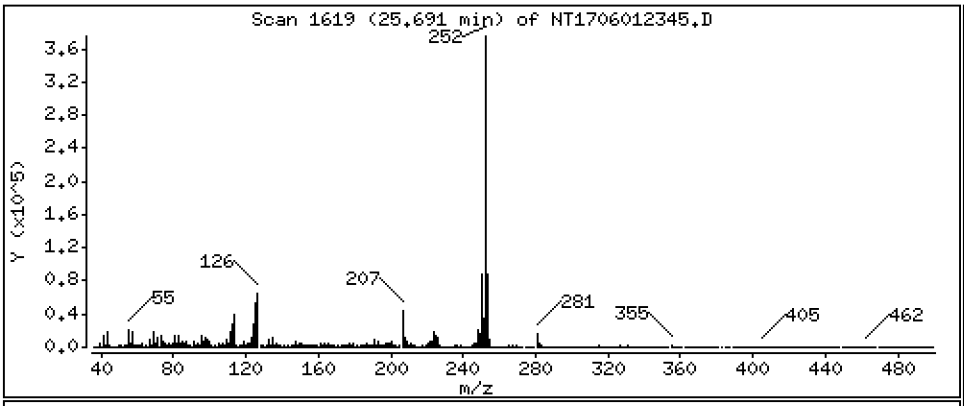
Operator: VTS

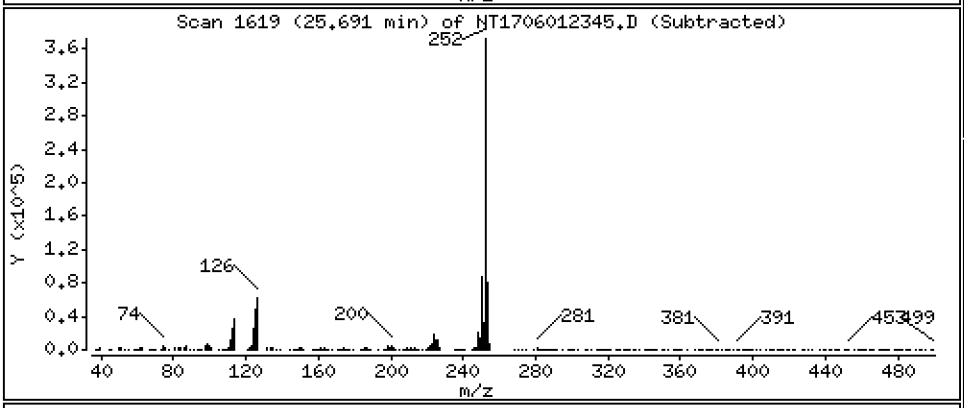
Column phase: ZB-5msi

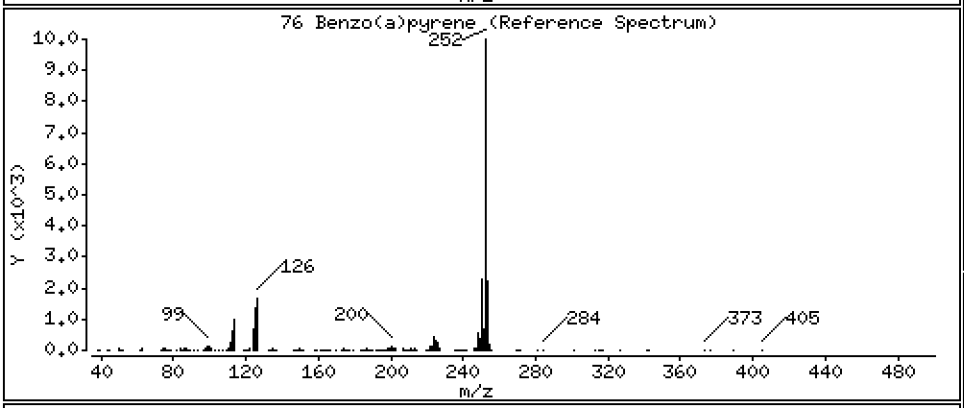
Column diameter: 0.25

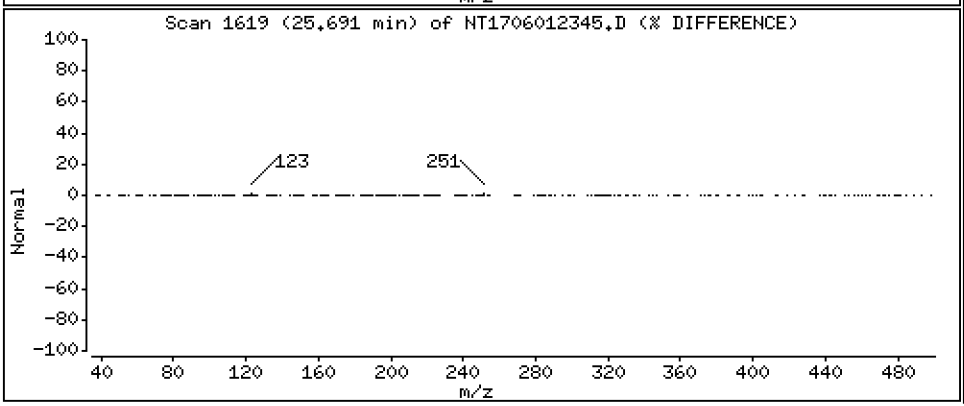
76 Benzo(a)pyrene

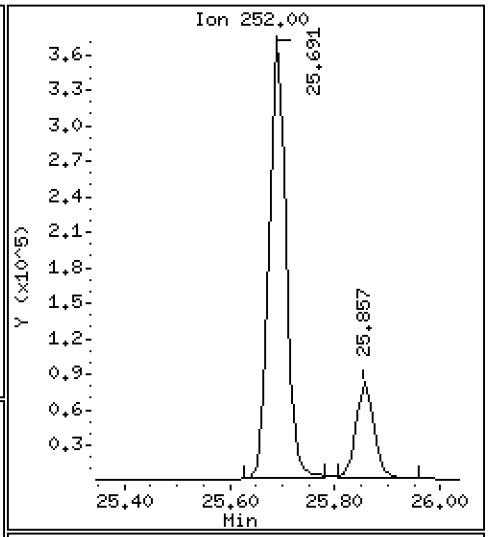
Concentration: 4.842 ug/mL

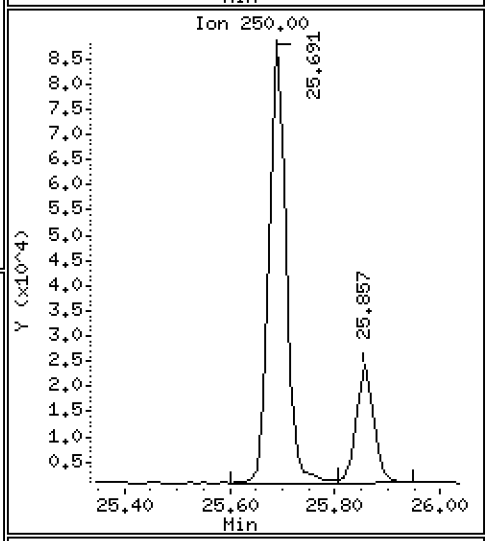


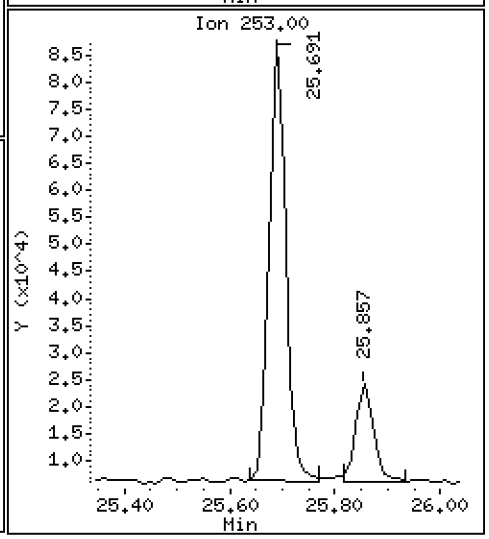












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

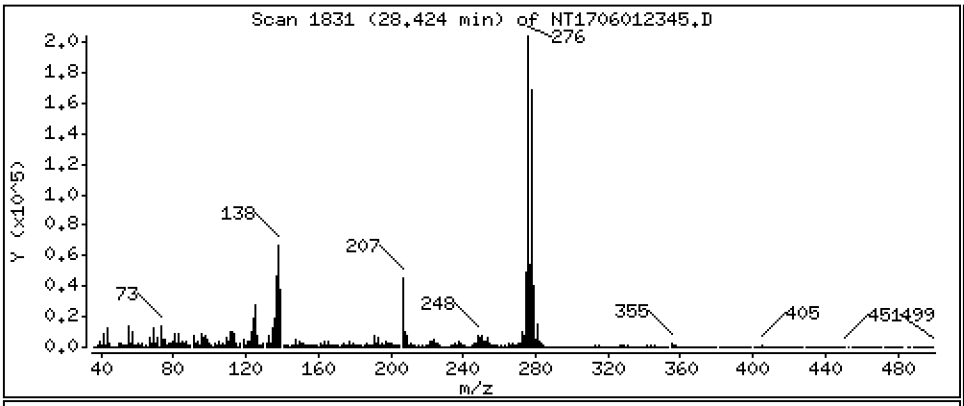
Operator: VTS

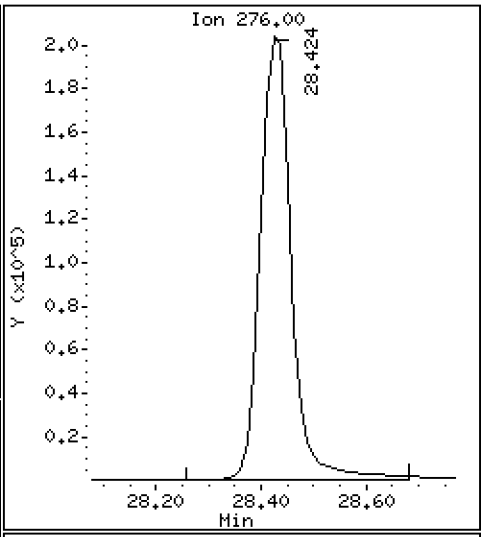
Column phase: ZB-5msi

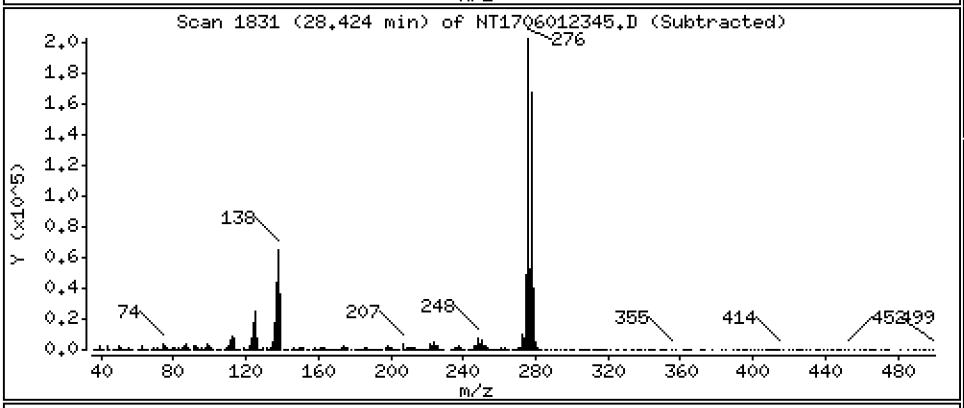
Column diameter: 0.25

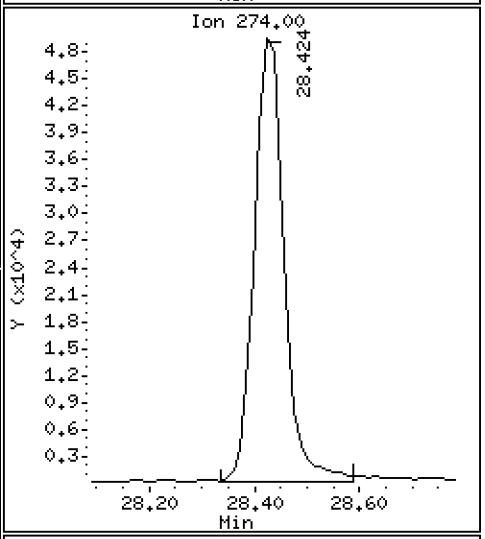
78 Indeno(1,2,3-cd)pyrene

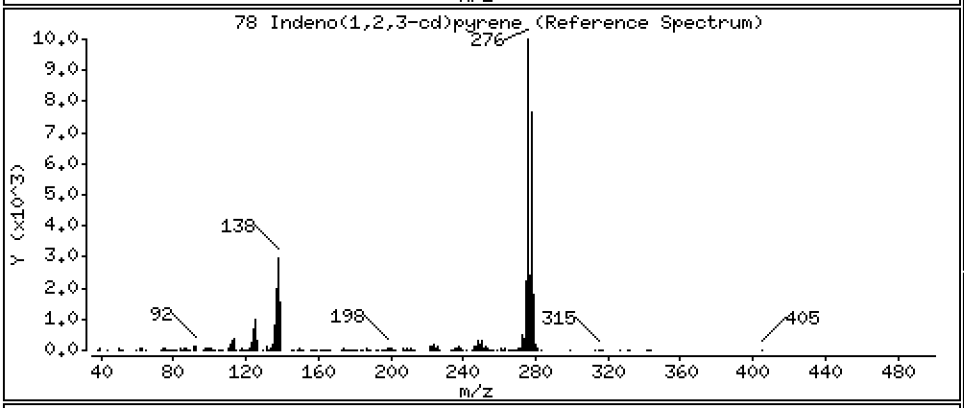
Concentration: 4.112 ug/mL

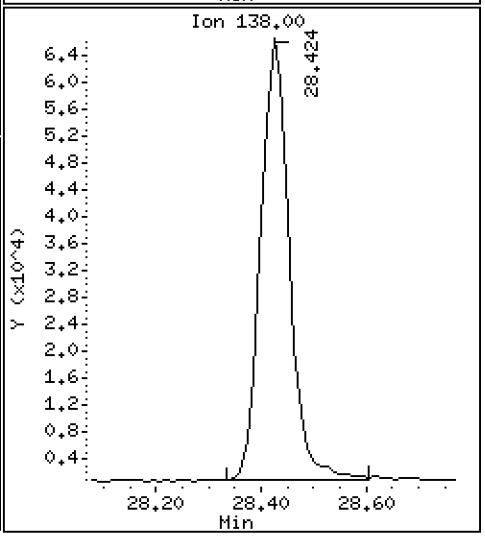


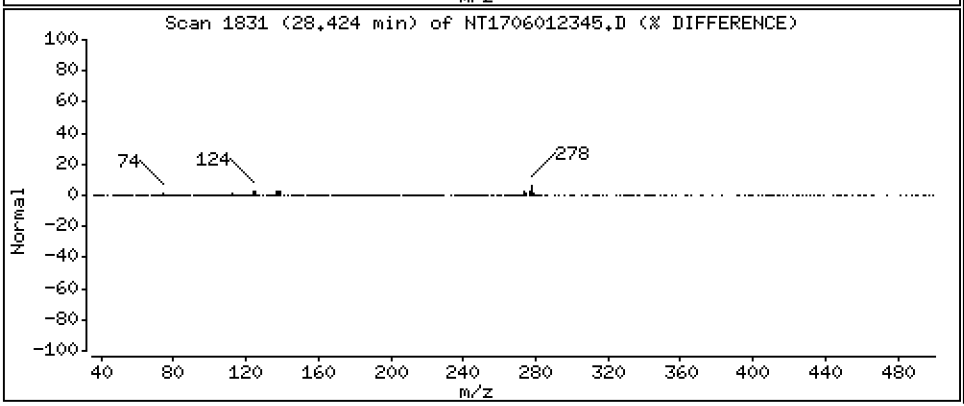












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

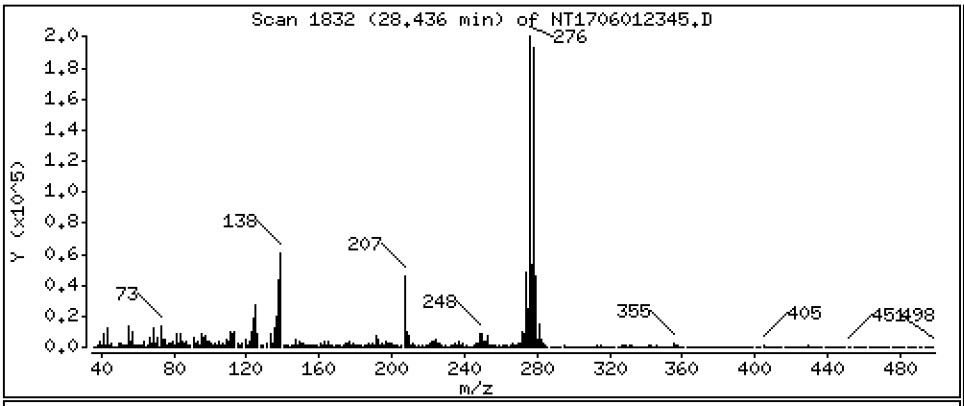
Operator: VTS

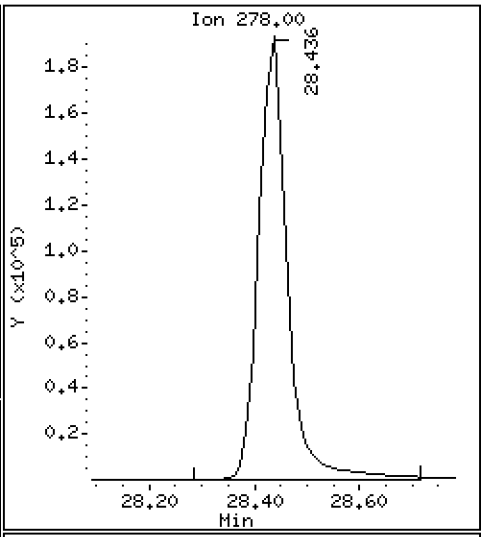
Column phase: ZB-5msi

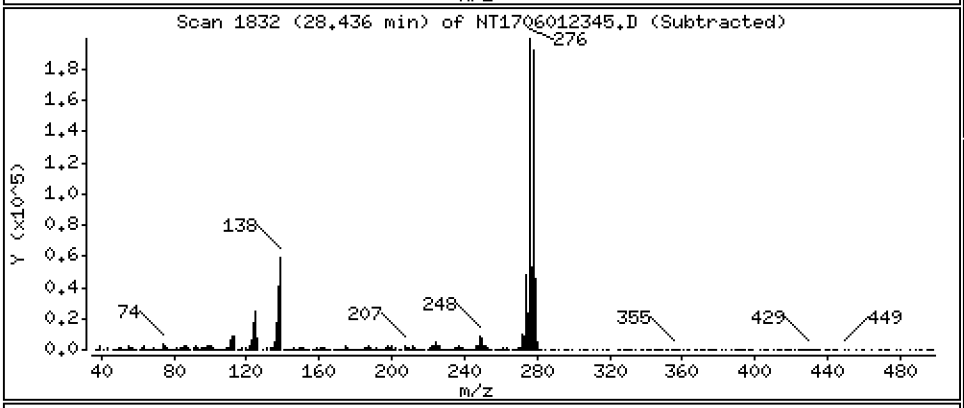
Column diameter: 0.25

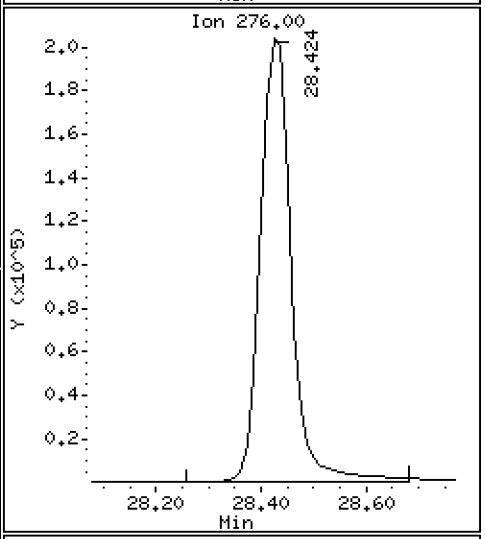
79 Dibenzo(a,h)anthracene

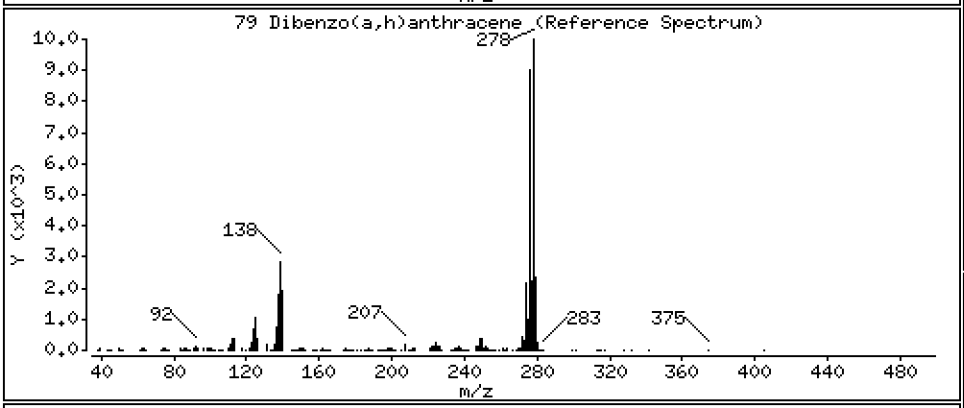
Concentration: 4.307 ug/mL

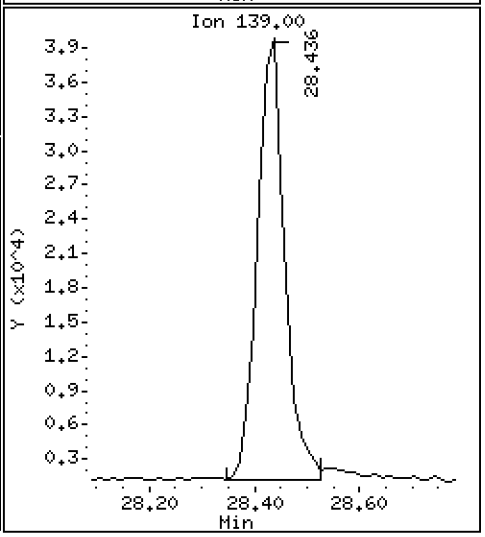


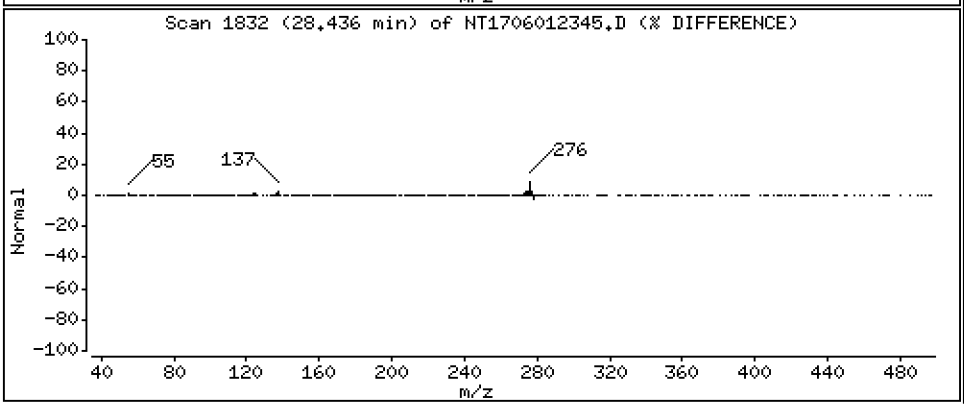












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

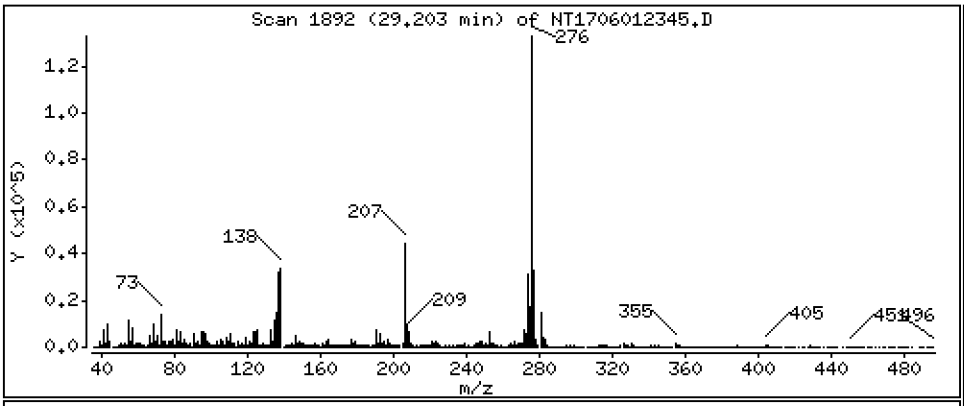
Operator: VTS

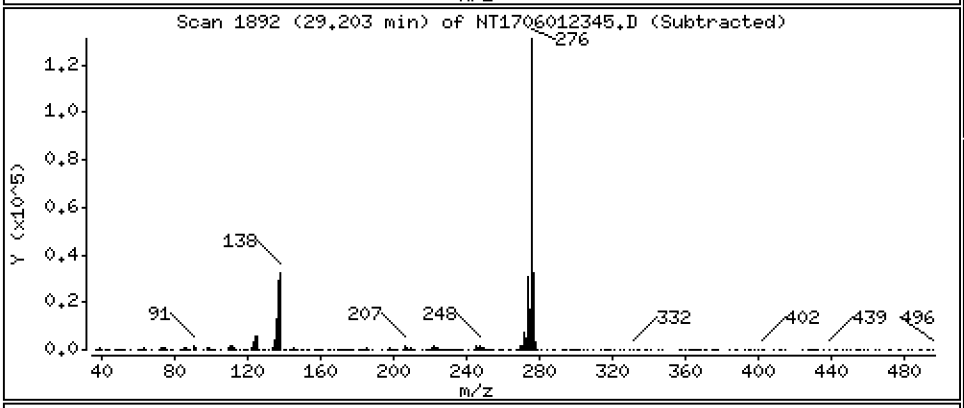
Column phase: ZB-5msi

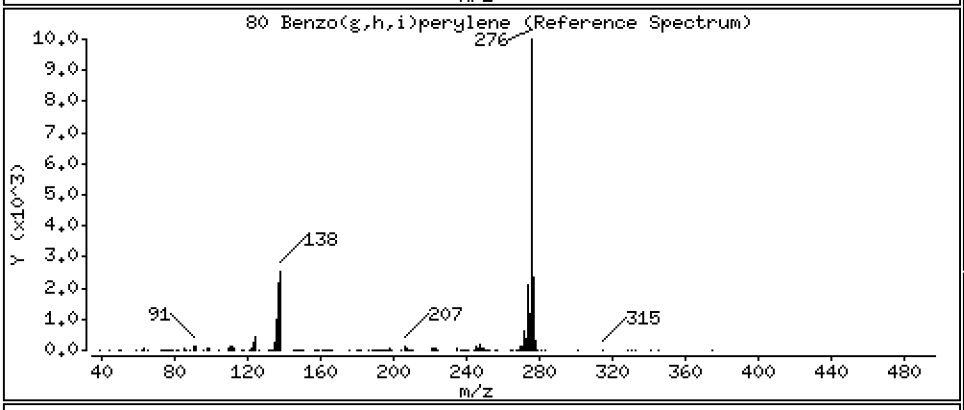
Column diameter: 0.25

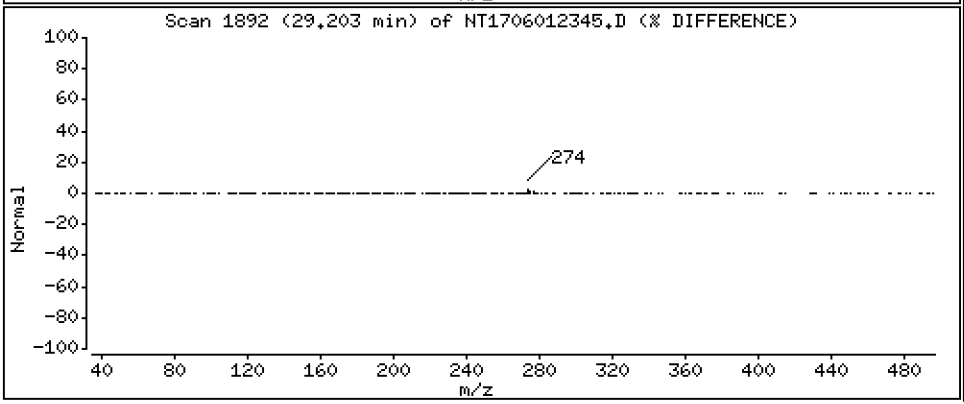
80 Benzo(g,h,i)perylene

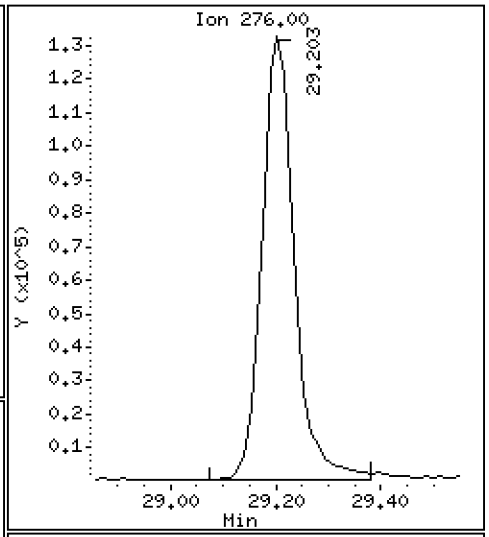
Concentration: 3.500 ug/mL

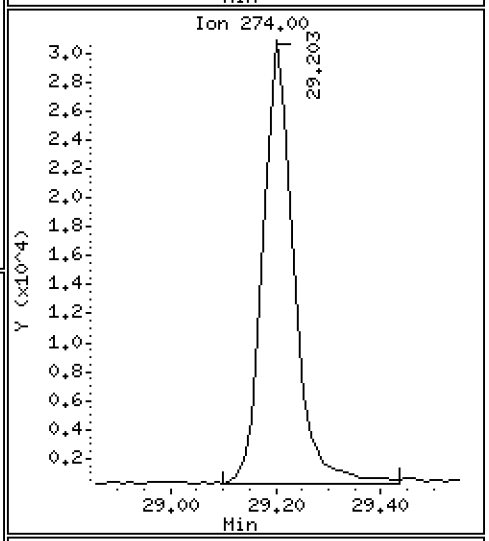


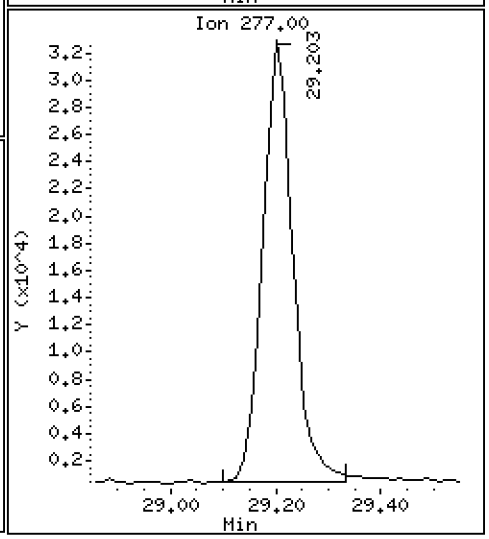












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

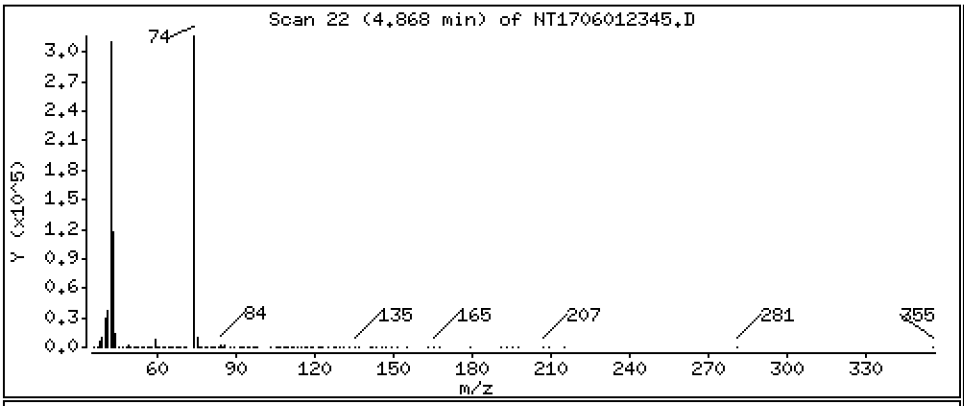
Operator: VTS

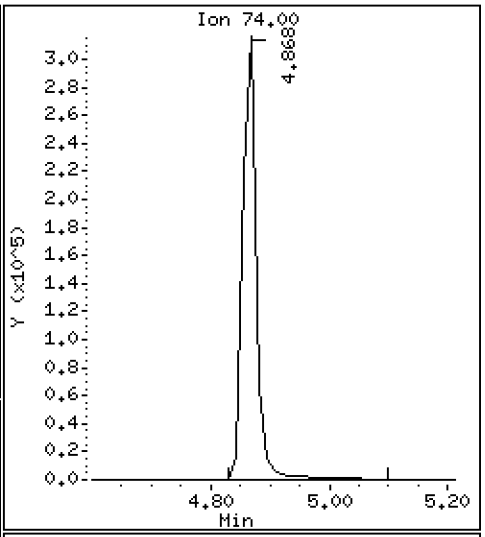
Column phase: ZB-5msi

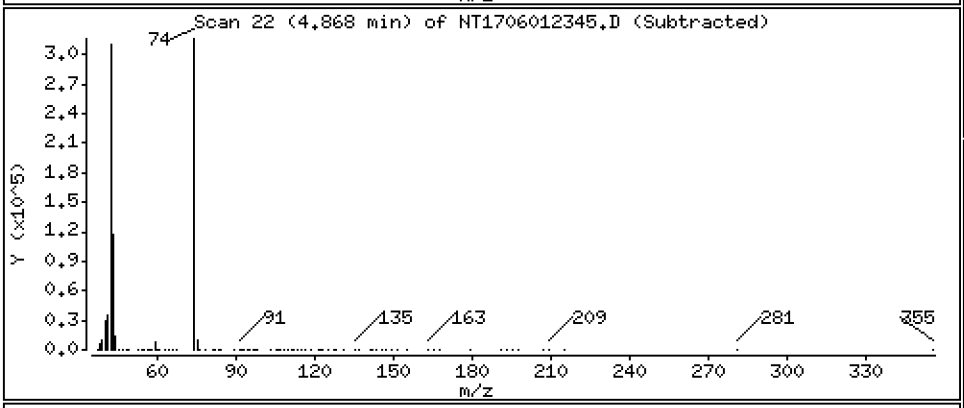
Column diameter: 0.25

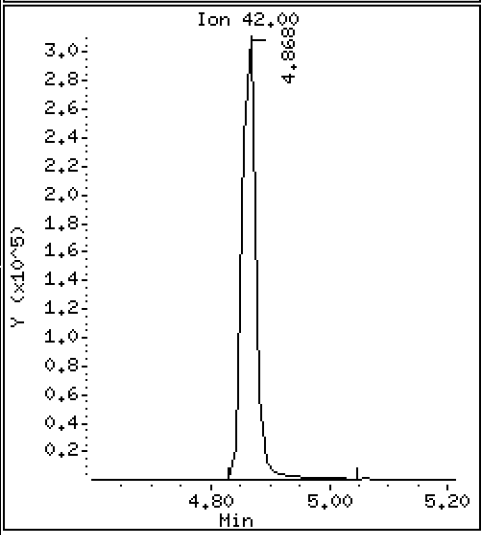
90 N-Nitrosodimethylamine

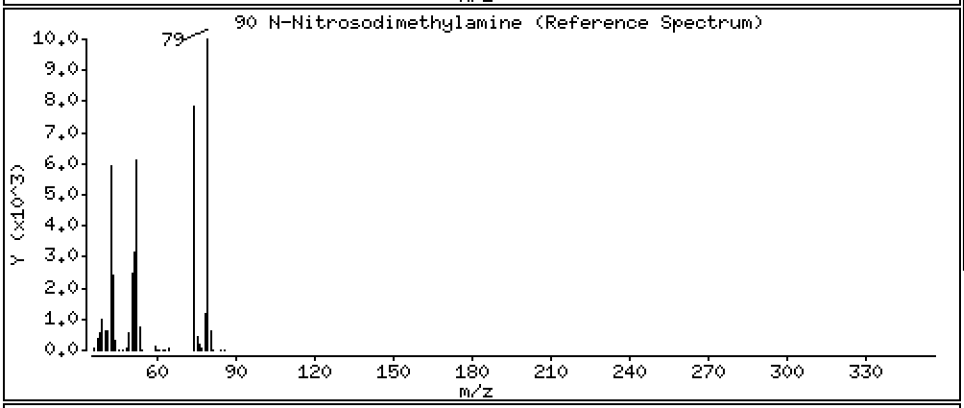
Concentration: 9.841 ug/mL

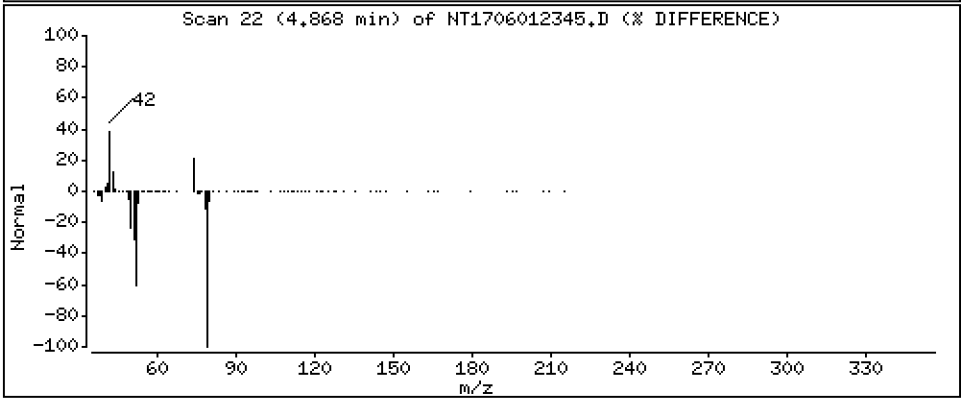












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

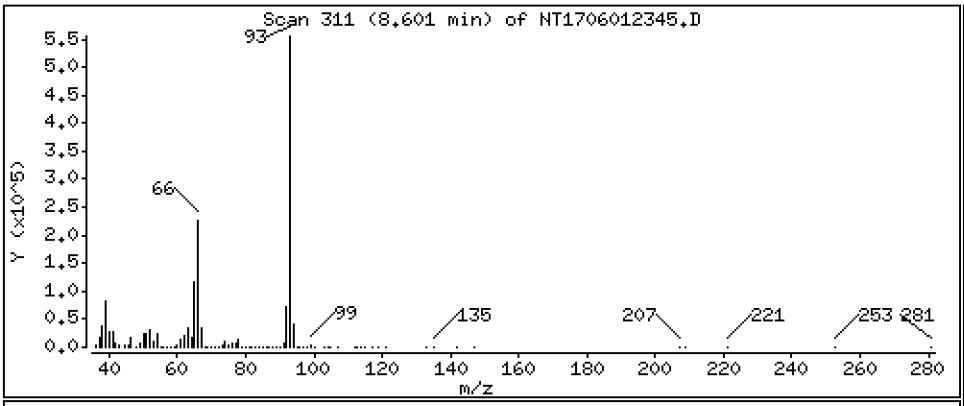
Operator: VTS

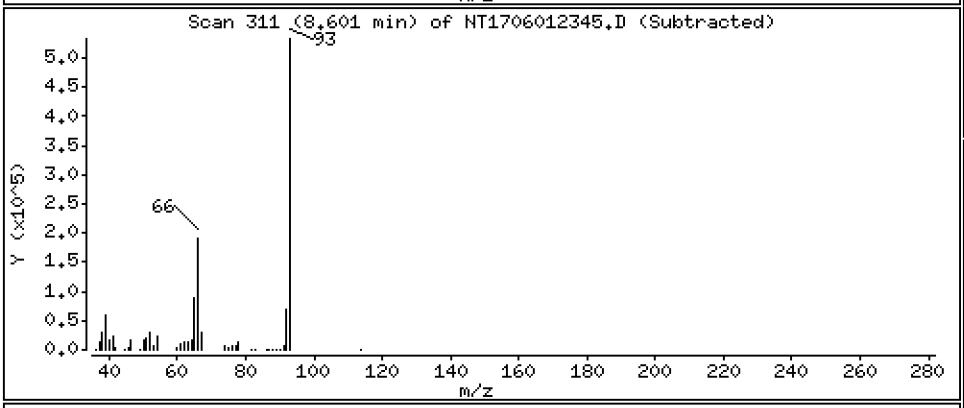
Column phase: ZB-5msi

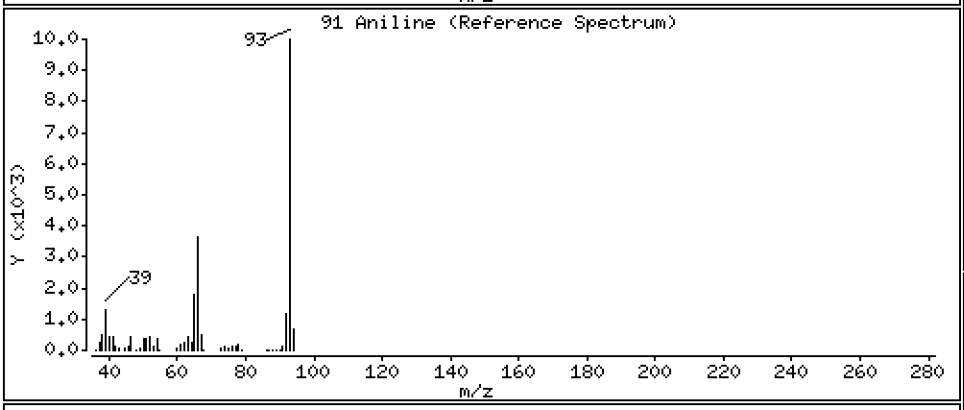
Column diameter: 0.25

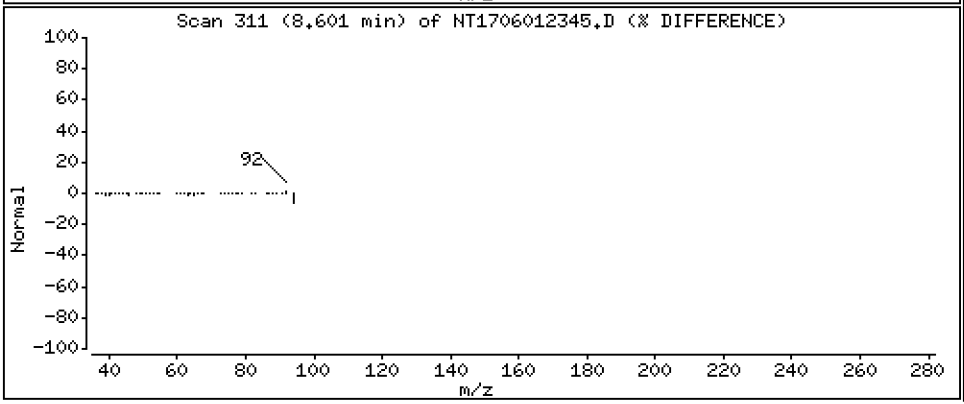
91 Aniline

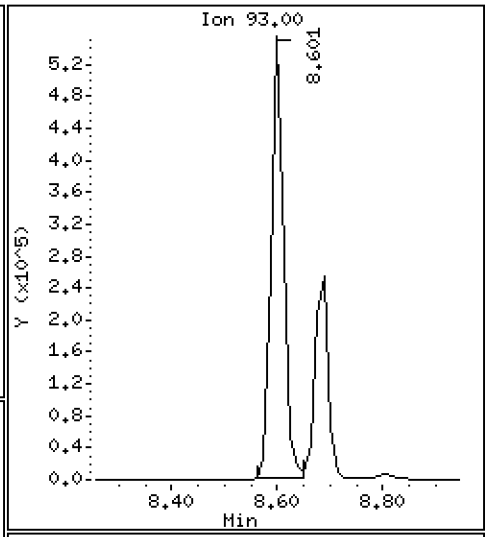
Concentration: 10.12 ug/mL

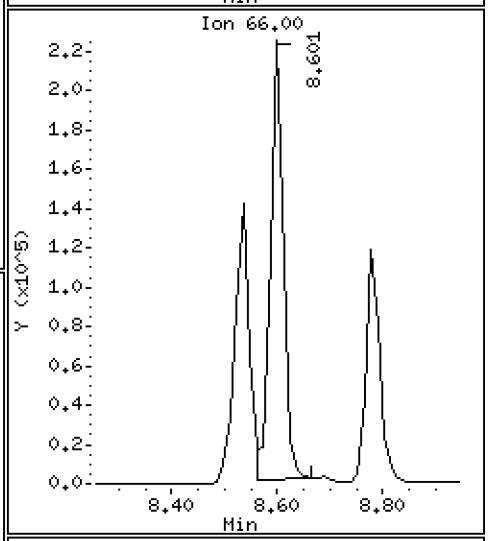


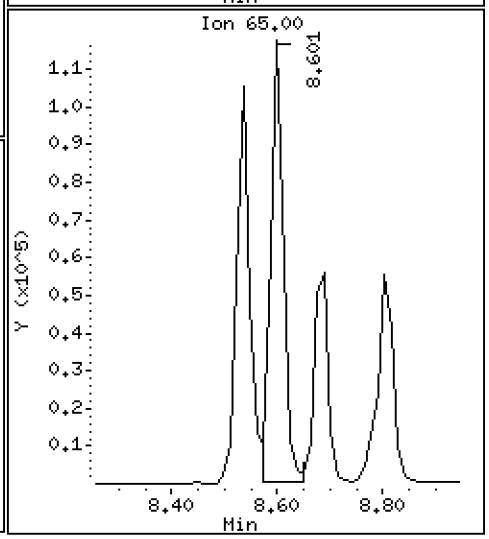












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

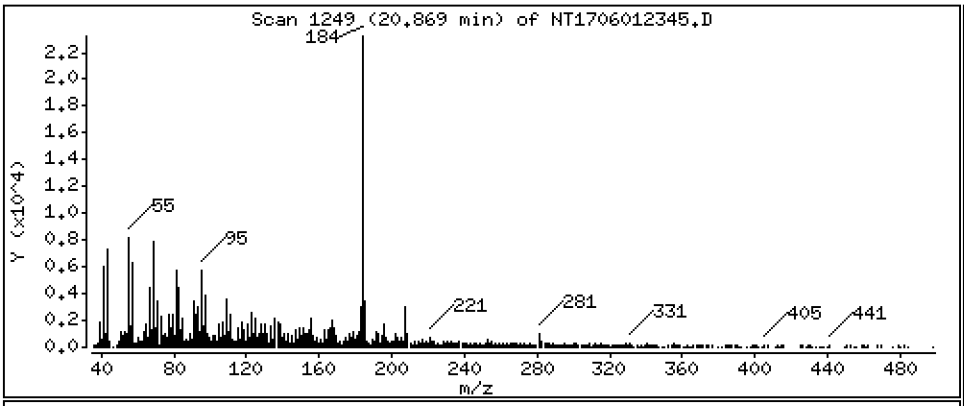
Operator: VTS

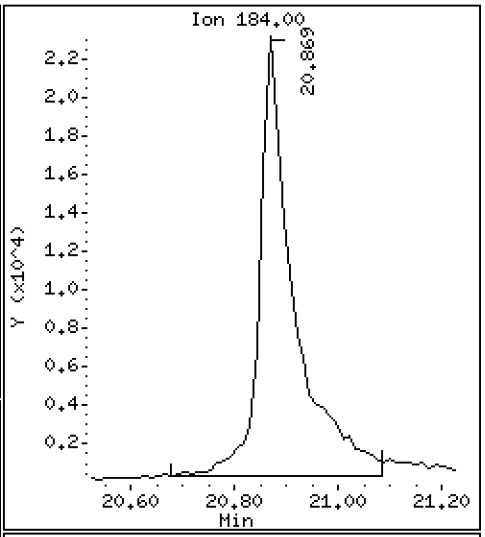
Column phase: ZB-5msi

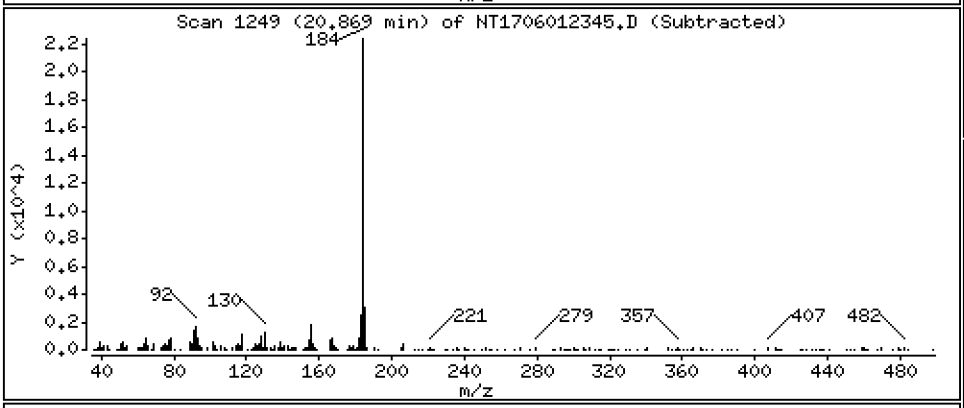
Column diameter: 0.25

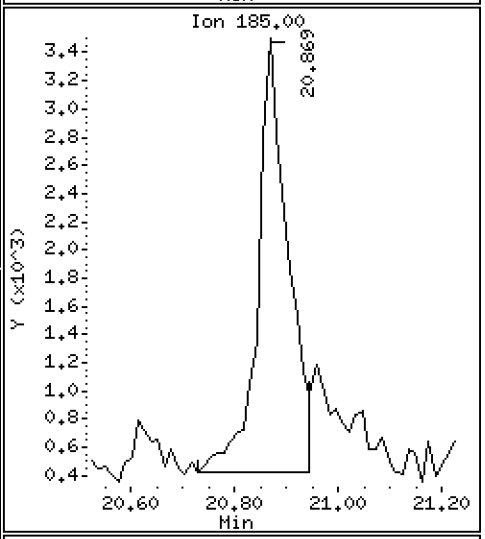
93 Benzidine

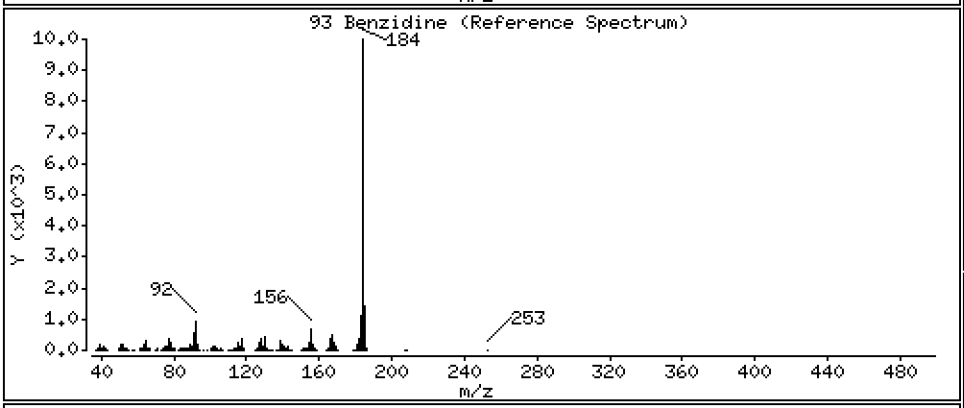
Concentration: 1.803 ug/mL

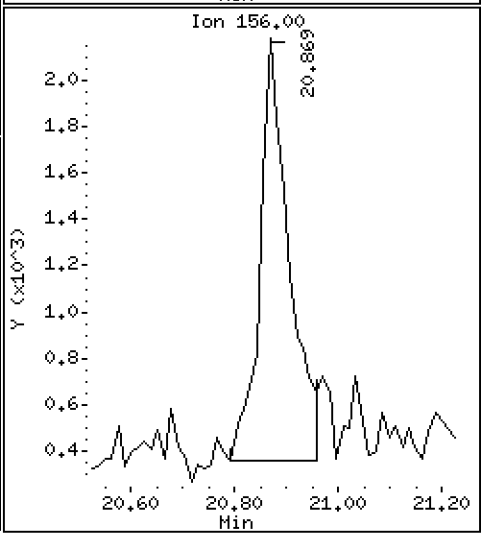


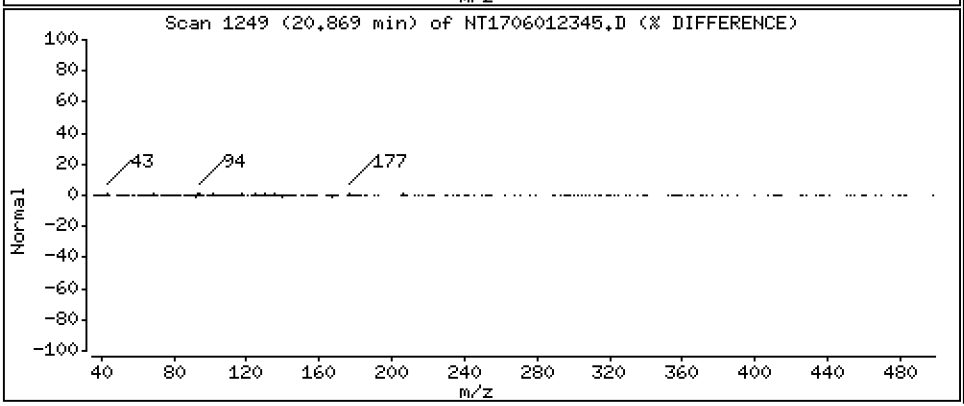












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

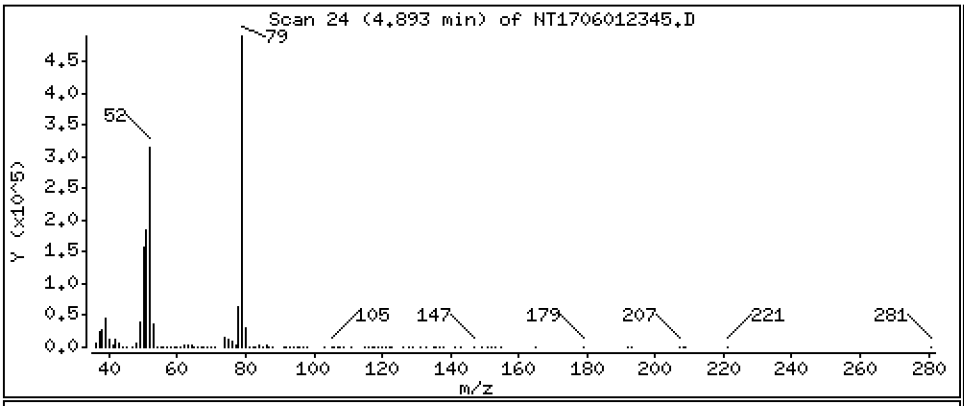
Operator: VTS

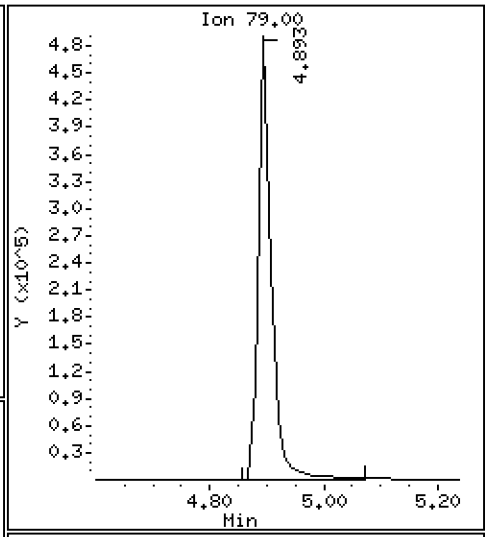
Column phase: ZB-5msi

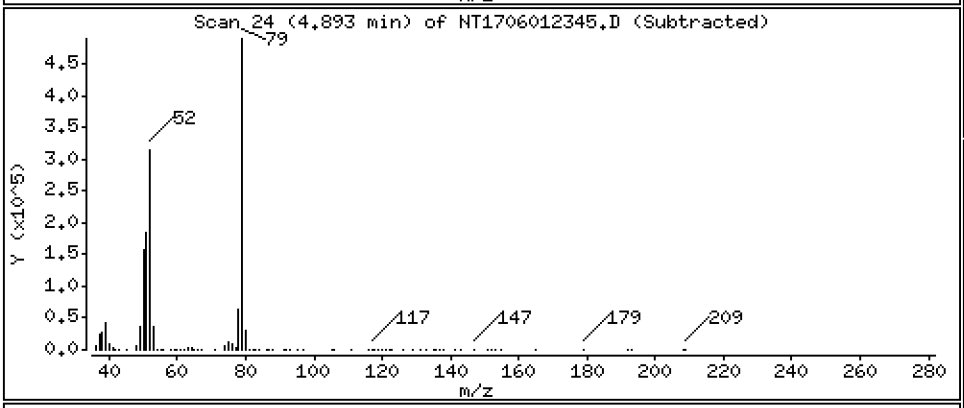
Column diameter: 0.25

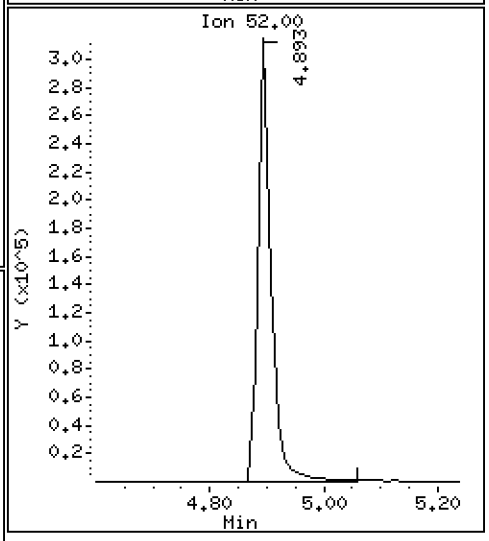
103 Pyridine

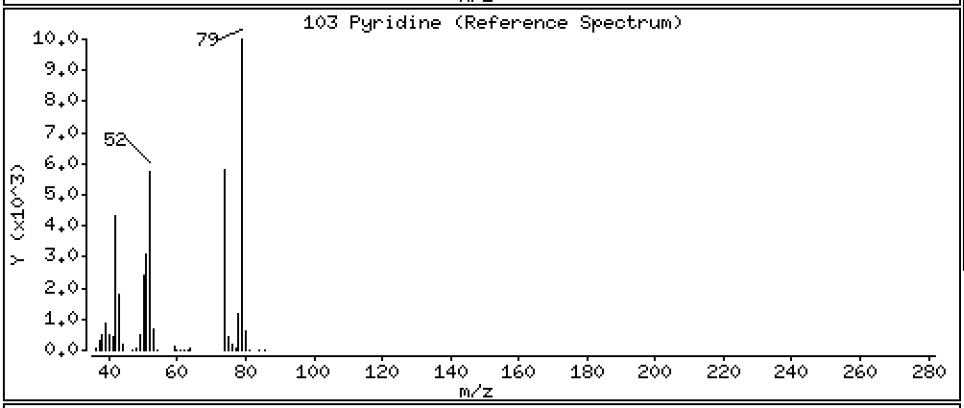
Concentration: 9.088 ug/mL

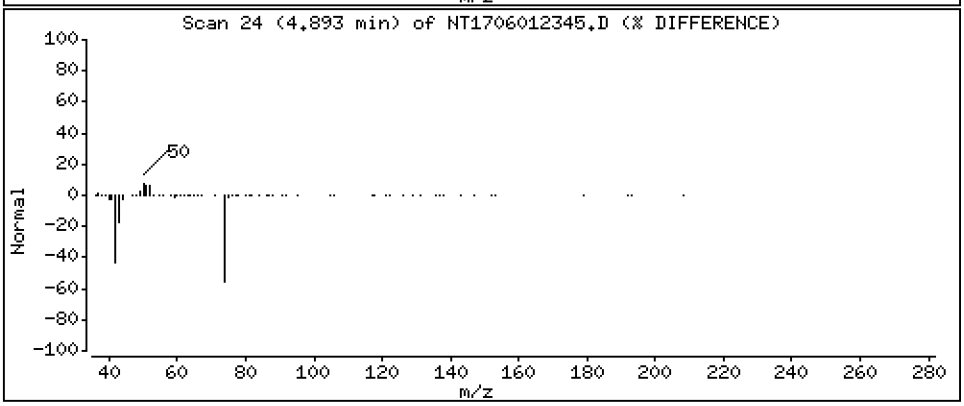












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

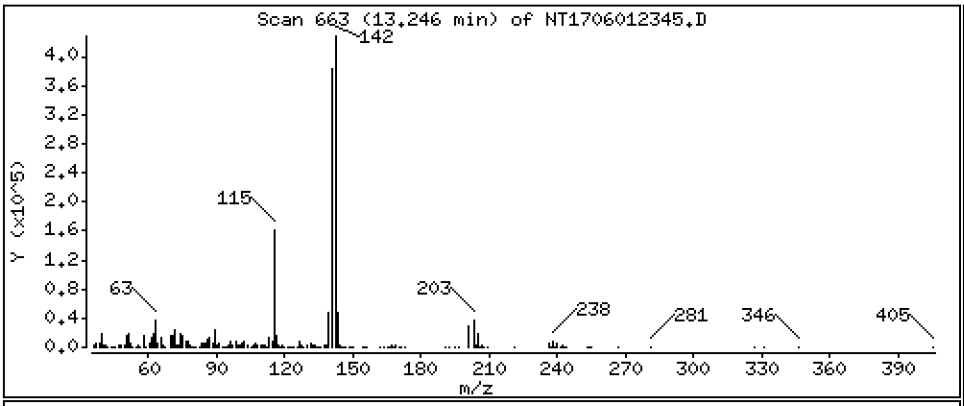
Operator: VTS

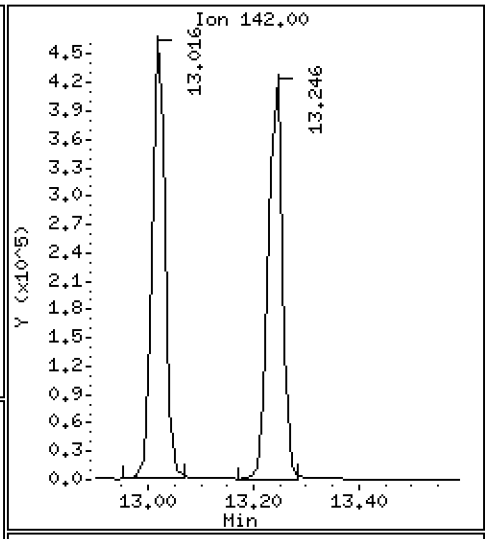
Column phase: ZB-5msi

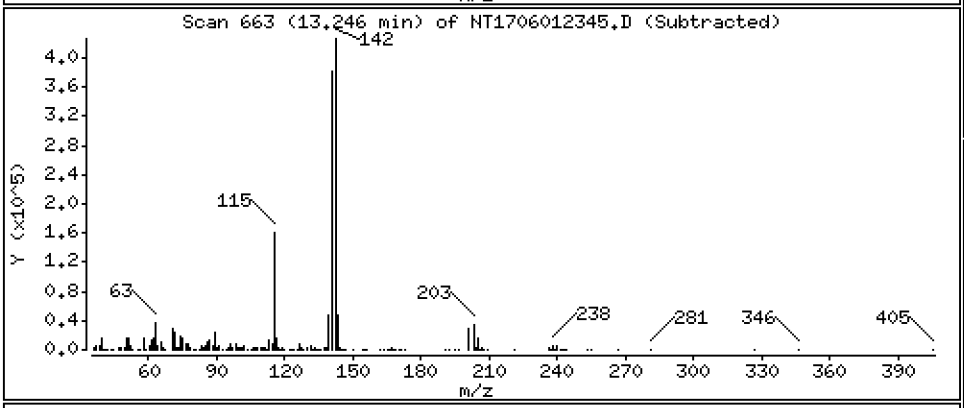
Column diameter: 0.25

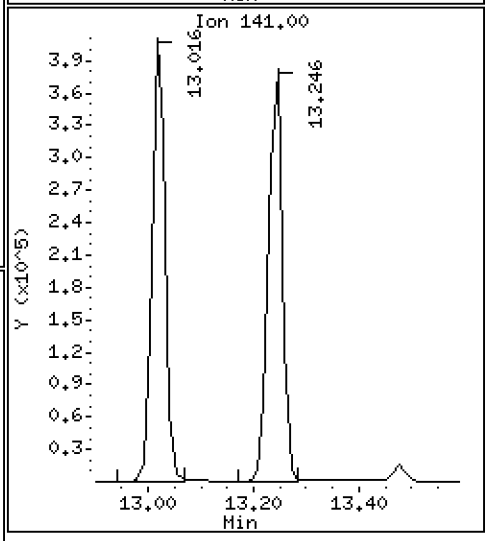
105 1-methylnaphthalene

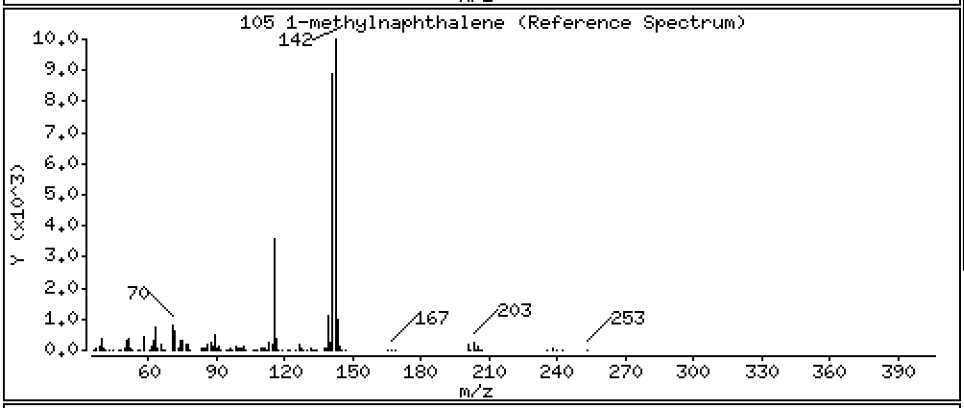
Concentration: 4.970 ug/mL

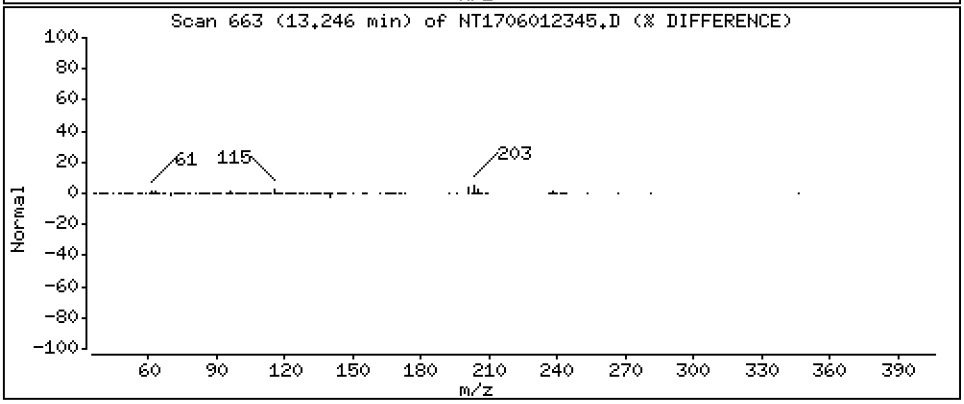












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

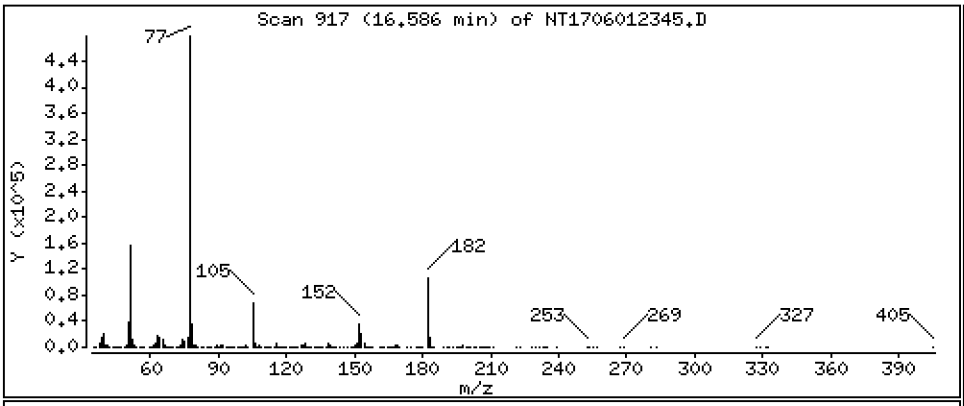
Operator: VTS

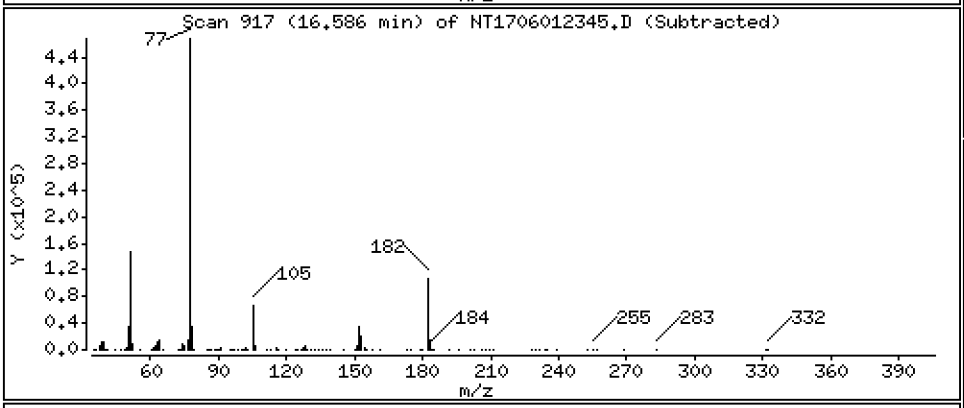
Column phase: ZB-5msi

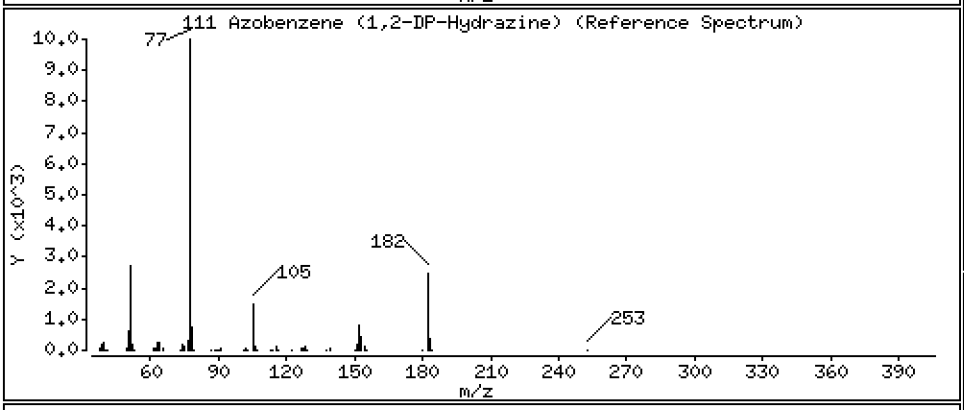
Column diameter: 0.25

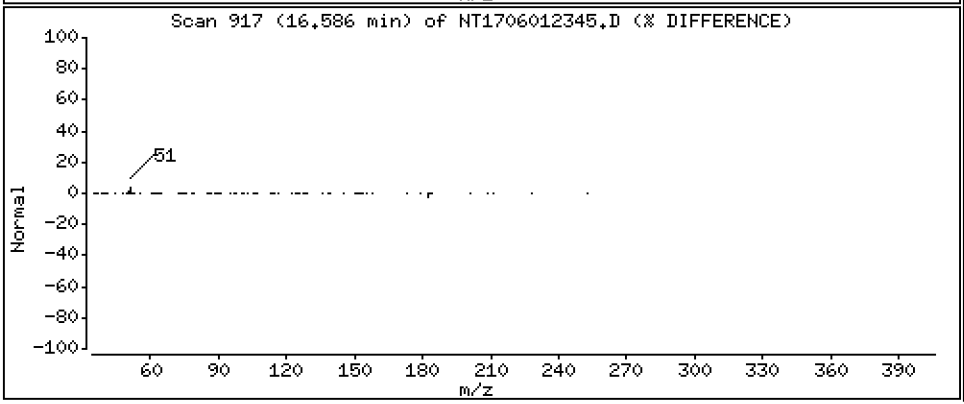
111 Azobenzene (1,2-DP-Hydrazine)

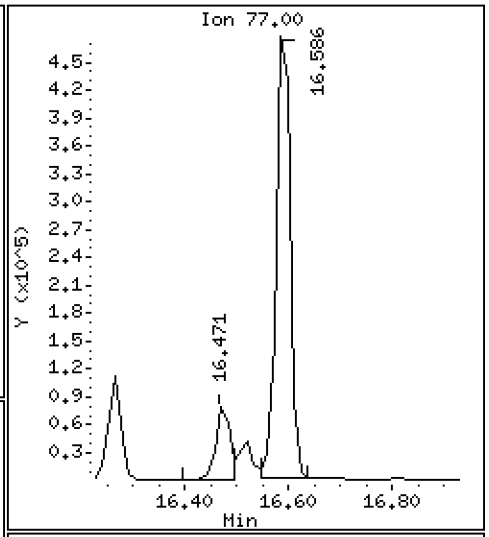
Concentration: 5.076 ug/mL

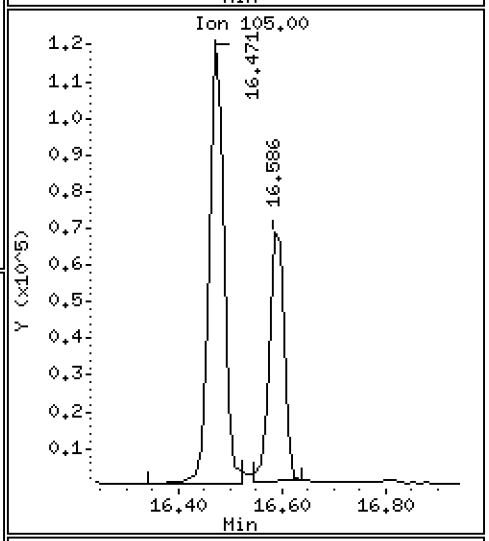


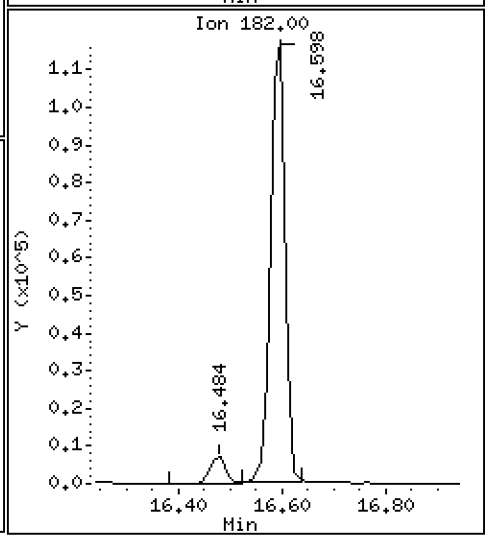












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

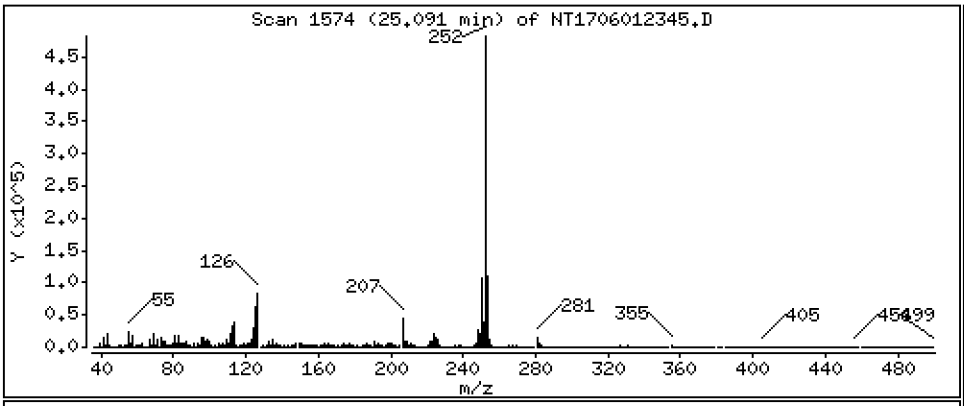
Operator: VTS

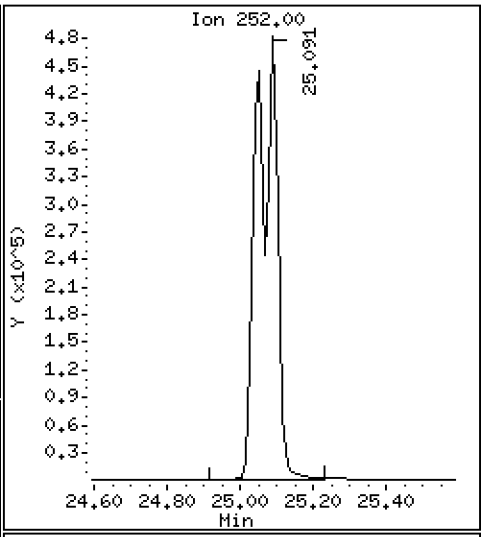
Column phase: ZB-5msi

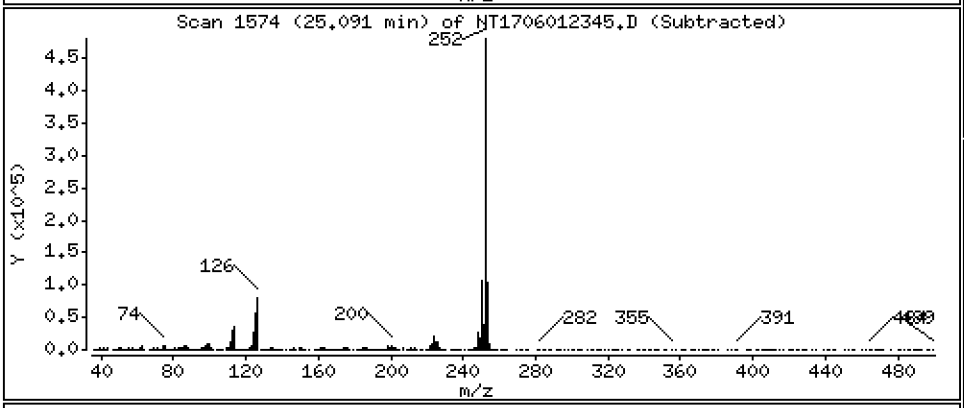
Column diameter: 0.25

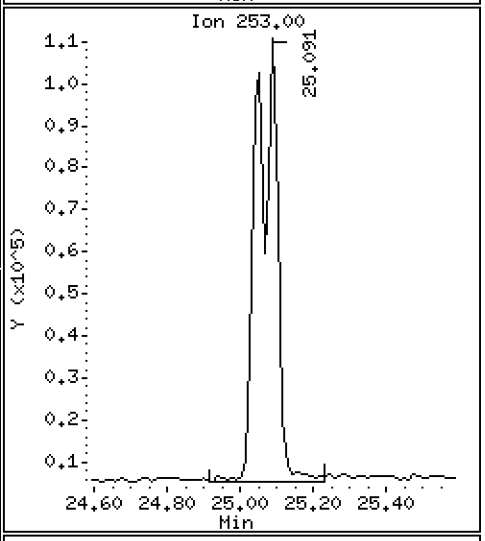
187 Total Benzofluoranthenes

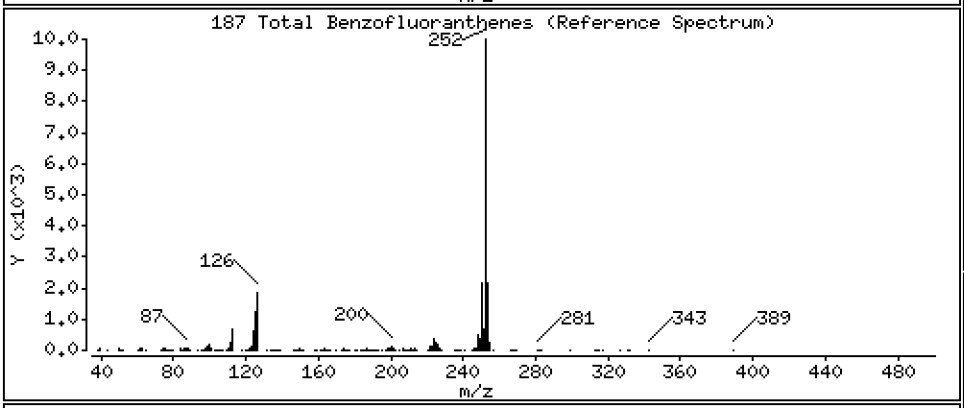
Concentration: 9.584 ug/mL

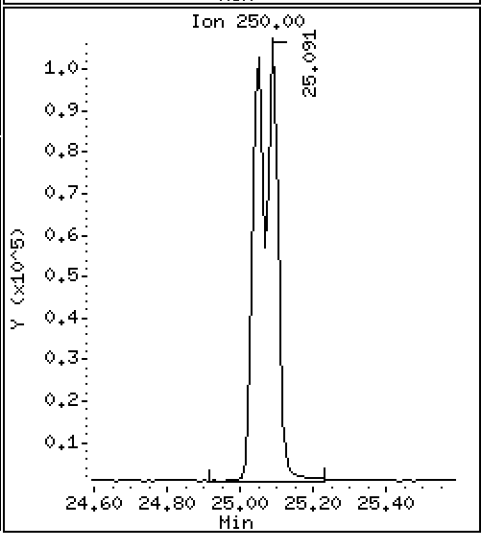


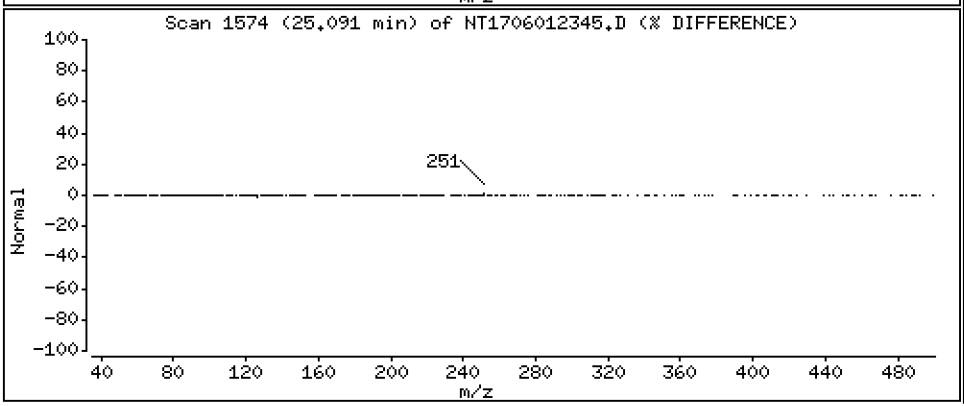












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D

Date : 02-JUN-2023 15:22

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-CCV1

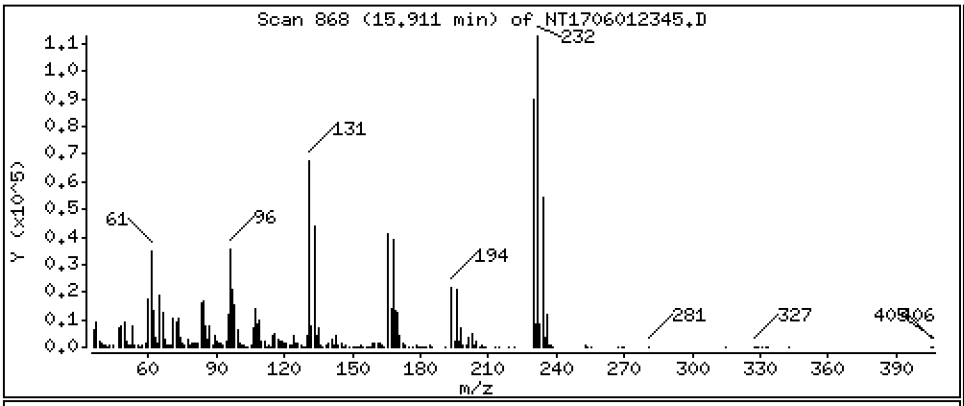
Operator: VTS

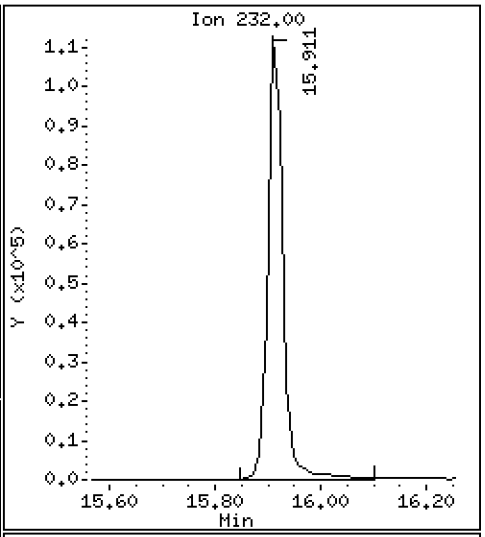
Column phase: ZB-5msi

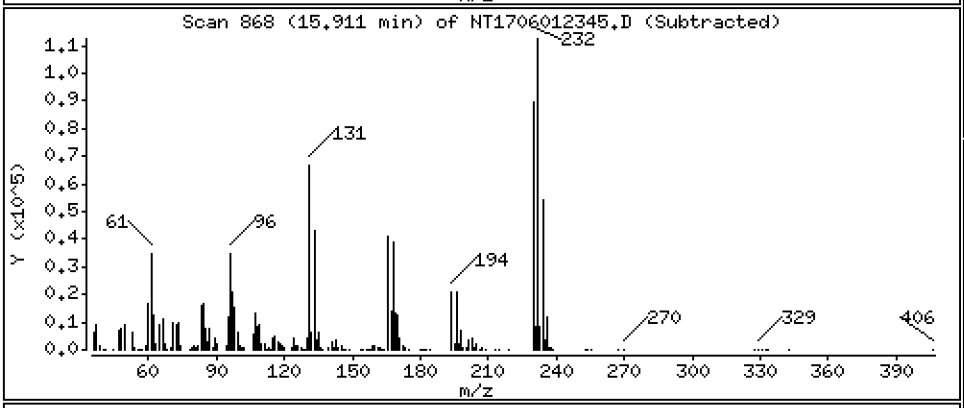
Column diameter: 0.25

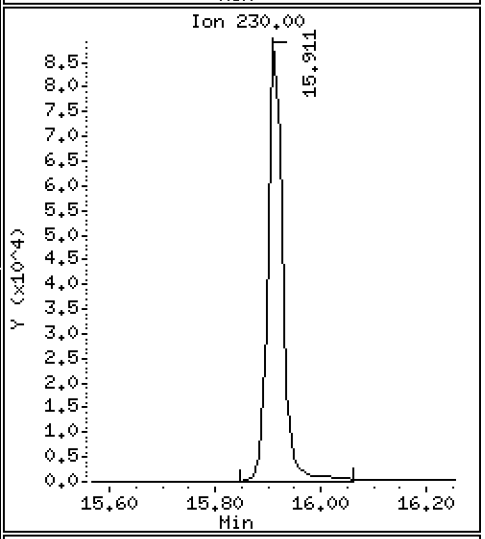
120 2,3,4,6-Tetrachlorophenol

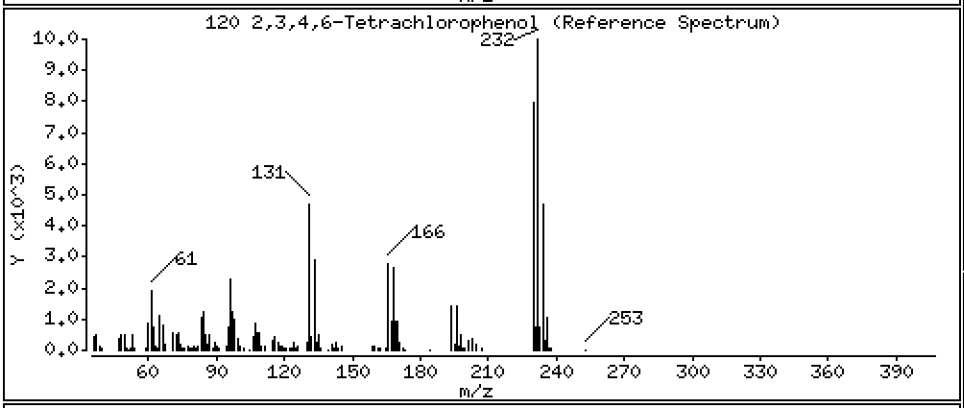
Concentration: 4.404 ug/mL

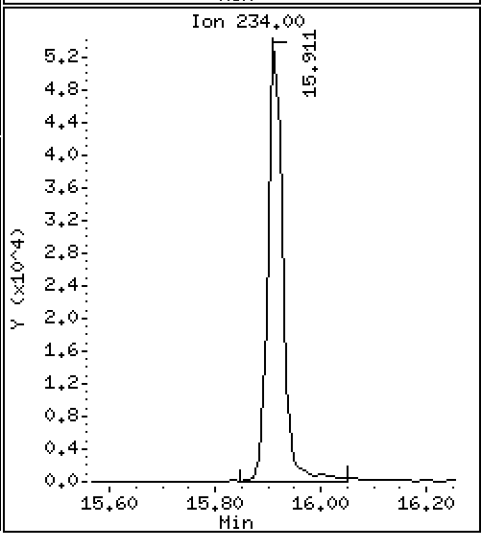


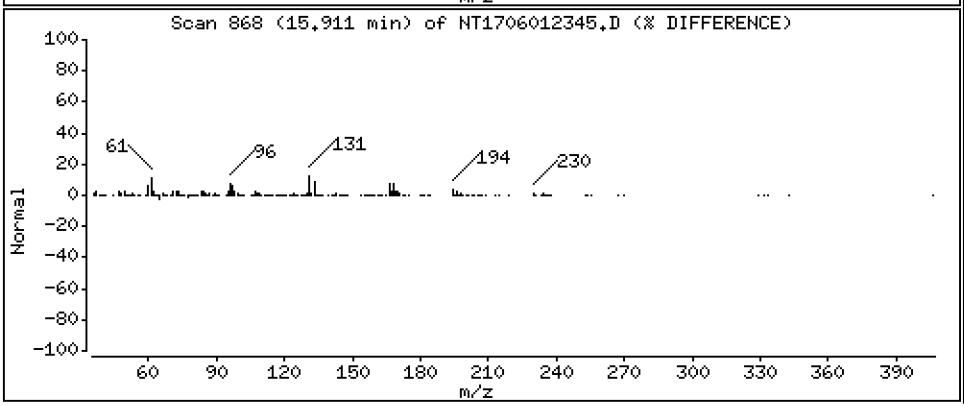












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012345.D
Lab Smp Id: SLE0008-CCV1
Inj Date : 02-JUN-2023 15:22
Operator : VTS Inst ID: nt17.i
Smp Info : SLE0008-CCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:44 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.944	6.944	(0.760)	603407	7.84040	7.840
$	2 Phenol-d5	99	8.511	8.511	(0.932)	774516	7.60460	7.605
	3 Phenol	94	8.536	8.536	(0.934)	540857	5.01364	5.014
$	5 2-Chlorophenol-d4	132	8.778	8.778	(0.961)	621327	7.61610	7.616
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	437056	5.55755	5.558
	6 2-Chlorophenol	128	8.804	8.804	(0.964)	471491	5.23377	5.234
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	453147	4.97017	4.970
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	235105	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	501511	5.51531	5.515
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	285875	4.98552	4.986
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	425047	4.97250	4.973
	11 Benzyl alcohol	108	9.417	9.417	(1.031)	254266	5.06249	5.062
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	115478	4.79291	4.793
	13 2-Methylphenol	108	9.634	9.634	(1.055)	373967	4.71687	4.717
	17 Hexachloroethane	117	10.094	10.094	(1.105)	173004	4.75624	4.756
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	312507	5.15194	5.152
	15 4-Methylphenol	108	9.902	9.902	(1.084)	390828	4.84143	4.841
$	18 Nitrobenzene-d5	82	10.222	10.222	(0.881)	494511	5.15162	5.152
	19 Nitrobenzene	77	10.260	10.260	(0.884)	464169	5.06831	5.068
	20 Isophorone	82	10.694	10.707	(0.922)	694925	5.54317	5.543
	21 2-Nitrophenol	139	10.873	10.873	(0.937)	256793	5.81890	5.819
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	778827	9.08957	9.090
	23 Bis(2-Chloroethoxy)methane	93	11.116	11.116	(0.958)	372738	4.85122	4.851
	24 Benzoic acid	105	11.192	11.205	(0.965)	1158228	20.0950	20.09
	25 2,4-Dichlorophenol	162	11.333	11.333	(0.977)	726989	10.5587	10.56
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	351924	4.70619	4.706
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	843424	4.00000	
	28 Naphthalene	128	11.639	11.638	(1.003)	1133532	4.88717	4.887
	29 4-Chloroaniline	127	11.766	11.766	(1.014)	862839	9.43755	9.438
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	194651	5.25485	5.255
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	768020	10.3595	10.36
	32 2-Methylnaphthalene	142	13.016	13.015	(1.122)	840655	5.06208	5.062
	33 Hexachlorocyclopentadiene	237	13.475	13.475	(0.887)	168177	4.01406	4.014

		QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.640	13.640	(0.898)	494299	10.4853	10.49
35	2,4,5-Trichlorophenol	196	13.730	13.730	(0.904)	515927	10.3382	10.34
$ 36	2-Fluorobiphenyl	172	13.793	13.793	(0.908)	917886	5.17110	5.171
37	2-Chloronaphthalene	162	14.010	14.010	(0.923)	732404	5.08613	5.086
38	2-Nitroaniline	65	14.278	14.278	(0.940)	526012	10.7858	10.79
39	Dimethylphthalate	163	14.686	14.686	(0.967)	811589	5.23506	5.235
40	Acenaphthylene	152	14.878	14.878	(0.980)	1165383	5.09623	5.096
41	2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	385000	10.6072	10.61
* 42	Acenaphthene-d10	164	15.184	15.184	(1.000)	450569	4.00000	
43	3-Nitroaniline	138	15.120	15.133	(0.996)	304511	9.05816	9.058
44	Acenaphthene	153	15.247	15.247	(1.004)	724758	5.07018	5.070
45	2,4-Dinitrophenol	184	15.337	15.336	(1.010)	374357	16.5808	16.58
46	Dibenzofuran	168	15.579	15.579	(1.026)	1018988	5.10743	5.107
47	4-Nitrophenol	109	15.477	15.464	(1.019)	220491	9.87450	9.875
48	2,4-Dinitrotoluene	165	15.642	15.642	(1.030)	504992	10.6285	10.63
50	Diethylphthalate	149	16.140	16.139	(1.063)	921822	6.09713	6.097
49	Fluorene	166	16.280	16.280	(1.072)	1063583	5.60730	5.607
51	4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	475099	5.44818	5.448
52	4-Nitroaniline	138	16.407	16.420	(1.081)	287591	9.03809	9.038
53	4,6-Dinitro-2-methylphenol	198	16.483	16.483	(0.906)	525410	17.6431	17.64
54	N-Nitrosodiphenylamine	169	16.521	16.521	(0.908)	529103	5.06164	5.062
$ 55	2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	160698	8.17650	8.177
56	4-Bromophenyl-phenylether	248	17.260	17.259	(0.948)	200541	5.47546	5.475
57	Hexachlorobenzene	284	17.578	17.578	(0.966)	211093	5.65629	5.656
58	Pentachlorophenol	266	17.948	17.948	(0.986)	215231	9.51122	9.511
* 59	Phenanthrene-d10	188	18.203	18.203	(1.000)	746223	4.00000	
60	Phenanthrene	178	18.241	18.254	(1.002)	1073145	4.92863	4.929
61	Anthracene	178	18.343	18.343	(1.008)	1030795	5.04252	5.043
62	Carbazole	167	18.688	18.688	(1.027)	849532	6.37314	6.373
63	Di-n-butylphthalate	149	19.453	19.453	(1.069)	1272476	5.15508	5.155
64	Fluoranthene	202	20.613	20.613	(0.888)	1087784	4.65805	4.658
65	Pyrene	202	21.034	21.047	(0.906)	1089011	4.60015	4.600
$ 66	Terphenyl-d14	244	21.315	21.314	(0.918)	838342	4.98154	4.982
67	Butylbenzylphthalate	149	22.233	22.233	(0.958)	538898	5.08613	5.086
68	Benzo(a)anthracene	228	23.190	23.190	(0.999)	903698	4.91585	4.916
* 69	Chrysene-d12	240	23.215	23.215	(1.000)	499235	4.00000	
70	3,3'-Dichlorobenzidine	252	23.152	23.152	(0.997)	711810	18.4619	18.46
71	Chrysene	228	23.254	23.254	(1.002)	890142	5.14579	5.146
72	bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	782649	5.10668	5.107
* 134	Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1059289	4.00000	
73	Di-n-octylphthalate	149	24.236	24.236	(1.001)	1316689	4.90375	4.904
74	Benzo(b)fluoranthene	252	25.052	25.052	(0.971)	939534	4.30219	4.302
75	Benzo(k)fluoranthene	252	25.091	25.090	(0.972)	1101594	5.33909	5.339
76	Benzo(a)pyrene	252	25.690	25.690	(0.996)	832928	4.84174	4.842
* 77	Perylene-d12	264	25.805	25.805	(1.000)	550814	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.423	28.423	(1.101)	820566	4.11225	4.112
79	Dibenzo(a,h)anthracene	278	28.436	28.436	(1.102)	721344	4.30728	4.307
80	Benzo(g,h,i)perylene	276	29.203	29.203	(1.132)	576492	3.50025	3.500
90	N-Nitrosodimethylamine	74	4.867	4.867	(0.533)	505181	9.84061	9.841
91	Aniline	93	8.600	8.600	(0.941)	914685	10.1181	10.12
93	Benzidine	184	20.868	20.868	(0.899)	105349	1.80314	1.803
103	Pyridine	79	4.893	4.893	(0.536)	739973	9.08758	9.088
105	1-methylnaphthalene	142	13.245	13.245	(1.142)	765720	4.97018	4.970
111	Azobenzene (1,2-DP-Hydrazine)	77	16.585	16.585	(1.092)	895819	5.07591	5.076

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.091	25.090	(0.972)	1878769	9.58376	9.584
120 2,3,4,6-Tetrachlorophenol	232	15.910	15.910	(1.048)	248424	4.40435	4.404

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012345.D
Lab Smp Id: SLE0008-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 02-JUN-2023
Calibration Time: 11:02
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223423	111712	446846	235105	5.23
27 Naphthalene-d8	810178	405089	1620356	843424	4.10
42 Acenaphthene-d10	450990	225495	901980	450569	-0.09
59 Phenanthrene-d10	792538	396269	1585076	746223	-5.84
69 Chrysene-d12	499734	249867	999468	499235	-0.10
134 Di-n-octylphthala	1036983	518492	2073966	1059289	2.15
77 Perylene-d12	439413	219707	878826	550814	25.35

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012345.D

Lab ID: SLE0008-CCV1
nt17.i, ABN.m, 02-JUN-2023 15:22

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1706012338.D

On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

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

Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012306.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/01/23
Lab Sample ID:	SLF0008-LCV1	Injection Time:	15:12
Sequence Name:	ABN 0.2		

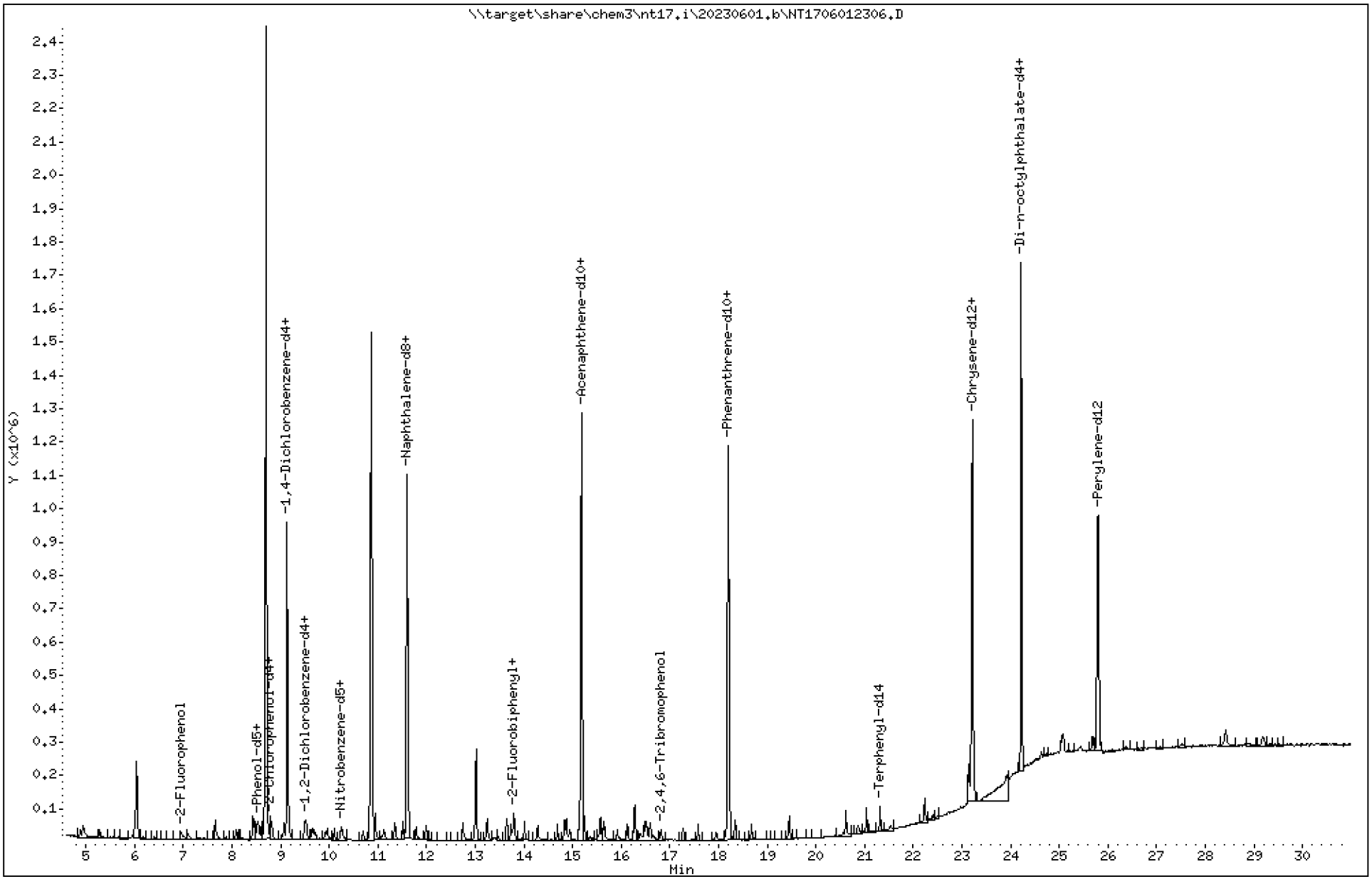
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	0.20000	0.2	1.8353850	1.6181300		-11.8	+/-50
4-Methylphenol	A	0.20000	0.2	1.3734410	1.2629010		-8.1	+/-50
Naphthalene	A	0.20000	0.2	1.0999940	1.1262340		2.4	+/-50
2-Methylnaphthalene	A	0.20000	0.2	0.7875944	0.7630619		-3.1	+/-50
Acenaphthylene	A	0.20000	0.2	2.0301060	2.1115640		4.0	+/-50
Dimethylphthalate	A	0.20000	0.2	1.3763000	1.4467150		5.1	+/-50
Acenaphthene	A	0.20000	0.2	1.2690180	1.2628870		-0.5	+/-50
Dibenzofuran	A	0.20000	0.2	1.7711910	1.7993580		1.6	+/-50
Fluorene	A	0.20000	0.2	1.6839010	1.7131240		1.7	+/-50
Phenanthrene	A	0.20000	0.2	1.1671410	1.1814960		1.2	+/-50
Anthracene	A	0.20000	0.2	1.0957620	0.9964891		-9.1	+/-50
Fluoranthene	A	0.20000	0.2	1.8710850	1.7243230		-7.8	+/-50
Pyrene	A	0.20000	0.2	1.8967730	1.8232390		-3.9	+/-50
Butylbenzylphthalate	A	0.20000	0.2	0.8489339	0.8024339		-5.5	+/-50
Benzo(a)anthracene	A	0.20000	0.2	1.4729210	1.6175460		9.8	+/-50
Chrysene	A	0.20000	0.2	1.3859970	1.4074370		1.5	+/-50
bis(2-Ethylhexyl)phthalate	A	0.20000	0.2	0.5787277	143710		-7.5	+/-50
Benzofluoranthenes, Total	A	0.40000	0.4	1.4236150	1.4438100		1.4	+/-50
Benzo(a)pyrene	A	0.20000	0.2	1.2492830	1.2524160		0.3	+/-50
Indeno(1,2,3-cd)pyrene	A	0.20000	0.2	1.4490690	1.4338330		-1.1	+/-50
Dibenzo(a,h)anthracene	A	0.20000	0.2	1.2161710	1.1638520		-4.3	+/-50
Benzo(g,h,i)perylene	A	0.20000	0.2	1.1960510	1.1534090		-3.6	+/-50
2-Fluorophenol	A	0.30000	0.228	1.3093930	0.9932511		-24.1	+/-50
Phenol-d5	A	0.30000	0.280	1.7328160	1.6159060		-6.7	+/-50
2-Chlorophenol-d4	A	0.30000	0.297	1.3879870	1.3739210		-1.0	+/-50
1,2-Dichlorobenzene-d4	A	0.20000	0.204	0.9755818	0.9955011		2.0	+/-50
Nitrobenzene-d5	A	0.20000	0.188	0.4552457	0.4268345		-6.2	+/-50
2-Fluorobiphenyl	A	0.20000	0.207	1.5758130	1.6332450		3.6	+/-50
2,4,6-Tribromophenol	A	0.30000	0.271	0.1414414	0.1575597		-9.7	+/-50
p-Terphenyl-d14	A	0.20000	0.206	1.3483810	1.3887710		3.0	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D
Date : 01-JUN-2023 15:12
Client ID:
Sample Info: SLF0008-LCV1

Instrument: nt17.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

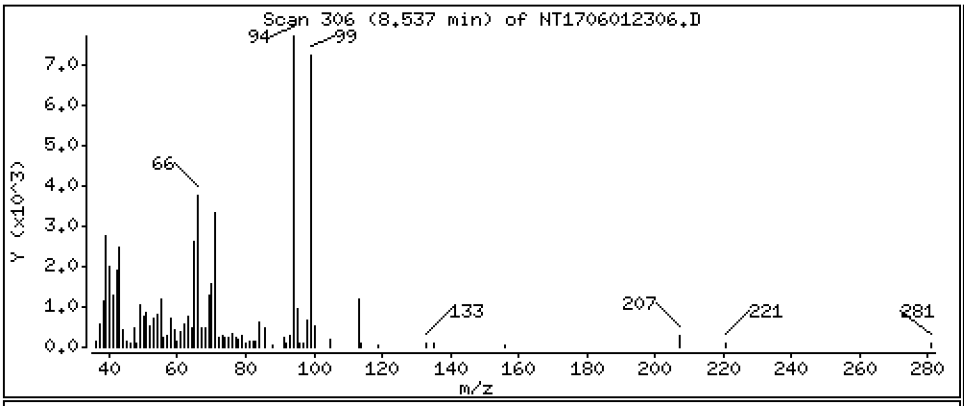
Operator: VTS

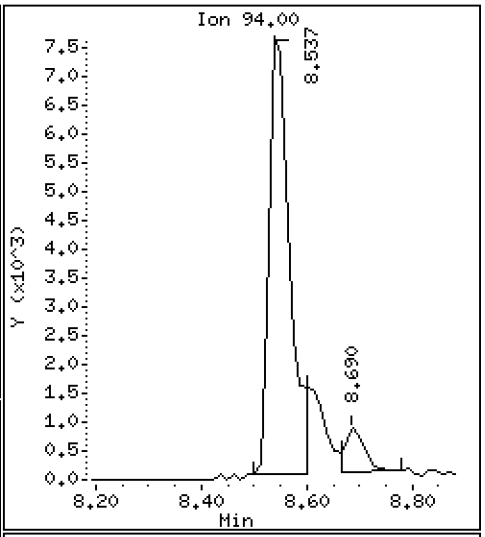
Column phase: ZB-5msi

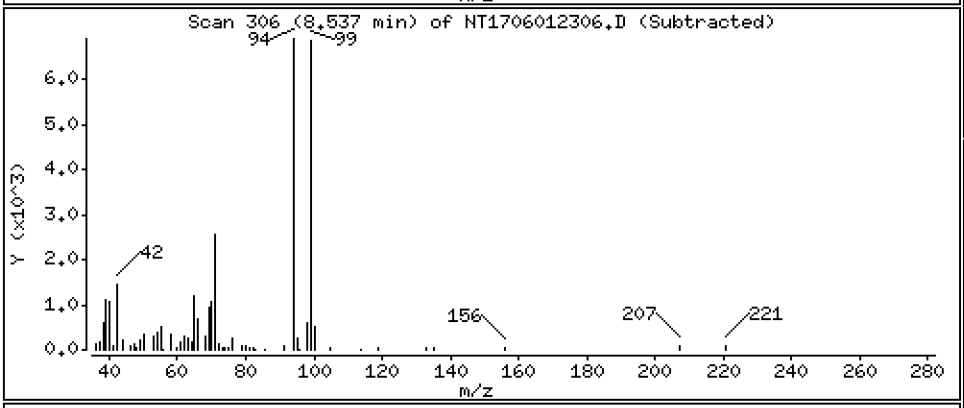
Column diameter: 0.25

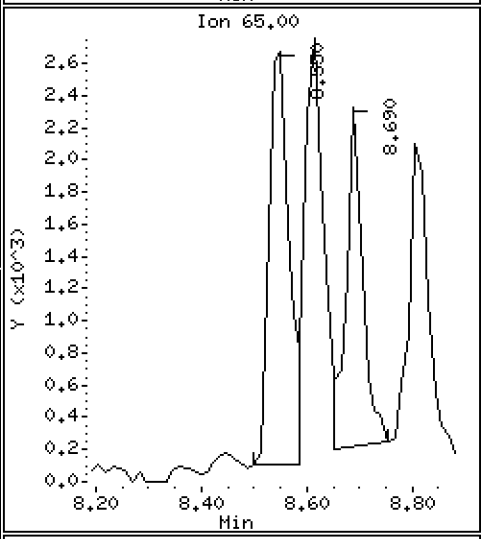
3 Phenol

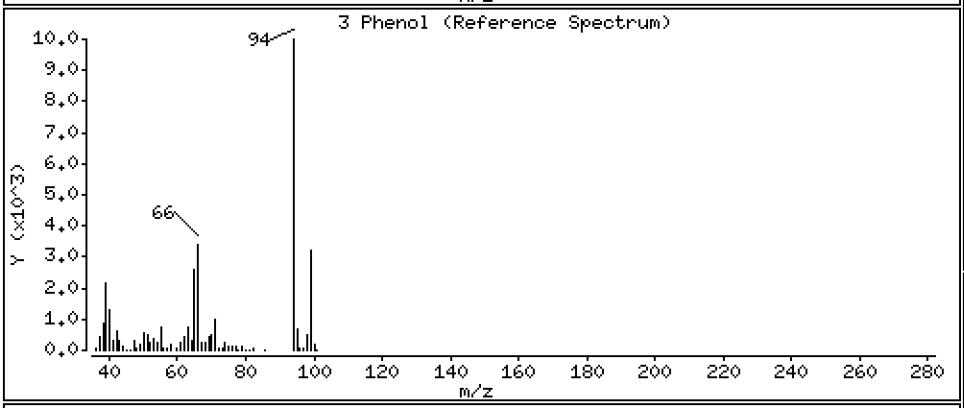
Concentration: 0.1763 ug/mL

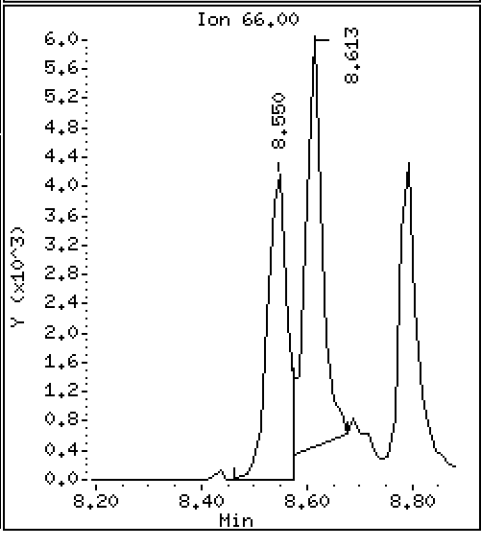


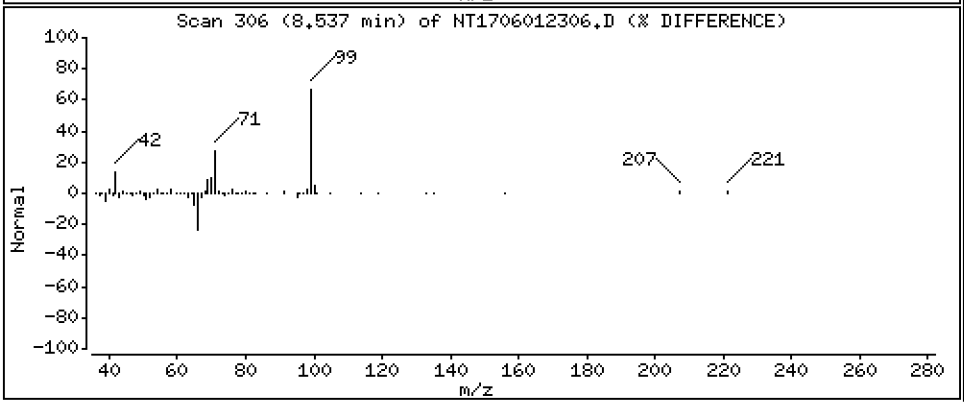












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

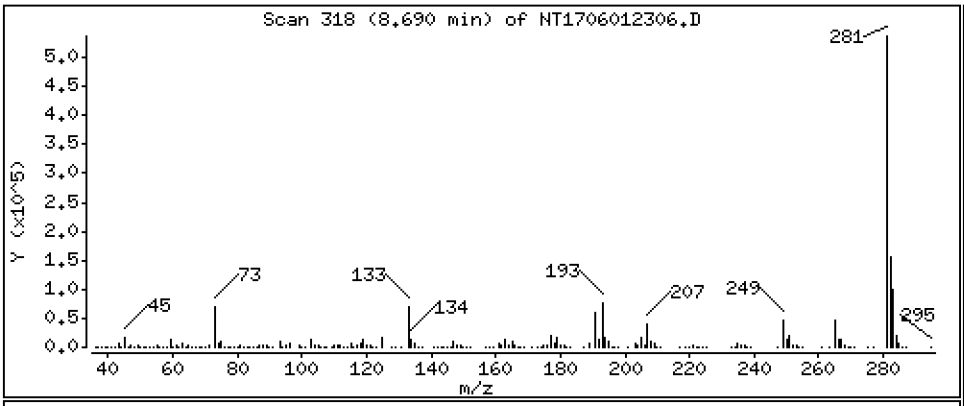
Operator: VTS

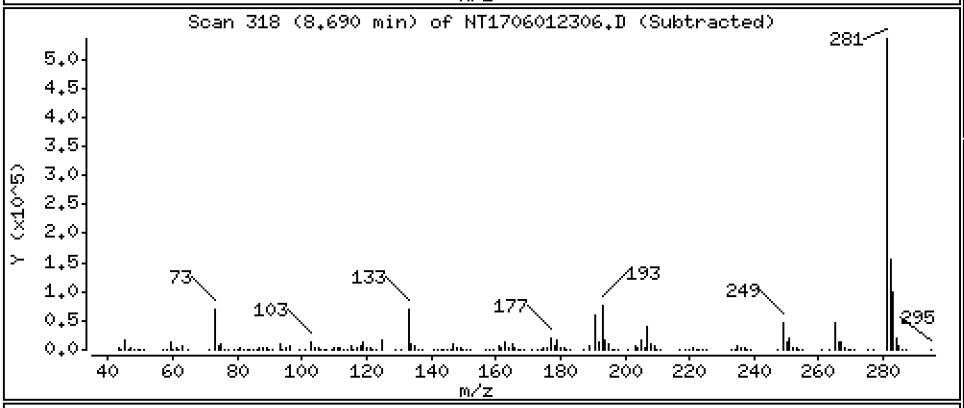
Column phase: ZB-5msi

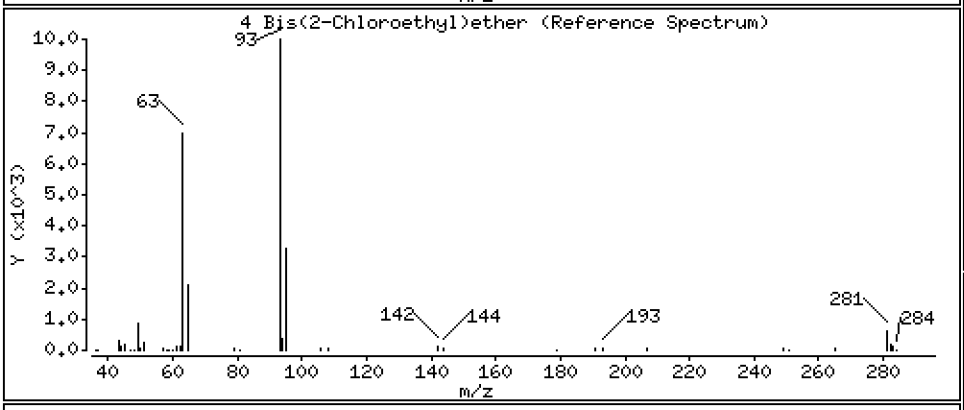
Column diameter: 0.25

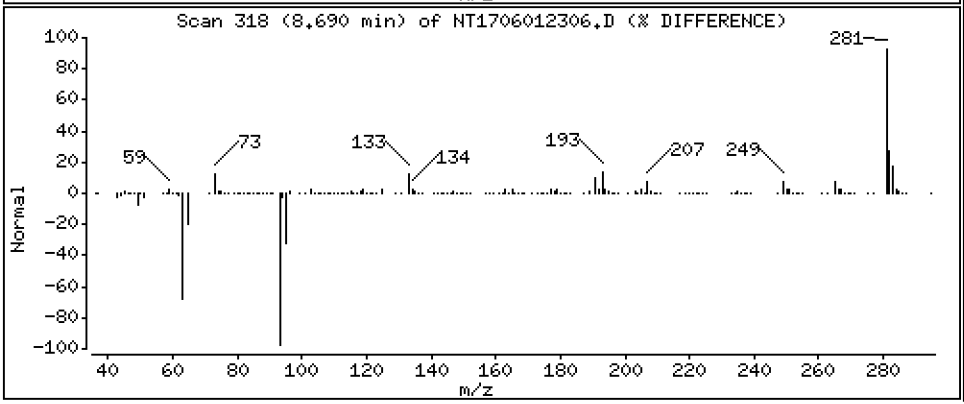
4 Bis(2-Chloroethyl)ether

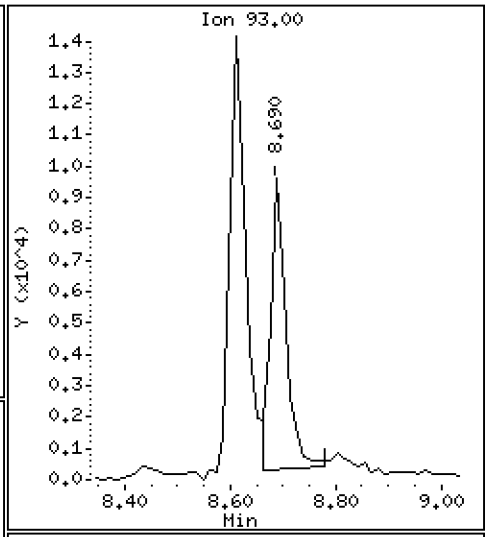
Concentration: 0.2234 ug/mL

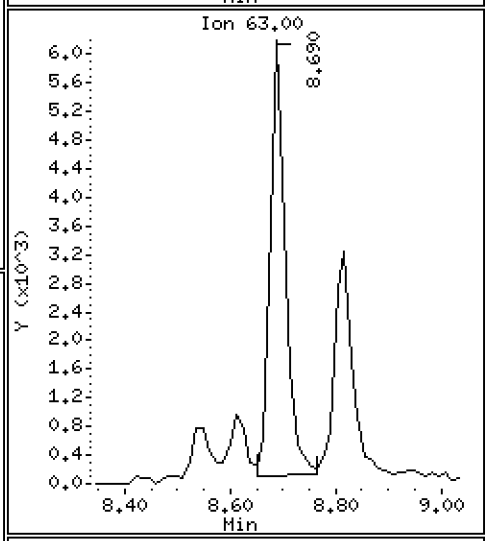


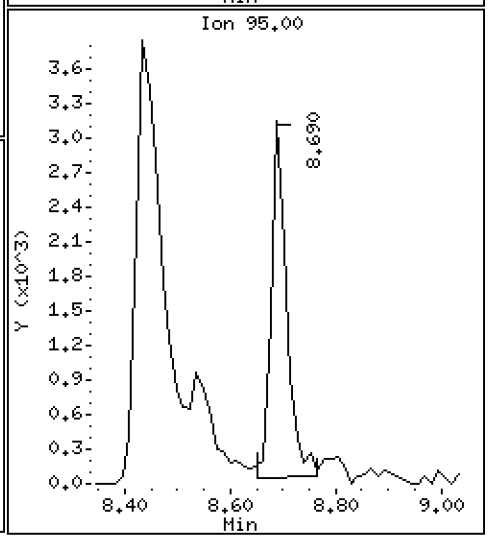












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

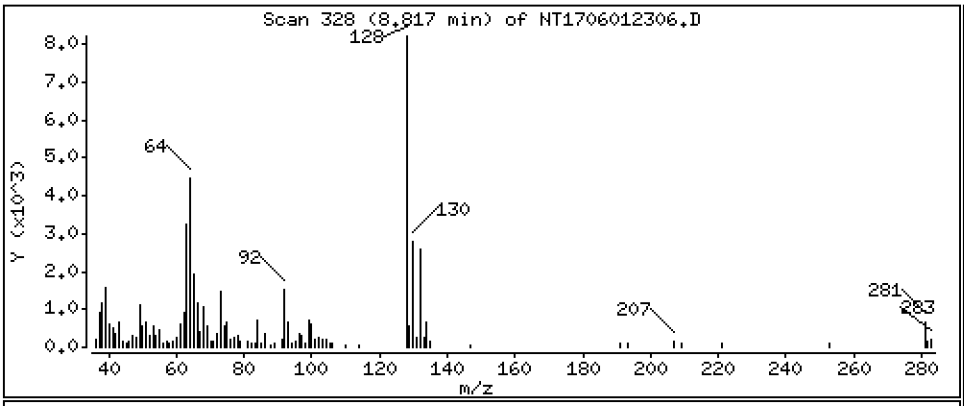
Operator: VTS

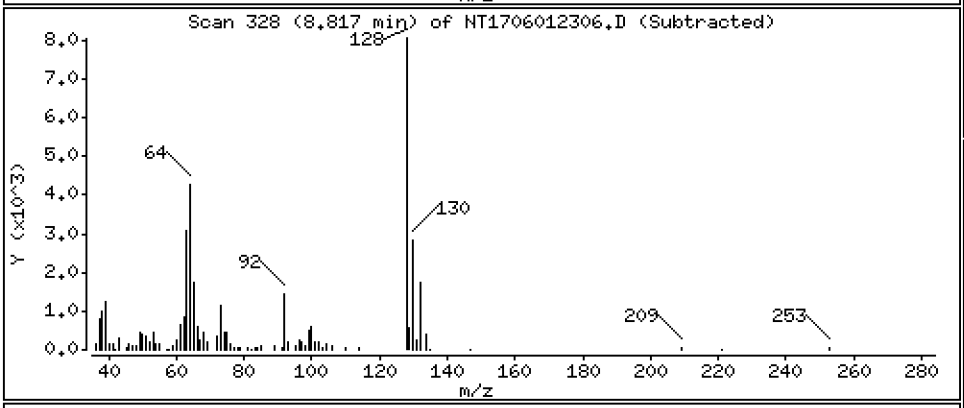
Column phase: ZB-5msi

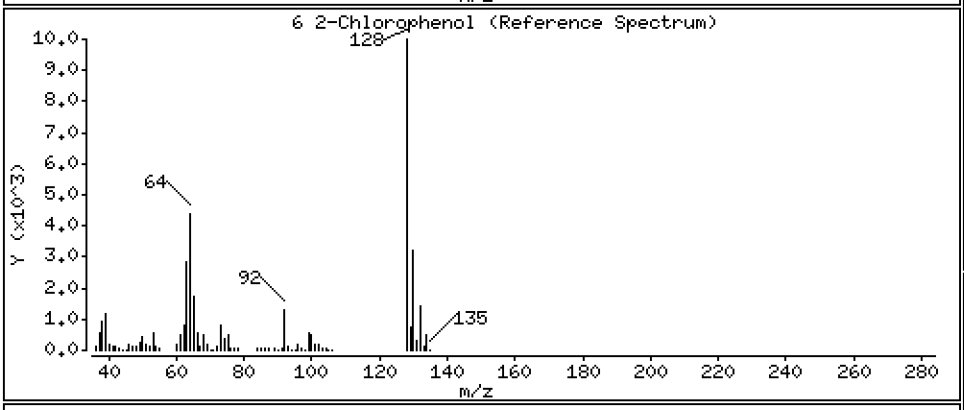
Column diameter: 0.25

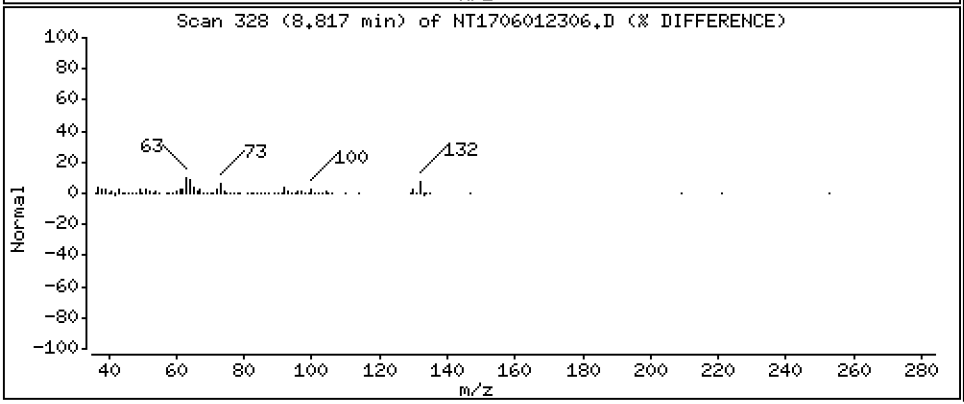
6 2-Chlorophenol

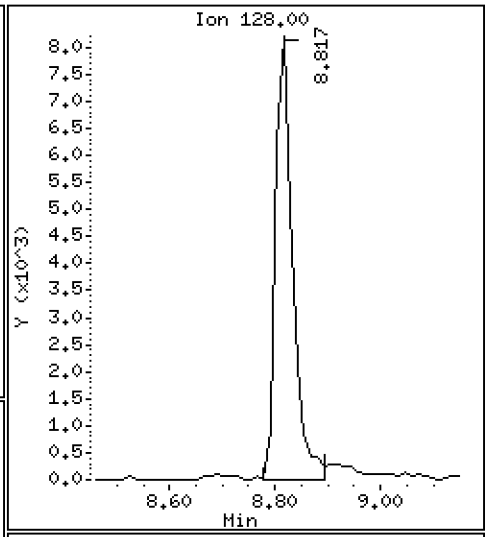
Concentration: 0.1874 ug/mL

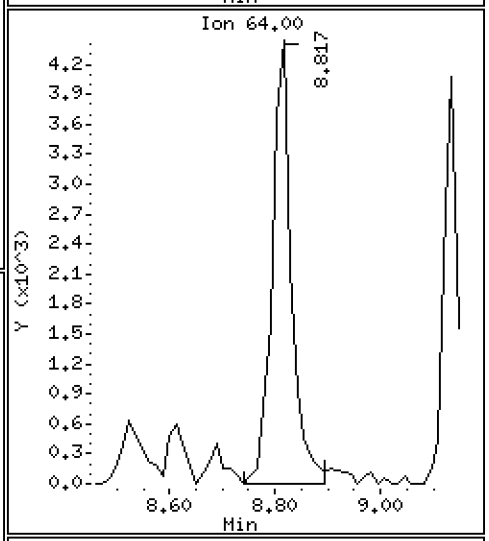


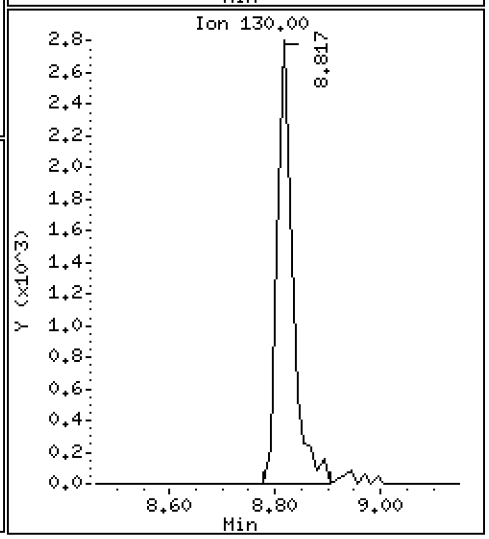












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

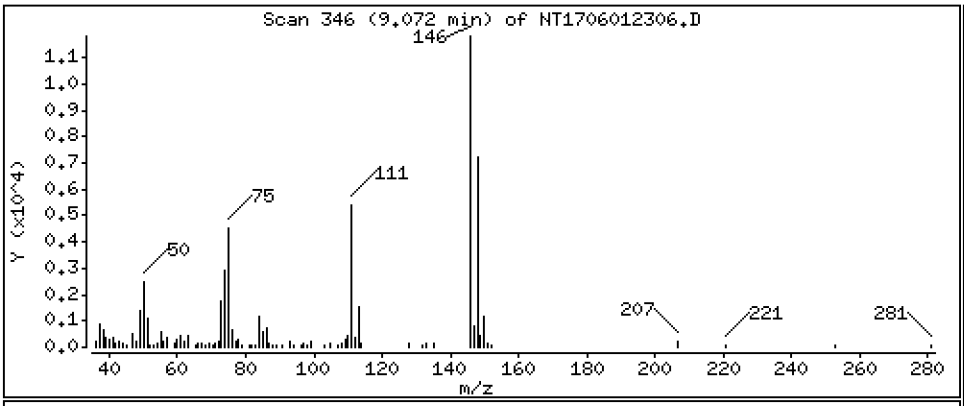
Operator: VTS

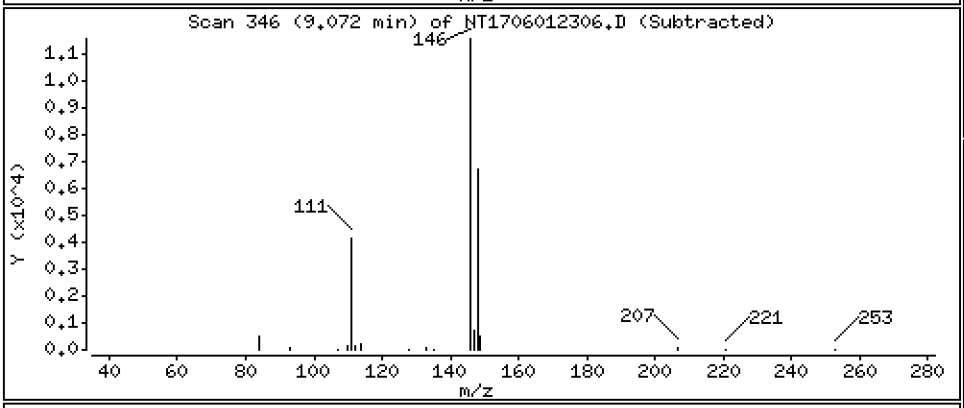
Column phase: ZB-5msi

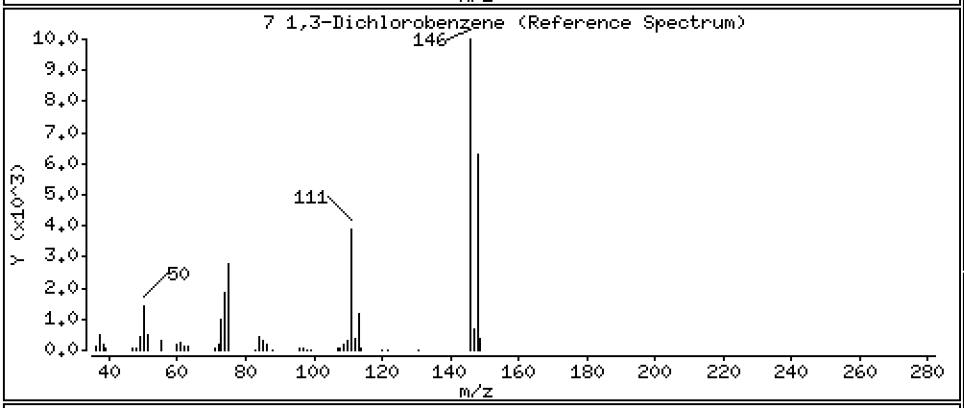
Column diameter: 0.25

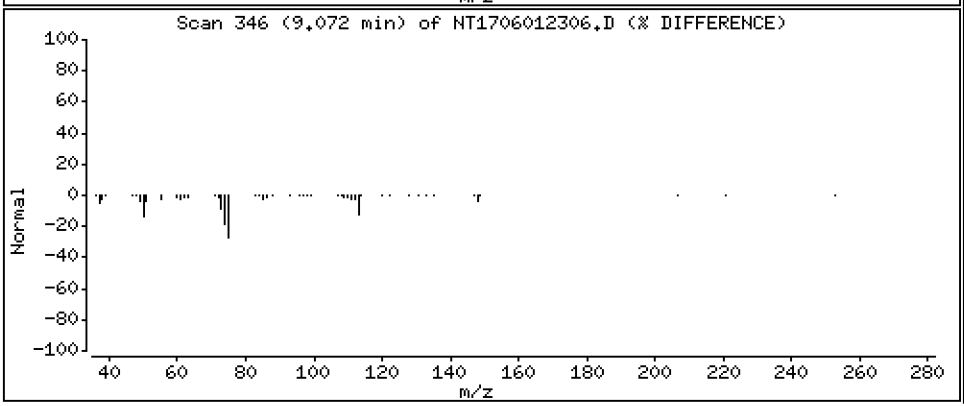
7 1,3-Dichlorobenzene

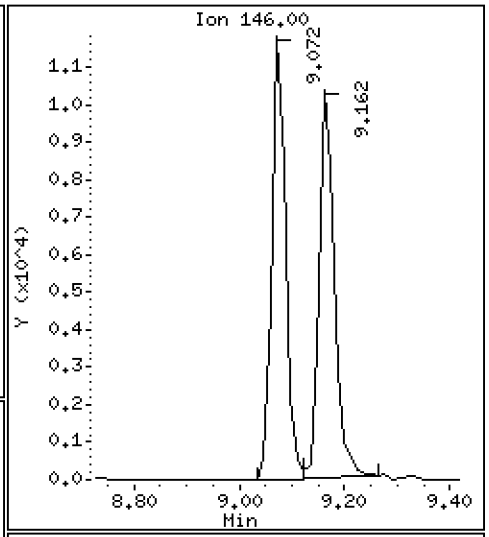
Concentration: 0.2146 ug/mL

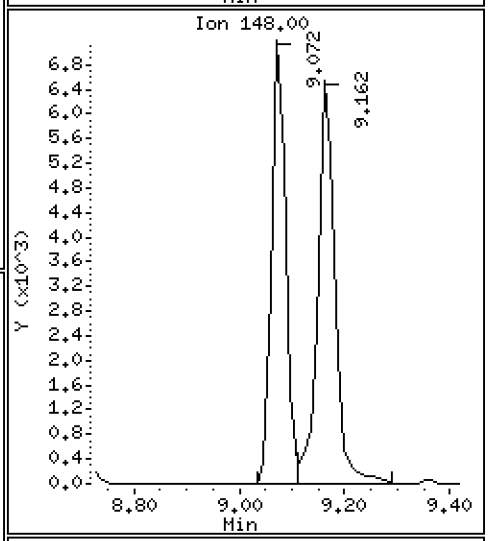


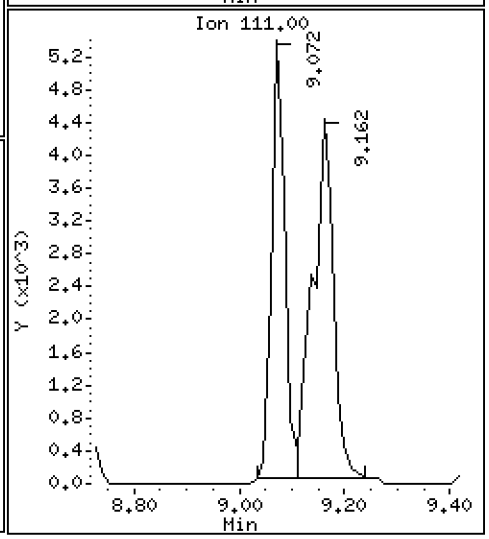












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

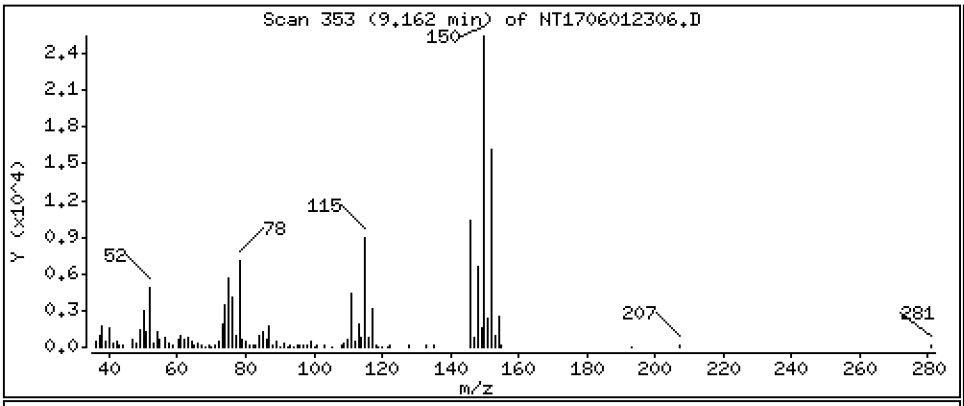
Operator: VTS

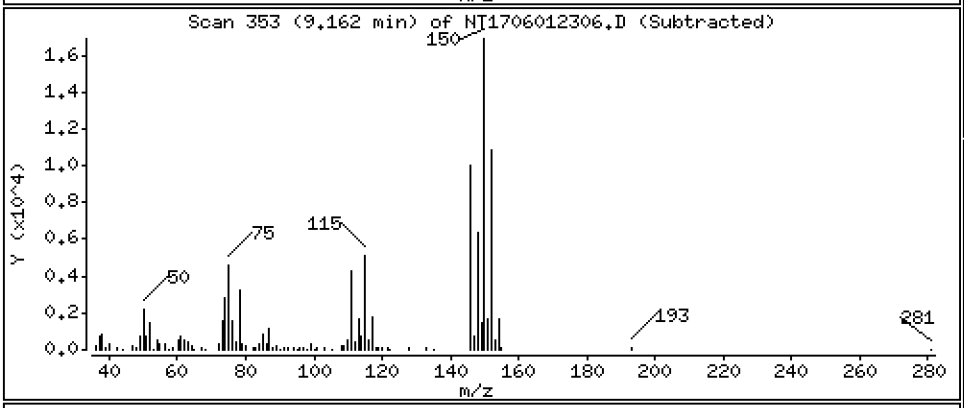
Column phase: ZB-5msi

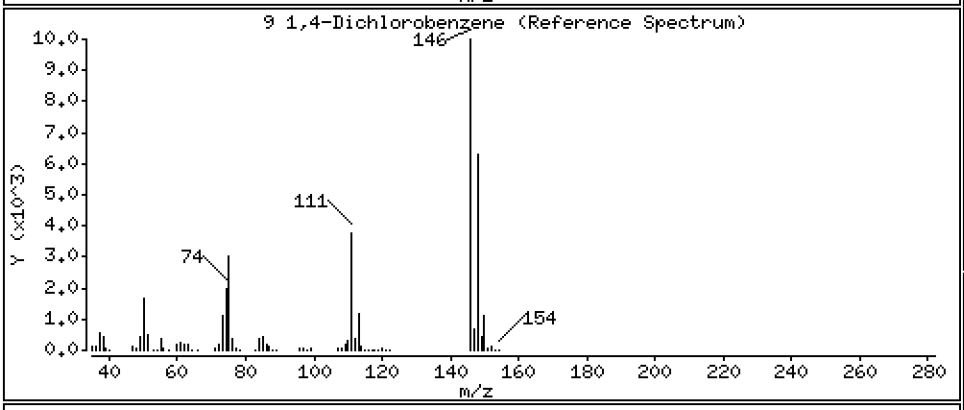
Column diameter: 0.25

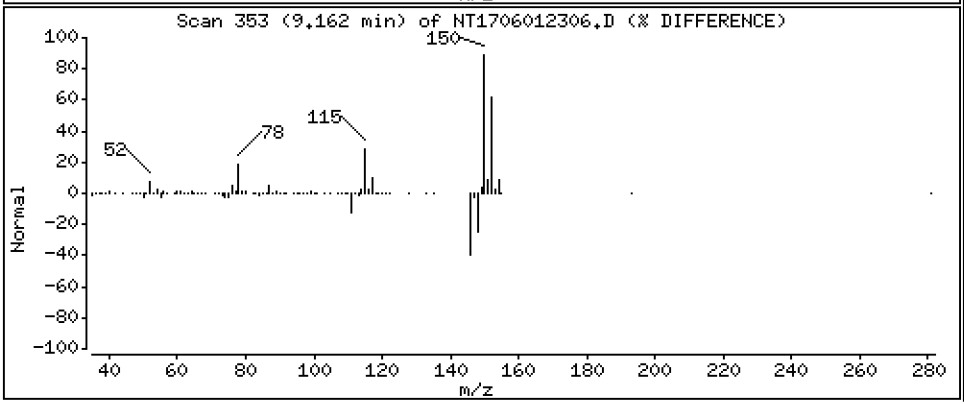
9 1,4-Dichlorobenzene

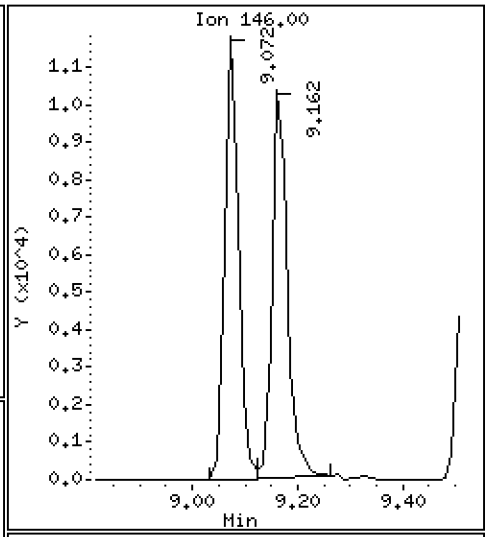
Concentration: 0.2071 ug/mL

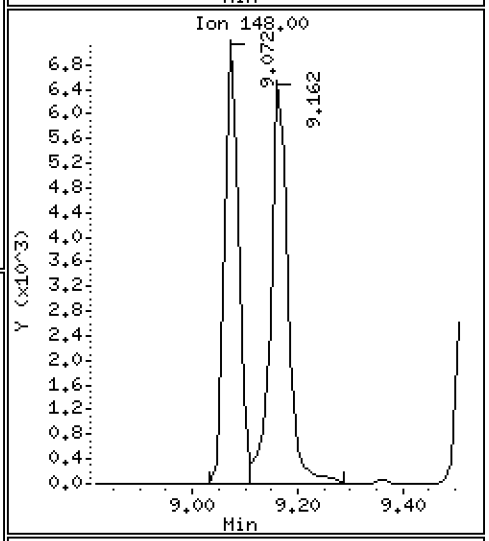


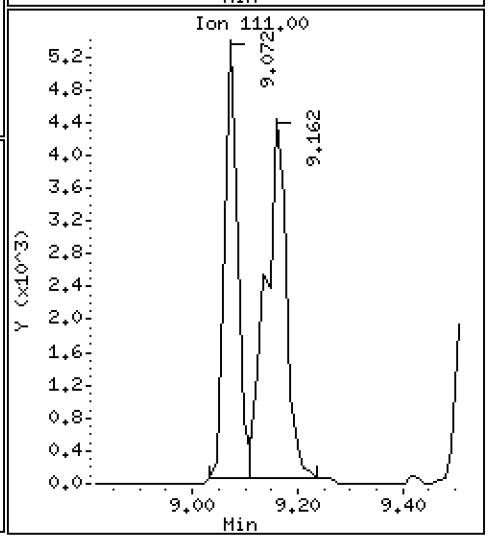












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

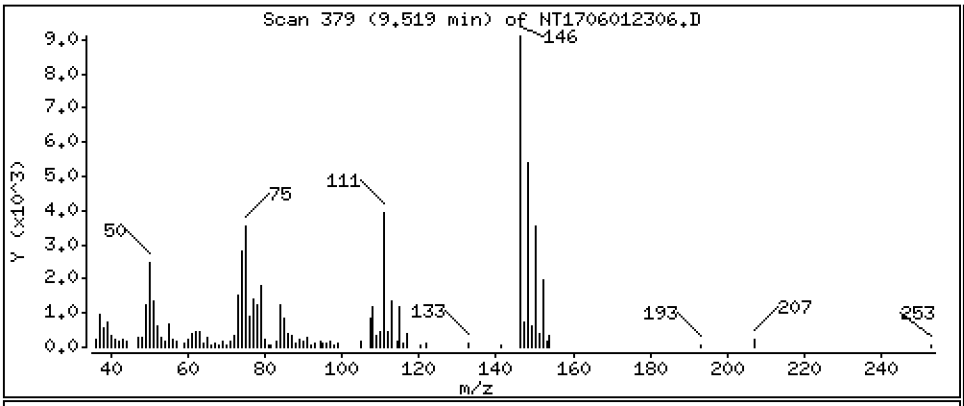
Operator: VTS

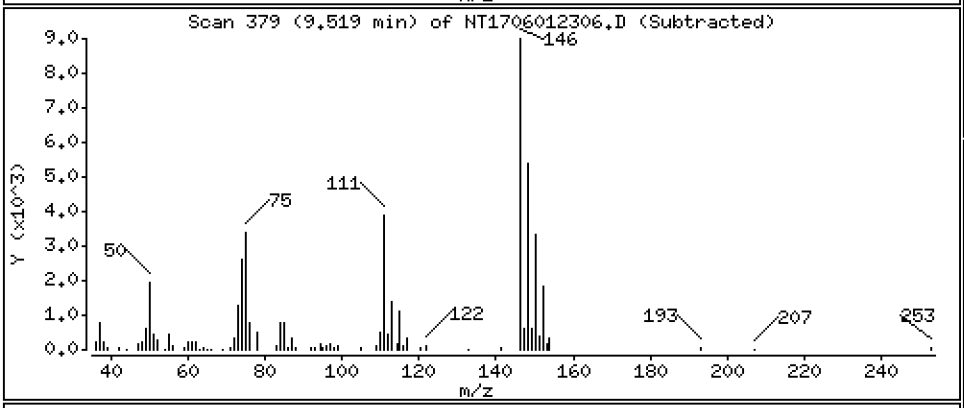
Column phase: ZB-5msi

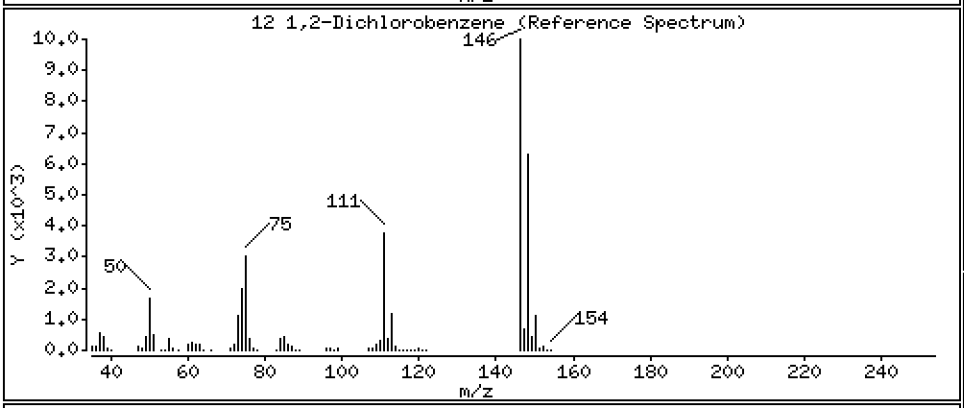
Column diameter: 0.25

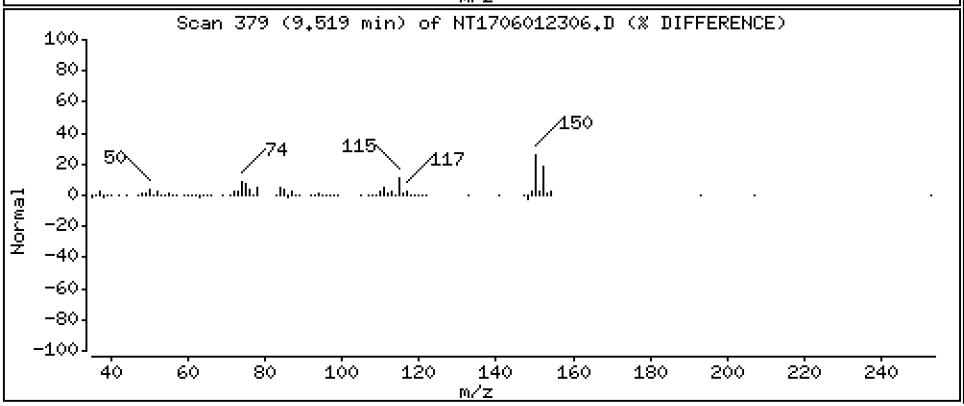
12 1,2-Dichlorobenzene

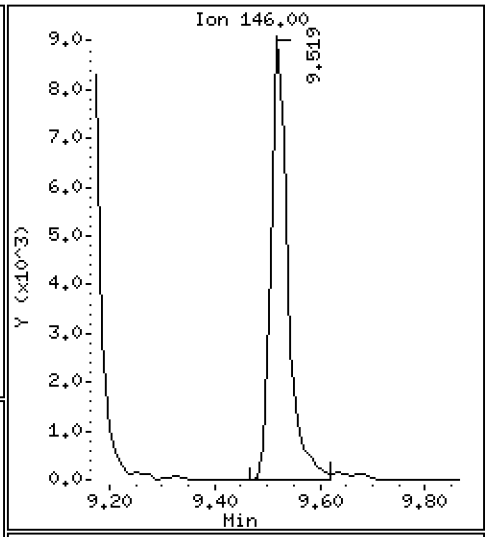
Concentration: 0.2157 ug/mL

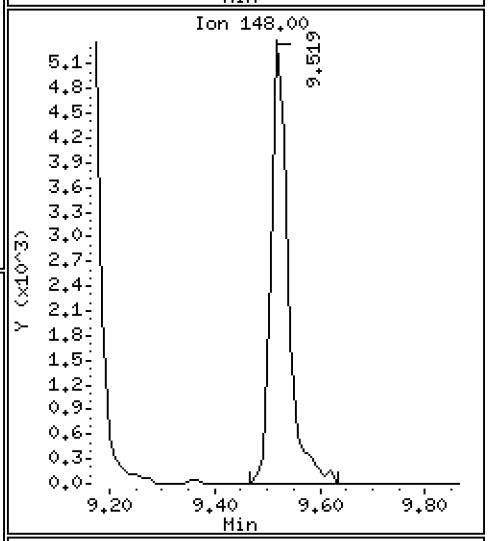


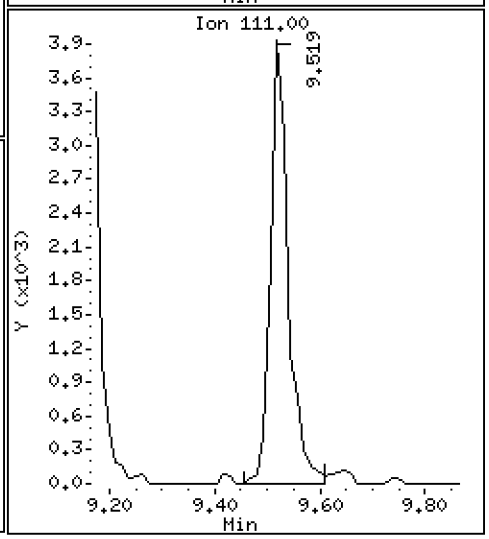












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

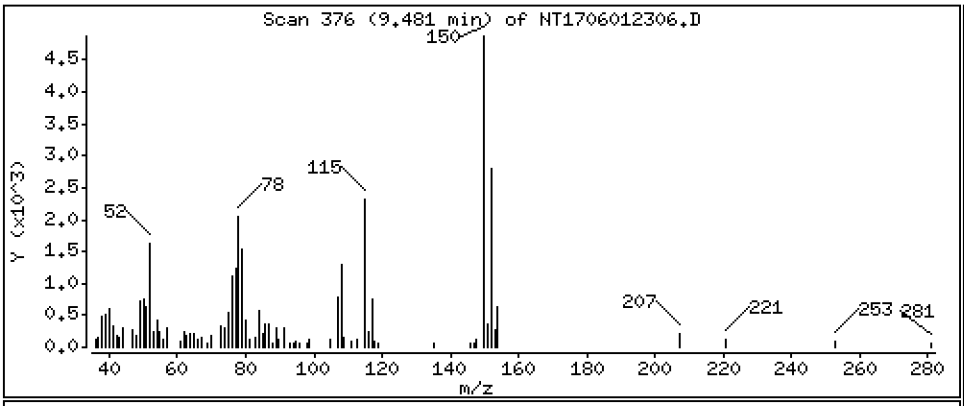
Operator: VTS

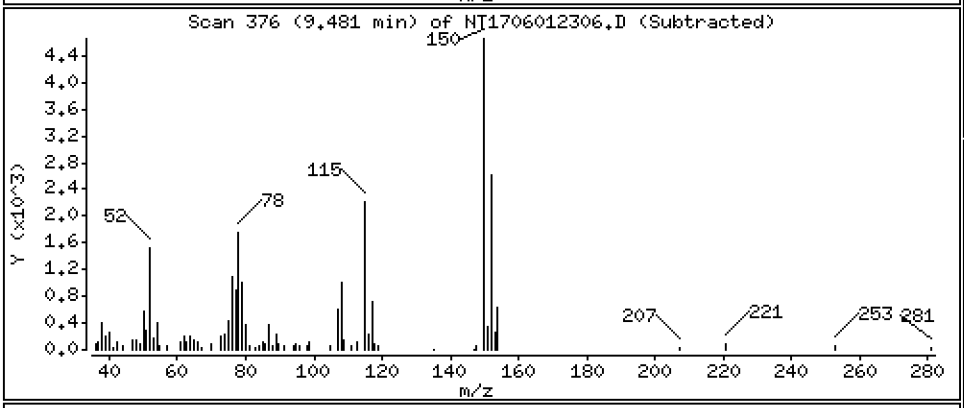
Column phase: ZB-5msi

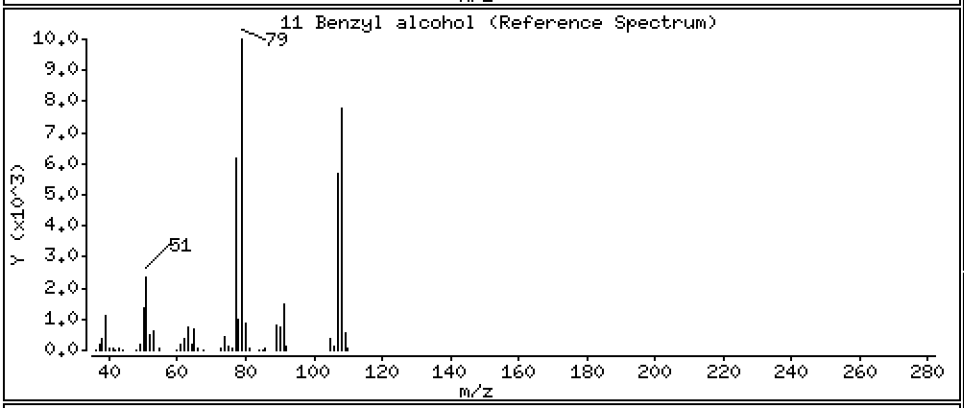
Column diameter: 0.25

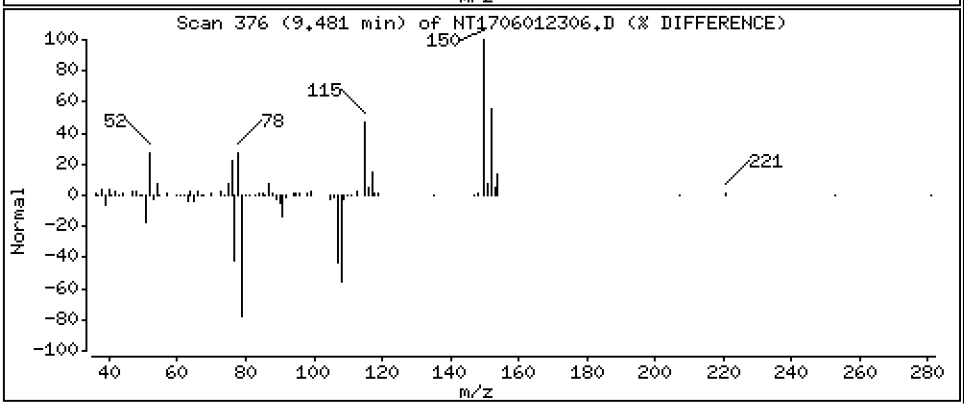
11 Benzyl alcohol

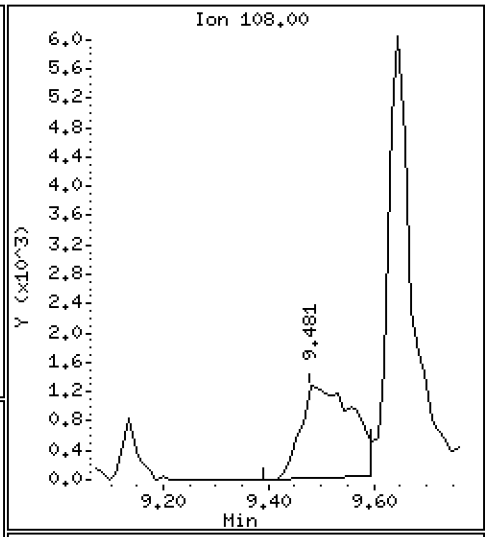
Concentration: 0.1569 ug/mL

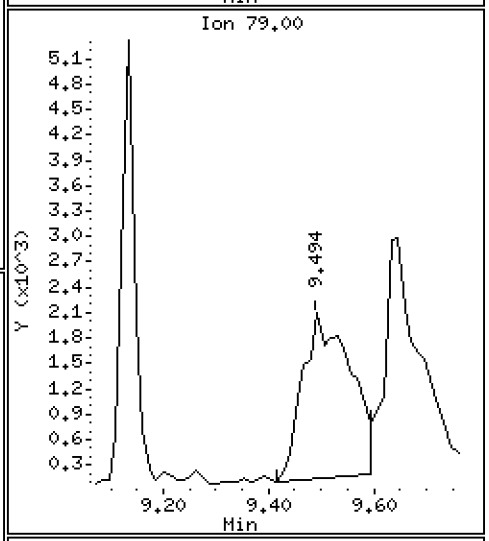


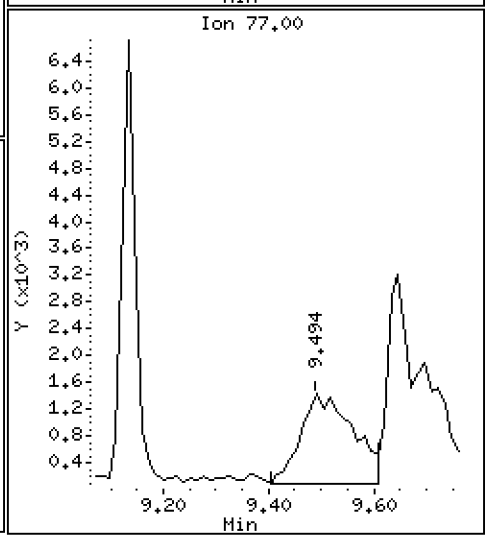












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

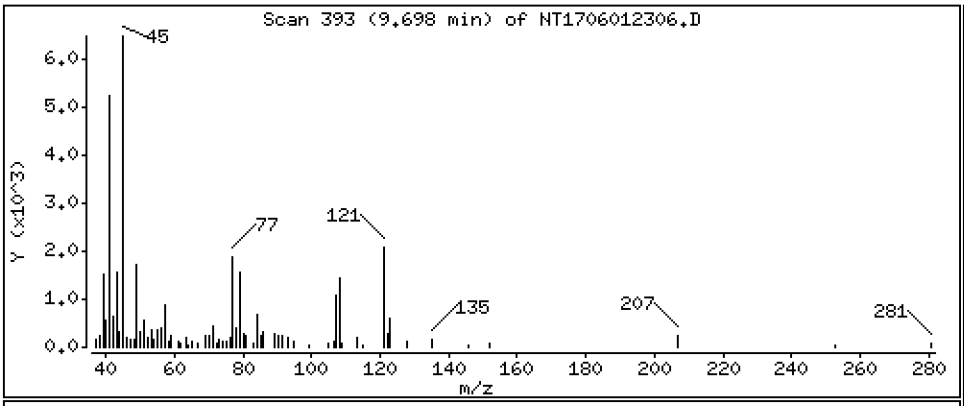
Operator: VTS

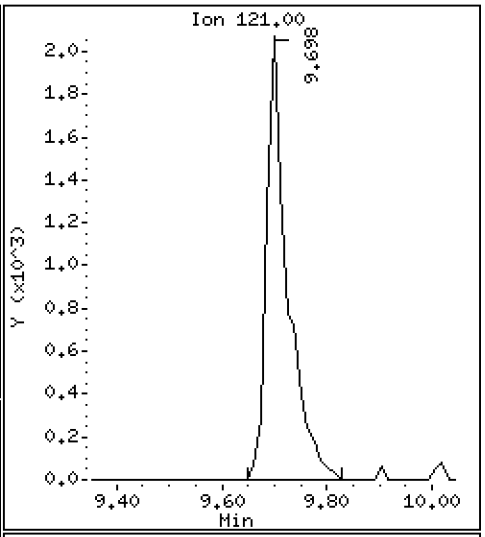
Column phase: ZB-5msi

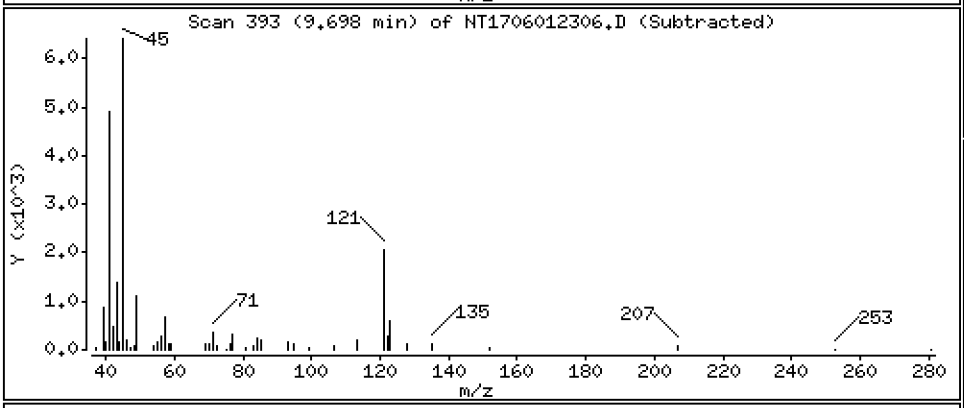
Column diameter: 0.25

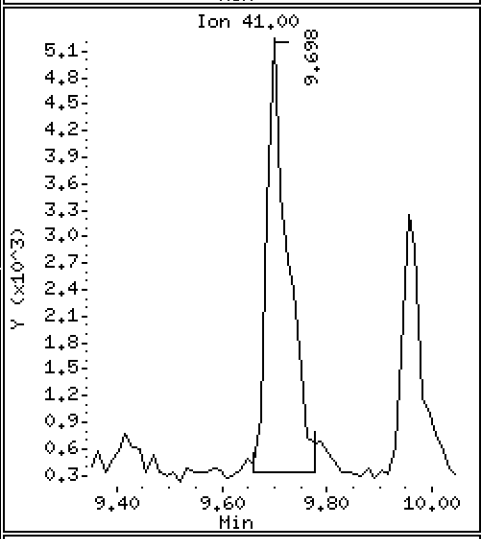
14 2,2'-oxybis(1-Chloropropane)

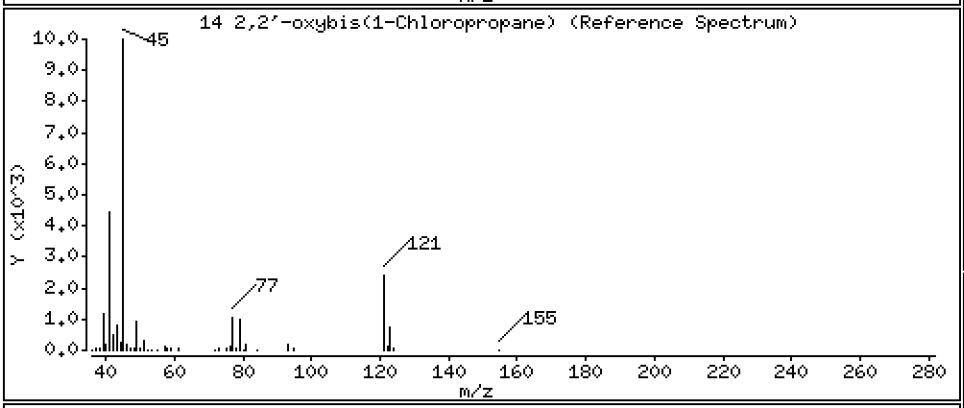
Concentration: 0.2494 ug/mL

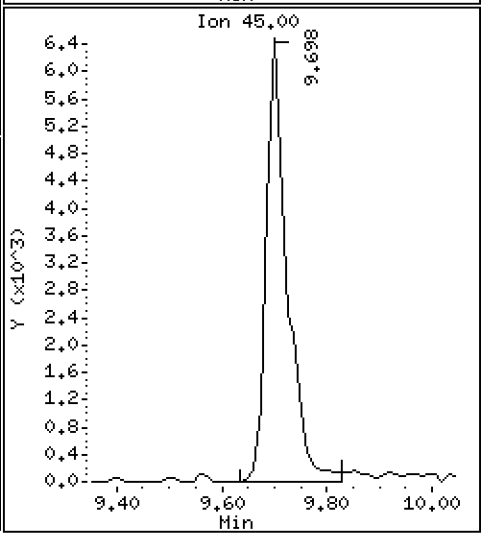


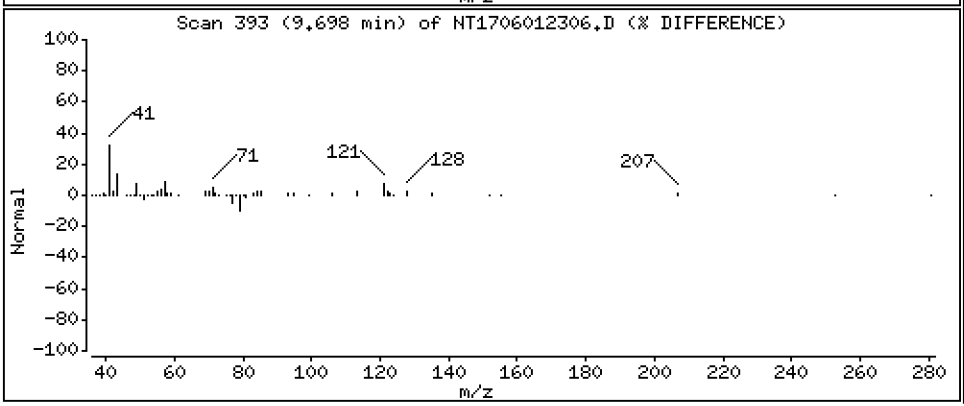












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

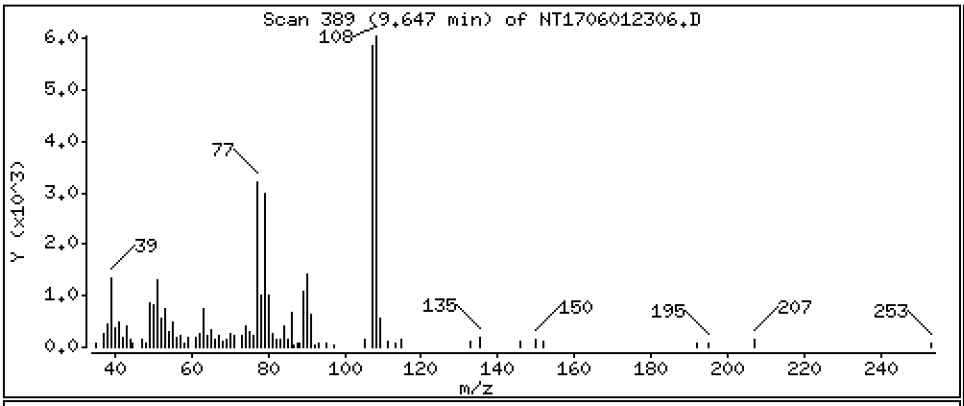
Operator: VTS

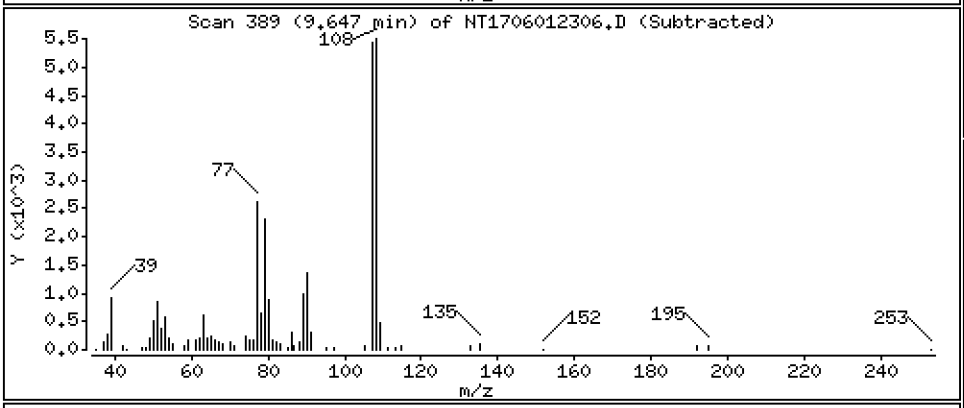
Column phase: ZB-5msi

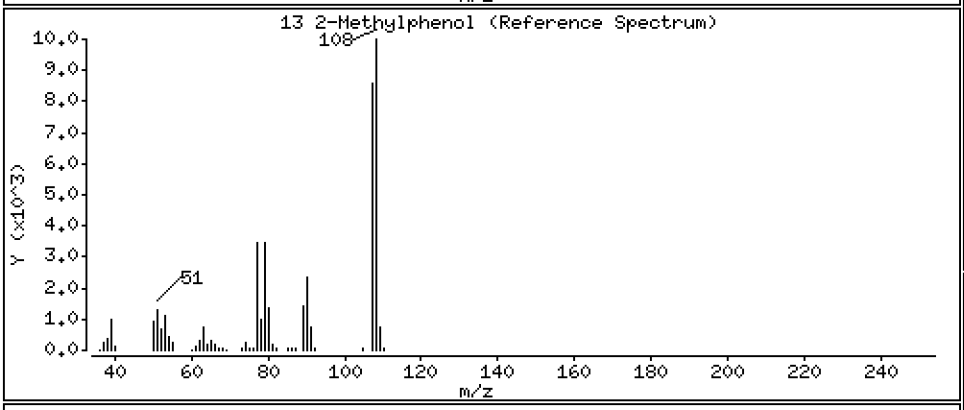
Column diameter: 0.25

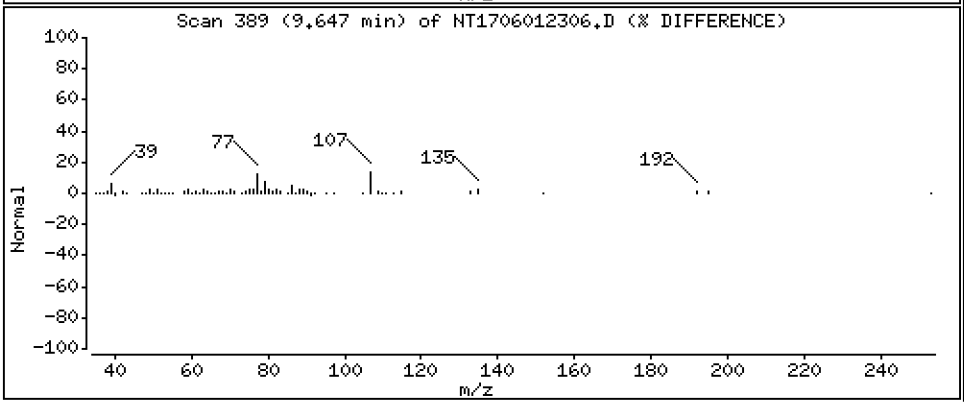
13 2-Methylphenol

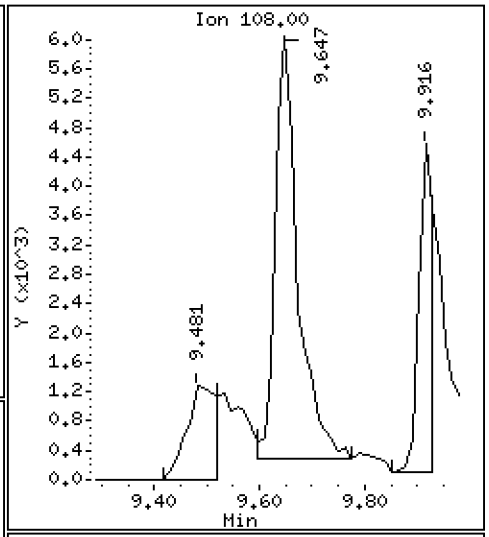
Concentration: 0.1978 ug/mL

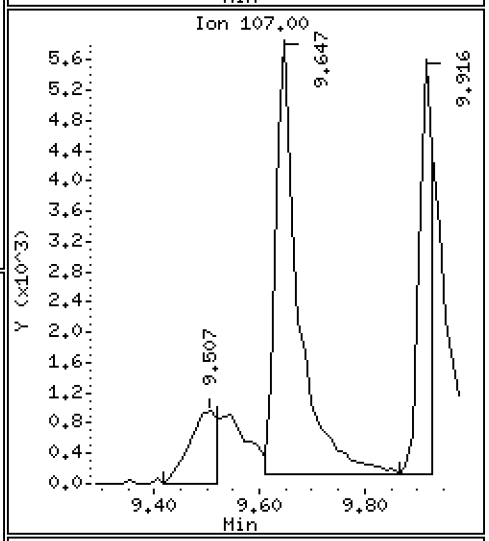


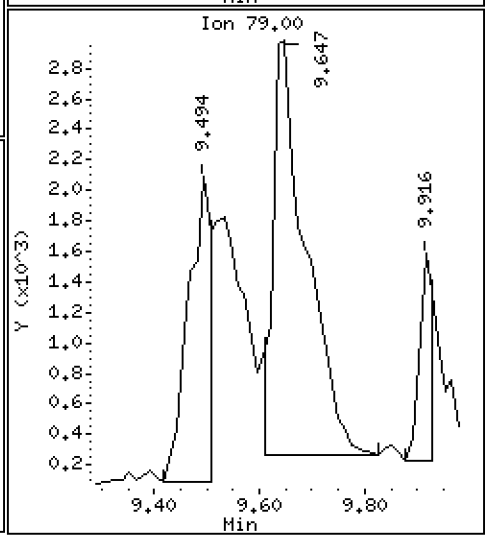












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

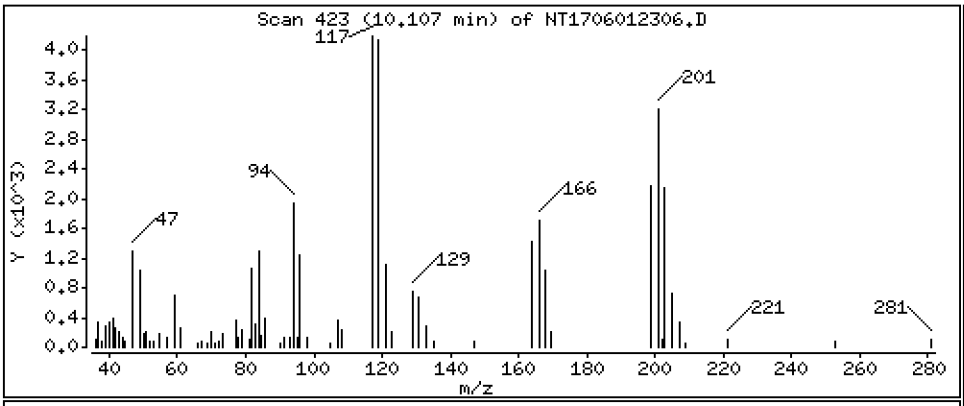
Operator: VTS

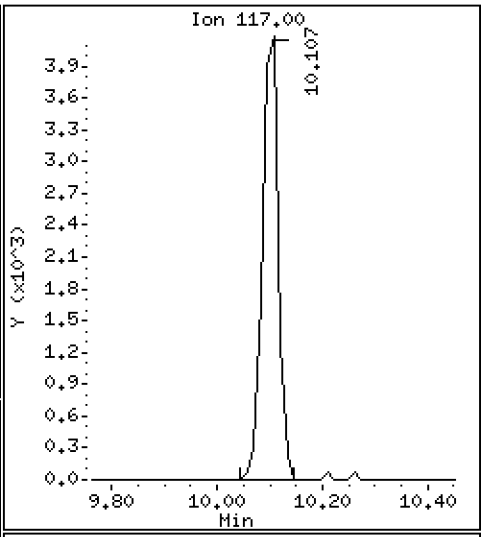
Column phase: ZB-5msi

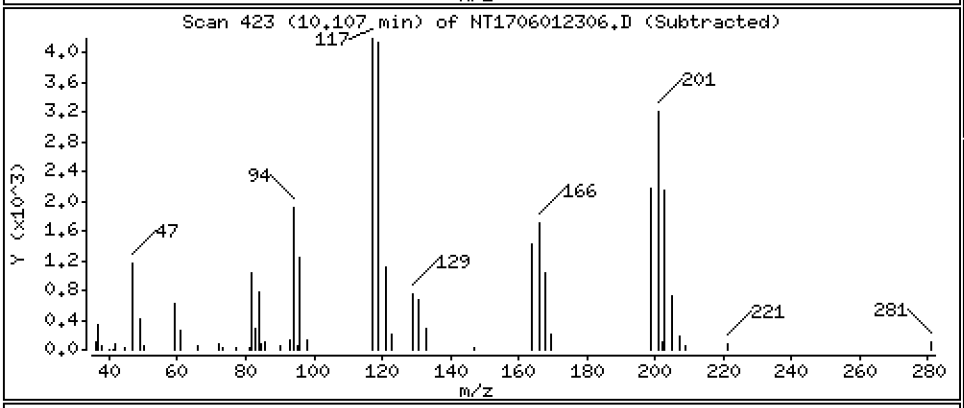
Column diameter: 0.25

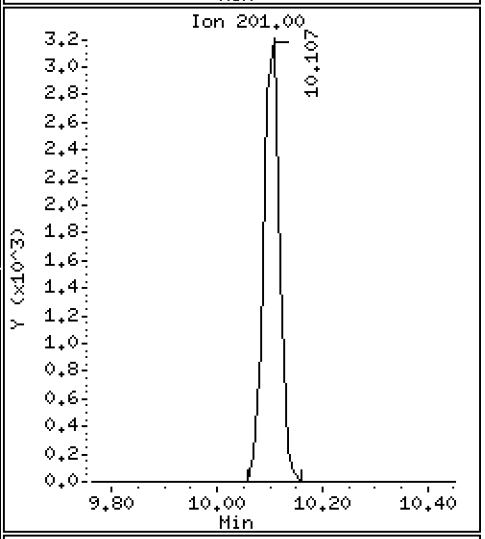
17 Hexachloroethane

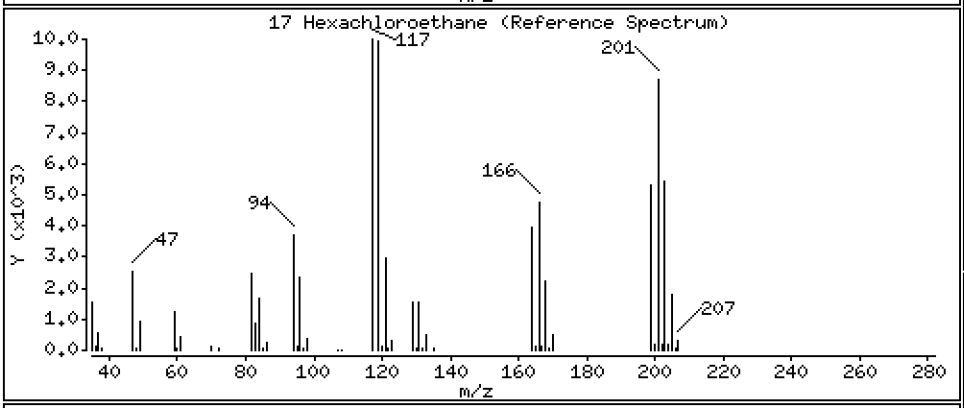
Concentration: 0.2219 ug/mL

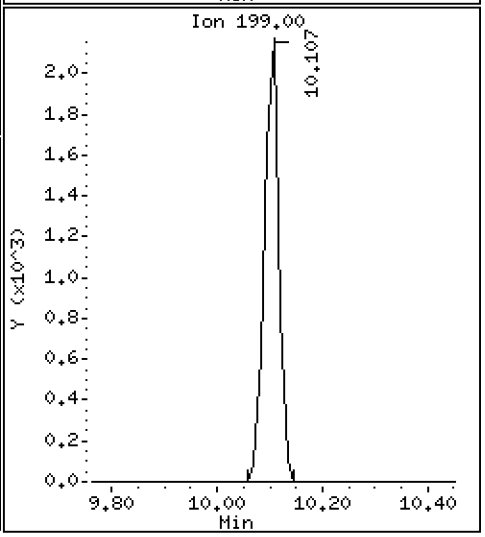


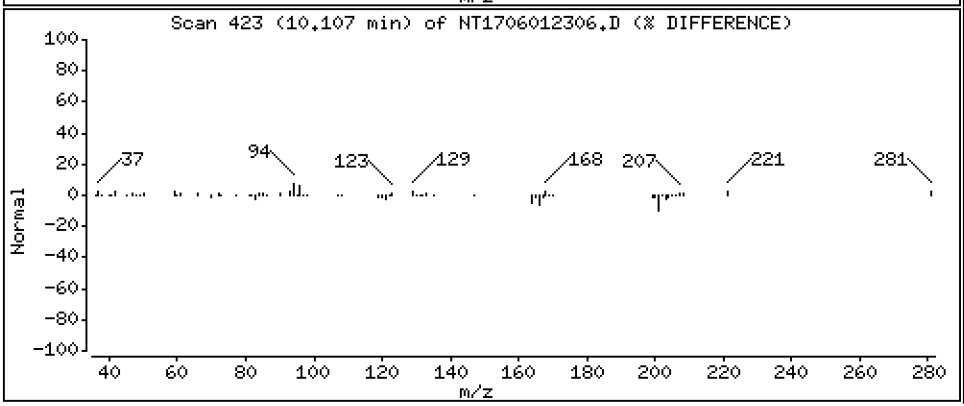












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

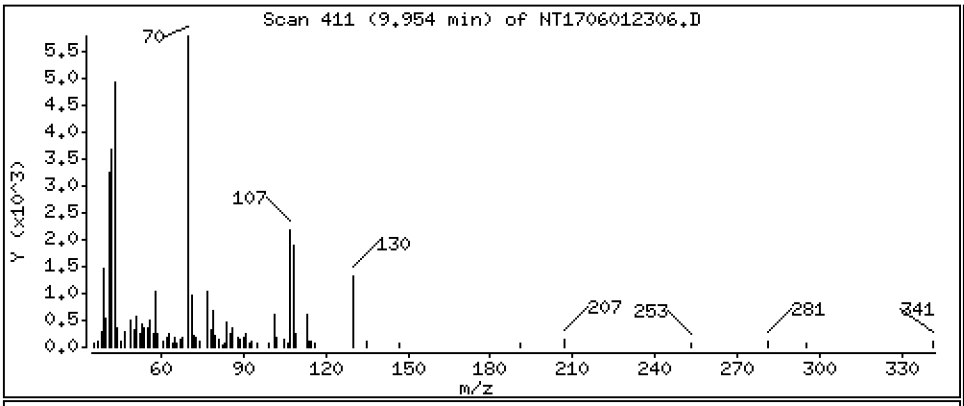
Operator: VTS

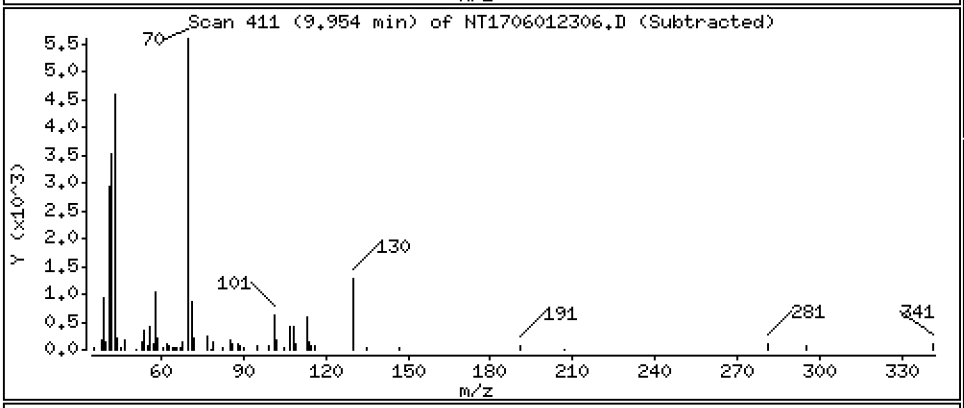
Column phase: ZB-5msi

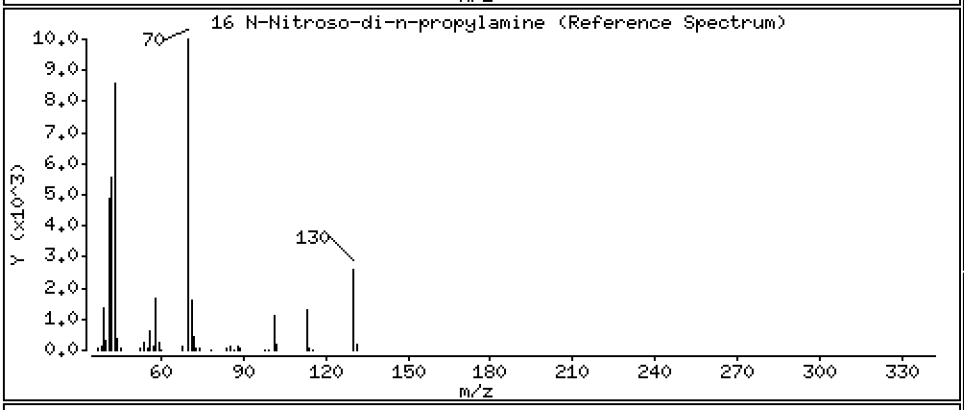
Column diameter: 0.25

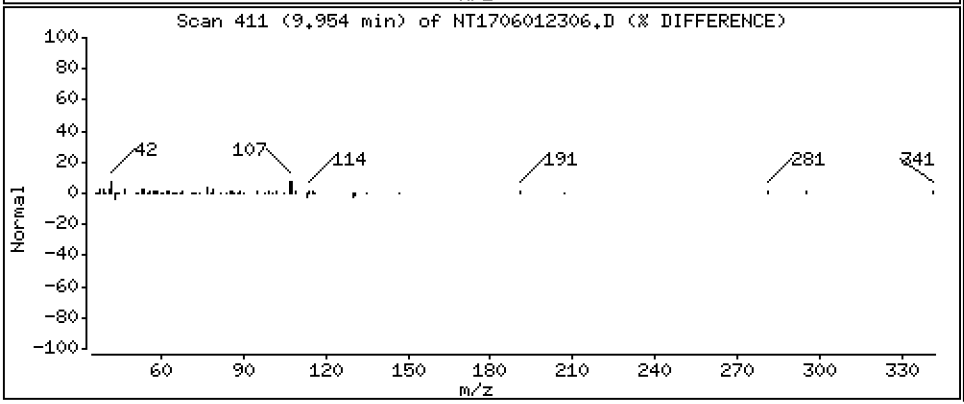
16 N-Nitroso-di-n-propylamine

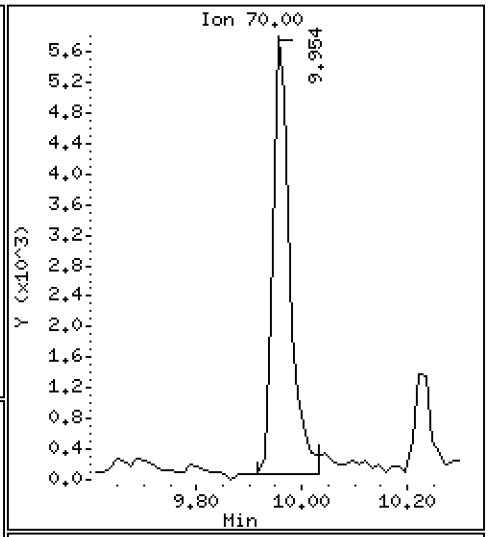
Concentration: 0.1932 ug/mL

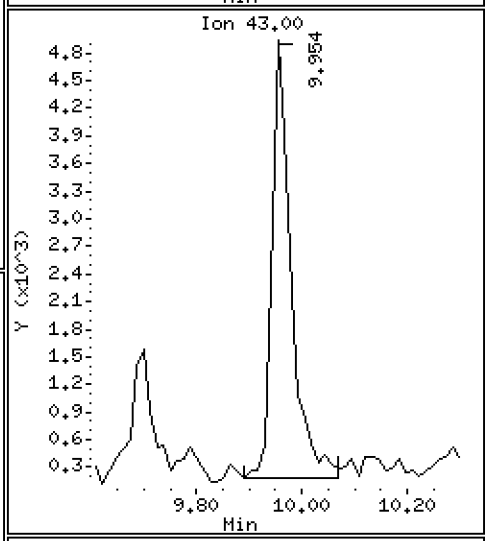


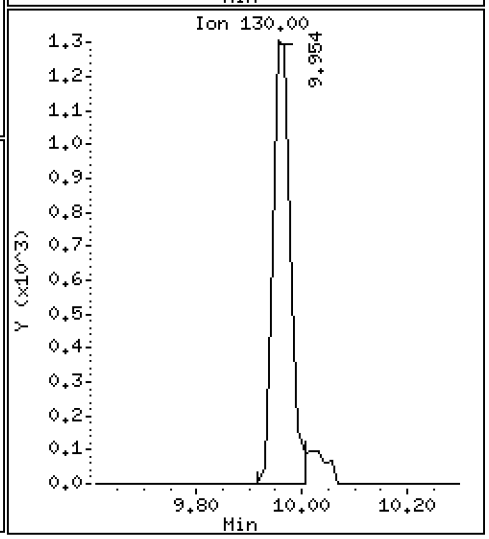












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

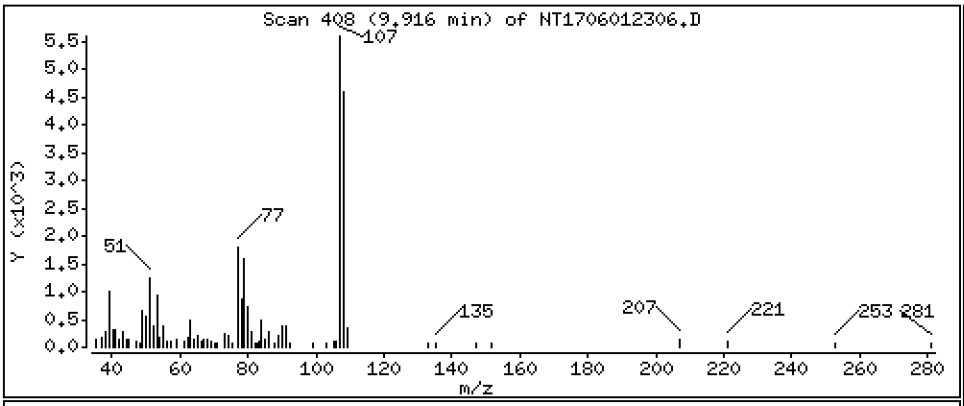
Operator: VTS

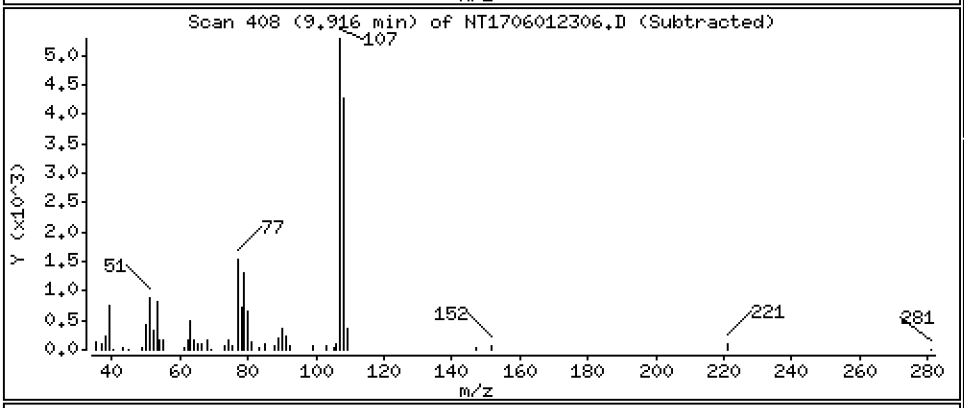
Column phase: ZB-5msi

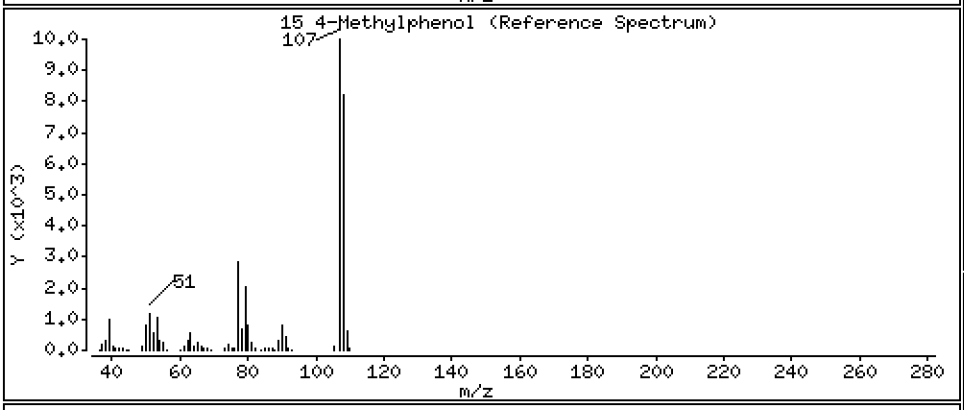
Column diameter: 0.25

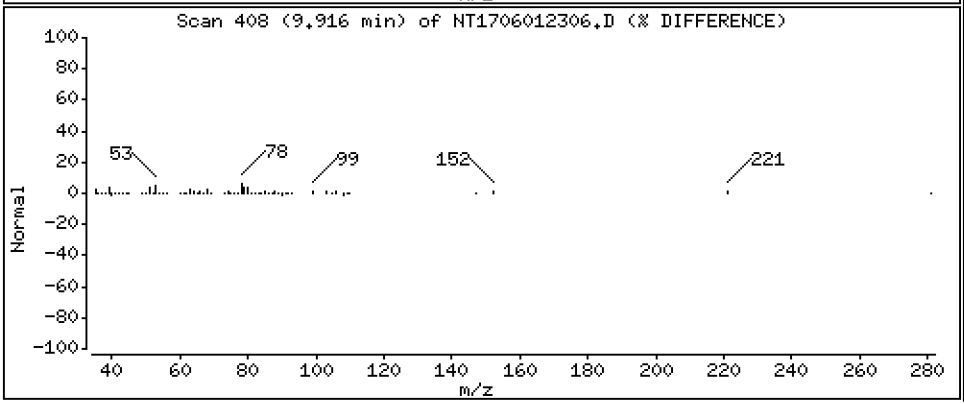
15 4-Methylphenol

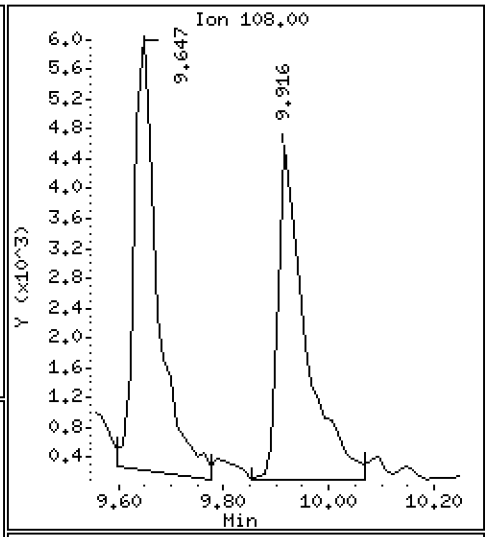
Concentration: 0.1839 ug/mL

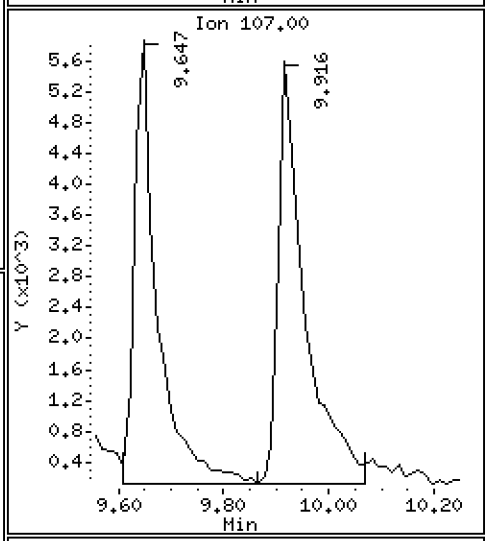


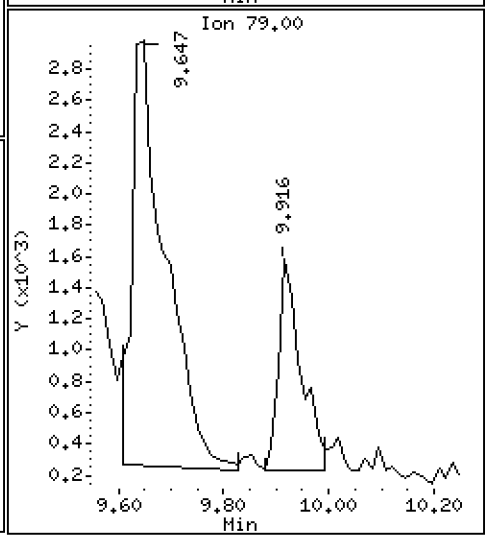












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

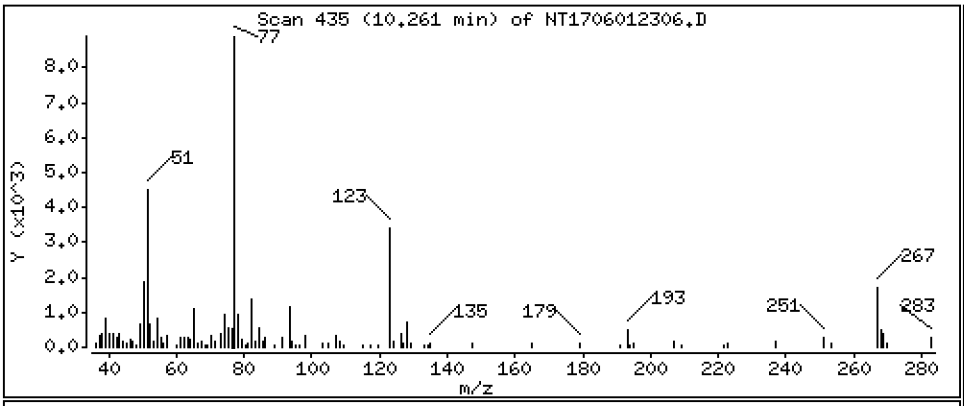
Operator: VTS

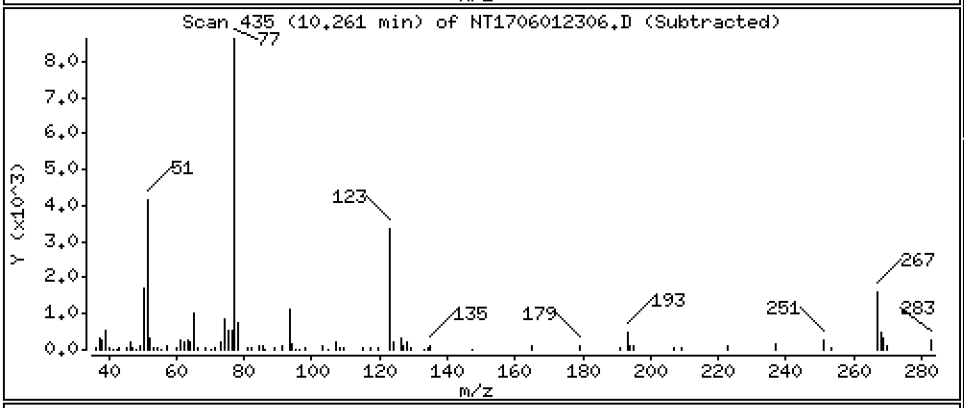
Column phase: ZB-5msi

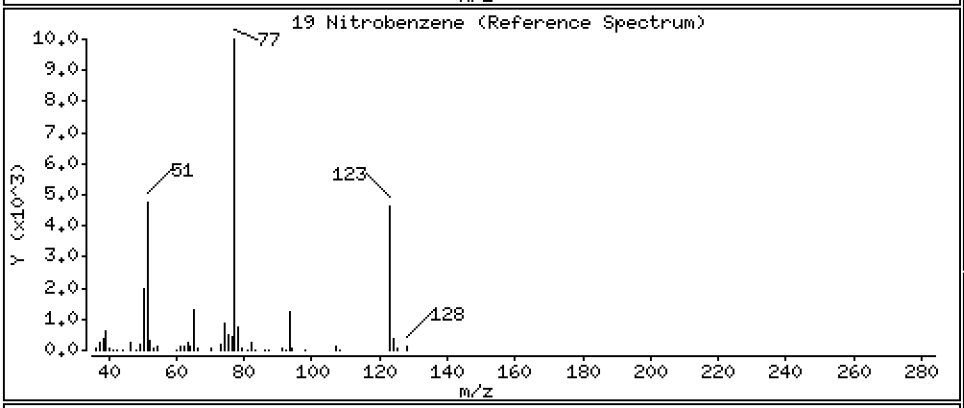
Column diameter: 0.25

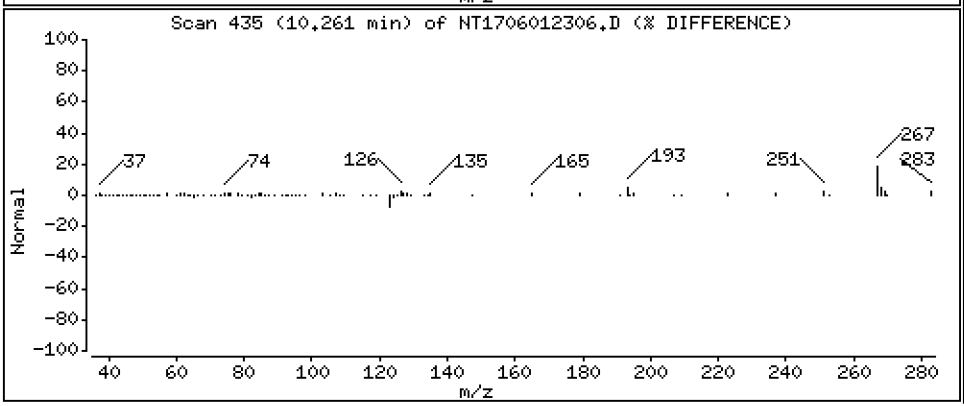
19 Nitrobenzene

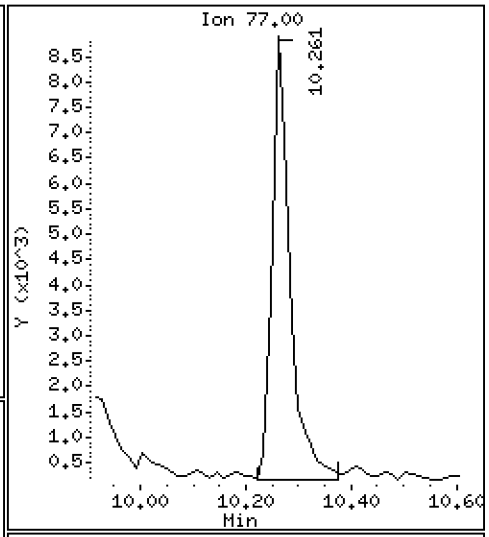
Concentration: 0.2007 ug/mL

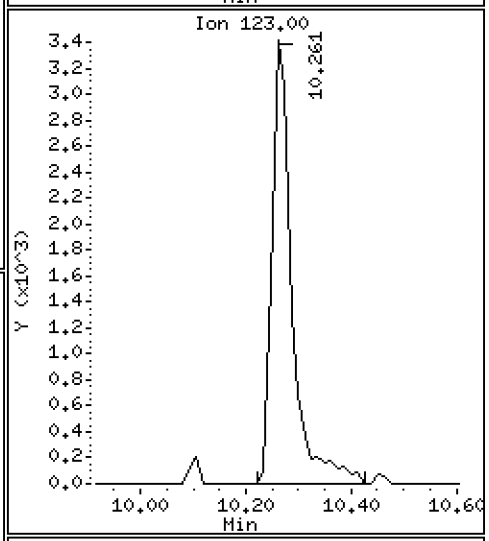


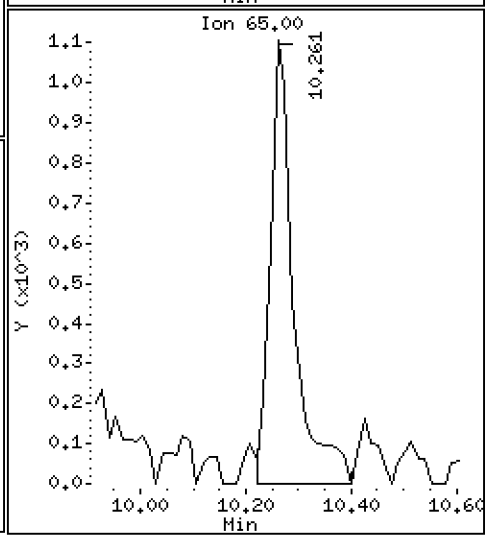












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

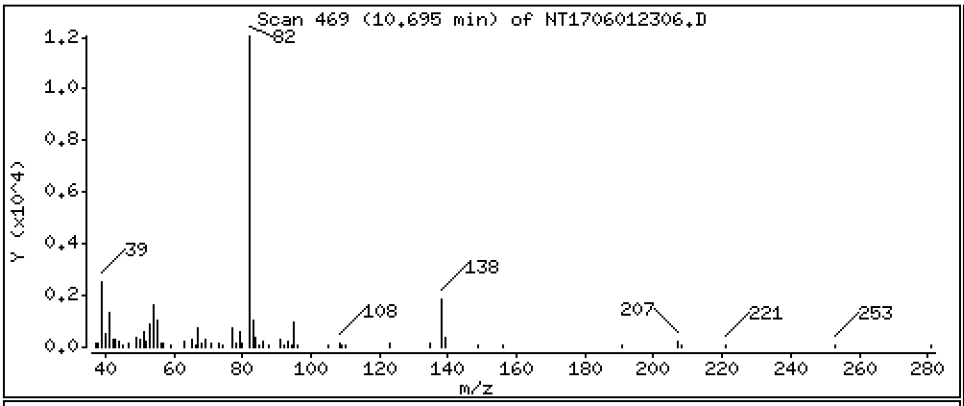
Operator: VTS

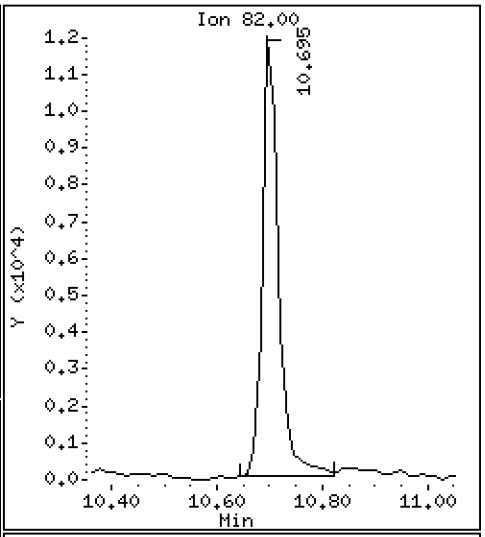
Column phase: ZB-5msi

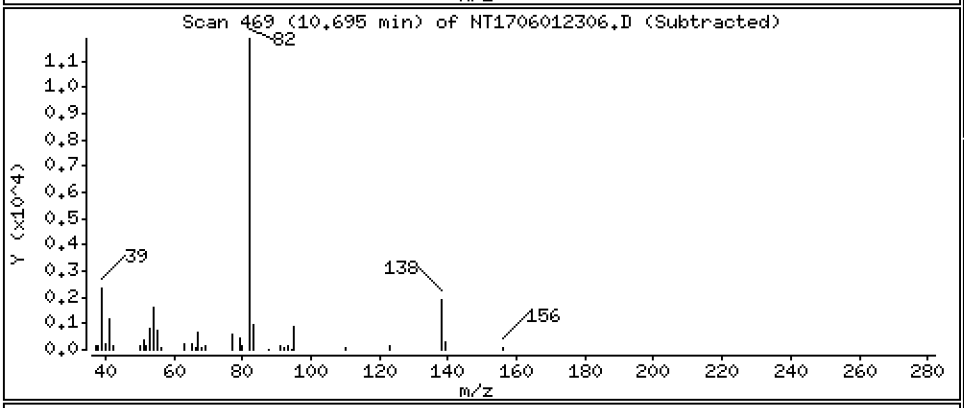
Column diameter: 0.25

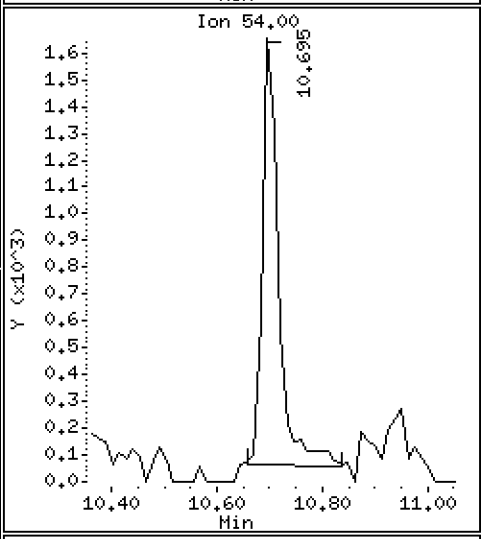
20 Isophorone

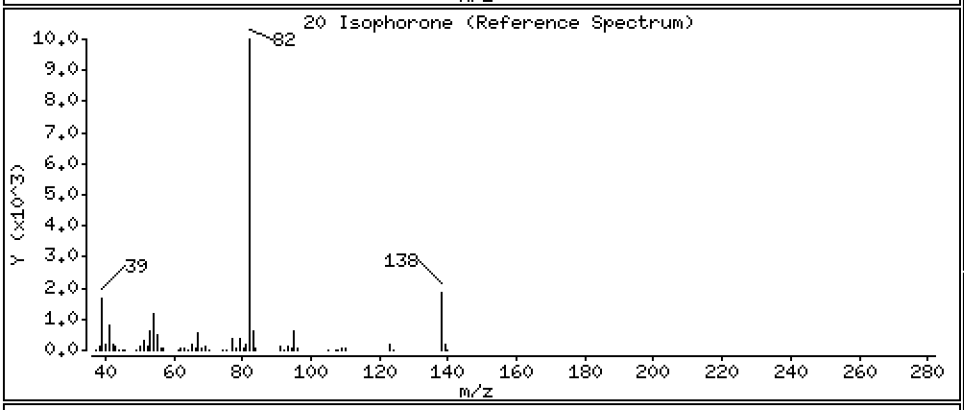
Concentration: 0.2115 ug/mL

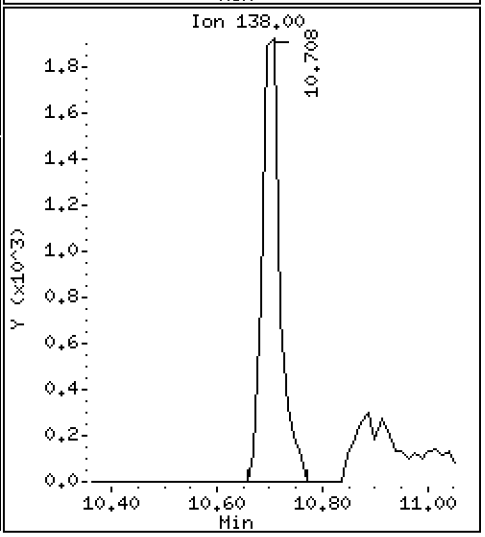


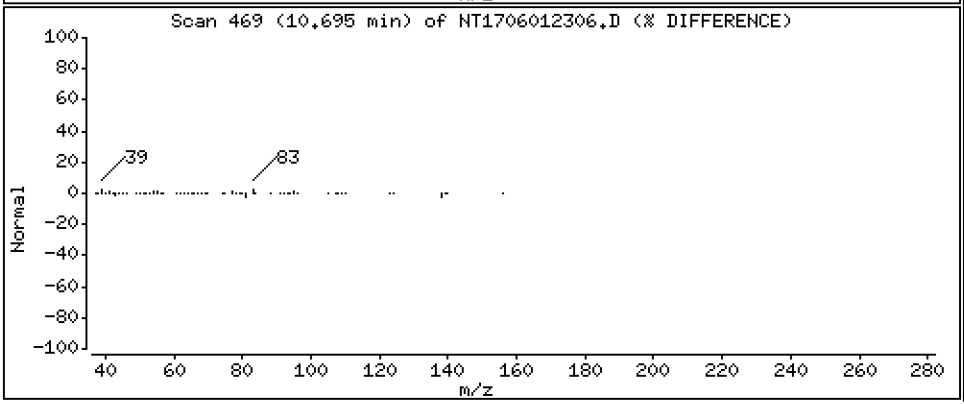












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

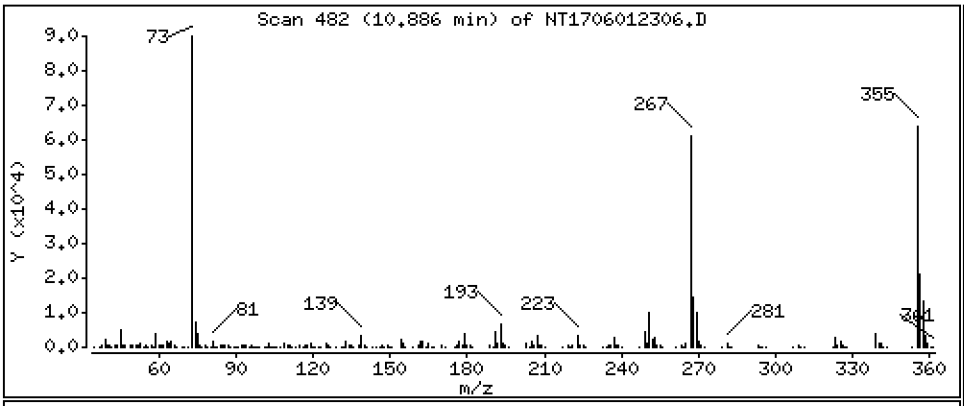
Operator: VTS

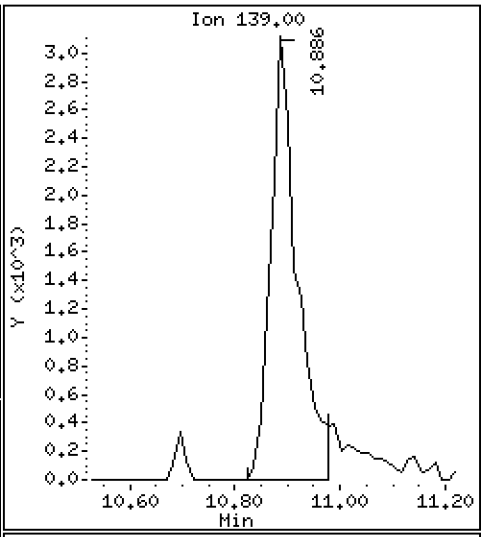
Column phase: ZB-5msi

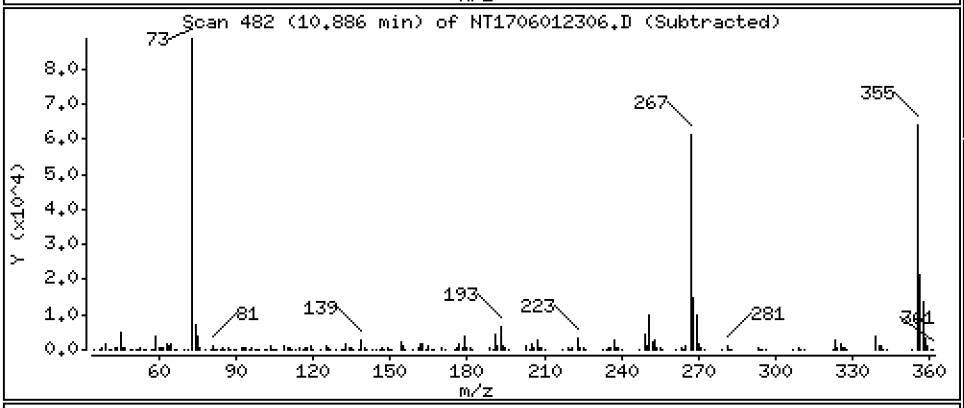
Column diameter: 0.25

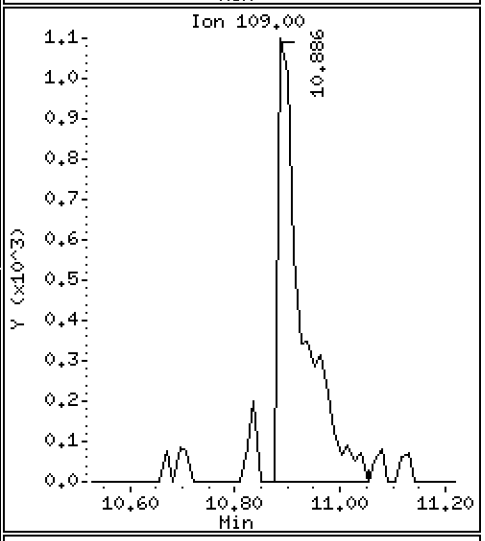
21 2-Nitrophenol

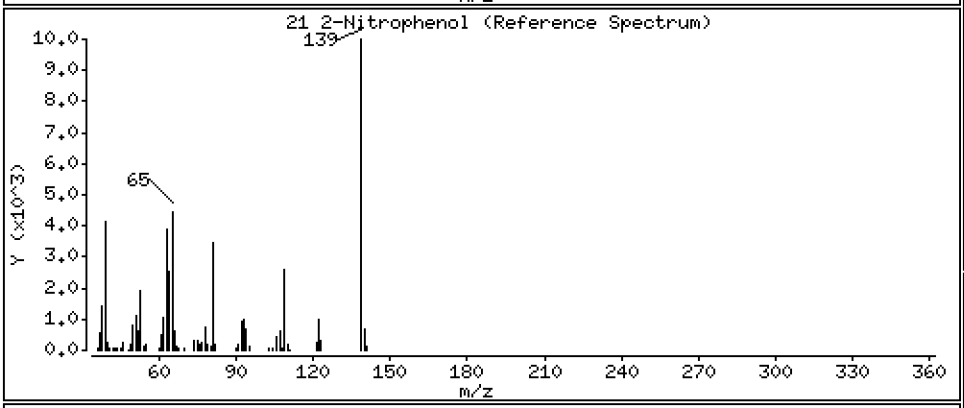
Concentration: 0.2227 ug/mL

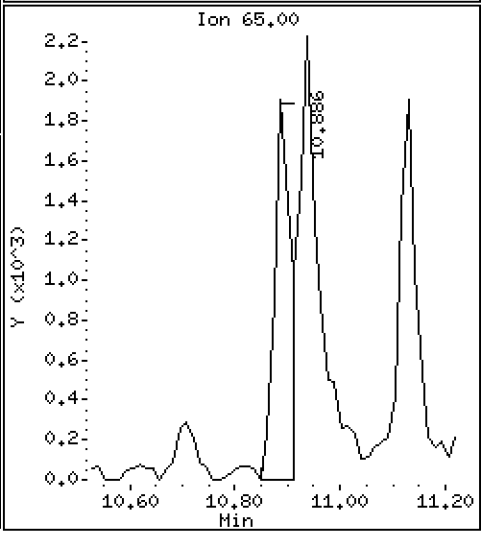


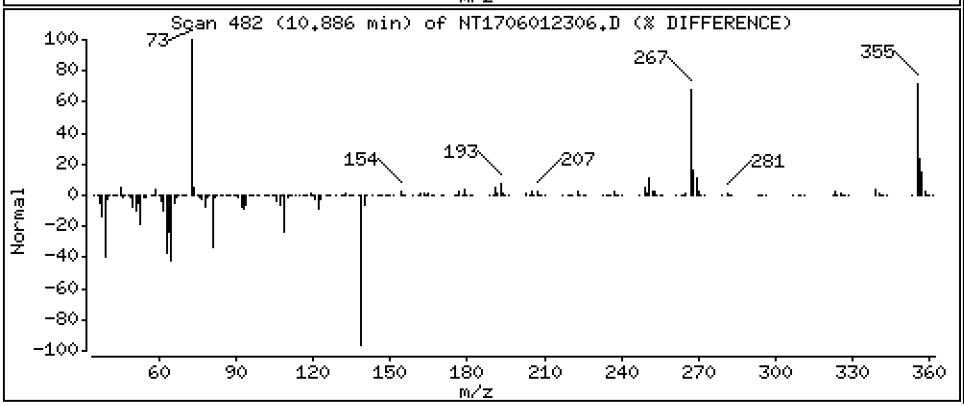












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

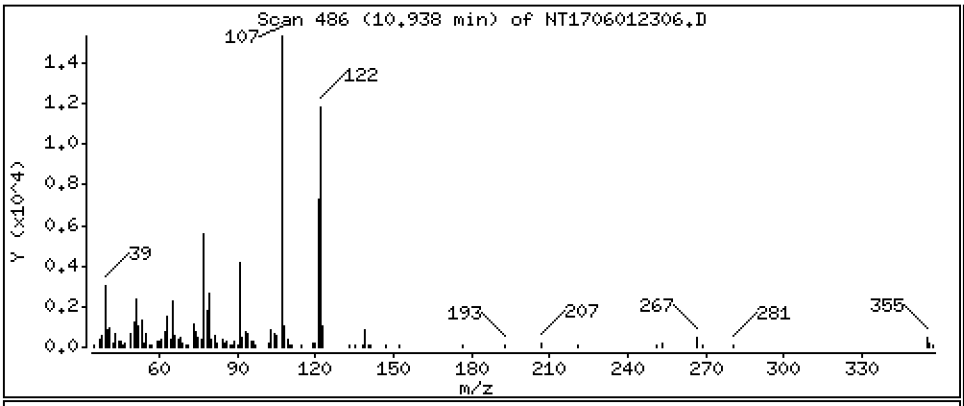
Operator: VTS

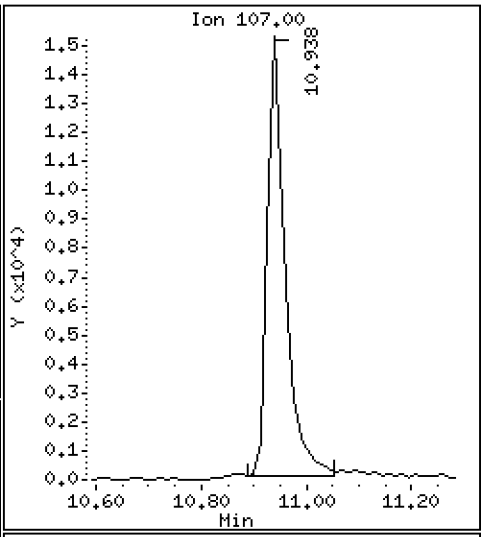
Column phase: ZB-5msi

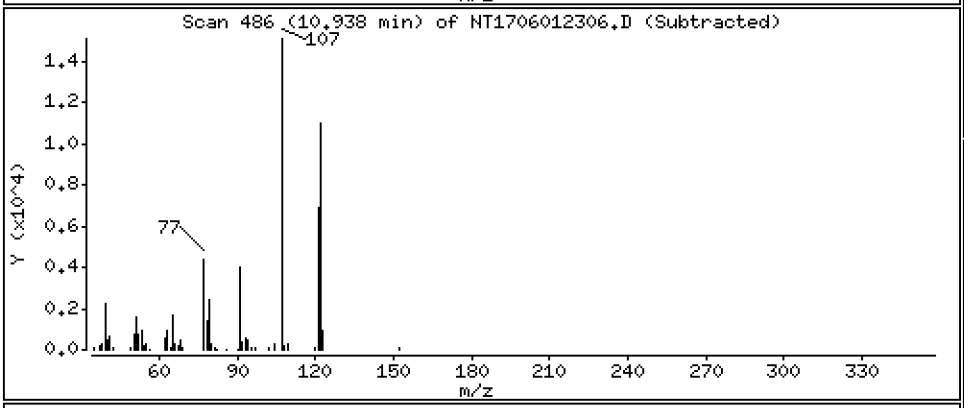
Column diameter: 0.25

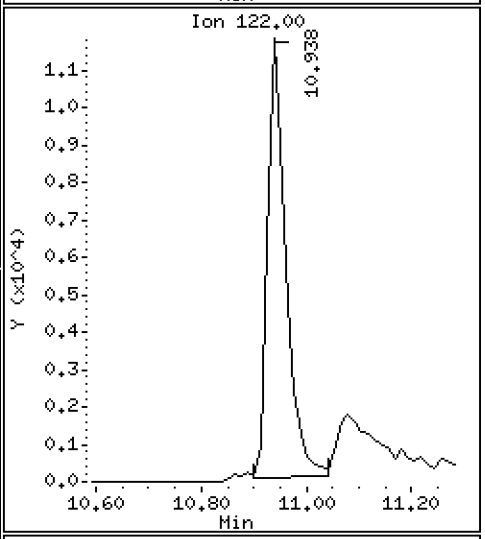
22 2,4-Dimethylphenol

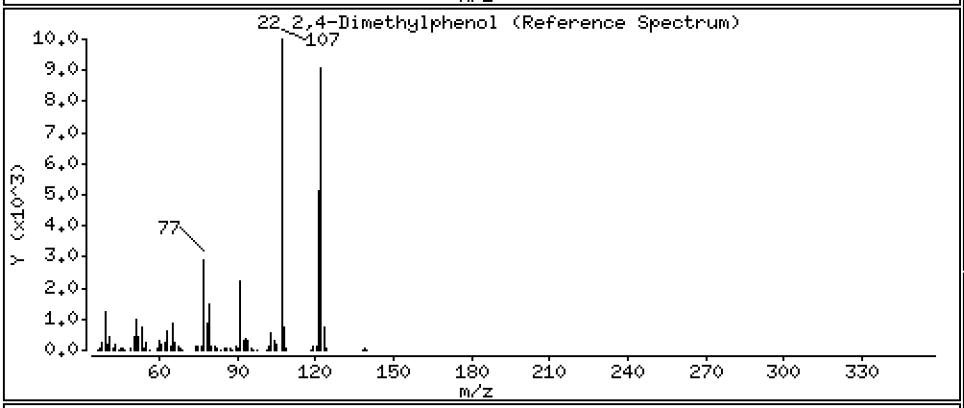
Concentration: 0.3734 ug/mL

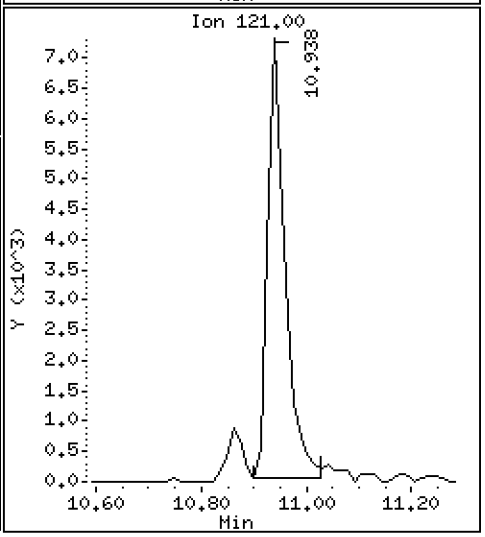


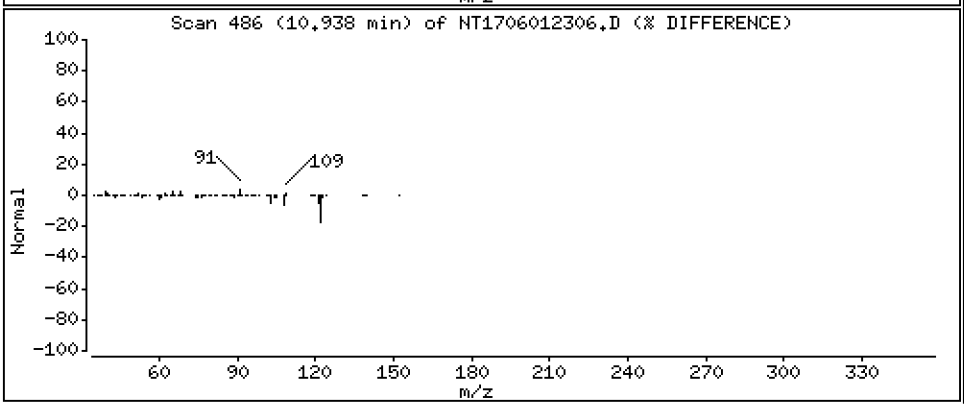












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

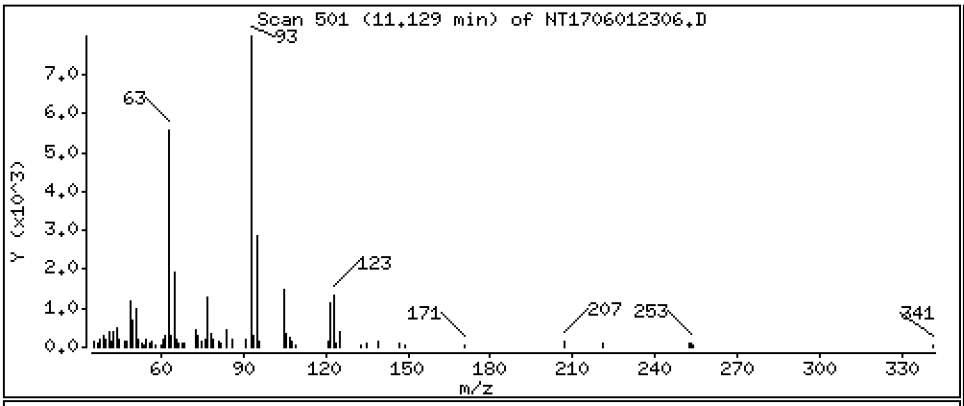
Operator: VTS

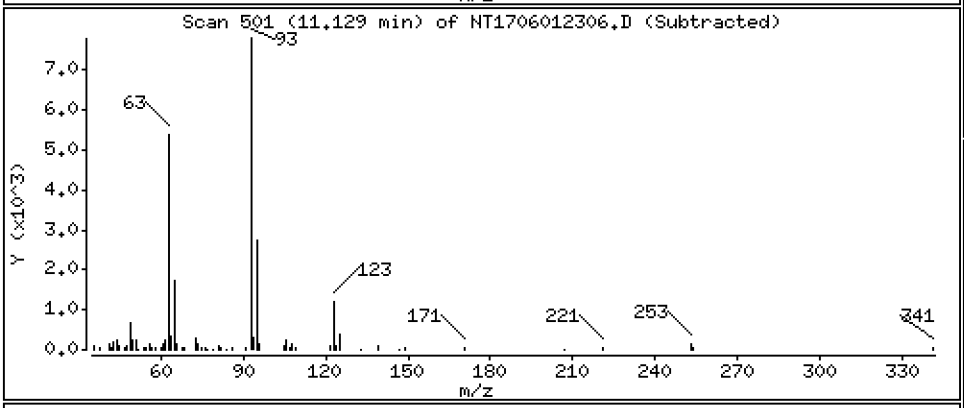
Column phase: ZB-5msi

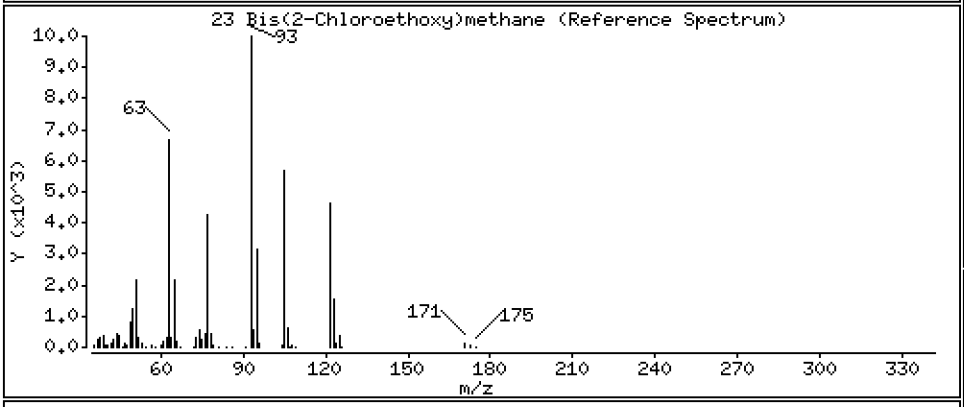
Column diameter: 0.25

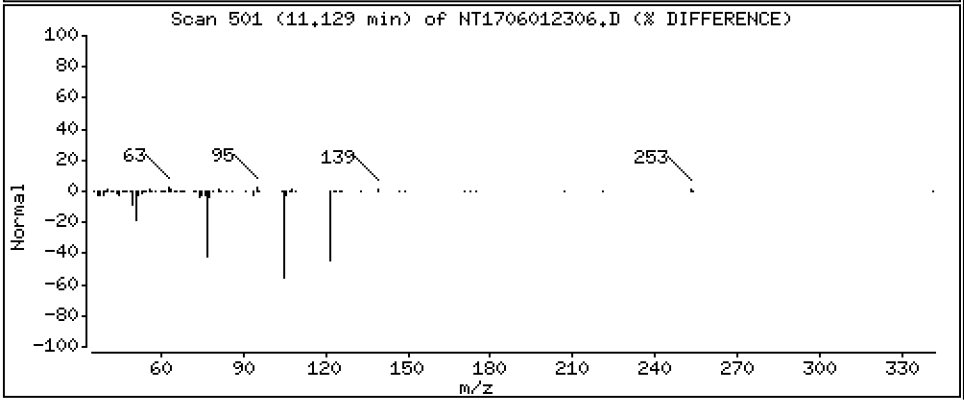
23 Bis(2-Chloroethoxy)methane

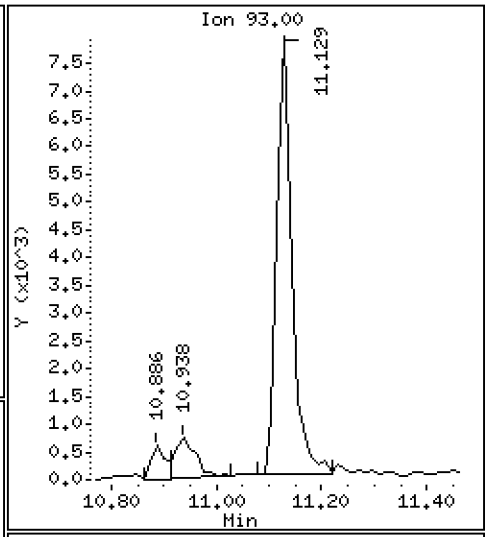
Concentration: 0.1872 ug/mL

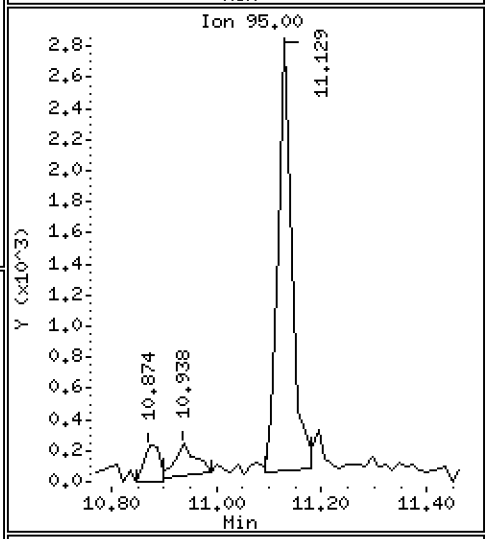


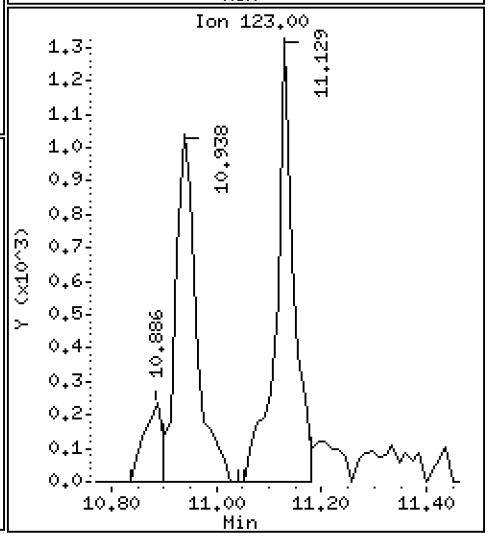












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

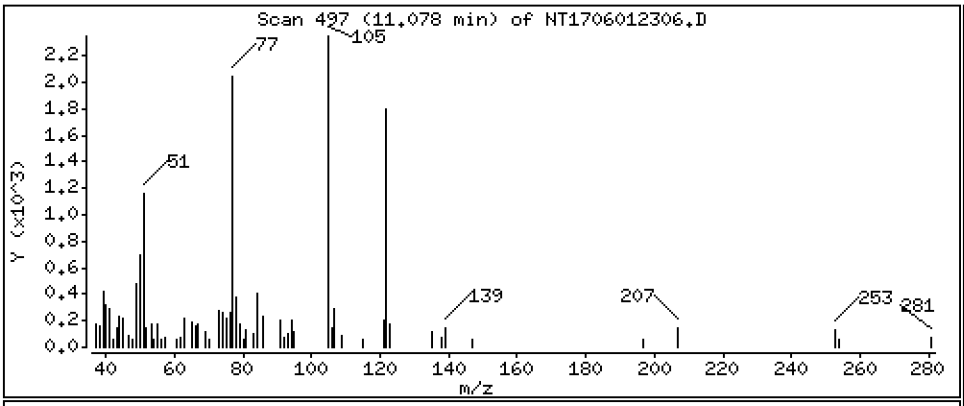
Operator: VTS

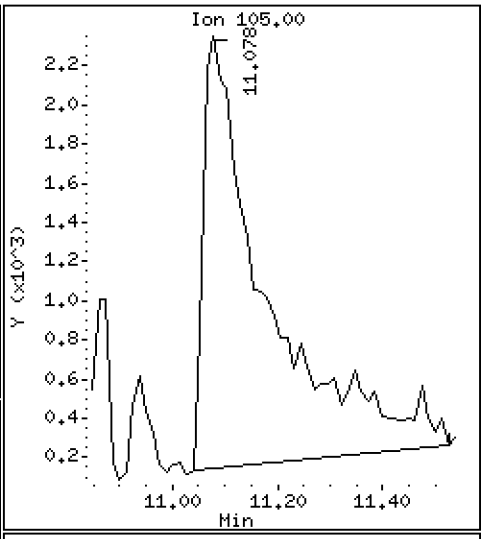
Column phase: ZB-5msi

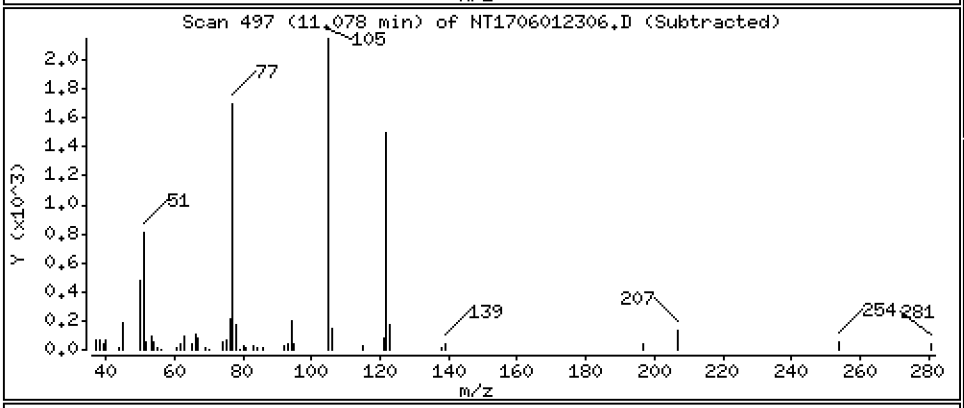
Column diameter: 0.25

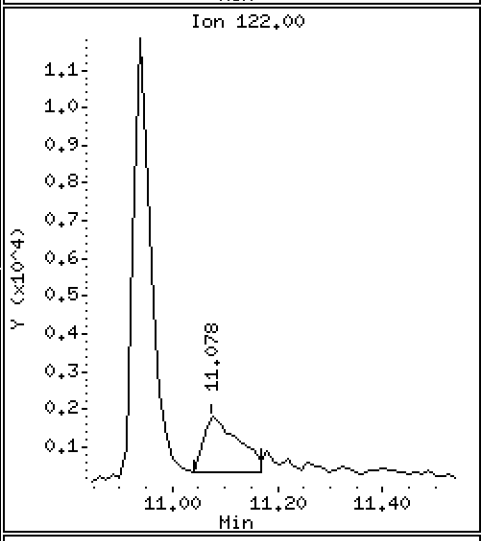
24 Benzoic acid

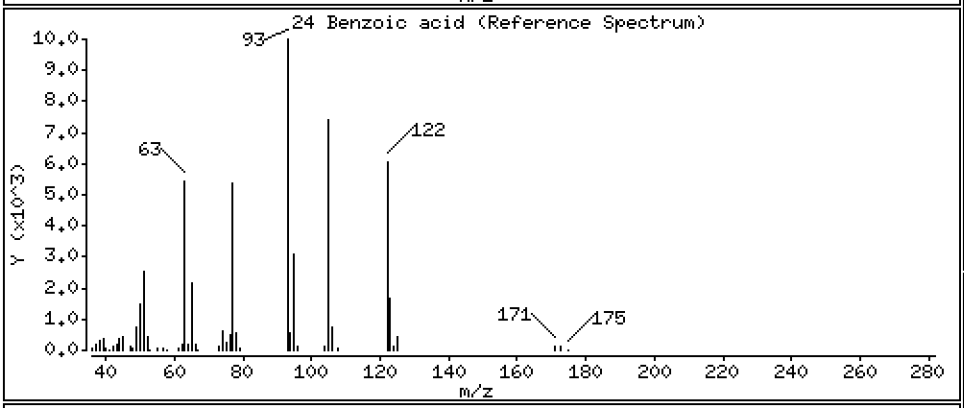
Concentration: 0.2977 ug/mL

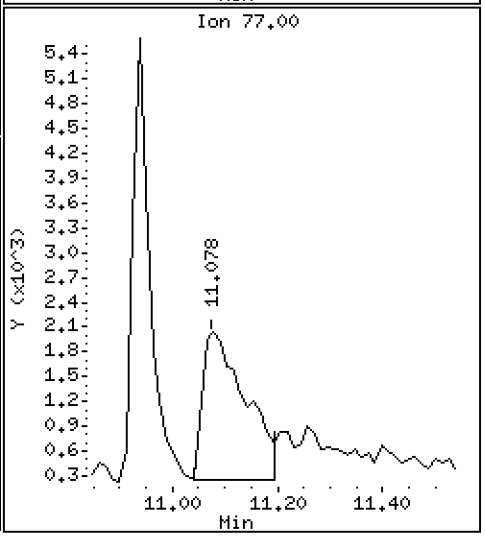


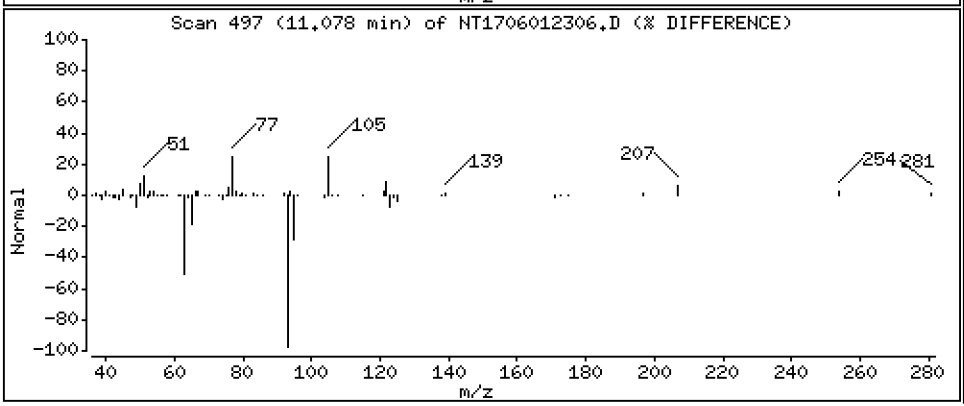












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

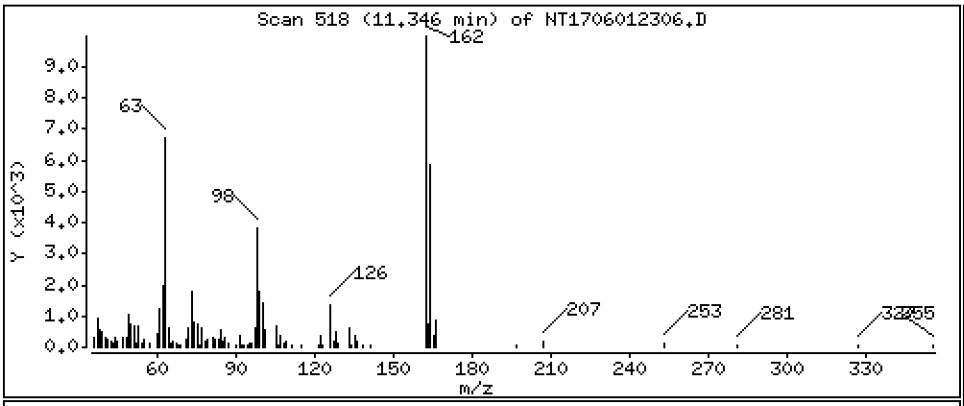
Operator: VTS

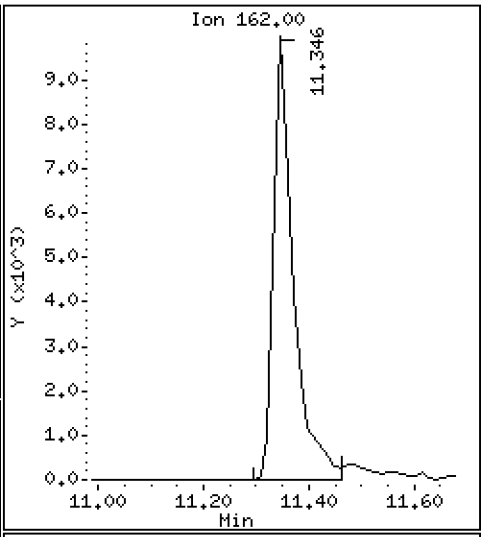
Column phase: ZB-5msi

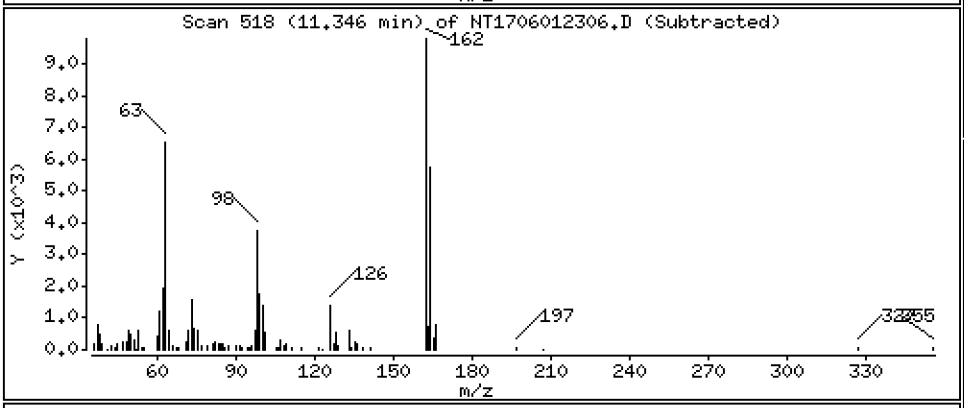
Column diameter: 0.25

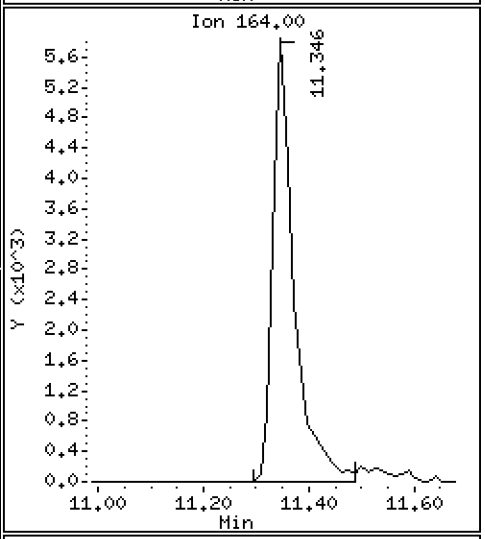
25 2,4-Dichlorophenol

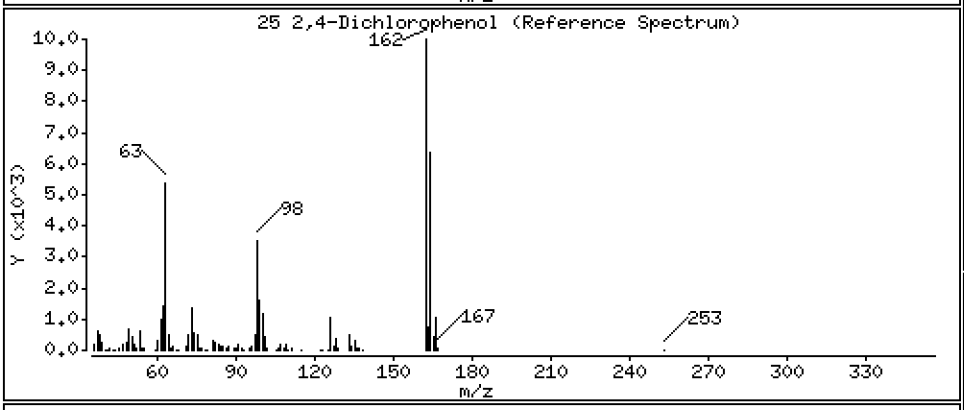
Concentration: 0.3839 ug/mL

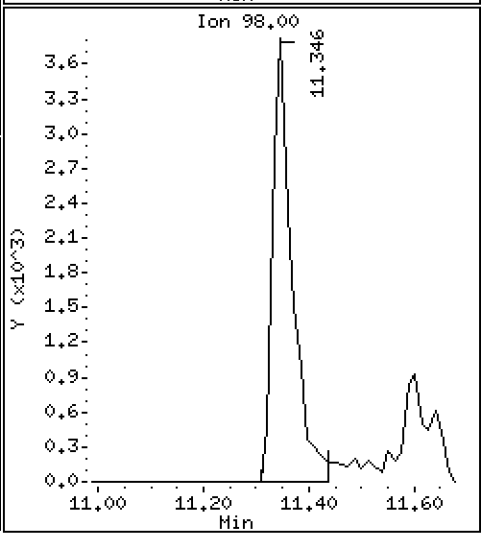


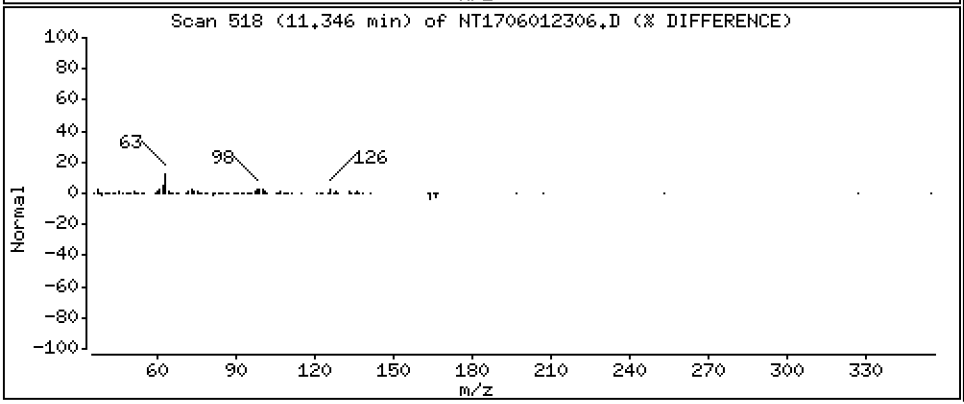












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

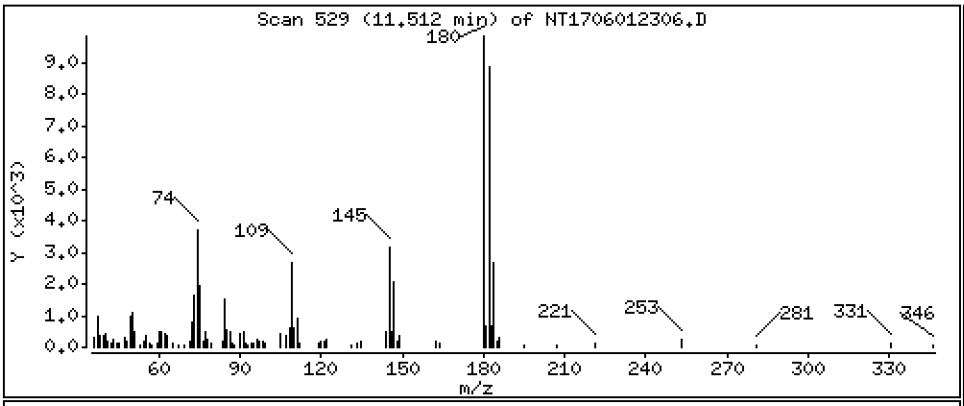
Operator: VTS

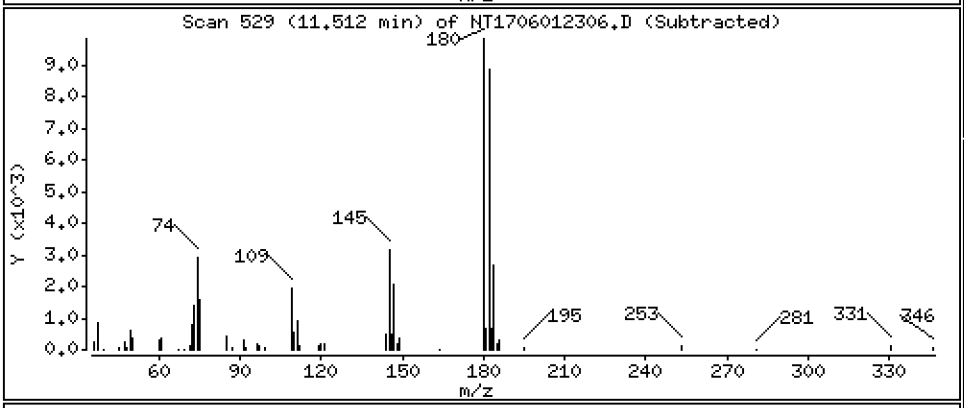
Column phase: ZB-5msi

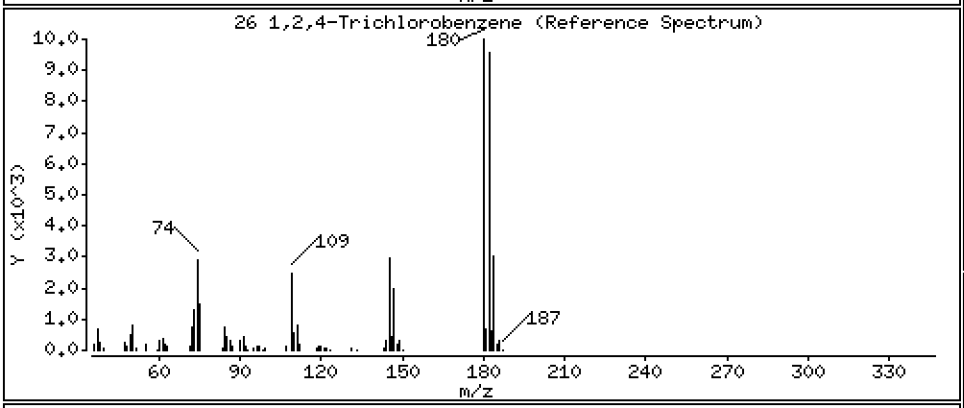
Column diameter: 0.25

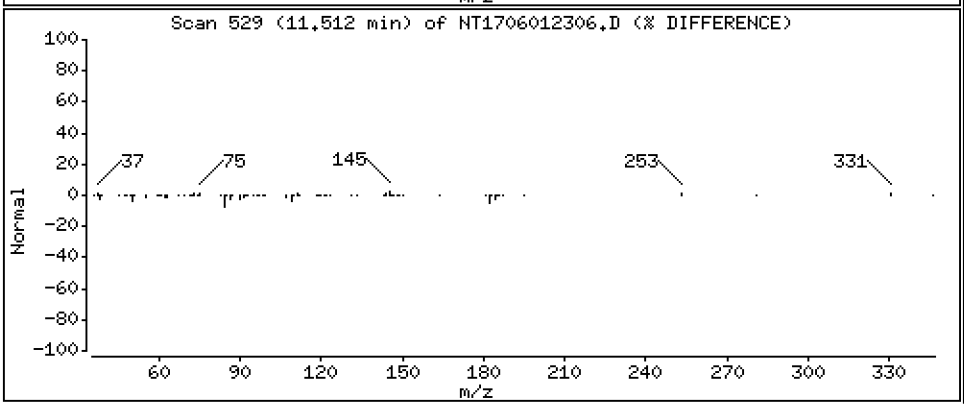
26 1,2,4-Trichlorobenzene

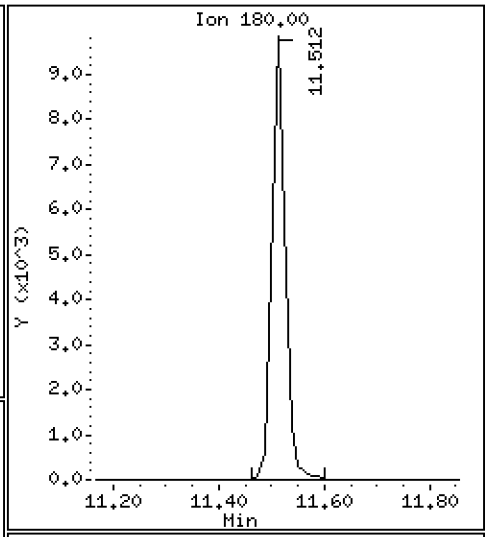
Concentration: 0.2073 ug/mL

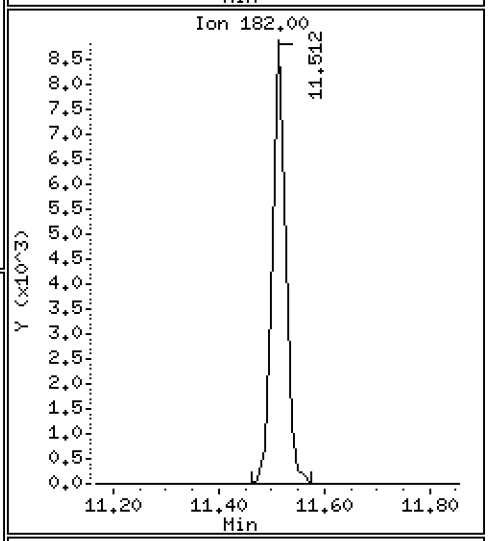


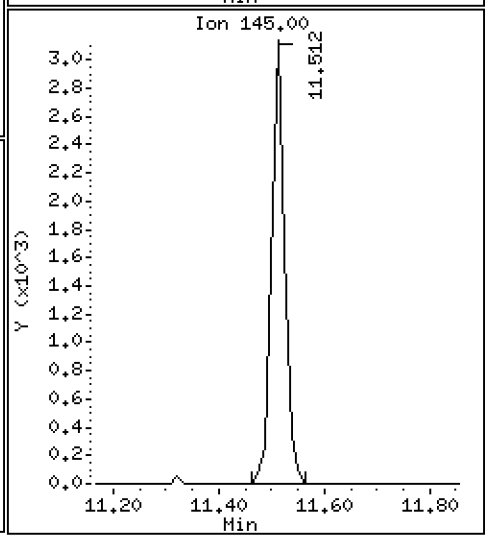












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

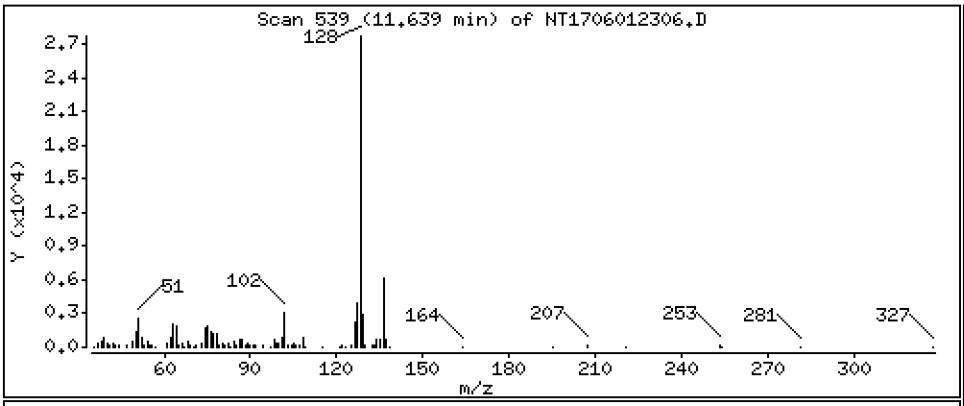
Operator: VTS

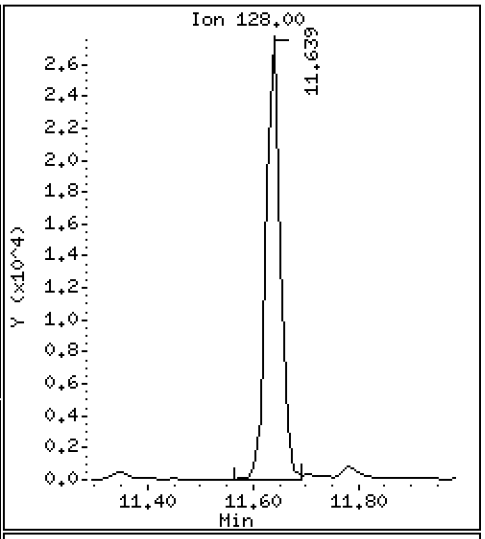
Column phase: ZB-5msi

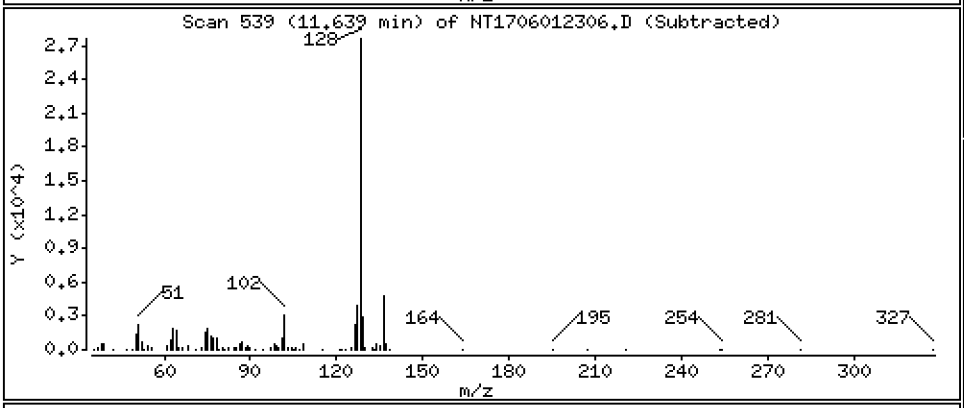
Column diameter: 0.25

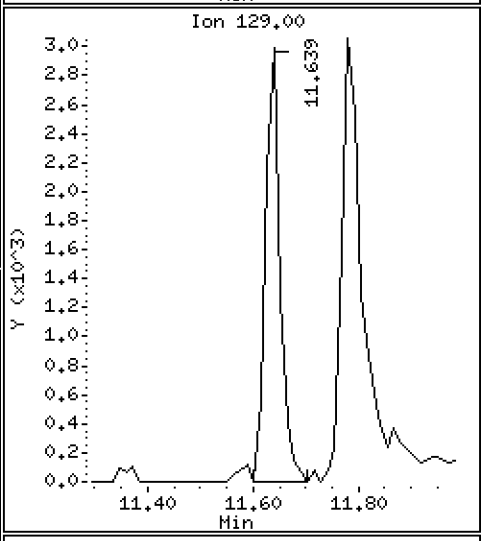
28 Naphthalene

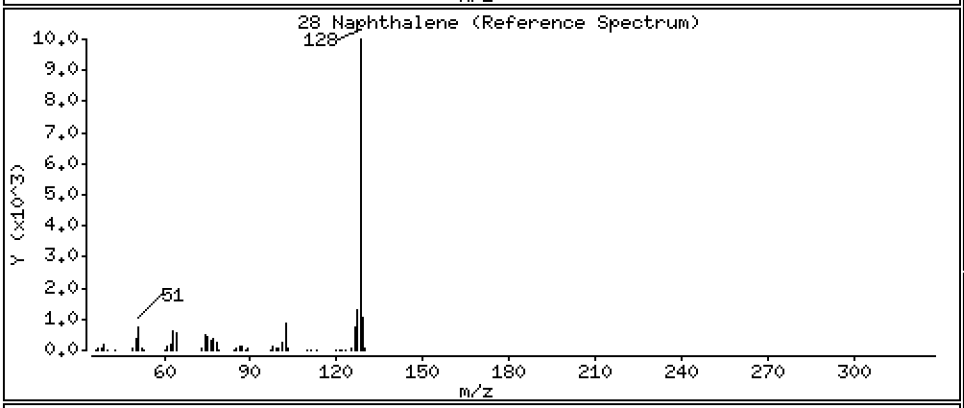
Concentration: 0.2048 ug/mL

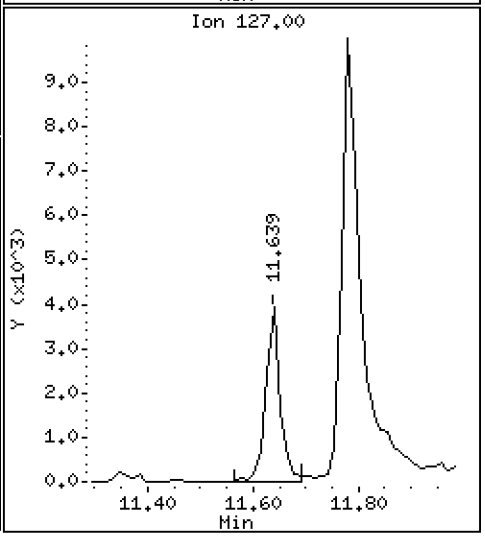


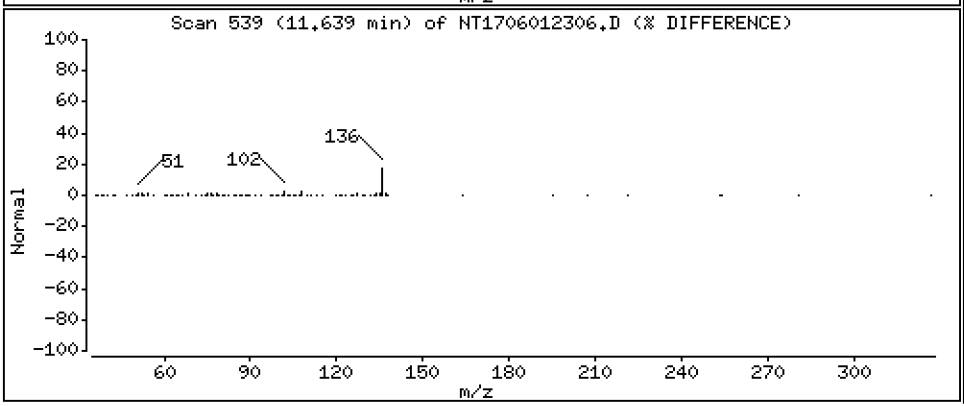












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

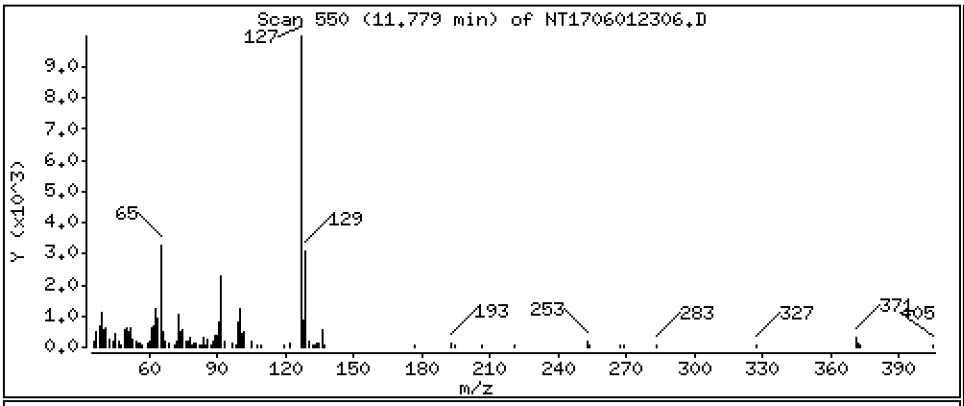
Operator: VTS

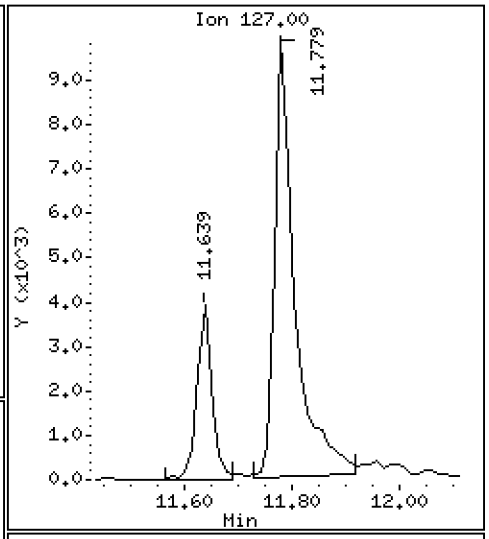
Column phase: ZB-5msi

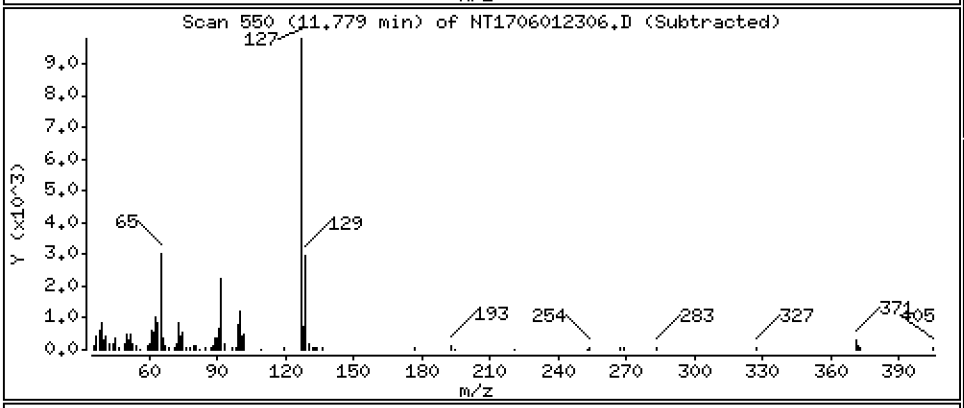
Column diameter: 0.25

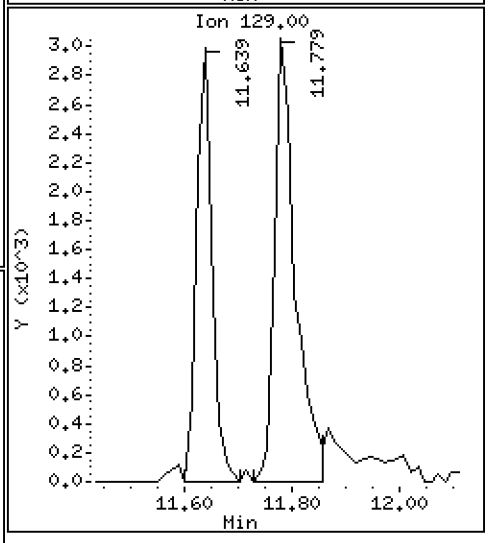
29 4-Chloroaniline

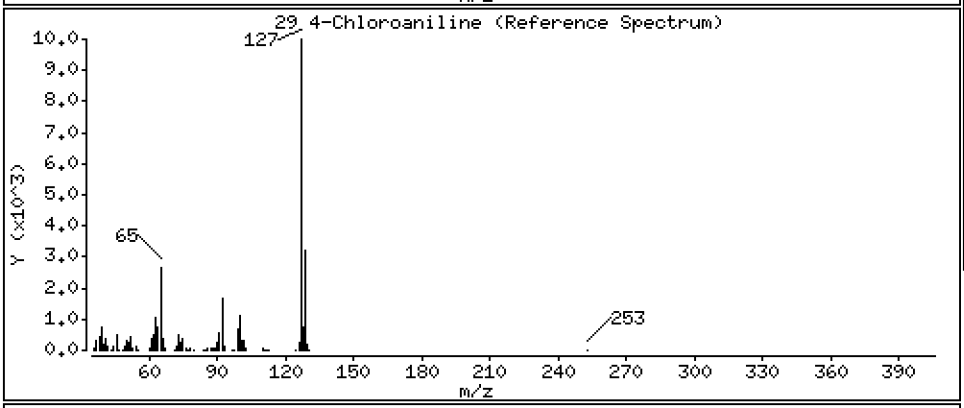
Concentration: 0.2906 ug/mL

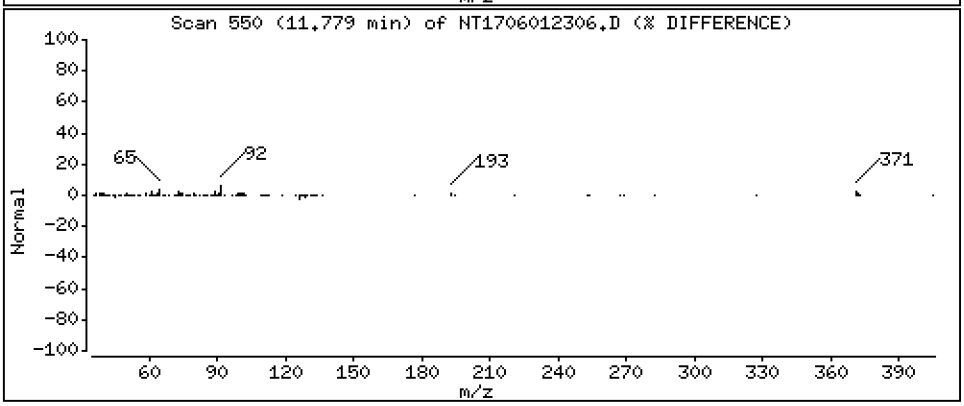












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

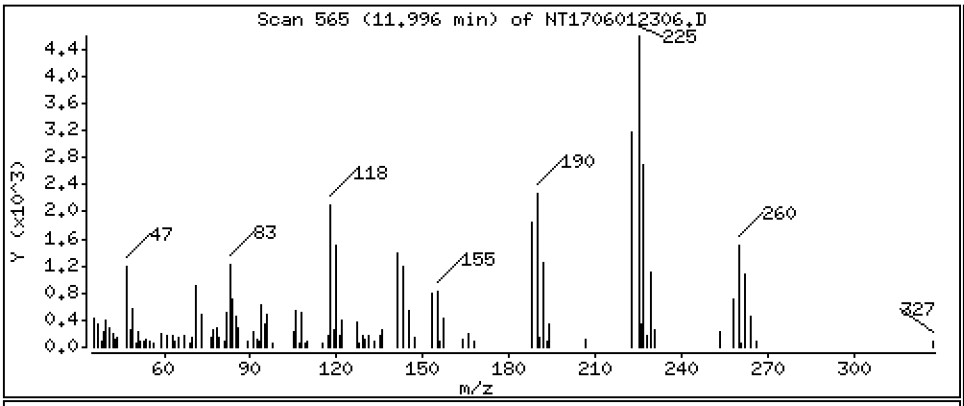
Operator: VTS

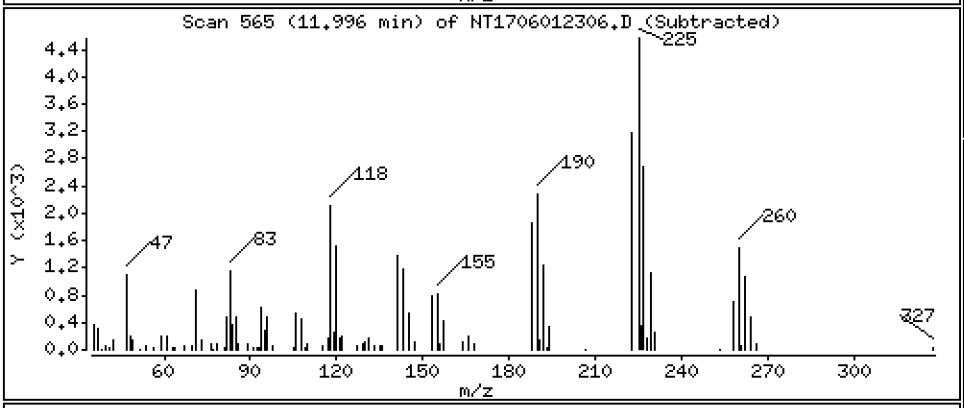
Column phase: ZB-5msi

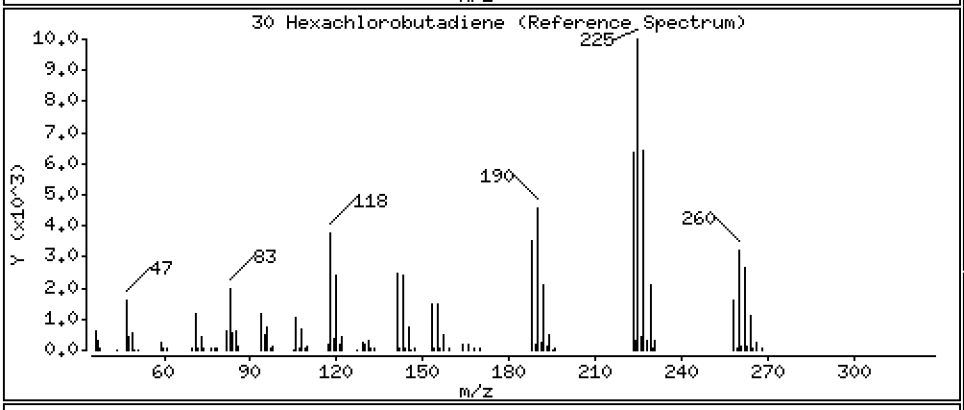
Column diameter: 0.25

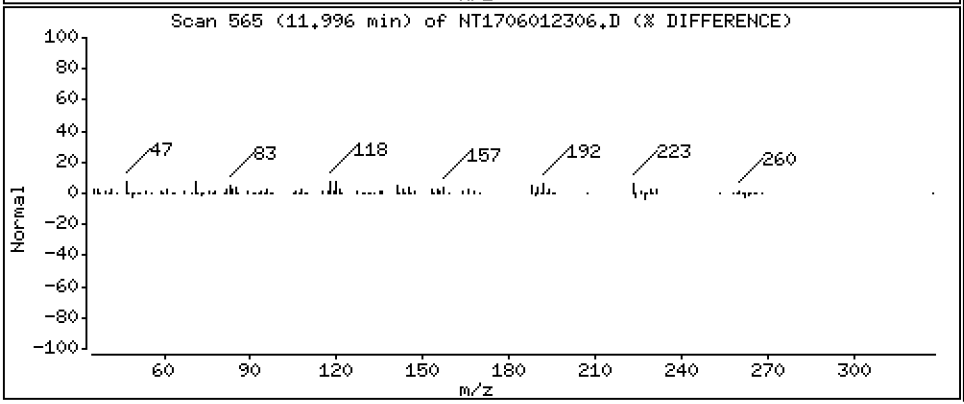
30 Hexachlorobutadiene

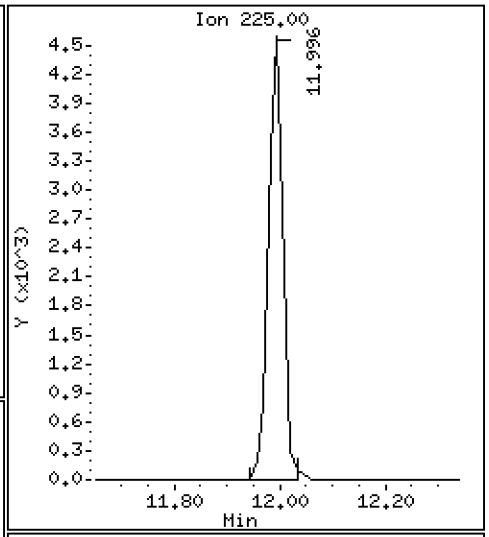
Concentration: 0.2130 ug/mL

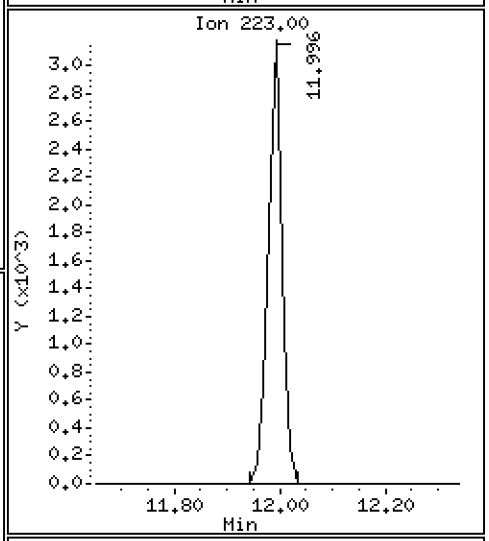


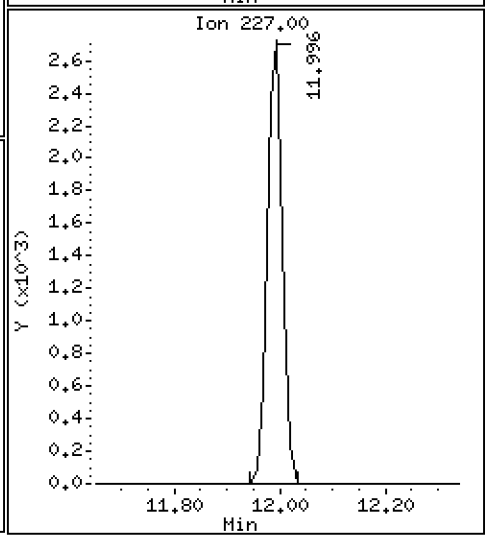












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

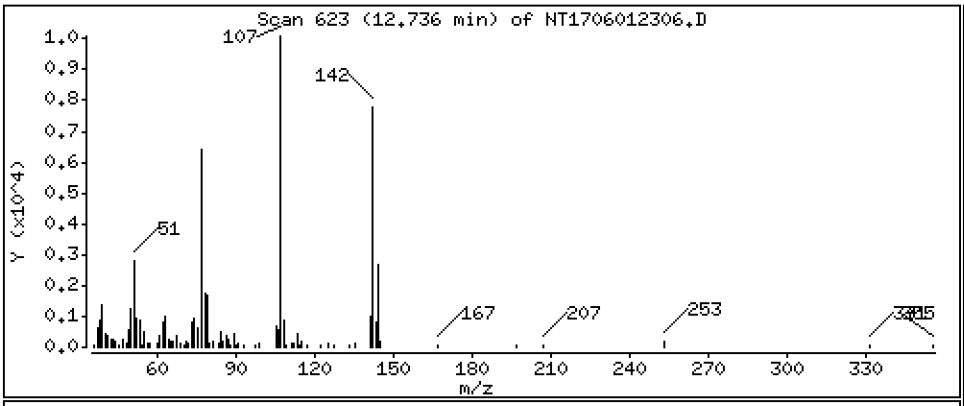
Operator: VTS

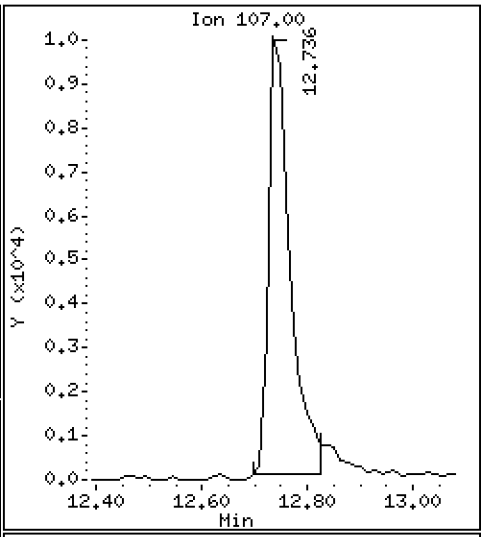
Column phase: ZB-5msi

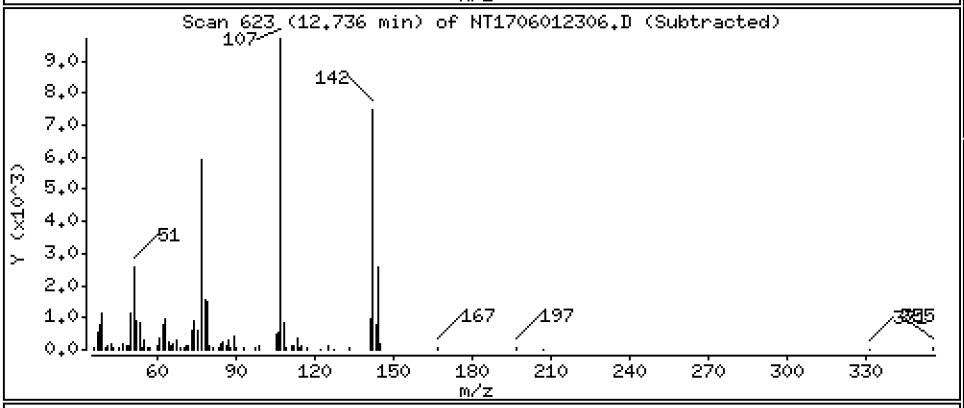
Column diameter: 0.25

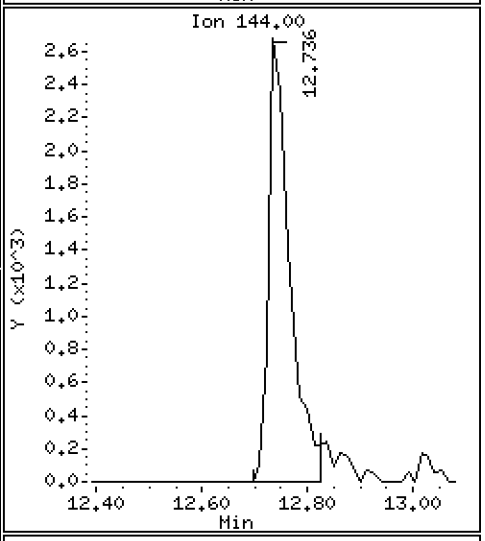
31 4-Chloro-3-methylphenol

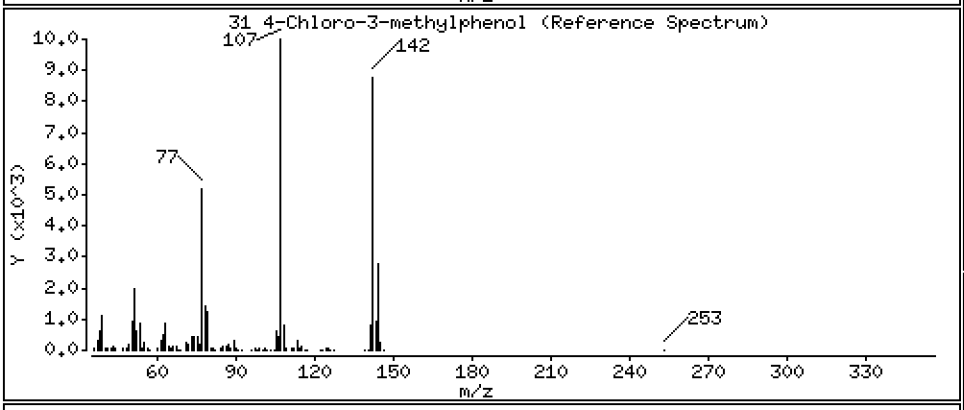
Concentration: 0.3369 ug/mL

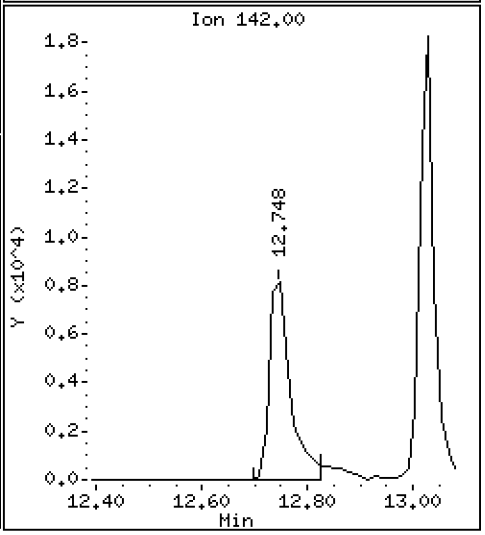


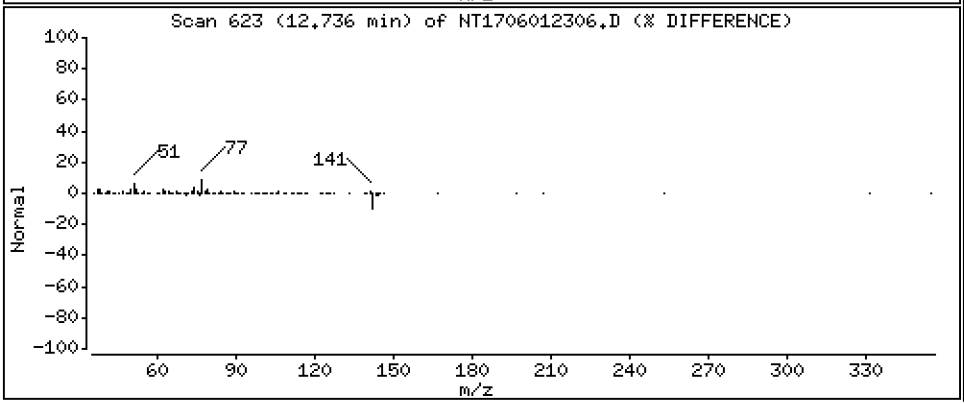












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

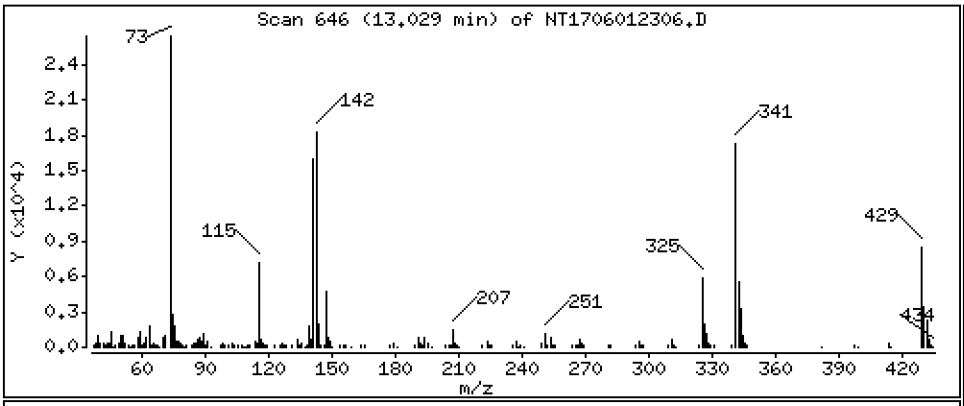
Operator: VTS

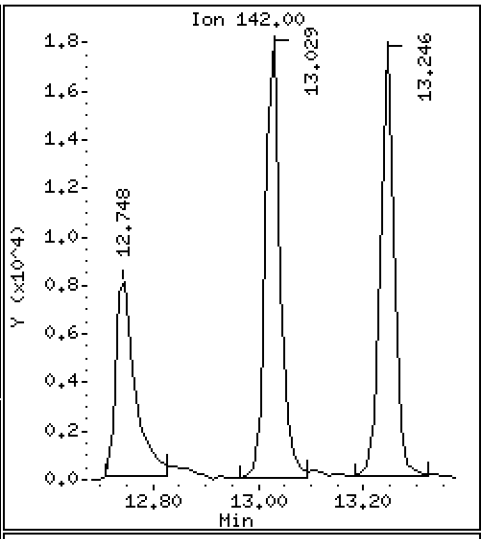
Column phase: ZB-5msi

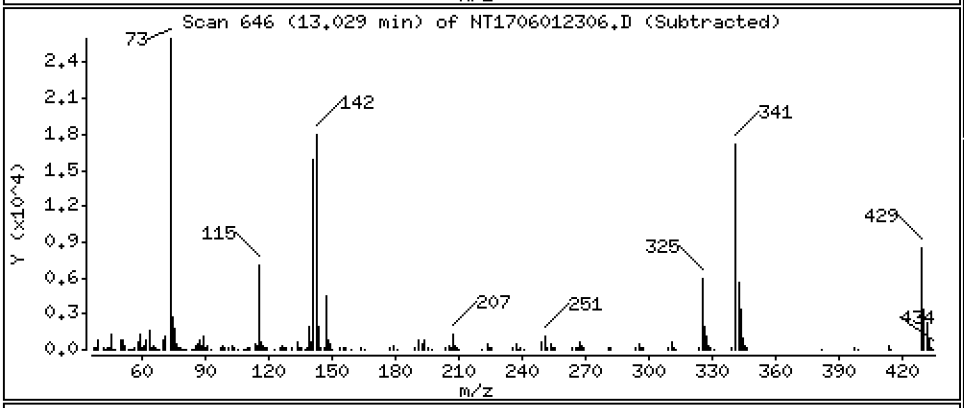
Column diameter: 0.25

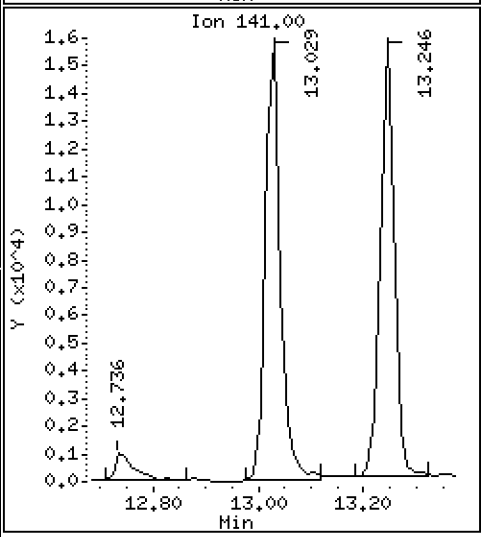
32 2-Methylnaphthalene

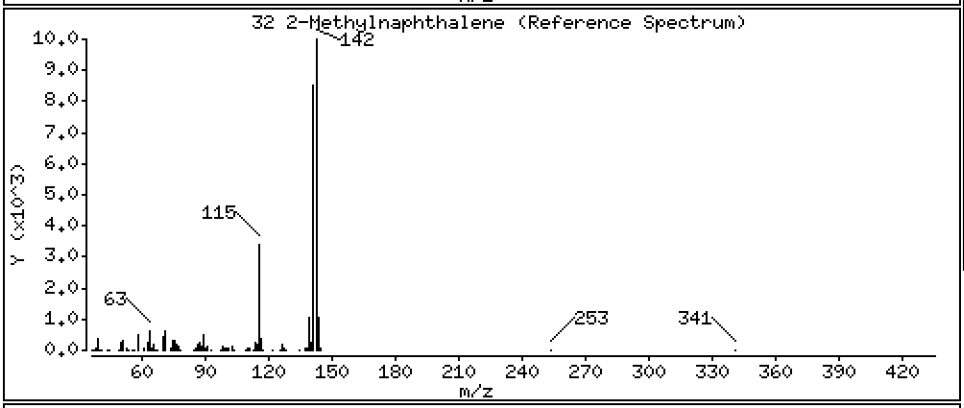
Concentration: 0.1938 ug/mL

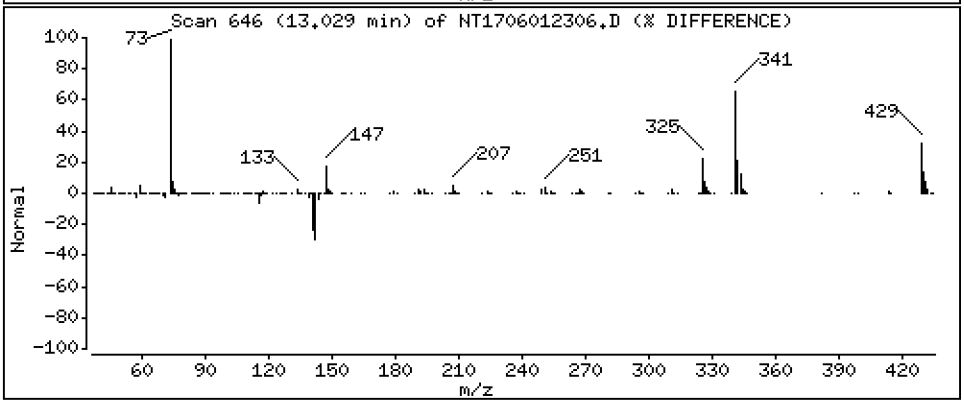












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

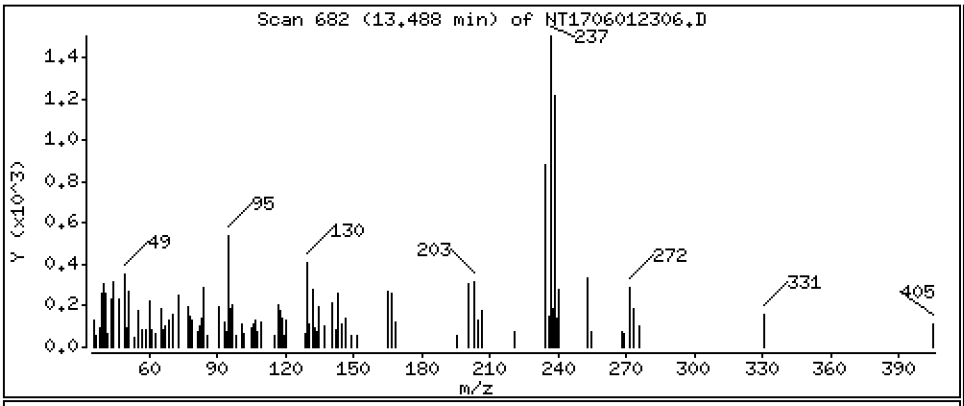
Operator: VTS

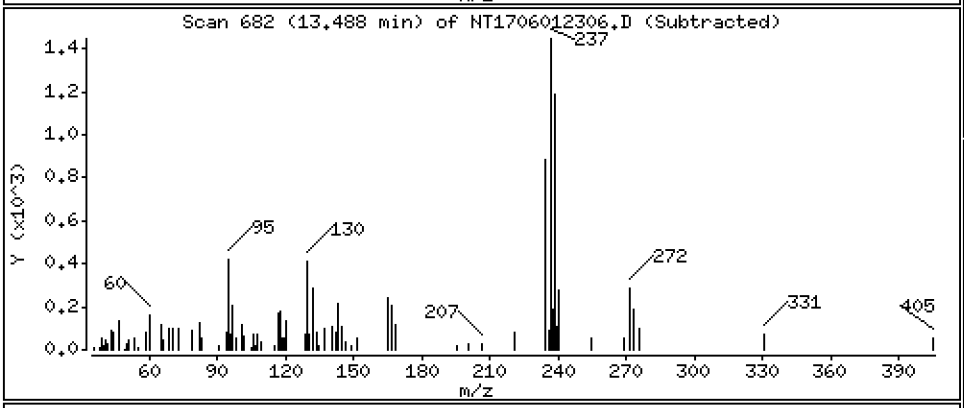
Column phase: ZB-5msi

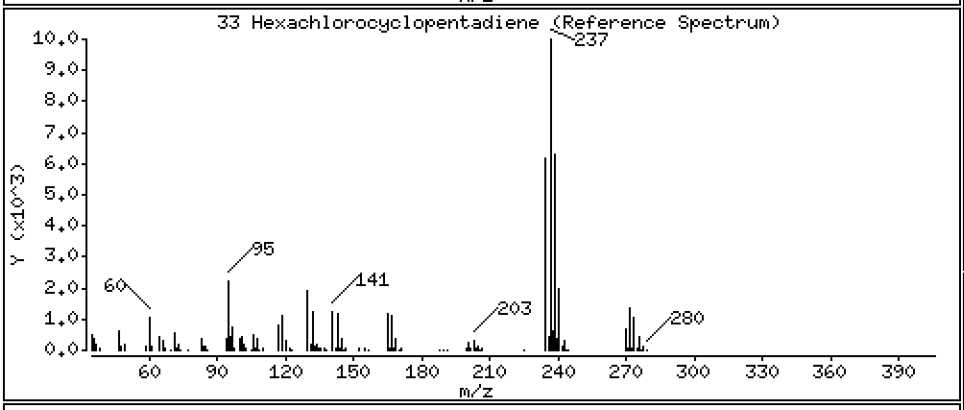
Column diameter: 0.25

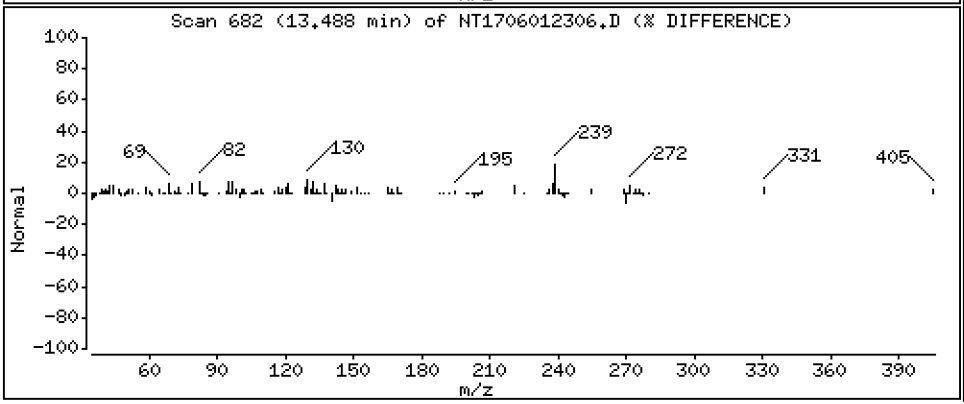
33 Hexachlorocyclopentadiene

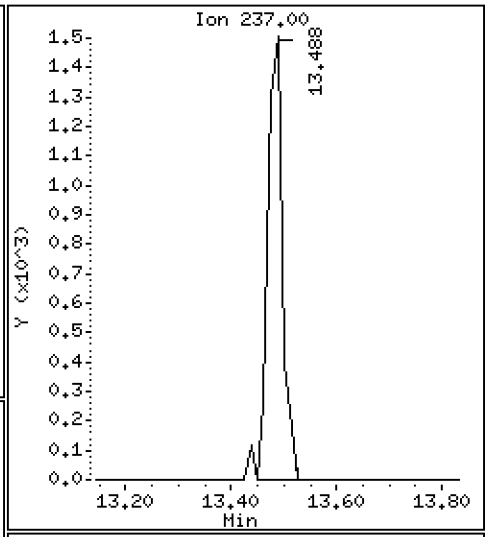
Concentration: 0.05957 ug/mL

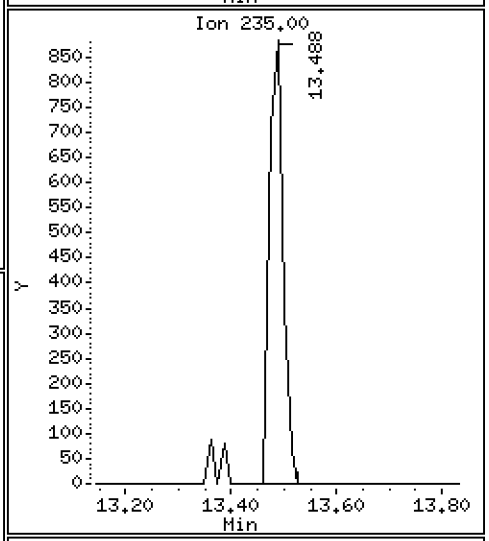


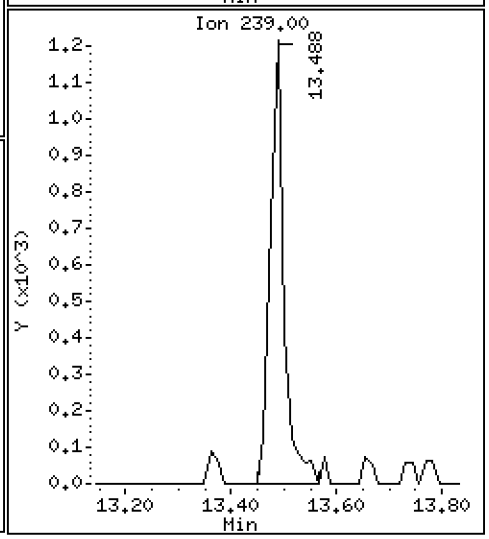












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

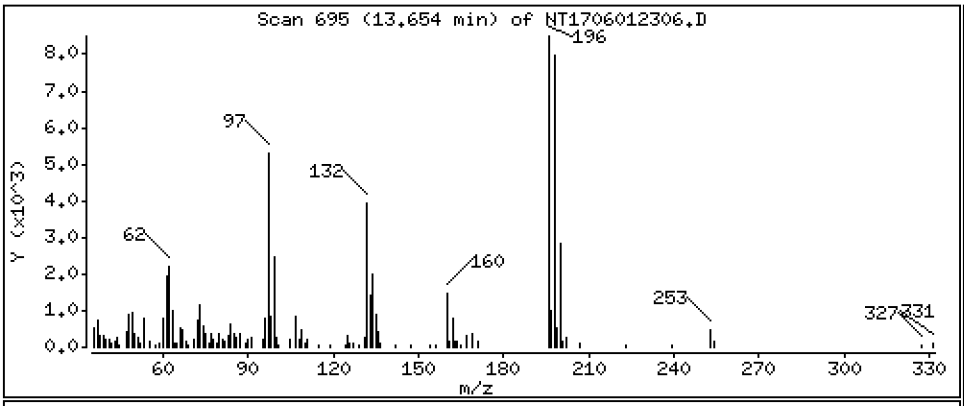
Operator: VTS

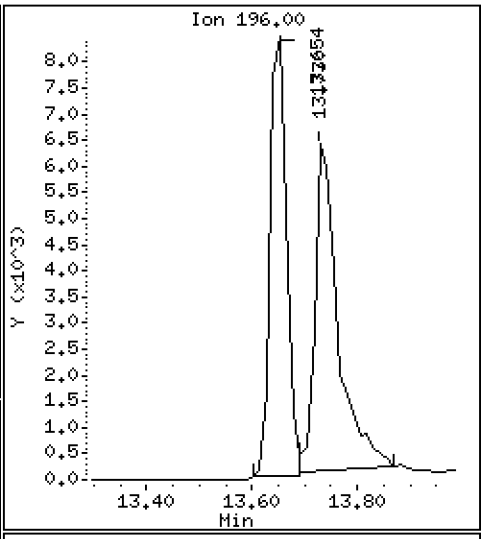
Column phase: ZB-5msi

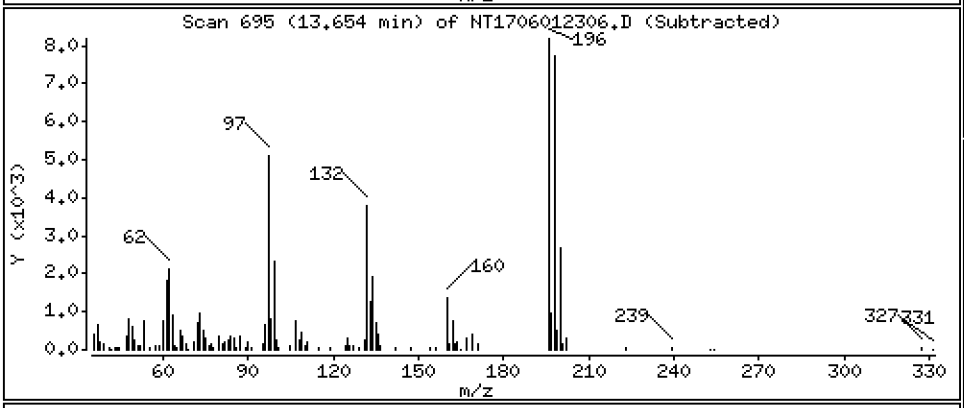
Column diameter: 0.25

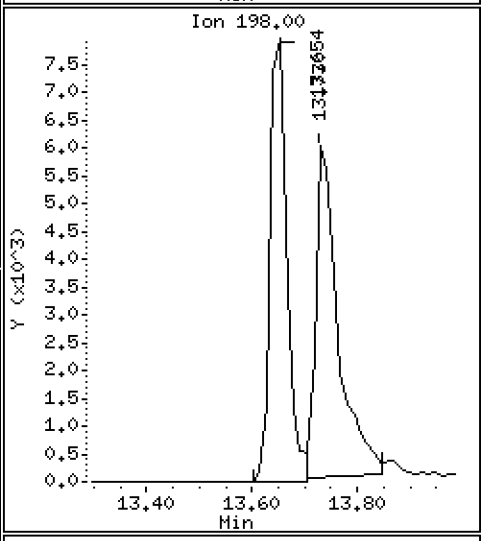
34 2,4,6-Trichlorophenol

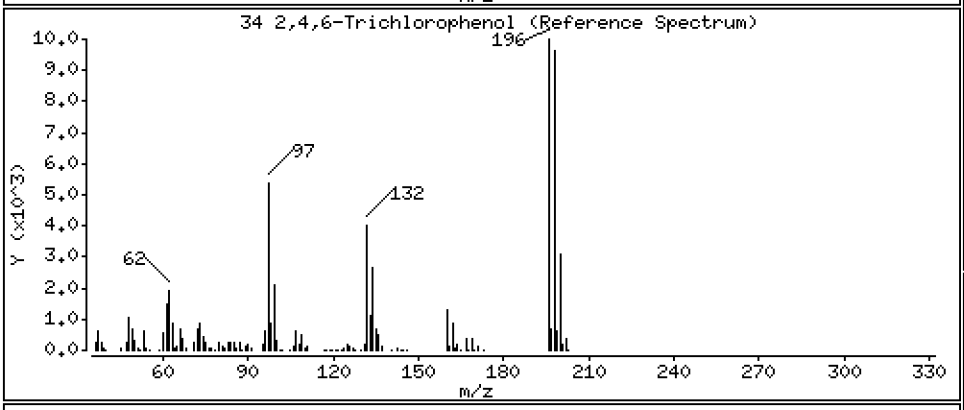
Concentration: 0.3375 ug/mL

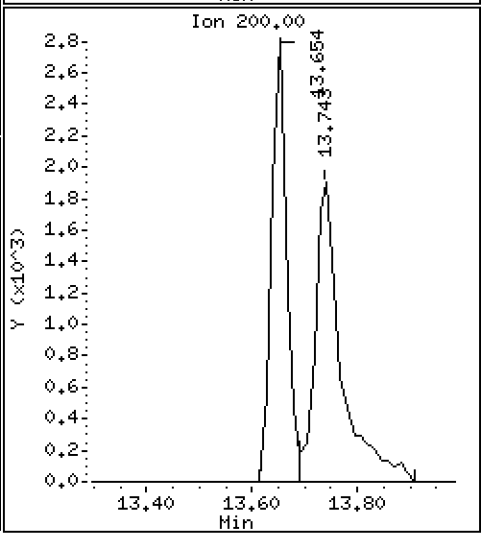


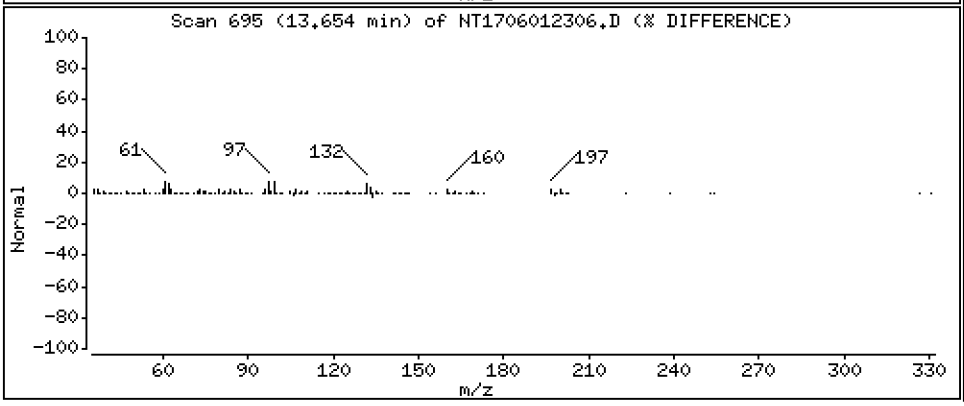












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

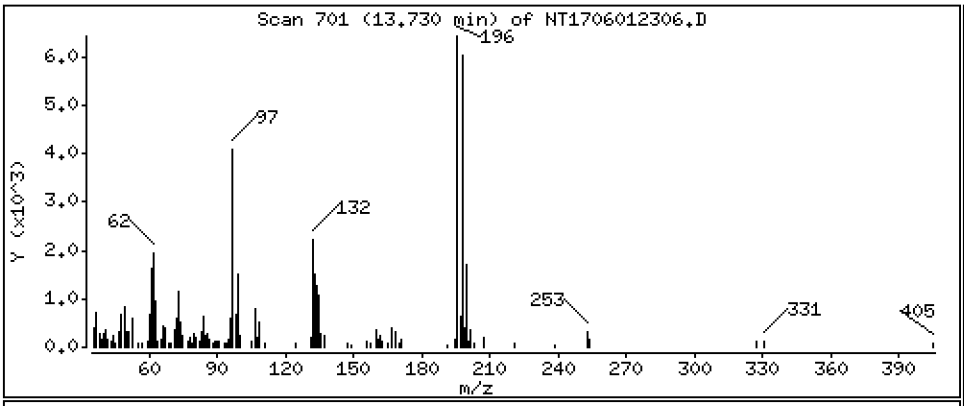
Operator: VTS

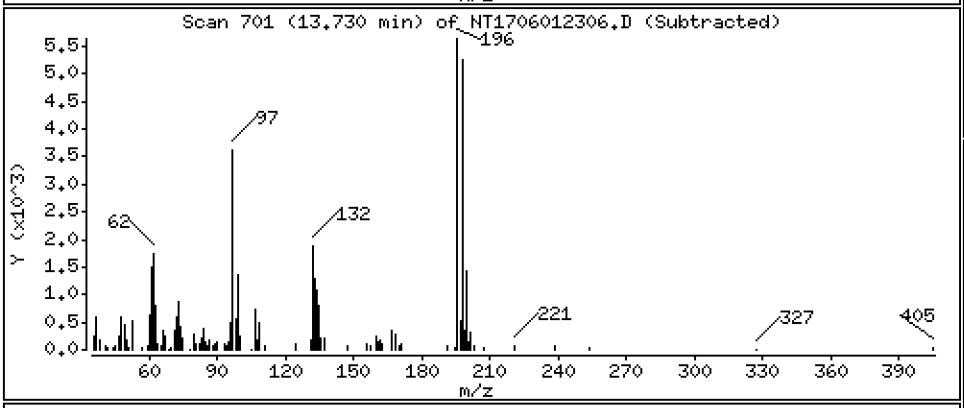
Column phase: ZB-5msi

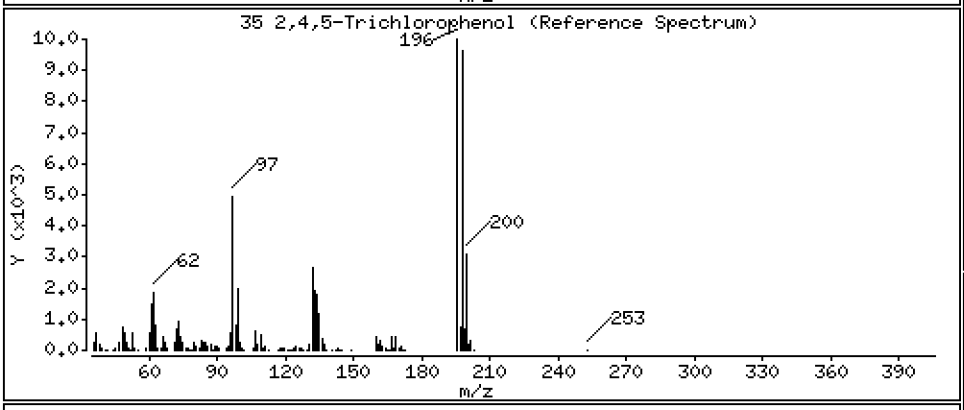
Column diameter: 0.25

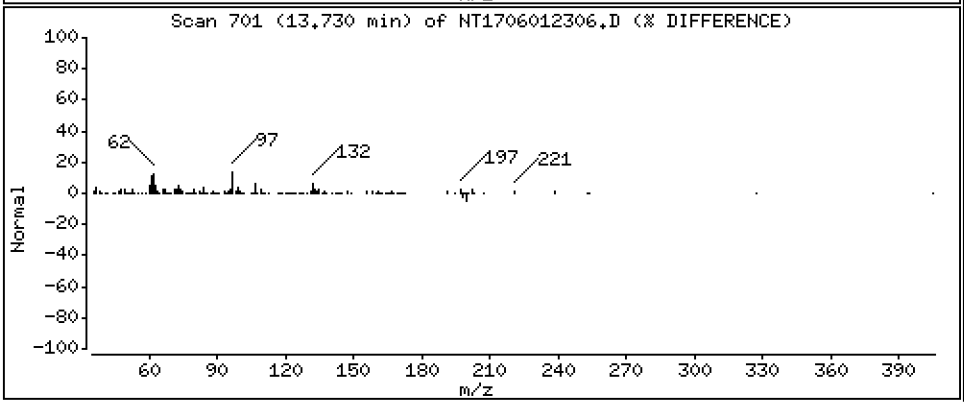
35 2,4,5-Trichlorophenol

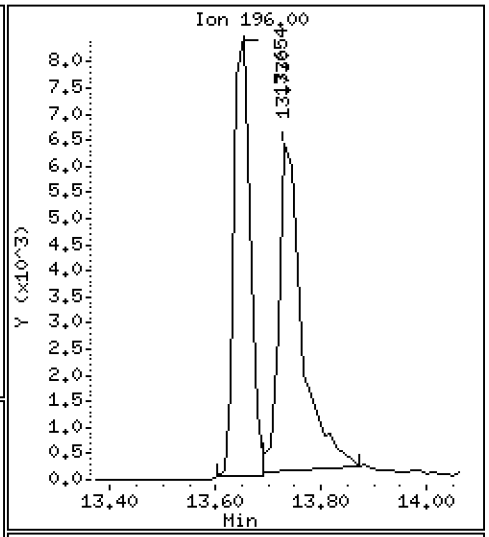
Concentration: 0.3535 ug/mL

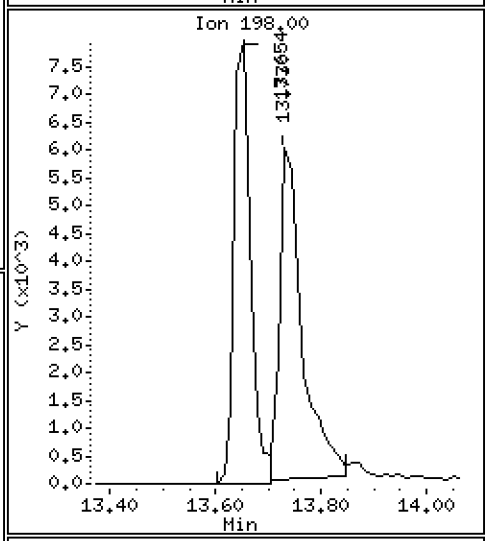


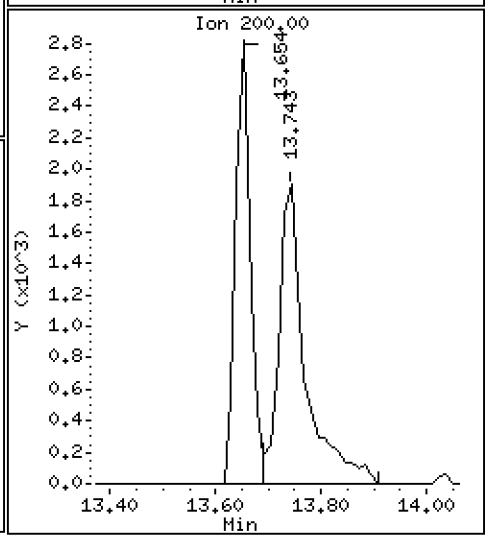












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

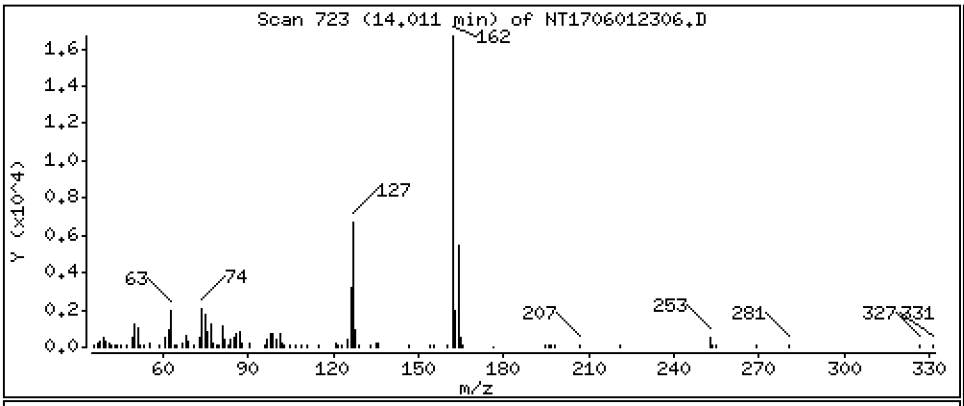
Operator: VTS

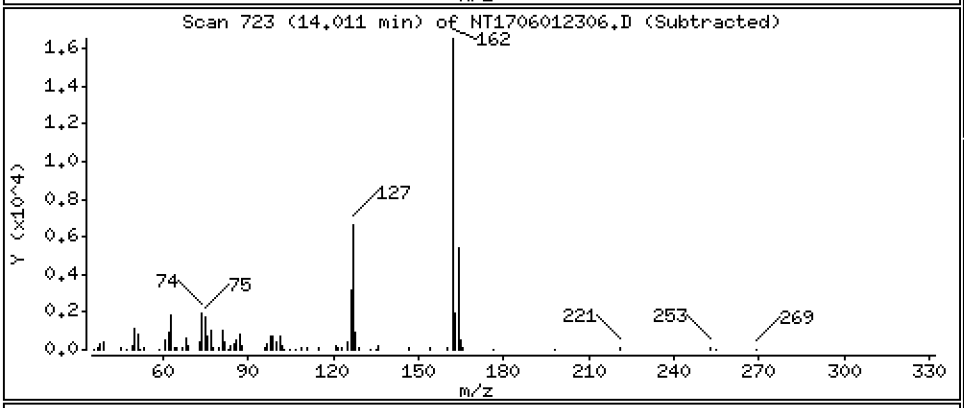
Column phase: ZB-5msi

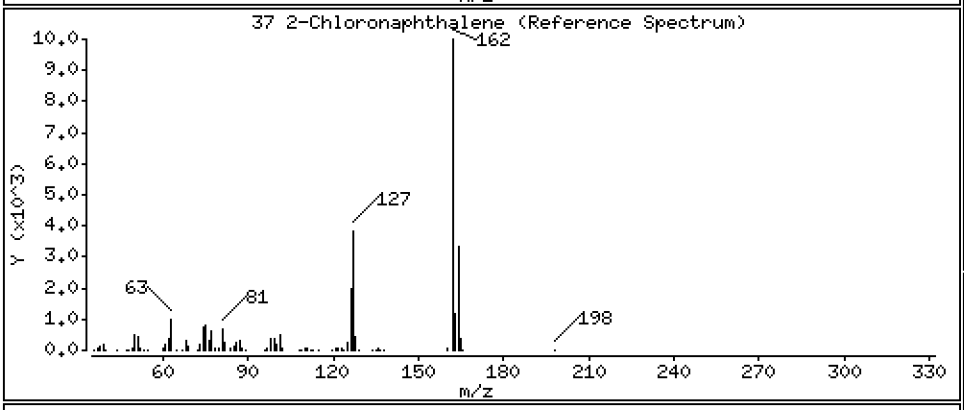
Column diameter: 0.25

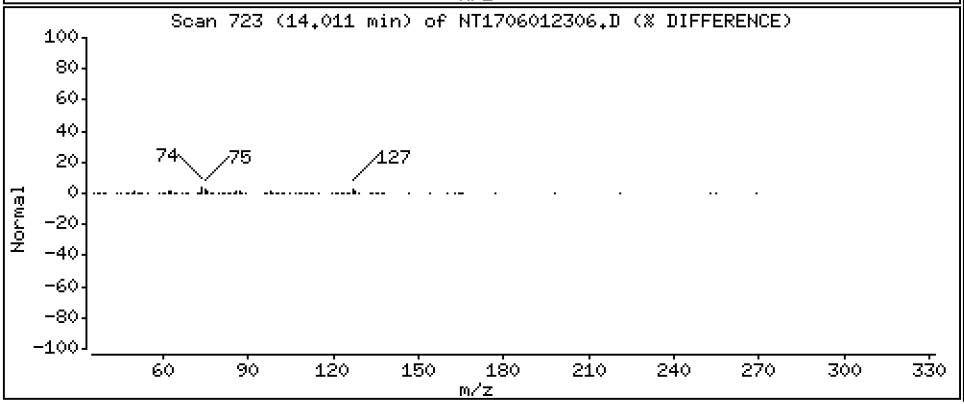
37 2-Chloronaphthalene

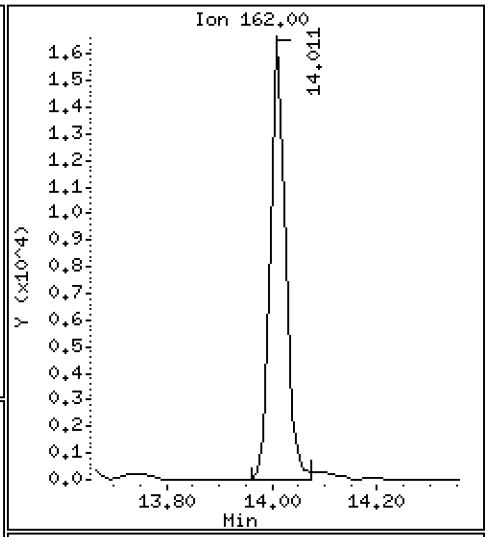
Concentration: 0.2006 ug/mL

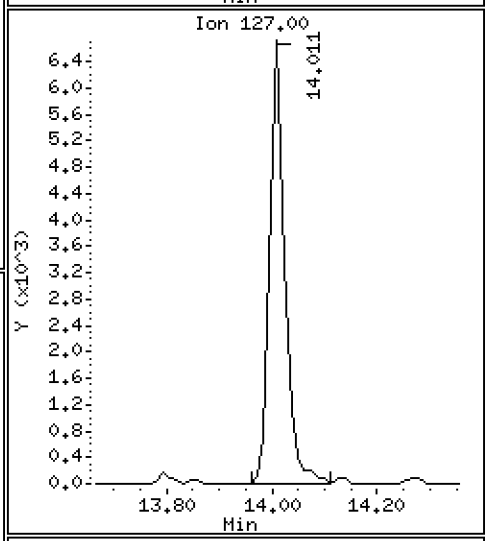


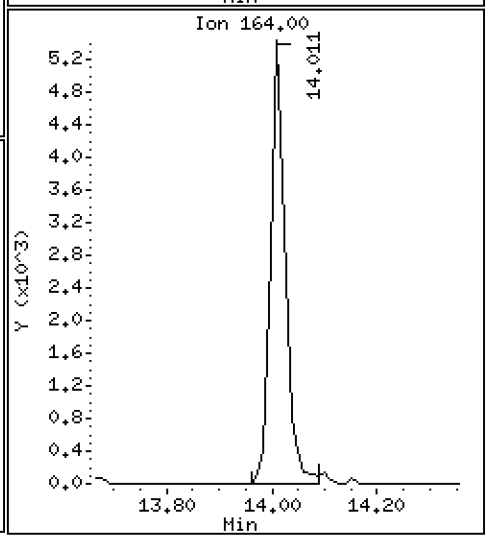












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

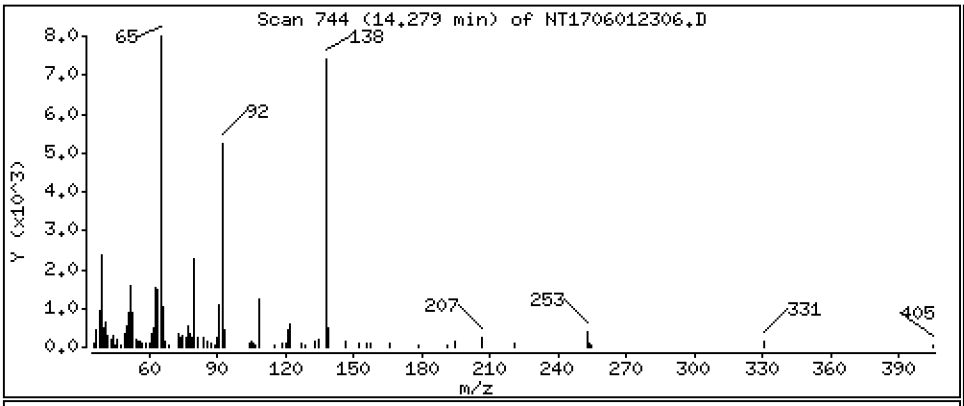
Operator: VTS

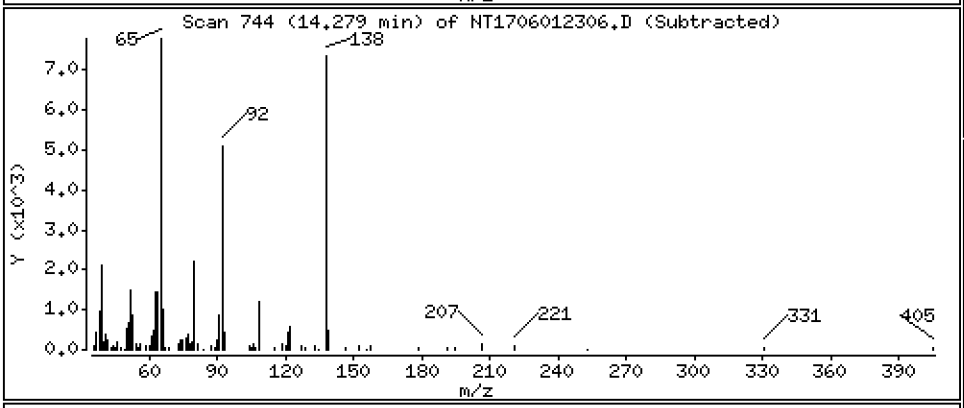
Column phase: ZB-5msi

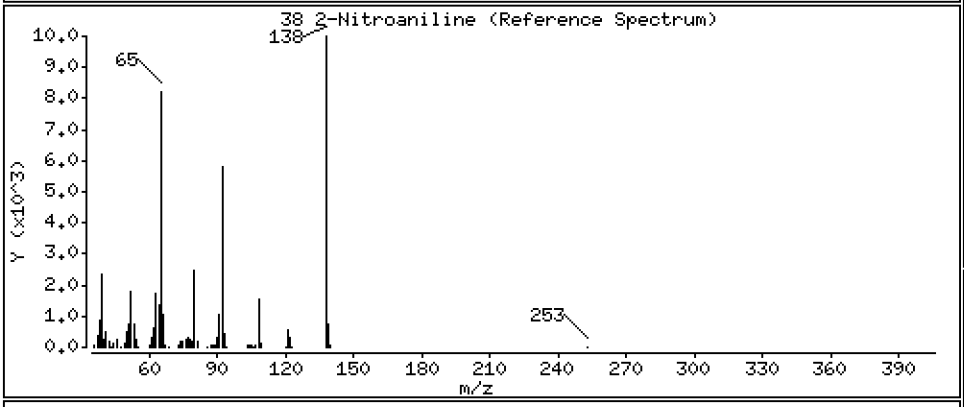
Column diameter: 0.25

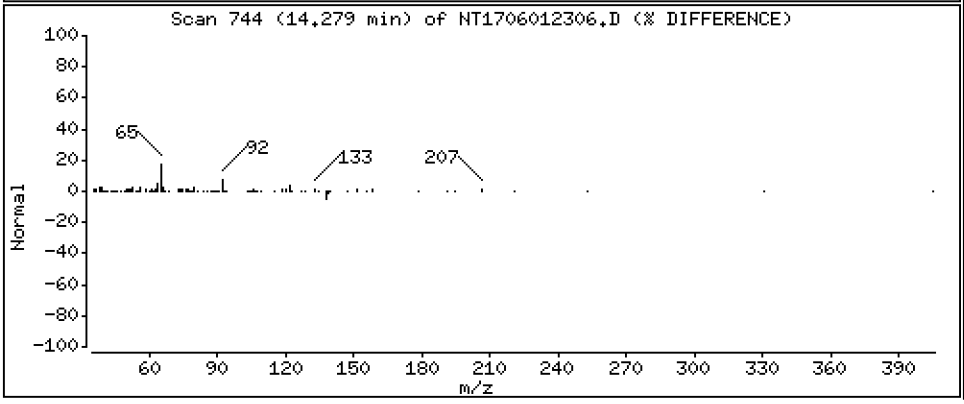
38 2-Nitroaniline

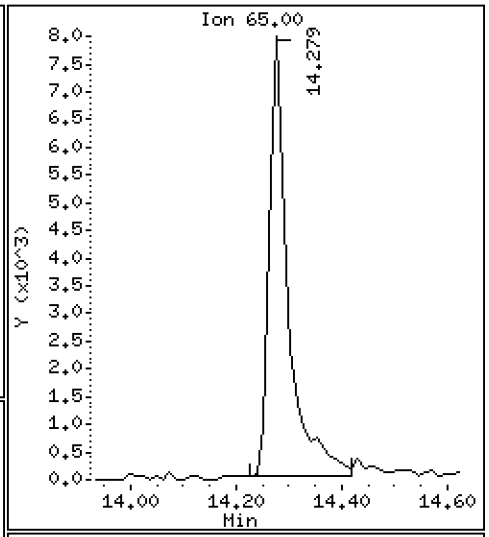
Concentration: 0.3655 ug/mL

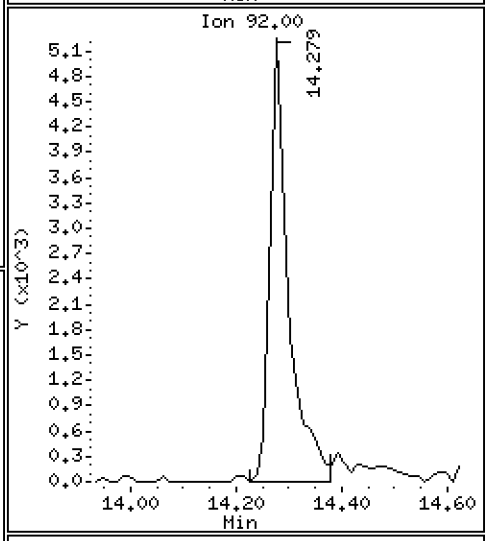


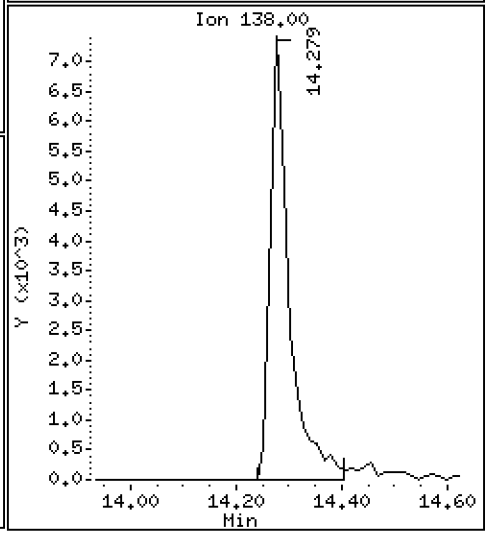












Date : 01-JUN-2023 15:12

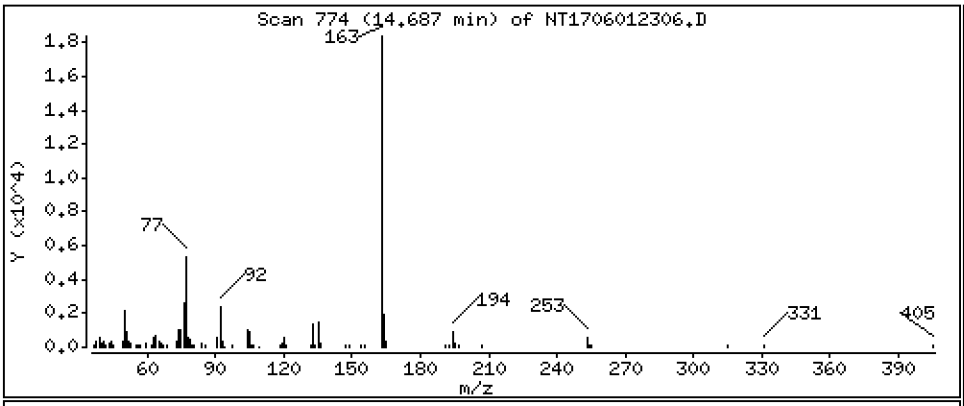
Client ID: Instrument: nt17.i

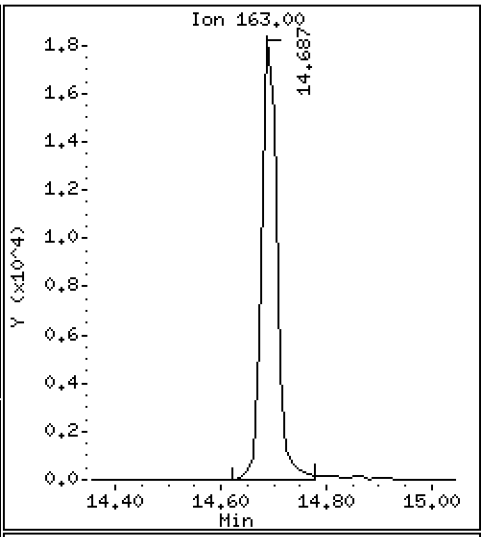
Sample Info: SLF0008-LCV1

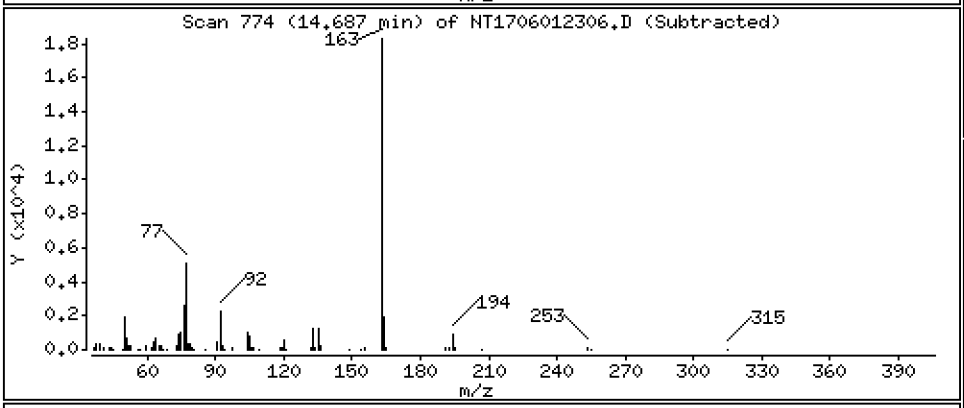
Operator: VTS

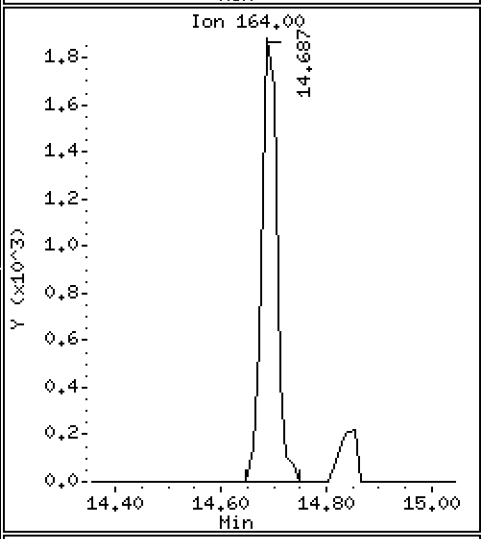
Column phase: ZB-5msi Column diameter: 0.25

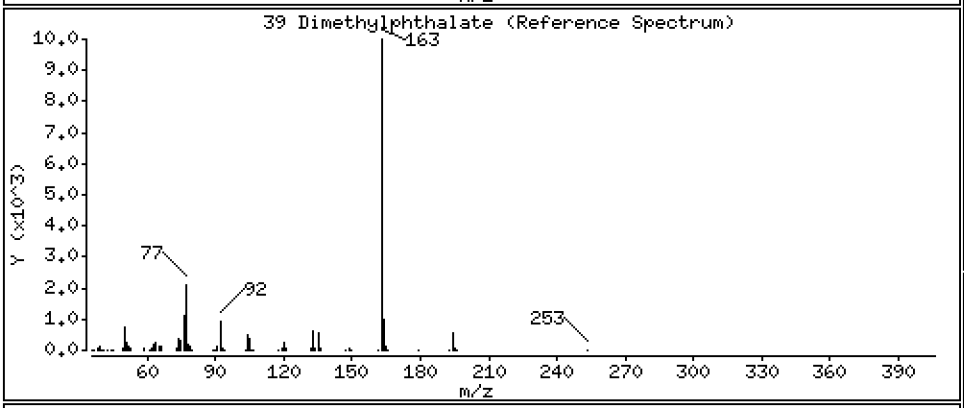
39 Dimethylphthalate Concentration: 0.2102 ug/mL

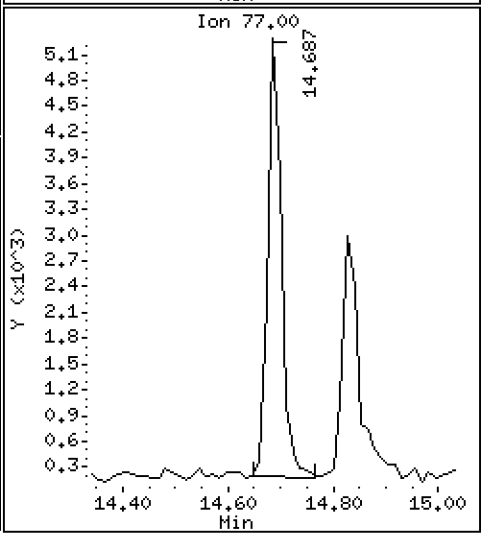


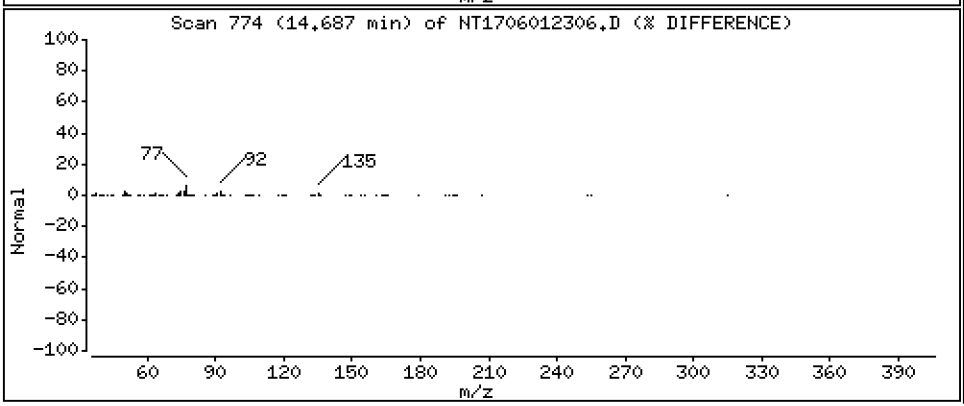












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

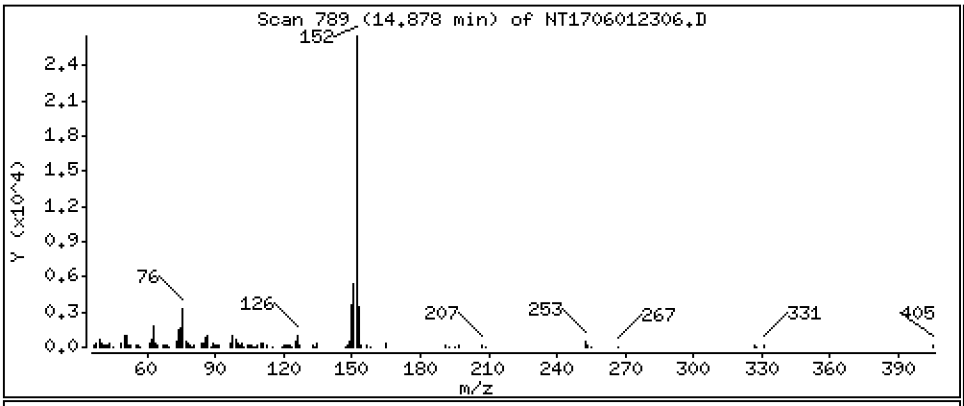
Operator: VTS

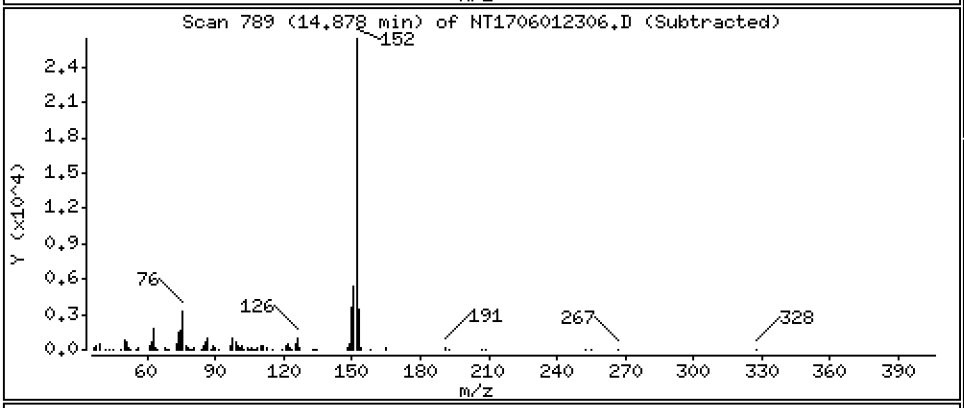
Column phase: ZB-5msi

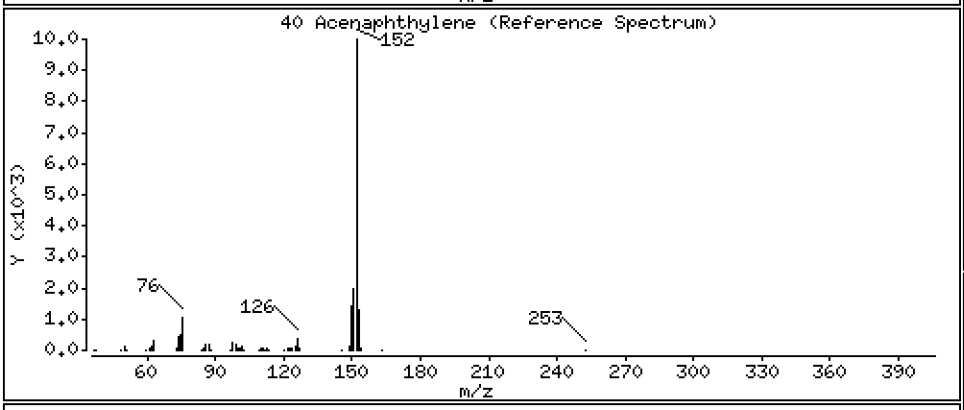
Column diameter: 0.25

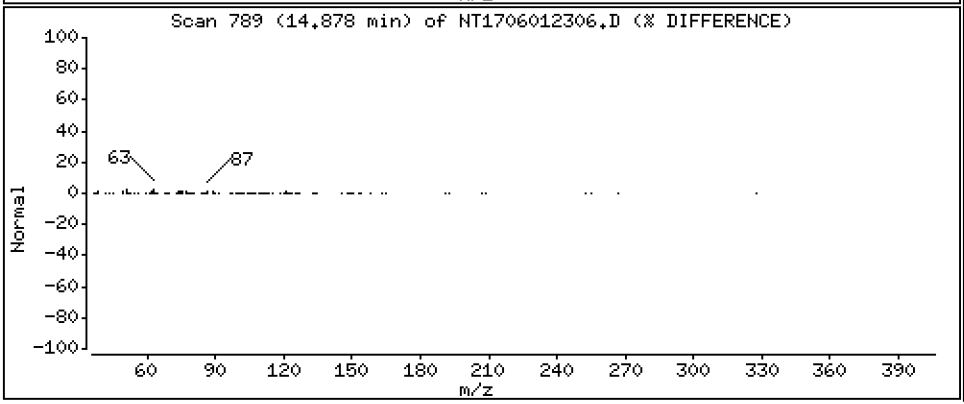
40 Acenaphthylene

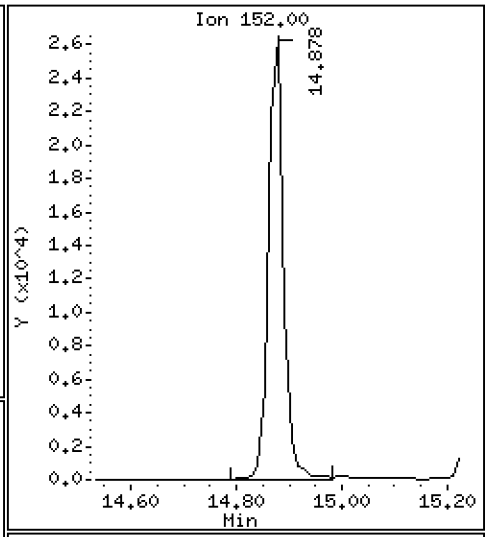
Concentration: 0.2080 ug/mL

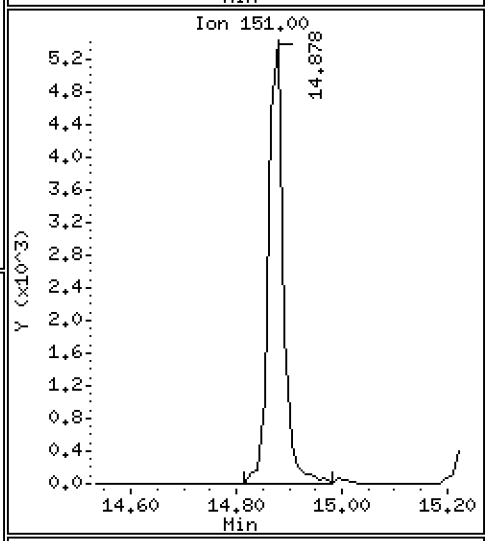


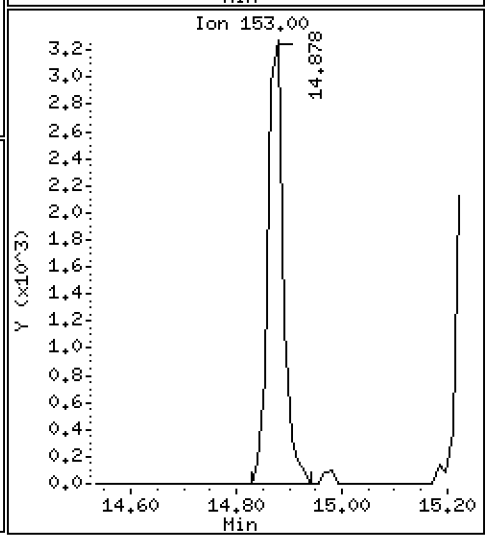












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

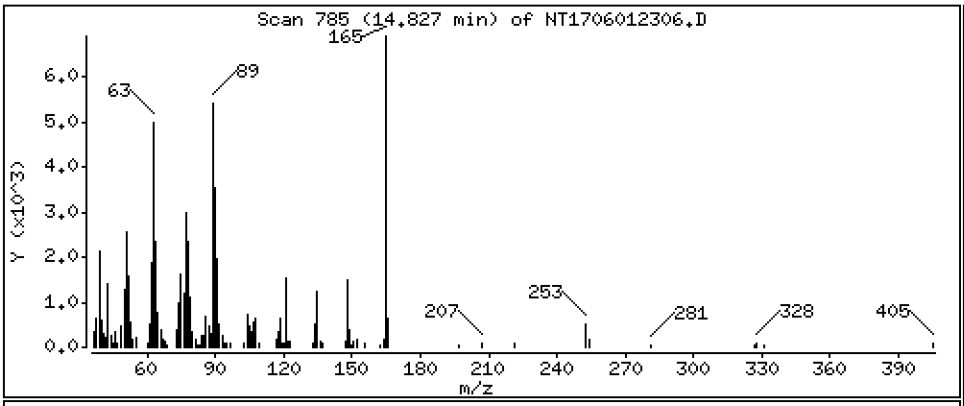
Operator: VTS

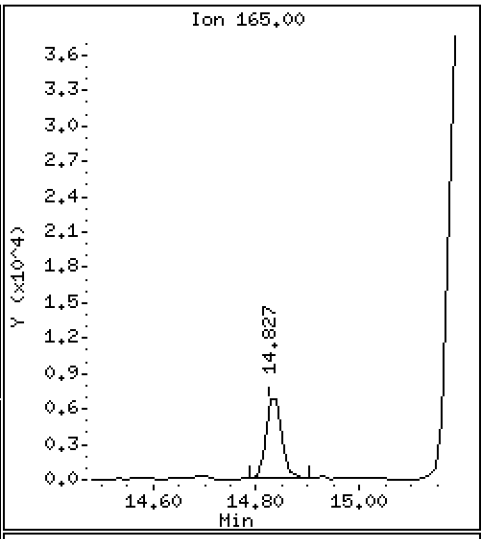
Column phase: ZB-5msi

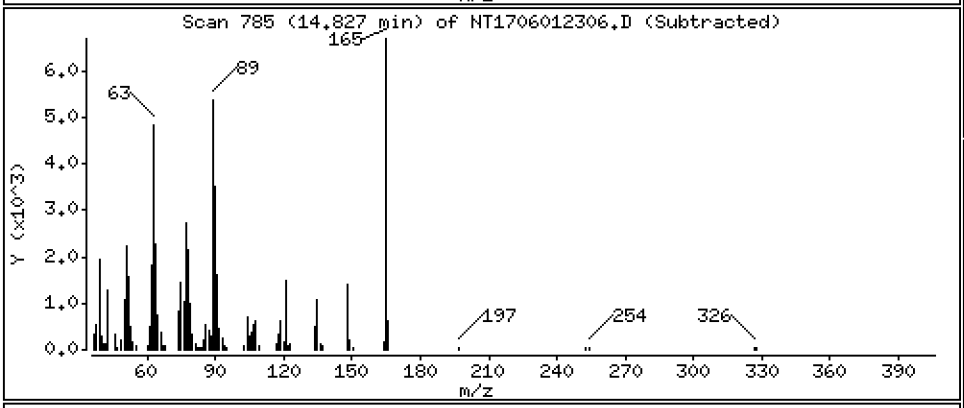
Column diameter: 0.25

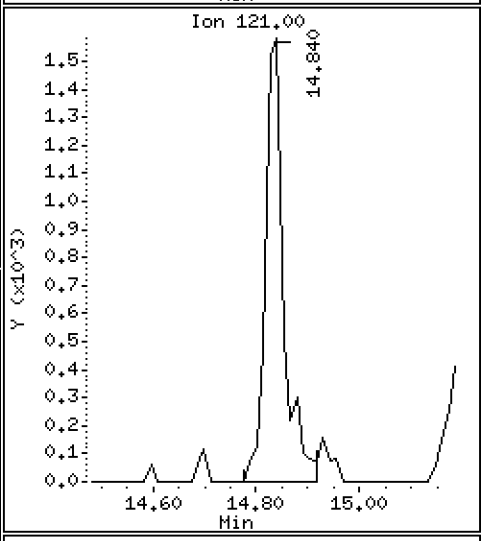
41 2,6-Dinitrotoluene

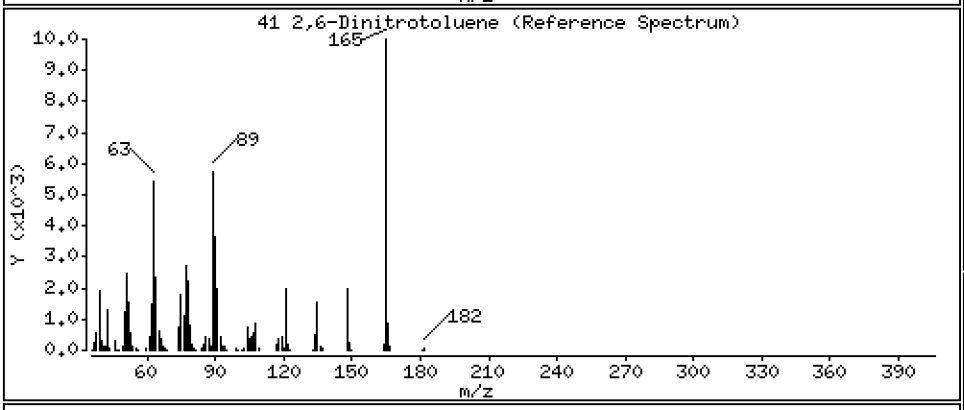
Concentration: 0.3496 ug/mL

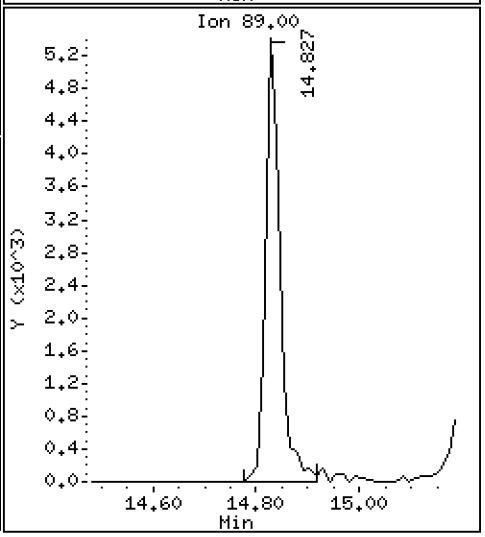


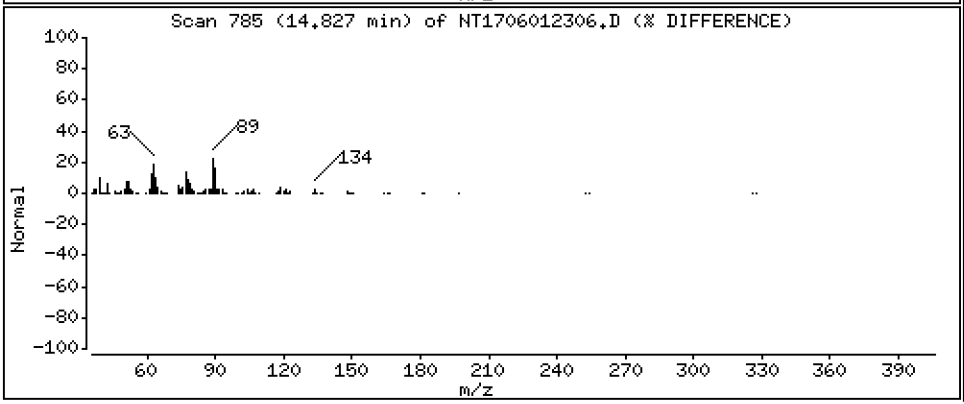












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

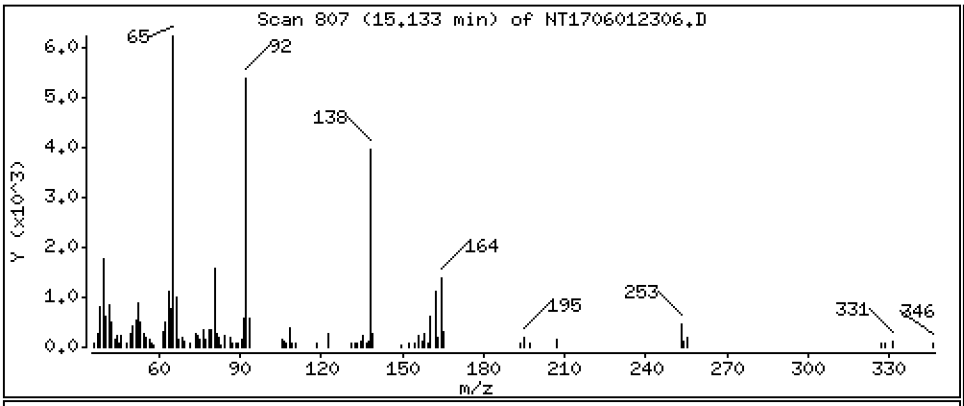
Operator: VTS

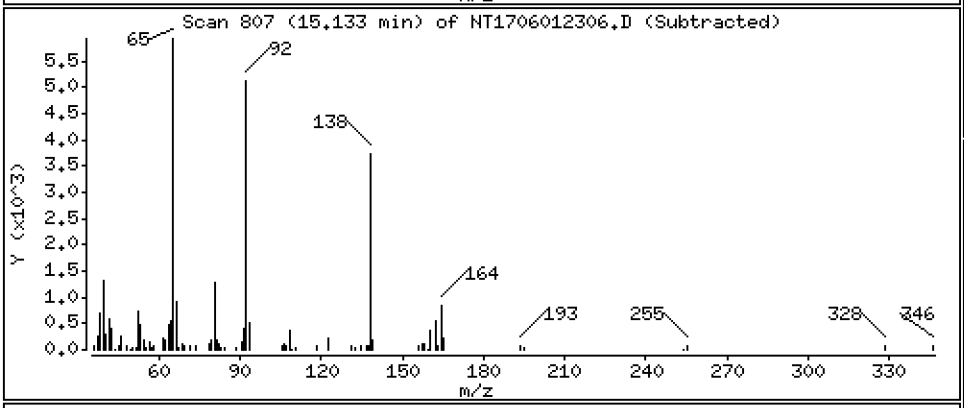
Column phase: ZB-5msi

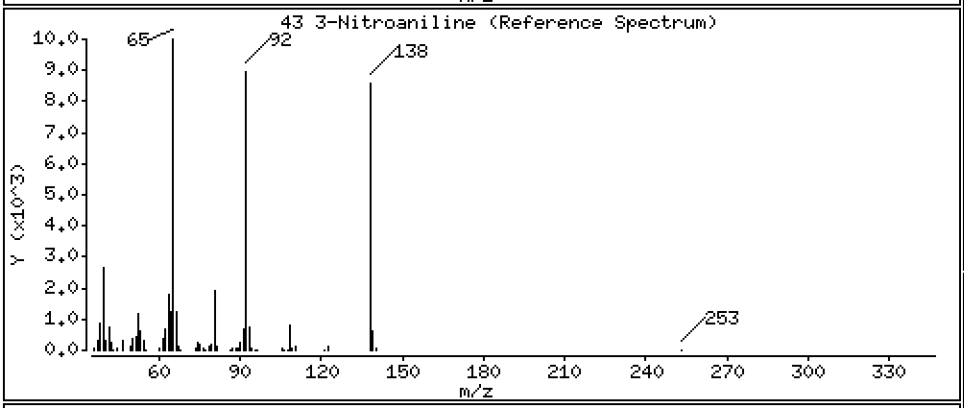
Column diameter: 0.25

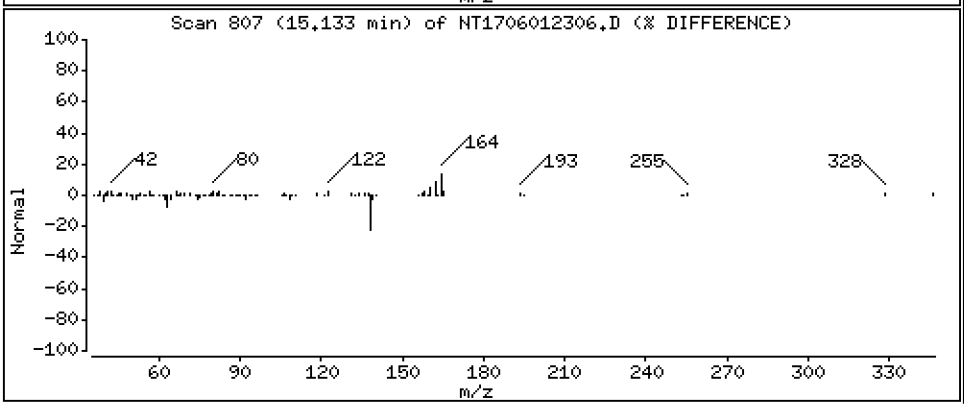
43 3-Nitroaniline

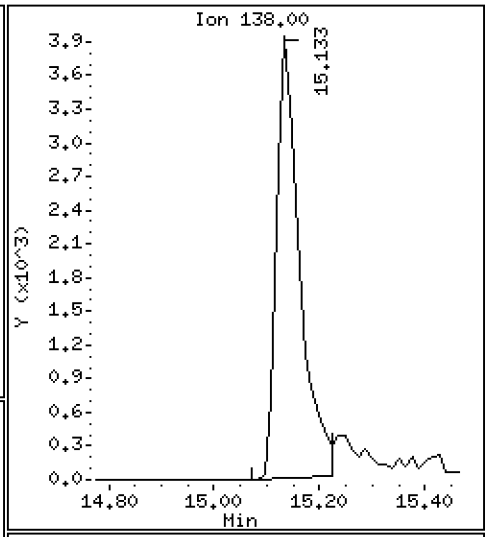
Concentration: 0.3242 ug/mL

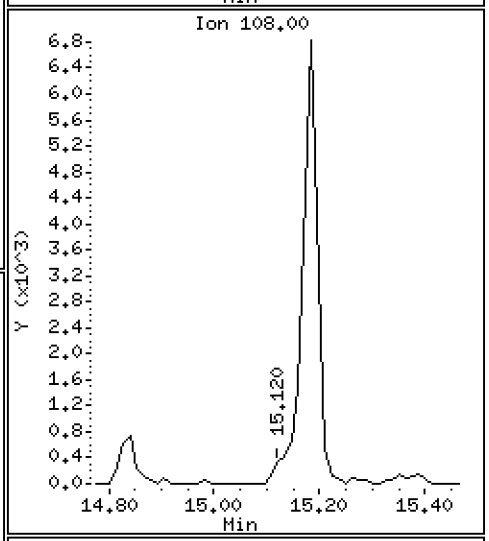


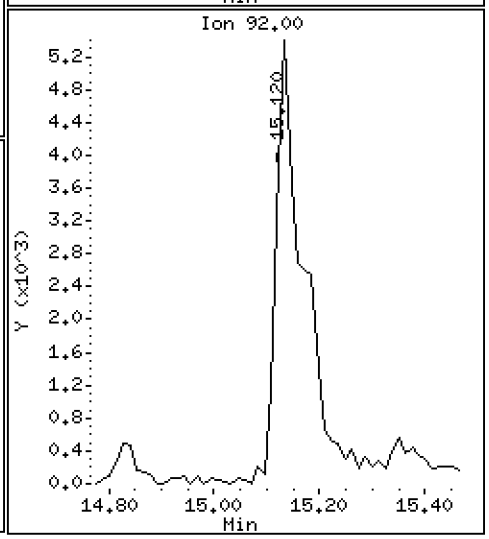












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

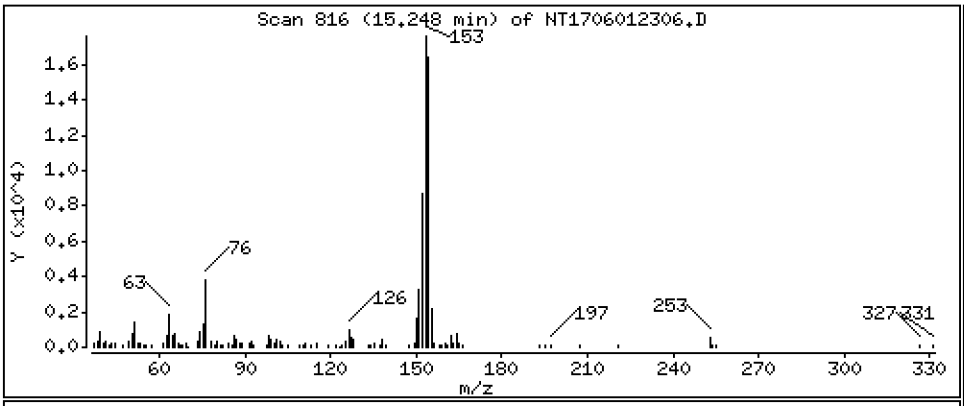
Operator: VTS

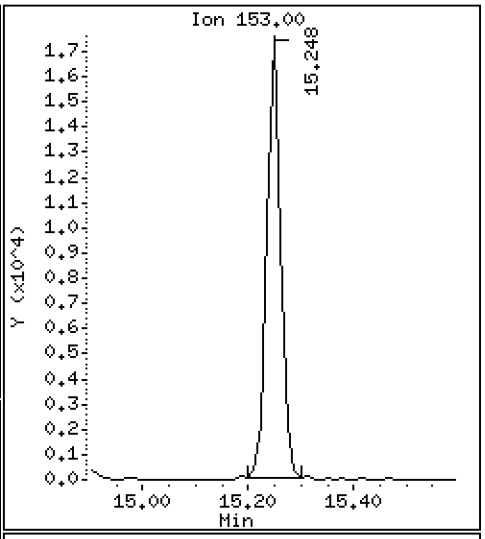
Column phase: ZB-5msi

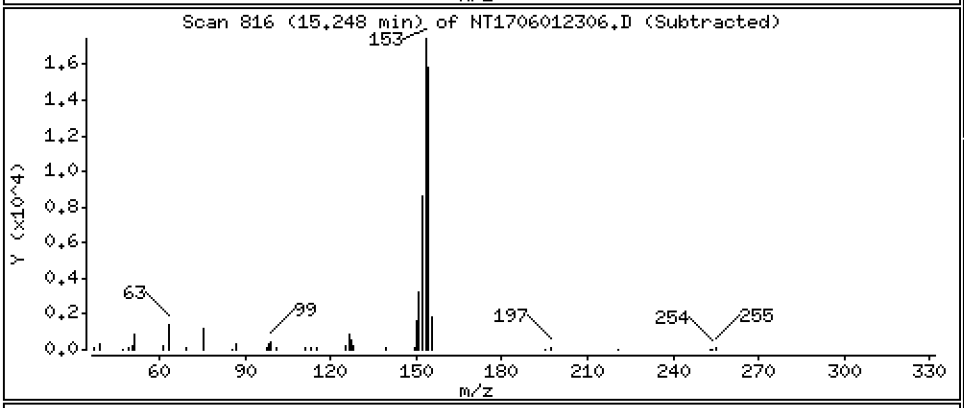
Column diameter: 0.25

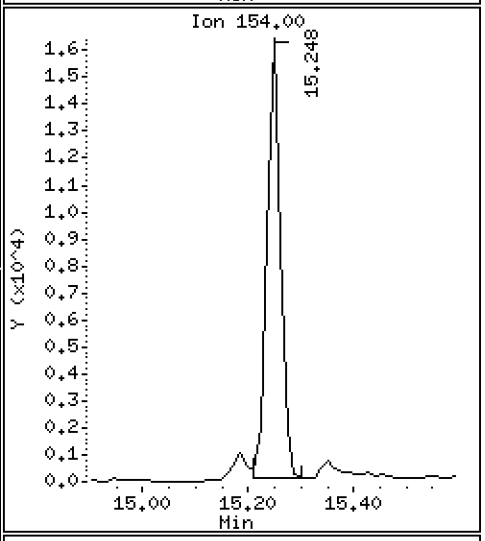
44 Acenaphthene

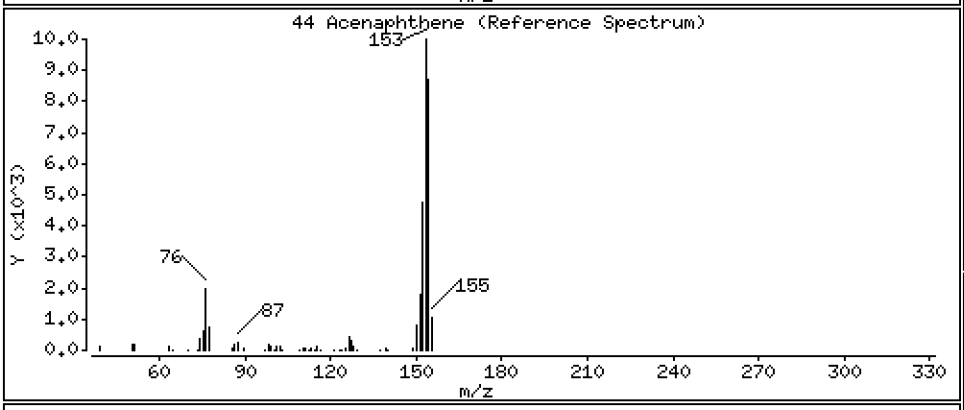
Concentration: 0.1990 ug/mL

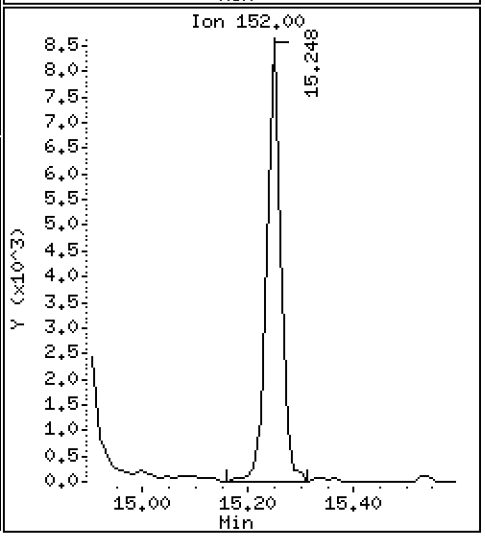


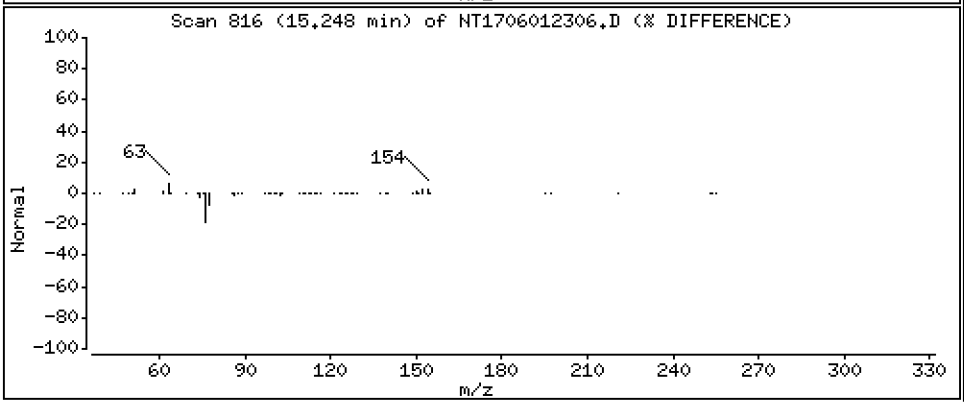












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

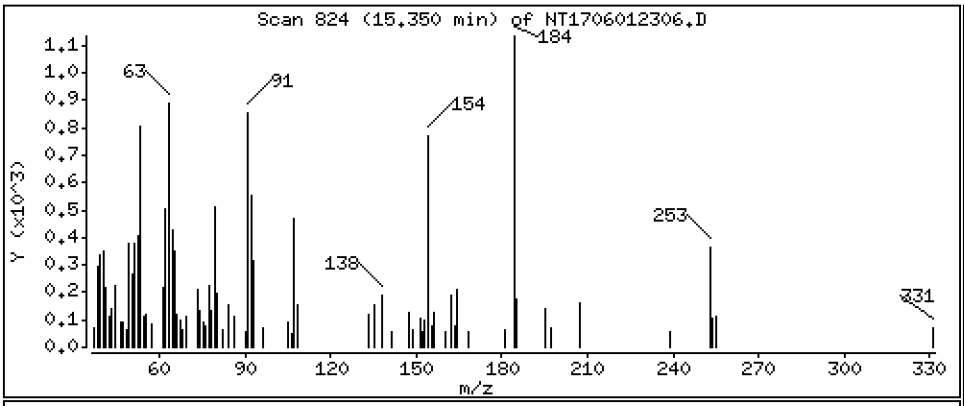
Operator: VTS

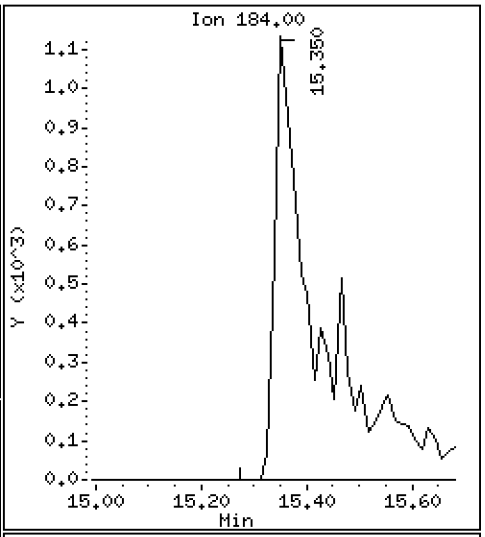
Column phase: ZB-5msi

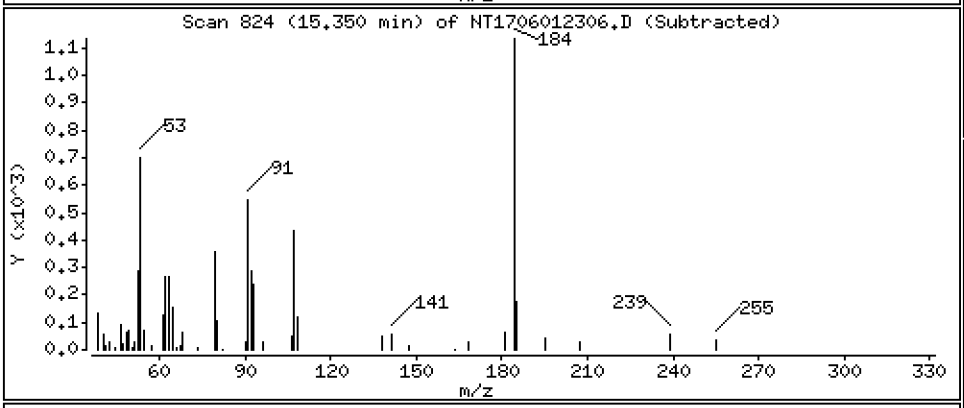
Column diameter: 0.25

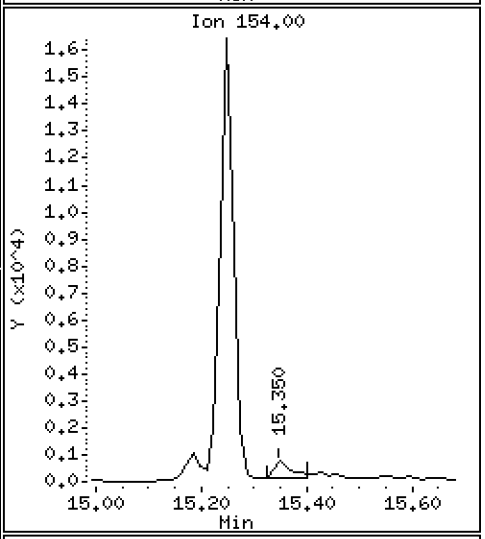
45 2,4-Dinitrophenol

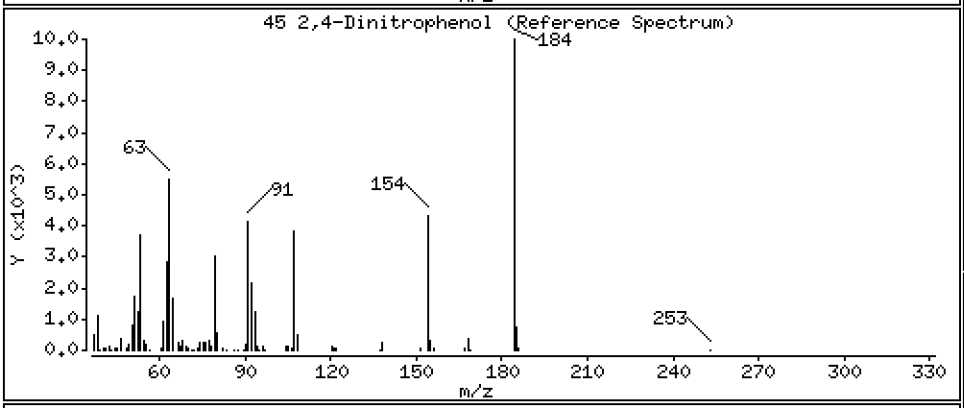
Concentration: 0.2702 ug/mL

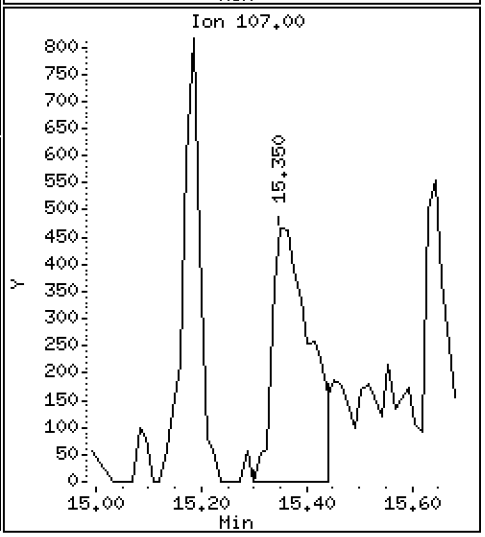


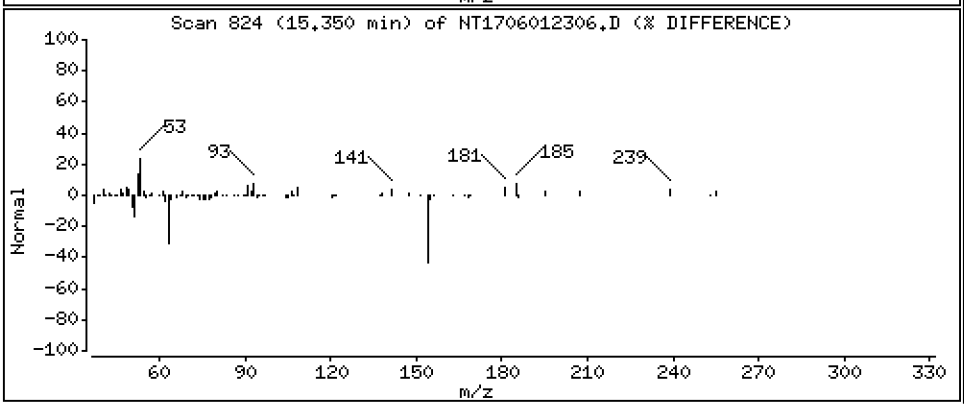












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

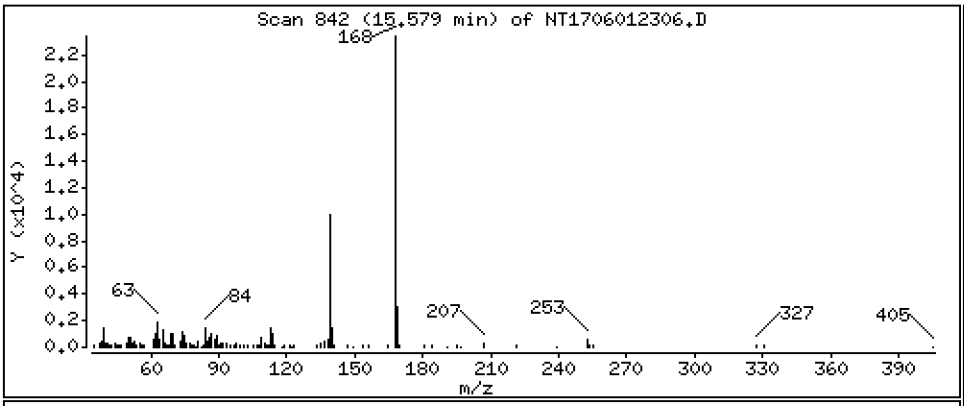
Operator: VTS

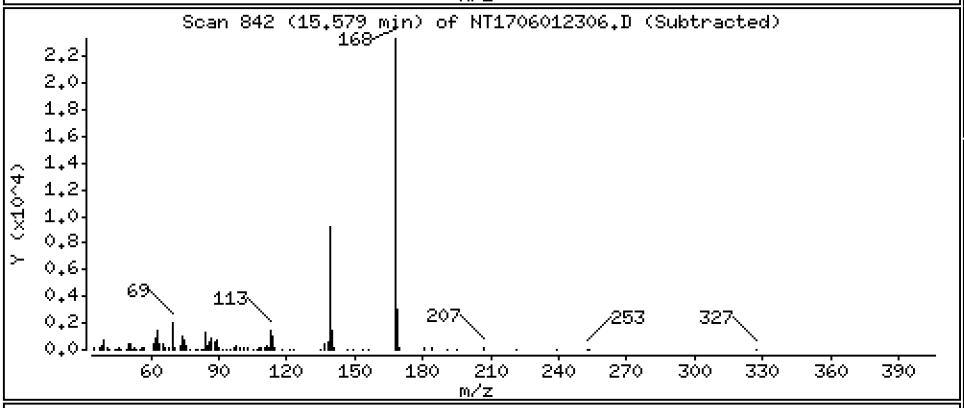
Column phase: ZB-5msi

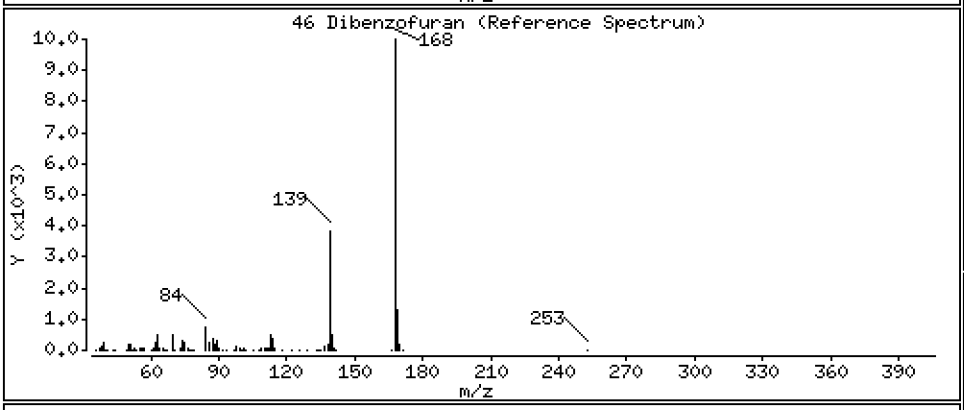
Column diameter: 0.25

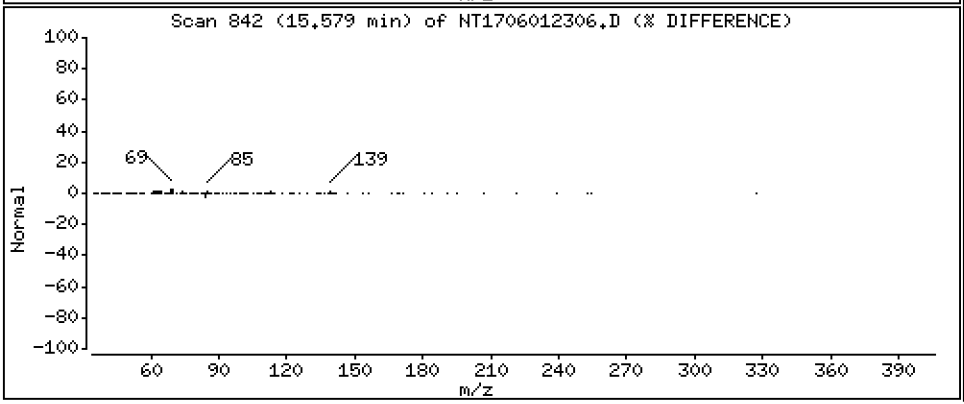
46 Dibenzofuran

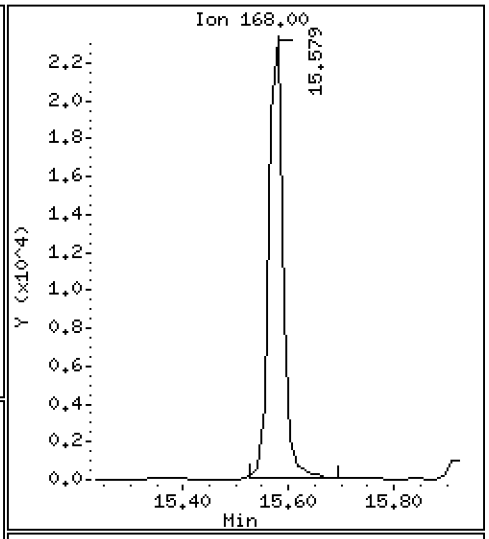
Concentration: 0.2032 ug/mL

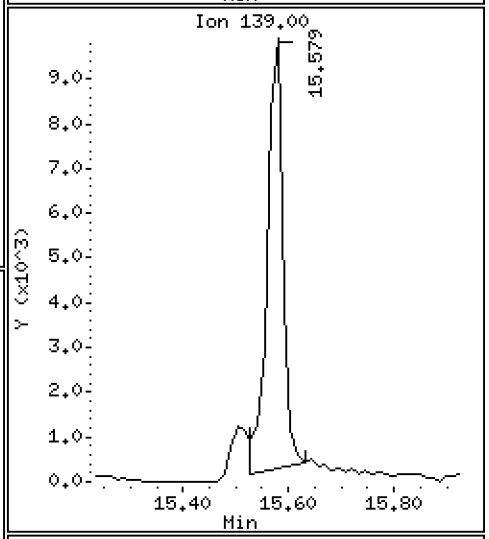


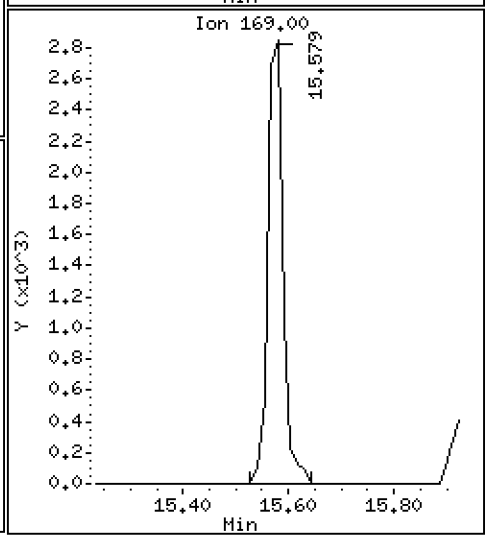












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

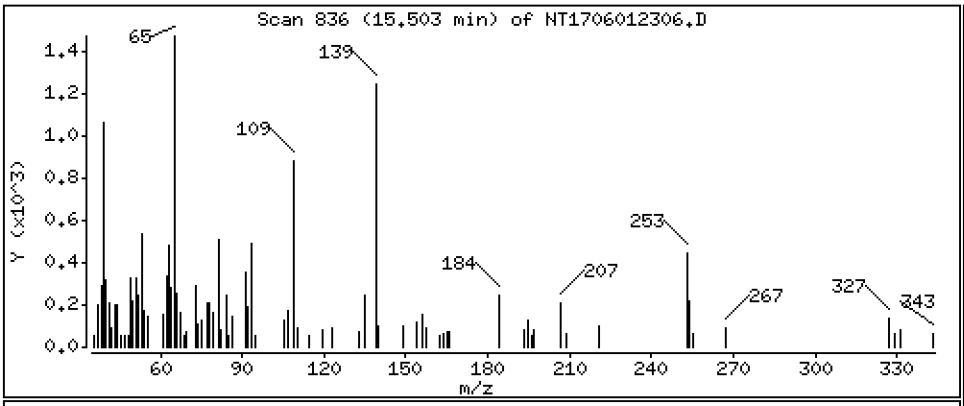
Operator: VTS

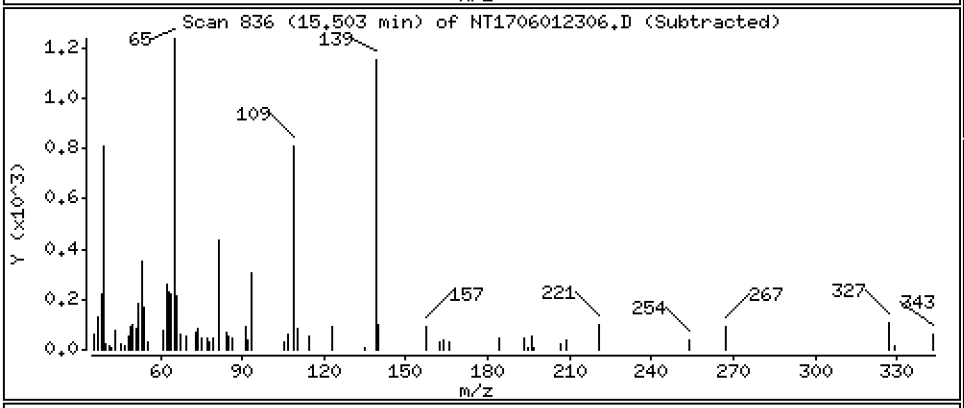
Column phase: ZB-5msi

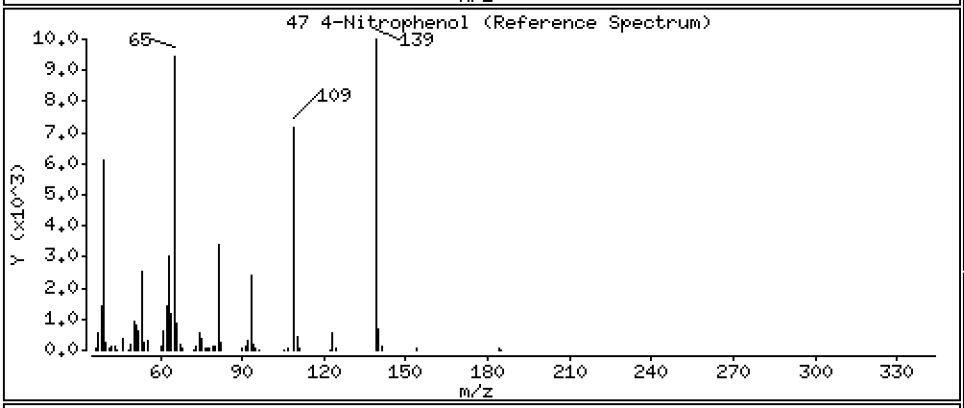
Column diameter: 0.25

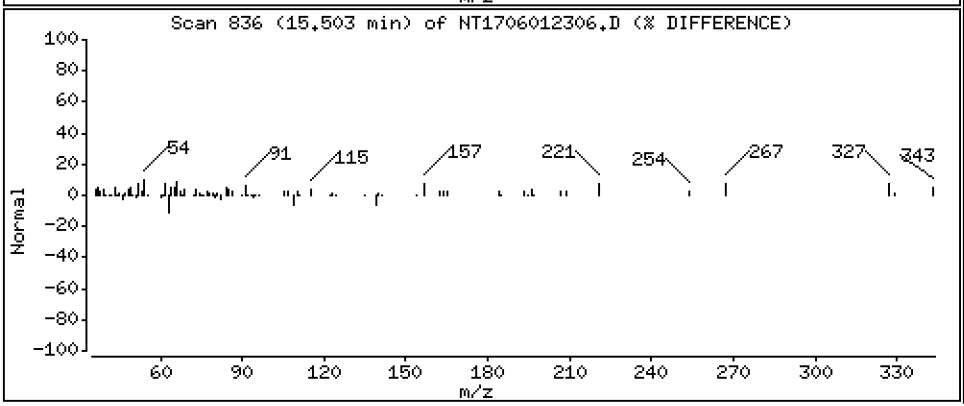
47 4-Nitrophenol

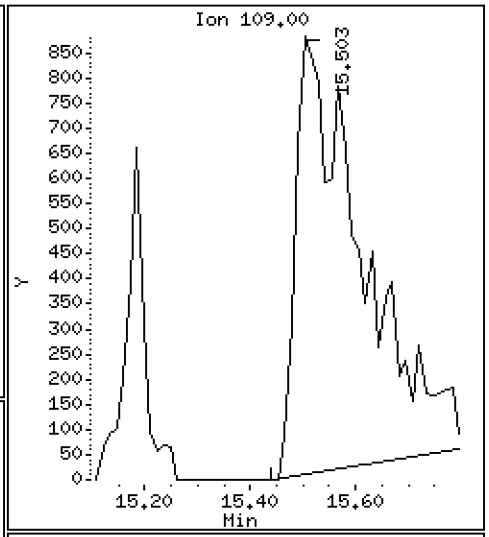
Concentration: 0.3105 ug/mL

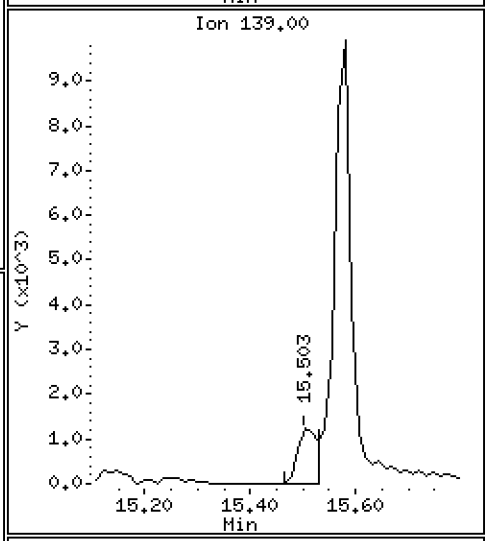


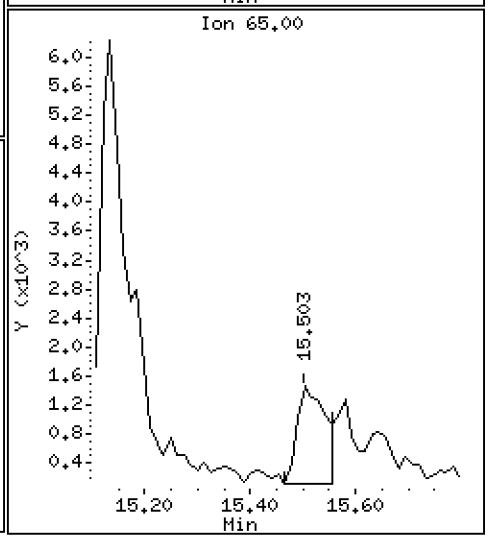












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

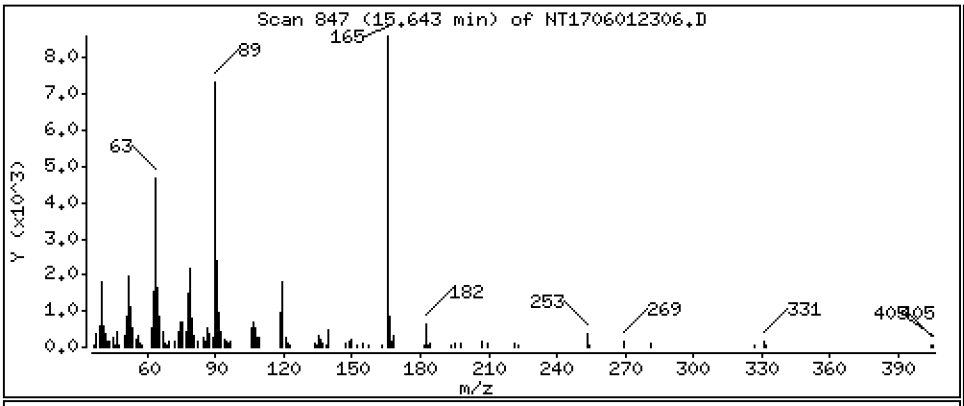
Operator: VTS

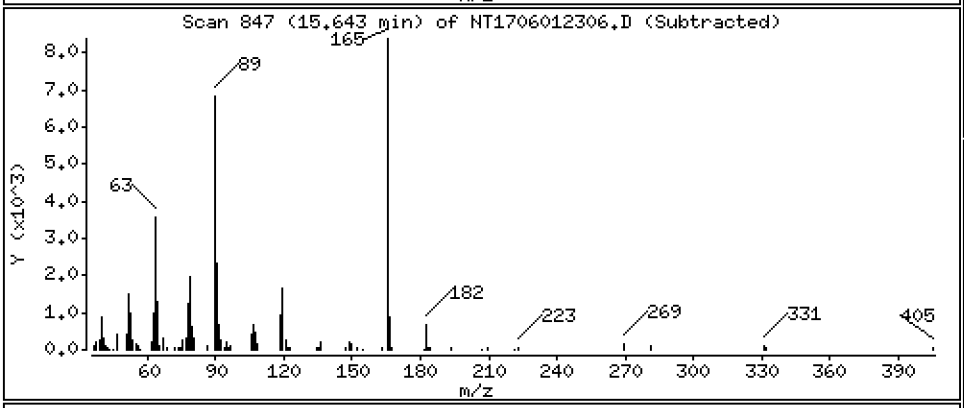
Column phase: ZB-5msi

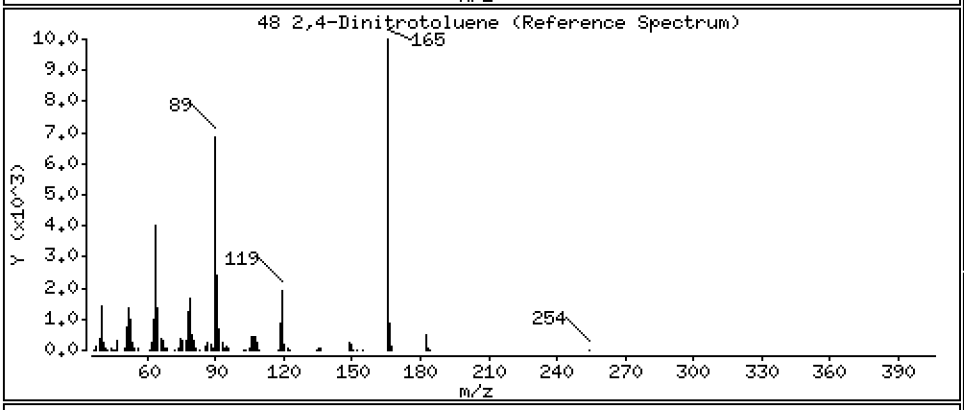
Column diameter: 0.25

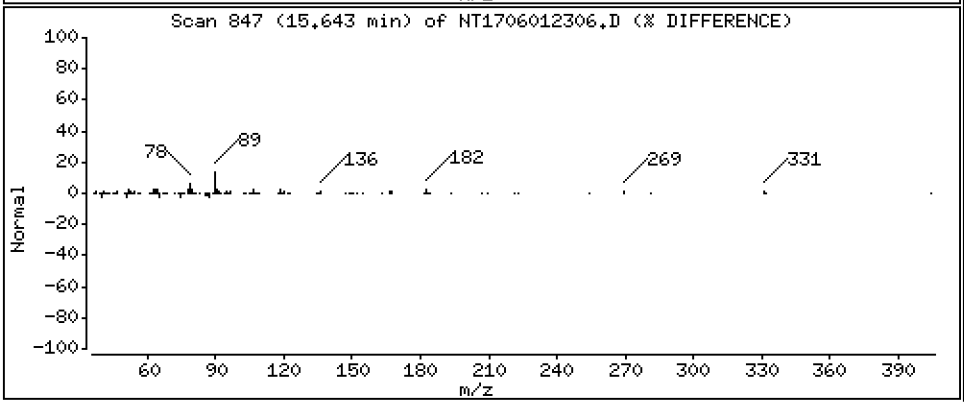
48 2,4-Dinitrotoluene

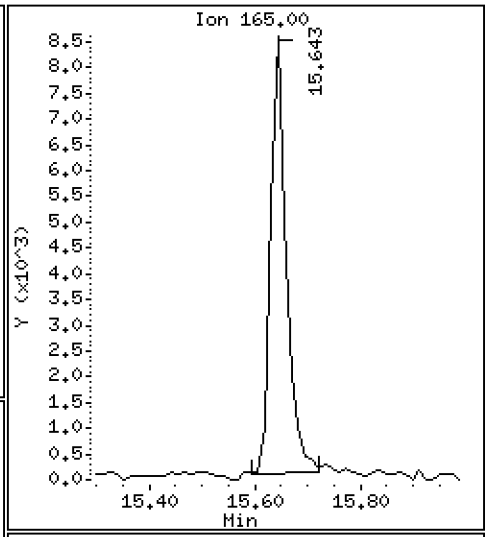
Concentration: 0.3334 ug/mL

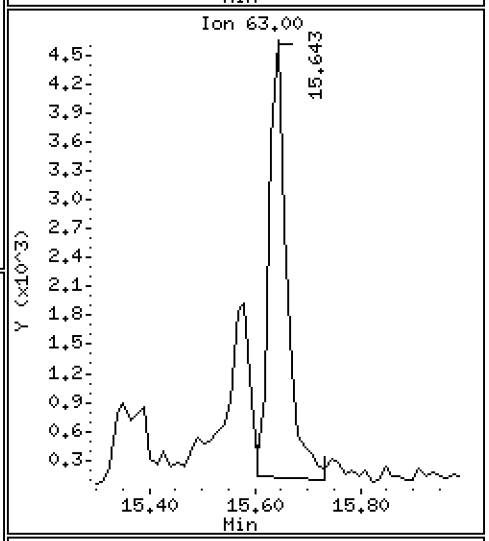


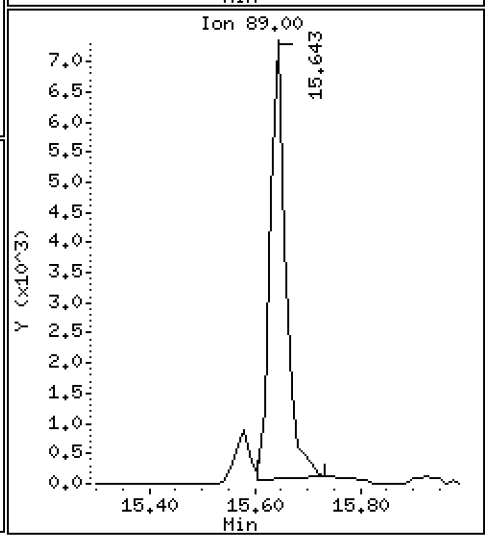












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

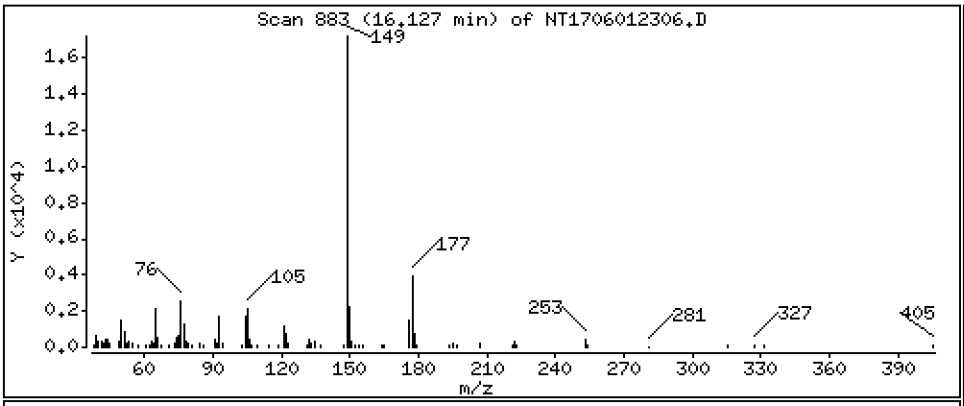
Operator: VTS

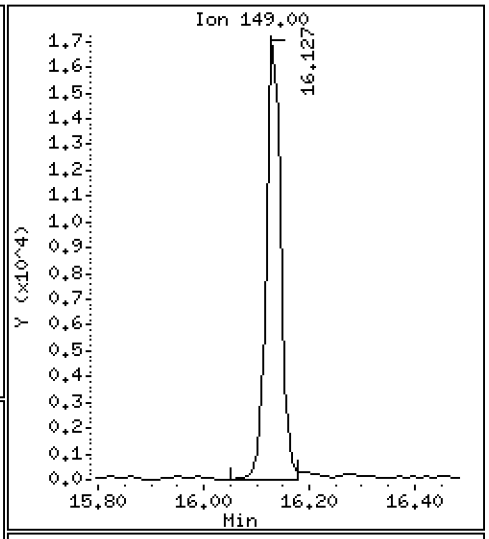
Column phase: ZB-5msi

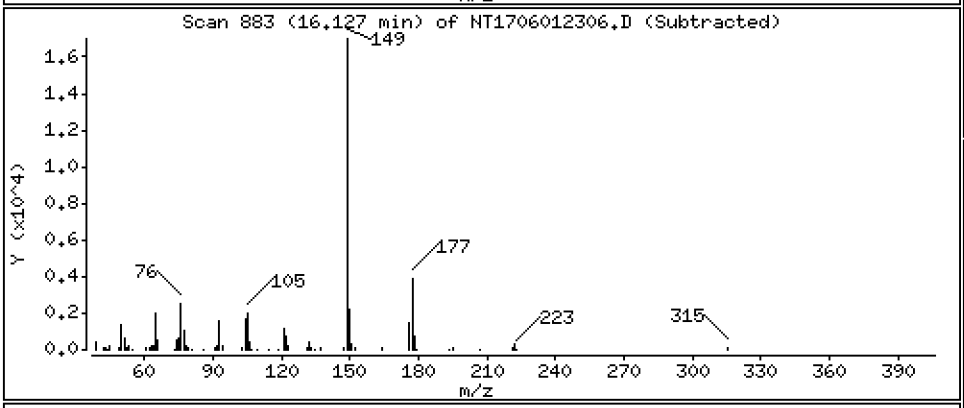
Column diameter: 0.25

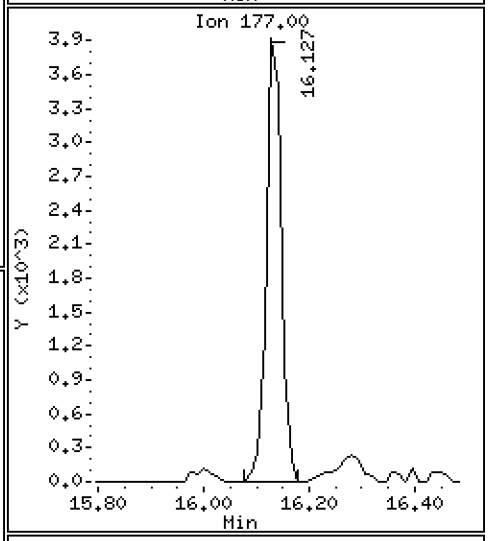
50 Diethylphthalate

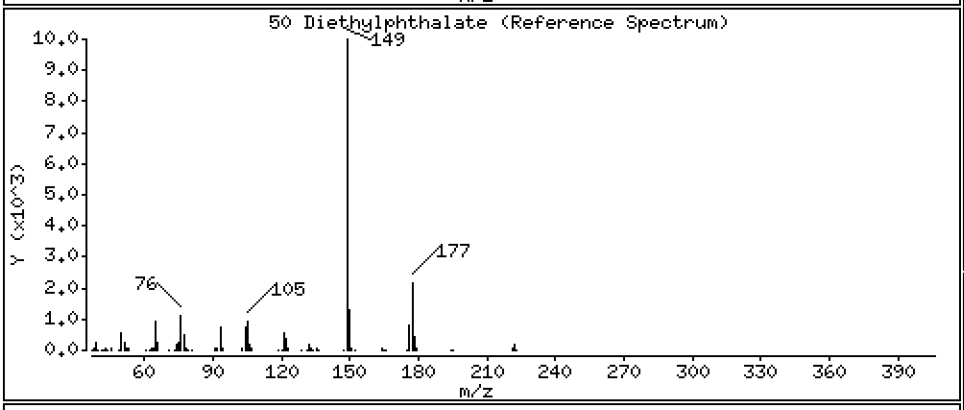
Concentration: 0.1966 ug/mL

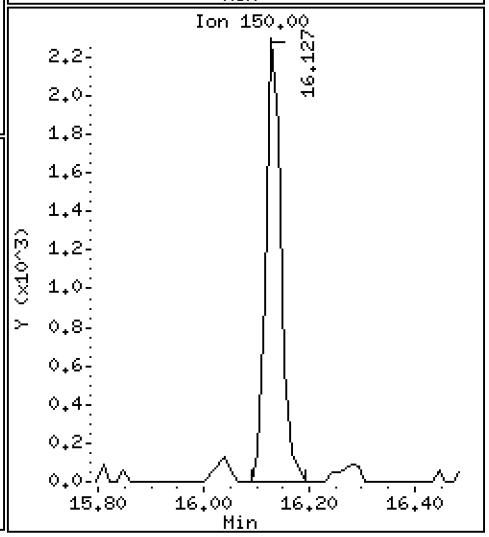


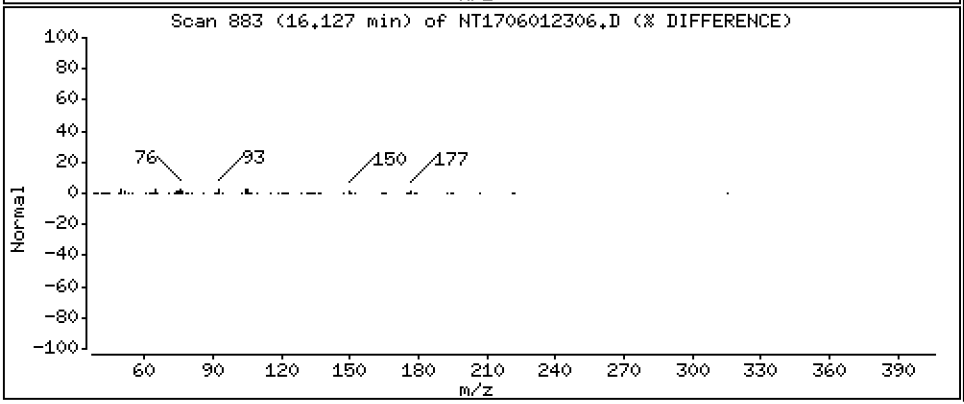












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

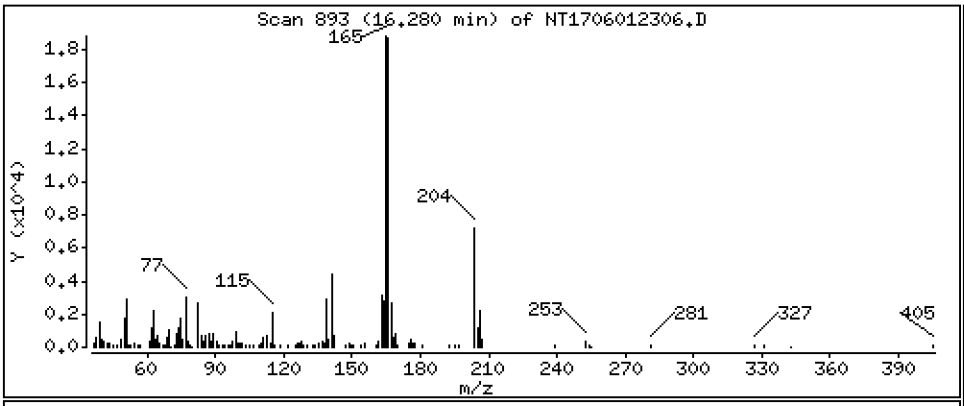
Operator: VTS

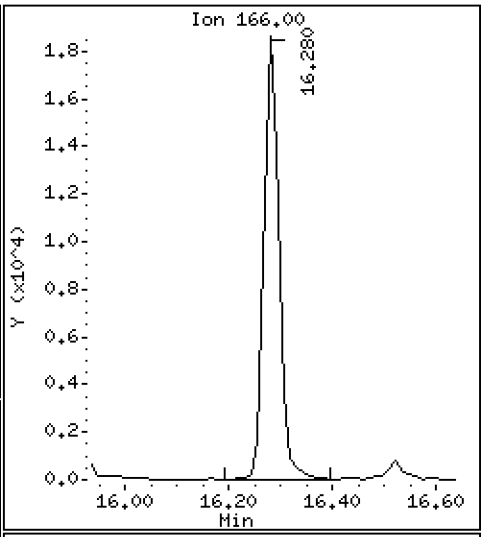
Column phase: ZB-5msi

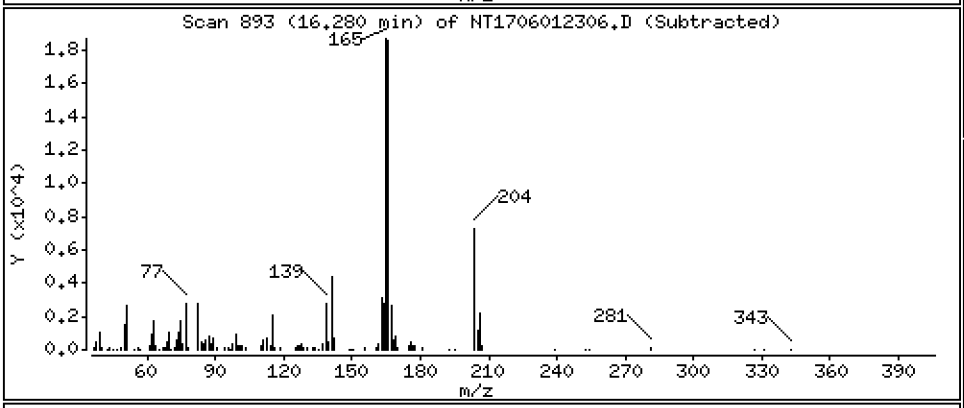
Column diameter: 0.25

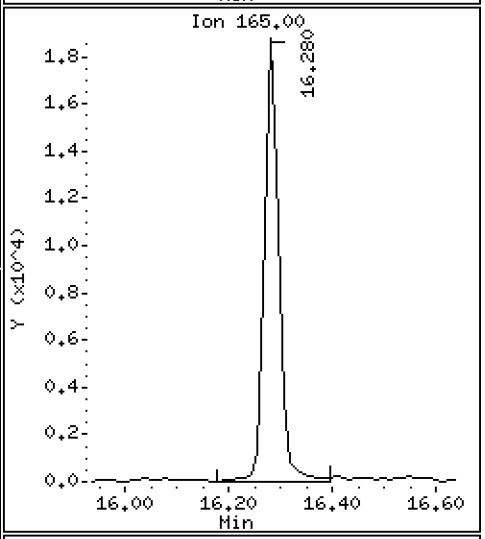
49 Fluorene

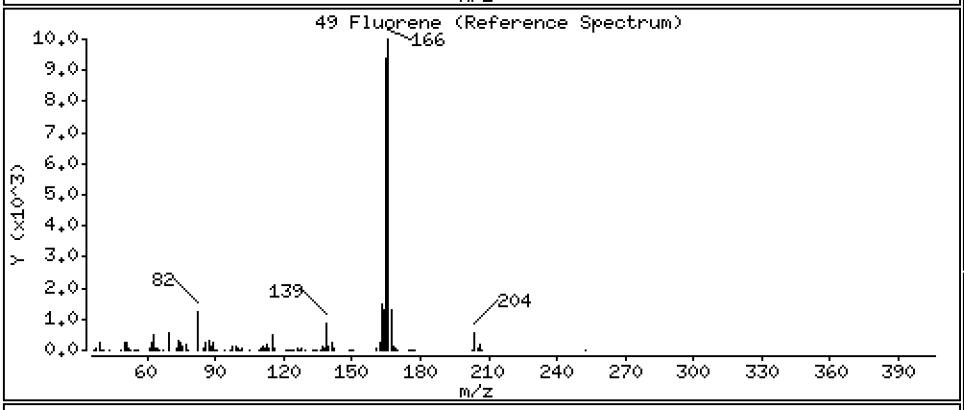
Concentration: 0.2035 ug/mL

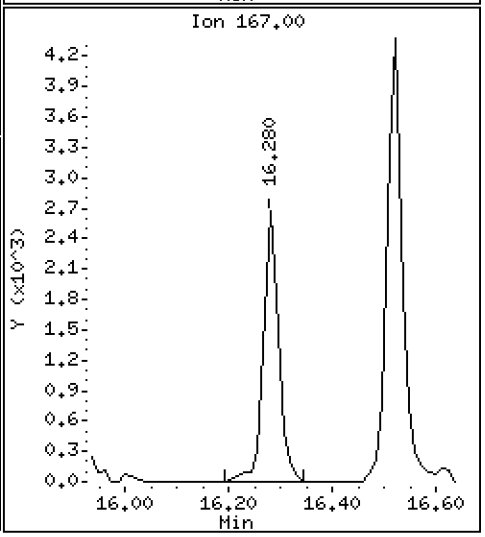


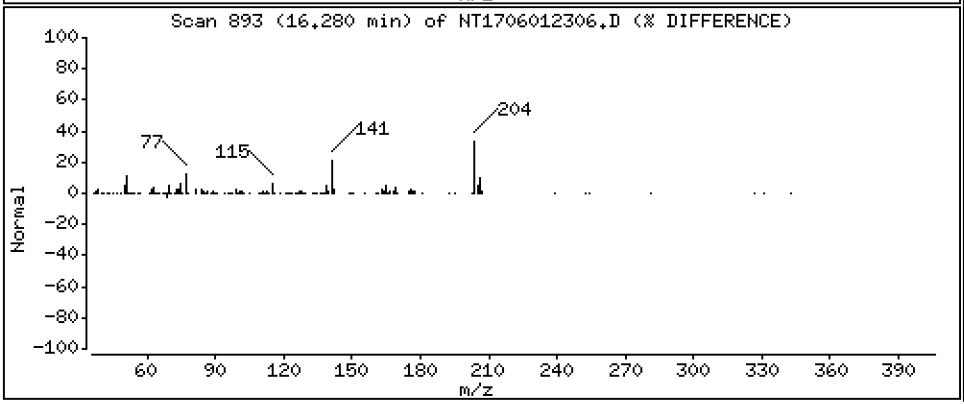












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

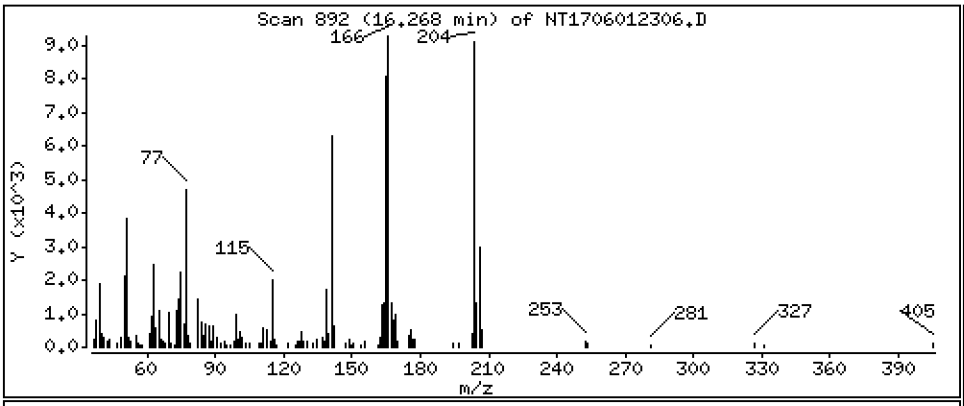
Operator: VTS

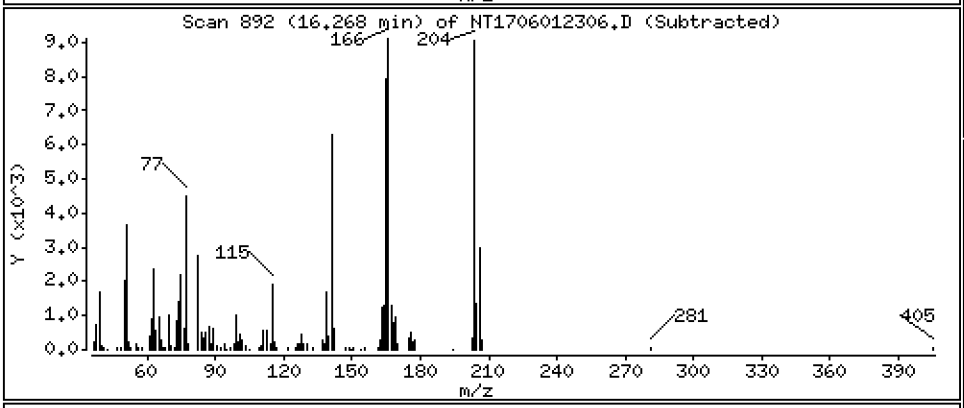
Column phase: ZB-5msi

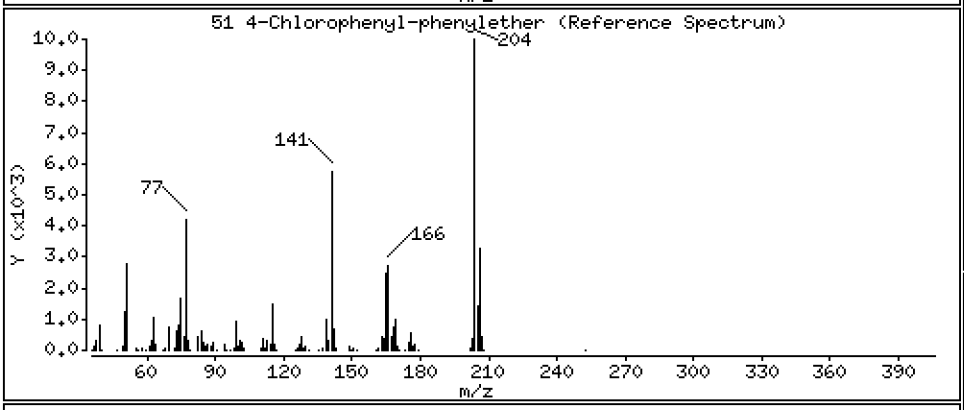
Column diameter: 0.25

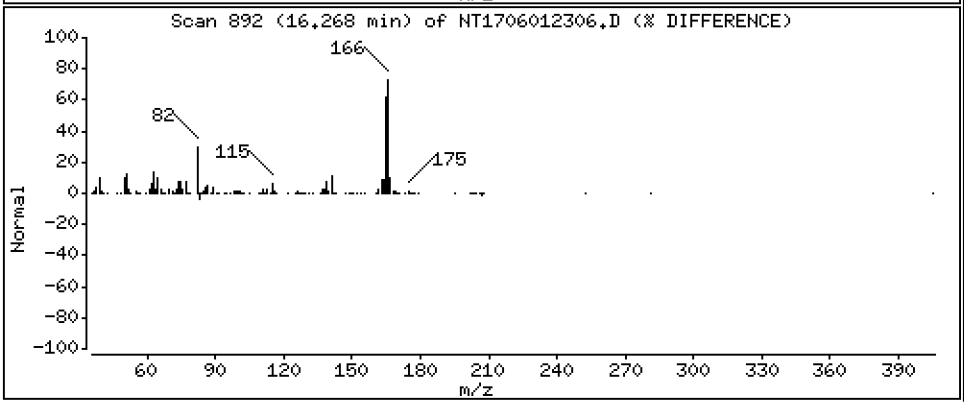
51 4-Chlorophenyl-phenylether

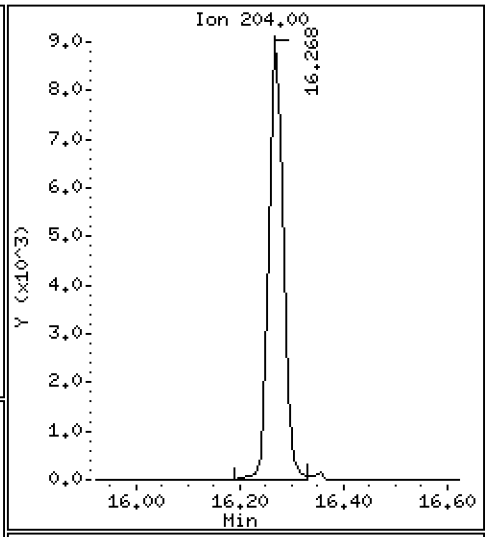
Concentration: 0.2196 ug/mL

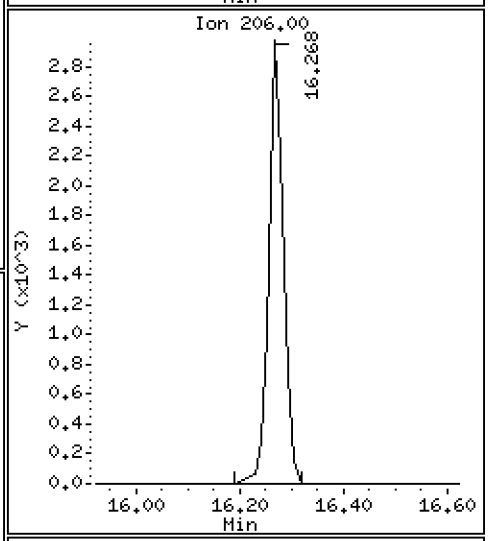


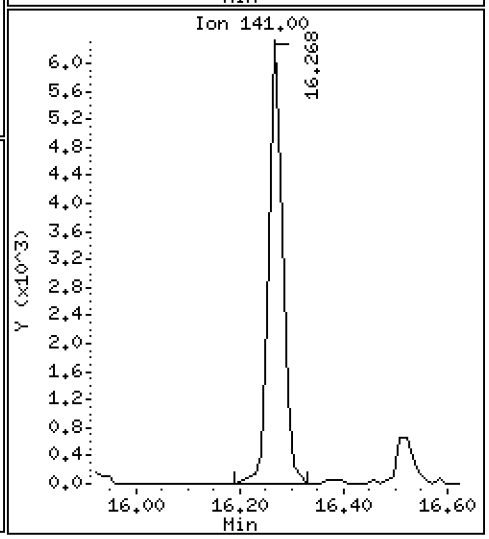












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

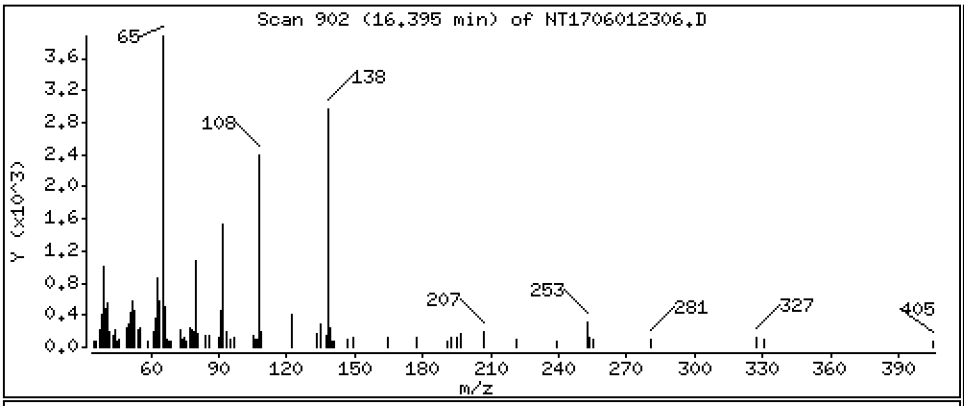
Operator: VTS

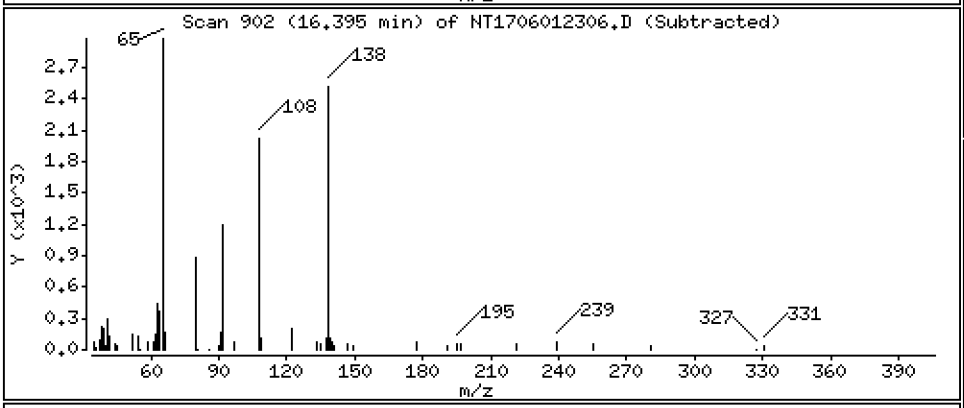
Column phase: ZB-5msi

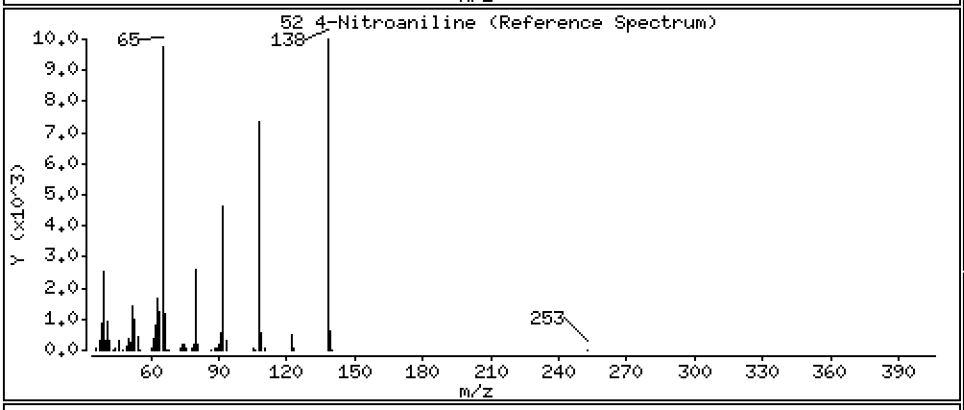
Column diameter: 0.25

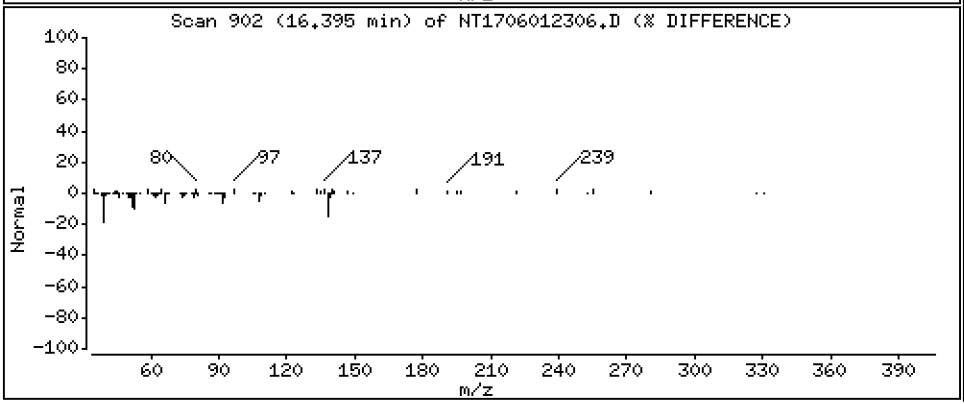
52 4-Nitroaniline

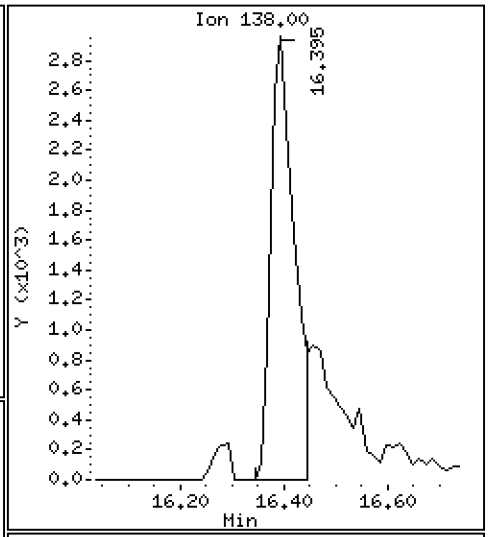
Concentration: 0.2635 ug/mL

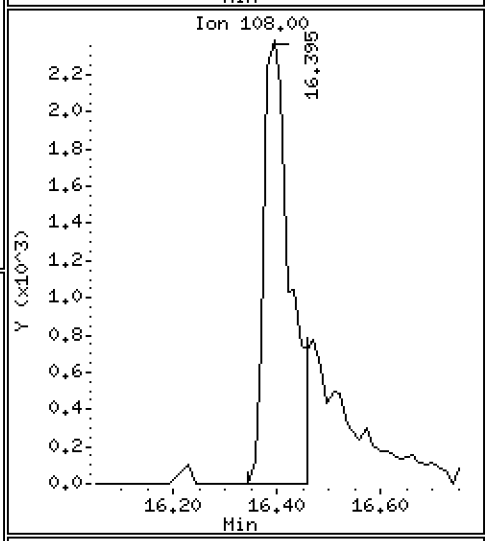


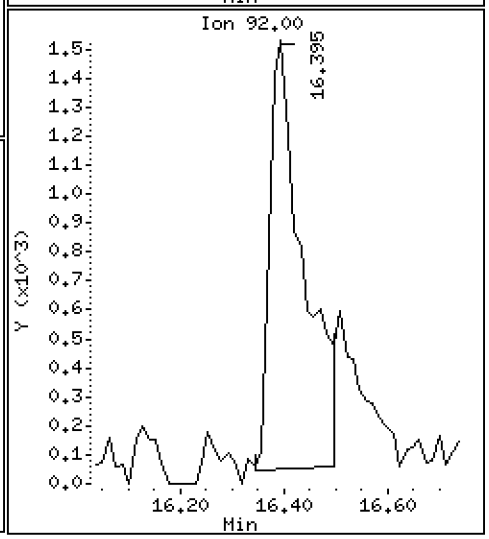












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

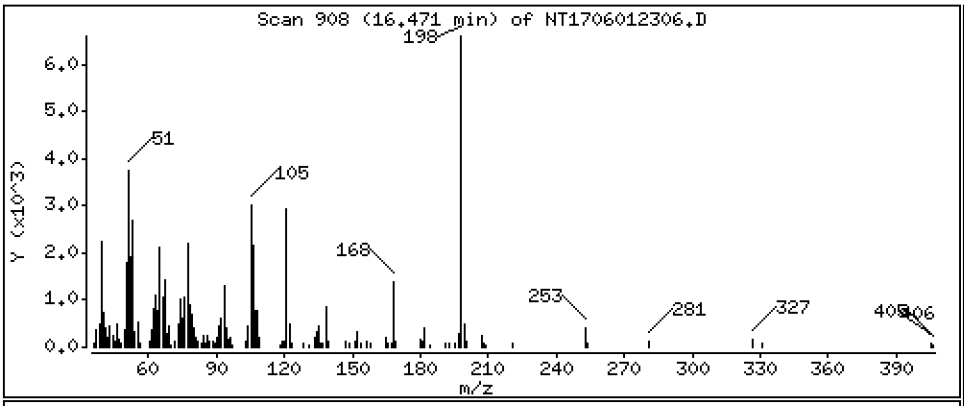
Operator: VTS

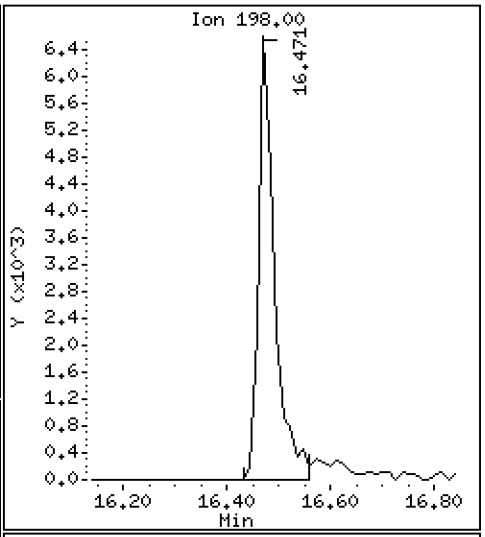
Column phase: ZB-5msi

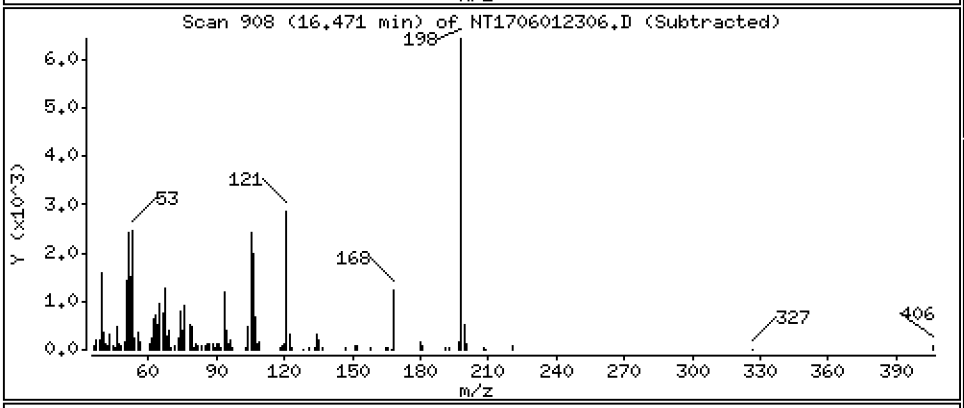
Column diameter: 0.25

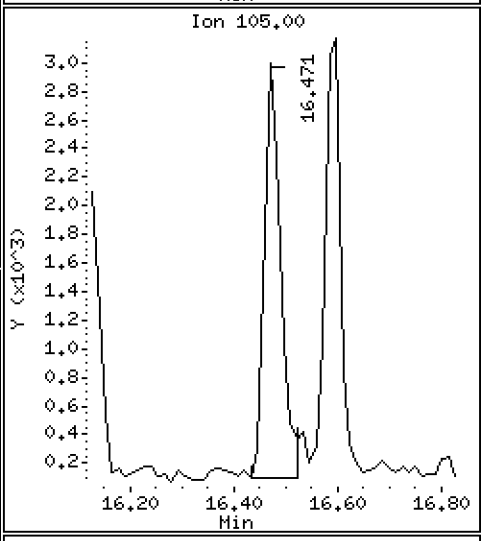
53 4,6-Dinitro-2-methylphenol

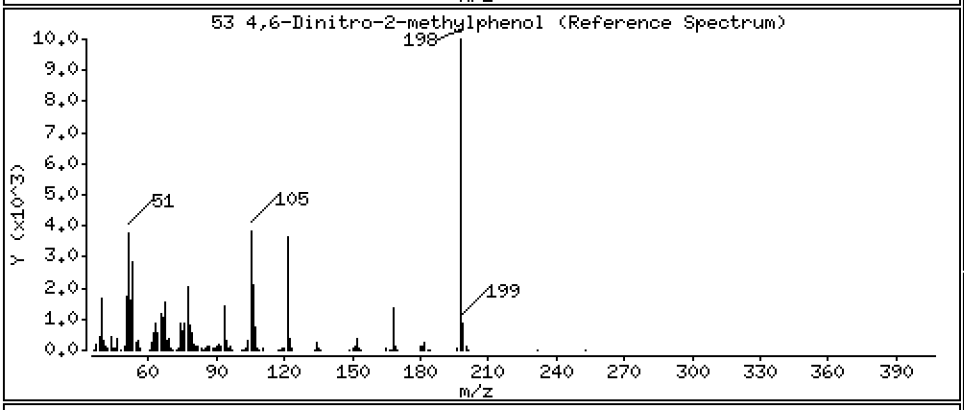
Concentration: 0.3975 ug/mL

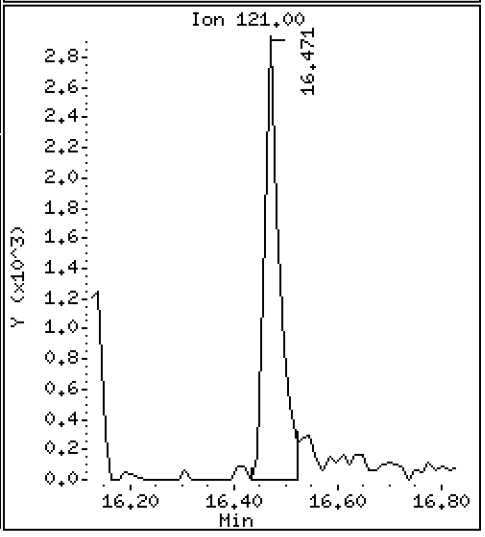


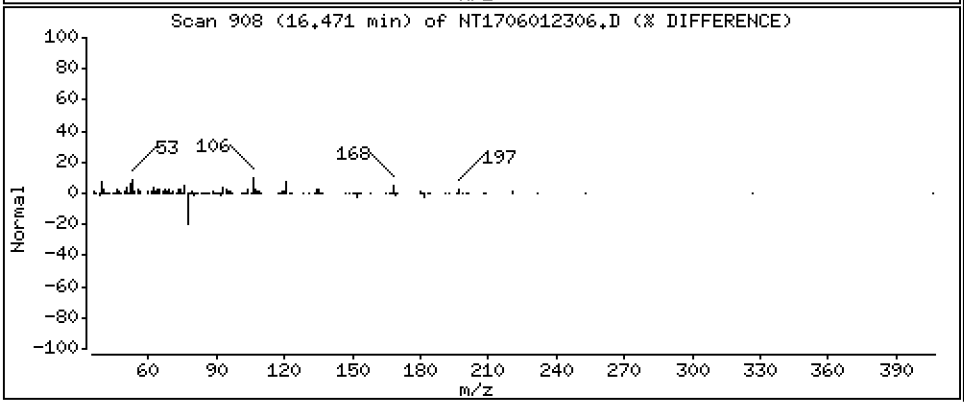












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

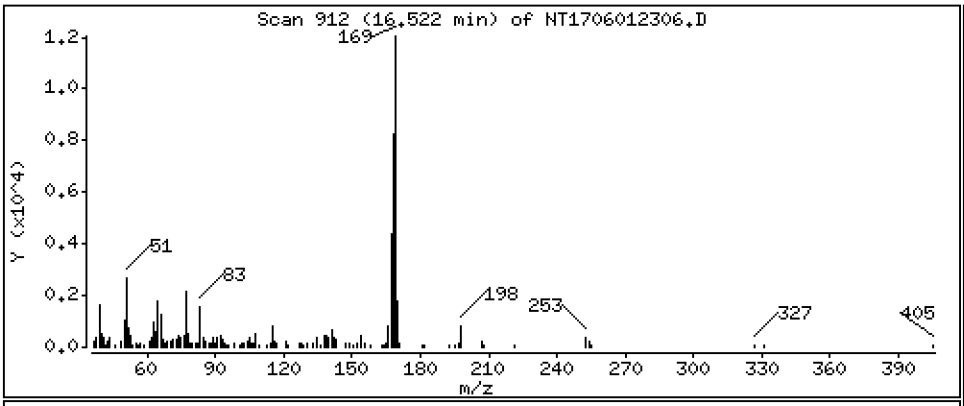
Operator: VTS

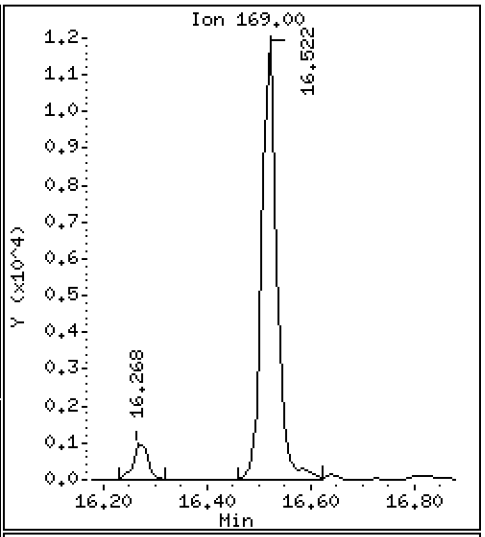
Column phase: ZB-5msi

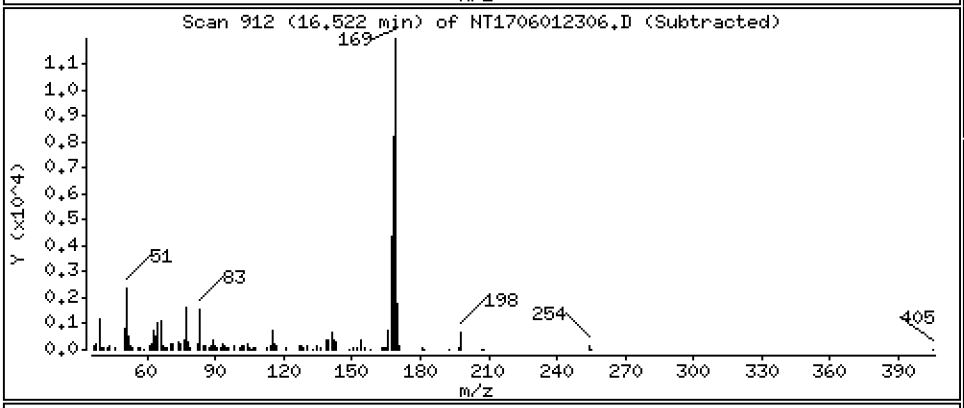
Column diameter: 0.25

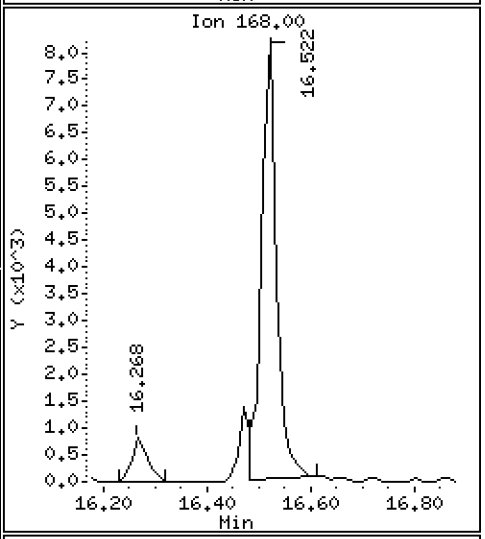
54 N-Nitrosodiphenylamine

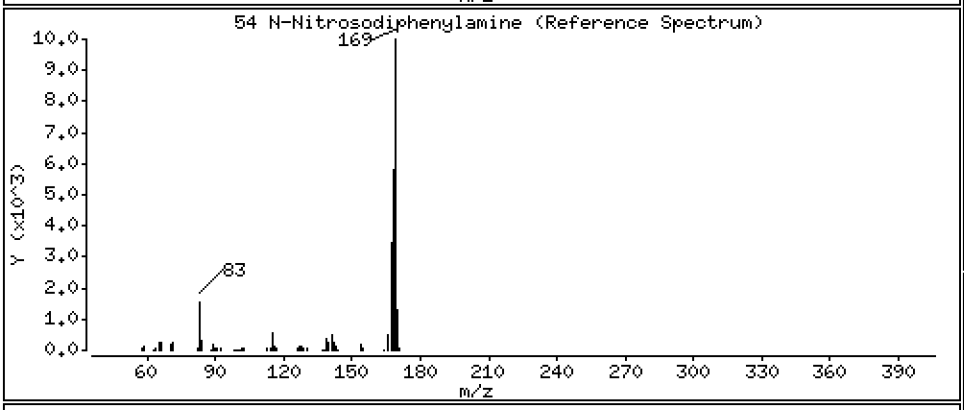
Concentration: 0.1939 ug/mL

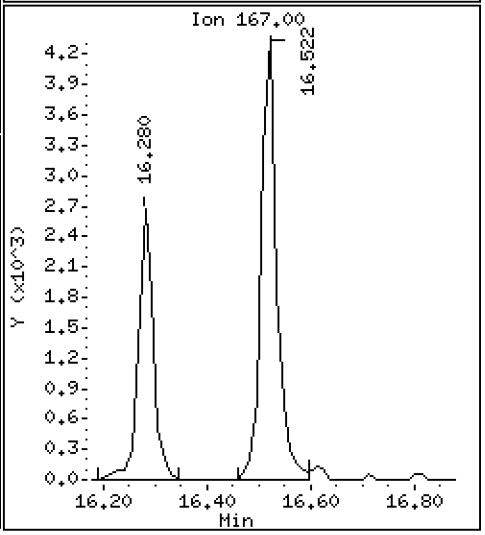


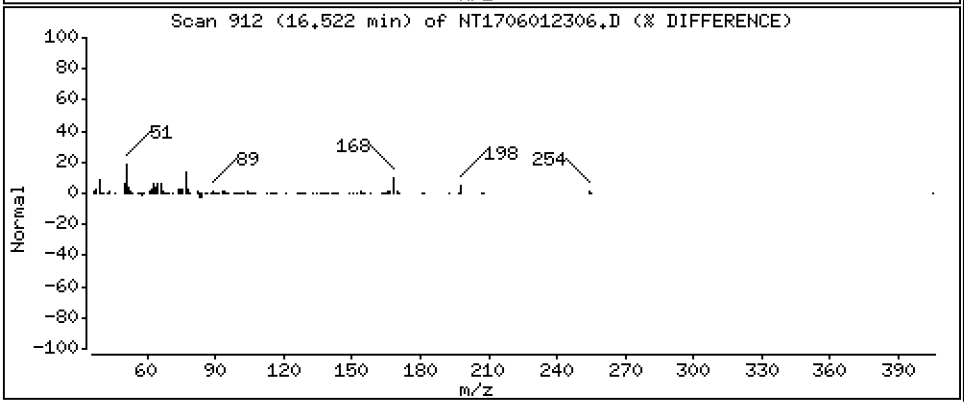












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

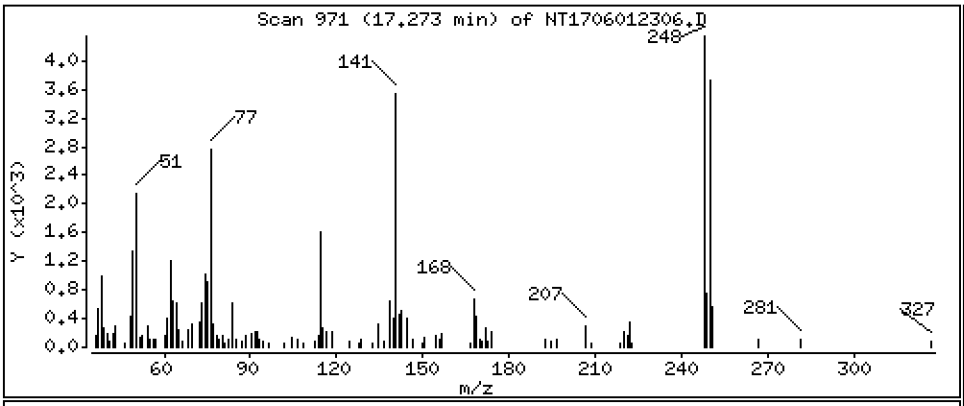
Operator: VTS

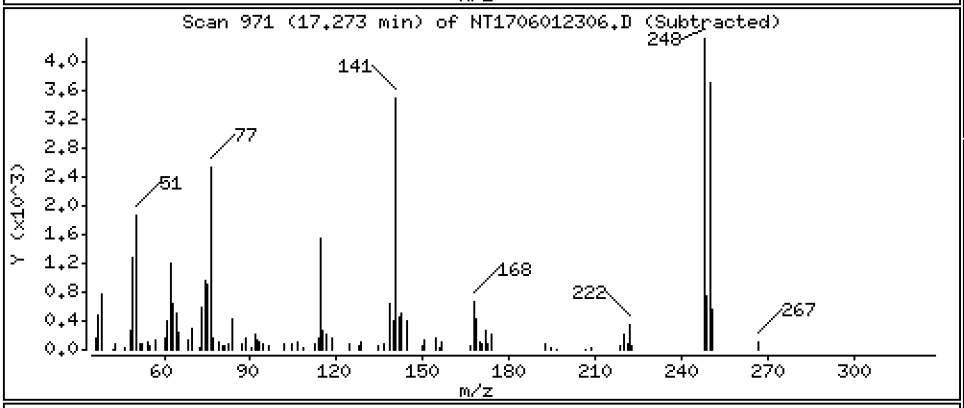
Column phase: ZB-5msi

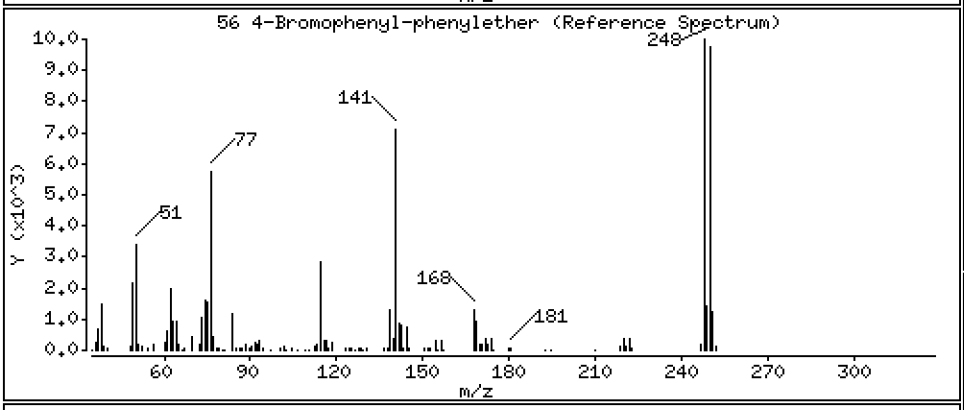
Column diameter: 0.25

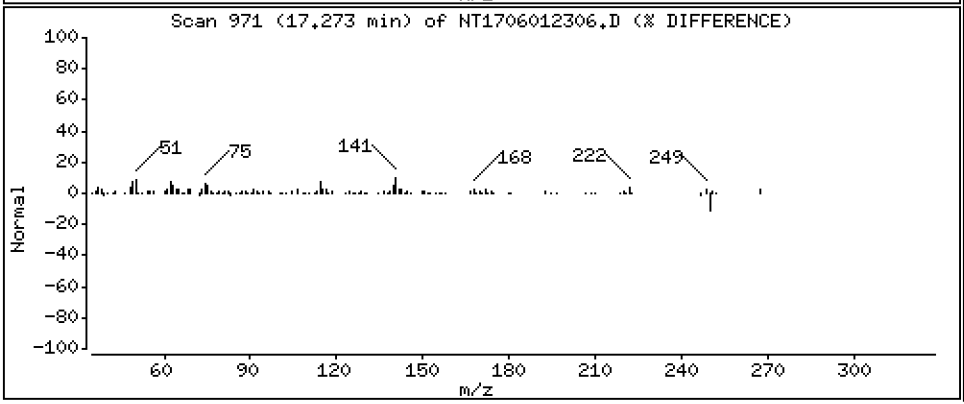
56 4-Bromophenyl-phenylether

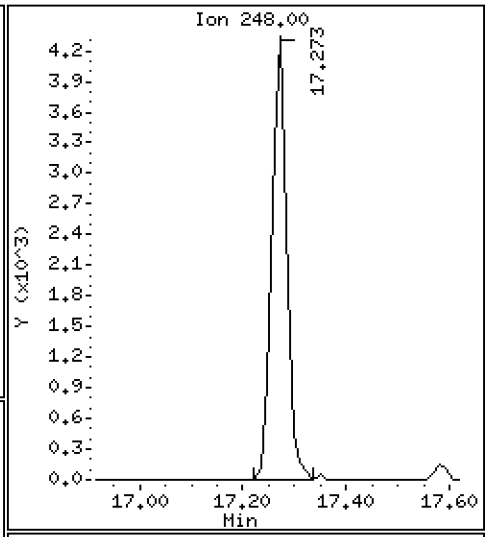
Concentration: 0.1972 ug/mL

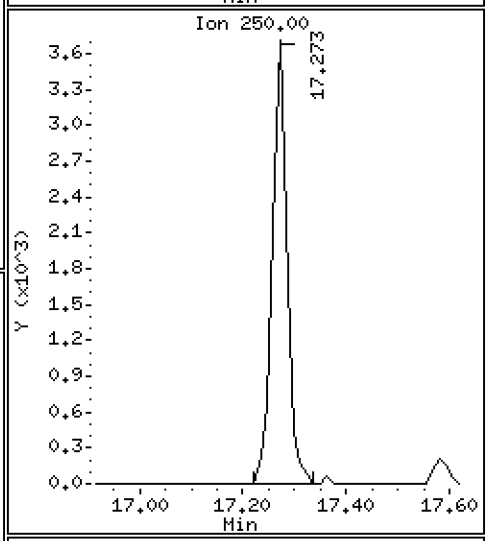


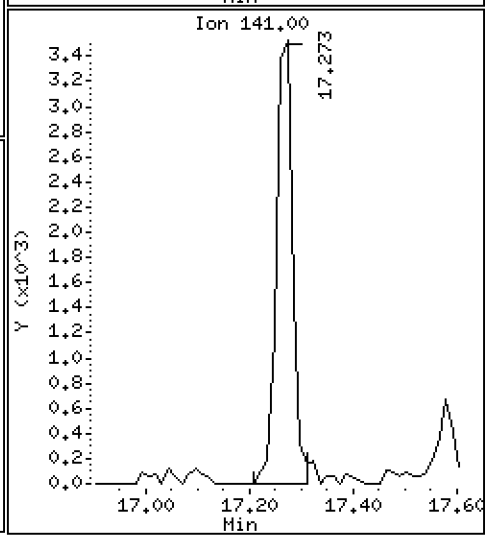












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

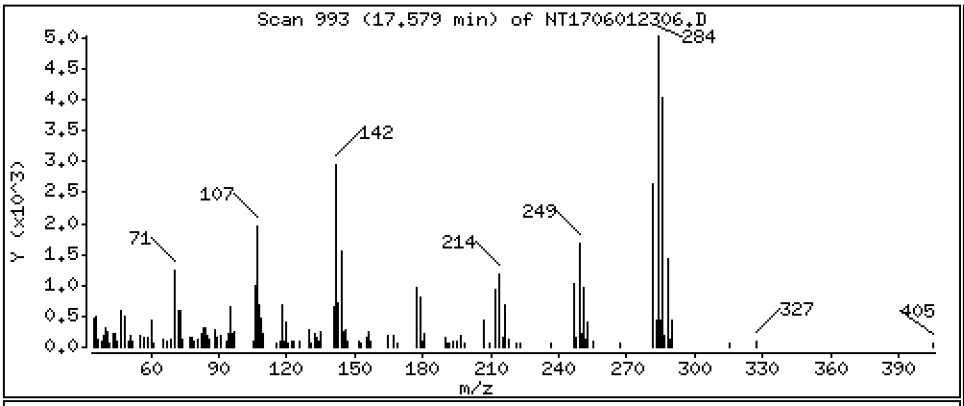
Operator: VTS

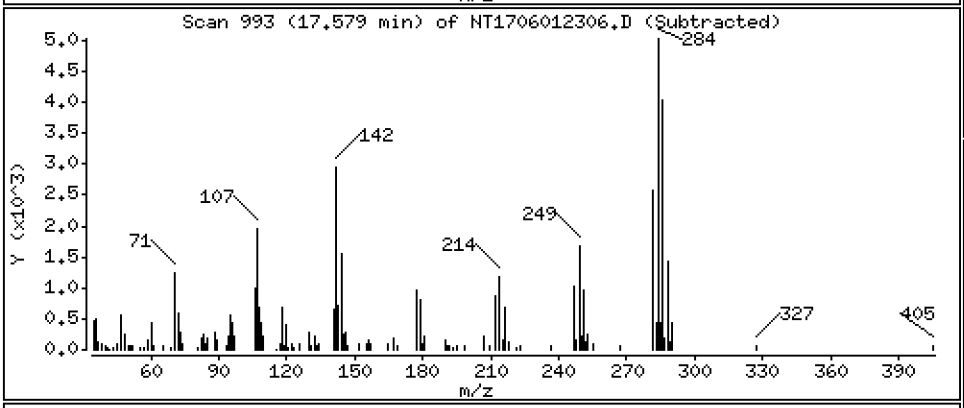
Column phase: ZB-5msi

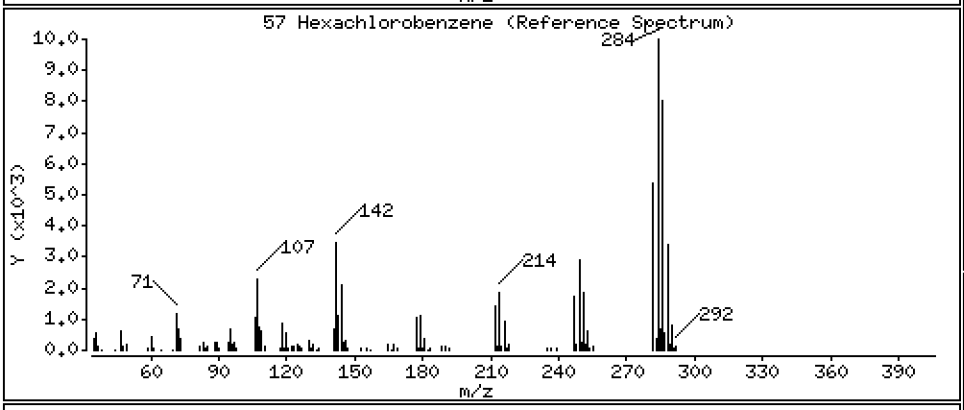
Column diameter: 0.25

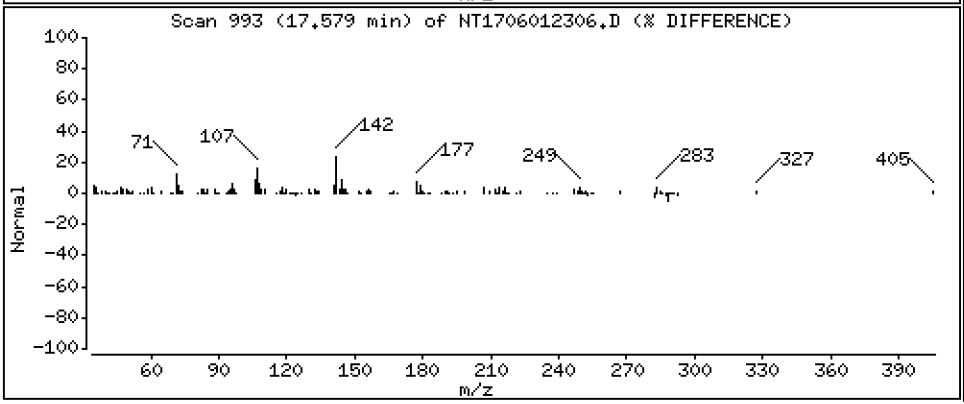
57 Hexachlorobenzene

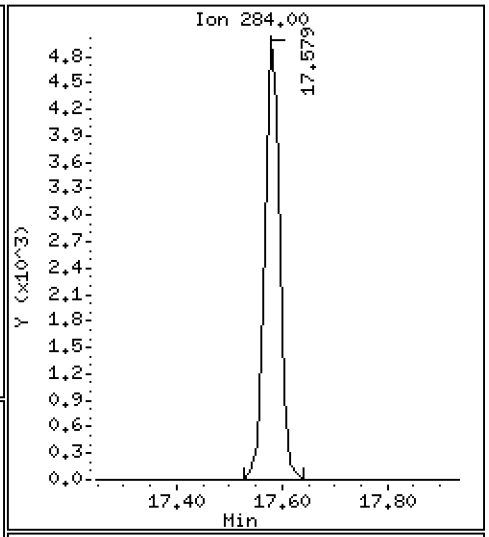
Concentration: 0.2236 ug/mL

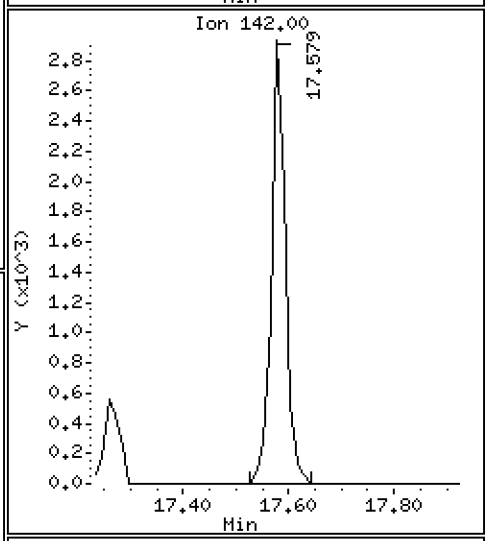


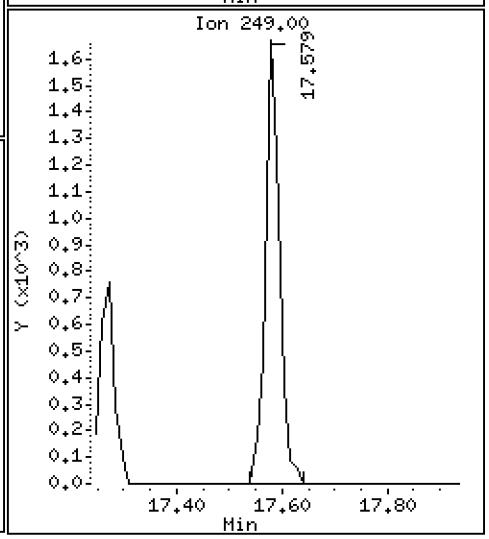












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

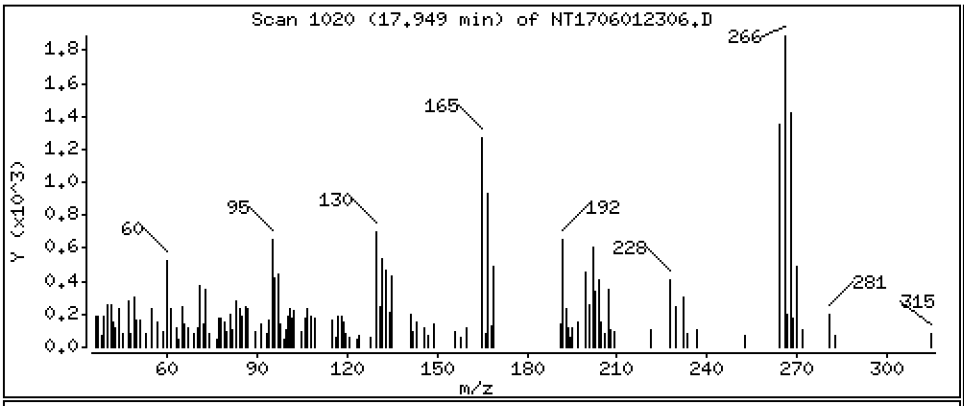
Operator: VTS

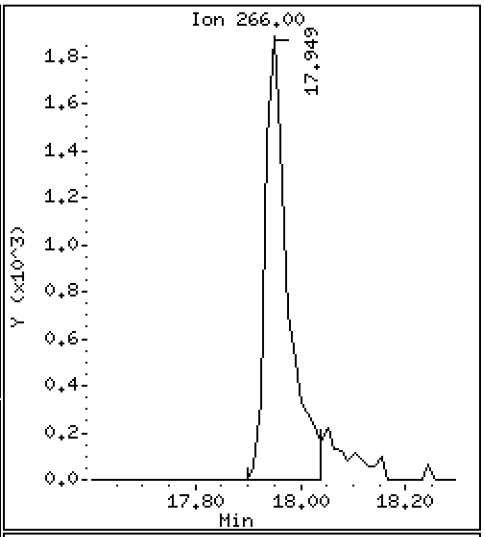
Column phase: ZB-5msi

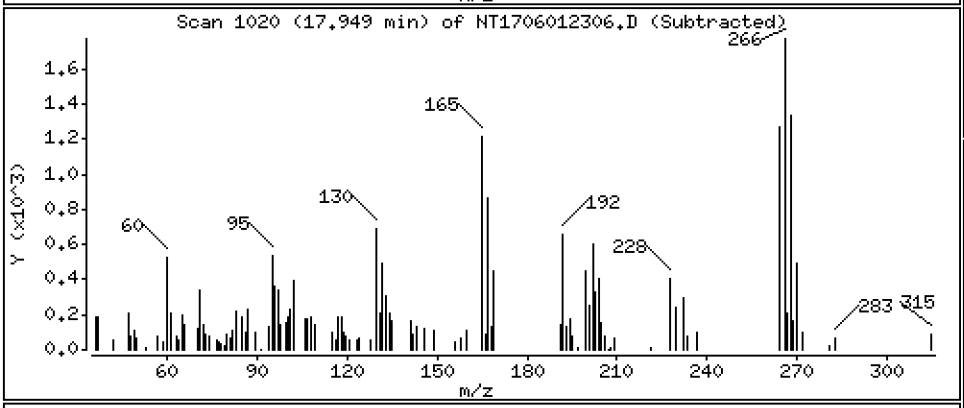
Column diameter: 0.25

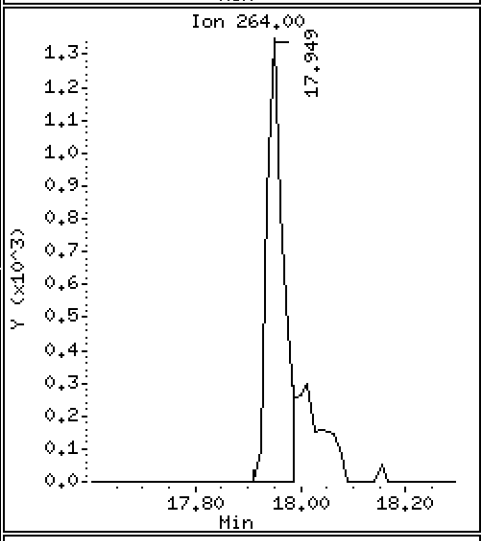
58 Pentachlorophenol

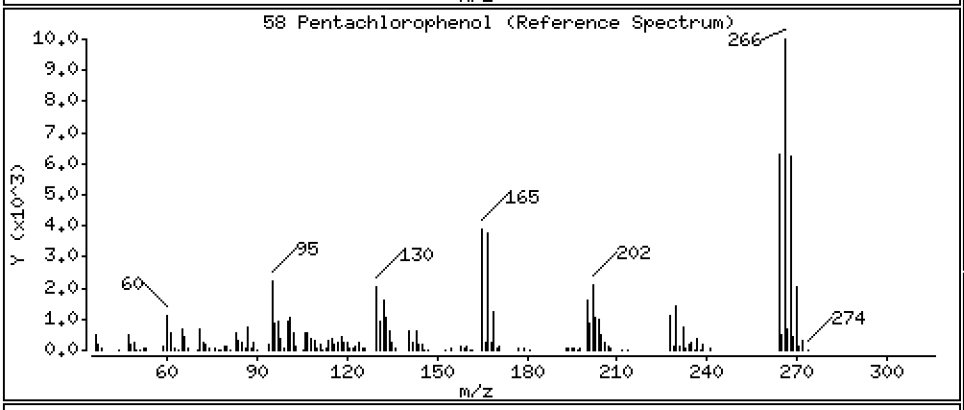
Concentration: 0.2209 ug/mL

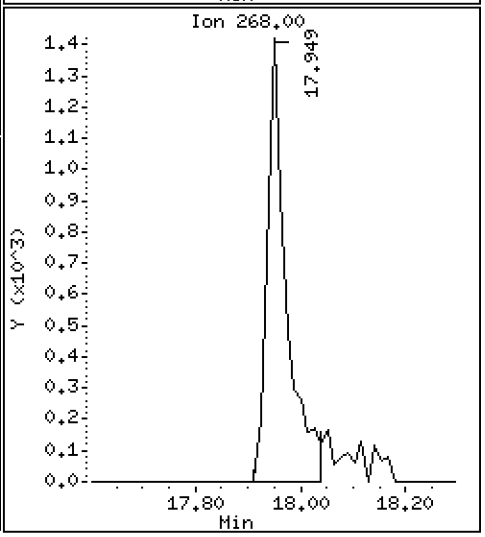


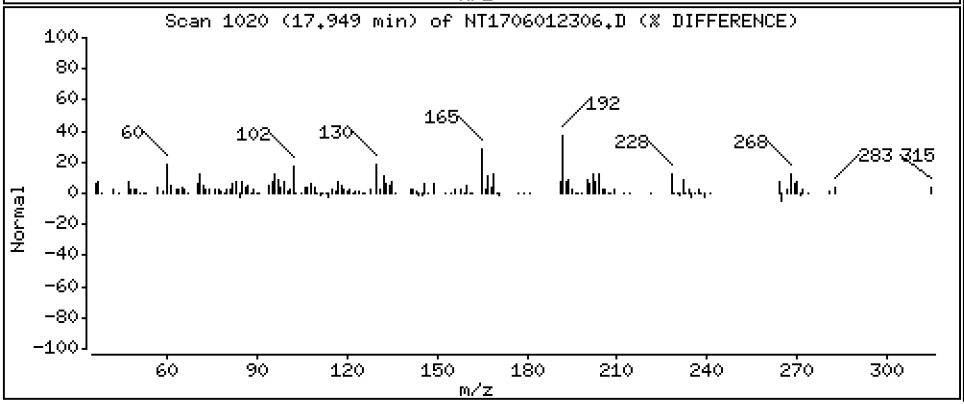












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

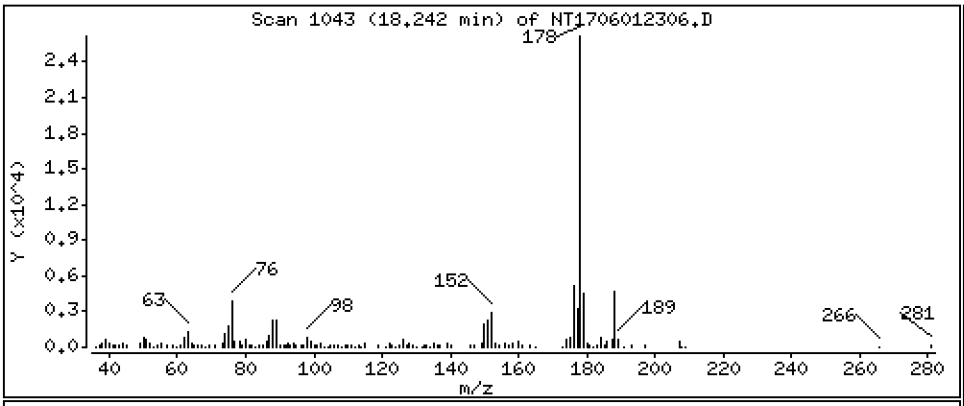
Operator: VTS

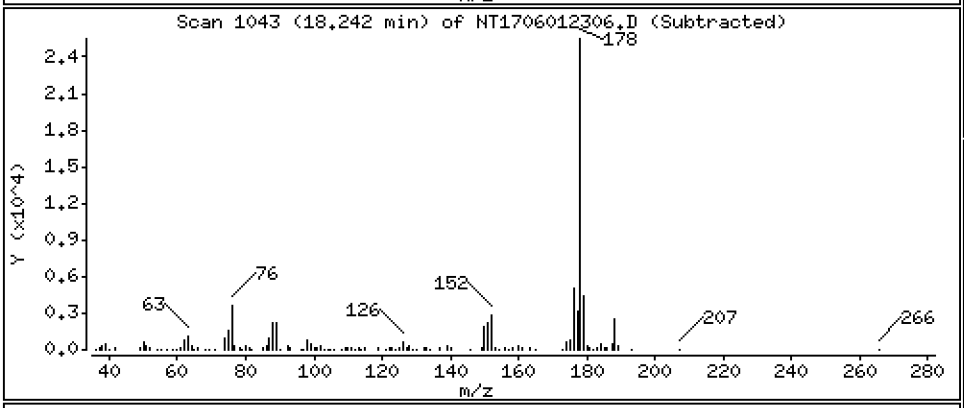
Column phase: ZB-5msi

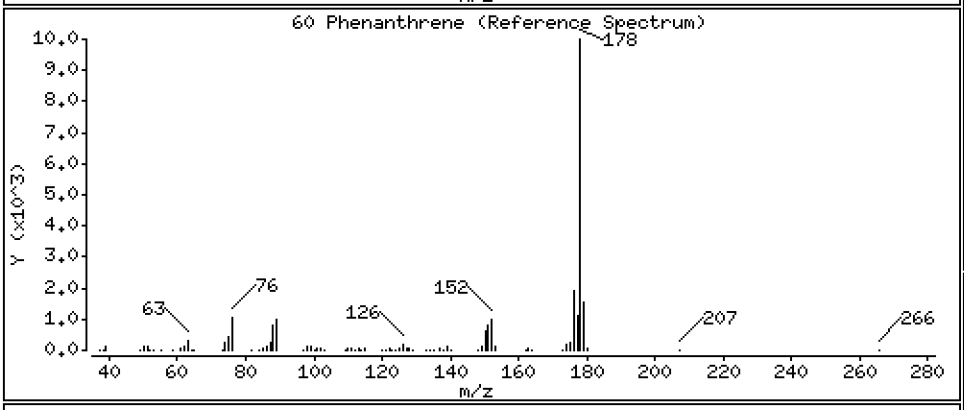
Column diameter: 0.25

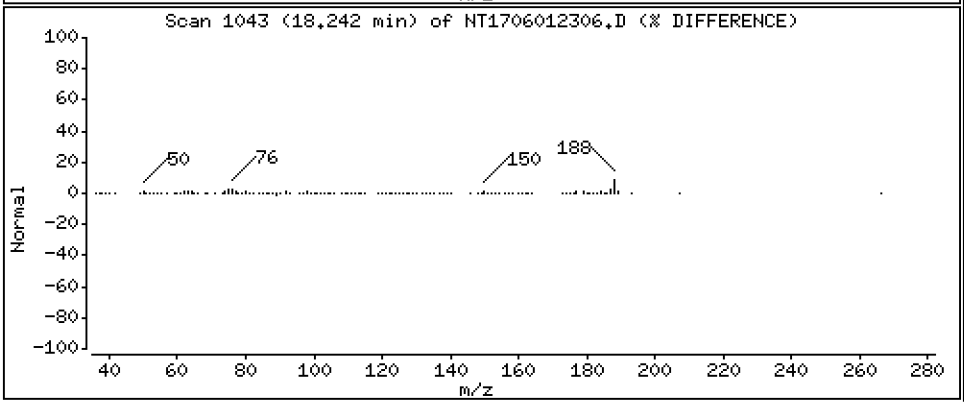
60 Phenanthrene

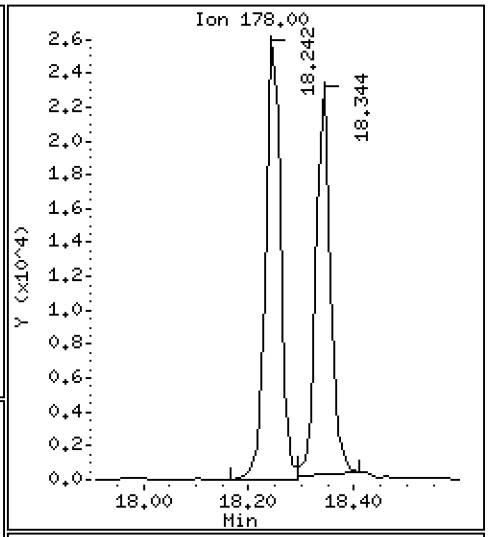
Concentration: 0.2025 ug/mL

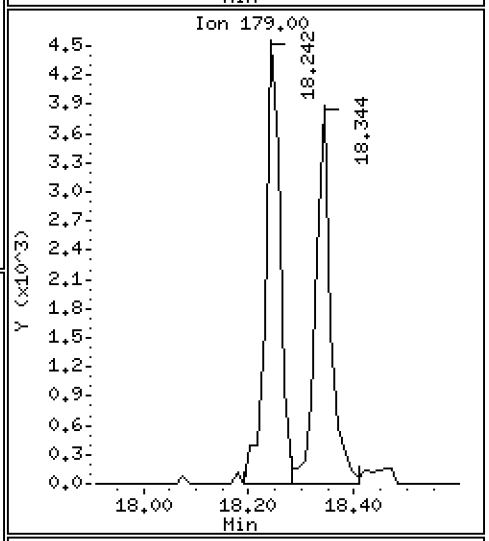


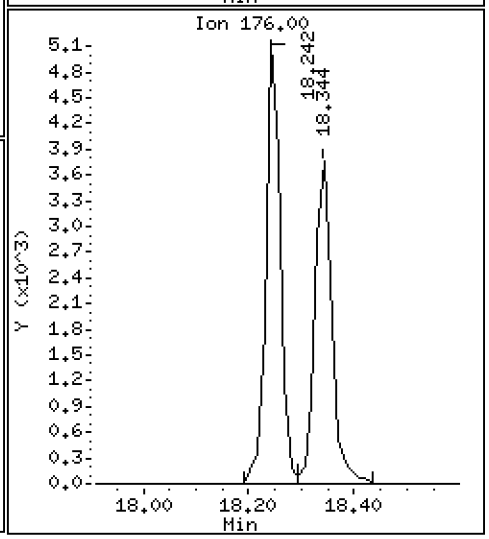












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

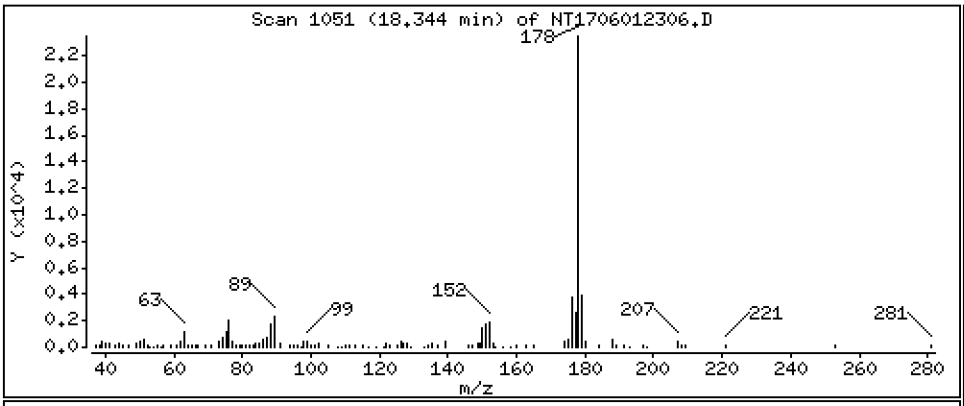
Operator: VTS

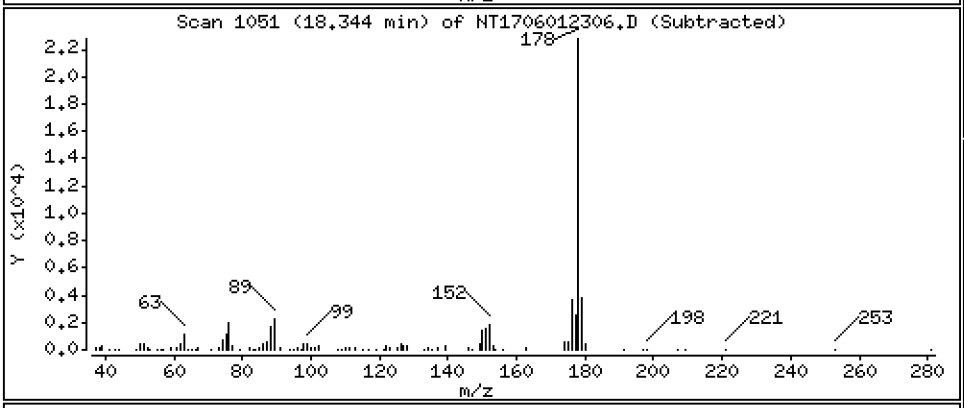
Column phase: ZB-5msi

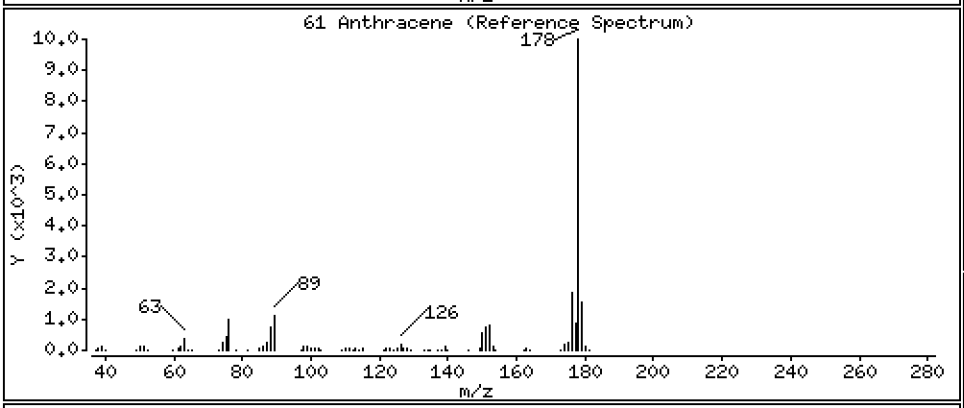
Column diameter: 0.25

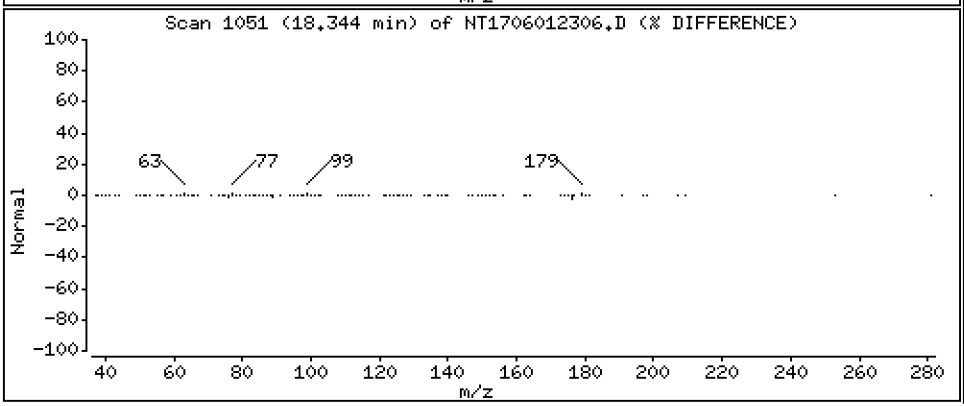
61 Anthracene

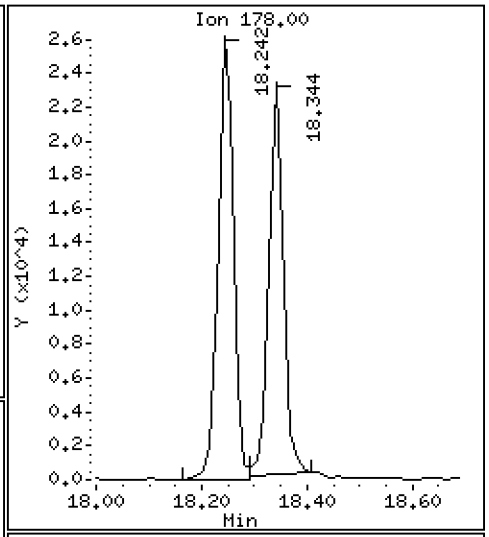
Concentration: 0.1819 ug/mL

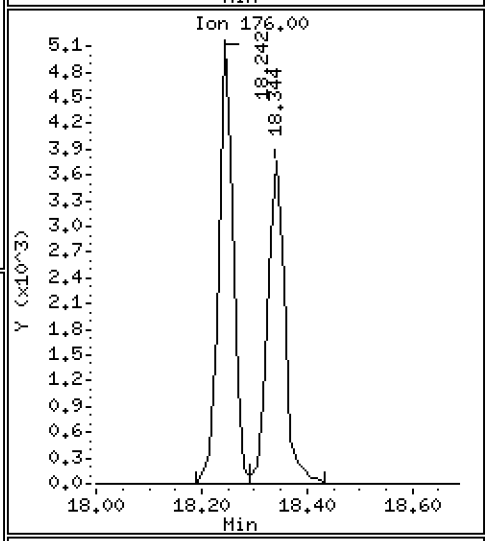


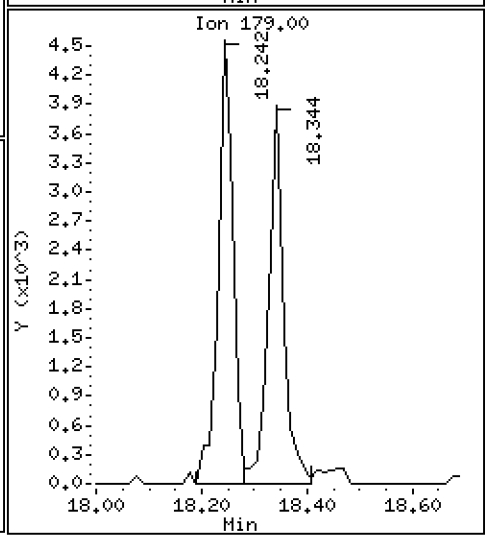












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

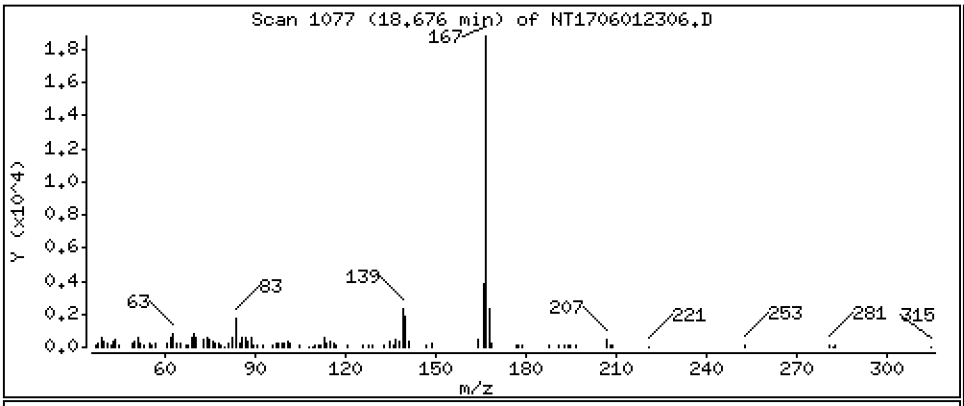
Operator: VTS

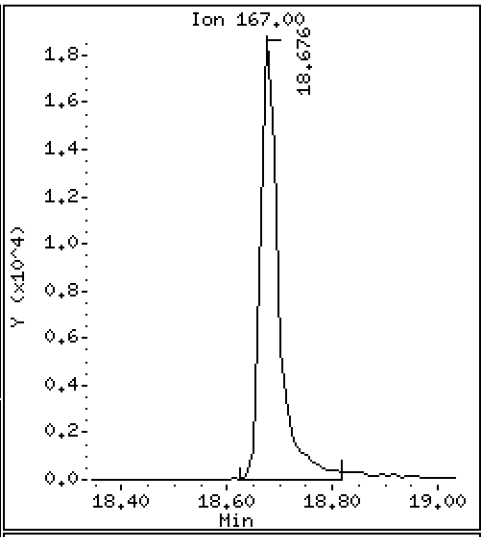
Column phase: ZB-5msi

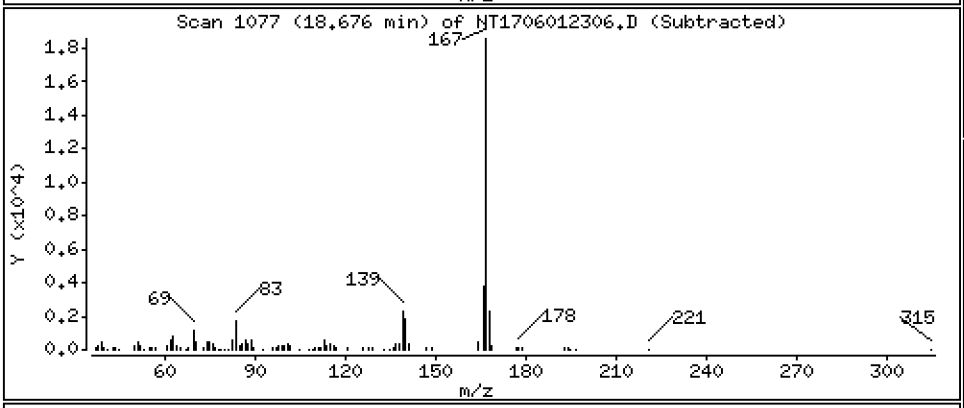
Column diameter: 0.25

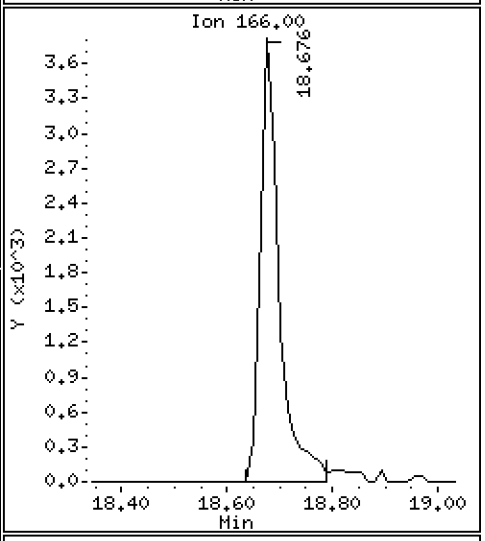
62 Carbazole

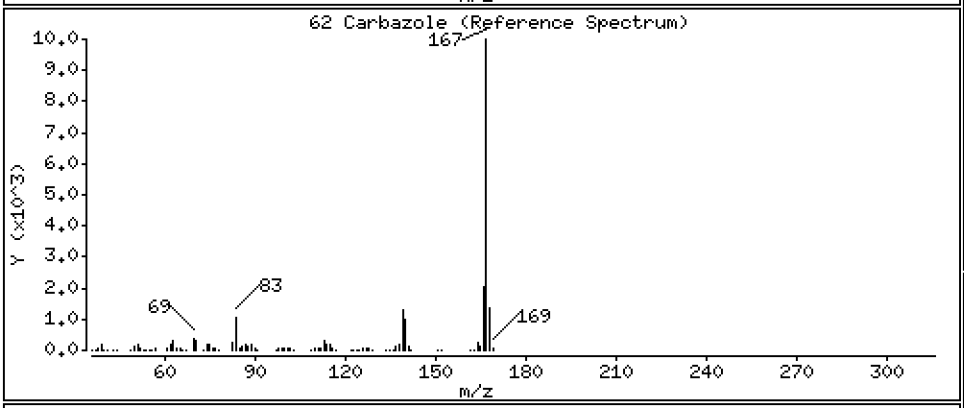
Concentration: 0.2978 ug/mL

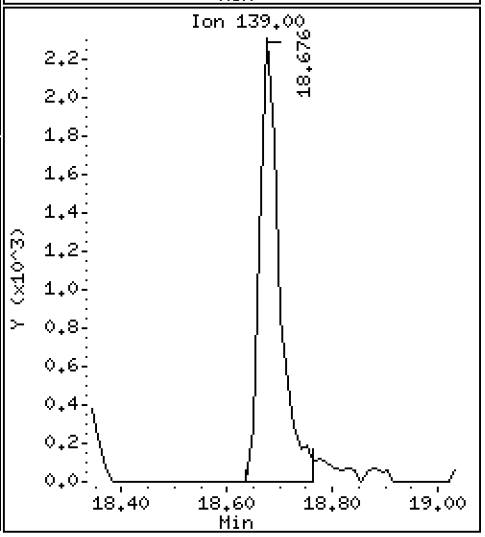


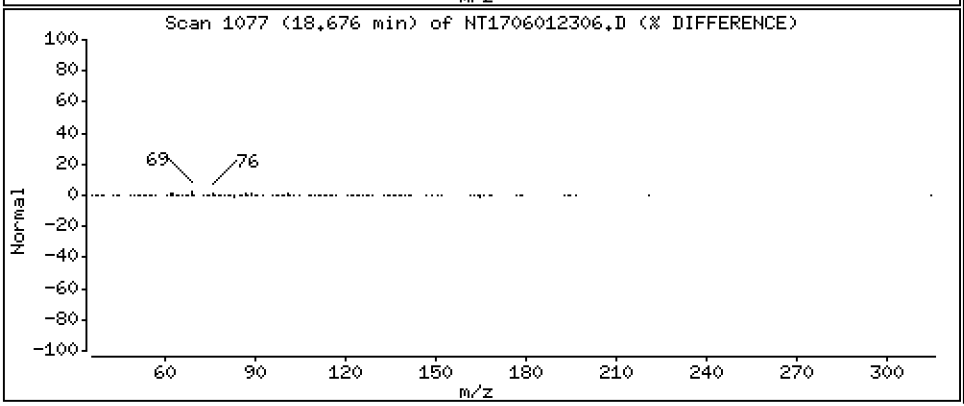












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

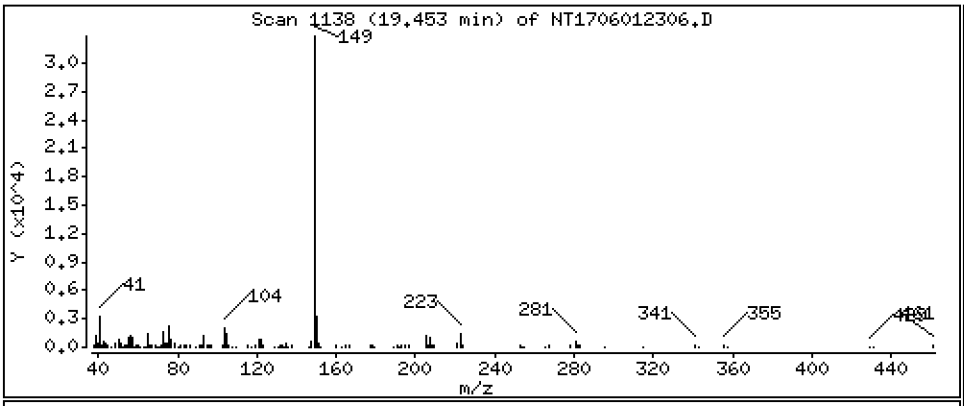
Operator: VTS

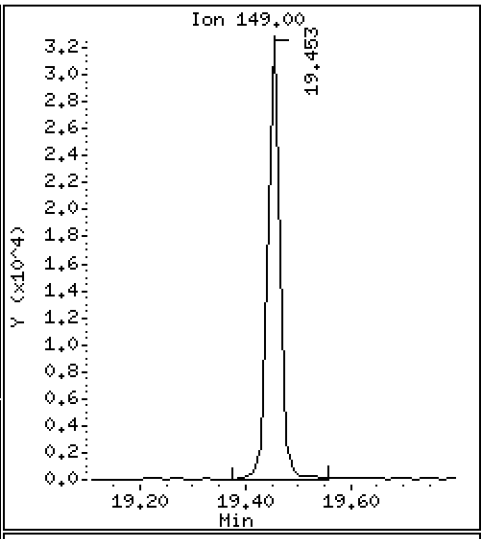
Column phase: ZB-5msi

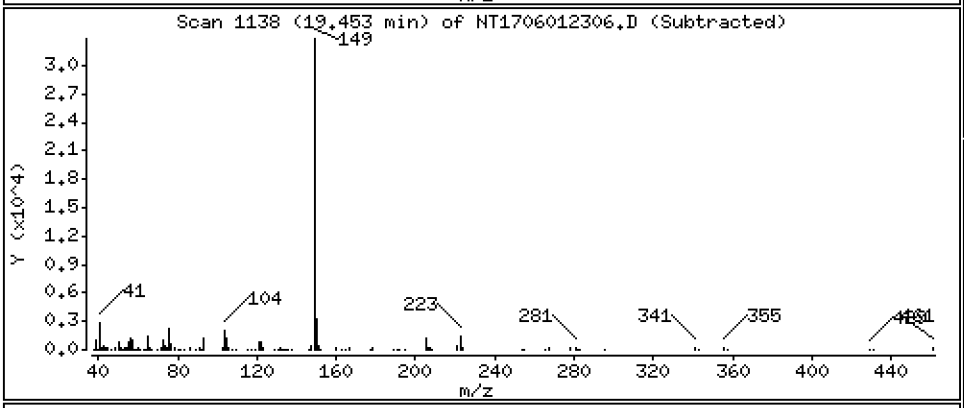
Column diameter: 0.25

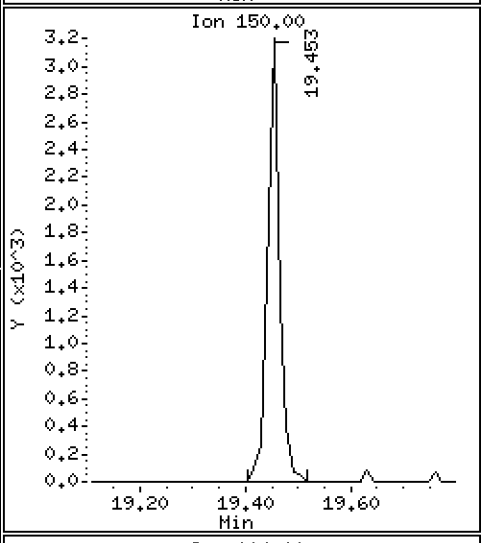
63 Di-n-butylphthalate

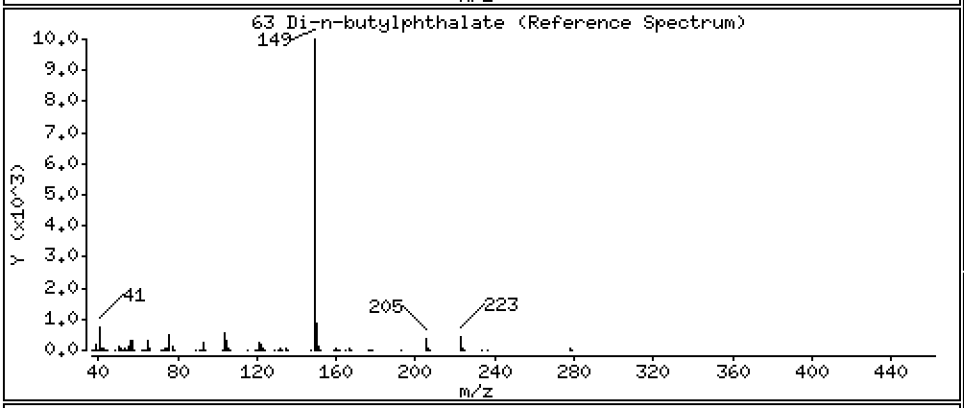
Concentration: 0.1884 ug/mL

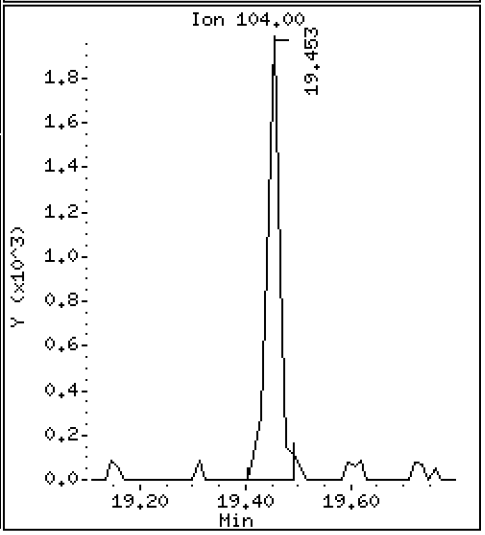


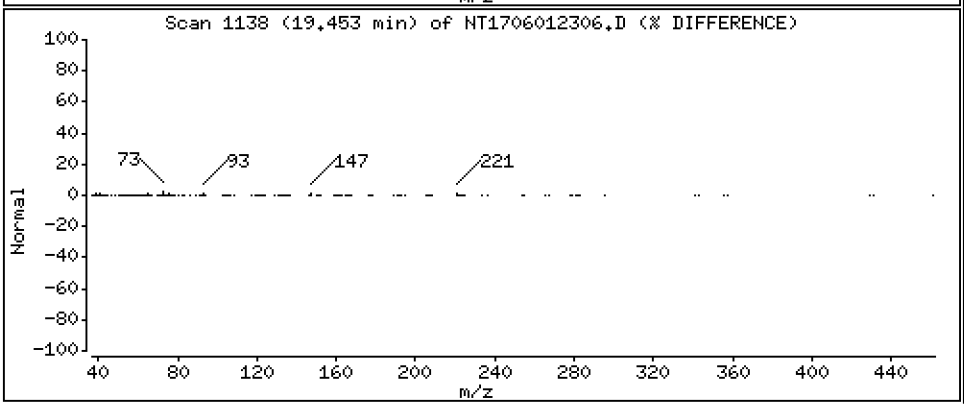












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

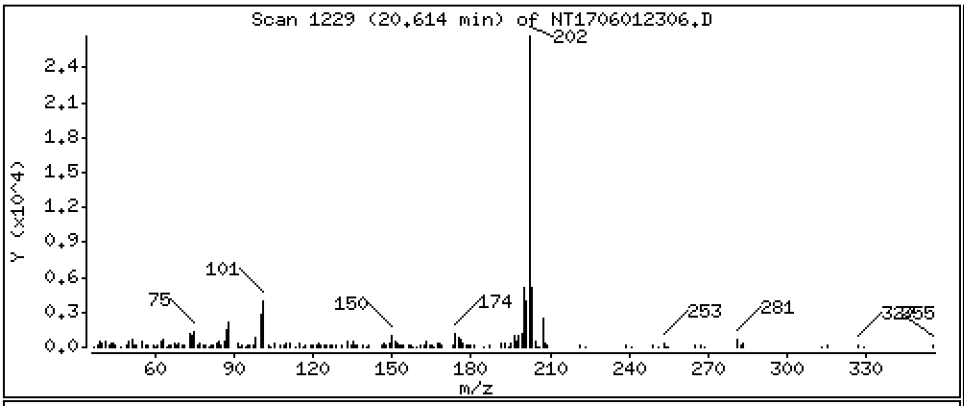
Operator: VTS

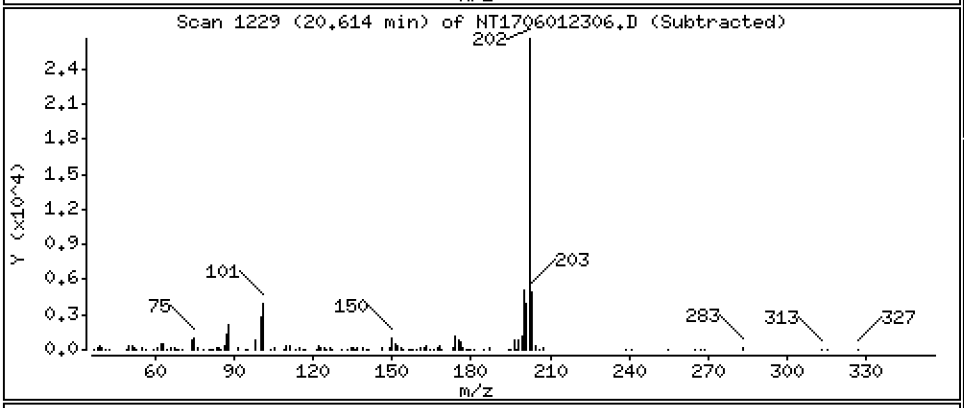
Column phase: ZB-5msi

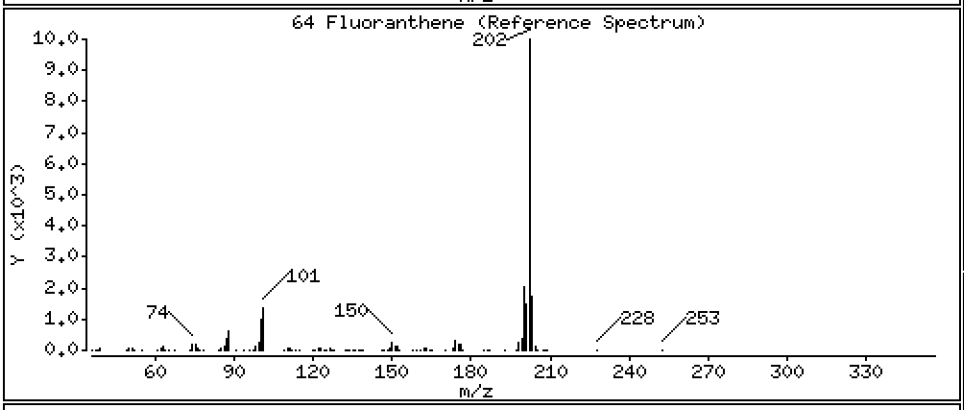
Column diameter: 0.25

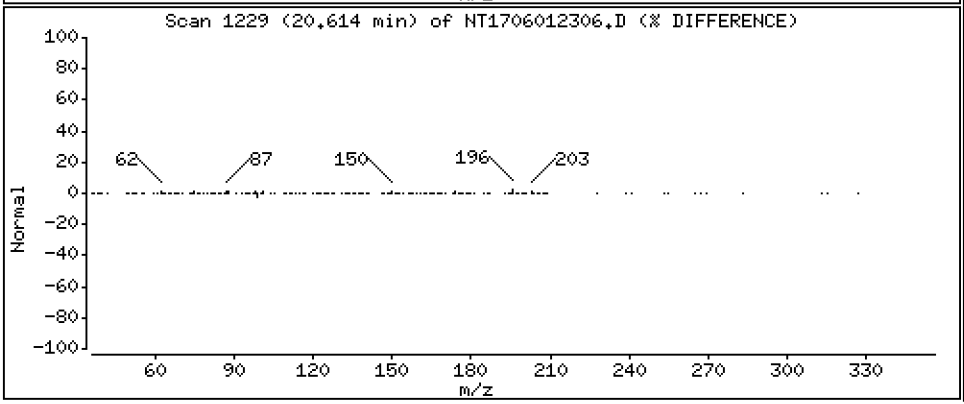
64 Fluoranthene

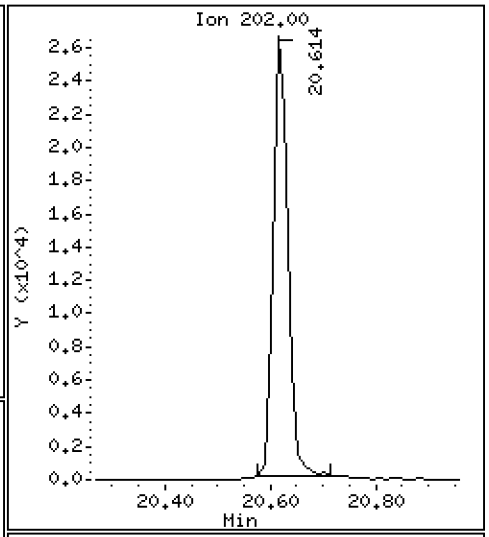
Concentration: 0.1843 ug/mL

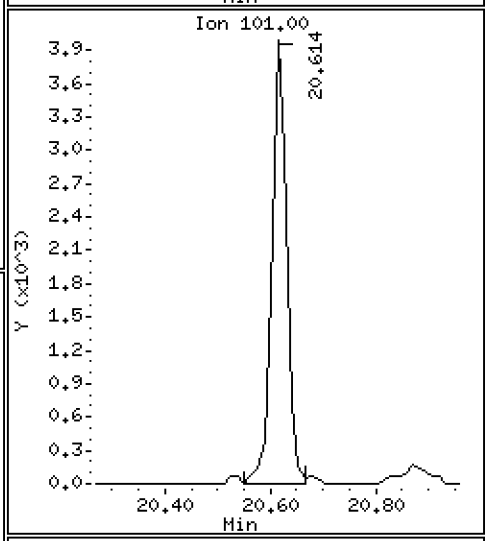


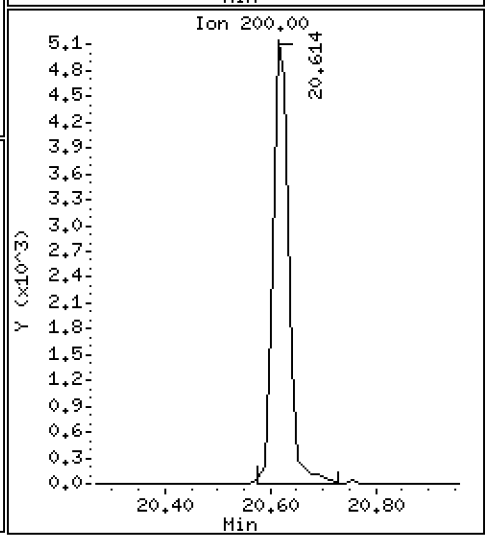












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

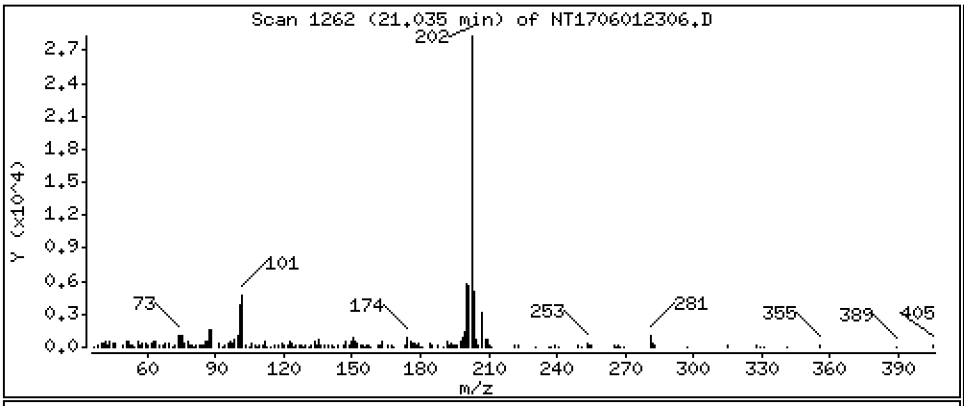
Operator: VTS

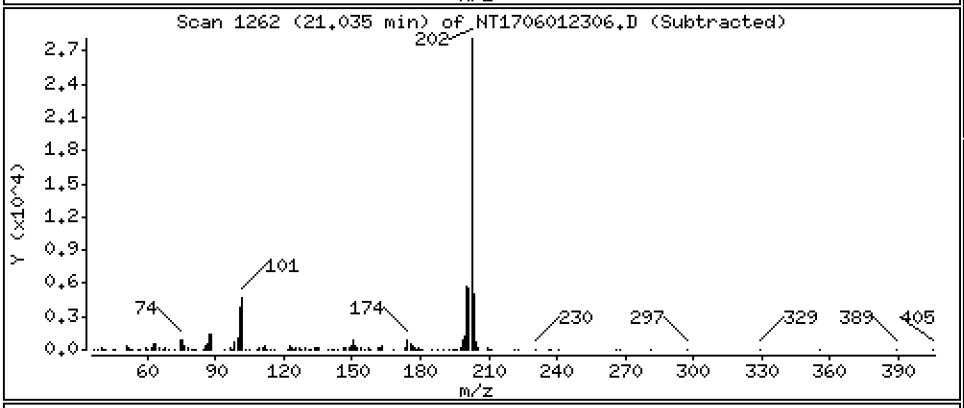
Column phase: ZB-5msi

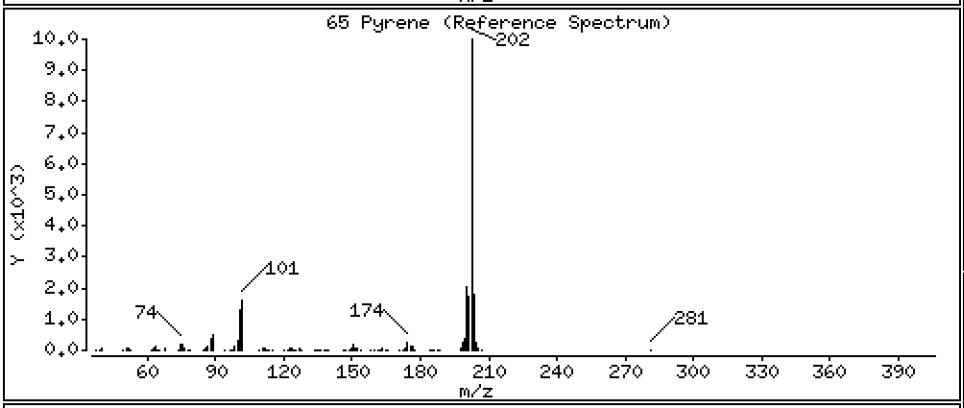
Column diameter: 0.25

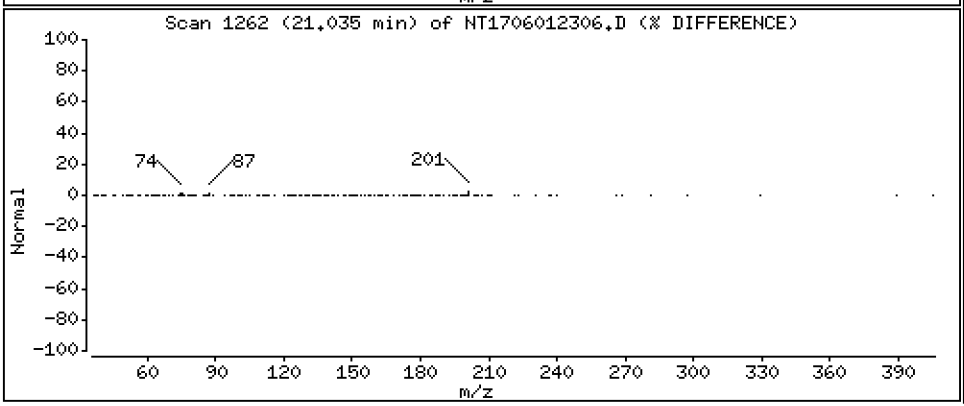
65 Pyrene

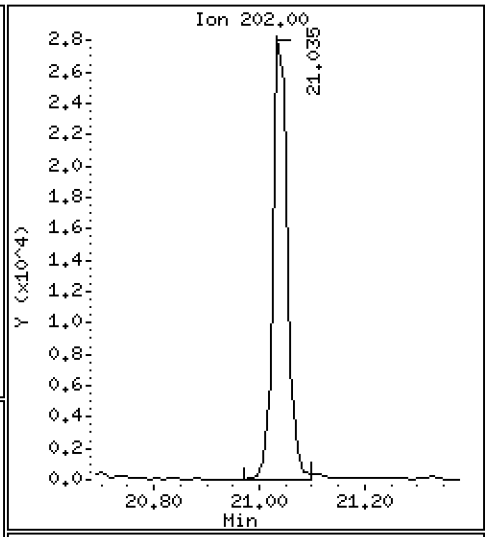
Concentration: 0.1922 ug/mL

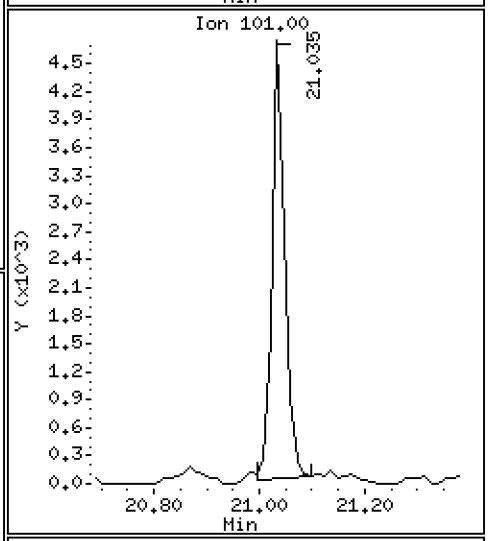


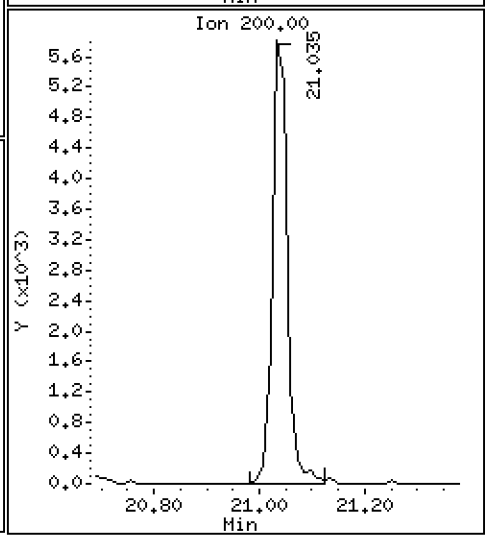












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

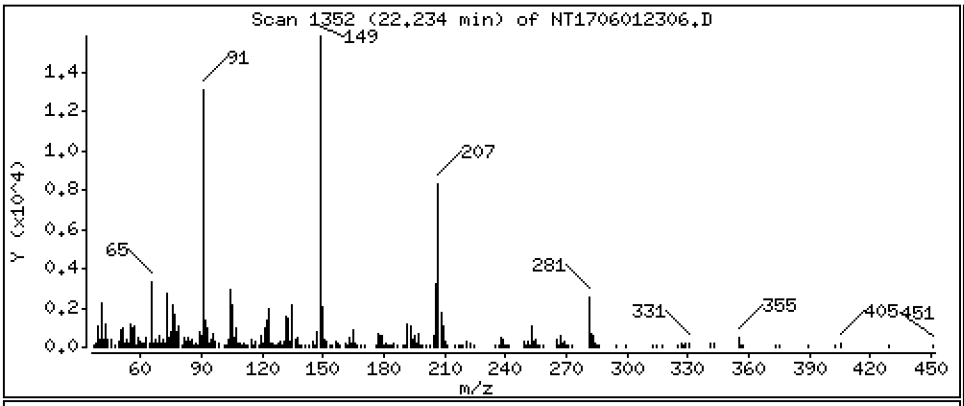
Operator: VTS

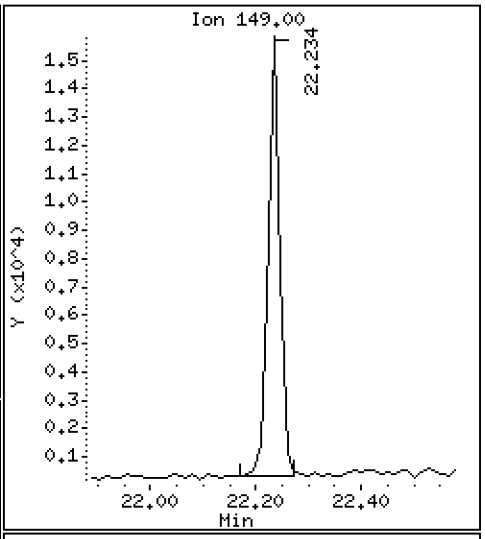
Column phase: ZB-5msi

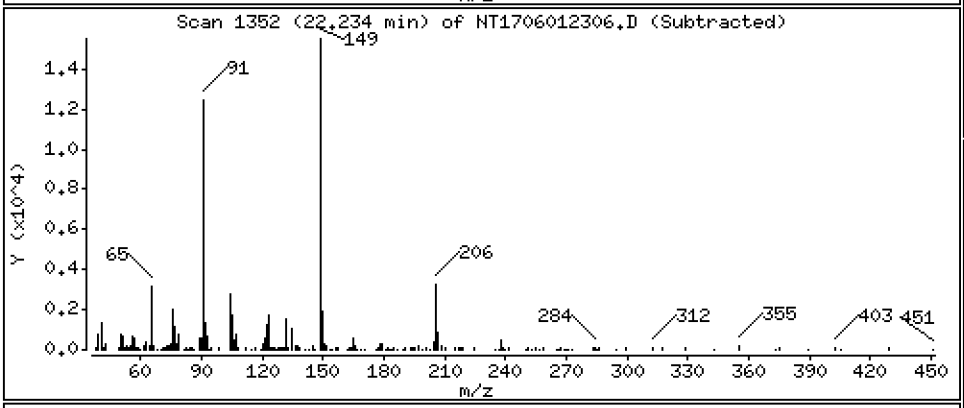
Column diameter: 0.25

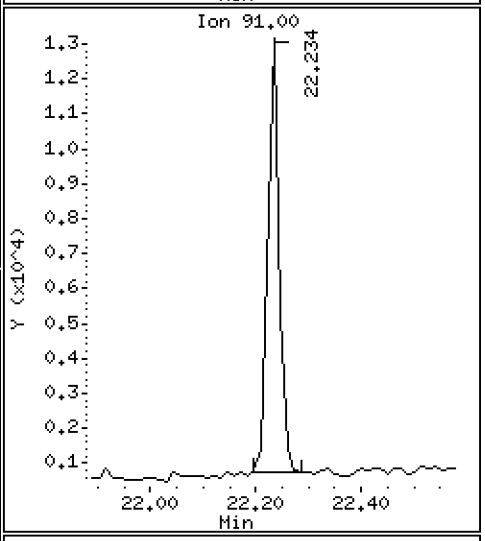
67 Butylbenzylphthalate

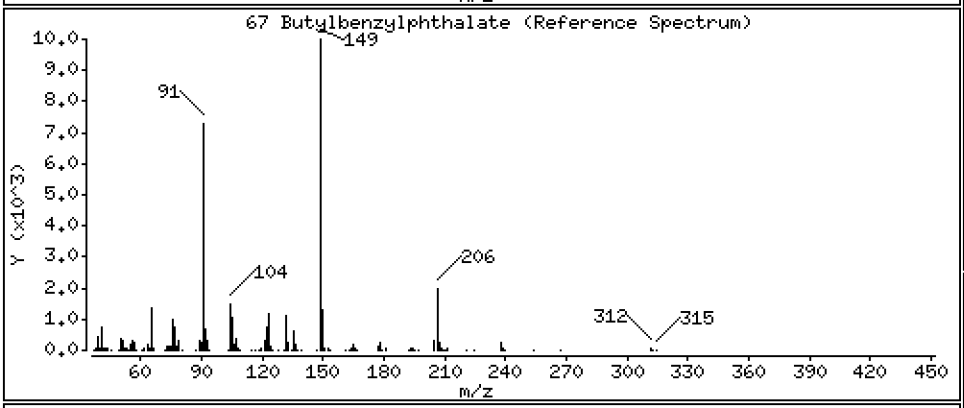
Concentration: 0.1890 ug/mL

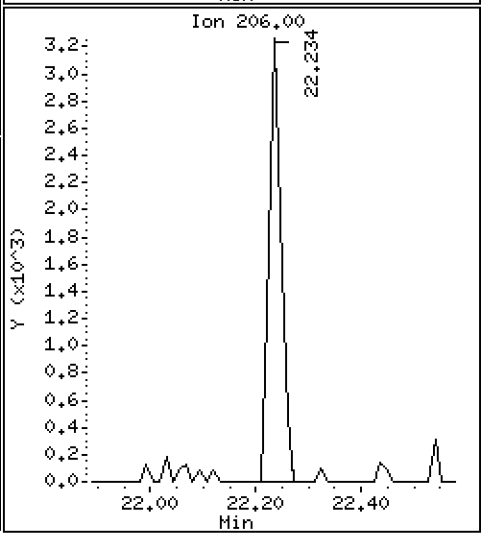


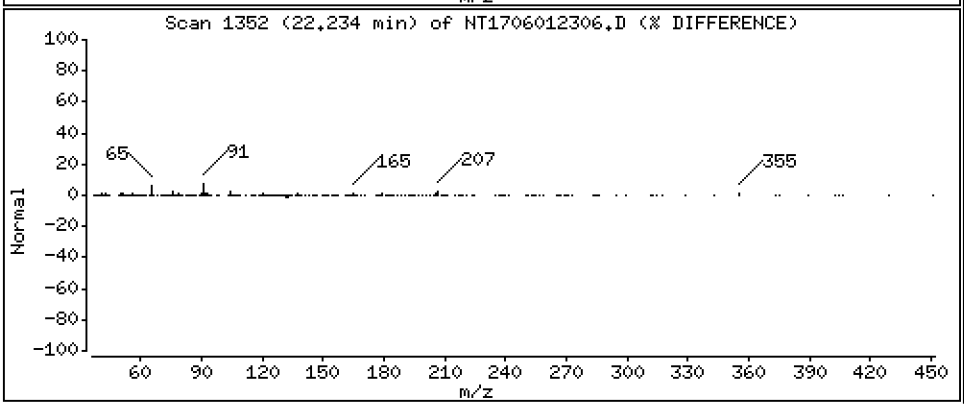












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

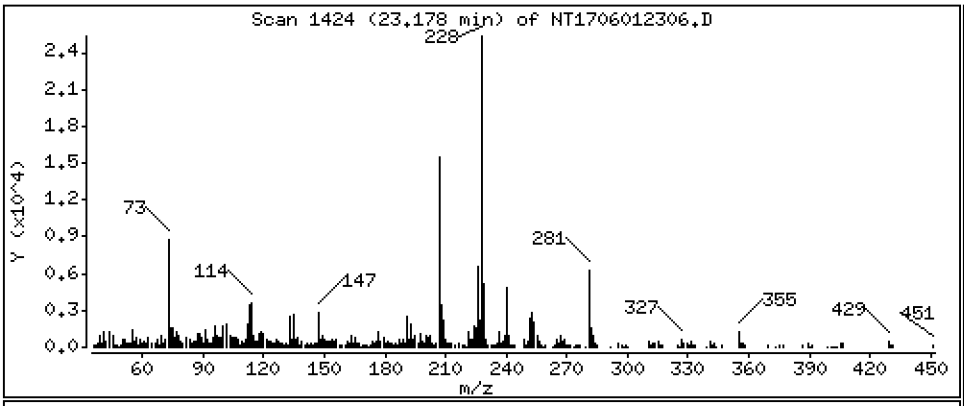
Operator: VTS

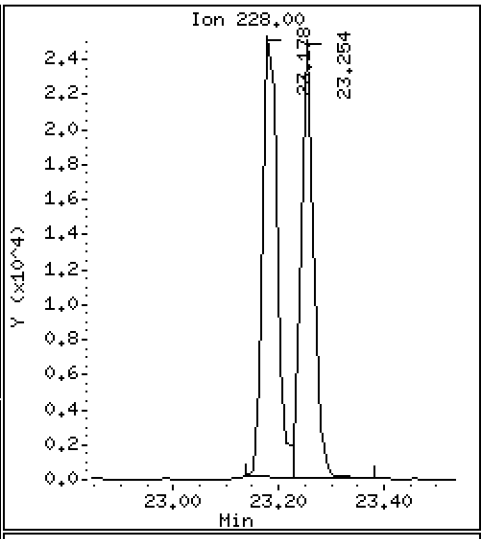
Column phase: ZB-5msi

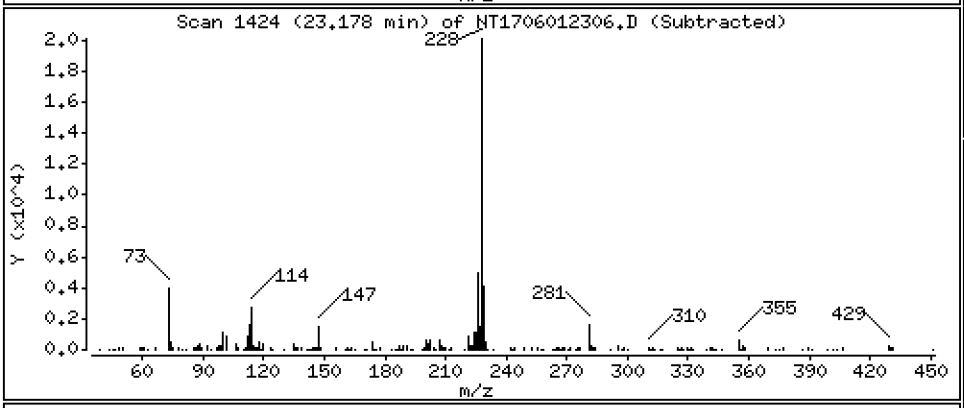
Column diameter: 0.25

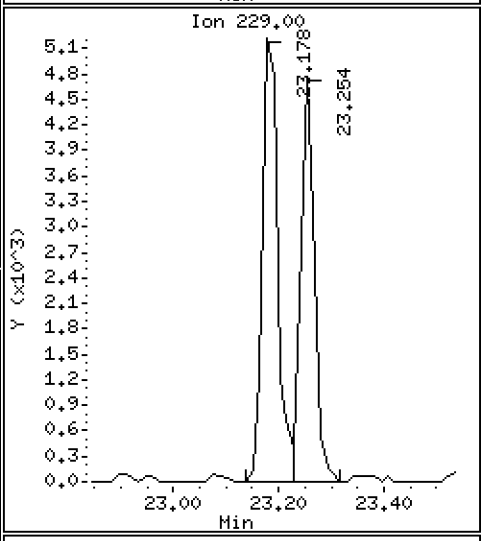
68 Benzo(a)anthracene

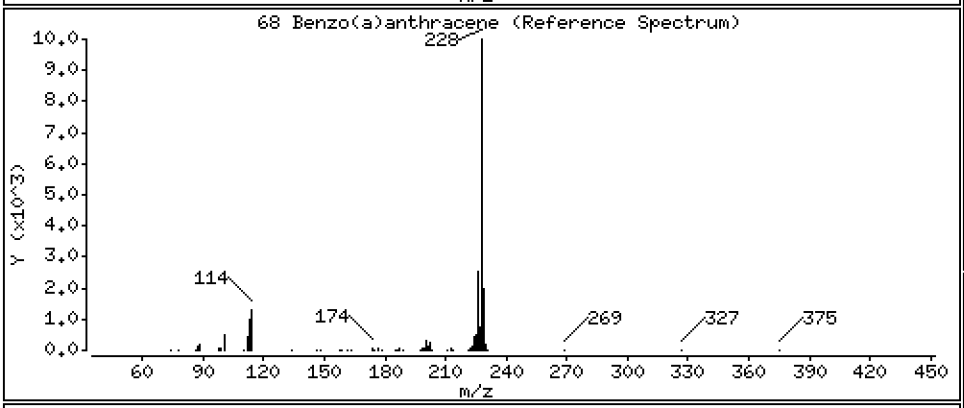
Concentration: 0.2196 ug/mL

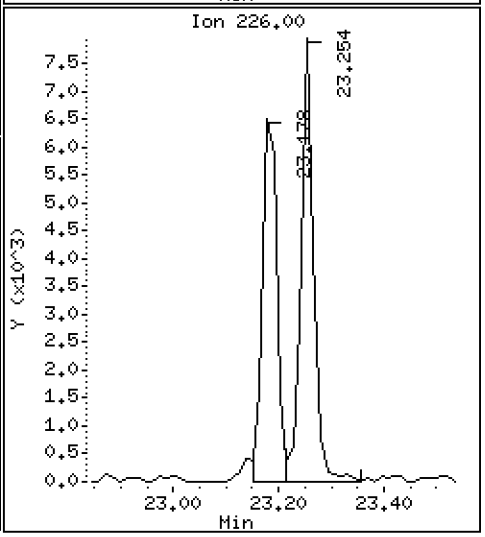


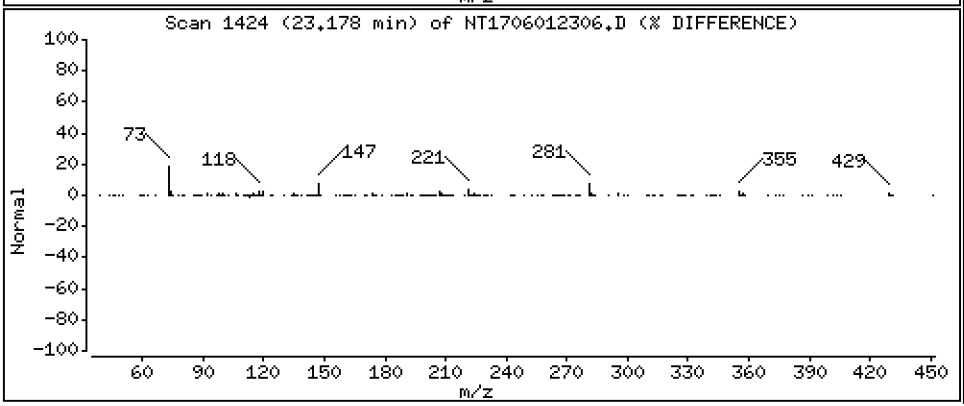












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

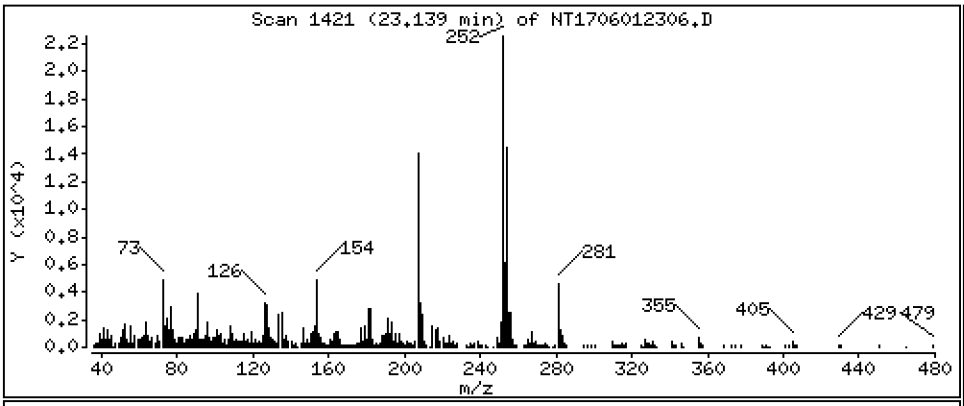
Operator: VTS

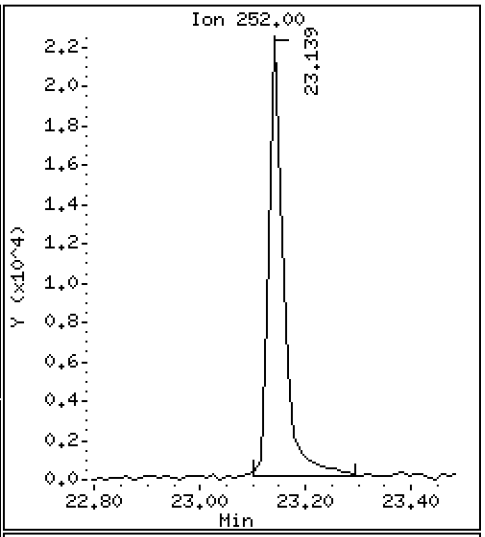
Column phase: ZB-5msi

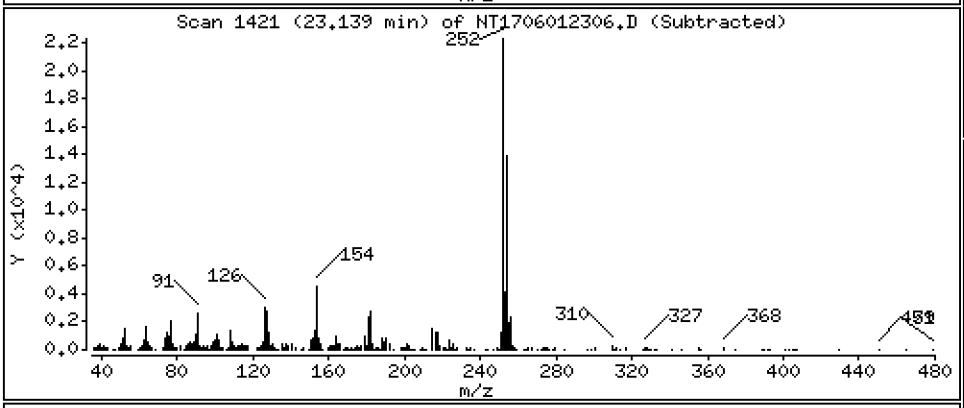
Column diameter: 0.25

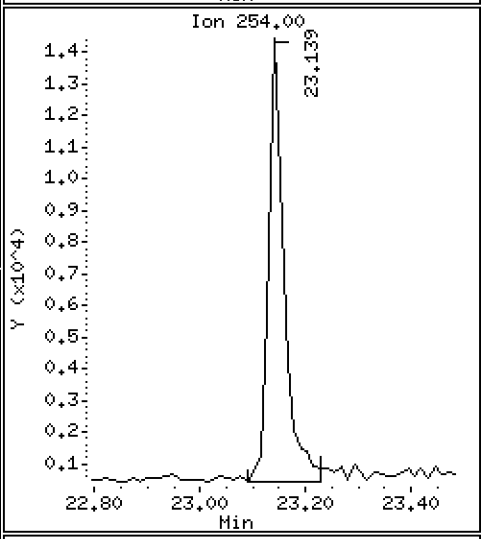
70 3,3'-Dichlorobenzidine

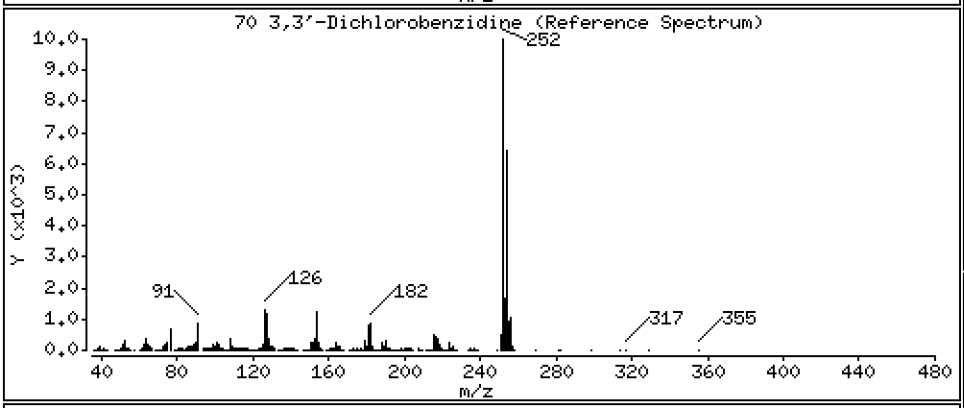
Concentration: 1.033 ug/mL

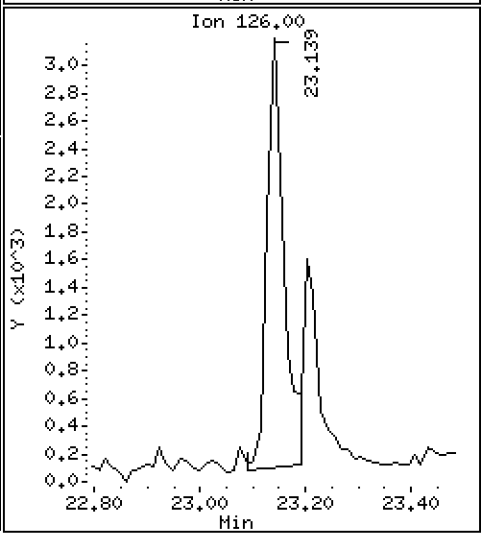


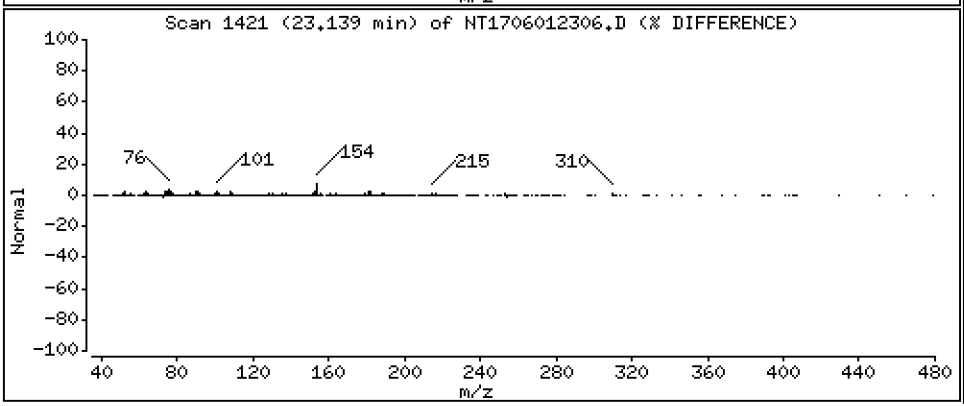












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

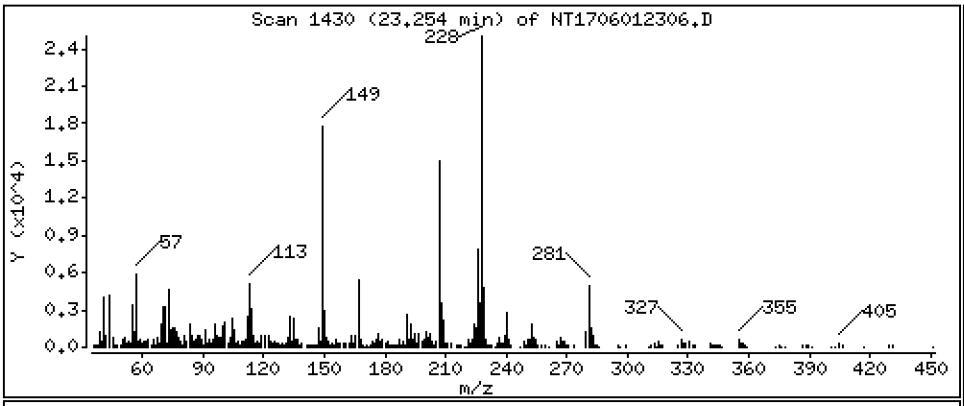
Operator: VTS

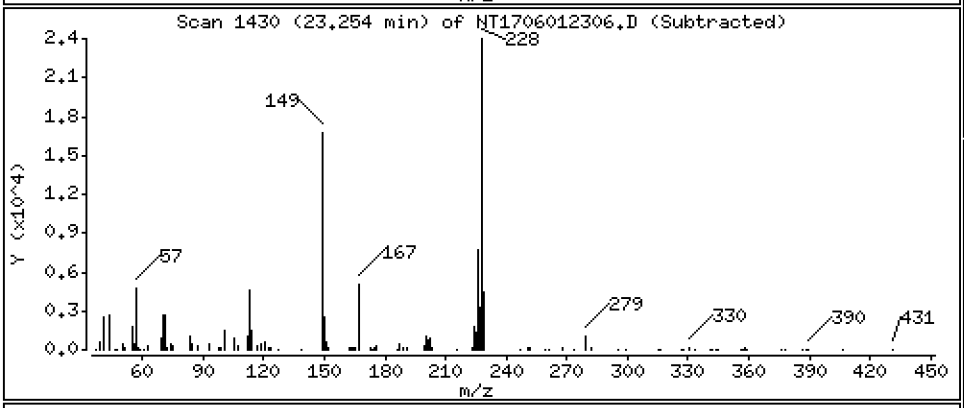
Column phase: ZB-5msi

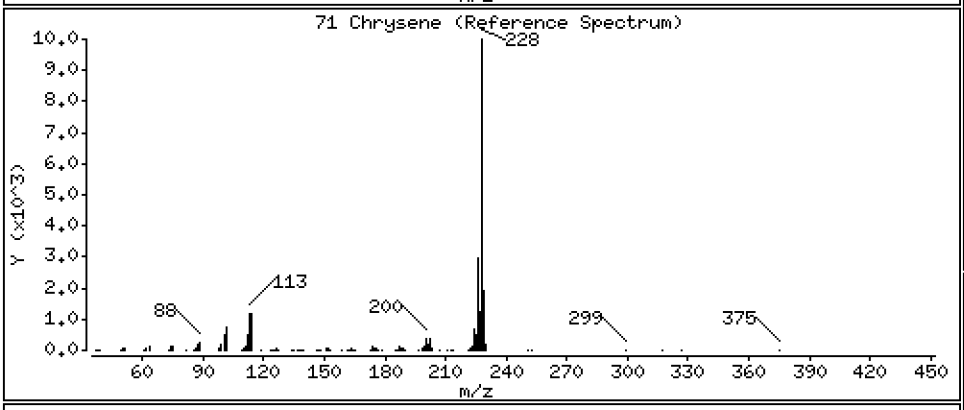
Column diameter: 0.25

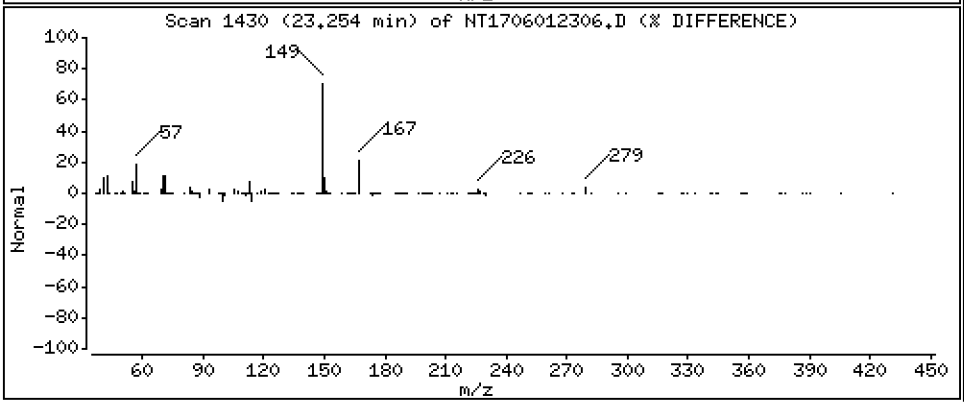
71 Chrysene

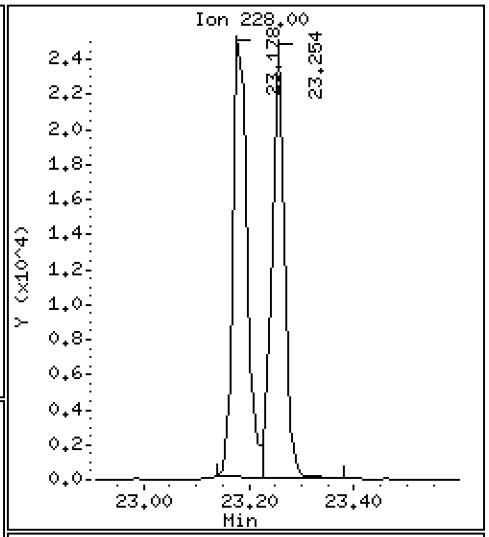
Concentration: 0.2031 ug/mL

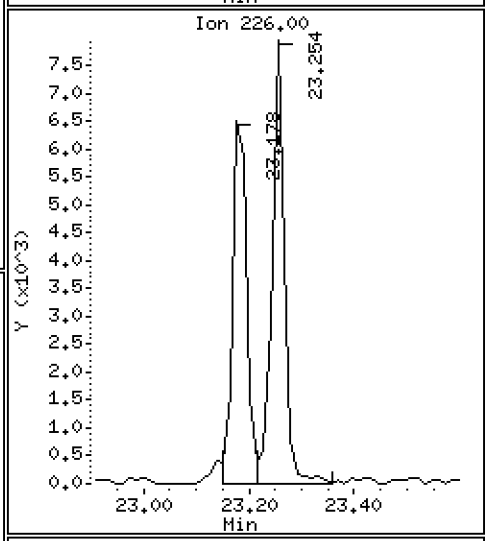


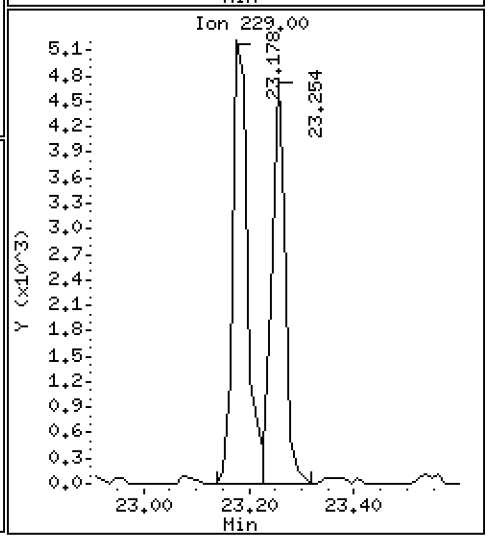












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

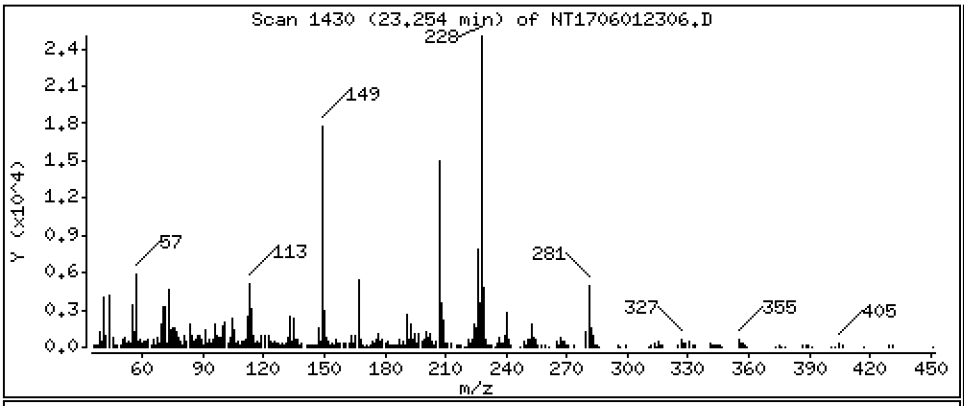
Operator: VTS

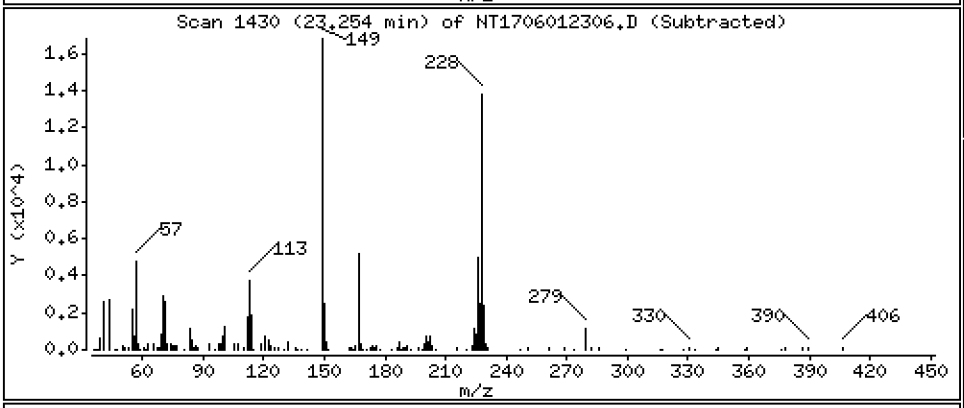
Column phase: ZB-5msi

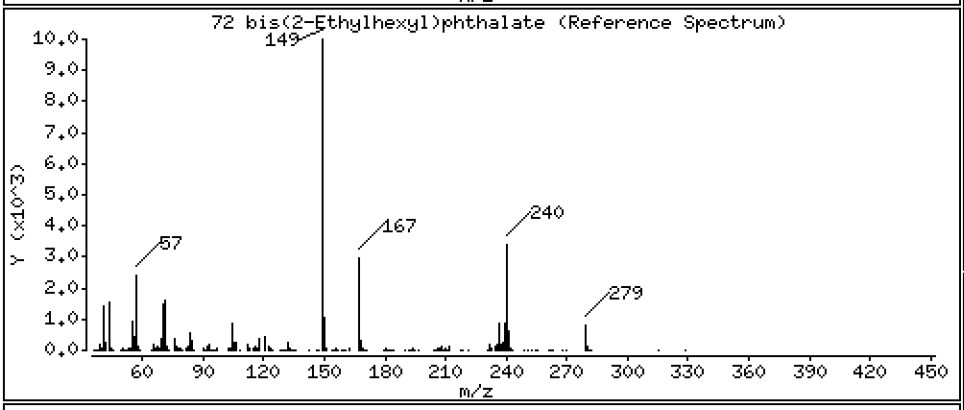
Column diameter: 0.25

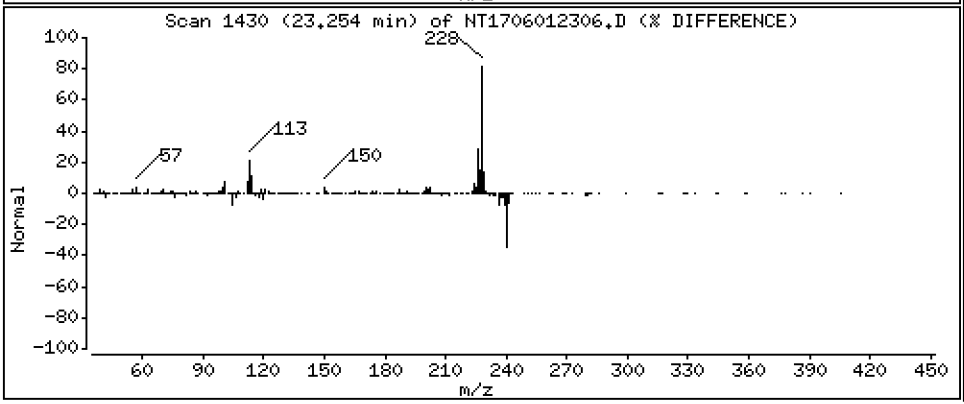
72 bis(2-Ethylhexyl)phthalate

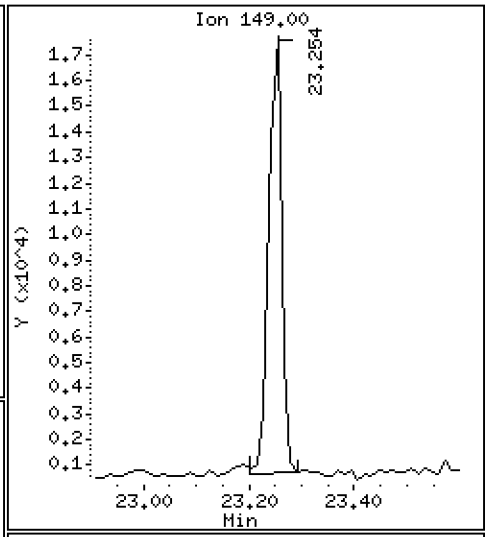
Concentration: 0.1851 ug/mL

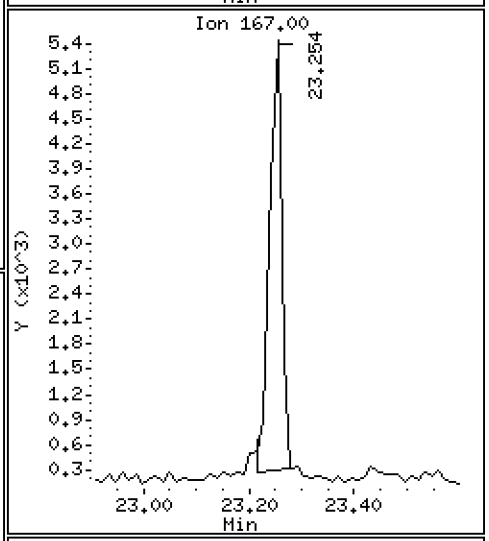


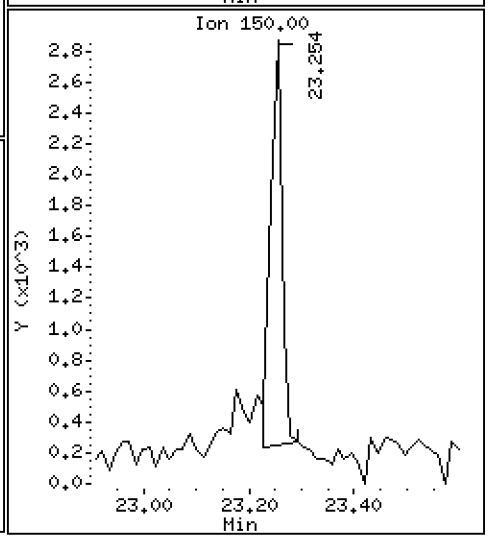












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

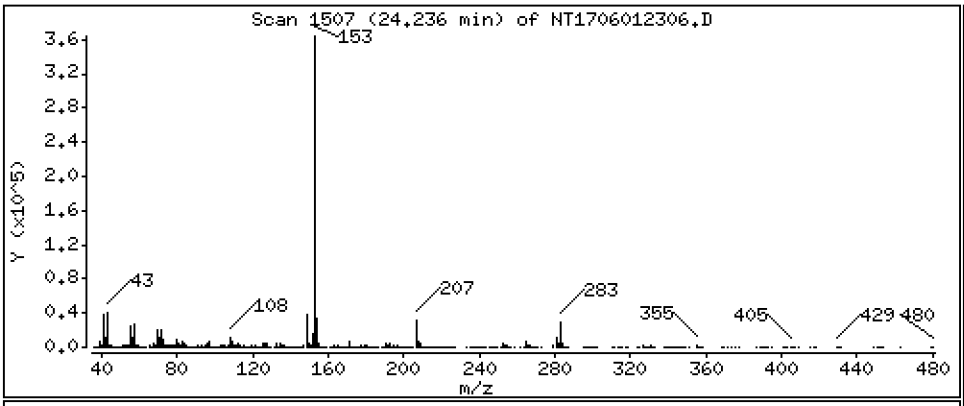
Operator: VTS

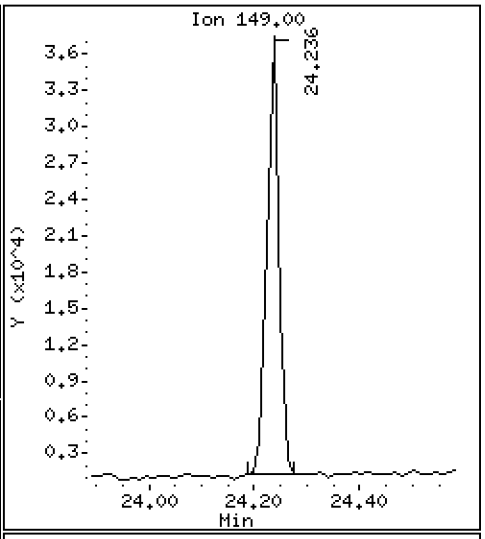
Column phase: ZB-5msi

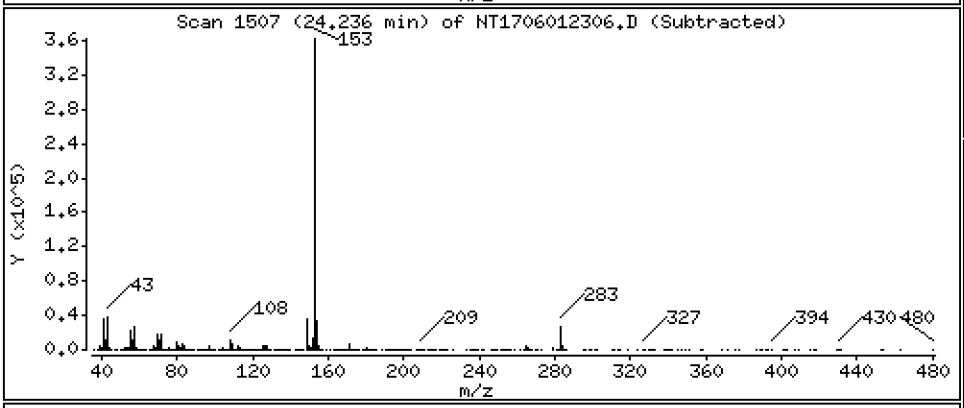
Column diameter: 0.25

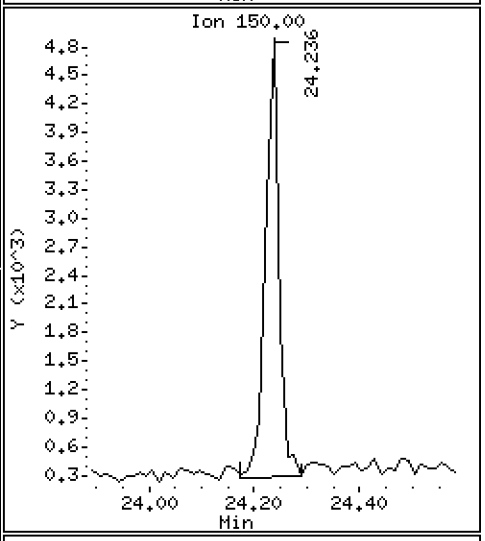
73 Di-n-octylphthalate

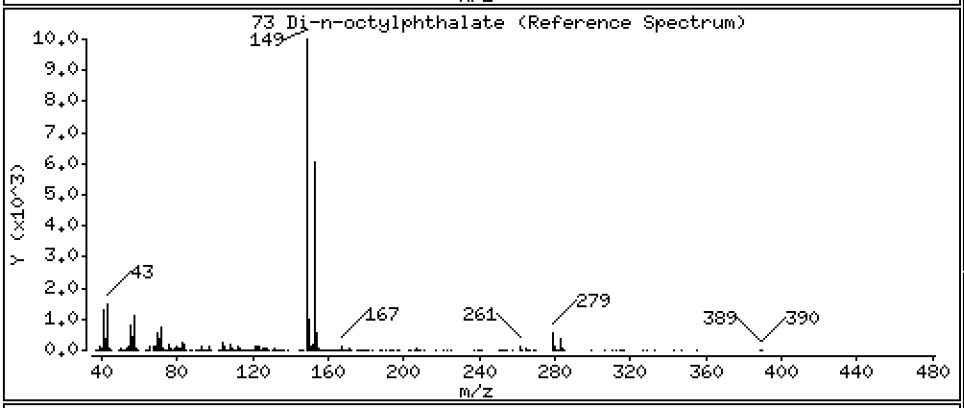
Concentration: 0.2051 ug/mL

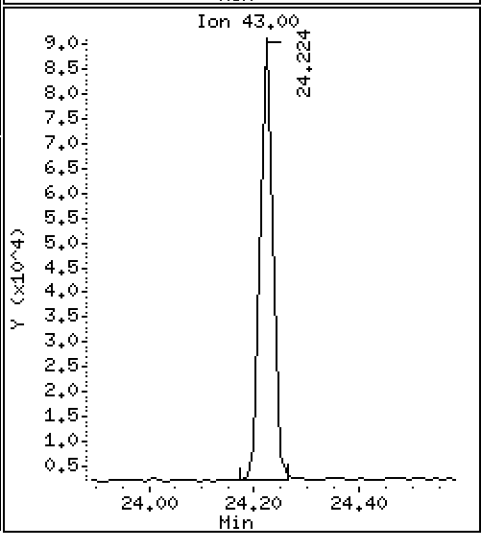


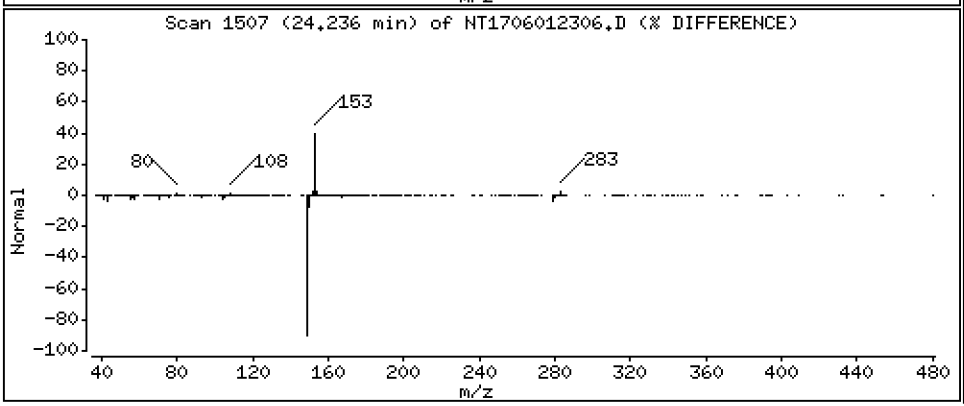












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

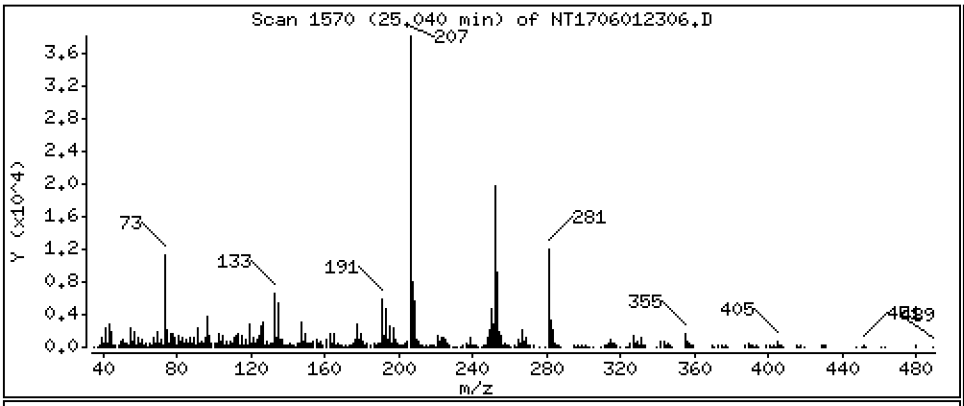
Operator: VTS

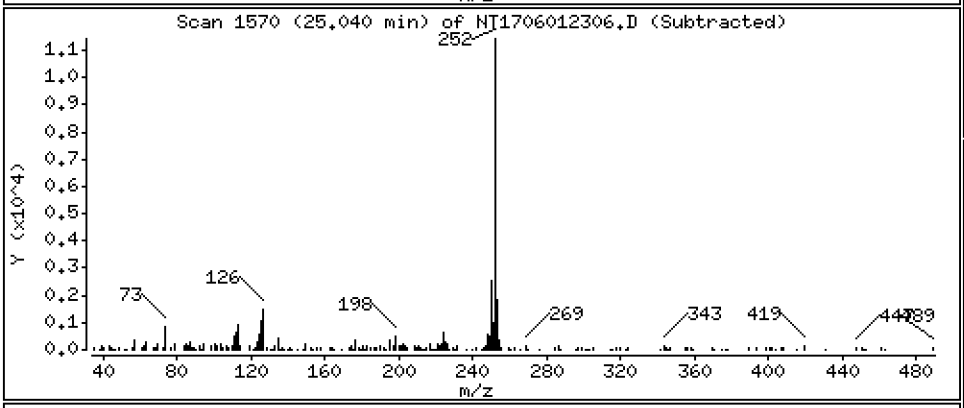
Column phase: ZB-5msi

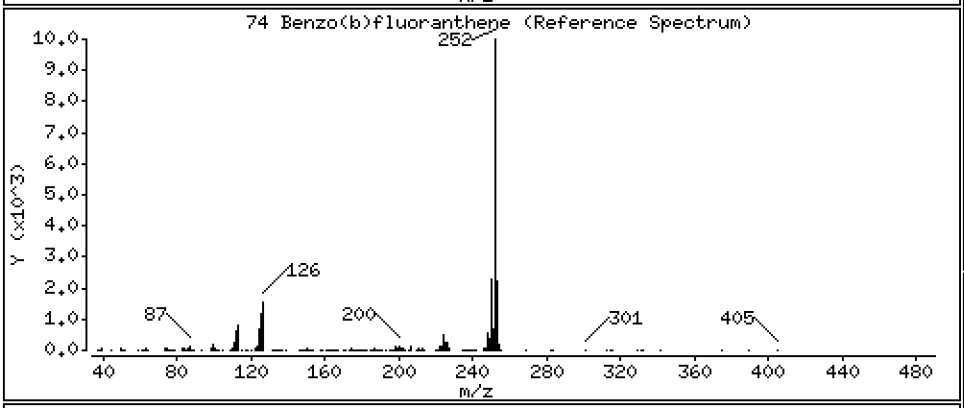
Column diameter: 0.25

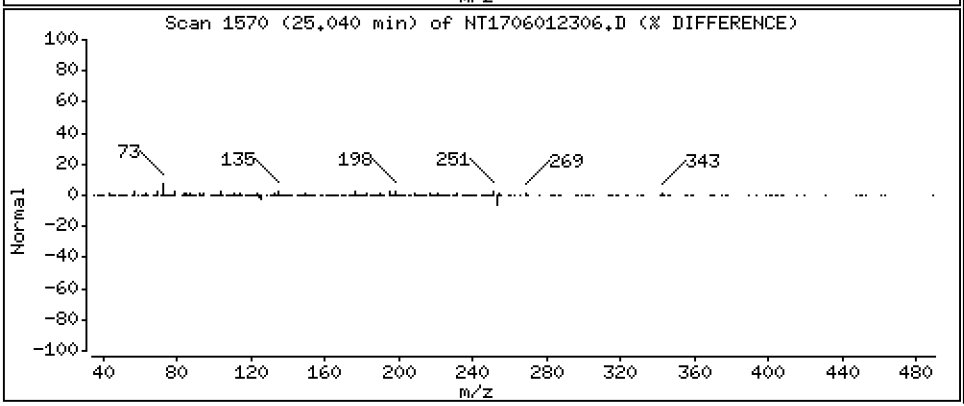
74 Benzo(b)fluoranthene

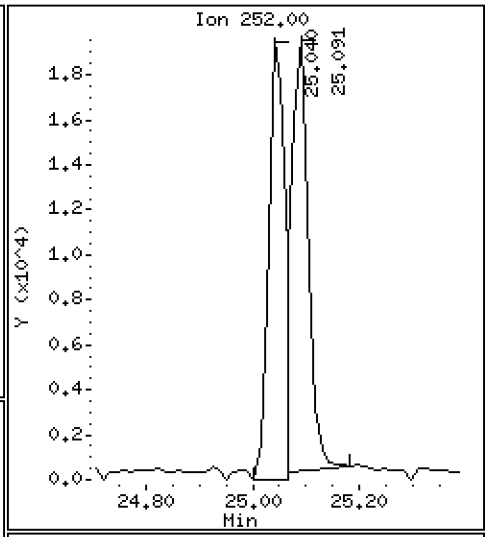
Concentration: 0.1895 ug/mL

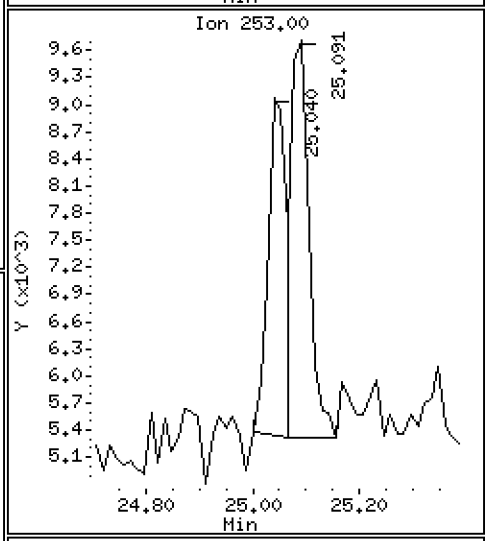


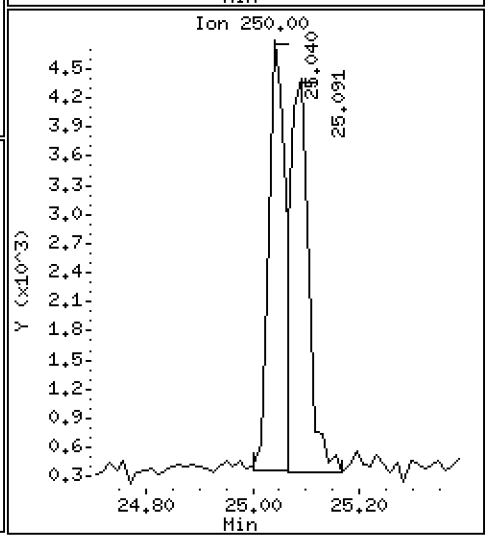












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

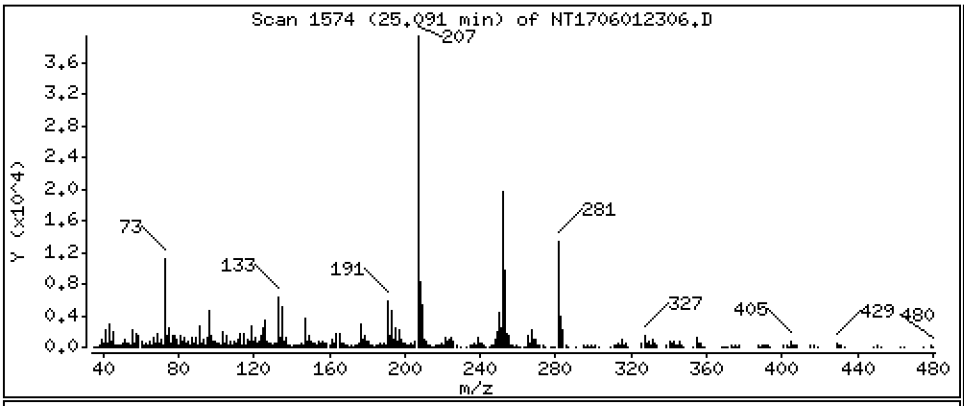
Operator: VTS

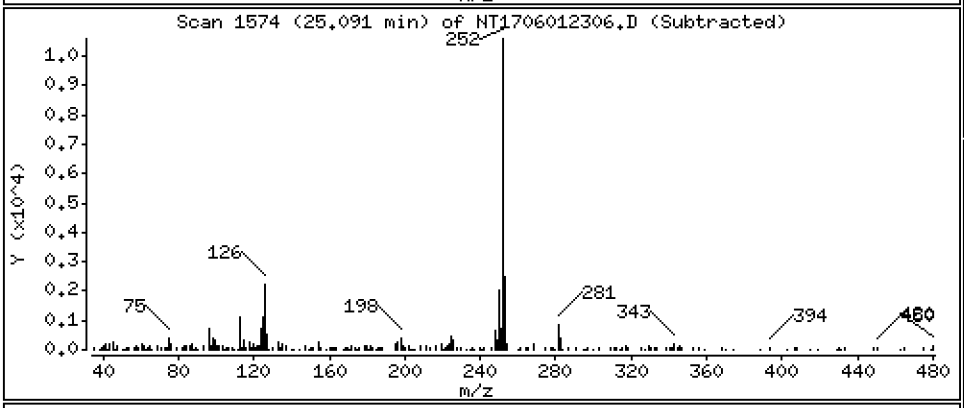
Column phase: ZB-5msi

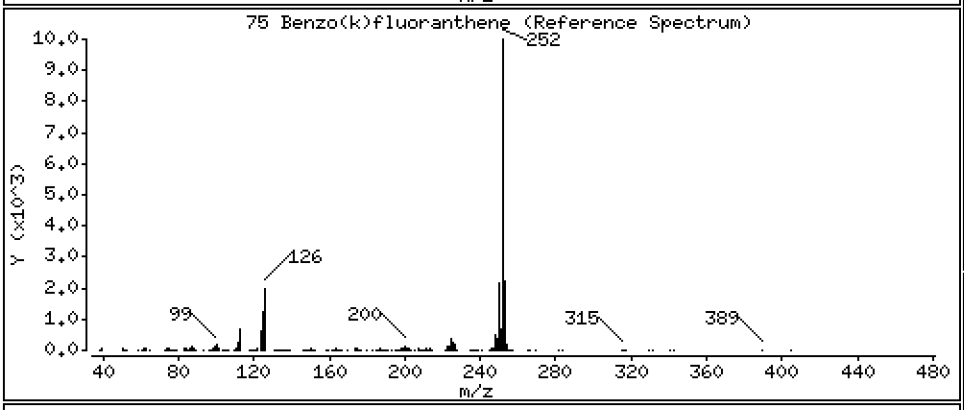
Column diameter: 0.25

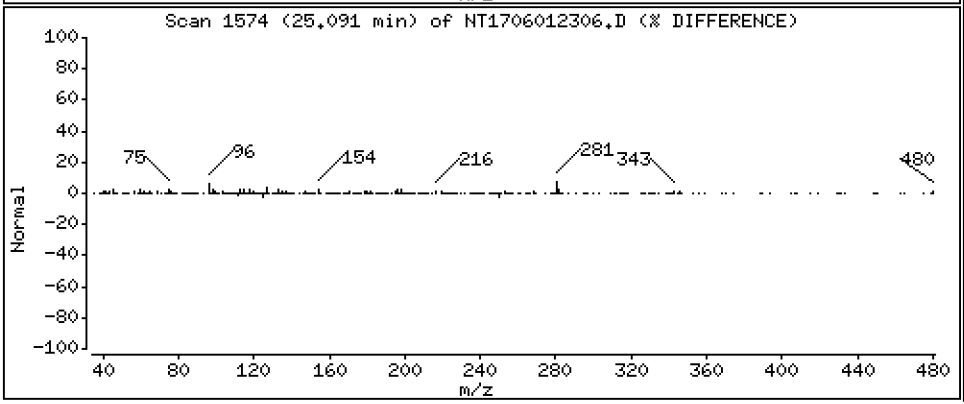
75 Benzo(k)fluoranthene

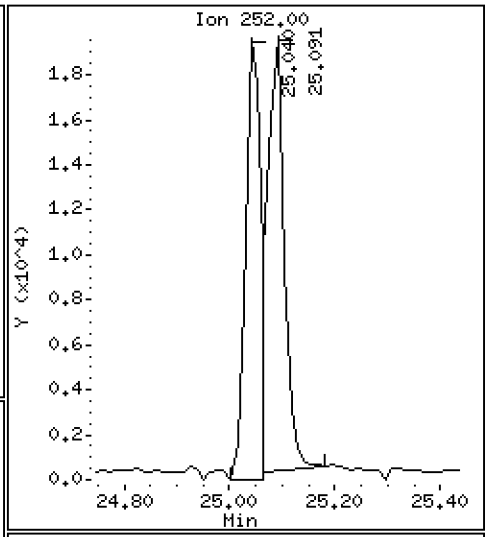
Concentration: 0.2045 ug/mL

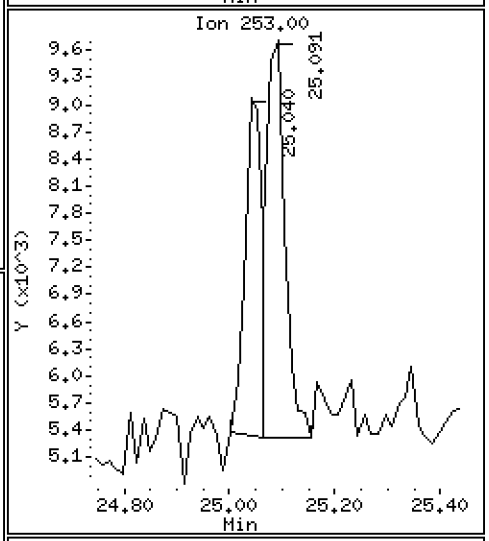


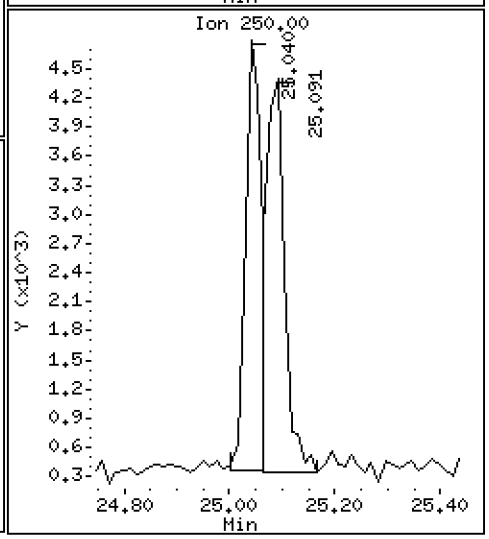












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

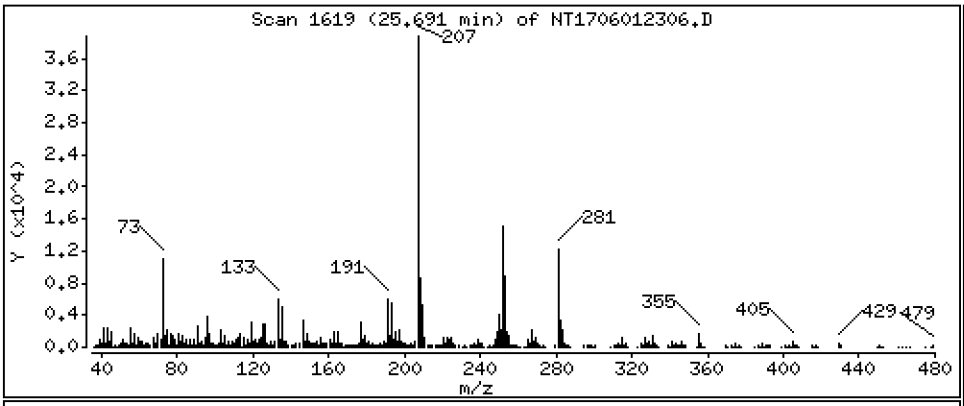
Operator: VTS

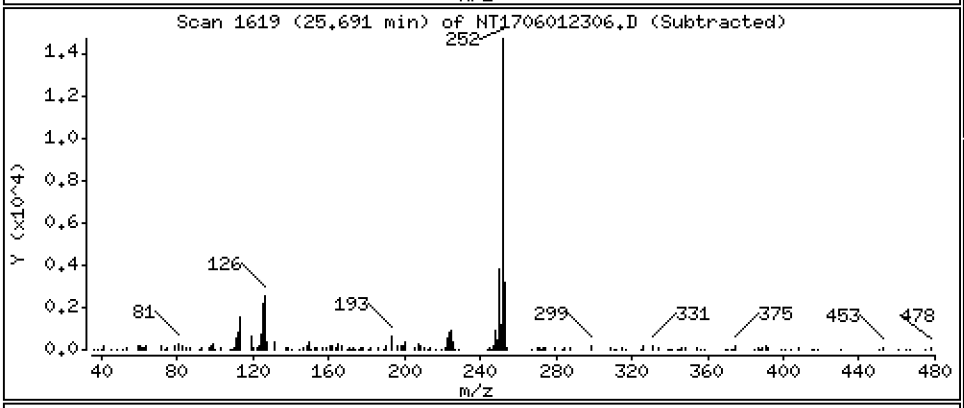
Column phase: ZB-5msi

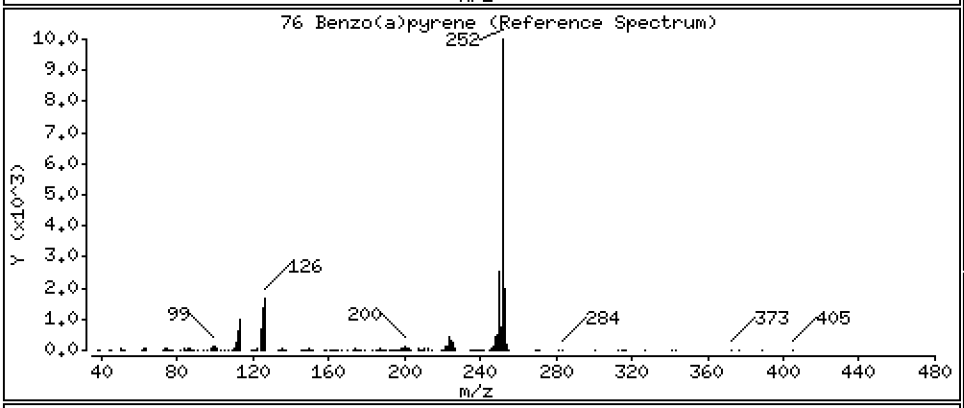
Column diameter: 0.25

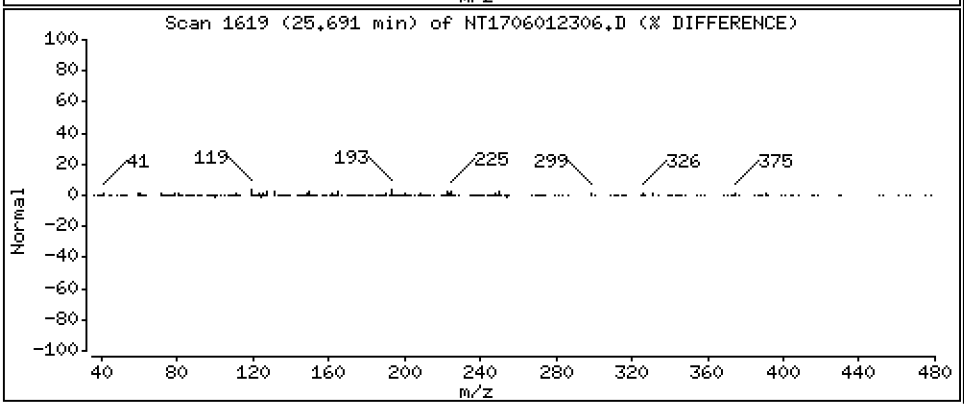
76 Benzo(a)pyrene

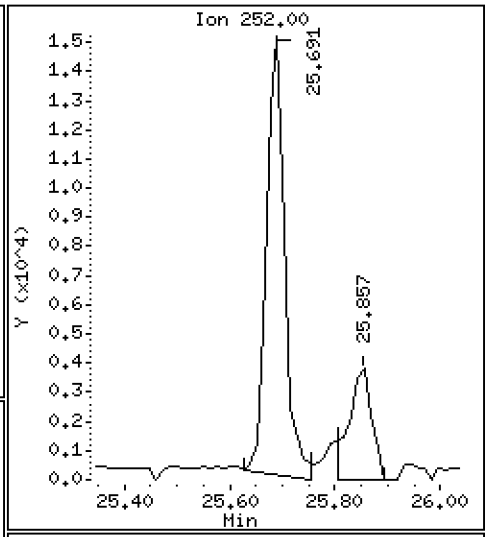
Concentration: 0.2005 ug/mL

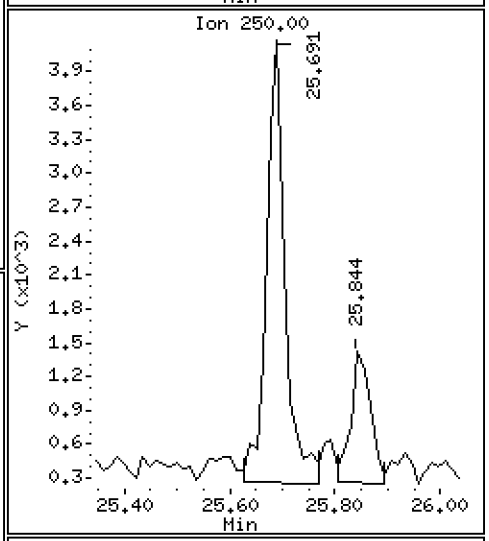


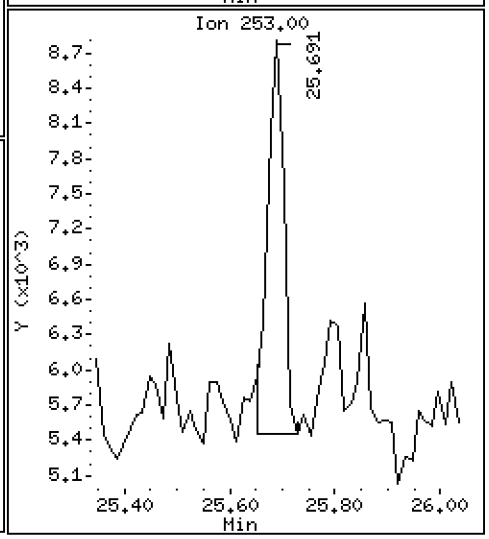












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

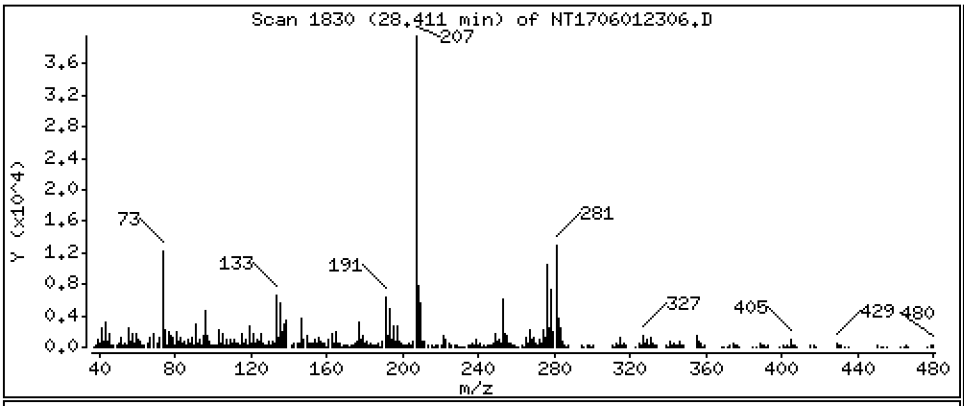
Operator: VTS

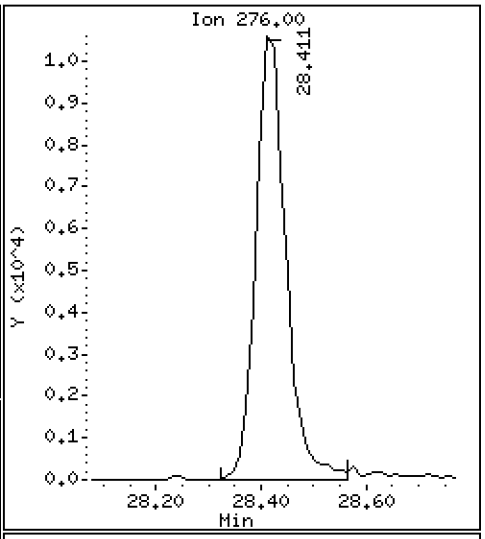
Column phase: ZB-5msi

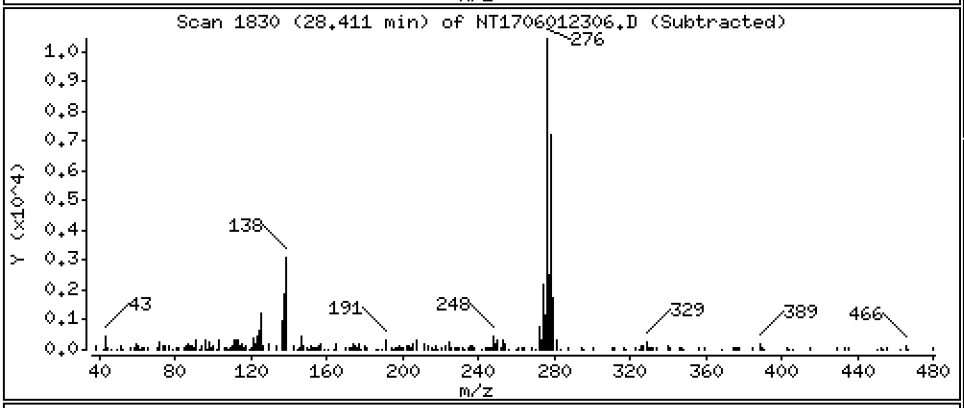
Column diameter: 0.25

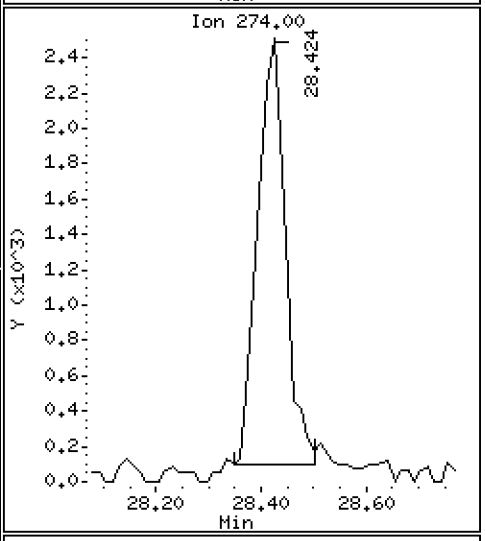
78 Indeno(1,2,3-cd)pyrene

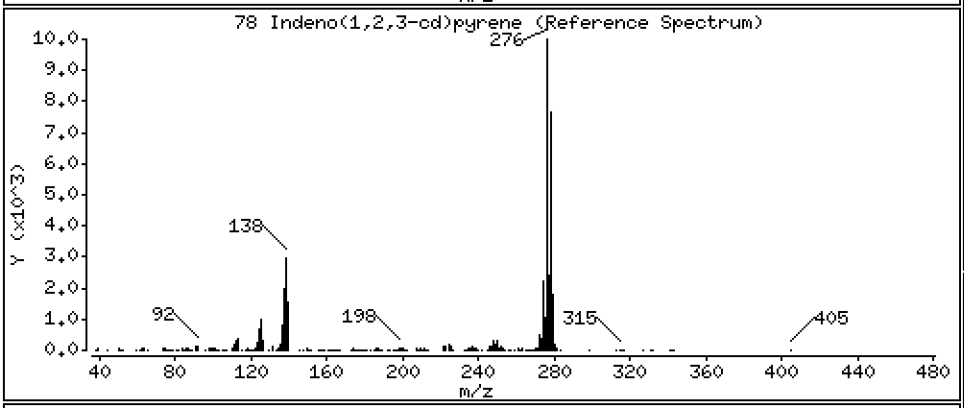
Concentration: 0.1979 ug/mL

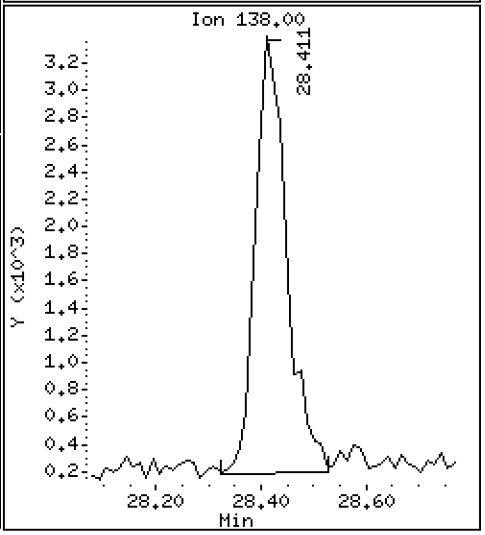


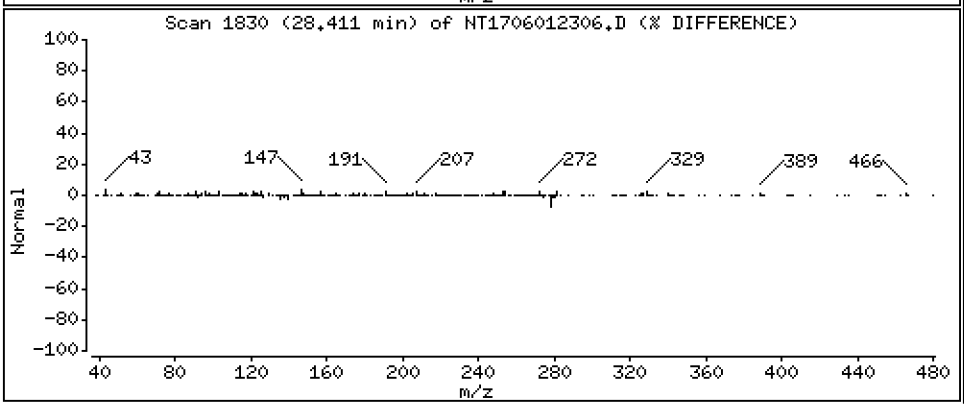












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

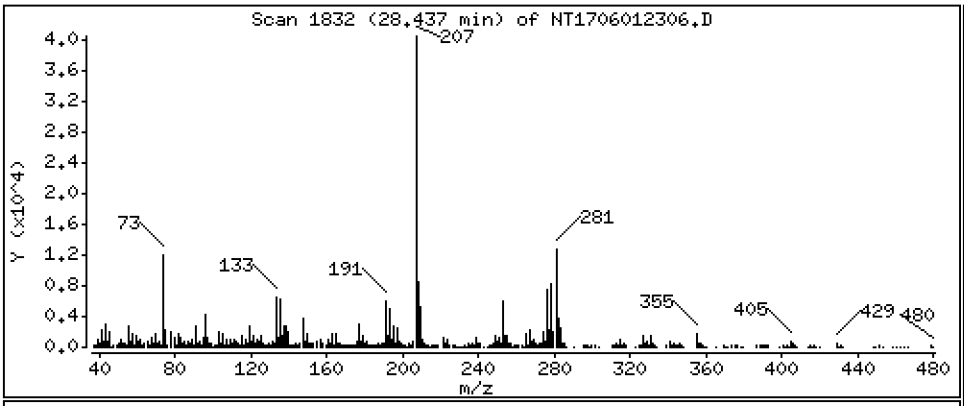
Operator: VTS

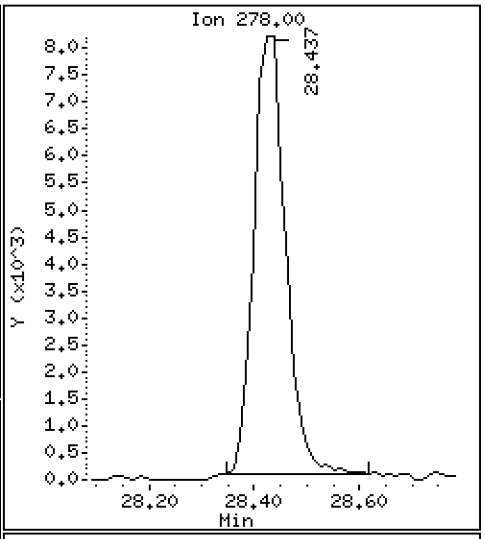
Column phase: ZB-5msi

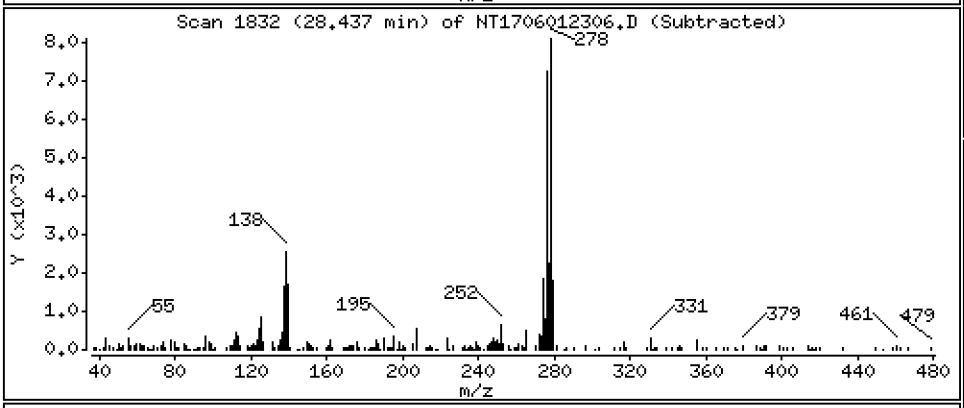
Column diameter: 0.25

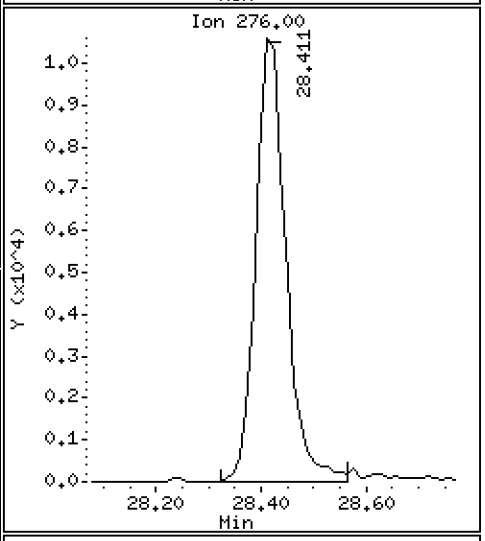
79 Dibenzo(a,h)anthracene

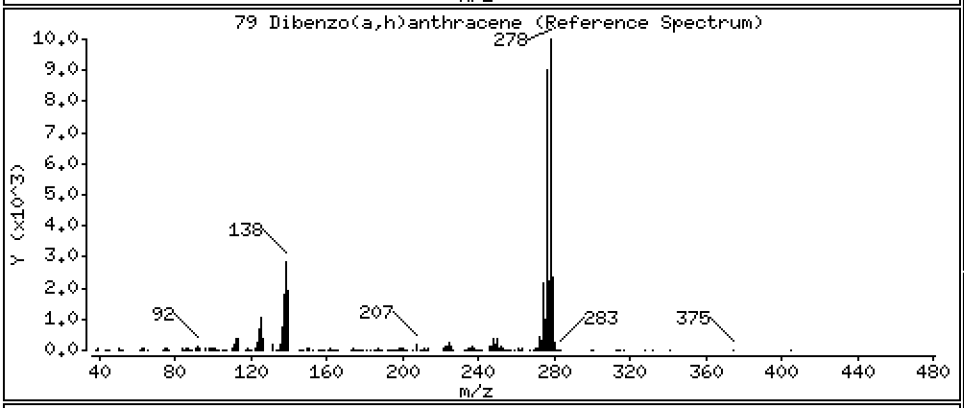
Concentration: 0.1914 ug/mL

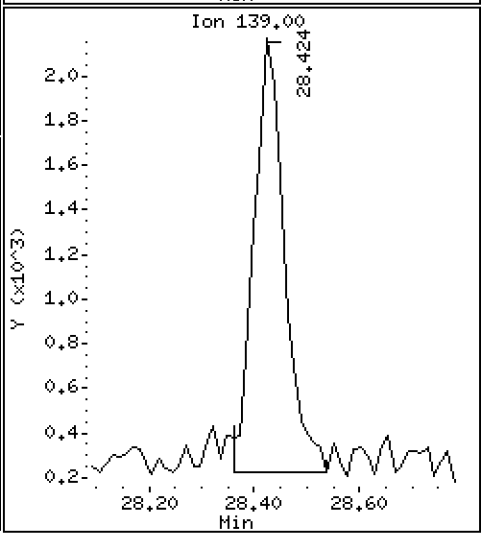


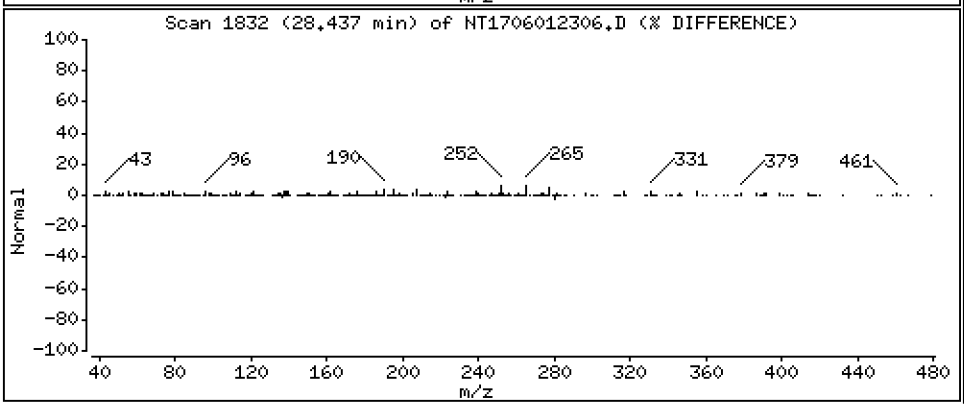












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

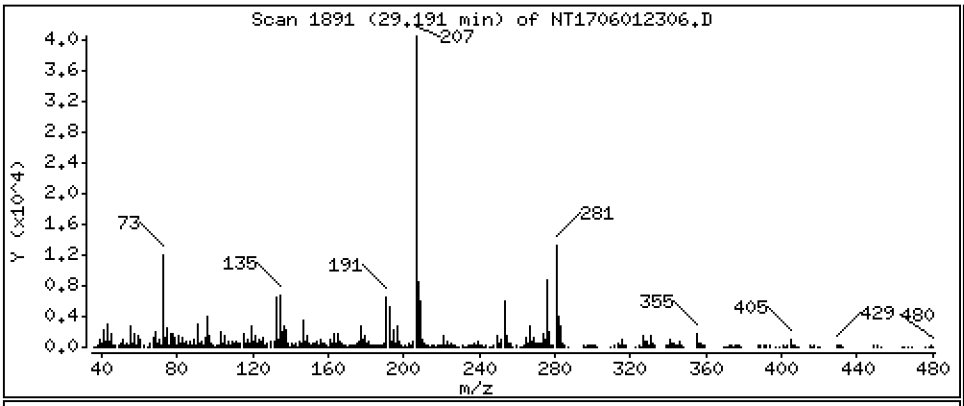
Operator: VTS

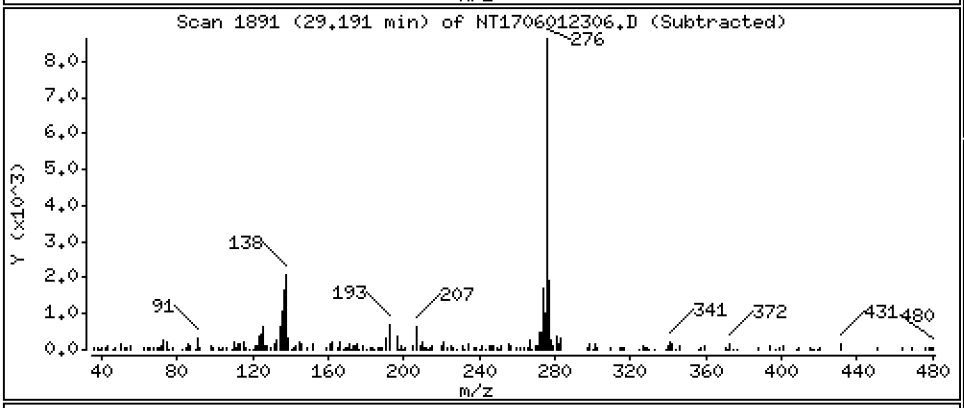
Column phase: ZB-5msi

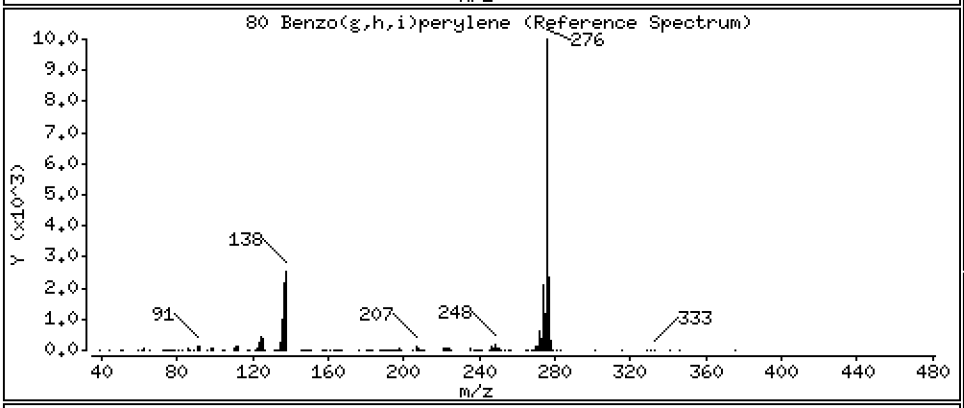
Column diameter: 0.25

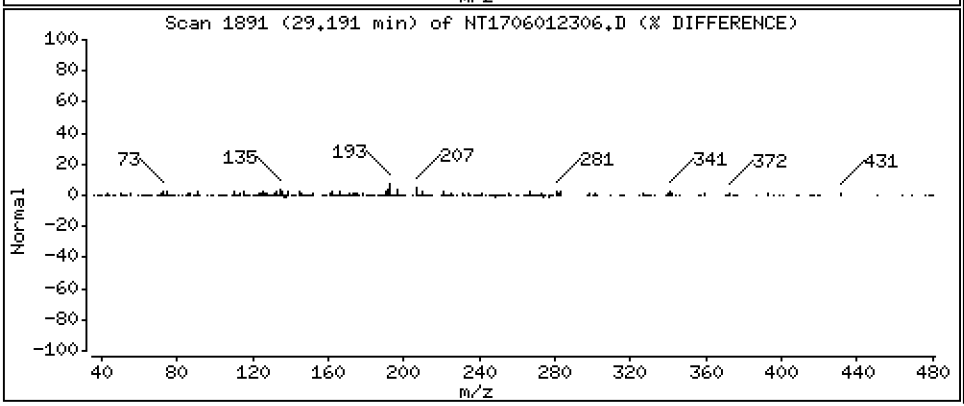
80 Benzo(g,h,i)perylene

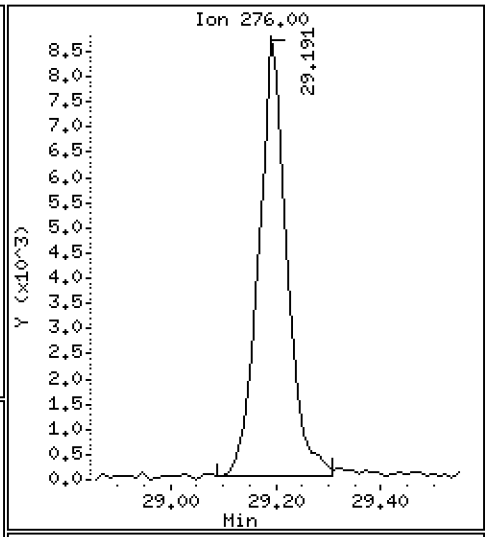
Concentration: 0.1929 ug/mL

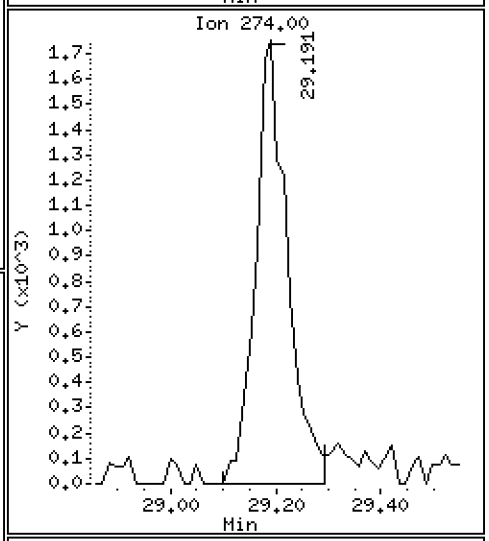


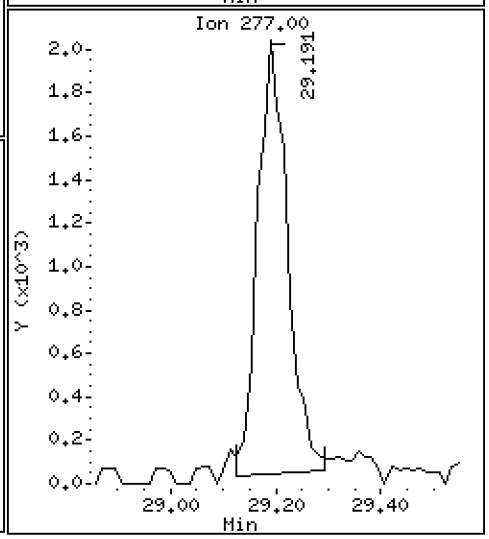












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

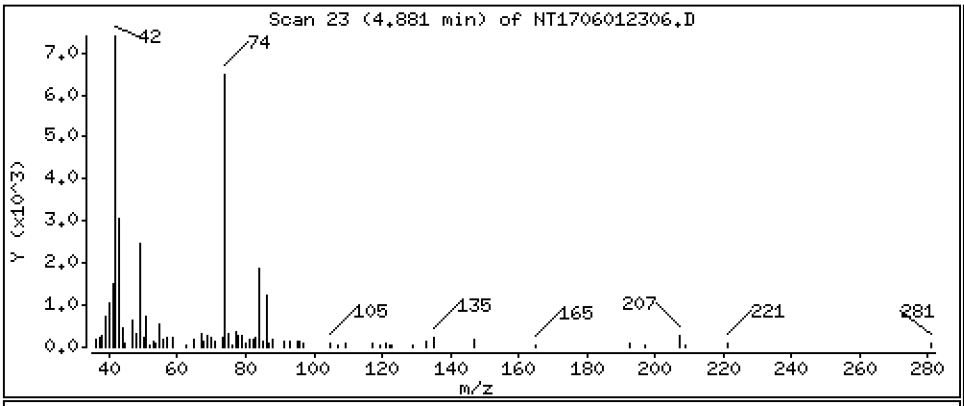
Operator: VTS

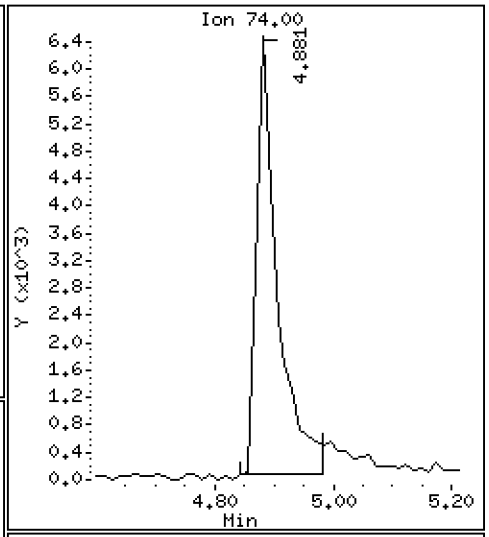
Column phase: ZB-5msi

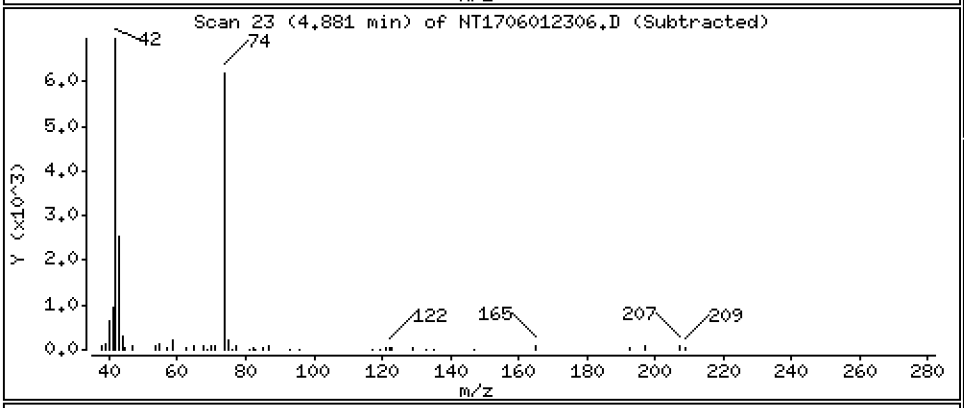
Column diameter: 0.25

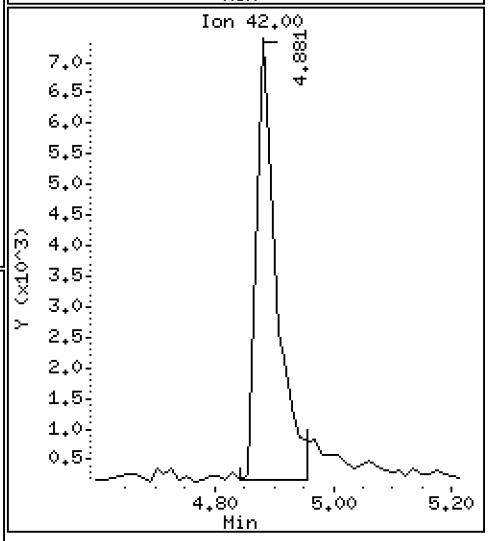
90 N-Nitrosodimethylamine

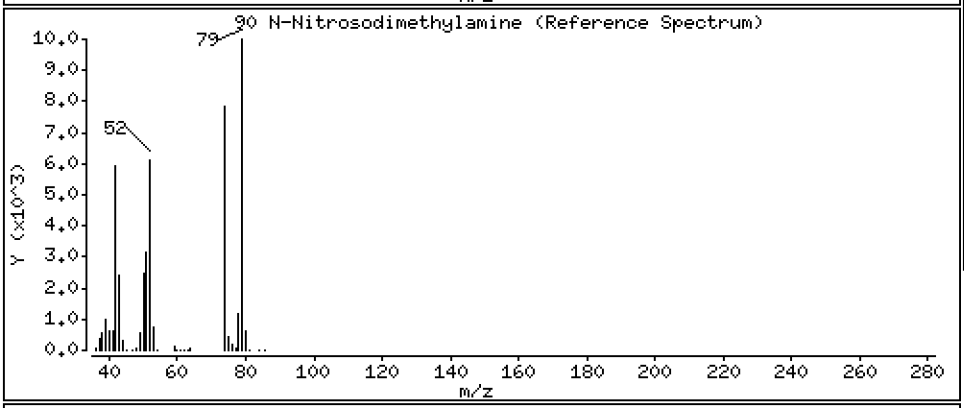
Concentration: 0.2784 ug/mL

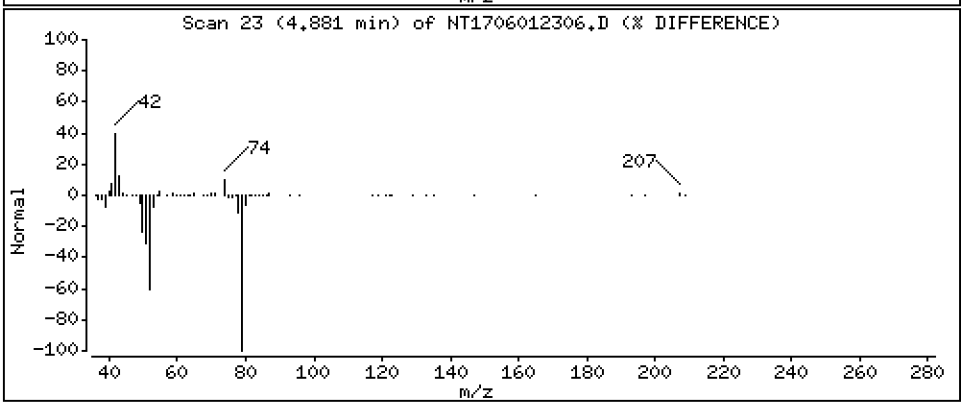












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

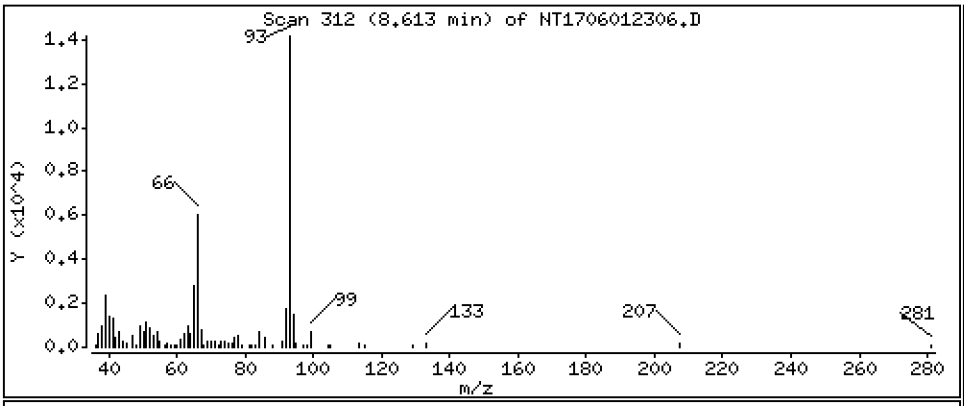
Operator: VTS

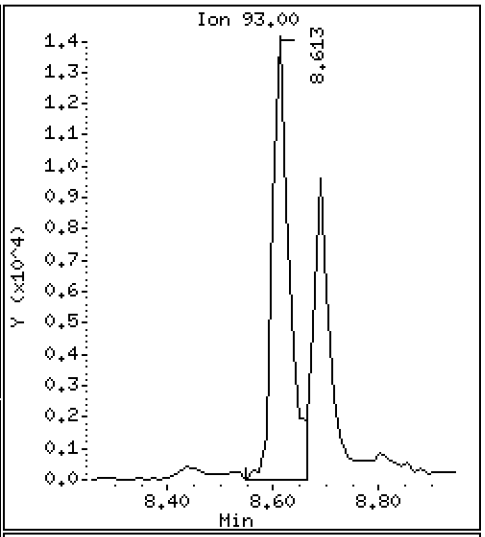
Column phase: ZB-5msi

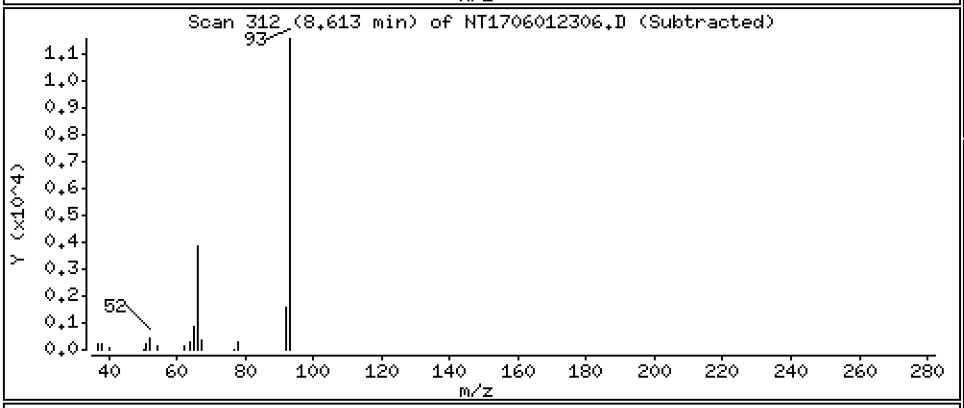
Column diameter: 0.25

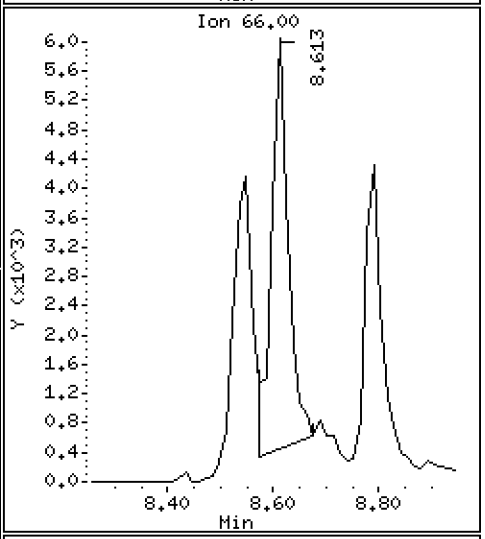
91 Aniline

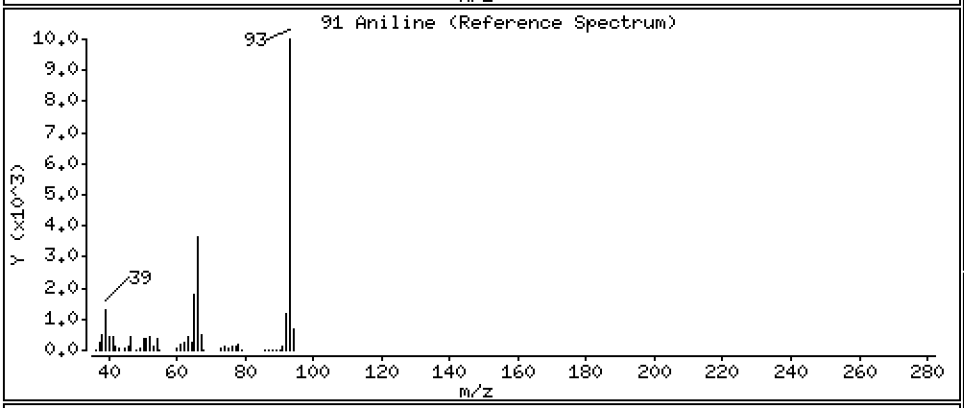
Concentration: 0.3178 ug/mL

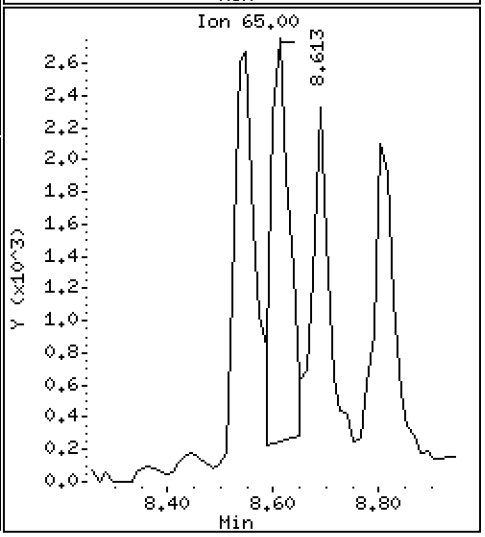


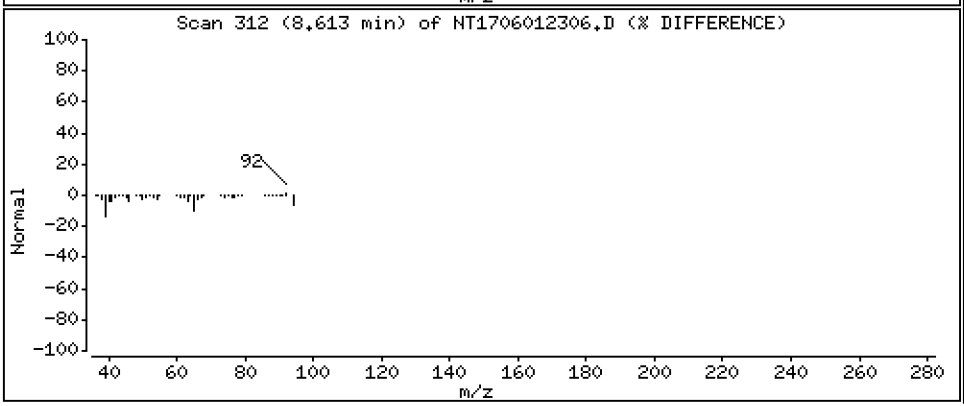












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

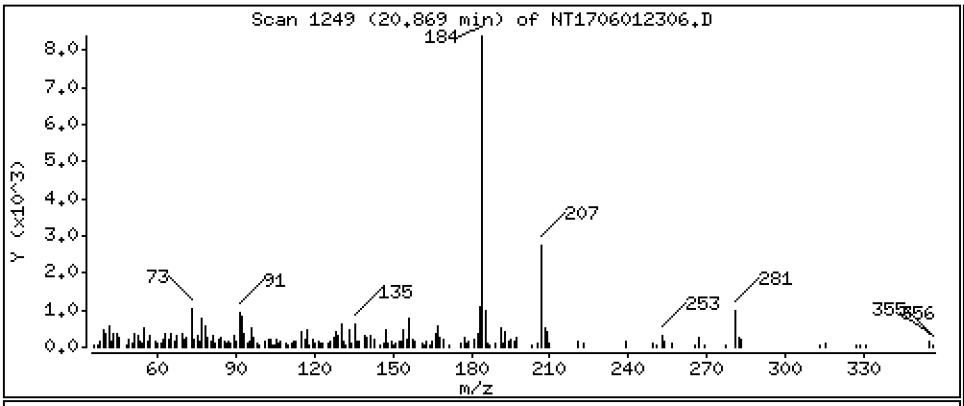
Operator: VTS

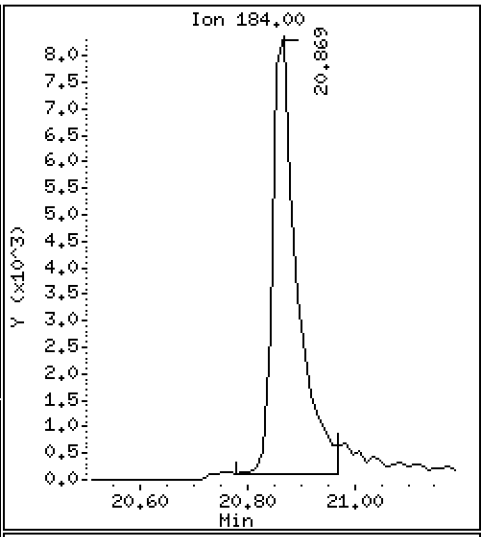
Column phase: ZB-5msi

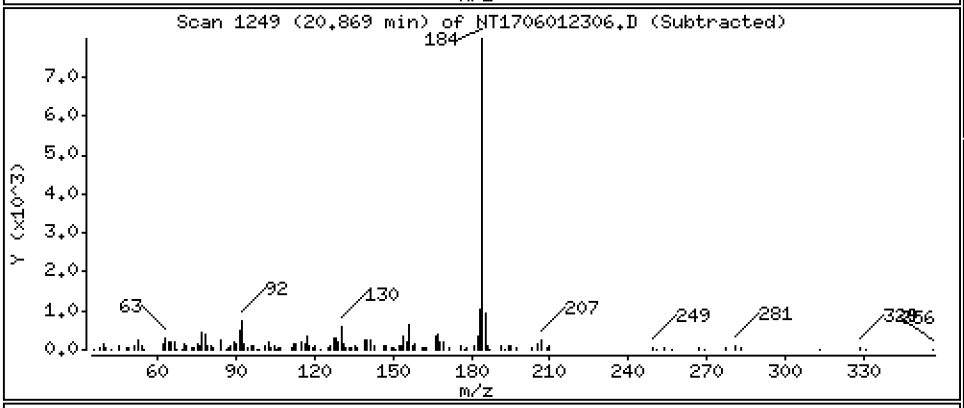
Column diameter: 0.25

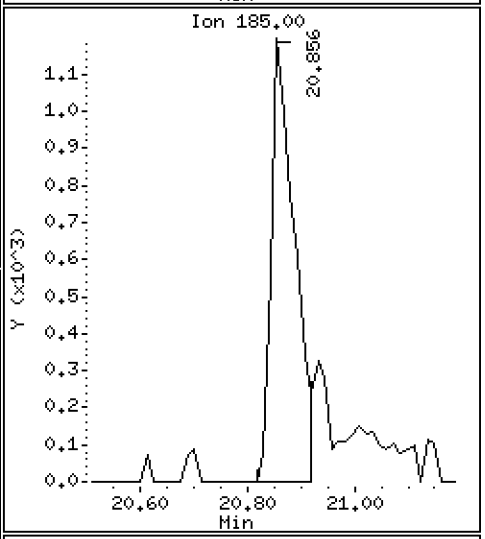
93 Benzidine

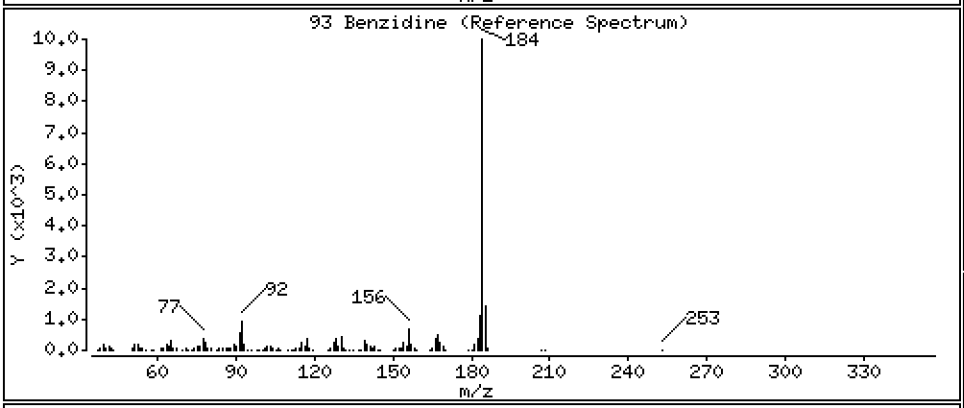
Concentration: 0.3812 ug/mL

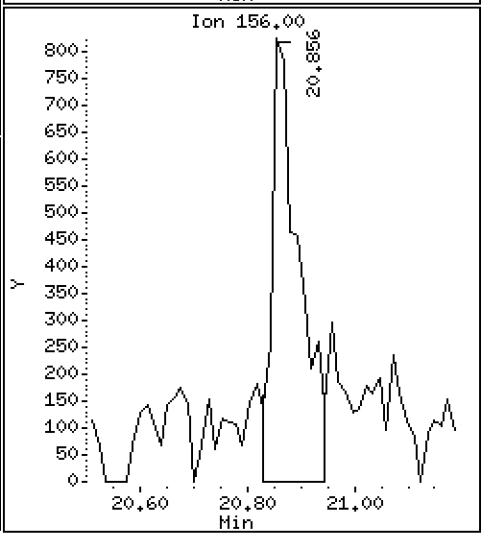


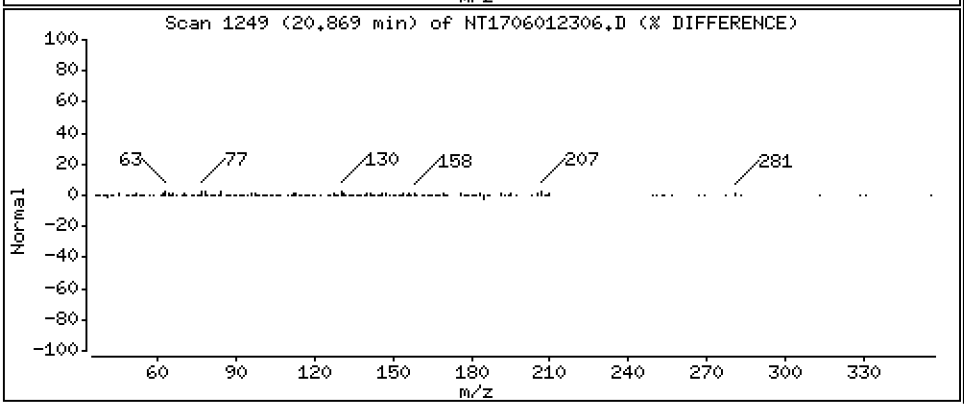












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

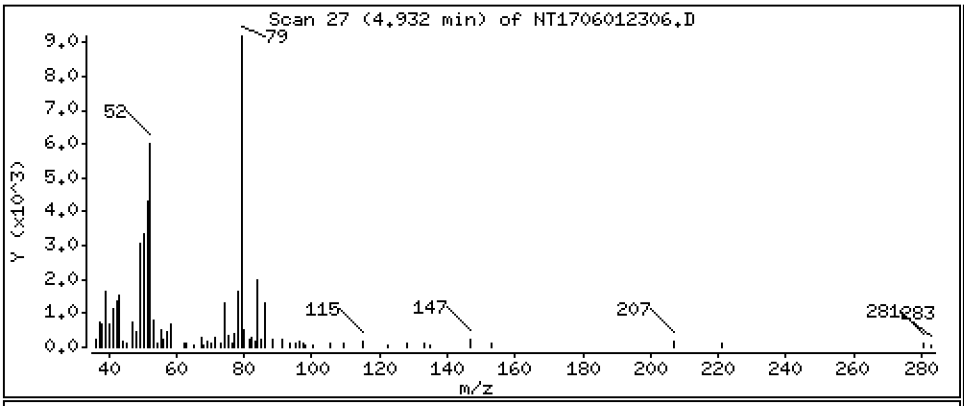
Operator: VTS

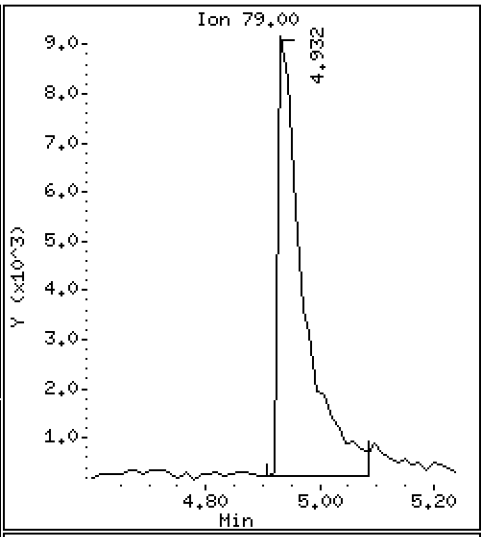
Column phase: ZB-5msi

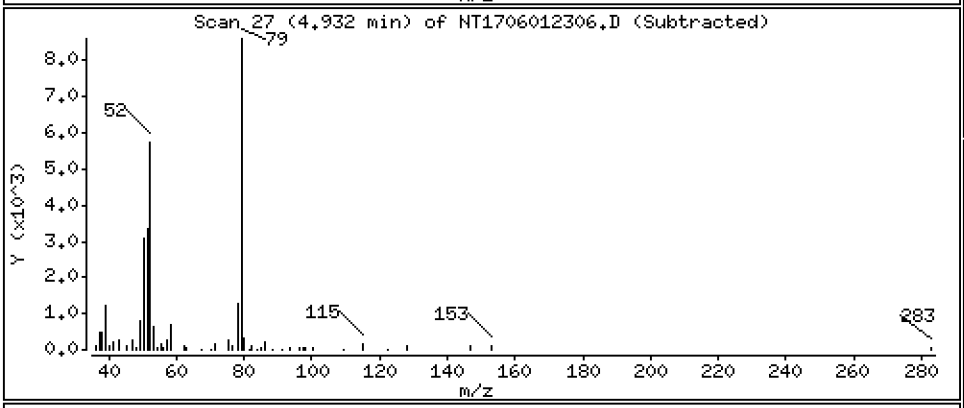
Column diameter: 0.25

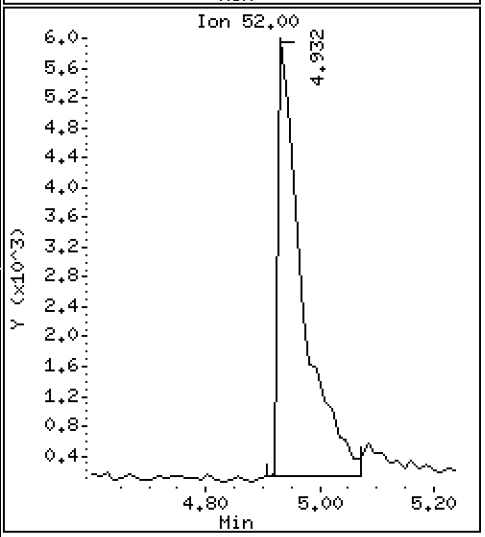
103 Pyridine

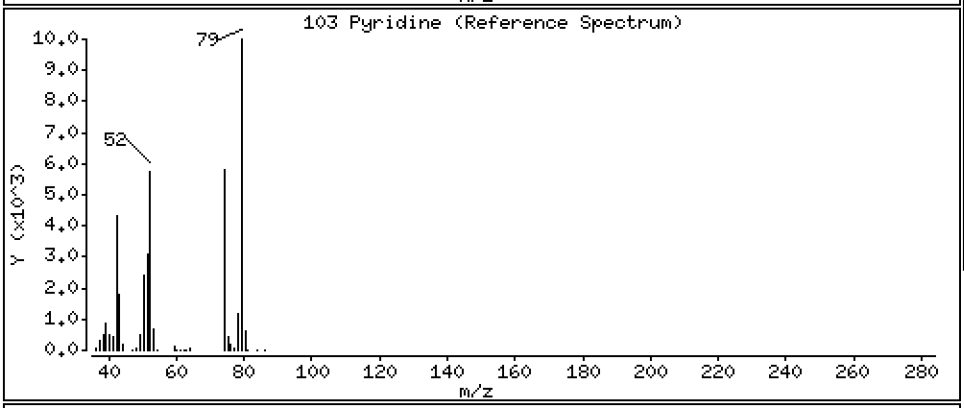
Concentration: 0.3128 ug/mL

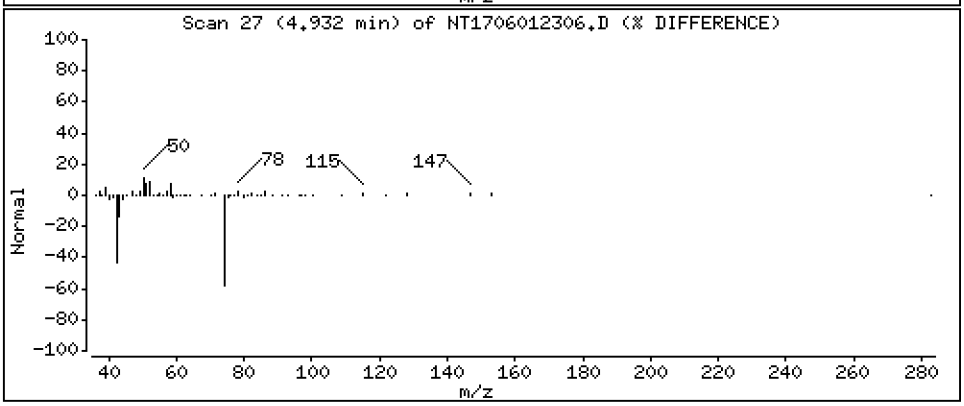












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

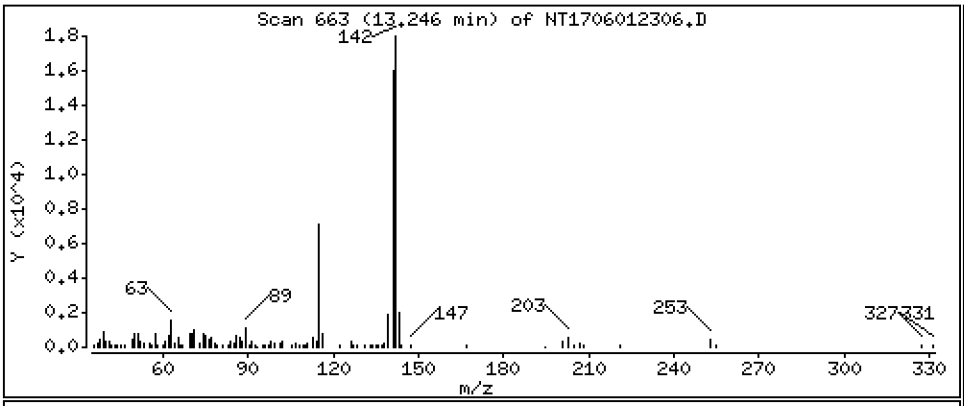
Operator: VTS

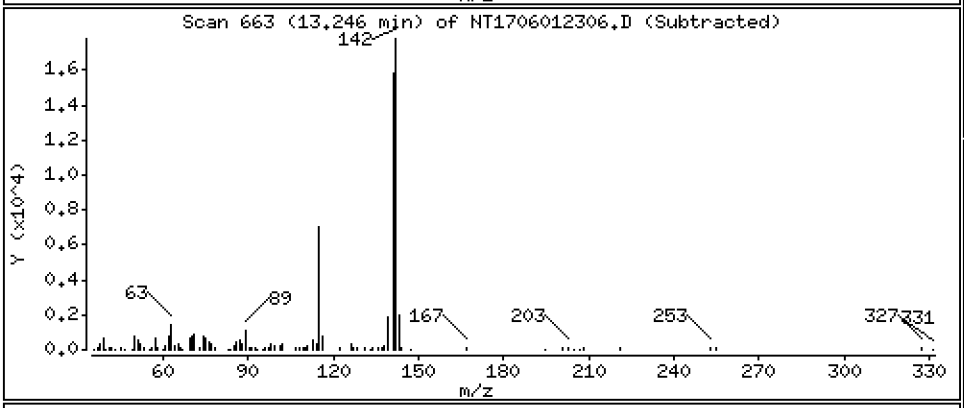
Column phase: ZB-5msi

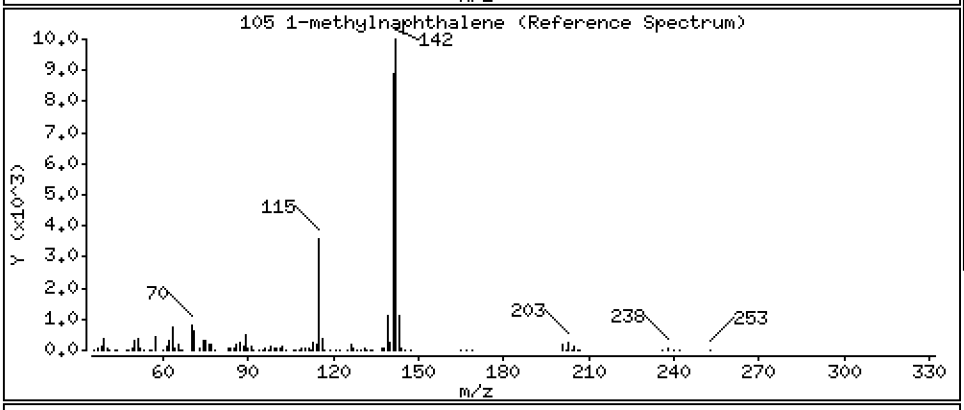
Column diameter: 0.25

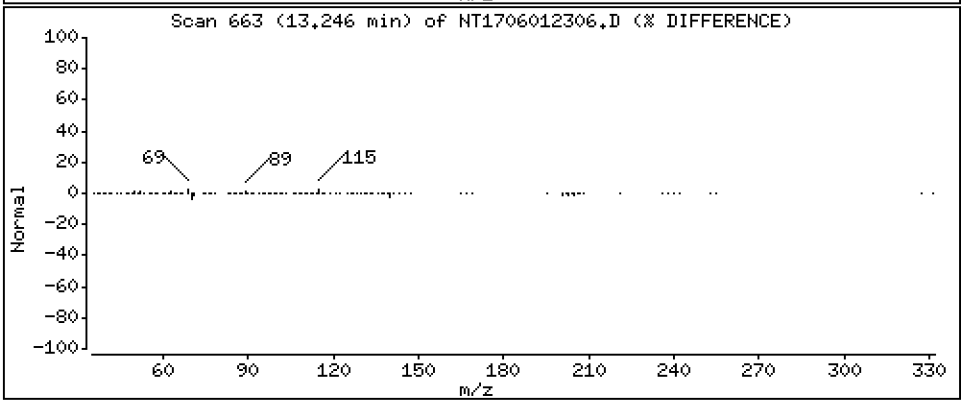
105 1-methylnaphthalene

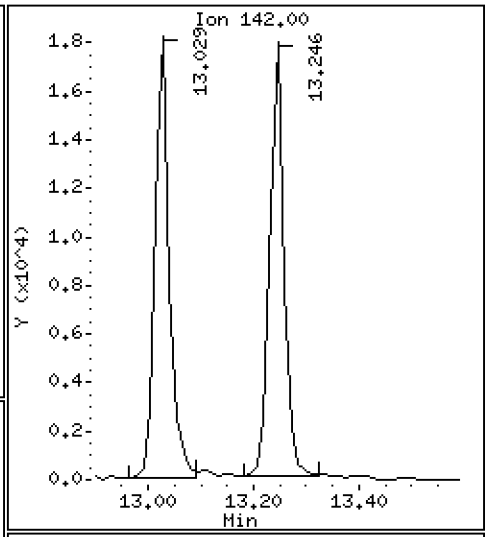
Concentration: 0.1878 ug/mL

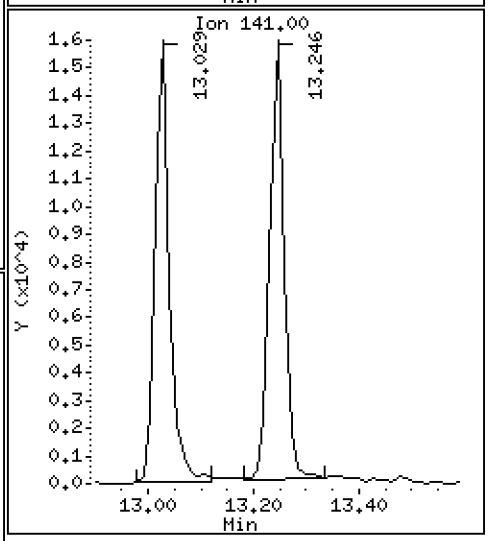












Date : 01-JUN-2023 15:12

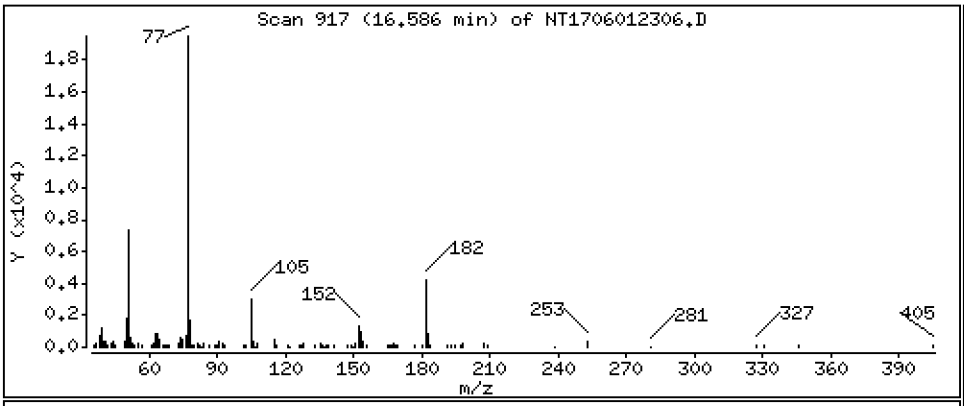
Client ID: Instrument: nt17.i

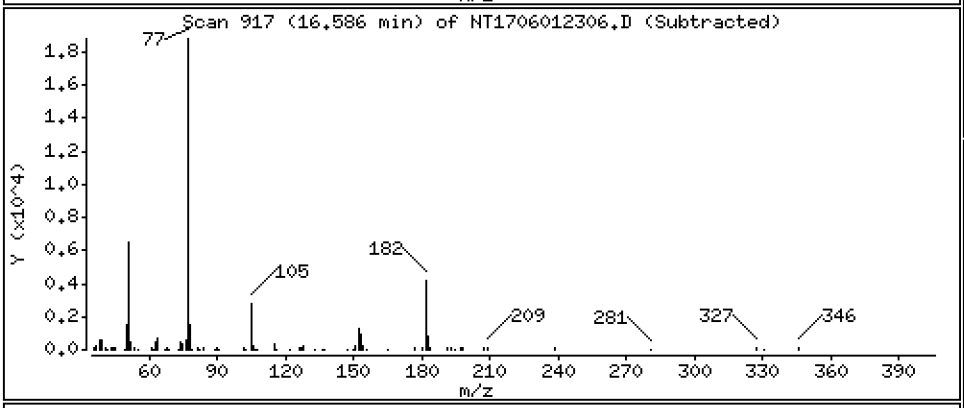
Sample Info: SLF0008-LCV1

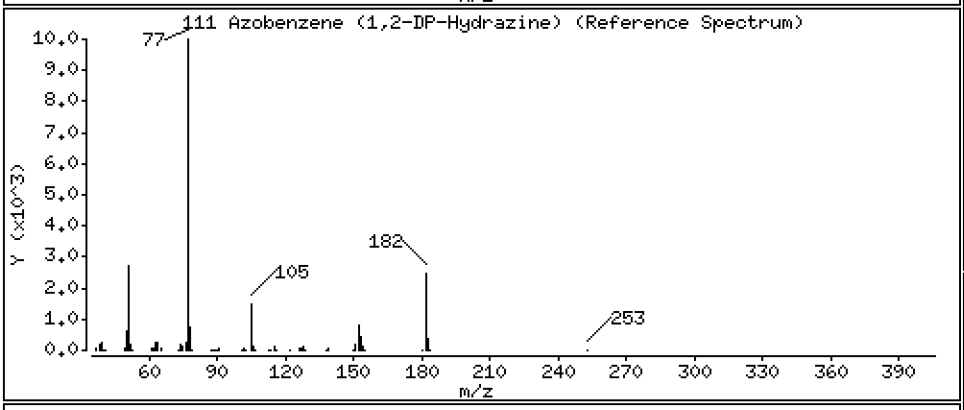
Operator: VTS

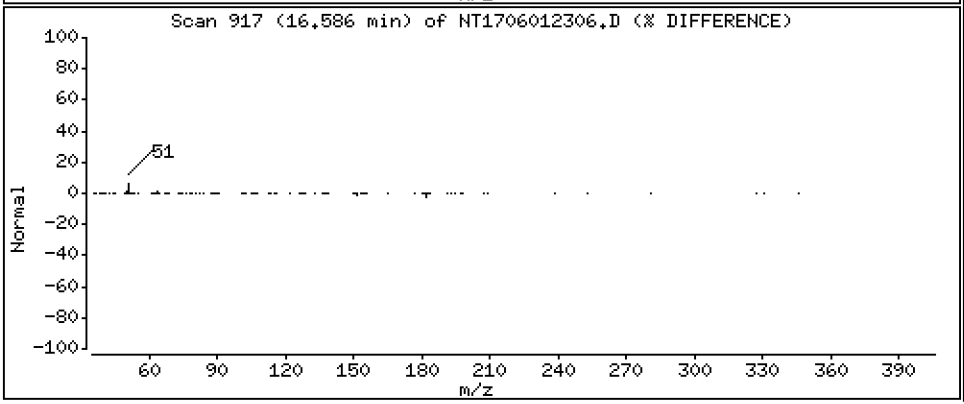
Column phase: ZB-5msi Column diameter: 0.25

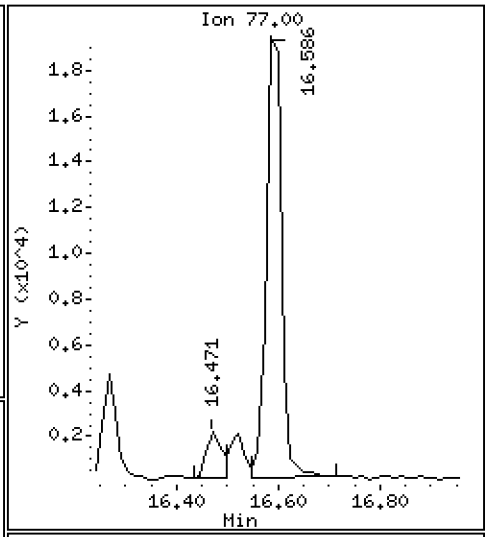
111 Azobenzene (1,2-DP-Hydrazine) Concentration: 0.2032 ug/mL

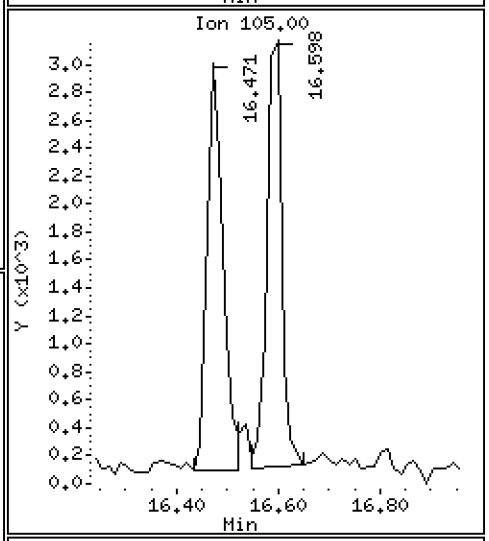


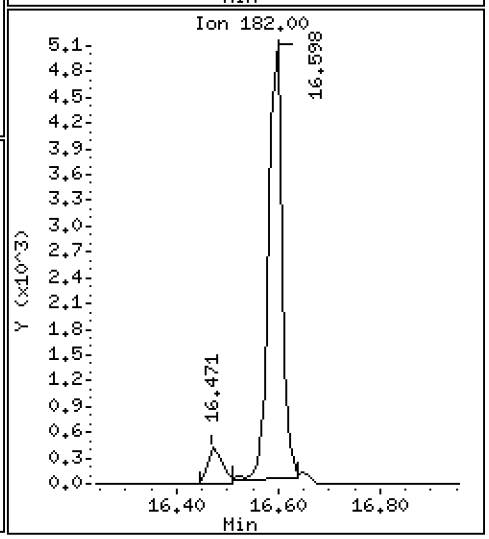












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

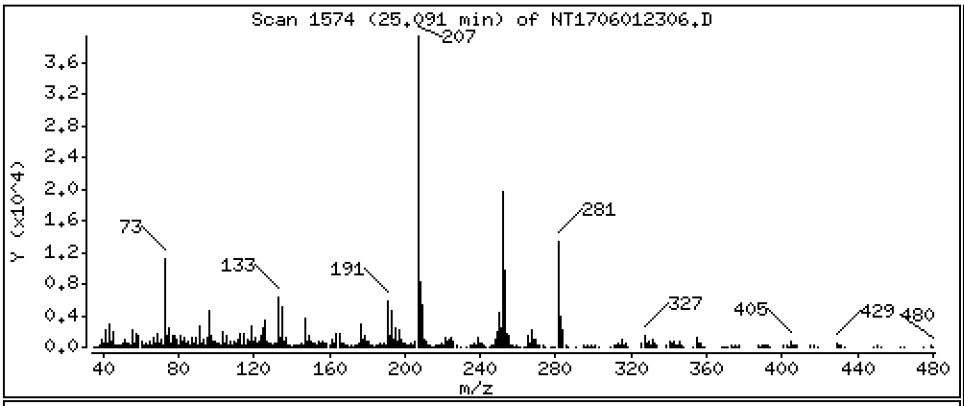
Operator: VTS

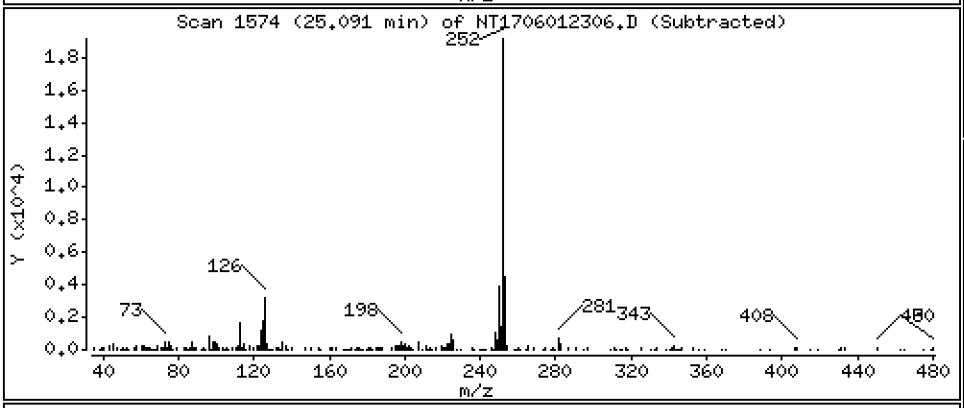
Column phase: ZB-5msi

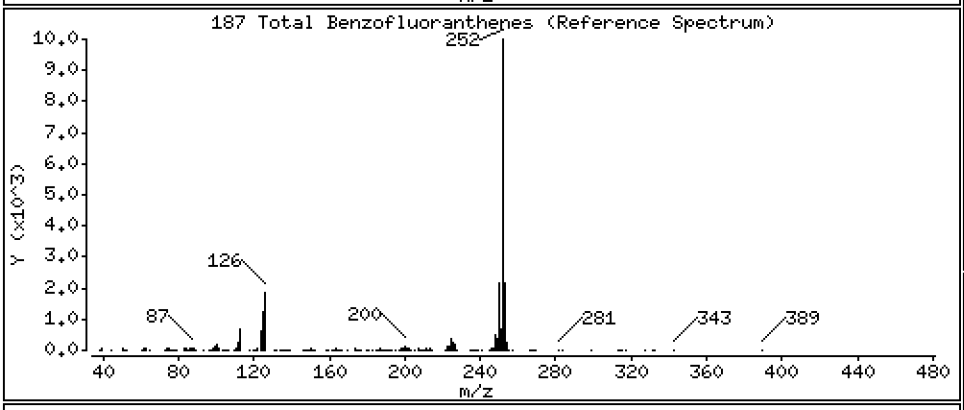
Column diameter: 0.25

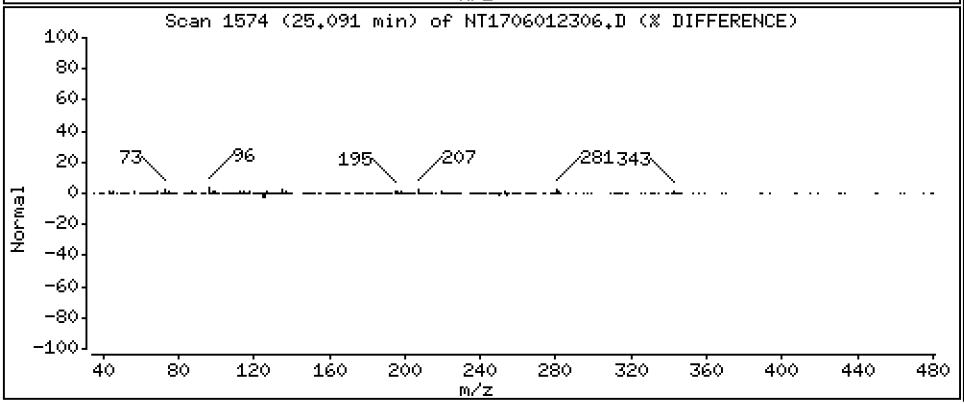
187 Total Benzofluoranthenes

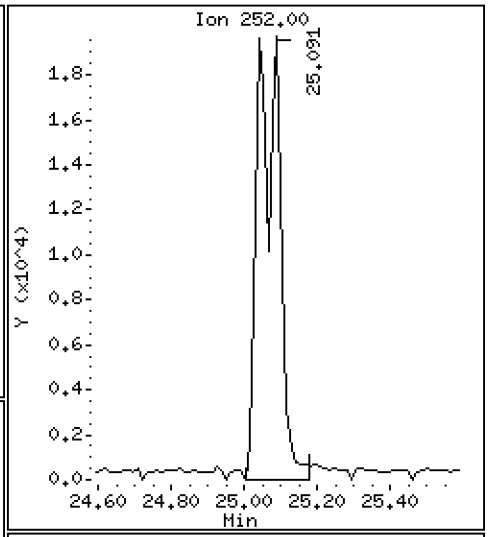
Concentration: 0.4057 ug/mL

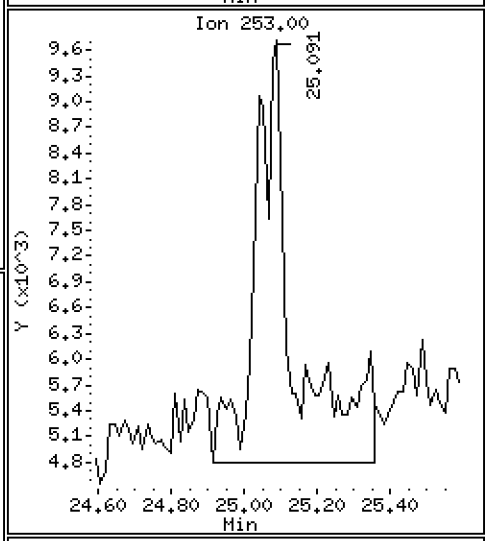


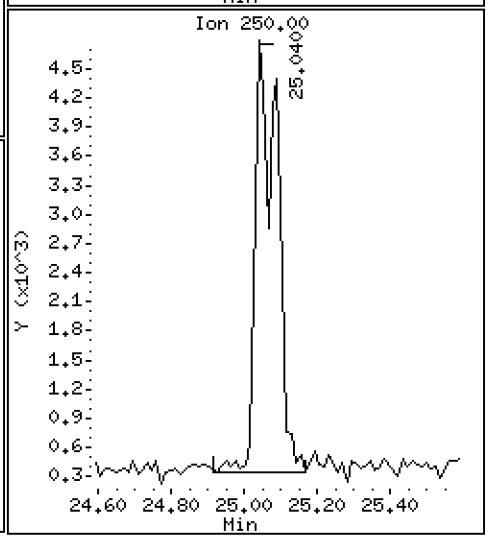












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D

Date : 01-JUN-2023 15:12

Client ID:

Instrument: nt17.i

Sample Info: SLF0008-LCV1

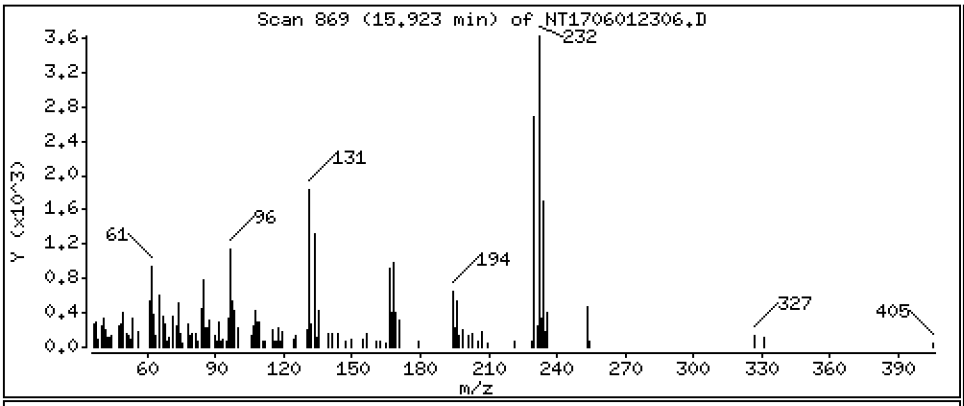
Operator: VTS

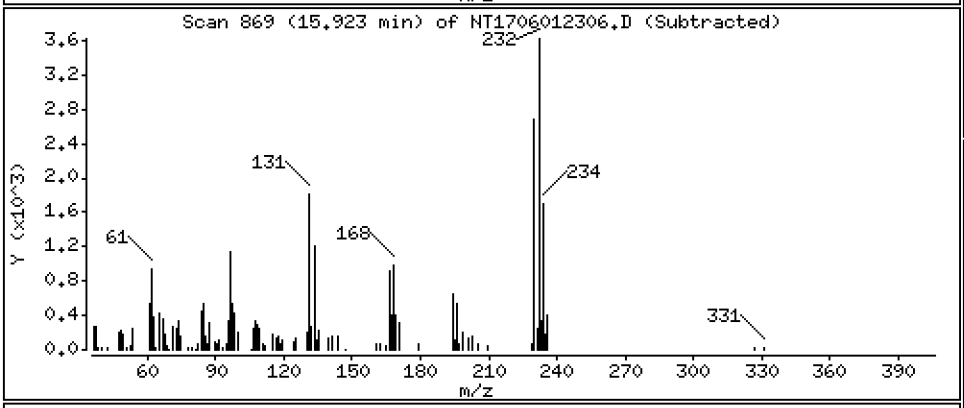
Column phase: ZB-5msi

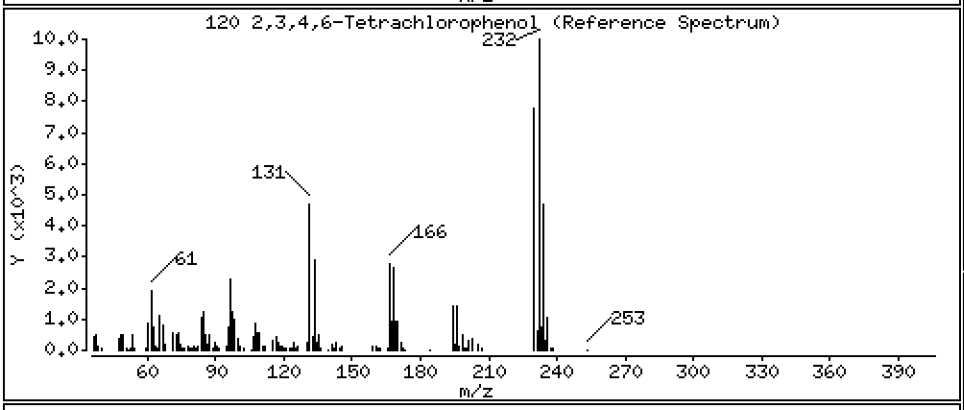
Column diameter: 0.25

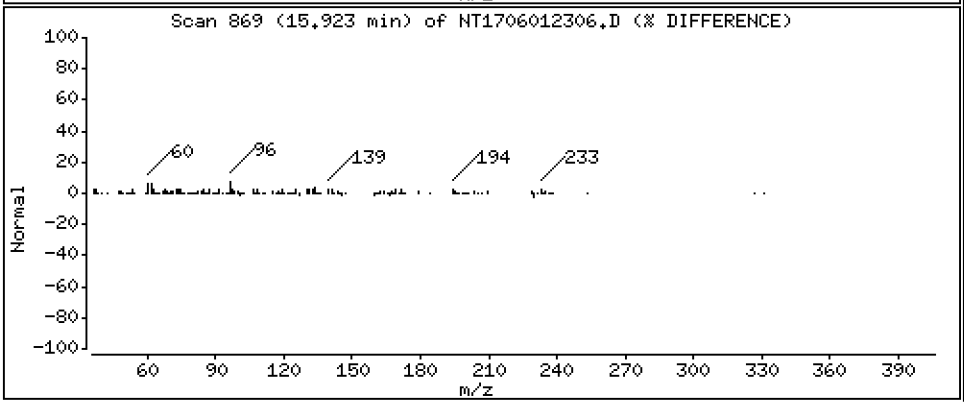
120 2,3,4,6-Tetrachlorophenol

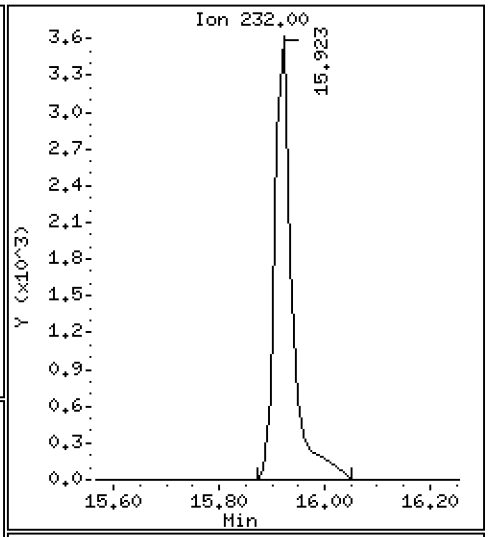
Concentration: 0.1511 ug/mL

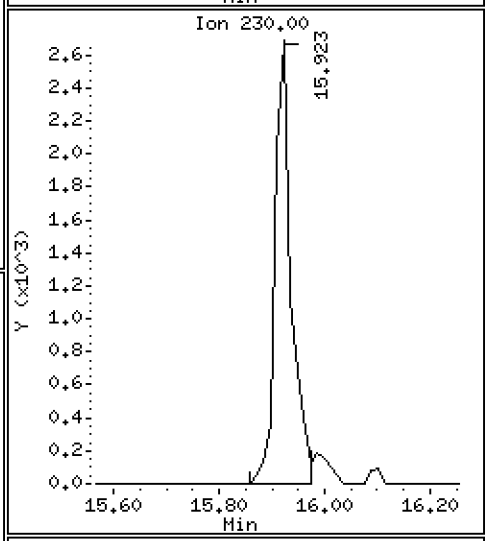


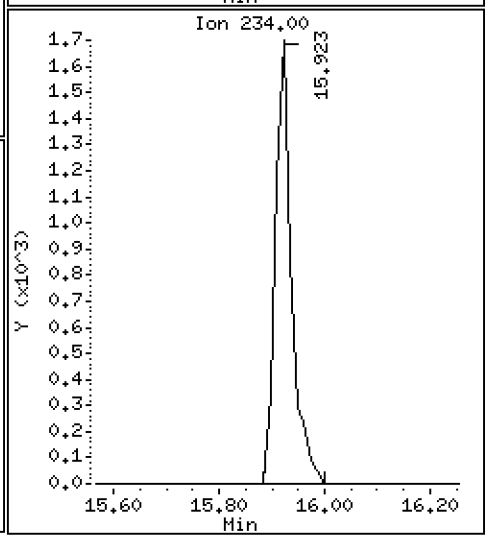












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012306.D
Lab Smp Id: SLF0008-LCV1
Inj Date : 01-JUN-2023 15:12
Operator : VTS Inst ID: nt17.i
Smp Info : SLF0008-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:06 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.969	6.944	(0.763)	19423	0.22757	0.2276
$	2 Phenol-d5	99	8.524	8.511	(0.933)	31599	0.27976	0.2798
	3 Phenol	94	8.537	8.537	(0.934)	21095	0.17633	0.1763
$	5 2-Chlorophenol-d4	132	8.791	8.779	(0.962)	26867	0.29696	0.2970
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	19481	0.22337	0.2234
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	18721	0.18739	0.1874
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	21701	0.21462	0.2146
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	260733	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	20886	0.20711	0.2071
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	12978	0.20408	0.2041
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	20450	0.21572	0.2157
	11 Benzyl alcohol	108	9.481	9.417	(1.038)	8740	0.15691	0.1569(M)
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	6664	0.24940	0.2494
	13 2-Methylphenol	108	9.647	9.634	(1.056)	17390	0.19778	0.1978
	17 Hexachloroethane	117	10.107	10.107	(1.106)	8950	0.22187	0.2219
	16 N-Nitroso-di-n-propylamine	70	9.953	9.953	(1.090)	12997	0.19321	0.1932
	15 4-Methylphenol	108	9.915	9.902	(1.085)	16464	0.18390	0.1839
$	18 Nitrobenzene-d5	82	10.234	10.222	(0.882)	20087	0.18752	0.1875
	19 Nitrobenzene	77	10.260	10.260	(0.884)	20509	0.20067	0.2007
	20 Isophorone	82	10.694	10.707	(0.922)	29588	0.21149	0.2115
	21 2-Nitrophenol	139	10.886	10.873	(0.938)	10966	0.22267	0.2227
	22 2,4-Dimethylphenol	107	10.937	10.937	(0.943)	35700	0.37336	0.3734
	23 Bis(2-Chloroethoxy)methane	93	11.129	11.116	(0.959)	16053	0.18722	0.1872
	24 Benzoic acid	105	11.077	11.192	(0.955)	19148	0.29770	0.2977(M)
	25 2,4-Dichlorophenol	162	11.346	11.333	(0.978)	29494	0.38386	0.3839
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	17300	0.20731	0.2073
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	941208	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	53001	0.20477	0.2048
	29 4-Chloroaniline	127	11.779	11.766	(1.015)	29647	0.29058	0.2906
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	8804	0.21298	0.2130
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.098)	27869	0.33686	0.3369
	32 2-Methylnaphthalene	142	13.028	13.028	(1.123)	35910	0.19377	0.1938
	33 Hexachlorocyclopentadiene	237	13.487	13.487	(0.888)	2789	0.05957	0.05957

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.653	13.641	(0.899)	17778	0.33746	0.3375
	35 2,4,5-Trichlorophenol	196	13.730	13.717	(0.904)	19714	0.35349	0.3535
$	36 2-Fluorobiphenyl	172	13.794	13.794	(0.908)	41118	0.20729	0.2073
	37 2-Chloronaphthalene	162	14.010	14.010	(0.923)	32283	0.20061	0.2006
	38 2-Nitroaniline	65	14.278	14.278	(0.940)	19918	0.36547	0.3655
	39 Dimethylphthalate	163	14.686	14.699	(0.967)	36422	0.21023	0.2102
	40 Acenaphthylene	152	14.878	14.878	(0.980)	53160	0.20803	0.2080
	41 2,6-Dinitrotoluene	165	14.827	14.839	(0.976)	14182	0.34965	0.3496
*	42 Acenaphthene-d10	164	15.184	15.184	(1.000)	503513	4.00000	
	43 3-Nitroaniline	138	15.133	15.120	(0.997)	12180	0.32422	0.3242(M)
	44 Acenaphthene	153	15.247	15.247	(1.004)	31794	0.19903	0.1990
	45 2,4-Dinitrophenol	184	15.349	15.337	(1.011)	6608	0.27023	0.2702(M)
	46 Dibenzofuran	168	15.579	15.579	(1.026)	45300	0.20318	0.2032
	47 4-Nitrophenol	109	15.502	15.451	(1.021)	7747	0.31046	0.3105(M)
	48 2,4-Dinitrotoluene	165	15.643	15.643	(1.030)	17701	0.33338	0.3334
	50 Diethylphthalate	149	16.127	16.140	(1.062)	33210	0.19656	0.1966
	49 Fluorene	166	16.280	16.280	(1.072)	43129	0.20347	0.2035
	51 4-Chlorophenyl-phenylether	204	16.267	16.267	(1.071)	21399	0.21959	0.2196
	52 4-Nitroaniline	138	16.394	16.382	(1.080)	9368	0.26345	0.2635
	53 4,6-Dinitro-2-methylphenol	198	16.471	16.483	(0.905)	14100	0.39746	0.3975
	54 N-Nitrosodiphenylamine	169	16.522	16.522	(0.908)	24147	0.19391	0.1939
$	55 2,4,6-Tribromophenol	330	16.814	16.814	(1.107)	5950	0.27091	0.2709
	56 4-Bromophenyl-phenylether	248	17.272	17.272	(0.949)	8606	0.19725	0.1972
	57 Hexachlorobenzene	284	17.578	17.591	(0.966)	9942	0.22363	0.2236
	58 Pentachlorophenol	266	17.948	17.948	(0.986)	5693	0.22087	0.2209
*	59 Phenanthrene-d10	188	18.203	18.203	(1.000)	888941	4.00000	
	60 Phenanthrene	178	18.241	18.254	(1.002)	52514	0.20246	0.2025
	61 Anthracene	178	18.343	18.343	(1.008)	44291	0.18188	0.1819
	62 Carbazole	167	18.675	18.688	(1.026)	43967	0.29783	0.2978
	63 Di-n-butylphthalate	149	19.453	19.453	(1.069)	55386	0.18836	0.1884
	64 Fluoranthene	202	20.613	20.613	(0.888)	51547	0.18431	0.1843
	65 Pyrene	202	21.034	21.034	(0.906)	54504	0.19225	0.1922
$	66 Terphenyl-d14	244	21.315	21.315	(0.918)	41516	0.20599	0.2060
	67 Butylbenzylphthalate	149	22.233	22.233	(0.958)	23988	0.18905	0.1890
	68 Benzo(a)anthracene	228	23.177	23.190	(0.998)	48355	0.21964	0.2196
*	69 Chrysene-d12	240	23.215	23.215	(1.000)	597881	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.139	23.139	(0.997)	44061	1.03296	1.033
	71 Chrysene	228	23.254	23.254	(1.002)	42074	0.20309	0.2031
	72 bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	28742	0.18507	0.1851
*	134 Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	1073418	4.00000	
	73 Di-n-octylphthalate	149	24.236	24.236	(1.001)	55815	0.20514	0.2051
	74 Benzo(b)fluoranthene	252	25.040	25.052	(0.970)	43460	0.18954	0.1895
	75 Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	44300	0.20449	0.2045
	76 Benzo(a)pyrene	252	25.690	25.690	(0.996)	36216	0.20050	0.2005
*	77 Perylene-d12	264	25.805	25.805	(1.000)	578338	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.411	28.423	(1.101)	41462	0.19790	0.1979
	79 Dibenzo(a,h)anthracene	278	28.436	28.436	(1.102)	33655	0.19140	0.1914
	80 Benzo(g,h,i)perylene	276	29.190	29.203	(1.131)	33353	0.19287	0.1929
	90 N-Nitrosodimethylamine	74	4.880	4.867	(0.534)	15851	0.27842	0.2784
	91 Aniline	93	8.613	8.600	(0.943)	31858	0.31777	0.3178
	93 Benzidine	184	20.868	20.856	(0.899)	26459	0.38117	0.3812
	103 Pyridine	79	4.931	4.893	(0.540)	28247	0.31280	0.3128
	105 1-methylnaphthalene	142	13.245	13.245	(1.142)	32290	0.18781	0.1878
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.585	16.598	(1.092)	40068	0.20316	0.2032

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.091	25.091	(0.972)	83501	0.40567	0.4057(M)
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.910	(1.049)	9524	0.15110	0.1511

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012306.D
Lab Smp Id: SLF0008-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 13:58
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265417	132709	530834	260733	-1.76
27 Naphthalene-d8	976764	488382	1953528	941208	-3.64
42 Acenaphthene-d10	532567	266284	1065134	503513	-5.46
59 Phenanthrene-d10	966524	483262	1933048	888941	-8.03
69 Chrysene-d12	647716	323858	1295432	597881	-7.69
134 Di-n-octylphthala	1235998	617999	2471996	1073418	-13.15
77 Perylene-d12	613582	306791	1227164	578338	-5.74

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012306.D

Lab ID: SLF0008-LCV1
nt17.i, ABN.m, 01-JUN-2023 15:12

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.038	1.031	0.0070	Benzyl alcohol
0.955	0.965	-0.0099	Benzoic acid

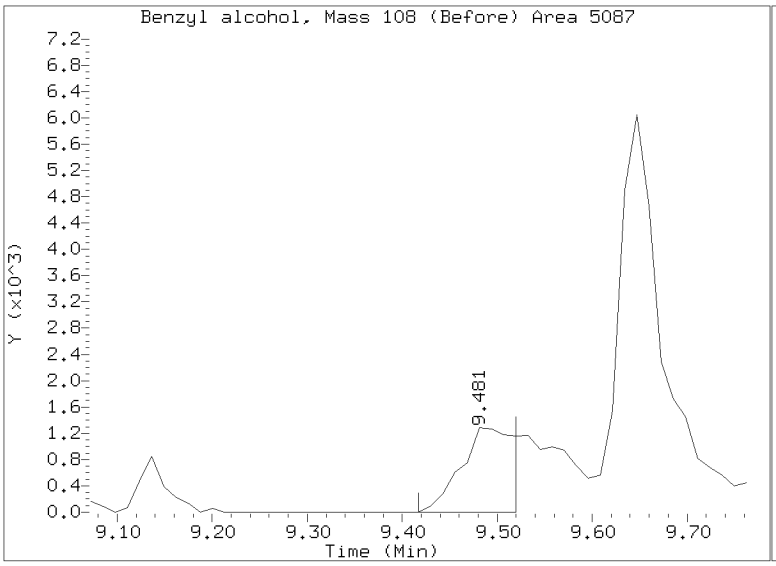
RRT check based on Ccal File: NT1706012304.D

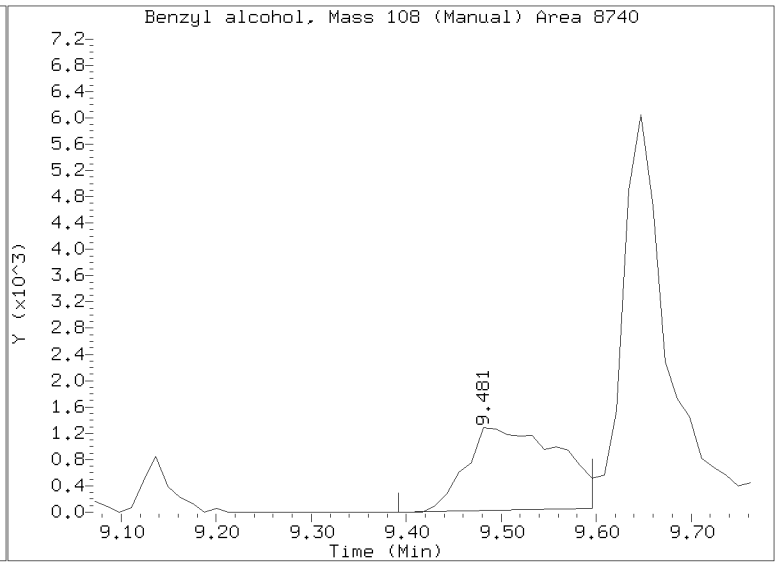
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

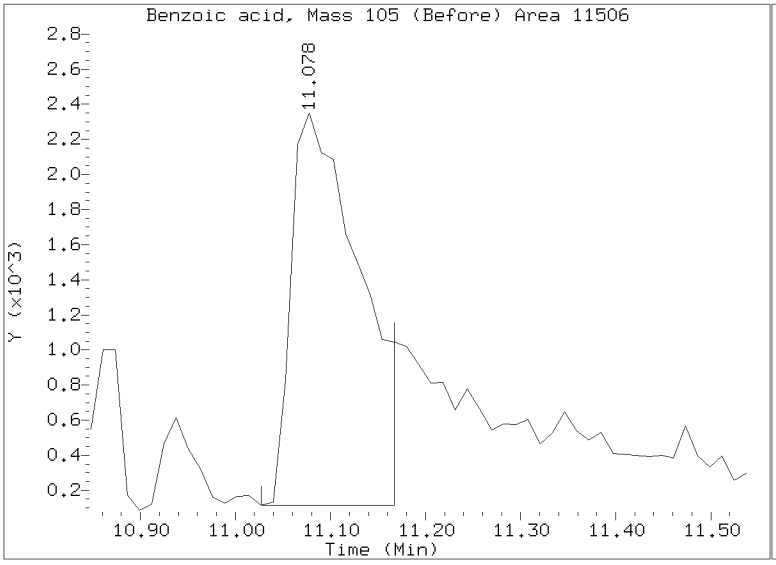
* Only compounds listed in the work order have been verified by the analyst *

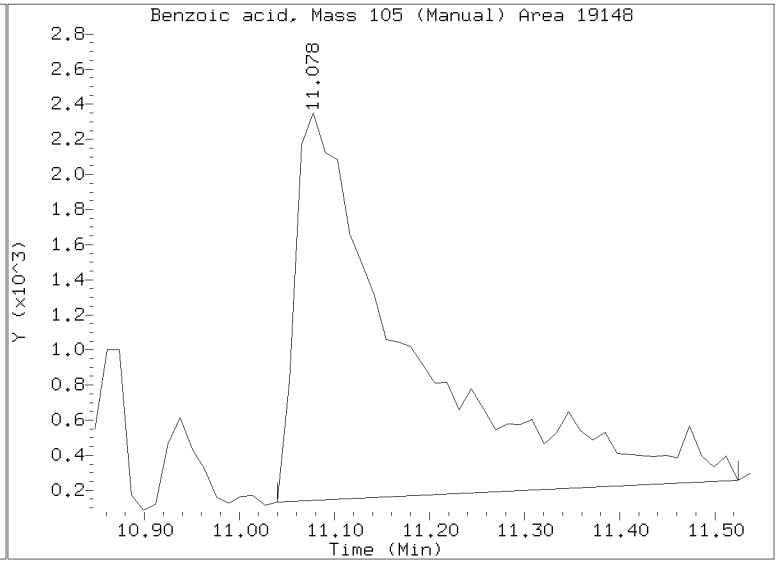
Quant Ion Manual Peak Adjustment Report

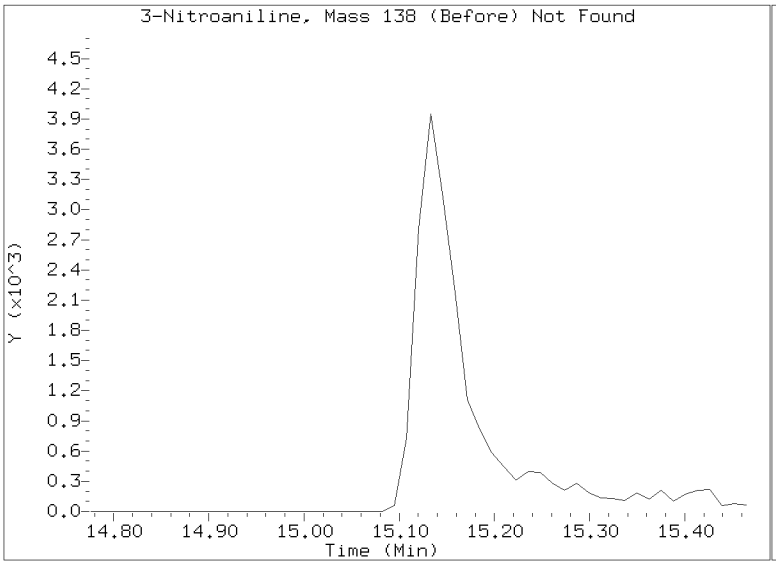
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012306.D
Injection Date: 01-JUN-2023 15:12
Lab ID:SLF0008-LCV1 Client ID:
Report Date: 06/03/2023 10:06

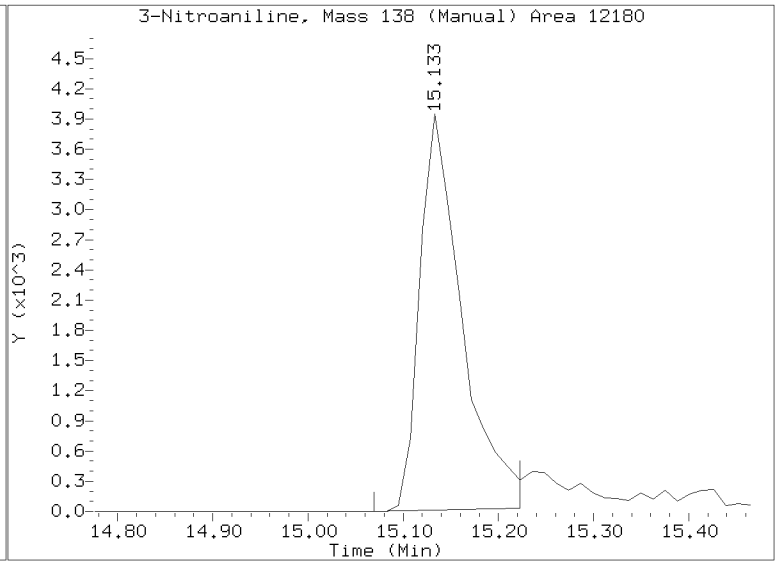






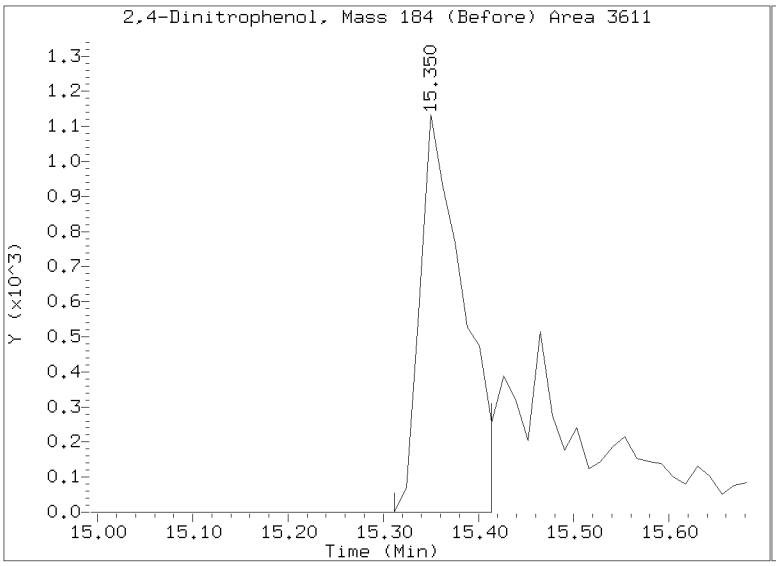


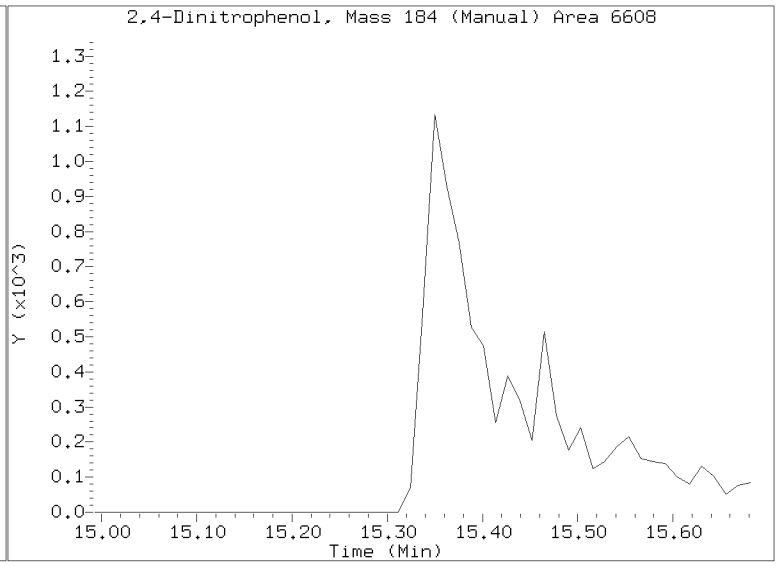


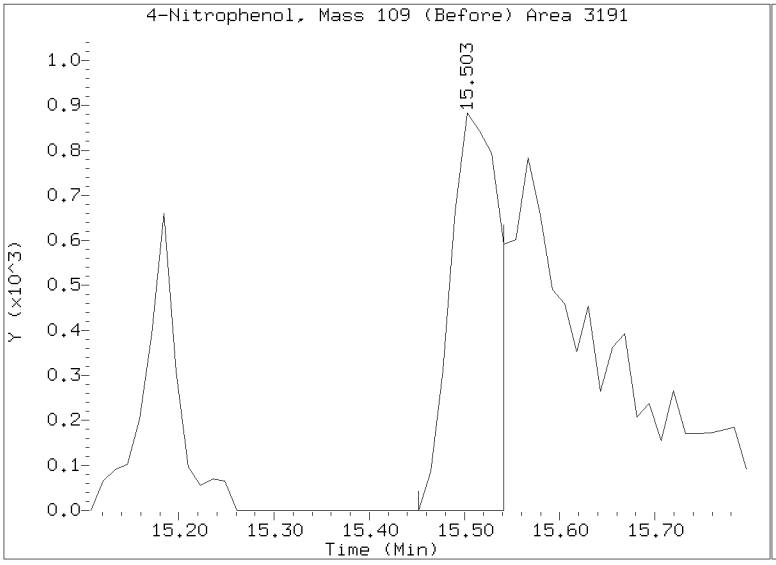


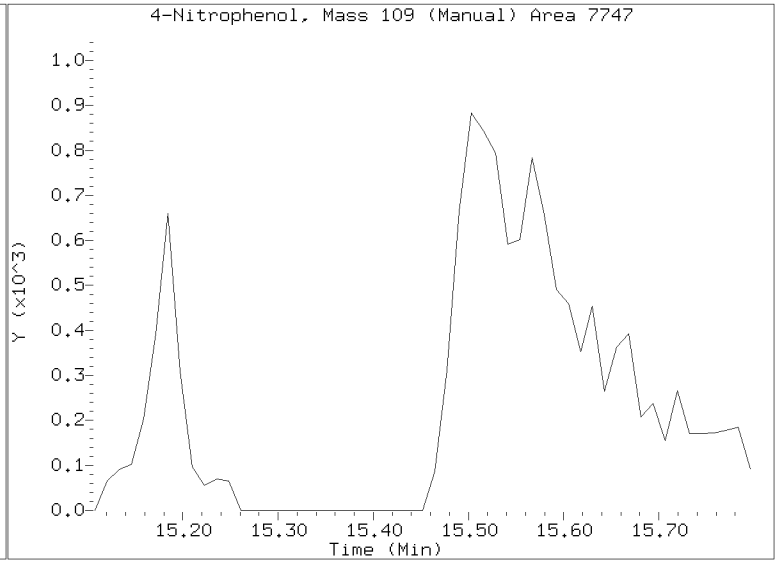
Quant Ion Manual Peak Adjustment Report

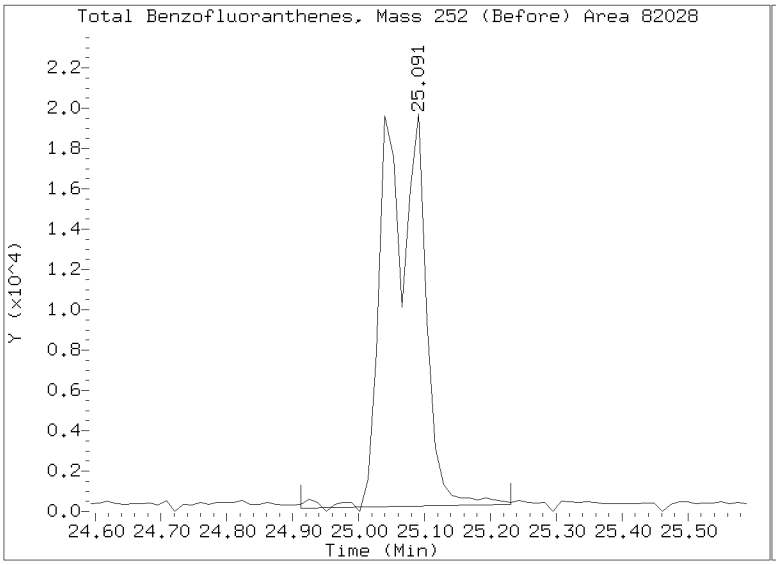
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012306.D
Injection Date: 01-JUN-2023 15:12
Lab ID:SLF0008-LCV1 Client ID:
Report Date: 06/03/2023 10:06

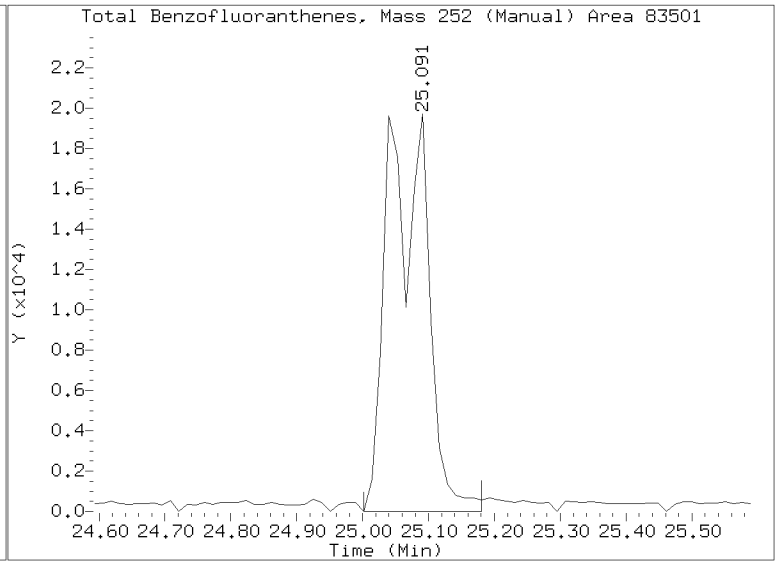












Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012322.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/02/23
Lab Sample ID:	SLF0008-LCV2	Injection Time:	01:06
Sequence Name:	ABN 0.2		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	0.20000	0.2	1.8353850	1.4206510		-22.6	+/-50
4-Methylphenol	A	0.20000	0.1	1.3734410	0.6651535		-51.6	+/-50
Naphthalene	A	0.20000	0.2	1.0999940	1.0915870		-0.8	+/-50
2-Methylnaphthalene	A	0.20000	0.2	0.7875944	0.7030330		-10.7	+/-50
Acenaphthylene	A	0.20000	0.2	2.0301060	2.2500600		10.8	+/-50
Dimethylphthalate	A	0.20000	0.2	1.3763000	1.3807730		0.3	+/-50
Acenaphthene	A	0.20000	0.2	1.2690180	1.3003490		2.5	+/-50
Dibenzofuran	A	0.20000	0.2	1.7711910	1.6864220		-4.8	+/-50
Fluorene	A	0.20000	0.2	1.6839010	1.3960070		-17.1	+/-50
Phenanthrene	A	0.20000	0.2	1.1671410	1.1979070		2.6	+/-50
Anthracene	A	0.20000	0.2	1.0957620	1.0876410		-0.7	+/-50
Fluoranthene	A	0.20000	0.2	1.8710850	1.8533980		-0.9	+/-50
Pyrene	A	0.20000	0.2	1.8967730	1.9860630		4.7	+/-50
Butylbenzylphthalate	A	0.20000	0.2	0.8489339	0.7654999		-9.8	+/-50
Benzo(a)anthracene	A	0.20000	0.2	1.4729210	1.5422880		4.7	+/-50
Chrysene	A	0.20000	0.2	1.3859970	1.5243890		10.0	+/-50
bis(2-Ethylhexyl)phthalate	A	0.20000	0.2	0.5787277	127875		15.0	+/-50
Benzofluoranthenes, Total	A	0.40000	0.4	1.4236150	1.4720250		3.4	+/-50
Benzo(a)pyrene	A	0.20000	0.2	1.2492830	1.4351280		14.9	+/-50
Indeno(1,2,3-cd)pyrene	A	0.20000	0.2	1.4490690	1.1787330		-18.7	+/-50
Dibenzo(a,h)anthracene	A	0.20000	0.1	1.2161710	0.8866543		-27.1	+/-50
Benzo(g,h,i)perylene	A	0.20000	0.1	1.1960510	0.7476795		-37.5	+/-50
2-Fluorophenol	A	0.30000	0.180	1.3093930	0.7852155		-40.0	+/-50
Phenol-d5	A	0.30000	0.194	1.7328160	1.1206450		-35.3	+/-50
2-Chlorophenol-d4	A	0.30000	0.241	1.3879870	1.1165770		-19.6	+/-50
1,2-Dichlorobenzene-d4	A	0.20000	0.193	0.9755818	0.9408000		-3.6	+/-50
Nitrobenzene-d5	A	0.20000	0.193	0.4552457	0.4393210		-3.5	+/-50
2-Fluorobiphenyl	A	0.20000	0.189	1.5758130	1.4862220		-5.7	+/-50
2,4,6-Tribromophenol	A	0.30000	0.265	0.1414414	0.1539392		-11.8	+/-50
p-Terphenyl-d14	A	0.20000	0.217	1.3483810	1.4624190		8.5	+/-50

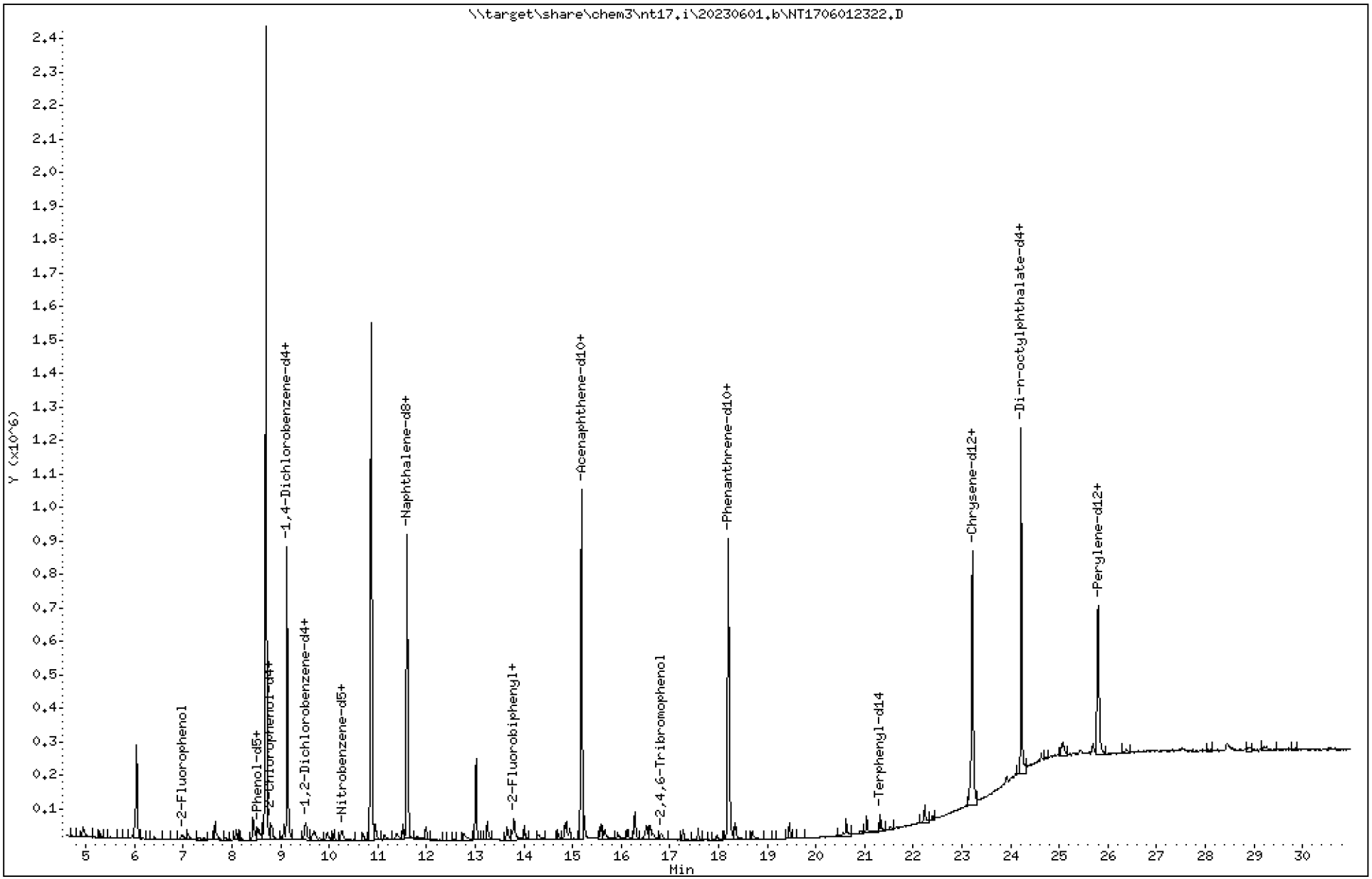
* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D
Date : 02-JUN-2023 01:06
Client ID:
Sample Info: BLE0008-LCV2

Instrument: nt17.i
Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

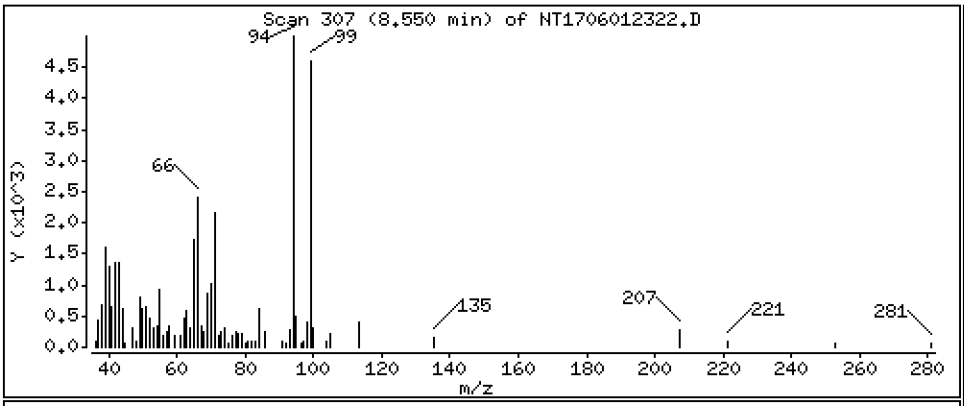
Operator: VTS

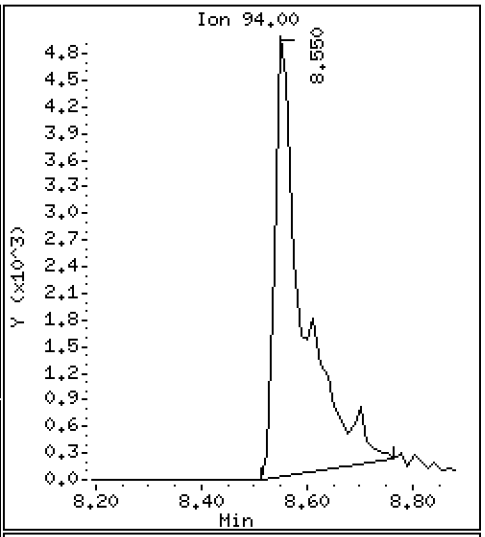
Column phase: ZB-5msi

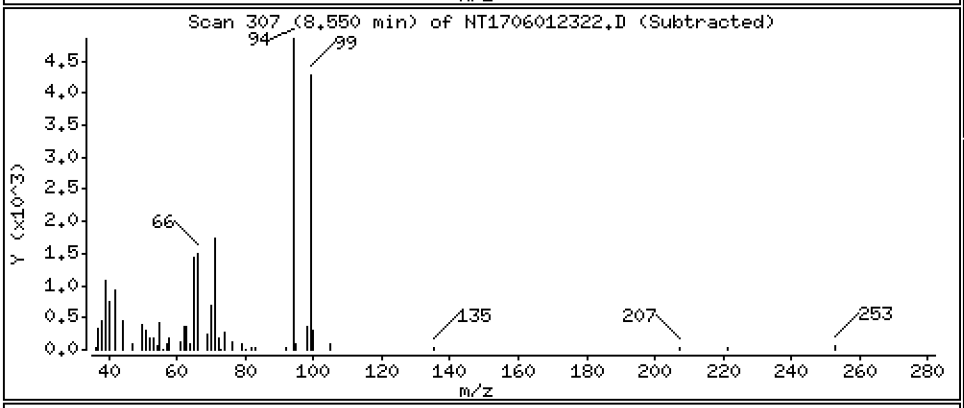
Column diameter: 0.25

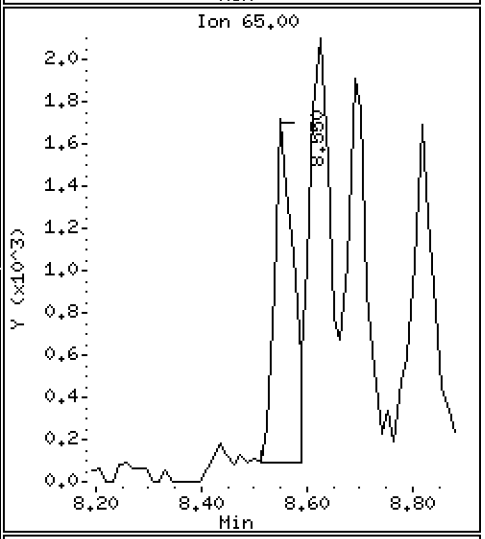
3 Phenol

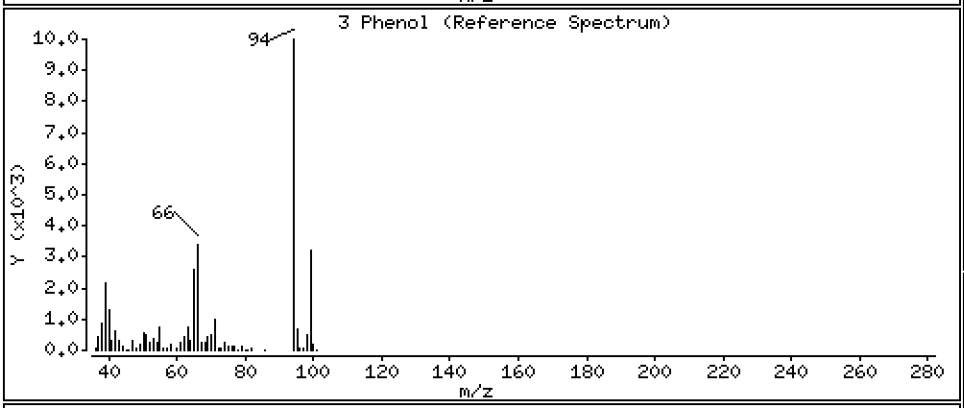
Concentration: 0.1548 ug/mL

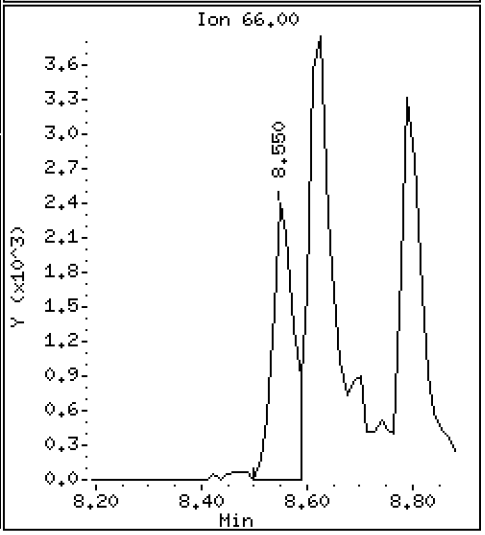


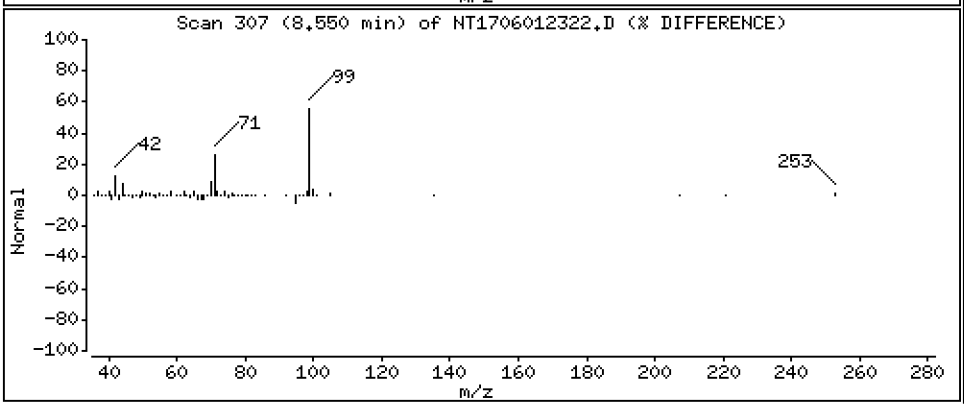












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

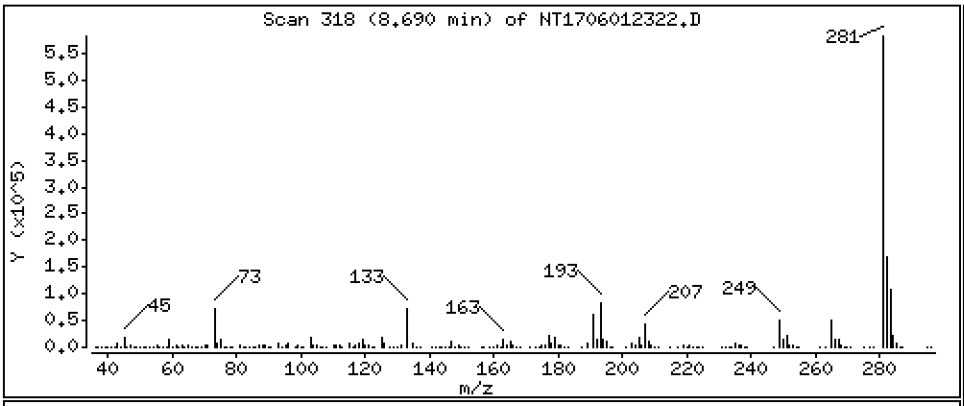
Operator: VTS

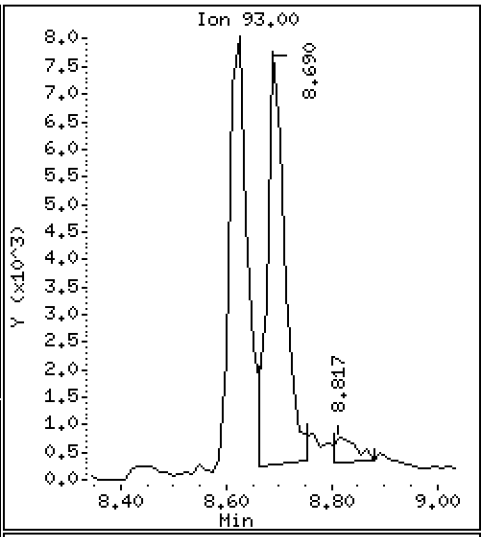
Column phase: ZB-5msi

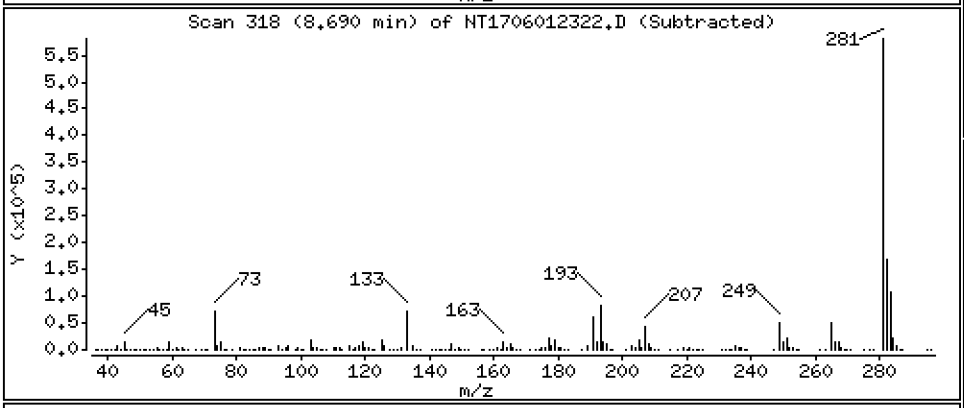
Column diameter: 0.25

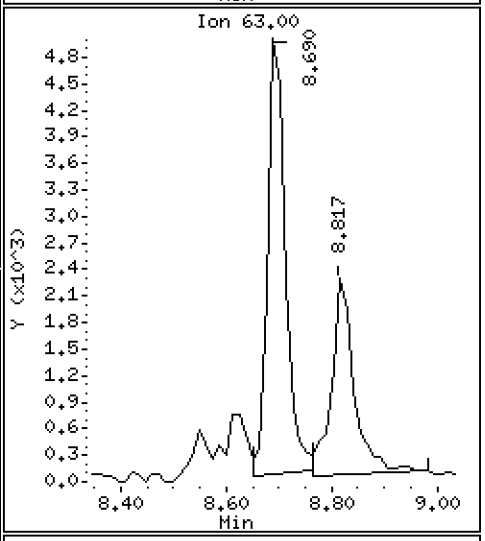
4 Bis(2-Chloroethyl)ether

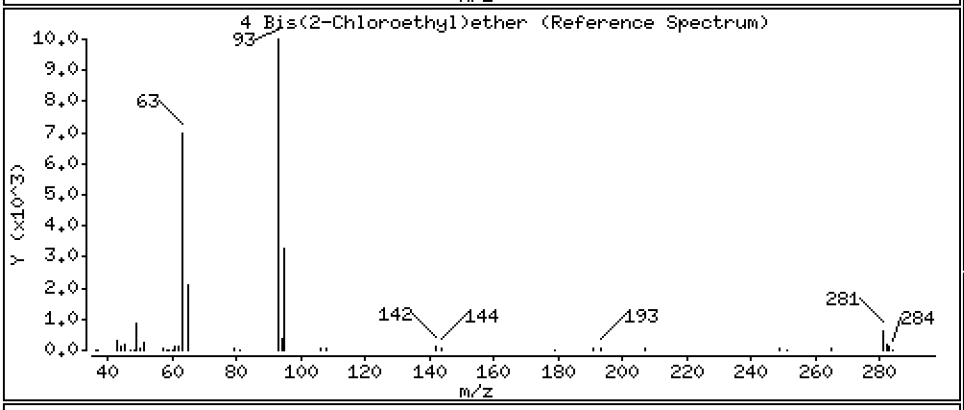
Concentration: 0.1979 ug/mL

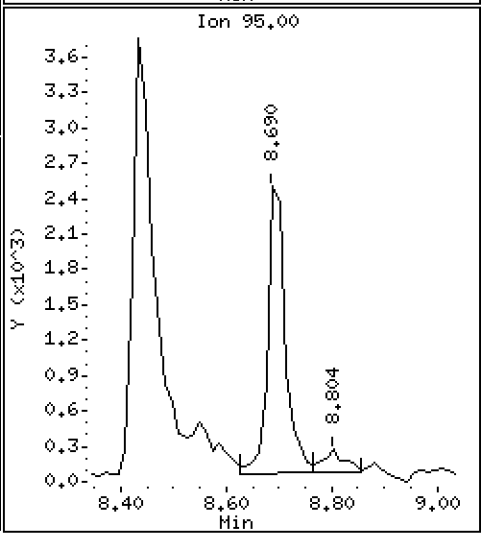


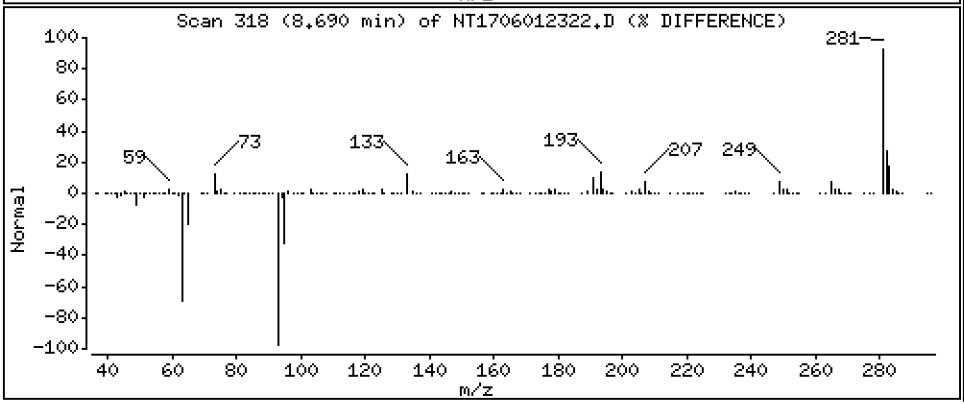












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

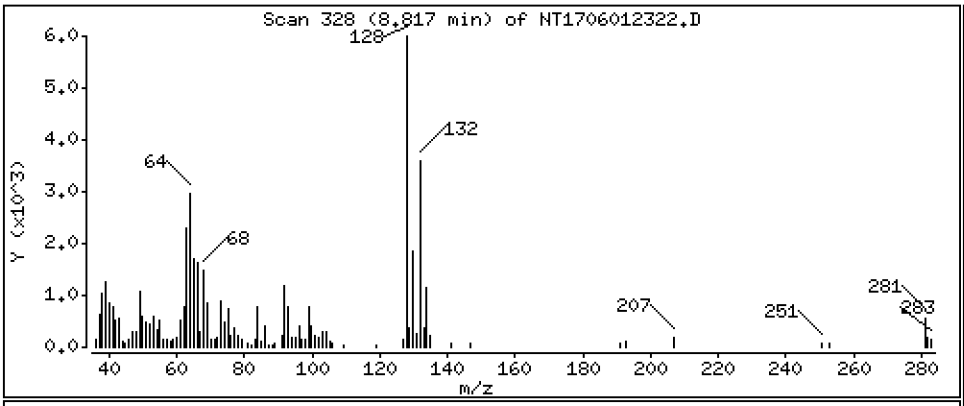
Operator: VTS

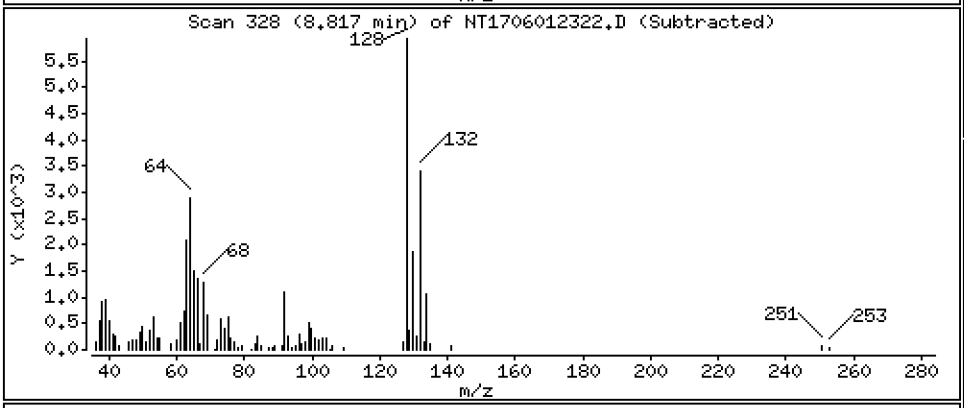
Column phase: ZB-5msi

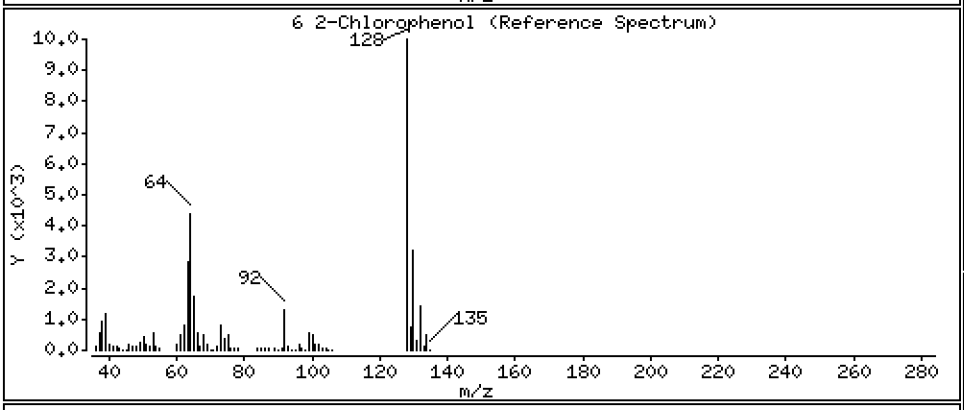
Column diameter: 0.25

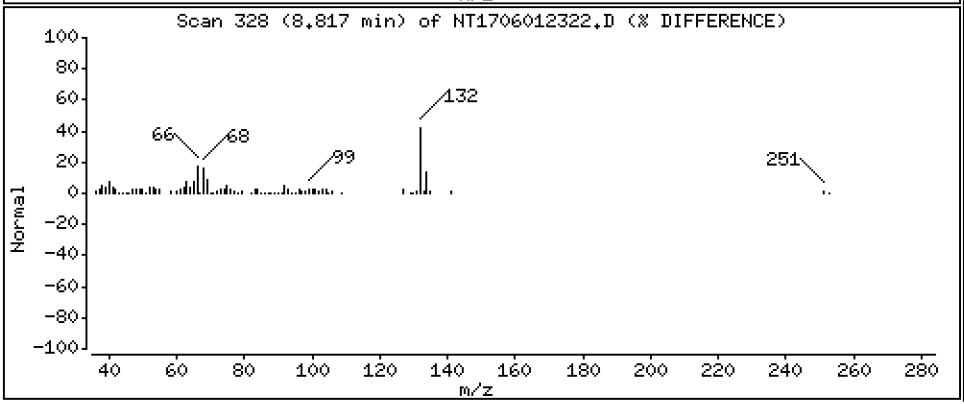
6 2-Chlorophenol

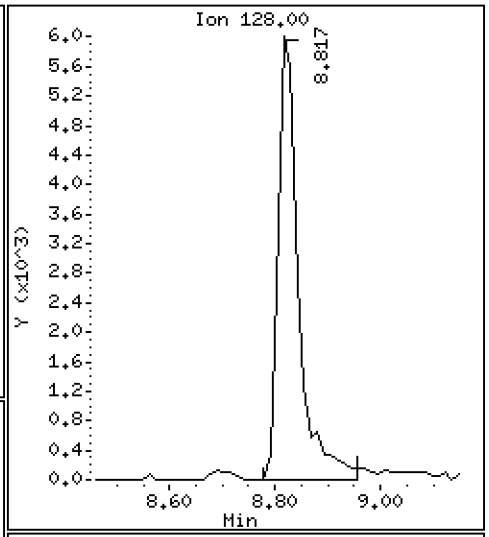
Concentration: 0.1797 ug/mL

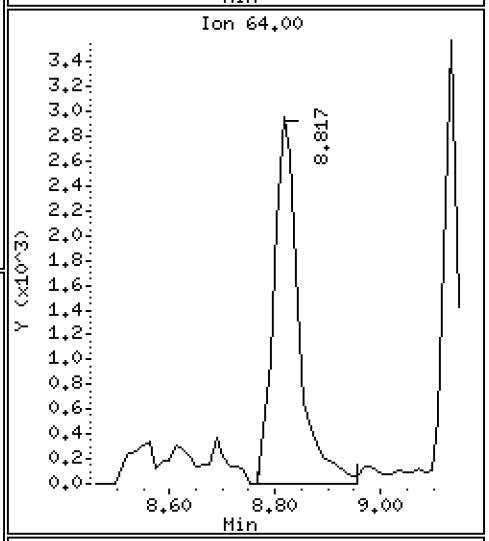


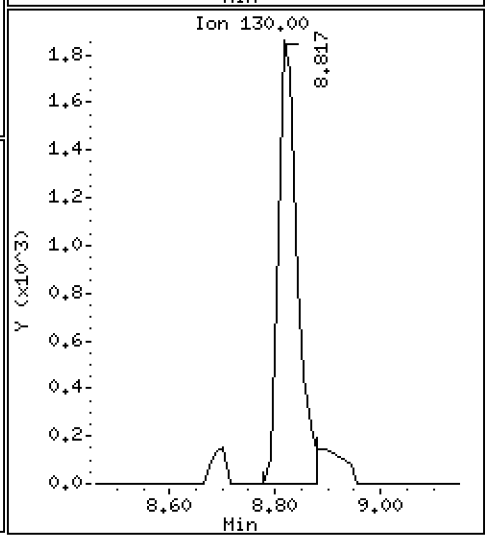












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

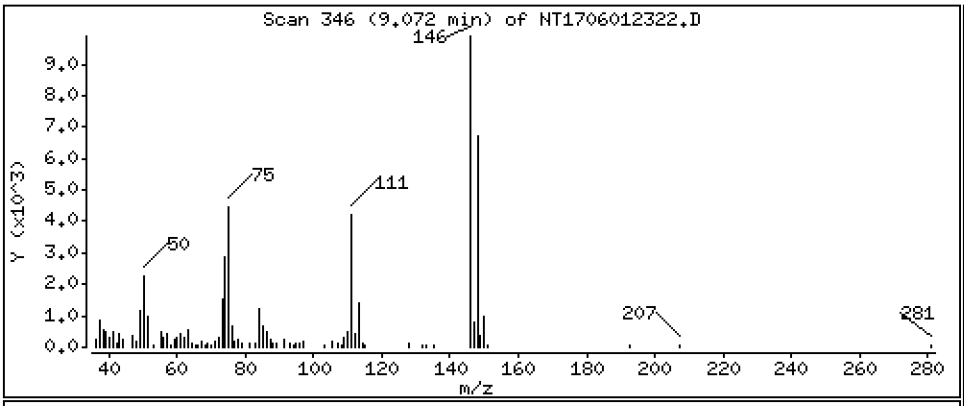
Operator: VTS

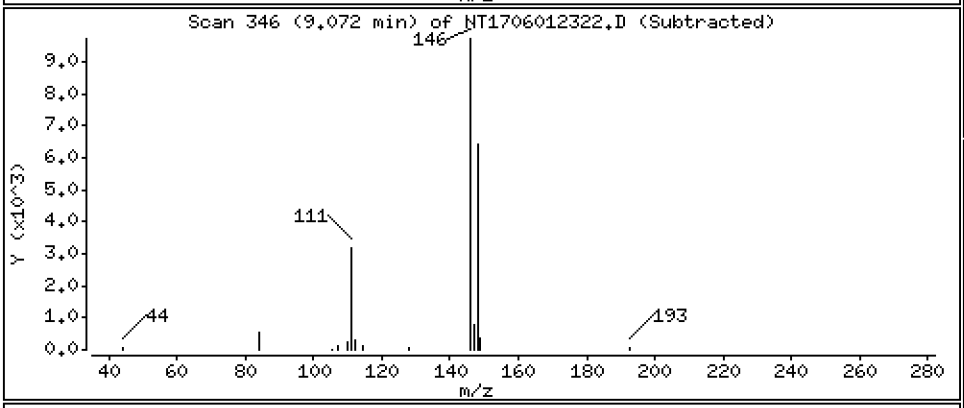
Column phase: ZB-5msi

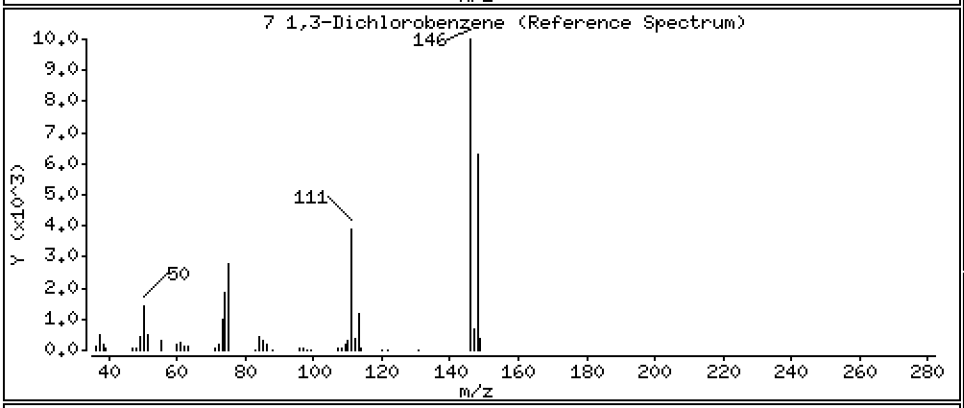
Column diameter: 0.25

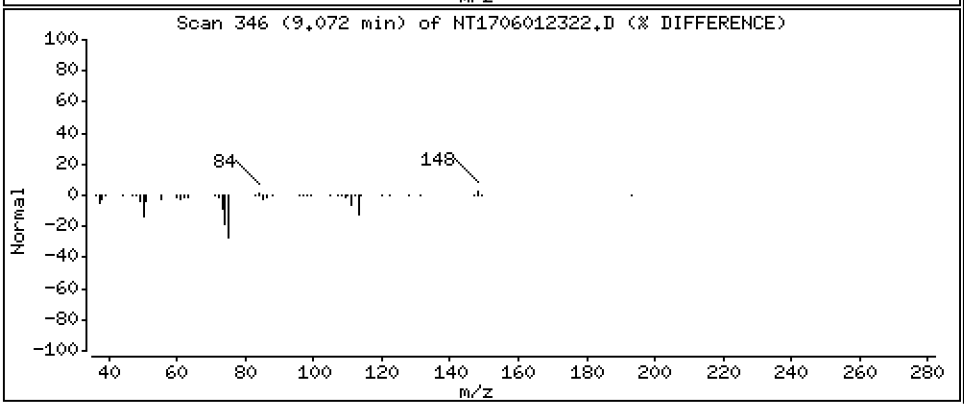
7 1,3-Dichlorobenzene

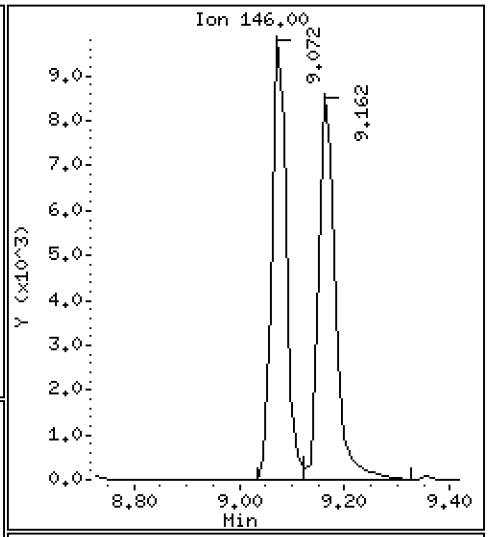
Concentration: 0.1830 ug/mL

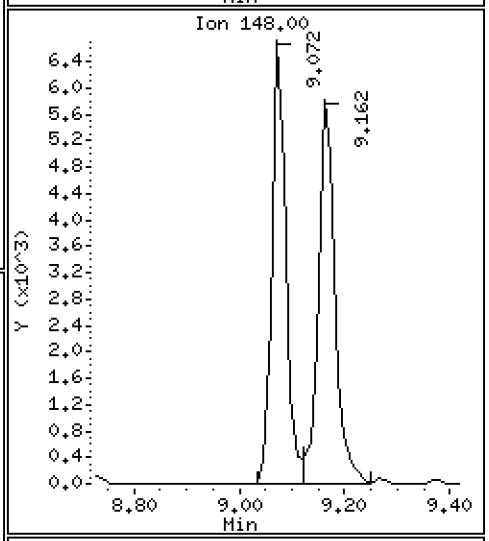


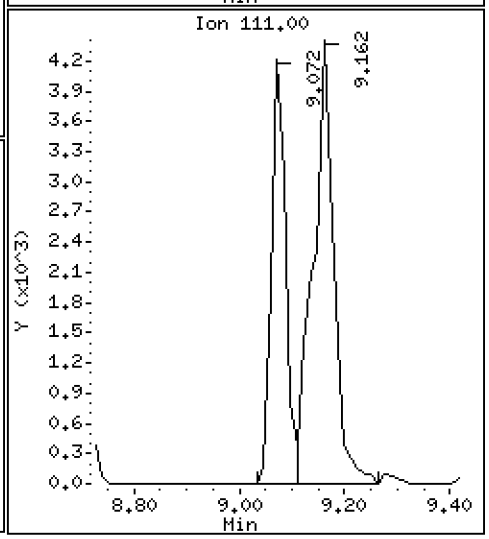












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

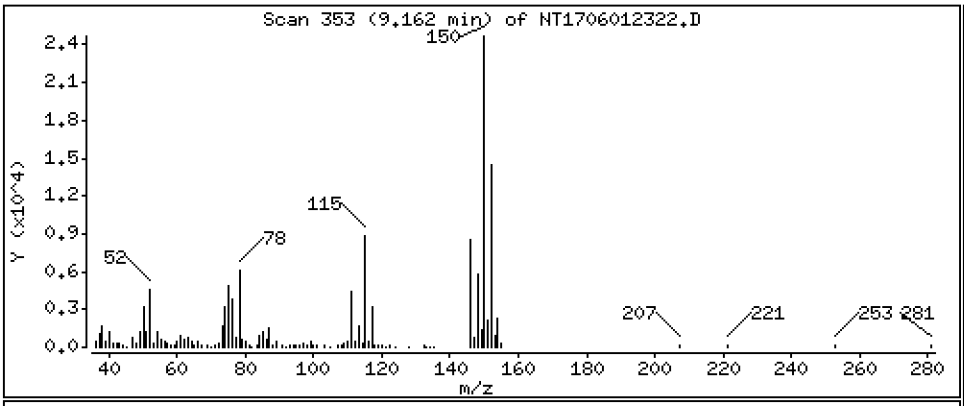
Operator: VTS

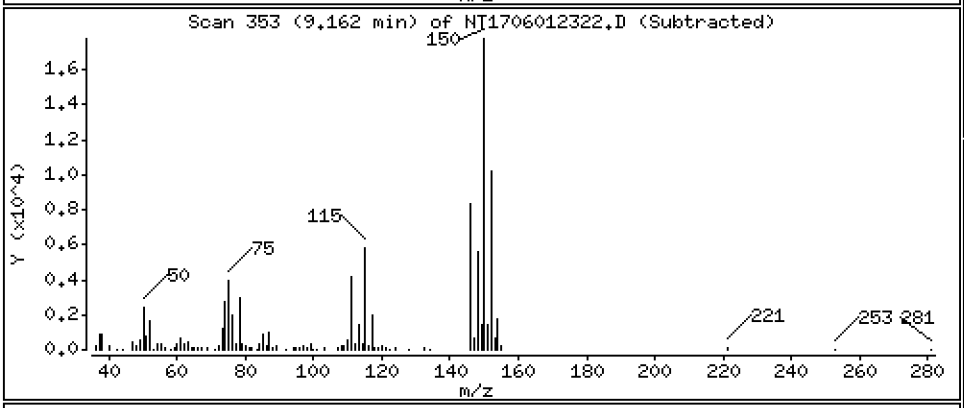
Column phase: ZB-5msi

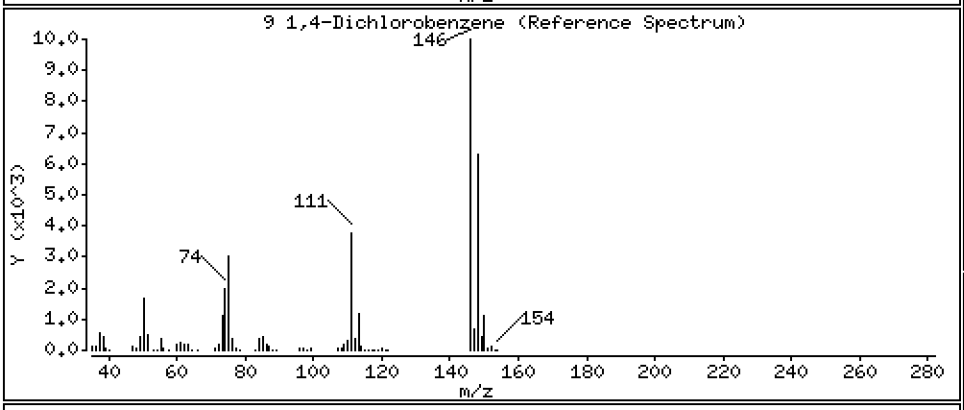
Column diameter: 0.25

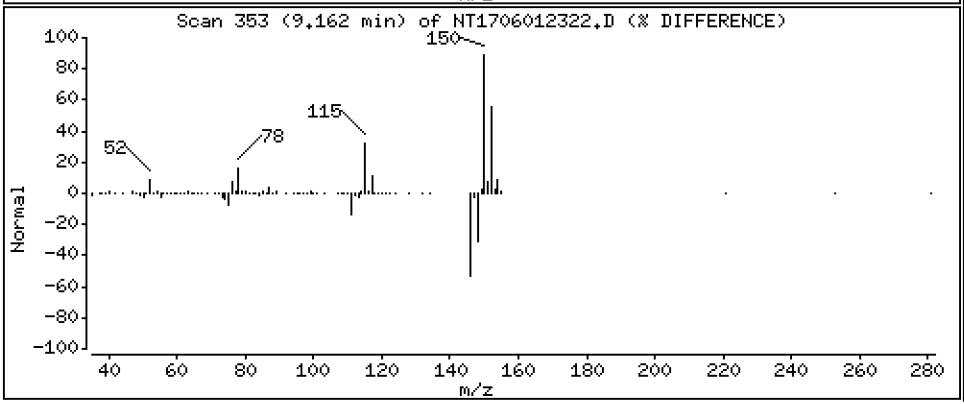
9 1,4-Dichlorobenzene

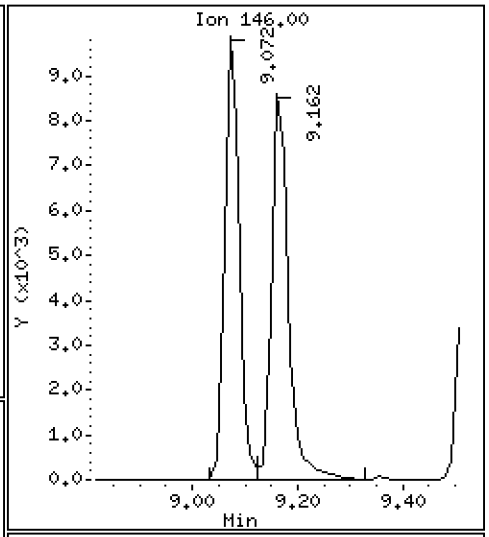
Concentration: 0.2114 ug/mL

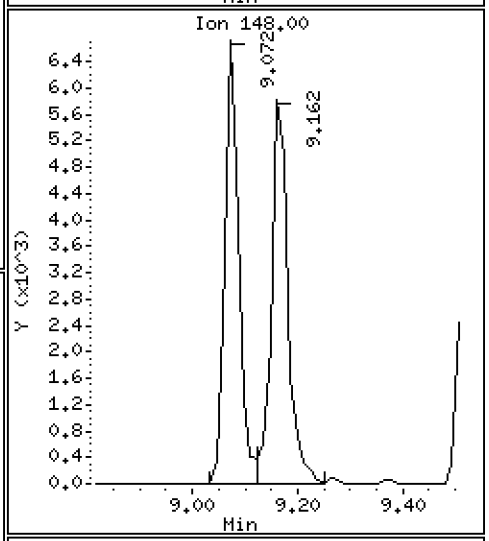


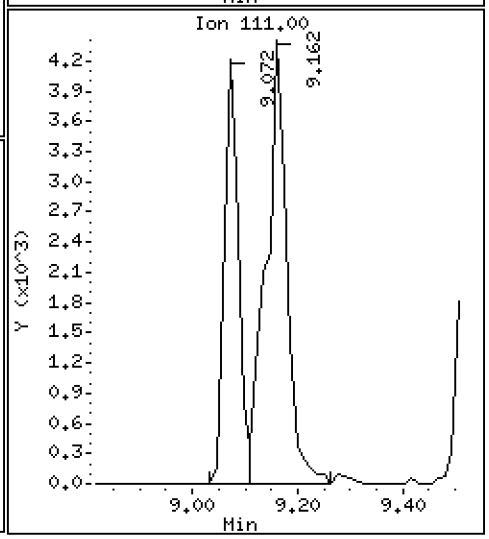












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

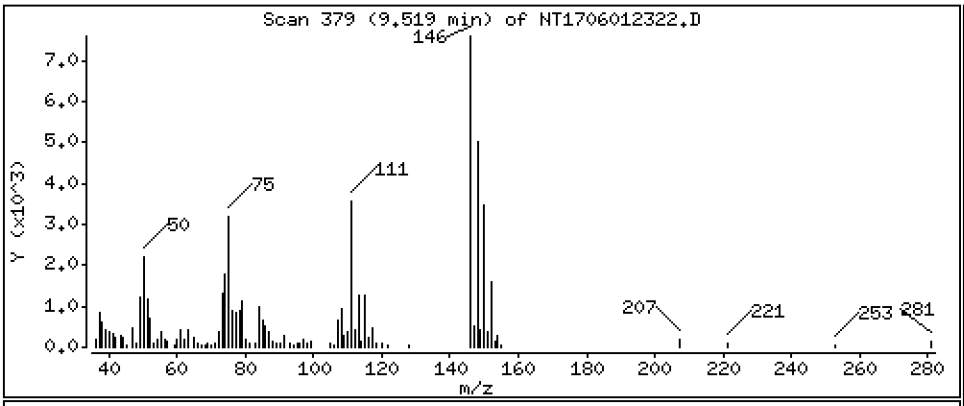
Operator: VTS

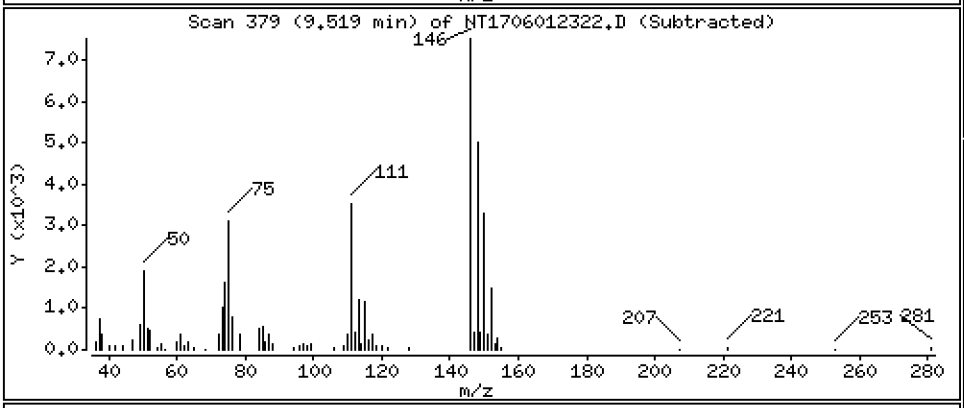
Column phase: ZB-5msi

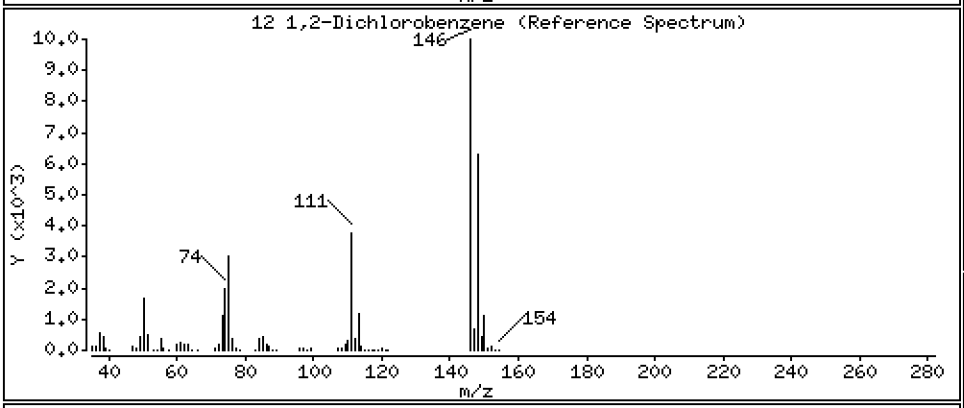
Column diameter: 0.25

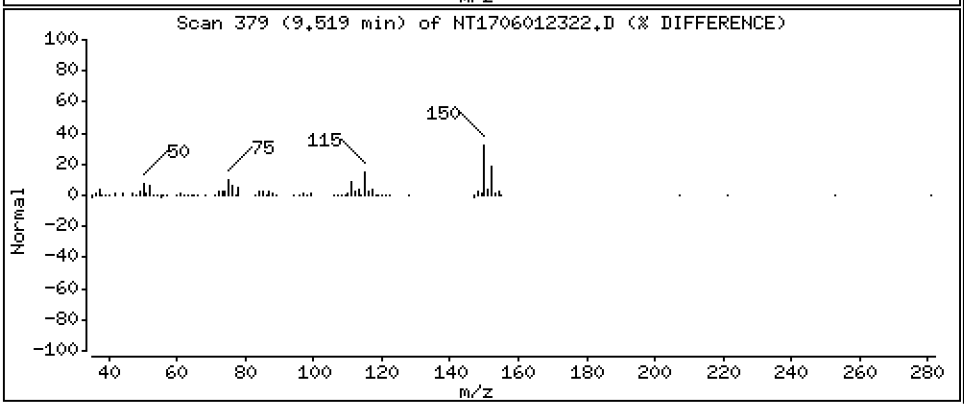
12 1,2-Dichlorobenzene

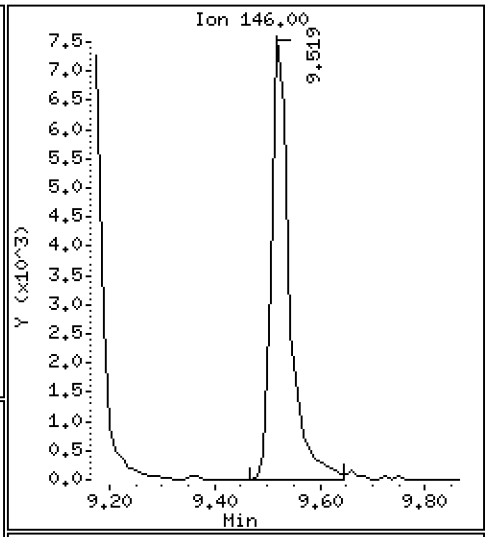
Concentration: 0.1889 ug/mL

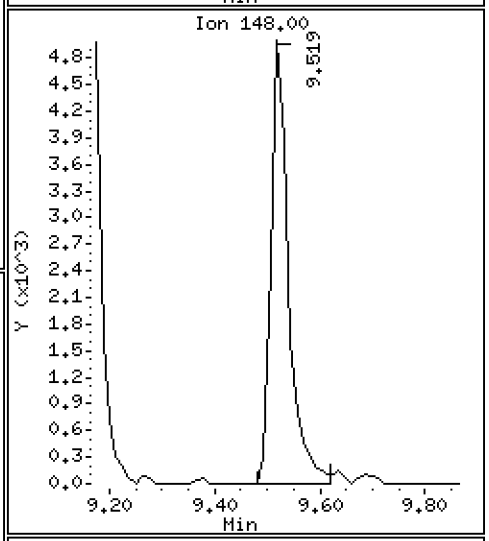


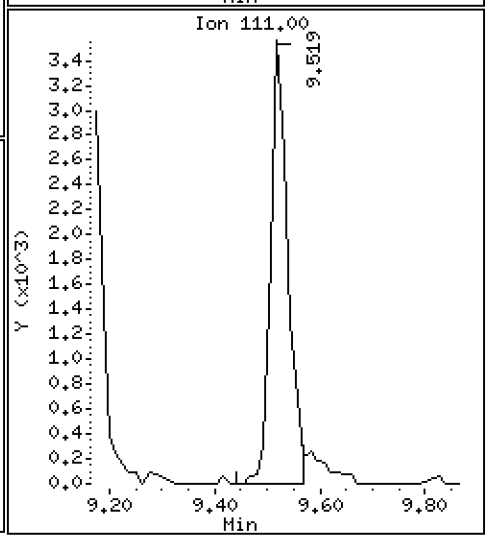












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

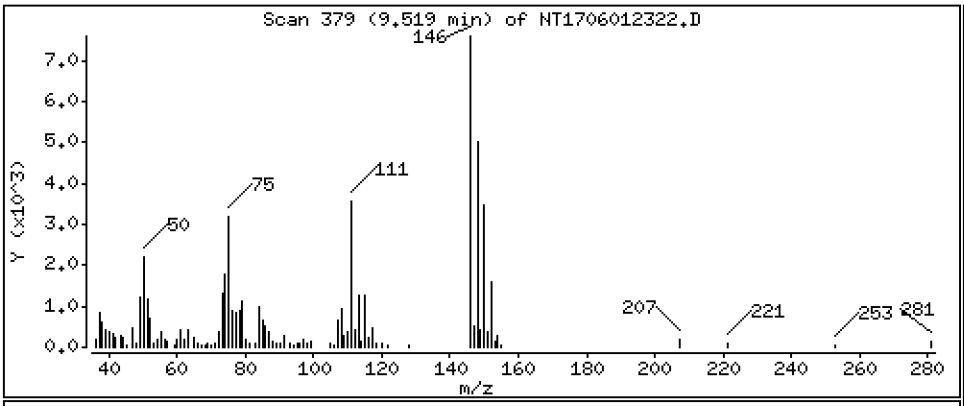
Operator: VTS

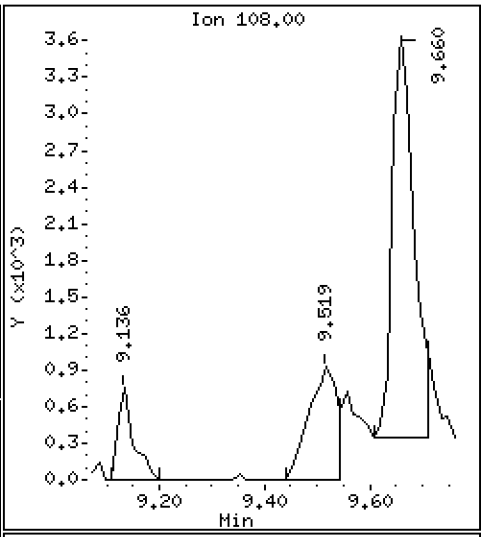
Column phase: ZB-5msi

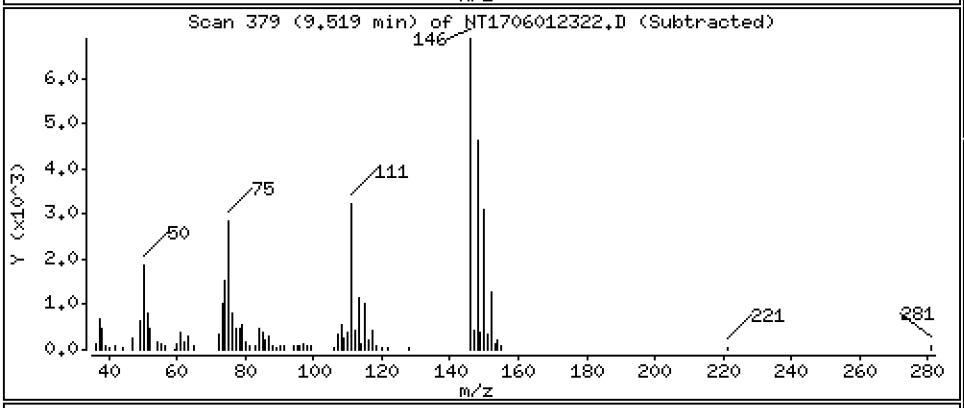
Column diameter: 0.25

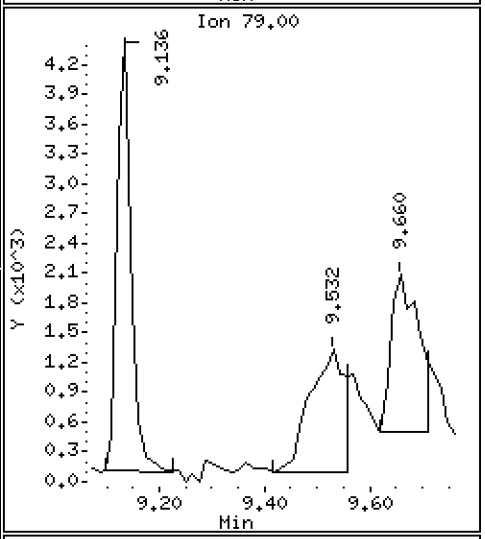
11 Benzyl alcohol

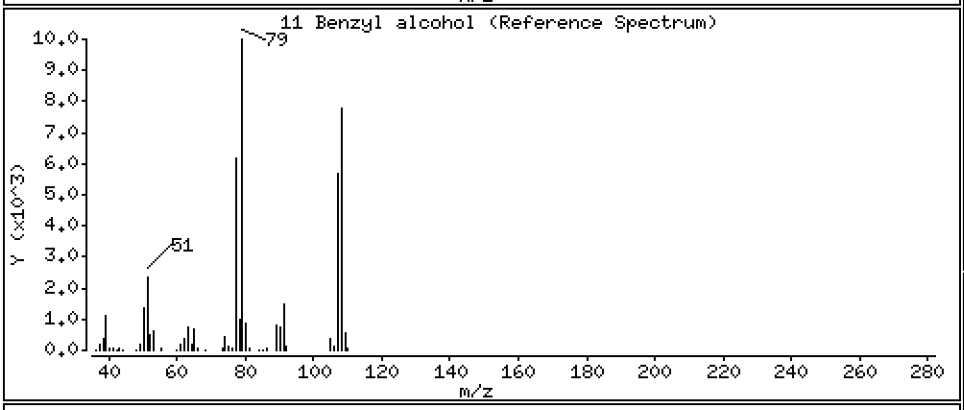
Concentration: 0.06216 ug/mL

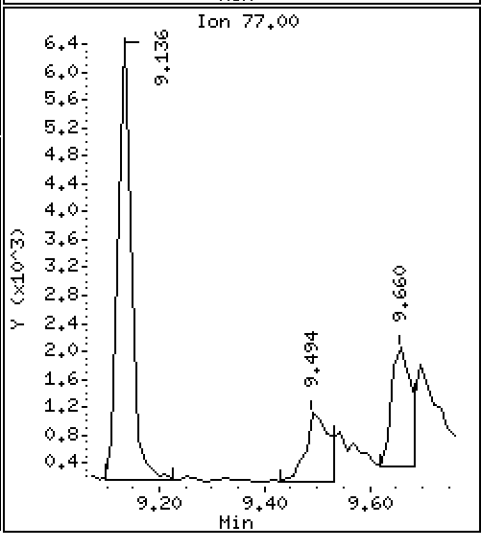


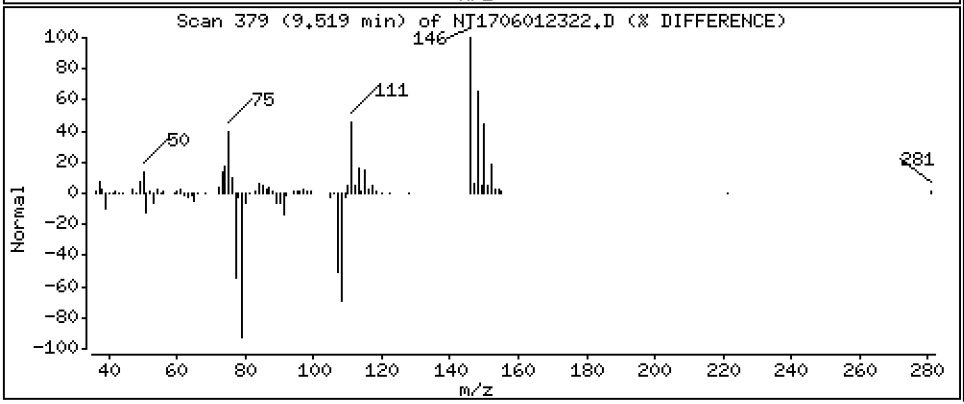












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

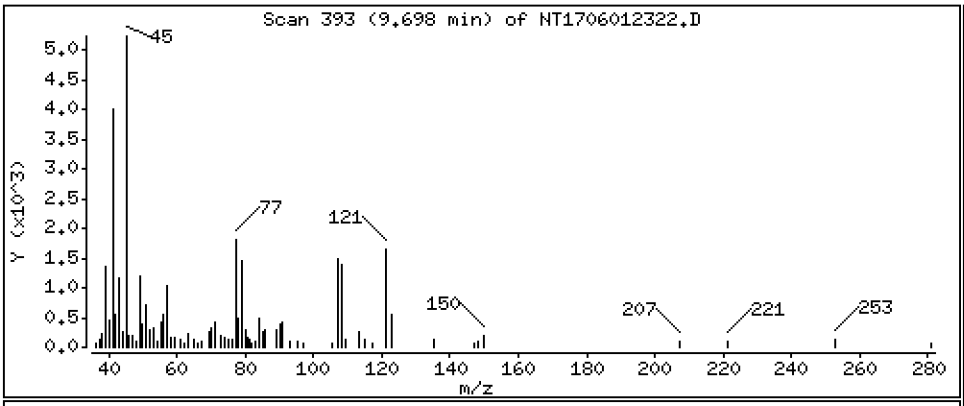
Operator: VTS

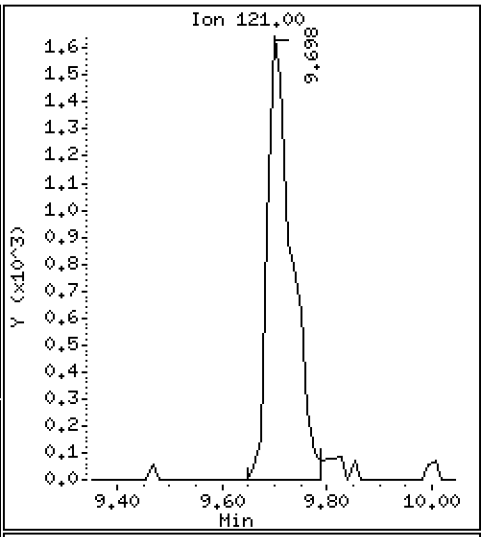
Column phase: ZB-5msi

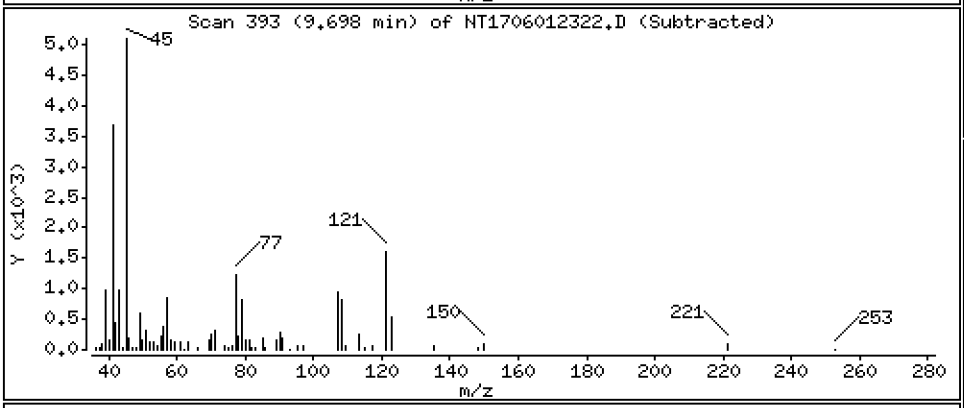
Column diameter: 0.25

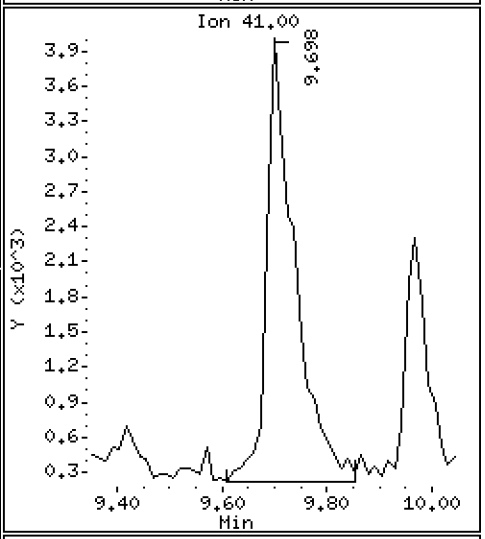
14 2,2'-oxybis(1-Chloropropane)

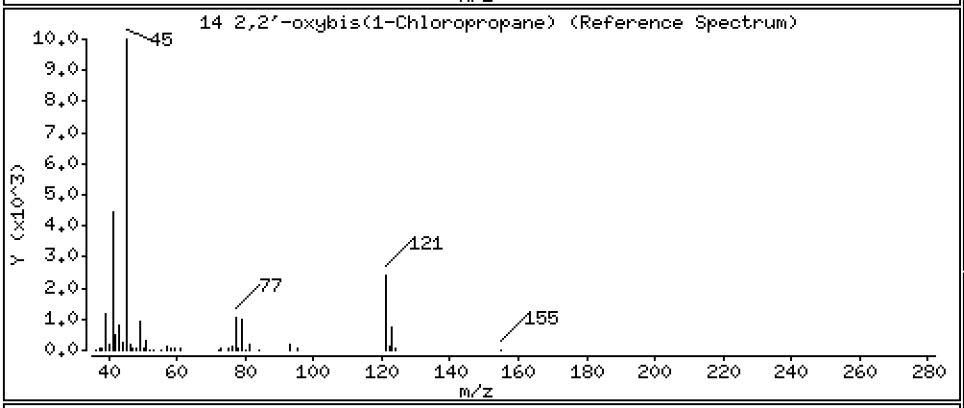
Concentration: 0.1950 ug/mL

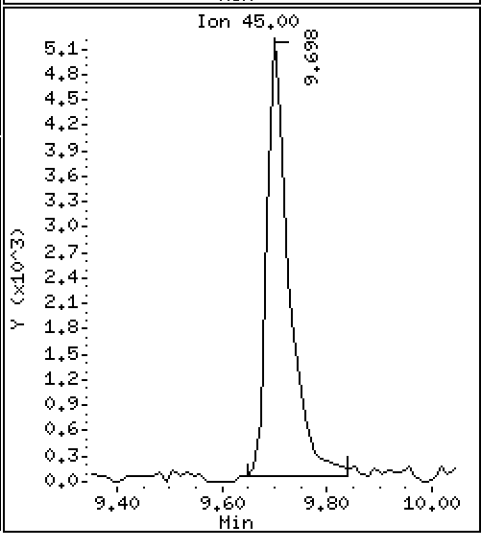


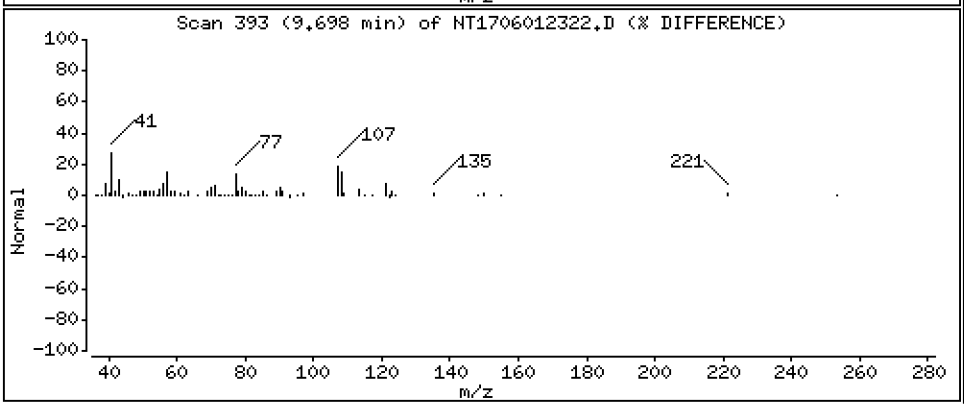












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

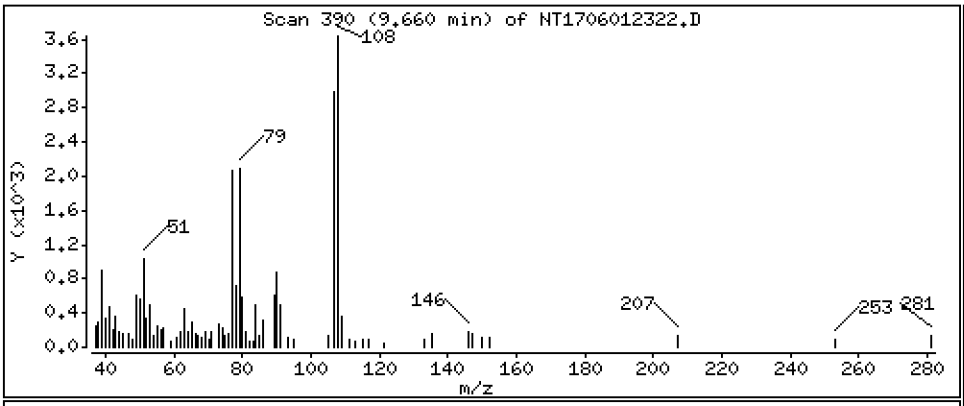
Operator: VTS

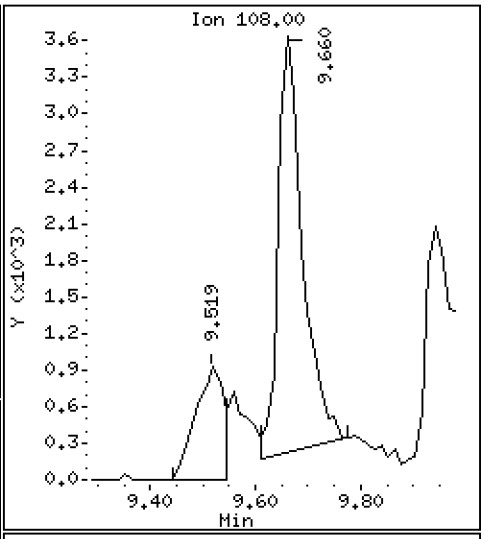
Column phase: ZB-5msi

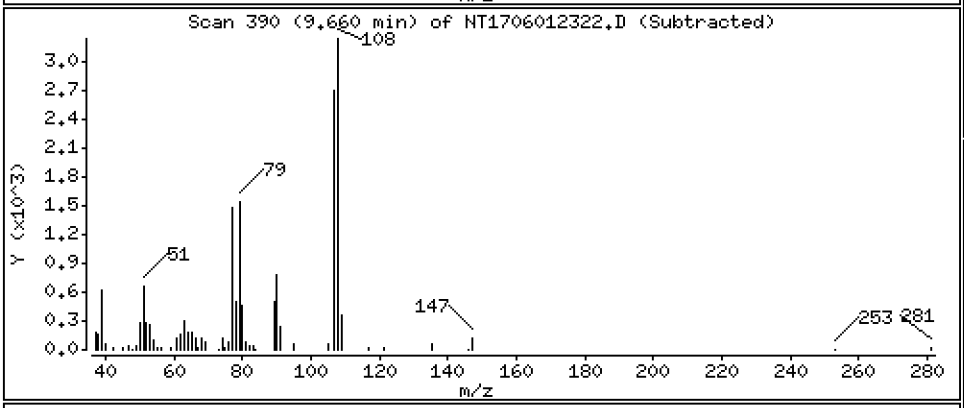
Column diameter: 0.25

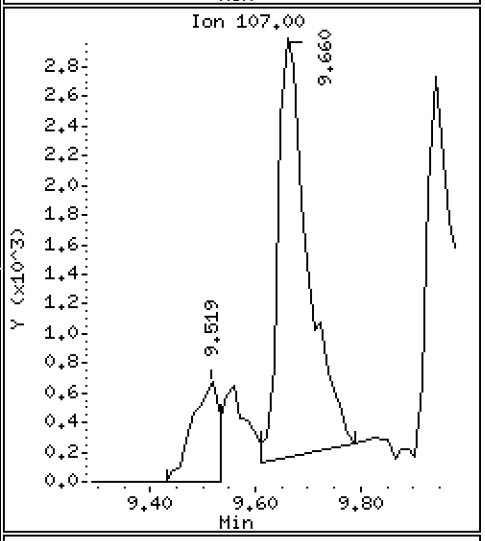
13 2-Methylphenol

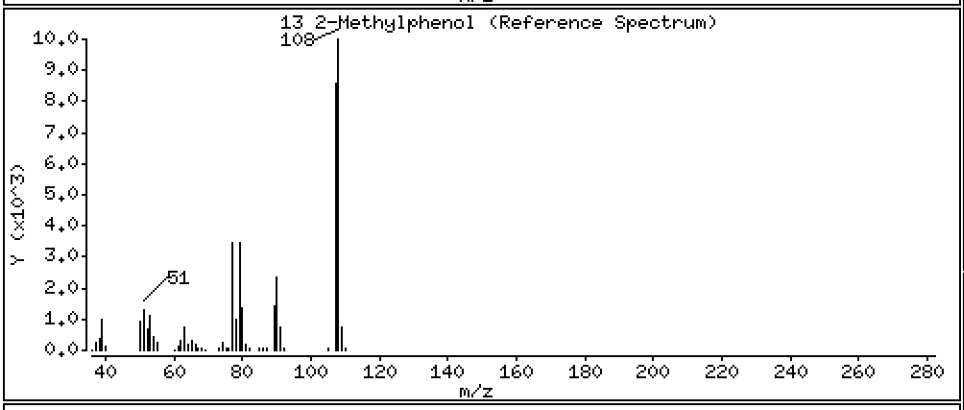
Concentration: 0.1231 ug/mL

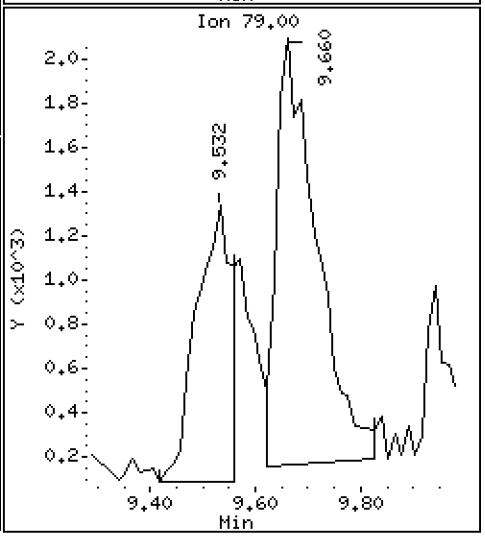


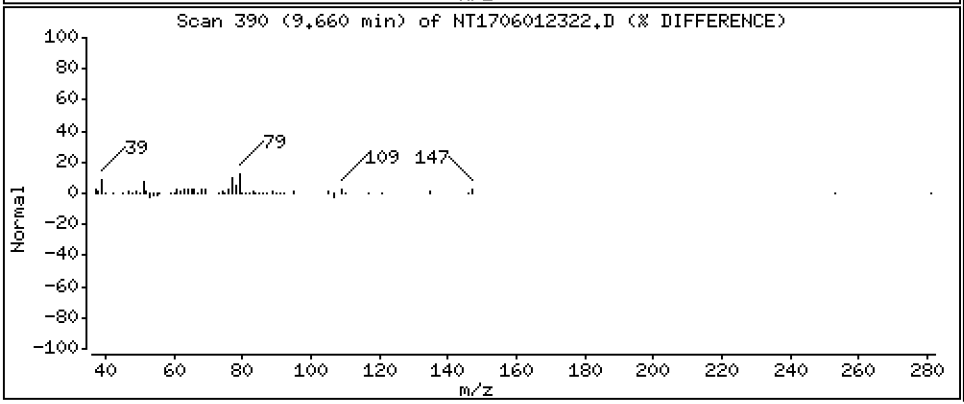












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

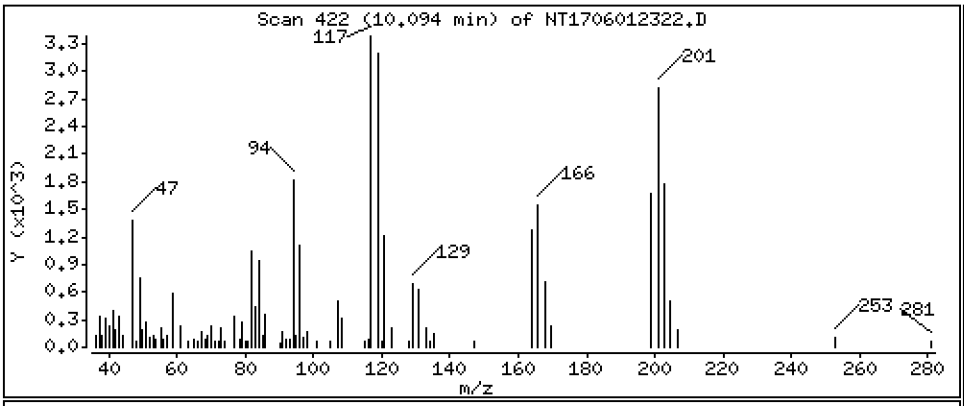
Operator: VTS

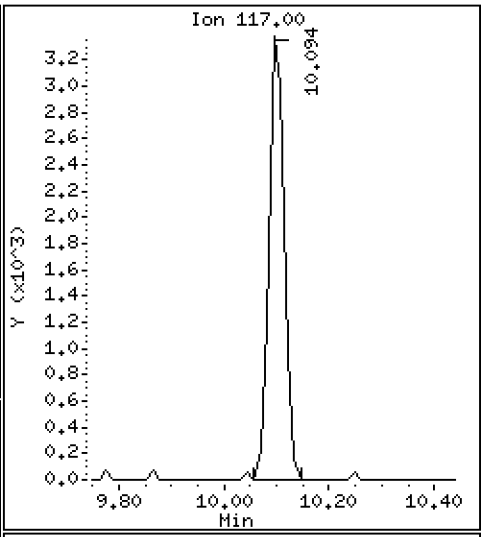
Column phase: ZB-5msi

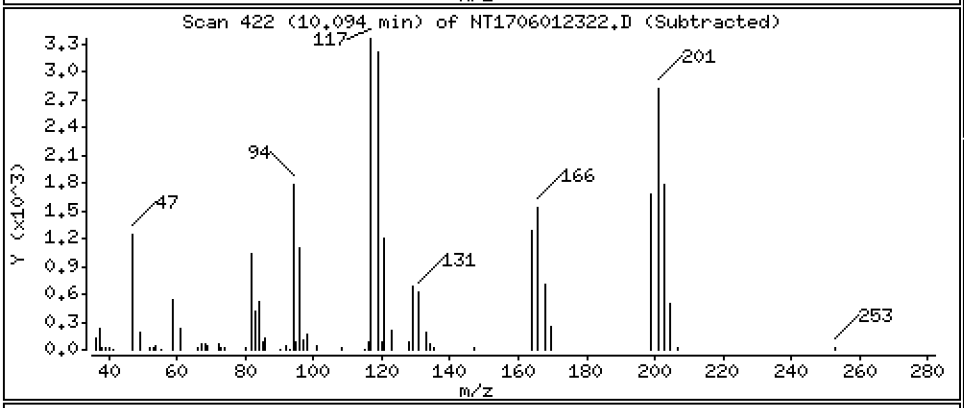
Column diameter: 0.25

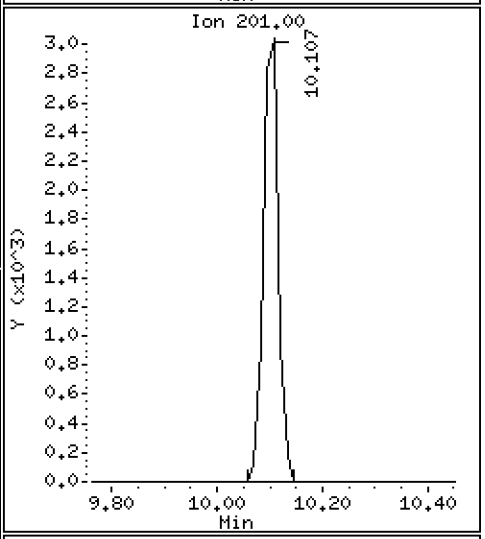
17 Hexachloroethane

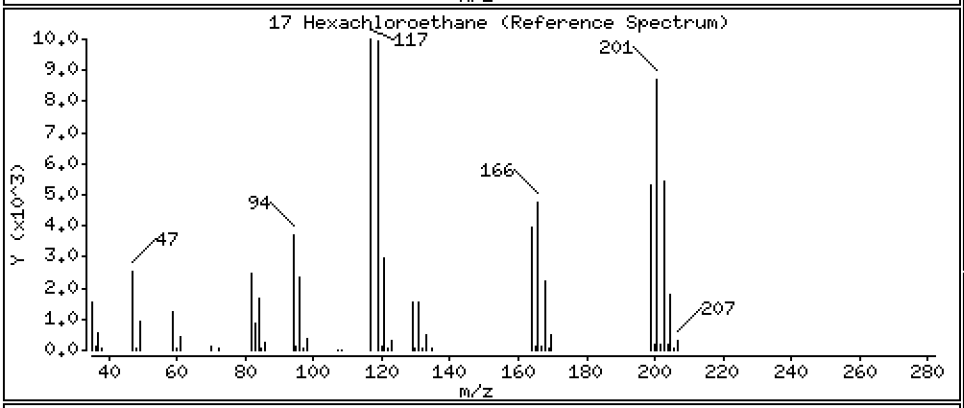
Concentration: 0.1643 ug/mL

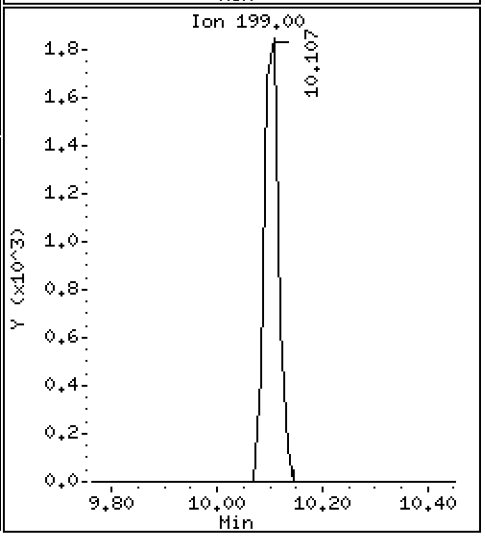


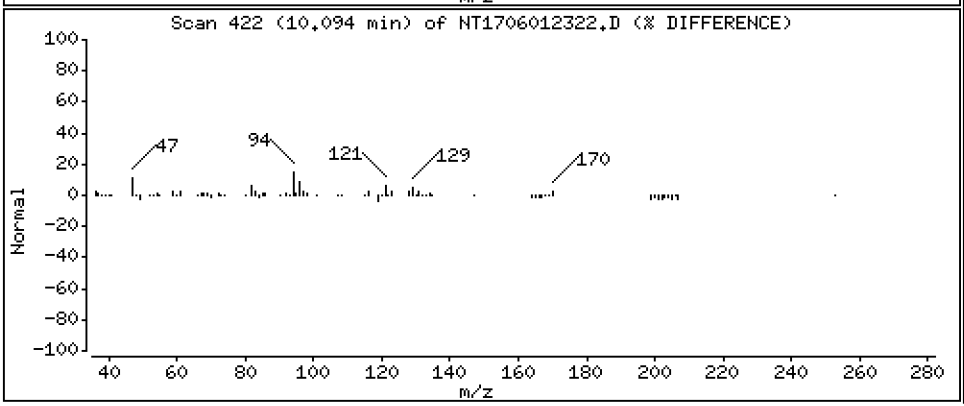












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

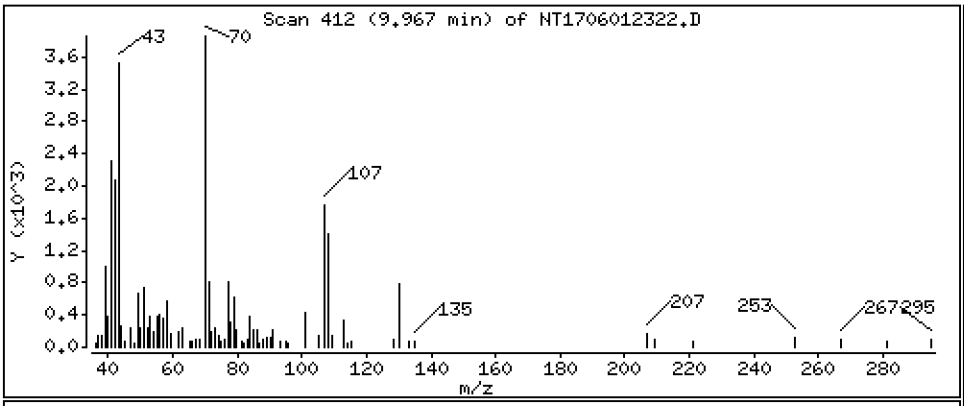
Operator: VTS

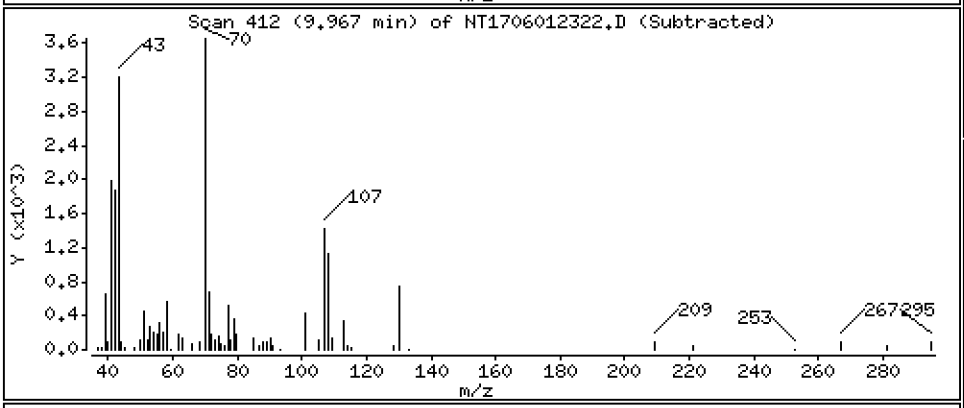
Column phase: ZB-5msi

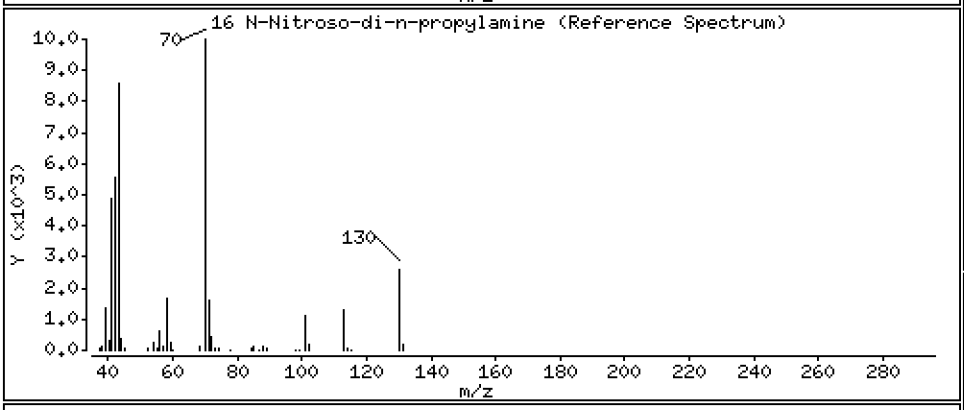
Column diameter: 0.25

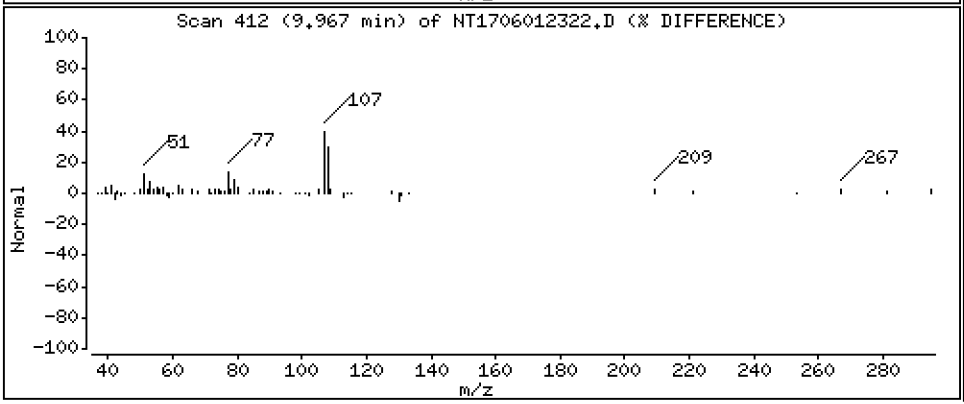
16 N-Nitroso-di-n-propylamine

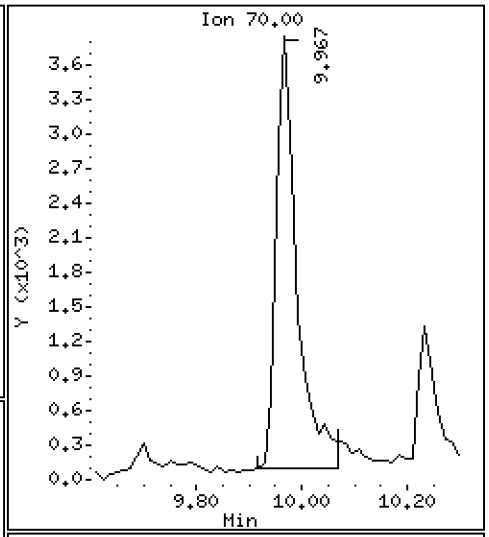
Concentration: 0.1513 ug/mL

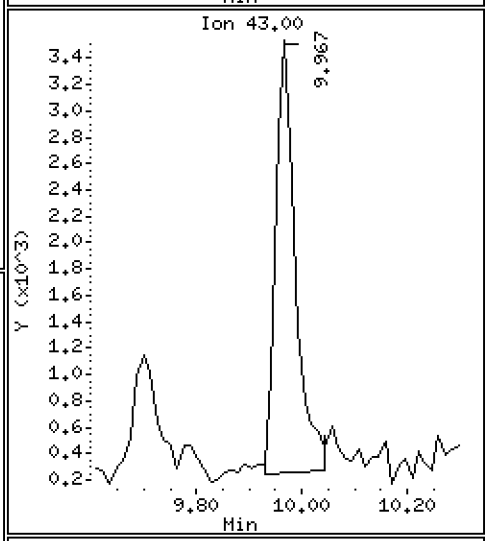


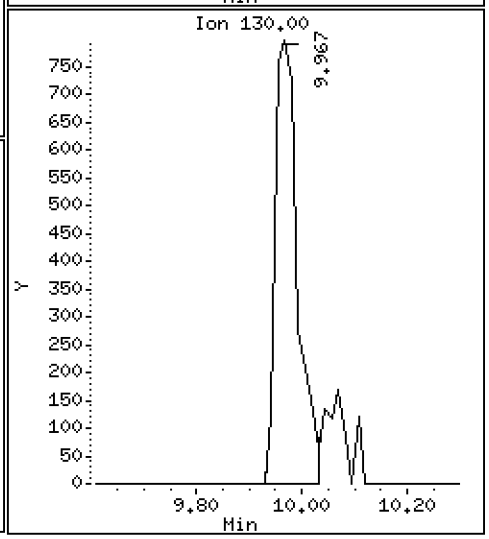












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

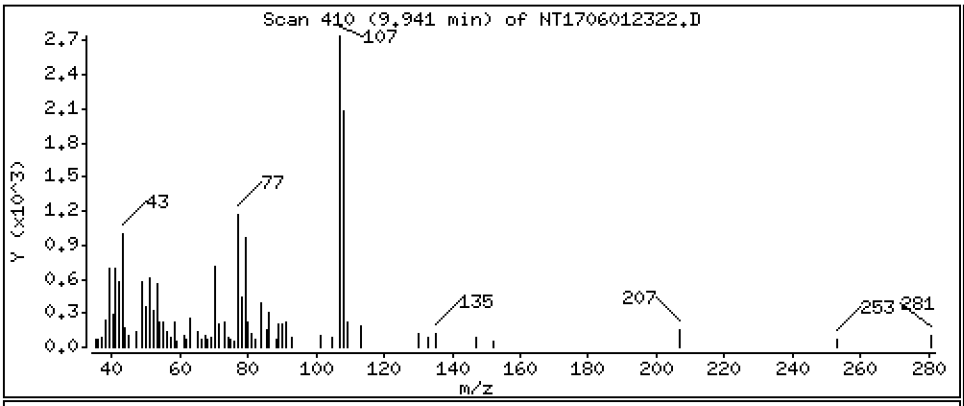
Operator: VTS

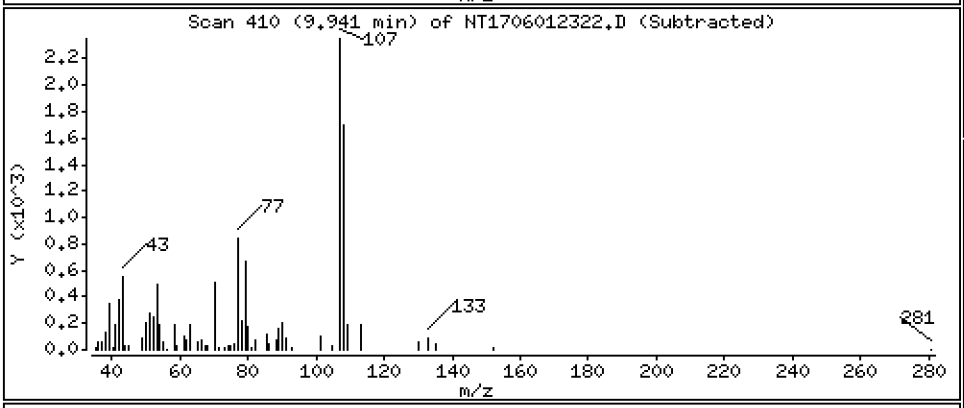
Column phase: ZB-5msi

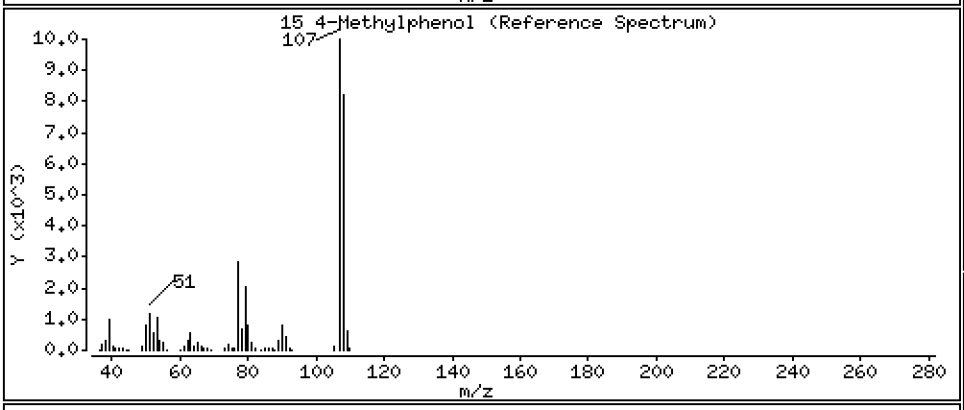
Column diameter: 0.25

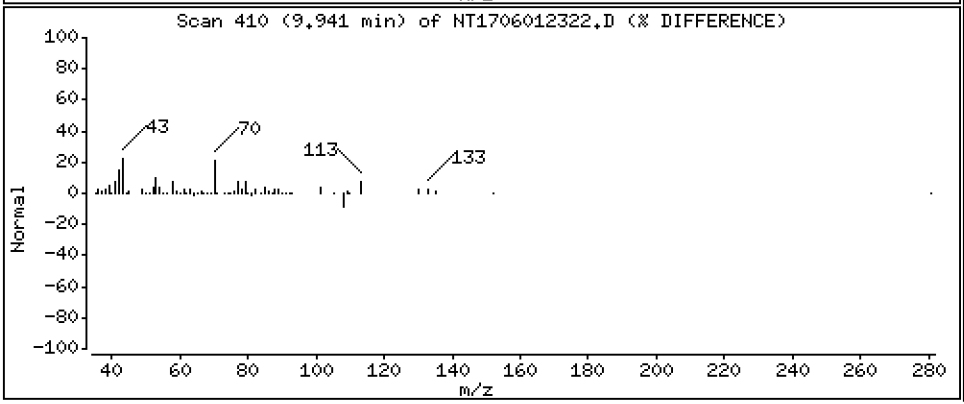
15 4-Methylphenol

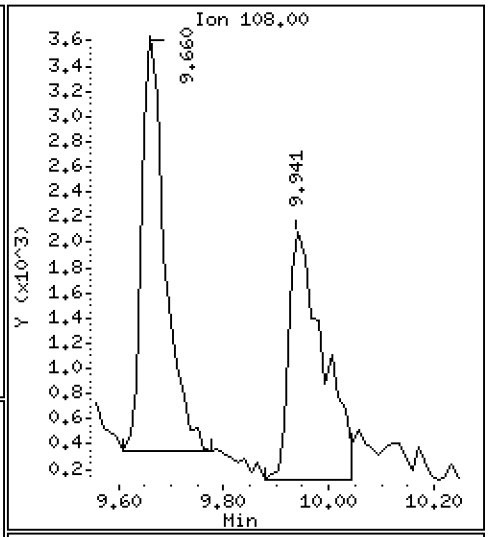
Concentration: 0.09686 ug/mL

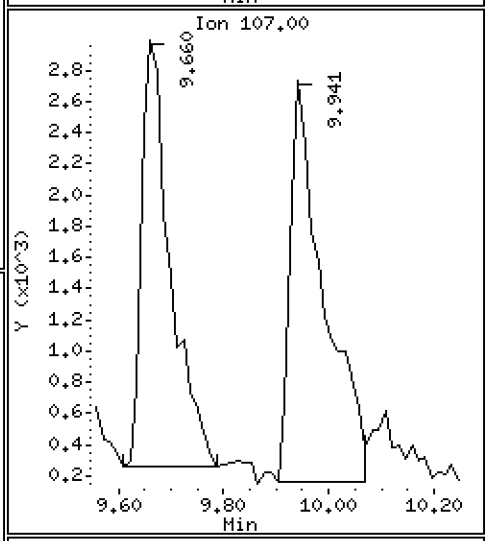


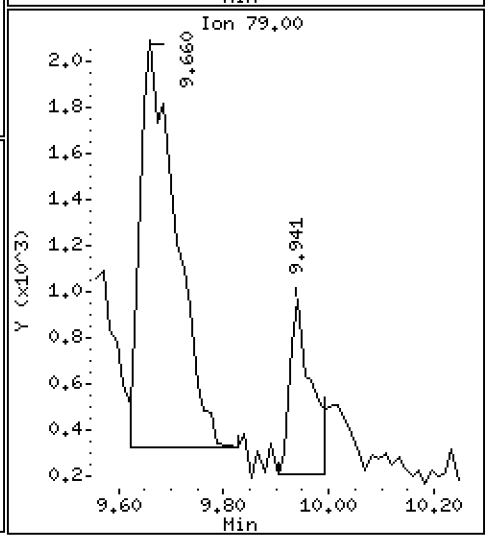












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

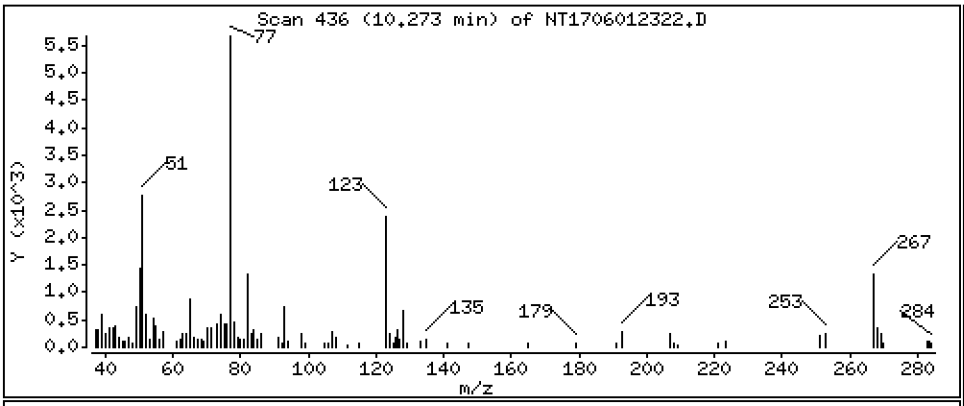
Operator: VTS

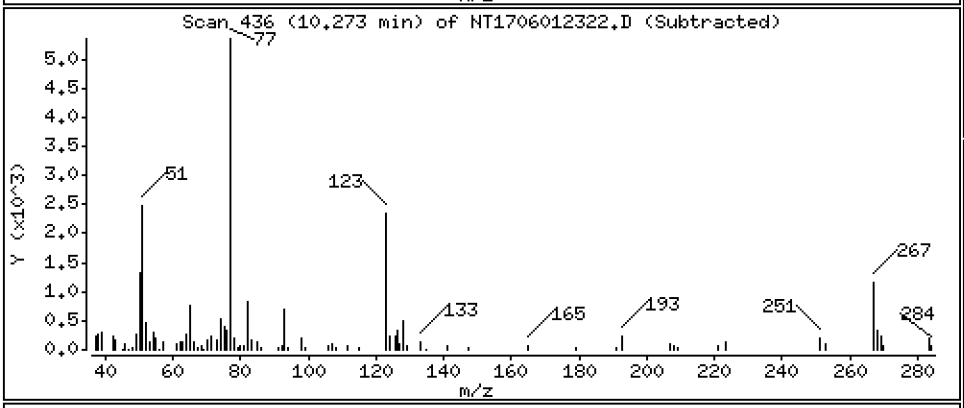
Column phase: ZB-5msi

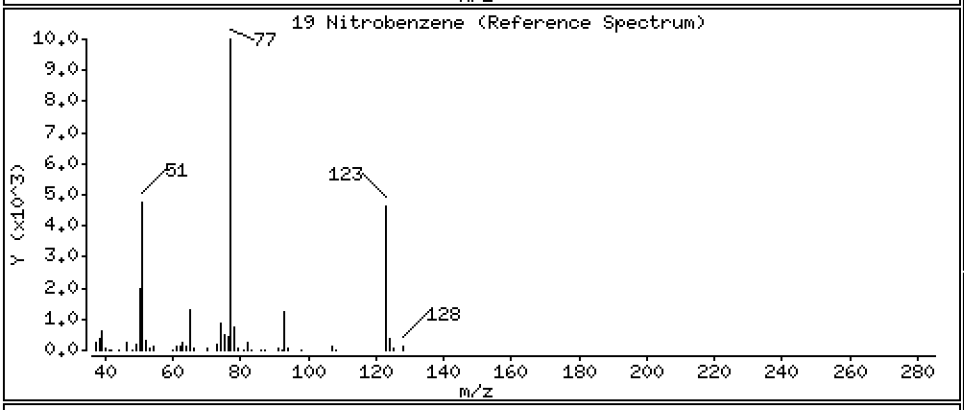
Column diameter: 0.25

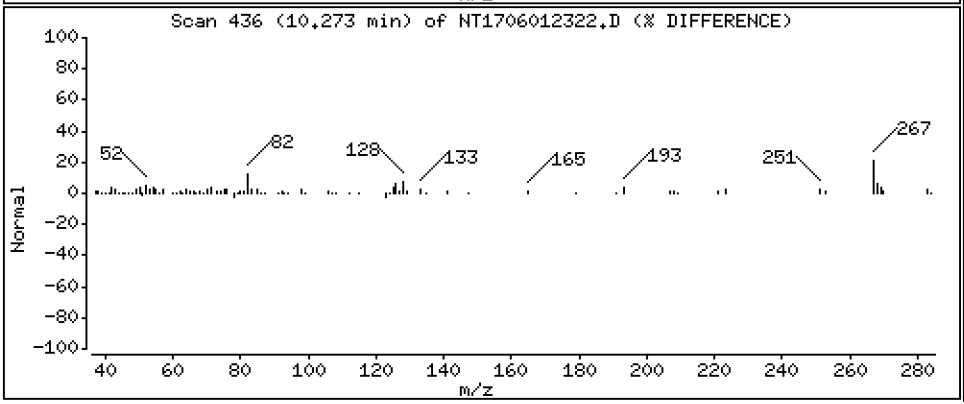
19 Nitrobenzene

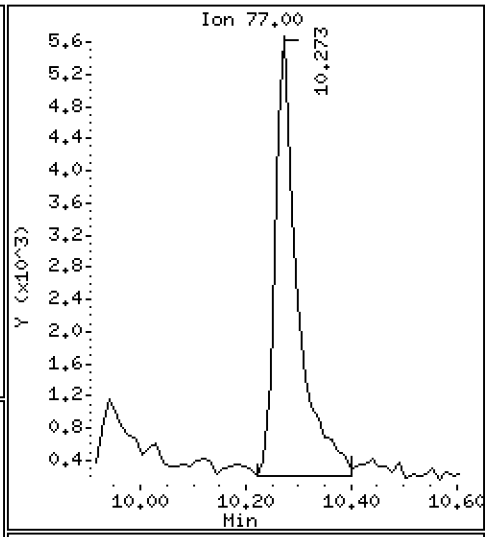
Concentration: 0.1839 ug/mL

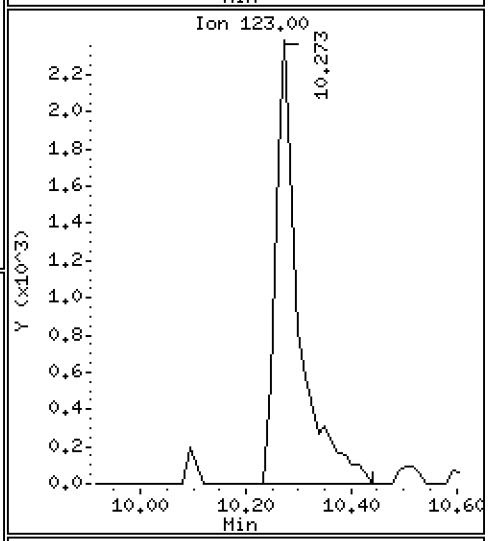


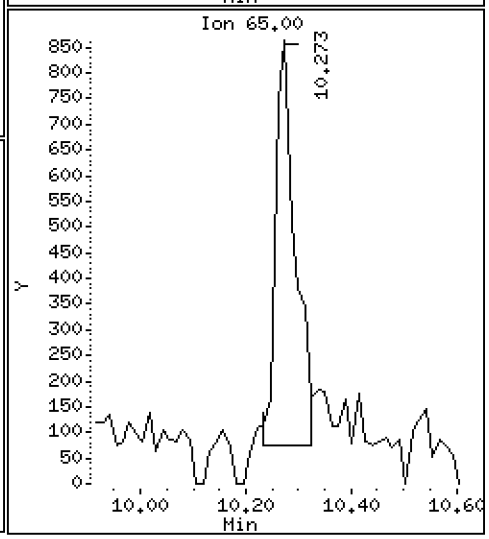












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

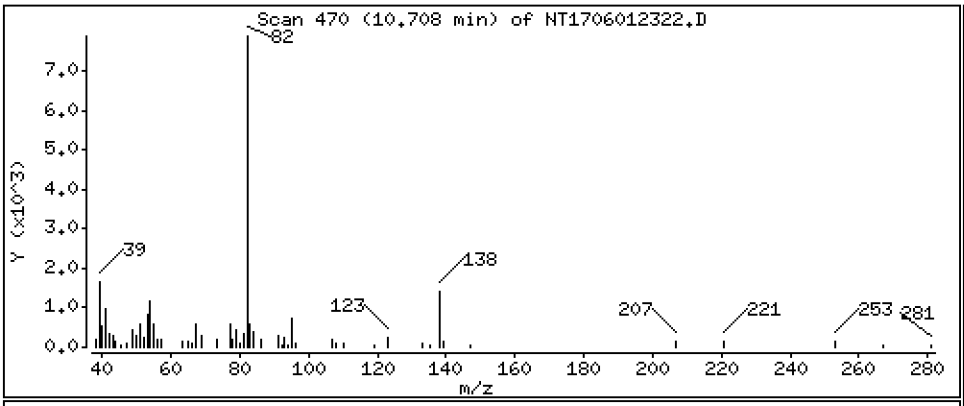
Operator: VTS

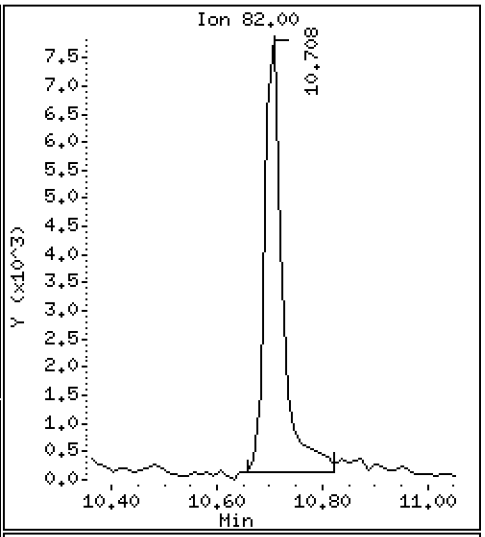
Column phase: ZB-5msi

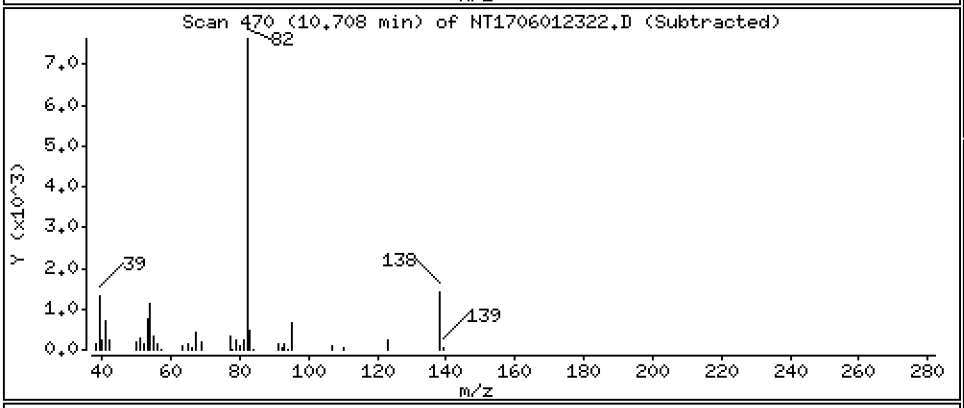
Column diameter: 0.25

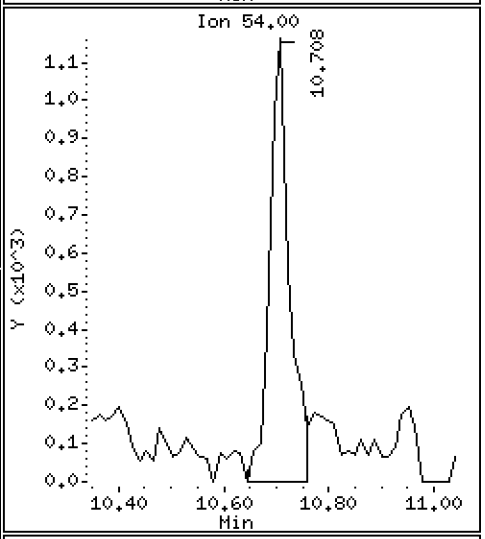
20 Isophorone

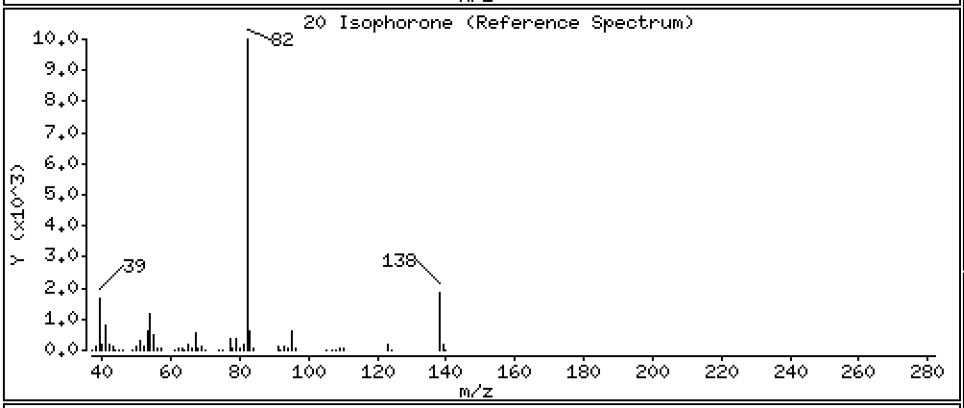
Concentration: 0.1751 ug/mL

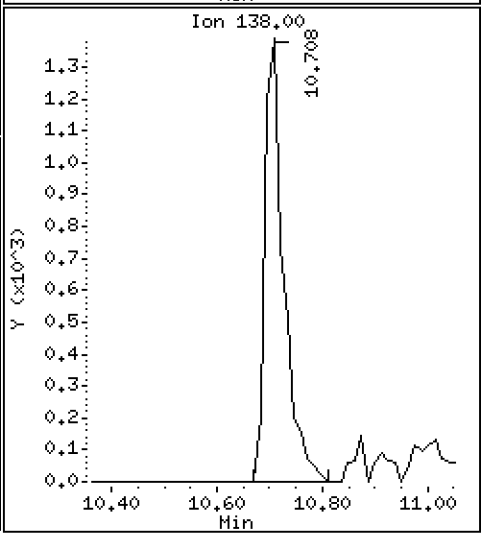


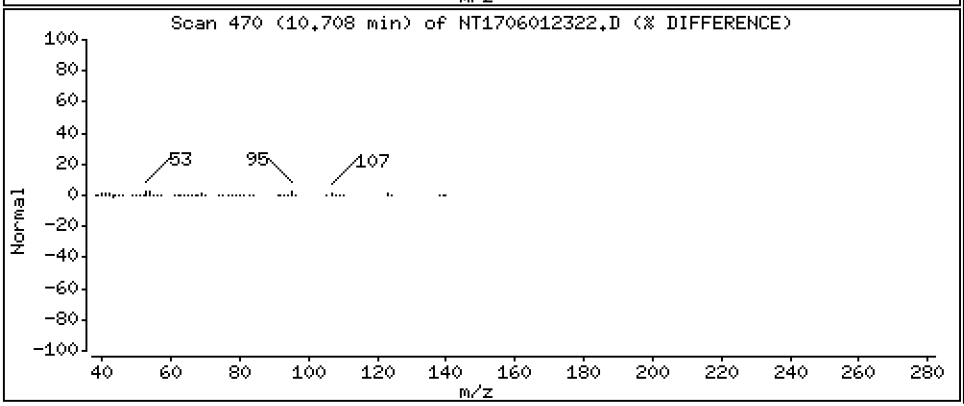












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

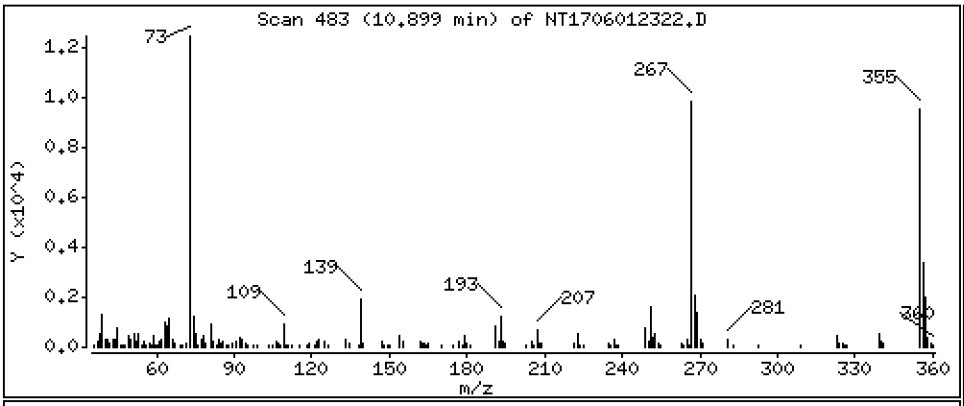
Operator: VTS

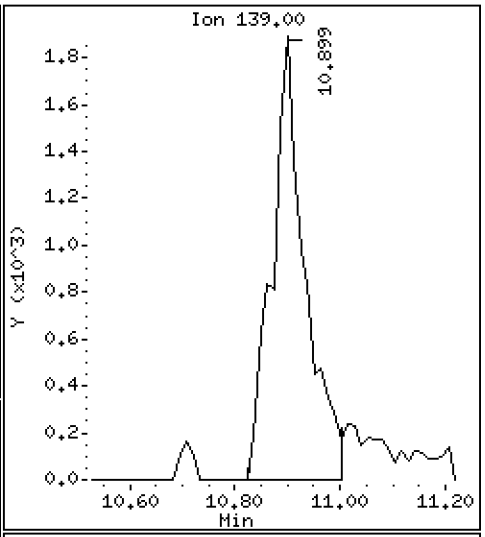
Column phase: ZB-5msi

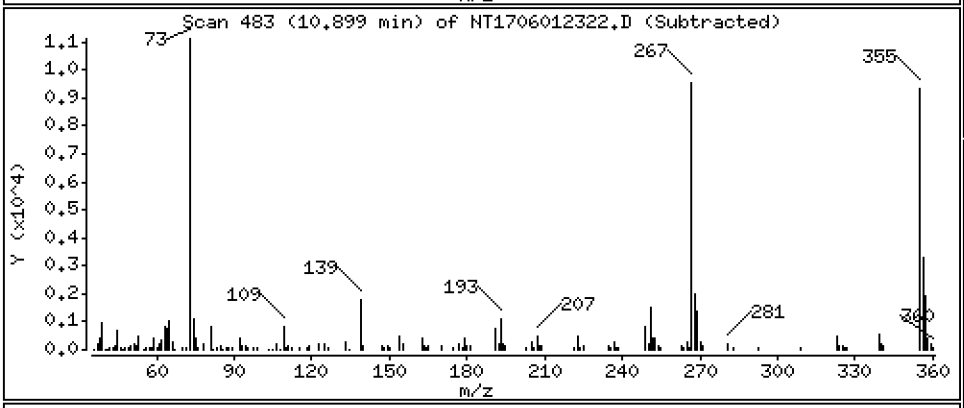
Column diameter: 0.25

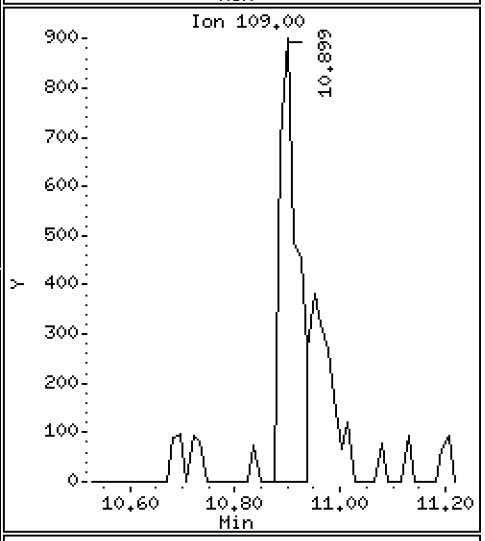
21 2-Nitrophenol

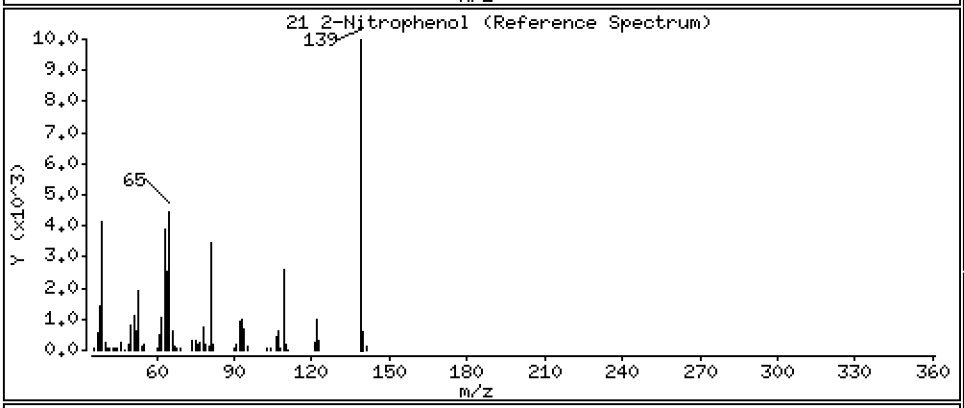
Concentration: 0.1963 ug/mL

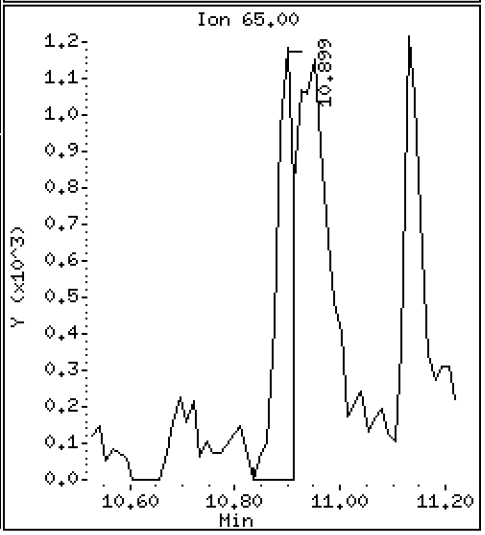


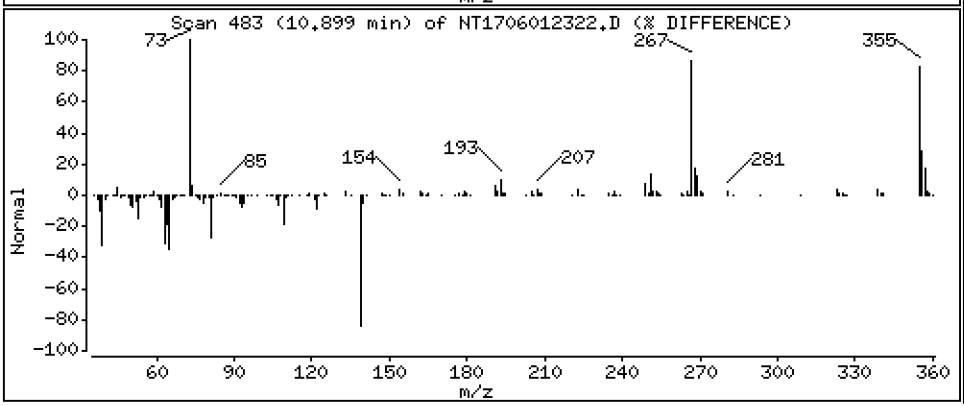












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

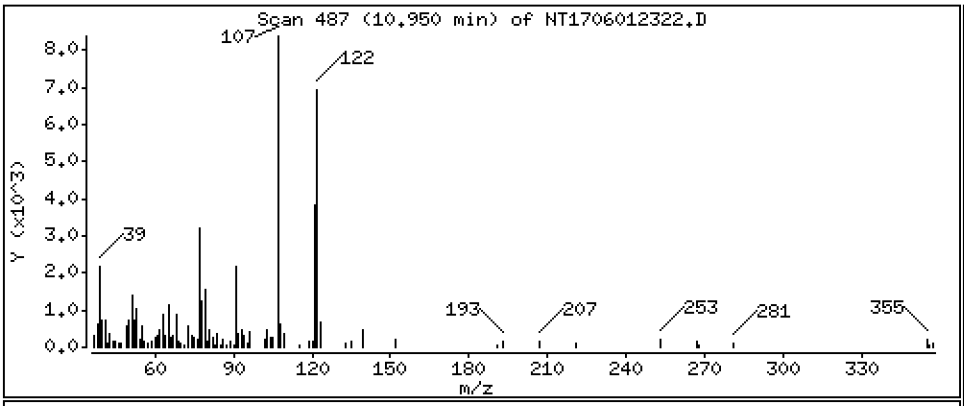
Operator: VTS

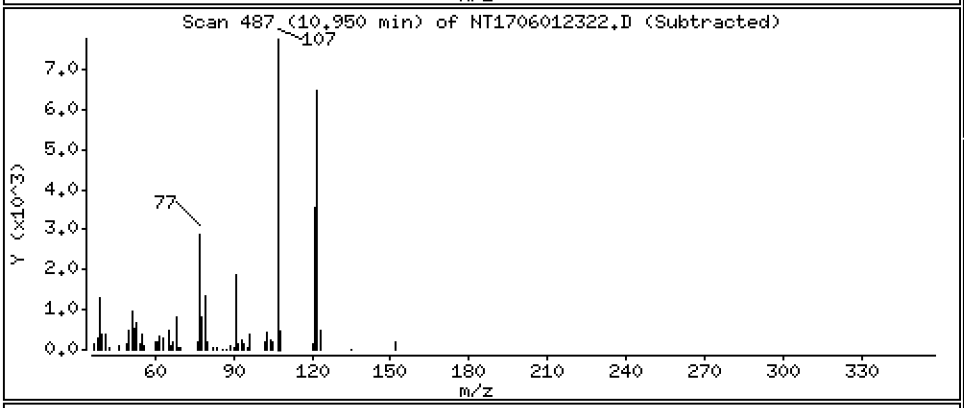
Column phase: ZB-5msi

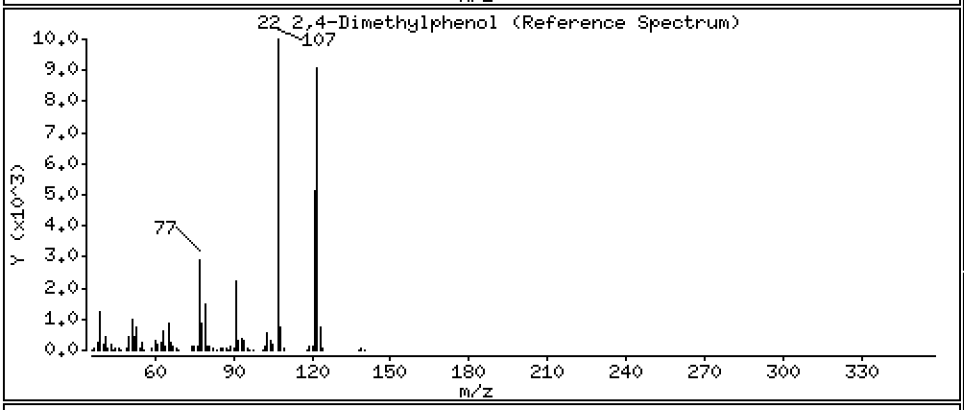
Column diameter: 0.25

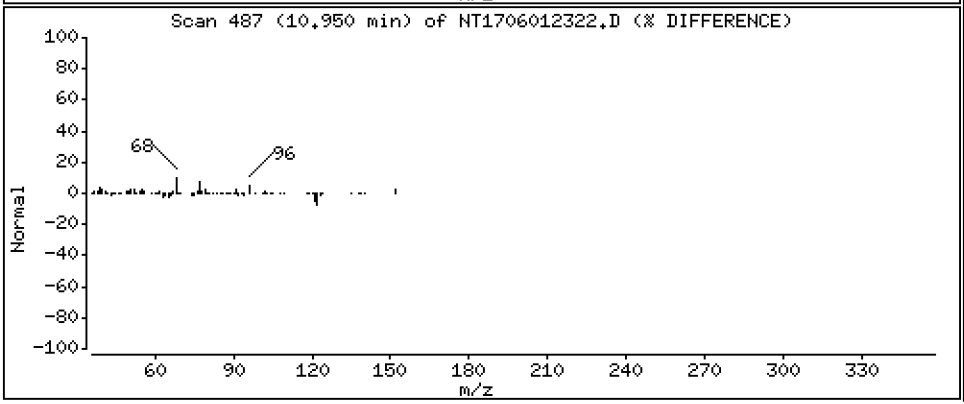
22 2,4-Dimethylphenol

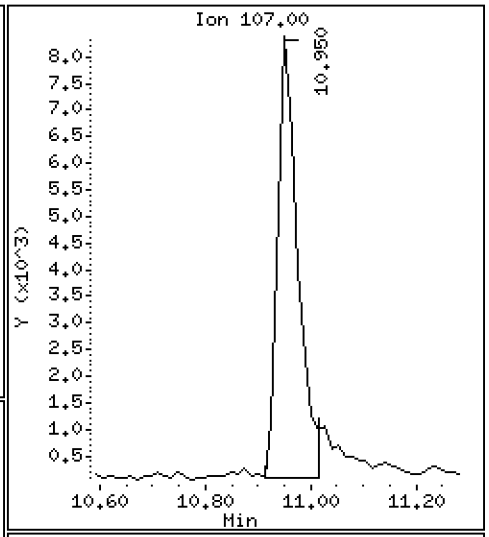
Concentration: 0.2719 ug/mL

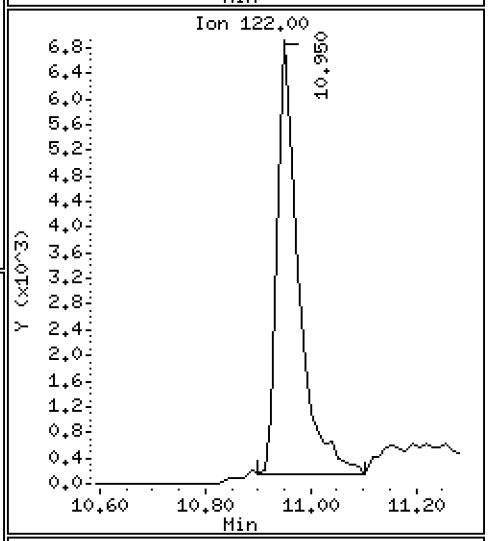


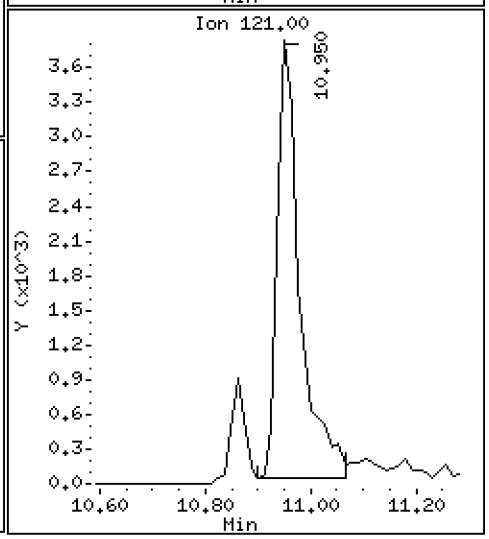












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

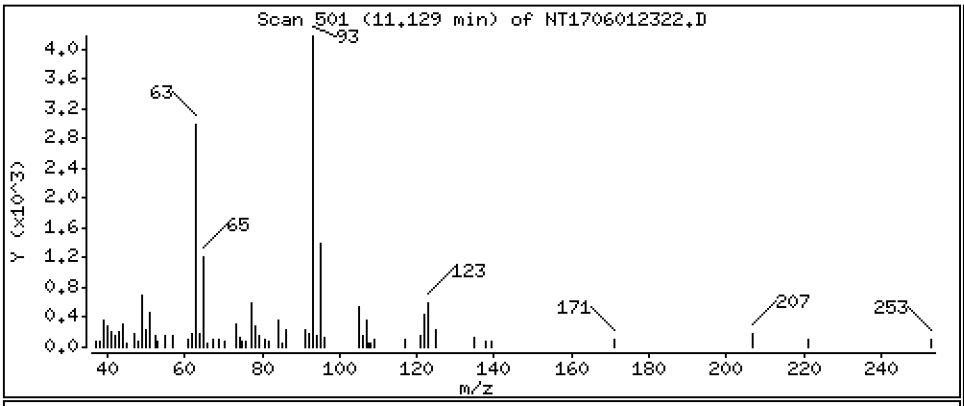
Operator: VTS

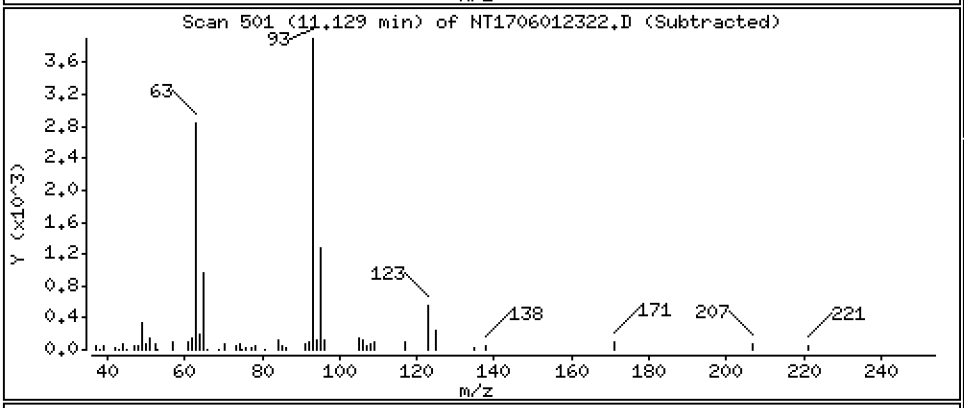
Column phase: ZB-5msi

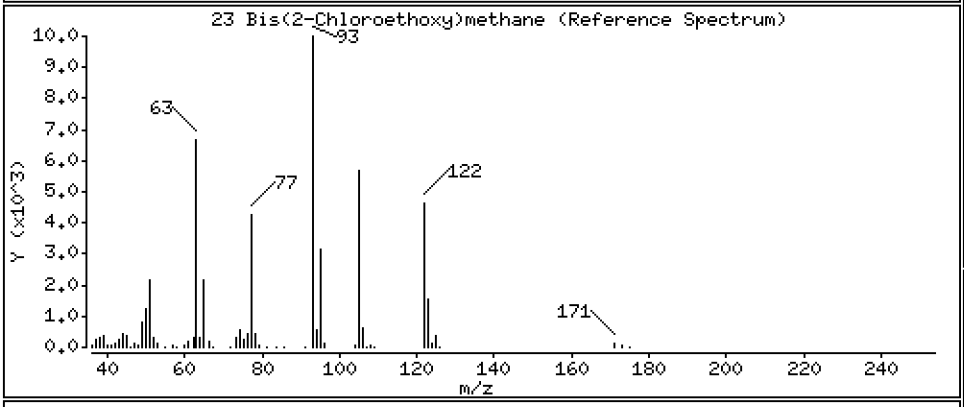
Column diameter: 0.25

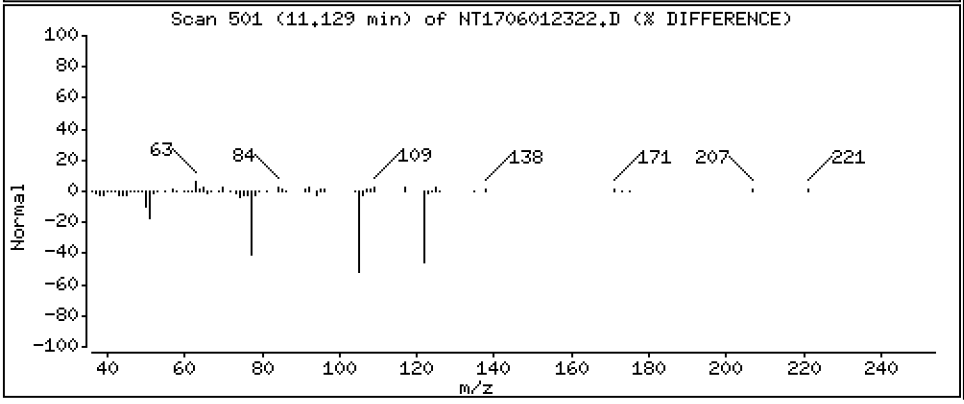
23 Bis(2-Chloroethoxy)methane

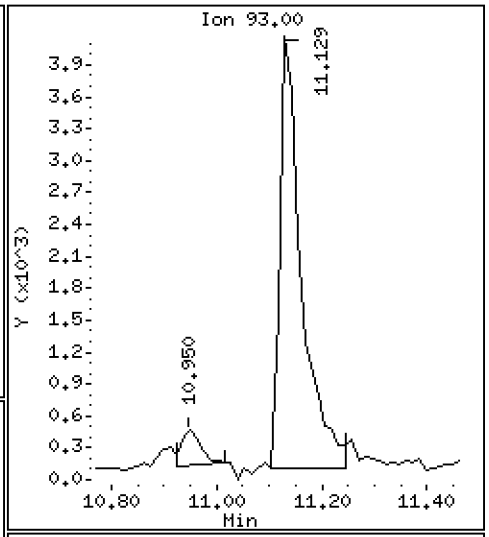
Concentration: 0.1590 ug/mL

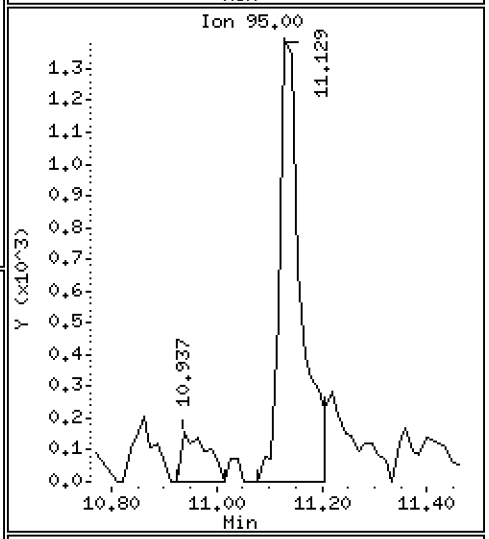


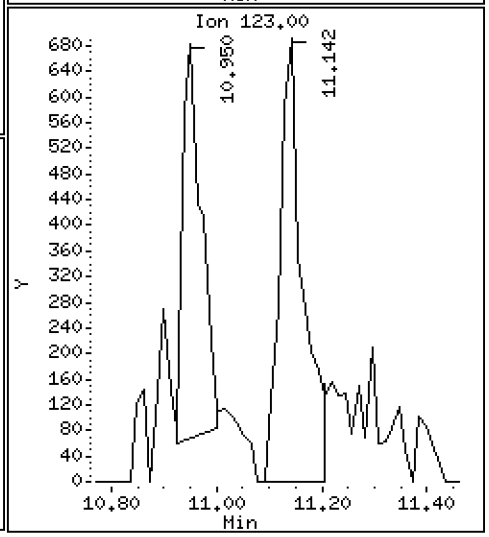












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

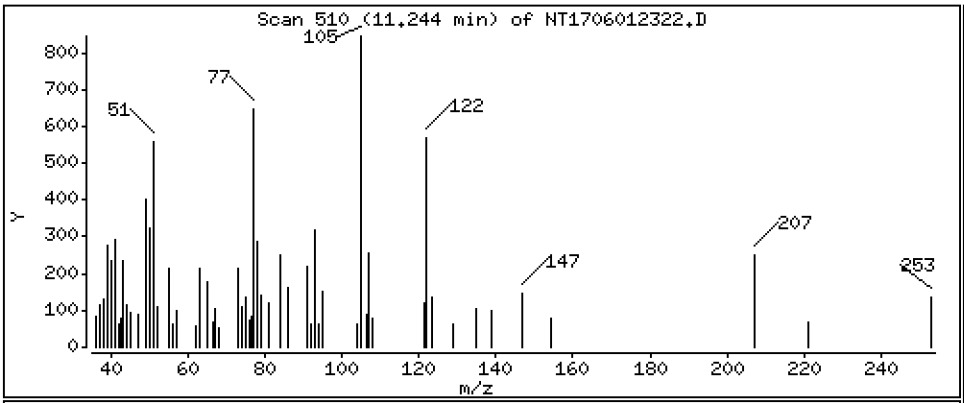
Operator: VTS

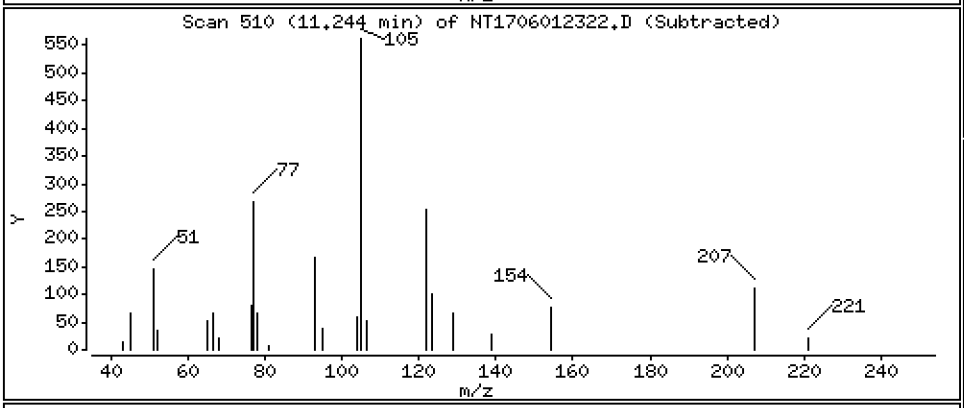
Column phase: ZB-5msi

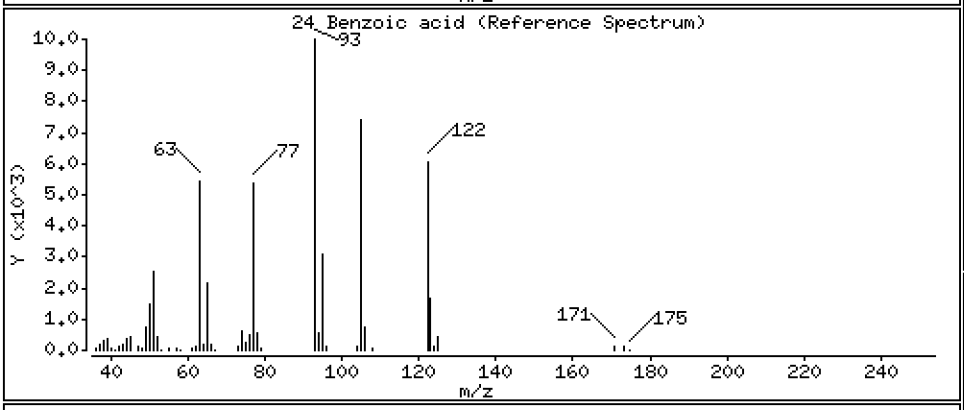
Column diameter: 0.25

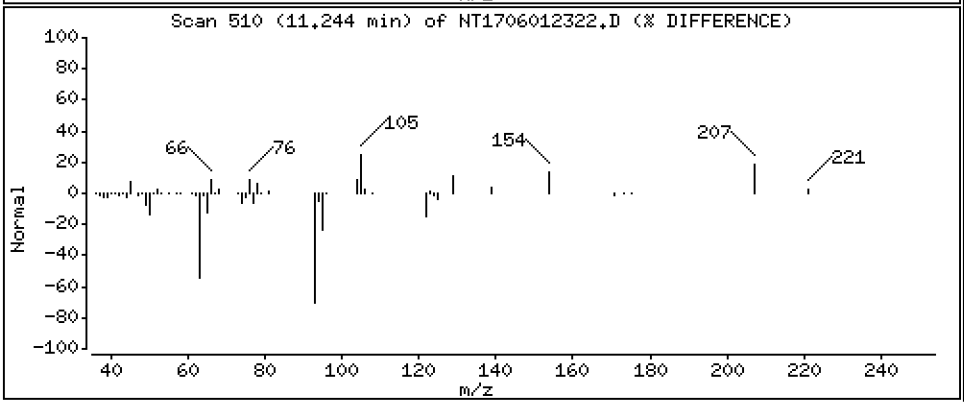
24 Benzoic acid

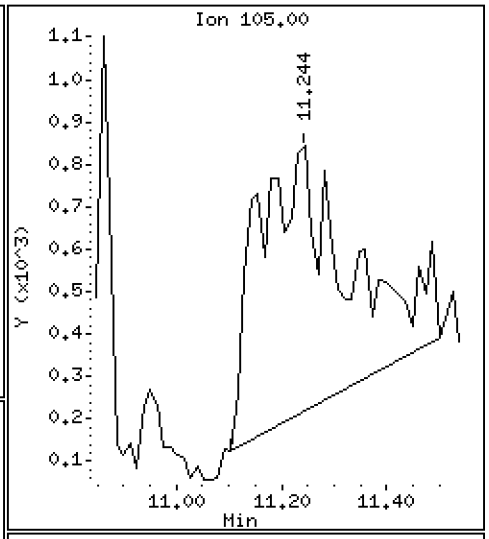
Concentration: 0.1403 ug/mL

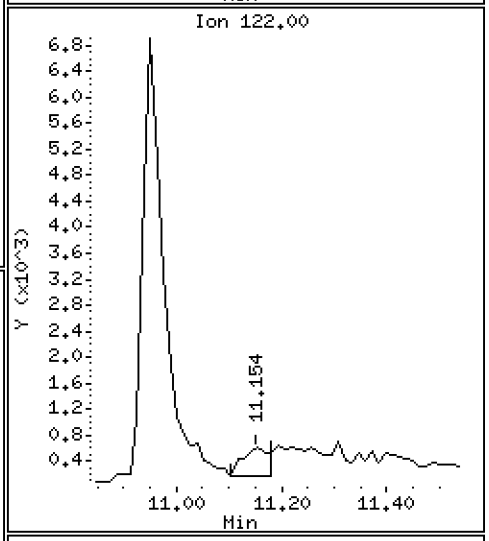


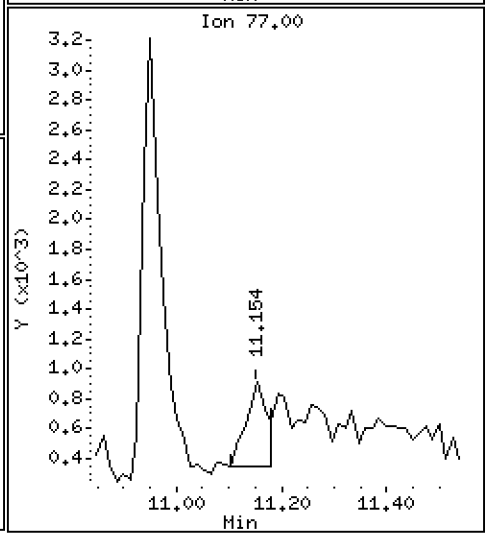












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

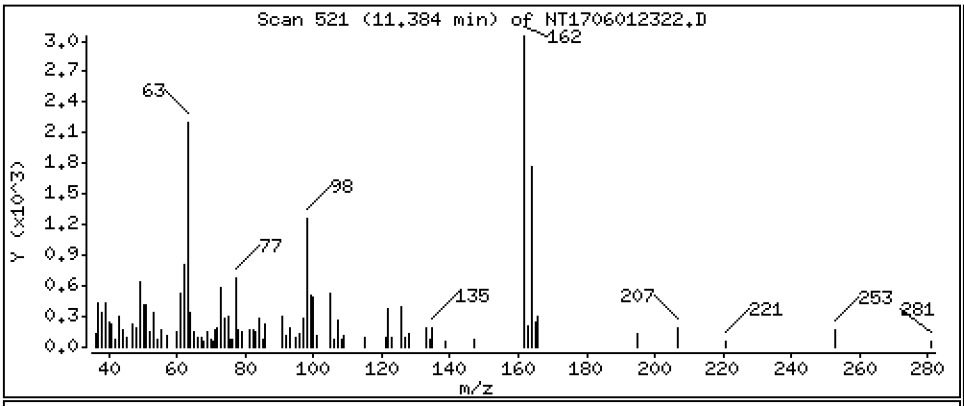
Operator: VTS

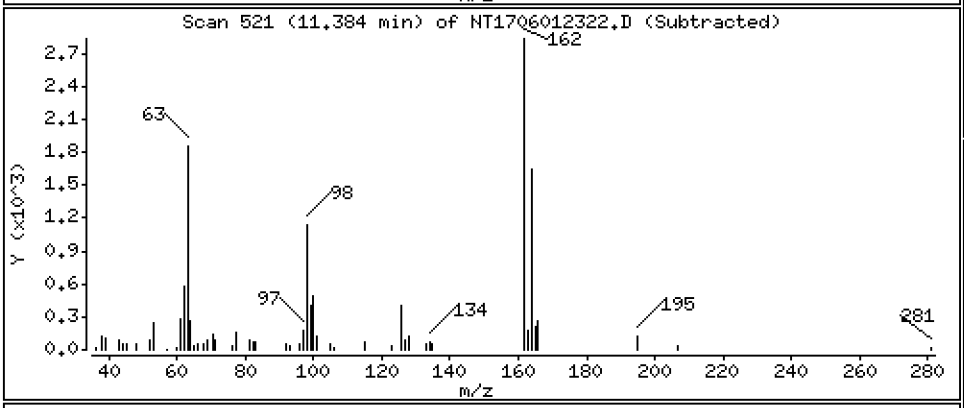
Column phase: ZB-5msi

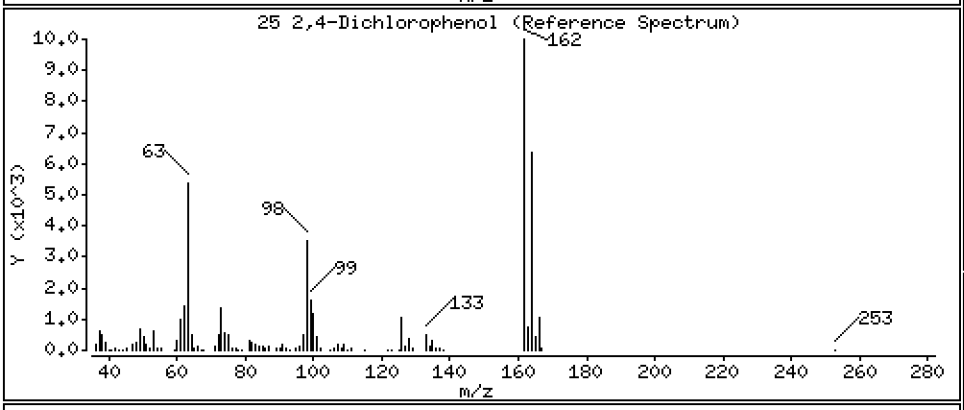
Column diameter: 0.25

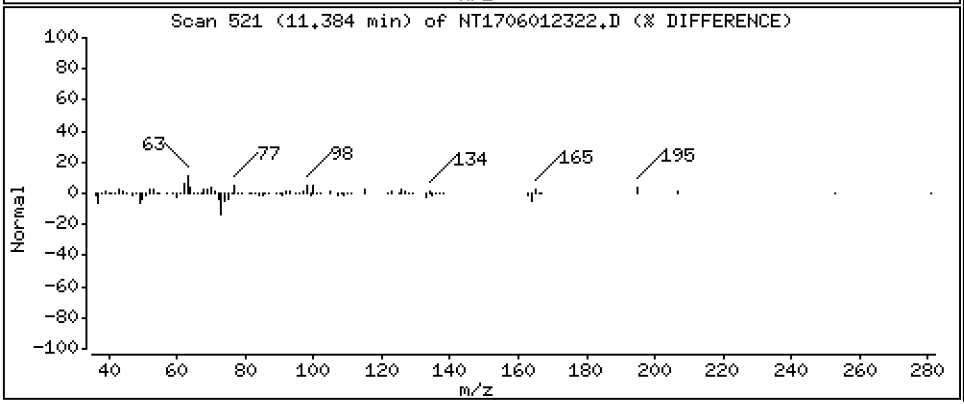
25 2,4-Dichlorophenol

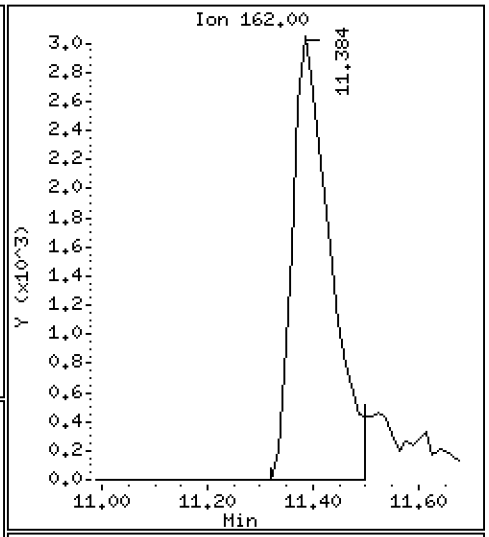
Concentration: 0.2148 ug/mL

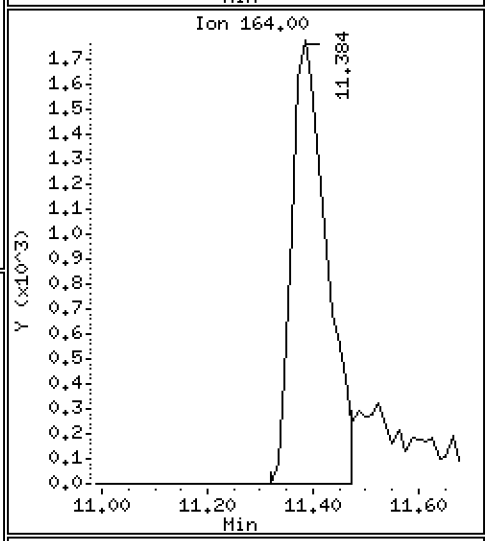


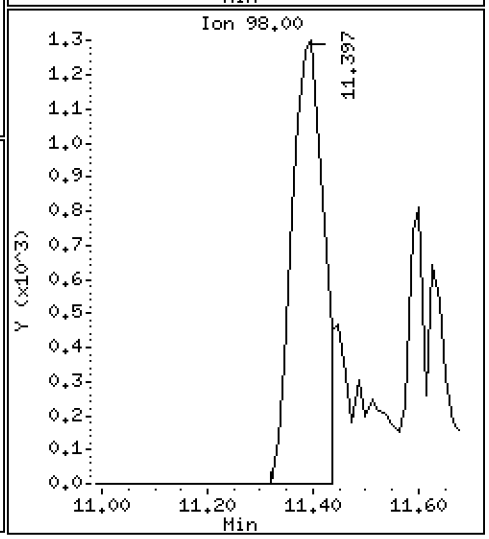












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

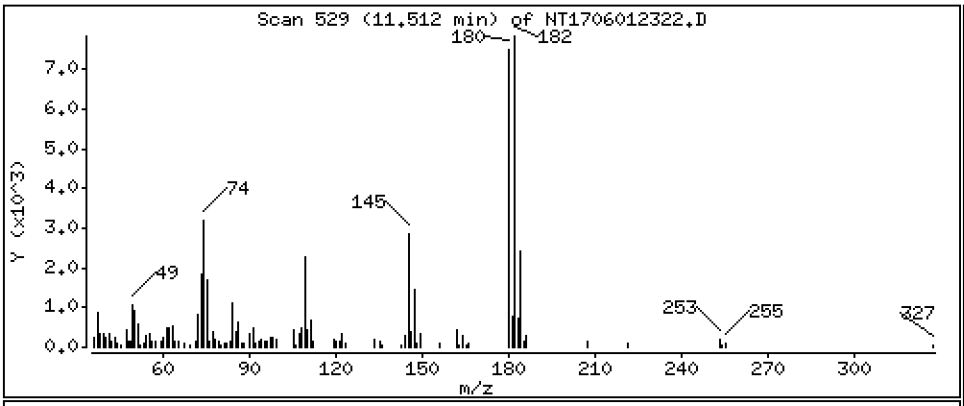
Operator: VTS

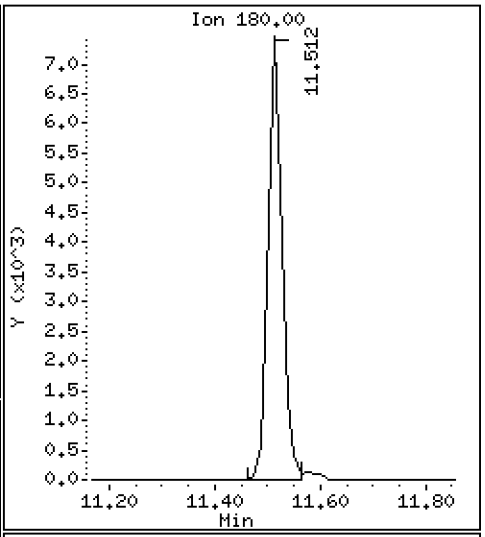
Column phase: ZB-5msi

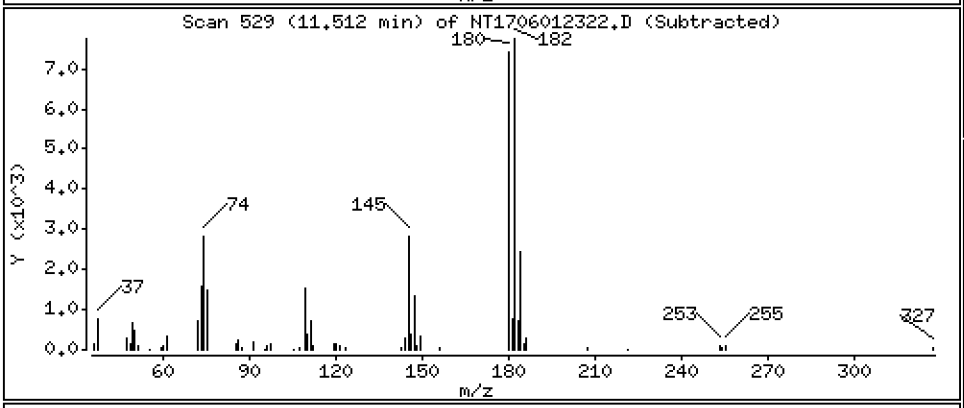
Column diameter: 0.25

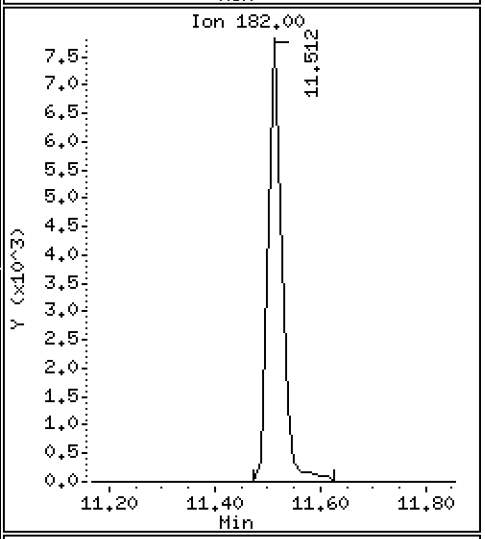
26 1,2,4-Trichlorobenzene

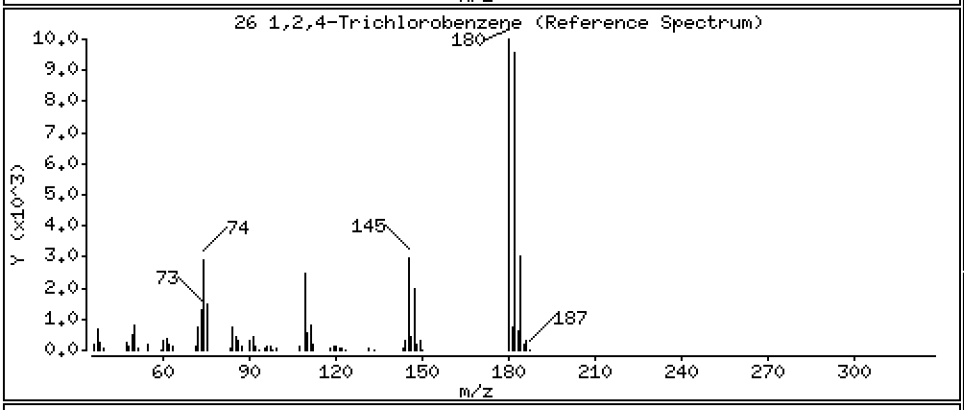
Concentration: 0.1947 ug/mL

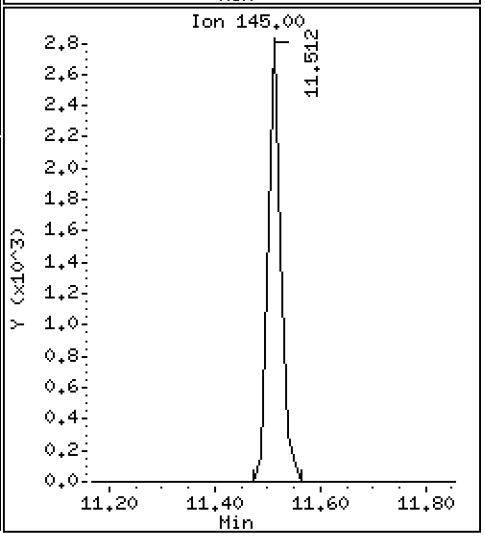


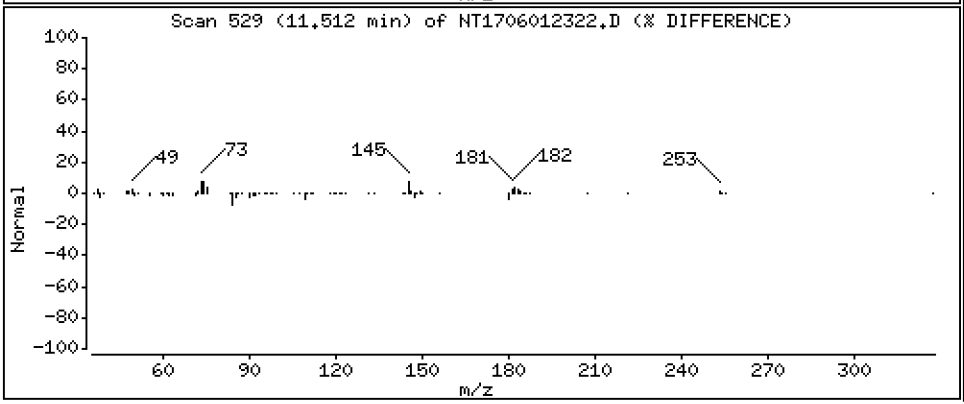












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

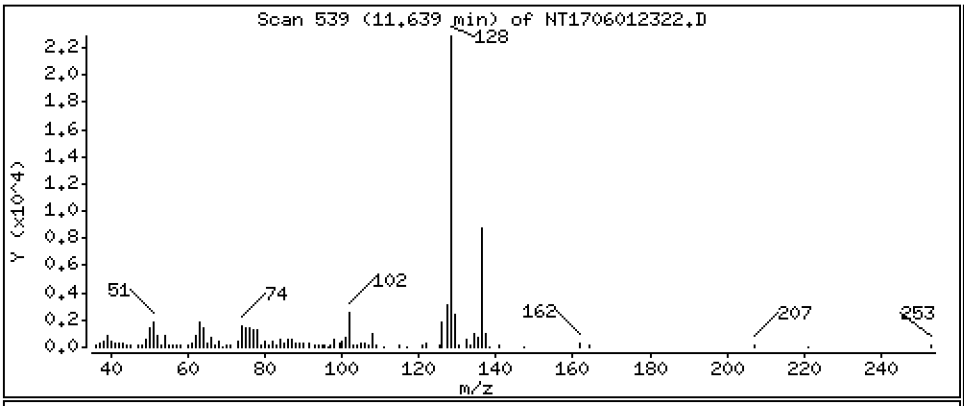
Operator: VTS

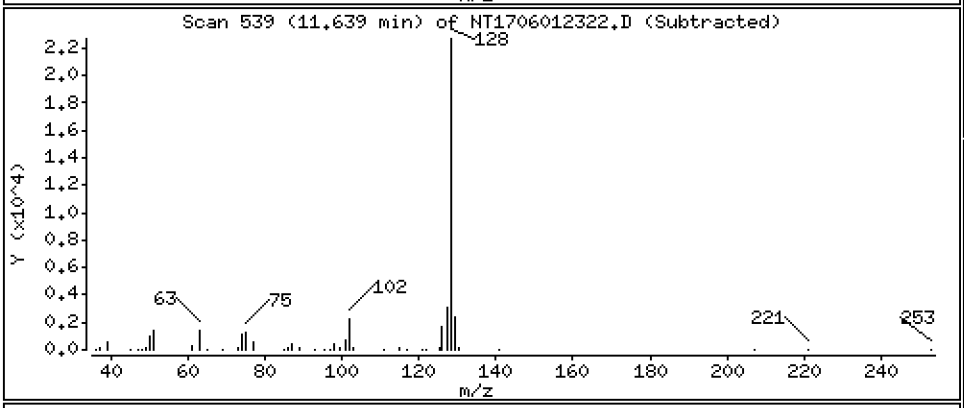
Column phase: ZB-5msi

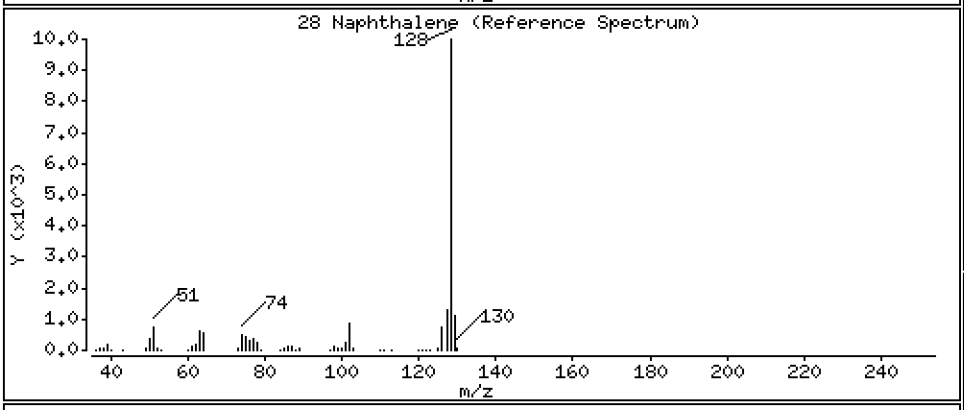
Column diameter: 0.25

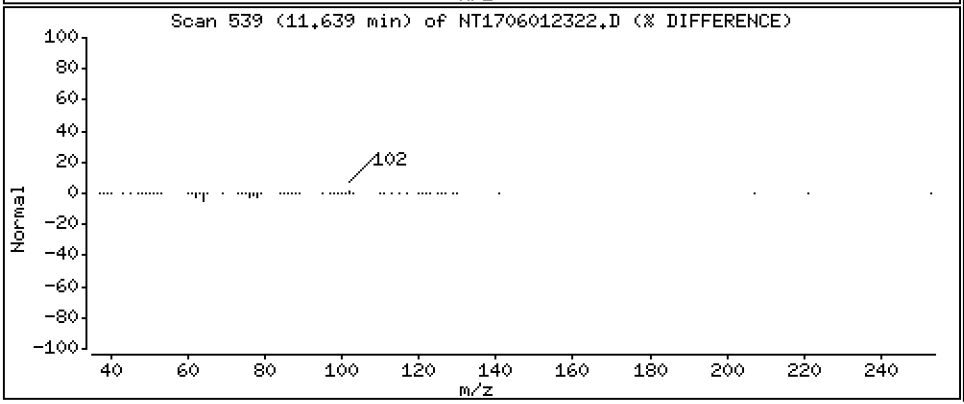
28 Naphthalene

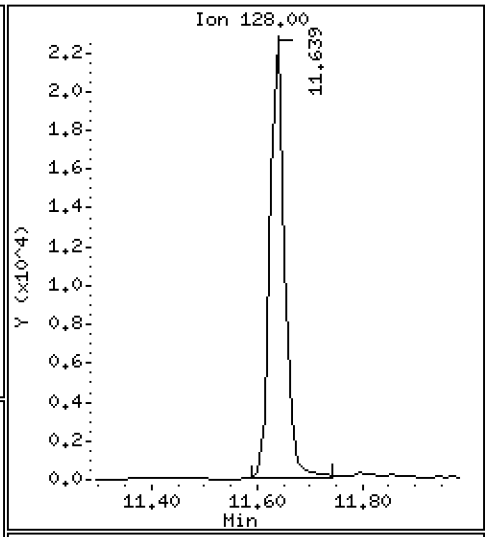
Concentration: 0.1985 ug/mL

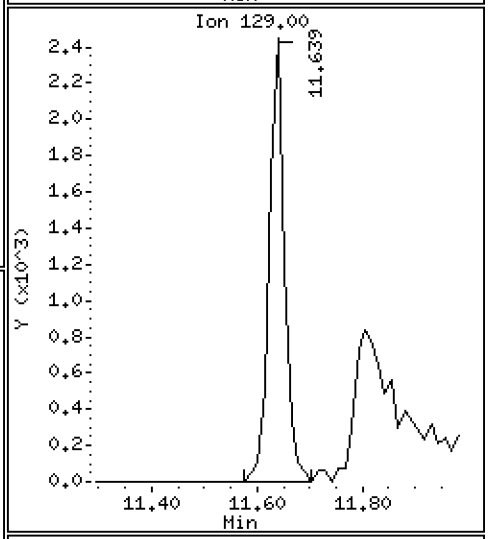


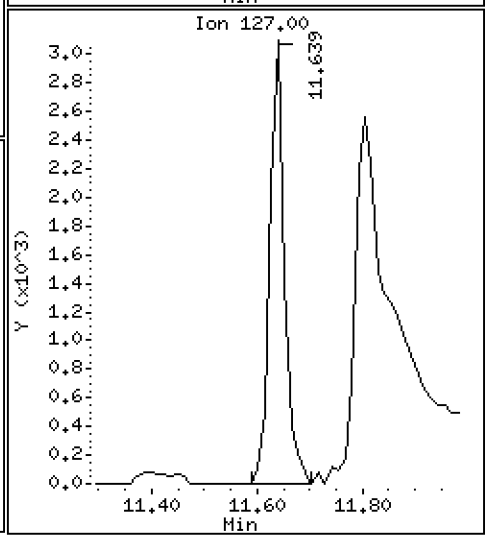












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

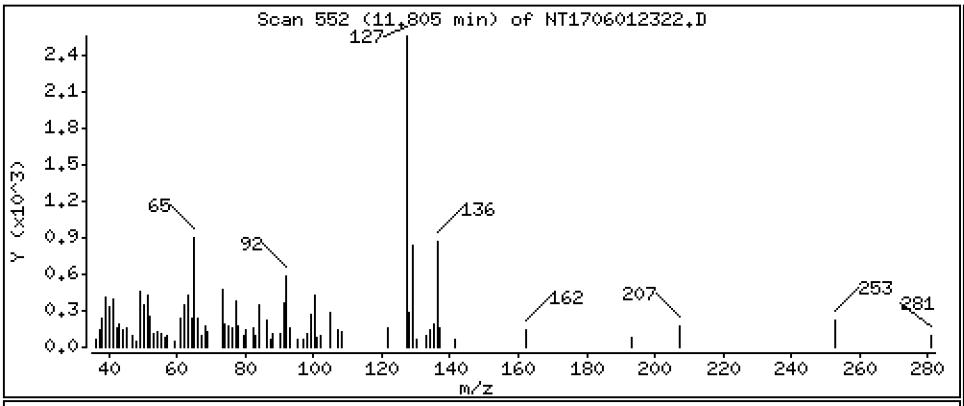
Operator: VTS

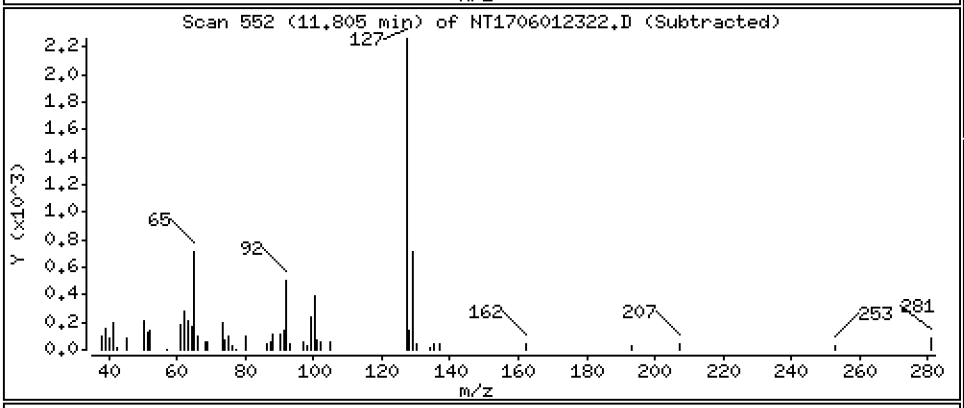
Column phase: ZB-5msi

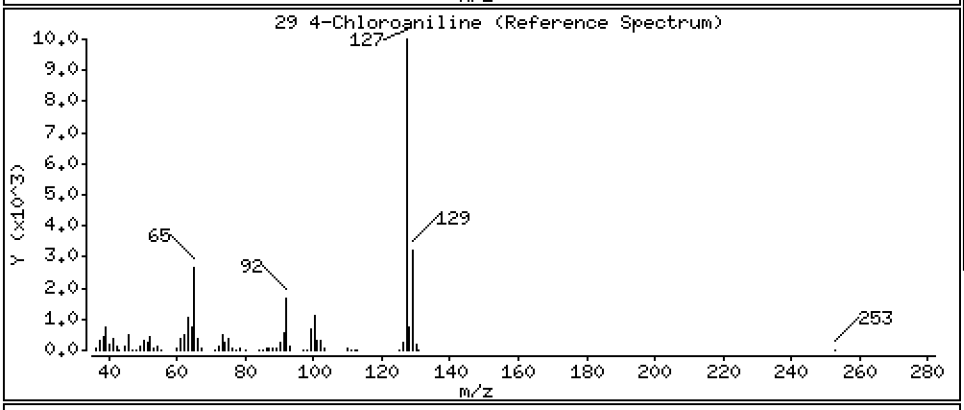
Column diameter: 0.25

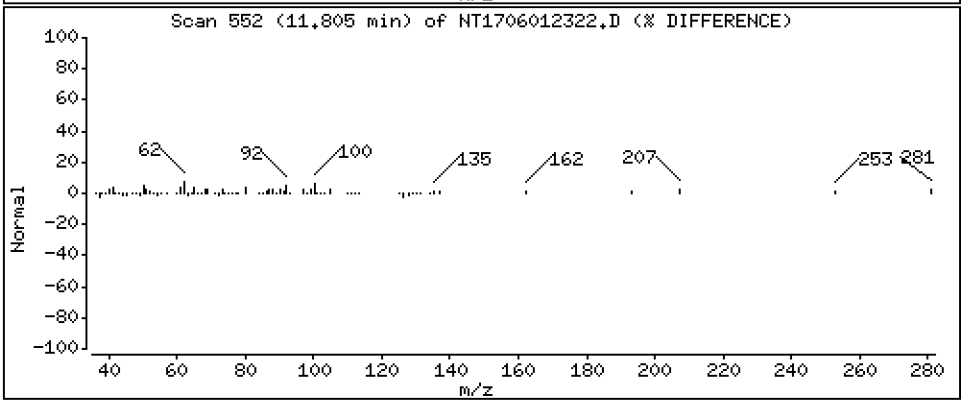
29 4-Chloroaniline

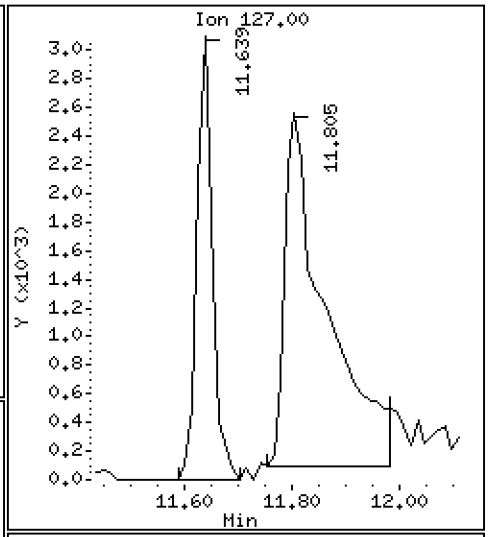
Concentration: 0.1581 ug/mL

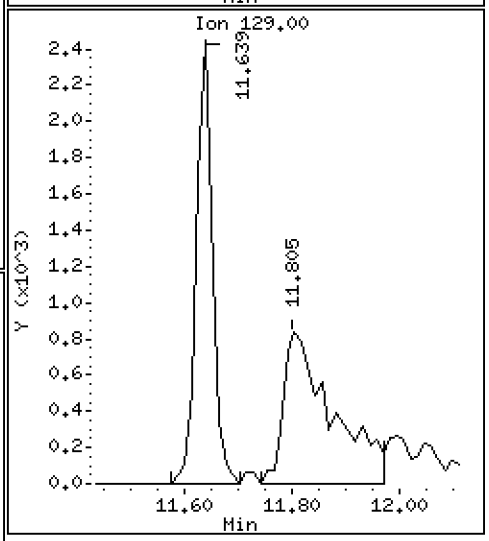












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

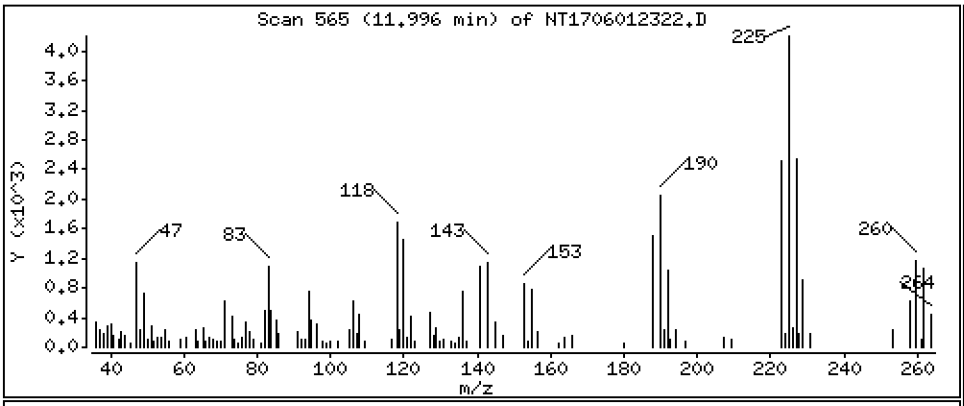
Operator: VTS

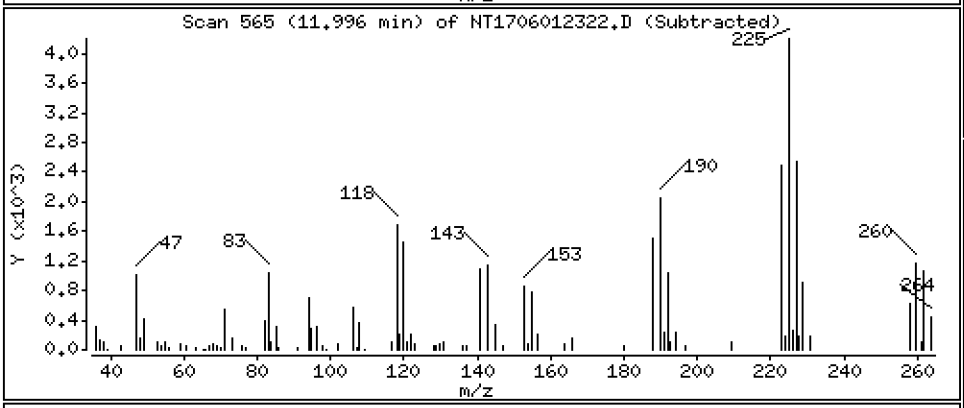
Column phase: ZB-5msi

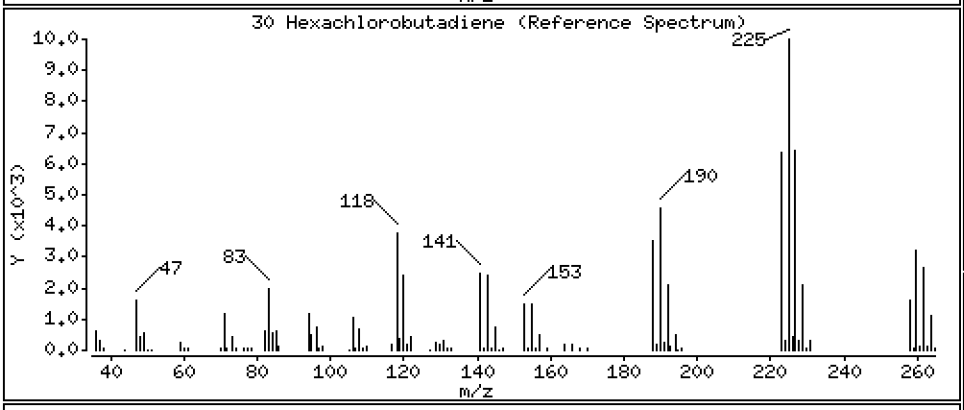
Column diameter: 0.25

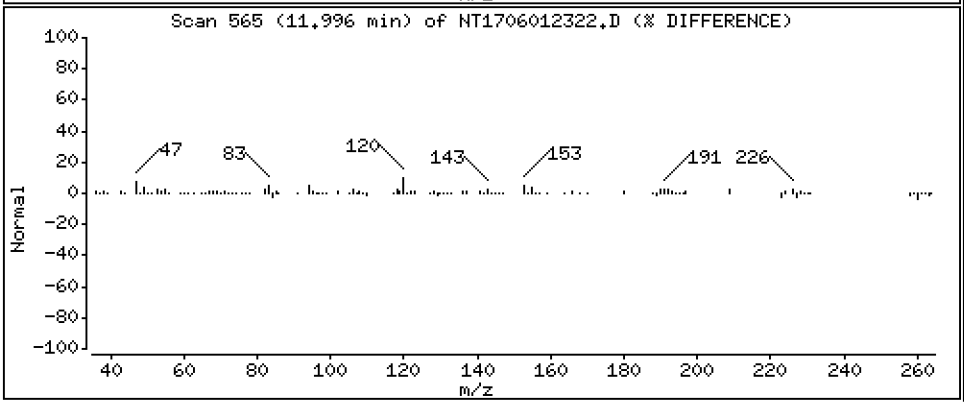
30 Hexachlorobutadiene

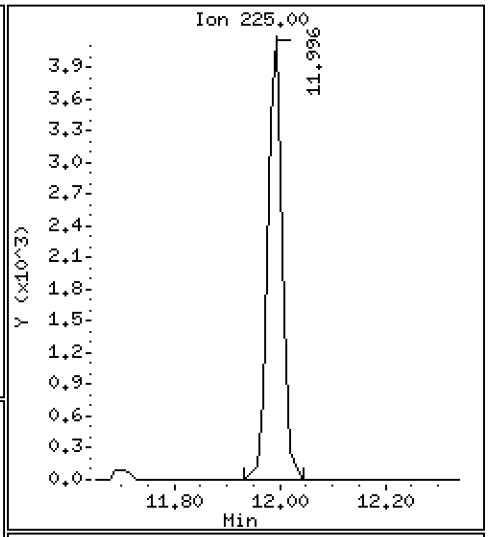
Concentration: 0.2263 ug/mL

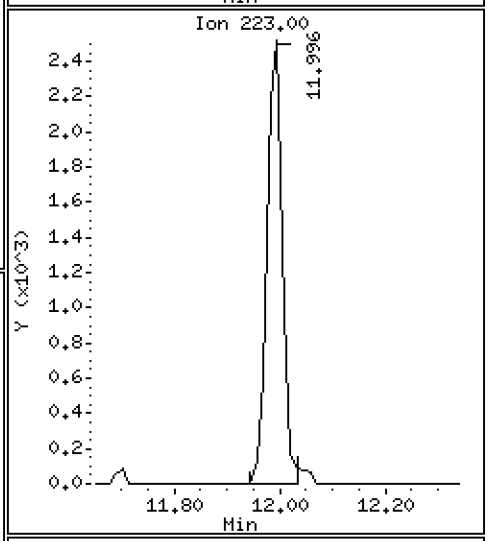


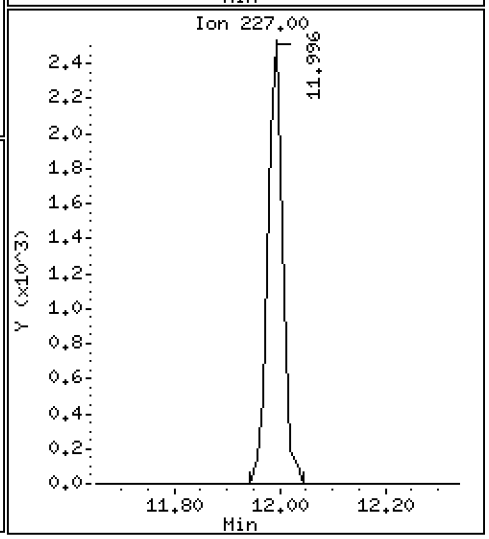












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

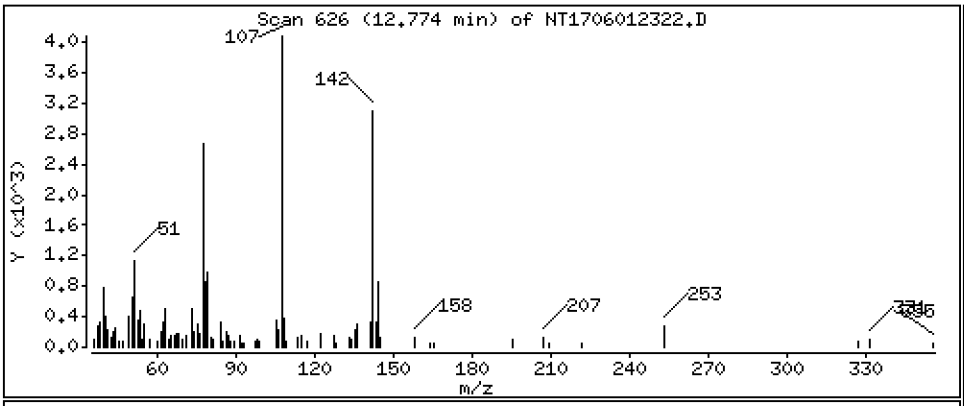
Operator: VTS

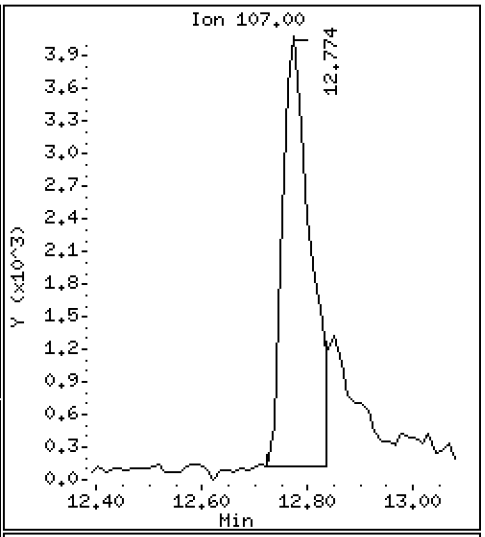
Column phase: ZB-5msi

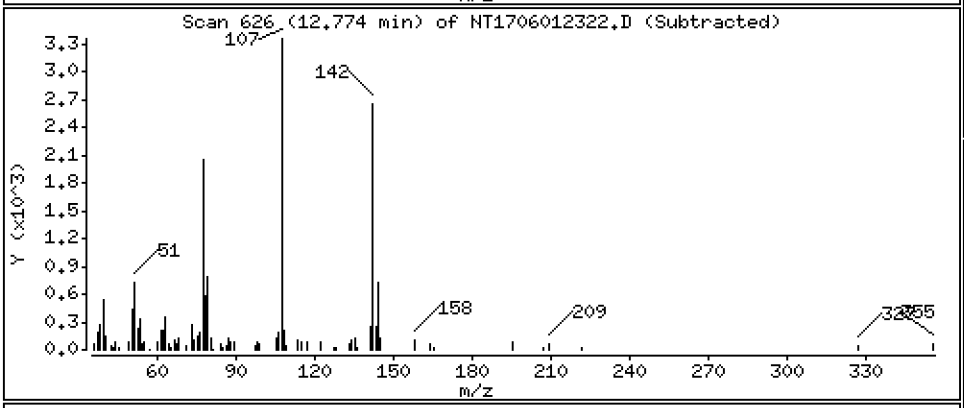
Column diameter: 0.25

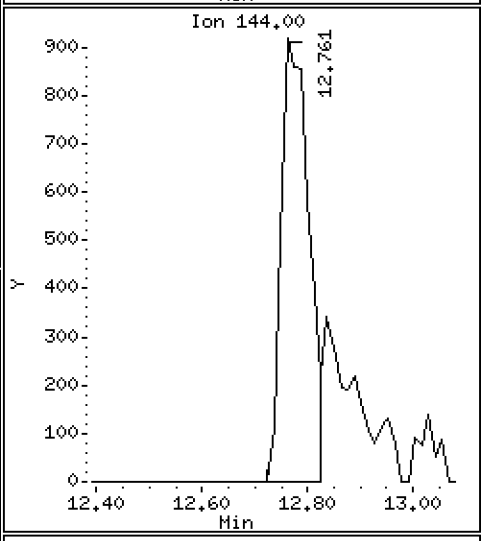
31 4-Chloro-3-methylphenol

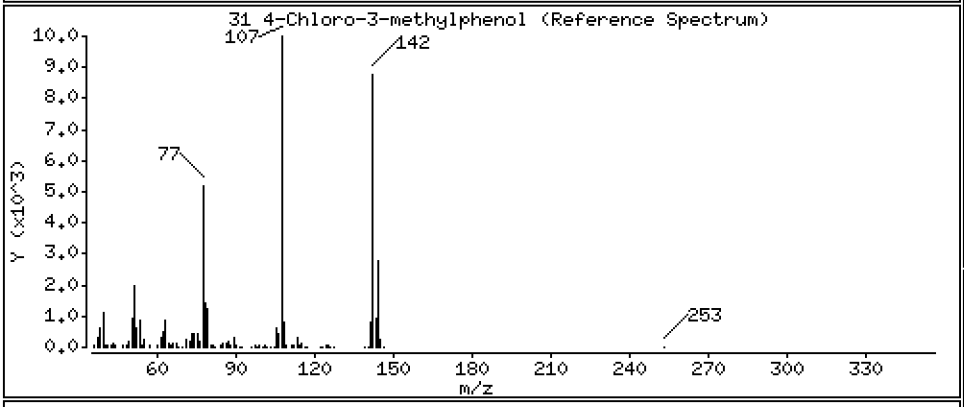
Concentration: 0.2100 ug/mL

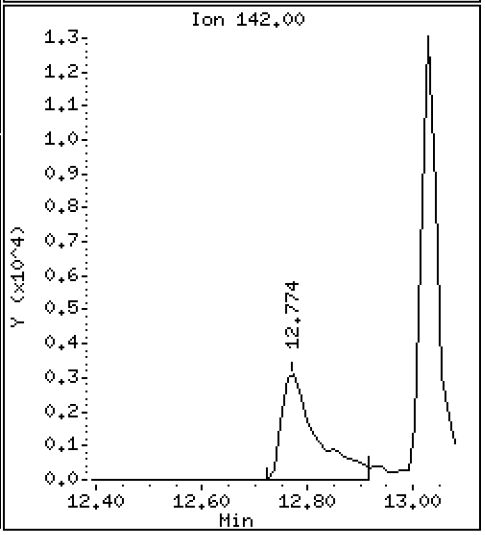


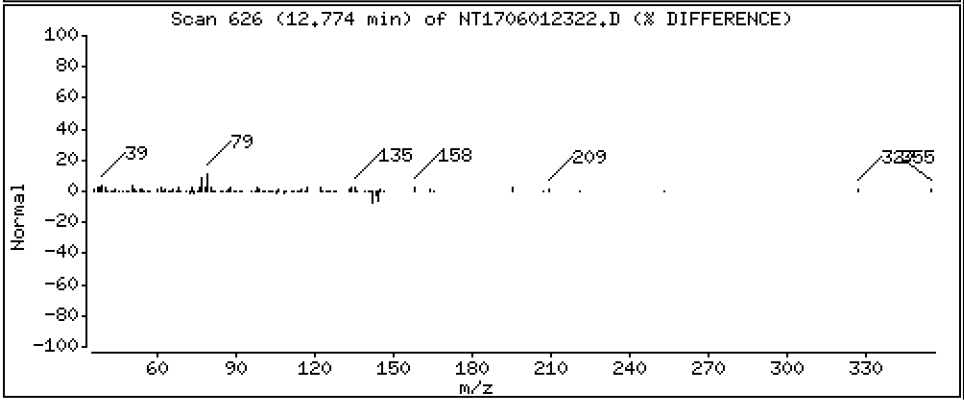












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

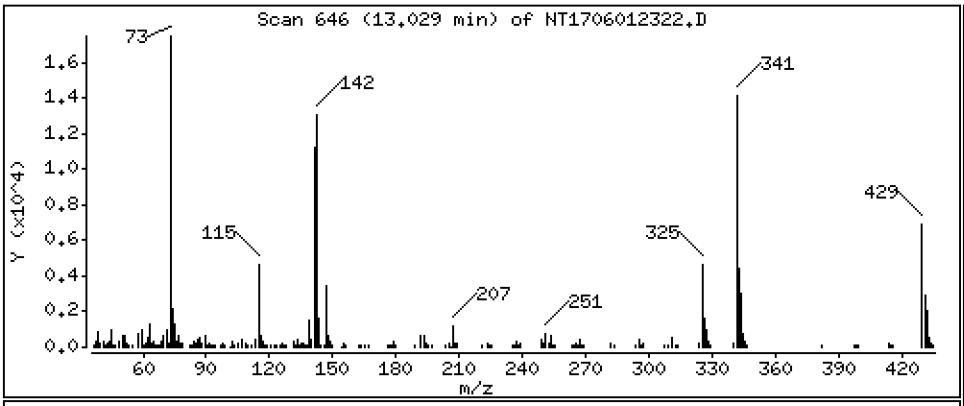
Operator: VTS

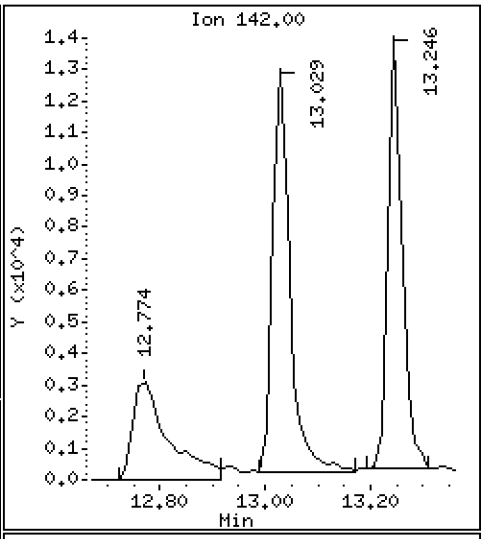
Column phase: ZB-5msi

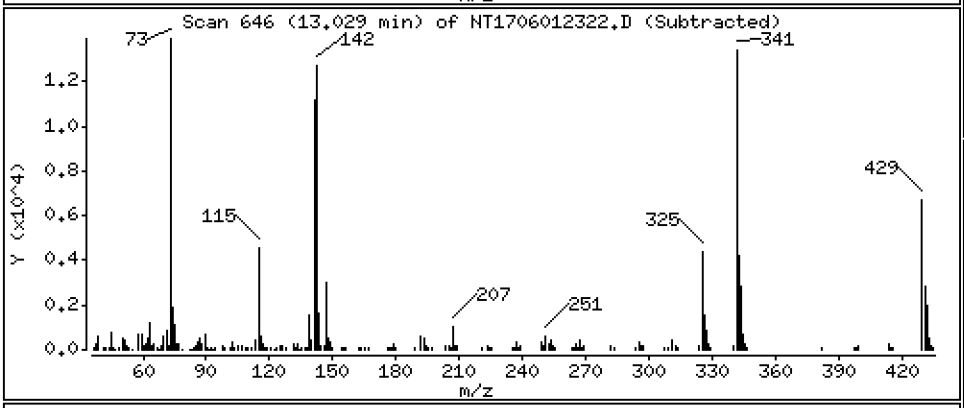
Column diameter: 0.25

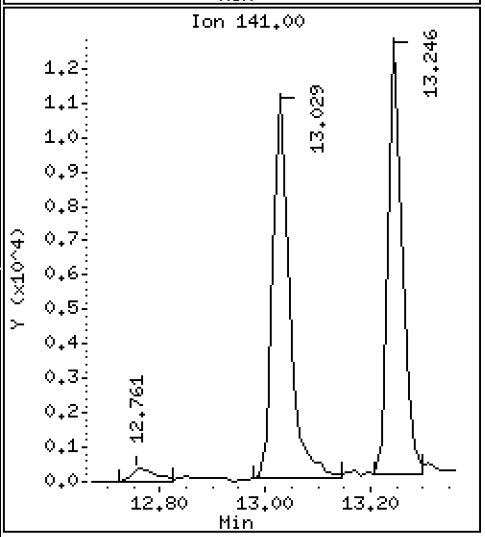
32 2-Methylnaphthalene

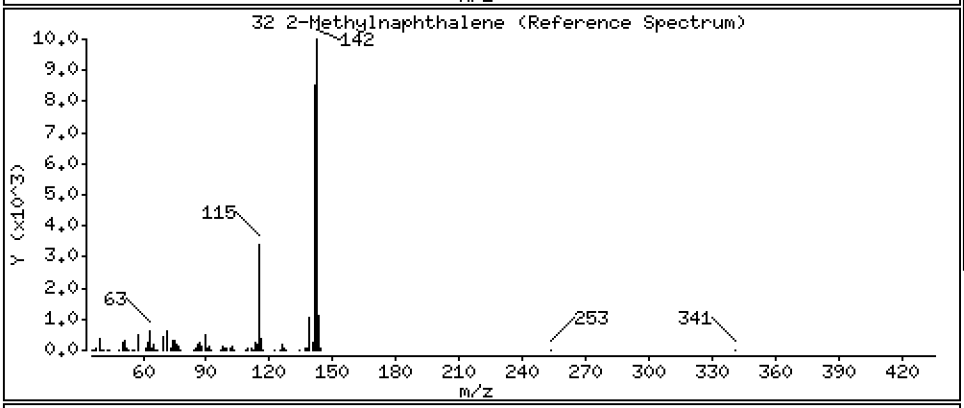
Concentration: 0.1785 ug/mL

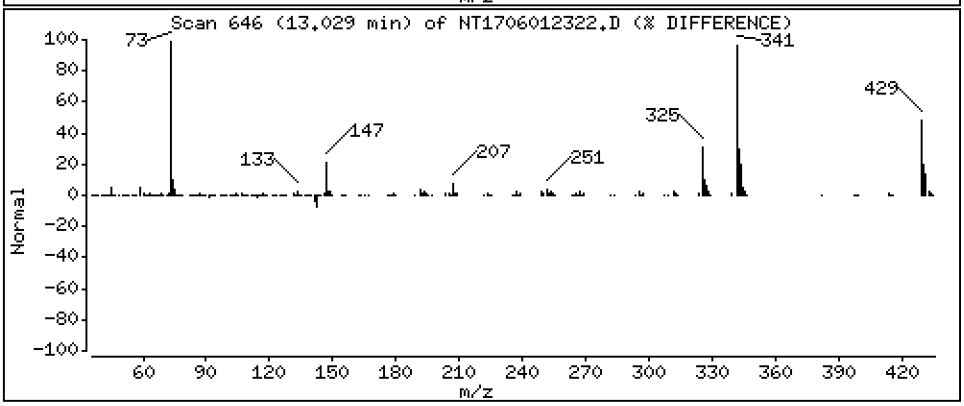












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

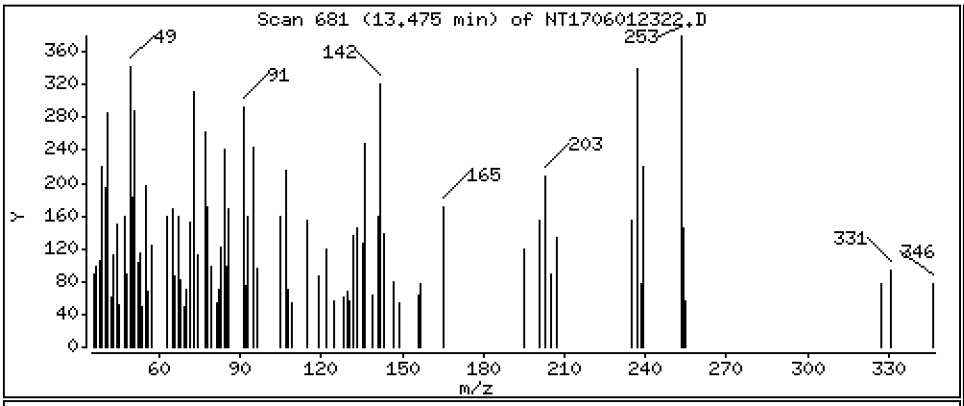
Operator: VTS

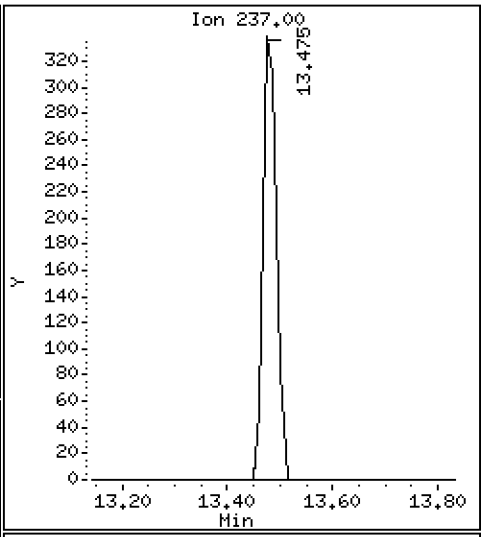
Column phase: ZB-5msi

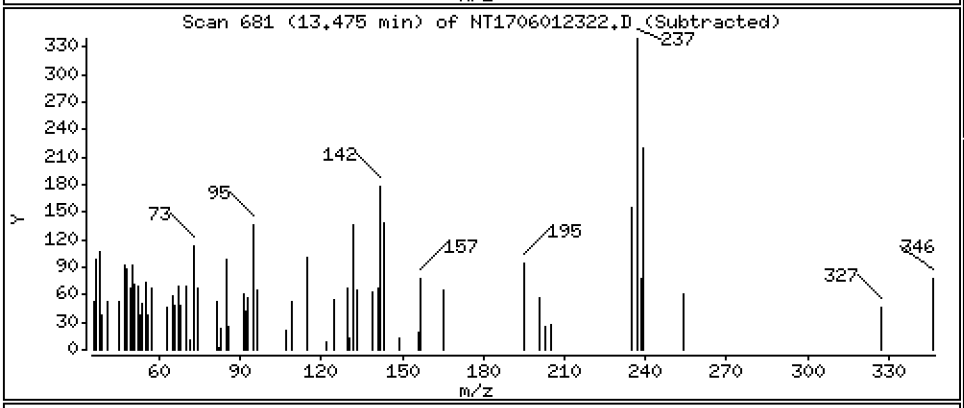
Column diameter: 0.25

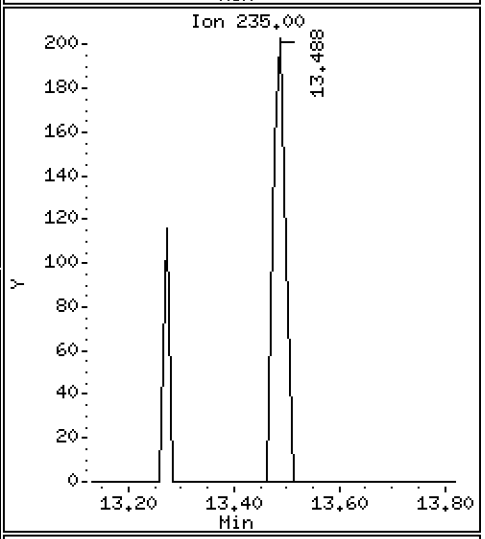
33 Hexachlorocyclopentadiene

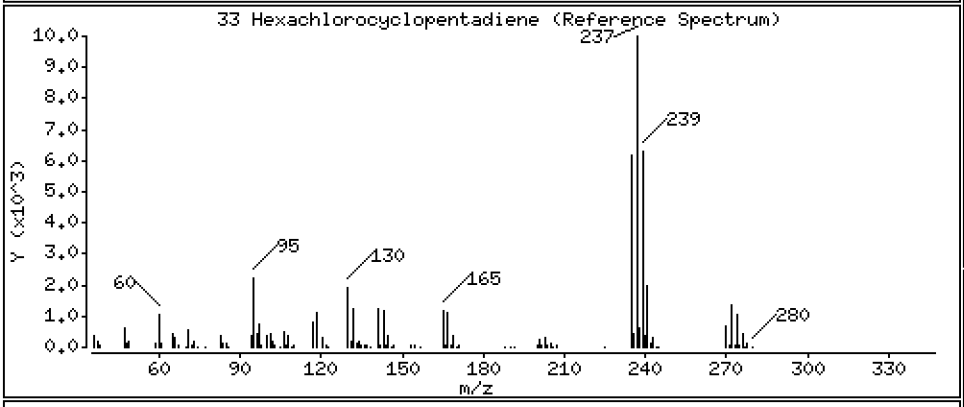
Concentration: 0.01538 ug/mL

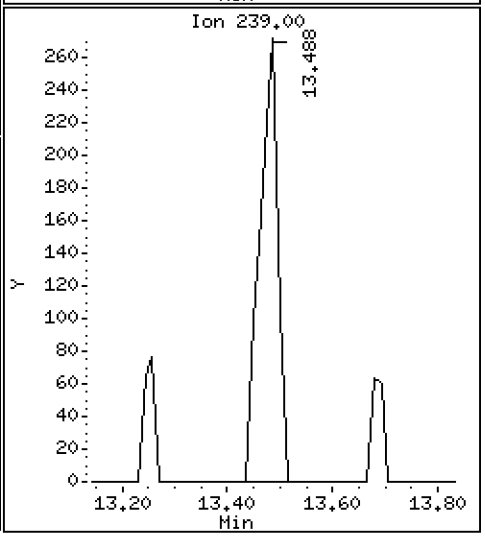


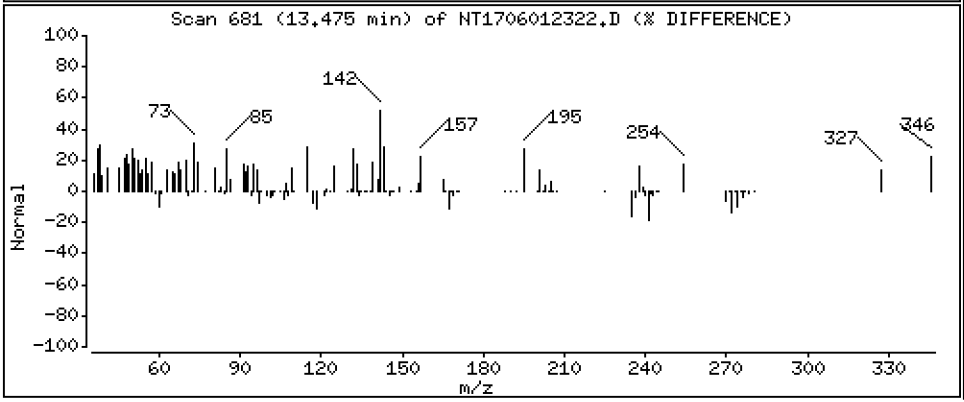












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

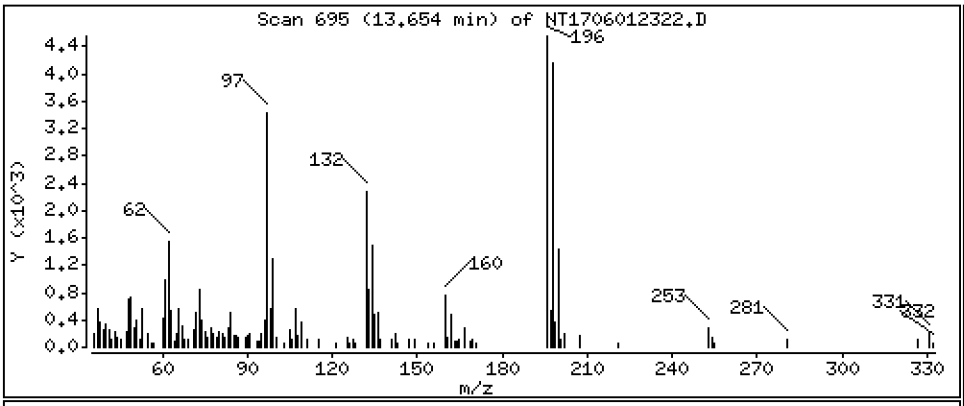
Operator: VTS

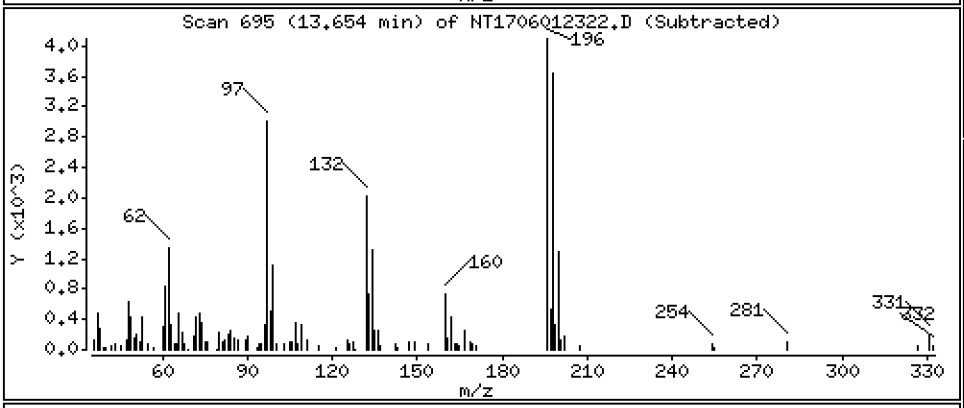
Column phase: ZB-5msi

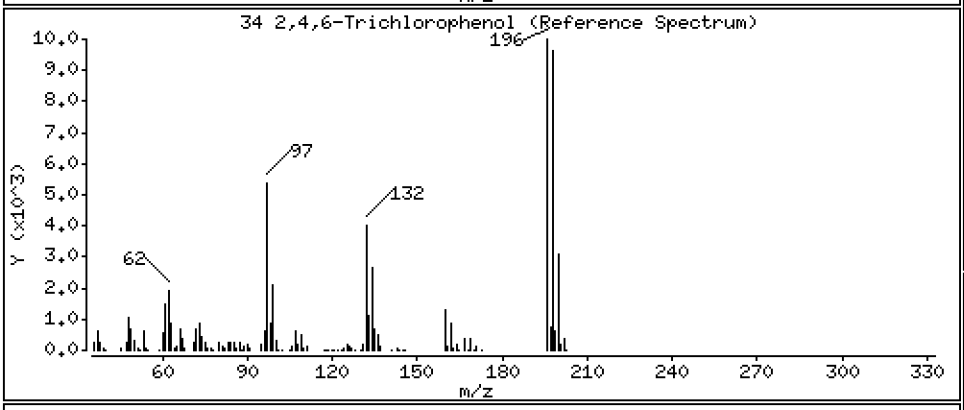
Column diameter: 0.25

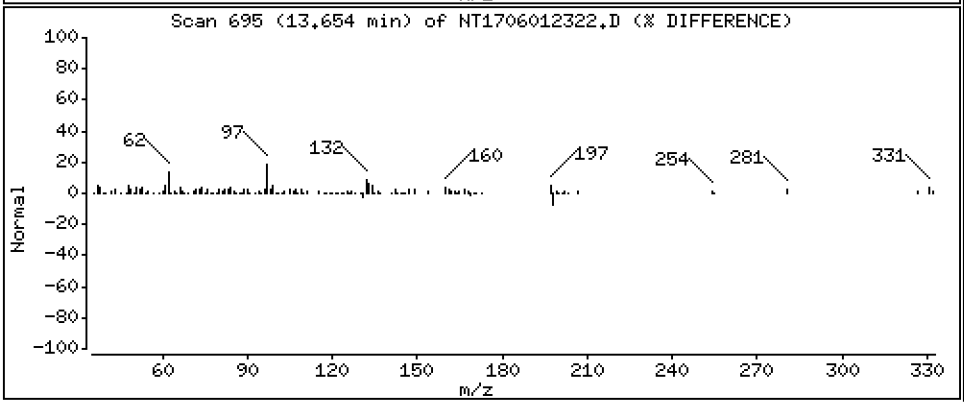
34 2,4,6-Trichlorophenol

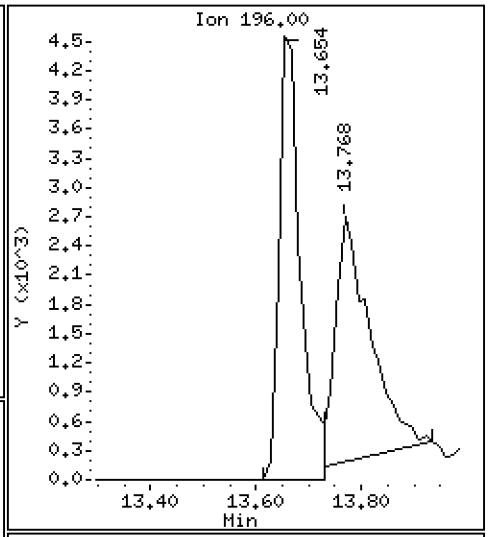
Concentration: 0.2974 ug/mL

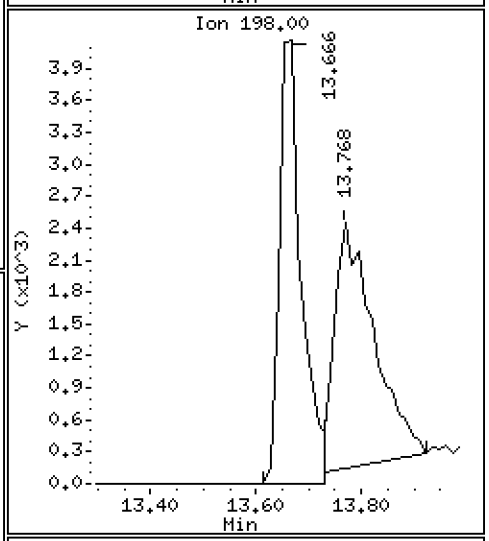


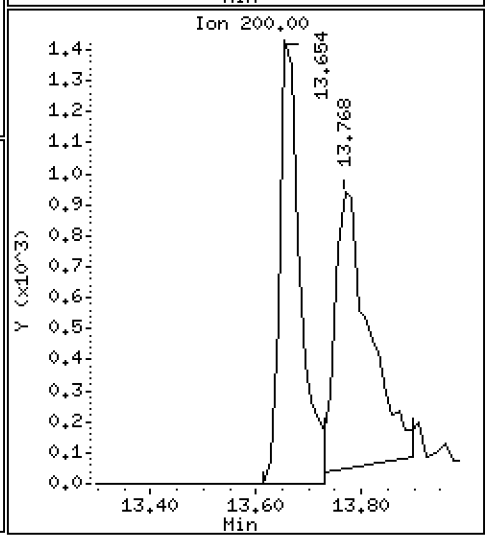












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

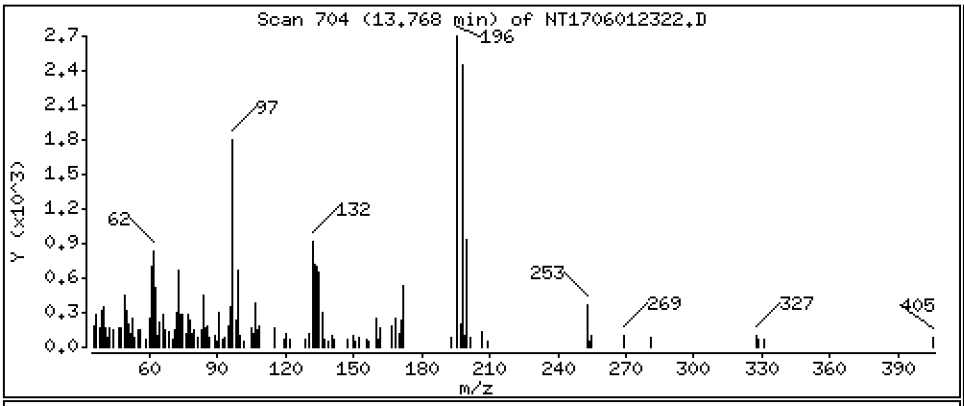
Operator: VTS

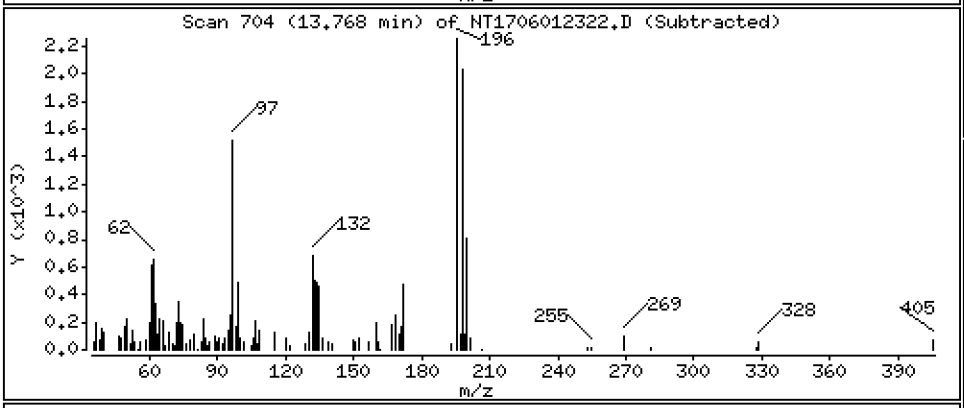
Column phase: ZB-5msi

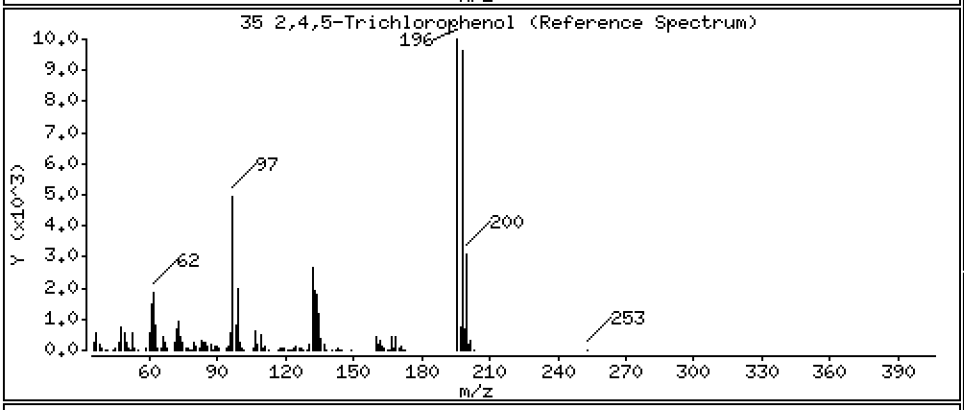
Column diameter: 0.25

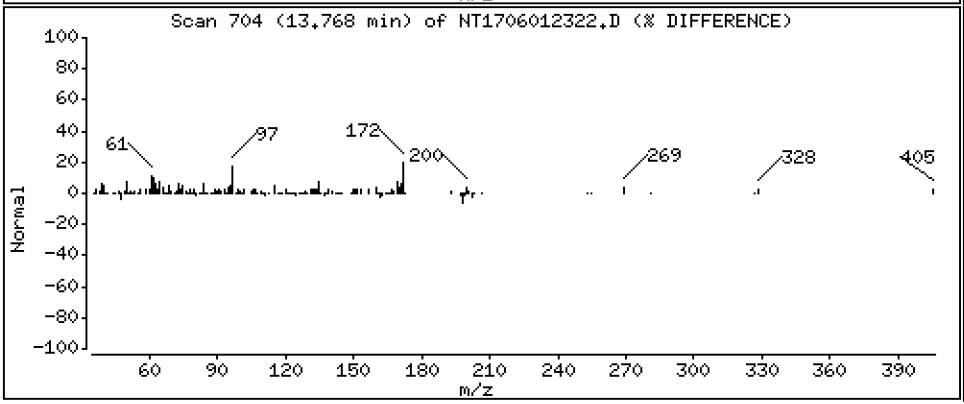
35 2,4,5-Trichlorophenol

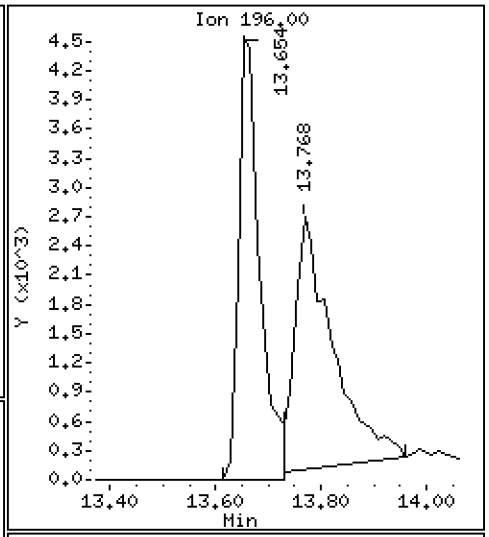
Concentration: 0.2810 ug/mL

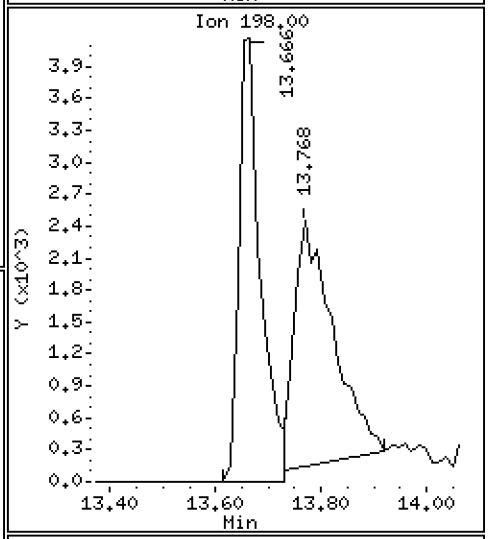


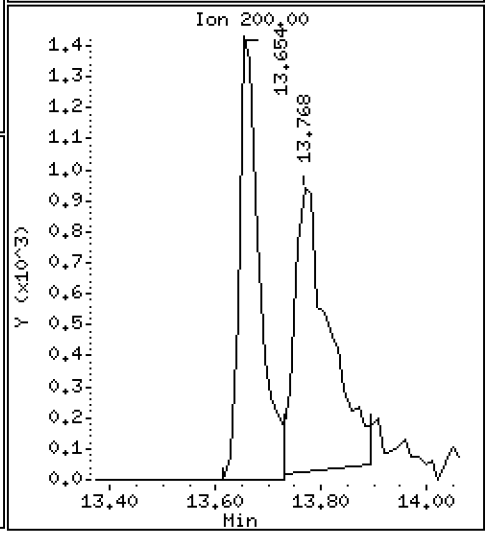












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

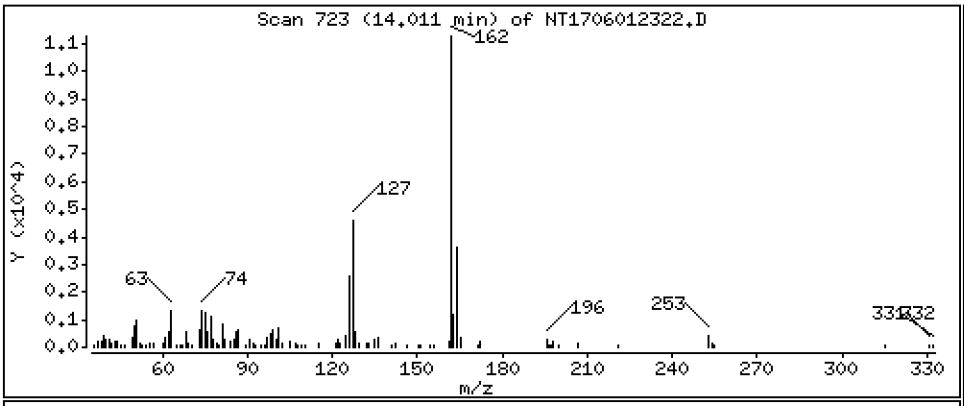
Operator: VTS

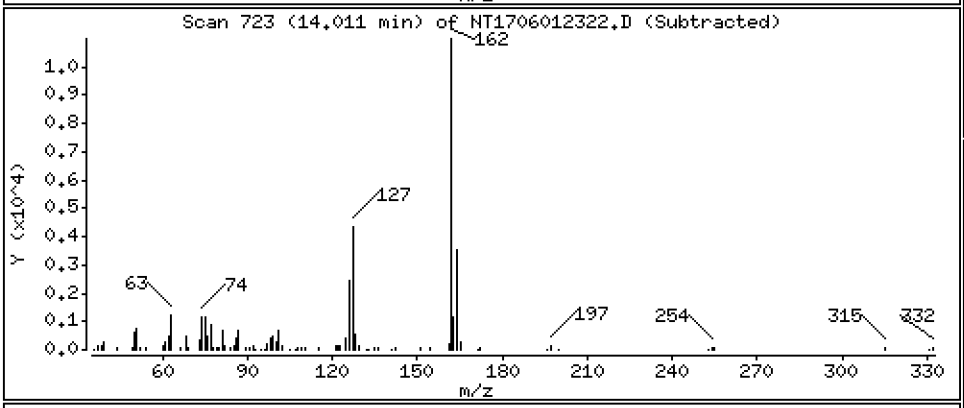
Column phase: ZB-5msi

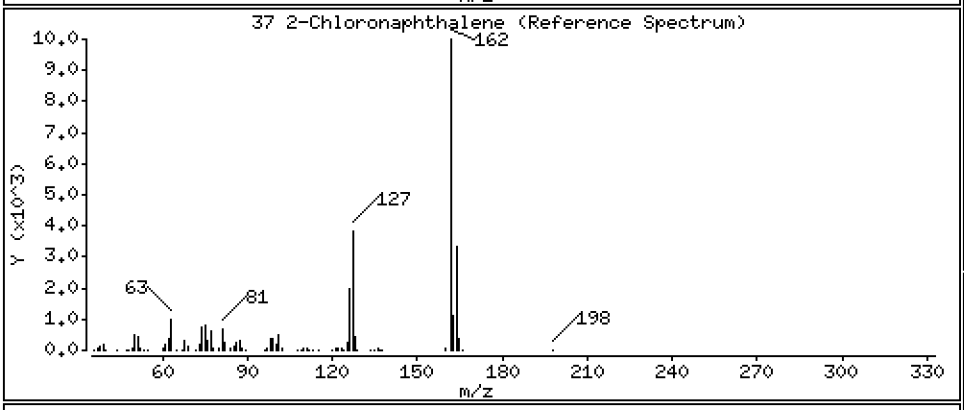
Column diameter: 0.25

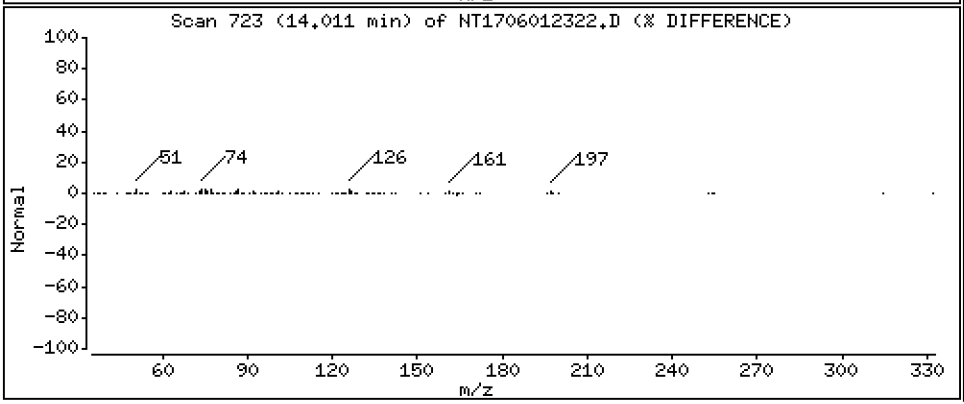
37 2-Chloronaphthalene

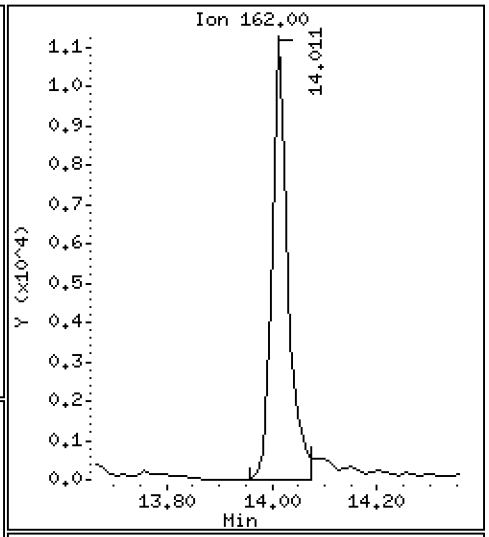
Concentration: 0.1783 ug/mL

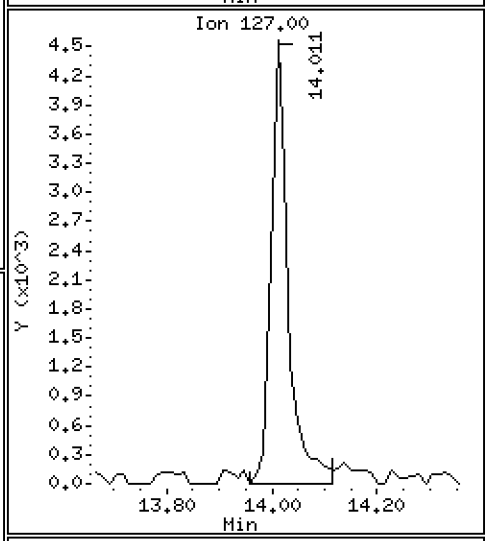


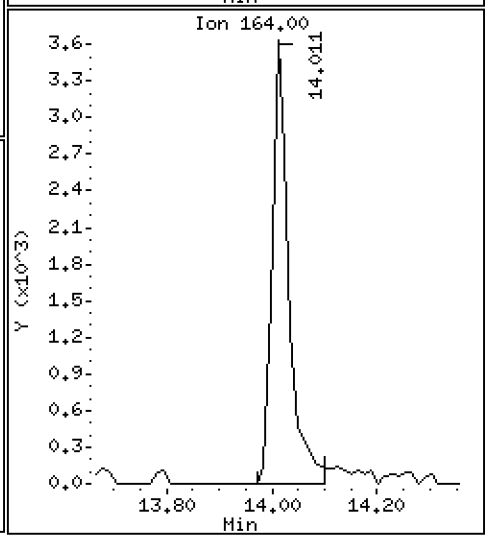












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

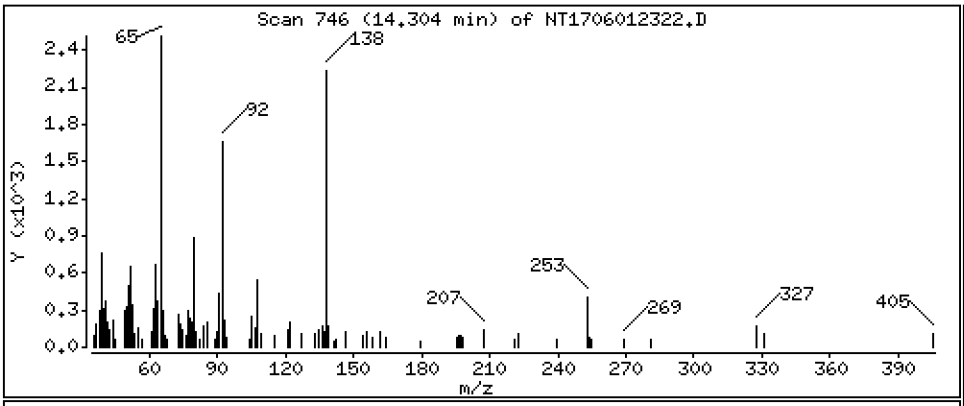
Operator: VTS

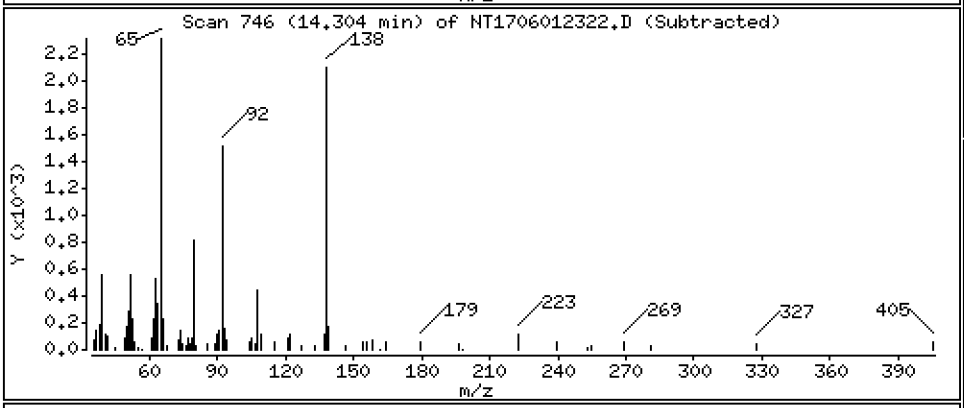
Column phase: ZB-5msi

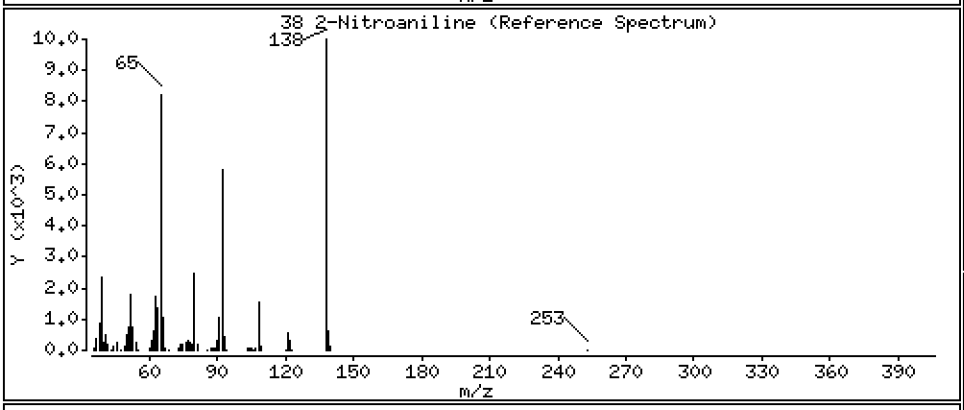
Column diameter: 0.25

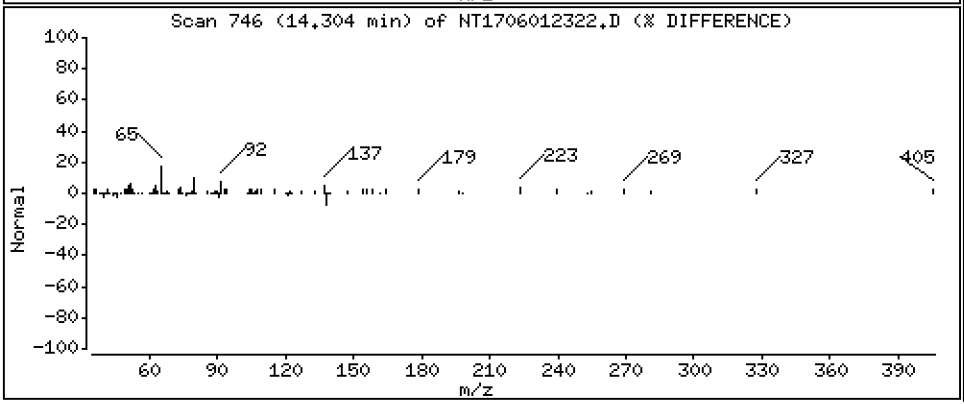
38 2-Nitroaniline

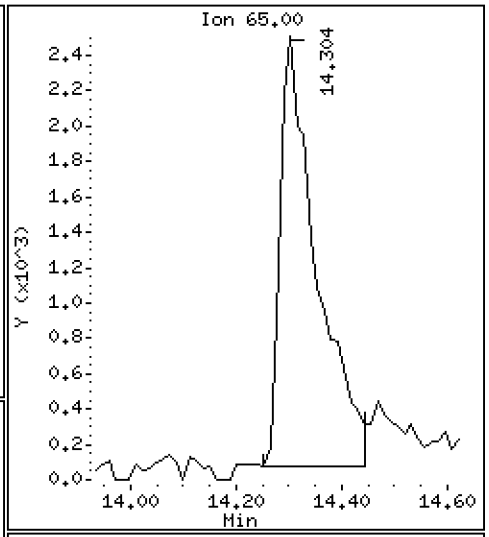
Concentration: 0.2588 ug/mL

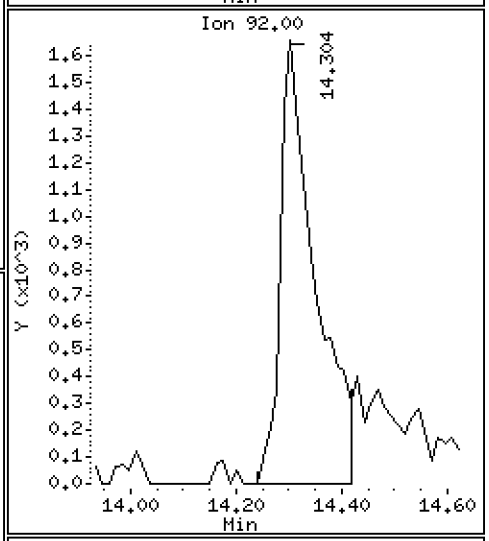


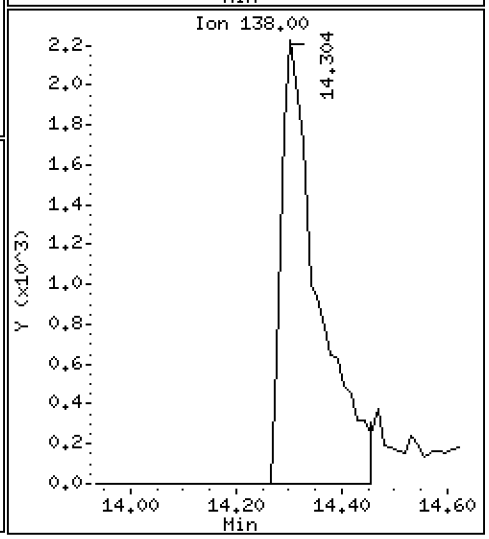












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

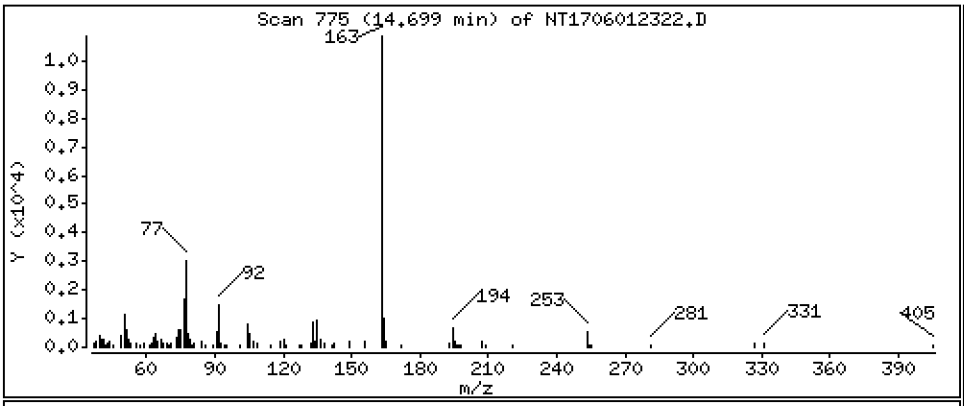
Operator: VTS

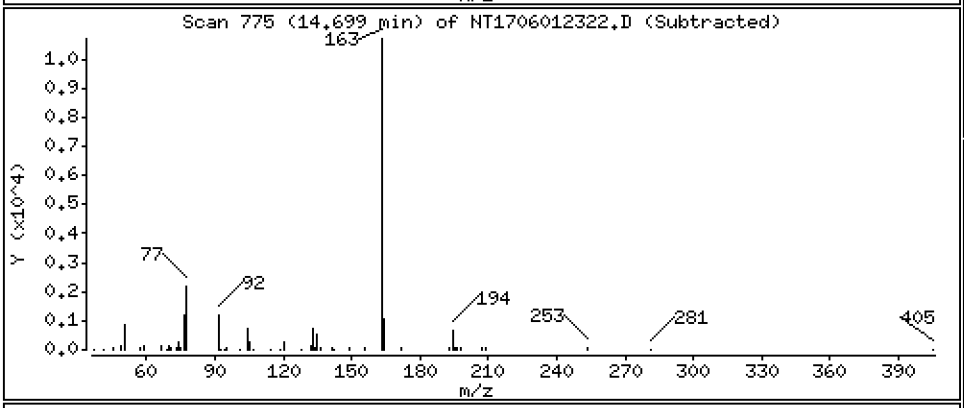
Column phase: ZB-5msi

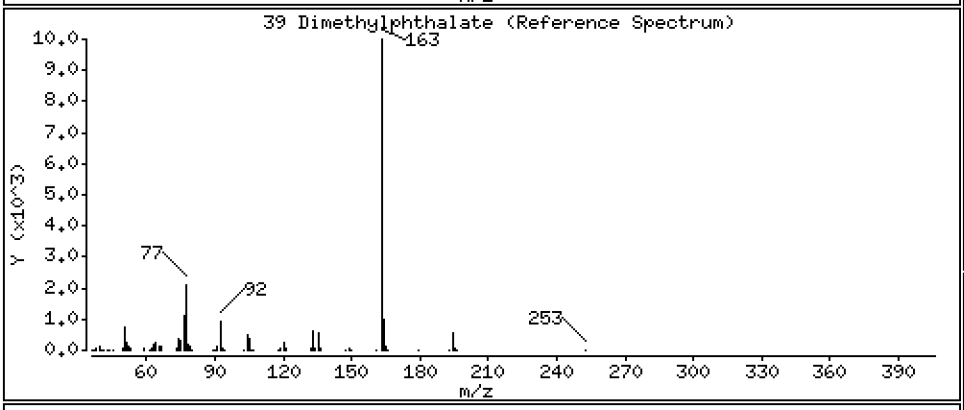
Column diameter: 0.25

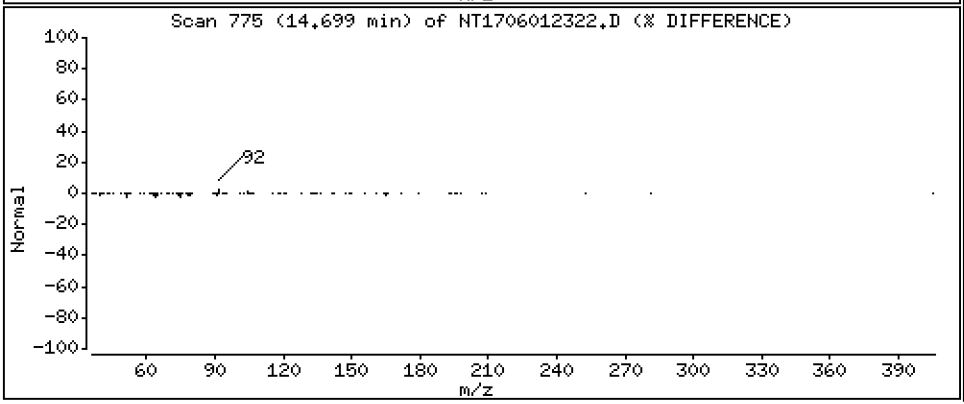
39 Dimethylphthalate

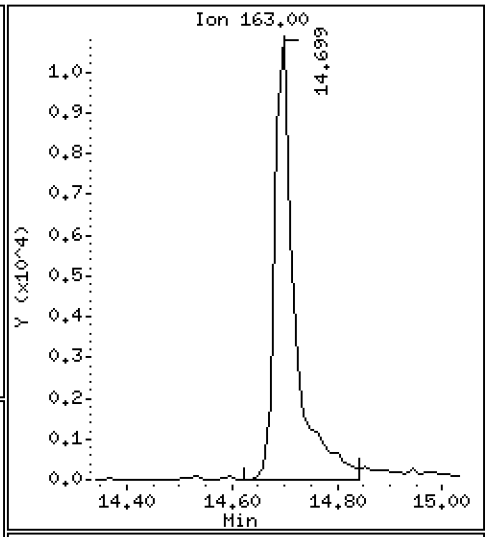
Concentration: 0.2006 ug/mL

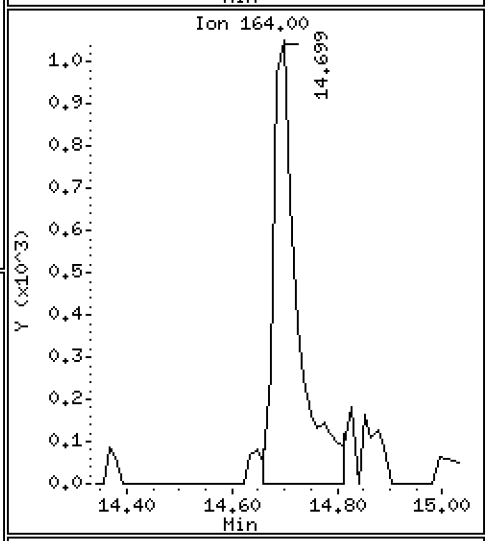


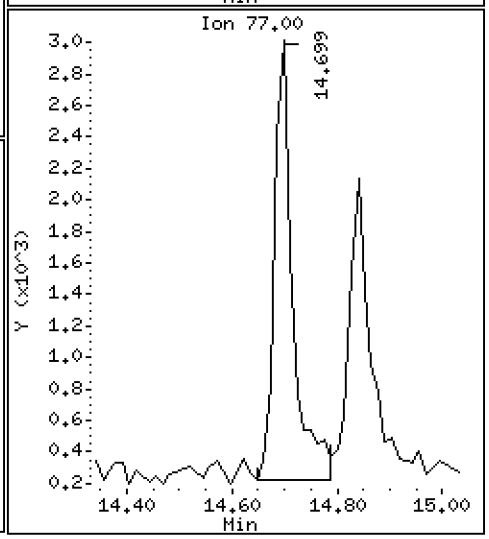












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

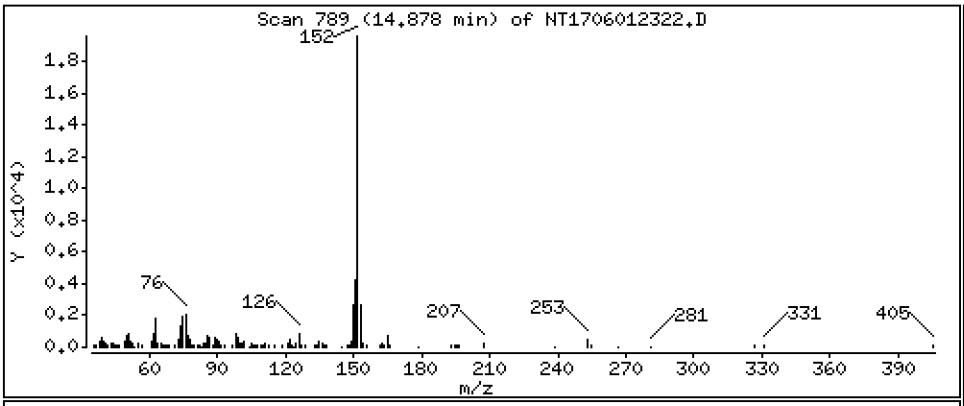
Operator: VTS

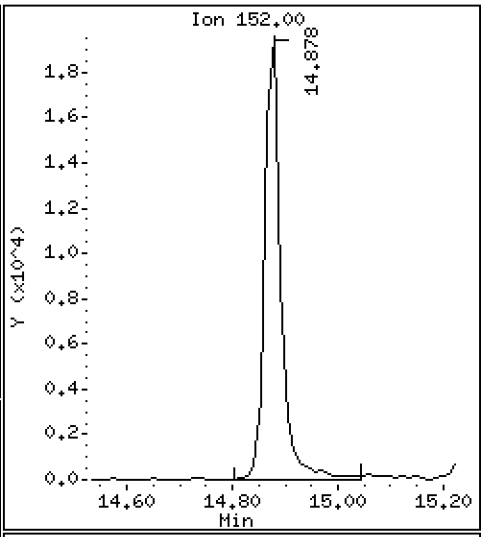
Column phase: ZB-5msi

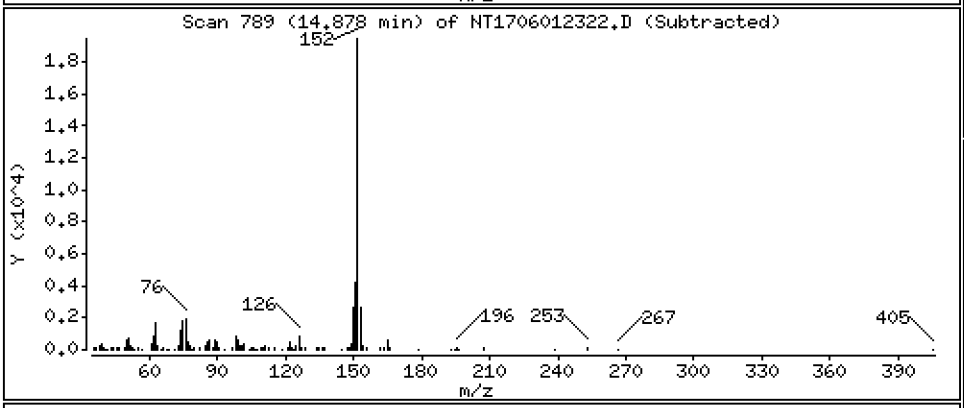
Column diameter: 0.25

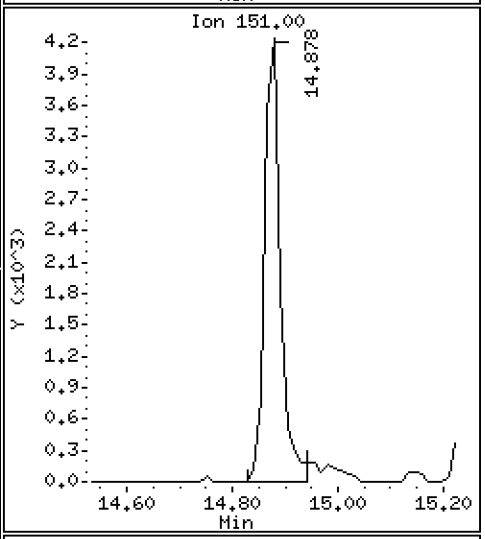
40 Acenaphthylene

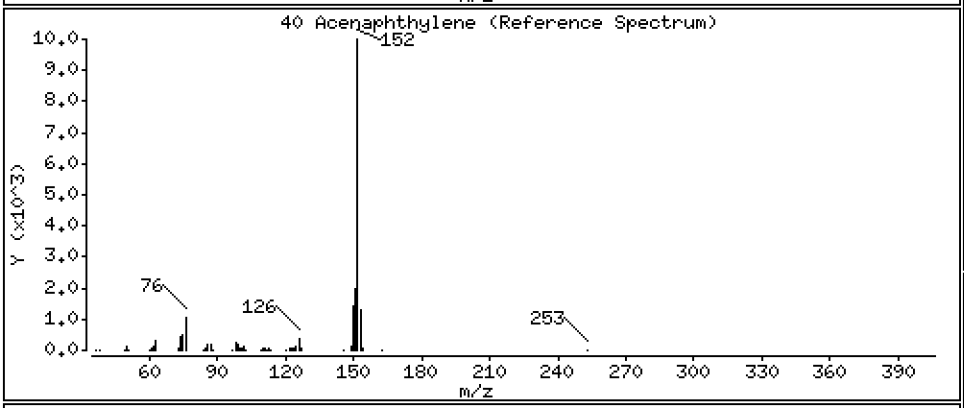
Concentration: 0.2217 ug/mL

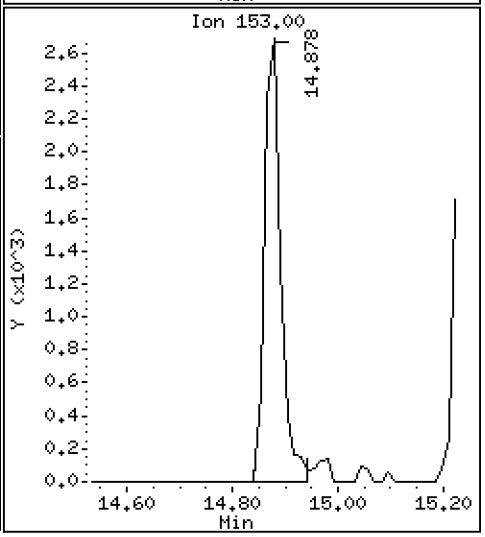


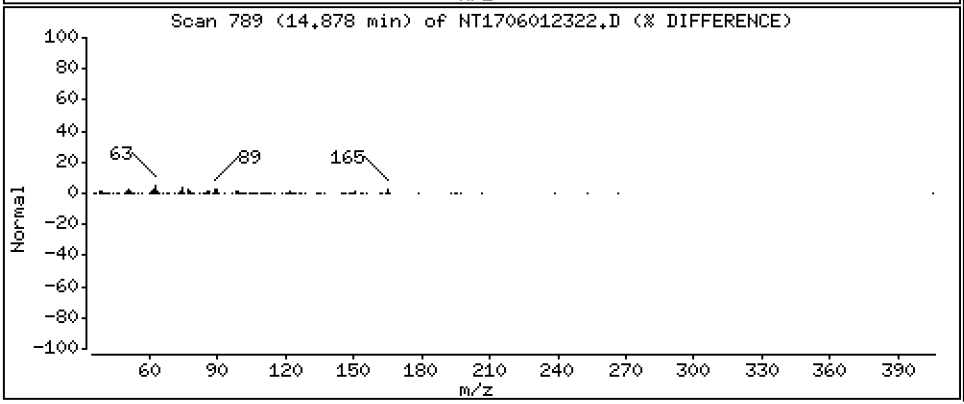












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

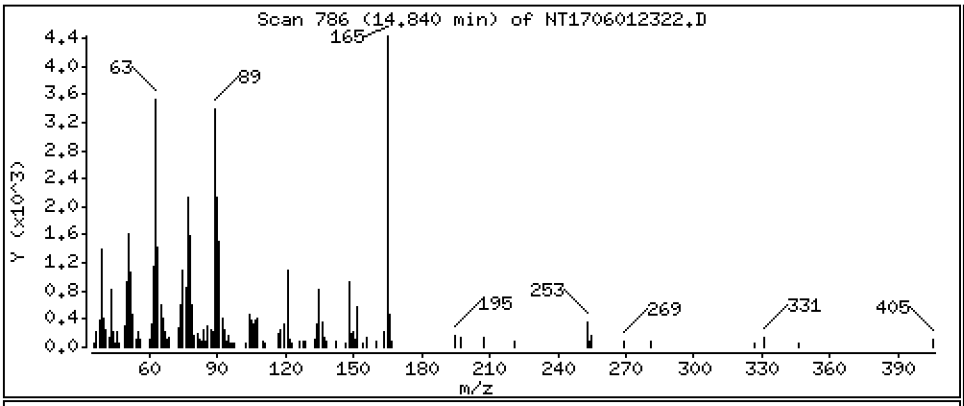
Operator: VTS

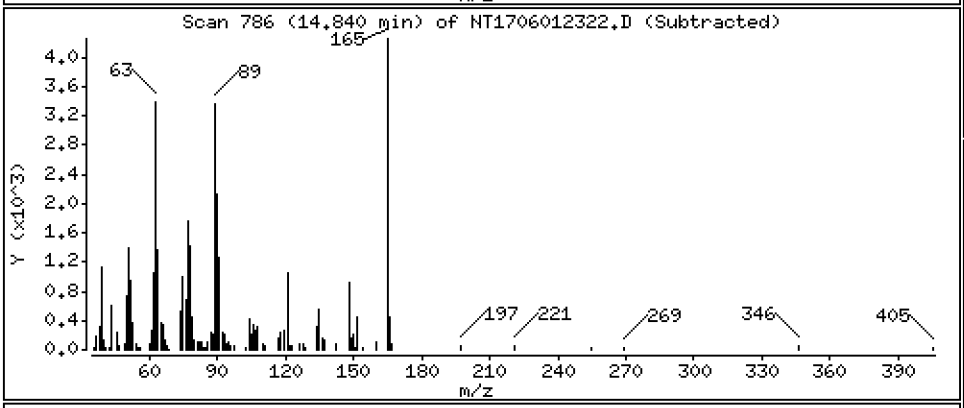
Column phase: ZB-5msi

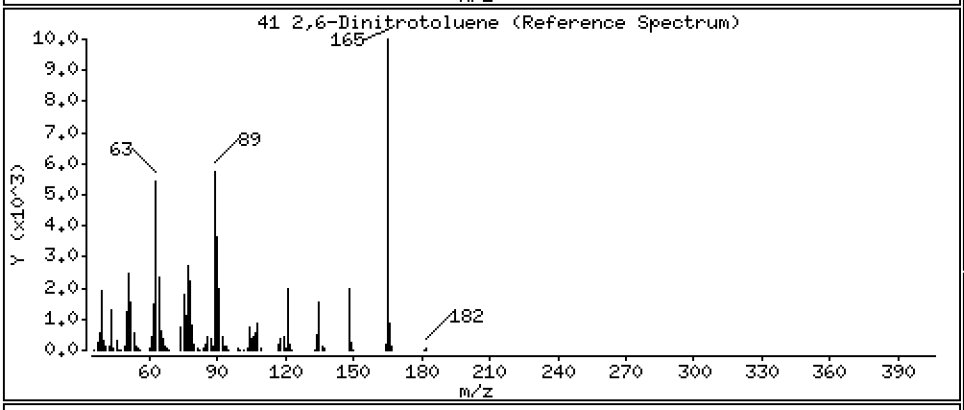
Column diameter: 0.25

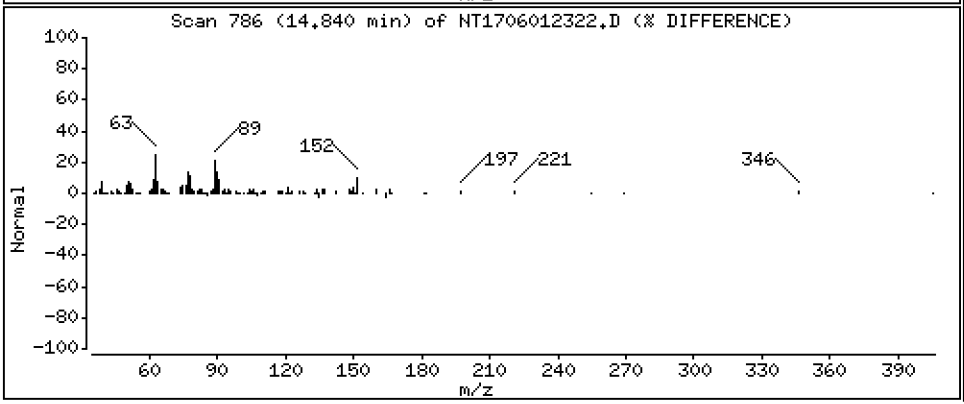
41 2,6-Dinitrotoluene

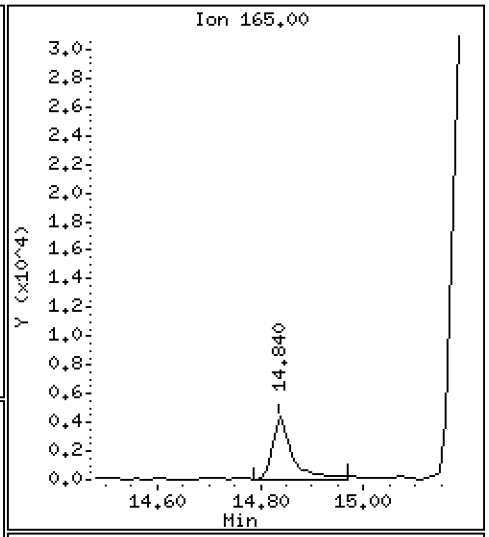
Concentration: 0.3560 ug/mL

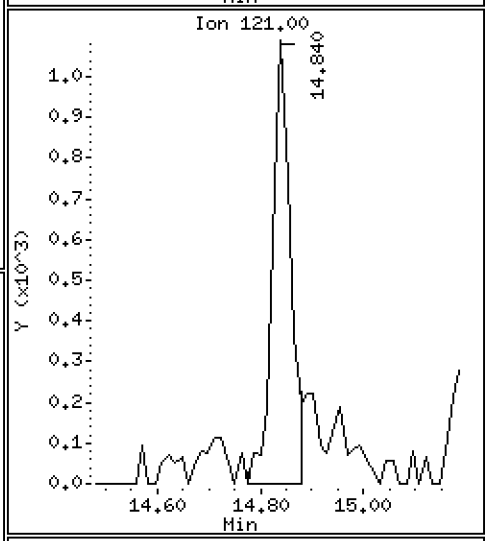


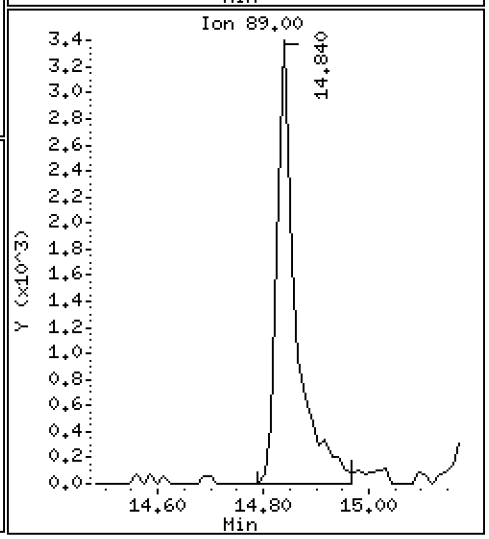












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

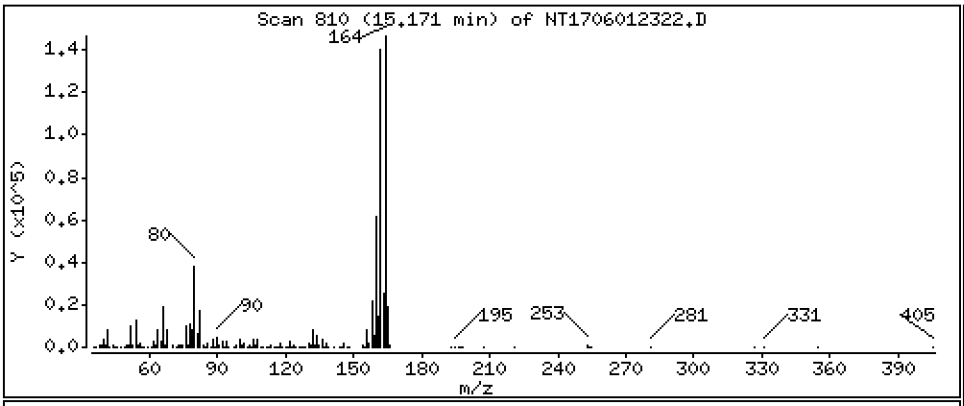
Operator: VTS

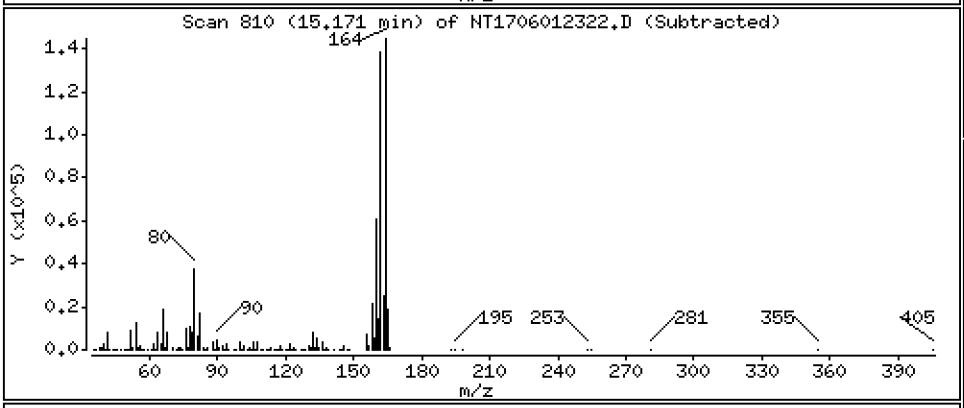
Column phase: ZB-5msi

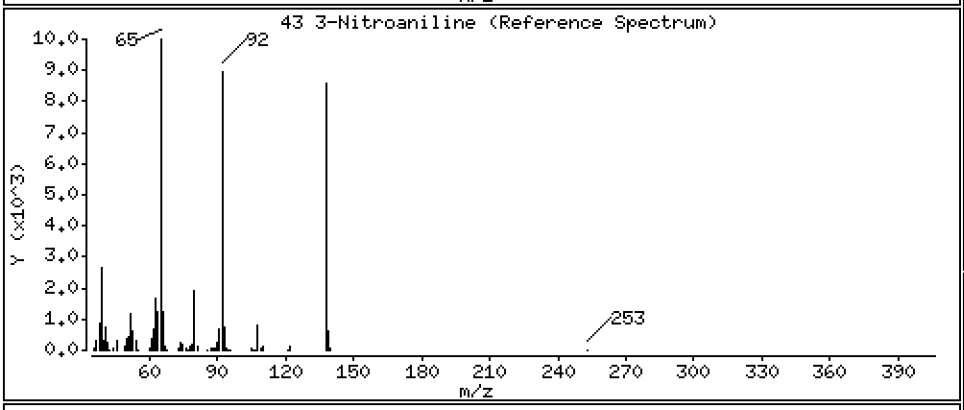
Column diameter: 0.25

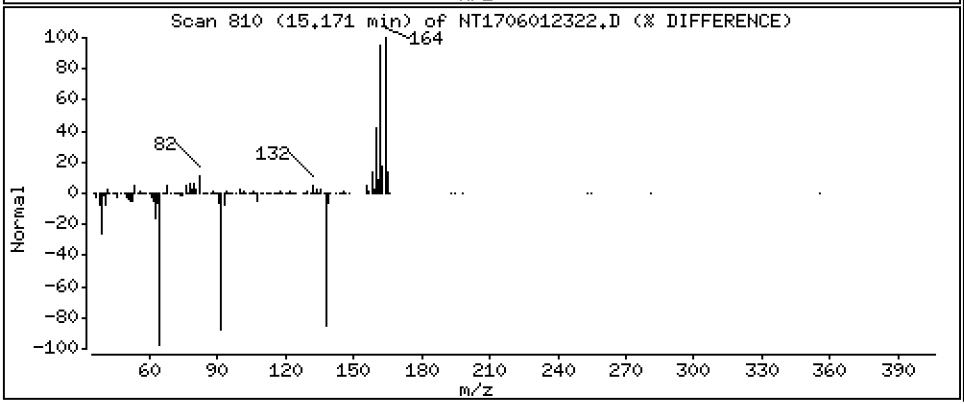
43 3-Nitroaniline

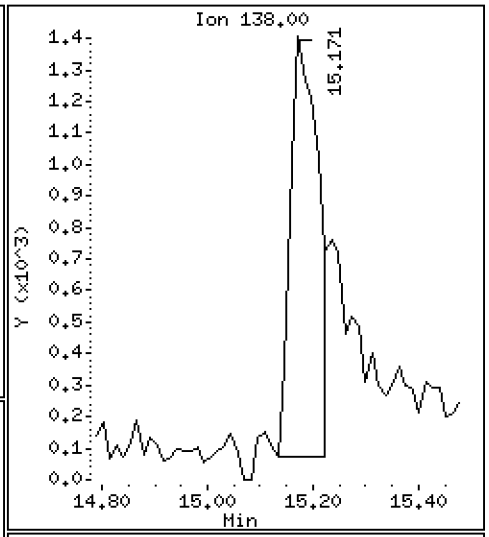
Concentration: 0.1591 ug/mL

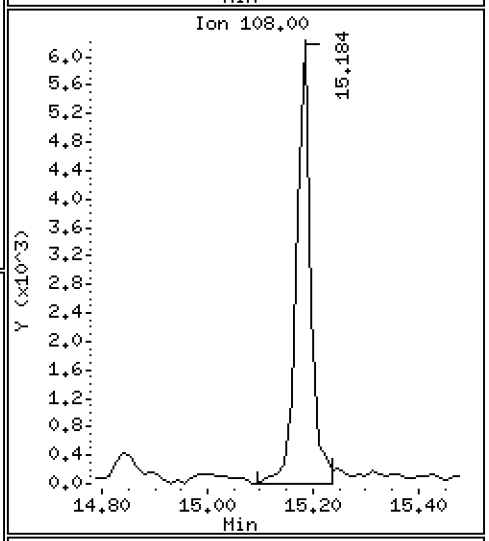


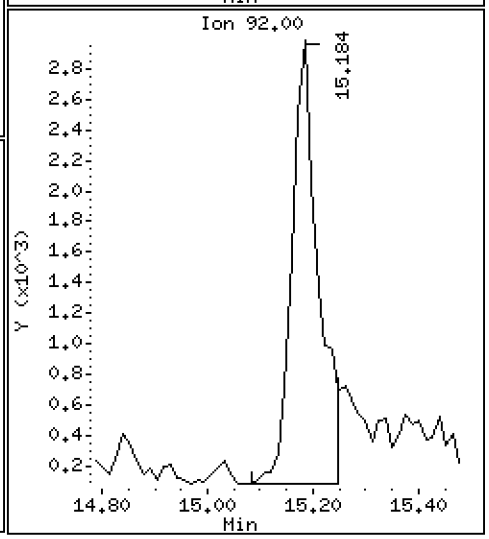












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

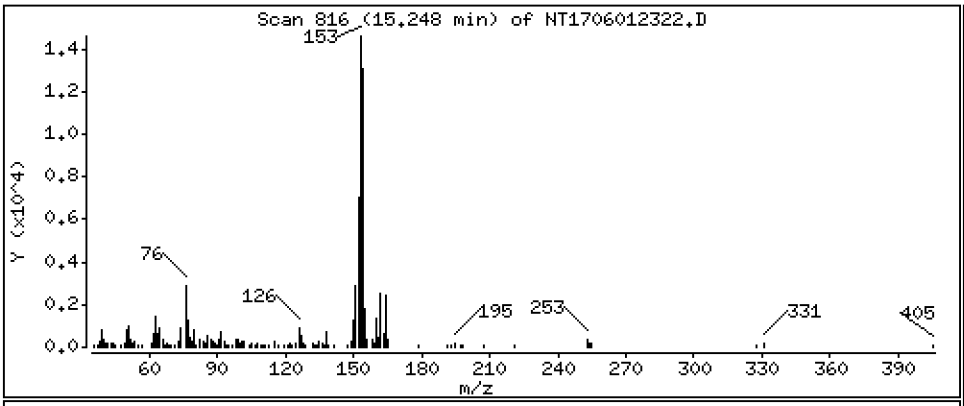
Operator: VTS

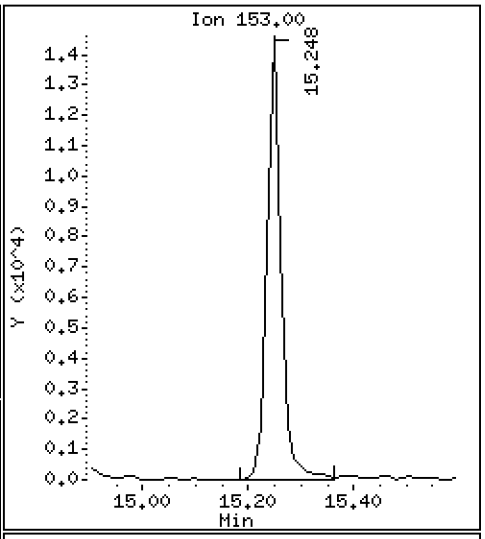
Column phase: ZB-5msi

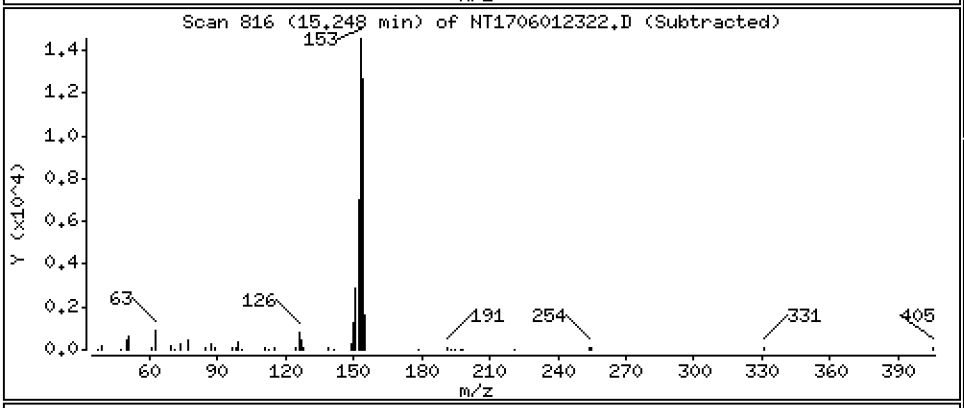
Column diameter: 0.25

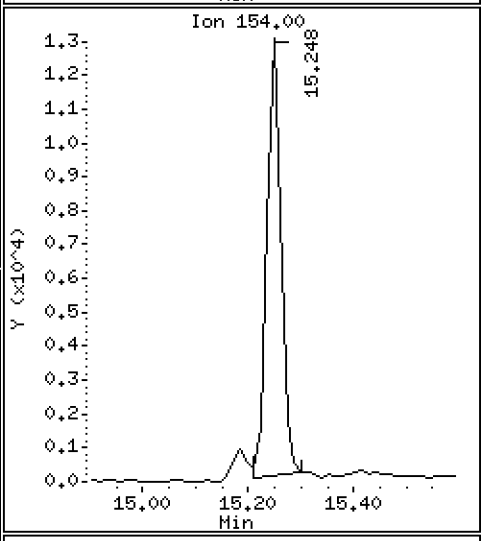
44 Acenaphthene

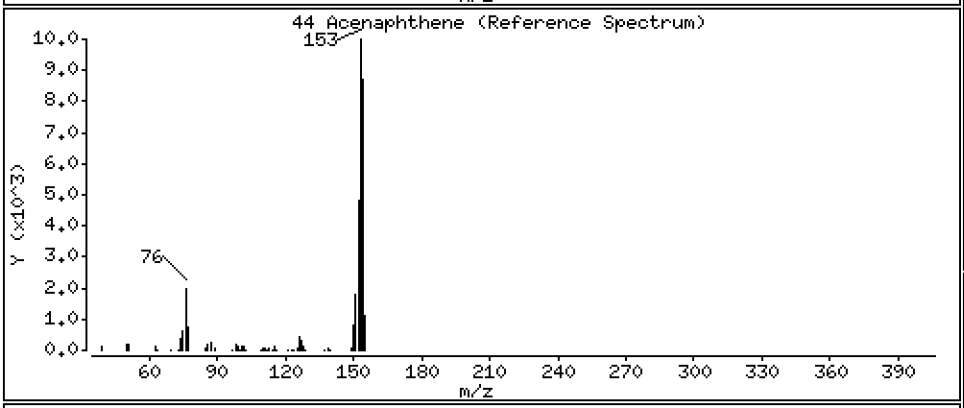
Concentration: 0.2049 ug/mL

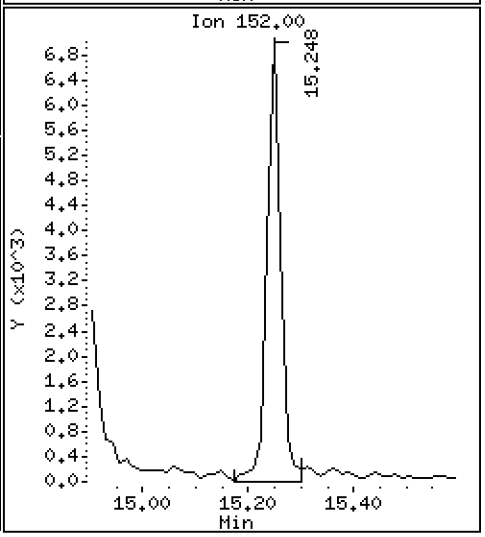


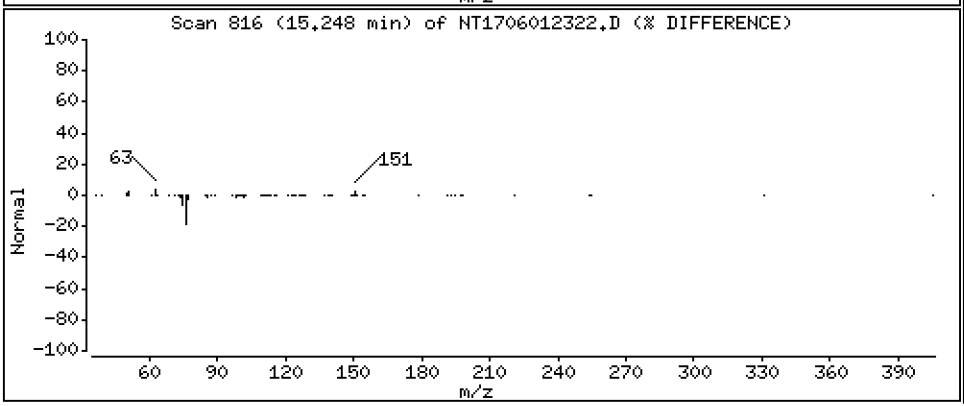












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

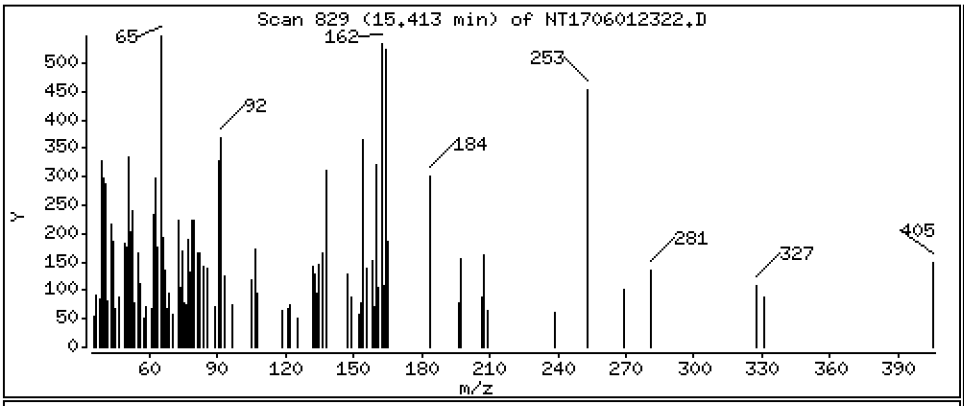
Operator: VTS

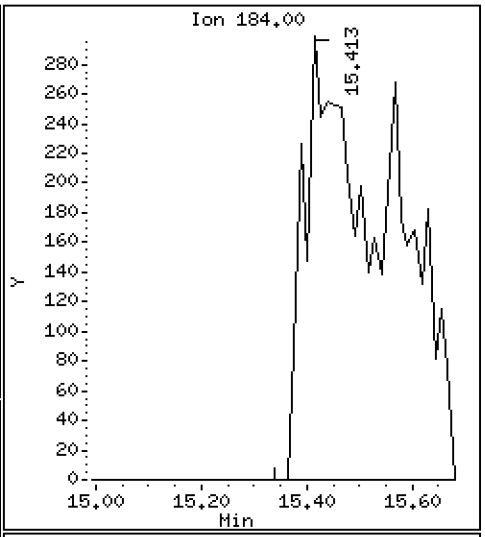
Column phase: ZB-5msi

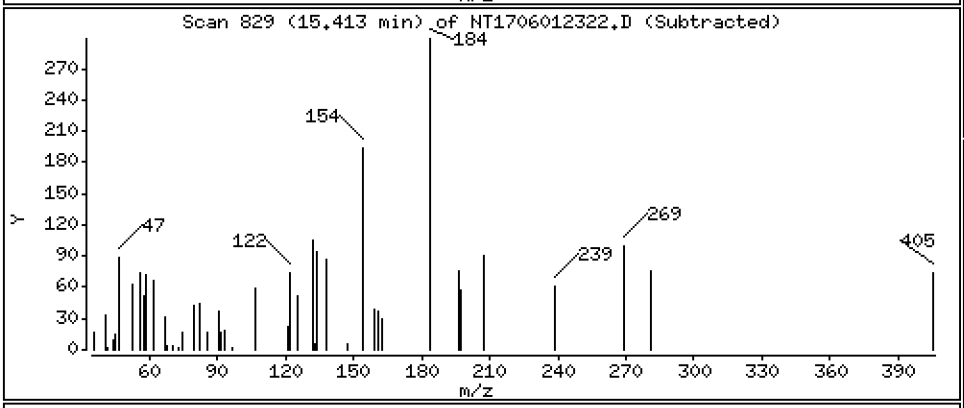
Column diameter: 0.25

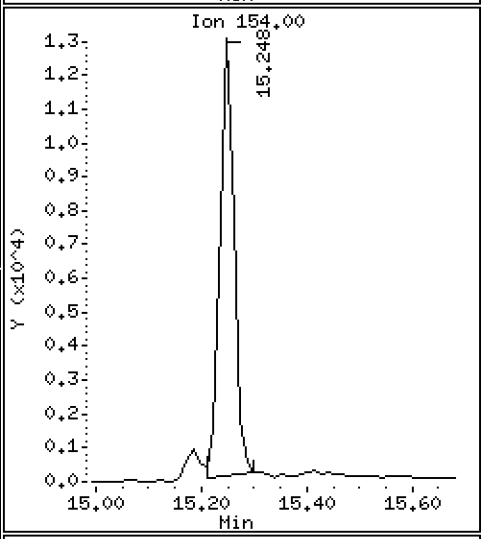
45 2,4-Dinitrophenol

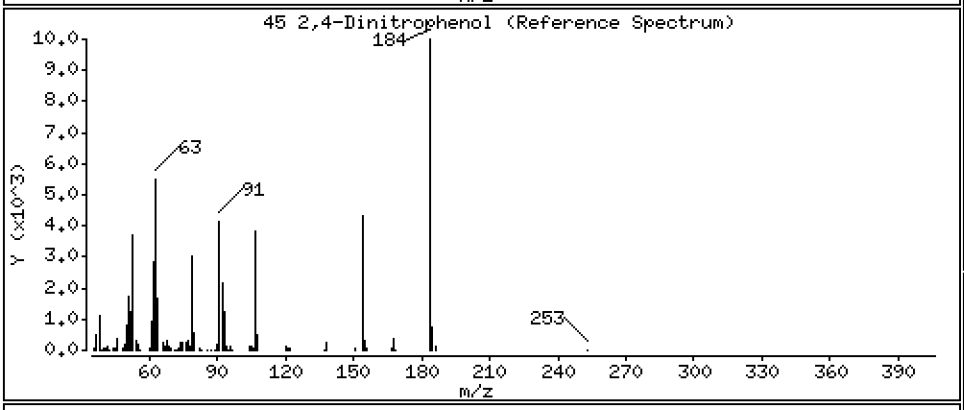
Concentration: 0.1626 ug/mL

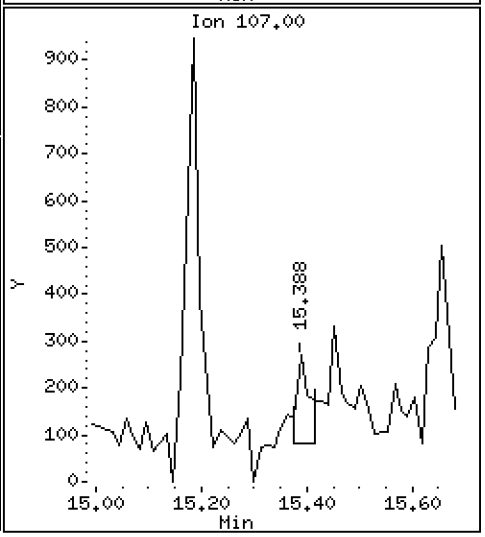


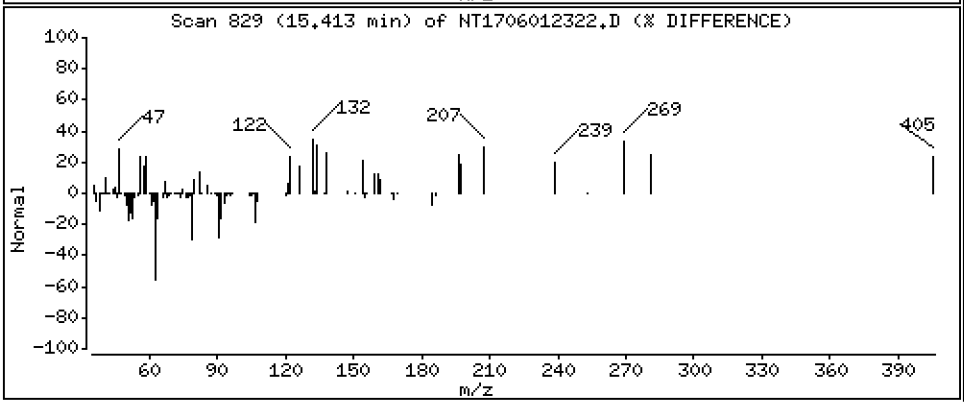












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

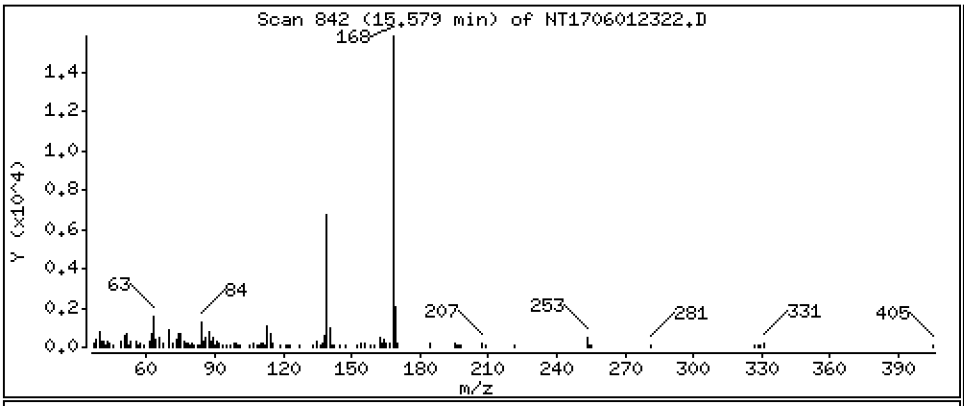
Operator: VTS

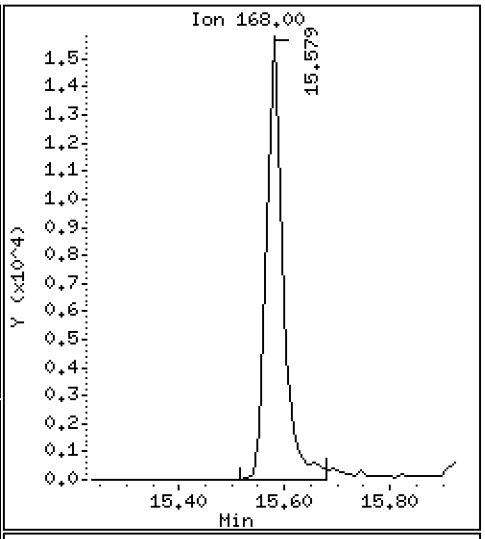
Column phase: ZB-5msi

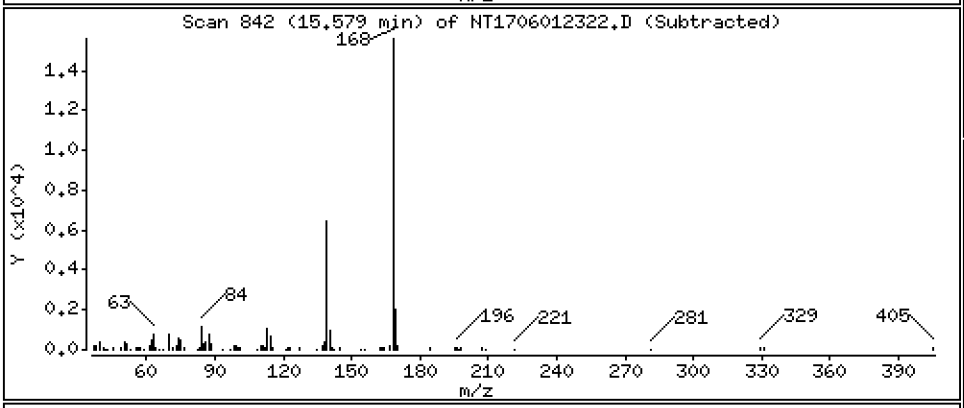
Column diameter: 0.25

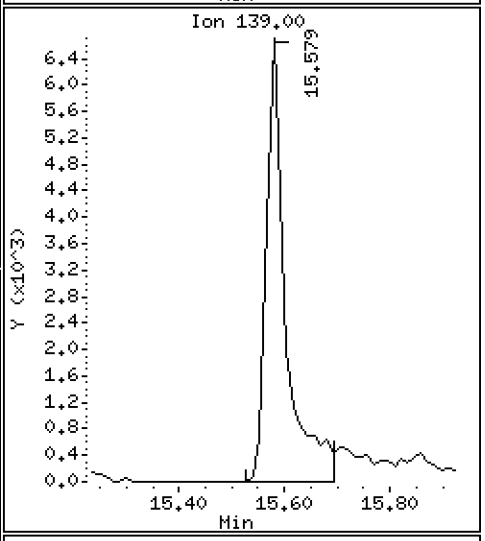
46 Dibenzofuran

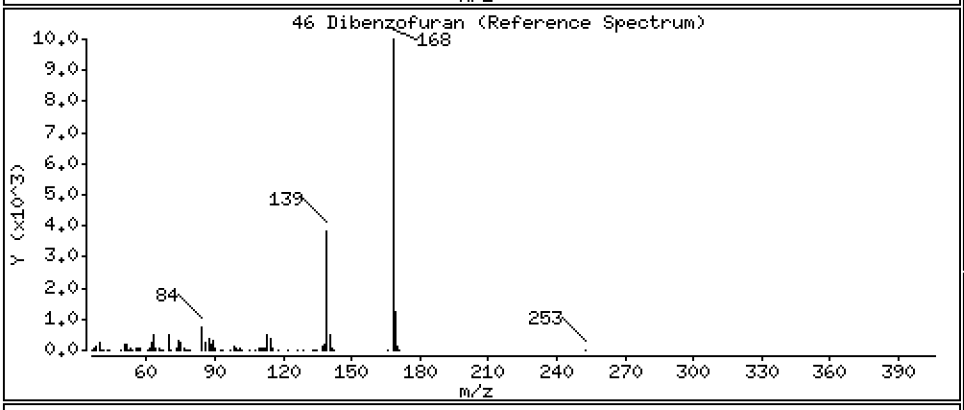
Concentration: 0.1904 ug/mL

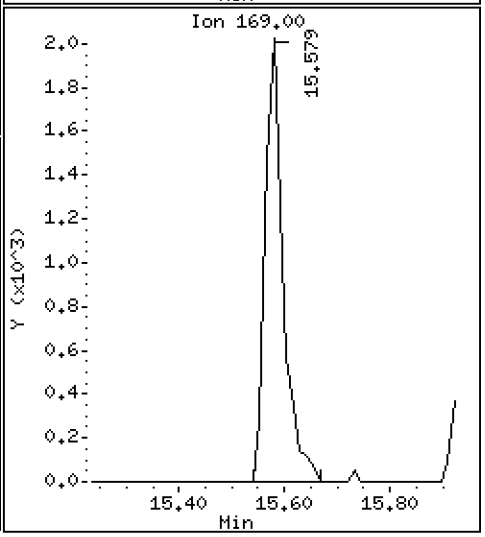


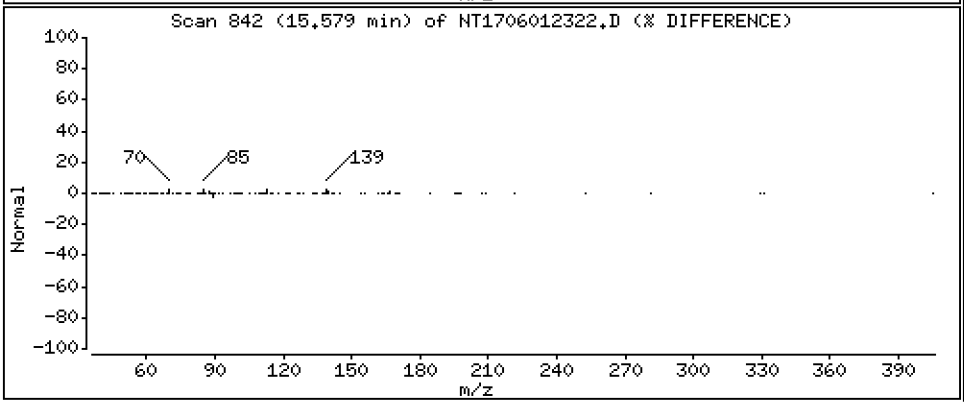












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

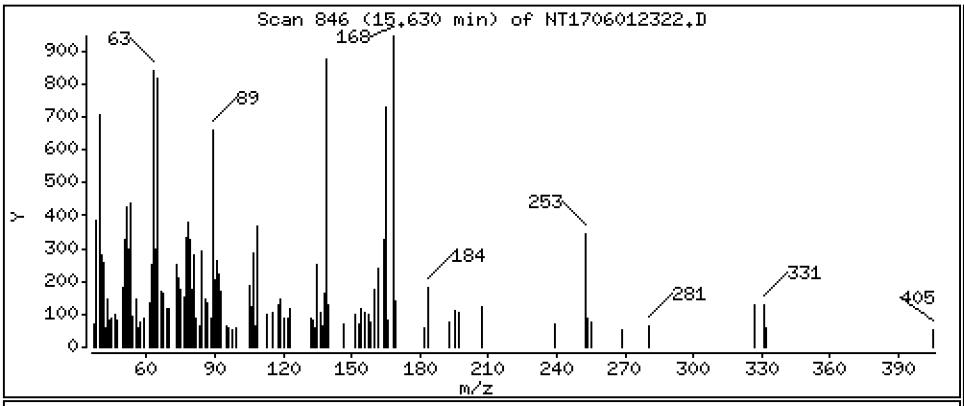
Operator: VTS

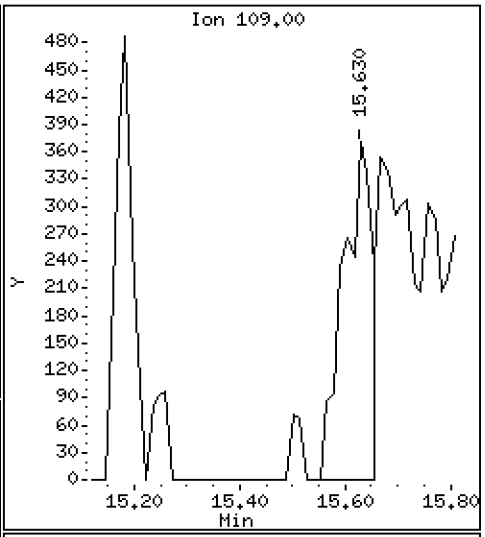
Column phase: ZB-5msi

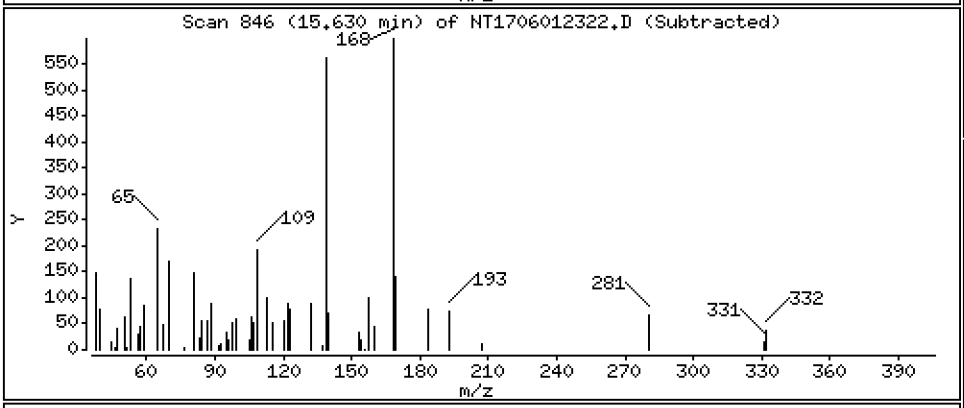
Column diameter: 0.25

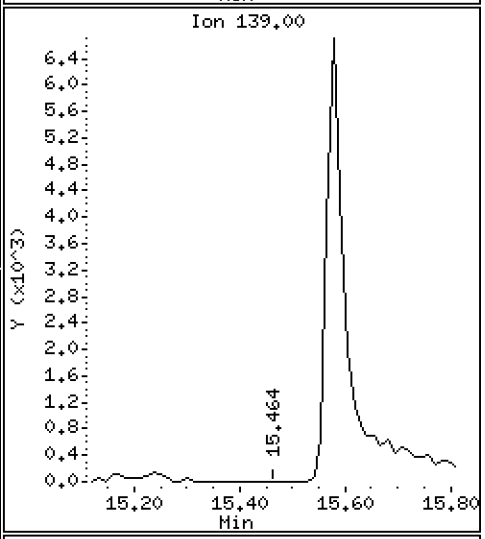
47 4-Nitrophenol

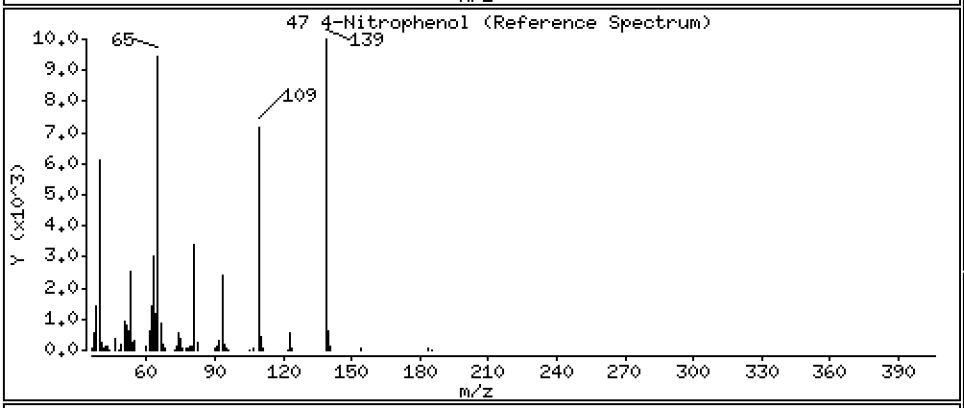
Concentration: 0.06900 ug/mL

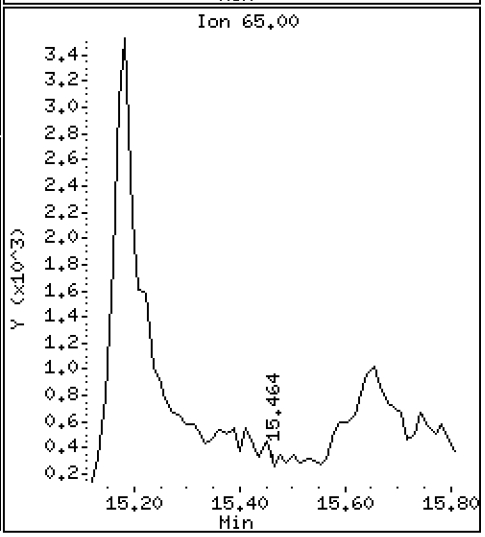


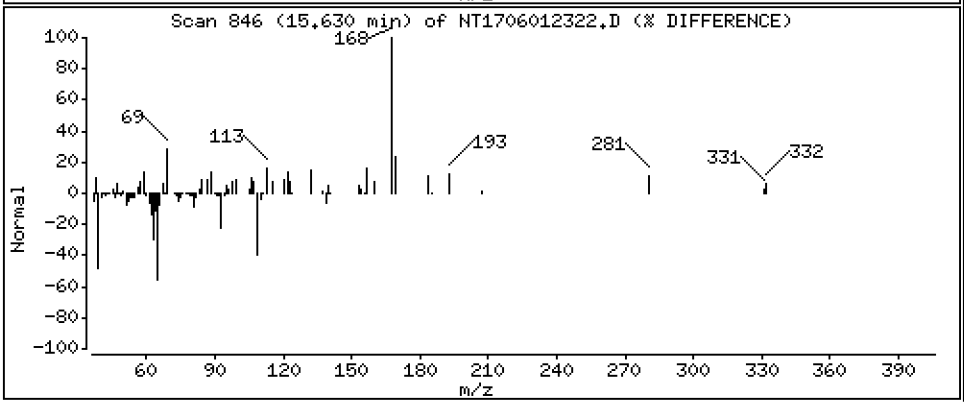












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

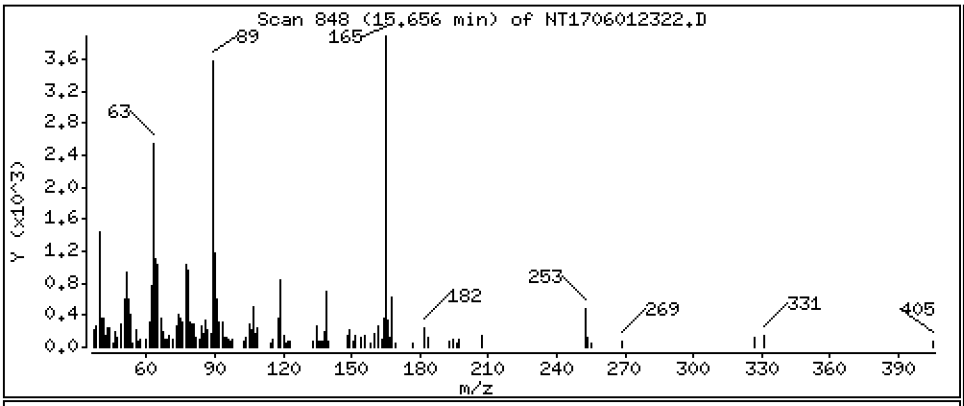
Operator: VTS

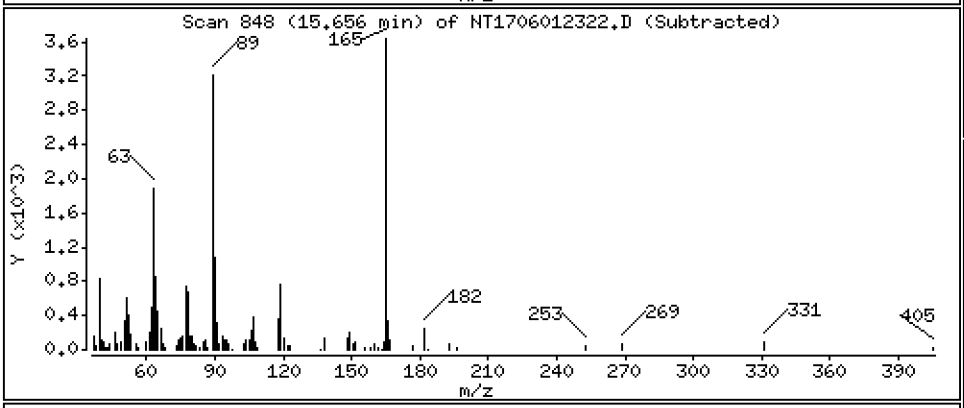
Column phase: ZB-5msi

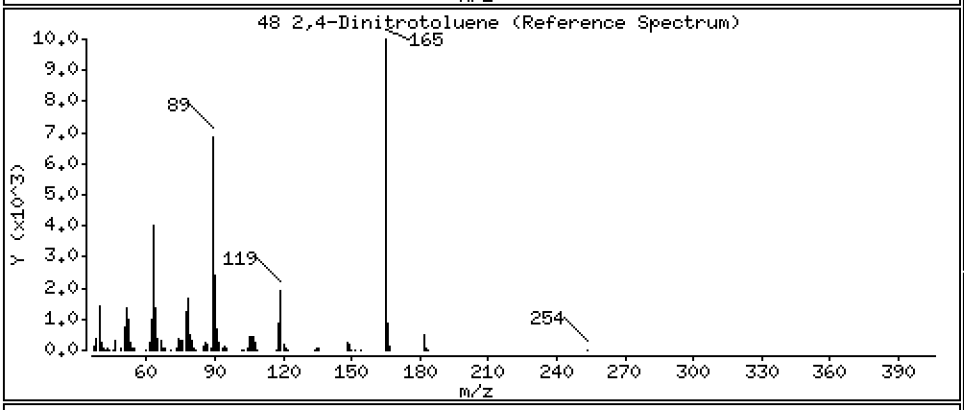
Column diameter: 0.25

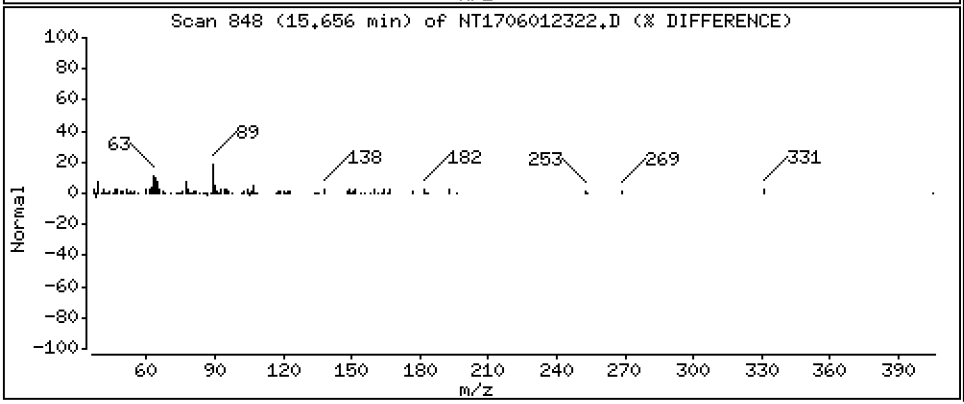
48 2,4-Dinitrotoluene

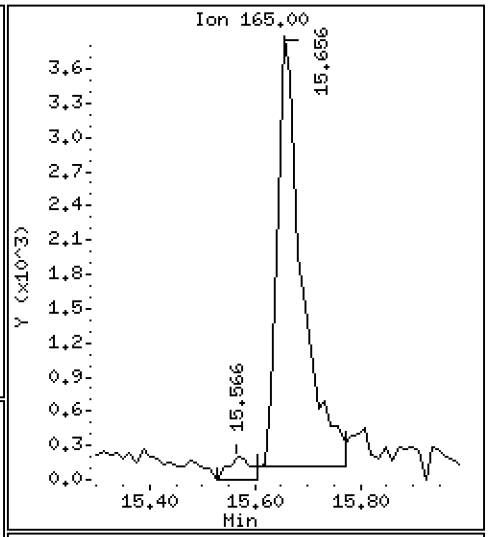
Concentration: 0.2838 ug/mL

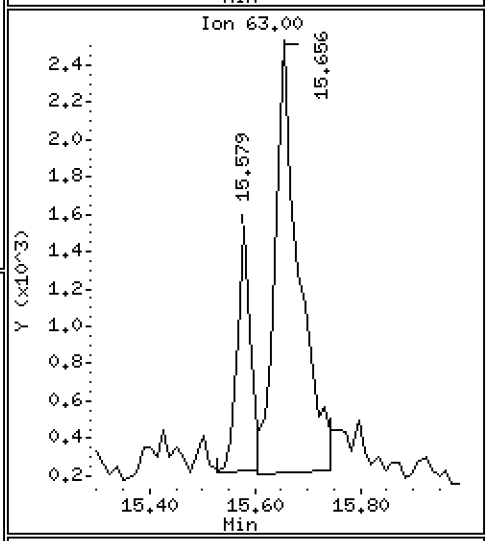


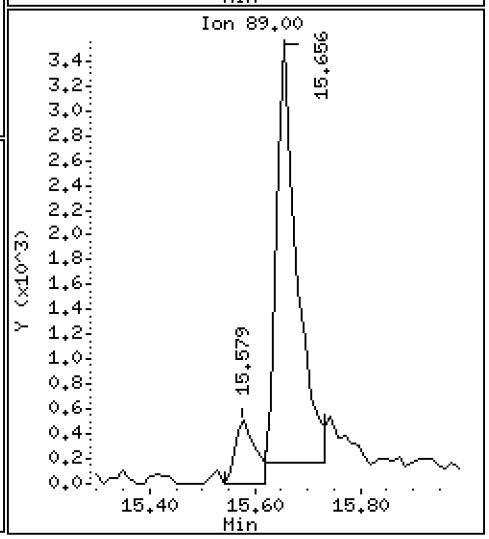












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

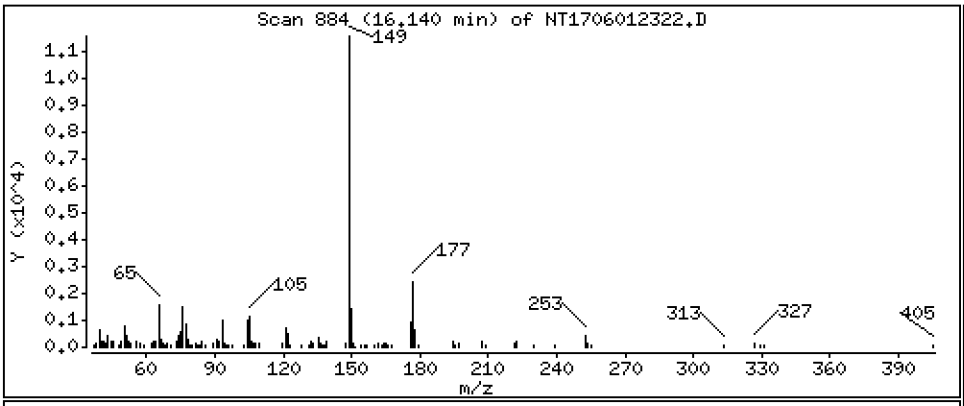
Operator: VTS

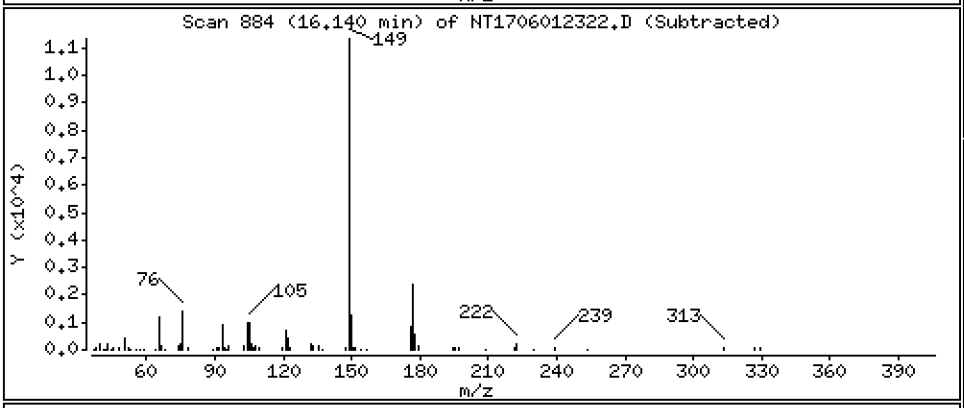
Column phase: ZB-5msi

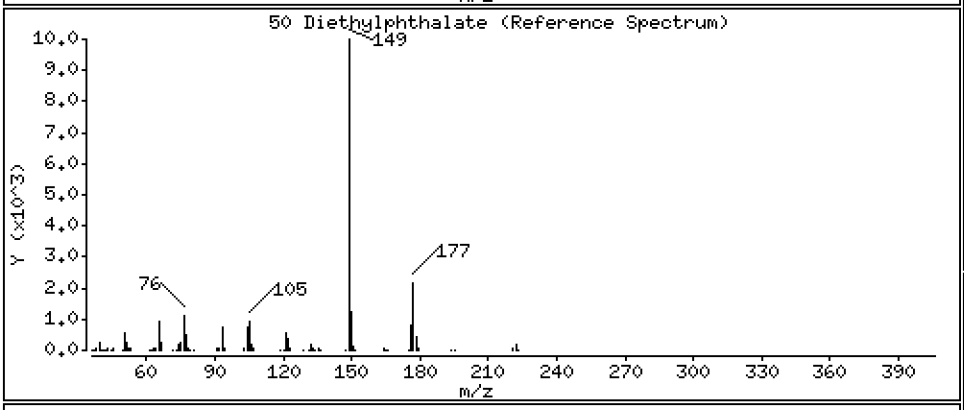
Column diameter: 0.25

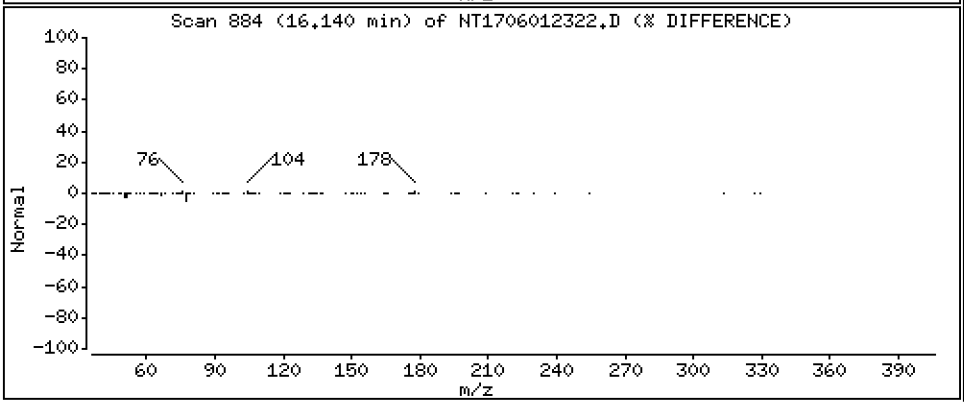
50 Diethylphthalate

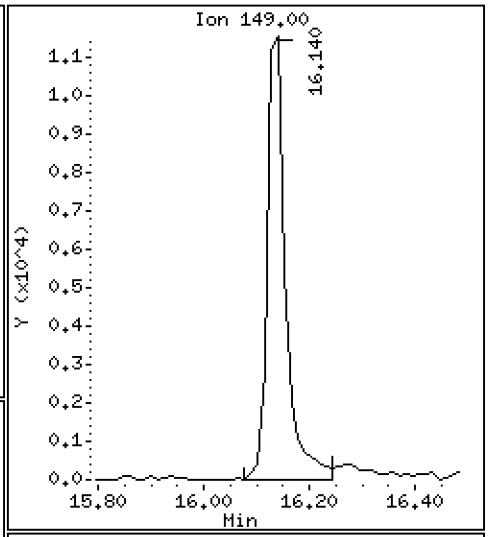
Concentration: 0.2315 ug/mL

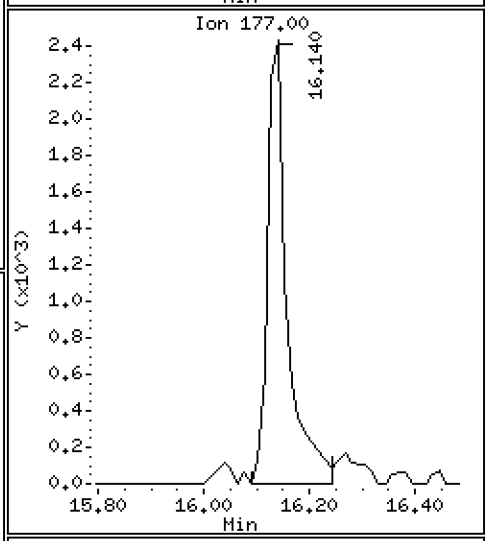


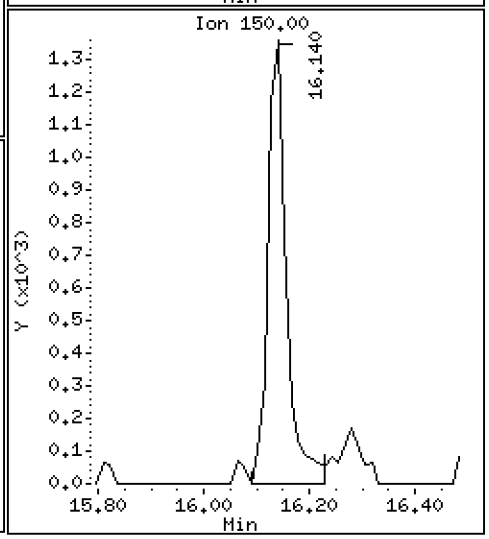












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

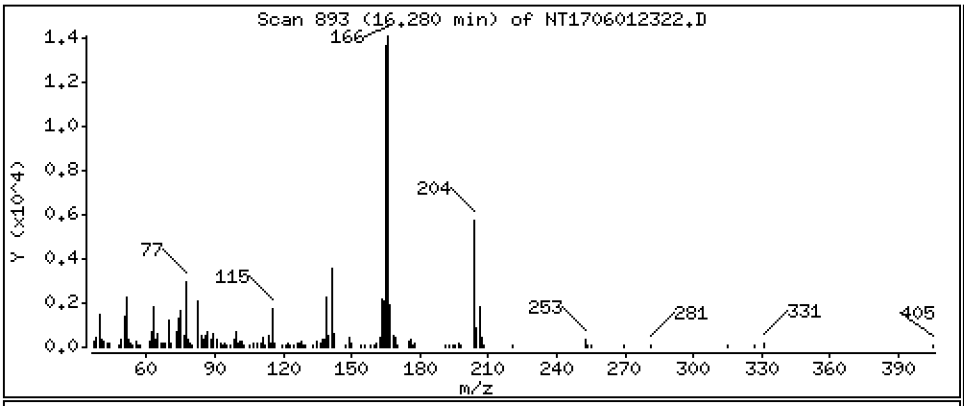
Operator: VTS

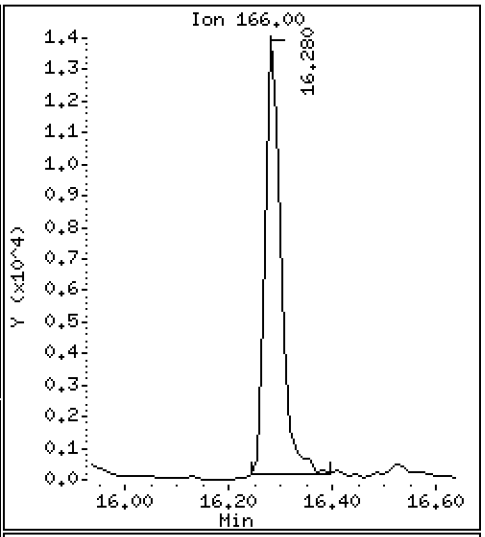
Column phase: ZB-5msi

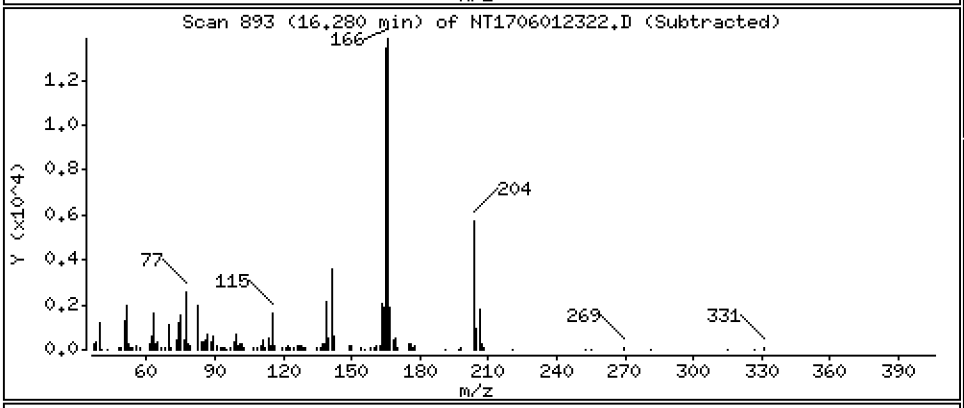
Column diameter: 0.25

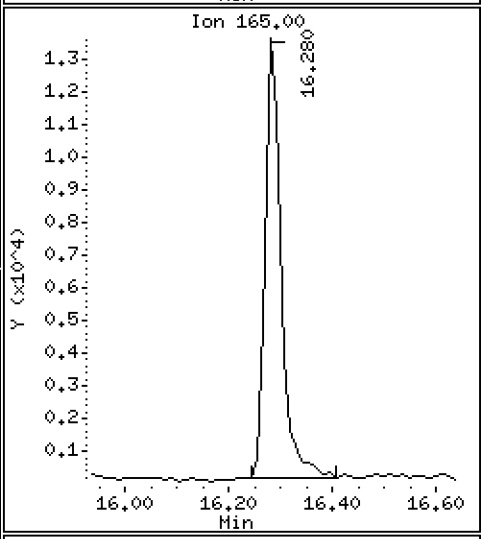
49 Fluorene

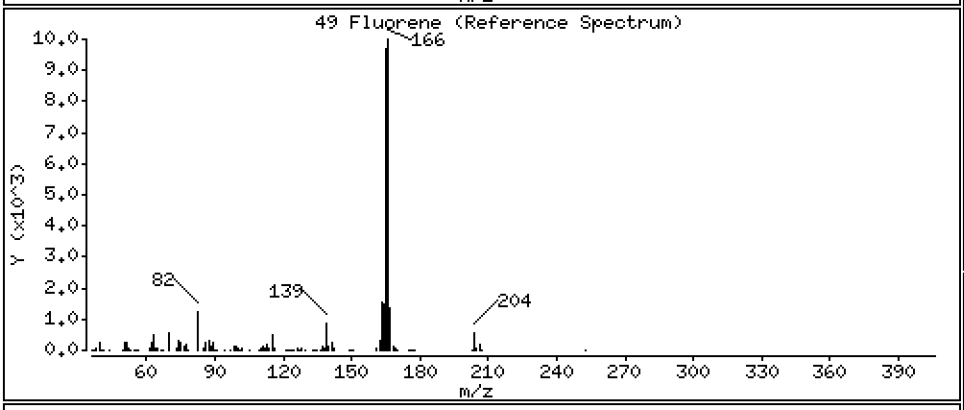
Concentration: 0.1658 ug/mL

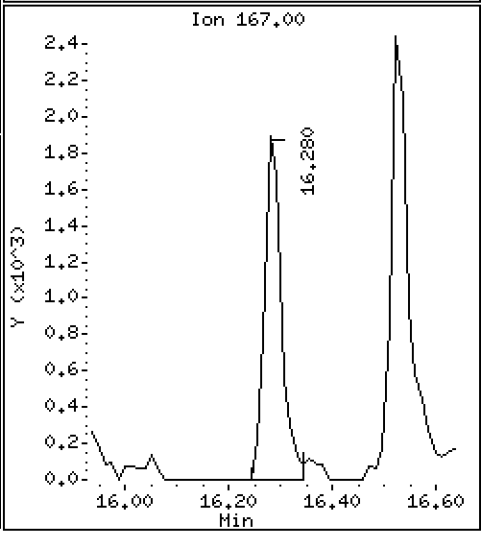


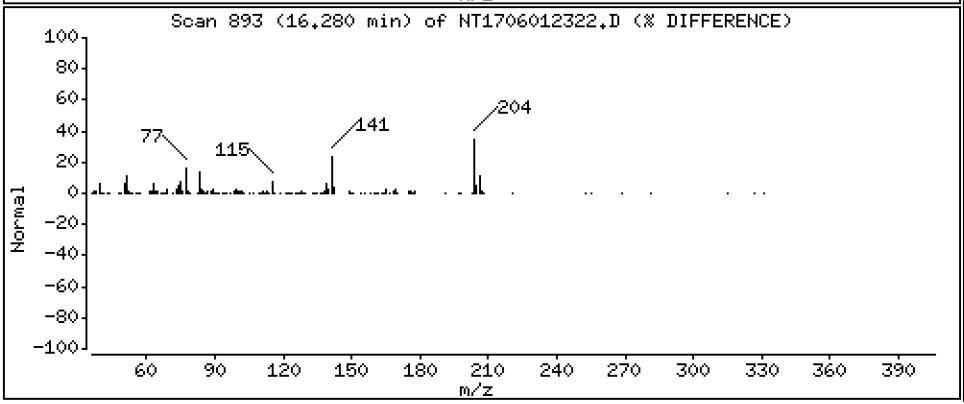












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

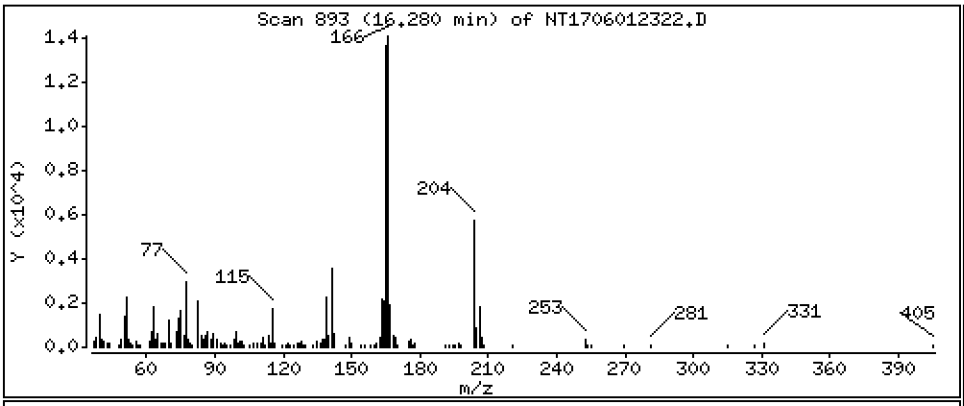
Operator: VTS

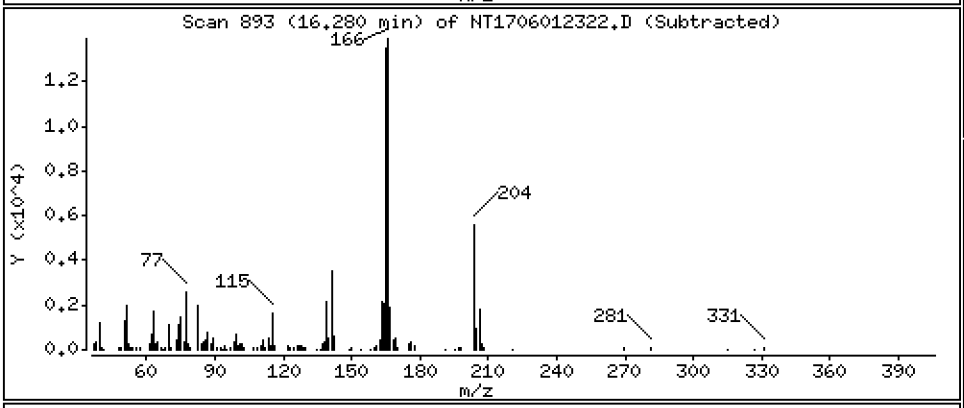
Column phase: ZB-5msi

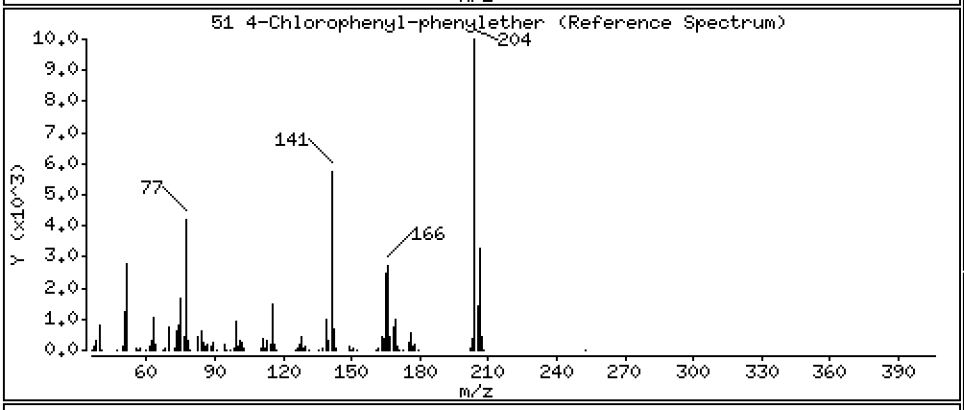
Column diameter: 0.25

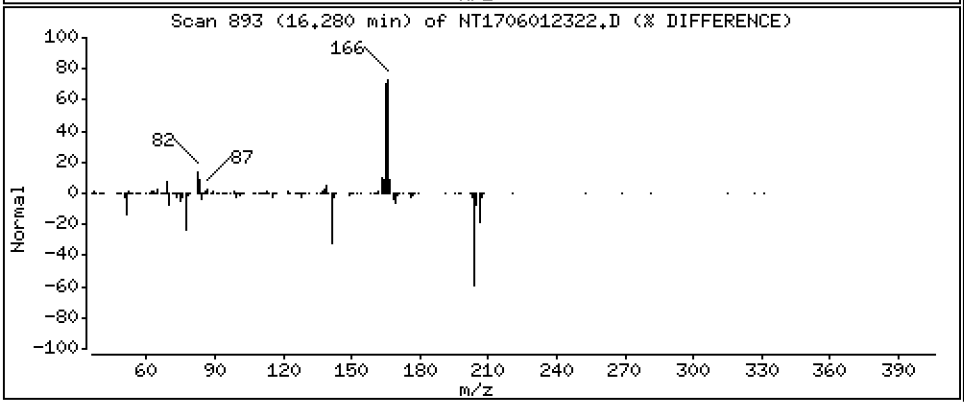
51 4-Chlorophenyl-phenylether

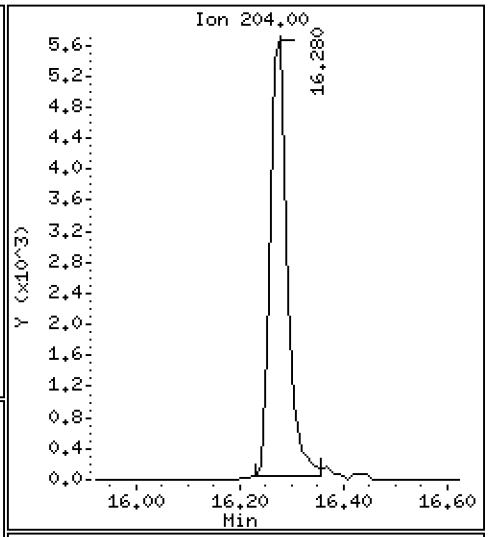
Concentration: 0.1576 ug/mL

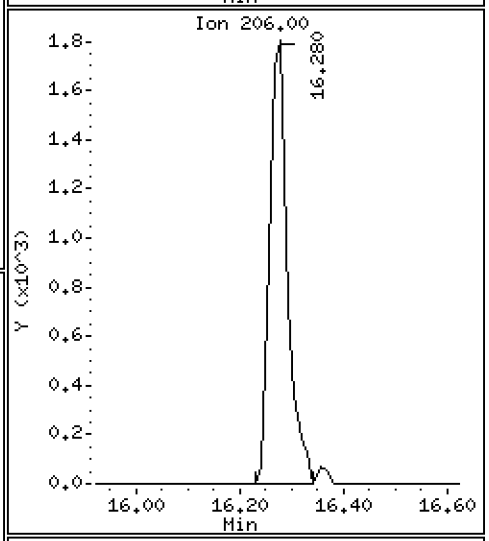


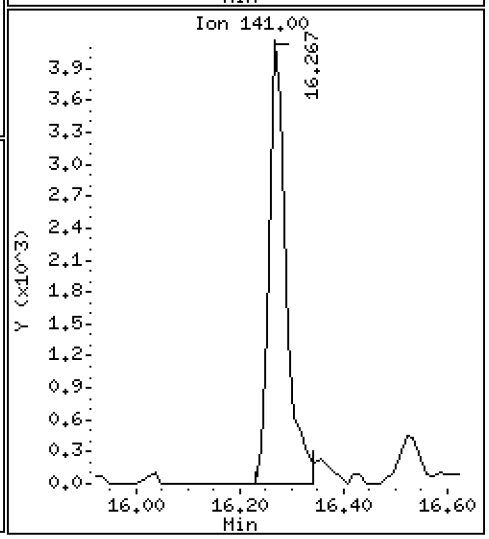












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

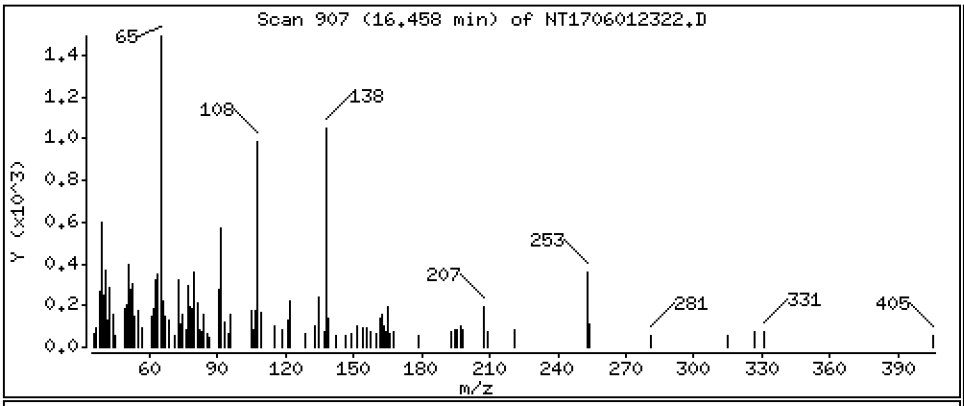
Operator: VTS

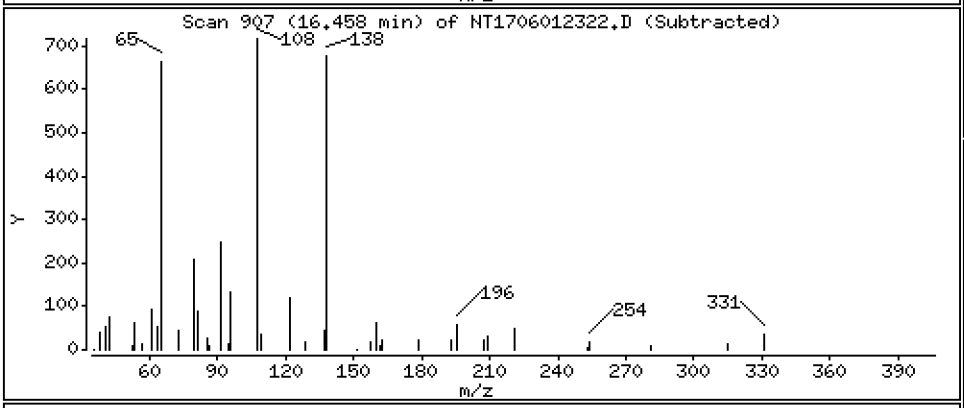
Column phase: ZB-5msi

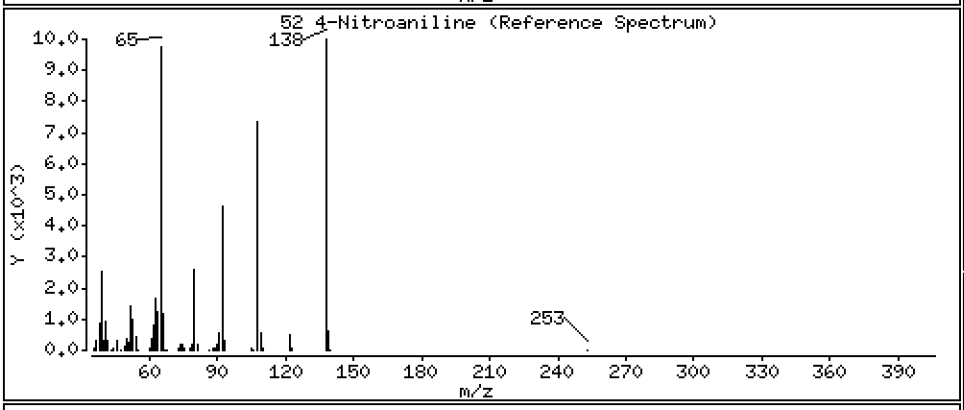
Column diameter: 0.25

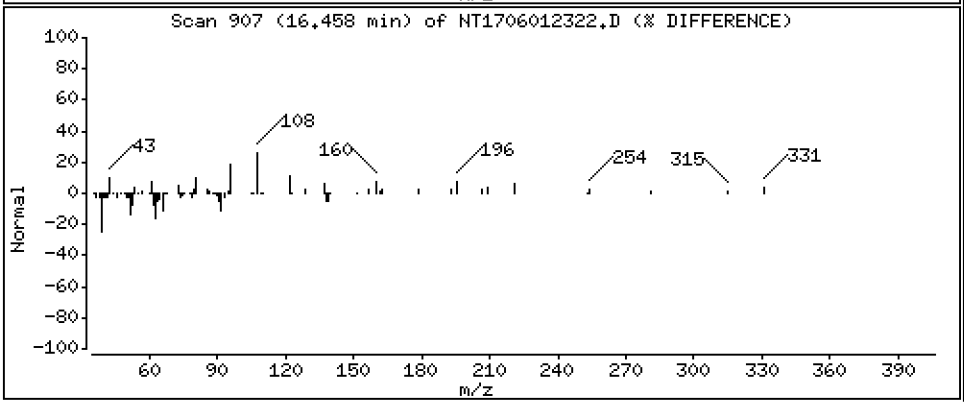
52 4-Nitroaniline

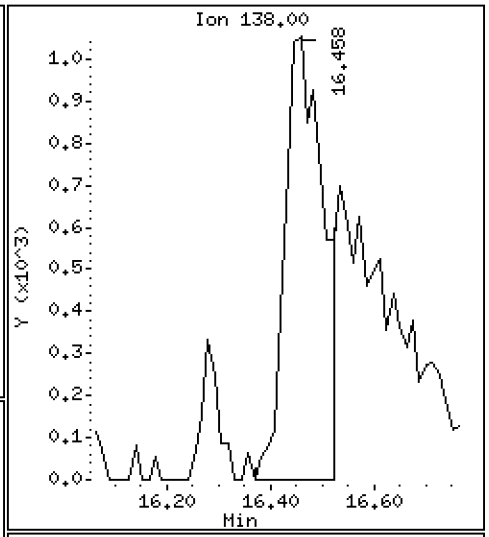
Concentration: 0.1836 ug/mL

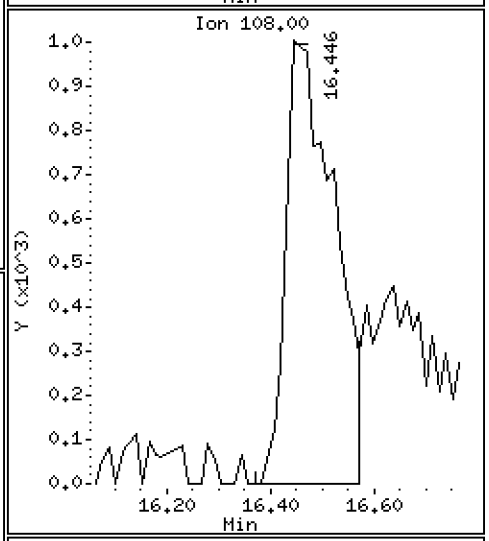


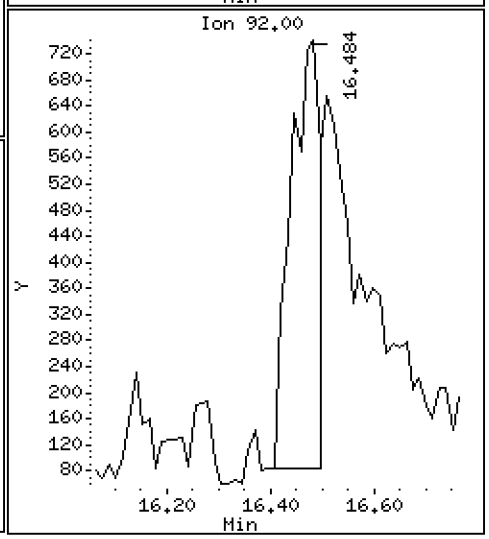












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

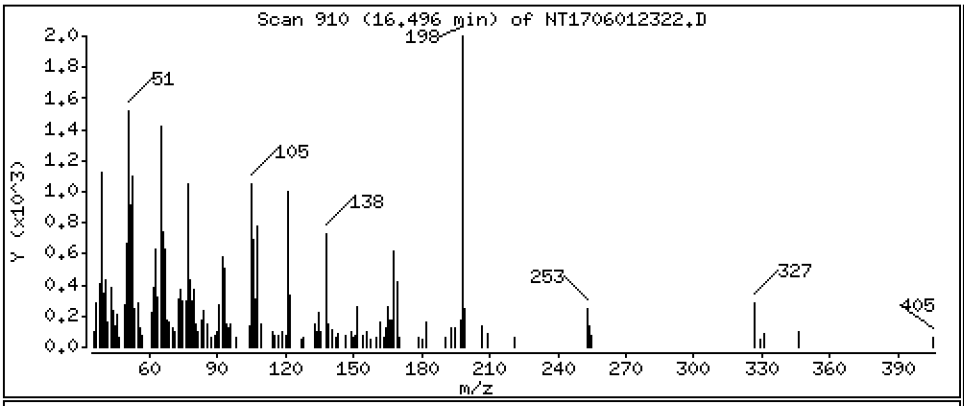
Operator: VTS

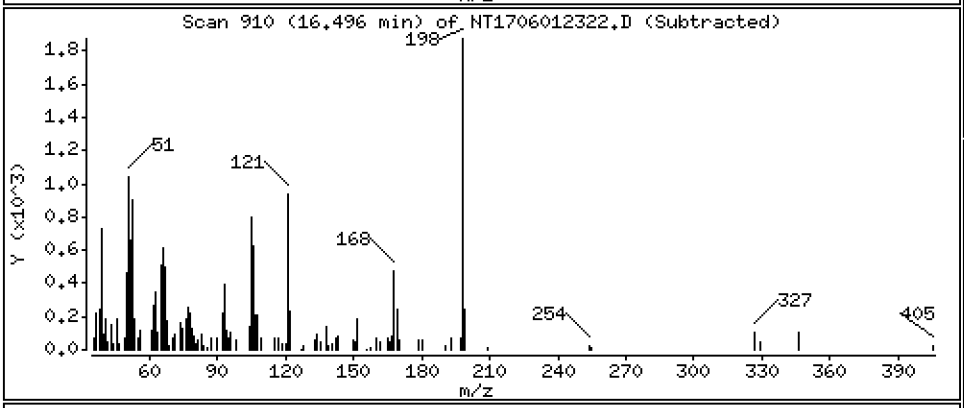
Column phase: ZB-5msi

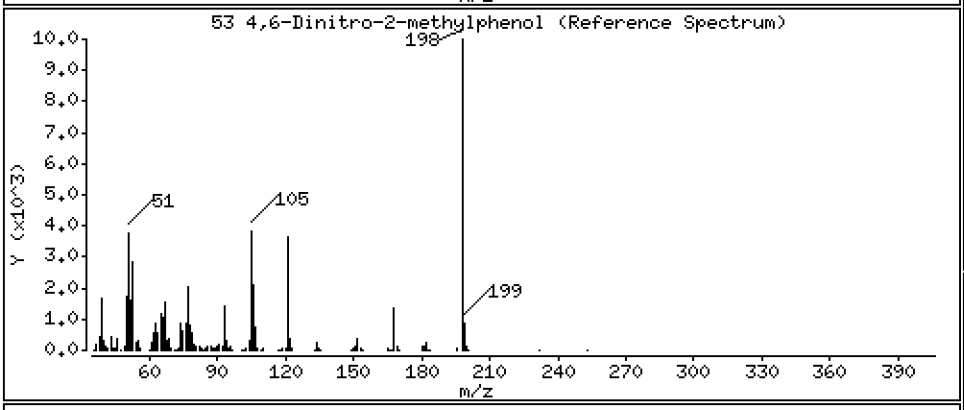
Column diameter: 0.25

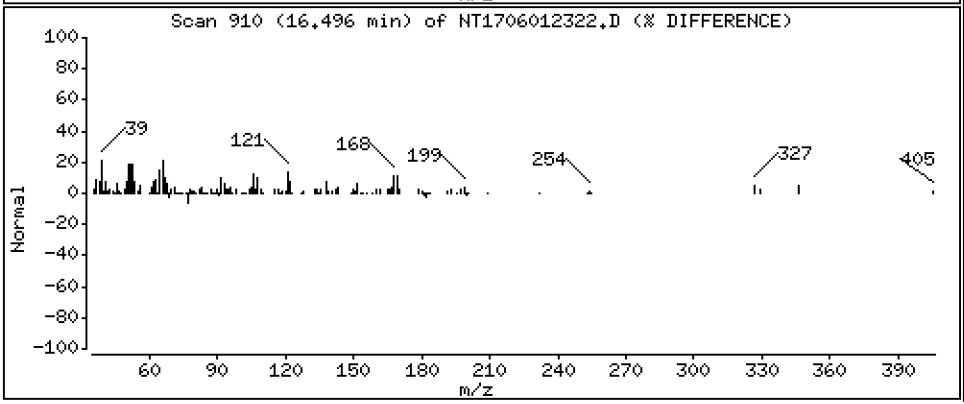
53 4,6-Dinitro-2-methylphenol

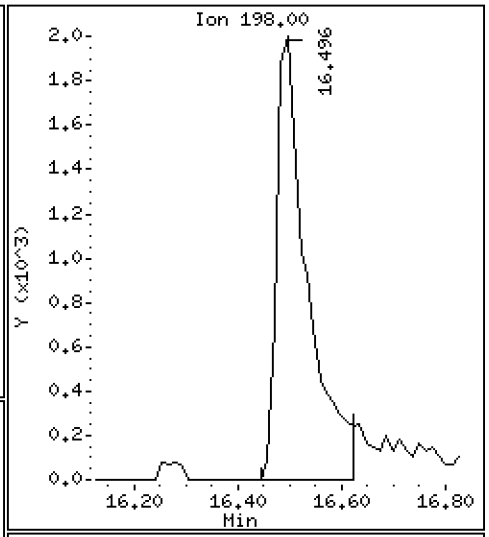
Concentration: 0.2918 ug/mL

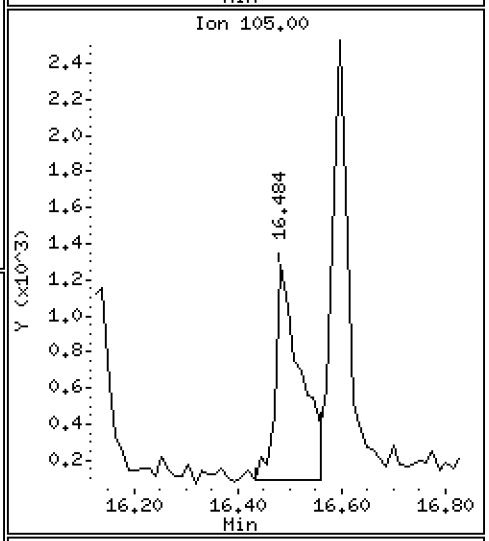


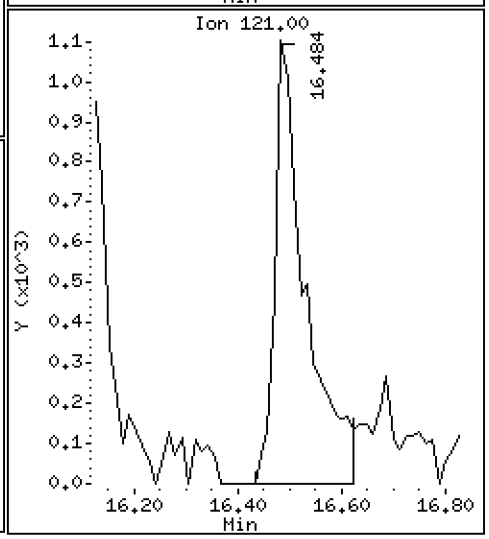












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

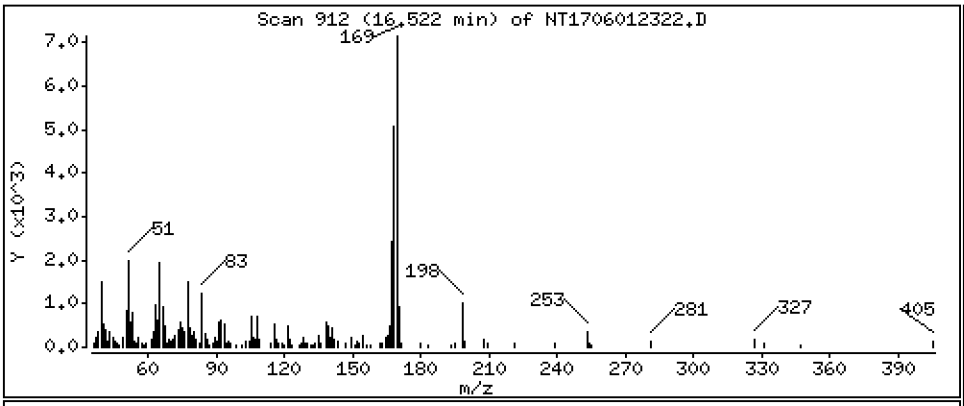
Operator: VTS

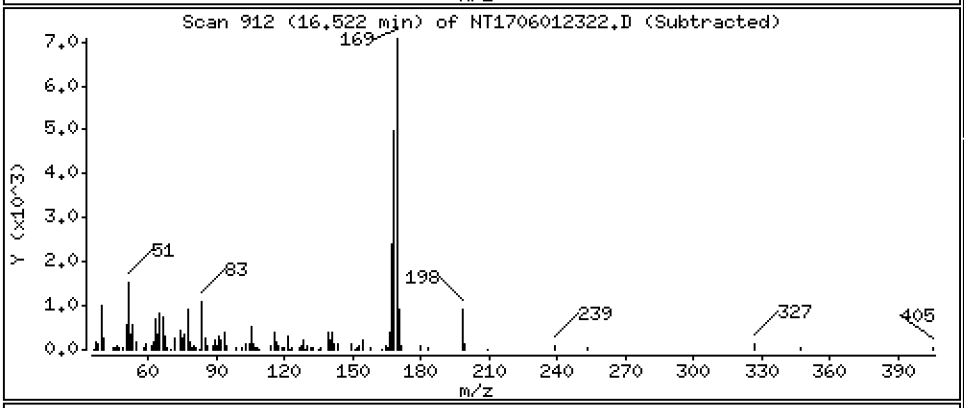
Column phase: ZB-5msi

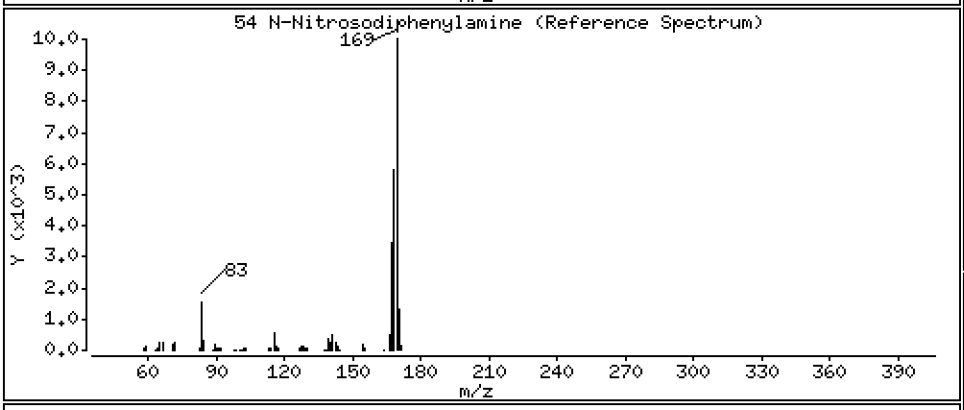
Column diameter: 0.25

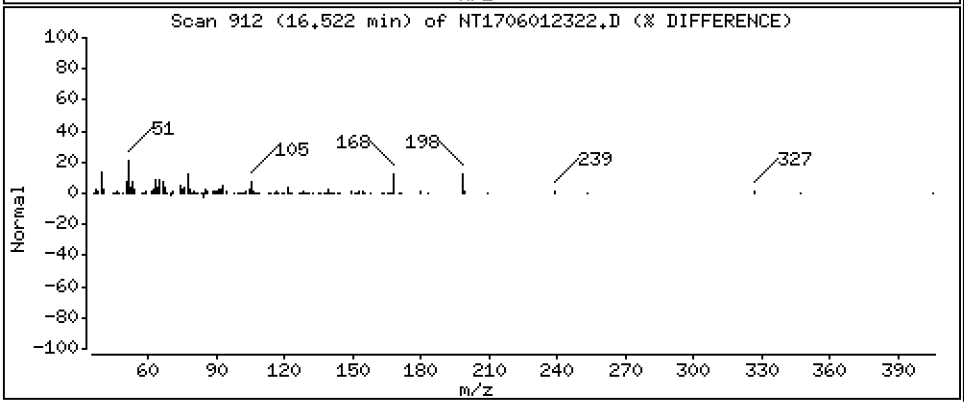
54 N-Nitrosodiphenylamine

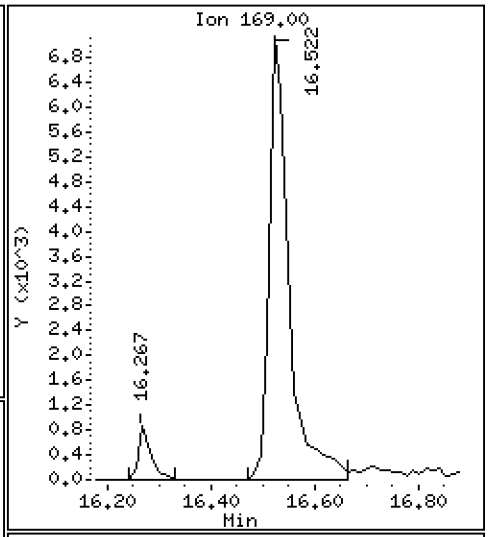
Concentration: 0.1887 ug/mL

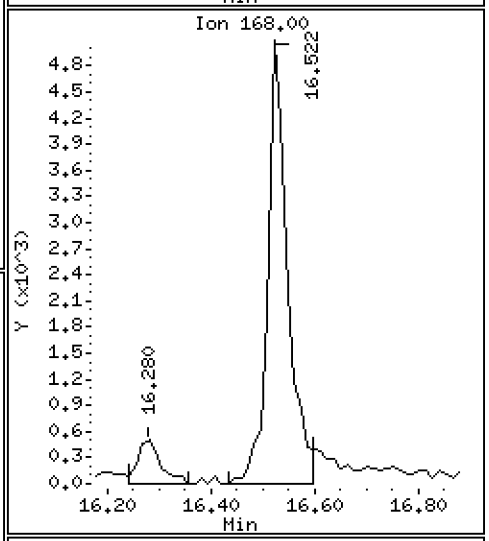


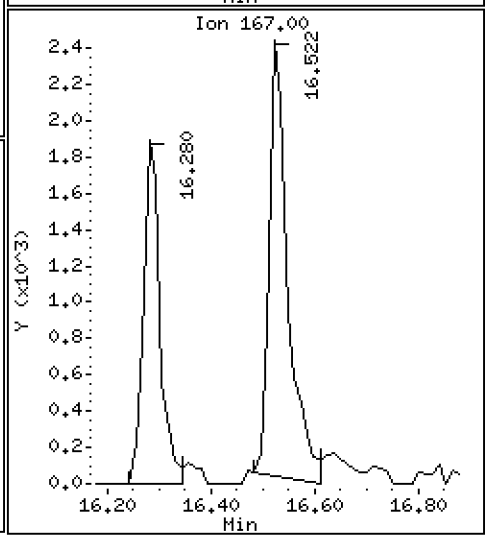












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

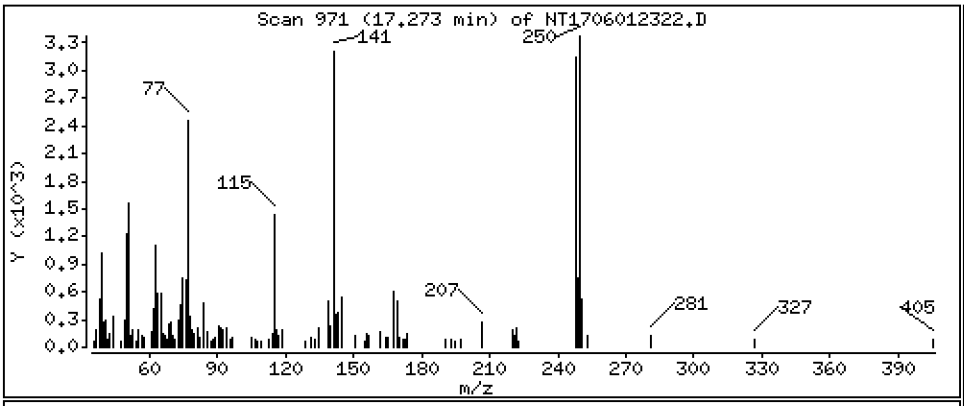
Operator: VTS

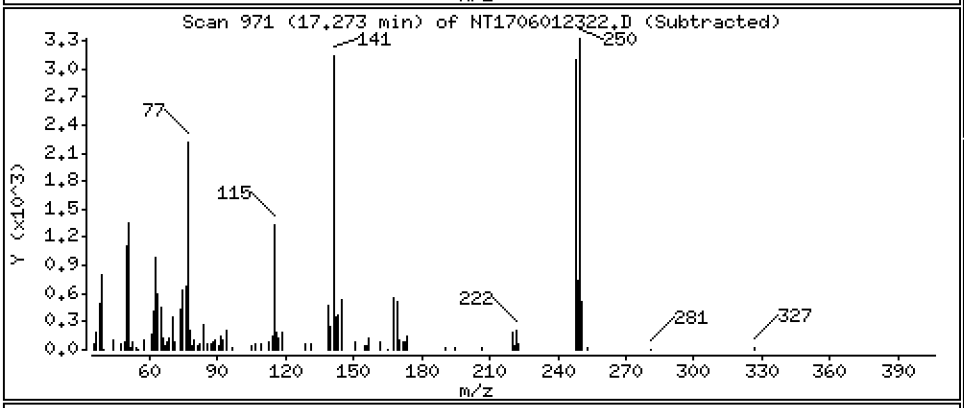
Column phase: ZB-5msi

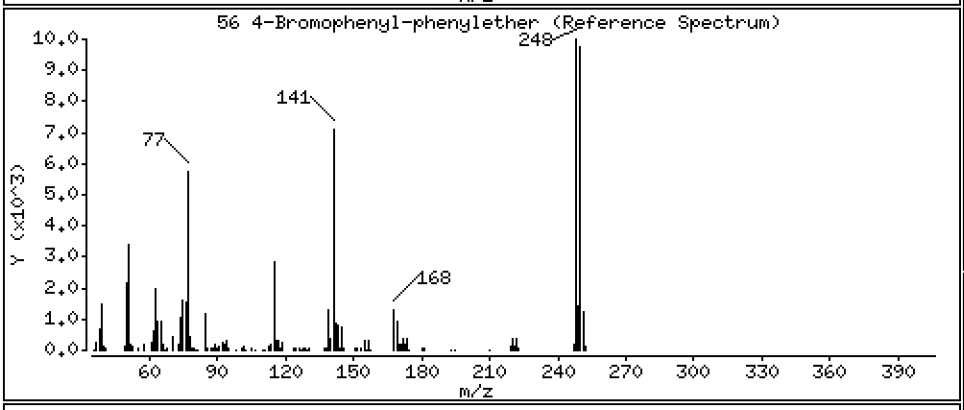
Column diameter: 0.25

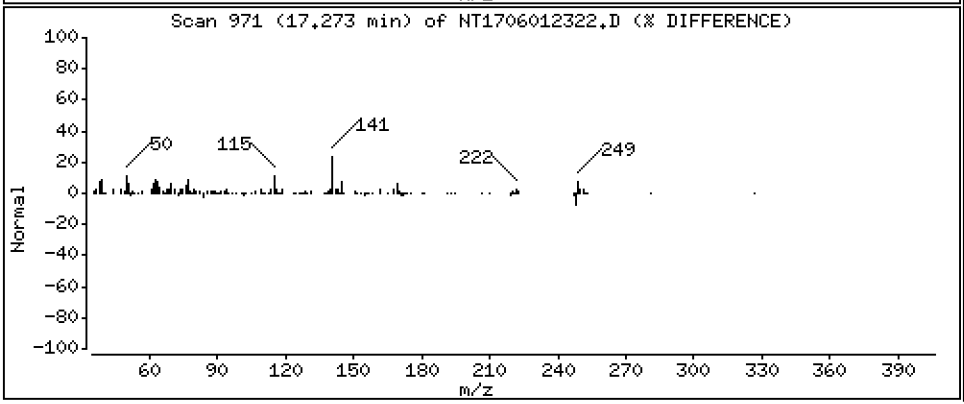
56 4-Bromophenyl-phenylether

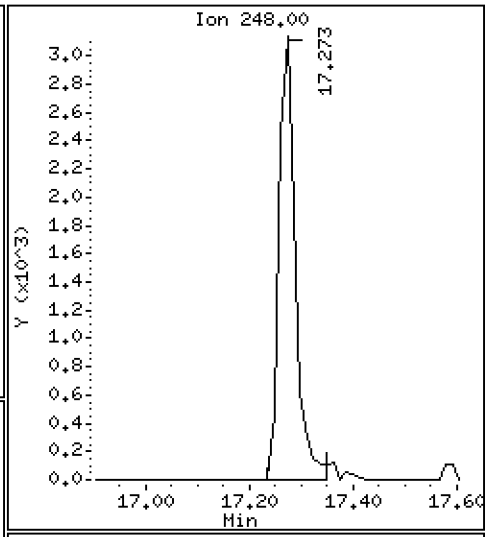
Concentration: 0.2026 ug/mL

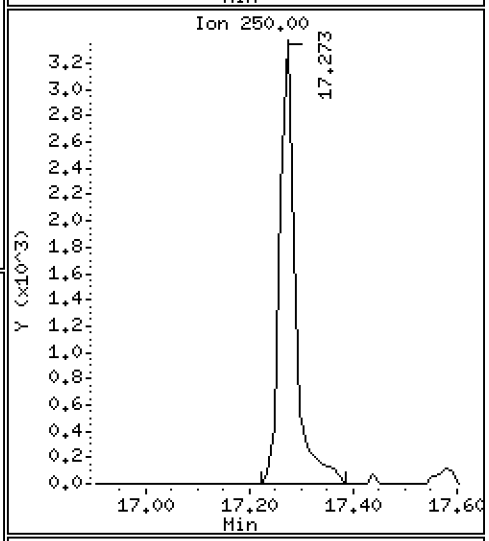


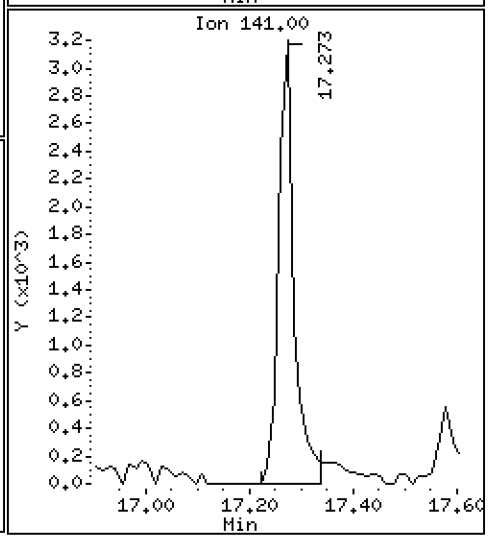












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

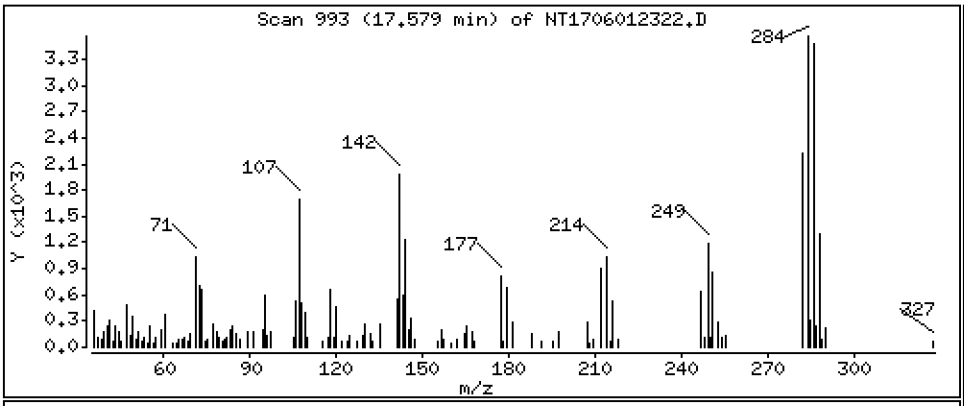
Operator: VTS

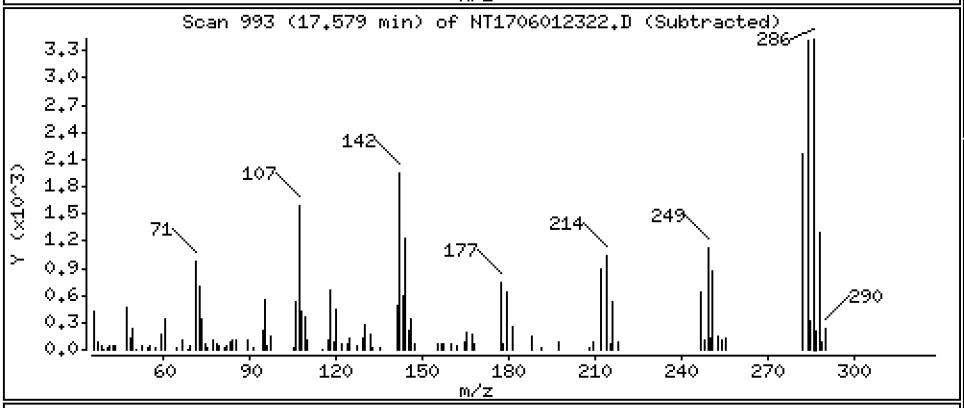
Column phase: ZB-5msi

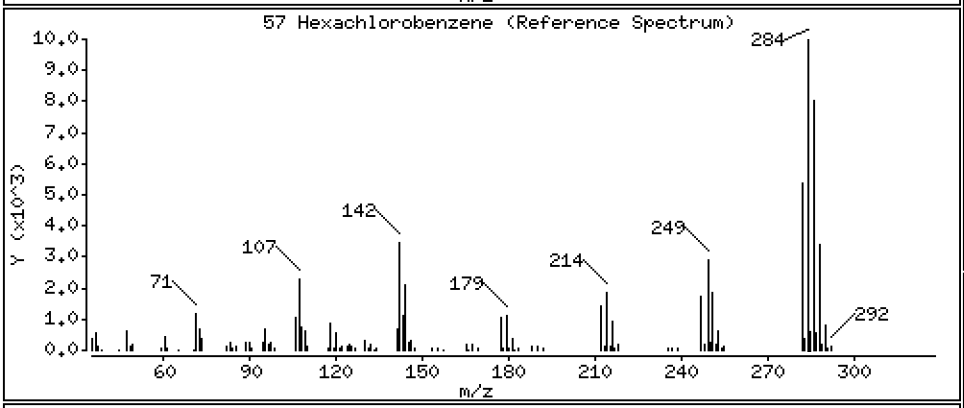
Column diameter: 0.25

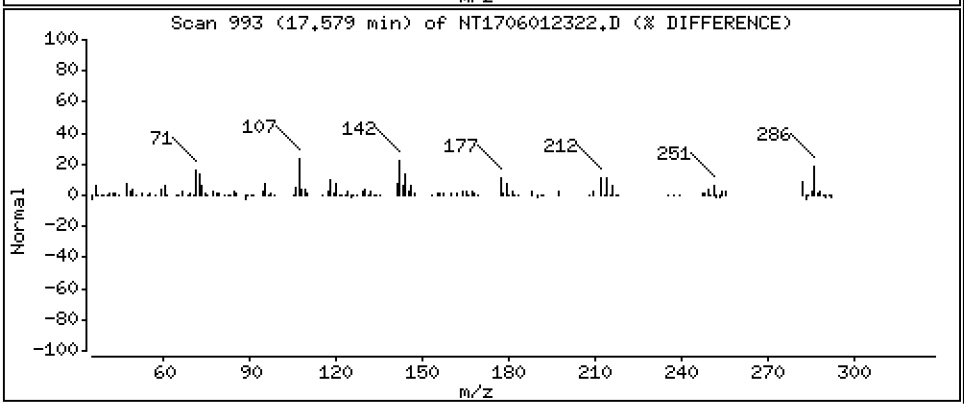
57 Hexachlorobenzene

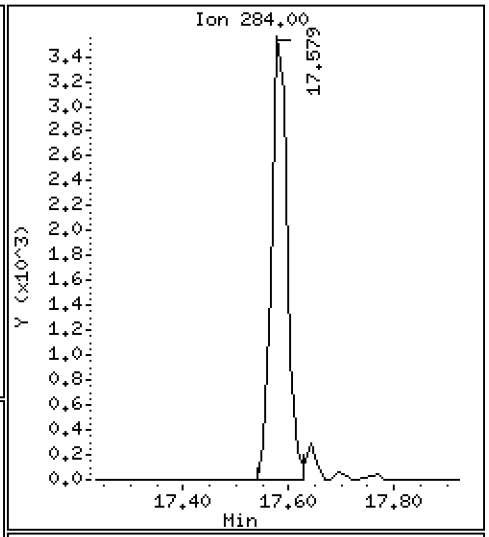
Concentration: 0.2115 ug/mL

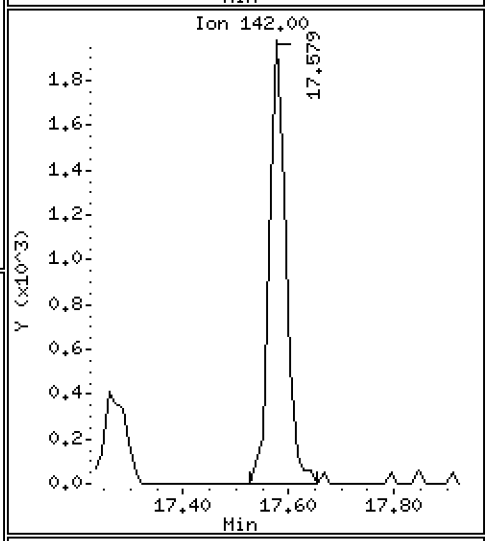


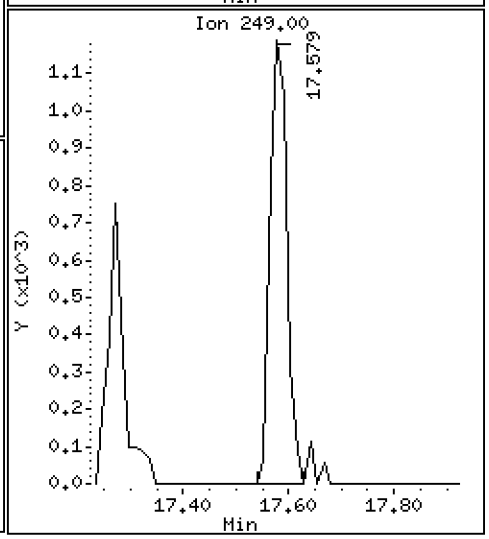












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

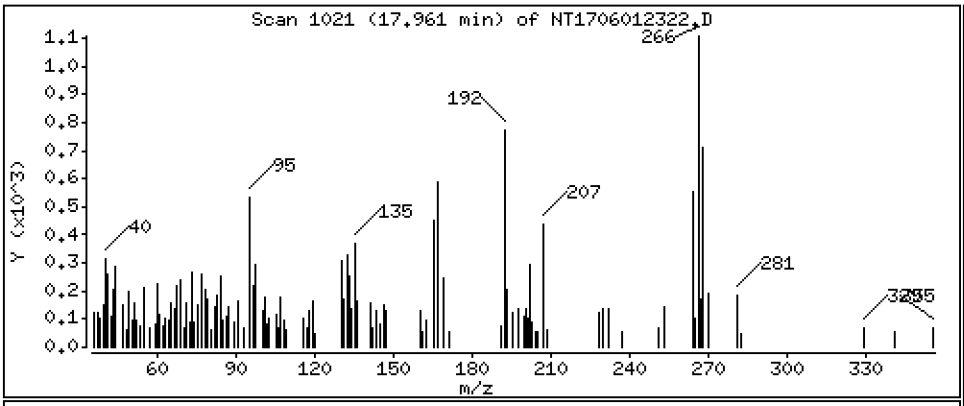
Operator: VTS

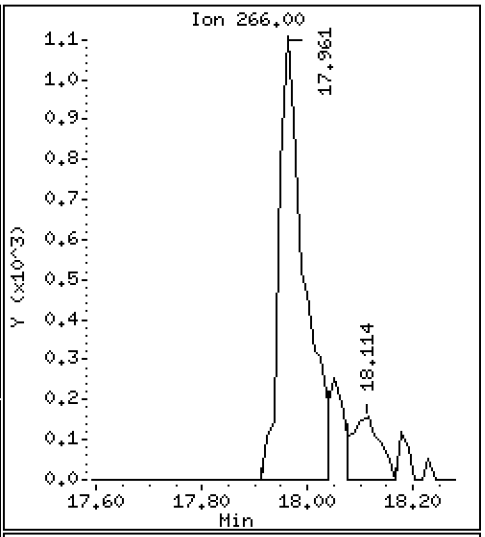
Column phase: ZB-5msi

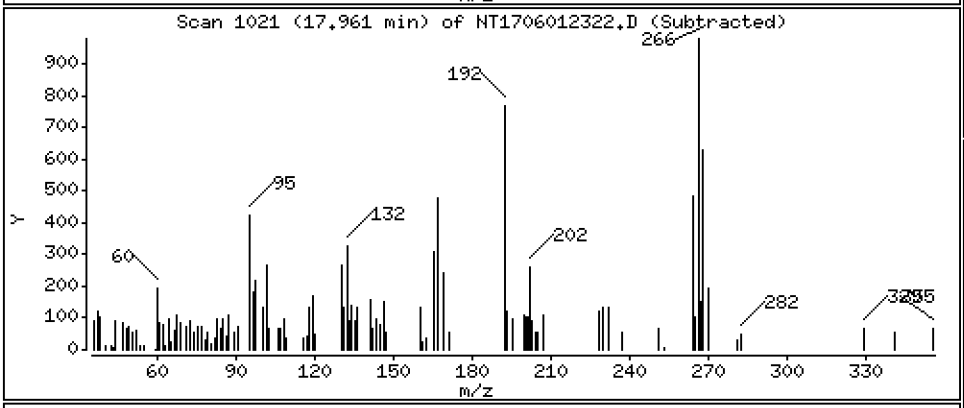
Column diameter: 0.25

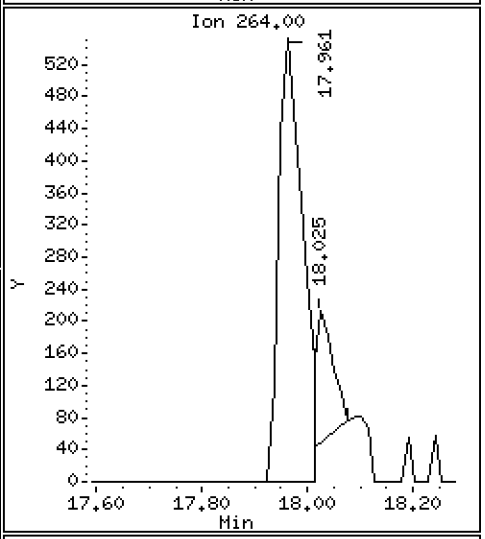
58 Pentachlorophenol

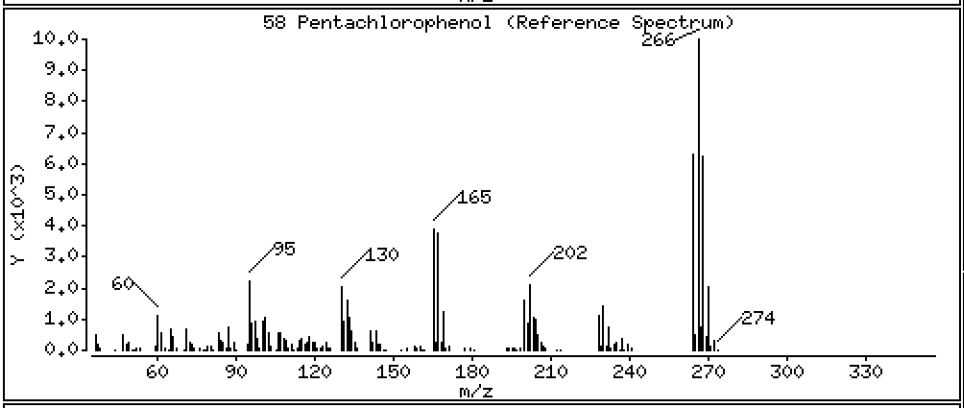
Concentration: 0.1803 ug/mL

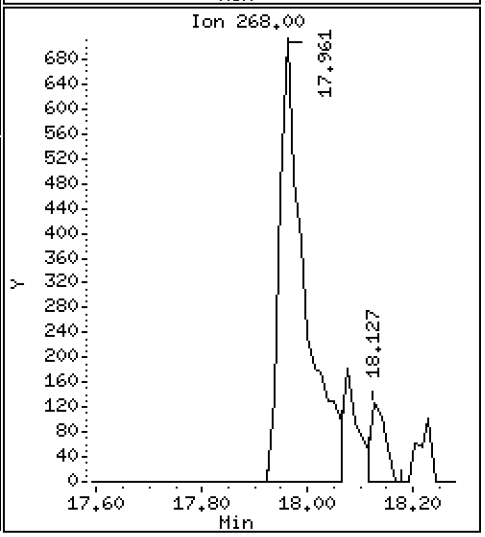


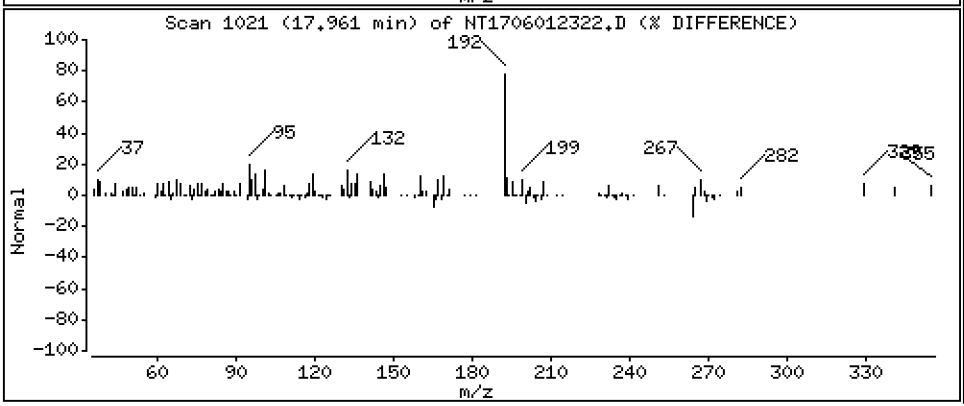












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

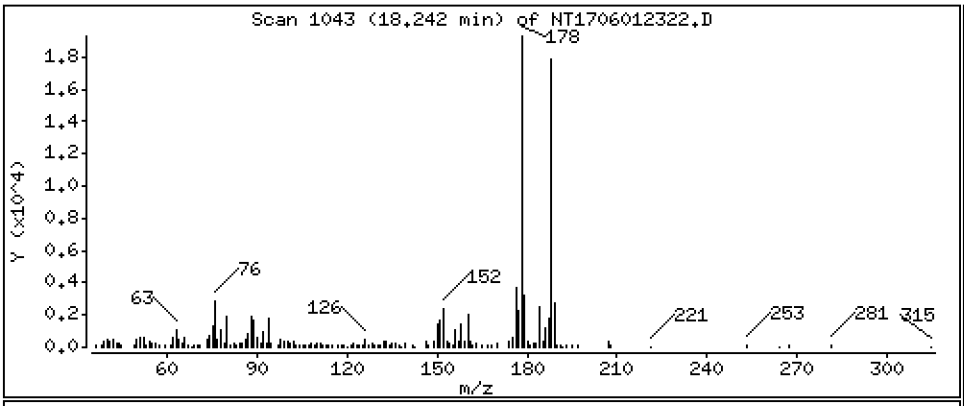
Operator: VTS

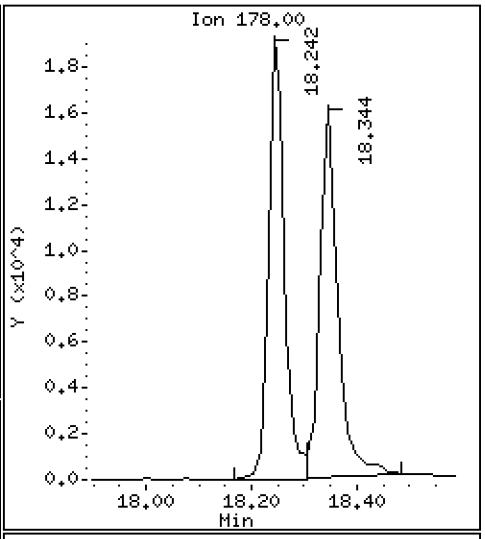
Column phase: ZB-5msi

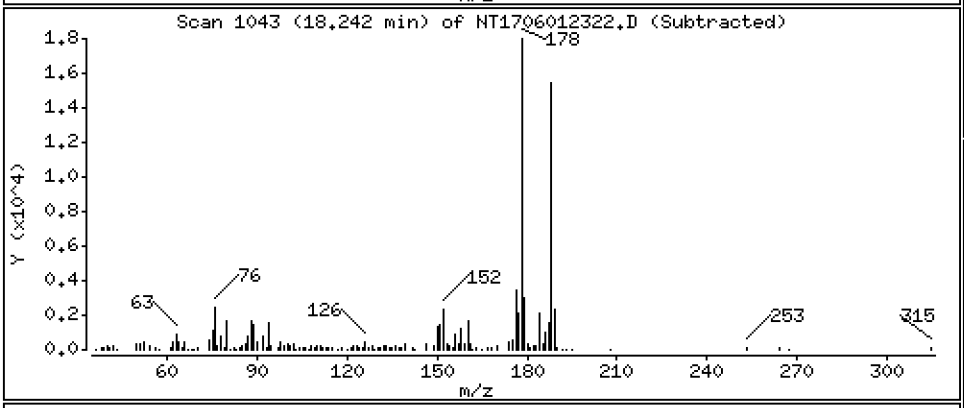
Column diameter: 0.25

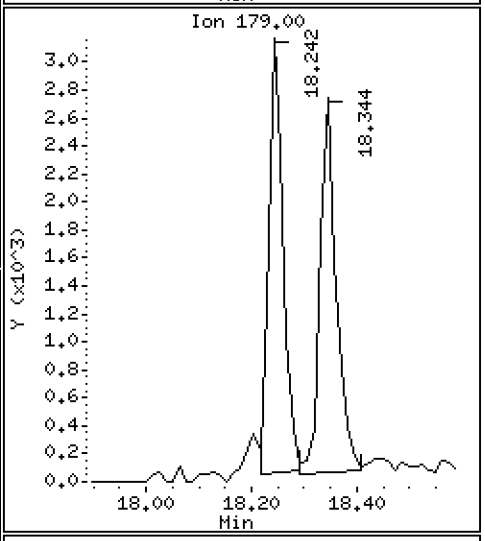
60 Phenanthrene

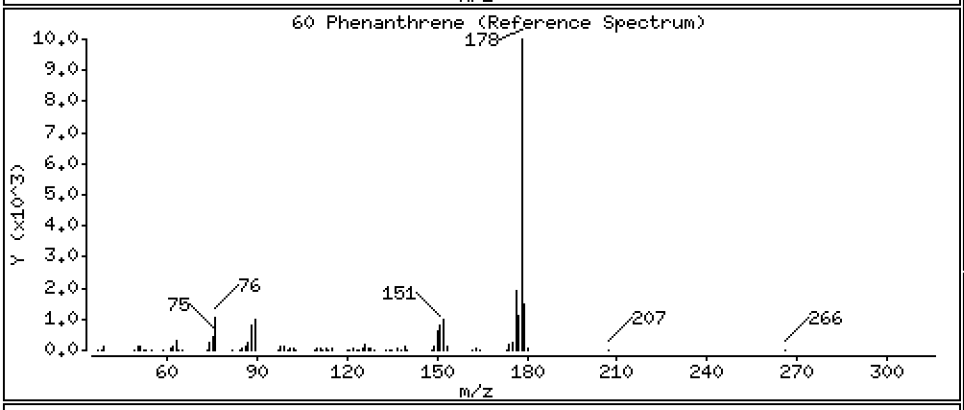
Concentration: 0.2053 ug/mL

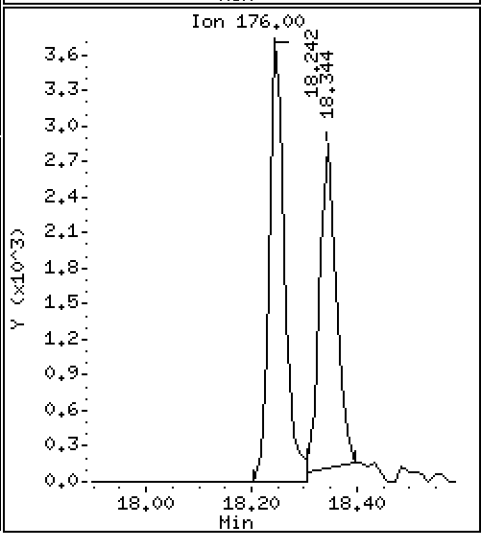


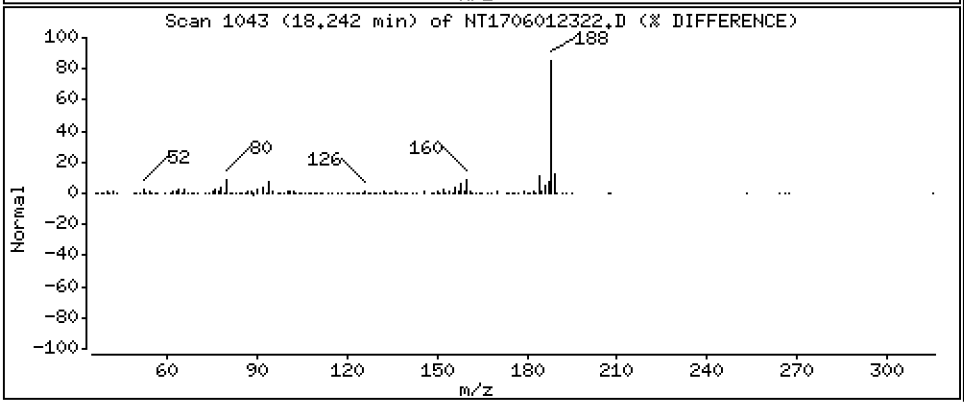












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

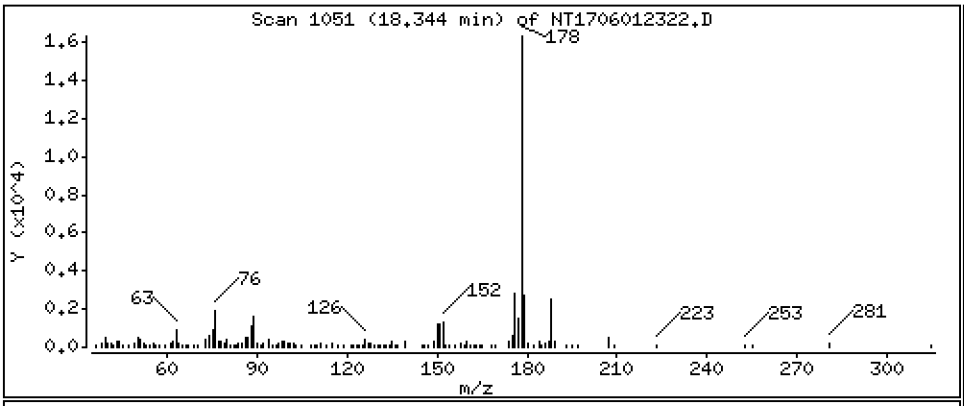
Operator: VTS

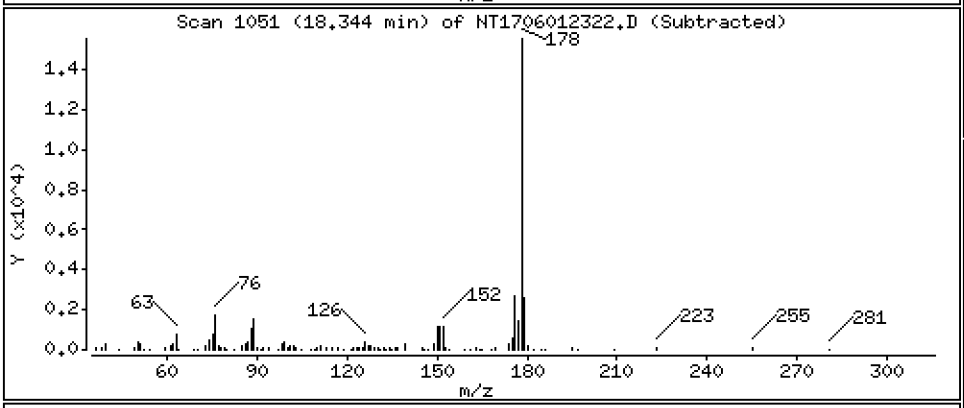
Column phase: ZB-5msi

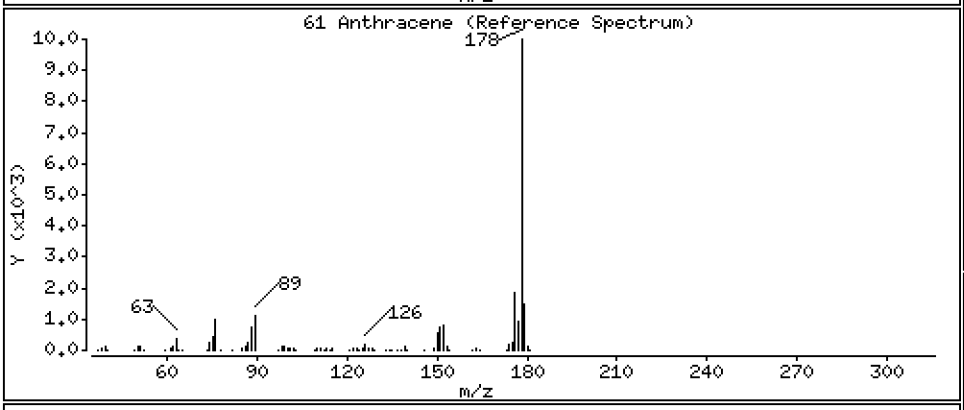
Column diameter: 0.25

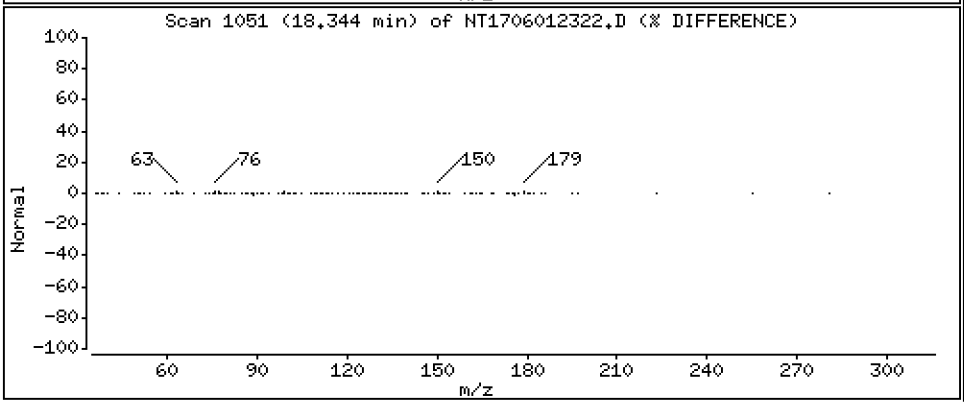
61 Anthracene

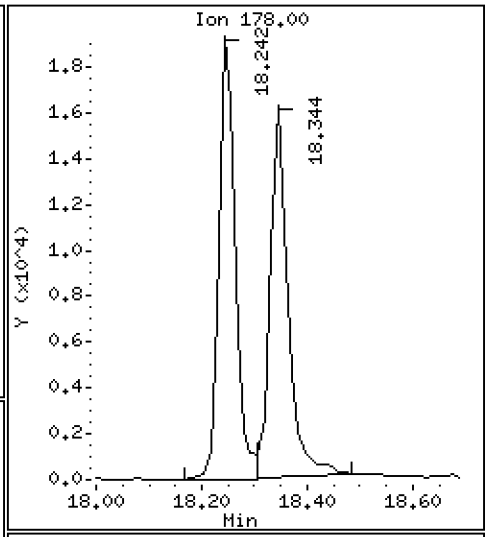
Concentration: 0.1985 ug/mL

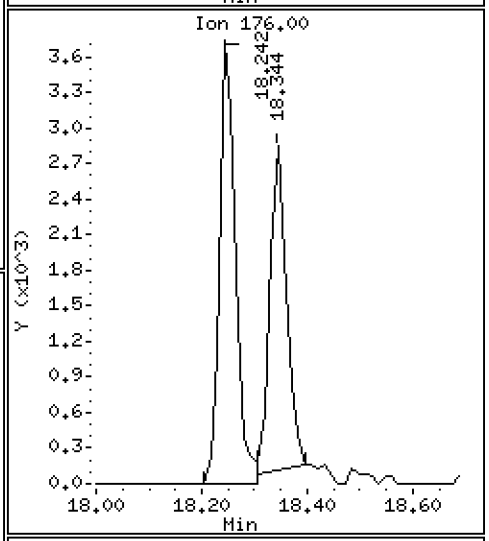


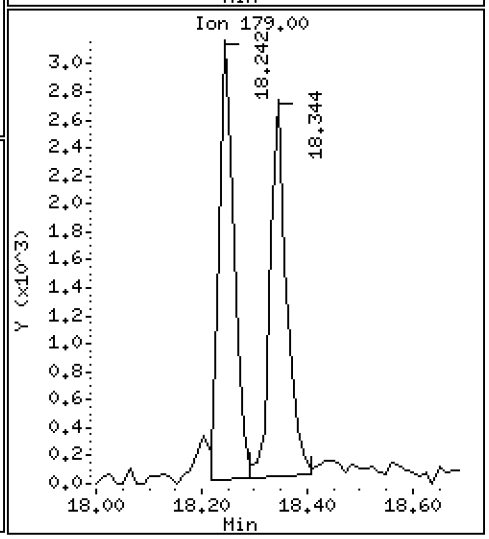












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

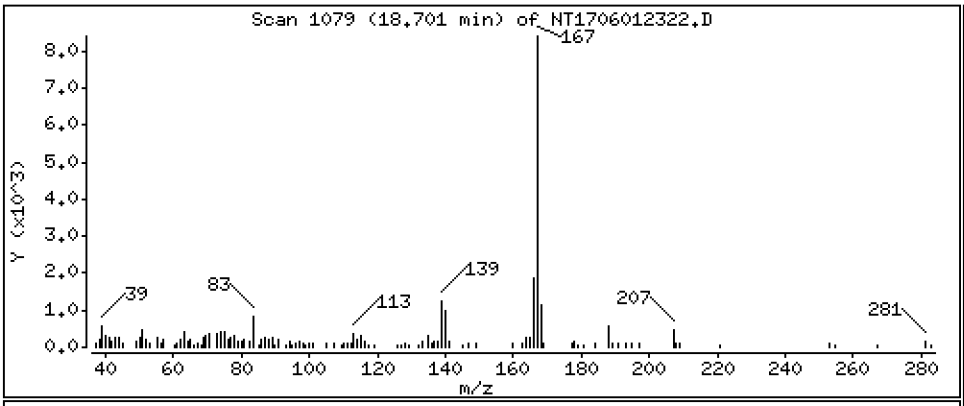
Operator: VTS

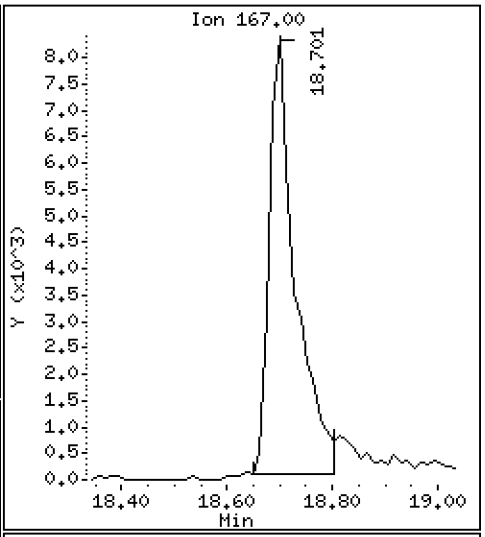
Column phase: ZB-5msi

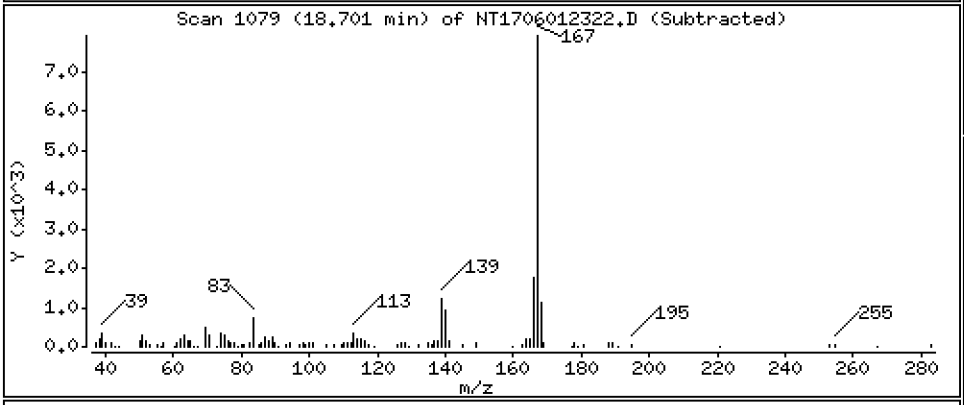
Column diameter: 0.25

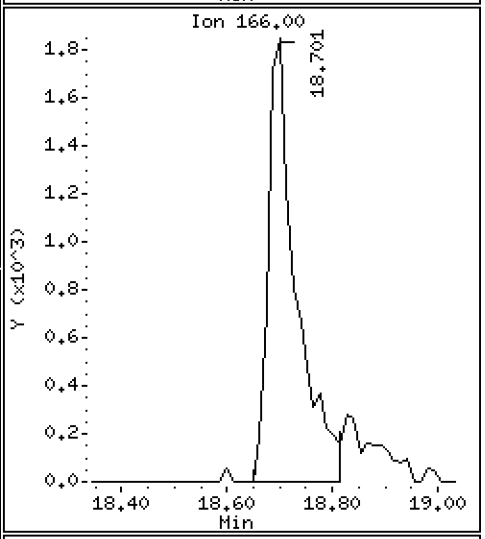
62 Carbazole

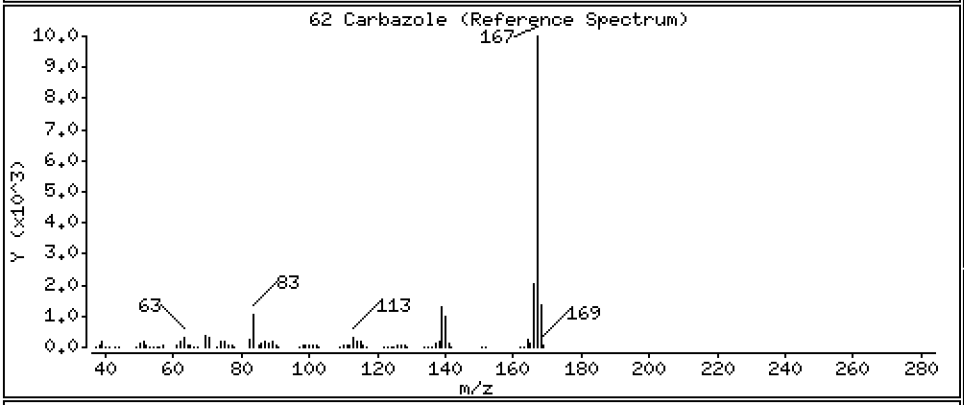
Concentration: 0.2423 ug/mL

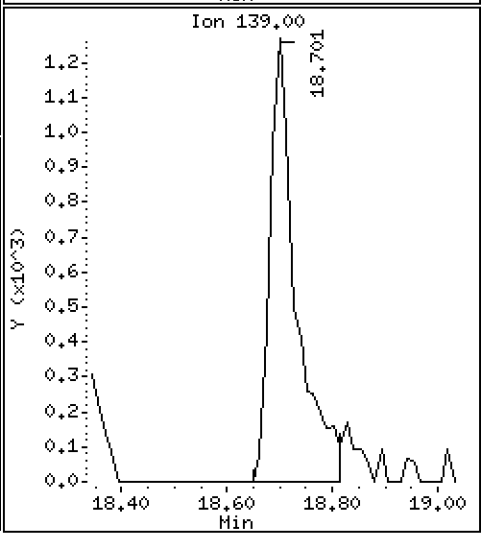


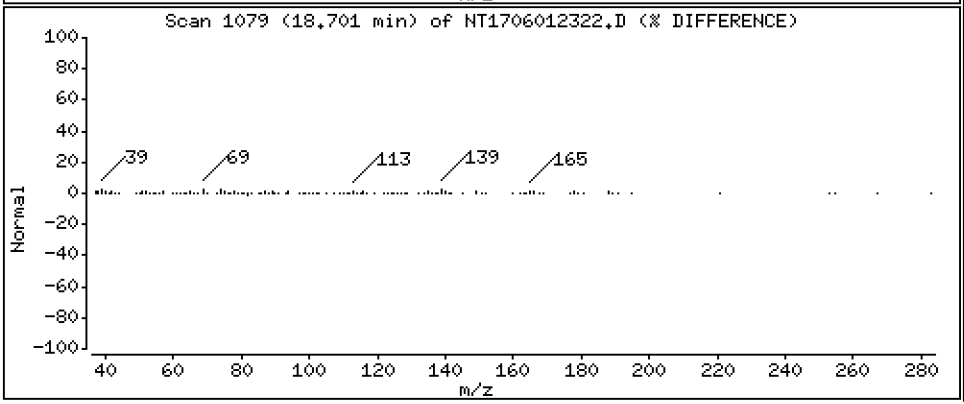












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

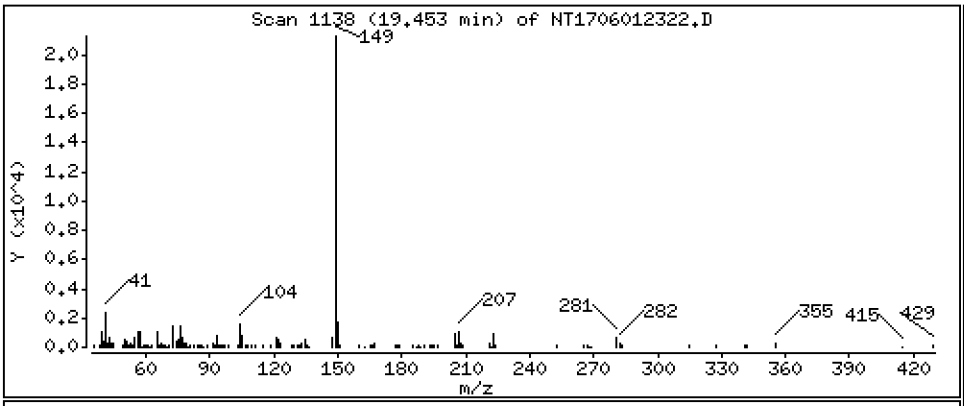
Operator: VTS

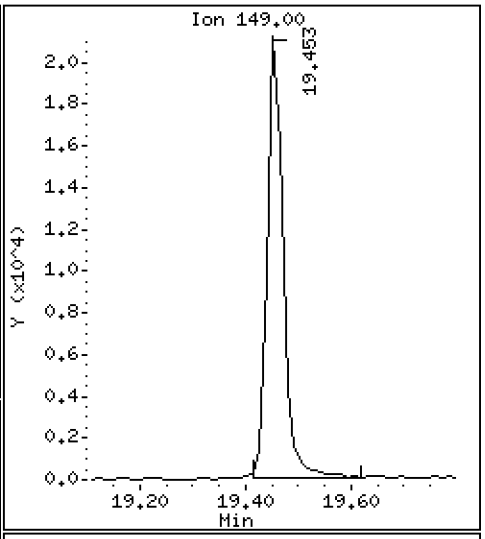
Column phase: ZB-5msi

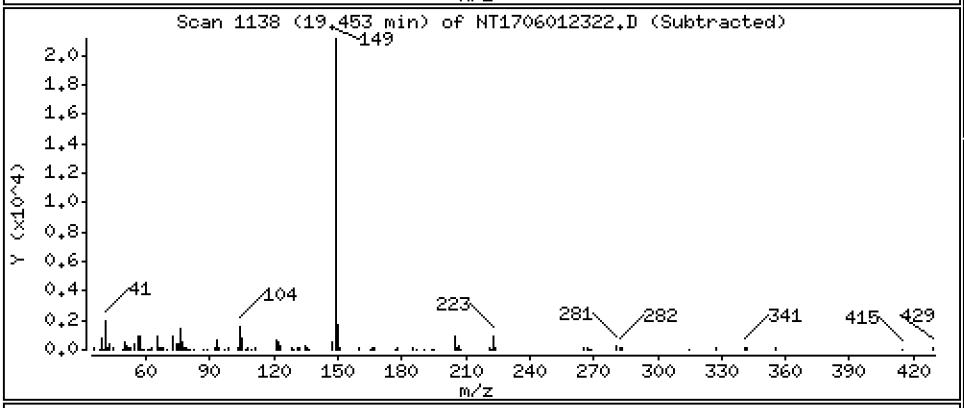
Column diameter: 0.25

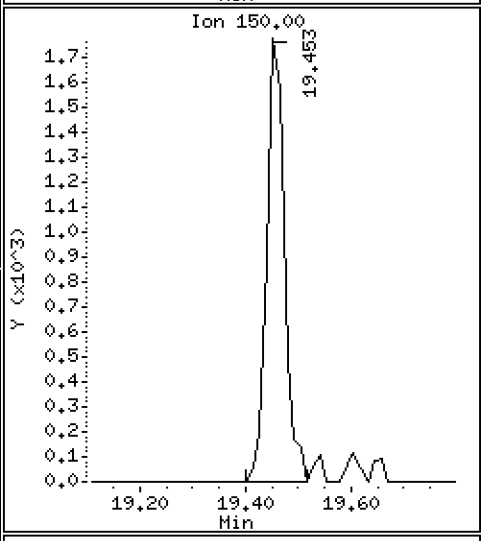
63 Di-n-butylphthalate

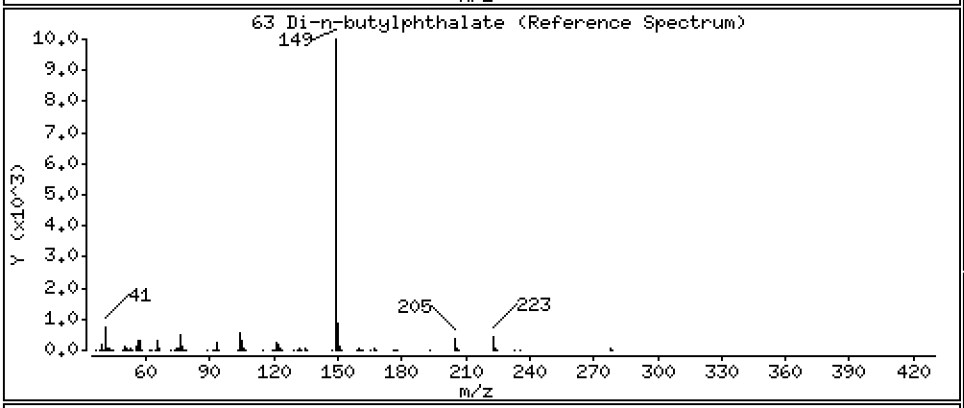
Concentration: 0.1826 ug/mL

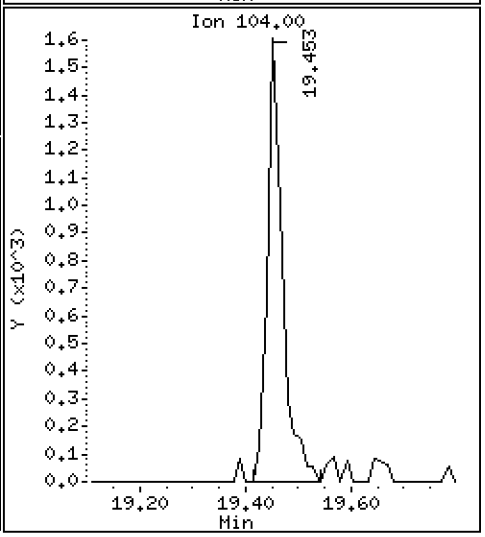


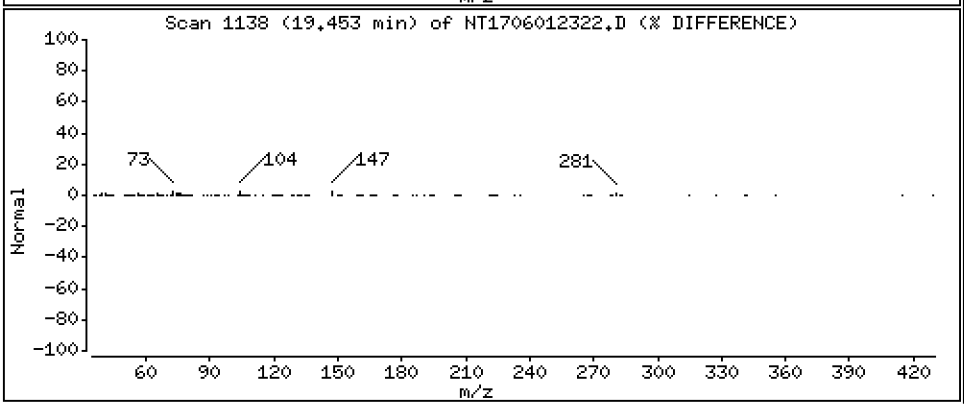












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

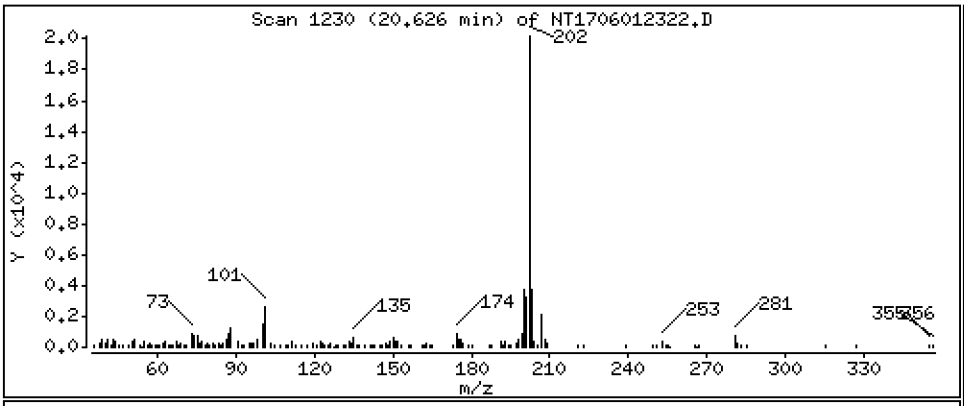
Operator: VTS

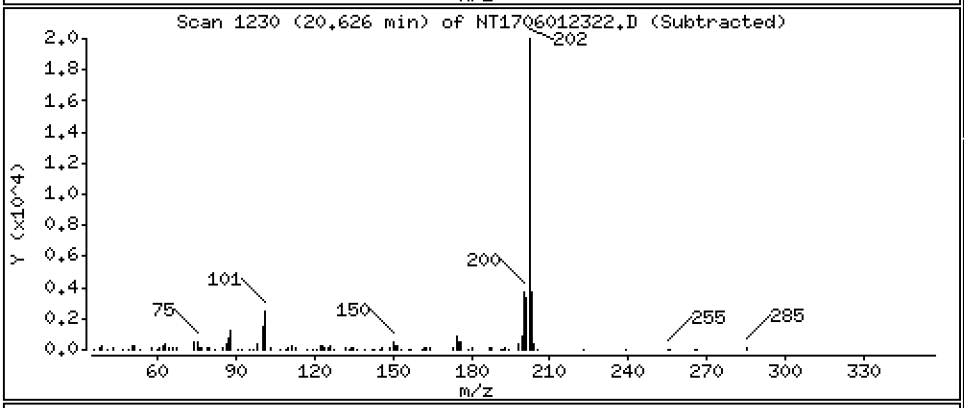
Column phase: ZB-5msi

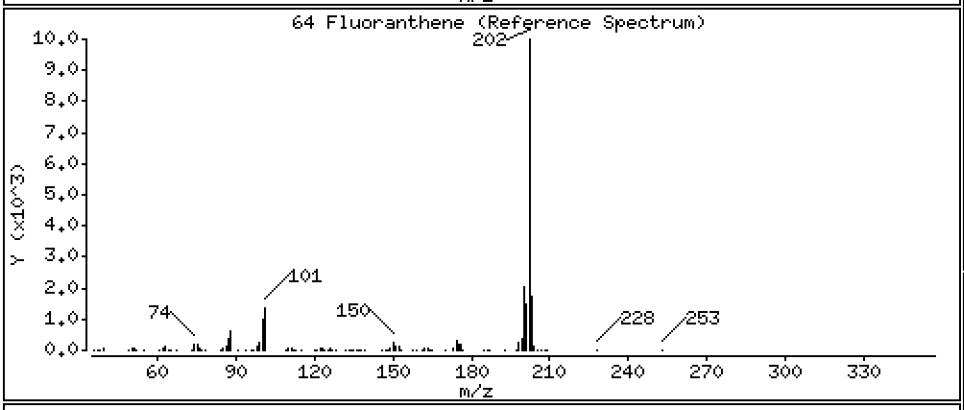
Column diameter: 0.25

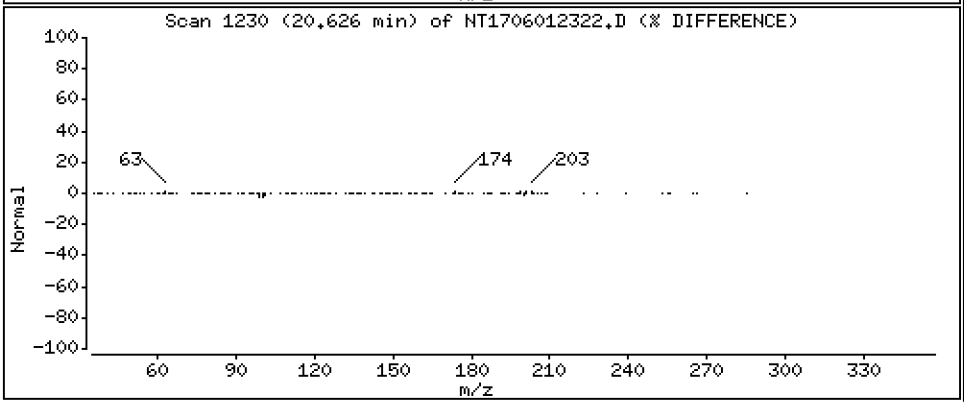
64 Fluoranthene

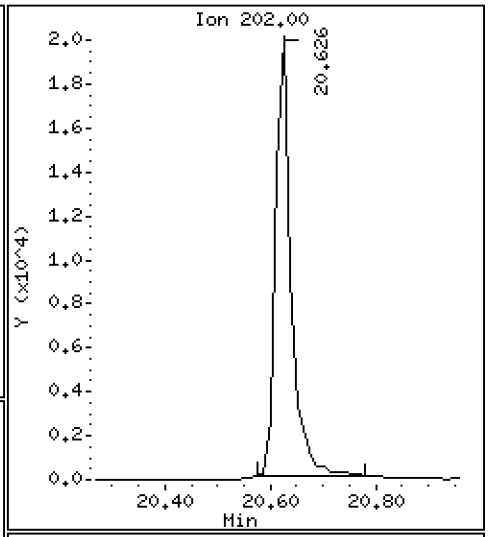
Concentration: 0.1981 ug/mL

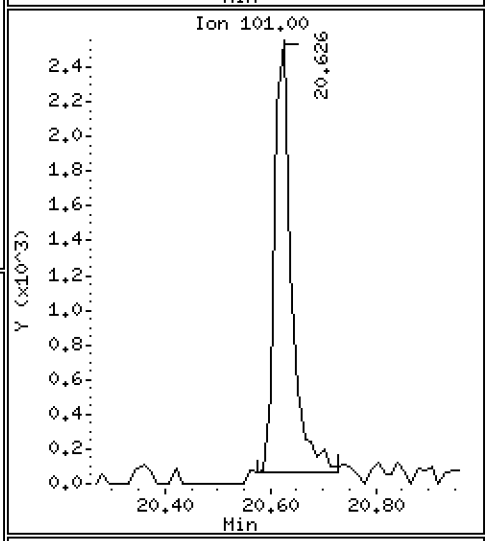


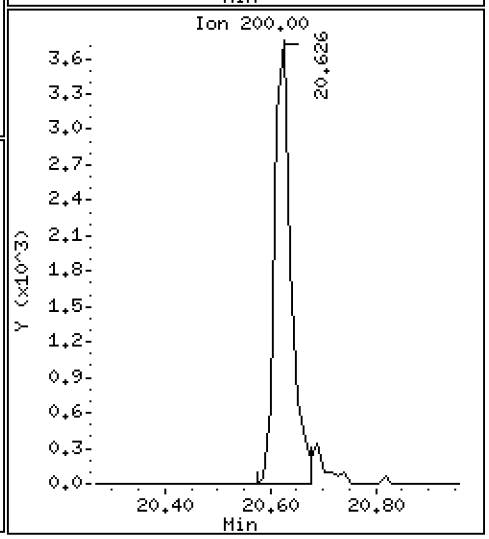












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

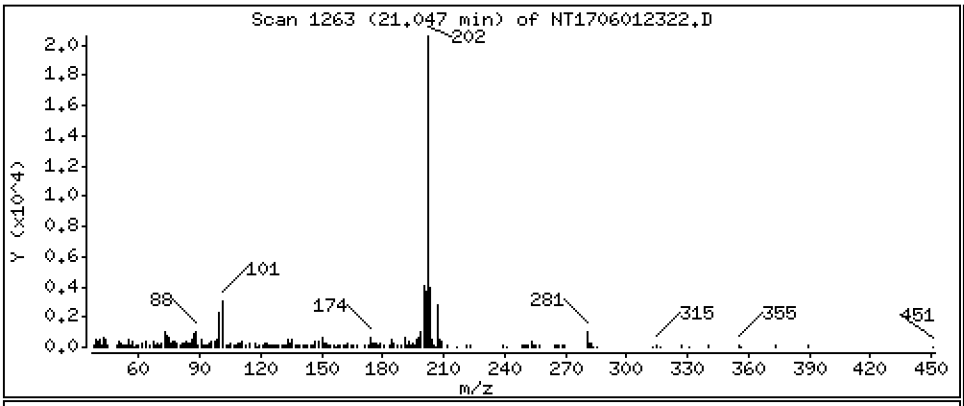
Operator: VTS

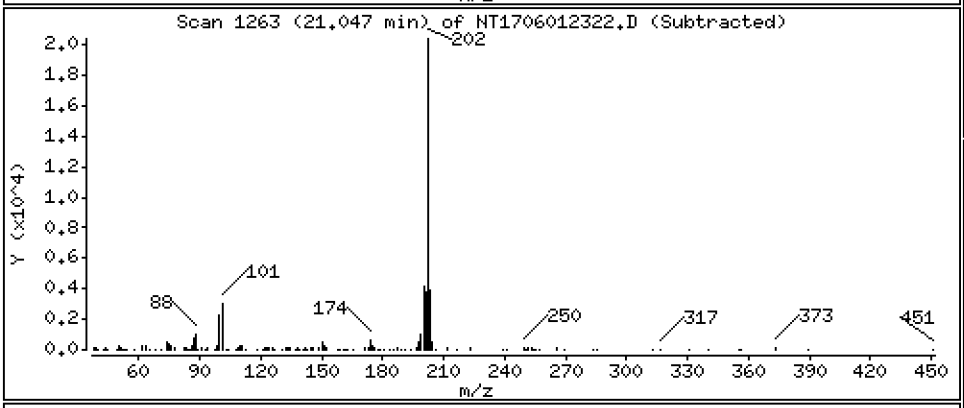
Column phase: ZB-5msi

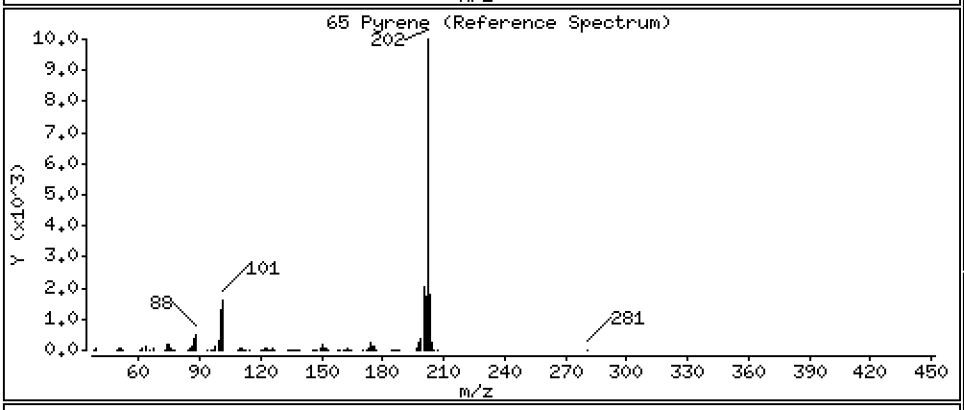
Column diameter: 0.25

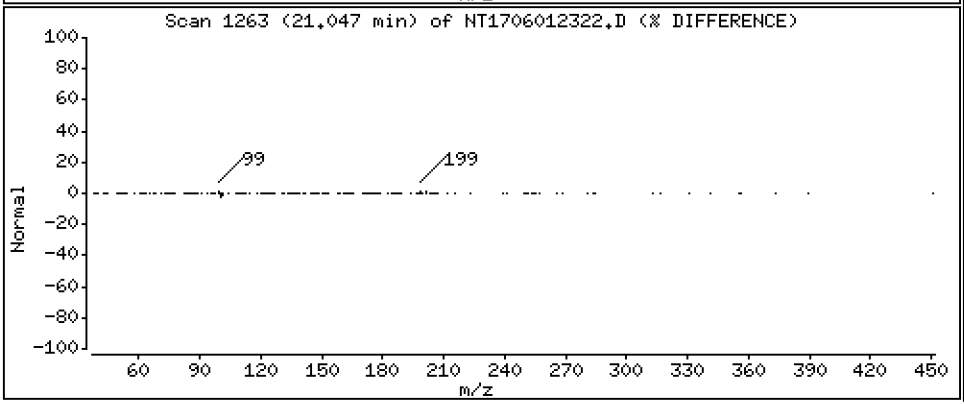
65 Pyrene

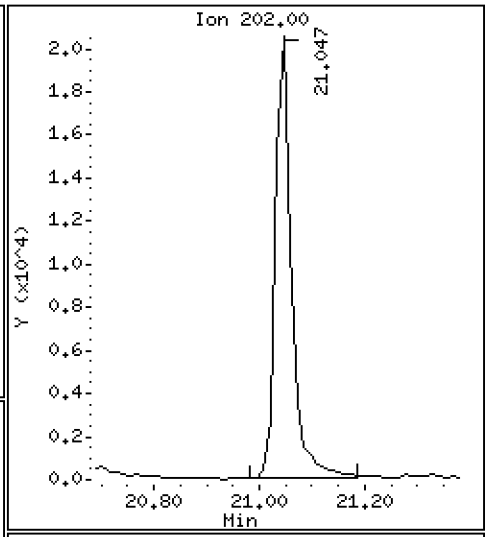
Concentration: 0.2094 ug/mL

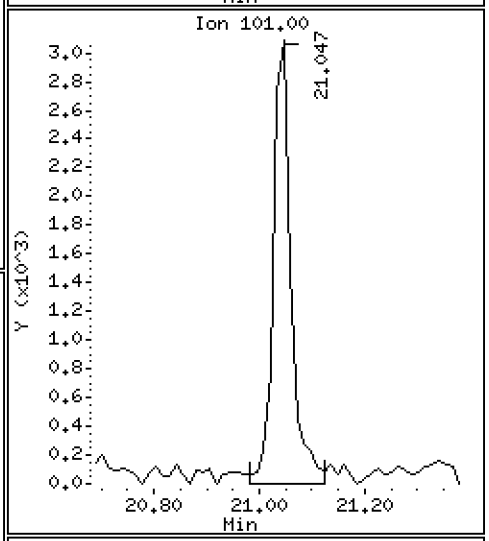


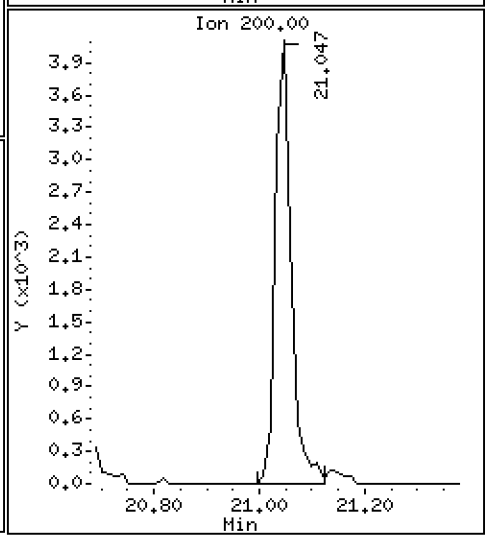












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

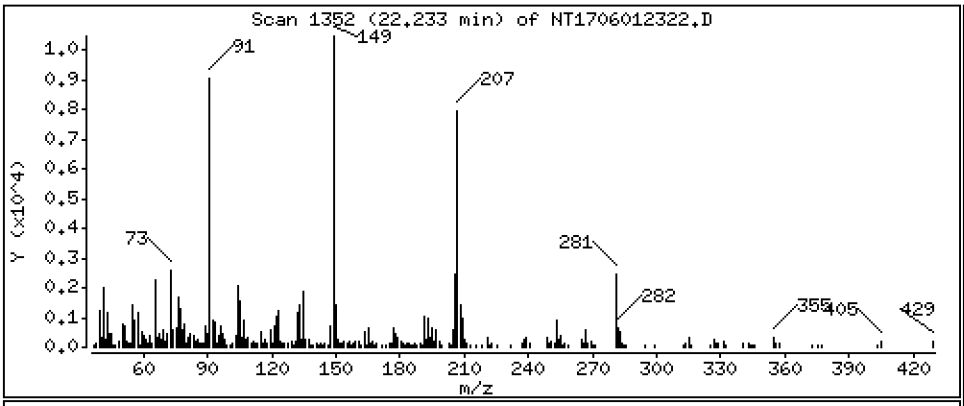
Operator: VTS

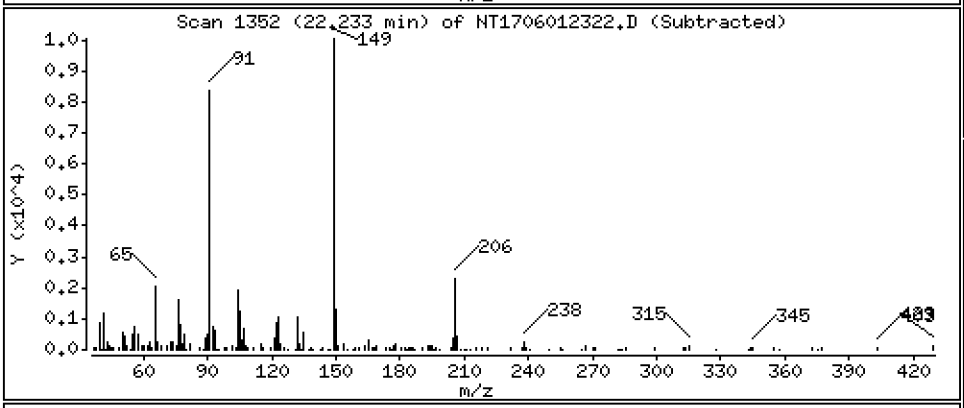
Column phase: ZB-5msi

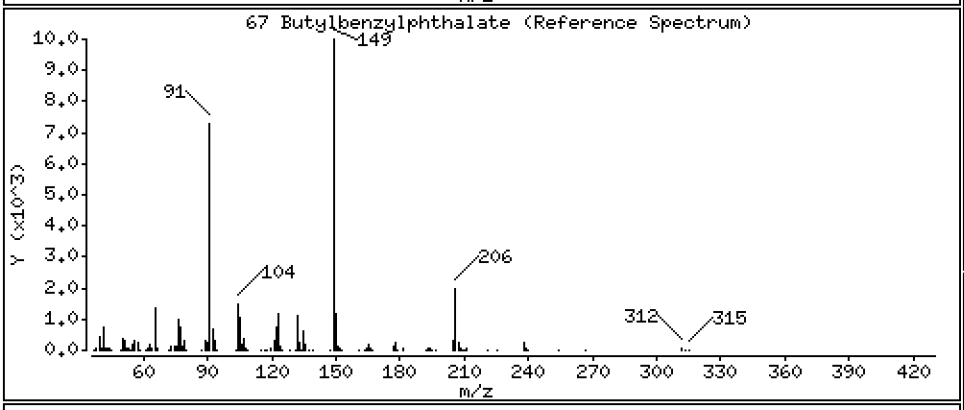
Column diameter: 0.25

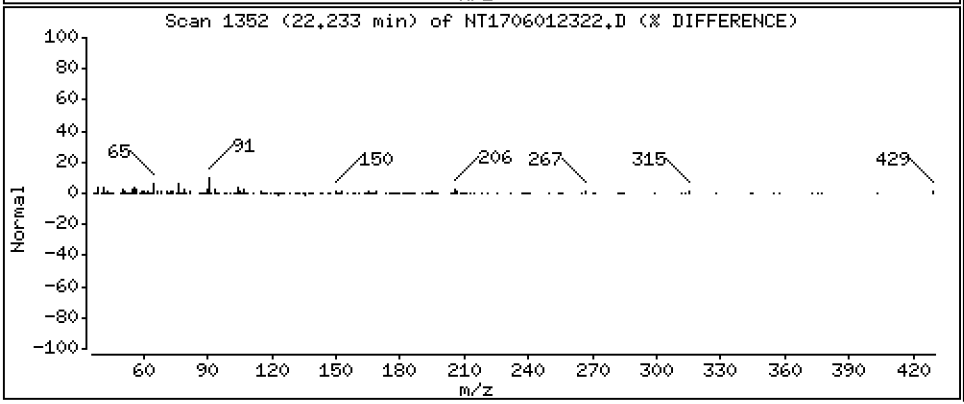
67 Butylbenzylphthalate

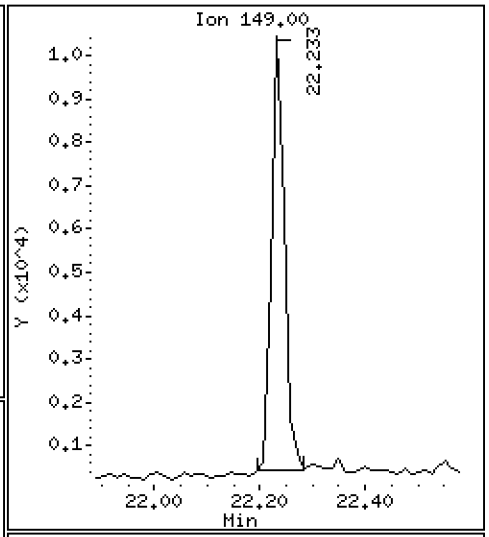
Concentration: 0.1803 ug/mL

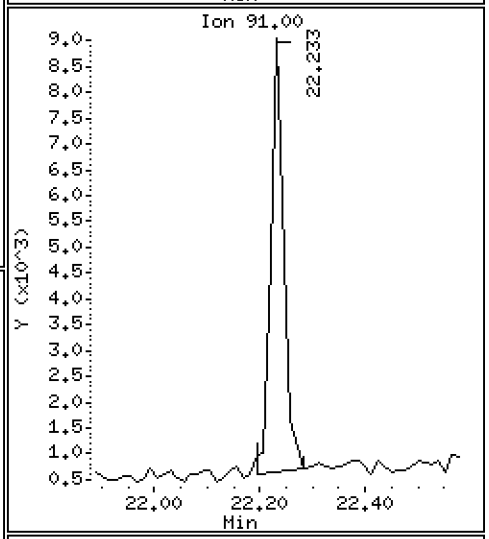


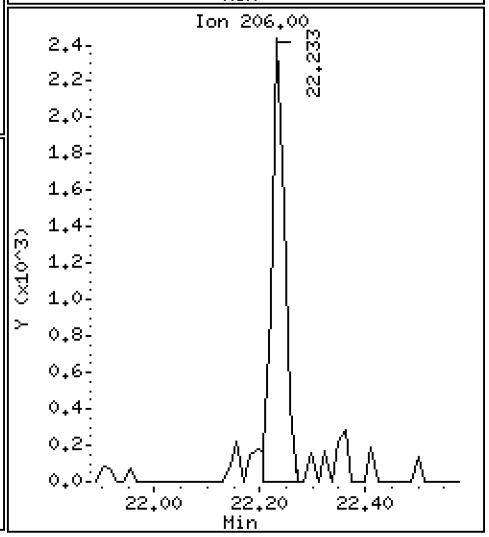












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

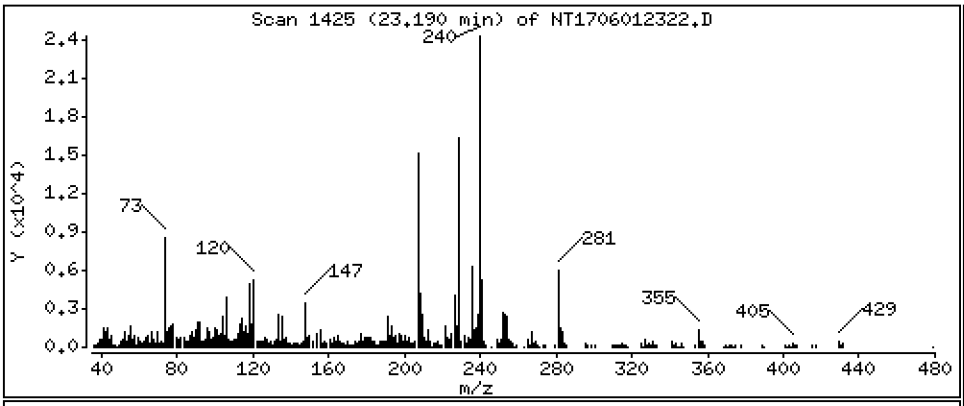
Operator: VTS

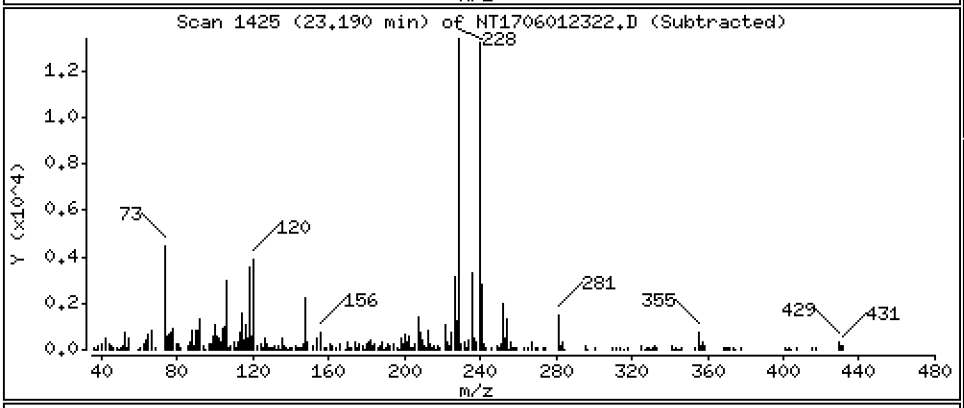
Column phase: ZB-5msi

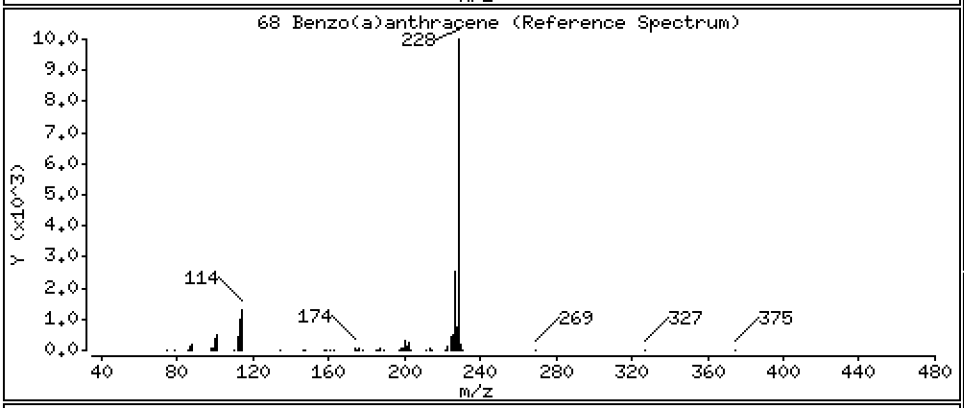
Column diameter: 0.25

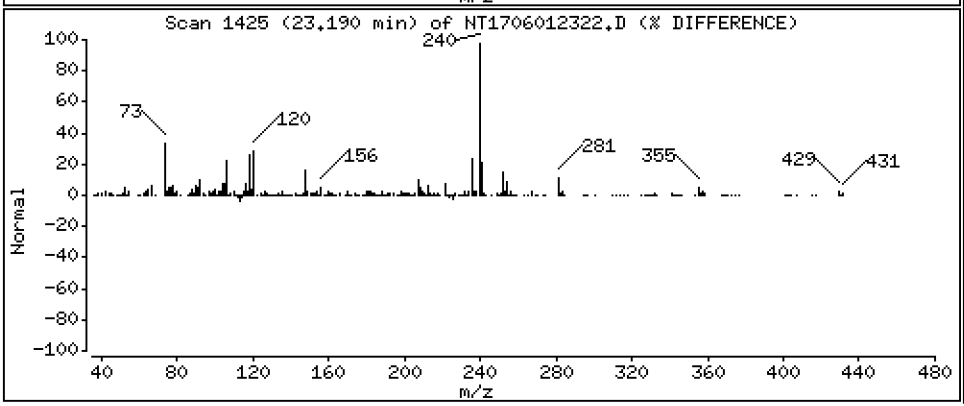
68 Benzo(a)anthracene

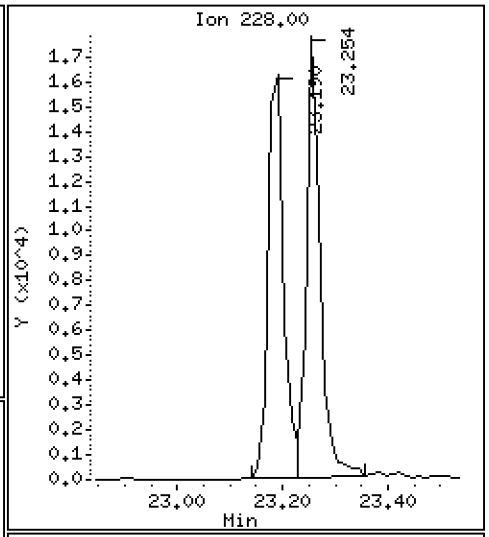
Concentration: 0.2094 ug/mL

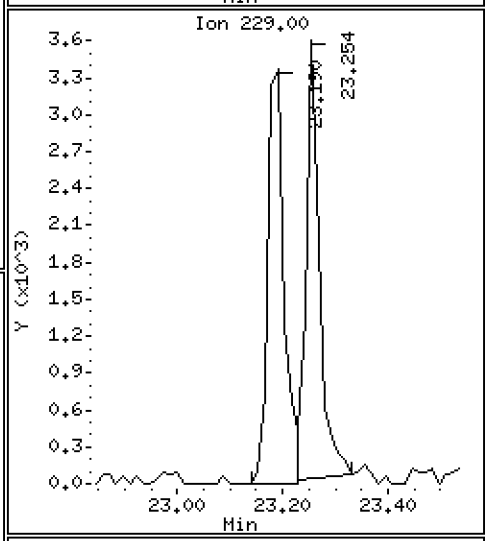


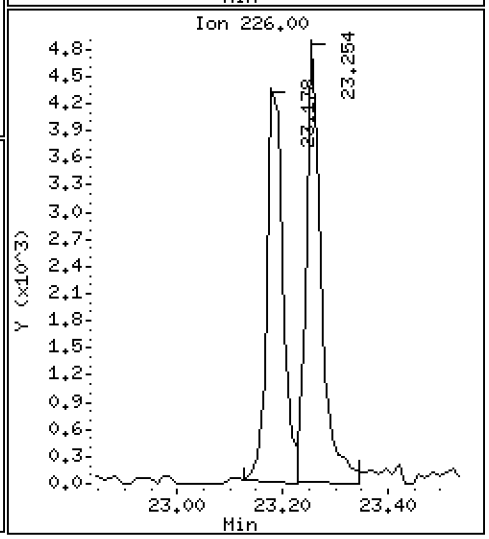












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

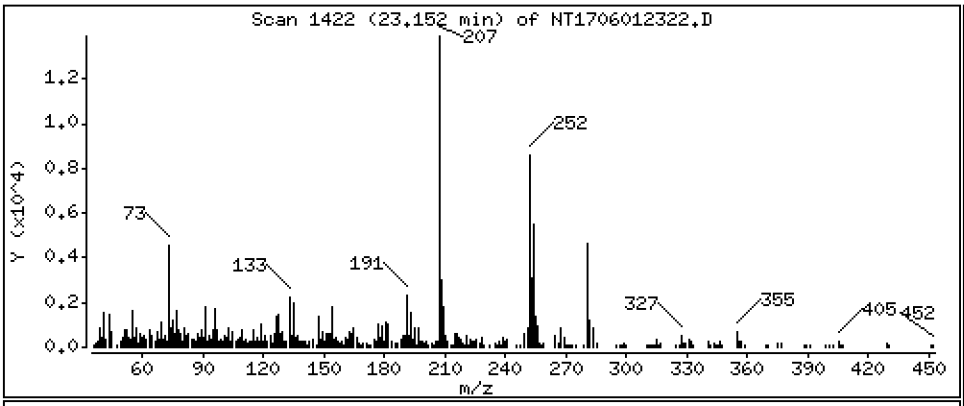
Operator: VTS

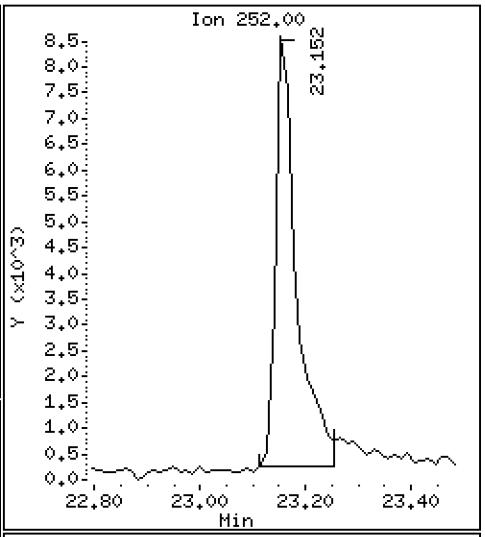
Column phase: ZB-5msi

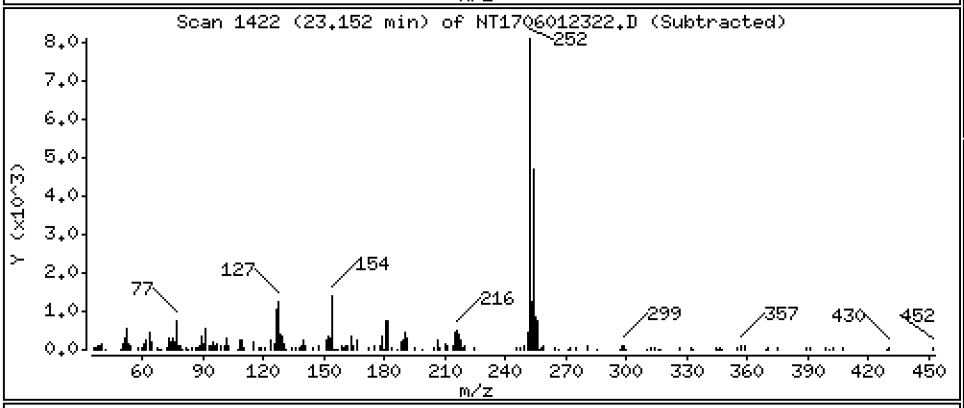
Column diameter: 0.25

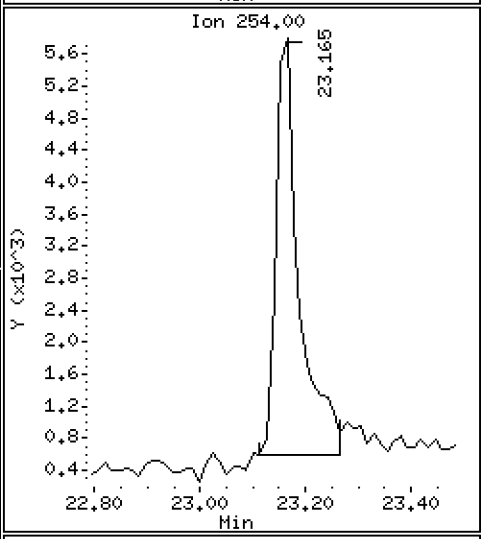
70 3,3'-Dichlorobenzidine

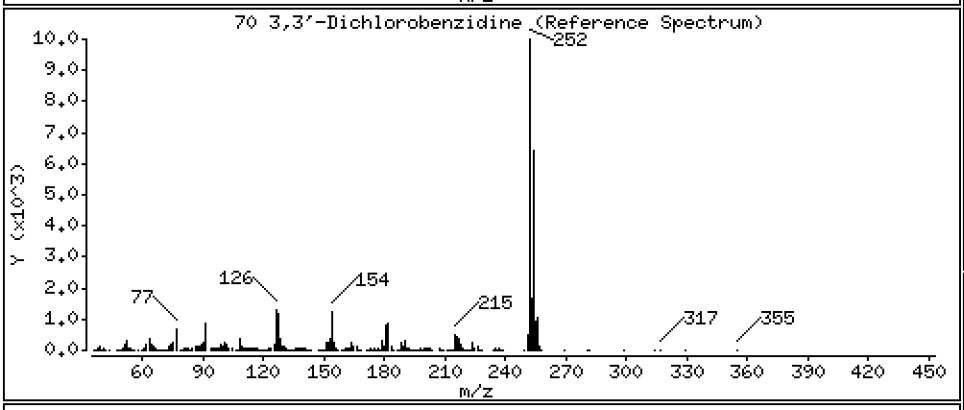
Concentration: 0.7446 ug/mL

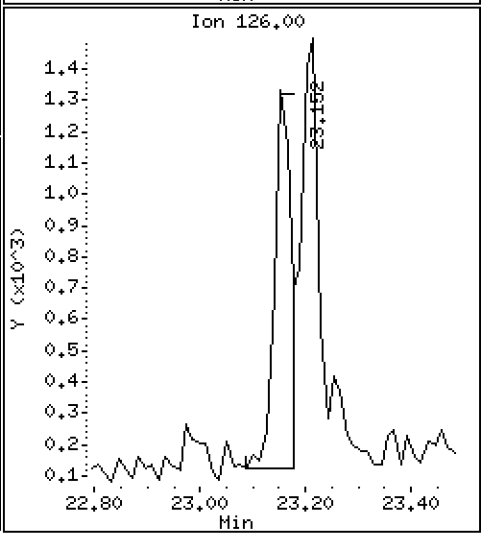


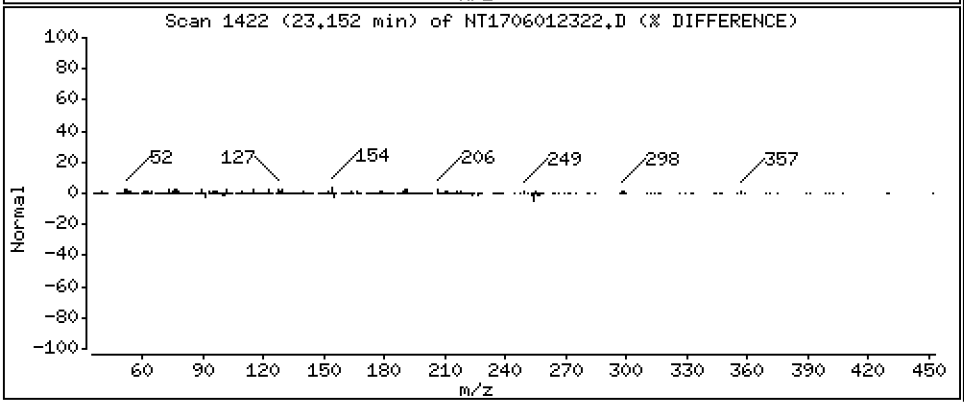












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

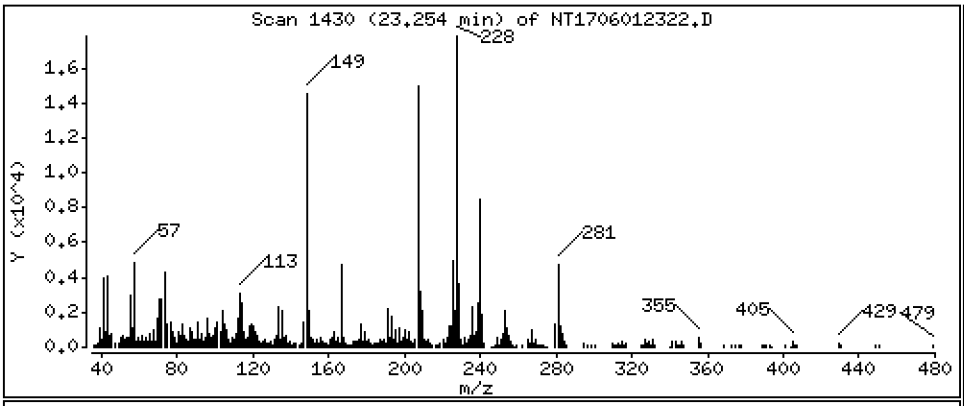
Operator: VTS

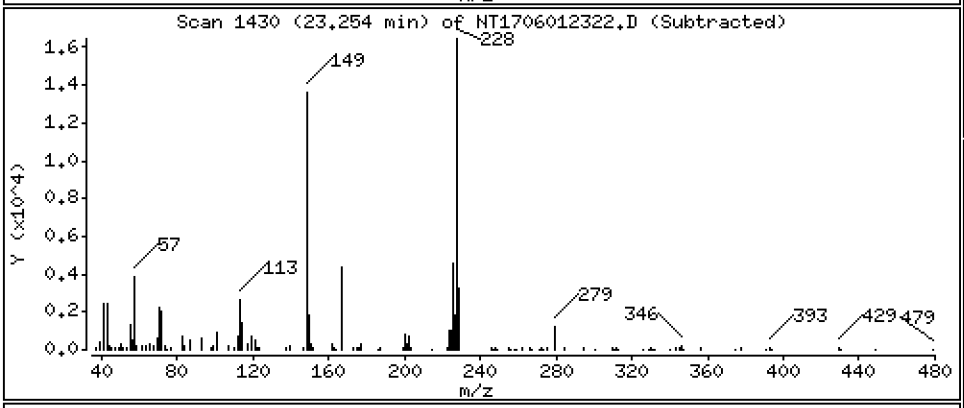
Column phase: ZB-5msi

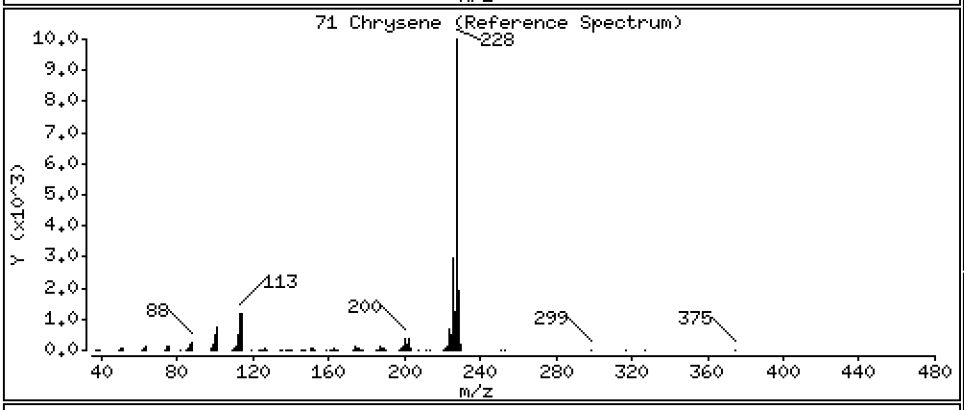
Column diameter: 0.25

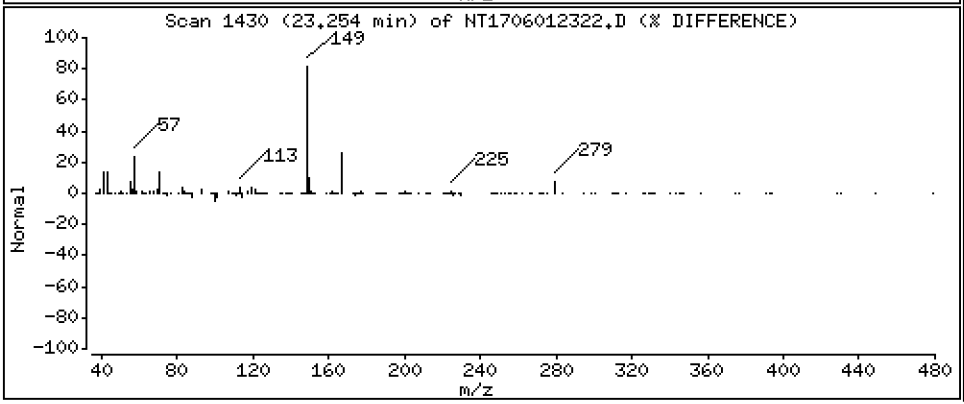
71 Chrysene

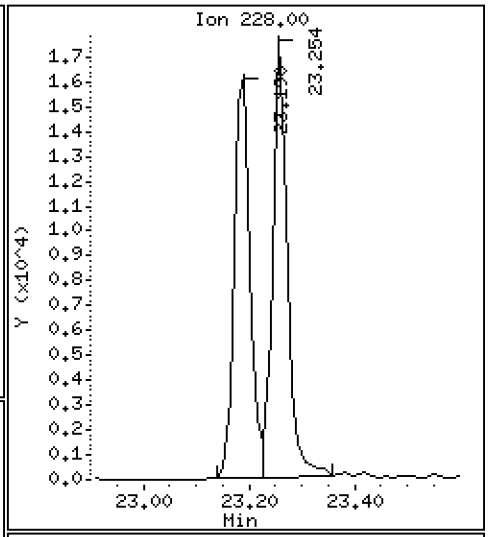
Concentration: 0.2200 ug/mL

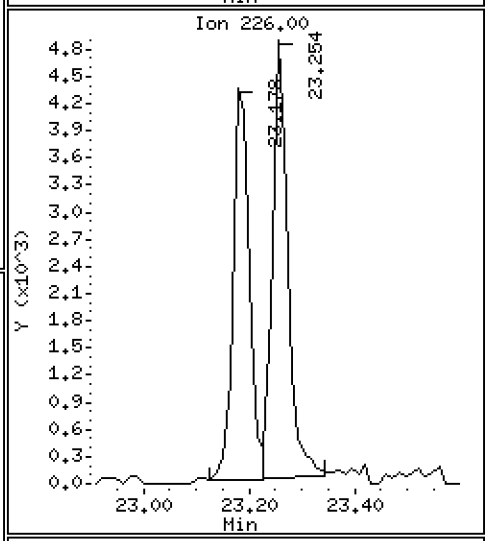


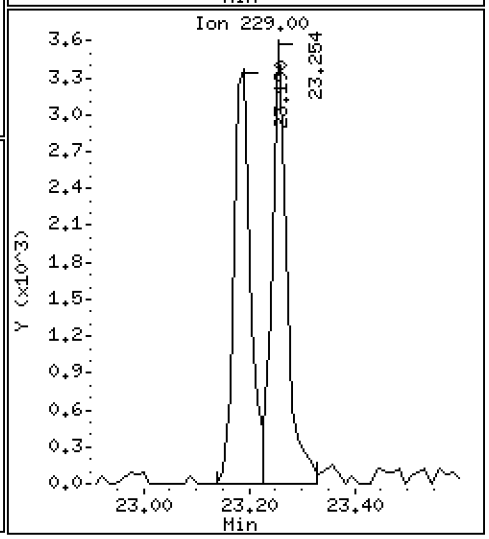












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

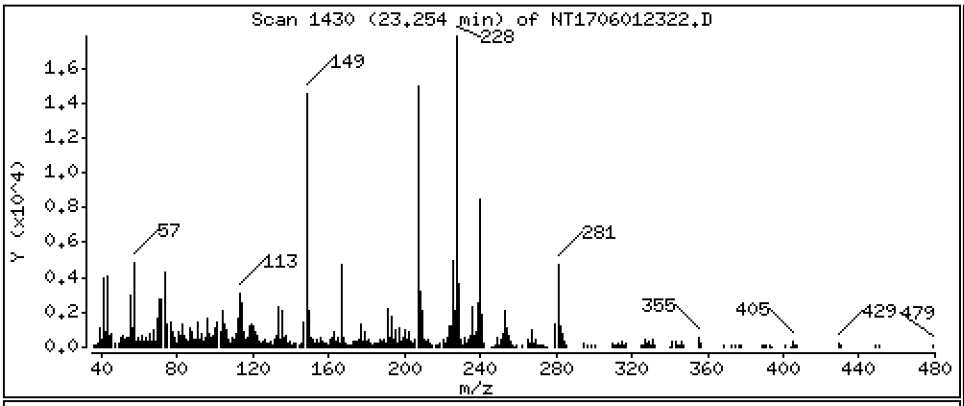
Operator: VTS

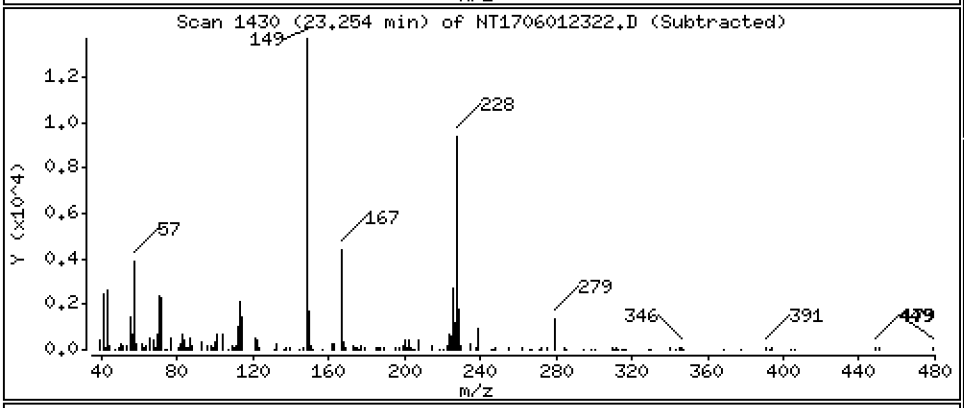
Column phase: ZB-5msi

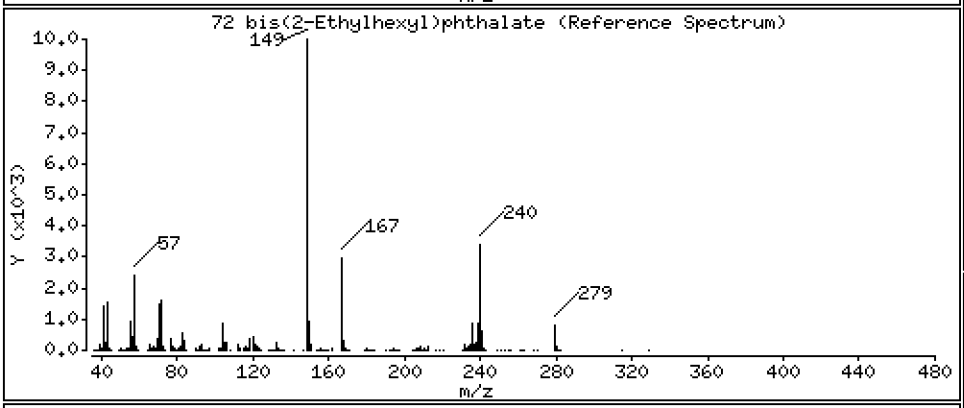
Column diameter: 0.25

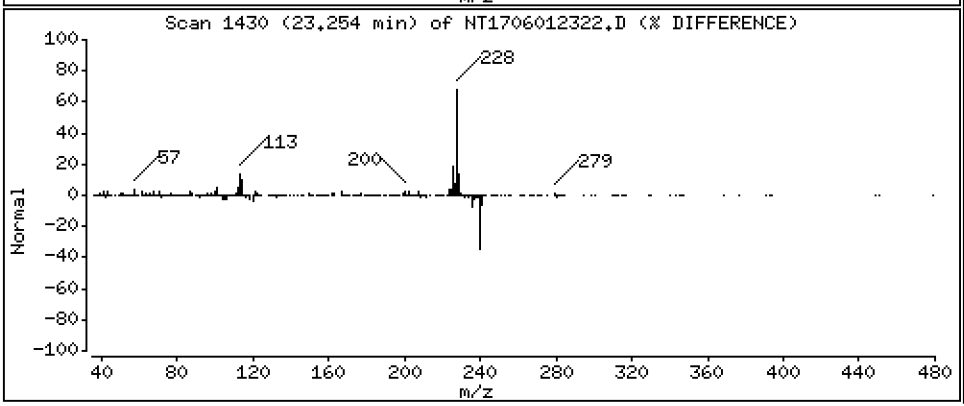
72 bis(2-Ethylhexyl)phthalate

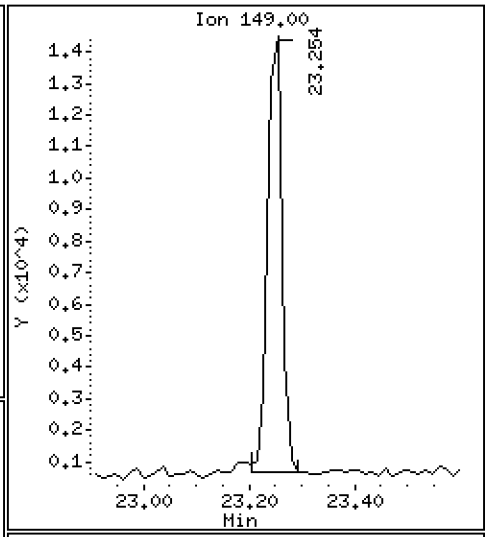
Concentration: 0.2300 ug/mL

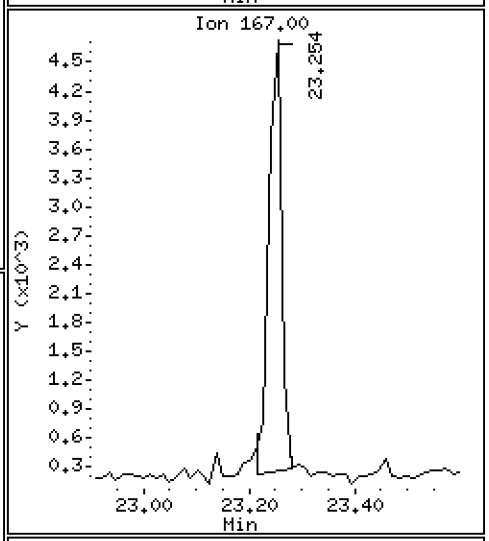


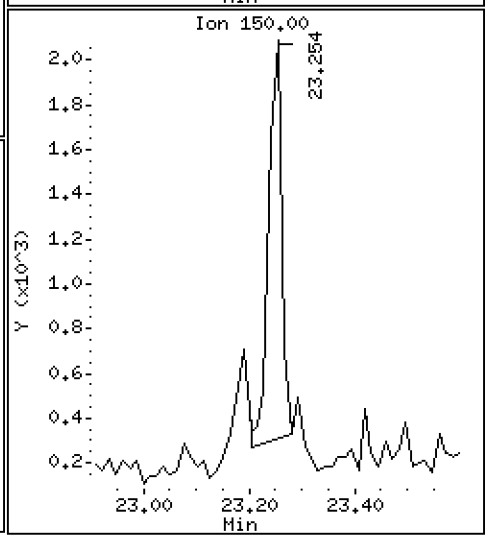












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

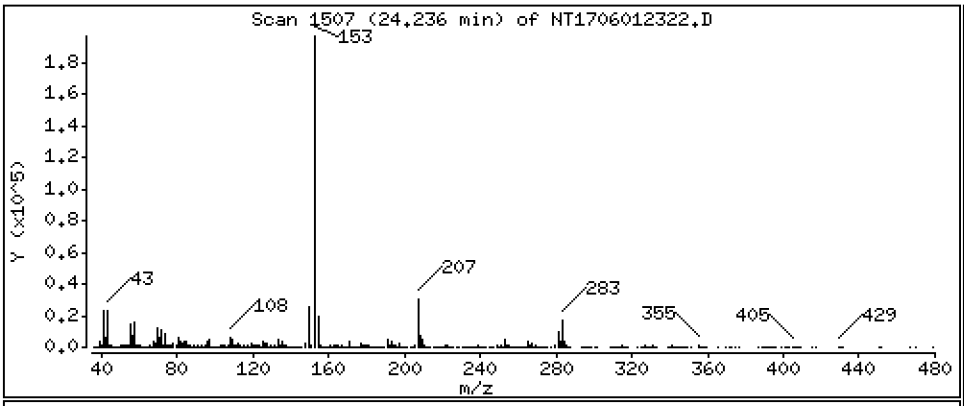
Operator: VTS

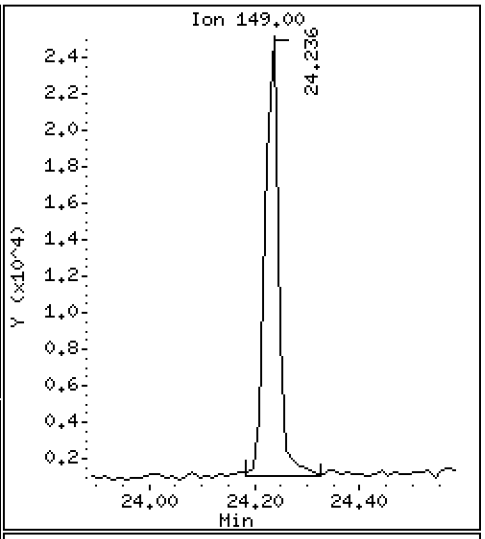
Column phase: ZB-5msi

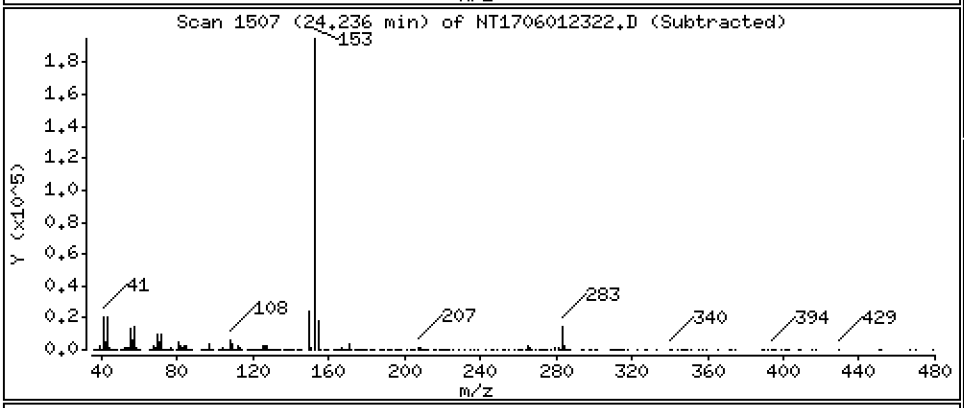
Column diameter: 0.25

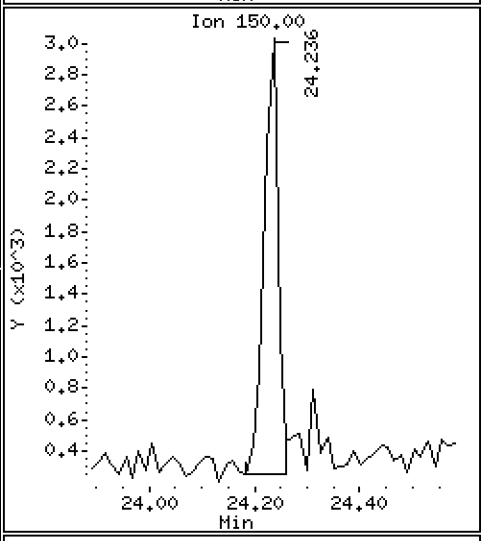
73 Di-n-octylphthalate

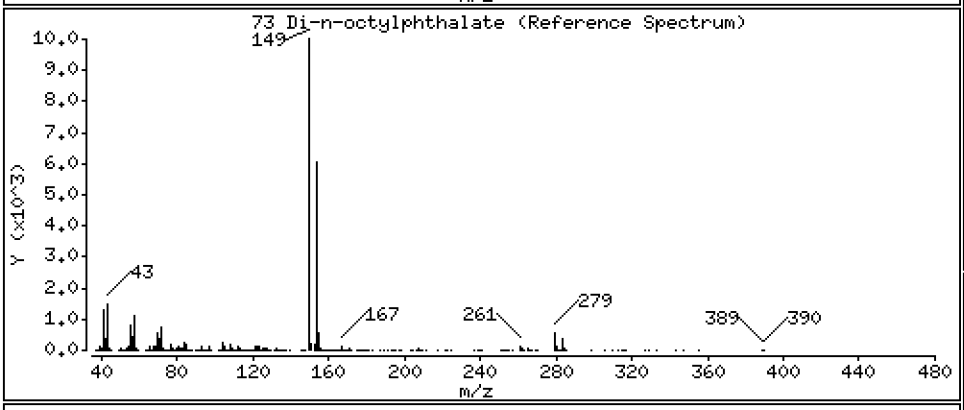
Concentration: 0.2203 ug/mL

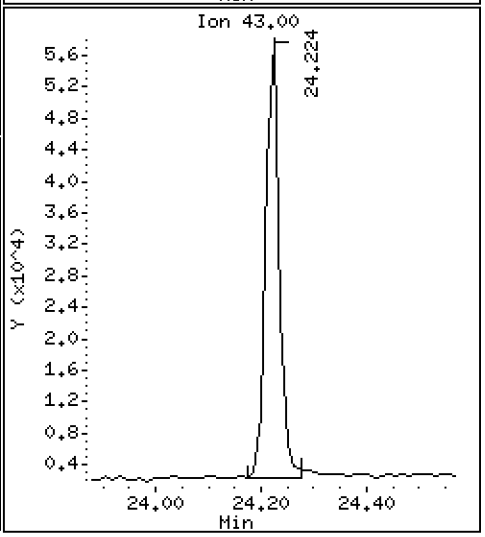


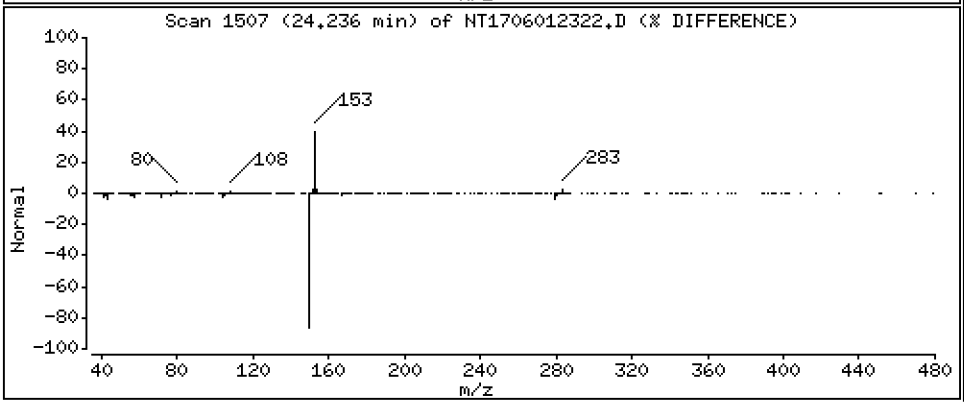












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

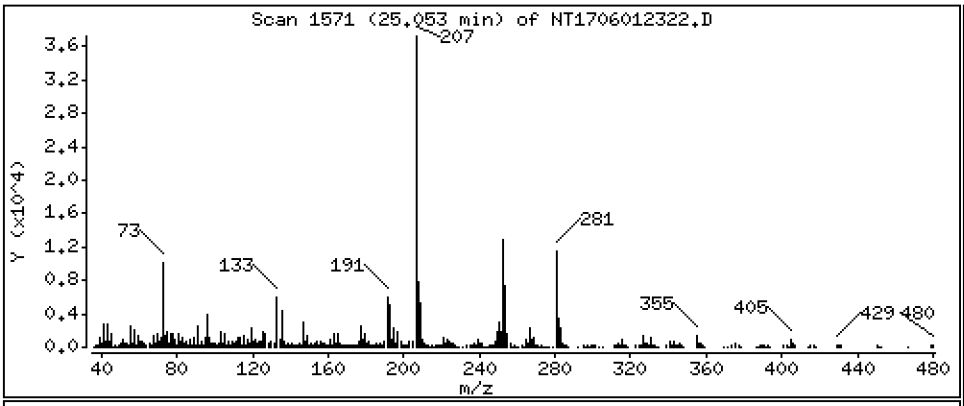
Operator: VTS

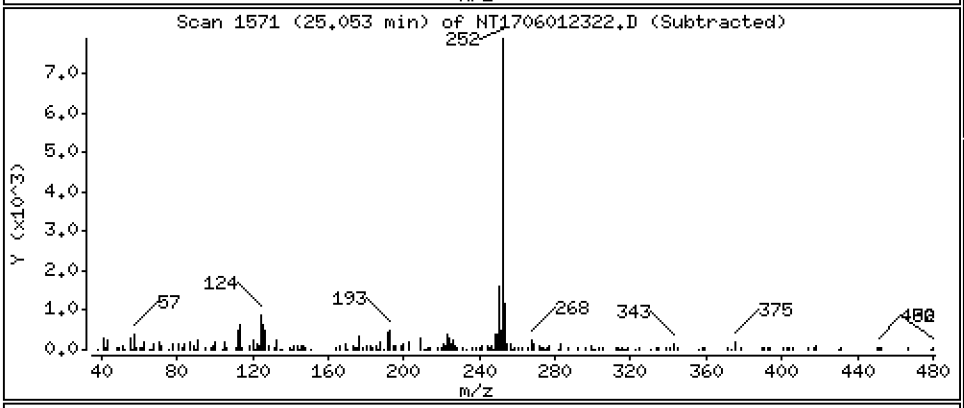
Column phase: ZB-5msi

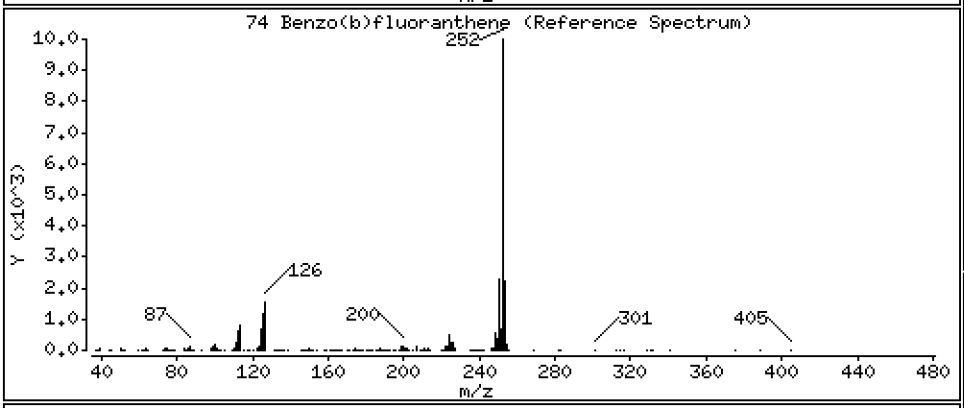
Column diameter: 0.25

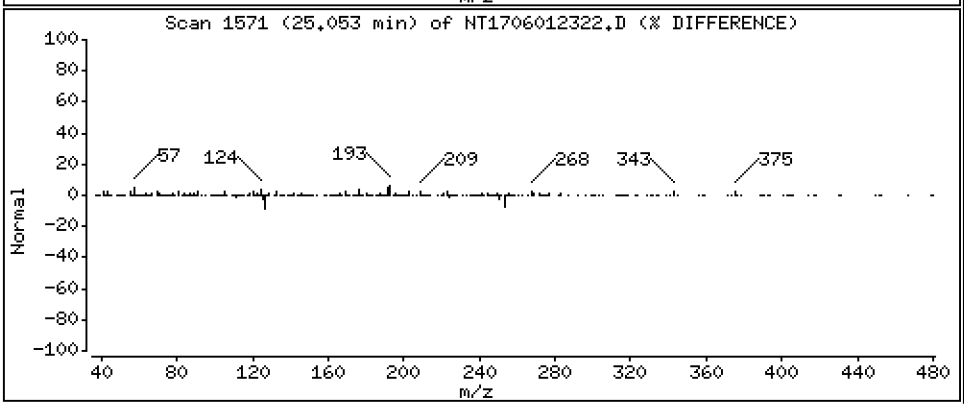
74 Benzo(b)fluoranthene

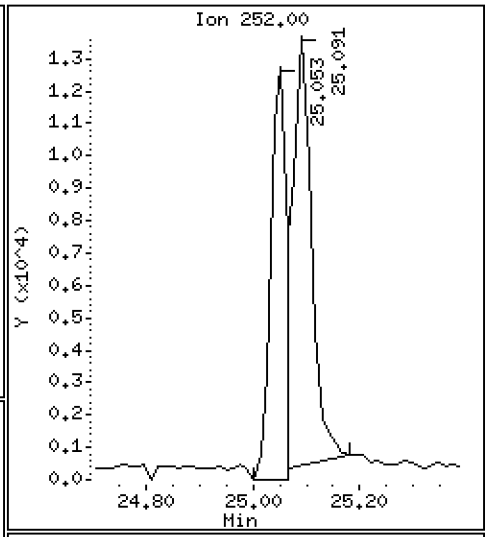
Concentration: 0.1761 ug/mL

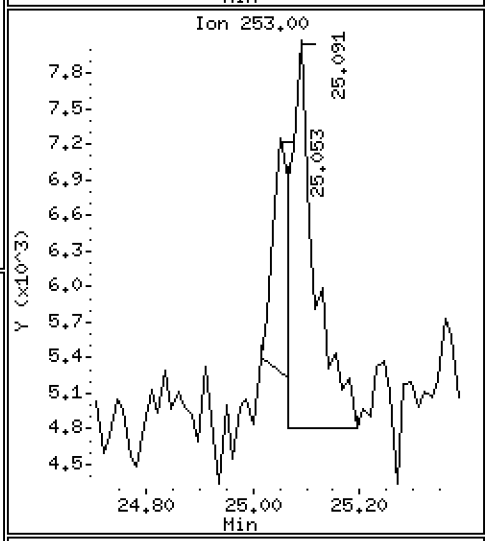


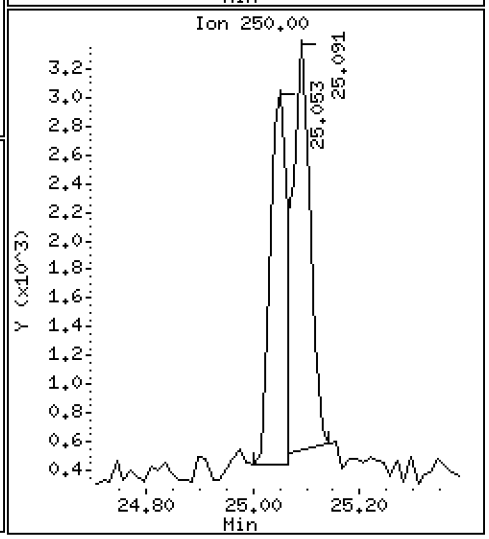












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

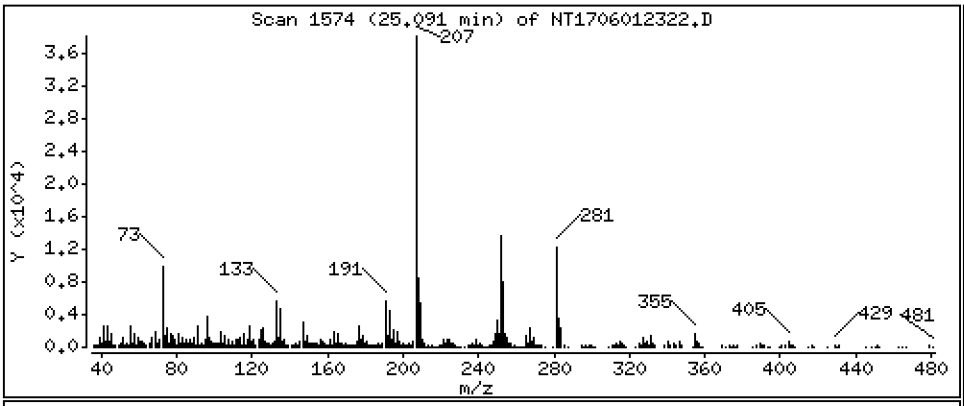
Operator: VTS

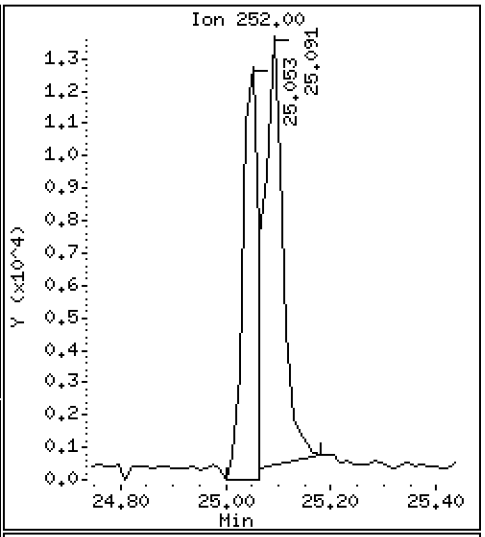
Column phase: ZB-5msi

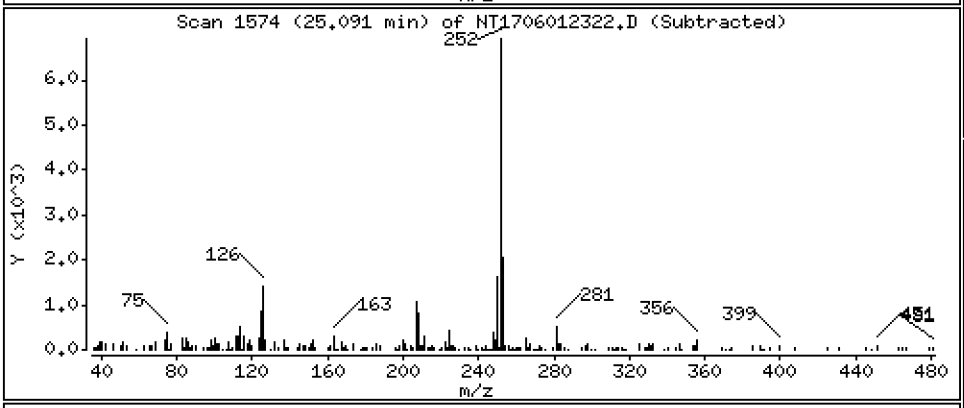
Column diameter: 0.25

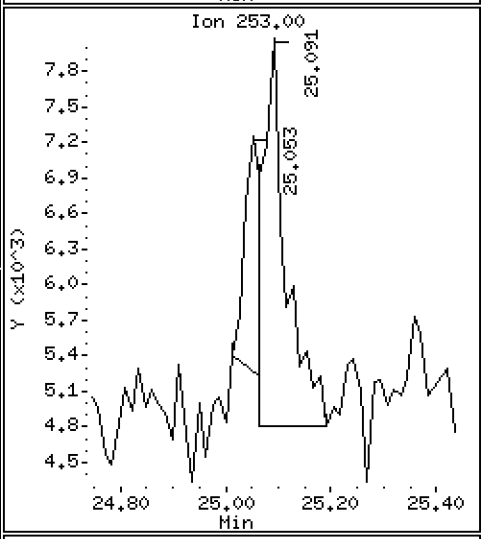
75 Benzo(k)fluoranthene

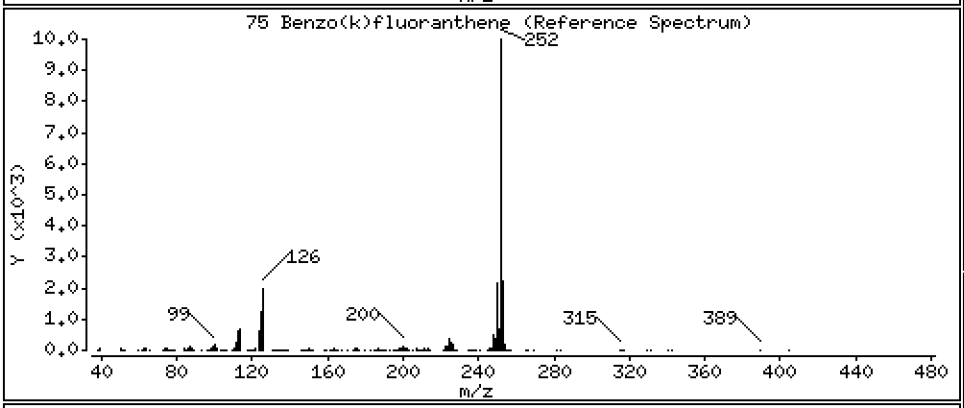
Concentration: 0.2391 ug/mL

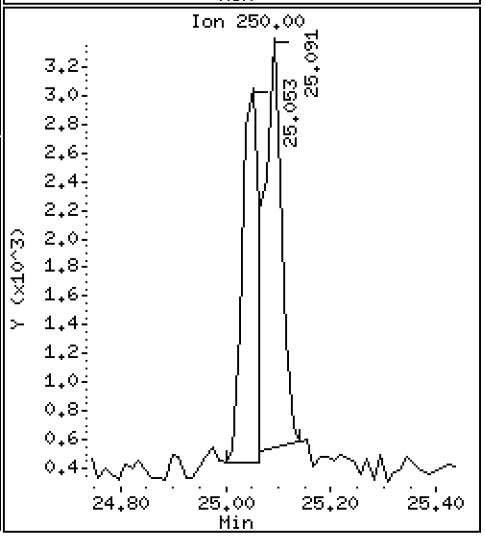


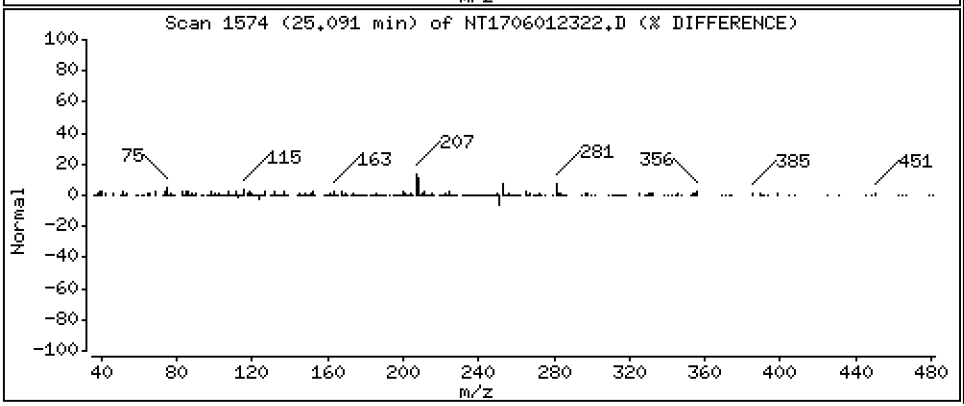












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

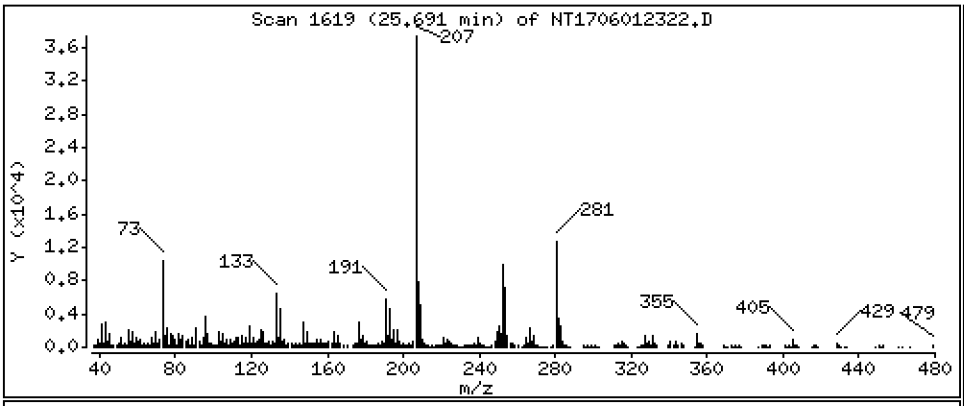
Operator: VTS

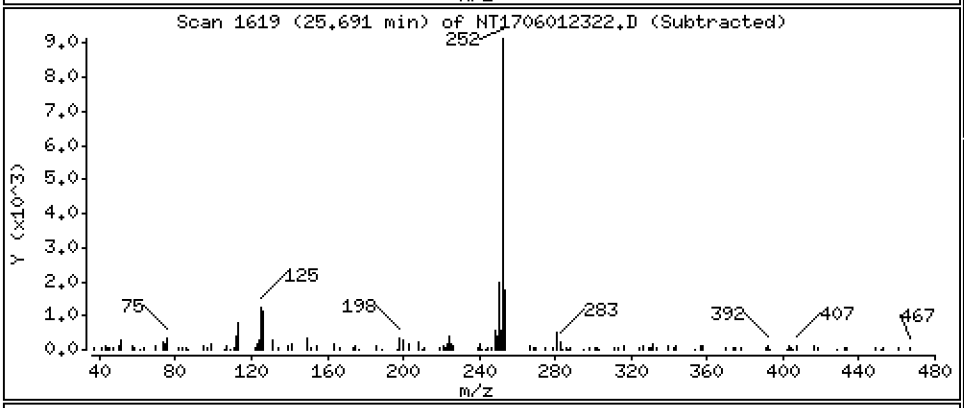
Column phase: ZB-5msi

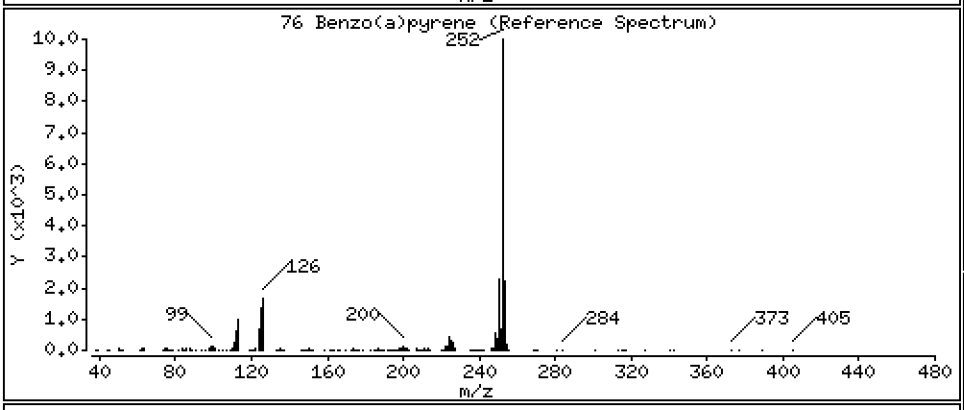
Column diameter: 0.25

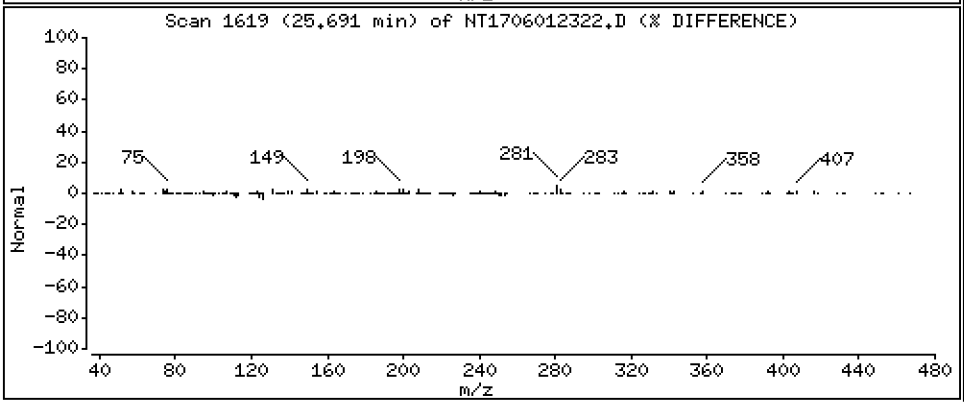
76 Benzo(a)pyrene

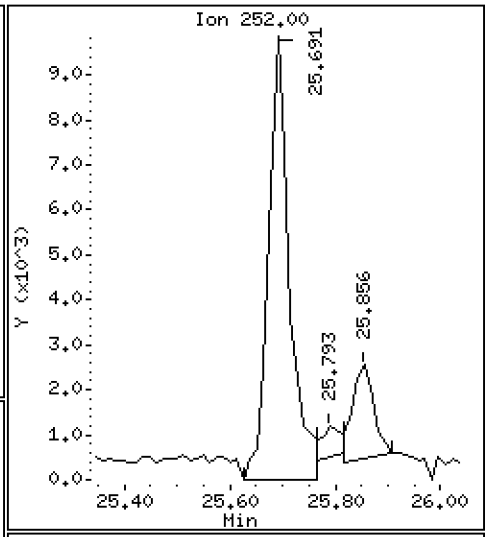
Concentration: 0.2298 ug/mL

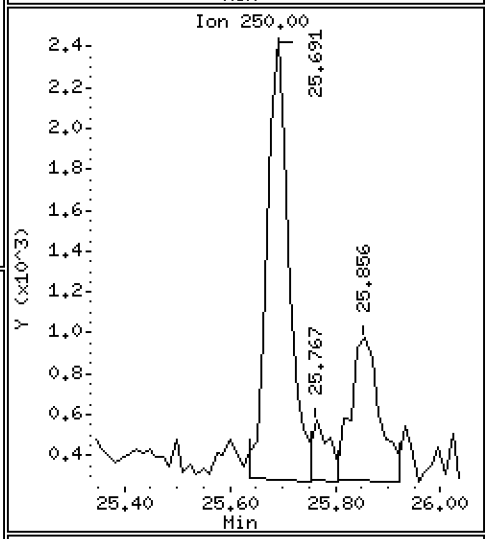


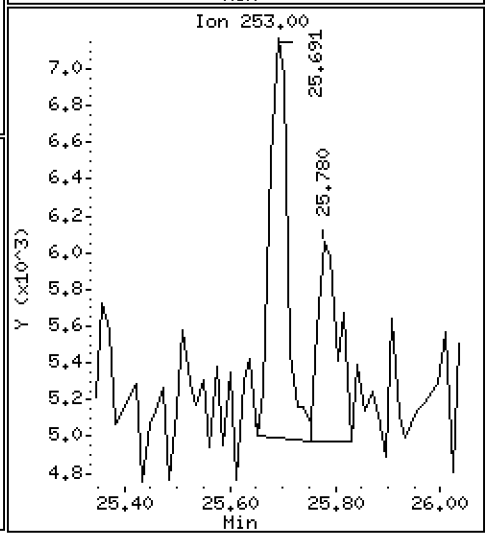












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

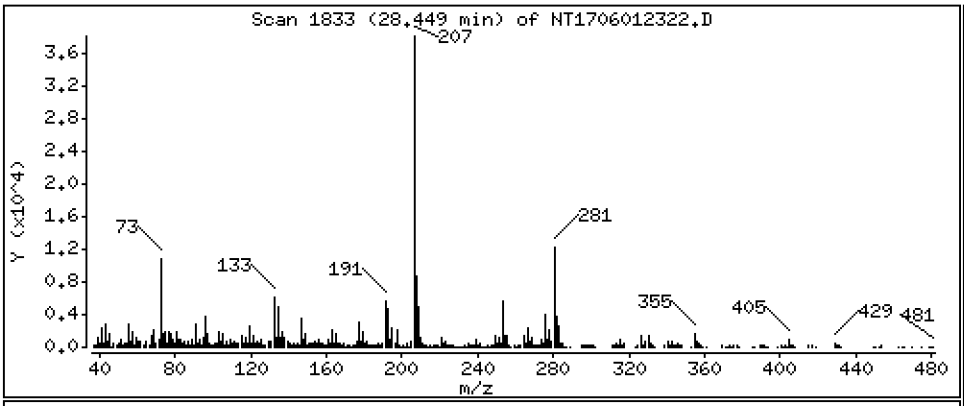
Operator: VTS

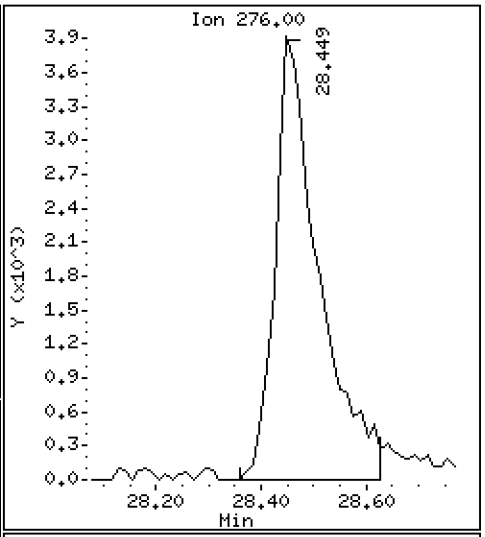
Column phase: ZB-5msi

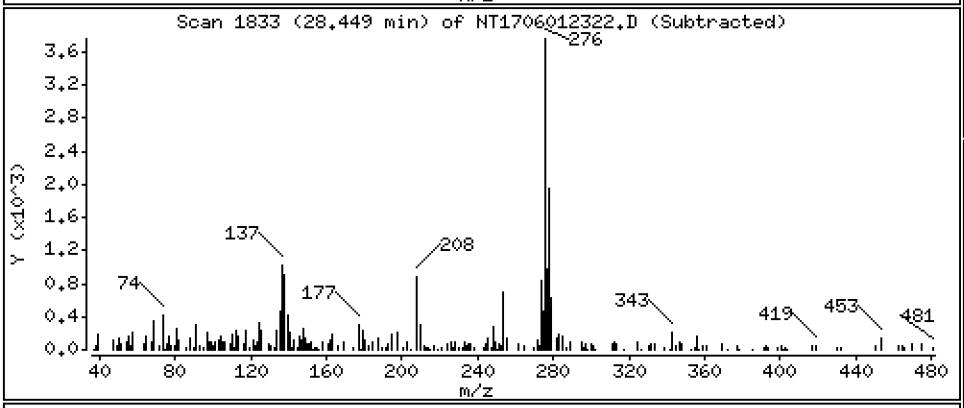
Column diameter: 0.25

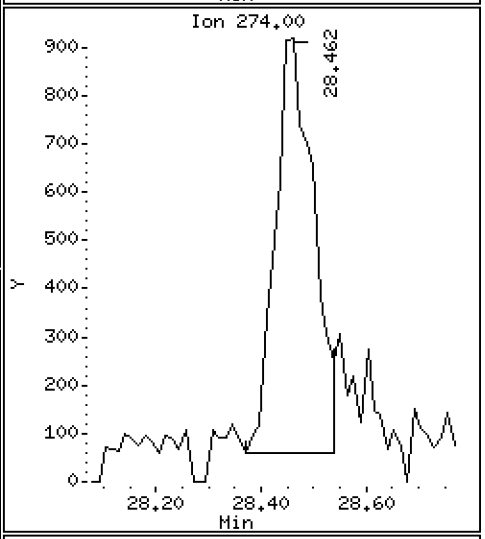
78 Indeno(1,2,3-cd)pyrene

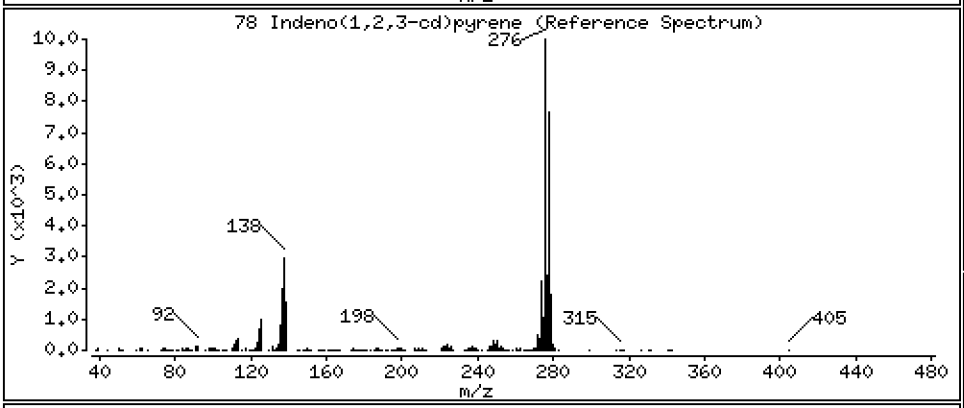
Concentration: 0.1627 ug/mL

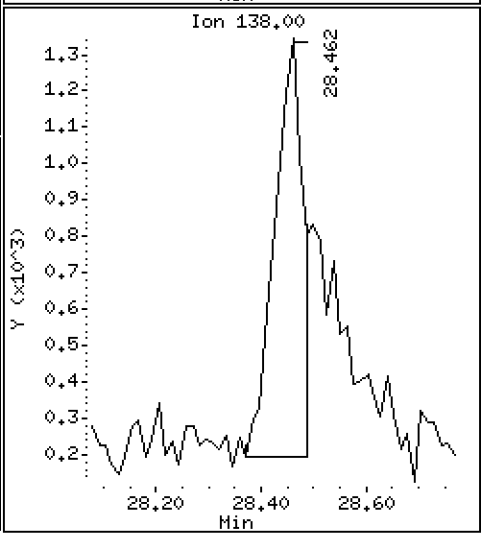


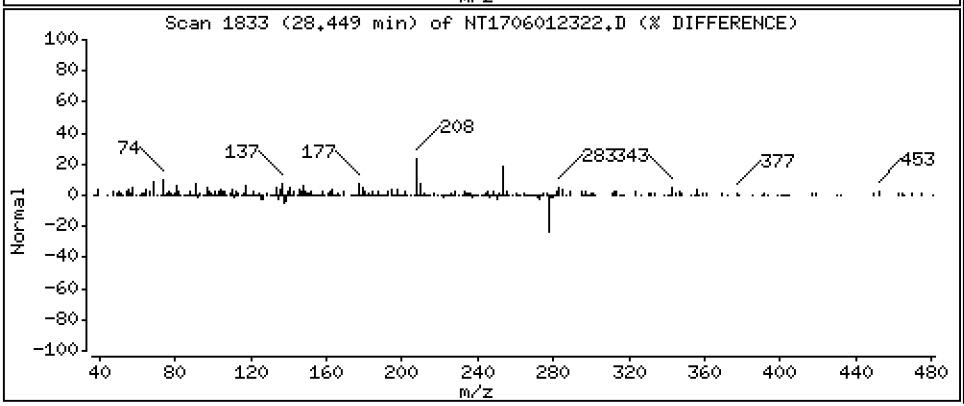












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

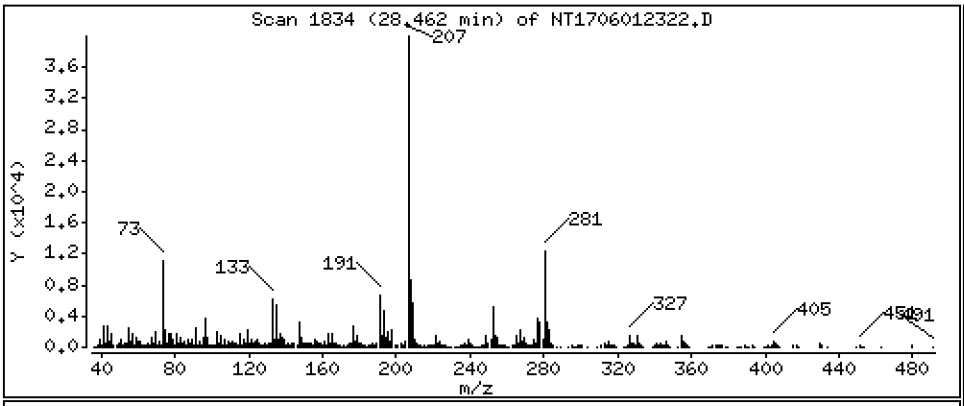
Operator: VTS

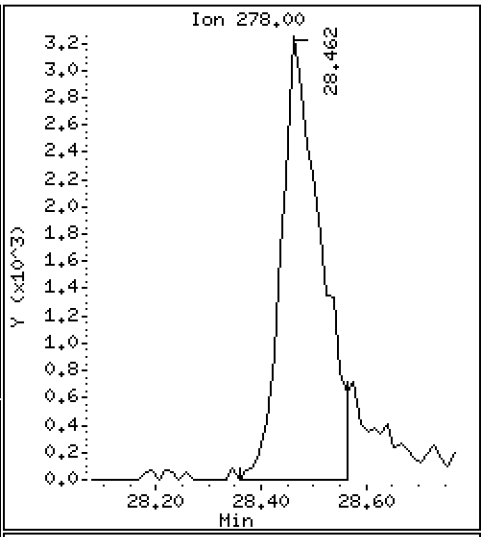
Column phase: ZB-5msi

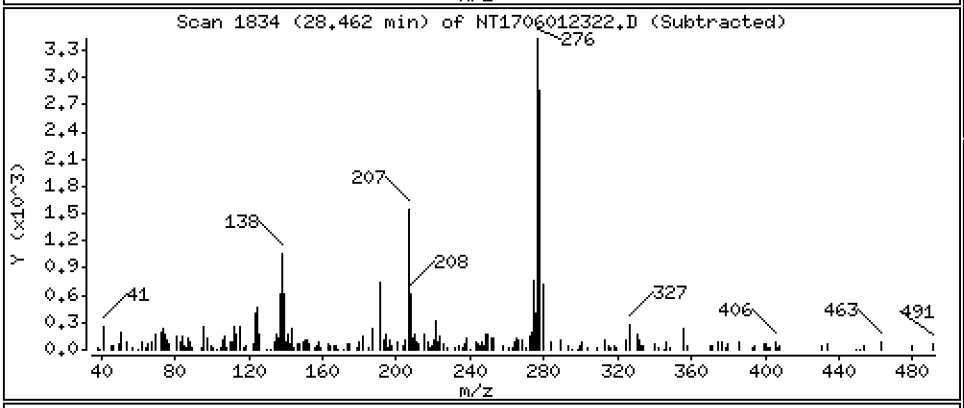
Column diameter: 0.25

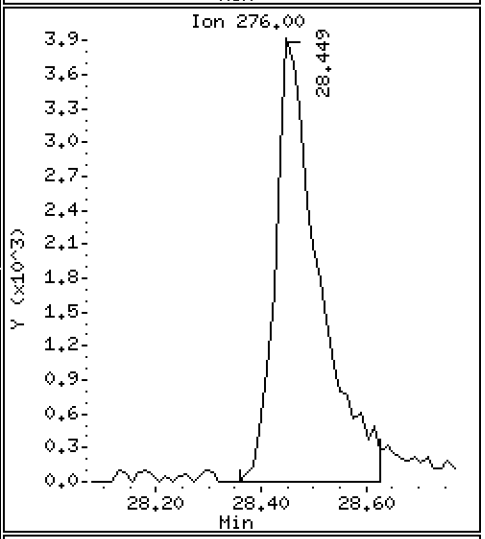
79 Dibenzo(a,h)anthracene

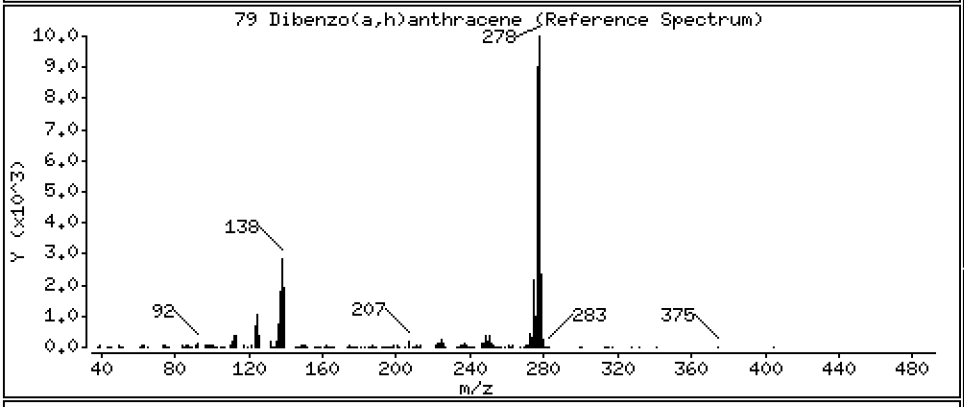
Concentration: 0.1458 ug/mL

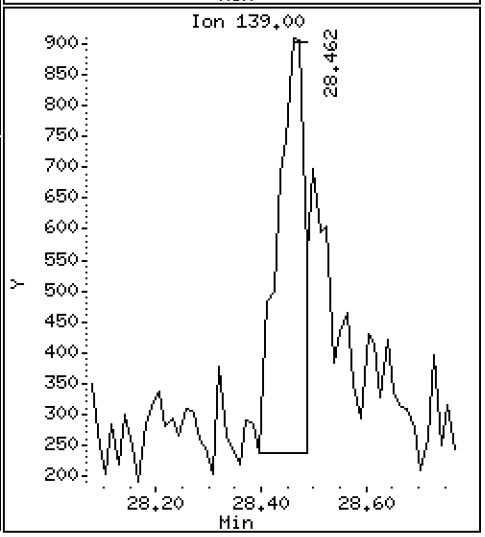


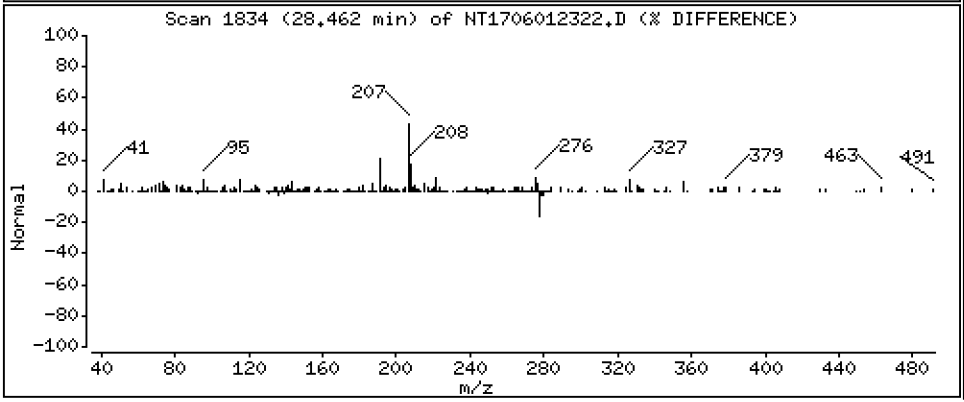












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

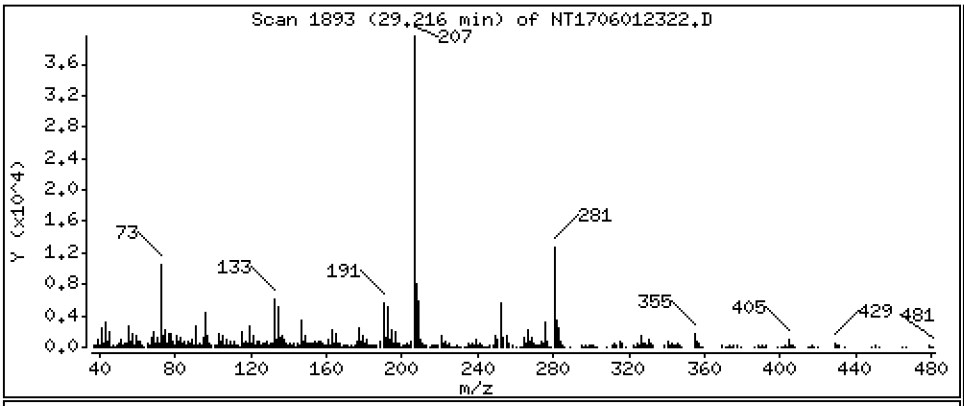
Operator: VTS

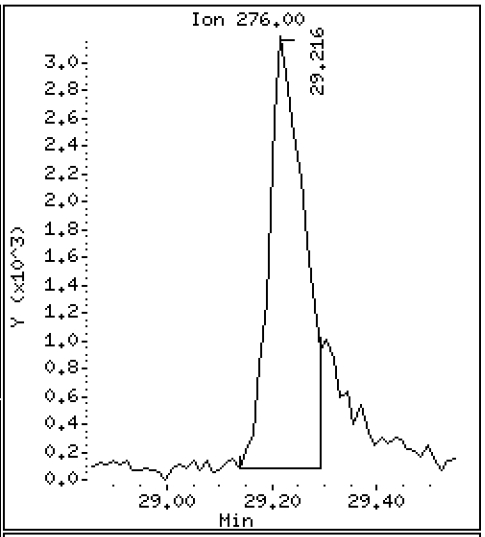
Column phase: ZB-5msi

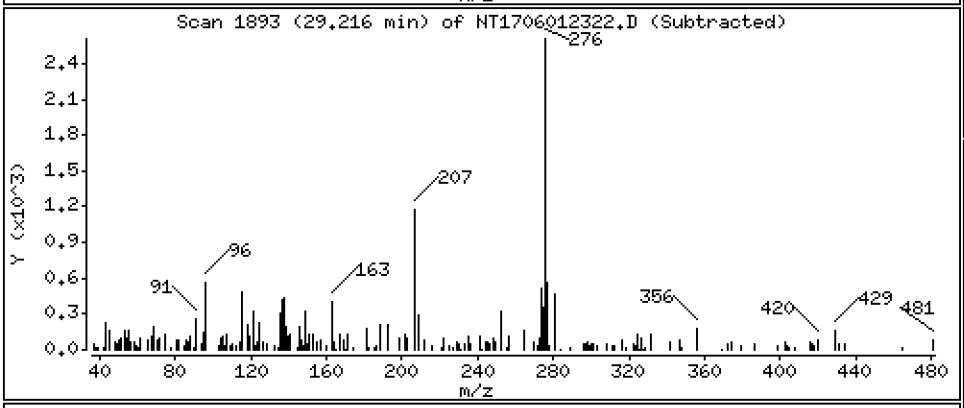
Column diameter: 0.25

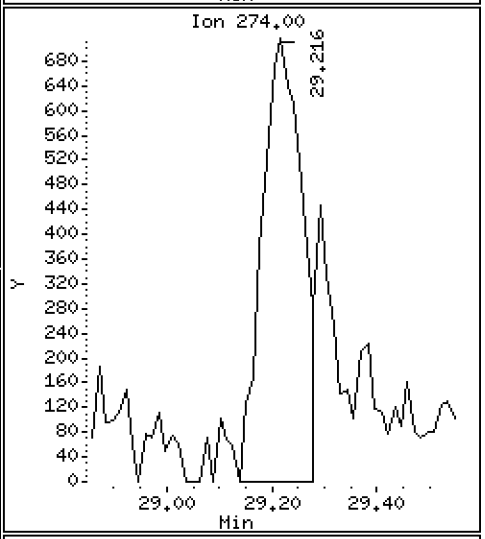
80 Benzo(g,h,i)perylene

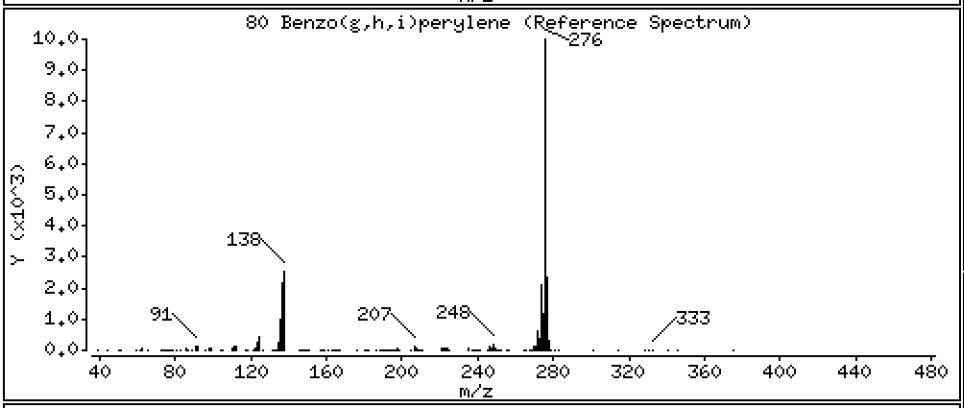
Concentration: 0.1250 ug/mL

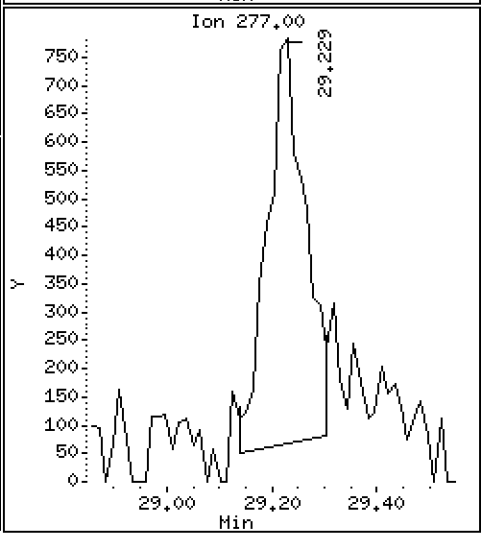


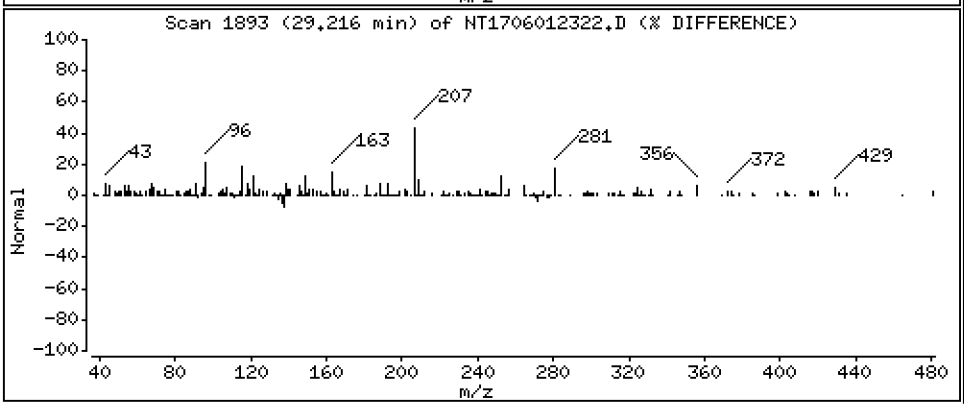












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

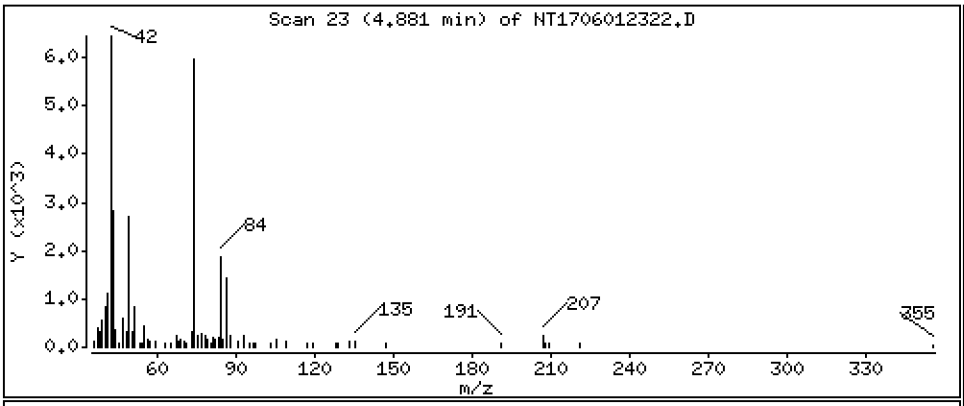
Operator: VTS

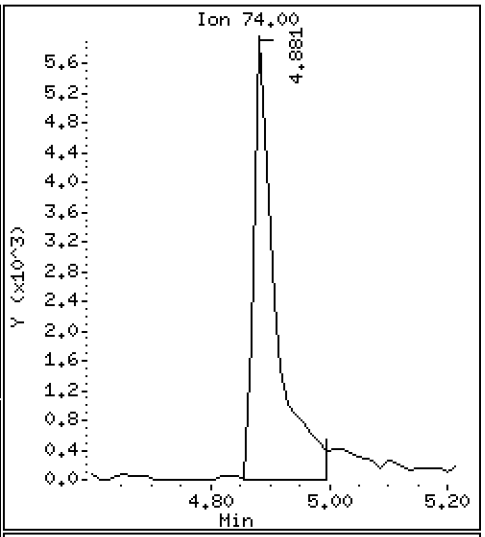
Column phase: ZB-5msi

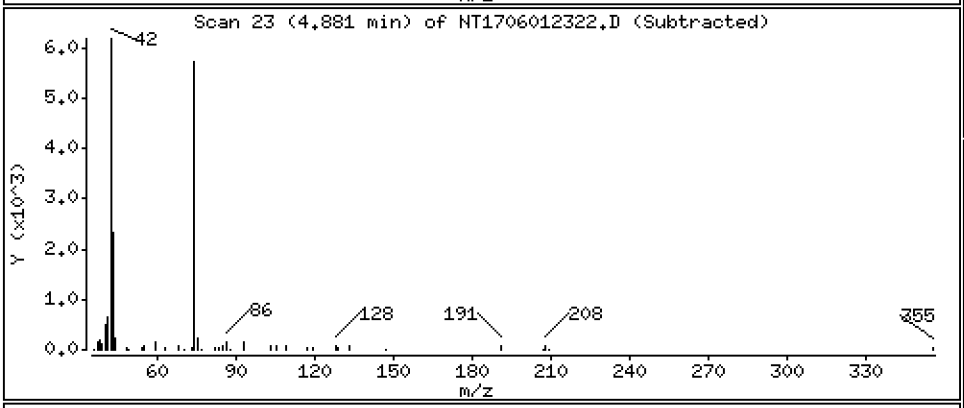
Column diameter: 0.25

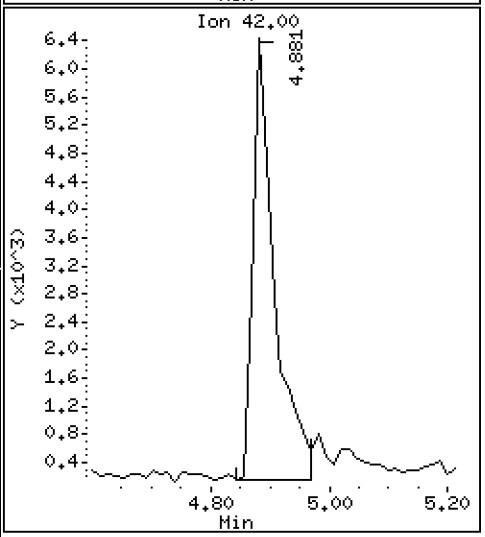
90 N-Nitrosodimethylamine

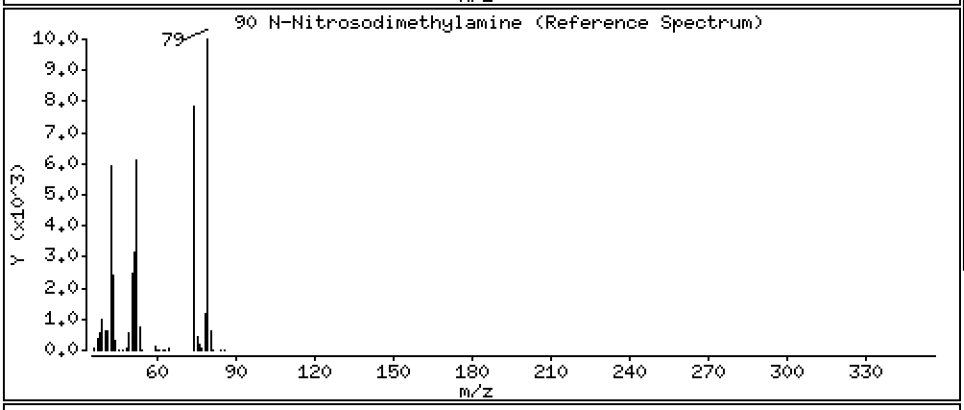
Concentration: 0.2630 ug/mL

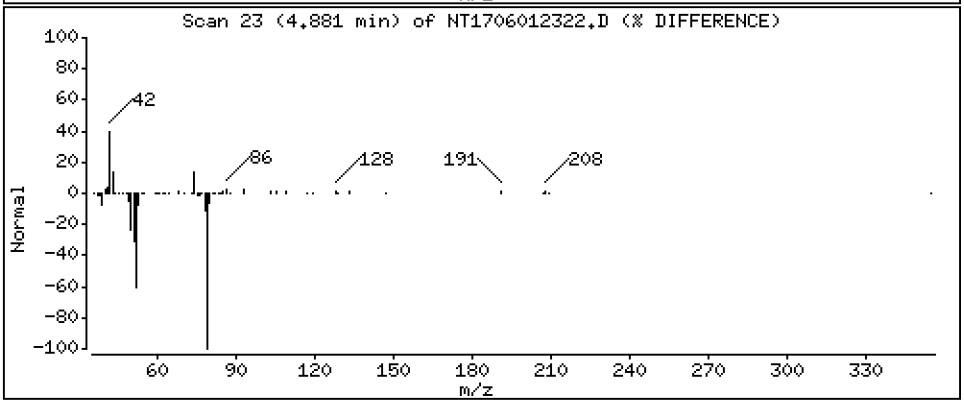












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

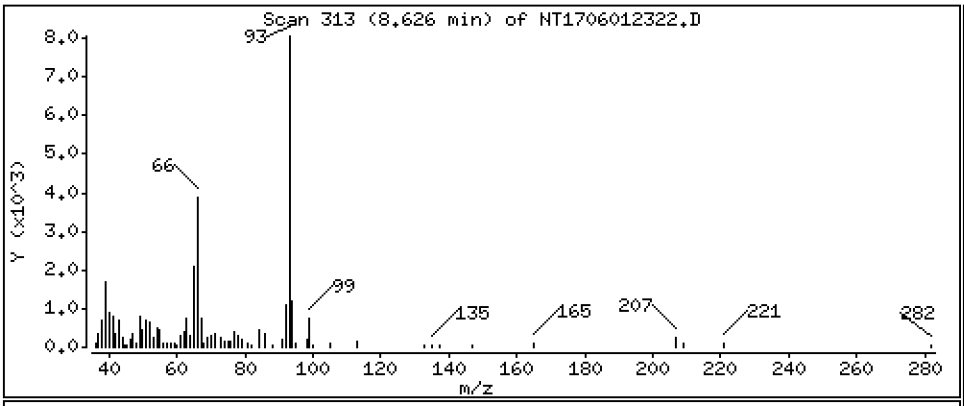
Operator: VTS

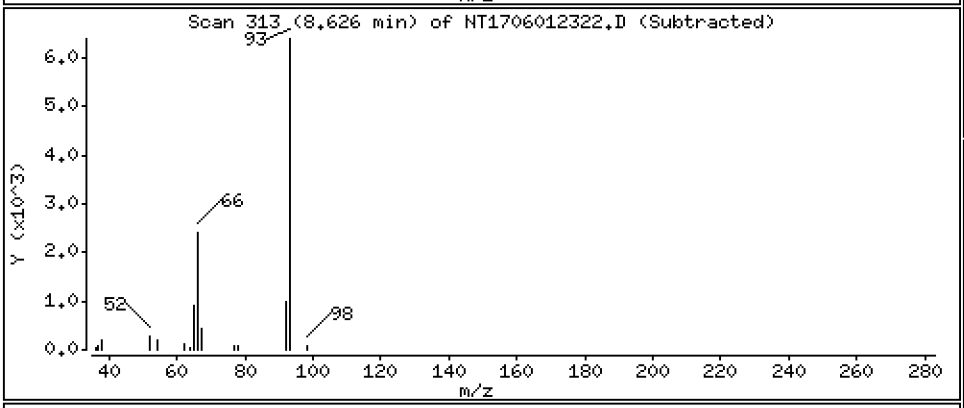
Column phase: ZB-5msi

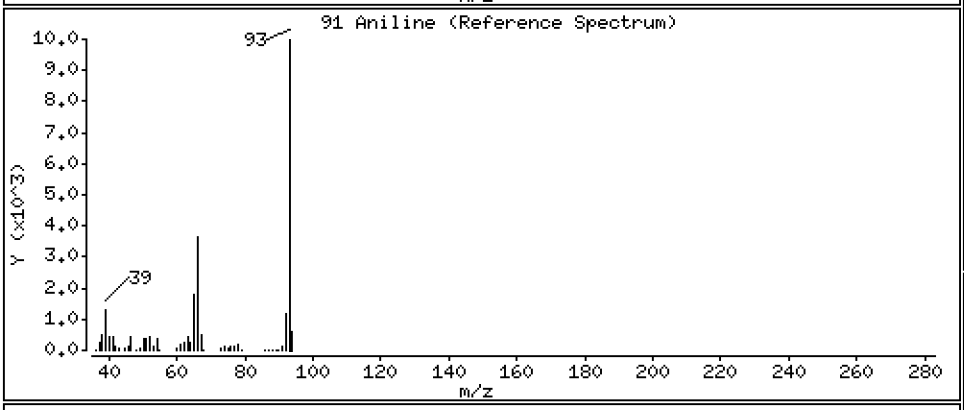
Column diameter: 0.25

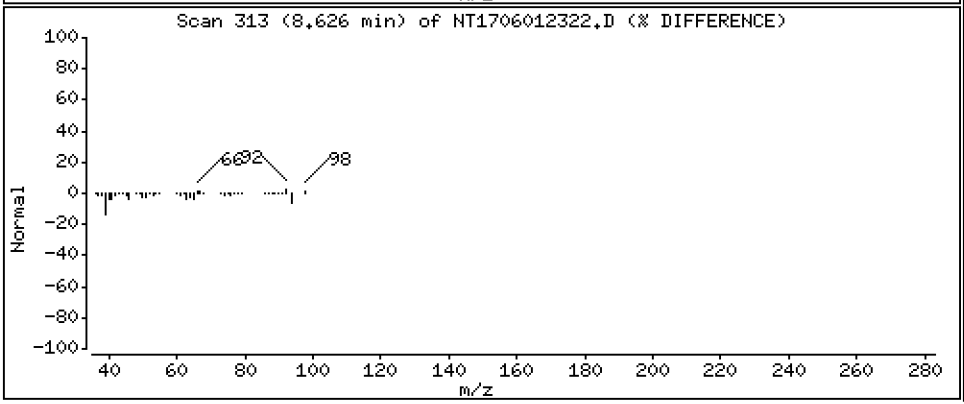
91 Aniline

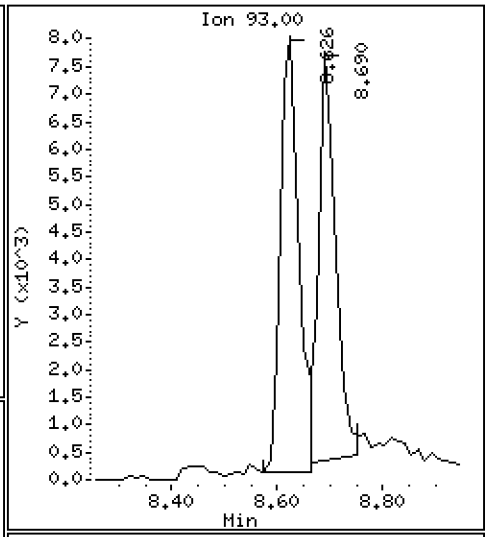
Concentration: 0.1895 ug/mL

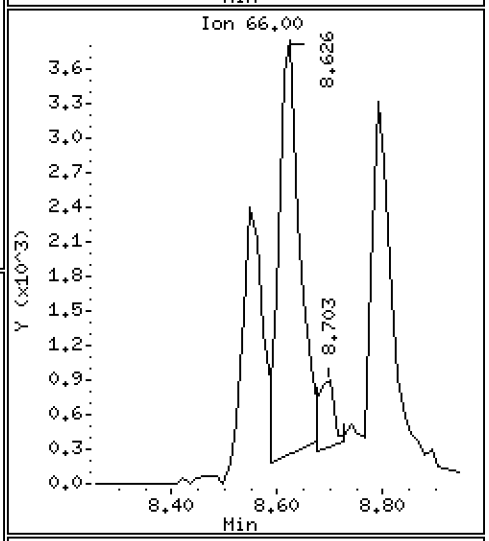


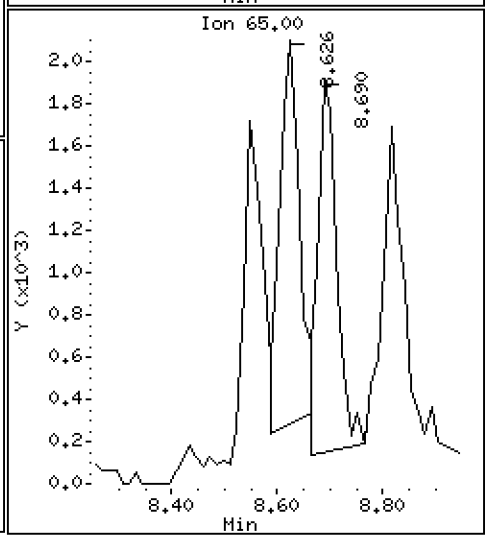












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

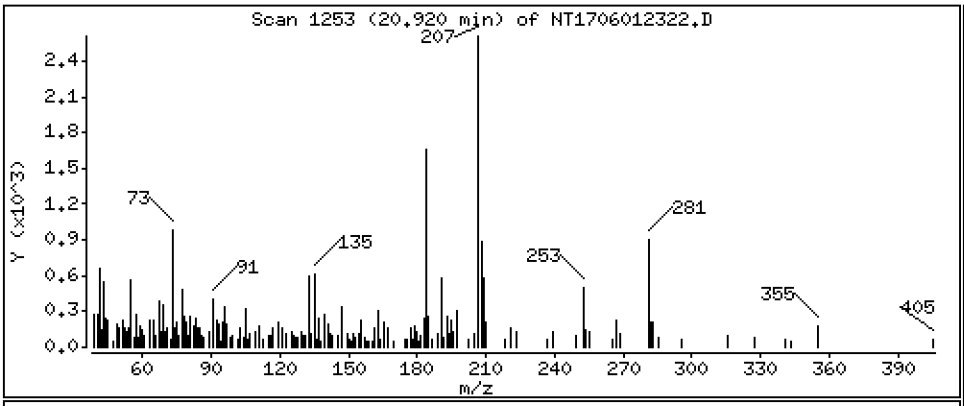
Operator: VTS

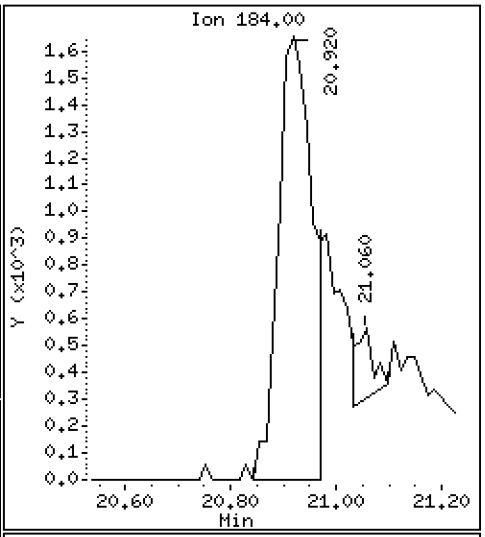
Column phase: ZB-5msi

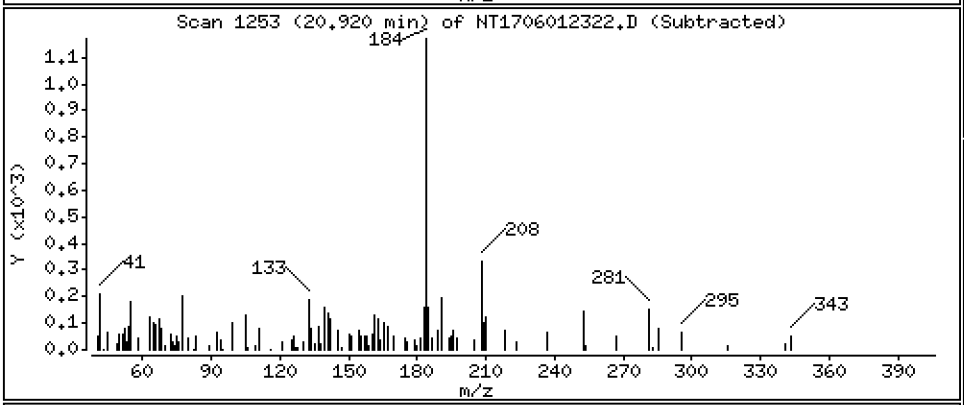
Column diameter: 0.25

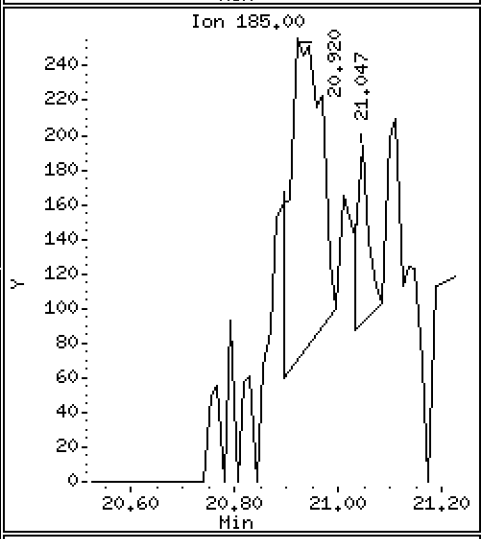
93 Benzidine

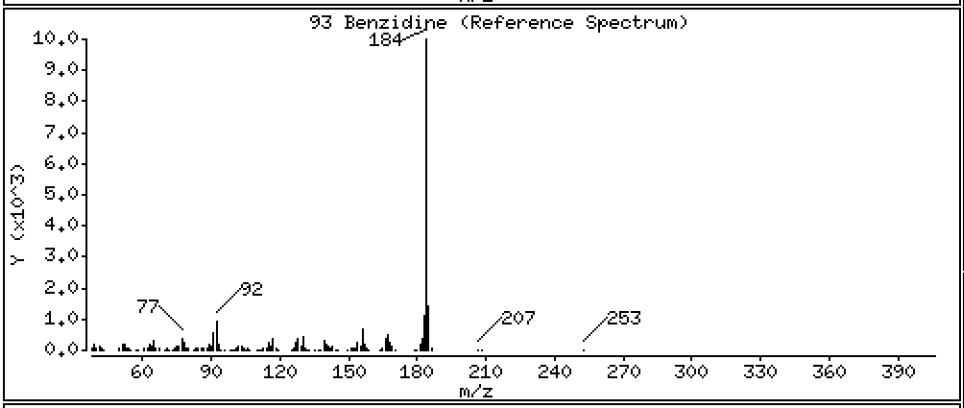
Concentration: 0.1449 ug/mL

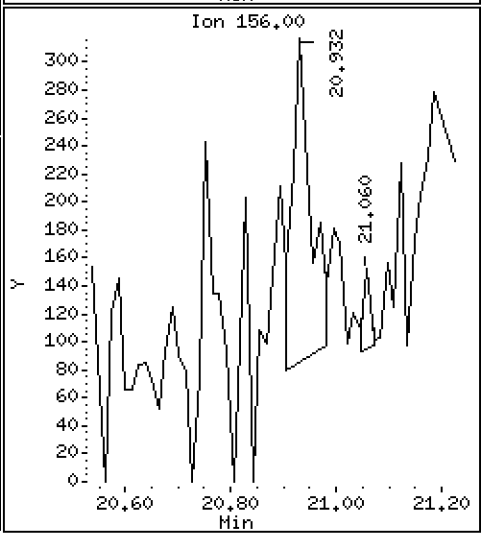


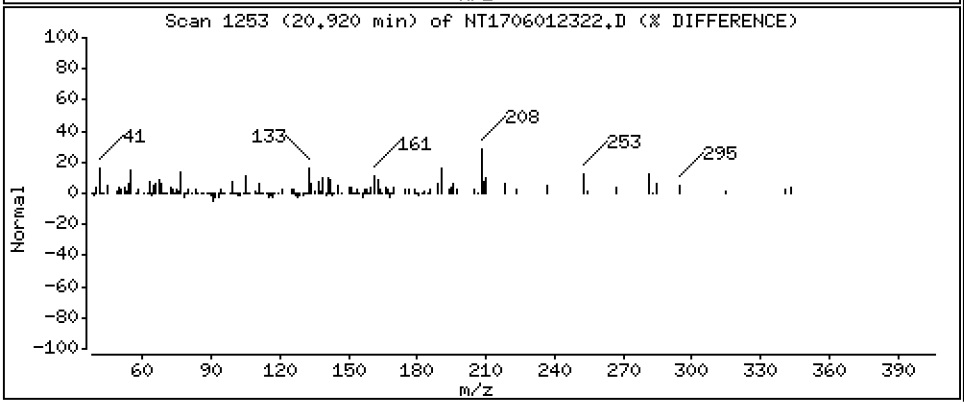












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

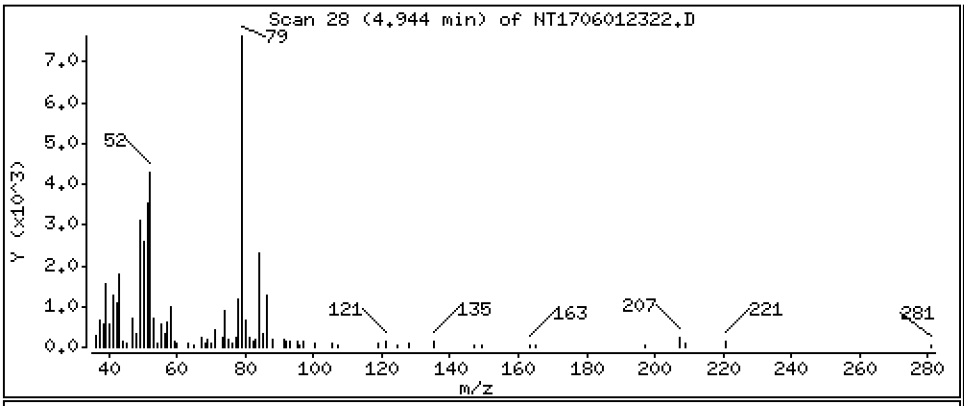
Operator: VTS

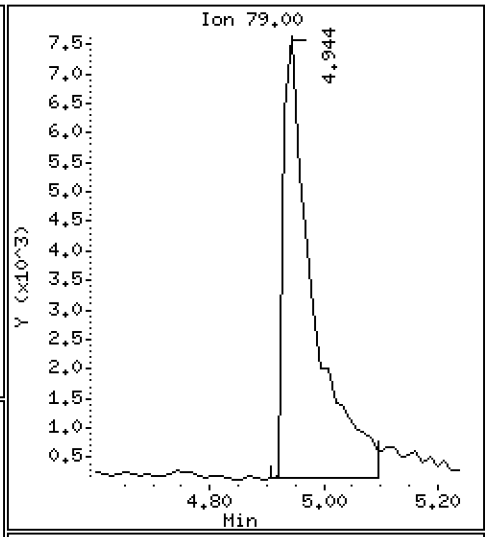
Column phase: ZB-5msi

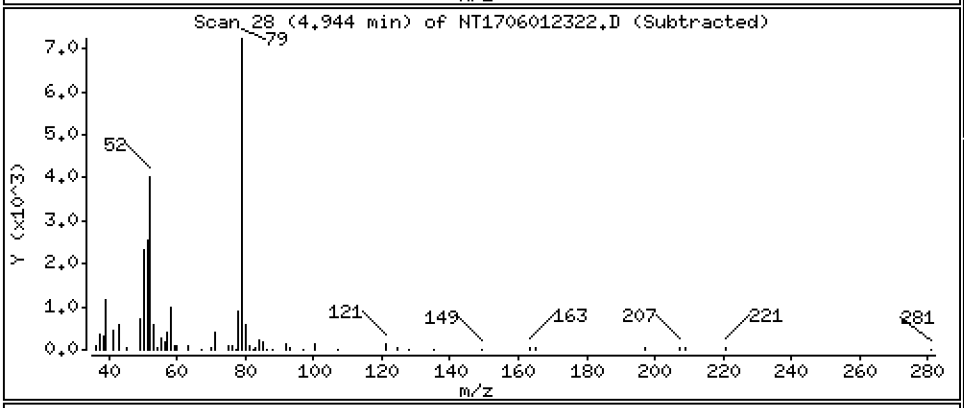
Column diameter: 0.25

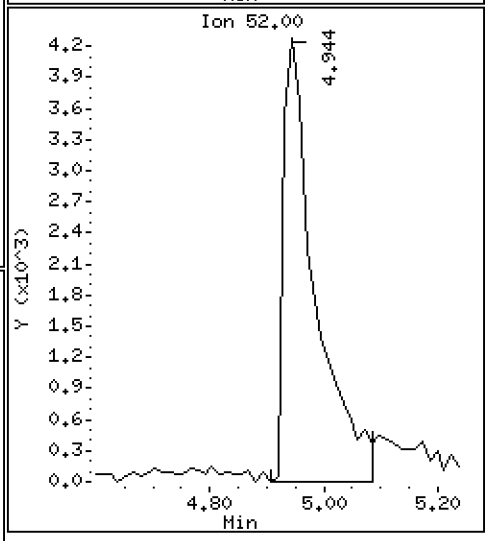
103 Pyridine

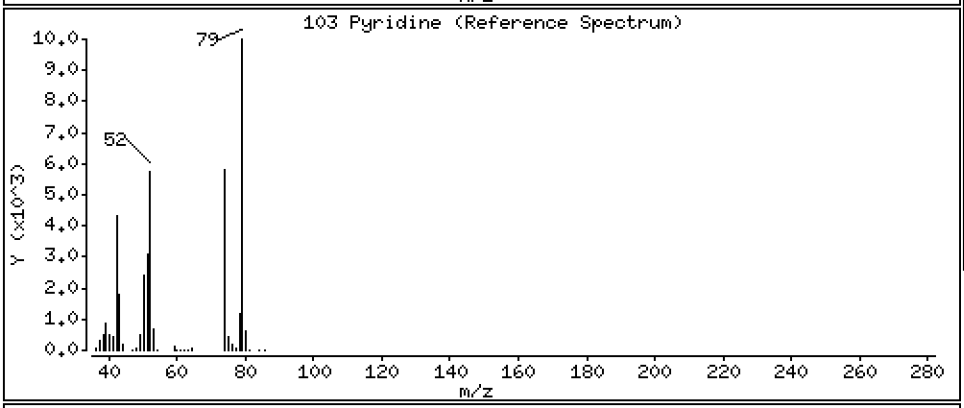
Concentration: 0.2893 ug/mL

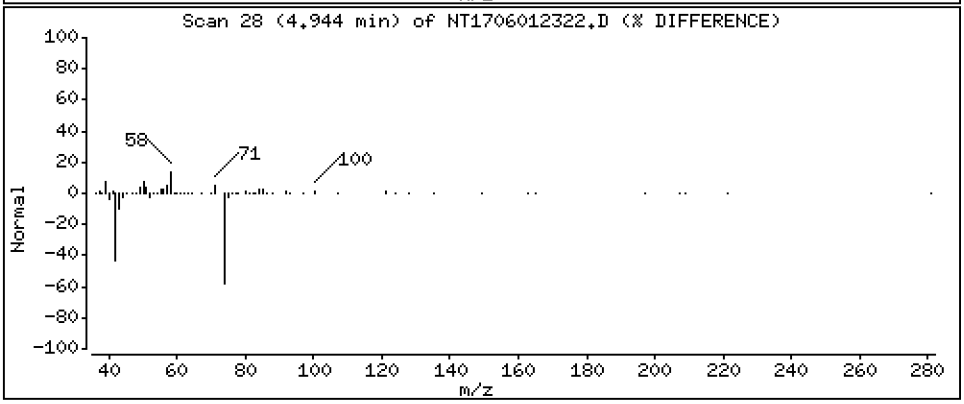












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

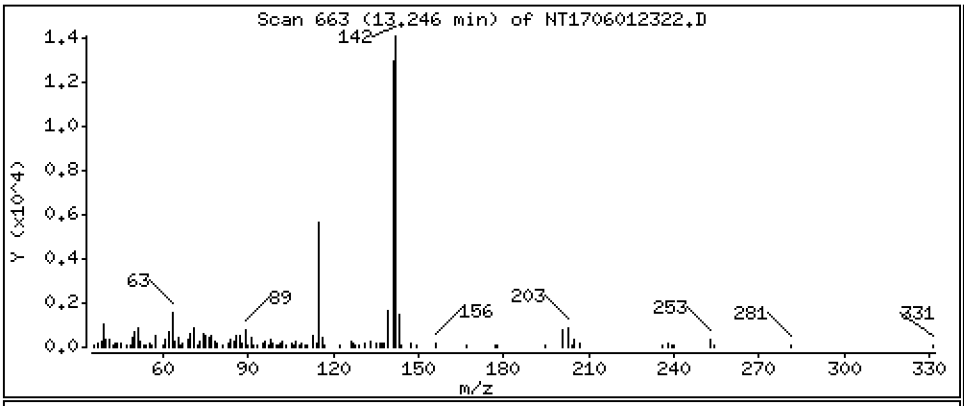
Operator: VTS

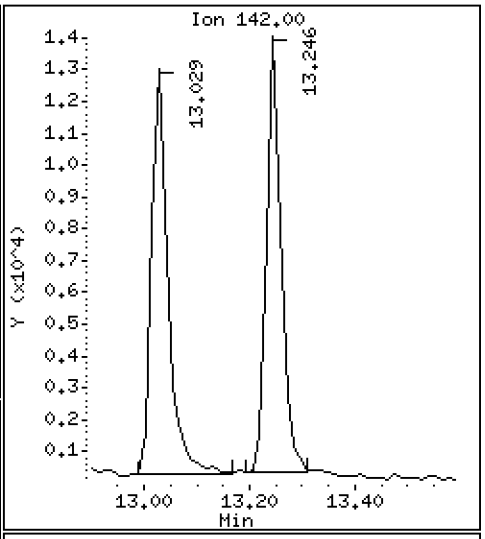
Column phase: ZB-5msi

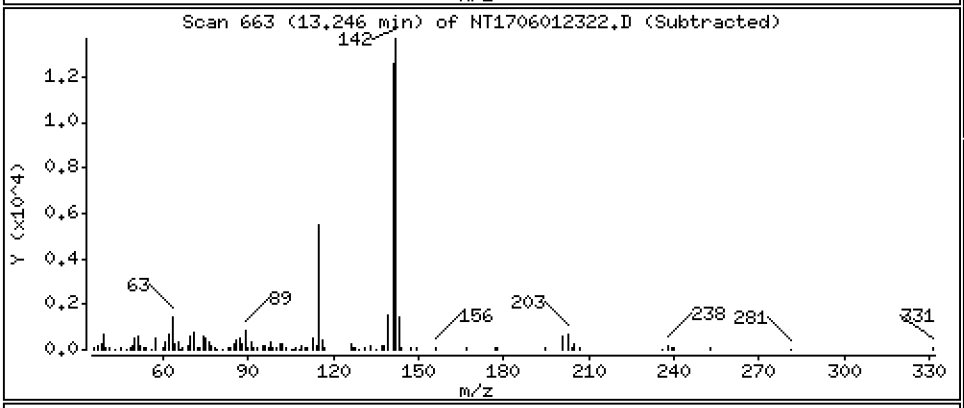
Column diameter: 0.25

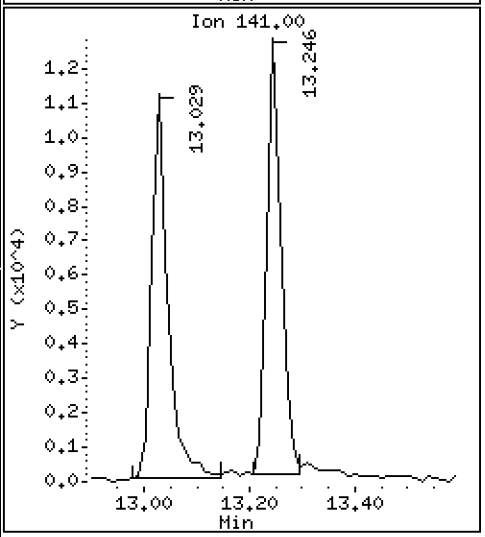
105 1-methylnaphthalene

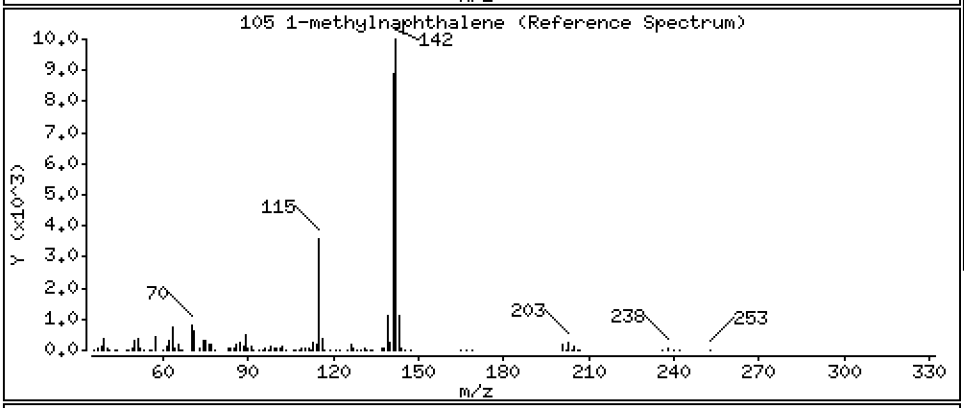
Concentration: 0.1755 ug/mL

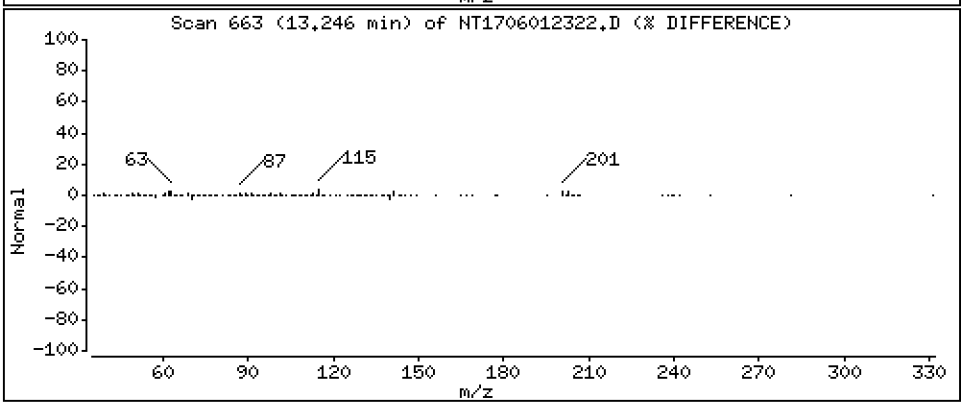












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

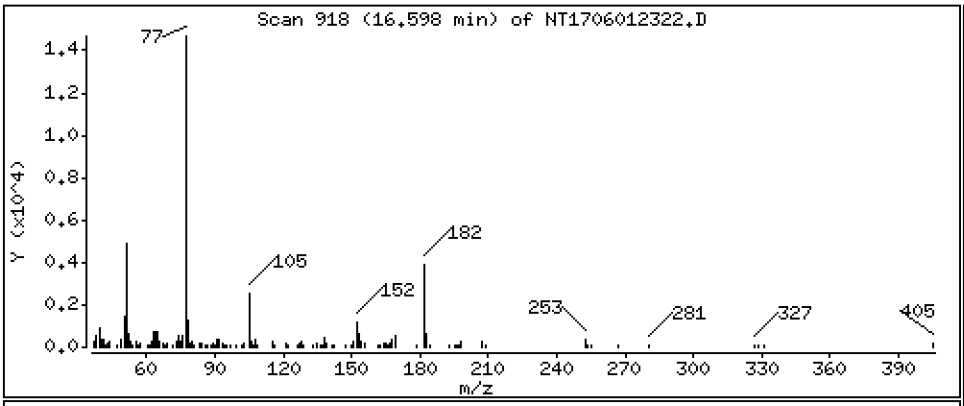
Operator: VTS

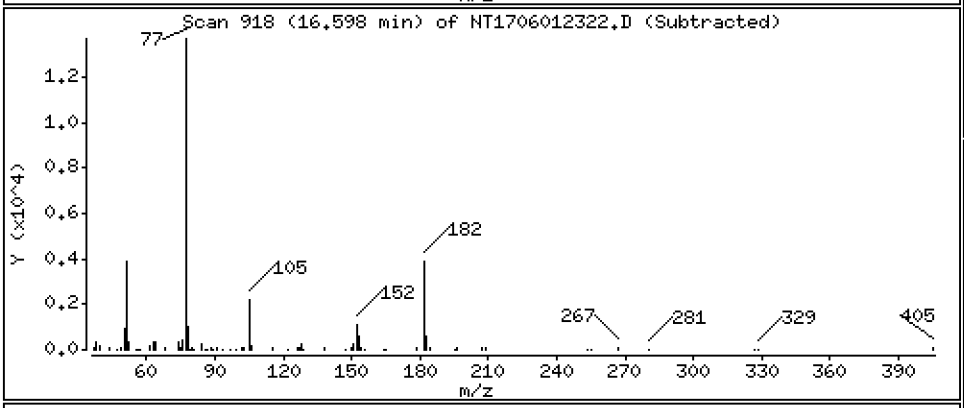
Column phase: ZB-5msi

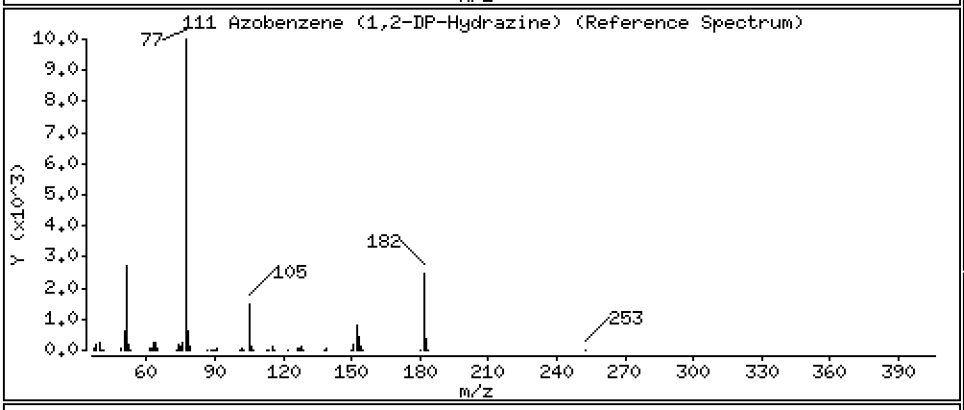
Column diameter: 0.25

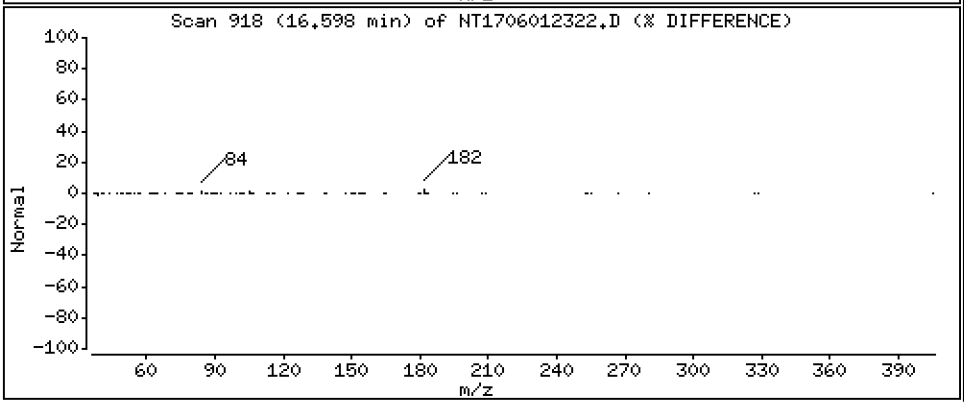
111 Azobenzene (1,2-DP-Hydrazine)

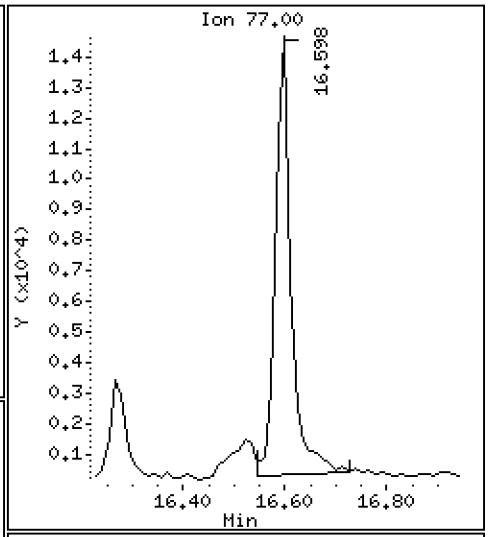
Concentration: 0.1931 ug/mL

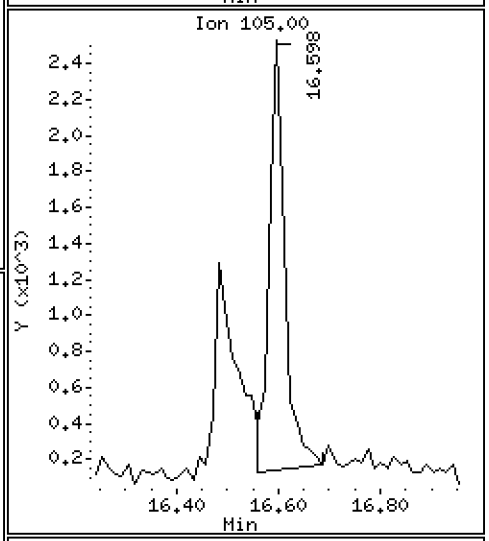


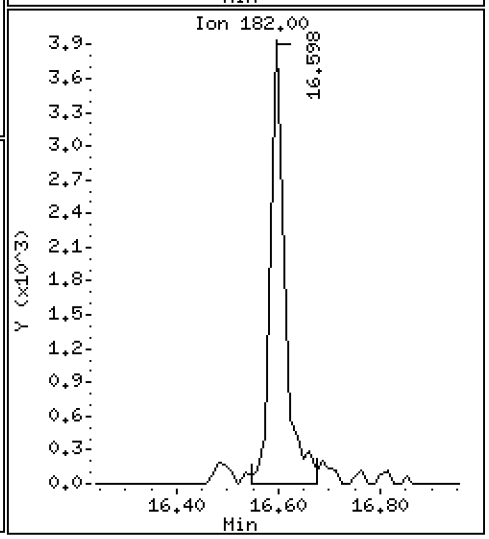












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

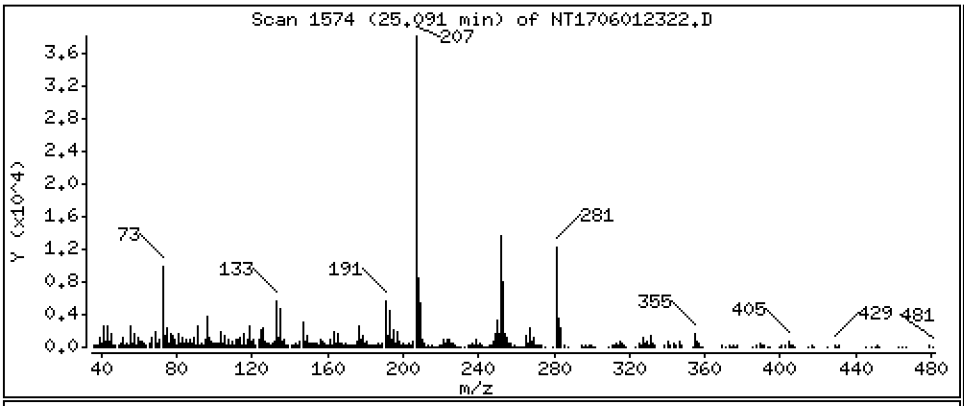
Operator: VTS

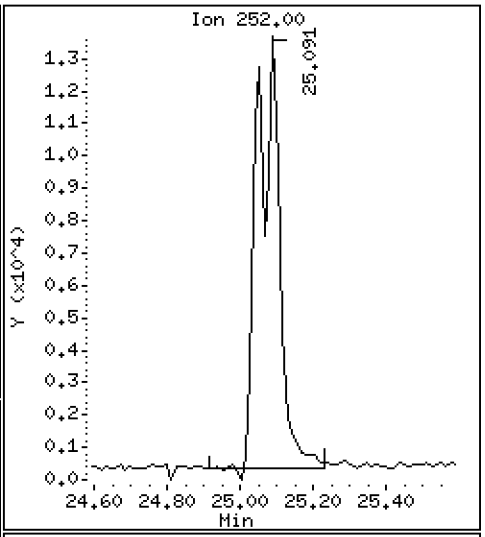
Column phase: ZB-5msi

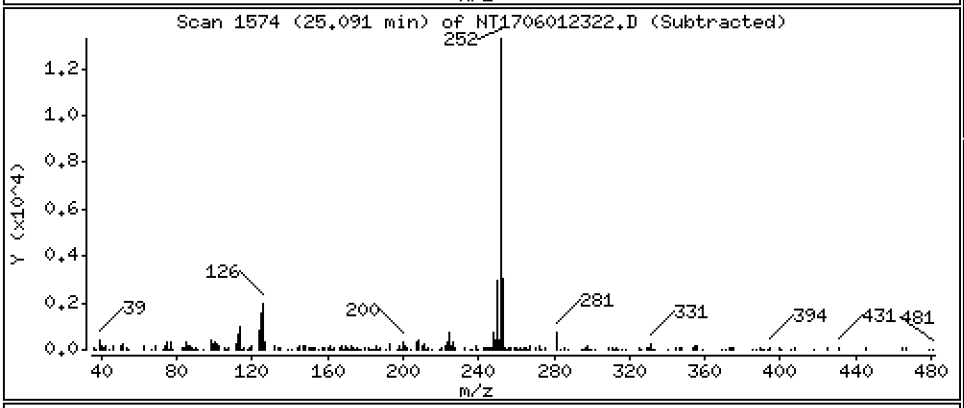
Column diameter: 0.25

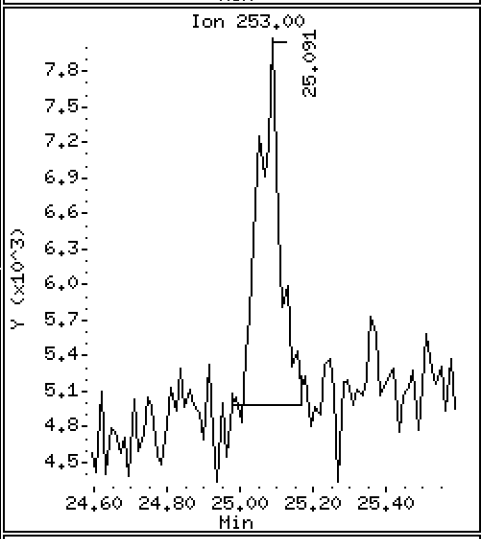
187 Total Benzofluoranthenes

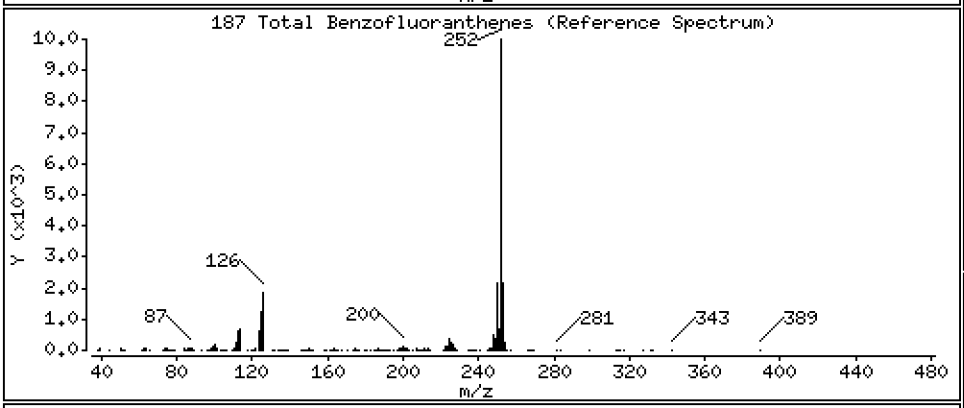
Concentration: 0.4136 ug/mL

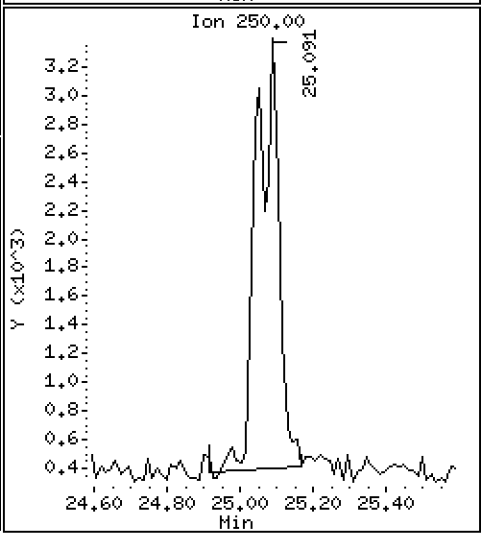


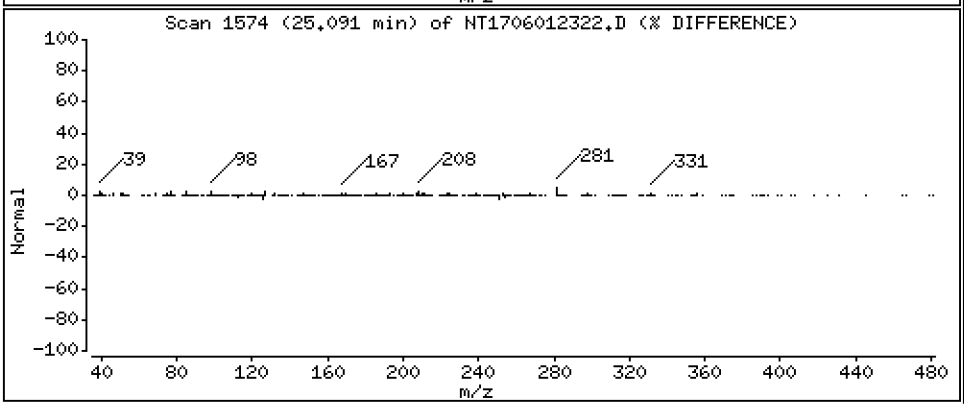












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D

Date : 02-JUN-2023 01:06

Client ID:

Instrument: nt17.i

Sample Info: BLE0008-LCV2

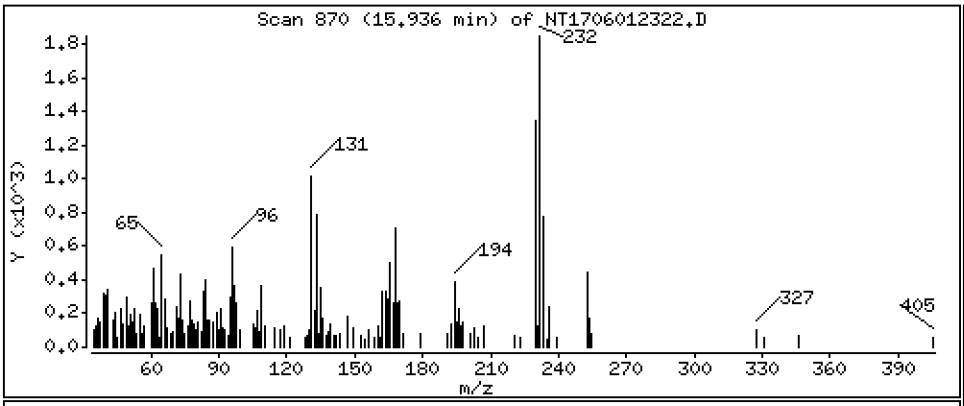
Operator: VTS

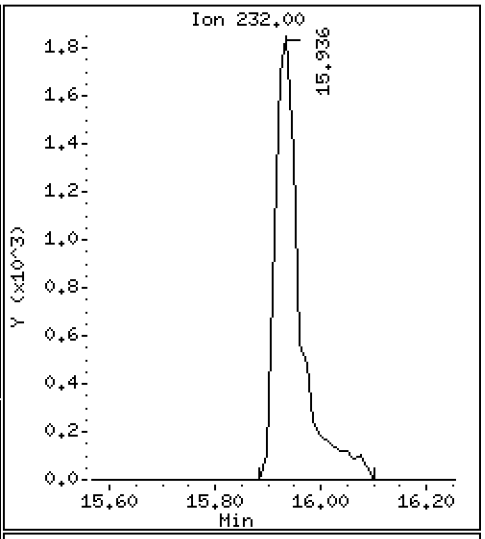
Column phase: ZB-5msi

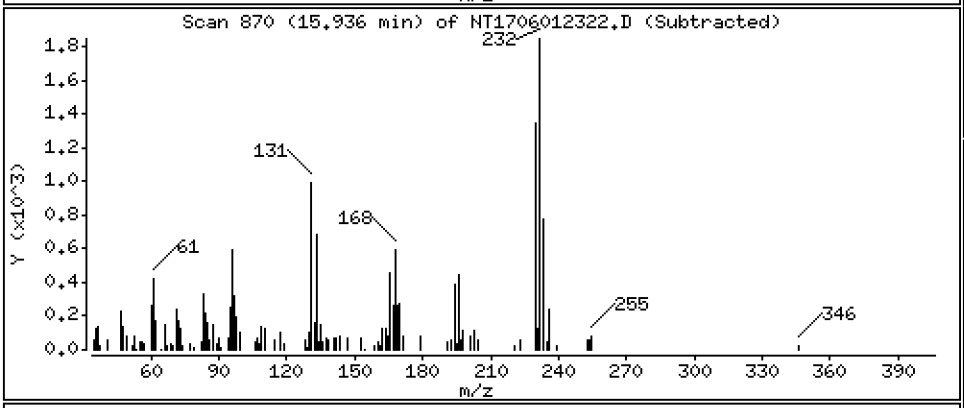
Column diameter: 0.25

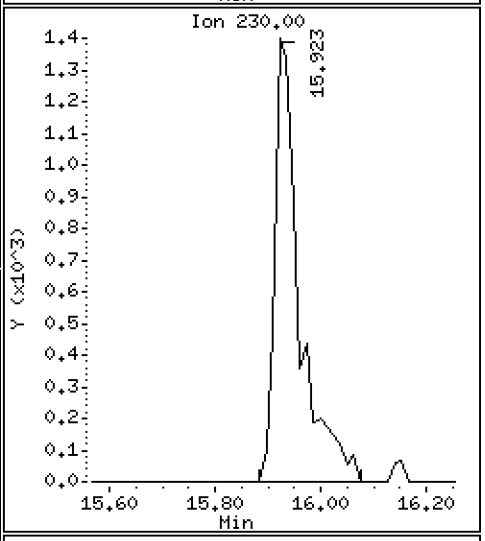
120 2,3,4,6-Tetrachlorophenol

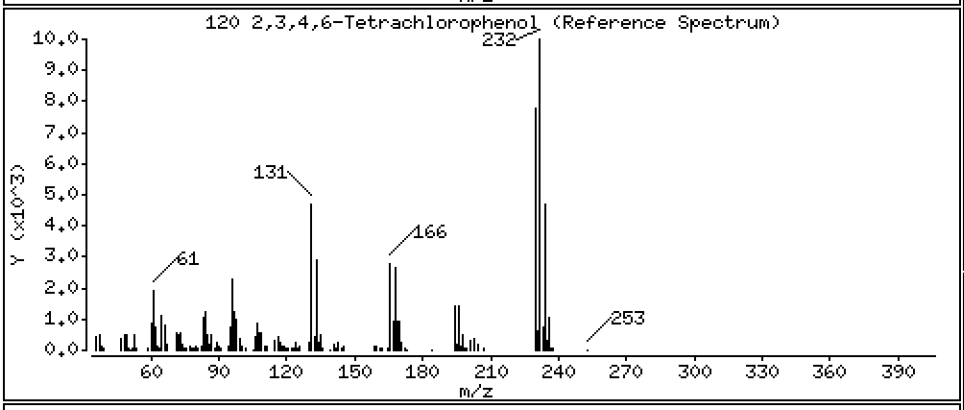
Concentration: 0.1285 ug/mL

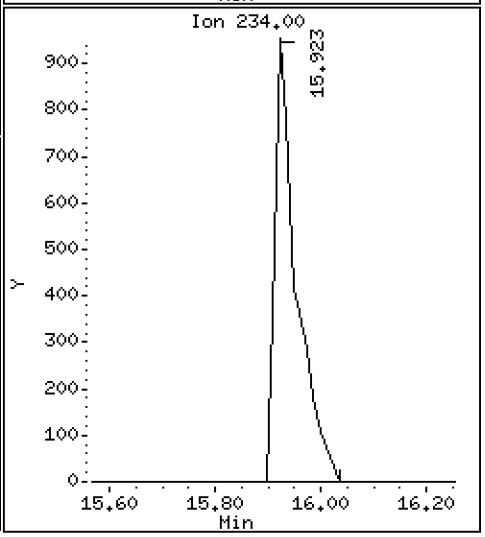


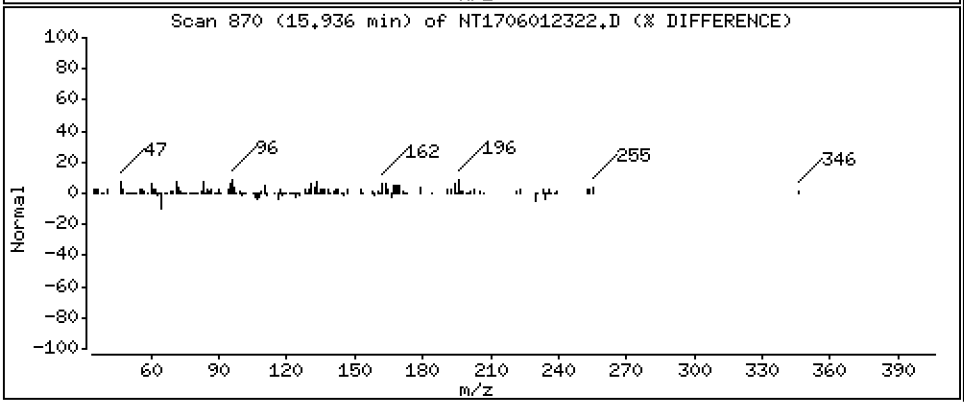












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012322.D
Lab Smp Id: BLE0008-LCV2
Inj Date : 02-JUN-2023 01:06
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0008-LCV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:23 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.982	6.944	(0.764)	15827	0.17990	0.1799
$	2 Phenol-d5	99	8.536	8.511	(0.934)	22588	0.19402	0.1940
	3 Phenol	94	8.549	8.536	(0.936)	19090	0.15481	0.1548(M)
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	22506	0.24134	0.2413
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	17793	0.19793	0.1979
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	18506	0.17971	0.1797
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	19068	0.18296	0.1830
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	268750	4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	21973	0.21139	0.2114
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	12642	0.19287	0.1929
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	18454	0.18886	0.1889
	11 Benzyl alcohol	108	9.519	9.417	(1.042)	3569	0.06216	0.06216
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	5370	0.19498	0.1950
	13 2-Methylphenol	108	9.659	9.634	(1.057)	11158	0.12312	0.1231
	17 Hexachloroethane	117	10.094	10.094	(1.105)	6830	0.16426	0.1643
	16 N-Nitroso-di-n-propylamine	70	9.966	9.953	(1.091)	10491	0.15130	0.1513
	15 4-Methylphenol	108	9.941	9.902	(1.088)	8938	0.09686	0.09686
$	18 Nitrobenzene-d5	82	10.234	10.222	(0.882)	17662	0.19300	0.1930
	19 Nitrobenzene	77	10.273	10.260	(0.886)	16058	0.18392	0.1839
	20 Isophorone	82	10.707	10.707	(0.923)	20930	0.17512	0.1751
	21 2-Nitrophenol	139	10.899	10.873	(0.940)	8258	0.19629	0.1963
	22 2,4-Dimethylphenol	107	10.950	10.937	(0.944)	22209	0.27189	0.2719
	23 Bis(2-Chloroethoxy)methane	93	11.128	11.116	(0.959)	11645	0.15898	0.1590
	24 Benzoic acid	105	11.243	11.192	(0.969)	7707	0.14026	0.1403(MH)
	25 2,4-Dichlorophenol	162	11.384	11.333	(0.981)	14100	0.21481	0.2148
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	13882	0.19473	0.1947
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	804059	4.00000	
	28 Naphthalene	128	11.639	11.639	(1.003)	43885	0.19847	0.1985
	29 4-Chloroaniline	127	11.804	11.766	(1.018)	13777	0.15807	0.1581
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	7991	0.22629	0.2263
	31 4-Chloro-3-methylphenol	107	12.773	12.735	(1.101)	14840	0.20997	0.2100
	32 2-Methylnaphthalene	142	13.028	13.016	(1.123)	28264	0.17853	0.1785
	33 Hexachlorocyclopentadiene	237	13.475	13.487	(0.887)	599	0.01538	0.01538

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.653	13.640	(0.899)	13032	0.29743	0.2974
	35 2,4,5-Trichlorophenol	196	13.768	13.717	(0.907)	13036	0.28105	0.2810
$	36 2-Fluorobiphenyl	172	13.793	13.793	(0.908)	31120	0.18863	0.1886
	37 2-Chloronaphthalene	162	14.010	14.010	(0.923)	23870	0.17835	0.1783
	38 2-Nitroaniline	65	14.304	14.278	(0.942)	11731	0.25880	0.2588
	39 Dimethylphthalate	163	14.699	14.686	(0.968)	28912	0.20065	0.2006
	40 Acenaphthylene	152	14.878	14.878	(0.980)	47114	0.22167	0.2217
	41 2,6-Dinitrotoluene	165	14.839	14.839	(0.977)	12011	0.35604	0.3560
*	42 Acenaphthene-d10	164	15.184	15.184	(1.000)	418780	4.00000	
	43 3-Nitroaniline	138	15.171	15.133	(0.999)	4972	0.15913	0.1591
	44 Acenaphthene	153	15.247	15.247	(1.004)	27228	0.20494	0.2049
	45 2,4-Dinitrophenol	184	15.413	15.337	(1.015)	3307	0.16263	0.1626(M)
	46 Dibenzofuran	168	15.579	15.579	(1.026)	35312	0.19043	0.1904
	47 4-Nitrophenol	109	15.630	15.464	(1.029)	1432	0.06900	0.06900(M)
	48 2,4-Dinitrotoluene	165	15.655	15.642	(1.031)	12531	0.28376	0.2838
	50 Diethylphthalate	149	16.140	16.140	(1.063)	32525	0.23146	0.2315
	49 Fluorene	166	16.280	16.280	(1.072)	29231	0.16581	0.1658
	51 4-Chlorophenyl-phenylether	204	16.280	16.267	(1.072)	12774	0.15760	0.1576
	52 4-Nitroaniline	138	16.458	16.407	(1.084)	5430	0.18360	0.1836
	53 4,6-Dinitro-2-methylphenol	198	16.496	16.471	(0.906)	8277	0.29178	0.2918
	54 N-Nitrosodiphenylamine	169	16.521	16.521	(0.908)	18793	0.18874	0.1887
$	55 2,4,6-Tribromophenol	330	16.827	16.814	(1.108)	4835	0.26468	0.2647
	56 4-Bromophenyl-phenylether	248	17.272	17.260	(0.949)	7067	0.20256	0.2026
	57 Hexachlorobenzene	284	17.578	17.578	(0.966)	7519	0.21151	0.2115
	58 Pentachlorophenol	266	17.961	17.935	(0.987)	3715	0.18028	0.1803
*	59 Phenanthrene-d10	188	18.203	18.203	(1.000)	710823	4.00000	
	60 Phenanthrene	178	18.241	18.241	(1.002)	42575	0.20527	0.2053
	61 Anthracene	178	18.343	18.343	(1.008)	38656	0.19852	0.1985
	62 Carbazole	167	18.700	18.688	(1.027)	28584	0.24229	0.2423
	63 Di-n-butylphthalate	149	19.453	19.453	(1.069)	42929	0.18258	0.1826
	64 Fluoranthene	202	20.626	20.613	(0.888)	41213	0.19811	0.1981
	65 Pyrene	202	21.047	21.034	(0.907)	44163	0.20941	0.2094
$	66 Terphenyl-d14	244	21.327	21.315	(0.919)	32519	0.21691	0.2169
	67 Butylbenzylphthalate	149	22.233	22.233	(0.958)	17022	0.18034	0.1803
	68 Benzo(a)anthracene	228	23.190	23.190	(0.999)	34295	0.20942	0.2094
*	69 Chrysene-d12	240	23.215	23.215	(1.000)	444729	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.152	23.139	(0.997)	23599	0.74464	0.7446
	71 Chrysene	228	23.254	23.254	(1.002)	33897	0.21997	0.2200
	72 bis(2-Ethylhexyl)phthalate	149	23.254	23.254	(0.960)	25575	0.23003	0.2300
*	134 Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	768456	4.00000	
	73 Di-n-octylphthalate	149	24.236	24.236	(1.001)	42902	0.22025	0.2203
	74 Benzo(b)fluoranthene	252	25.052	25.052	(0.971)	27073	0.17606	0.1761
	75 Benzo(k)fluoranthene	252	25.091	25.091	(0.972)	34735	0.23909	0.2391
	76 Benzo(a)pyrene	252	25.690	25.690	(0.996)	27830	0.22975	0.2298
*	77 Perylene-d12	264	25.805	25.805	(1.000)	387840	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.449	28.423	(1.102)	22858	0.16269	0.1627
	79 Dibenzo(a,h)anthracene	278	28.462	28.423	(1.103)	17194	0.14581	0.1458
	80 Benzo(g,h,i)perylene	276	29.216	29.203	(1.132)	14499	0.12502	0.1250
	90 N-Nitrosodimethylamine	74	4.880	4.867	(0.534)	15435	0.26302	0.2630
	91 Aniline	93	8.626	8.600	(0.944)	19581	0.18949	0.1895
	93 Benzidine	184	20.919	20.881	(0.901)	7472	0.14490	0.1449
	103 Pyridine	79	4.944	4.893	(0.541)	26924	0.28926	0.2893
	105 1-methylnaphthalene	142	13.245	13.245	(1.142)	25781	0.17553	0.1755
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.598	16.585	(1.093)	31672	0.19308	0.1931

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.091	25.091	(0.972)	57091	0.41360	0.4136
120 2,3,4,6-Tetrachlorophenol	232	15.936	15.910	(1.050)	6737	0.12851	0.1285

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012322.D
Lab Smp Id: BLE0008-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 23:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	257007	128504	514014	268750	4.57
27 Naphthalene-d8	932905	466453	1865810	804059	-13.81
42 Acenaphthene-d10	509574	254787	1019148	418780	-17.82
59 Phenanthrene-d10	912749	456375	1825498	710823	-22.12
69 Chrysene-d12	578011	289006	1156022	444729	-23.06
134 Di-n-octylphthala	1181490	590745	2362980	768456	-34.96
77 Perylene-d12	513683	256842	1027366	387840	-24.50

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	-0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	-0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012322.D

Lab ID: BLE0008-LCV2
nt17.i, ABN.m, 02-JUN-2023 01:06

RT	CO-ELUTION COMPOUNDS
9.519	1,2-Dichlorobenzene and Benzyl alcohol

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.042	1.031	0.0112	Benzyl alcohol
1.015	1.010	0.0050	2,4-Dinitrophenol
1.029	1.018	0.0109	4-Nitrophenol
0.541	0.536	0.0056	Pyridine

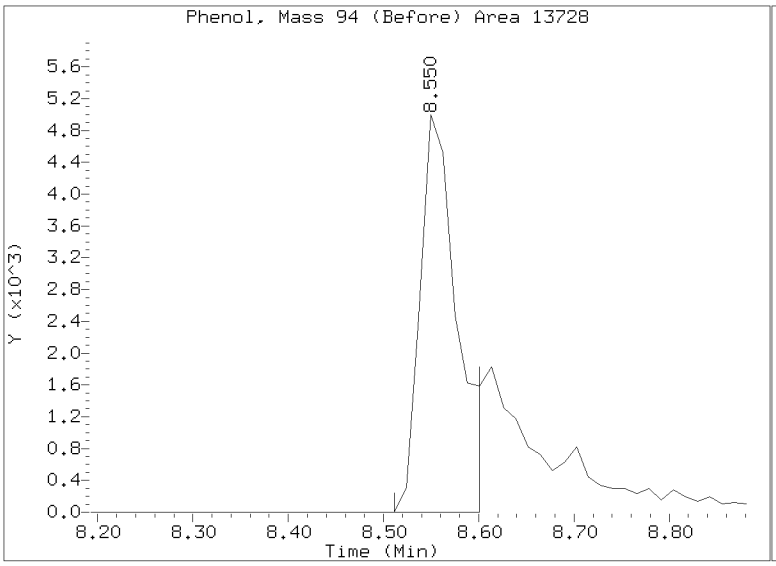
RRT check based on Ccal File: NT1706012320.D

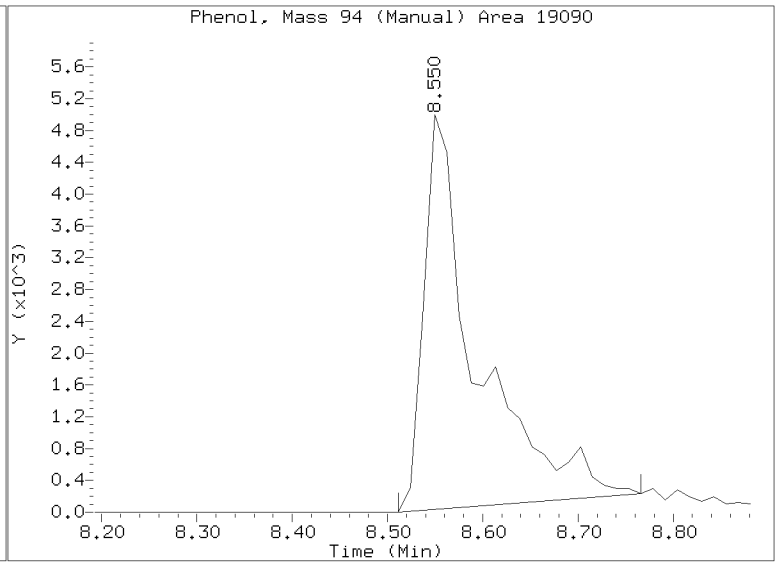
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

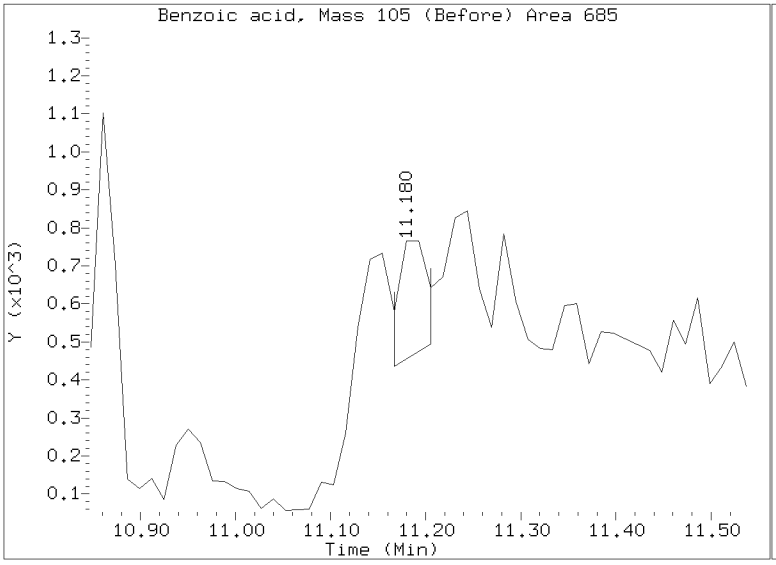
* Only compounds listed in the work order have been verified by the analyst *

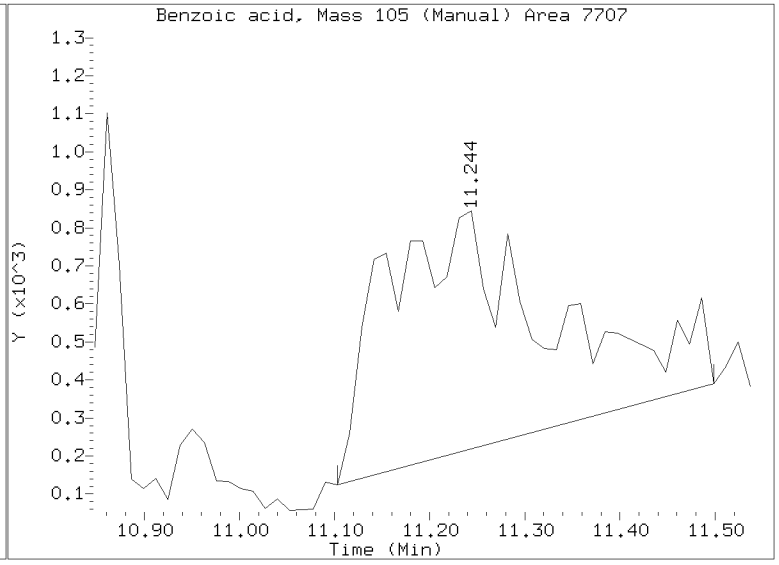
Quant Ion Manual Peak Adjustment Report

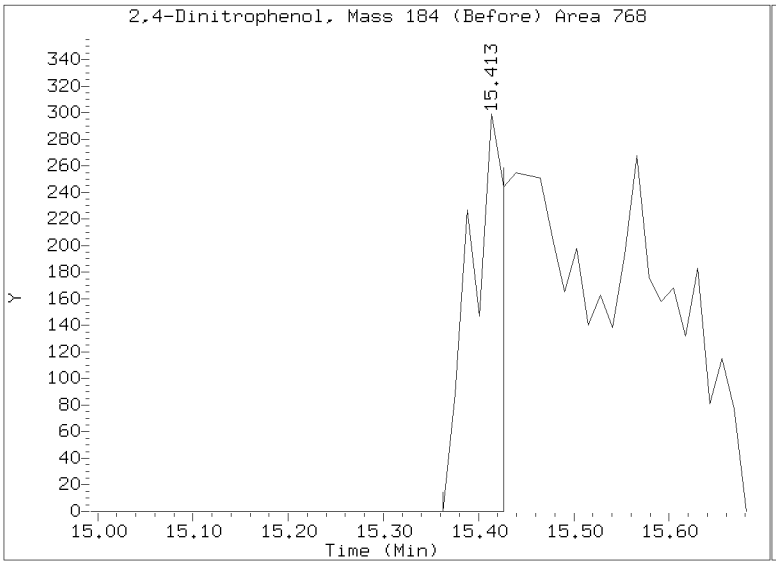
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012322.D
Injection Date: 02-JUN-2023 01:06
Lab ID:BLE0008-LCV2 Client ID:
Report Date: 06/03/2023 10:34

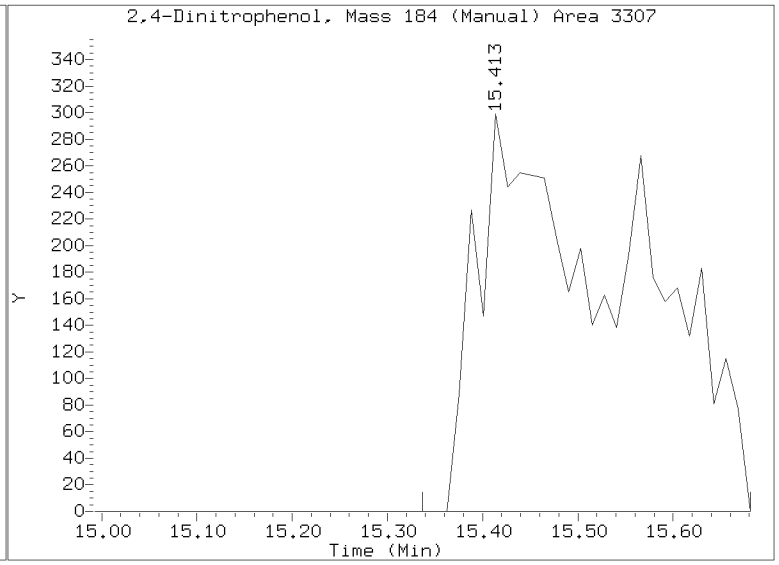






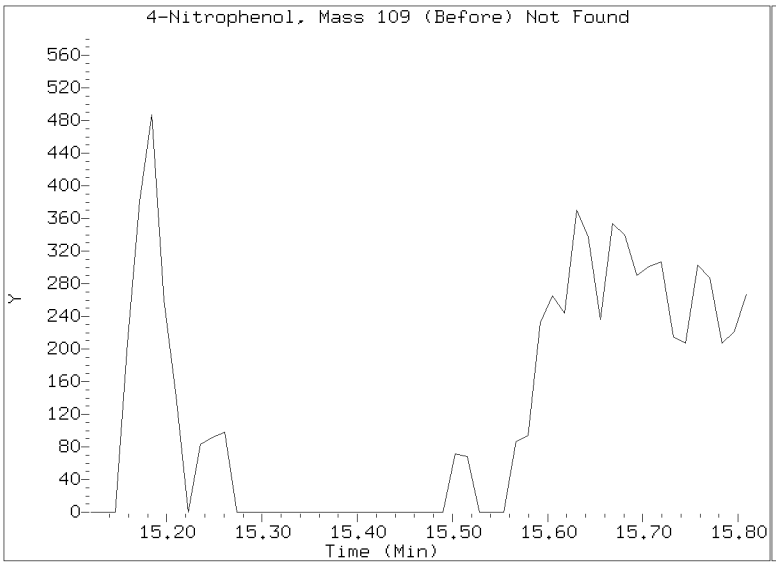


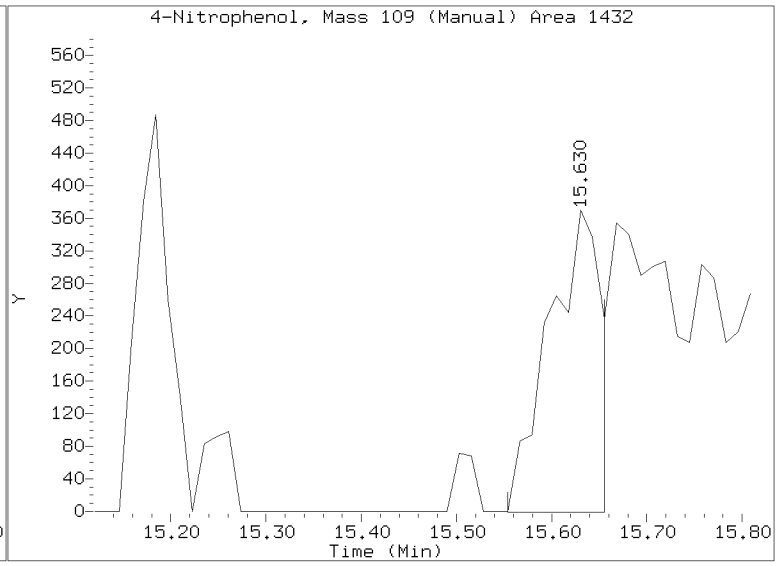




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012322.D
Injection Date: 02-JUN-2023 01:06
Lab ID:BLE0008-LCV2 Client ID:
Report Date: 06/03/2023 10:34





Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

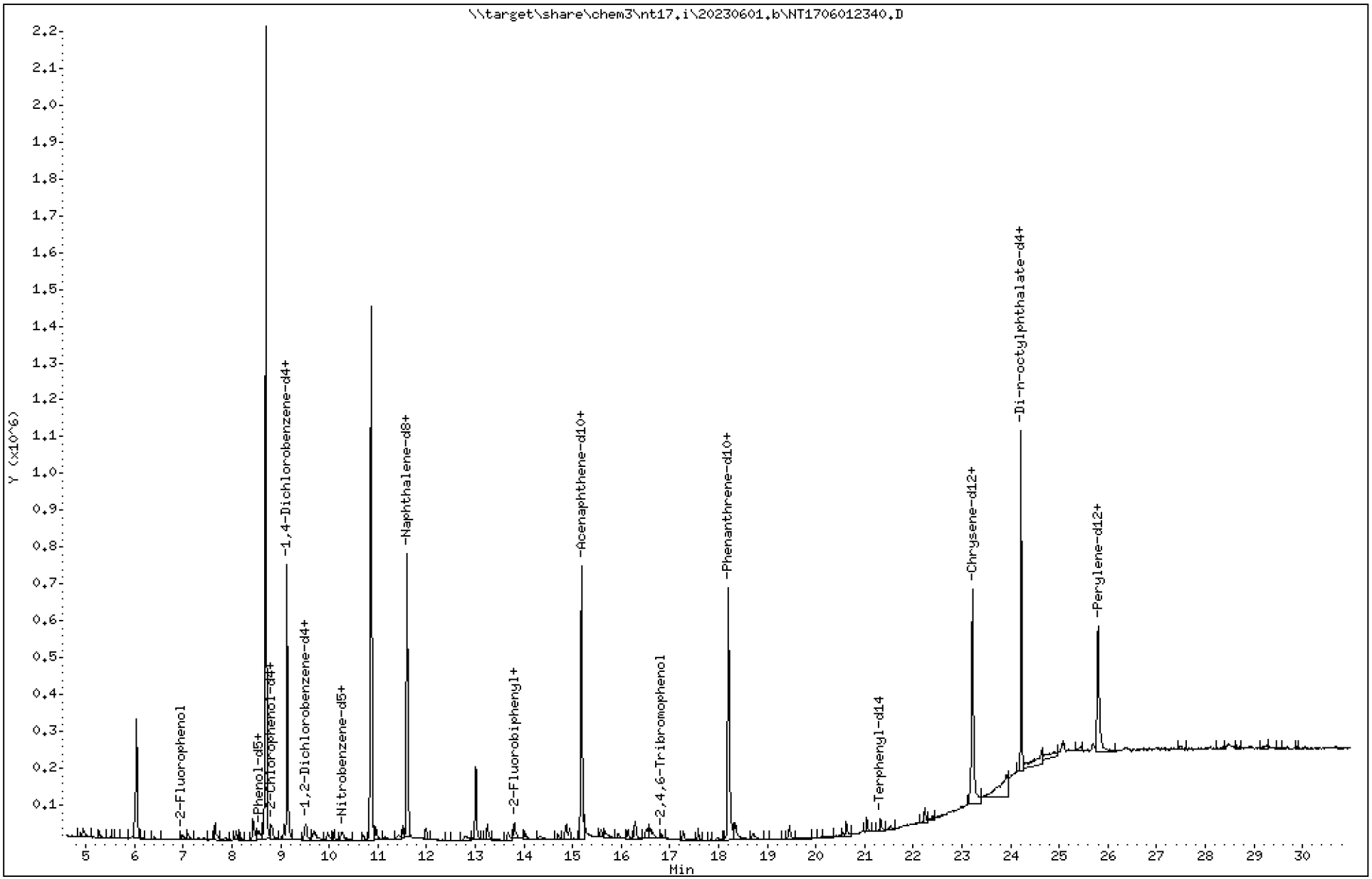
Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00065
Lab File ID:	NT1706012340.D	Calibration Date:	05/20/2023
Sequence:	SLF0008	Injection Date:	06/02/23
Lab Sample ID:	SLF0008-LCV3	Injection Time:	12:16
Sequence Name:	ABN 0.2		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	0.20000	0.2	1.8353850	1.5404180		-16.1	+/-50
4-Methylphenol	A	0.20000	0.1	1.3734410	0.7394125		-46.2	+/-50
Naphthalene	A	0.20000	0.2	1.0999940	1.1072530		0.7	+/-50
2-Methylnaphthalene	A	0.20000	0.2	0.7875944	0.6749119		-14.3	+/-50
Acenaphthylene	A	0.20000	0.2	2.0301060	2.1534780		6.1	+/-50
Dimethylphthalate	A	0.20000	0.2	1.3763000	1.2370810		-10.1	+/-50
Acenaphthene	A	0.20000	0.2	1.2690180	1.2760780		0.6	+/-50
Dibenzofuran	A	0.20000	0.2	1.7711910	1.8172330		2.6	+/-50
Fluorene	A	0.20000	0.2	1.6839010	1.3615640		-19.1	+/-50
Phenanthrene	A	0.20000	0.2	1.1671410	1.0728410		-8.1	+/-50
Anthracene	A	0.20000	0.2	1.0957620	0.9231504		-15.8	+/-50
Fluoranthene	A	0.20000	0.2	1.8710850	1.8440710		-1.4	+/-50
Pyrene	A	0.20000	0.2	1.8967730	1.8752370		-1.1	+/-50
Butylbenzylphthalate	A	0.20000	0.2	0.8489339	0.8435505		-0.6	+/-50
Benzo(a)anthracene	A	0.20000	0.2	1.4729210	1.4900760		1.2	+/-50
Chrysene	A	0.20000	0.2	1.3859970	1.5511620		11.9	+/-50
bis(2-Ethylhexyl)phthalate	A	0.20000	0.2	0.5787277	110780		16.3	+/-50
Benzofluoranthenes, Total	A	0.40000	0.4	1.4236150	1.4379570		1.0	+/-50
Benzo(a)pyrene	A	0.20000	0.2	1.2492830	1.1094640		-11.2	+/-50
Indeno(1,2,3-cd)pyrene	A	0.20000	0.1	1.4490690	0.8255595		-43.0	+/-50
Dibenzo(a,h)anthracene	A	0.20000	0.1	1.2161710	0.7535714		-38.0	+/-50
Benzo(g,h,i)perylene	A	0.20000	0.1	1.1960510	0.7868877		-34.2	+/-50
2-Fluorophenol	A	0.30000	0.195	1.3093930	0.8513062		-35.0	+/-50
Phenol-d5	A	0.30000	0.226	1.7328160	1.3063650		-24.6	+/-50
2-Chlorophenol-d4	A	0.30000	0.313	1.3879870	1.4504130		4.5	+/-50
1,2-Dichlorobenzene-d4	A	0.20000	0.211	0.9755818	1.0293960		5.5	+/-50
Nitrobenzene-d5	A	0.20000	0.191	0.4552457	0.4337834		-4.7	+/-50
2-Fluorobiphenyl	A	0.20000	0.213	1.5758130	1.6796230		6.6	+/-50
2,4,6-Tribromophenol	A	0.30000	0.255	0.1414414	0.1484745		-14.9	+/-50
p-Terphenyl-d14	A	0.20000	0.213	1.3483810	1.4378790		6.6	+/-50

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D
Date : 02-JUN-2023 12:16
Client ID:
Sample Info: SLE0008-LCV3

Instrument: nt17.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

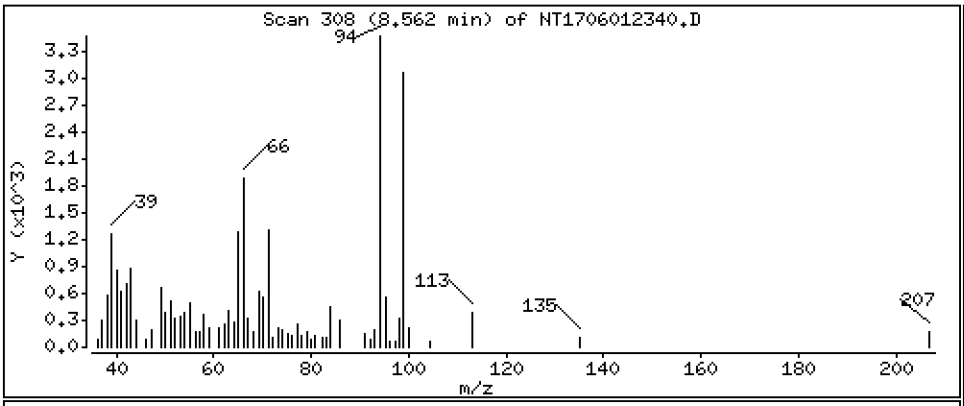
Operator: VTS

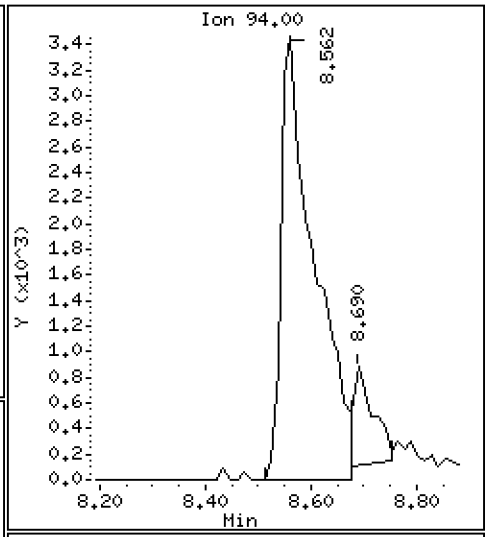
Column phase: ZB-5msi

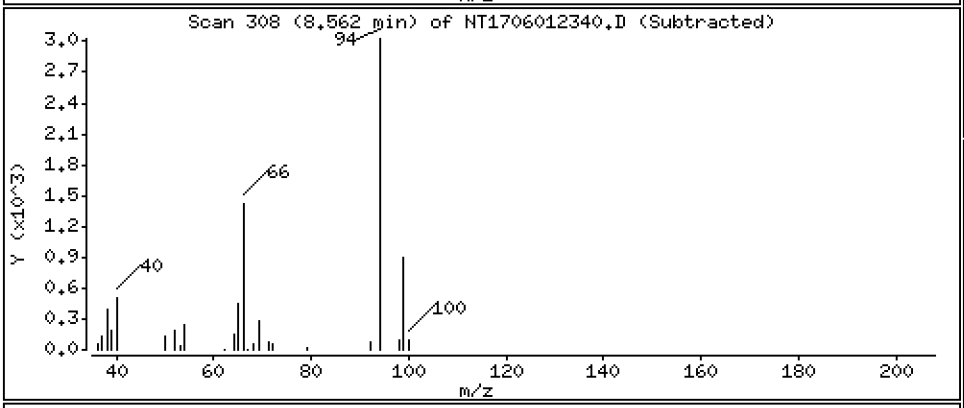
Column diameter: 0.25

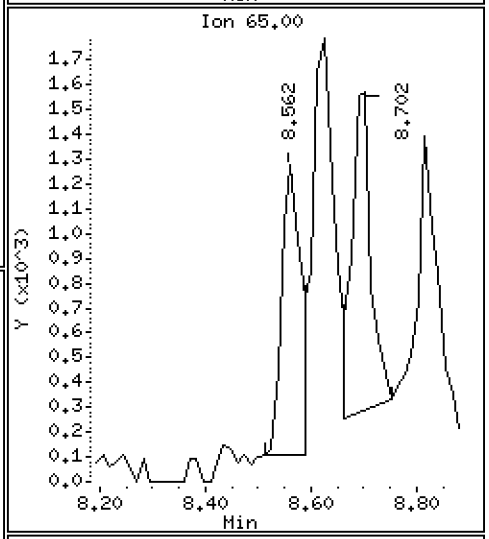
3 Phenol

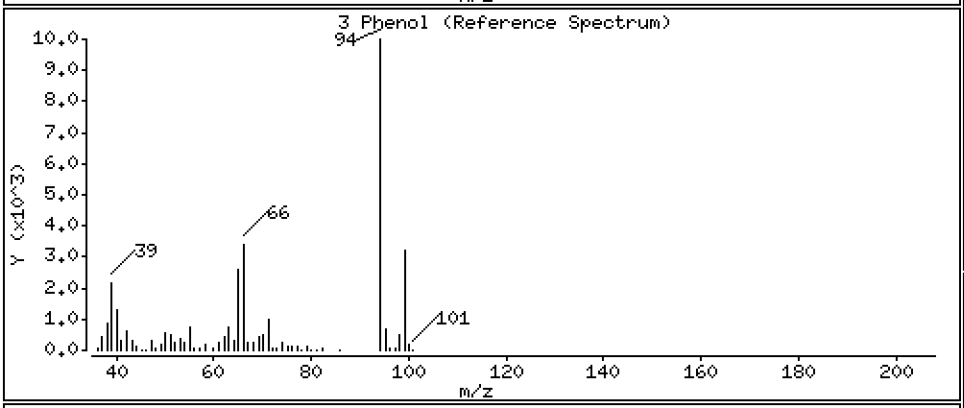
Concentration: 0.1679 ug/mL

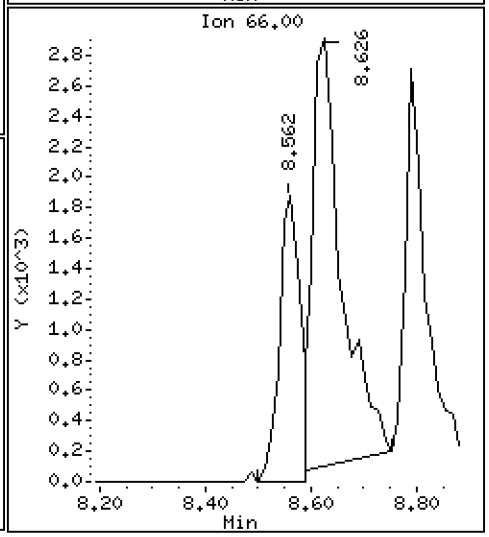


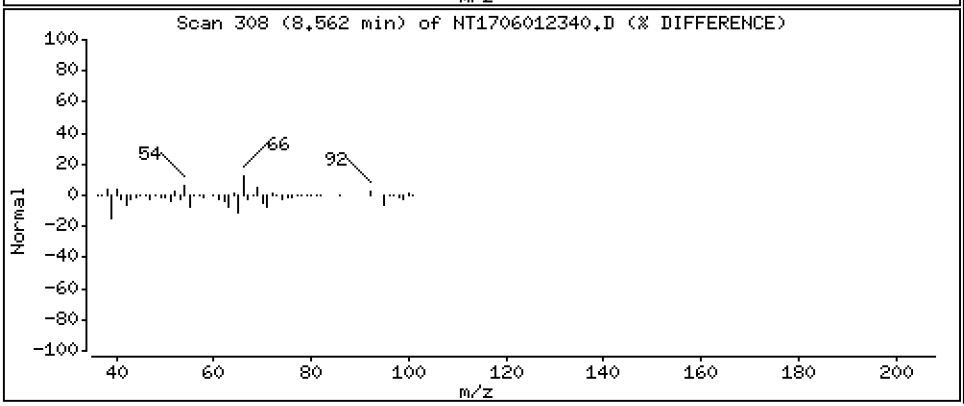












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

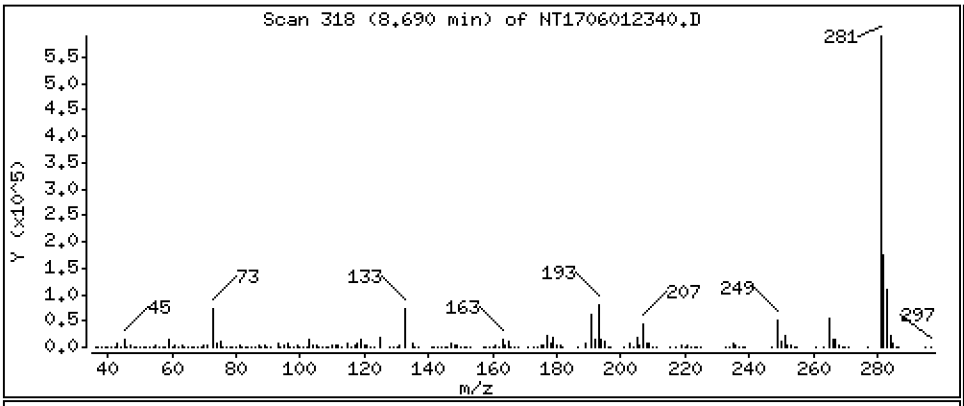
Operator: VTS

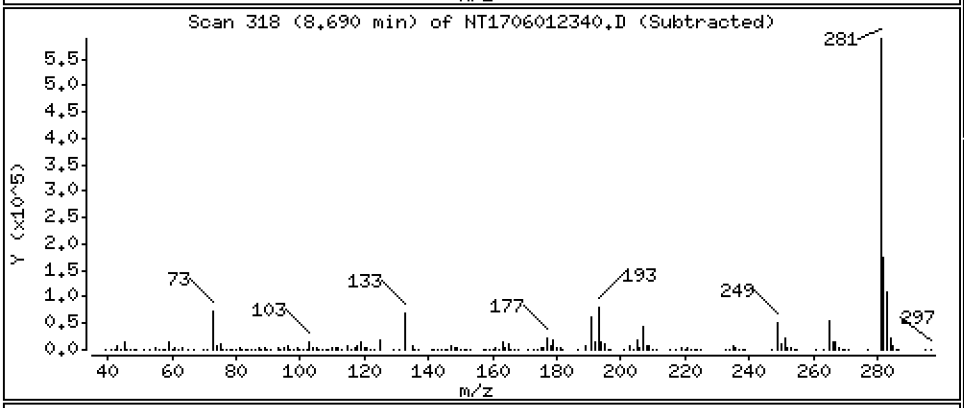
Column phase: ZB-5msi

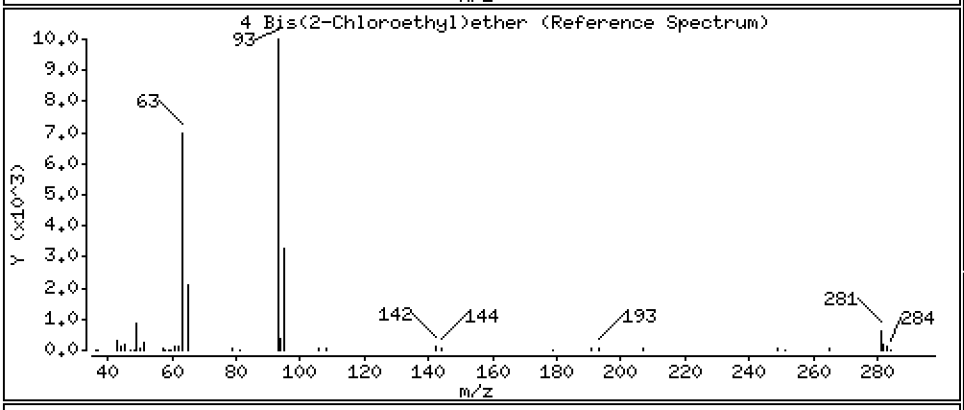
Column diameter: 0.25

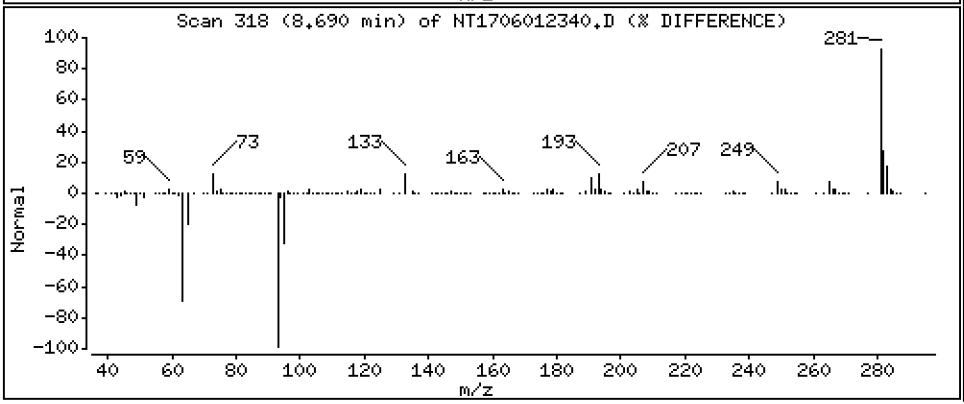
4 Bis(2-Chloroethyl)ether

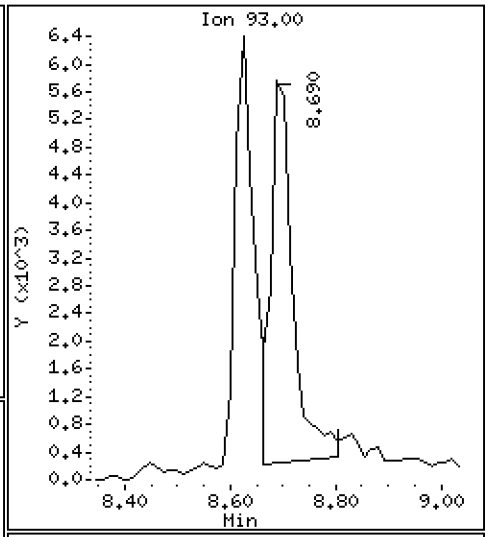
Concentration: 0.2495 ug/mL

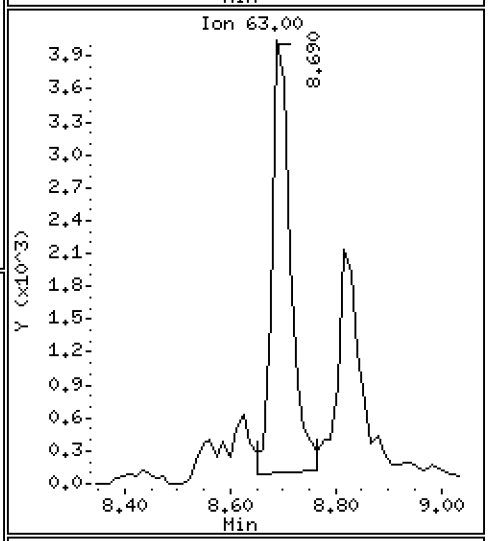


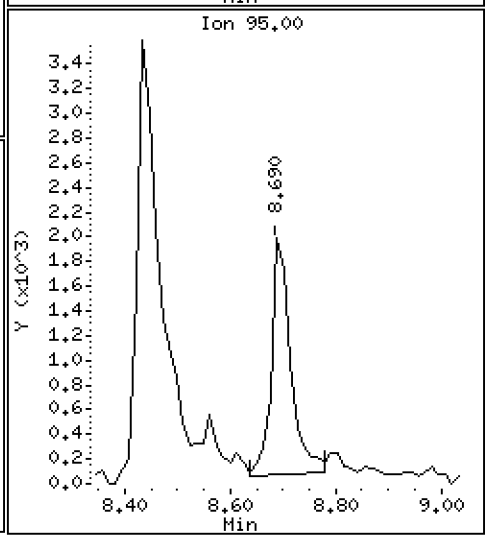












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

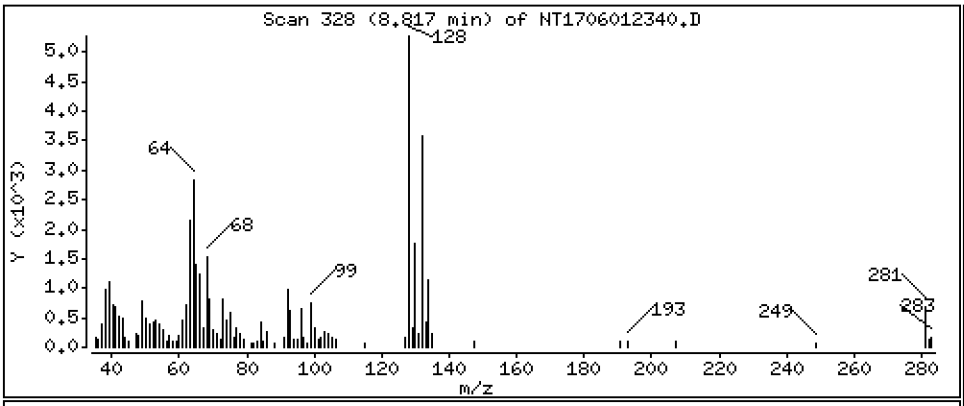
Operator: VTS

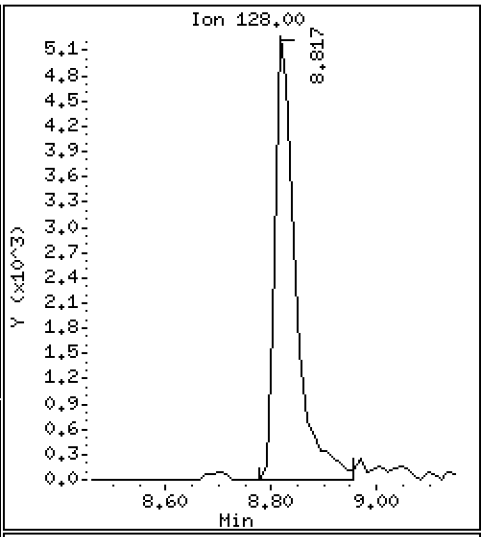
Column phase: ZB-5msi

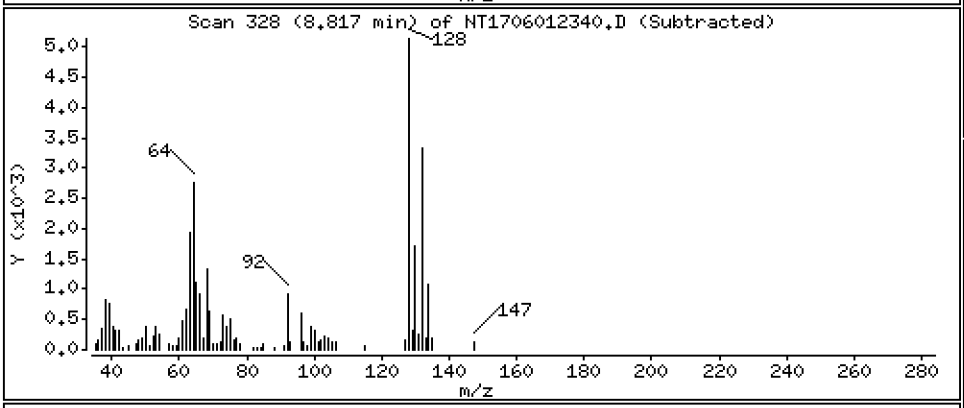
Column diameter: 0.25

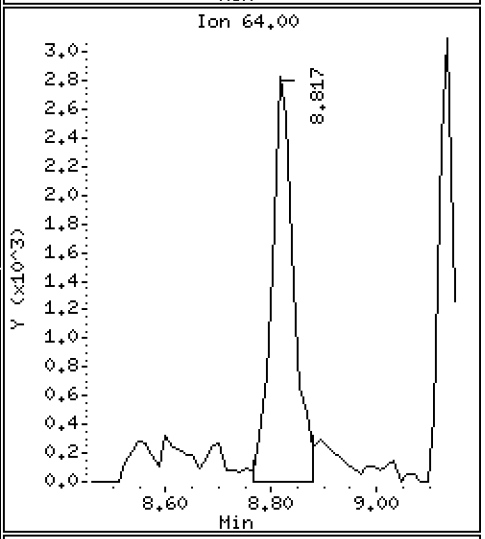
6 2-Chlorophenol

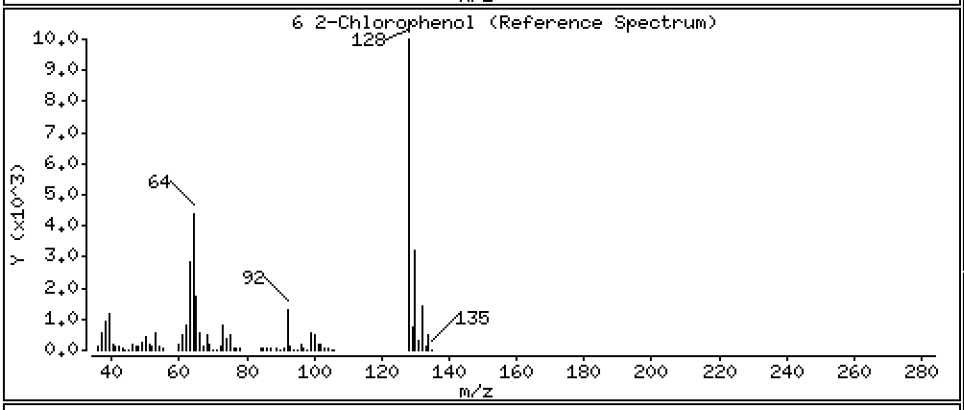
Concentration: 0.2146 ug/mL

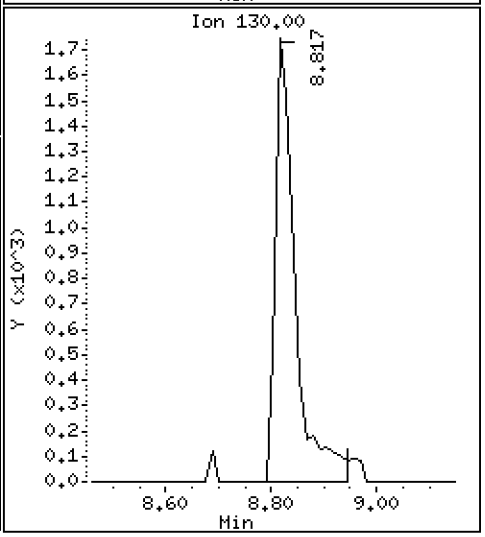


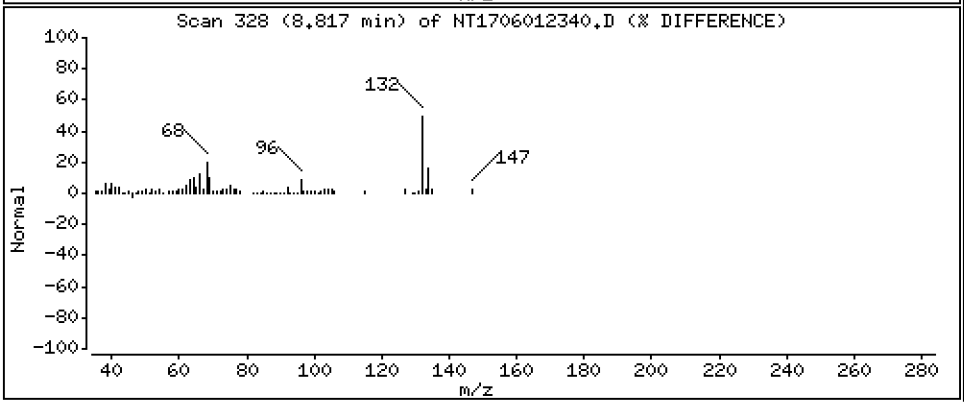












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

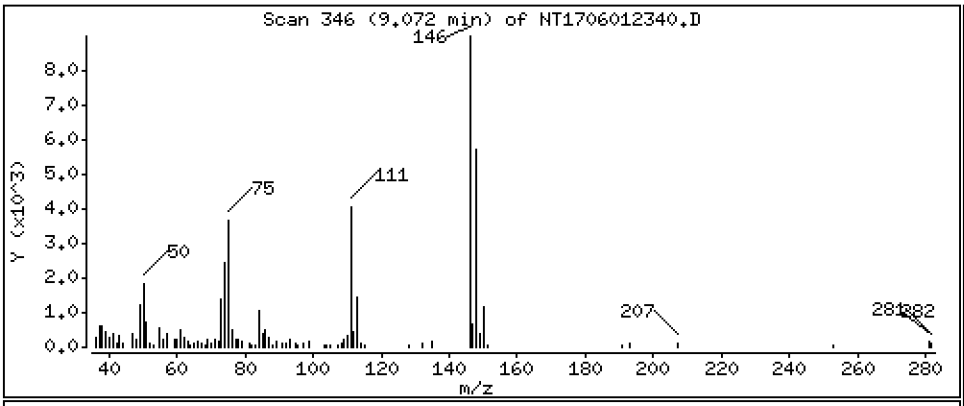
Operator: VTS

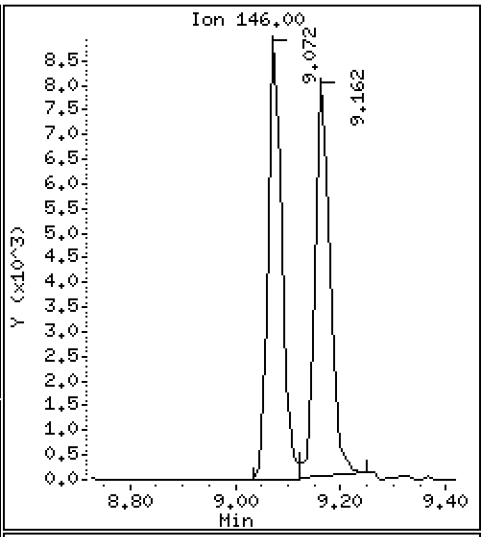
Column phase: ZB-5msi

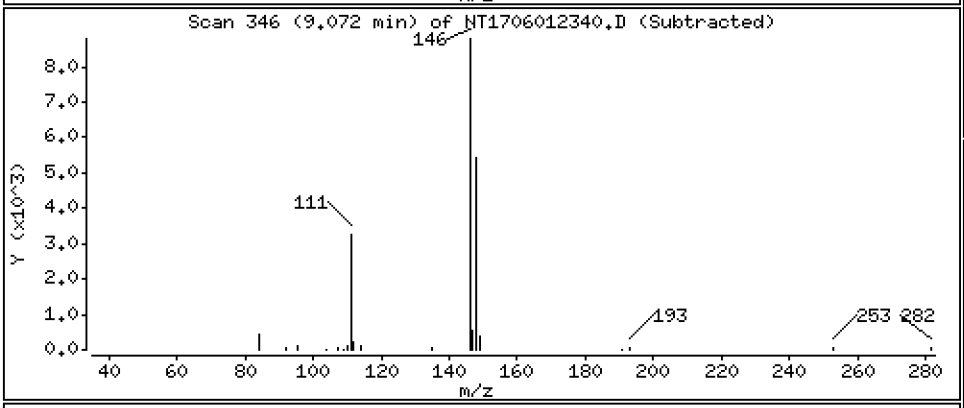
Column diameter: 0.25

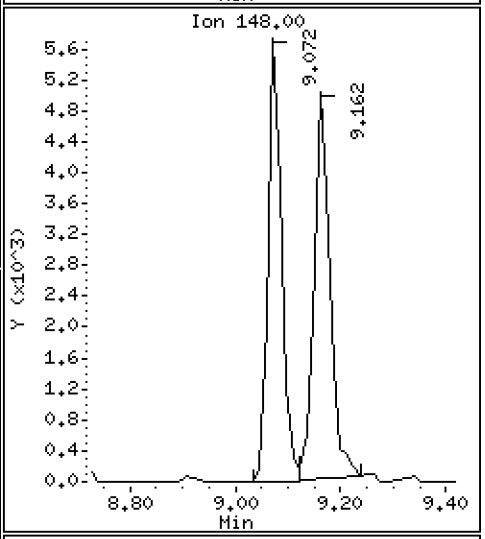
7 1,3-Dichlorobenzene

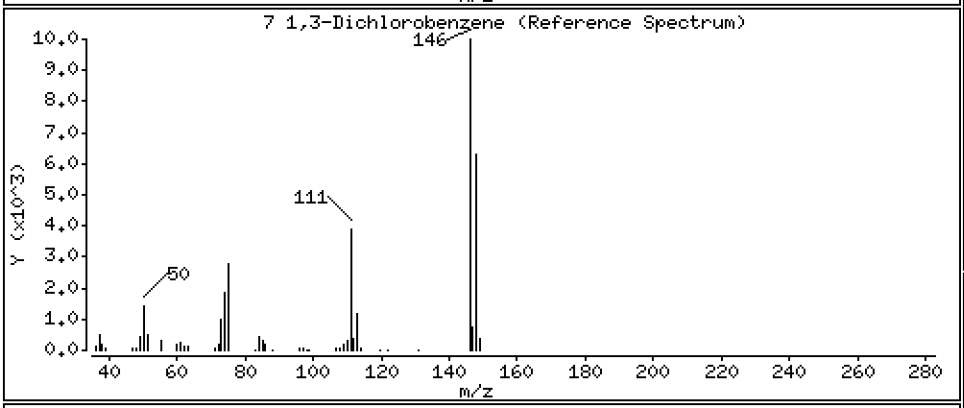
Concentration: 0.2117 ug/mL

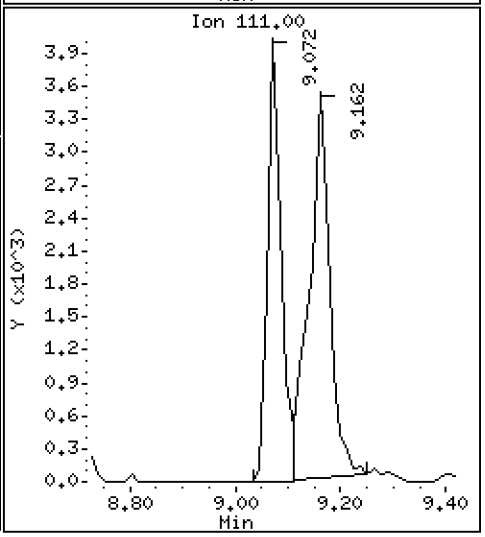


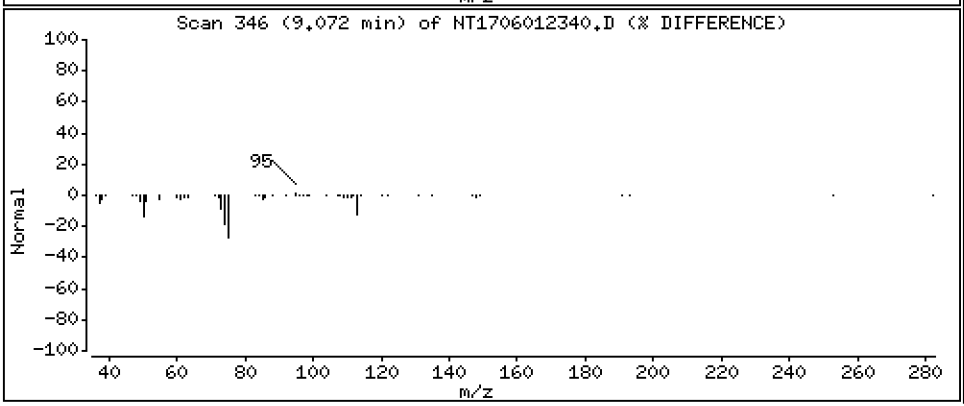












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

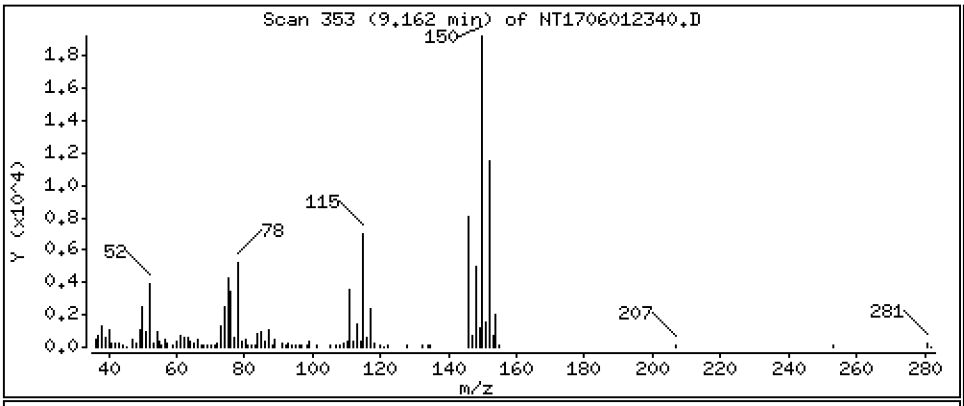
Operator: VTS

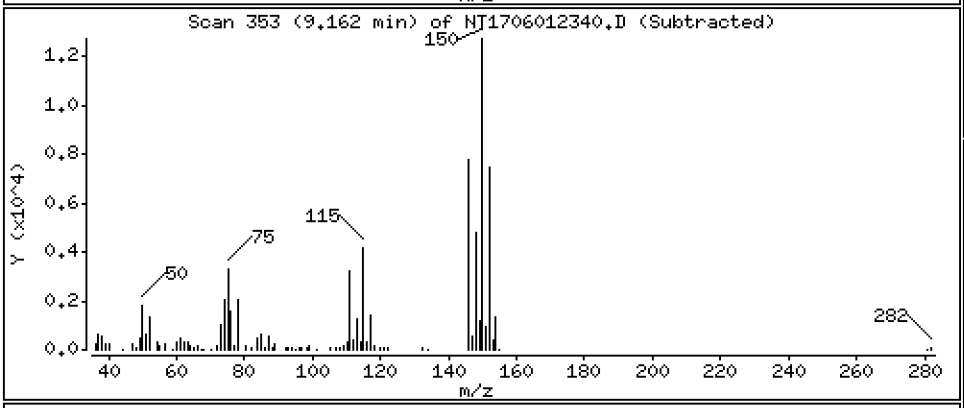
Column phase: ZB-5msi

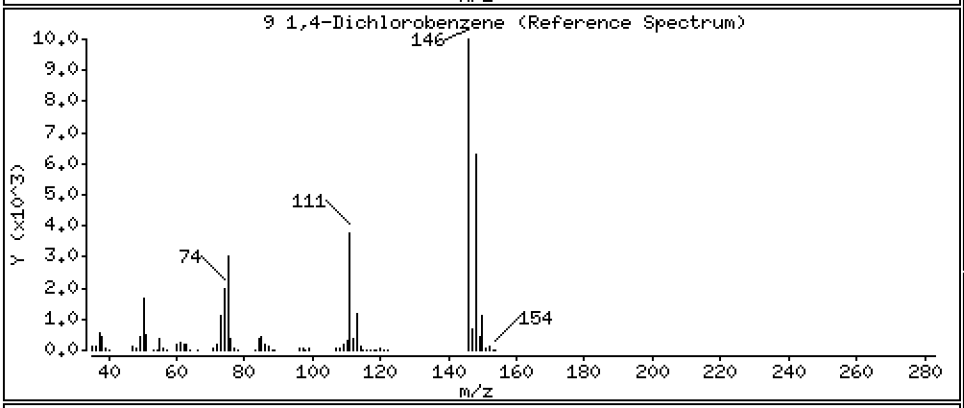
Column diameter: 0.25

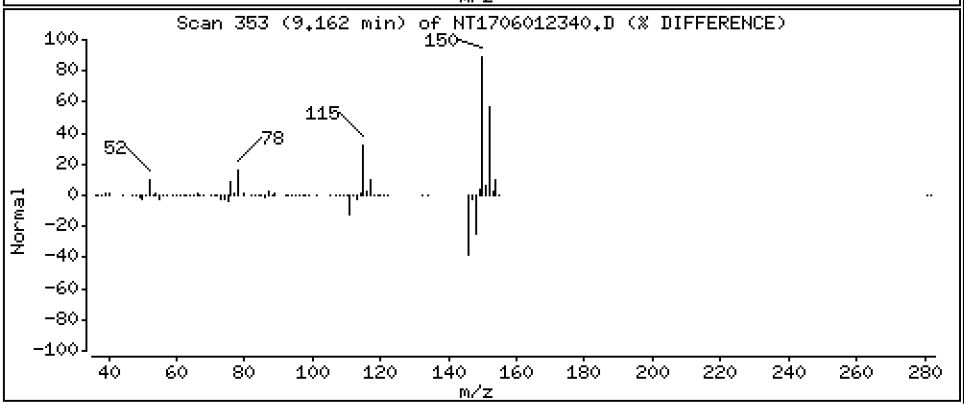
9 1,4-Dichlorobenzene

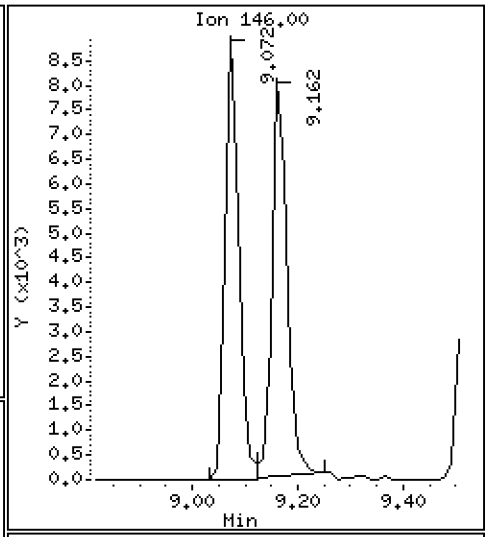
Concentration: 0.2045 ug/mL

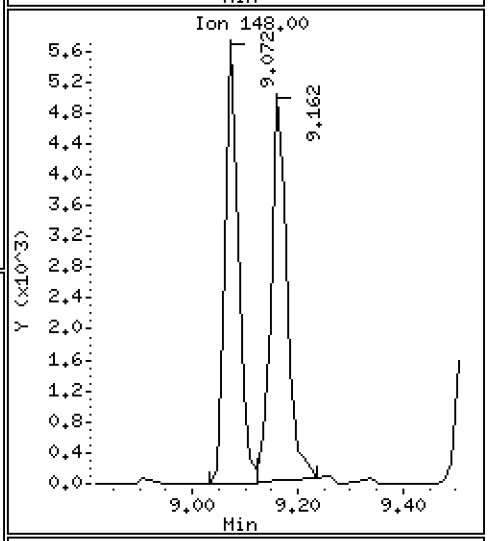


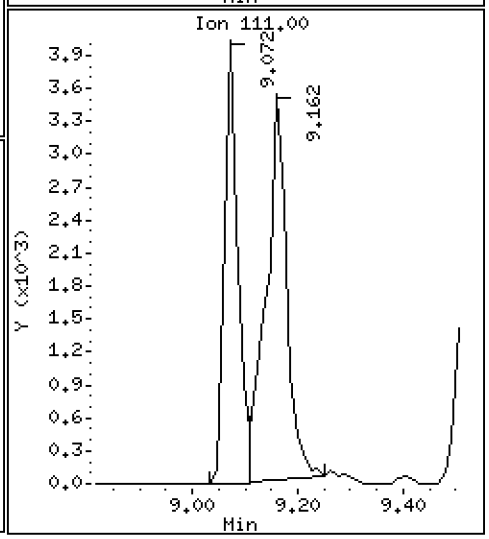












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

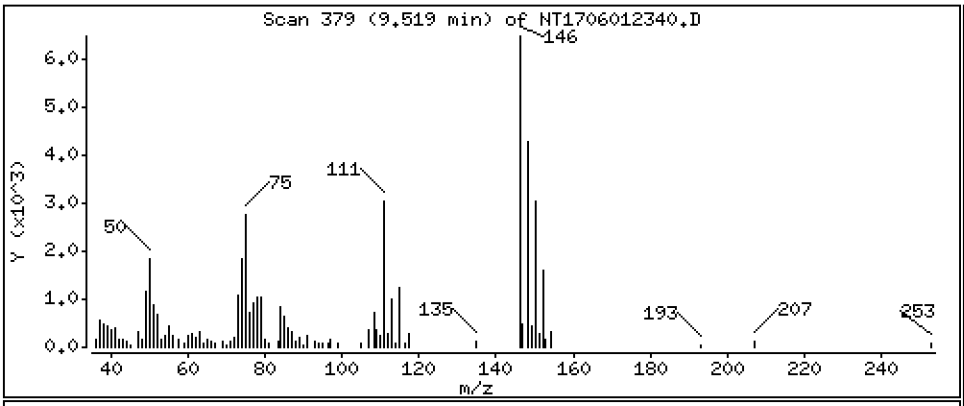
Operator: VTS

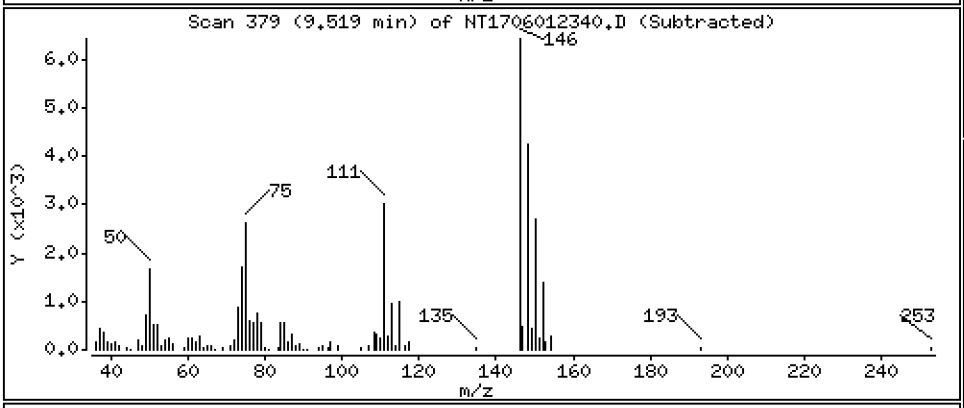
Column phase: ZB-5msi

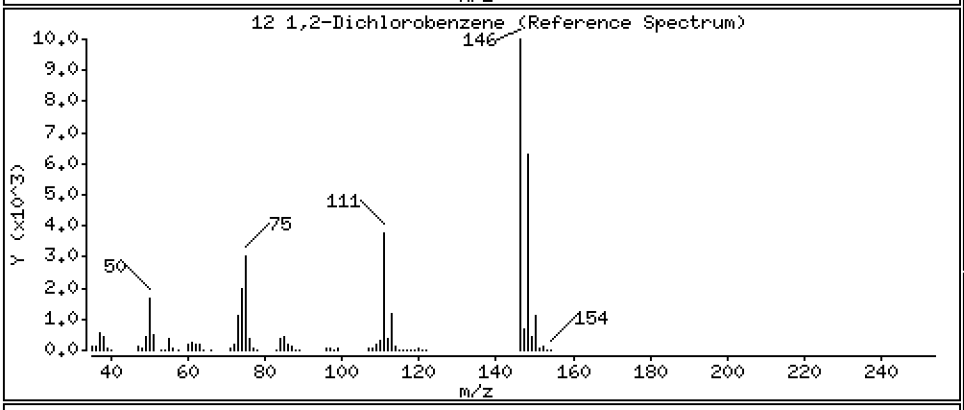
Column diameter: 0.25

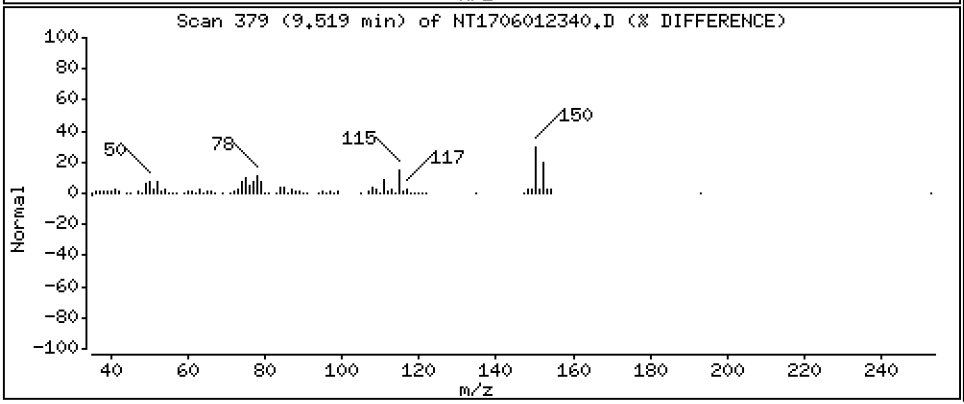
12 1,2-Dichlorobenzene

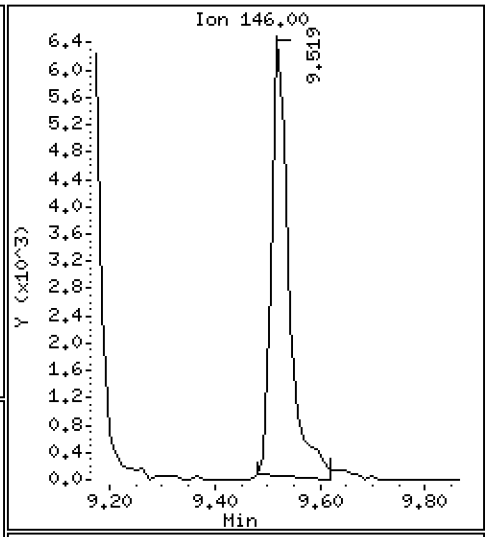
Concentration: 0.2051 ug/mL

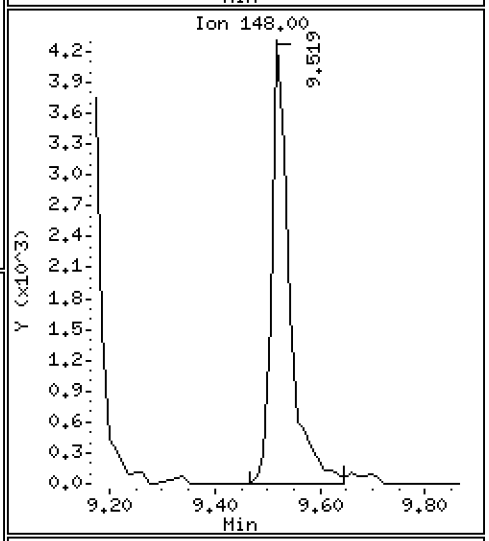


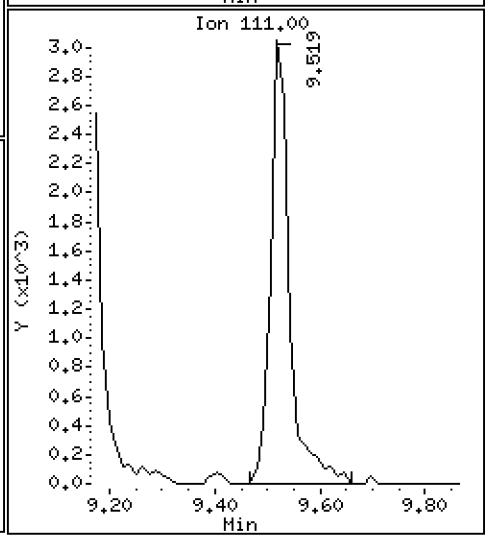












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

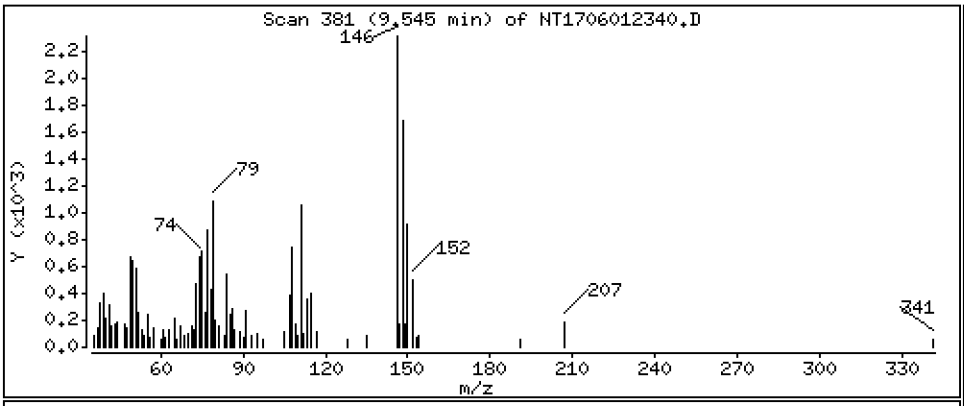
Operator: VTS

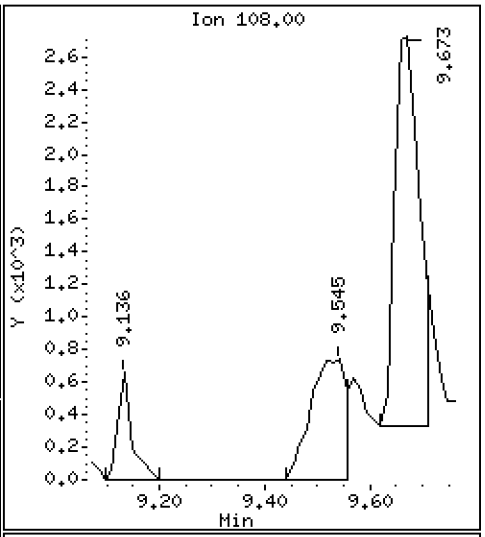
Column phase: ZB-5msi

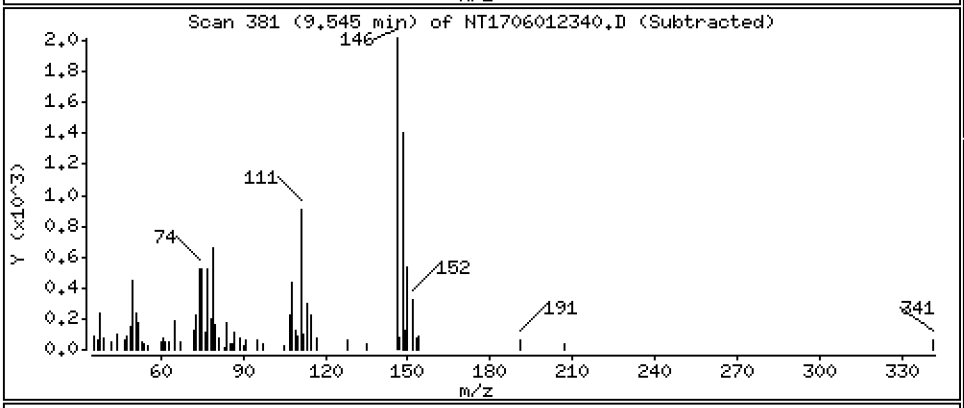
Column diameter: 0.25

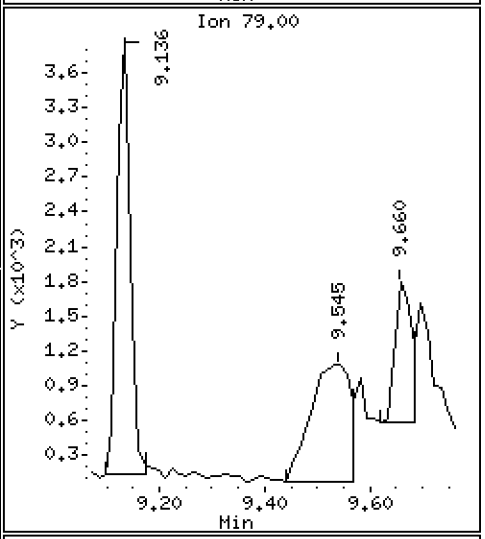
11 Benzyl alcohol

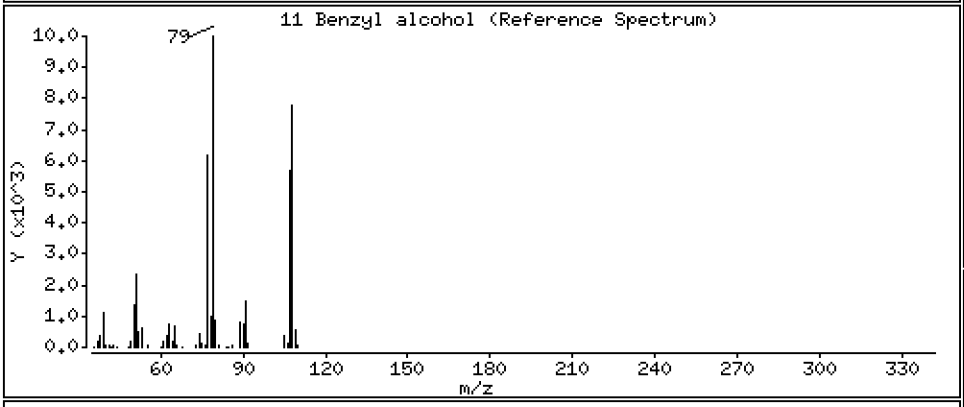
Concentration: 0.08110 ug/mL

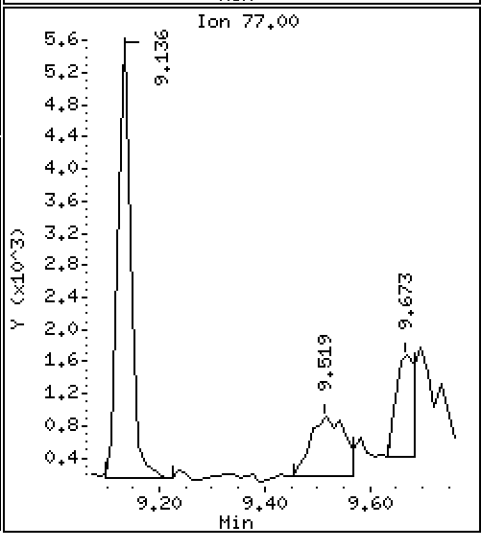


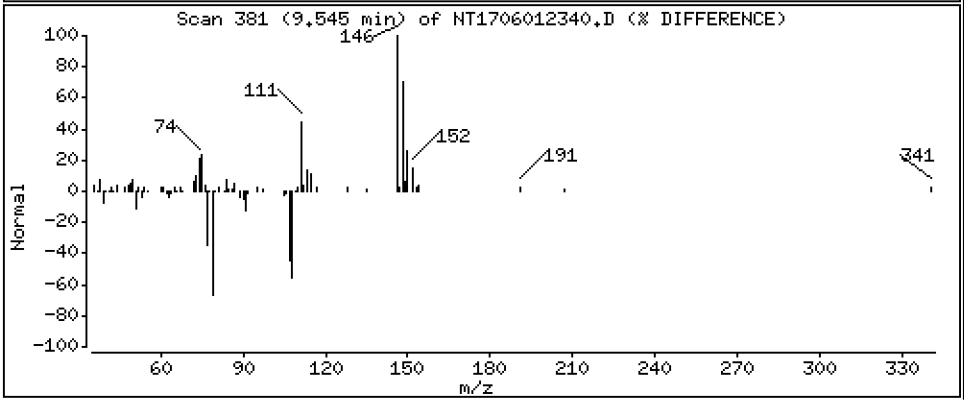












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

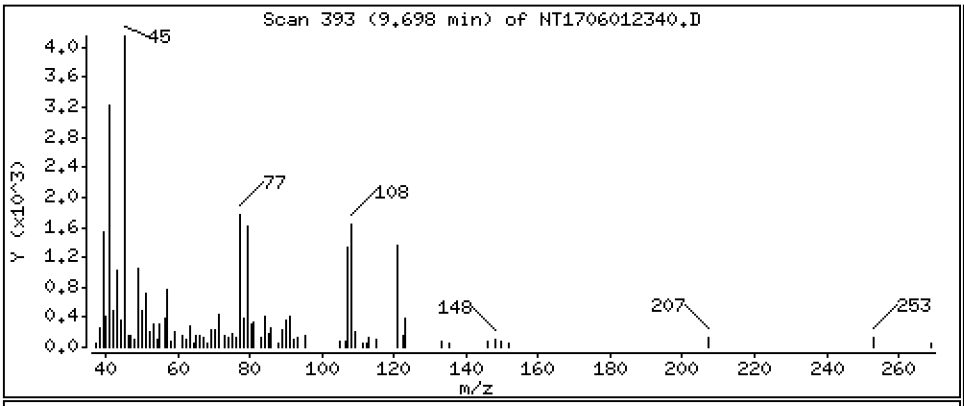
Operator: VTS

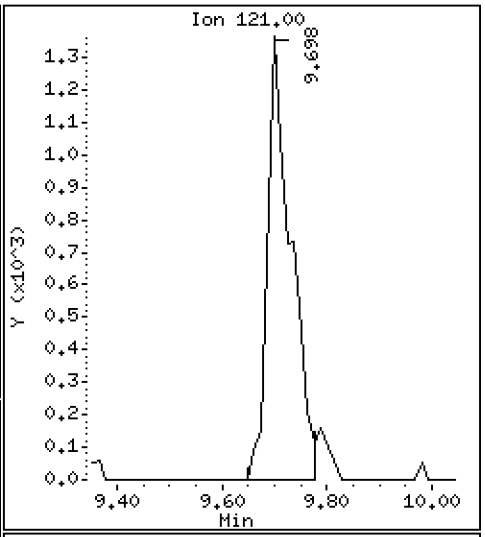
Column phase: ZB-5msi

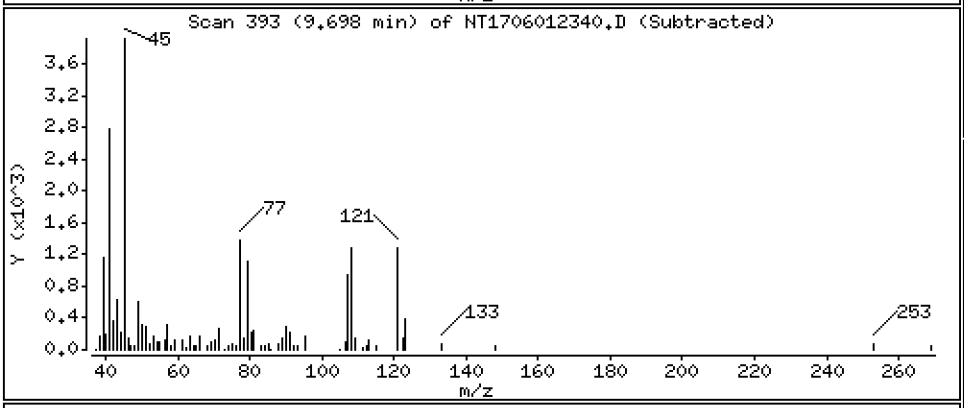
Column diameter: 0.25

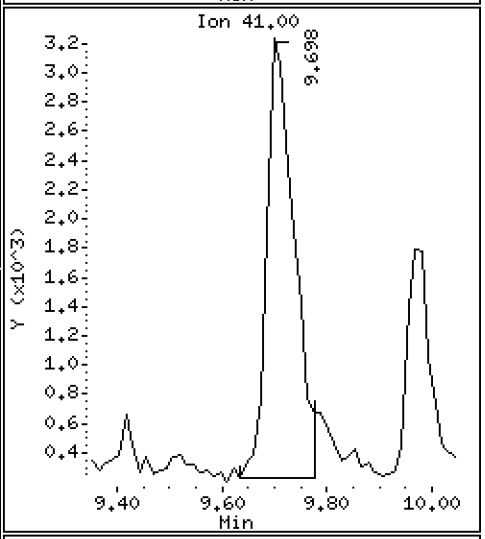
14 2,2'-oxybis(1-Chloropropane)

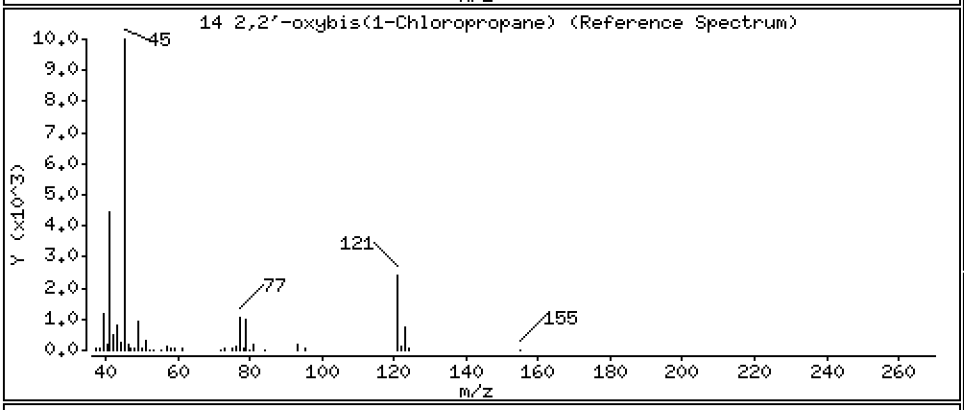
Concentration: 0.2071 ug/mL

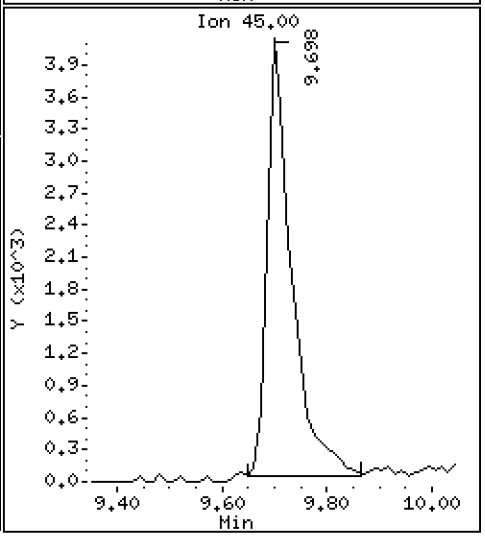


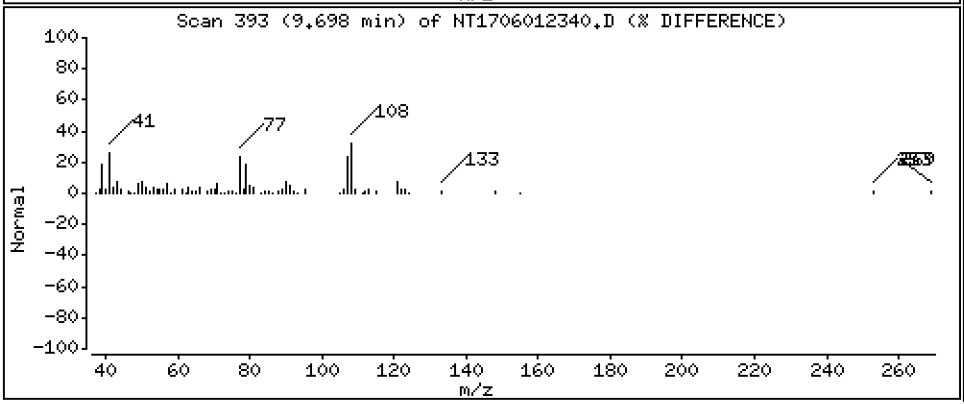












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

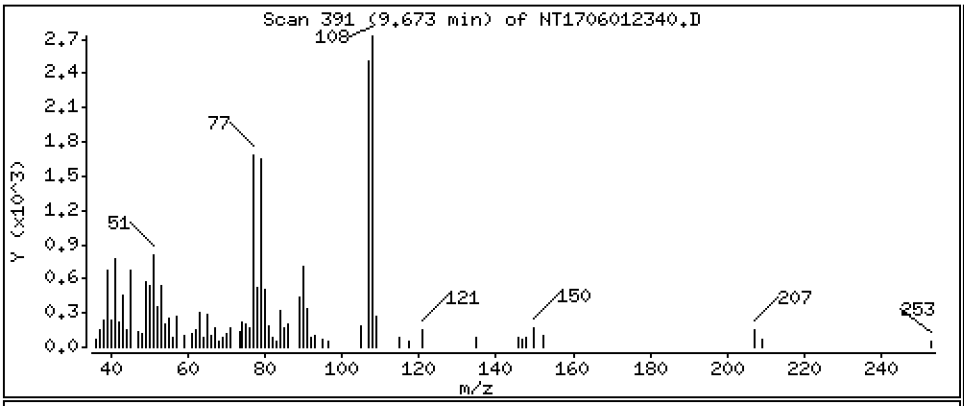
Operator: VTS

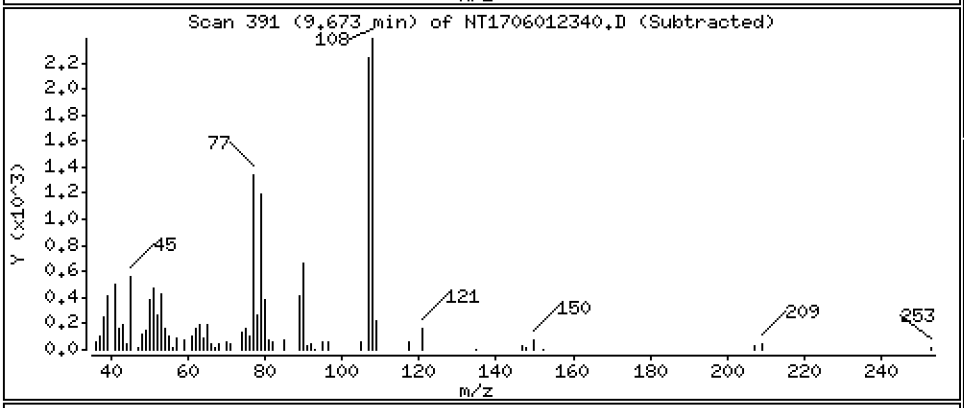
Column phase: ZB-5msi

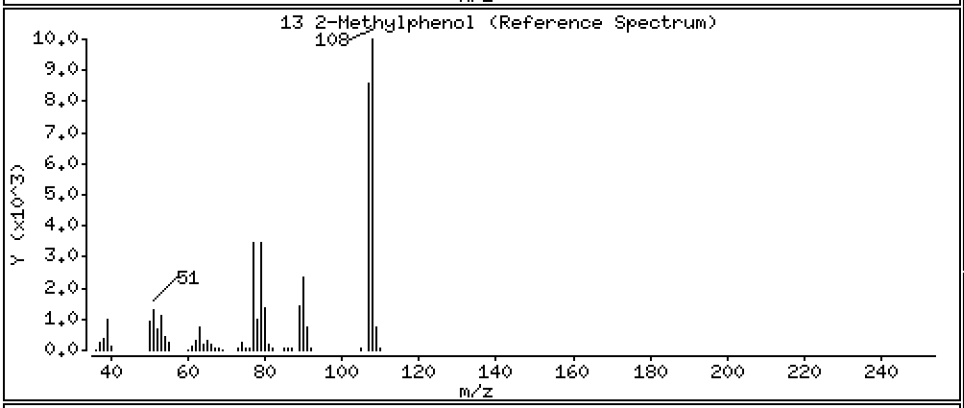
Column diameter: 0.25

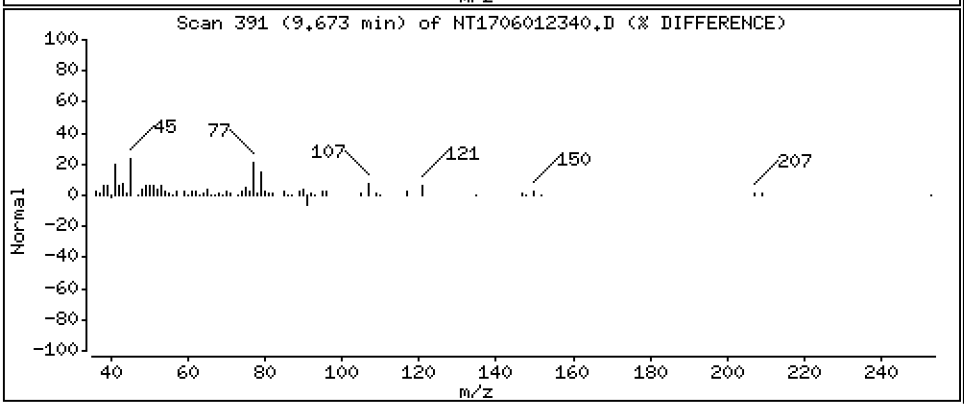
13 2-Methylphenol

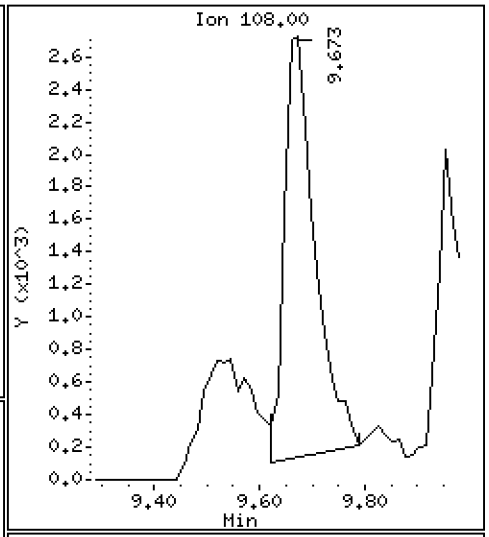
Concentration: 0.1546 ug/mL

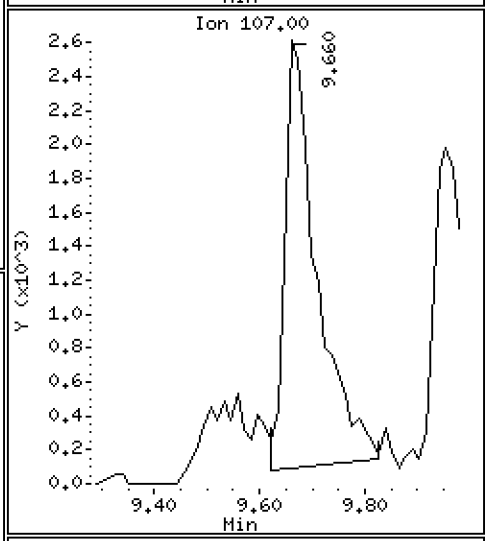


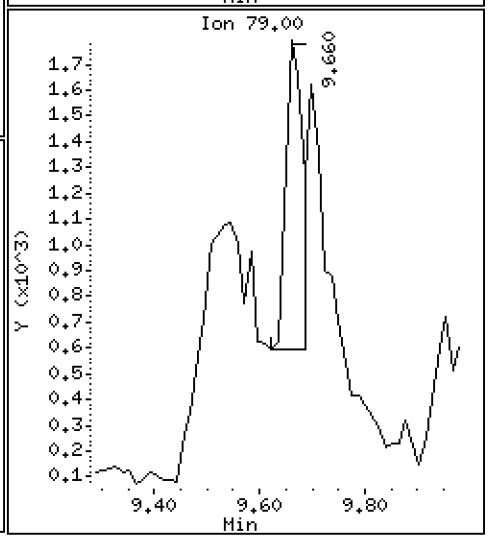












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

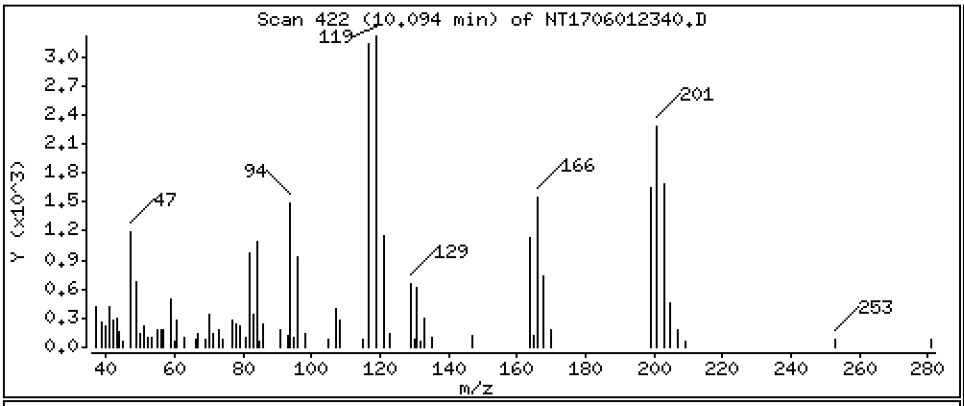
Operator: VTS

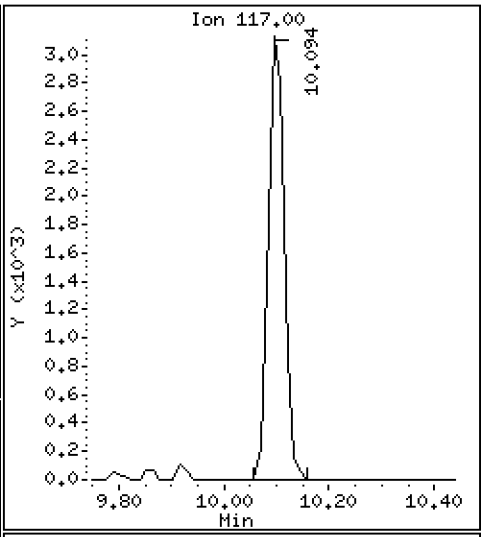
Column phase: ZB-5msi

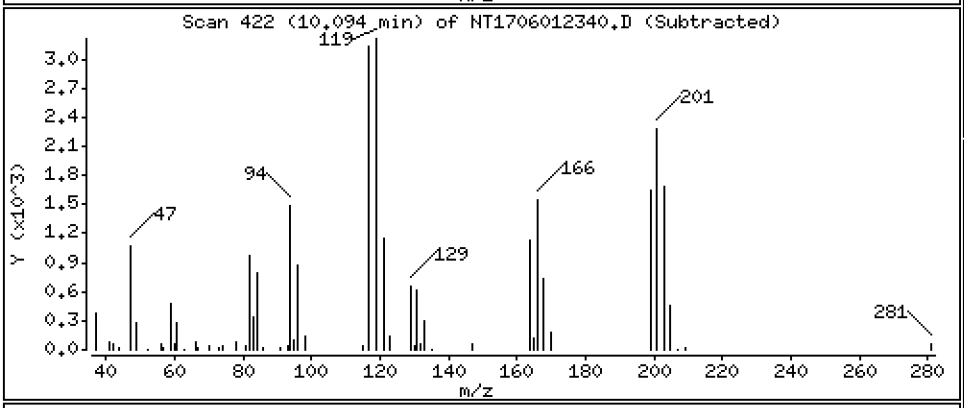
Column diameter: 0.25

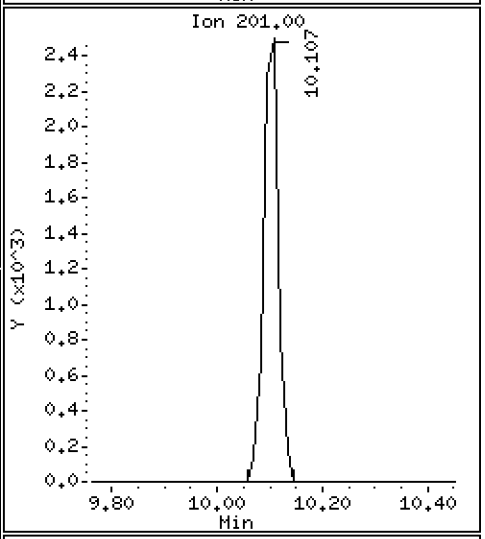
17 Hexachloroethane

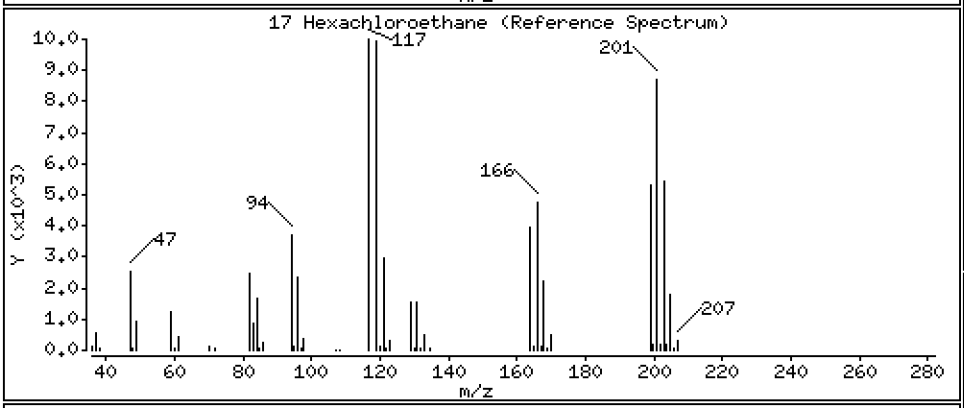
Concentration: 0.2128 ug/mL

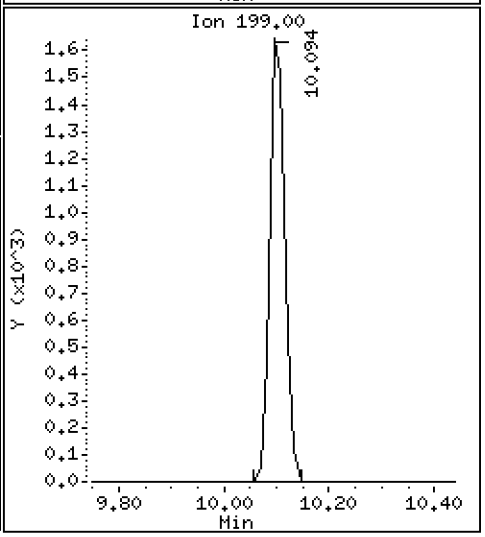


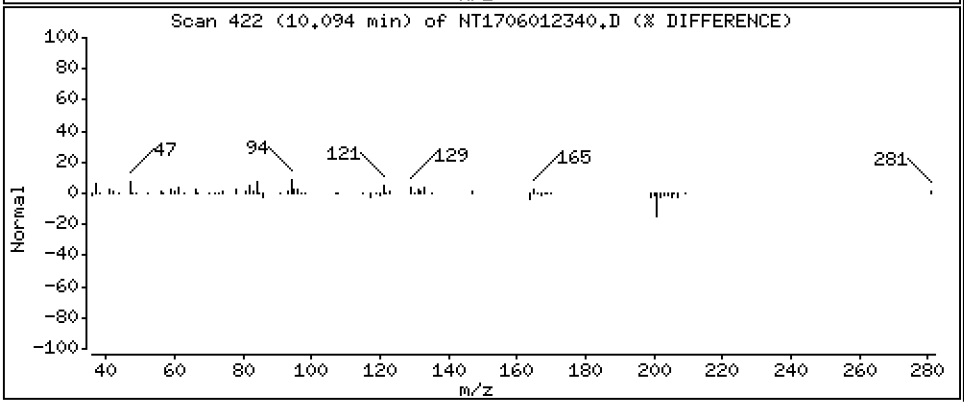












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

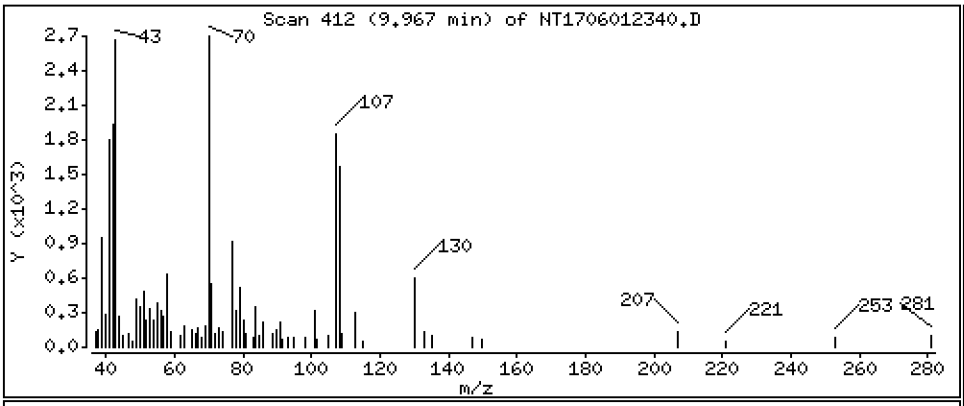
Operator: VTS

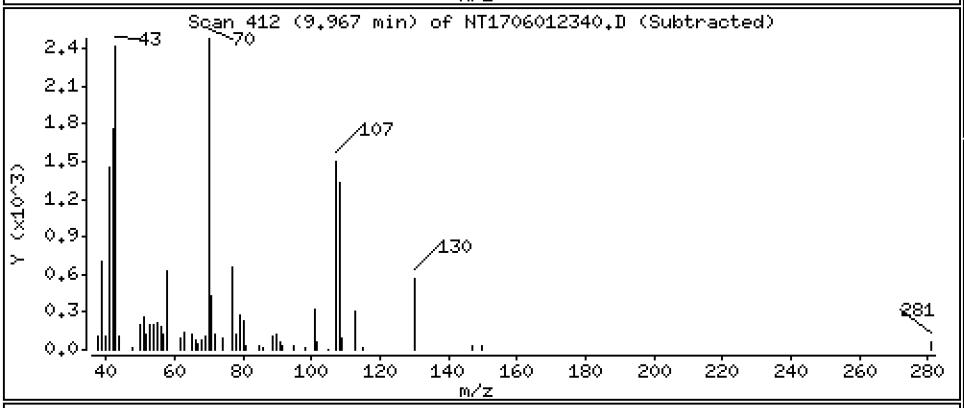
Column phase: ZB-5msi

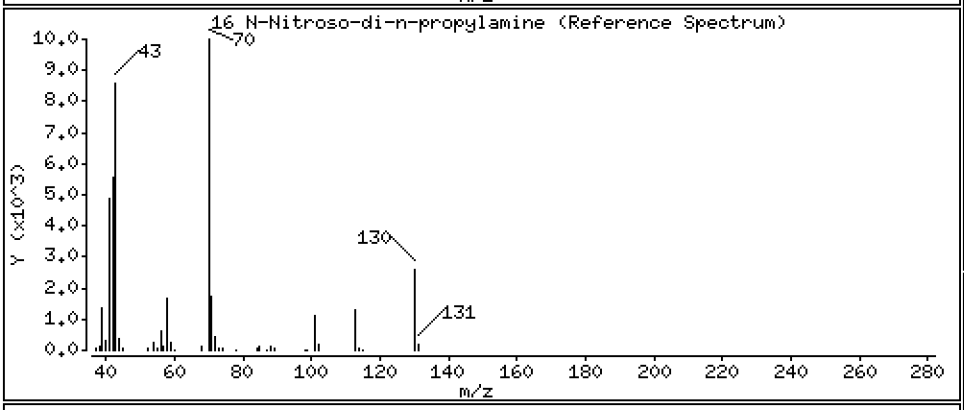
Column diameter: 0.25

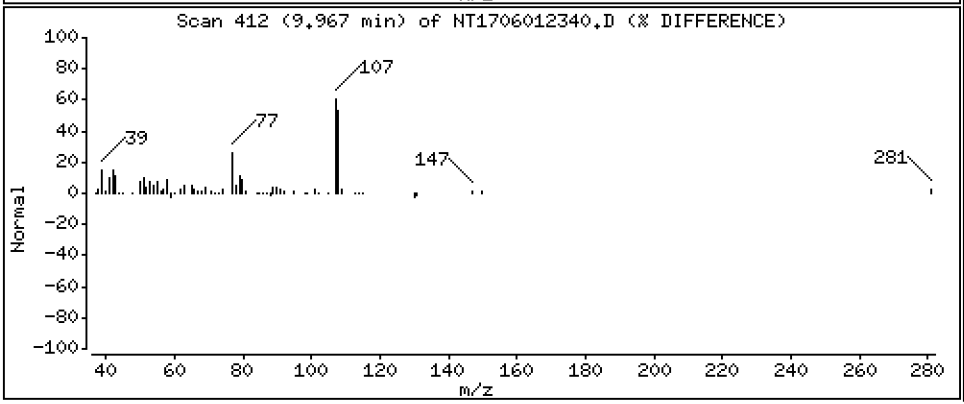
16 N-Nitroso-di-n-propylamine

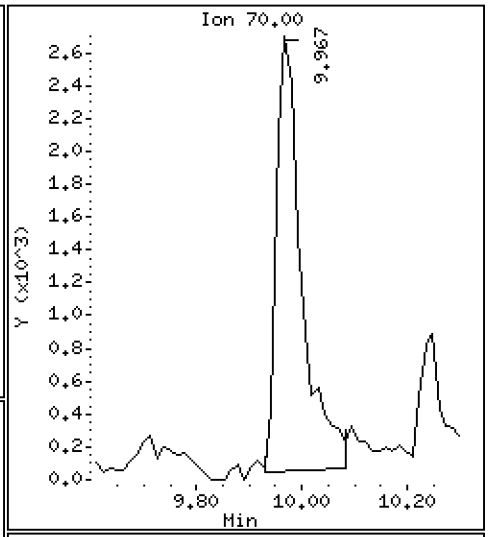
Concentration: 0.1725 ug/mL

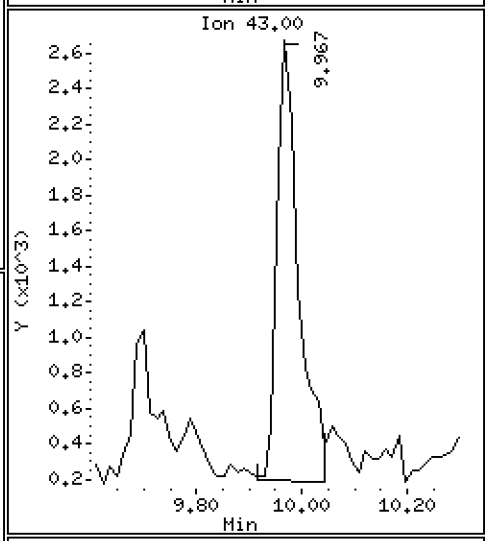


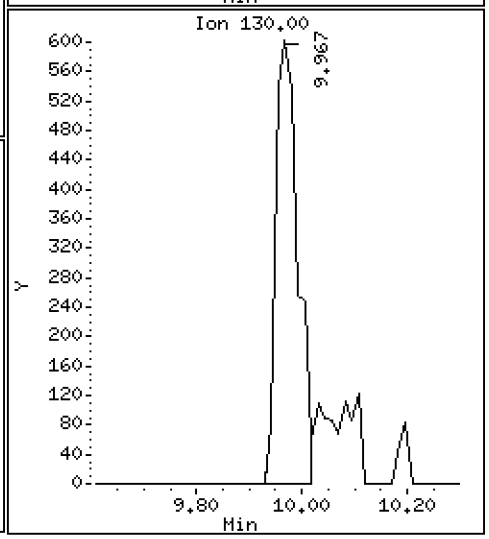












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

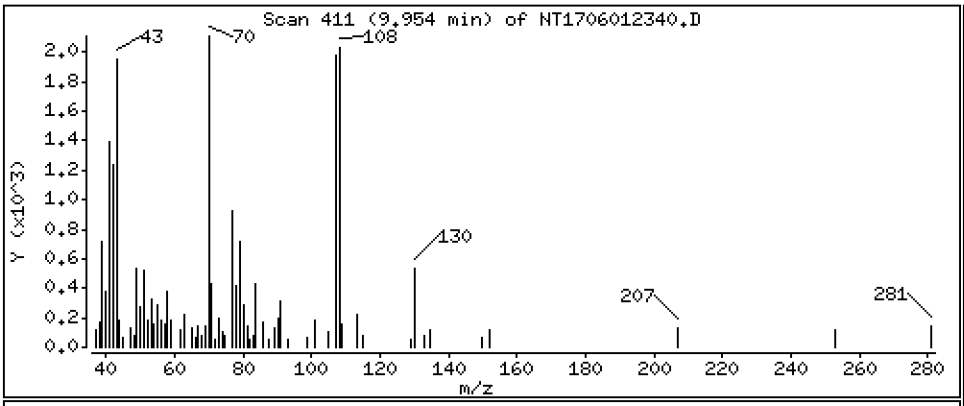
Operator: VTS

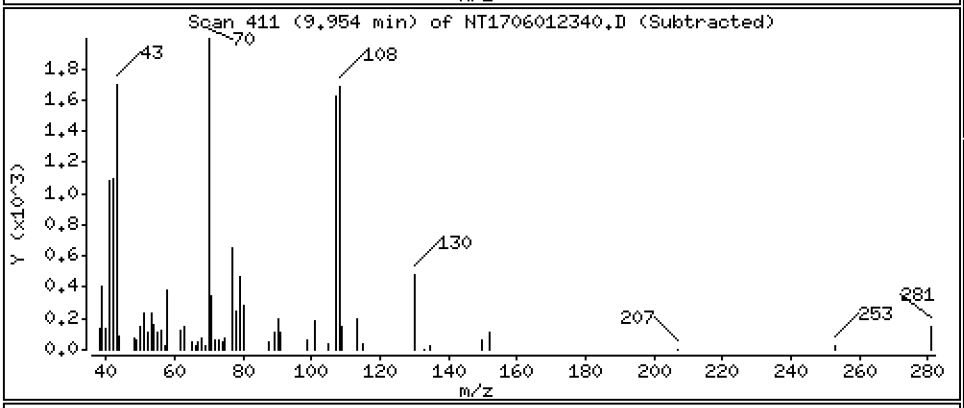
Column phase: ZB-5msi

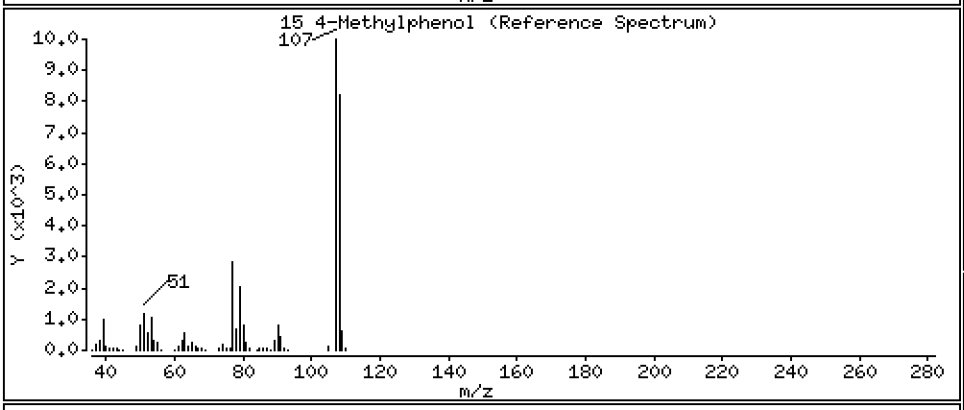
Column diameter: 0.25

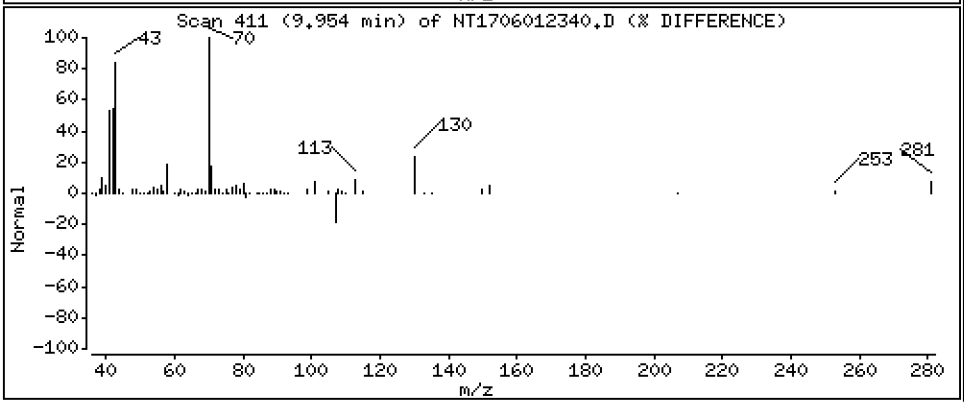
15 4-Methylphenol

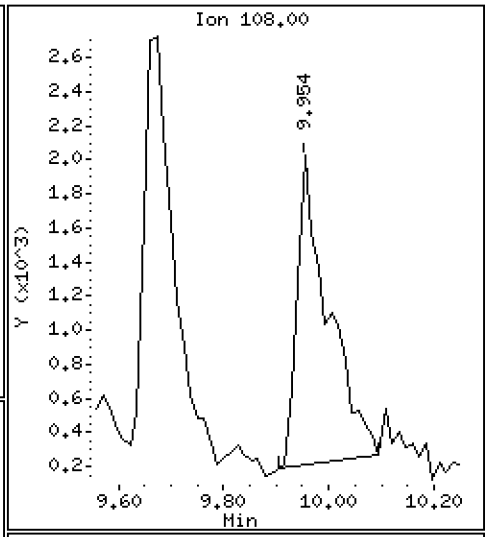
Concentration: 0.1077 ug/mL

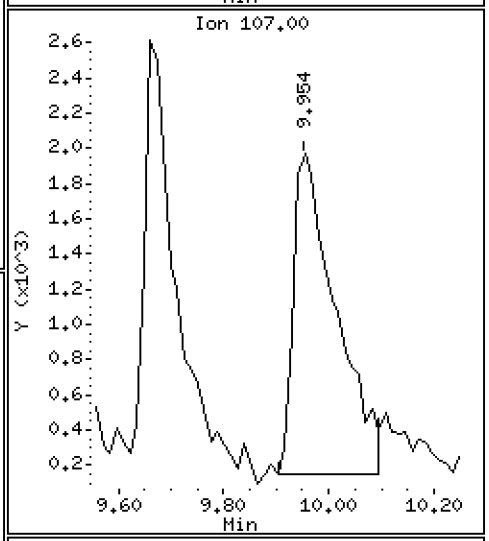


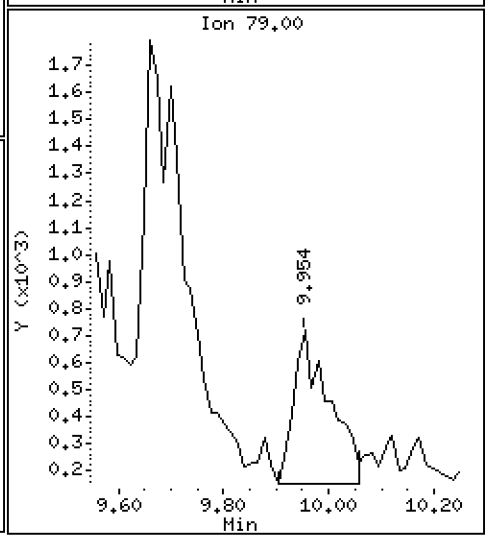












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

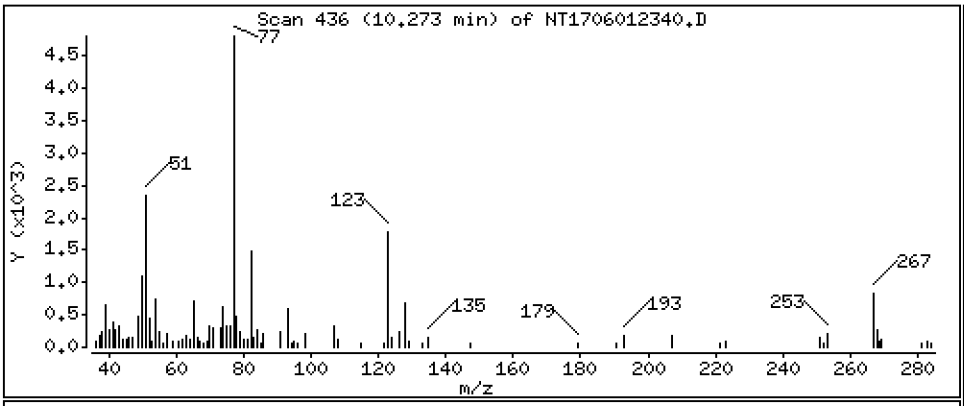
Operator: VTS

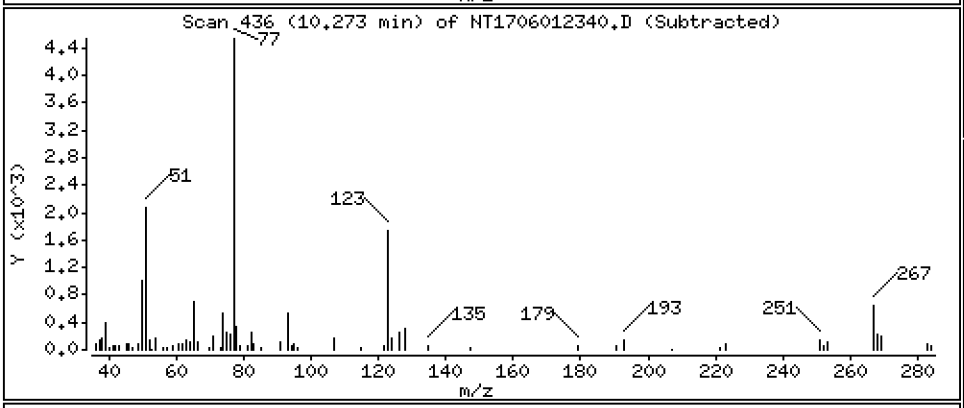
Column phase: ZB-5msi

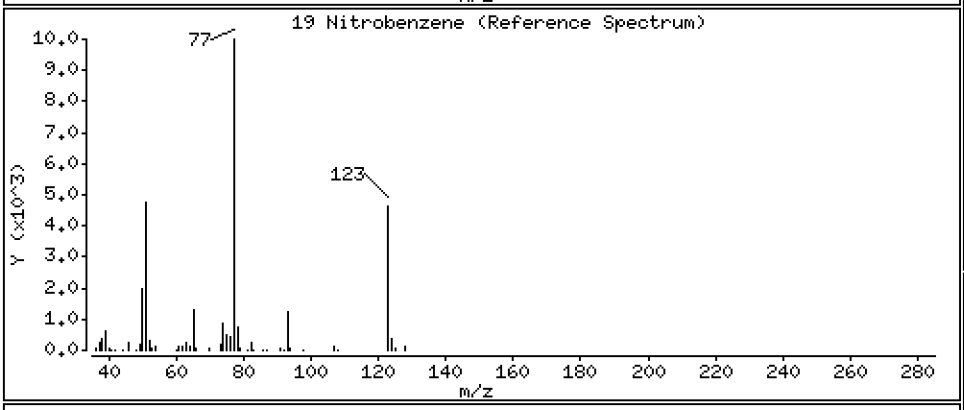
Column diameter: 0.25

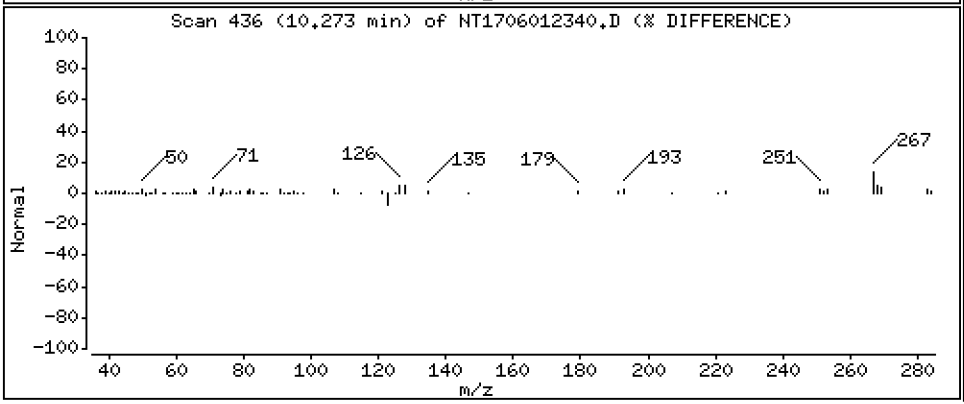
19 Nitrobenzene

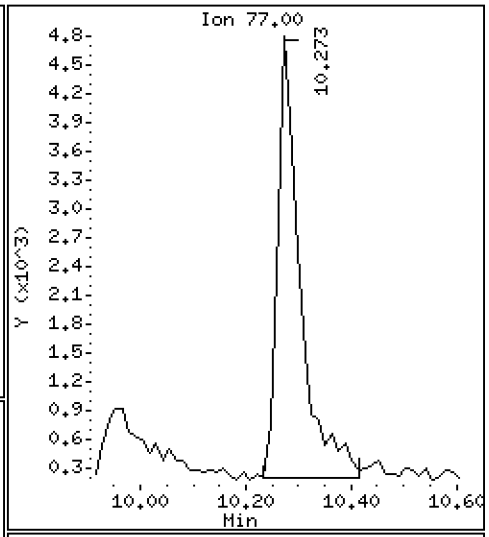
Concentration: 0.1837 ug/mL

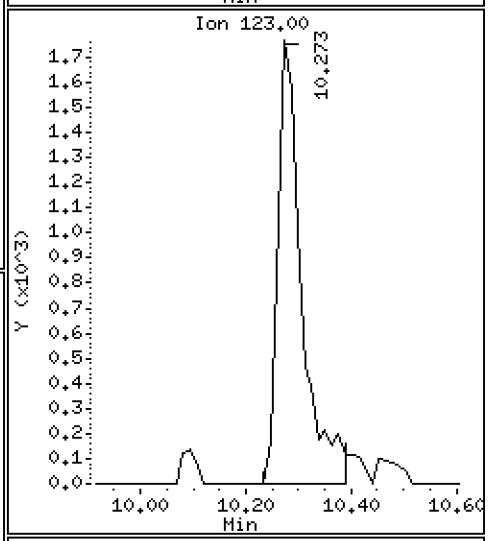


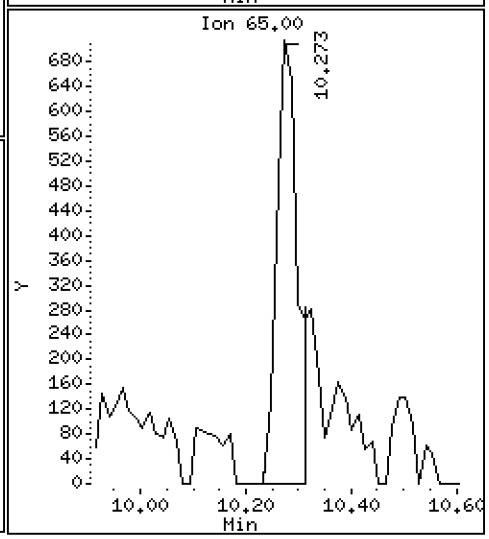












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

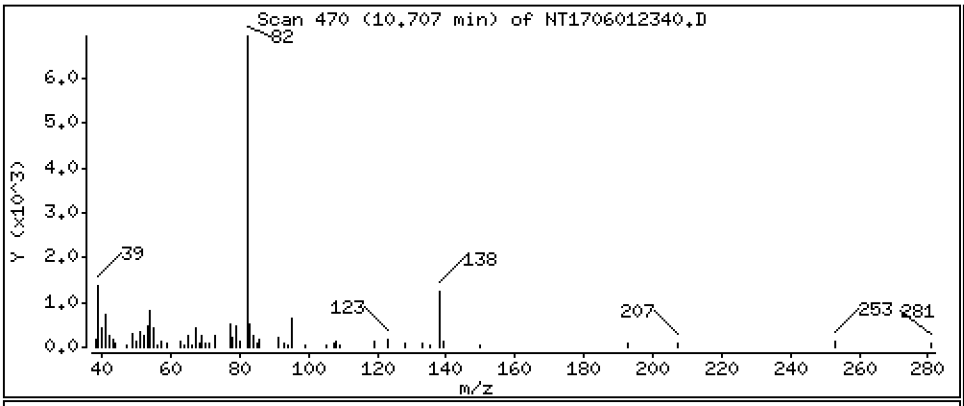
Operator: VTS

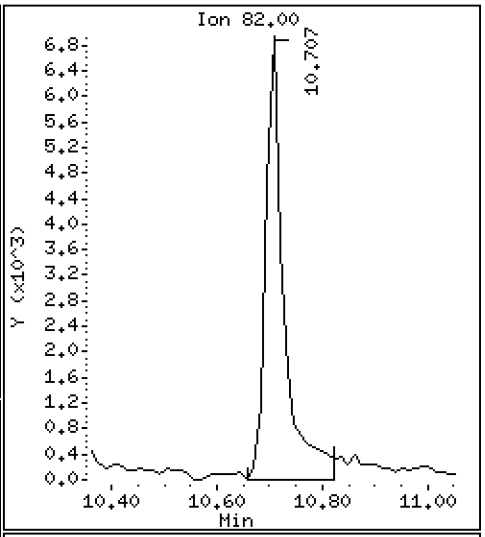
Column phase: ZB-5msi

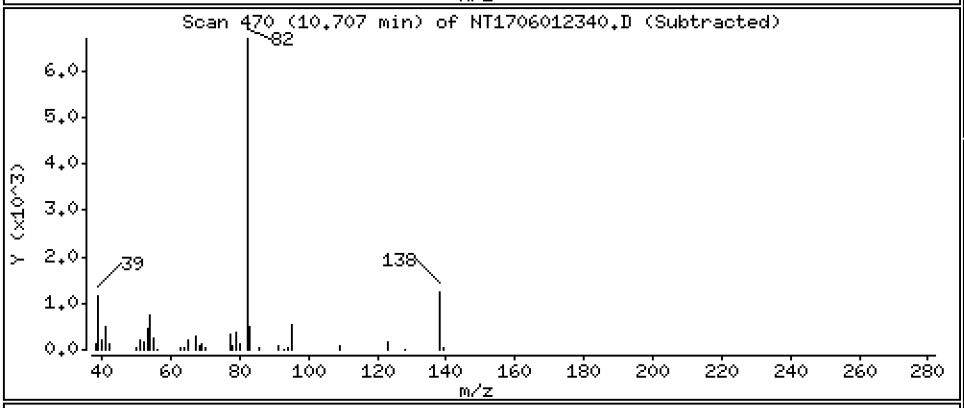
Column diameter: 0.25

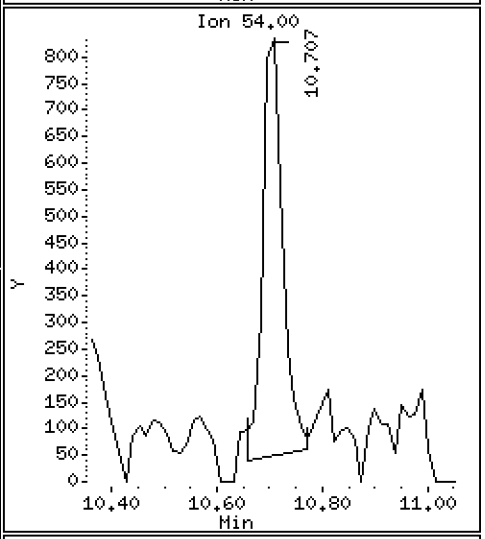
20 Isophorone

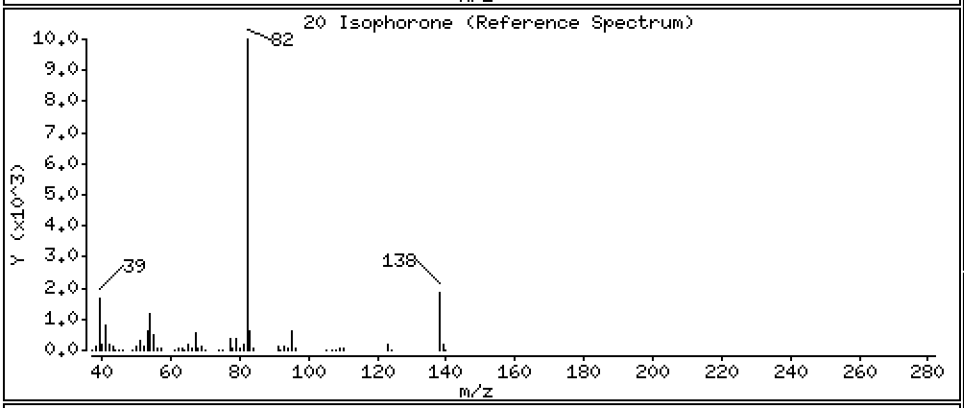
Concentration: 0.1855 ug/mL

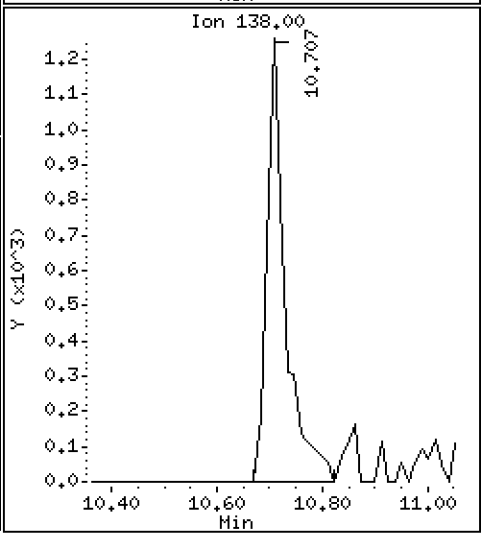


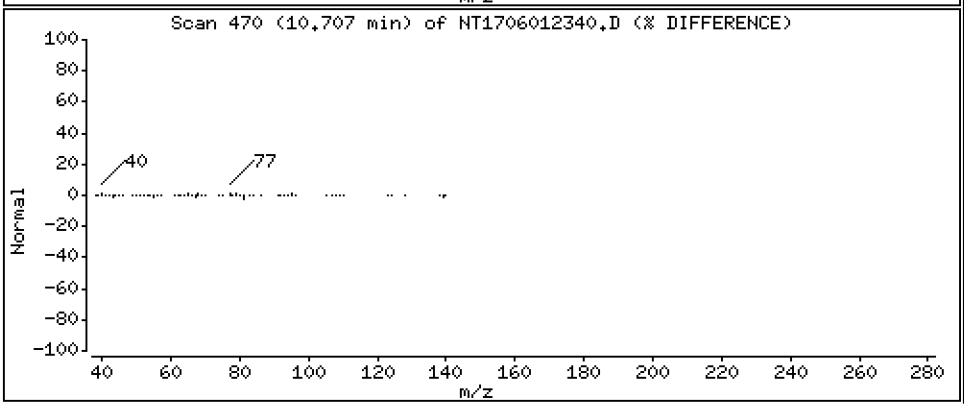












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

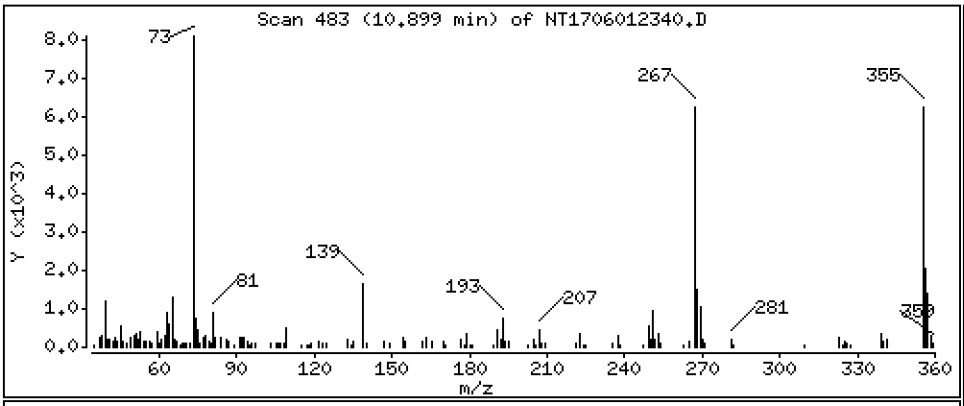
Operator: VTS

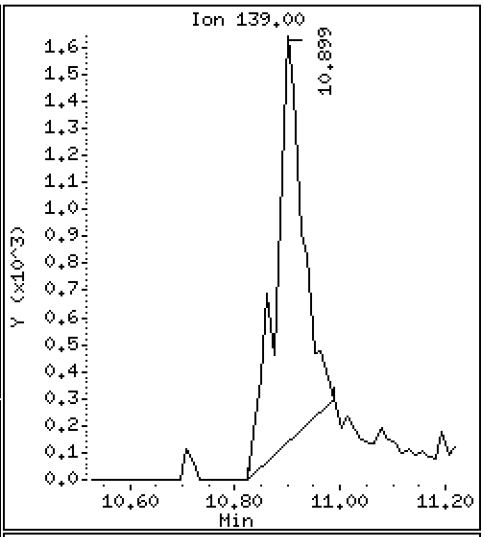
Column phase: ZB-5msi

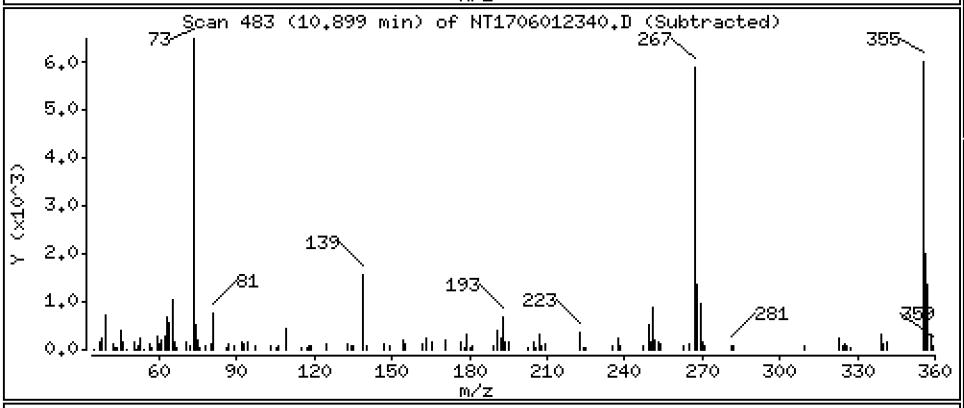
Column diameter: 0.25

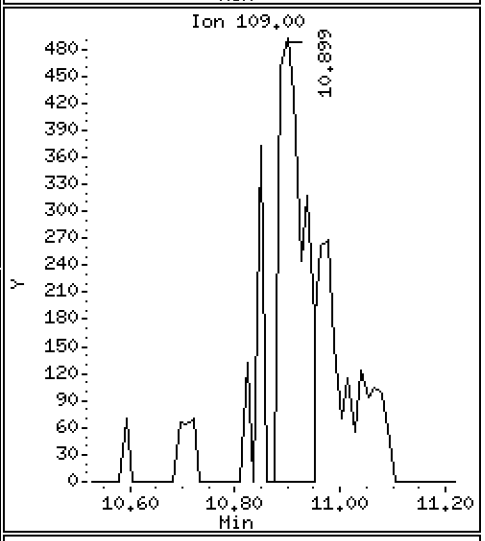
21 2-Nitrophenol

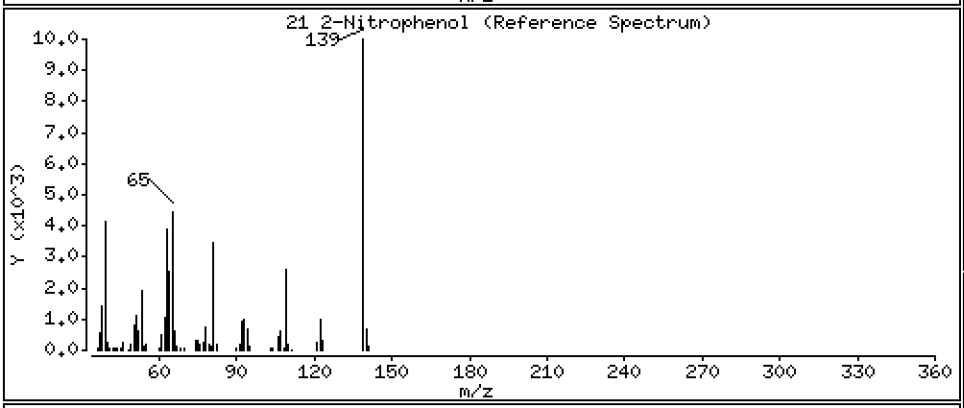
Concentration: 0.1482 ug/mL

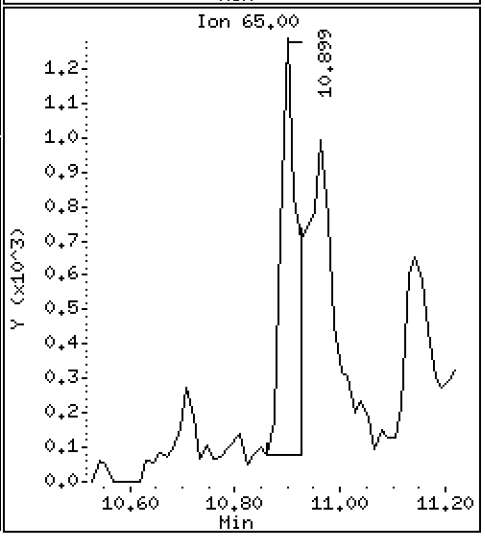


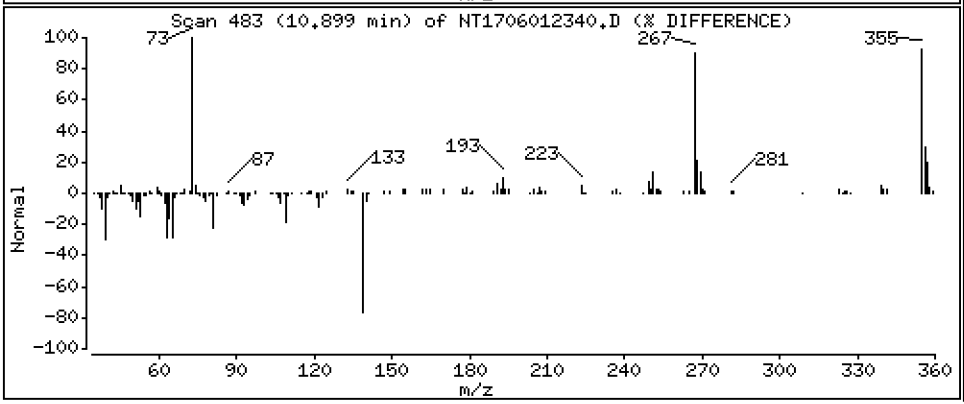












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

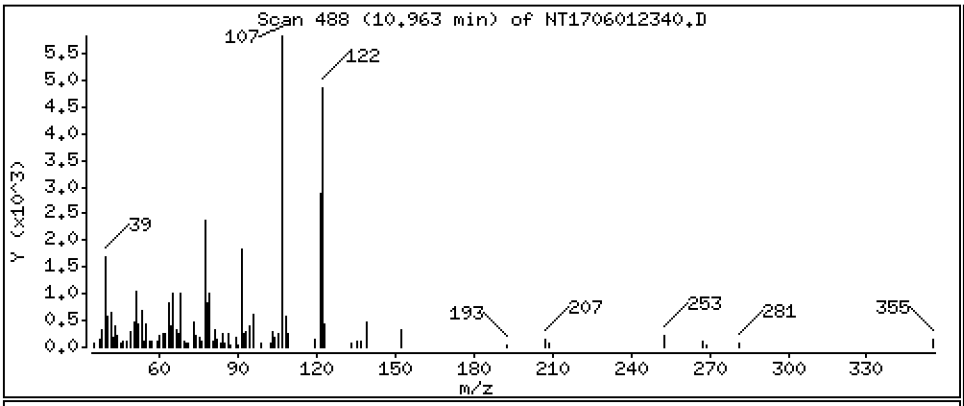
Operator: VTS

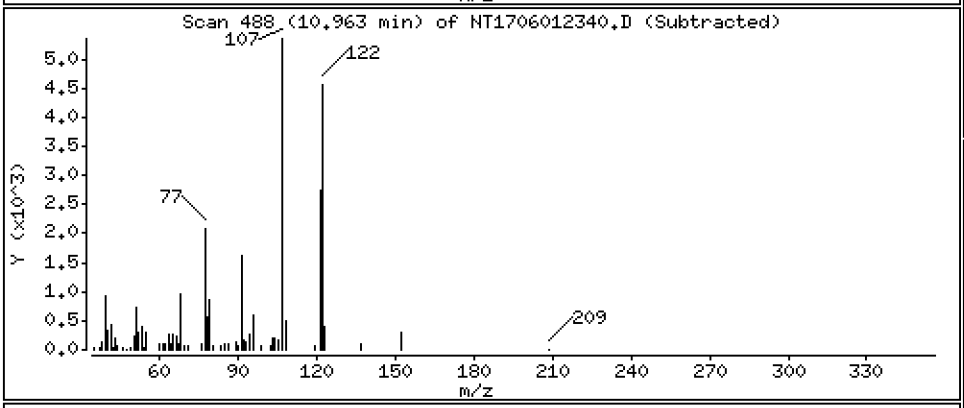
Column phase: ZB-5msi

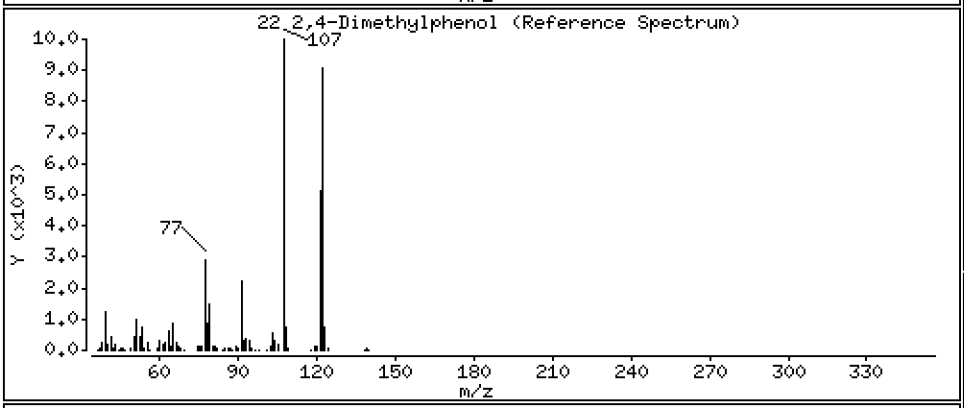
Column diameter: 0.25

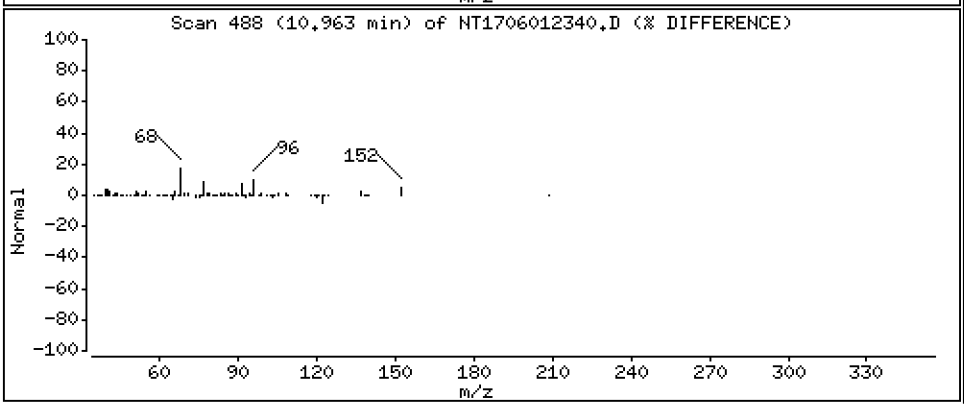
22 2,4-Dimethylphenol

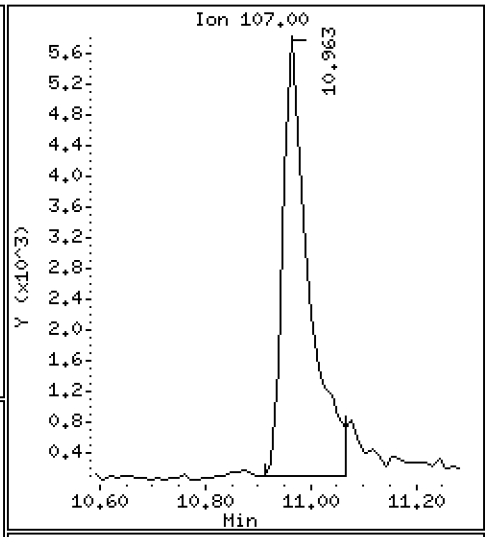
Concentration: 0.2808 ug/mL

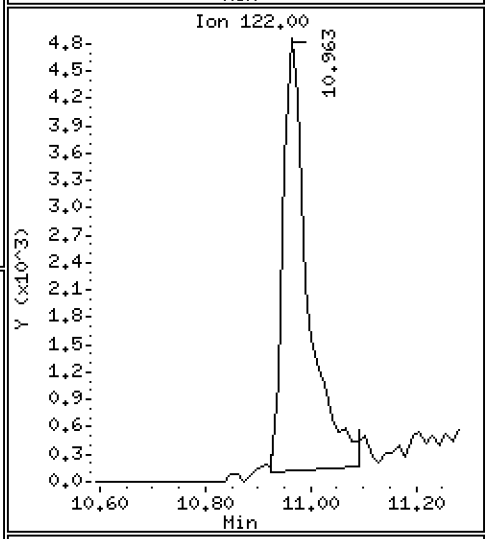


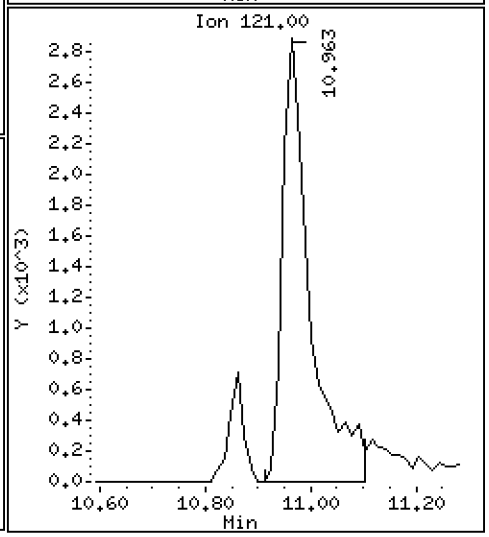












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

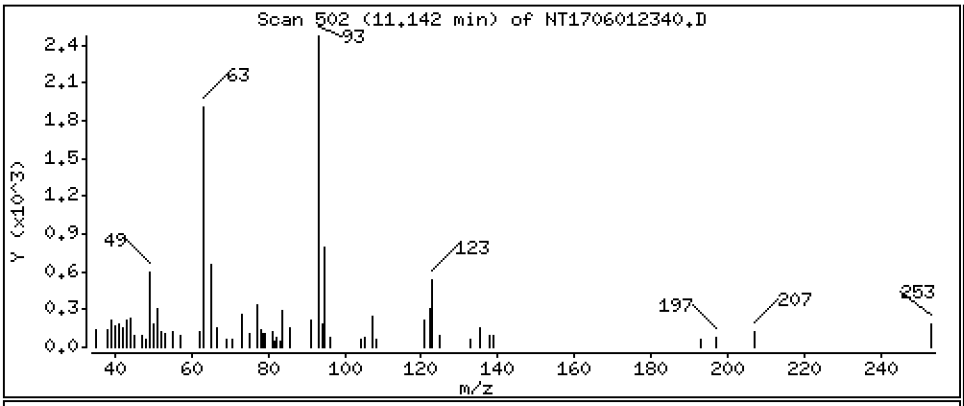
Operator: VTS

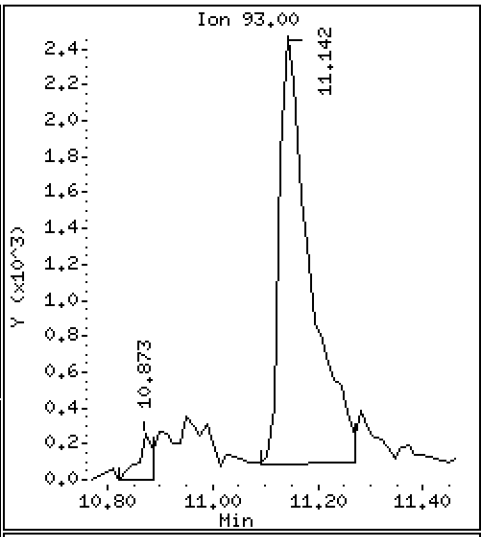
Column phase: ZB-5msi

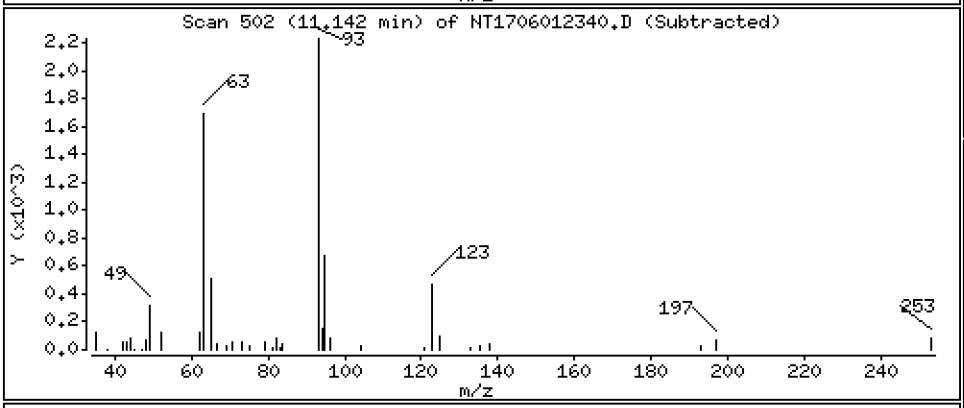
Column diameter: 0.25

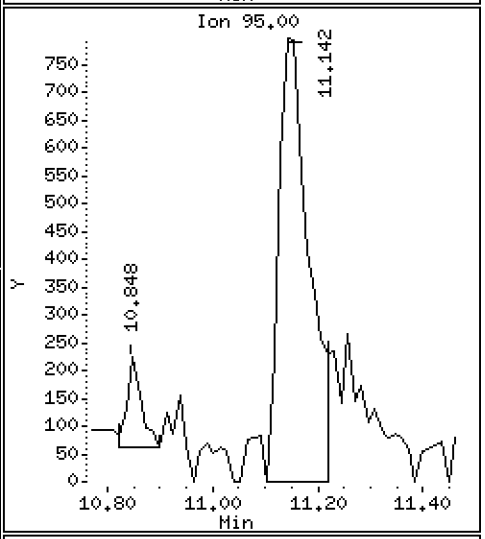
23 Bis(2-Chloroethoxy)methane

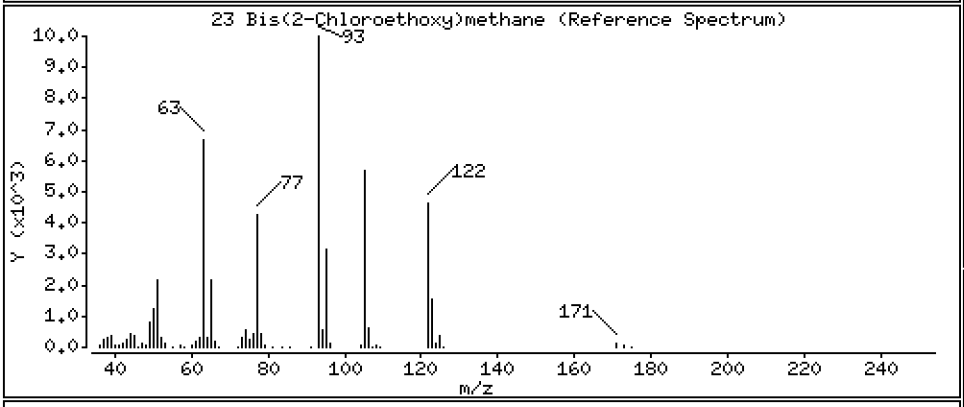
Concentration: 0.1541 ug/mL

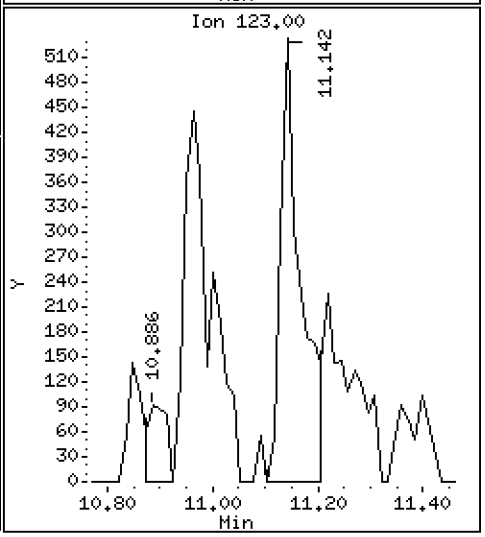


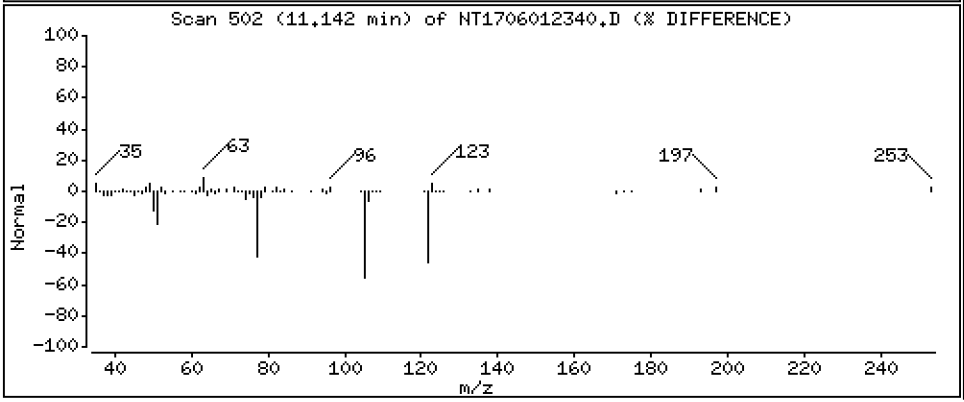












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

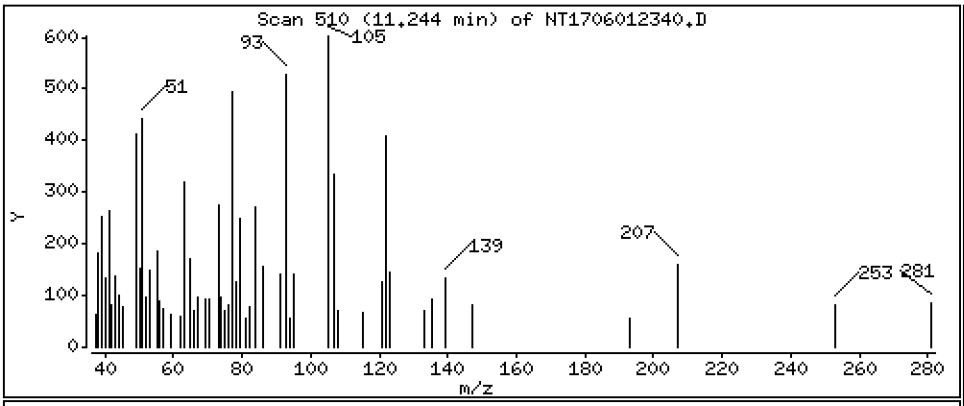
Operator: VTS

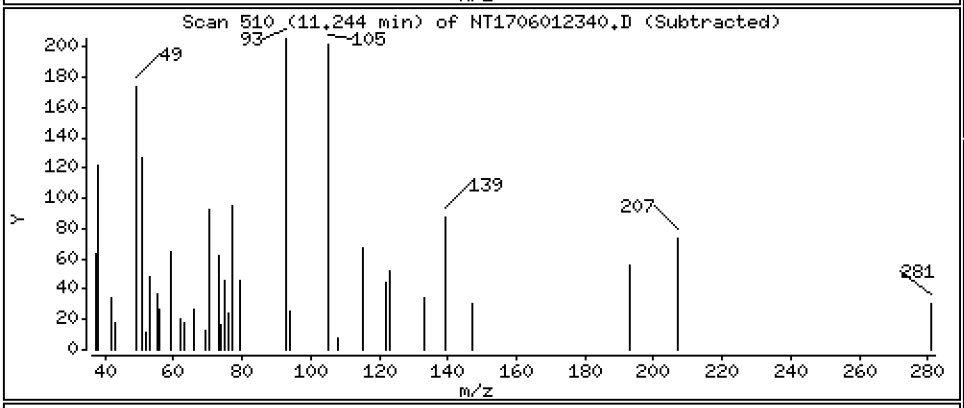
Column phase: ZB-5msi

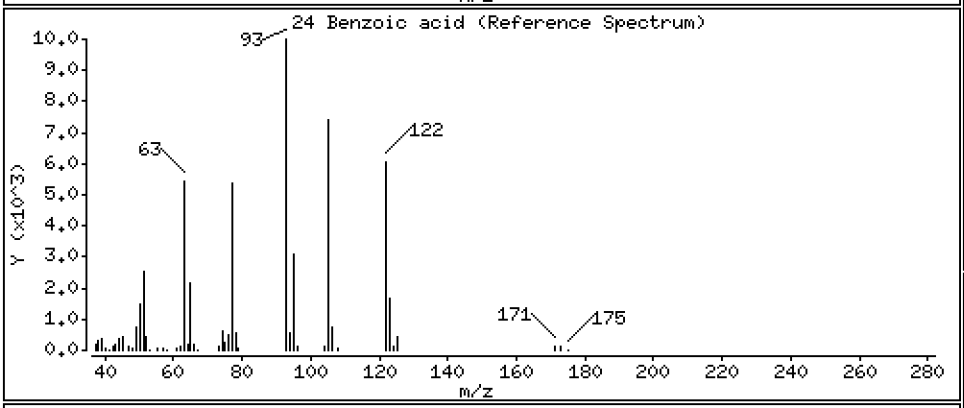
Column diameter: 0.25

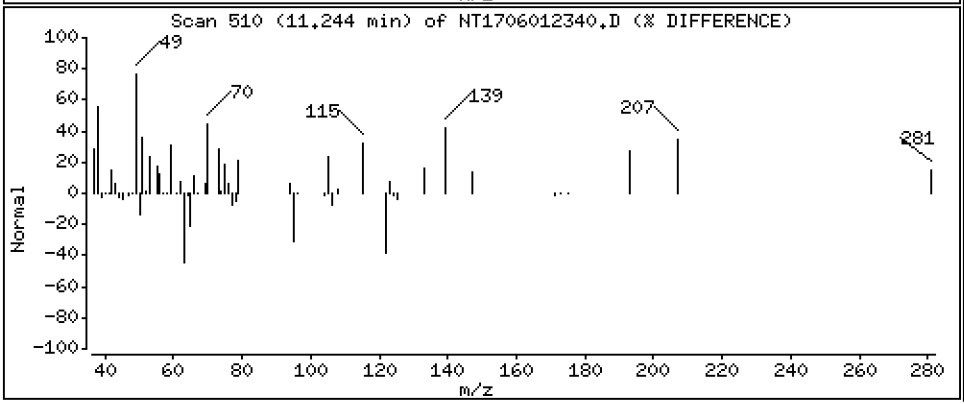
24 Benzoic acid

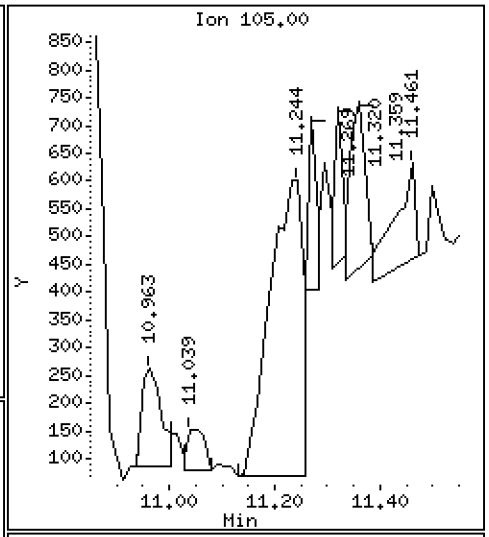
Concentration: 0.05034 ug/mL

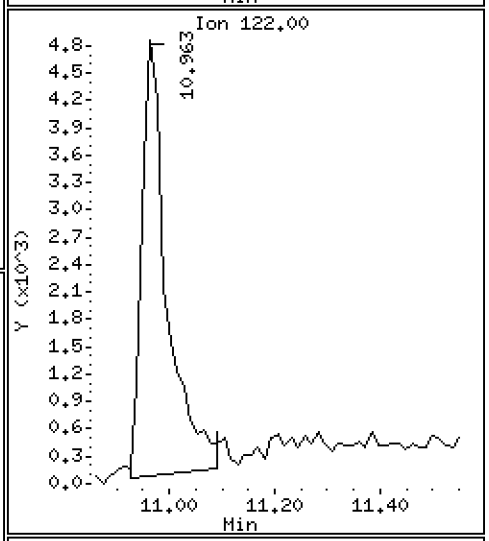


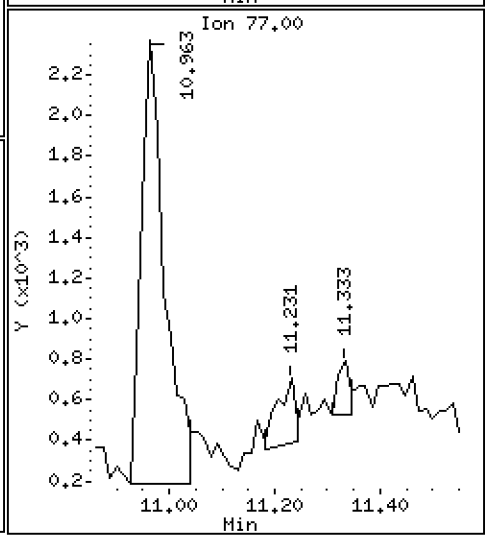












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

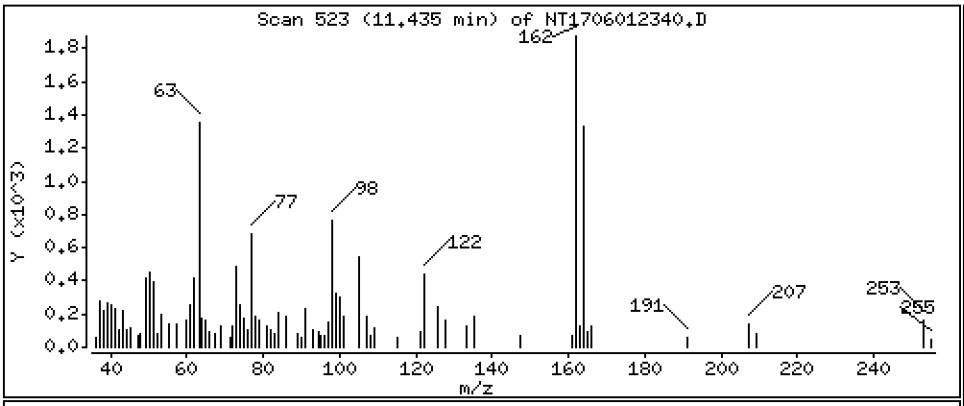
Operator: VTS

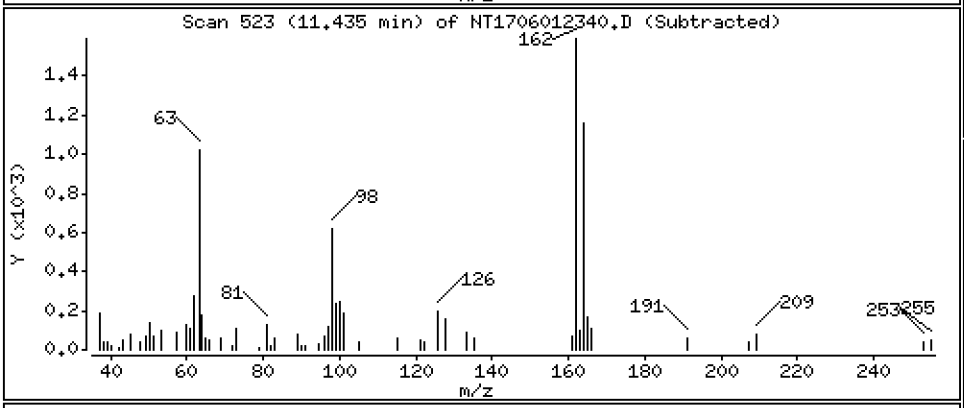
Column phase: ZB-5msi

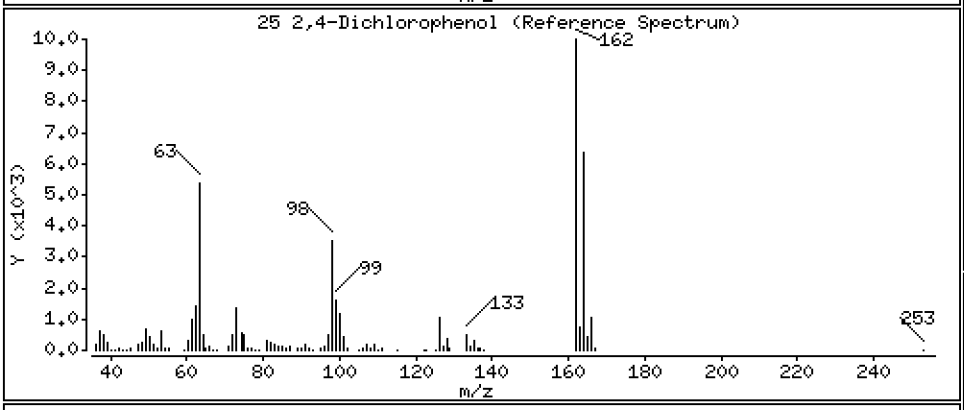
Column diameter: 0.25

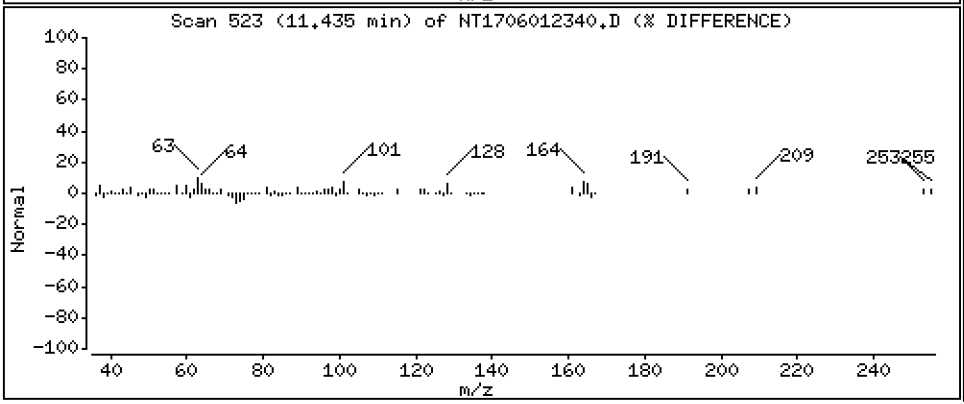
25 2,4-Dichlorophenol

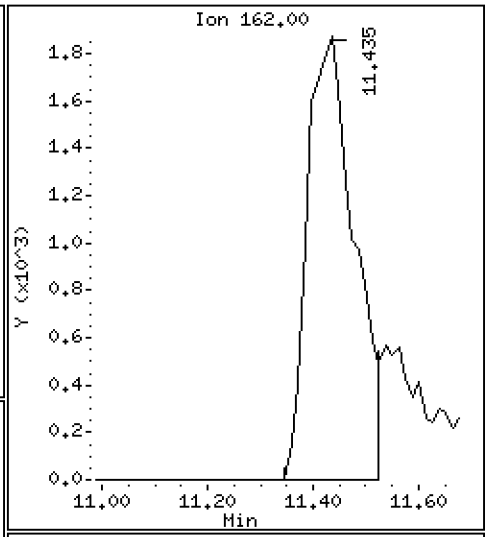
Concentration: 0.1867 ug/mL

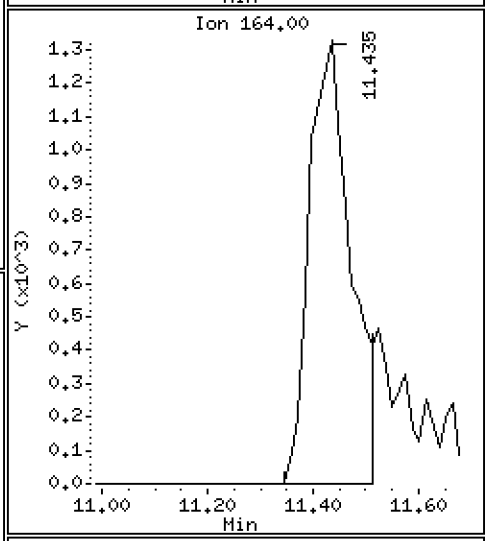


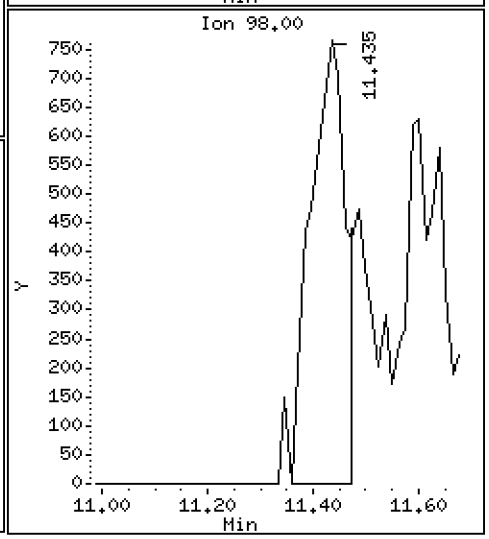












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

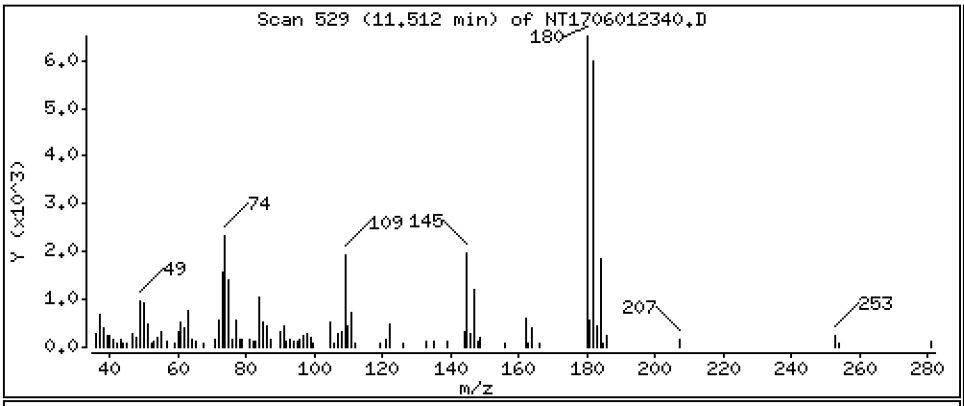
Operator: VTS

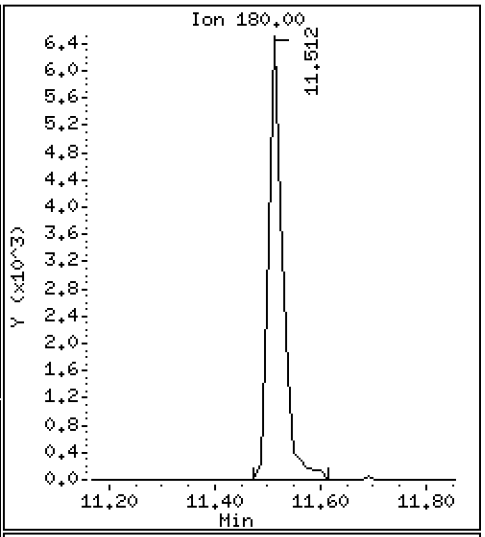
Column phase: ZB-5msi

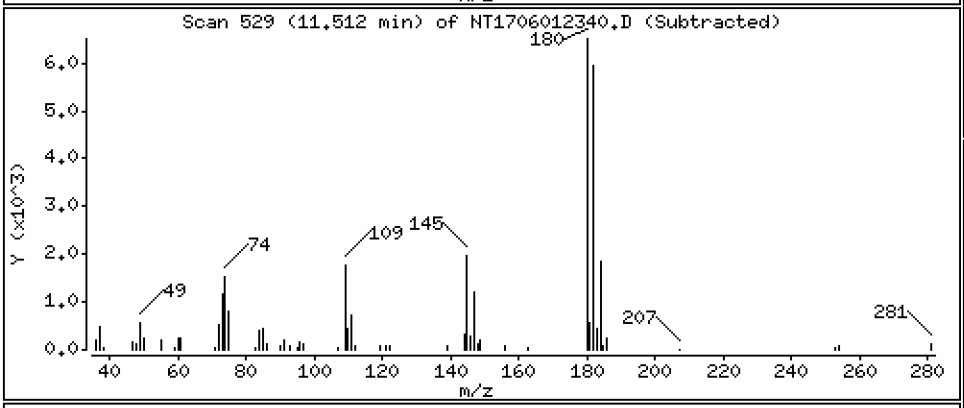
Column diameter: 0.25

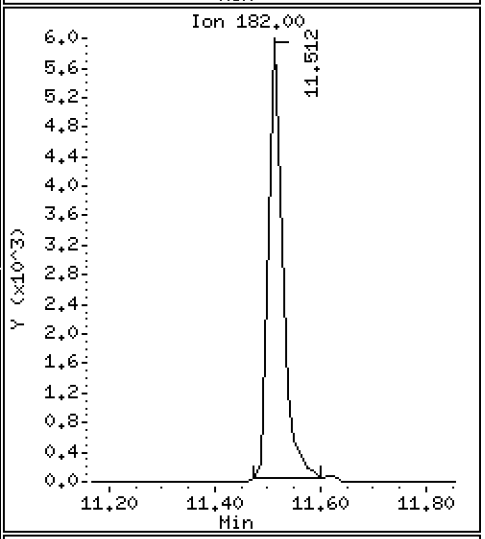
26 1,2,4-Trichlorobenzene

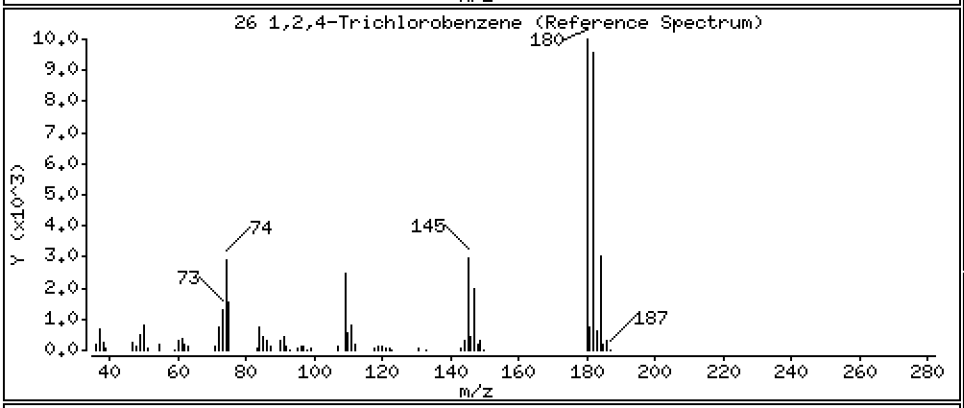
Concentration: 0.1989 ug/mL

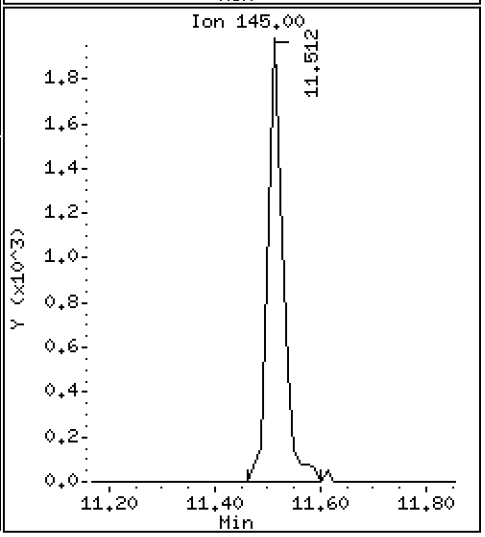


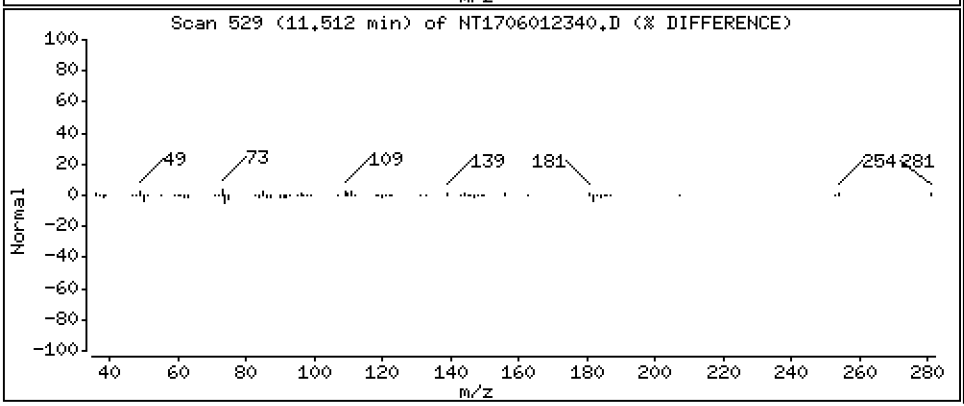












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

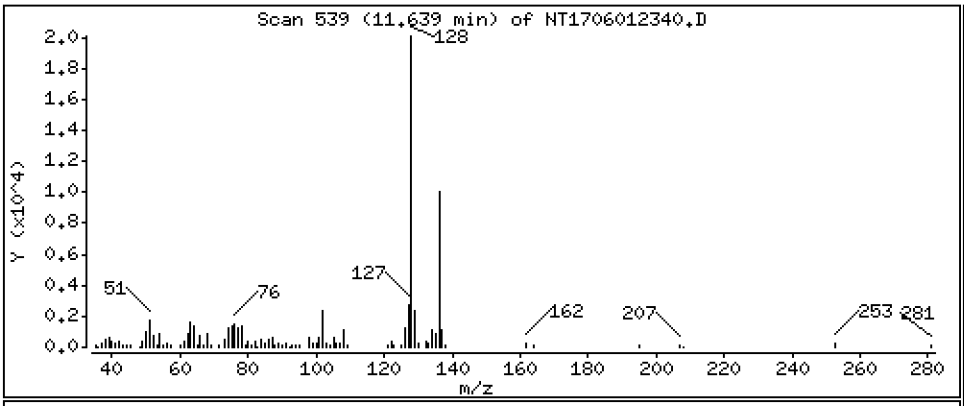
Operator: VTS

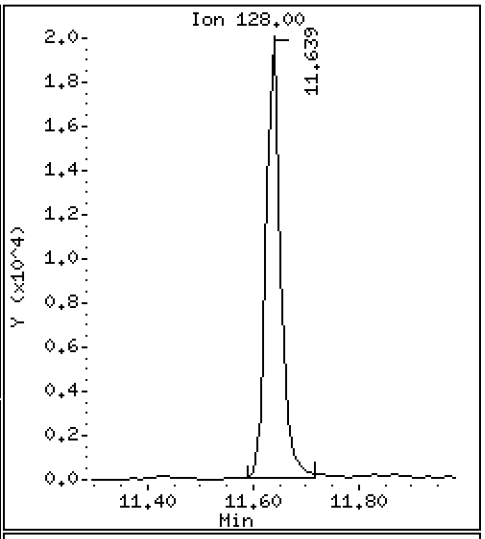
Column phase: ZB-5msi

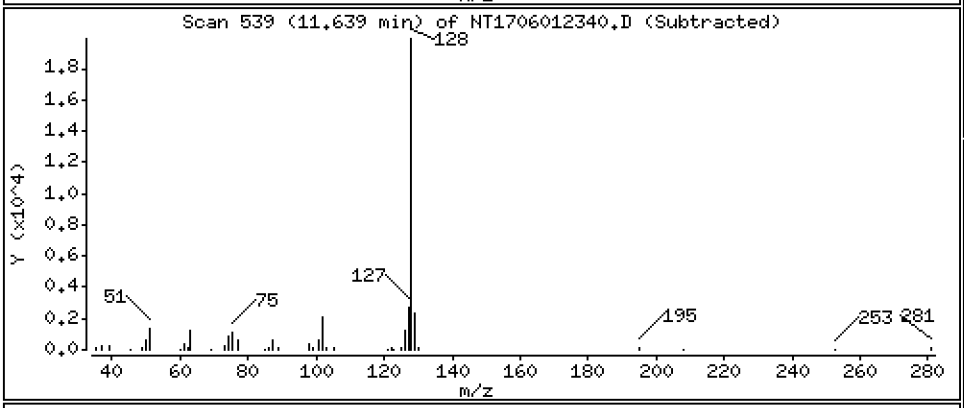
Column diameter: 0.25

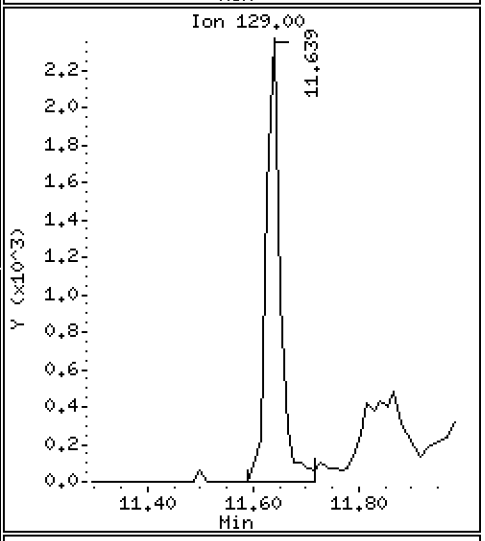
28 Naphthalene

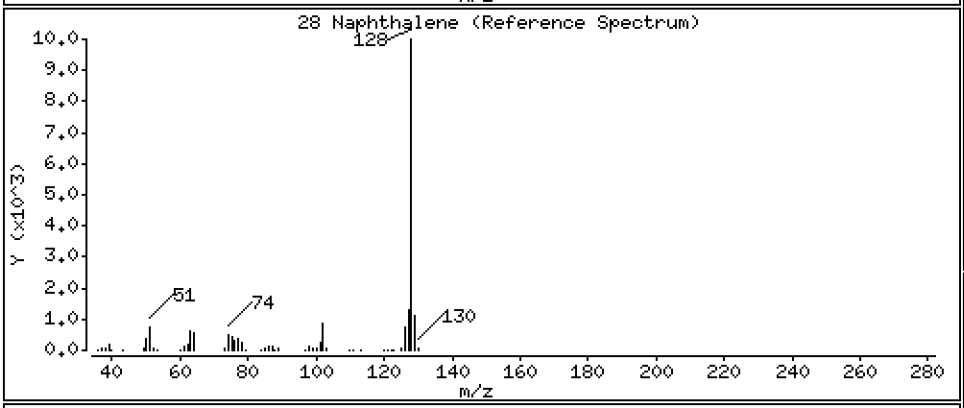
Concentration: 0.2013 ug/mL

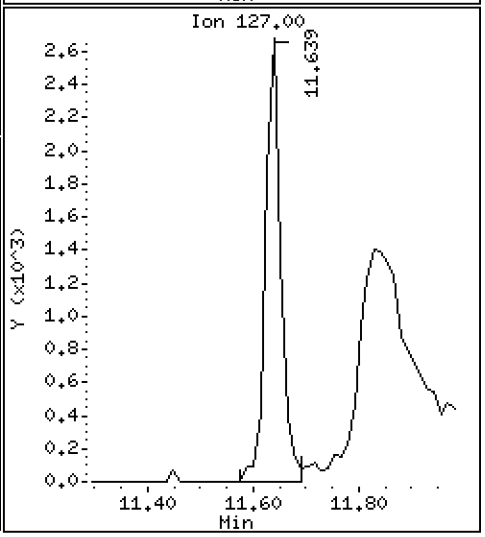


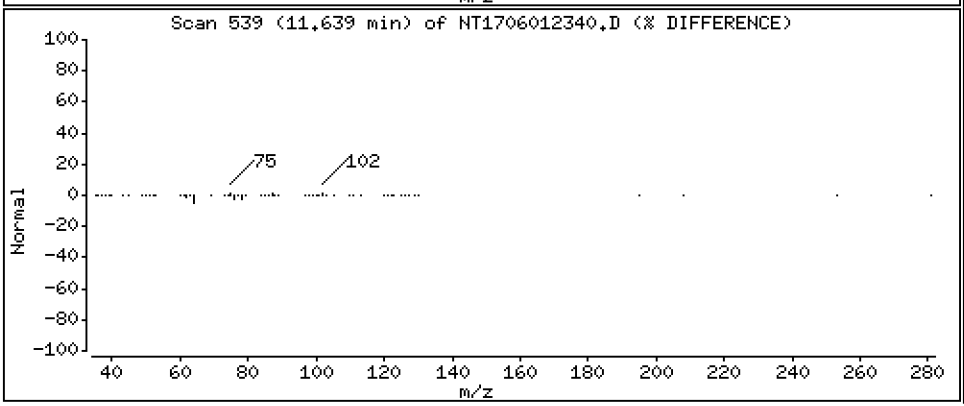












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

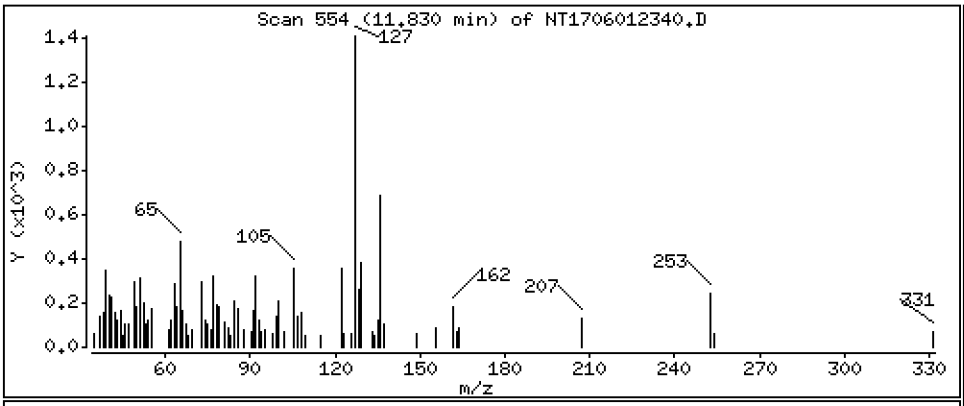
Operator: VTS

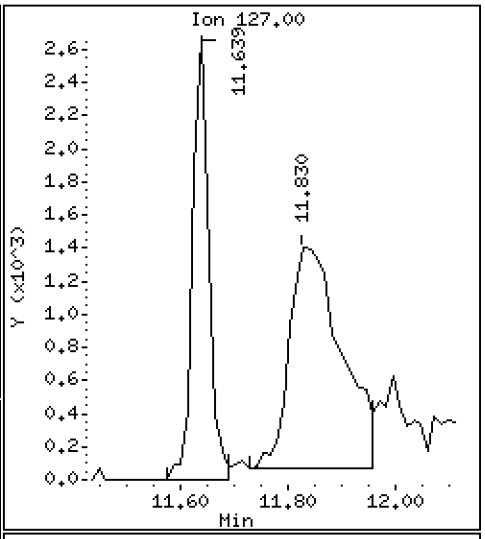
Column phase: ZB-5msi

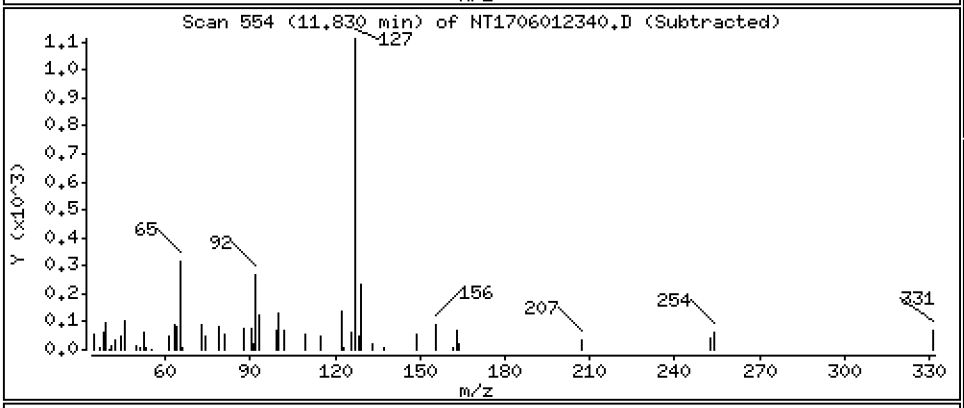
Column diameter: 0.25

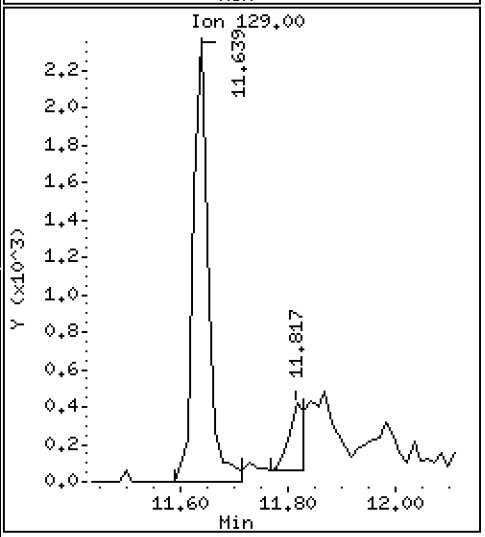
29 4-Chloroaniline

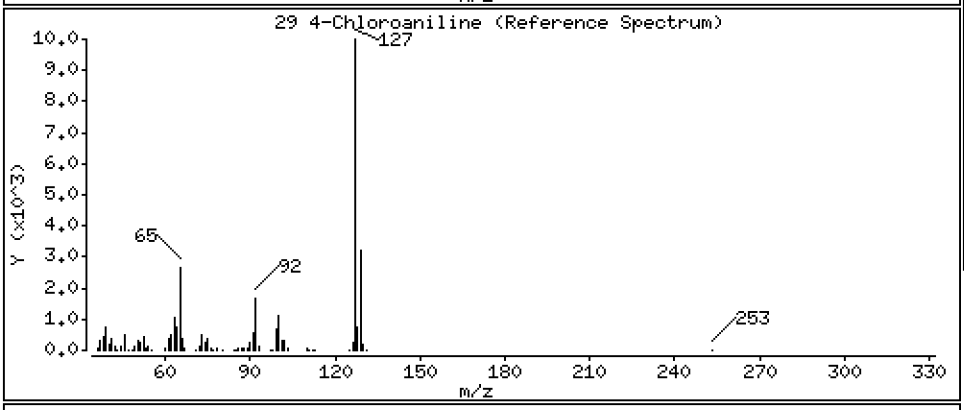
Concentration: 0.1207 ug/mL

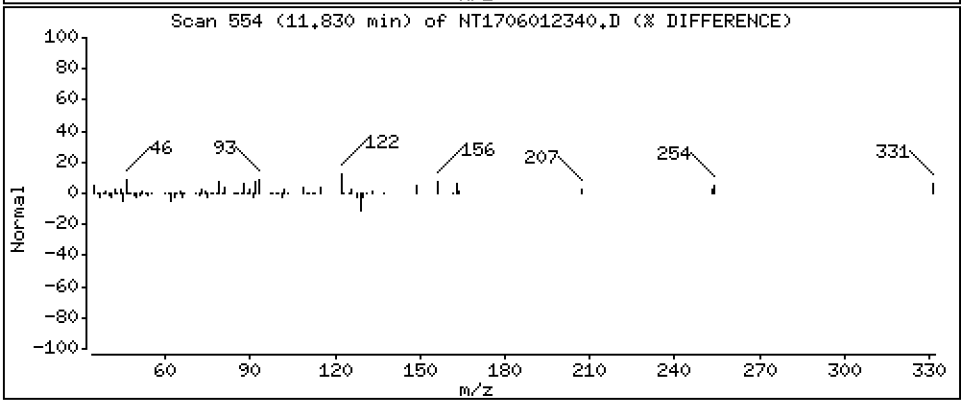












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

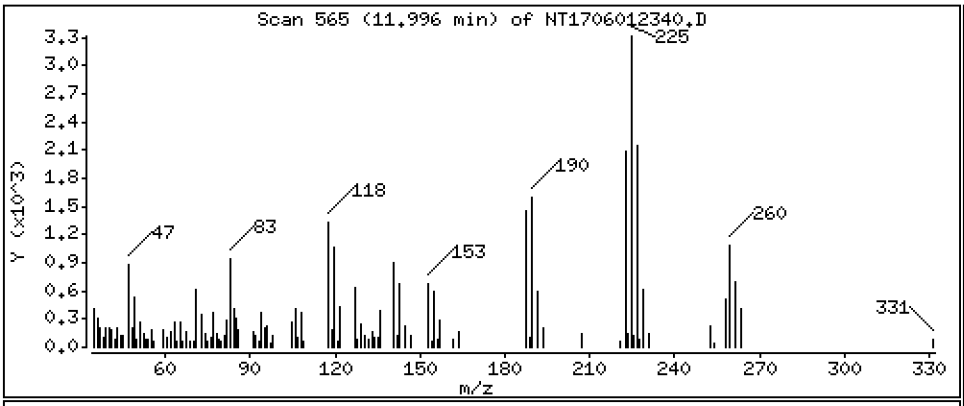
Operator: VTS

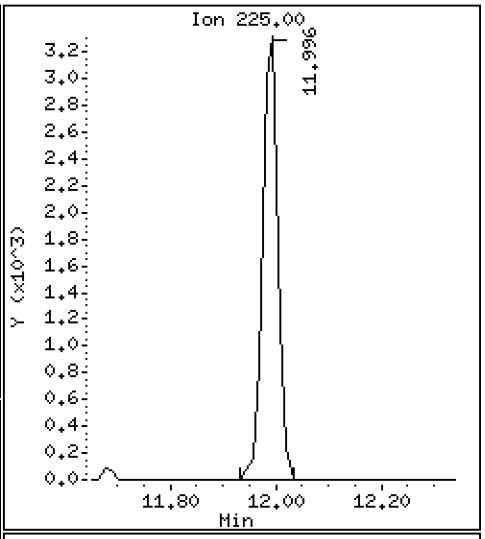
Column phase: ZB-5msi

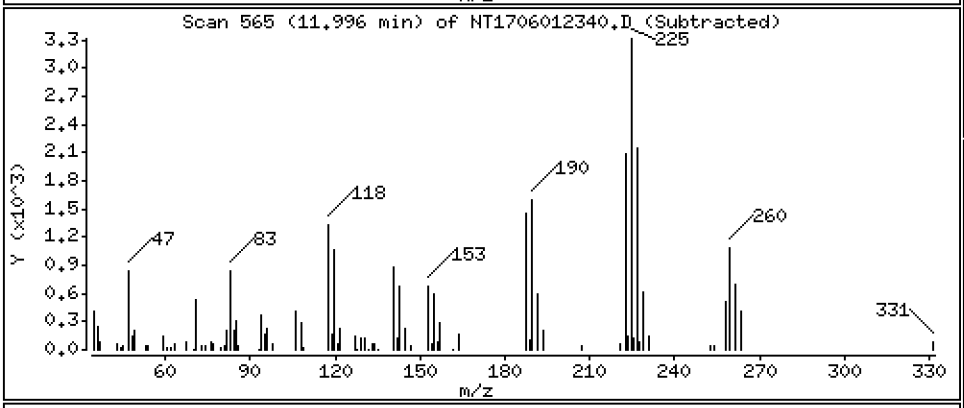
Column diameter: 0.25

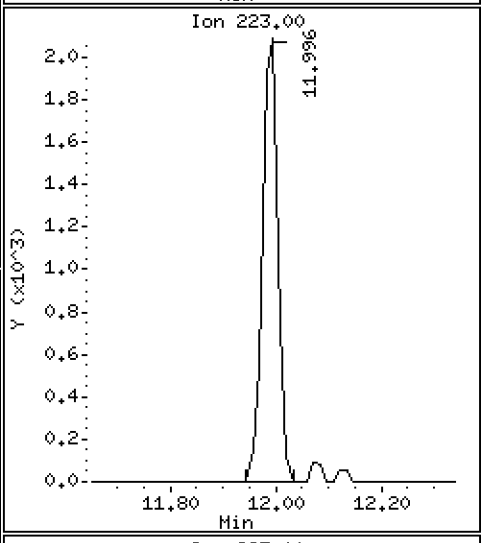
30 Hexachlorobutadiene

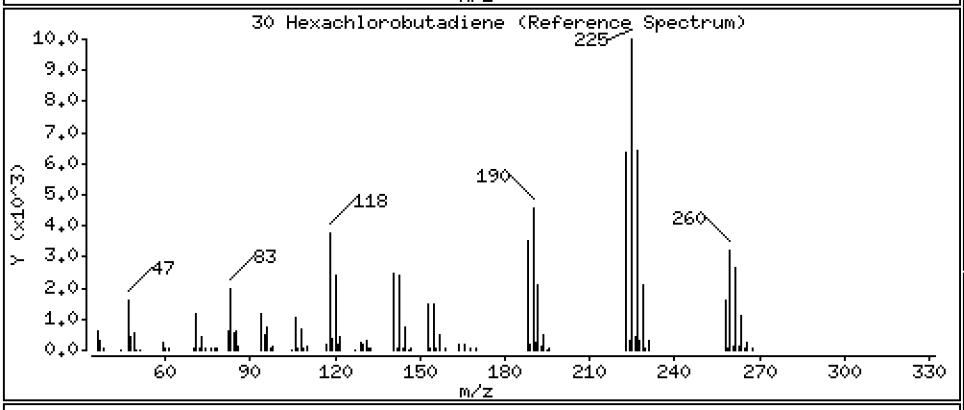
Concentration: 0.2211 ug/mL

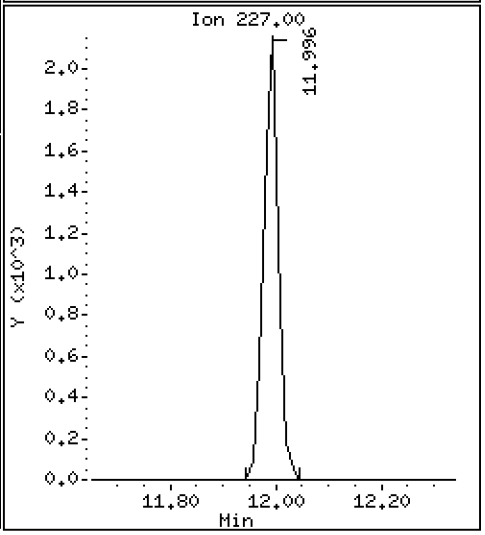


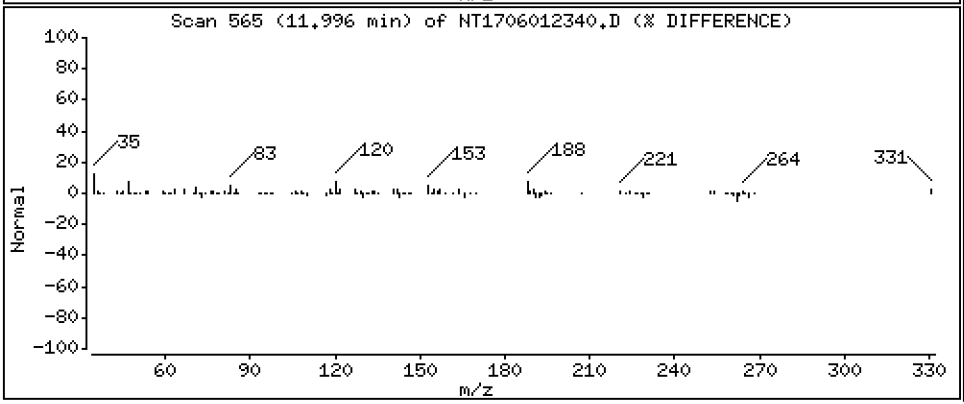












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

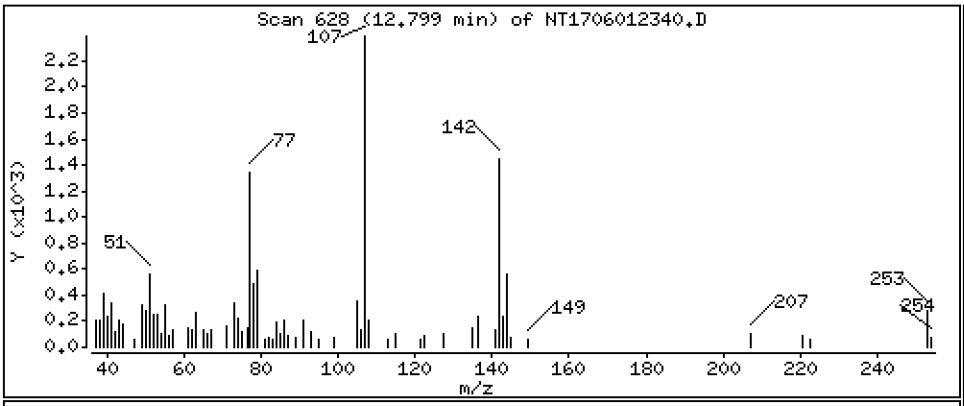
Operator: VTS

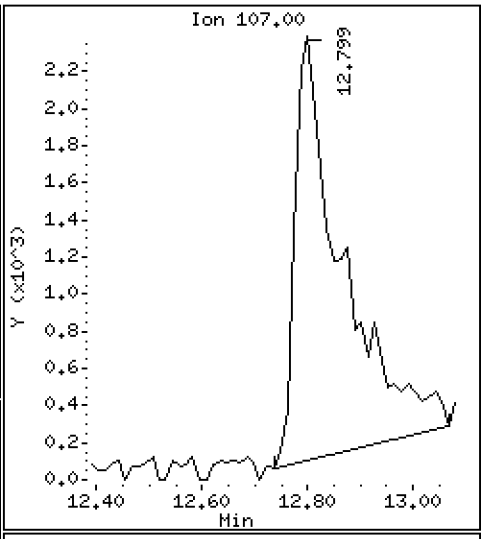
Column phase: ZB-5msi

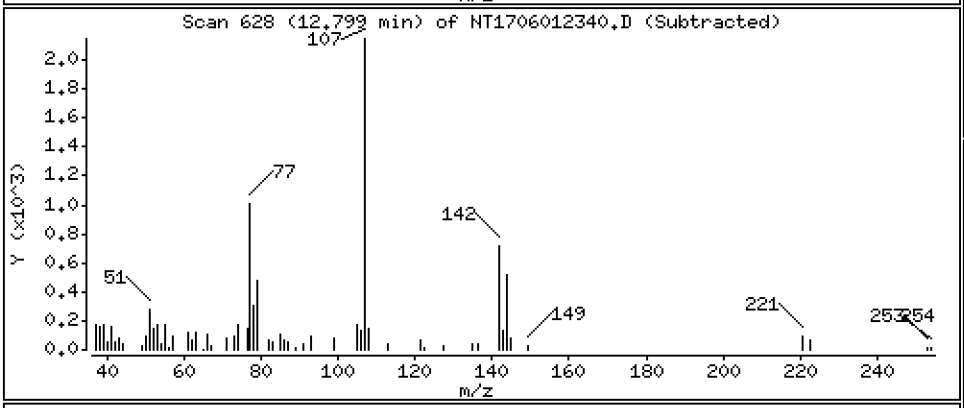
Column diameter: 0.25

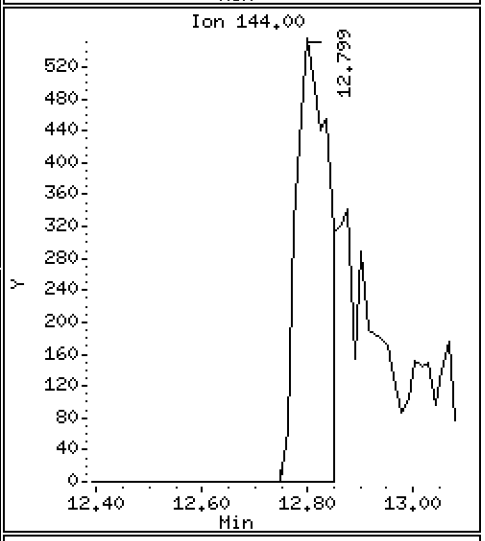
31 4-Chloro-3-methylphenol

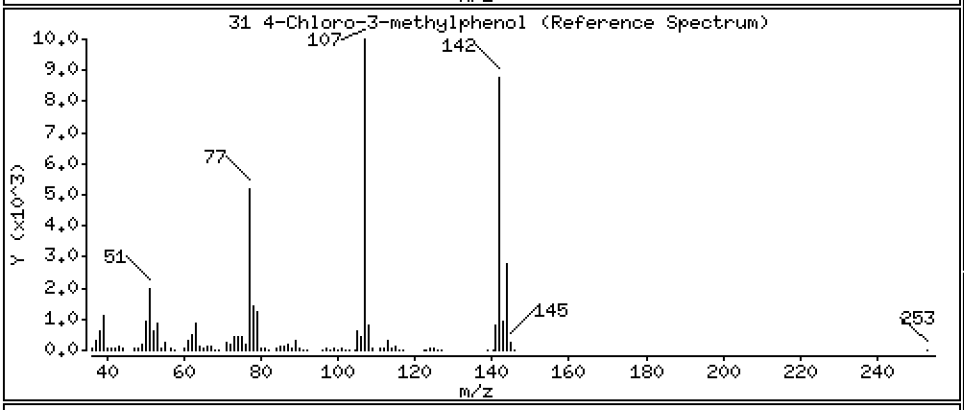
Concentration: 0.2354 ug/mL

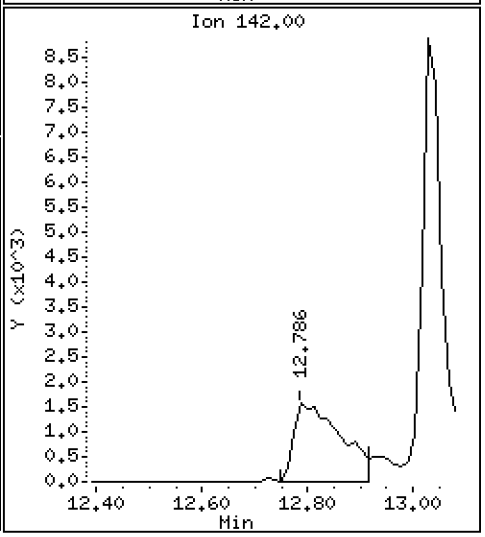


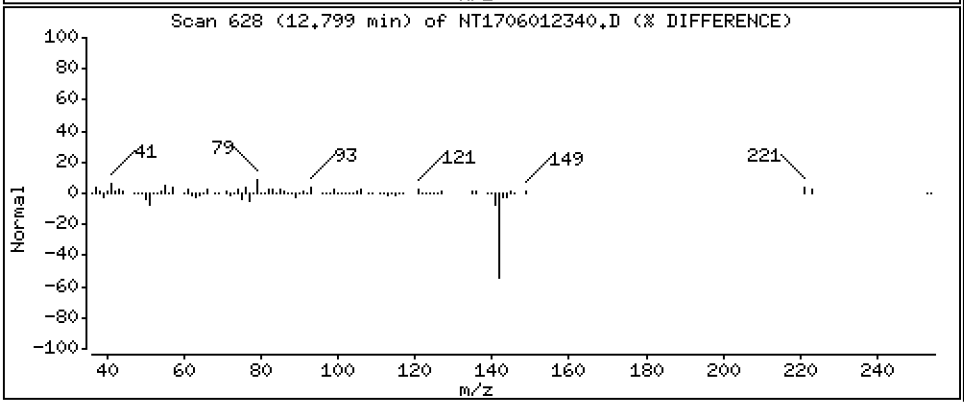












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

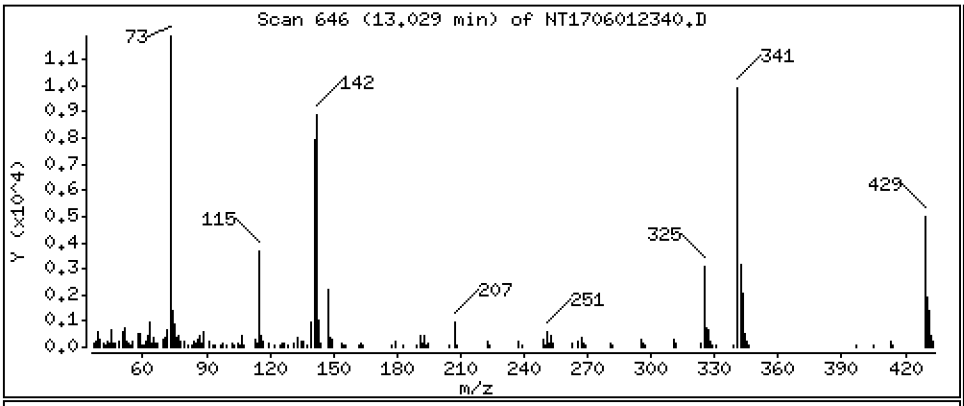
Operator: VTS

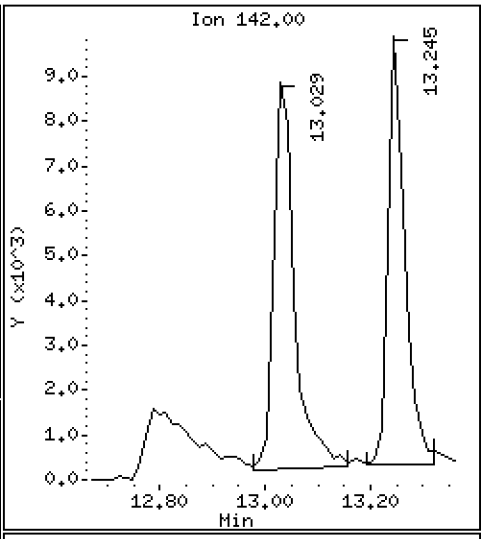
Column phase: ZB-5msi

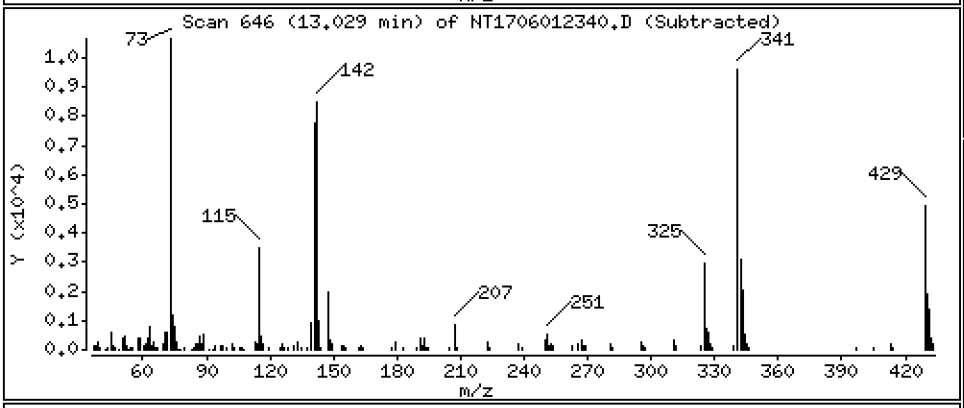
Column diameter: 0.25

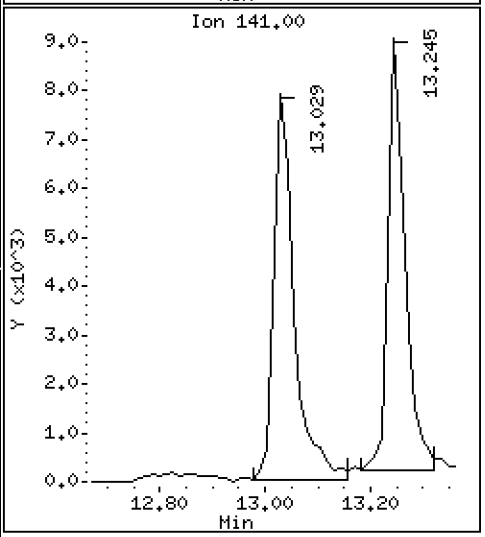
32 2-Methylnaphthalene

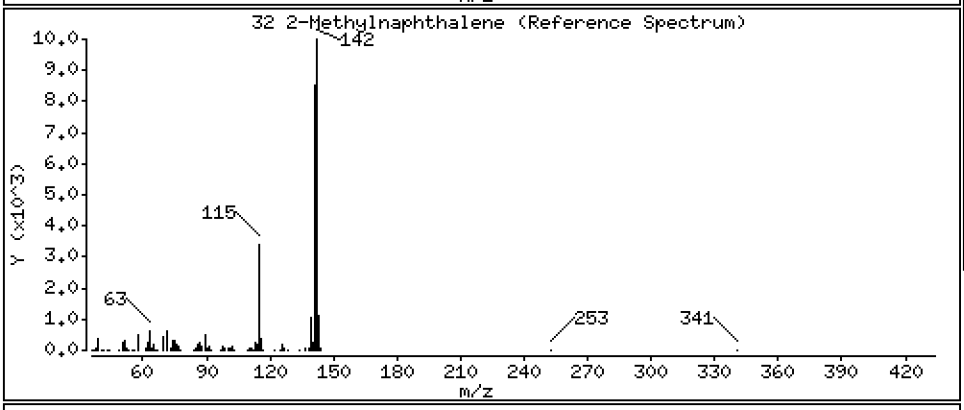
Concentration: 0.1714 ug/mL

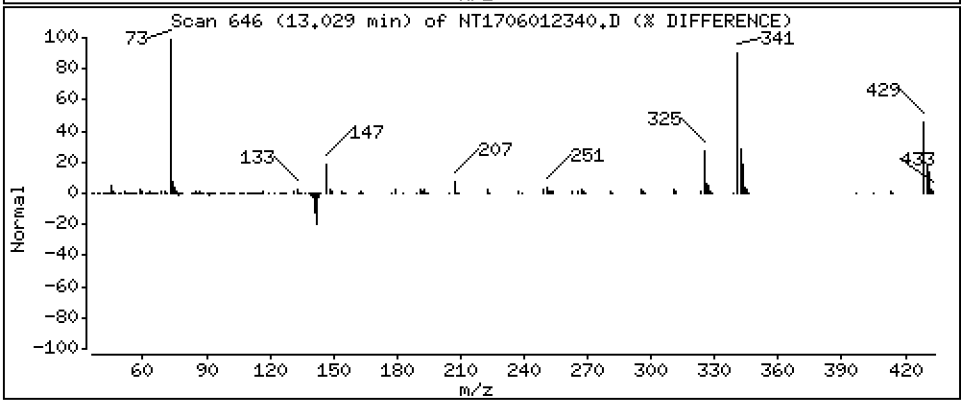












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

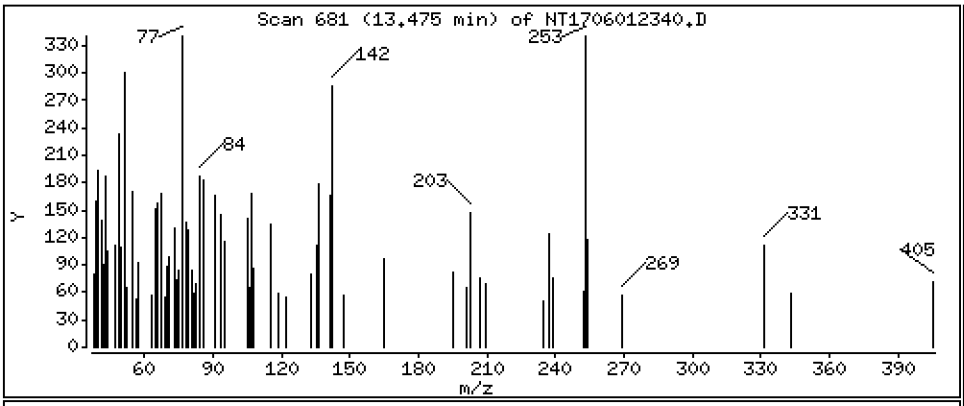
Operator: VTS

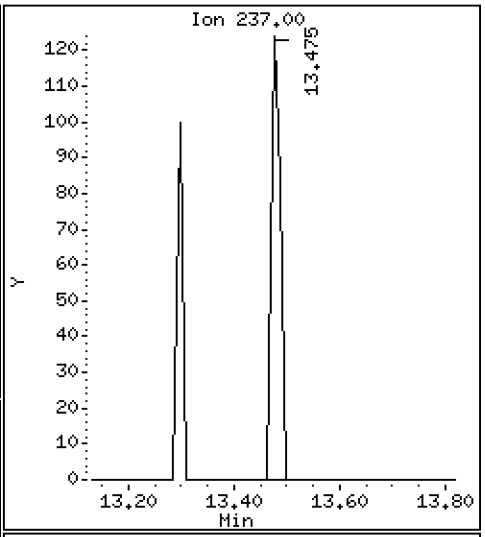
Column phase: ZB-5msi

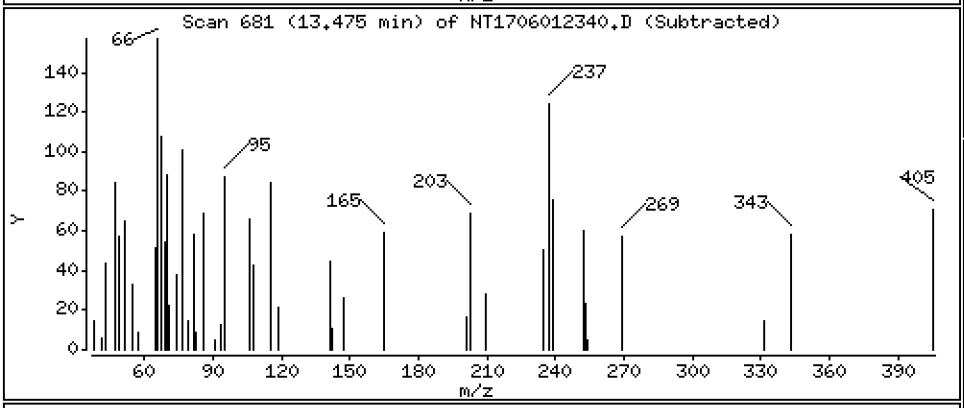
Column diameter: 0.25

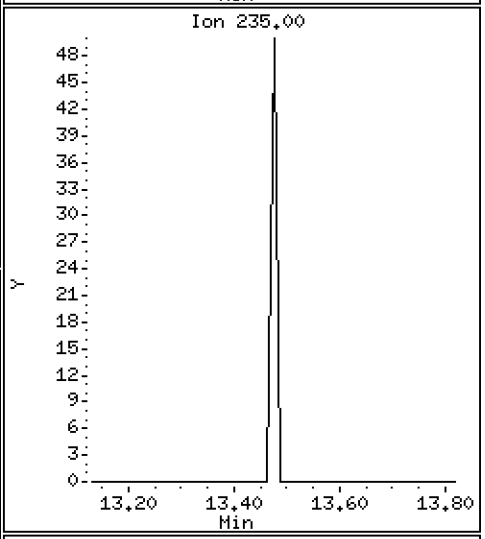
33 Hexachlorocyclopentadiene

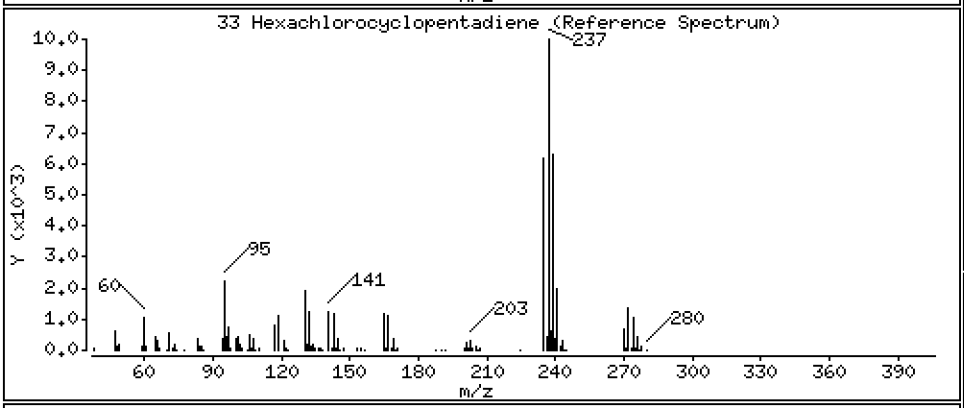
Concentration: 0.005475 ug/mL

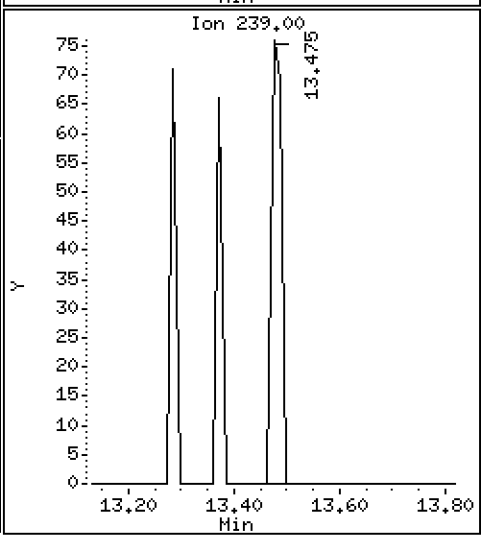


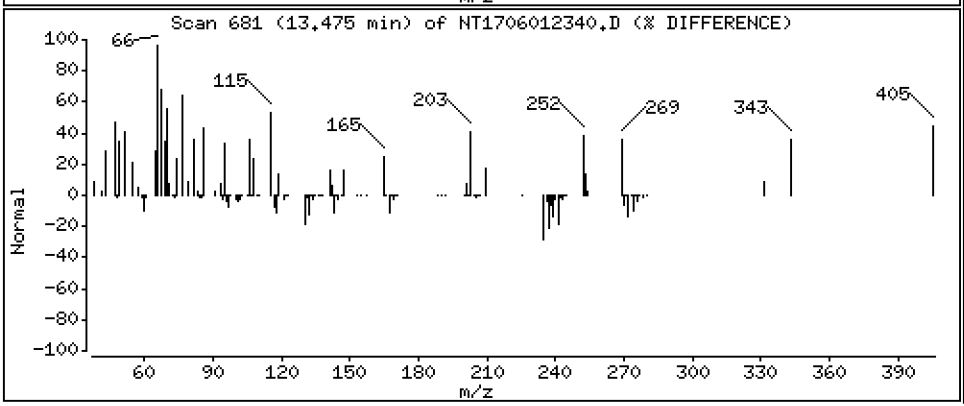












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

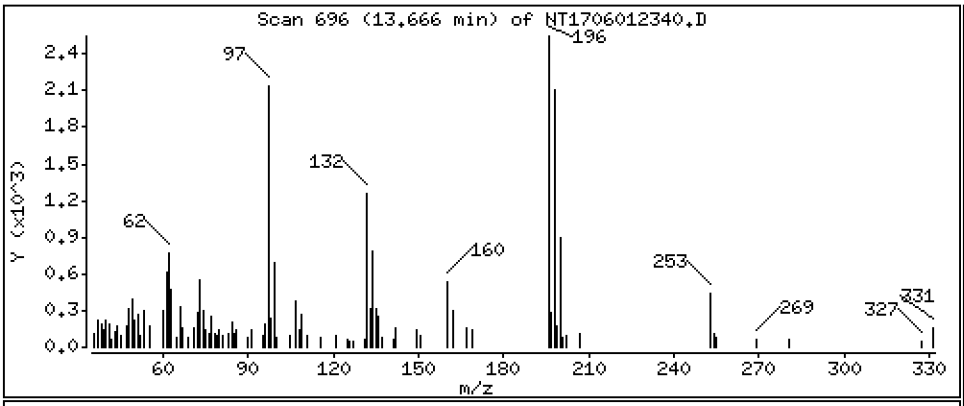
Operator: VTS

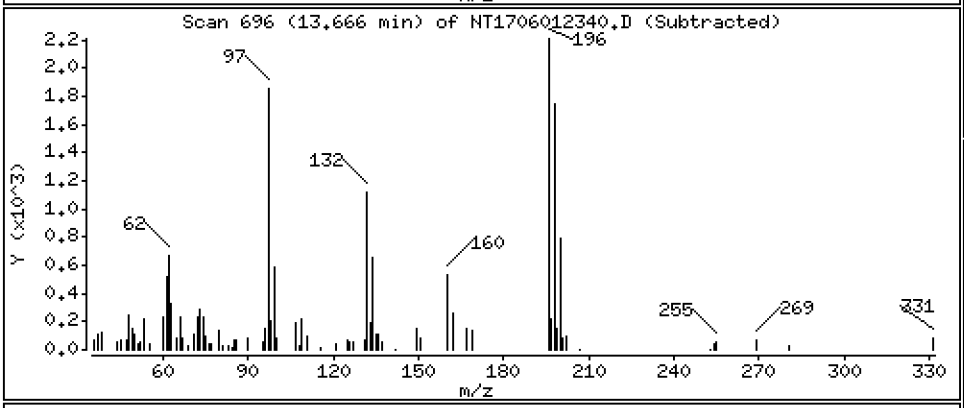
Column phase: ZB-5msi

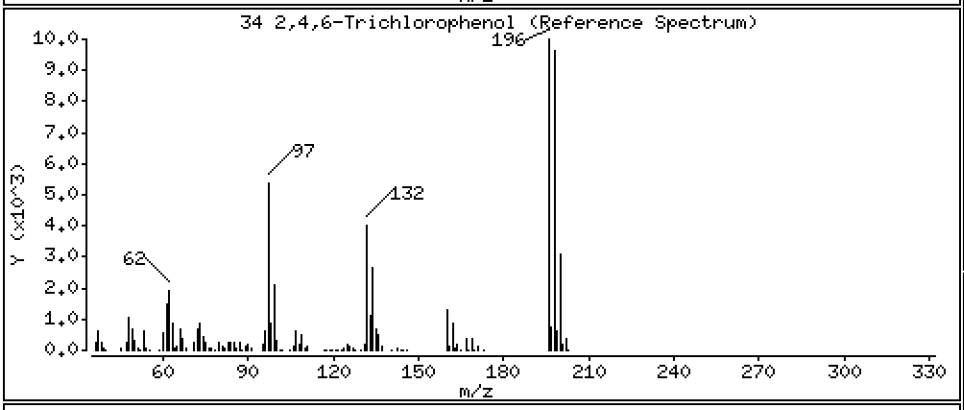
Column diameter: 0.25

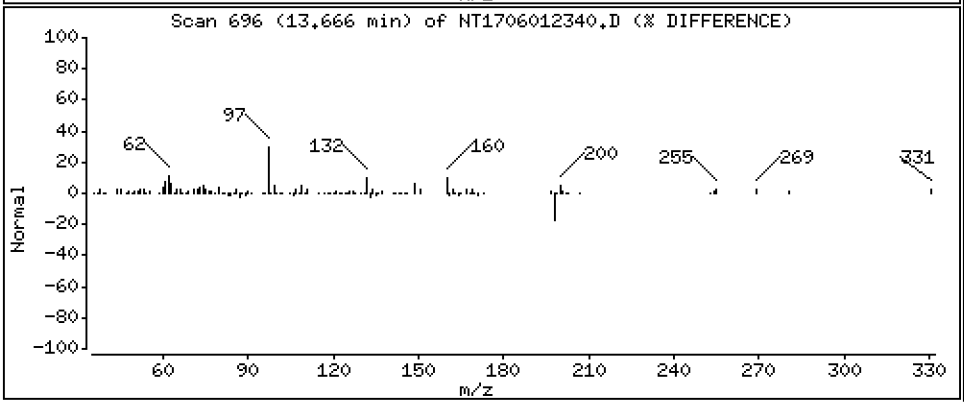
34 2,4,6-Trichlorophenol

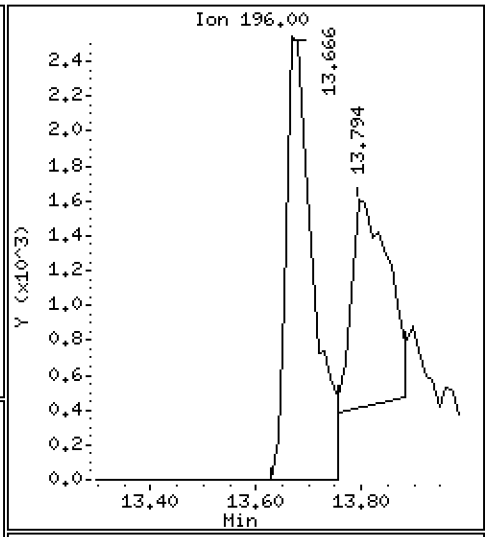
Concentration: 0.2813 ug/mL

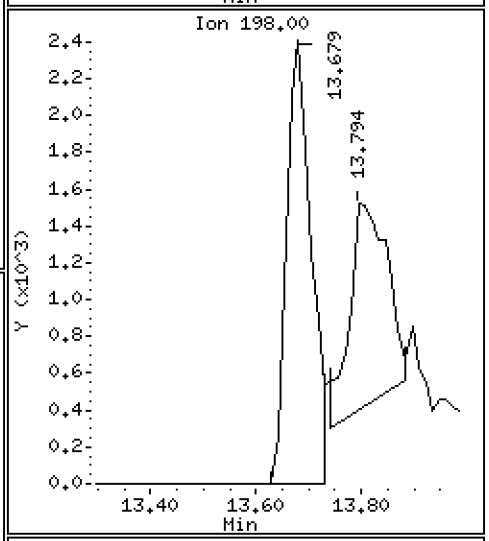


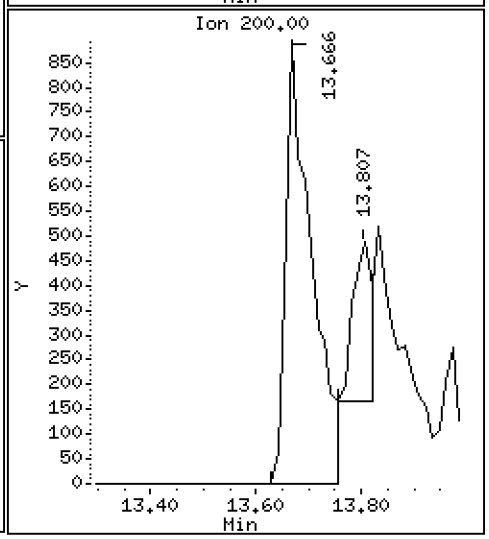












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

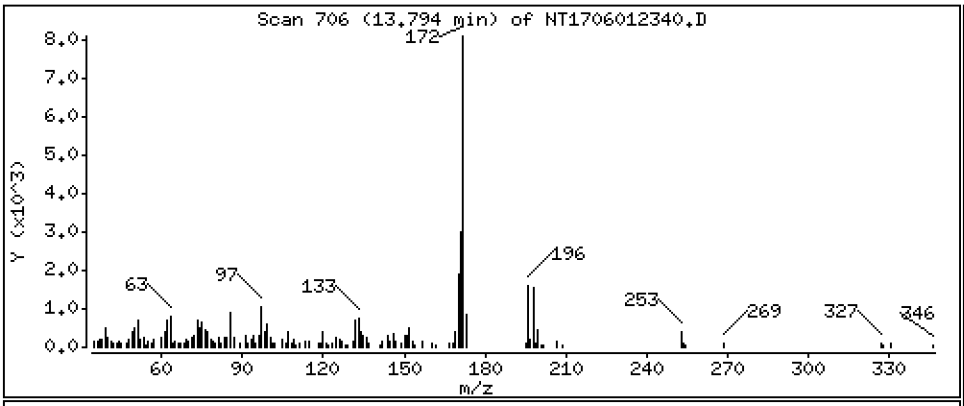
Operator: VTS

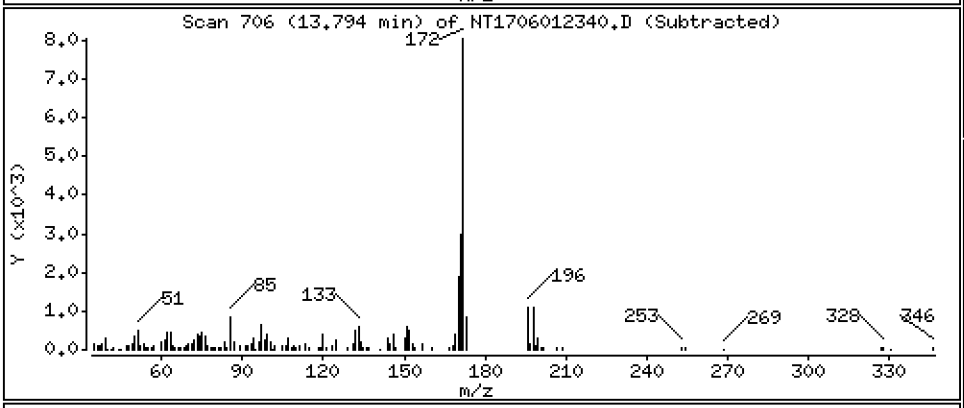
Column phase: ZB-5msi

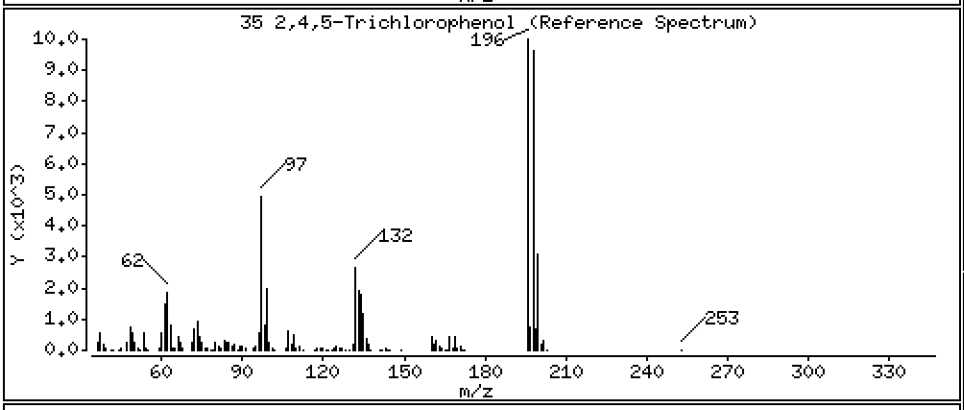
Column diameter: 0.25

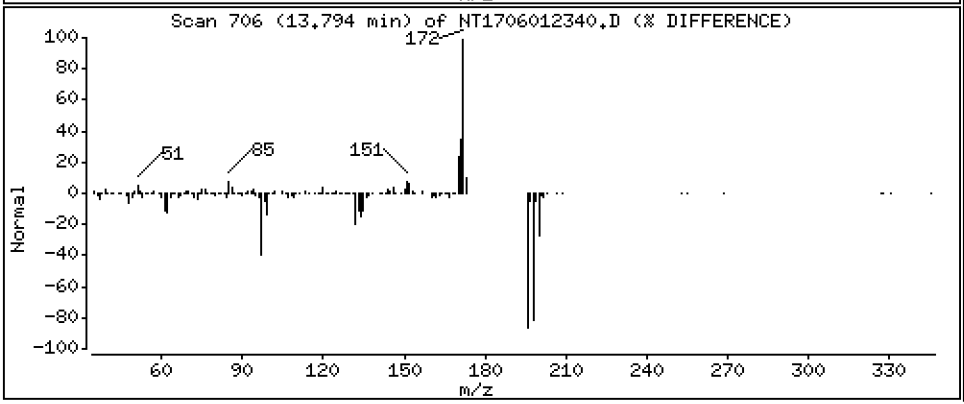
35 2,4,5-Trichlorophenol

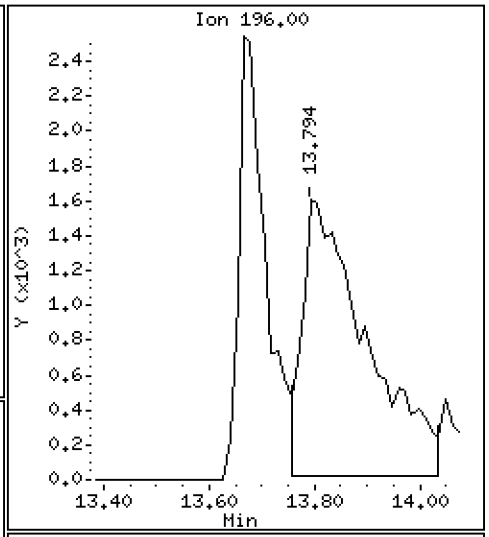
Concentration: 0.3958 ug/mL

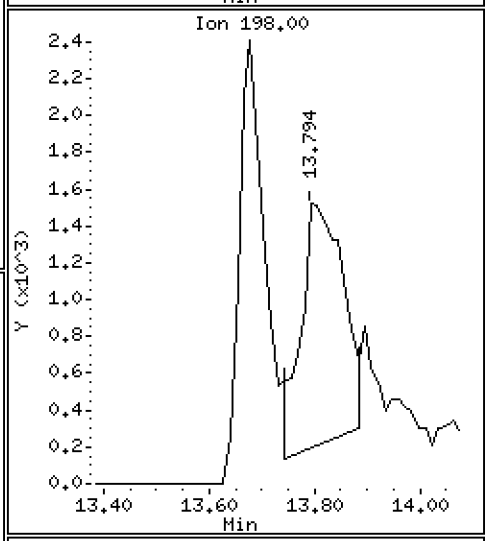


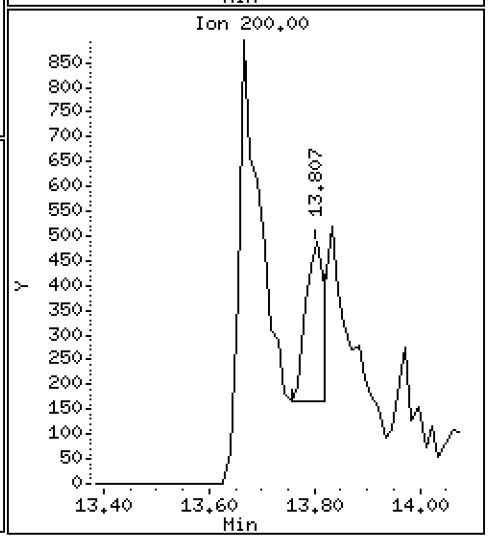












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

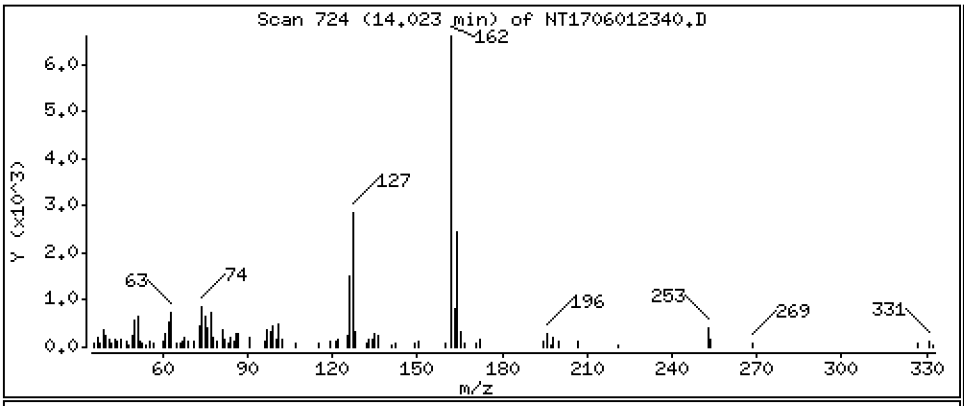
Operator: VTS

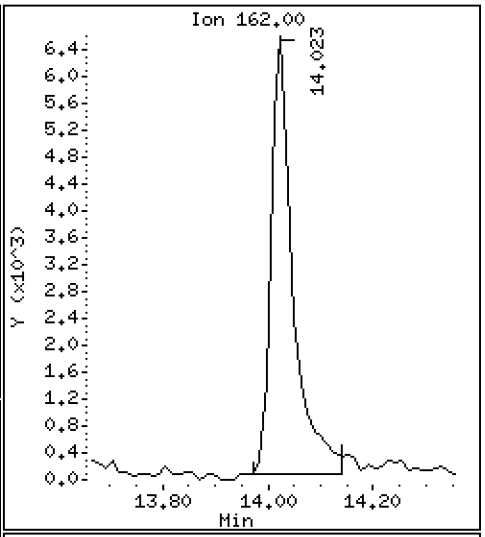
Column phase: ZB-5msi

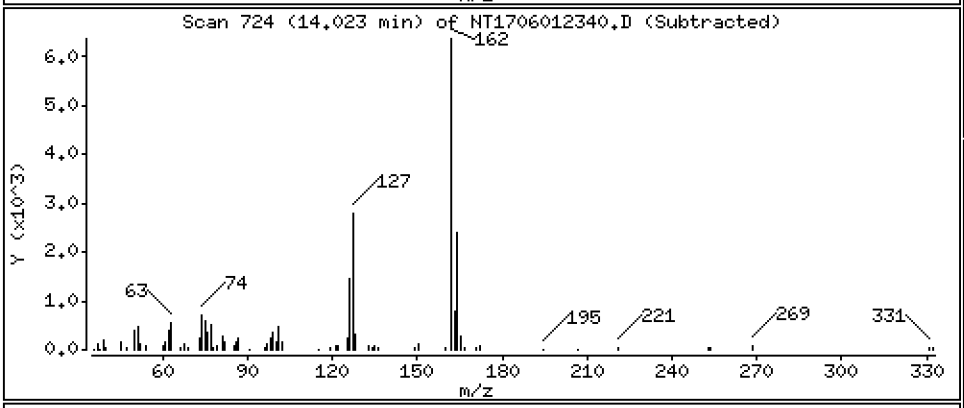
Column diameter: 0.25

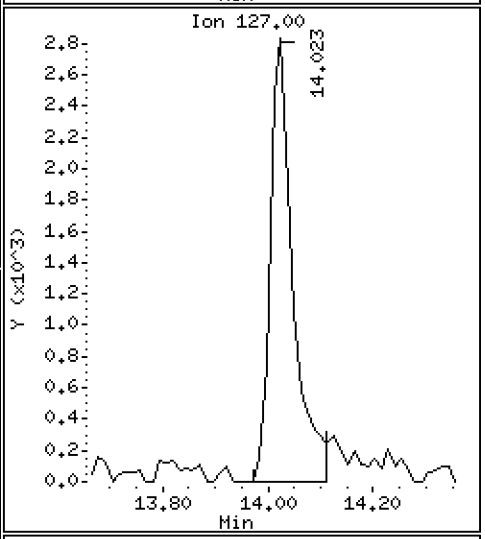
37 2-Chloronaphthalene

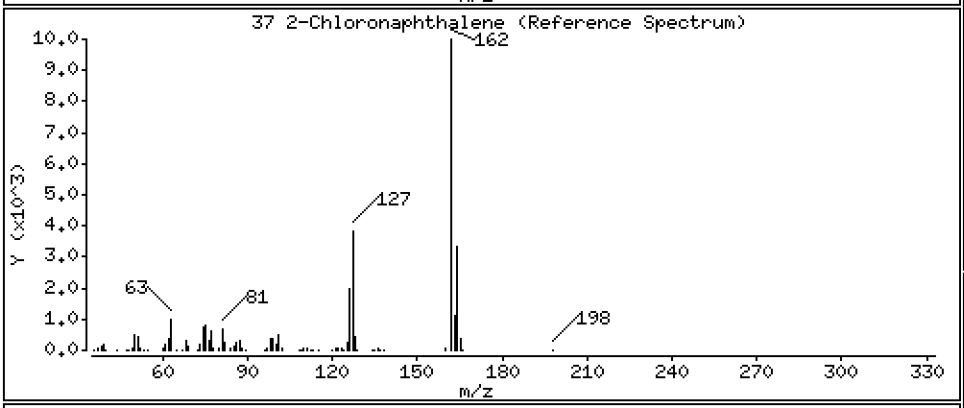
Concentration: 0.1899 ug/mL

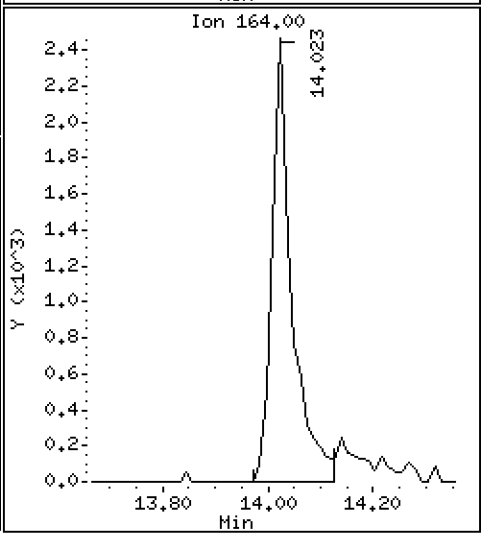


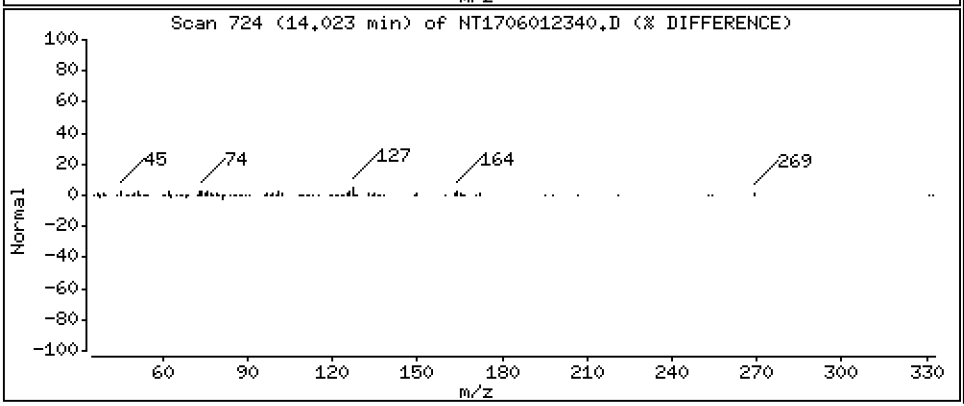












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

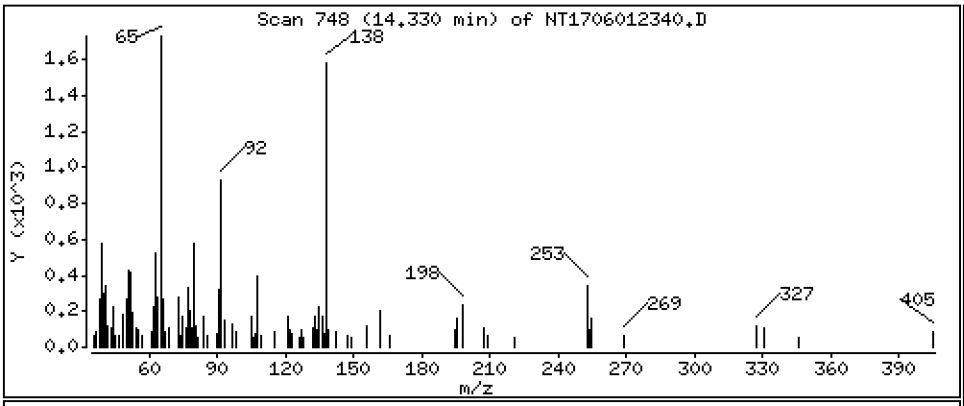
Operator: VTS

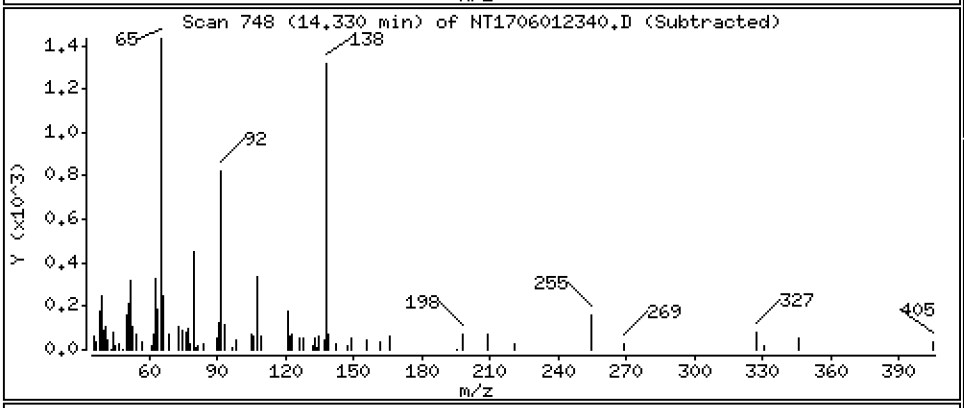
Column phase: ZB-5msi

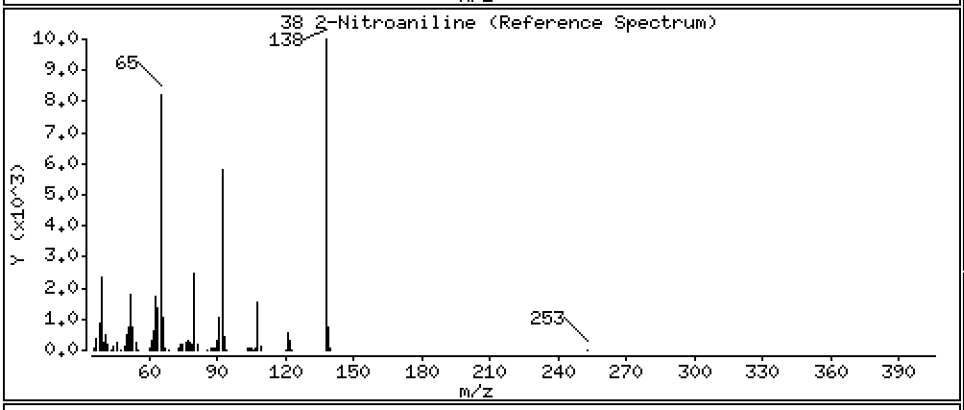
Column diameter: 0.25

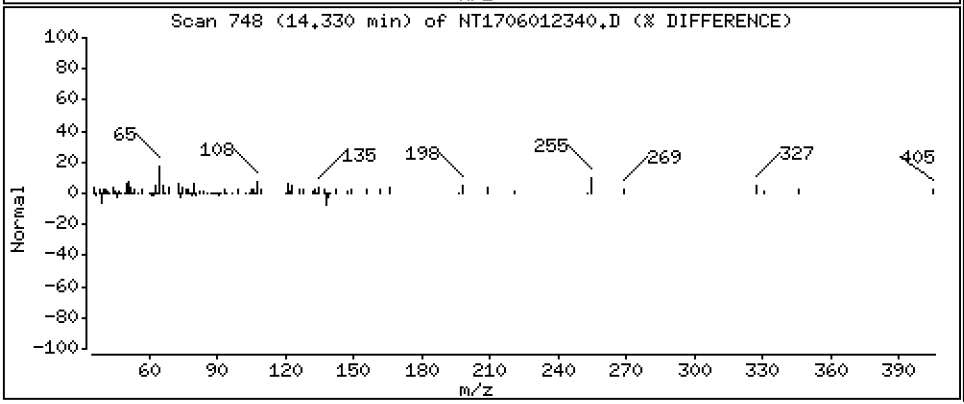
38 2-Nitroaniline

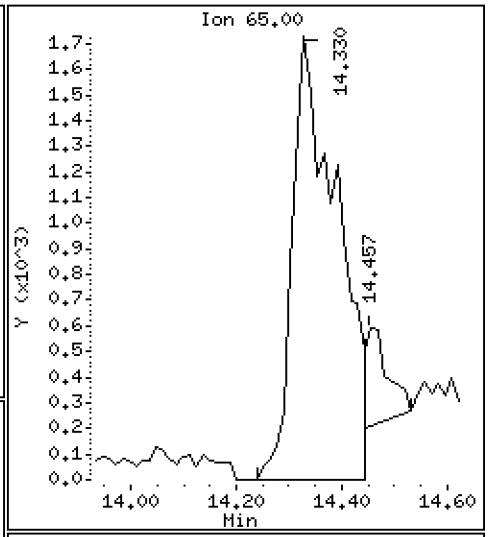
Concentration: 0.3067 ug/mL

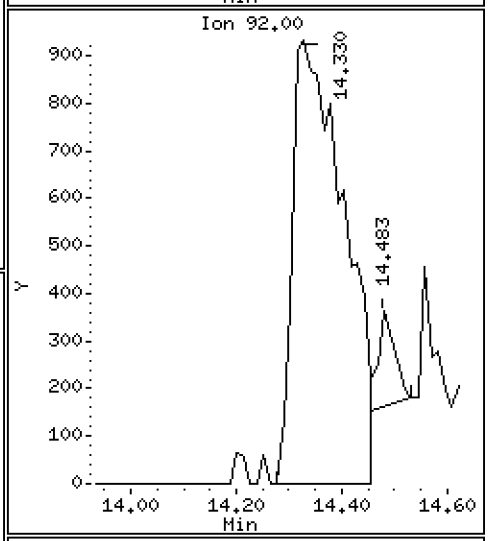


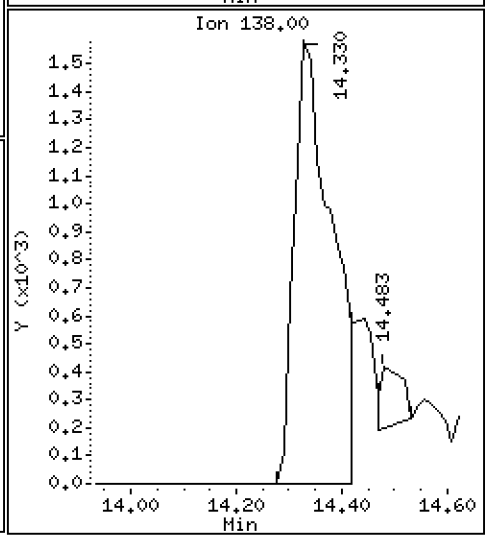












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

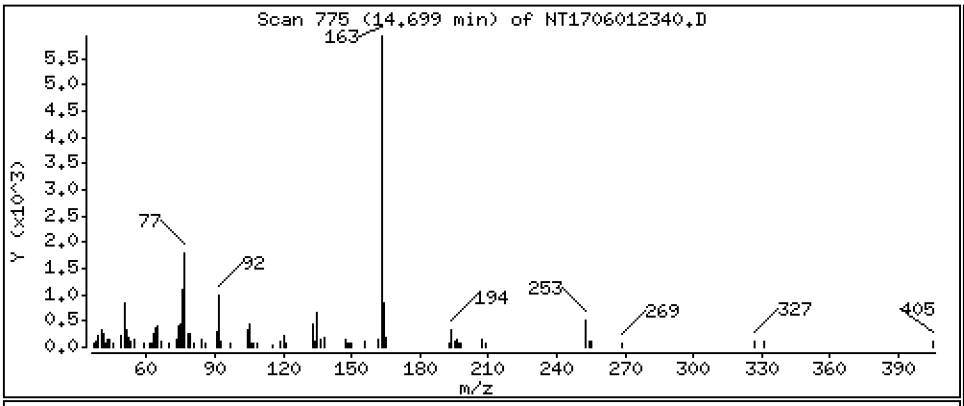
Operator: VTS

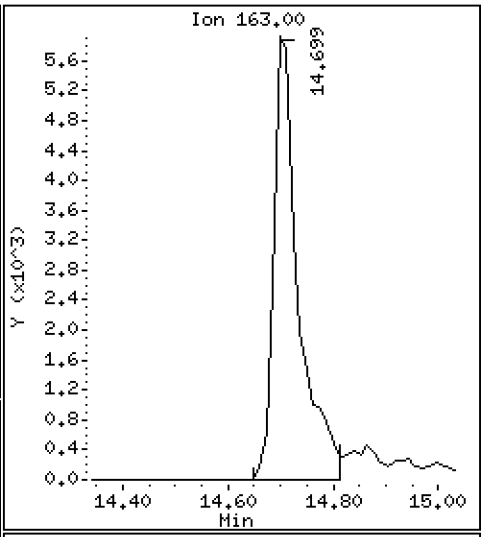
Column phase: ZB-5msi

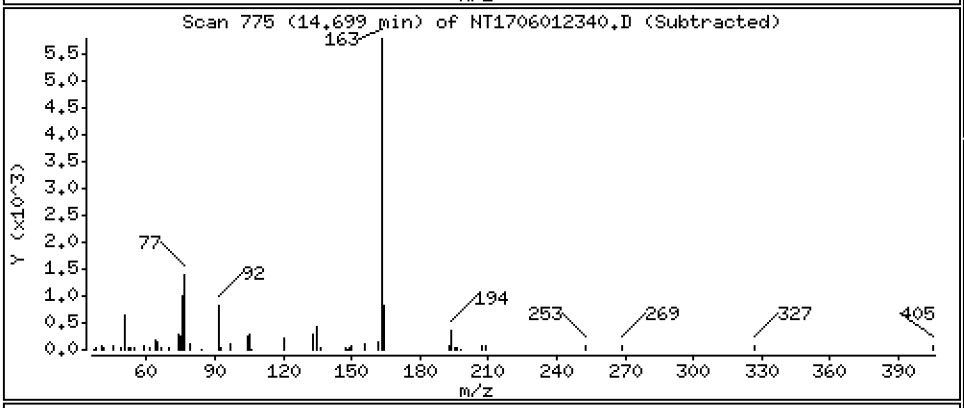
Column diameter: 0.25

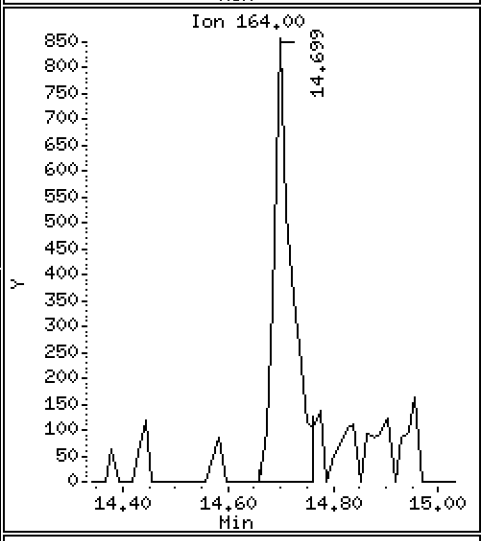
39 Dimethylphthalate

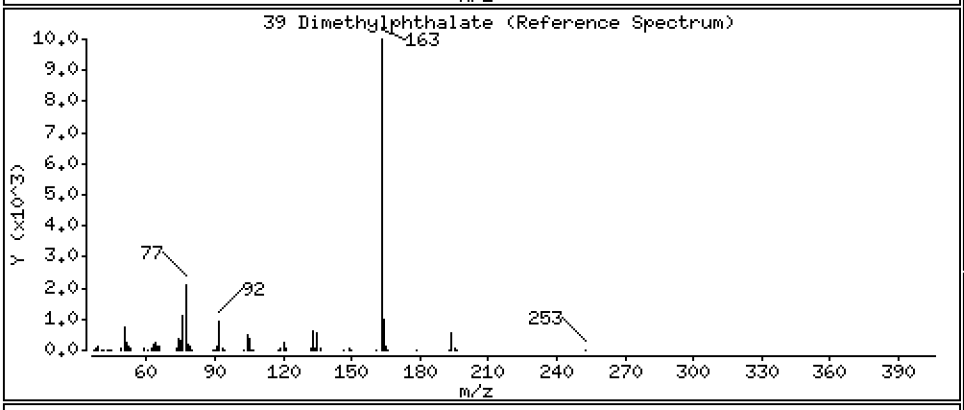
Concentration: 0.1798 ug/mL

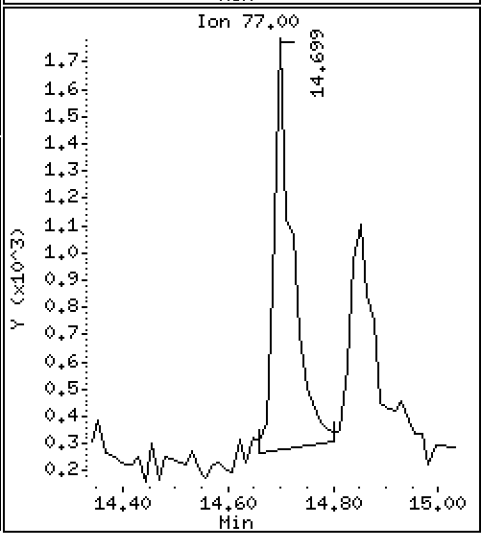


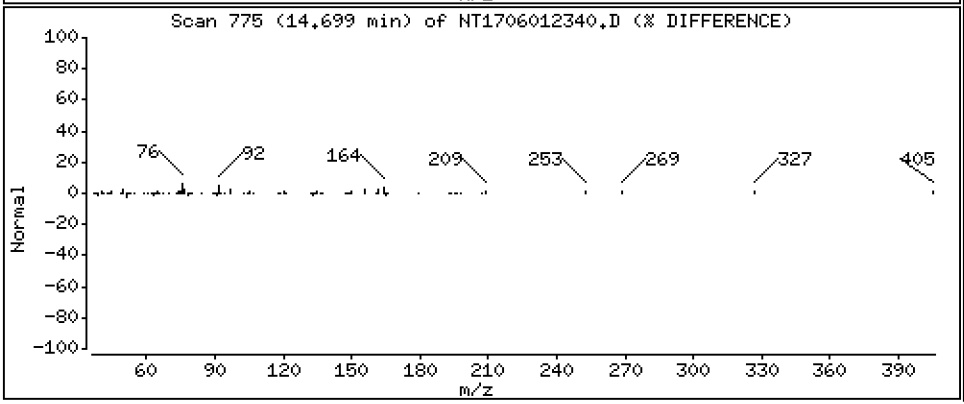












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

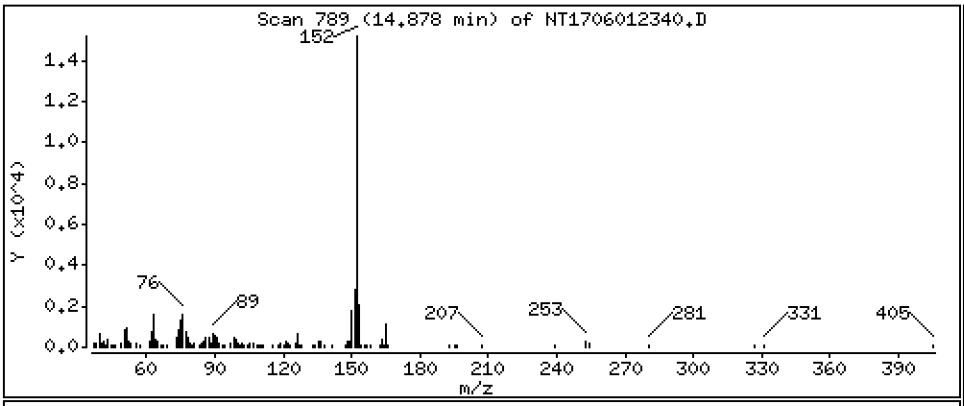
Operator: VTS

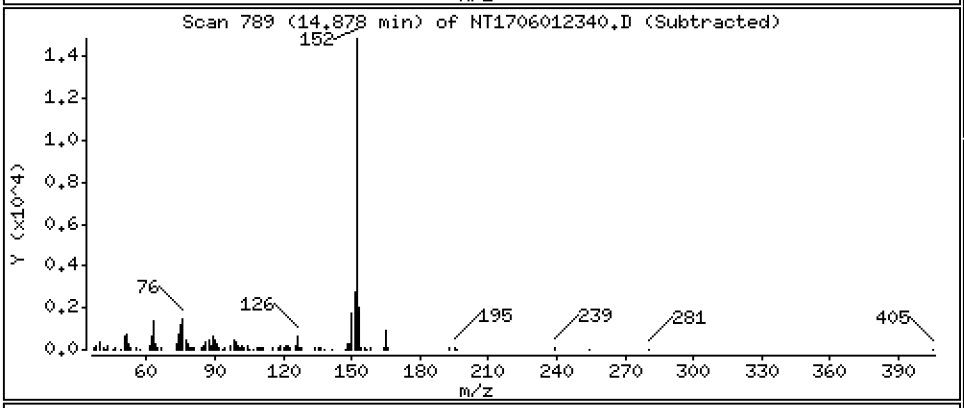
Column phase: ZB-5msi

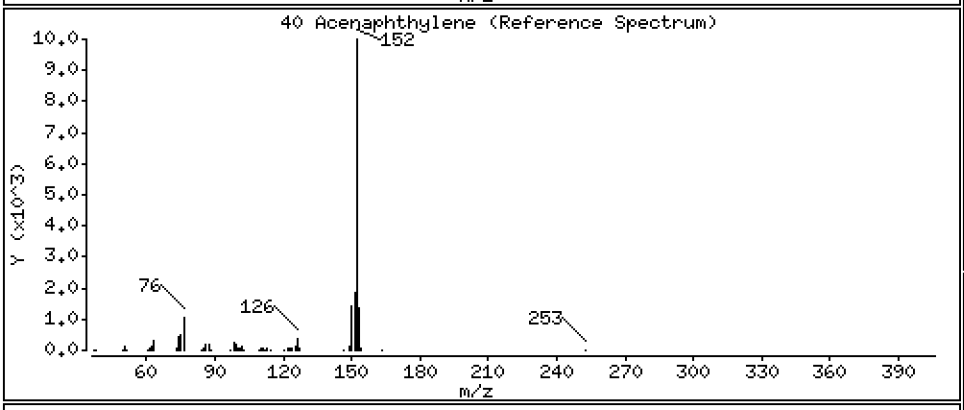
Column diameter: 0.25

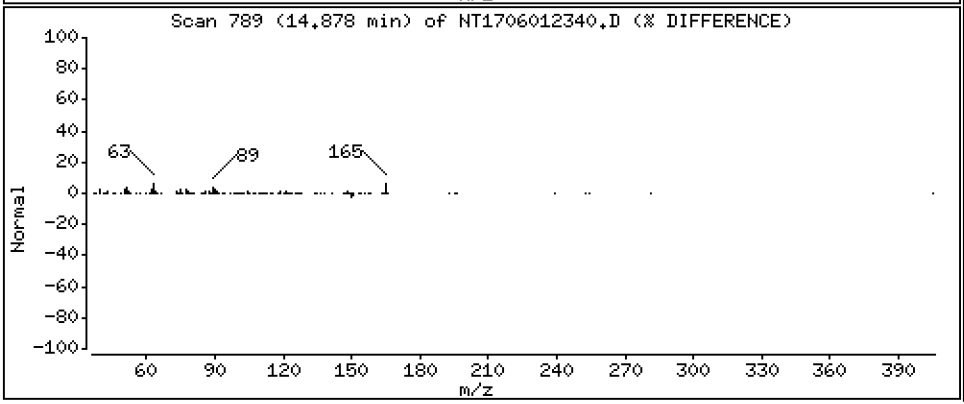
40 Acenaphthylene

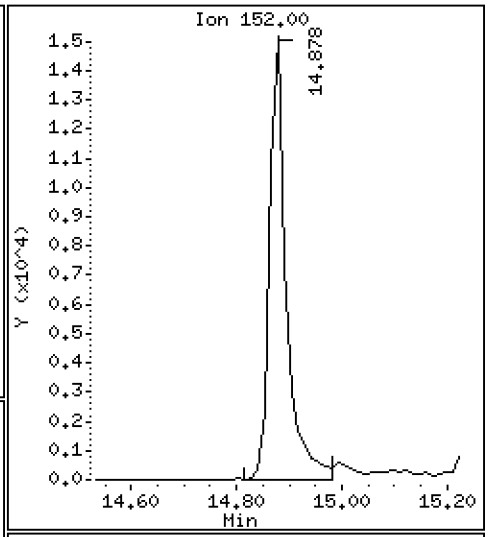
Concentration: 0.2122 ug/mL

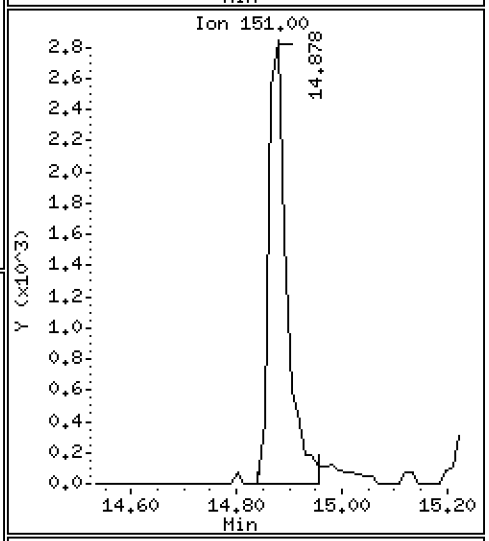


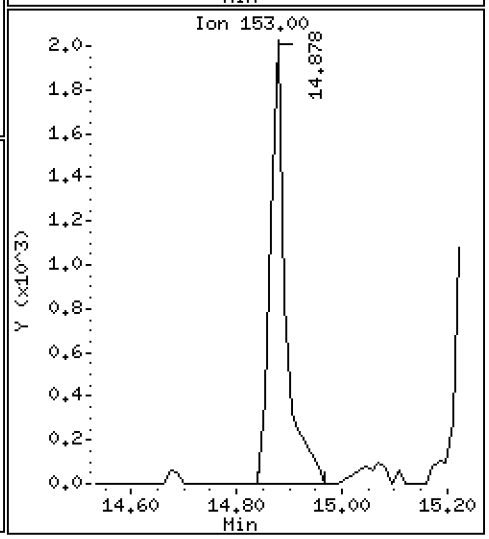












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

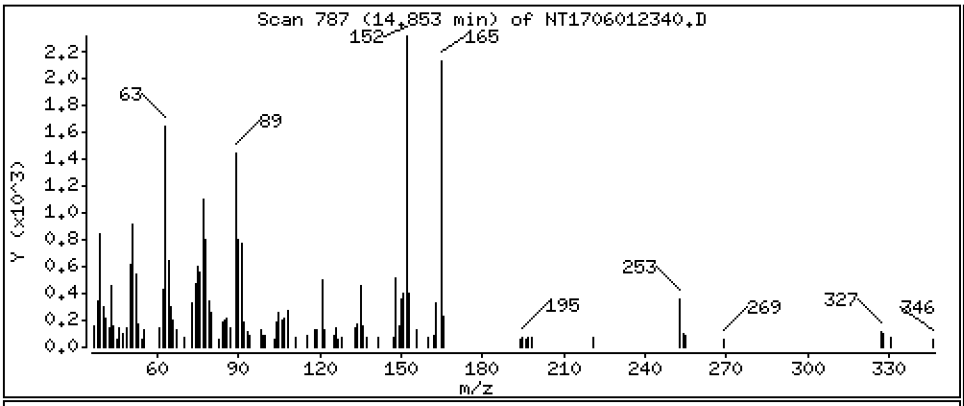
Operator: VTS

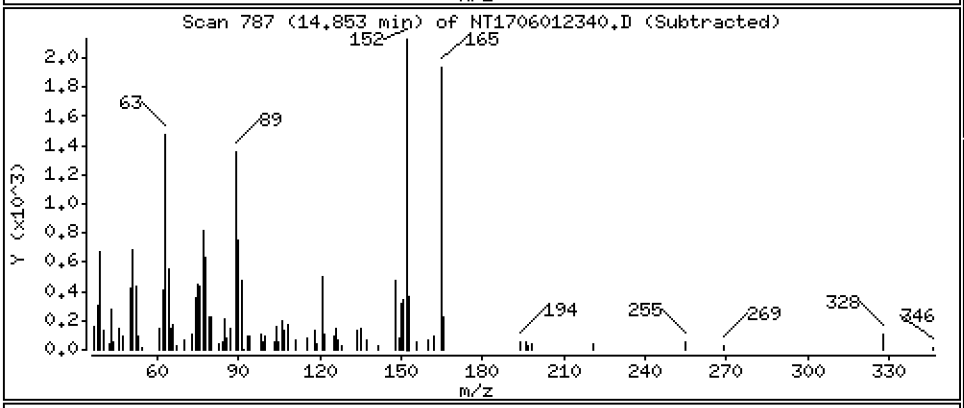
Column phase: ZB-5msi

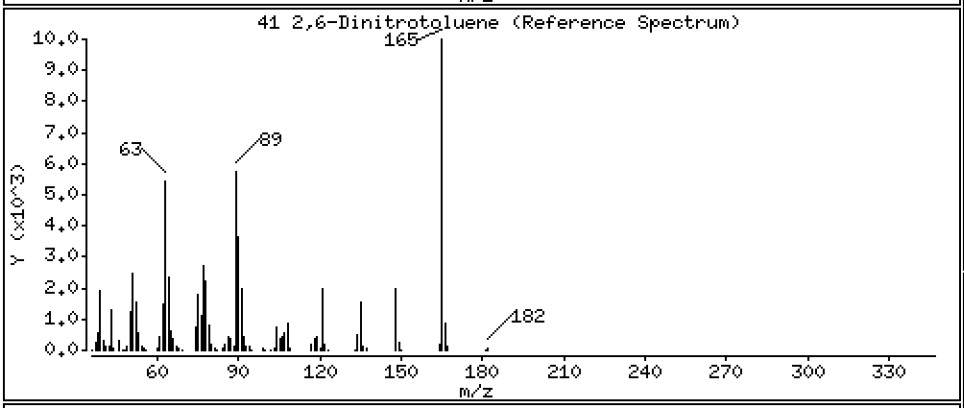
Column diameter: 0.25

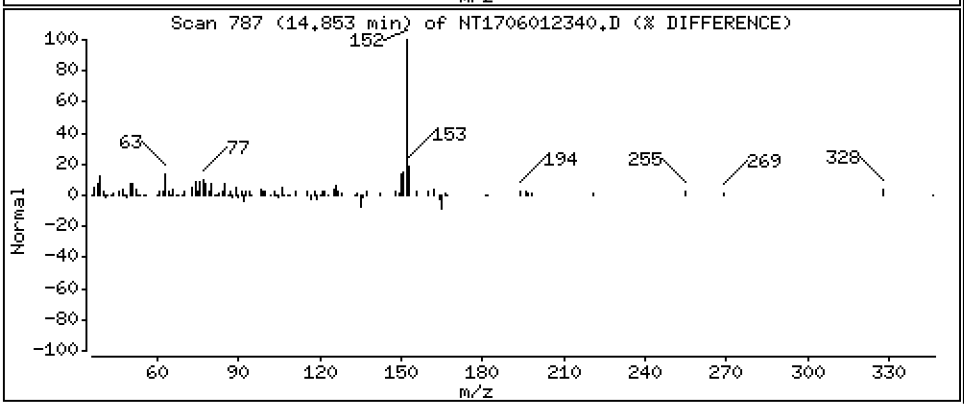
41 2,6-Dinitrotoluene

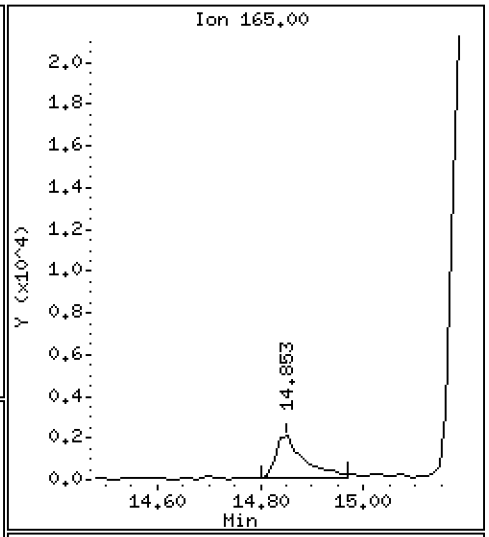
Concentration: 0.3093 ug/mL

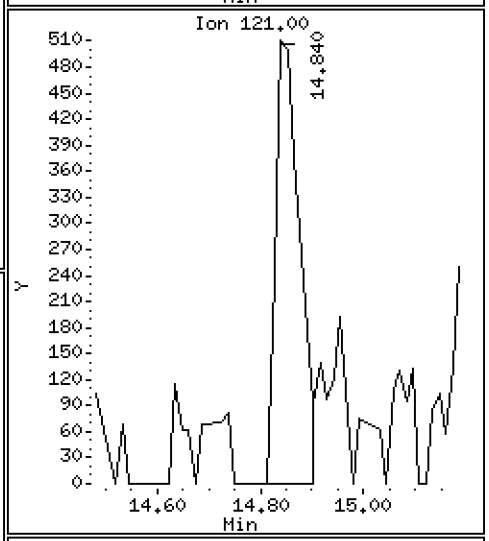


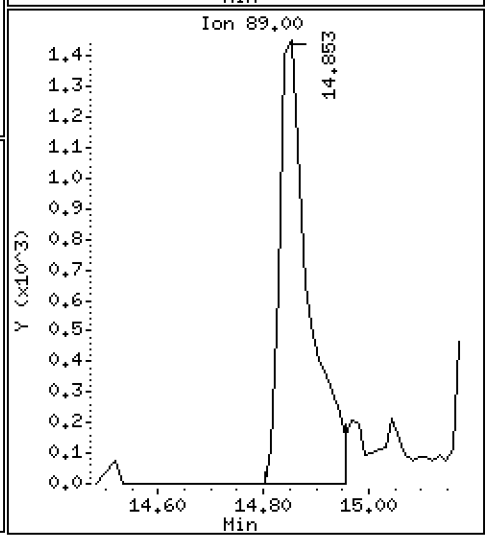












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

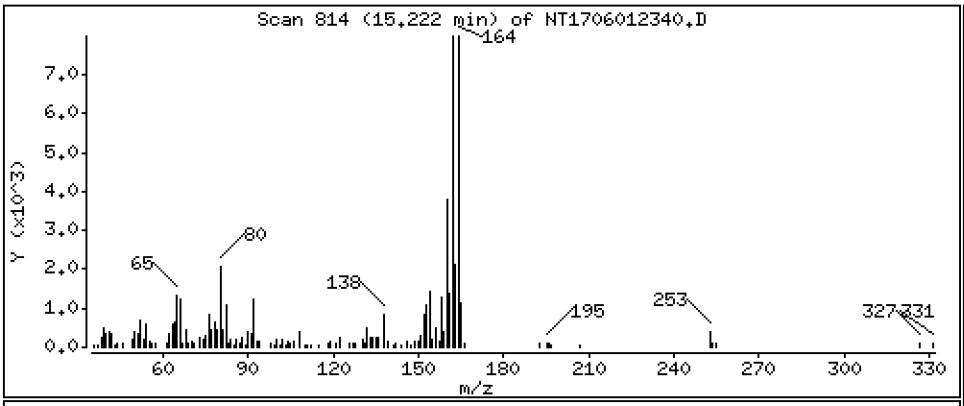
Operator: VTS

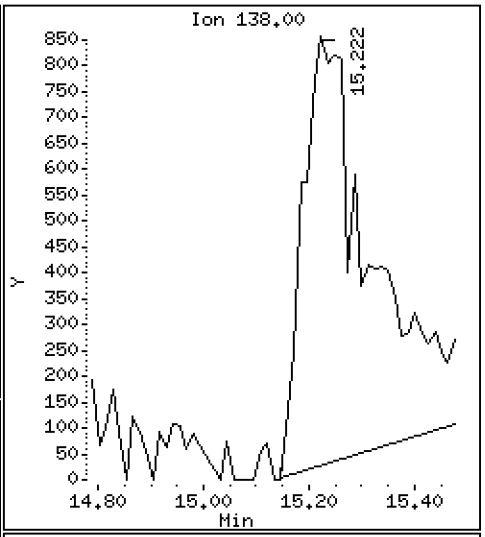
Column phase: ZB-5msi

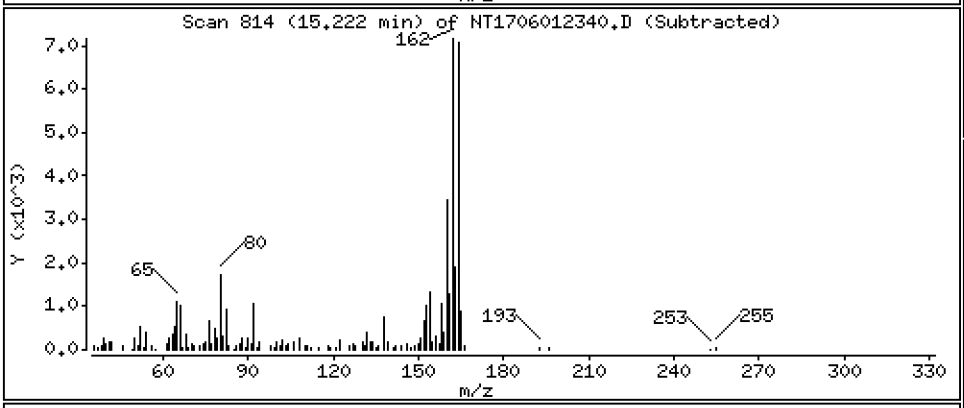
Column diameter: 0.25

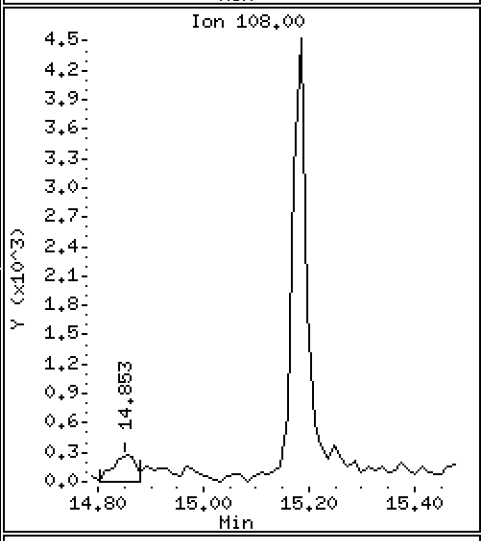
43 3-Nitroaniline

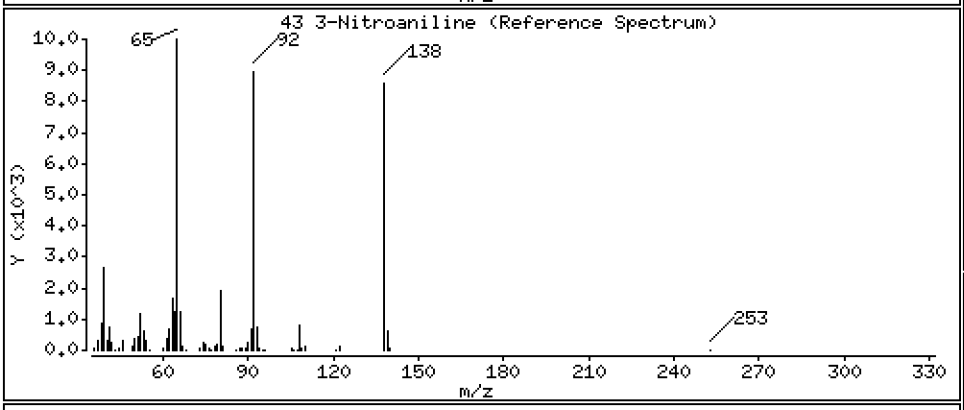
Concentration: 0.3343 ug/mL

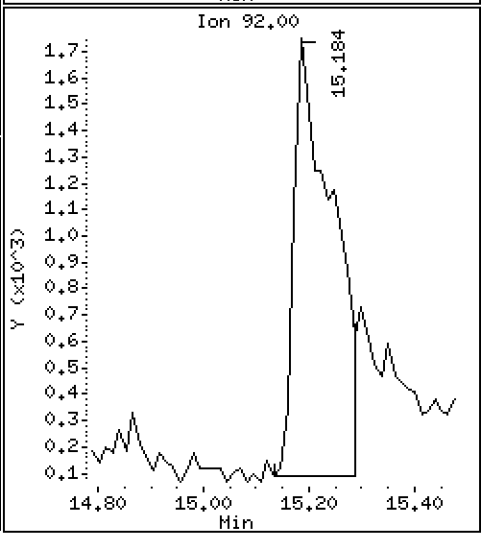


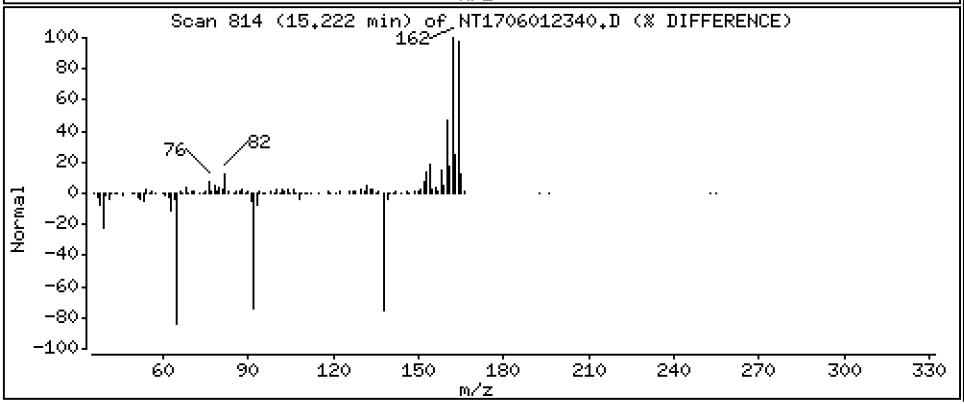












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

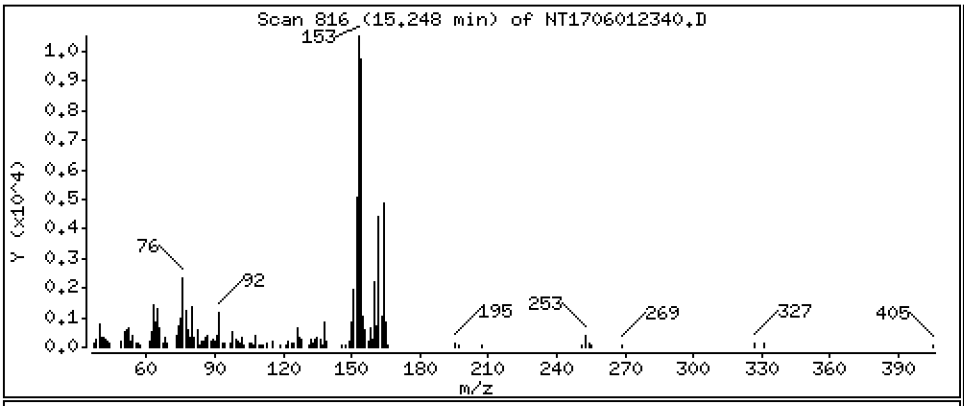
Operator: VTS

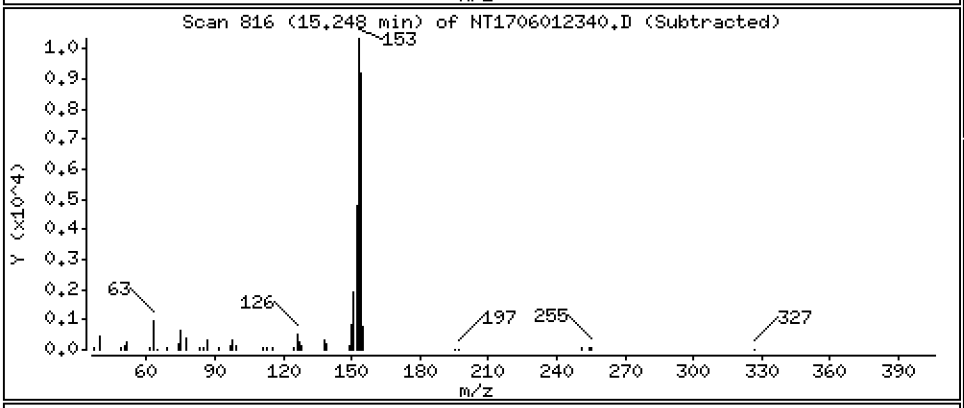
Column phase: ZB-5msi

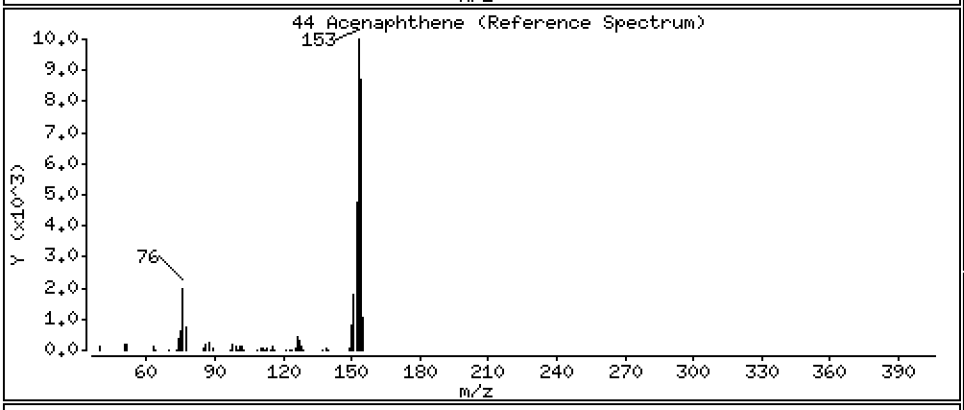
Column diameter: 0.25

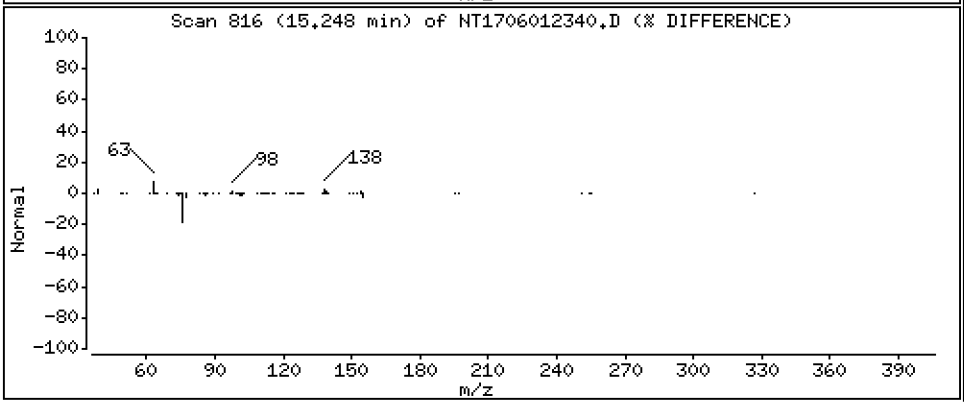
44 Acenaphthene

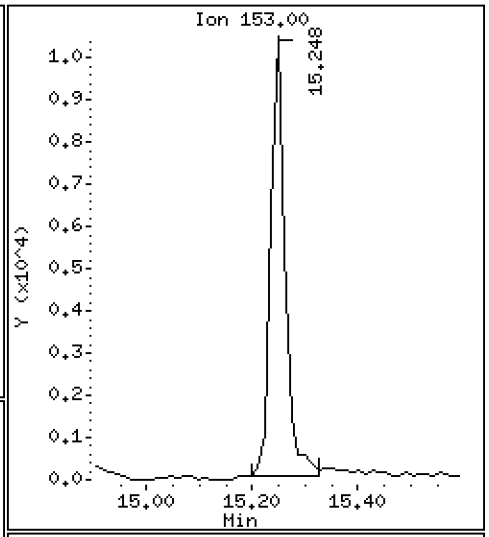
Concentration: 0.2011 ug/mL

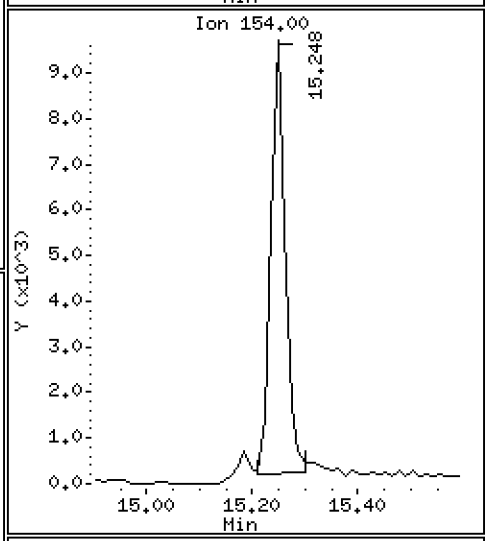


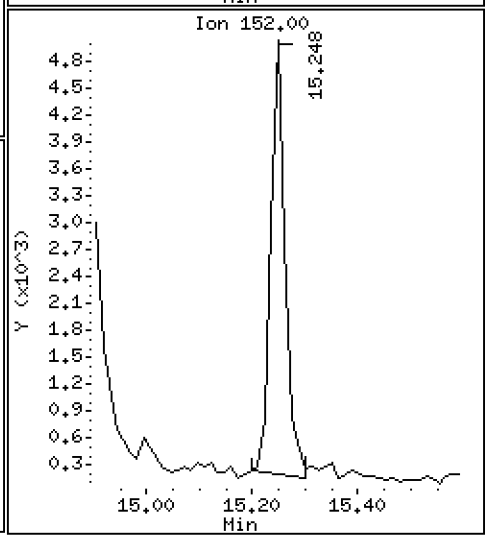












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

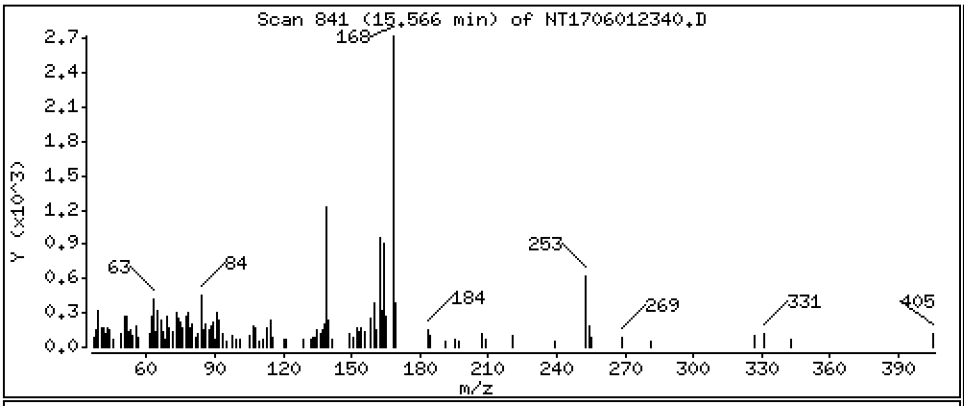
Operator: VTS

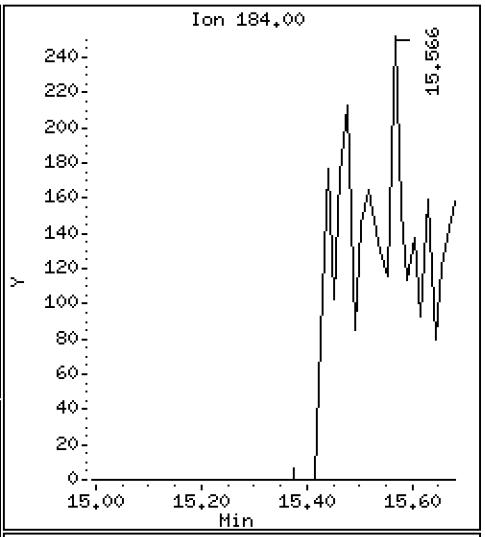
Column phase: ZB-5msi

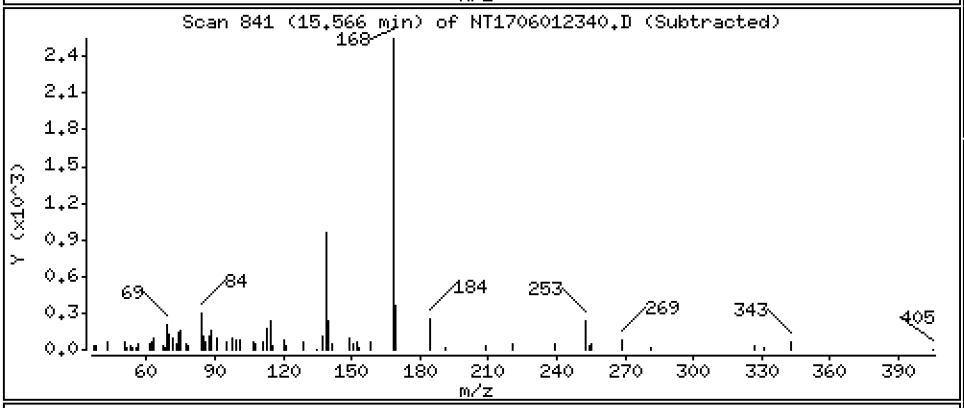
Column diameter: 0.25

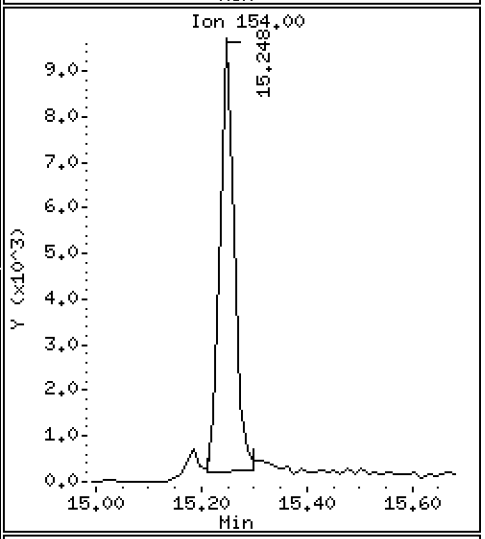
45 2,4-Dinitrophenol

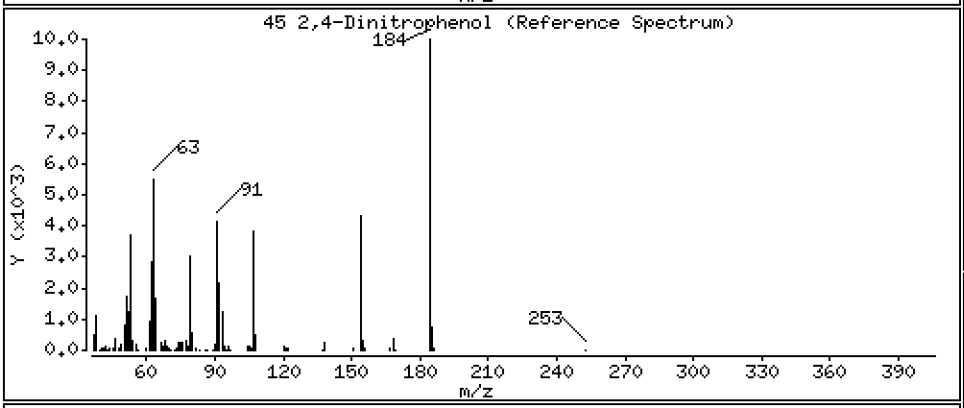
Concentration: 0.1729 ug/mL

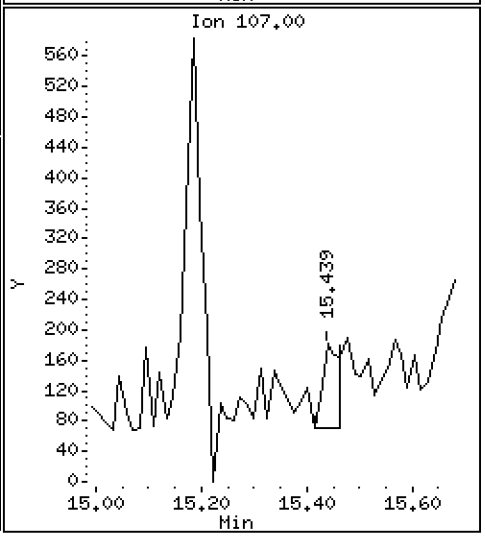


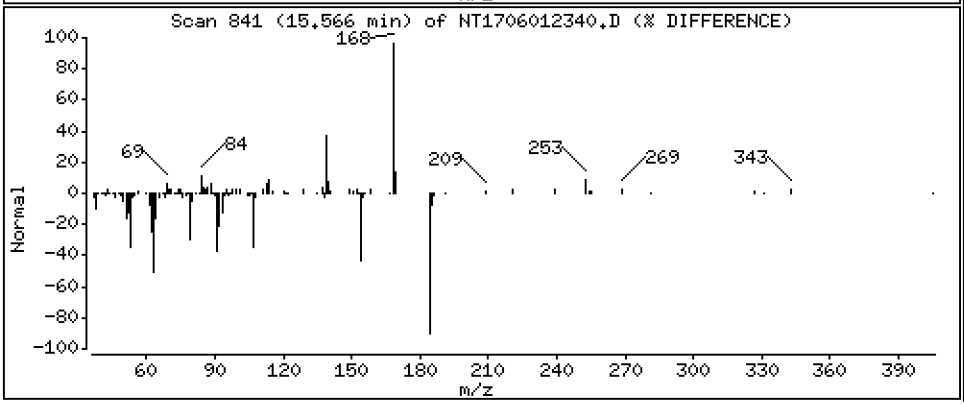












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

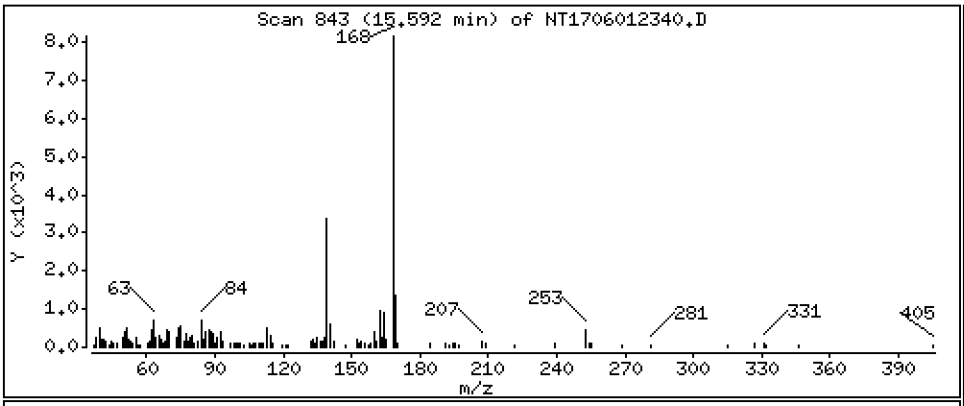
Operator: VTS

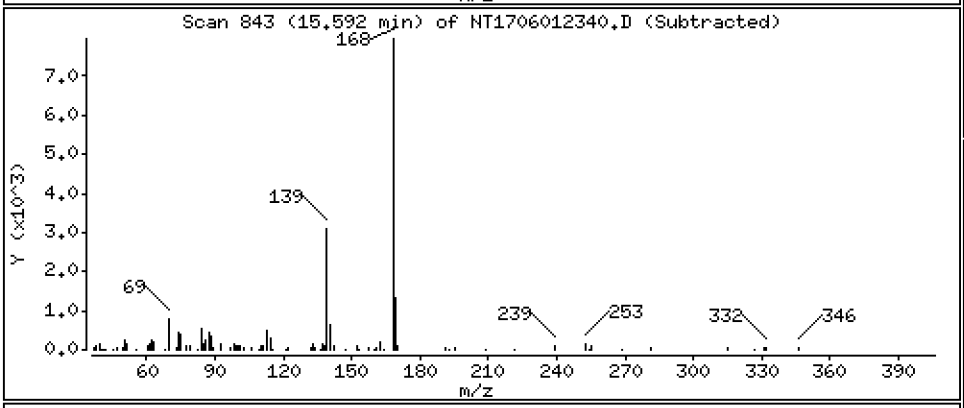
Column phase: ZB-5msi

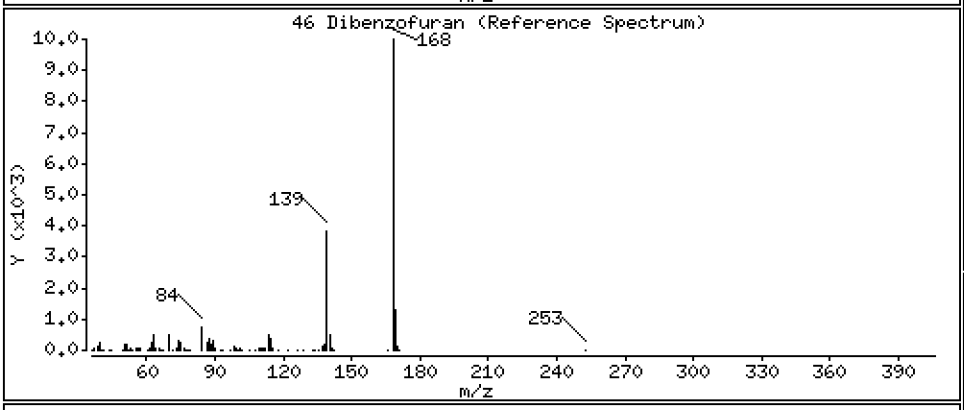
Column diameter: 0.25

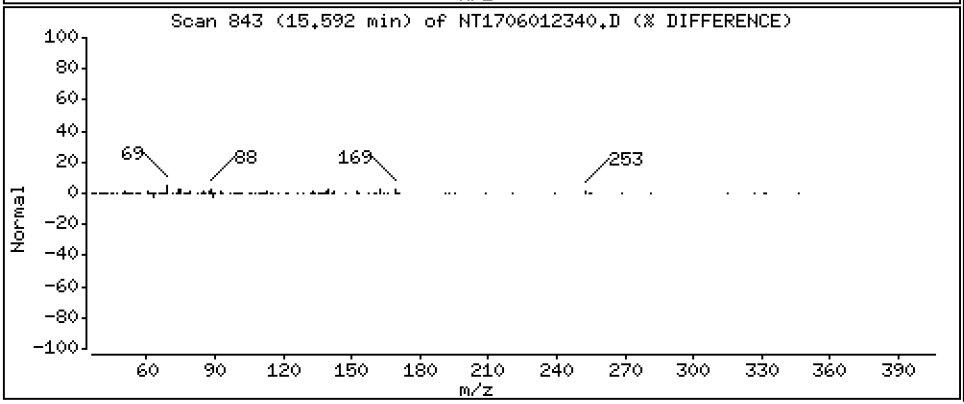
46 Dibenzofuran

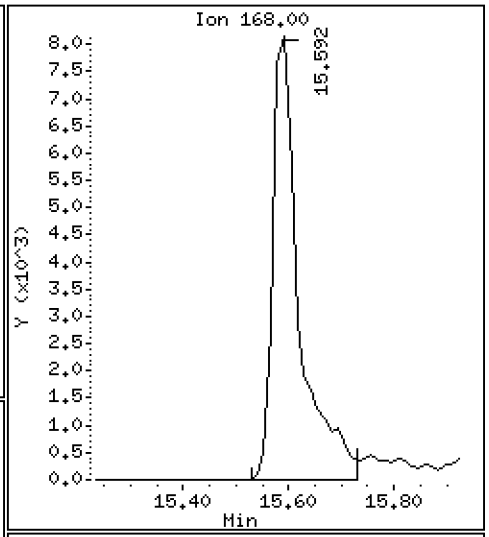
Concentration: 0.2052 ug/mL

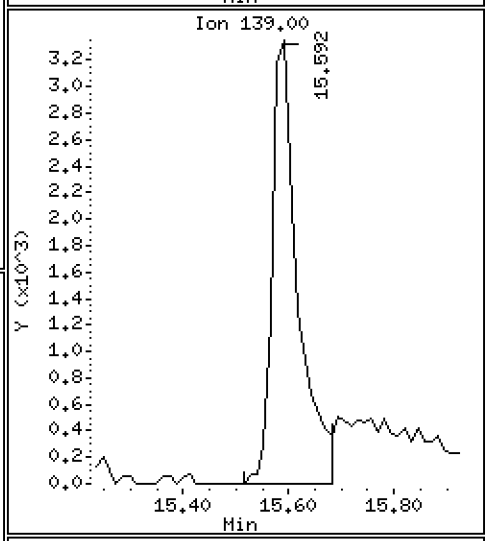


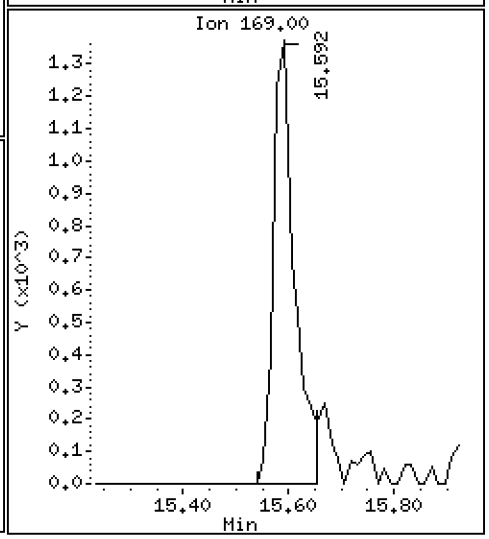












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

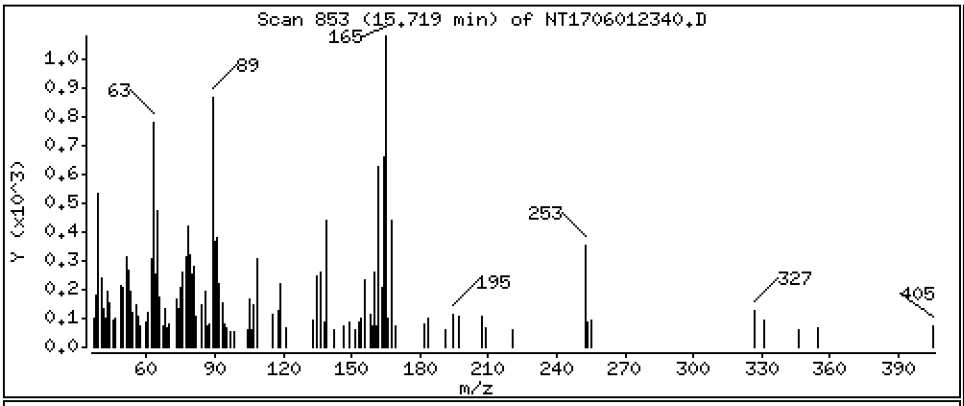
Operator: VTS

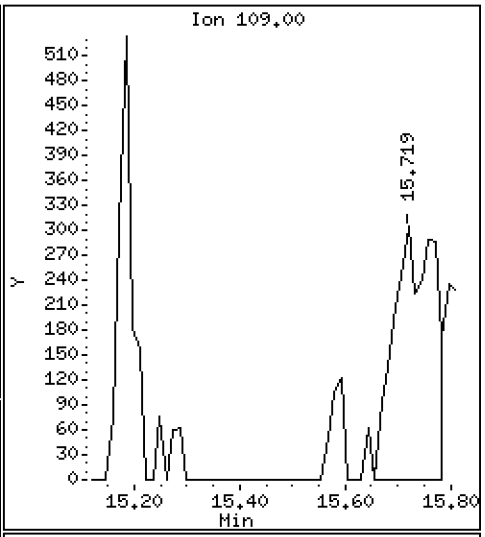
Column phase: ZB-5msi

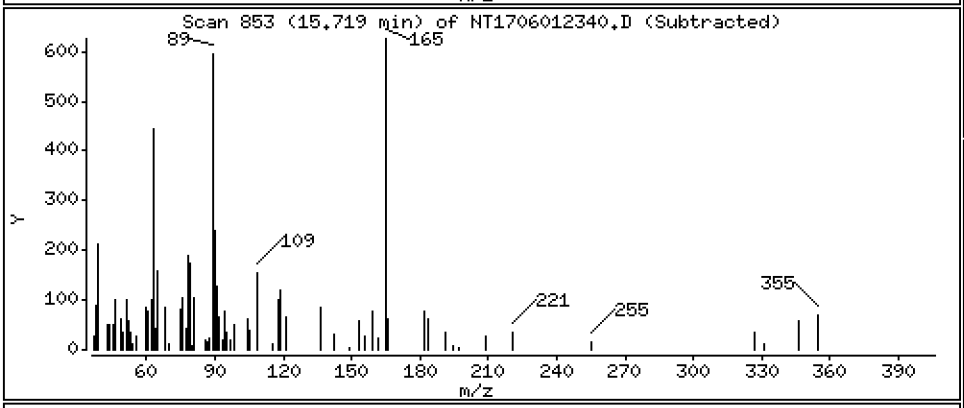
Column diameter: 0.25

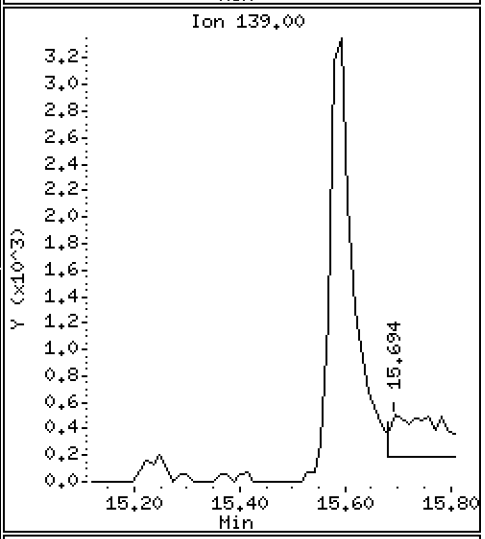
47 4-Nitrophenol

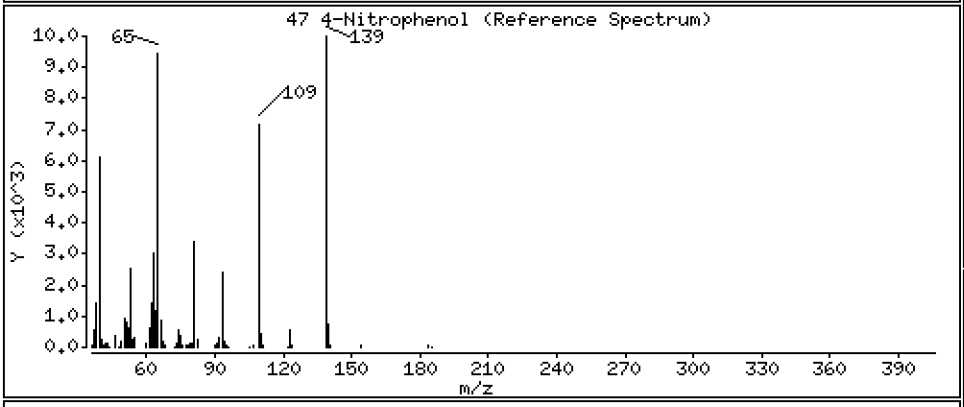
Concentration: 0.1085 ug/mL

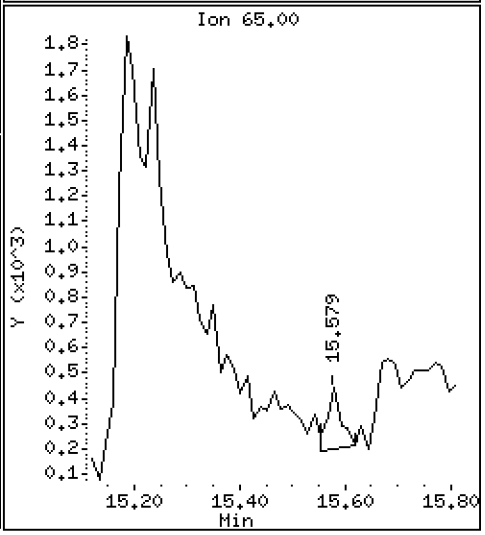


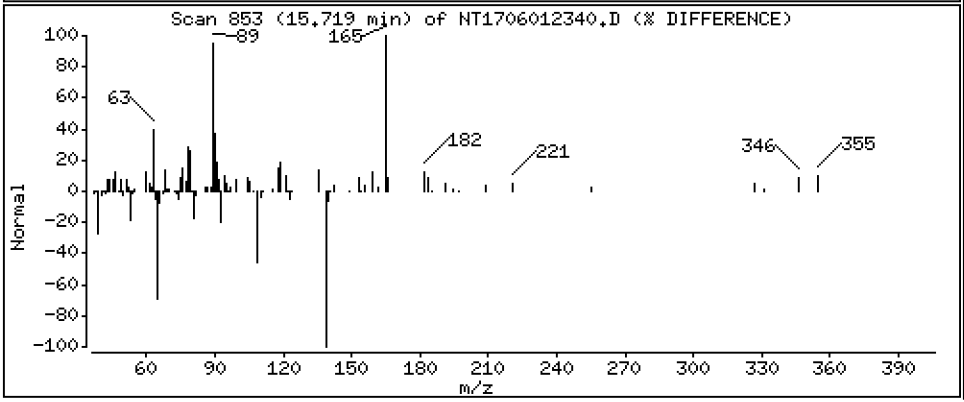












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

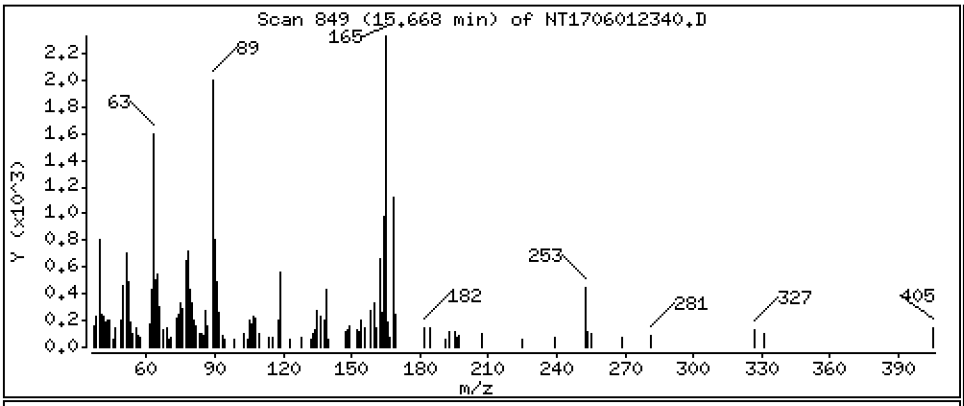
Operator: VTS

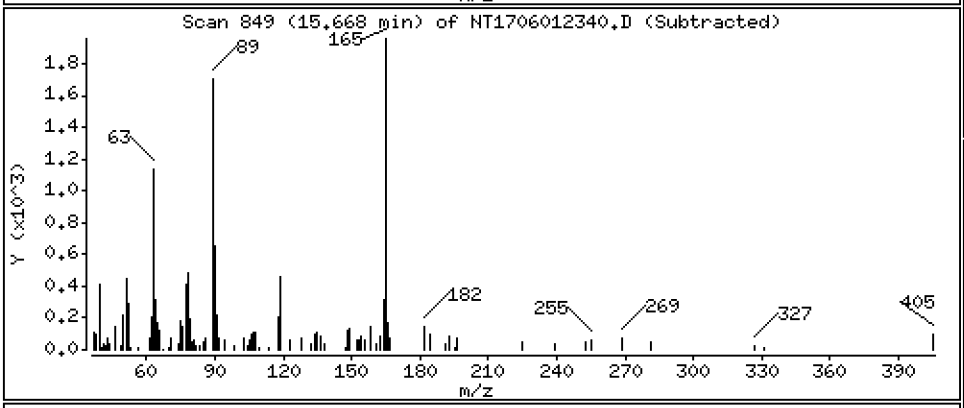
Column phase: ZB-5msi

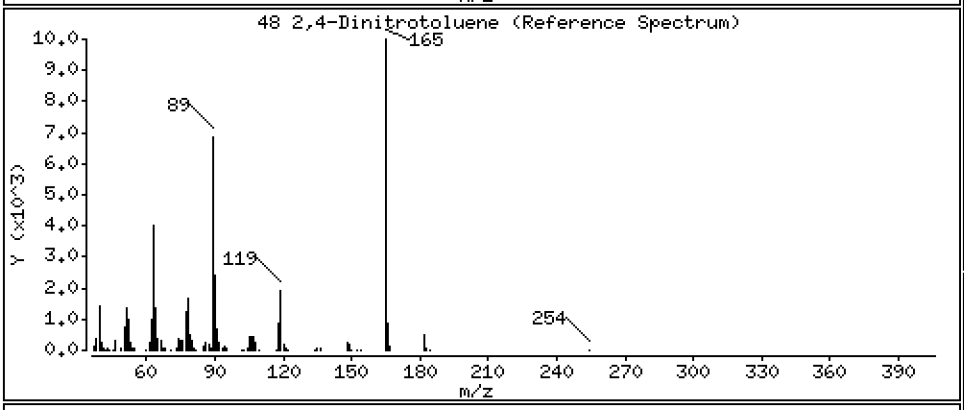
Column diameter: 0.25

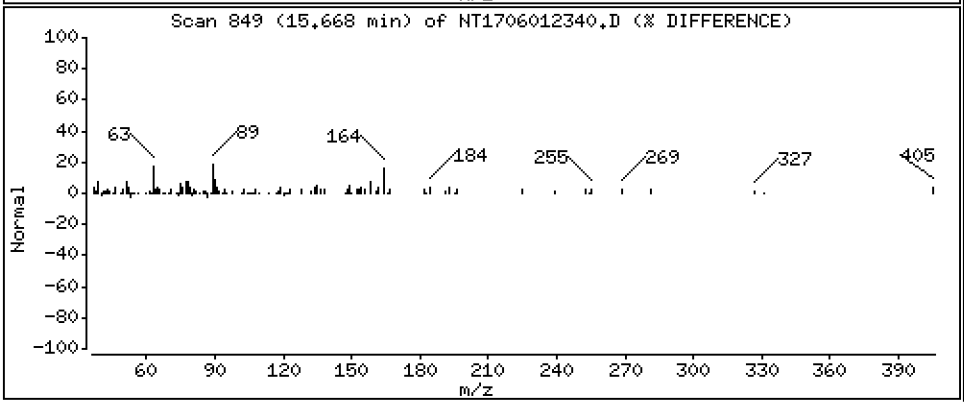
48 2,4-Dinitrotoluene

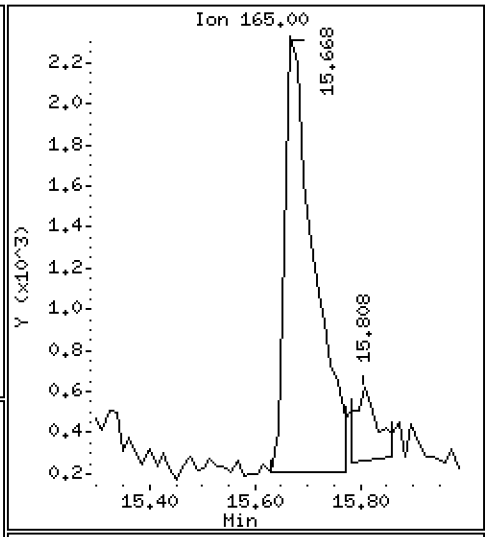
Concentration: 0.2509 ug/mL

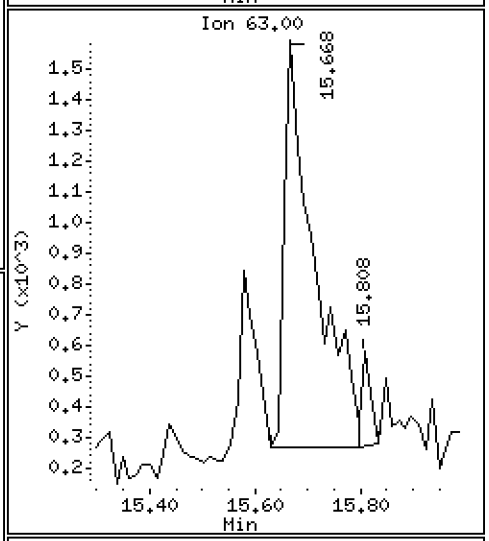


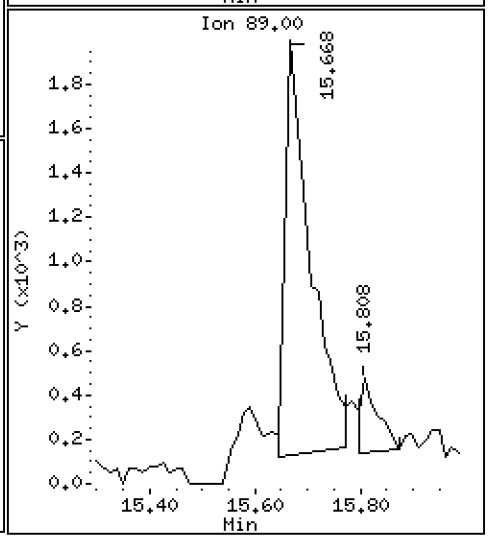












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

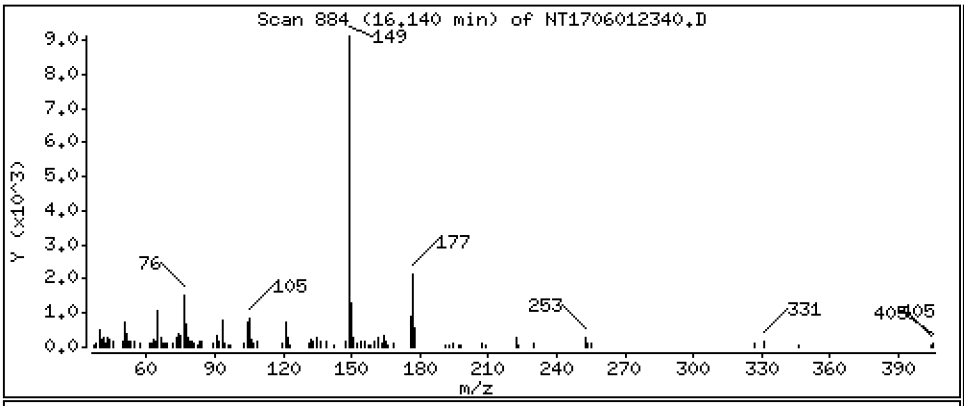
Operator: VTS

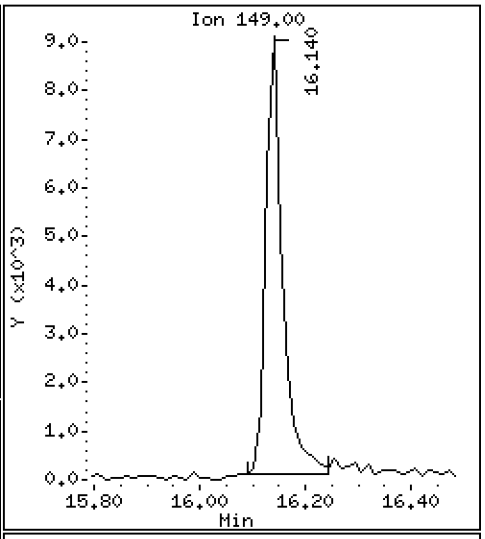
Column phase: ZB-5msi

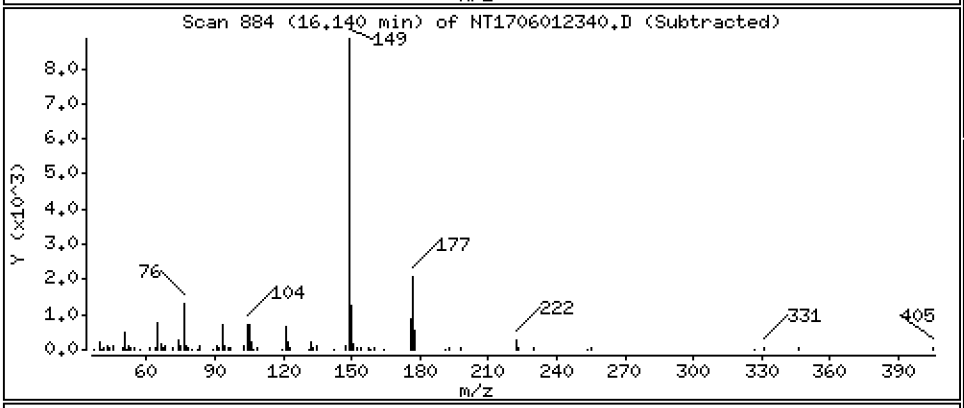
Column diameter: 0.25

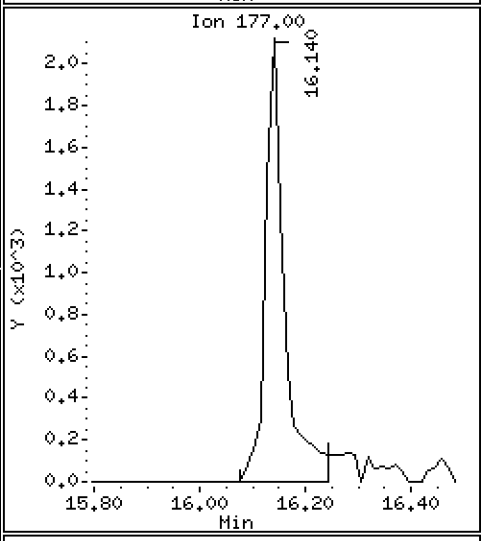
50 Diethylphthalate

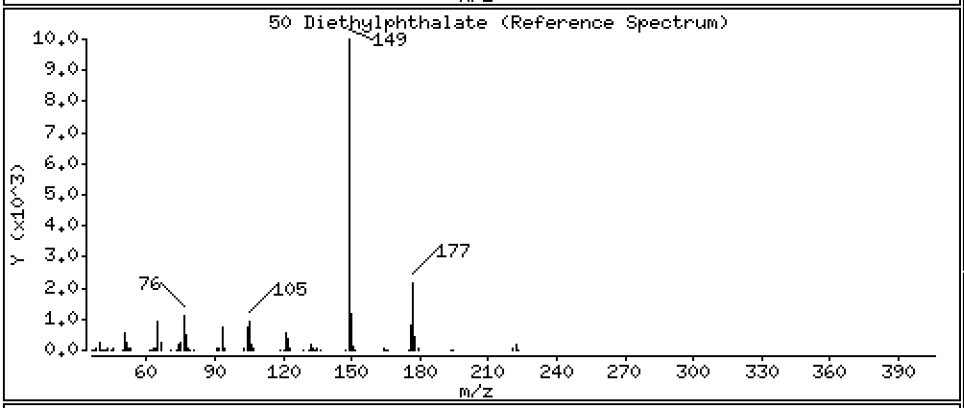
Concentration: 0.2258 ug/mL

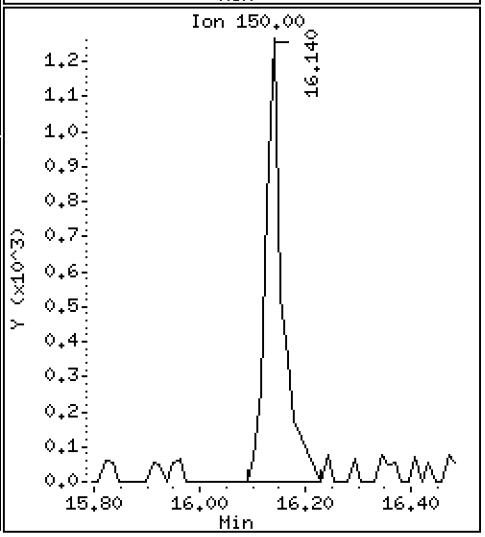


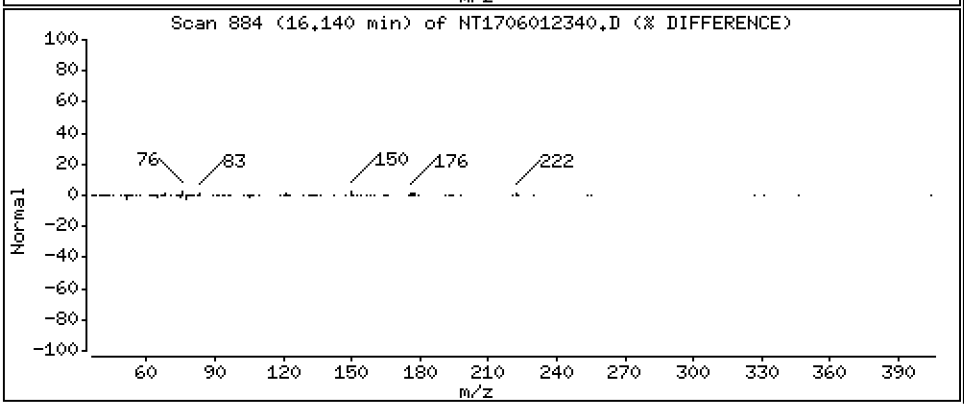












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

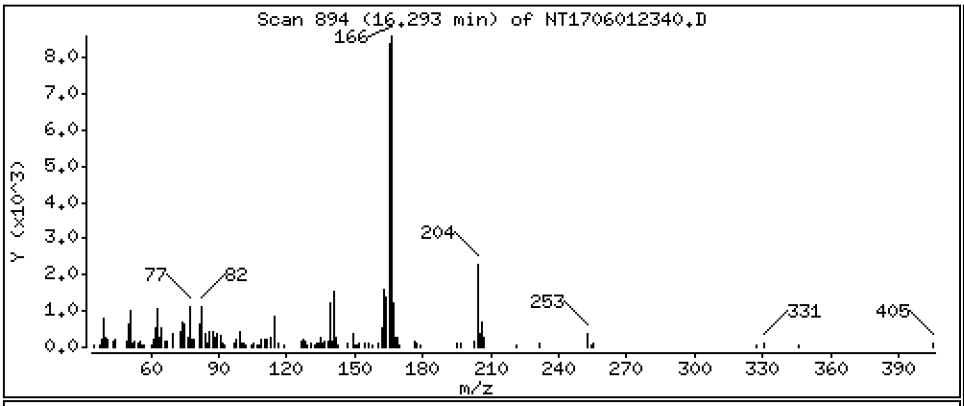
Operator: VTS

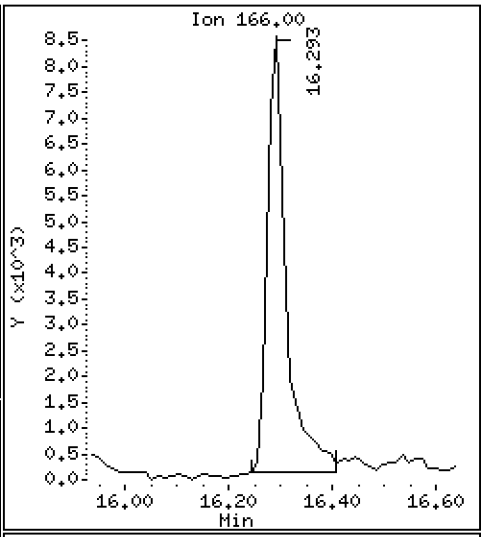
Column phase: ZB-5msi

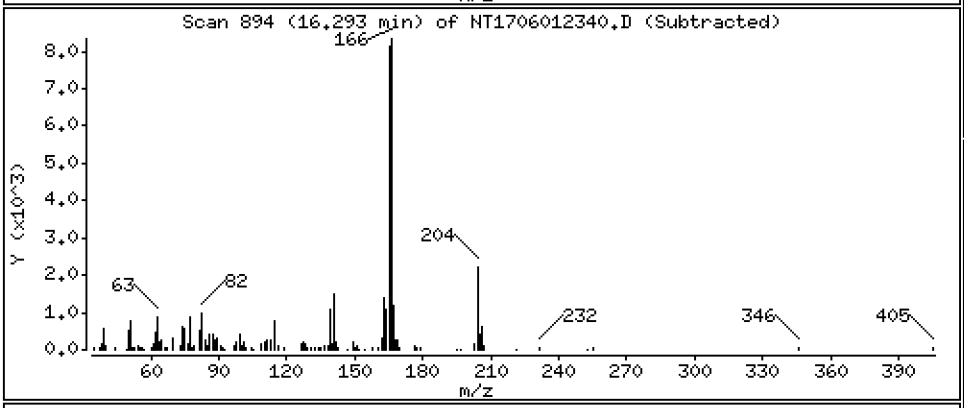
Column diameter: 0.25

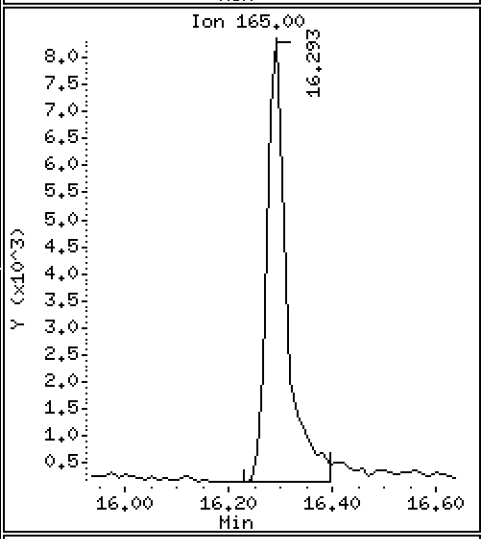
49 Fluorene

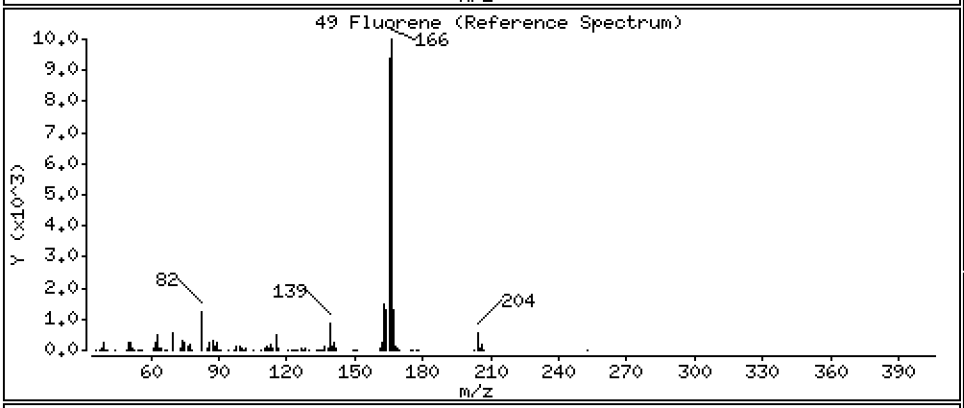
Concentration: 0.1617 ug/mL

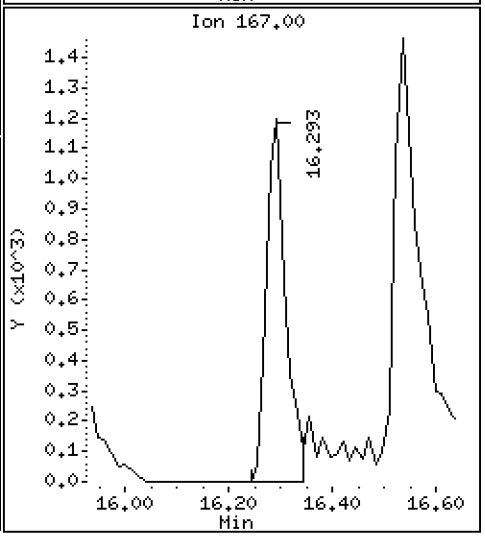


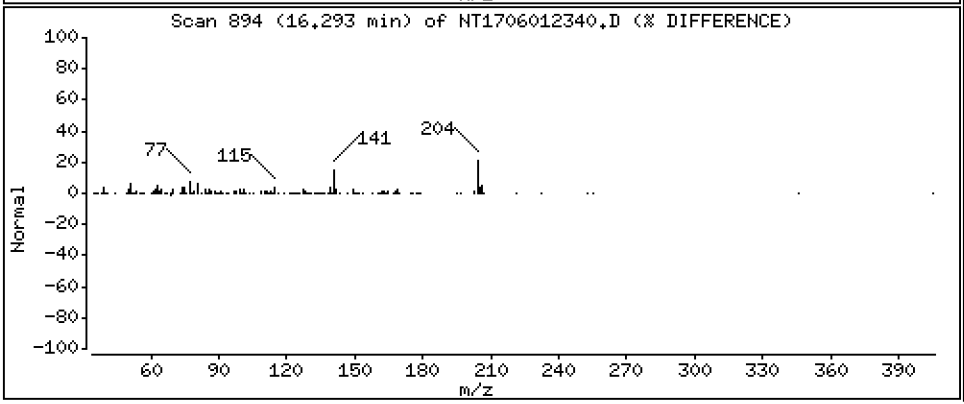












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

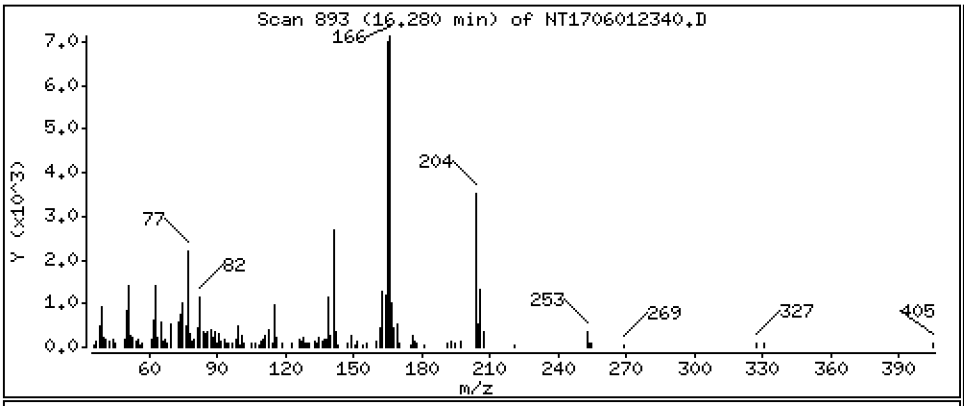
Operator: VTS

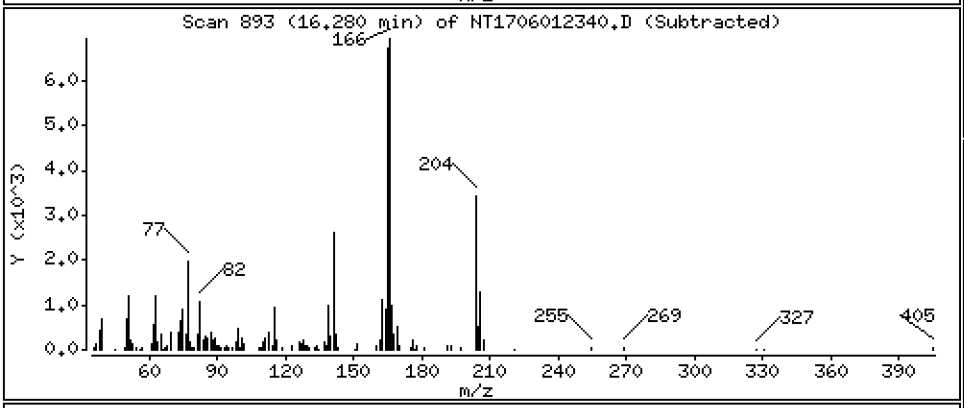
Column phase: ZB-5msi

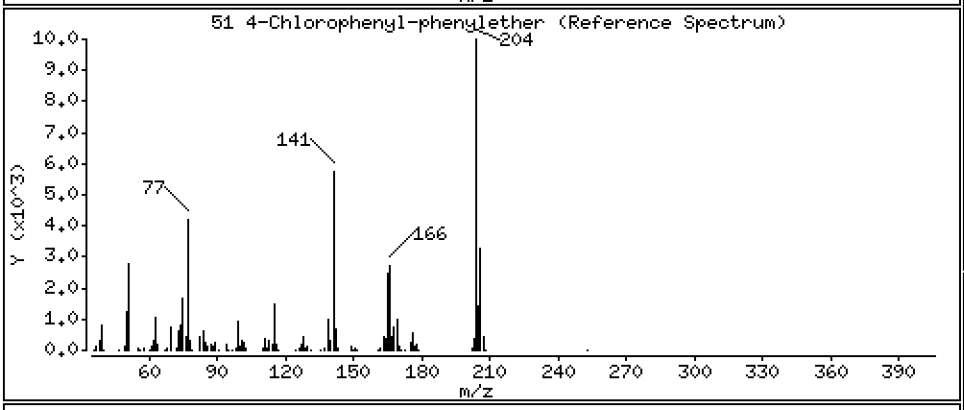
Column diameter: 0.25

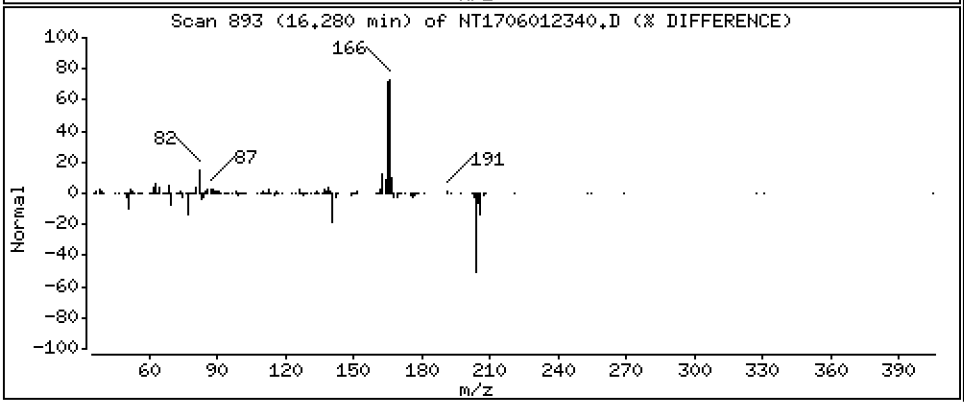
51 4-Chlorophenyl-phenylether

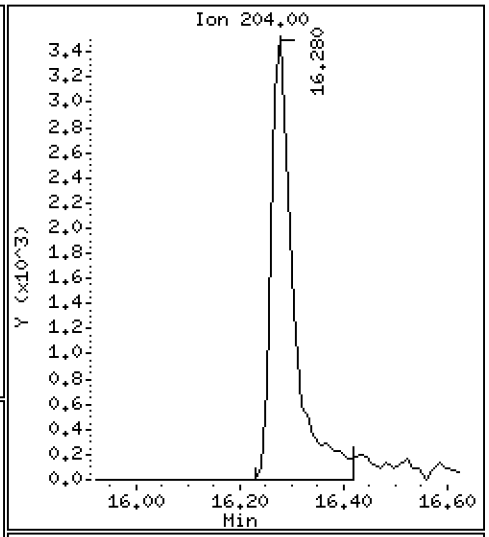
Concentration: 0.1755 ug/mL

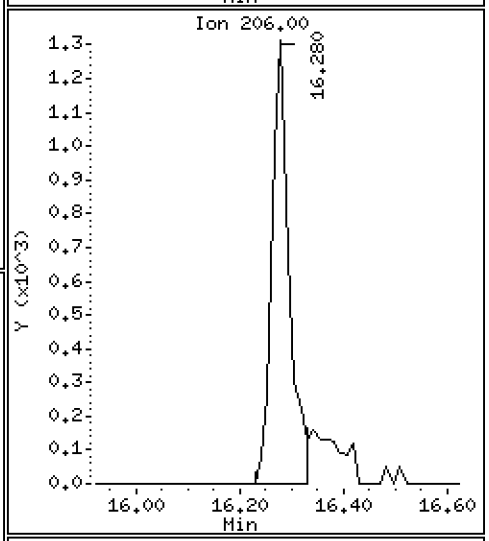


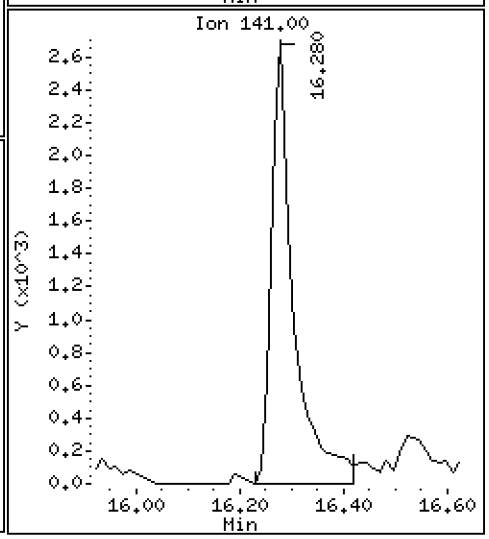












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

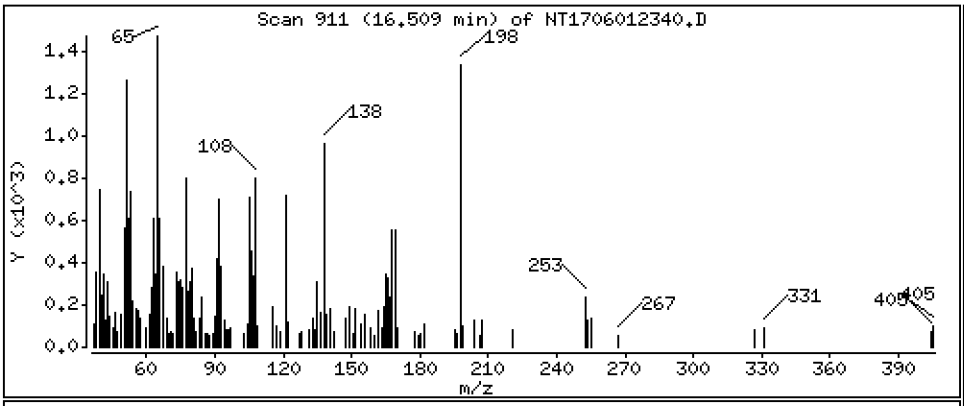
Operator: VTS

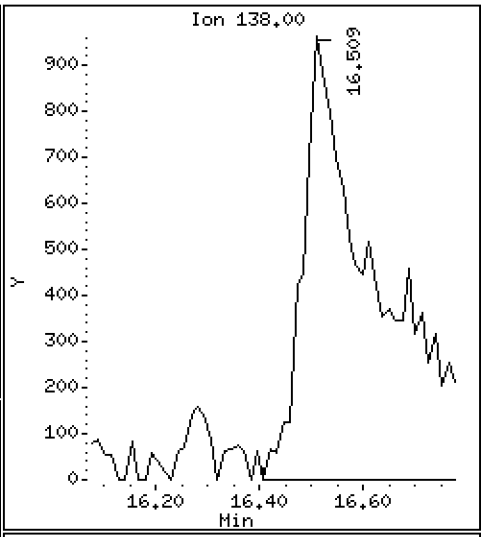
Column phase: ZB-5msi

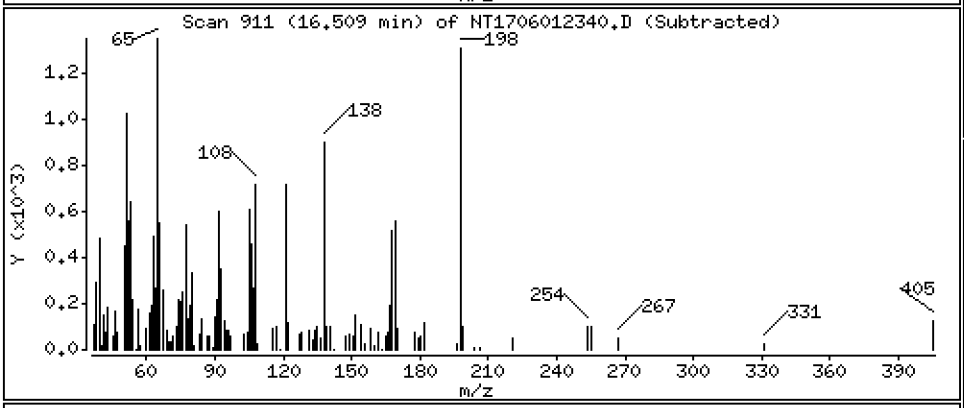
Column diameter: 0.25

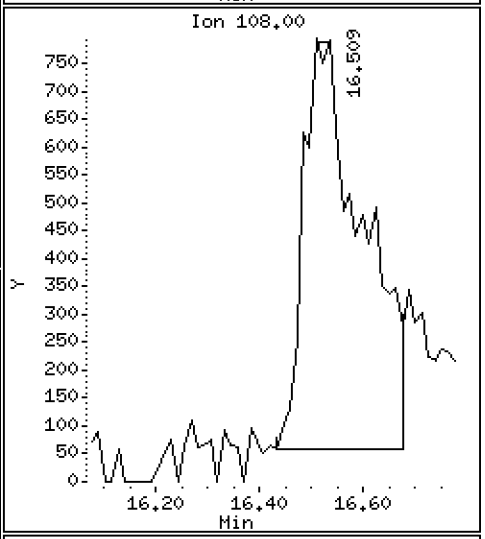
52 4-Nitroaniline

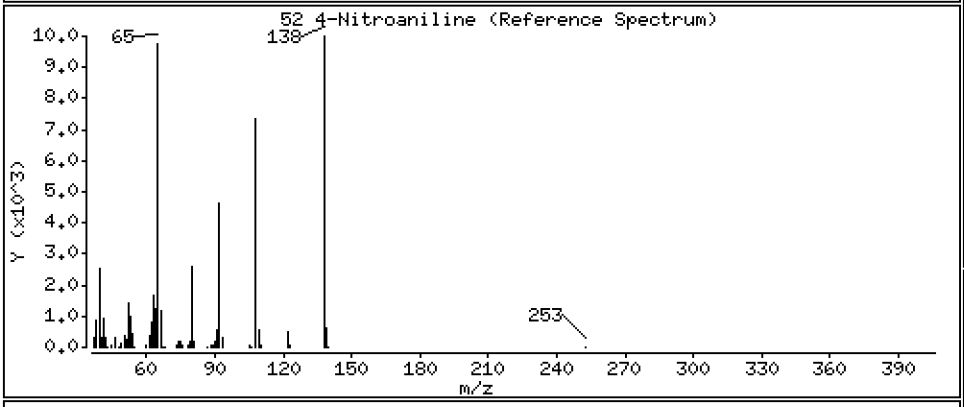
Concentration: 0.5278 ug/mL

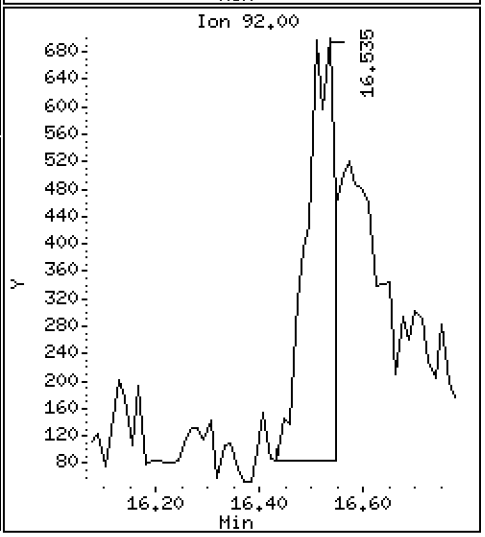


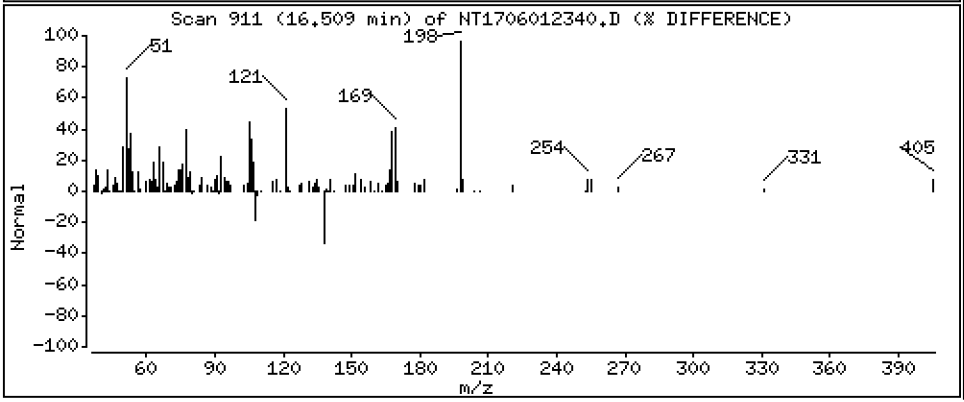












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

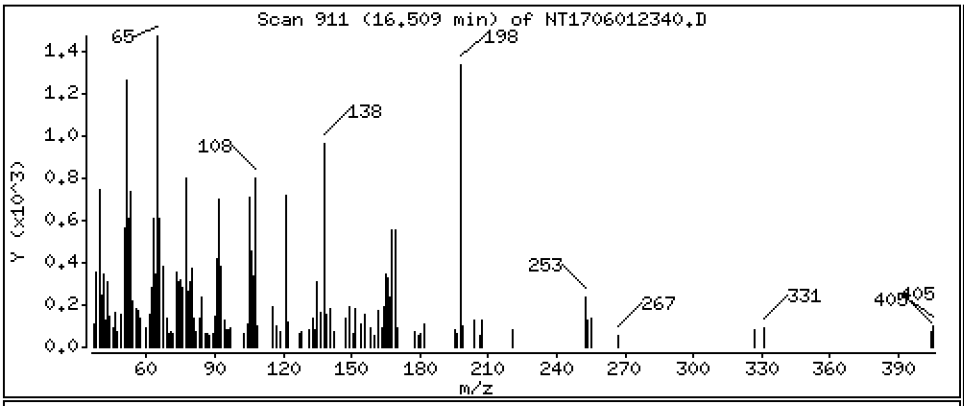
Operator: VTS

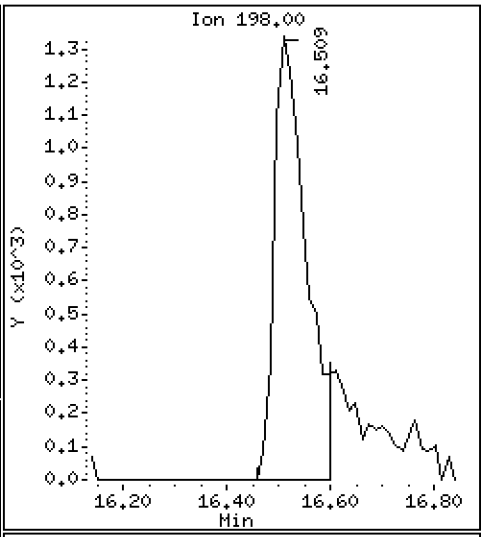
Column phase: ZB-5msi

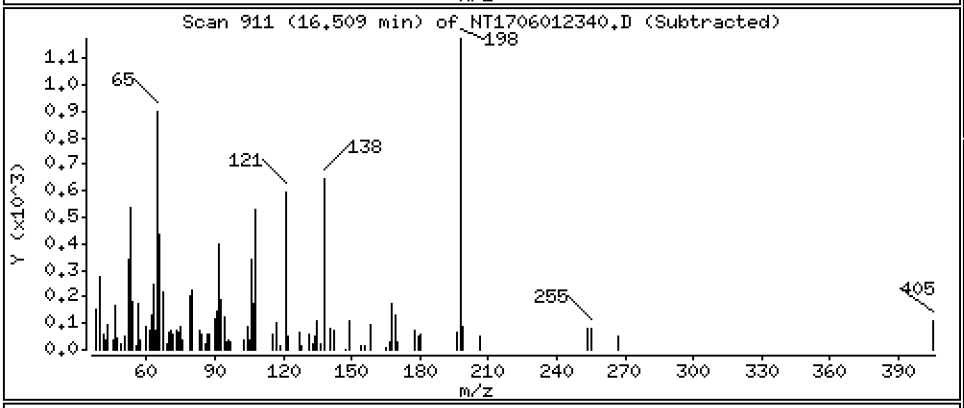
Column diameter: 0.25

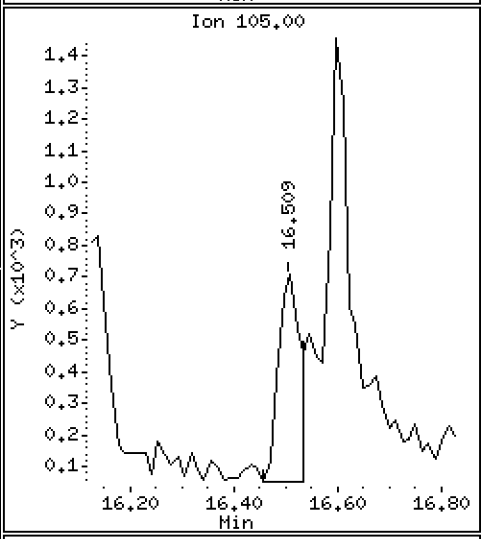
53 4,6-Dinitro-2-methylphenol

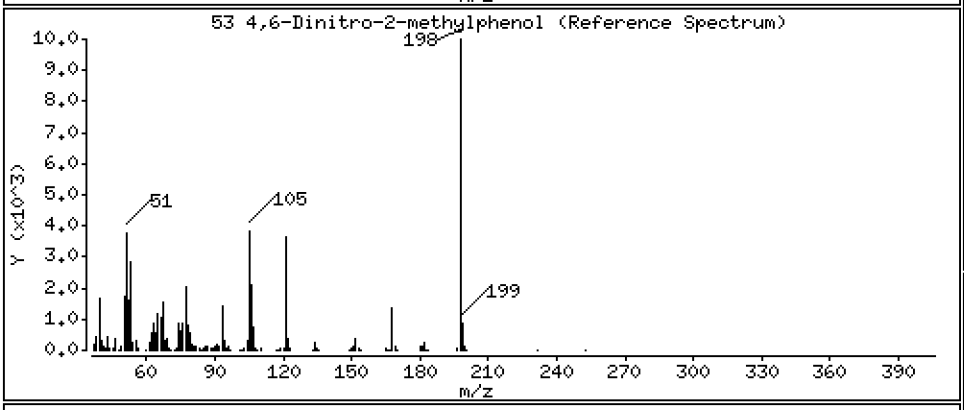
Concentration: 0.2433 ug/mL

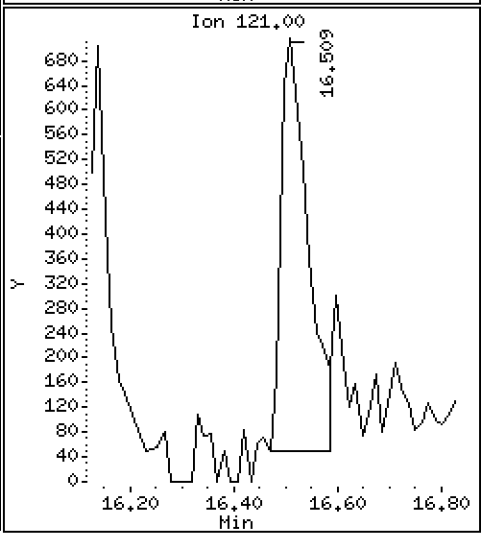


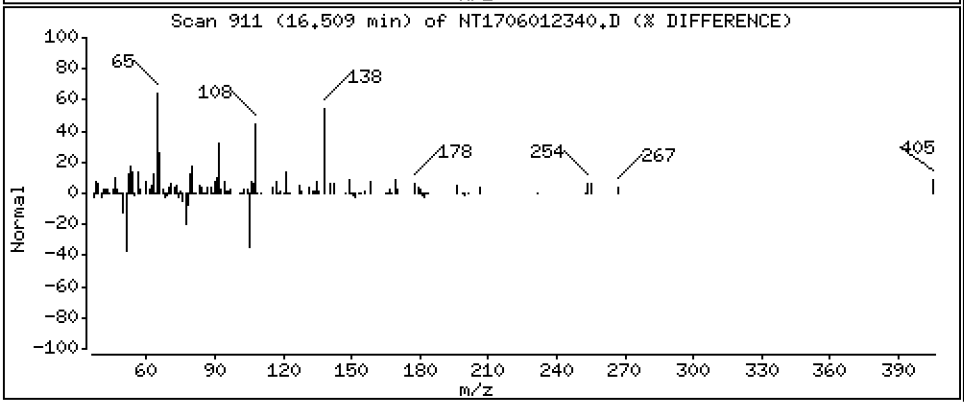












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

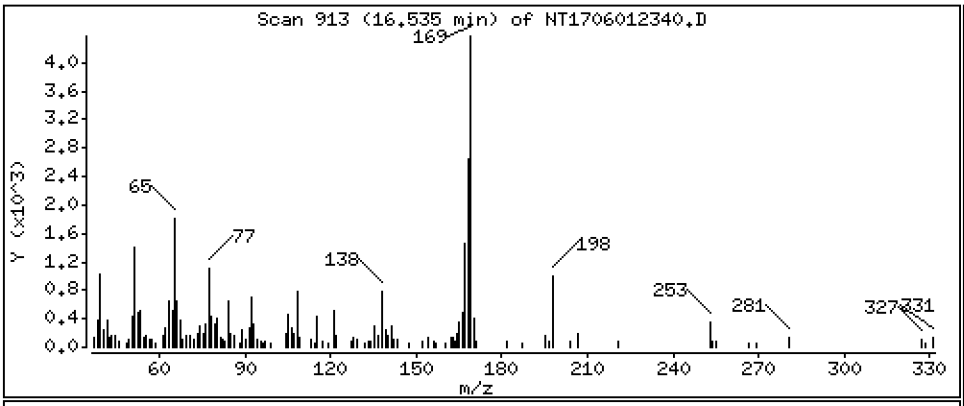
Operator: VTS

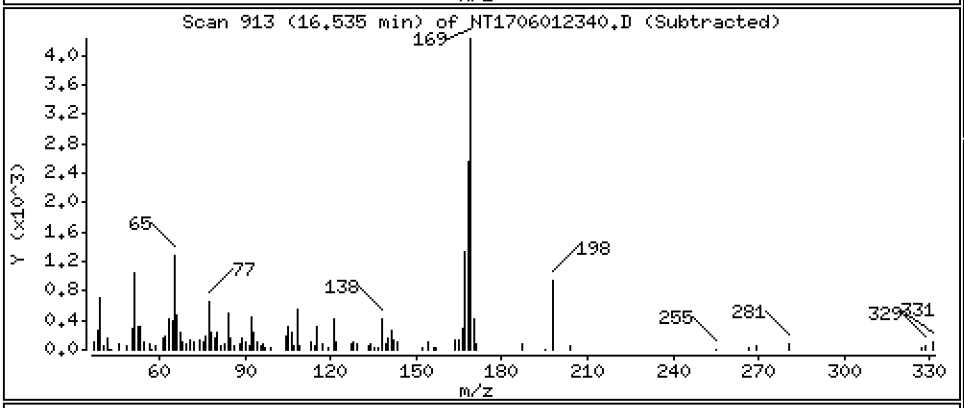
Column phase: ZB-5msi

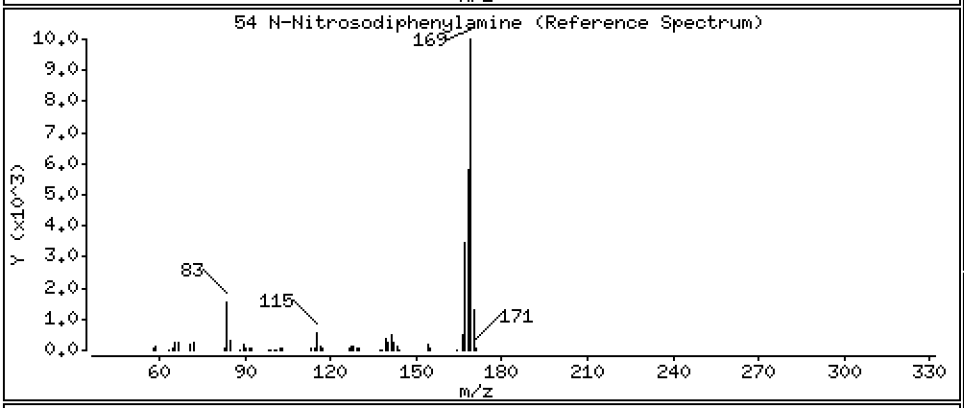
Column diameter: 0.25

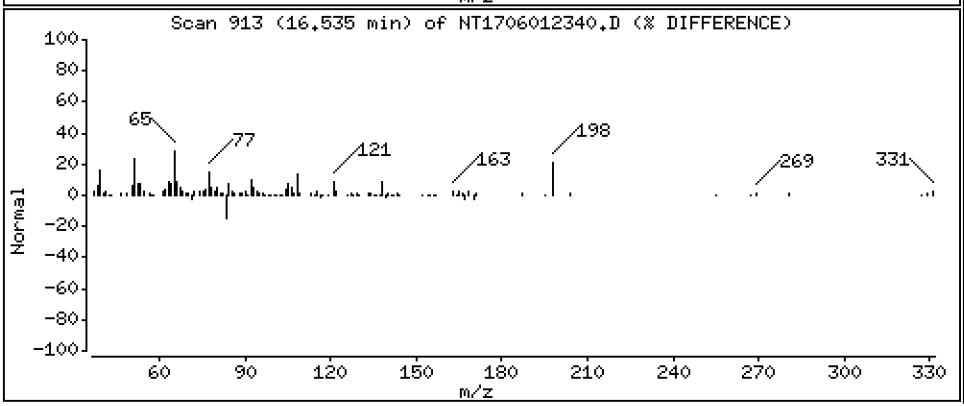
54 N-Nitrosodiphenylamine

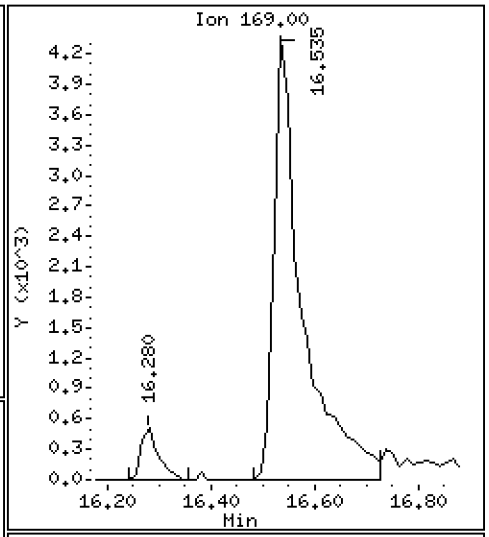
Concentration: 0.2001 ug/mL

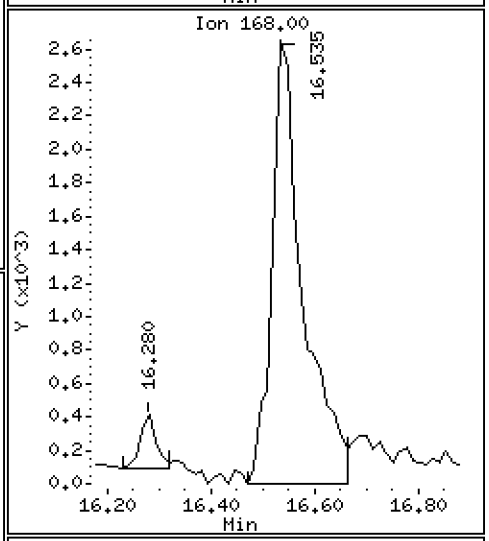


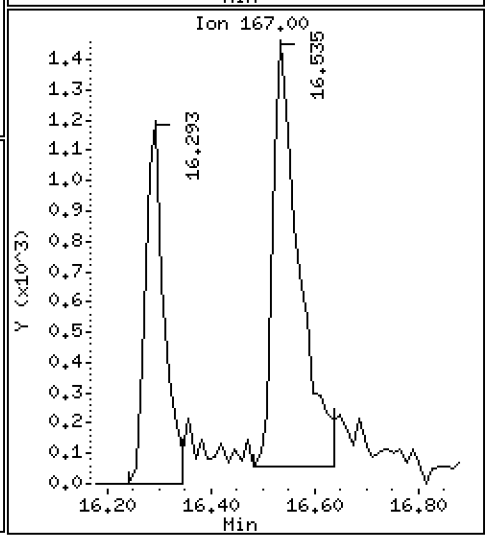












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

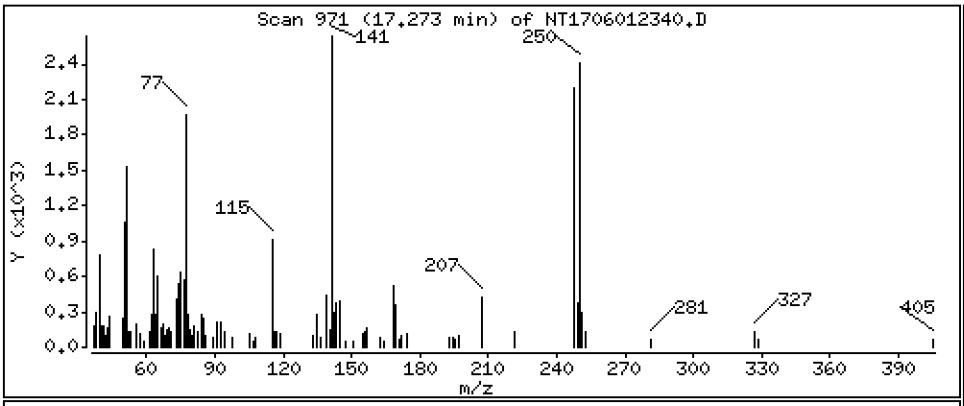
Operator: VTS

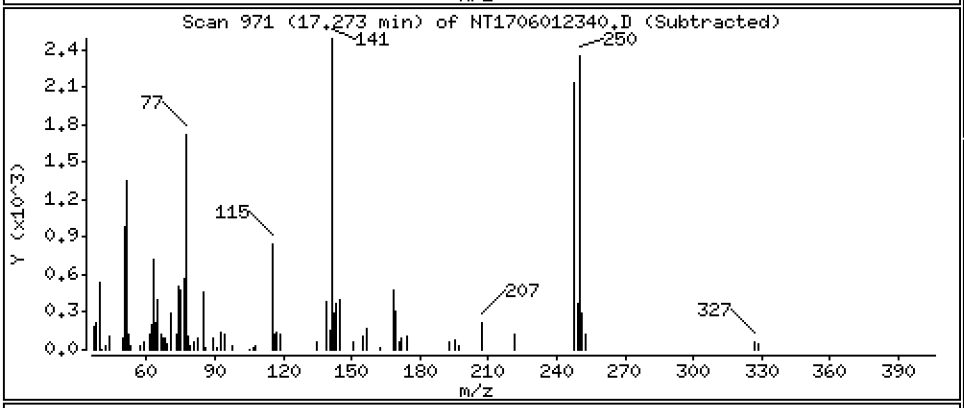
Column phase: ZB-5msi

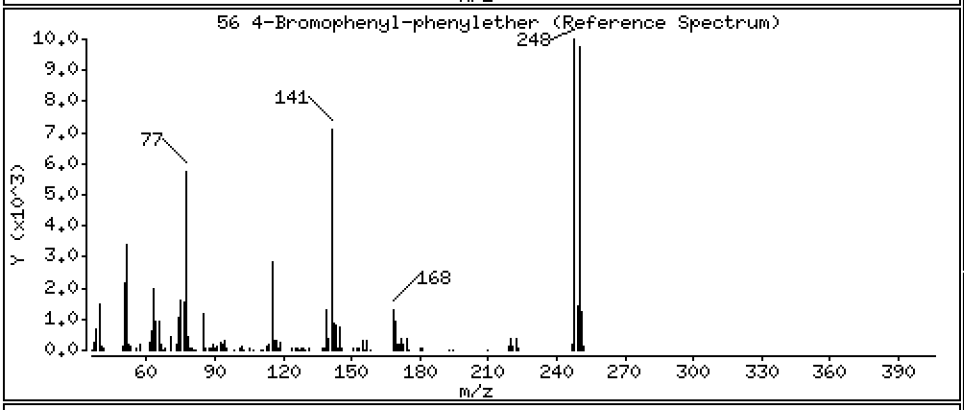
Column diameter: 0.25

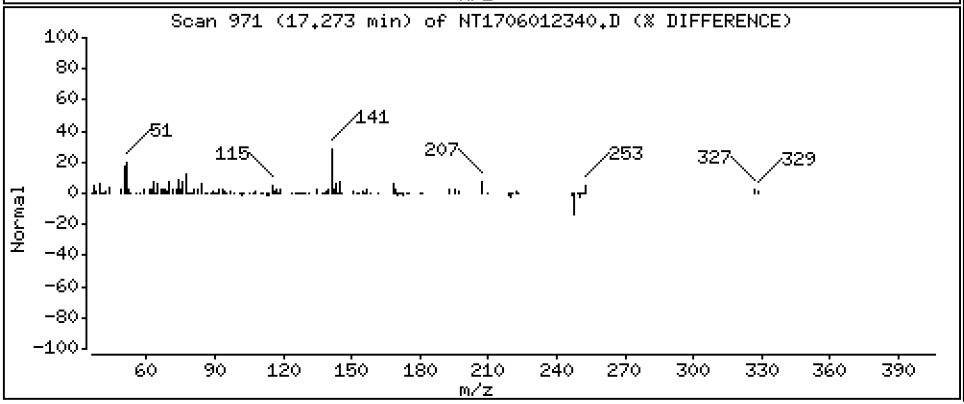
56 4-Bromophenyl-phenylether

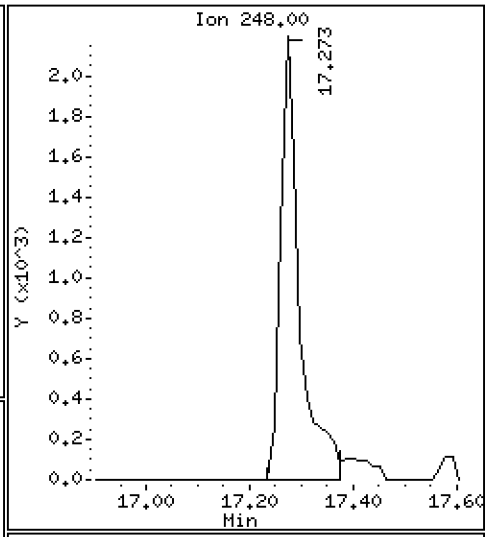
Concentration: 0.1951 ug/mL

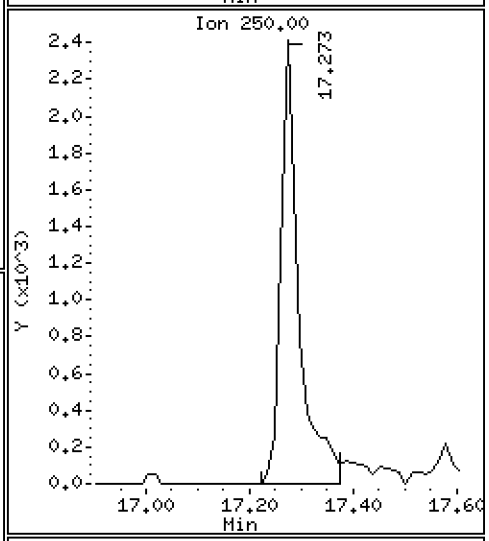


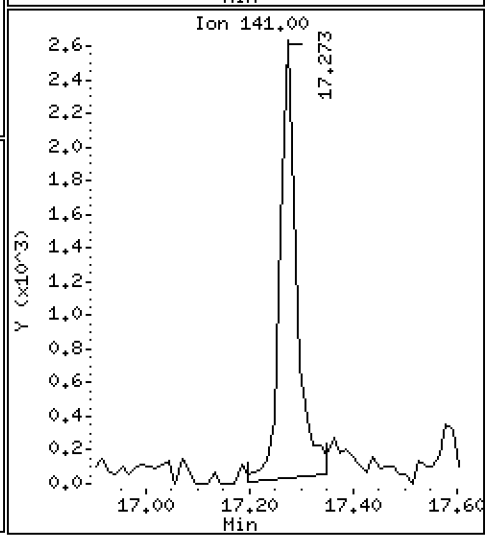












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

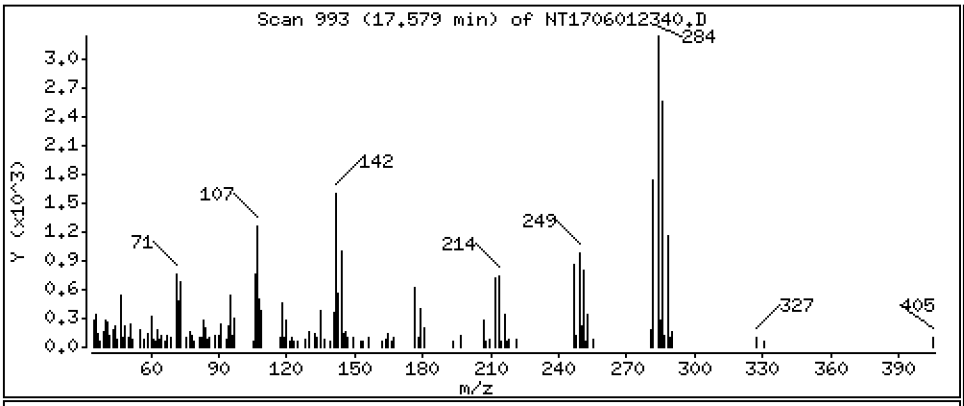
Operator: VTS

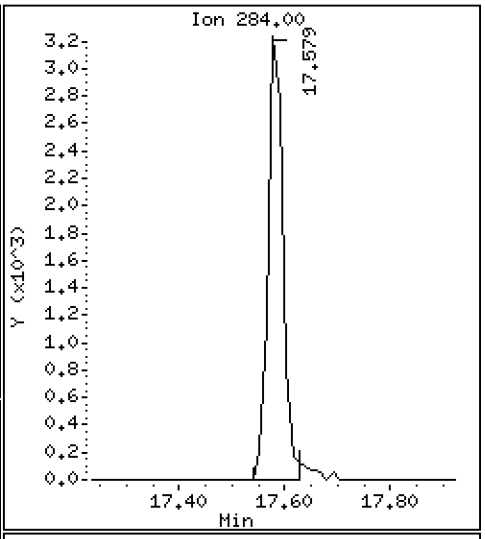
Column phase: ZB-5msi

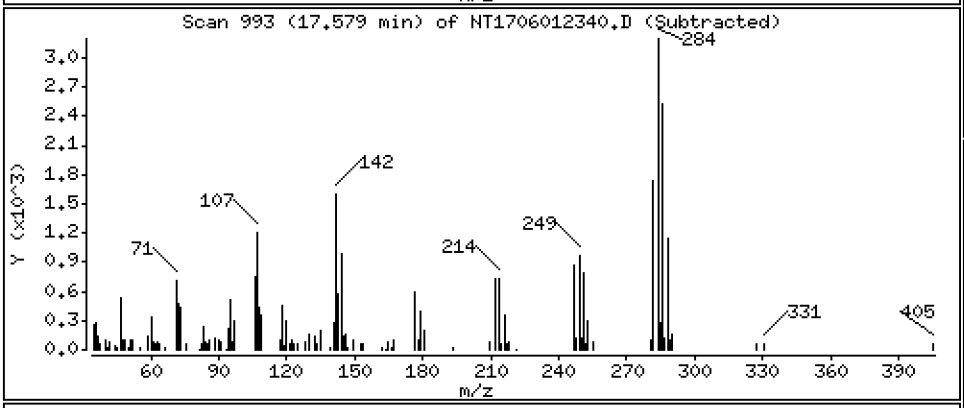
Column diameter: 0.25

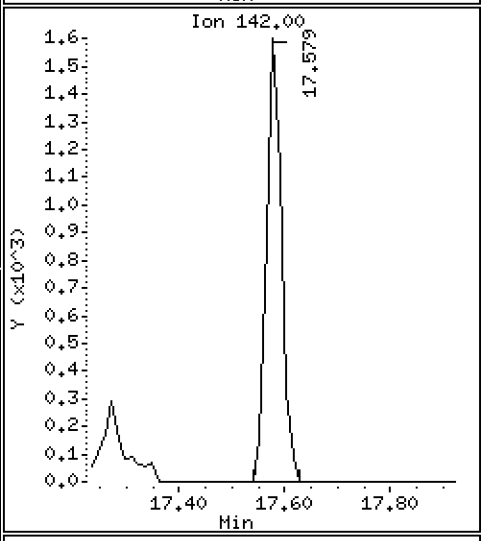
57 Hexachlorobenzene

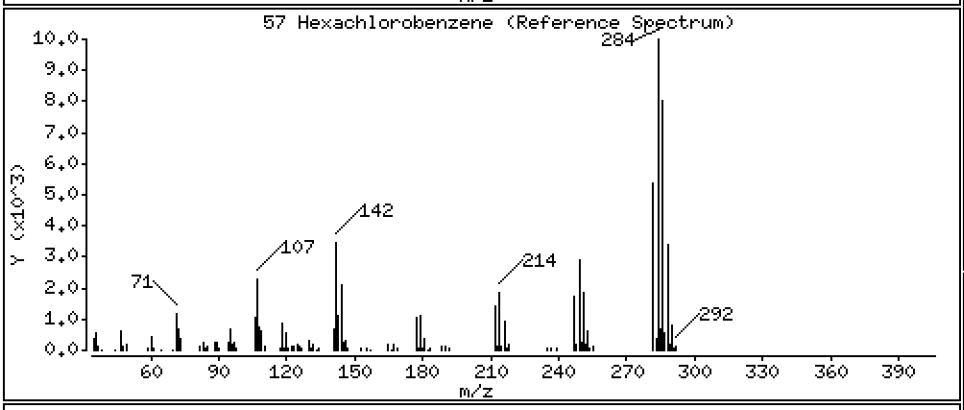
Concentration: 0.2176 ug/mL

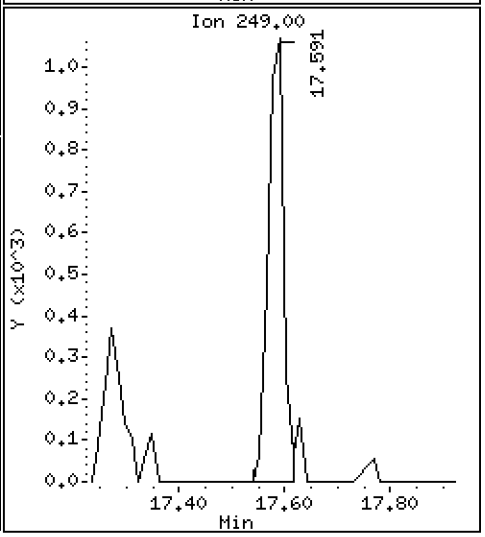


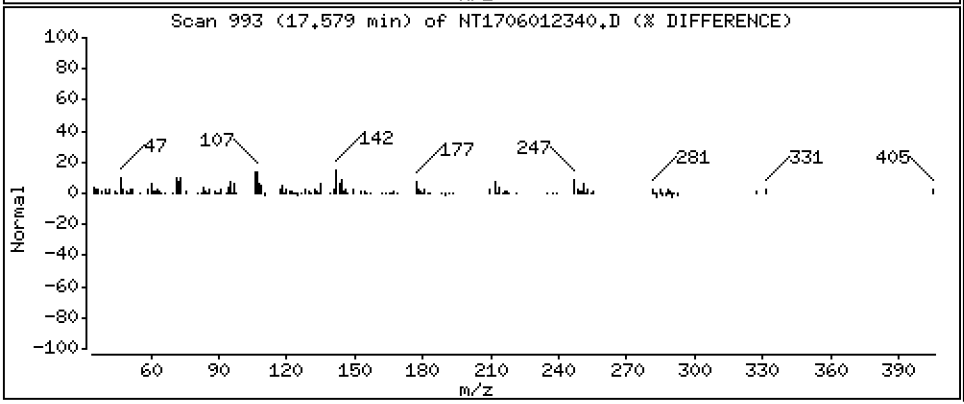












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

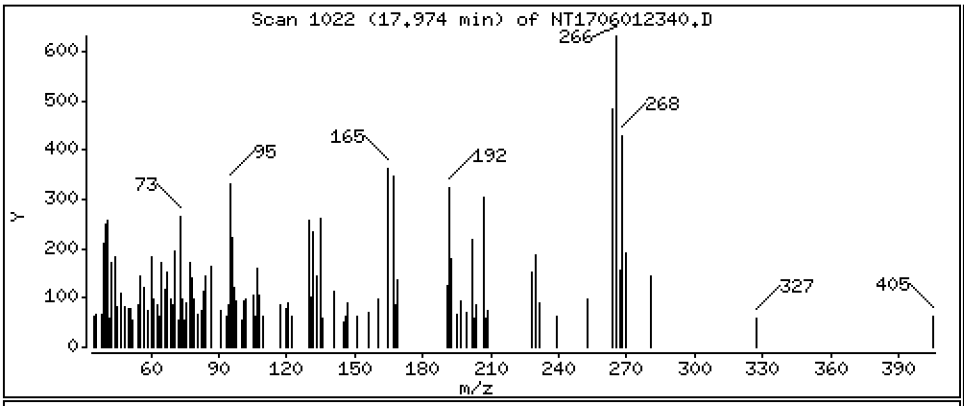
Operator: VTS

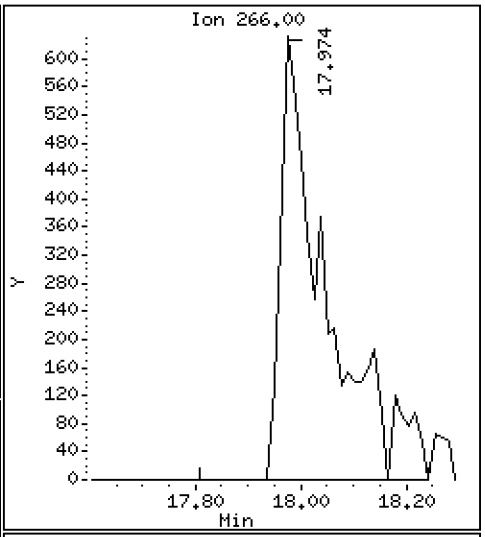
Column phase: ZB-5msi

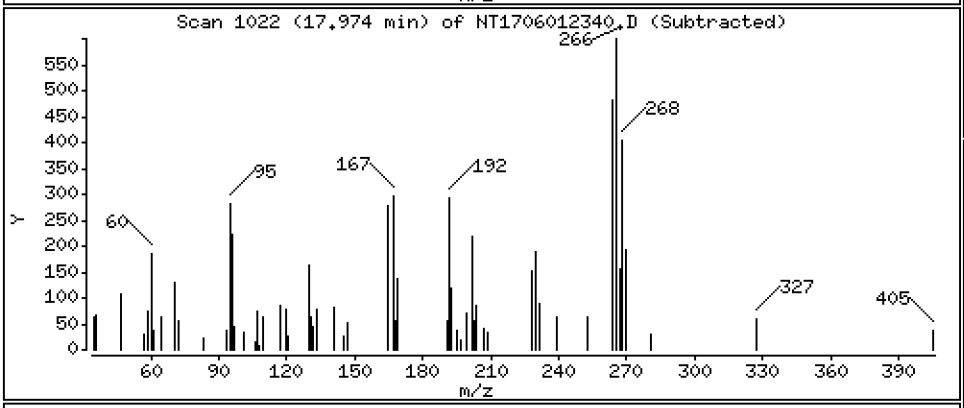
Column diameter: 0.25

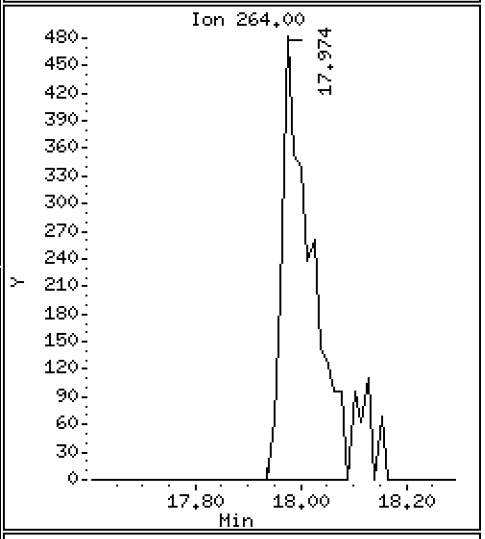
58 Pentachlorophenol

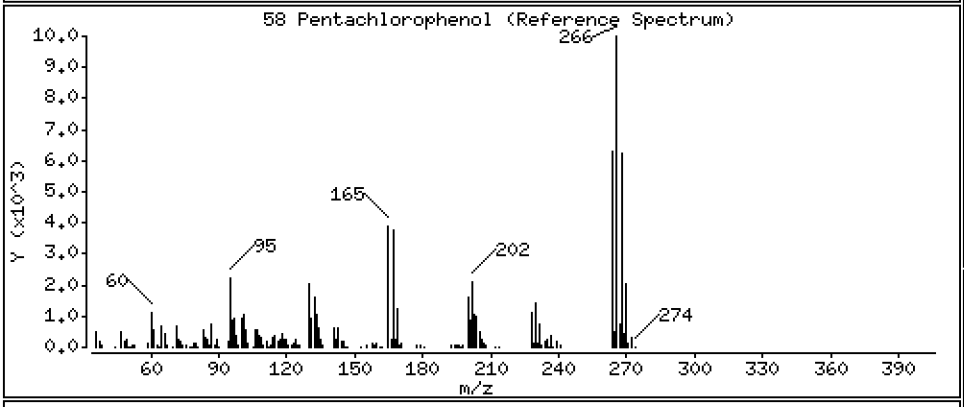
Concentration: 0.2210 ug/mL

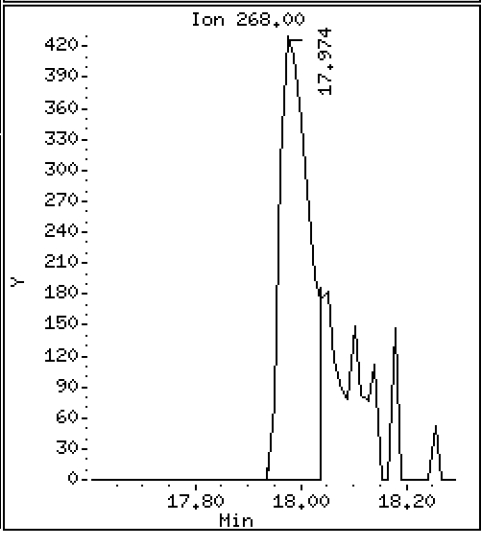


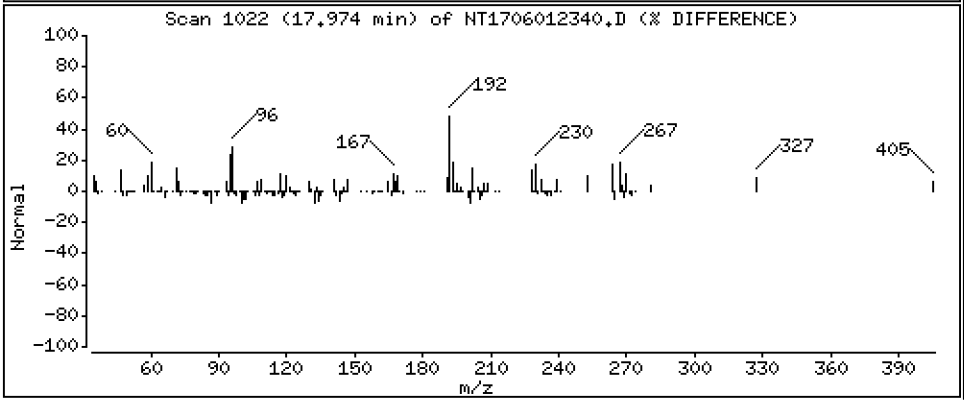












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

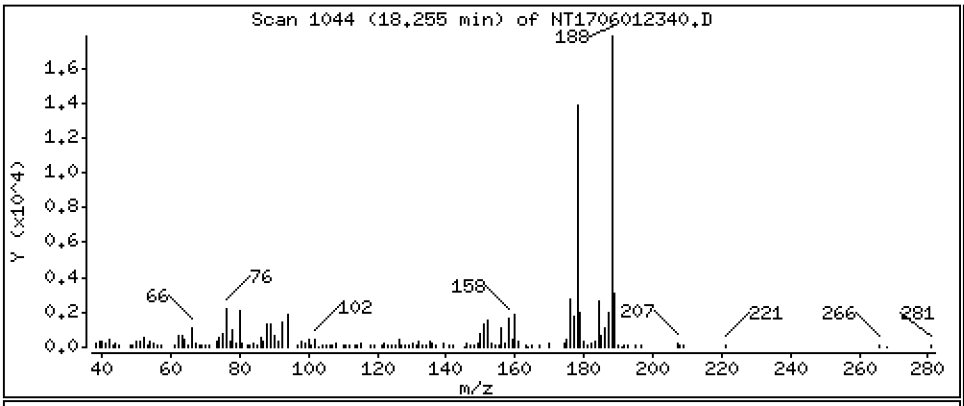
Operator: VTS

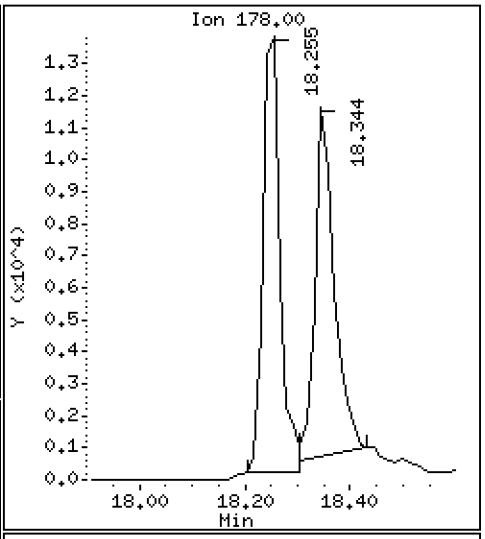
Column phase: ZB-5msi

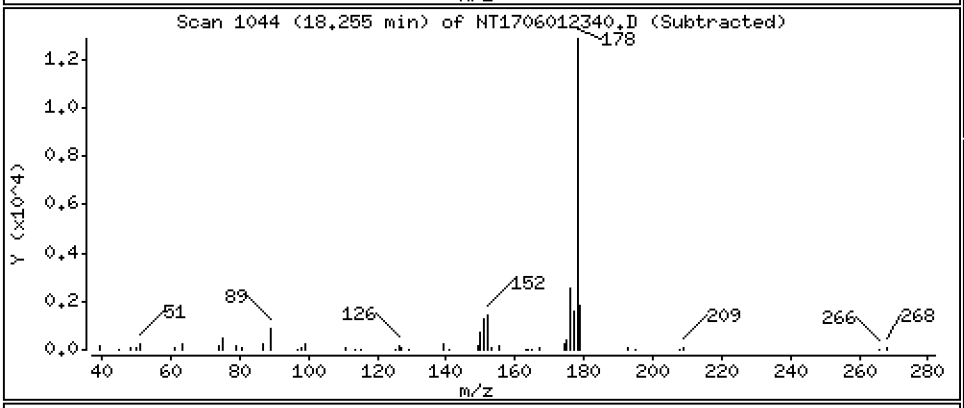
Column diameter: 0.25

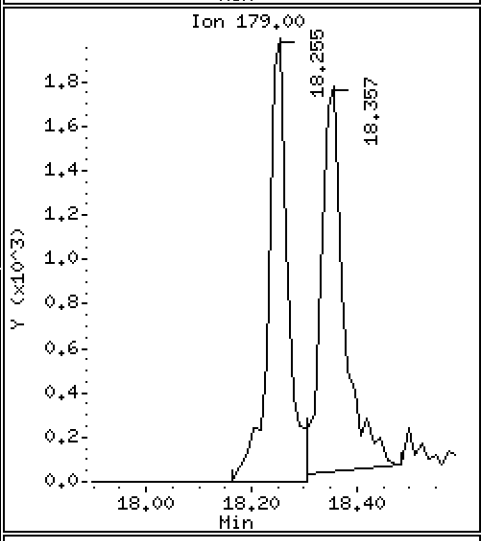
60 Phenanthrene

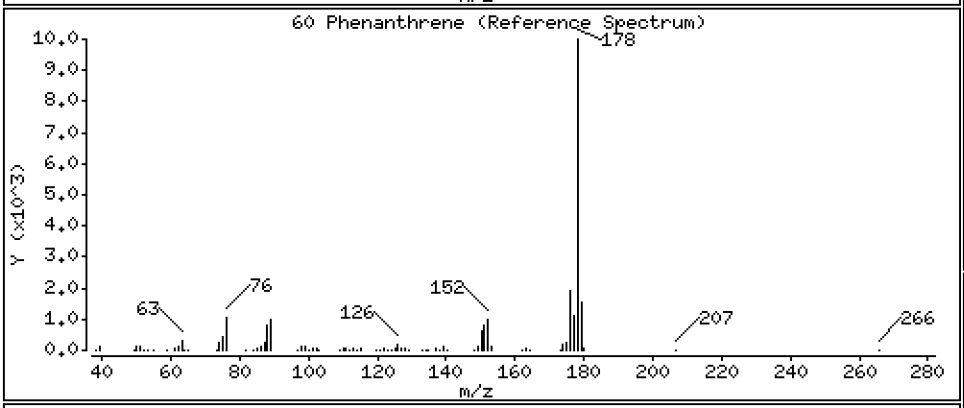
Concentration: 0.1838 ug/mL

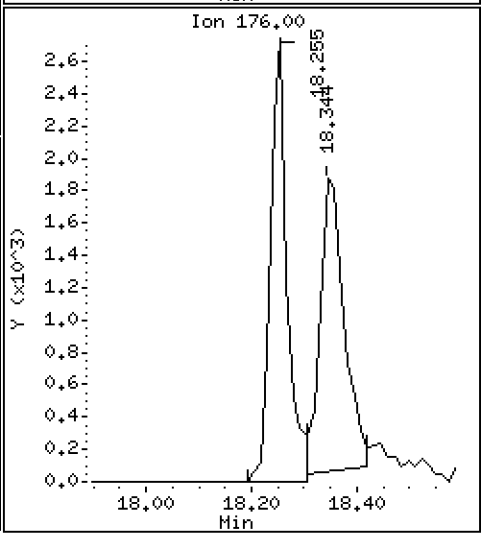


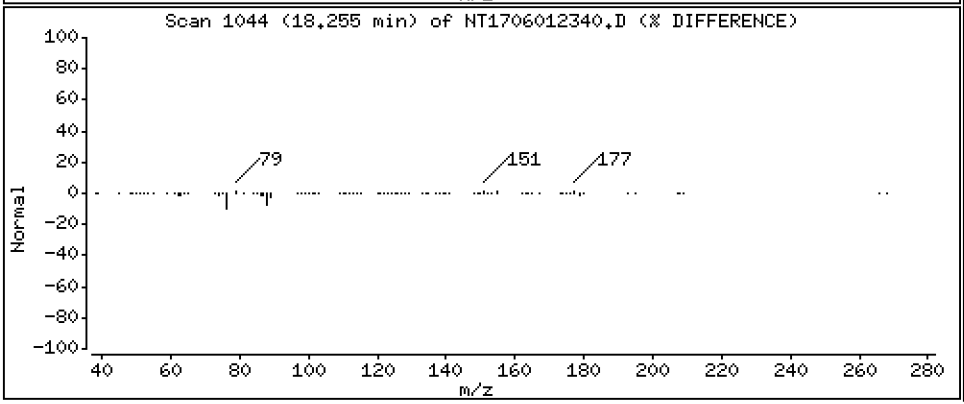












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

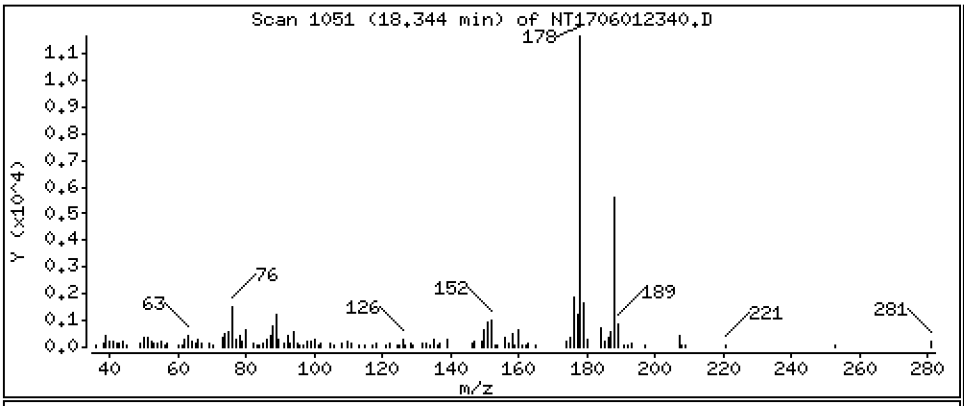
Operator: VTS

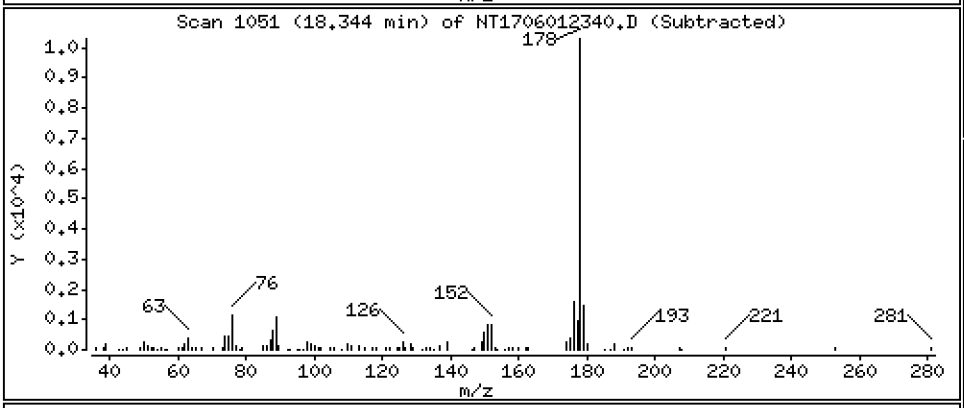
Column phase: ZB-5msi

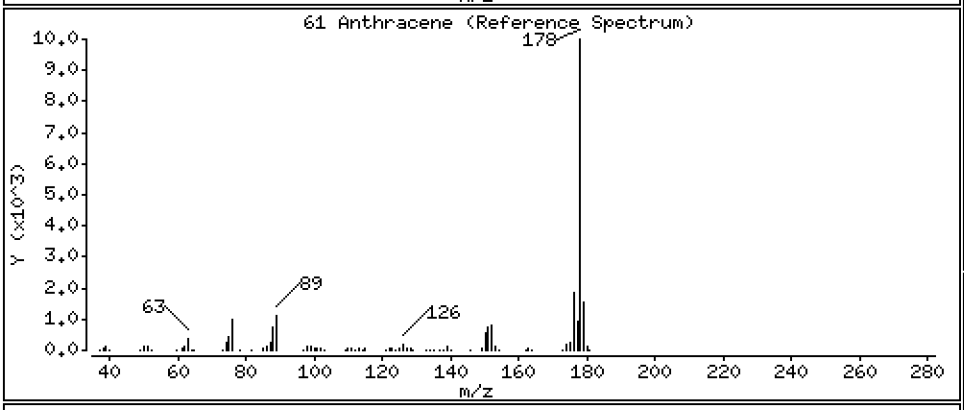
Column diameter: 0.25

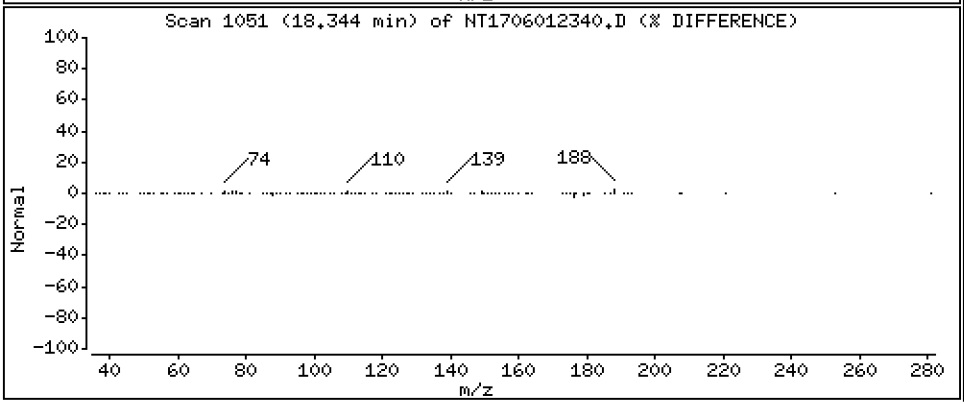
61 Anthracene

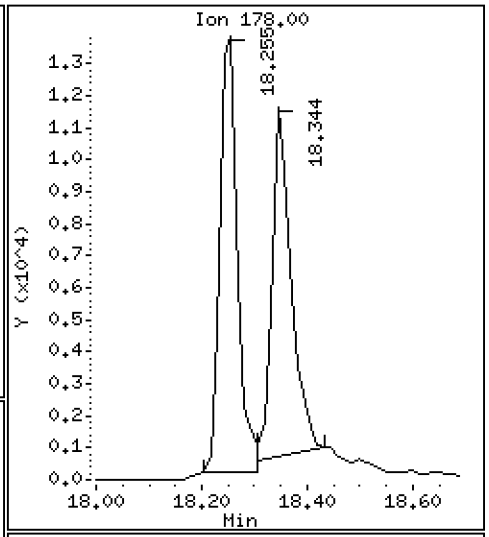
Concentration: 0.1685 ug/mL

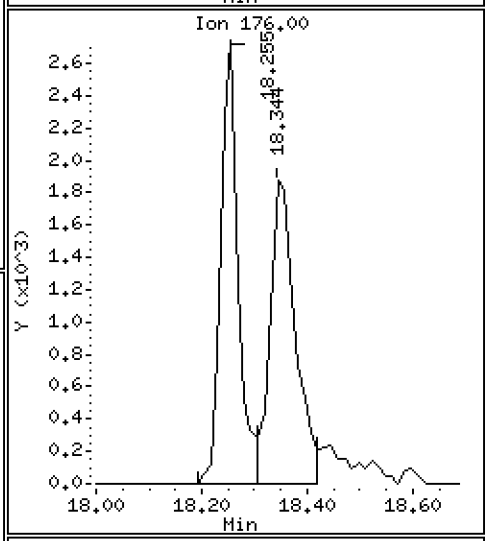


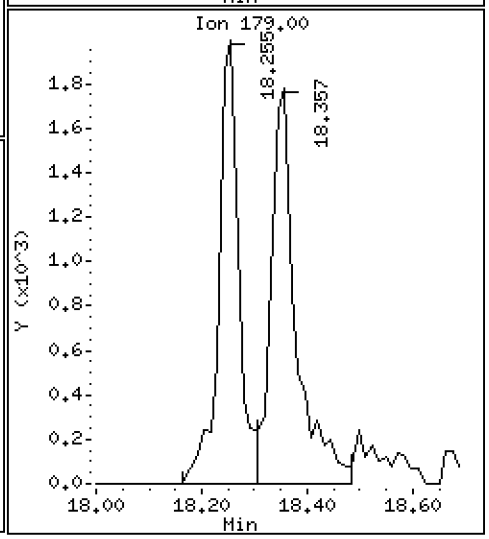












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

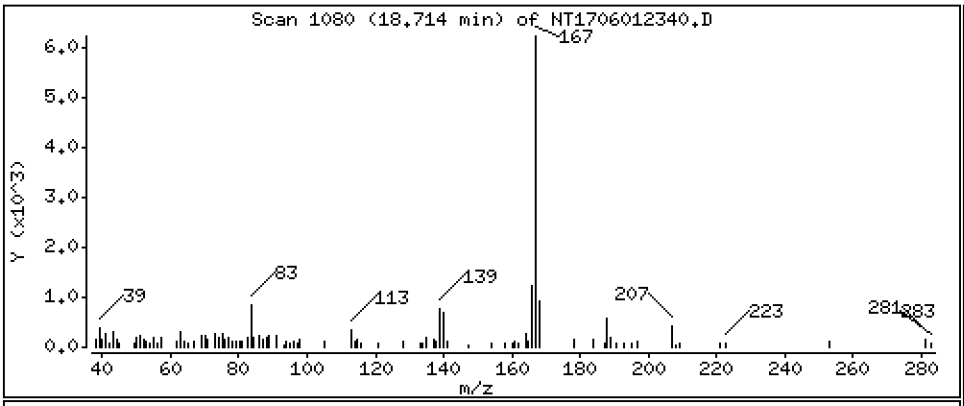
Operator: VTS

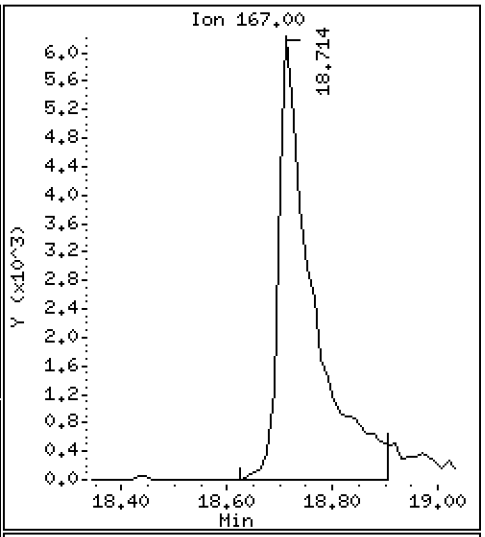
Column phase: ZB-5msi

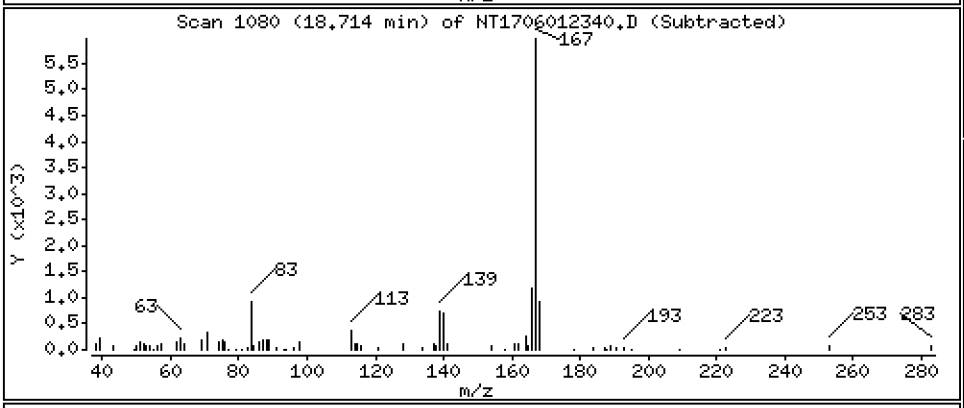
Column diameter: 0.25

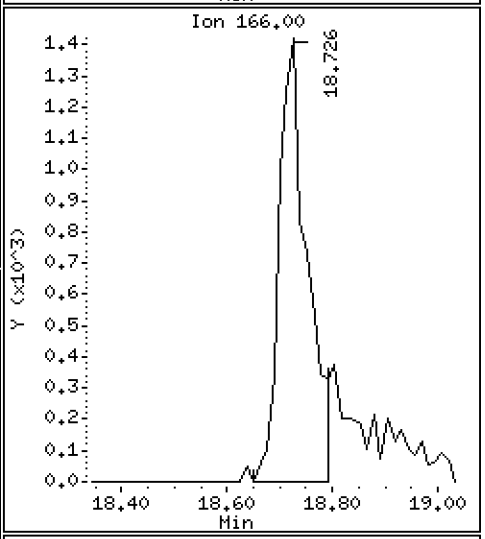
62 Carbazole

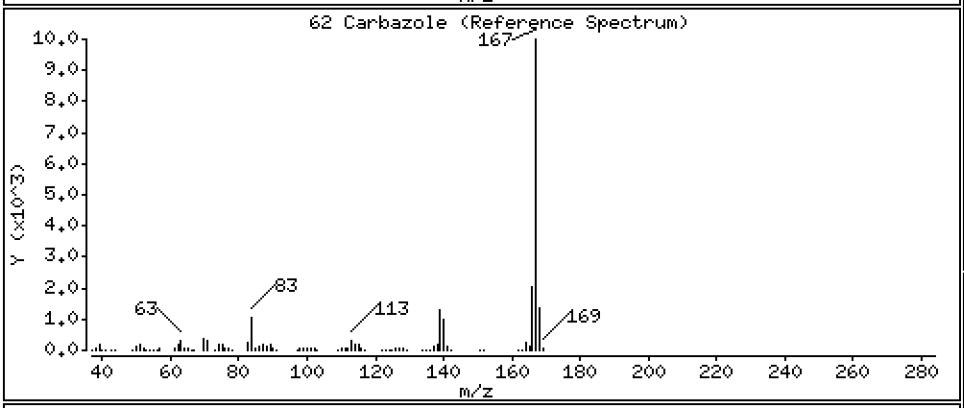
Concentration: 0.2854 ug/mL

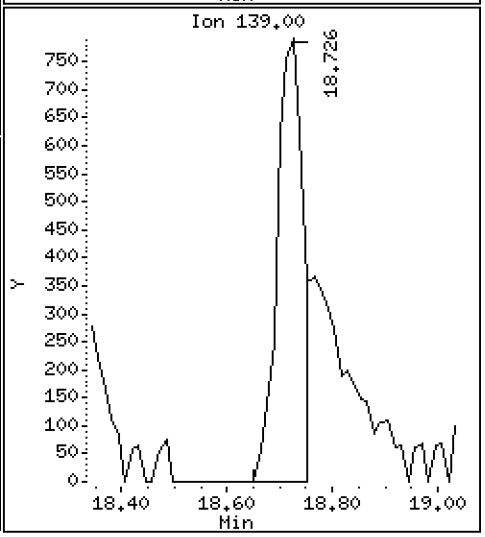


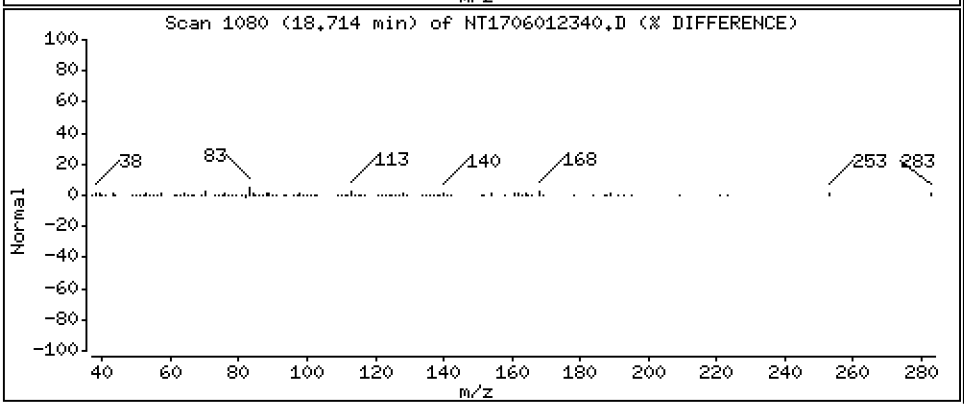












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

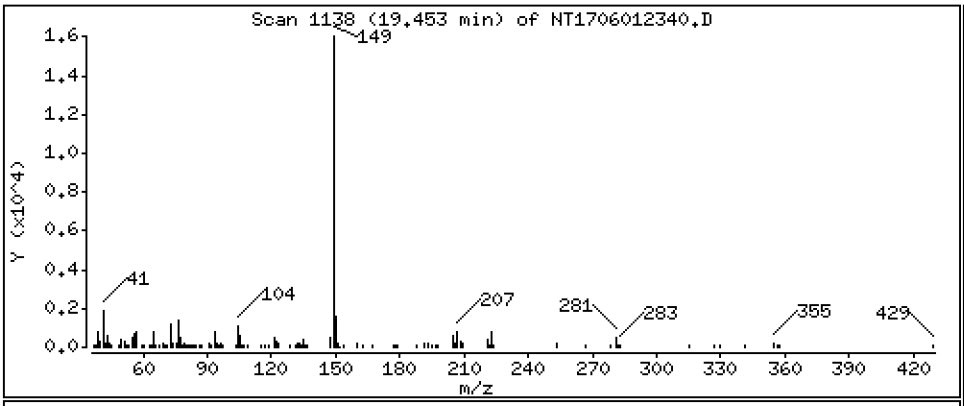
Operator: VTS

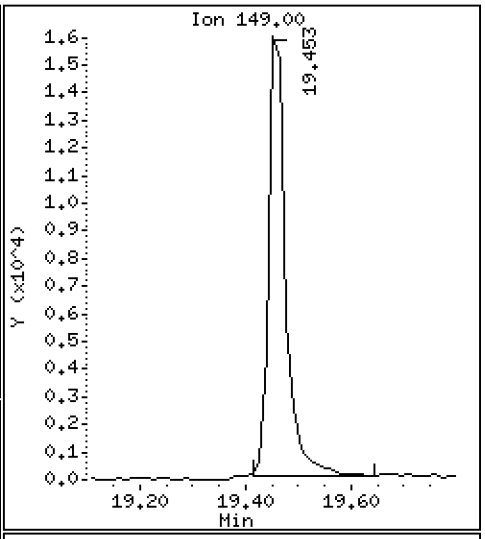
Column phase: ZB-5msi

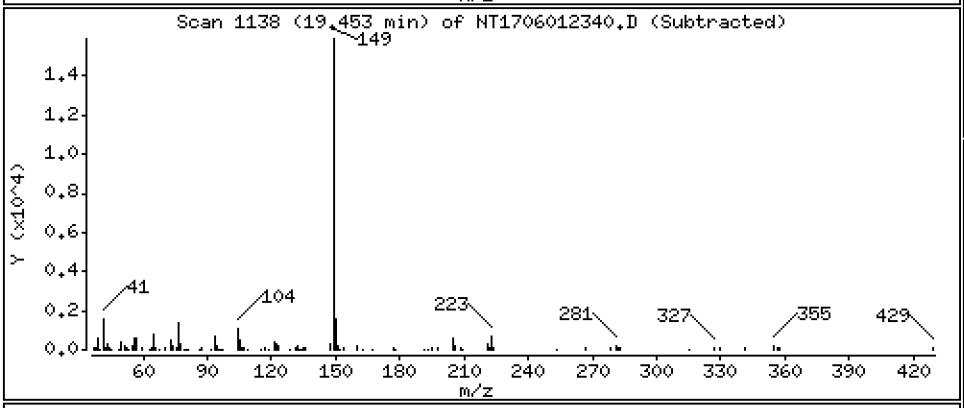
Column diameter: 0.25

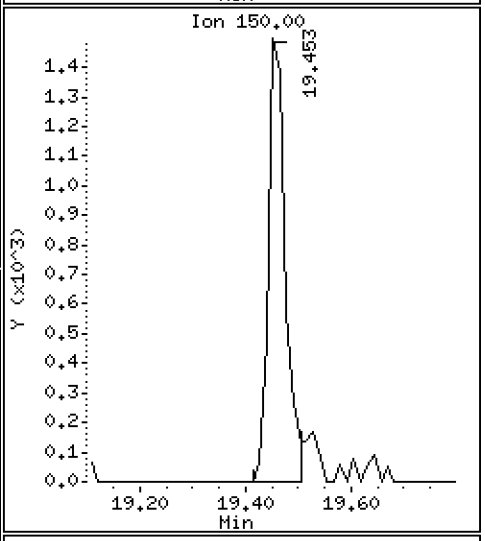
63 Di-n-butylphthalate

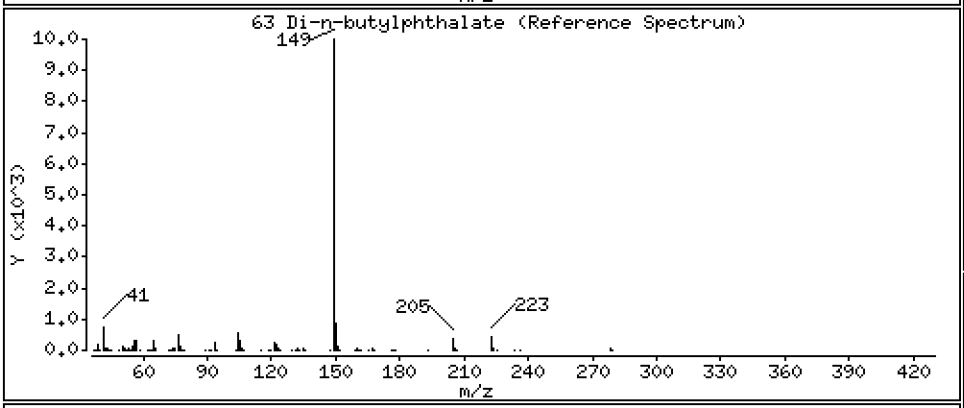
Concentration: 0.1827 ug/mL

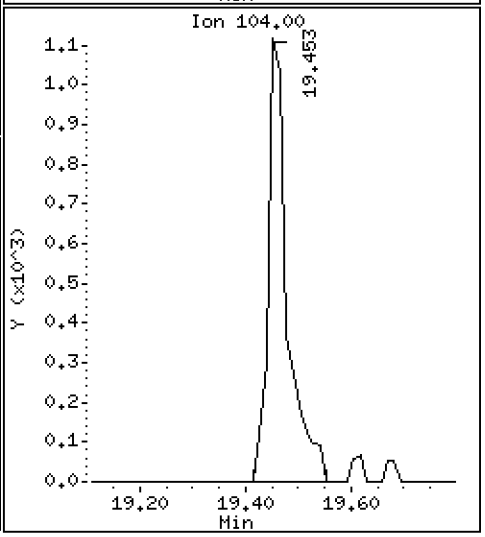


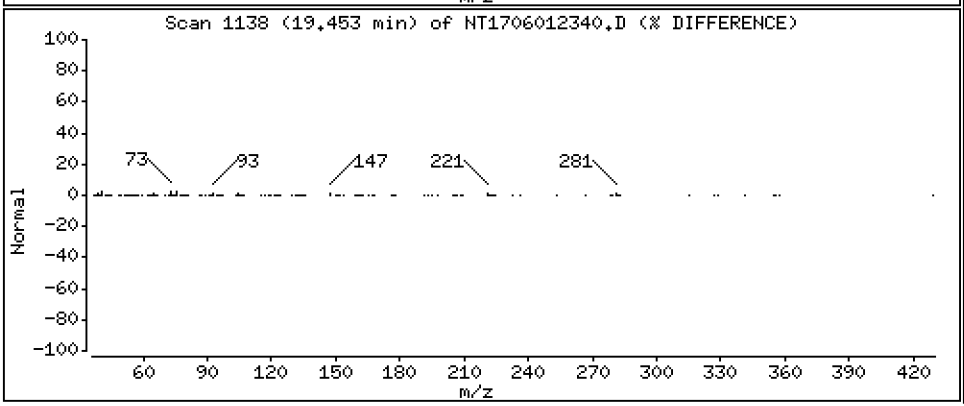












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

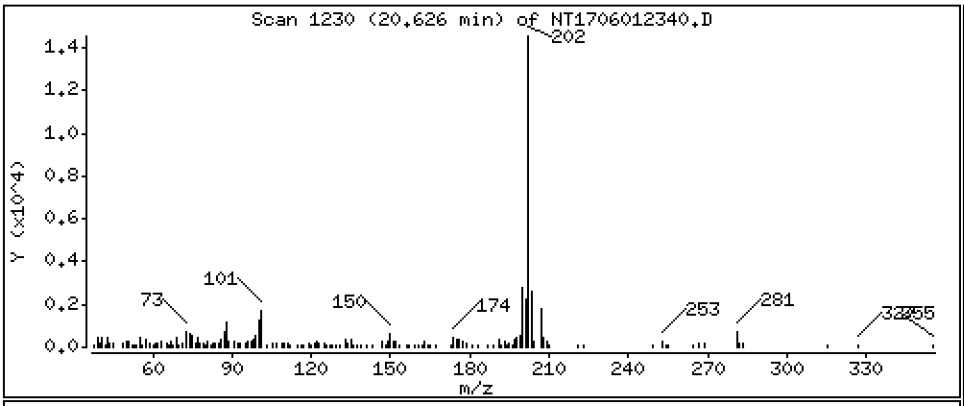
Operator: VTS

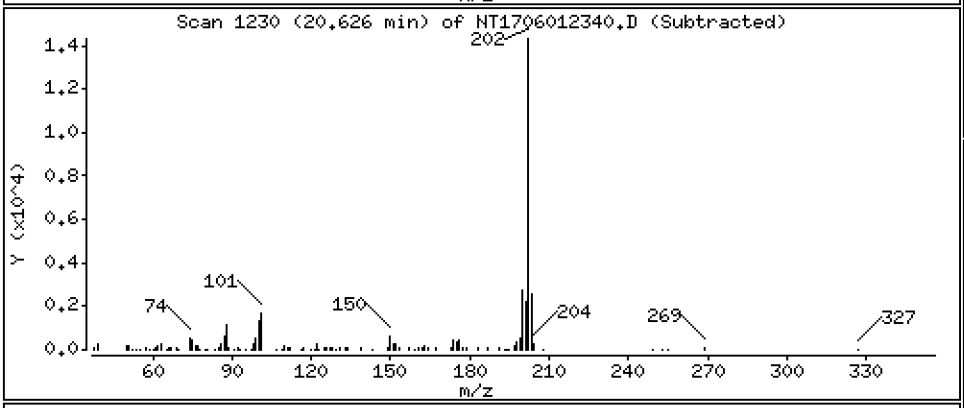
Column phase: ZB-5msi

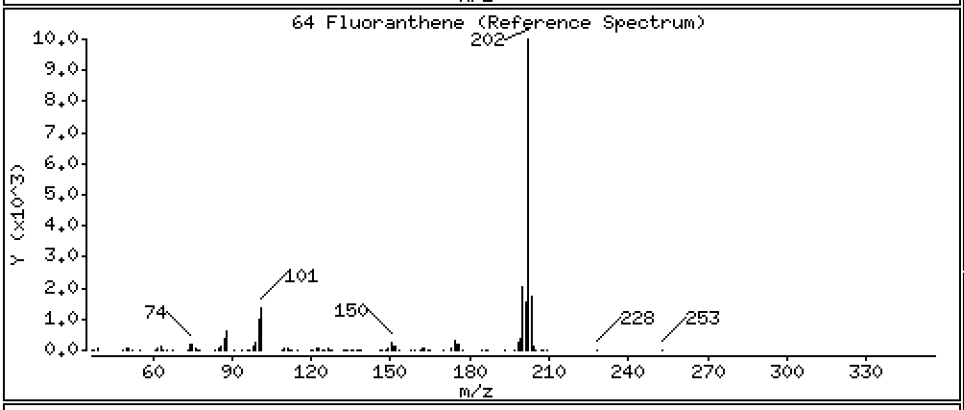
Column diameter: 0.25

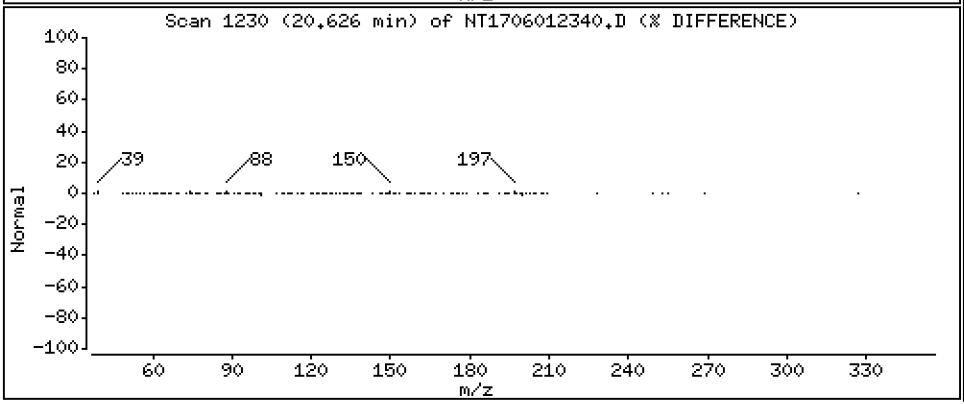
64 Fluoranthene

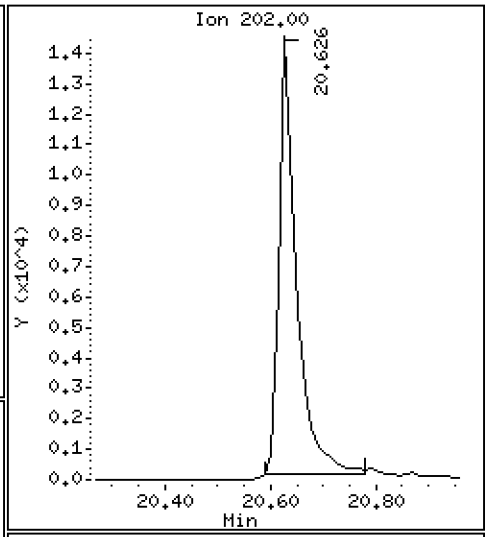
Concentration: 0.1971 ug/mL

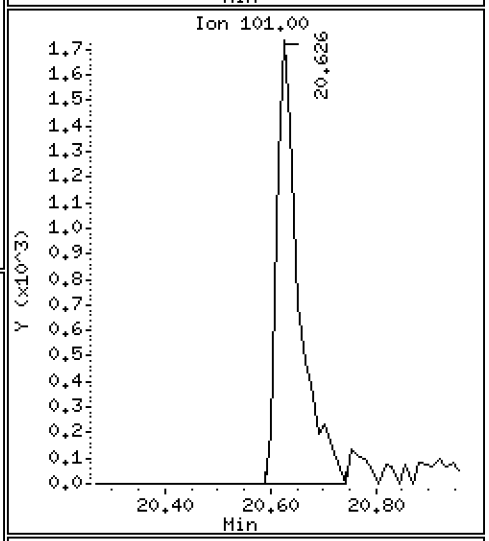


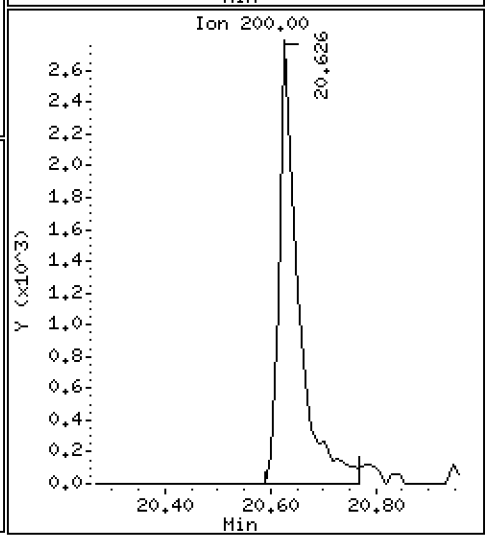












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

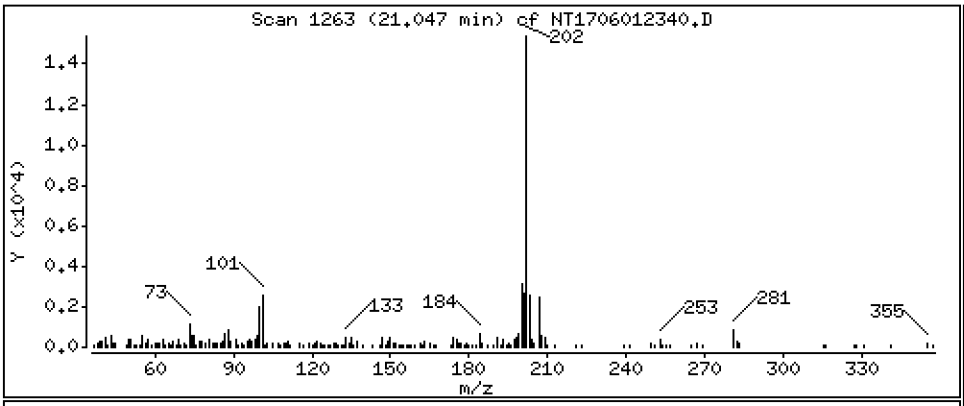
Operator: VTS

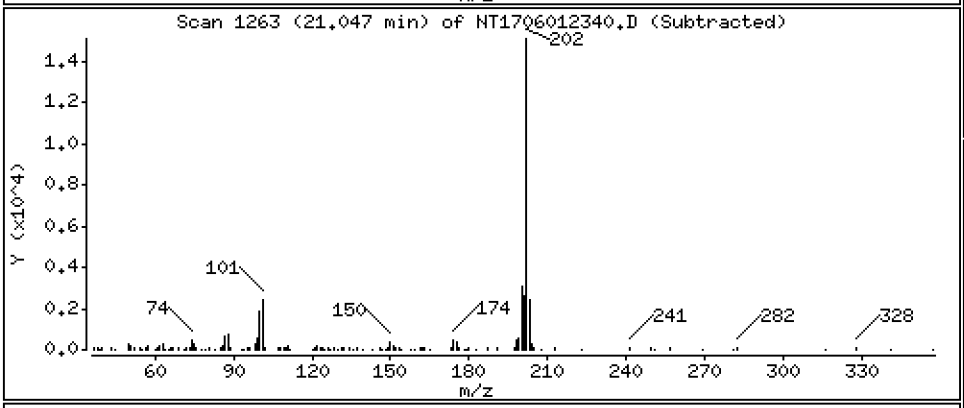
Column phase: ZB-5msi

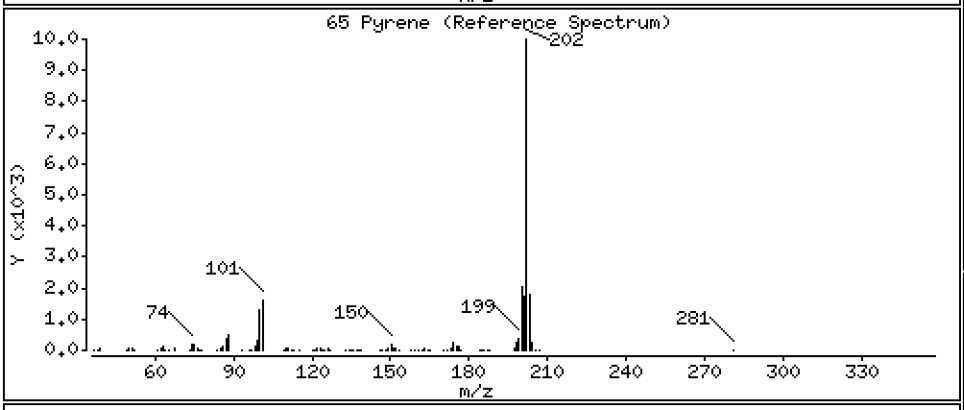
Column diameter: 0.25

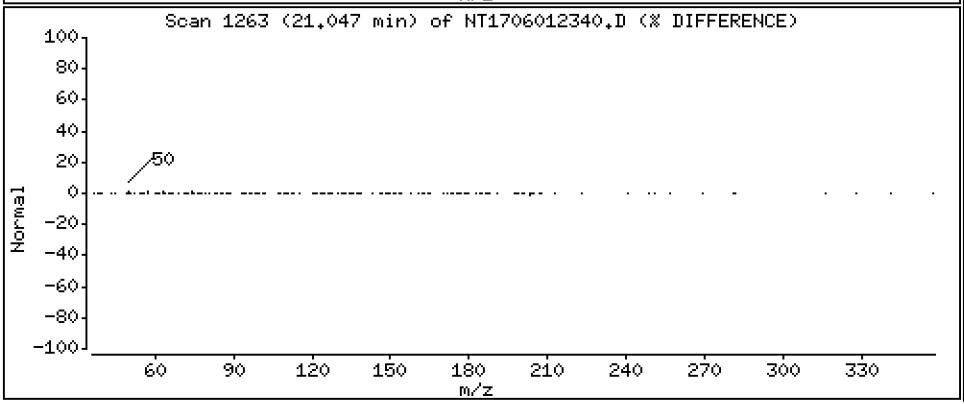
65 Pyrene

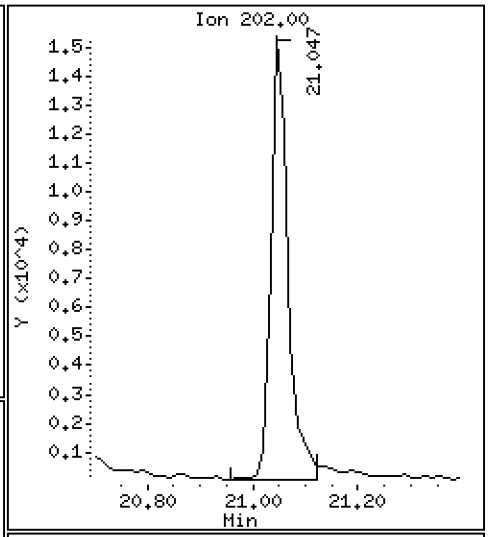
Concentration: 0.1977 ug/mL

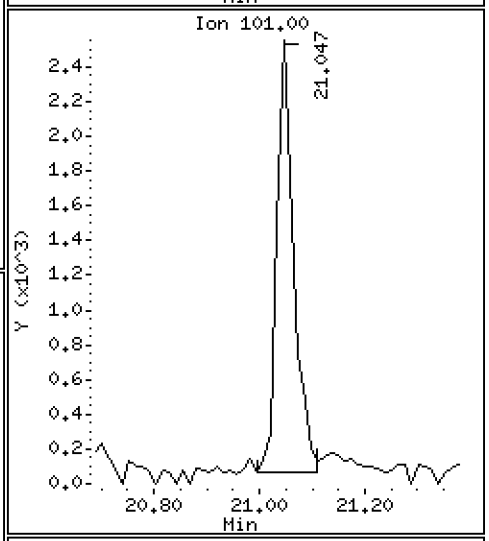


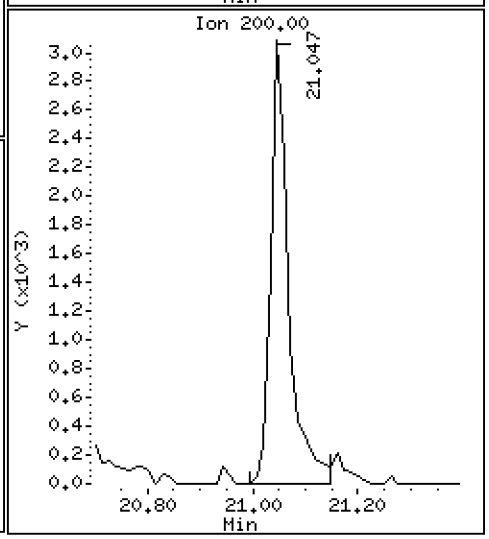












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

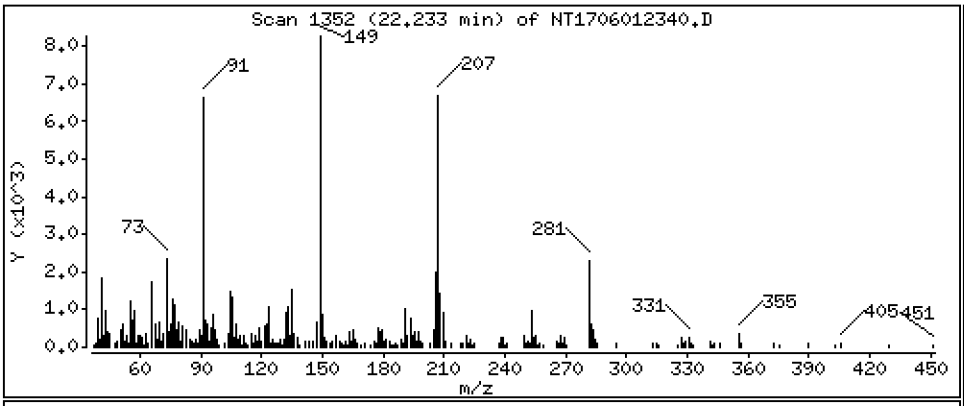
Operator: VTS

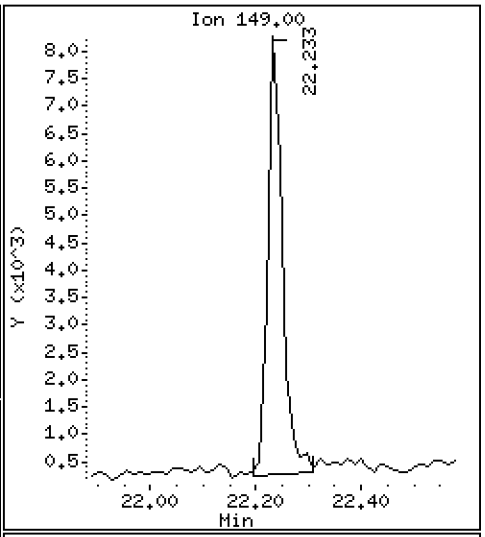
Column phase: ZB-5msi

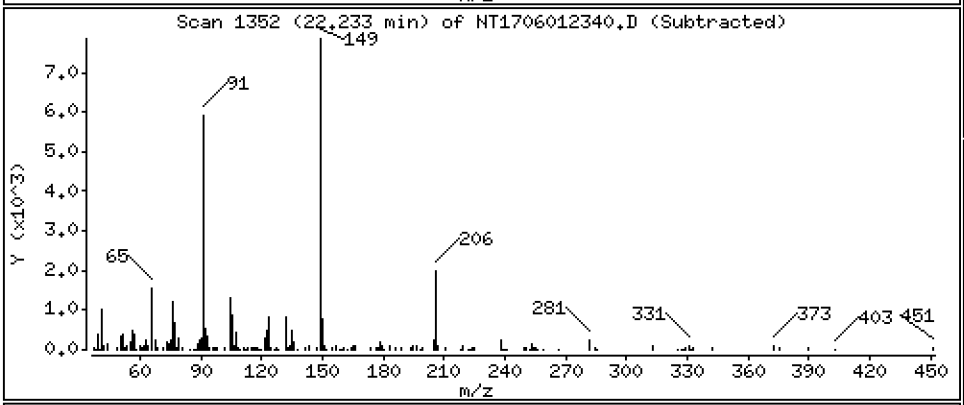
Column diameter: 0.25

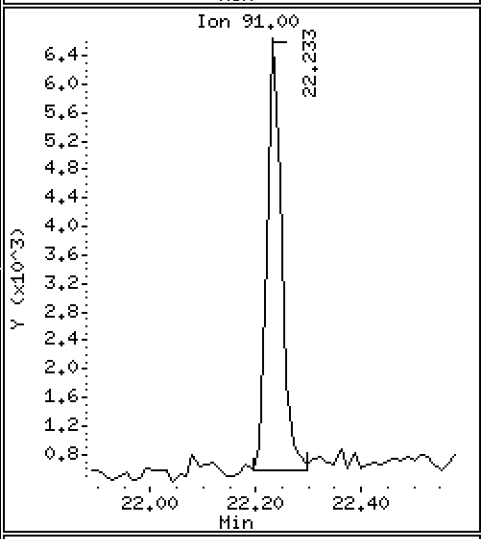
67 Butylbenzylphthalate

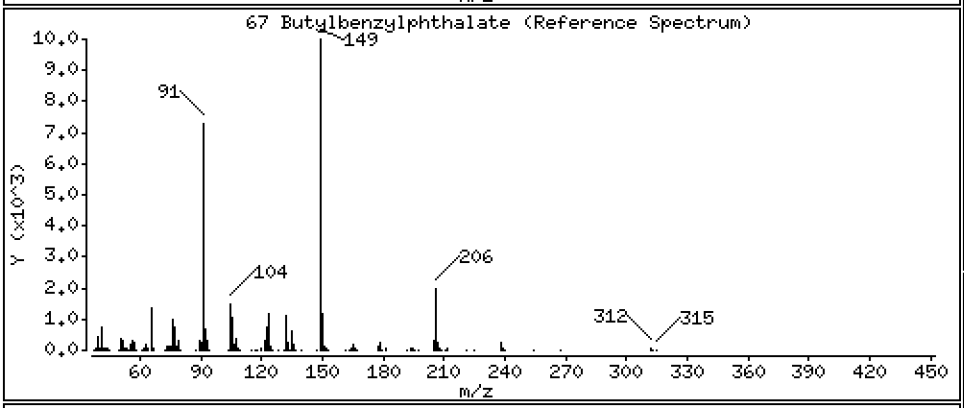
Concentration: 0.1987 ug/mL

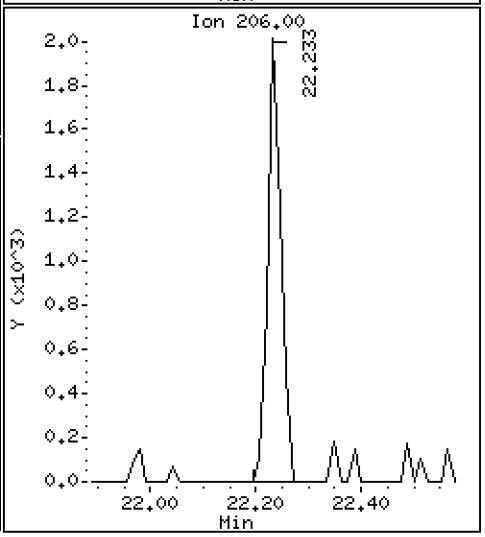


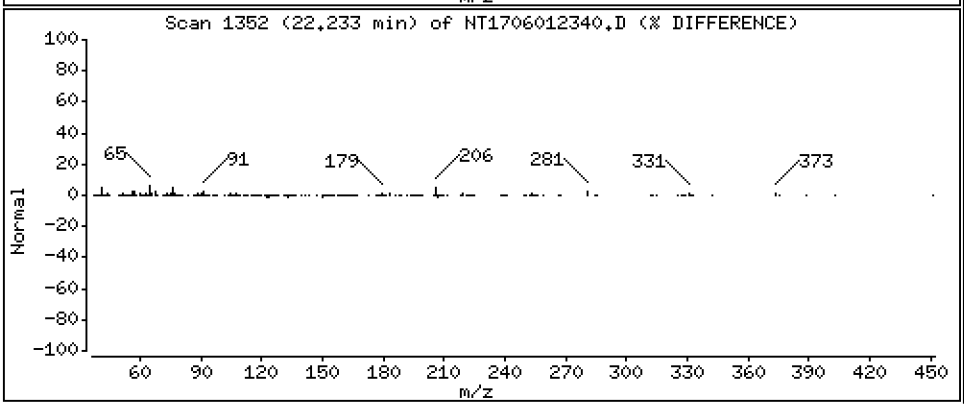












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

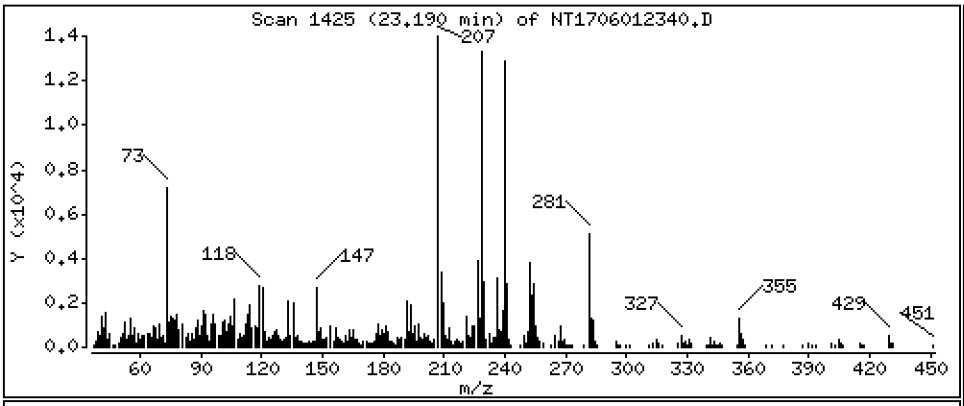
Operator: VTS

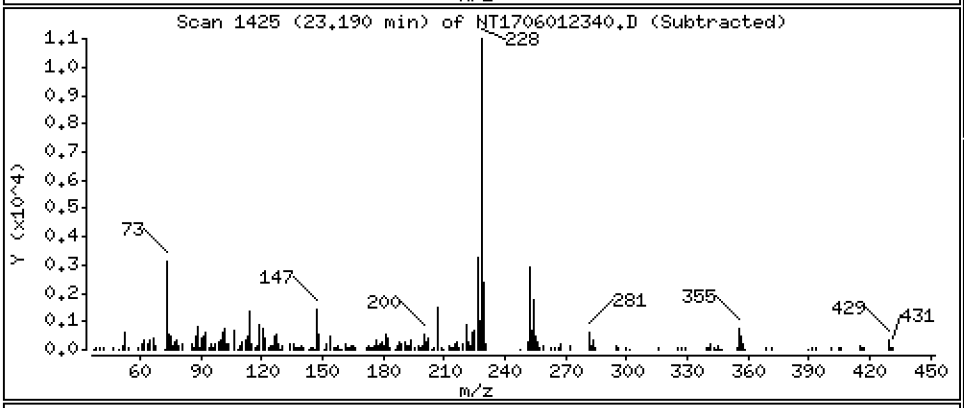
Column phase: ZB-5msi

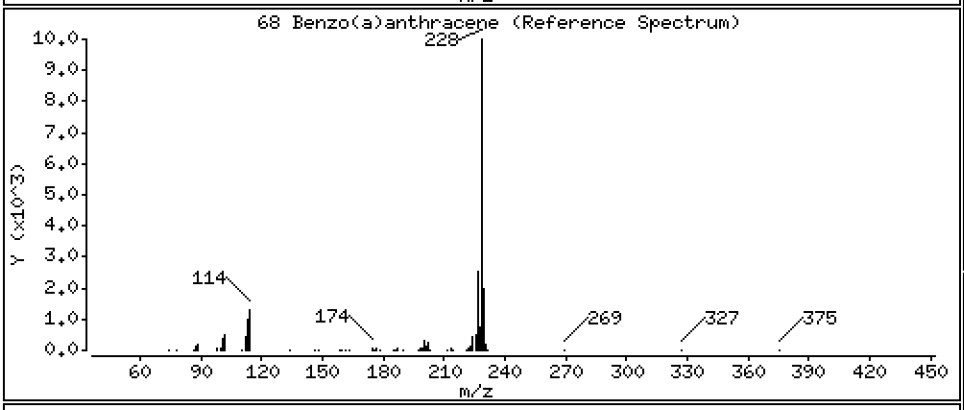
Column diameter: 0.25

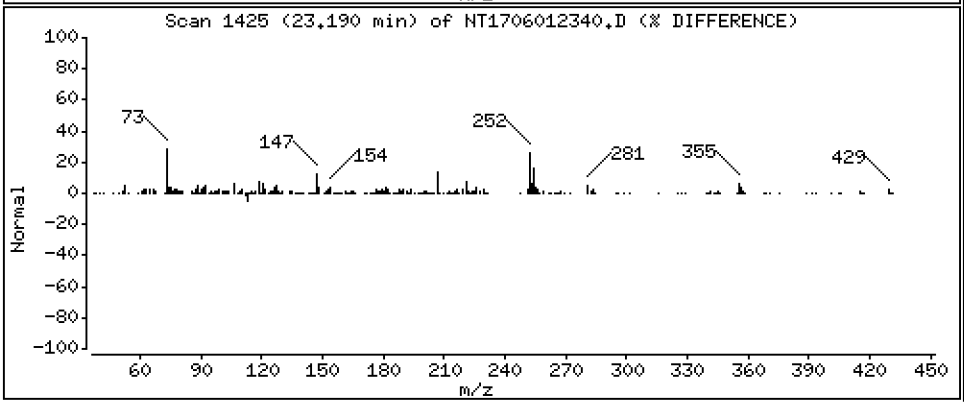
68 Benzo(a)anthracene

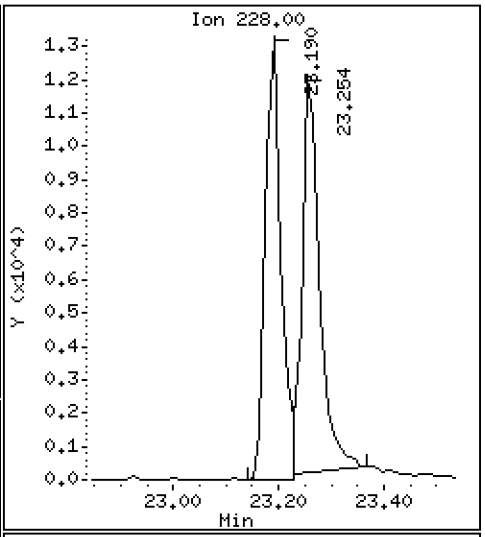
Concentration: 0.2023 ug/mL

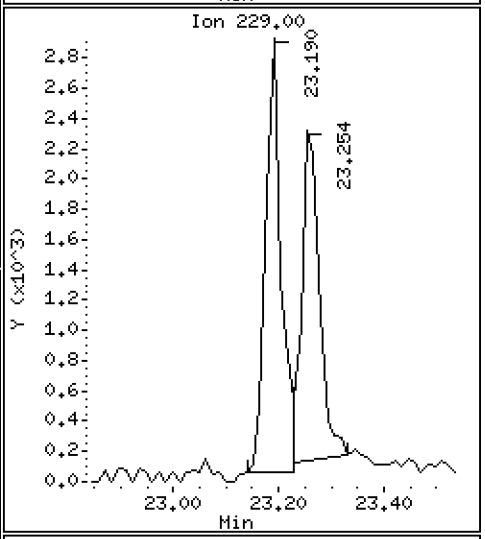


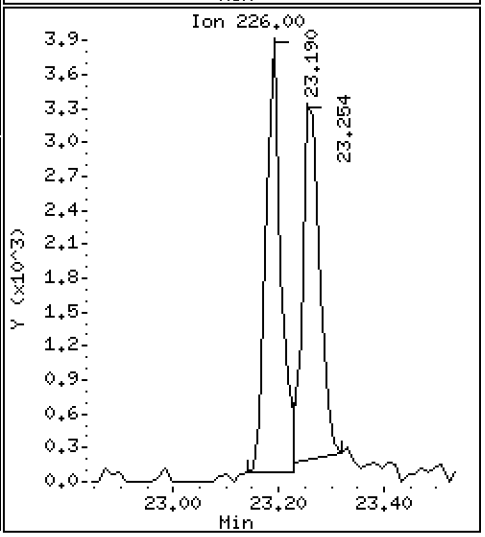












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

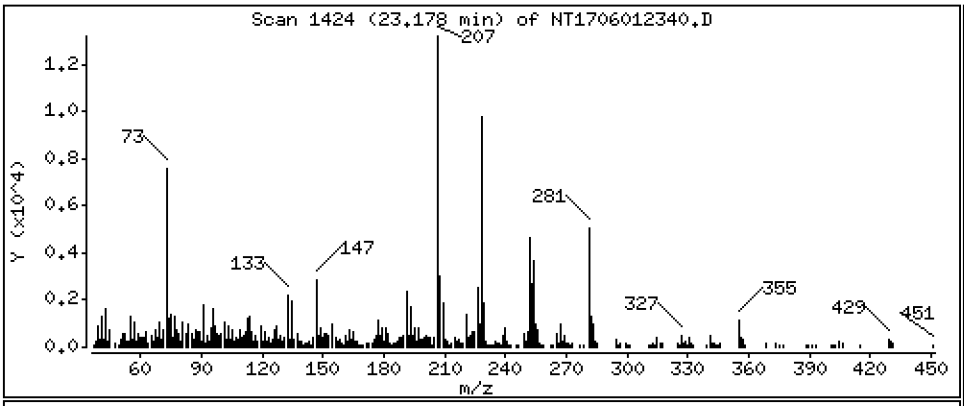
Operator: VTS

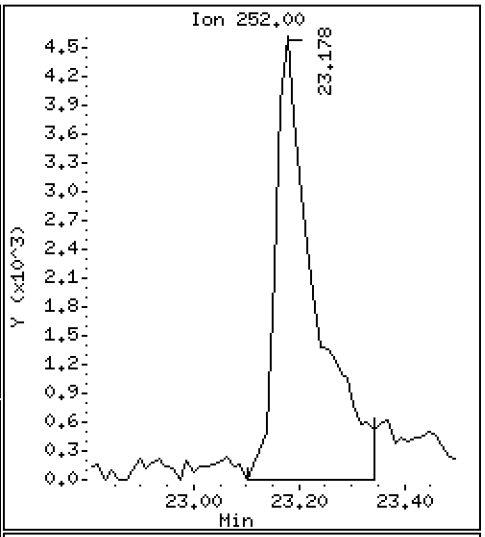
Column phase: ZB-5msi

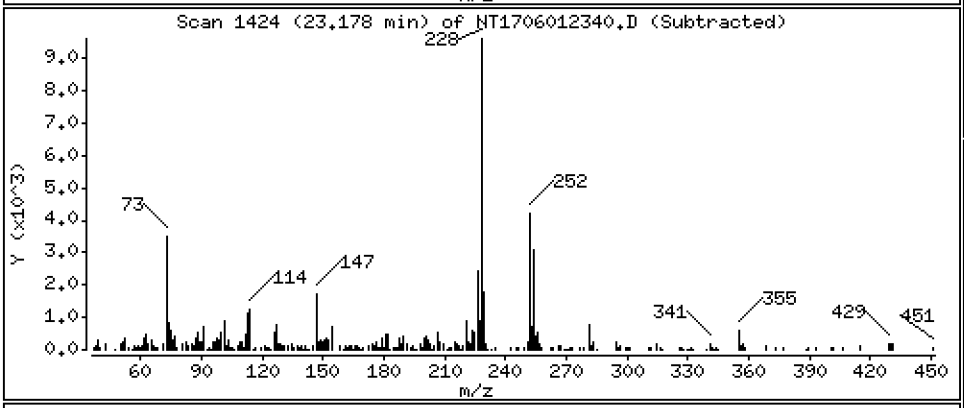
Column diameter: 0.25

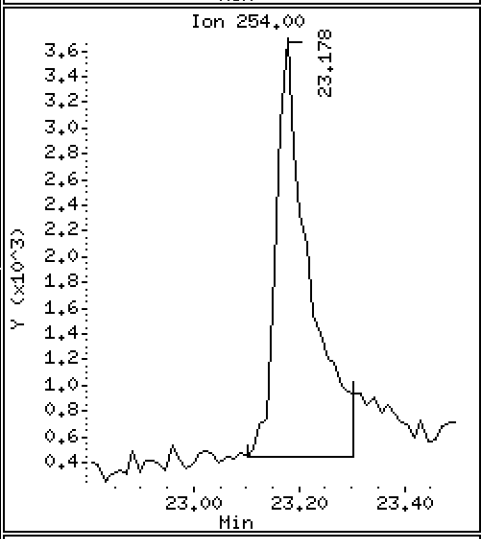
70 3,3'-Dichlorobenzidine

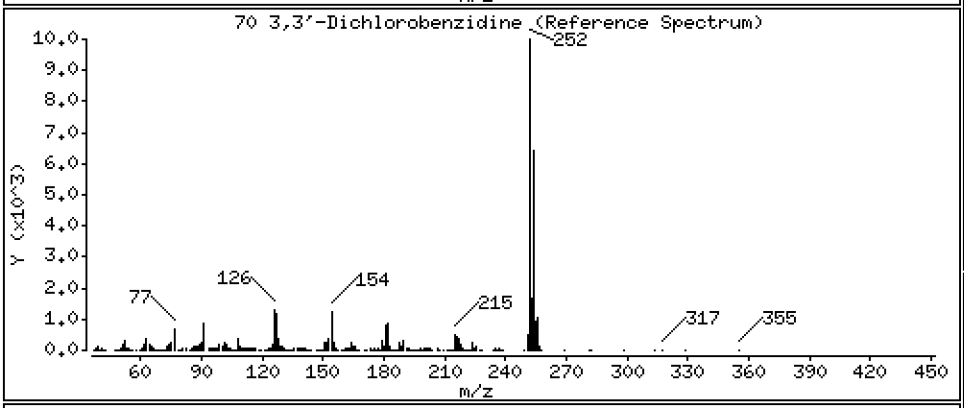
Concentration: 0.9204 ug/mL

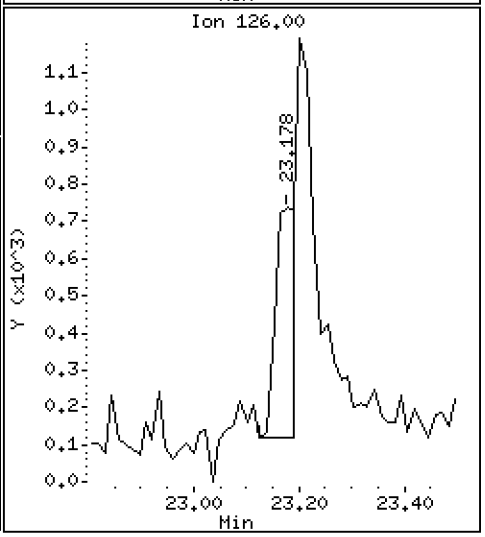


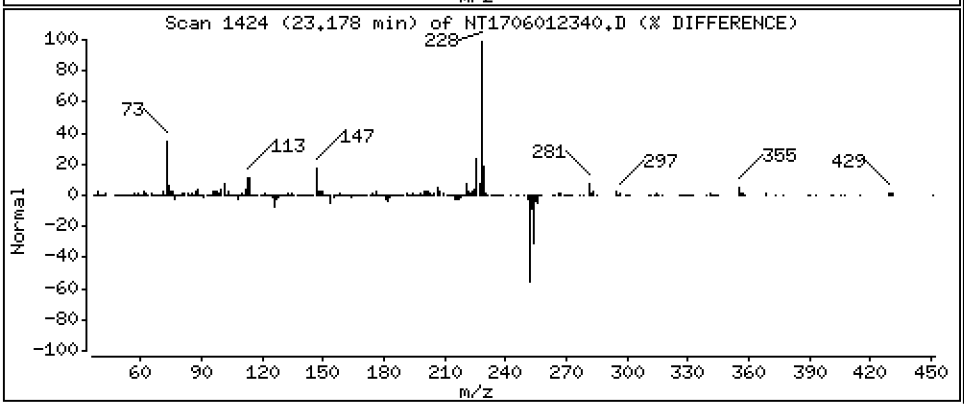












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

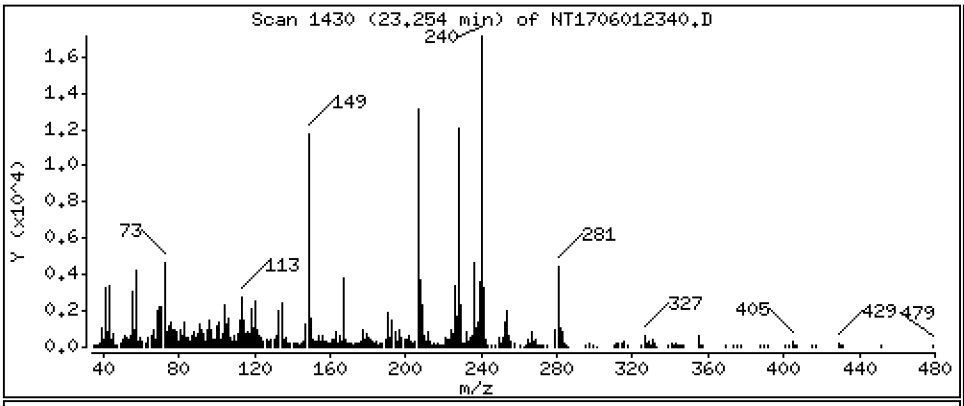
Operator: VTS

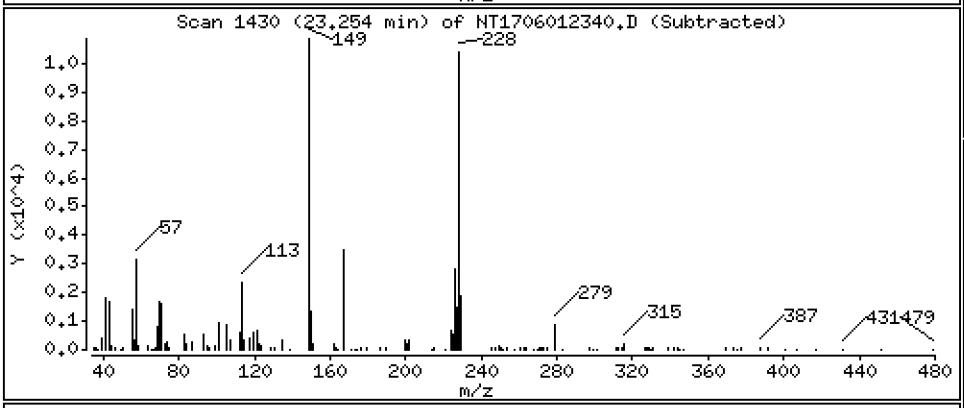
Column phase: ZB-5msi

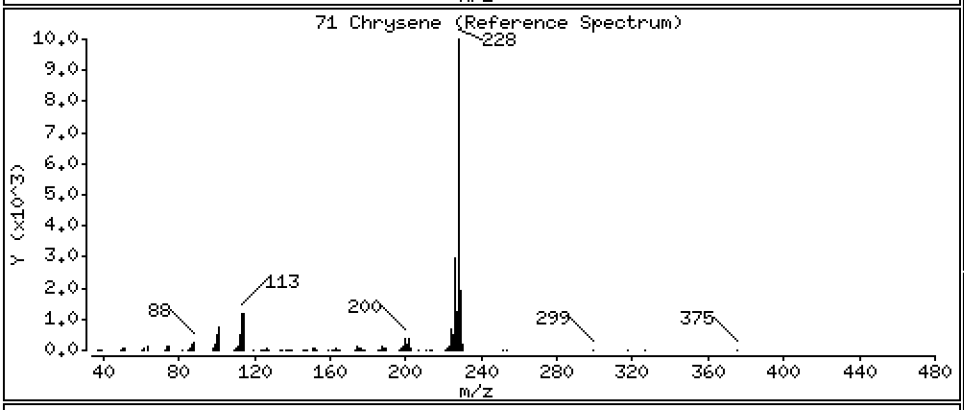
Column diameter: 0.25

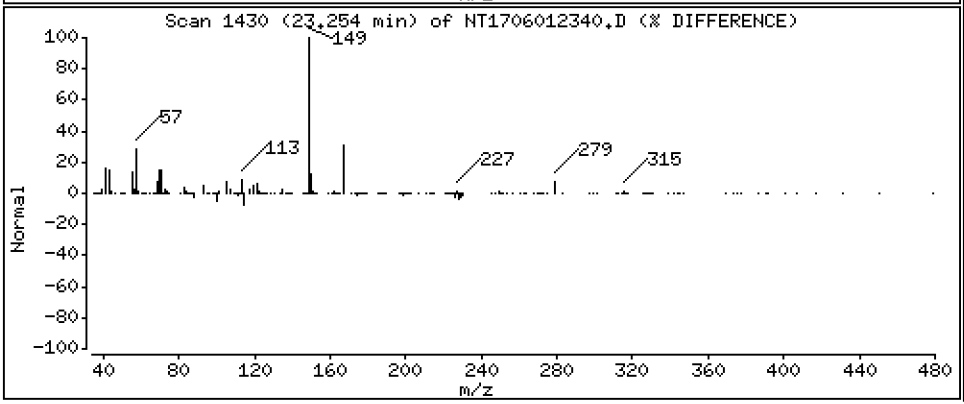
71 Chrysene

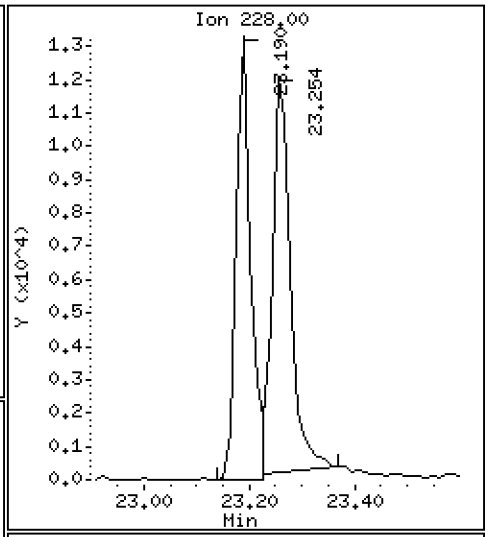
Concentration: 0.2238 ug/mL

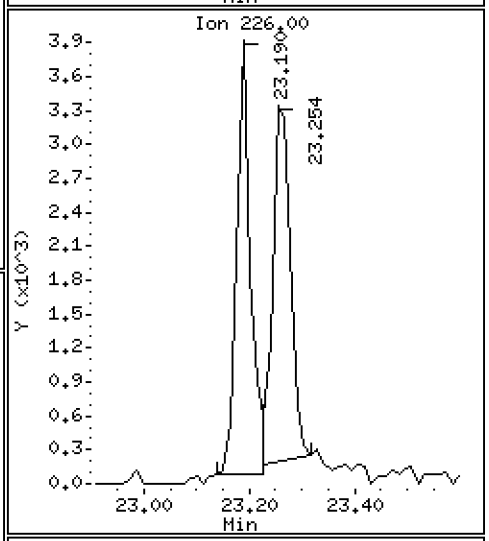


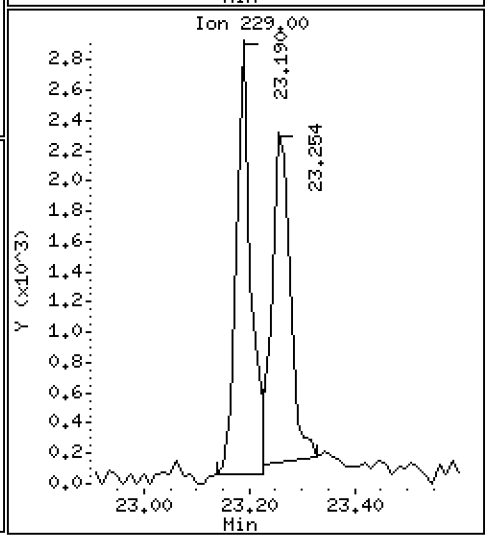












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

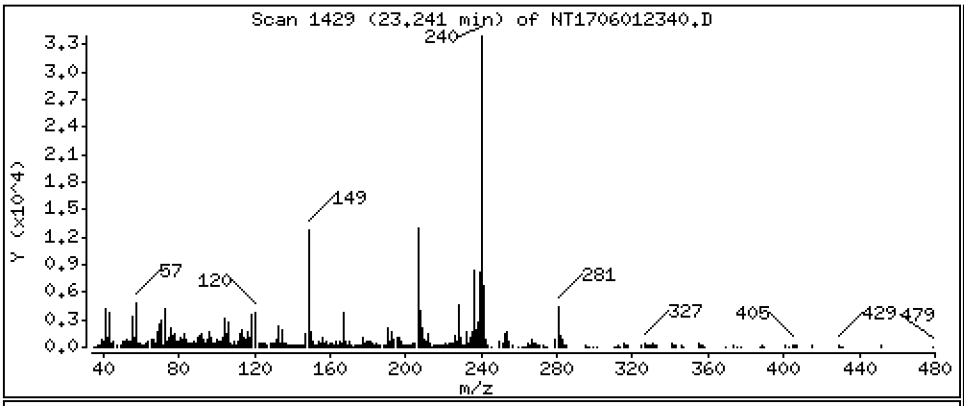
Operator: VTS

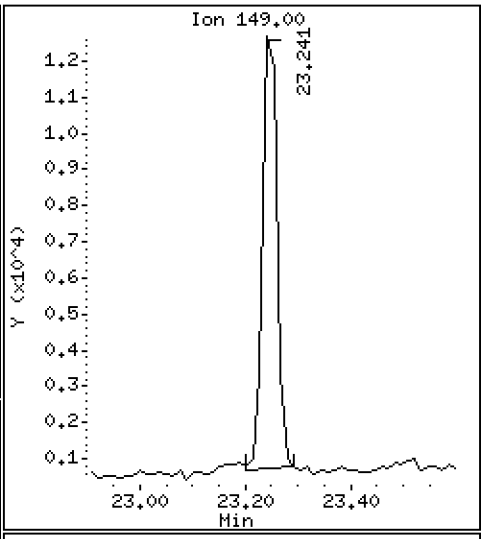
Column phase: ZB-5msi

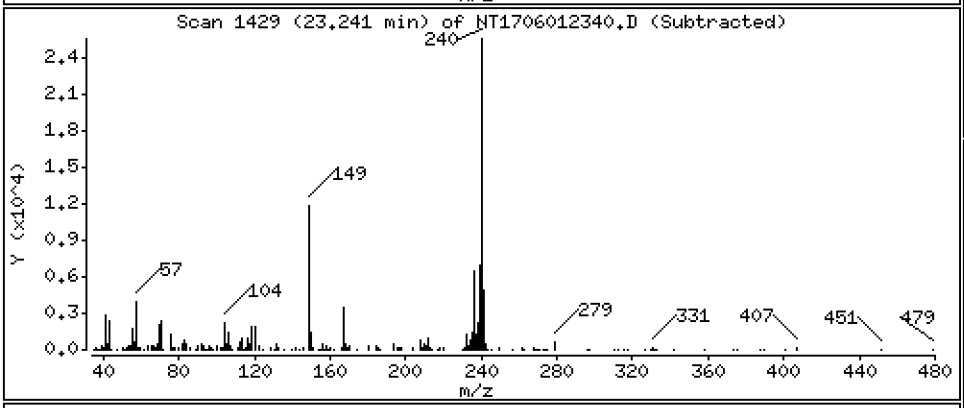
Column diameter: 0.25

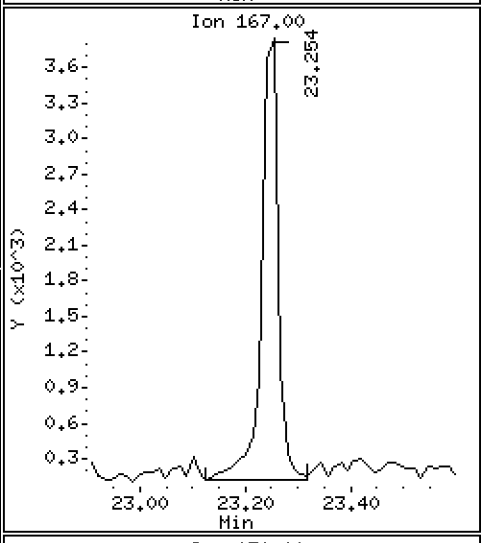
72 bis(2-Ethylhexyl)phthalate

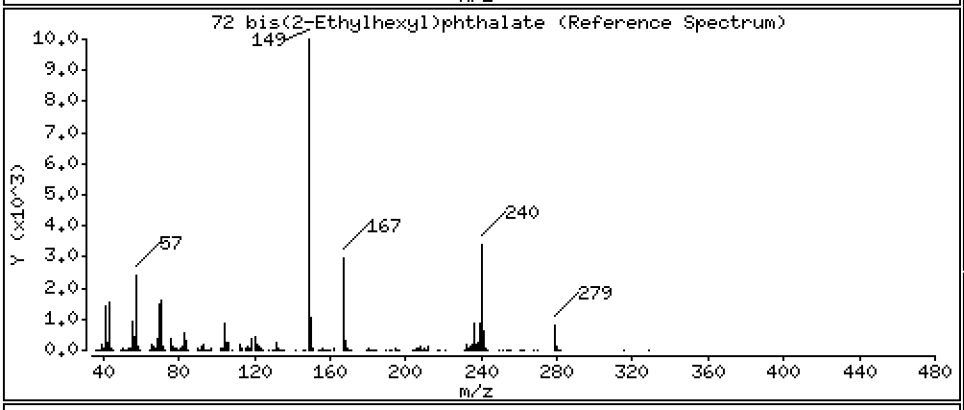
Concentration: 0.2325 ug/mL

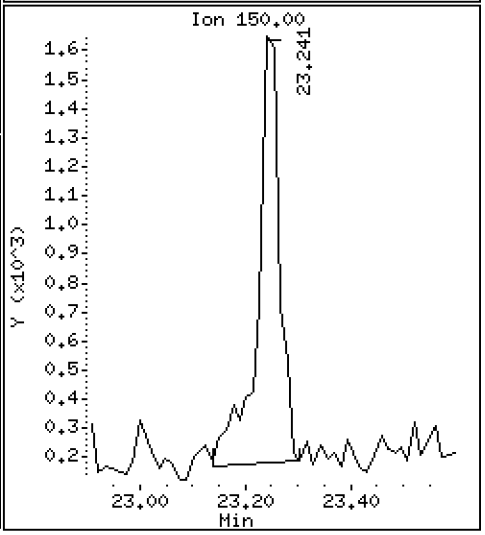


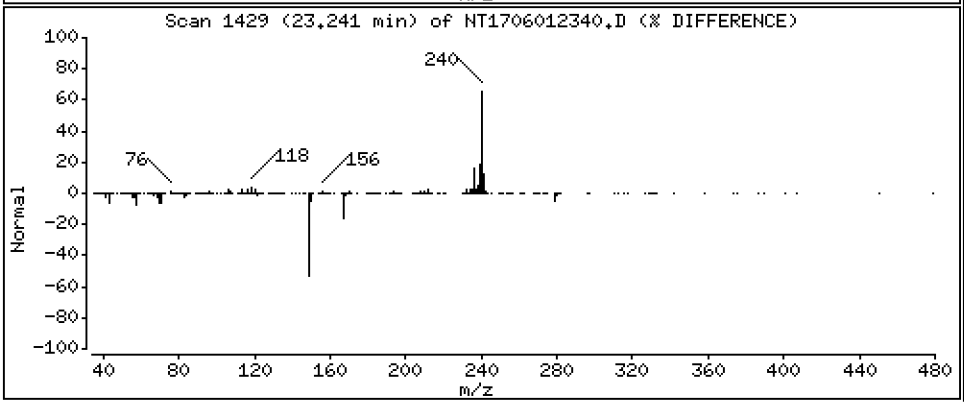












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

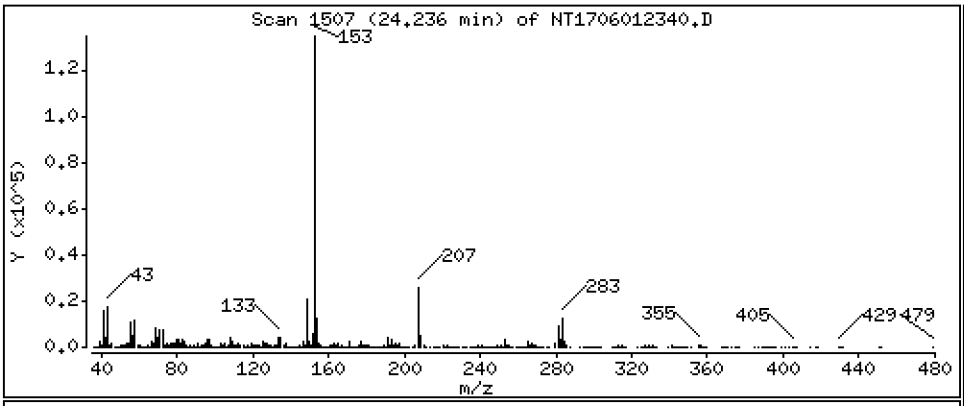
Operator: VTS

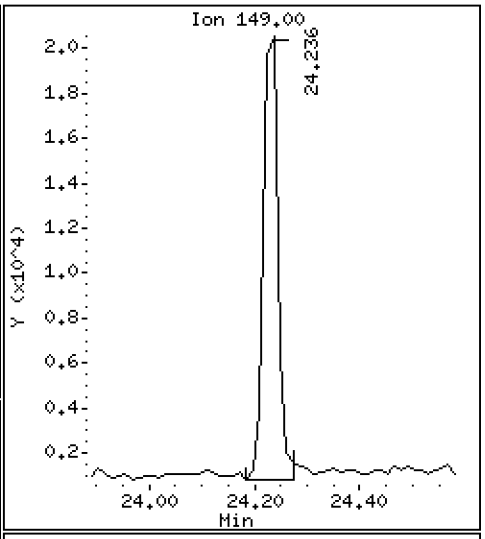
Column phase: ZB-5msi

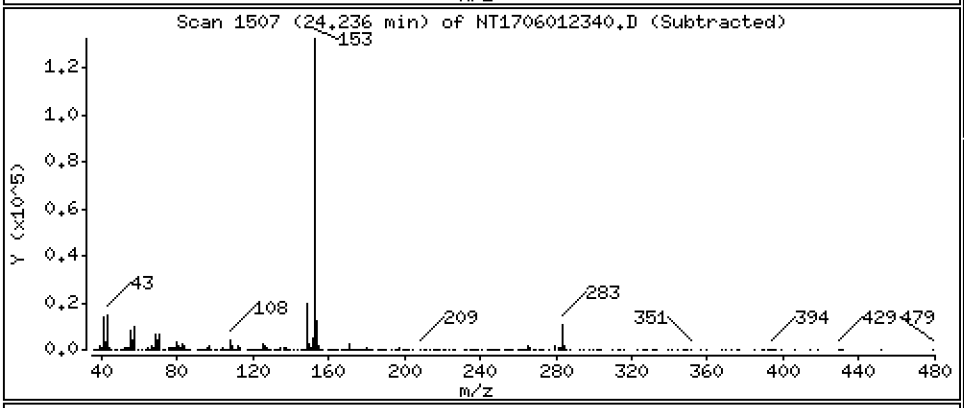
Column diameter: 0.25

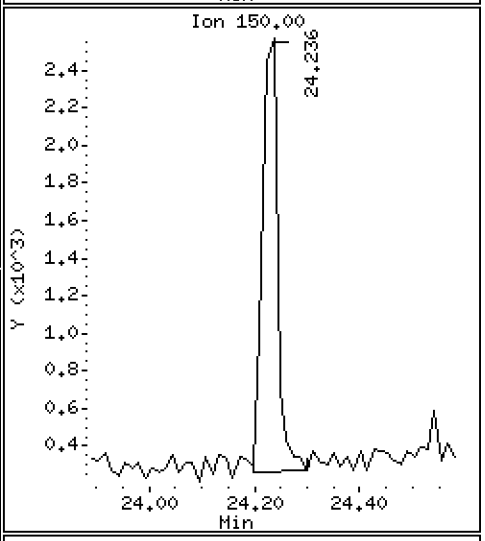
73 Di-n-octylphthalate

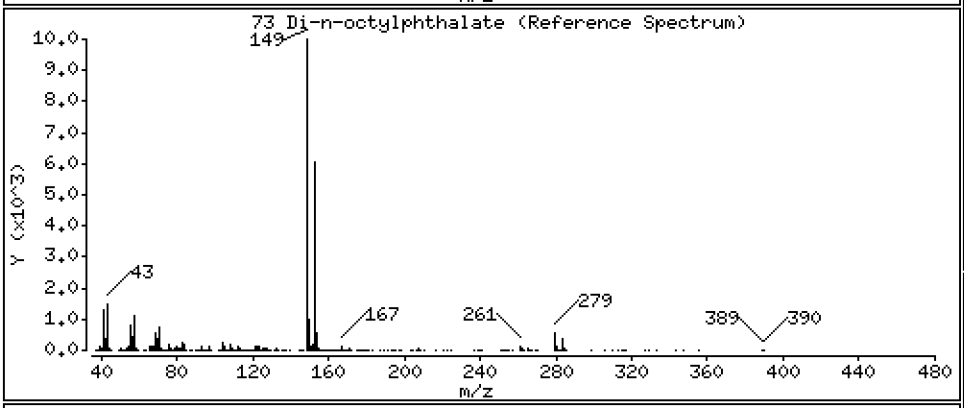
Concentration: 0.2271 ug/mL

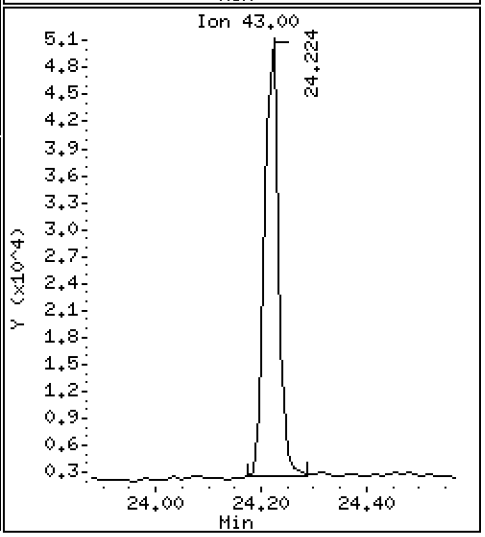


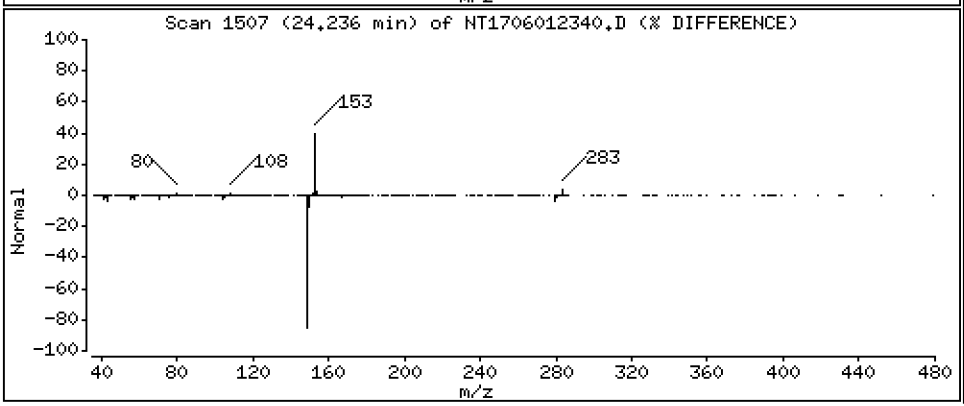












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

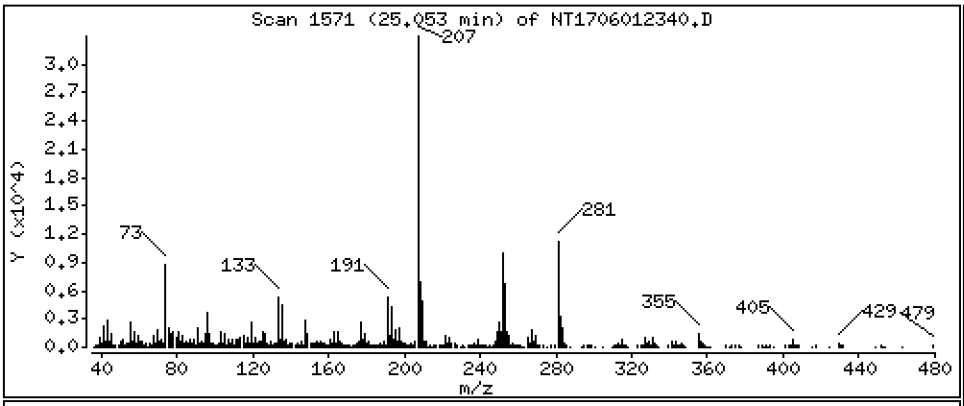
Operator: VTS

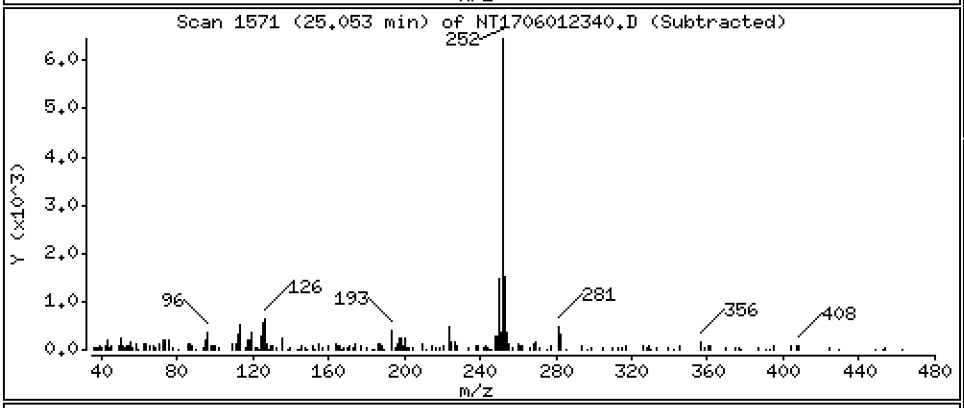
Column phase: ZB-5msi

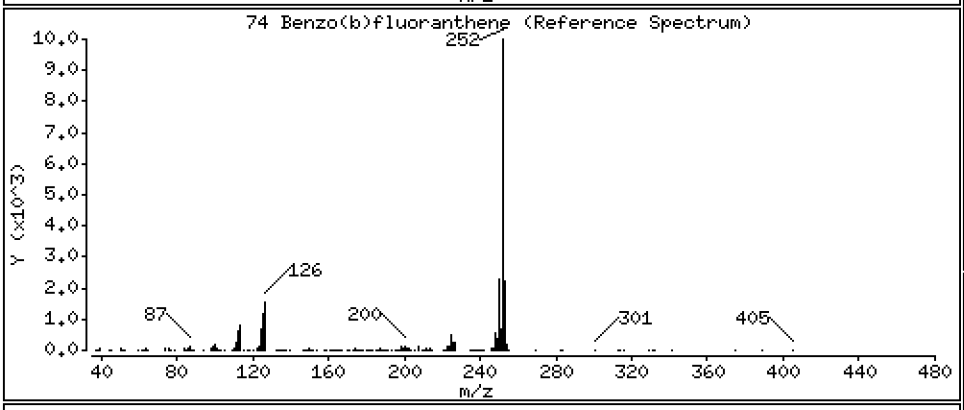
Column diameter: 0.25

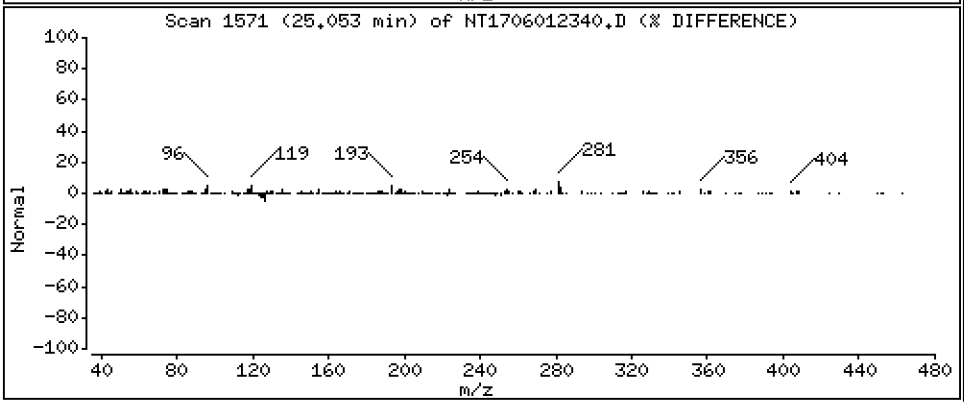
74 Benzo(b)fluoranthene

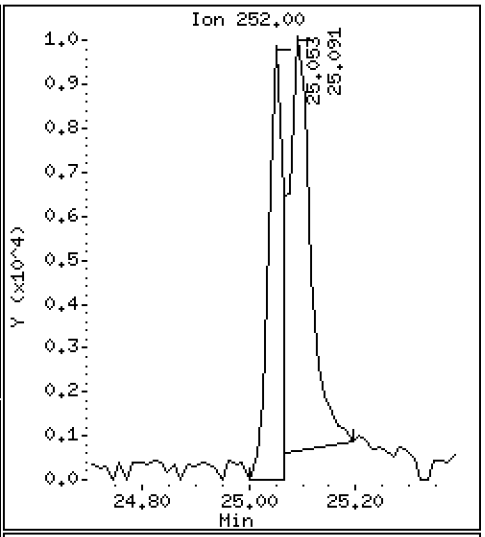
Concentration: 0.1531 ug/mL

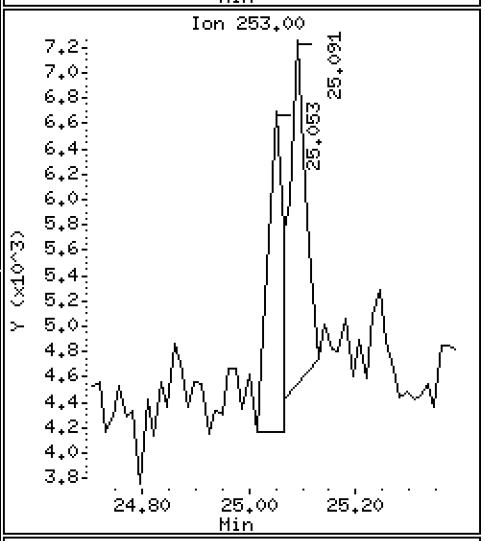


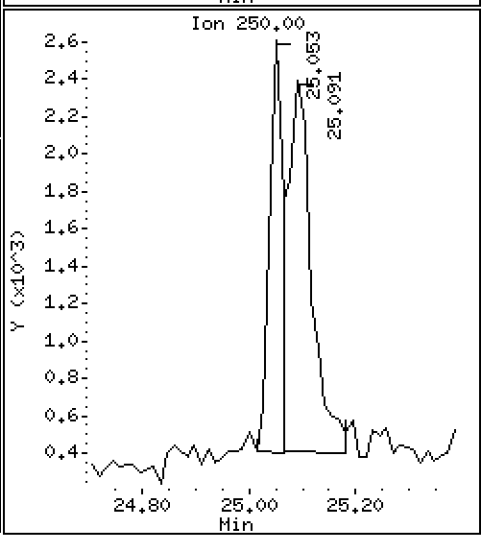












Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

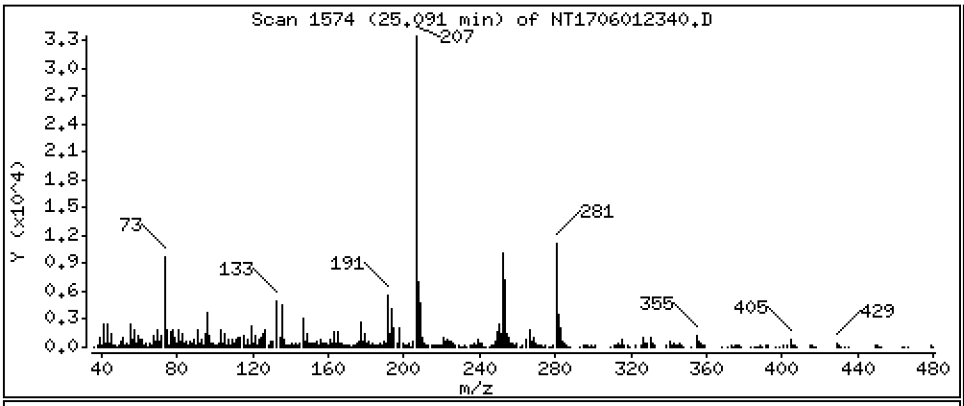
Operator: VTS

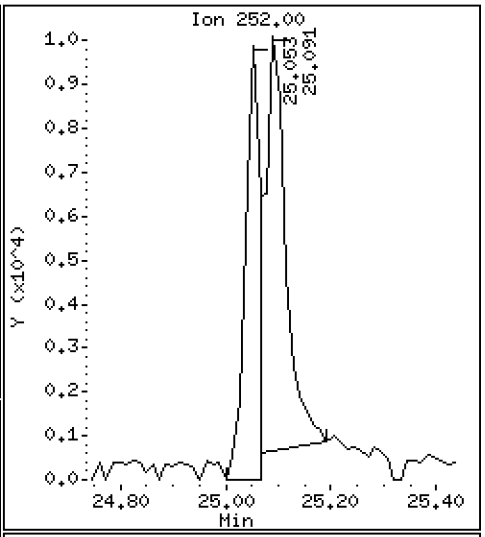
Column phase: ZB-5msi

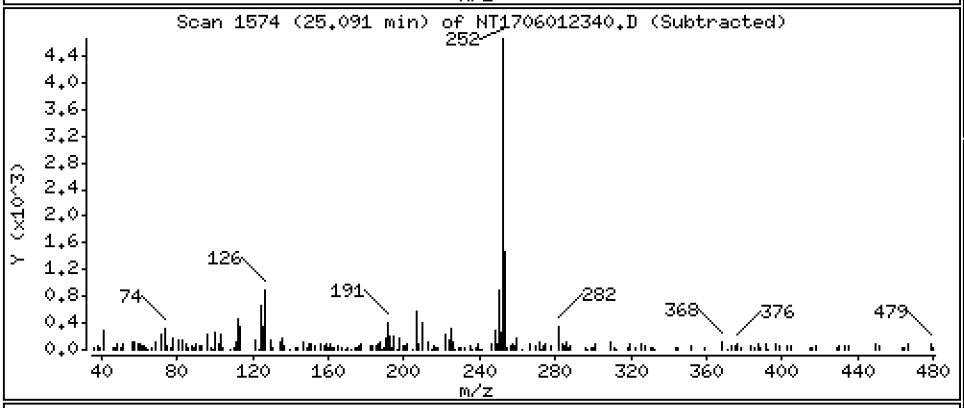
Column diameter: 0.25

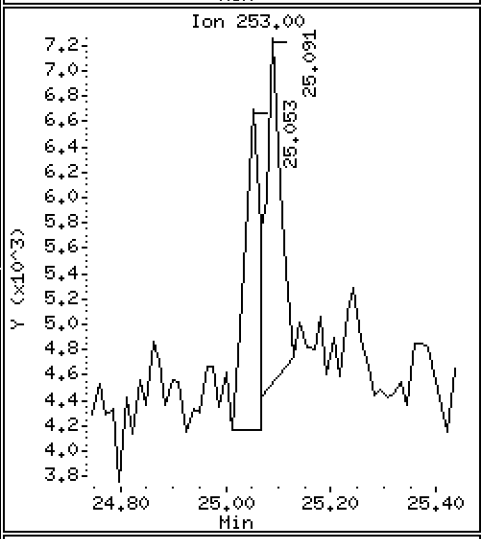
75 Benzo(k)fluoranthene

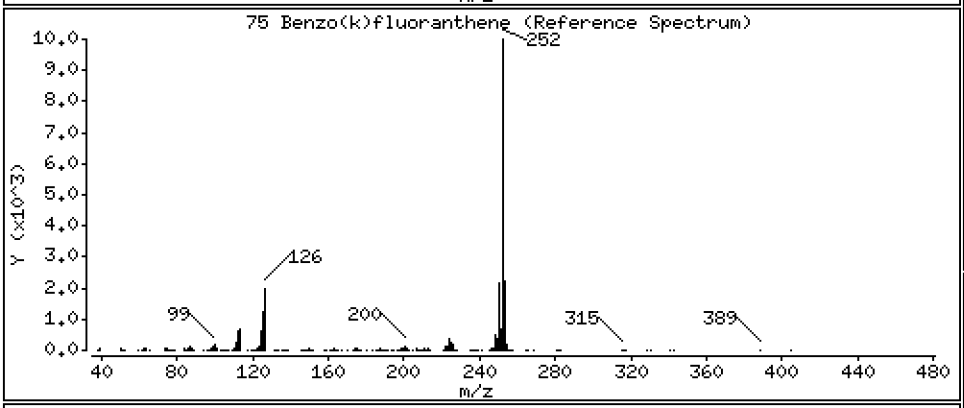
Concentration: 0.2379 ug/mL

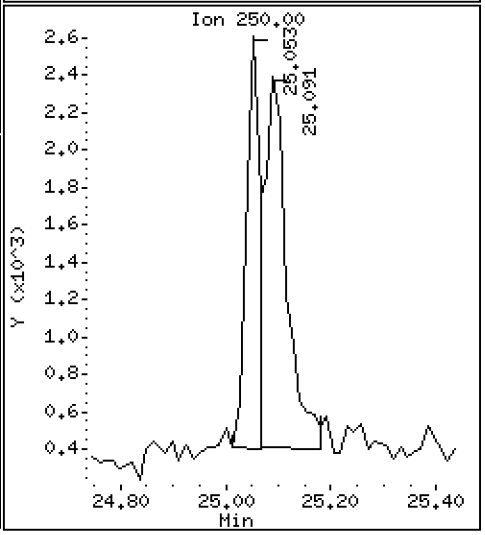


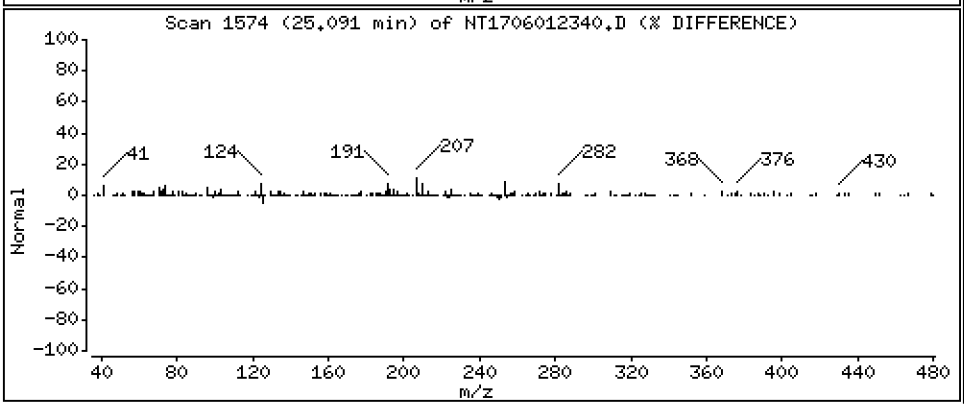












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

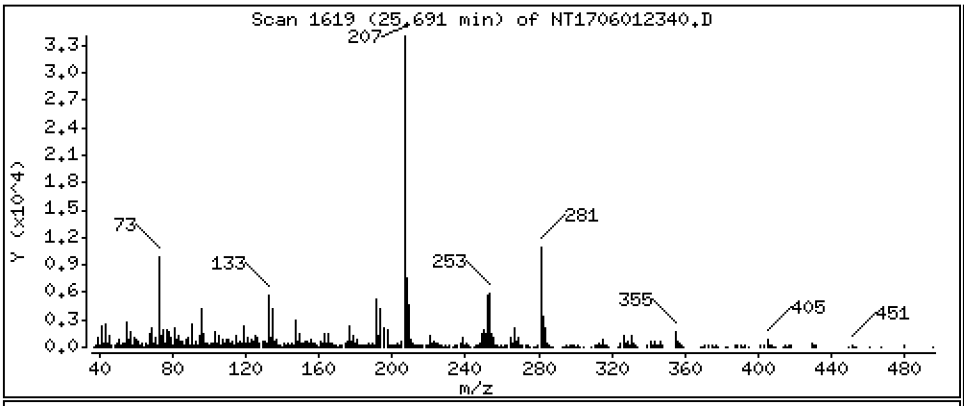
Operator: VTS

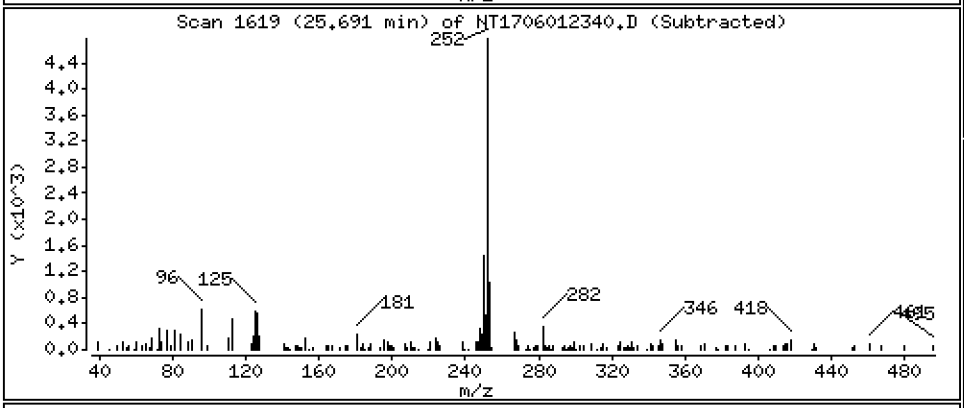
Column phase: ZB-5msi

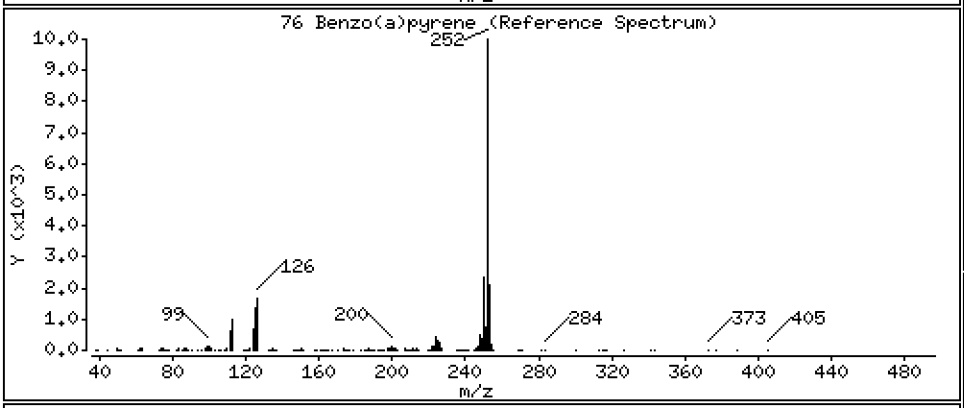
Column diameter: 0.25

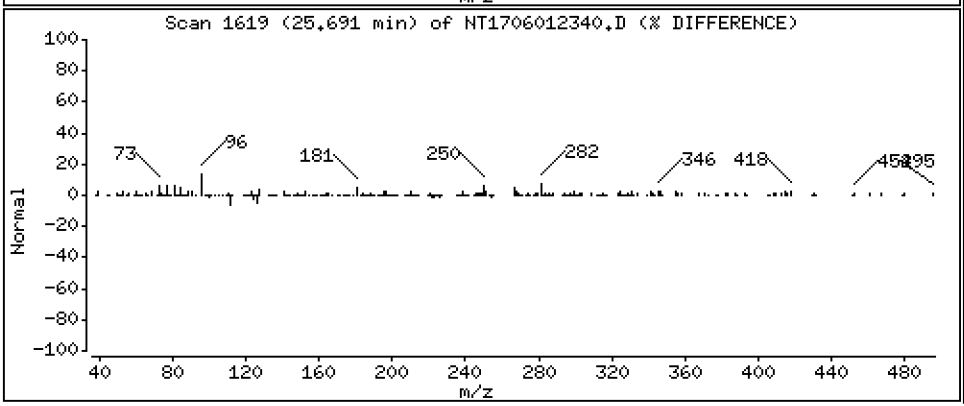
76 Benzo(a)pyrene

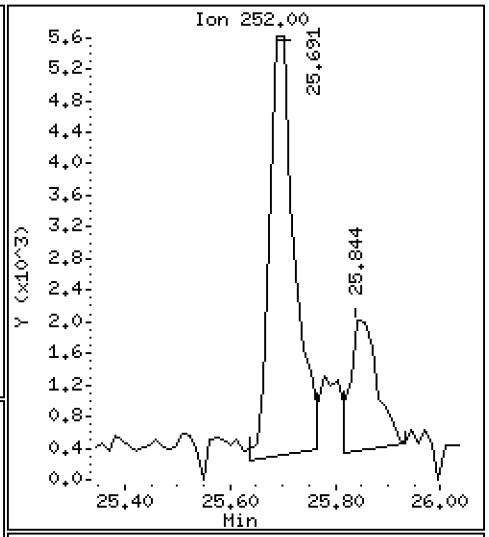
Concentration: 0.1776 ug/mL

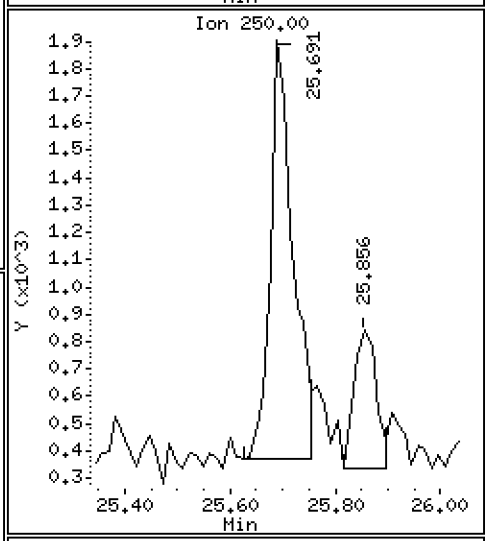


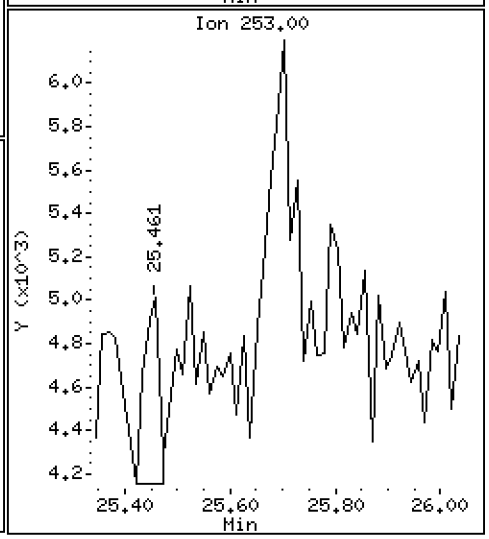












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

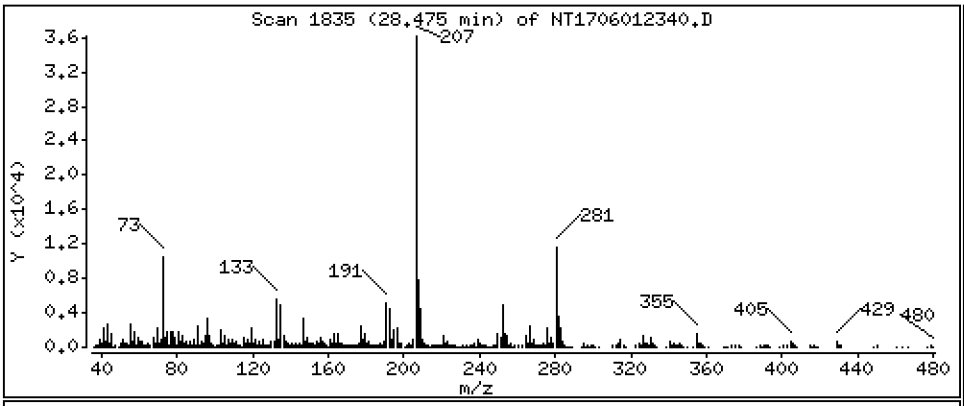
Operator: VTS

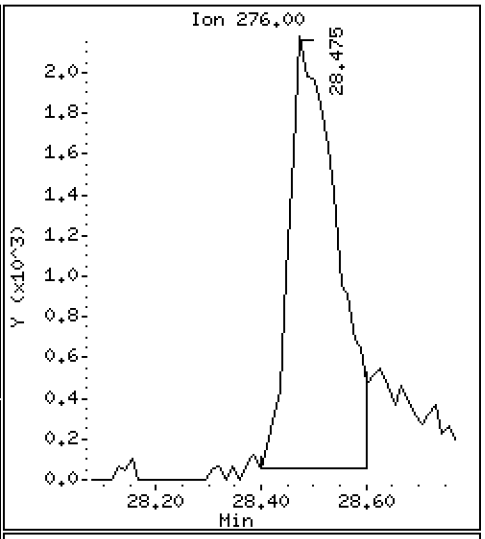
Column phase: ZB-5msi

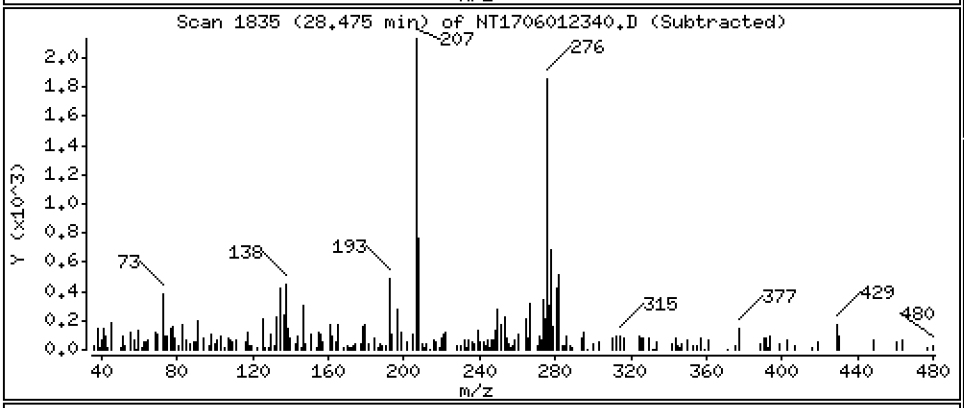
Column diameter: 0.25

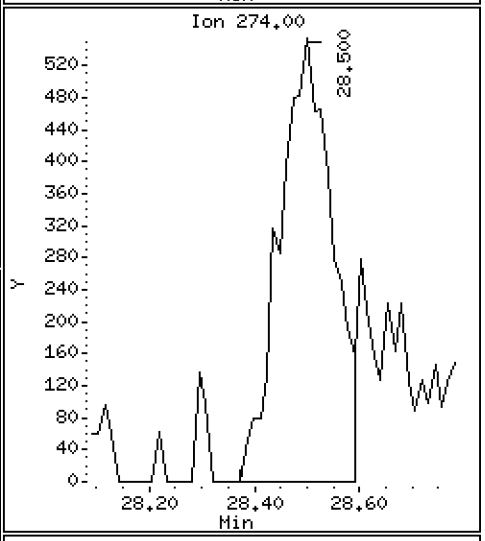
78 Indeno(1,2,3-cd)pyrene

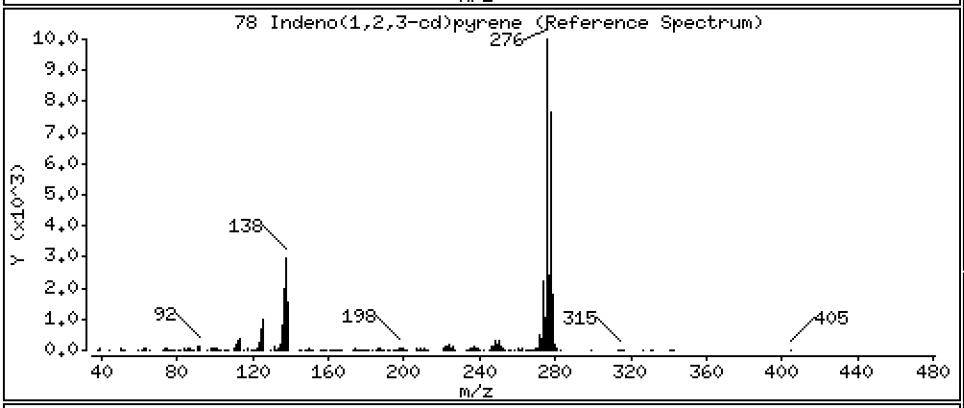
Concentration: 0.1139 ug/mL

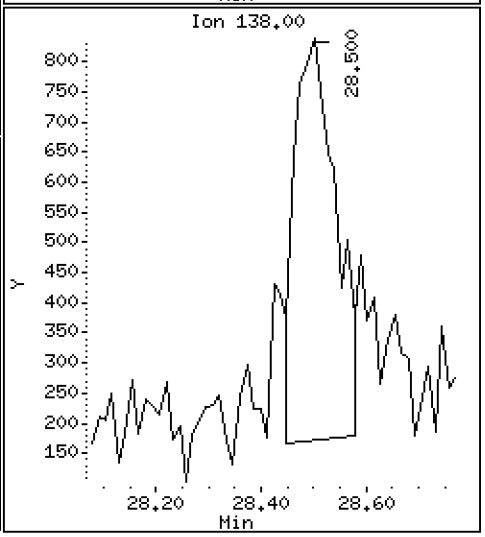


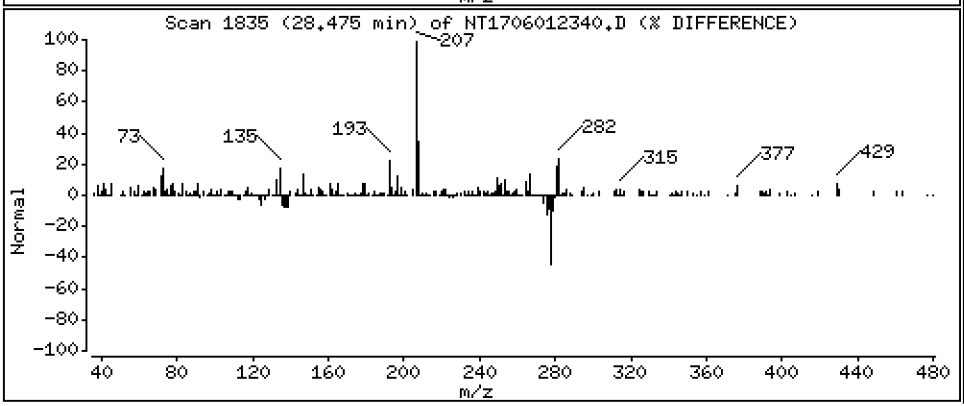












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

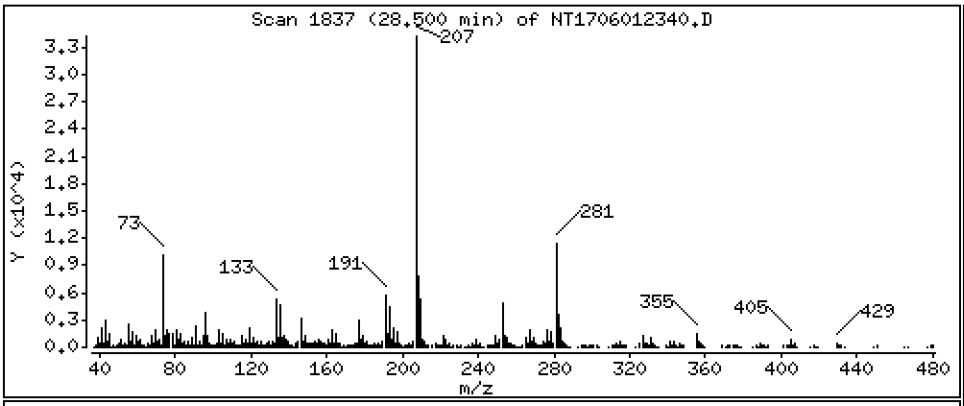
Operator: VTS

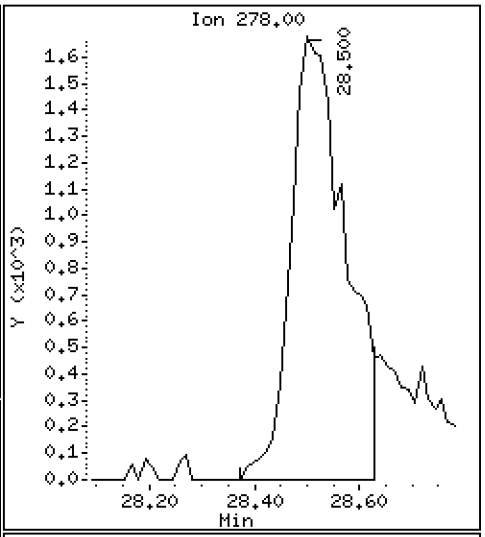
Column phase: ZB-5msi

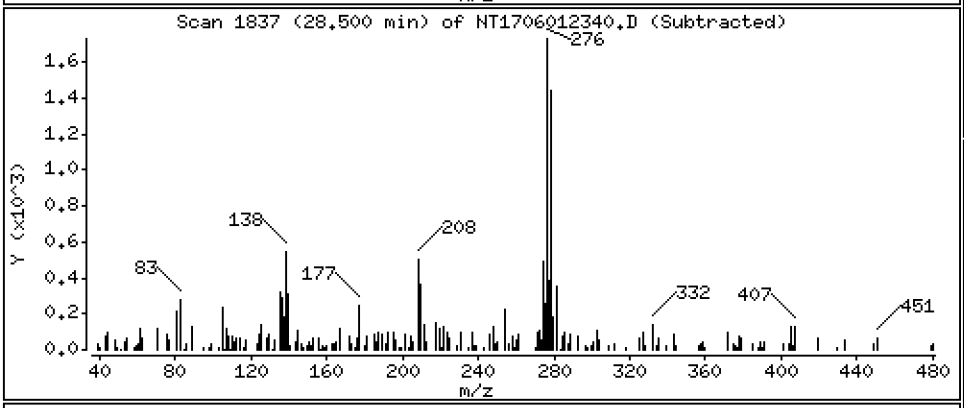
Column diameter: 0.25

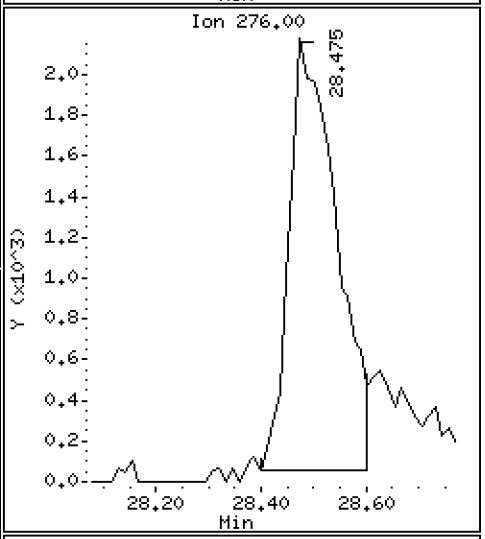
79 Dibenzo(a,h)anthracene

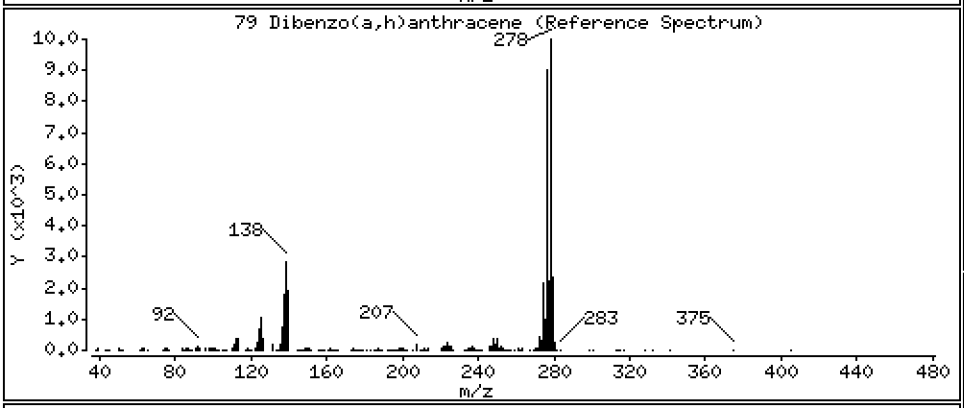
Concentration: 0.1239 ug/mL

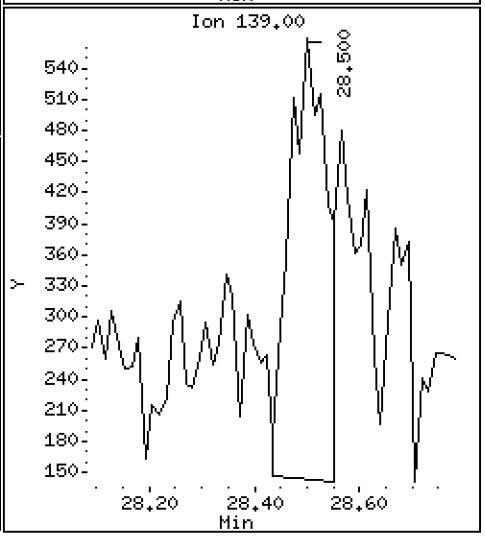


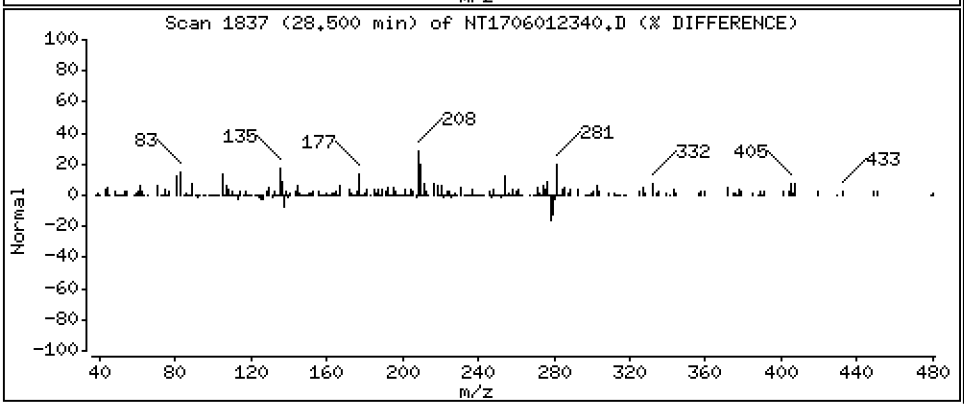












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

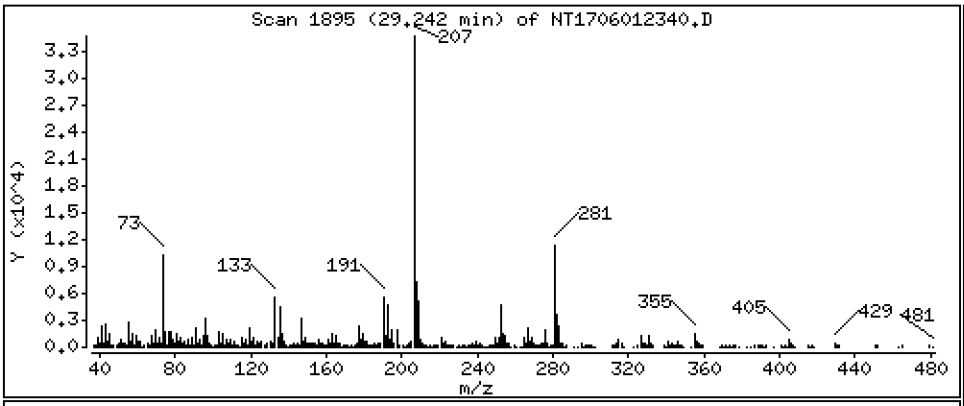
Operator: VTS

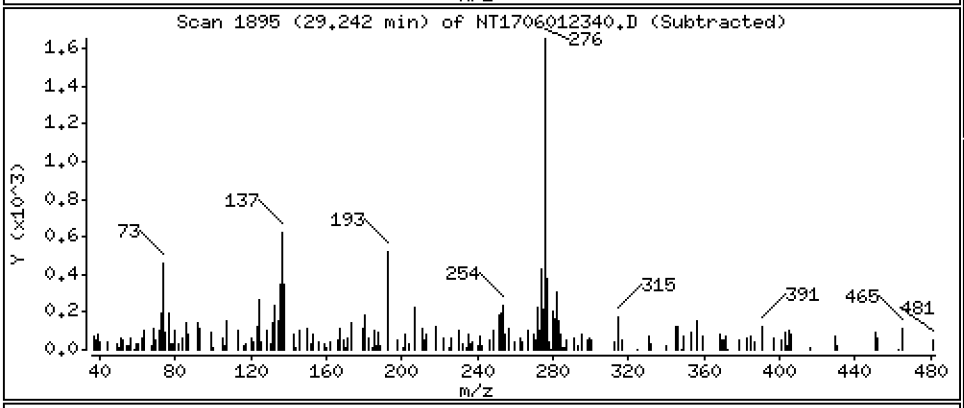
Column phase: ZB-5msi

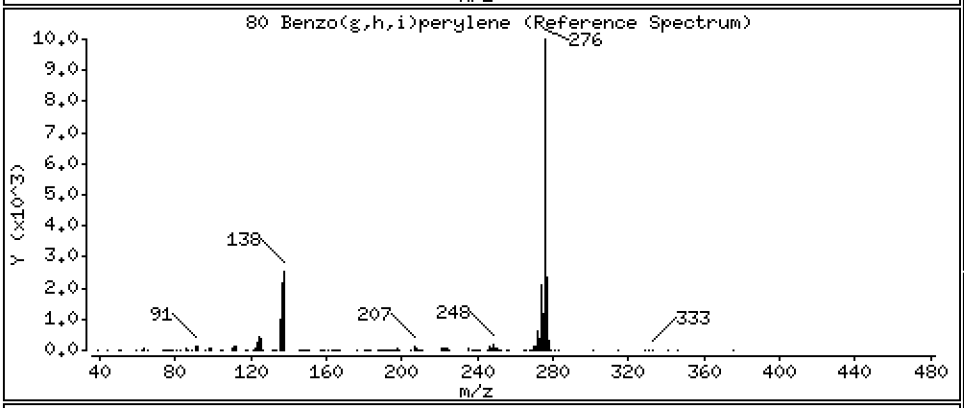
Column diameter: 0.25

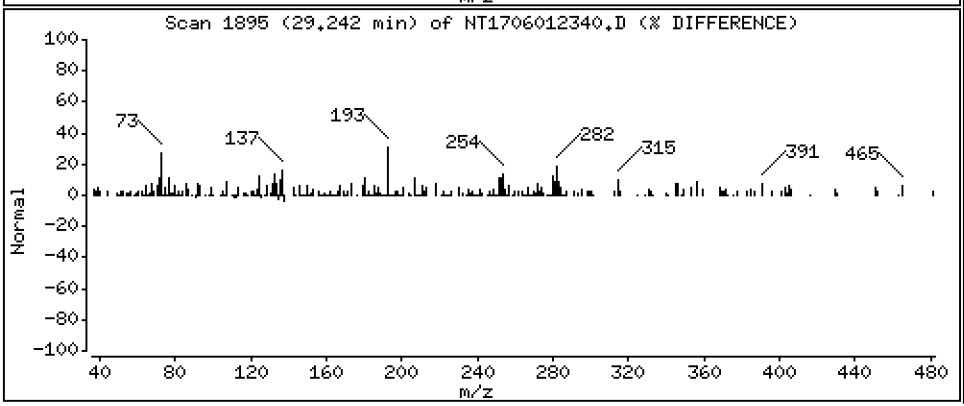
80 Benzo(g,h,i)perylene

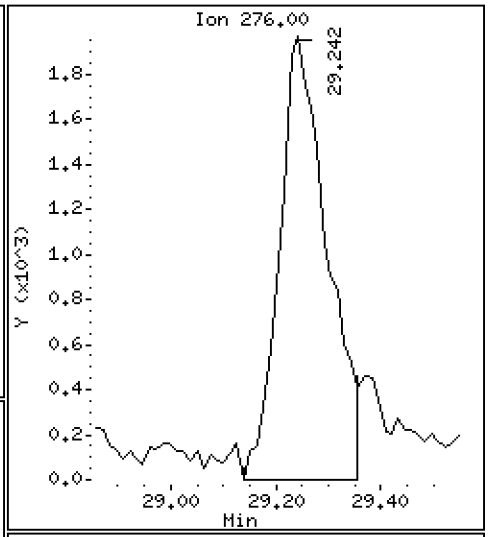
Concentration: 0.1316 ug/mL

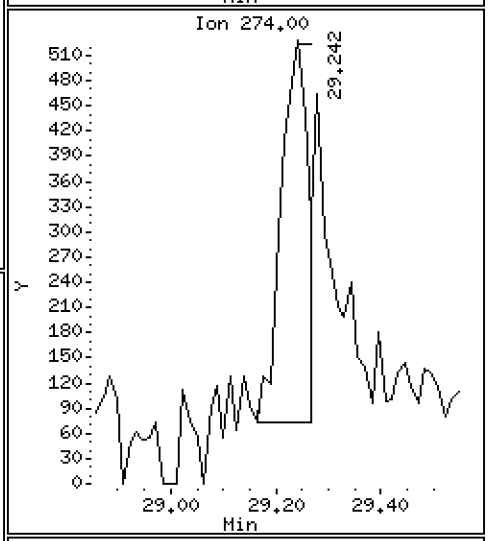


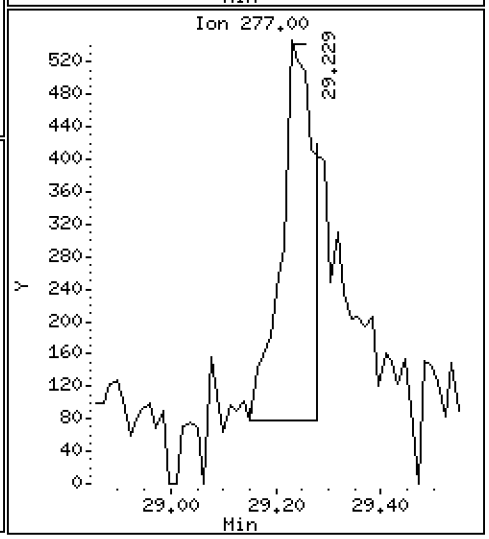












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

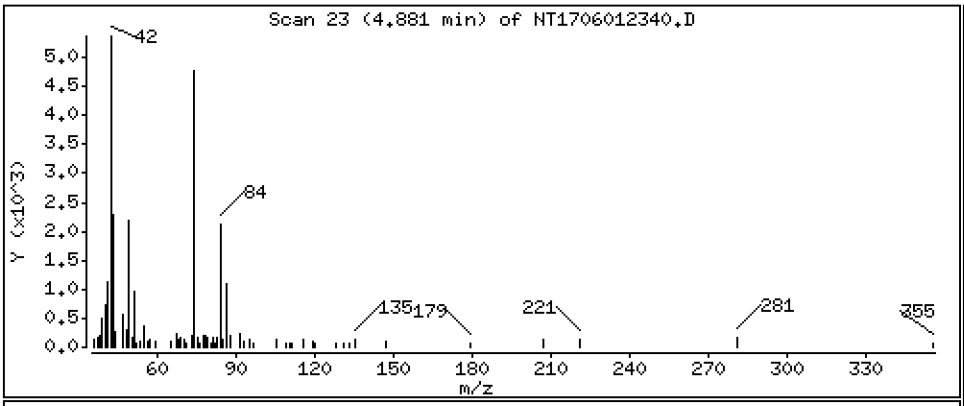
Operator: VTS

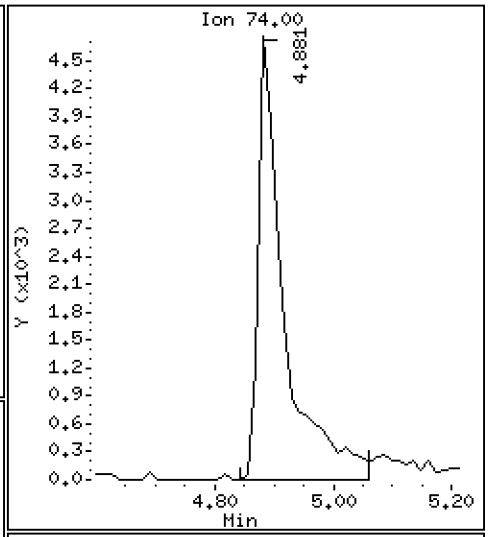
Column phase: ZB-5msi

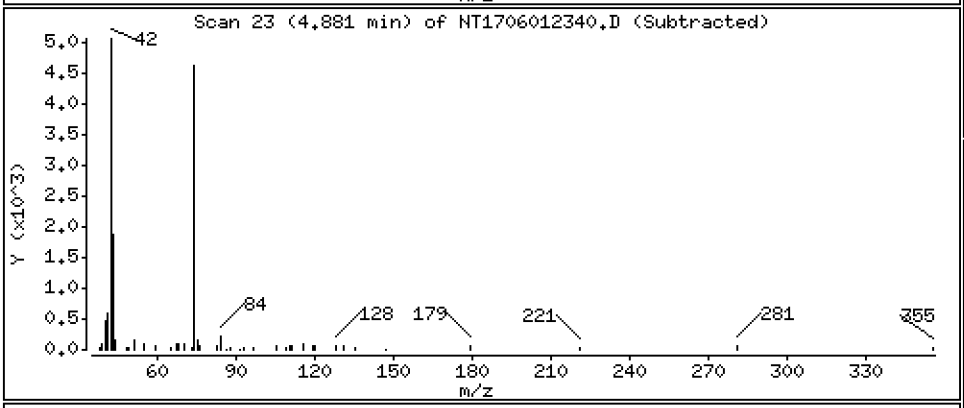
Column diameter: 0.25

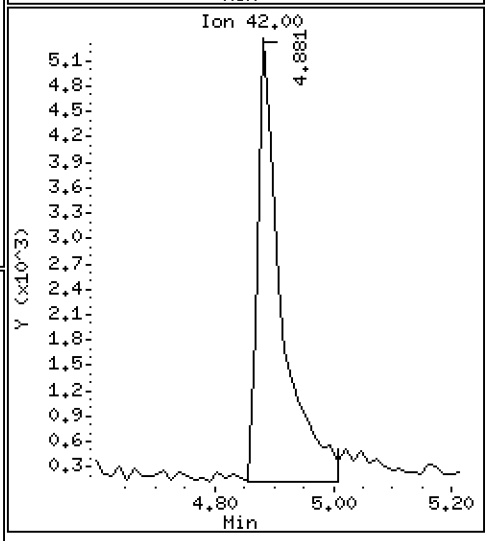
90 N-Nitrosodimethylamine

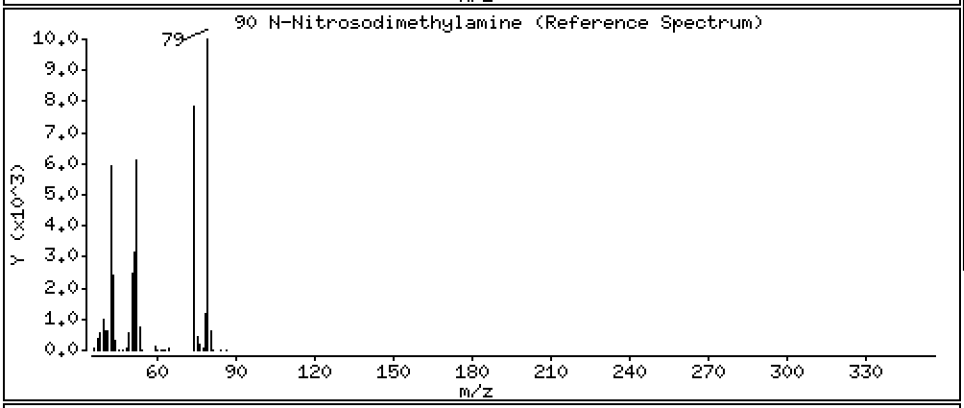
Concentration: 0.3335 ug/mL

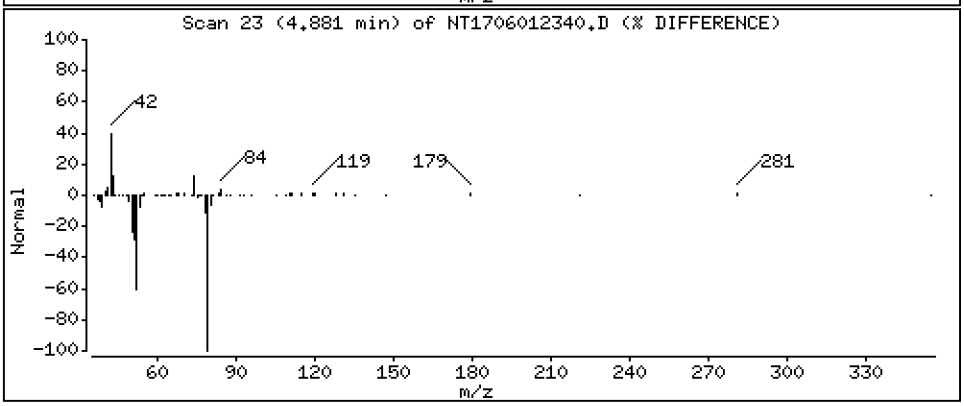












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

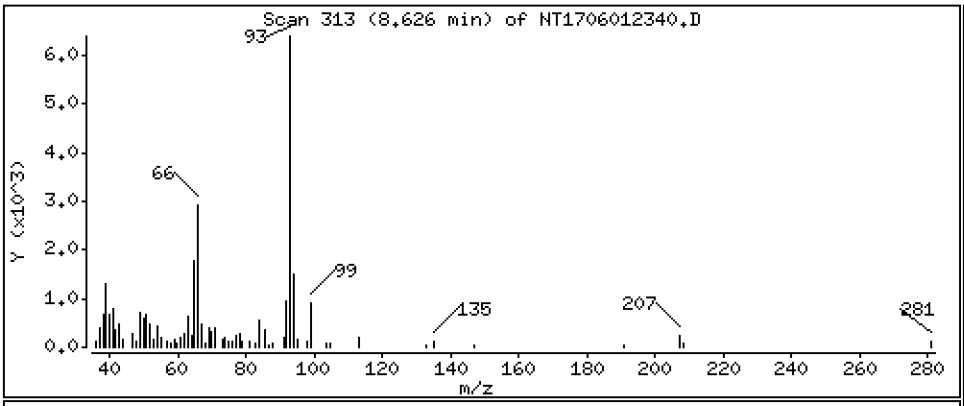
Operator: VTS

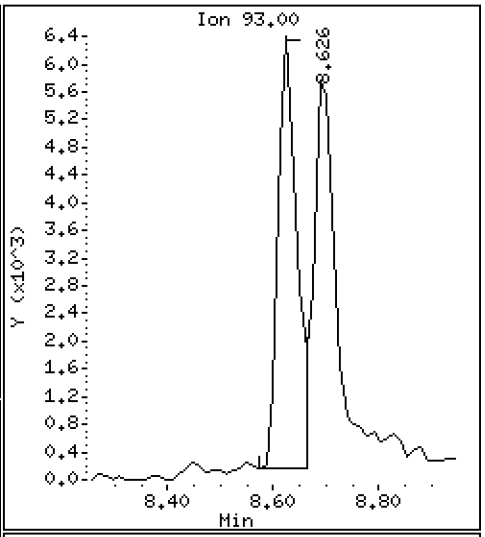
Column phase: ZB-5msi

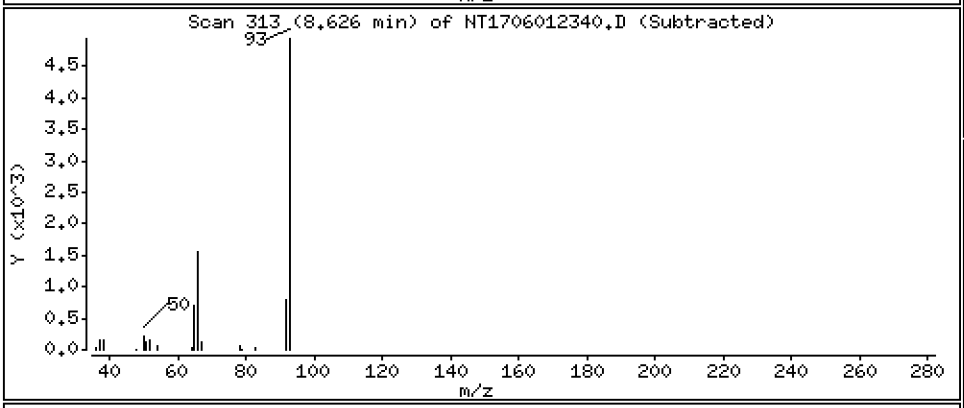
Column diameter: 0.25

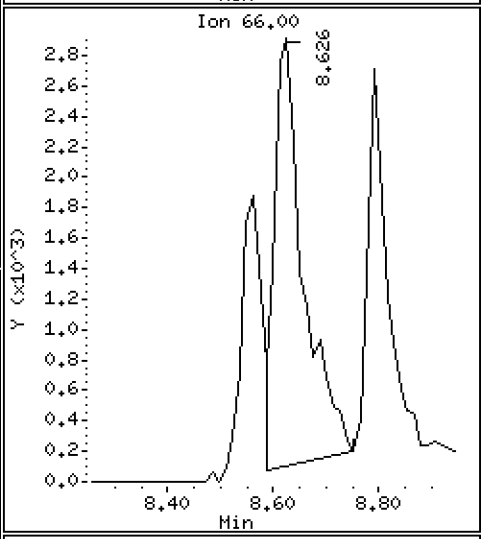
91 Aniline

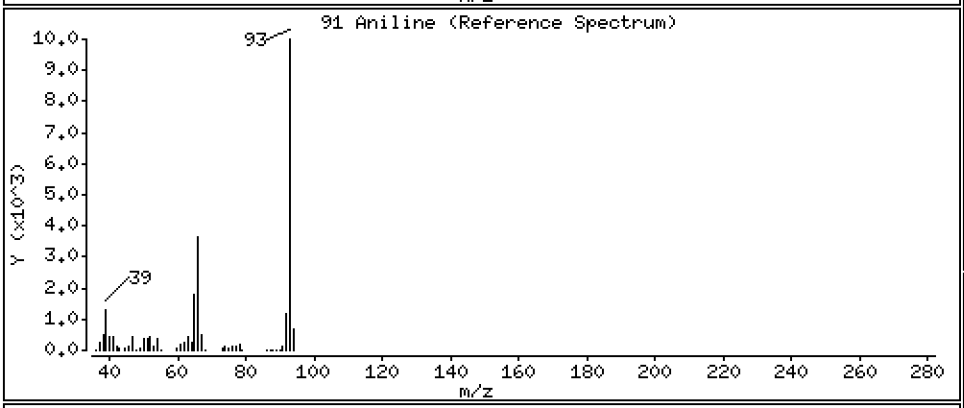
Concentration: 0.2030 ug/mL

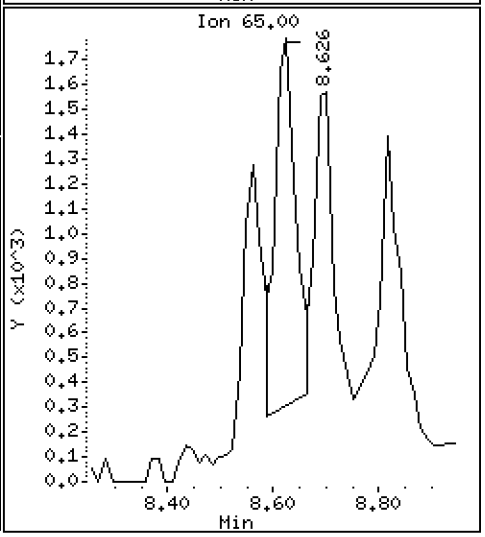


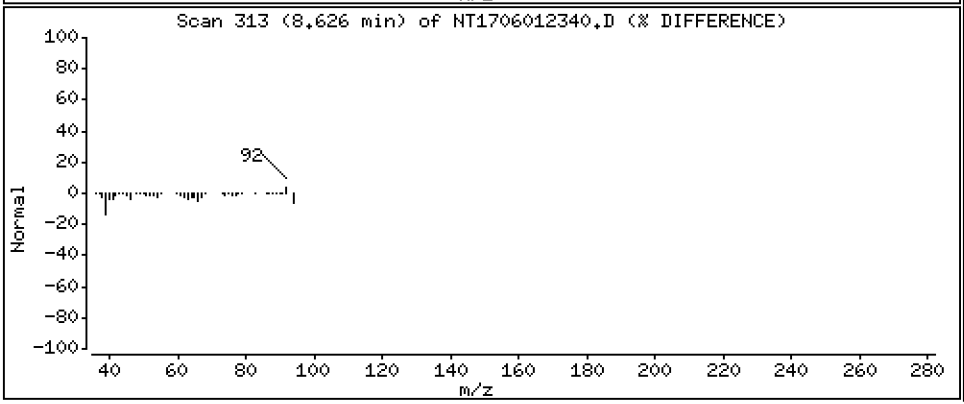












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

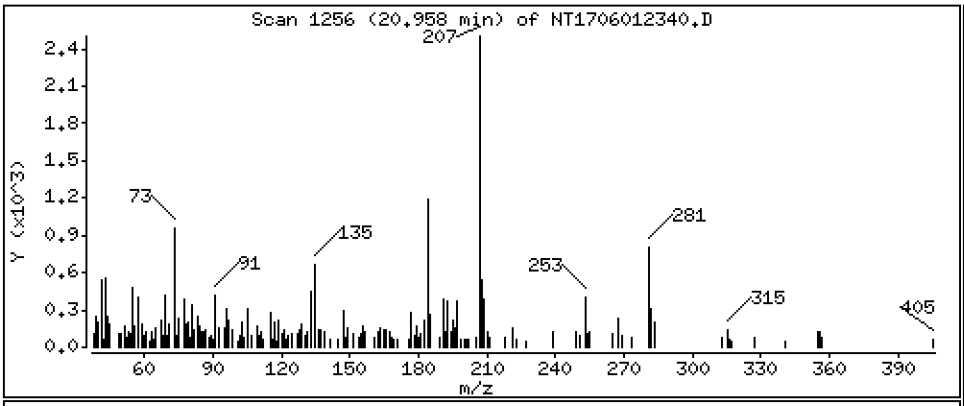
Operator: VTS

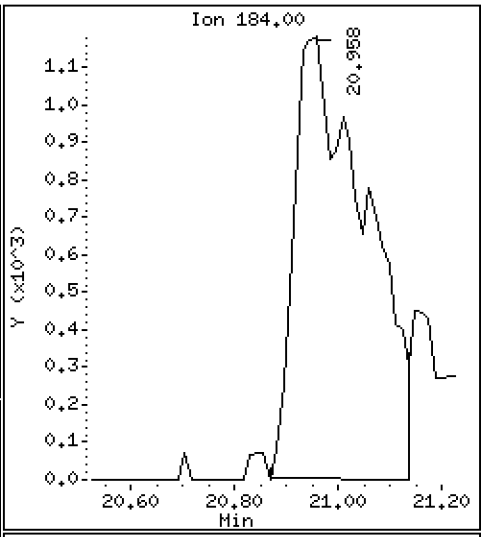
Column phase: ZB-5msi

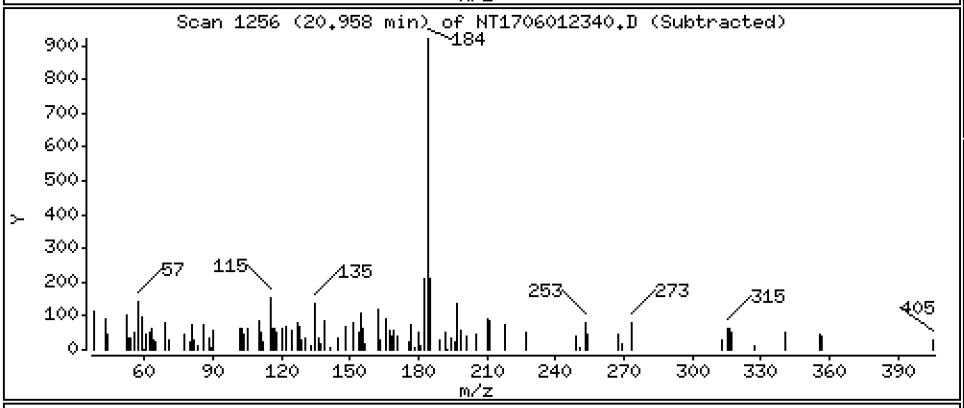
Column diameter: 0.25

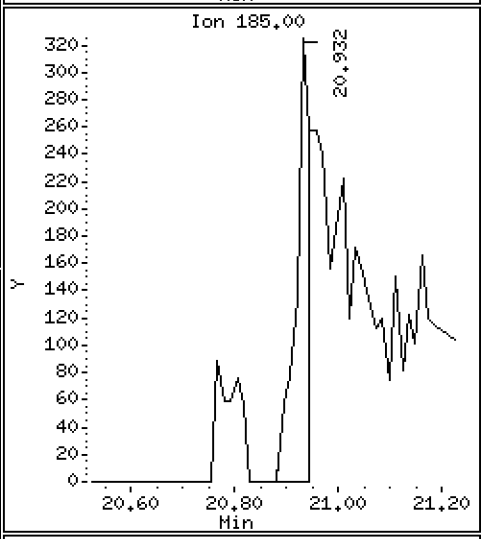
93 Benzidine

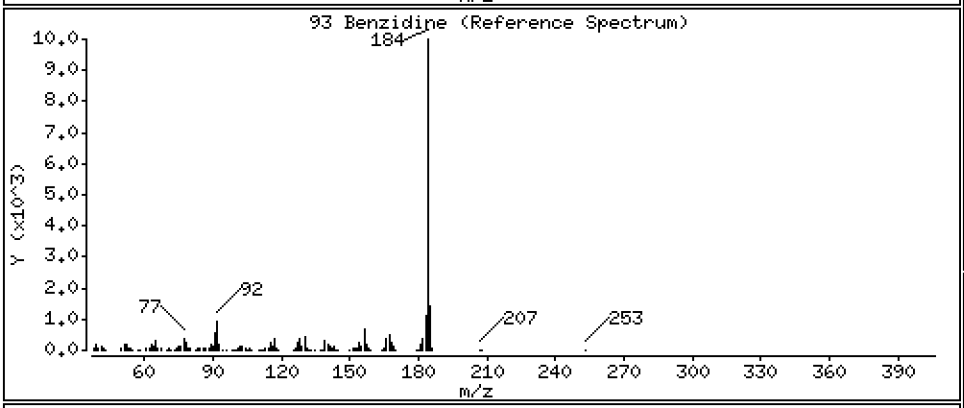
Concentration: 0.2683 ug/mL

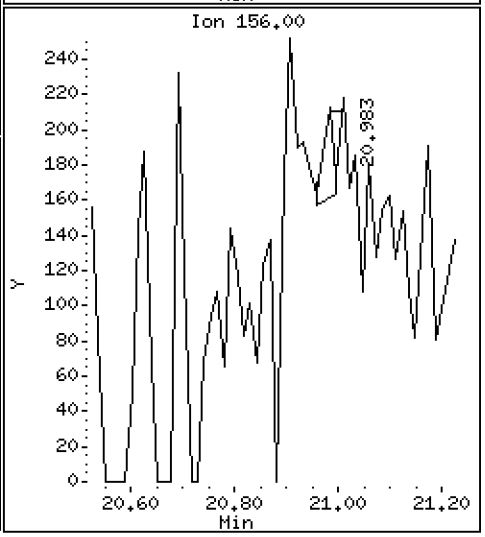


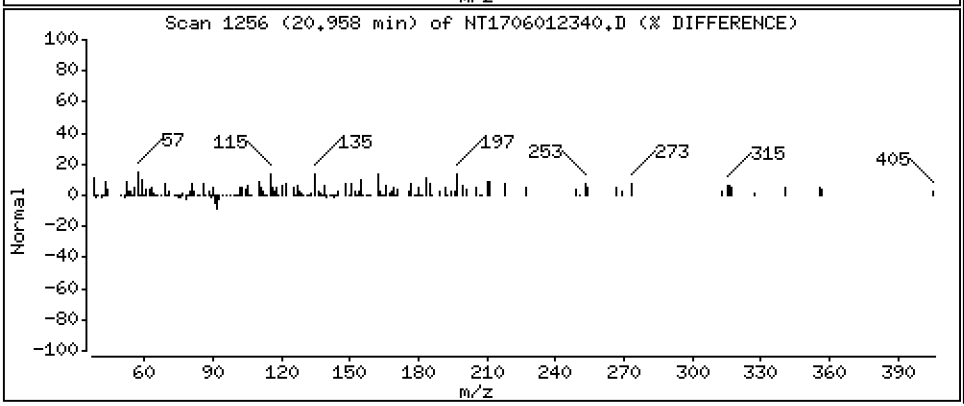












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

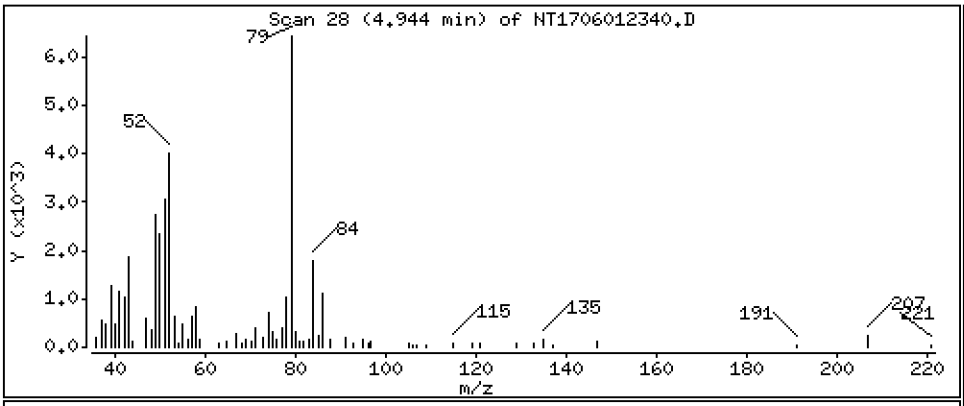
Operator: VTS

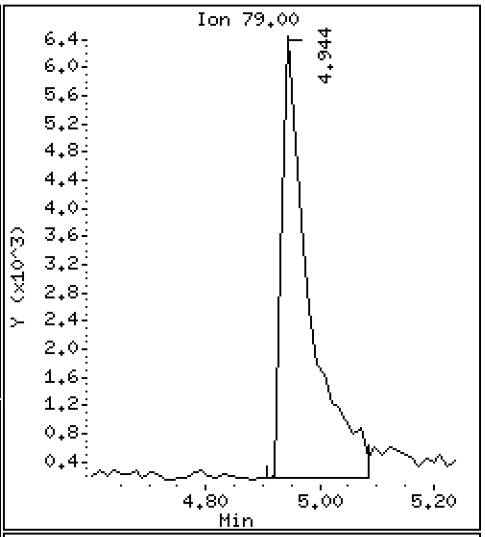
Column phase: ZB-5msi

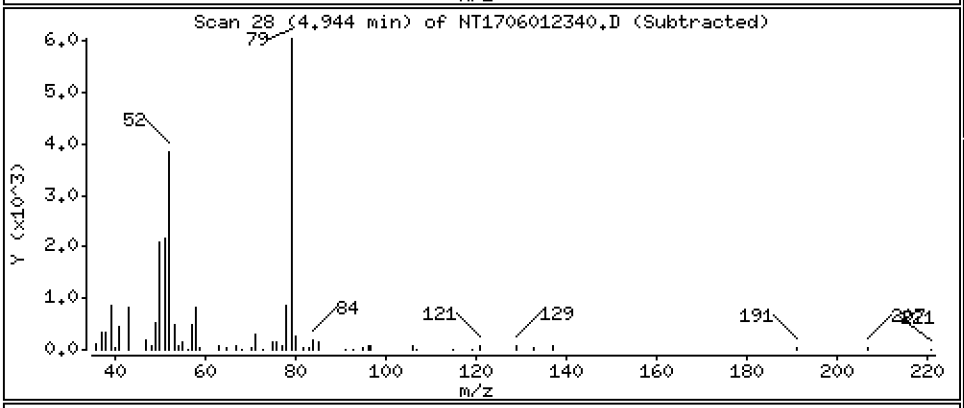
Column diameter: 0.25

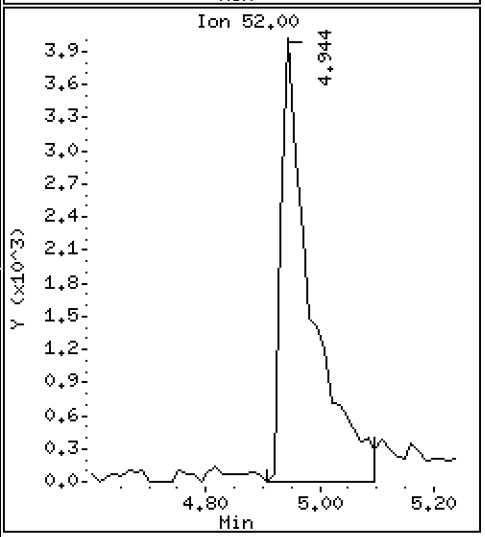
103 Pyridine

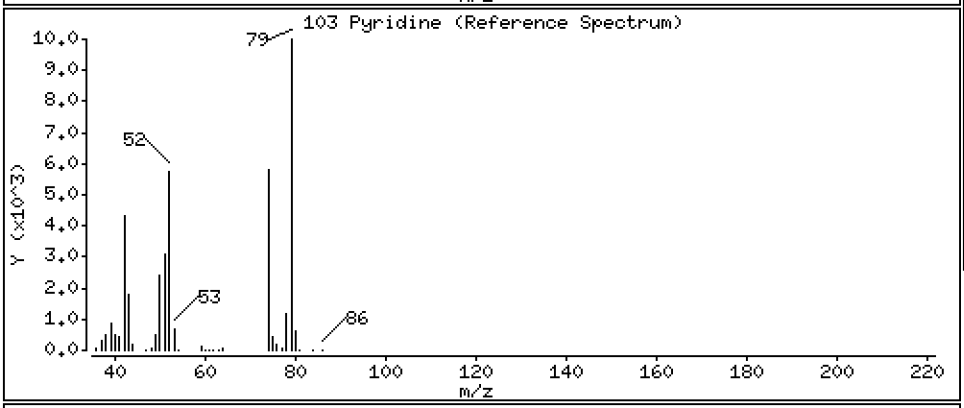
Concentration: 0.3024 ug/mL

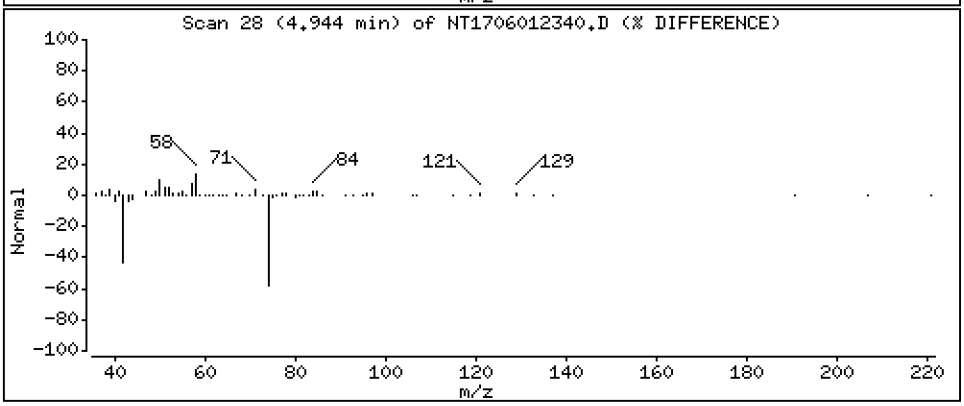












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

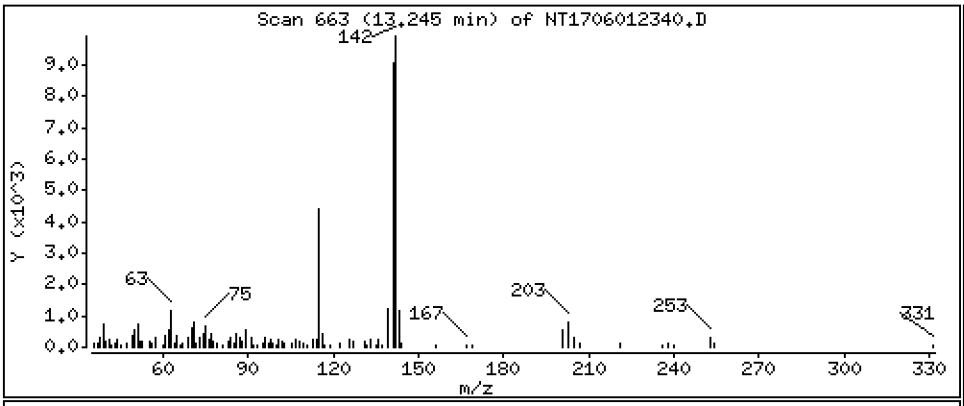
Operator: VTS

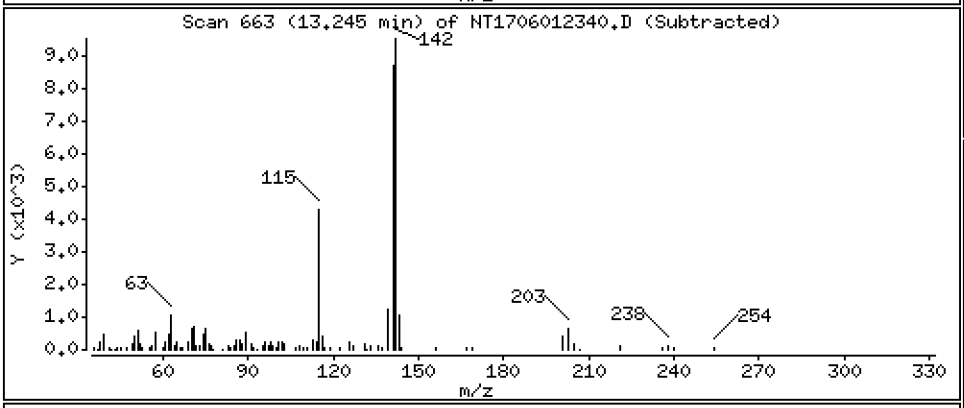
Column phase: ZB-5msi

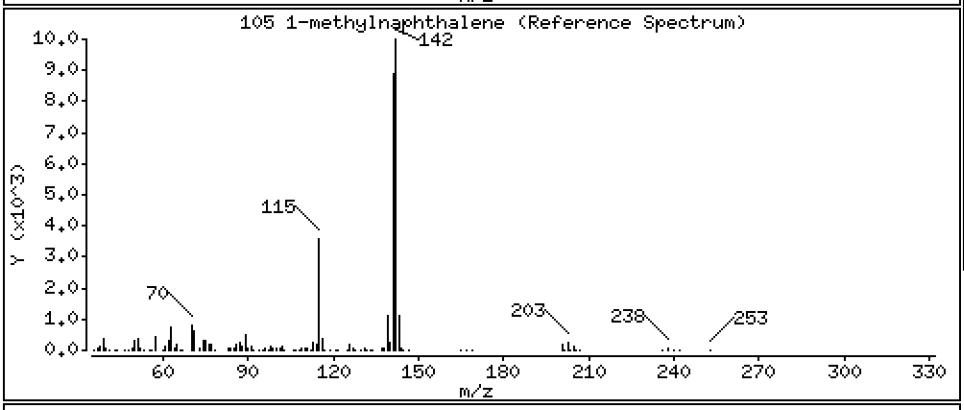
Column diameter: 0.25

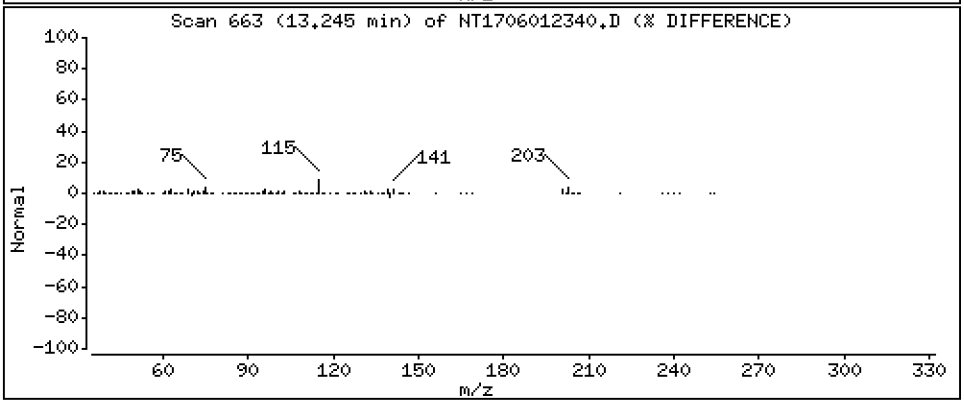
105 1-methylnaphthalene

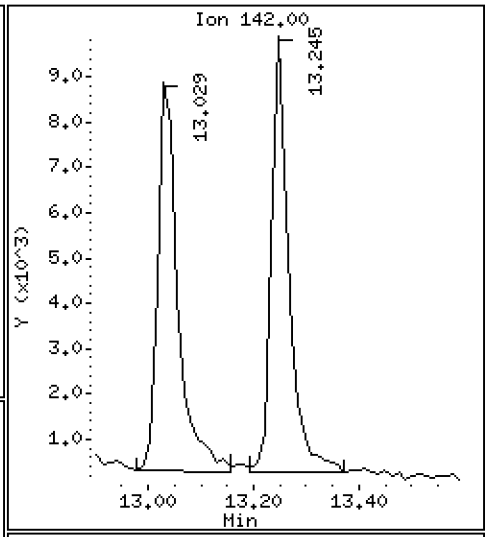
Concentration: 0.1740 ug/mL

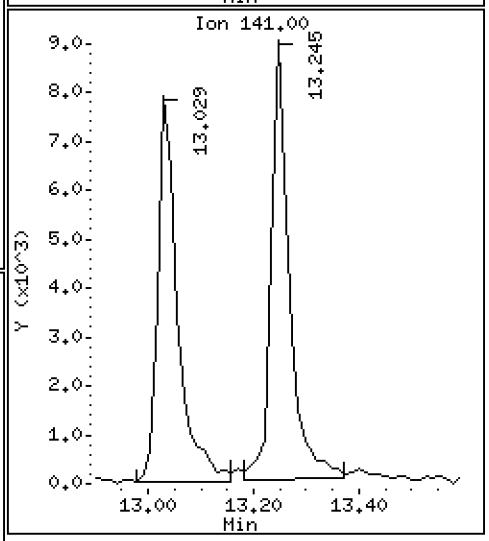












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

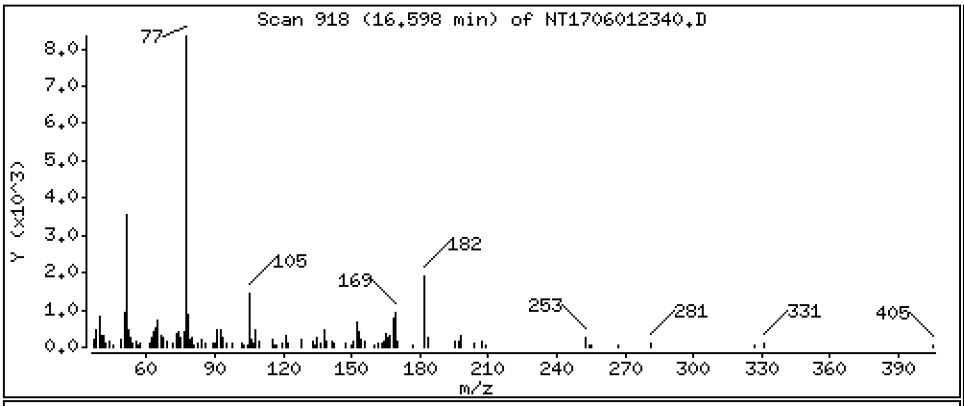
Operator: VTS

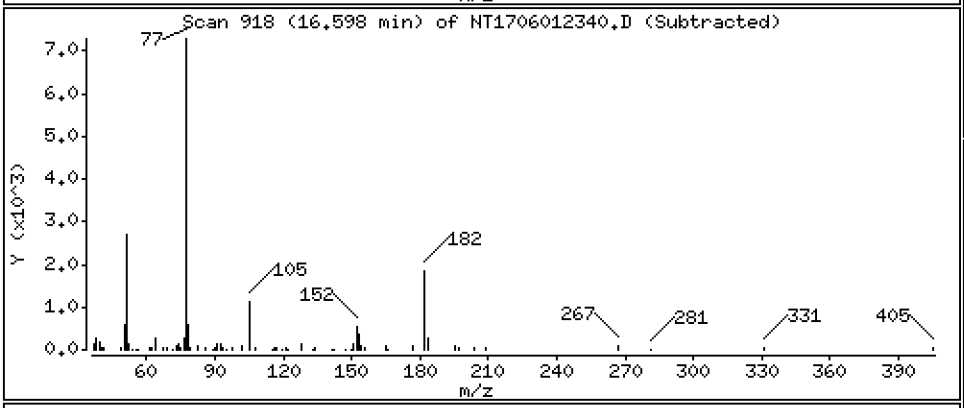
Column phase: ZB-5msi

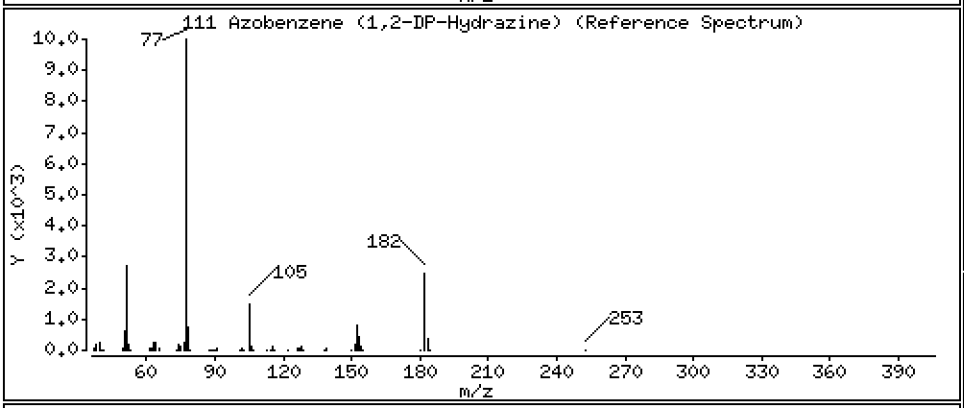
Column diameter: 0.25

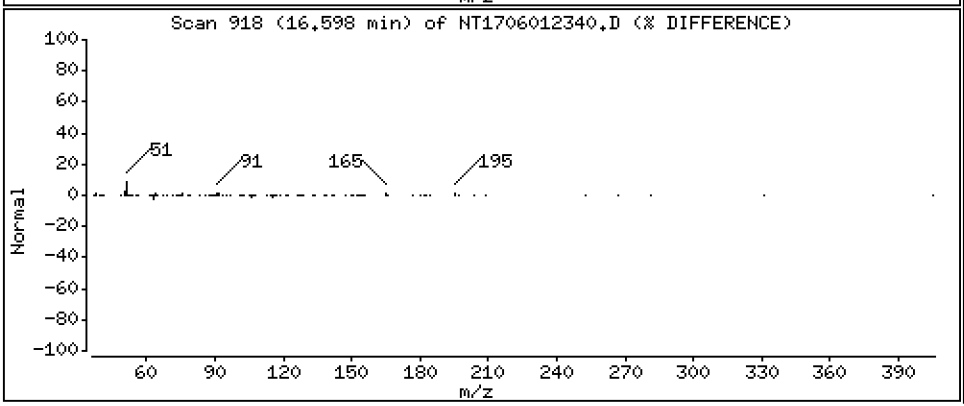
111 Azobenzene (1,2-DP-Hydrazine)

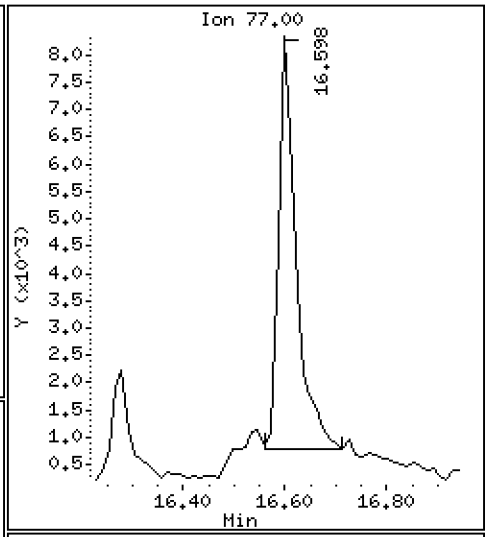
Concentration: 0.1494 ug/mL

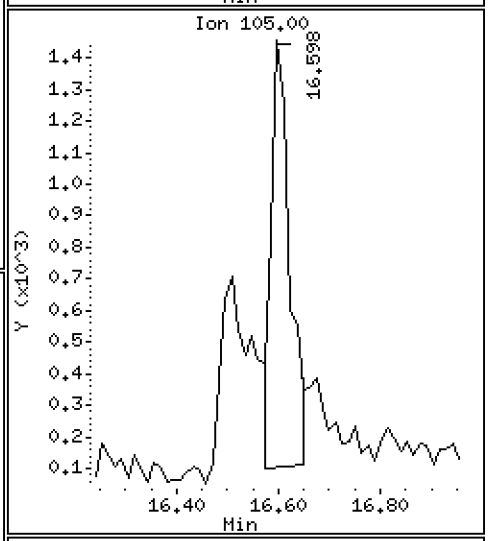


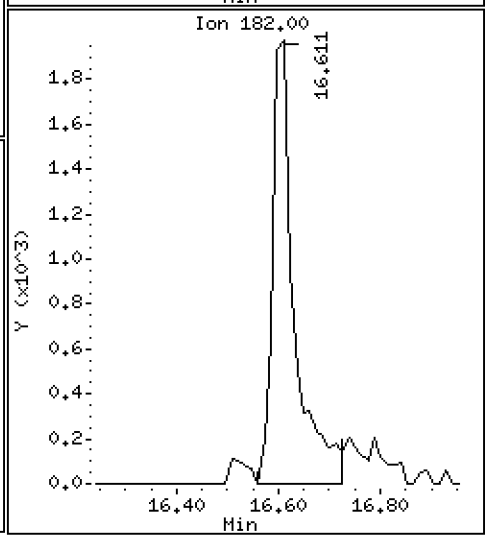












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

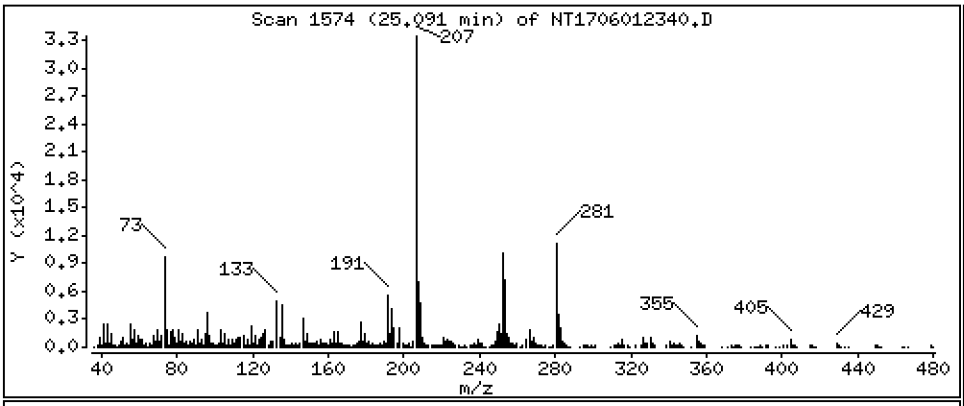
Operator: VTS

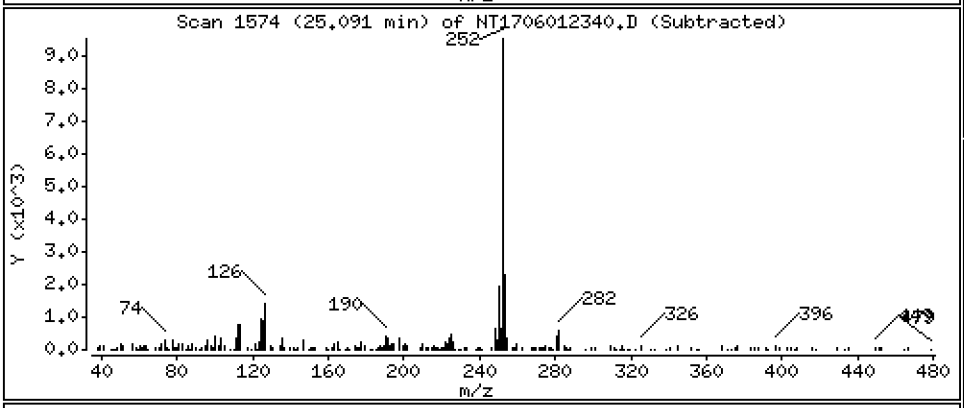
Column phase: ZB-5msi

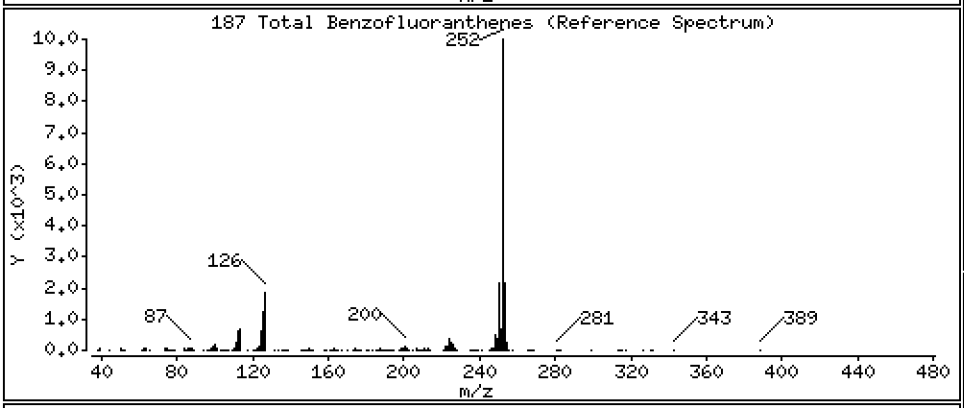
Column diameter: 0.25

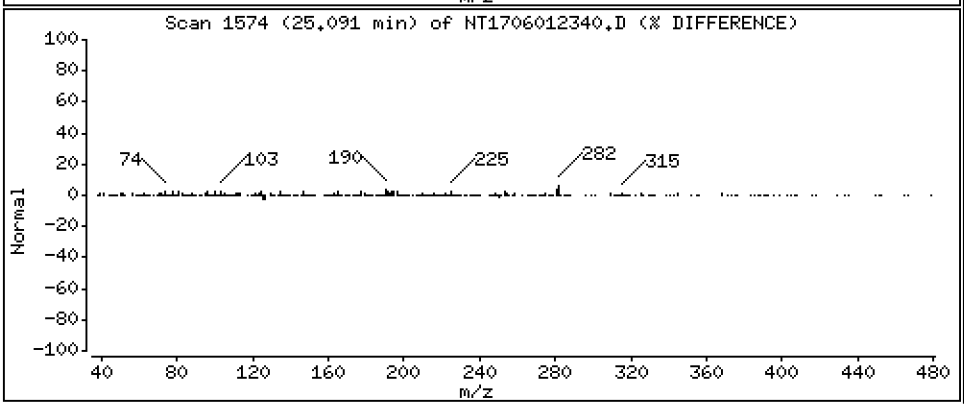
187 Total Benzofluoranthenes

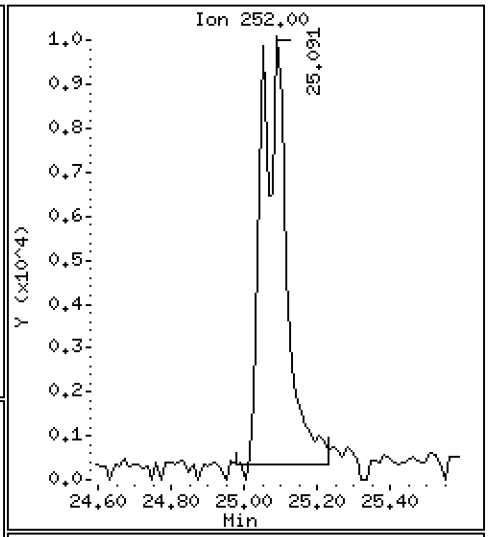
Concentration: 0.4040 ug/mL

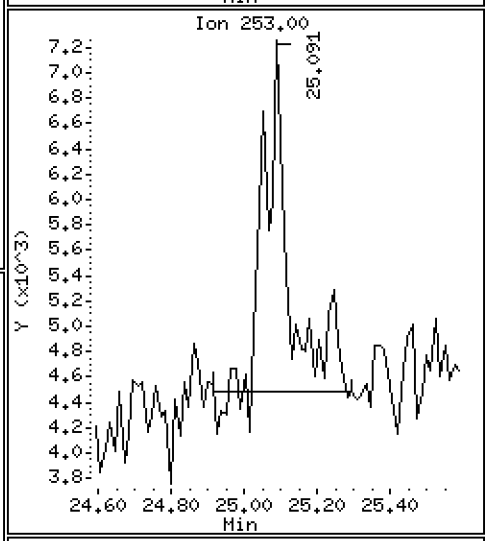


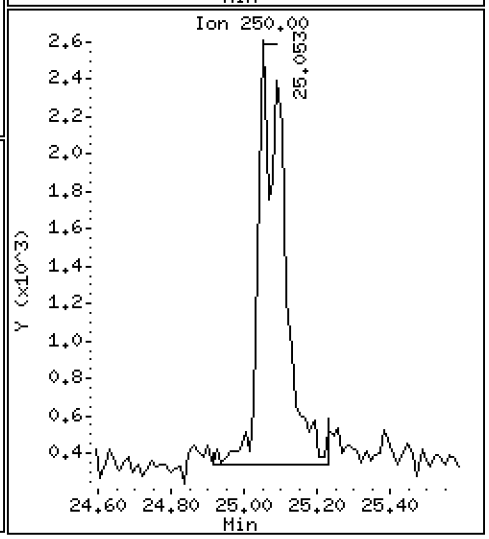












Data File: \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D

Date : 02-JUN-2023 12:16

Client ID:

Instrument: nt17.i

Sample Info: SLE0008-LCV3

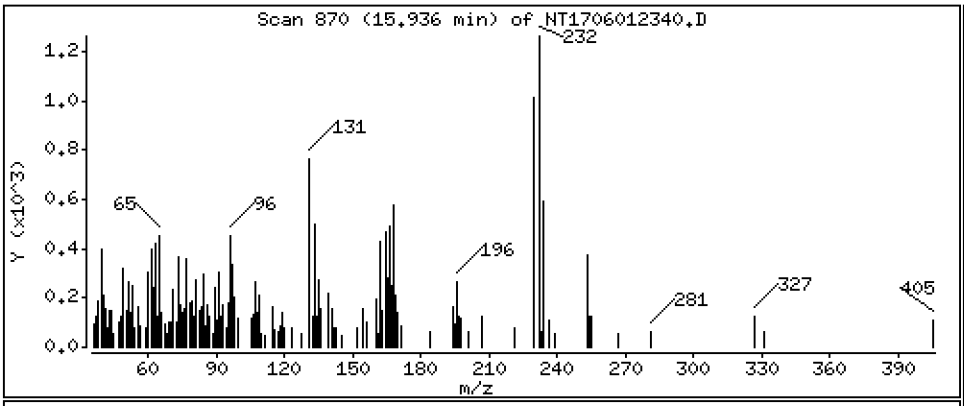
Operator: VTS

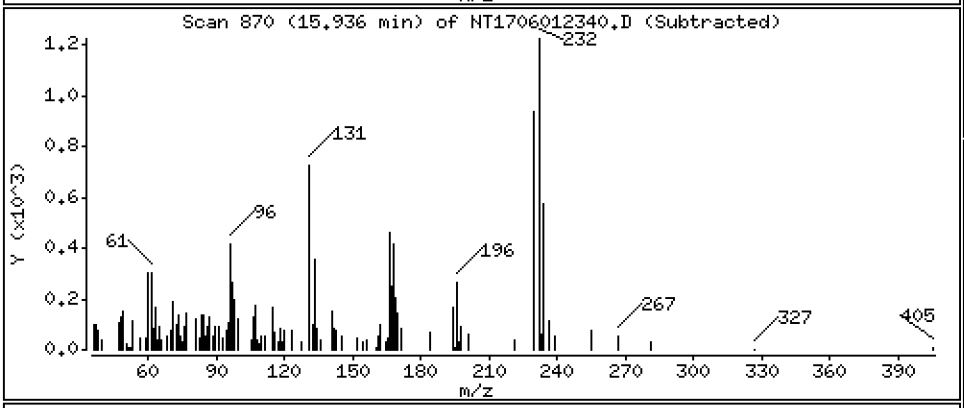
Column phase: ZB-5msi

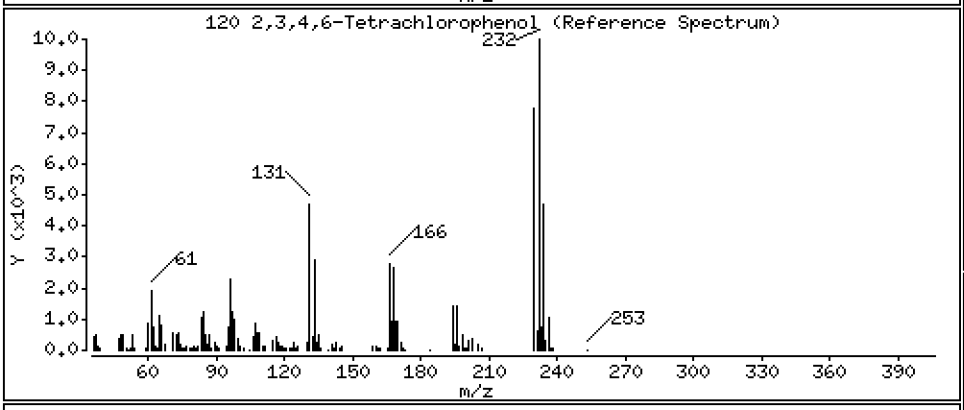
Column diameter: 0.25

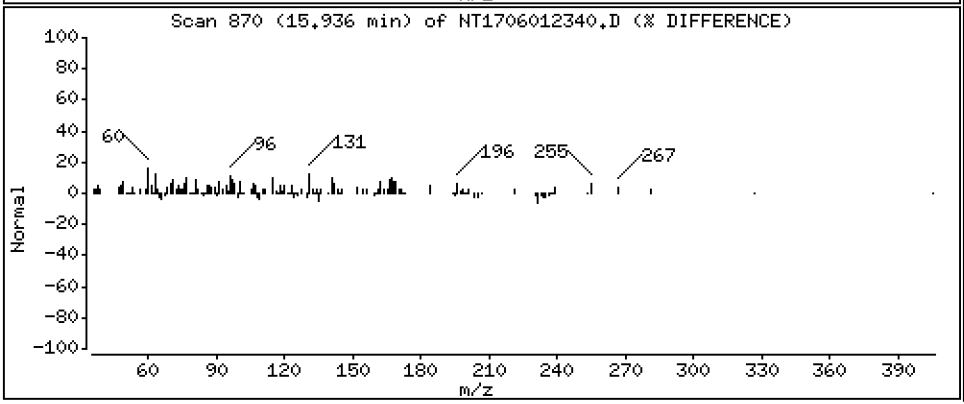
120 2,3,4,6-Tetrachlorophenol

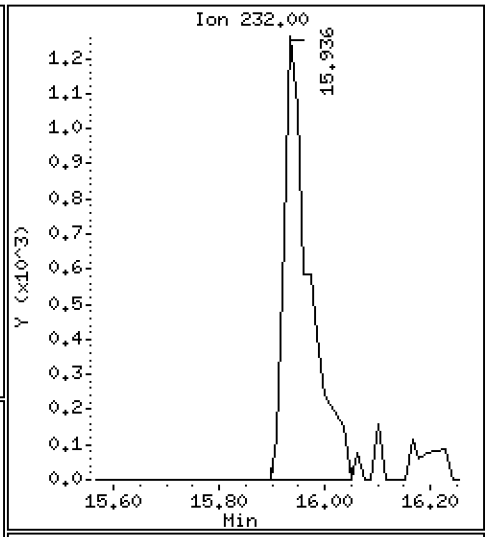
Concentration: 0.1198 ug/mL

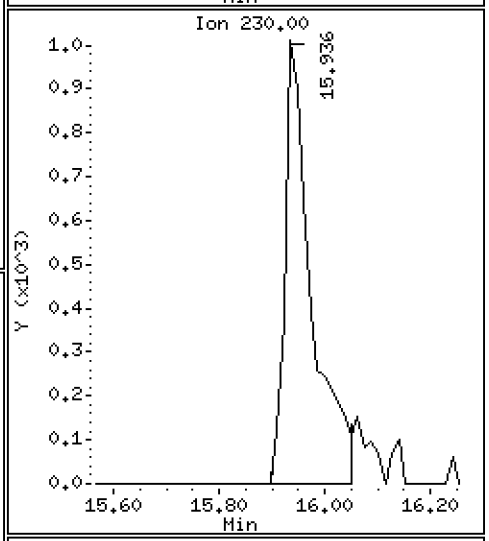


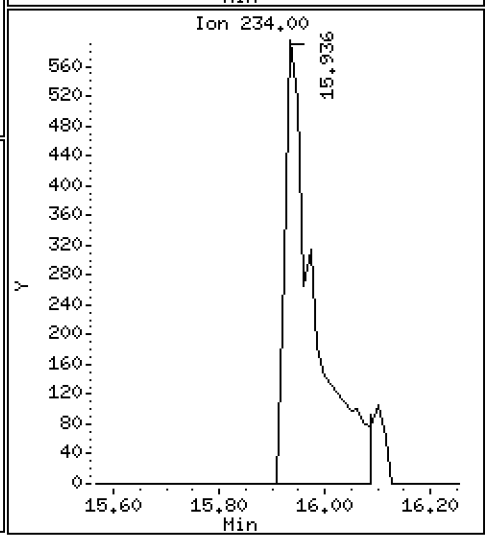












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt17.i\20230601.b\NT1706012340.D
Lab Smp Id: SLE0008-LCV3
Inj Date : 02-JUN-2023 12:16
Operator : VTS Inst ID: nt17.i
Smp Info : SLE0008-LCV3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt17.i\20230601.b\ABN.m
Meth Date : 03-Jun-2023 10:44 van Quant Type: ISTD
Cal Date : 16-MAY-2023 22:37 Cal File: NT1705162308.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

								CONCENTRATIONS	
		QUANT SIG						ON-COLUMN	FINAL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE		(ug/mL)	(ug/mL)
$	1 2-Fluorophenol	112	6.982	6.944	(0.764)	12854		0.19505	0.1950
$	2 Phenol-d5	99	8.536	8.511	(0.934)	19725		0.22617	0.2262
	3 Phenol	94	8.562	8.536	(0.937)	15506		0.16786	0.1679
$	5 2-Chlorophenol-d4	132	8.791	8.778	(0.962)	21900		0.31349	0.3135
	4 Bis(2-Chloroethyl)ether	93	8.689	8.689	(0.951)	16800		0.24947	0.2495
	6 2-Chlorophenol	128	8.817	8.804	(0.965)	16557		0.21463	0.2146
	7 1,3-Dichlorobenzene	146	9.072	9.072	(0.993)	16531		0.21174	0.2117
*	8 1,4-Dichlorobenzene-d4	152	9.136	9.136	(1.000)	201322		4.00000	
	9 1,4-Dichlorobenzene	146	9.161	9.161	(1.003)	15927		0.20455	0.2045
$	10 1,2-Dichlorobenzene-d4	152	9.493	9.493	(1.039)	10362		0.21103	0.2110
	12 1,2-Dichlorobenzene	146	9.519	9.519	(1.042)	15009		0.20505	0.2051
	11 Benzyl alcohol	108	9.544	9.417	(1.045)	3488		0.08110	0.08110
	14 2,2'-oxybis(1-Chloropropane)	121	9.698	9.698	(1.062)	4272		0.20706	0.2071
	13 2-Methylphenol	108	9.672	9.634	(1.059)	10494		0.15457	0.1546
	17 Hexachloroethane	117	10.094	10.094	(1.105)	6629		0.21283	0.2128
	16 N-Nitroso-di-n-propylamine	70	9.966	9.953	(1.091)	8961		0.17252	0.1725
	15 4-Methylphenol	108	9.953	9.902	(1.090)	7443		0.10767	0.1077(M)
$	18 Nitrobenzene-d5	82	10.234	10.222	(0.882)	15043		0.19057	0.1906
	19 Nitrobenzene	77	10.273	10.260	(0.886)	13833		0.18368	0.1837
	20 Isophorone	82	10.707	10.707	(0.923)	19124		0.18550	0.1855
	21 2-Nitrophenol	139	10.899	10.873	(0.940)	5380		0.14825	0.1482(M)
	22 2,4-Dimethylphenol	107	10.962	10.937	(0.945)	19784		0.28078	0.2808
	23 Bis(2-Chloroethoxy)methane	93	11.141	11.116	(0.960)	9736		0.15409	0.1541
	24 Benzoic acid	105	11.243	11.205	(0.969)	2386		0.05034	0.05034
	25 2,4-Dichlorophenol	162	11.435	11.333	(0.986)	10572		0.18672	0.1867
	26 1,2,4-Trichlorobenzene	180	11.511	11.511	(0.992)	12229		0.19887	0.1989
*	27 Naphthalene-d8	136	11.600	11.600	(1.000)	693572		4.00000	
	28 Naphthalene	128	11.638	11.638	(1.003)	38398		0.20132	0.2013
	29 4-Chloroaniline	127	11.829	11.766	(1.020)	9076		0.12072	0.1207
	30 Hexachlorobutadiene	225	11.995	11.995	(1.034)	6736		0.22114	0.2211
	31 4-Chloro-3-methylphenol	107	12.799	12.735	(1.103)	14350		0.23538	0.2354(M)
	32 2-Methylnaphthalene	142	13.028	13.015	(1.123)	23405		0.17139	0.1714
	33 Hexachlorocyclopentadiene	237	13.475	13.475	(0.887)	159		0.00547	0.005475

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.666	13.640	(0.900)	9192	0.28129	0.2813
	35 2,4,5-Trichlorophenol	196	13.793	13.730	(0.908)	13691	0.39576	0.3958(MH)
$	36 2-Fluorobiphenyl	172	13.806	13.793	(0.909)	26230	0.21318	0.2132
	37 2-Chloronaphthalene	162	14.023	14.010	(0.924)	18956	0.18990	0.1899
	38 2-Nitroaniline	65	14.329	14.278	(0.944)	10370	0.30675	0.3067
	39 Dimethylphthalate	163	14.699	14.686	(0.968)	19319	0.17977	0.1798
	40 Acenaphthylene	152	14.878	14.878	(0.980)	33630	0.21215	0.2122
	41 2,6-Dinitrotoluene	165	14.852	14.839	(0.978)	7783	0.30934	0.3093
*	42 Acenaphthene-d10	164	15.184	15.184	(1.000)	312332	4.00000	
	43 3-Nitroaniline	138	15.222	15.133	(1.003)	7791	0.33433	0.3343(M)
	44 Acenaphthene	153	15.247	15.247	(1.004)	19928	0.20111	0.2011
	45 2,4-Dinitrophenol	184	15.566	15.336	(1.025)	2622	0.17289	0.1729(M)
	46 Dibenzofuran	168	15.591	15.579	(1.027)	28379	0.20520	0.2052
	47 4-Nitrophenol	109	15.719	15.464	(1.035)	1680	0.10854	0.1085(M)
	48 2,4-Dinitrotoluene	165	15.668	15.642	(1.032)	8265	0.25094	0.2509
	50 Diethylphthalate	149	16.139	16.139	(1.063)	23663	0.22578	0.2258
	49 Fluorene	166	16.292	16.280	(1.073)	21263	0.16172	0.1617
	51 4-Chlorophenyl-phenylether	204	16.280	16.267	(1.072)	10610	0.17552	0.1755
	52 4-Nitroaniline	138	16.509	16.420	(1.087)	11642	0.52781	0.5278(M)
	53 4,6-Dinitro-2-methylphenol	198	16.509	16.483	(0.907)	5770	0.24329	0.2433
	54 N-Nitrosodiphenylamine	169	16.534	16.521	(0.908)	16656	0.20007	0.2001
$	55 2,4,6-Tribromophenol	330	16.839	16.814	(1.109)	3478	0.25529	0.2553
	56 4-Bromophenyl-phenylether	248	17.272	17.259	(0.949)	5692	0.19514	0.1951
	57 Hexachlorobenzene	284	17.578	17.578	(0.966)	6468	0.21762	0.2176
	58 Pentachlorophenol	266	17.973	17.948	(0.987)	3808	0.22099	0.2210(M)
*	59 Phenanthrene-d10	188	18.203	18.203	(1.000)	594291	4.00000	
	60 Phenanthrene	178	18.254	18.254	(1.003)	31879	0.18384	0.1838
	61 Anthracene	178	18.343	18.343	(1.008)	27431	0.16849	0.1685
	62 Carbazole	167	18.713	18.688	(1.028)	28164	0.28541	0.2854
	63 Di-n-butylphthalate	149	19.453	19.453	(1.069)	35916	0.18270	0.1827
	64 Fluoranthene	202	20.626	20.613	(0.888)	34022	0.19711	0.1971
	65 Pyrene	202	21.047	21.047	(0.907)	34597	0.19773	0.1977
$	66 Terphenyl-d14	244	21.327	21.314	(0.919)	26528	0.21327	0.2133
	67 Butylbenzylphthalate	149	22.233	22.233	(0.958)	15563	0.19873	0.1987
	68 Benzo(a)anthracene	228	23.190	23.190	(0.999)	27491	0.20233	0.2023
*	69 Chrysene-d12	240	23.215	23.215	(1.000)	368988	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.177	23.152	(0.998)	24218	0.92038	0.9204
	71 Chrysene	228	23.254	23.254	(1.002)	28618	0.22383	0.2238
	72 bis(2-Ethylhexyl)phthalate	149	23.241	23.254	(0.959)	22156	0.23252	0.2325
*	134 Di-n-octylphthalate-d4	153	24.223	24.223	(1.000)	658589	4.00000	
	73 Di-n-octylphthalate	149	24.236	24.236	(1.001)	37912	0.22710	0.2271
	74 Benzo(b)fluoranthene	252	25.052	25.052	(0.971)	19493	0.15309	0.1531
	75 Benzo(k)fluoranthene	252	25.090	25.090	(0.972)	28626	0.23795	0.2379
	76 Benzo(a)pyrene	252	25.690	25.690	(0.996)	17816	0.17762	0.1776
*	77 Perylene-d12	264	25.805	25.805	(1.000)	321164	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.474	28.423	(1.103)	13257	0.11394	0.1139
	79 Dibenzo(a,h)anthracene	278	28.500	28.436	(1.104)	12101	0.12393	0.1239
	80 Benzo(g,h,i)perylene	276	29.241	29.203	(1.133)	12636	0.13158	0.1316
	90 N-Nitrosodimethylamine	74	4.880	4.867	(0.534)	14662	0.33353	0.3335
	91 Aniline	93	8.626	8.600	(0.944)	15717	0.20303	0.2030
	93 Benzidine	184	20.957	20.868	(0.903)	11488	0.26833	0.2683(M)
	103 Pyridine	79	4.944	4.893	(0.541)	21086	0.30241	0.3024
	105 1-methylnaphthalene	142	13.245	13.245	(1.142)	22045	0.17401	0.1740
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.598	16.585	(1.093)	18272	0.14936	0.1494

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.090	25.090	(0.972)	46182	0.40403	0.4040
120 2,3,4,6-Tetrachlorophenol	232	15.935	15.910	(1.050)	4686	0.11985	0.1198

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012340.D
Lab Smp Id: SLE0008-LCV3
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\ABN.m
Misc Info:

Calibration Date: 02-JUN-2023
Calibration Time: 11:02
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223423	111712	446846	201322	-9.89
27 Naphthalene-d8	810178	405089	1620356	693572	-14.39
42 Acenaphthene-d10	450990	225495	901980	312332	-30.75
59 Phenanthrene-d10	792538	396269	1585076	594291	-25.01
69 Chrysene-d12	499734	249867	999468	368988	-26.16
134 Di-n-octylphthala	1036983	518492	2073966	658589	-36.49
77 Perylene-d12	439413	219707	878826	321164	-26.91

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.14	8.64	9.64	9.14	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.18	14.68	15.68	15.18	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.22	22.72	23.72	23.22	-0.00
134 Di-n-octylphthala	24.22	23.72	24.72	24.22	-0.00
77 Perylene-d12	25.81	25.31	26.31	25.81	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012340.D

Lab ID: SLE0008-LCV3
nt17.i, ABN.m, 02-JUN-2023 12:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.045	1.031	0.0140	Benzyl alcohol
1.089	1.084	0.0056	4-Methylphenol
0.986	0.977	0.0088	2,4-Dichlorophenol
1.020	1.014	0.0055	4-Chloroaniline
1.103	1.098	0.0055	4-Chloro-3-methylphenol
1.003	0.997	0.0059	3-Nitroaniline
1.025	1.010	0.0151	2,4-Dinitrophenol
1.035	1.018	0.0168	4-Nitrophenol
1.087	1.081	0.0059	4-Nitroaniline
0.541	0.536	0.0056	Pyridine

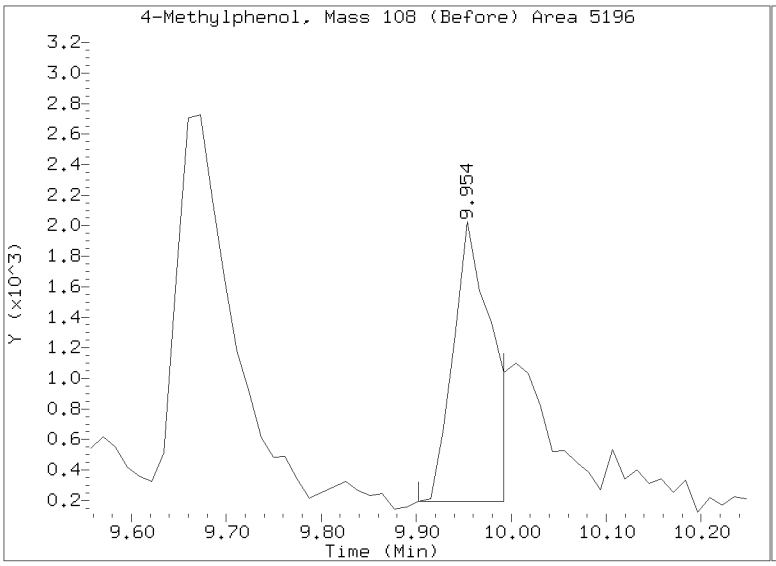
RRT check based on Ccal File: NT1706012338.D

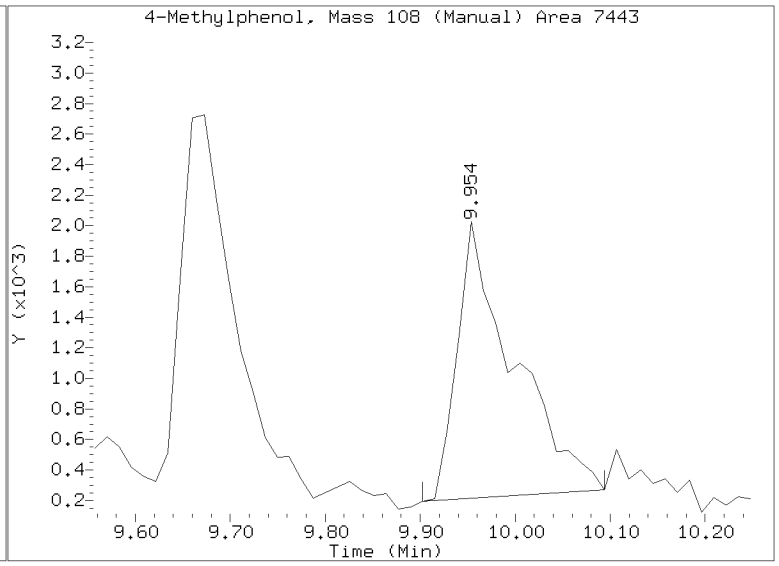
On Column LOD for nt17.i, ABN.m, ICAL.sub = 0.0000

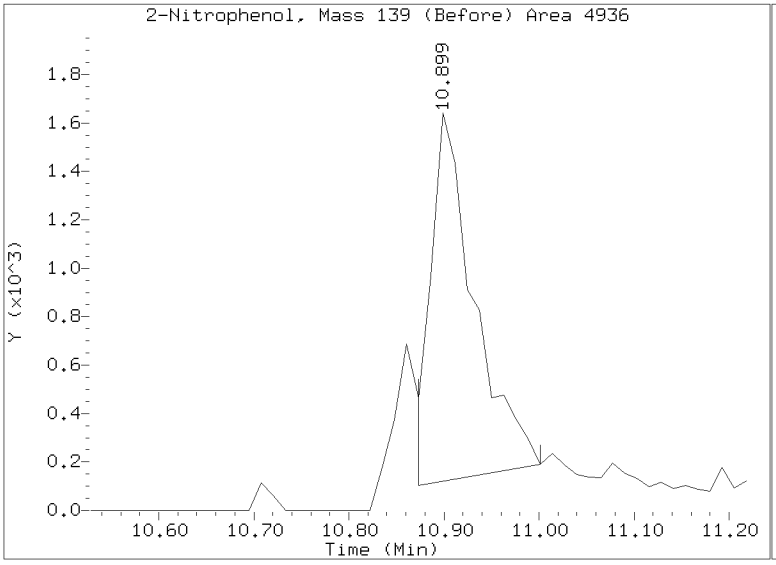
* Only compounds listed in the work order have been verified by the analyst *

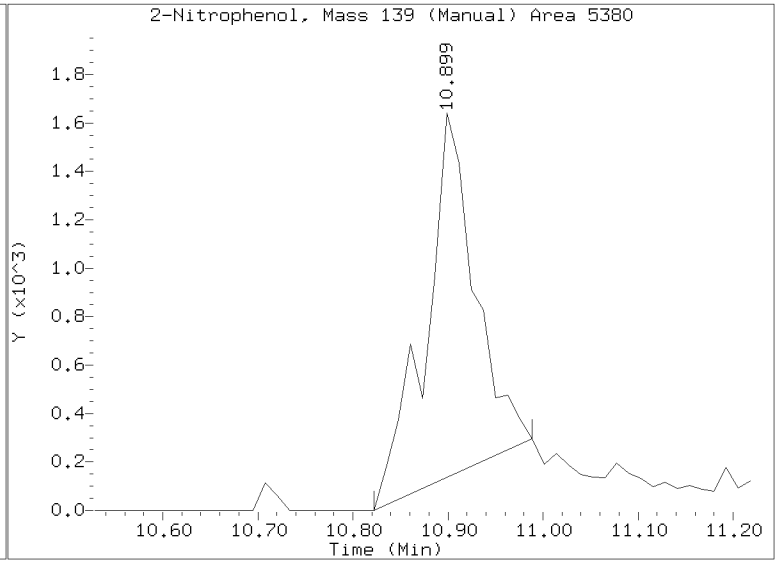
Quant Ion Manual Peak Adjustment Report

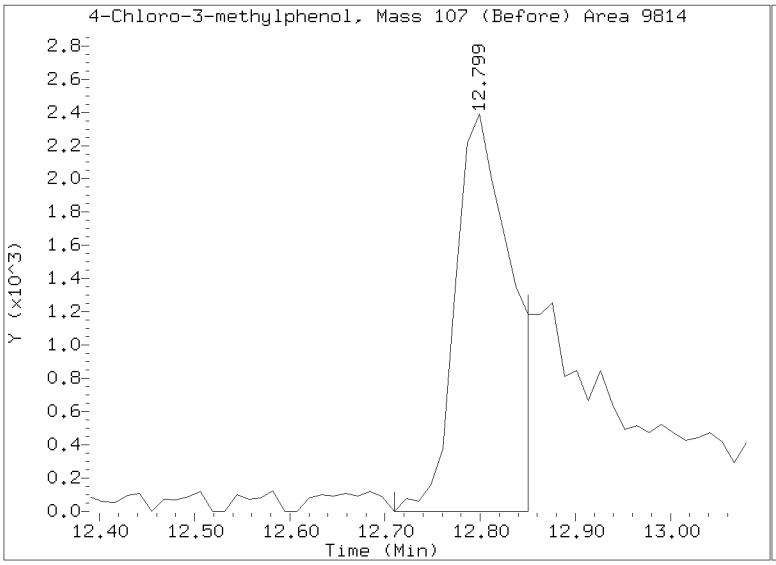
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012340.D
Injection Date: 02-JUN-2023 12:16
Lab ID:SLE0008-LCV3 Client ID:
Report Date: 06/03/2023 10:44

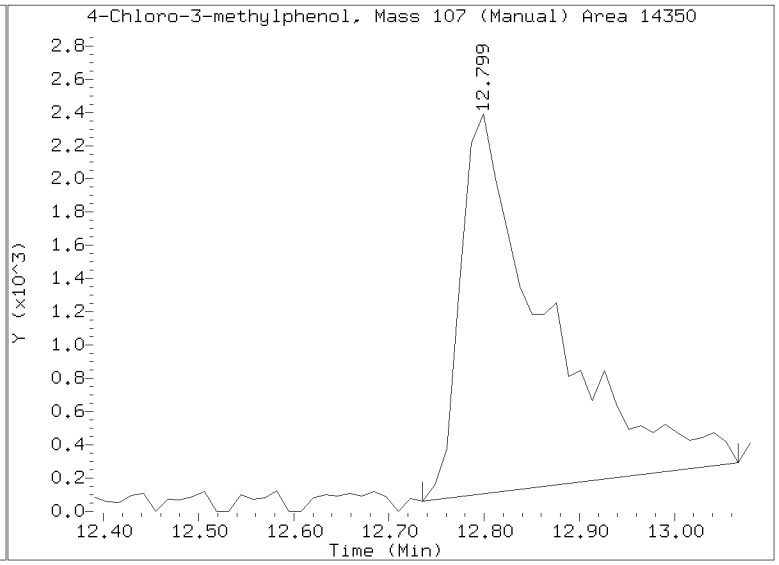






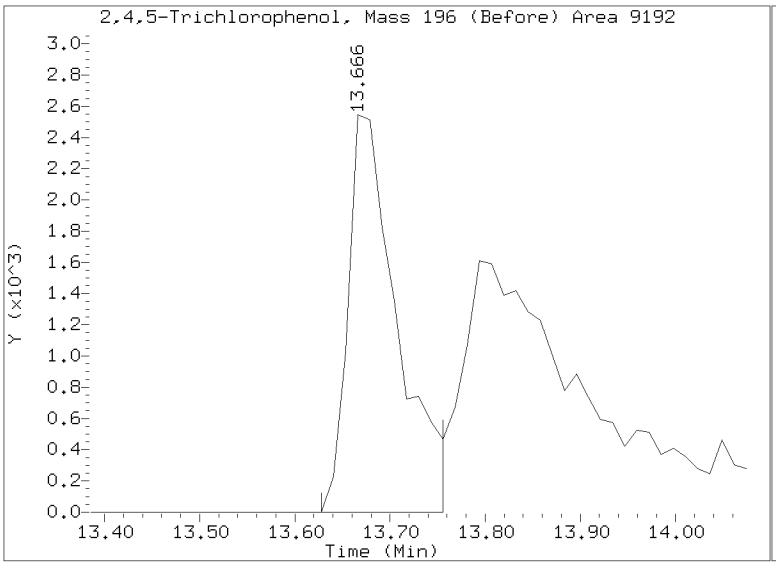


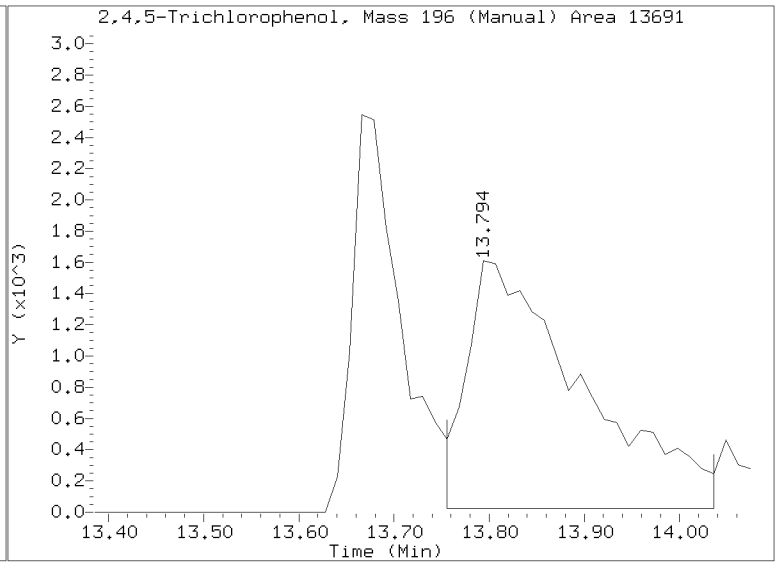


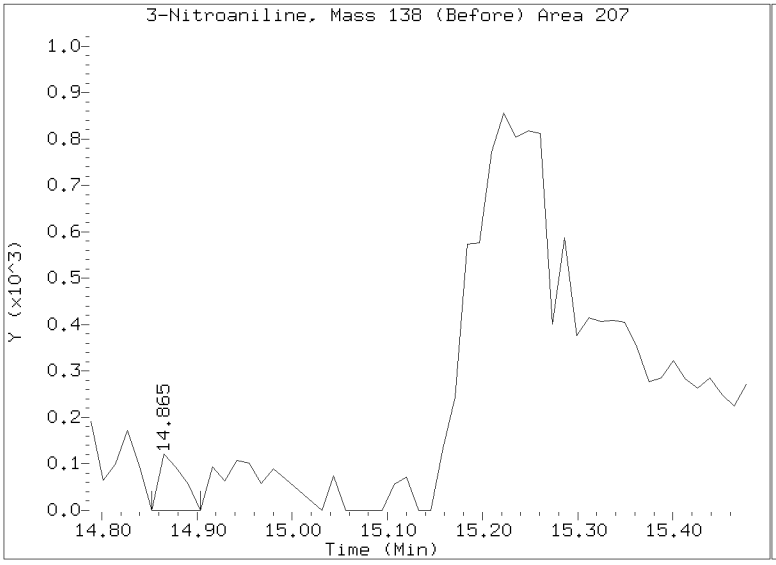


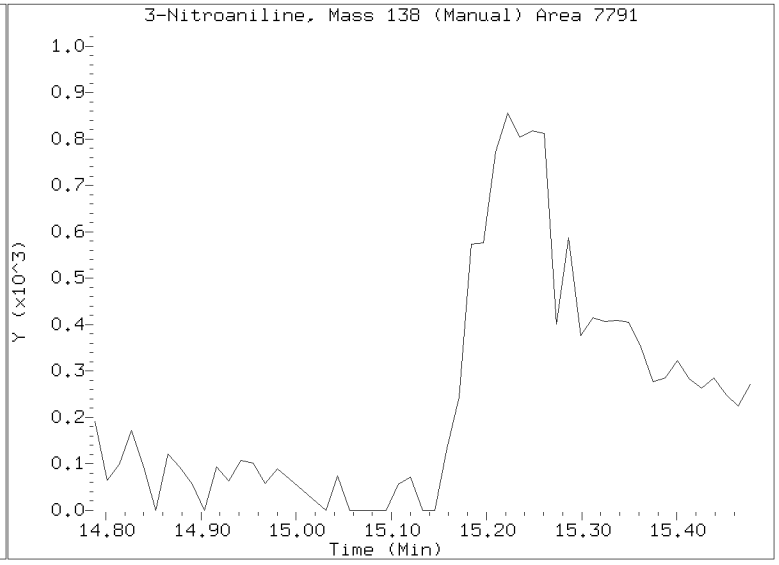
Quant Ion Manual Peak Adjustment Report

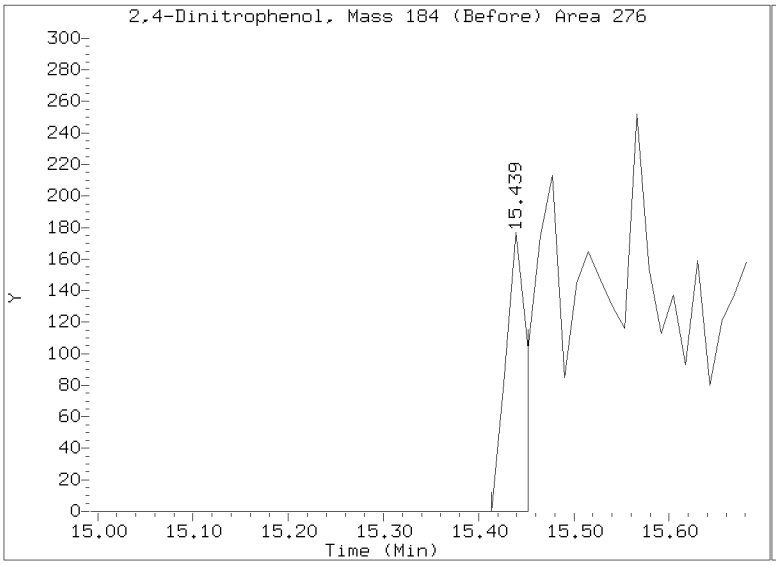
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012340.D
Injection Date: 02-JUN-2023 12:16
Lab ID:SLE0008-LCV3 Client ID:
Report Date: 06/03/2023 10:44

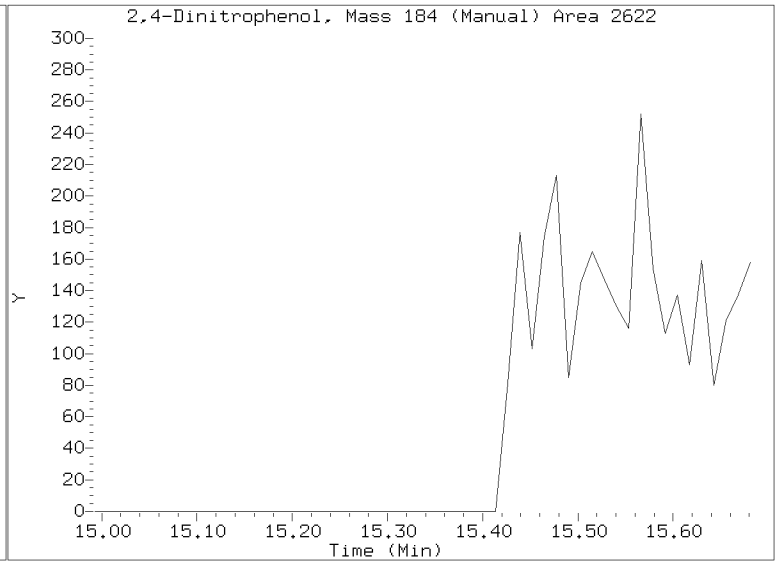






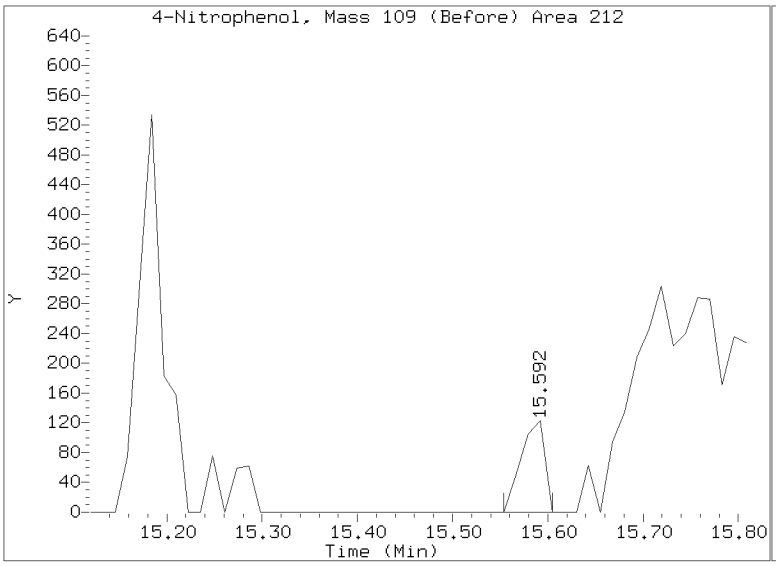


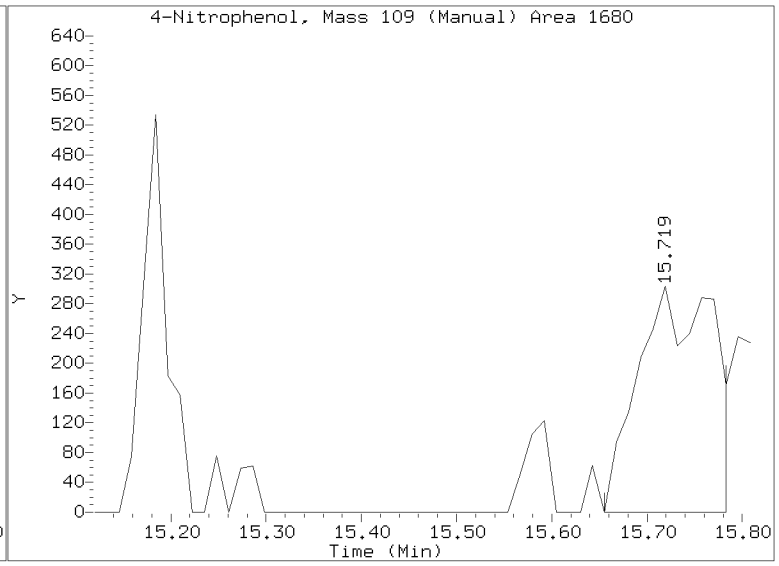


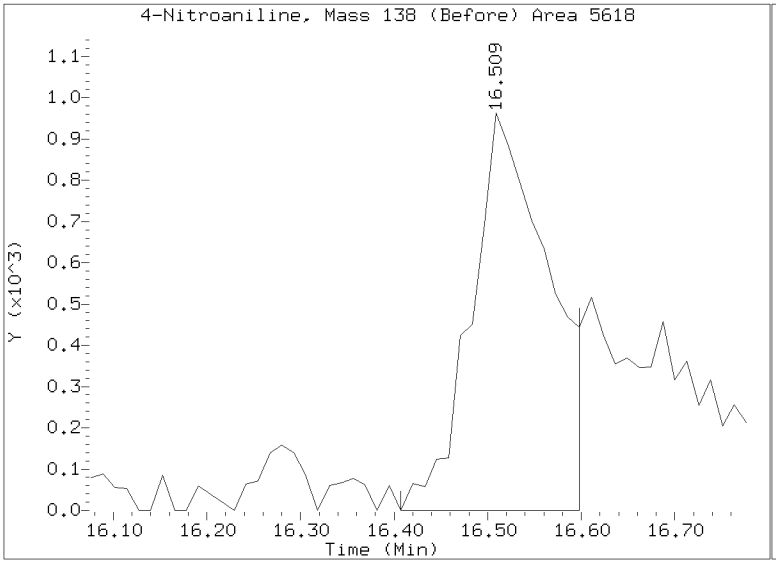


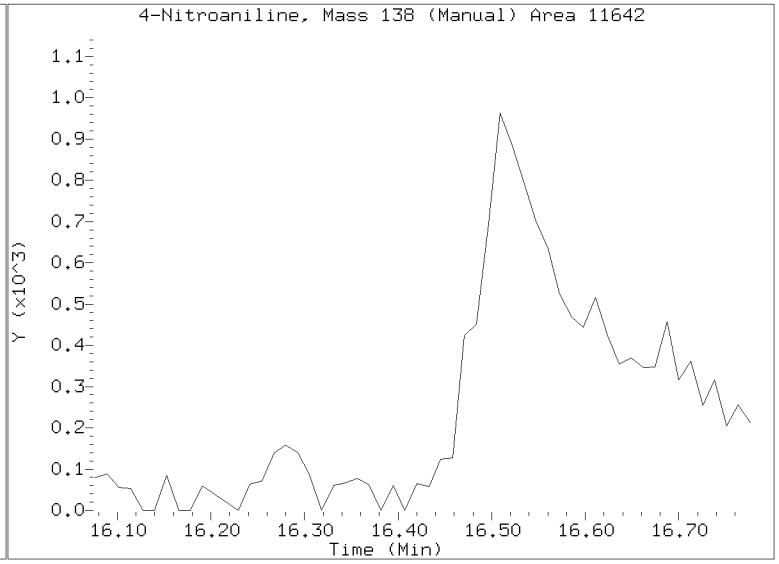
Quant Ion Manual Peak Adjustment Report

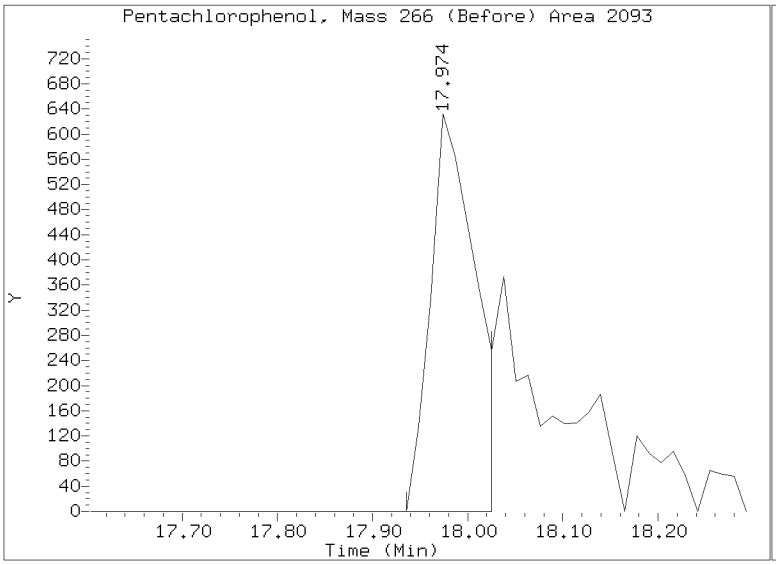
Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012340.D
Injection Date: 02-JUN-2023 12:16
Lab ID:SLE0008-LCV3 Client ID:
Report Date: 06/03/2023 10:44

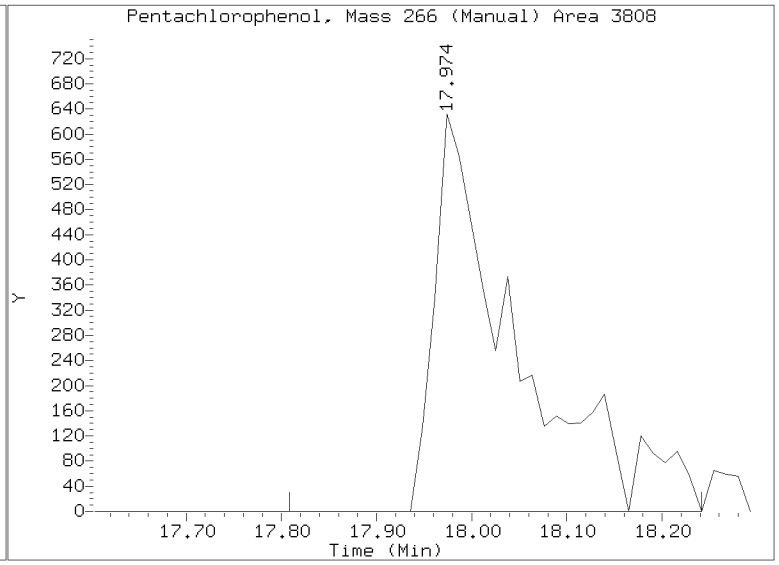






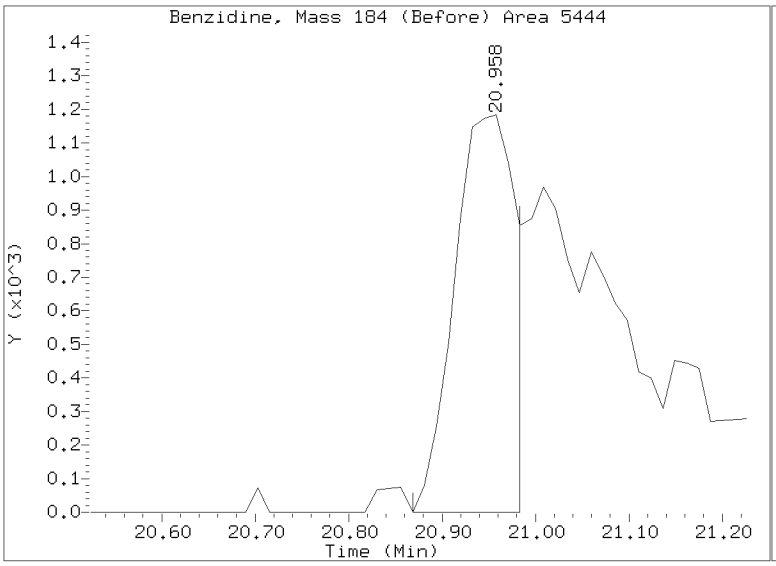


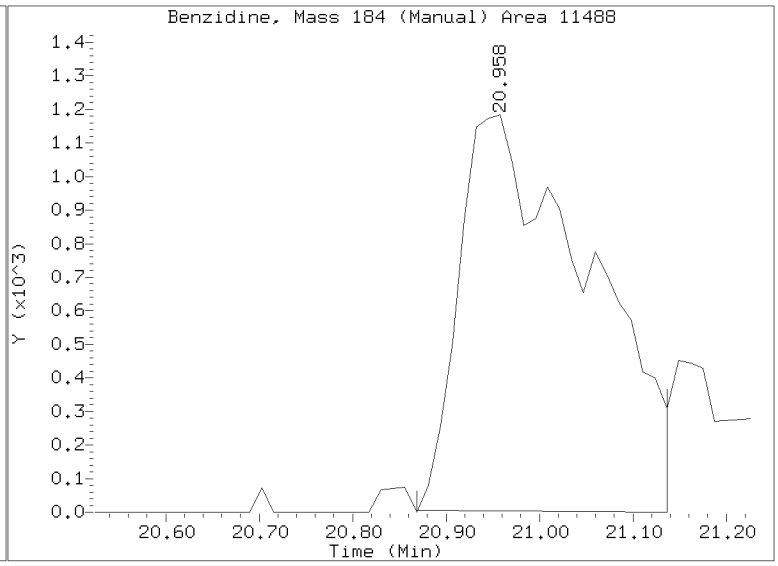




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/NT1706012340.D
Injection Date: 02-JUN-2023 12:16
Lab ID:SLE0008-LCV3 Client ID:
Report Date: 06/03/2023 10:44





Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0338	Instrument:	NT17
		Calibration:	GE00065

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLE0338-TUN1	NT1705162301.D	NA	05/16/23 18:14
ABN 20	SLE0338-CAL7	NT1705162302.D	NA	05/16/23 18:52
ABN 10	SLE0338-CAL6	NT1705162303.D	NA	05/16/23 19:29
ABN 5	SLE0338-CAL5	NT1705162304.D	NA	05/16/23 20:07
ABN 2.5	SLE0338-CAL4	NT1705162305.D	NA	05/16/23 20:44
ABN 1.0	SLE0338-CAL3	NT1705162306.D	NA	05/16/23 21:22
ABN 0.5	SLE0338-CAL2	NT1705162307.D	NA	05/16/23 21:59
ABN 0.2	SLE0338-CAL1	NT1705162308.D	NA	05/16/23 22:37
SCV 5.0	SLE0338-SCV1	NT1705162311.D	NA	05/17/23 00:29
Initial Cal Blank	SLE0338-ICB1	NT1705162312.D	NA	05/17/23 01:07

Printed: 5/20/2023 1:31:24PM

ANALYSIS SEQUENCE

SLE0338

Instrument ID: NT17
Calibration ID: GE00065
MS EM Level: 1450 EV

GCMS Description: Agilent 7890B/5977B
GCMS Column ID: L004289

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0338-TUN1	MS Tune	QC		1	L005045		05/16/2023 18:14	NT1705162301.D	VTS	
SLE0338-CAL7	ABN 20	QC		2	K011111	K010831	05/16/2023 18:52	NT1705162302.D	JGR	
SLE0338-CAL6	ABN 10	QC		3	K011110	K010831	05/16/2023 19:29	NT1705162303.D	JGR	
SLE0338-CAL5	ABN 5	QC		4	K011109	K010831	05/16/2023 20:07	NT1705162304.D	JGR	
SLE0338-CAL4	ABN 2.5	QC		5	K011108	K010831	05/16/2023 20:44	NT1705162305.D	JGR	
SLE0338-CAL3	ABN 1.0	QC		6	K011107	K010831	05/16/2023 21:22	NT1705162306.D	JGR	
SLE0338-CAL2	ABN 0.5	QC		7	K011106	K010831	05/16/2023 21:59	NT1705162307.D	JGR	
SLE0338-CAL1	ABN 0.2	QC		8	K011105	K010831	05/16/2023 22:37	NT1705162308.D	JGR	
SLE0338-SCV1	SCV 5.0	QC		9	K010066	K010831	05/17/2023 00:29	NT1705162311.D	JGR	
SLE0338-ICB1	Initial Cal Blank	QC		10	K005156	K010831	05/17/2023 01:07	NT1705162312.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230516.b

	Time	Filename	LabID	ClientId	DF																	
1	1814	NT1705162301.D	SLE0338-TUN1		1	|NO ISTDS FOUND||																
2	1852	NT1705162302.D	SLE0338-CAL7		1	| 9.38	262646	||11.84	972245	||15.44	531394	||18.47	858760	||23.47	584767	||26.16	454990	||24.47	1150423 |
3	1929	NT1705162303.D	SLE0338-CAL6		1	| 9.37	285800	||11.84	1067038	||15.44	581019	||18.47	929294	||23.46	582943	||26.16	481255	||24.47	1171304 |
4	2007	NT1705162304.D	SLE0338-CAL5		1	| 9.37	287078	||11.84	1056758	||15.44	587510	||18.46	933575	||23.46	576570	||26.15	491359	||24.47	1181651 |
5	2044	NT1705162305.D	SLE0338-CAL4		1	| 9.37	294275	||11.84	1079321	||15.44	588382	||18.46	983826	||23.46	618048	||26.15	536896	||24.47	1230644 |
6	2122	NT1705162306.D	SLE0338-CAL3		1	| 9.37	291199	||11.84	1069618	||15.44	576693	||18.46	946973	||23.46	570480	||26.15	514255	||24.47	1138779 |
7	2159	NT1705162307.D	SLE0338-CAL2		1	| 9.37	324107	||11.84	1038534	||15.44	548179	||18.46	888076	||23.45	524160	||26.15	482063	||24.45	1033662 |
8	2237	NT1705162308.D	SLE0338-CAL1		1	| 9.37	341484	||11.83	1094850	||15.43	579868	||18.46	948879	||23.45	564132	||26.15	504570	||24.47	1101082 |
9	2314	NT1705162309.D	SIM0.1		1	| 9.37	321301	||11.83	1156521	||15.44	625574	||18.46	1065678	||23.45	676035	||26.15	620220	||24.45	1323254 |
10	2351	NT1705162310.D	SIM 0.5		1	| 9.37	332506	||11.83	1064302	||15.43	556553	||18.46	907034	||23.45	531815	||26.15	492679	||24.45	1051214 |
11	0029	NT1705162311.D	SLE0338-SCV1		1	| 9.37	265705	||11.84	965231	||15.44	512787	||18.46	850147	||23.46	511511	||26.15	456008	||24.47	1044471 |
12	0107	NT1705162312.D	SLE0338-ICB1		1	| 9.37	287620	||11.83	1041050	||15.44	539097	||18.46	886060	||23.45	518615	||26.15	487385	||24.45	1011857 |

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230516.b

Instrument: nt17.i Date: 16-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1814	NT1705162301.D	SLE0338-TUN1	1	NO MANUAL INTEGRATION
1852	NT1705162302.D	SLE0338-CAL7	1	Benzoic acid, 2-Fluorophenol,
1929	NT1705162303.D	SLE0338-CAL6	1	Benzoic acid,
2007	NT1705162304.D	SLE0338-CAL5	1	NO MANUAL INTEGRATION
2044	NT1705162305.D	SLE0338-CAL4	1	Benzoic acid,
2122	NT1705162306.D	SLE0338-CAL3	1	NO MANUAL INTEGRATION
2159	NT1705162307.D	SLE0338-CAL2	1	NO MANUAL INTEGRATION
2237	NT1705162308.D	SLE0338-CAL1	1	Benzoic acid,
2314	NT1705162309.D	SIM0.1	1	Benzo(k)fluoranthene,
2351	NT1705162310.D	SIM 0.5	1	NO MANUAL INTEGRATION
0029	NT1705162311.D	SLE0338-SCV1	1	NO MANUAL INTEGRATION
0107	NT1705162312.D	SLE0338-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 20-May-2023 13:32

NT1705162301.D	Data Locked	van, 20-May-2023 13:32
NT1705162302.D	Data Locked	van, 20-May-2023 13:32
NT1705162303.D	Data Locked	van, 20-May-2023 13:32
NT1705162304.D	Data Locked	van, 20-May-2023 13:32
NT1705162305.D	Data Locked	van, 20-May-2023 13:32
NT1705162306.D	Data Locked	van, 20-May-2023 13:32
NT1705162307.D	Data Locked	van, 20-May-2023 13:32
NT1705162308.D	Data Locked	van, 20-May-2023 13:32
NT1705162309.D	Data Locked	van, 20-May-2023 13:32
NT1705162310.D	Data Locked	van, 20-May-2023 13:32
NT1705162311.D	Data Locked	van, 20-May-2023 13:32
NT1705162312.D	Data Locked	van, 20-May-2023 13:32

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0008	Instrument:	NT17
		Calibration:	GE00065

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLF0008-TUN1	NT1706012303.D	NA	06/01/23 13:41
ABN 5	SLF0008-ICV1	NT1706012304.D	NA	06/01/23 13:58
ABN 0.2	SLF0008-LCV1	NT1706012306.D	NA	06/01/23 15:12
ZZZZZ	BLE0084-BLK1	NT1706012308.D	Solid	06/01/23 16:27
ZZZZZ	BLE0084-BS1	NT1706012309.D	Solid	06/01/23 17:04
ZZZZZ	BLE0084-BSD1	NT1706012310.D	Solid	06/01/23 17:41
ZZZZZ	BLE0084-MS1	NT1706012311.D	Solid	06/01/23 18:18
ZZZZZ	BLE0084-MSD1	NT1706012312.D	Solid	06/01/23 18:56
ZZZZZ	23D0682-01	NT1706012313.D	Solid	06/01/23 19:33
ZZZZZ	23D0682-02	NT1706012314.D	Solid	06/01/23 20:09
ZZZZZ	23D0682-03	NT1706012315.D	Solid	06/01/23 20:46
ZZZZZ	23D0682-04	NT1706012316.D	Solid	06/01/23 21:23
ZZZZZ	23D0682-05	NT1706012317.D	Solid	06/01/23 22:00
ZZZZZ	23D0682-06	NT1706012318.D	Solid	06/01/23 22:38
ZZZZZ	23D0682-07	NT1706012319.D	Solid	06/01/23 23:15
ABN 5	SLF0008-ICV2	NT1706012320.D	NA	06/01/23 23:52
ABN 0.2	SLF0008-LCV2	NT1706012322.D	NA	06/02/23 01:06
ZZZZZ	23D0682-08	NT1706012324.D	Solid	06/02/23 02:20
Blank	BLE0148-BLK1	NT1706012325.D	Solid	06/02/23 02:57
LCS	BLE0148-BS1	NT1706012326.D	Solid	06/02/23 03:34
LCS Dup	BLE0148-BSD1	NT1706012327.D	Solid	06/02/23 04:11
LDW23-SS1805	BLE0148-MS1	NT1706012328.D	Solid	06/02/23 04:48
LDW23-SS1805	BLE0148-MSD1	NT1706012329.D	Solid	06/02/23 05:25
Reference	BLE0148-SRM1	NT1706012330.D	Solid	06/02/23 06:02
ZZZZZ	23D0394-07	NT1706012331.D	Solid	06/02/23 06:40
ZZZZZ	23D0394-13	NT1706012332.D	Solid	06/02/23 07:17
LDW23-SS1811	23E0009-01	NT1706012333.D	Solid	06/02/23 07:54
LDW23-SS1805	23E0009-03	NT1706012334.D	Solid	06/02/23 08:32
LDW23-SS1800	23E0009-05	NT1706012335.D	Solid	06/02/23 09:09

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0008	Instrument:	NT17
		Calibration:	GE00065

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1820	23E0009-07	NT1706012336.D	Solid	06/02/23 09:47
ABN 5	SLF0008-ICV3	NT1706012338.D	NA	06/02/23 11:02
ABN 0.2	SLF0008-LCV3	NT1706012340.D	NA	06/02/23 12:16
ZZZZZ	BLE0309-BLK1	NT1706012342.D	Solid	06/02/23 13:30
ZZZZZ	BLE0309-BS1	NT1706012343.D	Solid	06/02/23 14:08
ZZZZZ	23D0620-02	NT1706012344.D	Solid	06/02/23 14:45
ABN 5	SLF0008-CCV1	NT1706012345.D	NA	06/02/23 15:22

ANALYSIS SEQUENCE

SLF0008

Instrument ID: NT17
Calibration ID: GE00065
MS EM Level: 1525 EV

GCMS Description: Agilent 7890B/5977B
GCMS Column ID: L004289

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLF0008-TUN1	MS Tune	QC		1	L005045		06/01/2023 13:41	NT1706012303.D	VTS	
SLF0008-ICV1	ABN 5	QC		2	L005950	L001570	06/01/2023 13:58	NT1706012304.D	VTS	
SLF0008-LCV1	ABN 0.2	QC		3	L005946	L001570	06/01/2023 15:12	NT1706012306.D	VTS	
BLE0084-BLK1	Blank	QC		4		L001570	06/01/2023 16:27	NT1706012308.D	VTS	
BLE0084-BS1	LCS	QC		5		L001570	06/01/2023 17:04	NT1706012309.D	VTS	
BLE0084-BSD1	LCS Dup	QC		6		L001570	06/01/2023 17:41	NT1706012310.D	VTS	
BLE0084-MS1	Matrix Spike	QC		7		L001570	06/01/2023 18:18	NT1706012311.D	VTS	
BLE0084-MSD1	Matrix Spike Dup	QC		8		L001570	06/01/2023 18:56	NT1706012312.D	VTS	
23D0682-01	WSM-SG-08-0-1-230424	(20ug/kg solid or 0.2ug/L l	A 04	9		L001570	06/01/2023 19:33	NT1706012313.D	VTS	
23D0682-02	WSM-SG-08-1-2-230424	(20ug/kg solid or 0.2ug/L l	A 03	10		L001570	06/01/2023 20:09	NT1706012314.D	VTS	
23D0682-03	WSM-SG-09-0-1-230424	(20ug/kg solid or 0.2ug/L l	A 03	11		L001570	06/01/2023 20:46	NT1706012315.D	VTS	
23D0682-04	WSM-SG-09-1-2-230424	(20ug/kg solid or 0.2ug/L l	A 03	12		L001570	06/01/2023 21:23	NT1706012316.D	VTS	
23D0682-05	WSM-SG-10-0-1-230426	(20ug/kg solid or 0.2ug/L l	A 03	13		L001570	06/01/2023 22:00	NT1706012317.D	VTS	
23D0682-06	WSM-SG-10-1-2-230426	(20ug/kg solid or 0.2ug/L l	A 03	14		L001570	06/01/2023 22:38	NT1706012318.D	VTS	
23D0682-07	WSM-SG-11-0-1-230426	(20ug/kg solid or 0.2ug/L l	A 03	15		L001570	06/01/2023 23:15	NT1706012319.D	VTS	
SLF0008-ICV2	ABN 5	QC		16	L005950	L001570	06/01/2023 23:52	NT1706012320.D	VTS	
SLF0008-LCV2	ABN 0.2	QC		17	L005946	L001570	06/02/2023 01:06	NT1706012322.D	VTS	
23D0682-08	WSM-SG-11-1-2-230426	(20ug/kg solid or 0.2ug/L l	A 03	18		L001570	06/02/2023 02:20	NT1706012324.D	VTS	
BLE0148-BLK1	Blank	QC		19		L001570	06/02/2023 02:57	NT1706012325.D	VTS	
BLE0148-BS1	LCS	QC		20		L001570	06/02/2023 03:34	NT1706012326.D	VTS	
BLE0148-BSD1	LCS Dup	QC		21		L001570	06/02/2023 04:11	NT1706012327.D	VTS	
BLE0148-MS1	Matrix Spike	QC		22		L001570	06/02/2023 04:48	NT1706012328.D	VTS	

ANALYSIS SEQUENCE

SLF0008

Instrument ID: NT17
Calibration ID: GE00065
MS EM Level: 1525 EV

GCMS Description: Agilent 7890B/5977B
GCMS Column ID: L004289

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
BLE0148-MSD1	Matrix Spike Dup	QC		23		L001570	06/02/2023 05:25	NT1706012329.D	VTS	
BLE0148-SRM1	Reference	QC		24		L001570	06/02/2023 06:02	NT1706012330.D	VTS	
23D0394-07	LDW23-IT1087	(20ug/kg solid or 0.2ug/L l	A 02	25		L001570	06/02/2023 06:40	NT1706012331.D	VTS	
23D0394-13	LDW23-IT1806	(20ug/kg solid or 0.2ug/L l	A 02	26		L001570	06/02/2023 07:17	NT1706012332.D	VTS	
23E0009-01	LDW23-SS1811	(20ug/kg solid or 0.2ug/L l	A 01	27		L001570	06/02/2023 07:54	NT1706012333.D	VTS	
23E0009-03	LDW23-SS1805	(20ug/kg solid or 0.2ug/L l	A 01	28		L001570	06/02/2023 08:32	NT1706012334.D	VTS	
23E0009-05	LDW23-SS1800	(20ug/kg solid or 0.2ug/L l	A 01	29		L001570	06/02/2023 09:09	NT1706012335.D	VTS	
23E0009-07	LDW23-SS1820	(20ug/kg solid or 0.2ug/L l	A 01	30		L001570	06/02/2023 09:47	NT1706012336.D	VTS	
SLF0008-ICV3	ABN 5	QC		31	L005950	L001570	06/02/2023 11:02	NT1706012338.D	VTS	
SLF0008-LCV3	ABN 0.2	QC		32	L005946	L001570	06/02/2023 12:16	NT1706012340.D	VTS	
BLE0309-BLK1	Blank	QC		33		L001570	06/02/2023 13:30	NT1706012342.D	VTS	
BLE0309-BS1	LCS	QC		34		L001570	06/02/2023 14:08	NT1706012343.D	VTS	
23D0620-02	EWWST6-042623-G	(20ug/kg solid or 0.2ug/L l	A 04	35		L001570	06/02/2023 14:45	NT1706012344.D	VTS	
SLF0008-CCV1	ABN 5	QC		36	L005950	L001570	06/02/2023 15:22	NT1706012345.D	VTS	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b

	Time	Filename	LabID	ClientId	DF							
1	1230	NT1706012301.D	SLF0008-TUN1		1	NO ISTDS FOUND						
2	1307	NT1706012302.D			1	9.14 270308	11.60 1001289	15.18 555712	18.20 988089	23.22 679857	25.81 668339	24.22 1360349
3	1341	NT1706012303.D	SLF0008-TUN1		1	NO ISTDS FOUND						
4	1358	NT1706012304.D	SLF0008-ICV1		1	9.14 265417	11.60 976764	15.18 532567	18.20 966524	23.22 647716	25.81 613582	24.22 1235998
5	1435	NT1706012305.D	SIM-ICV		1	9.14 278571	11.60 998151	15.18 540615	18.20 973614	23.22 648912	25.81 632724	24.22 1192430
6	1512	NT1706012306.D	SLF0008-LCV1		1	9.14 260733	11.60 941208	15.18 503513	18.20 888941	23.22 597881	25.81 578338	24.22 1073418
7	1550	NT1706012307.D	SIM-LCV1		1	9.14 362952	11.60 1157482	15.18 617104	18.20 1111385	23.22 737955	25.81 730662	24.22 1362436
8	1627	NT1706012308.D	BLE0084-BLK1		1	9.14 270594	11.60 1049458	15.18 556100	18.20 993295	23.22 667813	25.81 619633	24.22 1237937
9	1704	NT1706012309.D	BLE0084-BS1		1	9.14 277547	11.60 1037767	15.18 574428	18.20 983989	23.22 673662	25.81 590583	24.22 1269901
10	1741	NT1706012310.D	BLE0084-BSD1		1	9.14 289698	11.60 1059658	15.18 586897	18.20 1021379	23.22 698761	25.81 610244	24.22 1289699
11	1818	NT1706012311.D	BLE0084-MS1		1	9.14 280251	11.60 1040856	15.18 559017	18.20 961072	23.22 623985	25.81 503361	24.22 1214139
12	1856	NT1706012312.D	BLE0084-MSD1		1	9.14 285782	11.60 1050067	15.18 565819	18.20 970550	23.22 694843	25.81 562770	24.22 1332322
13	1933	NT1706012313.D	23D0682-01		1	9.14 297070	11.60 1103326	15.18 571697	18.20 963103	23.22 588373	25.81 402791	24.22 1155411
14	2009	NT1706012314.D	23D0682-02		1	9.14 291088	11.59 1077618	15.18 561428	18.20 954221	23.22 615699	25.81 470809	24.22 1228226
15	2046	NT1706012315.D	23D0682-03		1	9.14 297759	11.59 1095639	15.18 580337	18.20 1001890	23.22 663512	25.81 491193	24.22 1241949
16	2123	NT1706012316.D	23D0682-04		1	9.14 290266	11.60 1108054	15.18 583158	18.20 1016248	23.23 583826	25.82 531066	24.24 1138908
17	2200	NT1706012317.D	23D0682-05		1	9.14 295154	11.60 1128922	15.18 589623	18.20 1073647	23.22 567737	25.81 514674	24.22 1164936
18	2238	NT1706012318.D	23D0682-06		1	9.14 284153	11.60 1074582	15.18 565621	18.20 1005754	23.22 601830	25.81 528417	24.22 1151626
19	2315	NT1706012319.D	23D0682-07		1	9.14 284036	11.60 1042529	15.18 559657	18.20 1014791	23.22 531530	25.81 511556	24.22 1110761
20	2352	NT1706012320.D	SLF0008-ICV2		1	9.14 257007	11.60 932905	15.18 509574	18.20 912749	23.22 578011	25.81 513683	24.22 1181490

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b

	Time	Filename	LabID	ClientId	DF																				
21	0029	NT1706012321.D	SIM-ICV		1	NO ISTDS FOUND																			
22	0106	NT1706012322.D	BLE0008-LCV2		1	9.14	268750	11.60	804059	15.18	418780	18.20	710823	23.22	444729	25.81	387840	24.22	768456						
23	0143	NT1706012323.D	LCV 0.1		1	NO ISTDS FOUND																			
24	0220	NT1706012324.D	23D0682-08		1	9.14	257572	11.60	980389	15.18	531102	18.20	958458	23.22	533605	25.81	462761	24.22	1105334						
25	0257	NT1706012325.D	BLE0148-BLK1		1	9.14	260076	11.60	965235	15.18	506657	18.20	872094	23.22	534317	25.81	444241	24.22	984393						
26	0334	NT1706012326.D	BLE0148-BS1		1	9.14	253041	11.60	948532	15.18	525869	18.20	895969	23.22	558853	25.81	462864	24.22	1076428						
27	0411	NT1706012327.D	BLE0148-BSD1		1	9.14	273824	11.60	1013716	15.18	559117	18.20	955105	23.22	578446	25.79	490309	24.22	1159047						
28	0448	NT1706012328.D	BLE0148-MS1		1	9.14	257322	11.60	945489	15.18	513986	18.22	982463	23.23	538012	25.83	676507	24.24	1059240						
29	0525	NT1706012329.D	BLE0148-MSD1		1	9.14	270365	11.60	996862	15.18	536103	18.20	992141	23.23	553842	25.82	622318	24.22	1128719						
30	0602	NT1706012330.D	BLE0148-SRM1		1	9.14	248324	11.60	906272	15.18	480152	18.20	827683	23.22	528618	25.81	472043	24.22	1141887						
31	0640	NT1706012331.D	23D0394-07		1	9.14	258152	11.60	942142	15.18	479960	18.20	833421	23.22	535645	25.81	460525	24.22	1073894						
32	0717	NT1706012332.D	23D0394-13		1	9.14	258231	11.60	944087	15.18	514259	18.20	935934	23.22	513629	25.81	517862	24.22	1093244						
33	0754	NT1706012333.D	23E0009-01		1	9.14	255925	11.60	935857	15.18	501417	18.20	904715	23.22	490011	25.81	537585	24.22	1013383						
34	0832	NT1706012334.D	23E0009-03		1	9.14	246695	11.60	907825	15.18	475279	18.20	876698	23.23	448714	25.82	541143	24.22	943475						
35	0909	NT1706012335.D	23E0009-05		1	9.14	229152	11.60	842018	15.18	440663	18.20	812309	23.22	429827	25.82	515866	24.22	888918						
36	0947	NT1706012336.D	23E0009-07		1	9.14	232057	11.60	873581	15.18	464606	18.20	850863	23.22	461716	25.82	524482	24.22	974858						
37	1024	NT1706012337.D	BLK0148-BLK2		1	9.14	220841	11.60	809407	15.18	428094	18.20	730790	23.22	451907	25.81	415452	24.22	903719						
38	1102	NT1706012338.D	SLF0008-ICV3		1	9.14	223423	11.60	810178	15.18	450990	18.20	792538	23.22	499734	25.81	439413	24.22	1036983						
39	1139	NT1706012339.D	SIM ICV3		1	9.14	221612	11.59	770800	15.18	406057	18.20	713378	23.22	436669	25.81	381810	24.22	816625						
40	1216	NT1706012340.D	SLE0008-LCV3		1	9.14	201322	11.60	693572	15.18	312332	18.20	594291	23.22	368988	25.81	321164	24.22	658589						
41	1253	NT1706012341.D	SIM-LCV		1	9.14	243687	11.60	844270	15.18	375687	18.20	734069	23.22	446958	25.81	387831	24.22	792925						

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b

	Time	Filename	LabID	ClientId	DF																			
42	1330	NT1706012342.D	BLE0309-BLK1		1	9.14	209266	11.59	745553	15.18	404130	18.20	702660	23.22	412918	25.81	363804	24.22	776867					
43	1408	NT1706012343.D	BLE0309-BS1		1	9.14	213504	11.59	793201	15.18	418247	18.20	728579	23.22	469965	25.81	410844	24.22	956664					
44	1445	NT1706012344.D	23D0620-02		1	9.14	215549	11.60	781324	15.18	405541	18.20	646484	23.23	582349	25.84	576152	24.24	1354894					
45	1522	NT1706012345.D	SLE0008-CCV1		1	9.14	235105	11.60	843424	15.18	450569	18.20	746223	23.22	499235	25.81	550814	24.22	1059289					
46	1559	NT1706012346.D	SIM-CCV1		1	9.14	238548	11.59	810459	15.18	440559	18.20	743578	23.22	426204	25.81	482716	24.22	896315					
47	1637	NT1706012347.D	LCV 0.2		1	9.14	213541	11.60	732743	15.18	364967	18.20	666692	23.22	397078	25.81	404998	24.22	805449					
48	1714	NT1706012348.D	LCV 0.1		1	9.14	268918	11.60	902318	15.18	405844	18.20	760220	23.22	466536	25.81	497649	24.22	926518					

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b

Instrument: nt17.i Date: 01-JUN-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1230	NT1706012301.D	SLF0008-TUN1	1	NO MANUAL INTEGRATION
1307	NT1706012302.D		1	NO MANUAL INTEGRATION
1341	NT1706012303.D	SLF0008-TUN1	1	NO MANUAL INTEGRATION
1358	NT1706012304.D	SLF0008-ICV1	1	NO MANUAL INTEGRATION
1435	NT1706012305.D	SIM-ICV	1	NO MANUAL INTEGRATION
1512	NT1706012306.D	SLF0008-LCV1	1	Benzyl alcohol, Benzoic acid, 3-Nitroaniline, 2,4-Dinitrophenol, 4-Nitrophenol, Total Benzofluoranthenes,
1550	NT1706012307.D	SIM-LCV1	1	NO MANUAL INTEGRATION
1627	NT1706012308.D	BLE0084-BLK1	1	Benzoic acid,
1704	NT1706012309.D	BLE0084-BS1	1	NO MANUAL INTEGRATION
1741	NT1706012310.D	BLE0084-BSD1	1	NO MANUAL INTEGRATION
1818	NT1706012311.D	BLE0084-MS1	1	2-Methylphenol, 2,3,4,6-Tetrachlorophenol, 2,4,6-Tribromophenol,
1856	NT1706012312.D	BLE0084-MSD1	1	2-Methylphenol, 4-Nitroaniline, 2,3,4,6-Tetrachlorophenol,
1933	NT1706012313.D	23D0682-01	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, 2-Fluorophenol, Phenol-d5, 2-Chlorophenol-d4,
2009	NT1706012314.D	23D0682-02	1	Benzyl alcohol, Benzo(k)fluoranthene, 2-Fluorophenol, Phenol-d5,
2046	NT1706012315.D	23D0682-03	1	4-Methylphenol,
2123	NT1706012316.D	23D0682-04	1	Benzo(k)fluoranthene, 1-methylnaphthalene,
2200	NT1706012317.D	23D0682-05	1	4-Methylphenol, Fluoranthene, Butylbenzylphthalate,

Instrument: nt17.i Date: 01-JUN-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
2238	NT1706012318.D	23D0682-06	1	Benzyl alcohol, 4-Methylphenol, Fluoranthene,
2315	NT1706012319.D	23D0682-07	1	Benzyl alcohol, 1-methylnaphthalene,
2352	NT1706012320.D	SLF0008-ICV2	1	NO MANUAL INTEGRATION
0029	NT1706012321.D	SIM-ICV	1	NO MANUAL INTEGRATION
0106	NT1706012322.D	BLE0008-LCV2	1	Phenol, Benzoic acid, 2,4-Dinitrophenol, 4-Nitrophenol,
0143	NT1706012323.D	LCV 0.1	1	NO MANUAL INTEGRATION
0220	NT1706012324.D	23D0682-08	1	4-Methylphenol, Fluorene,
0257	NT1706012325.D	BLE0148-BLK1	1	NO MANUAL INTEGRATION
0334	NT1706012326.D	BLE0148-BS1	1	NO MANUAL INTEGRATION
0411	NT1706012327.D	BLE0148-BSD1	1	4-Nitroaniline,
0448	NT1706012328.D	BLE0148-MS1	1	3-Nitroaniline, 4,6-Dinitro-2-methylphenol, N-Nitrosodiphenylamine, Pentachlorophenol, Phenanthrene-d10, Phena Carbazole, Di-n-butylphthalate, Fluoranthene, Pyrene, 2,4,6-Tribromophenol,
0525	NT1706012329.D	BLE0148-MSD1	1	4-Nitroaniline, N-Nitrosodiphenylamine, Phenanthrene-d10, Phenanthrene, Carbazole, Fluoranthene, Pyrene, Terphenyl-d14,
0602	NT1706012330.D	BLE0148-SRM1	1	4-Nitrophenol,
0640	NT1706012331.D	23D0394-07	1	NO MANUAL INTEGRATION
0717	NT1706012332.D	23D0394-13	1	Phenanthrene,
0754	NT1706012333.D	23E0009-01	1	Benzoic acid, Fluoranthene, Benzo(k)fluoranthene,
0832	NT1706012334.D	23E0009-03	1	Fluoranthene, Pyrene, Benzo(k)fluoranthene,
0909	NT1706012335.D	23E0009-05	1	Fluoranthene, Pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene,

Instrument: nt17.i Date: 02-JUN-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
0947	NT1706012336.D	23E0009-07	1	Fluoranthene, Pyrene, Benzo(k)fluoranthene,
1024	NT1706012337.D	BLK0148-BLK2	1	NO MANUAL INTEGRATION
1102	NT1706012338.D	SLF0008-ICV3	1	NO MANUAL INTEGRATION
1139	NT1706012339.D	SIM ICV3	1	NO MANUAL INTEGRATION
1216	NT1706012340.D	SLE0008-LCV3	1	4-Methylphenol, 2-Nitrophenol, 4-Chloro-3-methylphenol, 2,4,5-Trichlorophenol, 3-Nitroaniline, 2,4-Dinitrophen 4-Nitrophenol, 4-Nitroaniline, Pentachlorophenol, Benzidine,
1253	NT1706012341.D	SIM-LCV	1	NO MANUAL INTEGRATION
1330	NT1706012342.D	BLE0309-BLK1	1	Naphthalene,
1408	NT1706012343.D	BLE0309-BS1	1	NO MANUAL INTEGRATION
1445	NT1706012344.D	23D0620-02	1	Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
1522	NT1706012345.D	SLE0008-CCV1	1	NO MANUAL INTEGRATION
1559	NT1706012346.D	SIM-CCV1	1	NO MANUAL INTEGRATION
1637	NT1706012347.D	LCV 0.2	1	NO MANUAL INTEGRATION
1714	NT1706012348.D	LCV 0.1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 03-Jun-2023 11:55

NT1706012301.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012302.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012303.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012304.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012305.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012306.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012307.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012308.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012309.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012310.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012311.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012312.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012313.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012314.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012315.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012316.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012317.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012318.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012319.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012320.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012321.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012322.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012323.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012324.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012325.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012326.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012327.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012328.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012329.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012330.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012331.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012332.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012333.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012334.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012335.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012336.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012337.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012338.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012339.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012340.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012341.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012342.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012343.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012344.D	Data Locked	van, 03-Jun-2023 11:55

NT1706012345.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012346.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012347.D	Data Locked	van, 03-Jun-2023 11:55
NT1706012348.D	Data Locked	van, 03-Jun-2023 11:55

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0338	Instrument:	NT17
Calibration:	GE00065	Calibration Date:	05/20/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLE0338-ICB1 (Water)			Lab File ID: NT1705162312.D			Analyzed: 05/17/23 01:07		
2-Fluorophenol	7.5000	104	30 - 160	7.148	7.157143	-0.0091	N/A	
Phenol-d5	7.5000	96.0	30 - 160	8.715	8.720429	-0.0054	N/A	
2-Chlorophenol-d4	7.5000	102	30 - 160	9.008	9.009857	-0.0019	N/A	
1,2-Dichlorobenzene-d4	5.0000	100	30 - 160	9.723	9.726714	-0.0037	N/A	
Nitrobenzene-d5	5.0000	98.8	30 - 160	10.451	10.45471	-0.0037	N/A	
2-Fluorobiphenyl	5.0000	103	30 - 160	14.036	14.03771	-0.0017	N/A	
2,4,6-Tribromophenol	7.5000	78.1	30 - 160	17.069	17.07271	-0.0037	N/A	
p-Terphenyl-d14	5.0000	109	30 - 160	21.557	21.557	0.0000	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0008
Instrument: NT17
Calibration: GE00065
Calibration Date: 05/20/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLF0008-ICV1 (Solid)			Lab File ID: NT1706012304.D			Analyzed: 06/01/23 13:58		
2-Fluorophenol	7.5000	103	80 - 120	6.944	7.157143	-0.2131	N/A	
Phenol-d5	7.5000	106	80 - 120	8.511	8.720429	-0.2094	N/A	
2-Chlorophenol-d4	7.5000	112	80 - 120	8.779	9.009857	-0.2309	N/A	
1,2-Dichlorobenzene-d4	5.0000	102	80 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	5.0000	104	80 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	5.0000	102	80 - 120	13.794	14.03771	-0.2437	N/A	
2,4,6-Tribromophenol	7.5000	106	80 - 120	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	5.0000	102	80 - 120	21.315	21.557	-0.2420	N/A	
SLF0008-LCV1 (Solid)			Lab File ID: NT1706012306.D			Analyzed: 06/01/23 15:12		
2-Fluorophenol	0.30000	75.9	50 - 150	6.969	7.157143	-0.1881	N/A	
Phenol-d5	0.30000	93.3	50 - 150	8.524	8.720429	-0.1964	N/A	
2-Chlorophenol-d4	0.30000	99.0	50 - 150	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	0.20000	102	50 - 150	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	0.20000	93.8	50 - 150	10.234	10.45471	-0.2207	N/A	
2-Fluorobiphenyl	0.20000	104	50 - 150	13.794	14.03771	-0.2437	N/A	
2,4,6-Tribromophenol	0.30000	90.3	50 - 150	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	0.20000	103	50 - 150	21.315	21.557	-0.2420	N/A	
SLF0008-ICV2 (Solid)			Lab File ID: NT1706012320.D			Analyzed: 06/01/23 23:52		
2-Fluorophenol	7.5000	103	80 - 120	6.944	7.157143	-0.2131	N/A	
Phenol-d5	7.5000	102	80 - 120	8.511	8.720429	-0.2094	N/A	
2-Chlorophenol-d4	7.5000	101	80 - 120	8.778	9.009857	-0.2319	N/A	
1,2-Dichlorobenzene-d4	5.0000	103	80 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	5.0000	104	80 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	5.0000	102	80 - 120	13.793	14.03771	-0.2447	N/A	
2,4,6-Tribromophenol	7.5000	112	80 - 120	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	5.0000	104	80 - 120	21.315	21.557	-0.2420	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0008	Instrument:	NT17
Calibration:	GE00065	Calibration Date:	05/20/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLF0008-LCV2 (Solid)			Lab File ID: NT1706012322.D			Analyzed: 06/02/23 01:06		
2-Fluorophenol	0.30000	60.0	50 - 150	6.982	7.157143	-0.1751	N/A	
Phenol-d5	0.30000	64.7	50 - 150	8.536	8.720429	-0.1844	N/A	
2-Chlorophenol-d4	0.30000	80.4	50 - 150	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	0.20000	96.4	50 - 150	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	0.20000	96.5	50 - 150	10.234	10.45471	-0.2207	N/A	
2-Fluorobiphenyl	0.20000	94.3	50 - 150	13.793	14.03771	-0.2447	N/A	
2,4,6-Tribromophenol	0.30000	88.2	50 - 150	16.827	17.07271	-0.2457	N/A	
p-Terphenyl-d14	0.20000	108	50 - 150	21.327	21.557	-0.2300	N/A	
BLE0148-BLK1 (Solid)			Lab File ID: NT1706012325.D			Analyzed: 06/02/23 02:57		
2-Fluorophenol	750.00	56.9	27 - 120	6.969	7.157143	-0.1881	N/A	
Phenol-d5	750.00	56.7	29 - 120	8.524	8.720429	-0.1964	N/A	
2-Chlorophenol-d4	750.00	67.0	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	500.00	70.5	32 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	500.00	72.9	30 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	500.00	71.0	35 - 120	13.794	14.03771	-0.2437	N/A	
2,4,6-Tribromophenol	750.00	59.7	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	500.00	83.9	37 - 120	21.315	21.557	-0.2420	N/A	
BLE0148-BS1 (Solid)			Lab File ID: NT1706012326.D			Analyzed: 06/02/23 03:34		
2-Fluorophenol	750.00	47.0	27 - 120	6.957	7.157143	-0.2001	N/A	
Phenol-d5	750.00	52.7	29 - 120	8.511	8.720429	-0.2094	N/A	
2-Chlorophenol-d4	750.00	64.8	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	500.00	64.9	32 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	500.00	67.4	30 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	500.00	69.2	35 - 120	13.794	14.03771	-0.2437	N/A	
2,4,6-Tribromophenol	750.00	81.9	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	500.00	91.0	37 - 120	21.315	21.557	-0.2420	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0008	Instrument:	NT17
Calibration:	GE00065	Calibration Date:	05/20/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLE0148-BSD1 (Solid)			Lab File ID: NT1706012327.D			Analyzed: 06/02/23 04:11		
2-Fluorophenol	750.00	48.7	27 - 120	6.969	7.157143	-0.1881	N/A	
Phenol-d5	750.00	54.8	29 - 120	8.511	8.720429	-0.2094	N/A	
2-Chlorophenol-d4	750.00	65.9	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	500.00	65.8	32 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	500.00	70.9	30 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	500.00	74.0	35 - 120	13.794	14.03771	-0.2437	N/A	
2,4,6-Tribromophenol	750.00	82.7	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	500.00	88.4	37 - 120	21.315	21.557	-0.2420	N/A	
BLE0148-MS1 (Solid)			Lab File ID: NT1706012328.D			Analyzed: 06/02/23 04:48		
2-Fluorophenol	749.96	34.4	27 - 120	6.957	7.157143	-0.2001	N/A	
Phenol-d5	749.96	46.2	29 - 120	8.524	8.720429	-0.1964	N/A	
2-Chlorophenol-d4	749.96	54.5	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	499.97	55.0	32 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	499.97	60.4	30 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	499.97	70.1	35 - 120	13.793	14.03771	-0.2447	N/A	
2,4,6-Tribromophenol	749.96	83.8	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	499.97	72.4	37 - 120	21.34	21.557	-0.2170	N/A	
BLE0148-MSD1 (Solid)			Lab File ID: NT1706012329.D			Analyzed: 06/02/23 05:25		
2-Fluorophenol	749.96	35.3	27 - 120	6.957	7.157143	-0.2001	N/A	
Phenol-d5	749.96	46.9	29 - 120	8.524	8.720429	-0.1964	N/A	
2-Chlorophenol-d4	749.96	55.7	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	499.97	54.9	32 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	499.97	61.0	30 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	499.97	70.9	35 - 120	13.793	14.03771	-0.2447	N/A	
2,4,6-Tribromophenol	749.96	87.7	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	499.97	77.1	37 - 120	21.327	21.557	-0.2300	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0008
Instrument: NT17
Calibration: GE00065
Calibration Date: 05/20/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLE0148-SRM1 (Solid)			Lab File ID: NT1706012330.D			Analyzed: 06/02/23 06:02		
2-Fluorophenol	7500.0	49.5	27 - 120	6.969	7.157143	-0.1881	N/A	
Phenol-d5	7500.0	53.9	29 - 120	8.524	8.720429	-0.1964	N/A	
2-Chlorophenol-d4	7500.0	73.4	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	5000.0	64.0	32 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	5000.0	68.1	30 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	5000.0	72.2	35 - 120	13.794	14.03771	-0.2437	N/A	
2,4,6-Tribromophenol	7500.0	81.7	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	5000.0	83.4	37 - 120	21.315	21.557	-0.2420	N/A	
23E0009-01 (Solid)			Lab File ID: NT1706012333.D			Analyzed: 06/02/23 07:54		
2-Fluorophenol	749.59	30.3	27 - 120	6.969	7.157143	-0.1881	N/A	
Phenol-d5	749.59	39.4	29 - 120	8.524	8.720429	-0.1964	N/A	
2-Chlorophenol-d4	749.59	50.3	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	499.73	49.5	32 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	499.73	54.3	30 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	499.73	68.0	35 - 120	13.794	14.03771	-0.2437	N/A	
2,4,6-Tribromophenol	749.59	89.4	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	499.73	89.9	37 - 120	21.315	21.557	-0.2420	N/A	
23E0009-03 (Solid)			Lab File ID: NT1706012334.D			Analyzed: 06/02/23 08:32		
2-Fluorophenol	749.96	24.9	27 - 120	6.957	7.157143	-0.2001	N/A	*
Phenol-d5	749.96	36.8	29 - 120	8.524	8.720429	-0.1964	N/A	
2-Chlorophenol-d4	749.96	45.4	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	499.97	46.3	32 - 120	9.494	9.726714	-0.2327	N/A	
Nitrobenzene-d5	499.97	51.9	30 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	499.97	65.6	35 - 120	13.794	14.03771	-0.2437	N/A	
2,4,6-Tribromophenol	749.96	86.1	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	499.97	81.0	37 - 120	21.327	21.557	-0.2300	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0008
Instrument: NT17
Calibration: GE00065
Calibration Date: 05/20/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23E0009-05 (Solid)			Lab File ID: NT1706012335.D			Analyzed: 06/02/23 09:09		
2-Fluorophenol	747.69	27.8	27 - 120	6.957	7.157143	-0.2001	N/A	
Phenol-d5	747.69	38.4	29 - 120	8.524	8.720429	-0.1964	N/A	
2-Chlorophenol-d4	747.69	46.9	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	498.46	48.2	32 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	498.46	54.2	30 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	498.46	66.7	35 - 120	13.793	14.03771	-0.2447	N/A	
2,4,6-Tribromophenol	747.69	81.6	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	498.46	77.6	37 - 120	21.327	21.557	-0.2300	N/A	
23E0009-07 (Solid)			Lab File ID: NT1706012336.D			Analyzed: 06/02/23 09:47		
2-Fluorophenol	748.17	35.1	27 - 120	6.956	7.157143	-0.2011	N/A	
Phenol-d5	748.17	46.6	29 - 120	8.524	8.720429	-0.1964	N/A	
2-Chlorophenol-d4	748.17	55.1	31 - 120	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	498.78	54.8	32 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	498.78	59.3	30 - 120	10.221	10.45471	-0.2337	N/A	
2-Fluorobiphenyl	498.78	68.9	35 - 120	13.793	14.03771	-0.2447	N/A	
2,4,6-Tribromophenol	748.17	89.2	24 - 134	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	498.78	77.5	37 - 120	21.327	21.557	-0.2300	N/A	
SLF0008-ICV3 (Solid)			Lab File ID: NT1706012338.D			Analyzed: 06/02/23 11:02		
2-Fluorophenol	7.5000	105	80 - 120	6.944	7.157143	-0.2131	N/A	
Phenol-d5	7.5000	103	80 - 120	8.511	8.720429	-0.2094	N/A	
2-Chlorophenol-d4	7.5000	101	80 - 120	8.778	9.009857	-0.2319	N/A	
1,2-Dichlorobenzene-d4	5.0000	101	80 - 120	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	5.0000	105	80 - 120	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	5.0000	101	80 - 120	13.793	14.03771	-0.2447	N/A	
2,4,6-Tribromophenol	7.5000	110	80 - 120	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	5.0000	107	80 - 120	21.314	21.557	-0.2430	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0008	Instrument:	NT17
Calibration:	GE00065	Calibration Date:	05/20/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLF0008-LCV3 (Solid)			Lab File ID: NT1706012340.D			Analyzed: 06/02/23 12:16		
2-Fluorophenol	0.30000	65.0	50 - 150	6.982	7.157143	-0.1751	N/A	
Phenol-d5	0.30000	75.4	50 - 150	8.536	8.720429	-0.1844	N/A	
2-Chlorophenol-d4	0.30000	104	50 - 150	8.791	9.009857	-0.2189	N/A	
1,2-Dichlorobenzene-d4	0.20000	106	50 - 150	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	0.20000	95.3	50 - 150	10.234	10.45471	-0.2207	N/A	
2-Fluorobiphenyl	0.20000	107	50 - 150	13.806	14.03771	-0.2317	N/A	
2,4,6-Tribromophenol	0.30000	85.1	50 - 150	16.839	17.07271	-0.2337	N/A	
p-Terphenyl-d14	0.20000	107	50 - 150	21.327	21.557	-0.2300	N/A	
SLF0008-CCV1 (Solid)			Lab File ID: NT1706012345.D			Analyzed: 06/02/23 15:22		
2-Fluorophenol	7.5000	105	50 - 150	6.944	7.157143	-0.2131	N/A	
Phenol-d5	7.5000	101	50 - 150	8.511	8.720429	-0.2094	N/A	
2-Chlorophenol-d4	7.5000	102	50 - 150	8.778	9.009857	-0.2319	N/A	
1,2-Dichlorobenzene-d4	5.0000	99.7	50 - 150	9.493	9.726714	-0.2337	N/A	
Nitrobenzene-d5	5.0000	103	50 - 150	10.222	10.45471	-0.2327	N/A	
2-Fluorobiphenyl	5.0000	103	50 - 150	13.793	14.03771	-0.2447	N/A	
2,4,6-Tribromophenol	7.5000	109	50 - 150	16.814	17.07271	-0.2587	N/A	
p-Terphenyl-d14	5.0000	99.6	50 - 150	21.315	21.557	-0.2420	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0338	Instrument:	NT17
		Calibration:	GE00065

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLE0338-SCV1)		(Water)		Lab File ID: NT1705162311.D				Analyzed: 05/17/23 00:29	
1,4-Dichlorobenzene-d4	265705	9.365	287078	9.365	93	50 - 200	0.000	+/-0.50	
Naphthalene-d8	965231	11.842	1056758	11.843	91	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	512787	15.438	587510	15.439	87	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	850147	18.458	933575	18.458	91	50 - 200	0.000	+/-0.50	
Chrysene-d12	511511	23.457	576570	23.458	89	50 - 200	-0.001	+/-0.50	
Di-n-Octylphthalate-d4	1044471	24.465	1181651	24.465	88	50 - 200	0.000	+/-0.50	
Perylene-d12	456008	26.149	491359	26.149	93	50 - 200	0.000	+/-0.50	
Initial Cal Blank (SLE0338-ICB1)		(Water)		Lab File ID: NT1705162312.D				Analyzed: 05/17/23 01:07	
1,4-Dichlorobenzene-d4	287620	9.365	287078	9.365	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1041050	11.83	1056758	11.843	99	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	539097	15.439	587510	15.439	92	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	886060	18.458	933575	18.458	95	50 - 200	0.000	+/-0.50	
Chrysene-d12	518615	23.445	576570	23.458	90	50 - 200	-0.013	+/-0.50	
Di-n-Octylphthalate-d4	1011857	24.452	1181651	24.465	86	50 - 200	-0.013	+/-0.50	
Perylene-d12	487385	26.149	491359	26.149	99	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0008	Instrument:	NT17
		Calibration:	GE00065

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLF0008-ICV1)		(Solid)	Lab File ID: NT1706012304.D				Analyzed: 06/01/23 13:58		
1,4-Dichlorobenzene-d4	265417	9.136	265417	9.136	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	976764	11.6	976764	11.6	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	532567	15.184	532567	15.184	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	966524	18.203	966524	18.203	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	647716	23.215	647716	23.215	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1235998	24.223	1235998	24.223	100	50 - 200	0.000	+/-0.50	
Perylene-d12	613582	25.805	613582	25.805	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLF0008-LCV1)		(Solid)	Lab File ID: NT1706012306.D				Analyzed: 06/01/23 15:12		
1,4-Dichlorobenzene-d4	260733	9.136	265417	9.136	98	50 - 200	0.000	+/-0.50	
Naphthalene-d8	941208	11.6	976764	11.6	96	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	503513	15.184	532567	15.184	95	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	888941	18.203	966524	18.203	92	50 - 200	0.000	+/-0.50	
Chrysene-d12	597881	23.215	647716	23.215	92	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1073418	24.223	1235998	24.223	87	50 - 200	0.000	+/-0.50	
Perylene-d12	578338	25.805	613582	25.805	94	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLF0008-ICV2)		(Solid)	Lab File ID: NT1706012320.D				Analyzed: 06/01/23 23:52		
1,4-Dichlorobenzene-d4	257007	9.136	257007	9.136	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	932905	11.6	932905	11.6	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	509574	15.184	509574	15.184	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	912749	18.203	912749	18.203	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	578011	23.215	578011	23.215	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1181490	24.223	1181490	24.223	100	50 - 200	0.000	+/-0.50	
Perylene-d12	513683	25.805	513683	25.805	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLF0008-LCV2)		(Solid)	Lab File ID: NT1706012322.D				Analyzed: 06/02/23 01:06		
1,4-Dichlorobenzene-d4	268750	9.136	257007	9.136	105	50 - 200	0.000	+/-0.50	
Naphthalene-d8	804059	11.6	932905	11.6	86	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	418780	15.184	509574	15.184	82	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	710823	18.203	912749	18.203	78	50 - 200	0.000	+/-0.50	
Chrysene-d12	444729	23.215	578011	23.215	77	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	768456	24.223	1181490	24.223	65	50 - 200	0.000	+/-0.50	
Perylene-d12	387840	25.805	513683	25.805	76	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0008	Instrument:	NT17
		Calibration:	GE00065

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (BLE0148-BLK1)		(Solid)		Lab File ID: NT1706012325.D				Analyzed: 06/02/23 02:57	
1,4-Dichlorobenzene-d4	260076	9.136	257007	9.136	101	50 - 200	0.000	+/-0.50	
Naphthalene-d8	965235	11.6	932905	11.6	103	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	506657	15.184	509574	15.184	99	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	872094	18.203	912749	18.203	96	50 - 200	0.000	+/-0.50	
Chrysene-d12	534317	23.215	578011	23.215	92	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	984393	24.223	1181490	24.223	83	50 - 200	0.000	+/-0.50	
Perylene-d12	444241	25.805	513683	25.805	86	50 - 200	0.000	+/-0.50	
LCS (BLE0148-BS1)		(Solid)		Lab File ID: NT1706012326.D				Analyzed: 06/02/23 03:34	
1,4-Dichlorobenzene-d4	253041	9.136	257007	9.136	98	50 - 200	0.000	+/-0.50	
Naphthalene-d8	948532	11.6	932905	11.6	102	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	525869	15.184	509574	15.184	103	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	895969	18.203	912749	18.203	98	50 - 200	0.000	+/-0.50	
Chrysene-d12	558853	23.215	578011	23.215	97	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1076428	24.223	1181490	24.223	91	50 - 200	0.000	+/-0.50	
Perylene-d12	462864	25.805	513683	25.805	90	50 - 200	0.000	+/-0.50	
LCS Dup (BLE0148-BSD1)		(Solid)		Lab File ID: NT1706012327.D				Analyzed: 06/02/23 04:11	
1,4-Dichlorobenzene-d4	273824	9.136	257007	9.136	107	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1013716	11.6	932905	11.6	109	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	559117	15.184	509574	15.184	110	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	955105	18.203	912749	18.203	105	50 - 200	0.000	+/-0.50	
Chrysene-d12	578446	23.215	578011	23.215	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1159047	24.223	1181490	24.223	98	50 - 200	0.000	+/-0.50	
Perylene-d12	490309	25.792	513683	25.805	95	50 - 200	-0.013	+/-0.50	
Matrix Spike (BLE0148-MS1)		(Solid)		Lab File ID: NT1706012328.D				Analyzed: 06/02/23 04:48	
1,4-Dichlorobenzene-d4	257322	9.136	257007	9.136	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	945489	11.6	932905	11.6	101	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	513986	15.184	509574	15.184	101	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	982463	18.216	912749	18.203	108	50 - 200	0.013	+/-0.50	
Chrysene-d12	538012	23.228	578011	23.215	93	50 - 200	0.013	+/-0.50	
Di-n-Octylphthalate-d4	1059240	24.236	1181490	24.223	90	50 - 200	0.013	+/-0.50	
Perylene-d12	676507	25.83	513683	25.805	132	50 - 200	0.025	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0008	Instrument:	NT17
		Calibration:	GE00065

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (BLE0148-MSD1)		(Solid)	Lab File ID: NT1706012329.D				Analyzed: 06/02/23 05:25		
1,4-Dichlorobenzene-d4	270365	9.136	257007	9.136	105	50 - 200	0.000	+/-0.50	
Naphthalene-d8	996862	11.6	932905	11.6	107	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	536103	15.184	509574	15.184	105	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	992141	18.203	912749	18.203	109	50 - 200	0.000	+/-0.50	
Chrysene-d12	553842	23.228	578011	23.215	96	50 - 200	0.013	+/-0.50	
Di-n-Octylphthalate-d4	1128719	24.223	1181490	24.223	96	50 - 200	0.000	+/-0.50	
Perylene-d12	622318	25.818	513683	25.805	121	50 - 200	0.013	+/-0.50	
Reference (BLE0148-SRM1)		(Solid)	Lab File ID: NT1706012330.D				Analyzed: 06/02/23 06:02		
1,4-Dichlorobenzene-d4	248324	9.136	257007	9.136	97	50 - 200	0.000	+/-0.50	
Naphthalene-d8	906272	11.6	932905	11.6	97	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	480152	15.184	509574	15.184	94	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	827683	18.203	912749	18.203	91	50 - 200	0.000	+/-0.50	
Chrysene-d12	528618	23.215	578011	23.215	91	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1141887	24.223	1181490	24.223	97	50 - 200	0.000	+/-0.50	
Perylene-d12	472043	25.805	513683	25.805	92	50 - 200	0.000	+/-0.50	
LDW23-SS1811 (23E0009-01)		(Solid)	Lab File ID: NT1706012333.D				Analyzed: 06/02/23 07:54		
1,4-Dichlorobenzene-d4	255925	9.136	257007	9.136	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	935857	11.6	932905	11.6	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	501417	15.184	509574	15.184	98	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	904715	18.203	912749	18.203	99	50 - 200	0.000	+/-0.50	
Chrysene-d12	490011	23.215	578011	23.215	85	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1013383	24.223	1181490	24.223	86	50 - 200	0.000	+/-0.50	
Perylene-d12	537585	25.805	513683	25.805	105	50 - 200	0.000	+/-0.50	
LDW23-SS1805 (23E0009-03)		(Solid)	Lab File ID: NT1706012334.D				Analyzed: 06/02/23 08:32		
1,4-Dichlorobenzene-d4	246695	9.136	257007	9.136	96	50 - 200	0.000	+/-0.50	
Naphthalene-d8	907825	11.601	932905	11.6	97	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	475279	15.184	509574	15.184	93	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	876698	18.203	912749	18.203	96	50 - 200	0.000	+/-0.50	
Chrysene-d12	448714	23.228	578011	23.215	78	50 - 200	0.013	+/-0.50	
Di-n-Octylphthalate-d4	943475	24.223	1181490	24.223	80	50 - 200	0.000	+/-0.50	
Perylene-d12	541143	25.818	513683	25.805	105	50 - 200	0.013	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0008	Instrument:	NT17
		Calibration:	GE00065

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1800 (23E0009-05)		(Solid)		Lab File ID: NT1706012335.D				Analyzed: 06/02/23 09:09	
1,4-Dichlorobenzene-d4	229152	9.136	257007	9.136	89	50 - 200	0.000	+/-0.50	
Naphthalene-d8	842018	11.6	932905	11.6	90	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	440663	15.184	509574	15.184	86	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	812309	18.203	912749	18.203	89	50 - 200	0.000	+/-0.50	
Chrysene-d12	429827	23.215	578011	23.215	74	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	888918	24.223	1181490	24.223	75	50 - 200	0.000	+/-0.50	
Perylene-d12	515866	25.818	513683	25.805	100	50 - 200	0.013	+/-0.50	
LDW23-SS1820 (23E0009-07)		(Solid)		Lab File ID: NT1706012336.D				Analyzed: 06/02/23 09:47	
1,4-Dichlorobenzene-d4	232057	9.136	257007	9.136	90	50 - 200	0.000	+/-0.50	
Naphthalene-d8	873581	11.6	932905	11.6	94	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	464606	15.183	509574	15.184	91	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	850863	18.203	912749	18.203	93	50 - 200	0.000	+/-0.50	
Chrysene-d12	461716	23.215	578011	23.215	80	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	974858	24.223	1181490	24.223	83	50 - 200	0.000	+/-0.50	
Perylene-d12	524482	25.818	513683	25.805	102	50 - 200	0.013	+/-0.50	
Initial Cal Check (SLF0008-ICV3)		(Solid)		Lab File ID: NT1706012338.D				Analyzed: 06/02/23 11:02	
1,4-Dichlorobenzene-d4	223423	9.136	223423	9.136	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	810178	11.6	810178	11.6	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	450990	15.184	450990	15.184	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	792538	18.203	792538	18.203	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	499734	23.215	499734	23.215	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1036983	24.223	1036983	24.223	100	50 - 200	0.000	+/-0.50	
Perylene-d12	439413	25.805	439413	25.805	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLF0008-LCV3)		(Solid)		Lab File ID: NT1706012340.D				Analyzed: 06/02/23 12:16	
1,4-Dichlorobenzene-d4	201322	9.136	223423	9.136	90	50 - 200	0.000	+/-0.50	
Naphthalene-d8	693572	11.6	810178	11.6	86	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	312332	15.184	450990	15.184	69	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	594291	18.203	792538	18.203	75	50 - 200	0.000	+/-0.50	
Chrysene-d12	368988	23.215	499734	23.215	74	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	658589	24.223	1036983	24.223	64	50 - 200	0.000	+/-0.50	
Perylene-d12	321164	25.805	439413	25.805	73	50 - 200	0.000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0008
Instrument: NT17
Calibration: GE00065

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (SLF0008-CCV1)		(Water)		Lab File ID: NT1706012345.D				Analyzed: 06/02/23 15:22	
1,4-Dichlorobenzene-d4	235105	9.136	223423	9.136	105	50 - 200	0.000	+/-0.50	
Naphthalene-d8	843424	11.6	810178	11.6	104	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	450569	15.184	450990	15.184	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	746223	18.203	792538	18.203	94	50 - 200	0.000	+/-0.50	
Chrysene-d12	499235	23.215	499734	23.215	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1059289	24.223	1036983	24.223	102	50 - 200	0.000	+/-0.50	
Perylene-d12	550814	25.805	439413	25.805	125	50 - 200	0.000	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270E

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1811 23E0009-01	04/28/23 10:38	05/01/23 09:42	05/05/23 11:23	7	14	06/02/23 07:54	28	40	
LDW23-SS1805 23E0009-03	04/28/23 16:15	05/01/23 09:42	05/05/23 11:23	6	14	06/02/23 08:32	28	40	
LDW23-SS1800 23E0009-05	04/29/23 10:10	05/01/23 09:42	05/05/23 11:23	6	14	06/02/23 09:09	28	40	
LDW23-SS1820 23E0009-07	04/29/23 14:00	05/01/23 09:42	05/05/23 11:23	5	14	06/02/23 09:47	28	40	
Matrix Spike BLE0148-MS1	04/28/23 16:15	05/01/23 09:42	05/05/23 11:23	6	14	06/02/23 04:48	28	40	
Matrix Spike Dup BLE0148-MSD1	04/28/23 16:15	05/01/23 09:42	05/05/23 11:23	6	14	06/02/23 05:25	28	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT17

Analyte	MDL	RL	Units
Phenol	4.4	20.0	ug/kg
4-Methylphenol	7.4	20.0	ug/kg
Naphthalene	4.2	20.0	ug/kg
2-Methylnaphthalene	4.5	20.0	ug/kg
Acenaphthylene	6.2	20.0	ug/kg
Dimethylphthalate	4.4	20.0	ug/kg
Acenaphthene	5.2	20.0	ug/kg
Dibenzofuran	14.1	20.0	ug/kg
Fluorene	14.6	20.0	ug/kg
Phenanthrene	8.7	20.0	ug/kg
Anthracene	7.2	20.0	ug/kg
Fluoranthene	6.1	20.0	ug/kg
Pyrene	5.7	20.0	ug/kg
Butylbenzylphthalate	9.4	20.0	ug/kg
Benzo(a)anthracene	6.0	20.0	ug/kg
Chrysene	6.1	20.0	ug/kg
bis(2-Ethylhexyl)phthalate	14.1	50.0	ug/kg
Benzofluoranthenes, Total	21.0	40.0	ug/kg
Benzo(a)pyrene	4.2	20.0	ug/kg
Indeno(1,2,3-cd)pyrene	14.7	20.0	ug/kg
Dibenzo(a,h)anthracene	17.2	20.0	ug/kg
Benzo(g,h,i)perylene	13.6	20.0	ug/kg

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001941

Printed: 9/25/2013 1:45:31PM

Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

Comments

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

B001941
SVOA 2,4-Dinitrophenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: _____

Lot #: bEH 502 I

Purity: 90 ~ 94%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001945

Printed: 9/25/2013 3:23:22PM

Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

B001945
SVOC Benzoic Acid
Expires 12/31/2029
Prepared By Jianqing Zhou 12/31/2012

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: _____

Lot #: A0224339

Purity: 98%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001948

Printed: 9/25/2013 3:37:51PM

Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

Comments

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

B001948
SVOA 4,6-Dinitro-2-Methylphenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: _____

Lot #: 179-31A

Purity: 99%

Analyst: KB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002054

Printed: 10/4/2013 6:32:21PM

Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

Comments

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL

B002054
SVOA 1-Methylnaphthalene
Solvent / Lot: NA
Prep: 12/13/2012 by JZ
Exp: 12/31/2029
Location:

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 67-53

Purity: 99%

Analyst: AZ

H000691

Data File: \\target\share\chem2\fid4a.i\20230317.b\423C1703.D

Page 1

Date : 17-MAR-2023 10:46

Client ID:

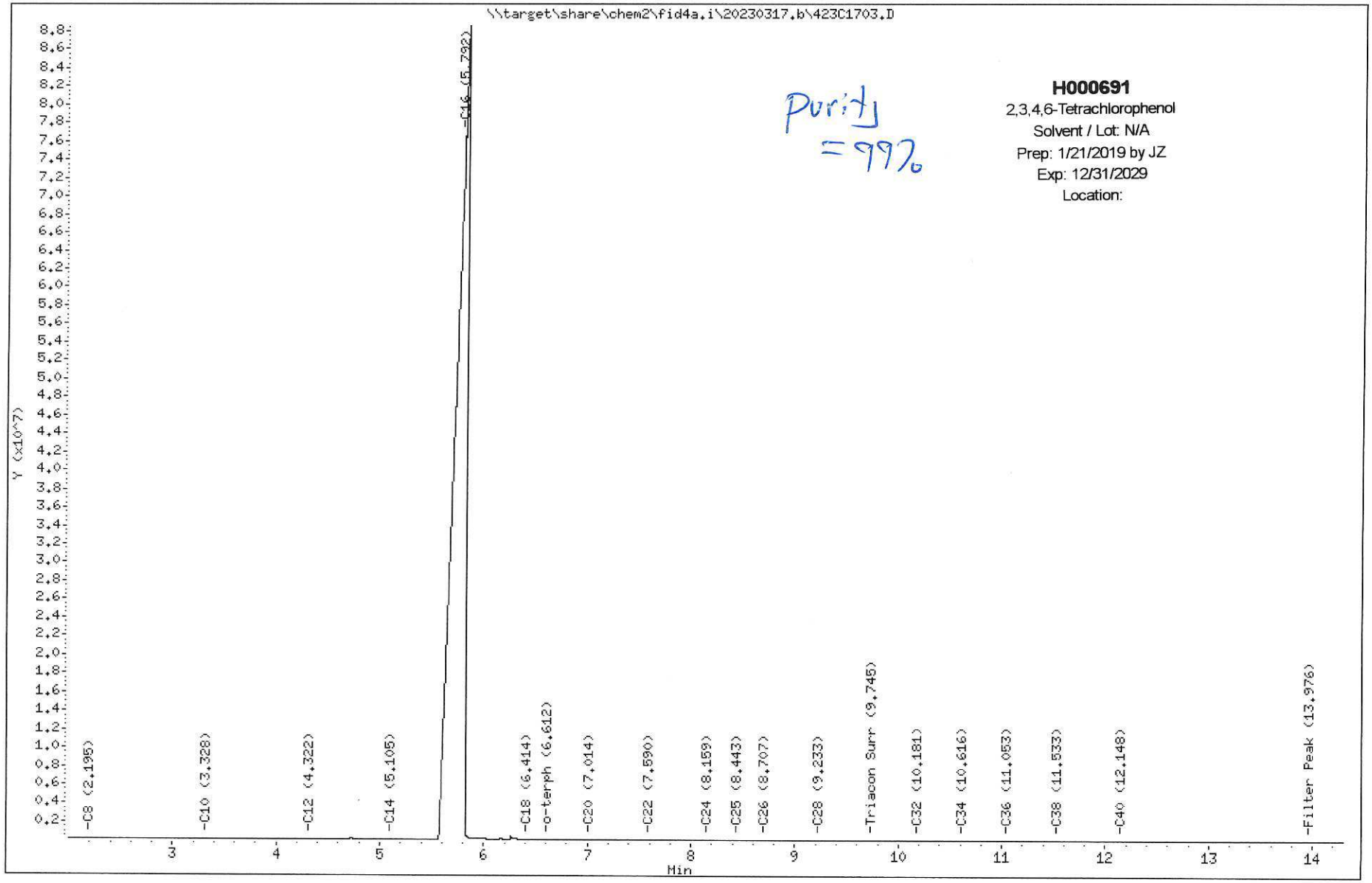
Instrument: fid4a.i

Sample Info: K007226

Operator: AA

Column phase: RTX-1

Column diameter: 0.25



Purity = 99%

H000691
2,3,4,6-Tetrachlorophenol
Solvent / Lot: N/A
Prep: 1/21/2019 by JZ
Exp: 12/31/2029
Location:

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Lab Smp Id: K007226
Inj Date : 17-MAR-2023 10:46
Operator : AA Inst ID: fid4a.i
Smp Info : K007226
Misc Info :
Comment   :
Method   : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m
Meth Date : 17-Mar-2023 16:58 alfonso Quant Type: AREA%
Cal Date : 18-AUG-2022 11:51 Cal File: 422H1803.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon+ Compound Sublist: tph.sub
Target Version: 4.14
Processing Host: ALFONSO-201901

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.228	2027	2354	1.162	0.000	
5.276	4673	2682	0.574	0.000	
5.322	195	844	4.328	0.000	
5.331	977	1203	1.231	0.000	
5.356	490	993	2.027	0.000	
5.361	814	1044	1.283	0.000	
5.382	115	387	3.351	0.000	
5.399	619	960	1.551	0.000	
5.406	402	1035	2.576	0.000	
5.410	378	1122	2.968	0.000	
5.423	1663	1555	0.935	0.000	
5.452	5951	5020	0.844	0.000	
5.501	290	797	2.753	0.000	
5.523	2317	2472	1.067	0.000	
5.538	5946	6823	1.147	0.000	
5.792	501855376	76456669	0.152	74.449	6 C16
5.807	79757019	82319946	1.032	11.775	
5.823	77929961	88539160	1.136	11.505	
5.962	75333	84828	1.126	0.011	
5.986	474748	124326	0.262	0.070	
6.070	17103	57180	3.343	0.002	
6.074	120761	57565	0.477	0.017	
6.113	90233	47140	0.522	0.013	
6.165	407438	218439	0.536	0.060	
6.263	944101	374166	0.396	0.139	
6.414	114839	39498	0.344	0.016	7 C18
6.464	53190	31177	0.586	0.007	
6.523	31509	25870	0.821	0.004	
6.551	4785	23963	5.008	0.000	
6.559	51194	25409	0.496	0.007	
6.590	21354	21666	1.015	0.003	
6.612	35061	21127	0.603	0.005	$ 8 o-terph
6.638	17712	19934	1.125	0.002	
6.672	22159	19651	0.887	0.003	
6.683	26846	19268	0.718	0.003	
6.708	5413	18142	3.351	0.000	
6.713	24941	18247	0.732	0.003	
6.747	50657	18478	0.365	0.007	
6.795	23973	17444	0.728	0.003	
6.814	28457	17895	0.629	0.004	
6.837	10746	15445	1.437	0.001	
6.871	29974	21406	0.714	0.004	
6.874	4287	21471	5.009	0.000	
6.882	20520	21675	1.056	0.003	
6.944	32864	17445	0.531	0.004	
6.978	9138	15347	1.679	0.001	
7.014	4130	13830	3.348	0.000	9 C20
7.025	12567	14083	1.121	0.001	
7.038	4952	14274	2.882	0.000	
7.044	6508	14578	2.240	0.000	
7.050	25344	14736	0.581	0.003	
7.099	5531	12365	2.236	0.000	
7.108	16440	12371	0.752	0.002	
7.129	9415	11275	1.198	0.001	
7.175	3589	10327	2.878	0.000	
7.182	7285	10474	1.438	0.001	
7.212	11252	10002	0.889	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
	677340272	268782821		100.000	

Total unknown % area = 25.478

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

ACID STOC"

Product no.: 22523046
Lot no.: LRAC9812
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9812.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005200
SVOA-ABN ACID STOCK-200-800ug/ml
Solvent / Lot: DCM
Prep: 5/18/2021 by JZ
Exp: 5/31/2023
Location:

JZ 5/18/21

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Agilent

Certificate of Analysis

J008074

SVOA PAH STD 2000ug/ml
Expires 6/30/2023
Prepared By Joshua Rains 8/5/2021

Product Name: PAH Standard

Product Number: US-106N-1

Lot Number: 0006540449

Lot Issue Date: 11-Jun-2020

Expiration Date: 30-Jun-2023

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

Matrix: methylene chloride/benzene (1:1)

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

Certificate of Analysis

Product Number: US-106N-1 **Lot Number:** 0006540449

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16062
Certification Date: November 19, 2020
Expiration Date: November 30, 2030

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

J008310
Benzidines std @2000ug/ml
Expires 11/30/2030
Prepared By Van Spohn 8/12/2021

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Certified Values

Analyte	*Units*	*Certified Value* [1,4]
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

Informational Values

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

Additional Information:

DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4ºC.

The sample has been intentionally prepared with an apparent headspace.

STORAGE

The sample should be stored at 4ºC. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4ºC.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID	CRM143-50G
Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.

Description

Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

1 **Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

***k*:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH **ISO/IEC 17025:2017 (ANAB Cert AT-1467)** and **ISO 17034:2016 (ANAB Cert AR-1470).**

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date	January 05, 2021
Version	0-152021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Reference Materials Producer
Cert #2495.01

Certificate of Analysis

Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics**® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

Certificate of Reference Material

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021 Certifying Officer: Shannon Mora

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory , please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

Distributed By SPEX CertiPrep

SPEX CertiPrep®

Your Science is Our Passion.®

203 Norcross Ave. Metuchen, NJ 08840

www.spexcertiprep.com • E-mail: crmsales@spexcsp.com

Phone: 1-732-549-7144 • Fax 1-732-603-9647

Accredited to 17025 & Guide 34 ISO Certified to 9001

ACCREDITED
Reference Materials Producer
Cert #2495.01

ECS

Certificate of Analysis

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542

Certificate of Reference Material

Catalog Number: ECS-A-030

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Lot No. AA210126005

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Nave

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

Distiributied By SPEX CertiPrep

SPEX CertiPrep®

Your Science is Our Passion.®

203 Norcross Ave. Metiuchen, NJ 08840

www.spexcertiprep.com • E-mail: crmsales@spexcsp.com

Phone: 1-732-549-7144 • Fax 1-732-603-9647

Accredited to 17025 & Guide 34 ISO Certified to 9001

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-104N-1 **Lot Issue Date:** 02-Jul-2021

Lot Number: 0006620643 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

K004544
toxic sub mix#2
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

05/11/22

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0181243

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2025 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Elution Order	Compound	Gr (weig					
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ2508) **Purity** 99%	1,50		+/- 53.3632	µg/mL	Stressed	
2	Phenol-d6 **CAS #** 13127-88-3 (Lot PR-31262) **Purity** 99%	1,506.0	µg/mL	+/- 8.9452 +/- 43.9882 +/- 53.3632	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,510.0	µg/mL	+/- 8.9689 +/- 44.1050 +/- 53.5049	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32542/022621DB1 **Purity** 99%	1,004.0	µg/mL	+/- 5.9635 +/- 29.3255 +/- 35.5754	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,008.0	µg/mL	+/- 5.9872 +/- 29.4423 +/- 35.7172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 19169) **Purity** 99%	1,006.0	µg/mL	+/- 5.9753 +/- 29.3839 +/- 35.6463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,506.0	µg/mL	+/- 8.9452 +/- 43.9882 +/- 53.3632	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101246	**Lot Number:**	CL17953
Description:	Benzoic Acid	**Certification Date:**	January 31, 2022
Storage:	4 °C	**Expiration Date:**	January 31, 2032
Provided As:	1 mL in 2 mL Ampoule in Methylene Chloride		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

K004603
Benzoic Acid @2000ug/ml
Solvent / Lot: N/A
Prep: 5/13/2022 by JZ
Exp: 1/31/2032
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018 us

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17662
Certification Date: December 2, 2021
Expiration Date: November 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

K004604
Benzidines std @2000ug/ml
Solvent / Lot: MeCl2
Prep: 5/13/2022 by JZ
Exp: 11/30/2031
Location: GC

5/13/22

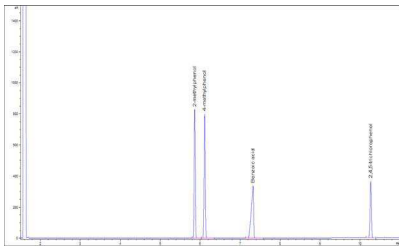
Supelco®

www.sigmaaldrich.com

Certificate of Analysis - Certified Reference Material

EPA TCL Hazardous Substances Mix 1

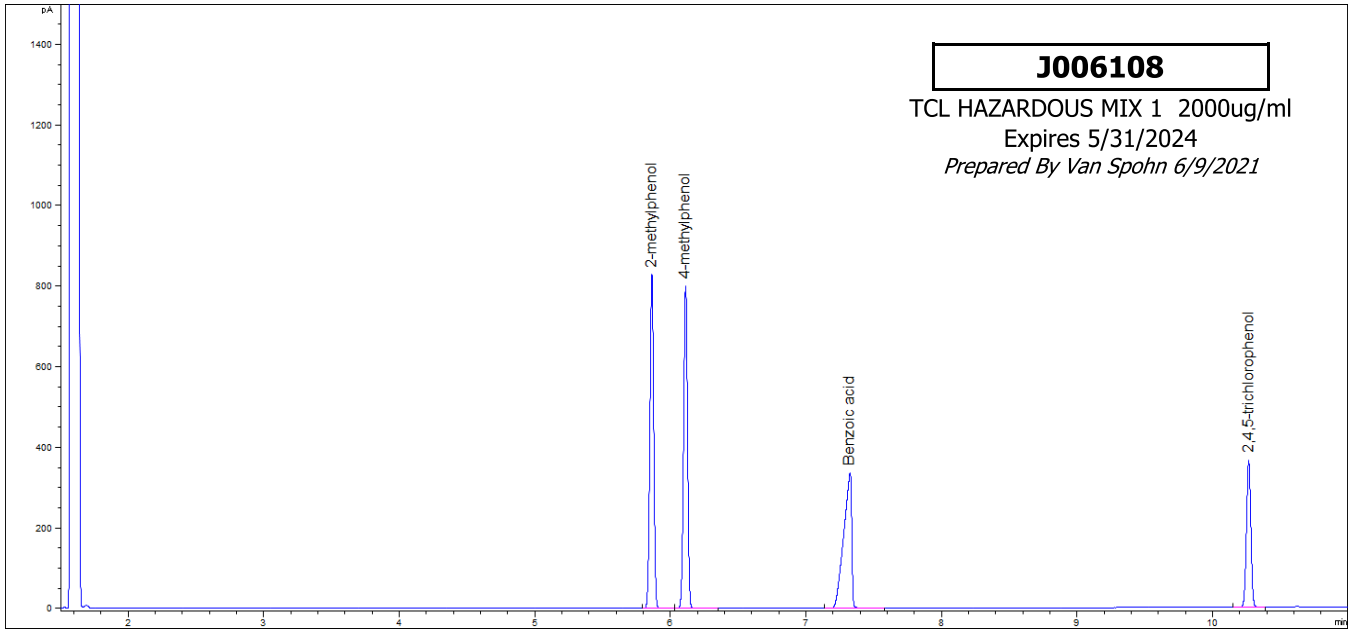
Product no.: 48907
Lot no.: LRAC9610
Expiry Date: May 2024
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAC9610.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Elution order*	*Raw Material Lot*
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

Informational Values:



Additional Information:
Analytical Method Parameters:
Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)
Carrier Gas: H2, Flow: 4.5 mL/min
Inlet Temperature: 170 °C, Injection Volume: 1 µL
Injection Mode: Split, Split Ratio: 20:1

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)
Detector: FID
Detector Temperature: 310 °C

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 20-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom}\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

.

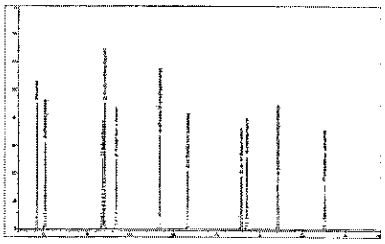
Supelco®

www.sigmaaldrich.com

Certificate of Analysis - Certified Reference Material

EPA TCL Phenols Mix

Product no.: 48904
Lot no.: LRAD0139
Expiry Date: July 2024
Manufacturing Date: July 2021
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0139.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



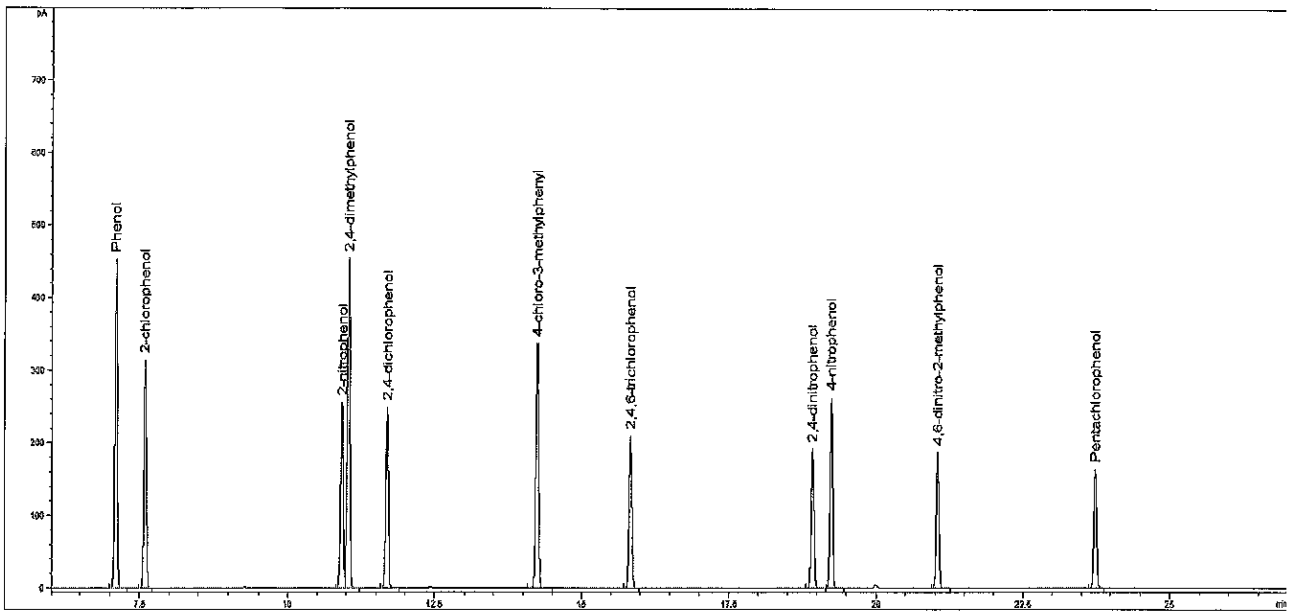
Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

ASSAY Method

J013597
TCL Phenols Mix 2000ug/ml
Solvent / Lot: LRAD0139
Prep: 12/30/2021 by VS
Exp: 7/31/2024
Location:

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.



METHOD: GC (Bellefonte Method)

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.5 mL/min
Inlet Temperature: 200 °C Injection Volume: 1.0 µL
Injection Mode: 25:1
Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)
Detector: FID Temperature: 310 °C

Elution details:

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorphenol
6	14.242	4-chloro-3-m3thylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 12-Jul-2021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{hom\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0139.01	12-Jul-2021	Original Release Date

.

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18355
Certification Date: July 25, 2022
Expiration Date: August 31, 2023

K007995
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: N/A
Prep: 8/29/2022 by JZ
Exp: 8/31/2023
Location: FREEZER 44

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAD2751
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2751.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at:* www.sigma-aldrich.com *for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

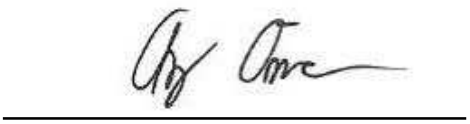
Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 03 JUN 2022



Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

ACID STOCK

Product no.: 22523046
Lot no.: LRAD2750
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2750.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	800	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	800	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	801	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1799	µg/mL	66.9	STBJ5751
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	800	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	800	µg/mL	100.0	BCCD4461
4-NITROPHENOL CAS# 100-02-7	800	µg/mL	100.0	MKCN1089
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1800	µg/mL	100.0	BCBX5762
PENTACHLOROPHENOL CAS# 87-86-5	800	µg/mL	99.0	23614-01
BENZOIC ACID CAS# 65-85-0	1800	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Certificate issue date: 03 JUN 2022

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2750.01	03 JUN 2022	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL18939
Certification Date: September 7, 2022
Expiration Date: August 31, 2032

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 3.812%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.419%

L001288
Benzidines std @2000ug/ml
Solvent / Lot: CL18939
Prep: 2/7/2023 by VS
Exp: 8/31/2032
Location: GC

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64631018 us

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101443
Lot Number: CL18741
Description: Aniline
Certification Date: July 21, 2022
Storage: 4 °C
Expiration Date: July 31, 2030
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 1.719%

L001290
Anline-1000ug/mL
Solvent / Lot: CL18741
Prep: 2/7/2023 by VS
Exp: 7/31/2030
Location: GC

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Aaron Dukes, Certified Reference Materials Manager

L001291
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: CL18811
Prep: 2/7/2023 by VS
Exp: 11/30/2023
Location: FREEZER 44

Component	CAS #	µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 1.643%
Acenaphthylene	208-96-8	1000	± 1.317%
Anthracene	120-12-7	1000	± 2.136%
Azobenzene	103-33-3	1000	± 1.630%
Benzo(a)anthracene	56-55-3	1000	± 2.372%
Benzo(a)pyrene	50-32-8	1000	± 3.028%
Benzo(b)fluoranthene	205-99-2	1000	± 2.377%
Benzo(k)fluoranthene	207-08-9	1000	± 2.286%
Benzo(g,h,i)perylene	191-24-2	1000	± 2.561%
Benzyl alcohol	100-51-6	1000	± 1.803%
Benzyl butyl phthalate	85-68-7	1000	± 1.855%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 1.626%
bis(2-Chloroethyl) ether	111-44-4	1000	± 1.776%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 2.406%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 2.415%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 2.350%
4-Bromophenyl phenyl ether	101-55-3	1000	± 1.708%
Carbazole	86-74-8	1000	± 1.844%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 2.831%
4-Chloro-3-methylphenol	59-50-7	1000	± 1.571%
2-Chloronaphthalene	91-58-7	1000	± 2.022%
2-Chlorophenol	95-57-8	1000	± 2.001%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 1.634%
Chrysene	218-01-9	1000	± 2.358%
Dibenz(a,h)anthracene	53-70-3	1000	± 2.452%
Dibenzofuran	132-64-9	1000	± 0.310%
Di-n-butyl phthalate	84-74-2	1000	± 2.347%
1,2-Dichlorobenzene	95-50-1	1000	± 1.803%
1,3-Dichlorobenzene	541-73-1	1000	± 1.808%
1,4-Dichlorobenzene	106-46-7	1000	± 1.503%
2,4-Dichlorophenol	120-83-2	1000	± 1.393%
Diethyl phthalate	84-66-2	1000	± 1.870%
2,4-Dimethylphenol	105-67-9	1000	± 2.495%
Dimethyl phthalate	131-11-3	1000	± 2.113%
1,2-Dinitrobenzene	528-29-0	1000	± 0.240%
1,3-Dinitrobenzene	99-65-0	1000	± 1.221%
1,4-Dinitrobenzene	100-25-4	1000	± 0.246%
2,4-Dinitrophenol	51-28-5	1000	± 0.519%
2,4-Dinitrotoluene	121-14-2	1000	± 2.242%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18811
Description: 8270 Calibration Standard
Certification Date: August 9, 2022
Storage: -18 °C
Expiration Date: November 30, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 2.154%
Di-n-octyl phthalate	117-84-0	1000	± 2.670%
Fluoranthene	206-44-0	1000	± 2.103%
Fluorene	86-73-7	1000	± 0.890%
Hexachlorobenzene	118-74-1	1000	± 1.210%
Hexachlorobutadiene	87-68-3	1000	± 1.304%
Hexachlorocyclopentadiene	77-47-4	1000	± 1.510%
Hexachloroethane	67-72-1	1000	± 3.281%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 1.921%
Isophorone	78-59-1	1000	± 2.022%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 1.661%
1-Methylnaphthalene	90-12-0	1000	± 1.929%
2-Methylnaphthalene	91-57-6	1000	± 2.220%
2-Methylphenol	95-48-7	1000	± 2.168%
3-Methylphenol	108-39-4	500	± 1.025%
4-Methylphenol	106-44-5	500	± 1.064%
Naphthalene	91-20-3	1000	± 1.199%
2-Nitroaniline	88-74-4	1000	± 1.874%
3-Nitroaniline	99-09-2	1000	± 2.146%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 1.704%

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 2.051%
4-Nitrophenol	100-02-7	1000	± 1.413%
N-Nitrosodimethylamine	62-75-9	1000	± 0.545%
N-Nitrosodiphenylamine	86-30-6	1000	± 1.669%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.712%
Pentachlorophenol	87-86-5	1000	± 2.454%
Phenanthrene	85-01-8	1000	± 2.072%
Phenol	108-95-2	1000	± 2.140%
Pyrene	129-00-0	1000	± 1.869%
Pyridine	110-86-1	1000	± 0.545%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 2.552%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 2.220%
1,2,4-Trichlorobenzene	120-82-1	1000	± 1.632%
2,4,5-Trichlorophenol	95-95-4	1000	± 1.596%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.481%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64591018 us

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101291	**Lot Number:**	CL11000
Description:	GC/MS Tuning Mix	**Certification Date:**	May 9, 2014
Storage:	4 °C	**Expiration Date:**	December 31, 2023
Provided As:	1 mL in 2 mL Ampoule in Methylene chloride	**Revision Date:**	August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

LOO 1648

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111110613_US

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101291
Description: GC/MS Tuning Mix
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene chloride

Lot Number: CL11000
Certification Date: May 9, 2014
Expiration Date: December 31, 2023
Revision Date: August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

LOO1648

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC Guide 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC Guide 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC Guide 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC Guide 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova®
Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL-111106-13_us

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1811

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-01 A	SDG:	23E0009
Sampled:	04/28/23 10:38	Prepared:	05/05/23 11:23	File ID:	NT1706012333S.D
% Solids:	69.29	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 07:54
Batch:	BLE0148	Sequence:	SLF0037	Initial/Final:	14.44 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00070
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.6	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	1.3	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	20.0	U	2.5	20.0
65-85-0	Benzoic acid	1	27.2	J	13.4	99.9
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	7.3	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.59	233	31.1	27 - 120	
p-Terphenyl-d14	499.73	445	89.1	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123335.D

Date : 02-JUN-2023 07:54

Client ID:

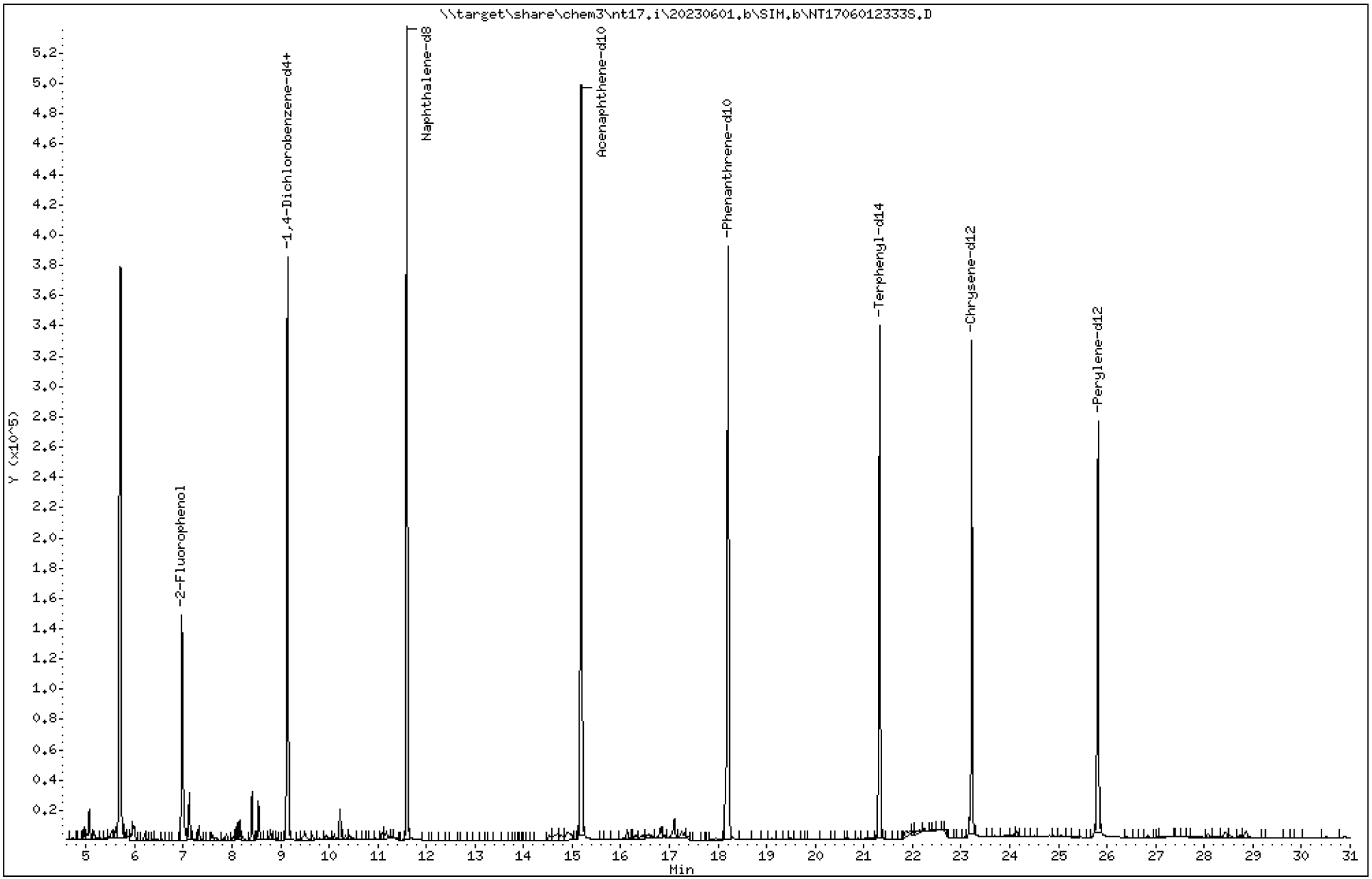
Instrument: nt17.i

Sample Info: 23E0009-01

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

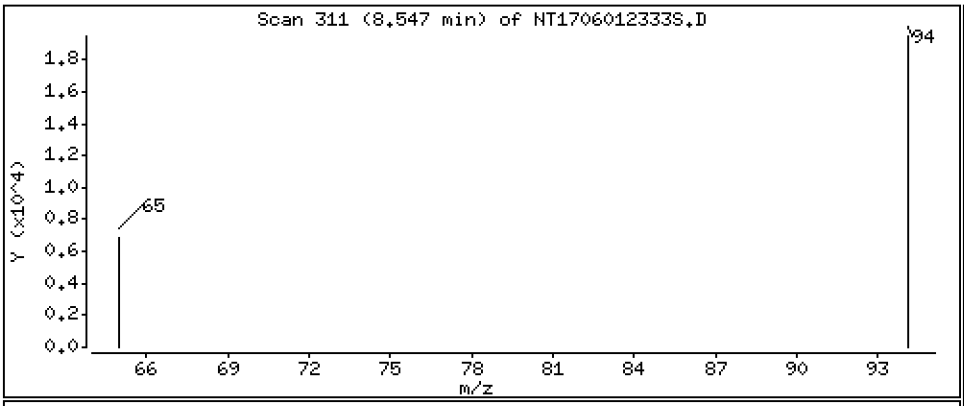
Operator: VTS

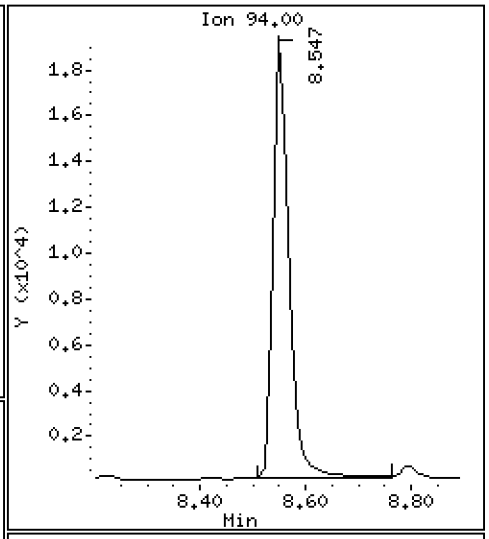
Column phase: ZB-5msi

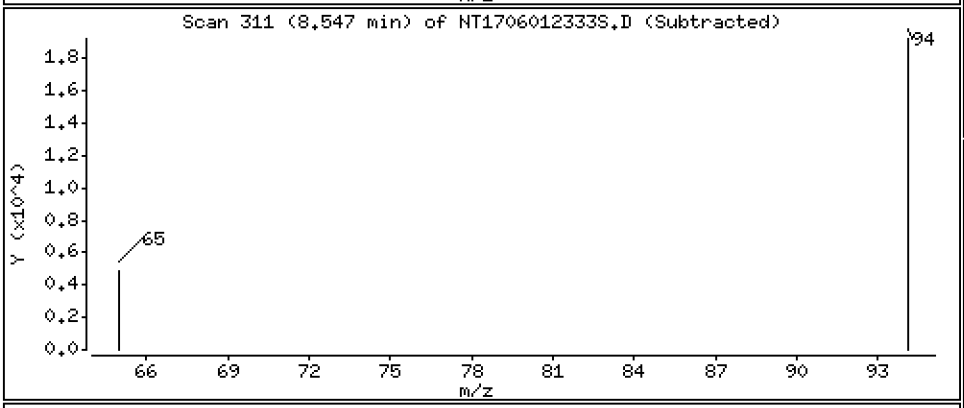
Column diameter: 0.25

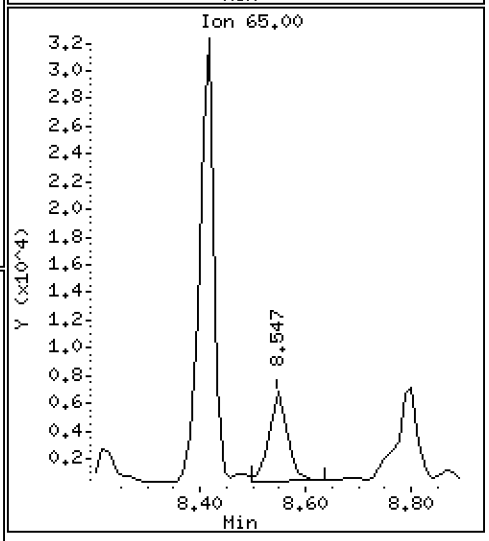
3 Phenol

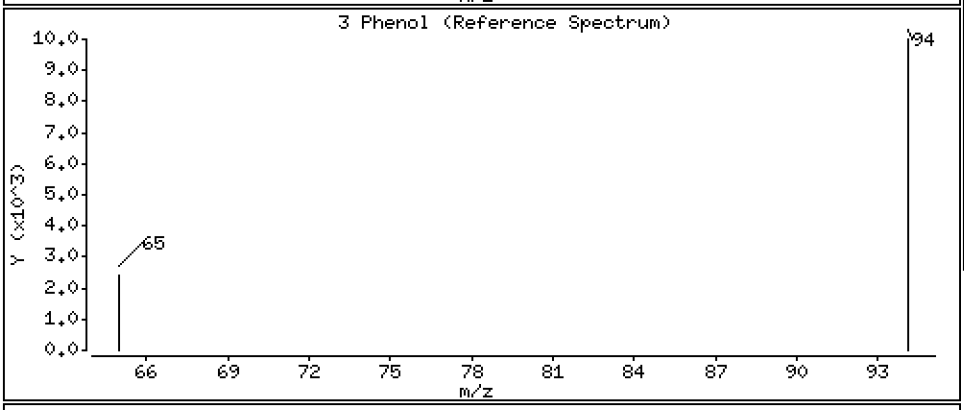
Concentration: 0.3464 ug/mL

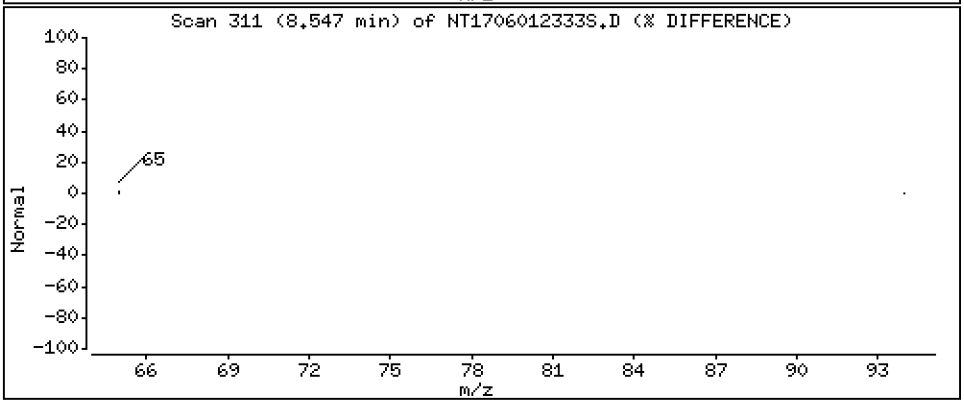












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

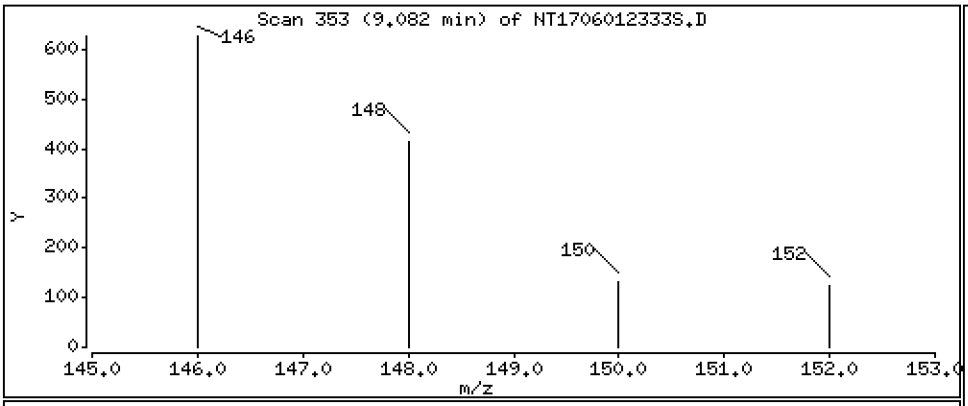
Operator: VTS

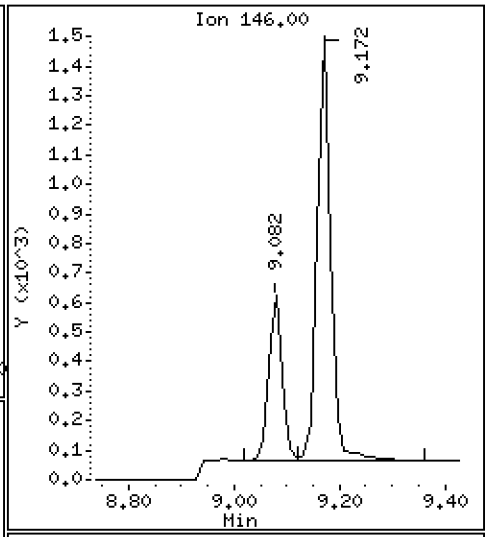
Column phase: ZB-5msi

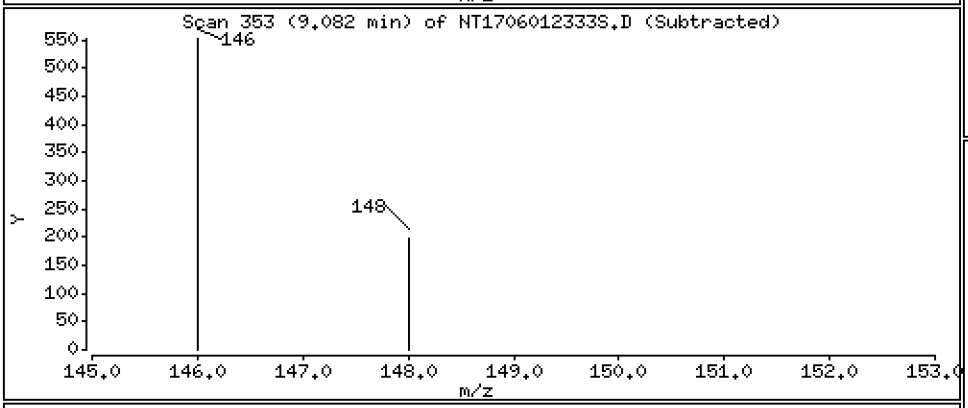
Column diameter: 0.25

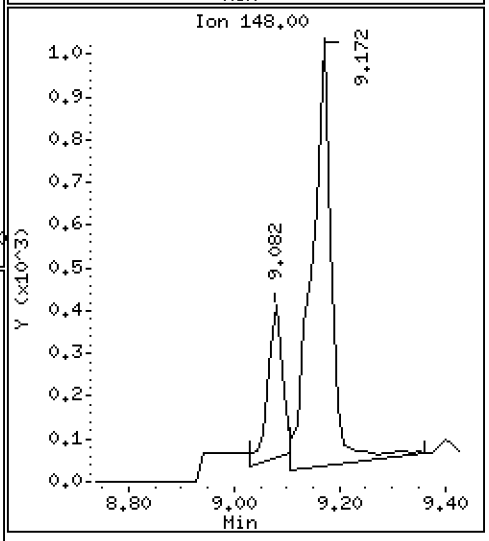
7 1,3-Dichlorobenzene

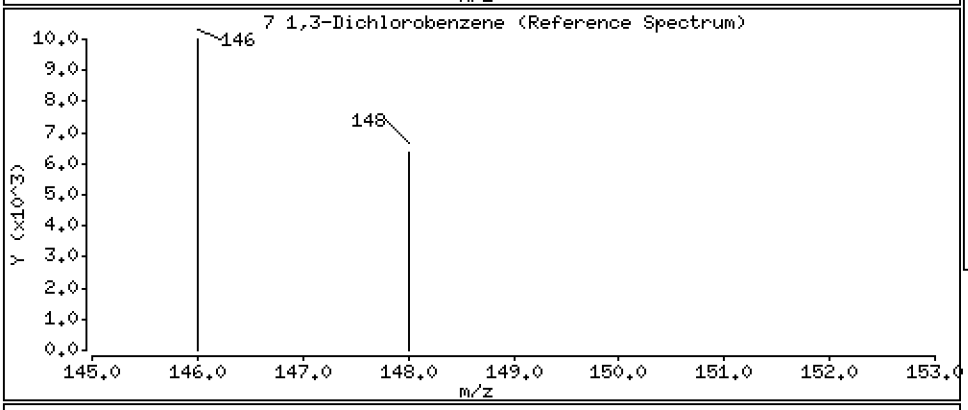
Concentration: 0.009390 ug/mL

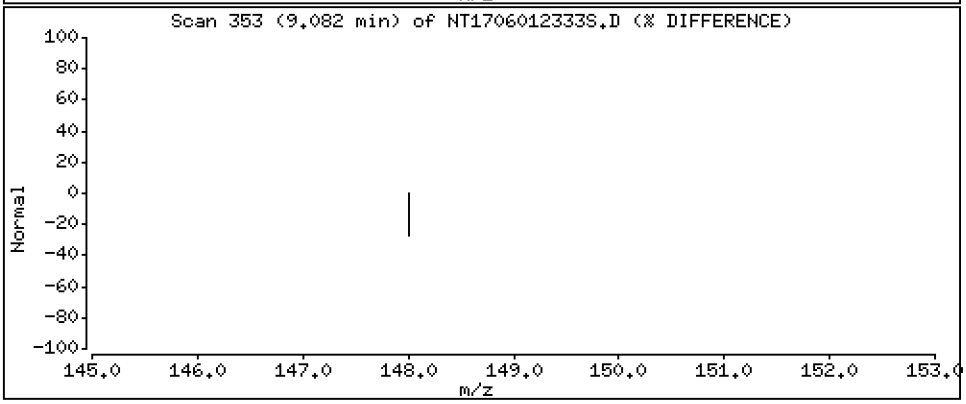












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

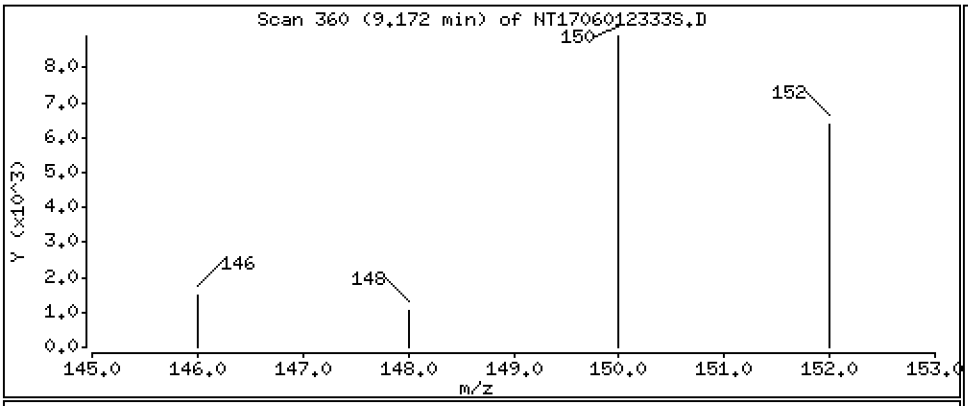
Operator: VTS

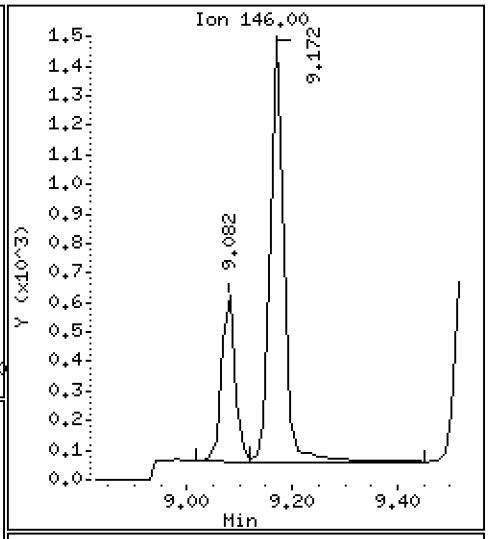
Column phase: ZB-5msi

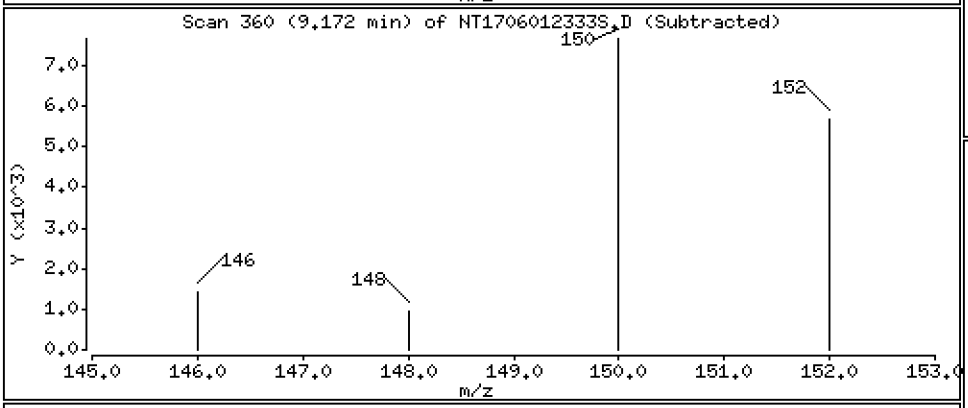
Column diameter: 0.25

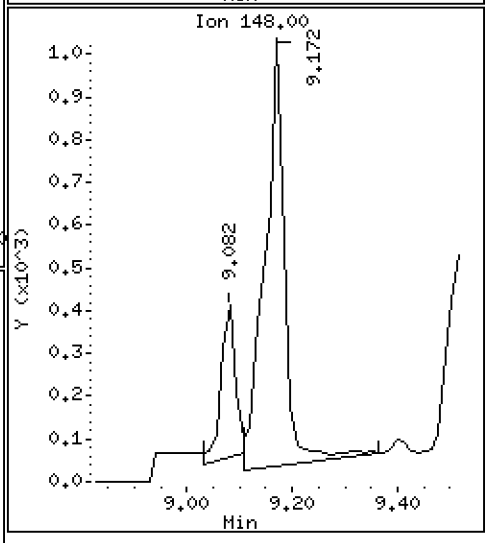
9 1,4-Dichlorobenzene

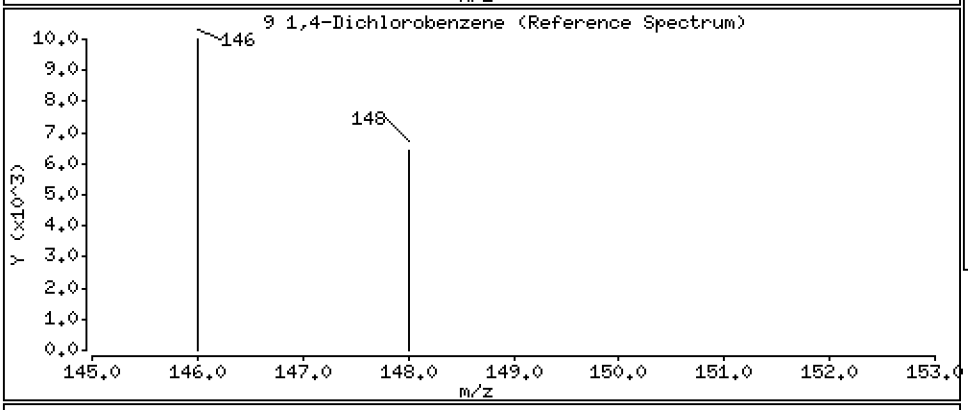
Concentration: 0.02553 ug/mL

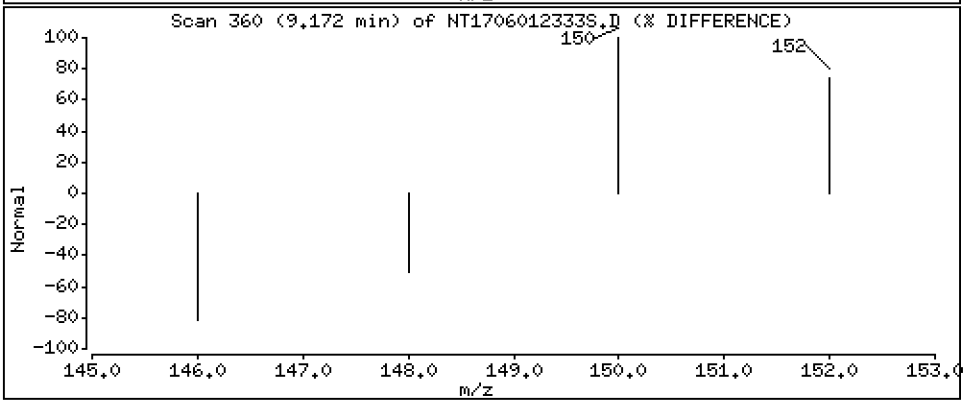












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

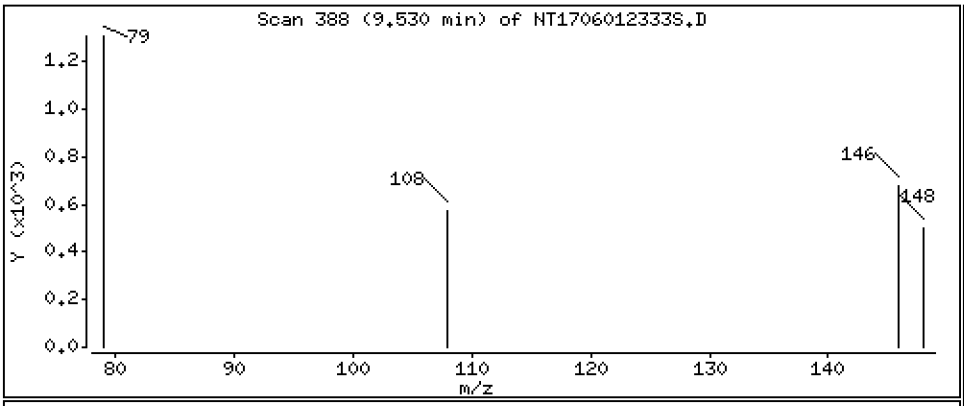
Operator: VTS

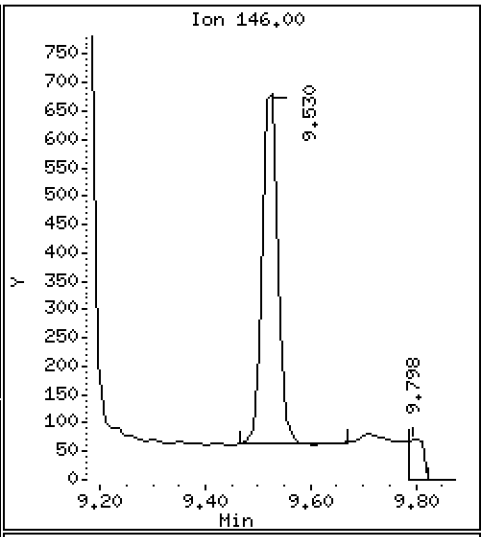
Column phase: ZB-5msi

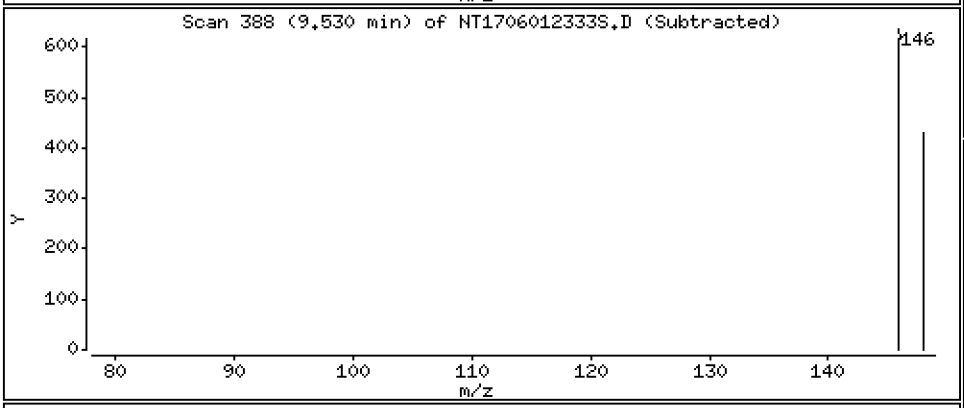
Column diameter: 0.25

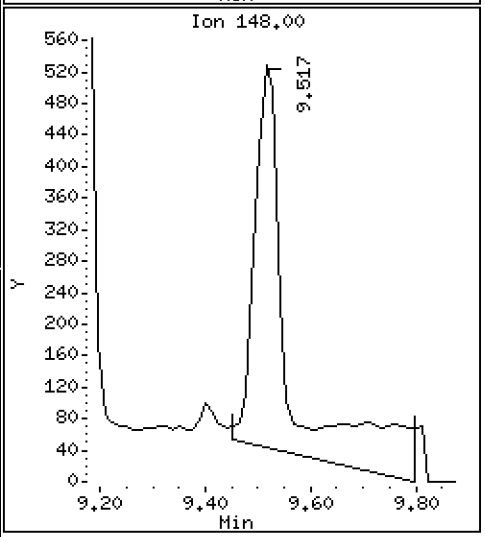
12 1,2-Dichlorobenzene

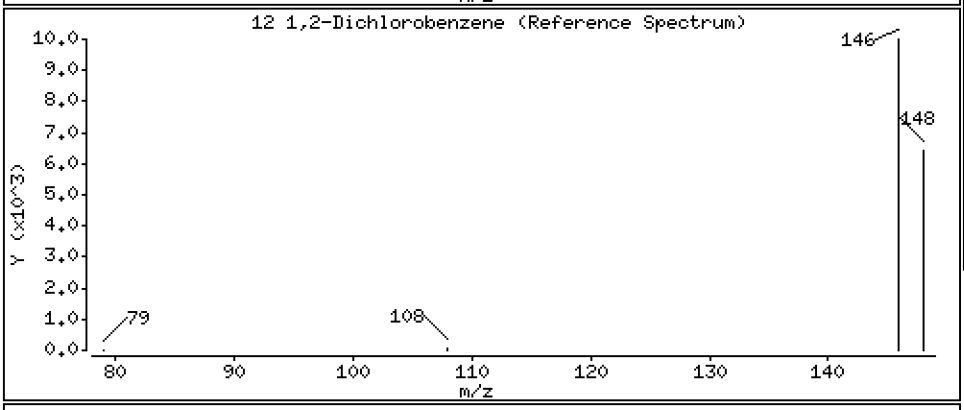
Concentration: 0.01282 ug/mL

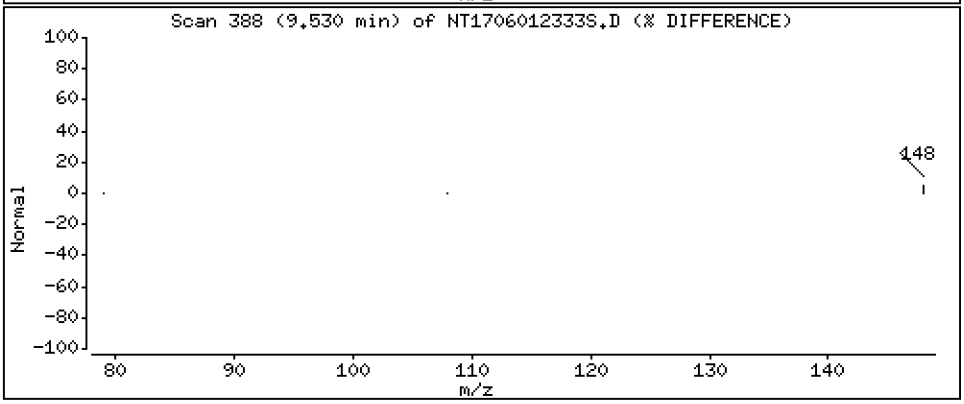












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

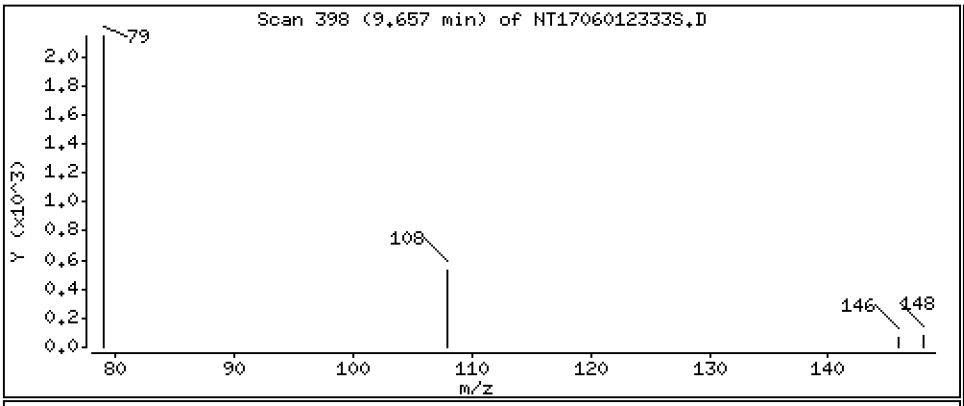
Operator: VTS

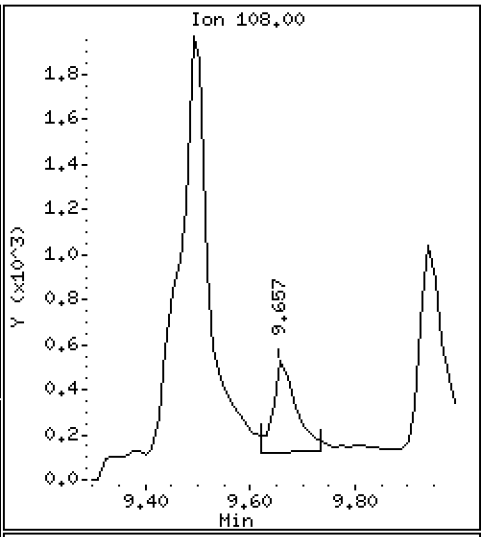
Column phase: ZB-5msi

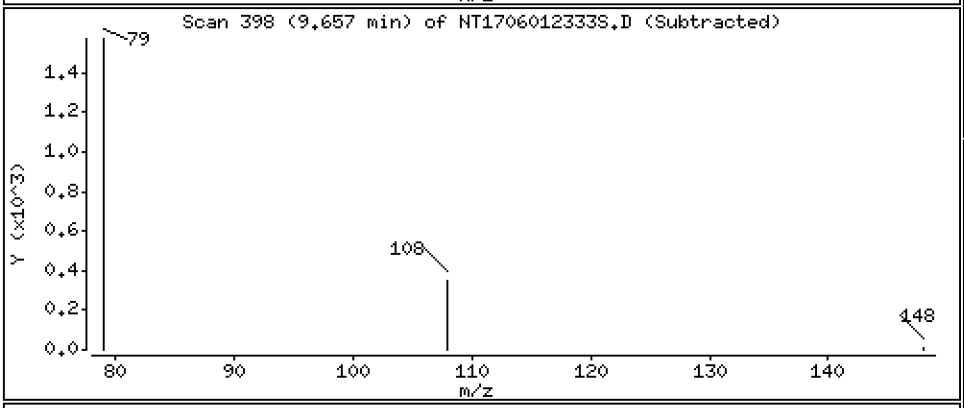
Column diameter: 0.25

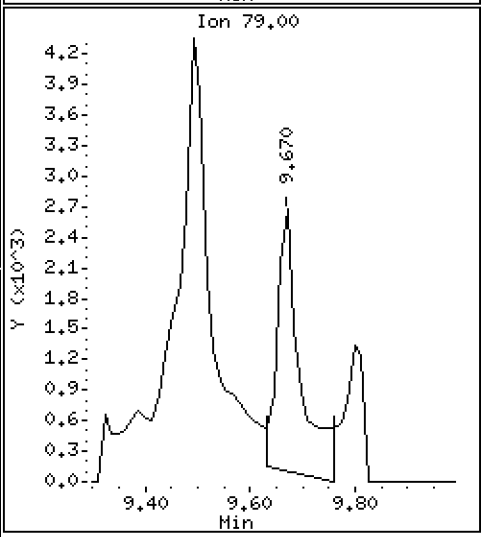
13 2-Methylphenol

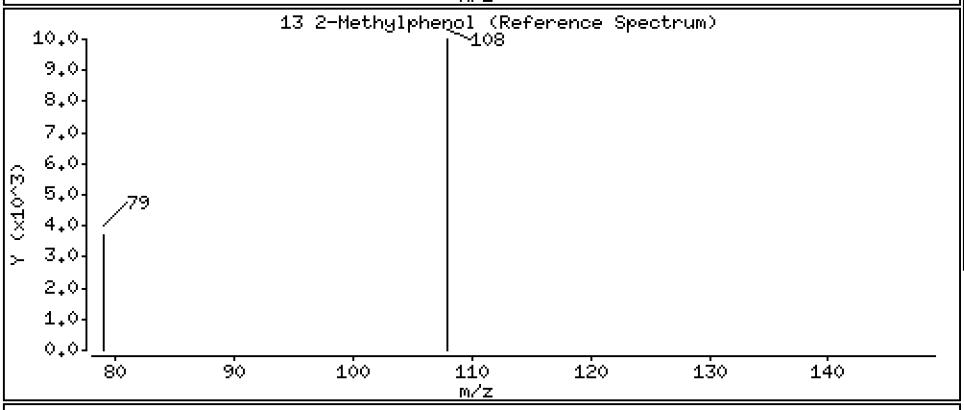
Concentration: 0.01581 ug/mL

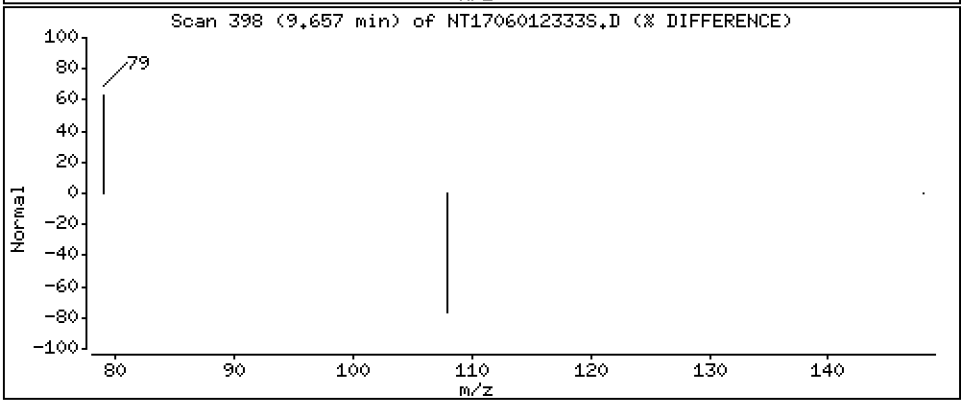












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

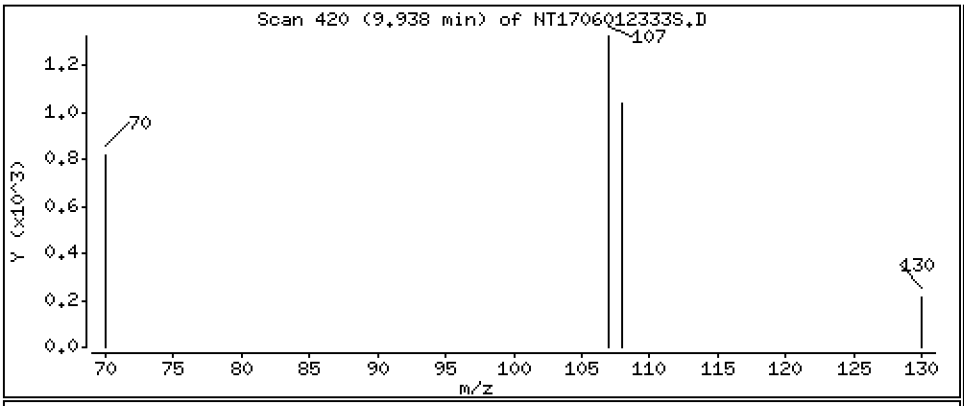
Operator: VTS

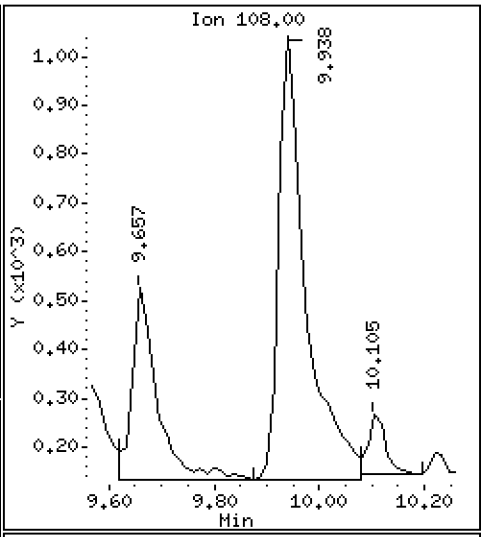
Column phase: ZB-5msi

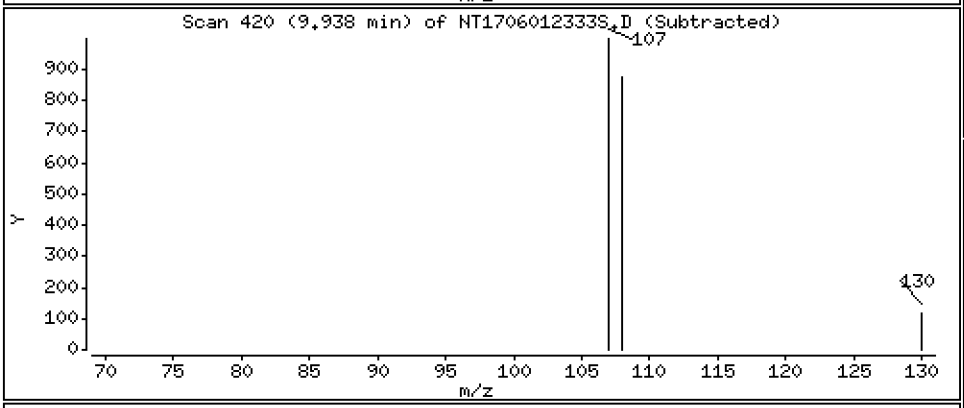
Column diameter: 0.25

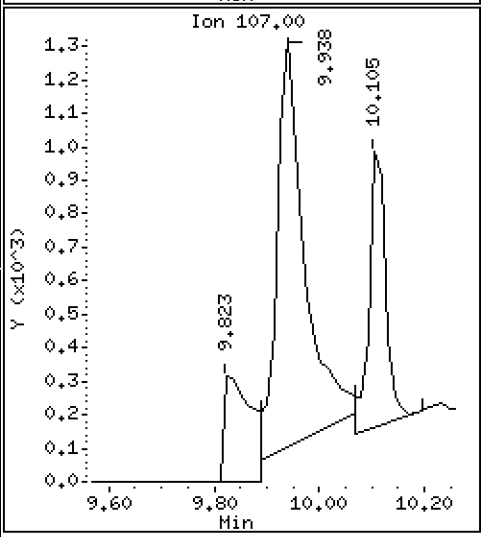
15 4-Methylphenol

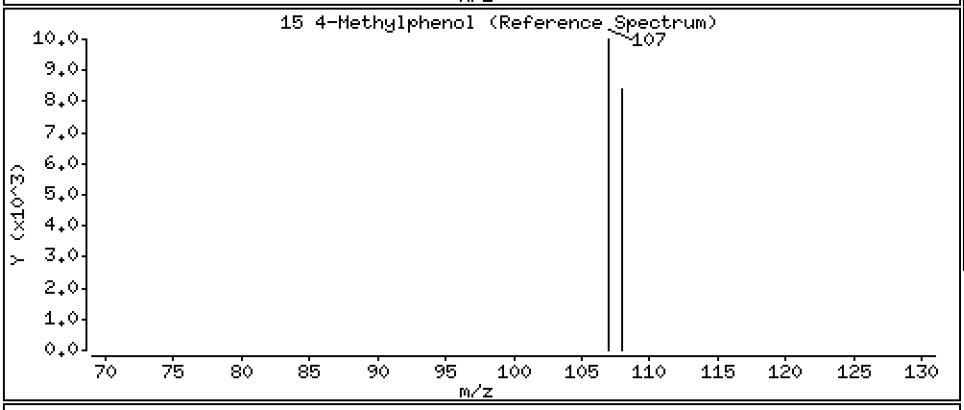
Concentration: 0.03972 ug/mL

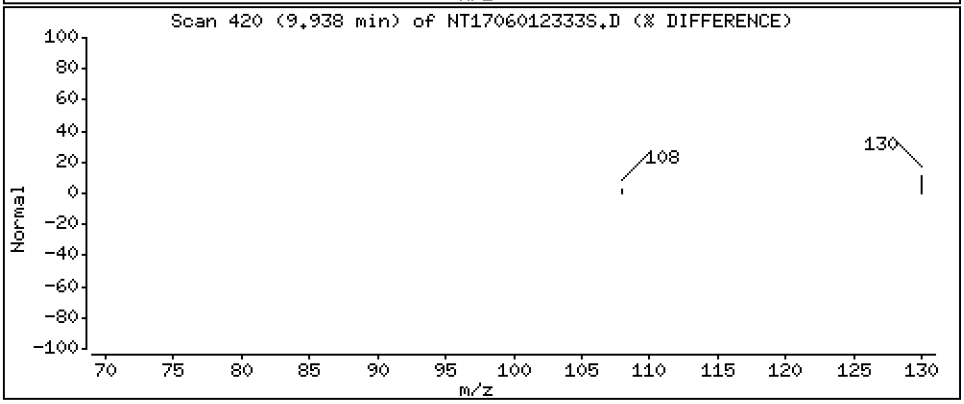












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

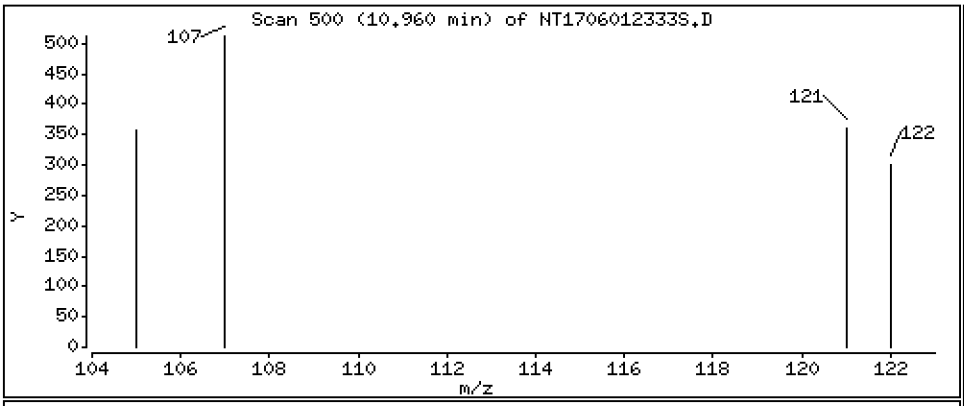
Operator: VTS

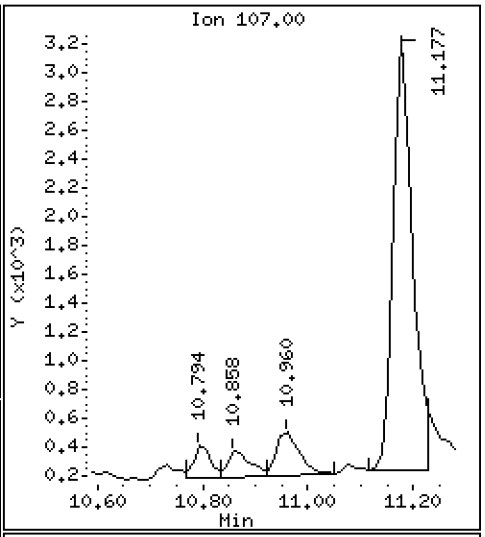
Column phase: ZB-5msi

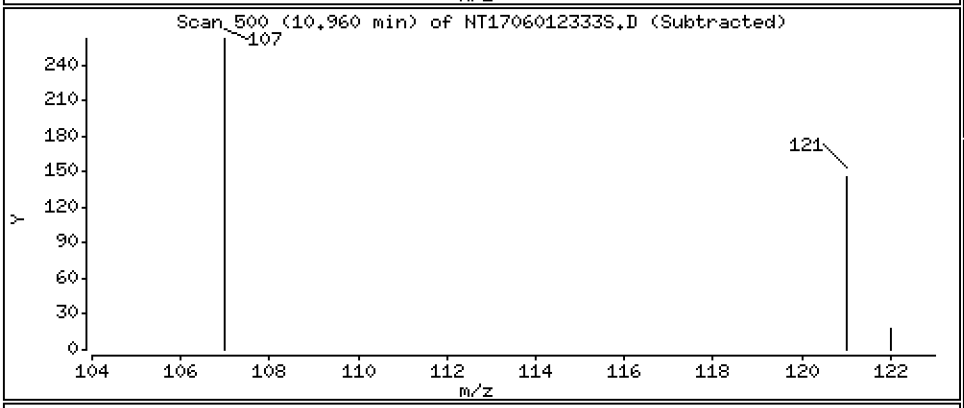
Column diameter: 0.25

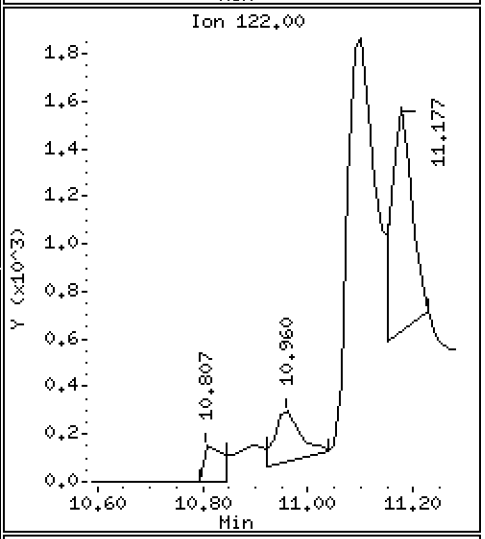
22 2,4-Dimethylphenol

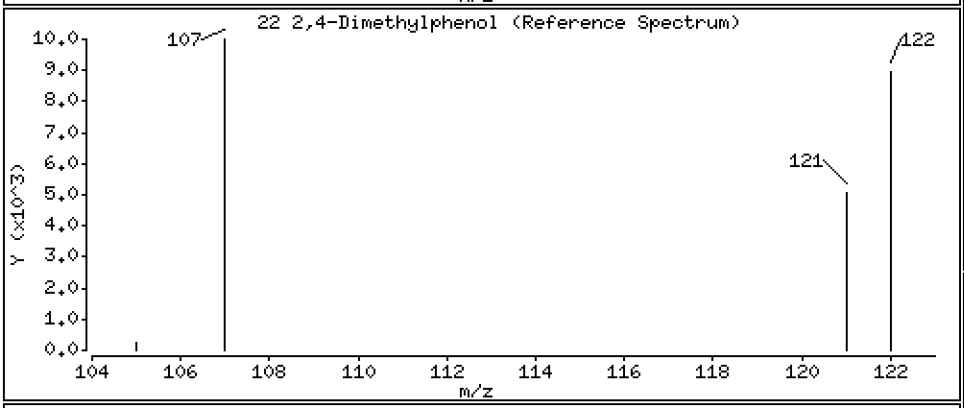
Concentration: 0.01043 ug/mL

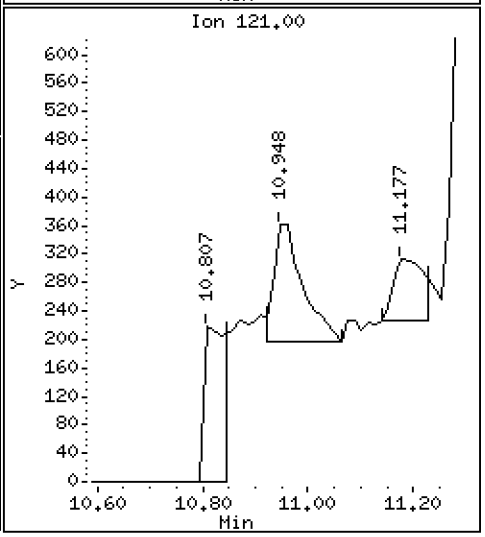


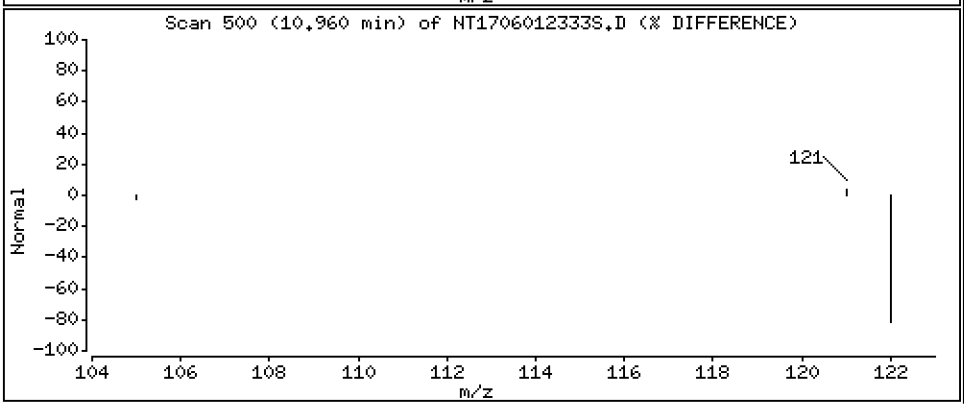












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

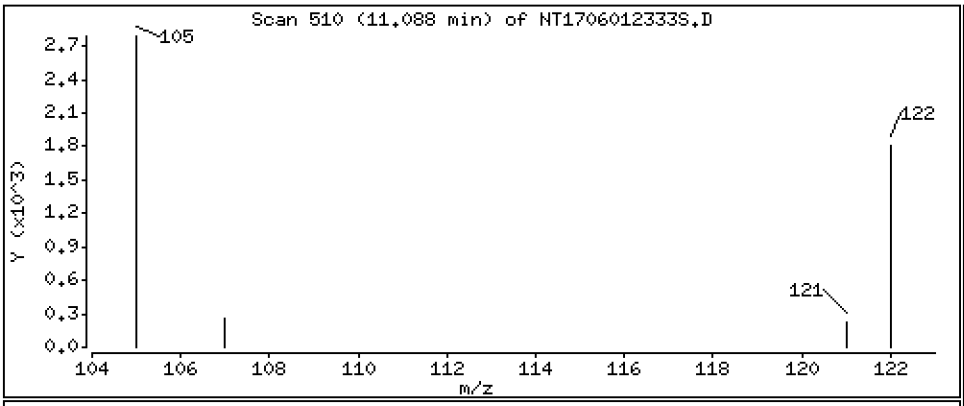
Operator: VTS

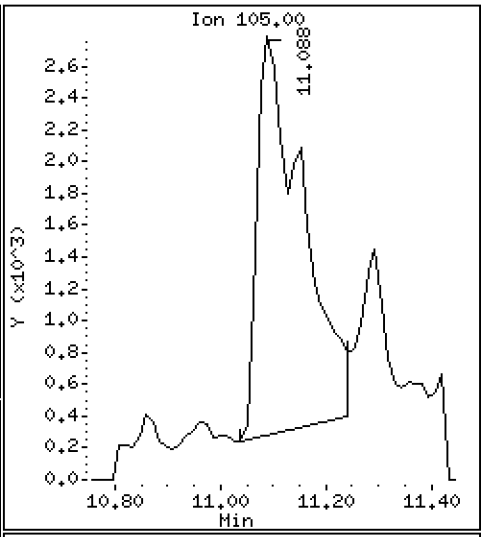
Column phase: ZB-5msi

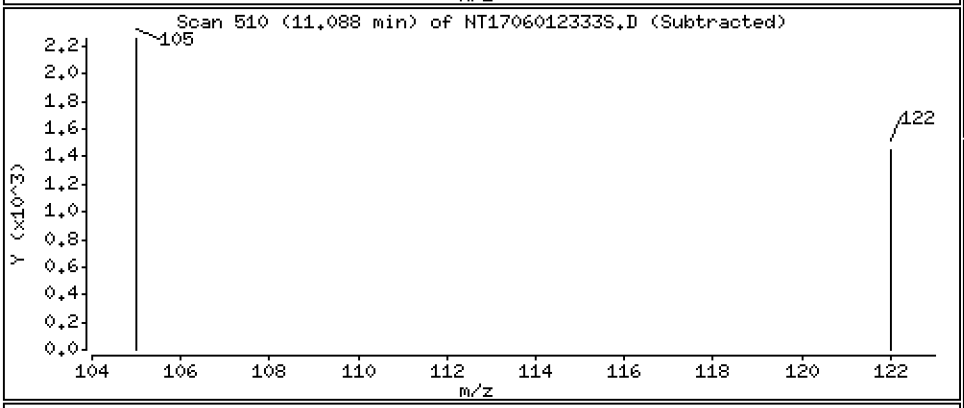
Column diameter: 0.25

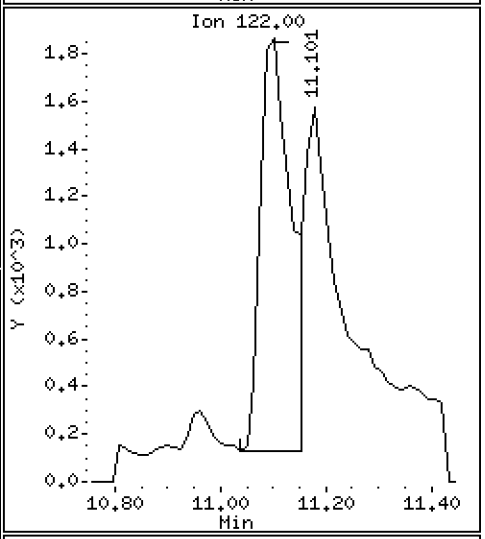
24 Benzoic acid

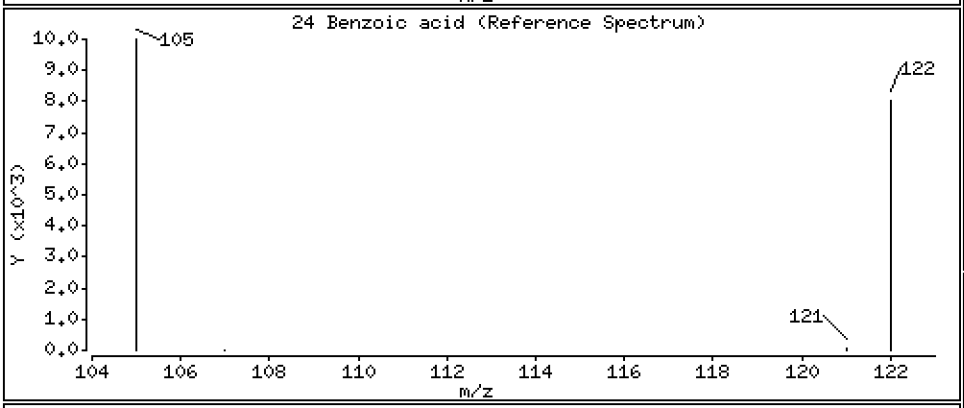
Concentration: 0.2718 ug/mL

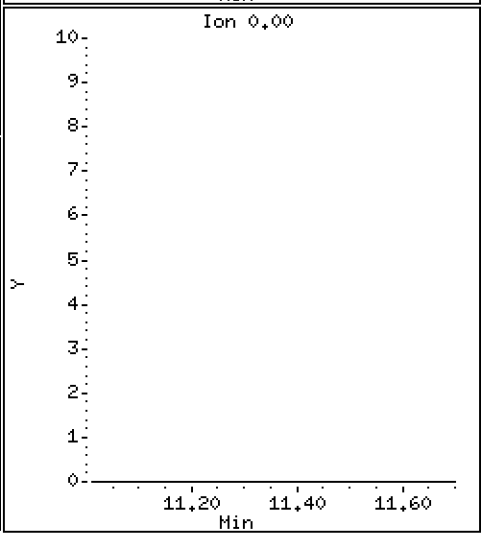


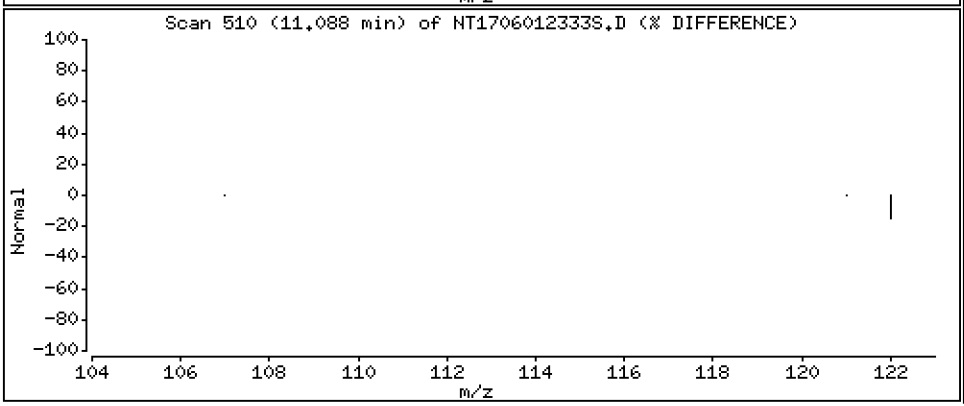












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

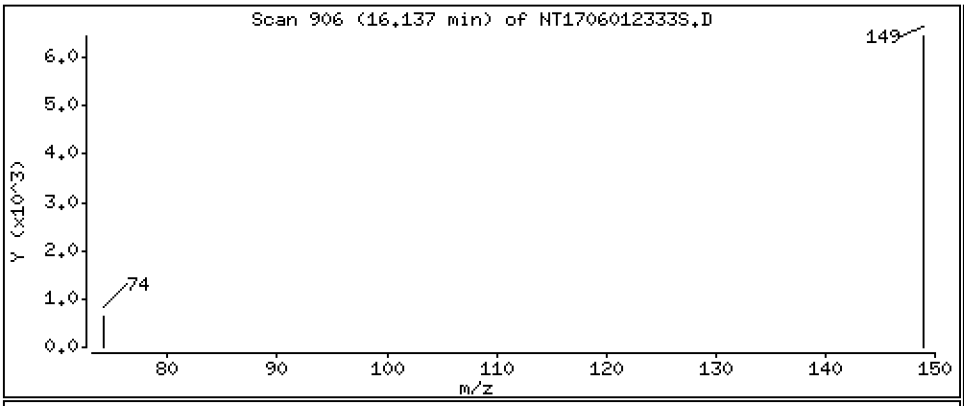
Operator: VTS

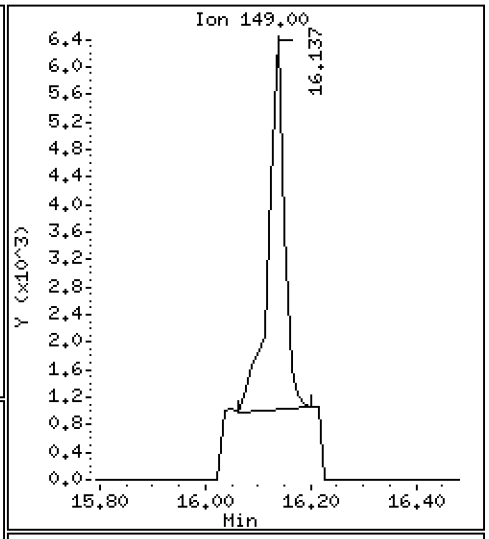
Column phase: ZB-5msi

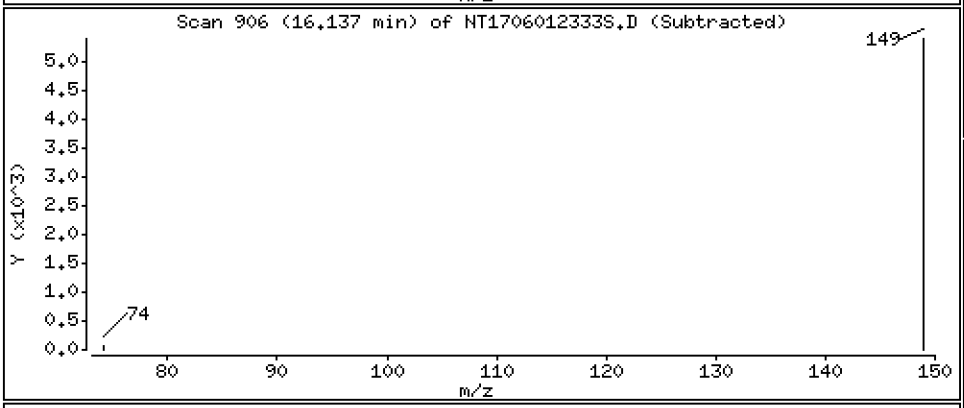
Column diameter: 0.25

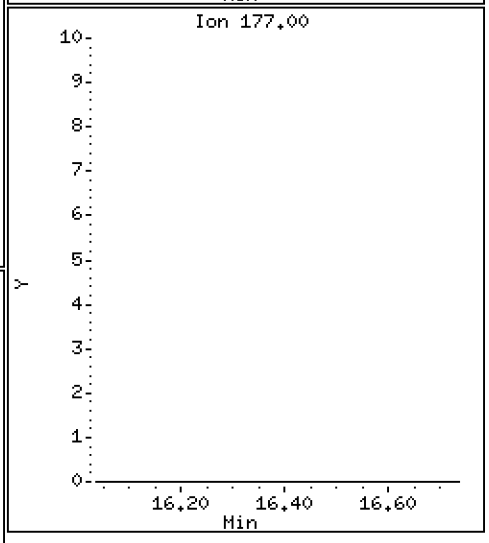
50 Diethylphthalate

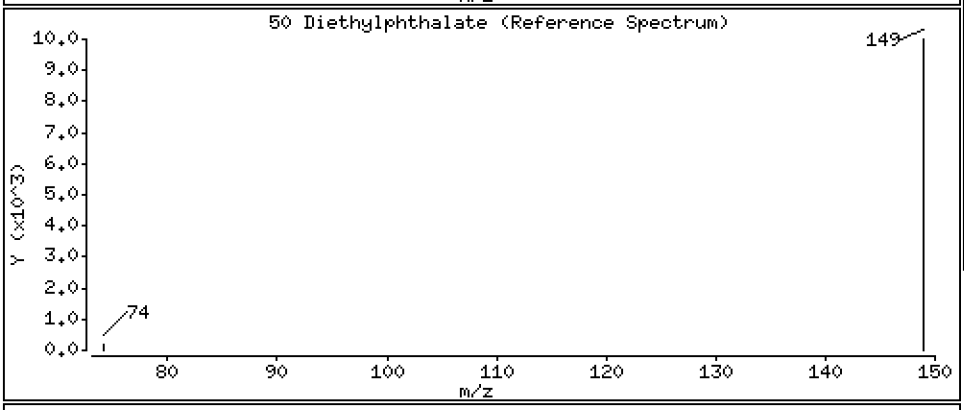
Concentration: 0.06383 ug/mL

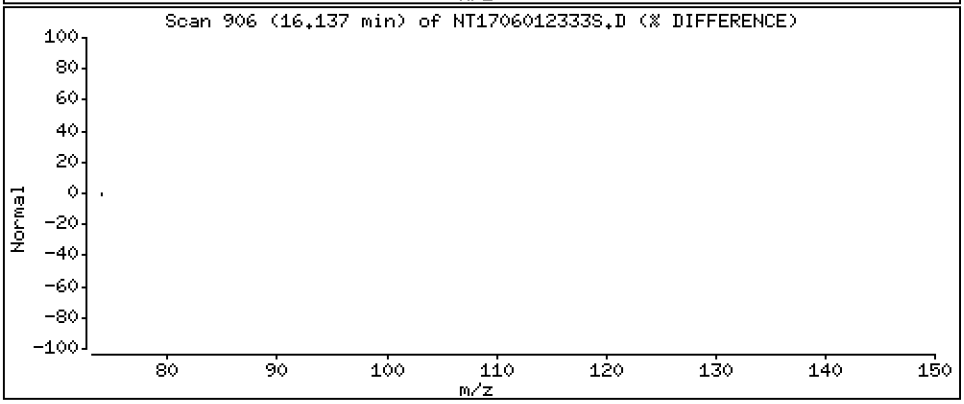












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

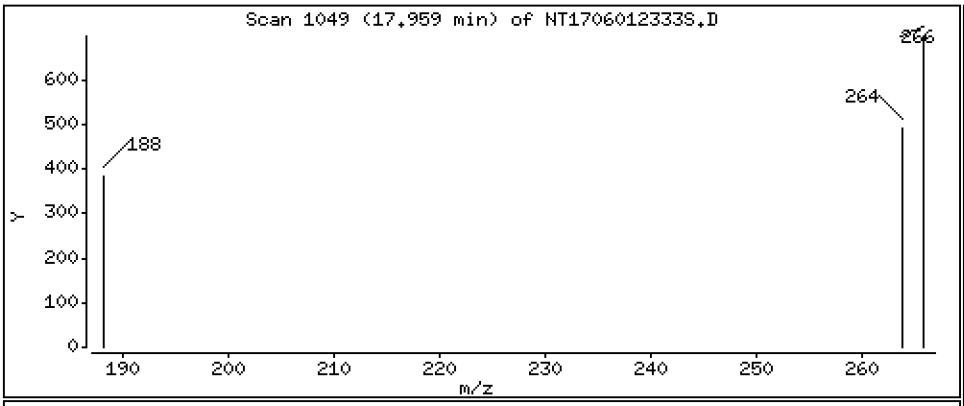
Operator: VTS

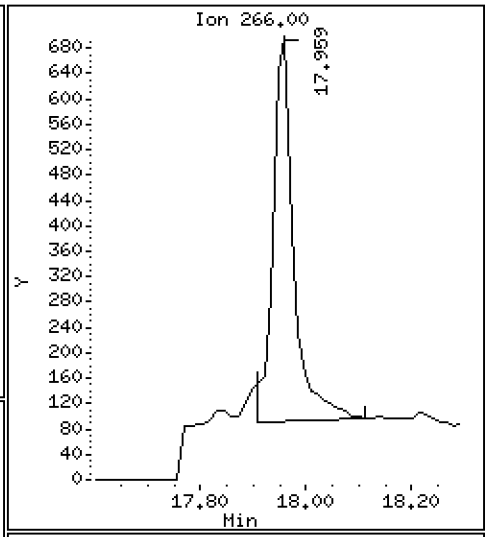
Column phase: ZB-5msi

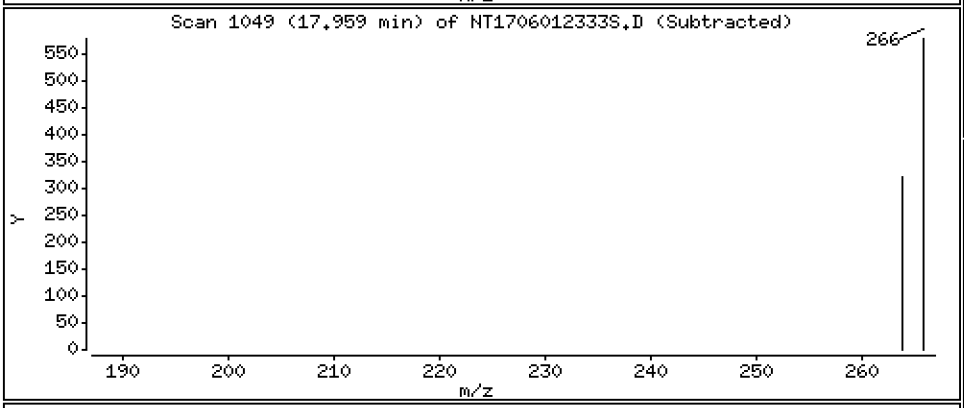
Column diameter: 0.25

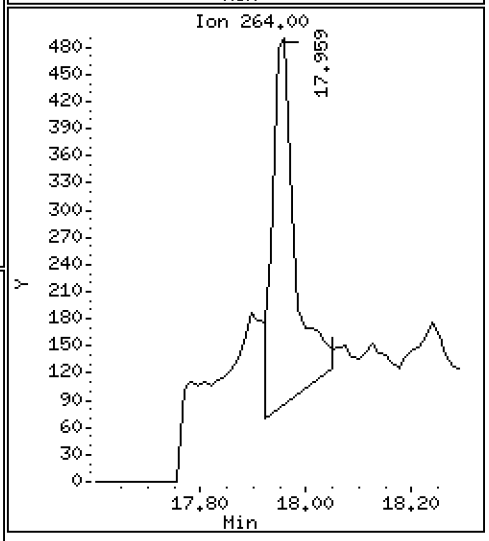
58 Pentachlorophenol

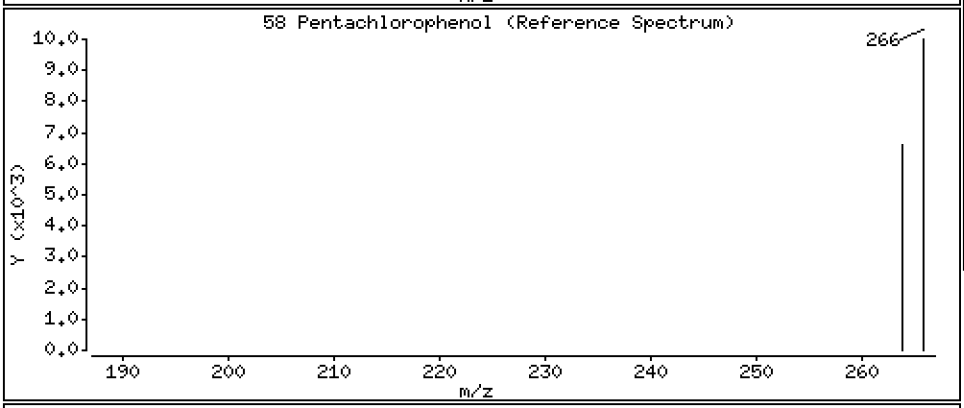
Concentration: 0.07289 ug/mL

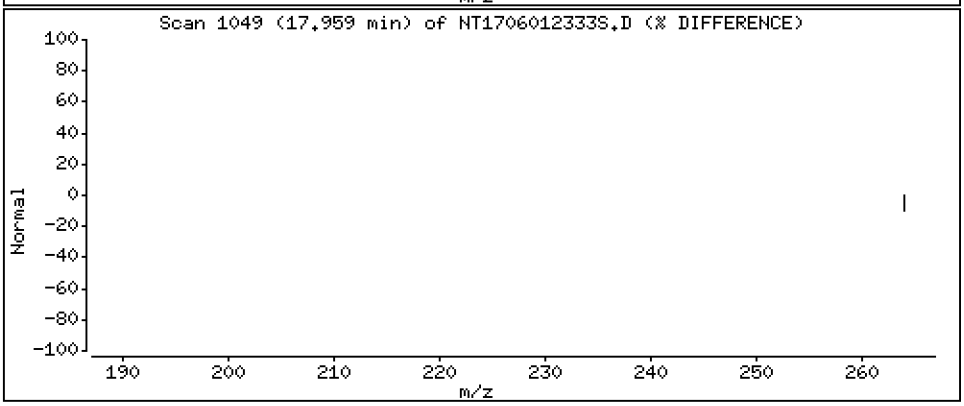












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

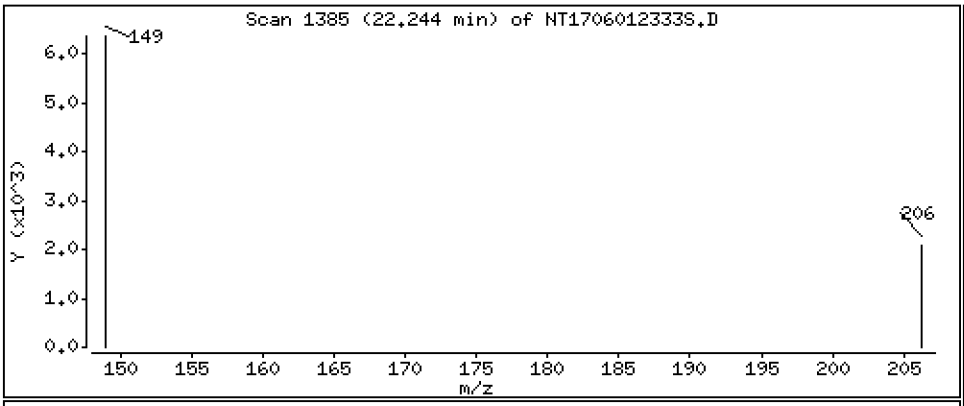
Operator: VTS

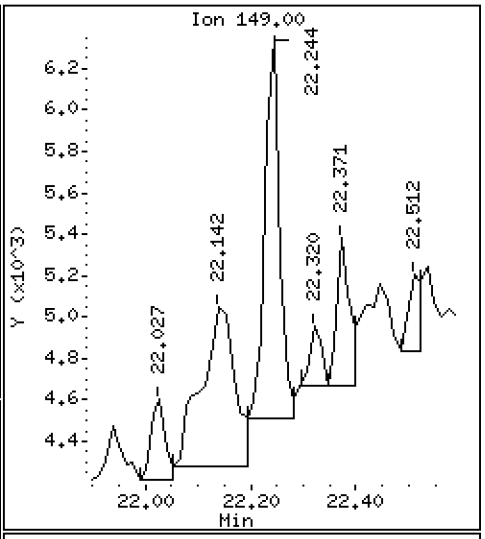
Column phase: ZB-5msi

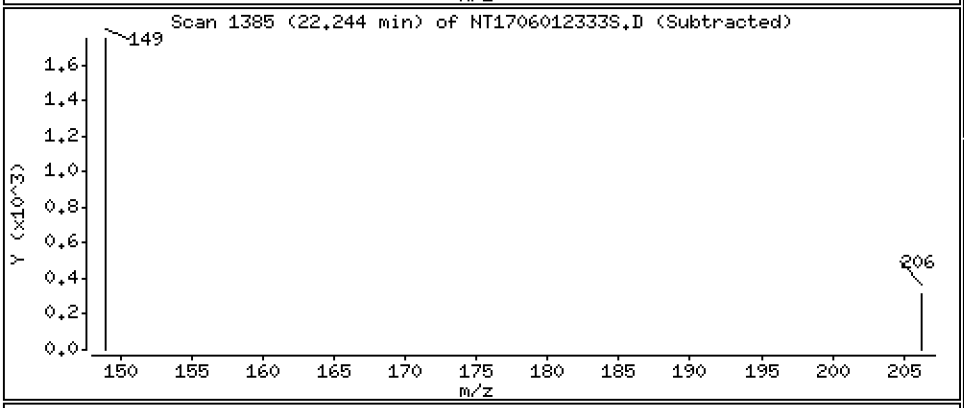
Column diameter: 0.25

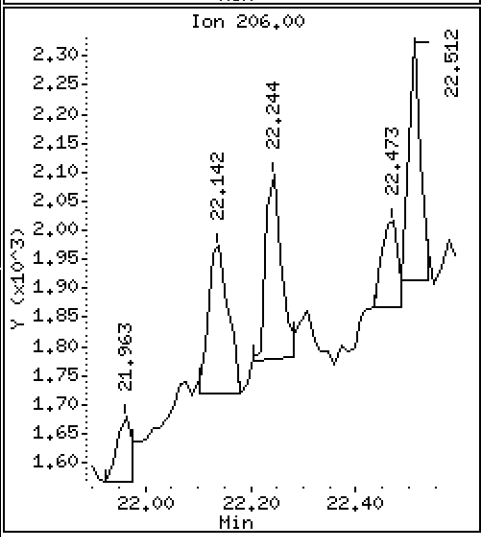
67 Butylbenzylphthalate

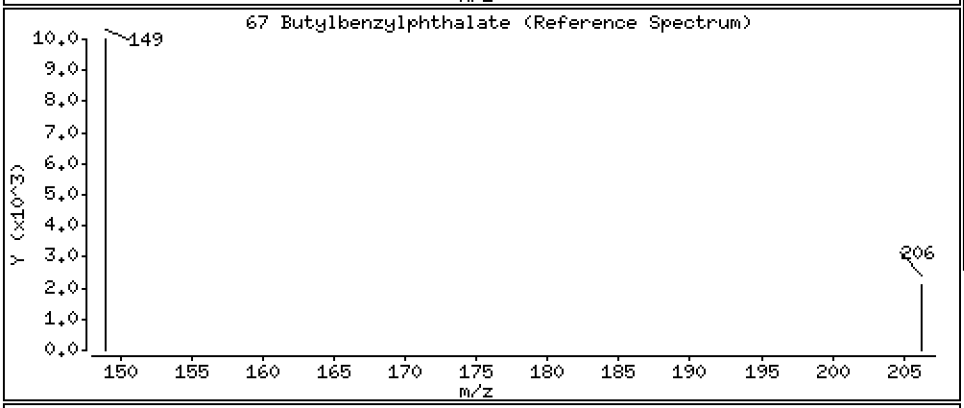
Concentration: 0.03311 ug/mL

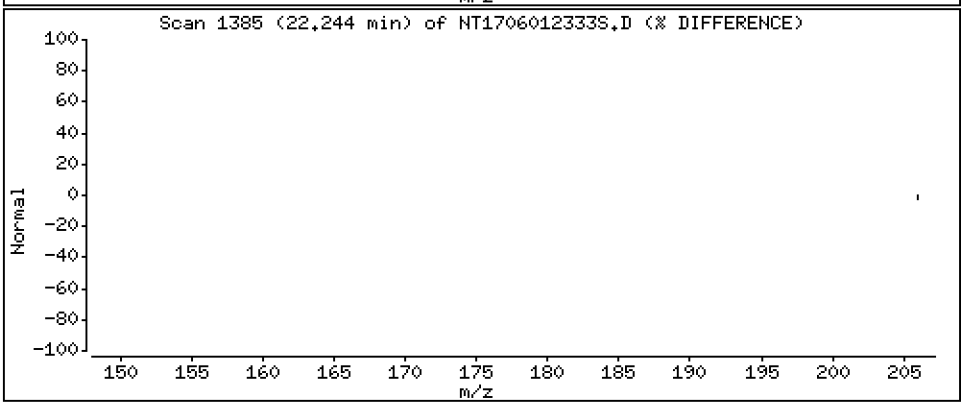












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D

Date : 02-JUN-2023 07:54

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-01

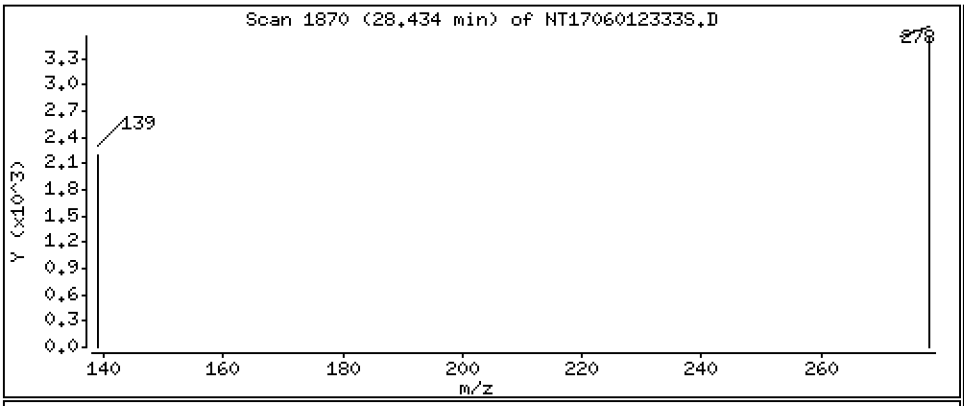
Operator: VTS

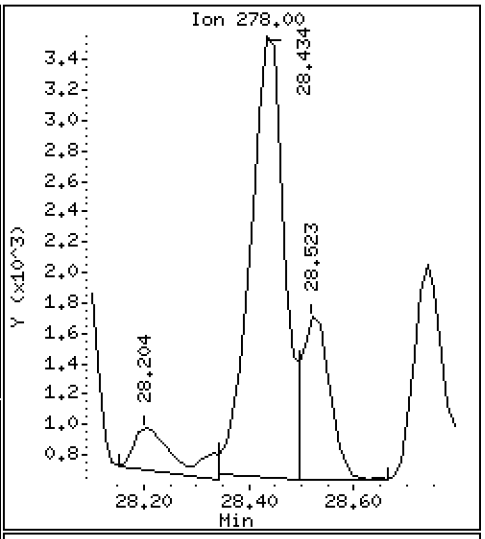
Column phase: ZB-5msi

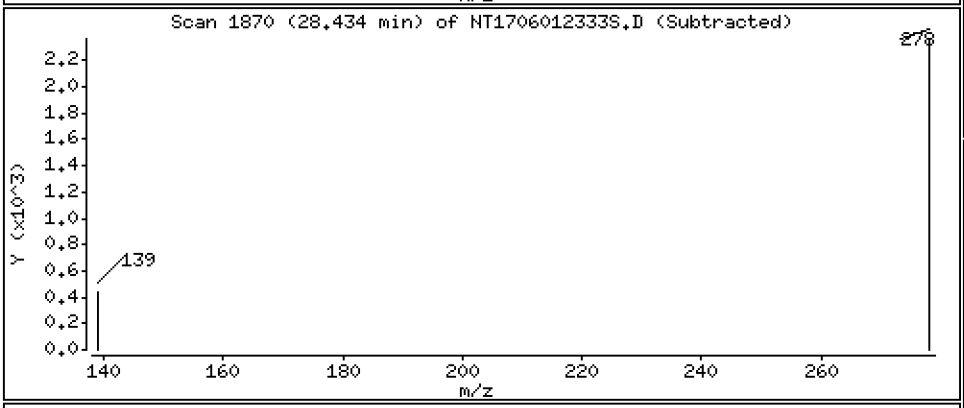
Column diameter: 0.25

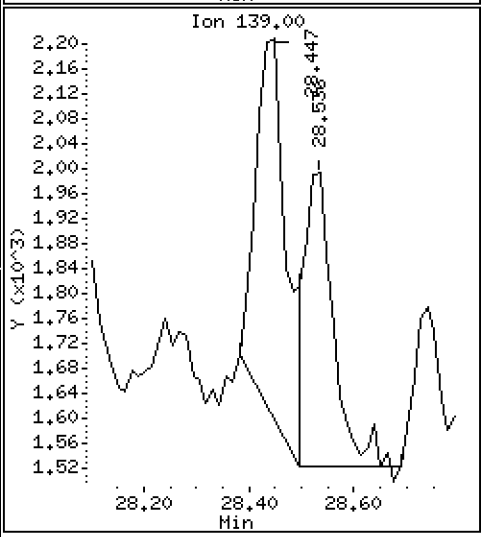
79 Dibenzo(a,h)anthracene

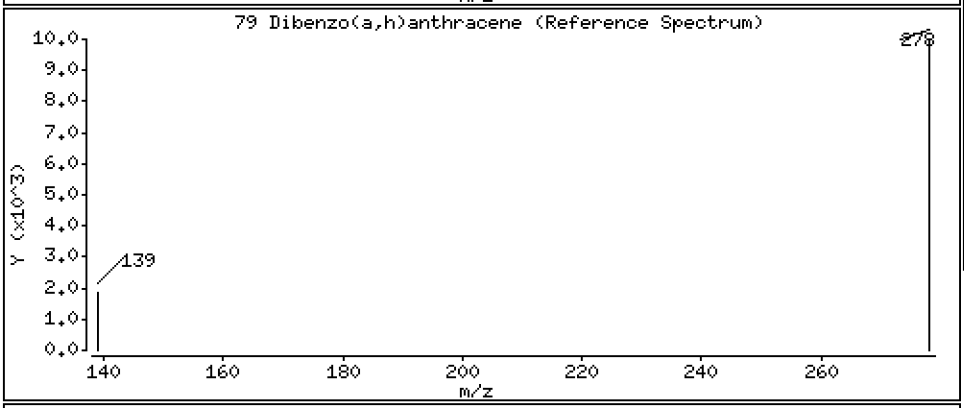
Concentration: 0.08711 ug/mL

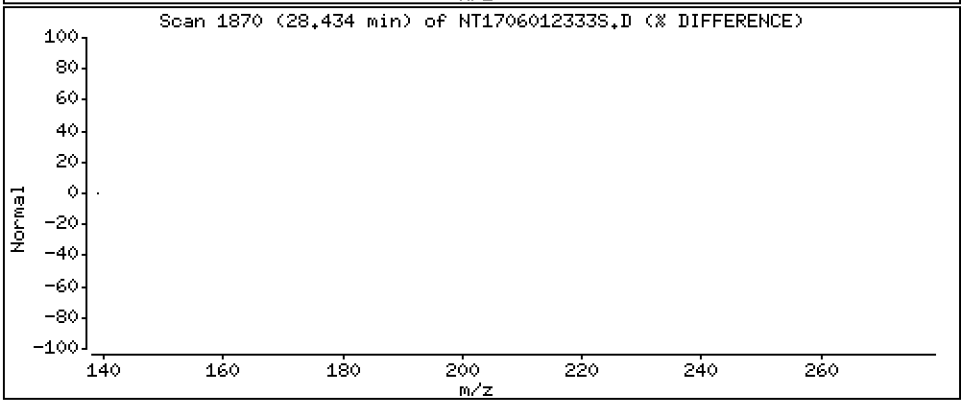












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012333S.D
Lab Smp Id: 23E0009-01
Inj Date : 02-JUN-2023 07:54
Operator : VTS Inst ID: nt17.i
Smp Info : 23E0009-01
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 28
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.954	(0.762)	185583	2.33219	2.332(R)
	3 Phenol	94	8.547	8.547	(0.934)	41067	0.34635	0.3464
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	998	0.00939	0.009390
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	263090	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	2644	0.02553	0.02553
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	1301	0.01282	0.01282
	13 2-Methylphenol	108	9.657	9.644	(1.056)	1299	0.01581	0.01581(M)
	15 4-Methylphenol	108	9.938	9.912	(1.087)	3298	0.03972	0.03972
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.960	10.934	(0.945)	929	0.01043	0.01043
	24 Benzoic acid	105	11.087	11.100	(0.956)	15089	0.27183	0.2718(M)
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	926298	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	15.181	15.194	(1.000)	535315	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.063)	11395	0.06383	0.06383(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	17.958	17.946	(0.987)	1673	0.07289	0.07289
*	59 Phenanthrene-d10	188	18.201	18.201	(1.000)	852878	4.00000	
$	66 Terphenyl-d14	244	21.325	21.325	(0.918)	447798	4.45342	4.453(R)
	67 Butylbenzylphthalate	149	22.243	22.243	(0.958)	3618	0.03311	0.03311
*	69 Chrysene-d12	240	23.226	23.213	(1.000)	529916	4.00000	
*	77 Perylene-d12	264	25.815	25.802	(1.000)	542327	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.433	28.446	(1.101)	13325	0.08711	0.08711
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012333S.D Calibration Time: 00:29
Lab Smp Id: 23E0009-01
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	263090	-0.92
27 Naphthalene-d8	874121	437061	1748242	926298	5.97
42 Acenaphthene-d10	524478	262239	1048956	535315	2.07
59 Phenanthrene-d10	807440	403720	1614880	852878	5.63
69 Chrysene-d12	527364	263682	1054728	529916	0.48
77 Perylene-d12	455527	227764	911054	542327	19.05

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.18	-0.08
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.21	22.71	23.71	23.23	0.05
77 Perylene-d12	25.80	25.30	26.30	25.82	0.05

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

REVIEW SUMMARY FOR FILE - NT1706012333S.D

Lab ID: 23E0009-01
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 07:54

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: SIM.b/NT1706012321S.D

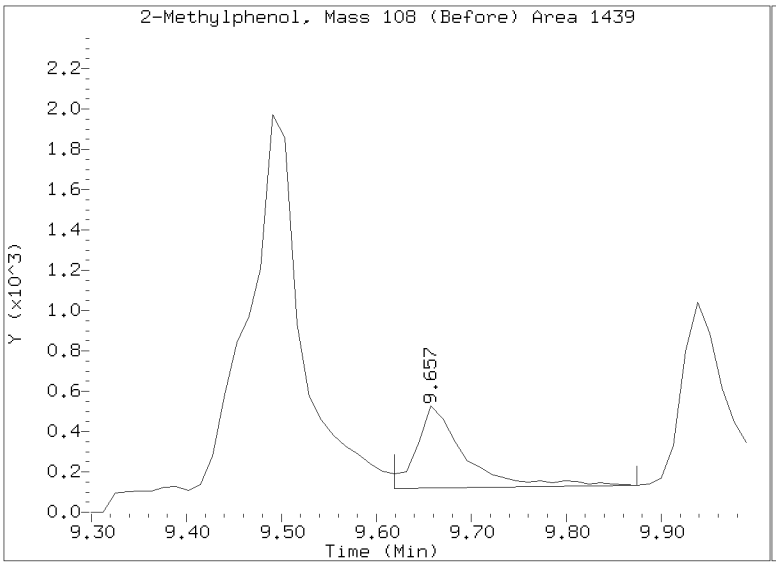
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

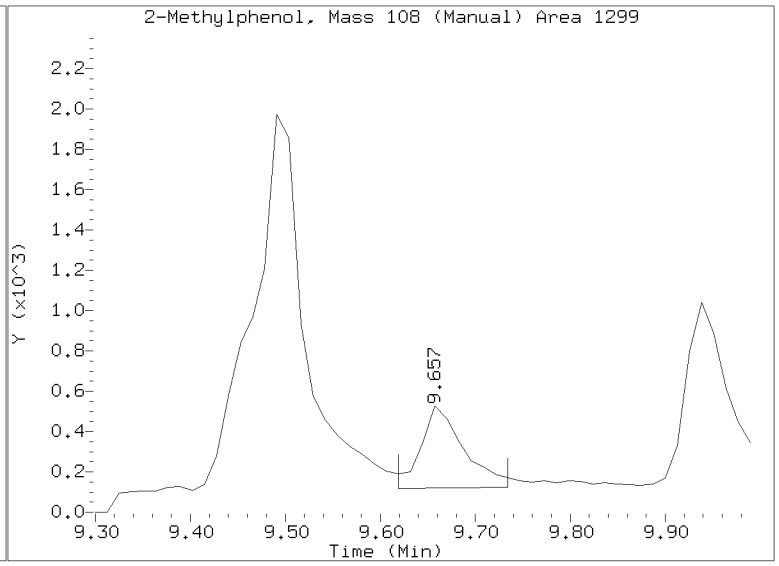
Exception: 1,2,4-Trichlorobenzene 0.0010

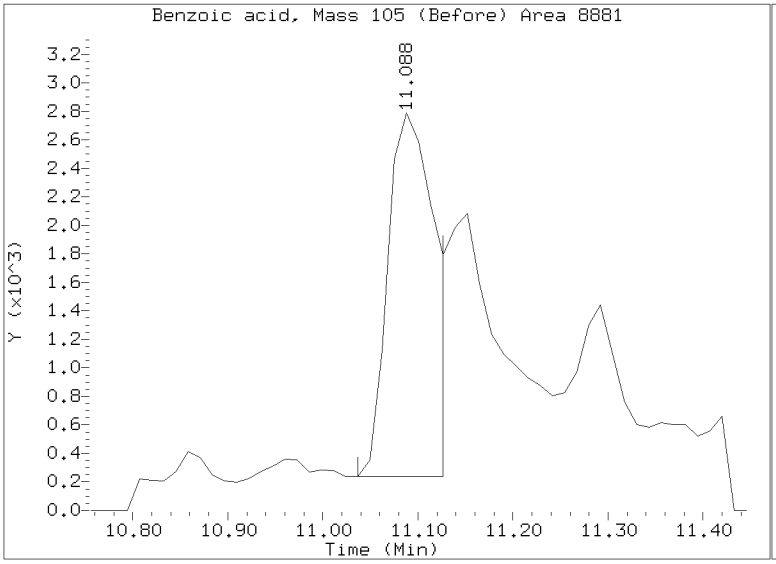
* Only compounds listed in the work order have been verified by the analyst *

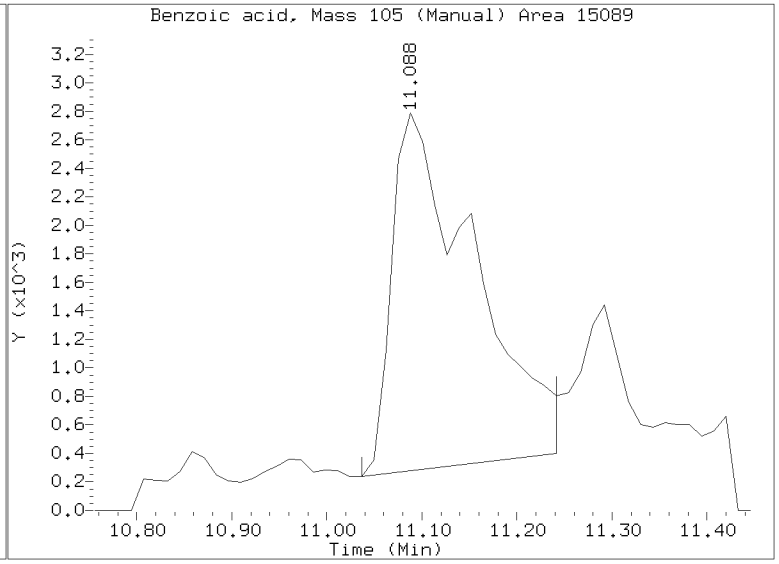
Quant Ion Manual Peak Adjustment Report

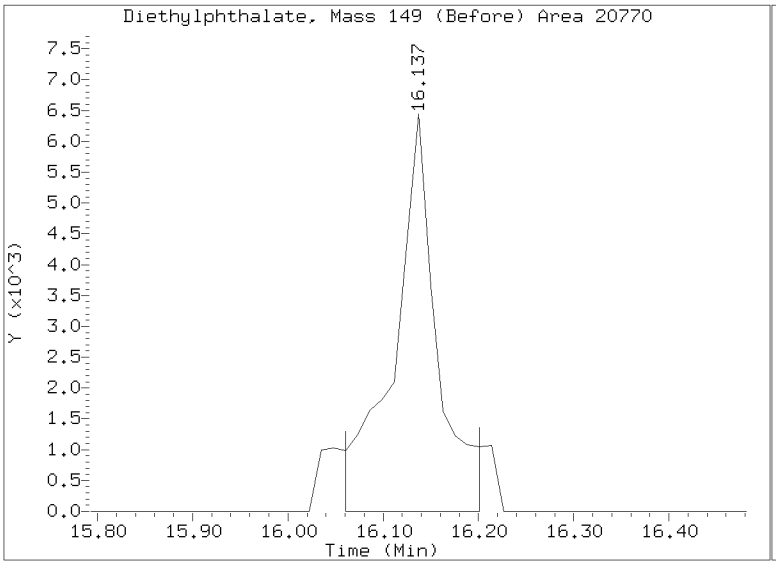
Datafile: //target/share/chem3/nt17.i/20230601.b/SIM.b/NT1706012333S.D
Injection Date: 02-JUN-2023 07:54
Lab ID:23E0009-01 Client ID:
Report Date: 06/06/2023 11:44

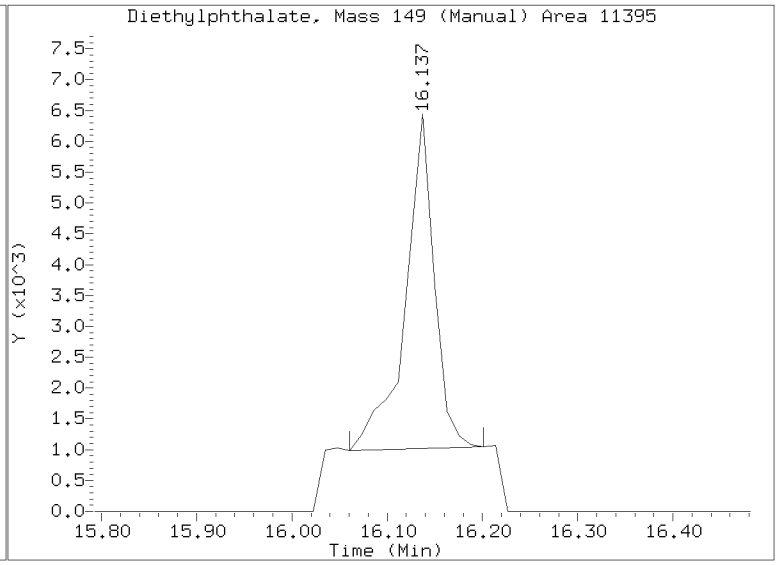












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1805

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-03 A	SDG:	23E0009
Sampled:	04/28/23 16:15	Prepared:	05/05/23 11:23	File ID:	NT1706012334S.D
% Solids:	50.79	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 08:32
Batch:	BLE0148	Sequence:	SLF0037	Initial/Final:	19.69 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00070
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.7	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	1.0	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	85.2		2.5	20.0
65-85-0	Benzoic acid	1	80.2	J	13.4	100
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	4.2	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.96	196	26.1	27 - 120	*
p-Terphenyl-d14	499.97	435	87.0	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123345.D

Date : 02-JUN-2023 08:32

Client ID:

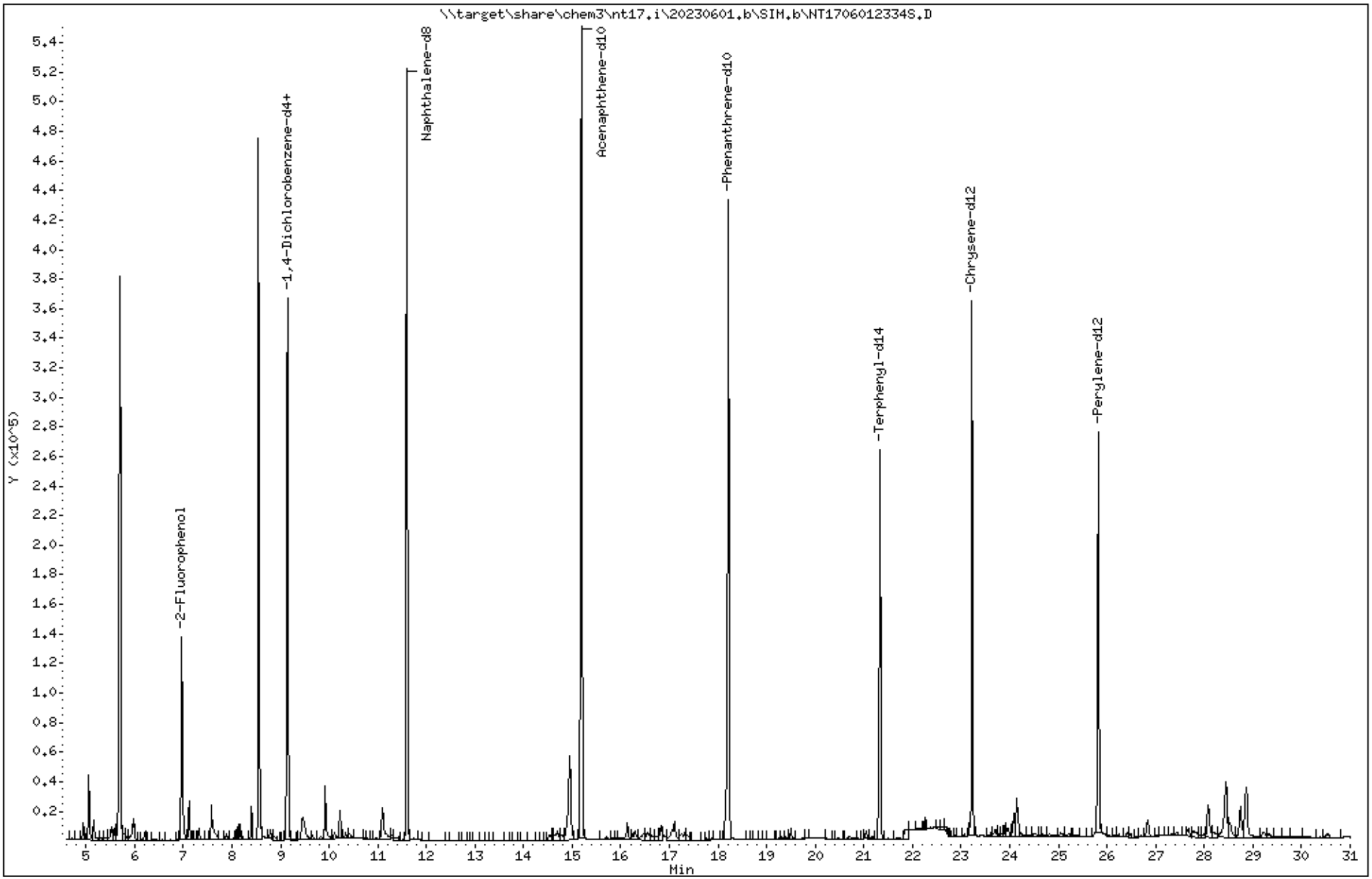
Sample Info: 23E0009-03

Instrument: nt17.i

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

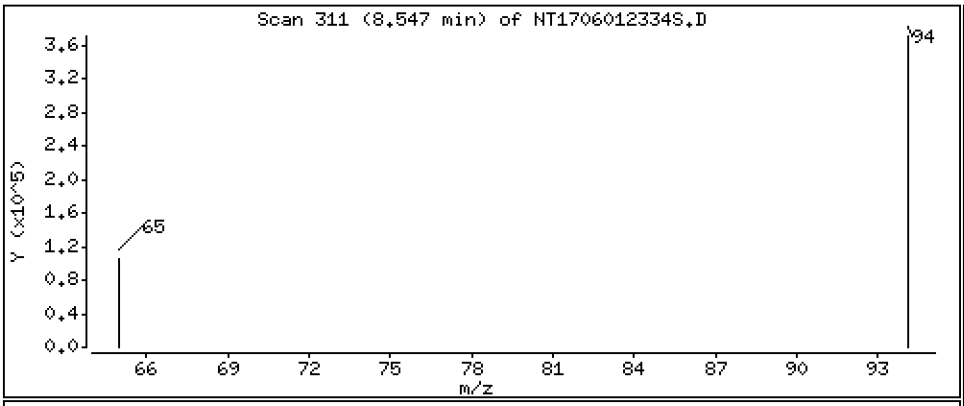
Operator: VTS

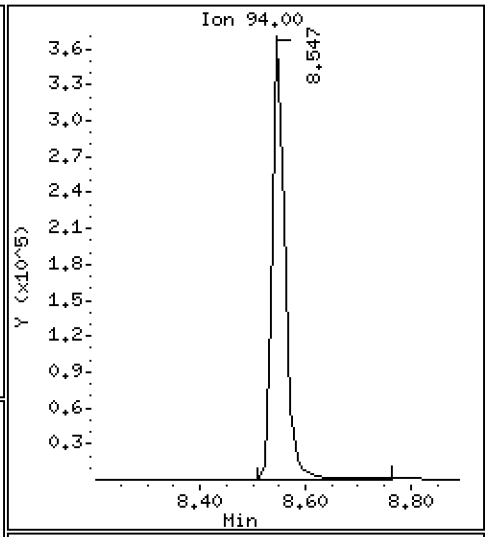
Column phase: ZB-5msi

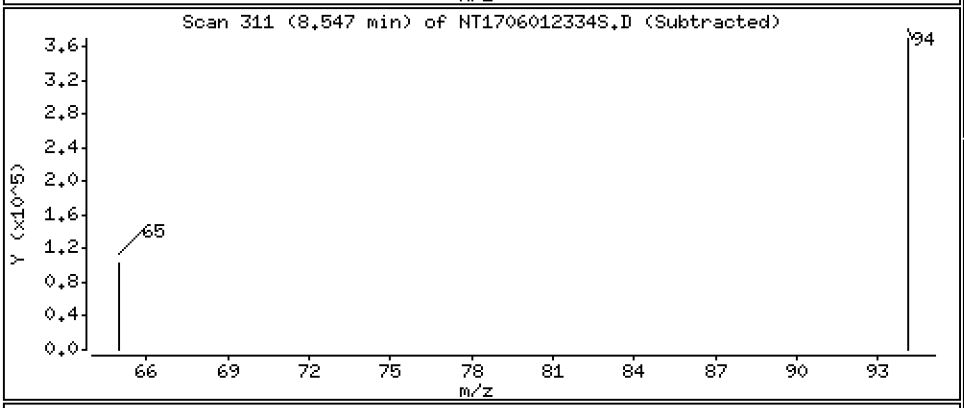
Column diameter: 0.25

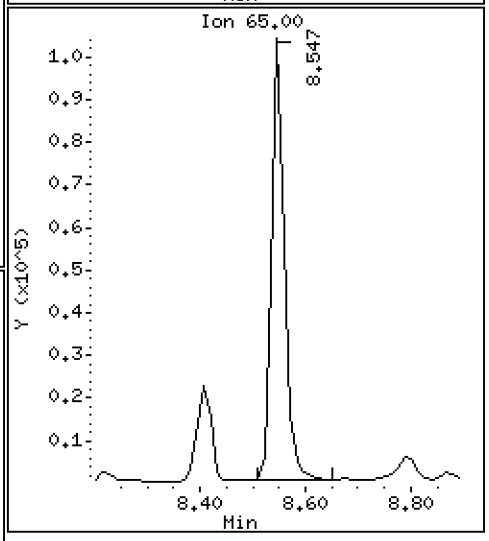
3 Phenol

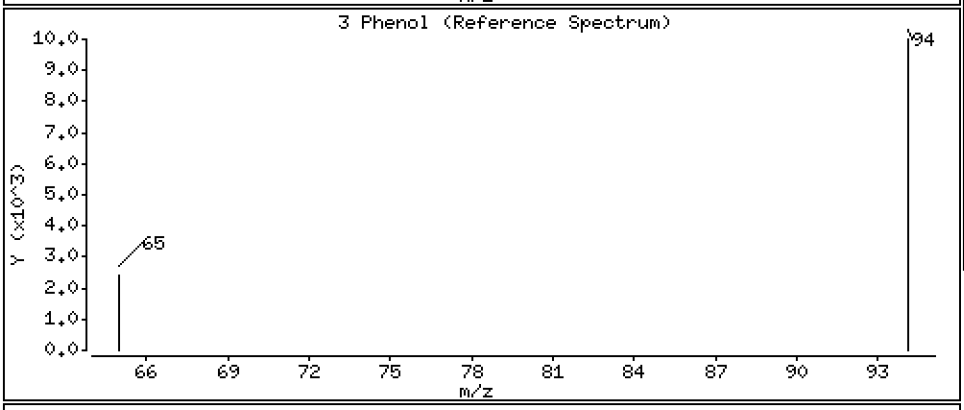
Concentration: 5.726 ug/mL

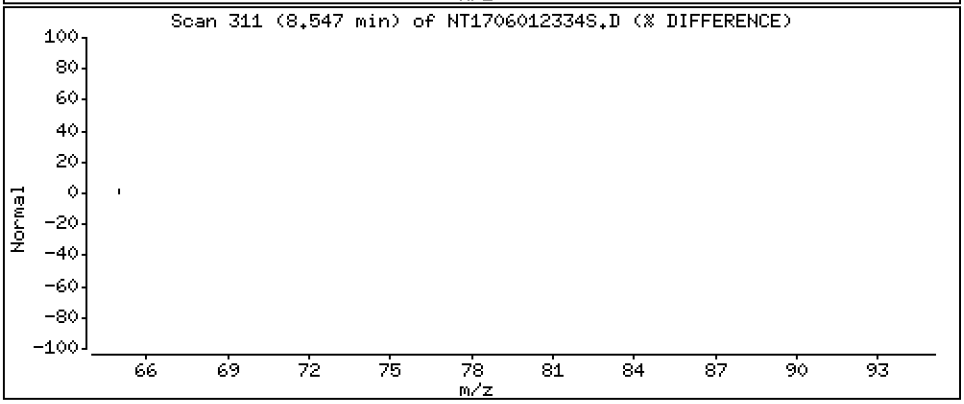












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

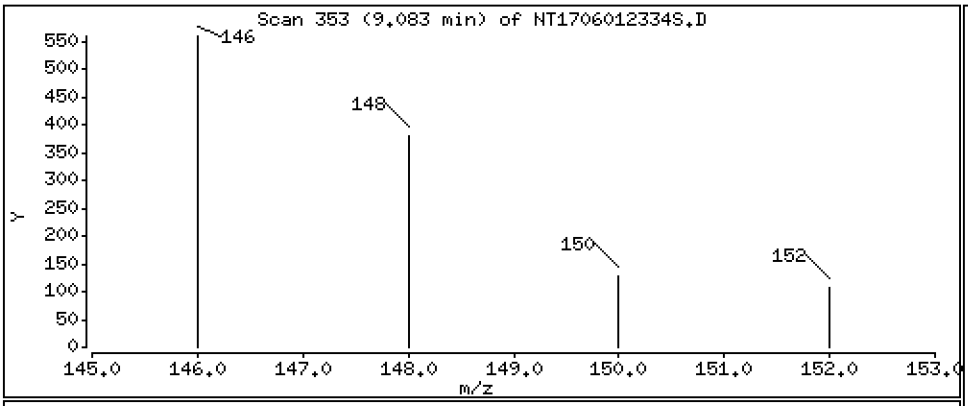
Operator: VTS

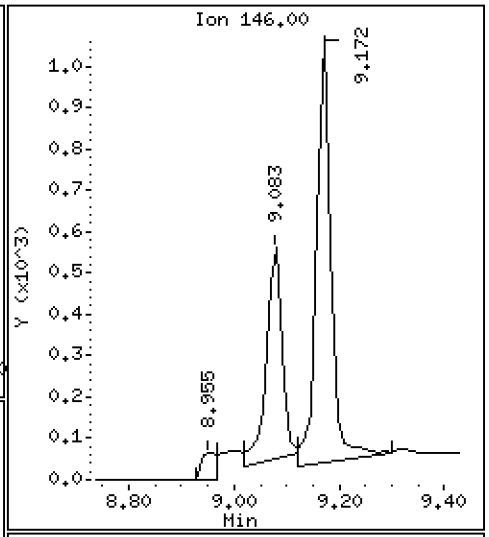
Column phase: ZB-5msi

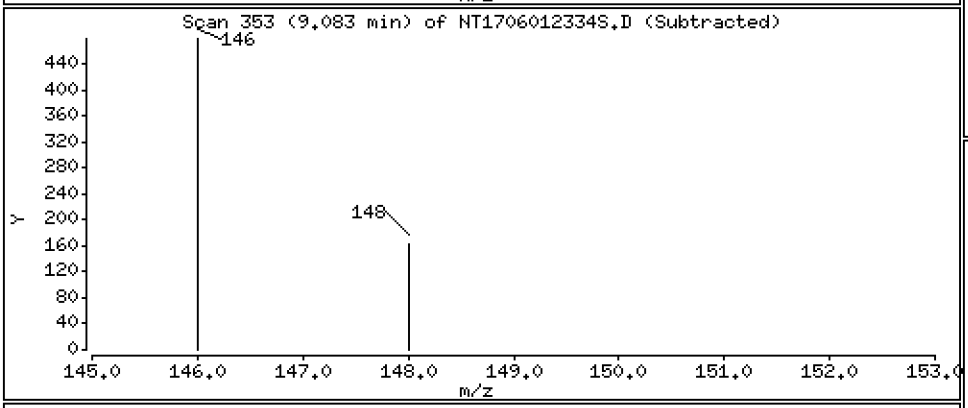
Column diameter: 0.25

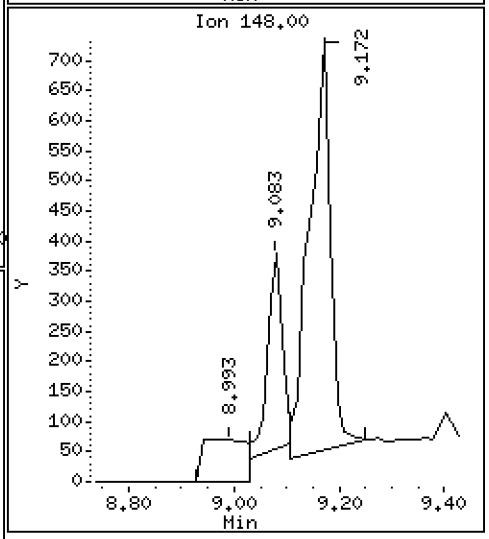
7 1,3-Dichlorobenzene

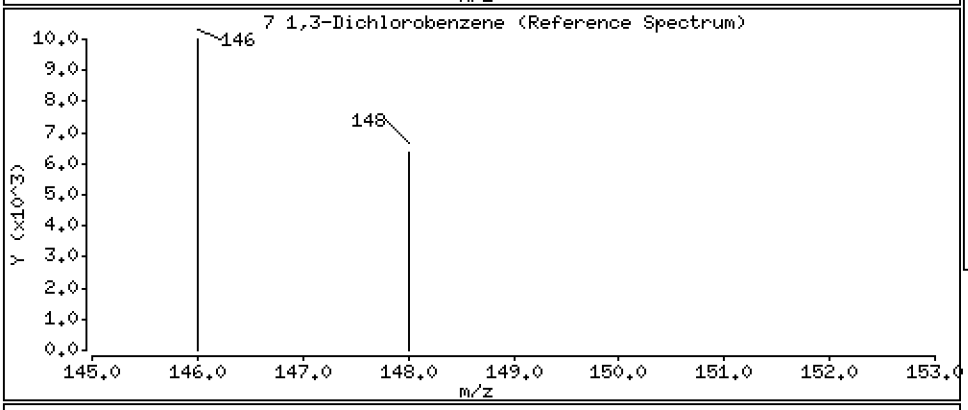
Concentration: 0.01066 ug/mL

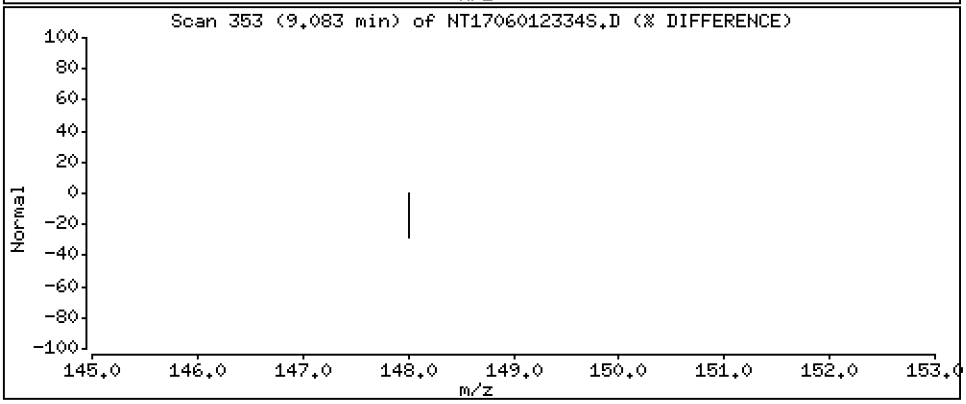












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

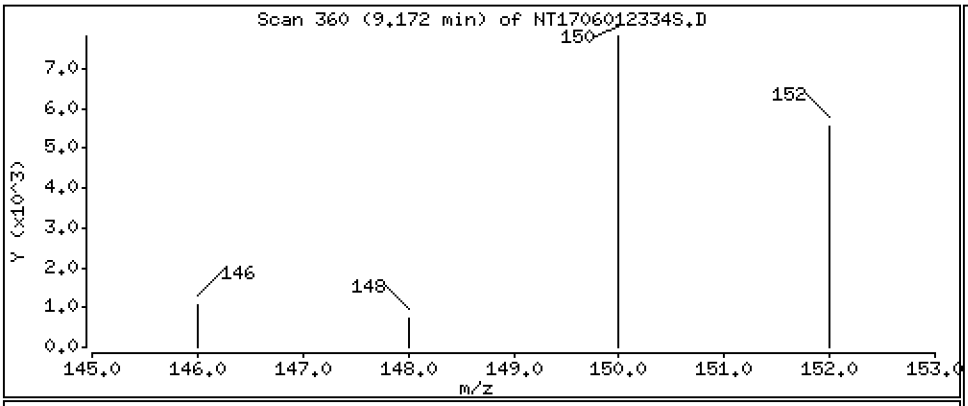
Operator: VTS

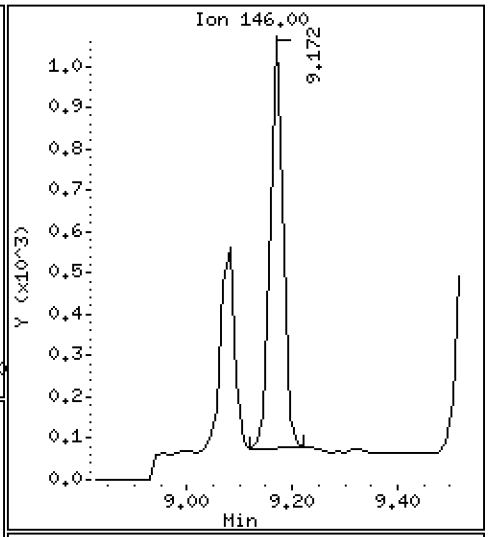
Column phase: ZB-5msi

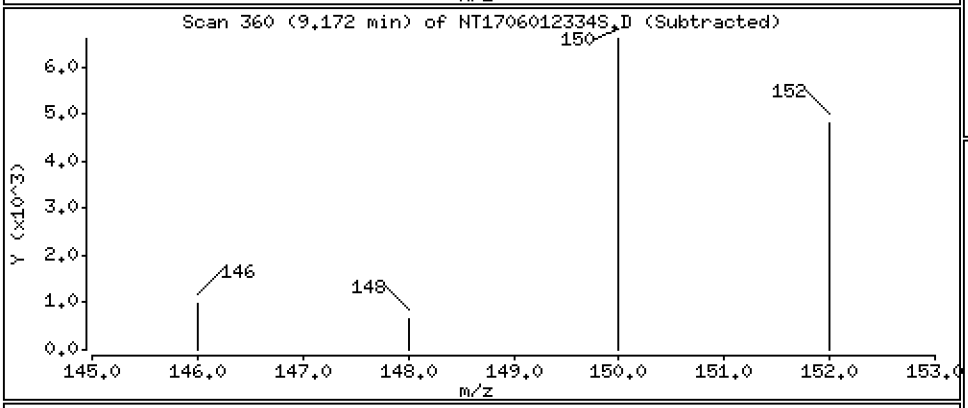
Column diameter: 0.25

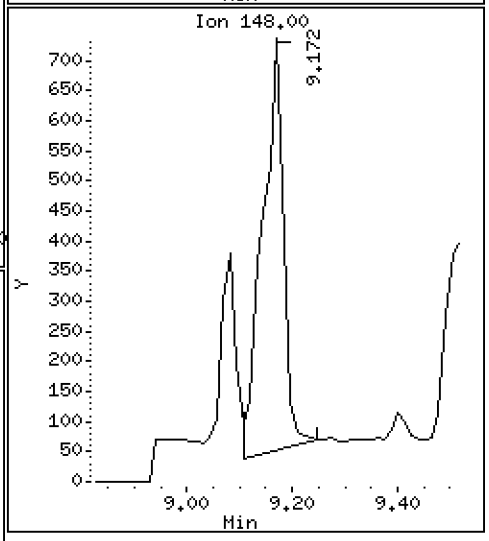
9 1,4-Dichlorobenzene

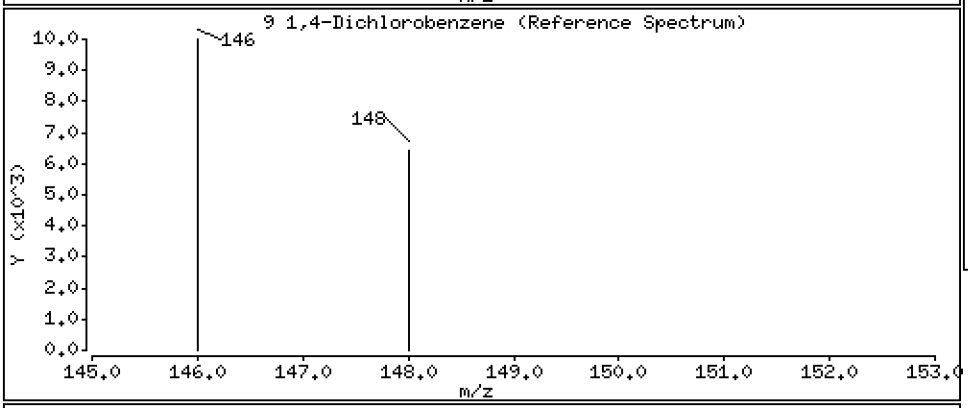
Concentration: 0.01721 ug/mL

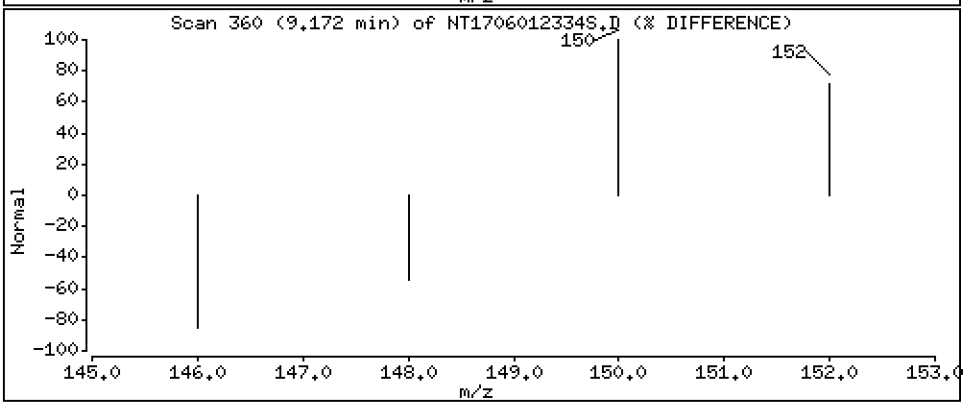












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

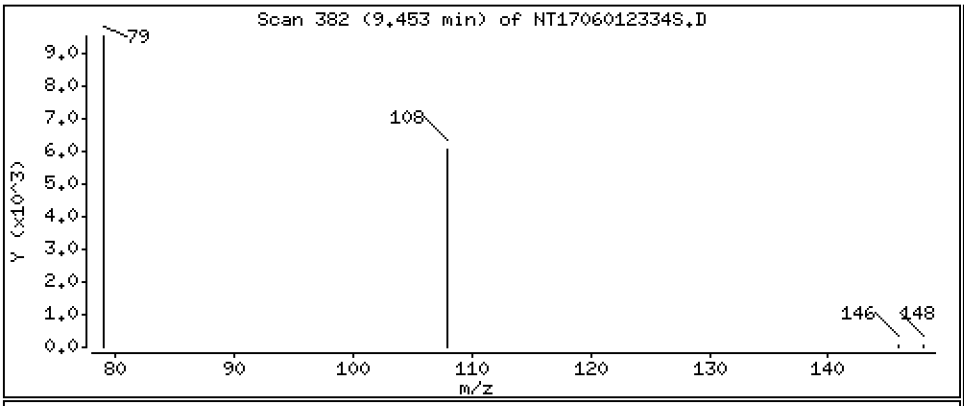
Operator: VTS

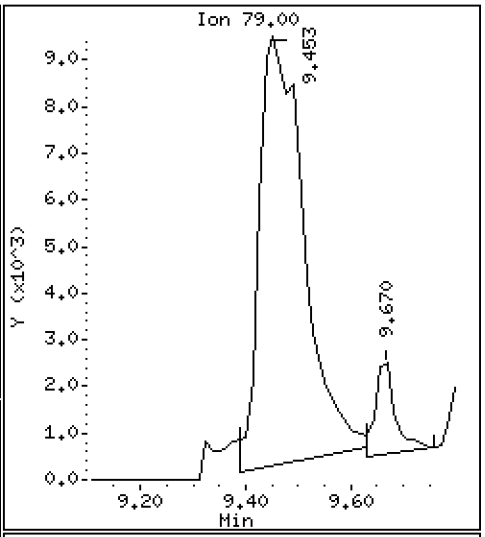
Column phase: ZB-5msi

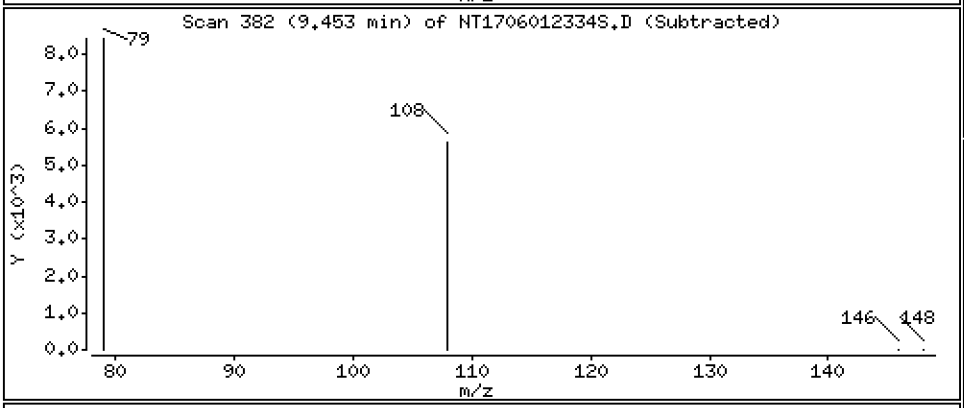
Column diameter: 0.25

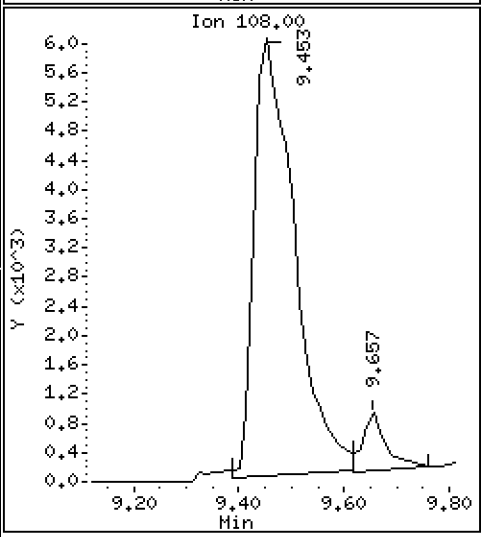
11 Benzyl alcohol

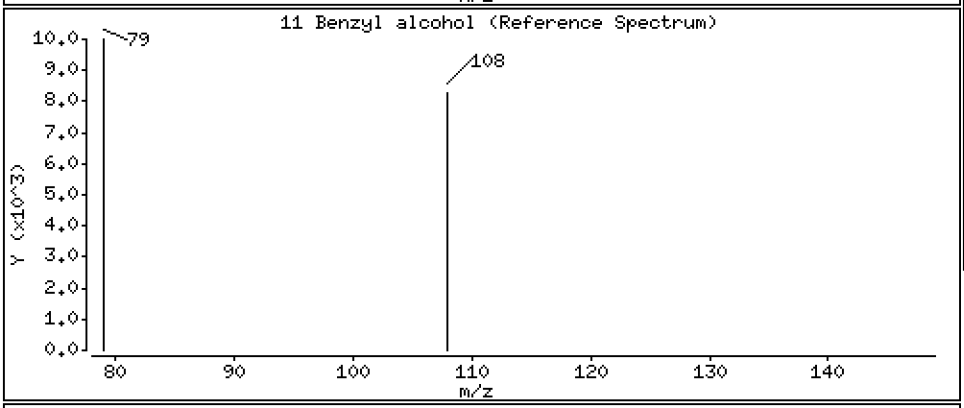
Concentration: 0.8521 ug/mL

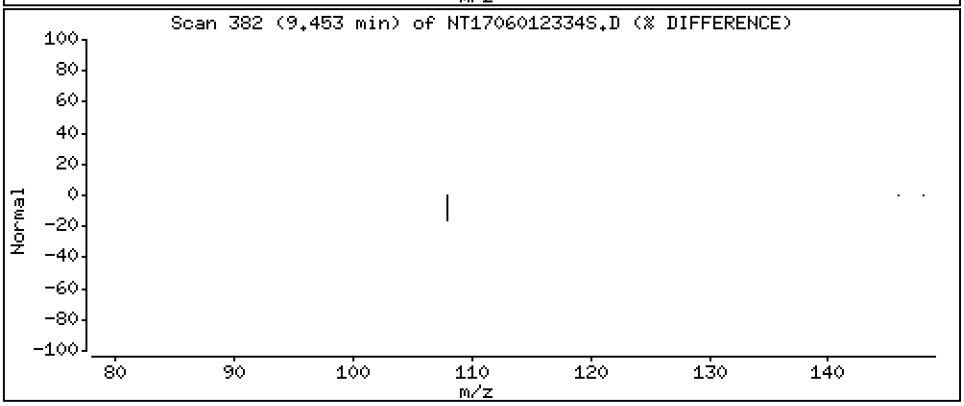












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

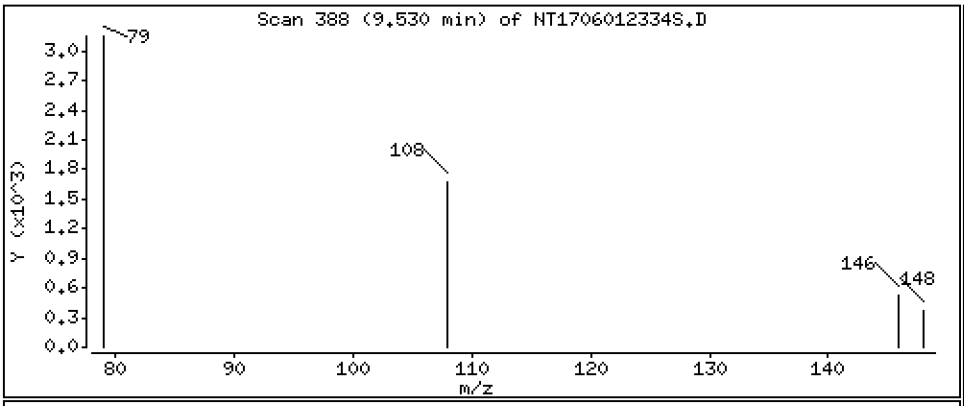
Operator: VTS

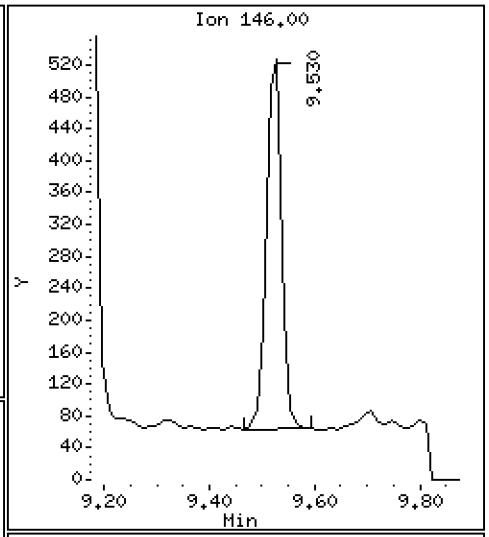
Column phase: ZB-5msi

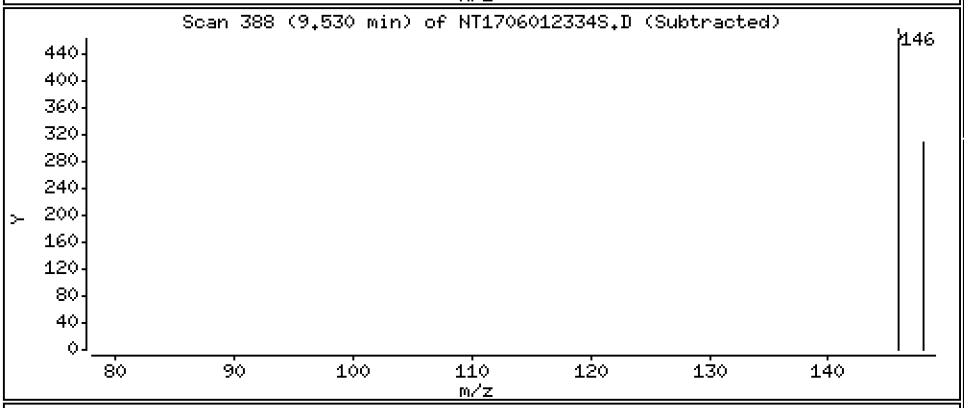
Column diameter: 0.25

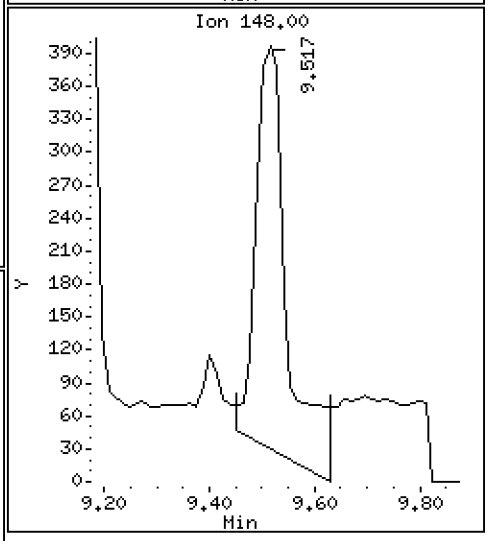
12 1,2-Dichlorobenzene

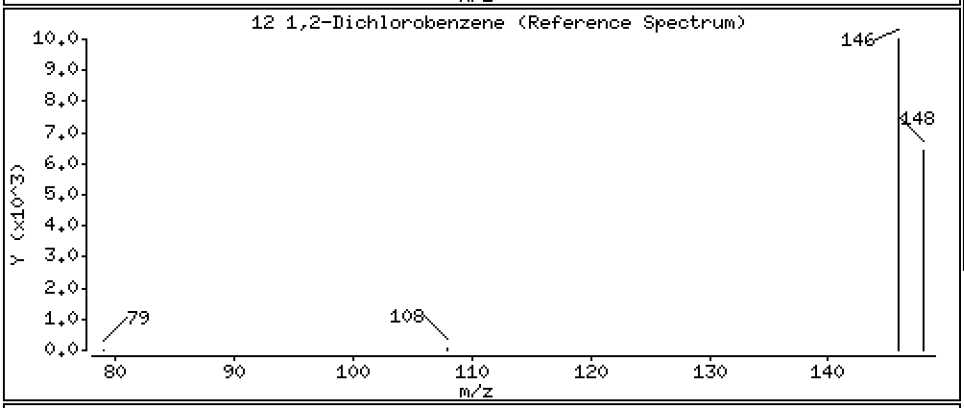
Concentration: 0.009636 ug/mL

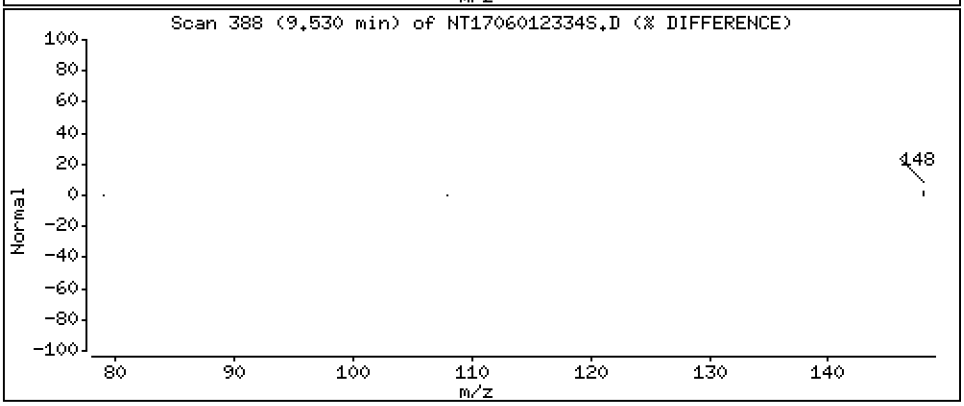












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

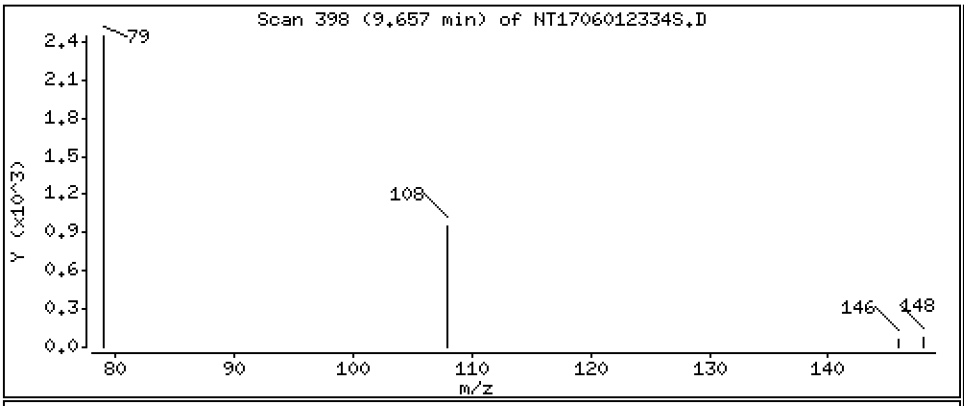
Operator: VTS

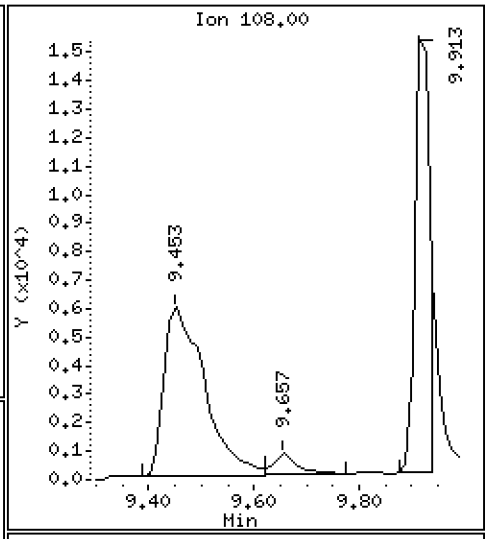
Column phase: ZB-5msi

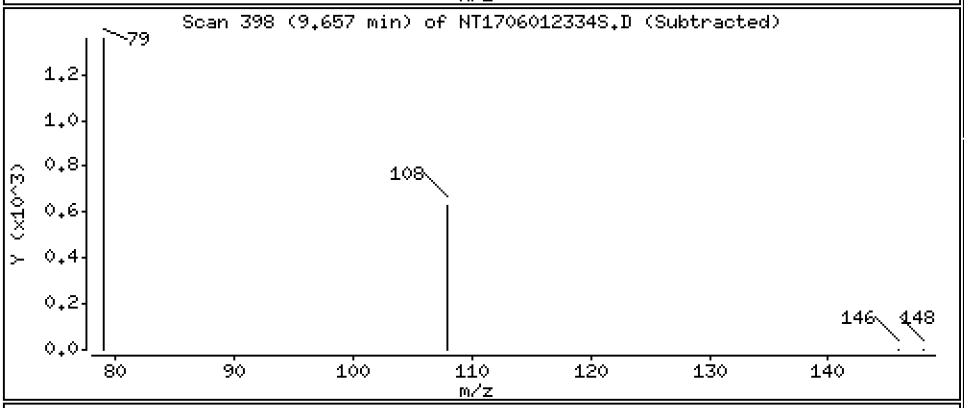
Column diameter: 0.25

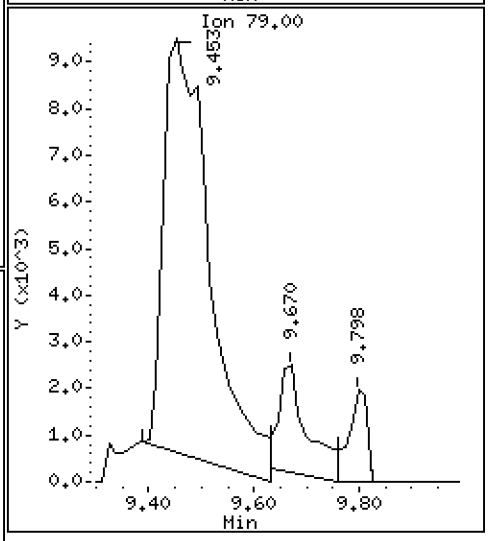
13 2-Methylphenol

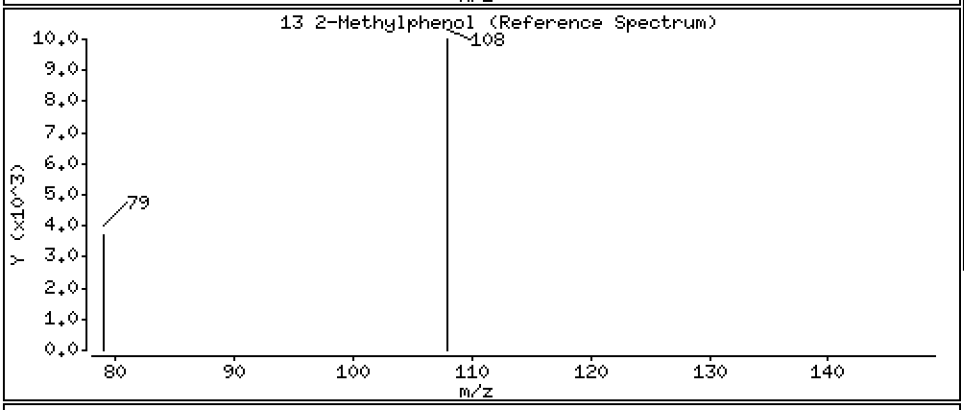
Concentration: 0.02888 ug/mL

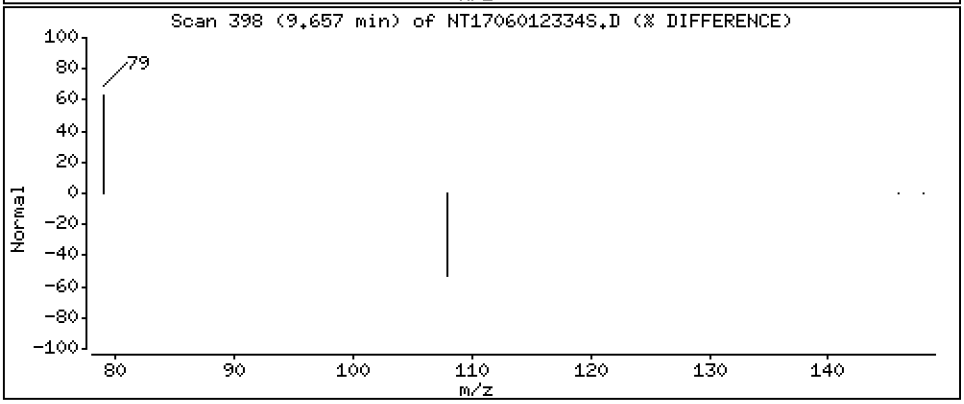












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

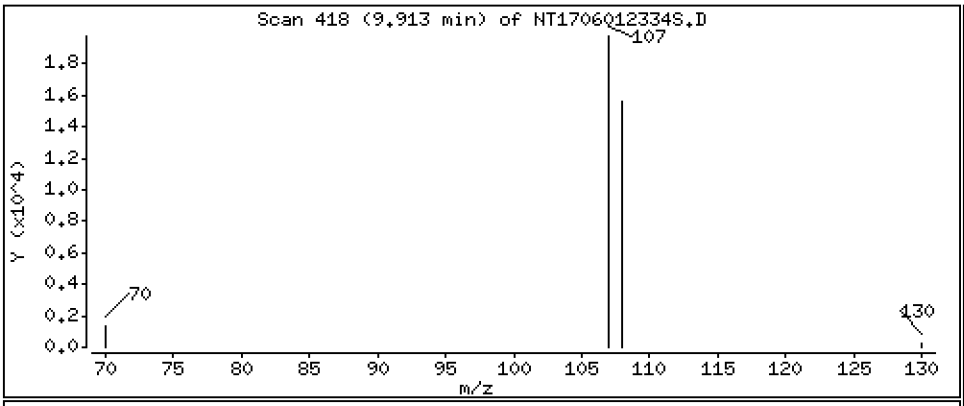
Operator: VTS

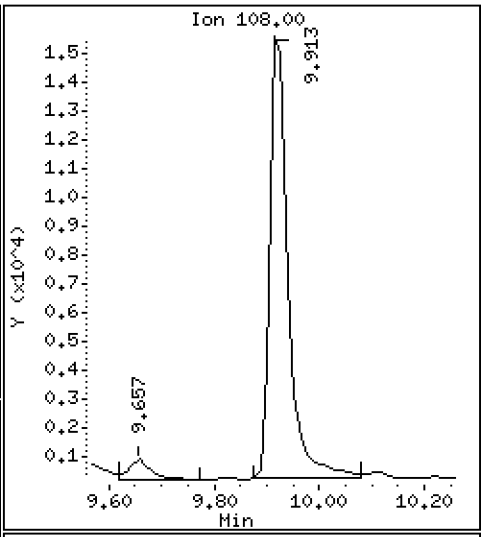
Column phase: ZB-5msi

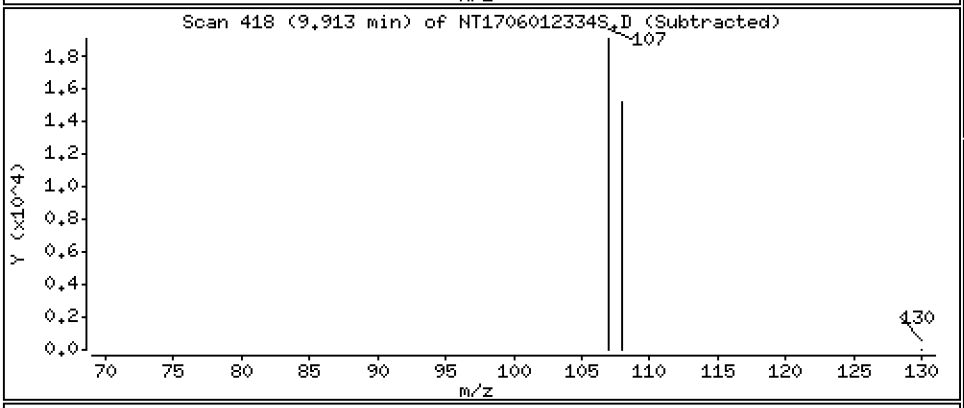
Column diameter: 0.25

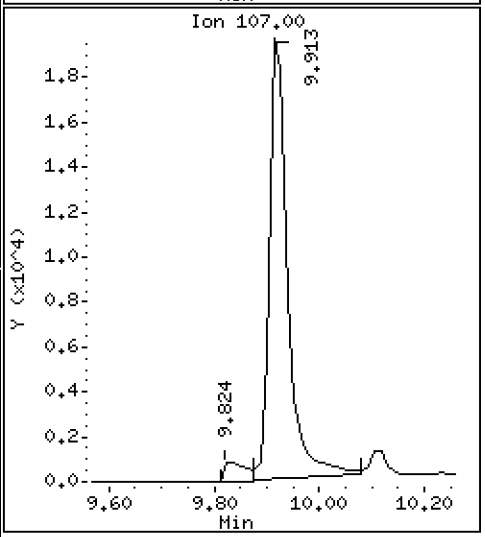
15 4-Methylphenol

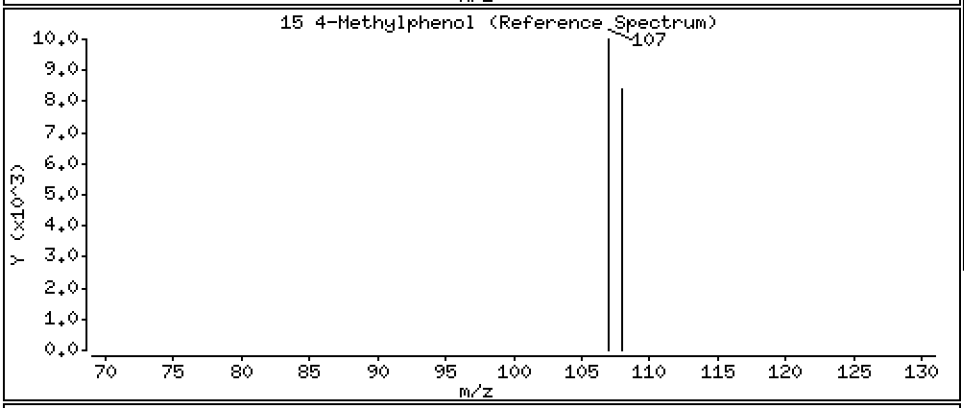
Concentration: 0.4723 ug/mL

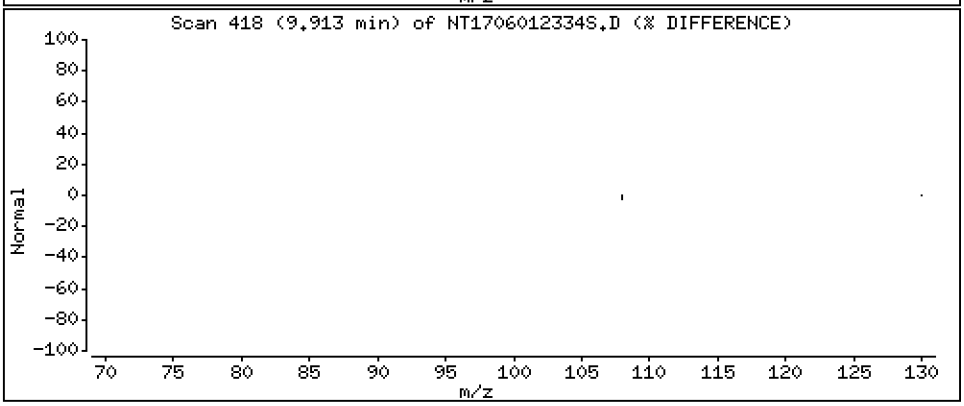












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123345.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

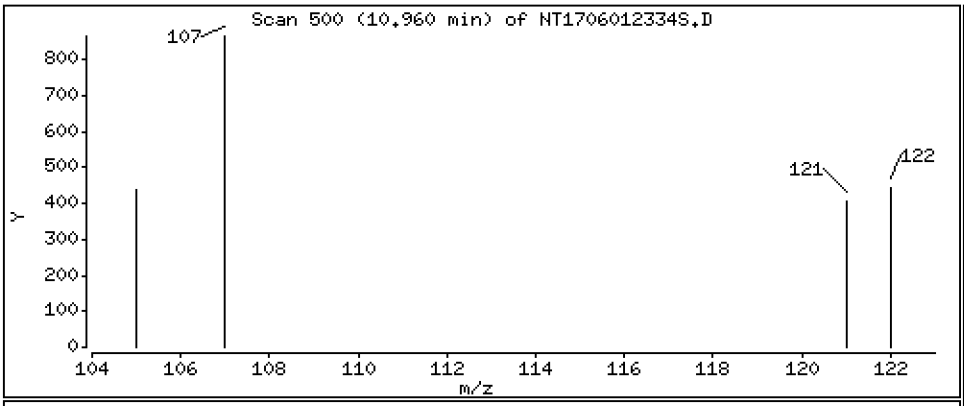
Operator: VTS

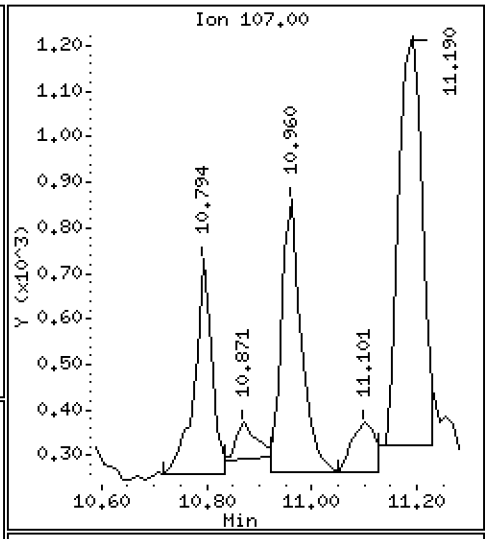
Column phase: ZB-5msi

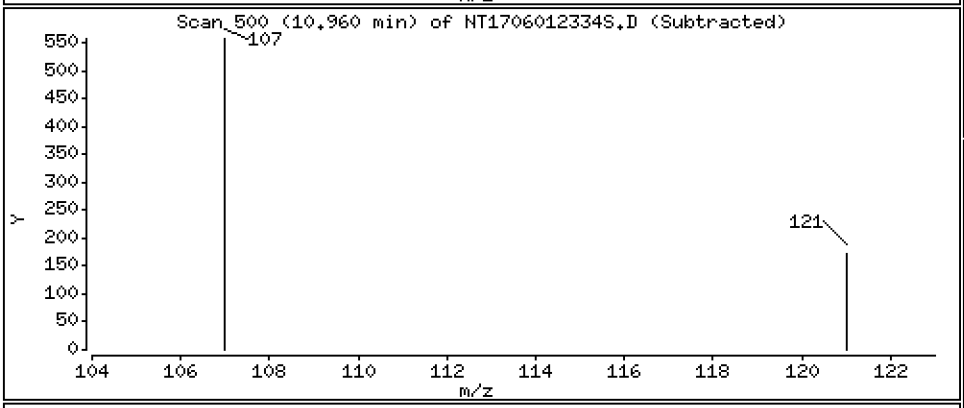
Column diameter: 0.25

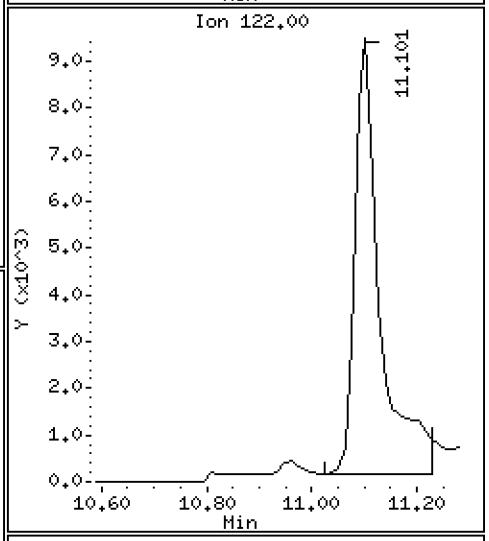
22 2,4-Dimethylphenol

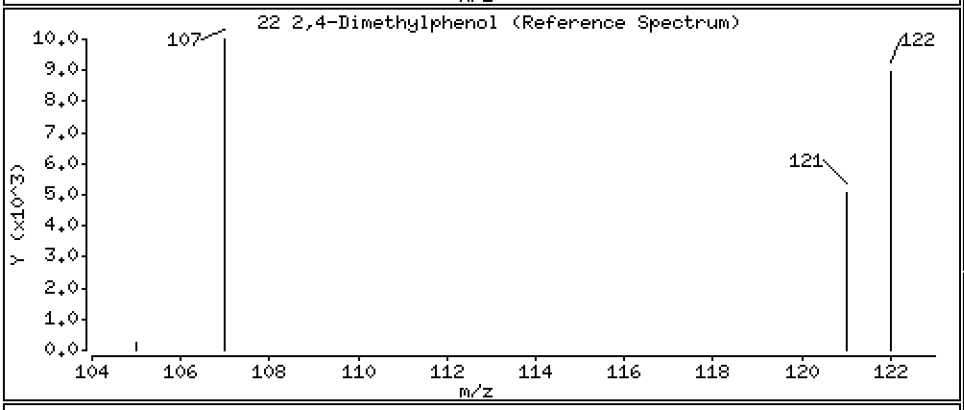
Concentration: 0.01836 ug/mL

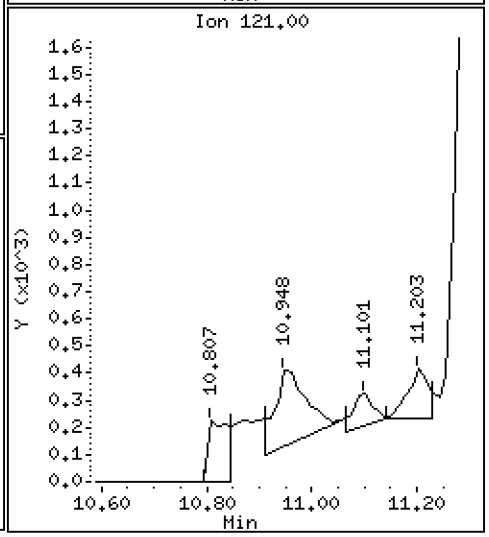


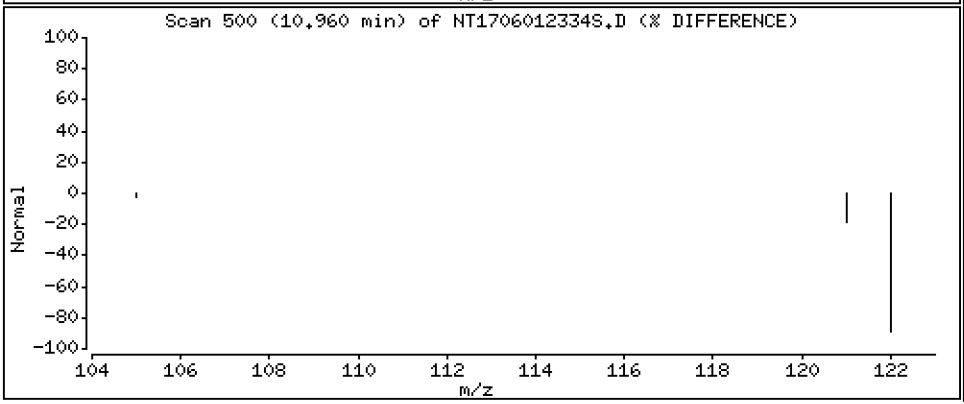












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

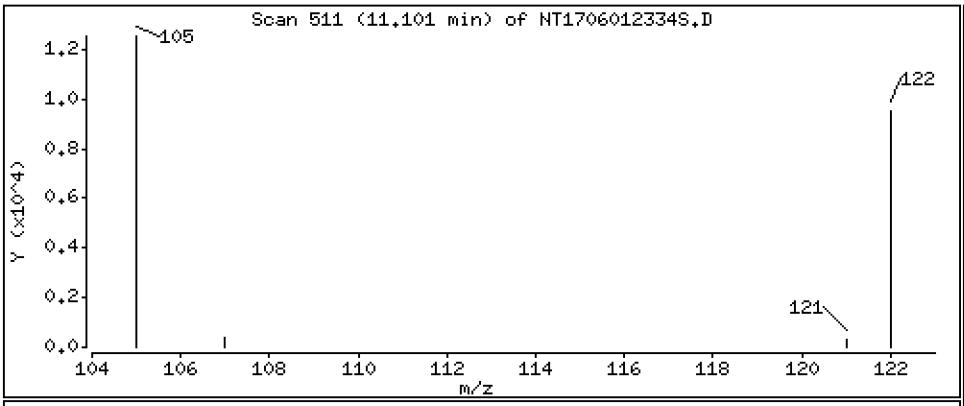
Operator: VTS

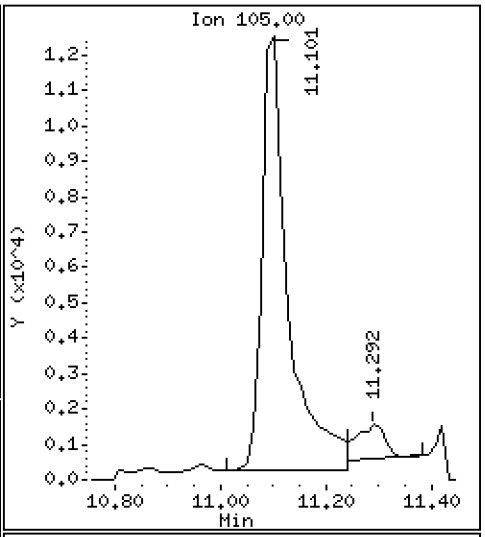
Column phase: ZB-5msi

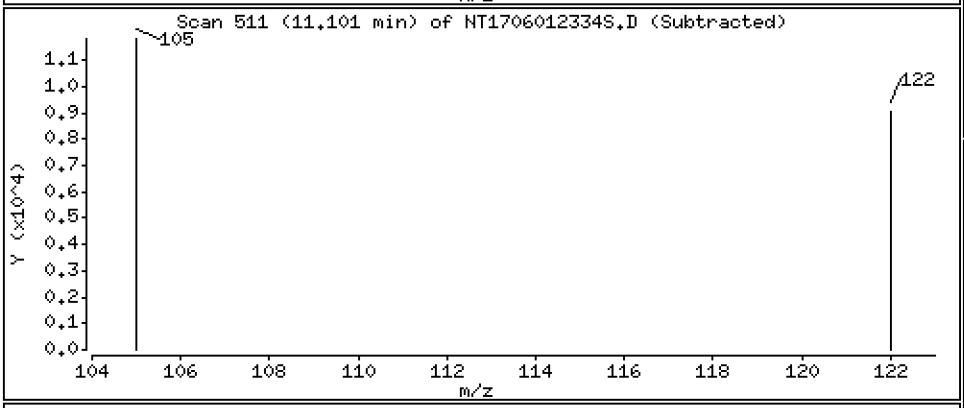
Column diameter: 0.25

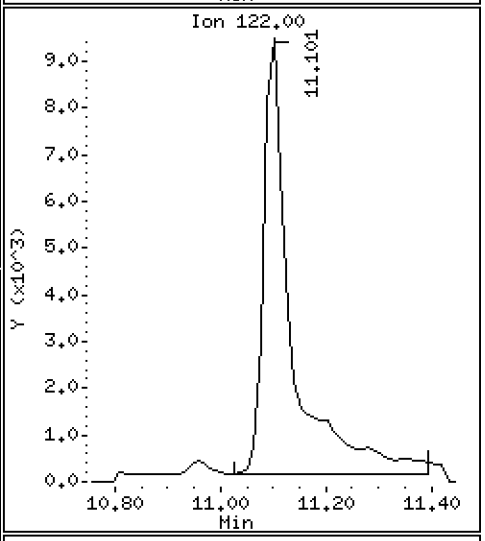
24 Benzoic acid

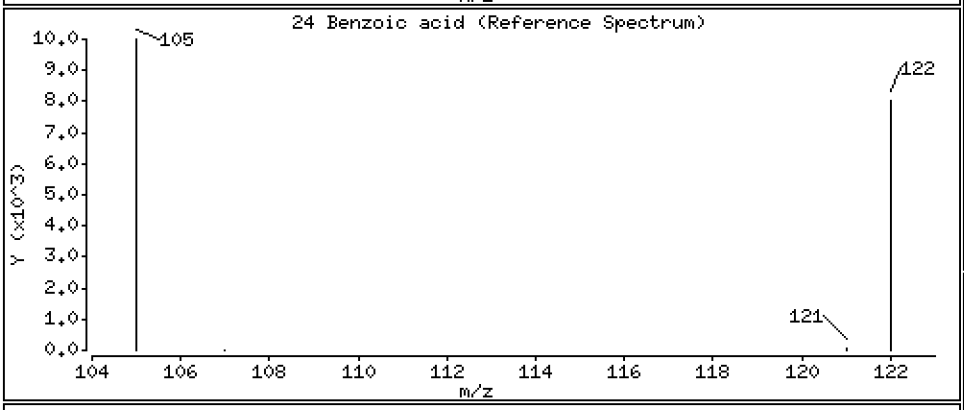
Concentration: 0.8020 ug/mL

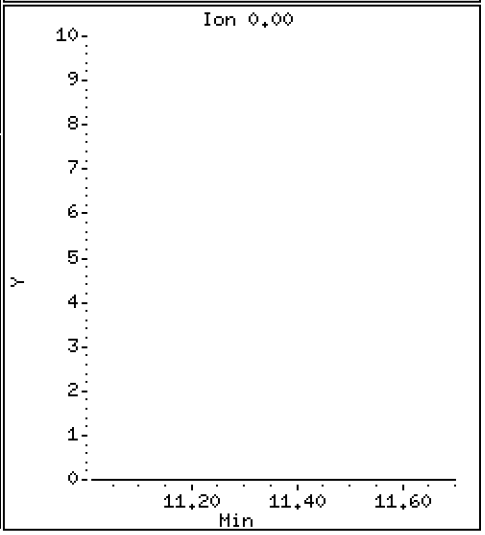


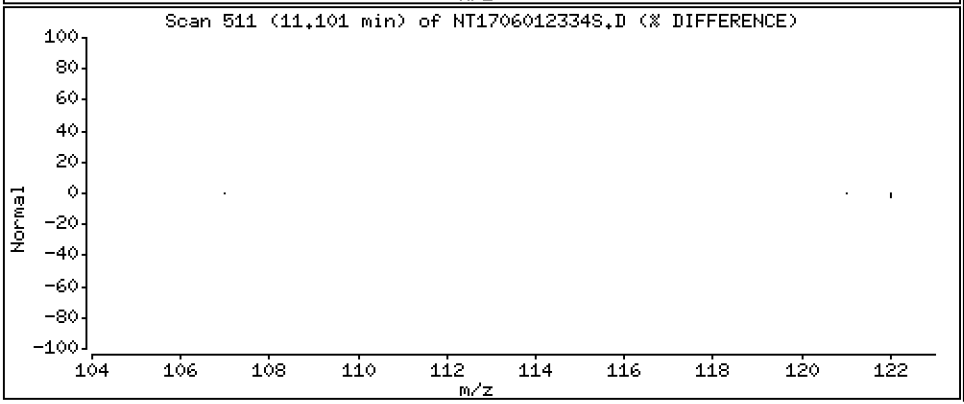












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

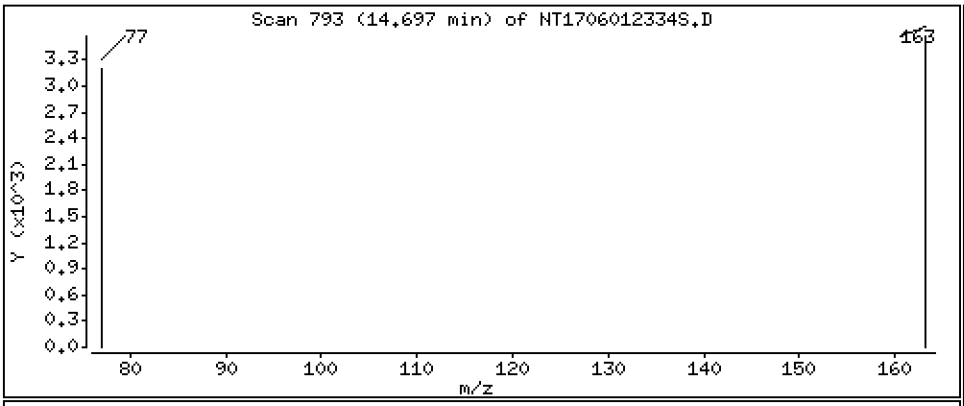
Operator: VTS

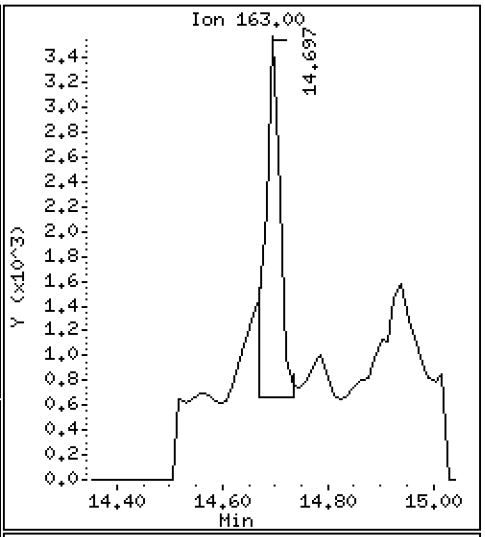
Column phase: ZB-5msi

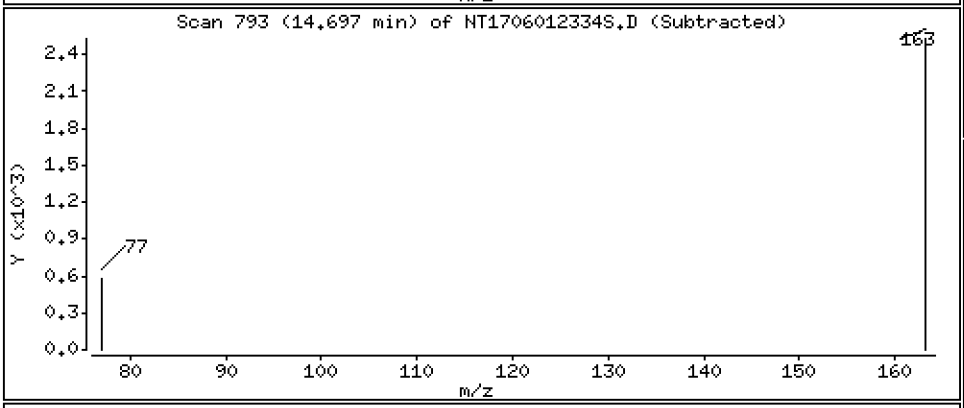
Column diameter: 0.25

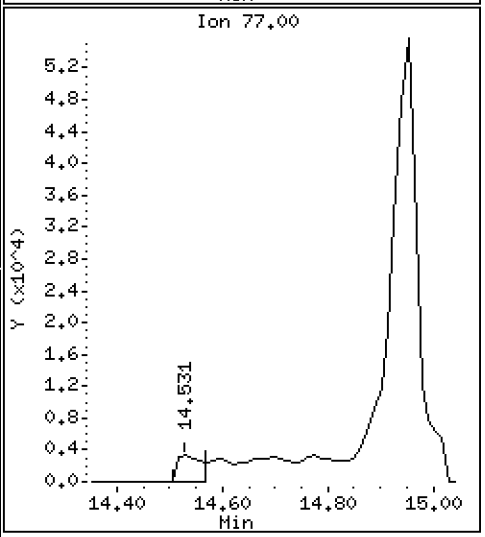
39 Dimethylphthalate

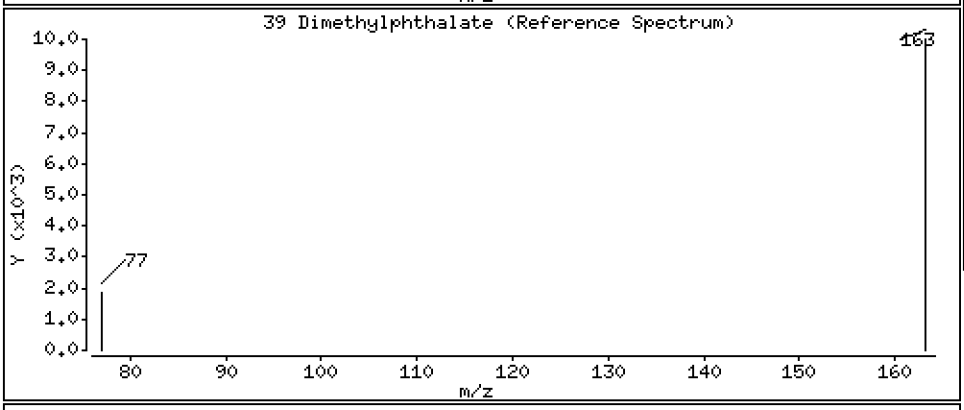
Concentration: 0.02866 ug/mL

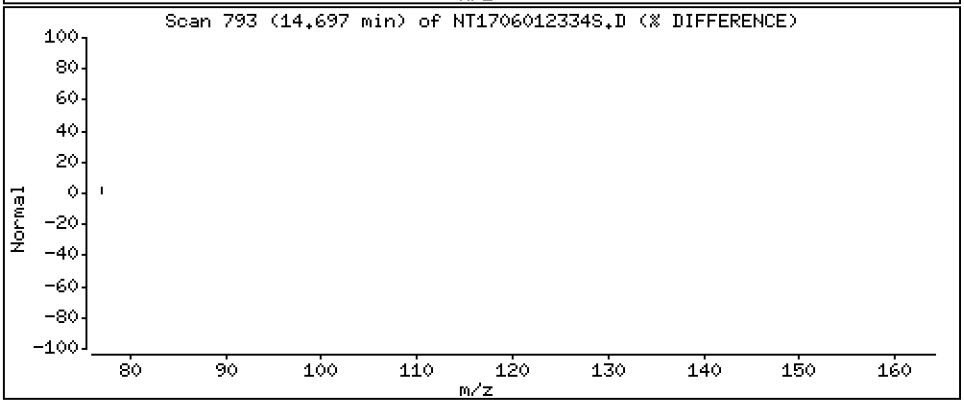












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

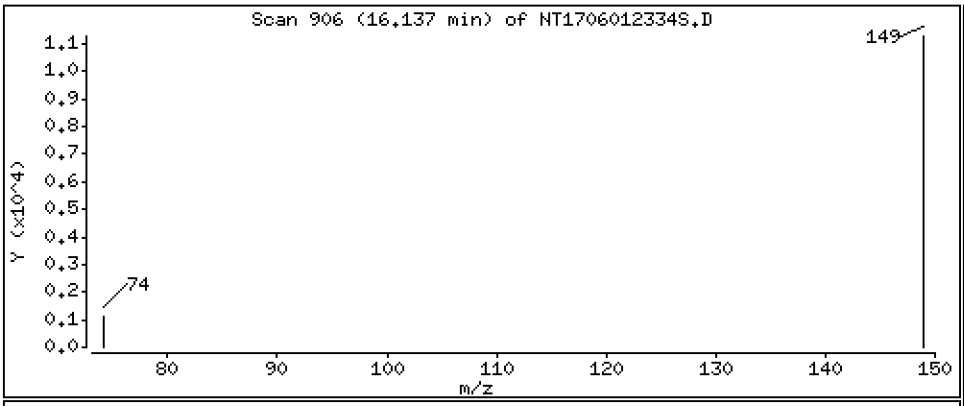
Operator: VTS

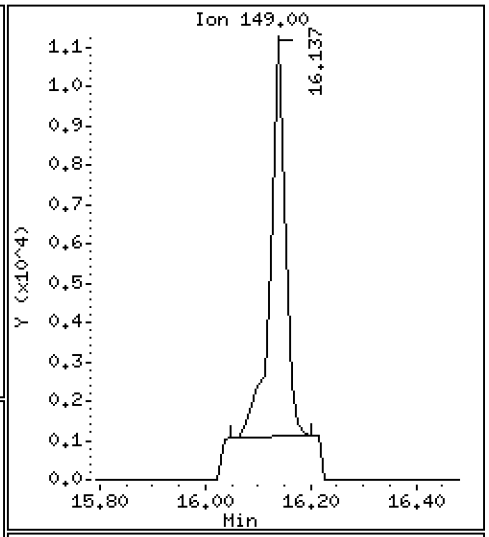
Column phase: ZB-5msi

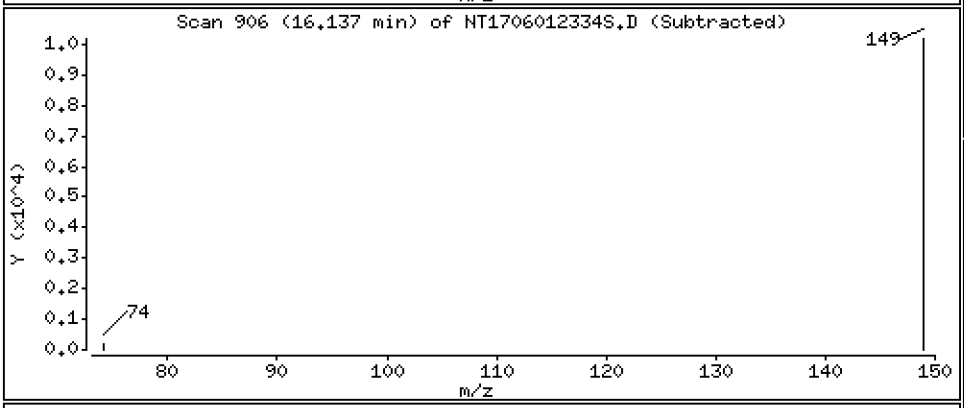
Column diameter: 0.25

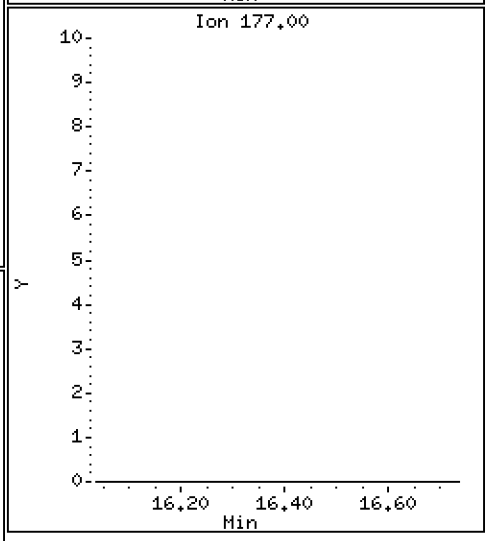
50 Diethylphthalate

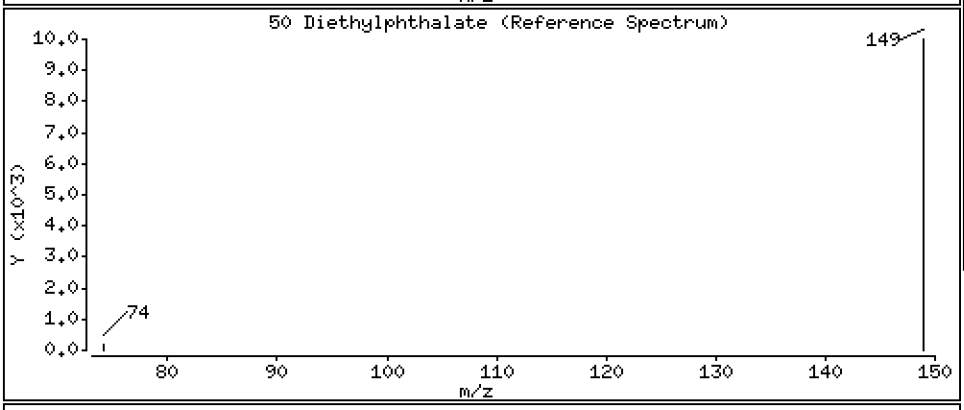
Concentration: 0.1146 ug/mL

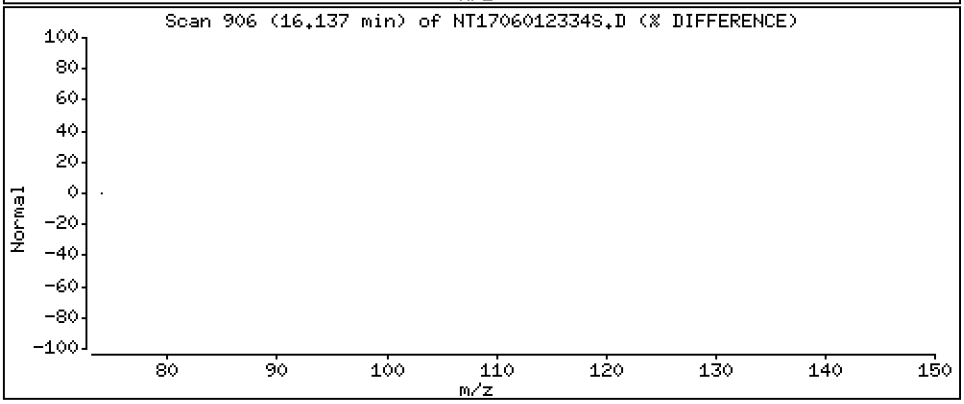












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

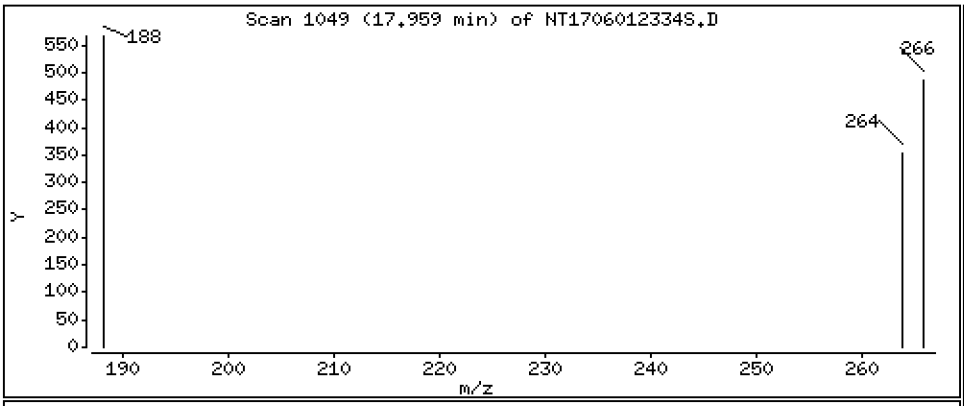
Operator: VTS

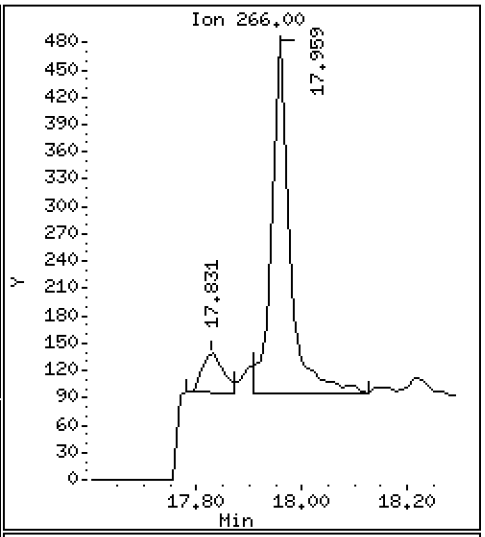
Column phase: ZB-5msi

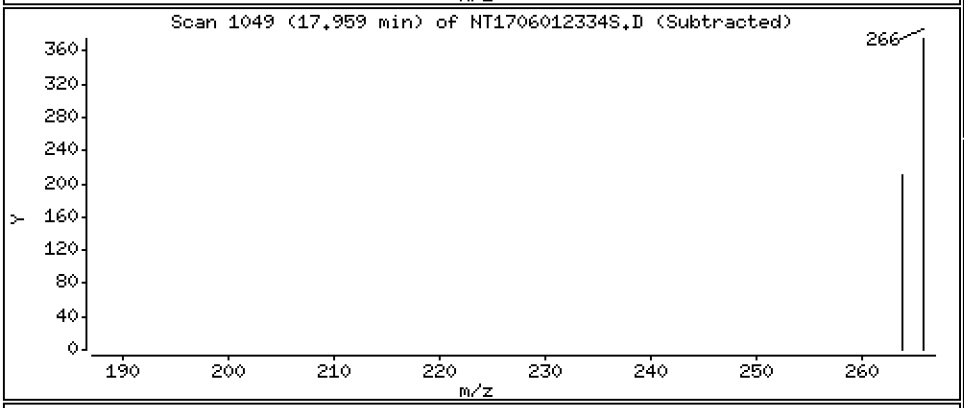
Column diameter: 0.25

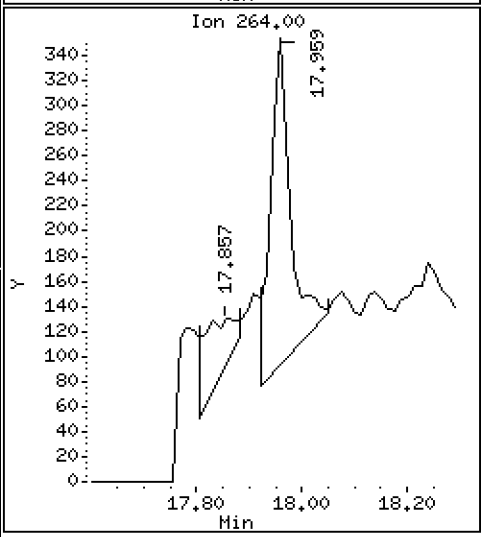
58 Pentachlorophenol

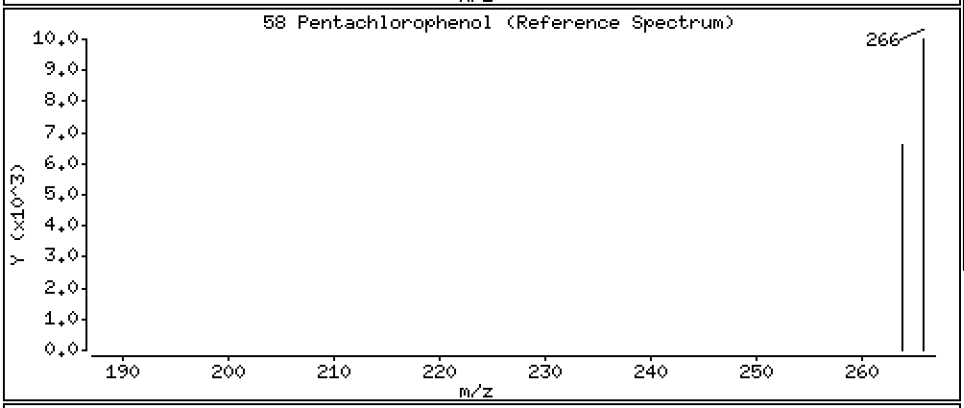
Concentration: 0.04218 ug/mL

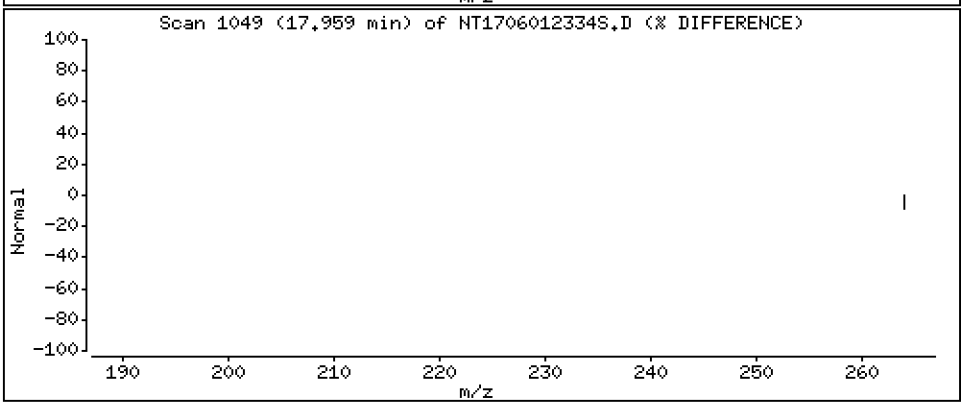












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

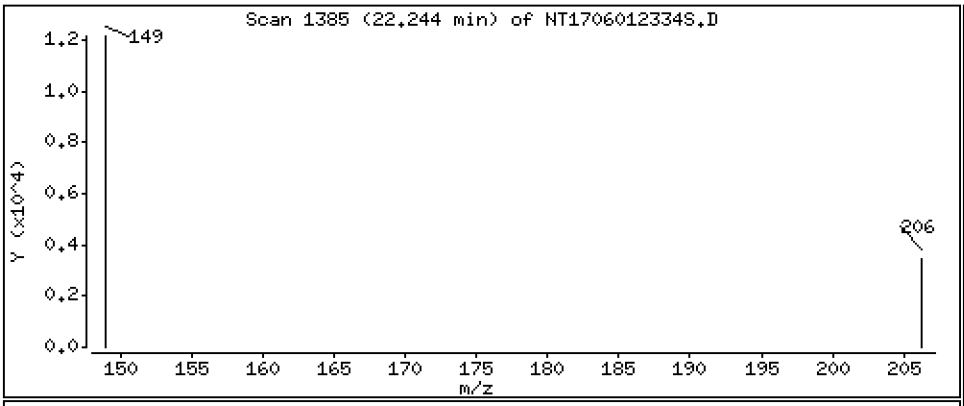
Operator: VTS

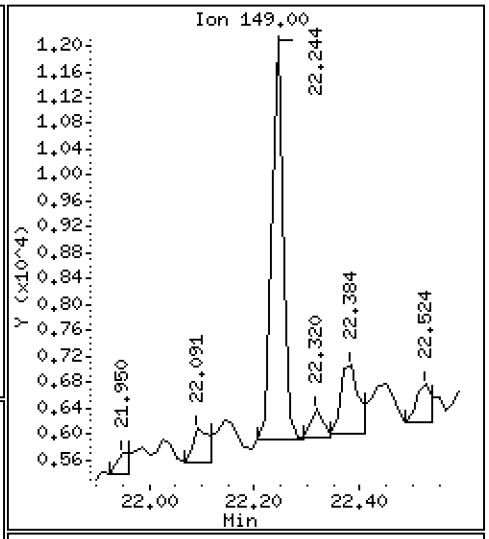
Column phase: ZB-5msi

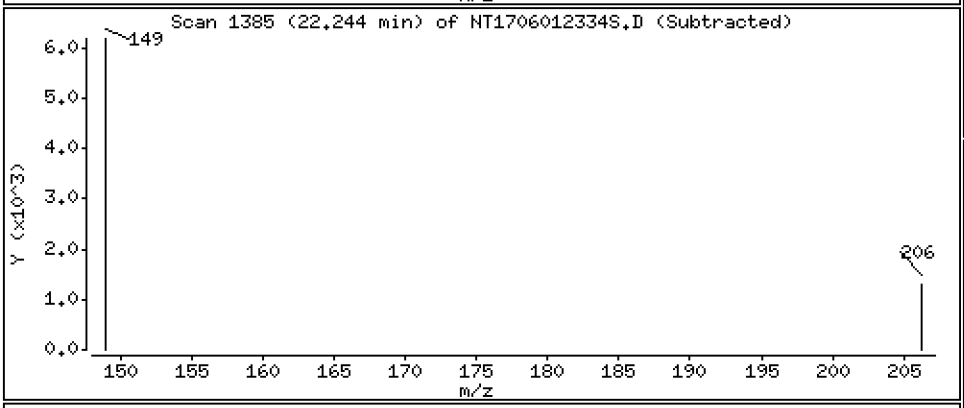
Column diameter: 0.25

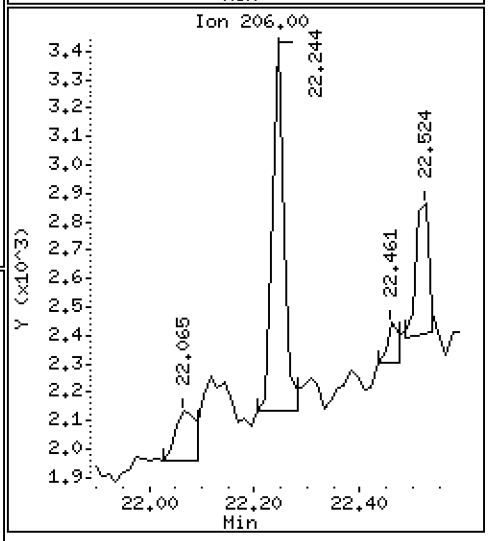
67 Butylbenzylphthalate

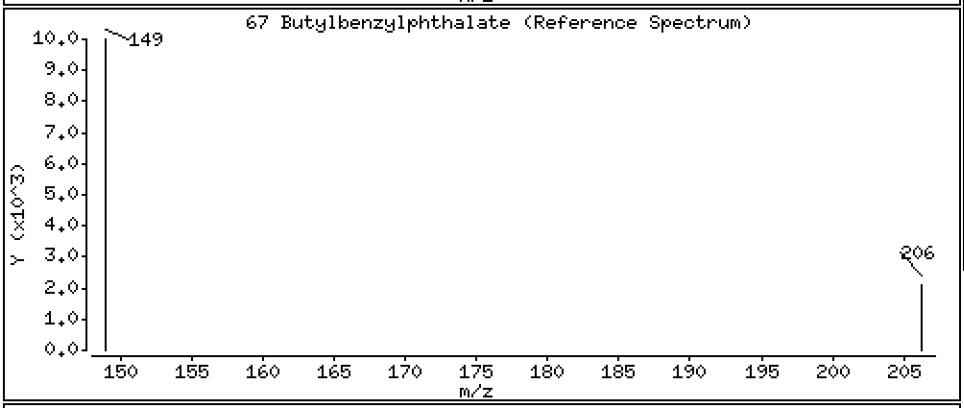
Concentration: 0.09967 ug/mL

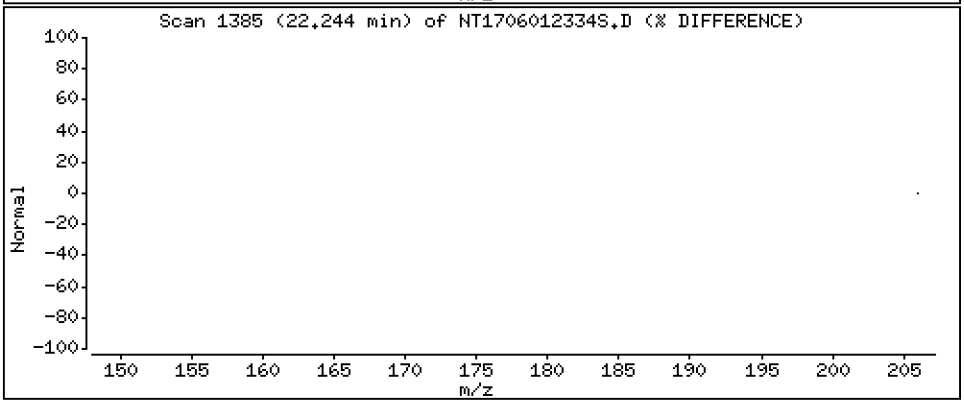












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D

Date : 02-JUN-2023 08:32

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-03

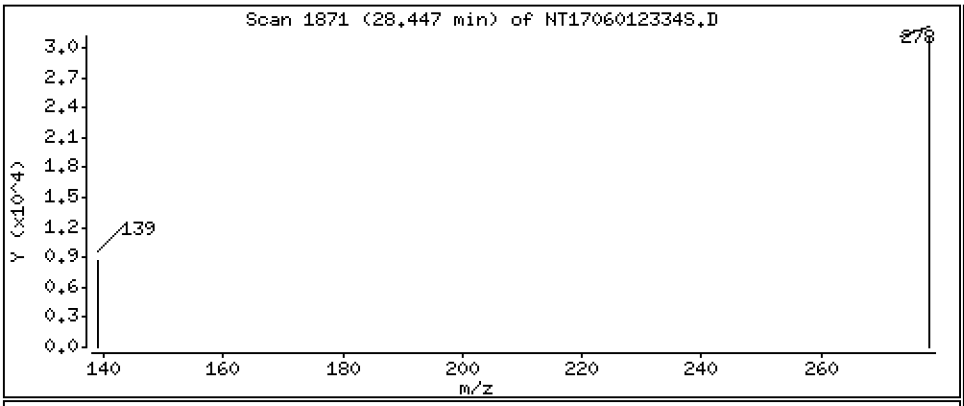
Operator: VTS

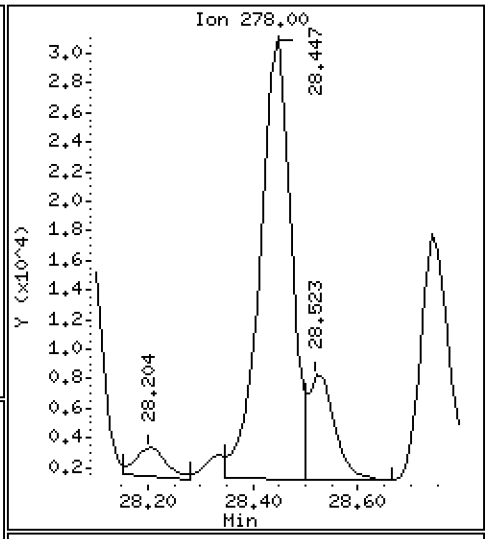
Column phase: ZB-5msi

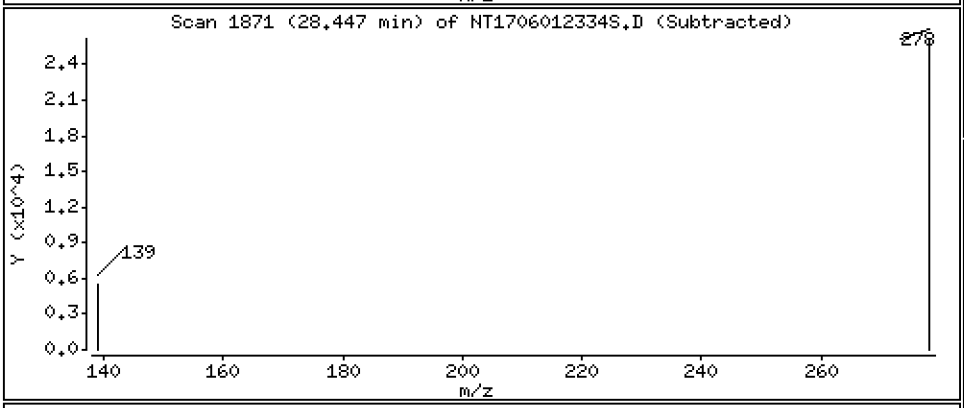
Column diameter: 0.25

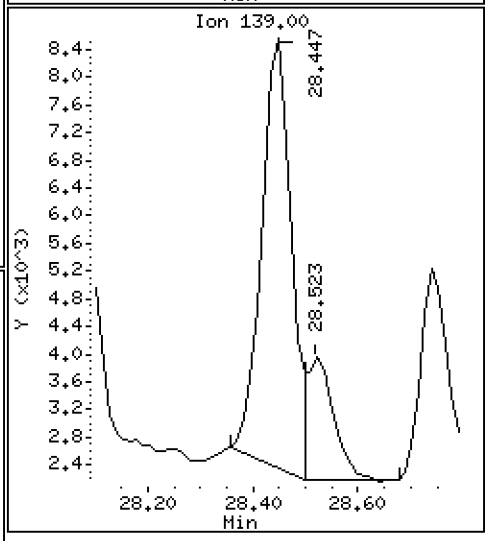
79 Dibenzo(a,h)anthracene

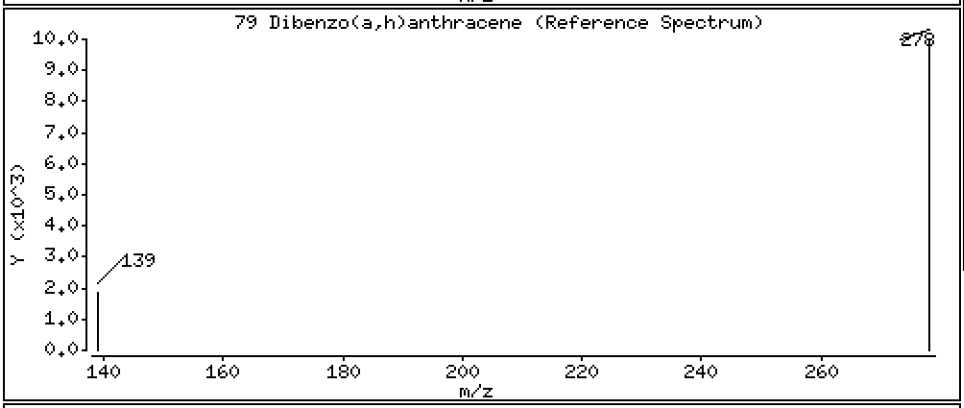
Concentration: 0.7708 ug/mL

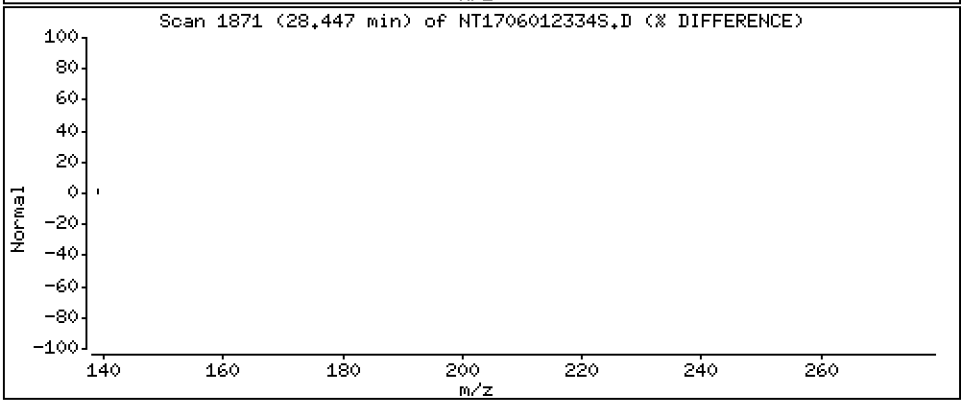












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012334S.D
Lab Smp Id: 23E0009-03
Inj Date : 02-JUN-2023 08:32
Operator : VTS Inst ID: nt17.i
Smp Info : 23E0009-03
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.954	(0.762)	148480	1.96025	1.960(R)
	3 Phenol	94	8.547	8.547	(0.934)	646223	5.72567	5.726
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	1078	0.01066	0.01066
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	250430	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	1697	0.01721	0.01721(M)
	11 Benzyl alcohol	79	9.452	9.452	(1.034)	54797	0.85206	0.8521
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	931	0.00964	0.009636(M)
	13 2-Methylphenol	108	9.657	9.644	(1.056)	2259	0.02888	0.02888
	15 4-Methylphenol	108	9.912	9.912	(1.084)	37330	0.47229	0.4723
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.960	10.934	(0.945)	1587	0.01836	0.01836
	24 Benzoic acid	105	11.100	11.100	(0.957)	43193	0.80200	0.8020
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	898713	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	14.696	14.696	(0.967)	5507	0.02866	0.02866(M)
*	42 Acenaphthene-d10	162	15.194	15.194	(1.000)	523176	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.062)	20002	0.11464	0.1146(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	17.958	17.946	(0.986)	934	0.04218	0.04218
*	59 Phenanthrene-d10	188	18.213	18.201	(1.000)	822979	4.00000	
$	66 Terphenyl-d14	244	21.338	21.325	(0.919)	383766	4.35020	4.350(R)
	67 Butylbenzylphthalate	149	22.243	22.243	(0.958)	9555	0.09967	0.09967
*	69 Chrysene-d12	240	23.226	23.213	(1.000)	464918	4.00000	
*	77 Perylene-d12	264	25.828	25.802	(1.000)	558030	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.446	28.446	(1.101)	121316	0.77076	0.7708
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012334S.D Calibration Time: 00:29
Lab Smp Id: 23E0009-03
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	250430	-5.69
27 Naphthalene-d8	874121	437061	1748242	898713	2.81
42 Acenaphthene-d10	524478	262239	1048956	523176	-0.25
59 Phenanthrene-d10	807440	403720	1614880	822979	1.92
69 Chrysene-d12	527364	263682	1054728	464918	-11.84
77 Perylene-d12	455527	227764	911054	558030	22.50

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.21	0.07
69 Chrysene-d12	23.21	22.71	23.71	23.23	0.06
77 Perylene-d12	25.80	25.30	26.30	25.83	0.10

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

REVIEW SUMMARY FOR FILE - NT1706012334S.D

Lab ID: 23E0009-03
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 08:32

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: SIM.b/NT1706012321S.D

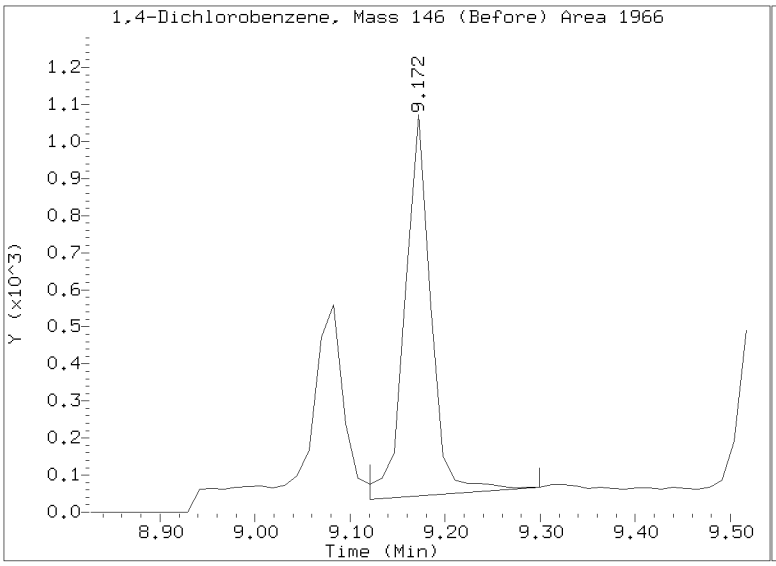
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

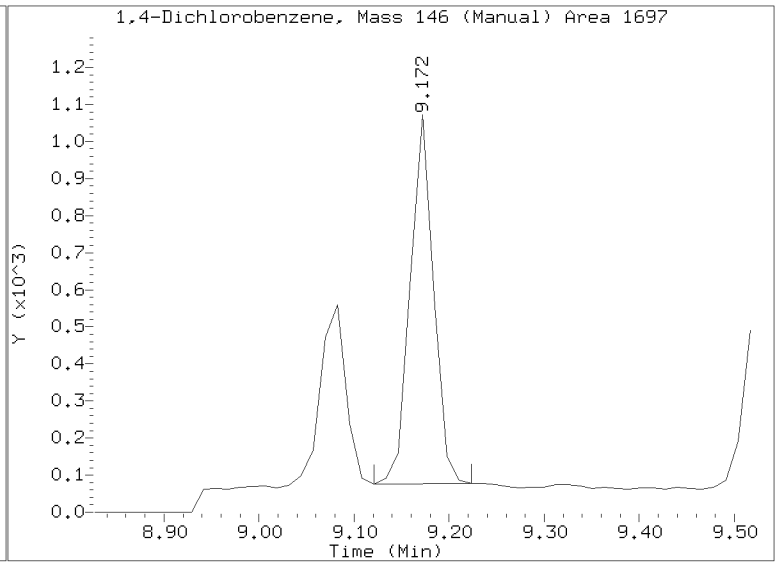
Exception: 1,2,4-Trichlorobenzene 0.0010

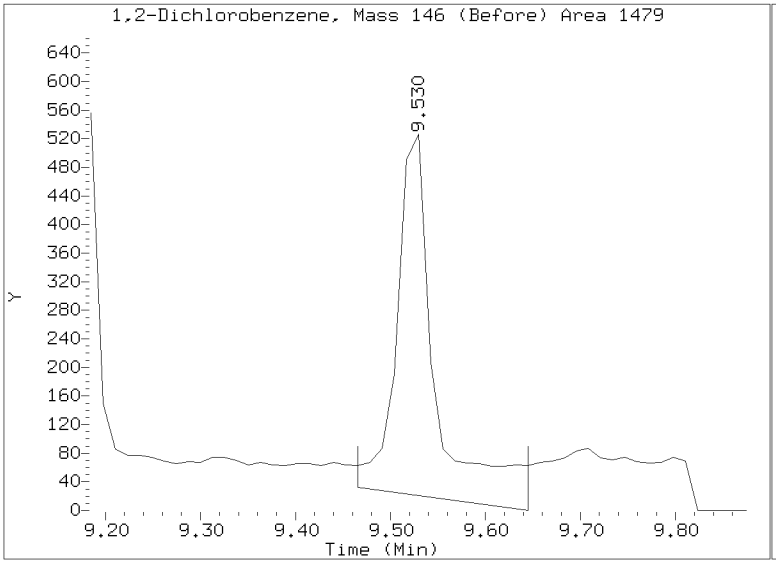
* Only compounds listed in the work order have been verified by the analyst *

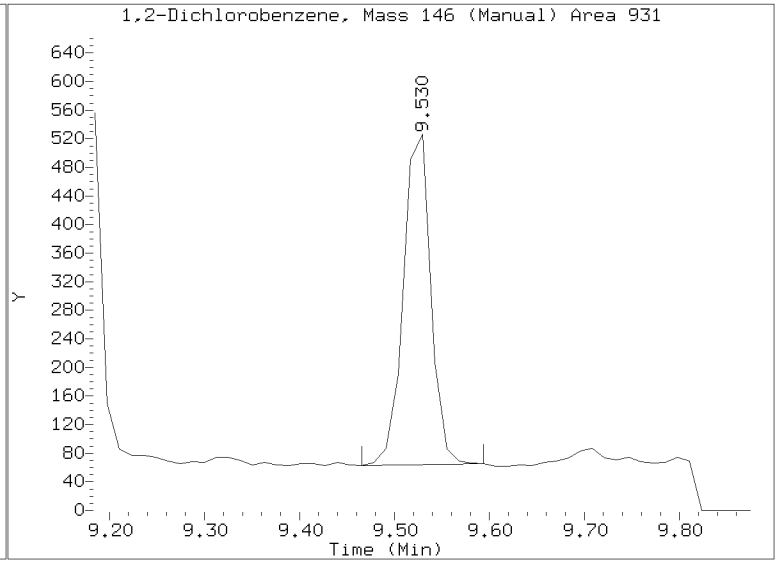
Quant Ion Manual Peak Adjustment Report

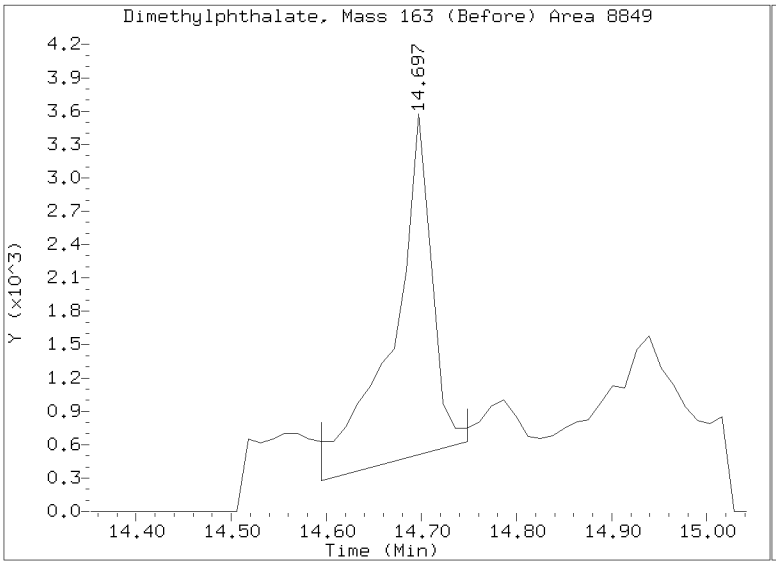
Datafile: //target/share/chem3/nt17.i/20230601.b/SIM.b/NT1706012334S.D
Injection Date: 02-JUN-2023 08:32
Lab ID:23E0009-03 Client ID:
Report Date: 06/06/2023 11:44

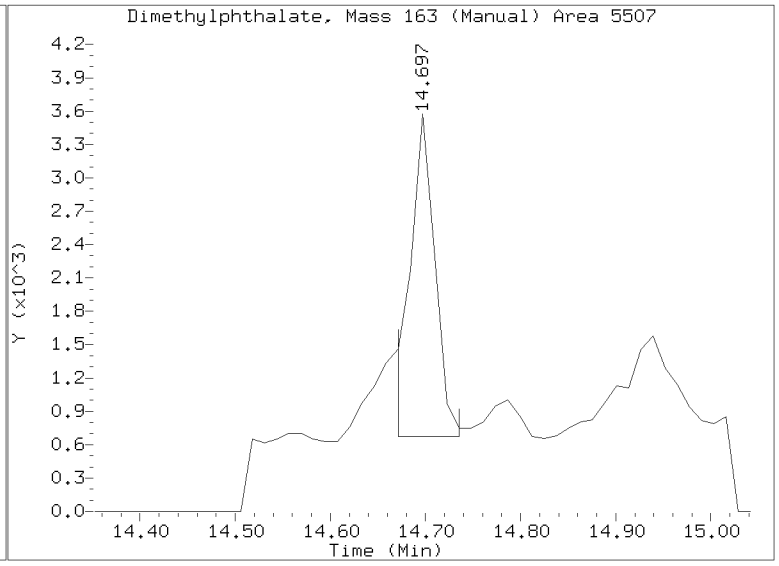






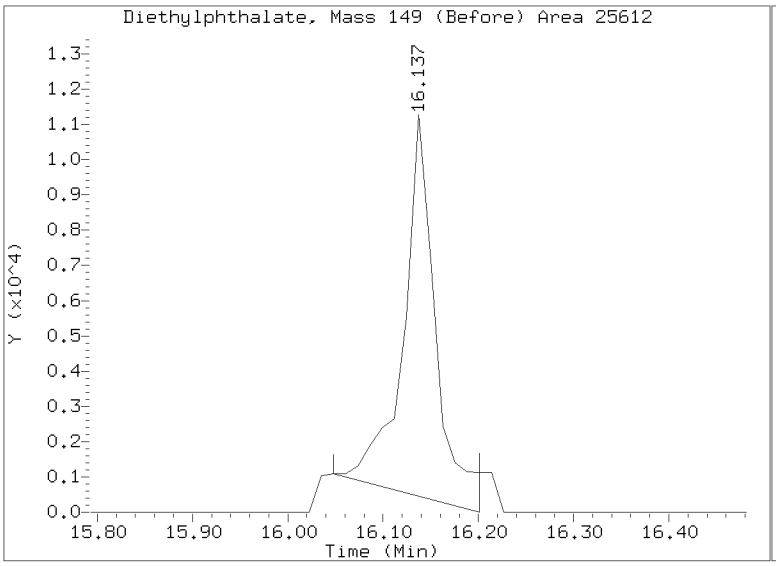


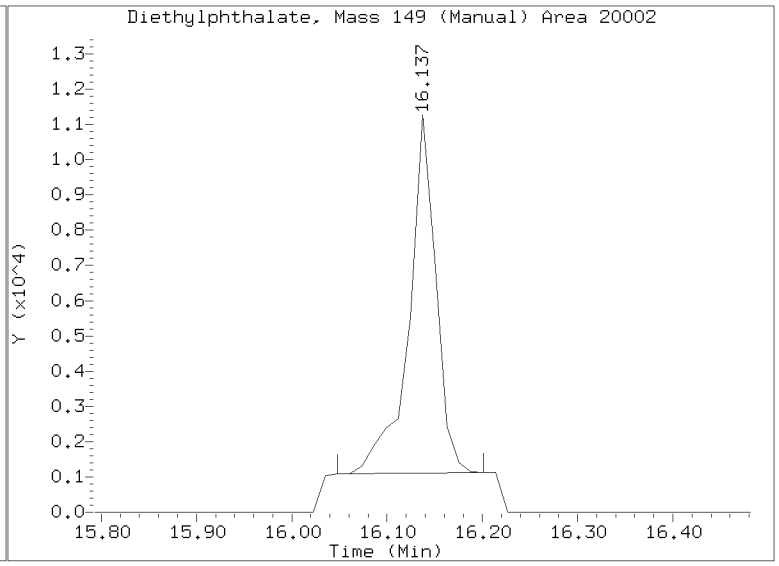




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/SIM.b/NT1706012334S.D
Injection Date: 02-JUN-2023 08:32
Lab ID:23E0009-03 Client ID:
Report Date: 06/06/2023 11:44





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1800

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-05 A	SDG:	23E0009
Sampled:	04/29/23 10:10	Prepared:	05/05/23 11:23	File ID:	NT1706012335S.D
% Solids:	47.45	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 09:09
Batch:	BLE0148	Sequence:	SLF0037	Initial/Final:	21.14 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00070
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.0	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	0.8	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	84.7		2.5	19.9
65-85-0	Benzoic acid	1	64.3	J	13.4	99.7
105-67-9	2,4-Dimethylphenol	1	19.9	U	2.2	19.9
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	3.9	J	2.1	19.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	747.69	216	28.8	27 - 120	
p-Terphenyl-d14	498.46	436	87.4	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123358.D

Date : 02-JUN-2023 09:09

Client ID:

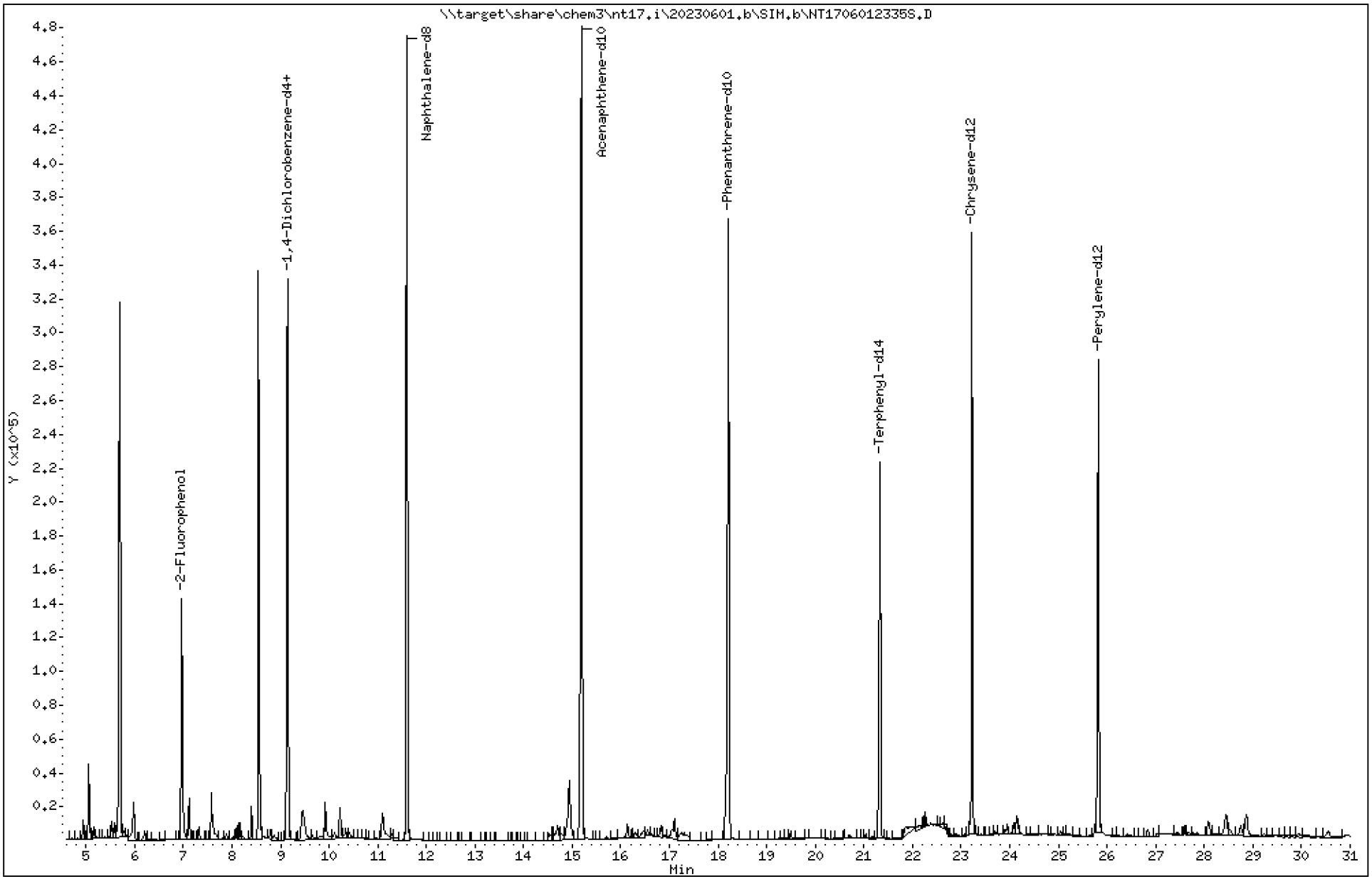
Instrument: nt17.i

Sample Info: 23E0009-05

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

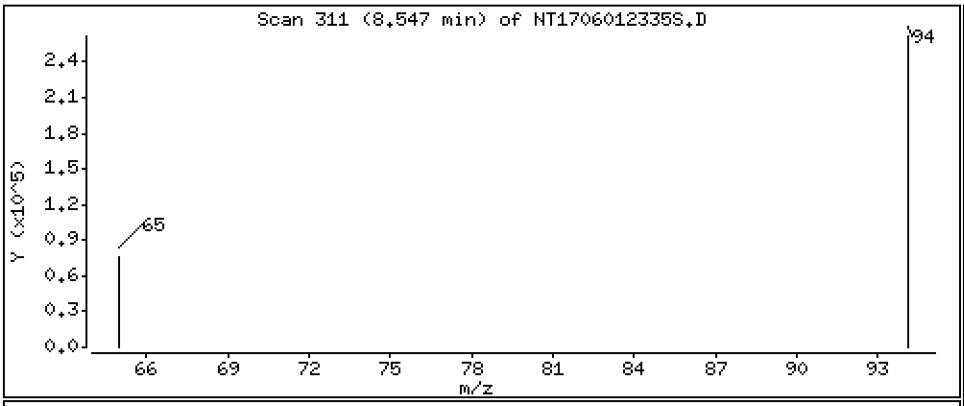
Operator: VTS

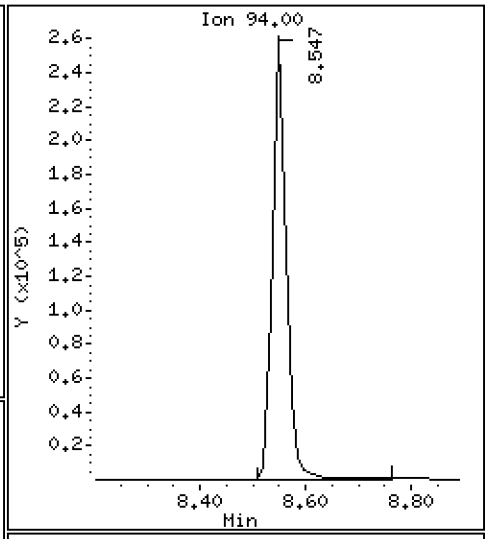
Column phase: ZB-5msi

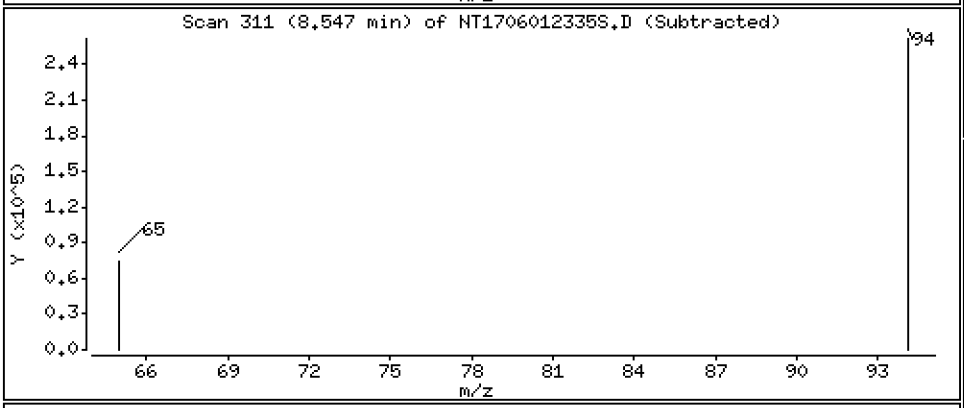
Column diameter: 0.25

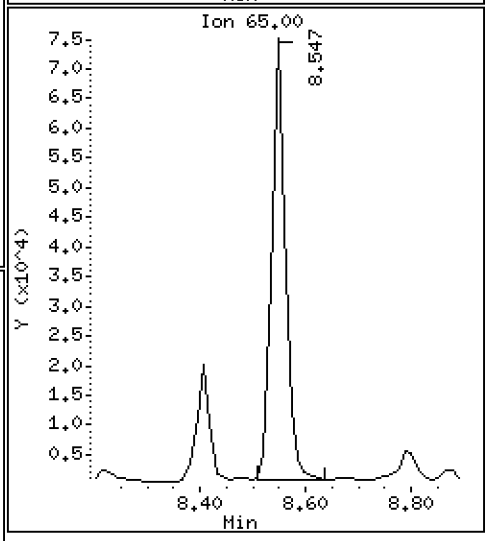
3 Phenol

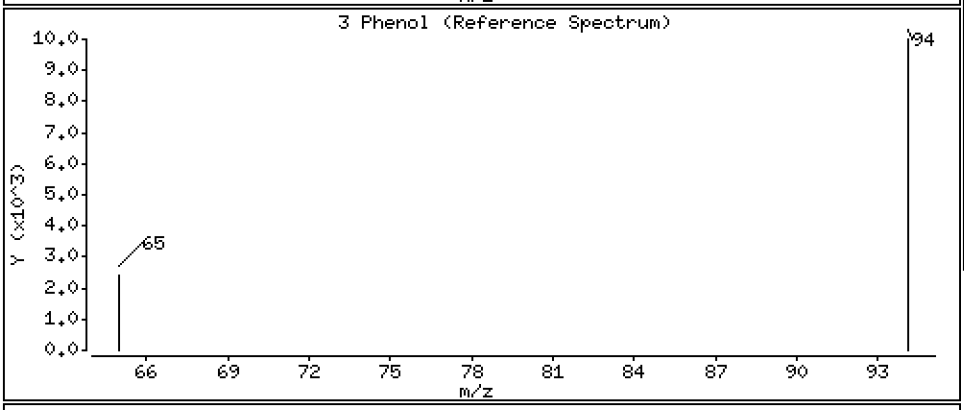
Concentration: 4.470 ug/mL

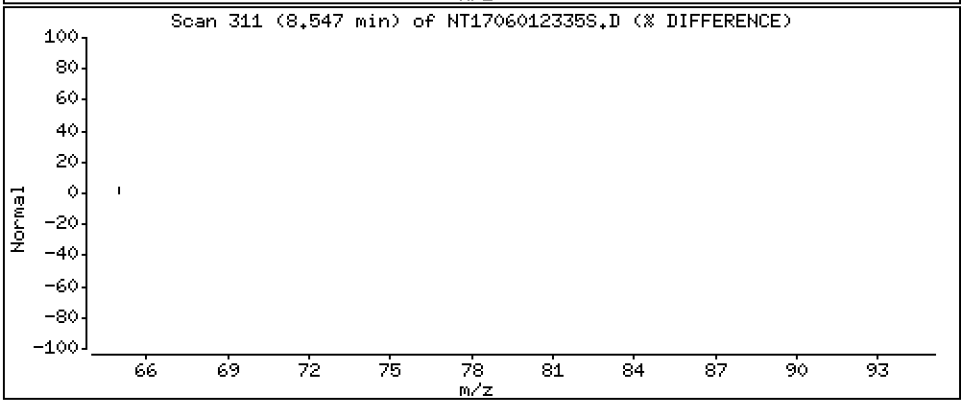












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

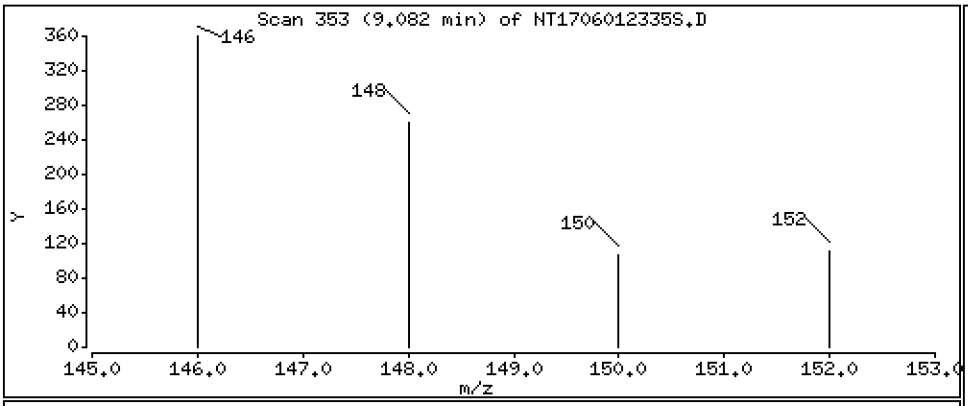
Operator: VTS

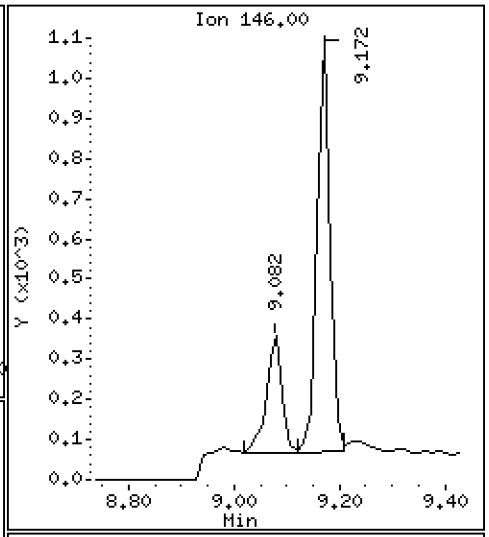
Column phase: ZB-5msi

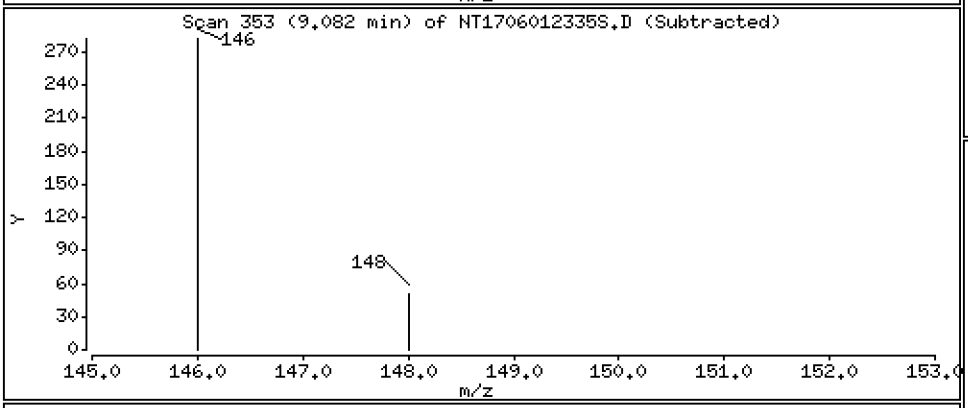
Column diameter: 0.25

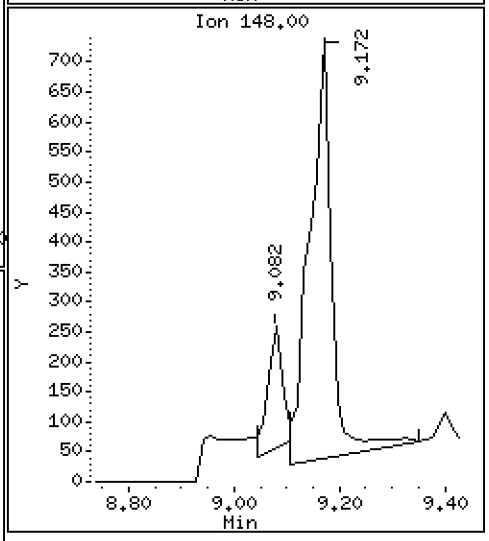
7 1,3-Dichlorobenzene

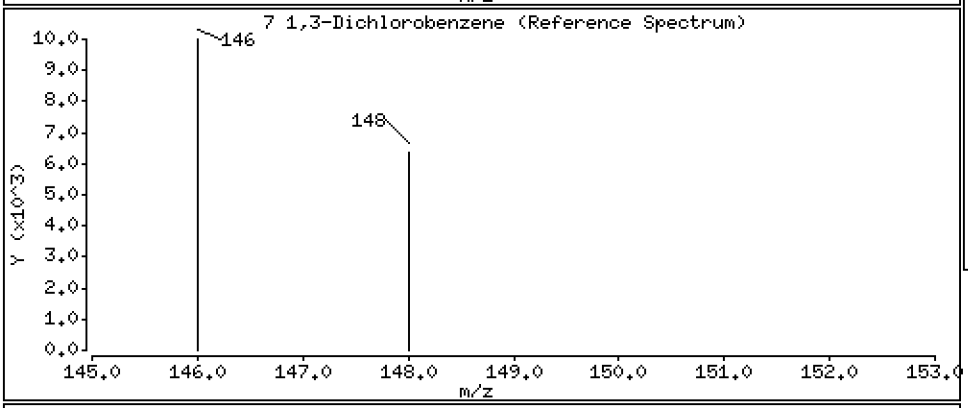
Concentration: 0.006258 ug/mL

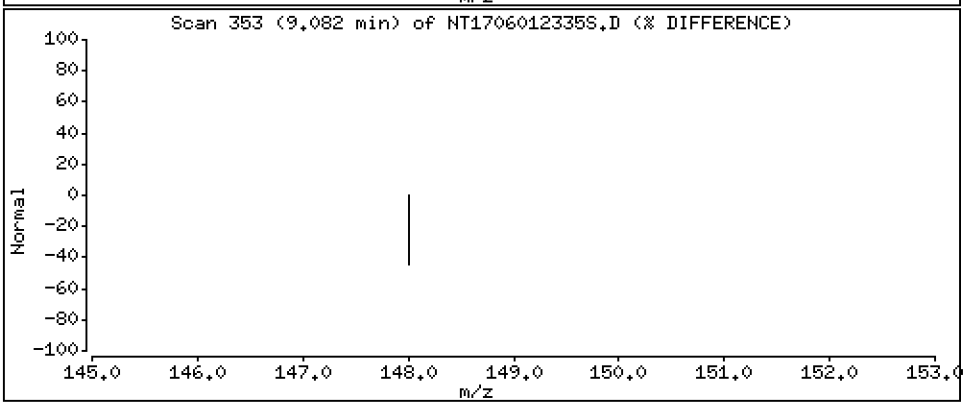












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

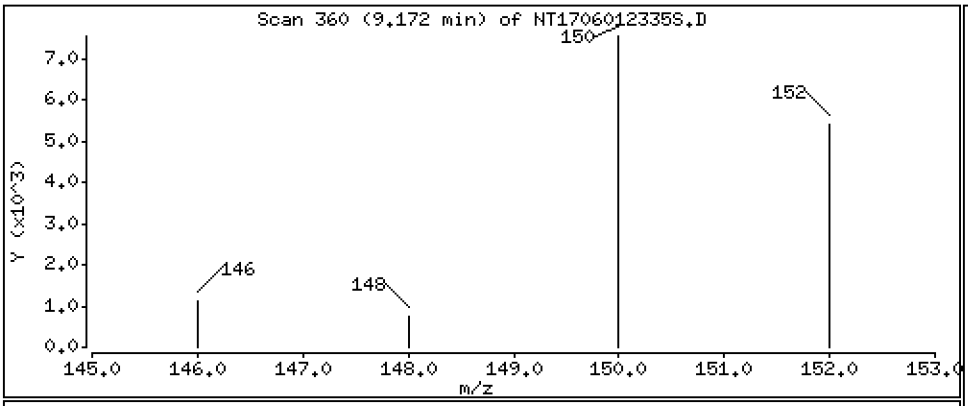
Operator: VTS

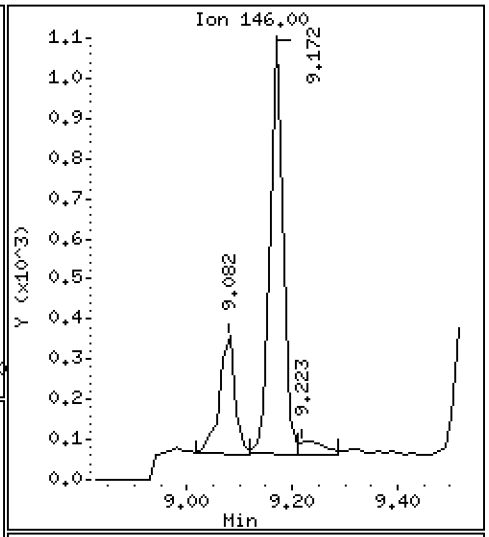
Column phase: ZB-5msi

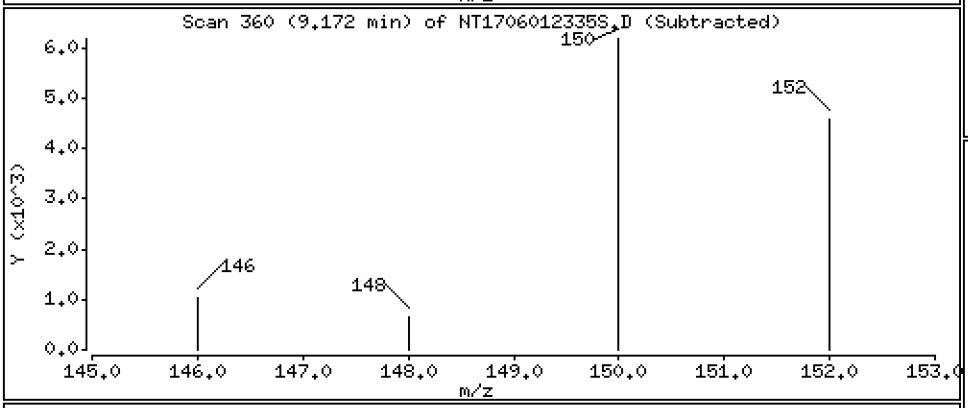
Column diameter: 0.25

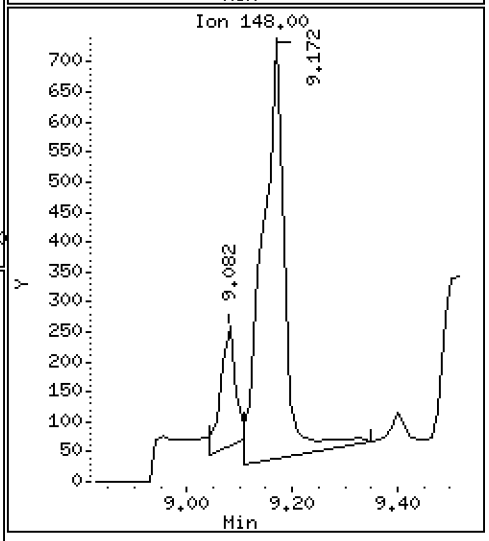
9 1,4-Dichlorobenzene

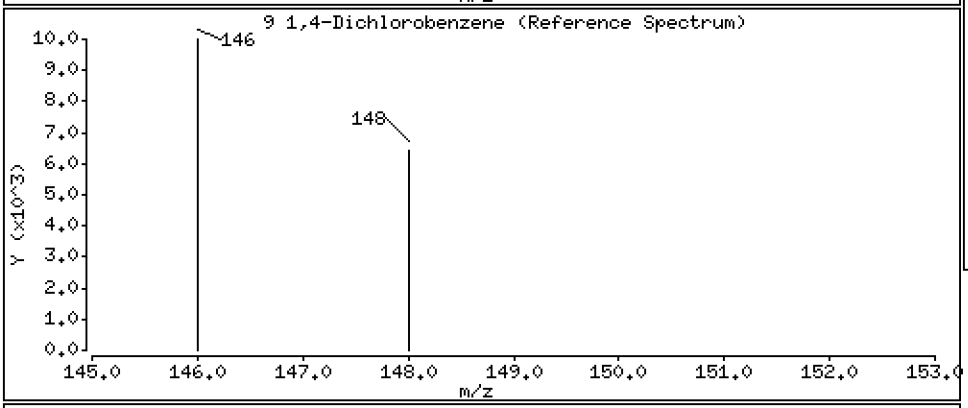
Concentration: 0.01973 ug/mL

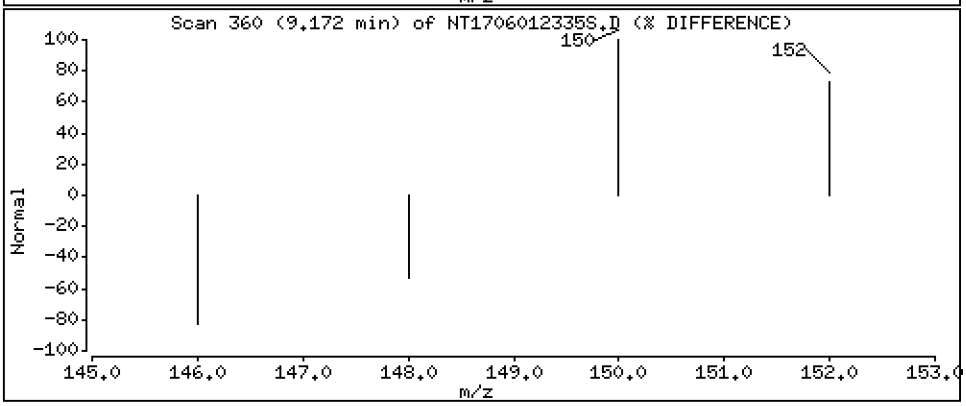












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

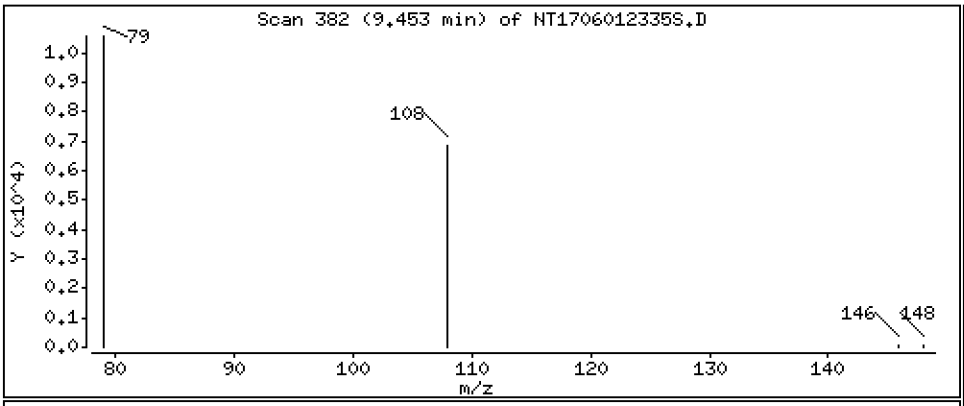
Operator: VTS

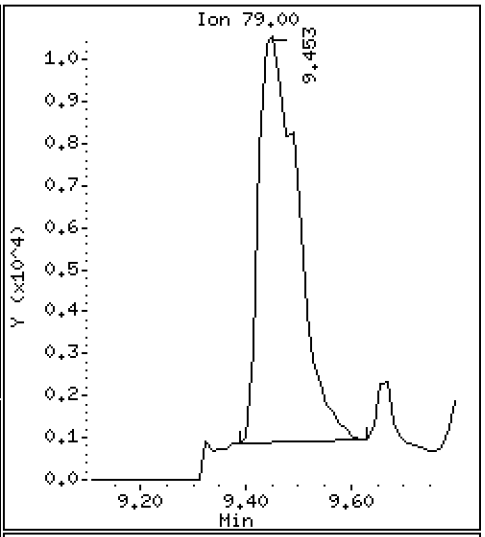
Column phase: ZB-5msi

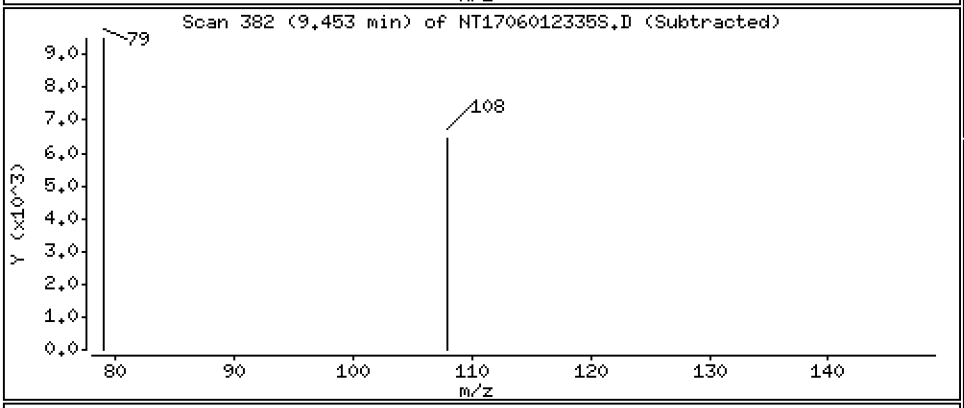
Column diameter: 0.25

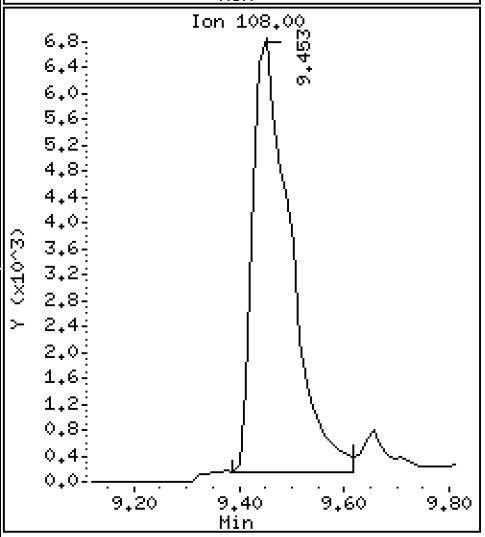
11 Benzyl alcohol

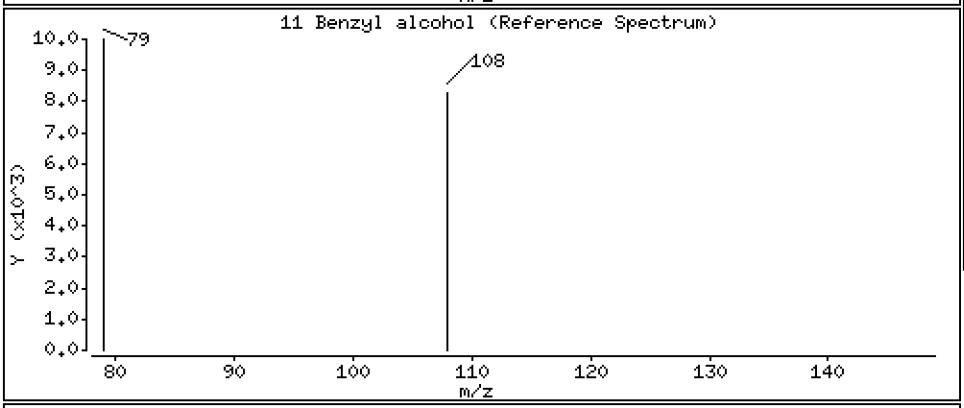
Concentration: 0.8492 ug/mL

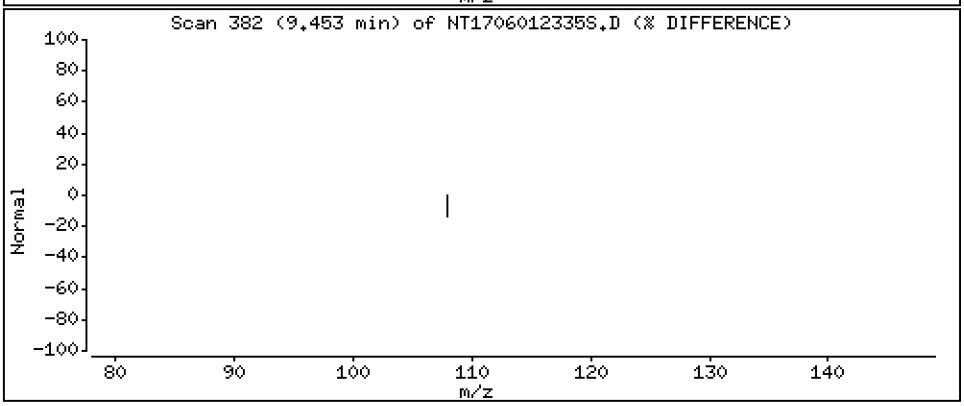












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

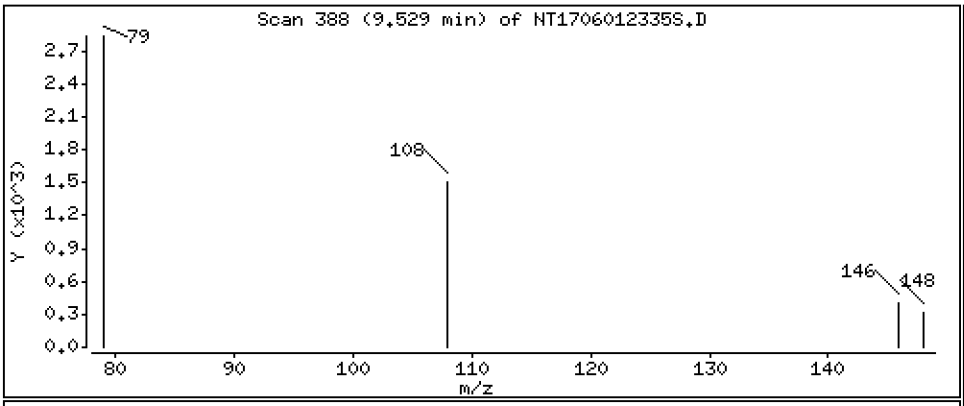
Operator: VTS

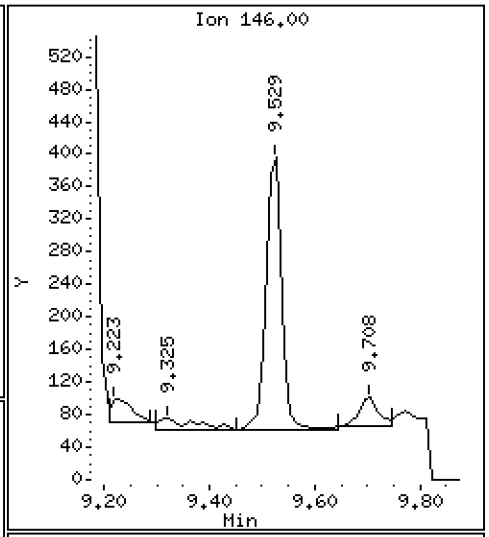
Column phase: ZB-5msi

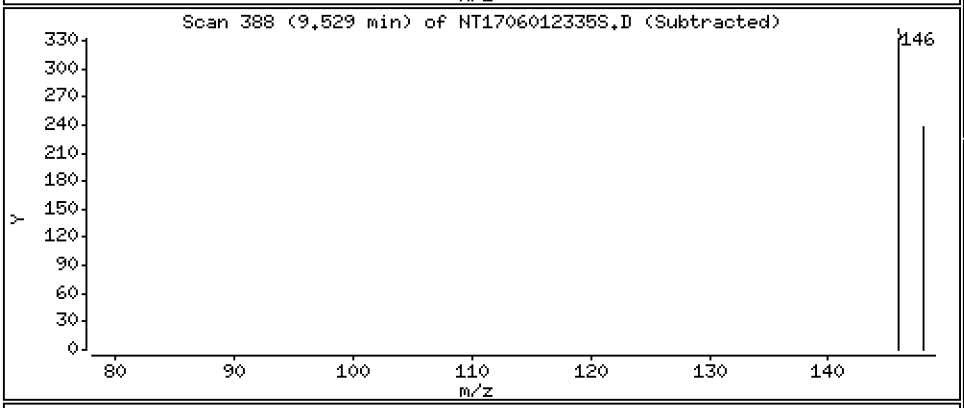
Column diameter: 0.25

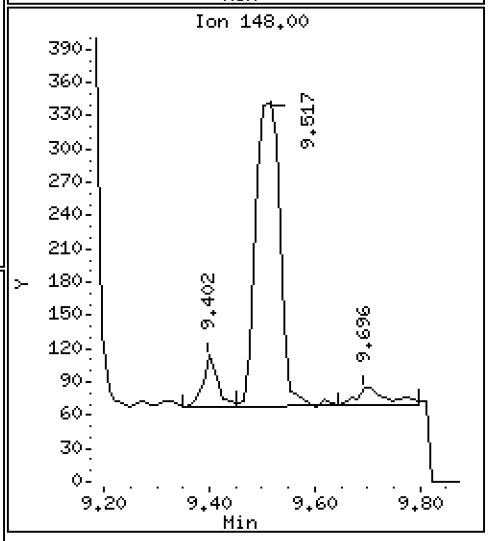
12 1,2-Dichlorobenzene

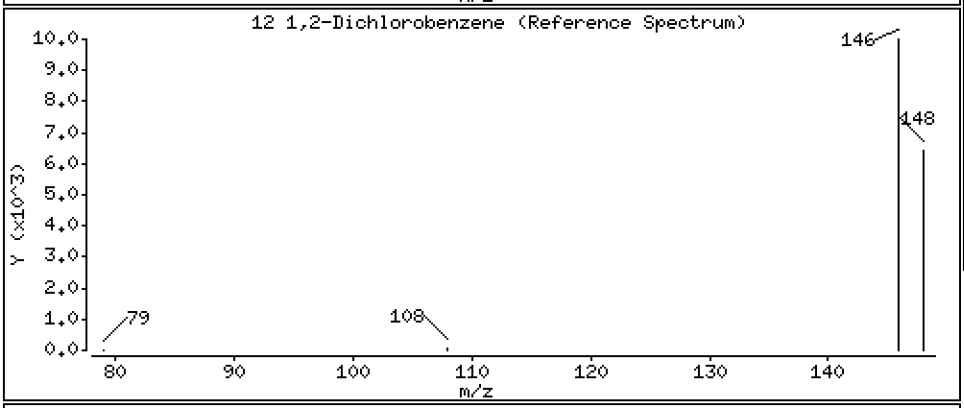
Concentration: 0.007772 ug/mL

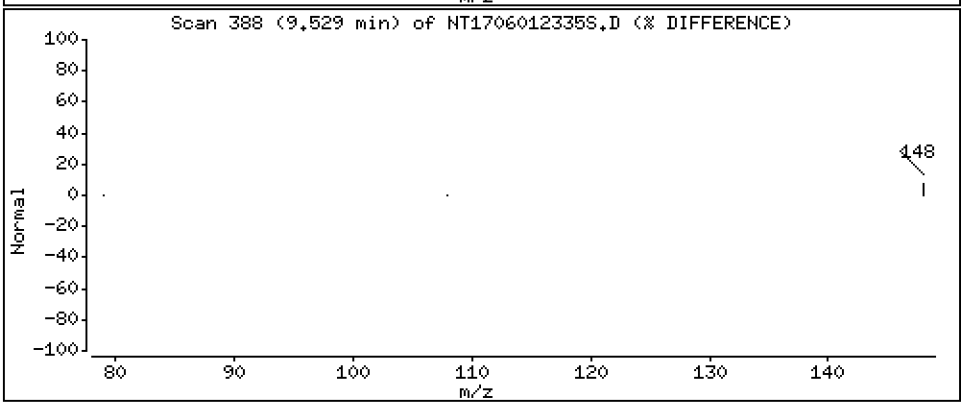












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

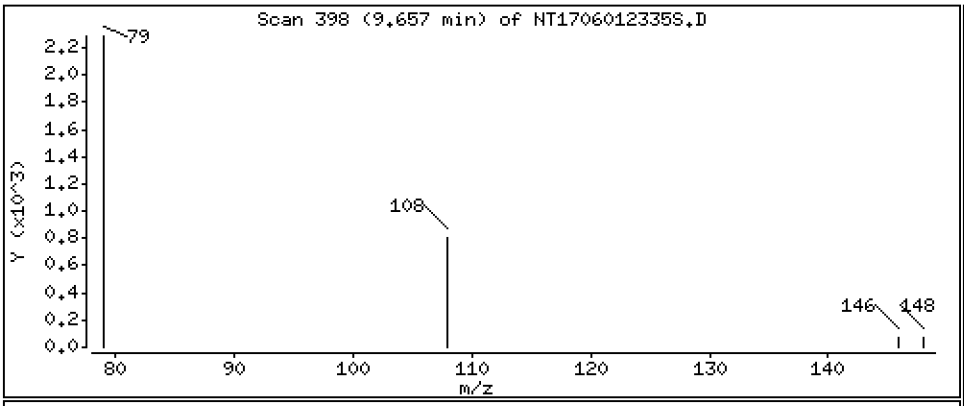
Operator: VTS

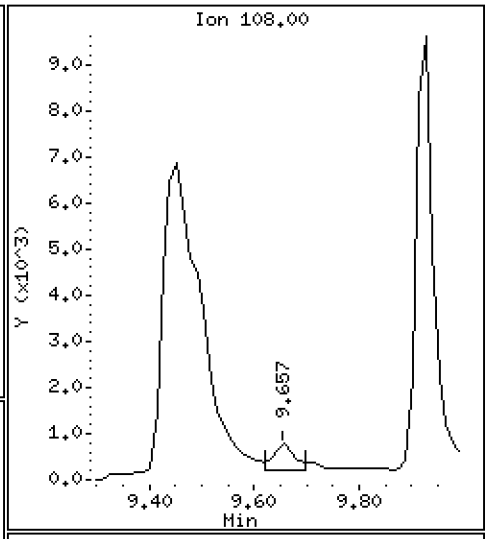
Column phase: ZB-5msi

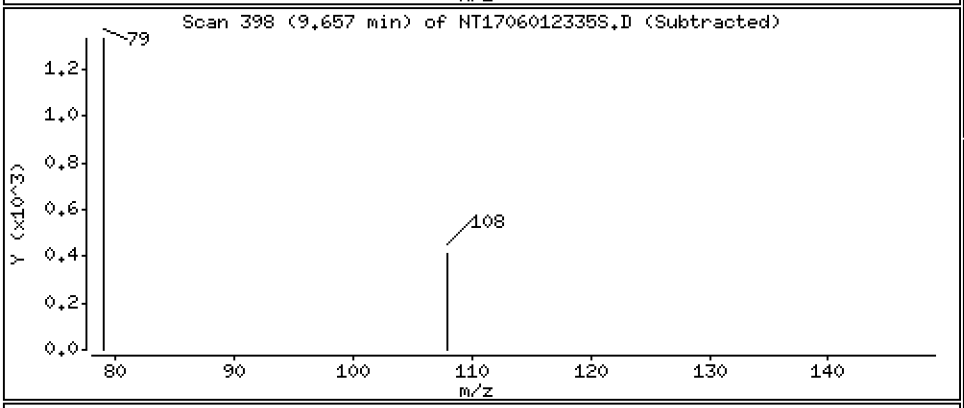
Column diameter: 0.25

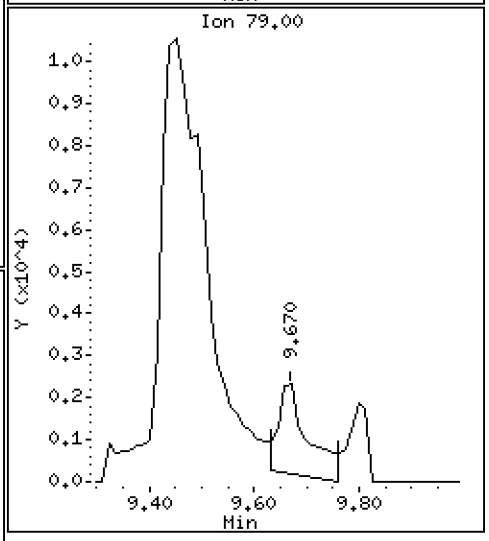
13 2-Methylphenol

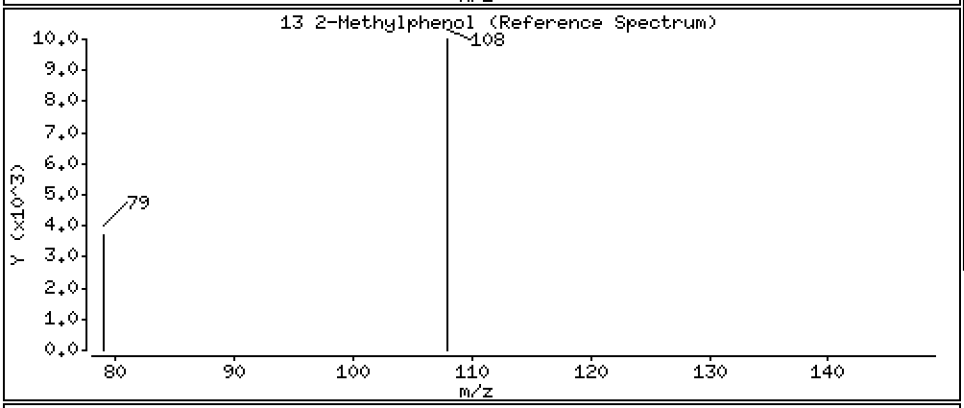
Concentration: 0.02235 ug/mL

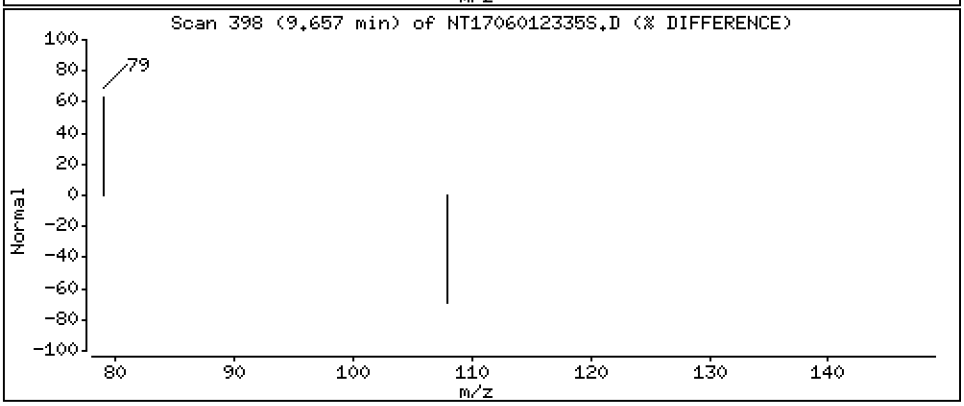












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

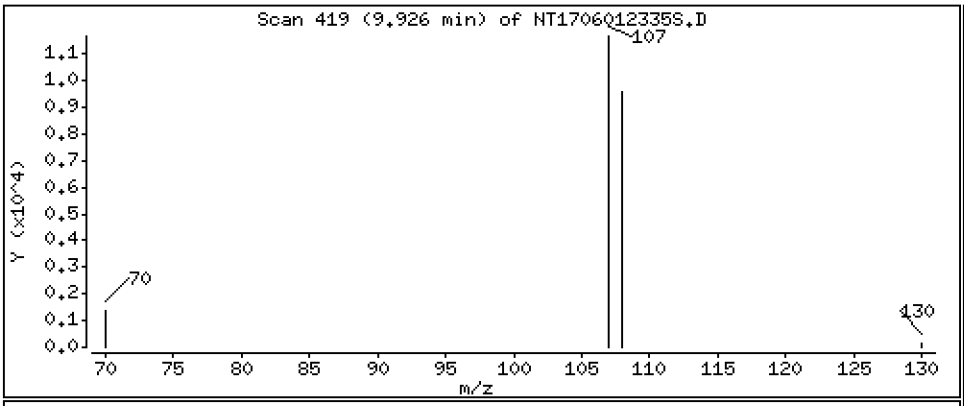
Operator: VTS

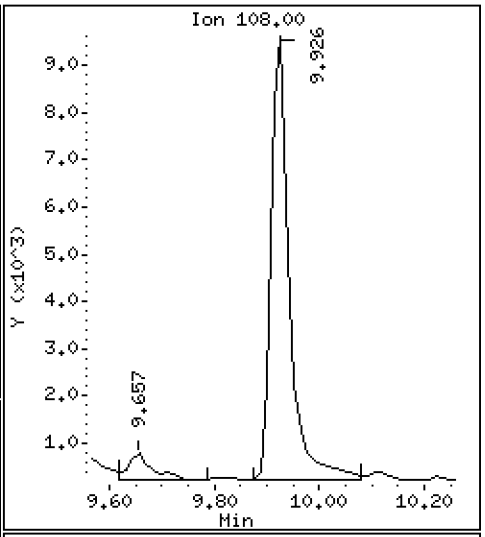
Column phase: ZB-5msi

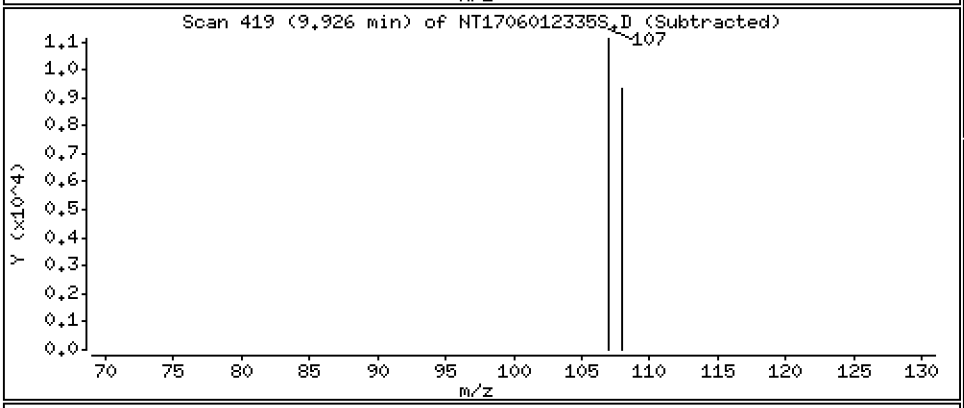
Column diameter: 0.25

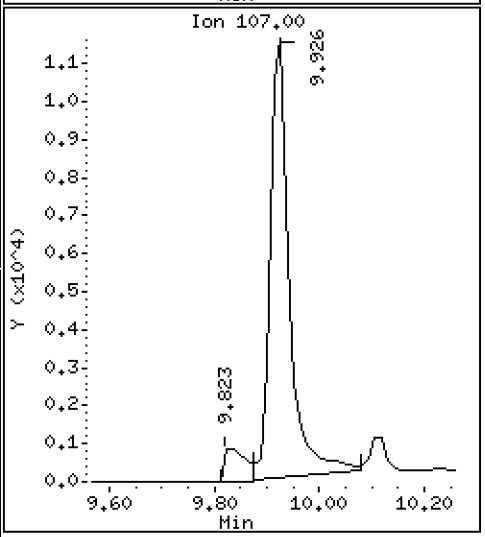
15 4-Methylphenol

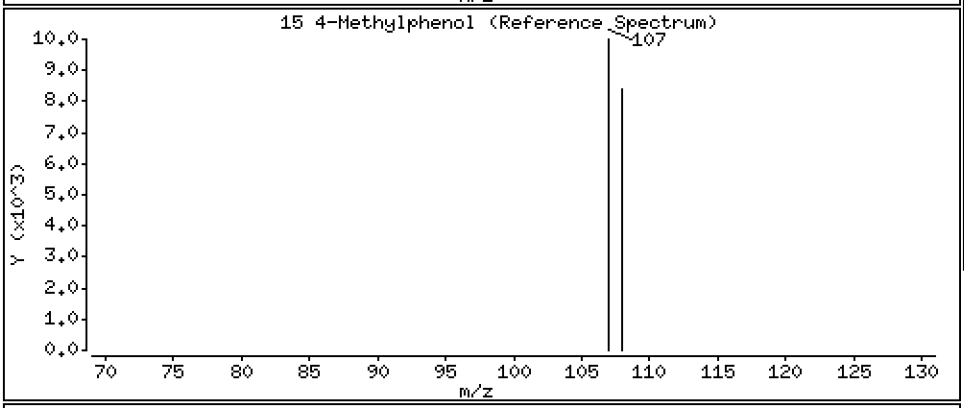
Concentration: 0.3082 ug/mL

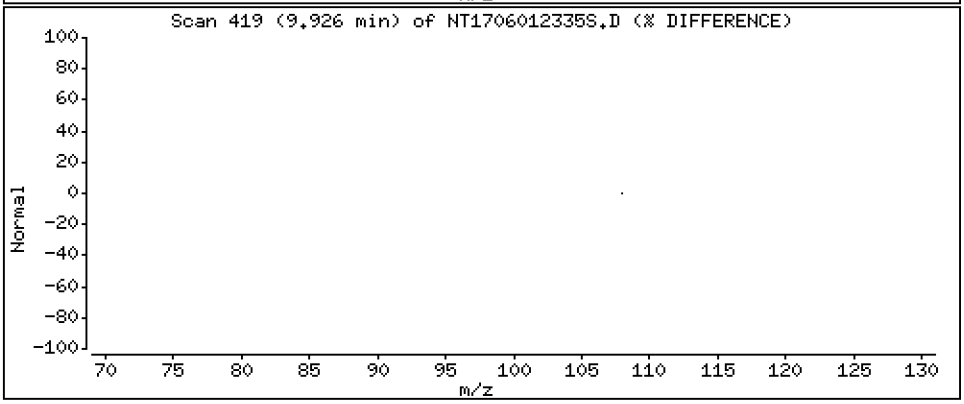












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123355.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

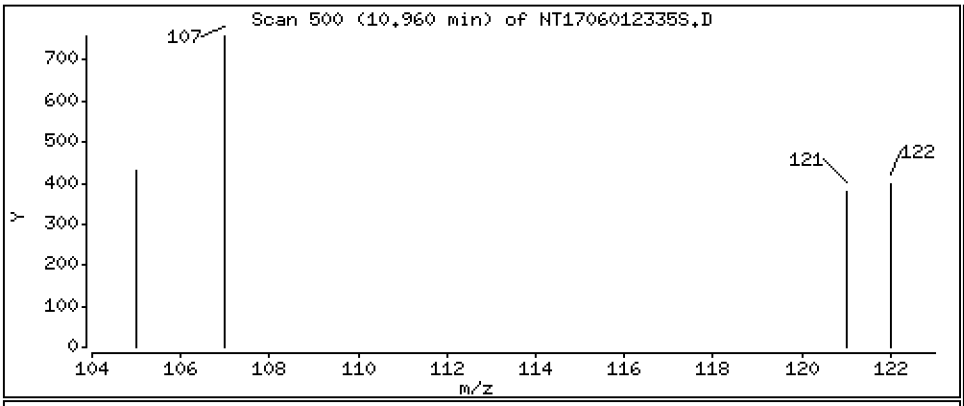
Operator: VTS

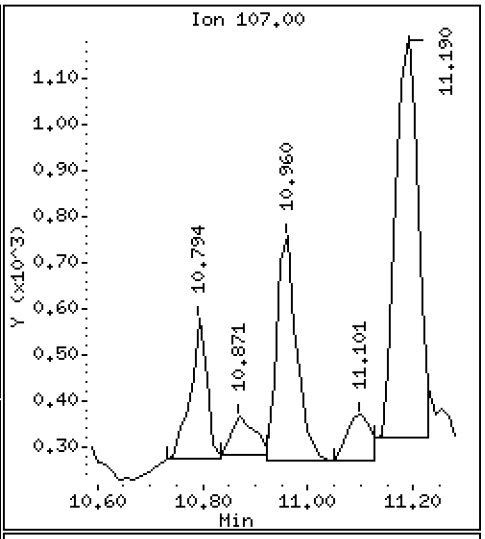
Column phase: ZB-5msi

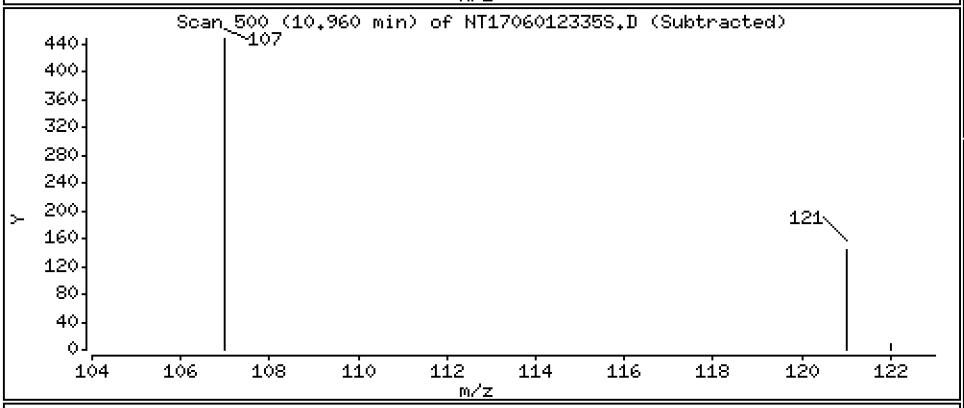
Column diameter: 0.25

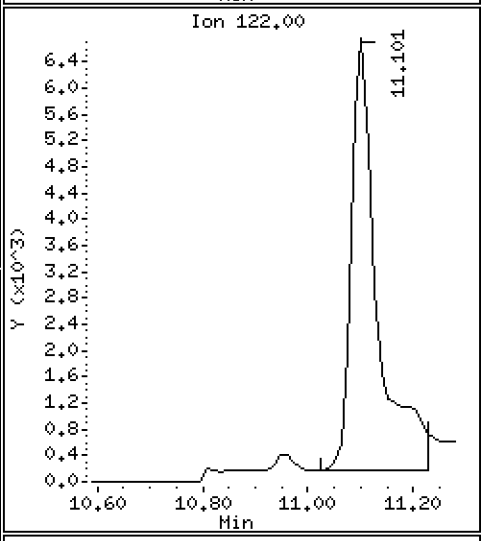
22 2,4-Dimethylphenol

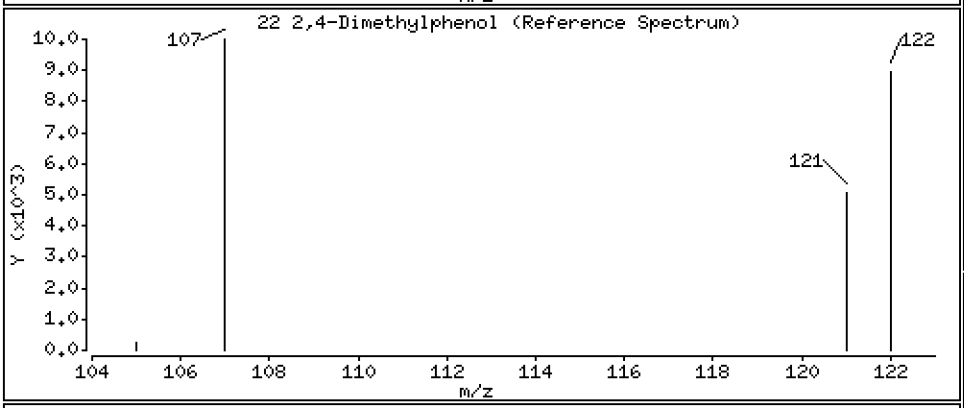
Concentration: 0.01608 ug/mL

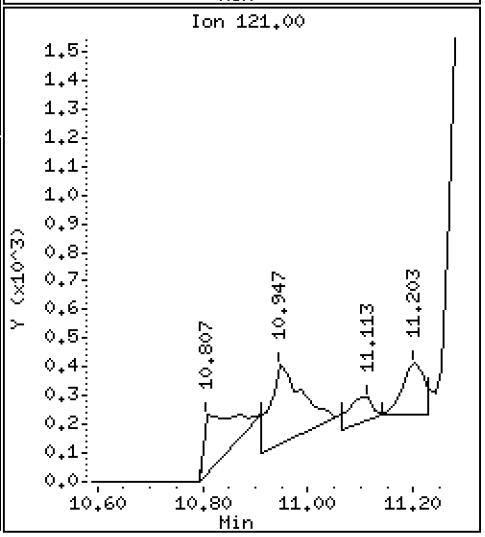


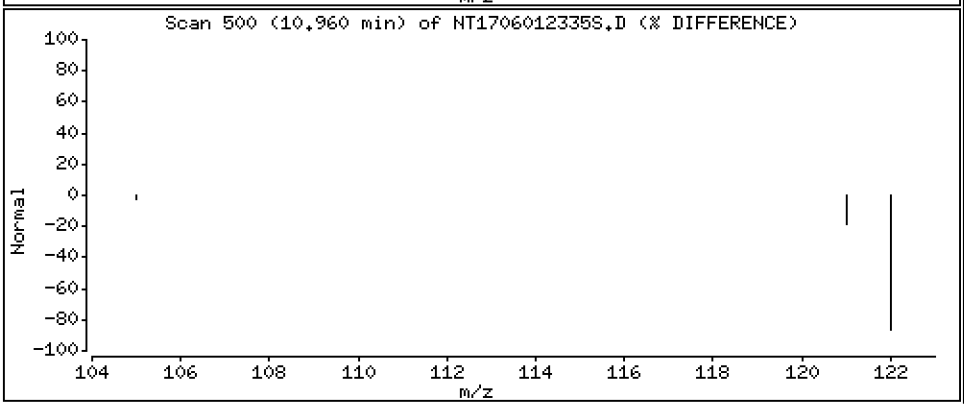












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123355.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

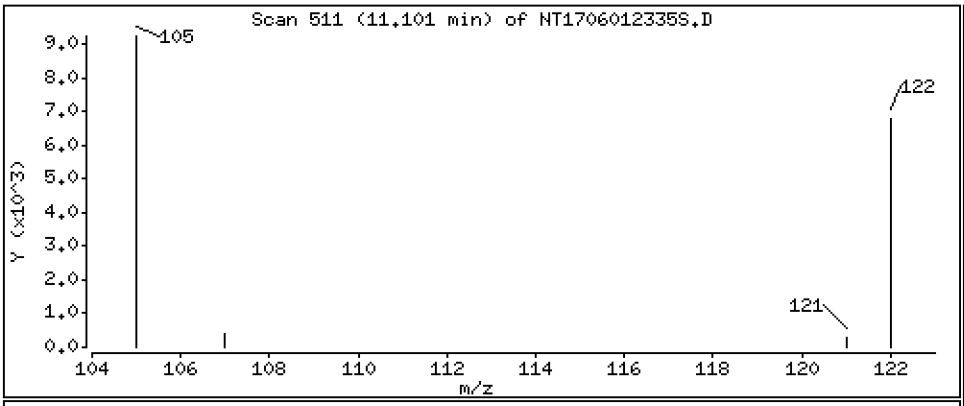
Operator: VTS

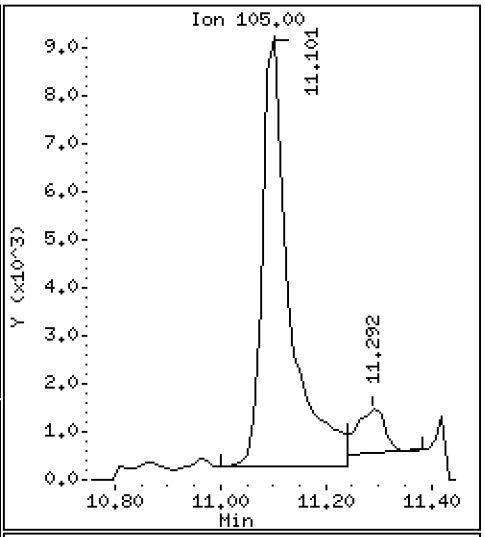
Column phase: ZB-5msi

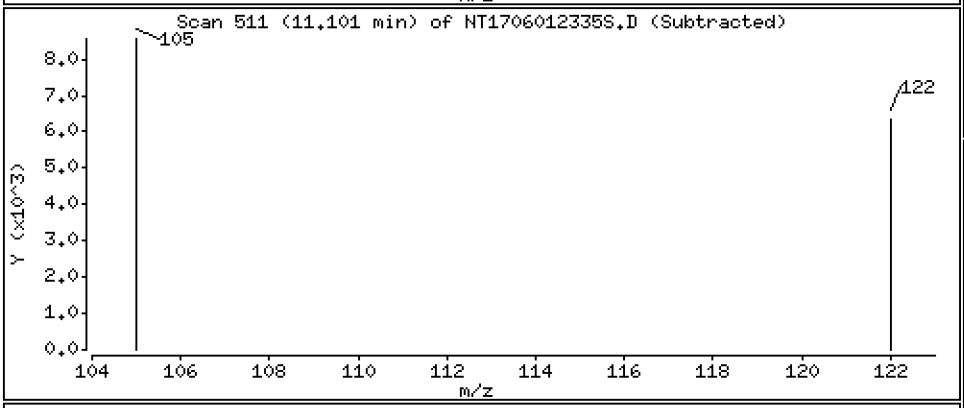
Column diameter: 0.25

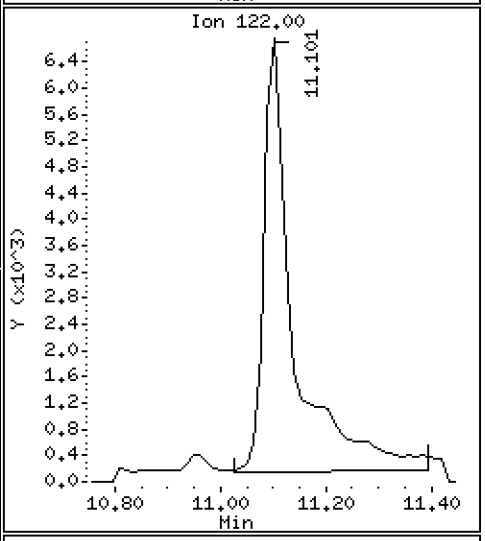
24 Benzoic acid

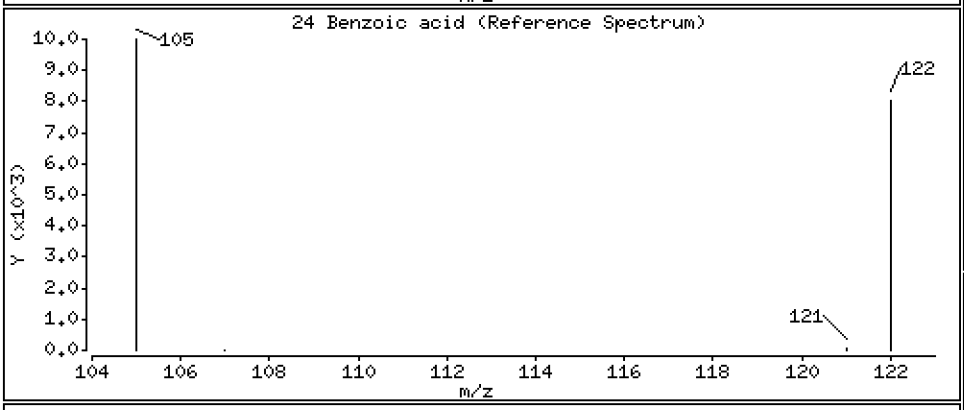
Concentration: 0.6445 ug/mL

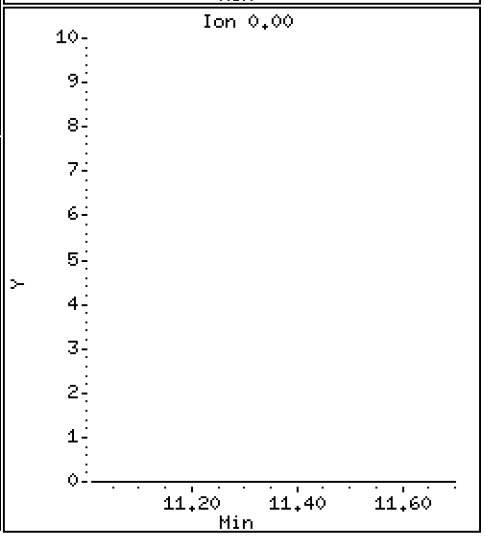


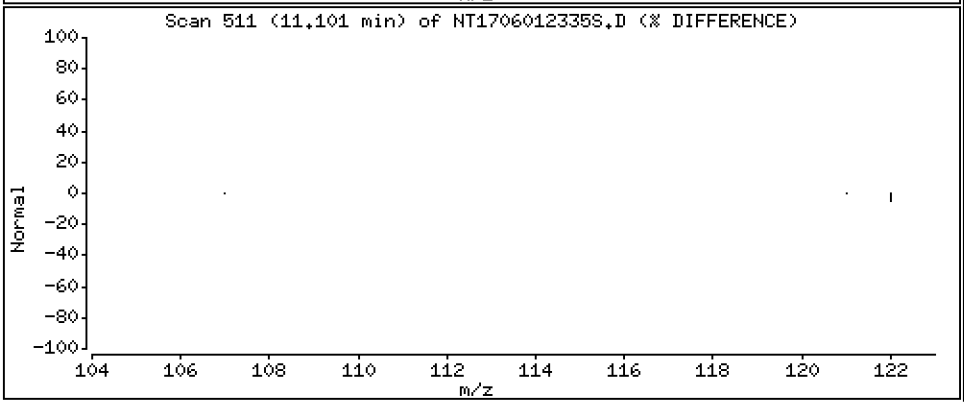












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123355.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

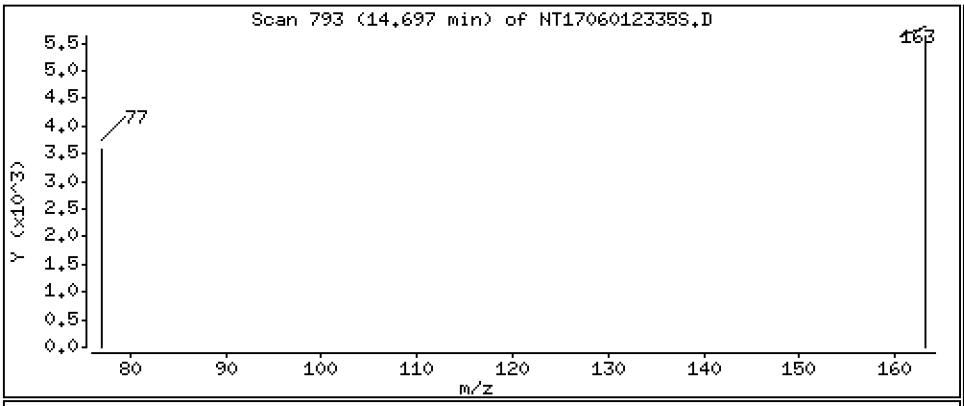
Operator: VTS

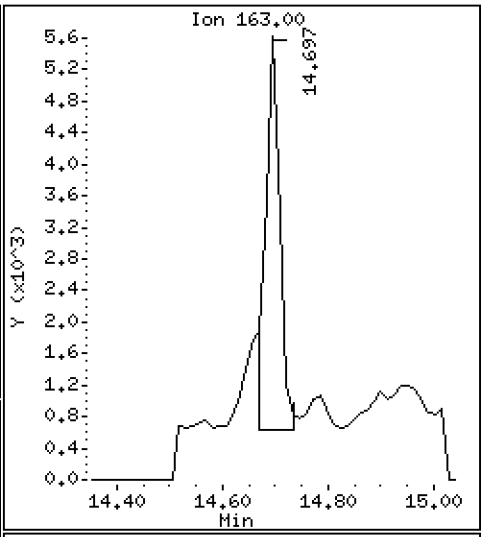
Column phase: ZB-5msi

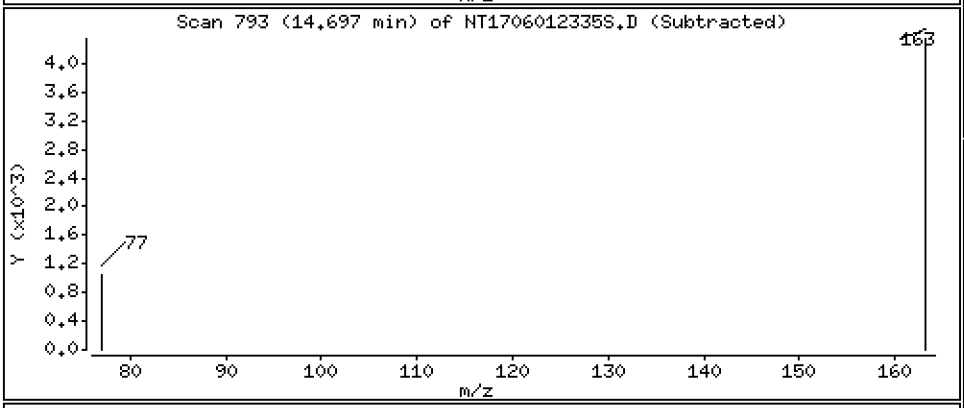
Column diameter: 0.25

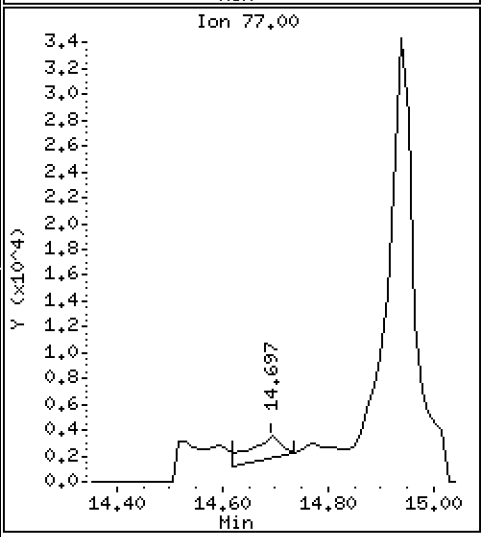
39 Dimethylphthalate

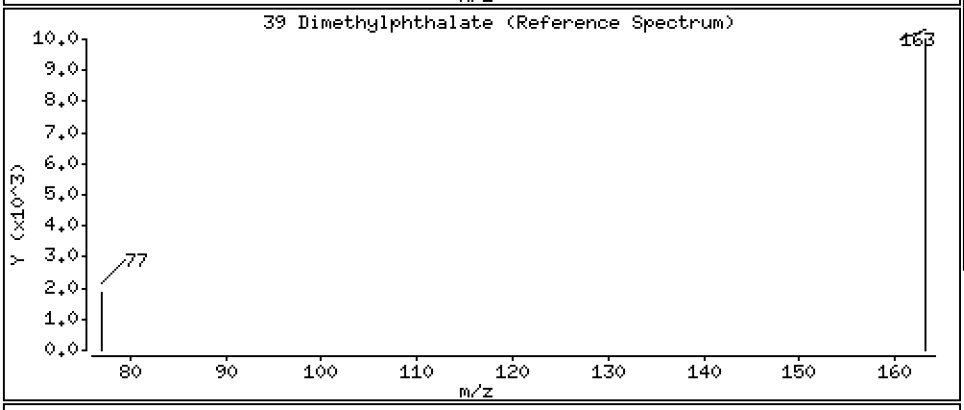
Concentration: 0.05472 ug/mL

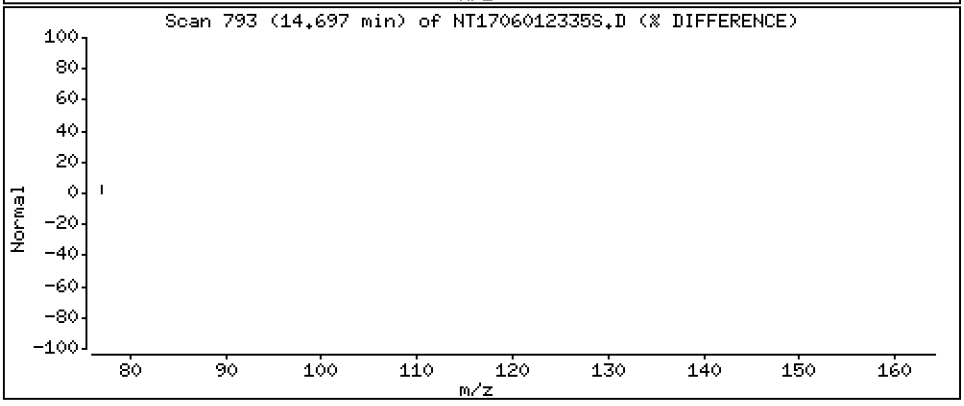












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123355.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

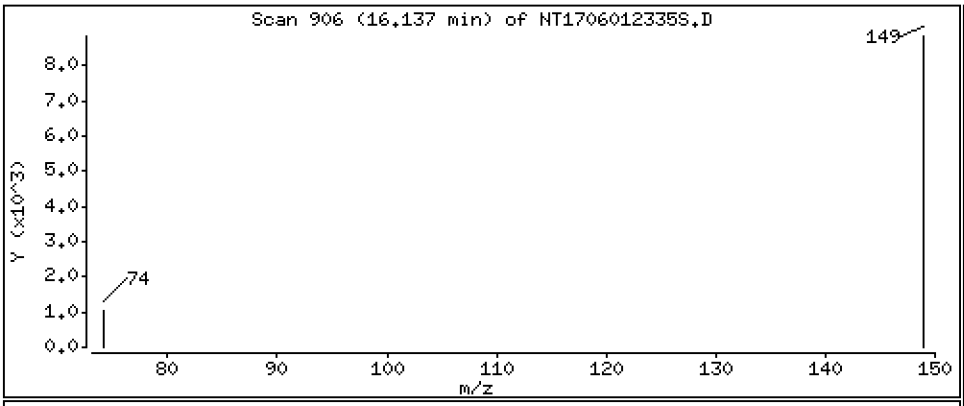
Operator: VTS

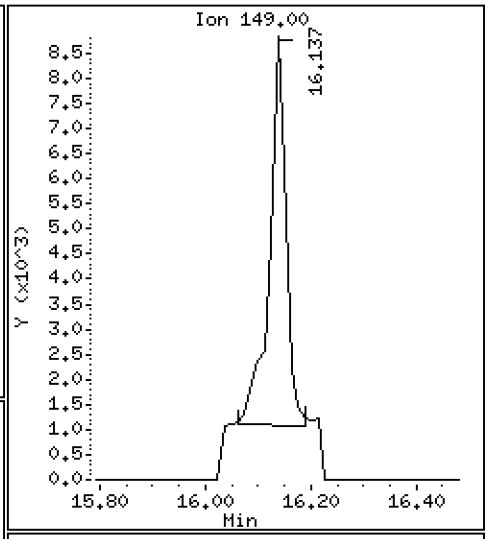
Column phase: ZB-5msi

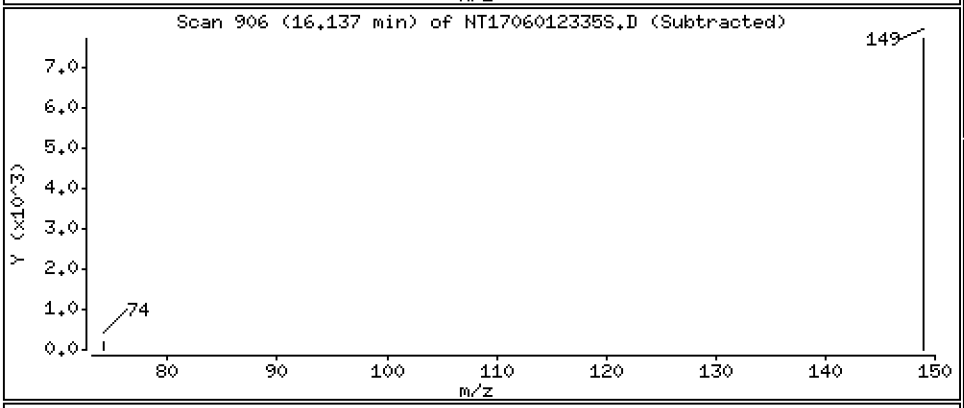
Column diameter: 0.25

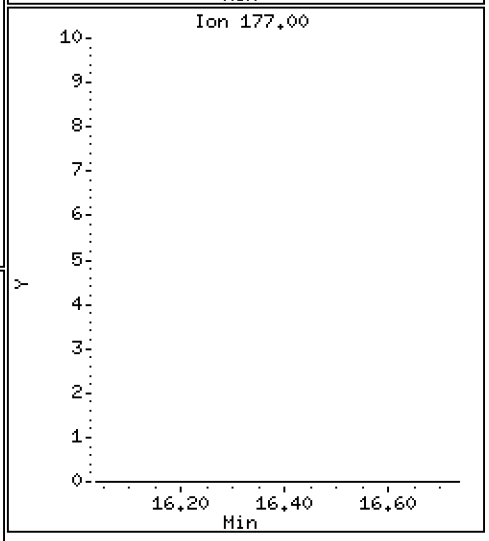
50 Diethylphthalate

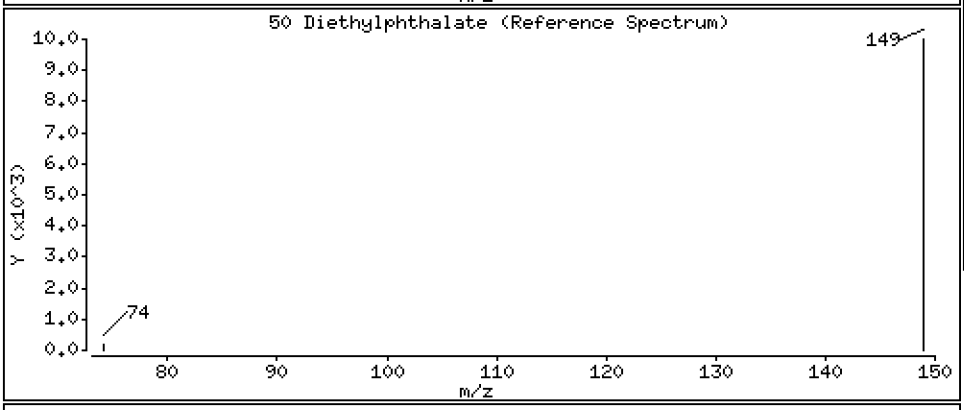
Concentration: 0.1045 ug/mL

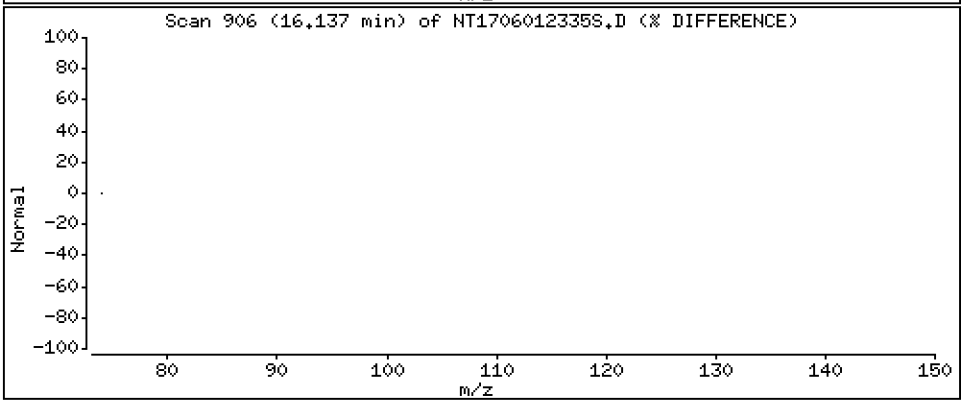












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

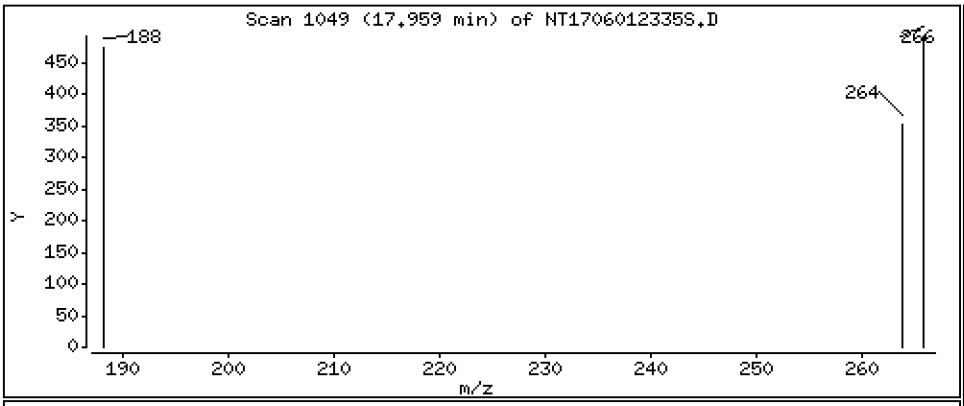
Operator: VTS

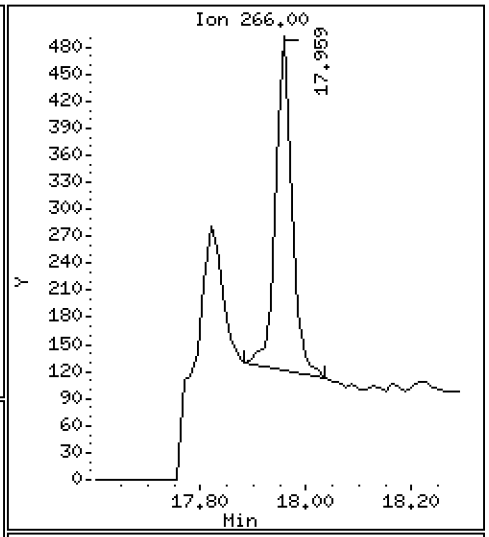
Column phase: ZB-5msi

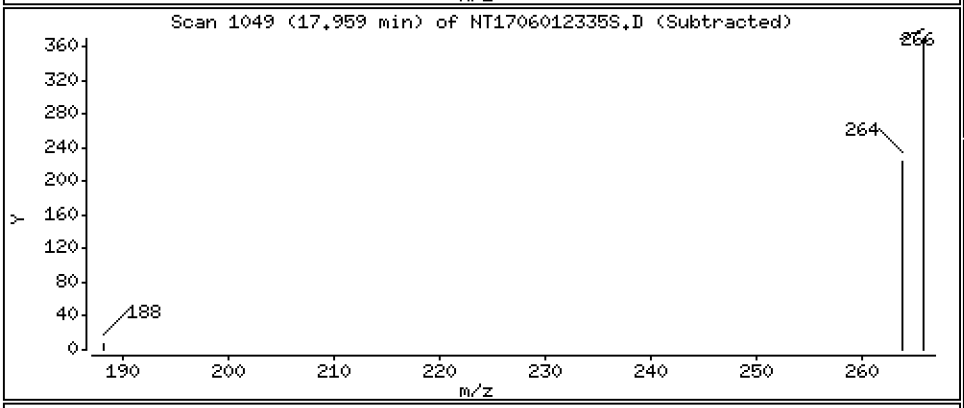
Column diameter: 0.25

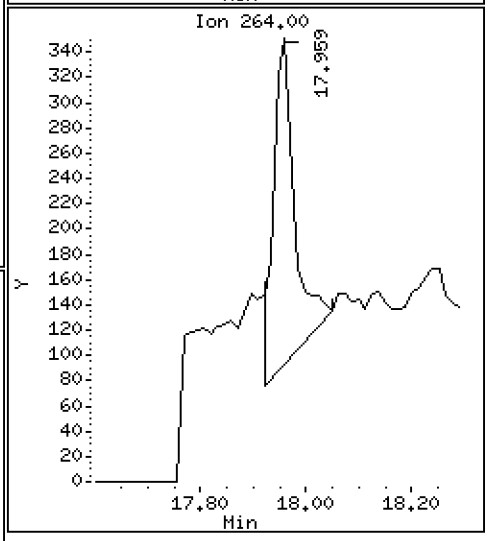
58 Pentachlorophenol

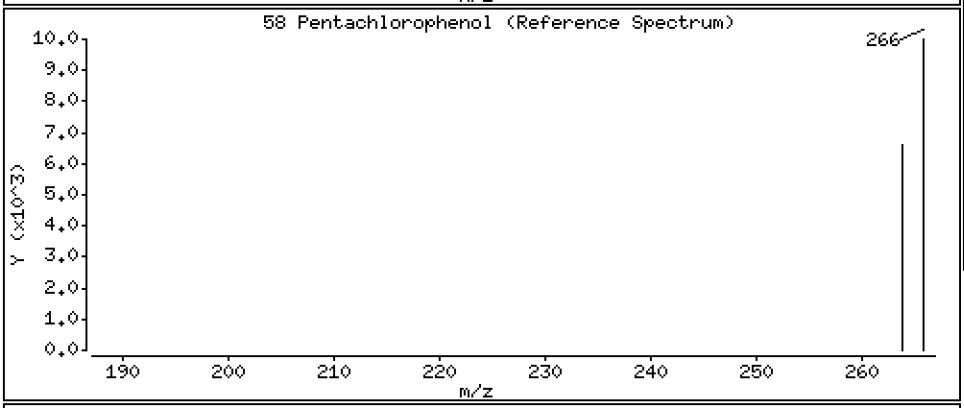
Concentration: 0.03917 ug/mL

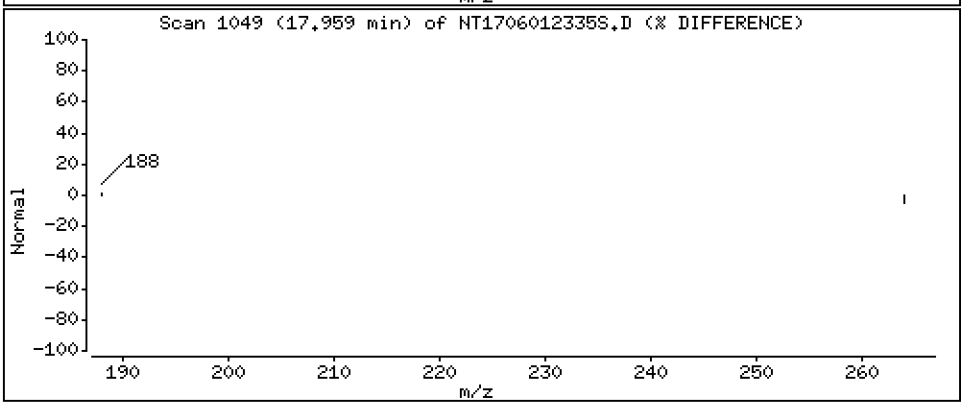












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

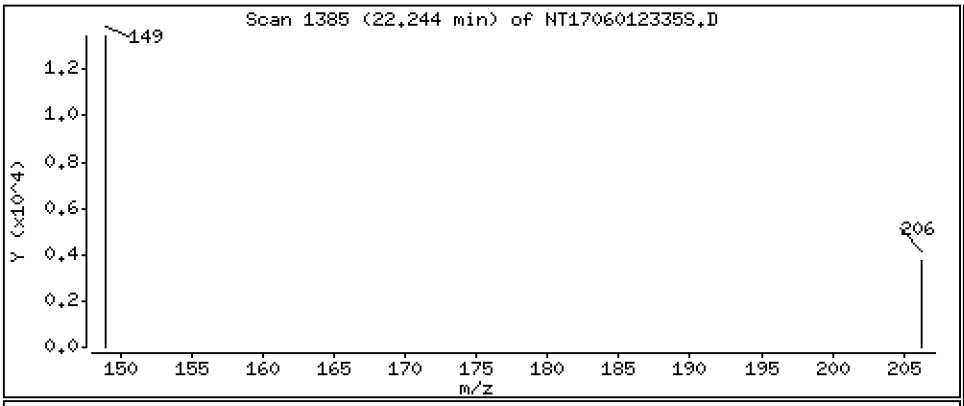
Operator: VTS

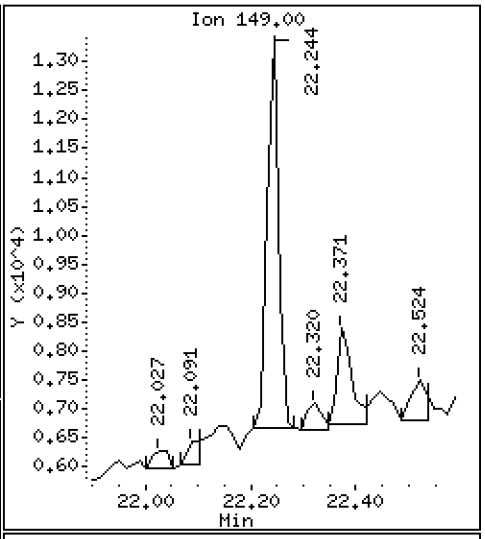
Column phase: ZB-5msi

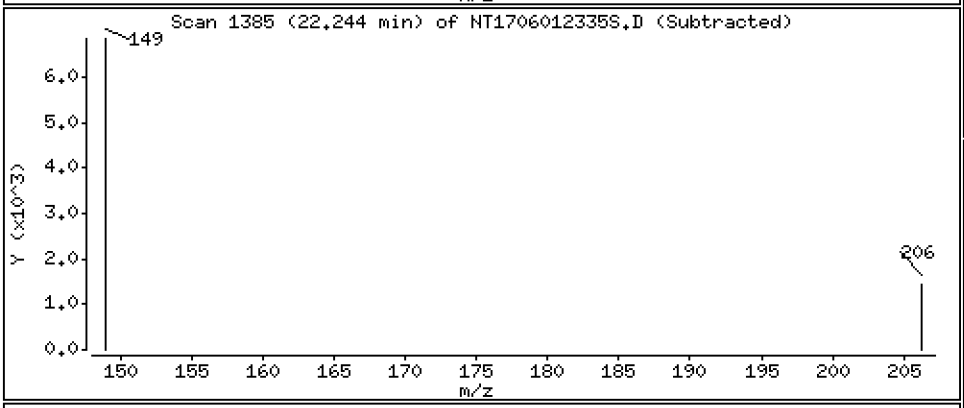
Column diameter: 0.25

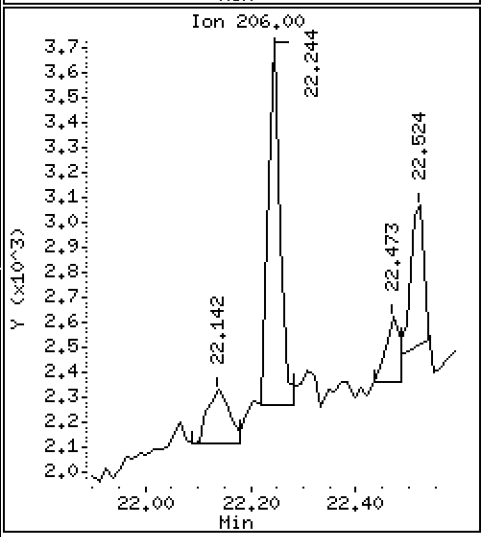
67 Butylbenzylphthalate

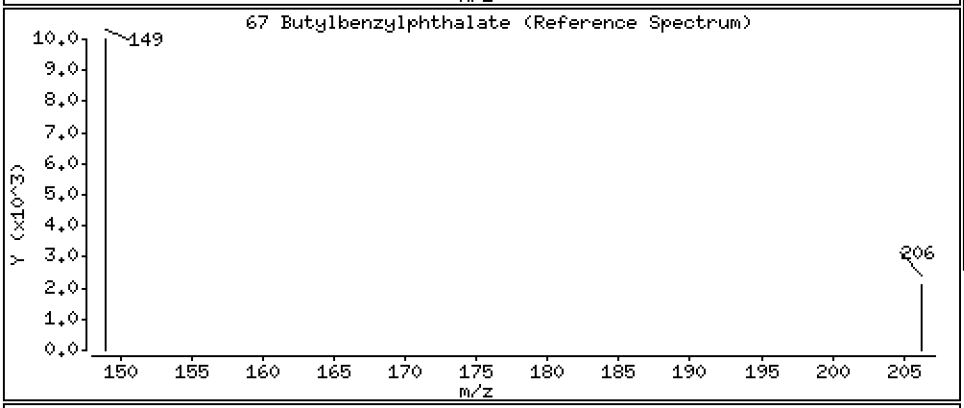
Concentration: 0.1128 ug/mL

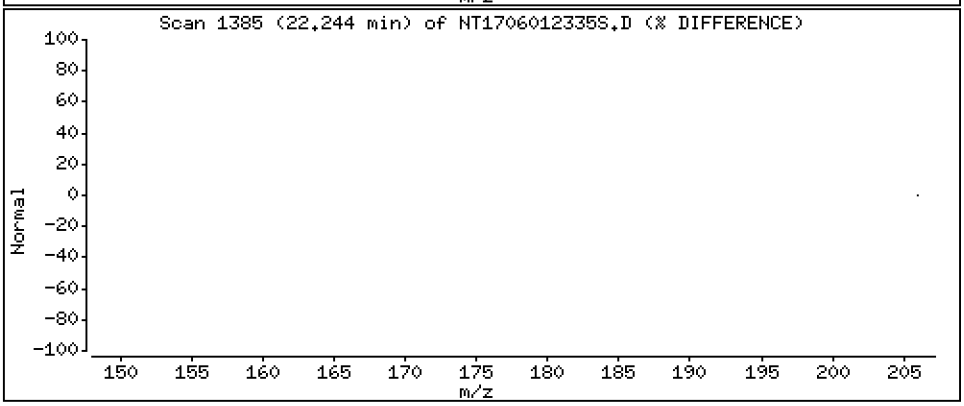












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D

Date : 02-JUN-2023 09:09

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-05

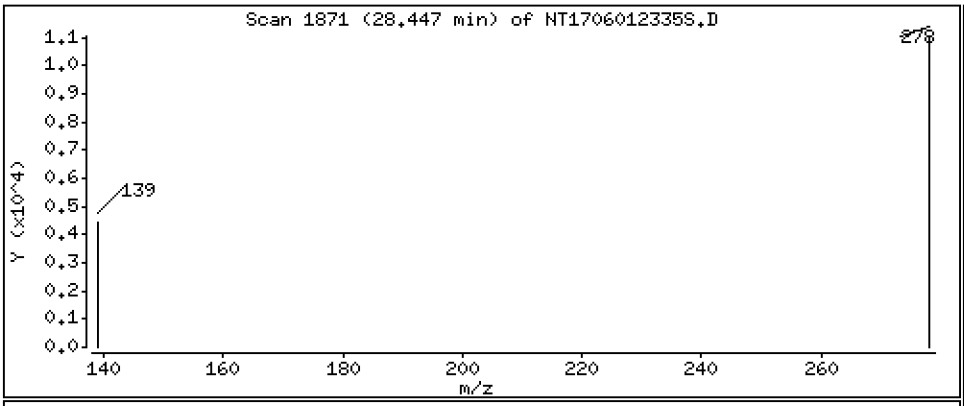
Operator: VTS

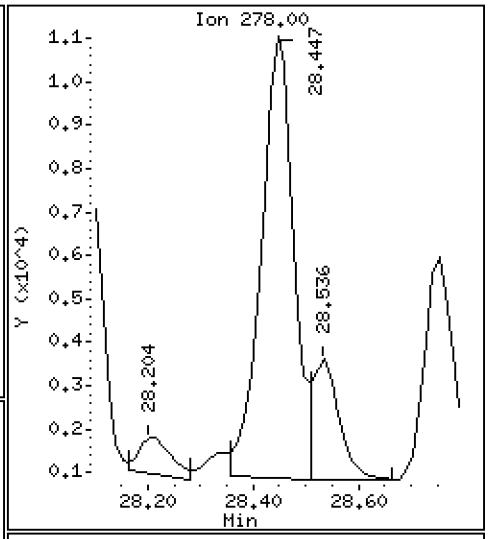
Column phase: ZB-5msi

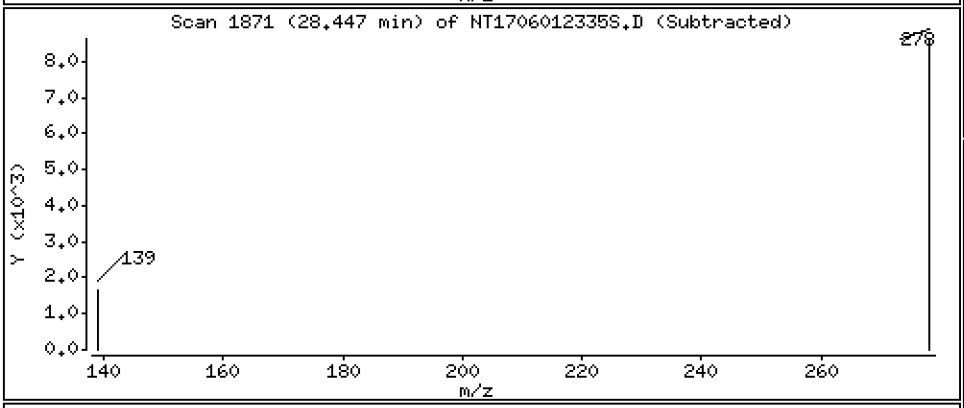
Column diameter: 0.25

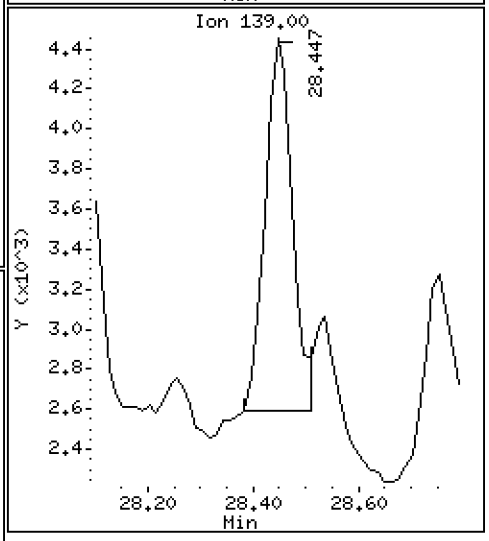
79 Dibenzo(a,h)anthracene

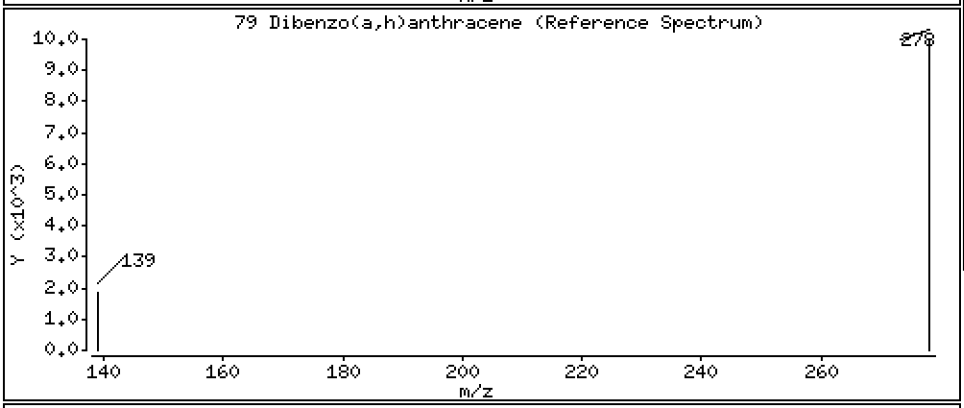
Concentration: 0.3008 ug/mL

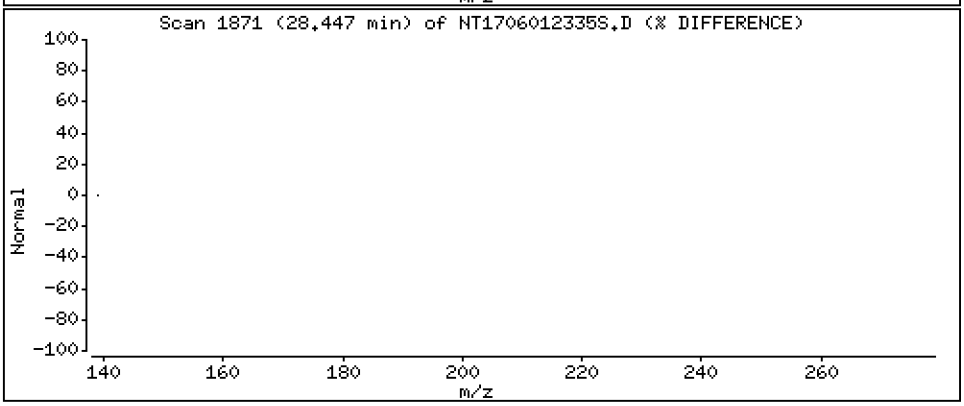












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012335S.D
Lab Smp Id: 23E0009-05
Inj Date : 02-JUN-2023 09:09
Operator : VTS Inst ID: nt17.i
Smp Info : 23E0009-05
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 30
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.954	(0.762)	151586	2.16220	2.162(R)
	3 Phenol	94	8.547	8.547	(0.934)	466972	4.47022	4.470
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	586	0.00626	0.006258
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	231789	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	1800	0.01973	0.01973
	11 Benzyl alcohol	79	9.452	9.452	(1.034)	50548	0.84920	0.8492(M)
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	695	0.00777	0.007772
	13 2-Methylphenol	108	9.657	9.644	(1.056)	1618	0.02235	0.02235(M)
	15 4-Methylphenol	108	9.925	9.912	(1.085)	22547	0.30820	0.3082
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.960	10.934	(0.945)	1299	0.01608	0.01608
	24 Benzoic acid	105	11.100	11.100	(0.957)	32437	0.64449	0.6445
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	839861	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	14.696	14.696	(0.967)	9665	0.05472	0.05472(M)
*	42 Acenaphthene-d10	162	15.194	15.194	(1.000)	480947	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.062)	16765	0.10452	0.1045(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	17.958	17.946	(0.986)	798	0.03917	0.03917(M)
*	59 Phenanthrene-d10	188	18.213	18.201	(1.000)	757288	4.00000	
$	66 Terphenyl-d14	244	21.337	21.325	(0.919)	365556	4.37025	4.370(R)
	67 Butylbenzylphthalate	149	22.243	22.243	(0.958)	10257	0.11284	0.1128
*	69 Chrysene-d12	240	23.225	23.213	(1.000)	440825	4.00000	
*	77 Perylene-d12	264	25.815	25.802	(1.000)	534485	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.446	28.446	(1.102)	45347	0.30080	0.3008
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012335S.D Calibration Time: 00:29
Lab Smp Id: 23E0009-05
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	231789	-12.71
27 Naphthalene-d8	874121	437061	1748242	839861	-3.92
42 Acenaphthene-d10	524478	262239	1048956	480947	-8.30
59 Phenanthrene-d10	807440	403720	1614880	757288	-6.21
69 Chrysene-d12	527364	263682	1054728	440825	-16.41
77 Perylene-d12	455527	227764	911054	534485	17.33

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.21	0.07
69 Chrysene-d12	23.21	22.71	23.71	23.23	0.05
77 Perylene-d12	25.80	25.30	26.30	25.82	0.05

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

REVIEW SUMMARY FOR FILE - NT1706012335S.D

Lab ID: 23E0009-05
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 09:09

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: SIM.b/NT1706012321S.D

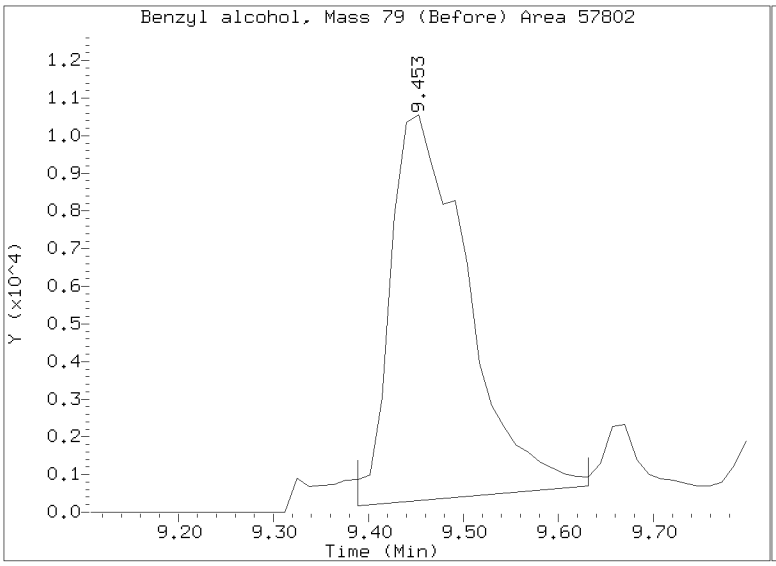
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

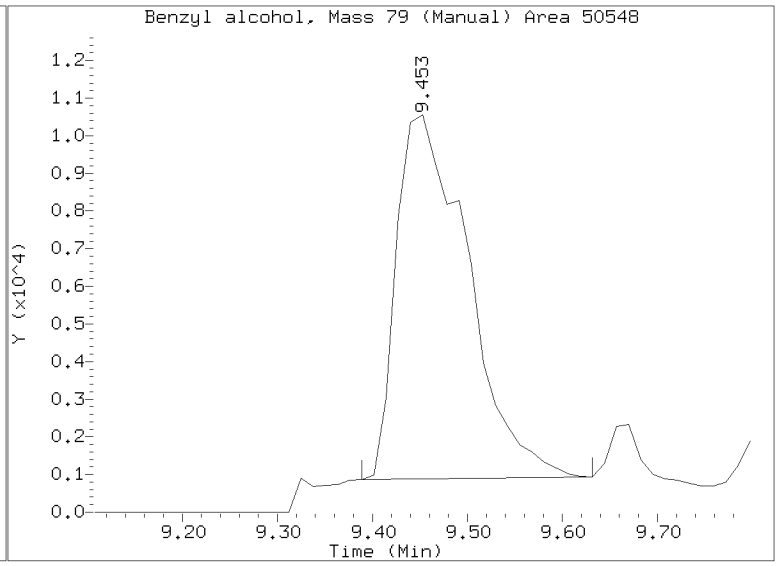
Exception: 1,2,4-Trichlorobenzene 0.0010

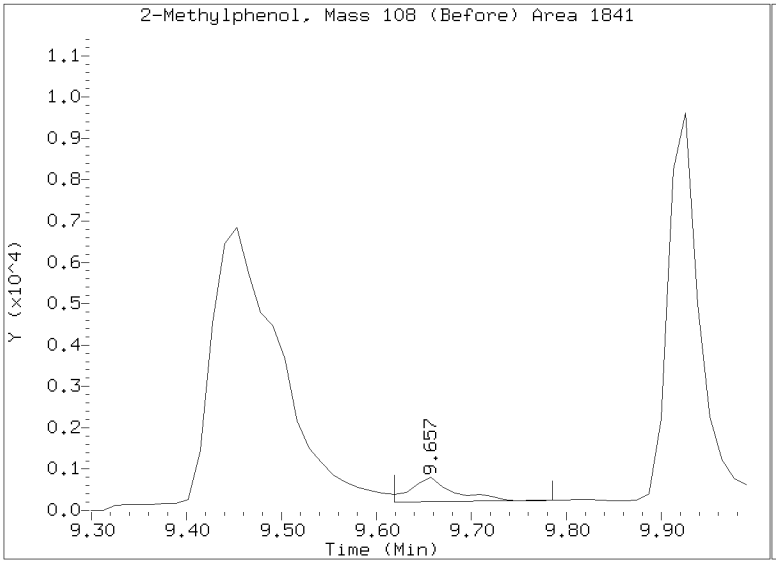
* Only compounds listed in the work order have been verified by the analyst *

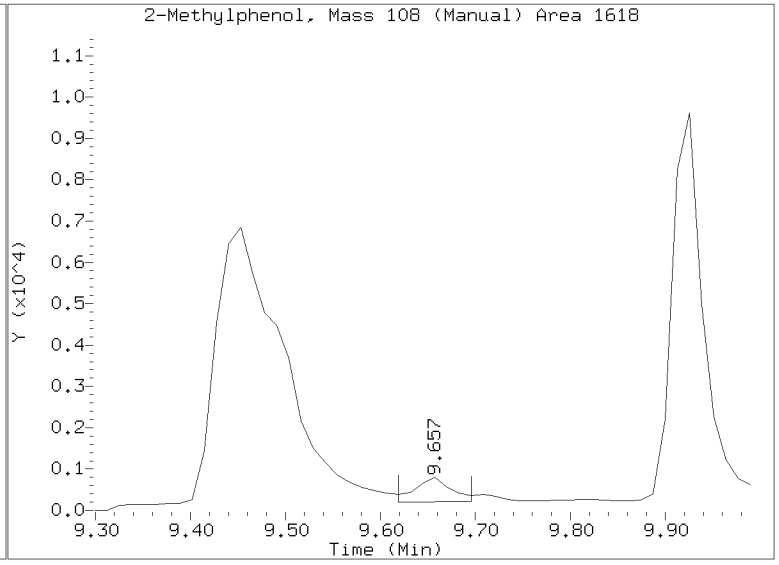
Quant Ion Manual Peak Adjustment Report

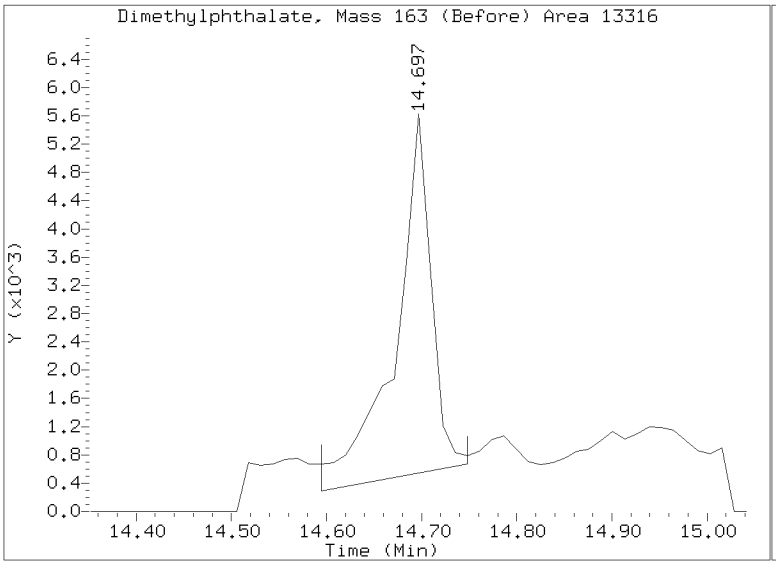
Datafile: //target/share/chem3/nt17.i/20230601.b/SIM.b/NT1706012335S.D
Injection Date: 02-JUN-2023 09:09
Lab ID:23E0009-05 Client ID:
Report Date: 06/06/2023 11:44

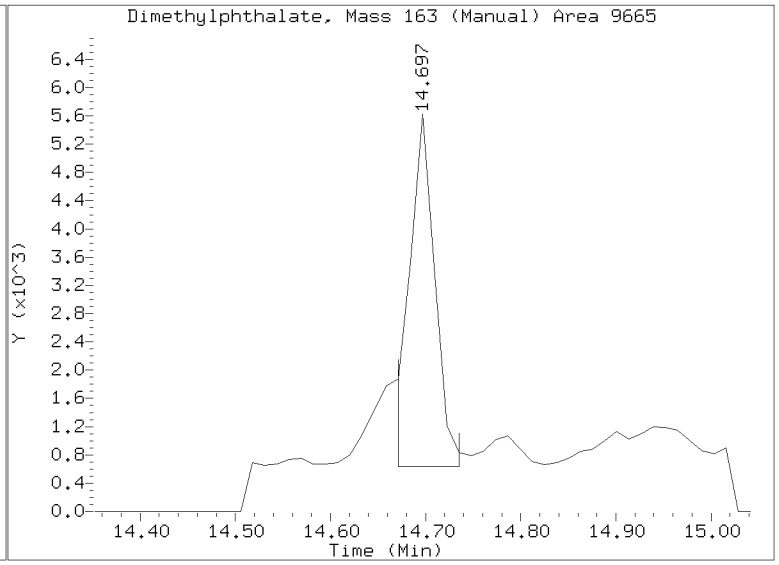






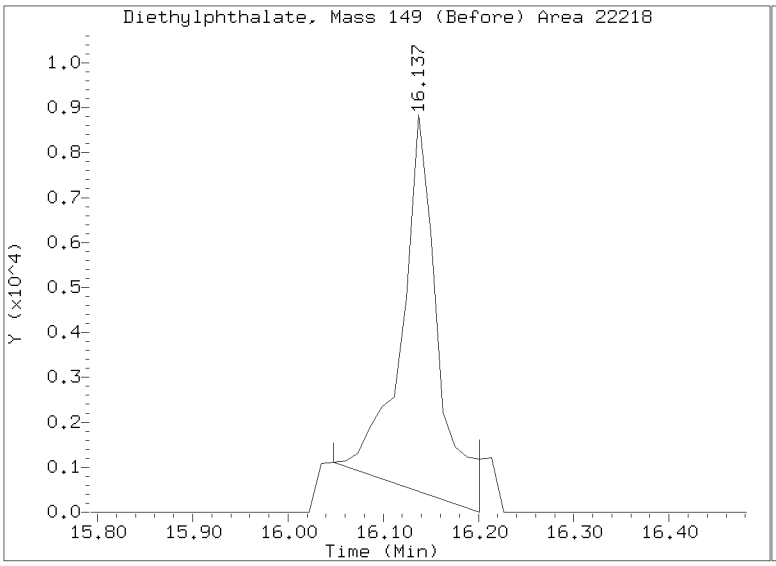


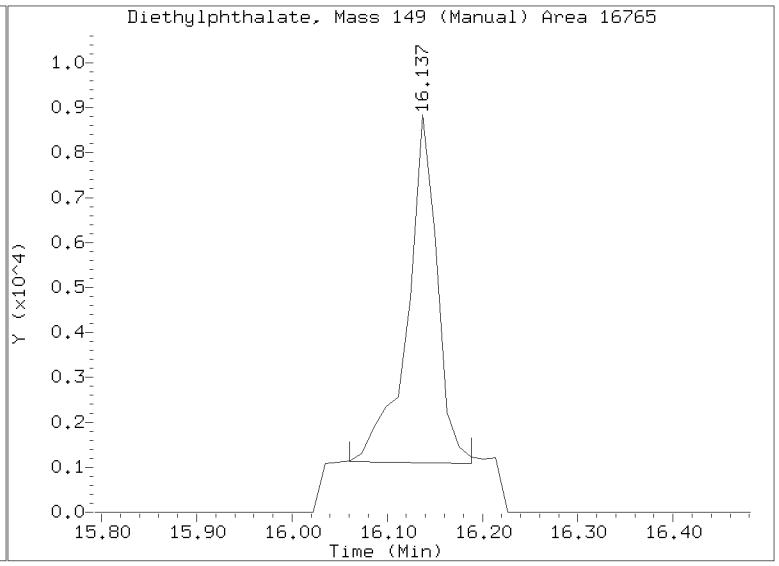


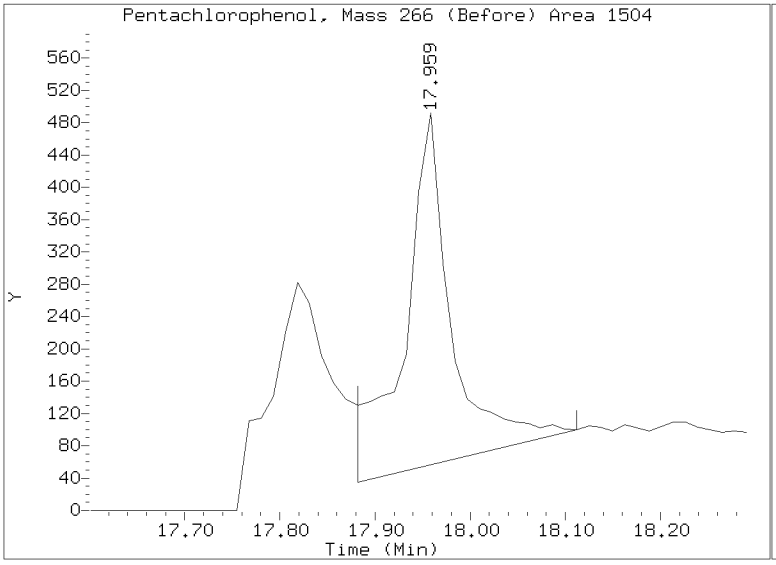


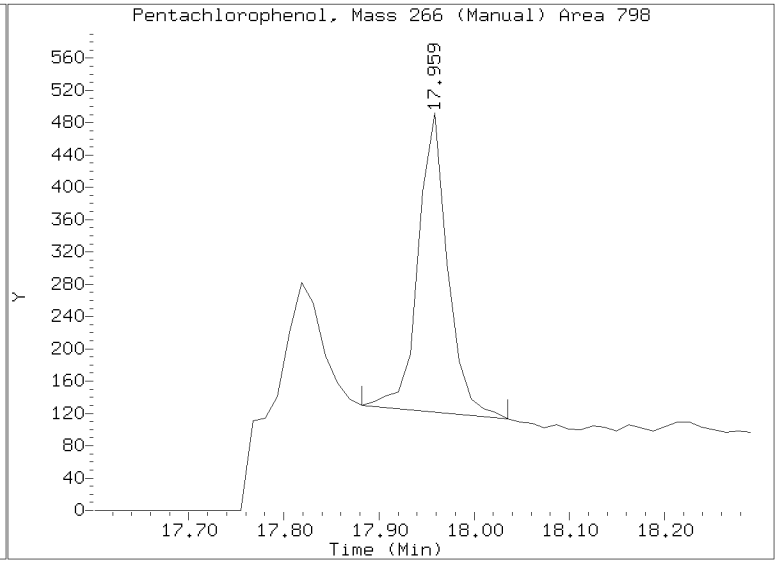
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/SIM.b/NT1706012335S.D
Injection Date: 02-JUN-2023 09:09
Lab ID:23E0009-05 Client ID:
Report Date: 06/06/2023 11:44









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1820

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-07 A	SDG:	23E0009
Sampled:	04/29/23 14:00	Prepared:	05/05/23 11:23	File ID:	NT1706012336S.D
% Solids:	53.18	Preparation:	EPA 3546 (Microwave)	Analyzed:	06/02/23 09:47
Batch:	BLE0148	Sequence:	SLF0037	Initial/Final:	18.85 g Wet / 1 mL
Instrument:	NT17	Column:	ZB-5MS	Calibration:	GE00070
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.4	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	103		2.5	20.0
65-85-0	Benzoic acid	1	103		13.4	99.8
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	6.8	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.17	275	36.8	27 - 120	
p-Terphenyl-d14	498.78	450	90.2	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123365.D

Date : 02-JUN-2023 09:47

Client ID:

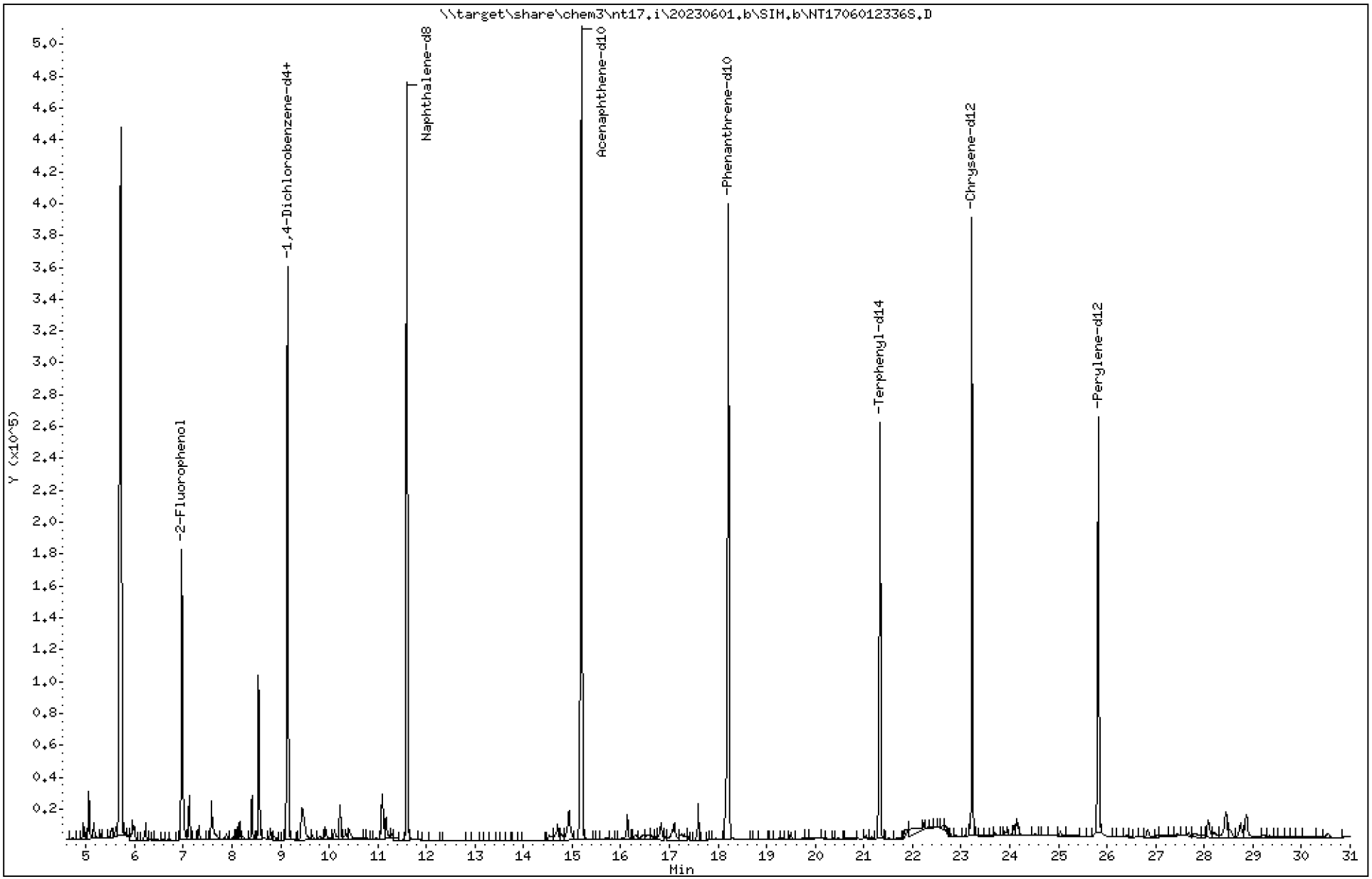
Instrument: nt17.i

Sample Info: 23E0009-07

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

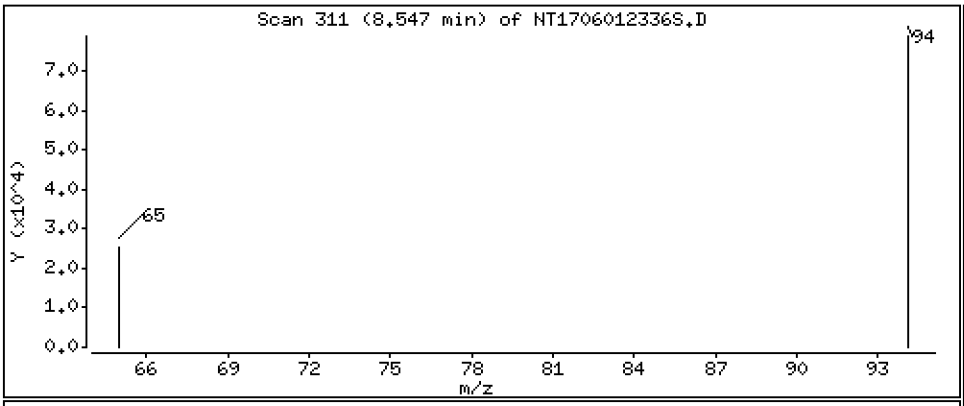
Operator: VTS

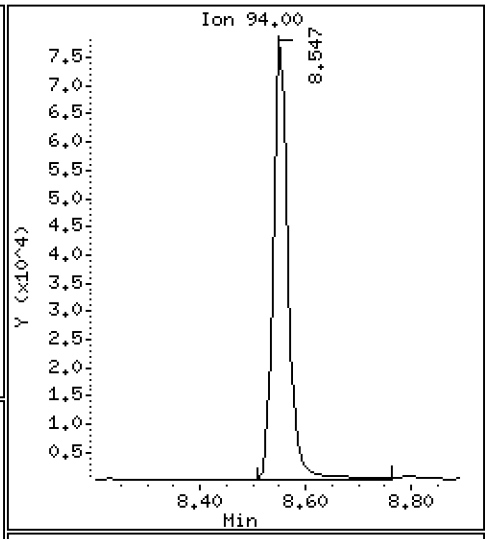
Column phase: ZB-5msi

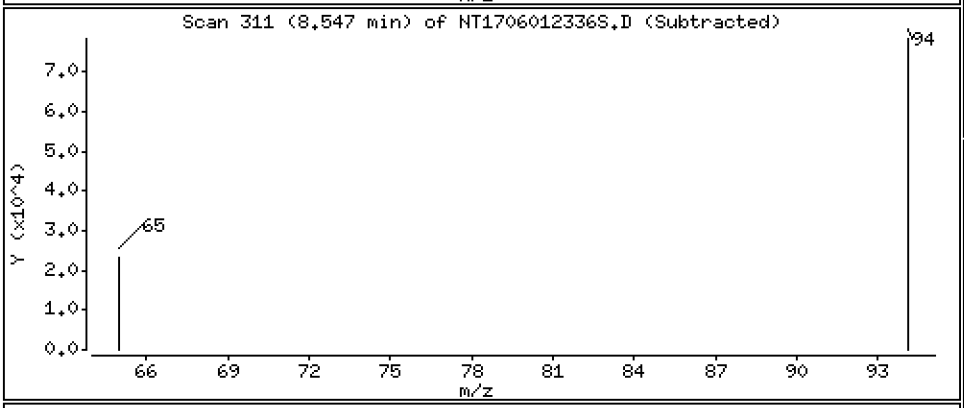
Column diameter: 0.25

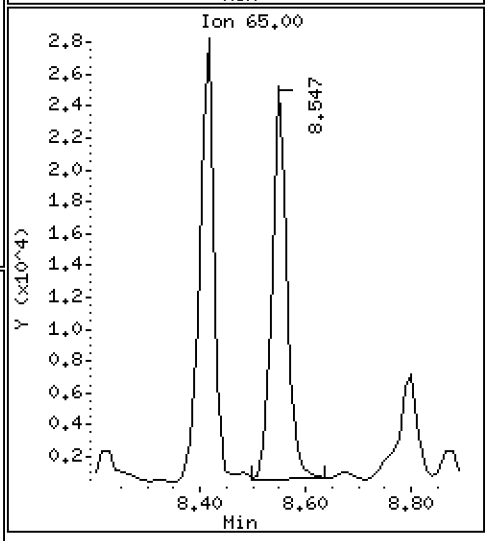
3 Phenol

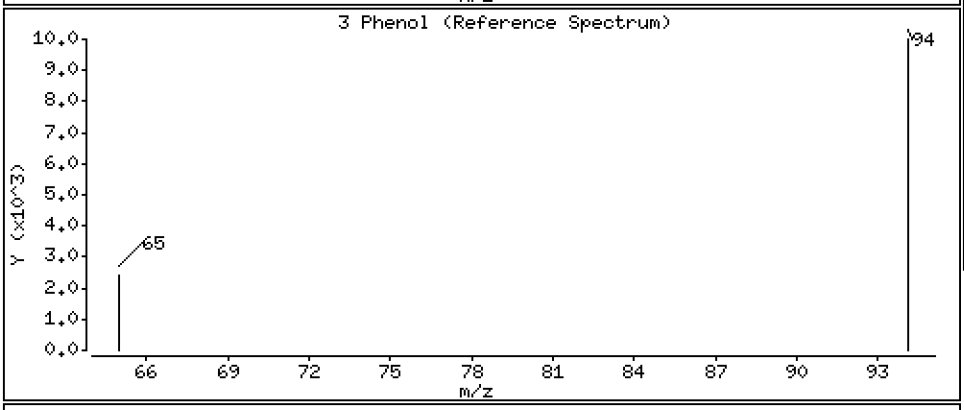
Concentration: 1.472 ug/mL

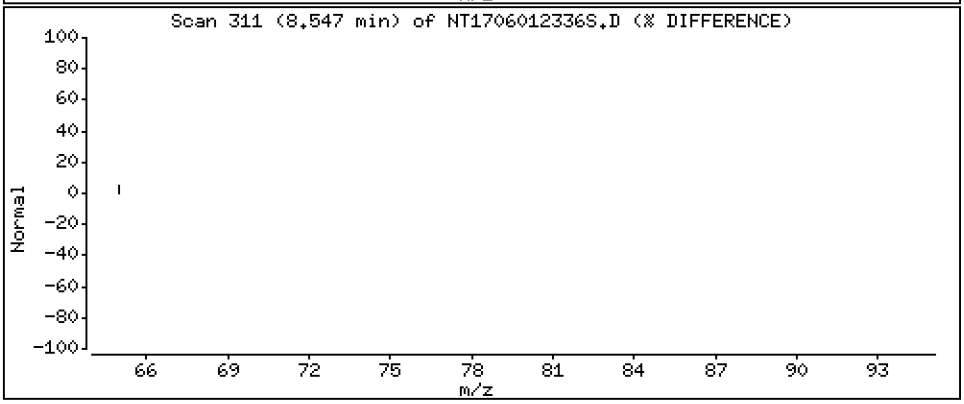












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

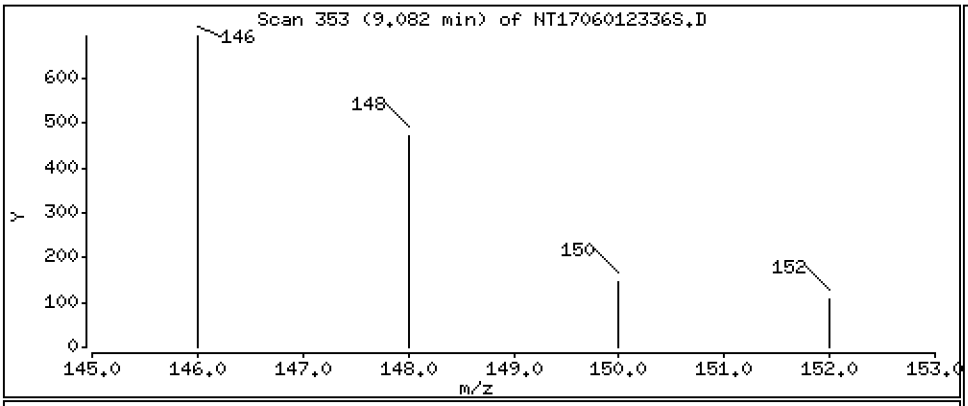
Operator: VTS

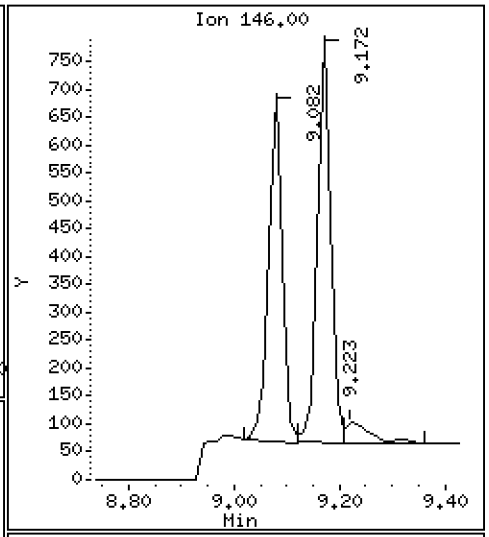
Column phase: ZB-5msi

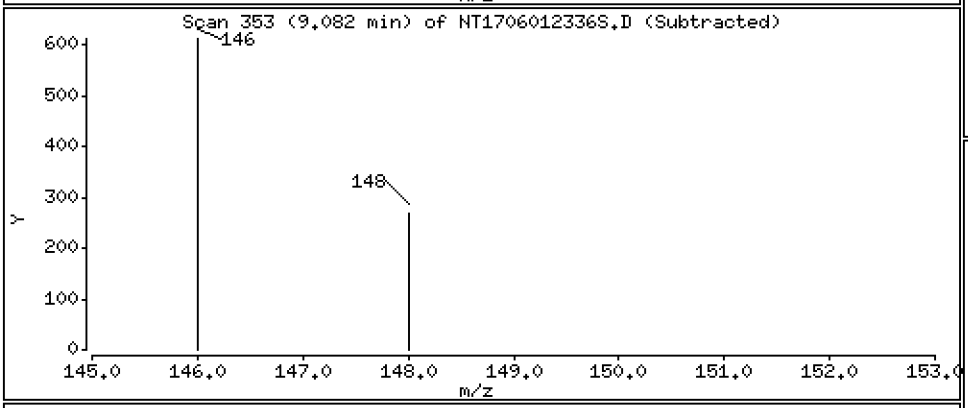
Column diameter: 0.25

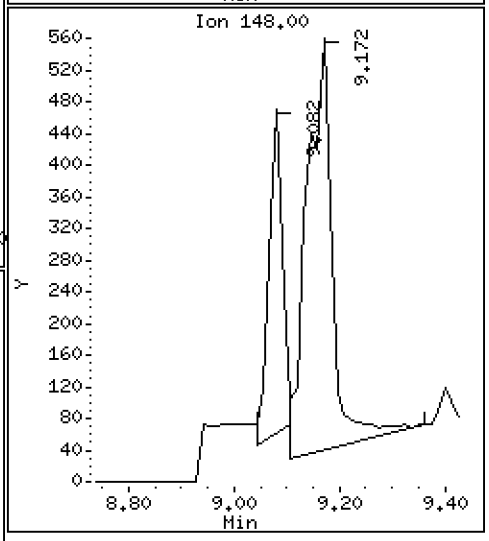
7 1,3-Dichlorobenzene

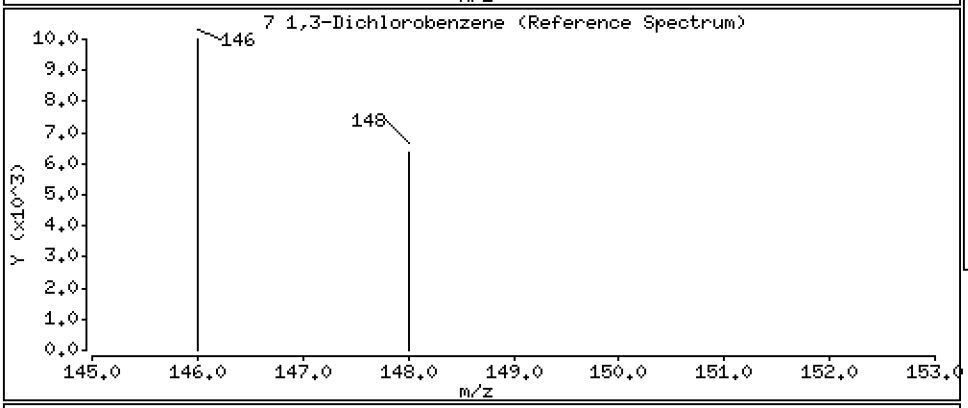
Concentration: 0.01186 ug/mL

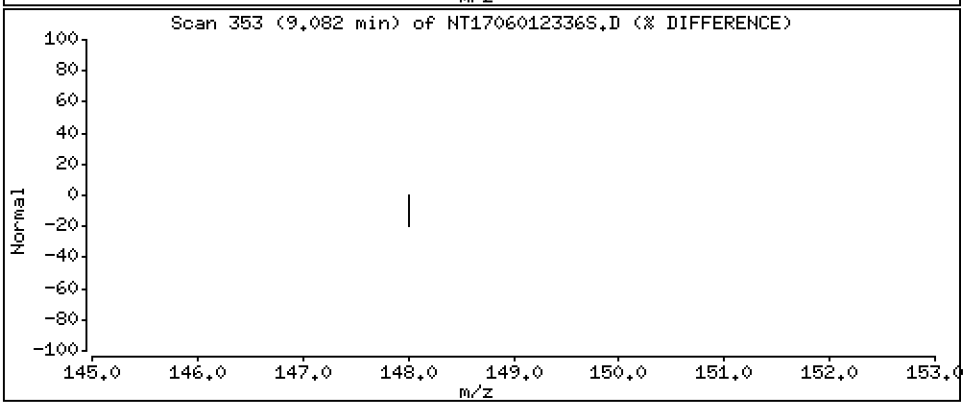












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

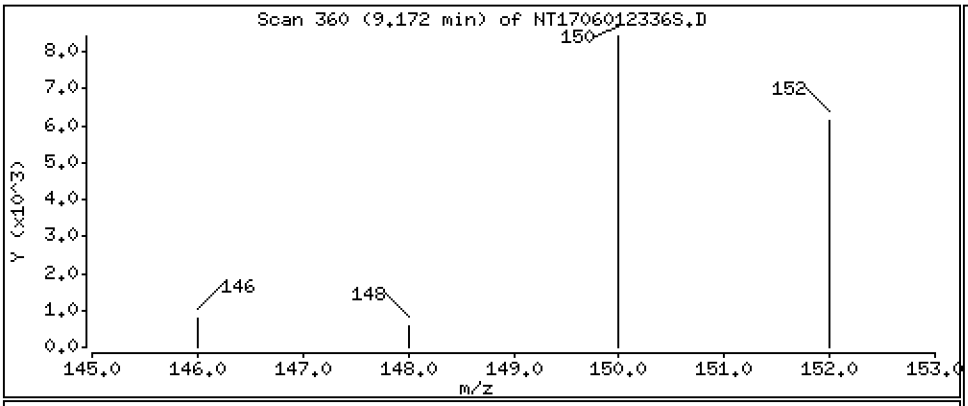
Operator: VTS

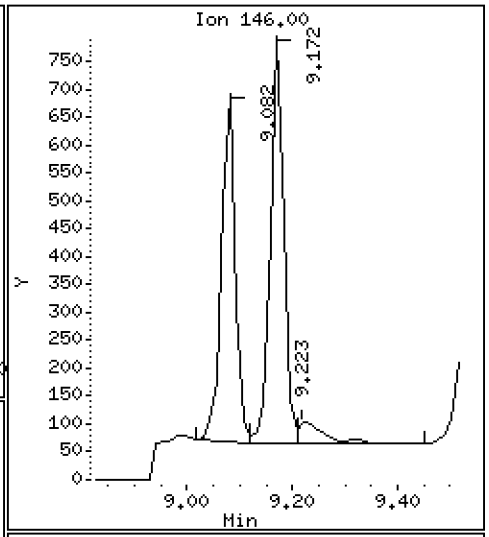
Column phase: ZB-5msi

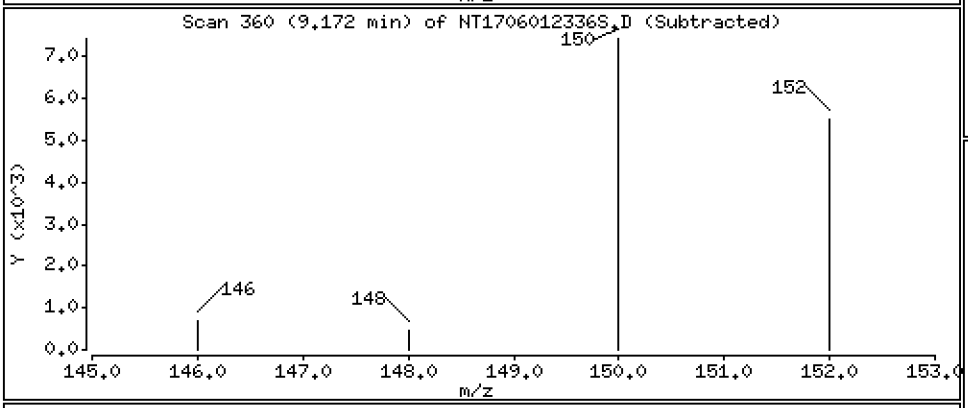
Column diameter: 0.25

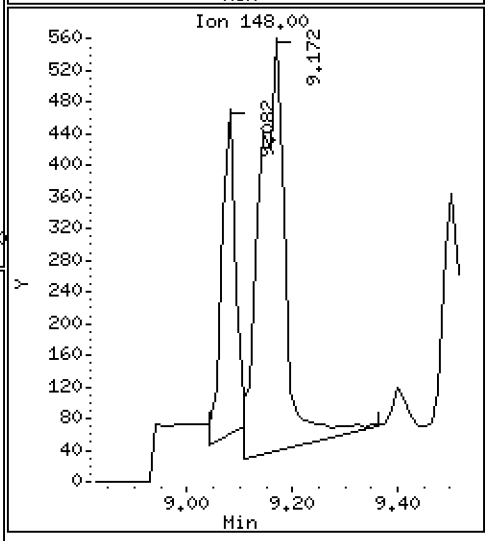
9 1,4-Dichlorobenzene

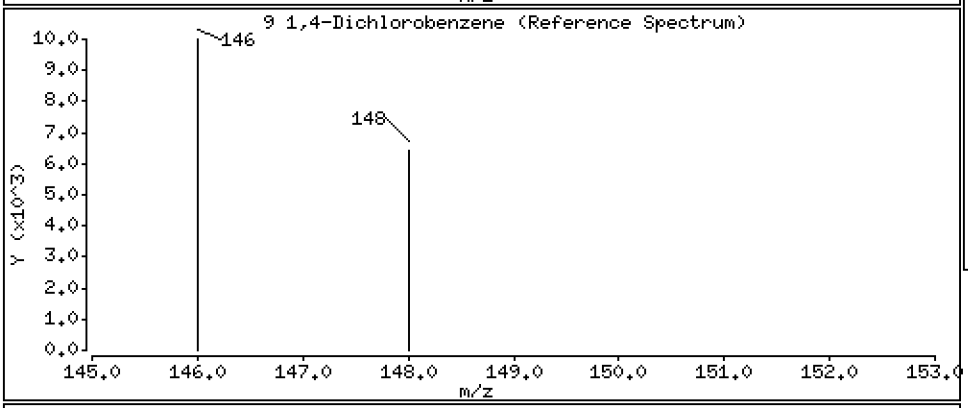
Concentration: 0.01380 ug/mL

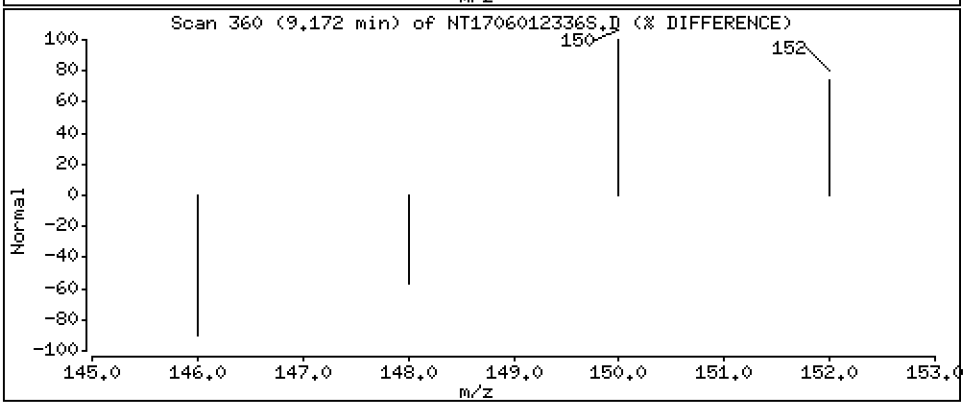












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

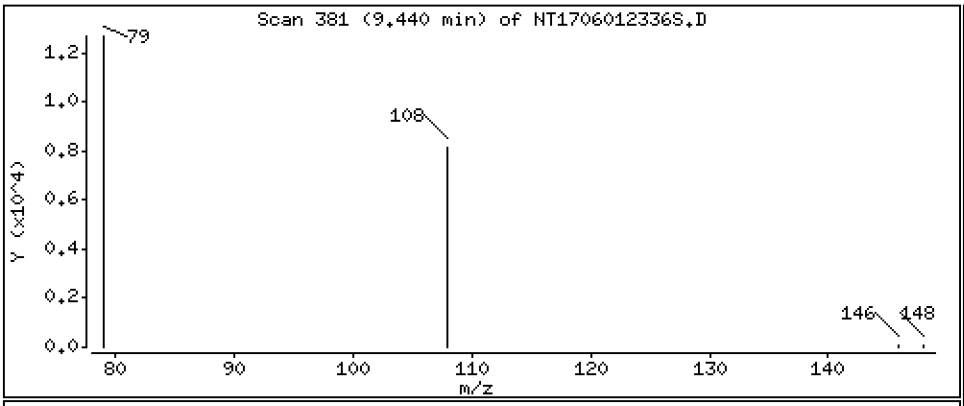
Operator: VTS

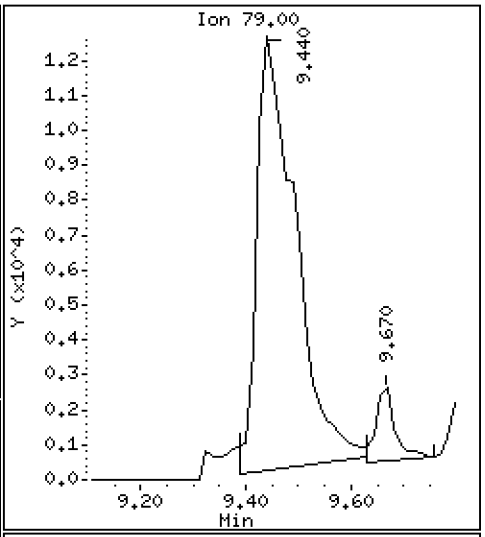
Column phase: ZB-5msi

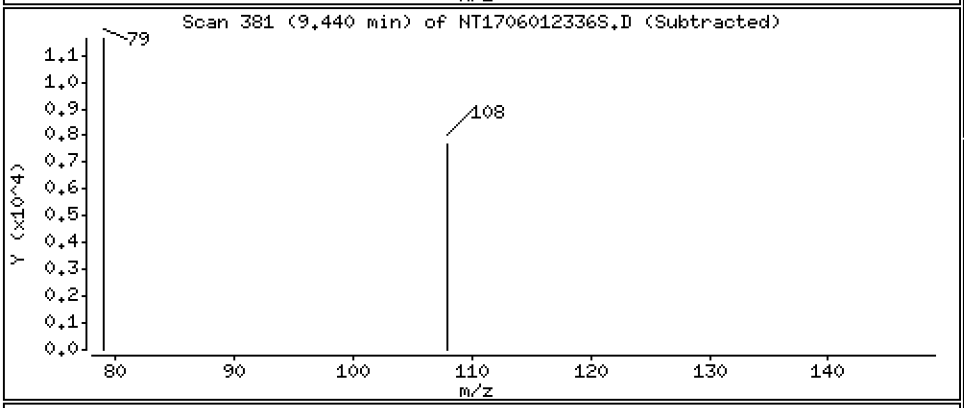
Column diameter: 0.25

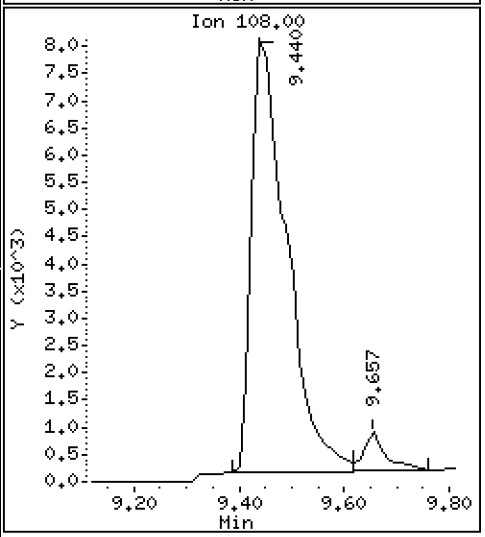
11 Benzyl alcohol

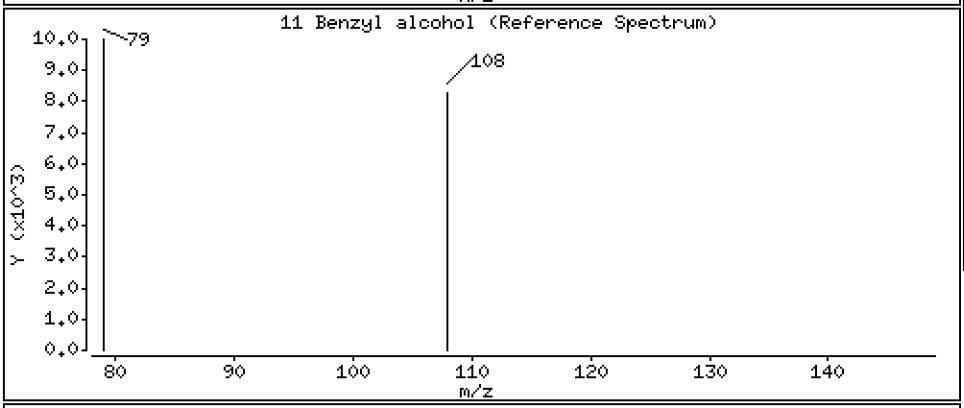
Concentration: 1.038 ug/mL

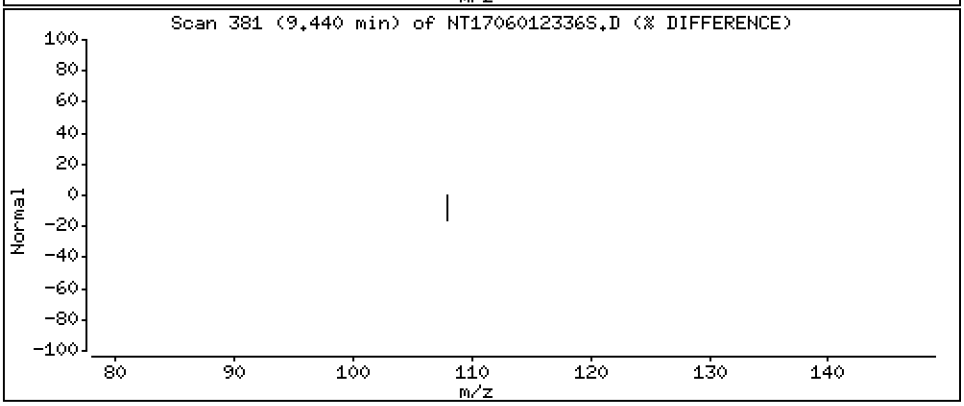












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

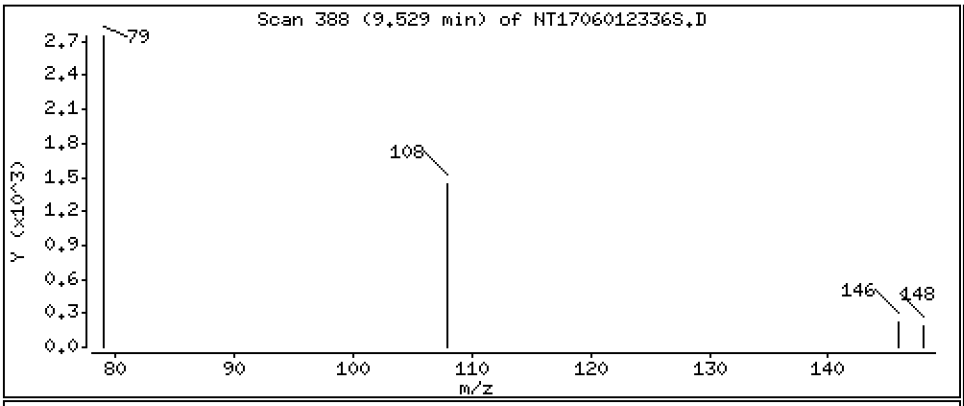
Operator: VTS

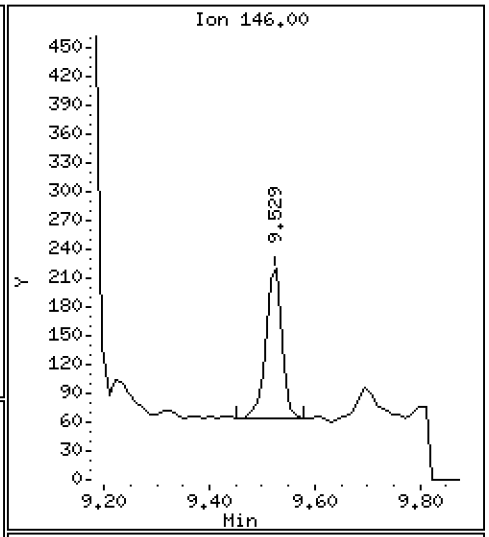
Column phase: ZB-5msi

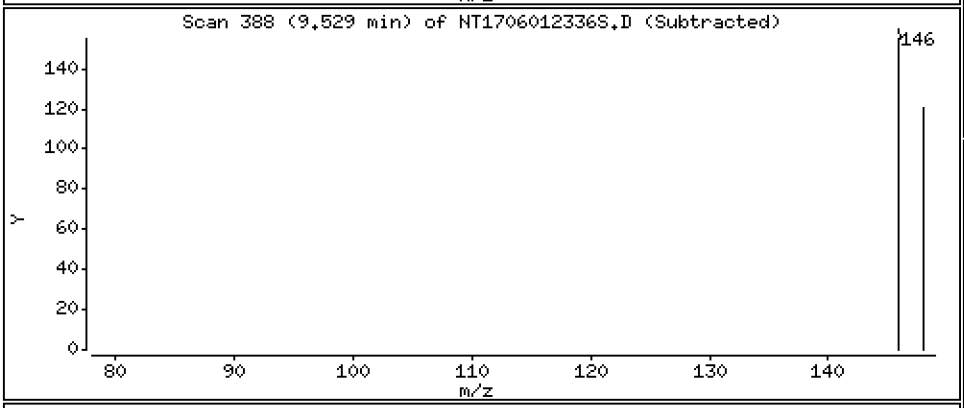
Column diameter: 0.25

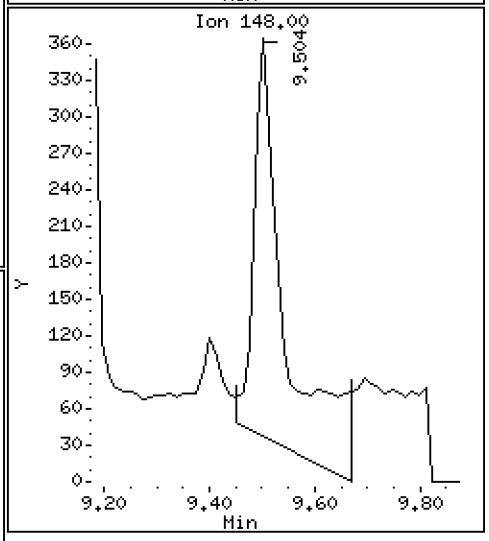
12 1,2-Dichlorobenzene

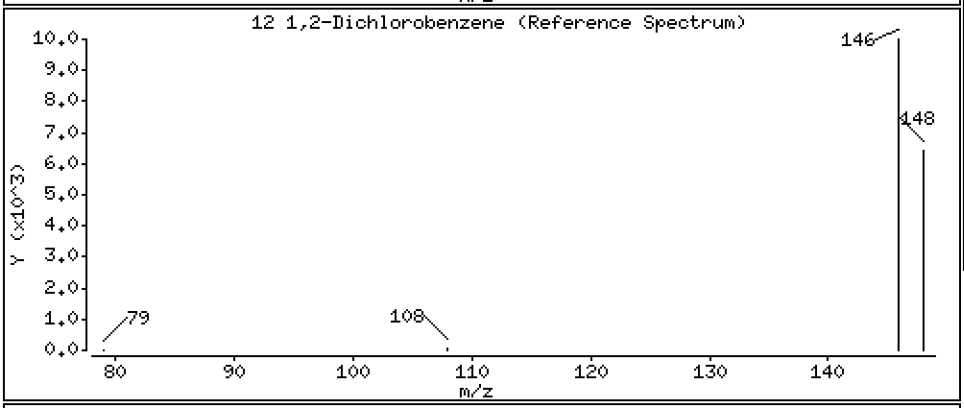
Concentration: 0.003609 ug/mL

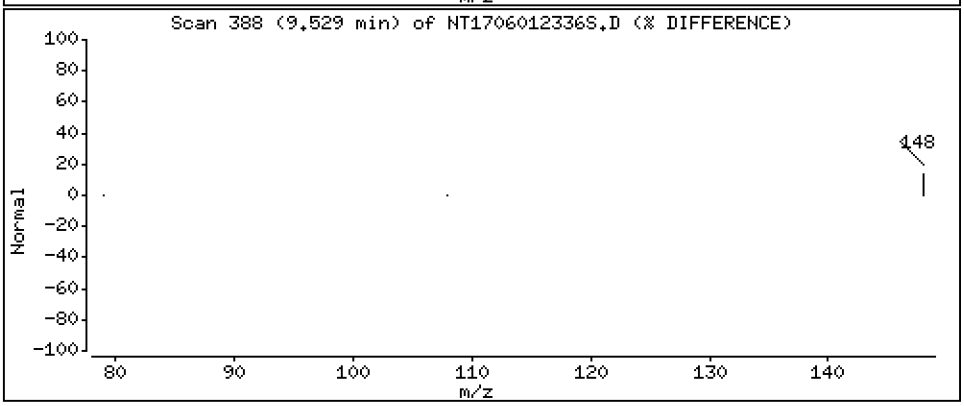












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

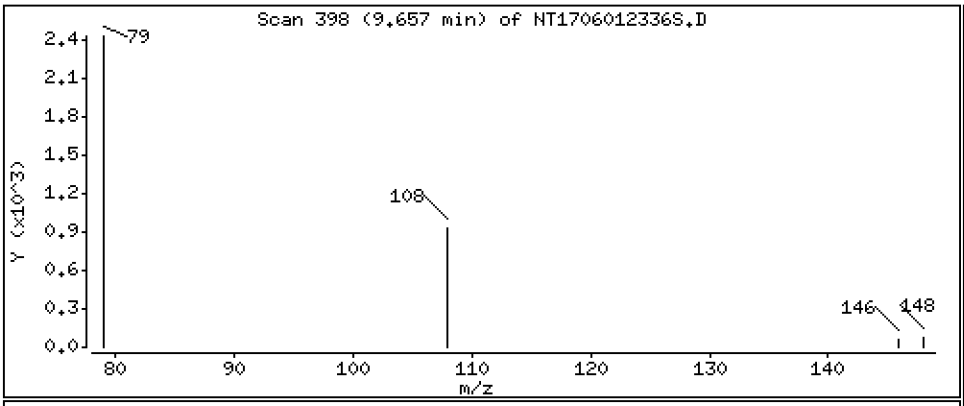
Operator: VTS

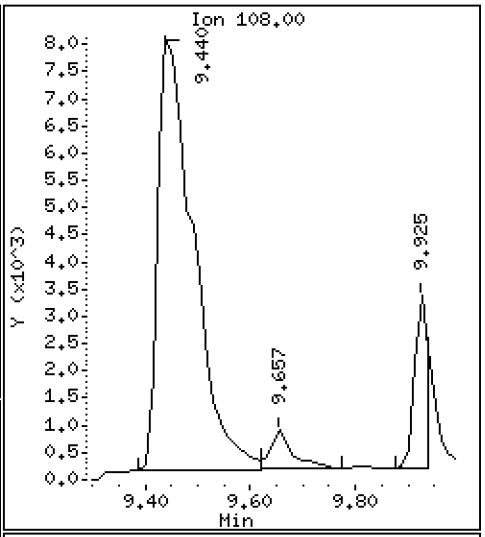
Column phase: ZB-5msi

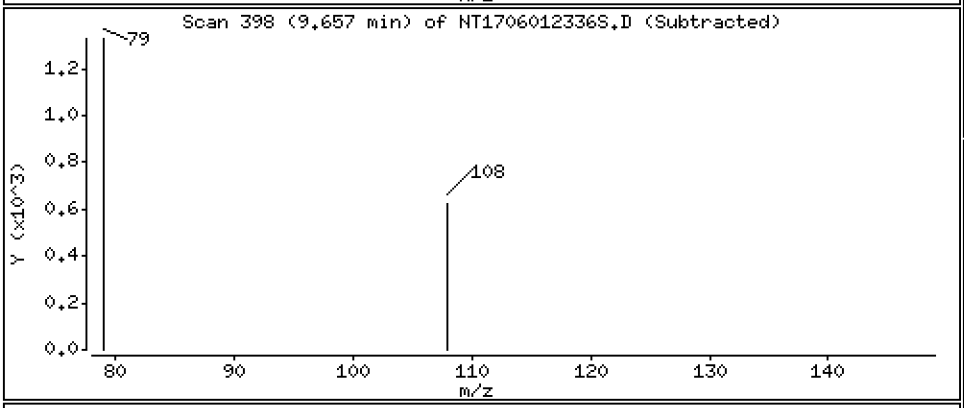
Column diameter: 0.25

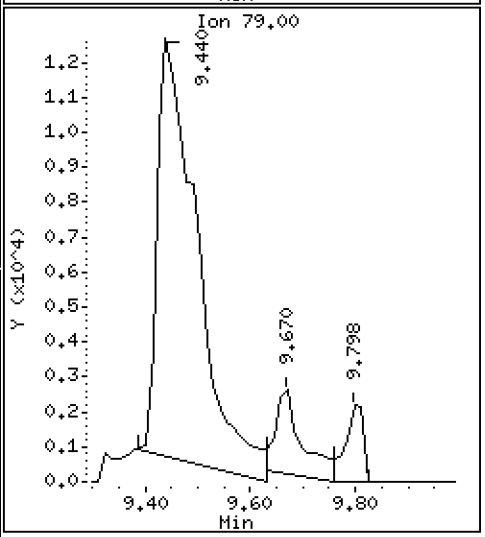
13 2-Methylphenol

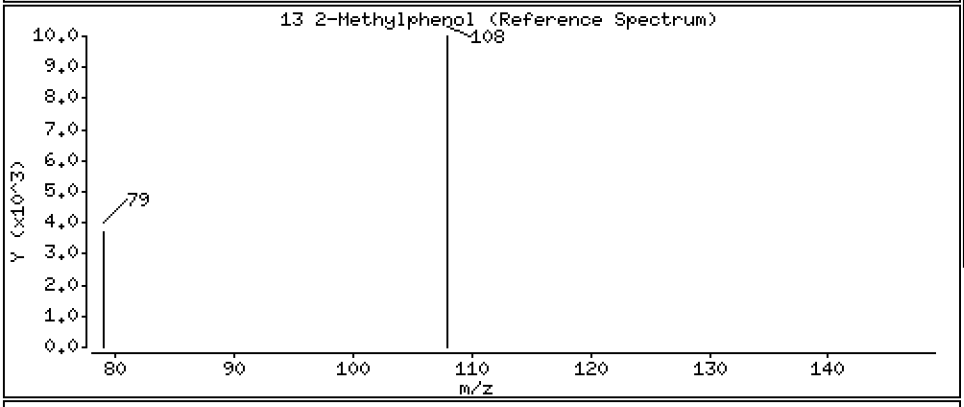
Concentration: 0.02935 ug/mL

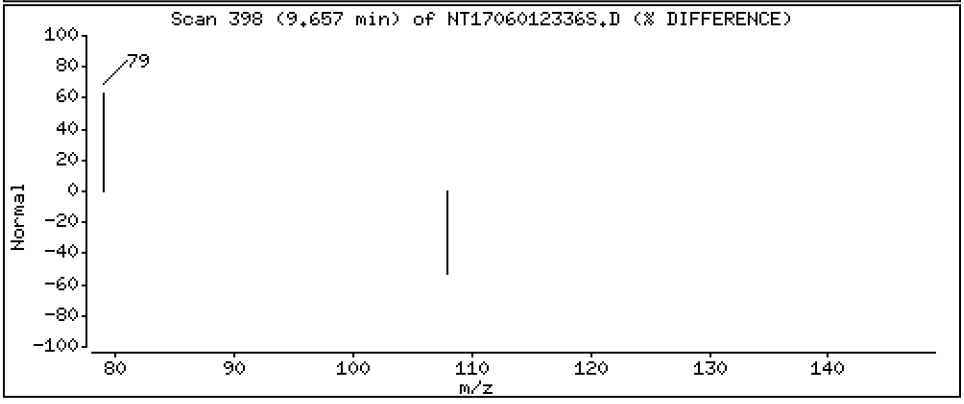












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

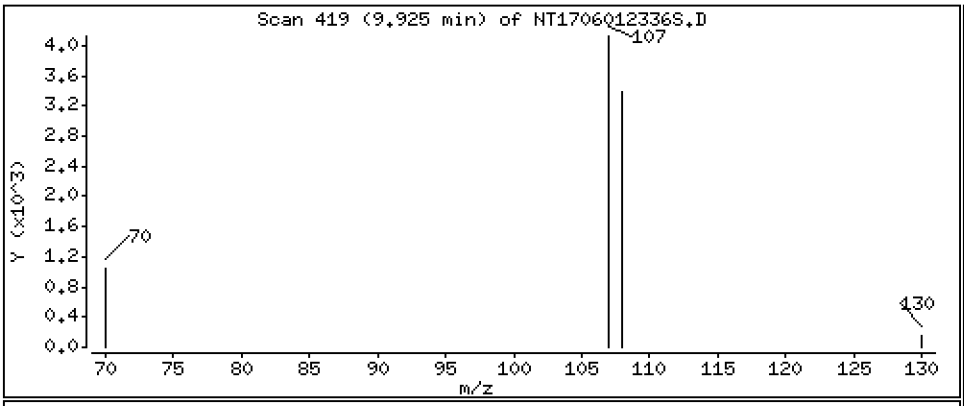
Operator: VTS

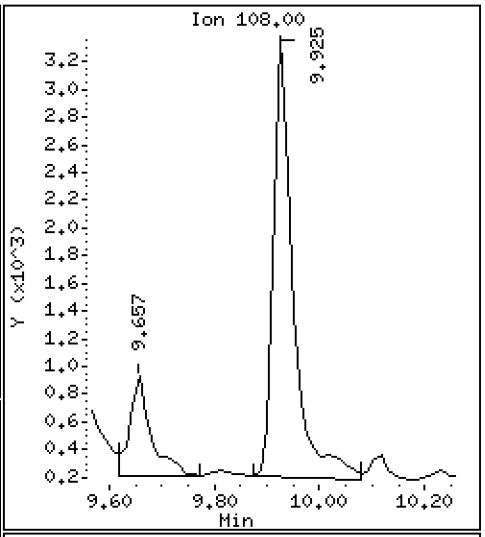
Column phase: ZB-5msi

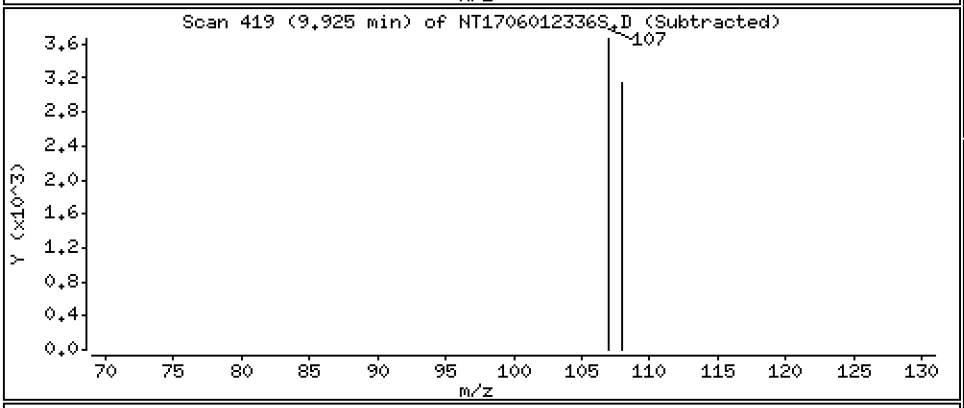
Column diameter: 0.25

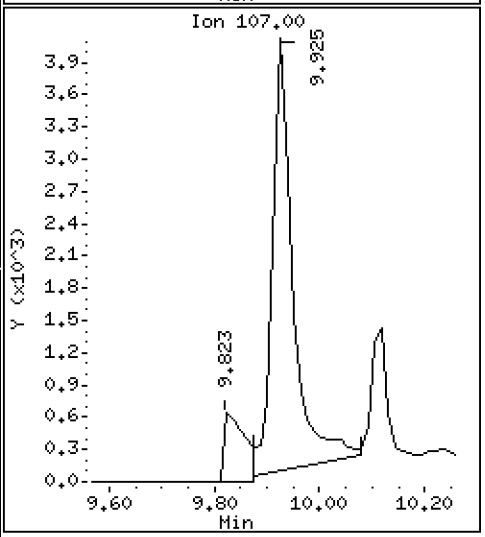
15 4-Methylphenol

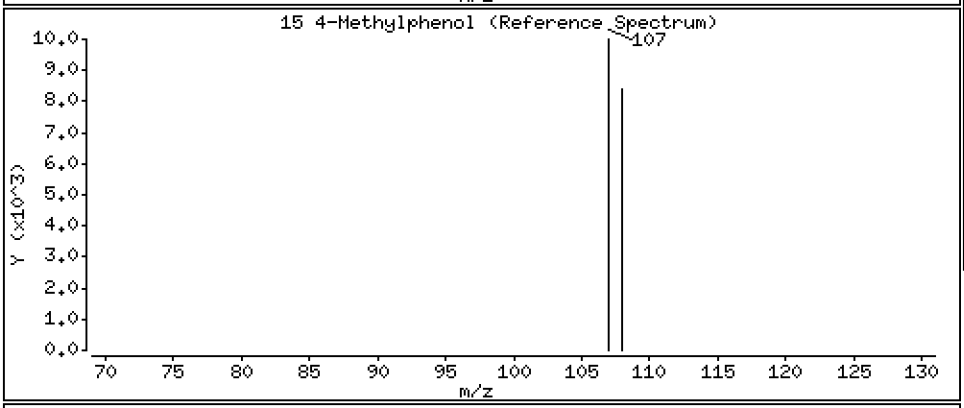
Concentration: 0.1101 ug/mL

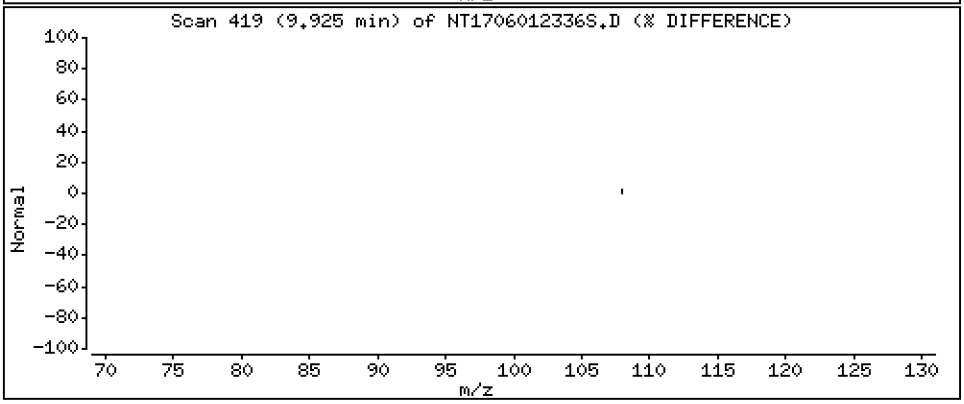












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123365.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

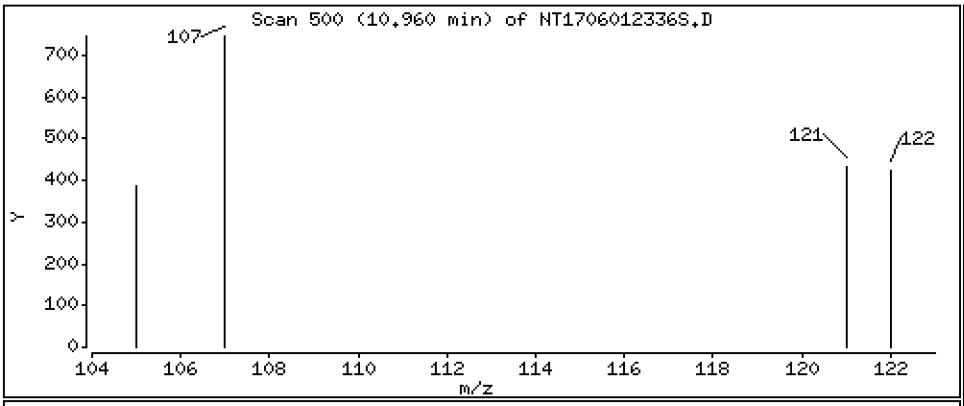
Operator: VTS

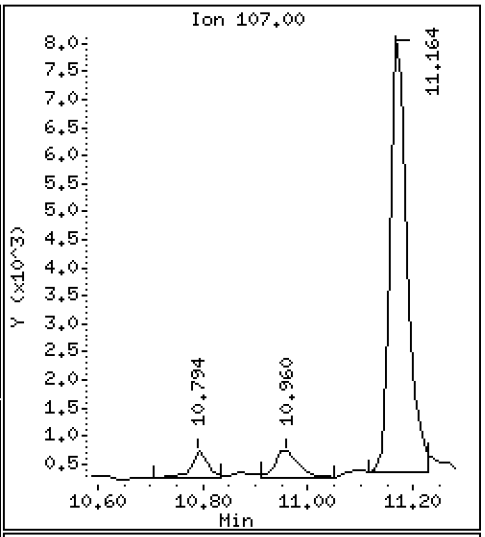
Column phase: ZB-5msi

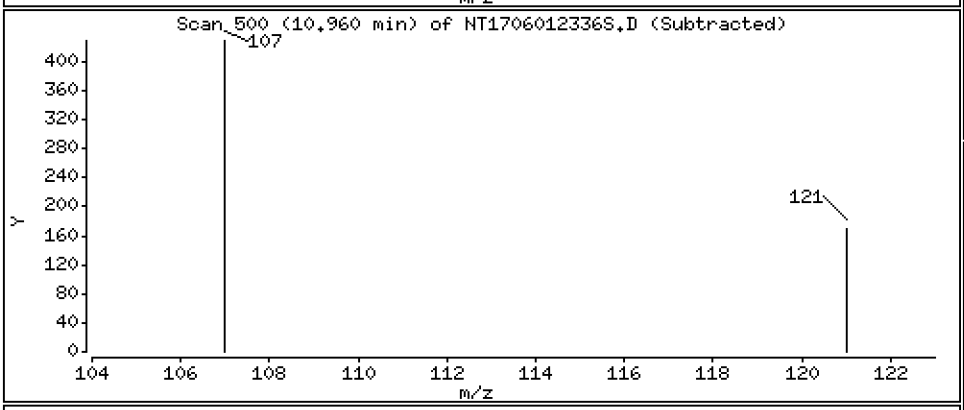
Column diameter: 0.25

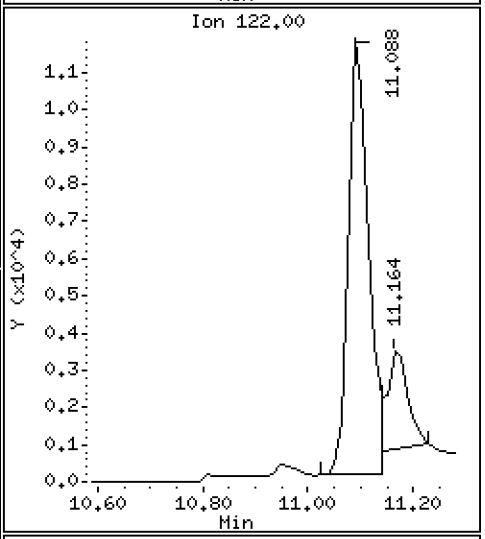
22 2,4-Dimethylphenol

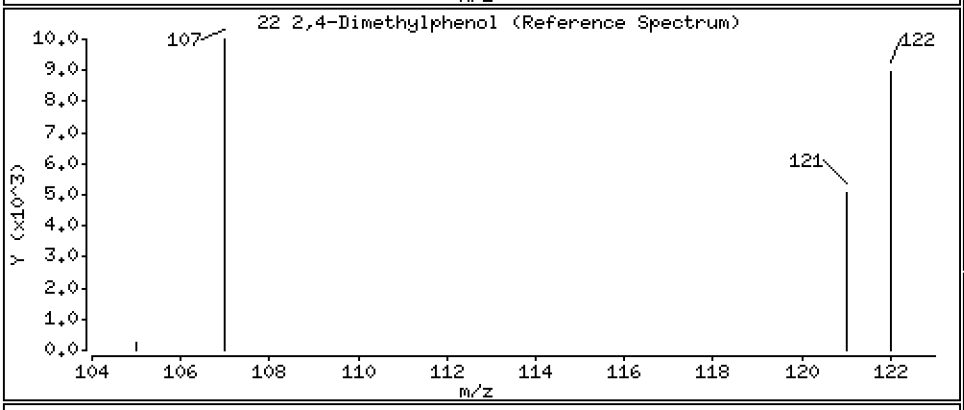
Concentration: 0.01680 ug/mL

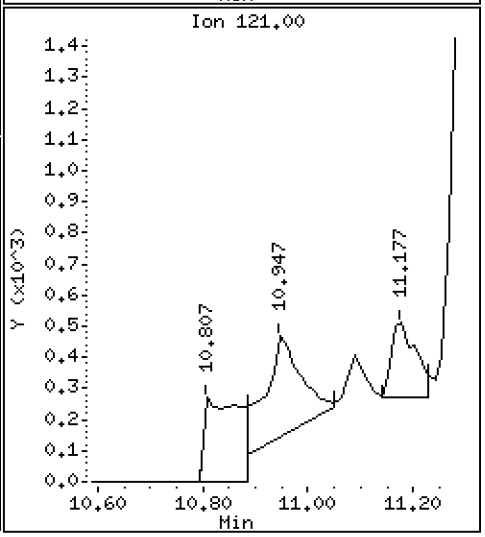


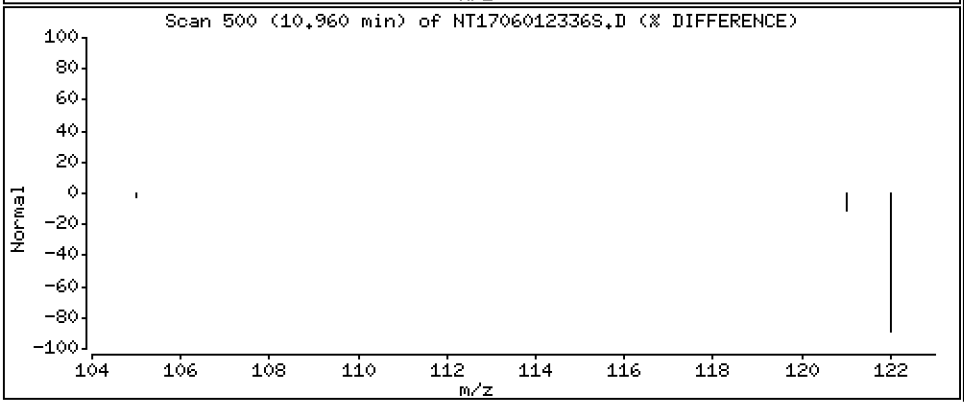












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123365.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

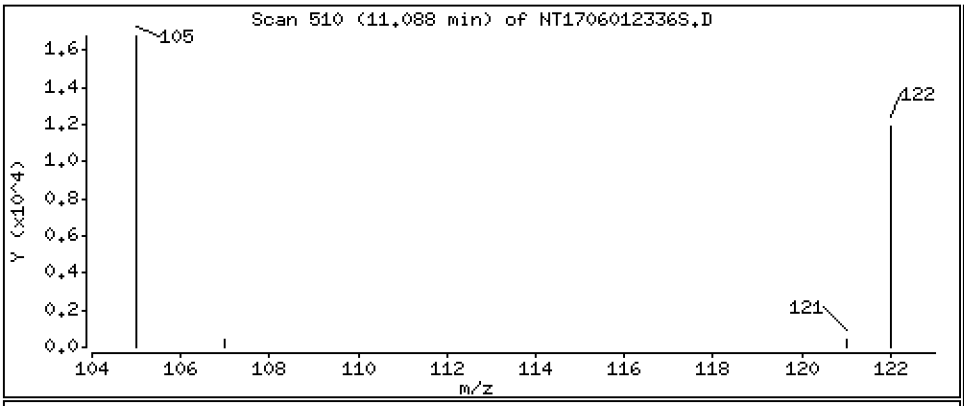
Operator: VTS

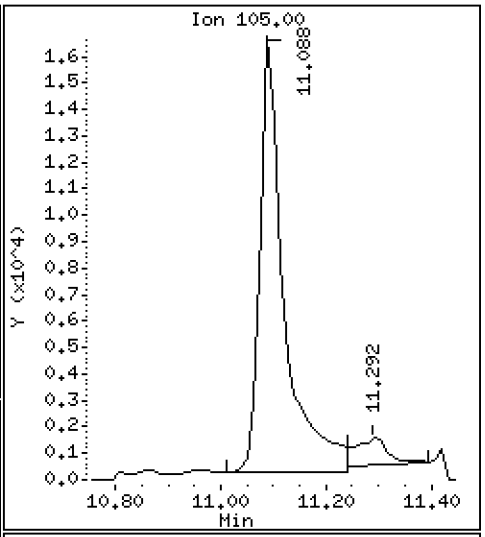
Column phase: ZB-5msi

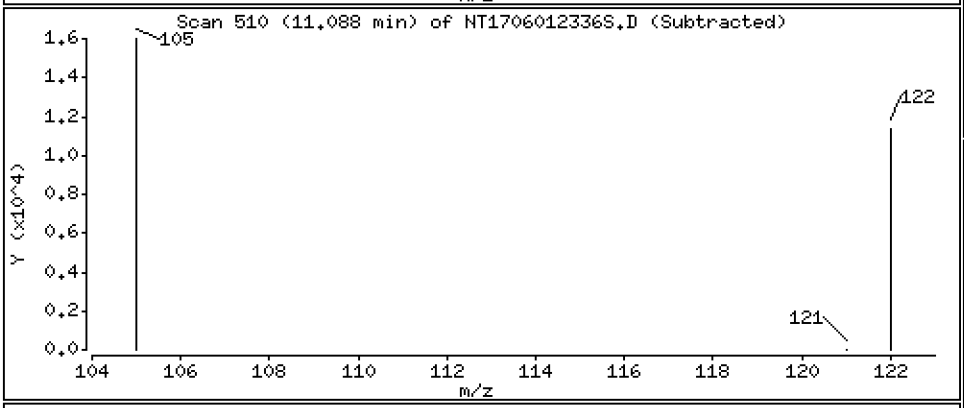
Column diameter: 0.25

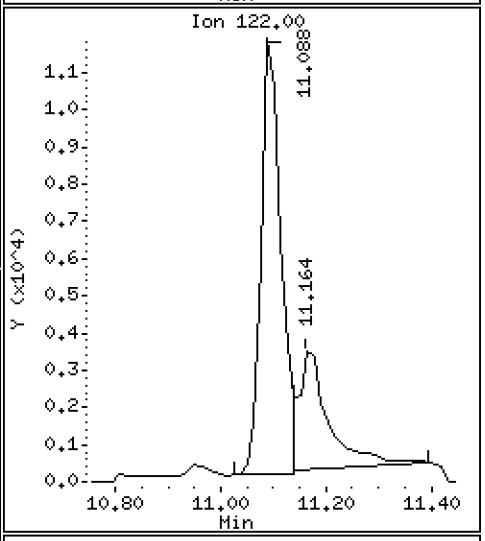
24 Benzoic acid

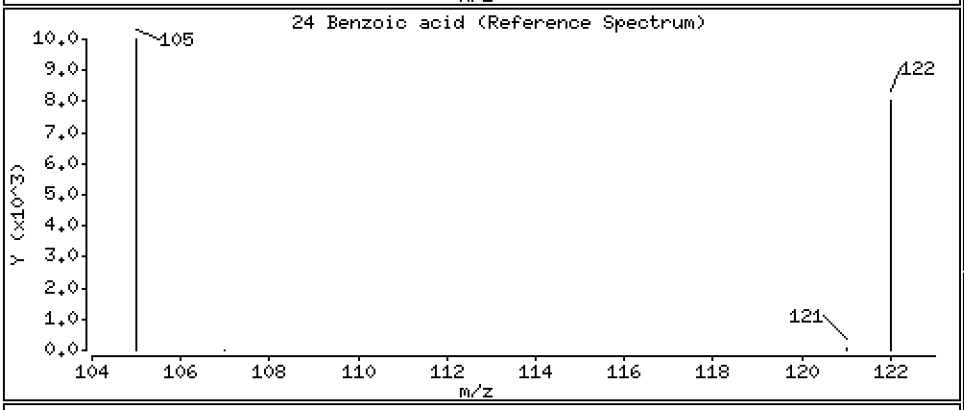
Concentration: 1.028 ug/mL

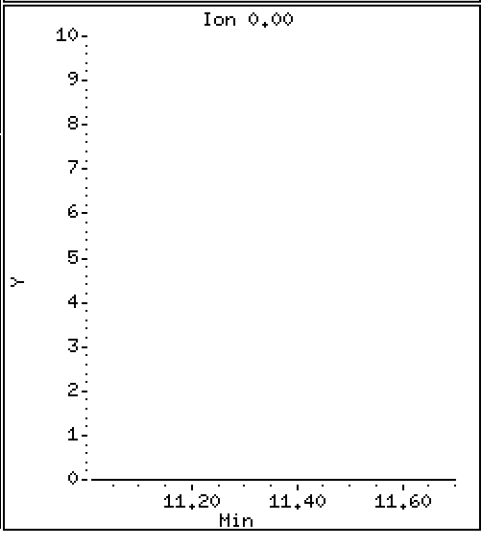


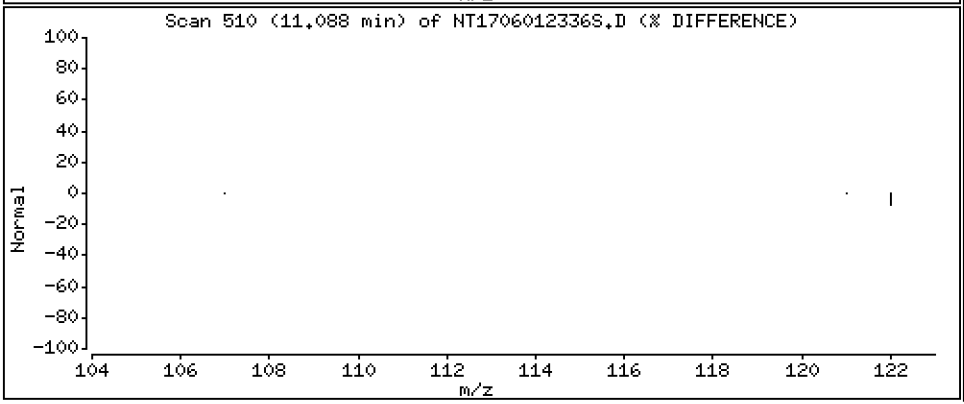












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123365.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

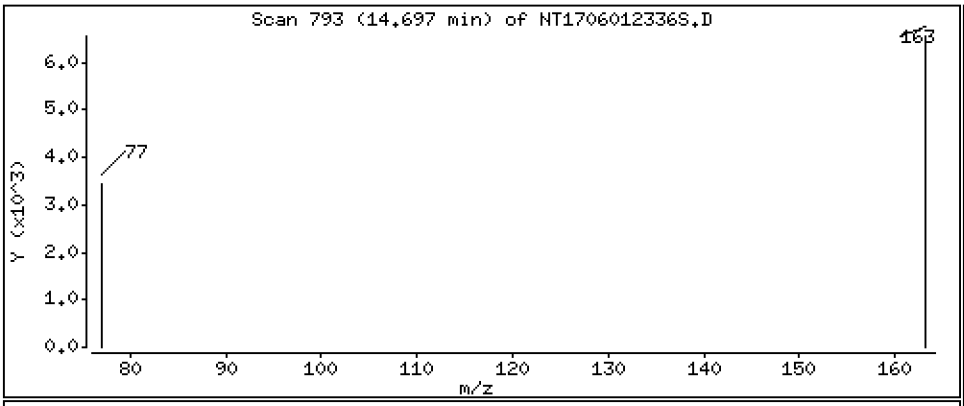
Operator: VTS

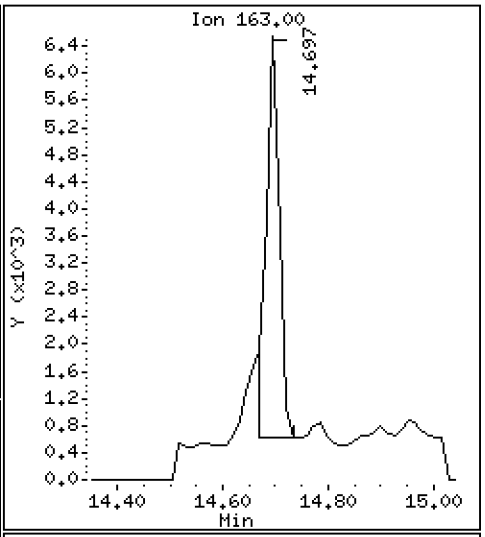
Column phase: ZB-5msi

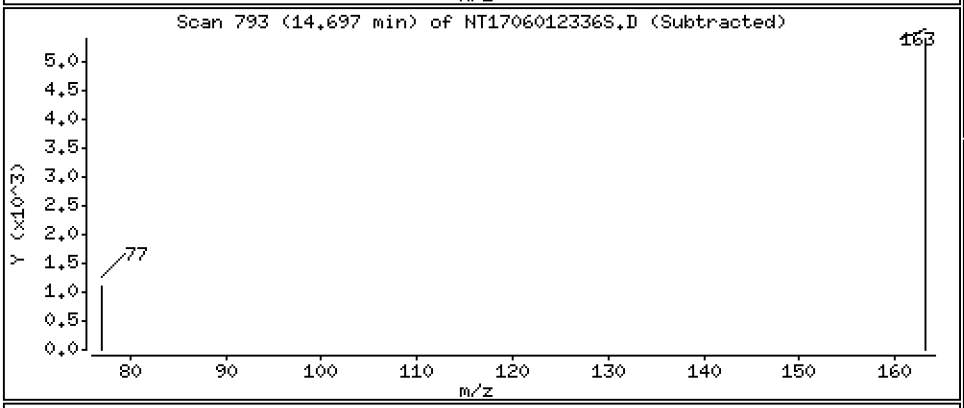
Column diameter: 0.25

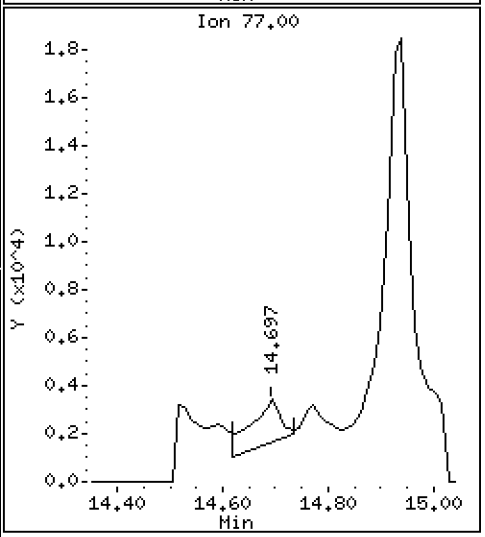
39 Dimethylphthalate

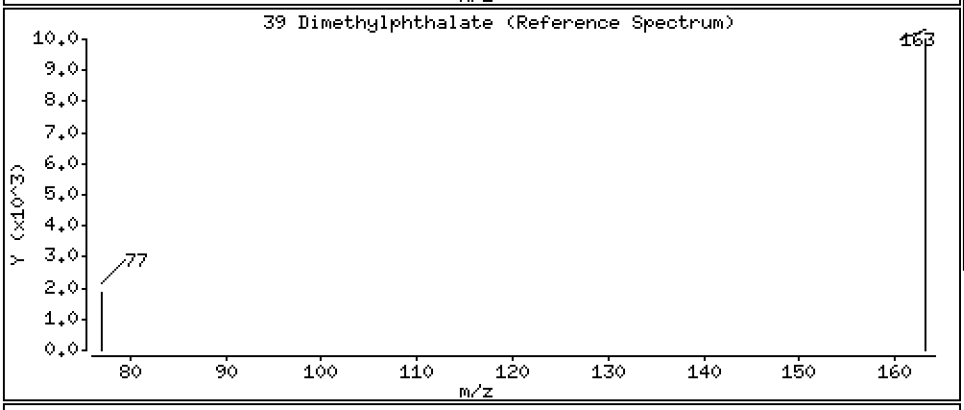
Concentration: 0.05845 ug/mL

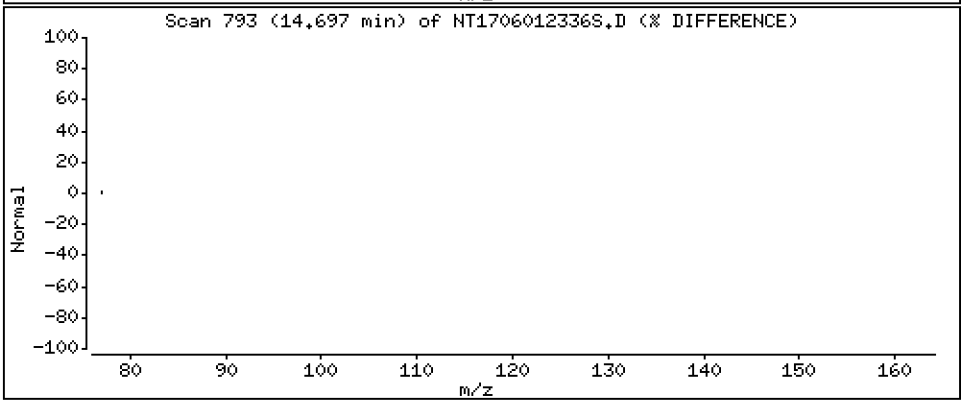












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123365.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

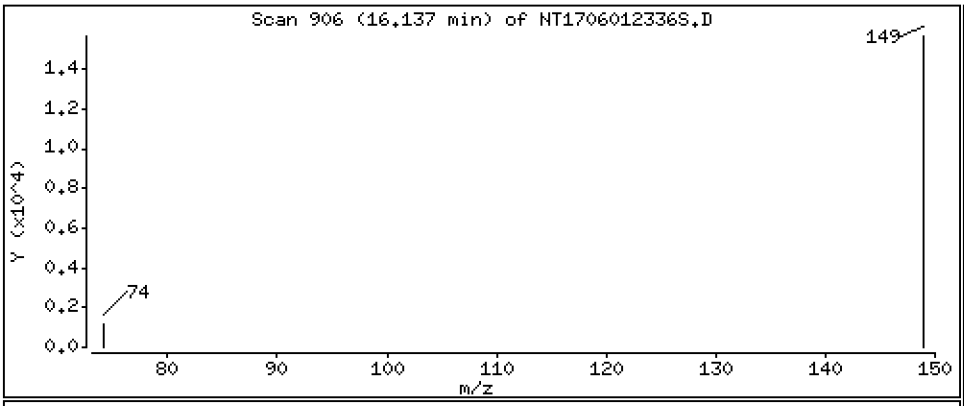
Operator: VTS

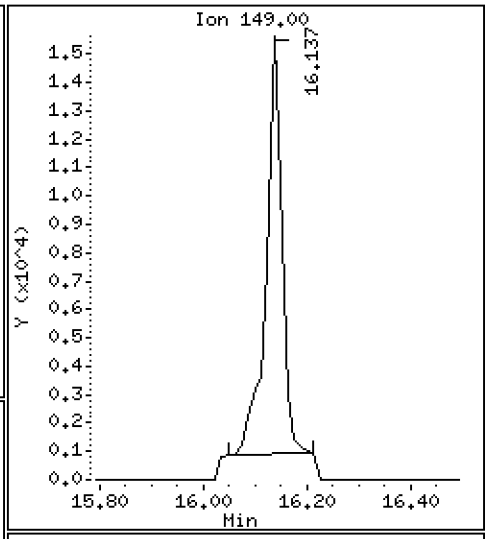
Column phase: ZB-5msi

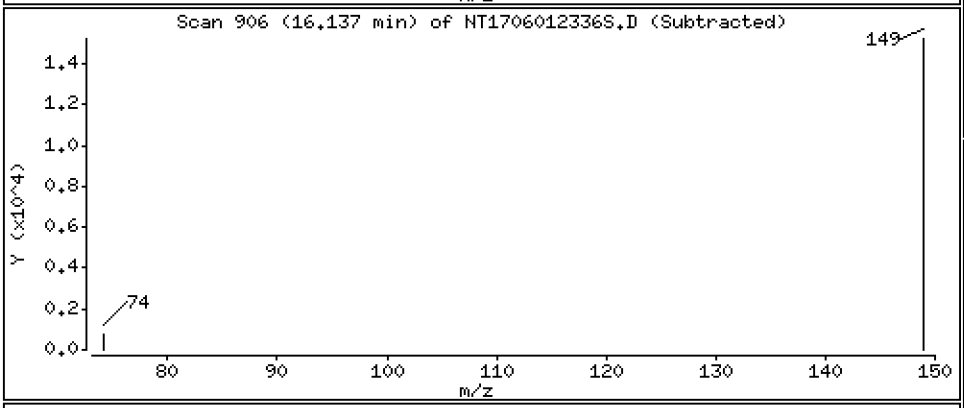
Column diameter: 0.25

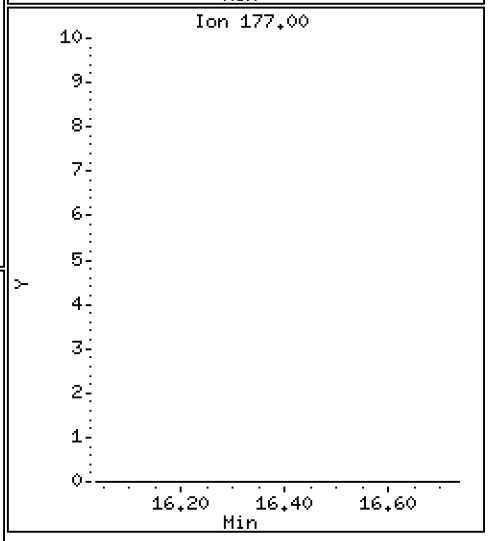
50 Diethylphthalate

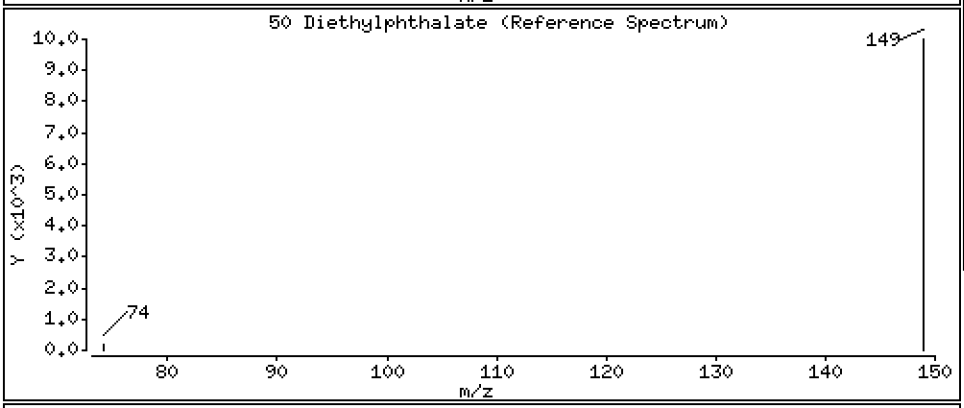
Concentration: 0.1855 ug/mL

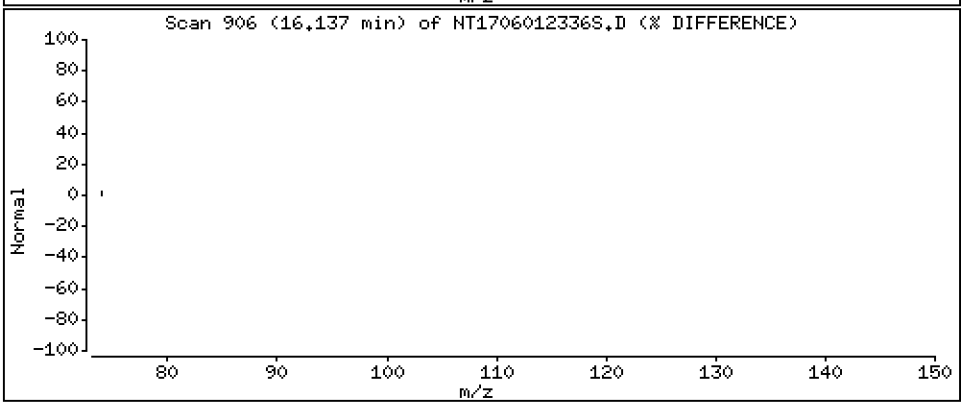












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

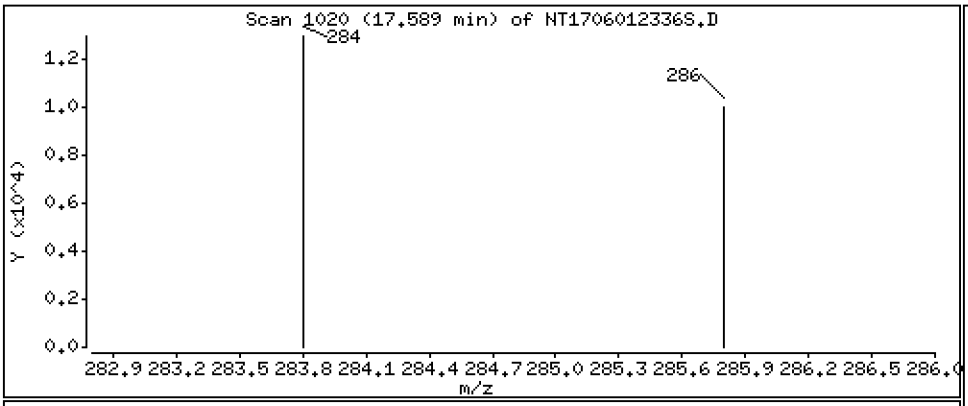
Operator: VTS

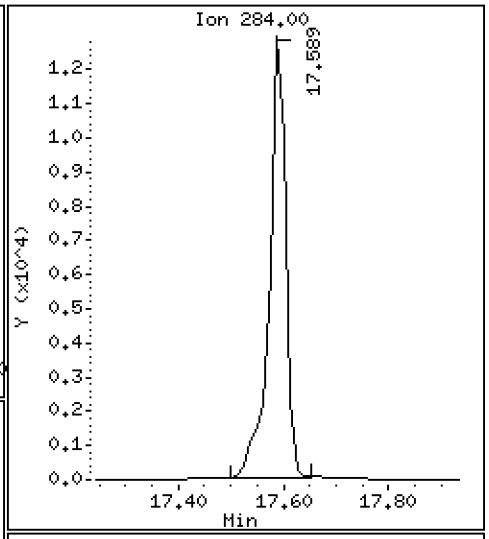
Column phase: ZB-5msi

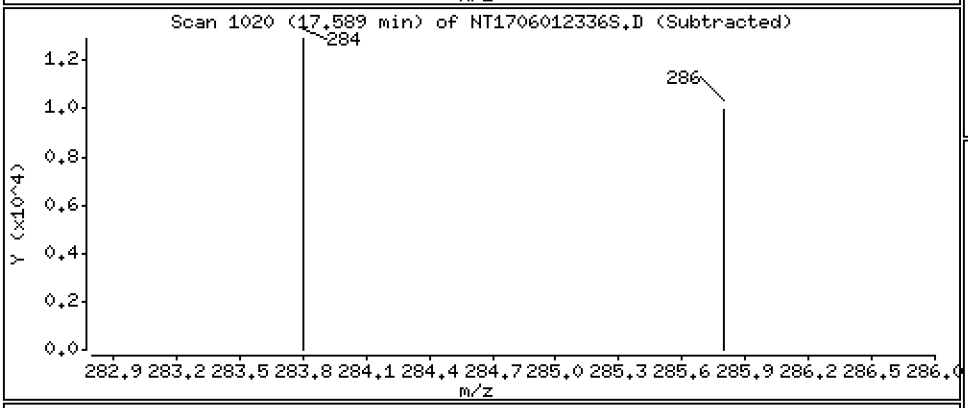
Column diameter: 0.25

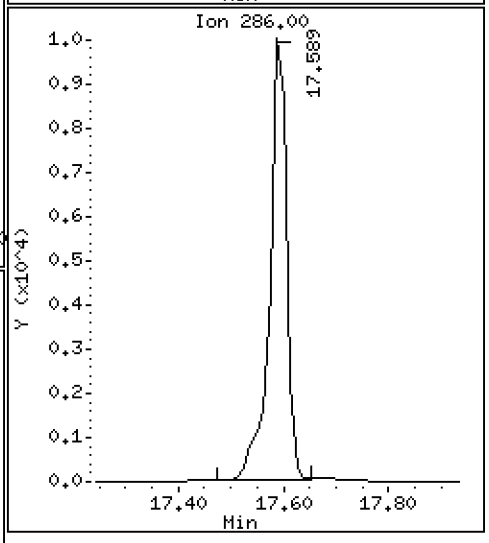
57 Hexachlorobenzene

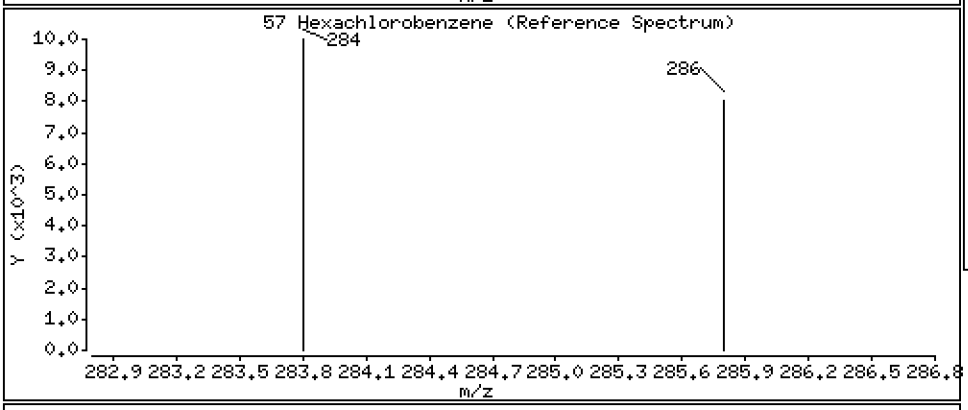
Concentration: 0.7251 ug/mL

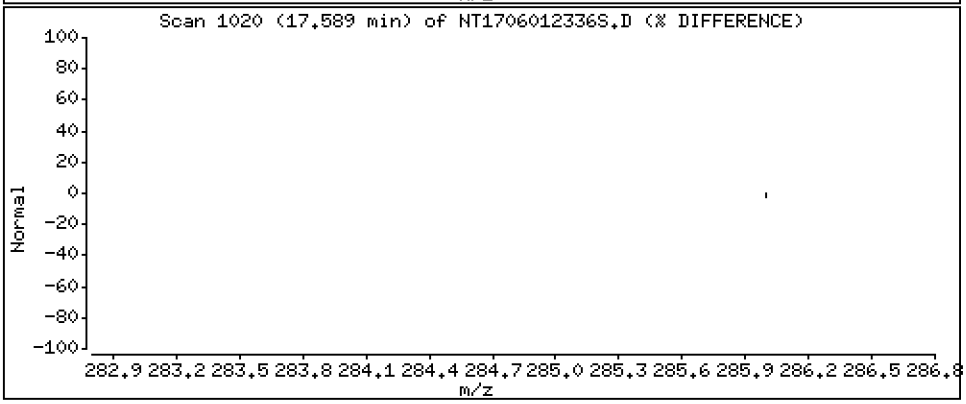












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

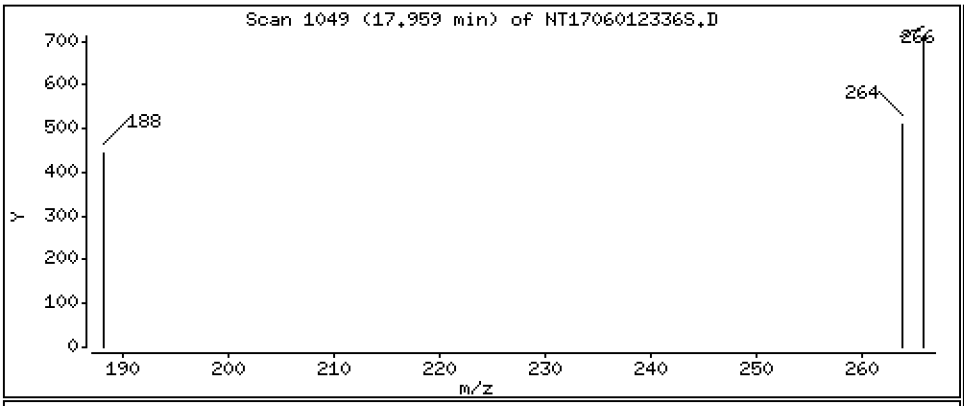
Operator: VTS

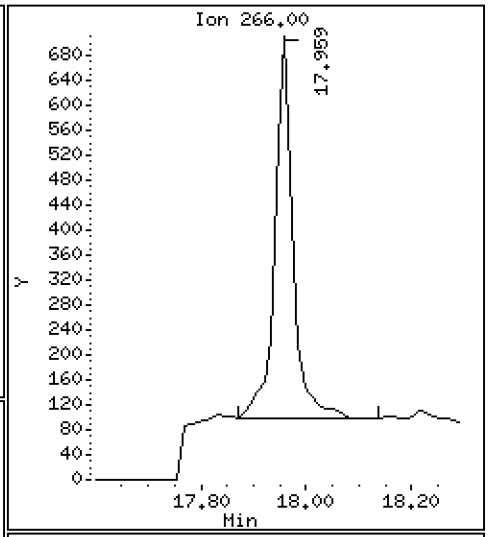
Column phase: ZB-5msi

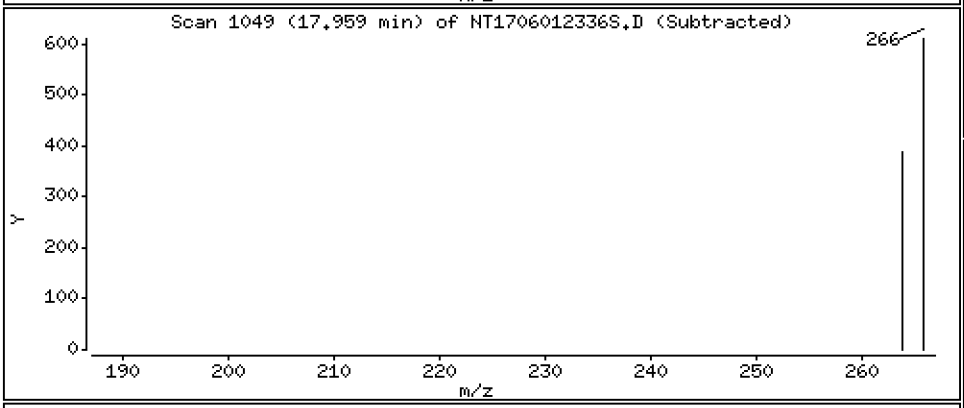
Column diameter: 0.25

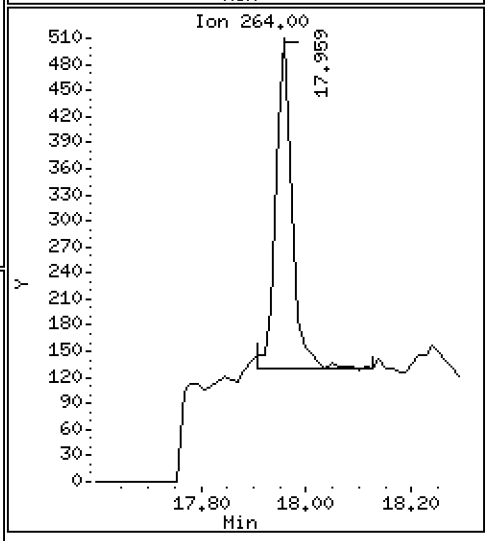
58 Pentachlorophenol

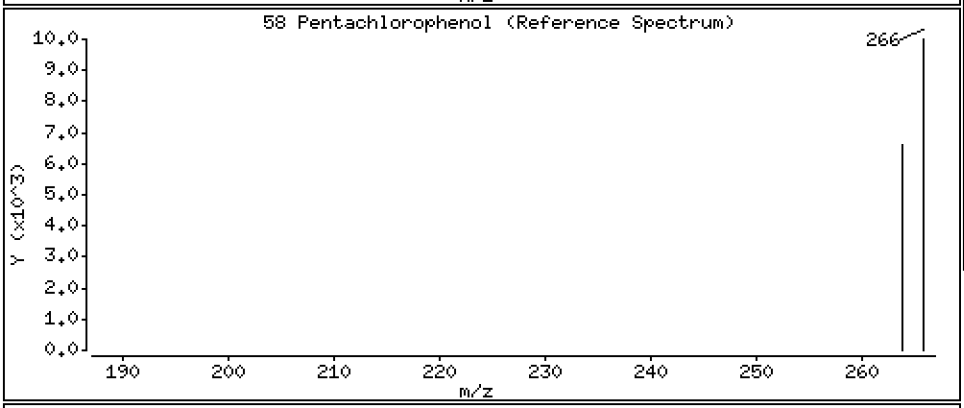
Concentration: 0.06800 ug/mL

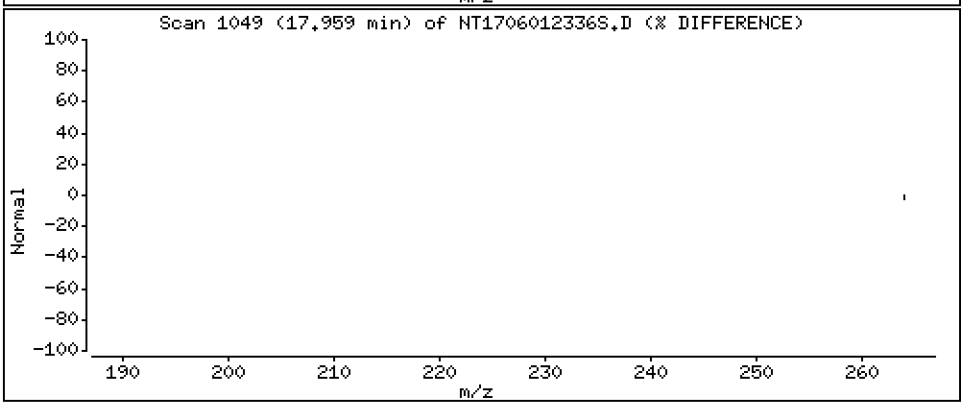












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

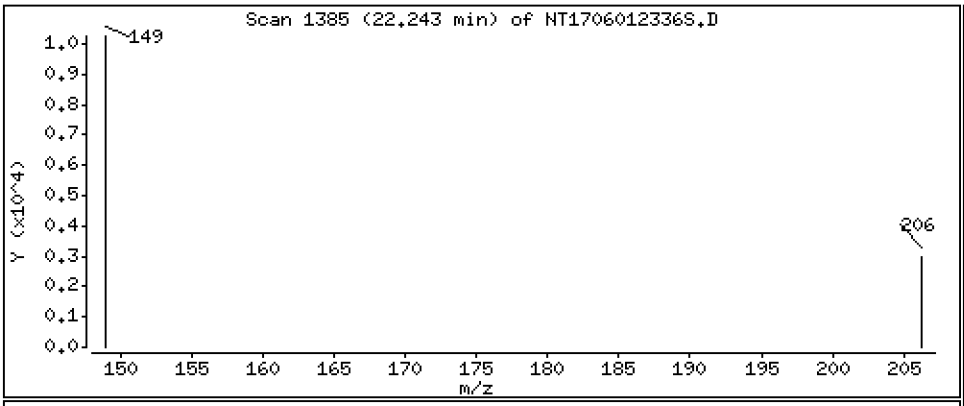
Operator: VTS

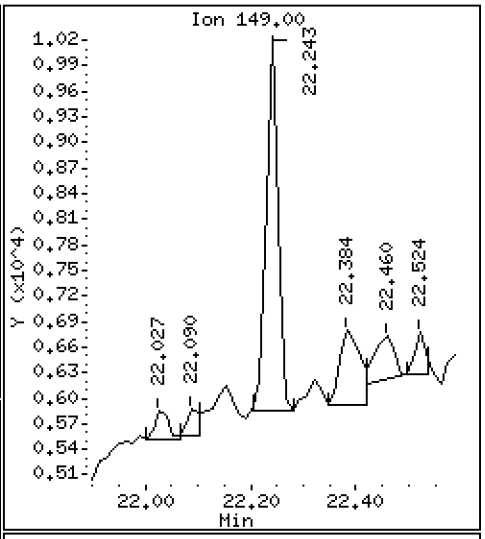
Column phase: ZB-5msi

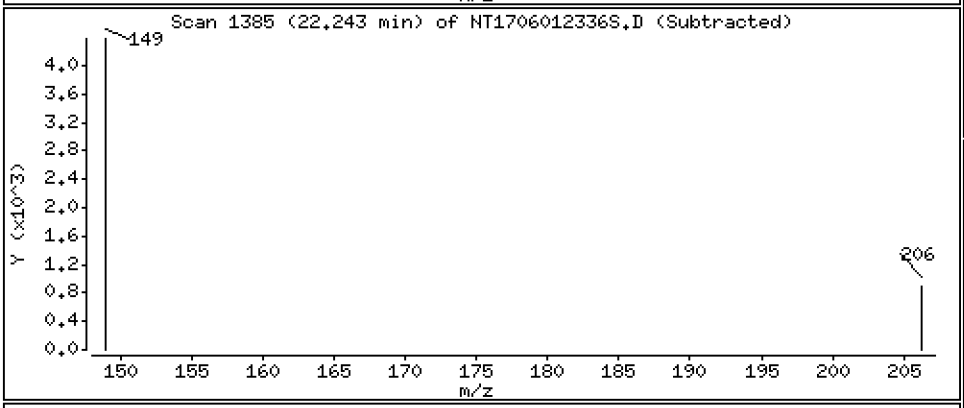
Column diameter: 0.25

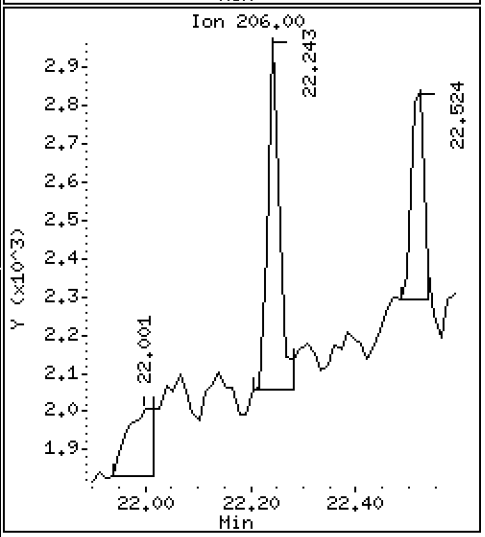
67 Butylbenzylphthalate

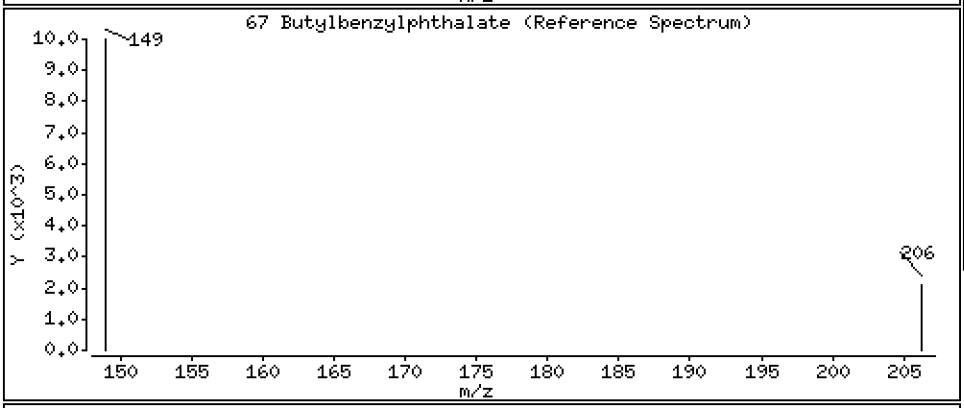
Concentration: 0.07076 ug/mL

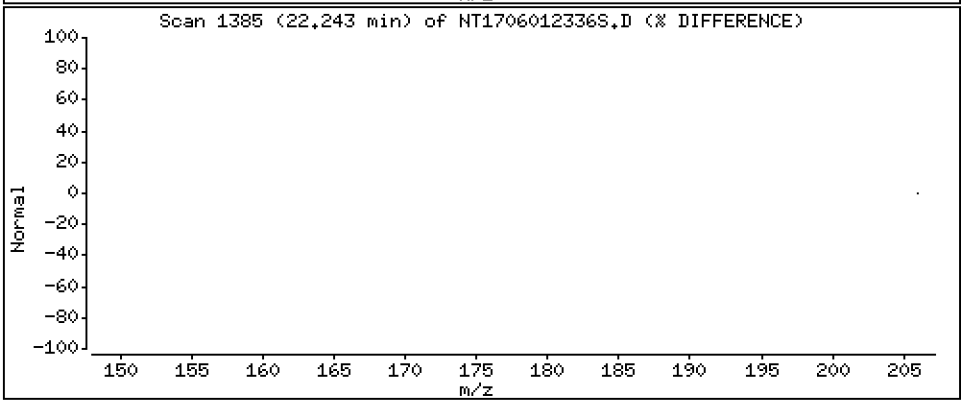












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D

Date : 02-JUN-2023 09:47

Client ID:

Instrument: nt17.i

Sample Info: 23E0009-07

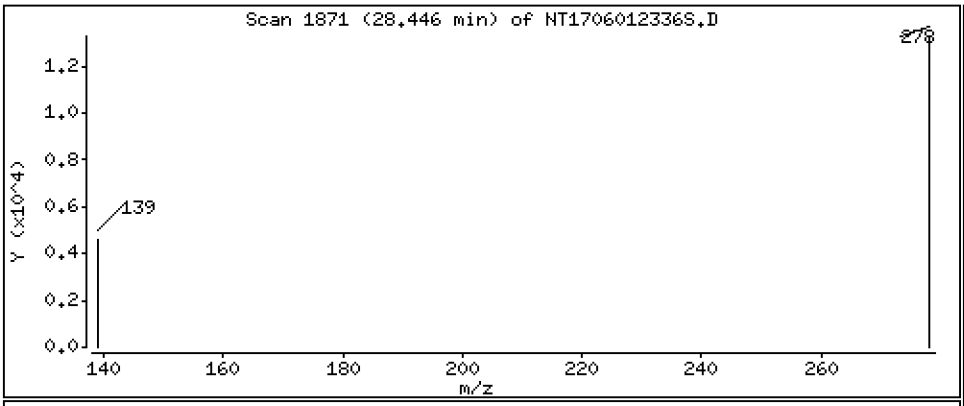
Operator: VTS

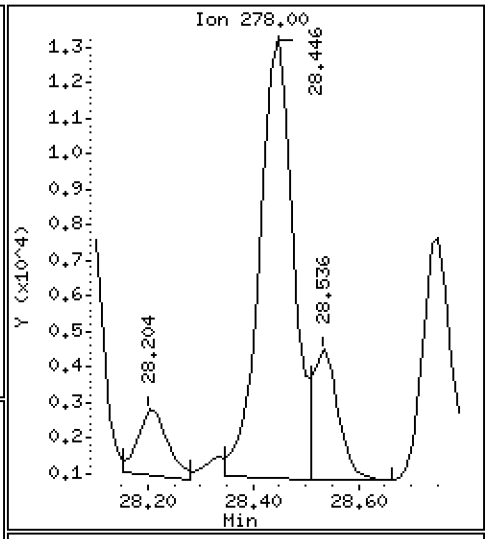
Column phase: ZB-5msi

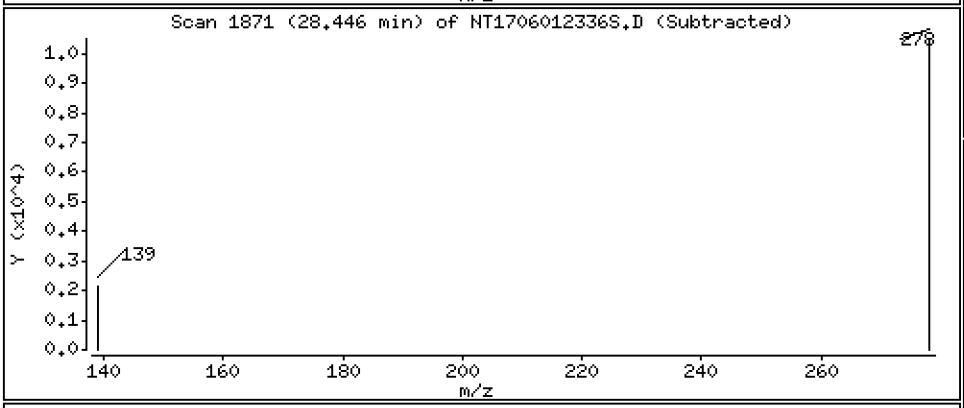
Column diameter: 0.25

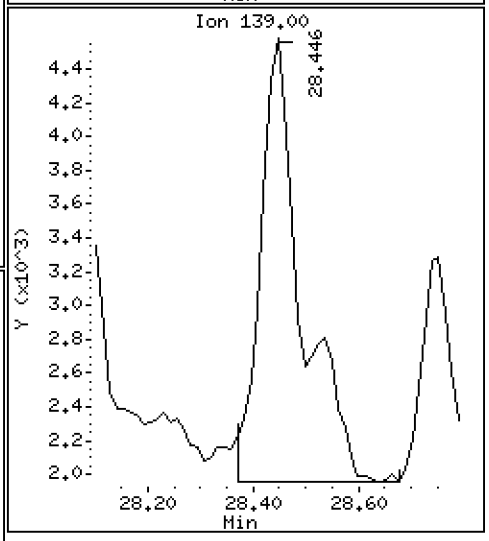
79 Dibenzo(a,h)anthracene

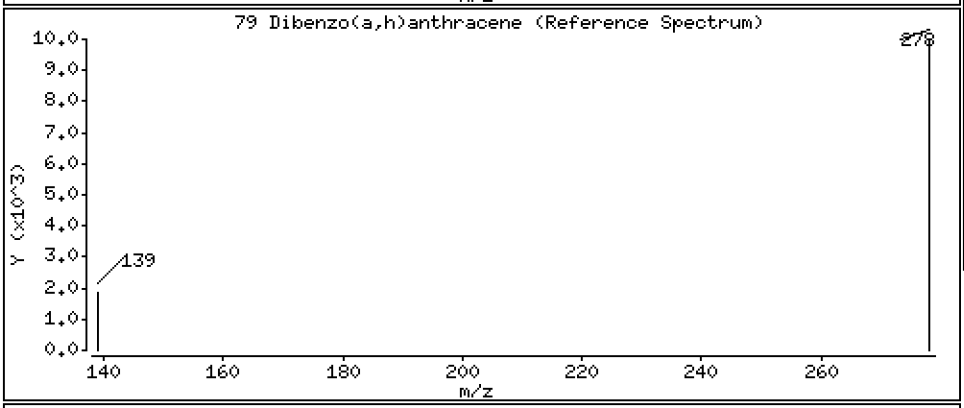
Concentration: 0.3599 ug/mL

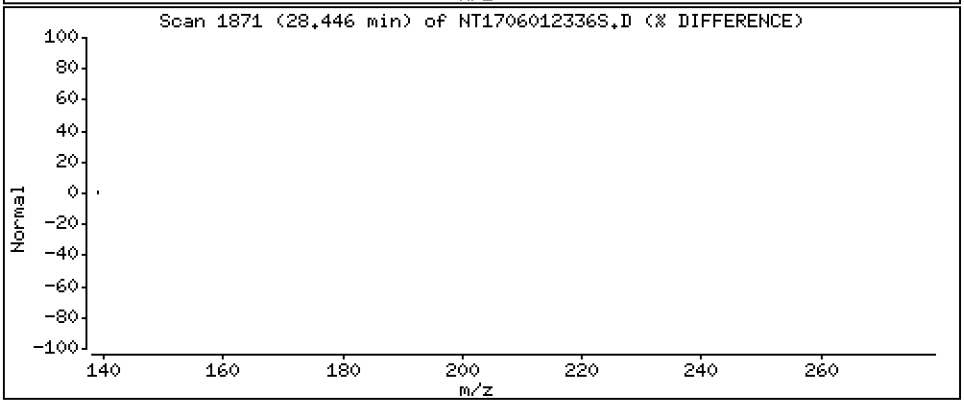












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012336S.D
Lab Smp Id: 23E0009-07
Inj Date : 02-JUN-2023 09:47
Operator : VTS Inst ID: nt17.i
Smp Info : 23E0009-07
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 31
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.954	(0.762)	199664	2.76006	2.760(R)
	3 Phenol	94	8.546	8.547	(0.934)	158622	1.47157	1.472
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	1146	0.01186	0.01186
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	239173	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	1299	0.01380	0.01380
	11 Benzyl alcohol	79	9.439	9.452	(1.032)	63724	1.03751	1.038
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	333	0.00361	0.003609(M)
	13 2-Methylphenol	108	9.657	9.644	(1.056)	2192	0.02935	0.02935
	15 4-Methylphenol	108	9.925	9.912	(1.085)	8314	0.11014	0.1101
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.960	10.934	(0.945)	1390	0.01680	0.01680
	24 Benzoic acid	105	11.087	11.100	(0.956)	52952	1.02751	1.028
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	859958	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	14.696	14.696	(0.967)	10684	0.05845	0.05845(M)
*	42 Acenaphthene-d10	162	15.194	15.194	(1.000)	497755	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.062)	30790	0.18548	0.1855(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	17.588	17.588	(0.966)	27818	0.72508	0.7251
	58 Pentachlorophenol	266	17.958	17.946	(0.986)	1469	0.06800	0.06800
*	59 Phenanthrene-d10	188	18.213	18.201	(1.000)	802789	4.00000	
$	66 Terphenyl-d14	244	21.337	21.325	(0.919)	400554	4.51058	4.511(R)
	67 Butylbenzylphthalate	149	22.243	22.243	(0.958)	6828	0.07076	0.07076
*	69 Chrysene-d12	240	23.225	23.213	(1.000)	468002	4.00000	
*	77 Perylene-d12	264	25.828	25.802	(1.000)	551503	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.446	28.446	(1.101)	55982	0.35988	0.3599
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012336S.D Calibration Time: 00:29
Lab Smp Id: 23E0009-07
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	239173	-9.93
27 Naphthalene-d8	874121	437061	1748242	859958	-1.62
42 Acenaphthene-d10	524478	262239	1048956	497755	-5.10
59 Phenanthrene-d10	807440	403720	1614880	802789	-0.58
69 Chrysene-d12	527364	263682	1054728	468002	-11.26
77 Perylene-d12	455527	227764	911054	551503	21.07

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.21	0.07
69 Chrysene-d12	23.21	22.71	23.71	23.23	0.05
77 Perylene-d12	25.80	25.30	26.30	25.83	0.10

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

REVIEW SUMMARY FOR FILE - NT1706012336S.D

Lab ID: 23E0009-07
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 09:47

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: SIM.b/NT1706012321S.D

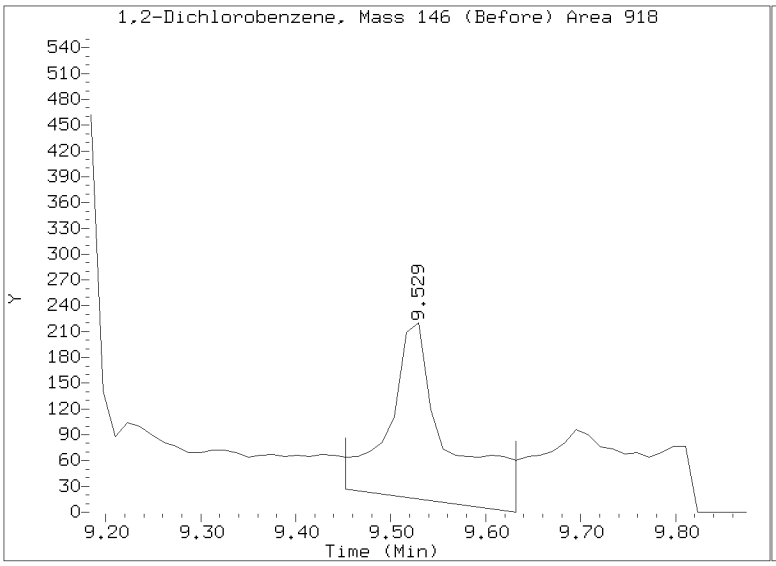
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

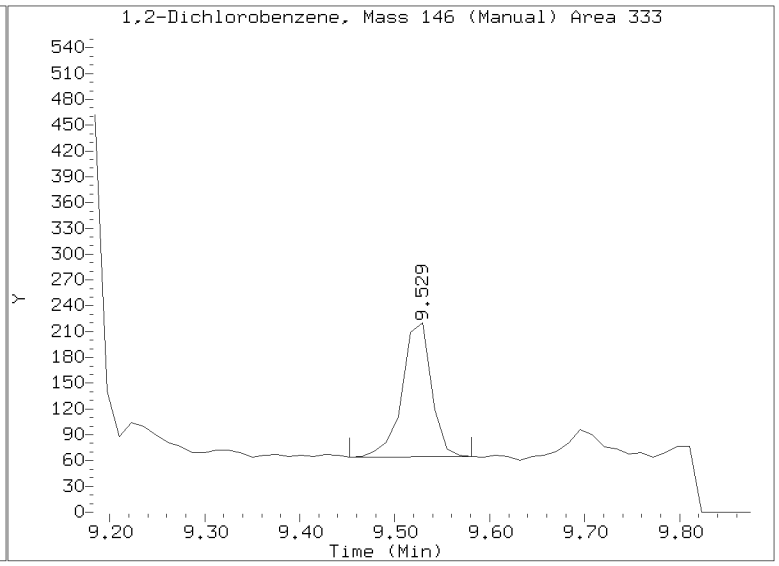
Exception: 1,2,4-Trichlorobenzene 0.0010

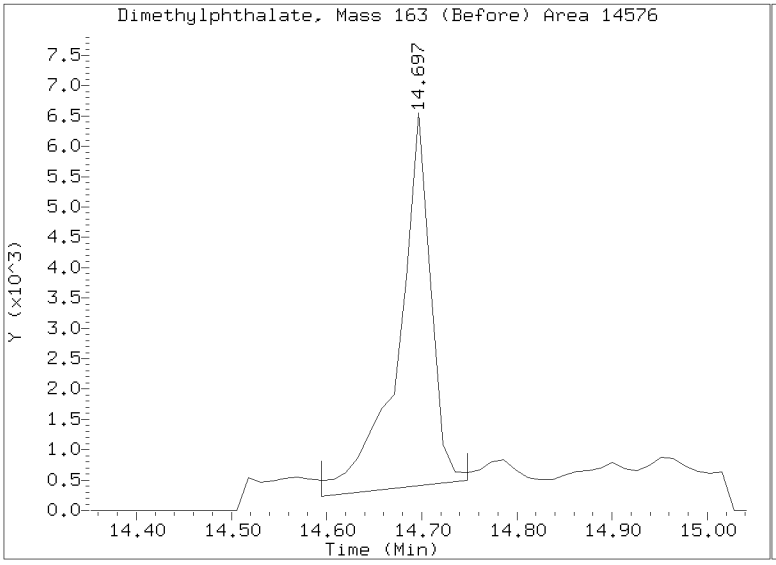
* Only compounds listed in the work order have been verified by the analyst *

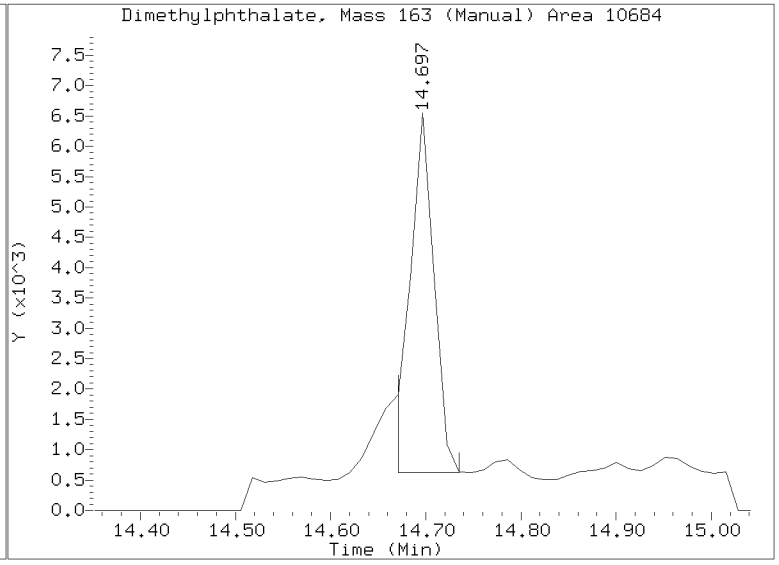
Quant Ion Manual Peak Adjustment Report

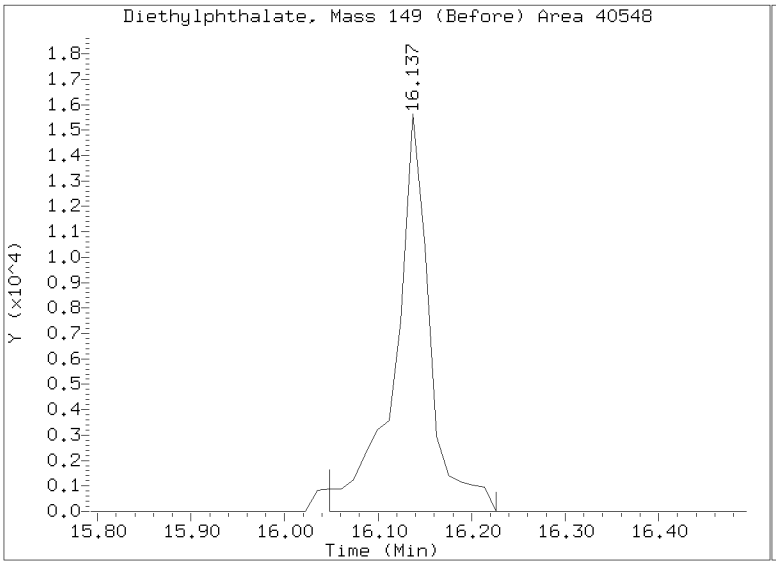
Datafile: //target/share/chem3/nt17.i/20230601.b/SIM.b/NT1706012336S.D
Injection Date: 02-JUN-2023 09:47
Lab ID:23E0009-07 Client ID:
Report Date: 06/06/2023 11:44

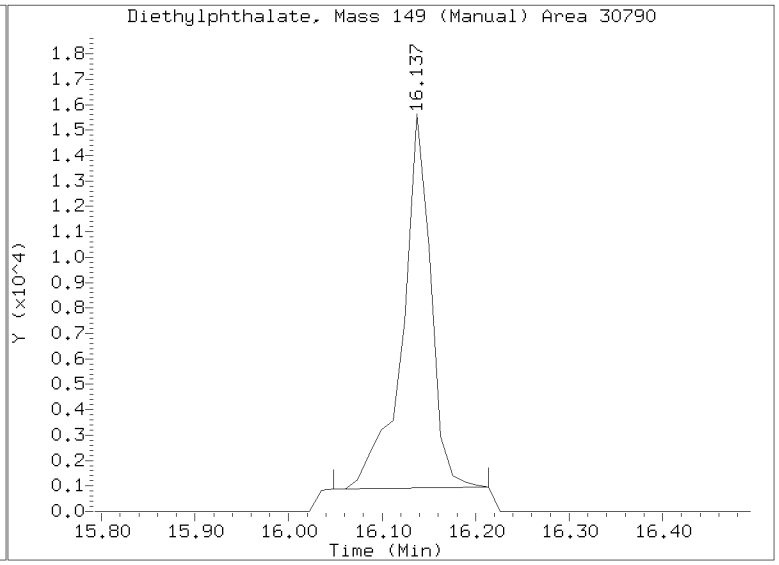












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1820

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-08 A	SDG:	23E0009
Sampled:	04/29/23 14:10	Prepared:	05/13/23 12:36	File ID:	N823052224.D
% Solids:	54.29	Preparation:	EPA 3546 (Microwave)	Analyzed:	05/22/23 22:22
Batch:	BLE0149	Sequence:	SLE0350	Initial/Final:	18.45 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GD00068
Cleanups:	GPC, Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	3	214	D	2.47	15.0
218-01-9	Chrysene	3	294	D	3.15	15.0
205-99-2	Benzo(b)fluoranthene	3	263	D	4.11	15.0
207-08-9	Benzo(k)fluoranthene	3	143	D	2.28	15.0
50-32-8	Benzo(a)pyrene	3	250	D	1.84	15.0
193-39-5	Indeno(1,2,3-cd)pyrene	3	258	D	3.14	15.0
53-70-3	Dibenzo(a,h)anthracene	3	64.6	D	2.67	15.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.75	109	72.8	32 - 120	
Dibenzo[a,h]anthracene-d14	149.75	206	138	21 - 133	*
Fluoranthene-d10	149.75	124	82.7	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

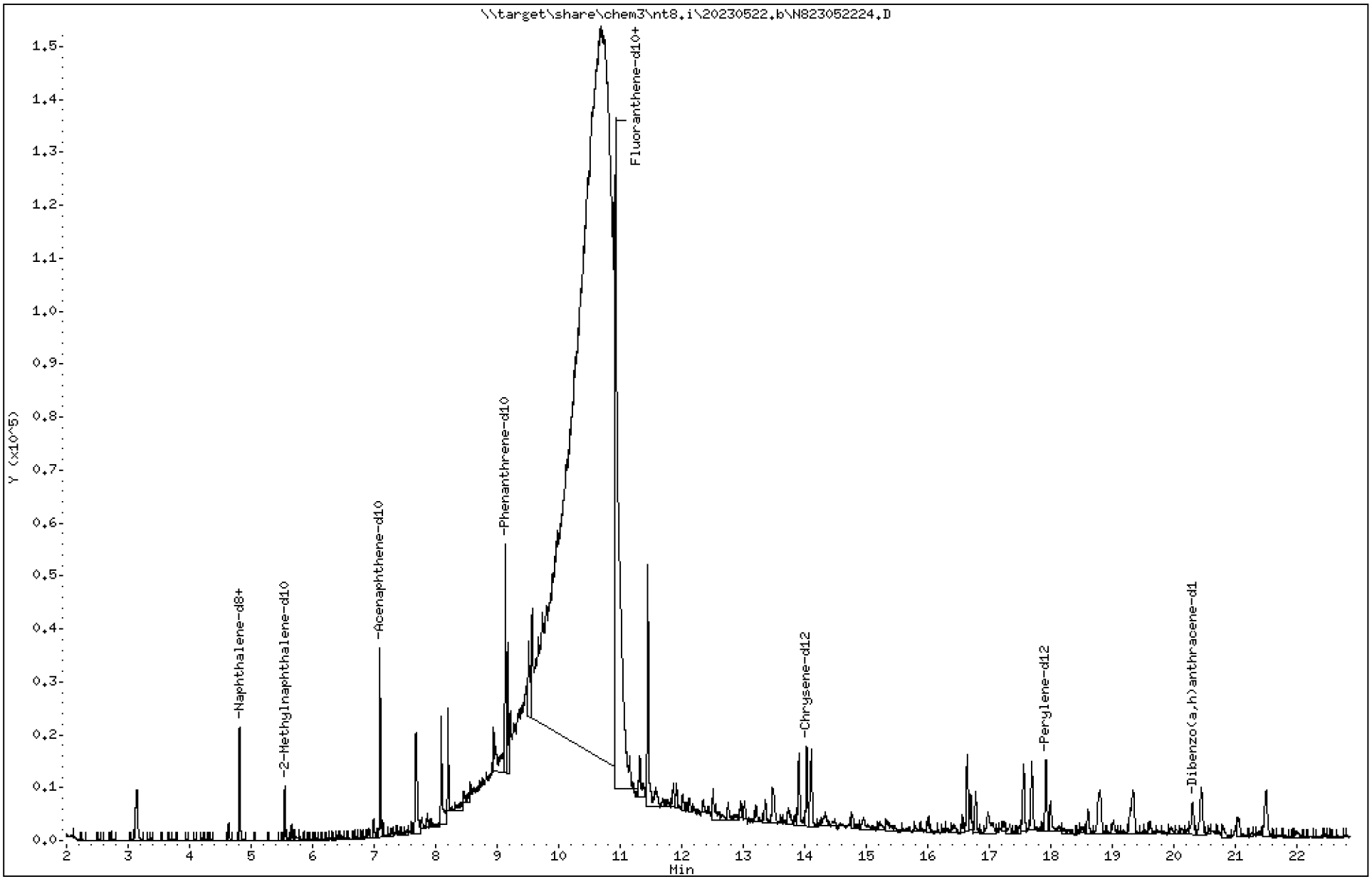
Instrument: nt8.i

Sample Info: 23E0009-08,3

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

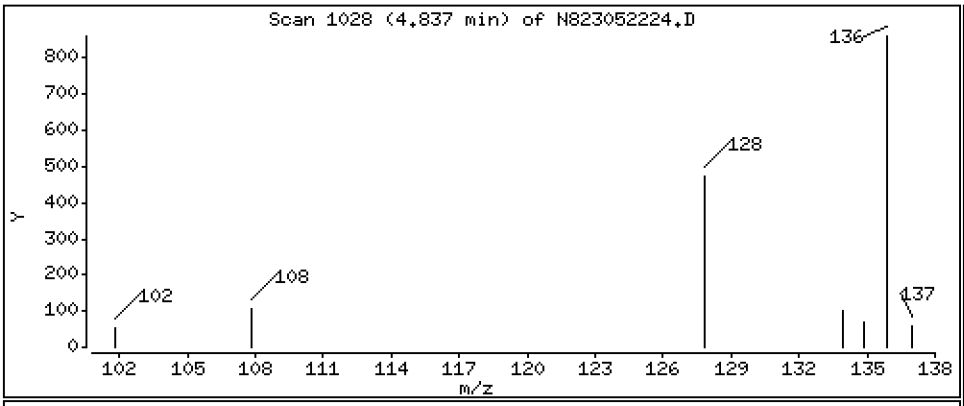
Operator: JZ

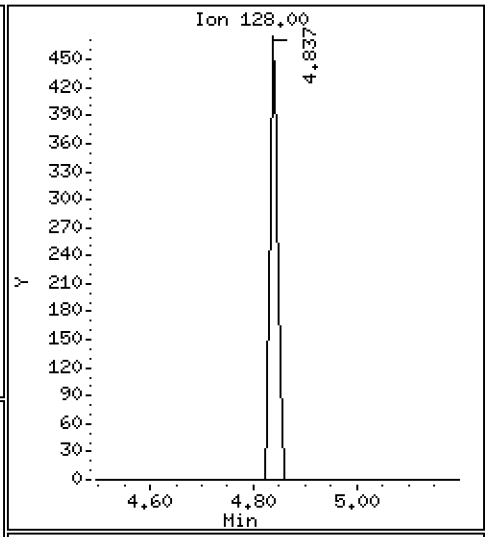
Column phase: Rxi-17sil

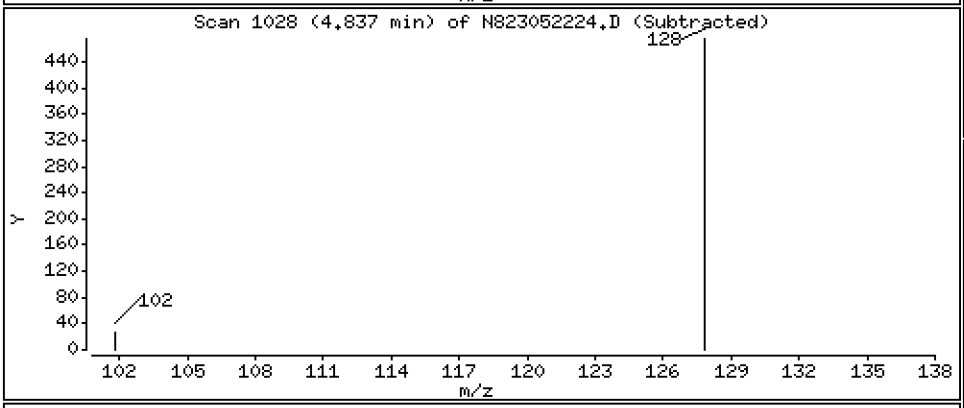
Column diameter: 0.25

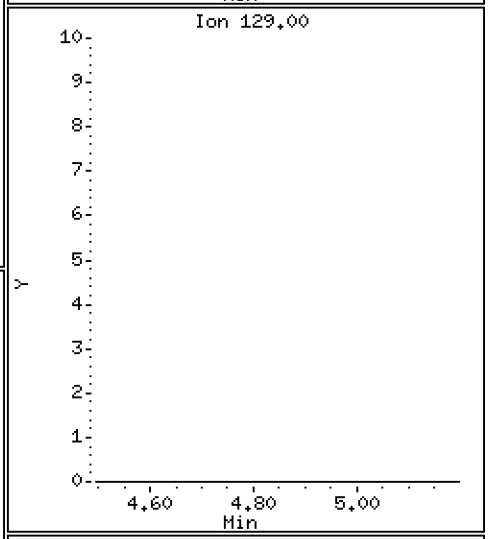
2 Naphthalene

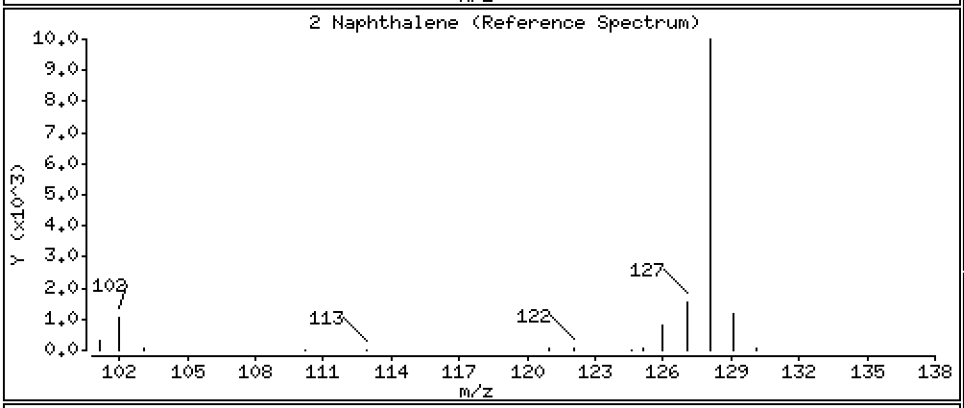
Concentration: 0.1625 ug/mL

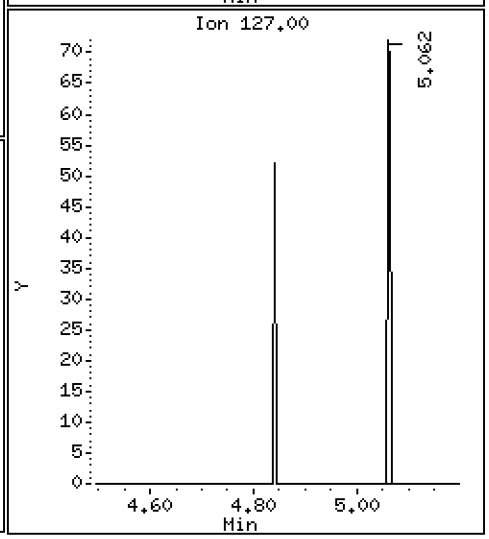


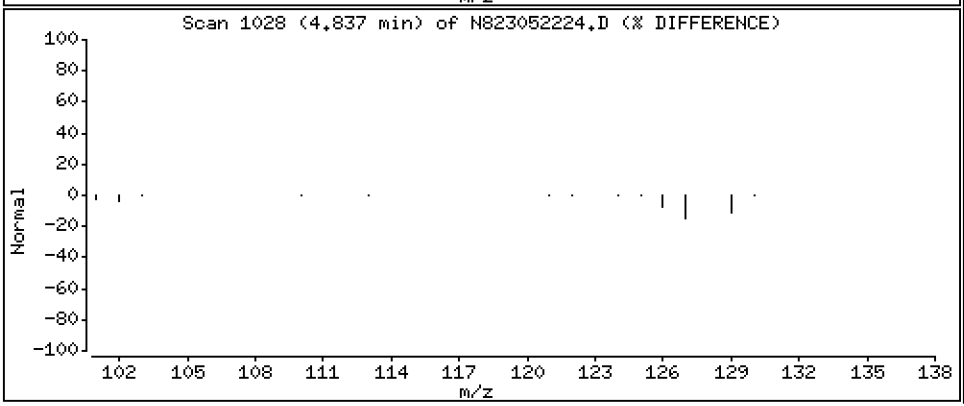












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

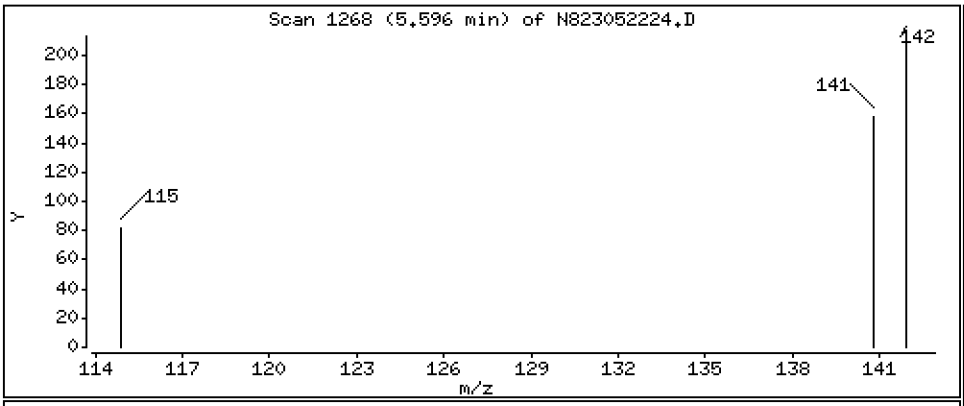
Operator: JZ

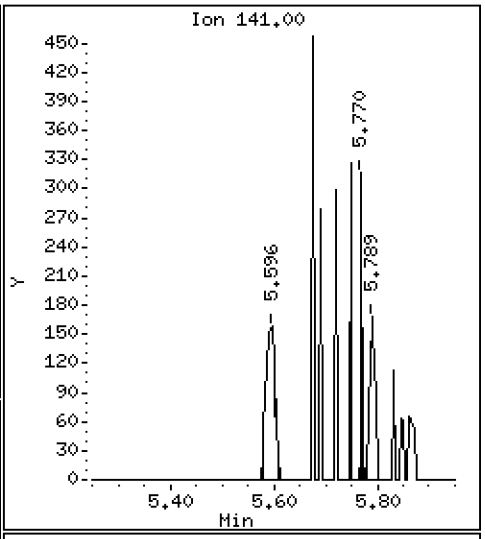
Column phase: Rxi-17sil

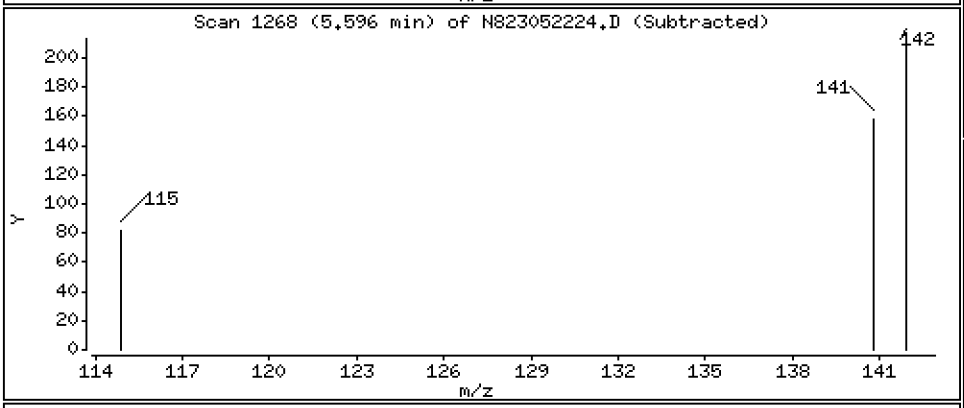
Column diameter: 0.25

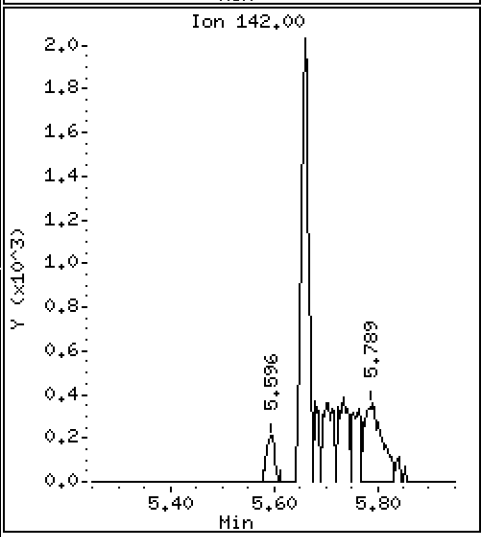
4 2-Methylnaphthalene

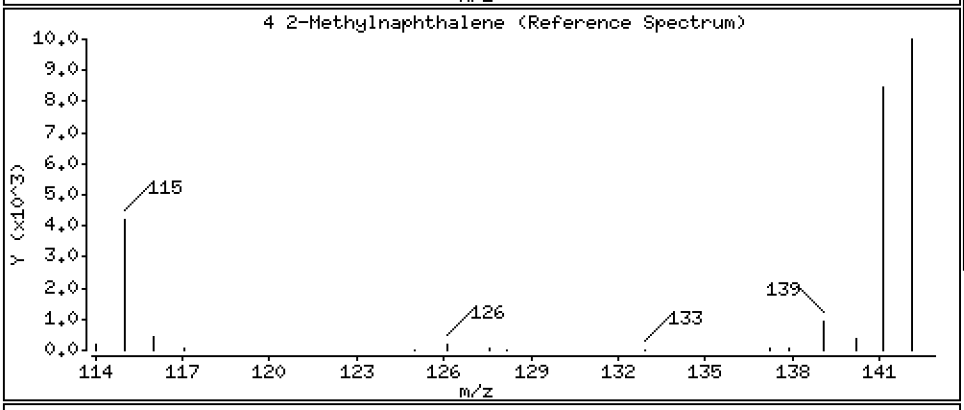
Concentration: 0.1085 ug/mL

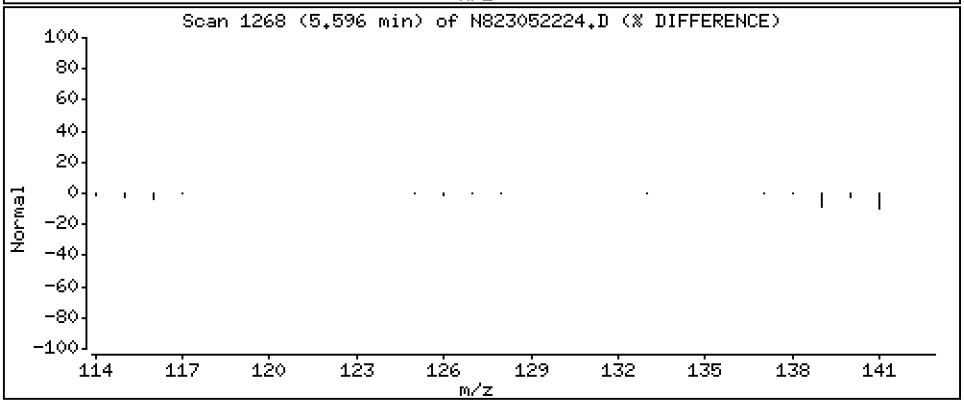












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

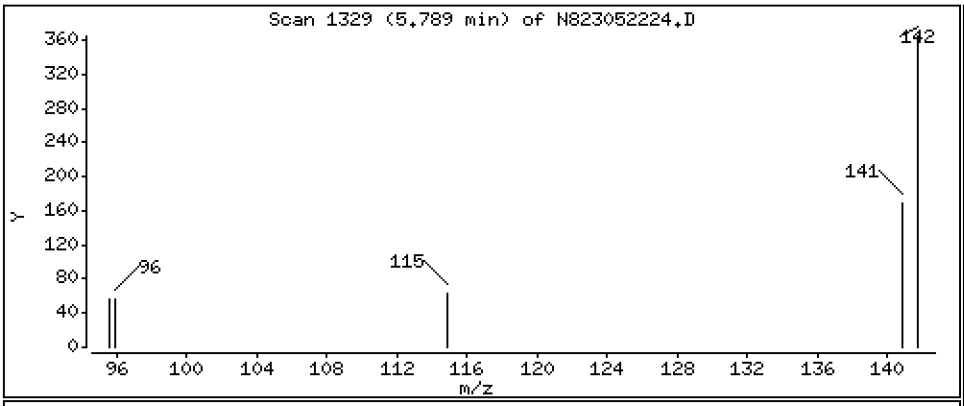
Operator: JZ

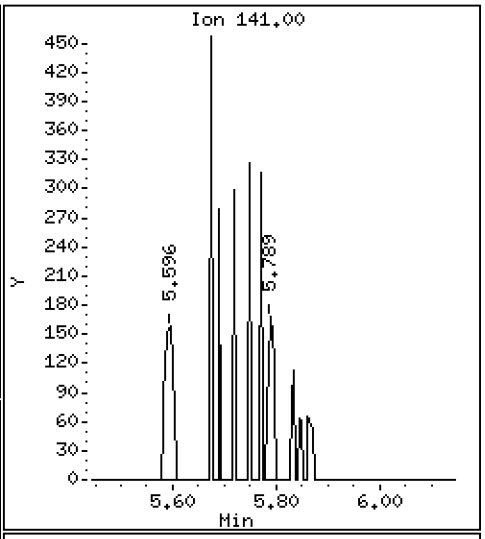
Column phase: Rxi-17sil

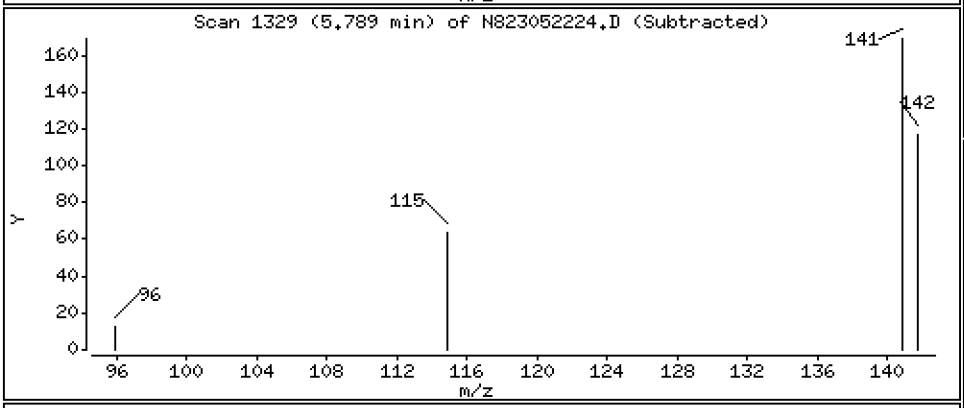
Column diameter: 0.25

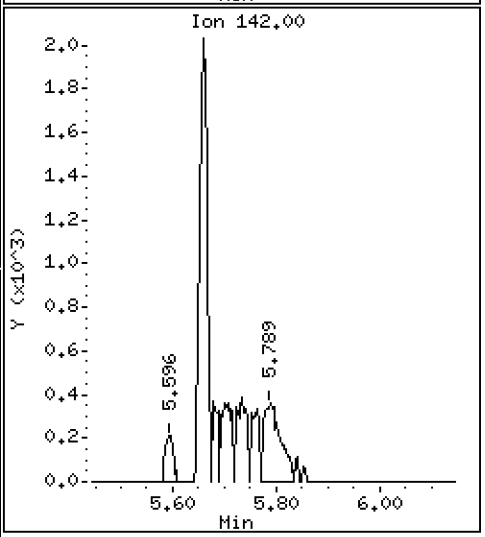
5 1-methylnaphthalene

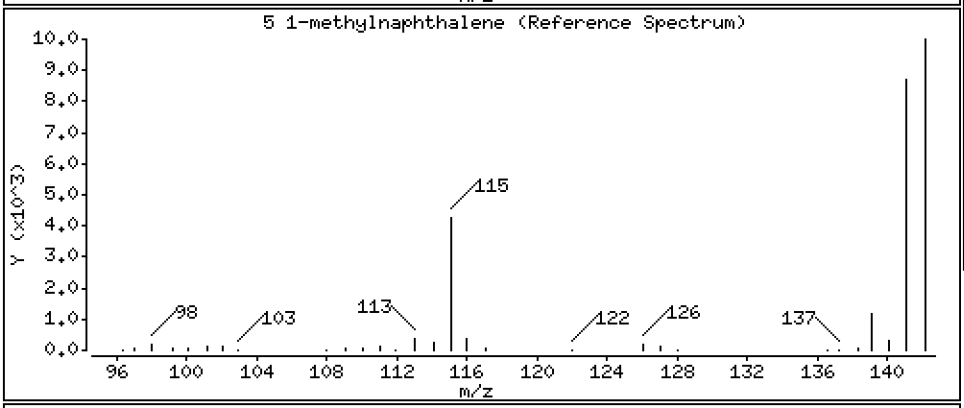
Concentration: 0.07859 ug/mL

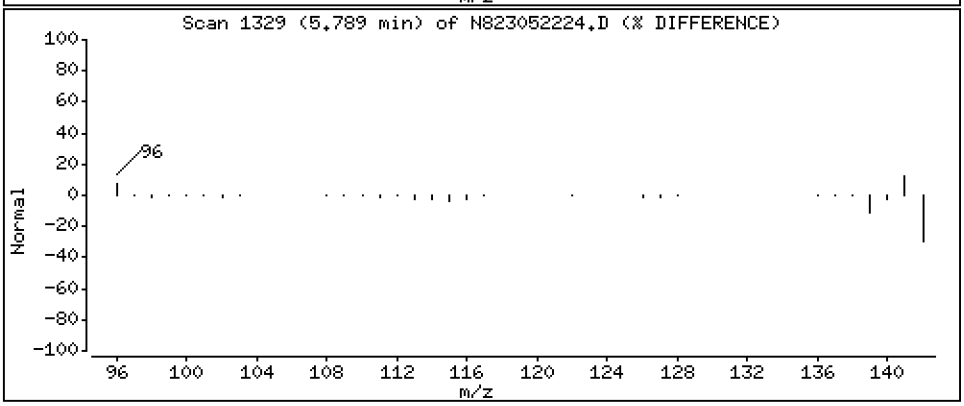












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

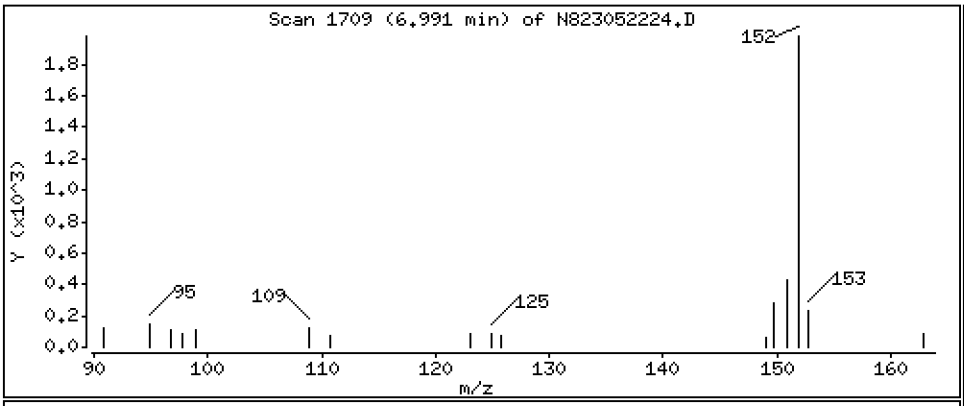
Operator: JZ

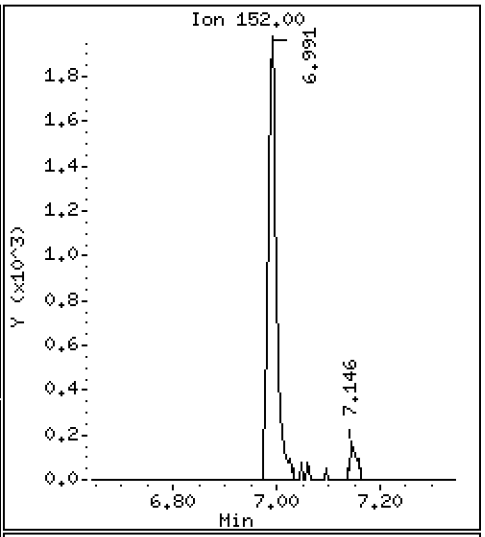
Column phase: Rxi-17sil

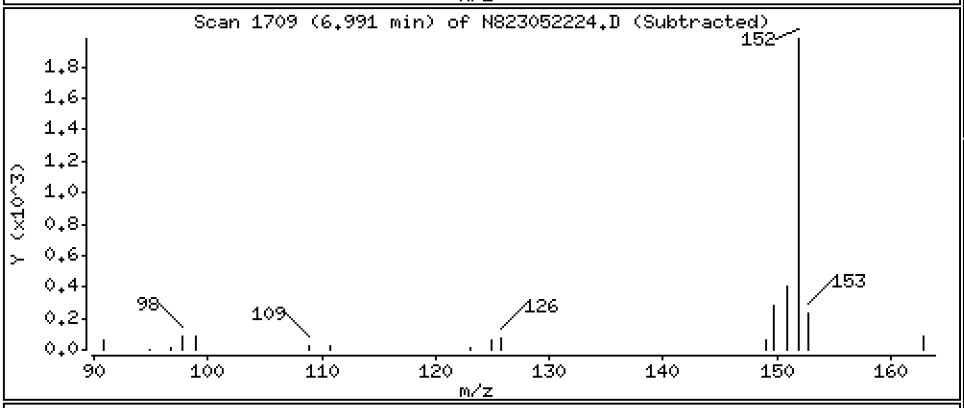
Column diameter: 0.25

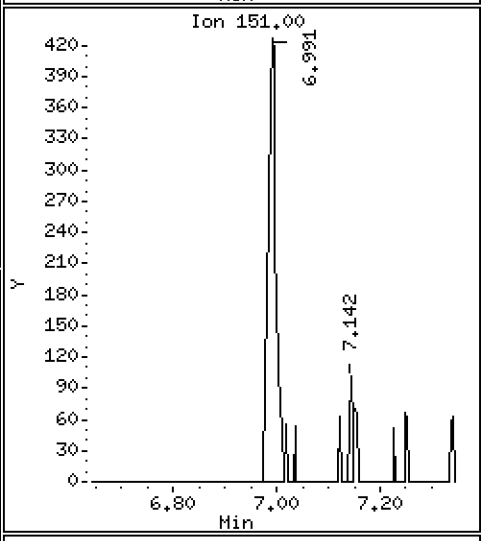
9 Acenaphthylene

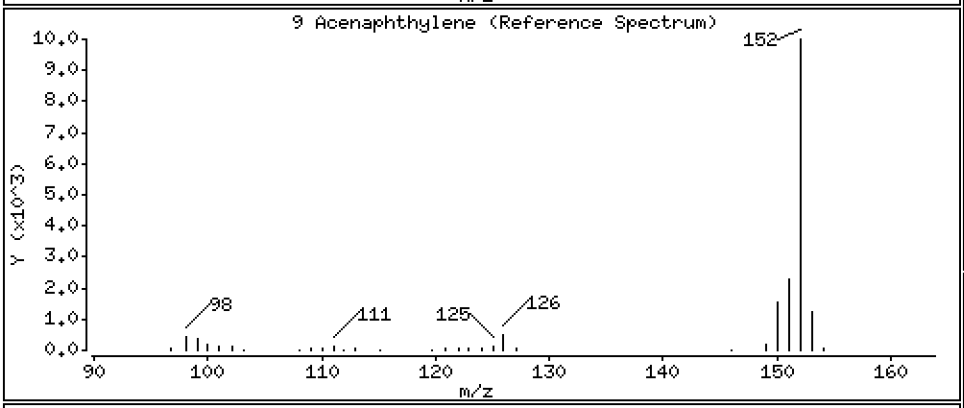
Concentration: 0.7141 ug/mL

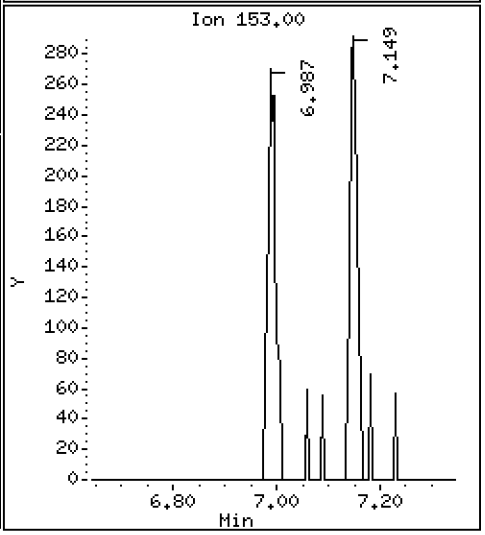


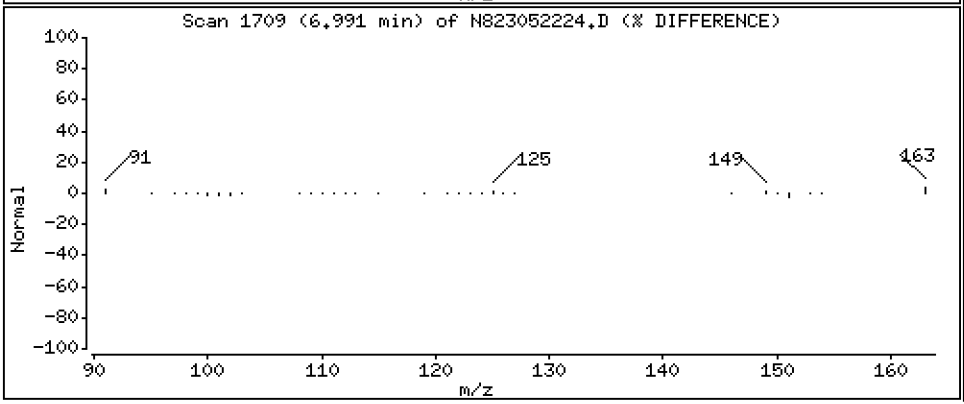












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

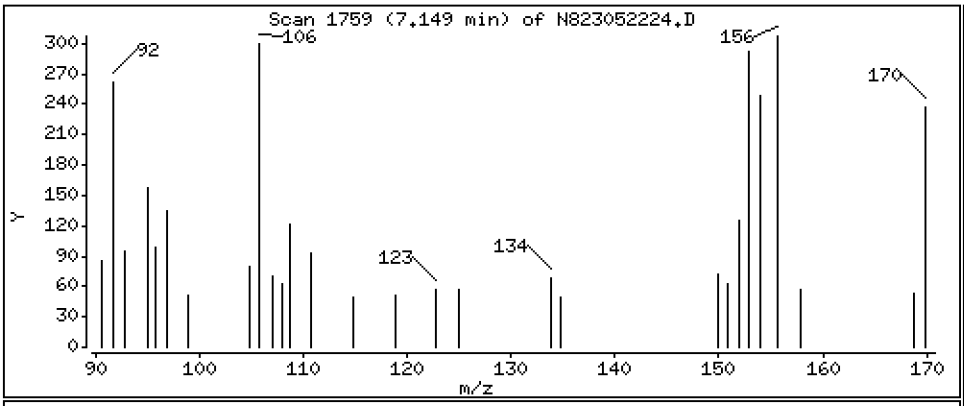
Operator: JZ

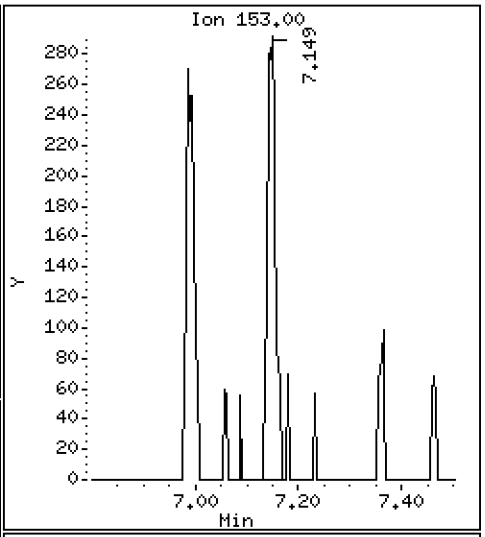
Column phase: Rxi-17sil

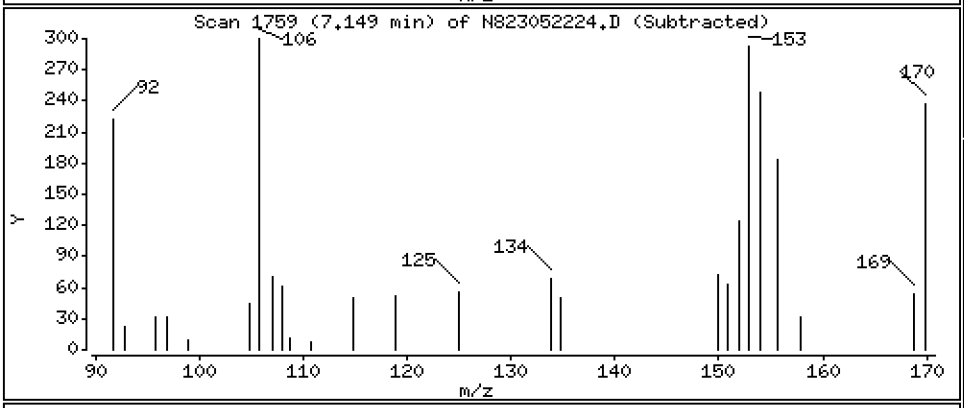
Column diameter: 0.25

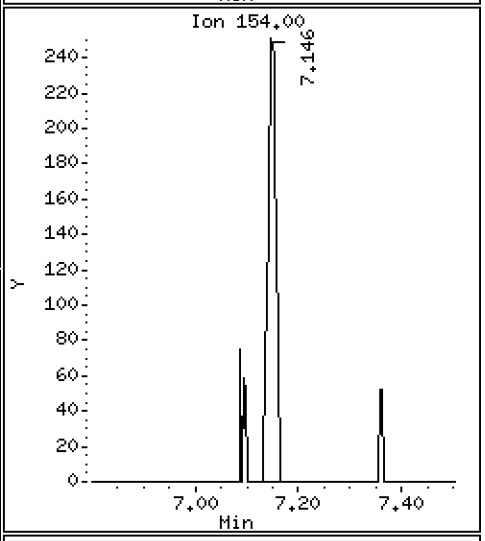
11 Acenaphthene

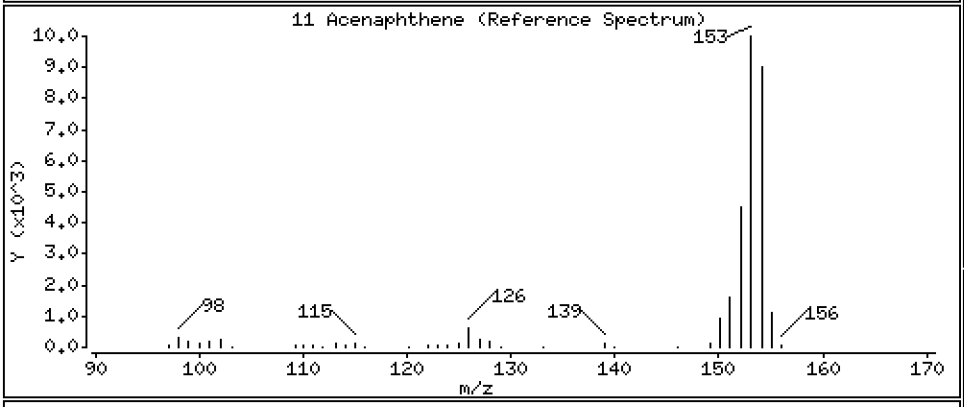
Concentration: 0.1602 ug/mL

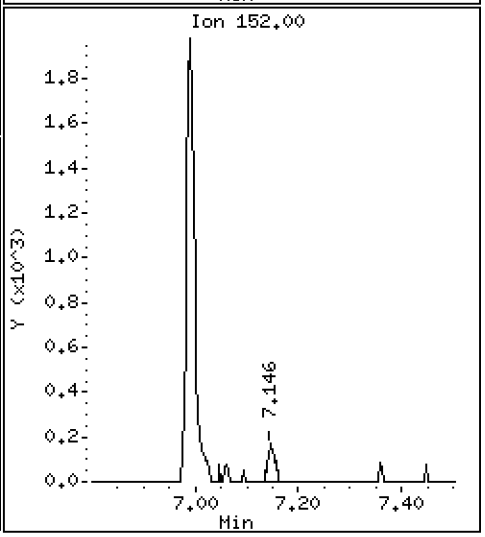


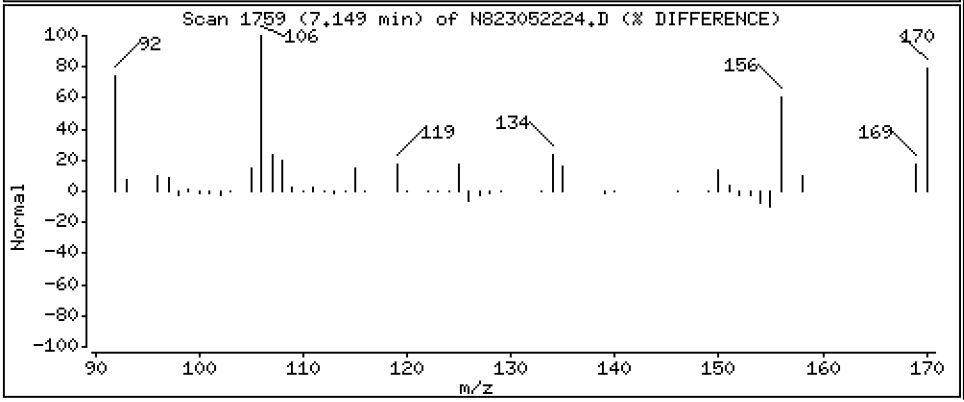












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

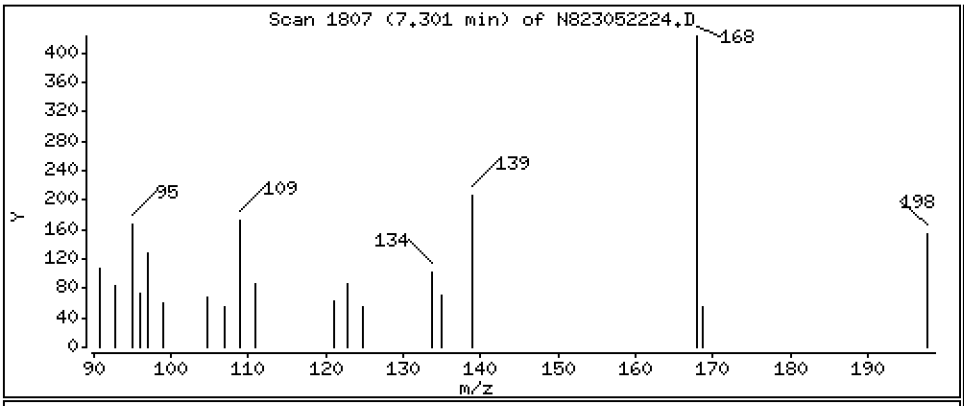
Operator: JZ

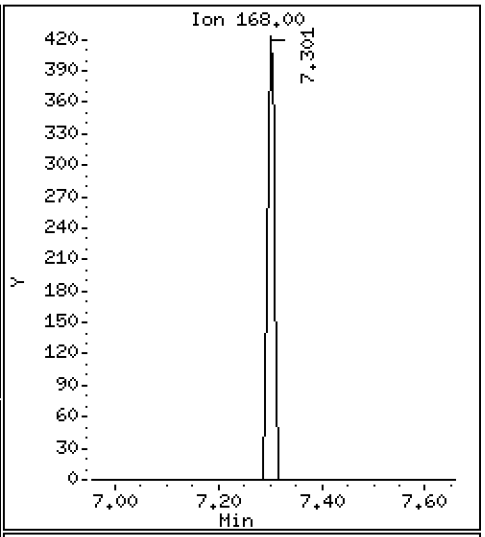
Column phase: Rxi-17sil

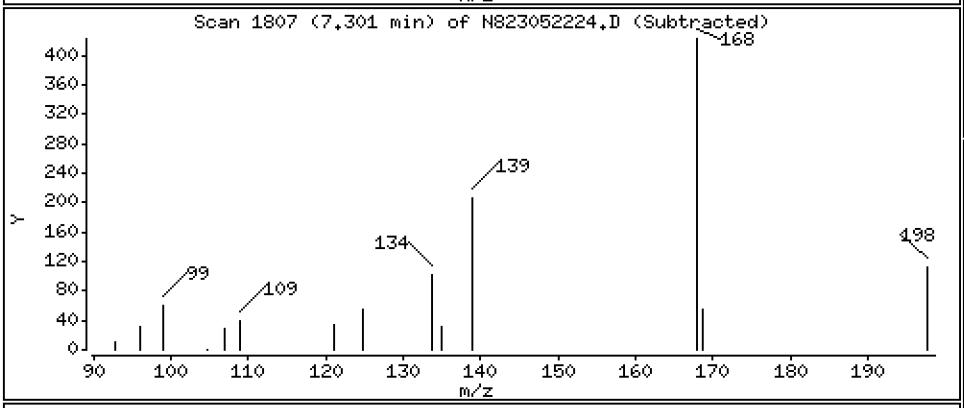
Column diameter: 0.25

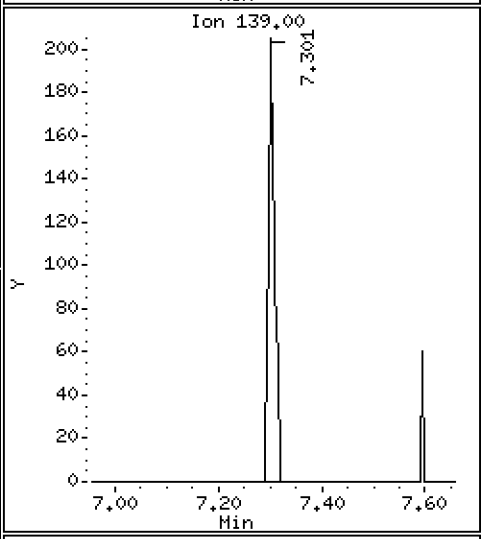
12 Dibenzofuran

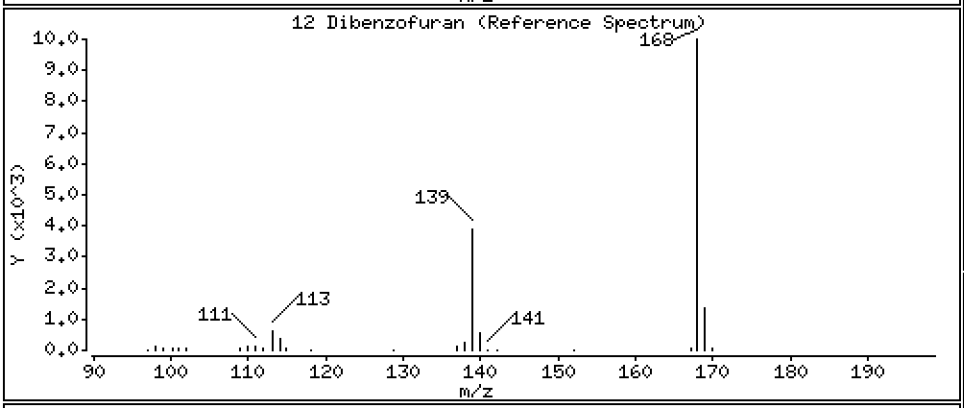
Concentration: 0.1286 ug/mL

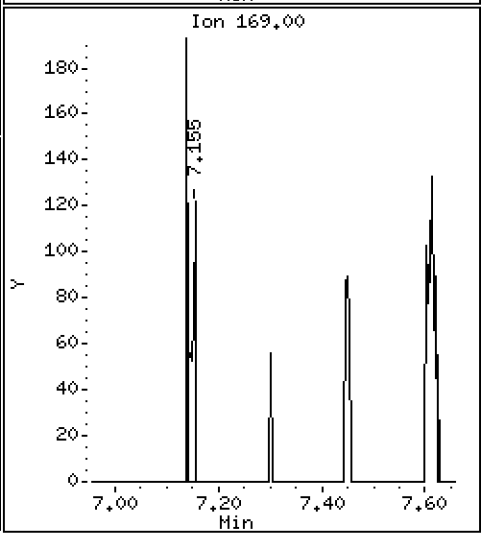


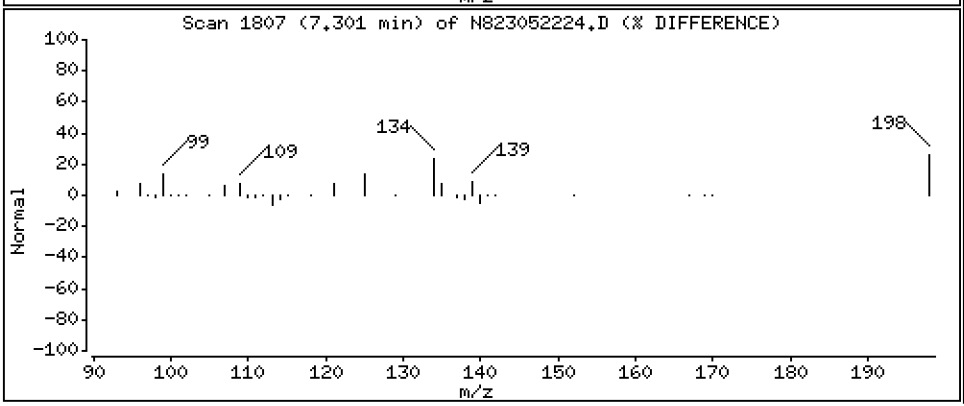












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

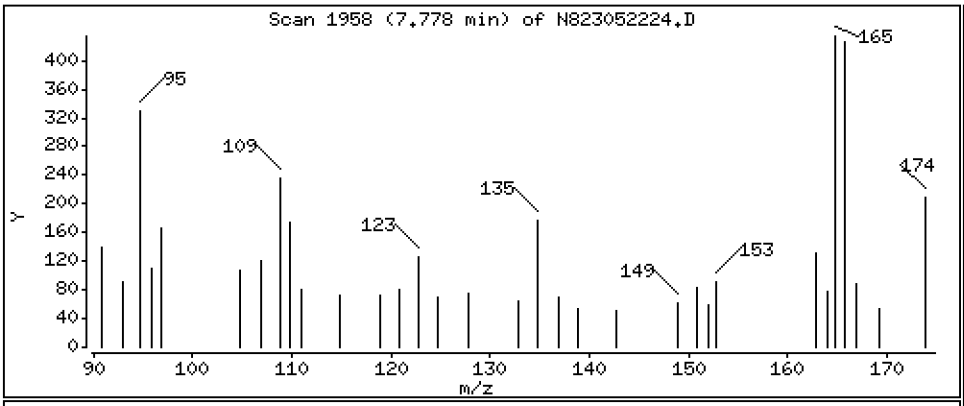
Operator: JZ

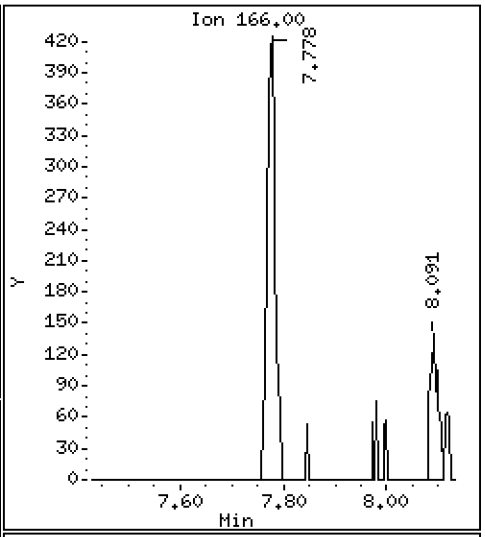
Column phase: Rxi-17sil

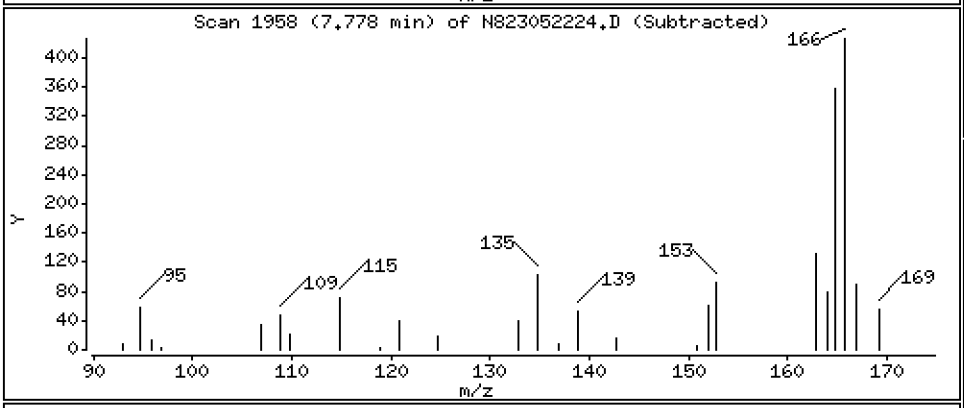
Column diameter: 0.25

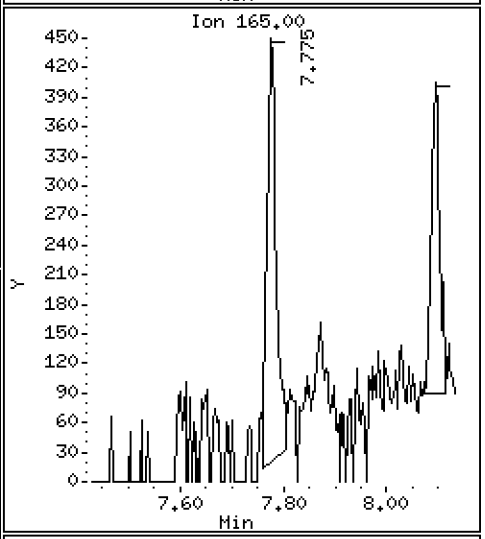
14 Fluorene

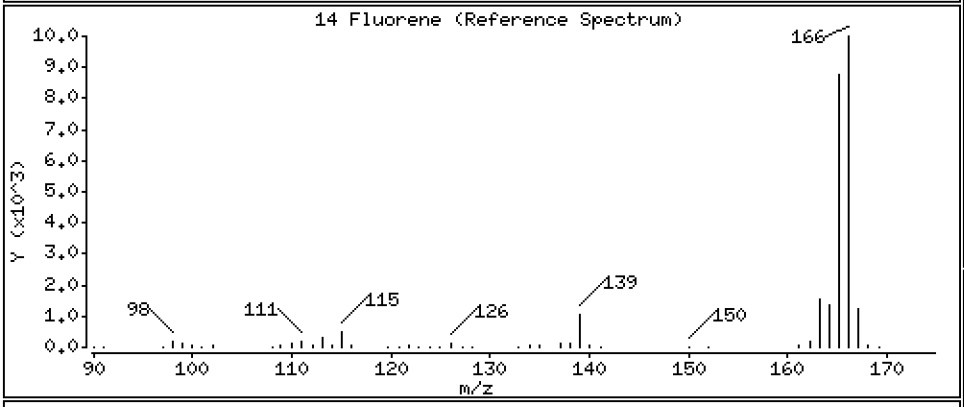
Concentration: 0.1949 ug/mL

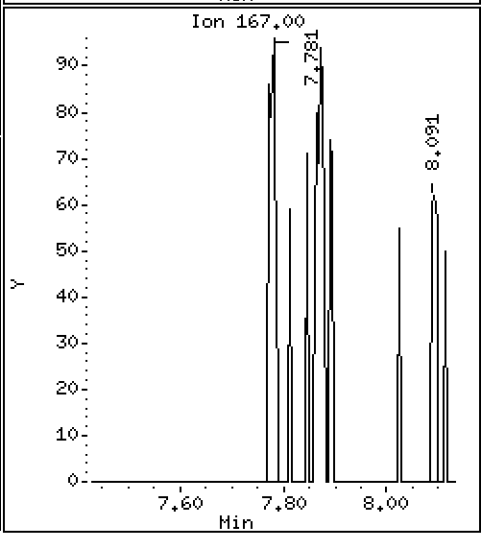


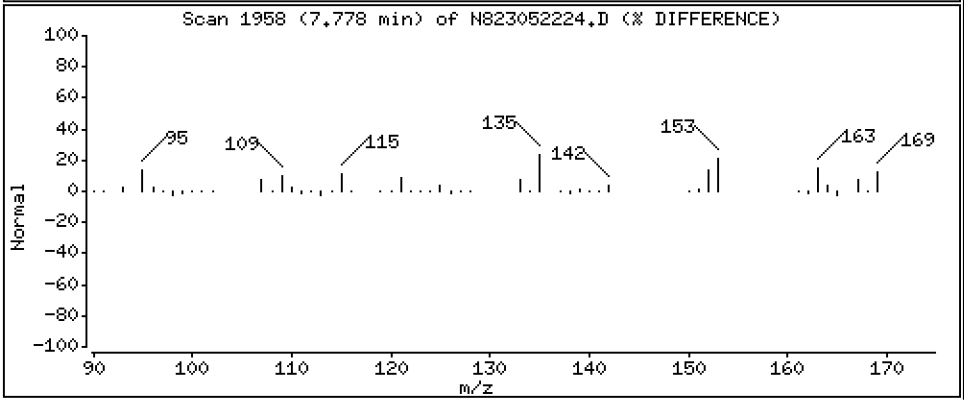












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

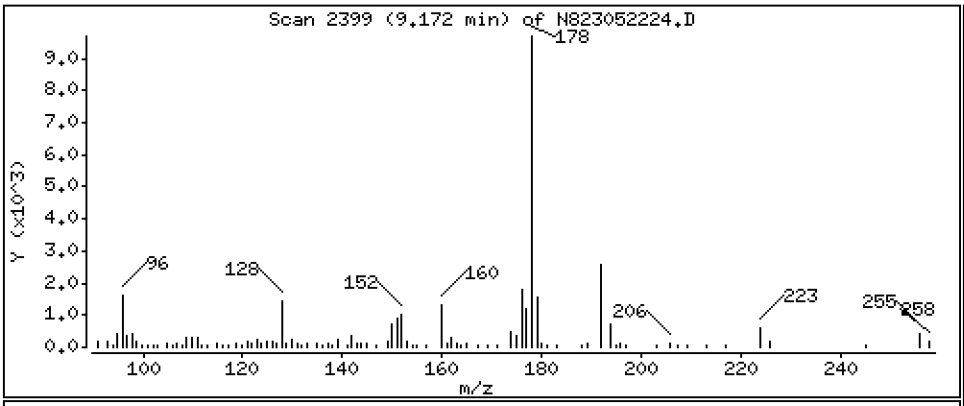
Operator: JZ

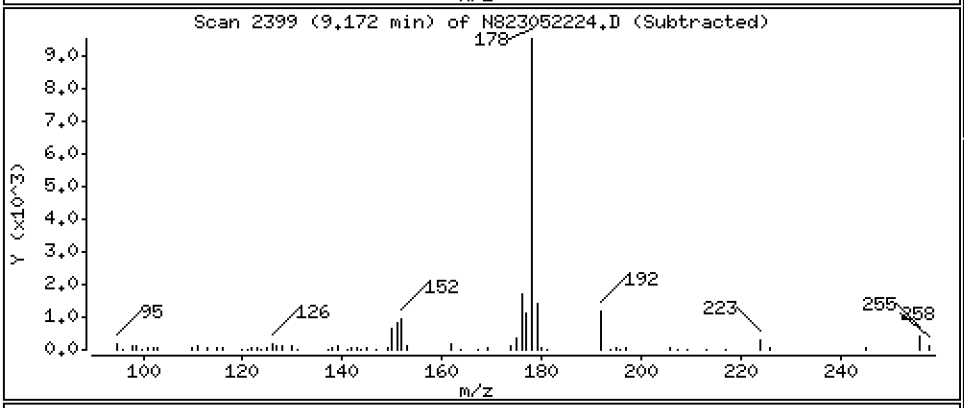
Column phase: Rxi-17sil

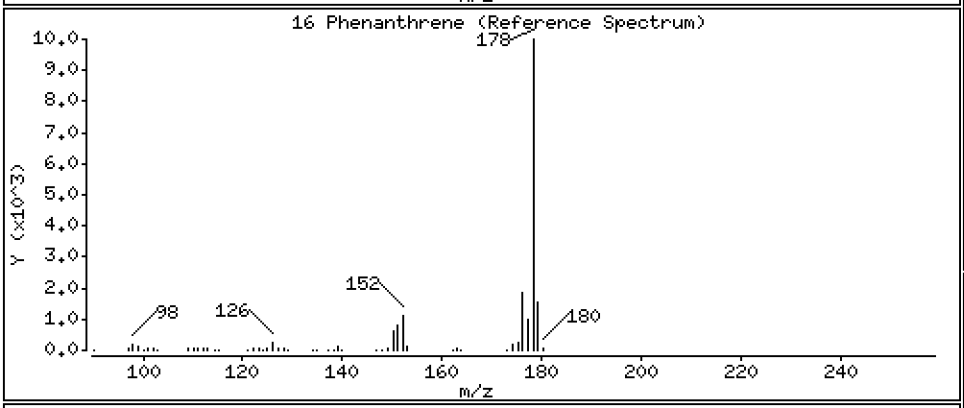
Column diameter: 0.25

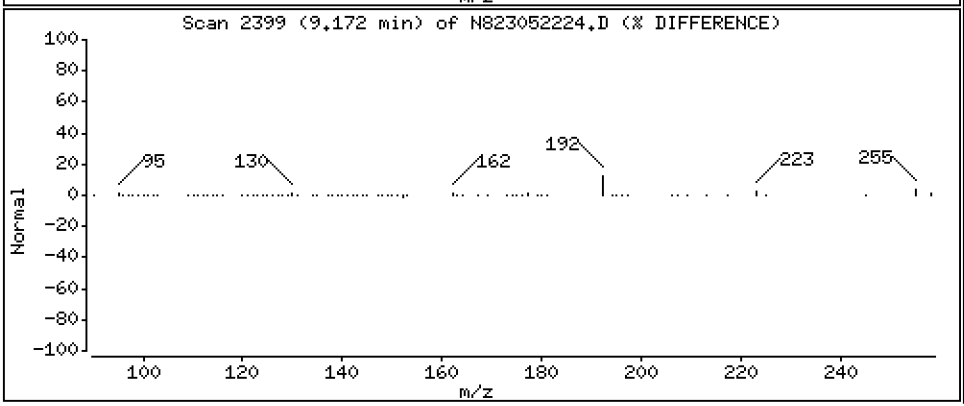
16 Phenanthrene

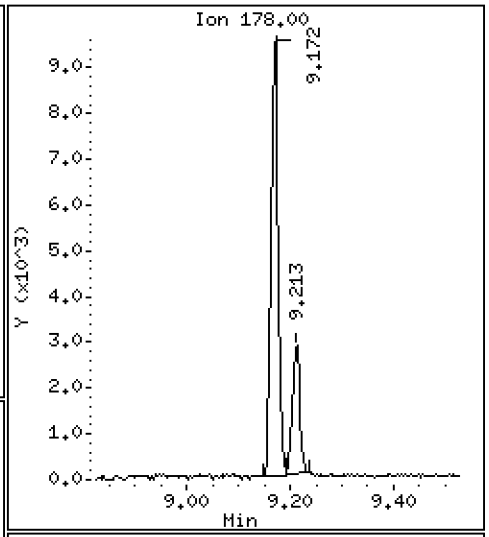
Concentration: 2.861 ug/mL

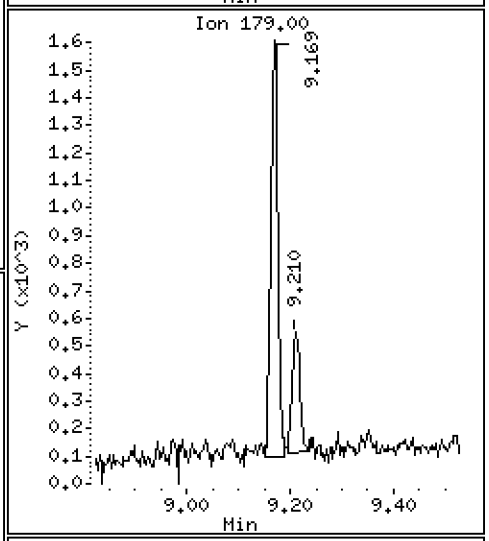


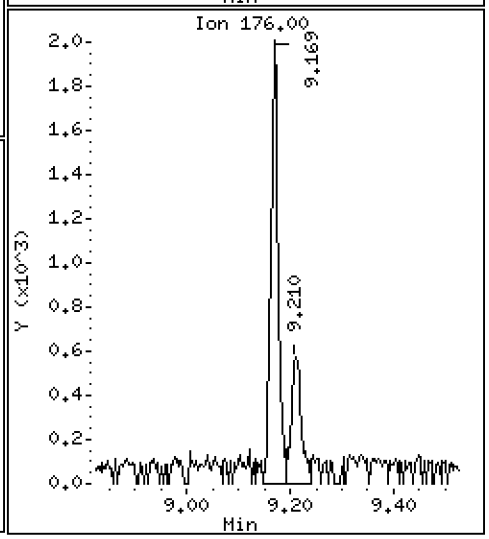












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

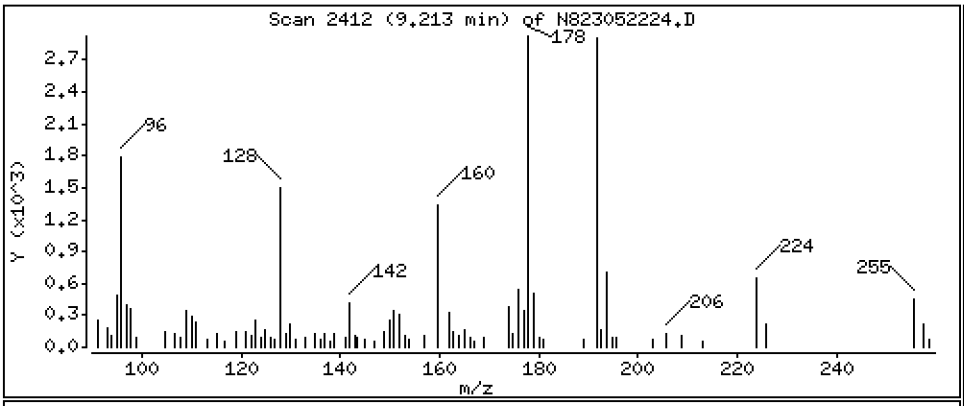
Operator: JZ

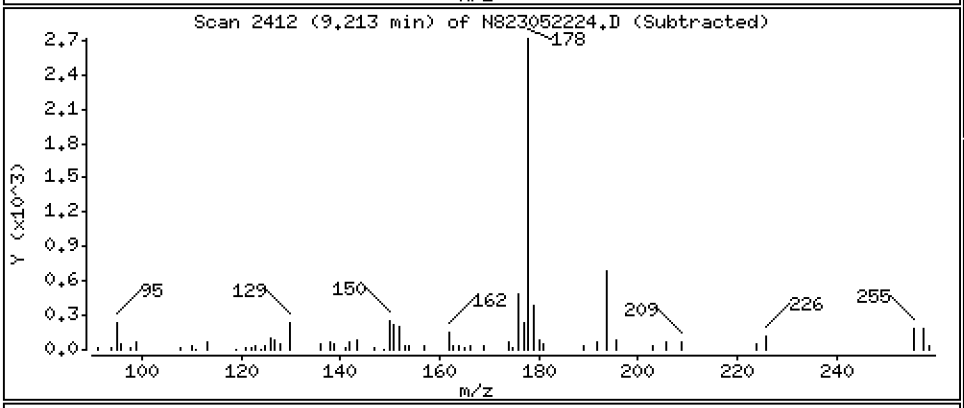
Column phase: Rxi-17sil

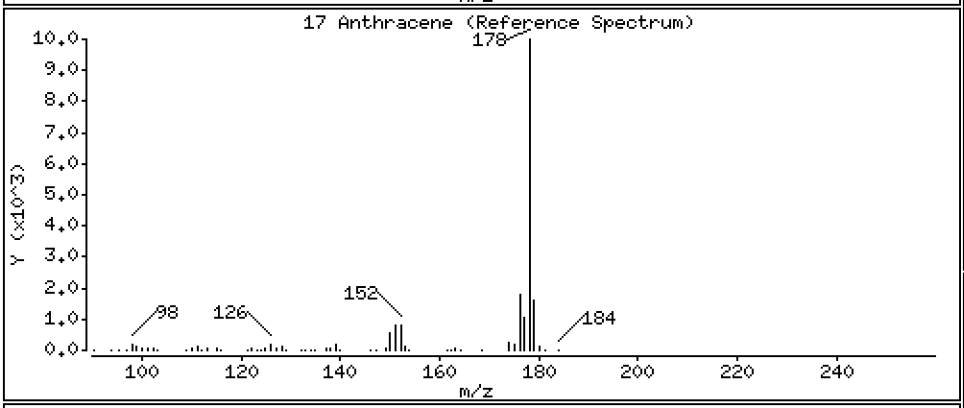
Column diameter: 0.25

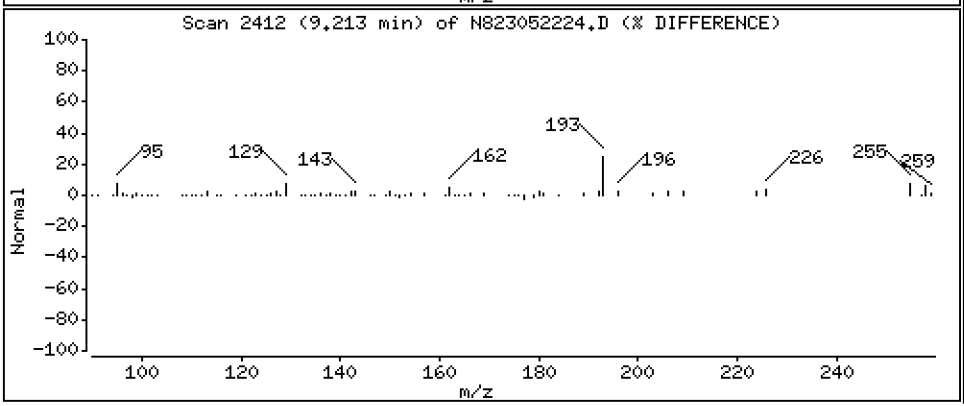
17 Anthracene

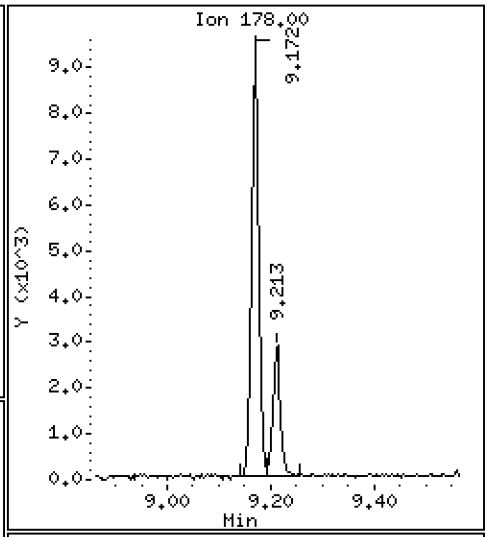
Concentration: 0.9738 ug/mL

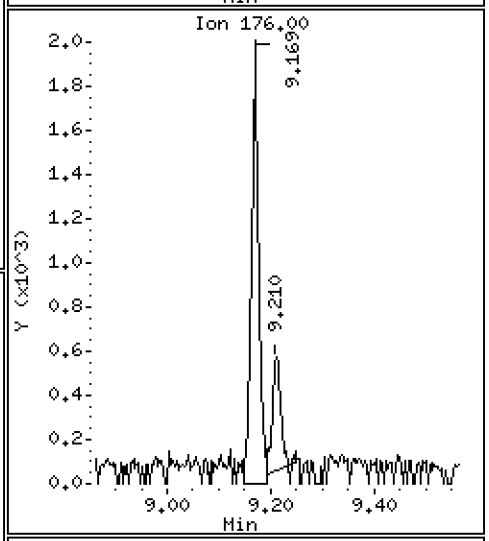


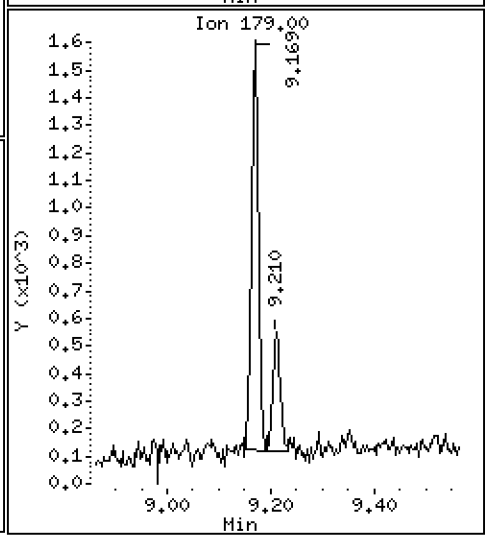












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

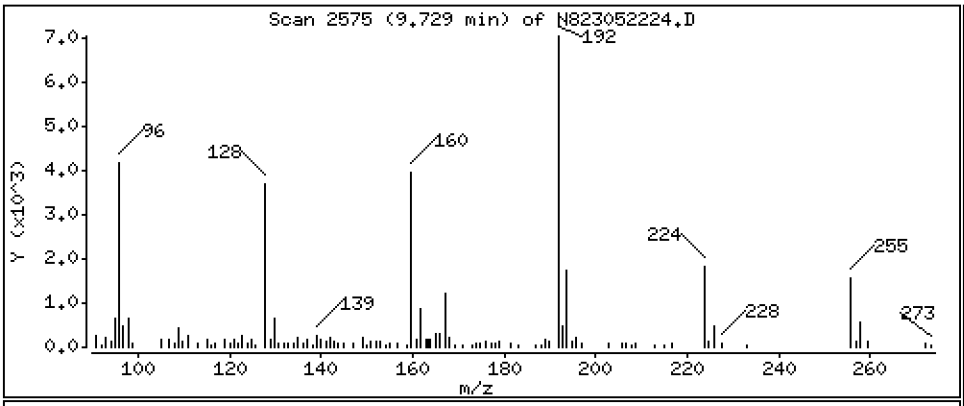
Operator: JZ

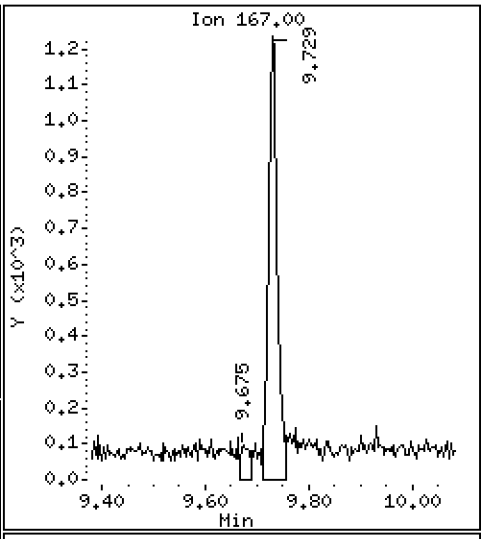
Column phase: Rxi-17sil

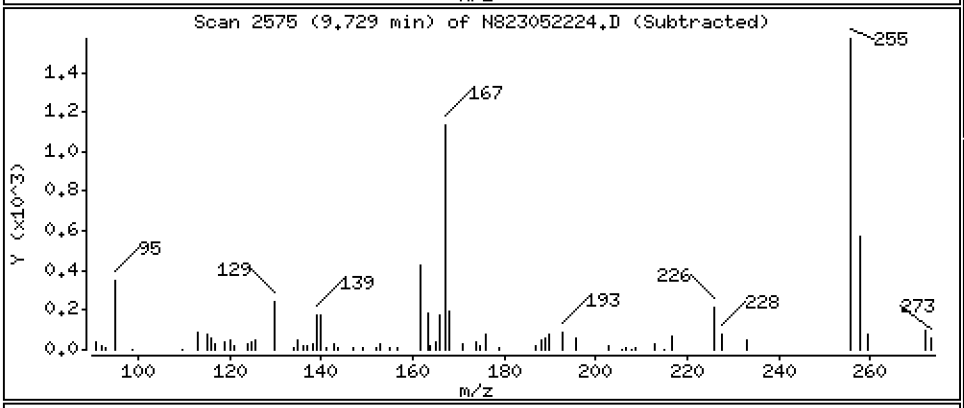
Column diameter: 0.25

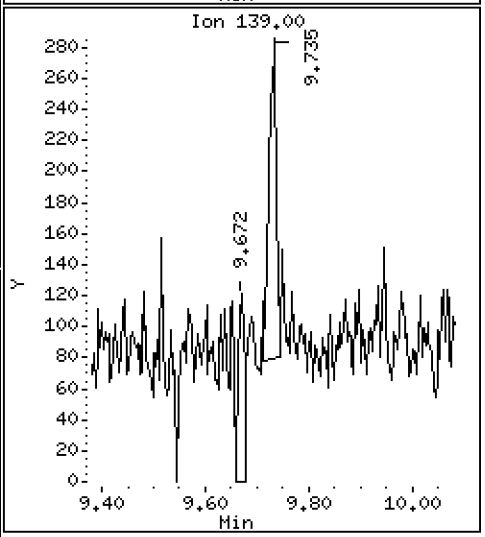
19 Carbazole

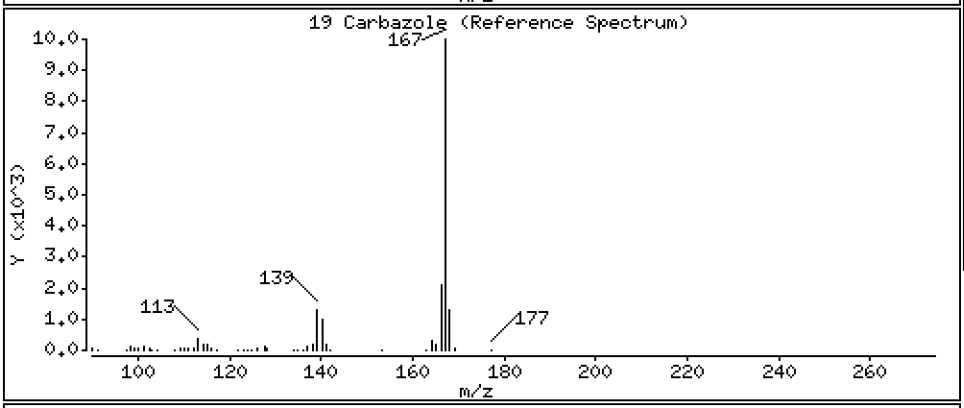
Concentration: 0.5142 ug/mL

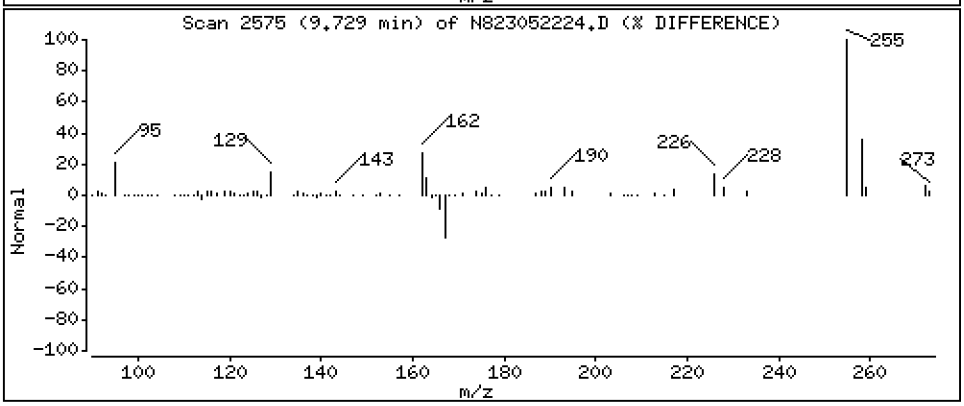












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

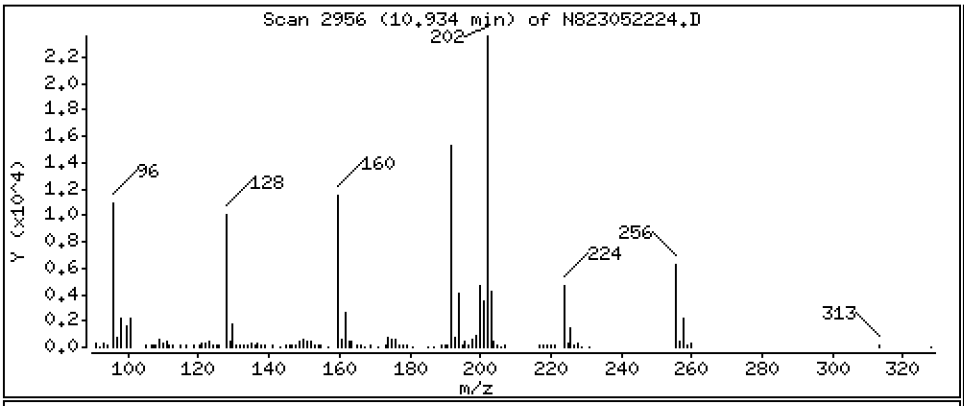
Operator: JZ

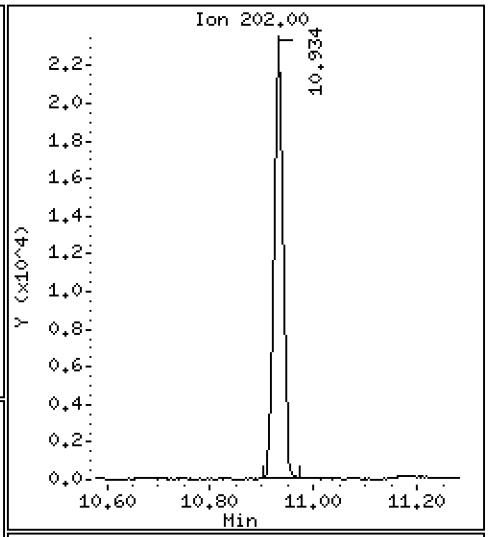
Column phase: Rxi-17sil

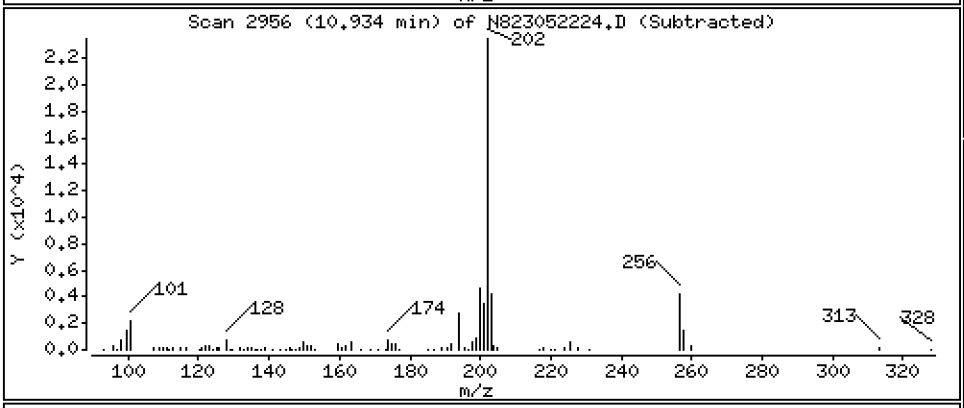
Column diameter: 0.25

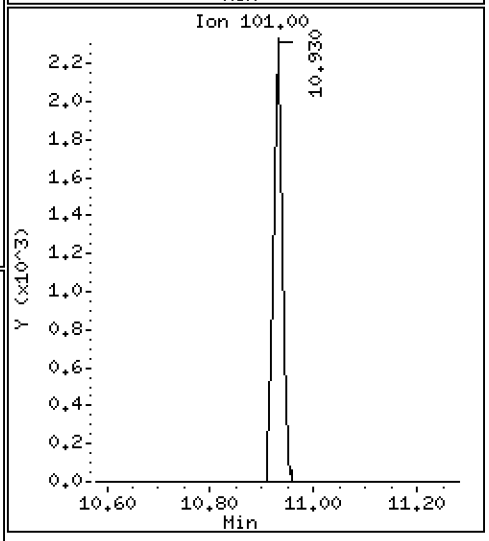
22 Fluoranthene

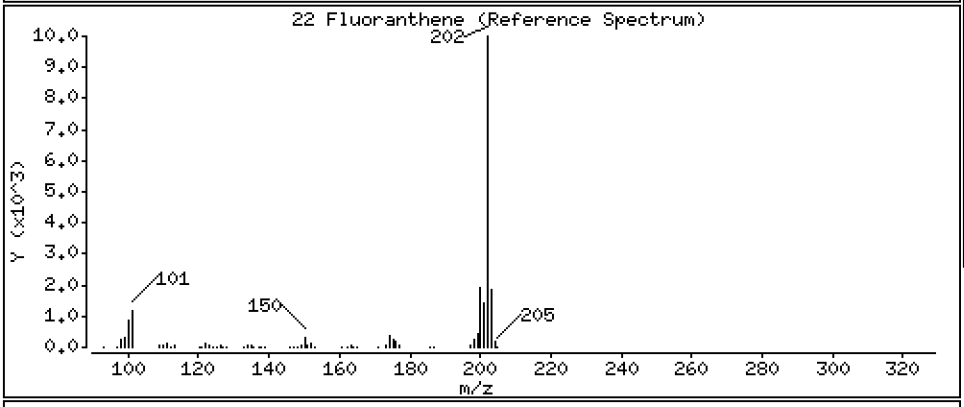
Concentration: 7.690 ug/mL

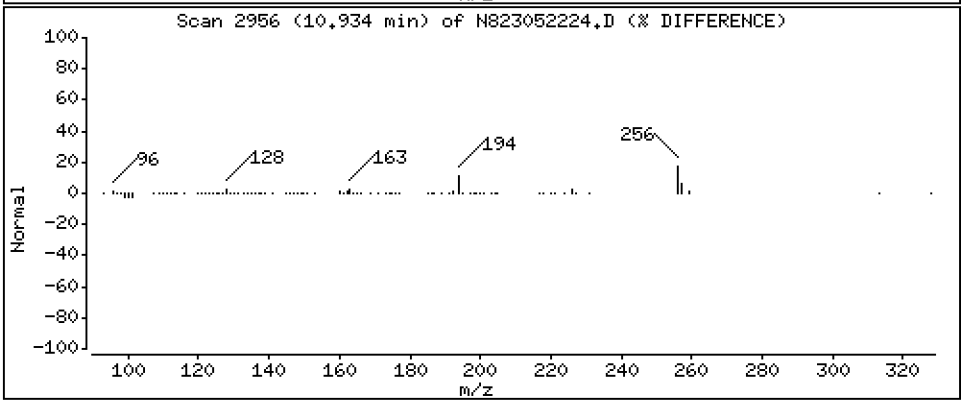












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

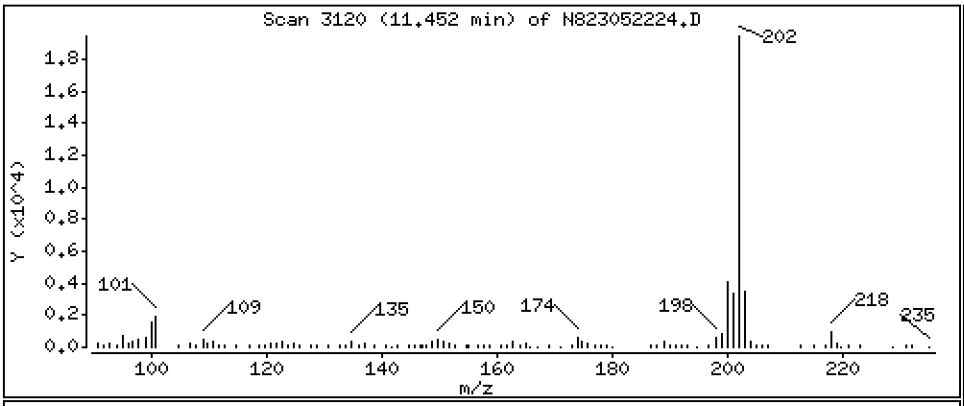
Operator: JZ

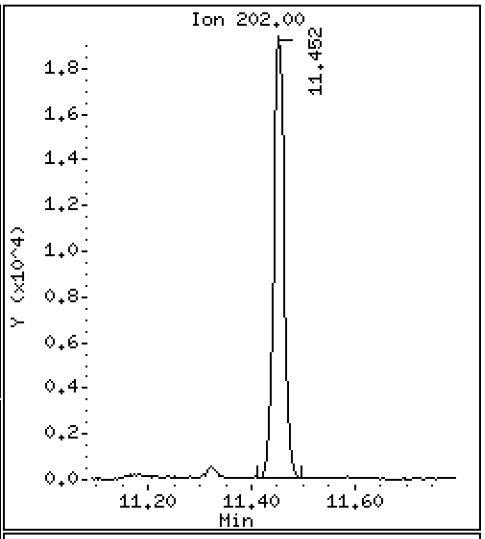
Column phase: Rxi-17sil

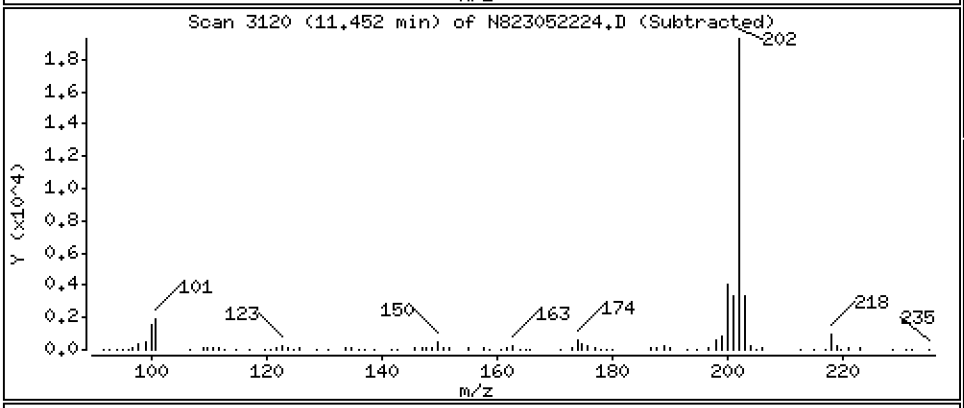
Column diameter: 0.25

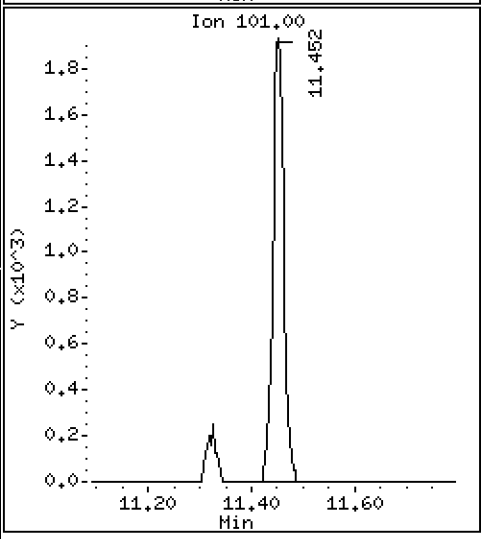
23 Pyrene

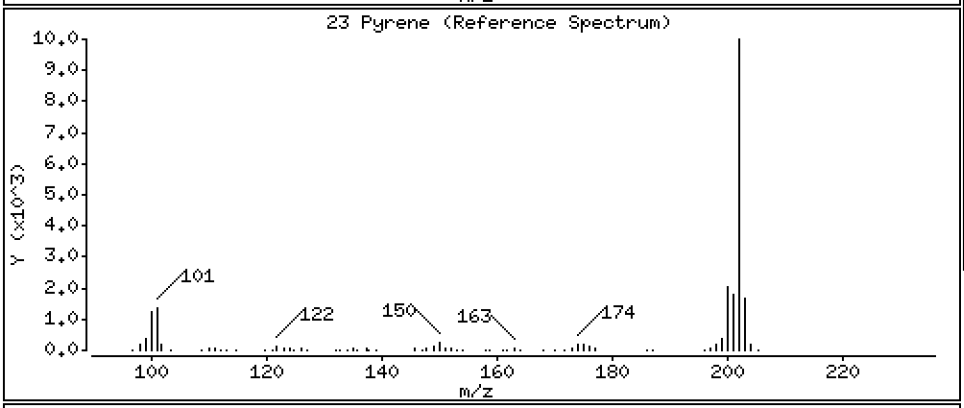
Concentration: 13.41 ug/mL

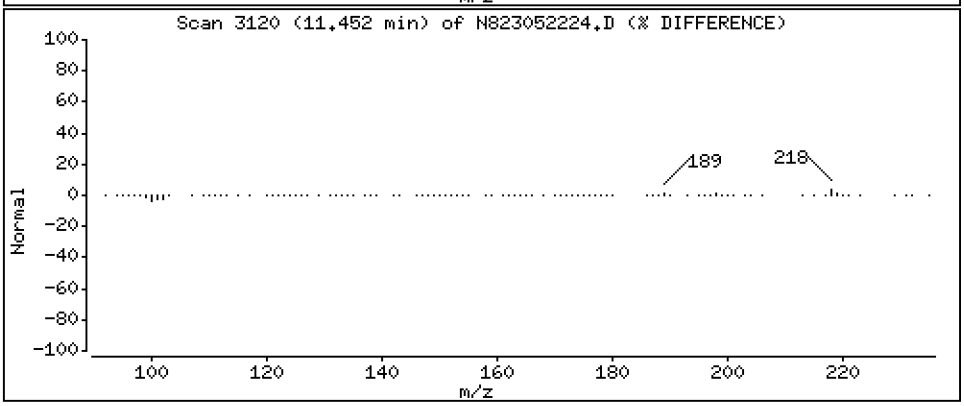












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

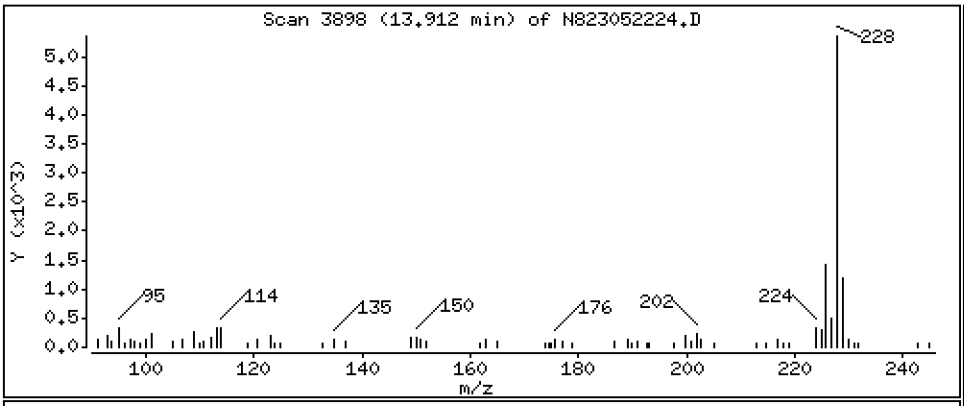
Operator: JZ

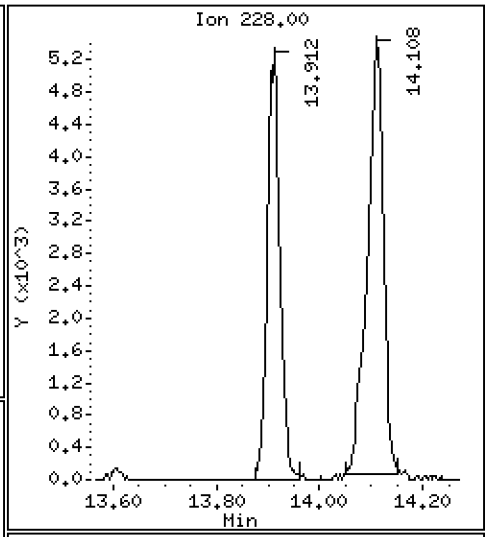
Column phase: Rxi-17sil

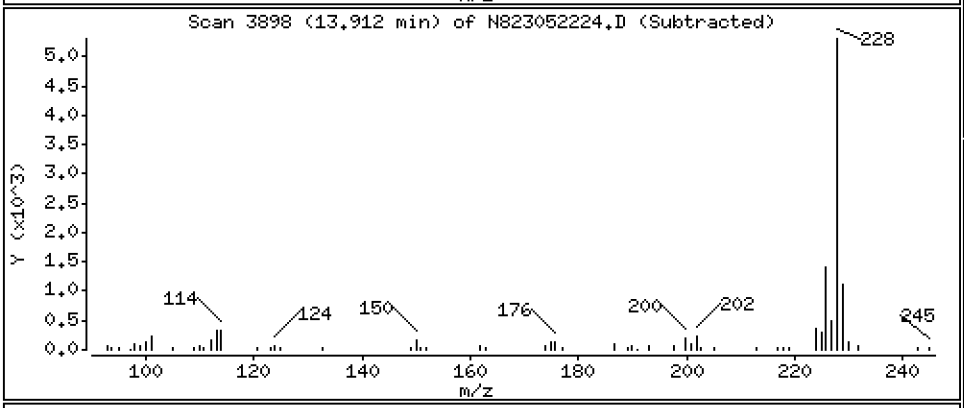
Column diameter: 0.25

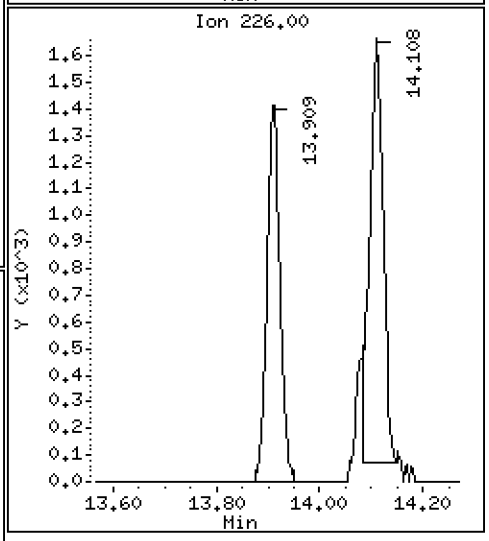
24 Benzo(a)anthracene

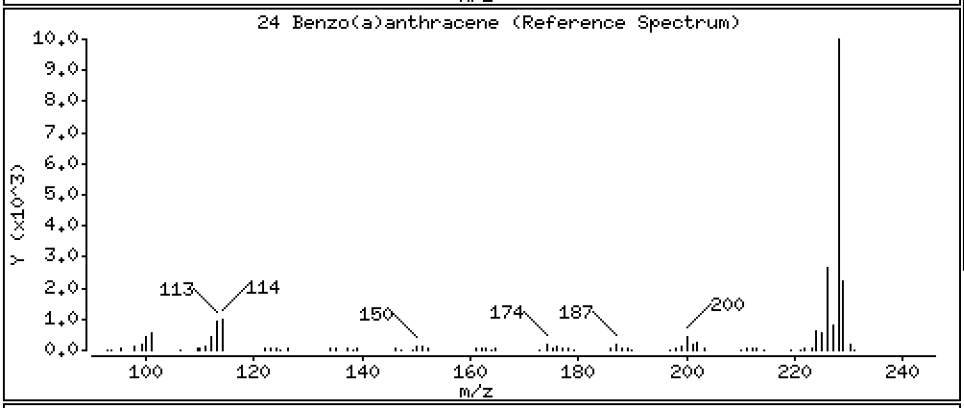
Concentration: 4.290 ug/mL

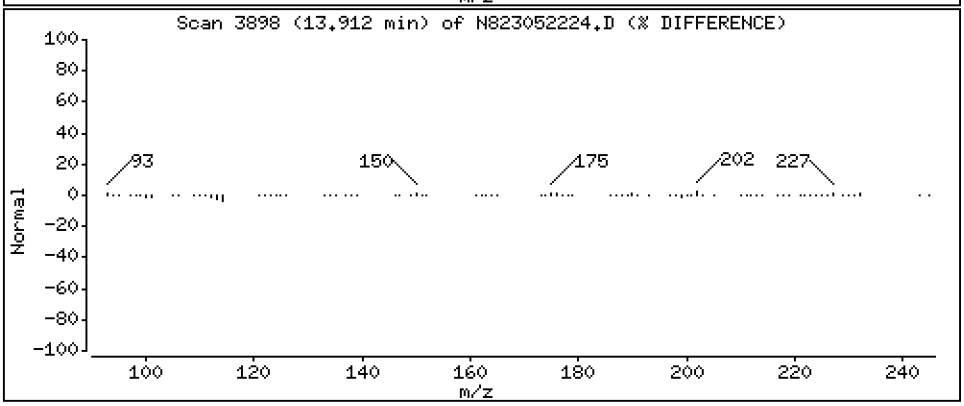












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

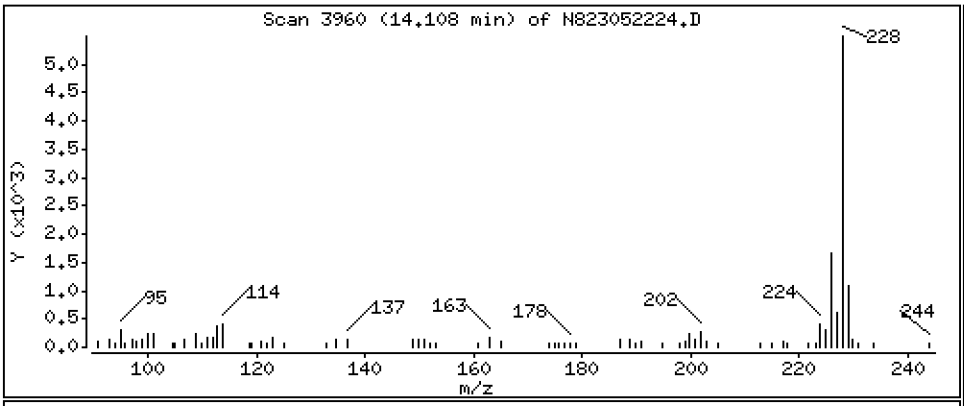
Operator: JZ

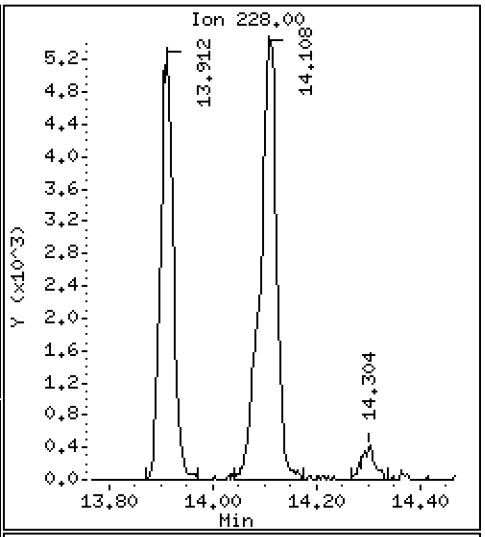
Column phase: Rxi-17sil

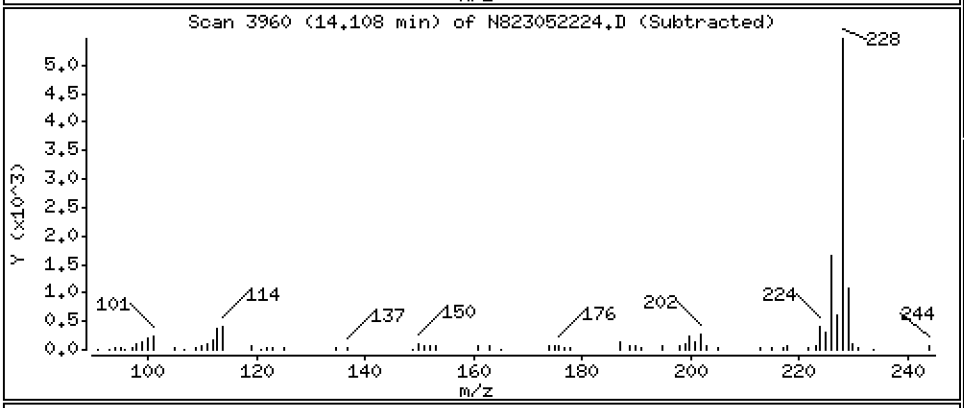
Column diameter: 0.25

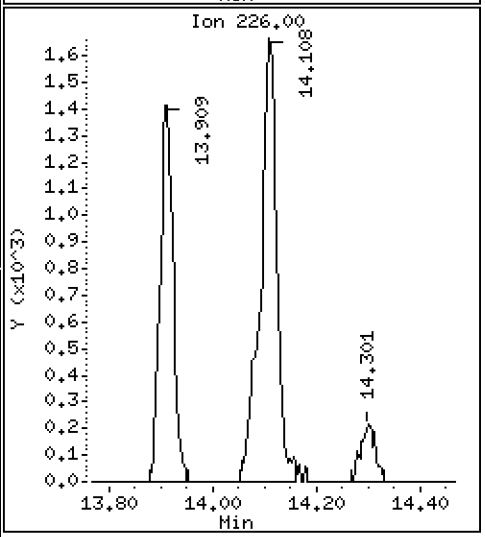
27 Chrysene

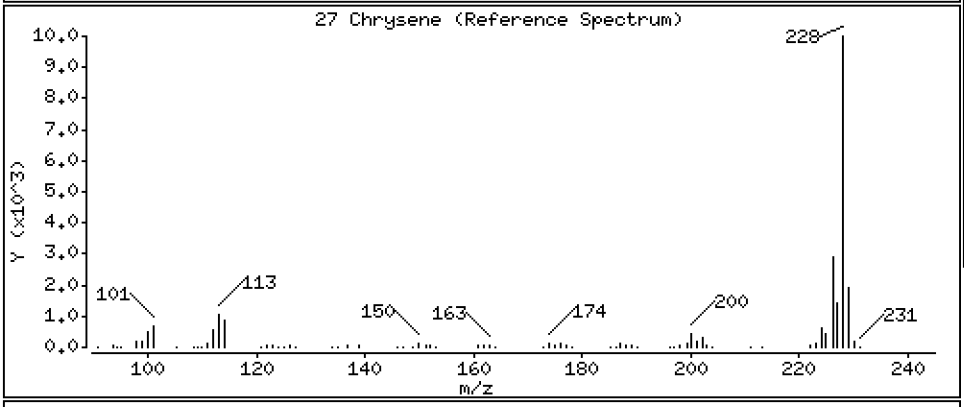
Concentration: 5.893 ug/mL

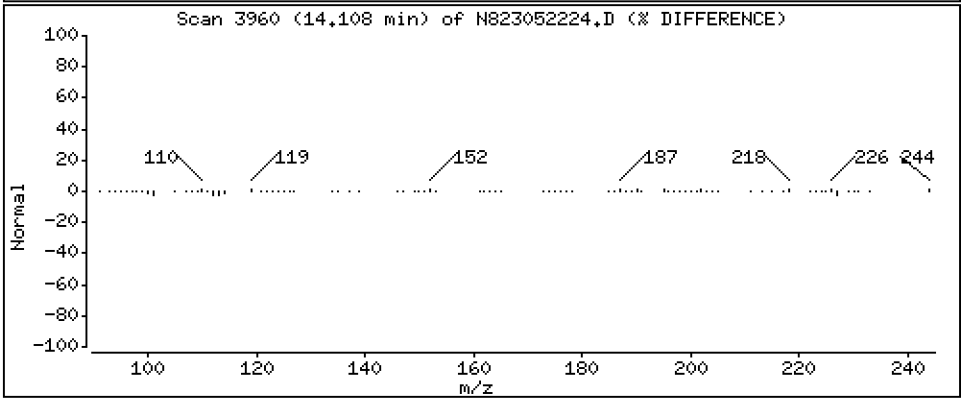












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

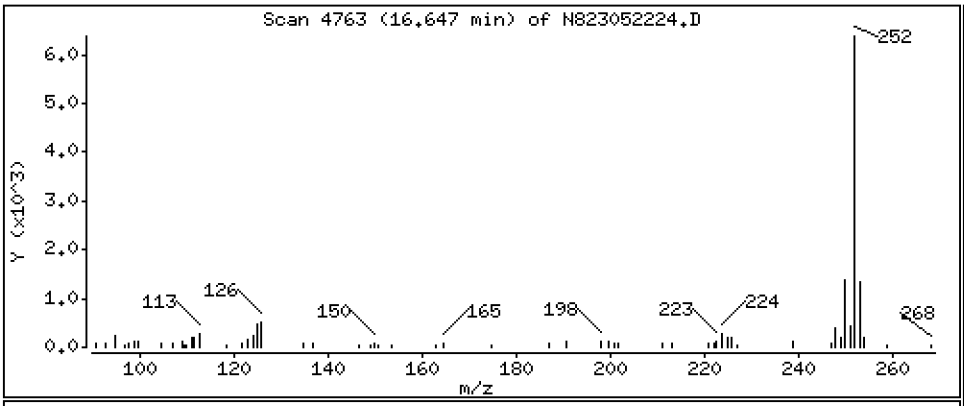
Operator: JZ

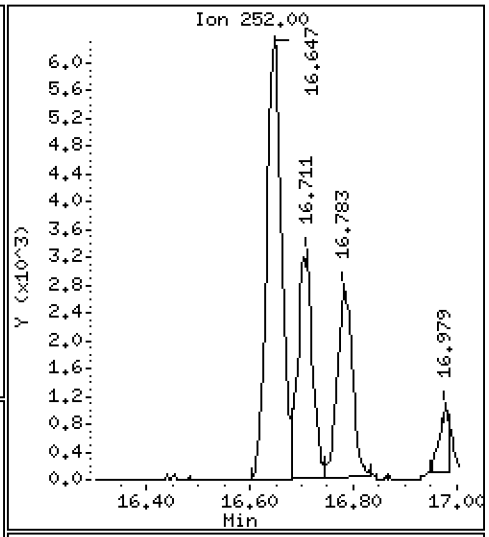
Column phase: Rxi-17sil

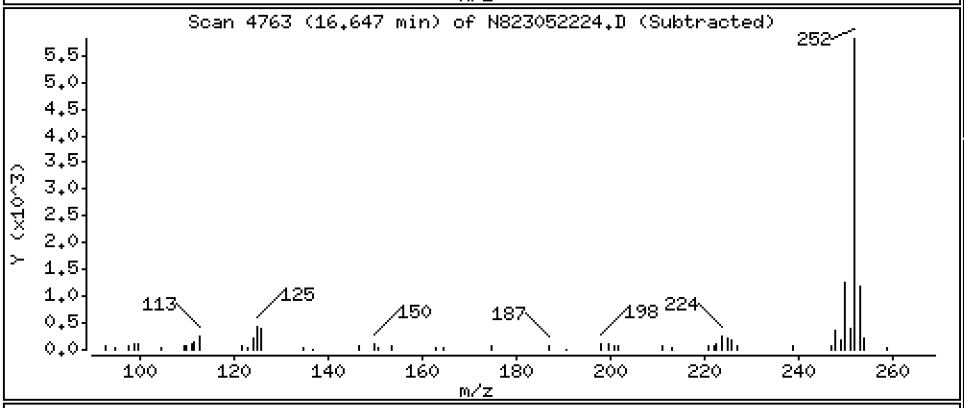
Column diameter: 0.25

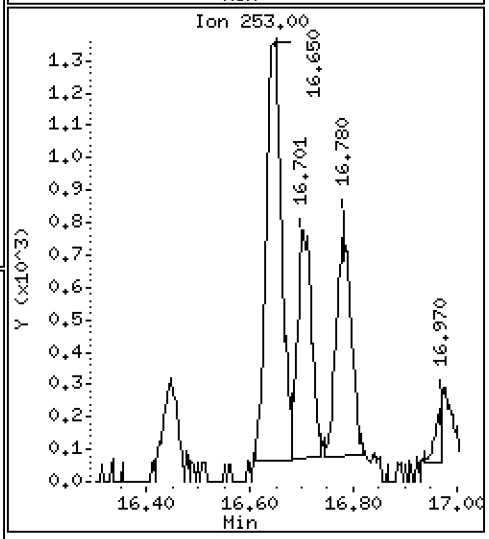
28 Benzo(b)fluoranthene

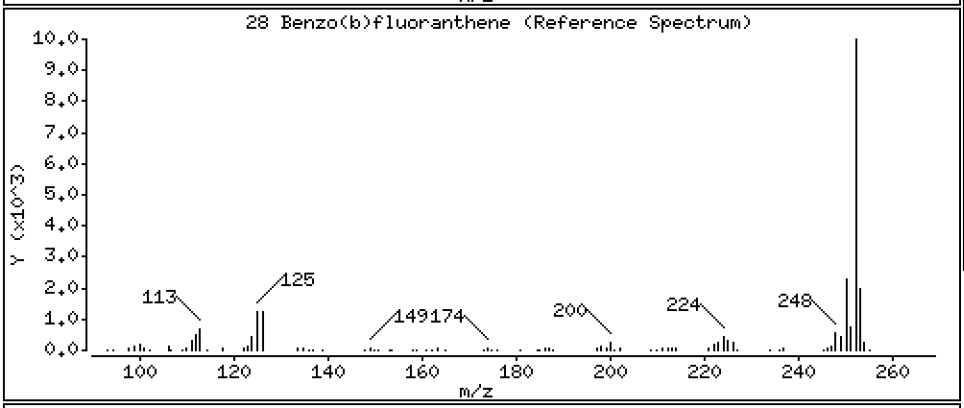
Concentration: 5.263 ug/mL

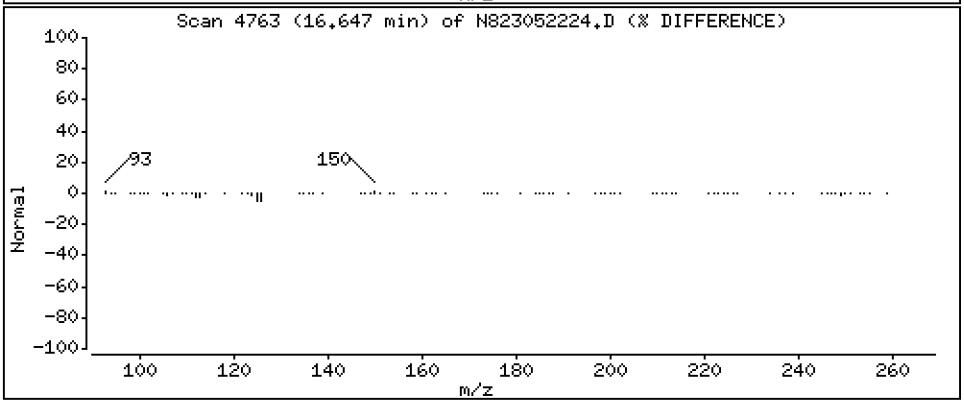












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

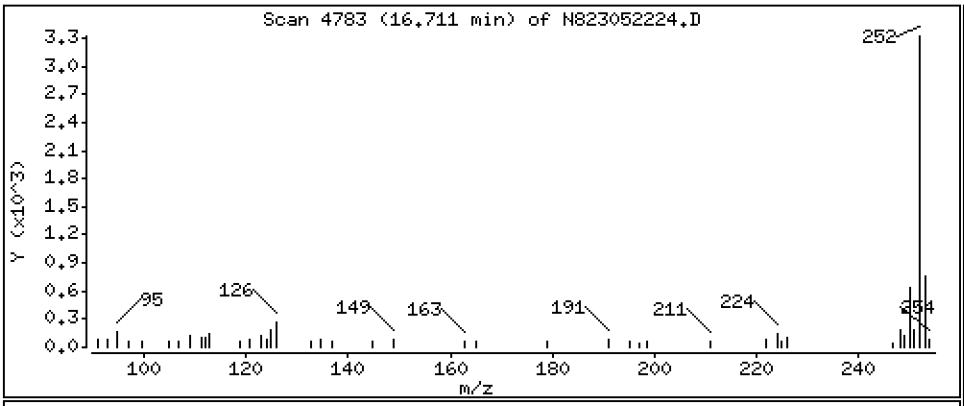
Operator: JZ

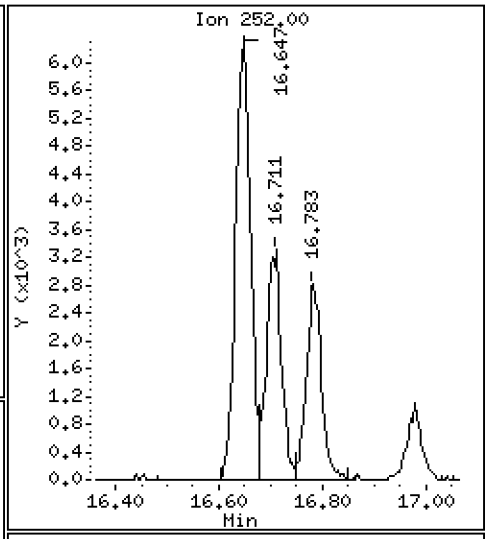
Column phase: Rxi-17sil

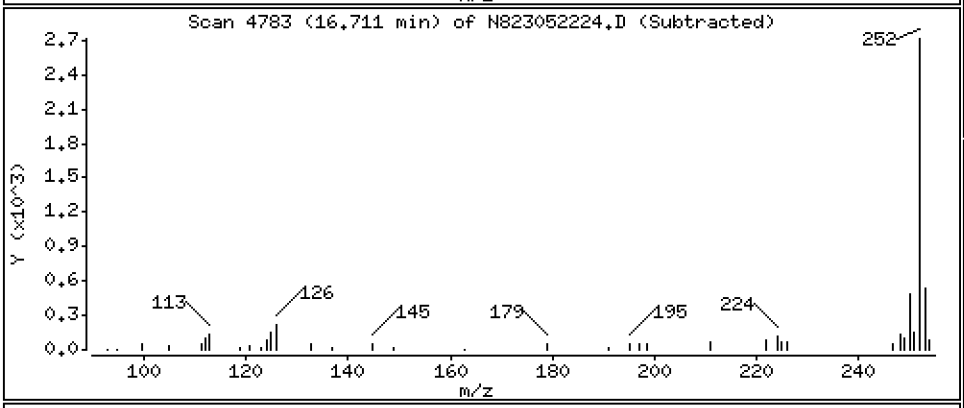
Column diameter: 0.25

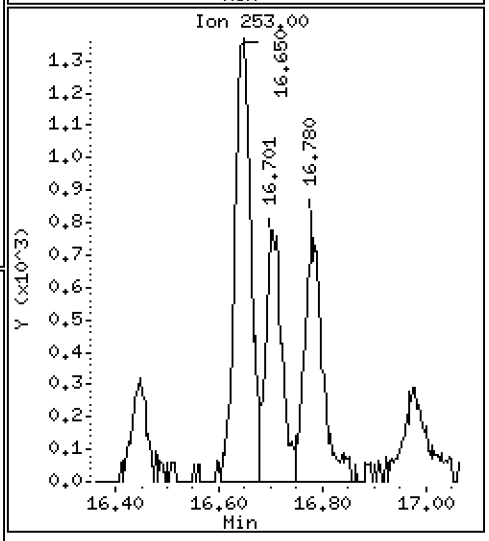
29 Benzo(k)fluoranthene

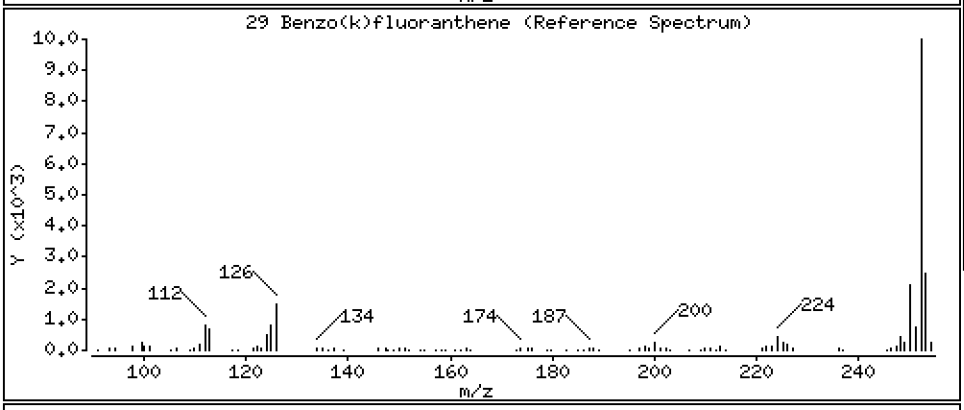
Concentration: 2.856 ug/mL

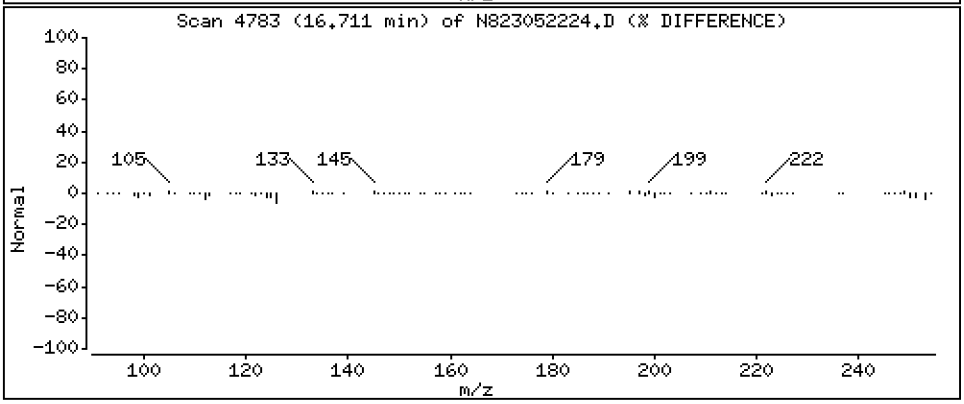












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

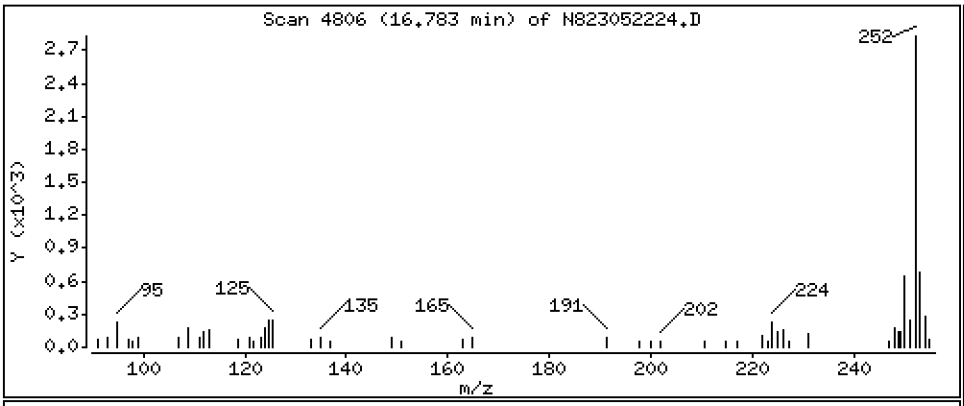
Operator: JZ

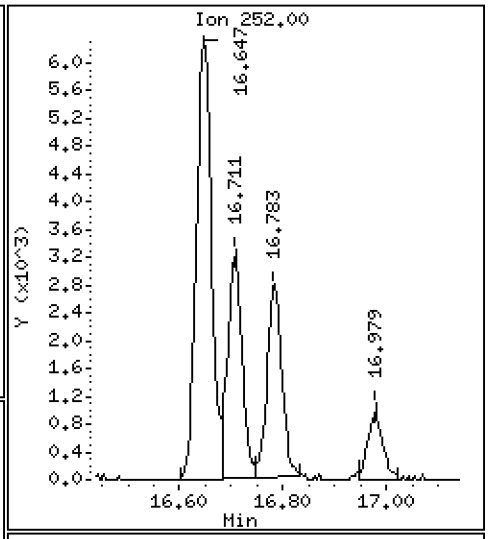
Column phase: Rxi-17sil

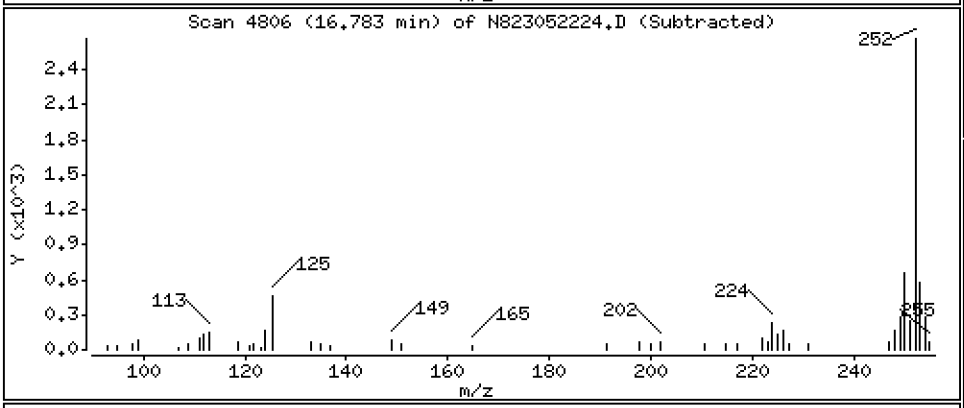
Column diameter: 0.25

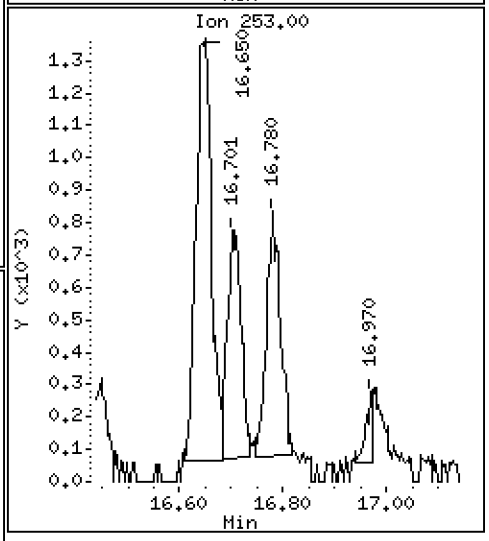
30 Benzo(j)fluoranthene

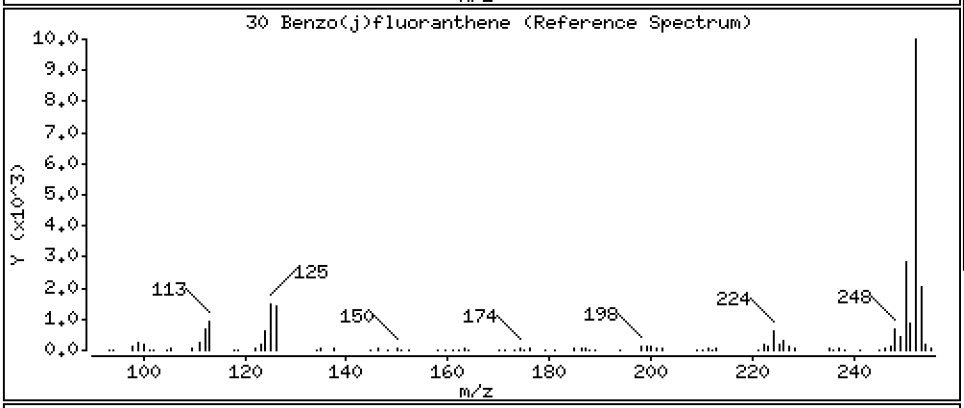
Concentration: 2.570 ug/mL

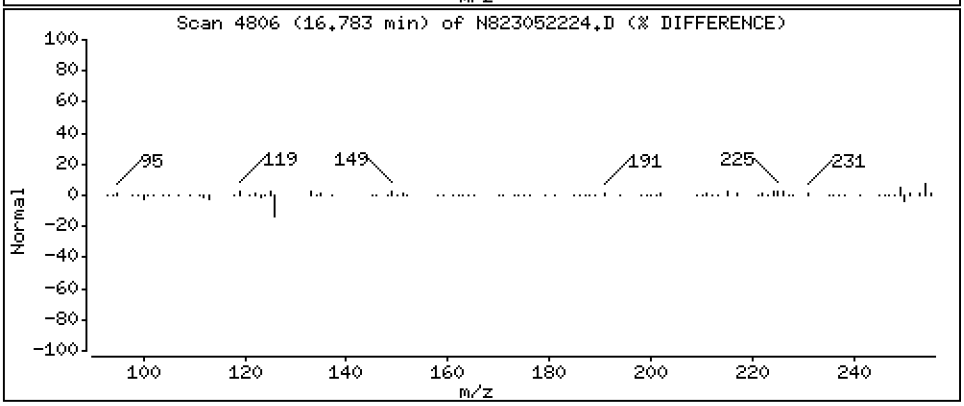












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

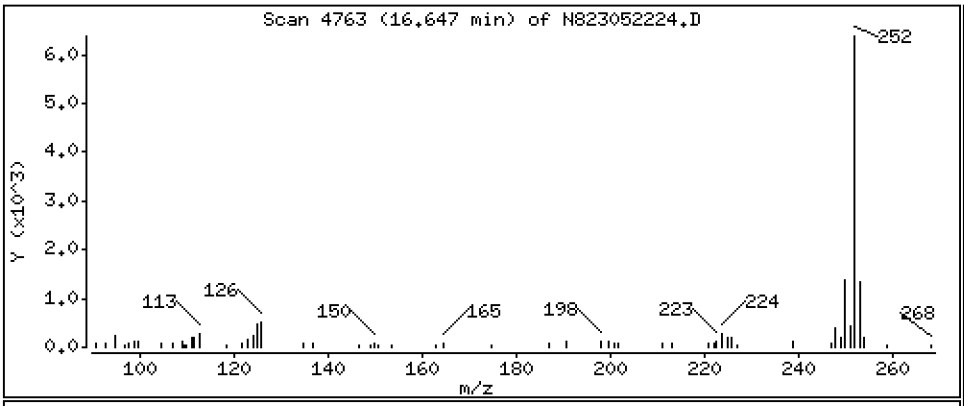
Operator: JZ

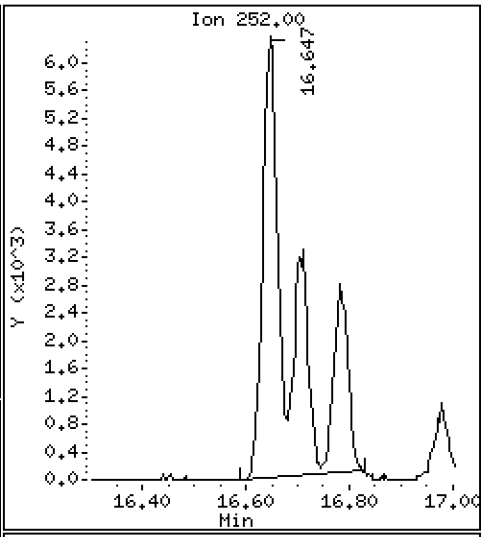
Column phase: Rxi-17sil

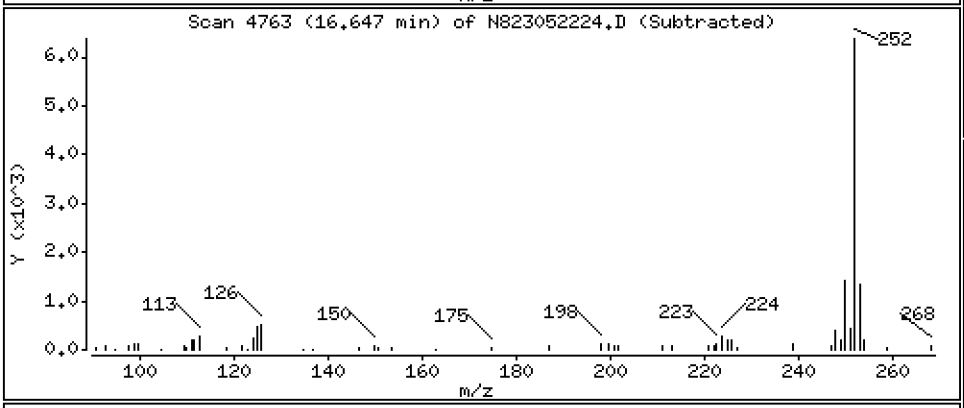
Column diameter: 0.25

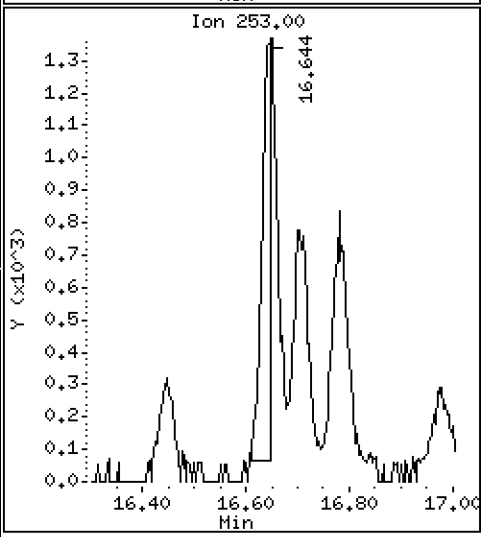
31 Total Benzofluoranthenes

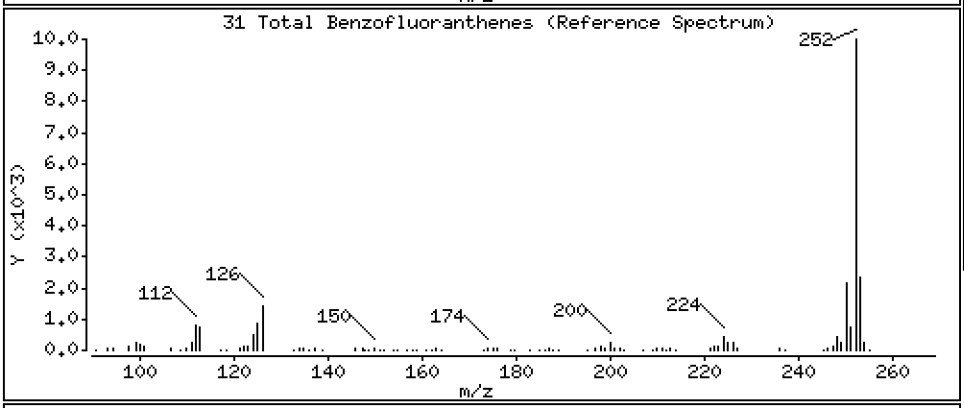
Concentration: 10.47 ug/mL

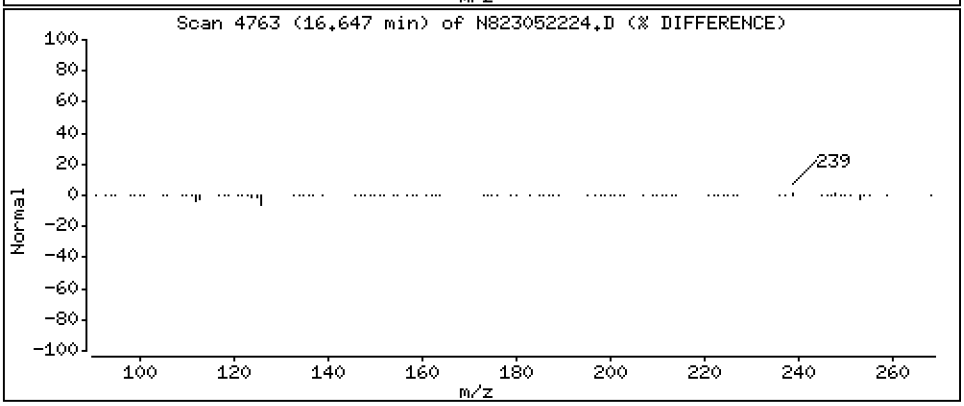












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

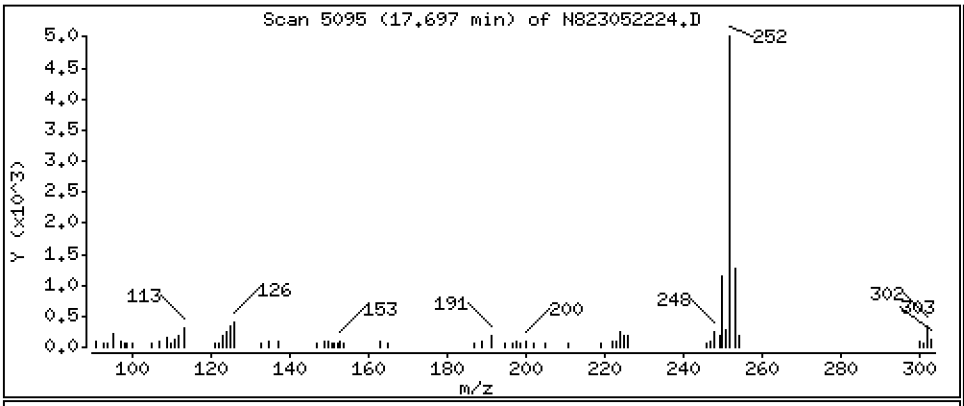
Operator: JZ

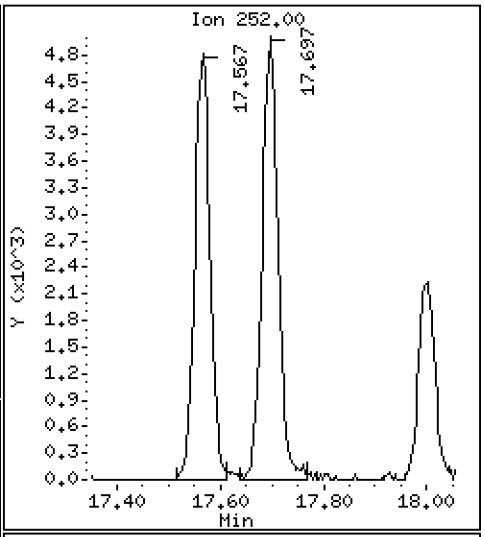
Column phase: Rxi-17sil

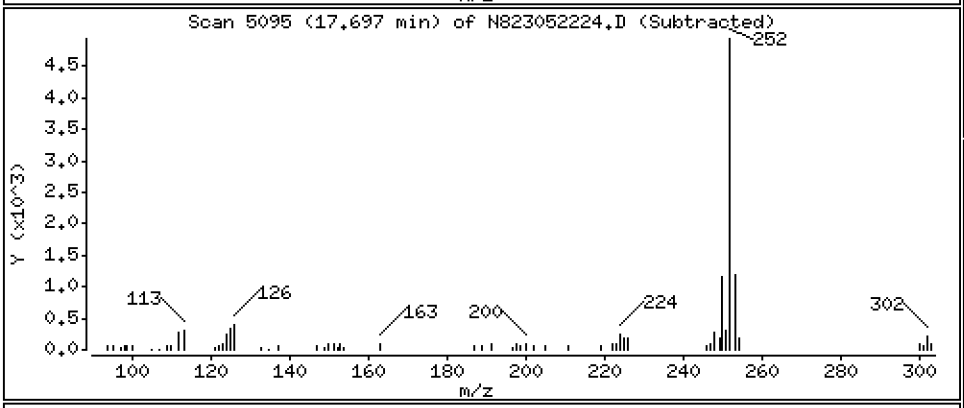
Column diameter: 0.25

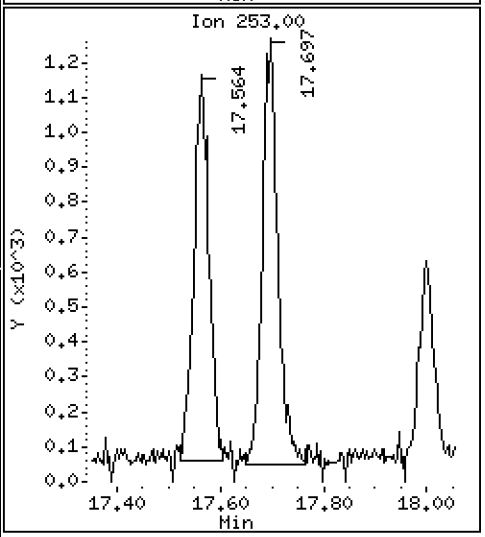
32 Benzo(a)pyrene

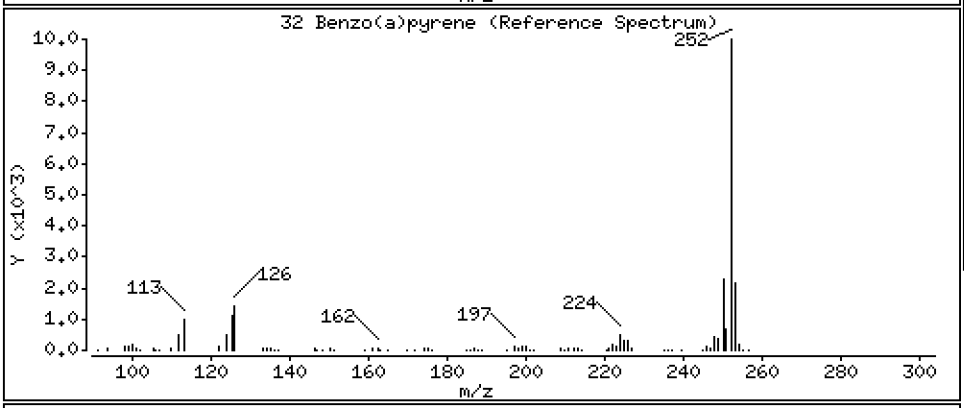
Concentration: 5.012 ug/mL

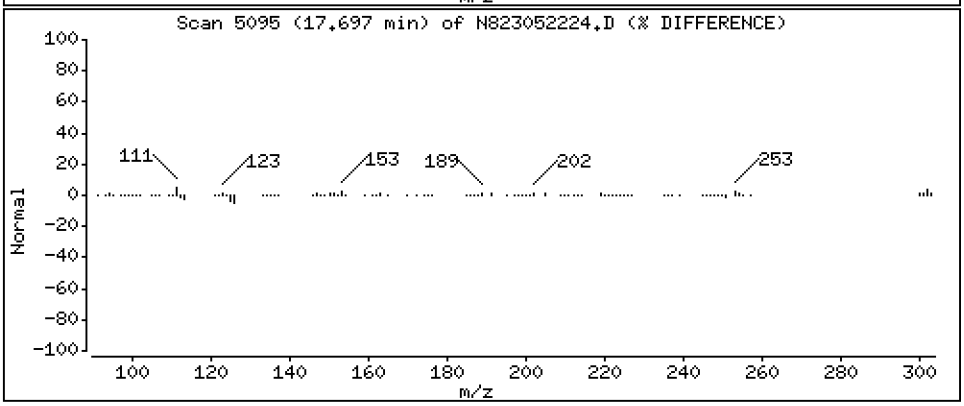












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

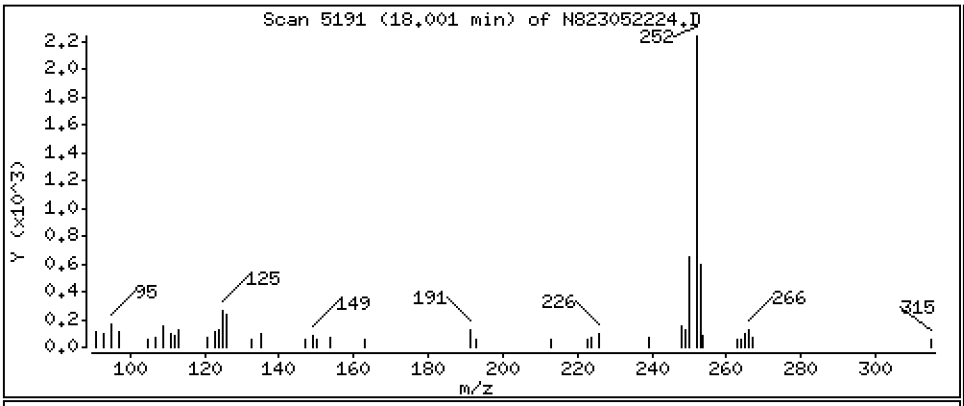
Operator: JZ

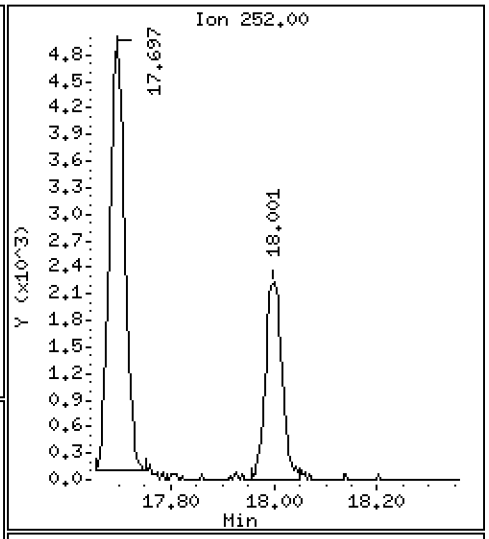
Column phase: Rxi-17sil

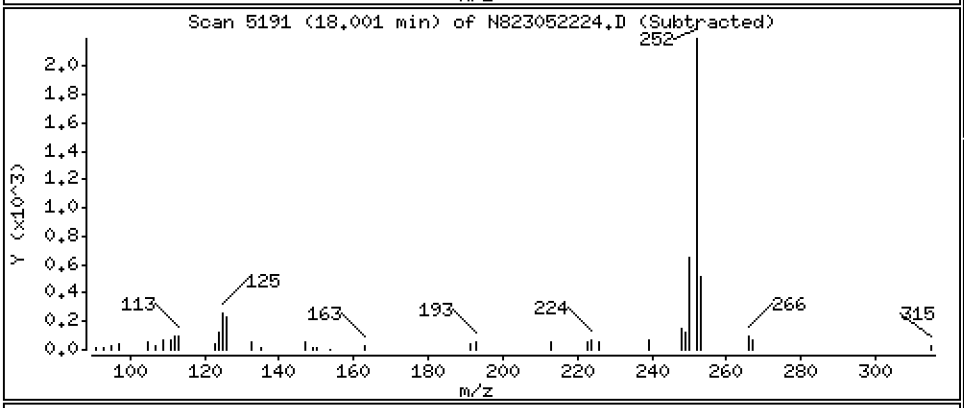
Column diameter: 0.25

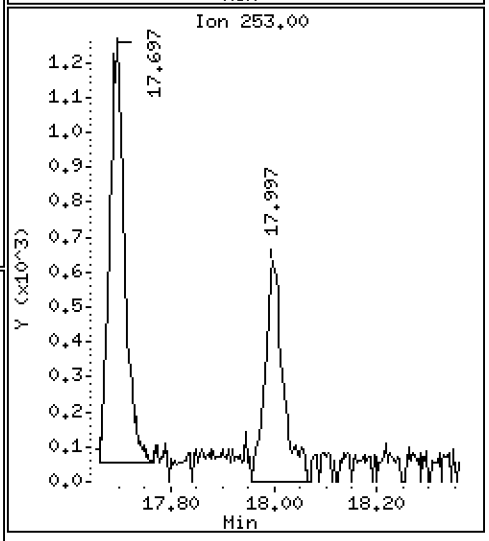
35 Perylene

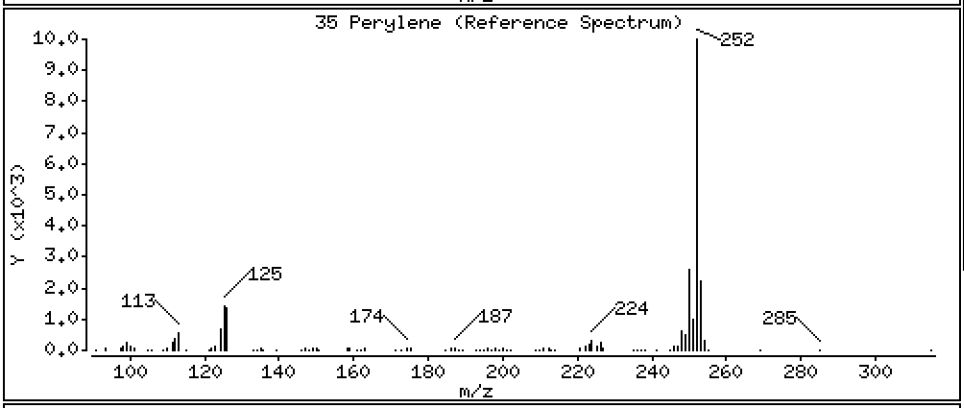
Concentration: 2.319 ug/mL

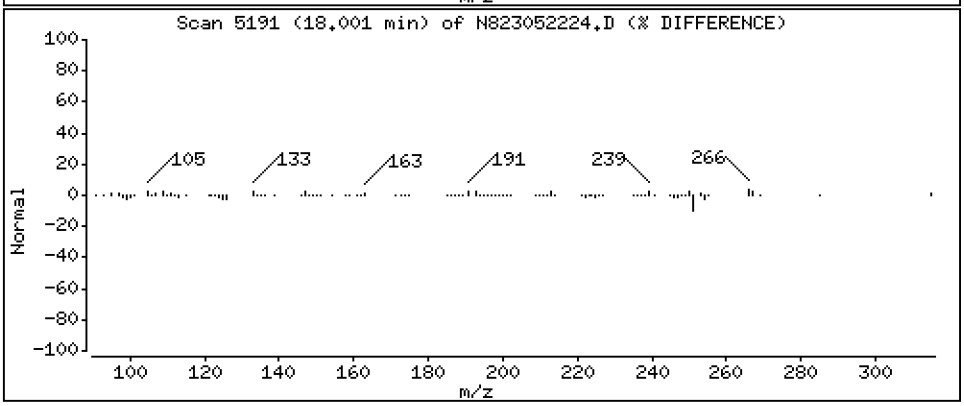












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

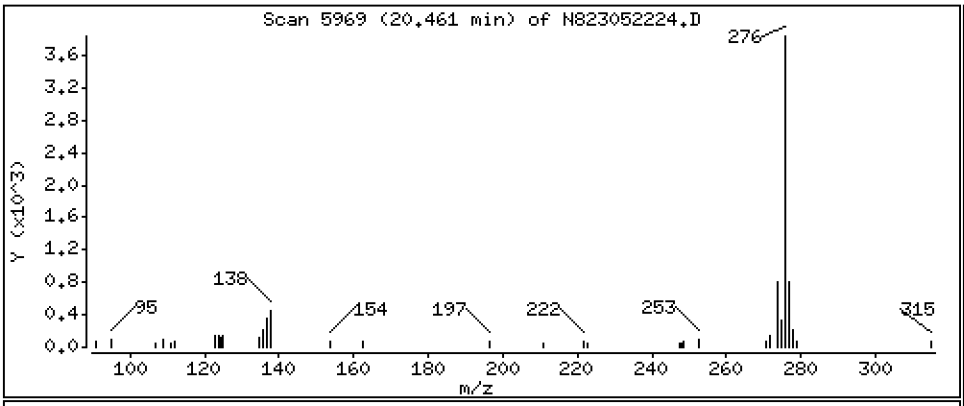
Operator: JZ

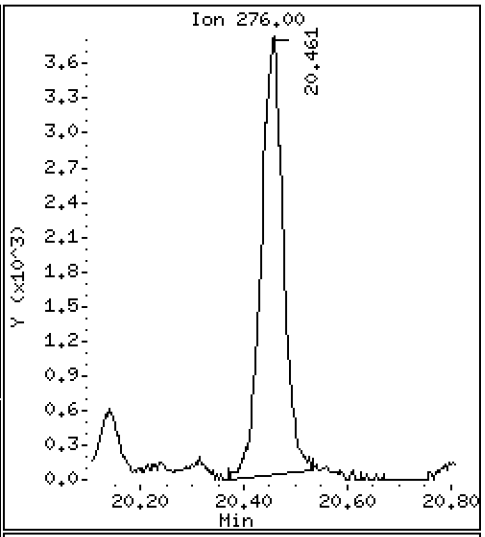
Column phase: Rxi-17sil

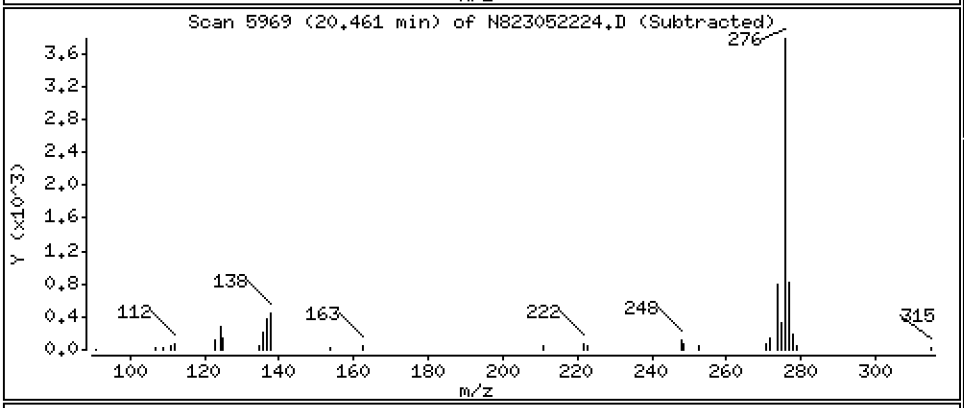
Column diameter: 0.25

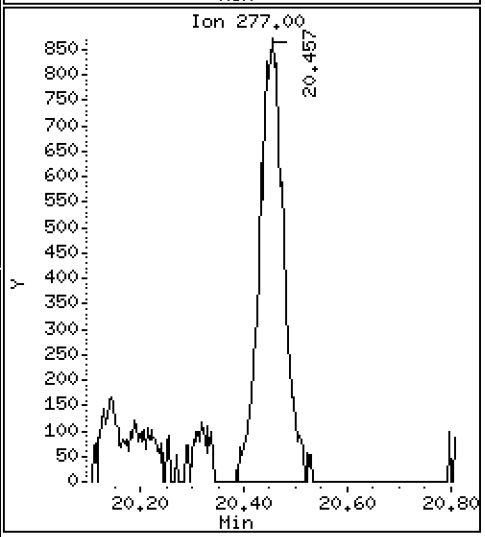
37 Indeno(1,2,3-cd)pyrene

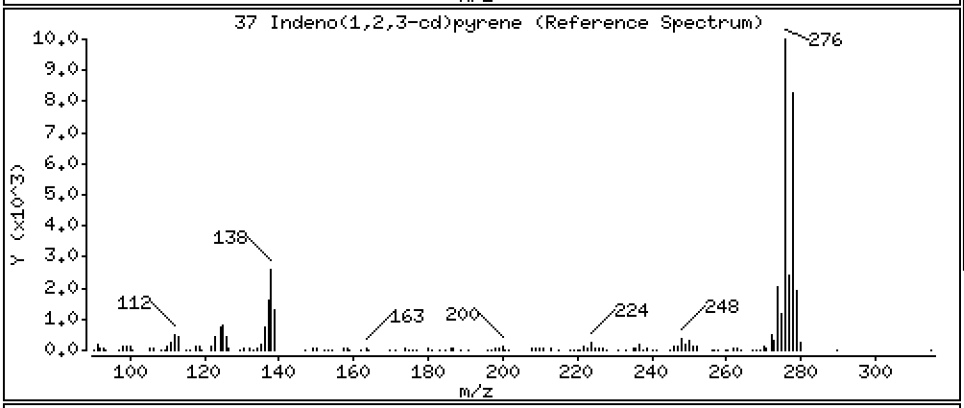
Concentration: 5.165 ug/mL

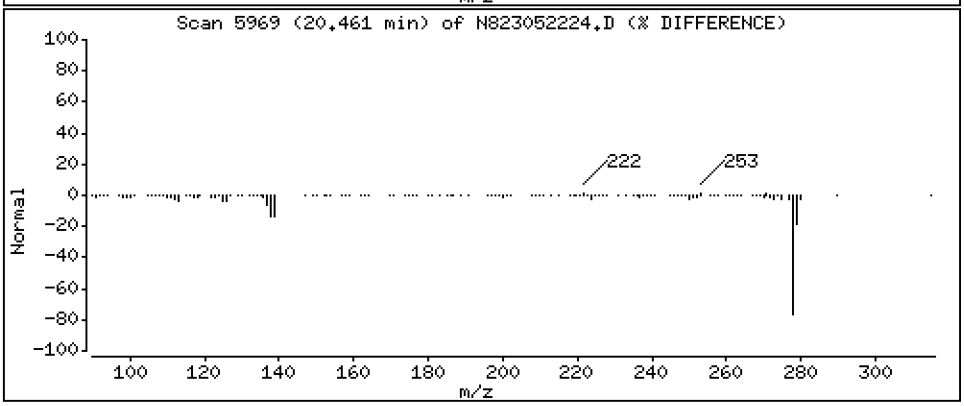












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

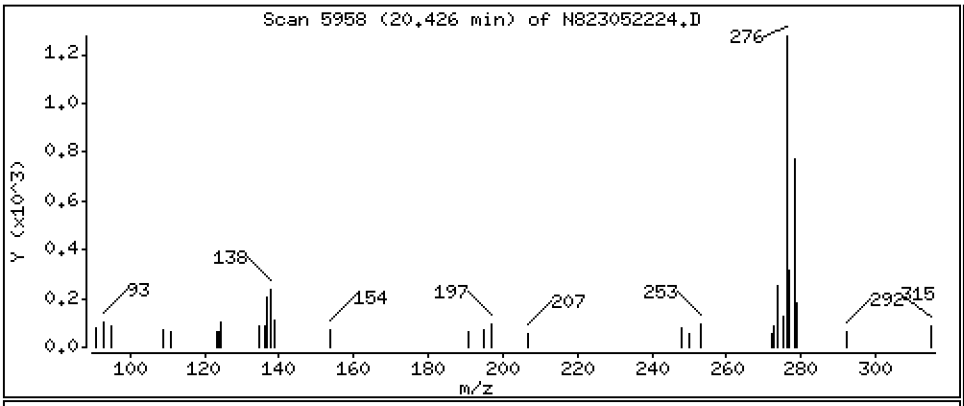
Operator: JZ

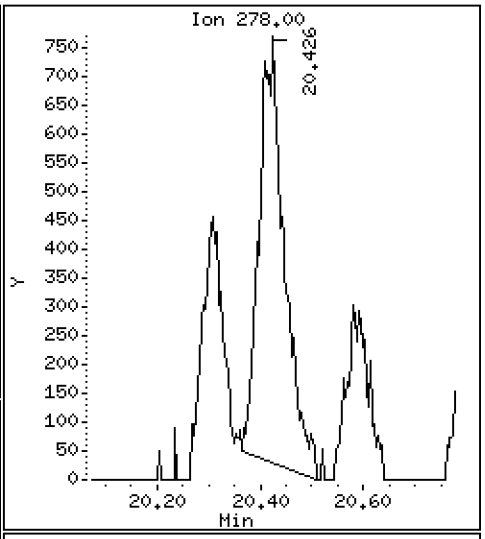
Column phase: Rxi-17sil

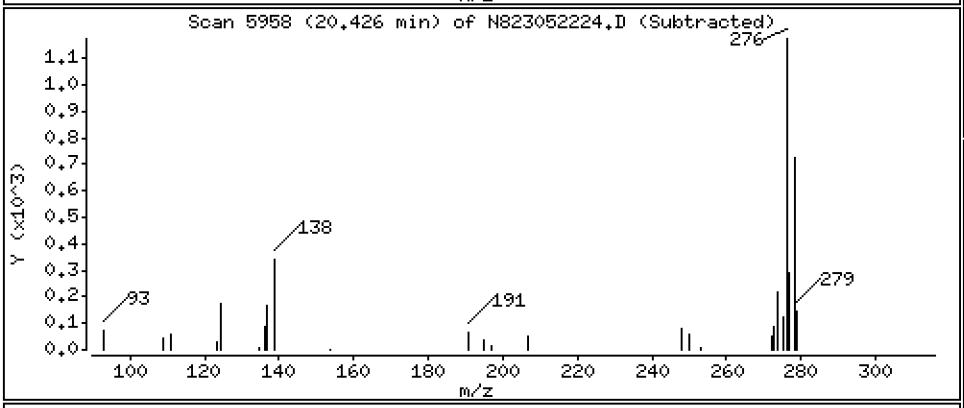
Column diameter: 0.25

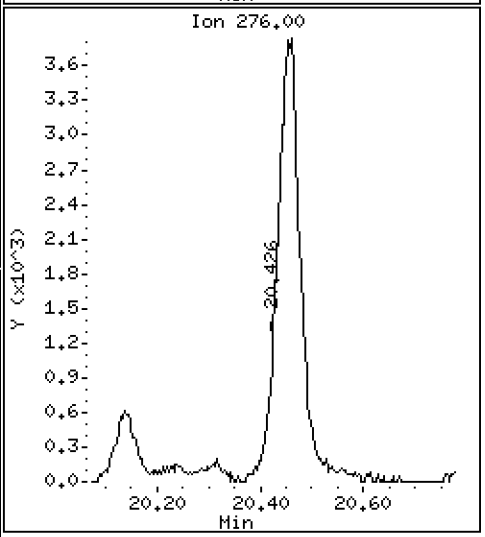
38 Dibenzo(a,h)anthracene

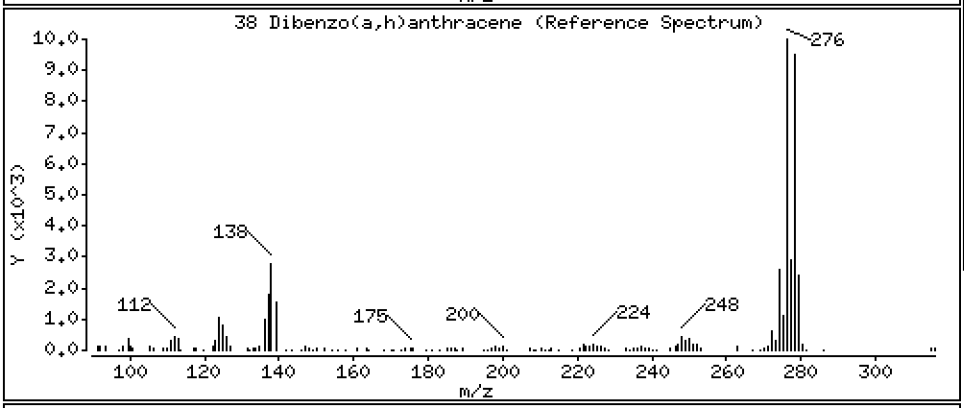
Concentration: 1.295 ug/mL

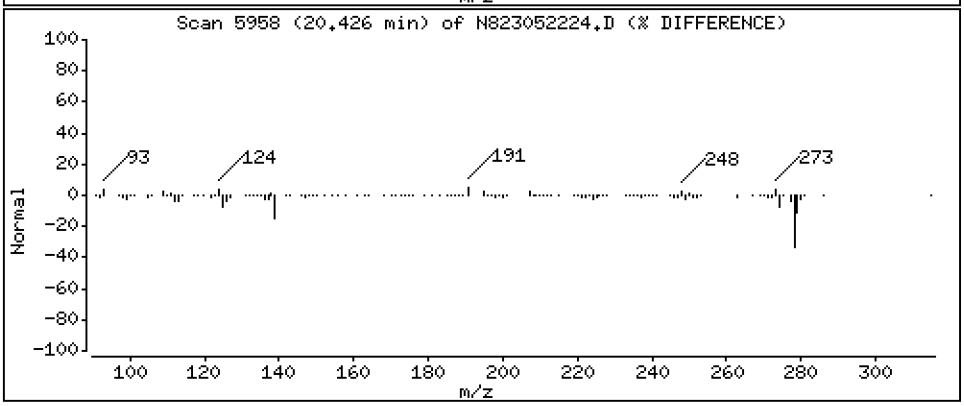












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052224.D

Date : 22-MAY-2023 22:22

Client ID:

Instrument: nt8.i

Sample Info: 23E0009-08,3

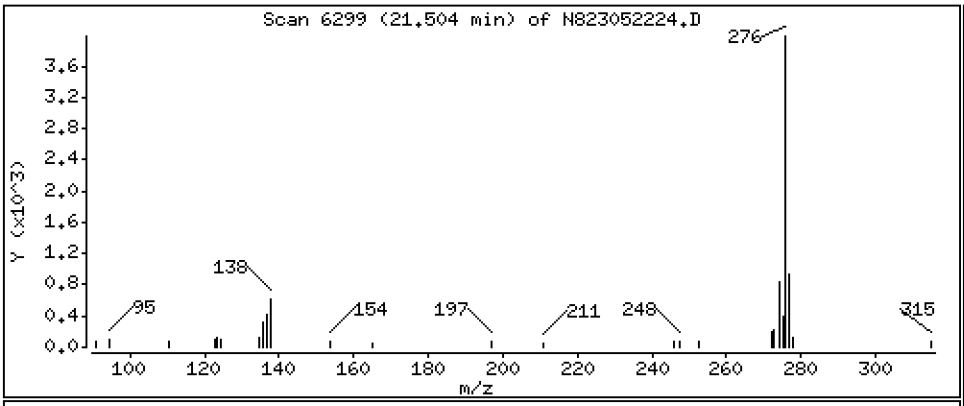
Operator: JZ

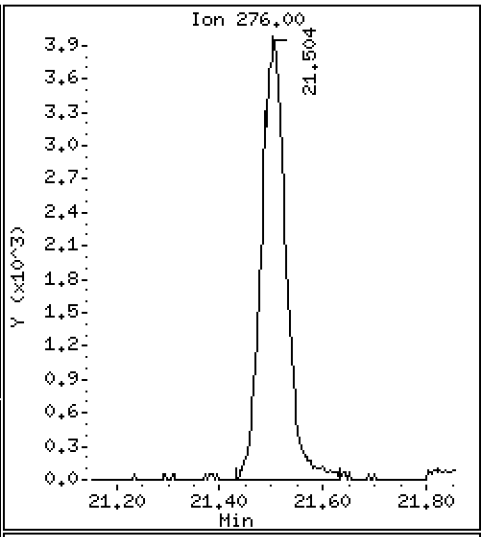
Column phase: Rxi-17sil

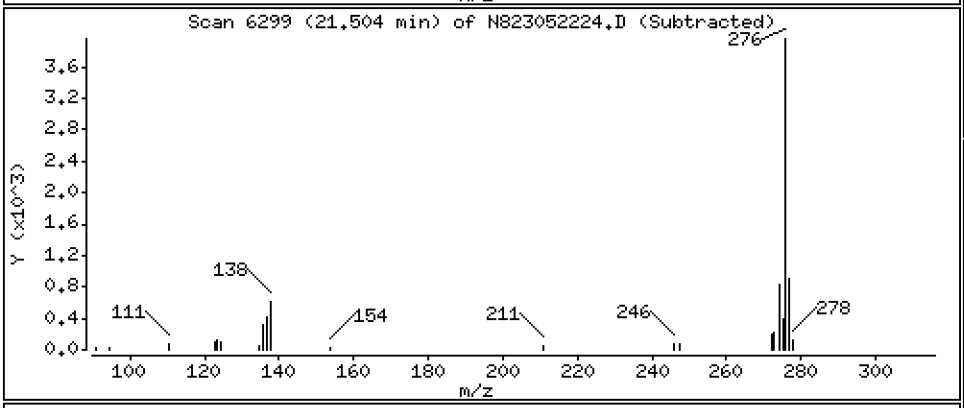
Column diameter: 0.25

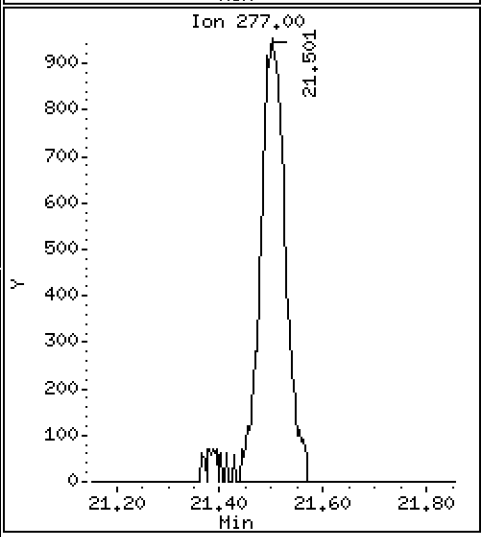
39 Benzo(g,h,i)perylene

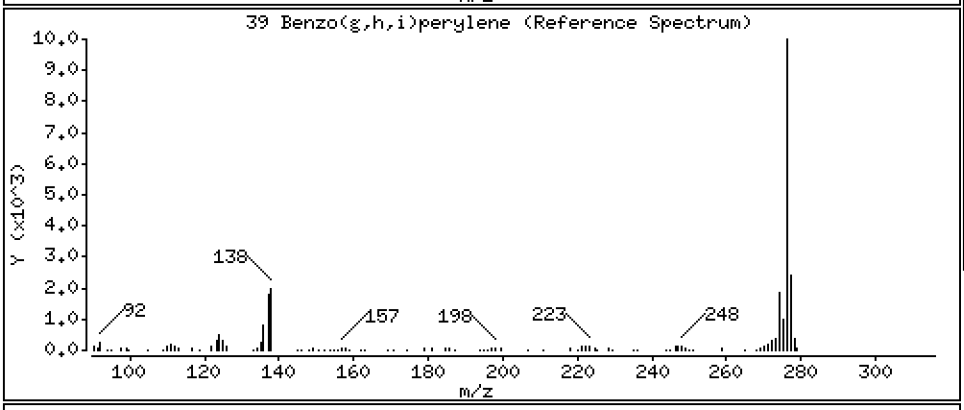
Concentration: 6.507 ug/mL

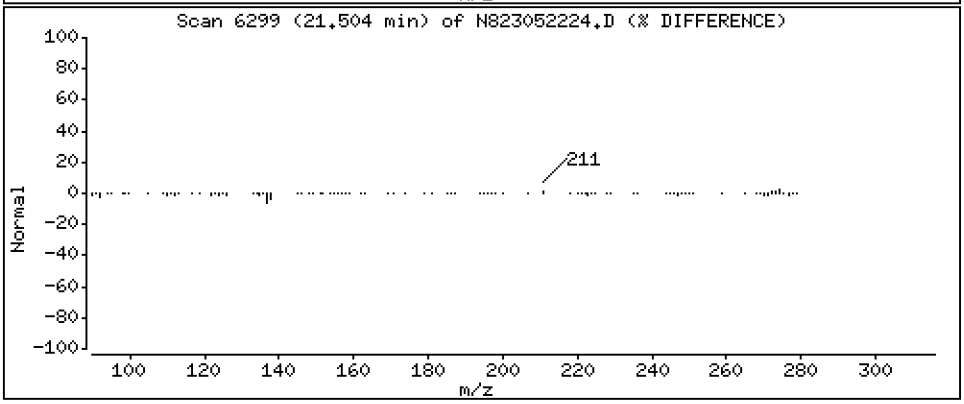












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230522.b\N823052224.D
Lab Smp Id: 23E0009-08
Inj Date : 22-MAY-2023 22:22
Operator : JZ Inst ID: nt8.i
Smp Info : 23E0009-08,3
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Meth Date : 23-May-2023 10:38 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 24
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

								CONCENTRATIONS	
		QUANT SIG						ON-COLUMN	FINAL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE		(ug/mL)	(ug/mL)
*	1 Naphthalene-d8	136	4.808	4.818	(1.000)	17969		2.00000	
	2 Naphthalene	128	4.837	4.846	(1.006)	496		0.05418	0.1625
$	3 2-Methylnaphthalene-d10	152	5.545	5.551	(1.153)	4042		0.72832	2.185
	4 2-Methylnaphthalene	141	5.596	5.599	(1.164)	188		0.03617	0.1085
	5 1-methylnaphthalene	141	5.789	5.795	(1.204)	135		0.02620	0.07859
	9 Acenaphthylene	152	6.990	6.993	(0.985)	2208		0.23804	0.7141
*	10 Acenaphthene-d10	164	7.098	7.101	(1.000)	10478		2.00000	
	11 Acenaphthene	153	7.148	7.151	(1.007)	321		0.05341	0.1602
	12 Dibenzofuran	168	7.300	7.306	(1.029)	387		0.04287	0.1286
	14 Fluorene	166	7.777	7.781	(1.096)	468		0.06497	0.1949
*	15 Phenanthrene-d10	188	9.134	9.140	(1.000)	18554		2.00000	
	16 Phenanthrene	178	9.172	9.175	(1.004)	9373		0.95374	2.861
	17 Anthracene	178	9.213	9.213	(1.009)	2992		0.32462	0.9738
	19 Carbazole	167	9.728	9.731	(1.065)	1509		0.17140	0.5142
	22 Fluoranthene	202	10.933	10.930	(1.197)	28973		2.56325	7.690
$	21 Fluoranthene-d10	212	10.895	10.895	(1.193)	8282		0.82692	2.481
	23 Pyrene	202	11.452	11.442	(0.816)	27709		4.47007	13.41
	24 Benzo(a)anthracene	228	13.912	13.918	(0.991)	9109		1.43007	4.290
*	25 Chrysene-d12	240	14.035	14.044	(1.000)	9682		2.00000	
	27 Chrysene	228	14.108	14.117	(1.005)	12291		1.96423	5.893
	28 Benzo(b)fluoranthene	252	16.647	16.653	(0.929)	13112		1.75427	5.263
	29 Benzo(k)fluoranthene	252	16.710	16.713	(0.932)	6705		0.95212	2.856
	30 Benzo(j)fluoranthene	252	16.783	16.789	(0.936)	5575		0.85683	2.570
	31 Total Benzofluoranthenes	252	16.647	16.653	(0.929)	24256		3.48977	10.47(M)
	32 Benzo(a)pyrene	252	17.697	17.703	(0.987)	10854		1.67063	5.012
*	33 Perylene-d12	264	17.927	17.934	(1.000)	11465		2.00000	
	35 Perylene	252	18.000	18.006	(1.004)	5042		0.77284	2.319
$	36 Dibenzo(a,h)anthracene-d14	292	20.312	20.318	(1.133)	6019		1.37509	4.125
	37 Indeno(1,2,3-cd)pyrene	276	20.460	20.457	(1.141)	11385		1.72151	5.165(M)
	38 Dibenzo(a,h)anthracene	278	20.425	20.425	(1.139)	2534		0.43150	1.295(M)
	39 Benzo(g,h,i)perylene	276	21.504	21.503	(1.199)	13287		2.16893	6.507

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823052224.D
Lab Smp Id: 23E0009-08
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 22-MAY-2023
Calibration Time: 11:46
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	17081	8541	34162	17969	5.20
10 Acenaphthene-d10	9674	4837	19348	10478	8.31
15 Phenanthrene-d10	17710	8855	35420	18554	4.77
25 Chrysene-d12	15081	7541	30162	9682	-35.80
33 Perylene-d12	15623	7812	31246	11465	-26.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.20
10 Acenaphthene-d10	7.10	6.60	7.60	7.10	-0.04
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.04	-0.07
33 Perylene-d12	17.93	17.43	18.43	17.93	-0.03

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

REVIEW SUMMARY FOR FILE - N823052224.D

Lab ID: 23E0009-08
nt8.i, 20230522.b\FSIMPNA230426.m,   22-MAY-2023 22:22

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

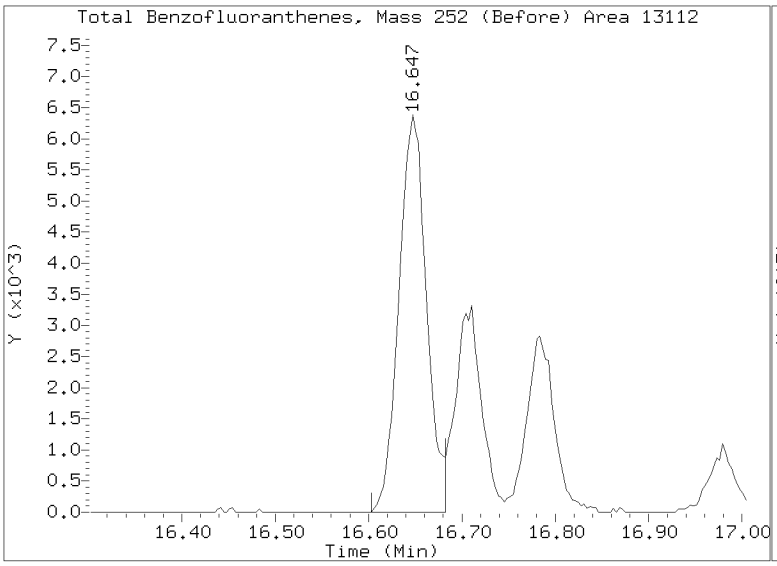
No RRT check performed

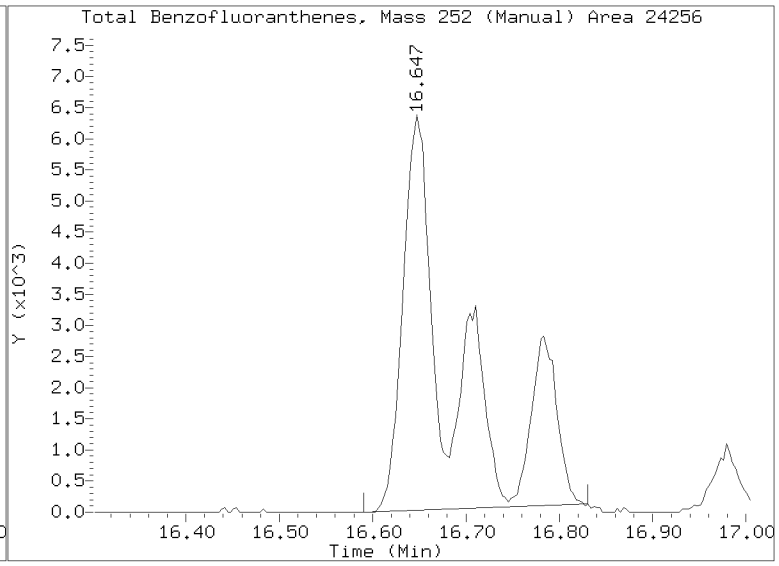
On Column LOD for nt8.i, 20230522.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

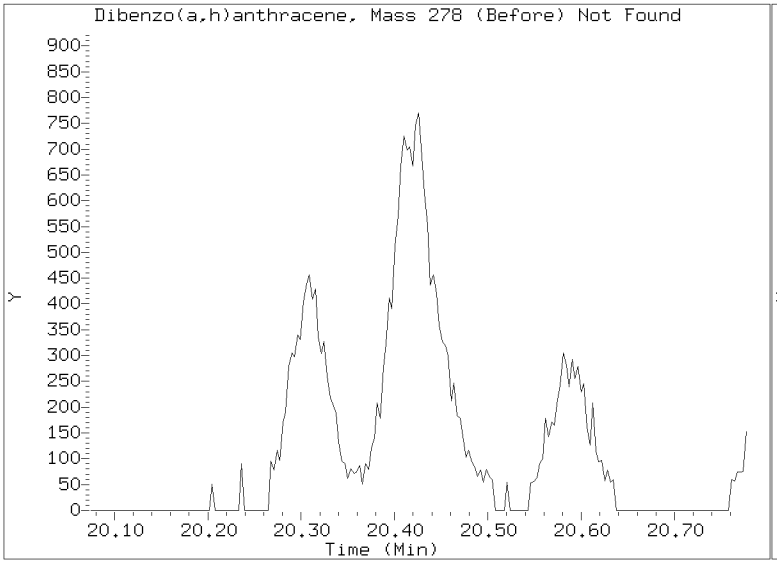
* Only compounds listed in the work order have been verified by the analyst *

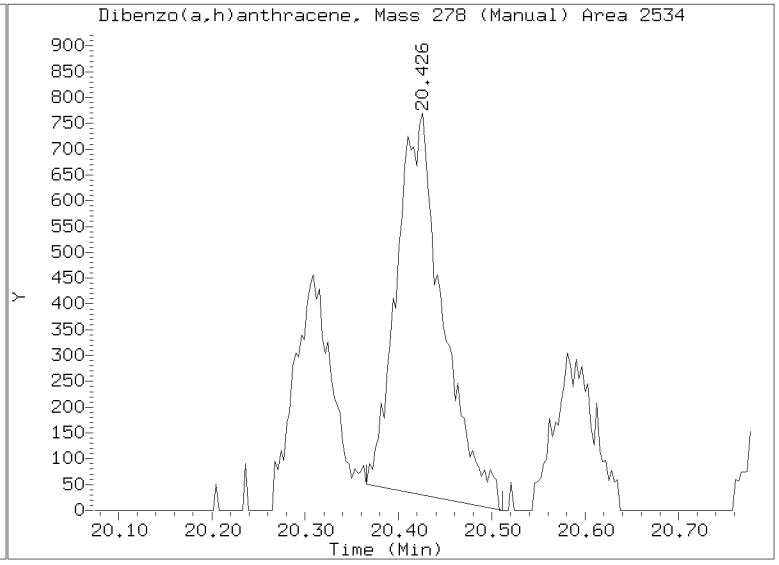
Quant Ion Manual Peak Adjustment Report

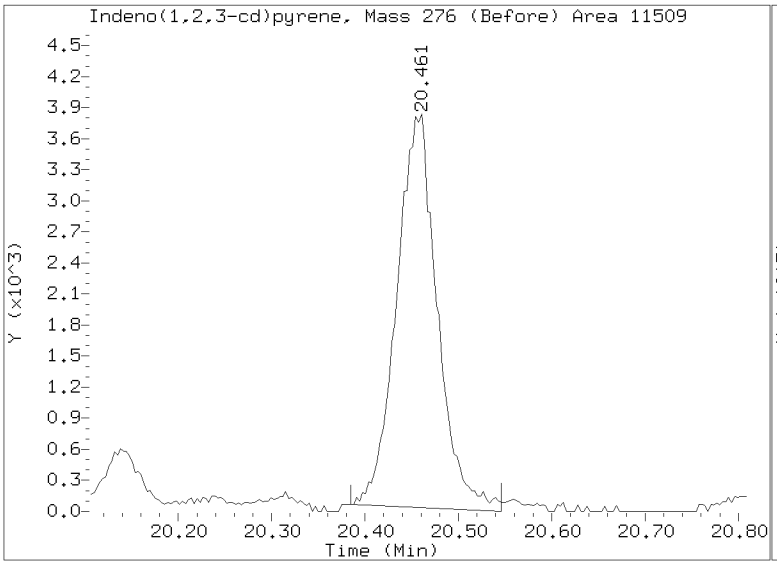
Datafile: //target/share/chem3/nt8.i/20230522.b/N823052224.D
Injection Date: 22-MAY-2023 22:22
Lab ID:23E0009-08 Client ID:
Report Date: 05/23/2023 11:41

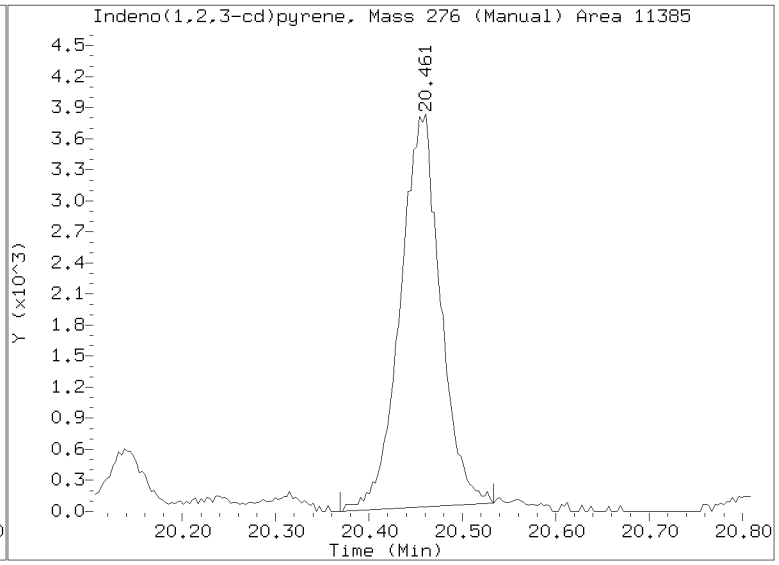












PREPARATION BATCH SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0148 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01	NT1706012333S.D	05/05/23 11:23	
LDW23-SS1805	23E0009-03	NT1706012334S.D	05/05/23 11:23	
LDW23-SS1800	23E0009-05	NT1706012335S.D	05/05/23 11:23	
LDW23-SS1820	23E0009-07	NT1706012336S.D	05/05/23 11:23	
Blank	BLE0148-BLK2	NT1706012325S.D	05/05/23 11:23	
LCS	BLE0148-BS2	NT1706012326S.D	05/05/23 11:23	
LCS Dup	BLE0148-BSD2	NT1706012327S.D	05/05/23 11:23	
LDW23-SS1805	BLE0148-MS2	NT1706012328S.D	05/05/23 11:23	
LDW23-SS1805	BLE0148-MSD2	NT1706012329S.D	05/05/23 11:23	
Reference	BLE0148-SRM2	NT1706012330S.D	05/05/23 11:23	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0148

Prepared using: EPA 3546 (Microwave)

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

Matrix: Solid **Date Prepared:** 05/12/23 **Balance ID:** B146462614 **Set Up By:** GD 5/11/23

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)
23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

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

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

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23D0394-07 A	87.2	(11.47) 11.48	(1:1)	1mL	1 ____	0.5 ____	
23D0394-13 A	76.5	(13.08) 13.08	(1:1)	1mL	1 ____	0.5 ____	
23E0009-01 A	69.3	(14.43) 14.44	(1:1)	1mL	1 ____	0.5 ____	
23E0009-03 A	50.8	(19.69) 19.69	(1:1)	1mL	1 ____	0.5 ____	
23E0009-05 A	47.5	(21.08) 21.12	(1:1)	1mL	1 ____	0.5 ____	
23E0009-07 A	53.2	(18.80) 18.85	(1:1)	1mL	1 ____	0.5 ____	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLE0148-BLK1	100.0	(10.00) 10.00	(1:1)	1mL	1 ____	0.5 ____	Use 5g Neutral Sodium Sulfate for Blanks
BLE0148-BS1	100.0	(10.00) 10.00	(1:1)	1mL	1 ____	0.5 ____	Use 5g Neutral Sodium Sulfate for Blanks
BLE0148-BSD1	100.0	(10.00) 10.00	(1:1)	1mL	1 ____	0.5 ____	Use 5g Neutral Sodium Sulfate for Blanks
BLE0148-MS1	50.8	()(19.69) 19.69	(1:1)	1mL	1 ____	0.5 ____	Use 23E0009-03
BLE0148-MSD1	50.8	()(19.69) 19.69	(1:1)	1mL	1 ____	0.5 ____	Use 23E0009-03
BLE0148-SRM1	100.0	~~(10.00)~~(1.00) 1.00	(1:1)	1mL	1 ____	0.5 ____	Use K003477

+1g DI WATER

05/12/23 — Client ID verified By — Date

MKS 5/31/23 — Preparation Reviewed By — Date

05/12/23 11:23 — Extraction Date and Time

Printed: 5/4/2023 2:02:16PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0148

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 2 3
Analyst/Date: 5/12/23

Pre-GPC KD
100°C
Exchange to Hexane
(add 10 mL to KD)
0 2 4 5 6
Analyst/Date: RT 5/25

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

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

TurboVap
1 2 3 4 5
Analyst/Date: NKS 5/31/23

Water Wash
Analyst/Date: NKS 5/31/23

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: G Date: 5/12/23	
Anhydrous Sodium Sulfate	L005016
1:1 Methylene Chloride/Acetone	L004178
Methylene Chloride	K005441
Pre-Deactivated Glass Wool	L004626
Pre GPC KD Analyst: RT Date: 5/25/23	
Pre-Deactivated Glass Wool	L004626
Anhydrous Sodium Sulfate	L005016
Methylene Chloride	K005423
Hexane	L003500
GPC Filter Prep Analyst: TWC Date: 5/27/23	
Methylene Chloride	K005441
GPC Filter	L001799
GPC Analyst: TWC Date: 5/27/23	
Methylene Chloride	K005441
GPC Calibration File	CL0059-GPC2
Post GPC KD Analyst: RT Date: 5/30/23	
Methylene Chloride	K005441
Vialing Analyst: NKS Date: 5/30/23	
Methylene Chloride	K005441

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 100/150µg/mL	A L001153 Exp L005075 Date: 5/8/2024	50µL	G	
Full List Spike (Freezer) 100µg/mL	7 L001812 (V) Exp L001731 Date: 3/4/2023	50µL	G	
Base Spike 200µg/mL	56 L001812 (V) Exp L001778 Date: 3/24/2023	50µL	G	
Acid Spike 100/200µg/mL	38 L001812 (V) Exp L001799 Date: 3/24/2023	50µL	G	

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0148

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SVOA Extraction Batch: BLE0148

Total Solids Batch: BLE0018 Work Order(s): 23E0009

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
[X] No Anomalies (standard soil/wet sediment/sand/gravel)= ϕ1, ϕ3 – ϕ8.	CJ ϕ5/ϕ2/23
[X] Standing Water Decanted (Not shared)= ϕ1, ϕ2 – ϕ8.	CJ ϕ5/ϕ2/23
[ ] Standing Water Homogenized (Shared samples)=	
[ ] Clay/Clumps (Difficult to homogenize)=	
[X] Rocks (%+size)? 1 ϕ1 5: % = ϕ2.	CJ ϕ5/ϕ2/23
[ ] Organics (Leaves/sticks/grass)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Received in 32oz jar(s)=Homogenized in Pyrex dish=	
[ ] Previously Frozen =	
[ ] Other (Details)=	
Aqueous:	
[✓] No Anomalies	
[ ] Turbid/Color=	
[ ] Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
[ ] Emulsions (%)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Other (Details)=	
[ ] Received in 1.0L Bottle(s)=No Bottle Rinse=	
[ ] Other Notes/Comments= (Note problems, concerns, corrective actions).	
[X] Share Samples Y (N)	CJ ϕ5/ϕ2/23
[X] Multiple Jars Y / (N)	CJ ϕ5/ϕ2/23
[ ] Sample Pre-Screens indicate analyte activity=	
[ ] Sample weights/volumes reduced based on Pre-Screen=	

PREPARATION BATCH SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0149 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1820	23E0009-08	N823052224.D	05/13/23 12:36	
Blank	BLE0149-BLK1	N823052218.D	05/13/23 12:35	
LCS	BLE0149-BS1	N823052219.D	05/13/23 12:35	
LCS Dup	BLE0149-BSD1	N823052220.D	05/13/23 12:35	
LDW23-IT1820	BLE0149-MS1	N823052225.D	05/13/23 12:35	
LDW23-IT1820	BLE0149-MSD1	N823052226.D	05/13/23 12:35	
Reference	BLE0149-SRM1	N823052221.D	05/13/23 12:35	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0149

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

id Date Prepared: 05/13/23 Balance ID: B14646214 Set Up By: CO 5/14/23

nments

<C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, K011477-79, MS/MSD </E>

J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

9: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 6,K011477-79, MS/MSD </E>

PR L001273-1275, Dup </H> Store in freezer (except GS)

following standards may be missing from this batch!

ignator	Description
QLS 4	QLS 4

nalysis: 8270E-SIM PAH (0.1ug/L or 5ug/kg)

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet)	Actual	(REQ/Opt) GPC C/U (1:1) 1 2 3	(REQ/Opt) Sulfur C/U (1:1) Y/N (Transfer Rinse)	(REQ/Opt) Silica Gel C/U (1:1) Y/N	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23D0037-02 A	52.8	(18.94)	18.95	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	
23D0037-04 A	51.5	(19.44)	19.48	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	
23E0009-08 A	54.3	(18.42)	18.45	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet)	Actual	(REQ/Opt) GPC C/U (1:1) 1 2 3	(REQ/Opt) Sulfur C/U (1:1) Y/N (Transfer Rinse)	(REQ/Opt) Silica Gel C/U (1:1) Y/N	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLE0149-BLK1	100.0	(10.00)	10.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	
BLE0149-BS1	100.0	(10.00)	10.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	
BLE0149-BSD1	100.0	(10.00)	10.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	
BLE0149-MS1	54.3	(18.42)	18.44	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	Use 23E0009-08
BLE0149-MSD1	54.3	(18.42)	18.44	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	Use 23E0009-08
BLE0149-SRM1	100.0	~~(10.00)~~ (5.00)	4.58	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	Use J007238

+1g DI WATER 05/13/23

L 97

05/13/23
Client ID verified By Date

LJ 5/22/23
Preparation Reviewed By Date

05/13/23 12:35
Extraction Date and Time

Printed: 5/4/2023 2:09:25PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0149

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23D0037: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
0 1 2 3
CT 05/13/23
Analyst/Date

Pre-GPC KD 100°C (No Exchange)
1 2 3 4 5 6
CR 5/18/23
Analyst/Date

Pre GPC TurboVap
1 2 3 4
SH 05/19/23
Analyst/Date

GPC
1 2 3
SH 05/19/23
Analyst/Date

Post-GPC KD 80°C Hexane Exchange 2 x 20 mL 100°C
0 1 2 4 5 6
CR 5/22/23
Analyst/Date

Pre-Cleanup TurboVap
1 2 3 4
LJ 5/22/23
Analyst/Date

Post-Cleanup TurboVap
1 2 3 4
LJ 5/22/23
Analyst/Date

Vialing
LJ 5/22/23

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT Date: 05/13/23	
Anhydrous Sodium Sulfate	L005616
1:1 Methylene Chloride/Acetone	L005072
Methylene Chloride	K005941
Pre-Deactivated Glass Wool	L004626
Pre GPC KD Analyst: CR Date: 5/18/23	
Hexane	L003500
Methylene Chloride	K005941
GPC Filter Prep Analyst: SH Date: 05/19/23	
Methylene Chloride	K005941
GPC Filter	L001799
GPC Analyst: SH Date: 05/19/23	
Methylene Chloride	~~K005941~~ K005941 LJ 5/22/23
GPC Calibration File	CLC0059 - GPC2
Post GPC KD Analyst: CR Date: 5/22/23	
Methylene Chloride	~~K005941~~ K005941 LJ 5/22/23
Hexane	L003500
Vialing Analyst: LJ Date: 5/22/23	
Methylene Chloride	K005941
Silica Gel (SPE) darts	L005133
Sodium Sulfite	N/A
Tetrabutylammonium hydrogensulfate (TBAS)	N/A
Hexane	L003500

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 15/75µg/mL	B L002091 Exp Date: 9/26/2023	100µL	CT	
Spike 15/75µg/mL	15 ~~K009081~~ L005139 Exp Date: 8/4/26	200µL	CT	

MANUALLY ENTER EXPIRATION DATES!

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

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

① CT 05/13/23

Printed: 5/4/2023 2:09:25PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0149

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23D0037: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <B>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Analyst/Date

Printed: 5/4/2023 2:09:25PM

3060F

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0149

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23D0037: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM ONLY to the vessels (until solvent is 3 inches above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 10-15 min in Refridgerator 05. Re-homogenize while cool. 7. Decant DCM into Erlenmeyer flask with a funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using 1:1 DCM/ACE. 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. If GPC is Req add 10mL Hexane and KD to 5mL at 100°C (NO EXCHANGE) 12. If GPC is NOT Req = KD to 5mL at 100°C. Exchange to Hexane (2X with 10mL) to 5mL at 100°C. 13. TurboVap. 14. If no GPC then Sulfur clean is REQUIRED. 15. Sulfur clean = Hexane transfer rinse. 16. Silica Clean-up Any Color=REQ (All or none). 17. TurboVap 18. Vial in DCM. A. Need Total Solids Y / N B. Archive/Freeze Y / N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SIM PAH Extraction Batch: BLE0149

Total Solids Batch: BLE0048 Work Order(s): 23E0009

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= ϕ1, ϕ3 – ϕ8.	ϕ5/ϕ2/23
☒ Standing Water Decanted (Not shared)= ϕ1, ϕ2 – ϕ8.	ϕ5/ϕ2/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 1/ϕ1 5.0% = ϕ2.	ϕ5/ϕ2/23
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	ϕ5/ϕ2/23
☒ Multiple Jars Y / N	ϕ5/ϕ2/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0182	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS Dup	BLE0149-BSD1	N823052220.D	05/22/2023	
LDW23-IT1820	23E0009-08	N823052224.D	05/22/2023	
Reference	BLE0149-SRM1	N823052221.D	05/22/2023	
Matrix Spike Dup	BLE0149-MSD1	N823052226.D	05/22/2023	
Matrix Spike	BLE0149-MS1	N823052225.D	05/22/2023	
Blank	BLE0149-BLK1	N823052218.D	05/22/2023	
LCS	BLE0149-BS1	N823052219.D	05/22/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0182

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLC0059-GPC2** **Printed: 5/22/2023 1:50:04PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0037-02	A	LDW23-IT1812	A 04	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/22/2023	LMJ	
23D0037-04	A	LDW23-IT1813	A 04	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/22/2023	LMJ	
23E0009-08	A	LDW23-IT1820	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/22/2023	LMJ	
BLE0149-BLK1	-	Blank	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-BS1	-	LCS	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-BSD1	-	LCS Dup	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-MS1	-	Matrix Spike	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-MSD1	-	Matrix Spike Dup	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-SRM1	-	Reference	-	0.5	0.5	-	5/22/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0183	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	BLE0149-BLK1	N823052218.D	05/22/2023	
LCS	BLE0149-BS1	N823052219.D	05/22/2023	
Matrix Spike	BLE0149-MS1	N823052225.D	05/22/2023	
Matrix Spike Dup	BLE0149-MSD1	N823052226.D	05/22/2023	
Reference	BLE0149-SRM1	N823052221.D	05/22/2023	
LDW23-IT1820	23E0009-08	N823052224.D	05/22/2023	
LCS Dup	BLE0149-BSD1	N823052220.D	05/22/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0183

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 5/22/2023 1:50:39PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0037-02	A	LDW23-IT1812	A 04	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/22/2023	LMJ	
23D0037-04	A	LDW23-IT1813	A 04	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/22/2023	LMJ	
23E0009-08	A	LDW23-IT1820	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/22/2023	LMJ	
BLE0149-BLK1	-	Blank	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-BS1	-	LCS	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-BSD1	-	LCS Dup	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-MS1	-	Matrix Spike	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-MSD1	-	Matrix Spike Dup	-	0.5	0.5	-	5/22/2023	LMJ	
BLE0149-SRM1	-	Reference	-	0.5	0.5	-	5/22/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLF0085	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1805	23E0009-03	NT1706012334S.D	05/31/2023	
Reference	BLE0148-SRM2	NT1706012330S.D	05/31/2023	
LDW23-SS1811	23E0009-01	NT1706012333S.D	05/31/2023	
LDW23-SS1800	23E0009-05	NT1706012335S.D	05/31/2023	
Blank	BLE0148-BLK2	NT1706012325S.D	05/31/2023	
Matrix Spike Dup	BLE0148-MSD2	NT1706012329S.D	05/31/2023	
LDW23-SS1820	23E0009-07	NT1706012336S.D	05/31/2023	
LCS	BLE0148-BS2	NT1706012326S.D	05/31/2023	
Matrix Spike	BLE0148-MS2	NT1706012328S.D	05/31/2023	
LCS Dup	BLE0148-BSD2	NT1706012327S.D	05/31/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLF0085

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLC0092-GPC2** **Printed: 6/9/2023 10:12:27AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0394-07	A	LDW23-IT1087	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23D0394-07	A	LDW23-IT1087	A 02	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23D0394-13	A	LDW23-IT1806	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23D0394-13	A	LDW23-IT1806	A 02	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23E0009-01	A	LDW23-SS1811	A 01	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23E0009-01	A	LDW23-SS1811	A 01	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23E0009-03	A	LDW23-SS1805	A 01	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23E0009-03	A	LDW23-SS1805	A 01	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23E0009-05	A	LDW23-SS1800	A 01	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23E0009-05	A	LDW23-SS1800	A 01	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
23E0009-07	A	LDW23-SS1820	A 01	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	5/31/2023	NRB	
23E0009-07	A	LDW23-SS1820	A 01	1	1	8270E-SIM Dual Scan SVOC	5/31/2023	NRB	
BLE0148-BLK1	-	Blank	-	1	1	-	5/31/2023	NRB	
BLE0148-BLK2	-	Blank	-	1	1	-	5/31/2023	NRB	
BLE0148-BS1	-	LCS	-	1	1	-	5/31/2023	NRB	
BLE0148-BS2	-	LCS	-	1	1	-	5/31/2023	NRB	
BLE0148-BSD1	-	LCS Dup	-	1	1	-	5/31/2023	NRB	
BLE0148-BSD2	-	LCS Dup	-	1	1	-	5/31/2023	NRB	
BLE0148-MS1	-	Matrix Spike	-	1	1	-	5/31/2023	NRB	
BLE0148-MS2	-	Matrix Spike	-	1	1	-	5/31/2023	NRB	
BLE0148-MSD1	-	Matrix Spike Dup	-	1	1	-	5/31/2023	NRB	
BLE0148-MSD2	-	Matrix Spike Dup	-	1	1	-	5/31/2023	NRB	

CLEANUP BENCH SHEET

CLF0085

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLC0092-GPC2** **Printed: 6/9/2023 10:12:27AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLE0148-SRM1	-	Reference	-	1	1	-	5/31/2023	NRB	
BLE0148-SRM2	-	Reference	-	1	1	-	5/31/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLE0148-BLK2	File ID:	NT1706012325S.D
Sampled:	N/A	Prepared:	05/05/23 11:23	Analyzed:	06/02/23 02:57
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLE0148	Sequence:	SLF0037	Calibration:	GE00070
Instrument:	NT17	Column:	ZB-5MS	Cleanups:	GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	0.7	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	20.0	U	2.5	20.0
65-85-0	Benzoic acid	1	100	U	13.4	100
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	431	57.4	27 - 120	
p-Terphenyl-d14	500.00	456	91.3	37 - 120	

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123258.D

Date : 02-JUN-2023 02:57

Client ID:

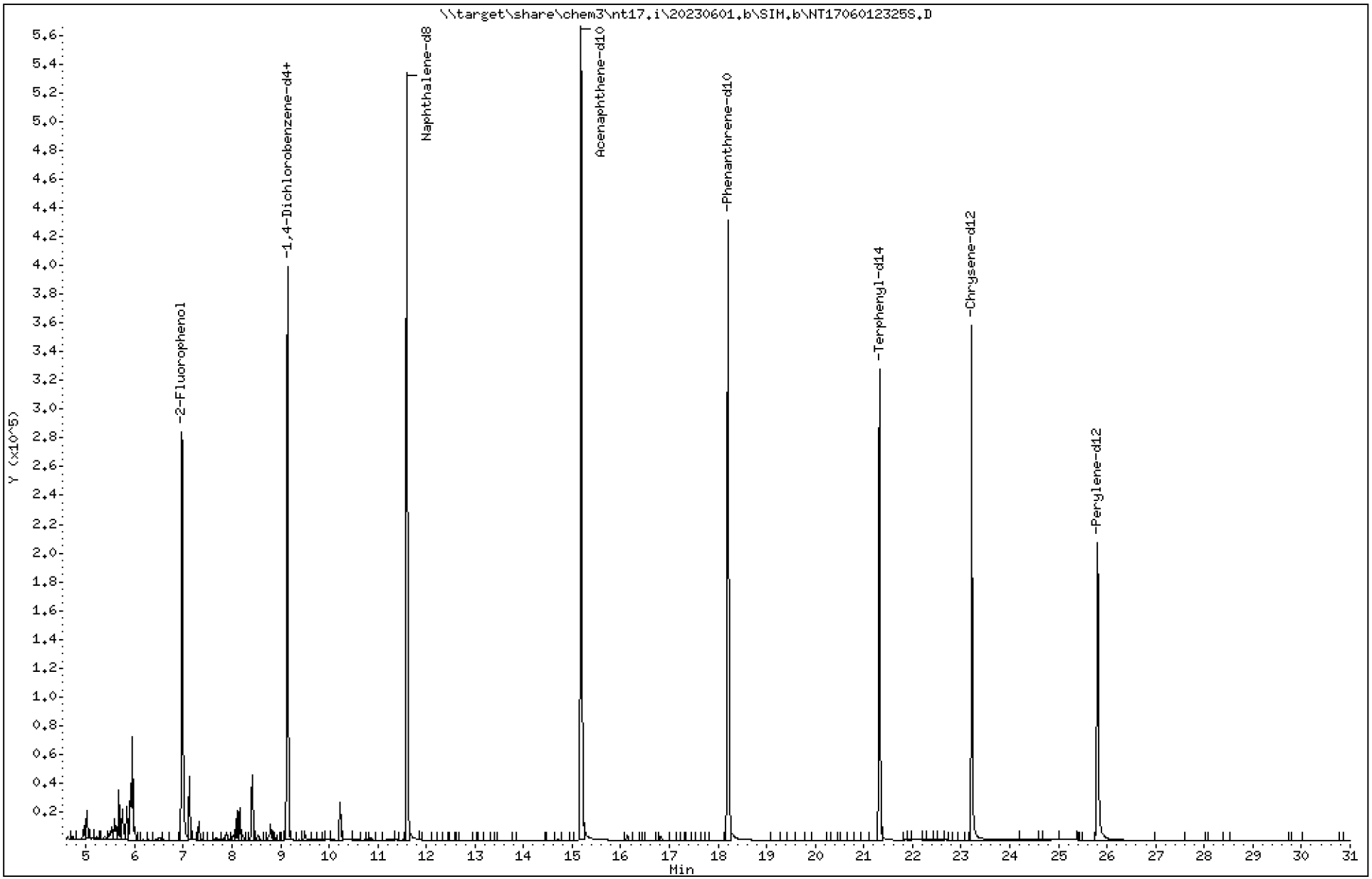
Instrument: nt17.i

Sample Info: BLE0148-BLK2

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012325S.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK2

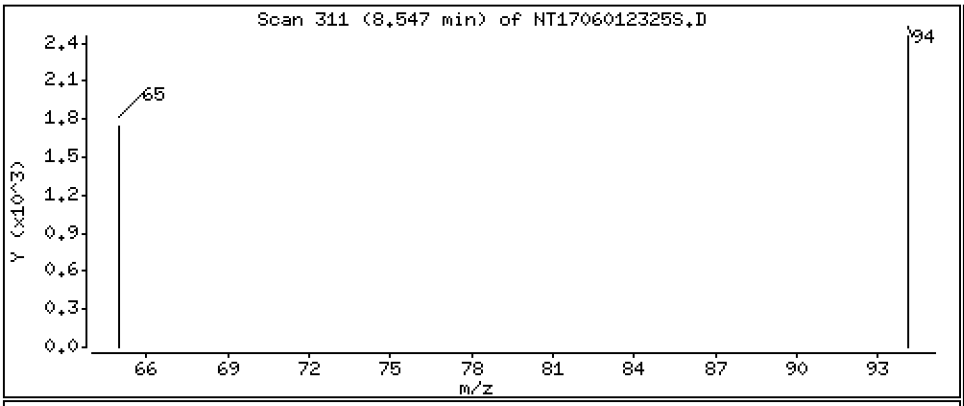
Operator: VTS

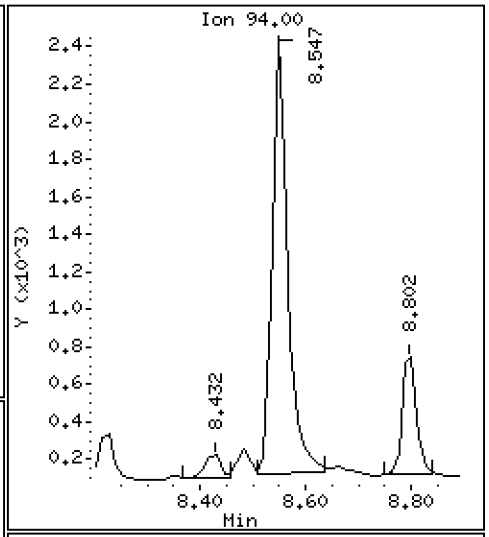
Column phase: ZB-5msi

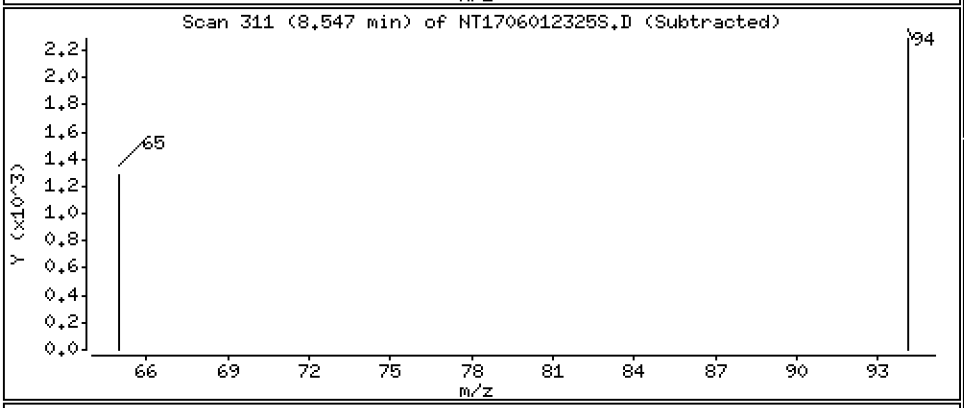
Column diameter: 0.25

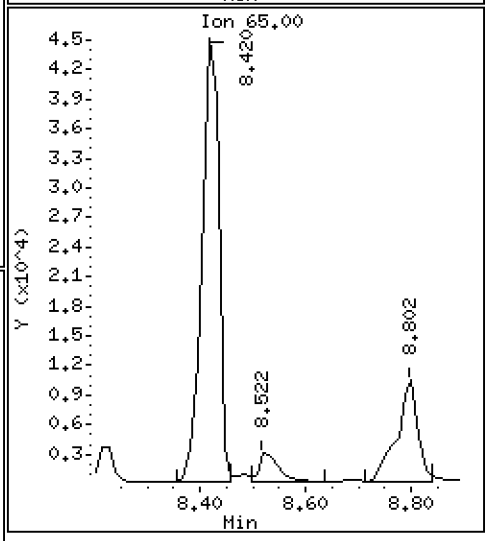
3 Phenol

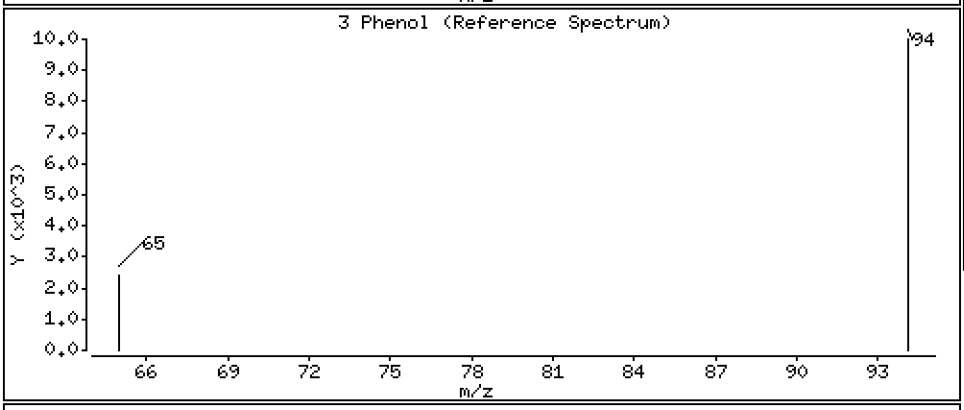
Concentration: 0.03905 ug/mL

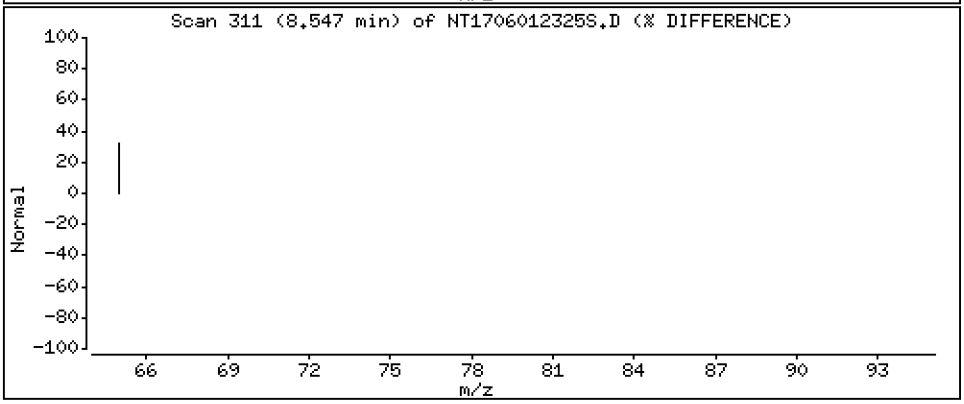












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012325S.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK2

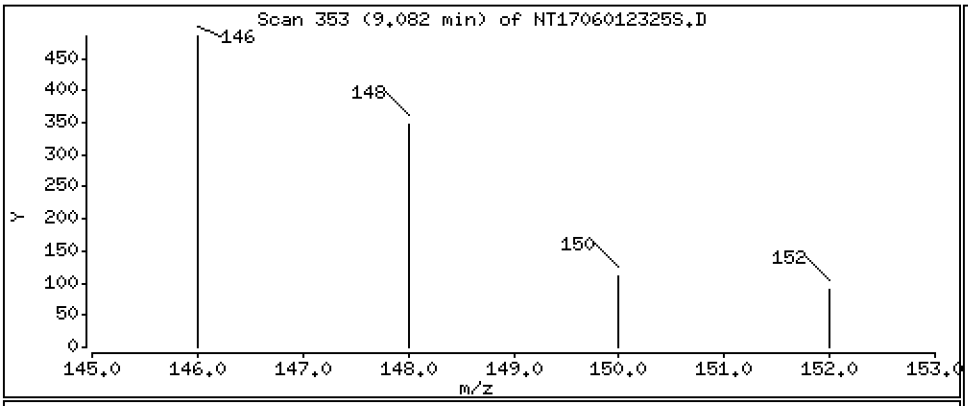
Operator: VTS

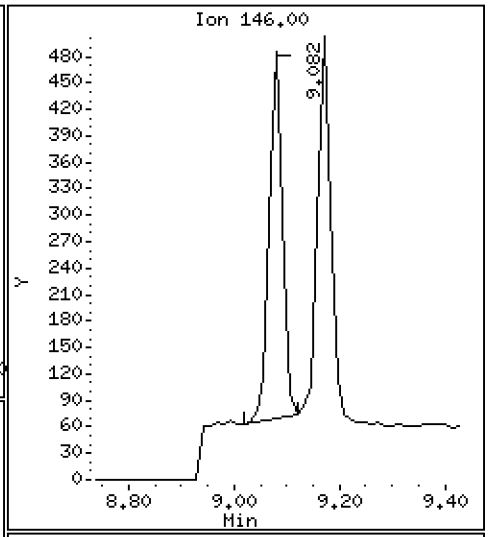
Column phase: ZB-5msi

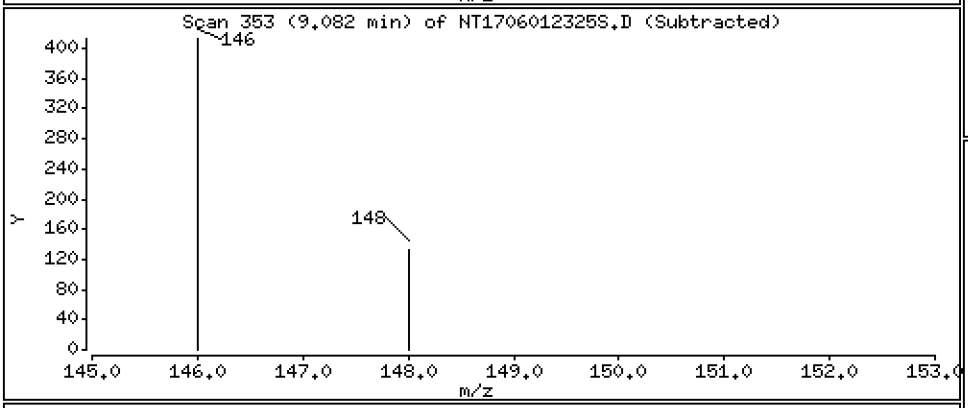
Column diameter: 0.25

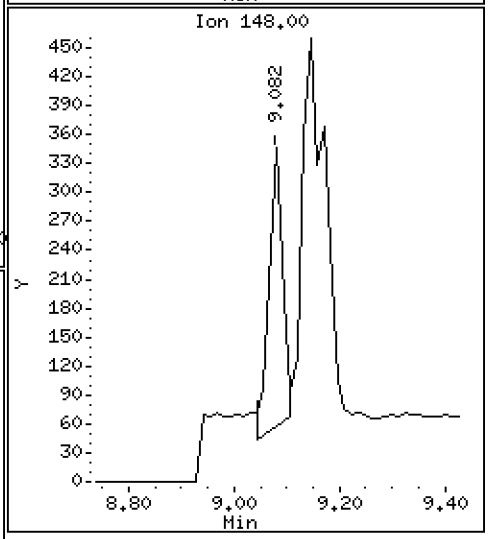
7 1,3-Dichlorobenzene

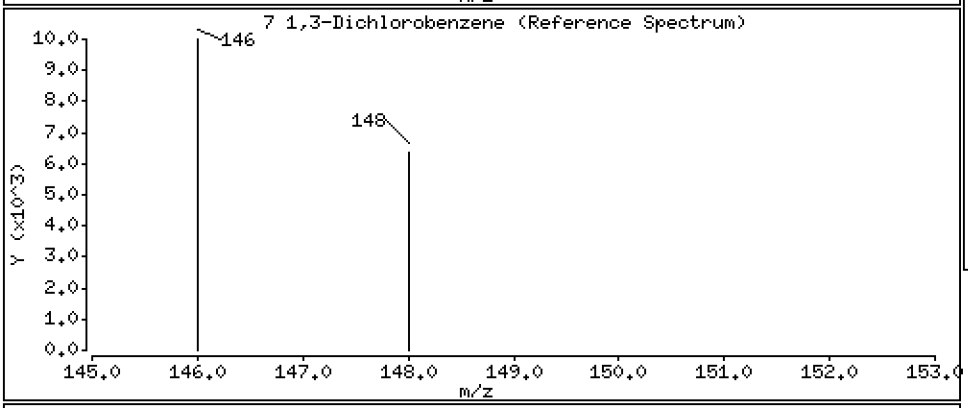
Concentration: 0.006611 ug/mL

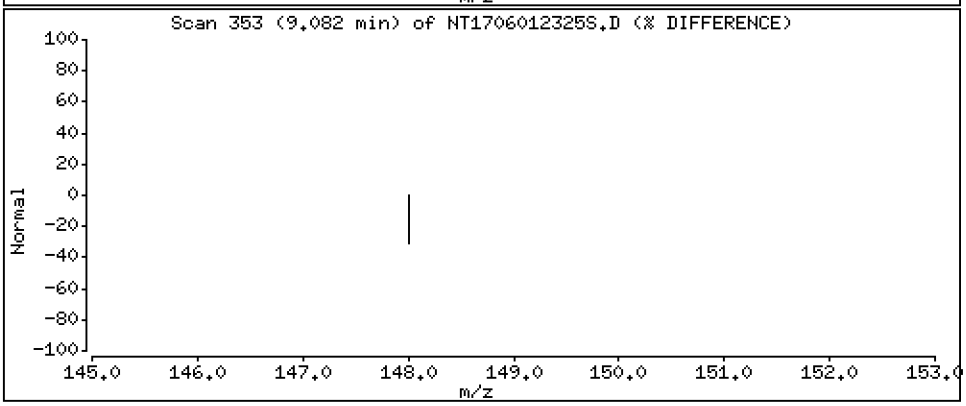












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012325S.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK2

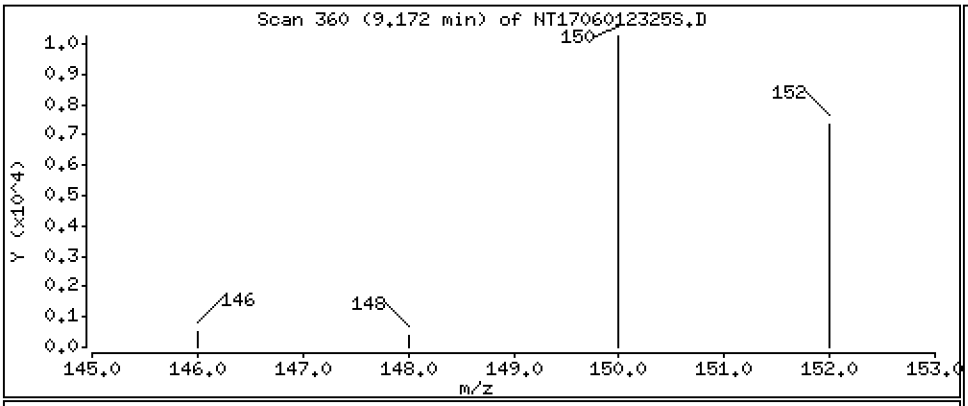
Operator: VTS

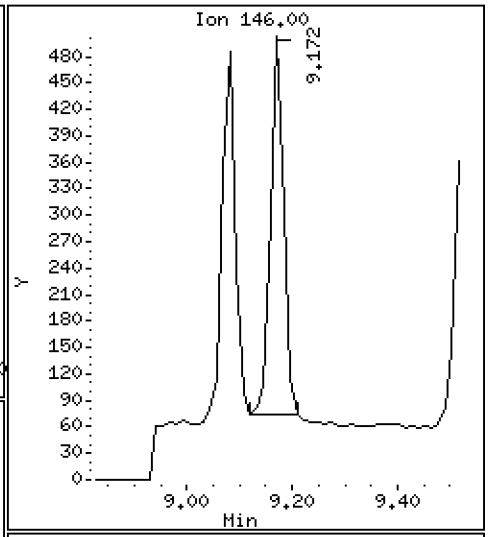
Column phase: ZB-5msi

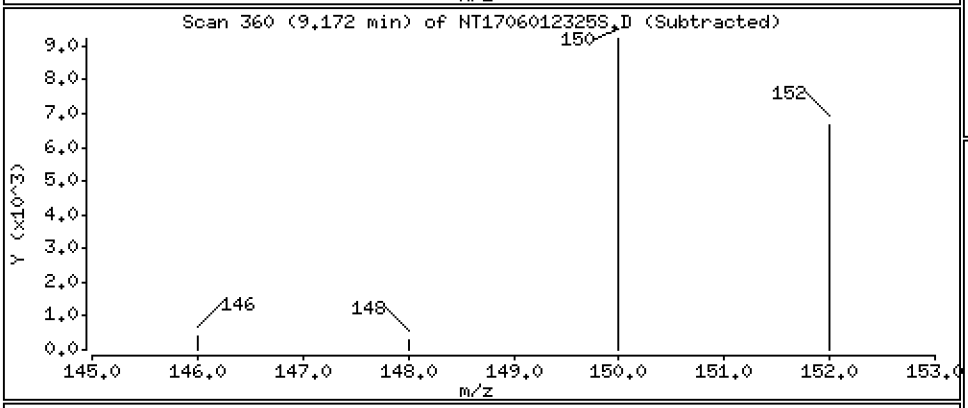
Column diameter: 0.25

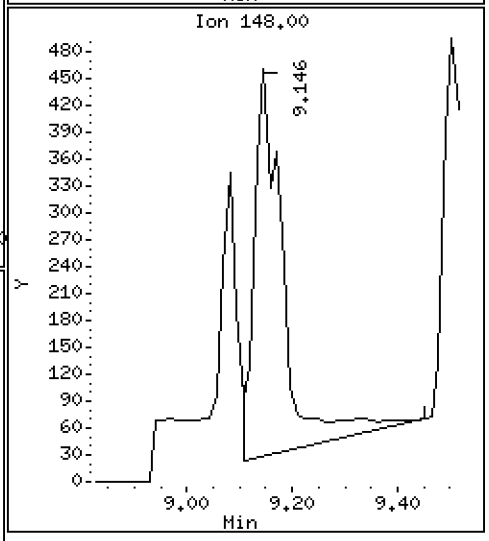
9 1,4-Dichlorobenzene

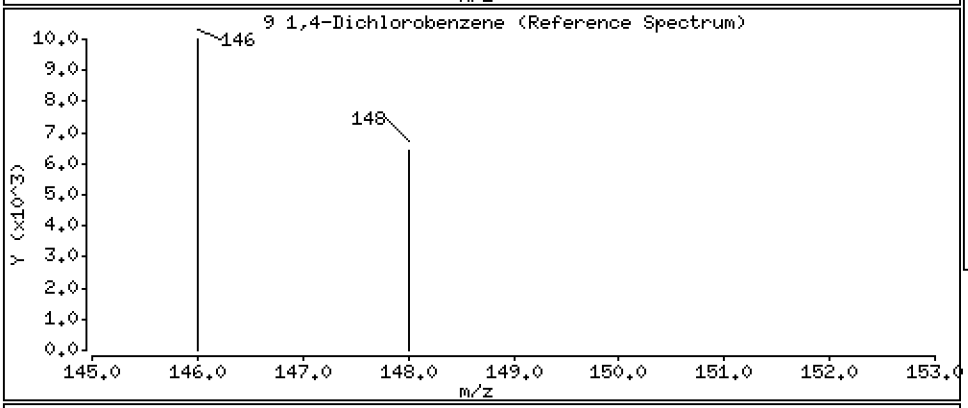
Concentration: 0.006905 ug/mL

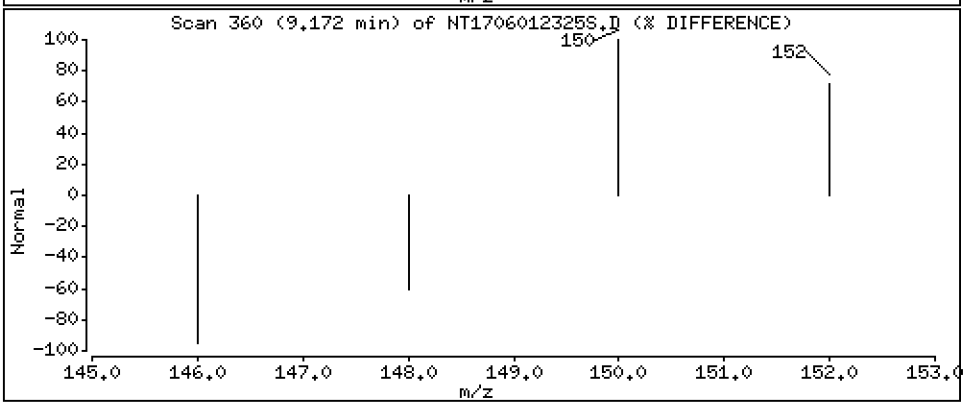












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012325S.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK2

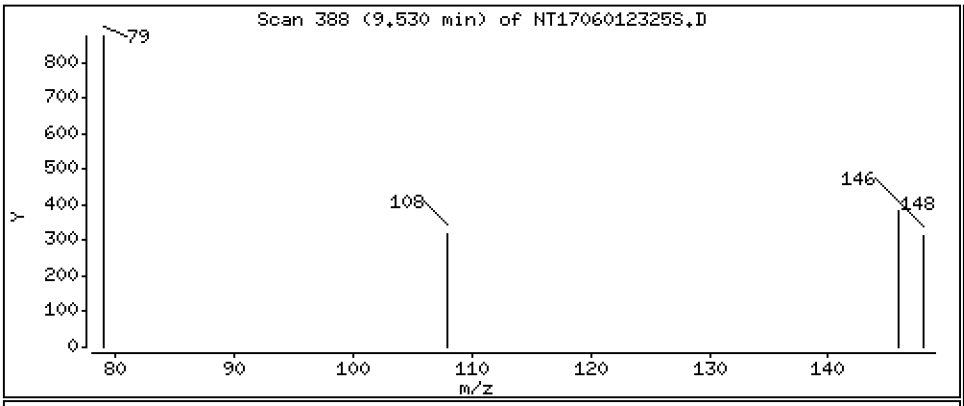
Operator: VTS

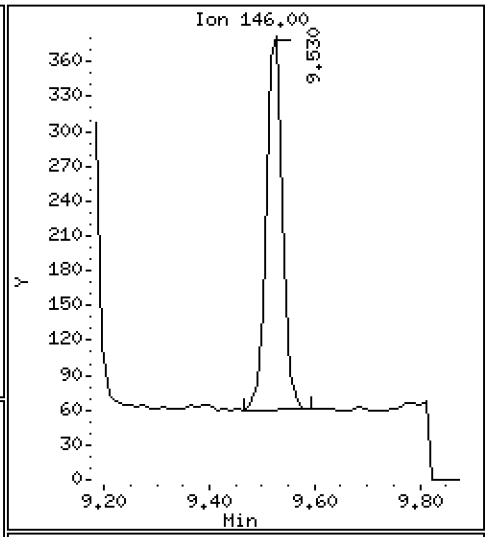
Column phase: ZB-5msi

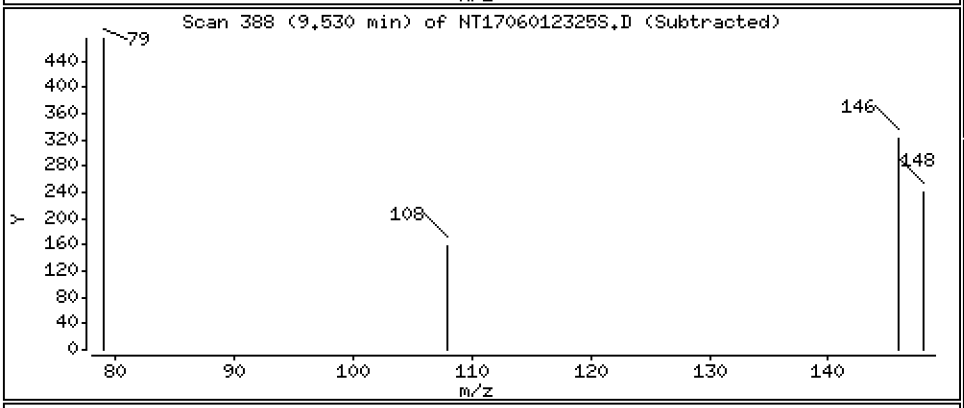
Column diameter: 0.25

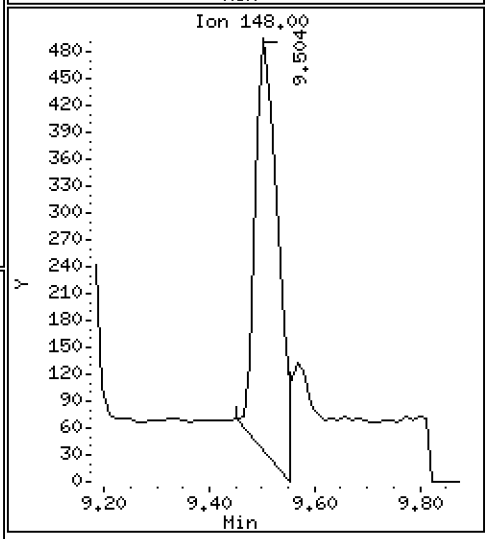
12 1,2-Dichlorobenzene

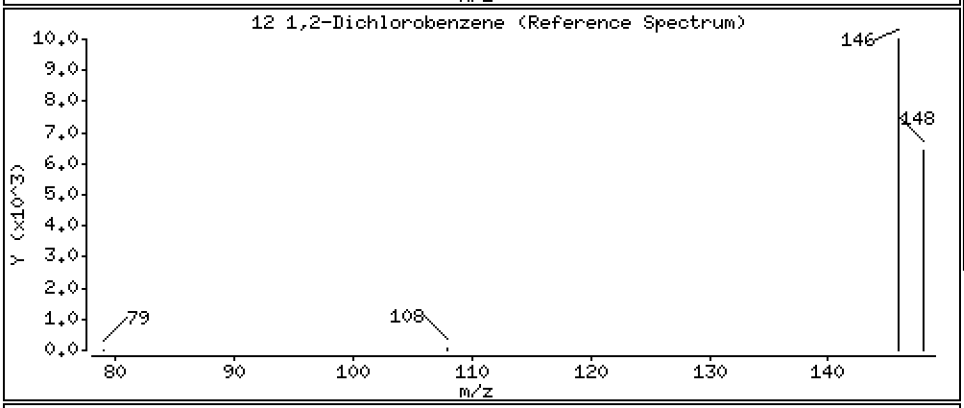
Concentration: 0.006589 ug/mL

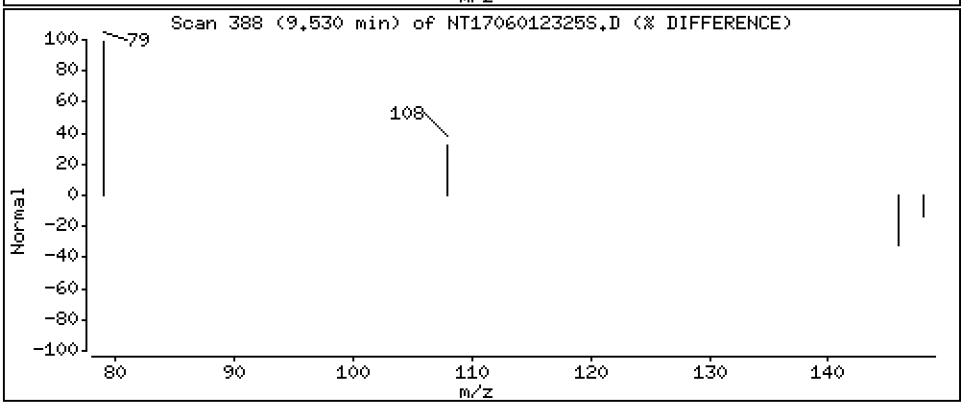












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012325S.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK2

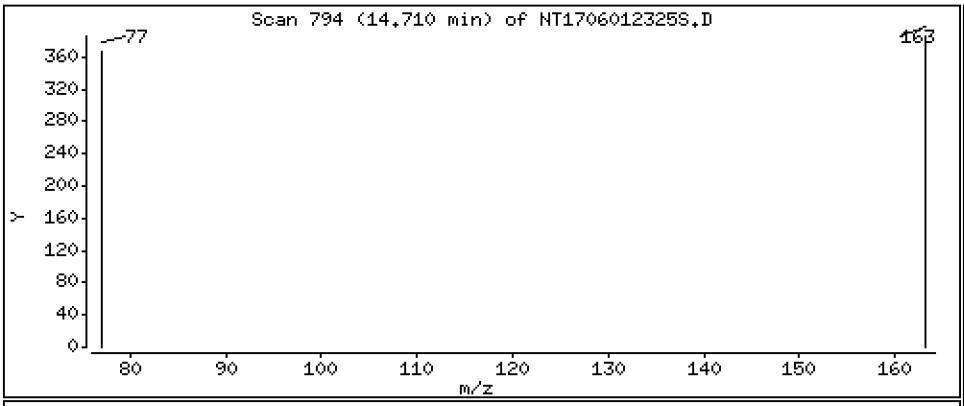
Operator: VTS

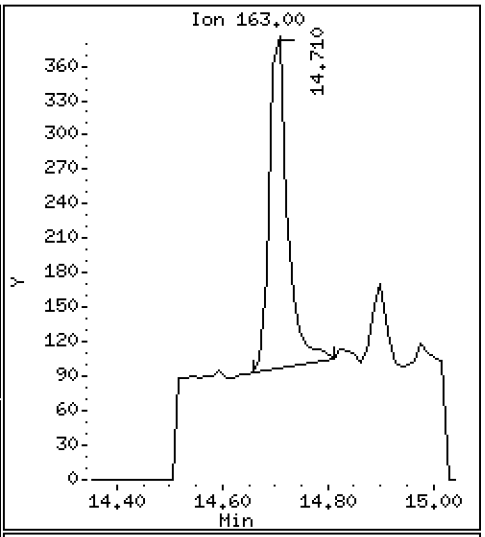
Column phase: ZB-5msi

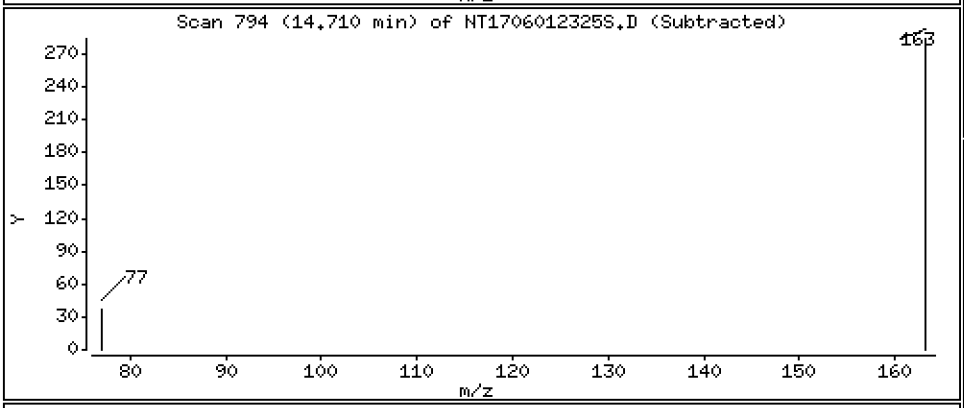
Column diameter: 0.25

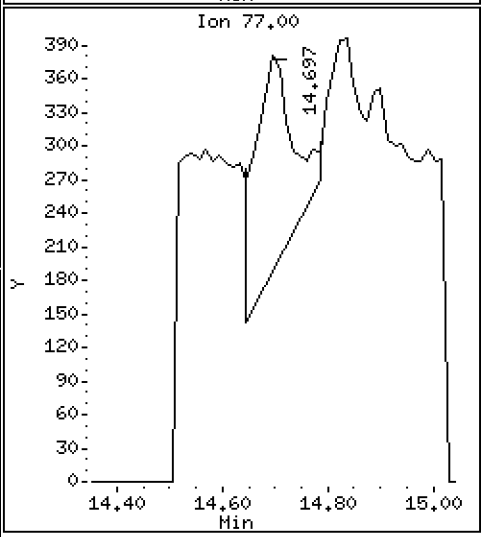
39 Dimethylphthalate

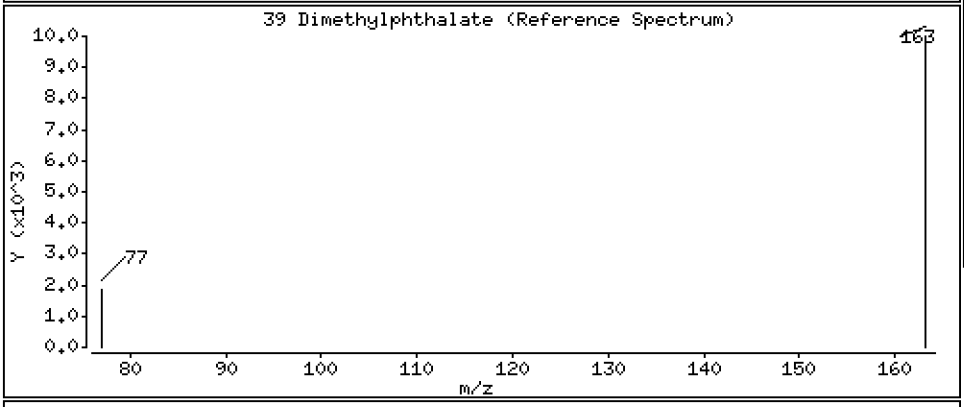
Concentration: 0.003443 ug/mL

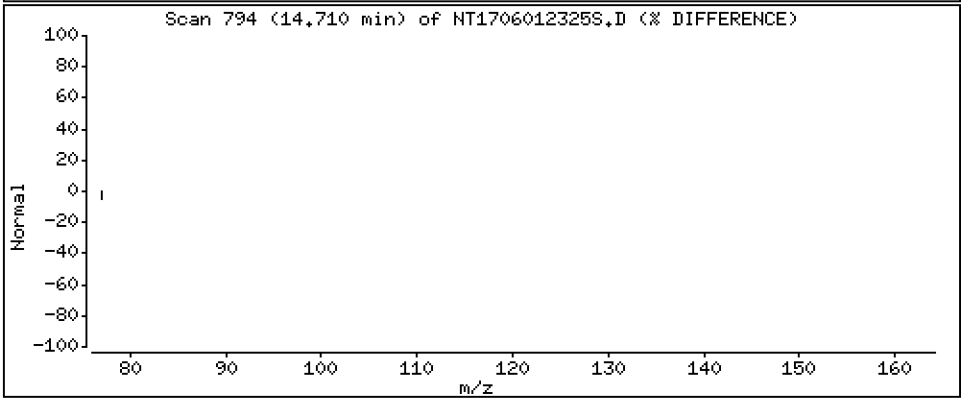












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012325S.D

Date : 02-JUN-2023 02:57

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BLK2

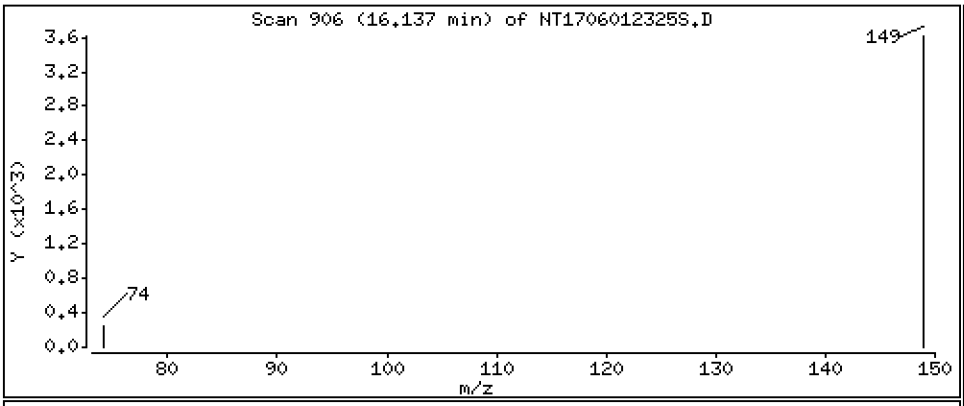
Operator: VTS

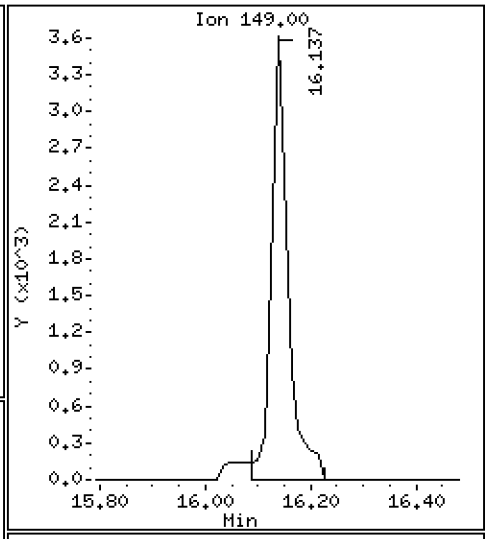
Column phase: ZB-5msi

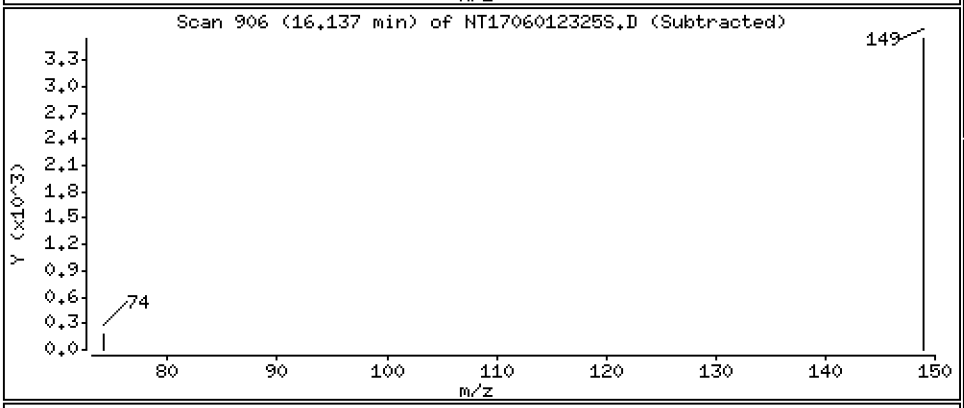
Column diameter: 0.25

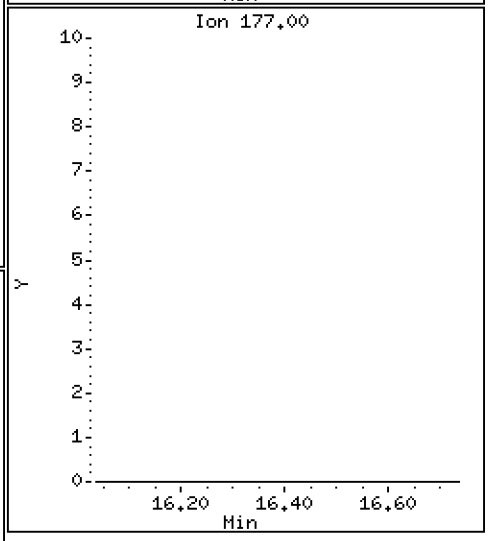
50 Diethylphthalate

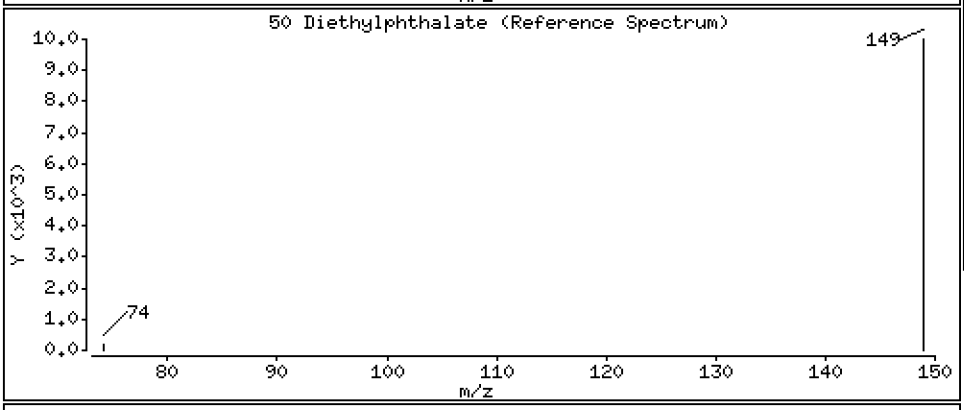
Concentration: 0.04354 ug/mL

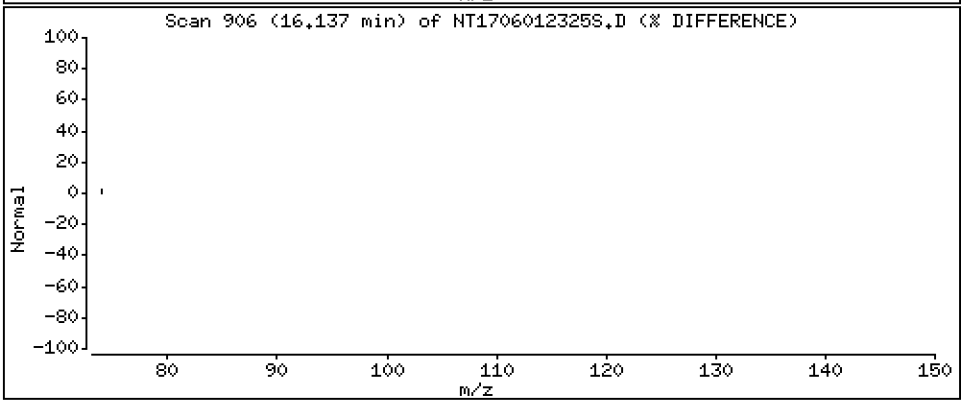












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012325S.D
Lab Smp Id: BLE0148-BLK2
Inj Date : 02-JUN-2023 02:57
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-BLK2
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.980	6.954	(0.763)	355665	4.30768	4.308(R)
3	Phenol	94	8.547	8.547	(0.934)	4804	0.03905	0.03905
7	1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	729	0.00661	0.006611(M)
* 8	1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	272978	4.00000	
9	1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	742	0.00691	0.006905(M)
11	Benzyl alcohol	79	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	694	0.00659	0.006589(M)
13	2-Methylphenol	108	Compound Not Detected.					
15	4-Methylphenol	108	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.598	11.598	(1.000)	949642	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.709	14.696	(0.969)	697	0.00344	0.003443(M)
* 42	Acenaphthene-d10	162	15.181	15.194	(1.000)	551269	4.00000	
50	Diethylphthalate	149	16.137	16.137	(1.063)	8005	0.04354	0.04354
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					
58	Pentachlorophenol	266	Compound Not Detected.					
* 59	Phenanthrene-d10	188	18.201	18.201	(1.000)	838655	4.00000	
$ 66	Terphenyl-d14	244	21.325	21.325	(0.919)	476968	4.56262	4.563(R)
67	Butylbenzylphthalate	149	Compound Not Detected.					
* 69	Chrysene-d12	240	23.213	23.213	(1.000)	550926	4.00000	
* 77	Perylene-d12	264	25.802	25.802	(1.000)	457583	4.00000	
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012325S.D Calibration Time: 00:29
Lab Smp Id: BLE0148-BLK2
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	272978	2.80
27 Naphthalene-d8	874121	437061	1748242	949642	8.64
42 Acenaphthene-d10	524478	262239	1048956	551269	5.11
59 Phenanthrene-d10	807440	403720	1614880	838655	3.87
69 Chrysene-d12	527364	263682	1054728	550926	4.47
77 Perylene-d12	455527	227764	911054	457583	0.45

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.18	-0.08
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.21	22.71	23.71	23.21	0.00
77 Perylene-d12	25.80	25.30	26.30	25.80	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012325S.D

Lab ID: BLE0148-BLK2
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 02:57

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1706012321S.D

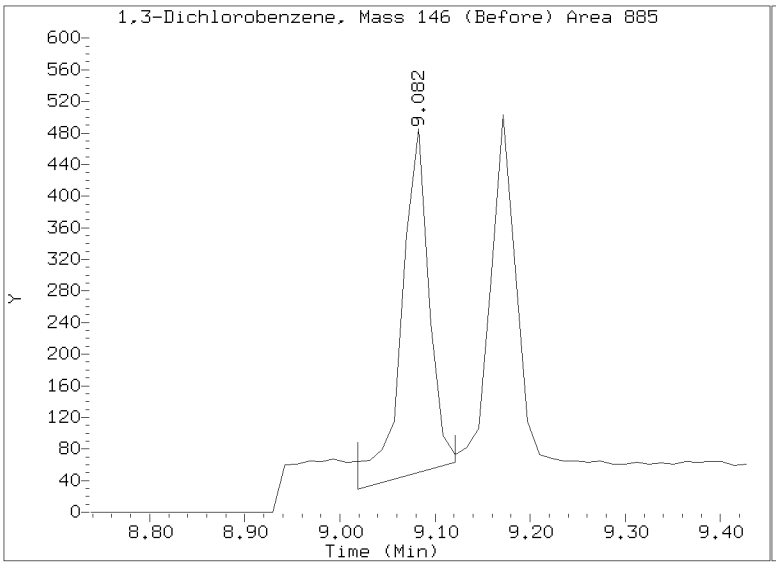
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

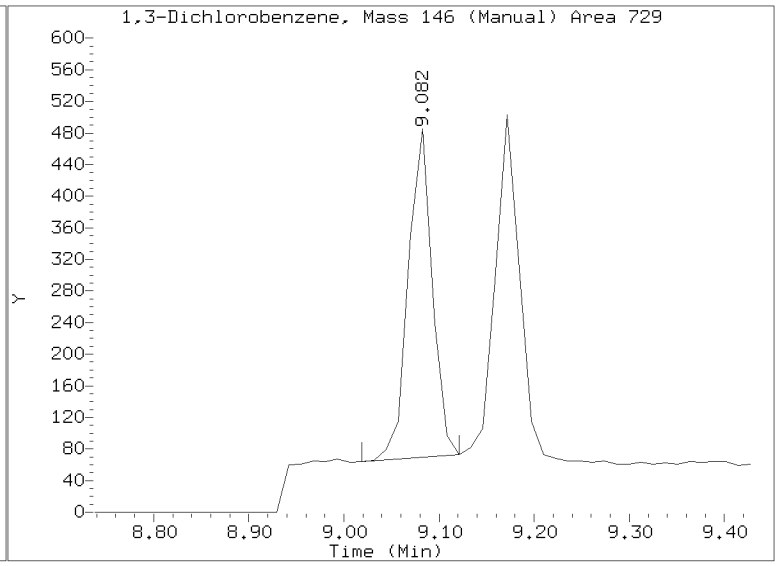
Exception: 1,2,4-Trichlorobenzene 0.0010

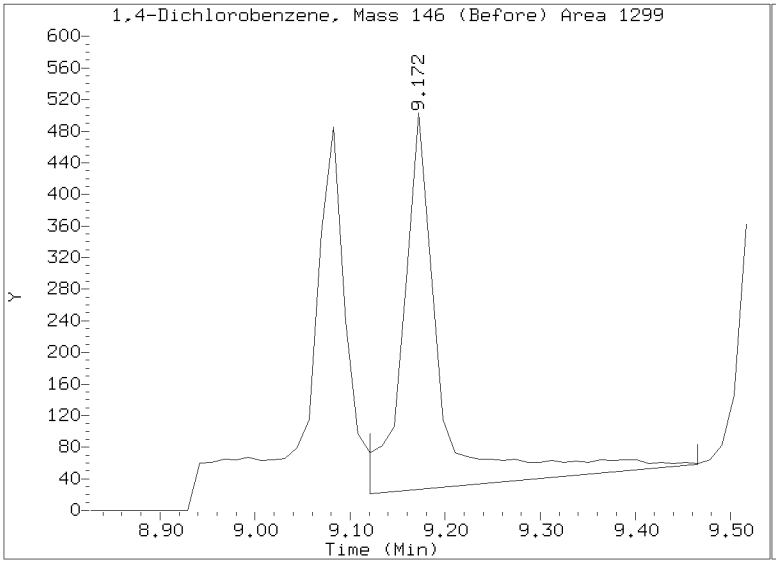
* Only compounds listed in the work order have been verified by the analyst *

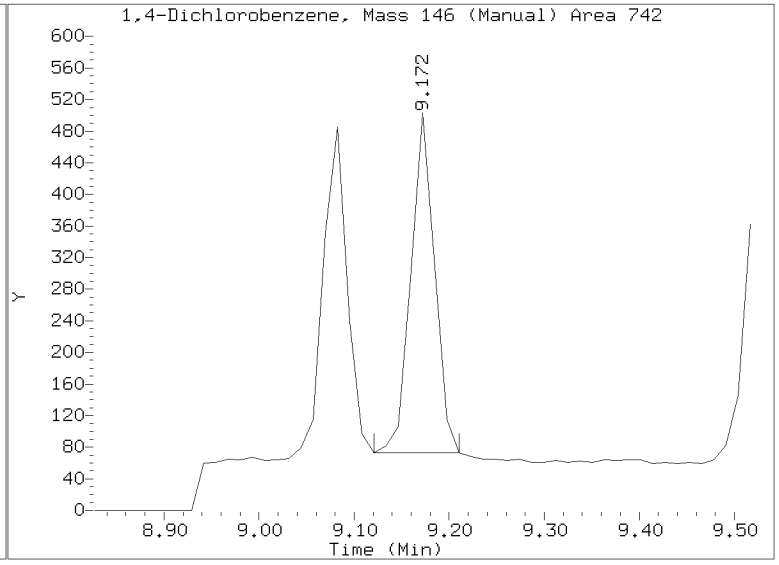
Quant Ion Manual Peak Adjustment Report

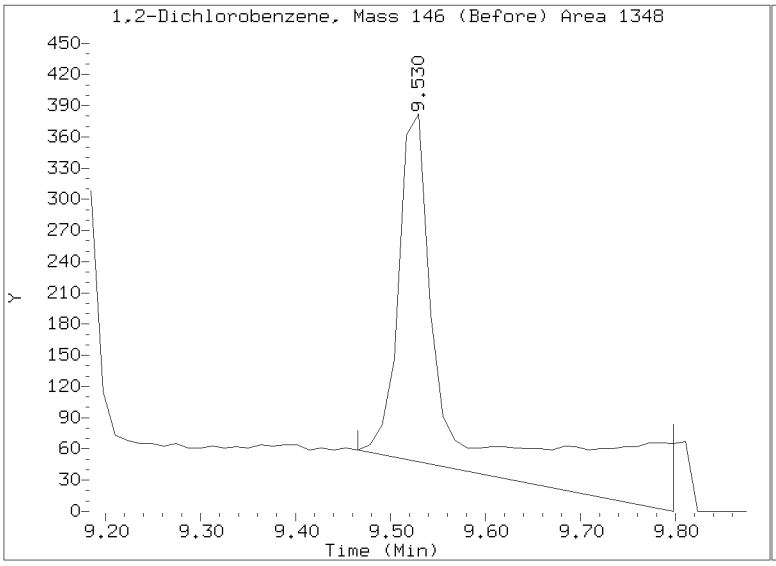
Datafile: //target/share/chem3/nt17.i/20230601.b/SIM.b/NT1706012325S.D
Injection Date: 02-JUN-2023 02:57
Lab ID:BLE0148-BLK2 Client ID:
Report Date: 06/06/2023 11:43

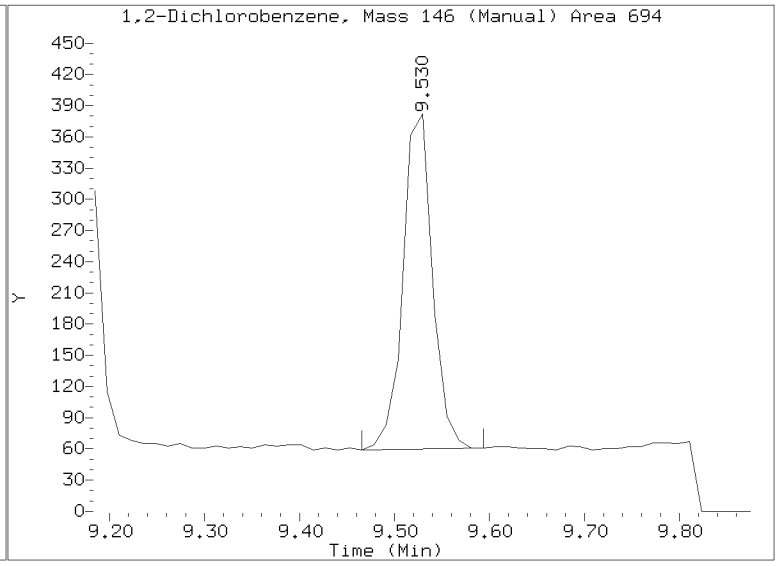






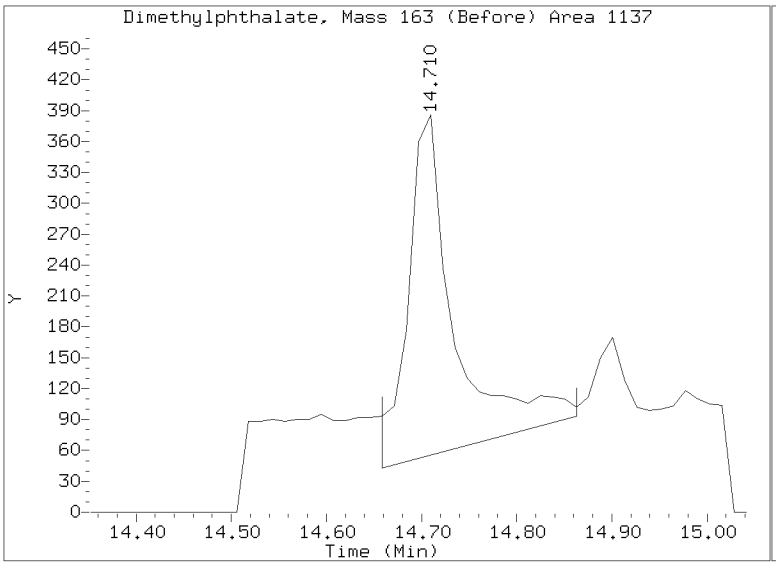


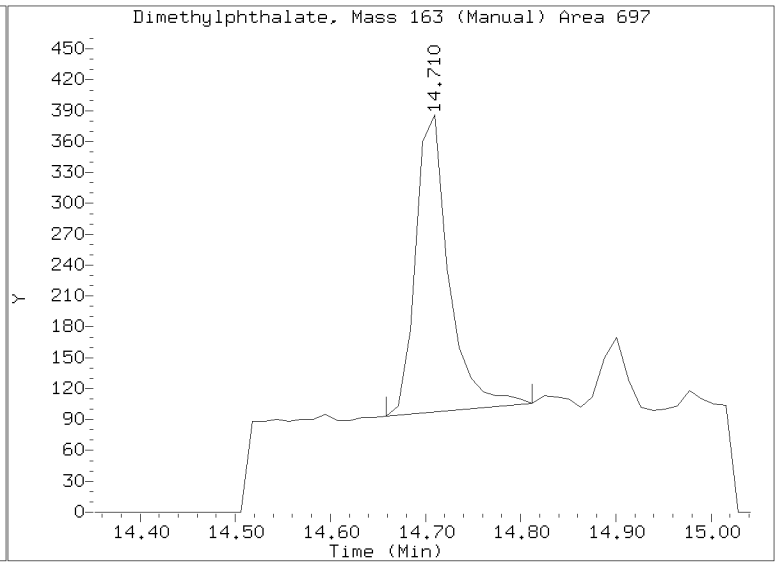




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/SIM.b/NT1706012325S.D
Injection Date: 02-JUN-2023 02:57
Lab ID:BLE0148-BLK2 Client ID:
Report Date: 06/06/2023 11:43





Form I

METHOD BLANK DATA SHEET

EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLE0149-BLK1	File ID:	N823052218.D
Sampled:	N/A	Prepared:	05/13/23 12:35	Analyzed:	05/22/23 19:38
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 0.5 mL
Batch:	BLE0149	Sequence:	SLE0350	Calibration:	GD00068
Instrument:	NT8	Column:	RXI-17Sil ms	Cleanups:	GPC, Silica Gel

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	5.00	U	0.82	5.00
218-01-9	Chrysene	1	5.00	U	1.05	5.00
205-99-2	Benzo(b)fluoranthene	1	5.00	U	1.37	5.00
207-08-9	Benzo(k)fluoranthene	1	5.00	U	0.76	5.00
50-32-8	Benzo(a)pyrene	1	5.00	U	0.61	5.00
193-39-5	Indeno(1,2,3-cd)pyrene	1	5.00	U	1.05	5.00
53-70-3	Dibenzo(a,h)anthracene	1	5.00	U	0.89	5.00

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	150.00	107	71.4	32 - 120	
Dibenzo[a,h]anthracene-d14	150.00	201	134	21 - 133	*
Fluoranthene-d10	150.00	138	92.0	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230522.b\N823052218.D

Date : 22-MAY-2023 19:38

Client ID:

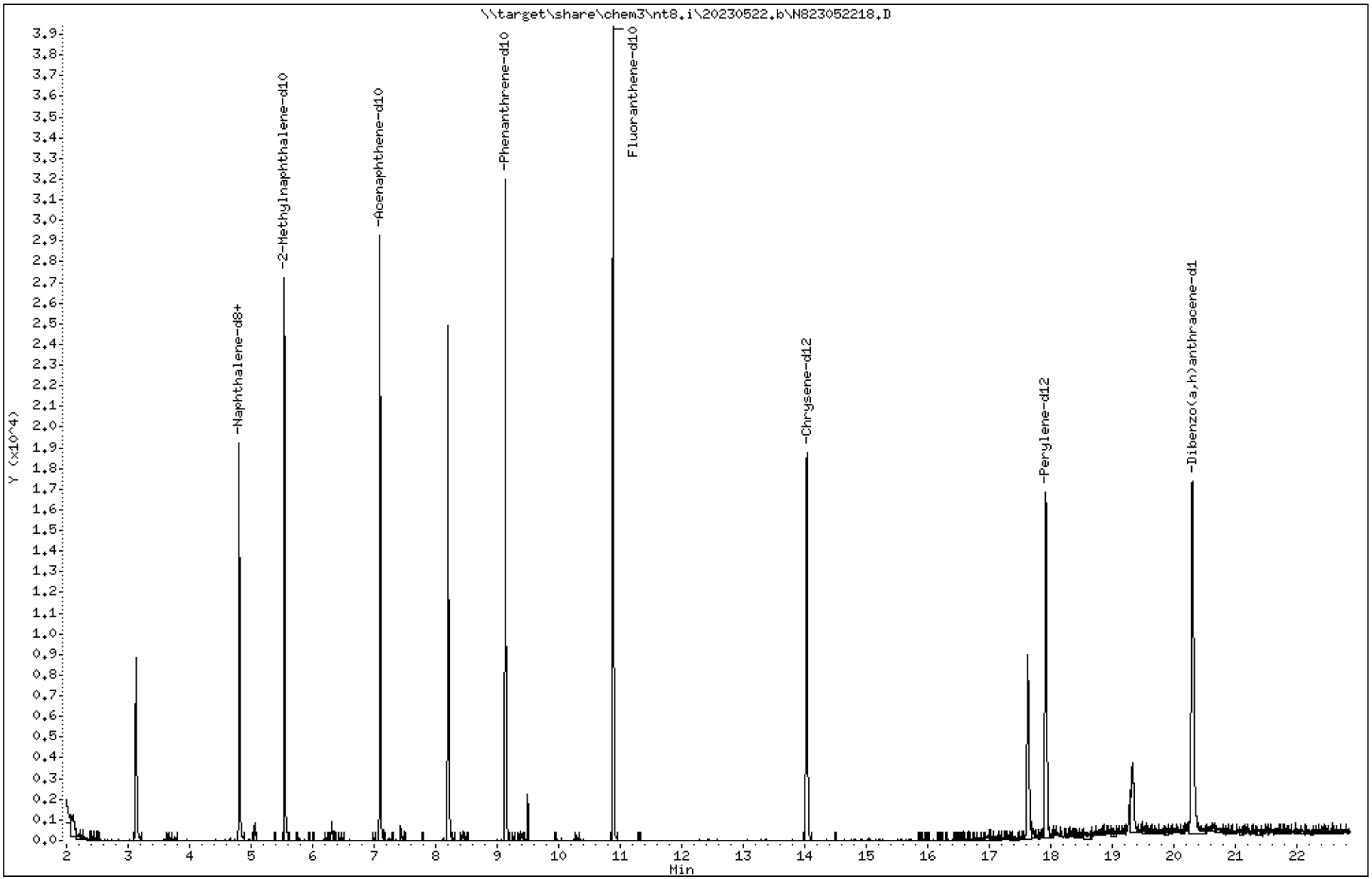
Instrument: nt8.i

Sample Info: BLE0149-BLK1,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230522.b\N823052218.D

Date : 22-MAY-2023 19:38

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BLK1,

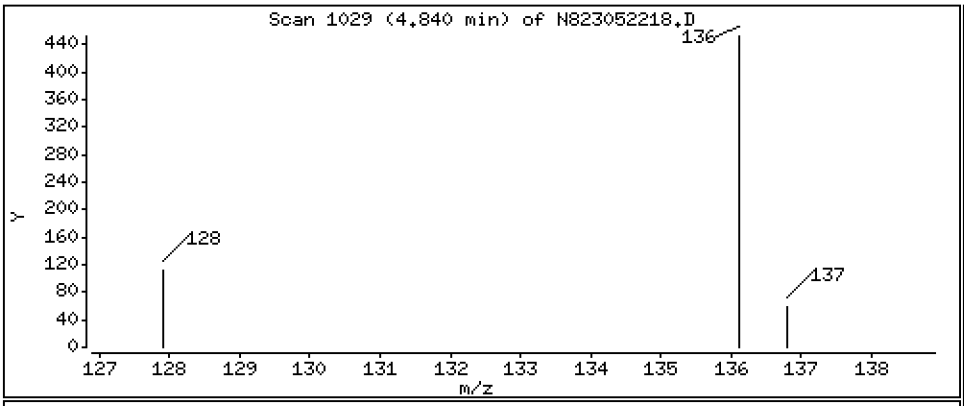
Operator: JZ

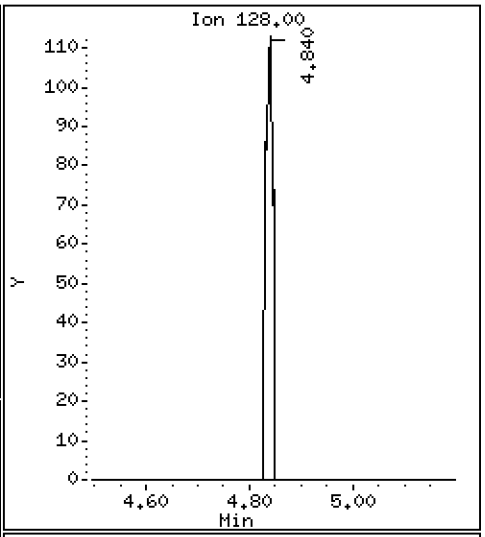
Column phase: Rxi-17sil

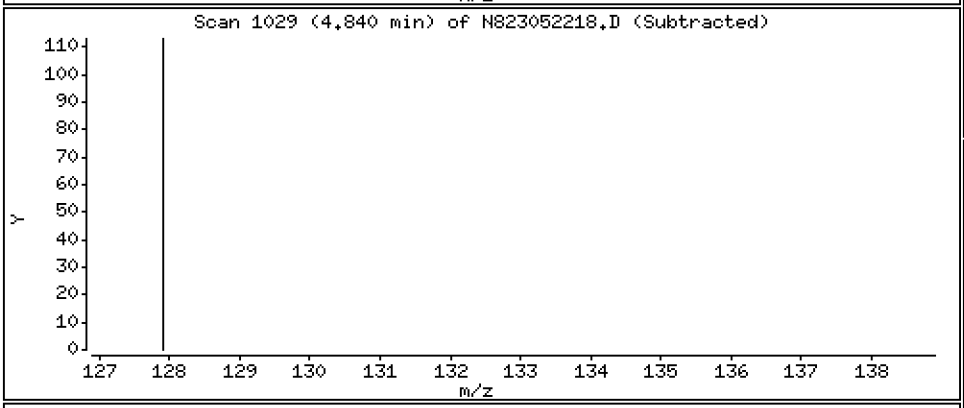
Column diameter: 0.25

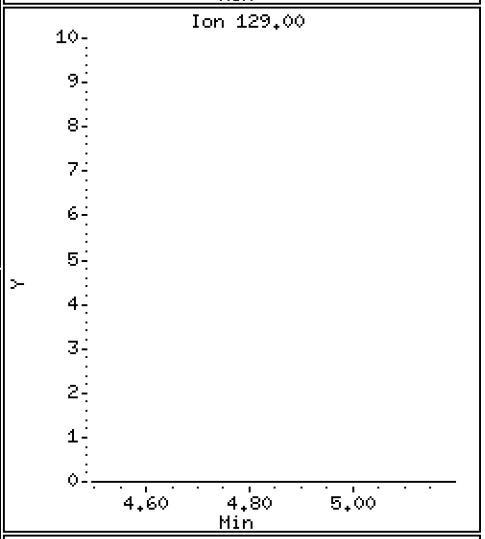
2 Naphthalene

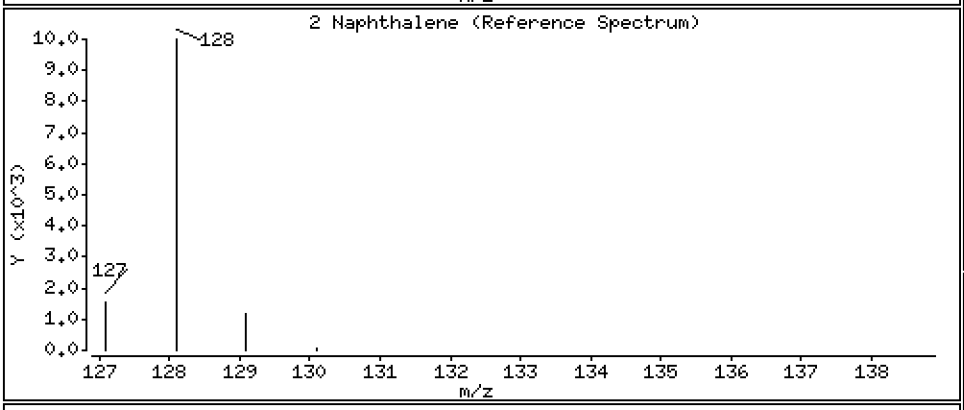
Concentration: 0.01280 ug/mL

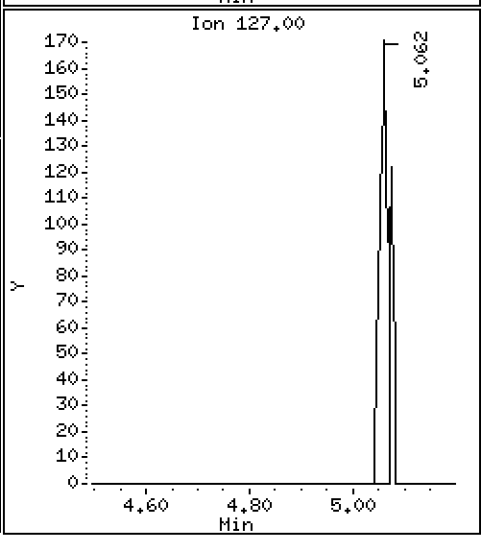


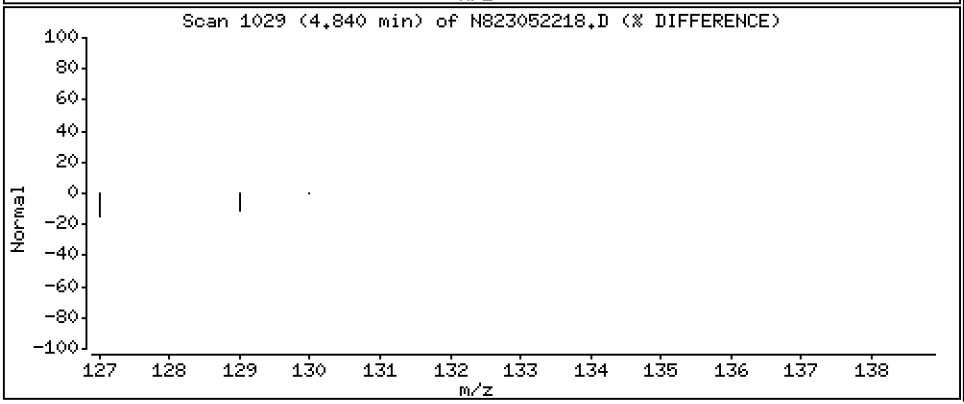












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052218.D

Date : 22-MAY-2023 19:38

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BLK1,

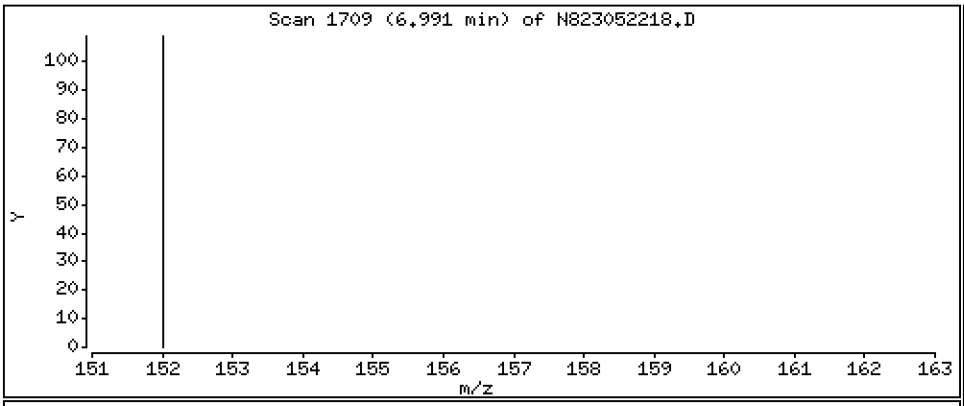
Operator: JZ

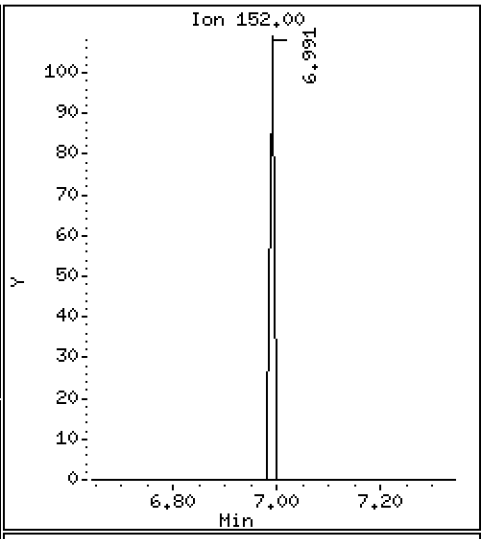
Column phase: Rxi-17sil

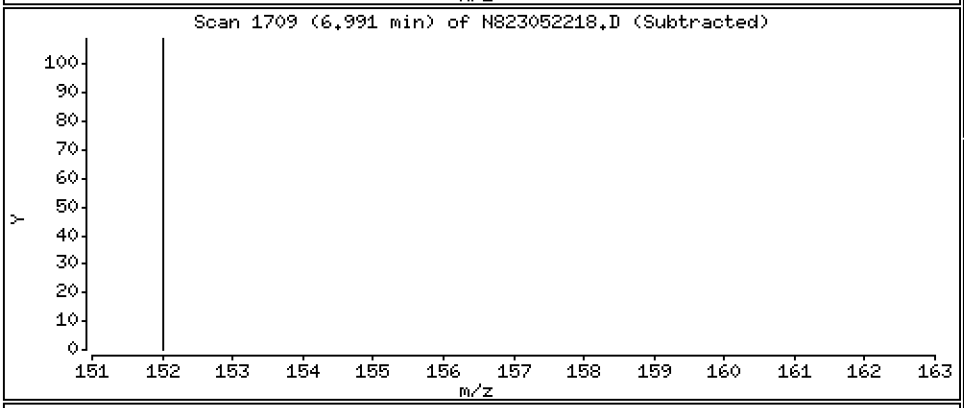
Column diameter: 0.25

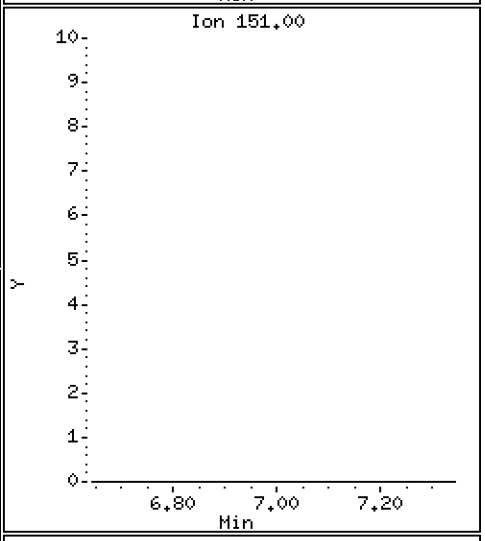
9 Acenaphthylene

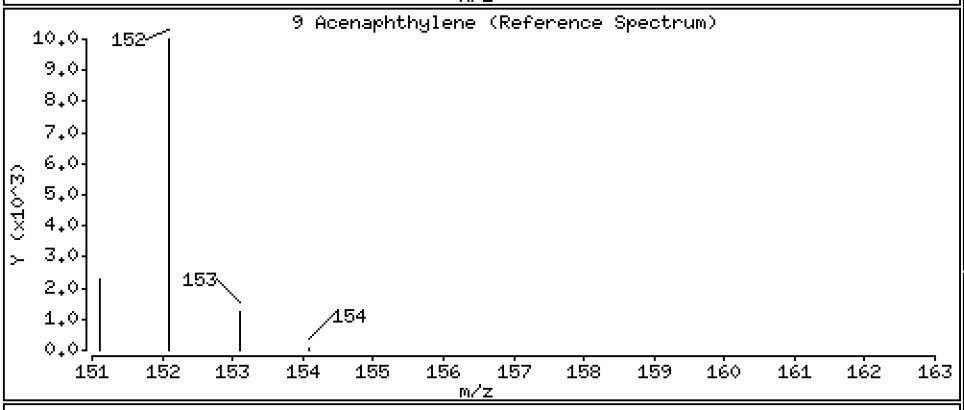
Concentration: 0.008673 ug/mL

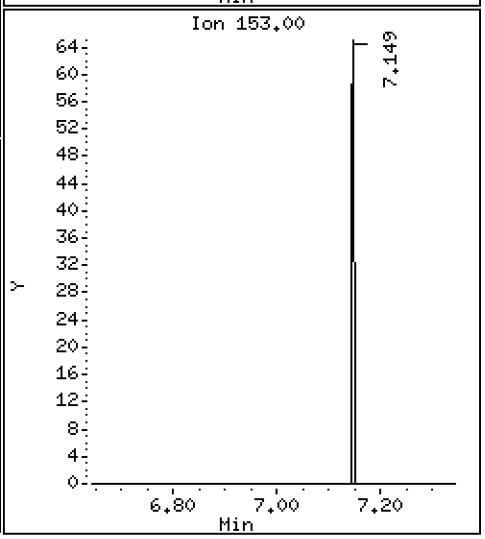


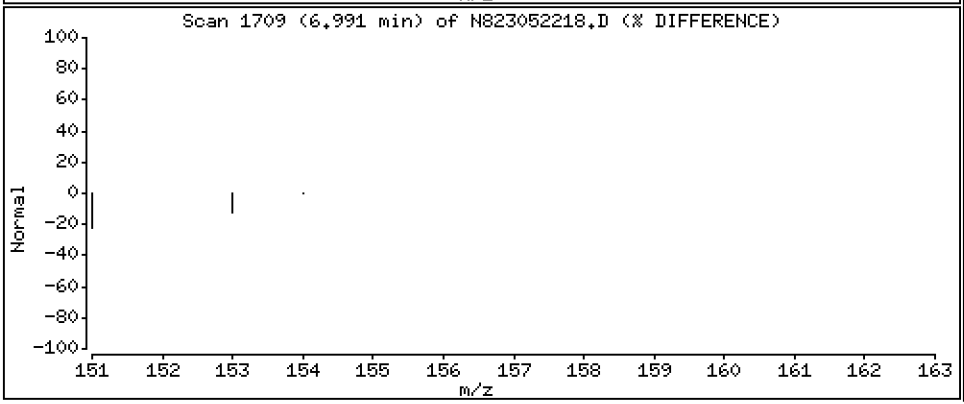












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230522.b\N823052218.D
Lab Smp Id: BLE0149-BLK1
Inj Date : 22-MAY-2023 19:38
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0149-BLK1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Meth Date : 23-May-2023 10:38 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.805	4.818	(1.000)	15484	2.00000	
	2 Naphthalene	128	4.840	4.846	(1.007)	101	0.01280	0.01280
$	3 2-Methylnaphthalene-d10	152	5.542	5.551	(1.153)	10244	2.14210	2.142
	4 2-Methylnaphthalene	141	Compound Not Detected.					
	5 1-methylnaphthalene	141	Compound Not Detected.					
	9 Acenaphthylene	152	6.990	6.993	(0.985)	72	0.00867	0.008673
*	10 Acenaphthene-d10	164	7.098	7.101	(1.000)	9378	2.00000	
	11 Acenaphthene	153	Compound Not Detected.					
	12 Dibenzofuran	168	Compound Not Detected.					
	14 Fluorene	166	Compound Not Detected.					
*	15 Phenanthrene-d10	188	9.134	9.140	(1.000)	16640	2.00000	
	16 Phenanthrene	178	Compound Not Detected.					
	17 Anthracene	178	Compound Not Detected.					
	19 Carbazole	167	Compound Not Detected.					
	22 Fluoranthene	202	Compound Not Detected.					
$	21 Fluoranthene-d10	212	10.886	10.895	(1.192)	24798	2.76077	2.761
	23 Pyrene	202	Compound Not Detected.					
	24 Benzo(a)anthracene	228	Compound Not Detected.					
*	25 Chrysene-d12	240	14.035	14.044	(1.000)	14149	2.00000	
	27 Chrysene	228	Compound Not Detected.					
	28 Benzo(b)fluoranthene	252	Compound Not Detected.					
	29 Benzo(k)fluoranthene	252	Compound Not Detected.					
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	Compound Not Detected.					
	32 Benzo(a)pyrene	252	Compound Not Detected.					
*	33 Perylene-d12	264	17.924	17.934	(1.000)	14692	2.00000	
	35 Perylene	252	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.311	20.318	(1.133)	22558	4.02163	4.022
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823052218.D
Lab Smp Id: BLE0149-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 22-MAY-2023
Calibration Time: 11:46
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	17081	8541	34162	15484	-9.35
10 Acenaphthene-d10	9674	4837	19348	9378	-3.06
15 Phenanthrene-d10	17710	8855	35420	16640	-6.04
25 Chrysene-d12	15081	7541	30162	14149	-6.18
33 Perylene-d12	15623	7812	31246	14692	-5.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.26
10 Acenaphthene-d10	7.10	6.60	7.60	7.10	-0.04
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.04	-0.07
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.05

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

REVIEW SUMMARY FOR FILE - N823052218.D

Lab ID: BLE0149-BLK1
nt8.i, 20230522.b\FSIMPNA230426.m,   22-MAY-2023 19:38

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check performed

On Column LOD for nt8.i, 20230522.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

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

LCS / LCS DUPLICATE RECOVERY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 03:34
Batch:	BLE0148	Laboratory ID:	BLE0148-BS2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	310		62.0	36 - 120
1,2-Dichlorobenzene	500	309		61.9	36 - 120
Benzyl Alcohol	500	349		69.8	25 - 123
Benzoic acid	2300	1830		79.4	10 - 160
2,4-Dimethylphenol	1300	337		25.9	10 - 120
1,2,4-Trichlorobenzene	500	292		58.3	35 - 120
N-Nitrosodiphenylamine	500	319		63.9	27 - 120
Pentachlorophenol	1300	1390		107	26 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	500	373		74.6	18.5	30	36 - 120
1,2-Dichlorobenzene	500	371		74.2	18.1	30	36 - 120
Benzyl Alcohol	500	435		87.0	21.9	30	25 - 123
Benzoic acid	2300	2000		86.8	8.85	30	10 - 160
2,4-Dimethylphenol	1300	418		32.1	21.3	30	10 - 120
1,2,4-Trichlorobenzene	500	347		69.3	17.2	30	35 - 120
N-Nitrosodiphenylamine	500	333		66.6	4.22	30	27 - 120
Pentachlorophenol	1300	1480		114	6.59	30	26 - 120

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123265.D

Page 1

Date : 02-JUN-2023 03:34

Client ID:

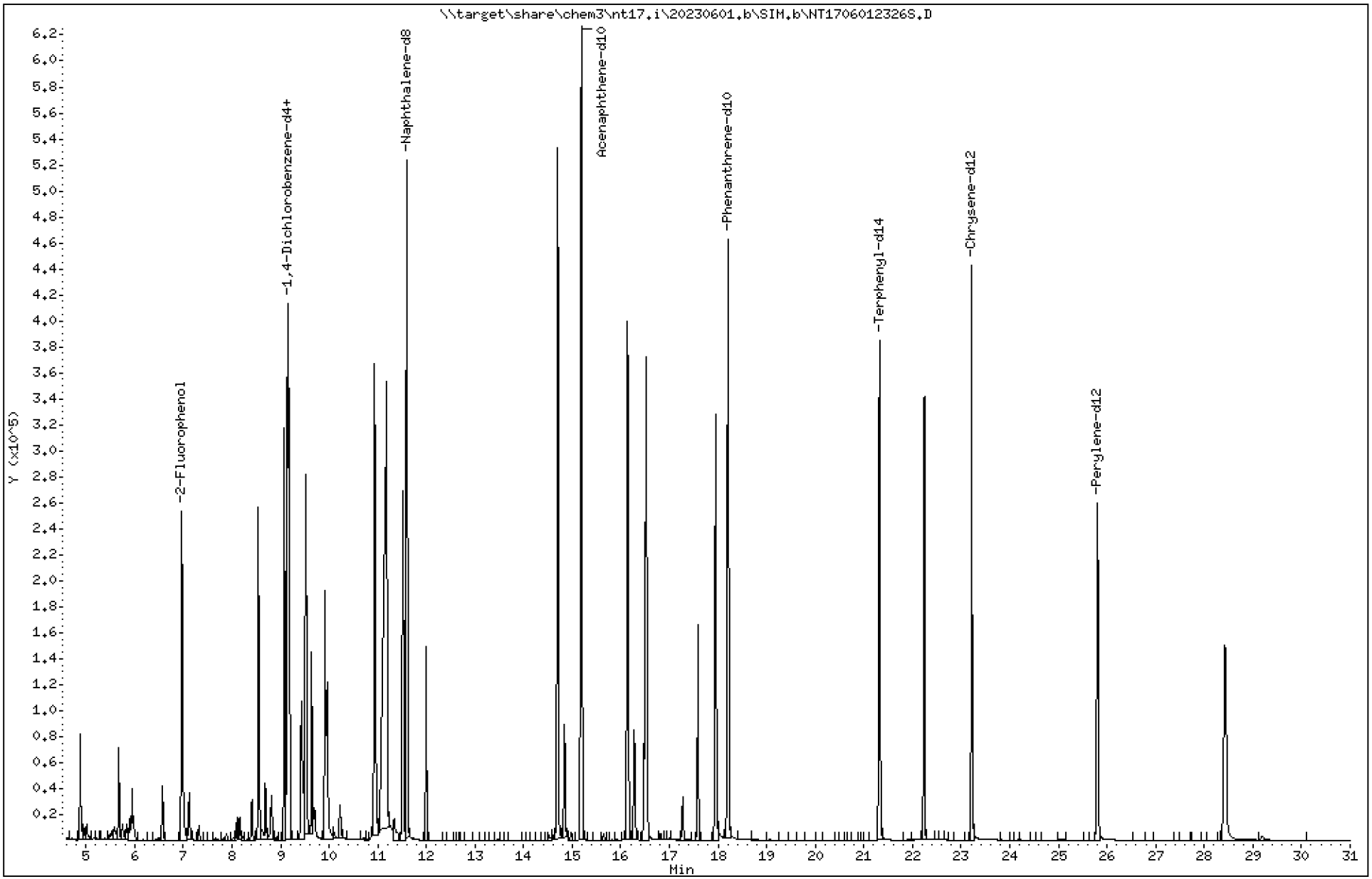
Instrument: nt17.i

Sample Info: BLE0148-BS2

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

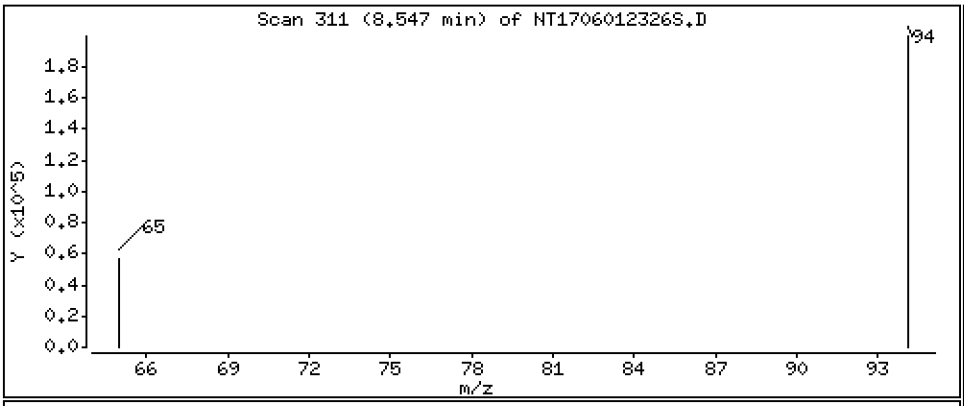
Operator: VTS

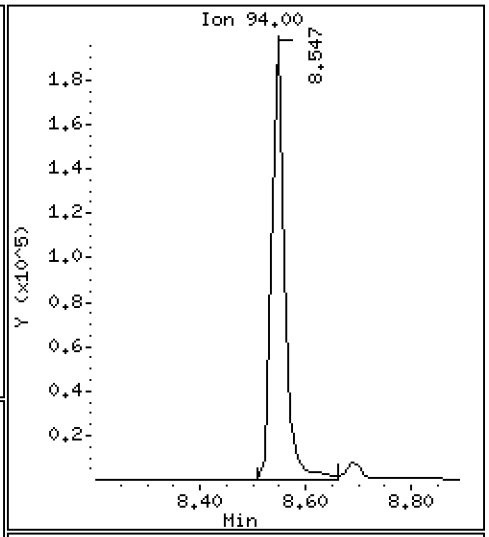
Column phase: ZB-5msi

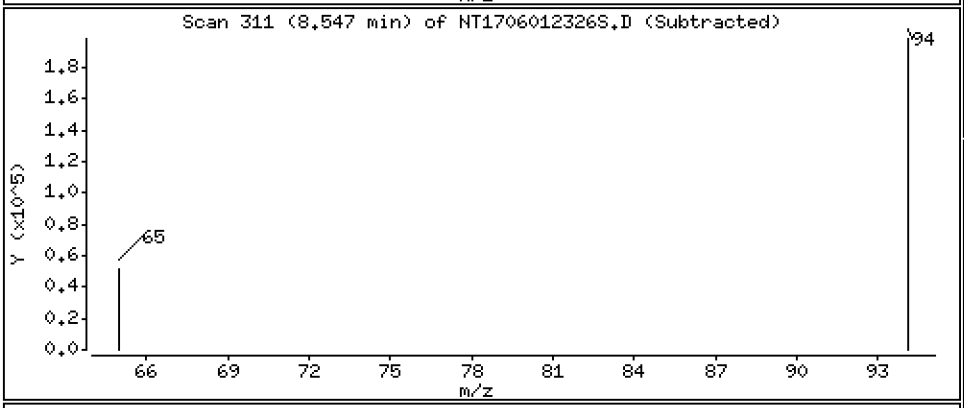
Column diameter: 0.25

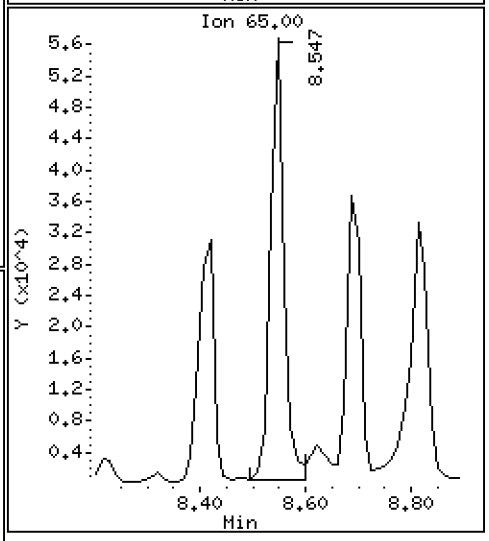
3 Phenol

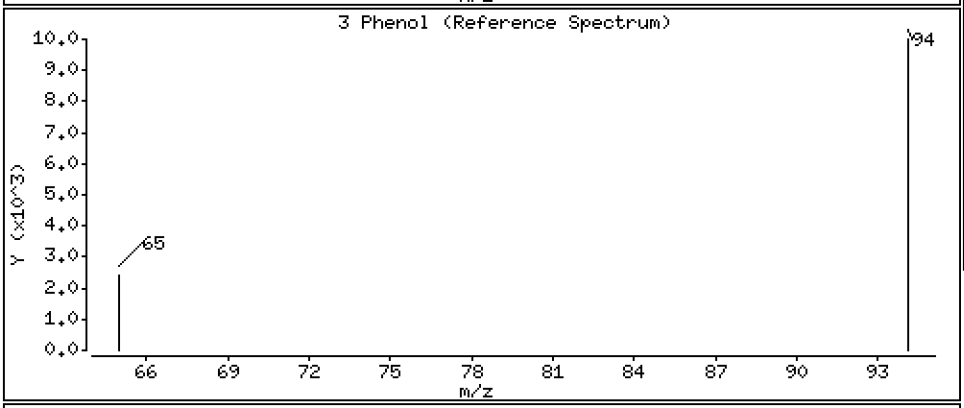
Concentration: 2.947 ug/mL

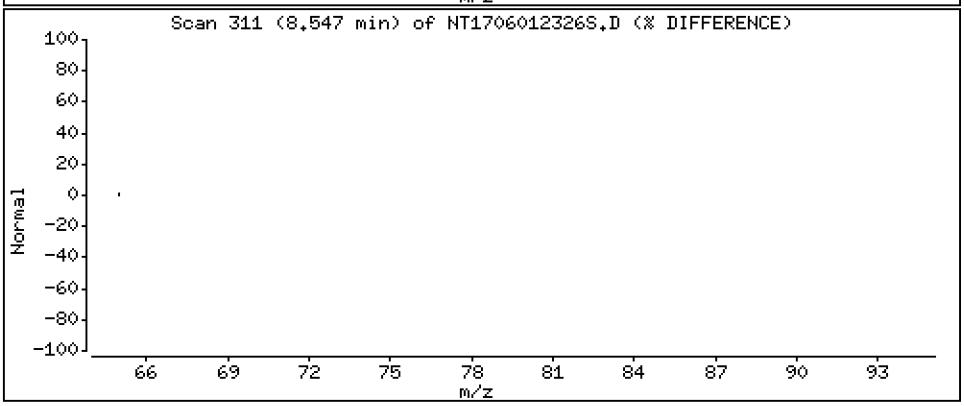












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

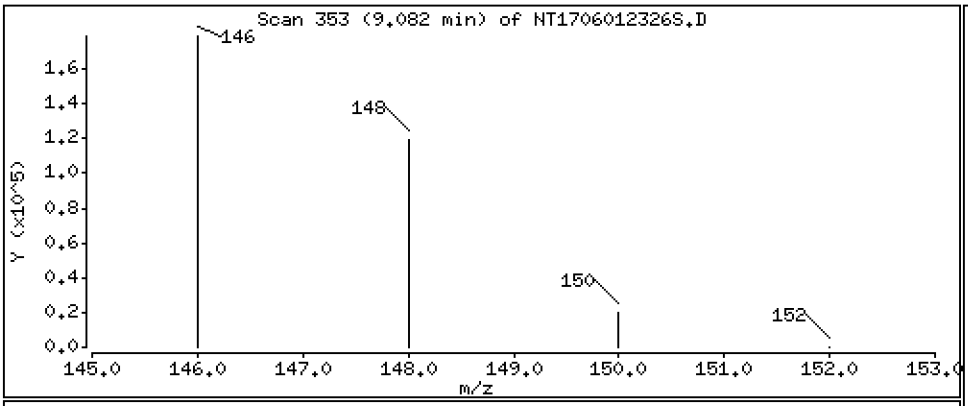
Operator: VTS

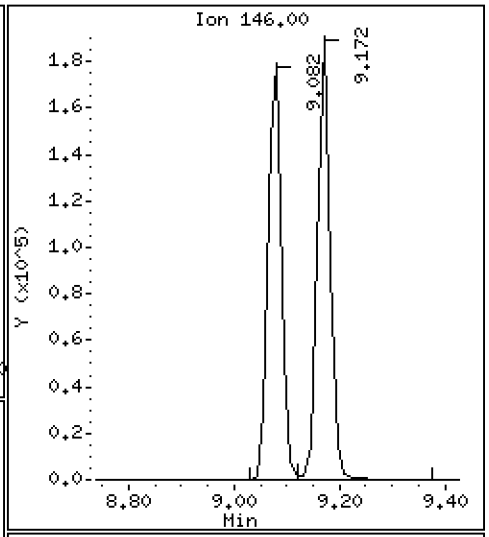
Column phase: ZB-5msi

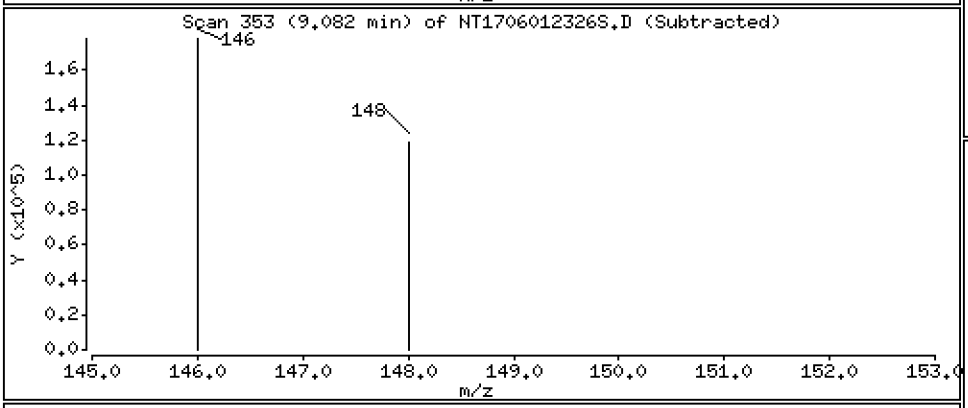
Column diameter: 0.25

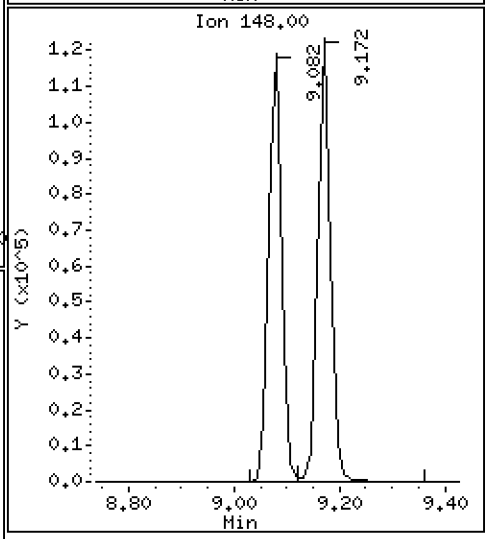
7 1,3-Dichlorobenzene

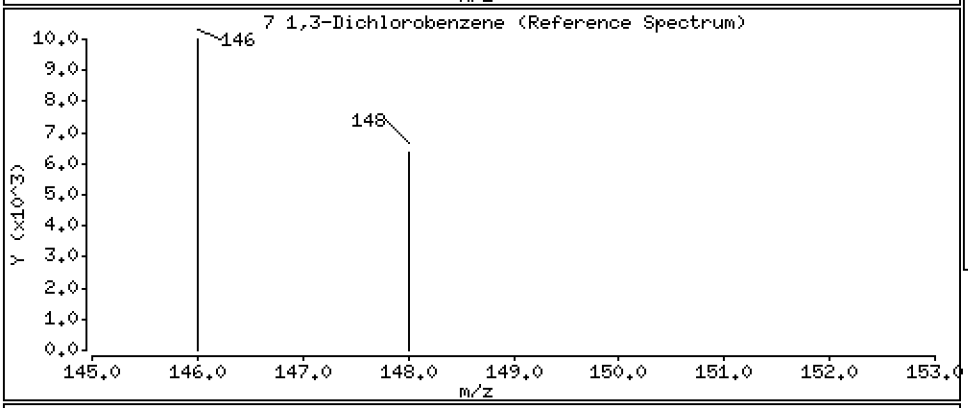
Concentration: 3.011 ug/mL

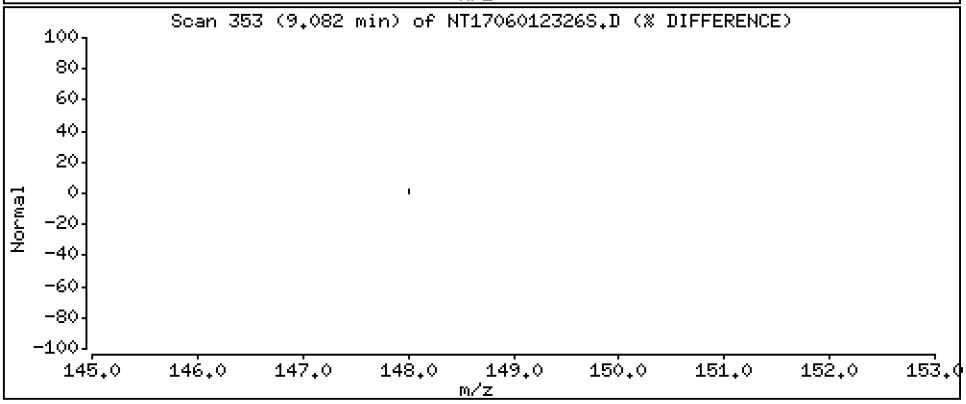












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

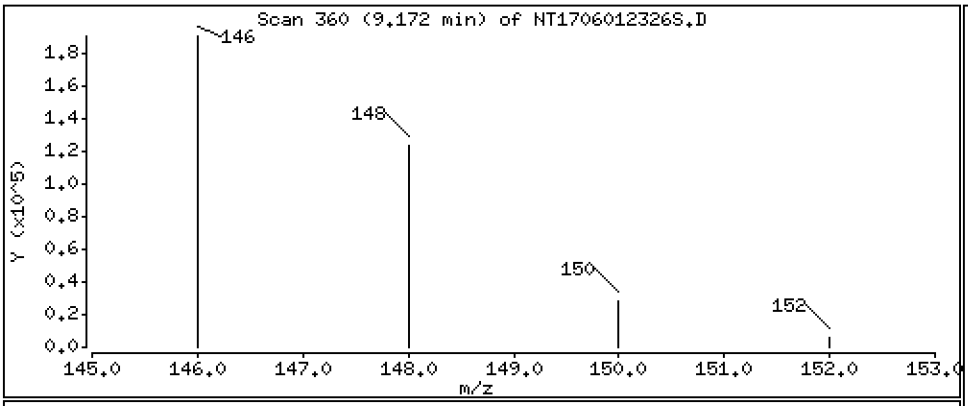
Operator: VTS

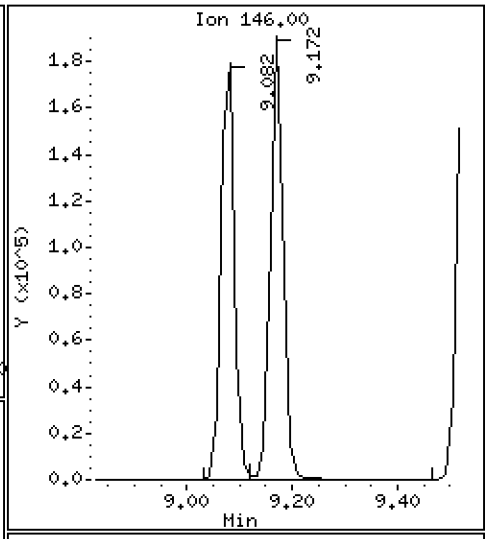
Column phase: ZB-5msi

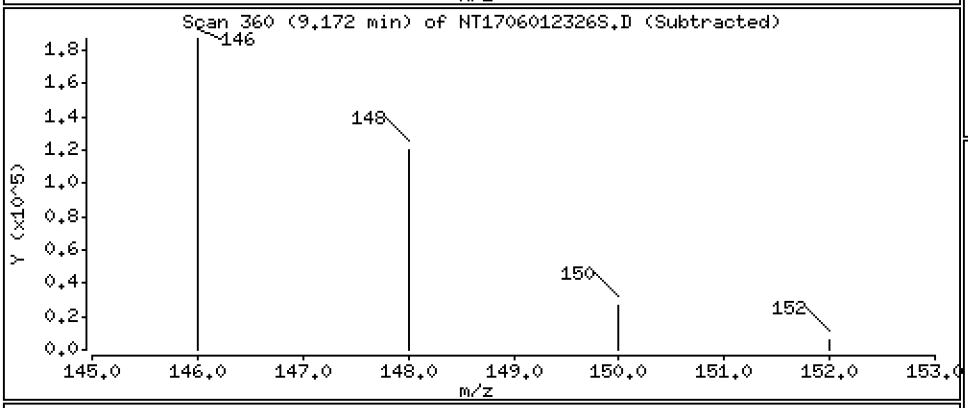
Column diameter: 0.25

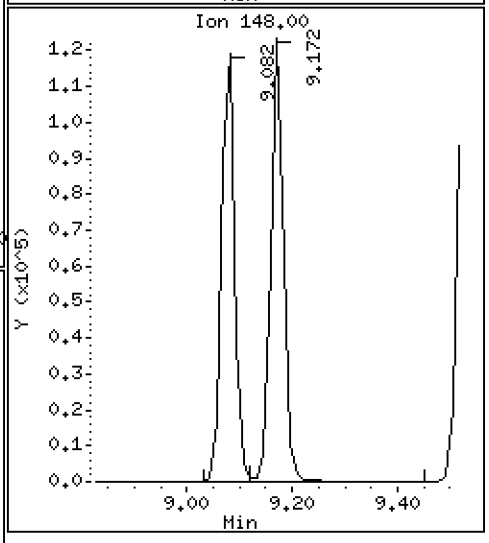
9 1,4-Dichlorobenzene

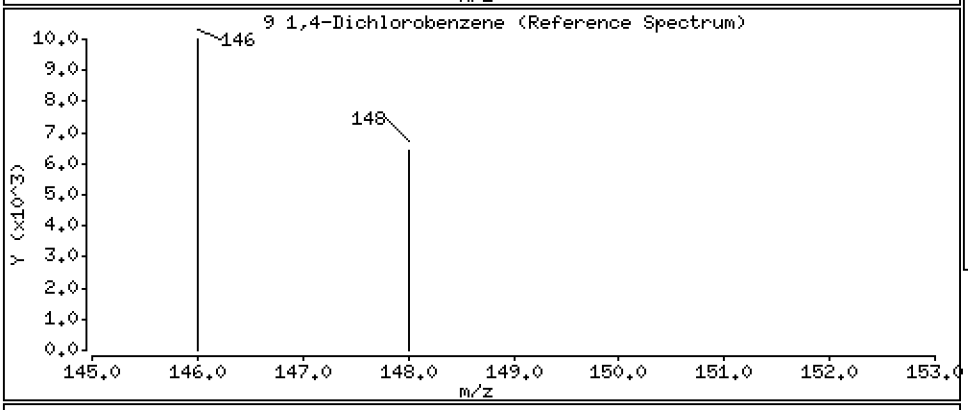
Concentration: 3.098 ug/mL

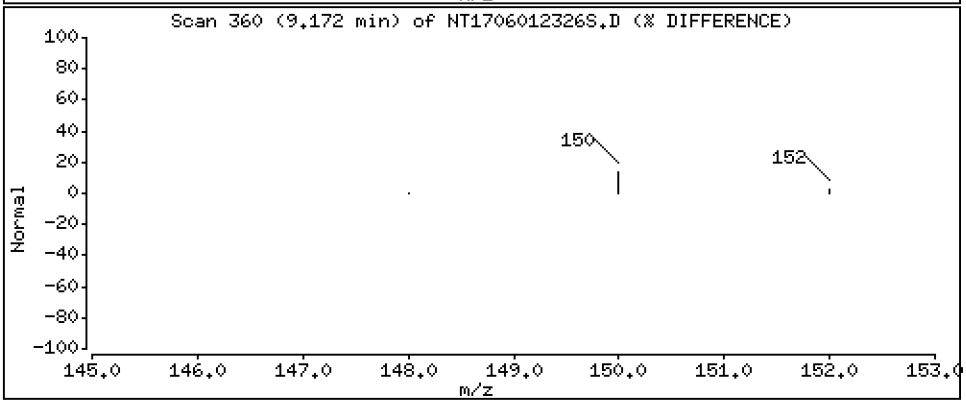












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

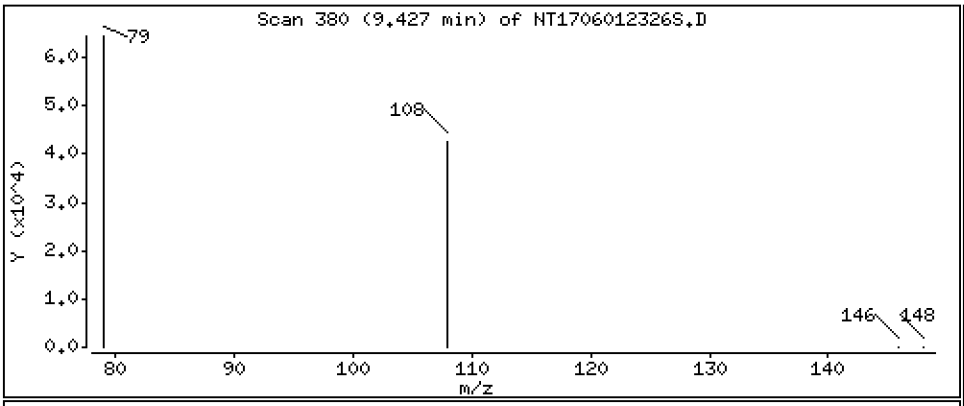
Operator: VTS

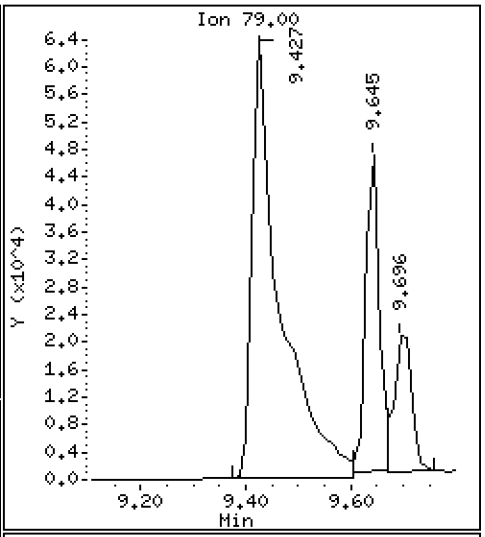
Column phase: ZB-5msi

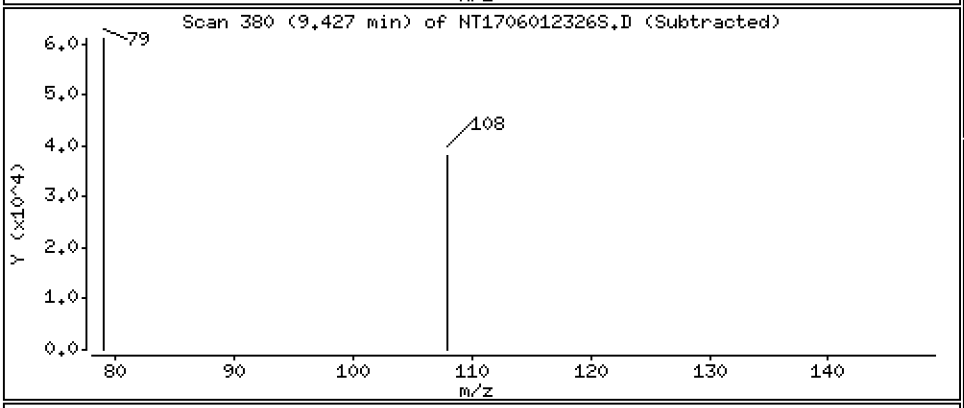
Column diameter: 0.25

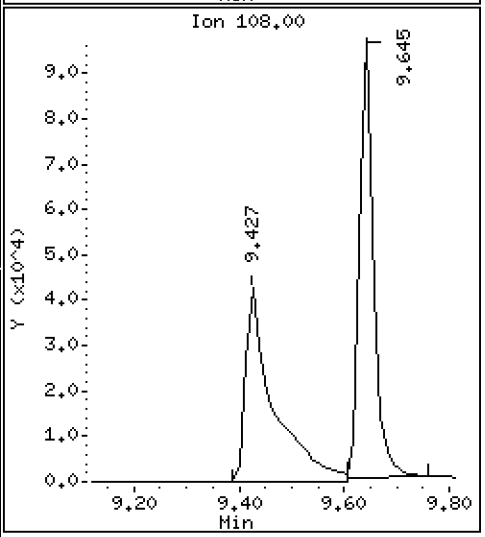
11 Benzyl alcohol

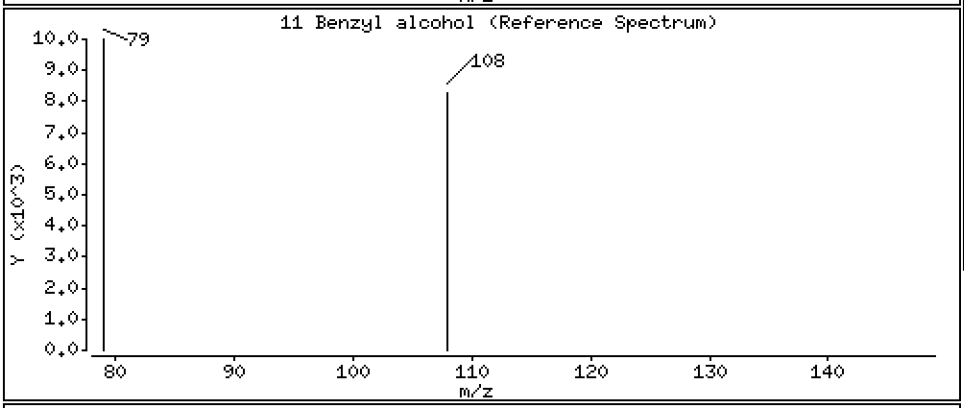
Concentration: 3.490 ug/mL

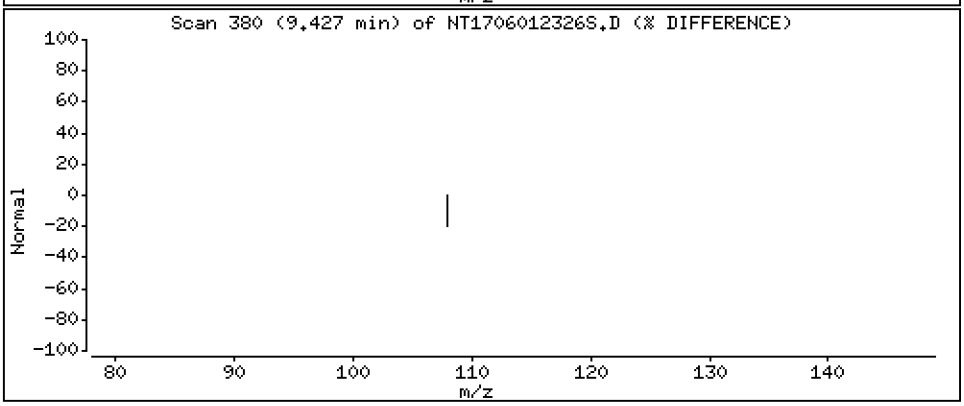












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

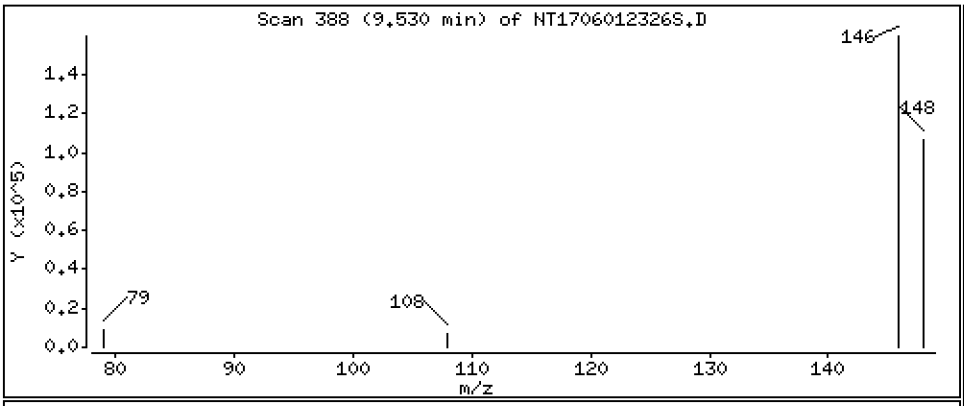
Operator: VTS

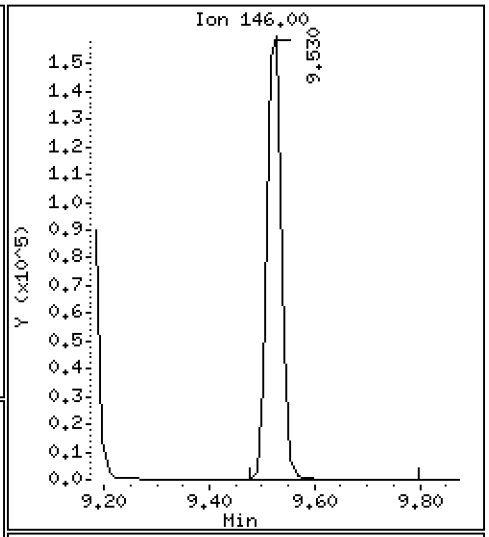
Column phase: ZB-5msi

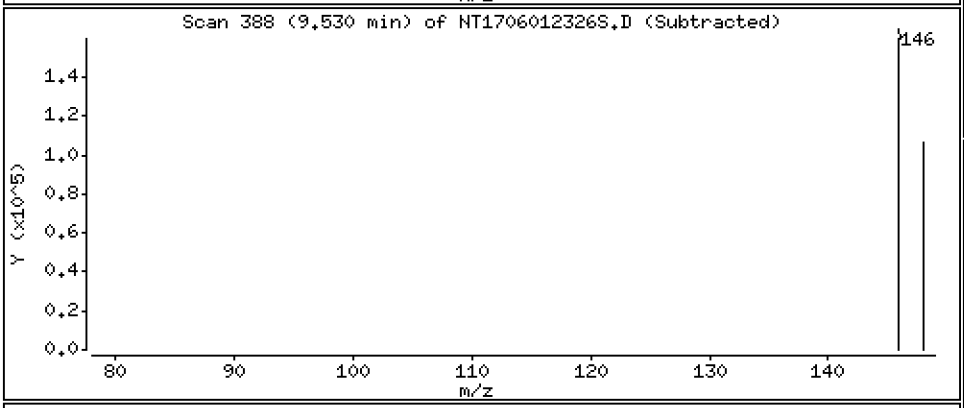
Column diameter: 0.25

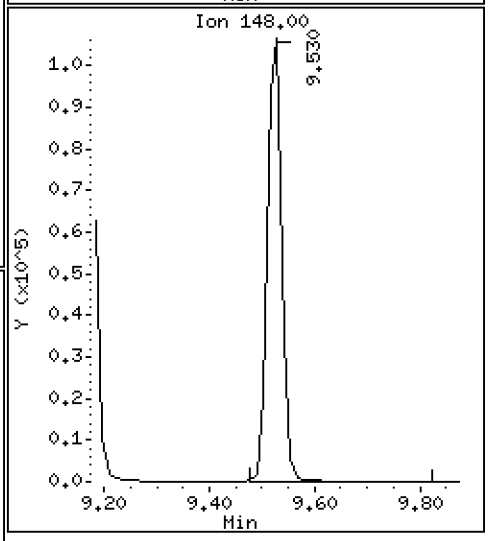
12 1,2-Dichlorobenzene

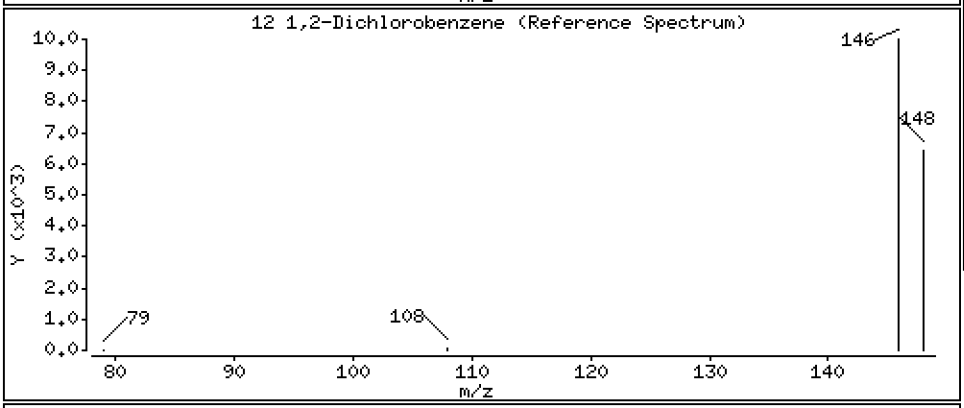
Concentration: 3.094 ug/mL

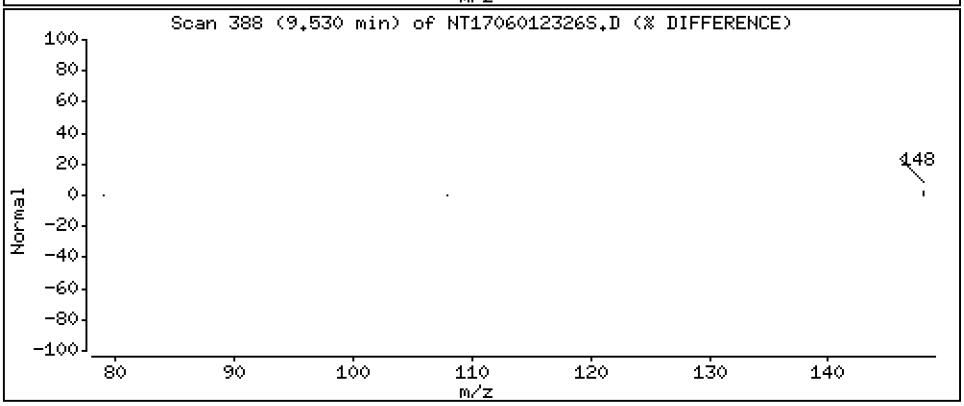












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

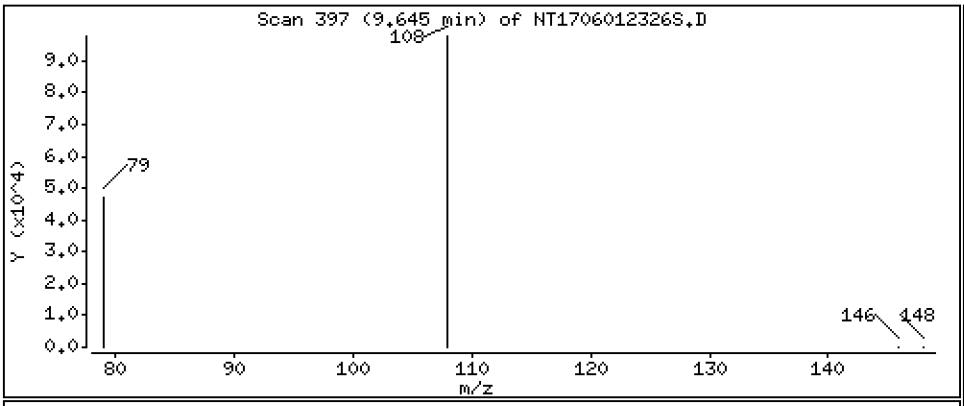
Operator: VTS

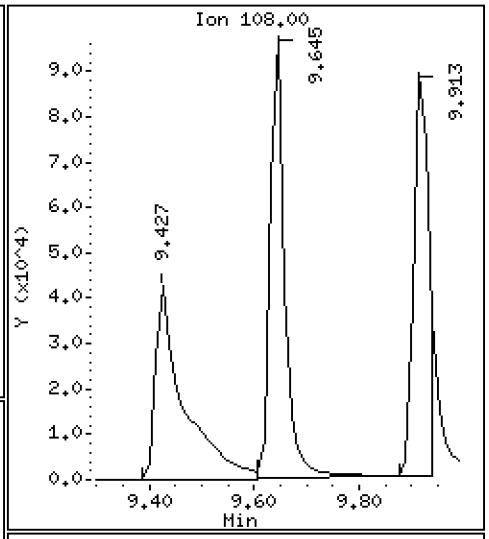
Column phase: ZB-5msi

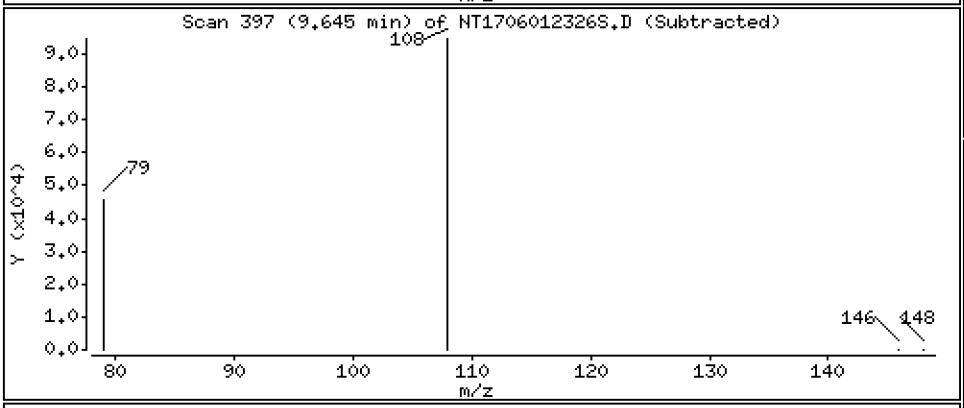
Column diameter: 0.25

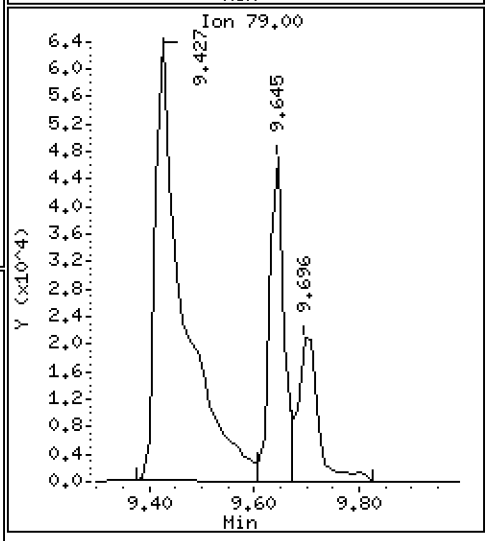
13 2-Methylphenol

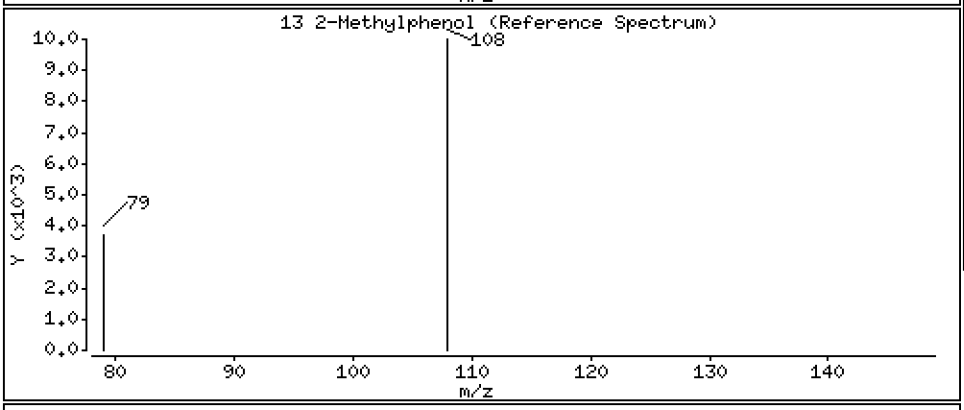
Concentration: 2.295 ug/mL

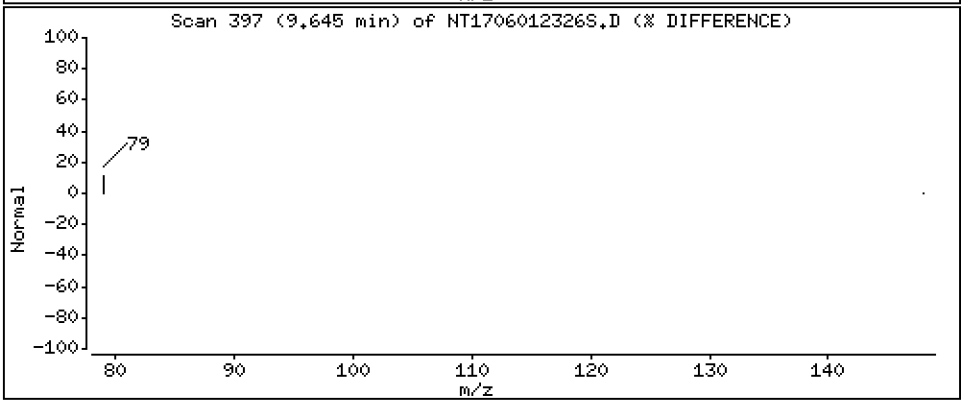












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

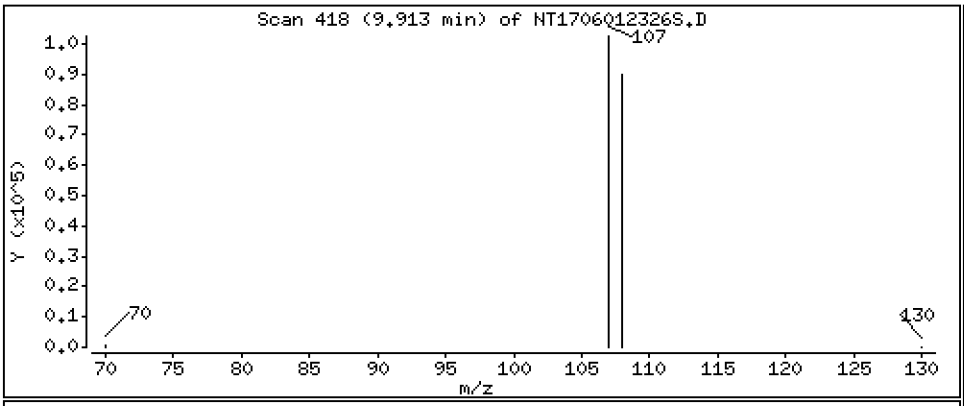
Operator: VTS

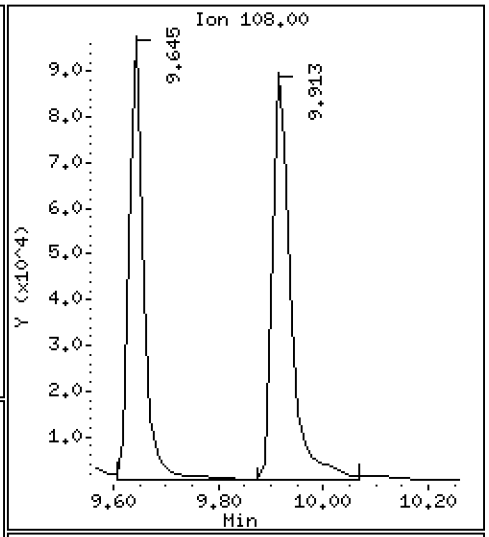
Column phase: ZB-5msi

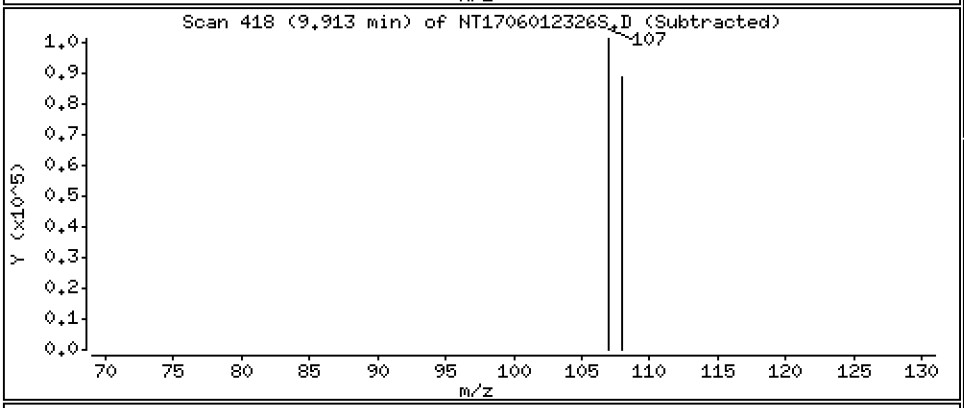
Column diameter: 0.25

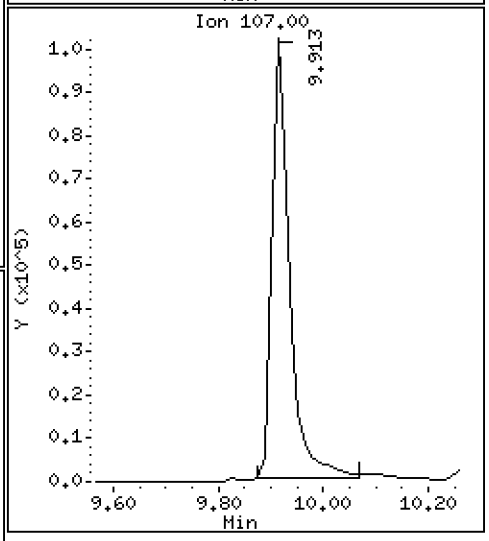
15 4-Methylphenol

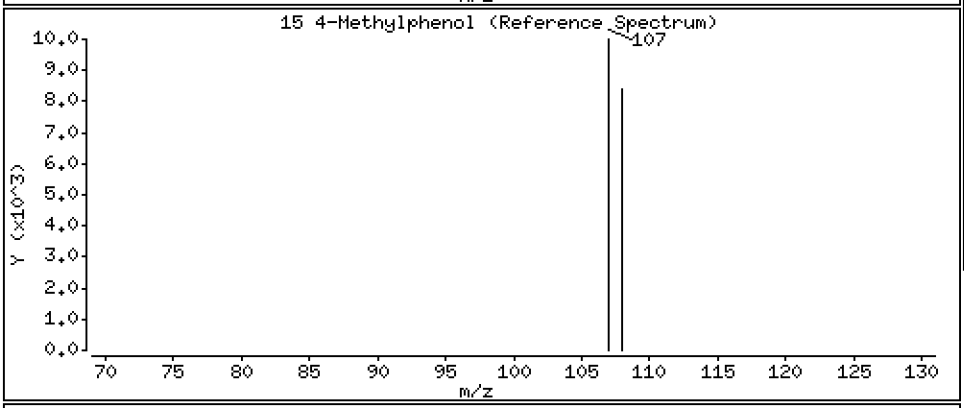
Concentration: 2.593 ug/mL

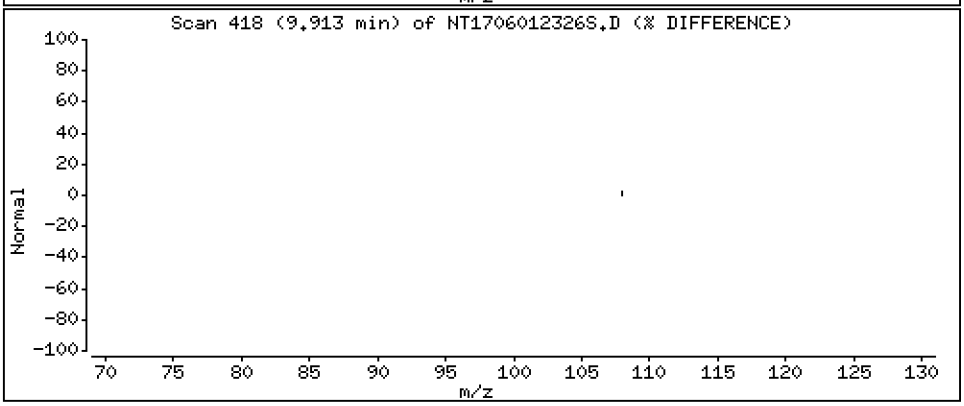












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

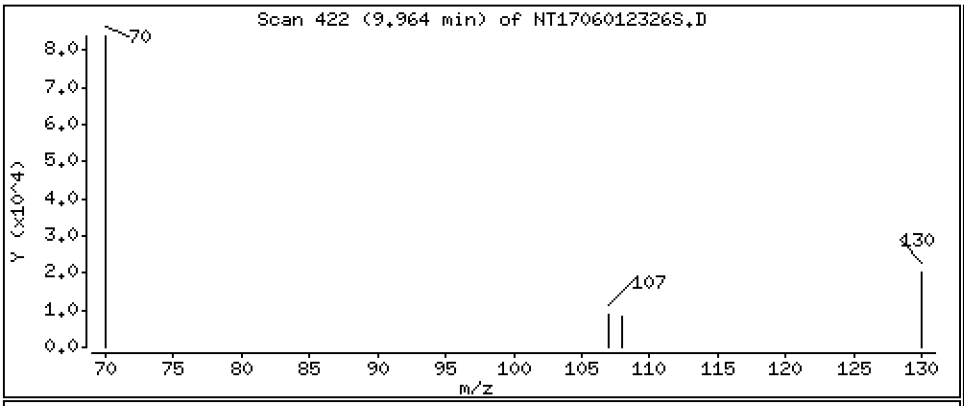
Operator: VTS

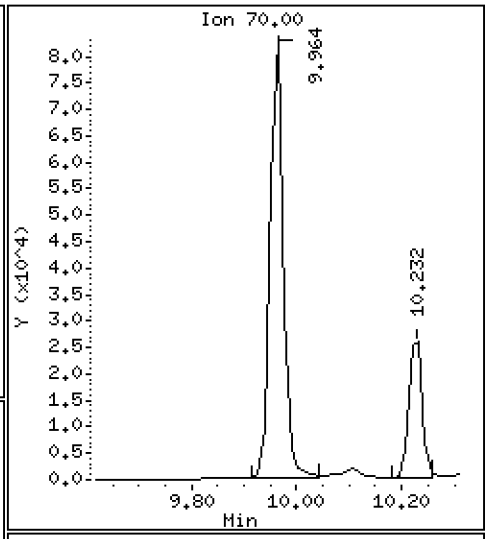
Column phase: ZB-5msi

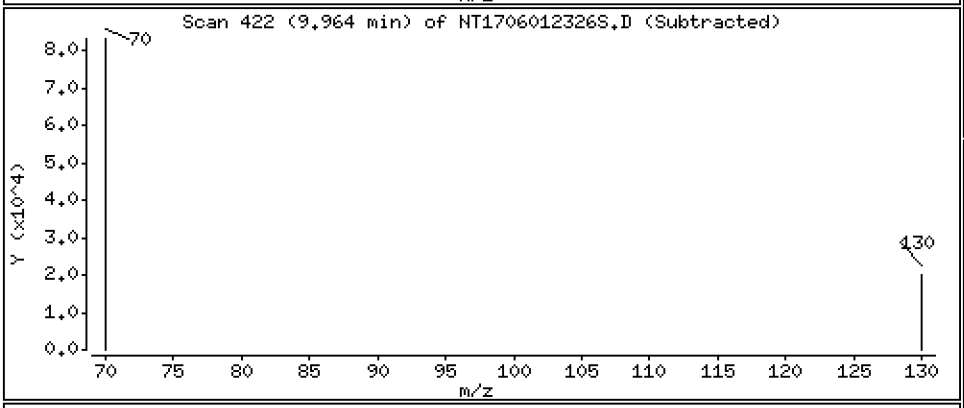
Column diameter: 0.25

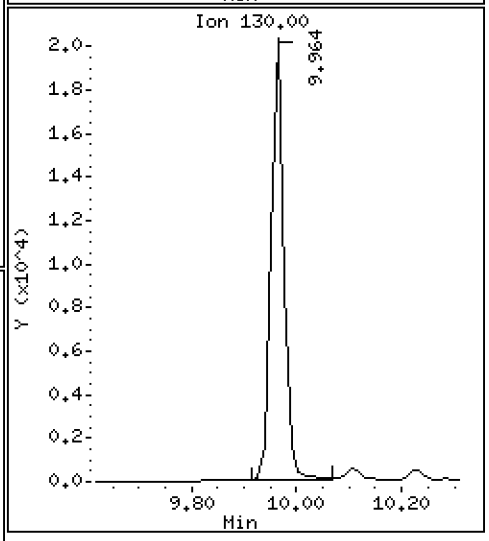
16 N-Nitroso-di-n-propylamine

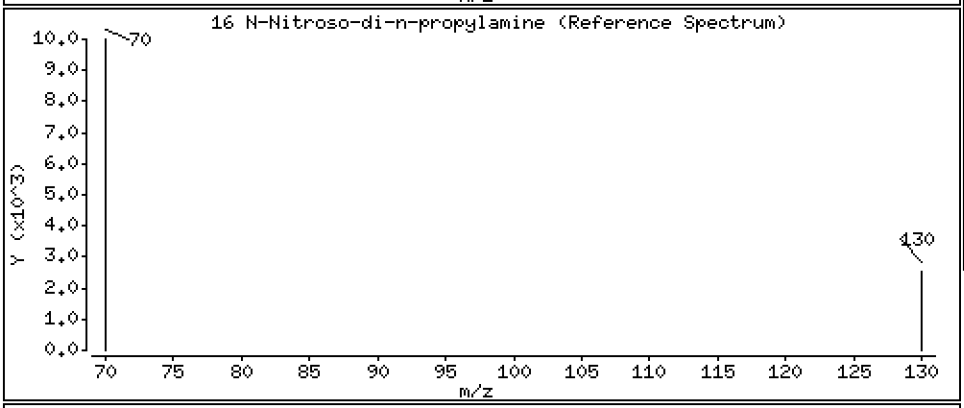
Concentration: 2.422 ug/mL

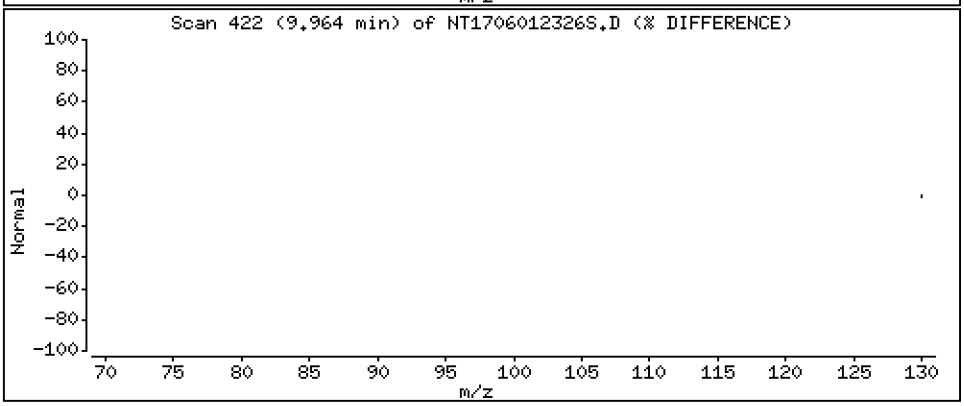












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123265.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

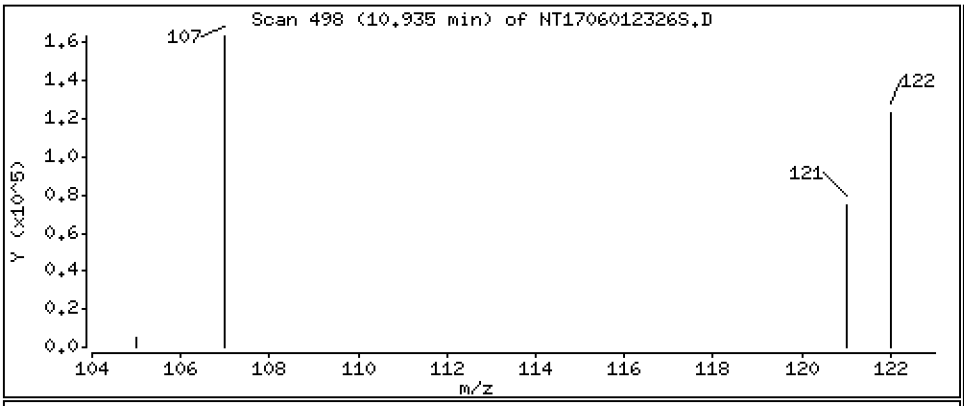
Operator: VTS

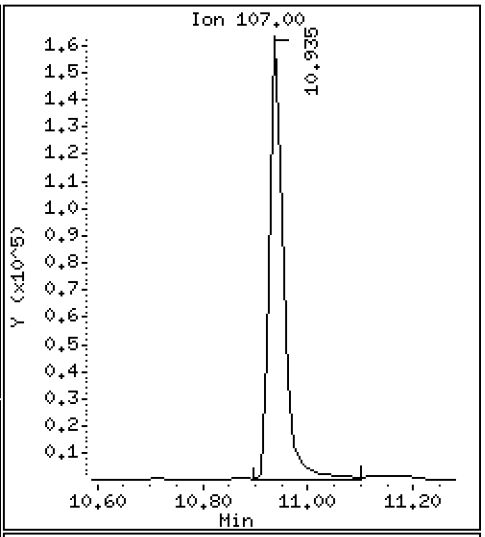
Column phase: ZB-5msi

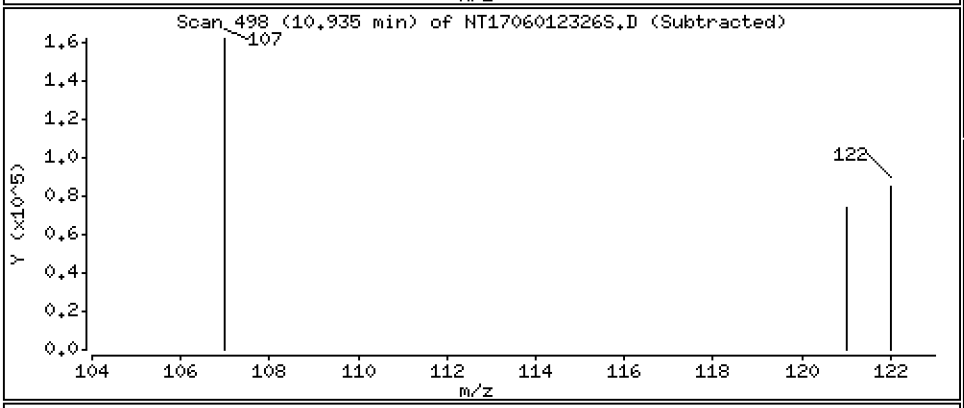
Column diameter: 0.25

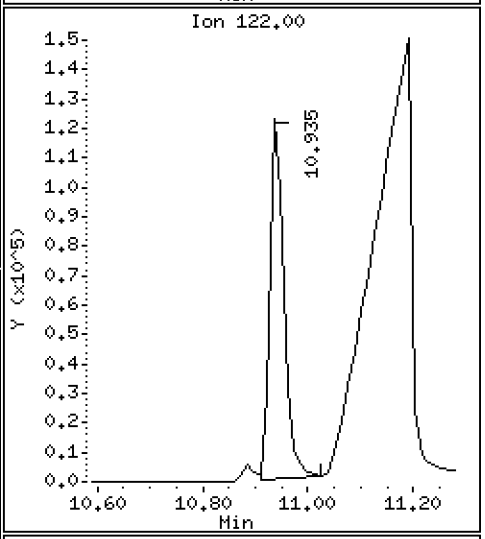
22 2,4-Dimethylphenol

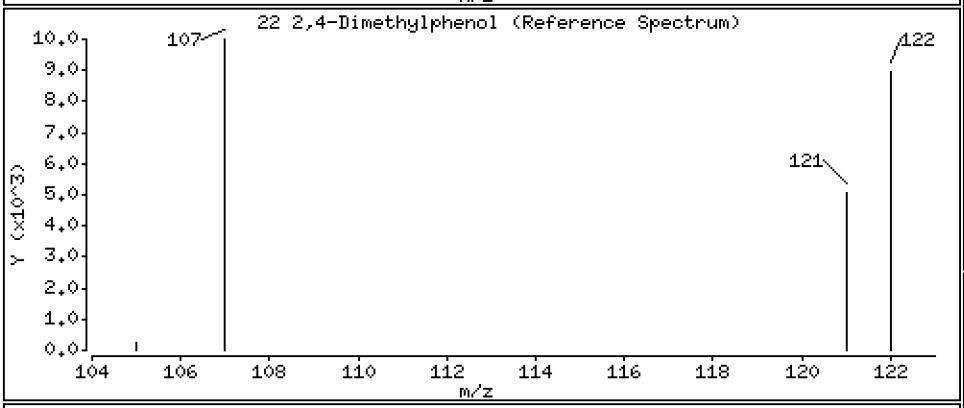
Concentration: 3.372 ug/mL

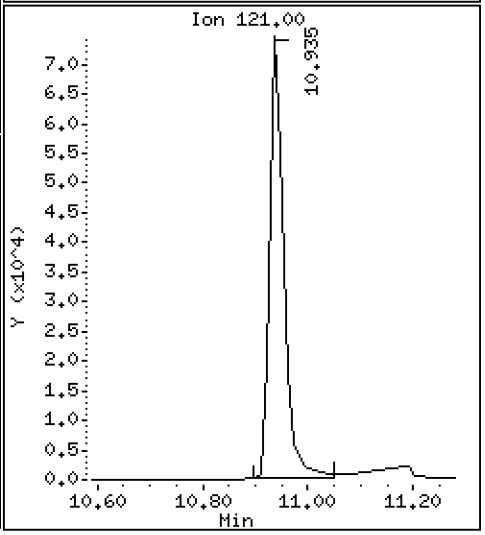


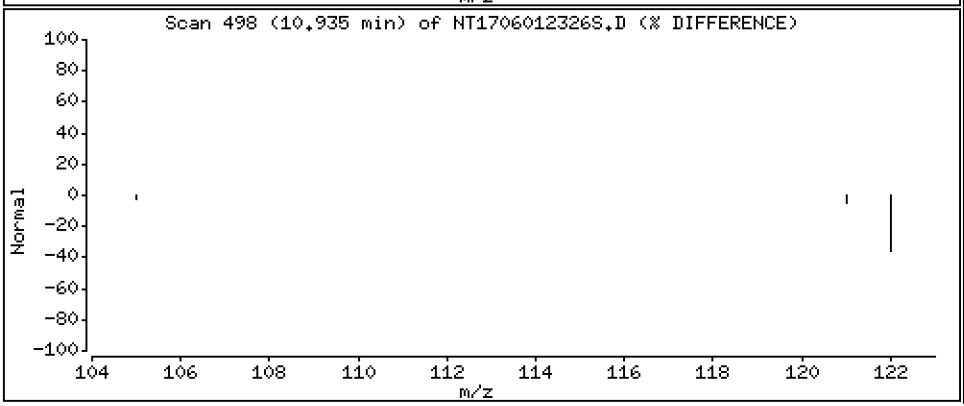












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

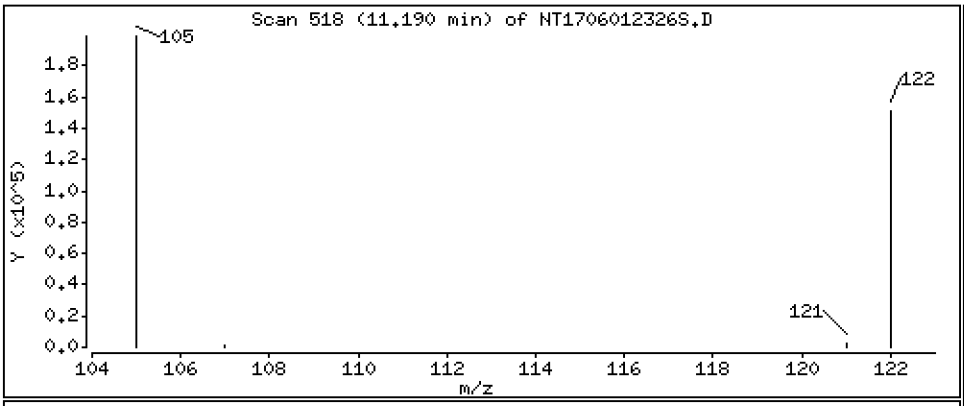
Operator: VTS

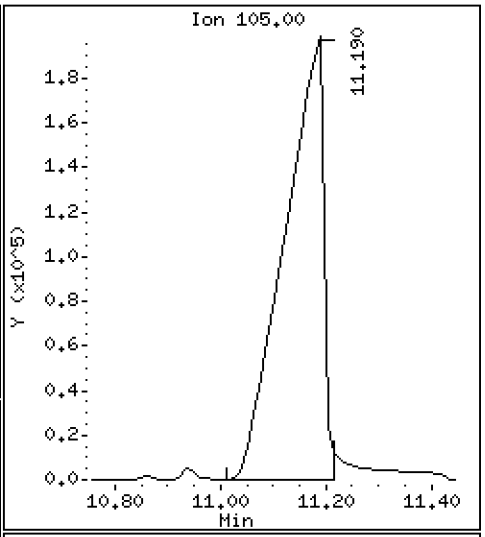
Column phase: ZB-5msi

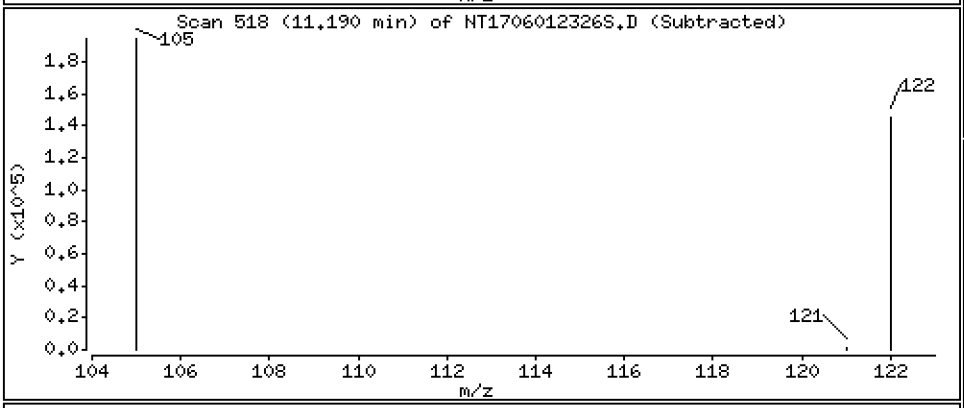
Column diameter: 0.25

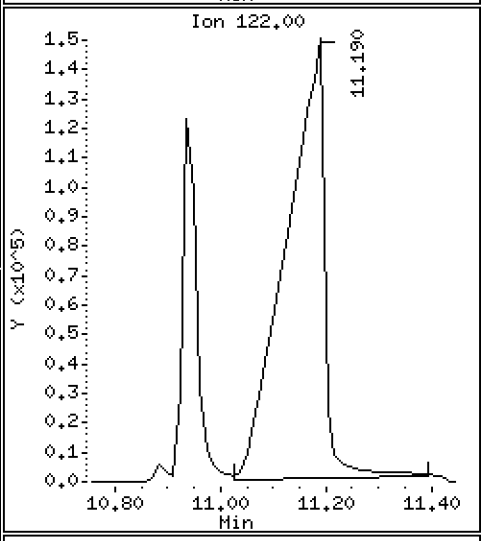
24 Benzoic acid

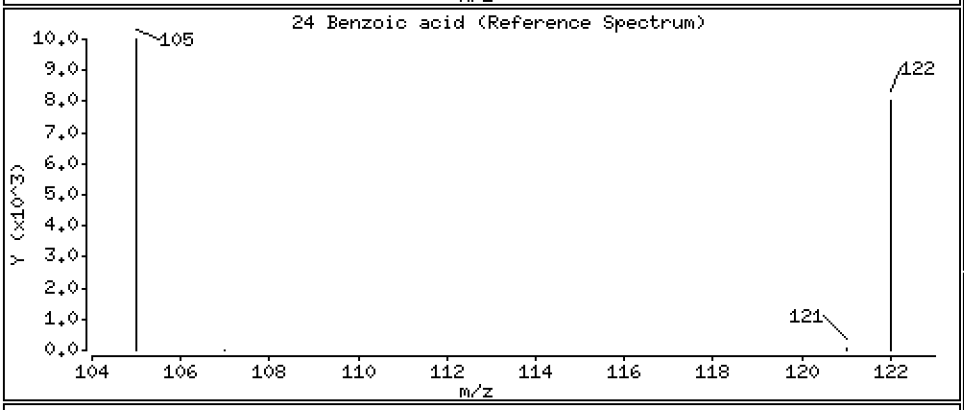
Concentration: 18.27 ug/mL

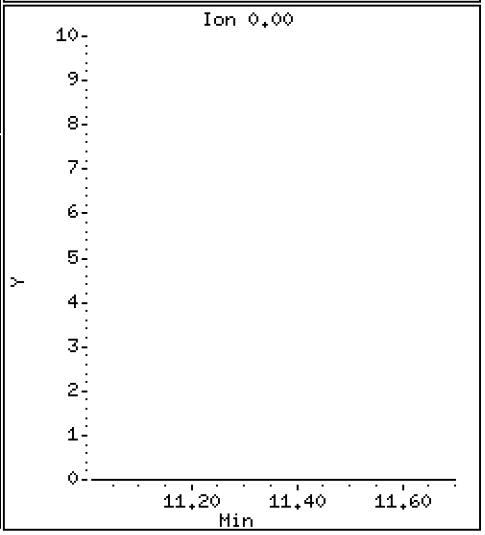


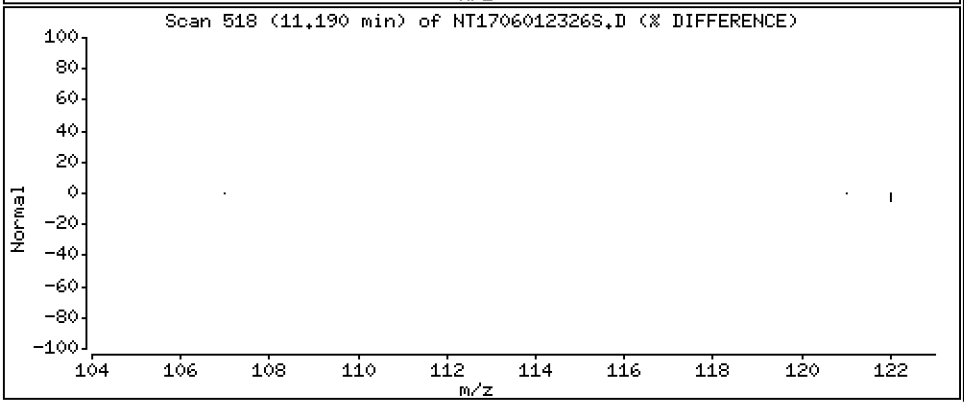












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

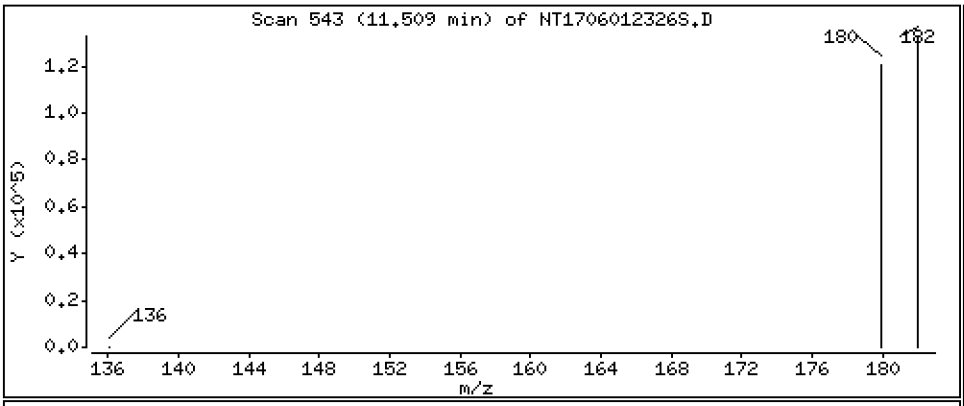
Operator: VTS

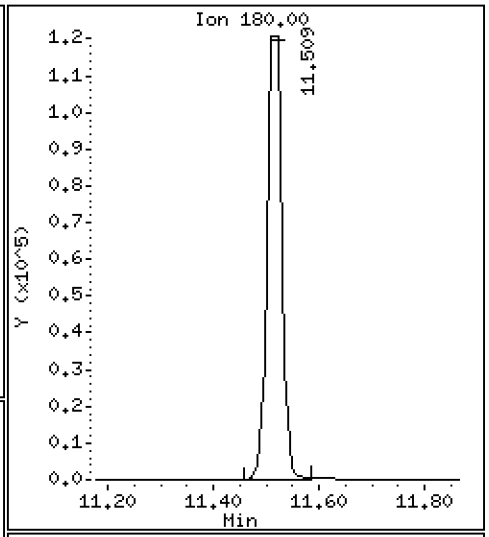
Column phase: ZB-5msi

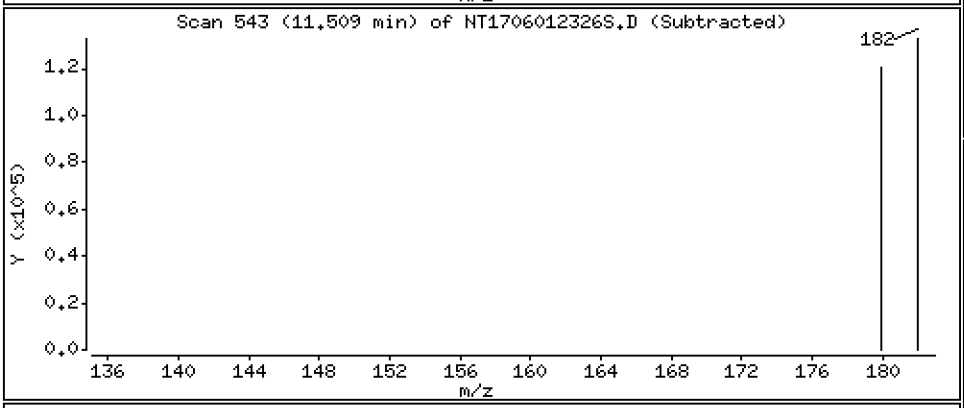
Column diameter: 0.25

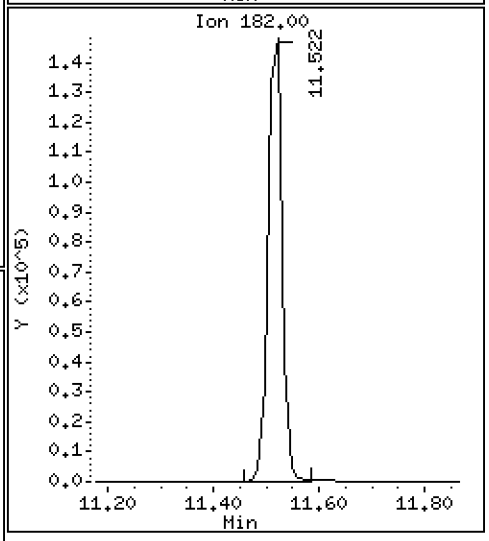
26 1,2,4-Trichlorobenzene

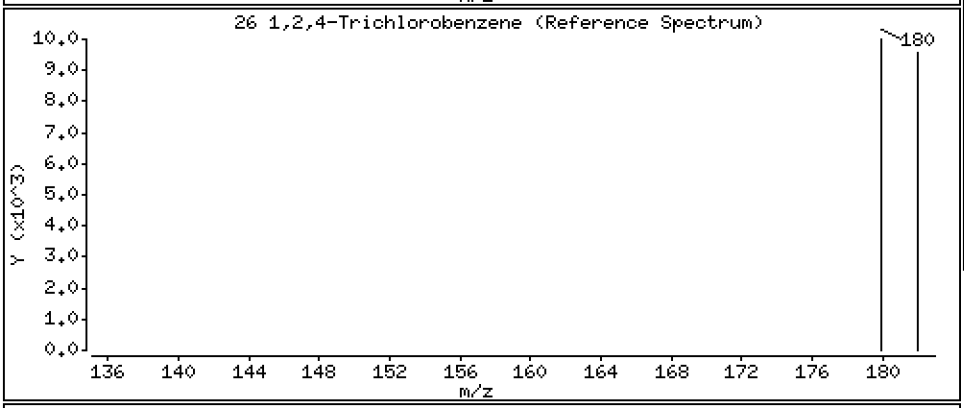
Concentration: 2.917 ug/mL

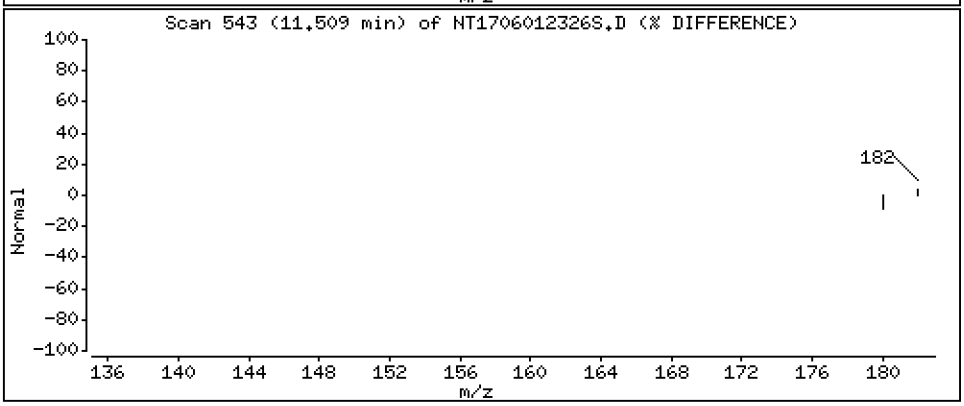












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

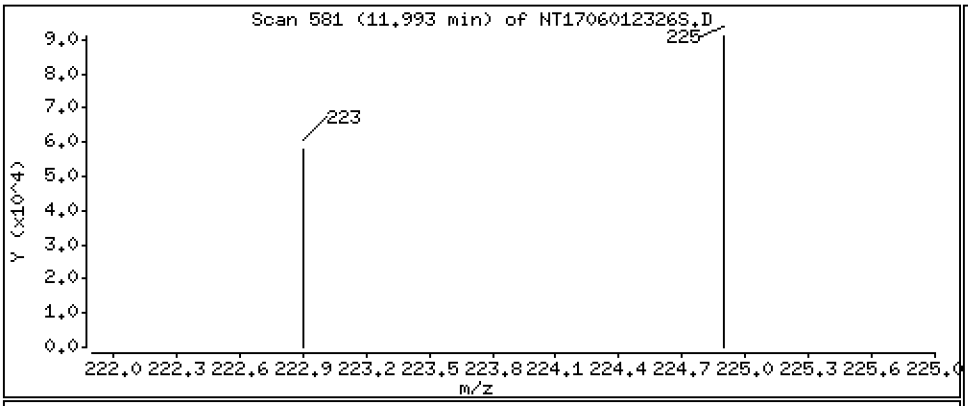
Operator: VTS

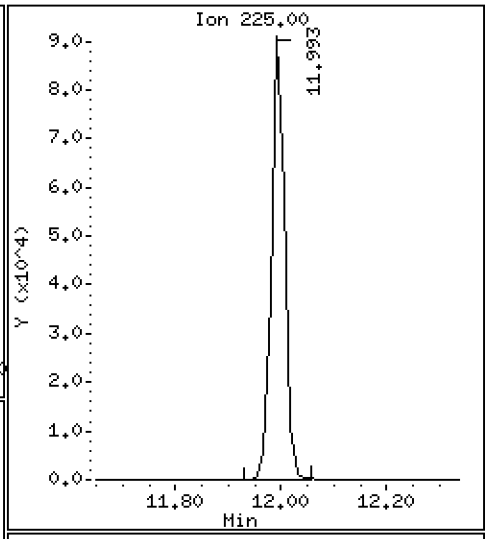
Column phase: ZB-5msi

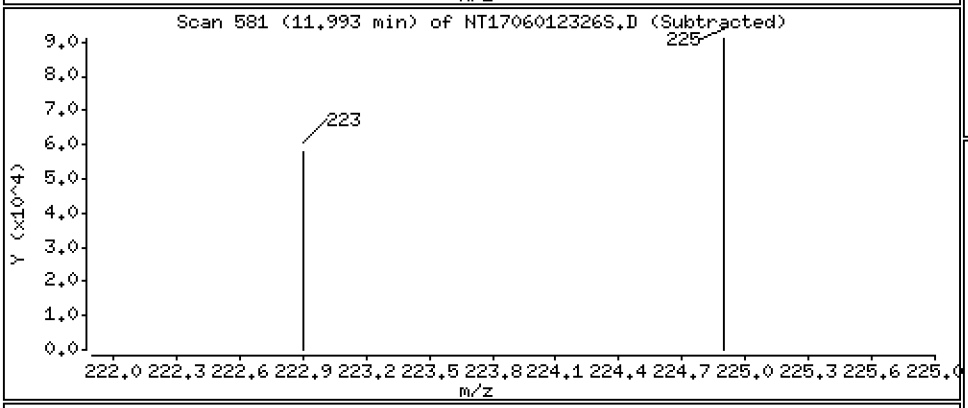
Column diameter: 0.25

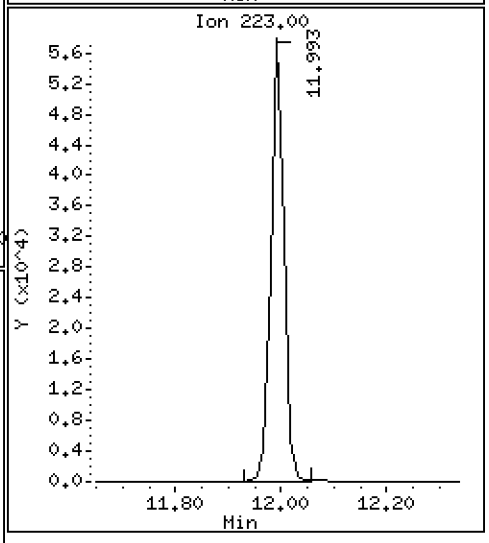
30 Hexachlorobutadiene

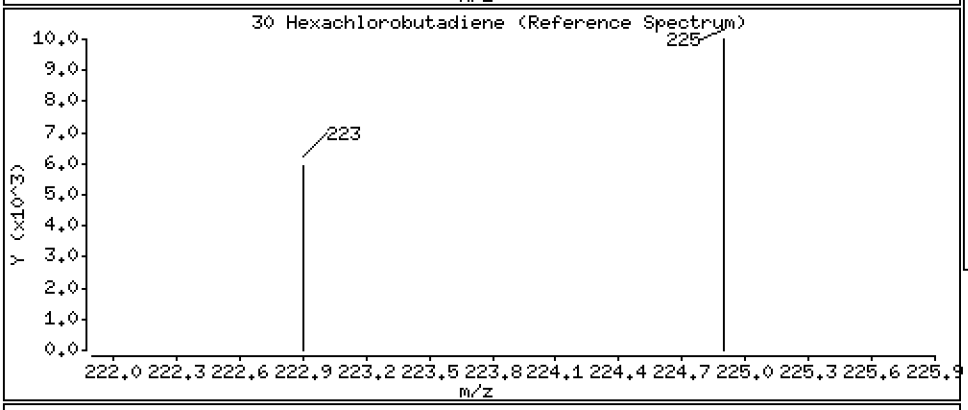
Concentration: 3.669 ug/mL

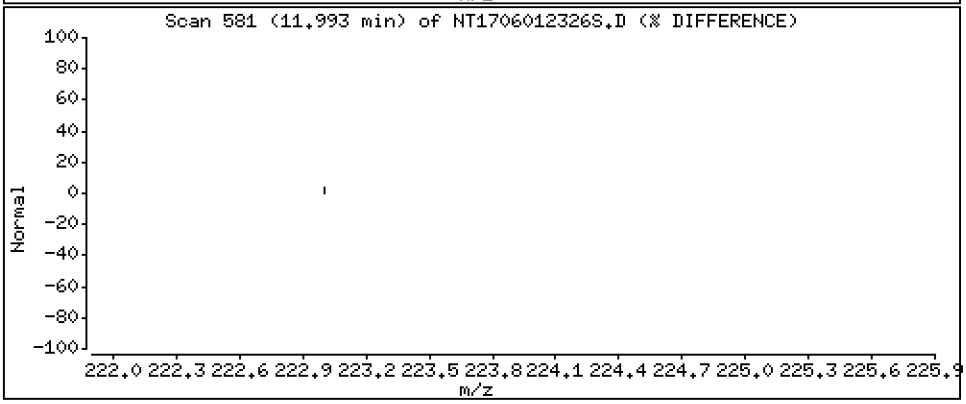












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

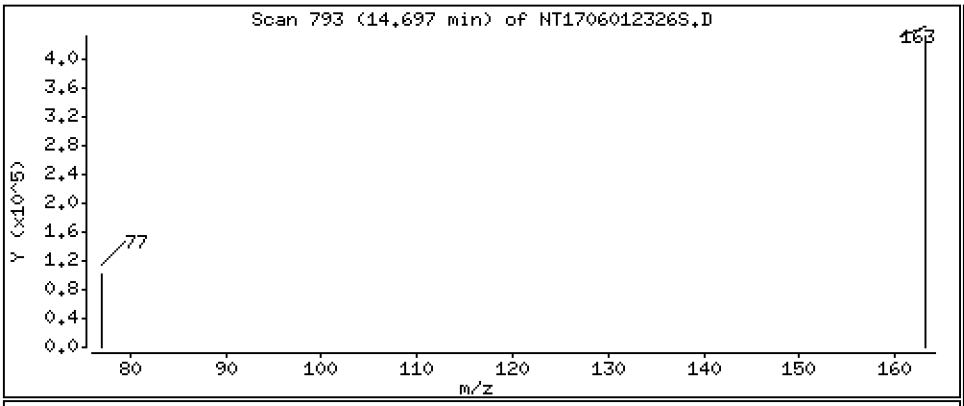
Operator: VTS

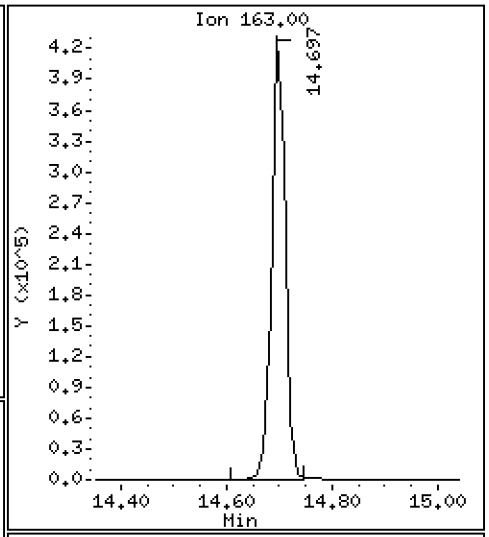
Column phase: ZB-5msi

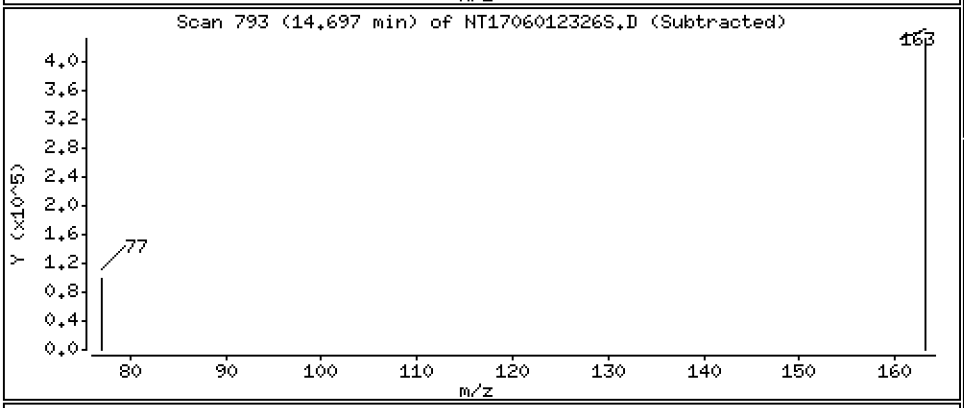
Column diameter: 0.25

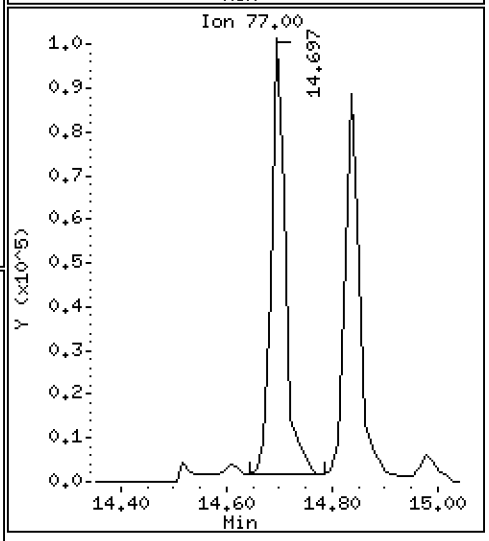
39 Dimethylphthalate

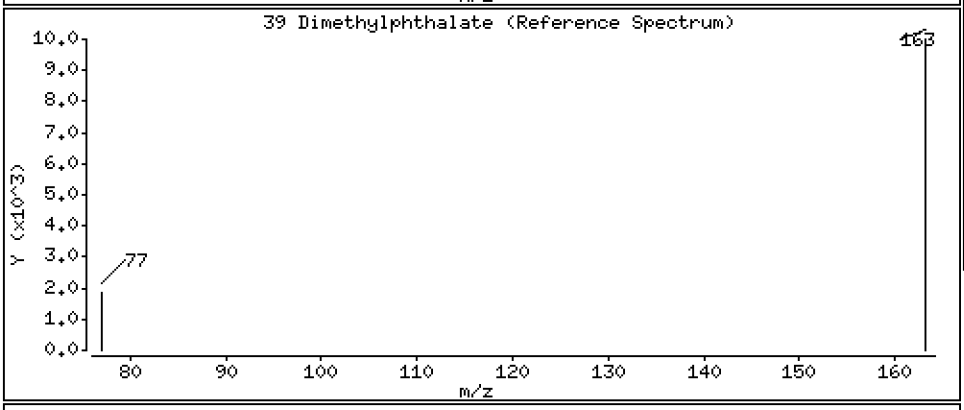
Concentration: 3.691 ug/mL

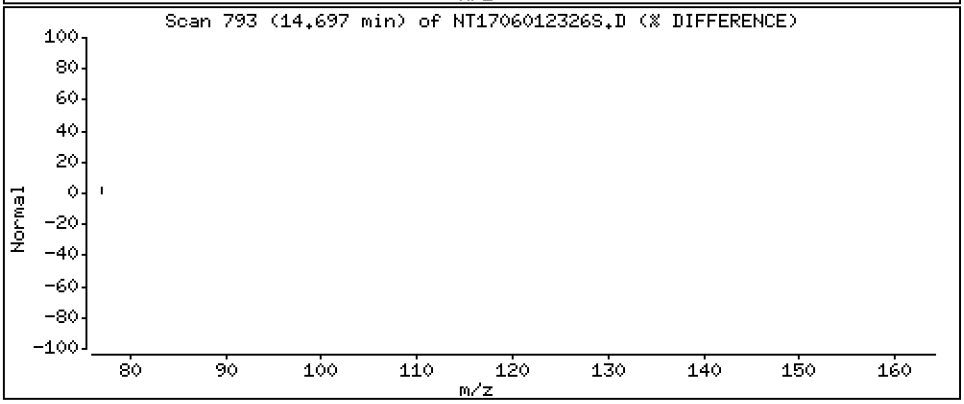












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

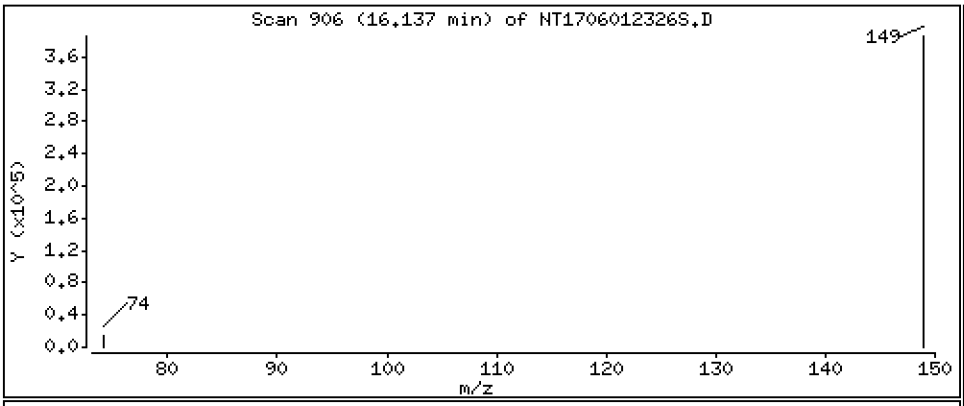
Operator: VTS

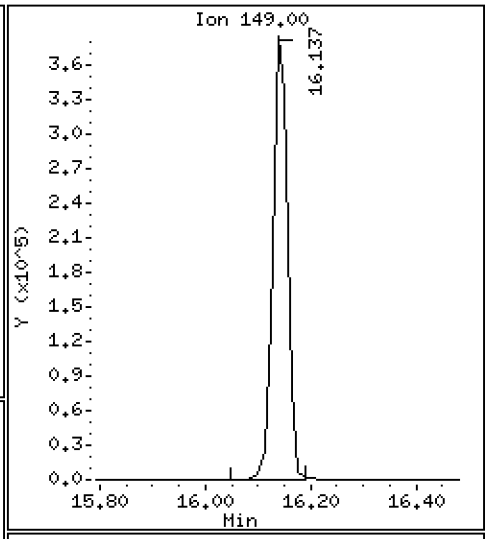
Column phase: ZB-5msi

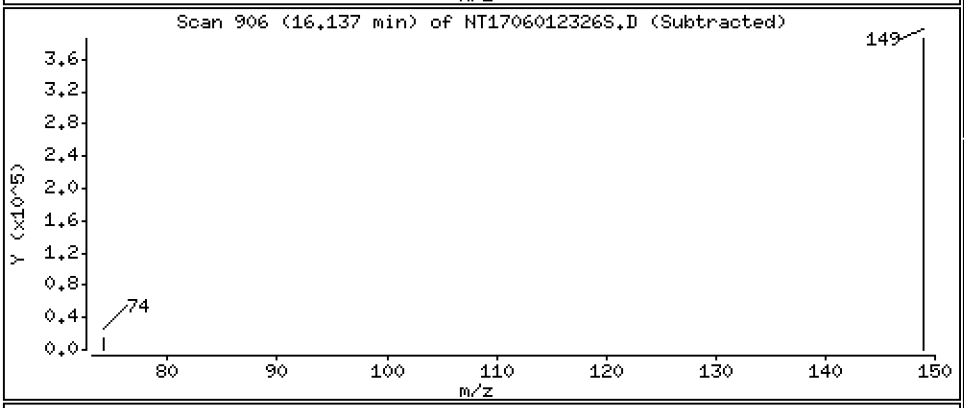
Column diameter: 0.25

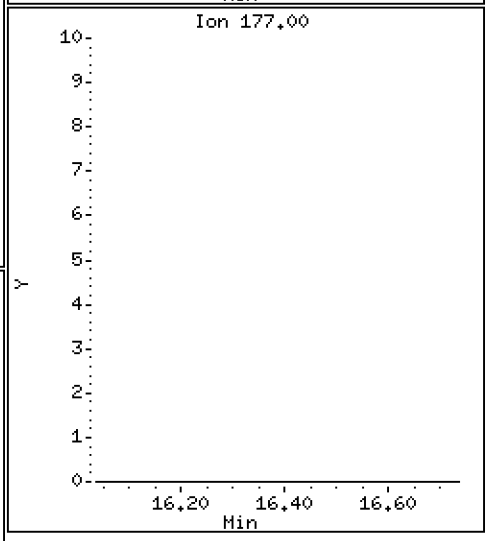
50 Diethylphthalate

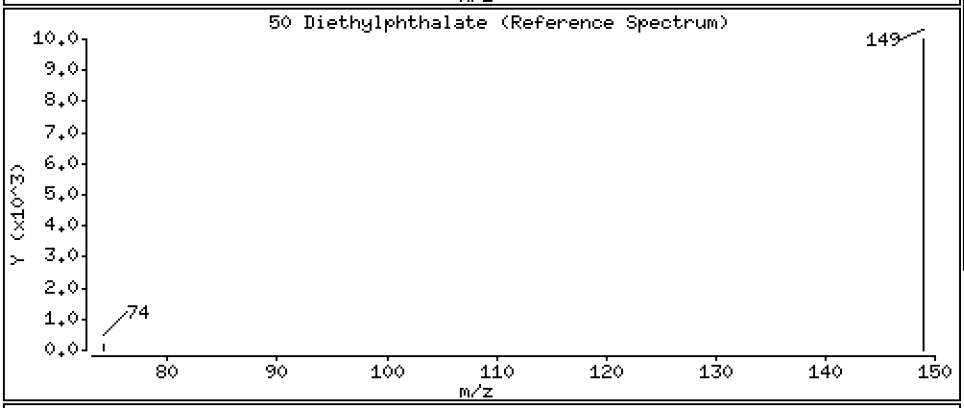
Concentration: 3.943 ug/mL

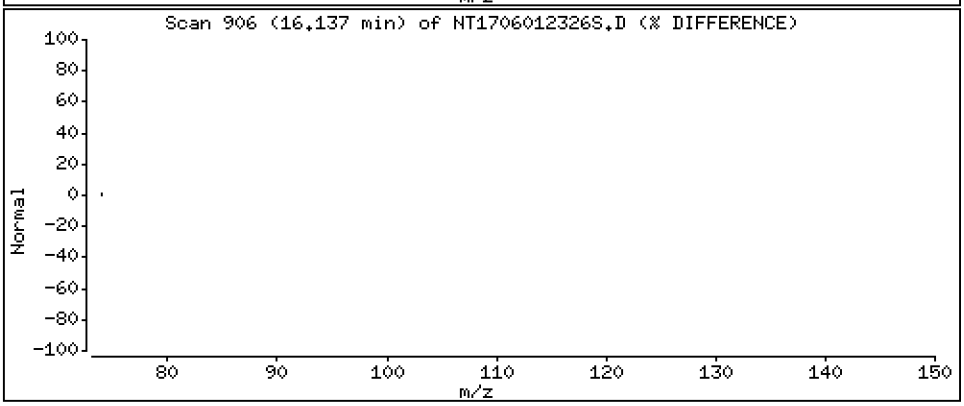












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123265.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

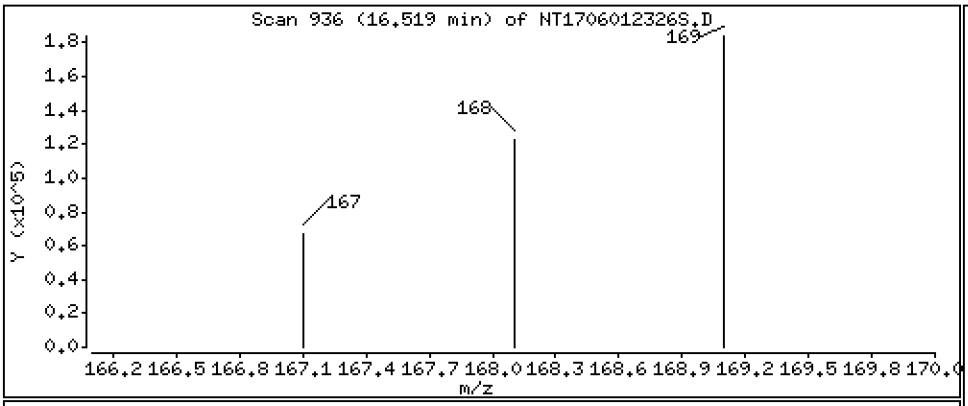
Operator: VTS

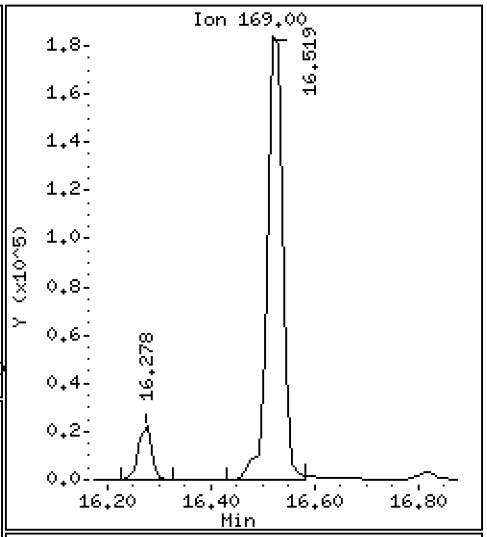
Column phase: ZB-5msi

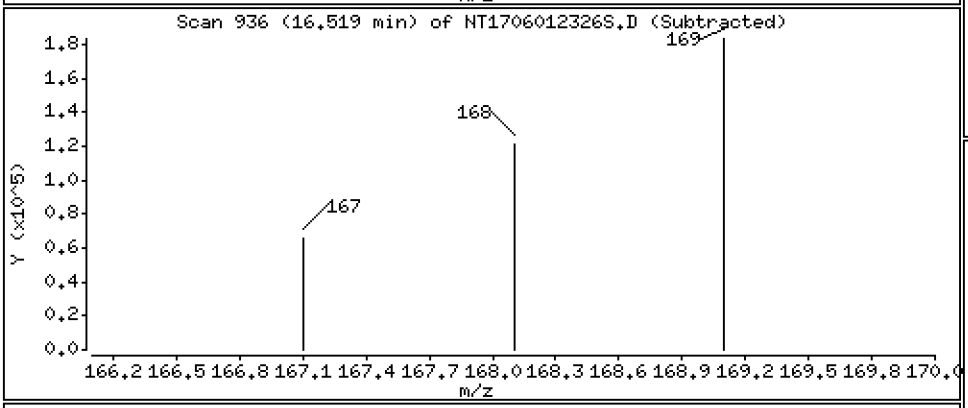
Column diameter: 0.25

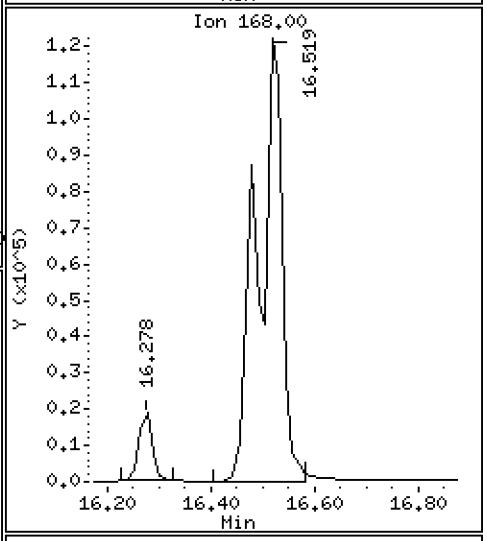
54 N-Nitrosodiphenylamine

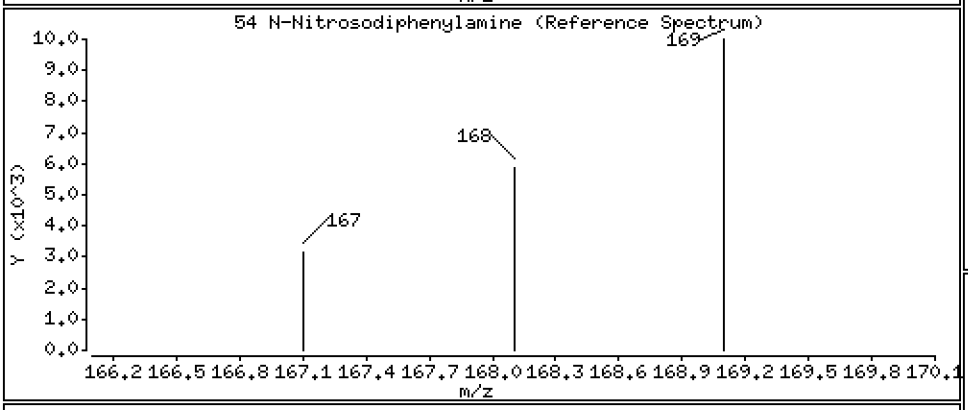
Concentration: 3.193 ug/mL

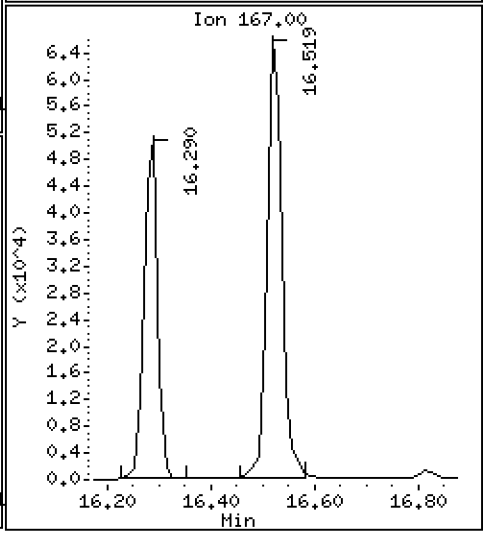


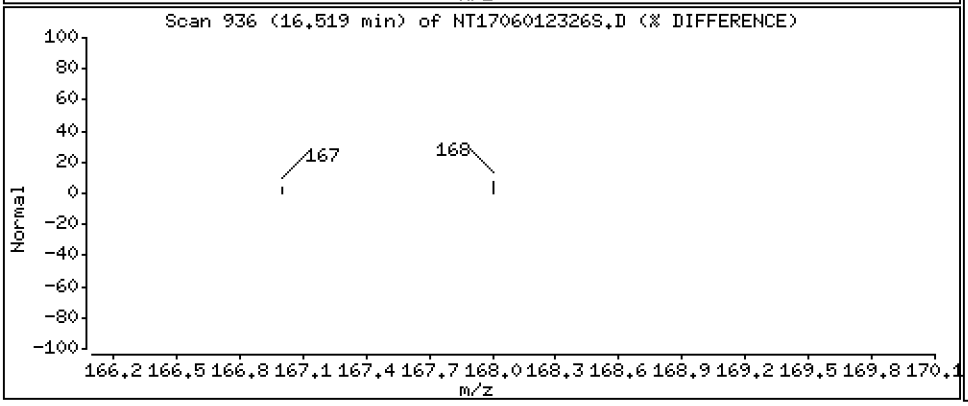












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

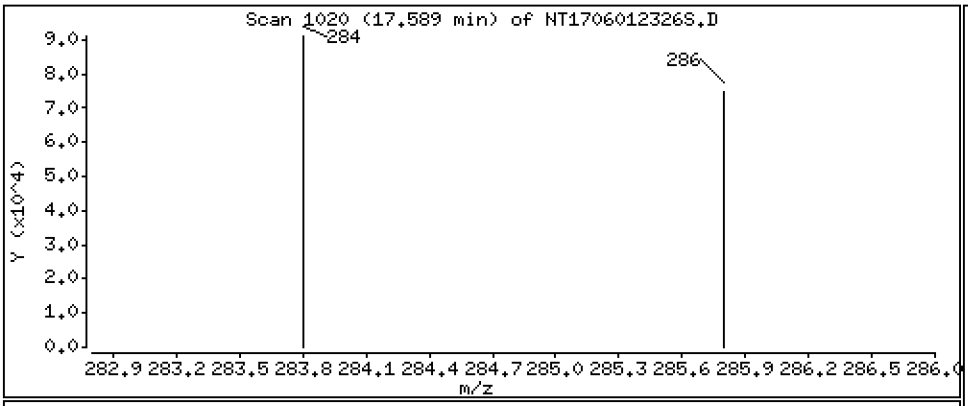
Operator: VTS

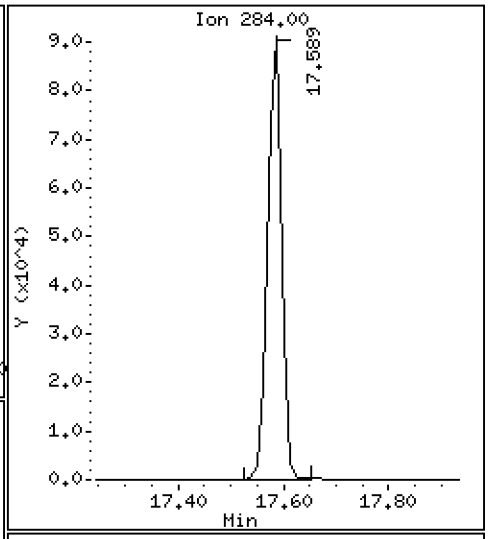
Column phase: ZB-5msi

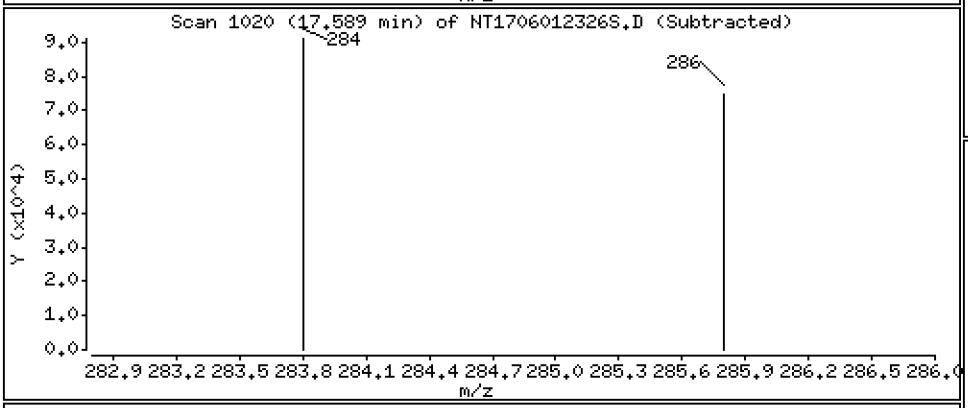
Column diameter: 0.25

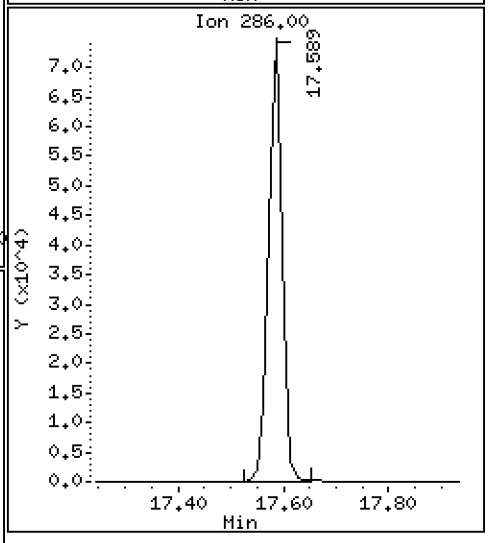
57 Hexachlorobenzene

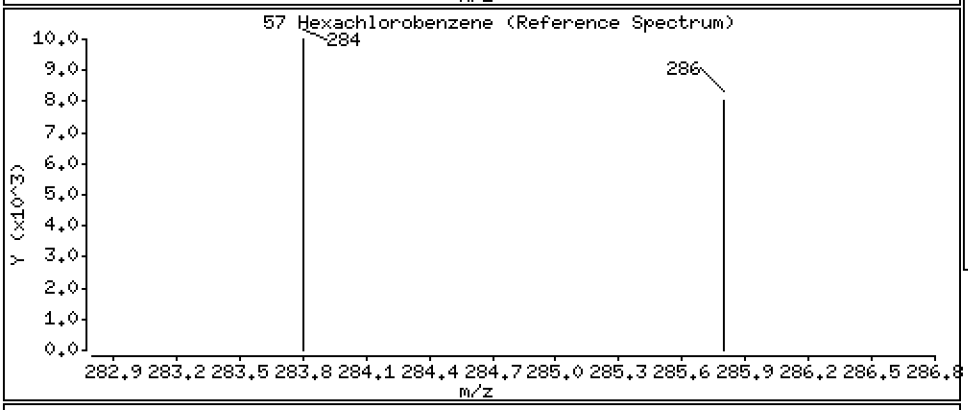
Concentration: 4.185 ug/mL

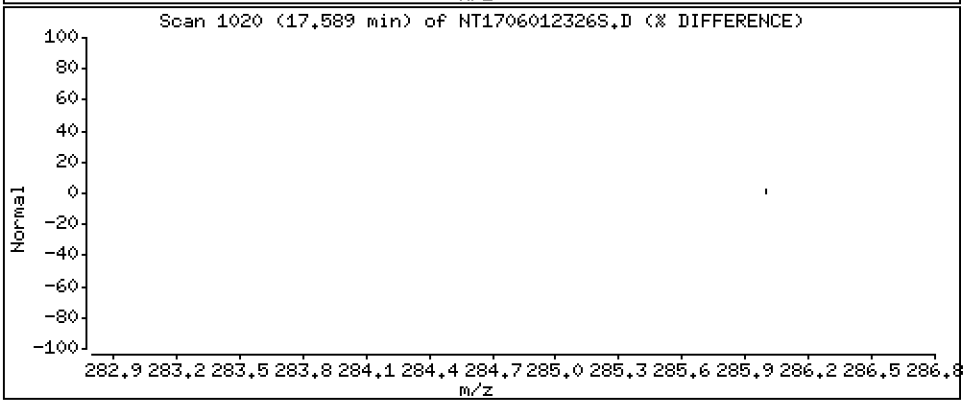












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

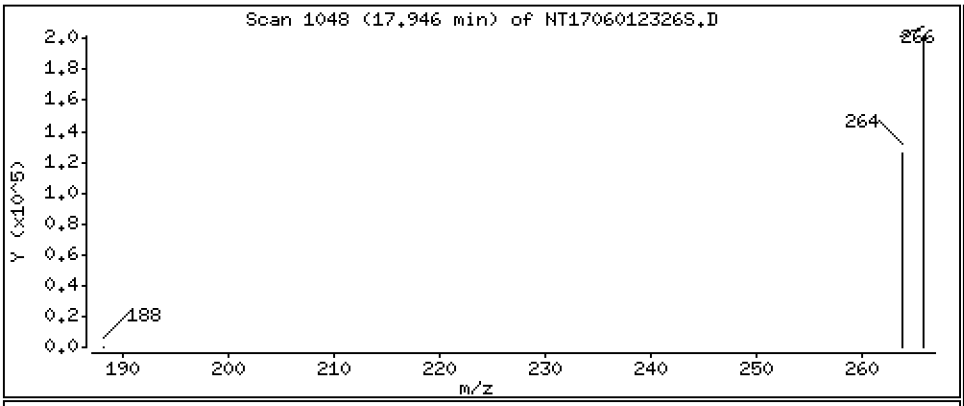
Operator: VTS

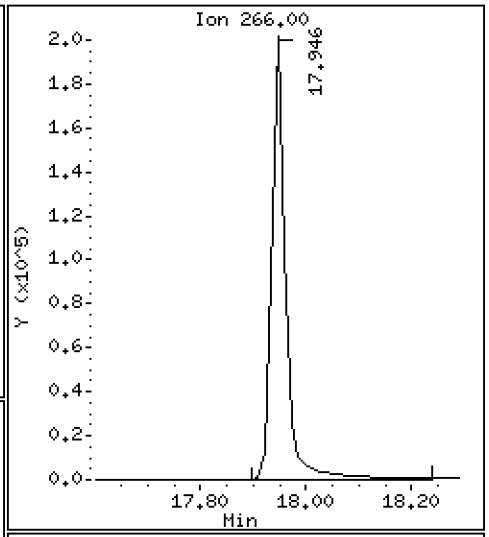
Column phase: ZB-5msi

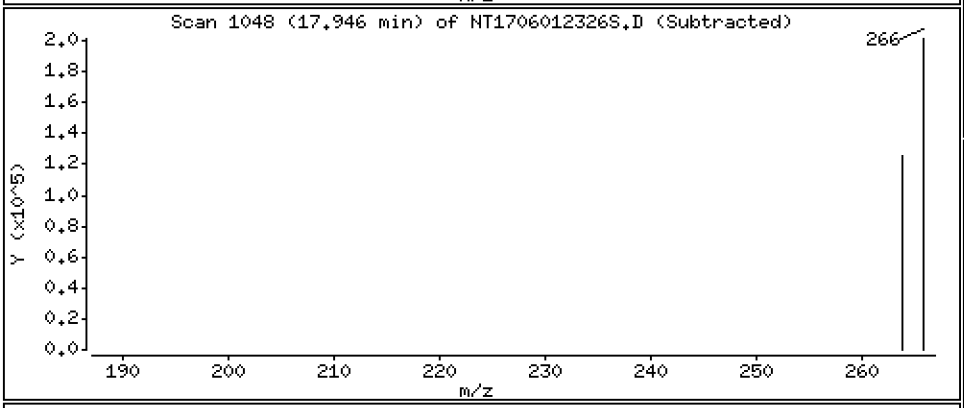
Column diameter: 0.25

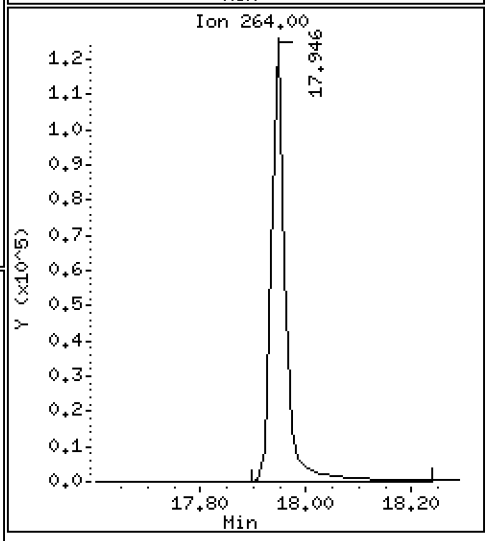
58 Pentachlorophenol

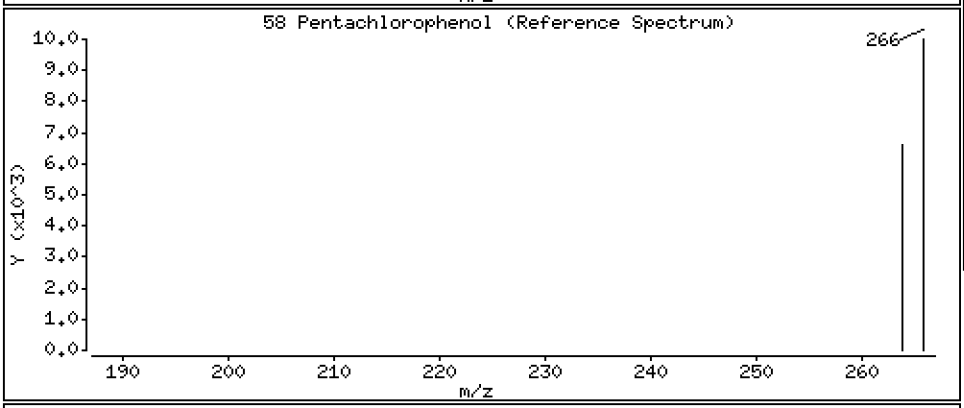
Concentration: 13.89 ug/mL

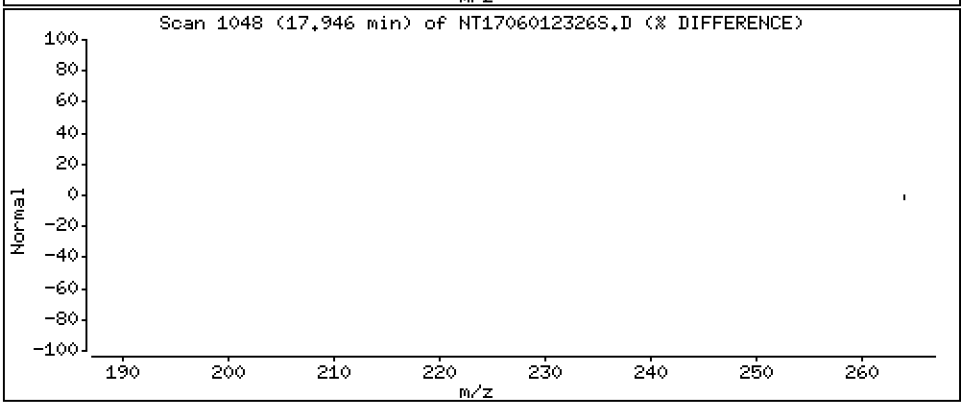












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

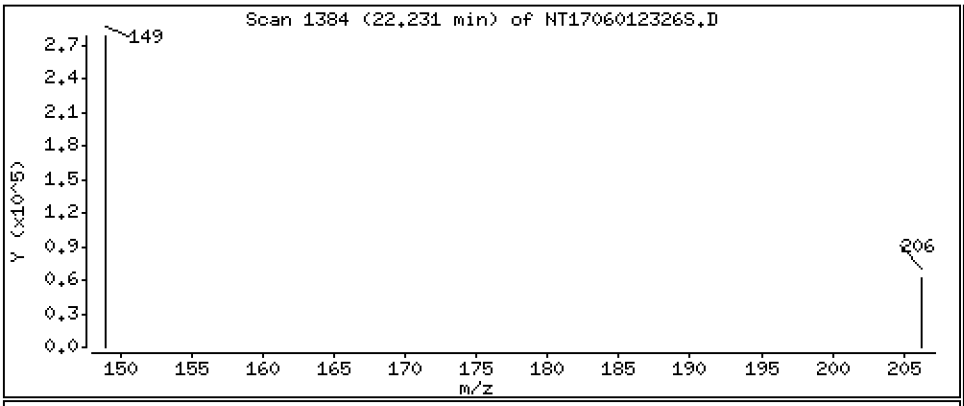
Operator: VTS

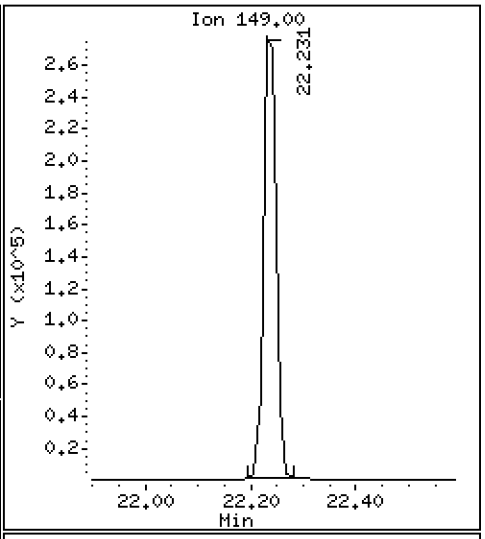
Column phase: ZB-5msi

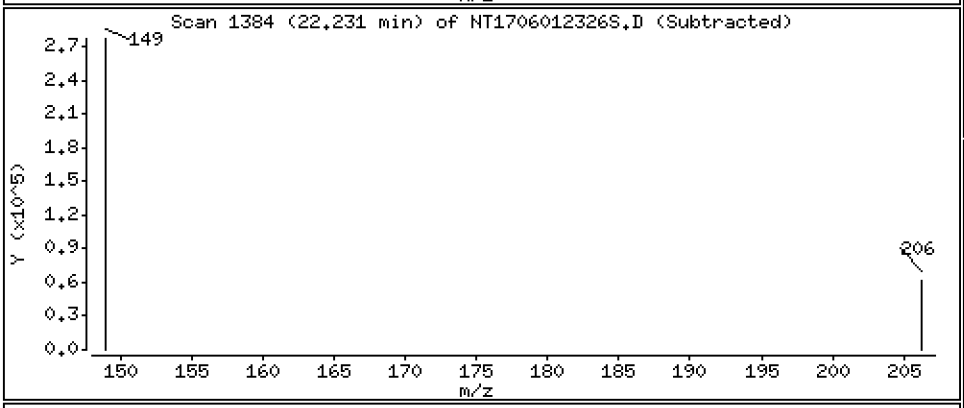
Column diameter: 0.25

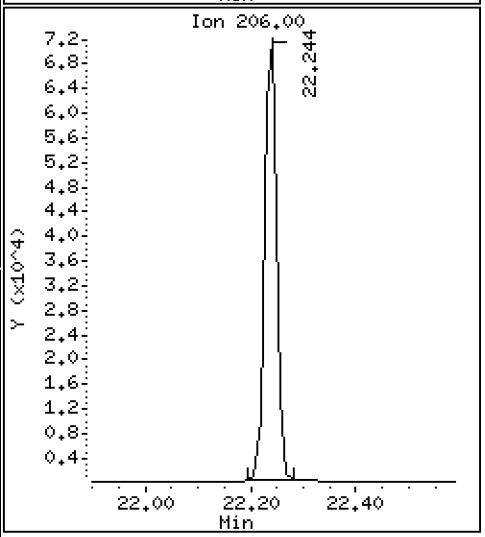
67 Butylbenzylphthalate

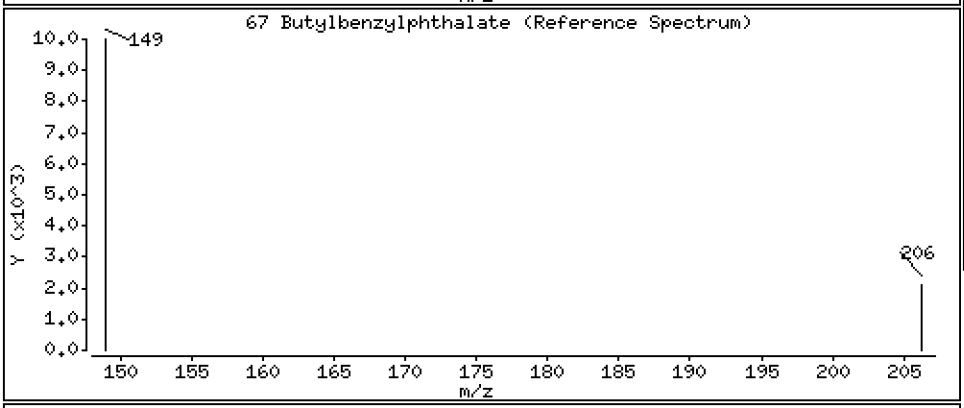
Concentration: 4.158 ug/mL

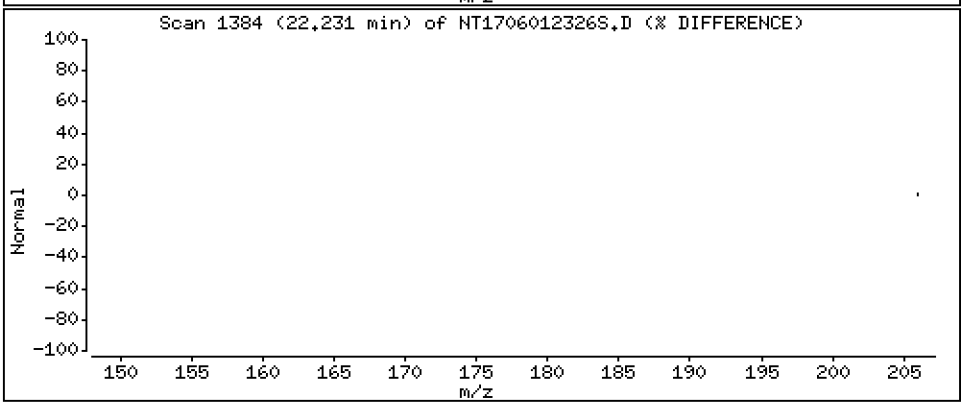












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

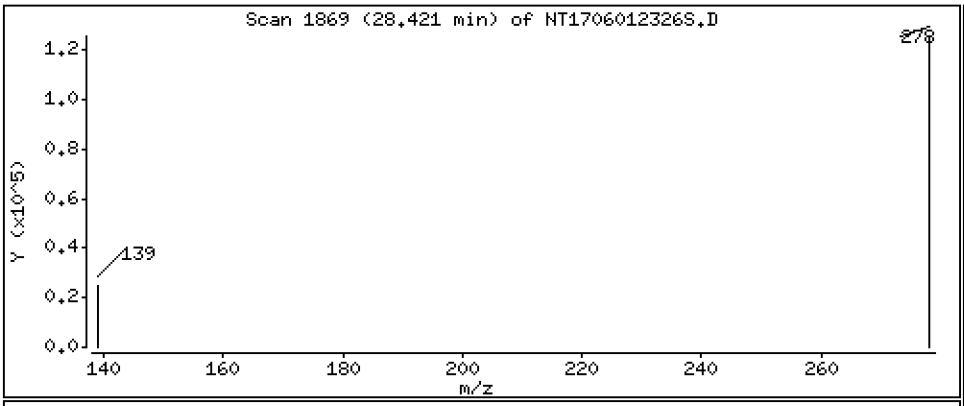
Operator: VTS

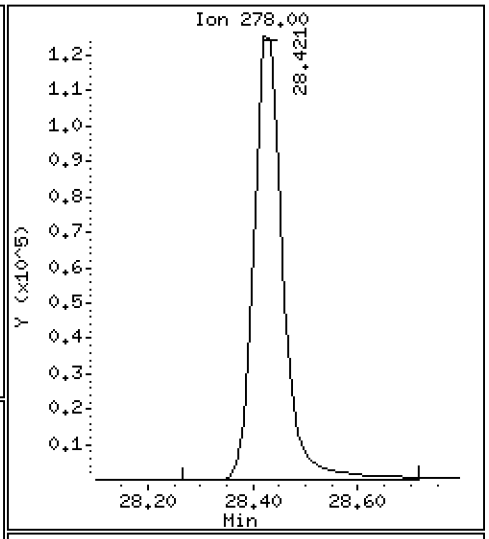
Column phase: ZB-5msi

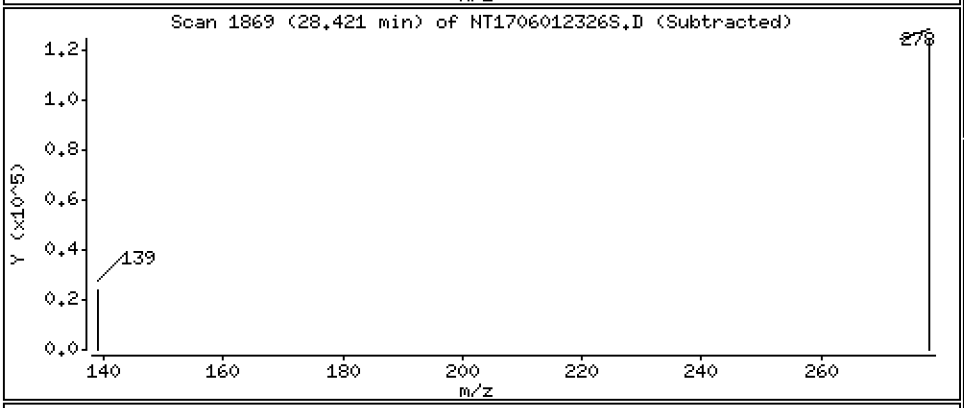
Column diameter: 0.25

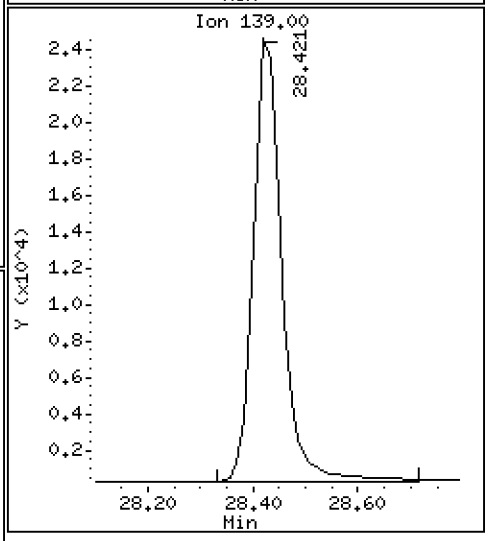
79 Dibenzo(a,h)anthracene

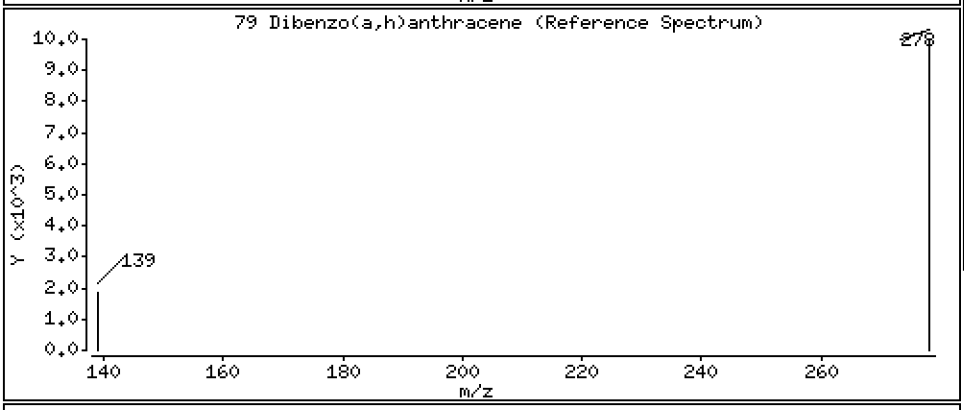
Concentration: 3.520 ug/mL

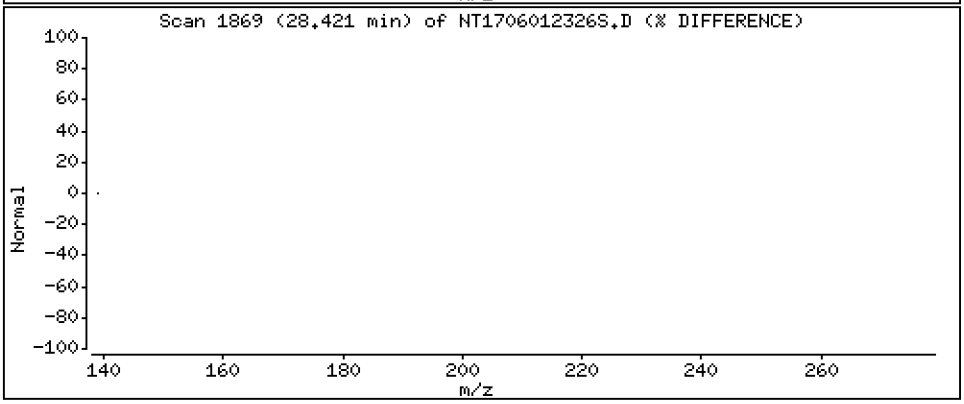












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D

Date : 02-JUN-2023 03:34

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BS2

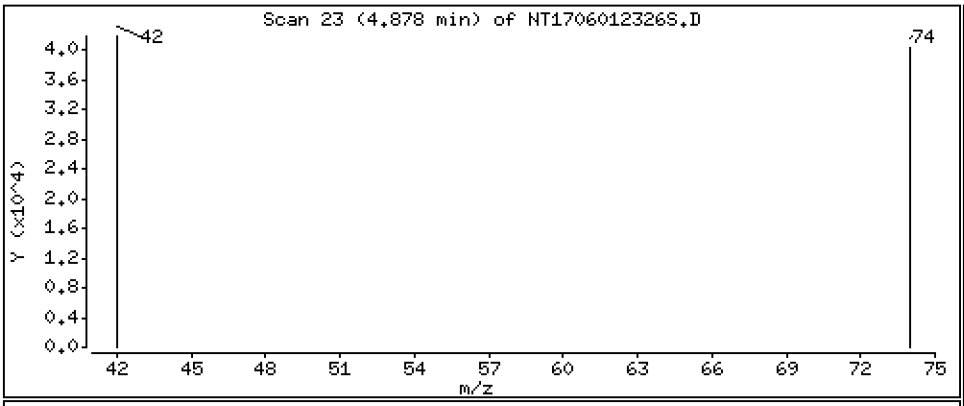
Operator: VTS

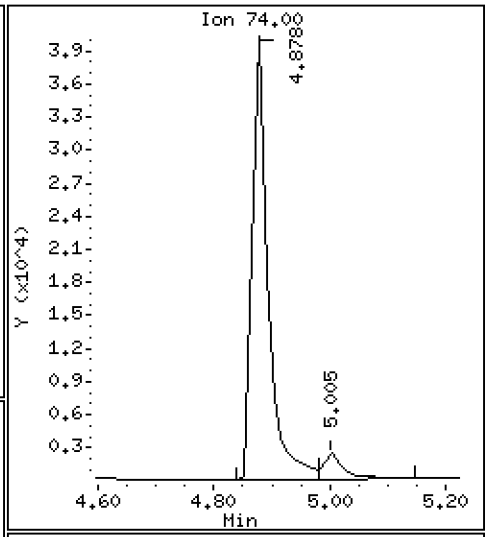
Column phase: ZB-5msi

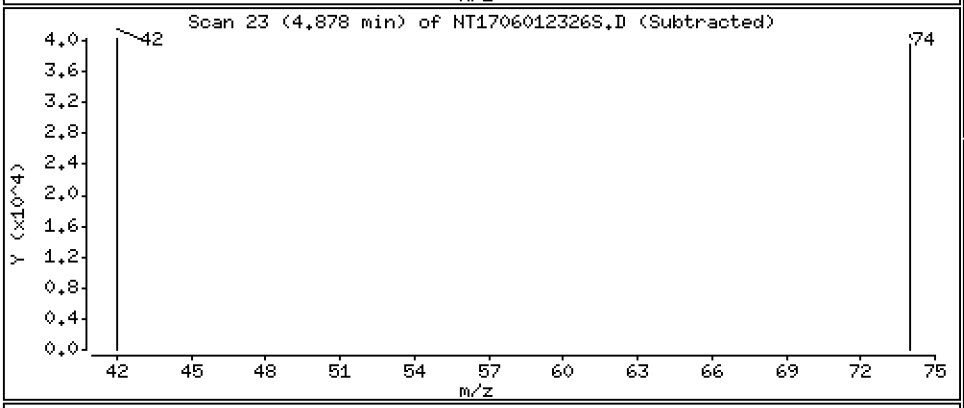
Column diameter: 0.25

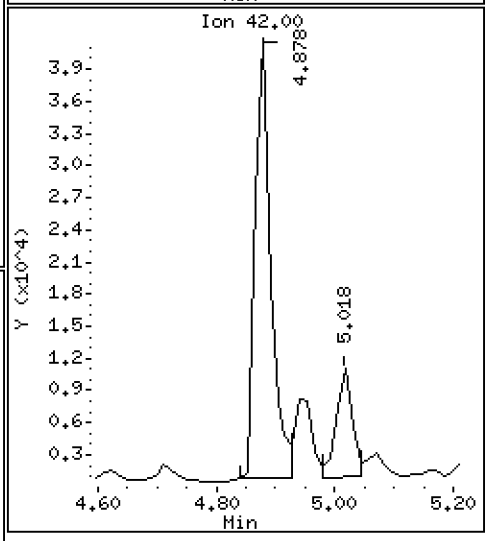
90 N-Nitrosodimethylamine

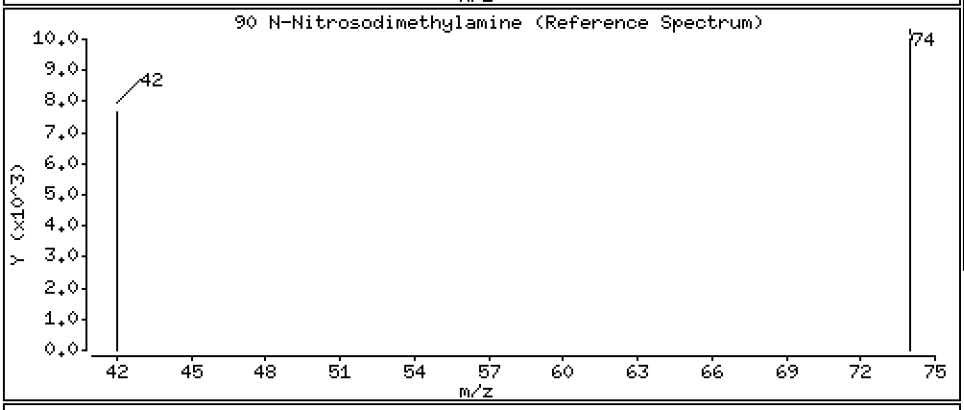
Concentration: 1.476 ug/mL

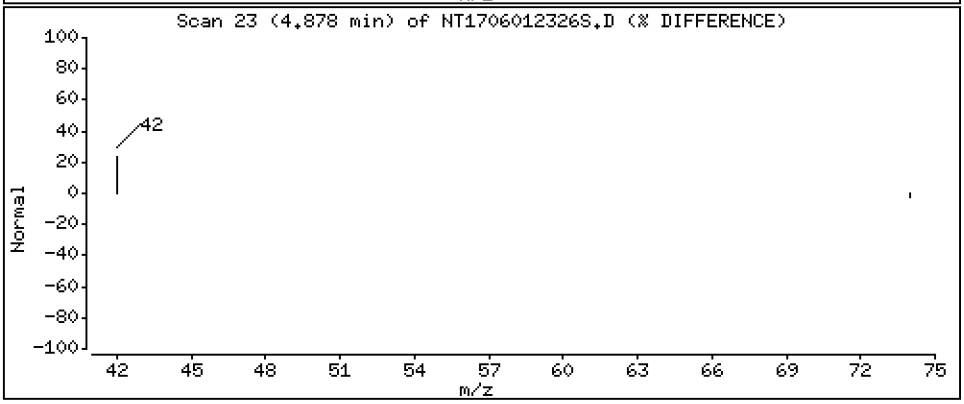












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012326S.D
Lab Smp Id: BLE0148-BS2
Inj Date : 02-JUN-2023 03:34
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-BS2
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.954	(0.762)	280098	3.53211	3.532(R)
	3 Phenol	94	8.547	8.547	(0.934)	348190	2.94673	2.947
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	318933	3.01130	3.011
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	262184	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	319753	3.09821	3.098
	11 Benzyl alcohol	79	9.427	9.452	(1.031)	234988	3.49012	3.490
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	312965	3.09391	3.094
	13 2-Methylphenol	108	9.644	9.644	(1.054)	187875	2.29450	2.295
	15 4-Methylphenol	108	9.912	9.912	(1.084)	214591	2.59324	2.593
	16 N-Nitroso-di-n-propylamine	70	9.963	9.964	(1.089)	144441	2.42195	2.422
	22 2,4-Dimethylphenol	107	10.934	10.934	(0.943)	303163	3.37240	3.372
	24 Benzoic acid	105	11.190	11.100	(0.965)	1023279	18.2719	18.27
	26 1,2,4-Trichlorobenzene	180	11.509	11.521	(0.992)	237944	2.91744	2.917
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	934527	4.00000	
	30 Hexachlorobutadiene	225	11.993	11.993	(1.034)	157550	3.66867	3.669
	39 Dimethylphthalate	163	14.696	14.696	(0.967)	771679	3.69051	3.691
*	42 Acenaphthene-d10	162	15.194	15.194	(1.000)	569401	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.062)	748838	3.94345	3.943
	54 N-Nitrosodiphenylamine	169	16.519	16.519	(0.908)	378815	3.19329	3.193
	57 Hexachlorobenzene	284	17.588	17.588	(0.966)	168427	4.18537	4.185
	58 Pentachlorophenol	266	17.945	17.946	(0.986)	369048	13.8896	13.89
*	59 Phenanthrene-d10	188	18.201	18.201	(1.000)	842050	4.00000	
$	66 Terphenyl-d14	244	21.325	21.325	(0.919)	549962	5.00765	5.008(R)
	67 Butylbenzylphthalate	149	22.230	22.243	(0.958)	496225	4.15793	4.158
*	69 Chrysene-d12	240	23.213	23.213	(1.000)	578785	4.00000	
*	77 Perylene-d12	264	25.802	25.802	(1.000)	476619	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.421	28.446	(1.101)	473216	3.52004	3.520
	90 N-Nitrosodimethylamine	74	4.878	4.878	(0.533)	75552	1.47616	1.476

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012326S.D Calibration Time: 00:29
Lab Smp Id: BLE0148-BS2
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	262184	-1.26
27 Naphthalene-d8	874121	437061	1748242	934527	6.91
42 Acenaphthene-d10	524478	262239	1048956	569401	8.57
59 Phenanthrene-d10	807440	403720	1614880	842050	4.29
69 Chrysene-d12	527364	263682	1054728	578785	9.75
77 Perylene-d12	455527	227764	911054	476619	4.63

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.21	22.71	23.71	23.21	-0.00
77 Perylene-d12	25.80	25.30	26.30	25.80	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012326S.D

Lab ID: BLE0148-BS2
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 03:34

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.965	0.957	0.0077	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1706012321S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123275.D

Date : 02-JUN-2023 04:11

Client ID:

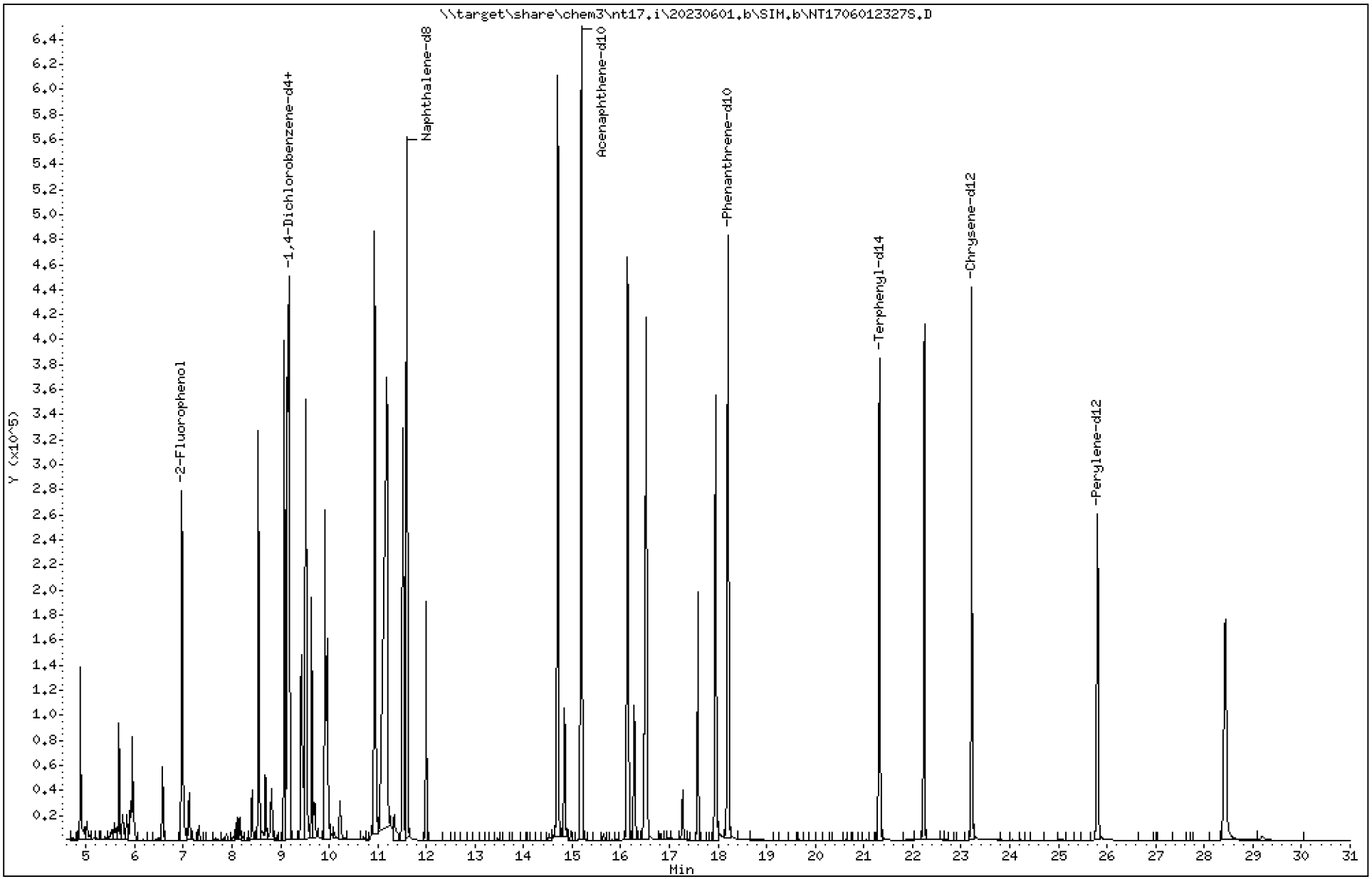
Sample Info: BLE0148-BSD2

Instrument: nt17.i

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

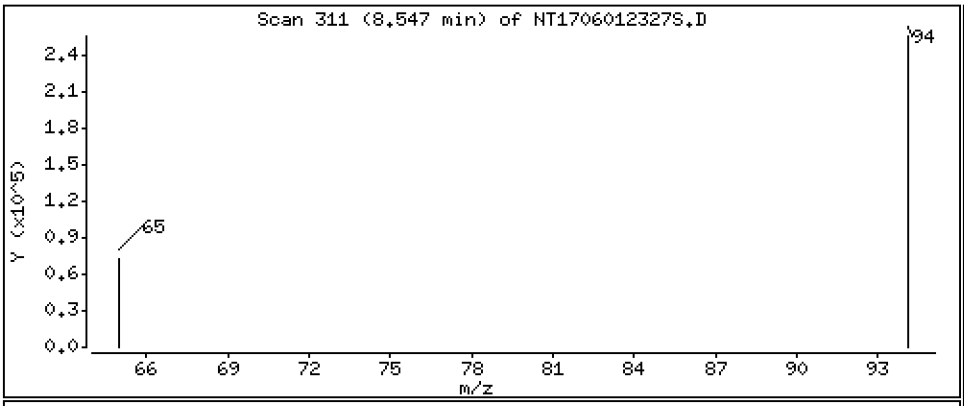
Operator: VTS

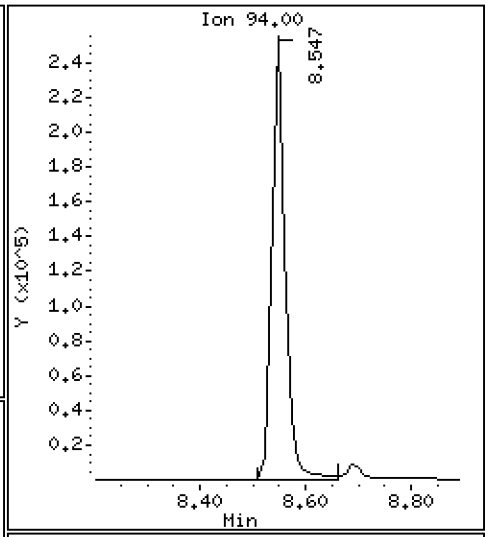
Column phase: ZB-5msi

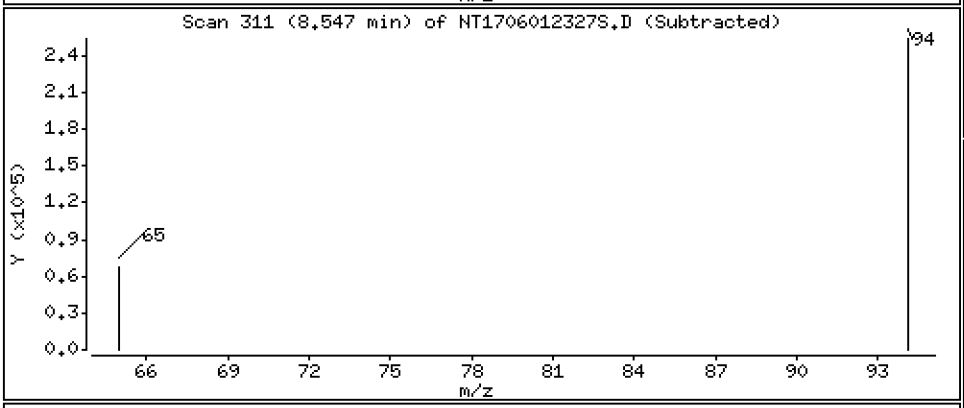
Column diameter: 0.25

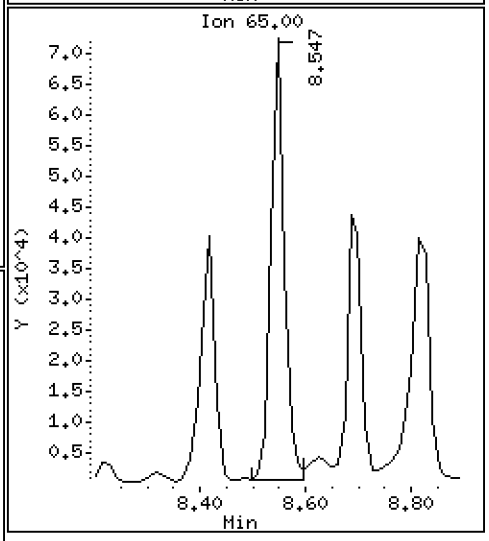
3 Phenol

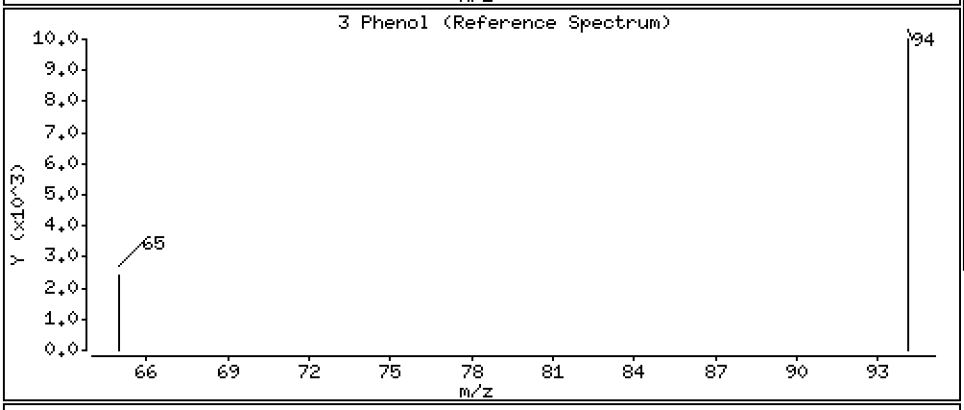
Concentration: 3.572 ug/mL

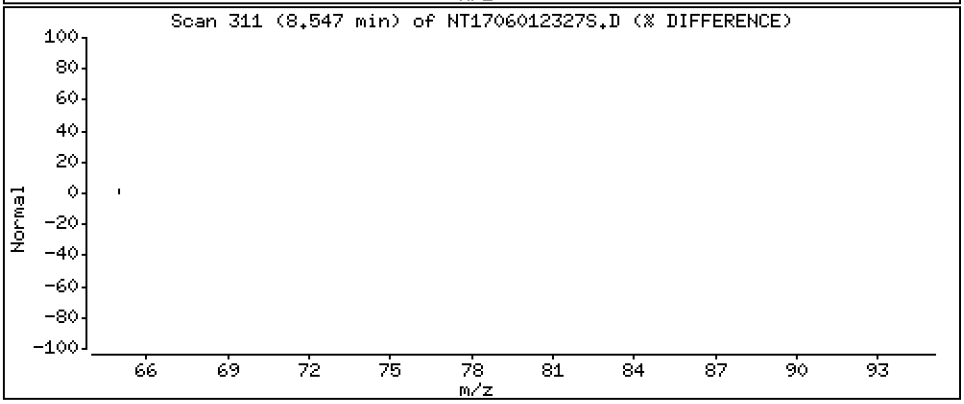












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

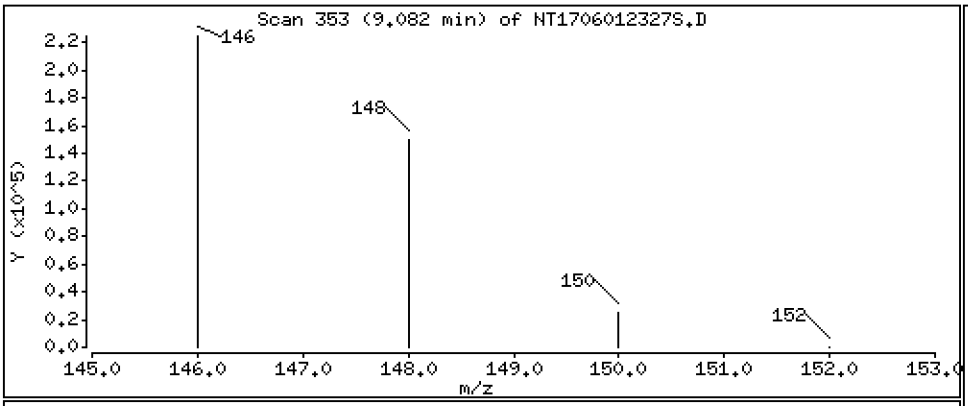
Operator: VTS

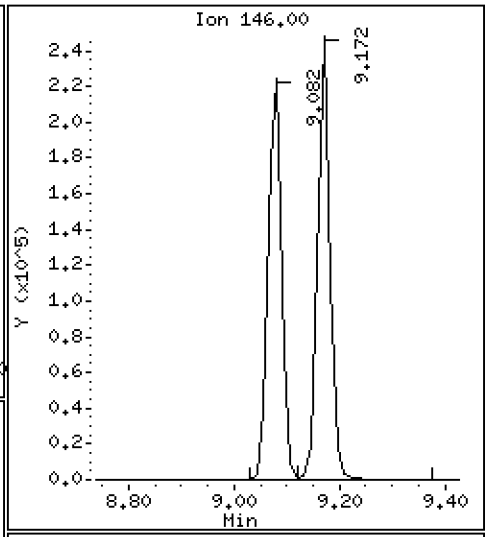
Column phase: ZB-5msi

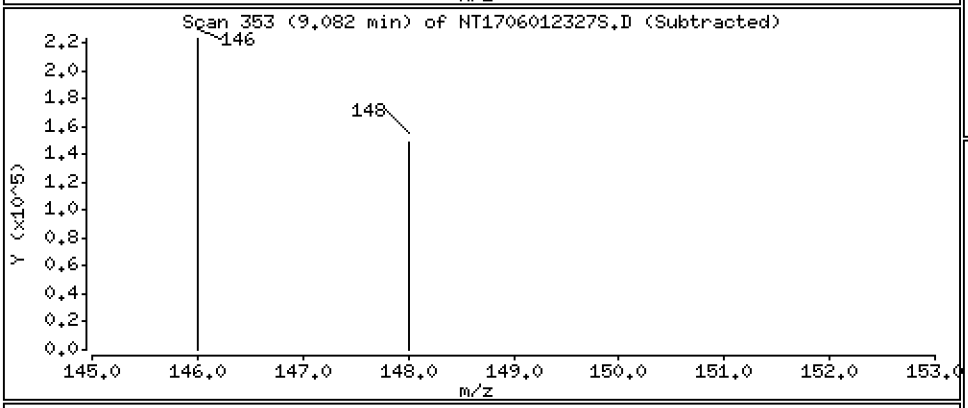
Column diameter: 0.25

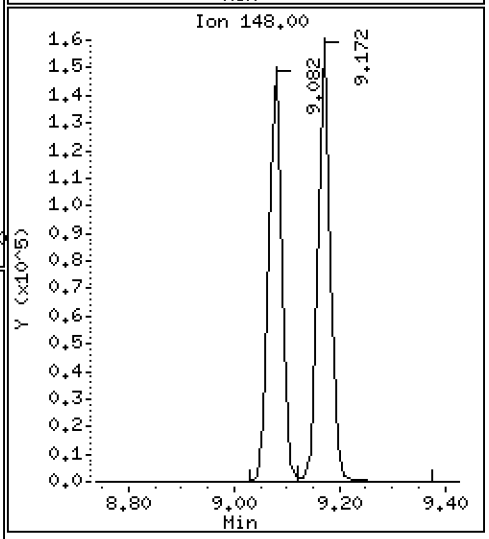
7 1,3-Dichlorobenzene

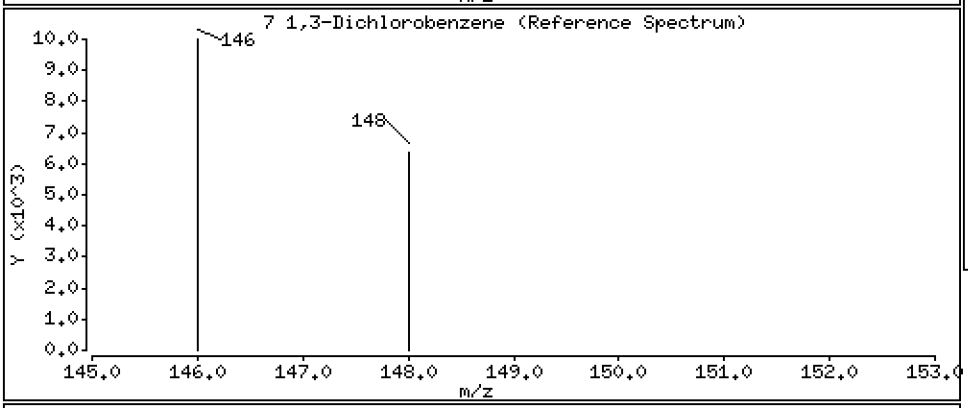
Concentration: 3.611 ug/mL

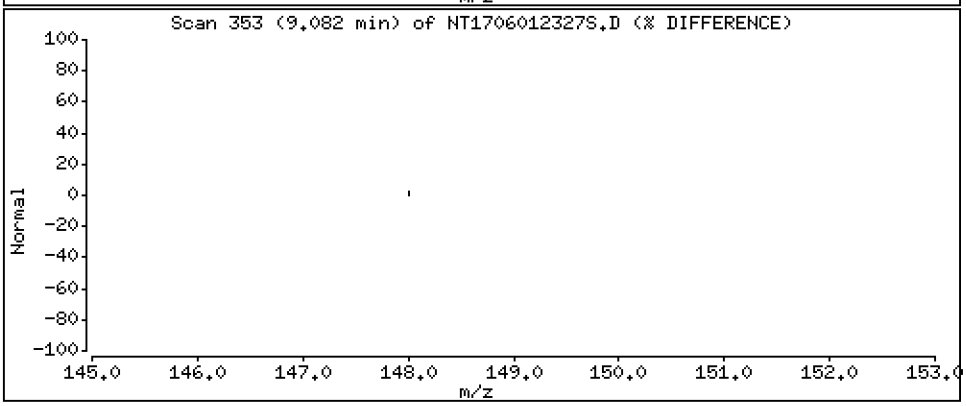












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

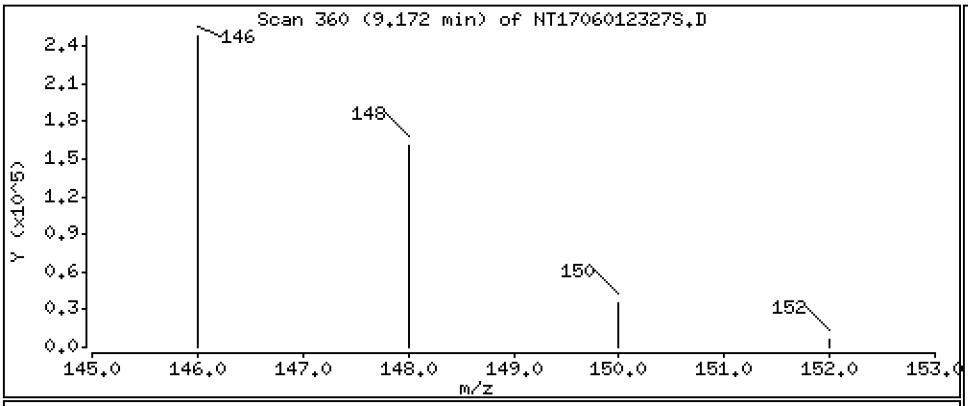
Operator: VTS

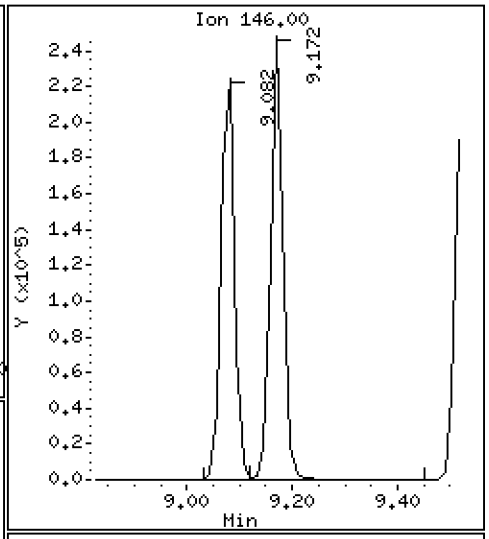
Column phase: ZB-5msi

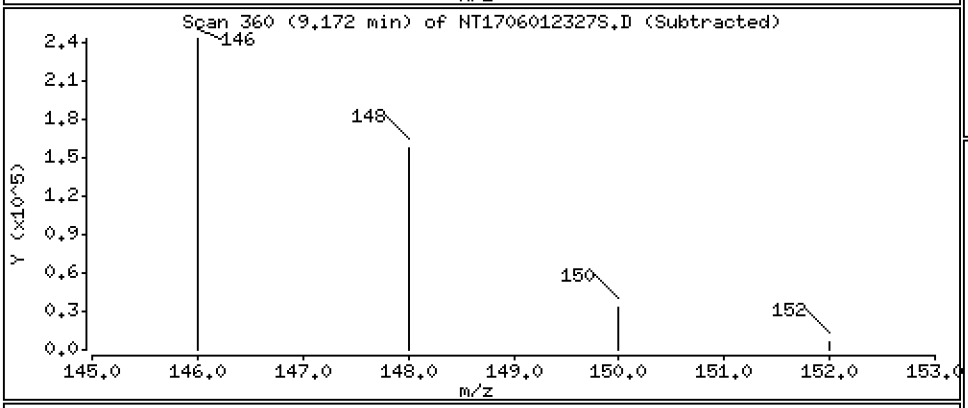
Column diameter: 0.25

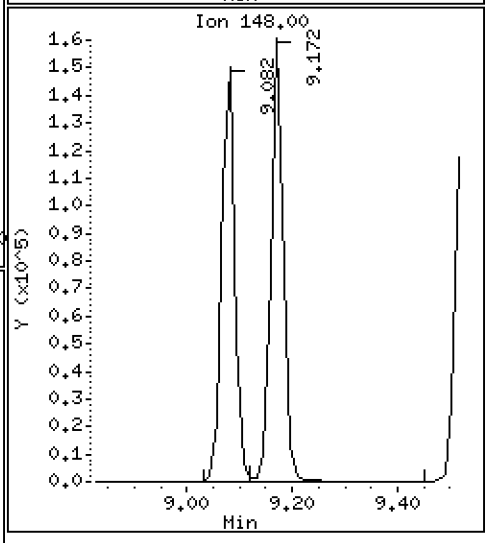
9 1,4-Dichlorobenzene

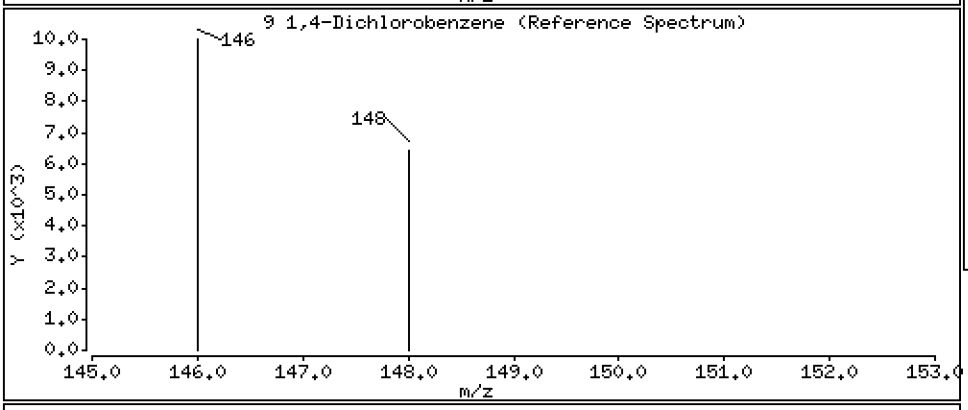
Concentration: 3.730 ug/mL

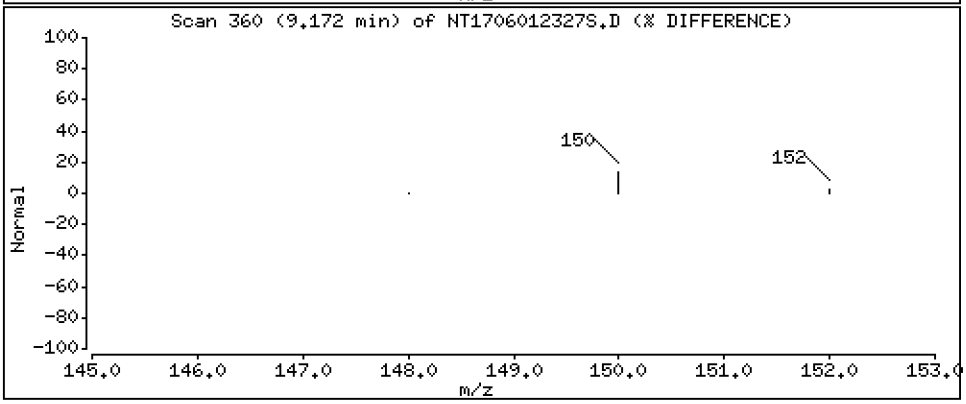












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

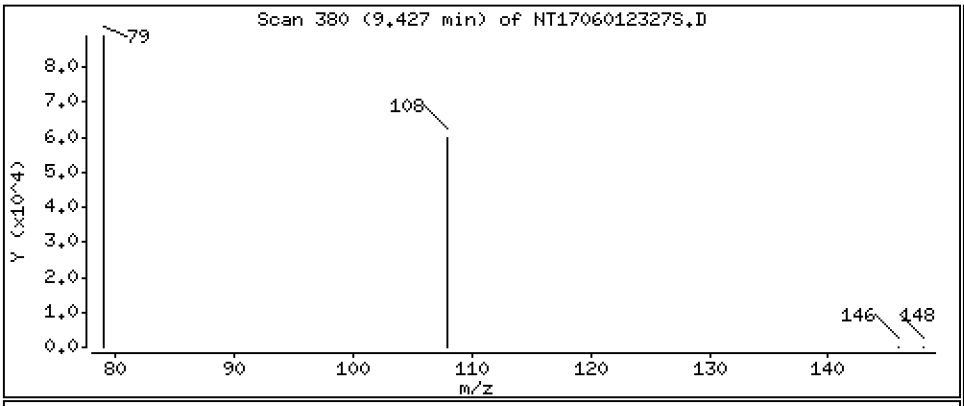
Operator: VTS

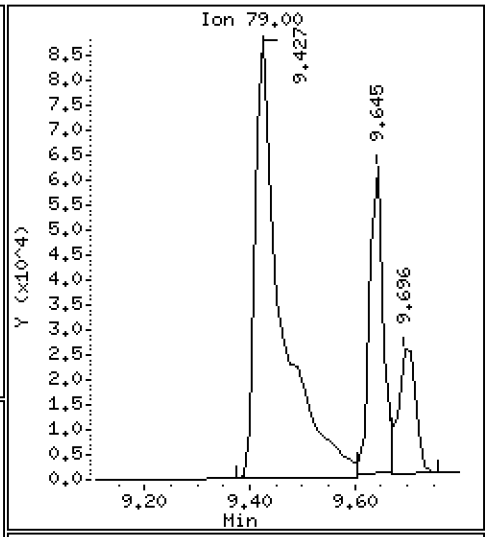
Column phase: ZB-5msi

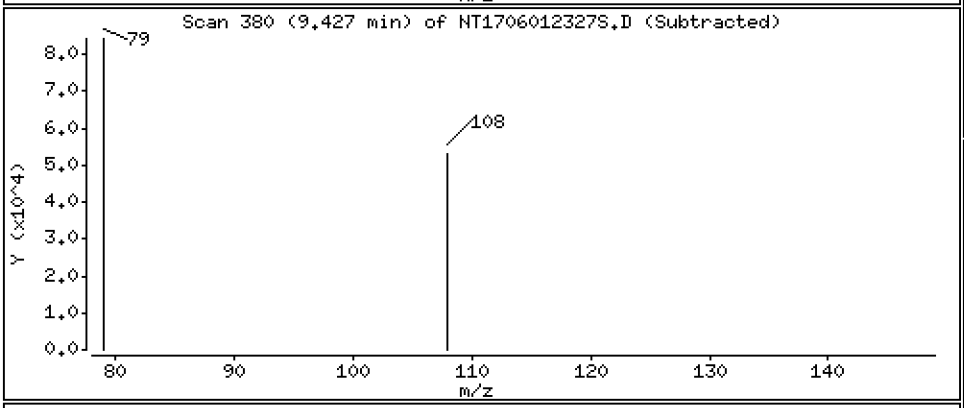
Column diameter: 0.25

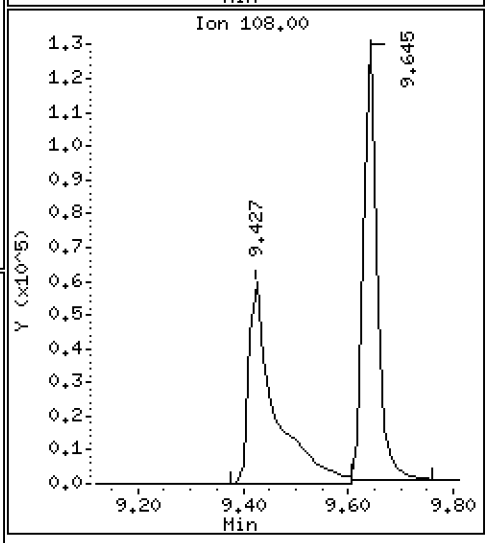
11 Benzyl alcohol

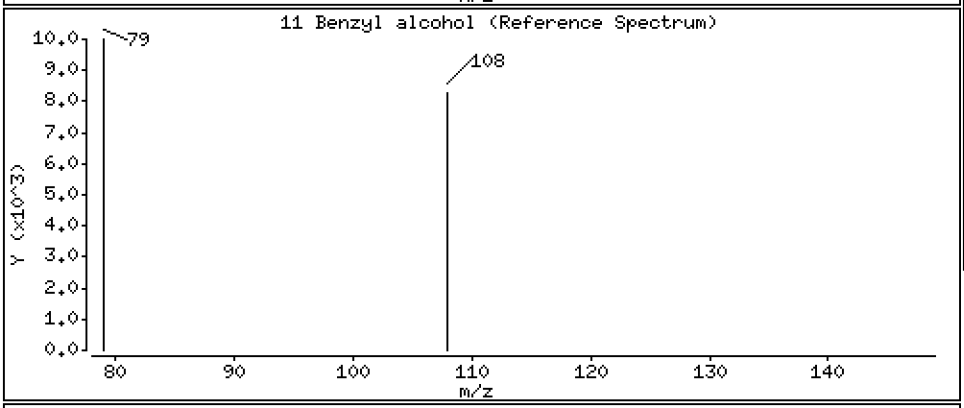
Concentration: 4.348 ug/mL

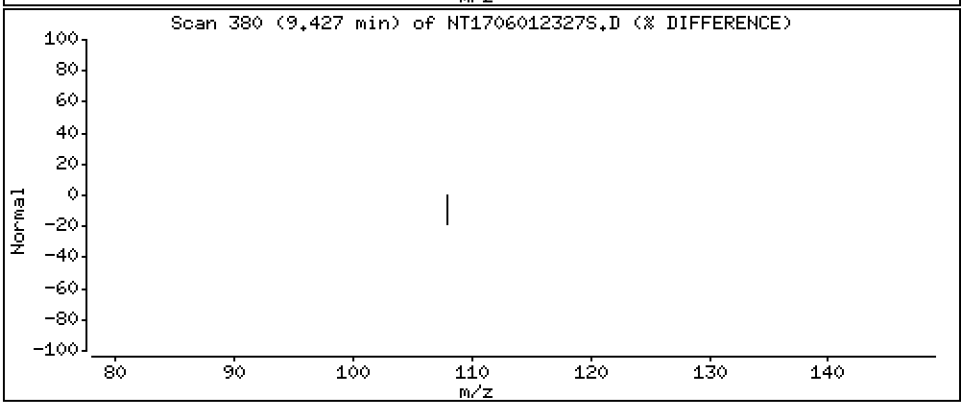












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

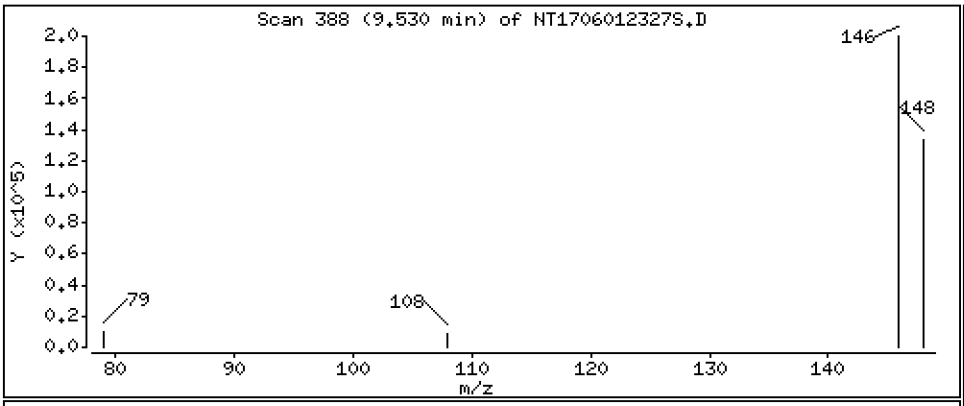
Operator: VTS

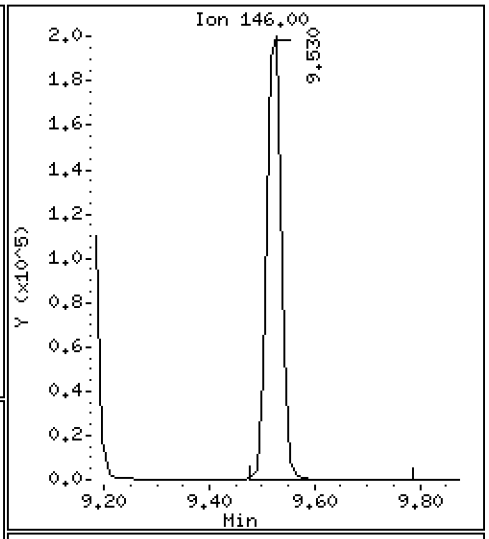
Column phase: ZB-5msi

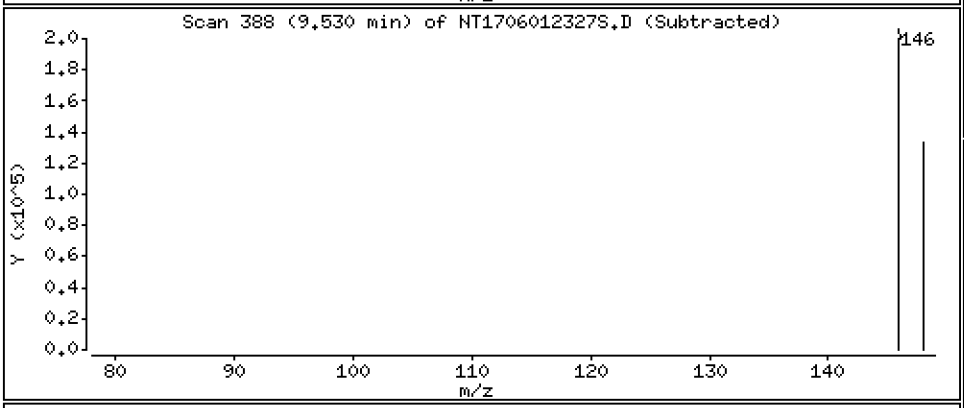
Column diameter: 0.25

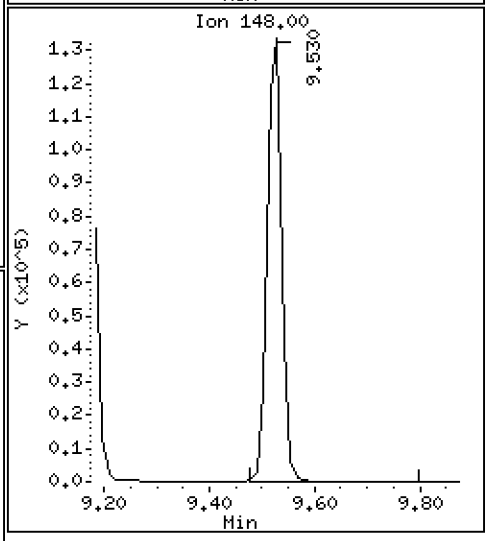
12 1,2-Dichlorobenzene

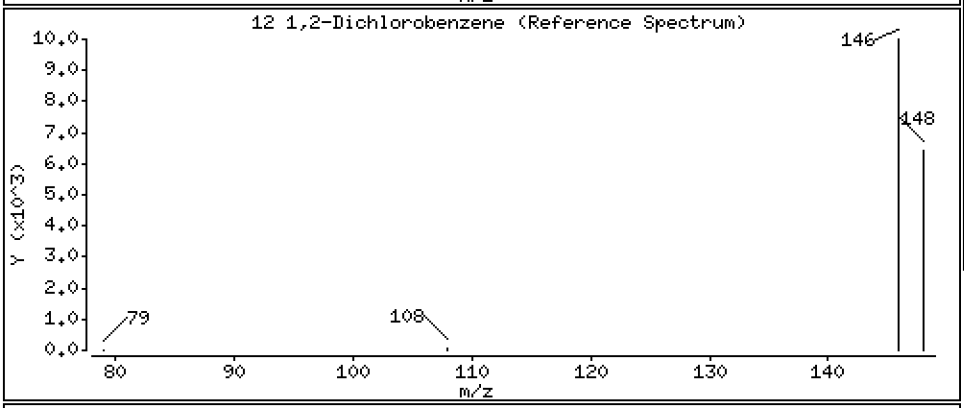
Concentration: 3.711 ug/mL

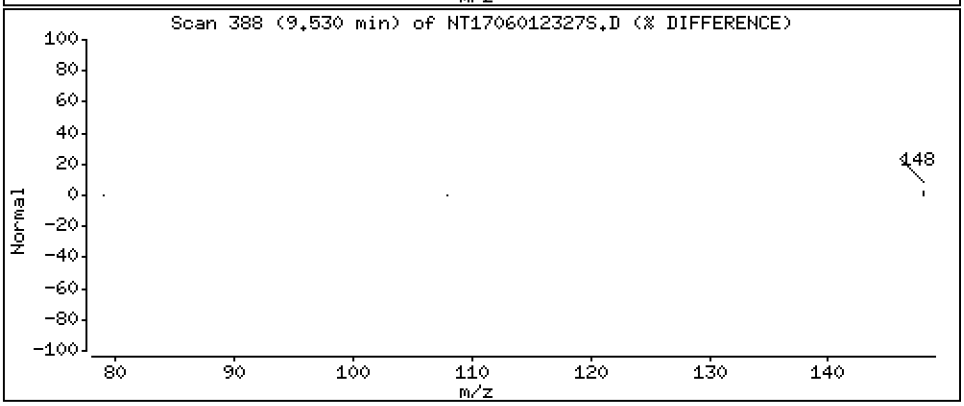












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

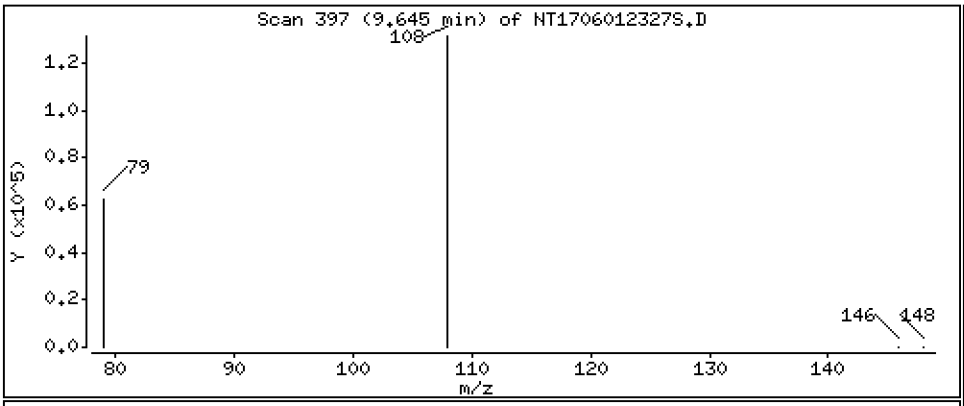
Operator: VTS

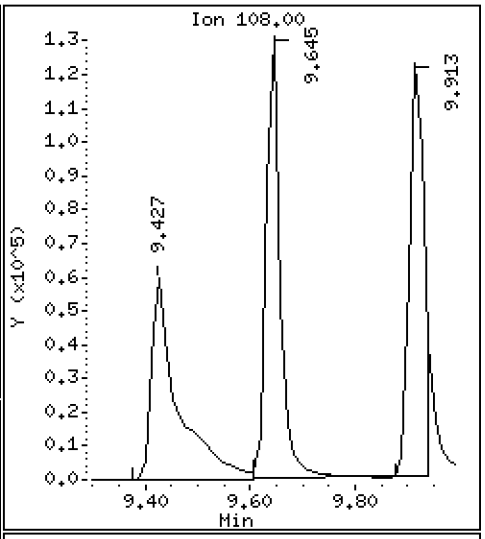
Column phase: ZB-5msi

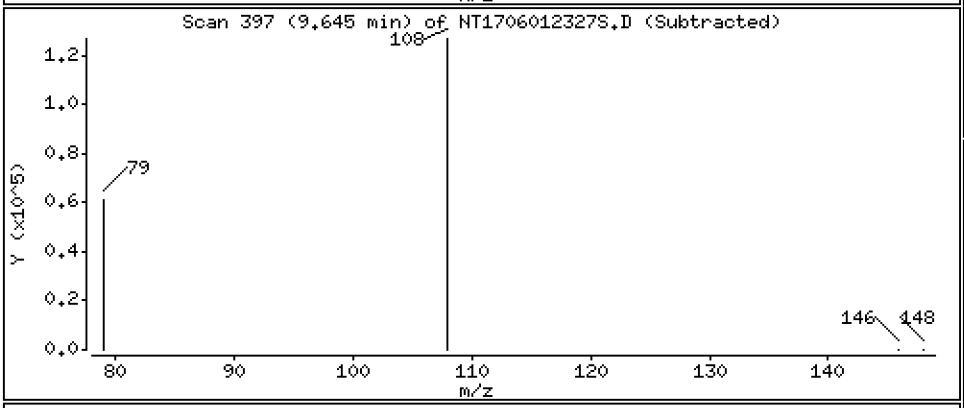
Column diameter: 0.25

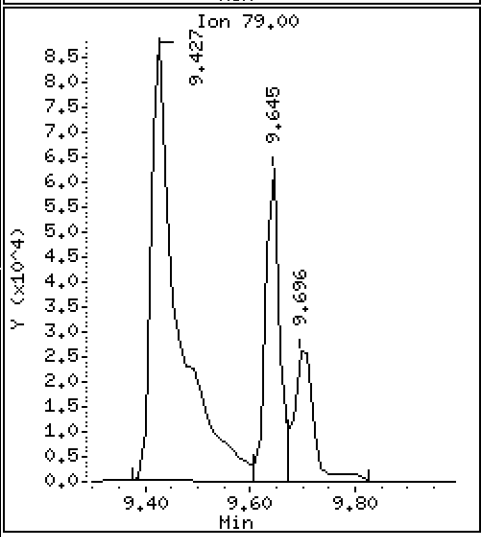
13 2-Methylphenol

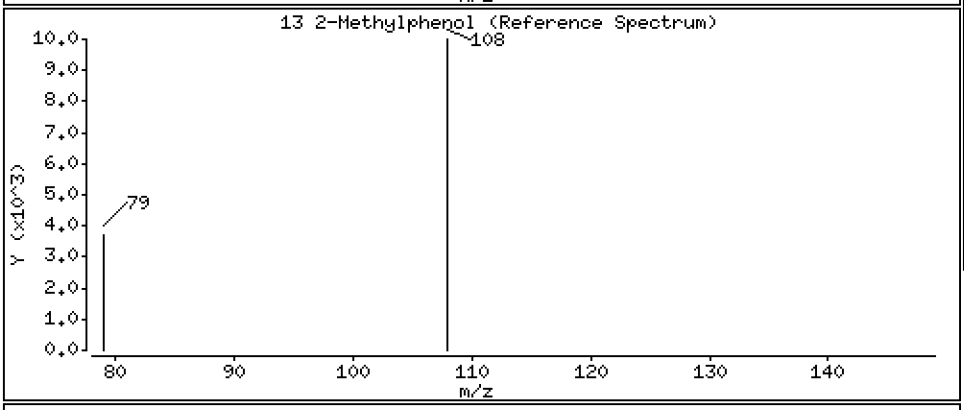
Concentration: 2.852 ug/mL

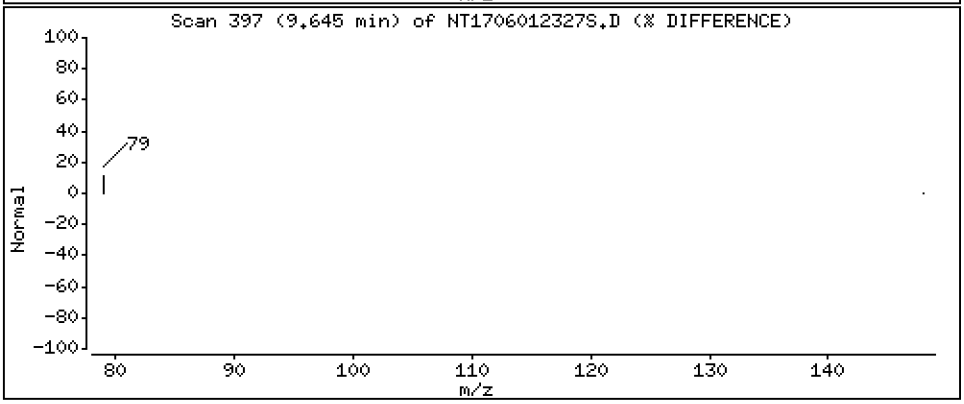












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

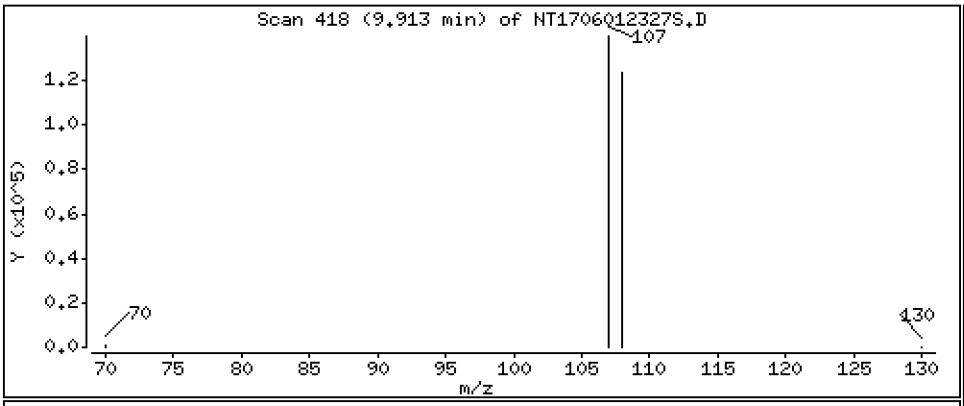
Operator: VTS

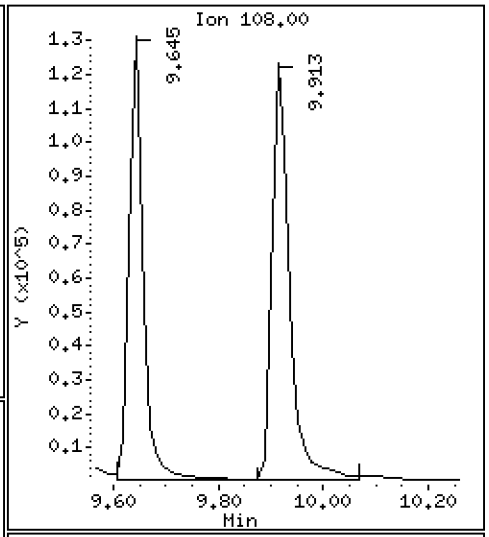
Column phase: ZB-5msi

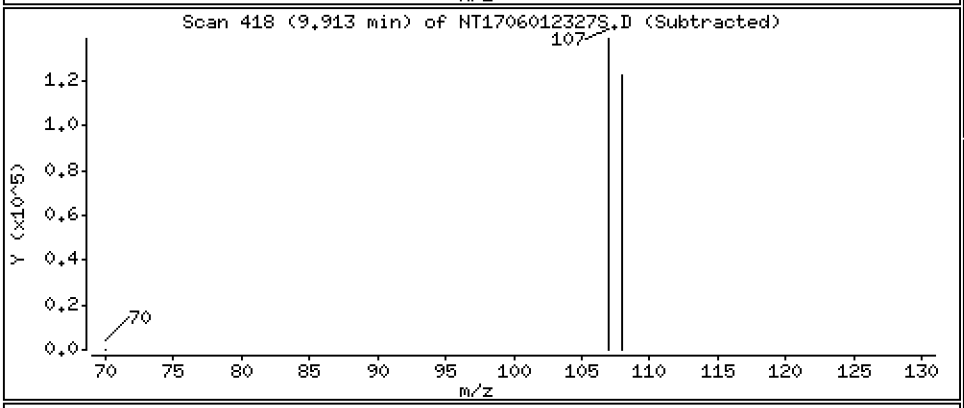
Column diameter: 0.25

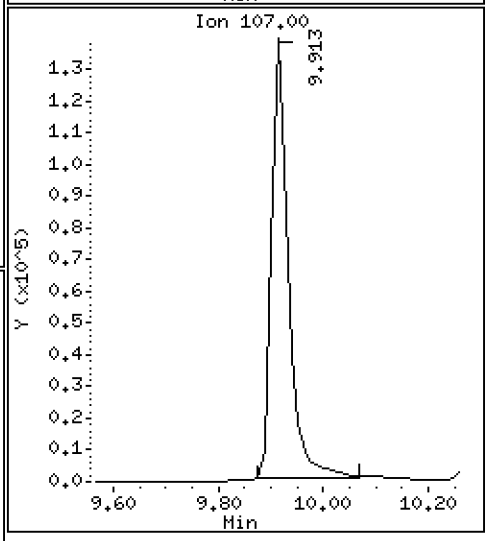
15 4-Methylphenol

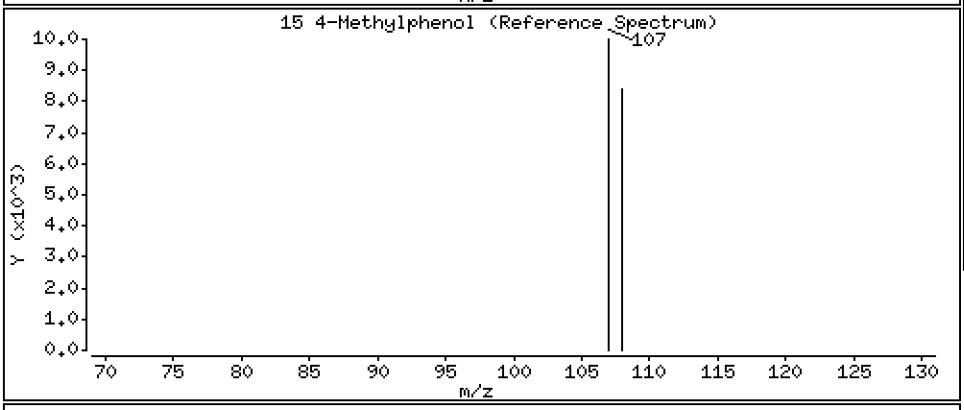
Concentration: 3.250 ug/mL

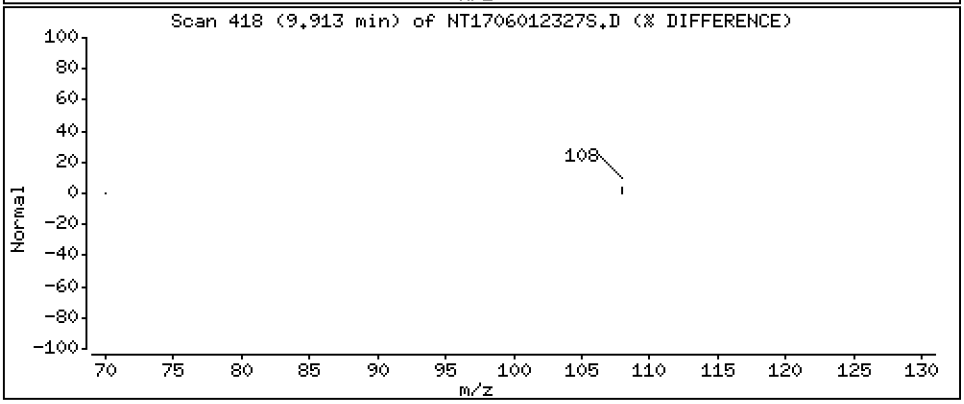












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

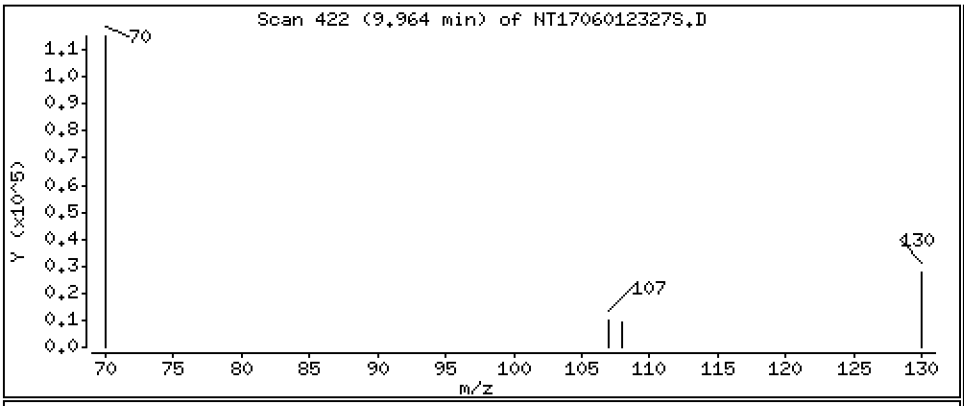
Operator: VTS

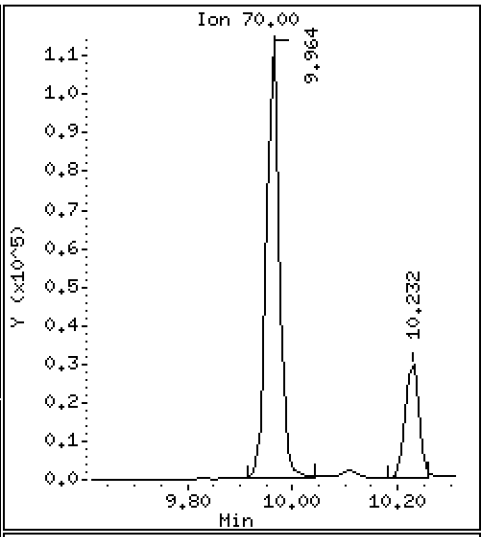
Column phase: ZB-5msi

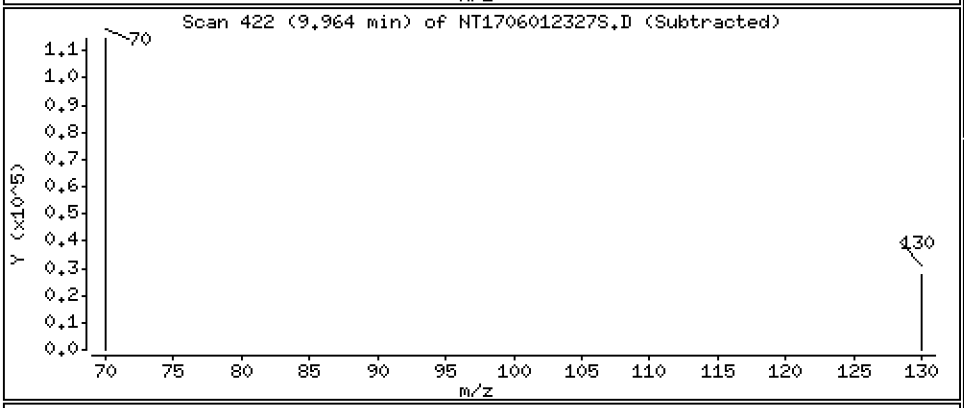
Column diameter: 0.25

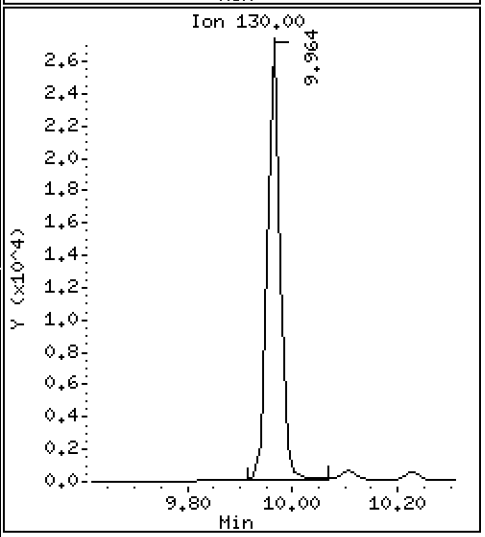
16 N-Nitroso-di-n-propylamine

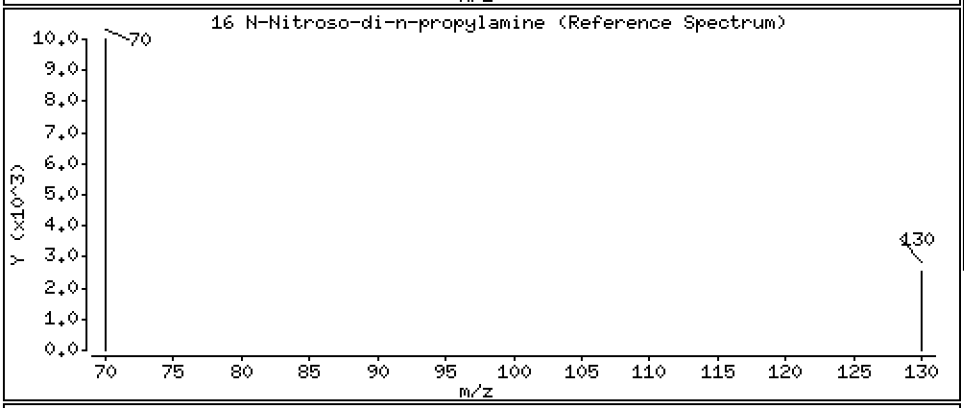
Concentration: 3.102 ug/mL

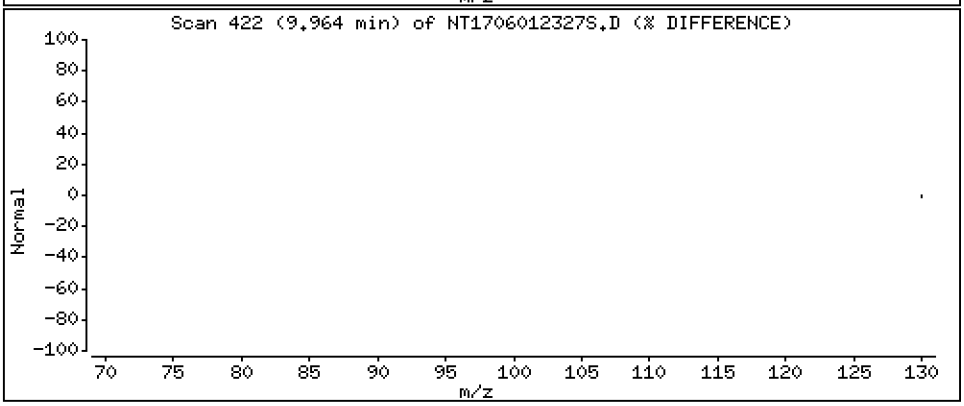












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123275.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

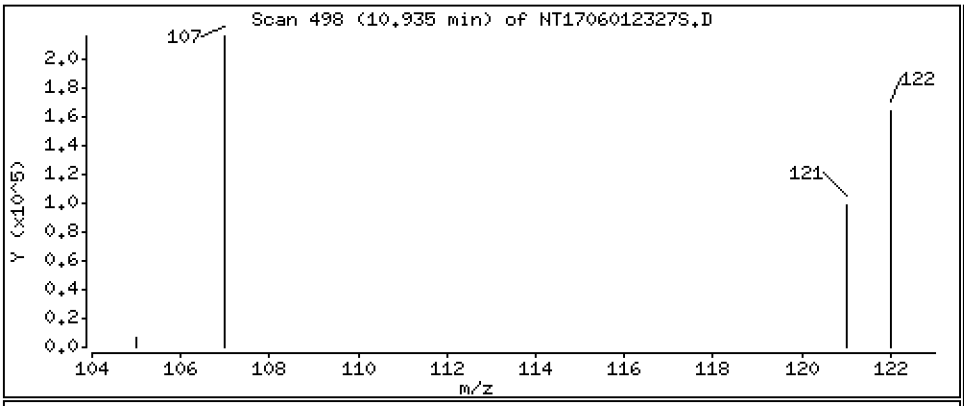
Operator: VTS

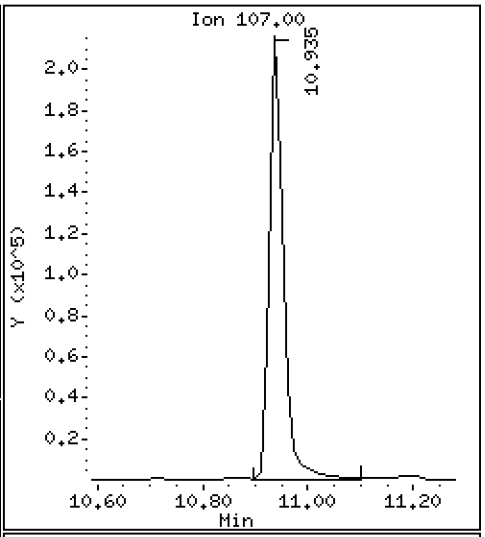
Column phase: ZB-5msi

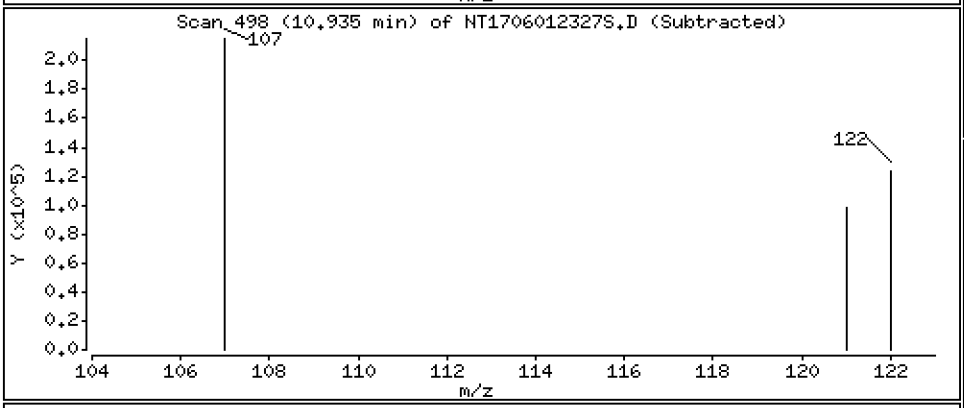
Column diameter: 0.25

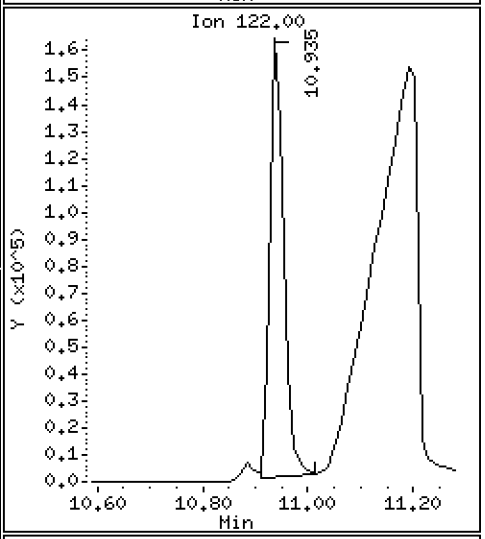
22 2,4-Dimethylphenol

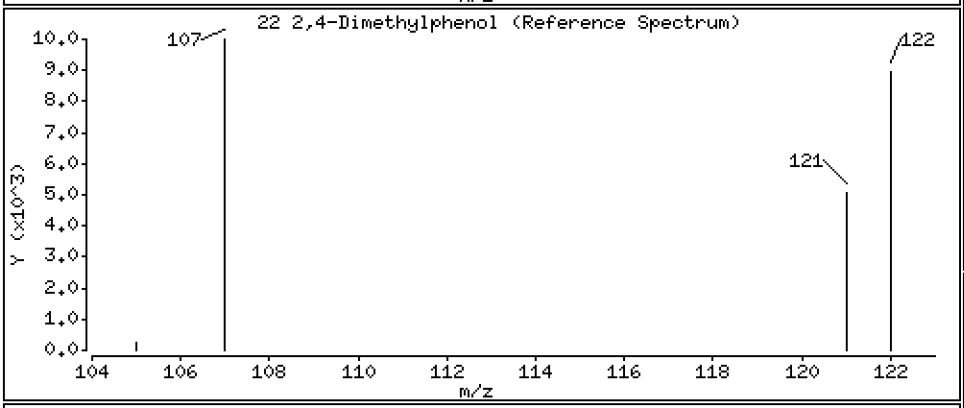
Concentration: 4.178 ug/mL

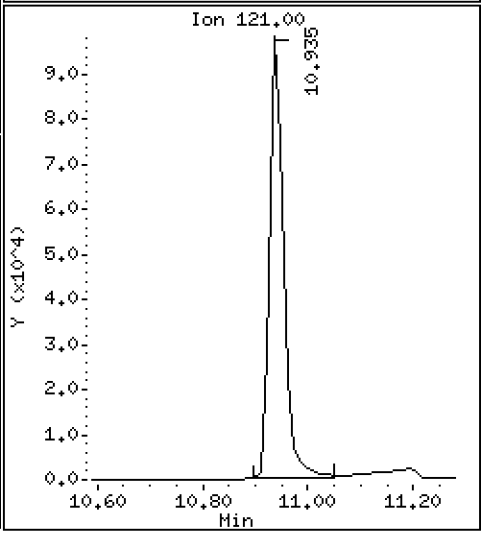


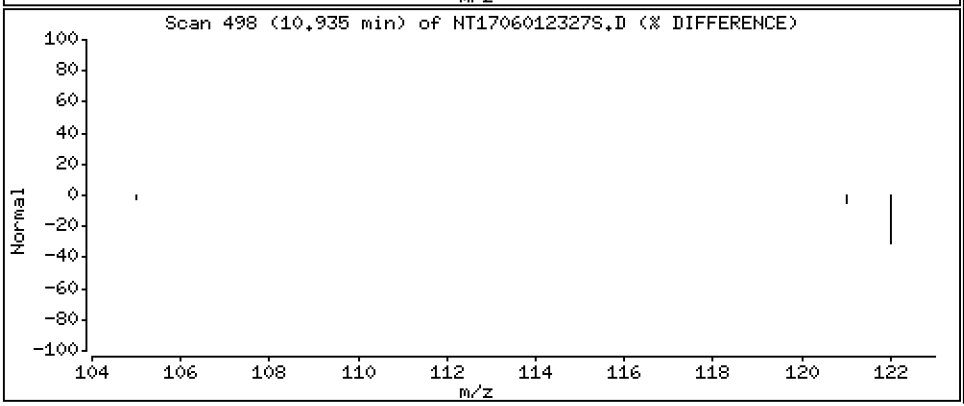












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123275.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

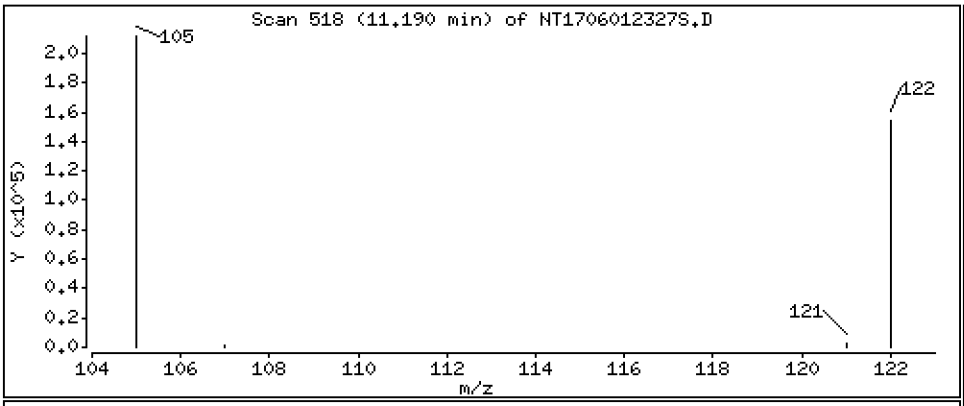
Operator: VTS

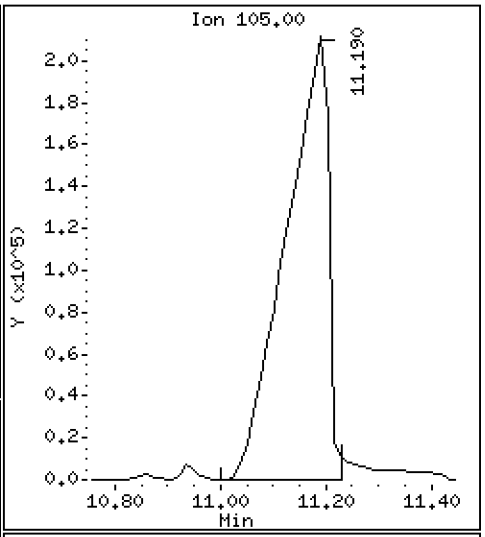
Column phase: ZB-5msi

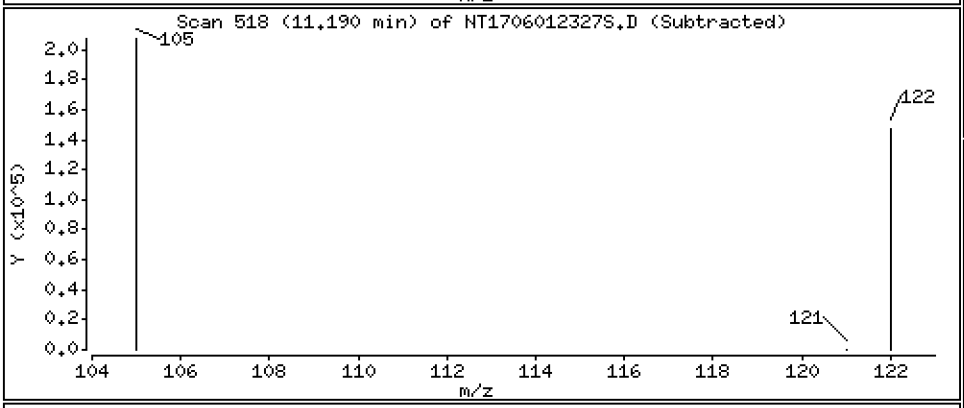
Column diameter: 0.25

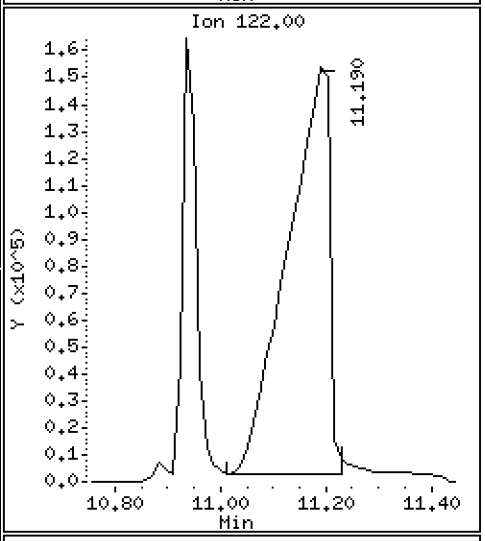
24 Benzoic acid

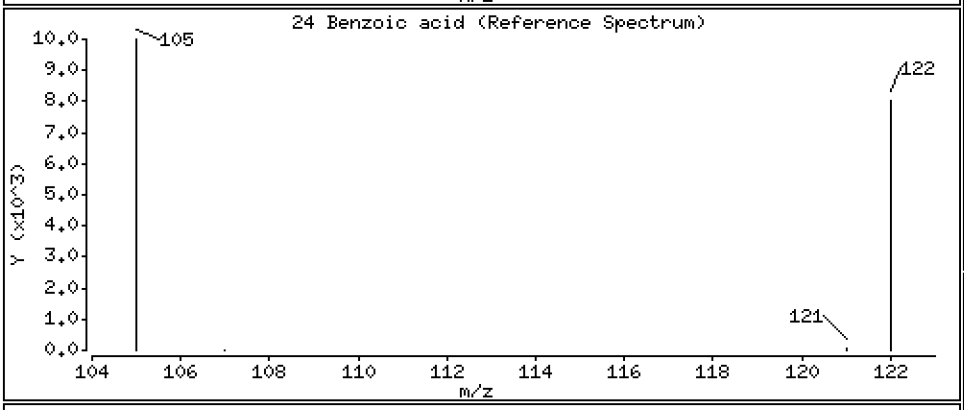
Concentration: 19.96 ug/mL

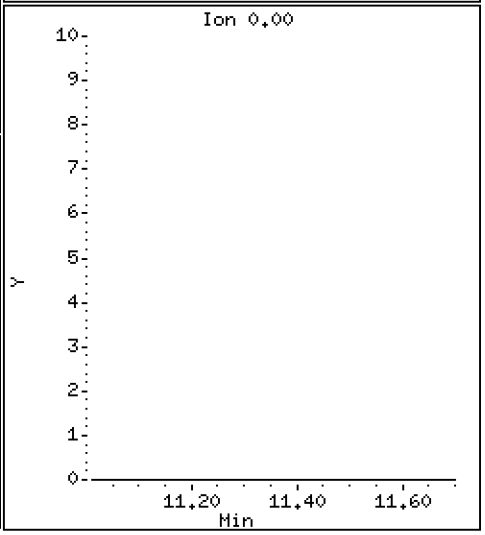


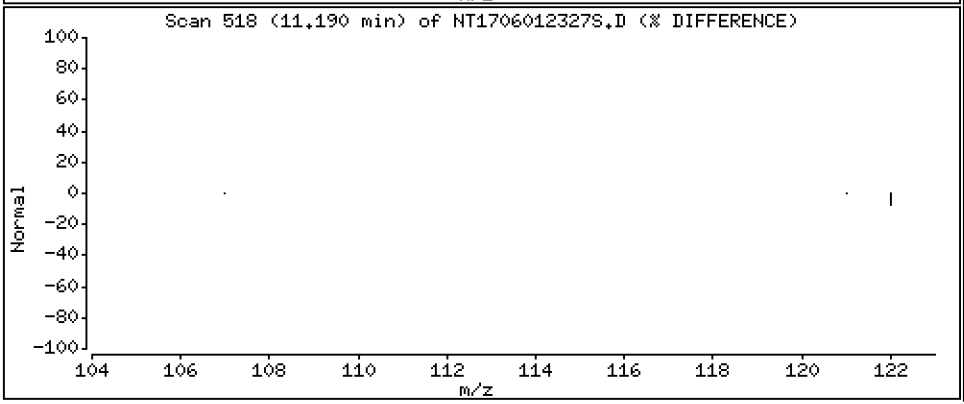












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

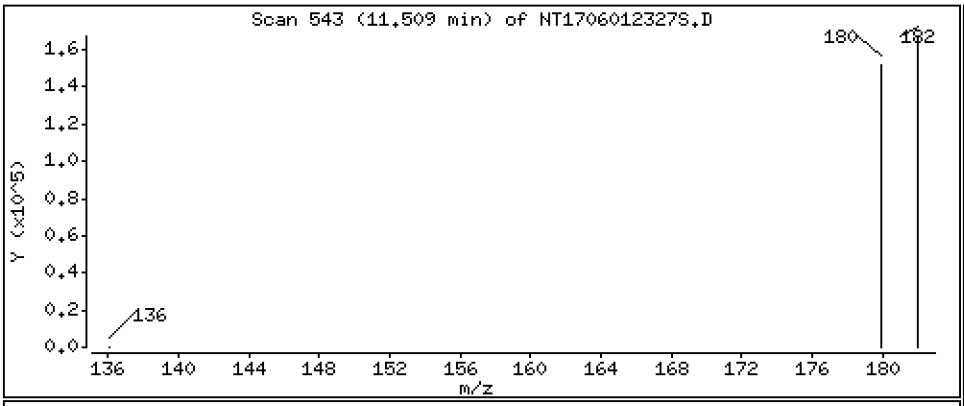
Operator: VTS

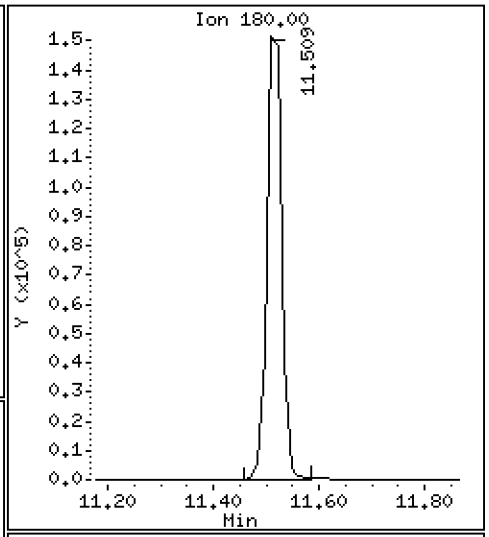
Column phase: ZB-5msi

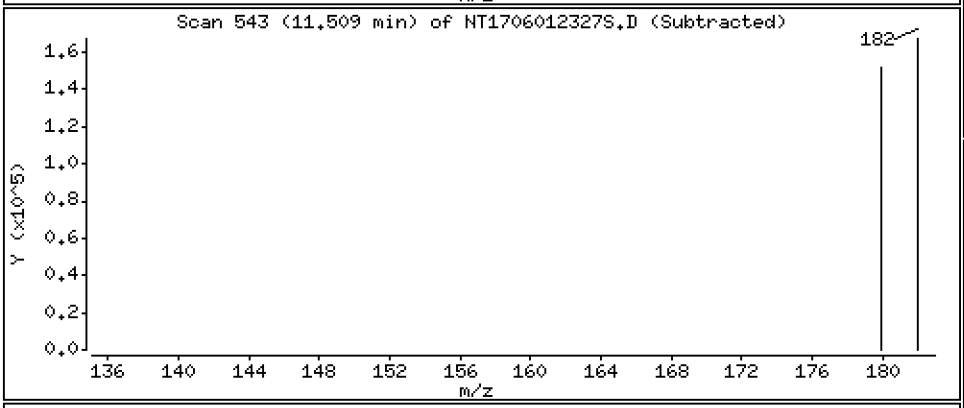
Column diameter: 0.25

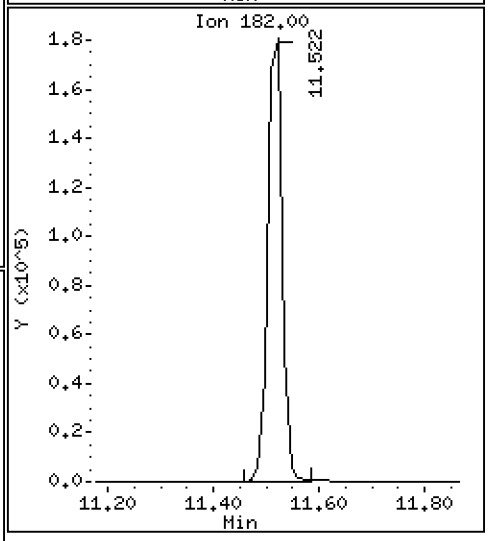
26 1,2,4-Trichlorobenzene

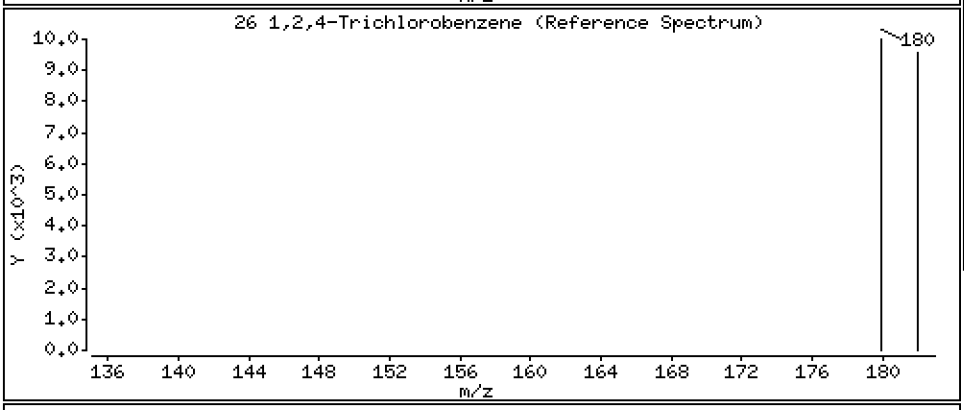
Concentration: 3.466 ug/mL

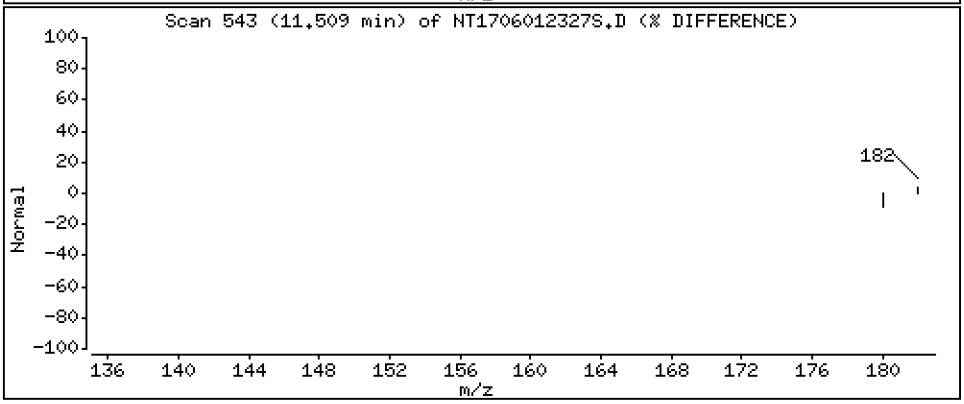












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123278.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

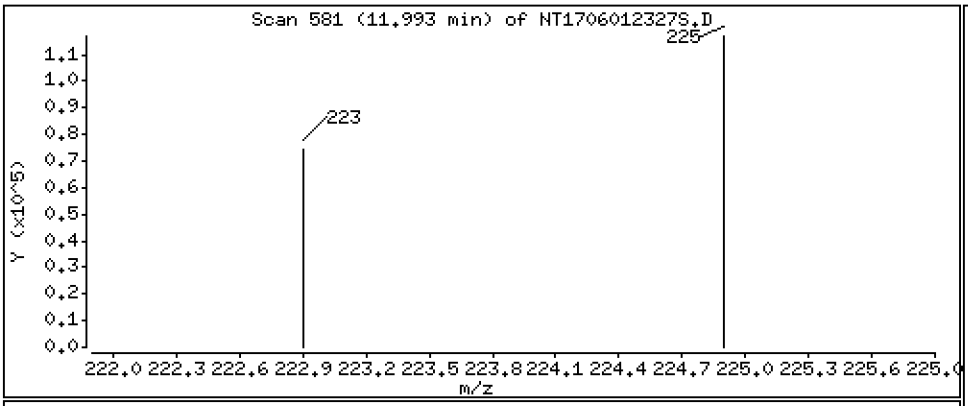
Operator: VTS

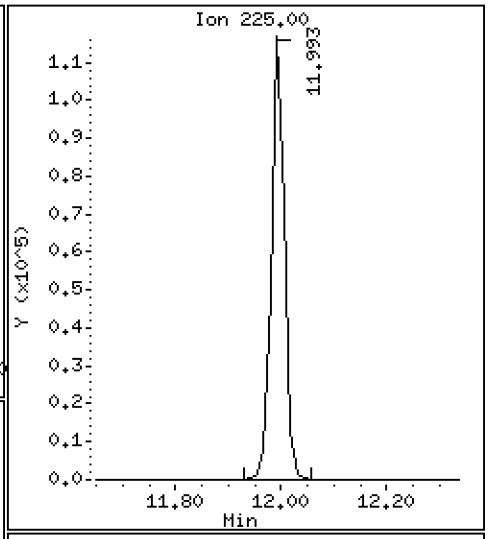
Column phase: ZB-5msi

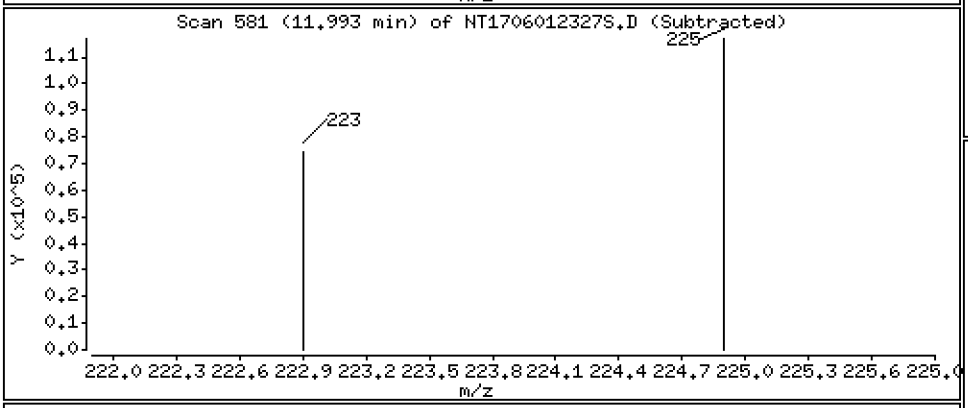
Column diameter: 0.25

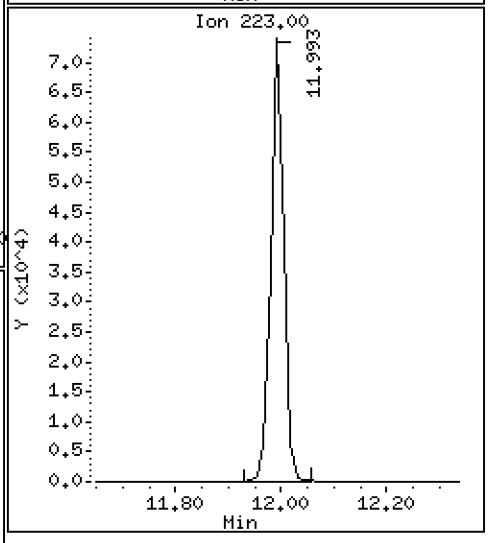
30 Hexachlorobutadiene

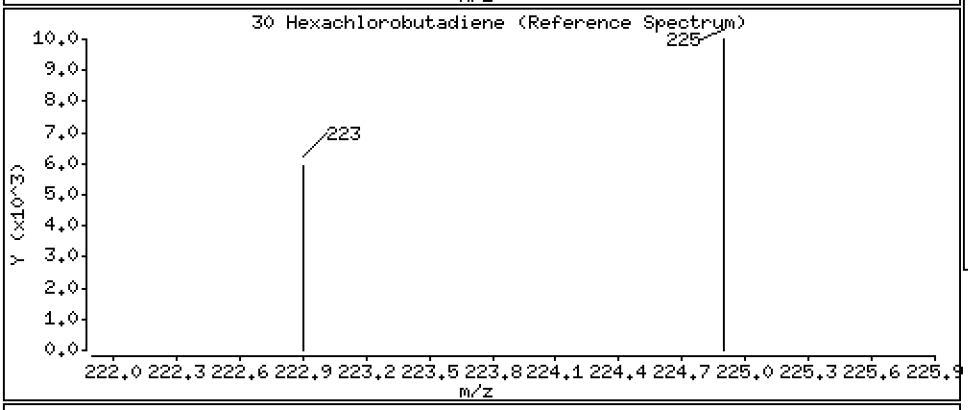
Concentration: 4.388 ug/mL

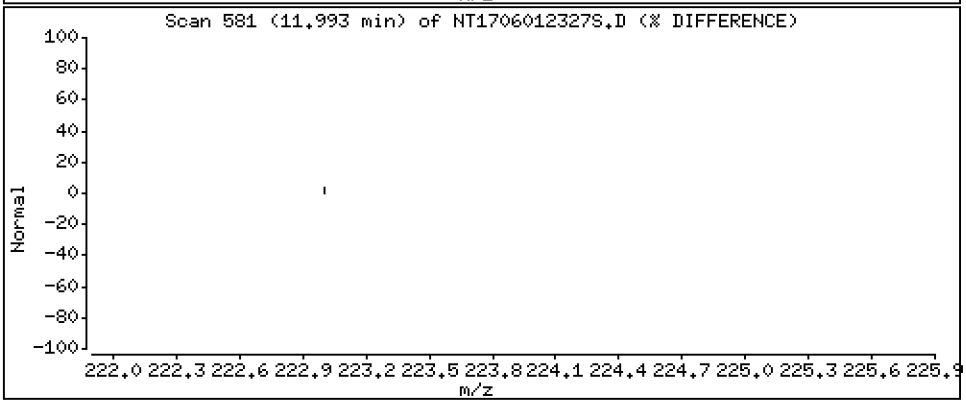












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

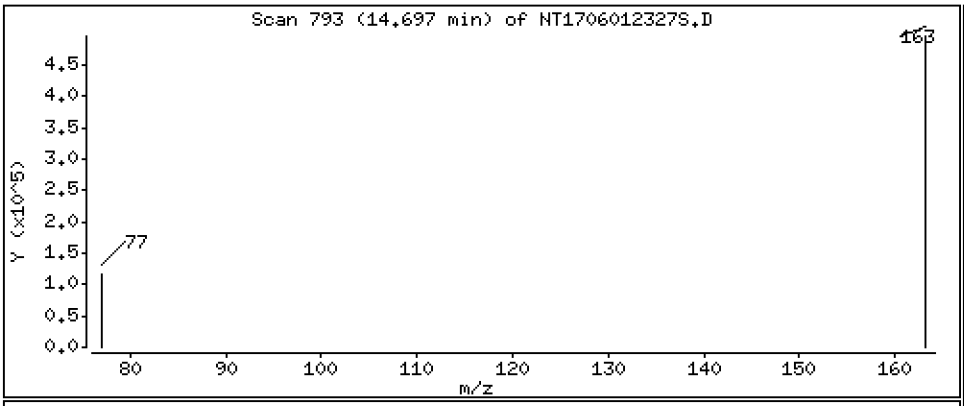
Operator: VTS

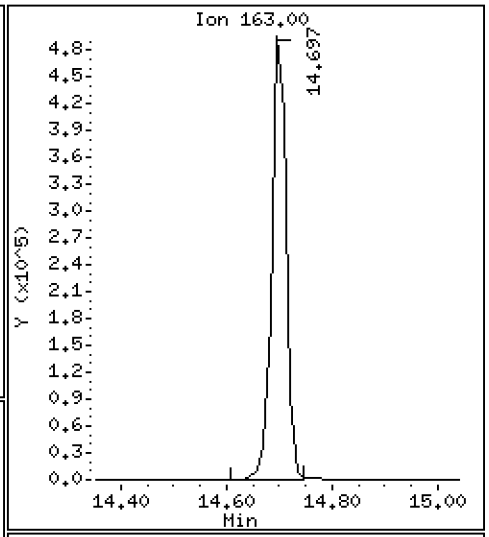
Column phase: ZB-5msi

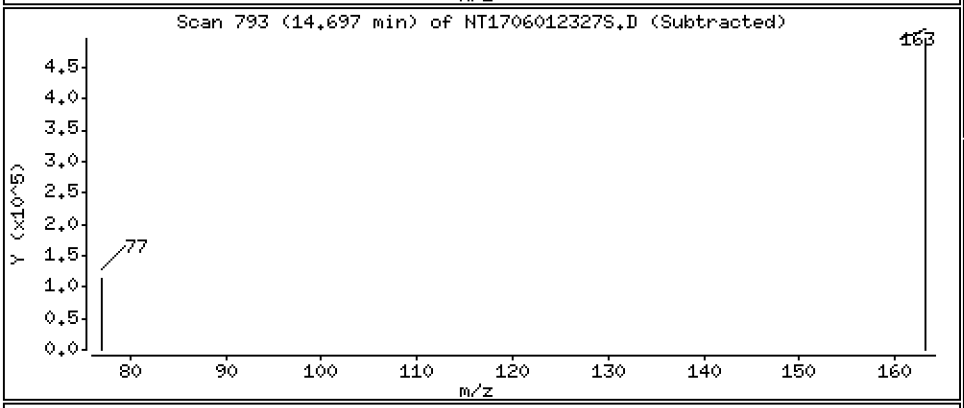
Column diameter: 0.25

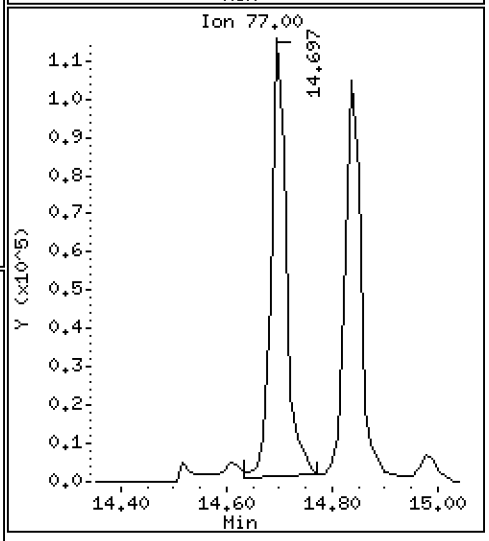
39 Dimethylphthalate

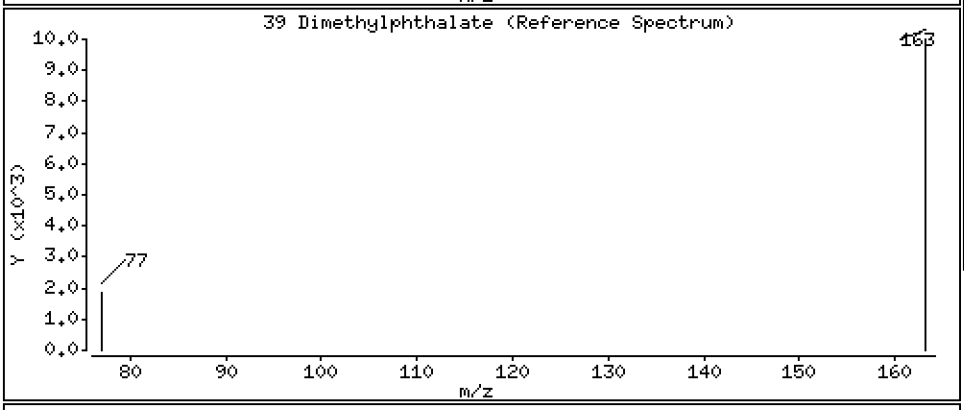
Concentration: 4.311 ug/mL

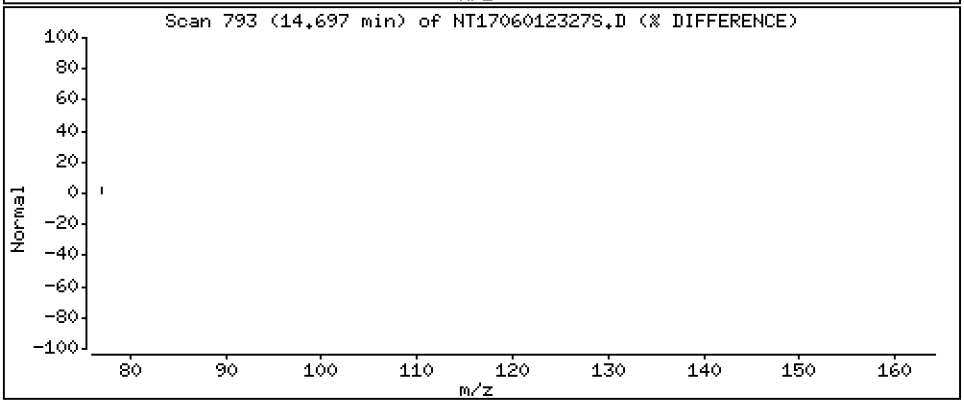












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

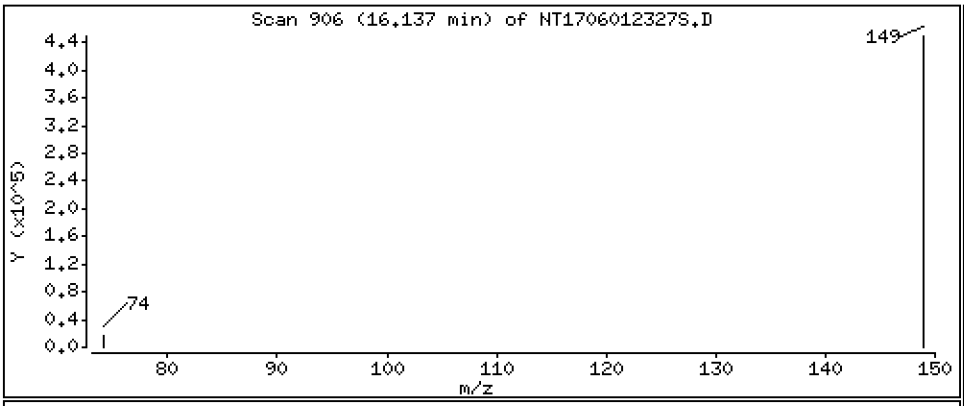
Operator: VTS

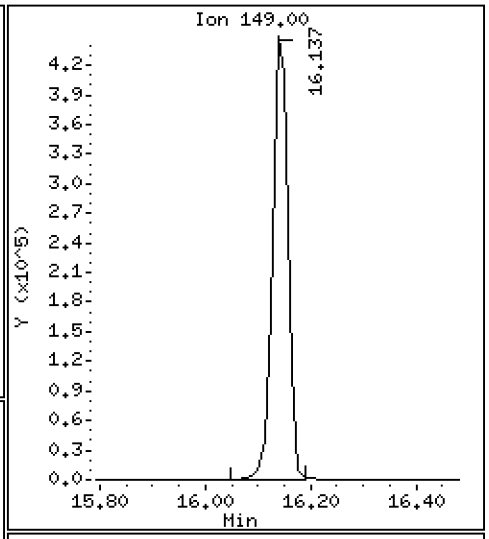
Column phase: ZB-5msi

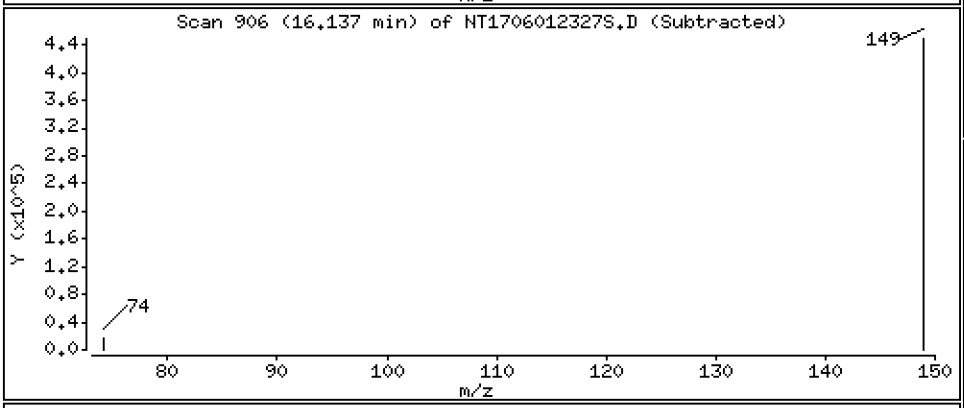
Column diameter: 0.25

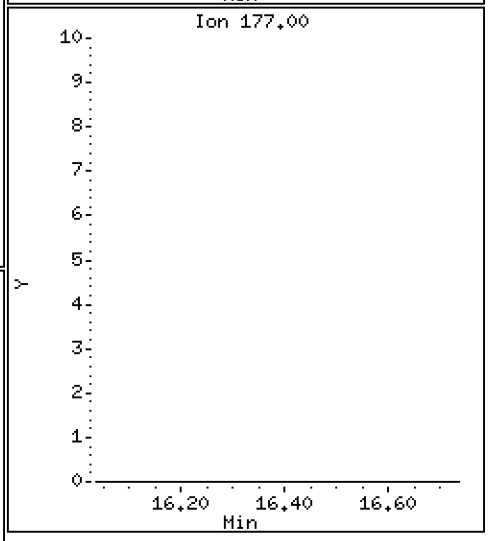
50 Diethylphthalate

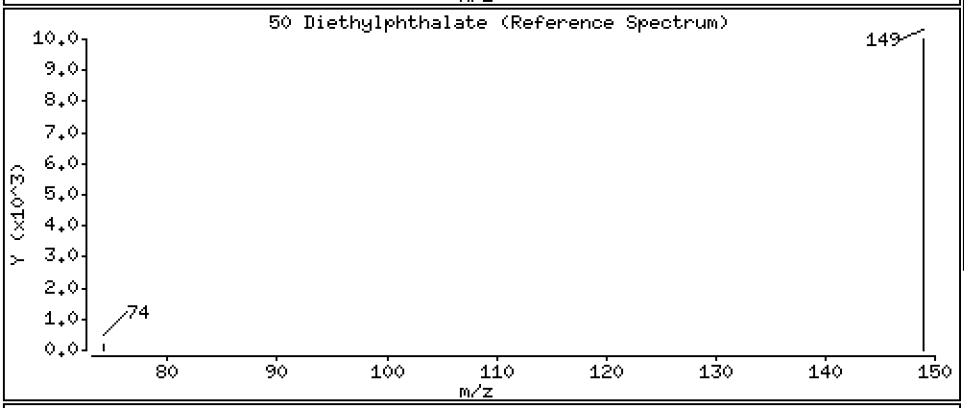
Concentration: 4.593 ug/mL

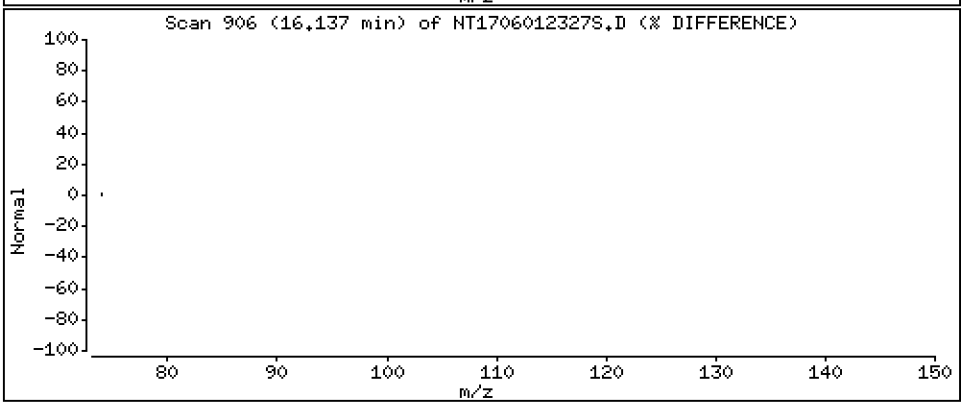












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123275.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

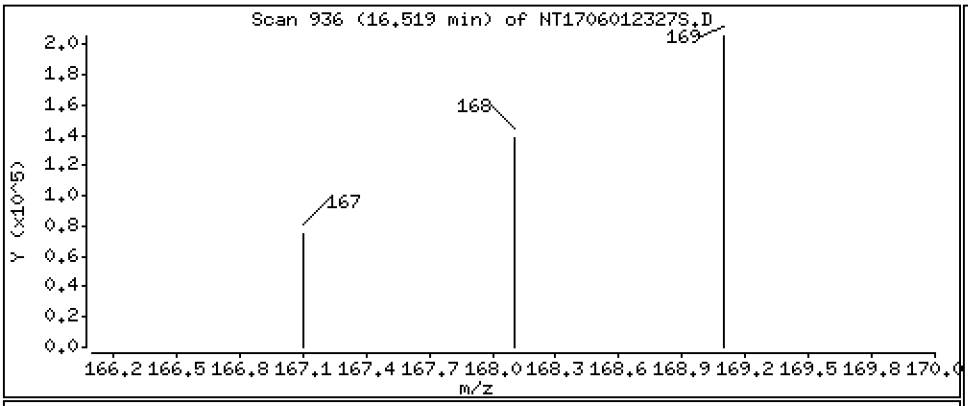
Operator: VTS

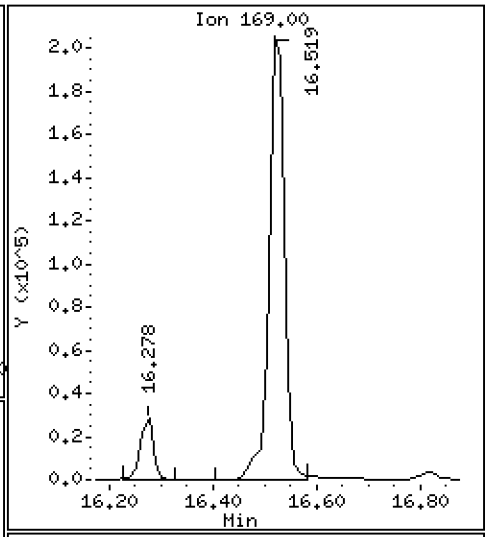
Column phase: ZB-5msi

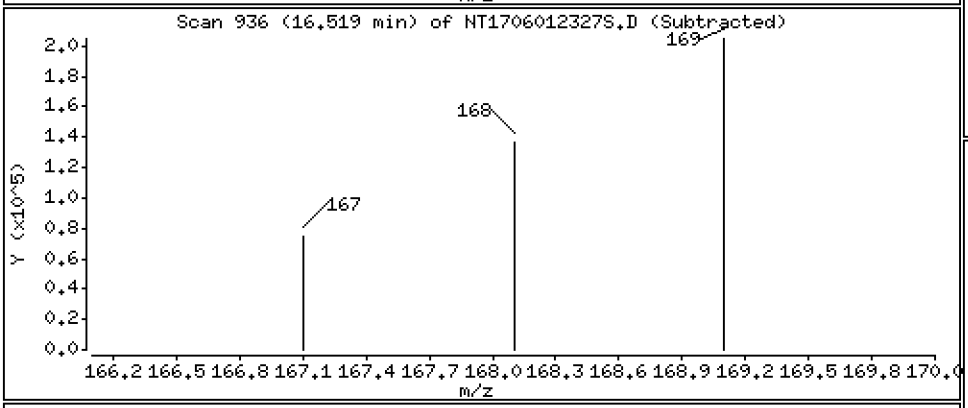
Column diameter: 0.25

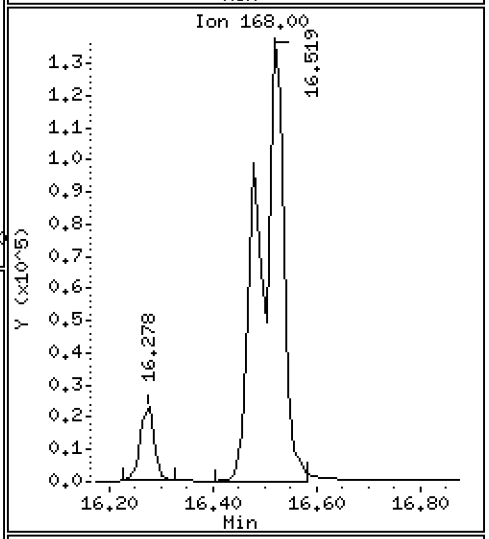
54 N-Nitrosodiphenylamine

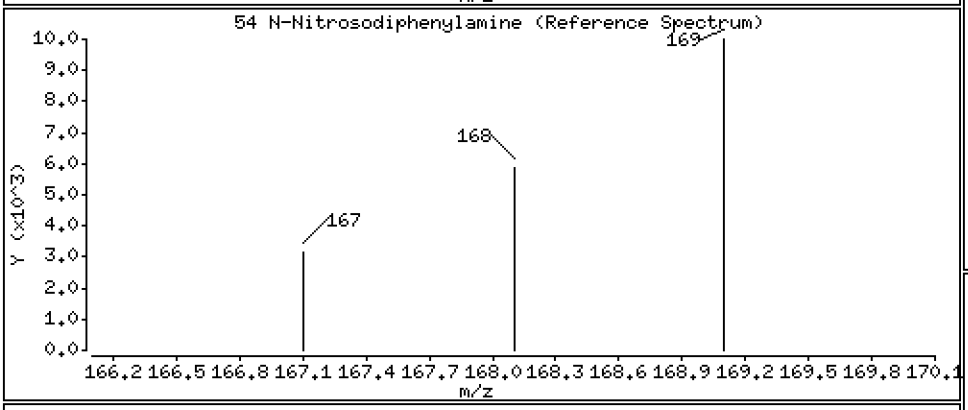
Concentration: 3.331 ug/mL

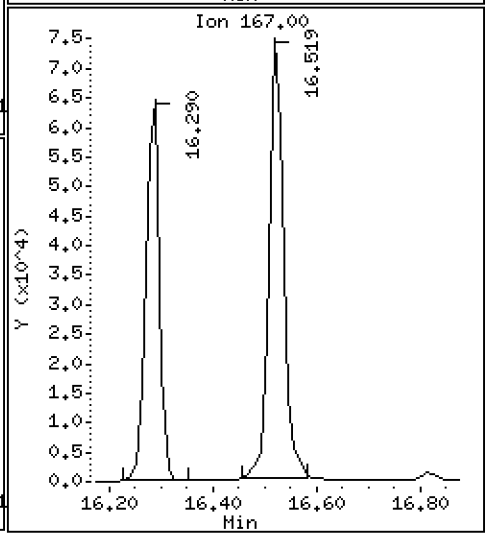


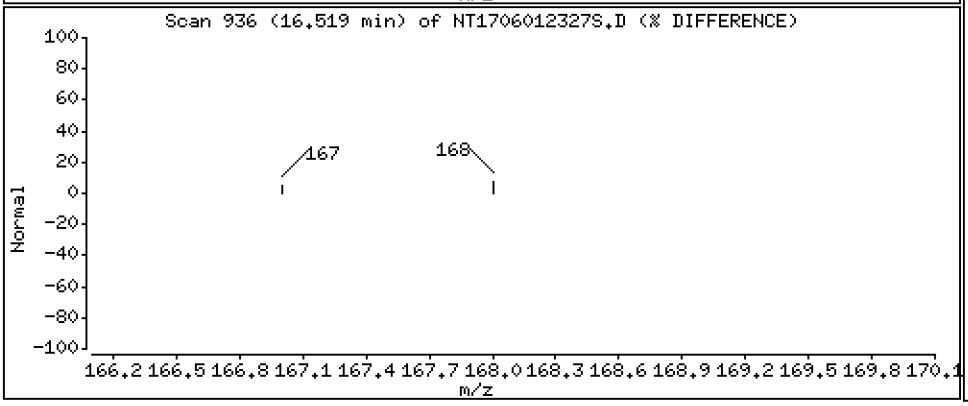












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

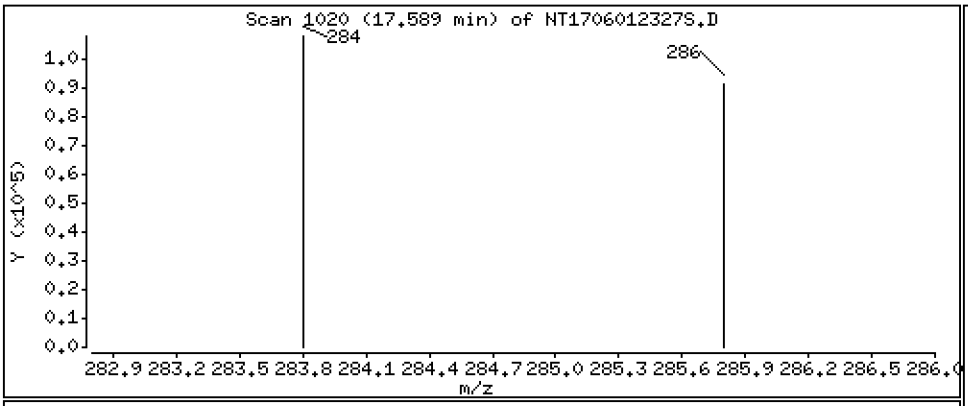
Operator: VTS

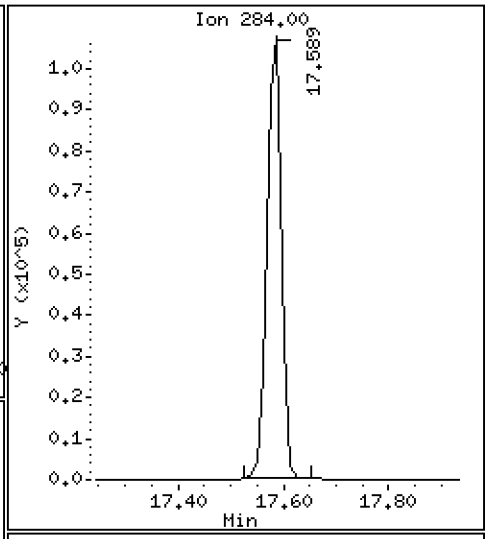
Column phase: ZB-5msi

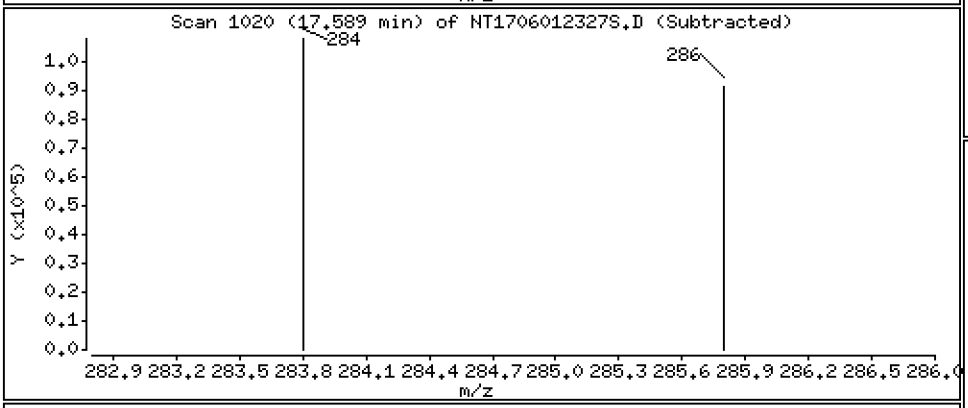
Column diameter: 0.25

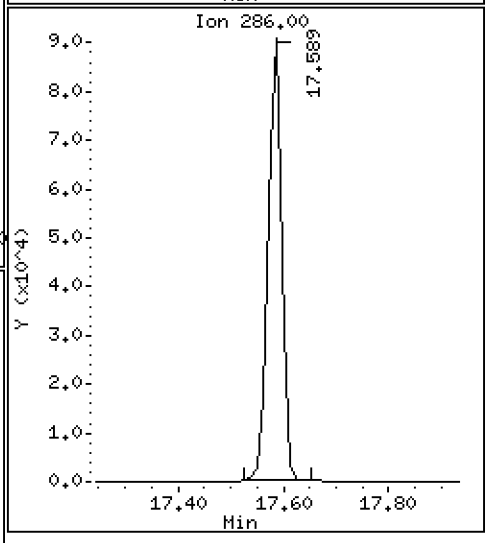
57 Hexachlorobenzene

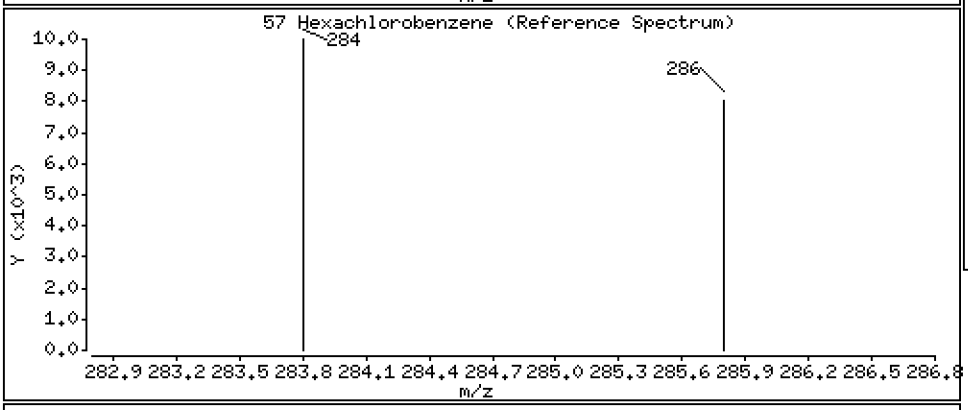
Concentration: 4.809 ug/mL

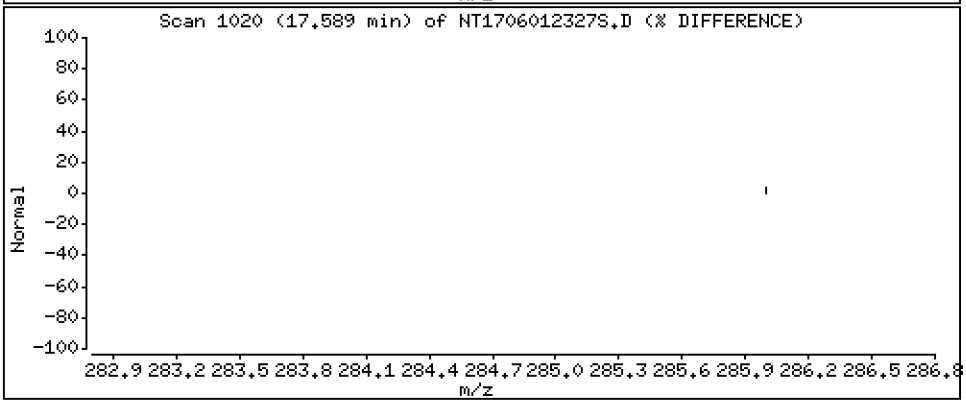












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

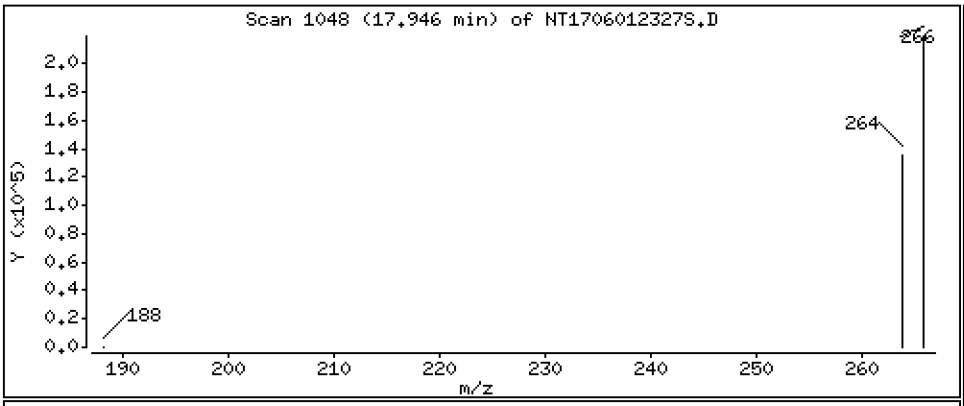
Operator: VTS

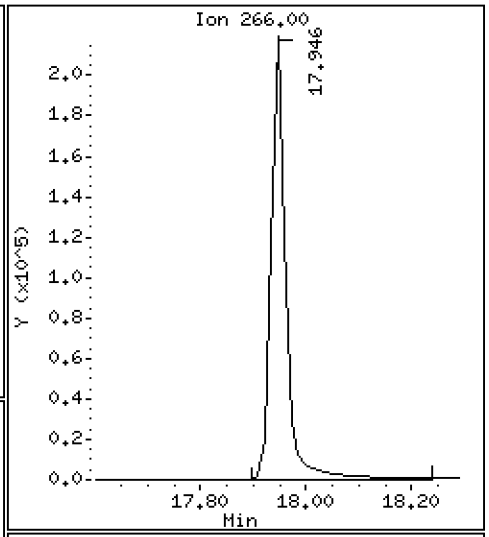
Column phase: ZB-5msi

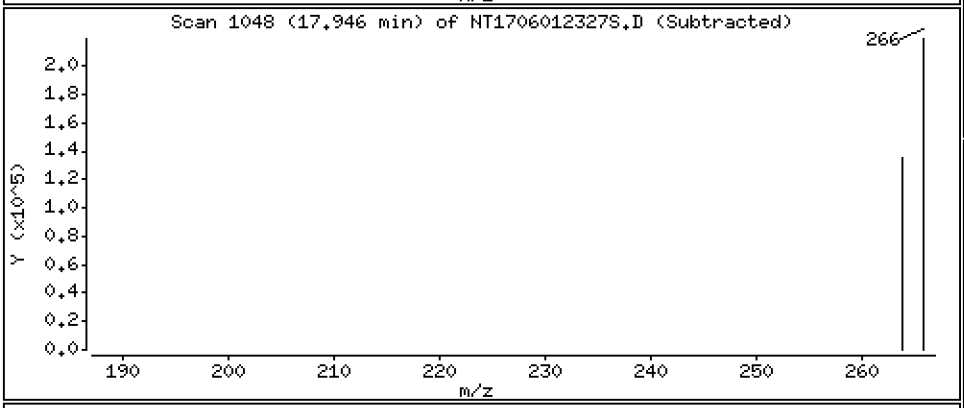
Column diameter: 0.25

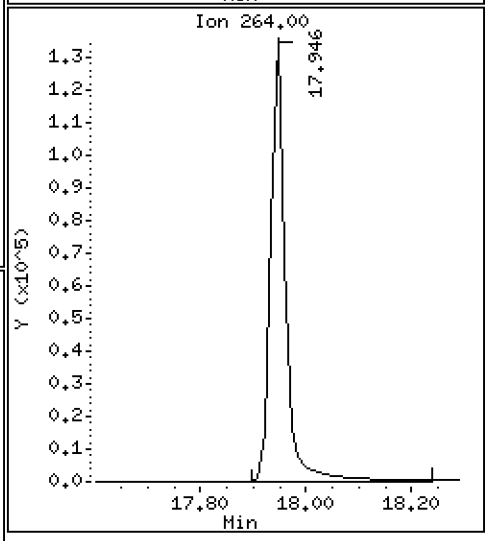
58 Pentachlorophenol

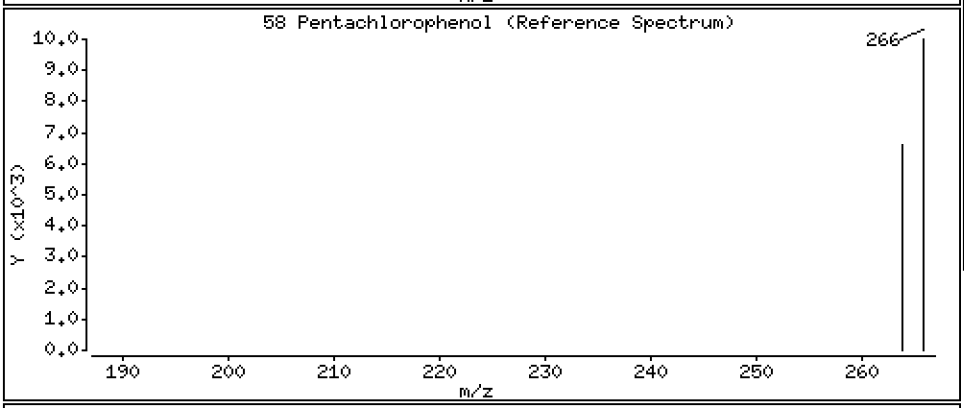
Concentration: 14.84 ug/mL

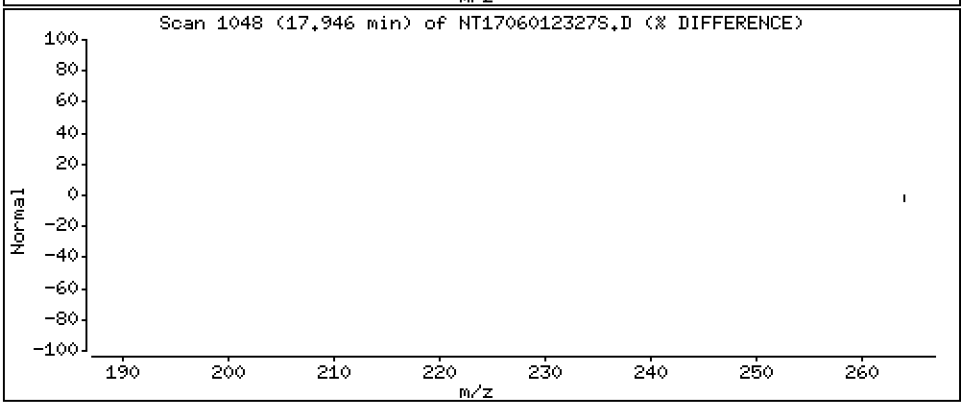












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

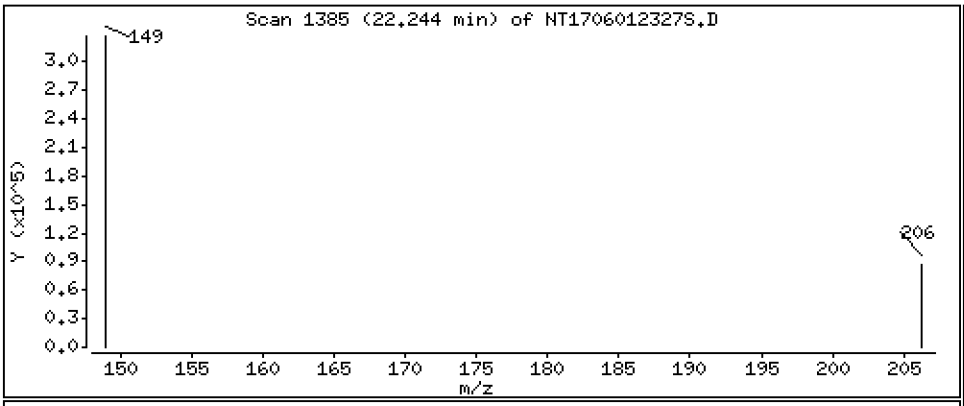
Operator: VTS

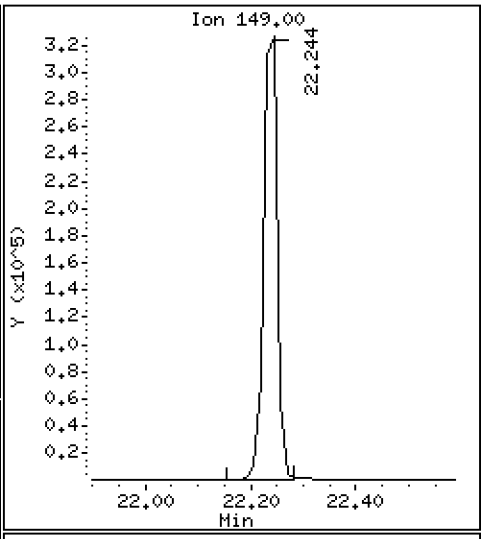
Column phase: ZB-5msi

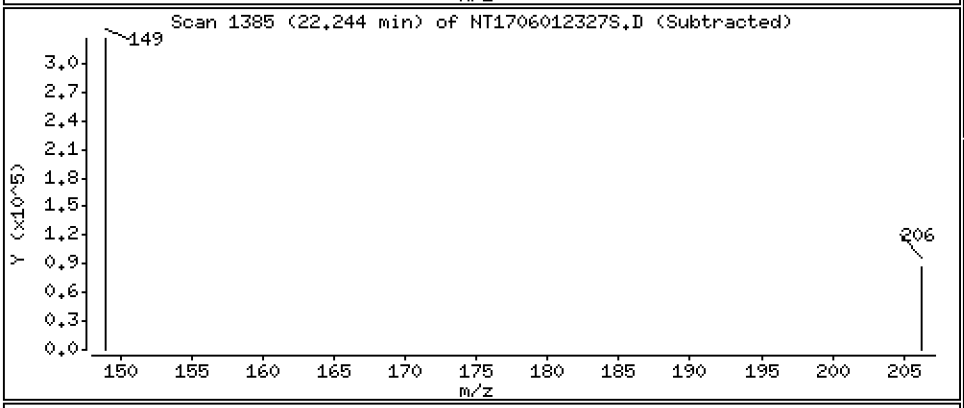
Column diameter: 0.25

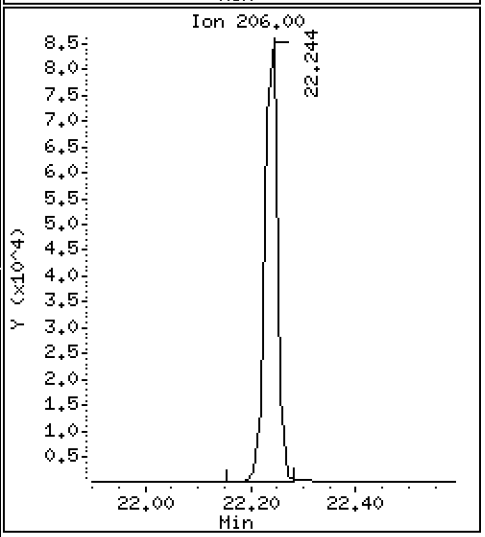
67 Butylbenzylphthalate

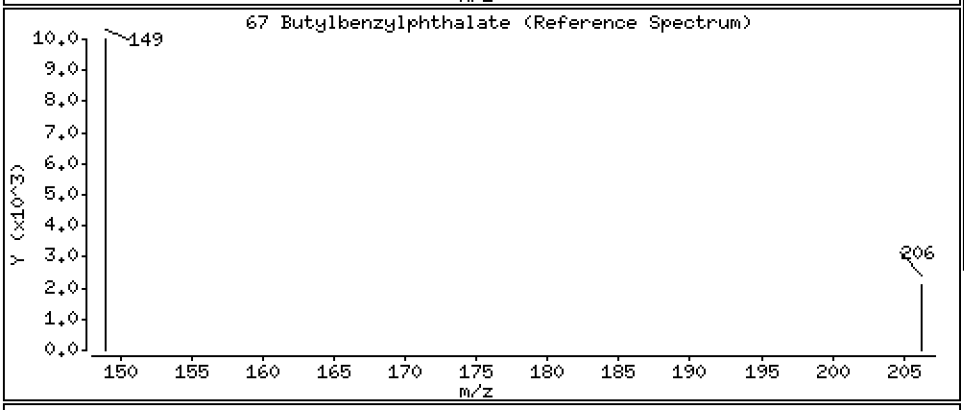
Concentration: 4.829 ug/mL

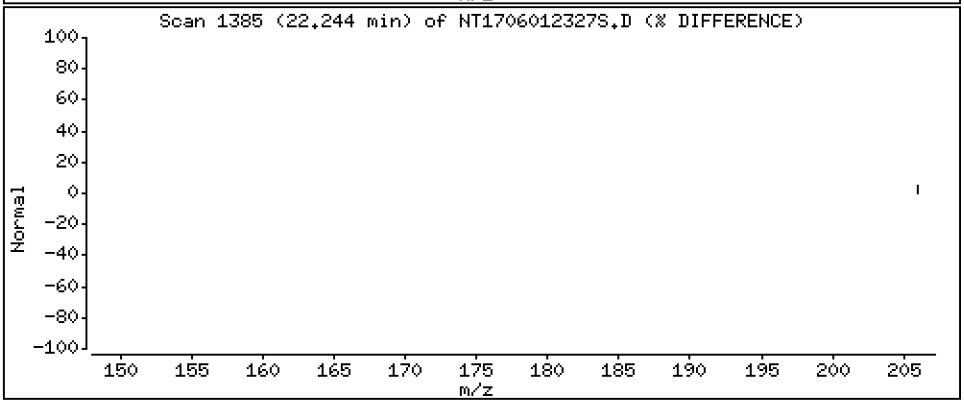












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

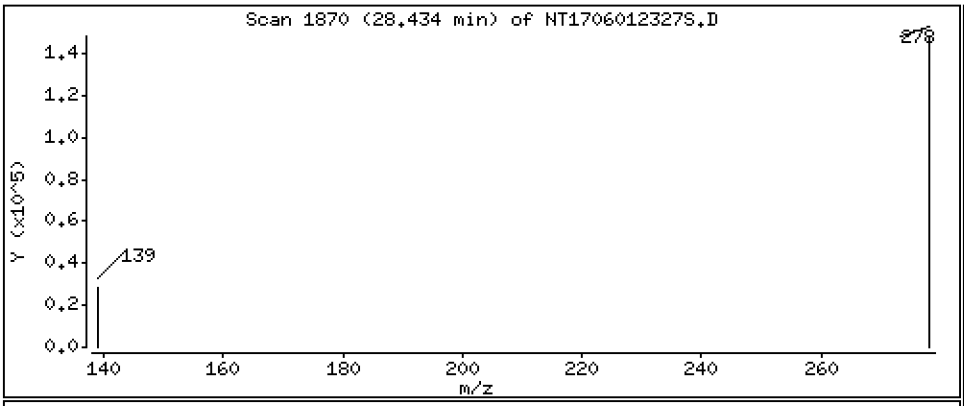
Operator: VTS

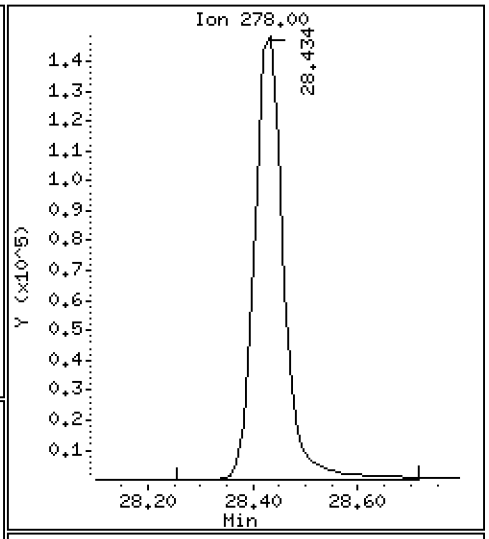
Column phase: ZB-5msi

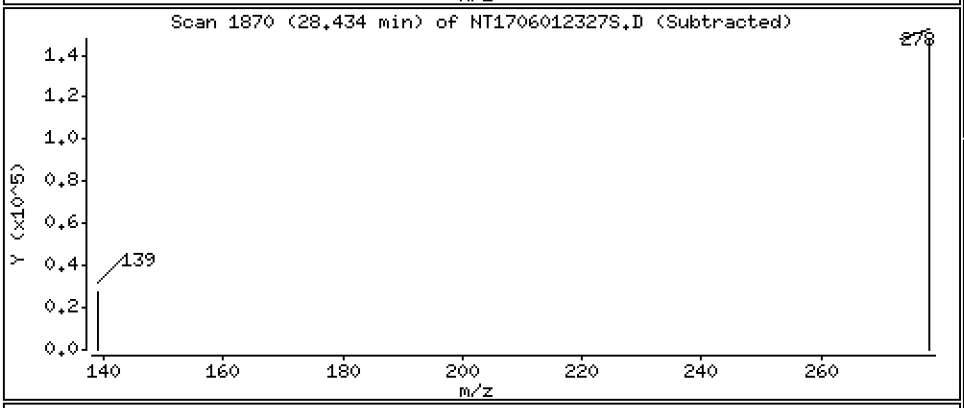
Column diameter: 0.25

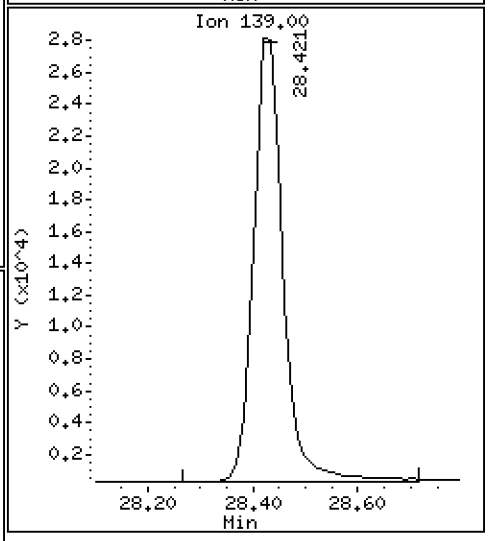
79 Dibenzo(a,h)anthracene

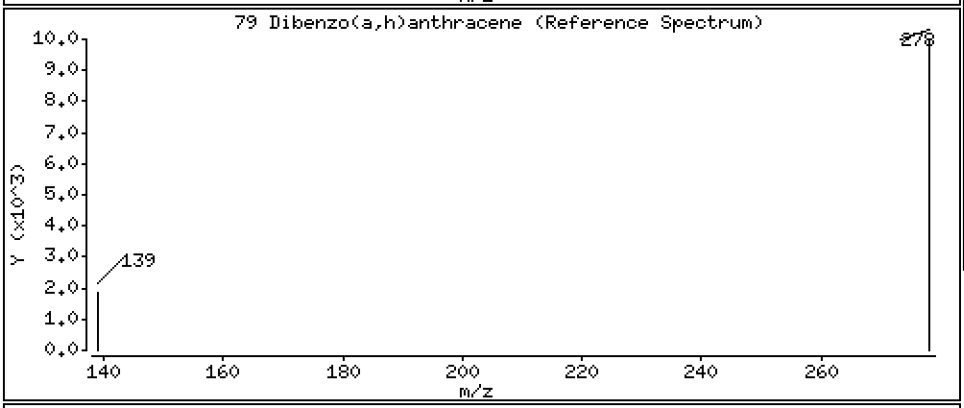
Concentration: 4.003 ug/mL

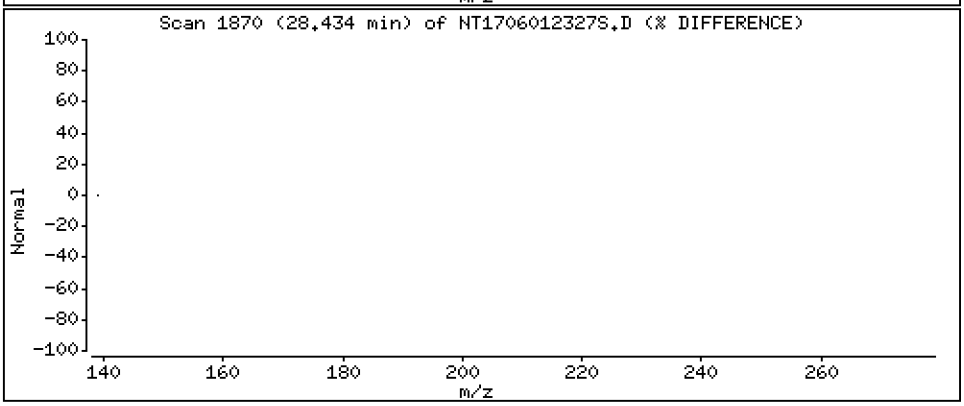












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D

Date : 02-JUN-2023 04:11

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-BSD2

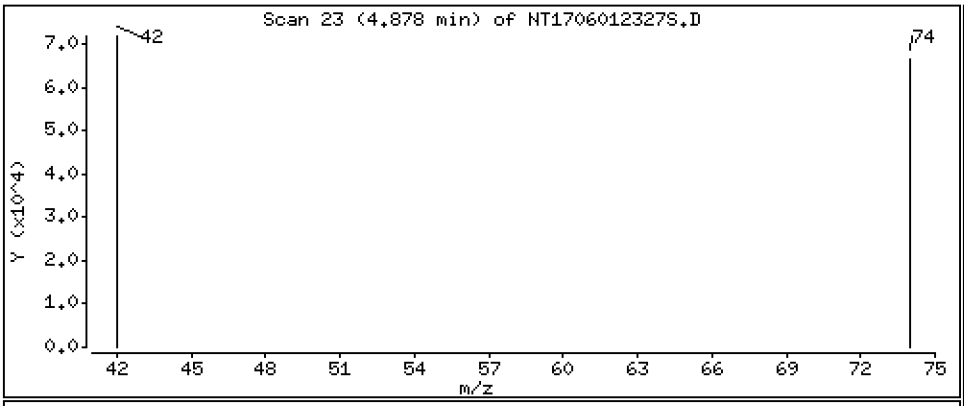
Operator: VTS

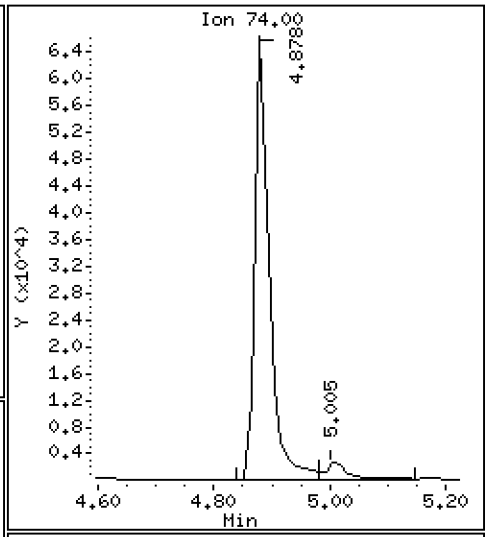
Column phase: ZB-5msi

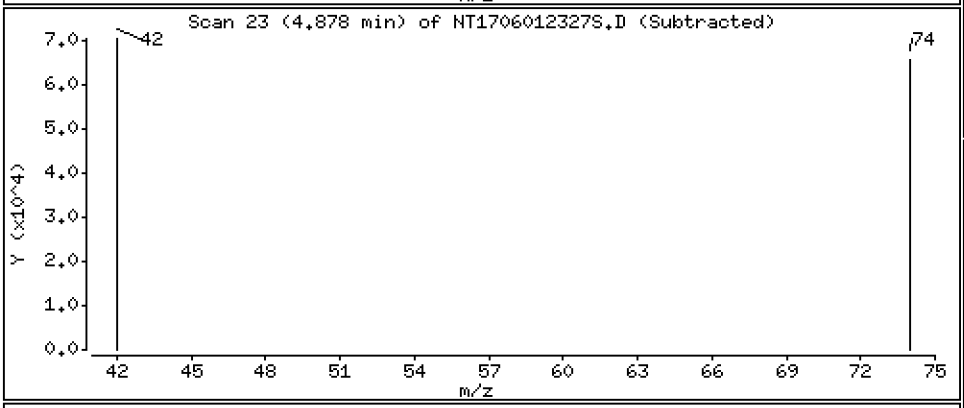
Column diameter: 0.25

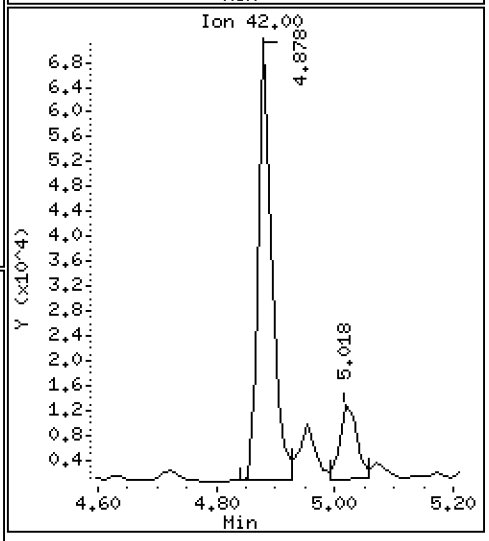
90 N-Nitrosodimethylamine

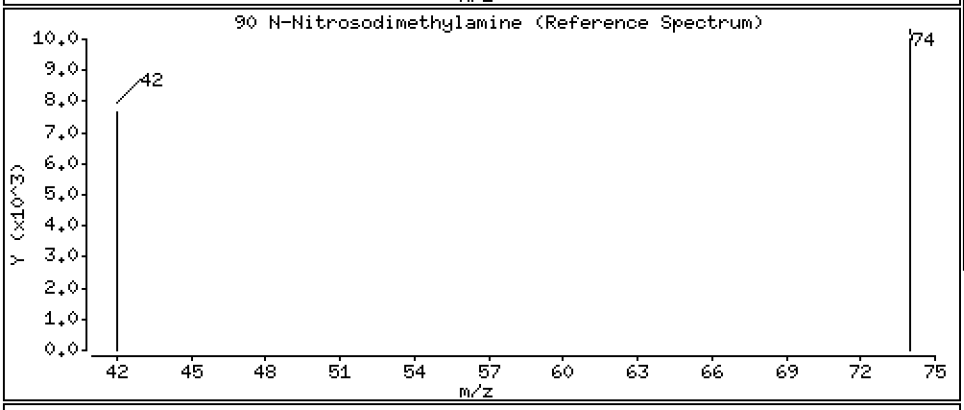
Concentration: 2.092 ug/mL

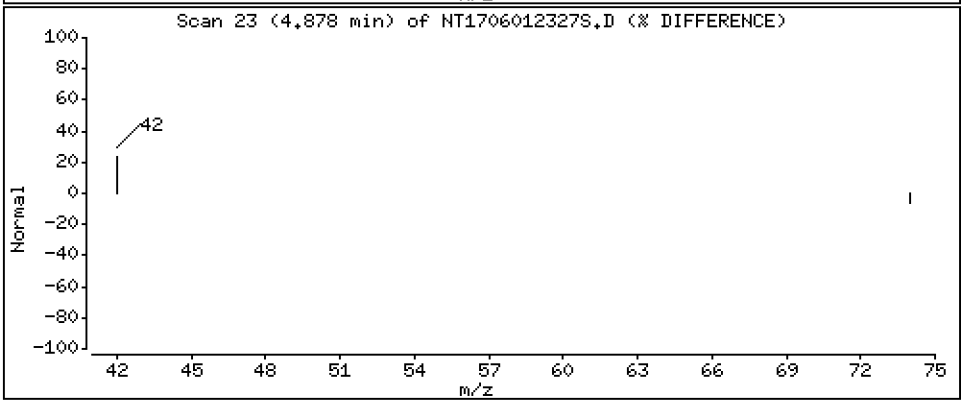












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012327S.D
Lab Smp Id: BLE0148-BSD2
Inj Date : 02-JUN-2023 04:11
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-BSD2
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.954	(0.762)	317061	3.81246	3.812(R)
	3 Phenol	94	8.547	8.547	(0.934)	442623	3.57188	3.572
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	401134	3.61146	3.611
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	274959	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	403694	3.72981	3.730
	11 Benzyl alcohol	79	9.427	9.452	(1.031)	307006	4.34790	4.348
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	393696	3.71117	3.711
	13 2-Methylphenol	108	9.644	9.644	(1.054)	244934	2.85238	2.852
	15 4-Methylphenol	108	9.912	9.912	(1.084)	282006	3.24958	3.250
	16 N-Nitroso-di-n-propylamine	70	9.963	9.964	(1.089)	194034	3.10235	3.102
	22 2,4-Dimethylphenol	107	10.934	10.934	(0.943)	398965	4.17808	4.178
	24 Benzoic acid	105	11.190	11.100	(0.965)	1187640	19.9642	19.96
	26 1,2,4-Trichlorobenzene	180	11.509	11.521	(0.992)	300291	3.46615	3.466
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	992690	4.00000	
	30 Hexachlorobutadiene	225	11.993	11.993	(1.034)	200159	4.38777	4.388
	39 Dimethylphthalate	163	14.696	14.696	(0.967)	952277	4.31082	4.311
*	42 Acenaphthene-d10	162	15.194	15.194	(1.000)	601549	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.062)	921329	4.59252	4.593
	54 N-Nitrosodiphenylamine	169	16.519	16.519	(0.908)	419005	3.33079	3.331
	57 Hexachlorobenzene	284	17.588	17.588	(0.966)	205230	4.80927	4.809
	58 Pentachlorophenol	266	17.945	17.946	(0.986)	424193	14.8363	14.84
*	59 Phenanthrene-d10	188	18.201	18.201	(1.000)	892939	4.00000	
$	66 Terphenyl-d14	244	21.325	21.325	(0.919)	555236	4.85127	4.851(R)
	67 Butylbenzylphthalate	149	22.243	22.243	(0.958)	600648	4.82941	4.829
*	69 Chrysene-d12	240	23.213	23.213	(1.000)	603172	4.00000	
*	77 Perylene-d12	264	25.802	25.802	(1.000)	499514	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.433	28.446	(1.102)	564008	4.00311	4.003
	90 N-Nitrosodimethylamine	74	4.878	4.878	(0.533)	112281	2.09186	2.092

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012327S.D Calibration Time: 00:29
Lab Smp Id: BLE0148-BSD2
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	274959	3.55
27 Naphthalene-d8	874121	437061	1748242	992690	13.56
42 Acenaphthene-d10	524478	262239	1048956	601549	14.69
59 Phenanthrene-d10	807440	403720	1614880	892939	10.59
69 Chrysene-d12	527364	263682	1054728	603172	14.37
77 Perylene-d12	455527	227764	911054	499514	9.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.21	22.71	23.71	23.21	-0.00
77 Perylene-d12	25.80	25.30	26.30	25.80	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012327S.D

Lab ID: BLE0148-BSD2
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 04:11

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.965	0.957	0.0077	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1706012321S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

LCS / LCS DUPLICATE RECOVERY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/22/23 20:06
Batch:	BLE0149	Laboratory ID:	BLE0149-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 0.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Benzo(a)anthracene	300	214		71.3	42 - 120
Chrysene	300	214		71.3	48 - 120
Benzo(b)fluoranthene	300	226		75.3	52 - 137
Benzo(k)fluoranthene	300	230		76.6	37 - 129
Benzo(a)pyrene	300	196		65.5	36 - 120
Indeno(1,2,3-cd)pyrene	300	263		87.5	67 - 132
Dibenzo(a,h)anthracene	300	255		84.9	66 - 139

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzo(a)anthracene	300	214		71.5	0.270	30	42 - 120
Chrysene	300	215		71.5	0.338	30	48 - 120
Benzo(b)fluoranthene	300	231		77.1	2.29	30	52 - 137
Benzo(k)fluoranthene	300	230		76.6	0.0133	30	37 - 129
Benzo(a)pyrene	300	196		65.3	0.258	30	36 - 120
Indeno(1,2,3-cd)pyrene	300	274		91.3	4.15	30	67 - 132
Dibenzo(a,h)anthracene	300	267		89.0	4.69	30	66 - 139

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Page 1

Date : 22-MAY-2023 20:06

Client ID:

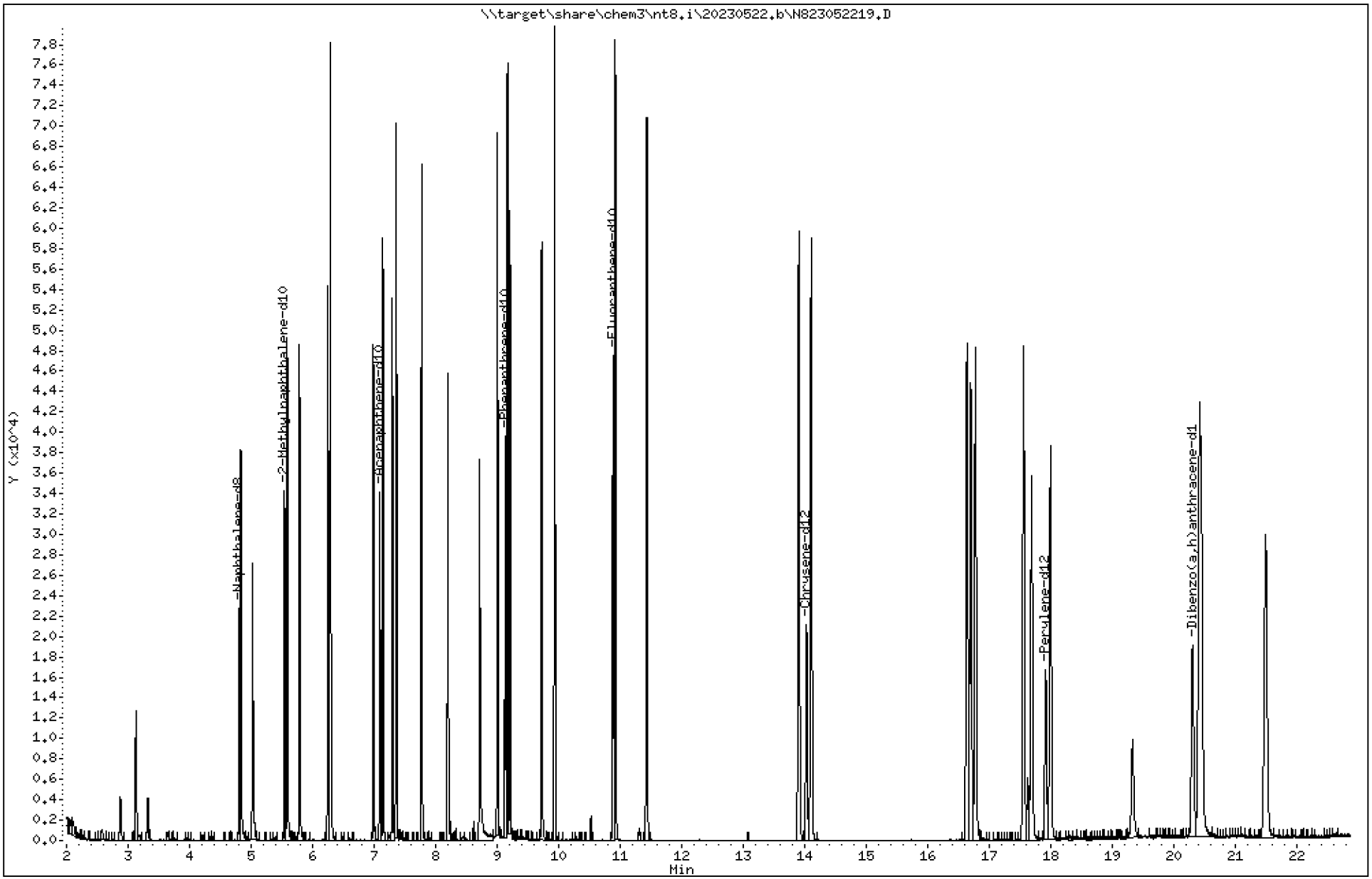
Instrument: nt8.i

Sample Info: BLE0149-BS1,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

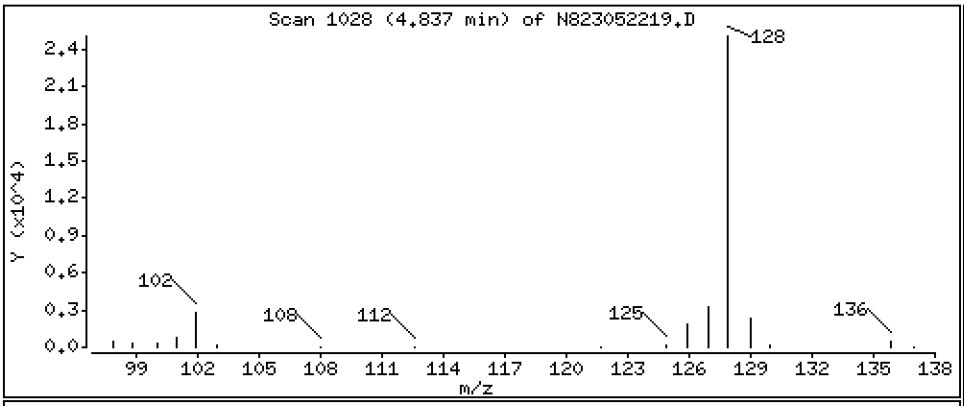
Operator: JZ

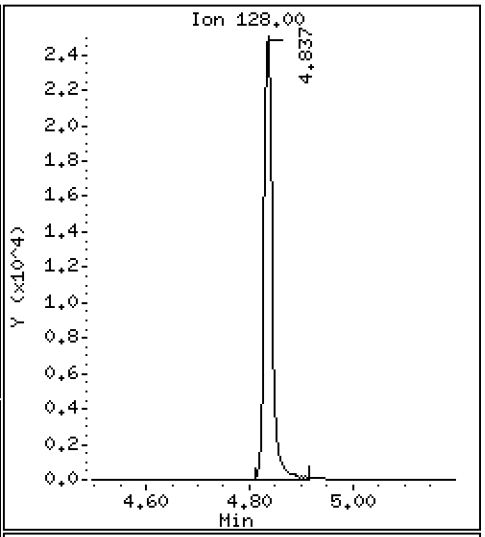
Column phase: Rxi-17sil

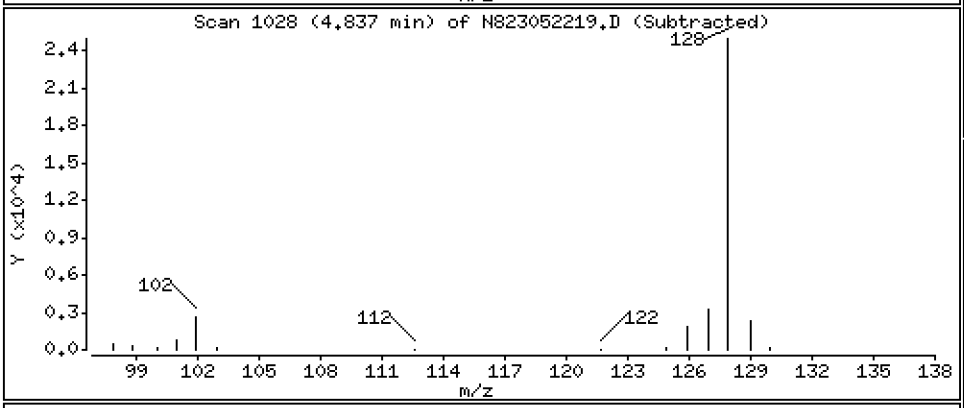
Column diameter: 0.25

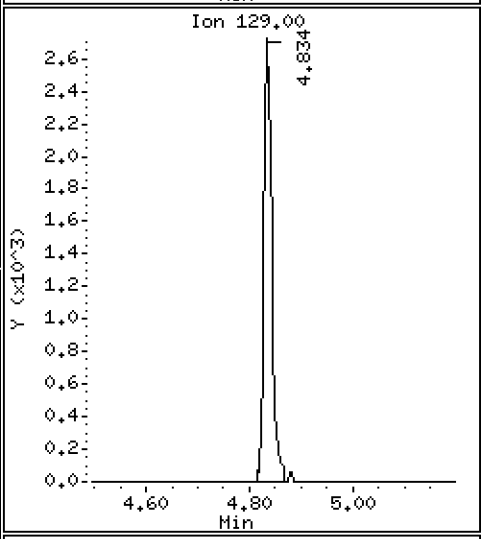
2 Naphthalene

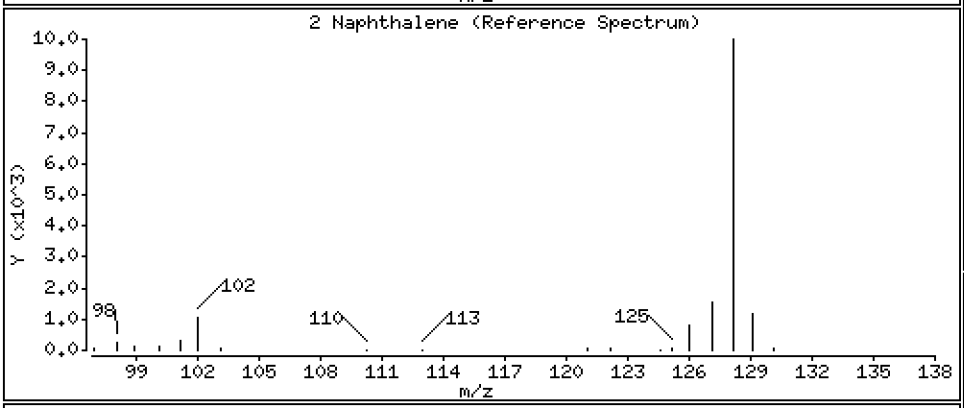
Concentration: 3.205 ug/mL

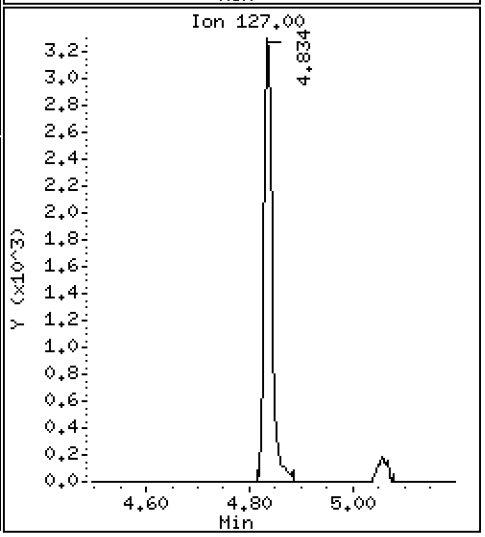


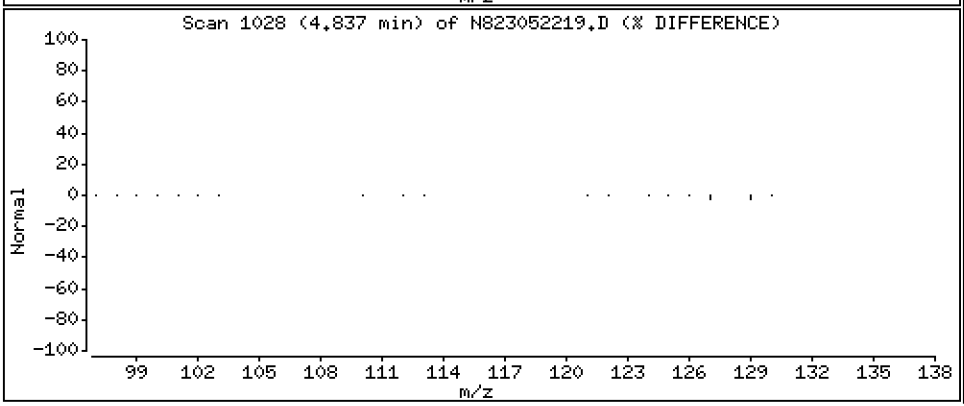












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

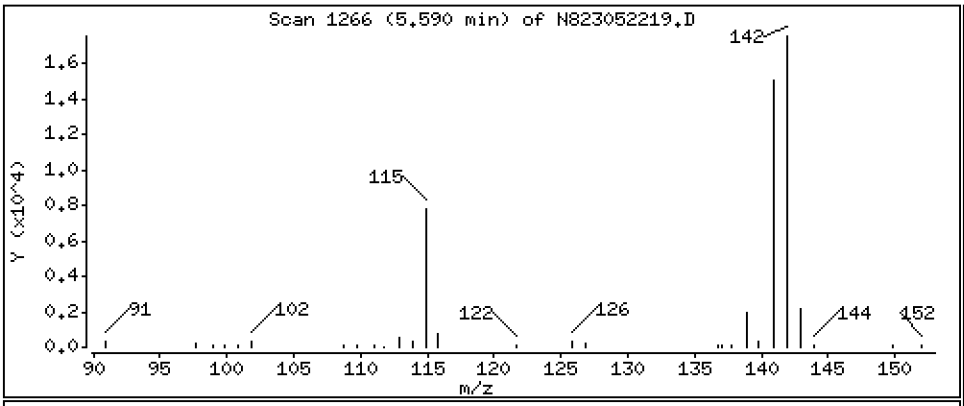
Operator: JZ

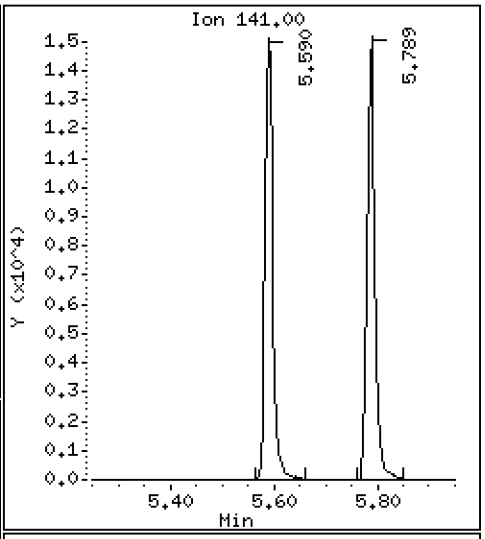
Column phase: Rxi-17sil

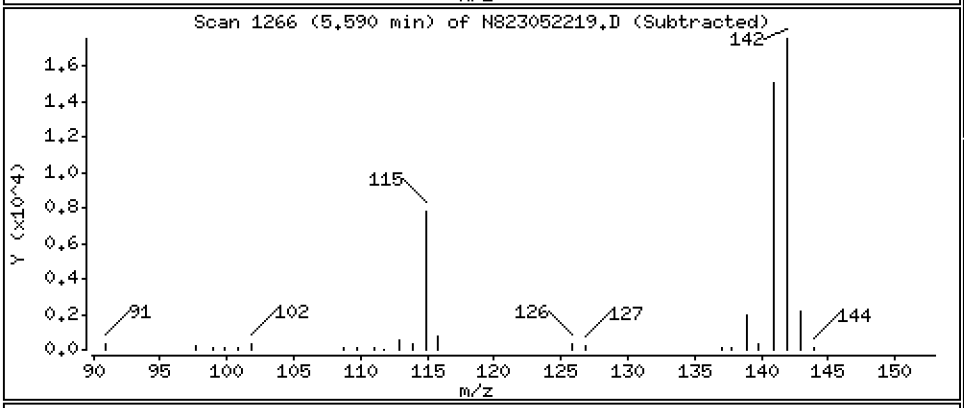
Column diameter: 0.25

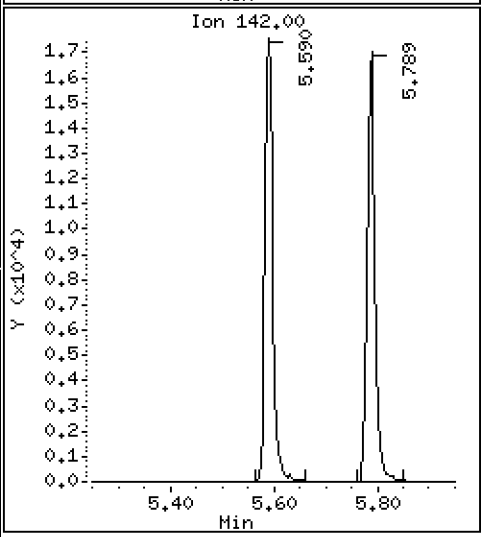
4 2-Methylnaphthalene

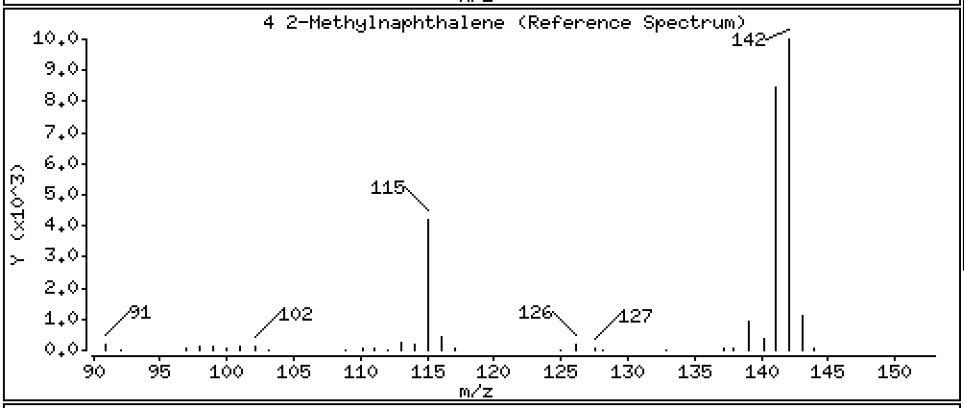
Concentration: 3.173 ug/mL

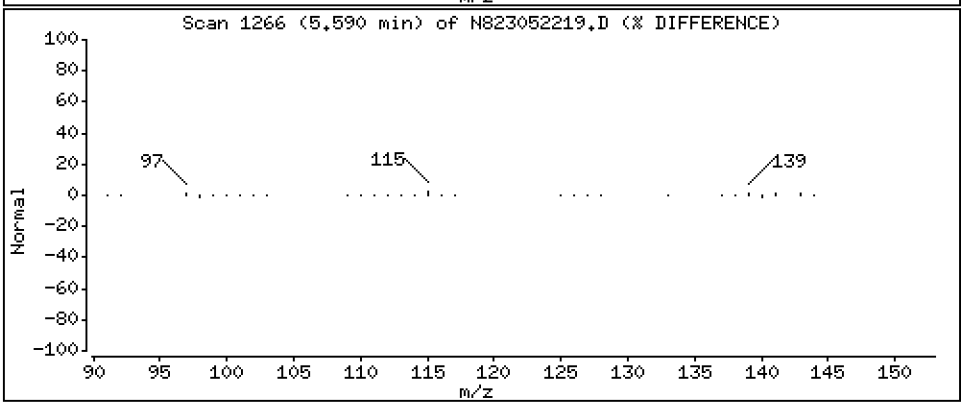












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

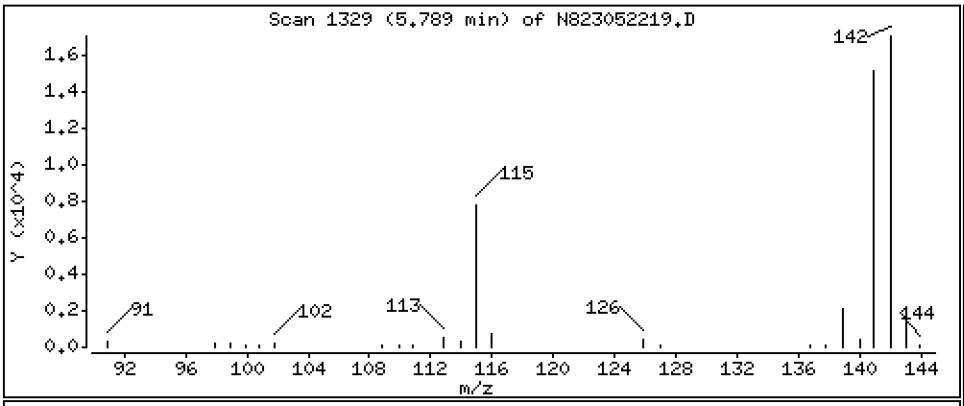
Operator: JZ

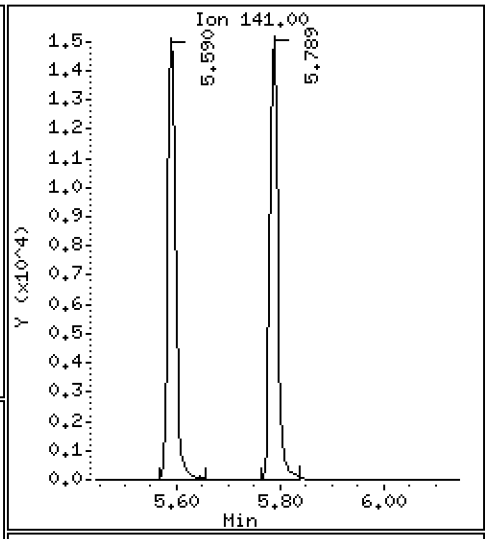
Column phase: Rxi-17sil

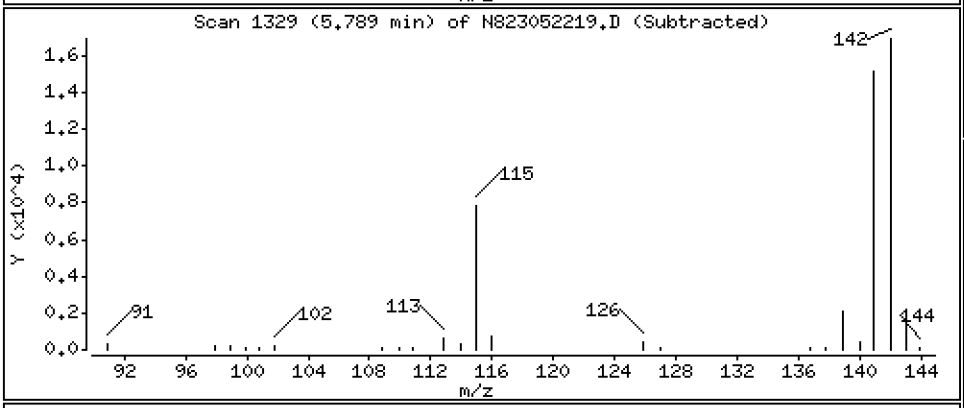
Column diameter: 0.25

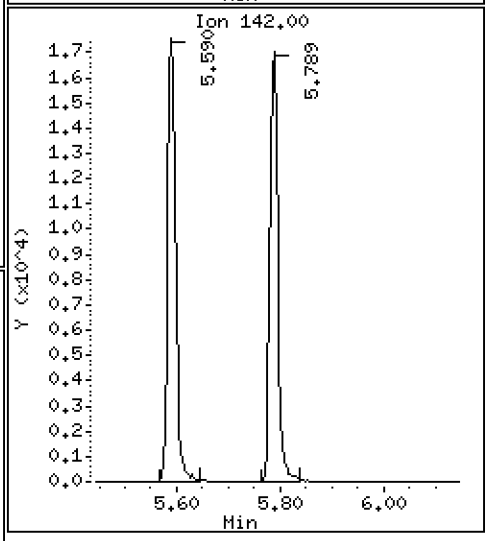
5 1-methylnaphthalene

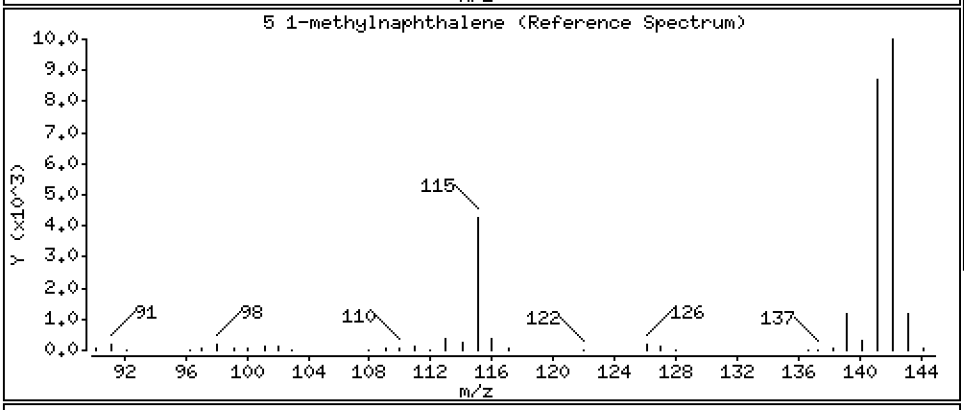
Concentration: 3.213 ug/mL

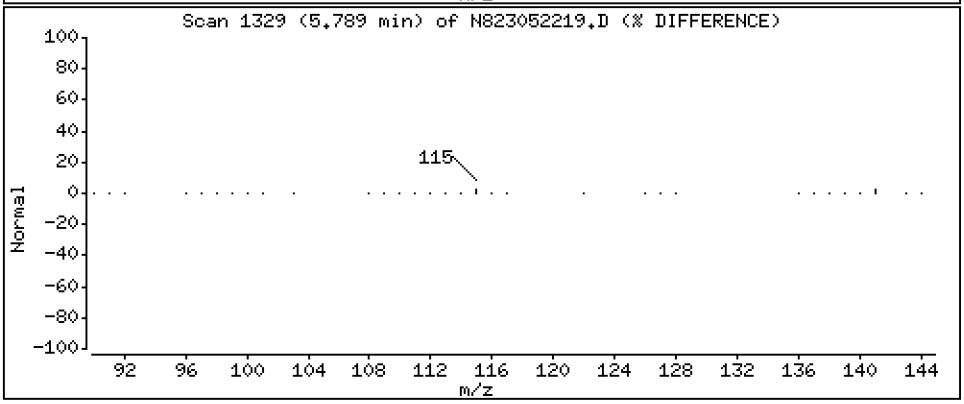












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

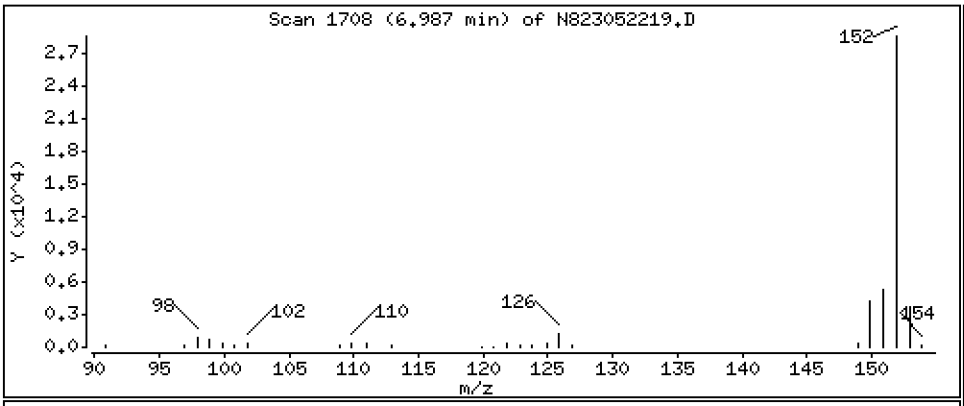
Operator: JZ

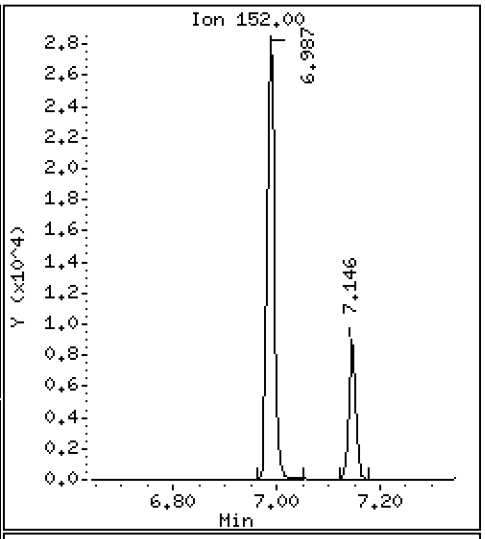
Column phase: Rxi-17sil

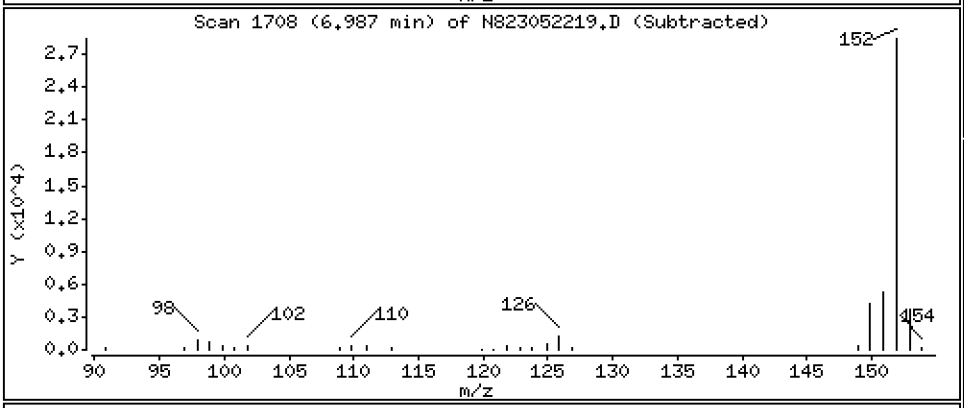
Column diameter: 0.25

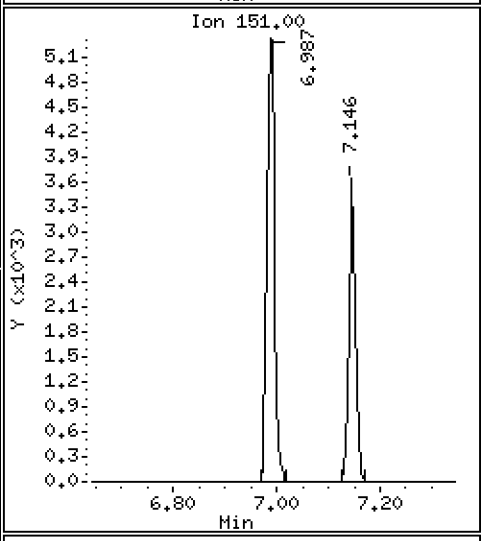
9 Acenaphthylene

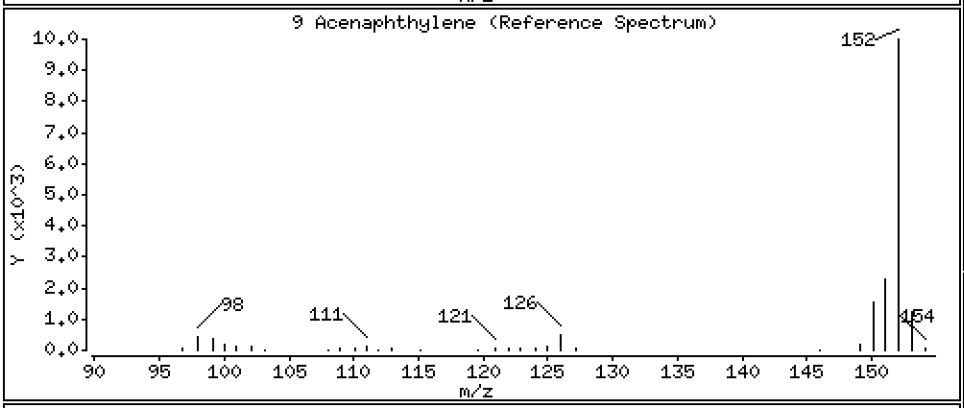
Concentration: 3.081 ug/mL

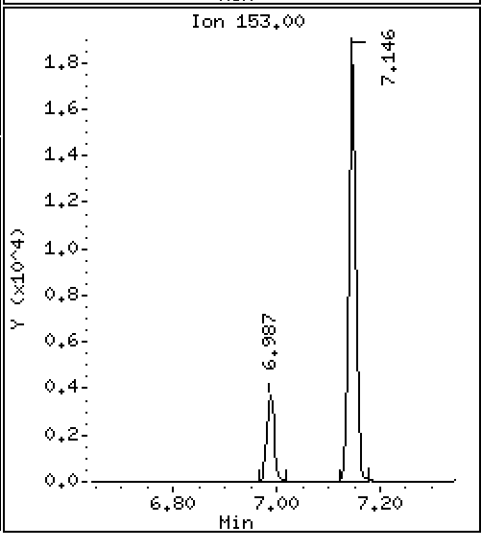


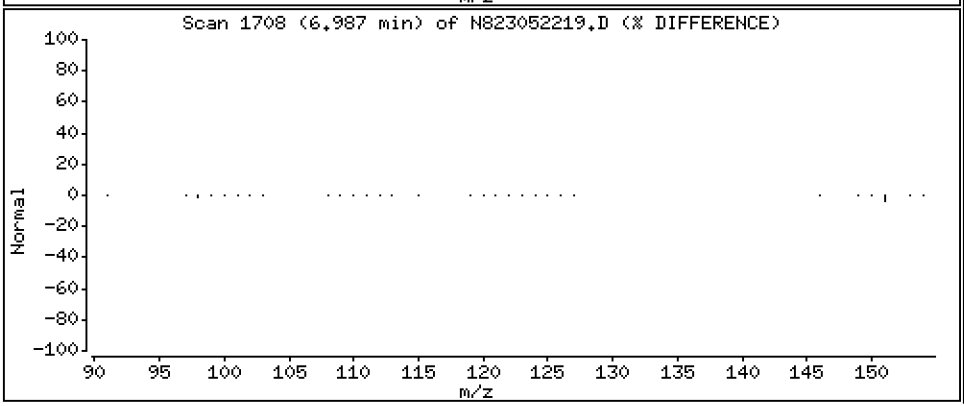












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

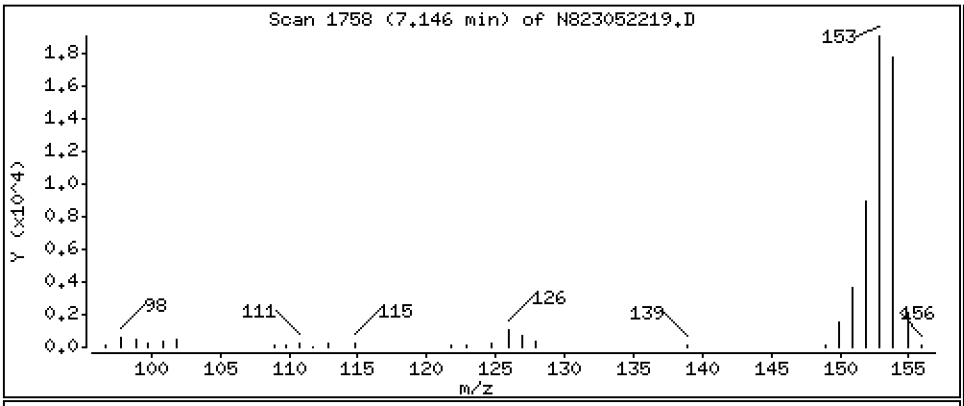
Operator: JZ

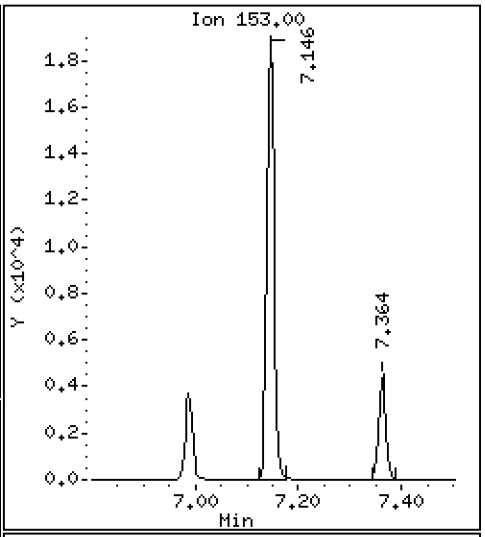
Column phase: Rxi-17sil

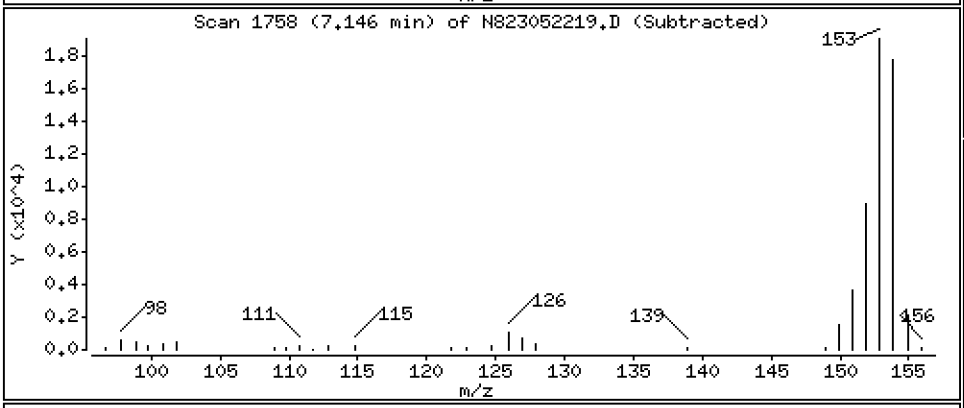
Column diameter: 0.25

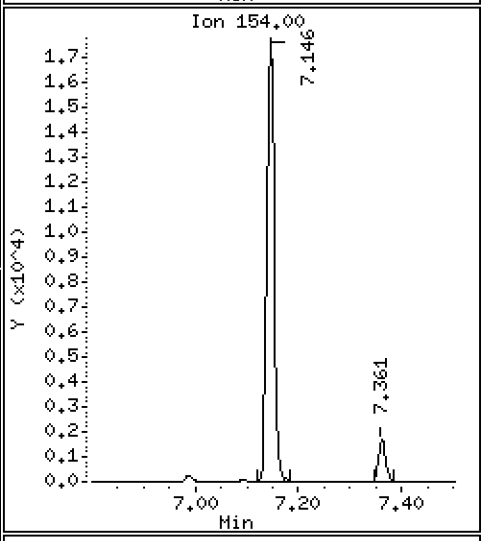
11 Acenaphthene

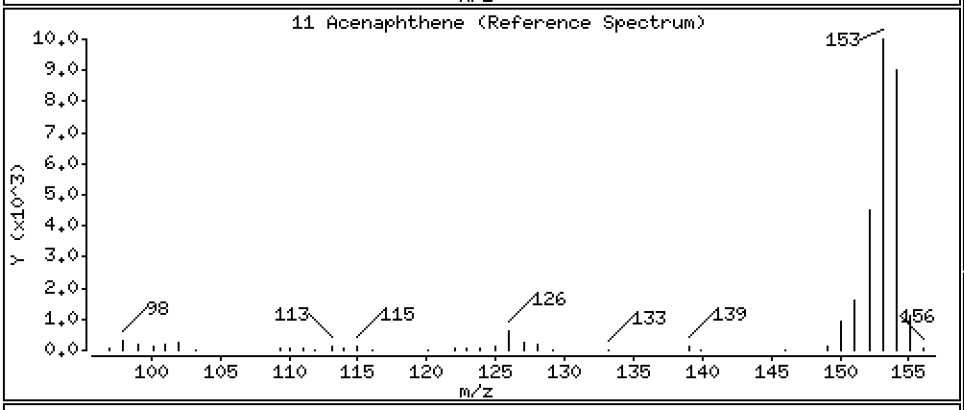
Concentration: 3.113 ug/mL

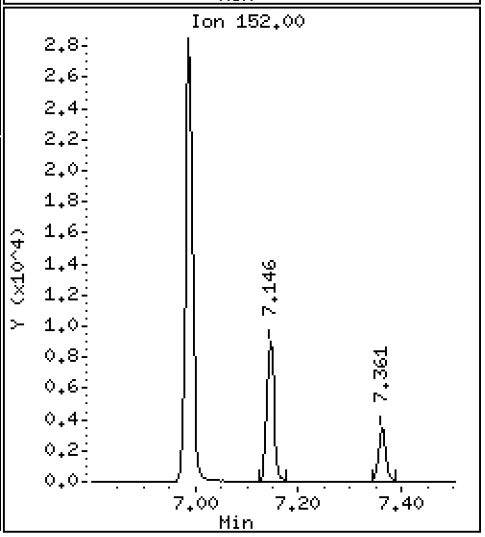


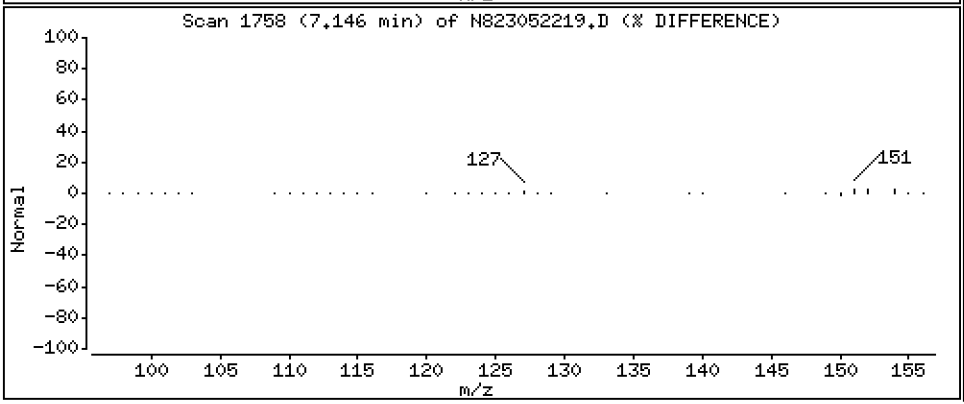












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

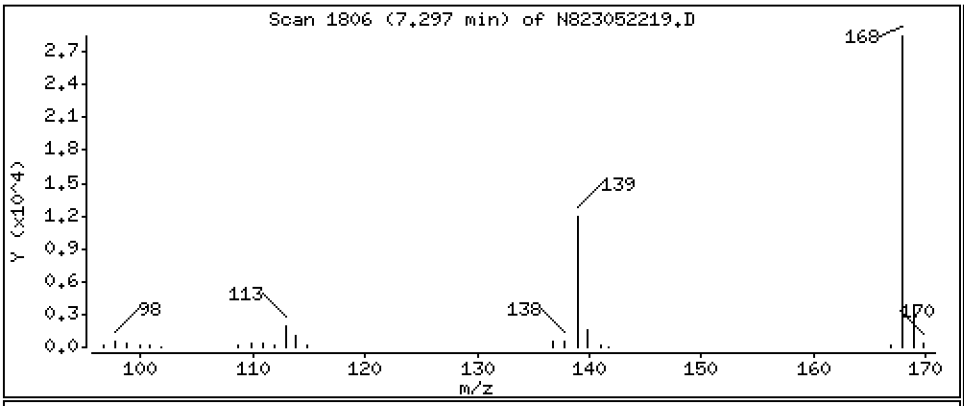
Operator: JZ

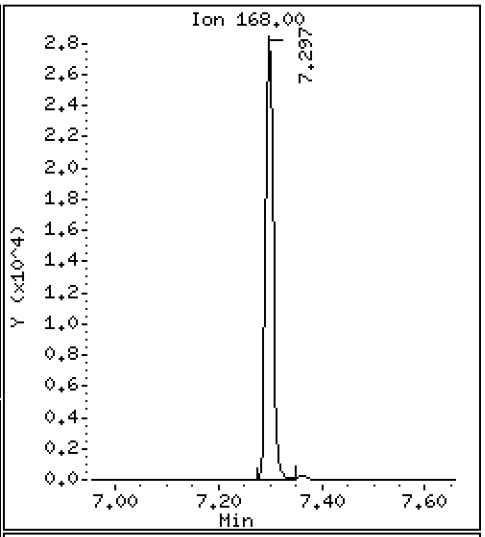
Column phase: Rxi-17sil

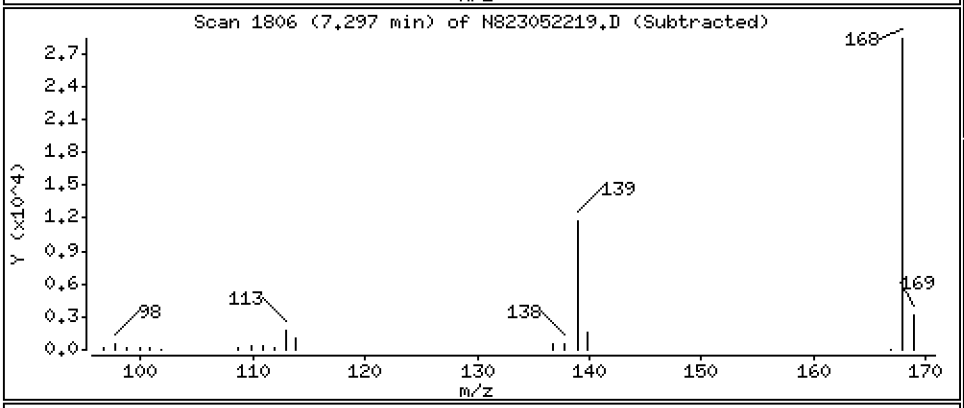
Column diameter: 0.25

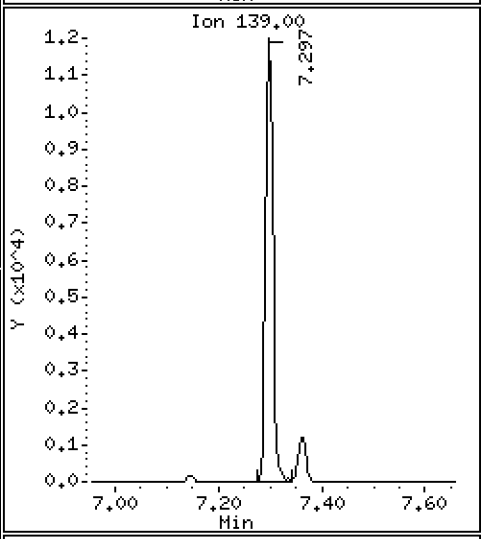
12 Dibenzofuran

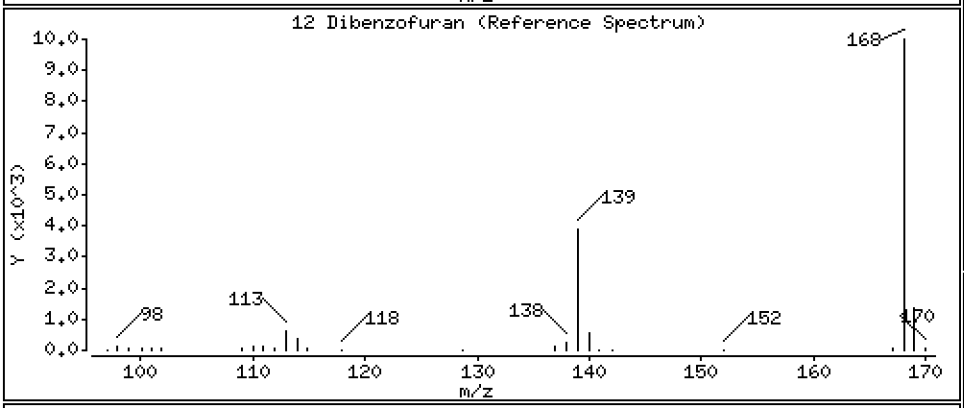
Concentration: 3.192 ug/mL

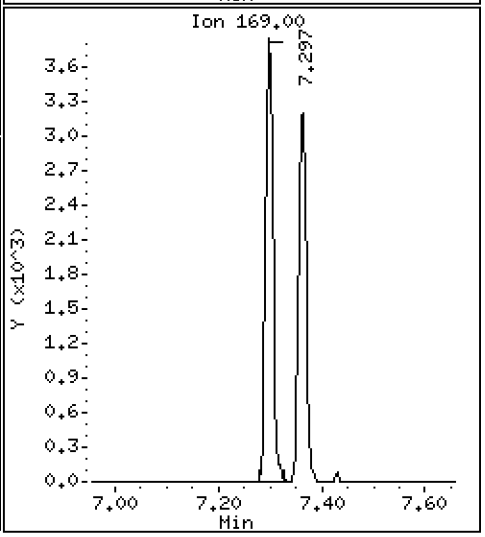


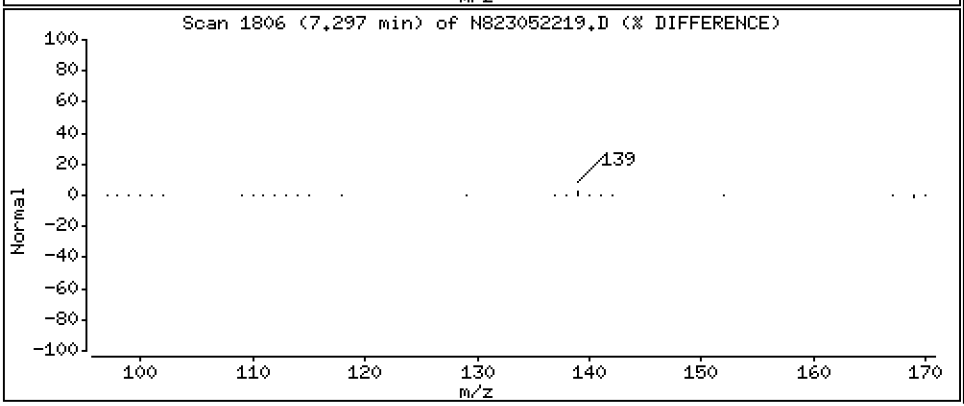












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

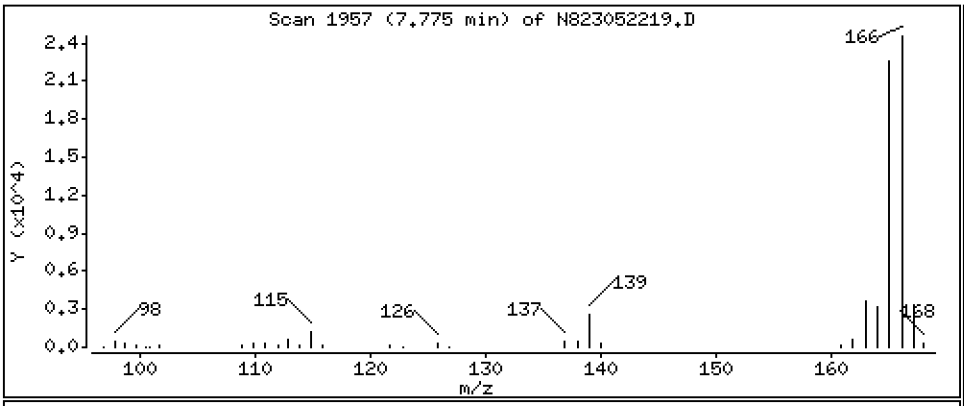
Operator: JZ

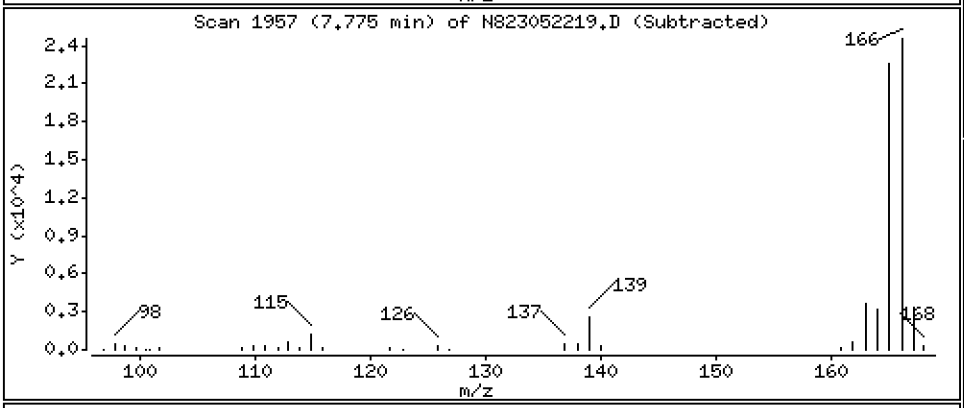
Column phase: Rxi-17sil

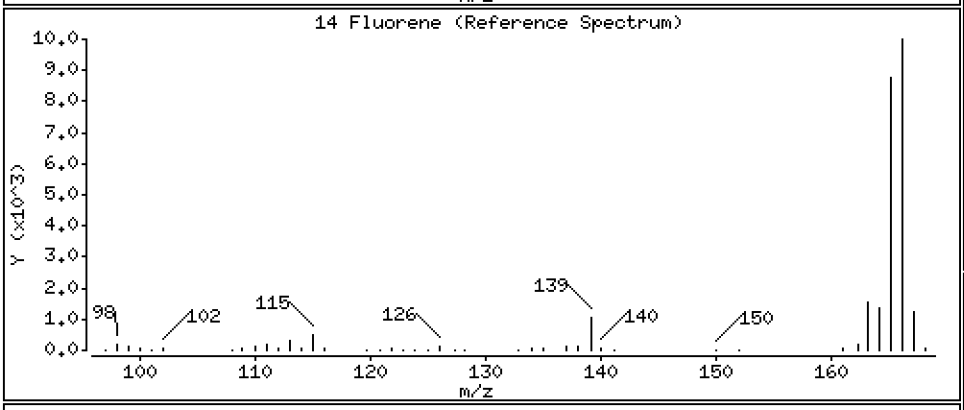
Column diameter: 0.25

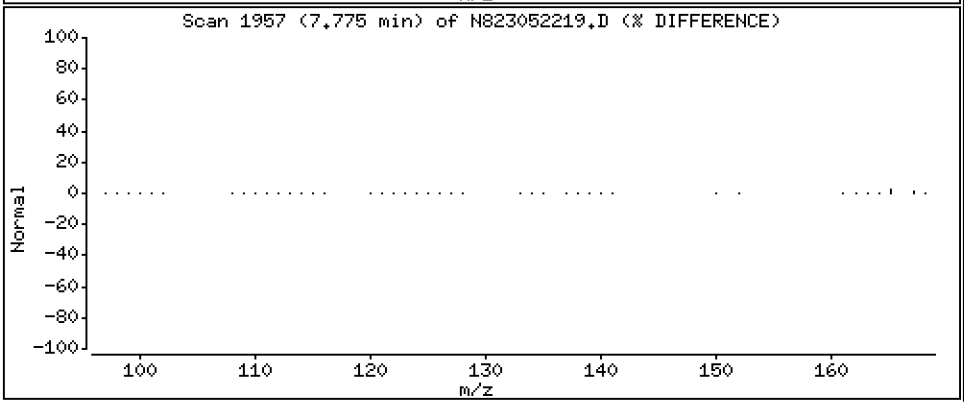
14 Fluorene

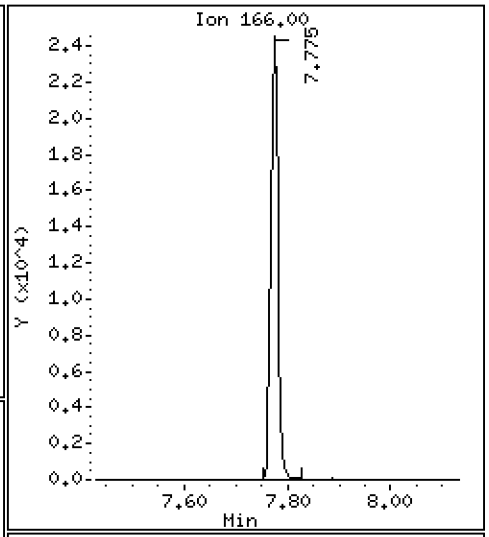
Concentration: 3.313 ug/mL

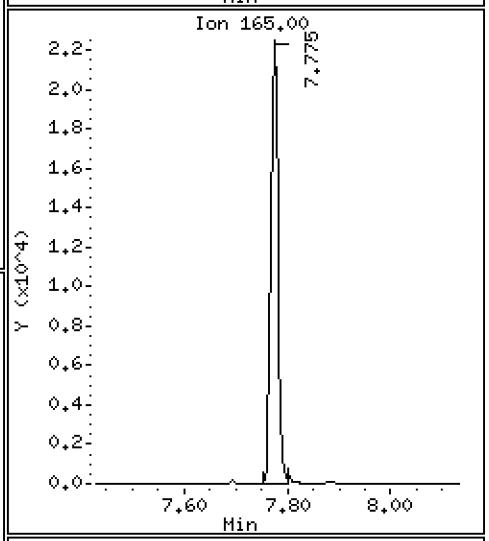


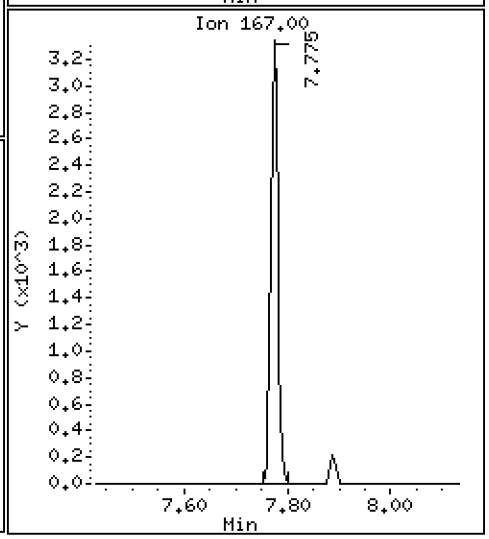












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

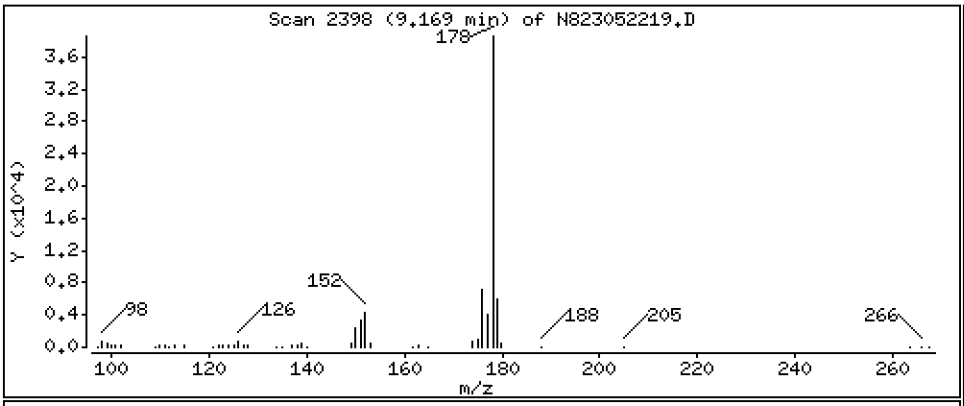
Operator: JZ

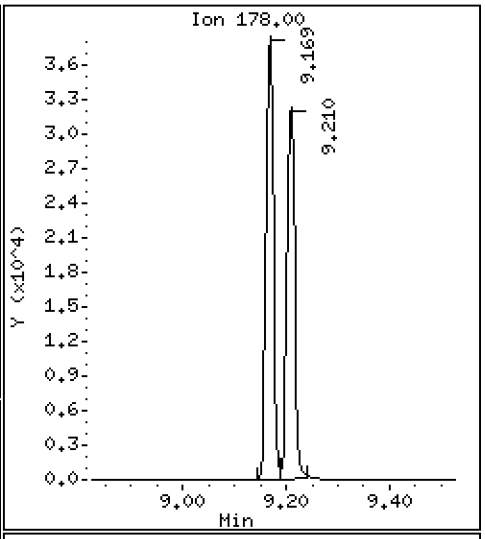
Column phase: Rxi-17sil

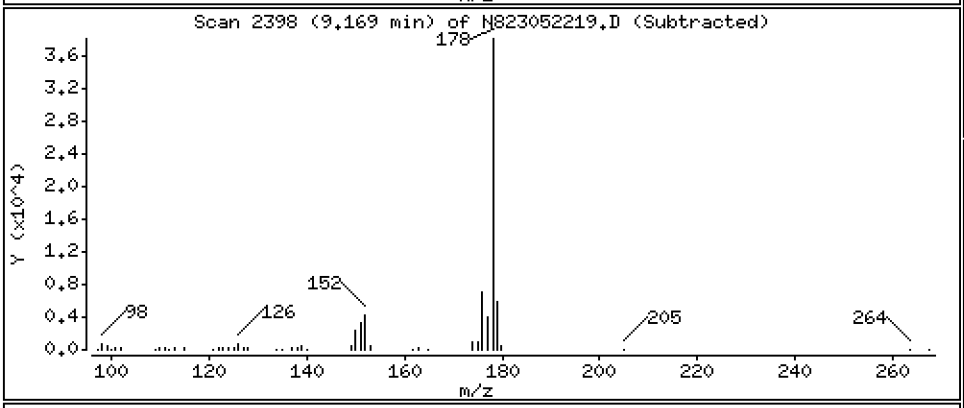
Column diameter: 0.25

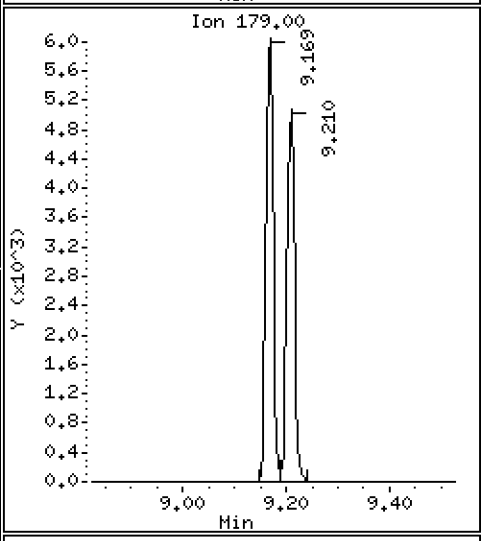
16 Phenanthrene

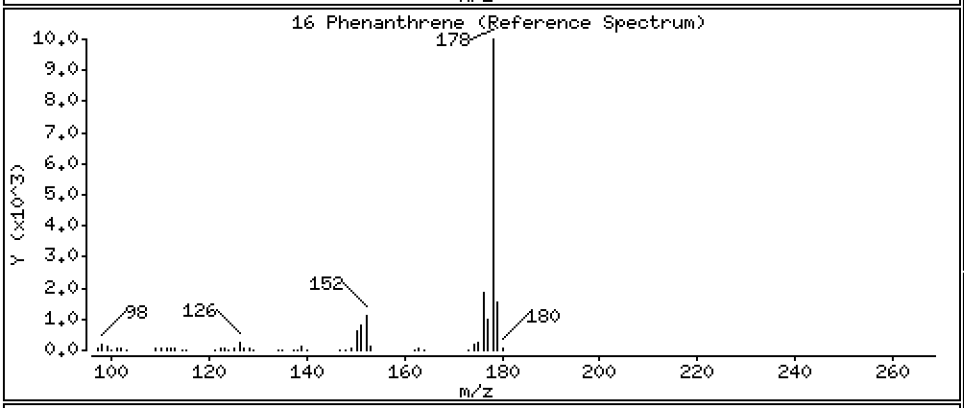
Concentration: 3.685 ug/mL

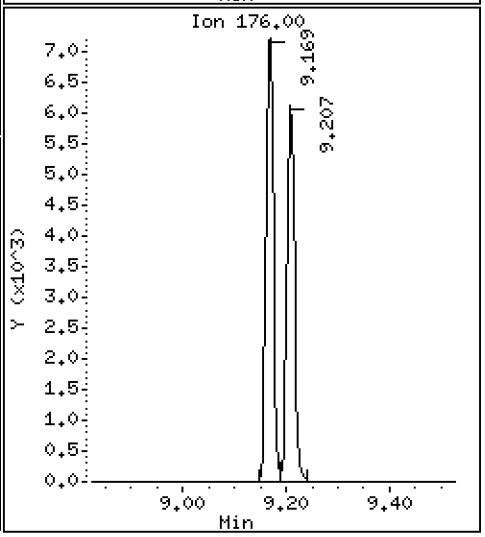


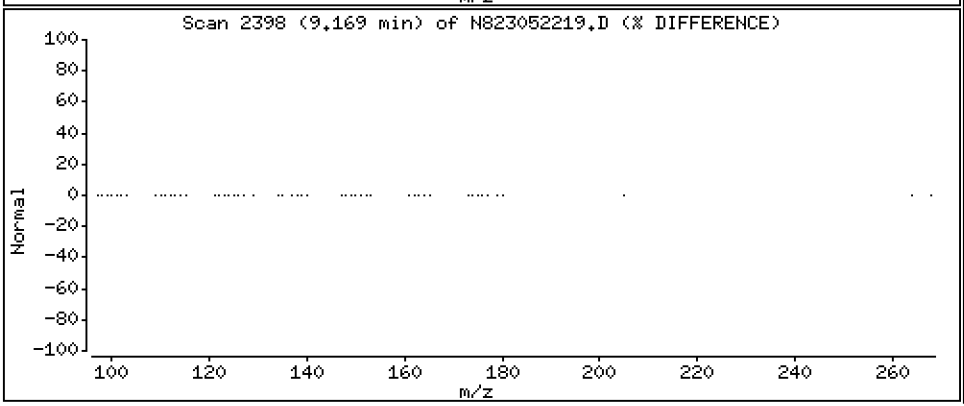












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

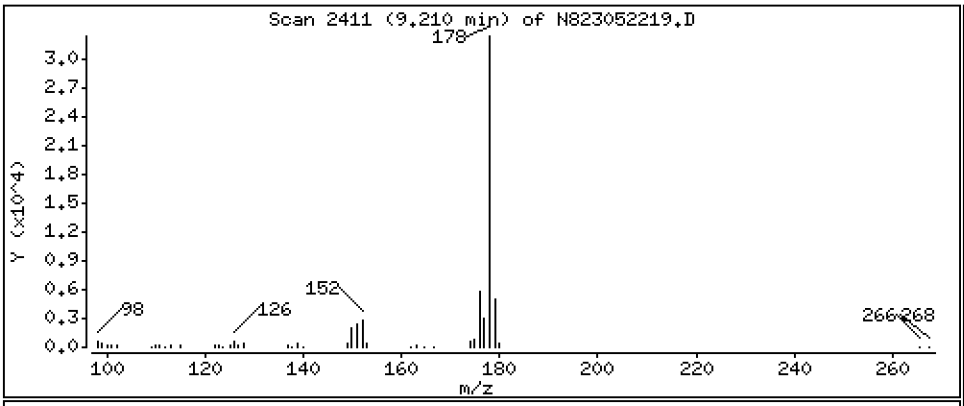
Operator: JZ

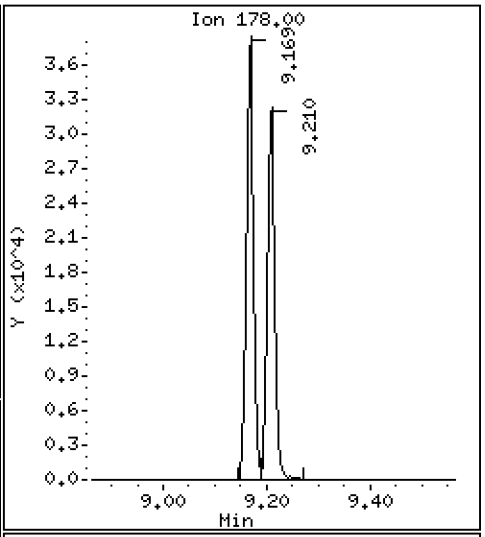
Column phase: Rxi-17sil

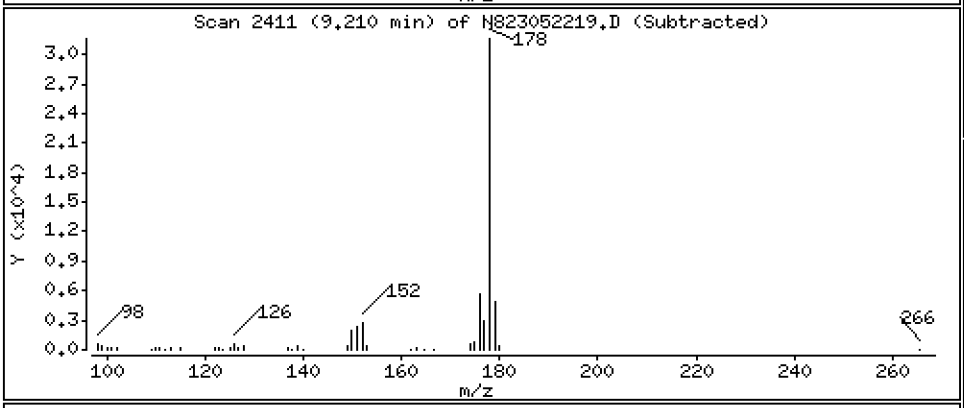
Column diameter: 0.25

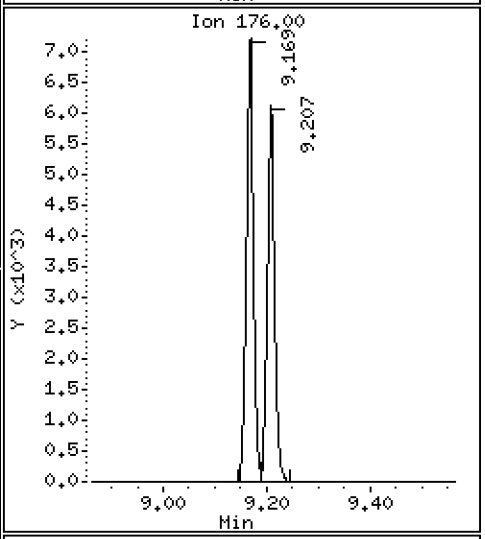
17 Anthracene

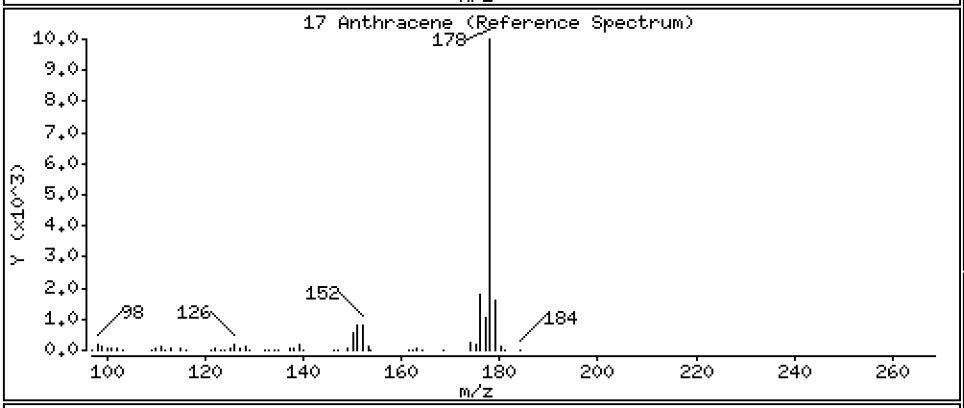
Concentration: 3.566 ug/mL

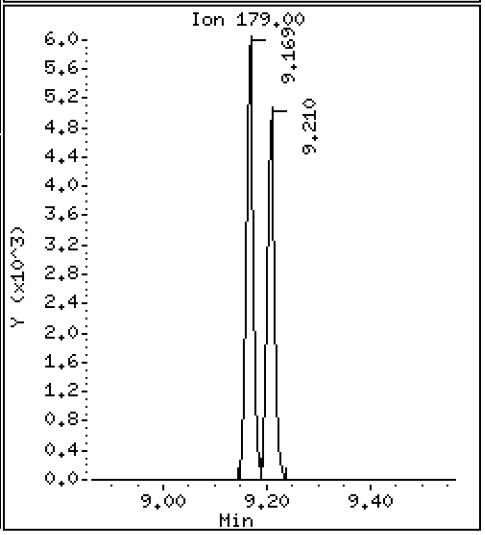


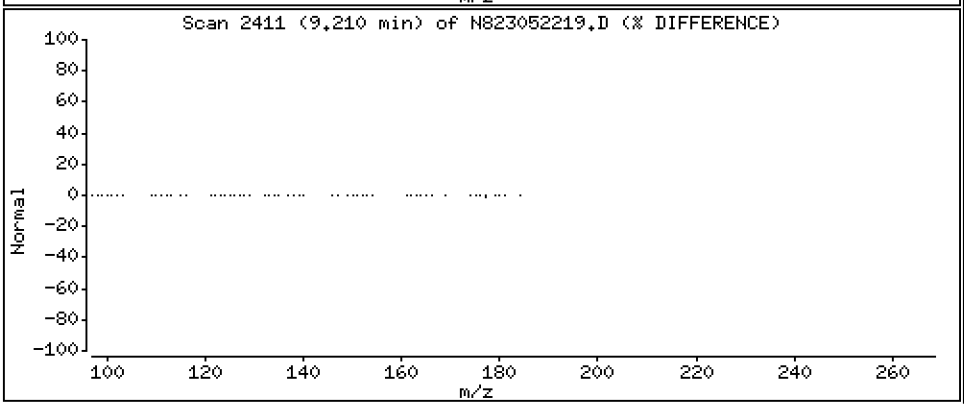












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

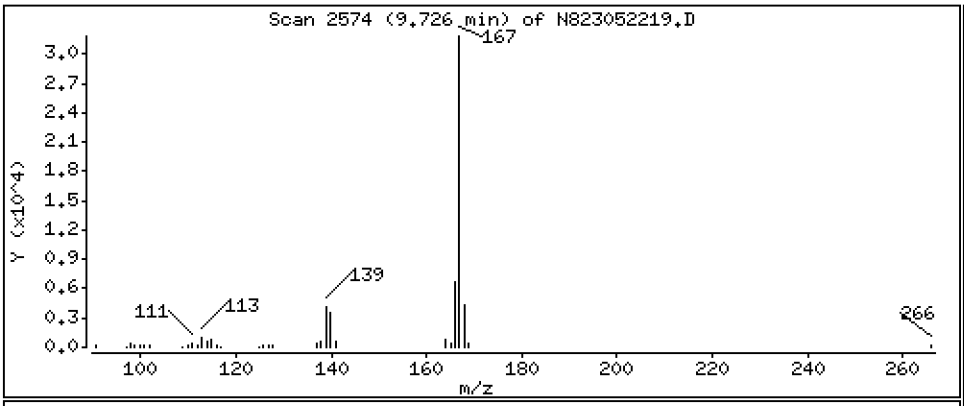
Operator: JZ

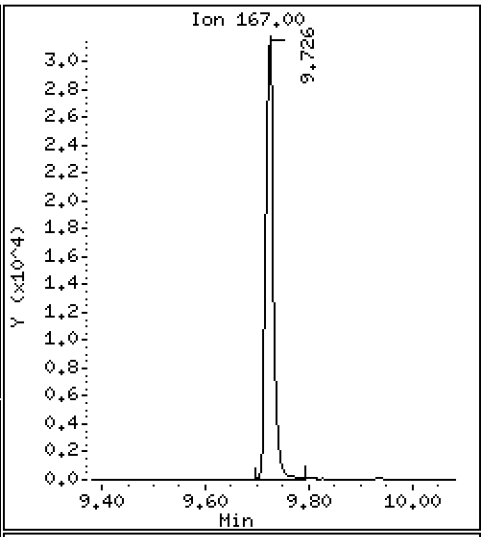
Column phase: Rxi-17sil

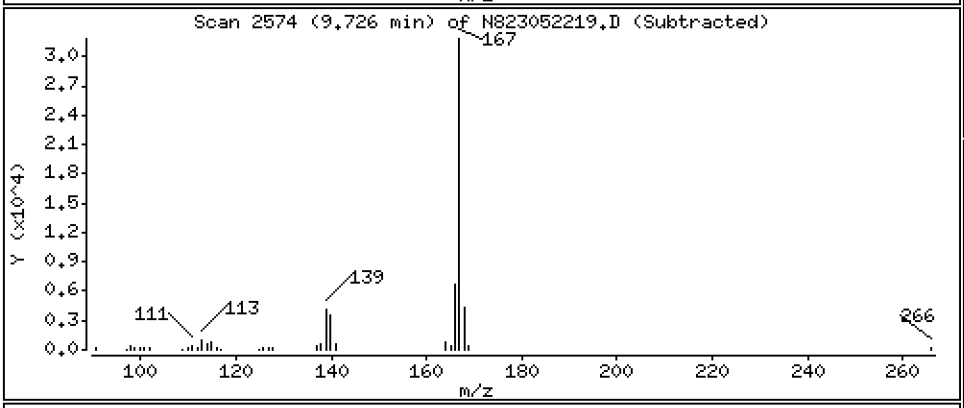
Column diameter: 0.25

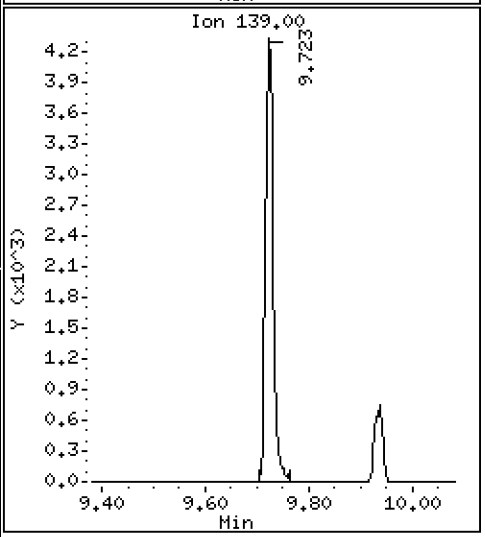
19 Carbazole

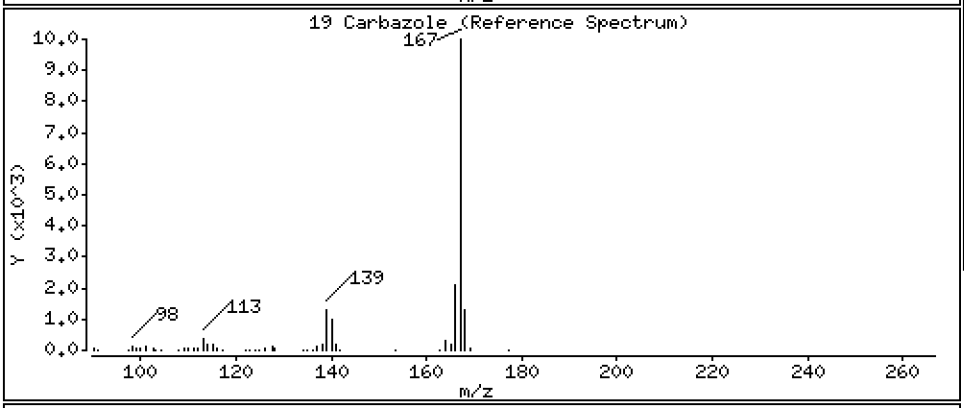
Concentration: 3.729 ug/mL

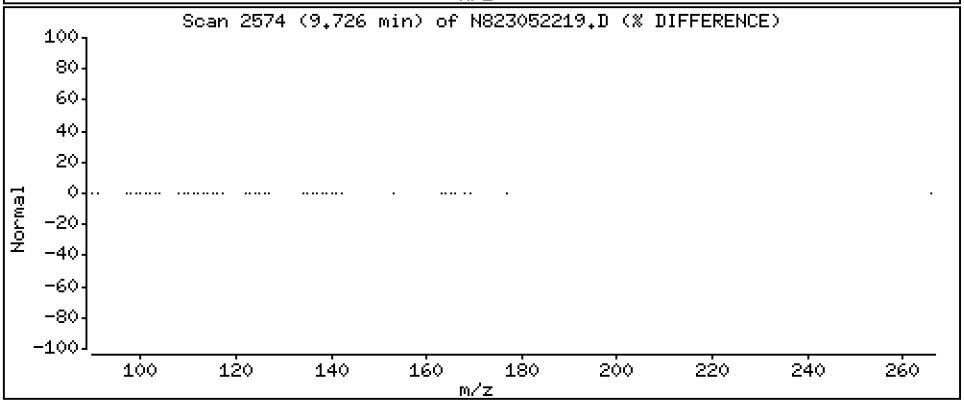












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

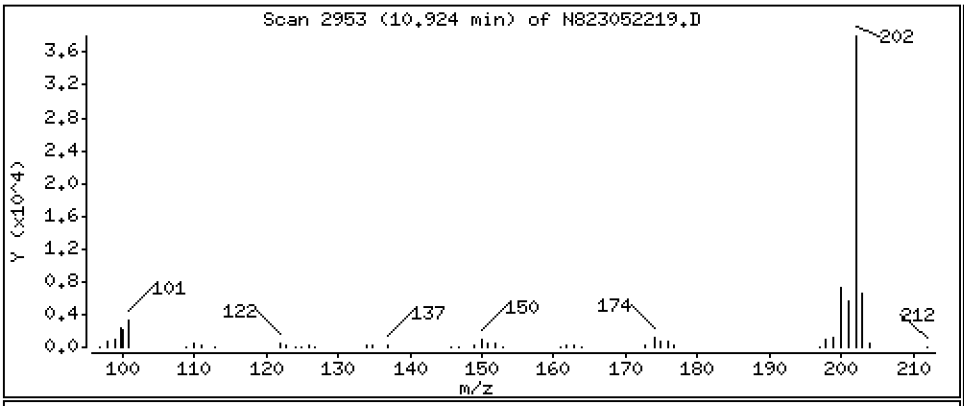
Operator: JZ

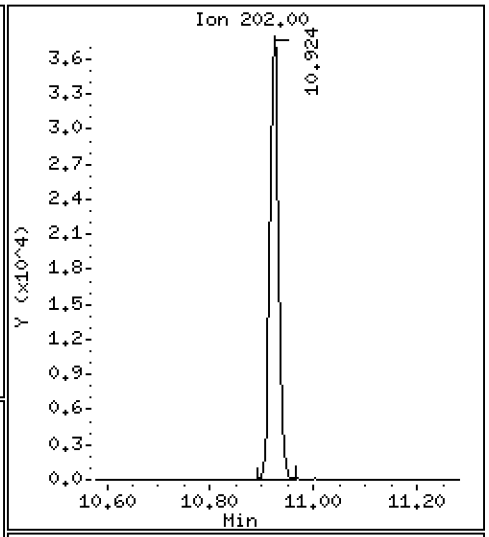
Column phase: Rxi-17sil

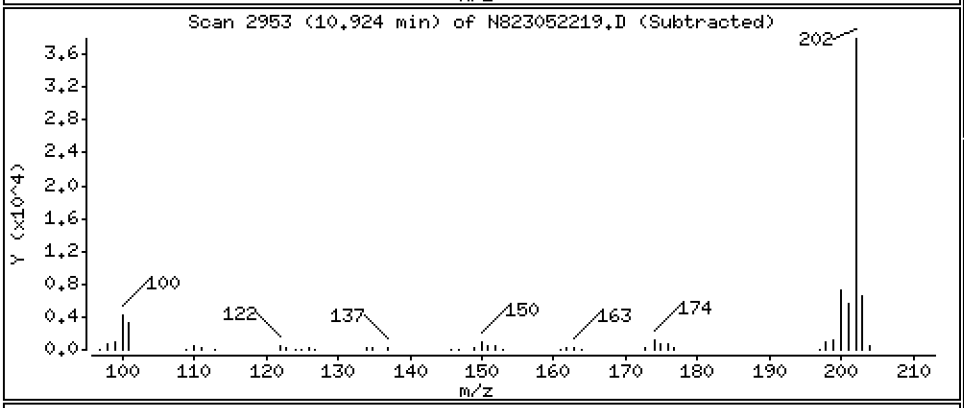
Column diameter: 0.25

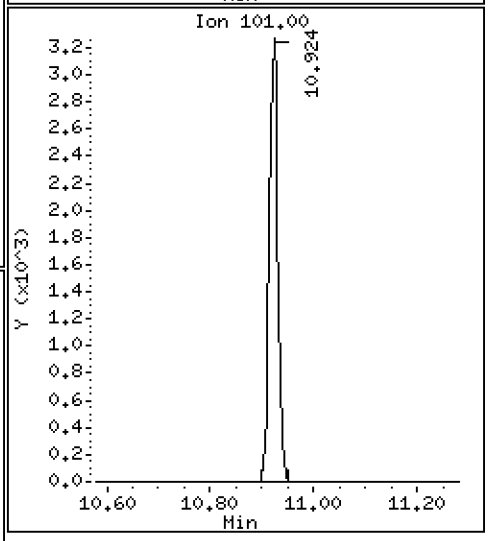
22 Fluoranthene

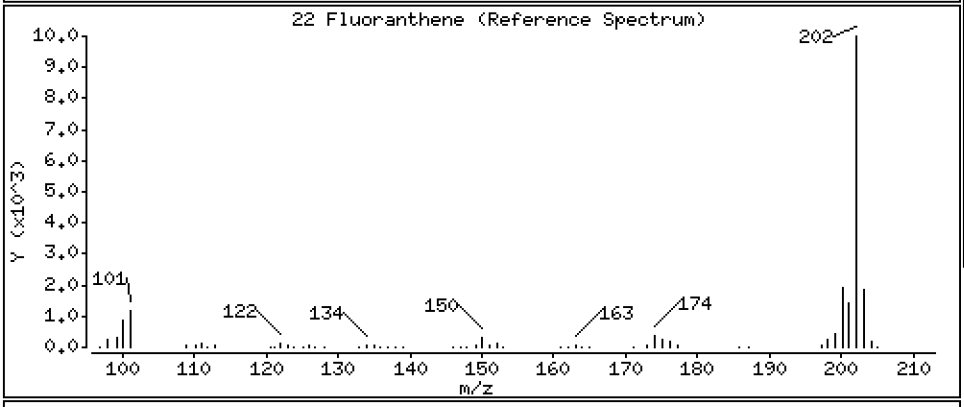
Concentration: 3.973 ug/mL

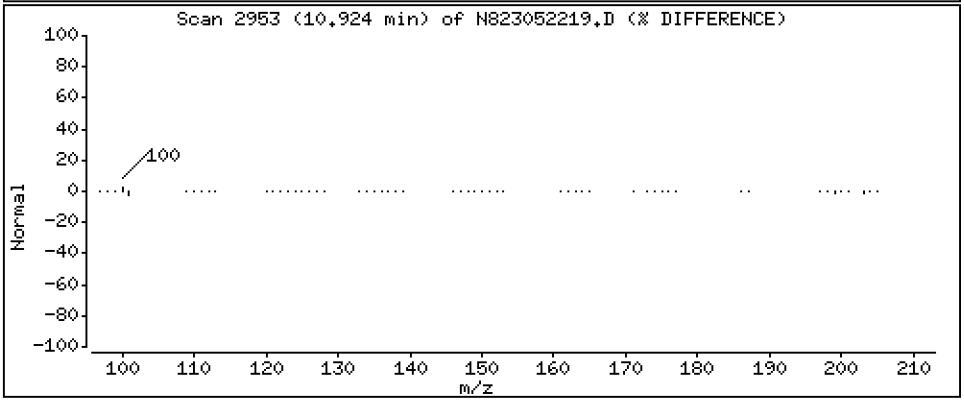












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

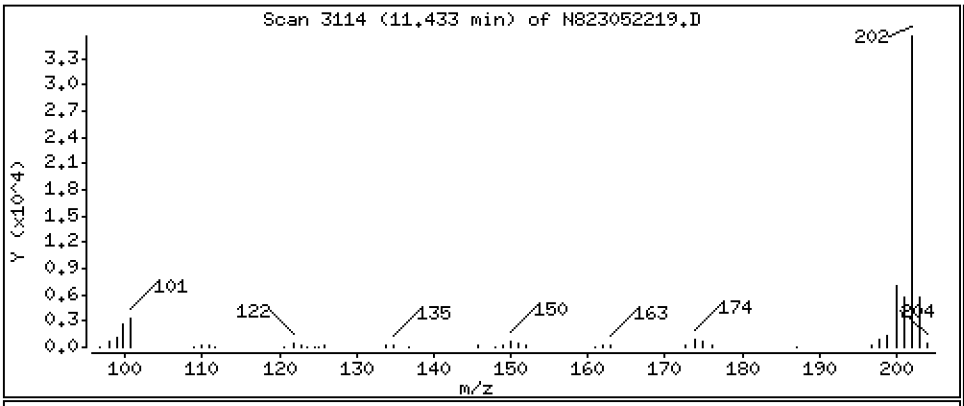
Operator: JZ

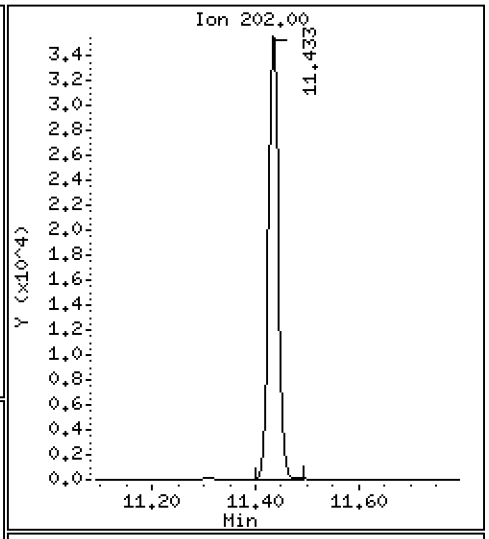
Column phase: Rxi-17sil

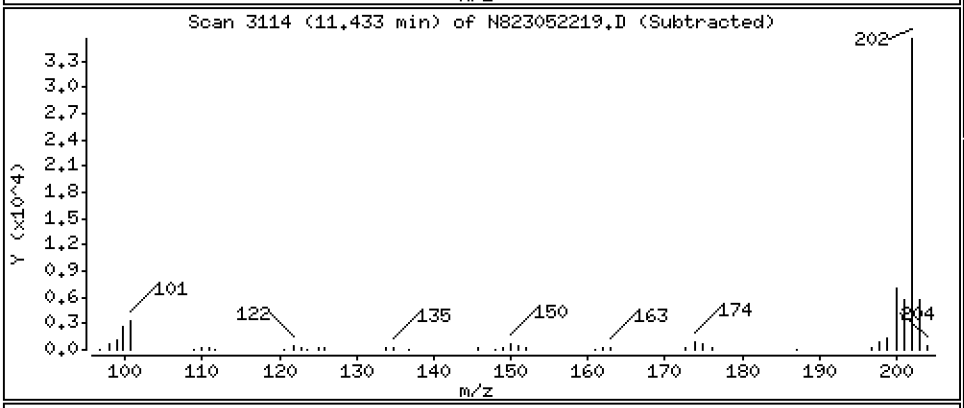
Column diameter: 0.25

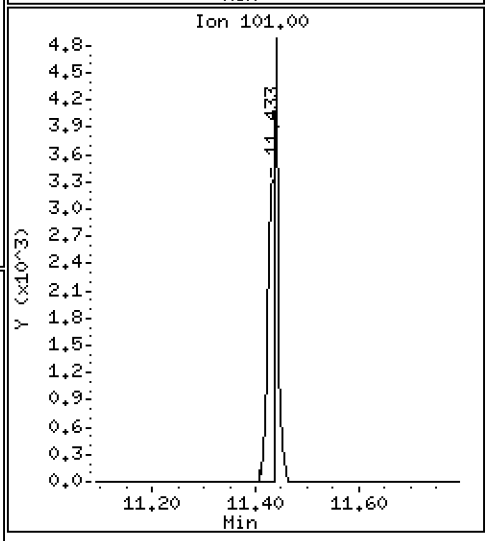
23 Pyrene

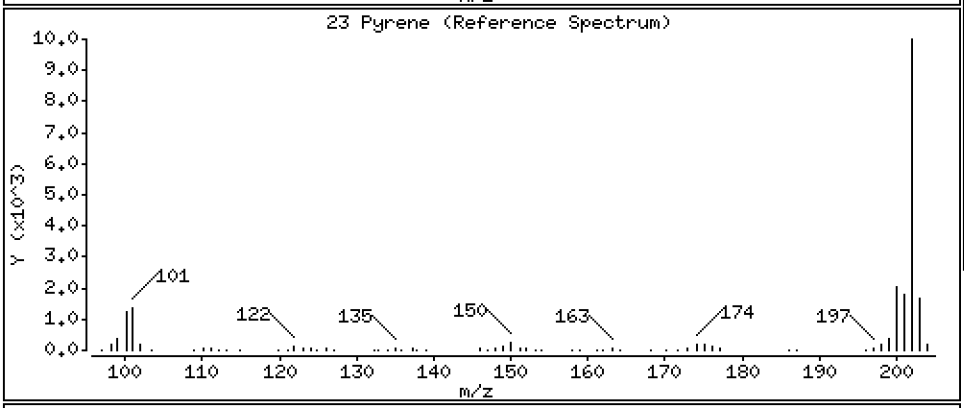
Concentration: 4.695 ug/mL

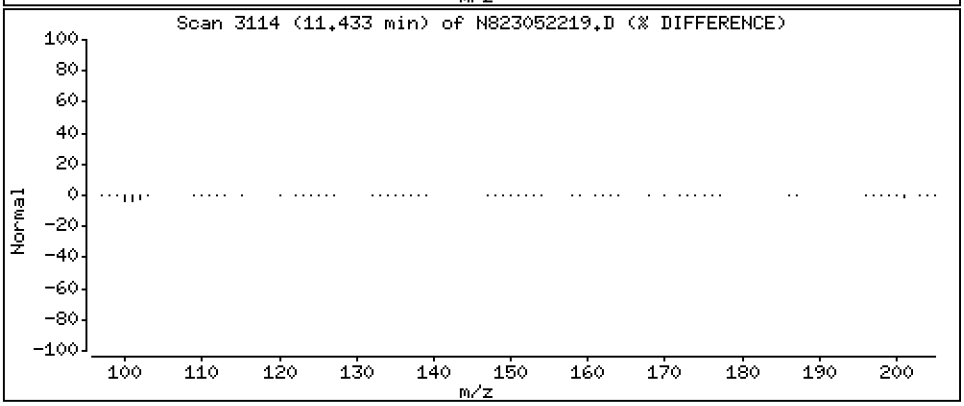












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

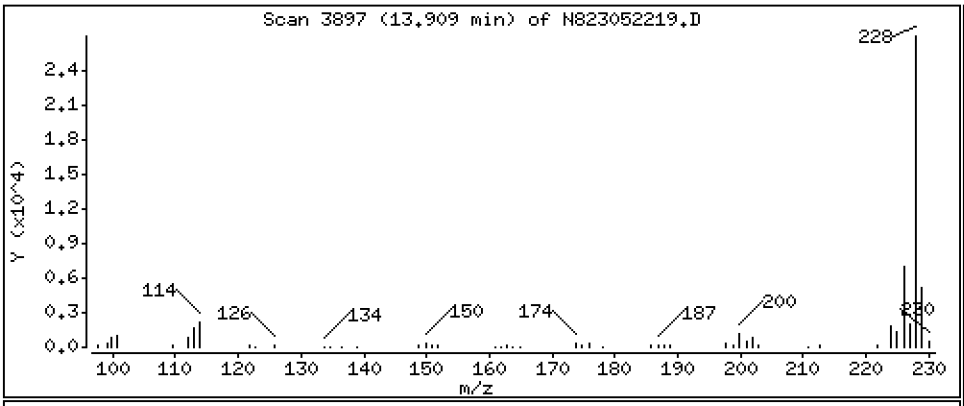
Operator: JZ

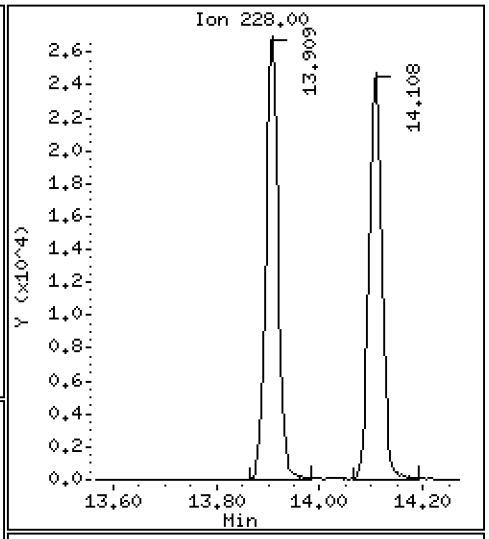
Column phase: Rxi-17sil

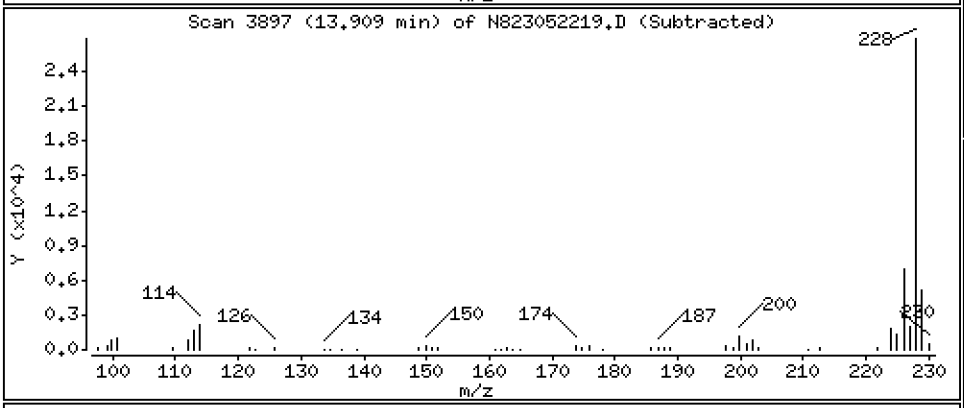
Column diameter: 0.25

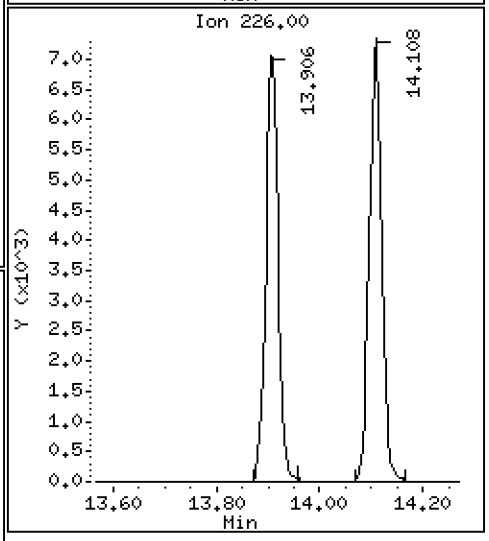
24 Benzo(a)anthracene

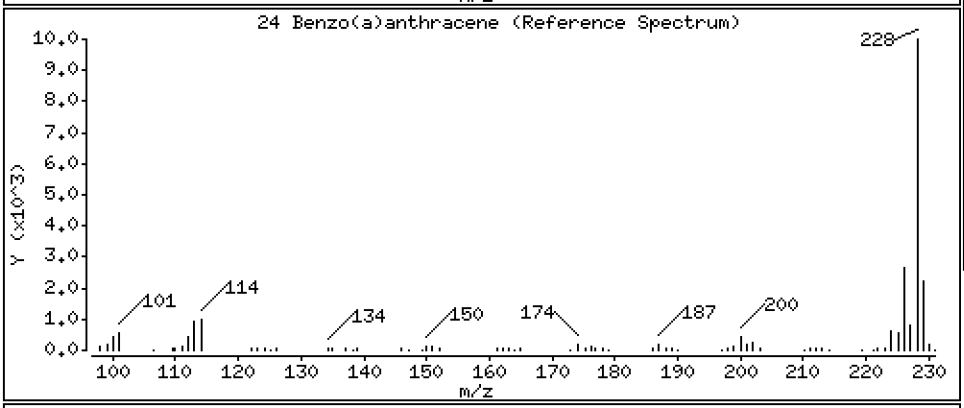
Concentration: 4.278 ug/mL

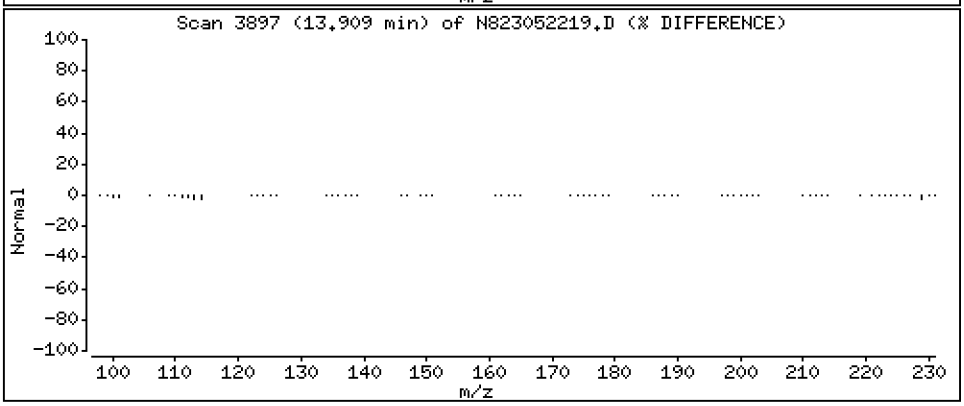












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

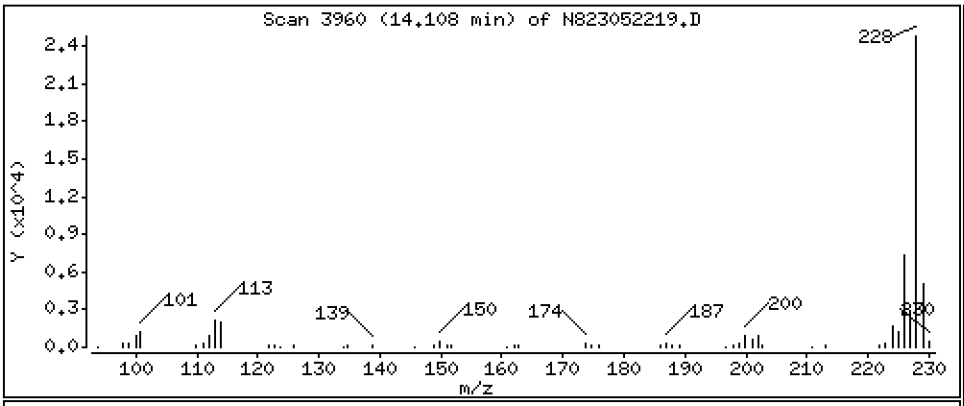
Operator: JZ

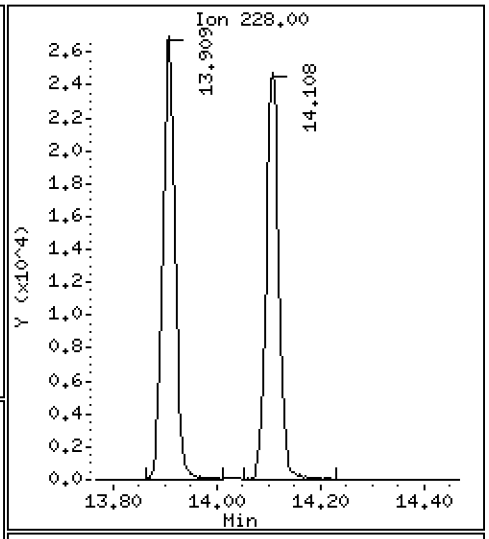
Column phase: Rxi-17sil

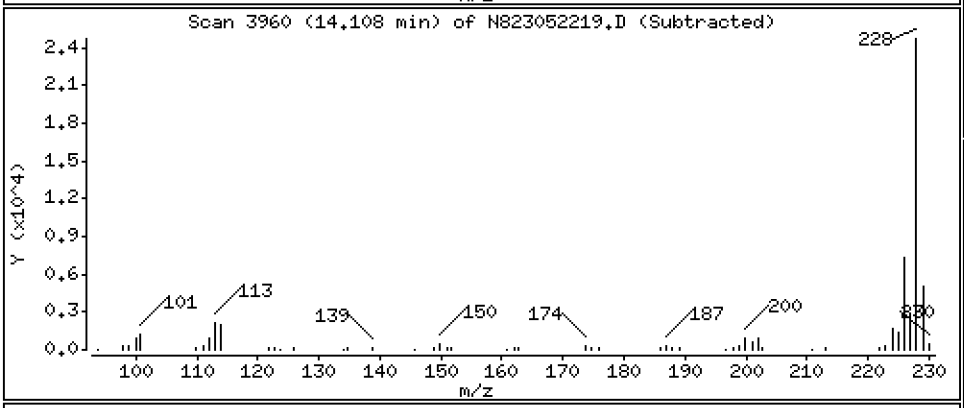
Column diameter: 0.25

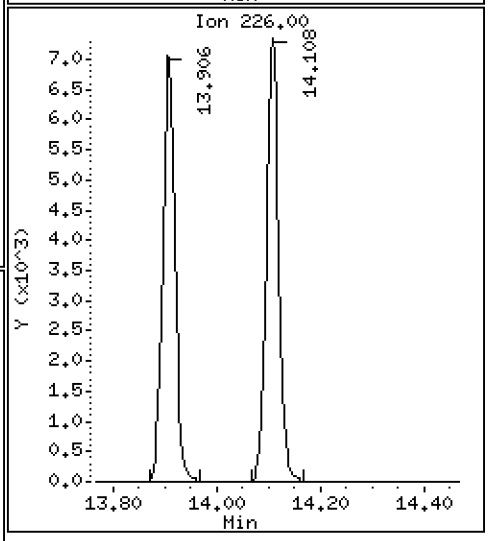
27 Chrysene

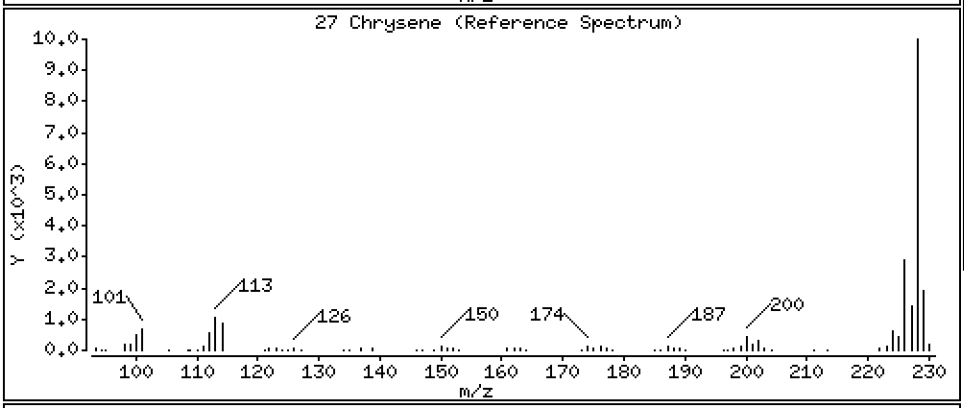
Concentration: 4.277 ug/mL

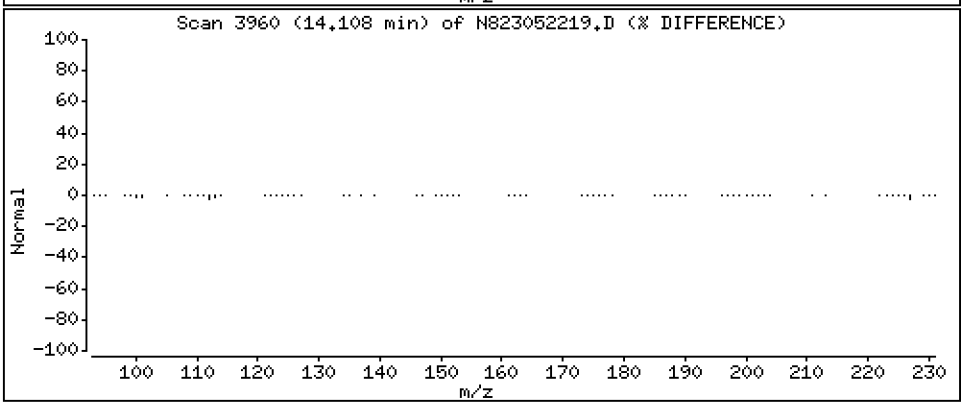












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

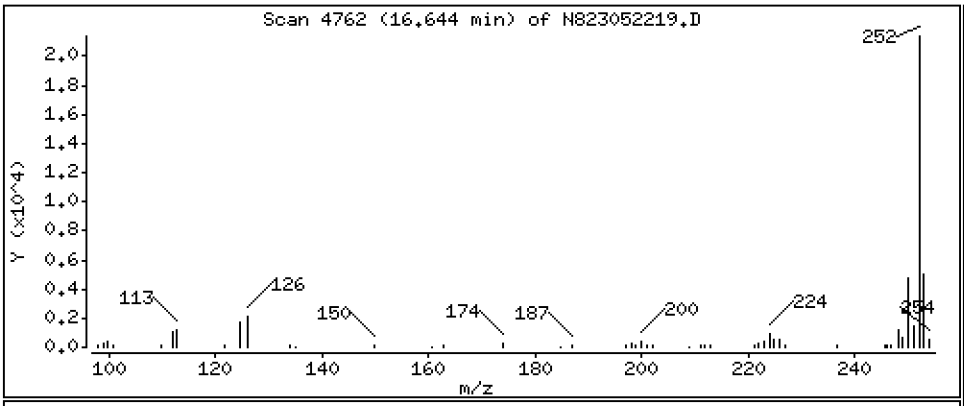
Operator: JZ

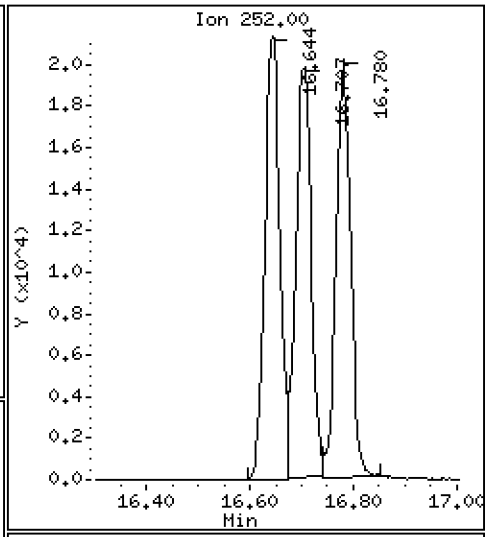
Column phase: Rxi-17sil

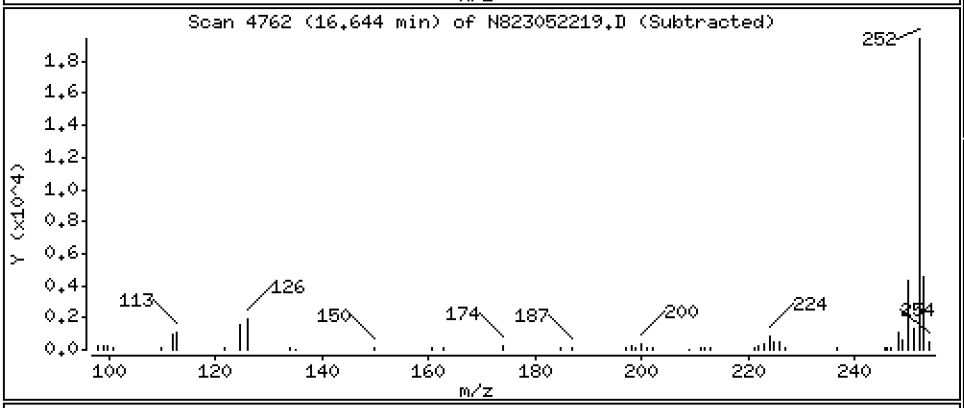
Column diameter: 0.25

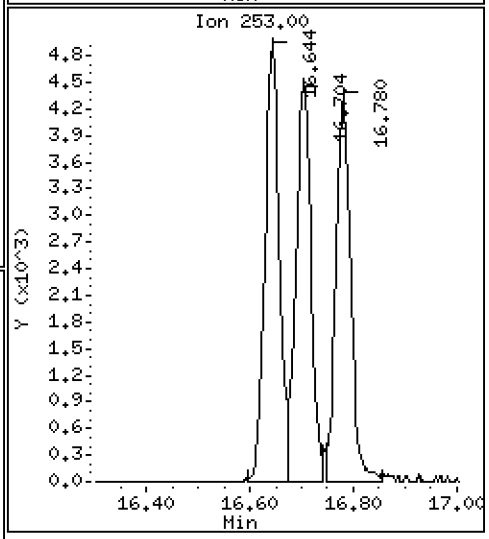
28 Benzo(b)fluoranthene

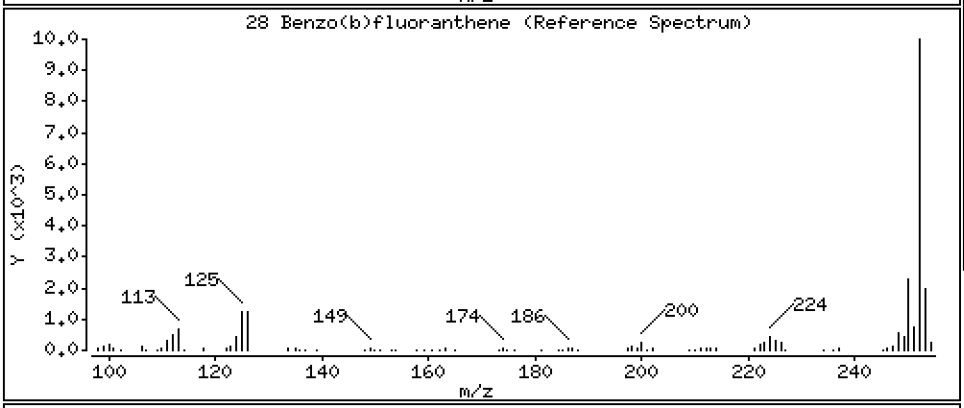
Concentration: 4.520 ug/mL

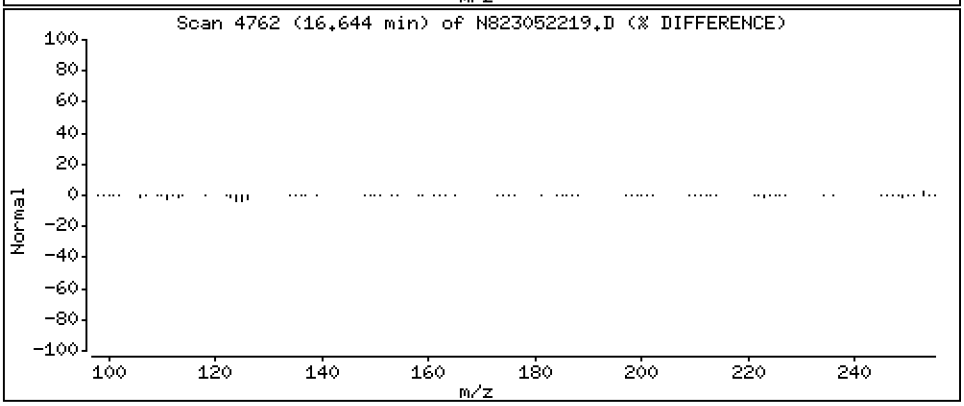












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

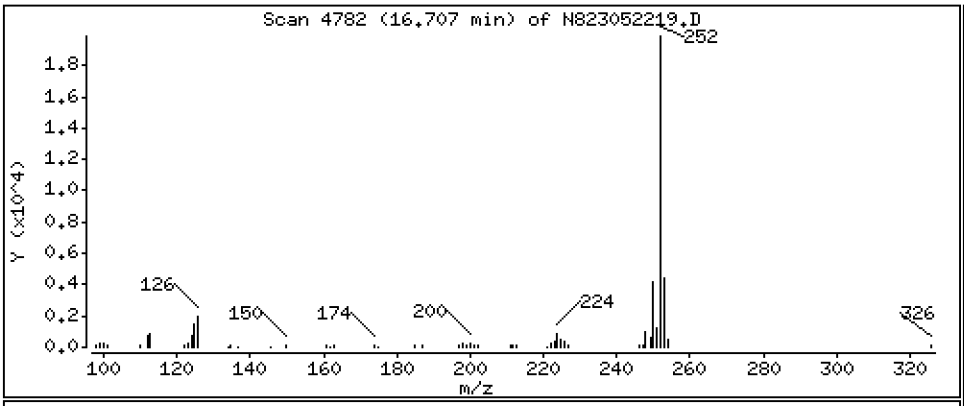
Operator: JZ

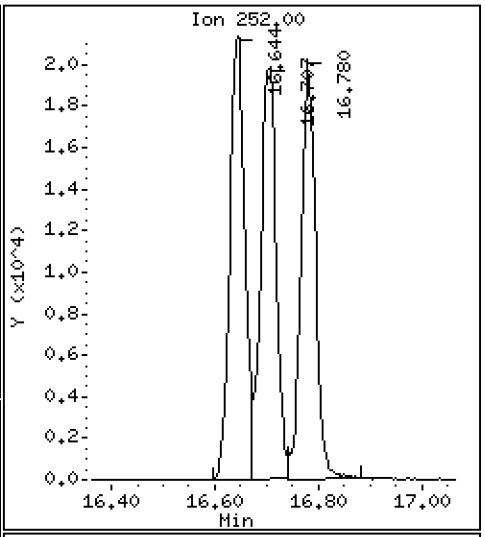
Column phase: Rxi-17sil

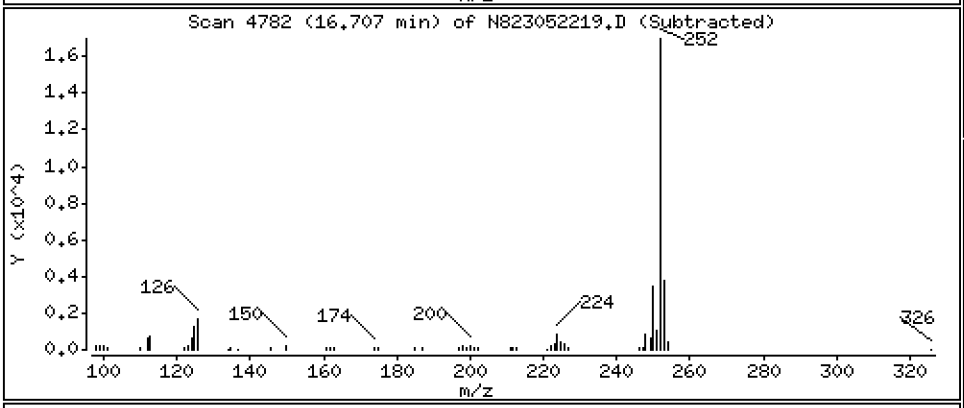
Column diameter: 0.25

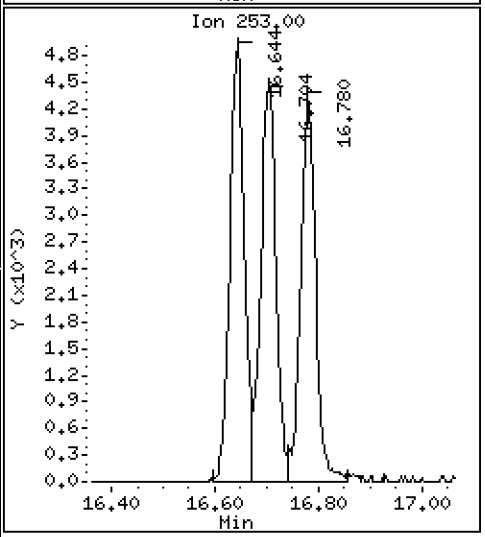
29 Benzo(k)fluoranthene

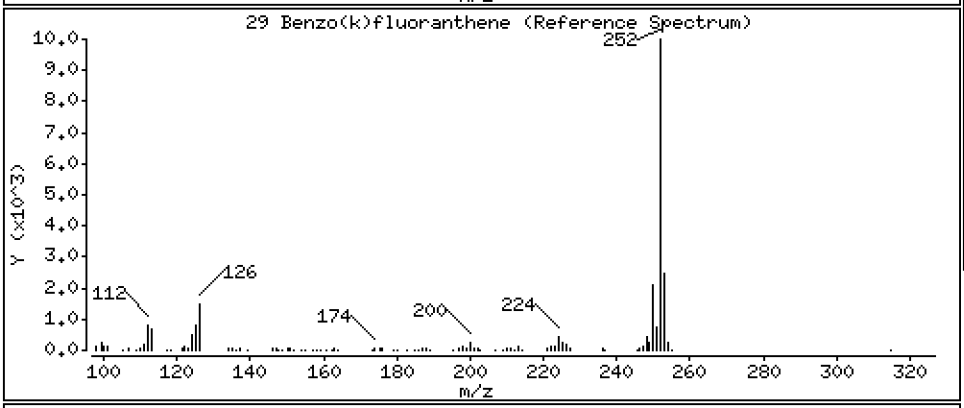
Concentration: 4.596 ug/mL

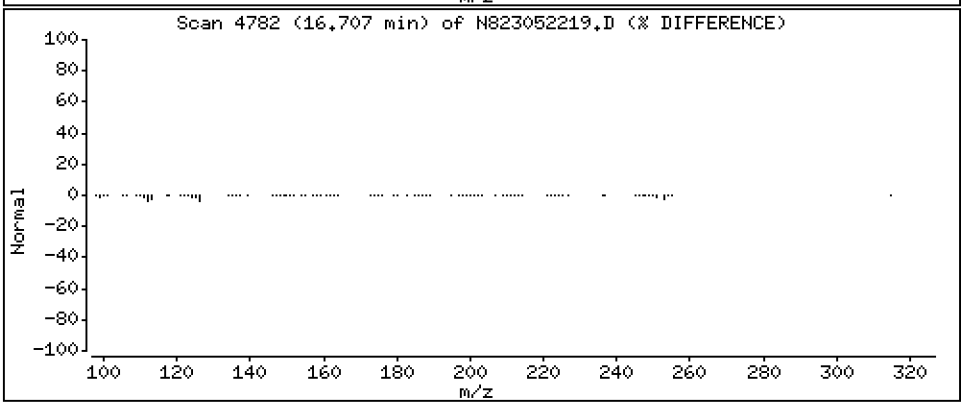












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

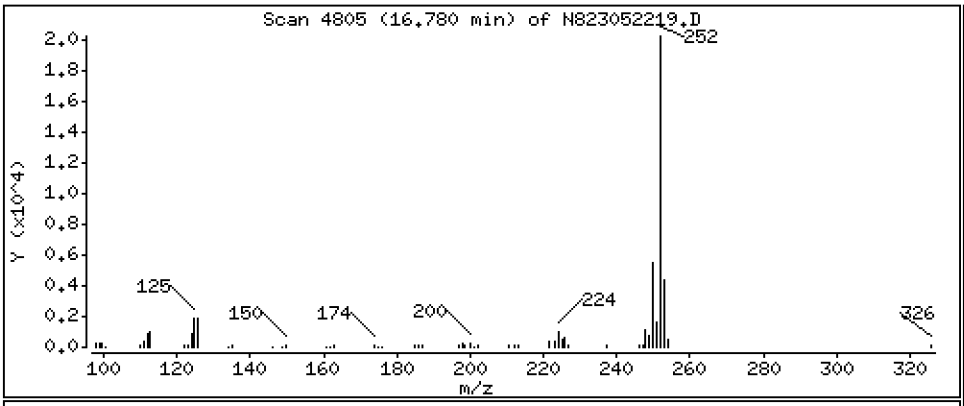
Operator: JZ

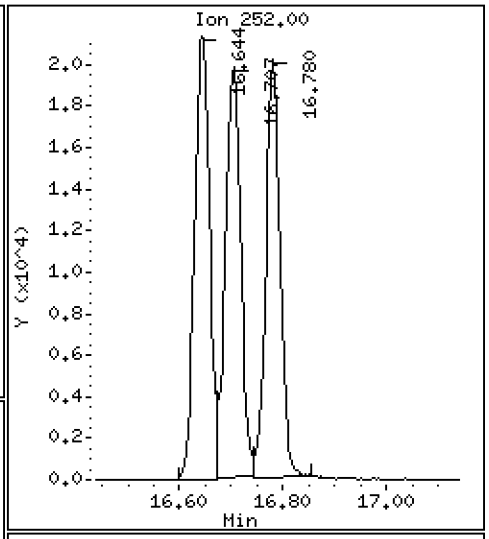
Column phase: Rxi-17sil

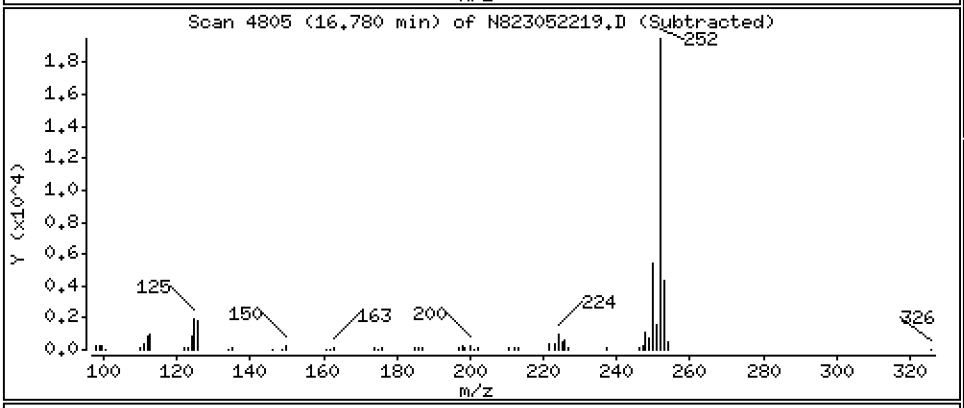
Column diameter: 0.25

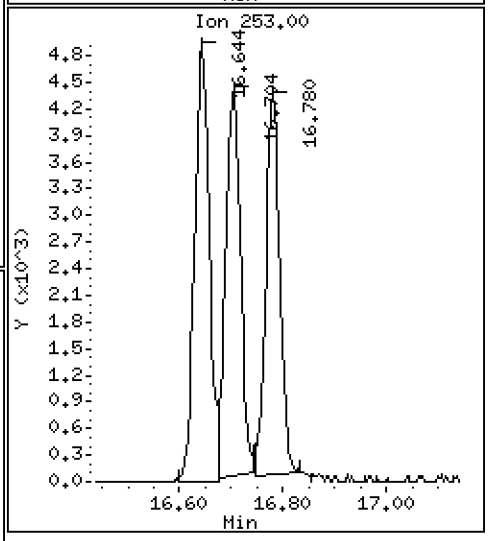
30 Benzo(j)fluoranthene

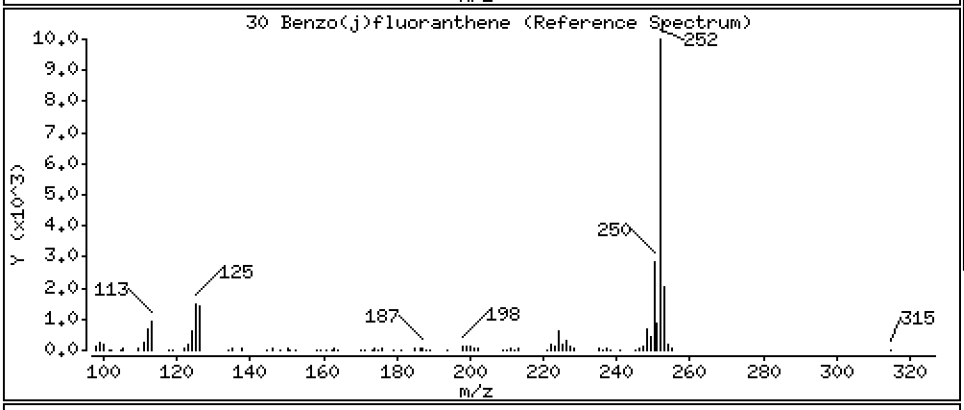
Concentration: 4.677 ug/mL

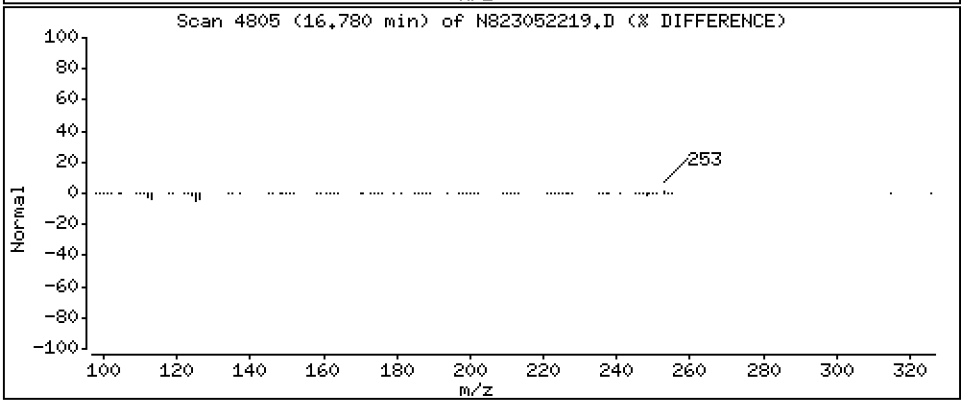












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

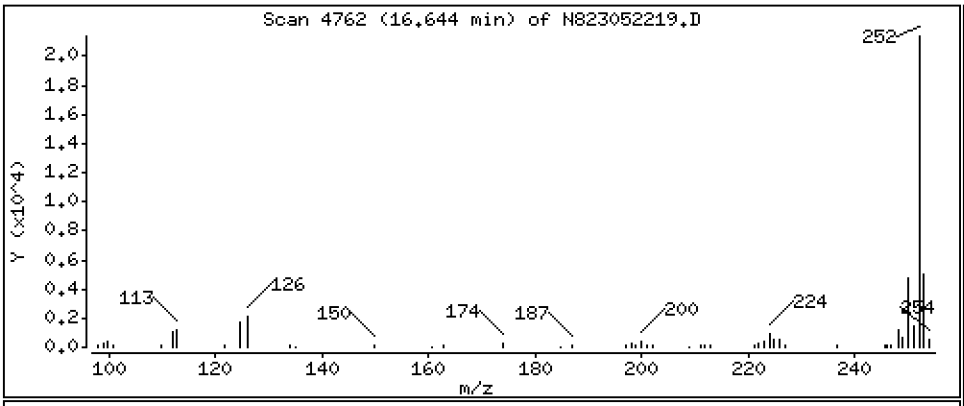
Operator: JZ

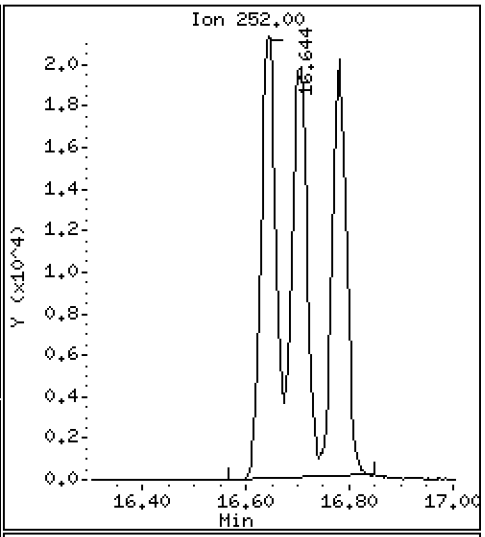
Column phase: Rxi-17sil

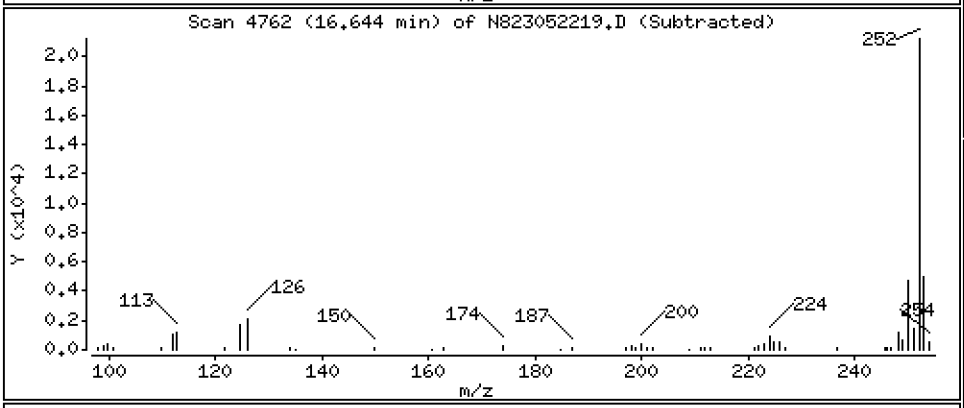
Column diameter: 0.25

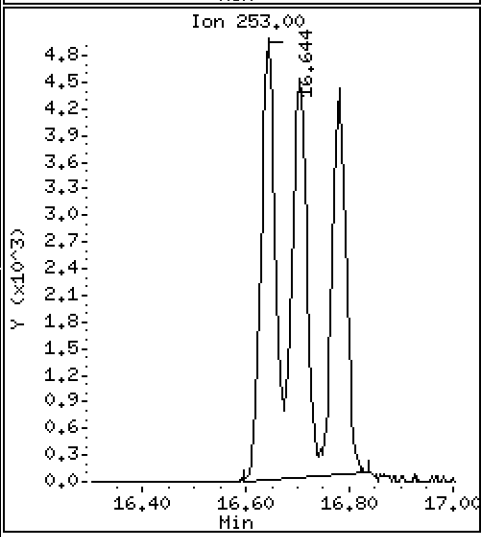
31 Total Benzofluoranthenes

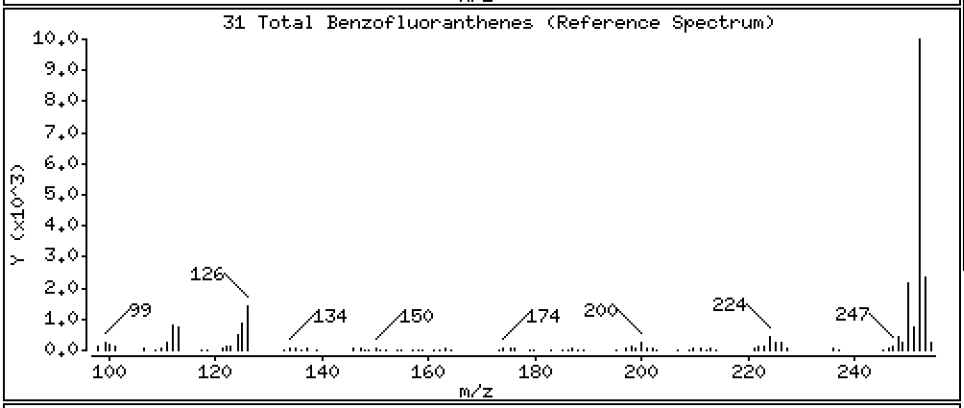
Concentration: 13.69 ug/mL

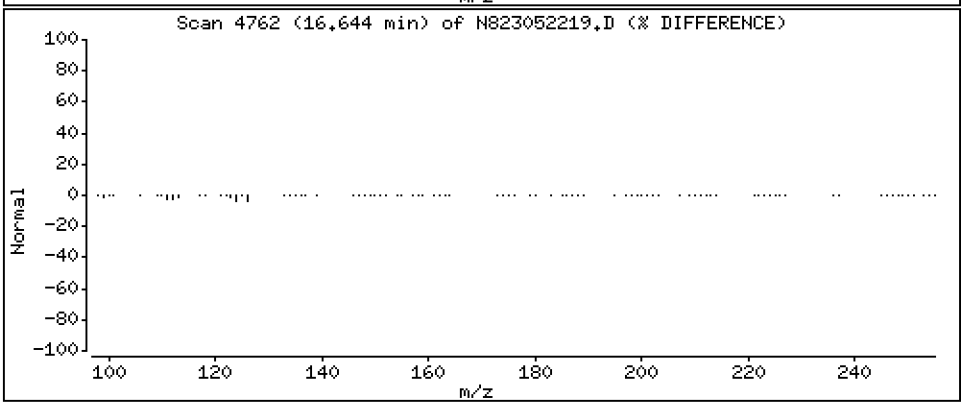












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

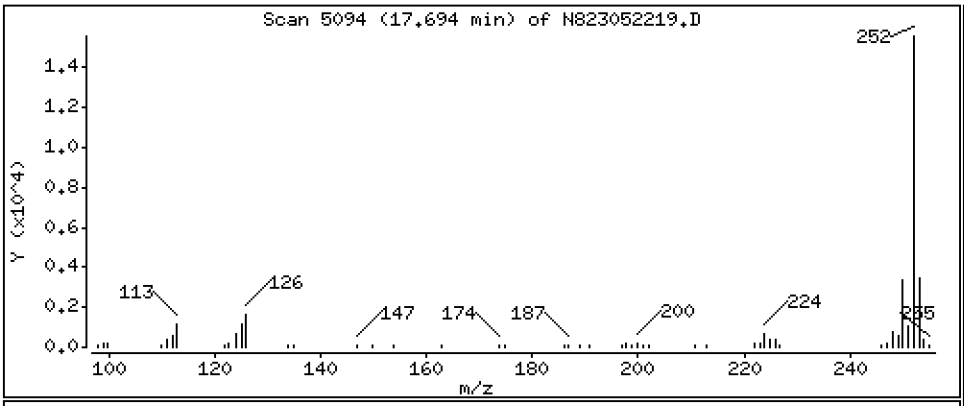
Operator: JZ

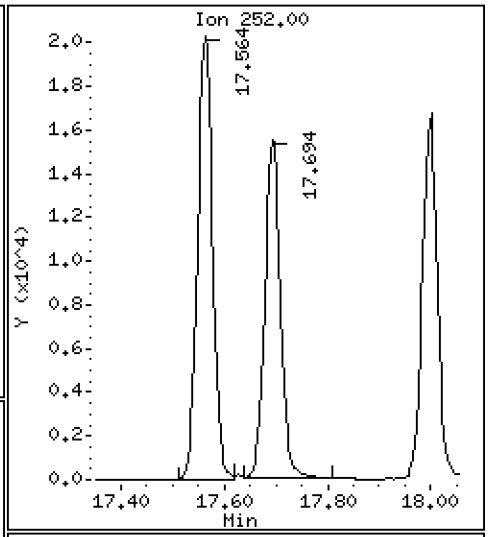
Column phase: Rxi-17sil

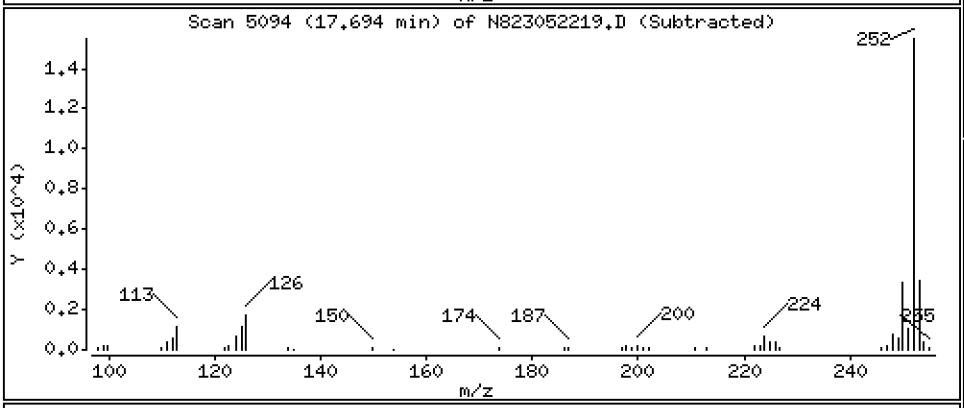
Column diameter: 0.25

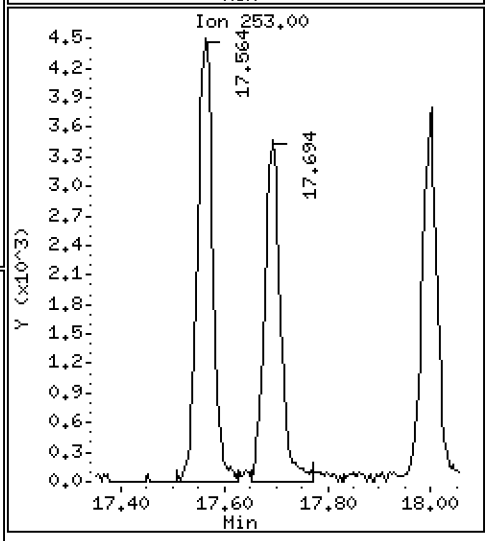
32 Benzo(a)pyrene

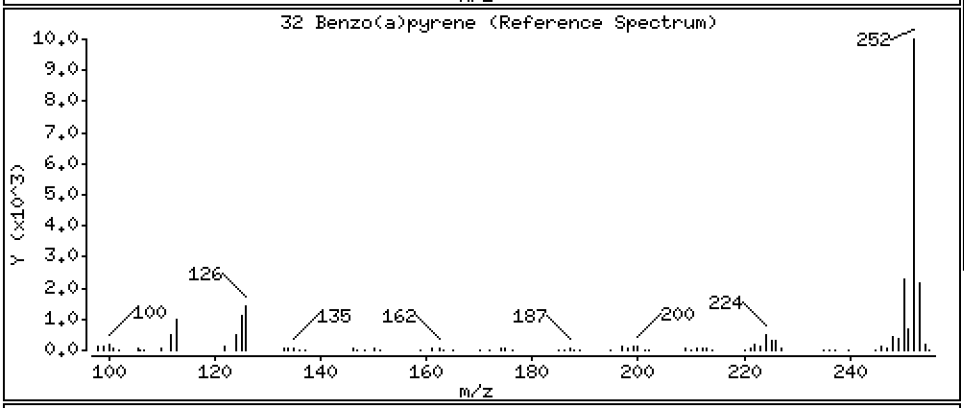
Concentration: 3.929 ug/mL

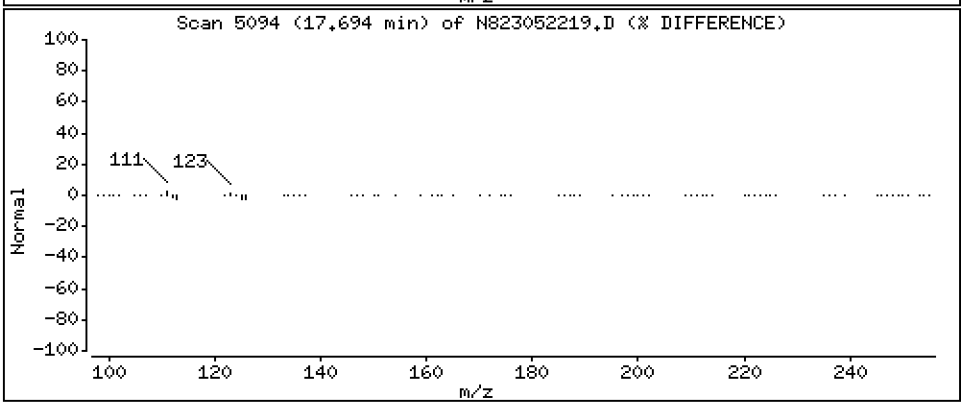












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

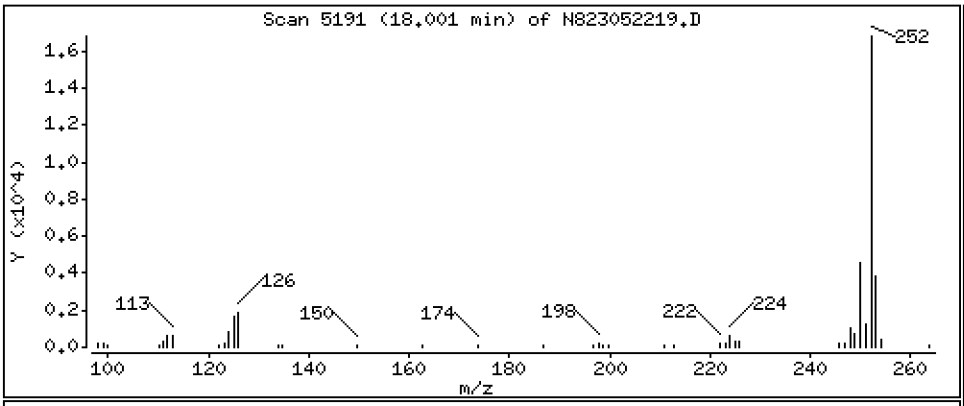
Operator: JZ

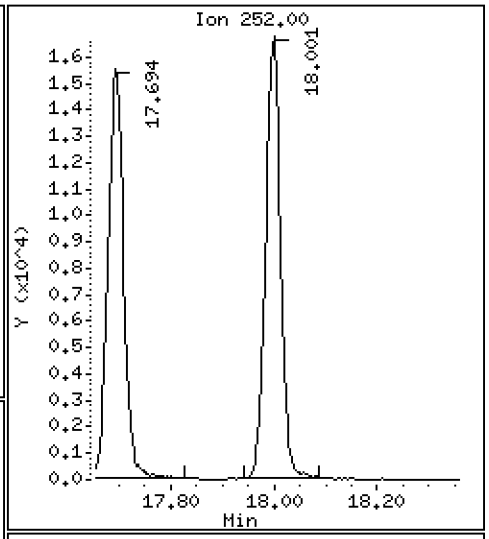
Column phase: Rxi-17sil

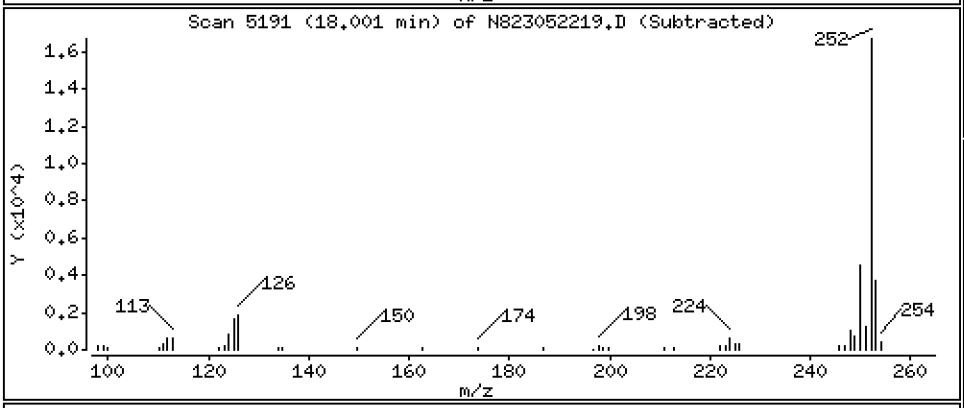
Column diameter: 0.25

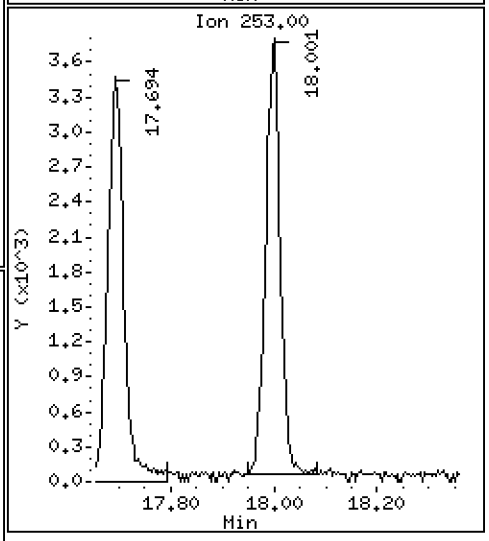
35 Perylene

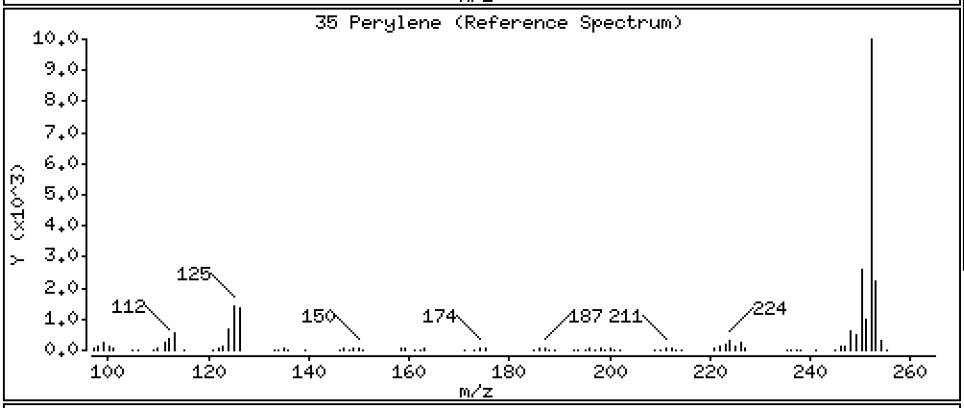
Concentration: 3.996 ug/mL

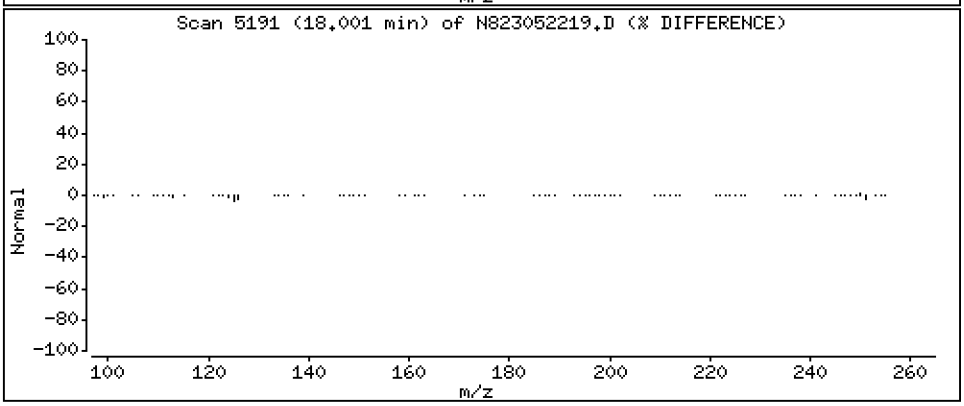












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

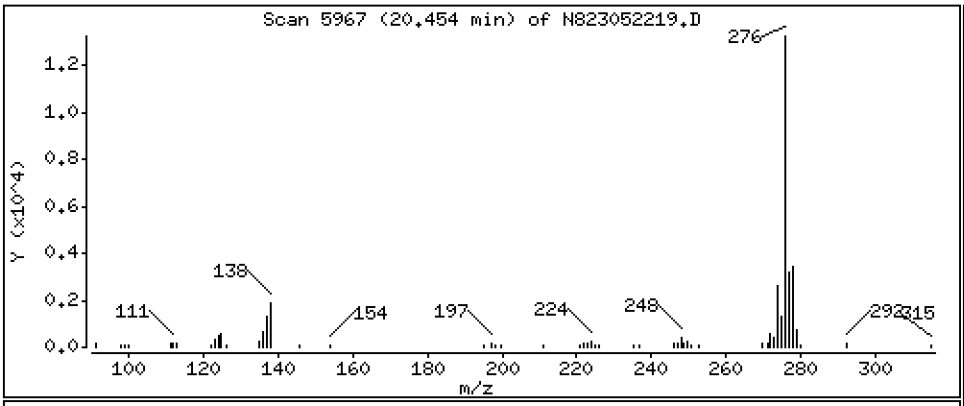
Operator: JZ

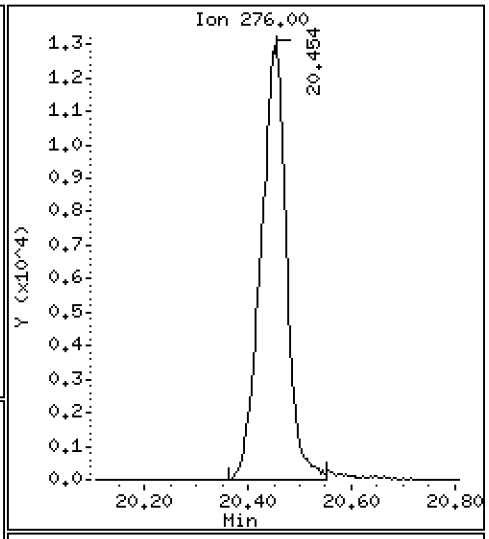
Column phase: Rxi-17sil

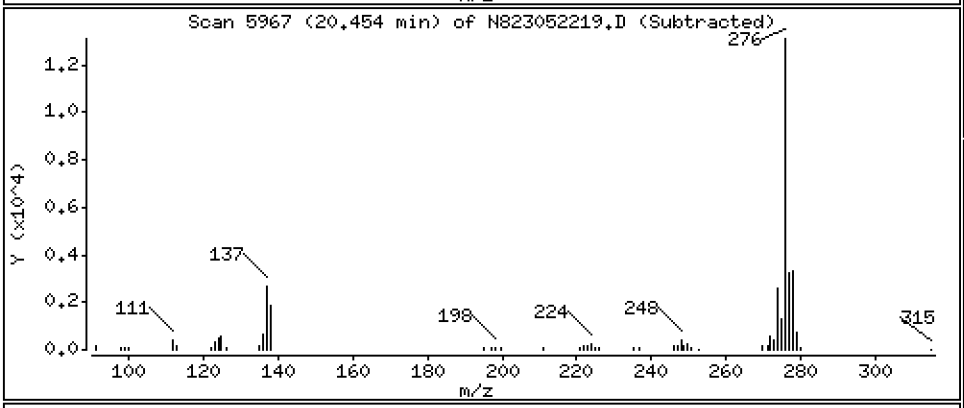
Column diameter: 0.25

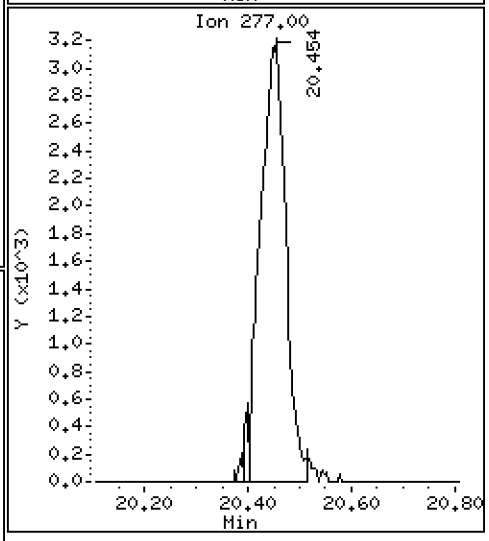
37 Indeno(1,2,3-cd)pyrene

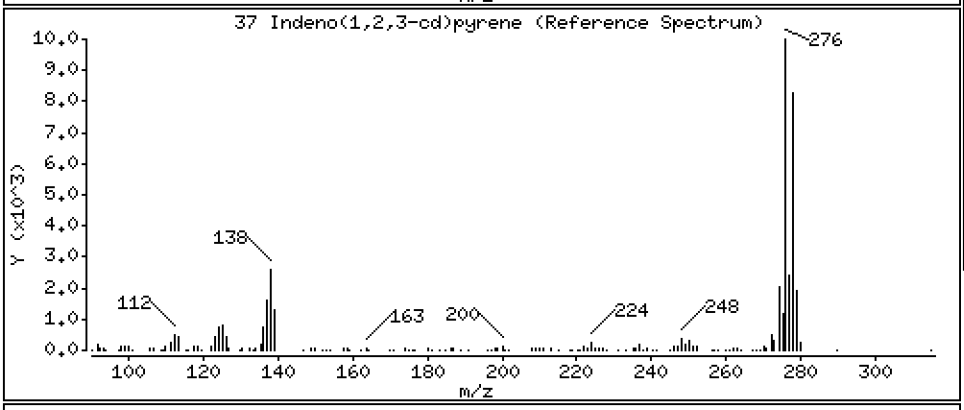
Concentration: 5.253 ug/mL

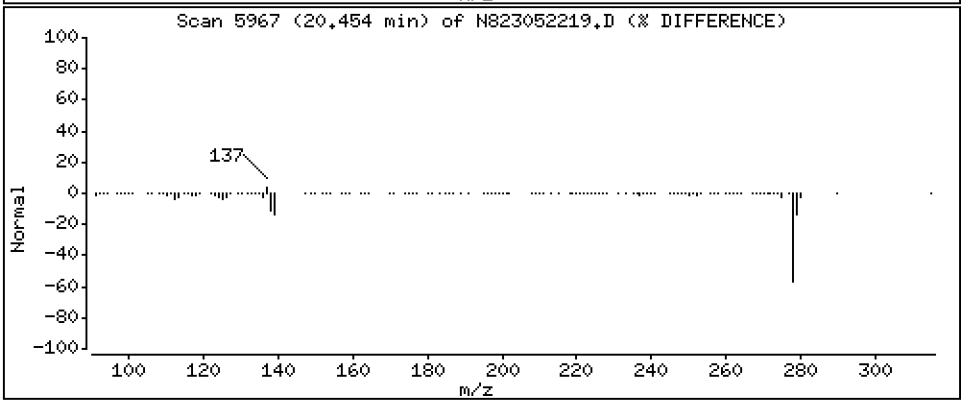












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

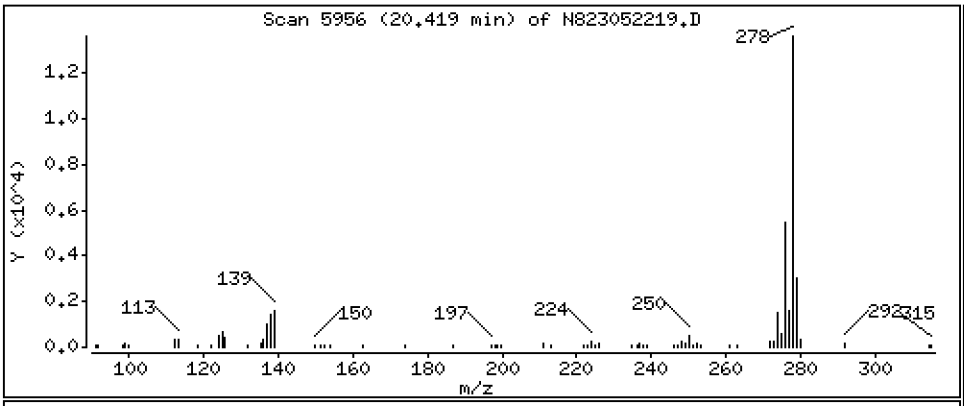
Operator: JZ

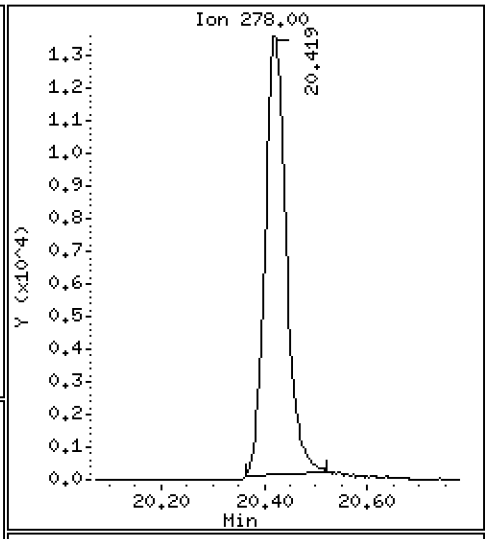
Column phase: Rxi-17sil

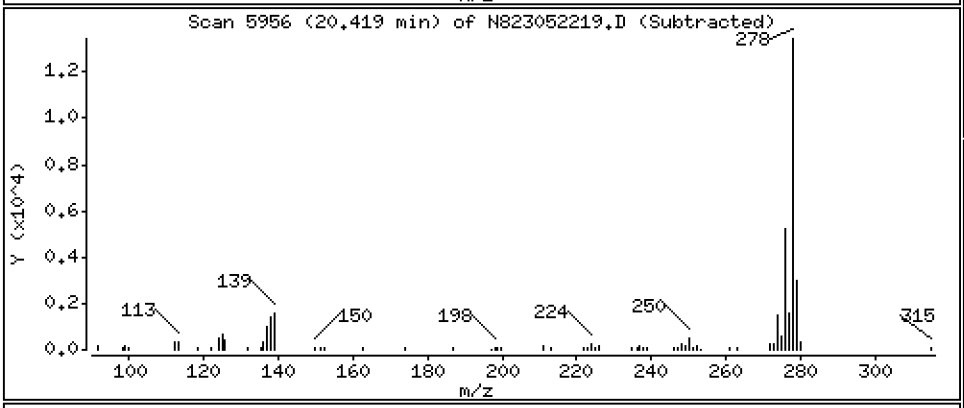
Column diameter: 0.25

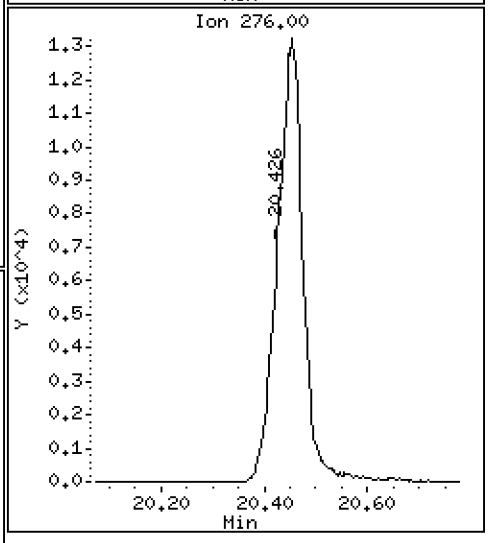
38 Dibenzo(a,h)anthracene

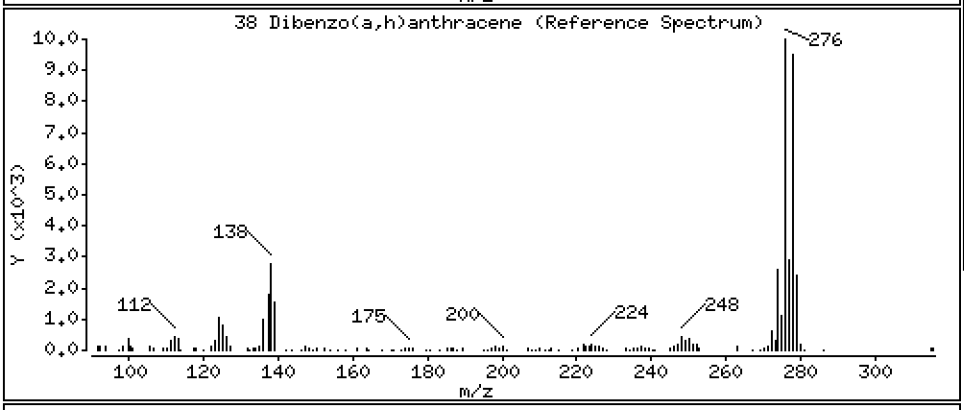
Concentration: 5.095 ug/mL

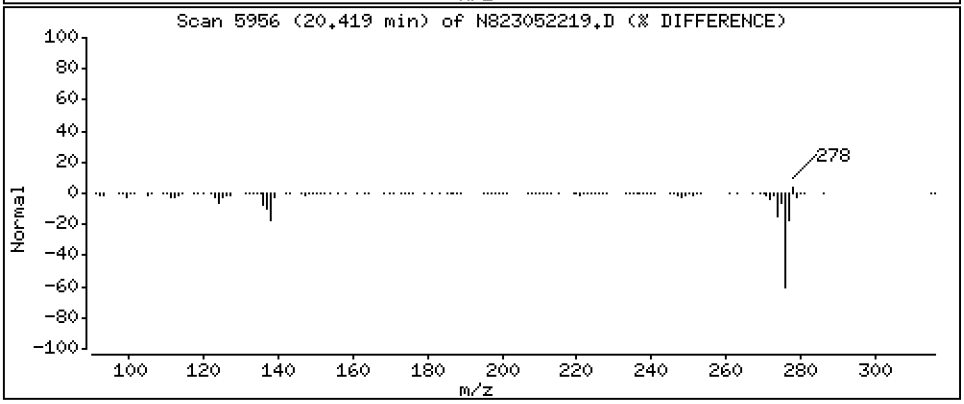












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052219.D

Date : 22-MAY-2023 20:06

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BS1,

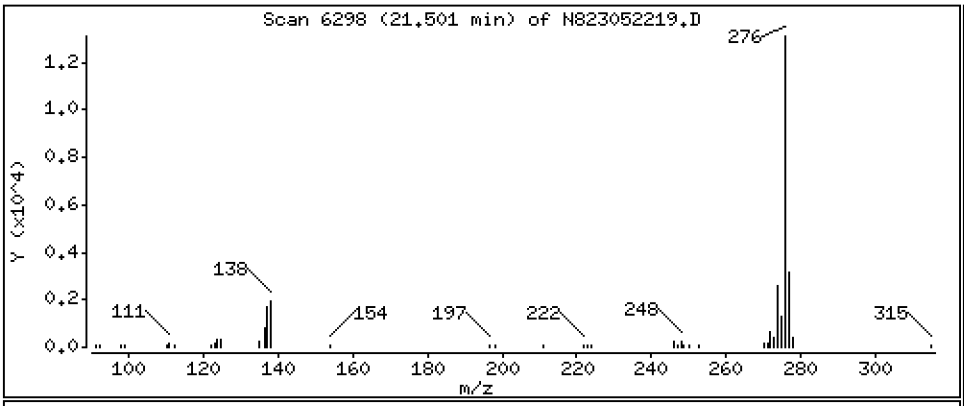
Operator: JZ

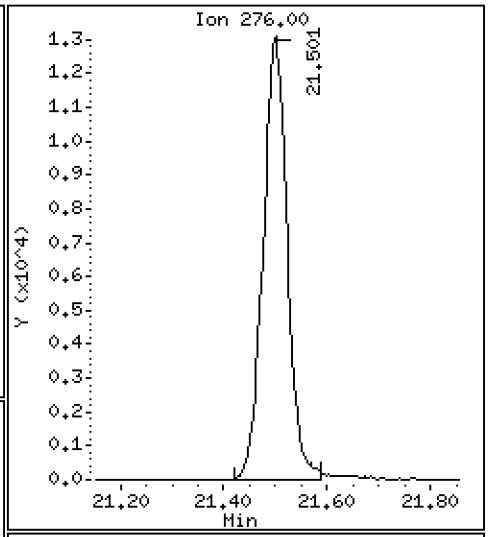
Column phase: Rxi-17sil

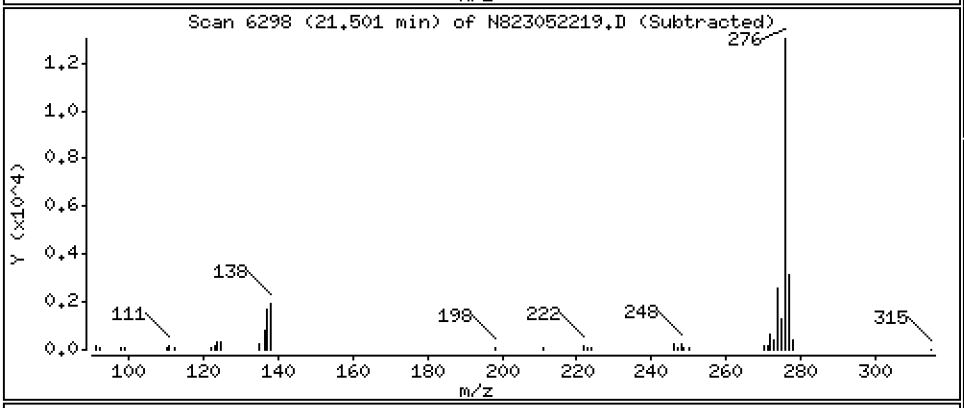
Column diameter: 0.25

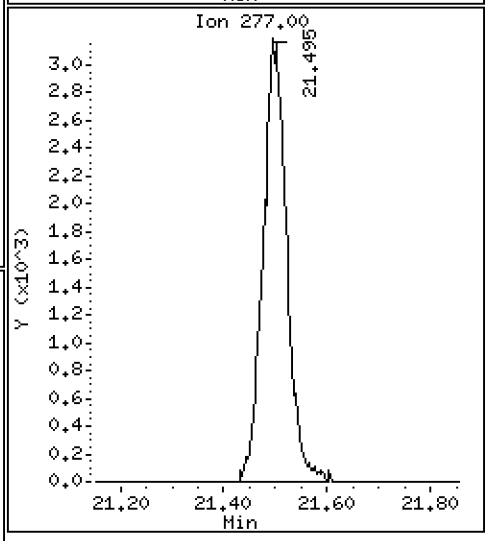
39 Benzo(g,h,i)perylene

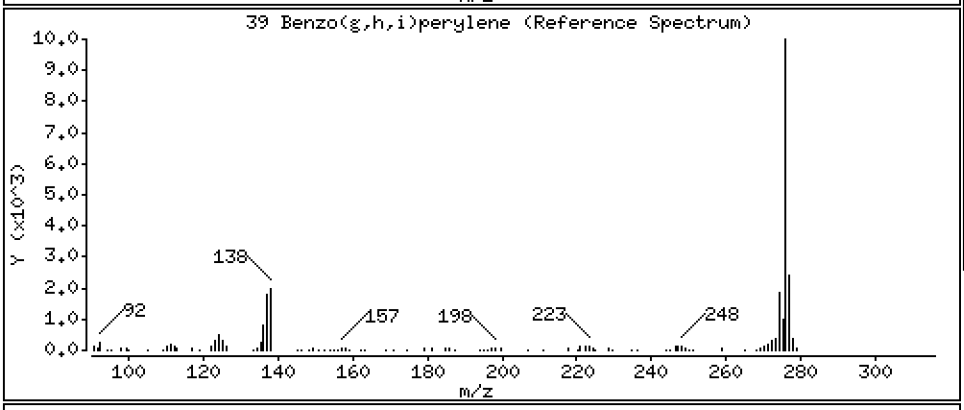
Concentration: 5.396 ug/mL

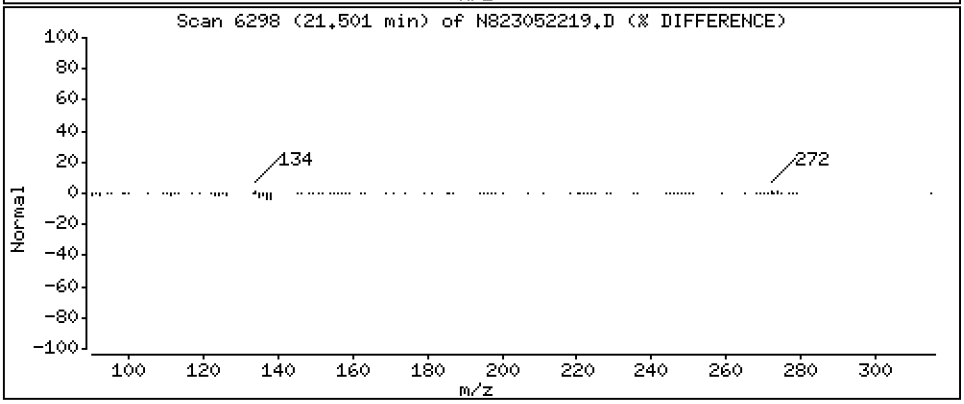












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230522.b\N823052219.D
Lab Smp Id: BLE0149-BS1
Inj Date : 22-MAY-2023 20:06
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0149-BS1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Meth Date : 23-May-2023 10:38 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.805	4.818	(1.000)	17287	2.00000	
	2 Naphthalene	128	4.837	4.846	(1.007)	28225	3.20477	3.205
$	3 2-Methylnaphthalene-d10	152	5.542	5.551	(1.153)	11814	2.21274	2.213
	4 2-Methylnaphthalene	141	5.589	5.599	(1.163)	15868	3.17331	3.173
	5 1-methylnaphthalene	141	5.789	5.795	(1.205)	15928	3.21260	3.213
	9 Acenaphthylene	152	6.987	6.993	(0.985)	27566	3.08089	3.081
*	10 Acenaphthene-d10	164	7.094	7.101	(1.000)	10107	2.00000	
	11 Acenaphthene	153	7.145	7.151	(1.007)	18047	3.11318	3.113
	12 Dibenzofuran	168	7.297	7.306	(1.029)	27790	3.19172	3.192
	14 Fluorene	166	7.774	7.781	(1.096)	23024	3.31342	3.313
*	15 Phenanthrene-d10	188	9.131	9.140	(1.000)	18862	2.00000	
	16 Phenanthrene	178	9.169	9.175	(1.004)	36811	3.68451	3.685
	17 Anthracene	178	9.210	9.213	(1.009)	33417	3.56637	3.566
	19 Carbazole	167	9.725	9.731	(1.065)	33375	3.72906	3.729
	22 Fluoranthene	202	10.924	10.930	(1.196)	45655	3.97315	3.973
$	21 Fluoranthene-d10	212	10.886	10.895	(1.192)	27794	2.72979	2.730
	23 Pyrene	202	11.433	11.442	(0.815)	47336	4.69459	4.695
	24 Benzo(a)anthracene	228	13.908	13.918	(0.991)	44328	4.27836	4.278
*	25 Chrysene-d12	240	14.035	14.044	(1.000)	15749	2.00000	
	27 Chrysene	228	14.108	14.117	(1.005)	43538	4.27746	4.277
	28 Benzo(b)fluoranthene	252	16.644	16.653	(0.929)	43660	4.52016	4.520
	29 Benzo(k)fluoranthene	252	16.707	16.713	(0.932)	41823	4.59571	4.596
	30 Benzo(j)fluoranthene	252	16.780	16.789	(0.936)	39325	4.67692	4.677
	31 Total Benzofluoranthenes	252	16.644	16.653	(0.929)	123005	13.6944	13.69(M)
	32 Benzo(a)pyrene	252	17.693	17.703	(0.987)	32986	3.92882	3.929
*	33 Perylene-d12	264	17.918	17.934	(1.000)	14816	2.00000	
	35 Perylene	252	18.000	18.006	(1.005)	33686	3.99557	3.996
$	36 Dibenzo(a,h)anthracene-d14	292	20.311	20.318	(1.134)	25087	4.43506	4.435
	37 Indeno(1,2,3-cd)pyrene	276	20.454	20.457	(1.142)	44893	5.25288	5.253
	38 Dibenzo(a,h)anthracene	278	20.419	20.425	(1.140)	38663	5.09465	5.095(M)
	39 Benzo(g,h,i)perylene	276	21.500	21.503	(1.200)	42715	5.39563	5.396

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823052219.D
Lab Smp Id: BLE0149-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 22-MAY-2023
Calibration Time: 11:46
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	17081	8541	34162	17287	1.21
10 Acenaphthene-d10	9674	4837	19348	10107	4.48
15 Phenanthrene-d10	17710	8855	35420	18862	6.50
25 Chrysene-d12	15081	7541	30162	15749	4.43
33 Perylene-d12	15623	7812	31246	14816	-5.17

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.26
10 Acenaphthene-d10	7.10	6.60	7.60	7.09	-0.09
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.10
25 Chrysene-d12	14.04	13.54	14.54	14.04	-0.07
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.09

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

REVIEW SUMMARY FOR FILE - N823052219.D

Lab ID: BLE0149-BS1
nt8.i, 20230522.b\FSIMPNA230426.m,   22-MAY-2023 20:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

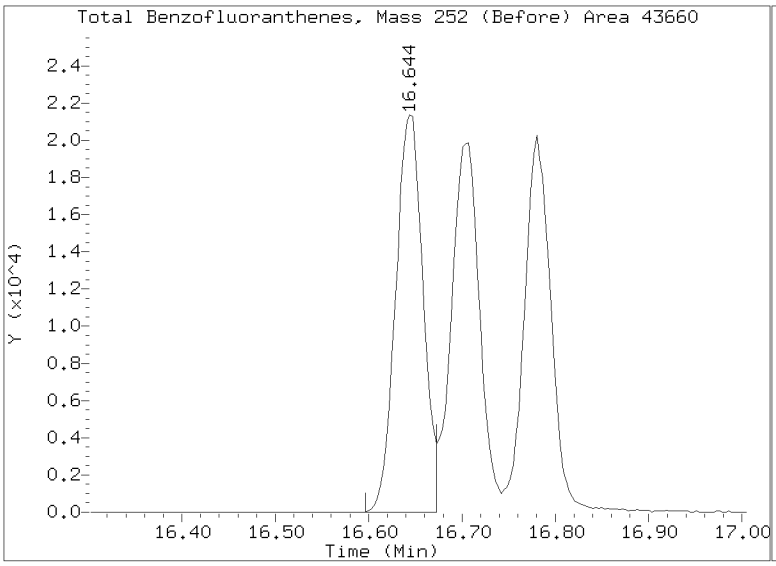
No RRT check performed

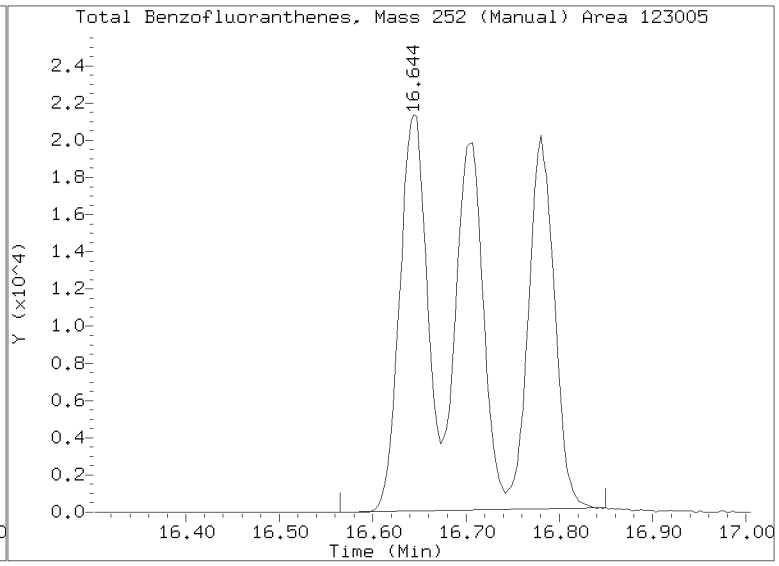
On Column LOD for nt8.i, 20230522.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

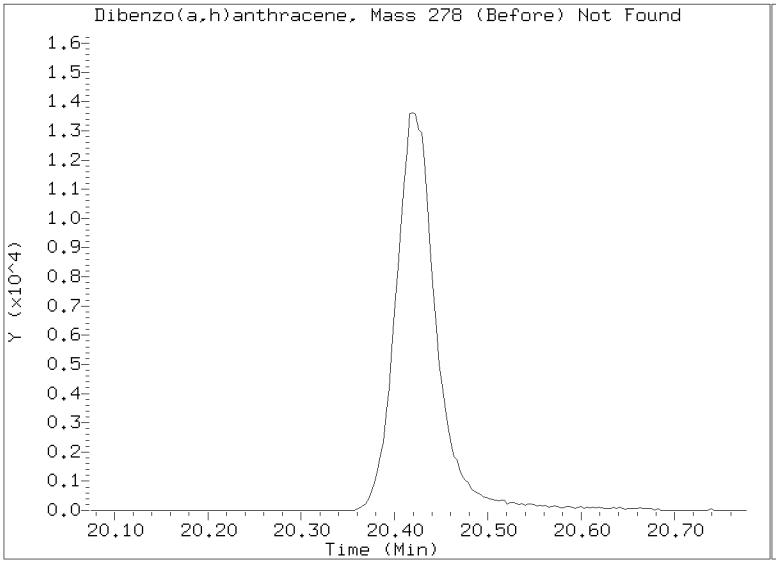
* Only compounds listed in the work order have been verified by the analyst *

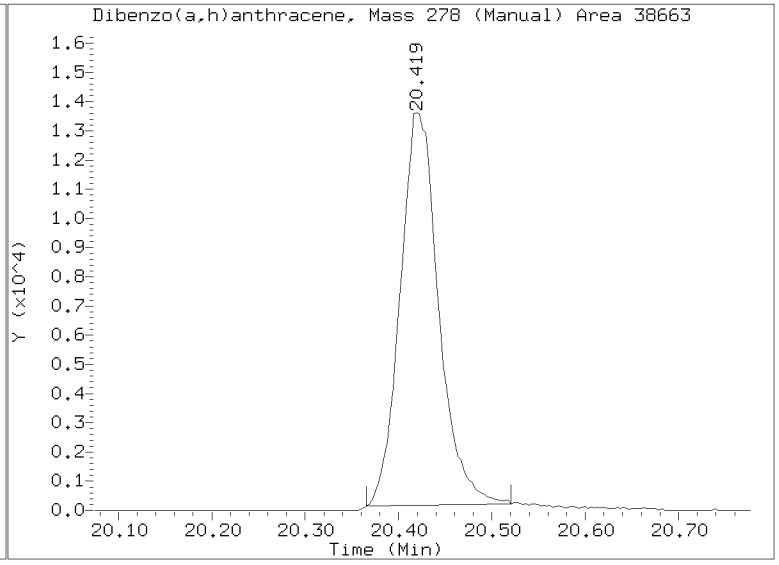
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230522.b/N823052219.D
Injection Date: 22-MAY-2023 20:06
Lab ID:BLE0149-BS1 Client ID:
Report Date: 05/23/2023 10:43









Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

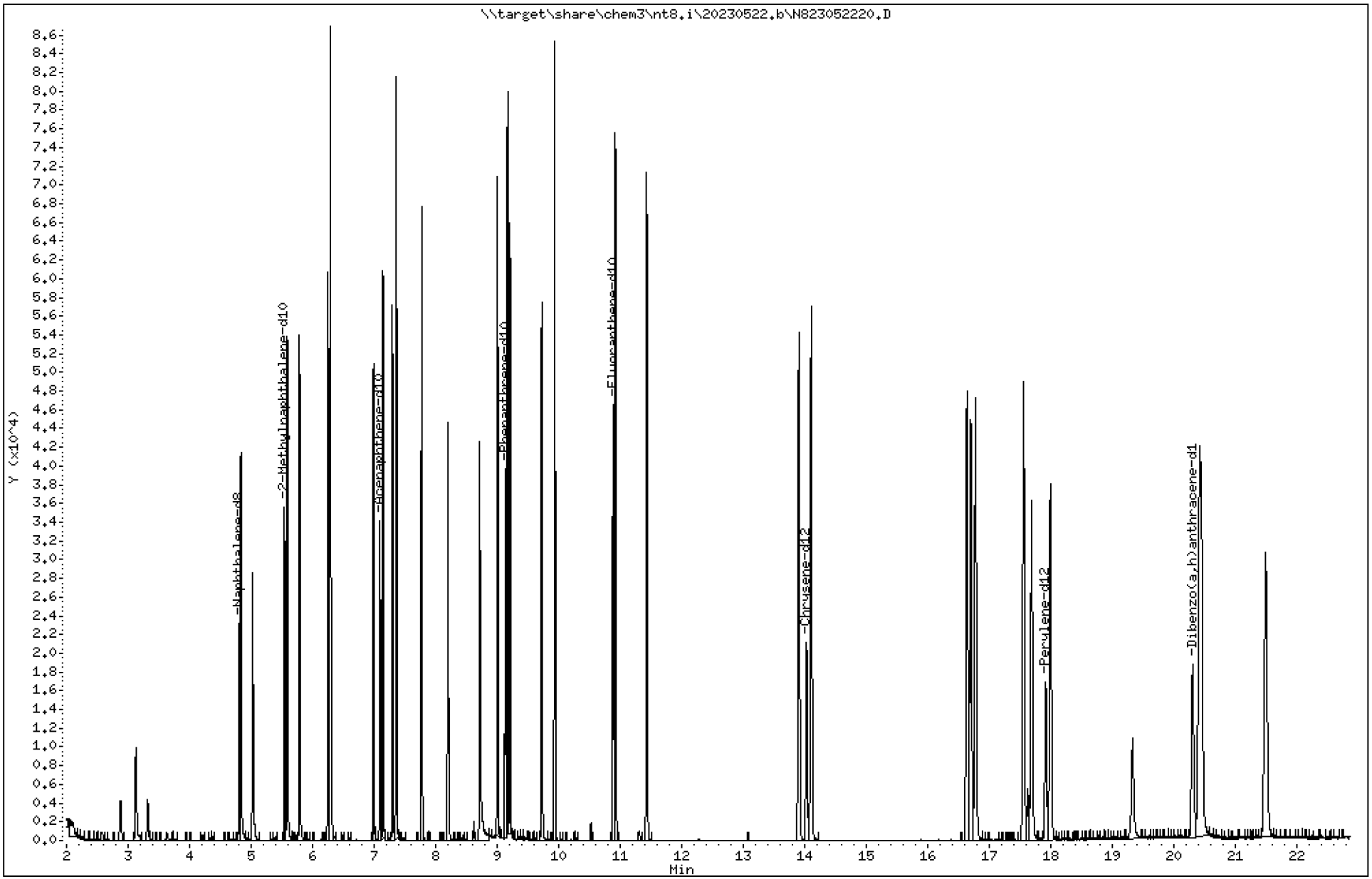
Instrument: nt8.i

Sample Info: BLE0149-BSD1,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

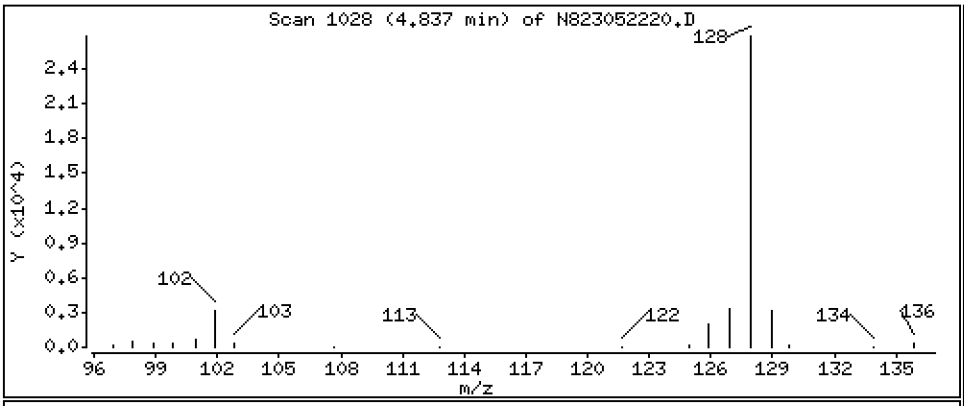
Operator: JZ

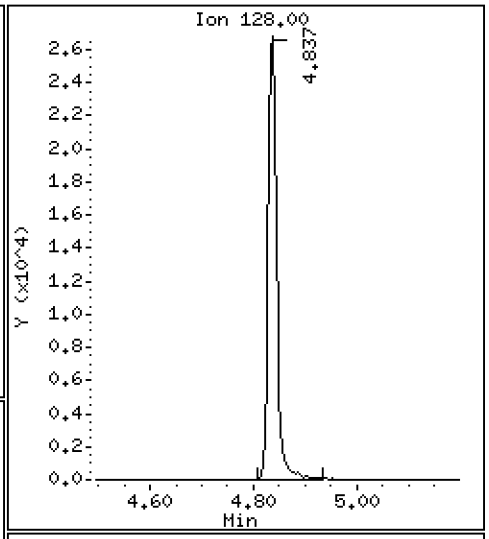
Column phase: Rxi-17sil

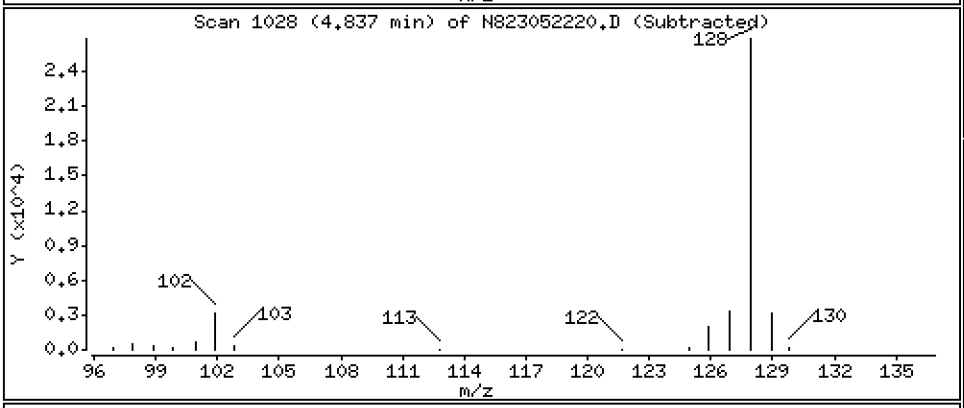
Column diameter: 0.25

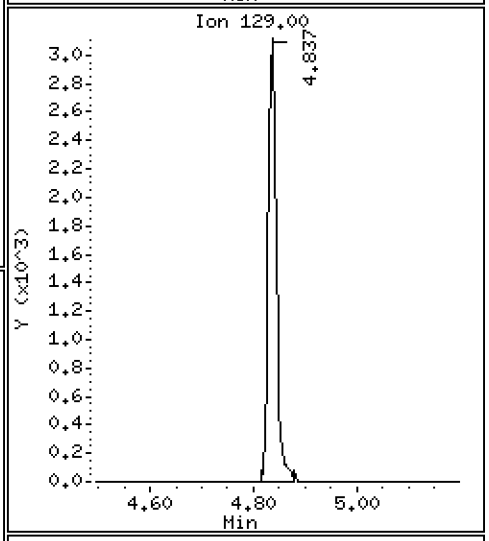
2 Naphthalene

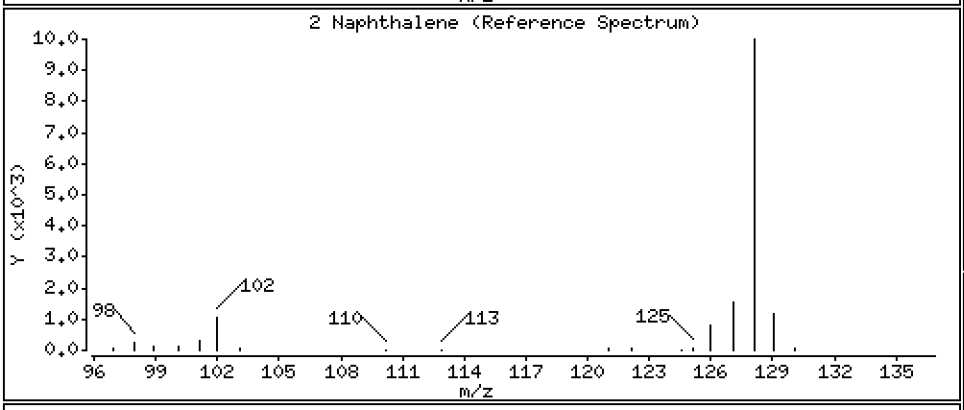
Concentration: 3.380 ug/mL

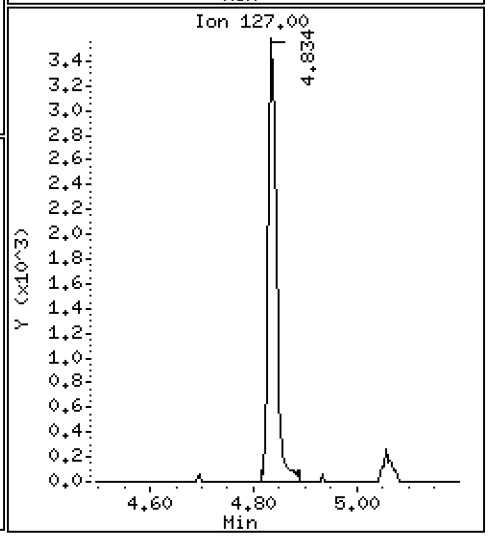


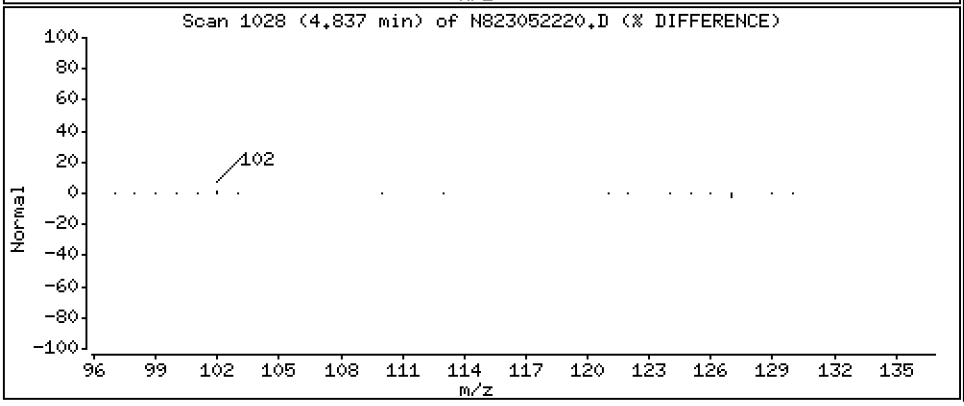












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

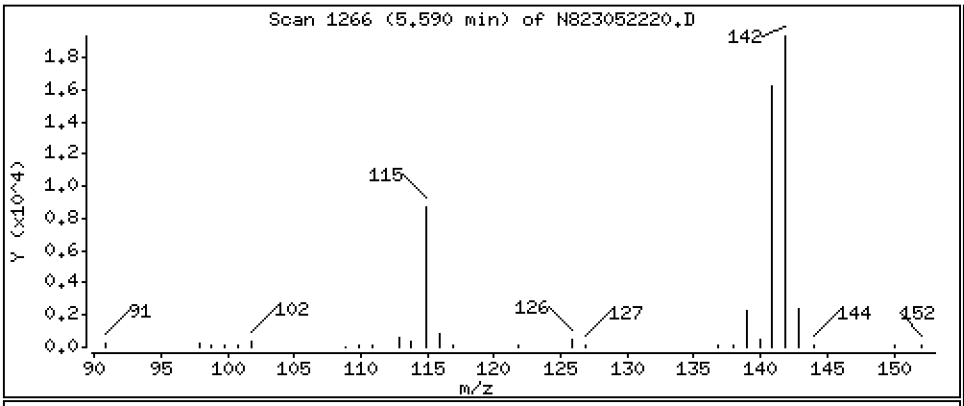
Operator: JZ

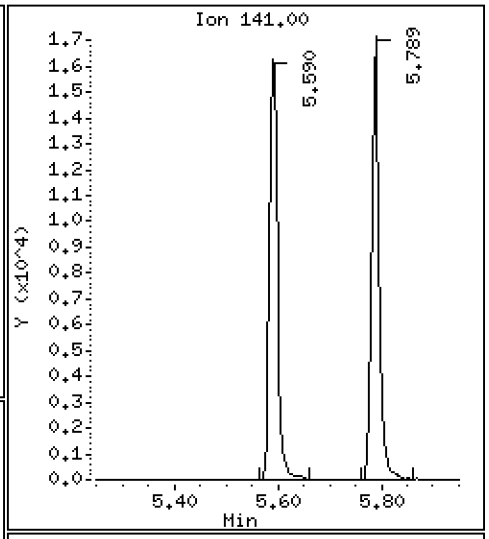
Column phase: Rxi-17sil

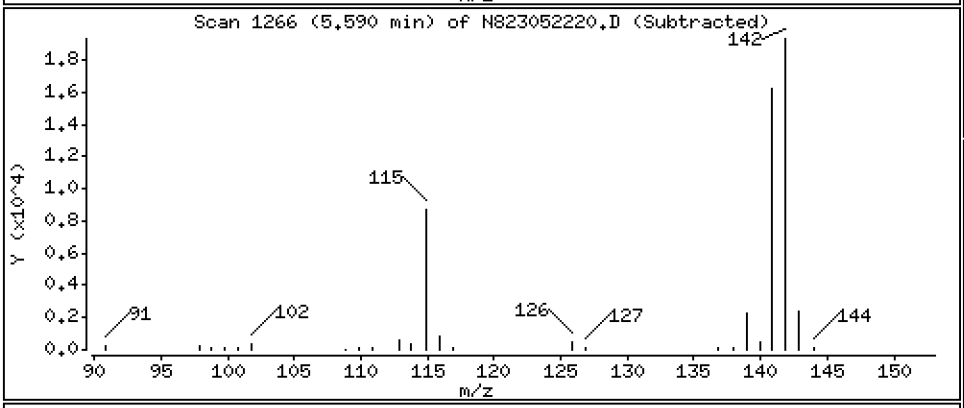
Column diameter: 0.25

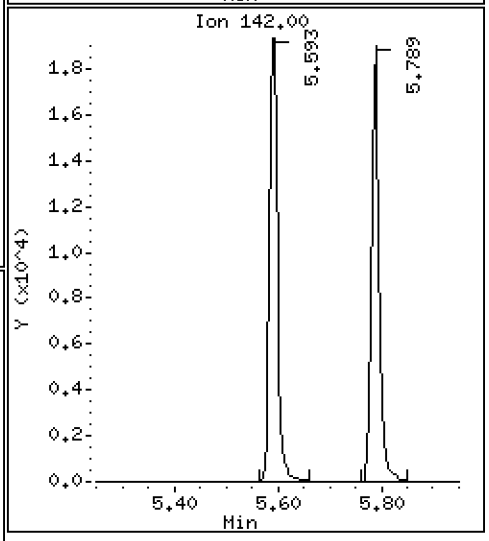
4 2-Methylnaphthalene

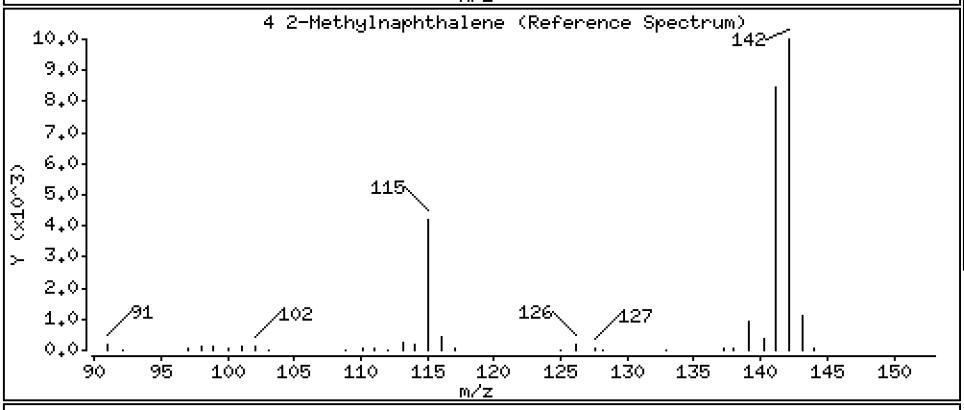
Concentration: 3.379 ug/mL

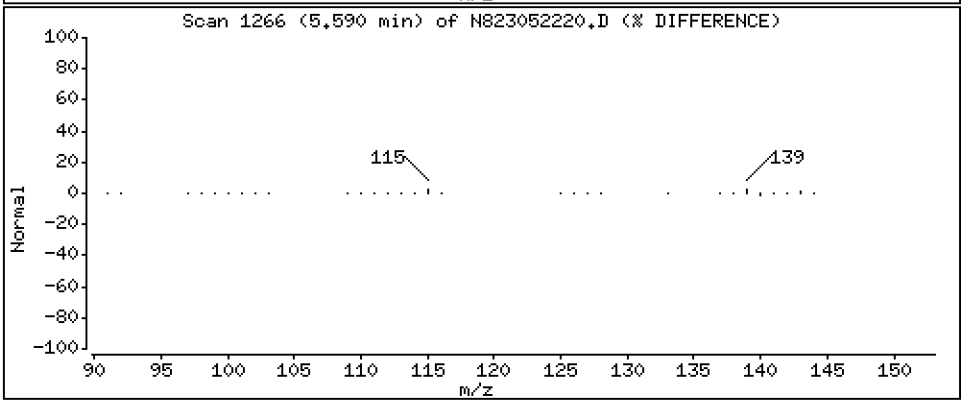












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

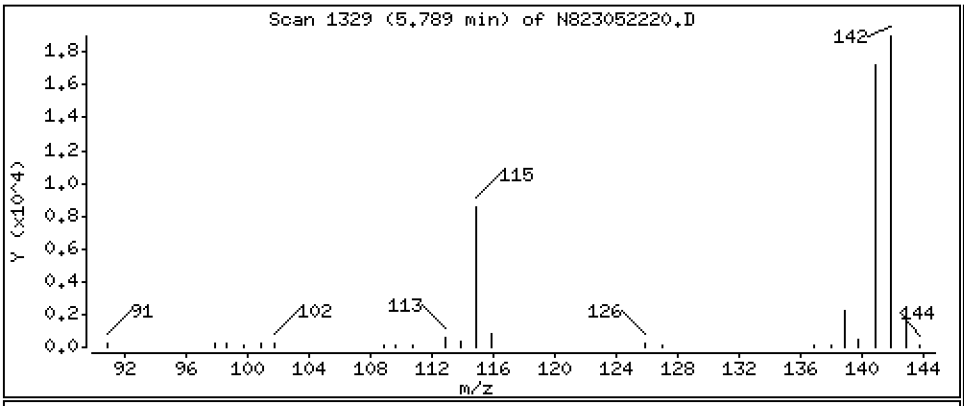
Operator: JZ

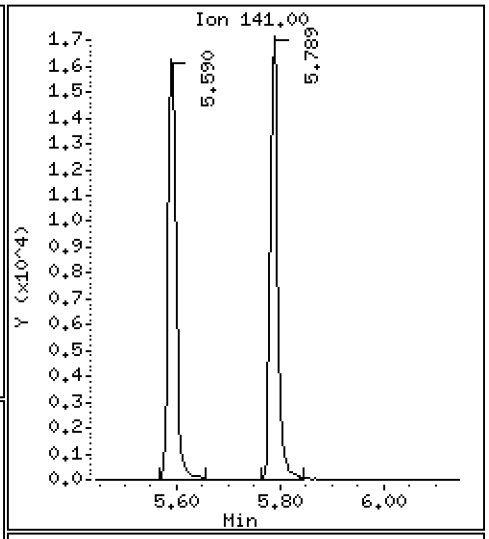
Column phase: Rxi-17sil

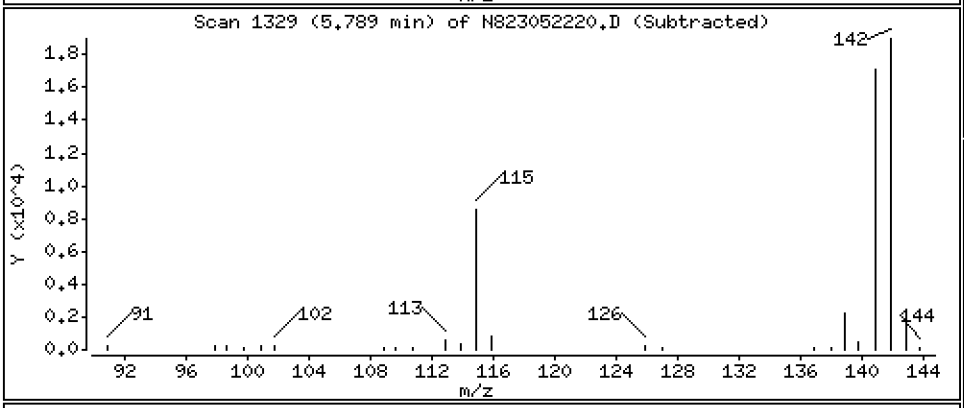
Column diameter: 0.25

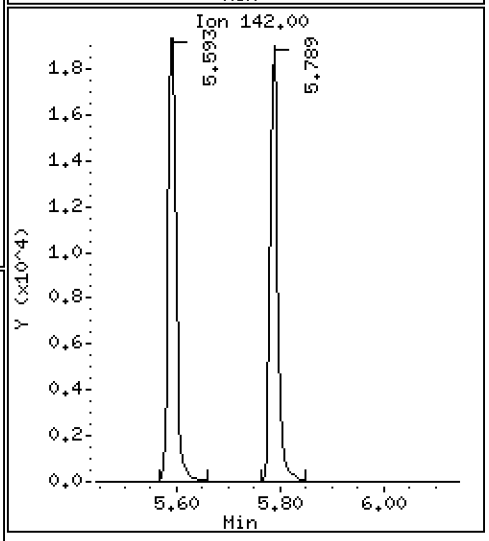
5 1-methylnaphthalene

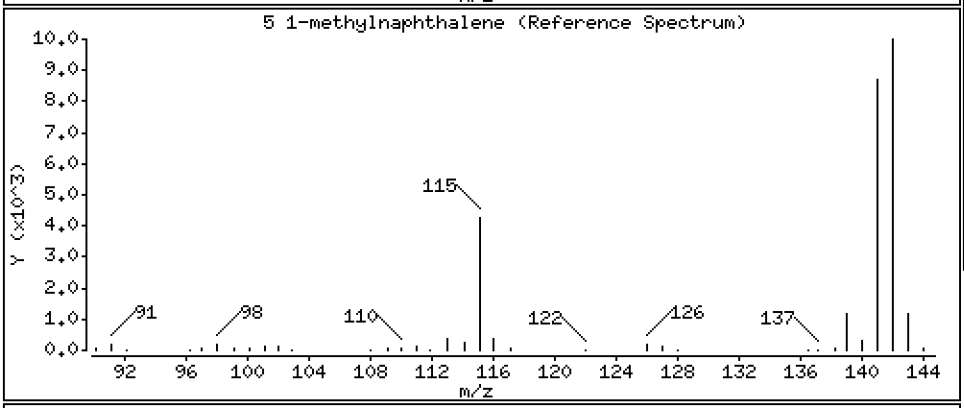
Concentration: 3.457 ug/mL

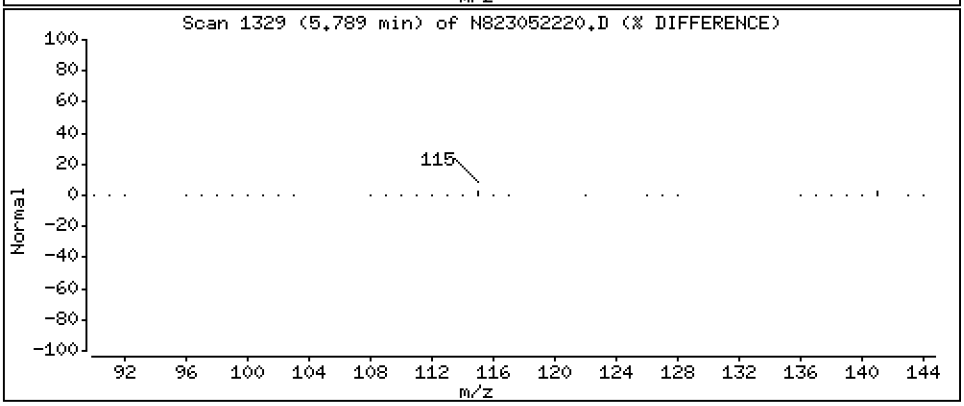












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

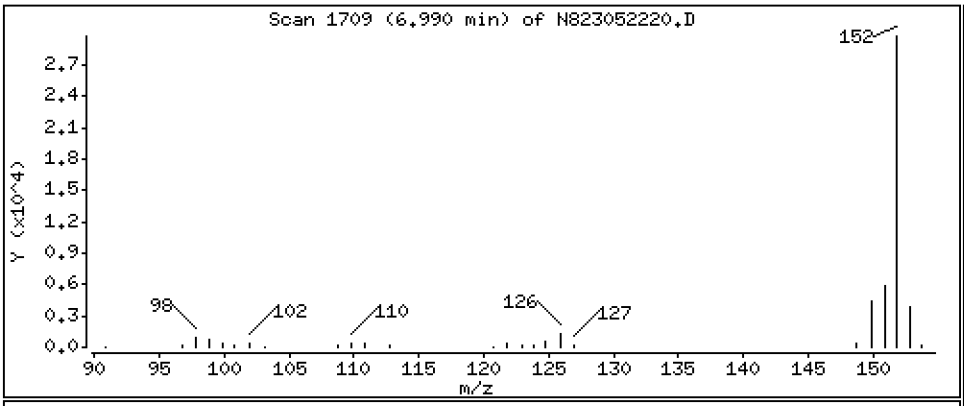
Operator: JZ

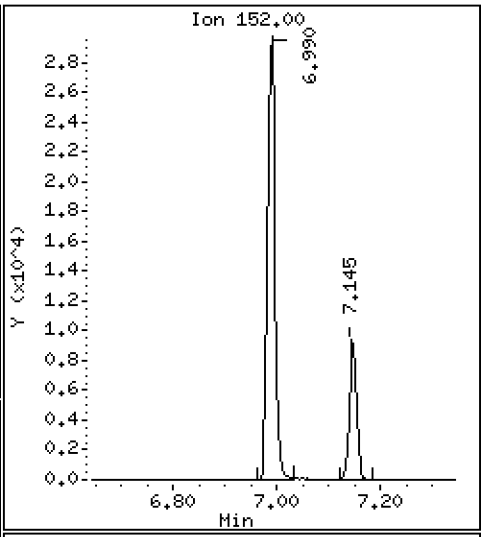
Column phase: Rxi-17sil

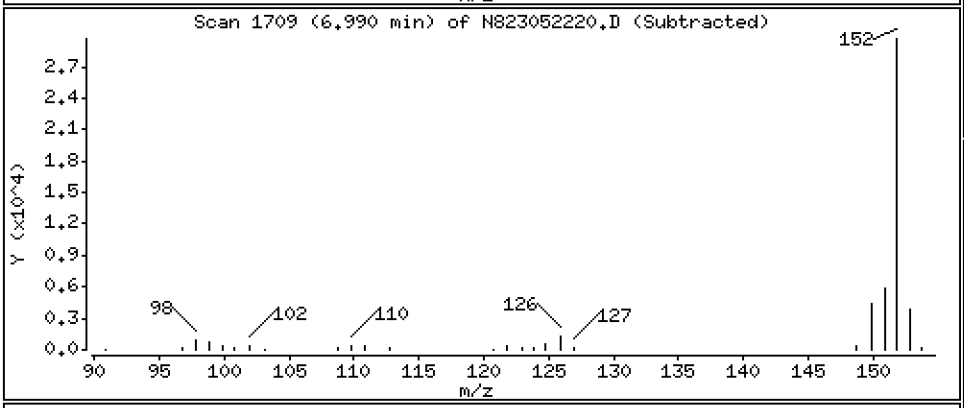
Column diameter: 0.25

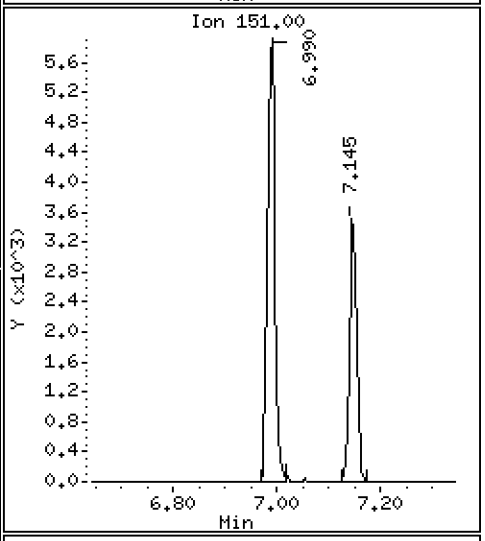
9 Acenaphthylene

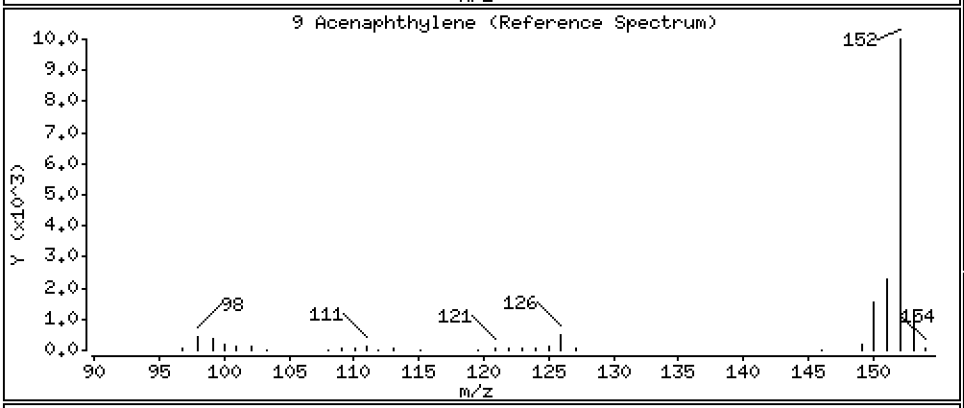
Concentration: 3.257 ug/mL

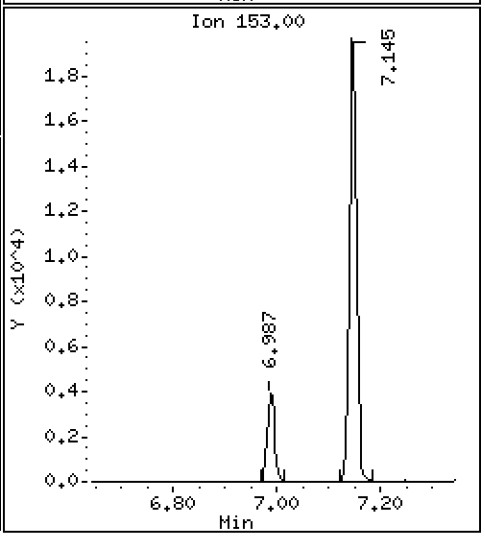


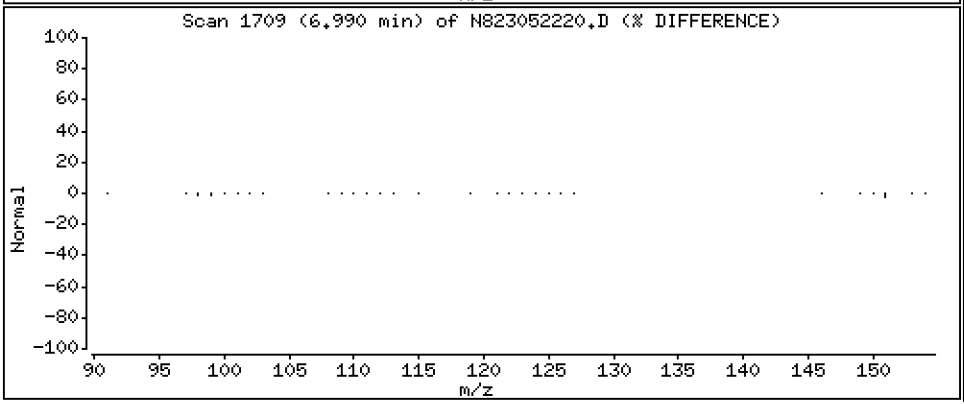












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

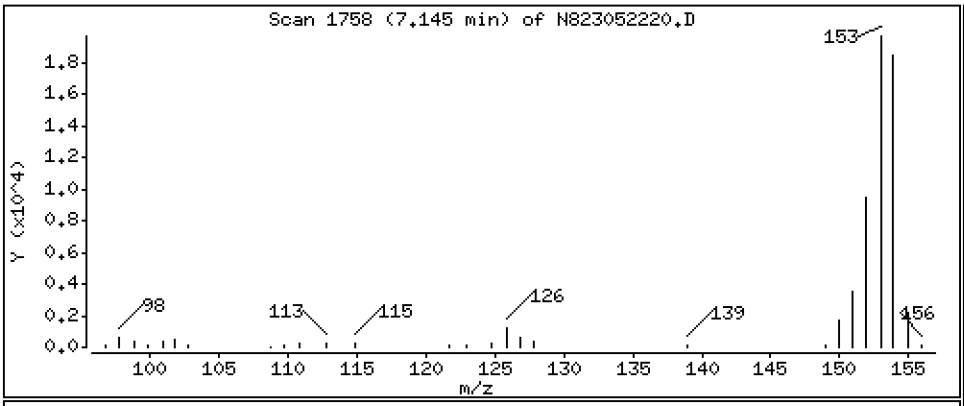
Operator: JZ

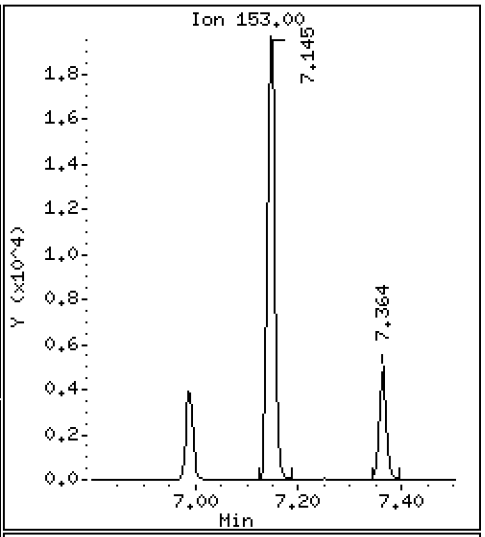
Column phase: Rxi-17sil

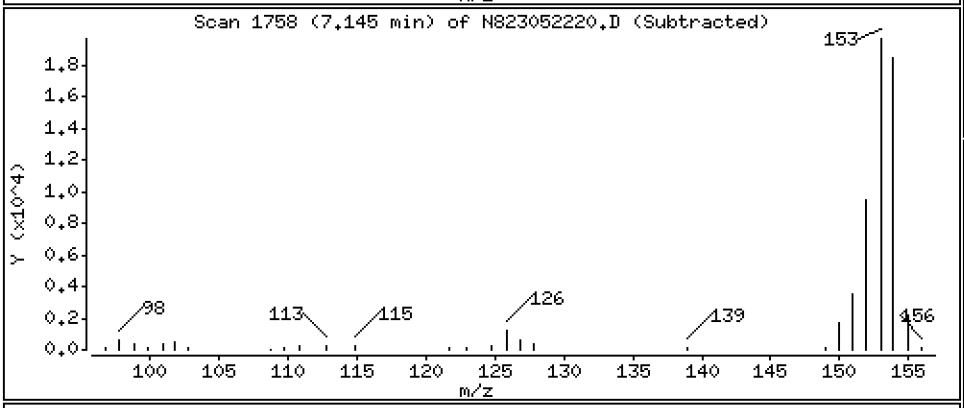
Column diameter: 0.25

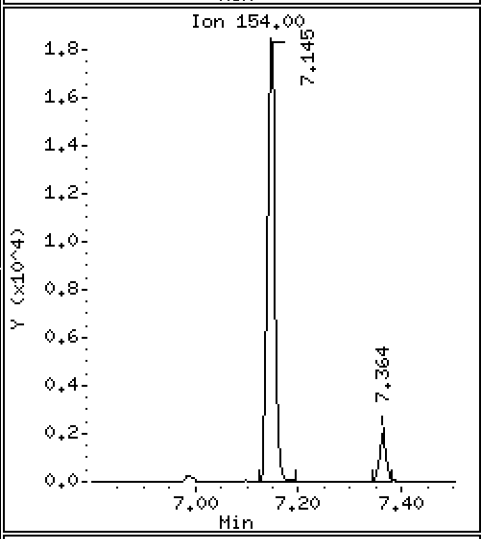
11 Acenaphthene

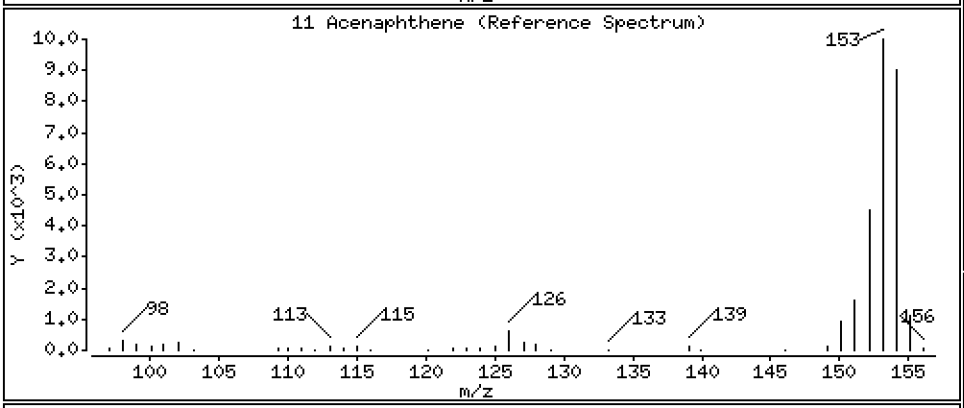
Concentration: 3.347 ug/mL

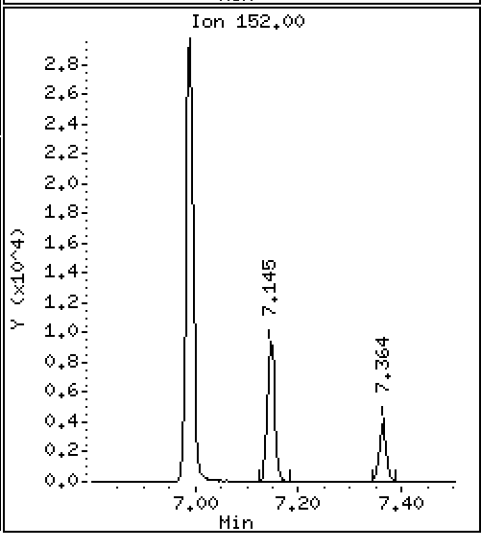


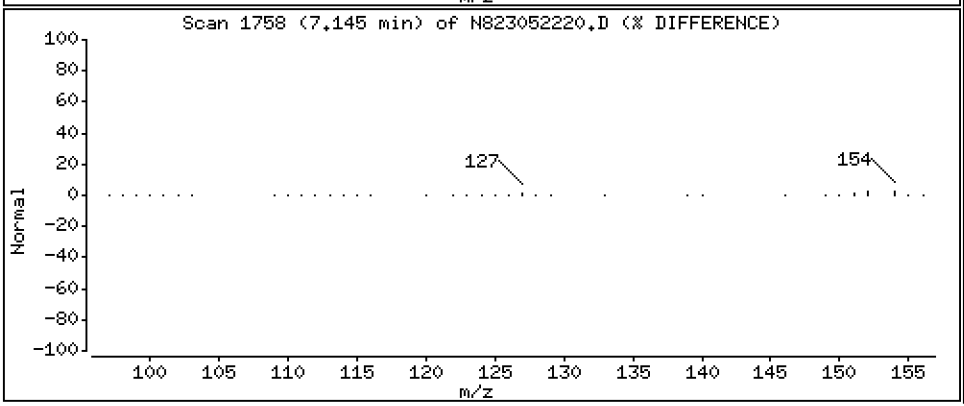












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

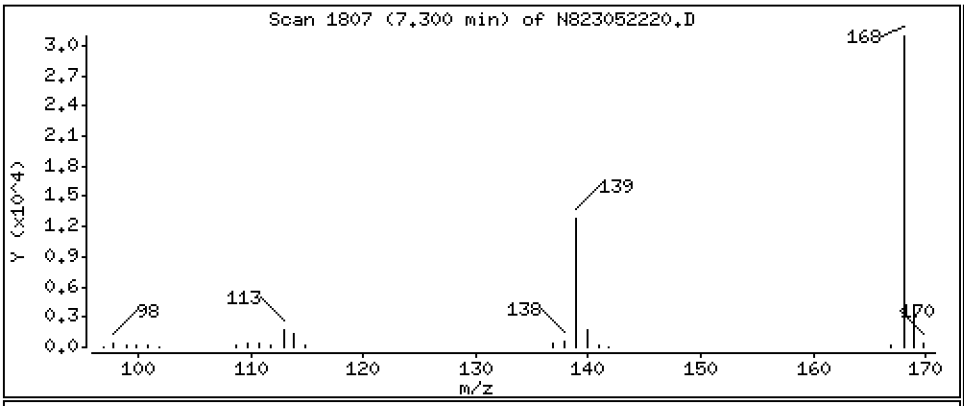
Operator: JZ

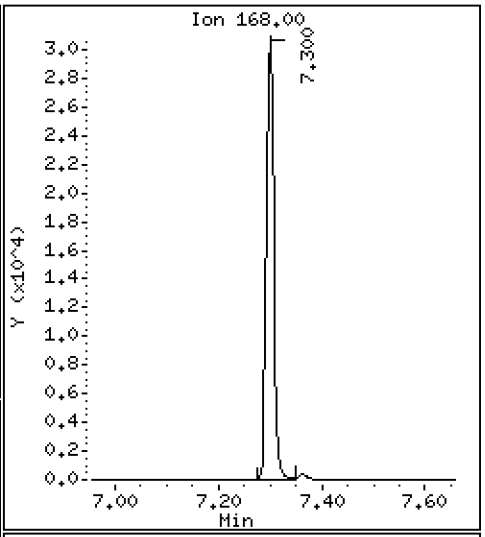
Column phase: Rxi-17sil

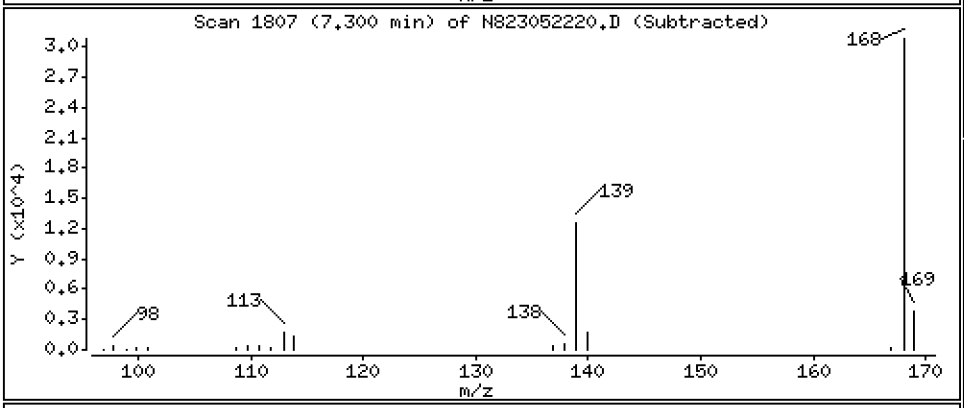
Column diameter: 0.25

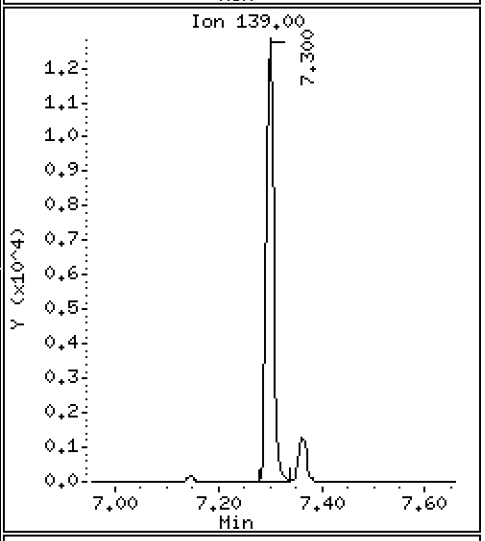
12 Dibenzofuran

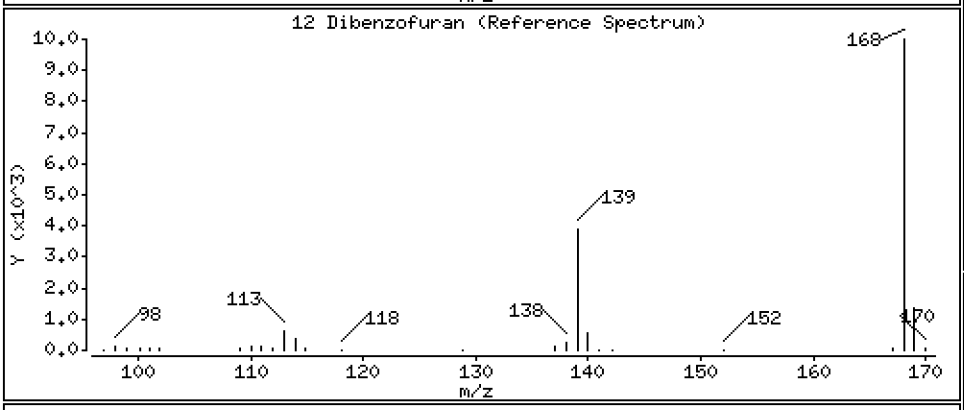
Concentration: 3.361 ug/mL

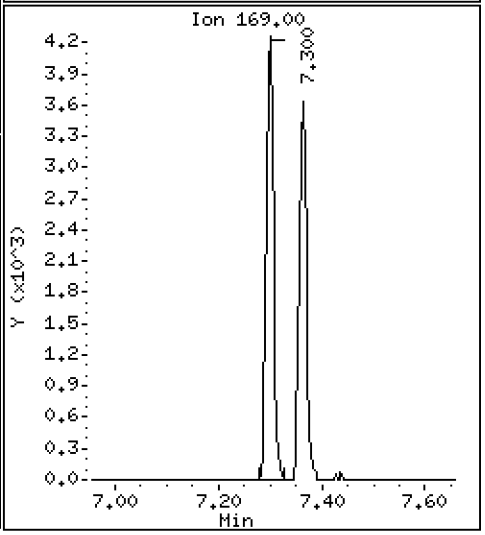


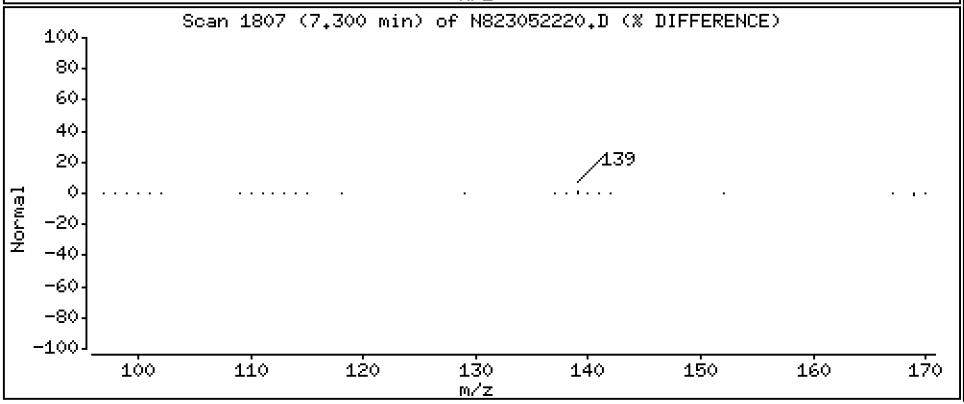












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

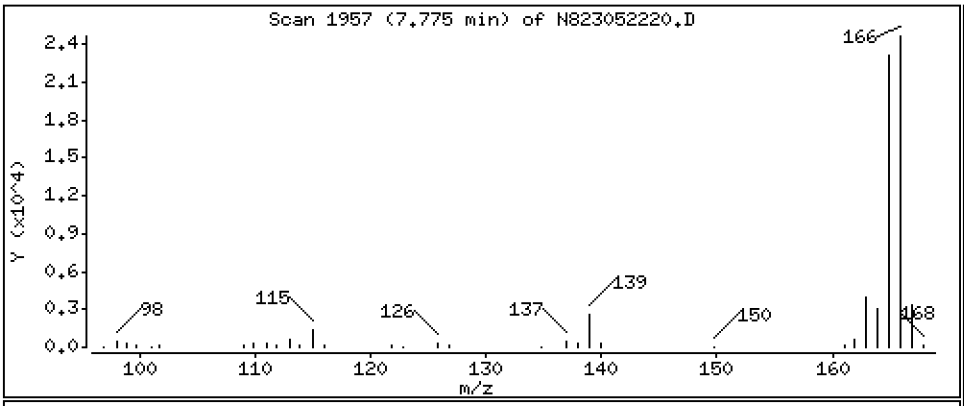
Operator: JZ

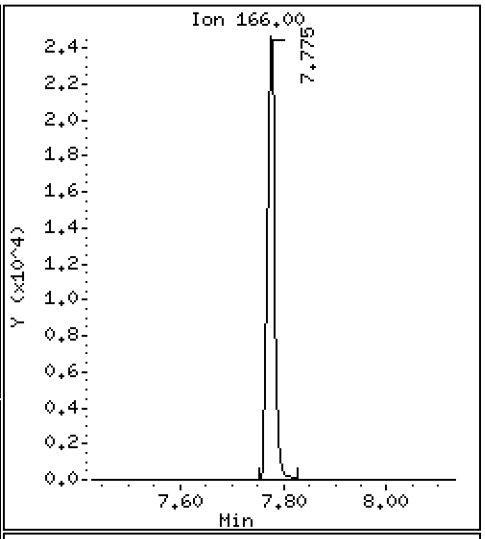
Column phase: Rxi-17sil

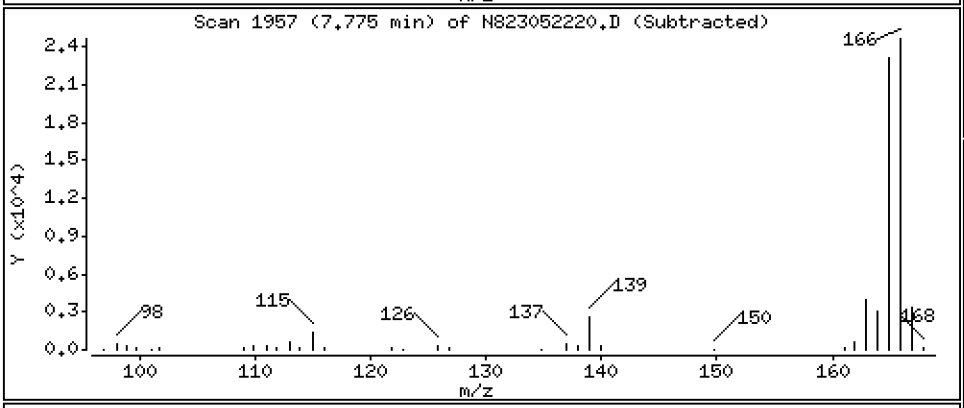
Column diameter: 0.25

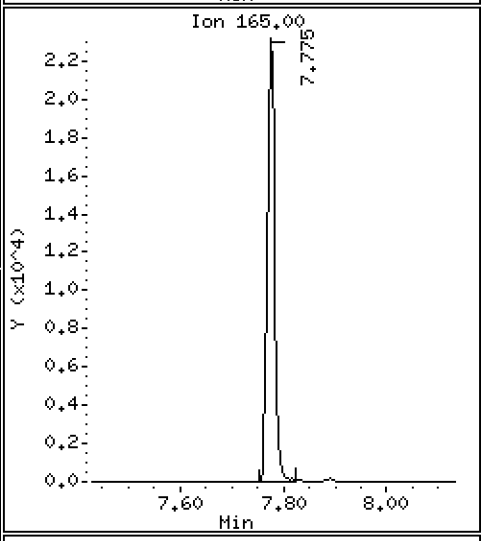
14 Fluorene

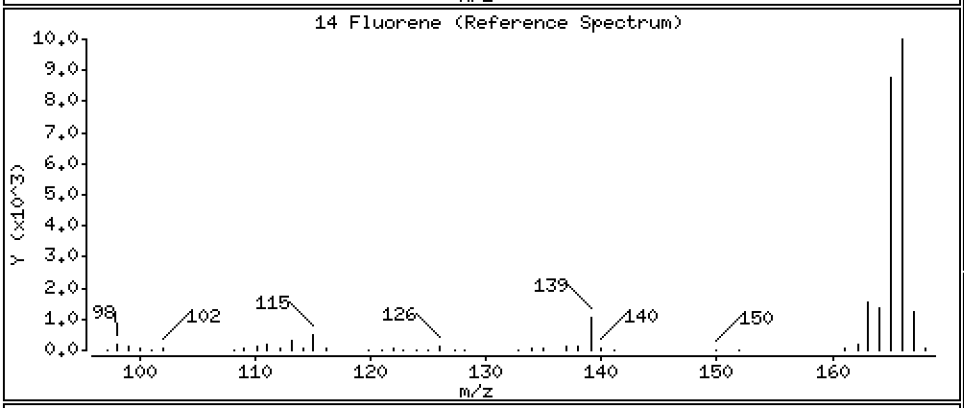
Concentration: 3.433 ug/mL

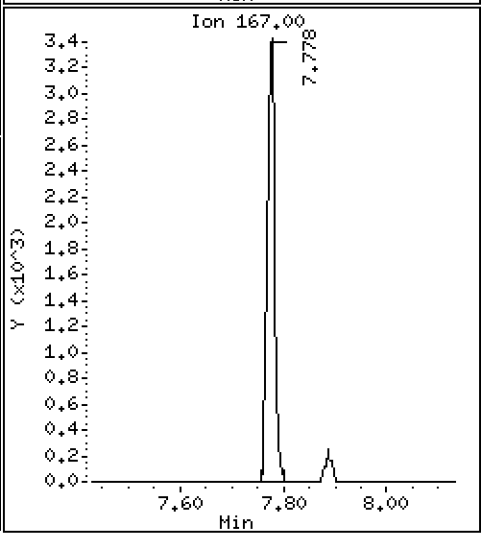


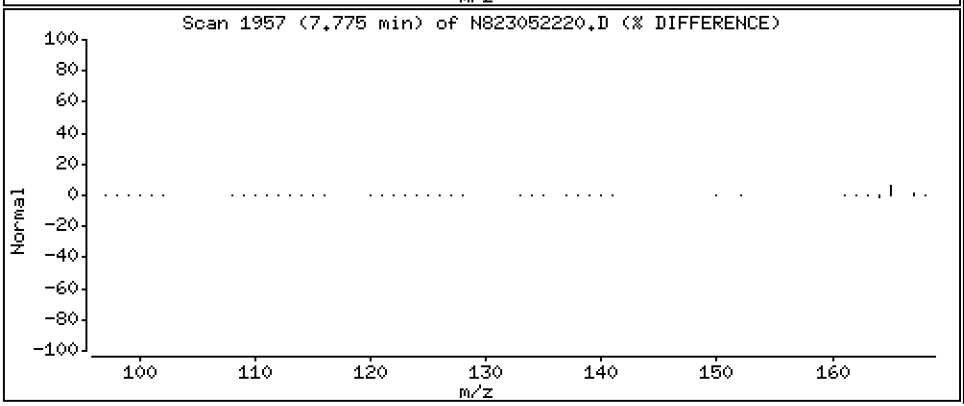












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

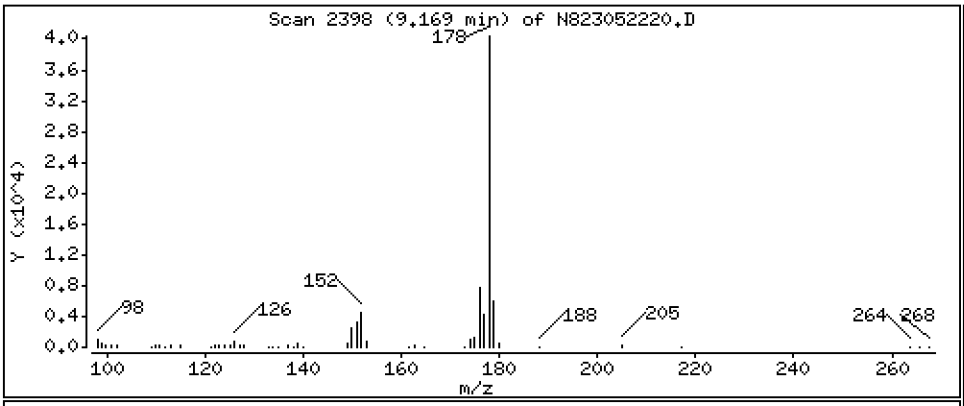
Operator: JZ

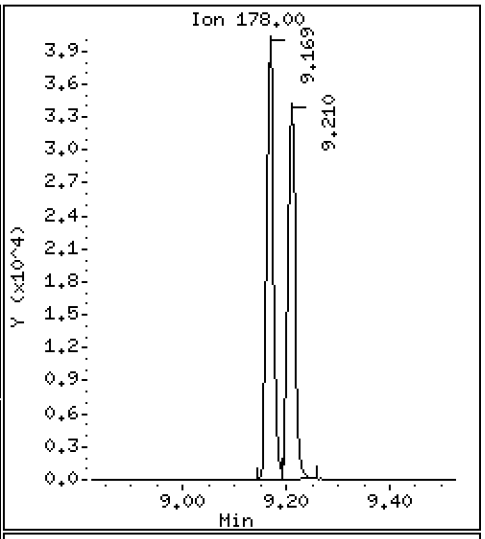
Column phase: Rxi-17sil

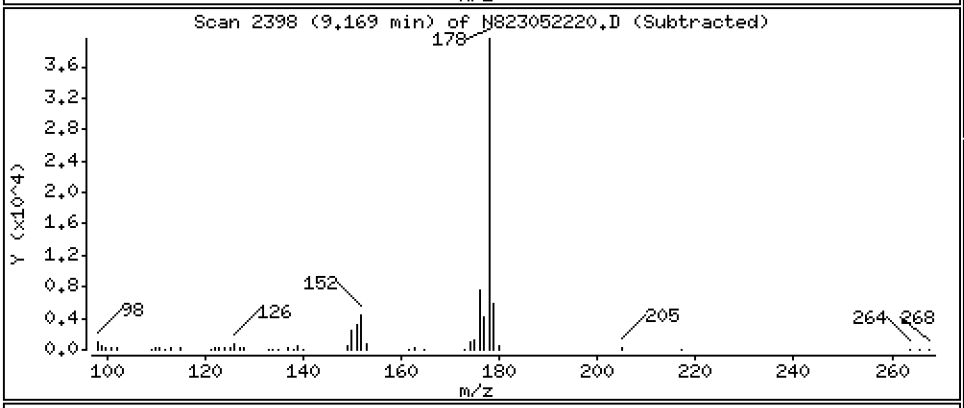
Column diameter: 0.25

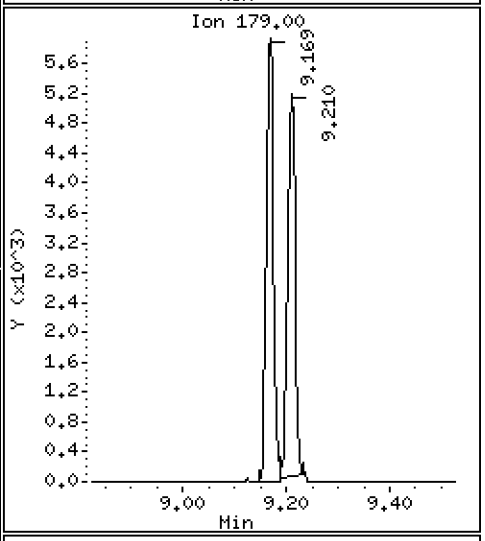
16 Phenanthrene

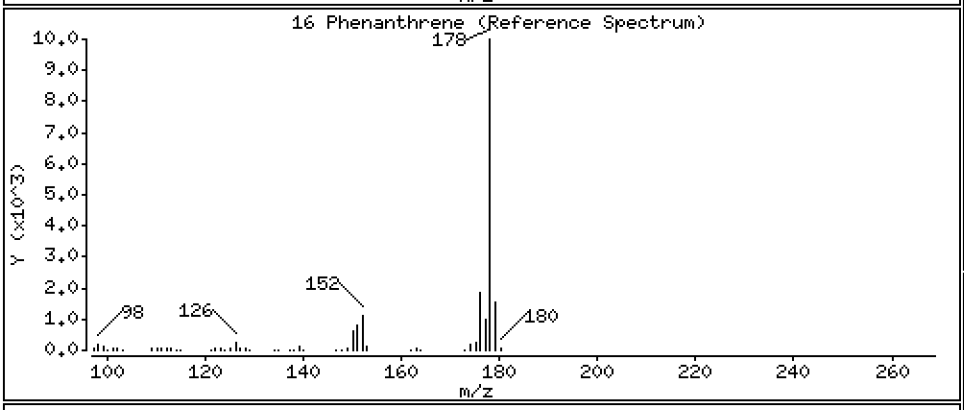
Concentration: 3.768 ug/mL

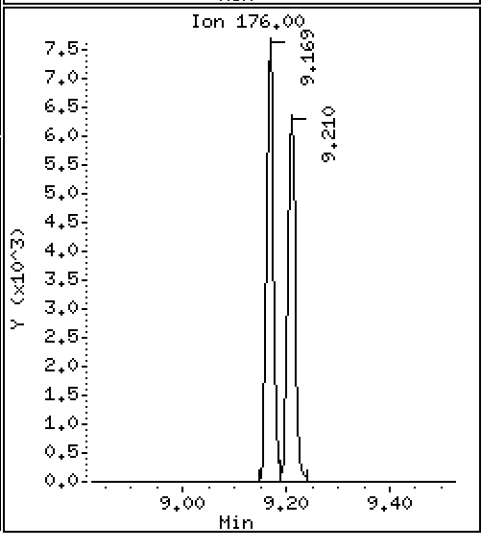


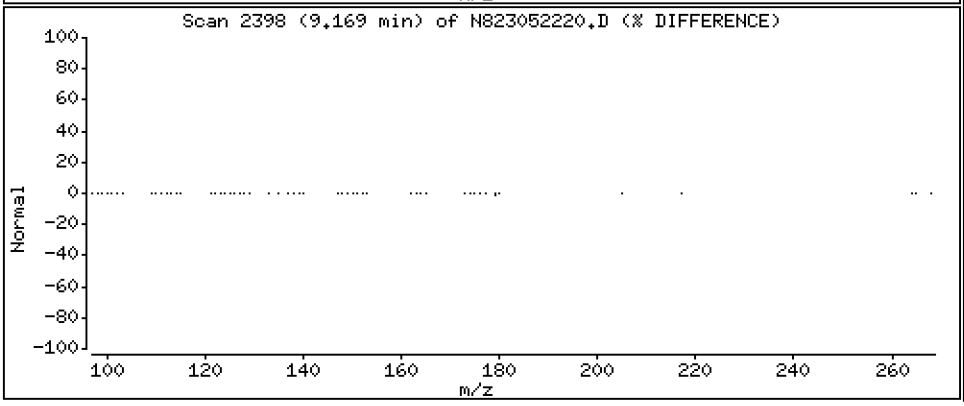












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

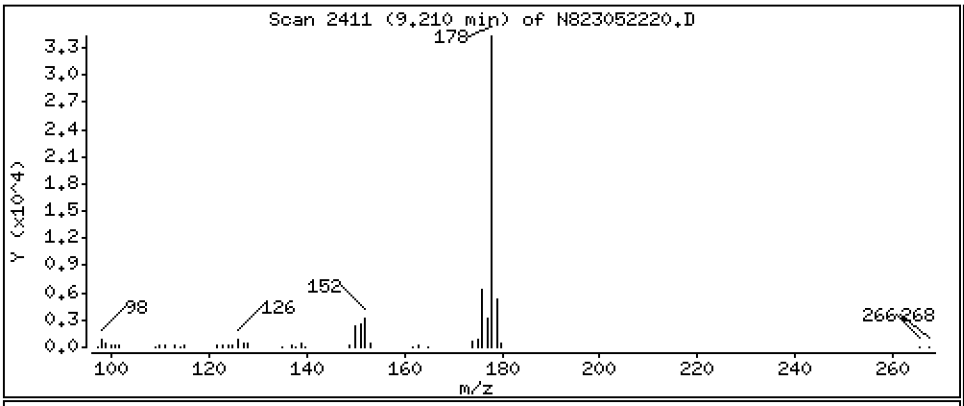
Operator: JZ

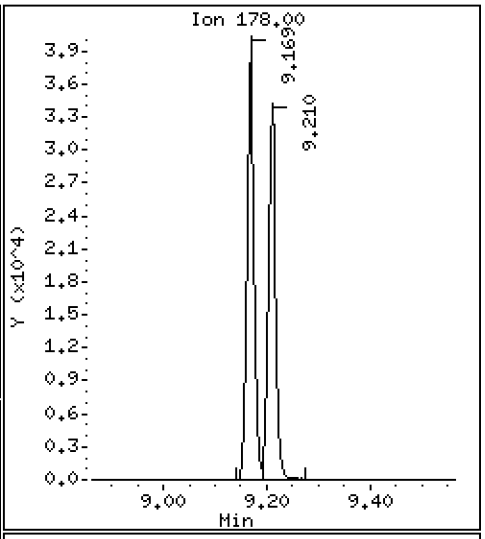
Column phase: Rxi-17sil

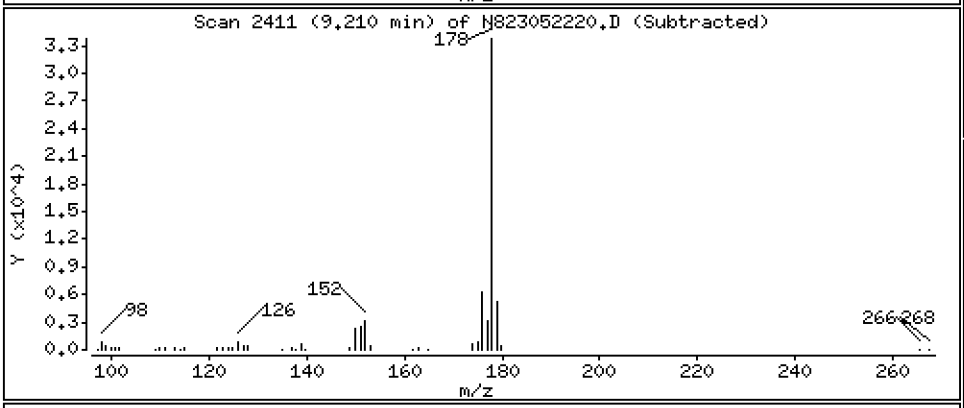
Column diameter: 0.25

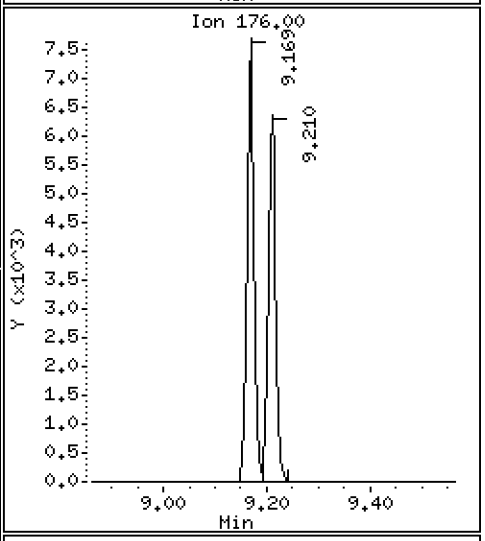
17 Anthracene

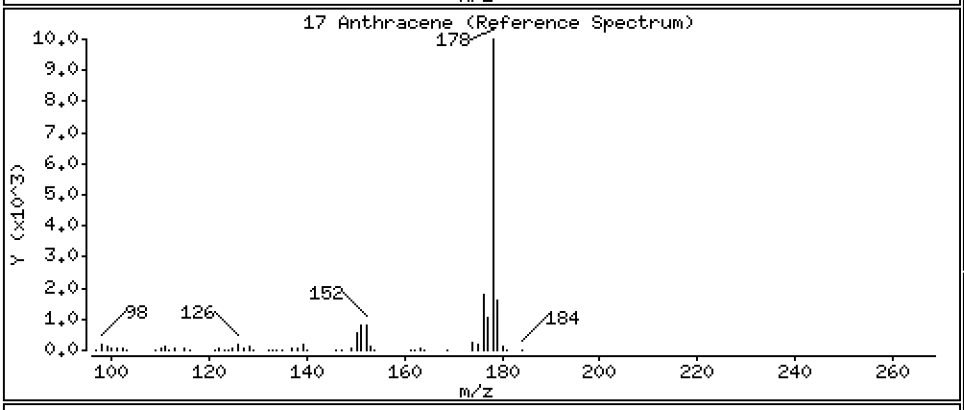
Concentration: 3.574 ug/mL

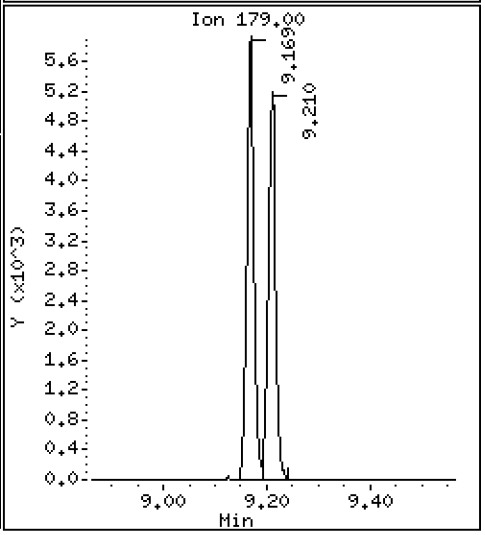


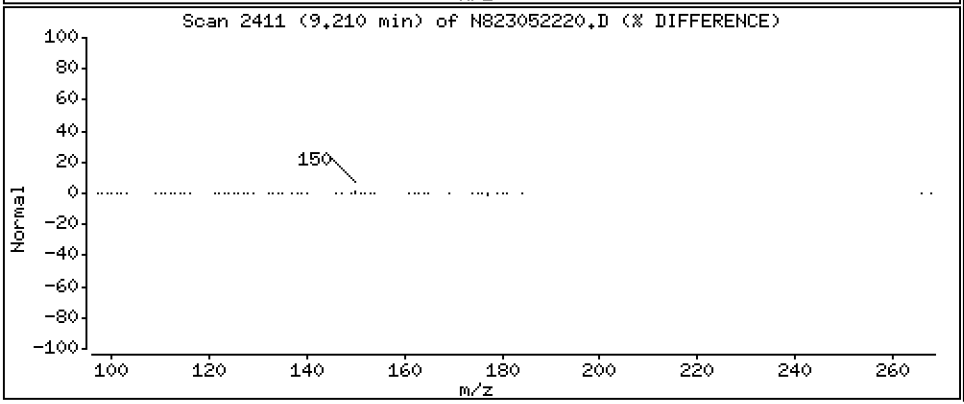












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

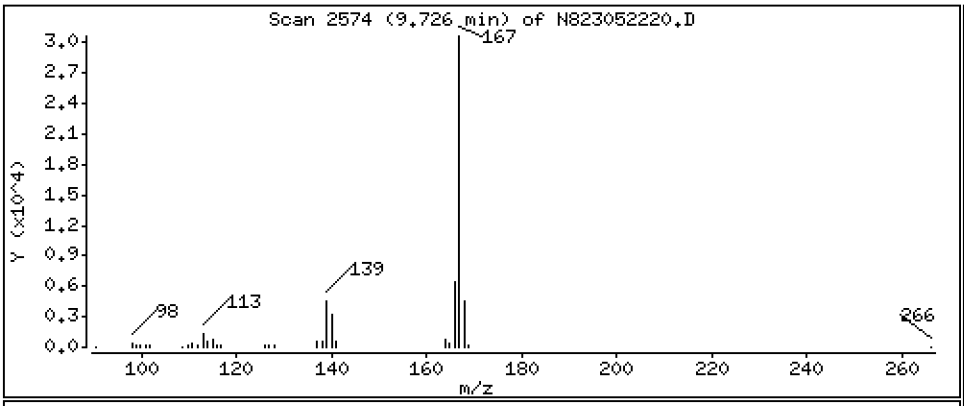
Operator: JZ

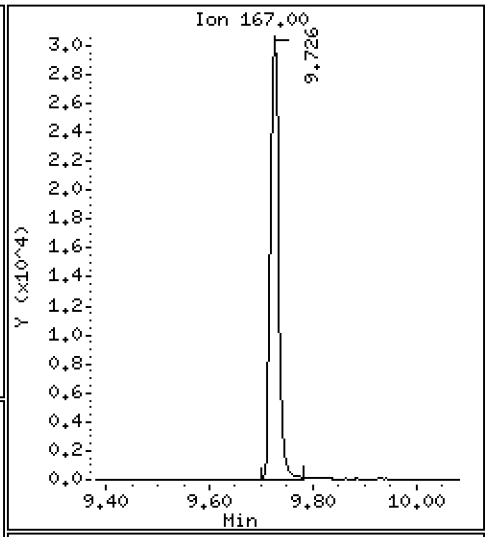
Column phase: Rxi-17sil

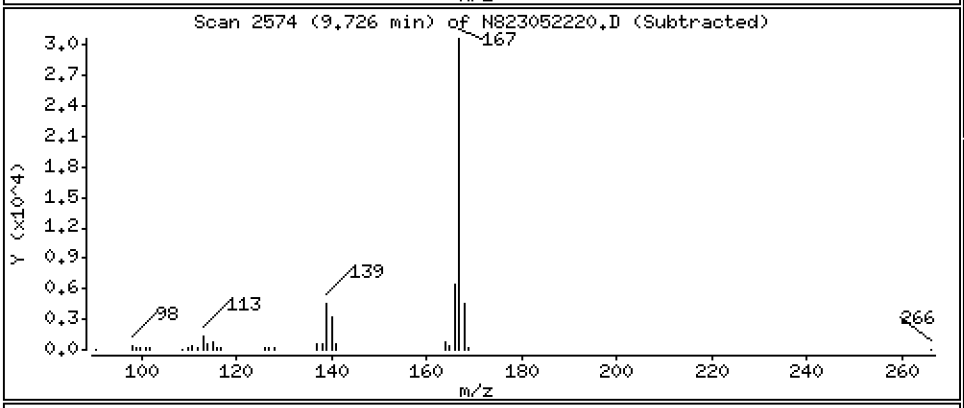
Column diameter: 0.25

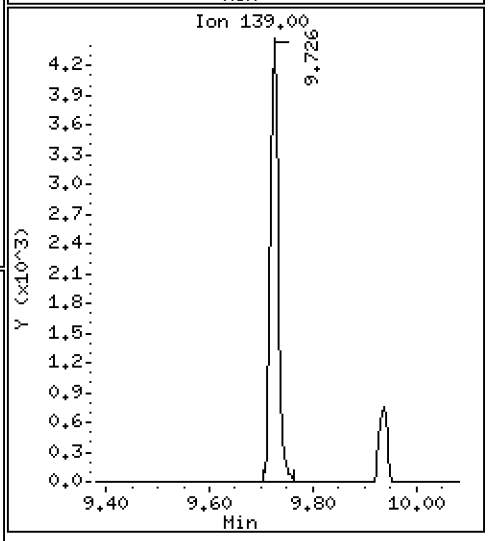
19 Carbazole

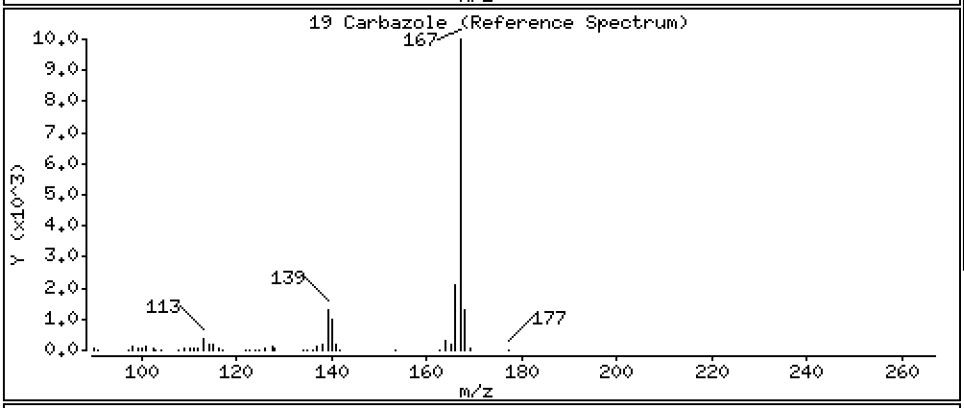
Concentration: 3.772 ug/mL

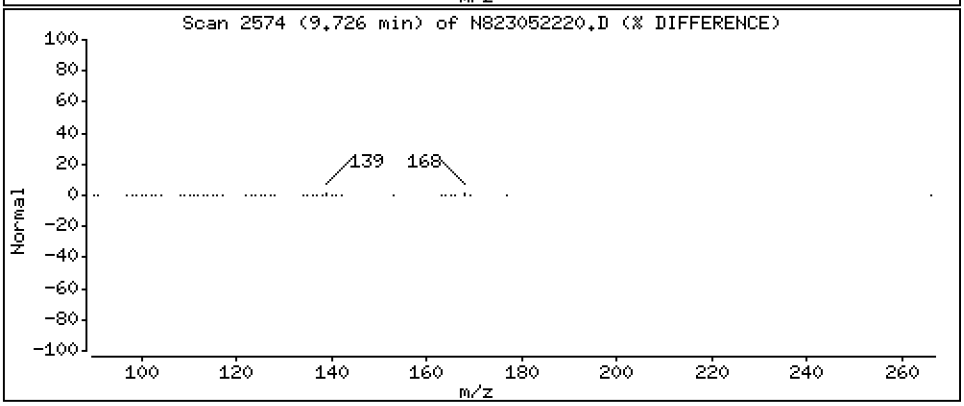












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

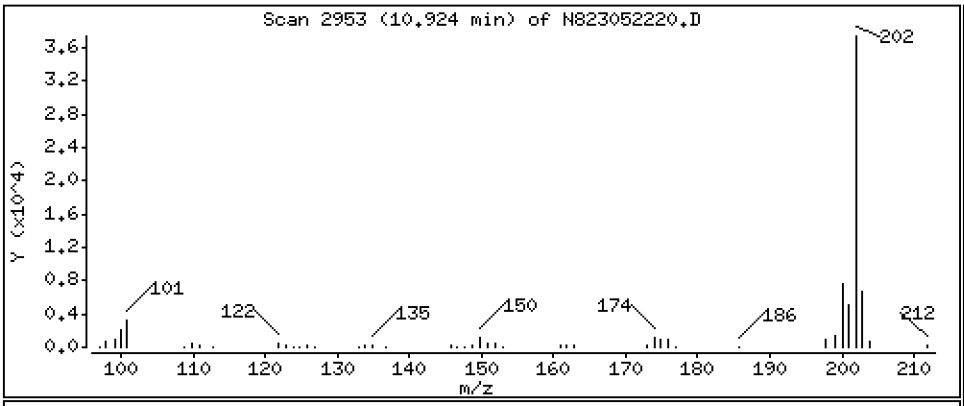
Operator: JZ

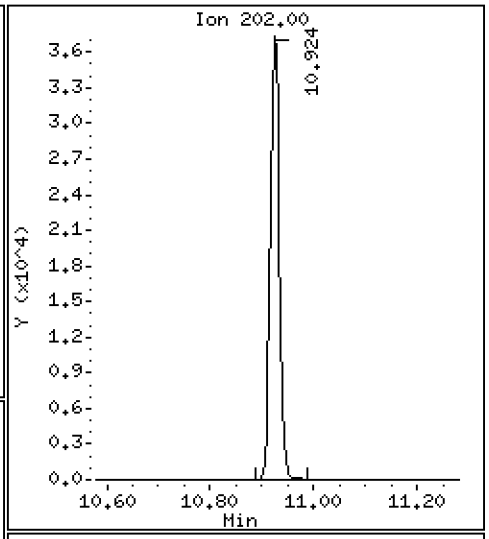
Column phase: Rxi-17sil

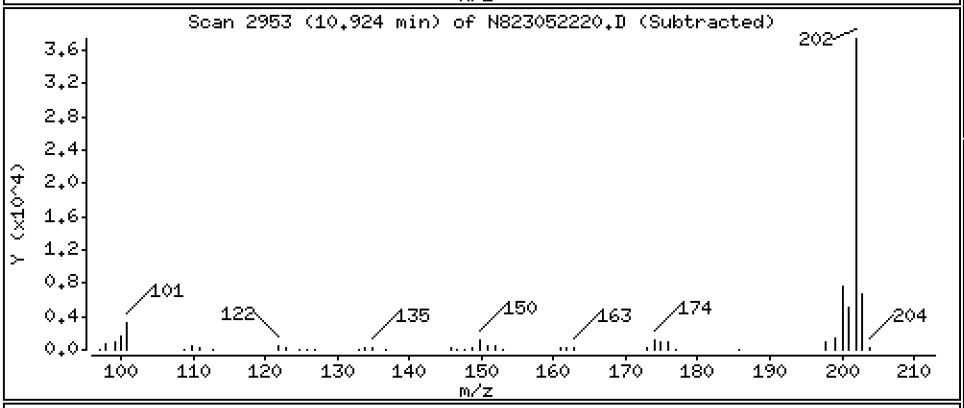
Column diameter: 0.25

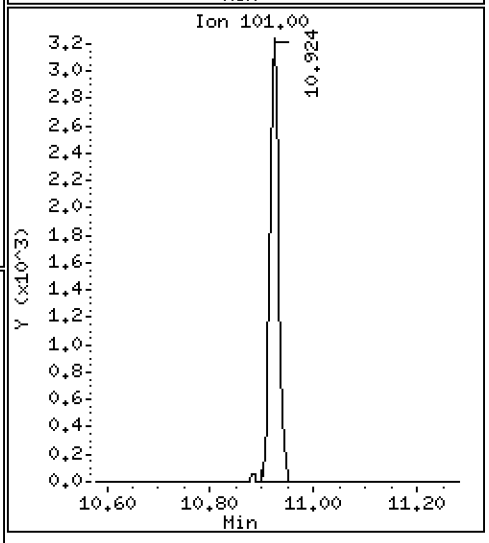
22 Fluoranthene

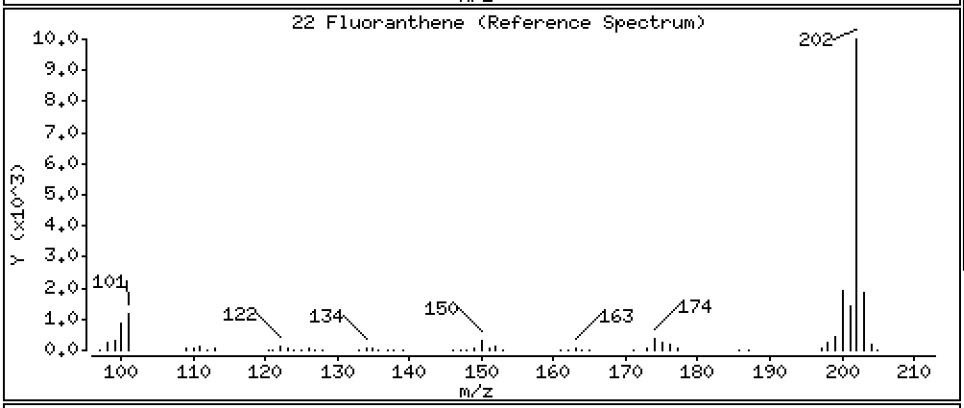
Concentration: 3.898 ug/mL

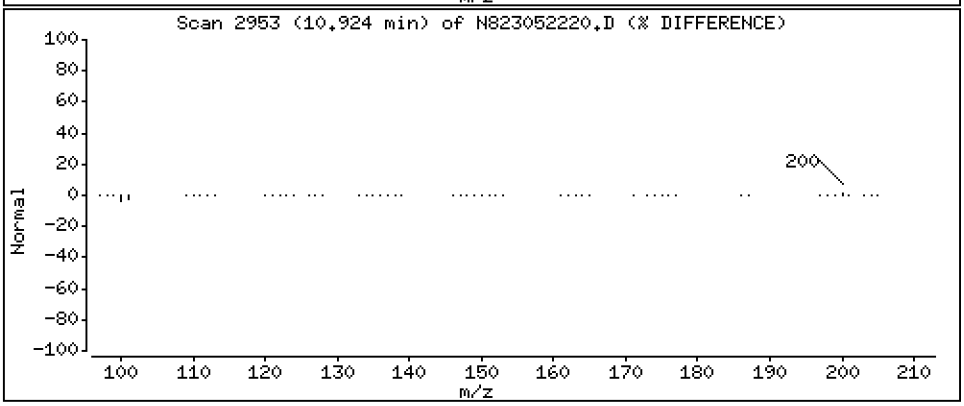












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

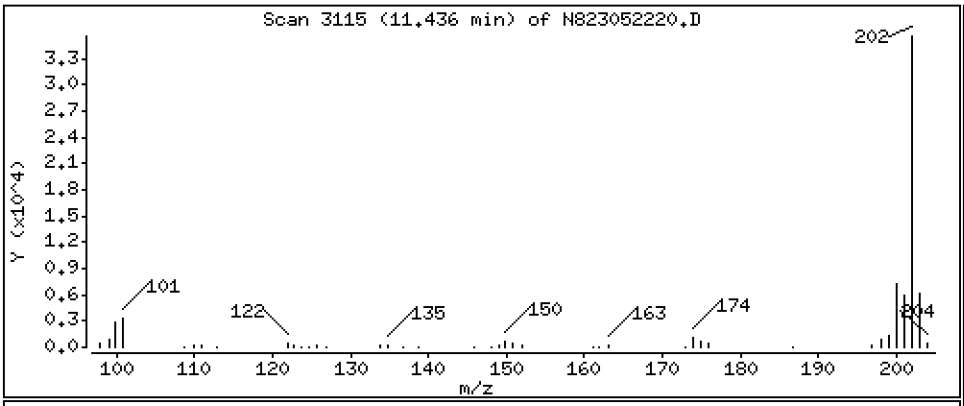
Operator: JZ

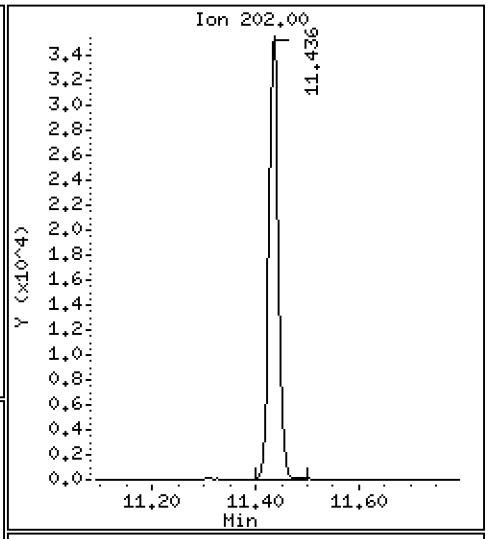
Column phase: Rxi-17sil

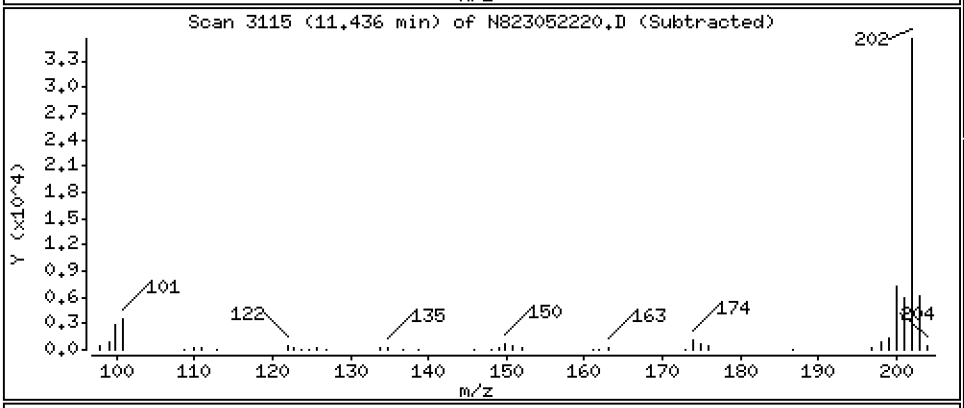
Column diameter: 0.25

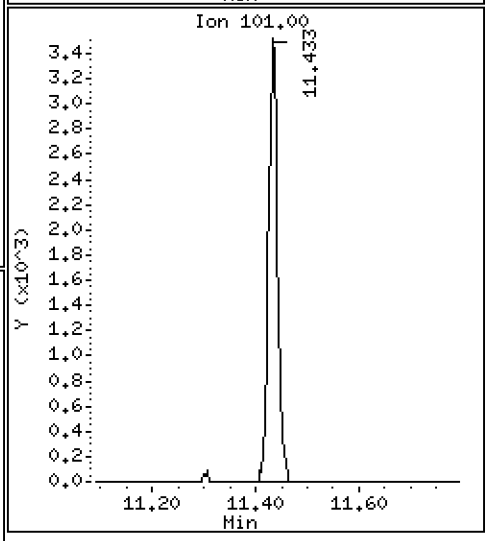
23 Pyrene

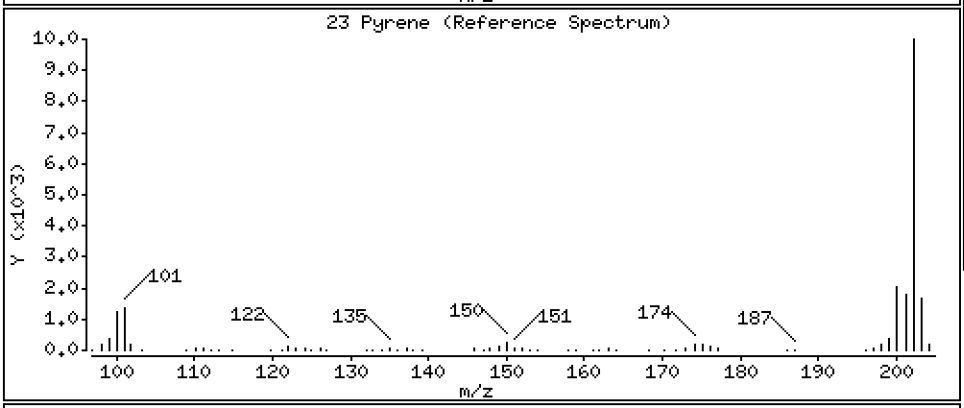
Concentration: 4.734 ug/mL

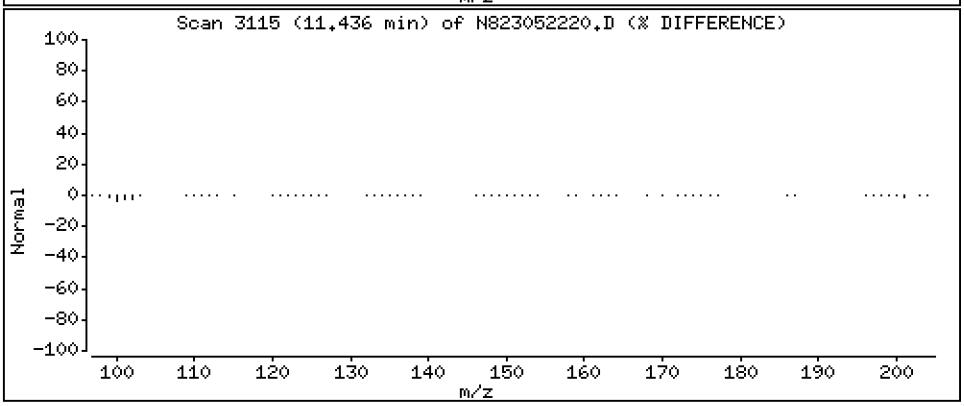












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

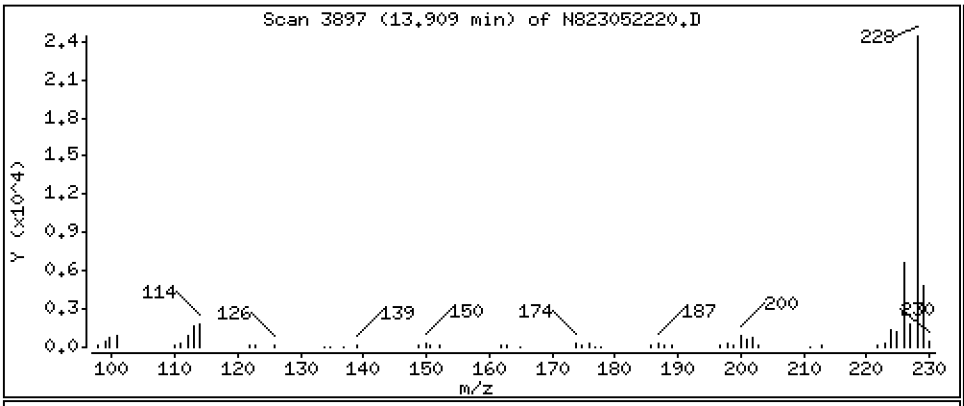
Operator: JZ

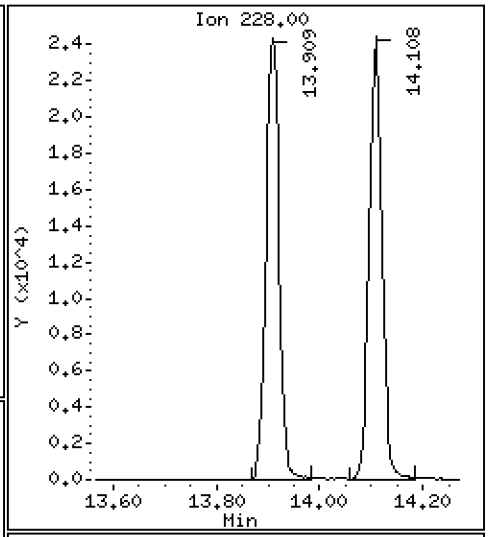
Column phase: Rxi-17sil

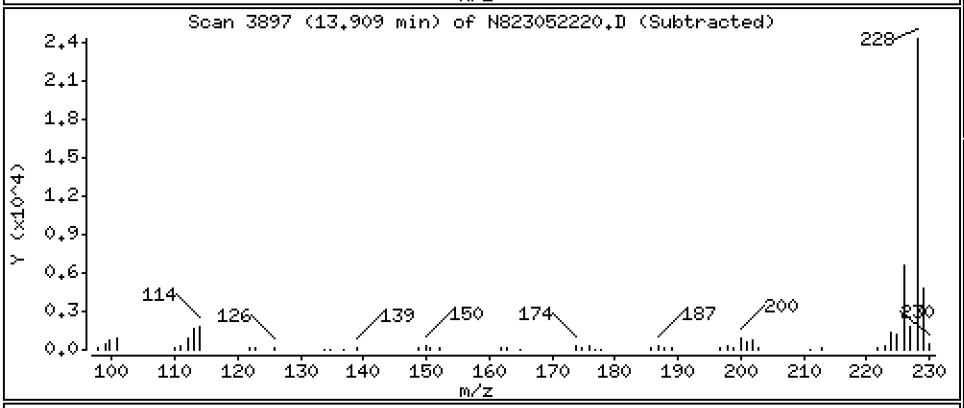
Column diameter: 0.25

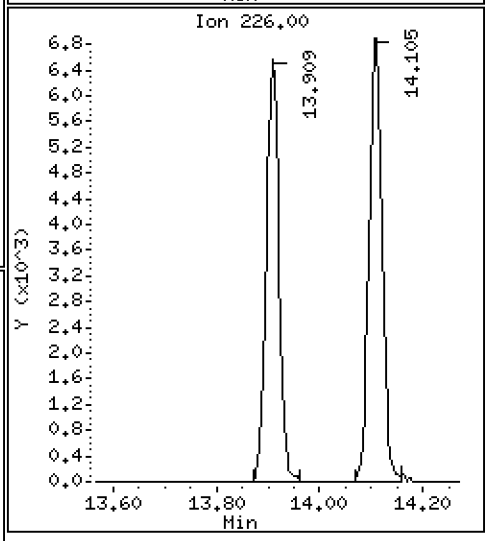
24 Benzo(a)anthracene

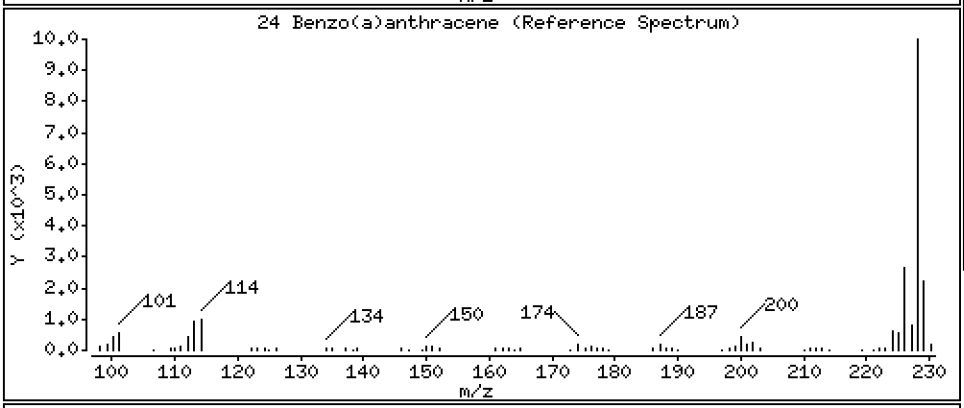
Concentration: 4.290 ug/mL

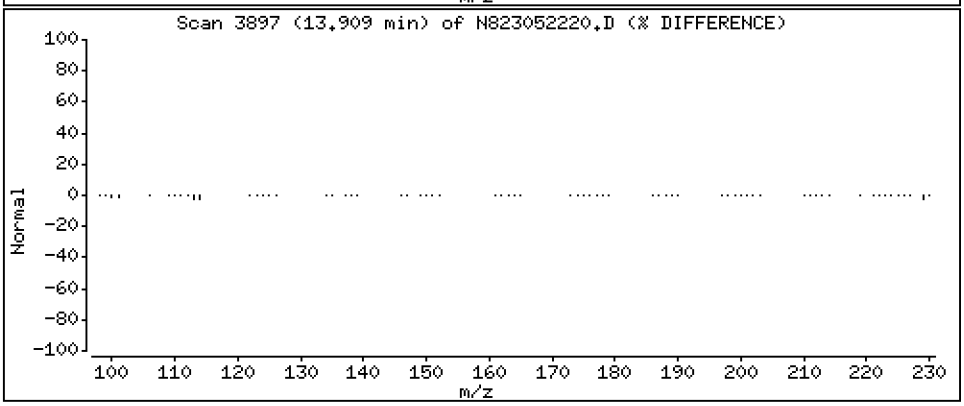












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

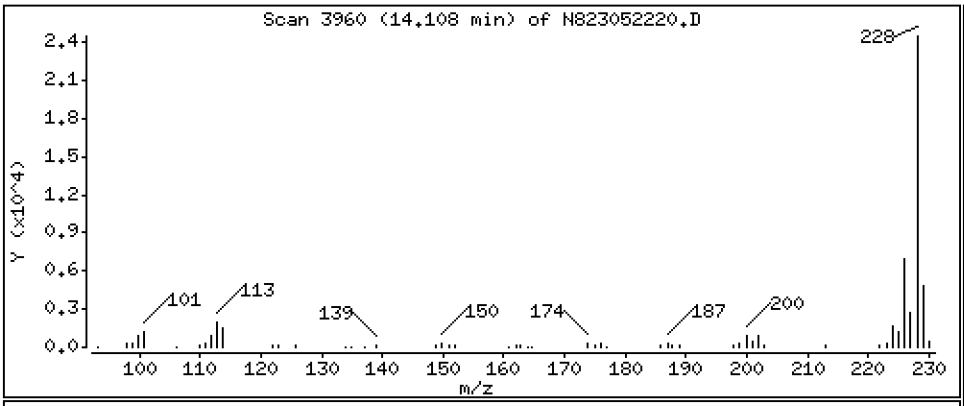
Operator: JZ

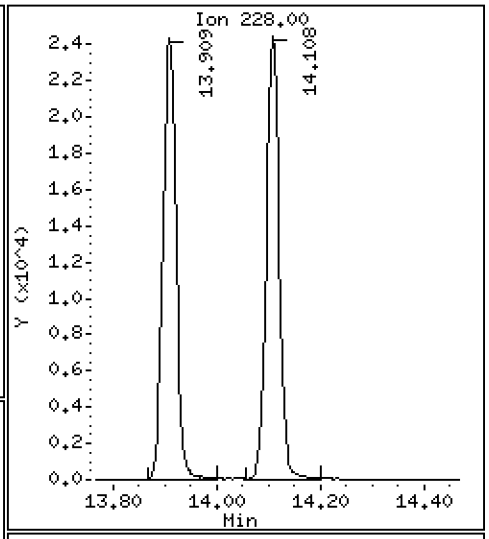
Column phase: Rxi-17sil

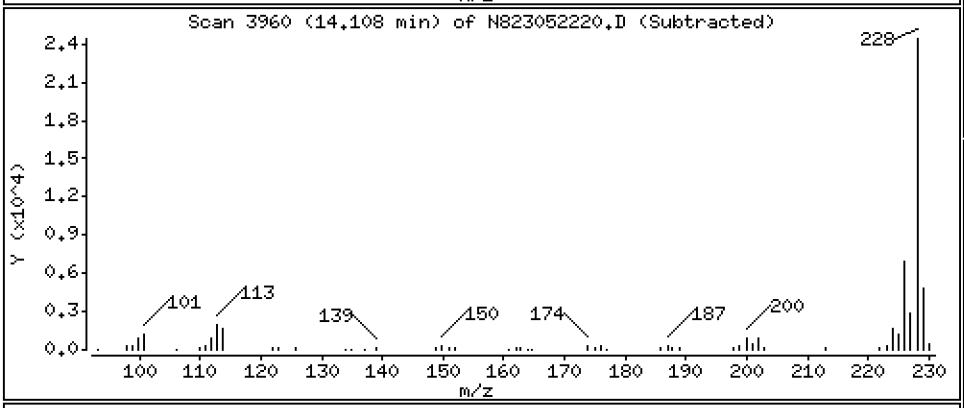
Column diameter: 0.25

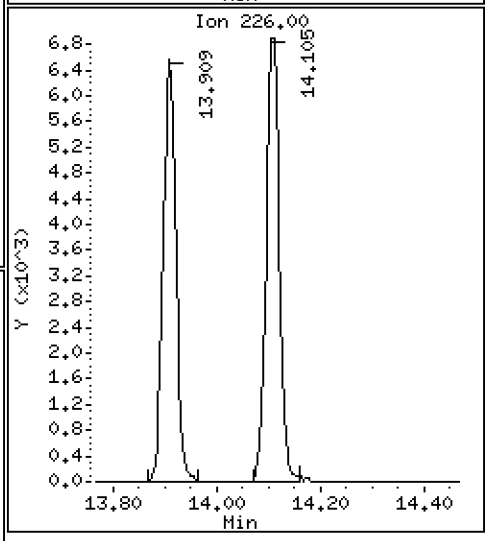
27 Chrysene

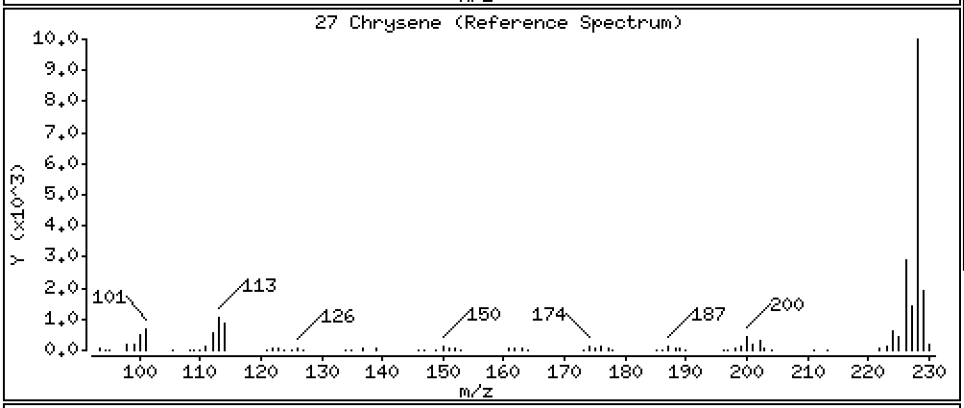
Concentration: 4.292 ug/mL

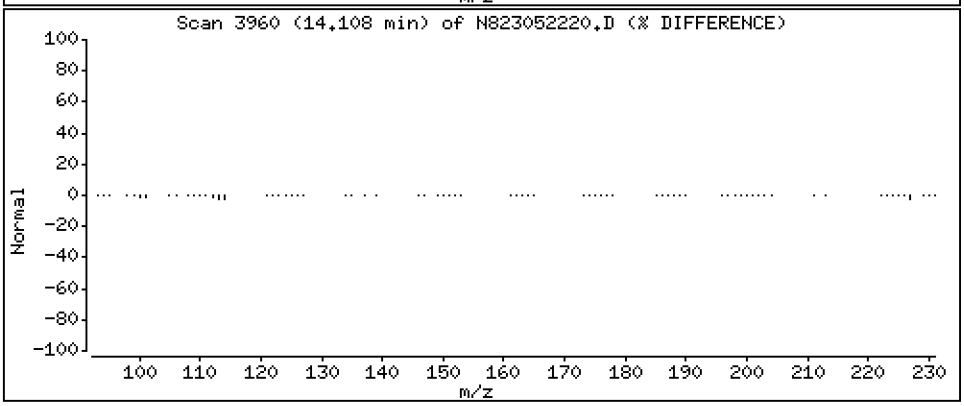












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

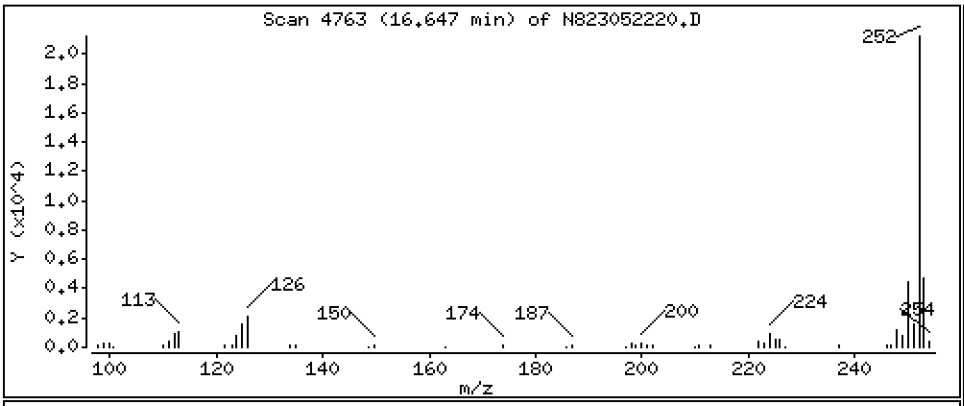
Operator: JZ

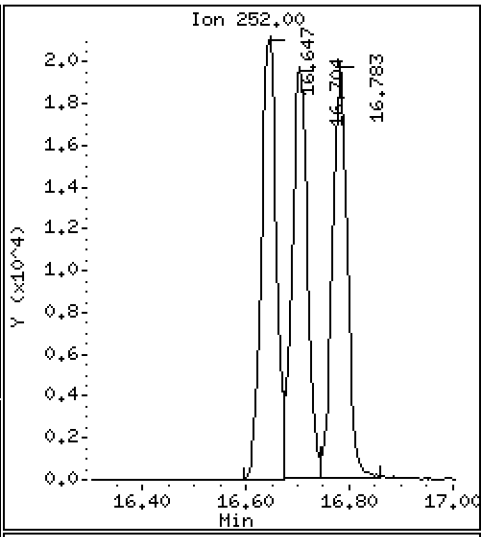
Column phase: Rxi-17sil

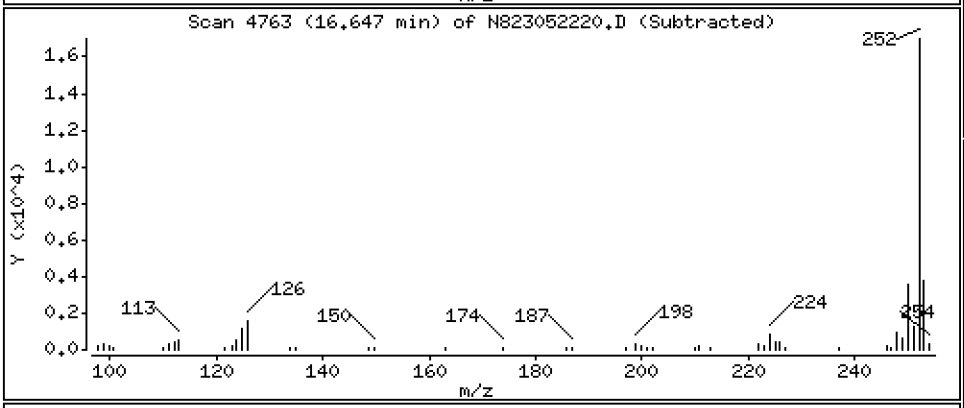
Column diameter: 0.25

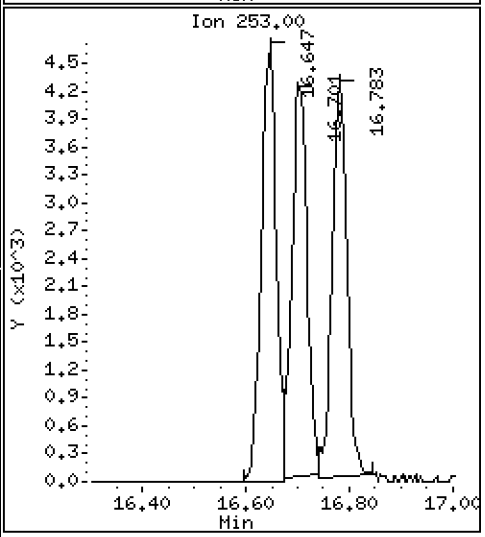
28 Benzo(b)fluoranthene

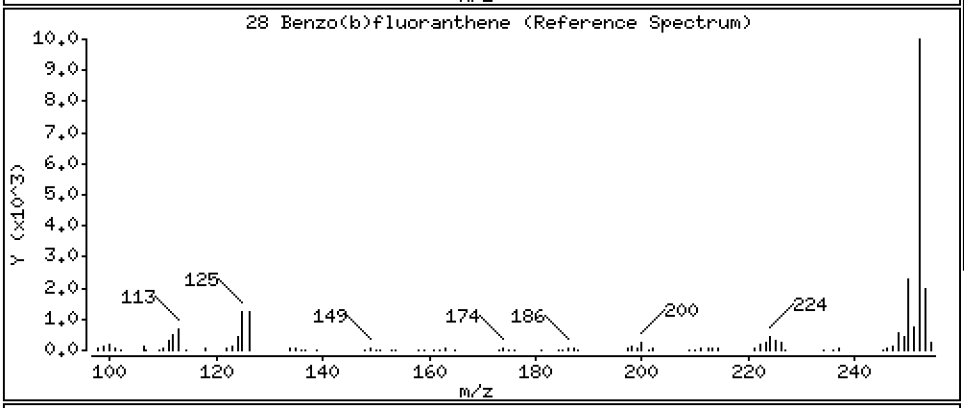
Concentration: 4.625 ug/mL

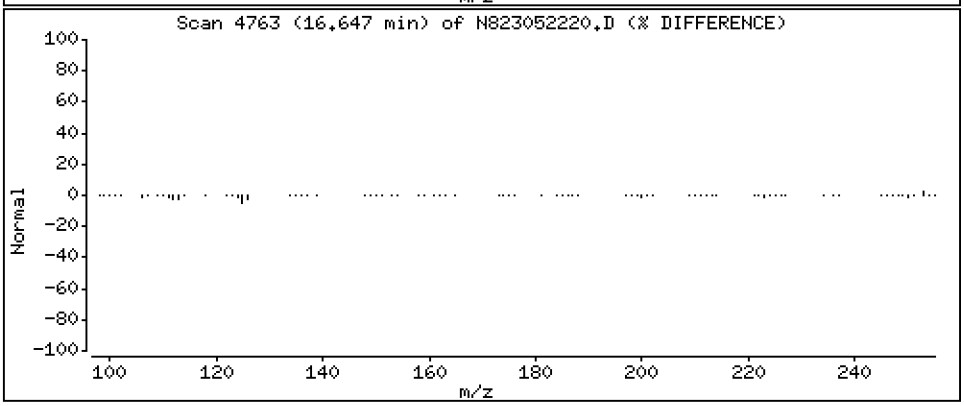












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

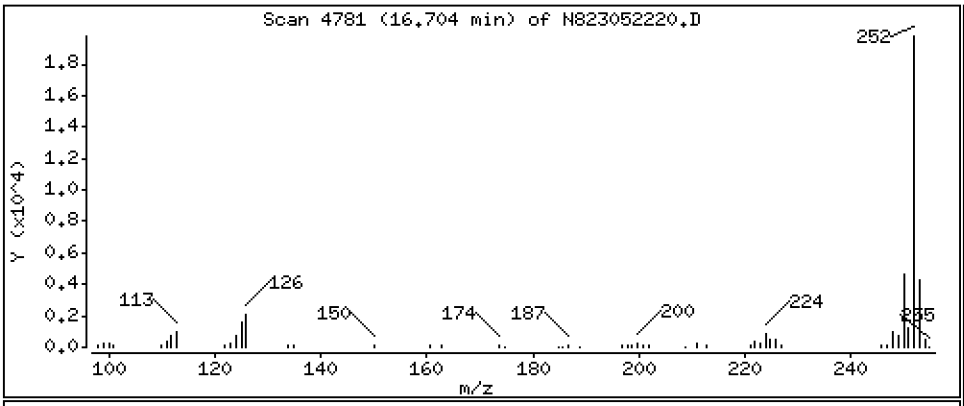
Operator: JZ

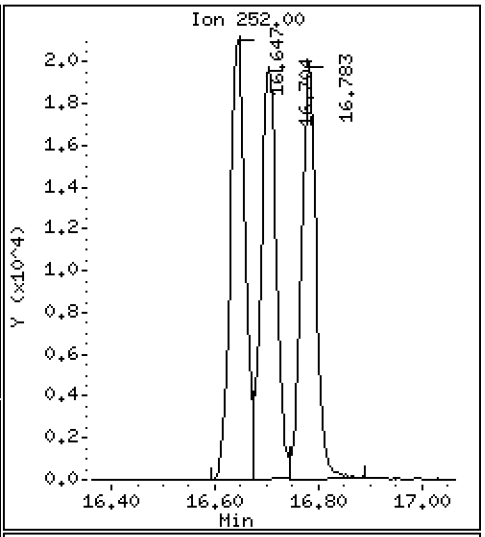
Column phase: Rxi-17sil

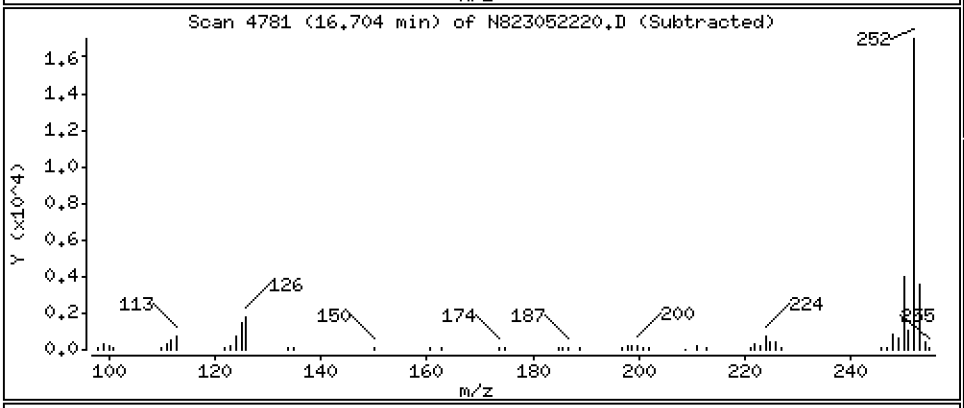
Column diameter: 0.25

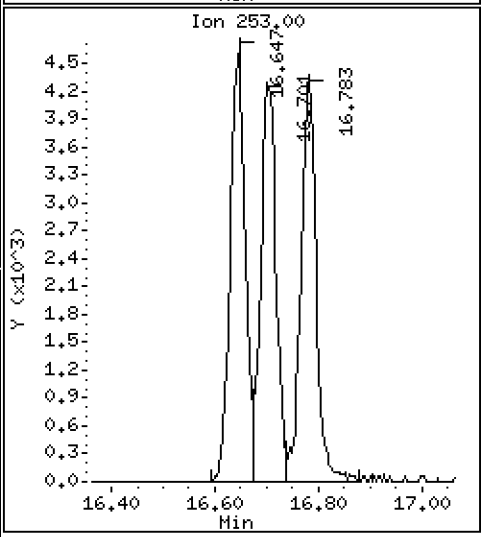
29 Benzo(k)fluoranthene

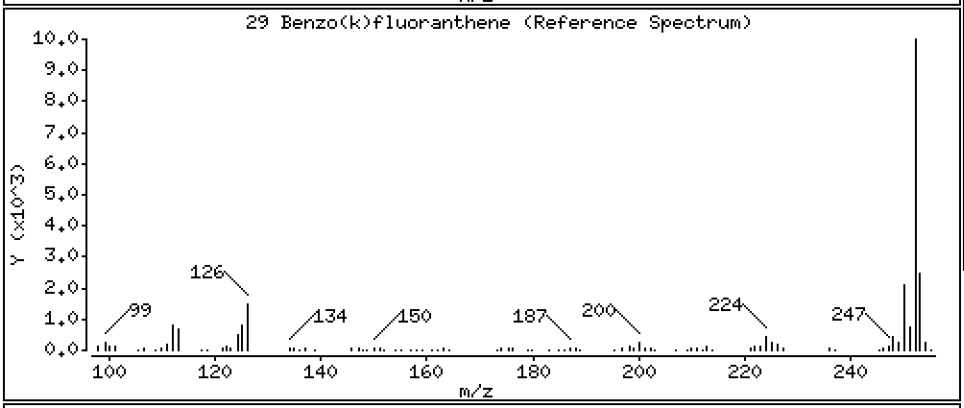
Concentration: 4.595 ug/mL

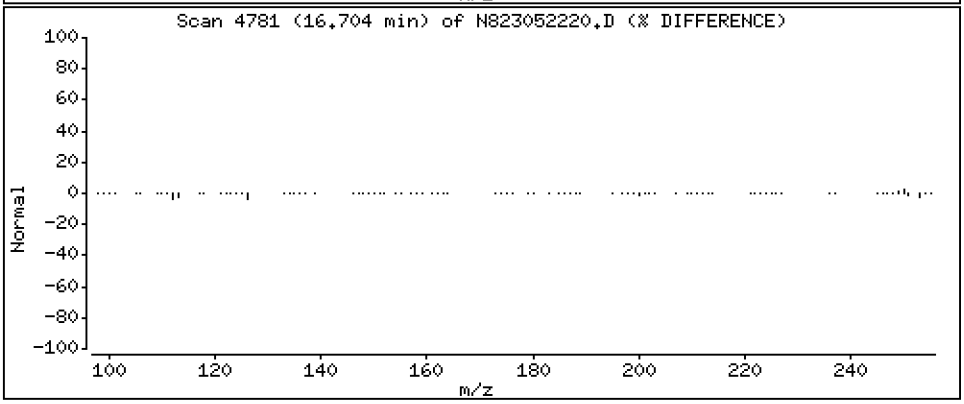












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

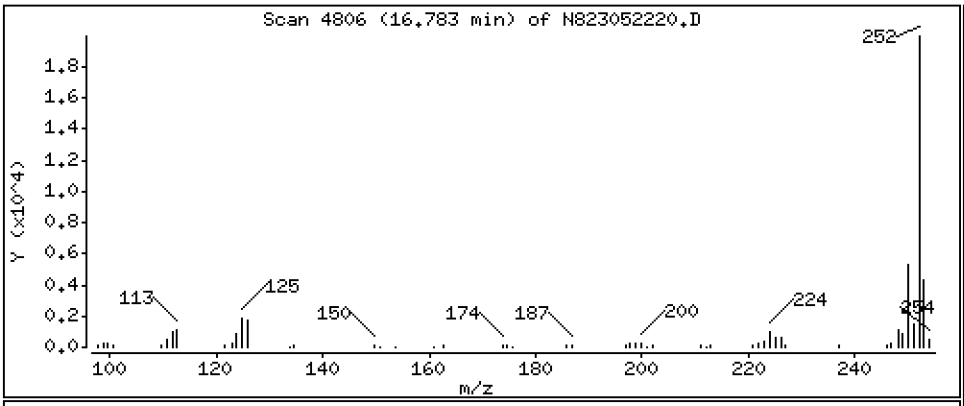
Operator: JZ

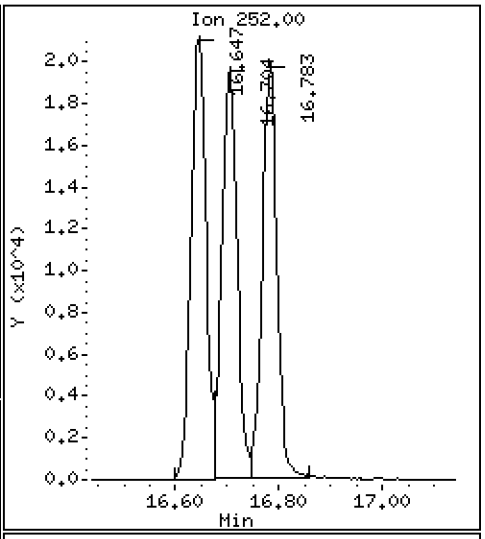
Column phase: Rxi-17sil

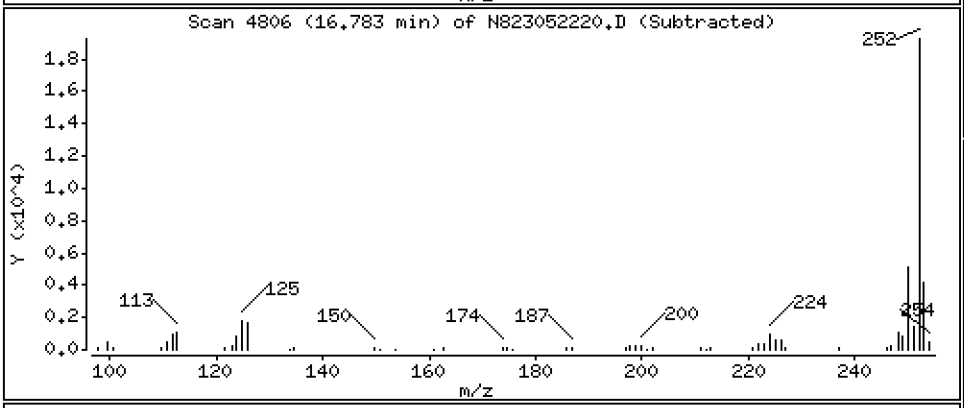
Column diameter: 0.25

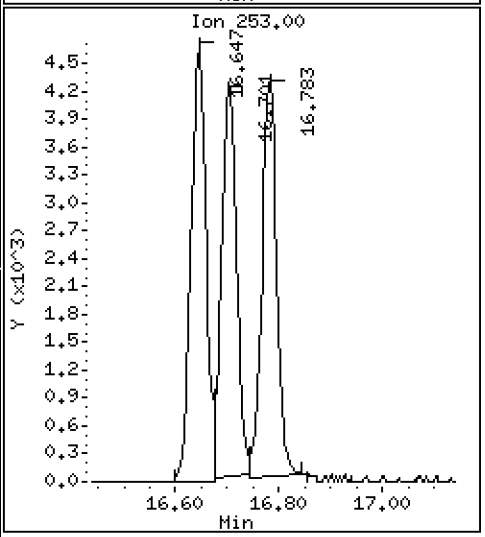
30 Benzo(j)fluoranthene

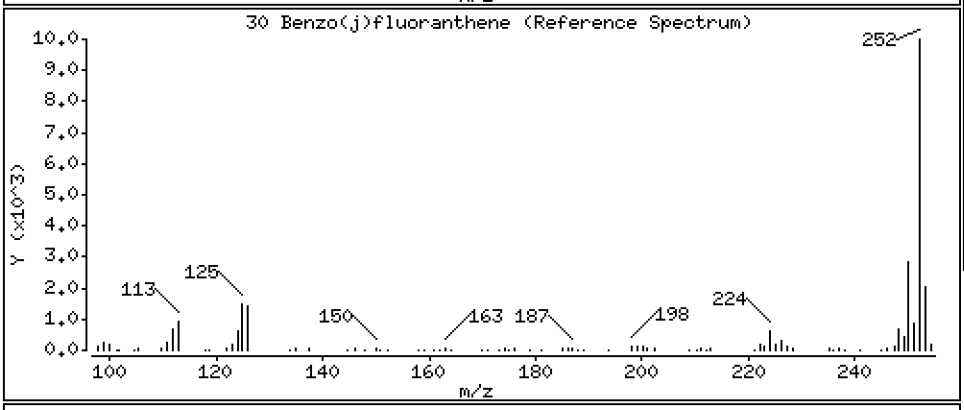
Concentration: 4.802 ug/mL

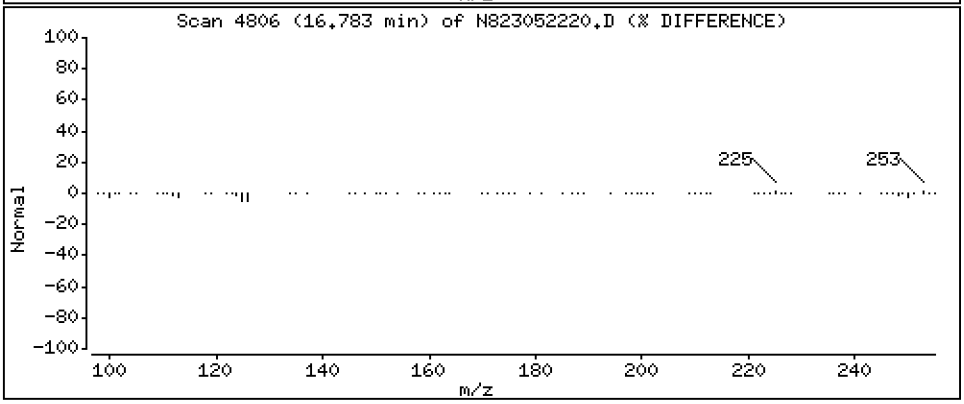












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

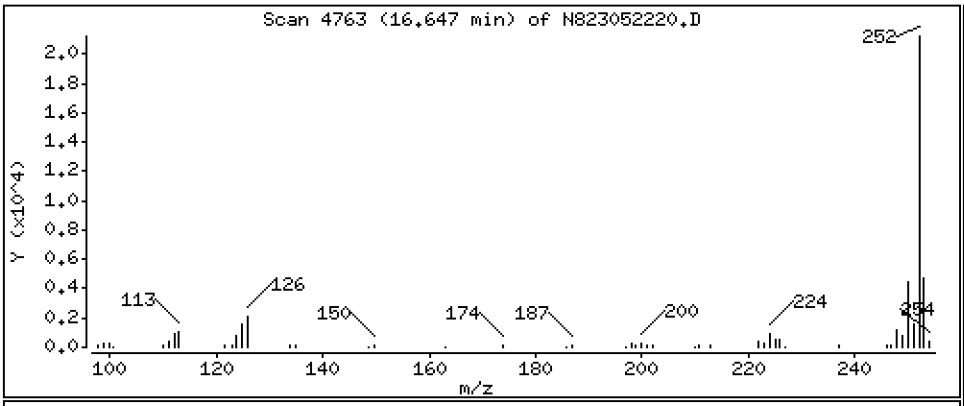
Operator: JZ

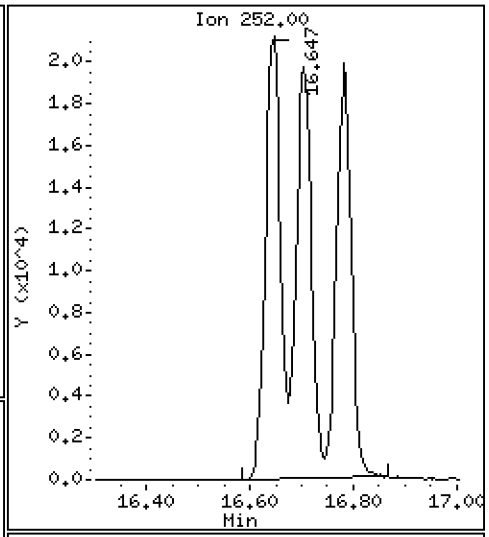
Column phase: Rxi-17sil

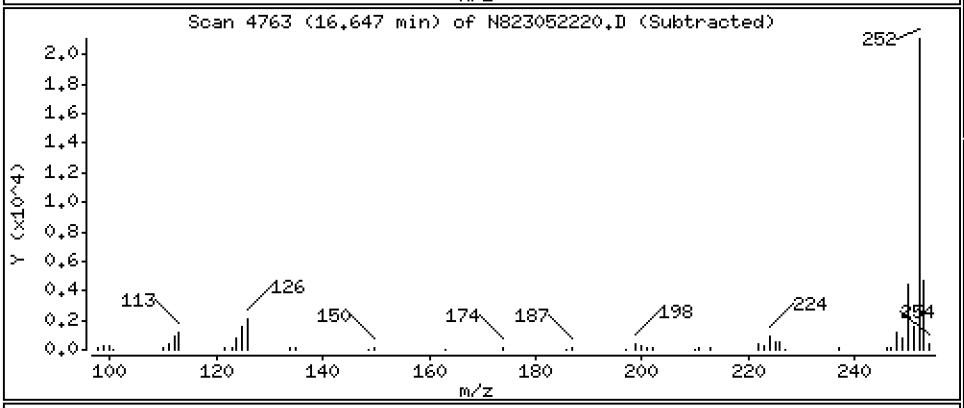
Column diameter: 0.25

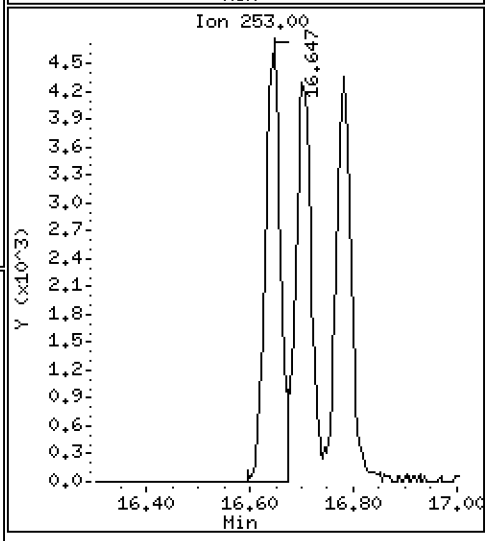
31 Total Benzofluoranthenes

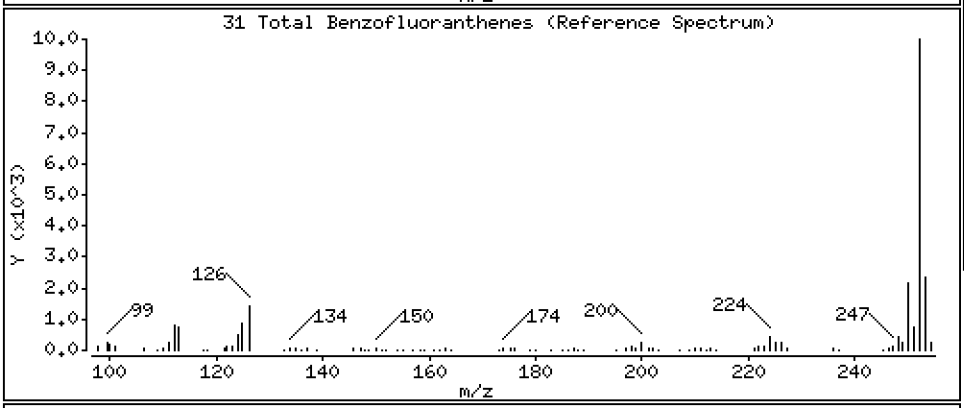
Concentration: 13.99 ug/mL

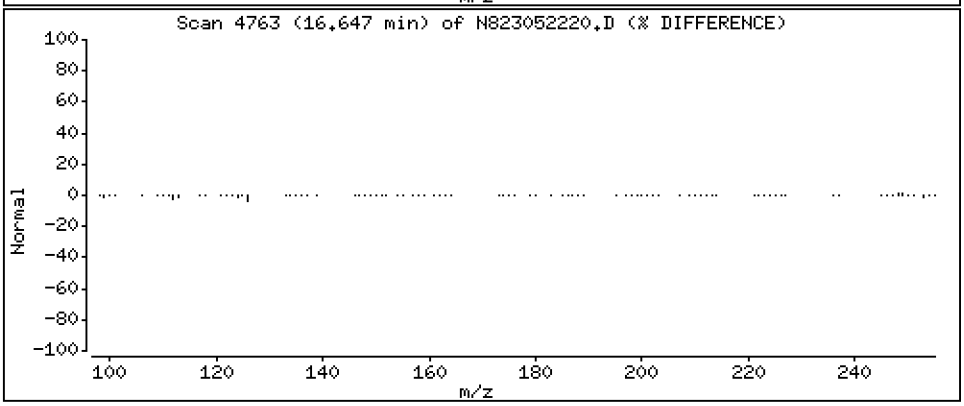












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

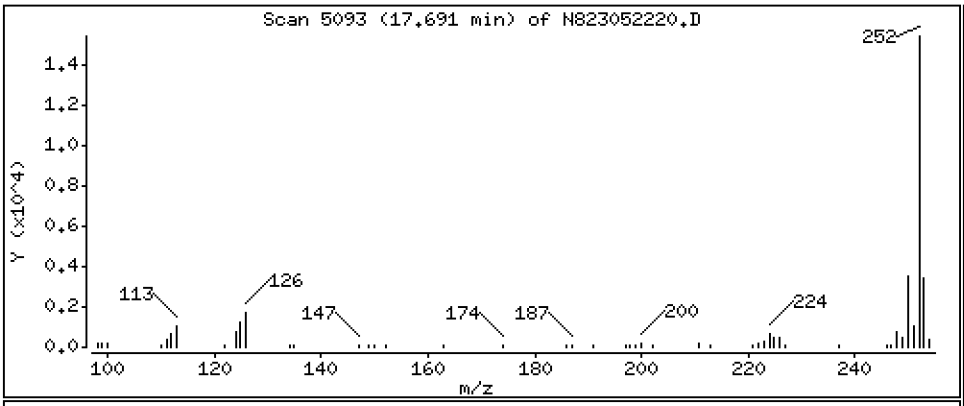
Operator: JZ

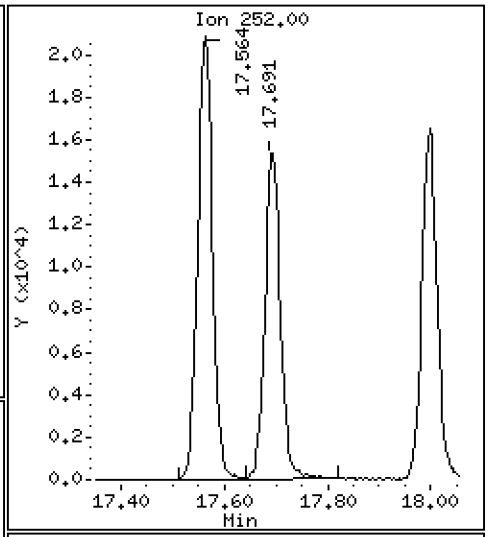
Column phase: Rxi-17sil

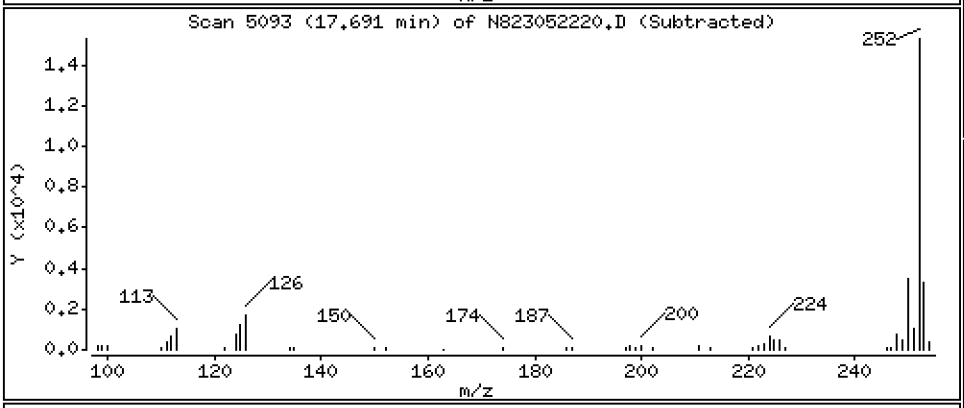
Column diameter: 0.25

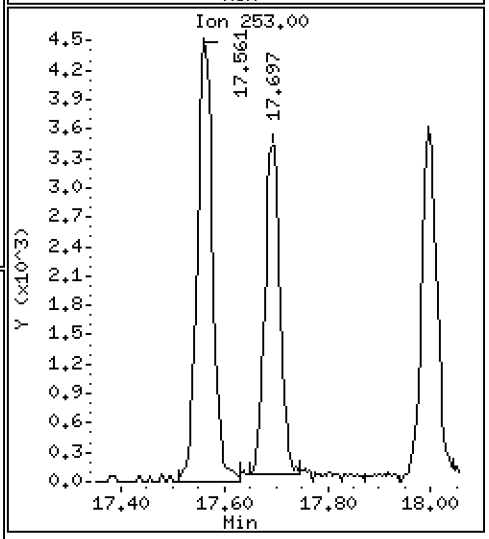
32 Benzo(a)pyrene

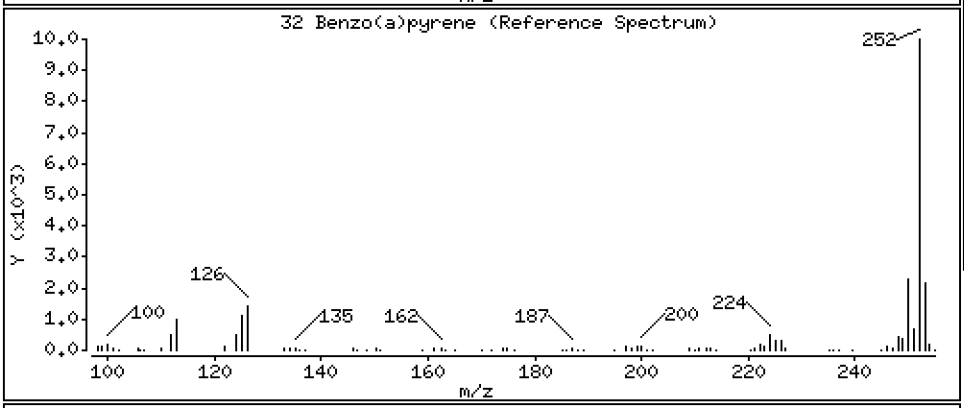
Concentration: 3.919 ug/mL

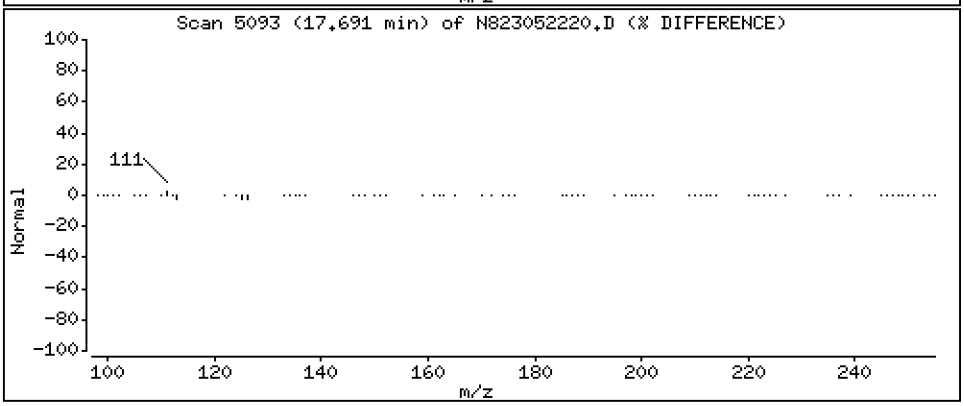












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

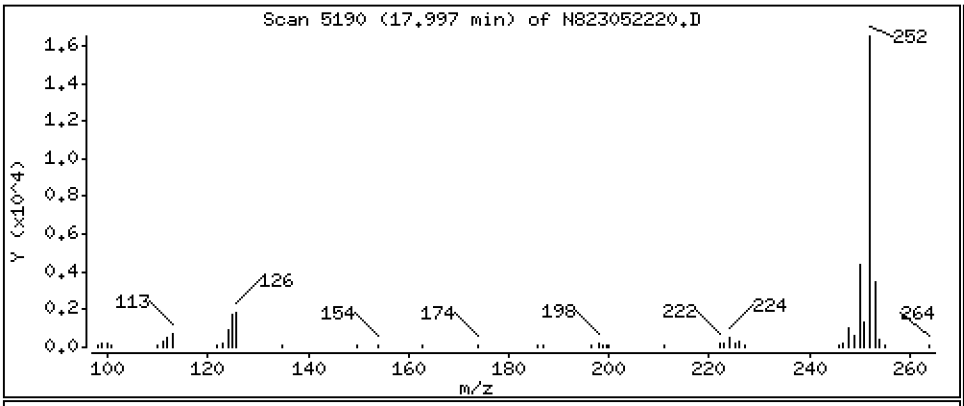
Operator: JZ

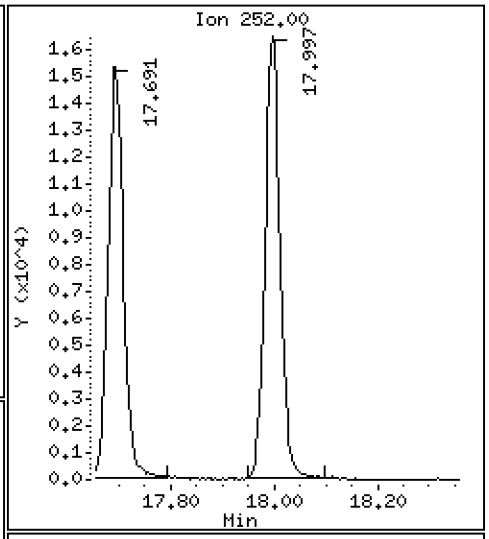
Column phase: Rxi-17sil

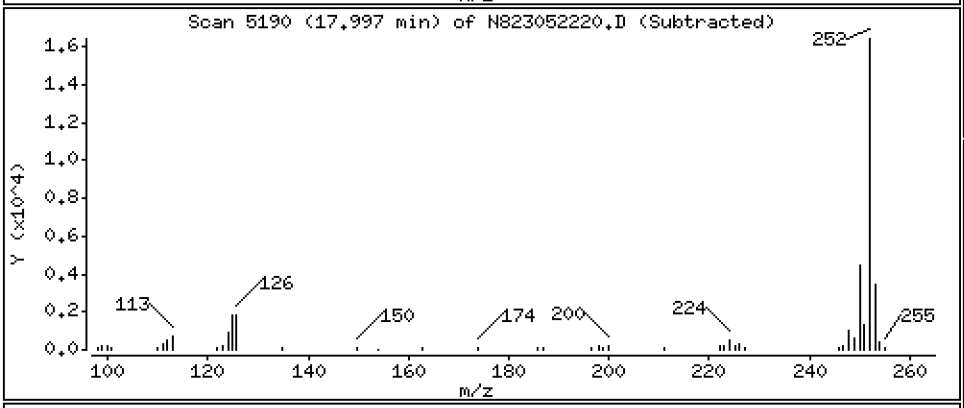
Column diameter: 0.25

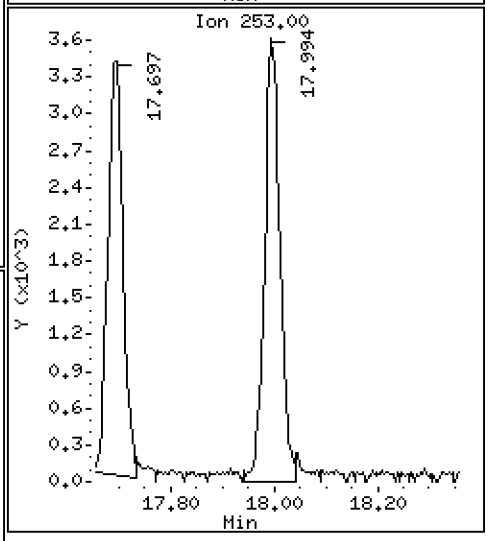
35 Perylene

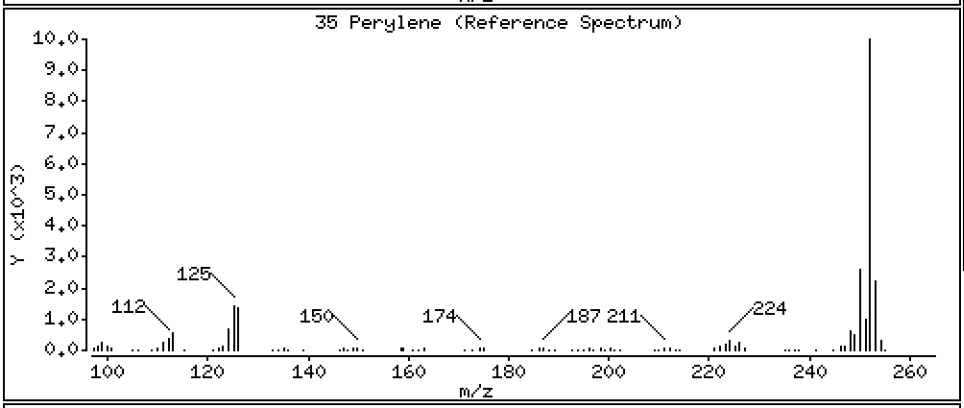
Concentration: 4.105 ug/mL

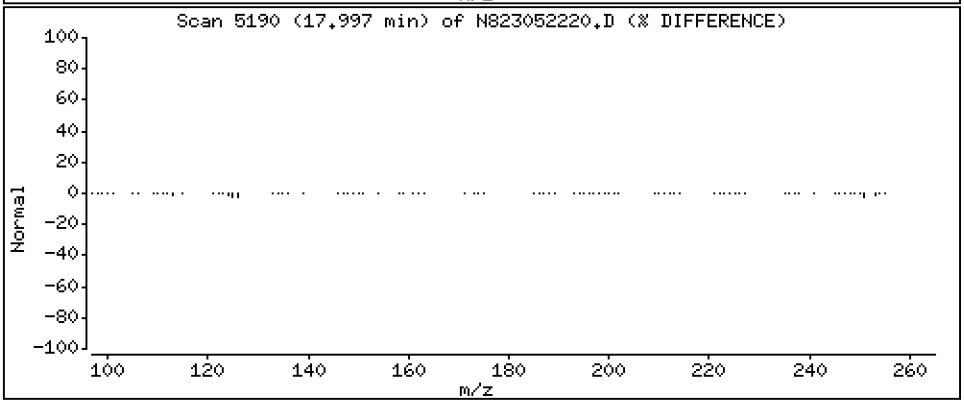












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

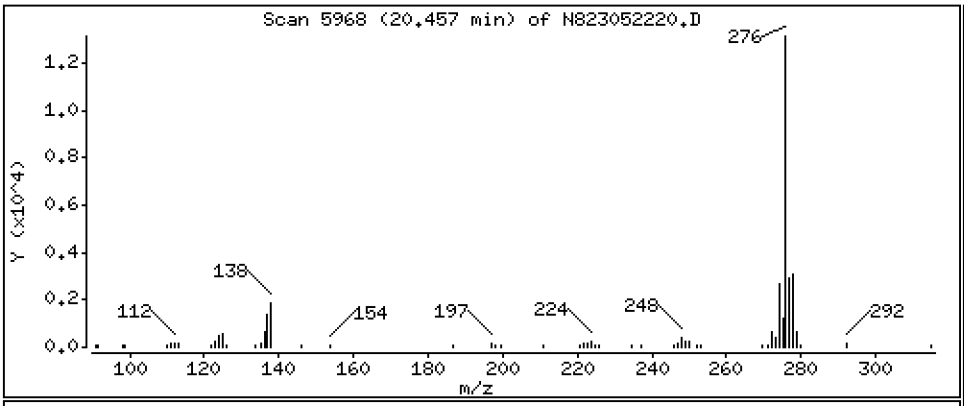
Operator: JZ

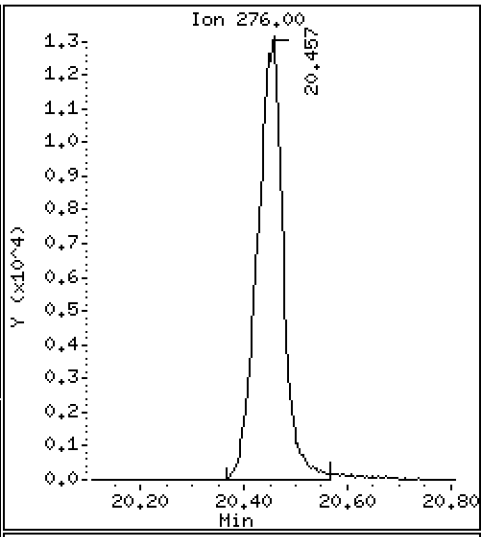
Column phase: Rxi-17sil

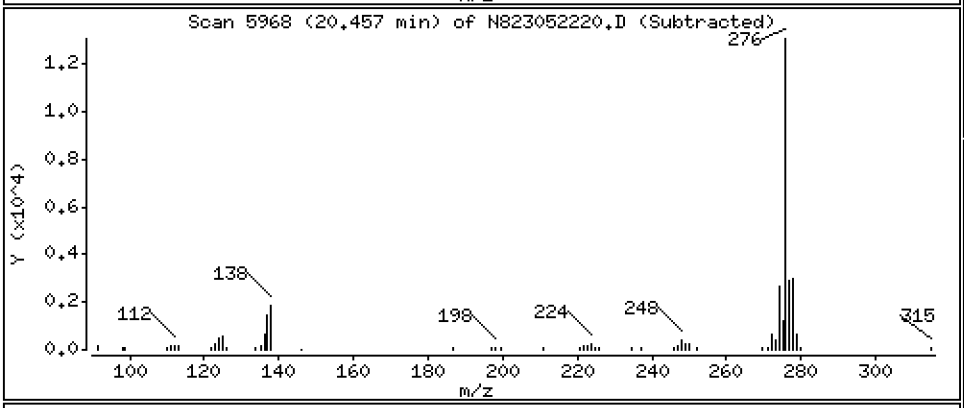
Column diameter: 0.25

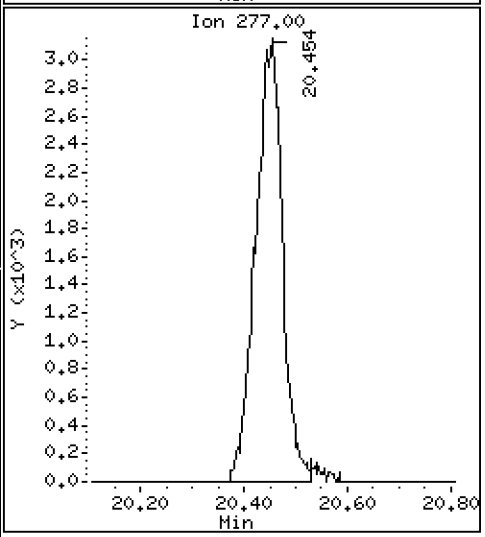
37 Indeno(1,2,3-cd)pyrene

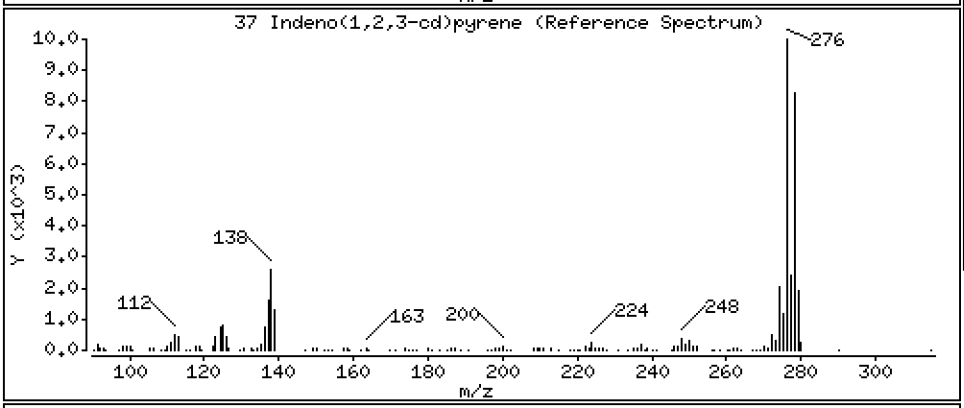
Concentration: 5.476 ug/mL

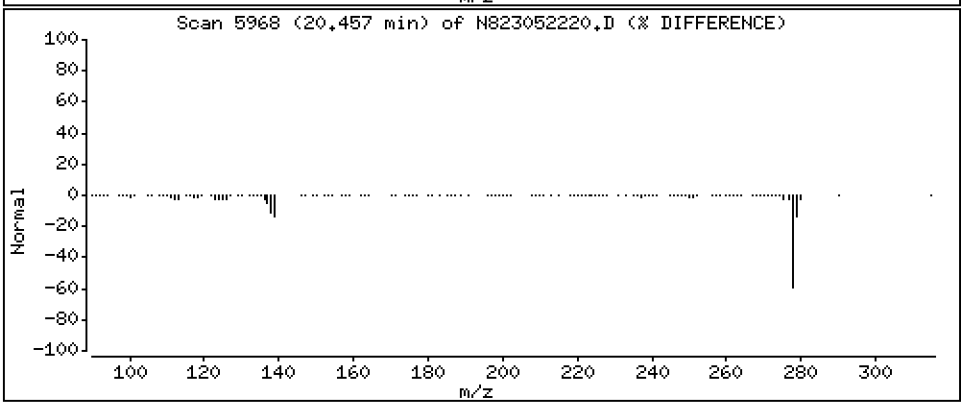












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

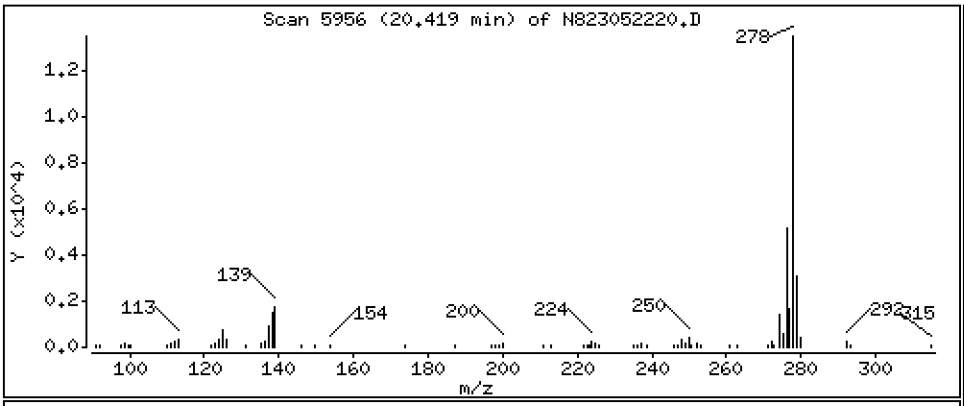
Operator: JZ

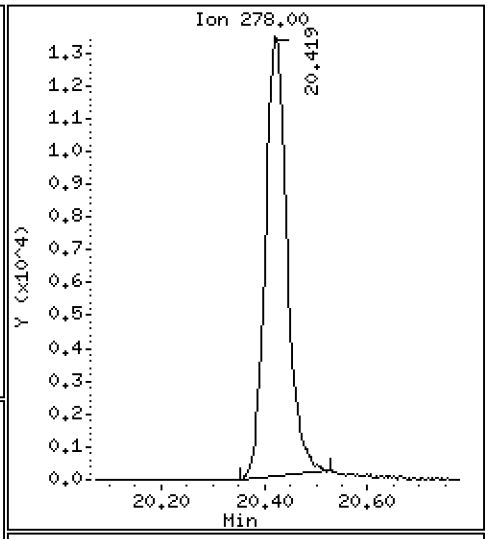
Column phase: Rxi-17sil

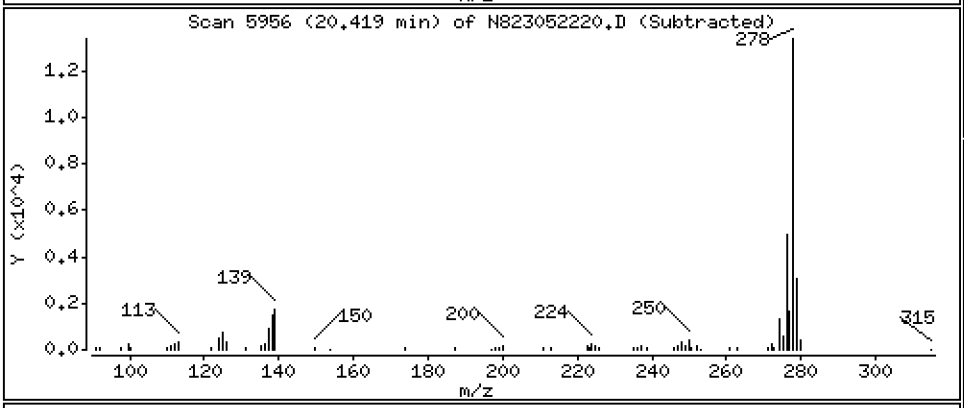
Column diameter: 0.25

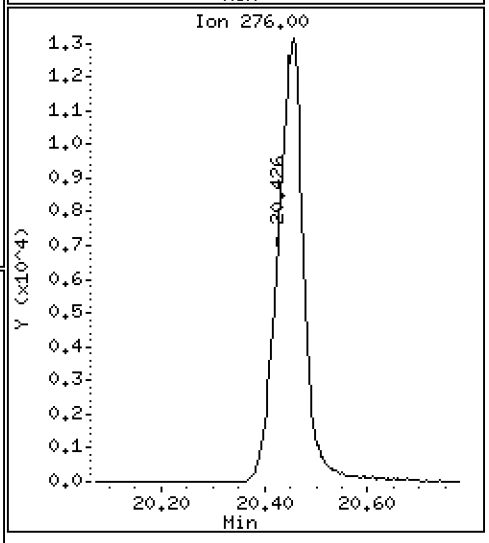
38 Dibenzo(a,h)anthracene

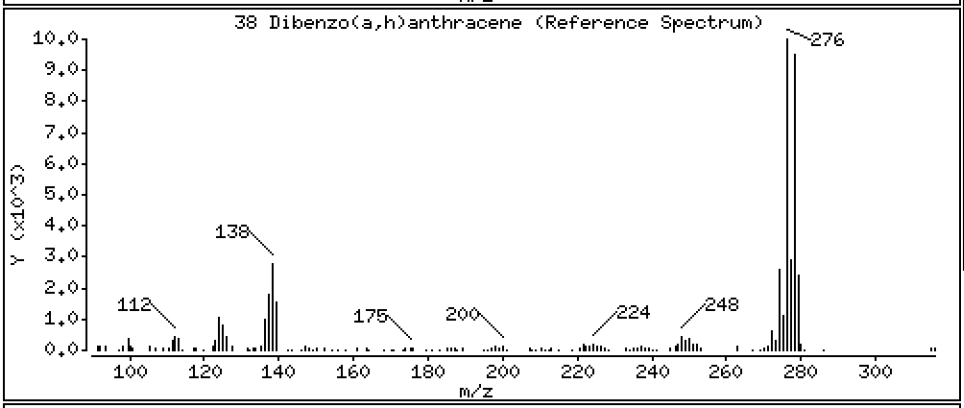
Concentration: 5.339 ug/mL

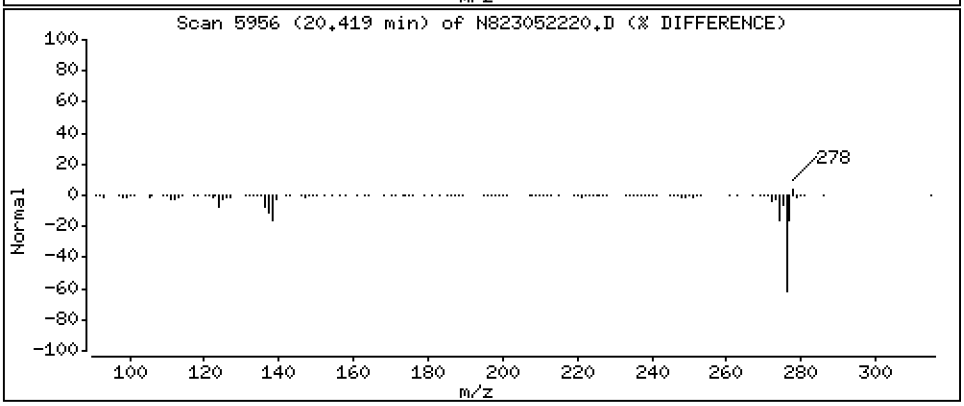












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052220.D

Date : 22-MAY-2023 20:33

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-BSD1,

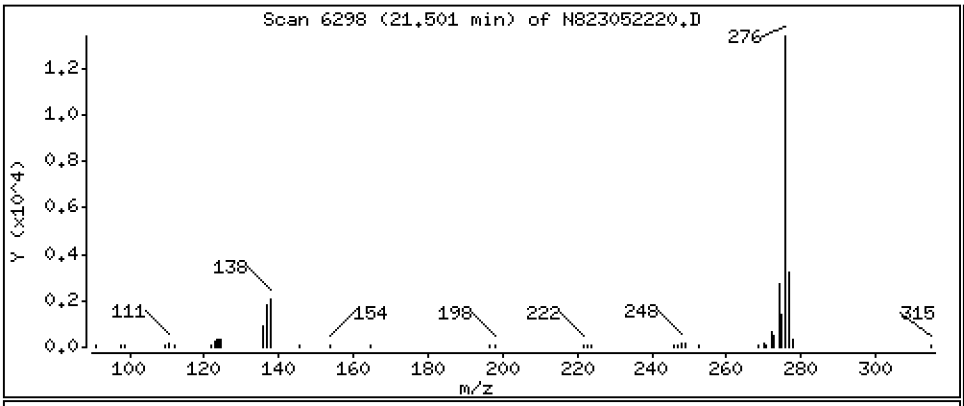
Operator: JZ

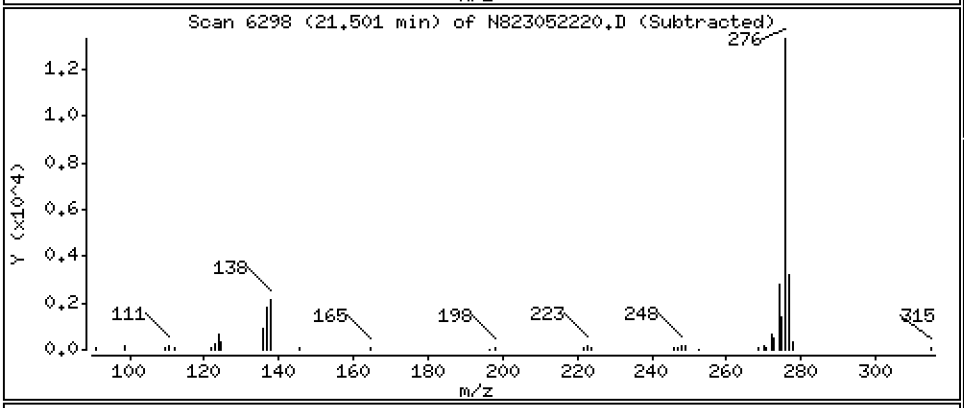
Column phase: Rxi-17sil

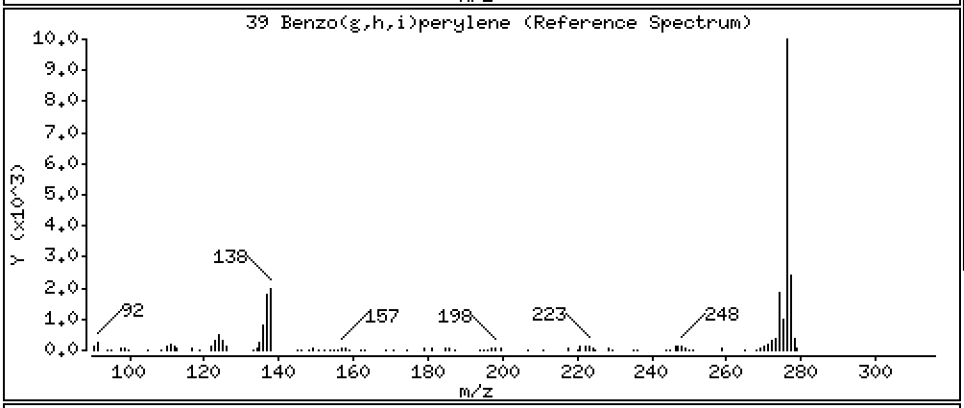
Column diameter: 0.25

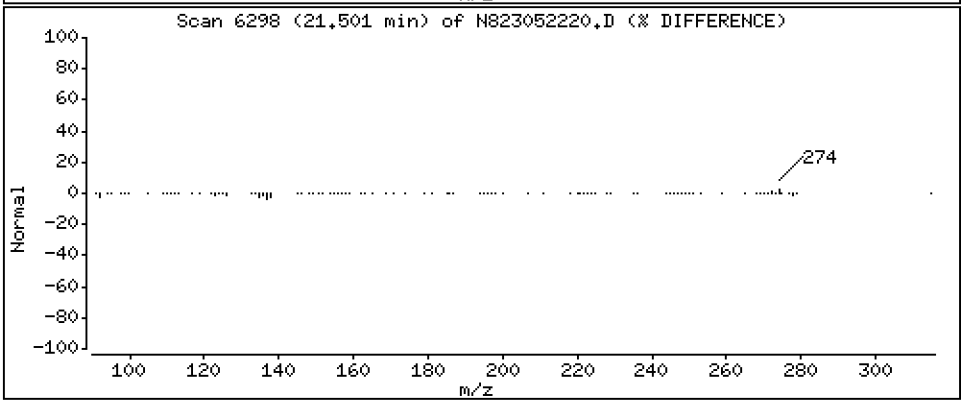
39 Benzo(g,h,i)perylene

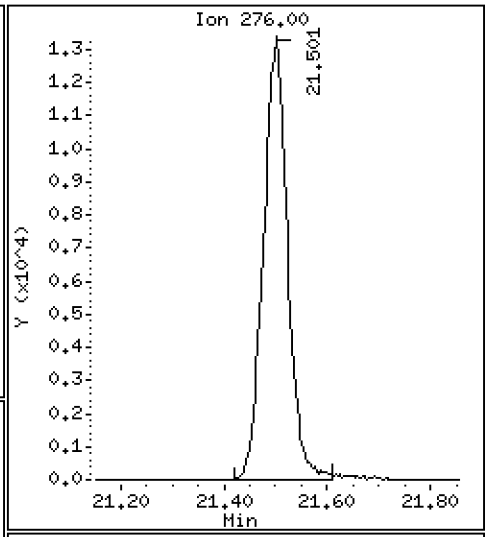
Concentration: 5.628 ug/mL

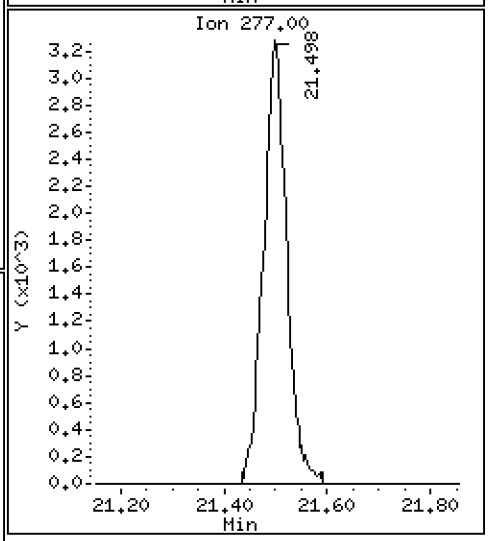












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230522.b\N823052220.D
Lab Smp Id: BLE0149-BSD1
Inj Date : 22-MAY-2023 20:33
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0149-BSD1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Meth Date : 23-May-2023 10:38 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.805	4.818	(1.000)	17781	2.00000	
	2 Naphthalene	128	4.837	4.846	(1.007)	30621	3.38023	3.380
$	3 2-Methylnaphthalene-d10	152	5.542	5.551	(1.153)	12972	2.36213	2.362
	4 2-Methylnaphthalene	141	5.589	5.599	(1.163)	17380	3.37912	3.379
	5 1-methylnaphthalene	141	5.788	5.795	(1.205)	17631	3.45729	3.457
	9 Acenaphthylene	152	6.990	6.993	(0.985)	29621	3.25675	3.257
*	10 Acenaphthene-d10	164	7.098	7.101	(1.000)	10274	2.00000	
	11 Acenaphthene	153	7.145	7.151	(1.007)	19723	3.34699	3.347
	12 Dibenzofuran	168	7.300	7.306	(1.029)	29751	3.36140	3.361
	14 Fluorene	166	7.774	7.781	(1.095)	24248	3.43284	3.433
*	15 Phenanthrene-d10	188	9.134	9.140	(1.000)	18966	2.00000	
	16 Phenanthrene	178	9.169	9.175	(1.004)	37855	3.76823	3.768
	17 Anthracene	178	9.210	9.213	(1.008)	33671	3.57377	3.574
	19 Carbazole	167	9.725	9.731	(1.065)	33946	3.77206	3.772
	22 Fluoranthene	202	10.923	10.930	(1.196)	45038	3.89796	3.898
$	21 Fluoranthene-d10	212	10.889	10.895	(1.192)	28099	2.74461	2.745
	23 Pyrene	202	11.436	11.442	(0.815)	46521	4.73400	4.734
	24 Benzo(a)anthracene	228	13.908	13.918	(0.991)	43319	4.28994	4.290
*	25 Chrysene-d12	240	14.032	14.044	(1.000)	15349	2.00000	
	27 Chrysene	228	14.108	14.117	(1.005)	42576	4.29195	4.292
	28 Benzo(b)fluoranthene	252	16.647	16.653	(0.929)	43594	4.62508	4.625
	29 Benzo(k)fluoranthene	252	16.704	16.713	(0.932)	40807	4.59510	4.595
	30 Benzo(j)fluoranthene	252	16.783	16.789	(0.936)	39402	4.80211	4.802
	31 Total Benzofluoranthenes	252	16.647	16.653	(0.929)	122609	13.9883	13.99(M)
	32 Benzo(a)pyrene	252	17.690	17.703	(0.987)	32106	3.91869	3.919
*	33 Perylene-d12	264	17.921	17.934	(1.000)	14458	2.00000	
	35 Perylene	252	17.997	18.006	(1.004)	33772	4.10496	4.105
$	36 Dibenzo(a,h)anthracene-d14	292	20.315	20.318	(1.134)	24799	4.49271	4.493
	37 Indeno(1,2,3-cd)pyrene	276	20.457	20.457	(1.142)	45666	5.47564	5.476
	38 Dibenzo(a,h)anthracene	278	20.419	20.425	(1.139)	39540	5.33922	5.339(M)
	39 Benzo(g,h,i)perylene	276	21.500	21.503	(1.200)	43476	5.62774	5.628

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823052220.D
Lab Smp Id: BLE0149-BSD1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 22-MAY-2023
Calibration Time: 11:46
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	17081	8541	34162	17781	4.10
10 Acenaphthene-d10	9674	4837	19348	10274	6.20
15 Phenanthrene-d10	17710	8855	35420	18966	7.09
25 Chrysene-d12	15081	7541	30162	15349	1.78
33 Perylene-d12	15623	7812	31246	14458	-7.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.26
10 Acenaphthene-d10	7.10	6.60	7.60	7.10	-0.05
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.03	-0.09
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.07

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

REVIEW SUMMARY FOR FILE - N823052220.D

Lab ID: BLE0149-BSD1
nt8.i, 20230522.b\FSIMPNA230426.m,   22-MAY-2023 20:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

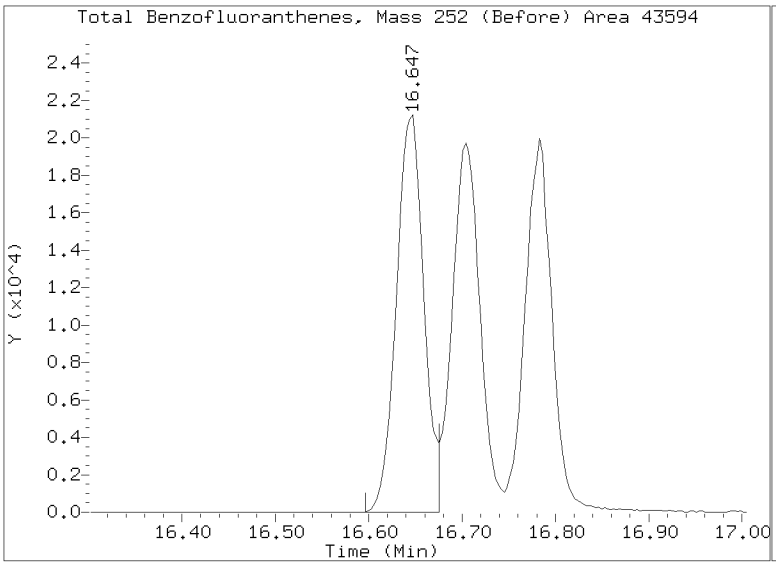
No RRT check performed

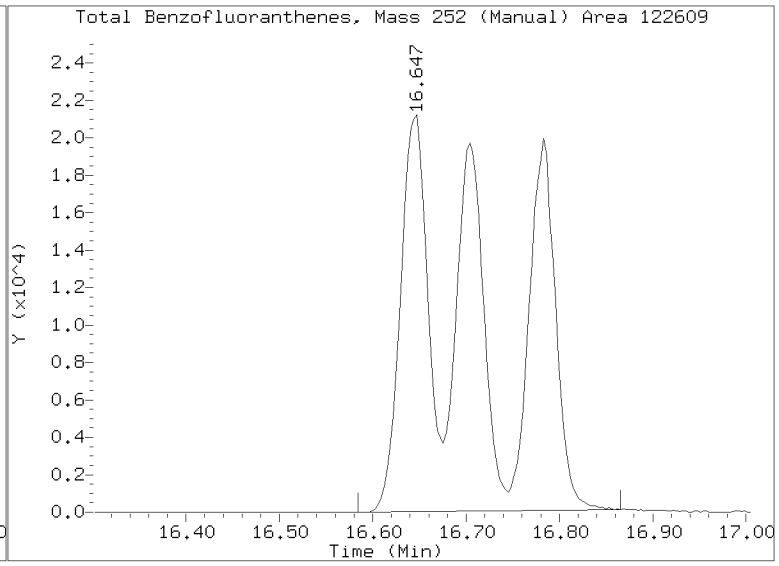
On Column LOD for nt8.i, 20230522.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

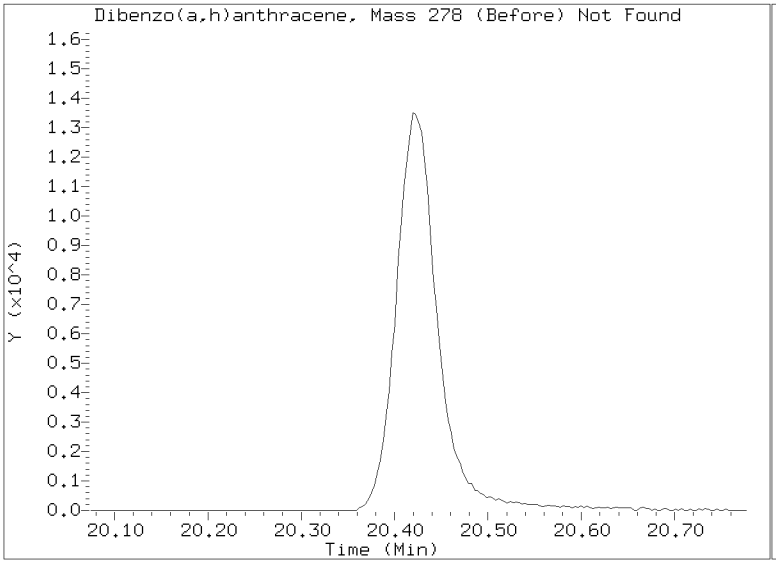
* Only compounds listed in the work order have been verified by the analyst *

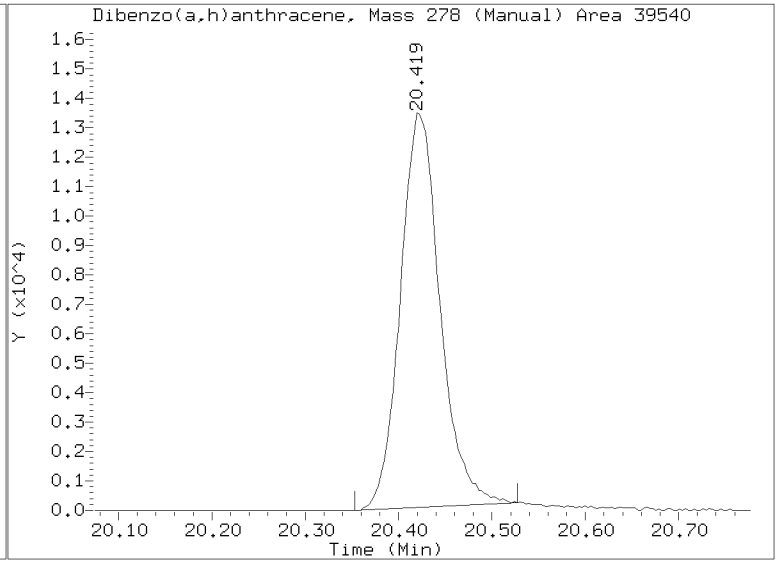
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230522.b/N823052220.D
Injection Date: 22-MAY-2023 20:33
Lab ID:BLE0149-BSD1 Client ID:
Report Date: 05/23/2023 10:45









MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 04:48
Batch:	BLE0148	Laboratory ID:	BLE0148-MS2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	19.69 g / 1 mL	Source Sample:	LDW23-SS1805

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	1.7	J	308		61.2	36 - 120
1,2-Dichlorobenzene	500	1.0	J	310		61.8	36 - 120
Benzyl Alcohol	500	85.2		397		62.4	25 - 123
Benzoic acid	2300	80.2	J	1060		42.7	10 - 160
2,4-Dimethylphenol	1300	ND	U	382		29.4	10 - 120
1,2,4-Trichlorobenzene	500	ND	U	314		62.7	35 - 120
N-Nitrosodiphenylamine	500	ND	U	349		69.9	27 - 120
Pentachlorophenol	1300	4.2	J	1440		110	26 - 120

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 05:25
Batch:	BLE0148	Laboratory ID:	BLE0148-MSD2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	19.69 g / 1 mL	Source Sample:	LDW23-SS1805

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	500	308		61.2	0.00260	30	36 - 120
1,2-Dichlorobenzene	500	305		60.8	1.67	30	36 - 120
Benzyl Alcohol	500	408		64.5	2.59	30	25 - 123
Benzoic acid	2300	1030		41.5	2.73	30	10 - 160
2,4-Dimethylphenol	1300	431		33.2	12.1	30	10 - 120
1,2,4-Trichlorobenzene	500	316		63.2	0.706	30	35 - 120
N-Nitrosodiphenylamine	500	350		70.1	0.250	30	27 - 120
Pentachlorophenol	1300	1500		115	4.16	30	26 - 120

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123285.D

Page 1

Date : 02-JUN-2023 04:48

Client ID:

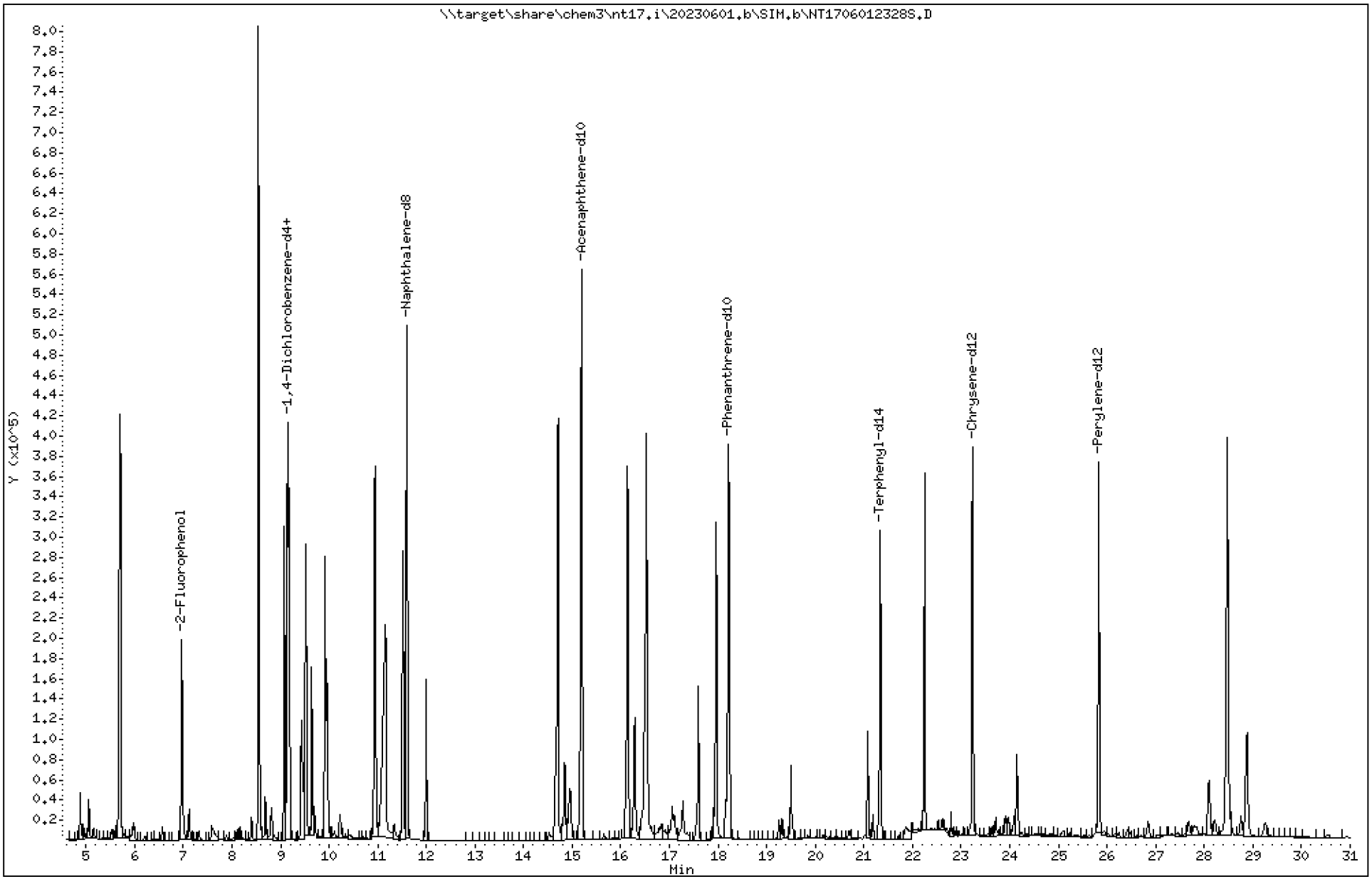
Instrument: nt17.i

Sample Info: BLE0148-MS2

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

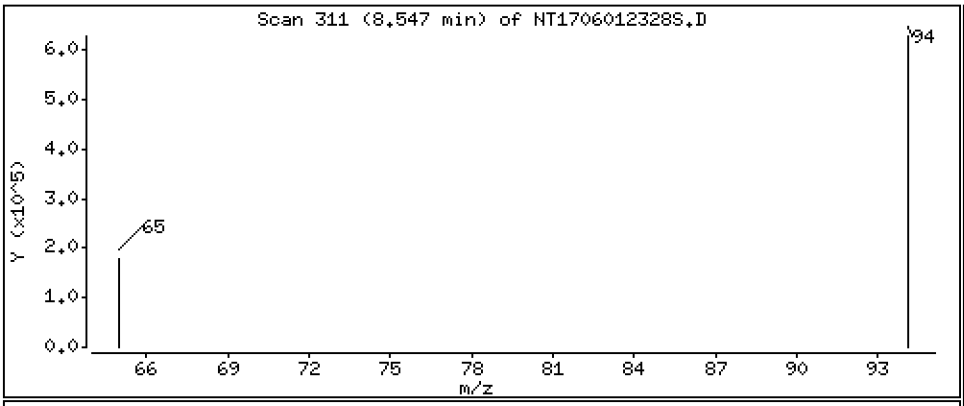
Operator: VTS

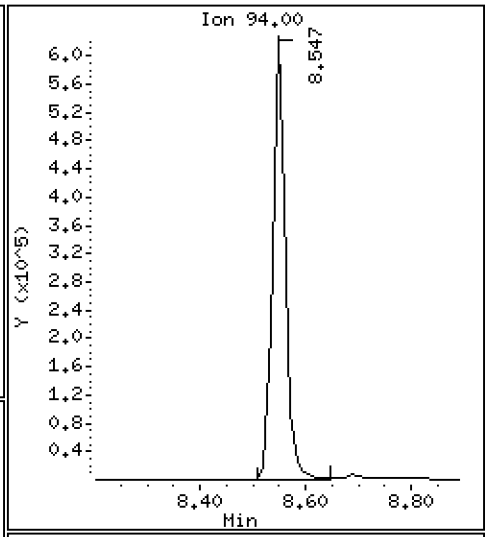
Column phase: ZB-5msi

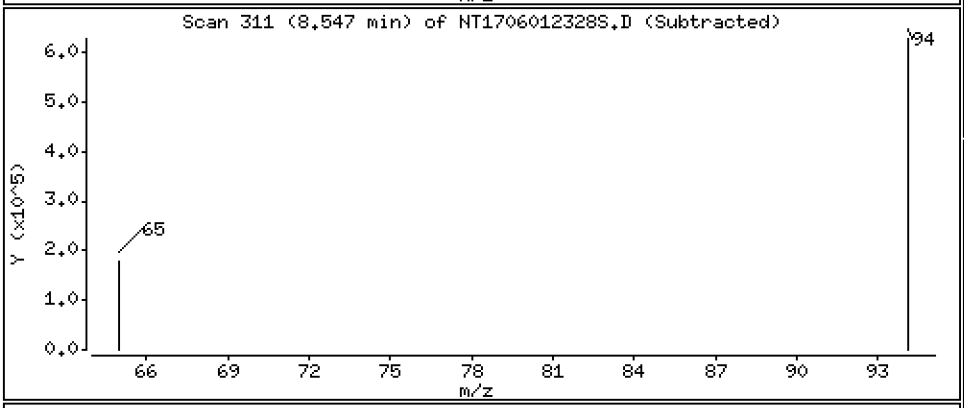
Column diameter: 0.25

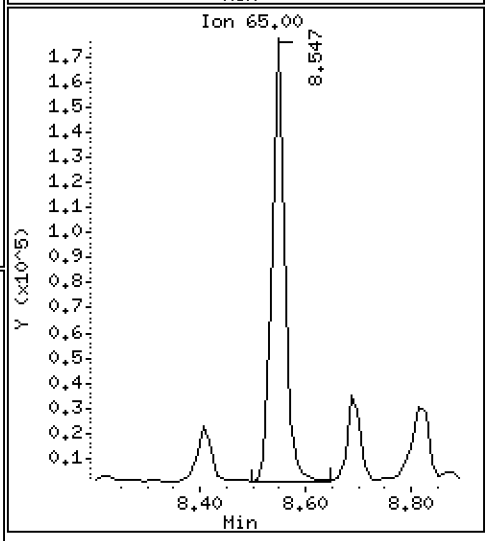
3 Phenol

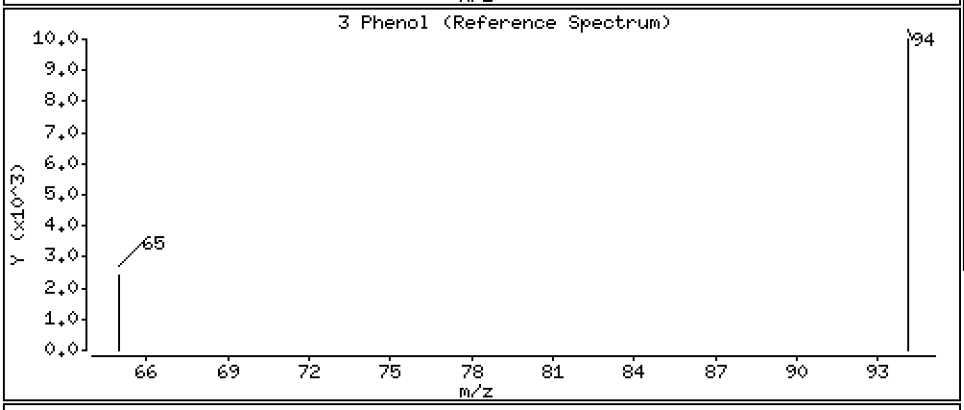
Concentration: 8.976 ug/mL

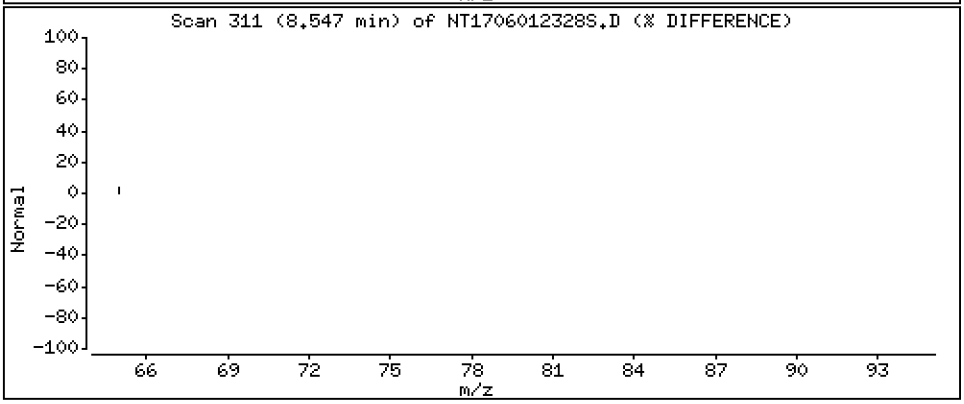












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

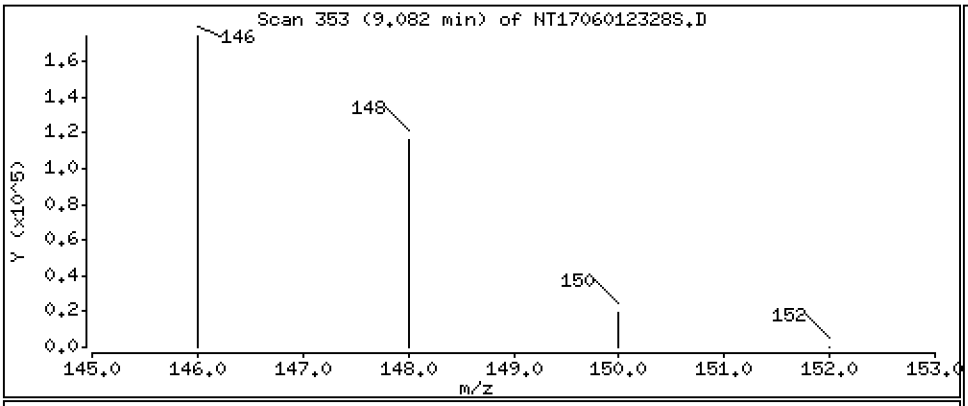
Operator: VTS

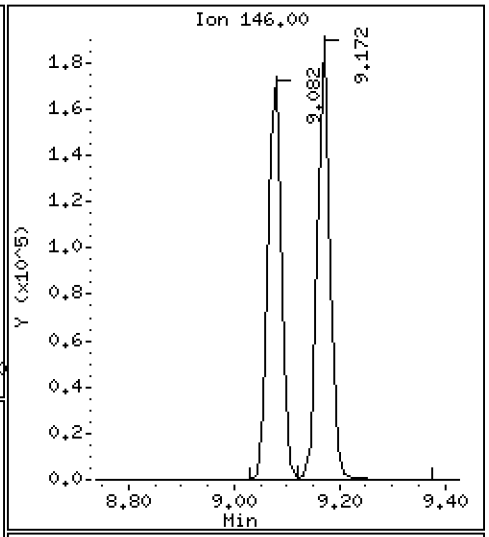
Column phase: ZB-5msi

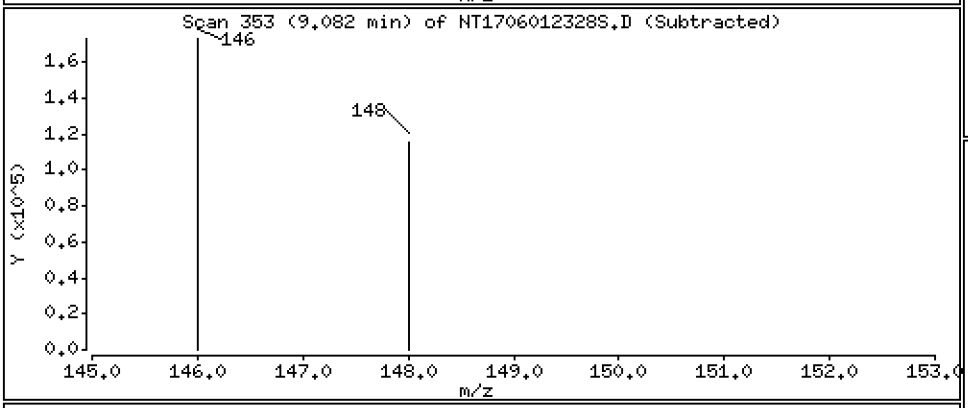
Column diameter: 0.25

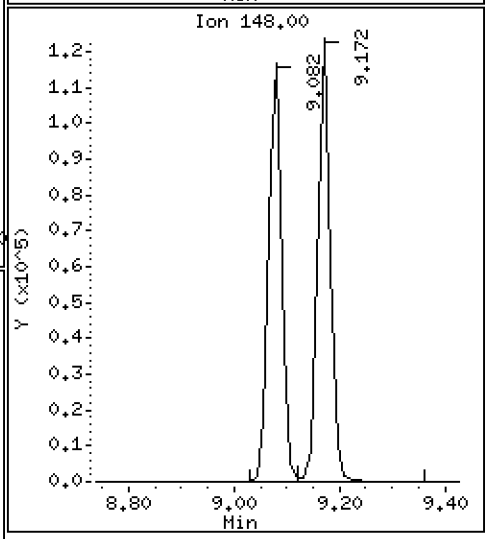
7 1,3-Dichlorobenzene

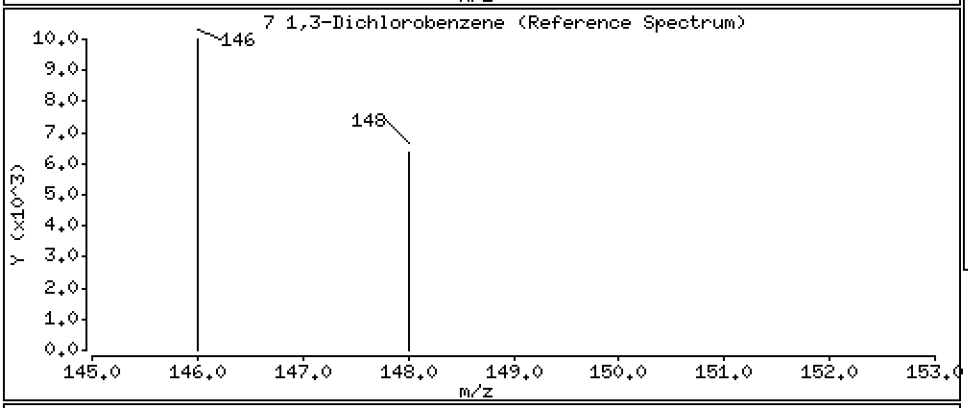
Concentration: 2.977 ug/mL

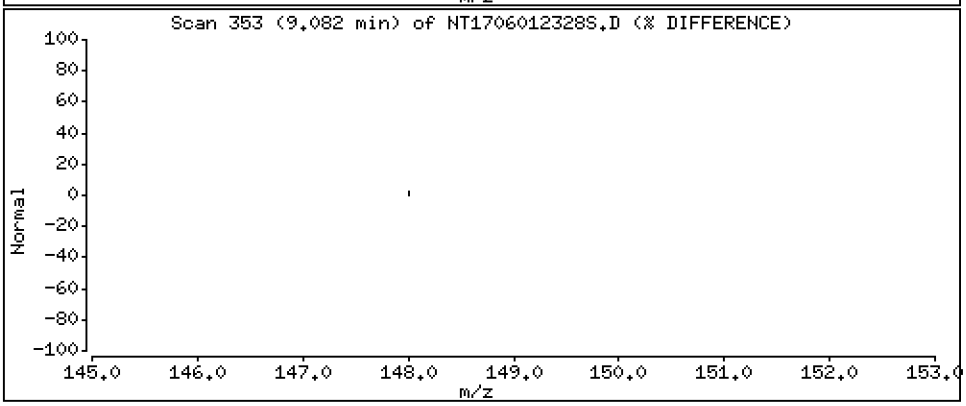












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

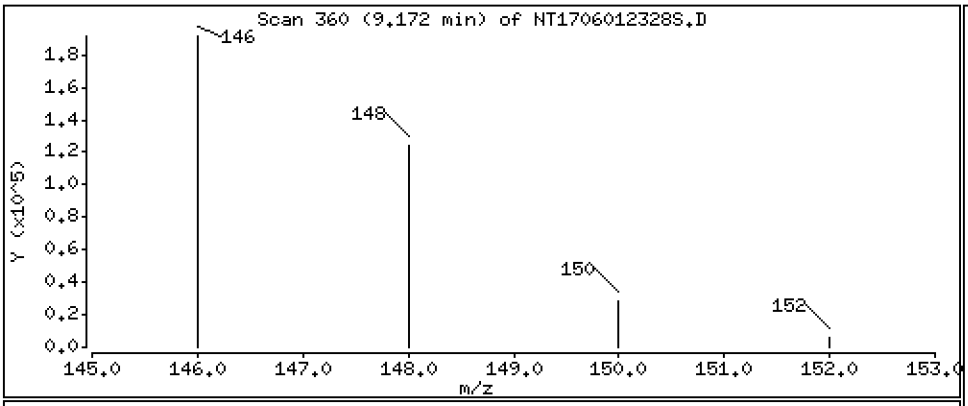
Operator: VTS

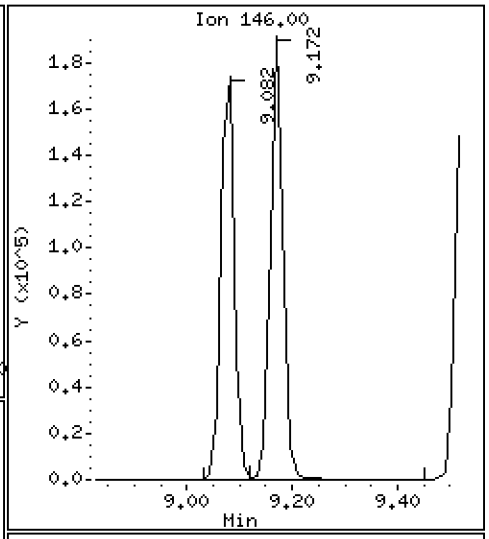
Column phase: ZB-5msi

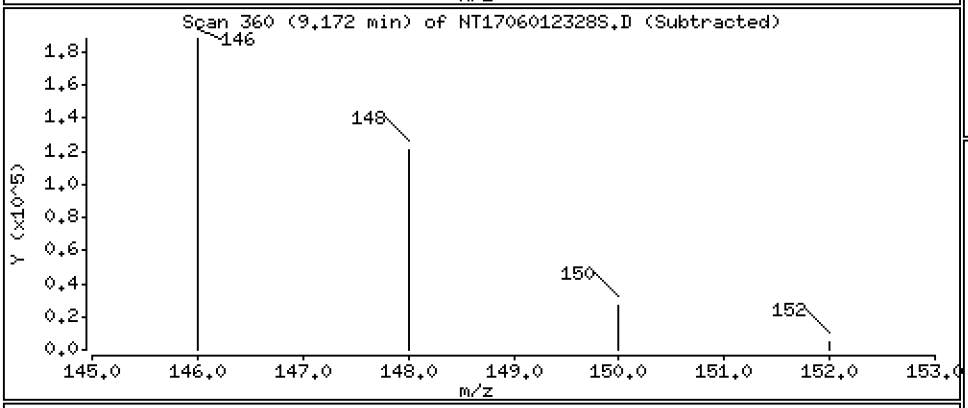
Column diameter: 0.25

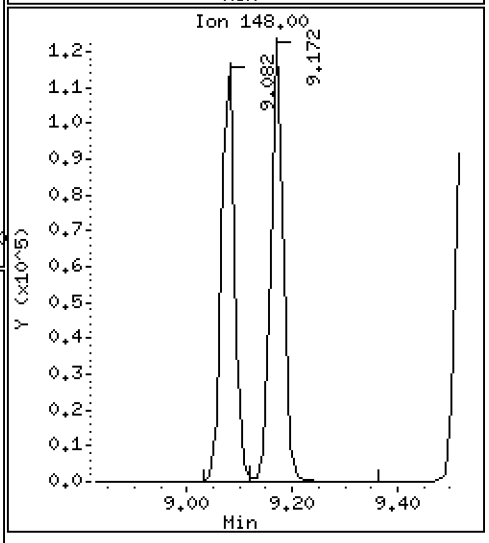
9 1,4-Dichlorobenzene

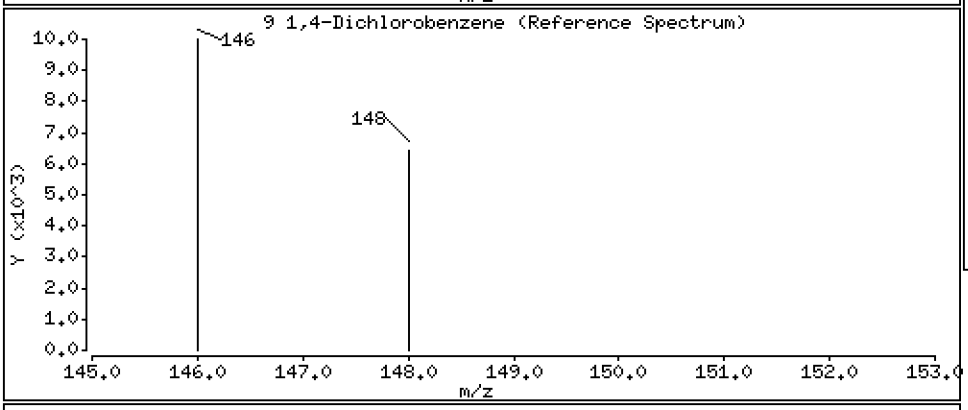
Concentration: 3.079 ug/mL

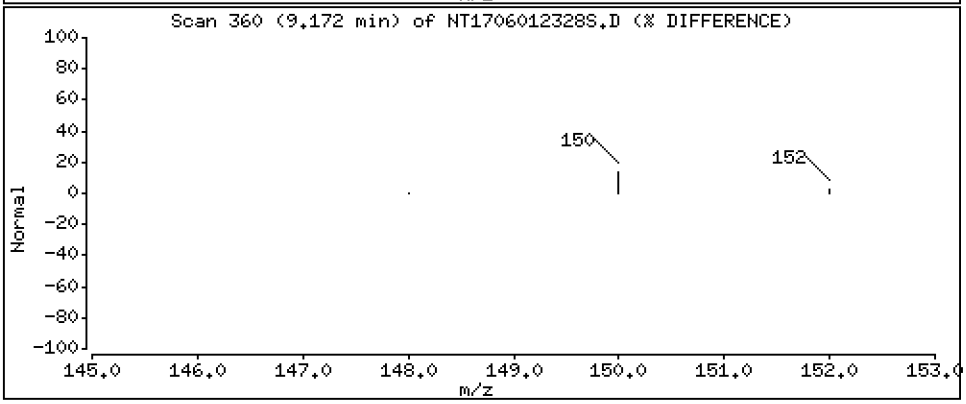












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

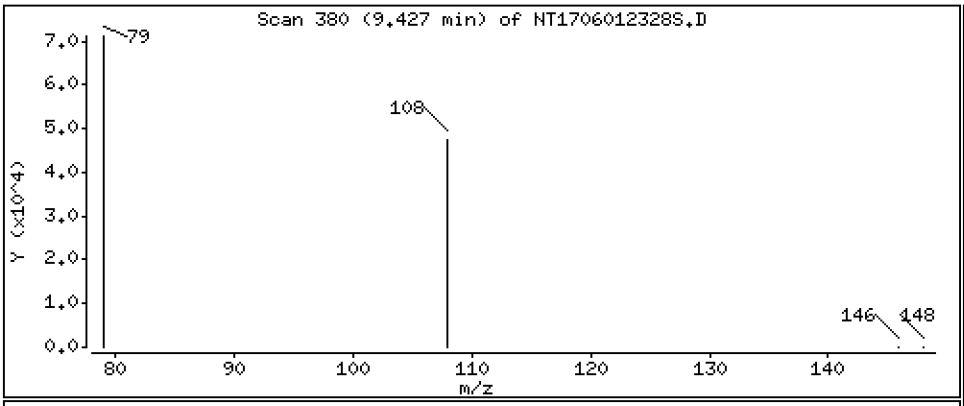
Operator: VTS

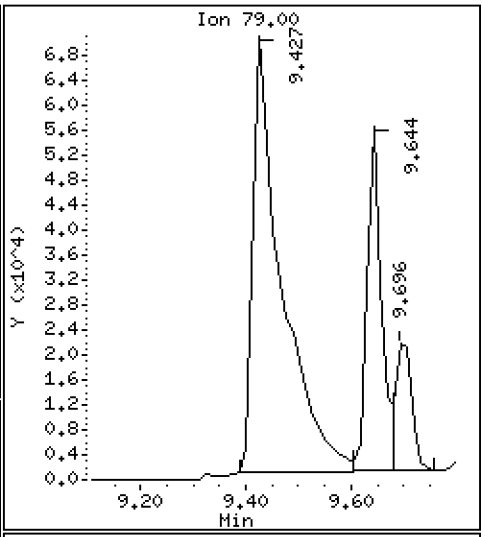
Column phase: ZB-5msi

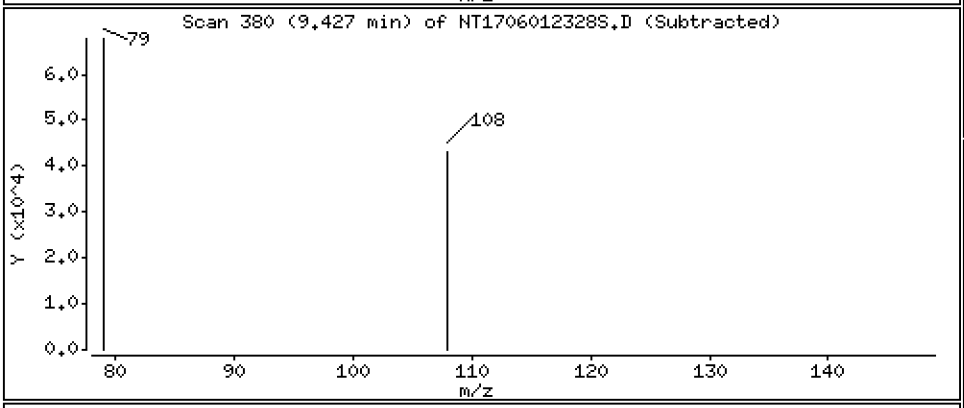
Column diameter: 0.25

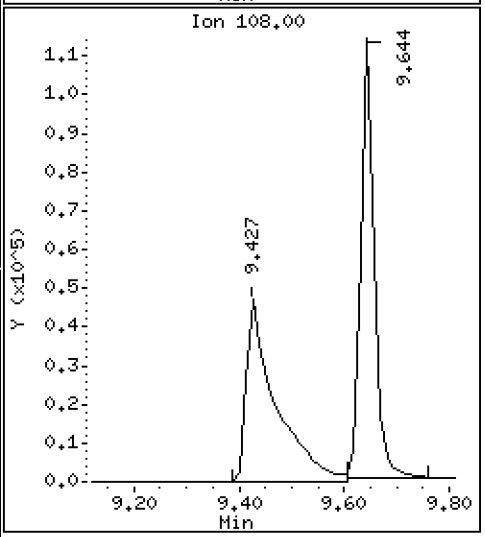
11 Benzyl alcohol

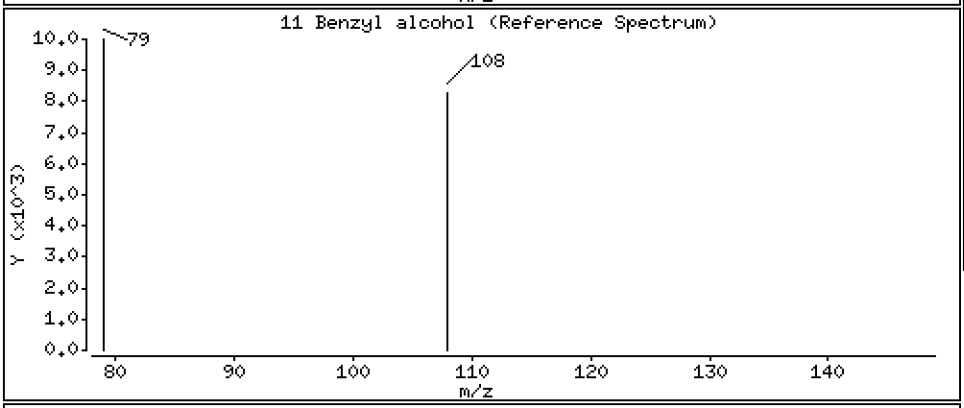
Concentration: 3.974 ug/mL

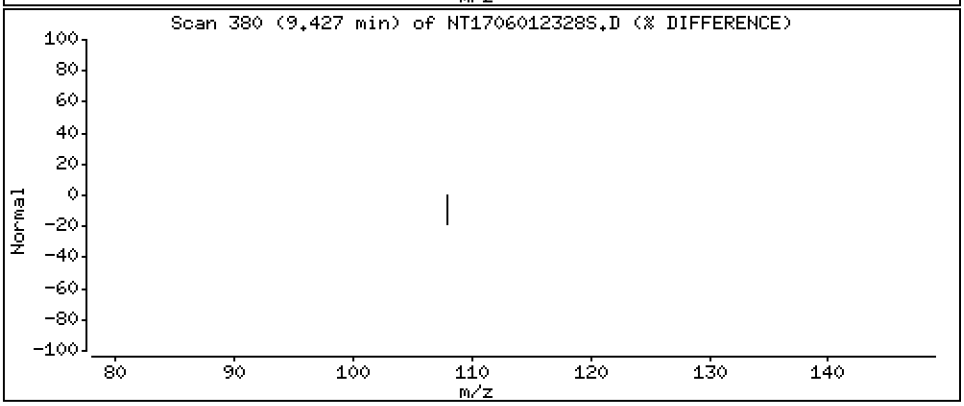












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

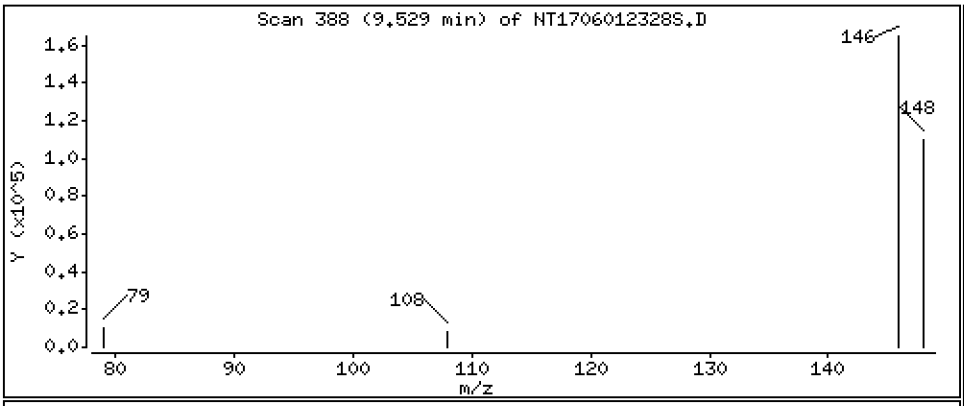
Operator: VTS

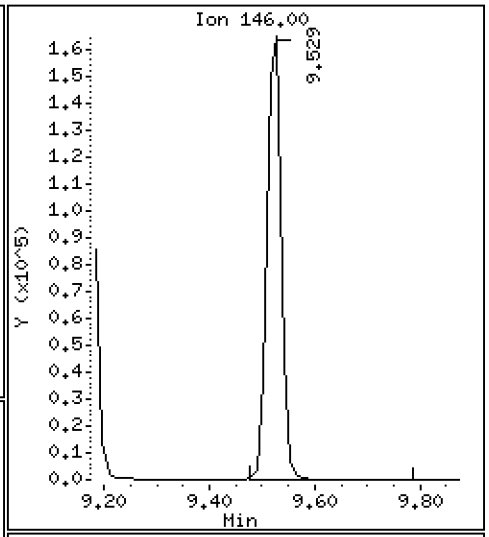
Column phase: ZB-5msi

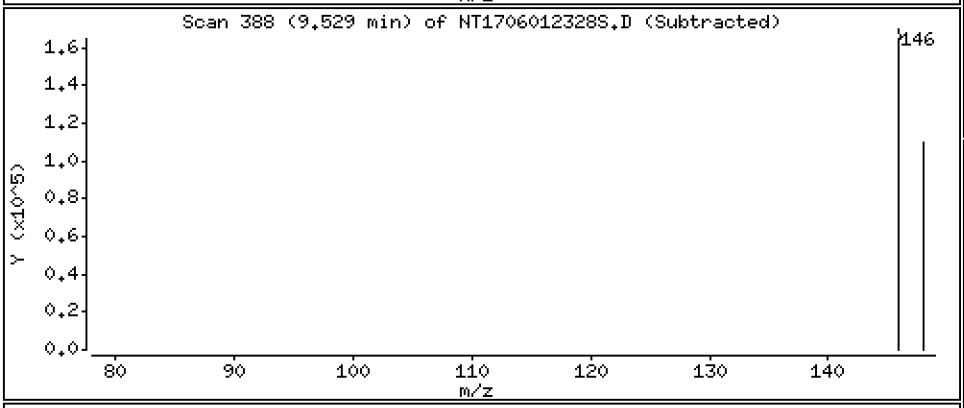
Column diameter: 0.25

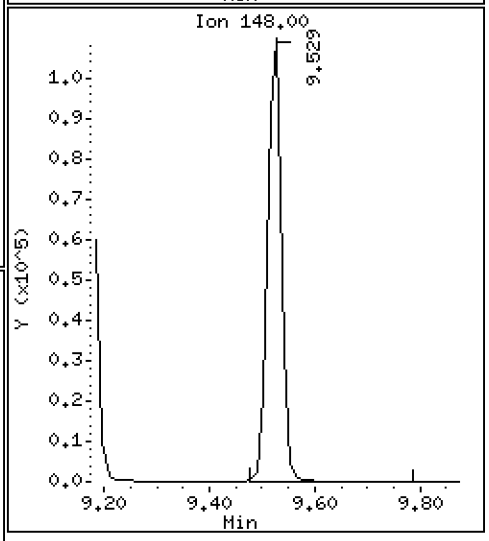
12 1,2-Dichlorobenzene

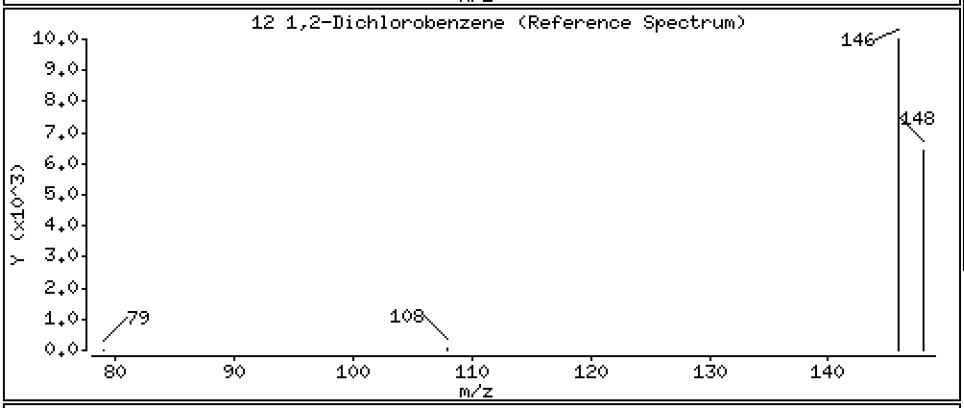
Concentration: 3.099 ug/mL

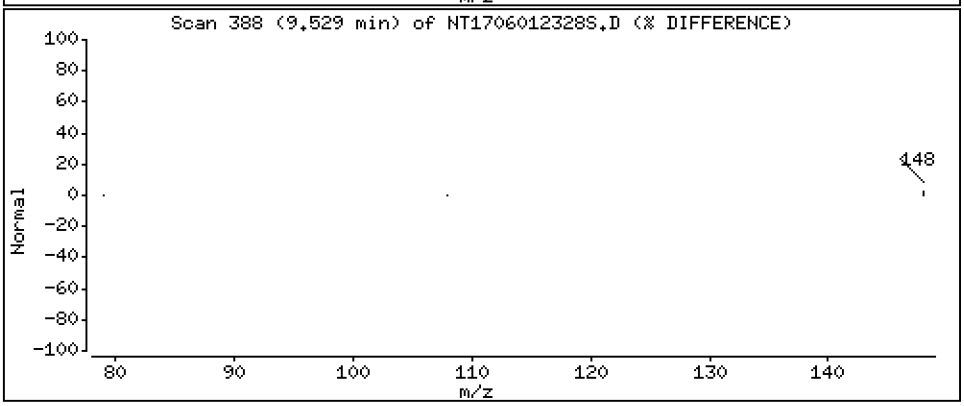












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

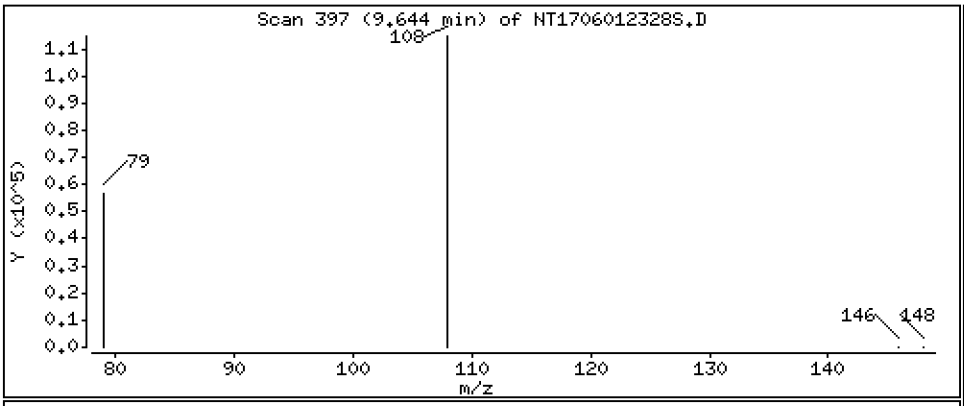
Operator: VTS

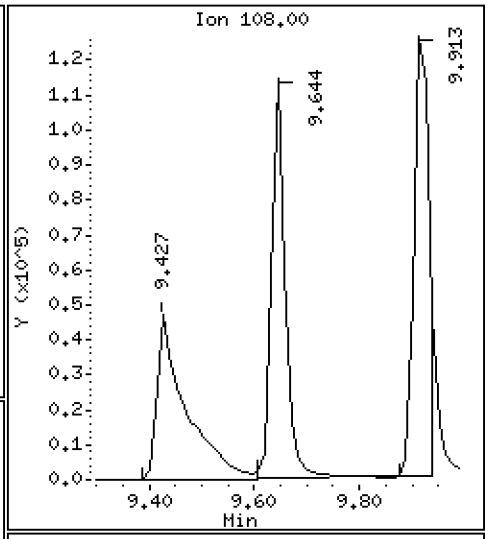
Column phase: ZB-5msi

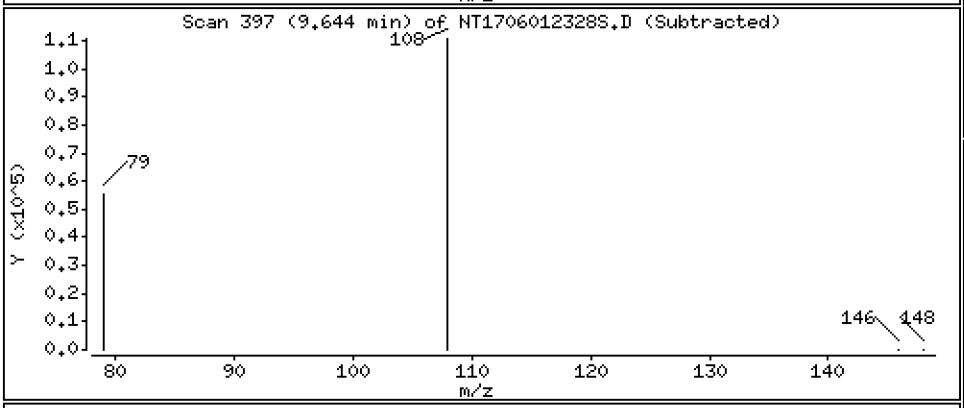
Column diameter: 0.25

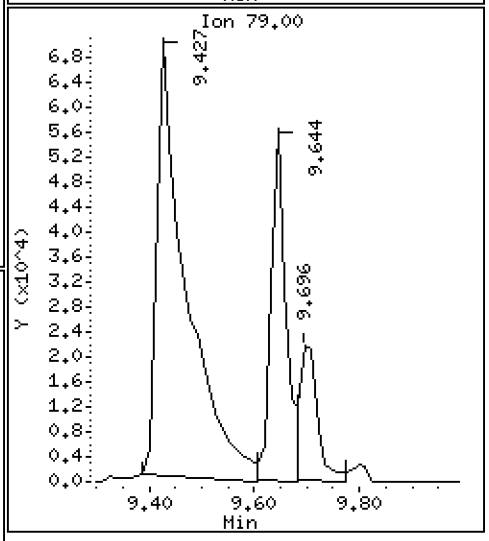
13 2-Methylphenol

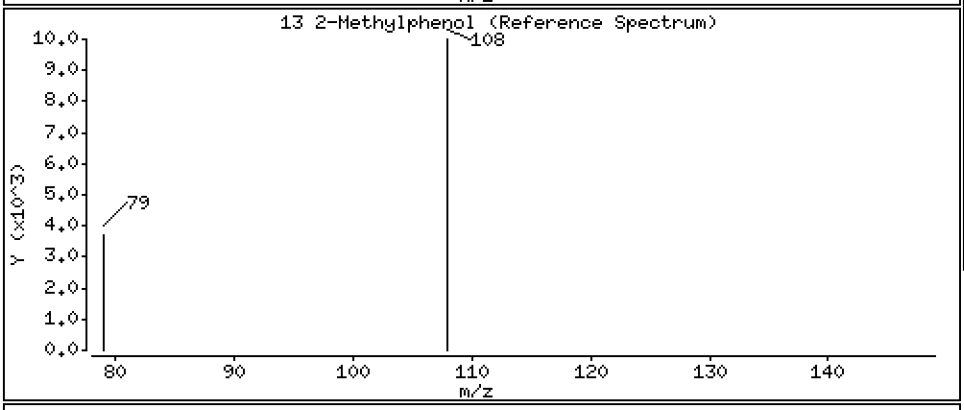
Concentration: 2.495 ug/mL

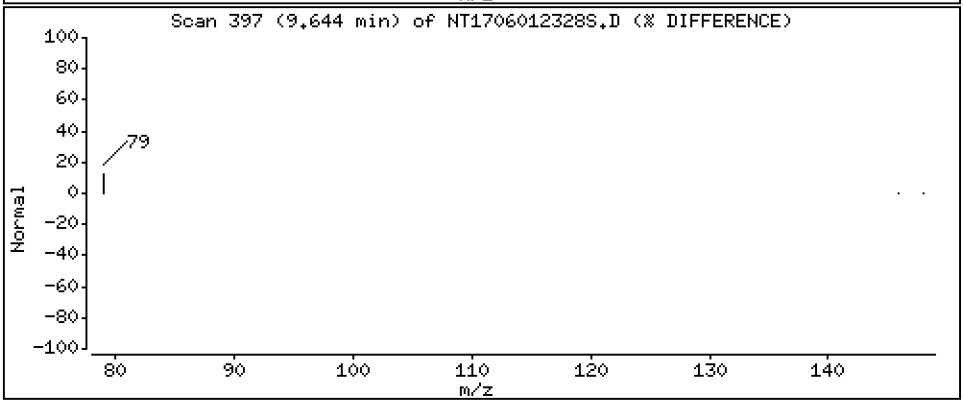












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

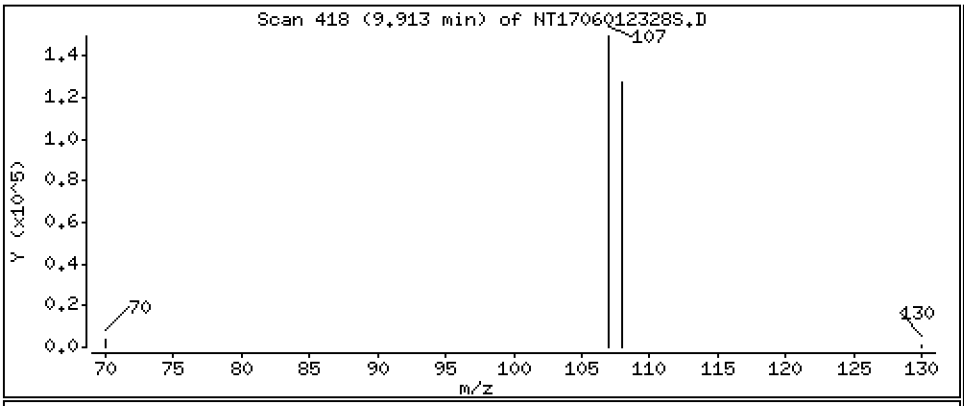
Operator: VTS

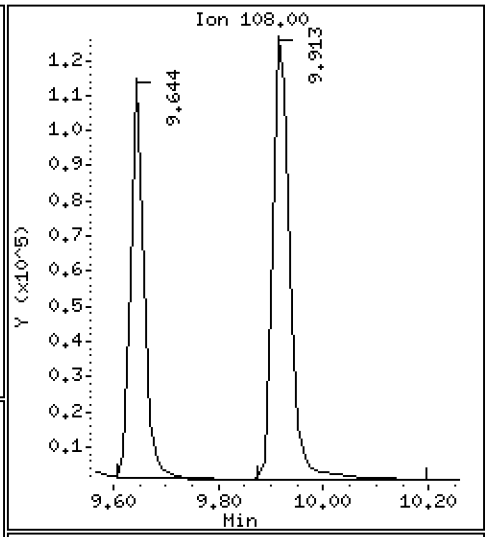
Column phase: ZB-5msi

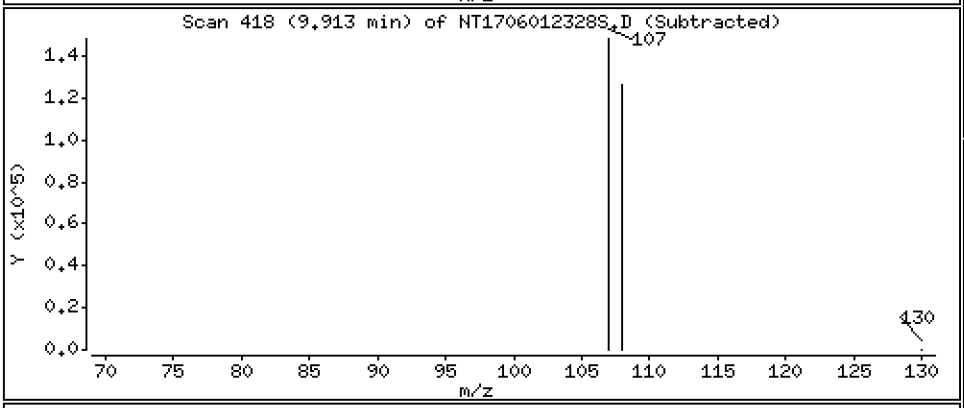
Column diameter: 0.25

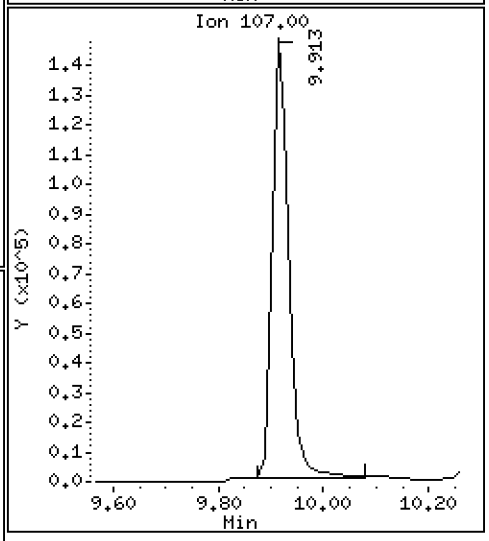
15 4-Methylphenol

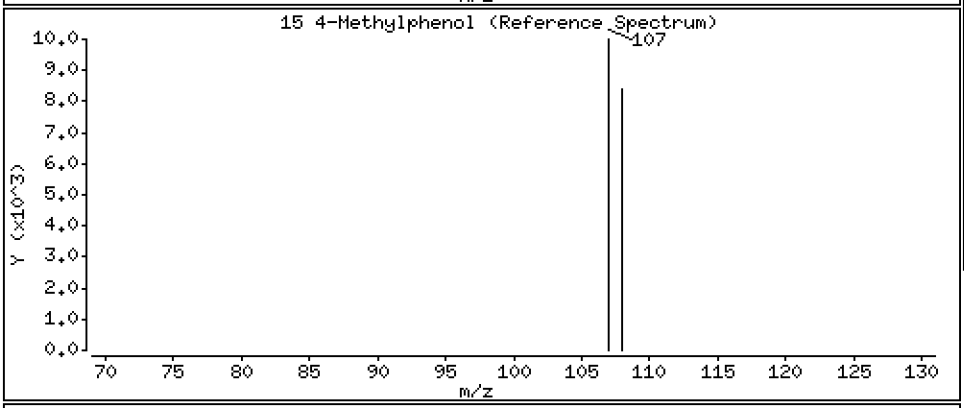
Concentration: 3.516 ug/mL

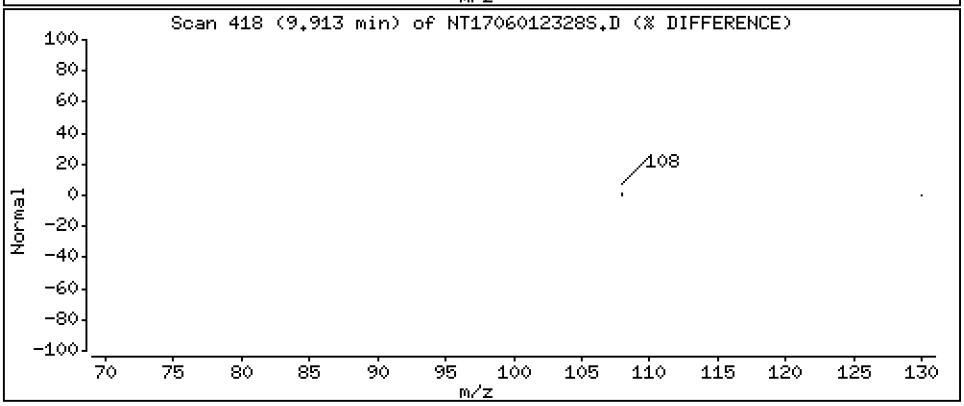












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

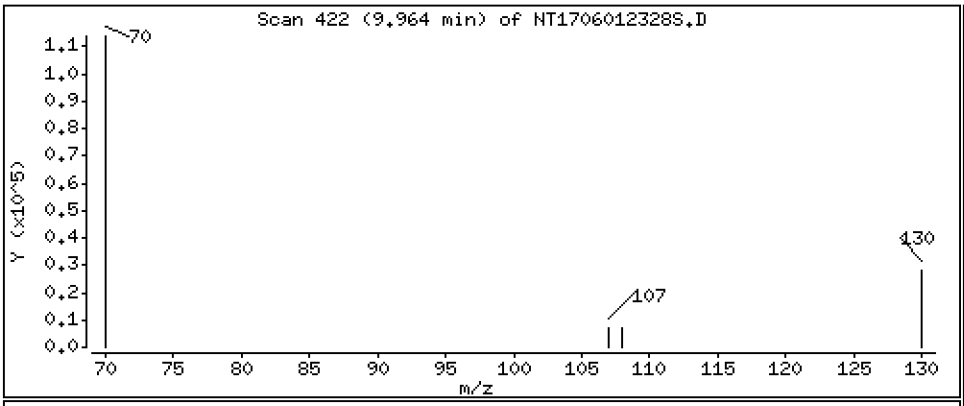
Operator: VTS

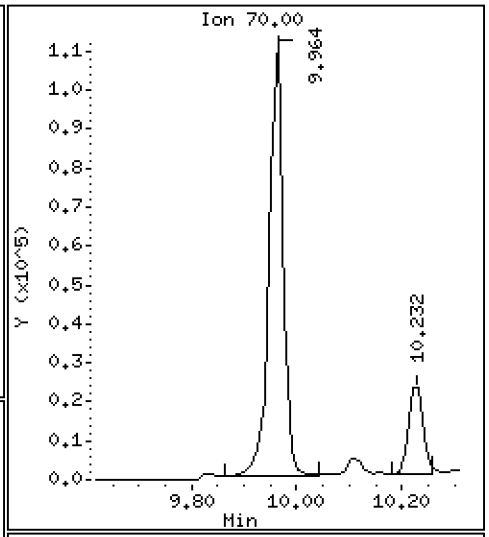
Column phase: ZB-5msi

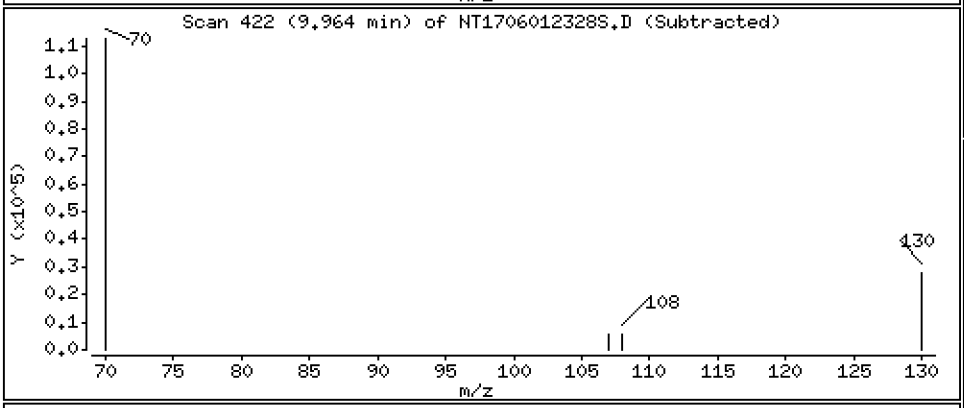
Column diameter: 0.25

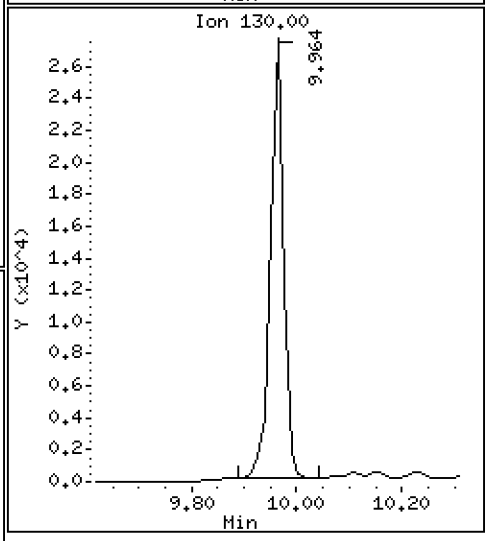
16 N-Nitroso-di-n-propylamine

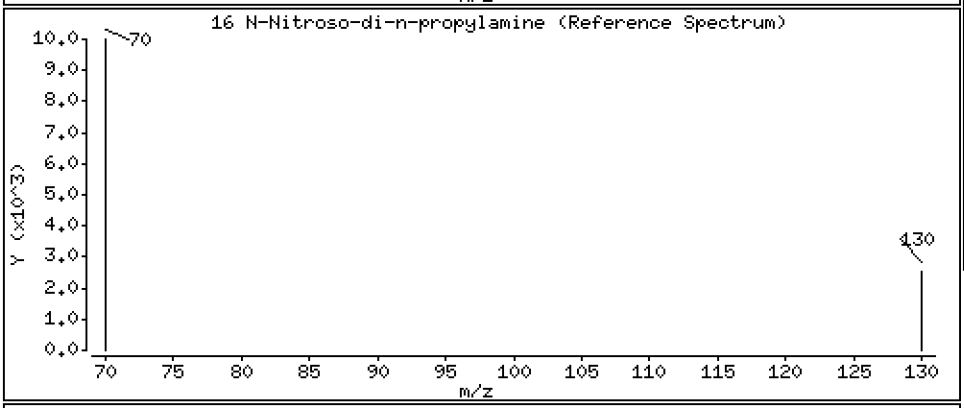
Concentration: 3.480 ug/mL

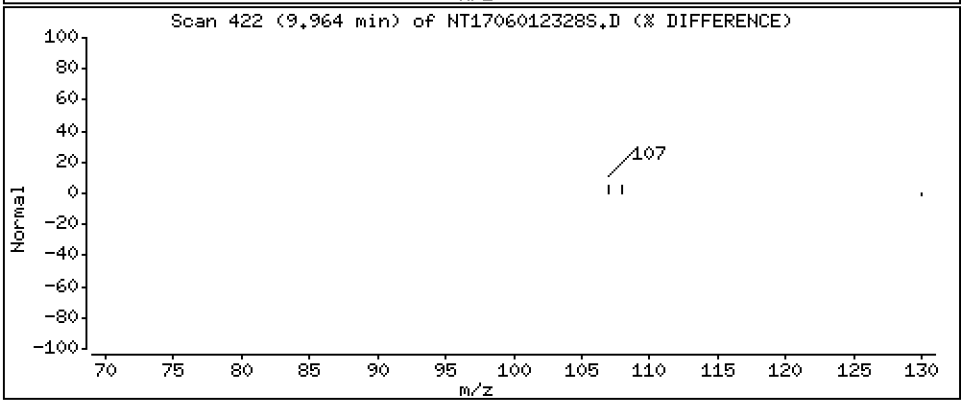












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123285.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

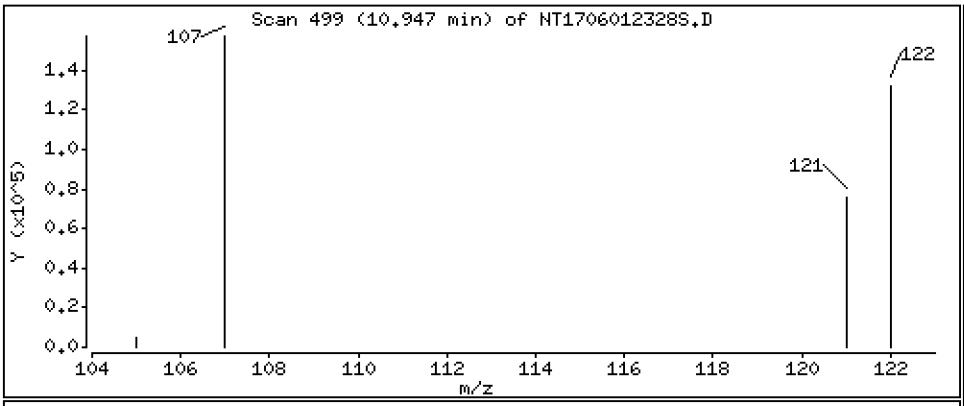
Operator: VTS

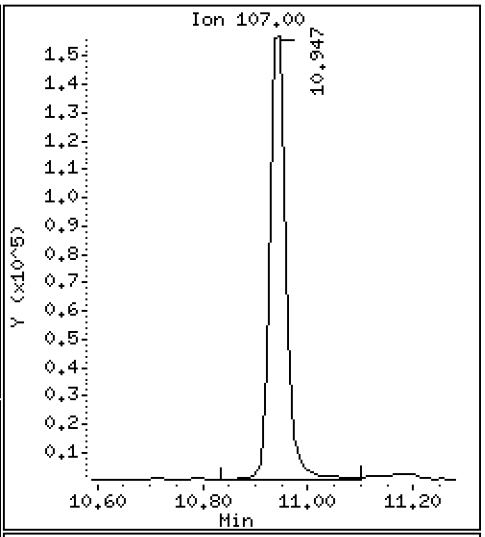
Column phase: ZB-5msi

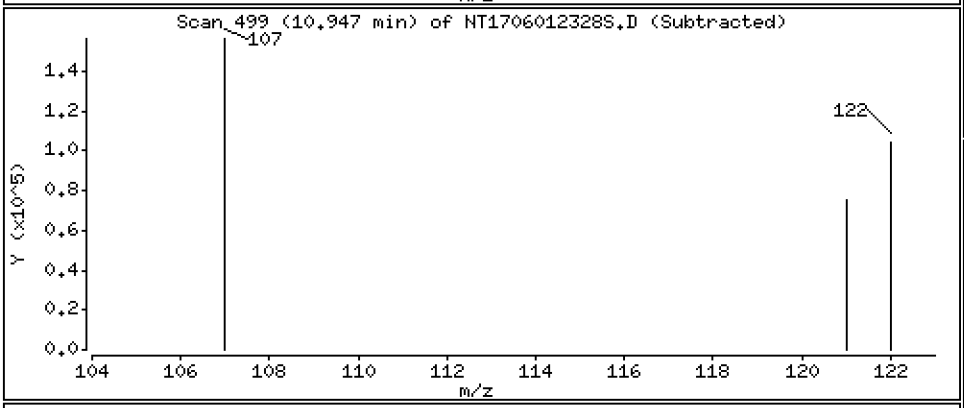
Column diameter: 0.25

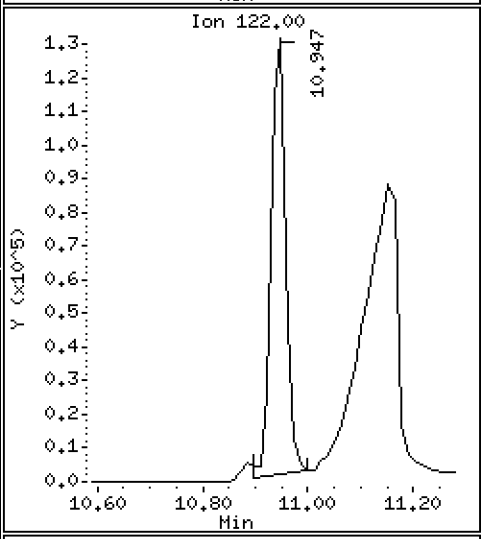
22 2,4-Dimethylphenol

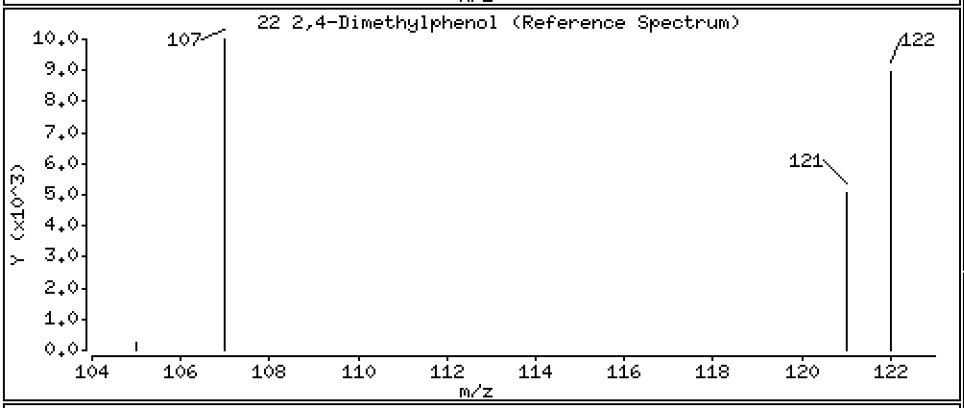
Concentration: 3.823 ug/mL

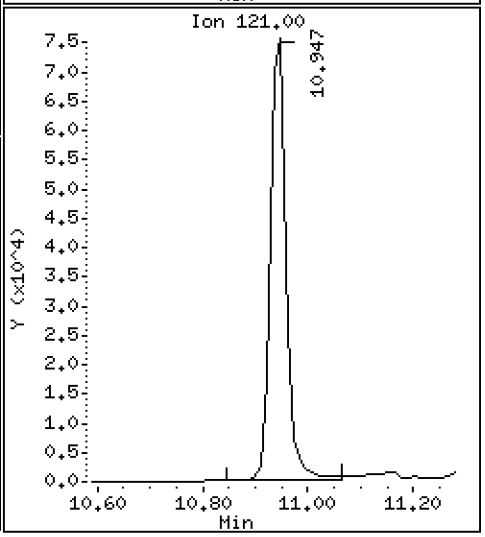


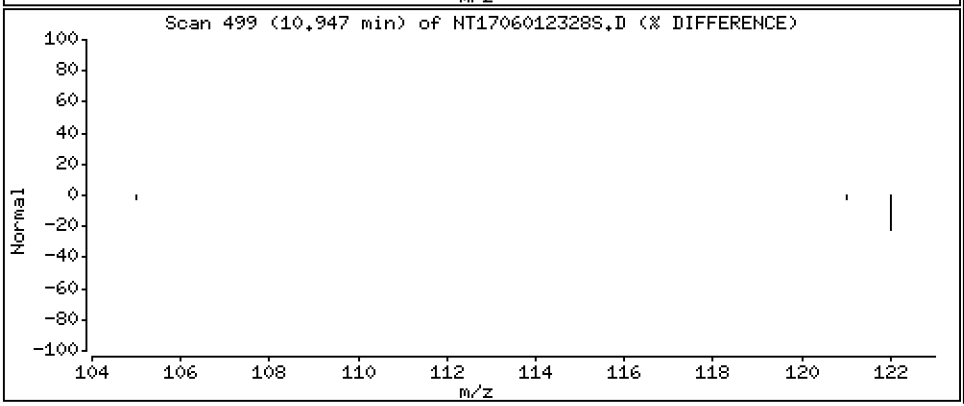












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

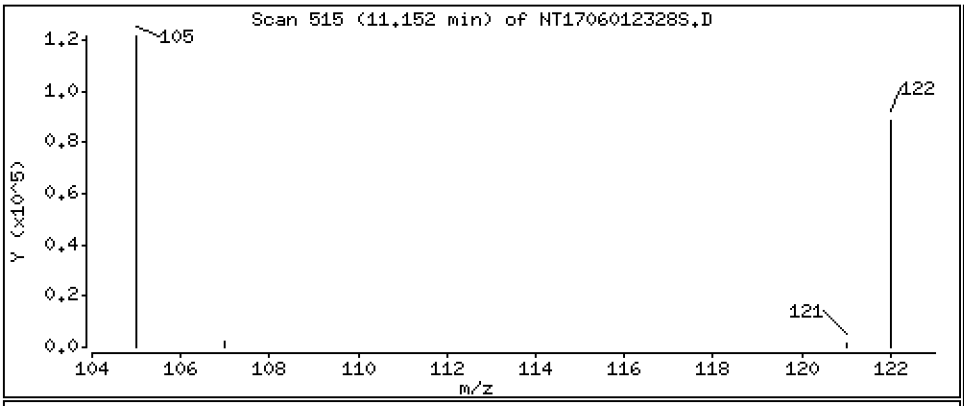
Operator: VTS

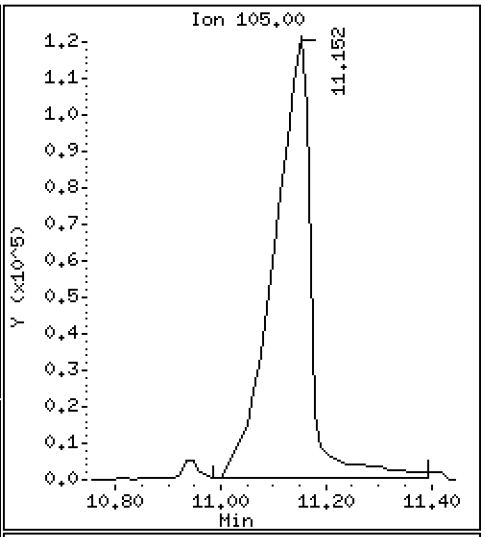
Column phase: ZB-5msi

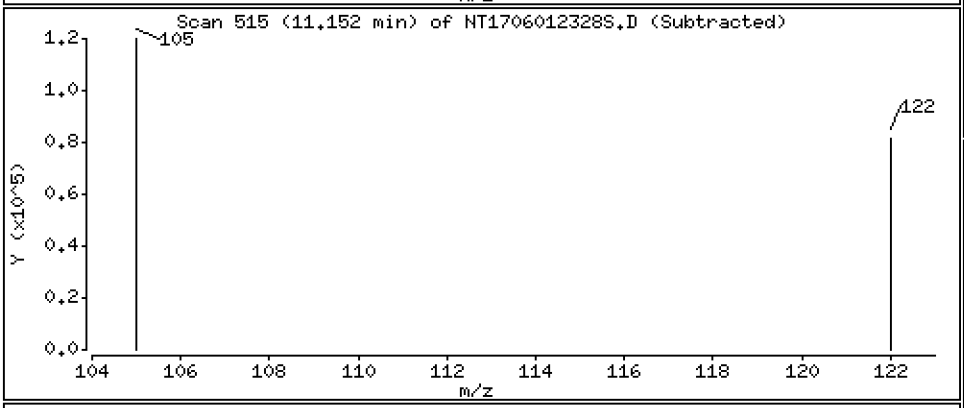
Column diameter: 0.25

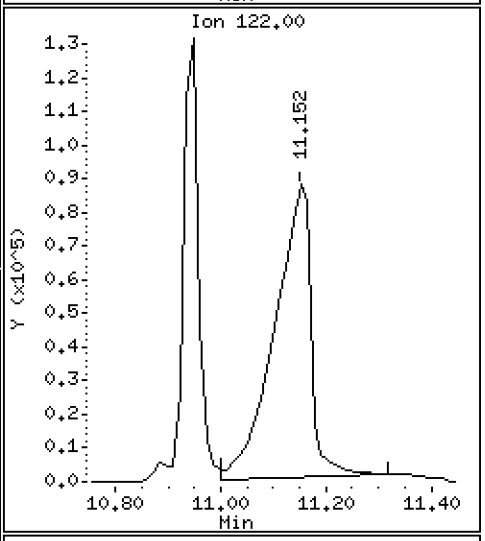
24 Benzoic acid

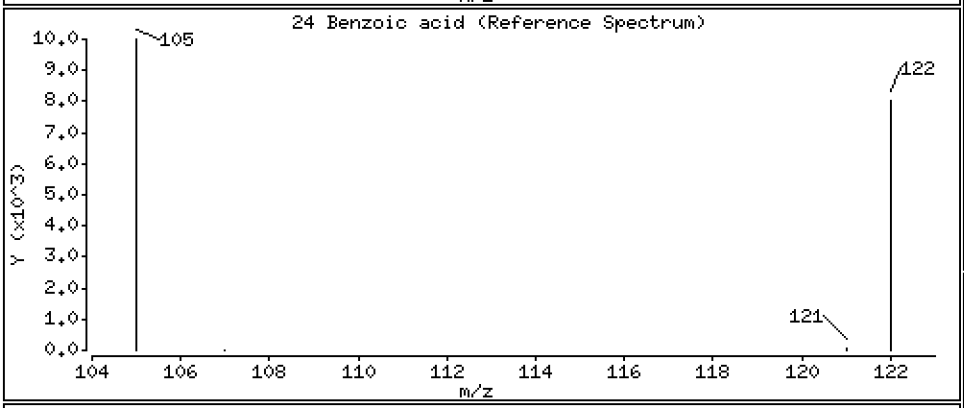
Concentration: 10.63 ug/mL

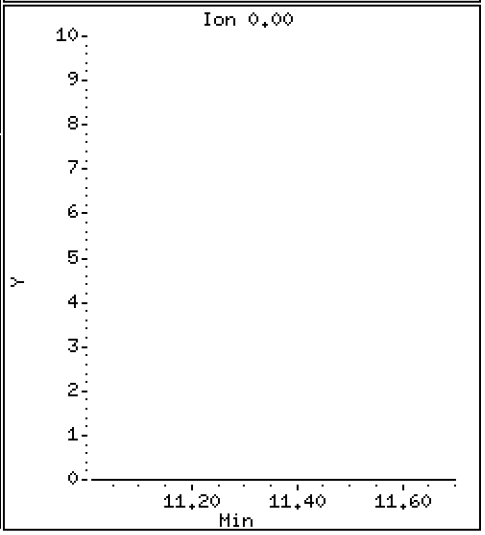


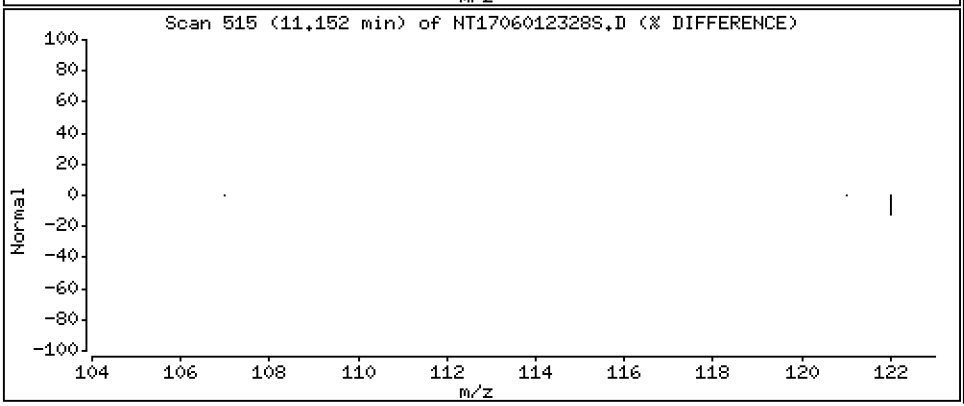












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

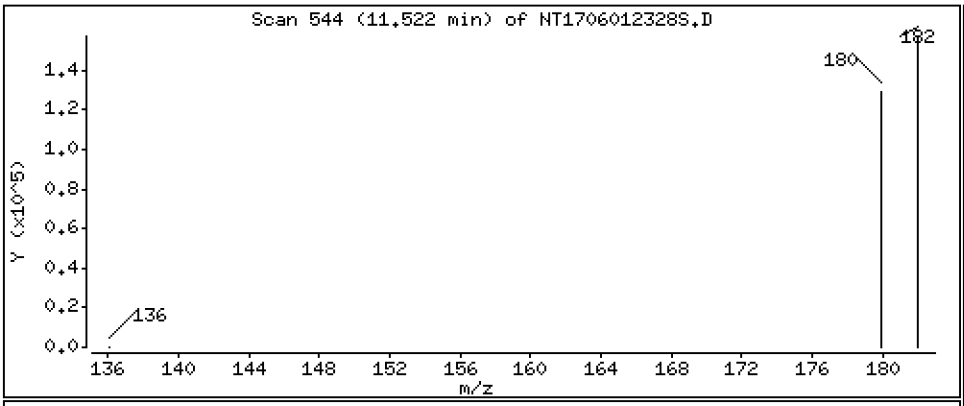
Operator: VTS

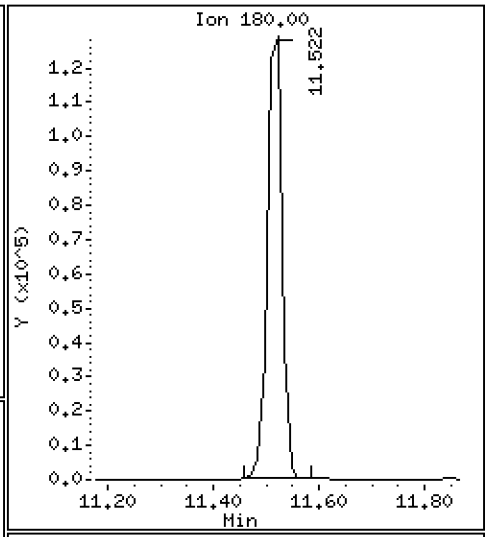
Column phase: ZB-5msi

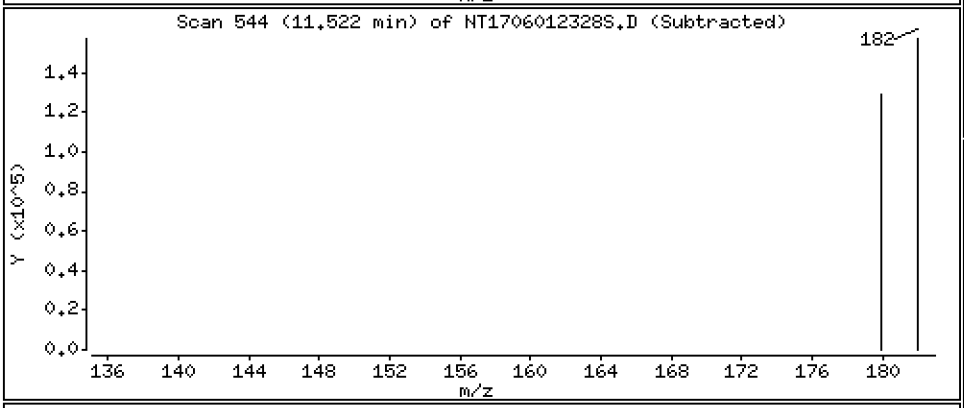
Column diameter: 0.25

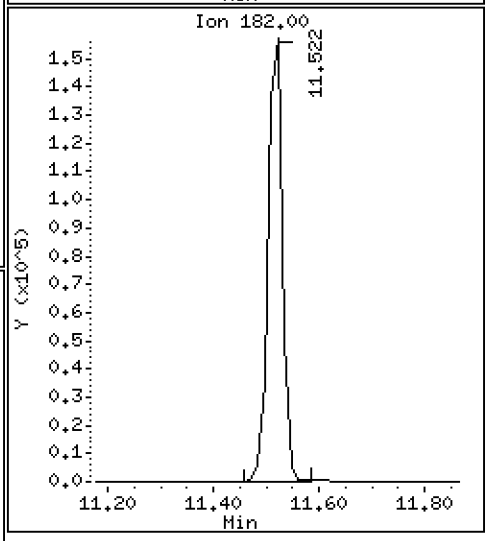
26 1,2,4-Trichlorobenzene

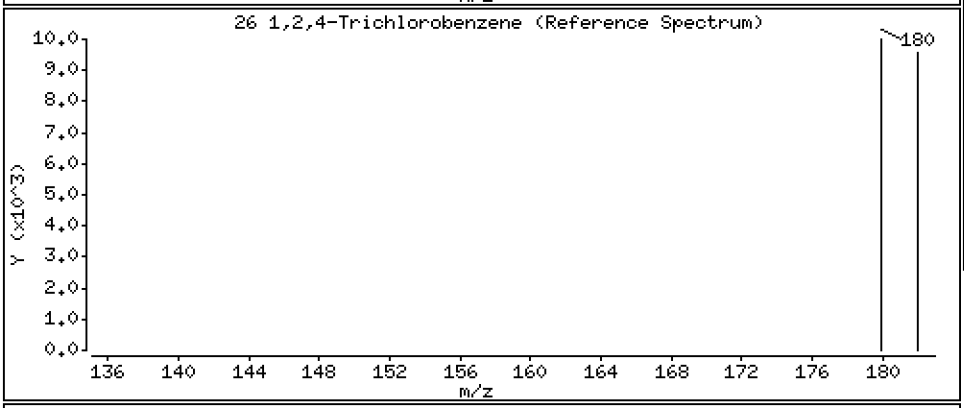
Concentration: 3.136 ug/mL

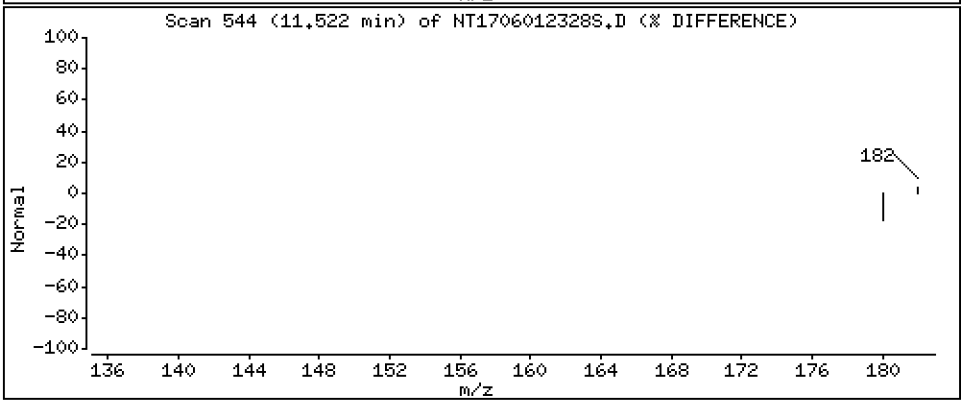












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123285.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

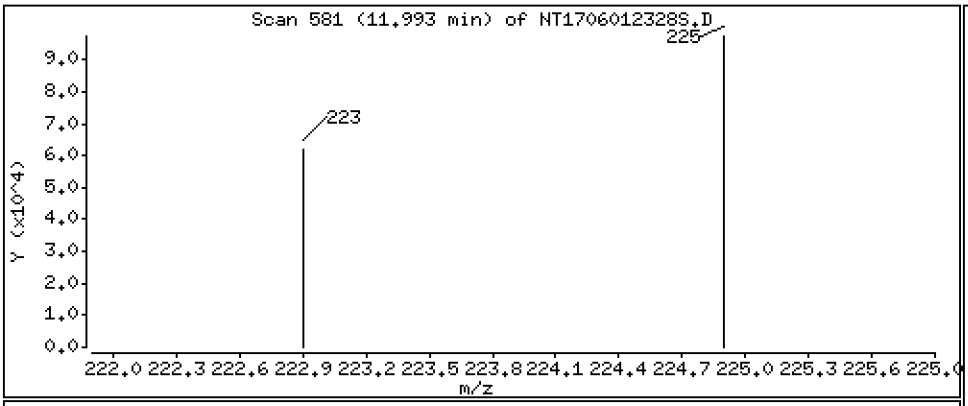
Operator: VTS

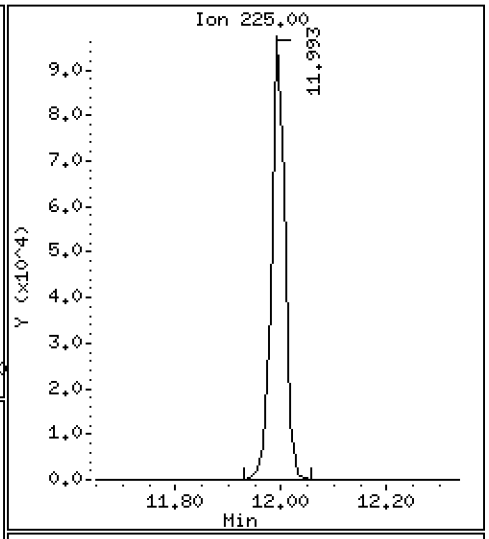
Column phase: ZB-5msi

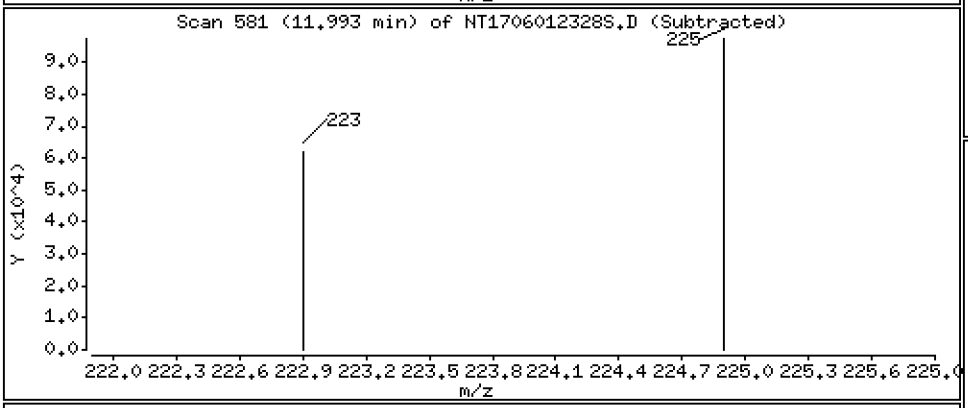
Column diameter: 0.25

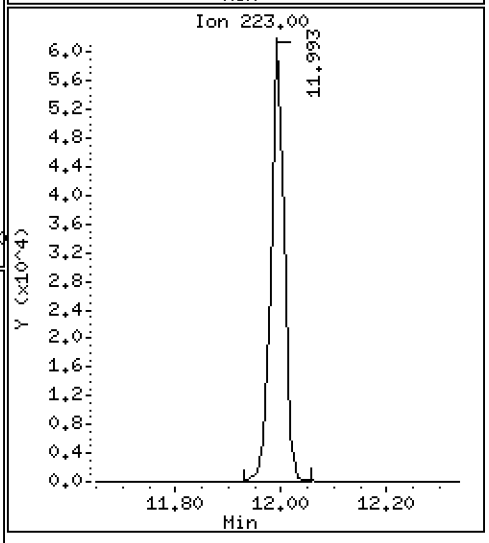
30 Hexachlorobutadiene

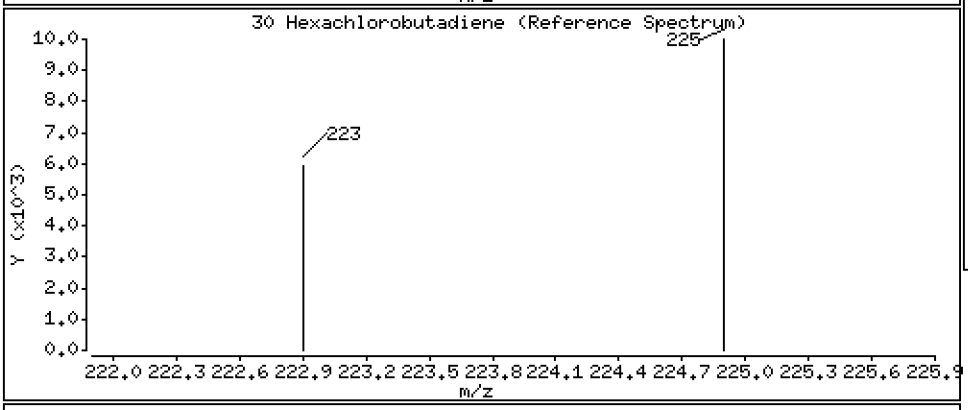
Concentration: 3.983 ug/mL

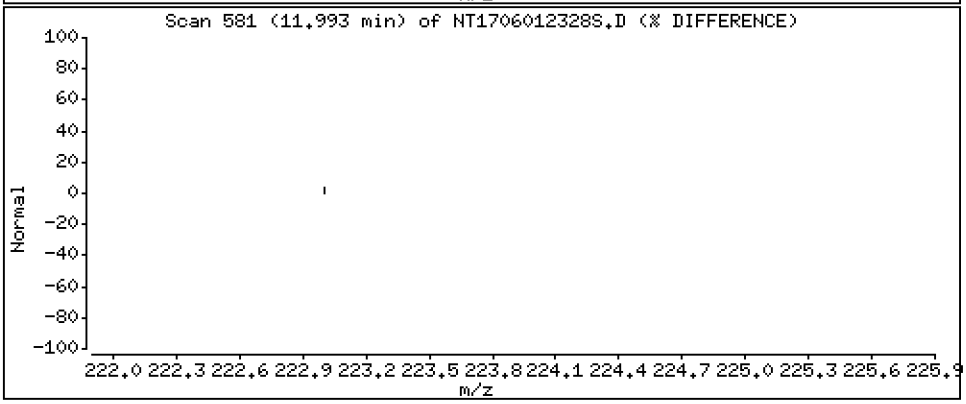












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

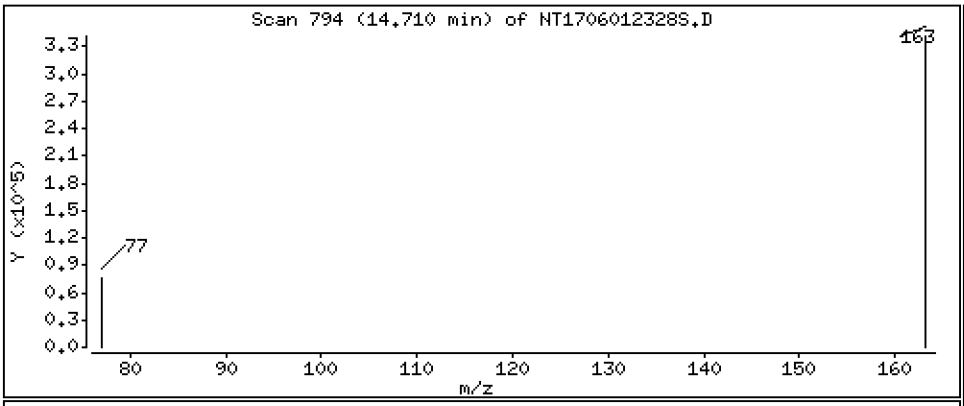
Operator: VTS

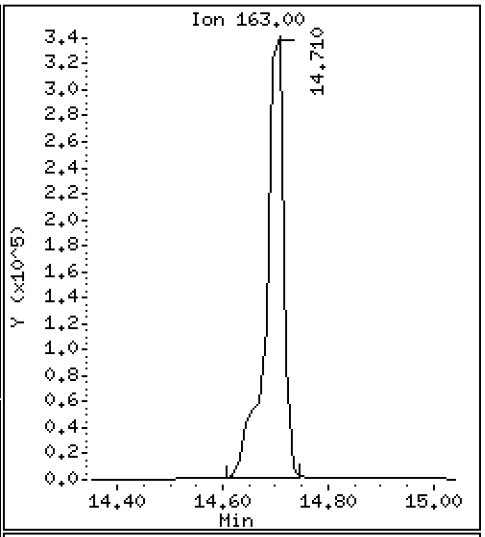
Column phase: ZB-5msi

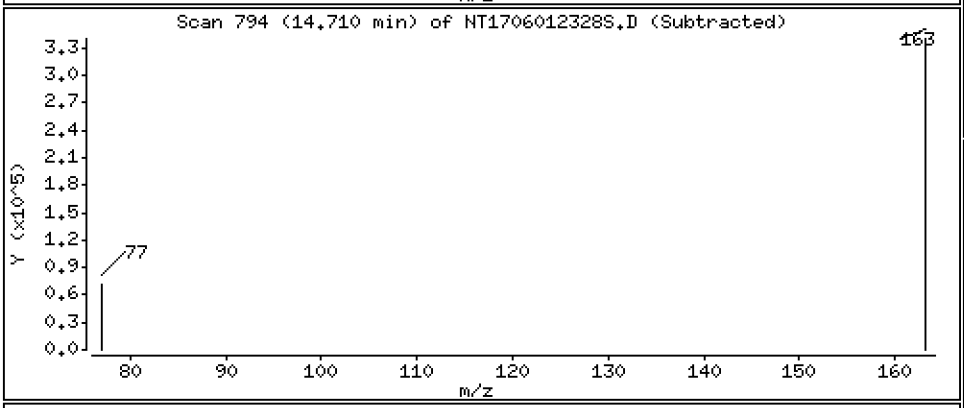
Column diameter: 0.25

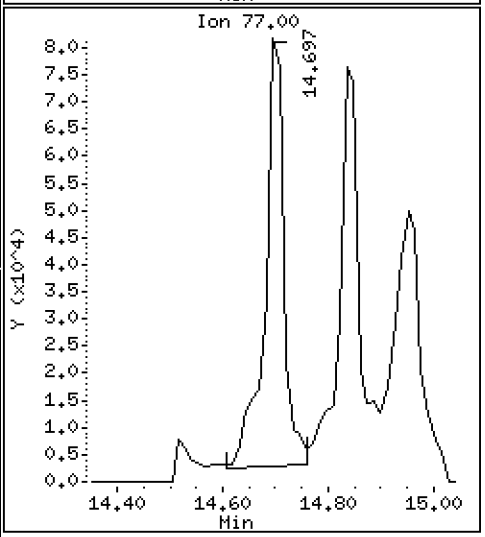
39 Dimethylphthalate

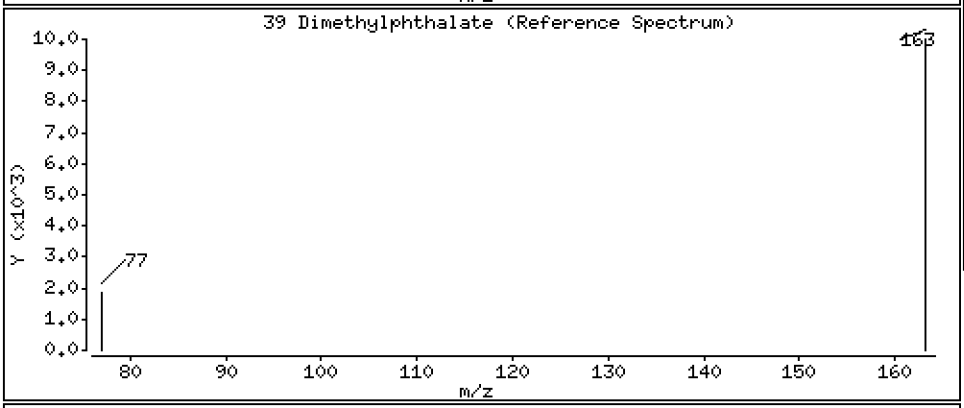
Concentration: 3.928 ug/mL

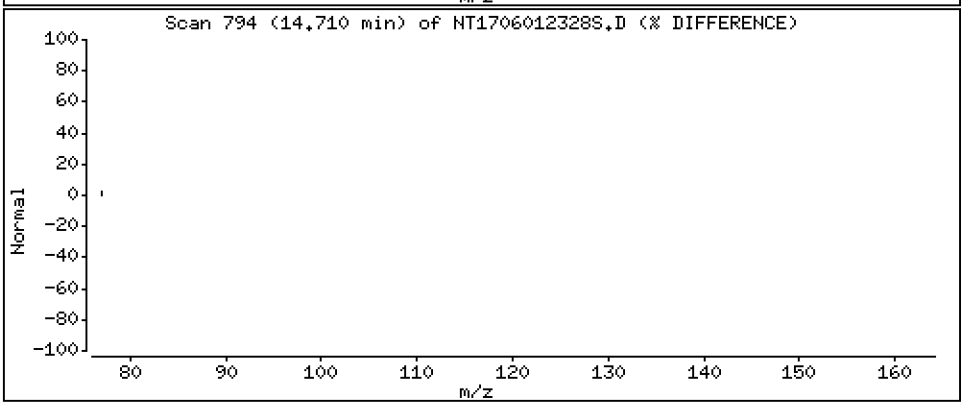












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

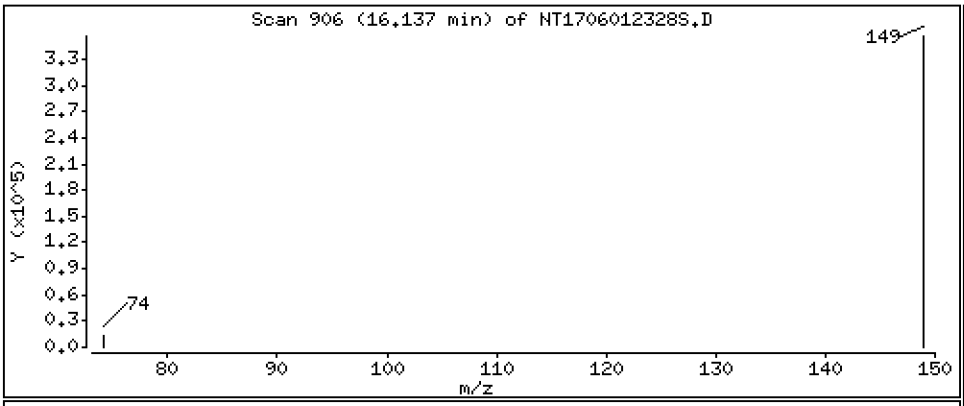
Operator: VTS

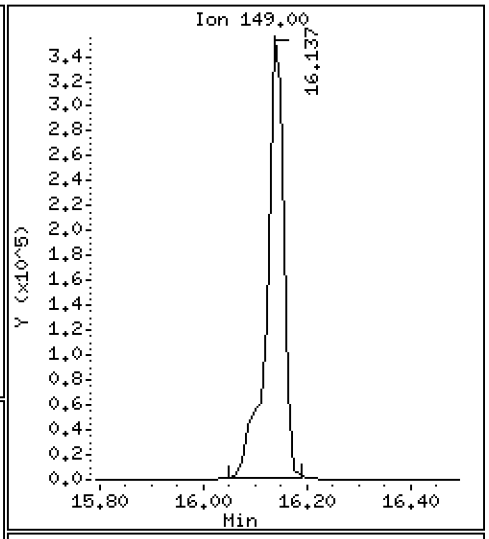
Column phase: ZB-5msi

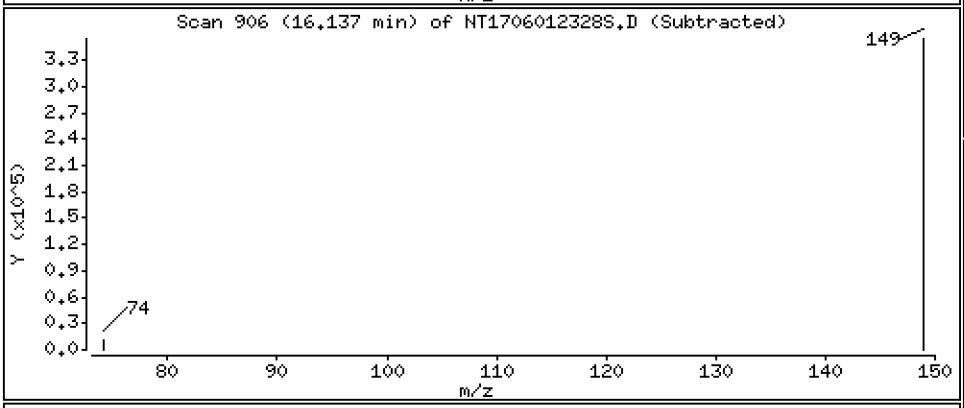
Column diameter: 0.25

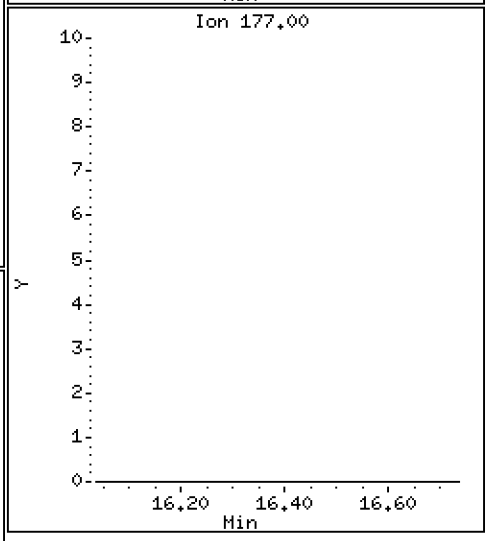
50 Diethylphthalate

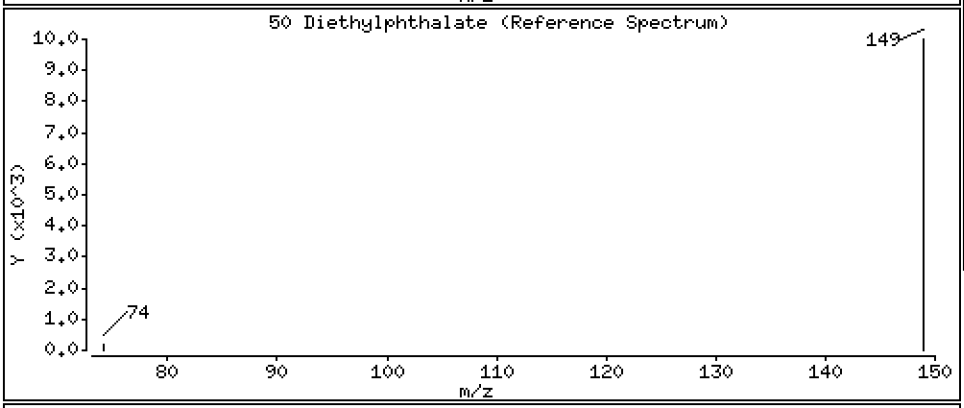
Concentration: 4.322 ug/mL

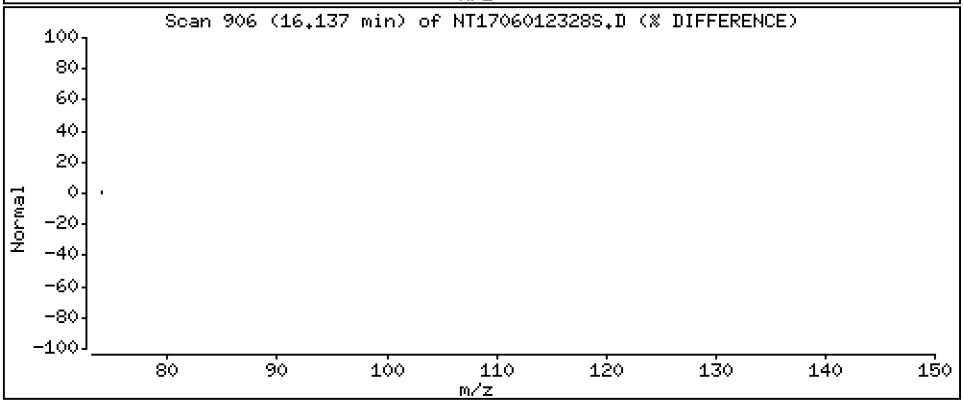












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123285.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

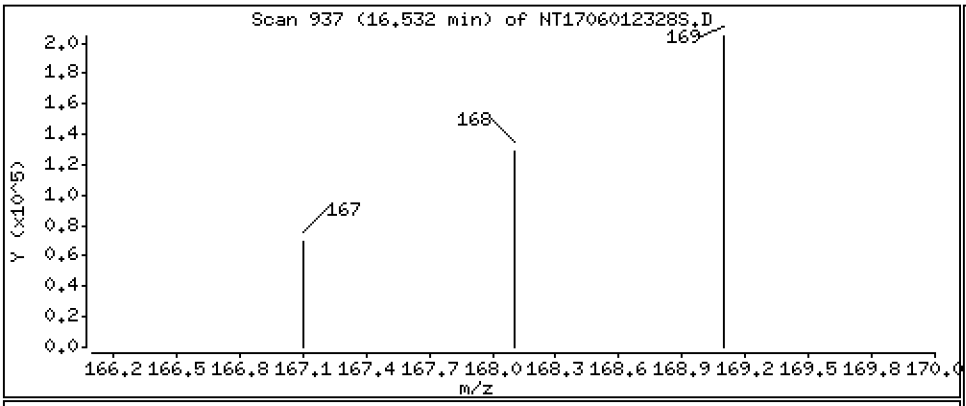
Operator: VTS

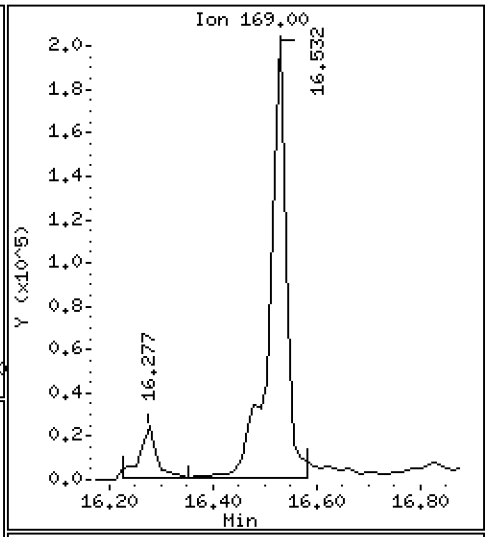
Column phase: ZB-5msi

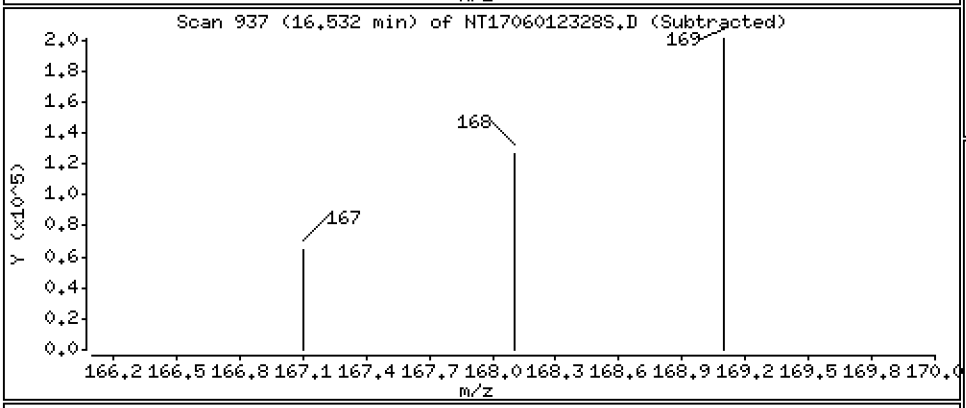
Column diameter: 0.25

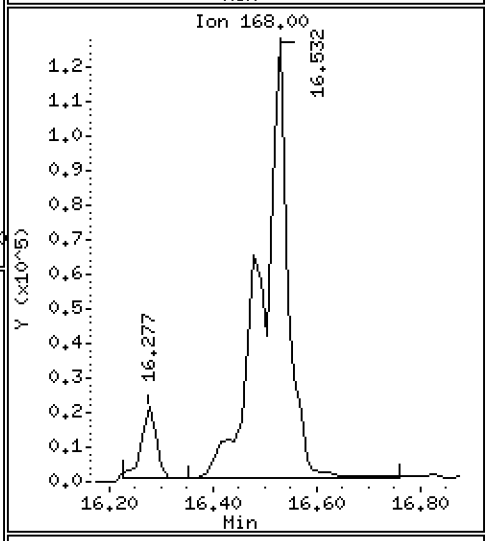
54 N-Nitrosodiphenylamine

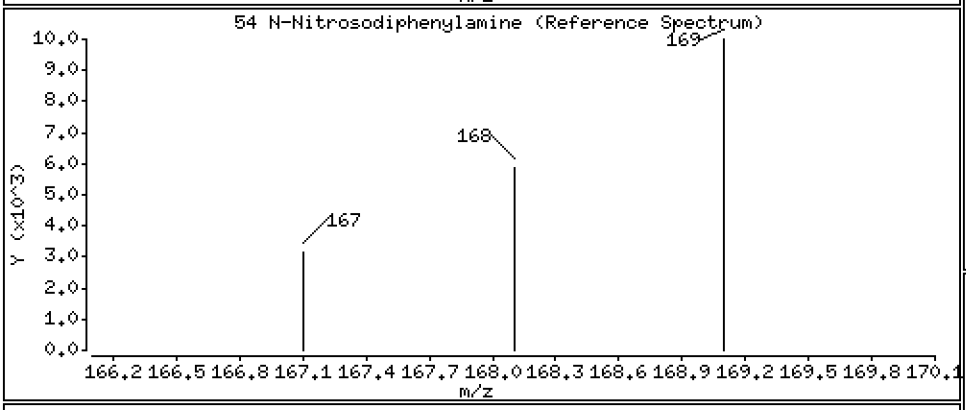
Concentration: 3.495 ug/mL

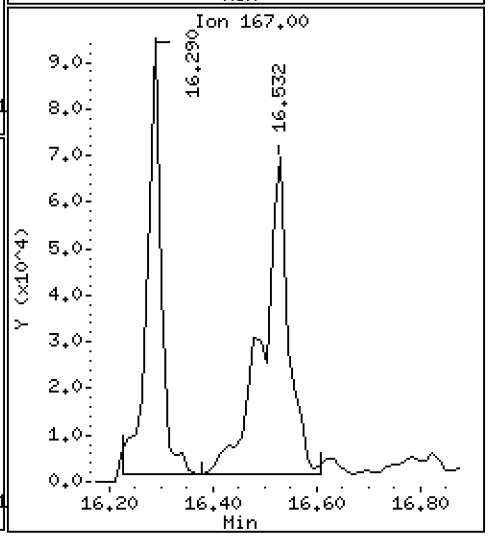


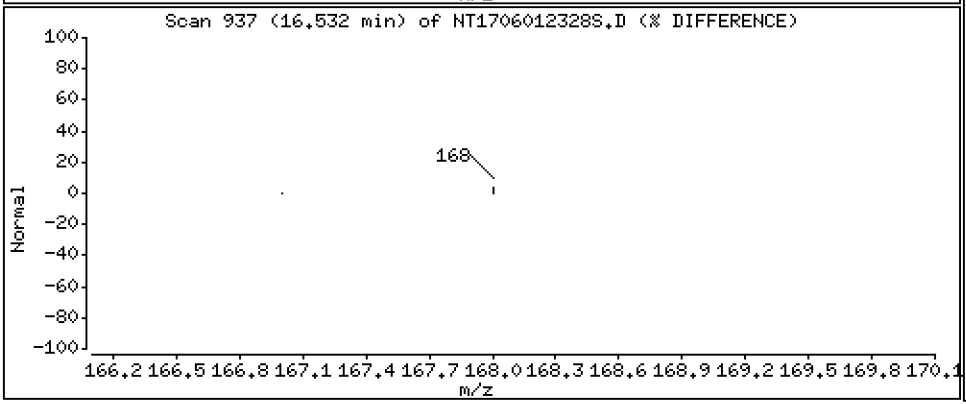












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

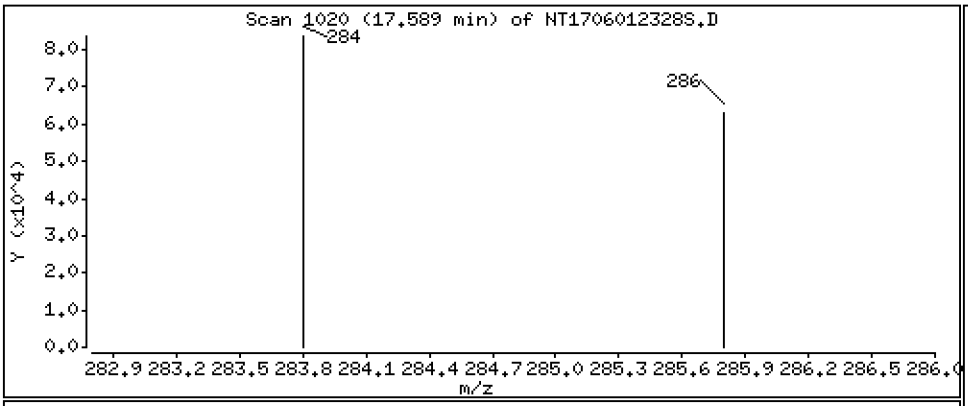
Operator: VTS

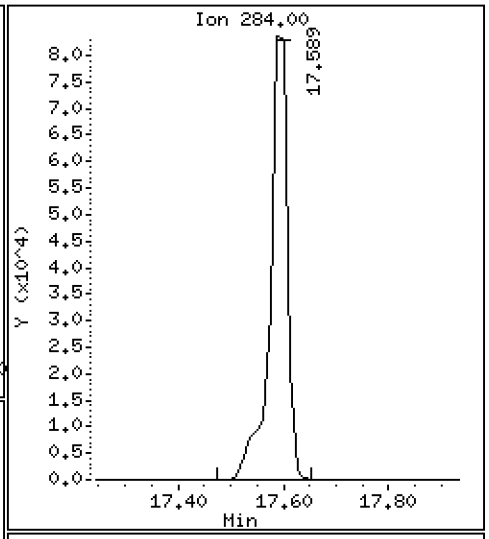
Column phase: ZB-5msi

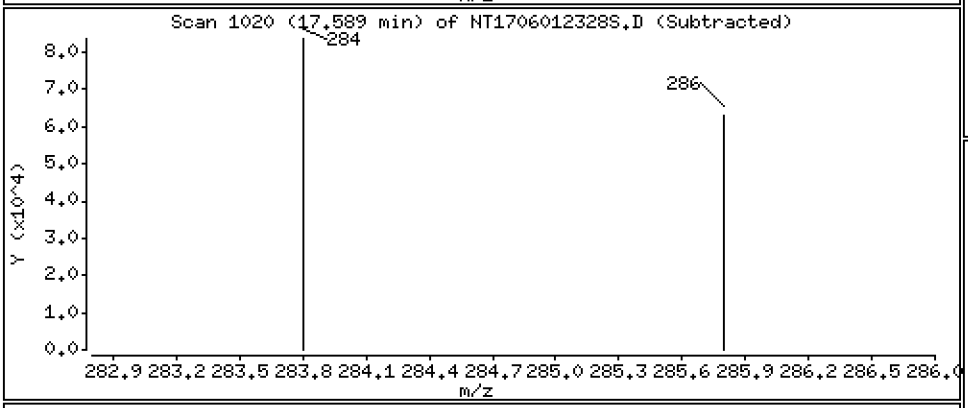
Column diameter: 0.25

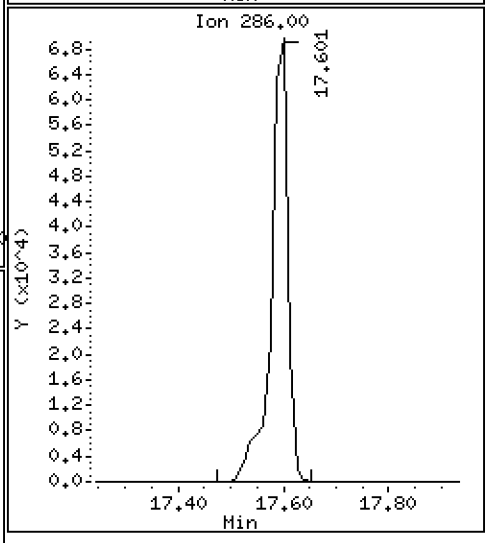
57 Hexachlorobenzene

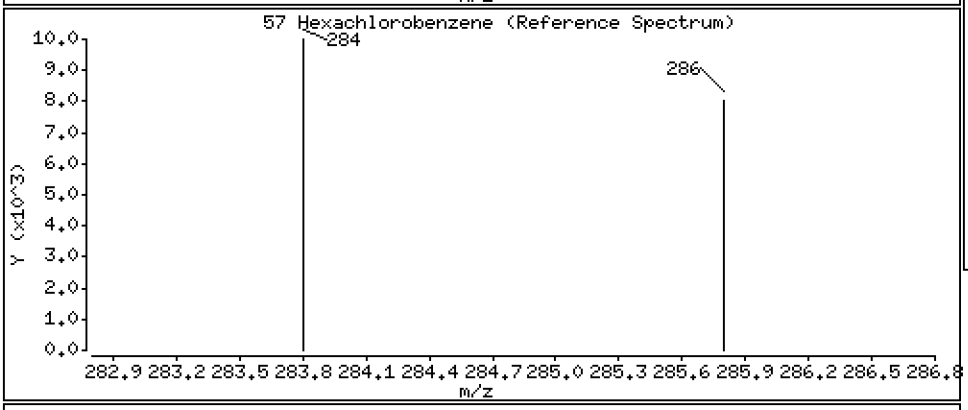
Concentration: 4.403 ug/mL

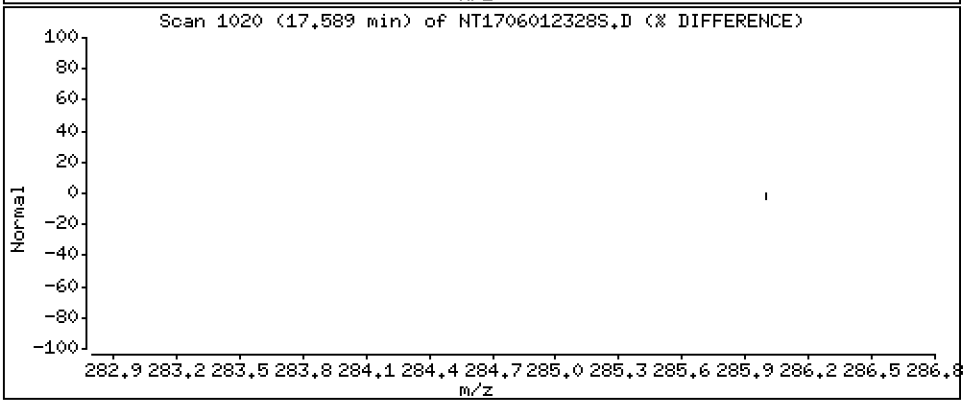












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

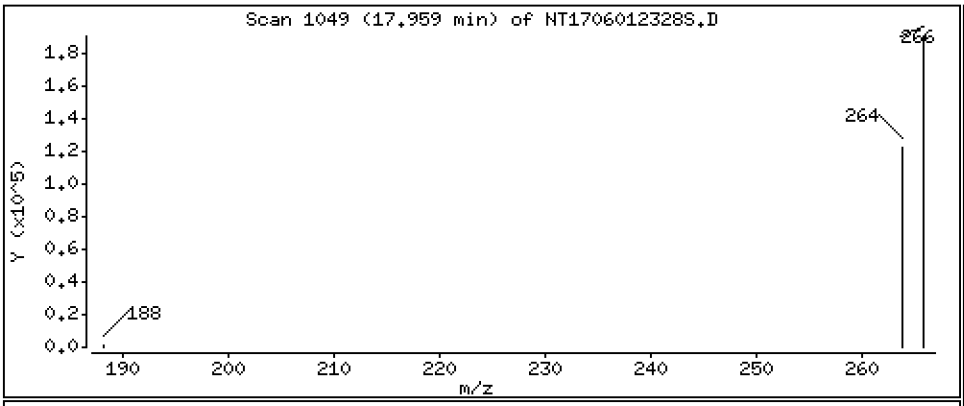
Operator: VTS

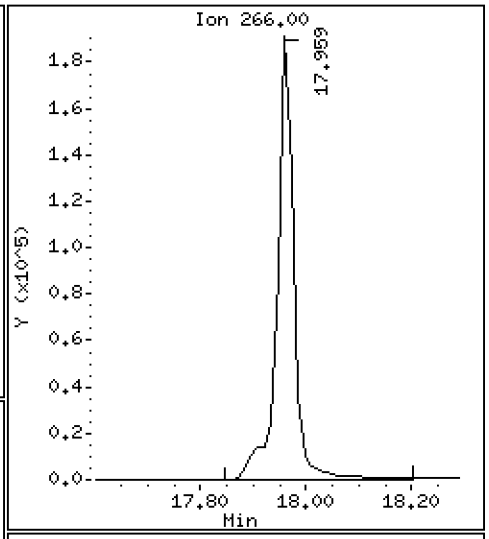
Column phase: ZB-5msi

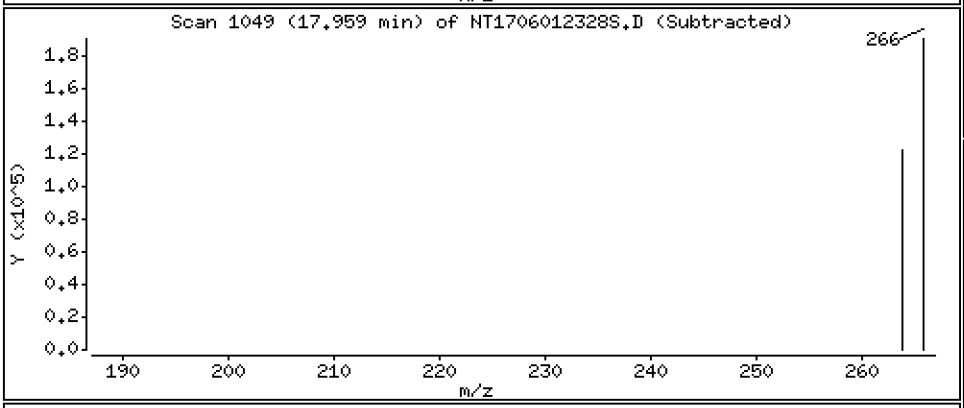
Column diameter: 0.25

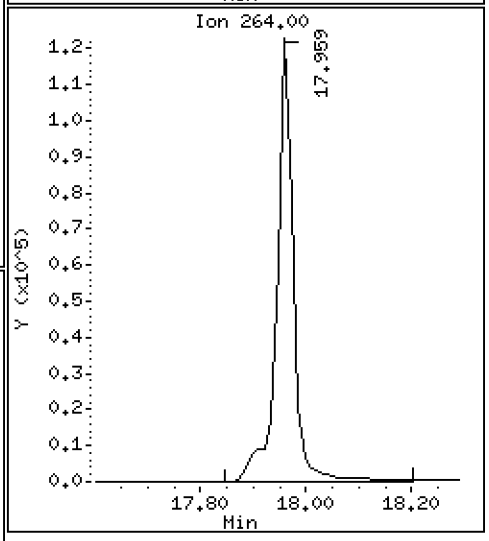
58 Pentachlorophenol

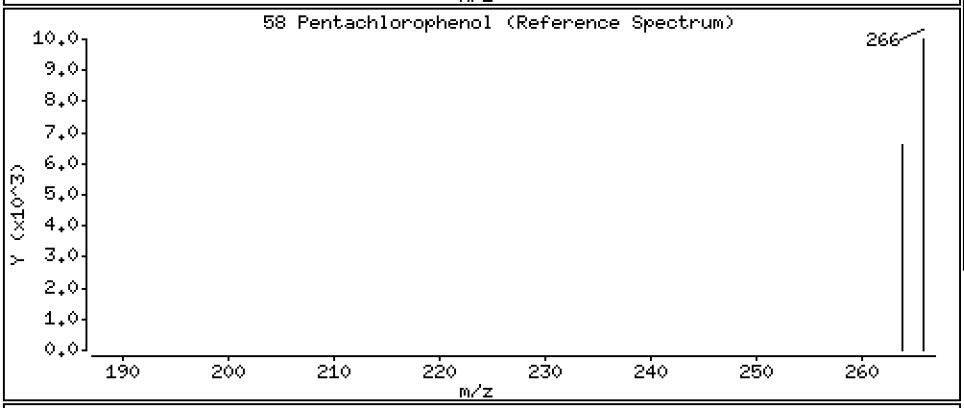
Concentration: 14.40 ug/mL

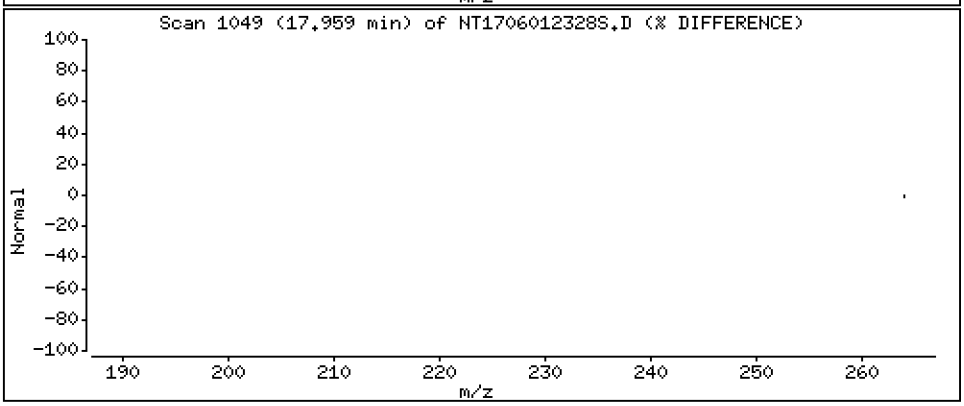












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

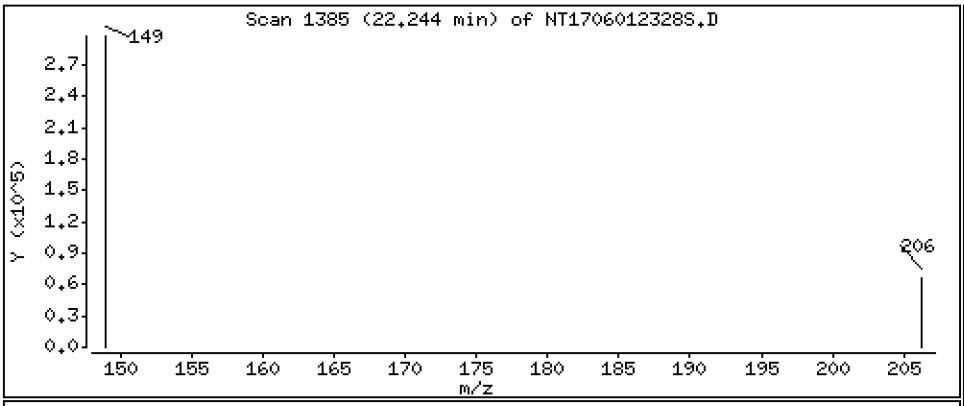
Operator: VTS

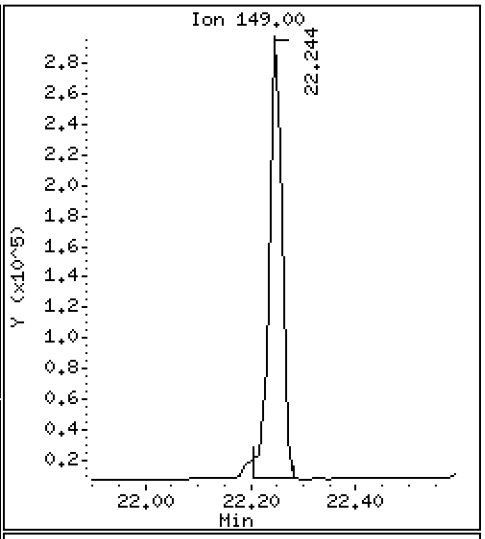
Column phase: ZB-5msi

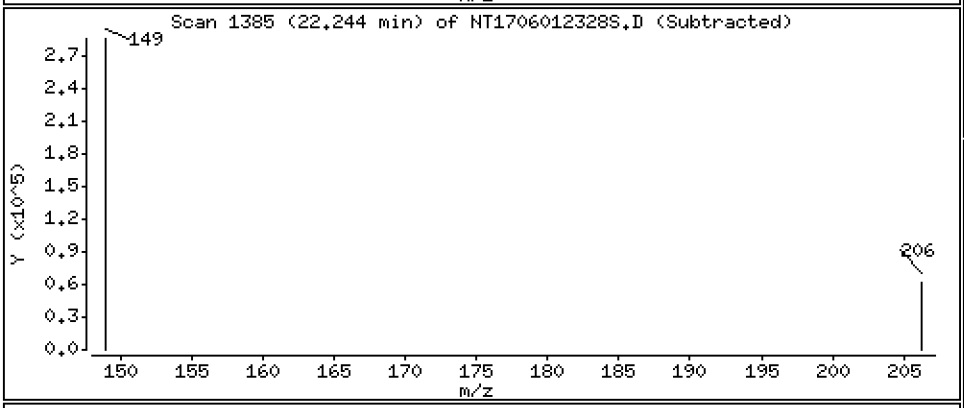
Column diameter: 0.25

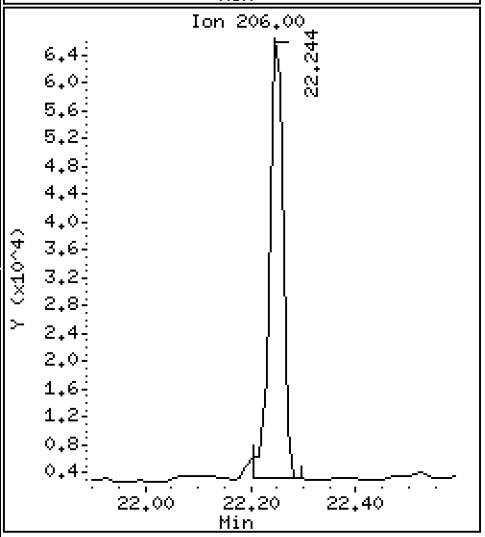
67 Butylbenzylphthalate

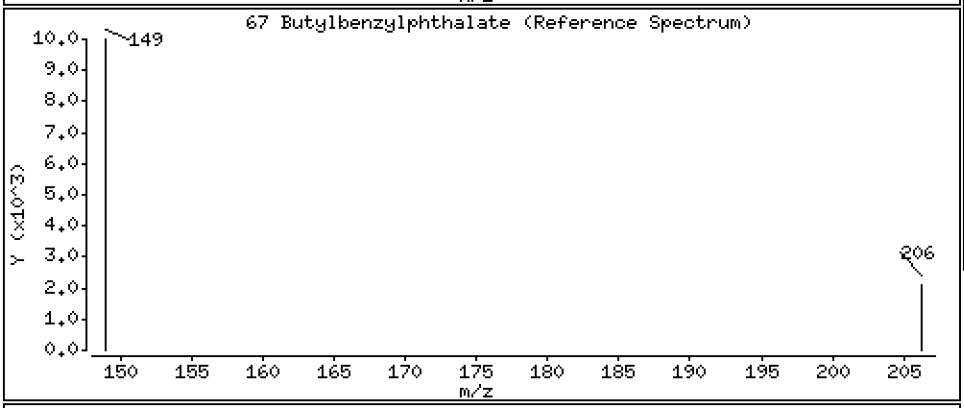
Concentration: 4.129 ug/mL

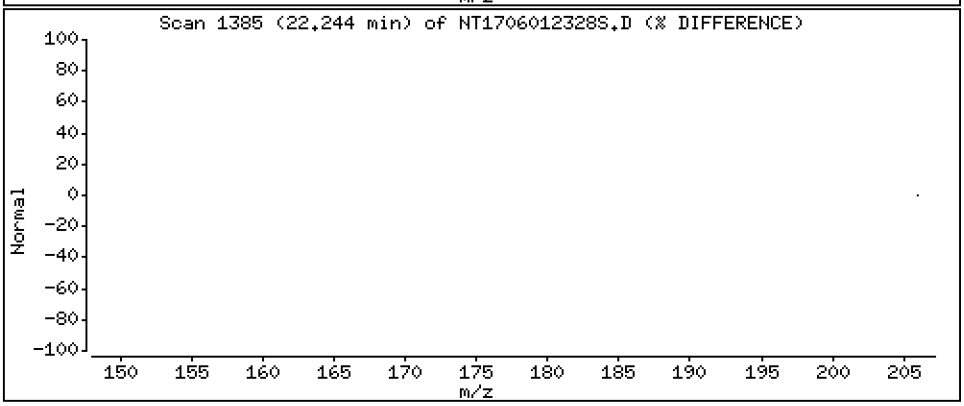












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

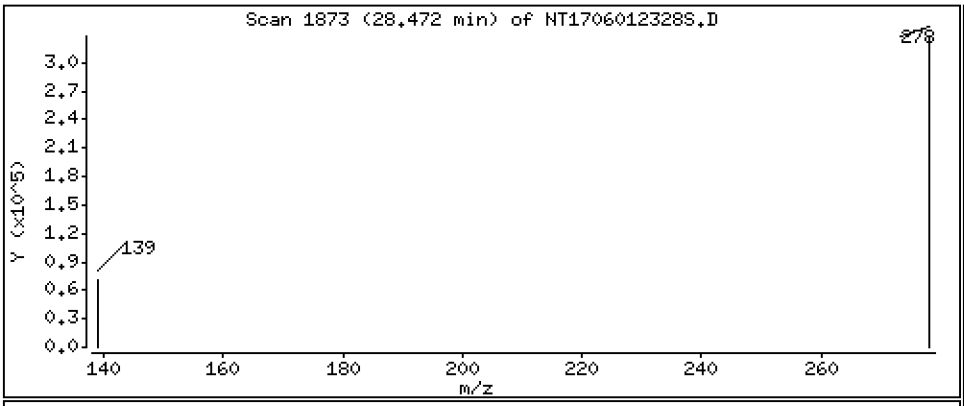
Operator: VTS

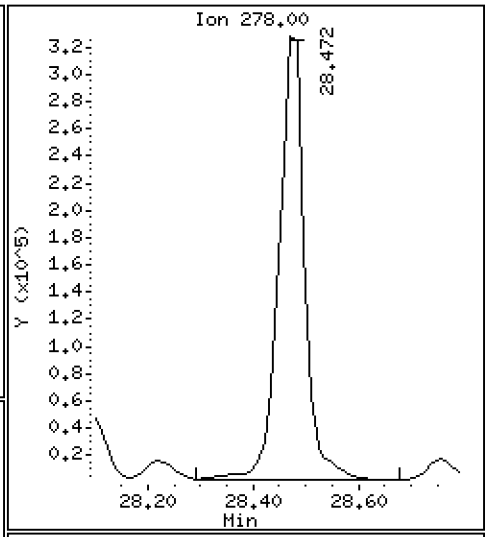
Column phase: ZB-5msi

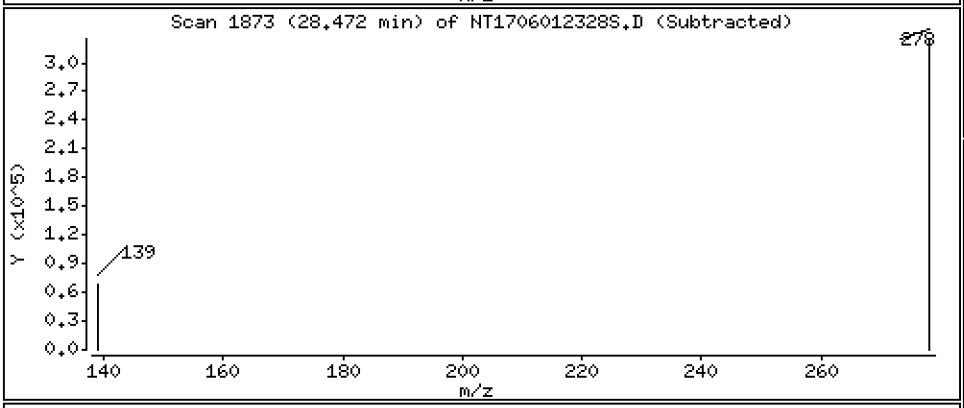
Column diameter: 0.25

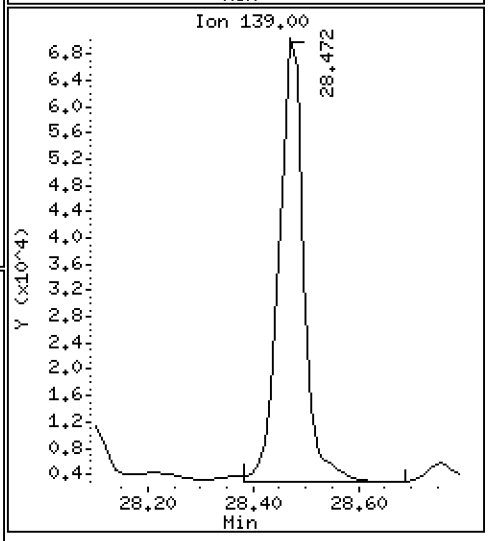
79 Dibenzo(a,h)anthracene

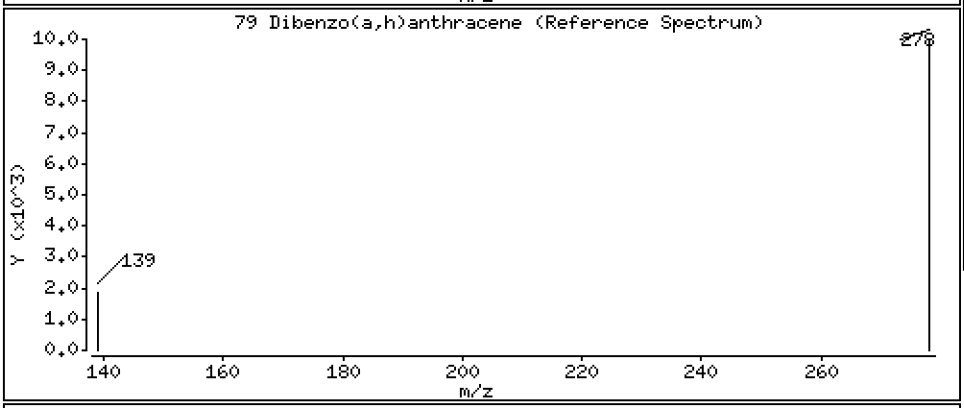
Concentration: 5.639 ug/mL

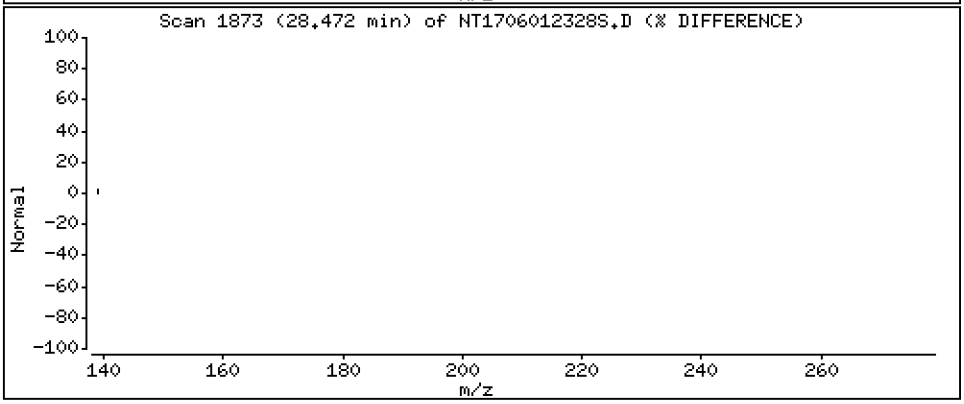












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D

Date : 02-JUN-2023 04:48

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MS2

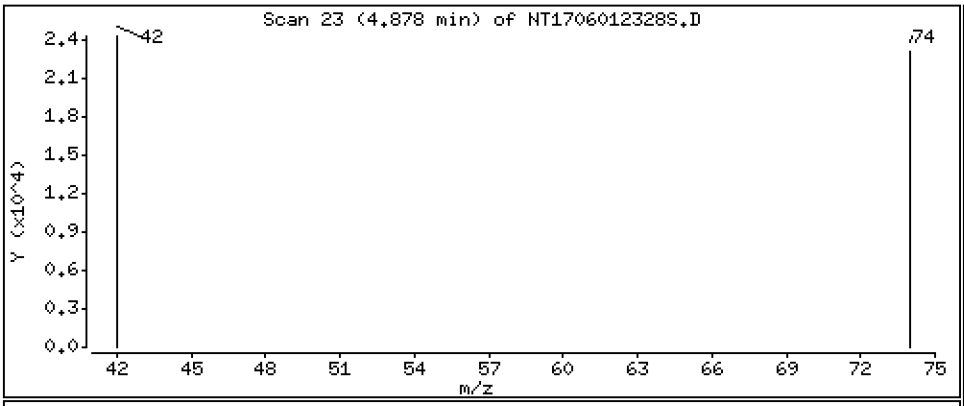
Operator: VTS

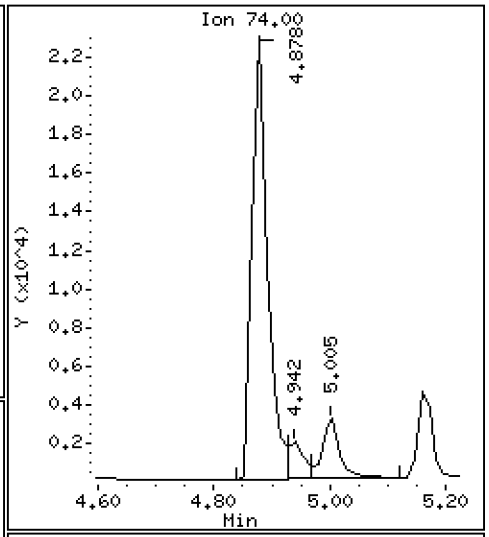
Column phase: ZB-5msi

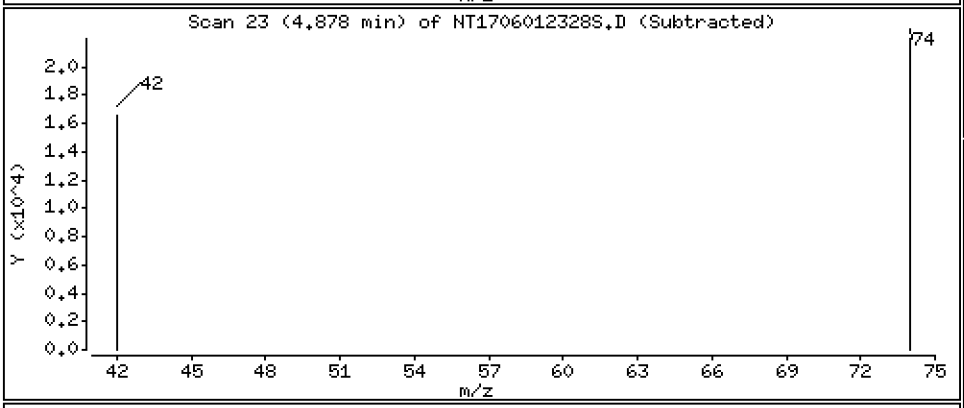
Column diameter: 0.25

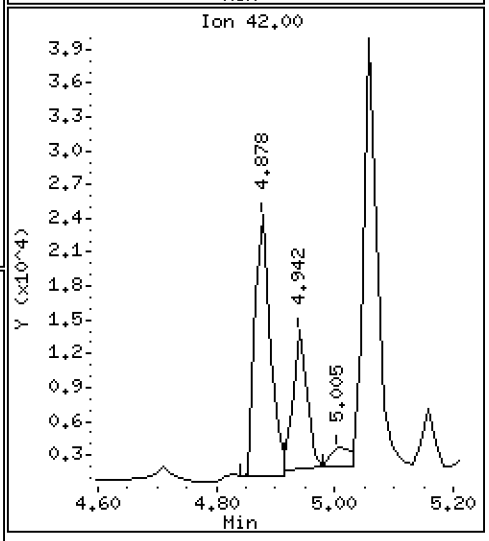
90 N-Nitrosodimethylamine

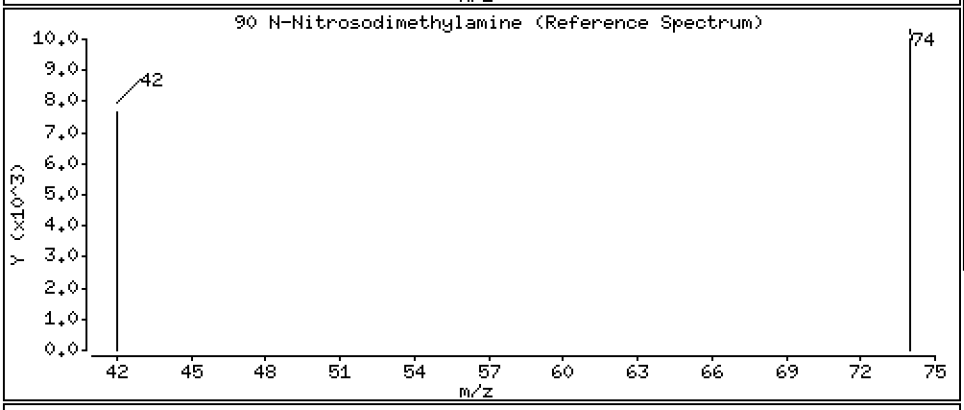
Concentration: 0.8361 ug/mL

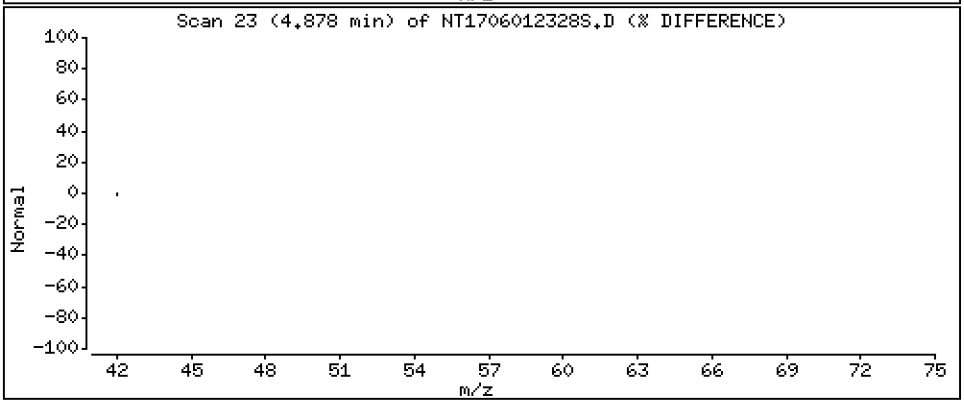












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012328S.D
Lab Smp Id: BLE0148-MS2
Inj Date : 02-JUN-2023 04:48
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-MS2
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.954	(0.762)	210548	2.66269	2.663(R)
	3 Phenol	94	8.546	8.547	(0.934)	1057612	8.97628	8.976
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	314345	2.97651	2.977
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	261433	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	316860	3.07900	3.079
	11 Benzyl alcohol	79	9.427	9.452	(1.031)	266793	3.97388	3.974
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	312556	3.09874	3.099
	13 2-Methylphenol	108	9.644	9.644	(1.054)	203727	2.49525	2.495
	15 4-Methylphenol	108	9.912	9.912	(1.084)	290124	3.51609	3.516
	16 N-Nitroso-di-n-propylamine	70	9.963	9.964	(1.089)	206930	3.47972	3.480
	22 2,4-Dimethylphenol	107	10.947	10.934	(0.944)	343641	3.82320	3.823
	24 Benzoic acid	105	11.151	11.100	(0.962)	595315	10.6315	10.63
	26 1,2,4-Trichlorobenzene	180	11.521	11.521	(0.993)	255745	3.13612	3.136
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	934401	4.00000	
	30 Hexachlorobutadiene	225	11.993	11.993	(1.034)	171020	3.98287	3.983
	39 Dimethylphthalate	163	14.709	14.696	(0.968)	801402	3.92793	3.928
*	42 Acenaphthene-d10	162	15.194	15.194	(1.000)	555590	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.062)	800906	4.32249	4.322
	54 N-Nitrosodiphenylamine	169	16.531	16.519	(0.908)	455535	3.49489	3.495
	57 Hexachlorobenzene	284	17.588	17.588	(0.966)	194664	4.40259	4.403
	58 Pentachlorophenol	266	17.958	17.946	(0.986)	423866	14.4050	14.40
*	59 Phenanthrene-d10	188	18.213	18.201	(1.000)	925204	4.00000	
$	66 Terphenyl-d14	244	21.337	21.325	(0.918)	413910	3.83378	3.834(R)
	67 Butylbenzylphthalate	149	22.243	22.243	(0.957)	484380	4.12861	4.129
*	69 Chrysene-d12	240	23.238	23.213	(1.000)	568981	4.00000	
*	77 Perylene-d12	264	25.828	25.802	(1.000)	703732	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.472	28.446	(1.102)	1119312	5.63902	5.639
	90 N-Nitrosodimethylamine	74	4.877	4.878	(0.533)	42672	0.83614	0.8361

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012328S.D Calibration Time: 00:29
Lab Smp Id: BLE0148-MS2
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	261433	-1.55
27 Naphthalene-d8	874121	437061	1748242	934401	6.90
42 Acenaphthene-d10	524478	262239	1048956	555590	5.93
59 Phenanthrene-d10	807440	403720	1614880	925204	14.58
69 Chrysene-d12	527364	263682	1054728	568981	7.89
77 Perylene-d12	455527	227764	911054	703732	54.49

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.21	0.07
69 Chrysene-d12	23.21	22.71	23.71	23.24	0.11
77 Perylene-d12	25.80	25.30	26.30	25.83	0.10

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

REVIEW SUMMARY FOR FILE - NT1706012328S.D

Lab ID: BLE0148-MS2
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 04:48

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1706012321S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123295.D

Date : 02-JUN-2023 05:25

Client ID:

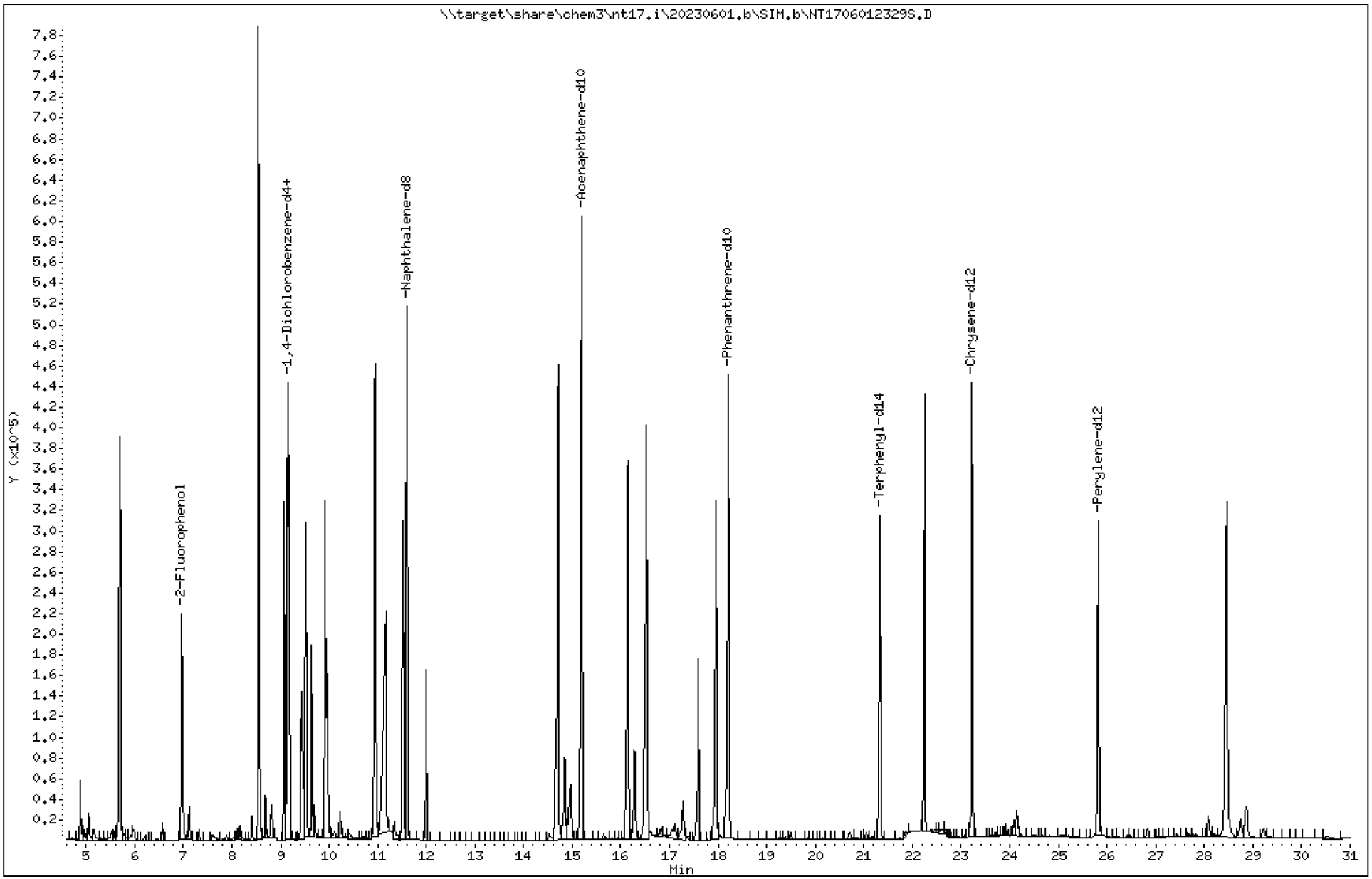
Instrument: nt17.i

Sample Info: BLE0148-MSD2

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

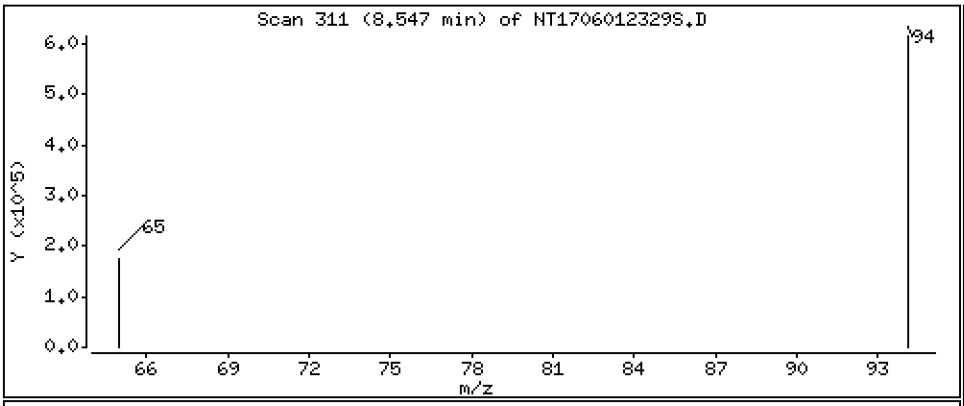
Operator: VTS

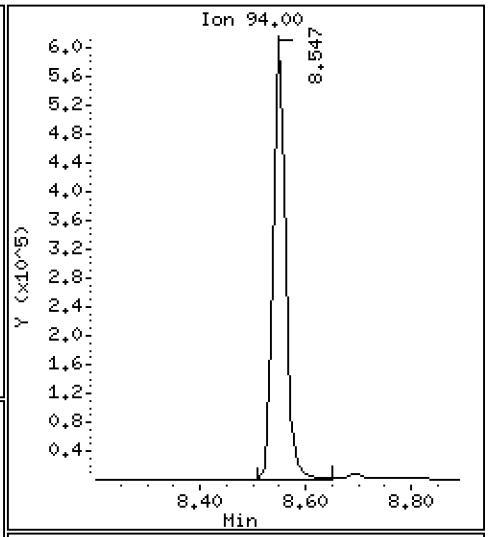
Column phase: ZB-5msi

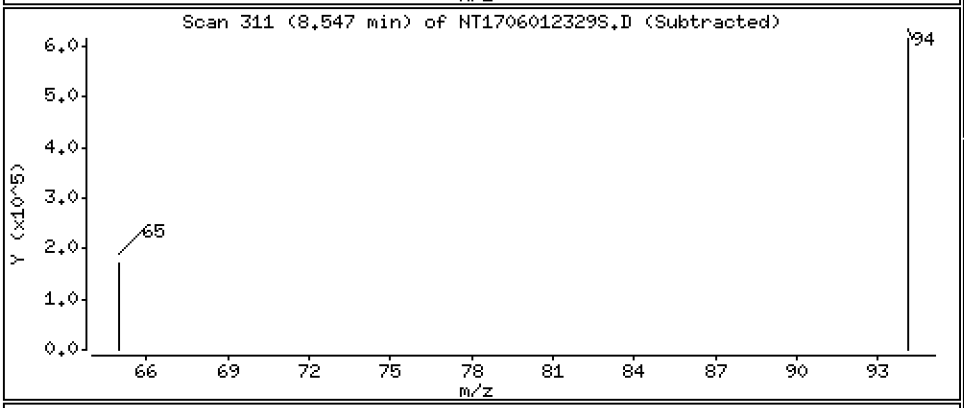
Column diameter: 0.25

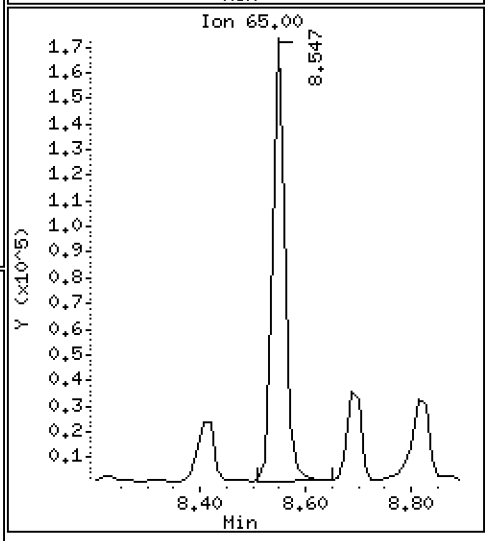
3 Phenol

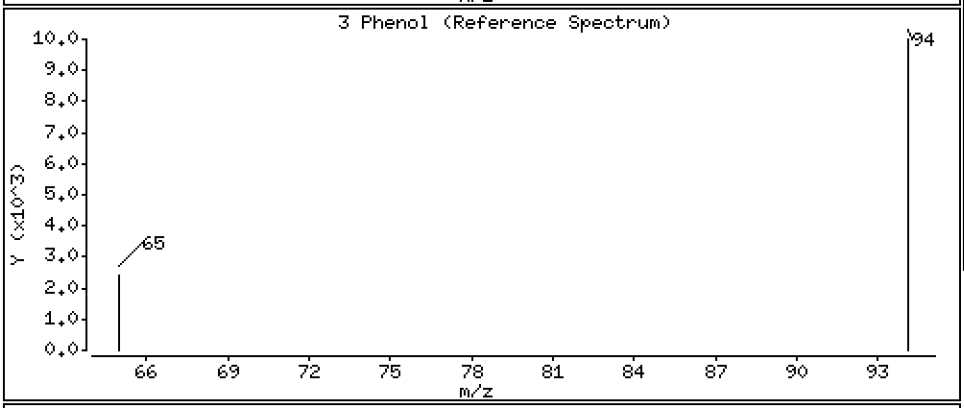
Concentration: 8.457 ug/mL

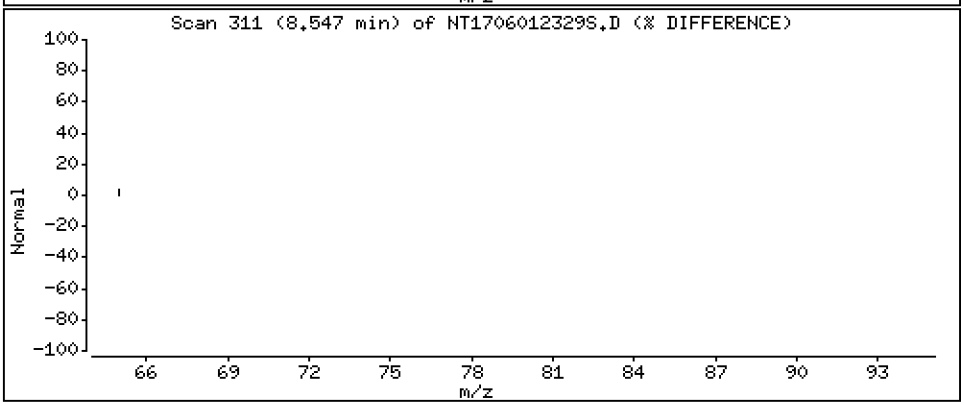












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

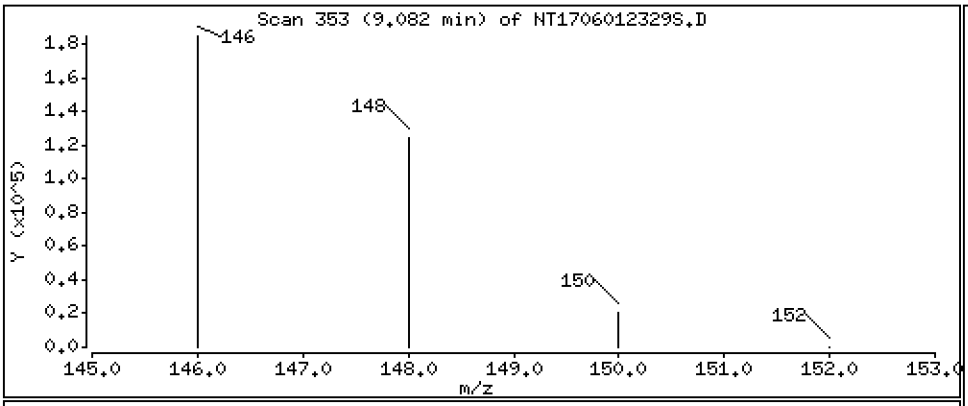
Operator: VTS

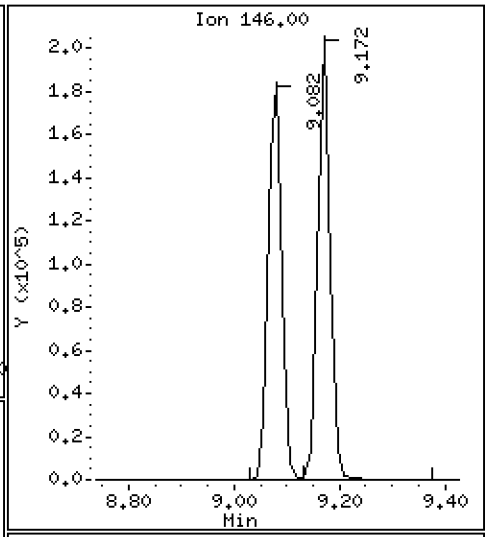
Column phase: ZB-5msi

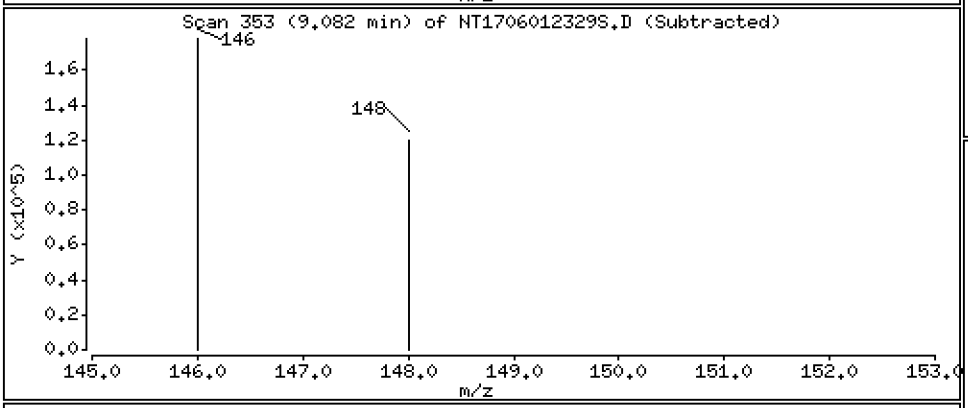
Column diameter: 0.25

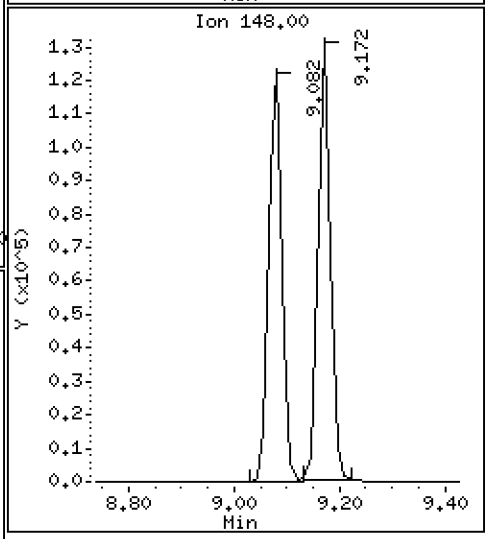
7 1,3-Dichlorobenzene

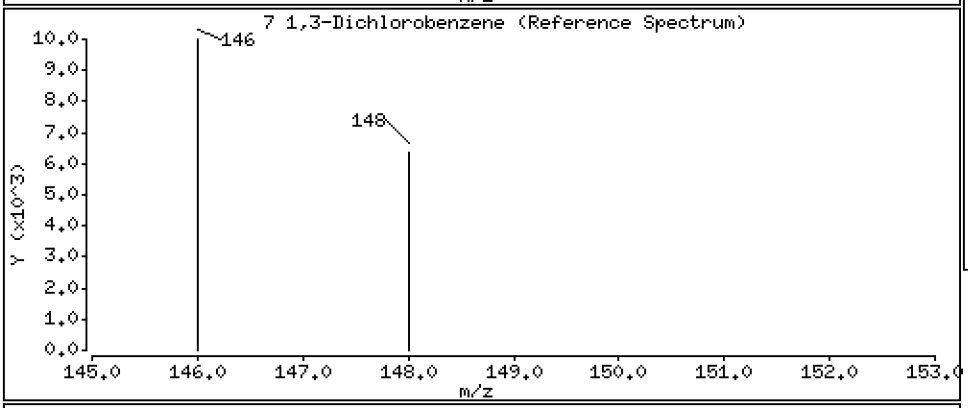
Concentration: 2.983 ug/mL

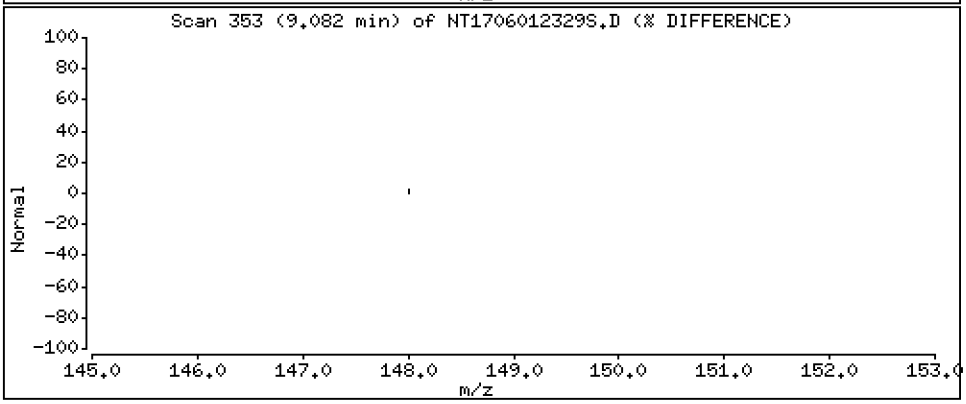












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

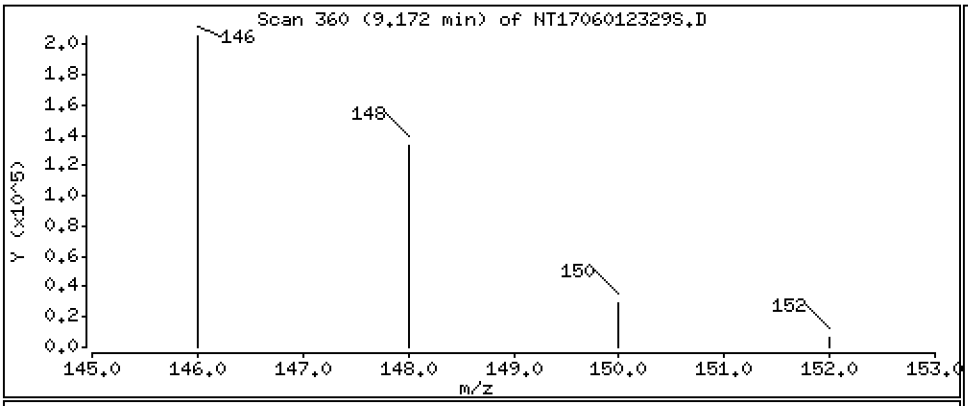
Operator: VTS

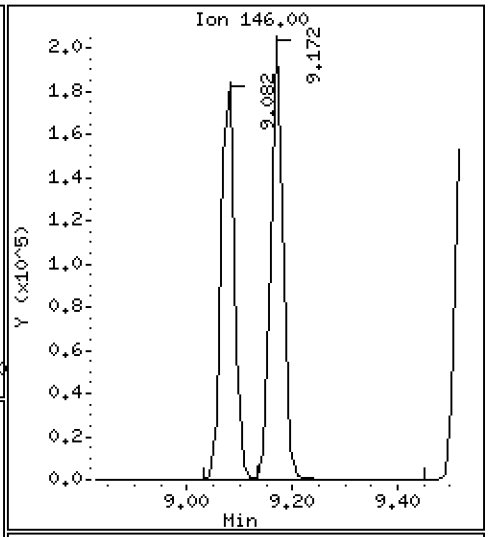
Column phase: ZB-5msi

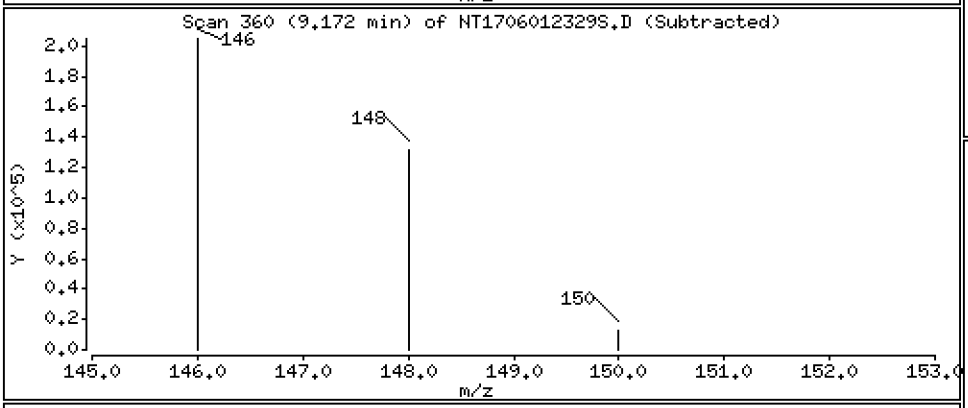
Column diameter: 0.25

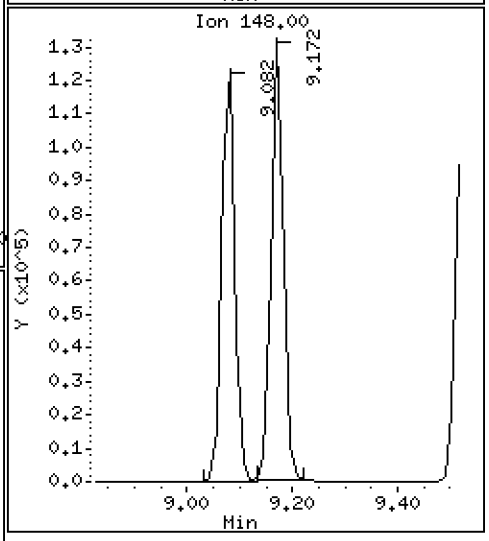
9 1,4-Dichlorobenzene

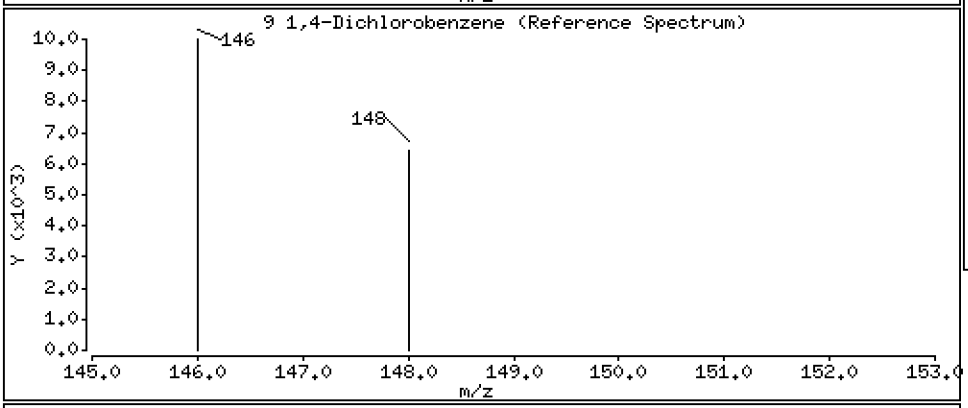
Concentration: 3.079 ug/mL

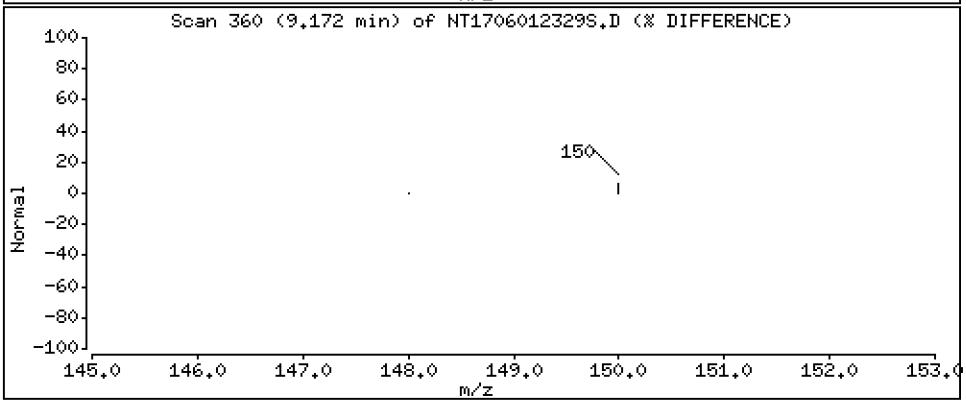












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

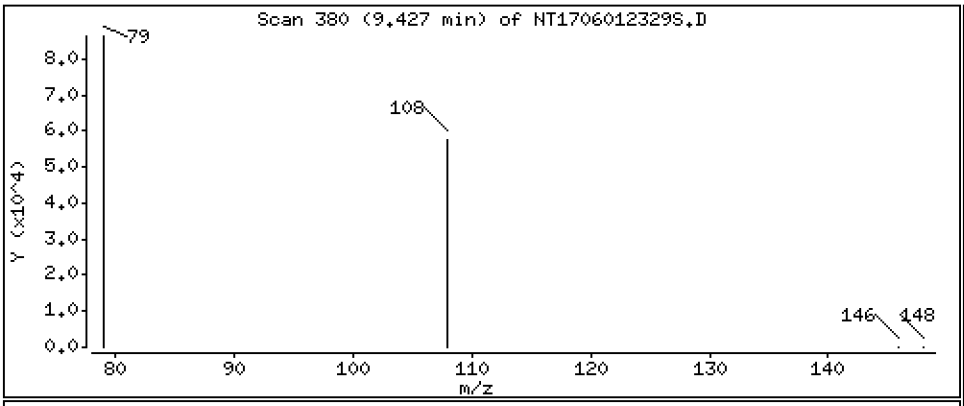
Operator: VTS

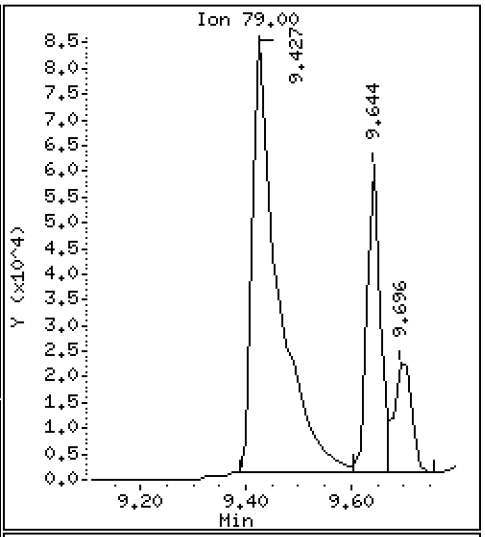
Column phase: ZB-5msi

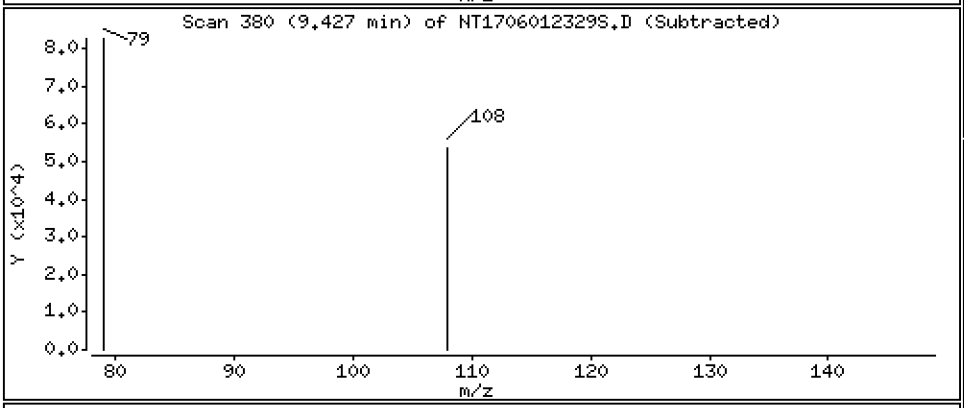
Column diameter: 0.25

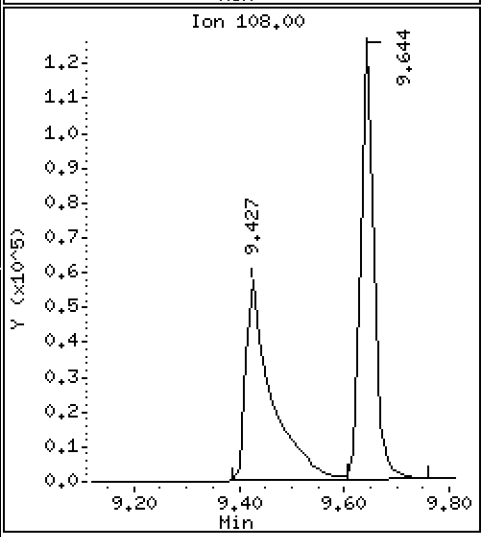
11 Benzyl alcohol

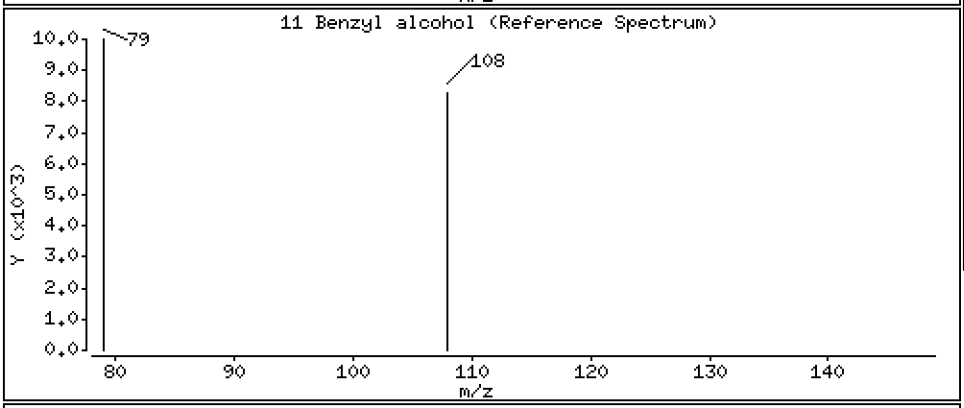
Concentration: 4.078 ug/mL

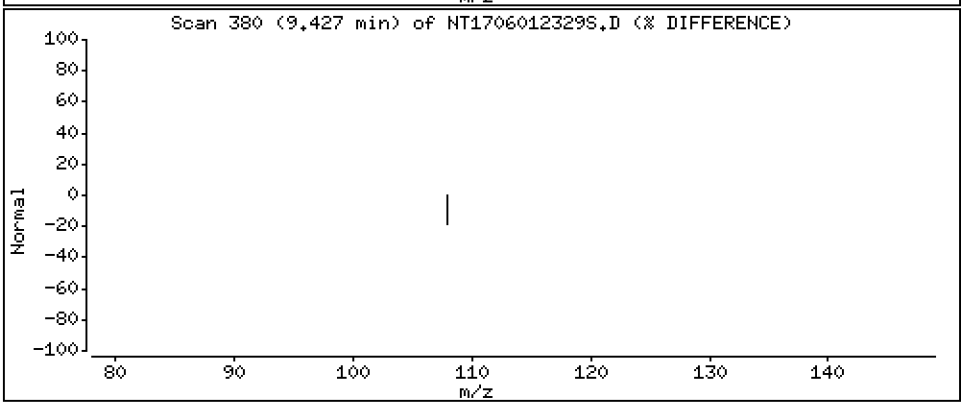












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

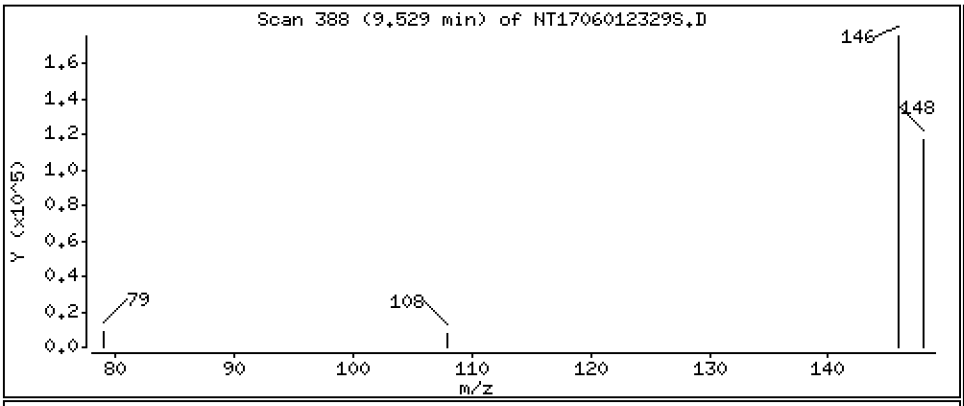
Operator: VTS

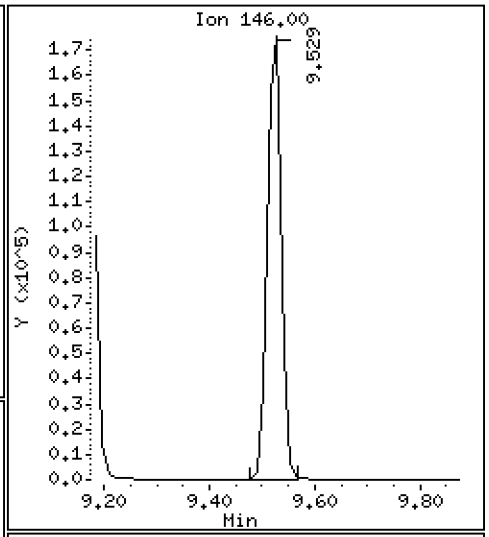
Column phase: ZB-5msi

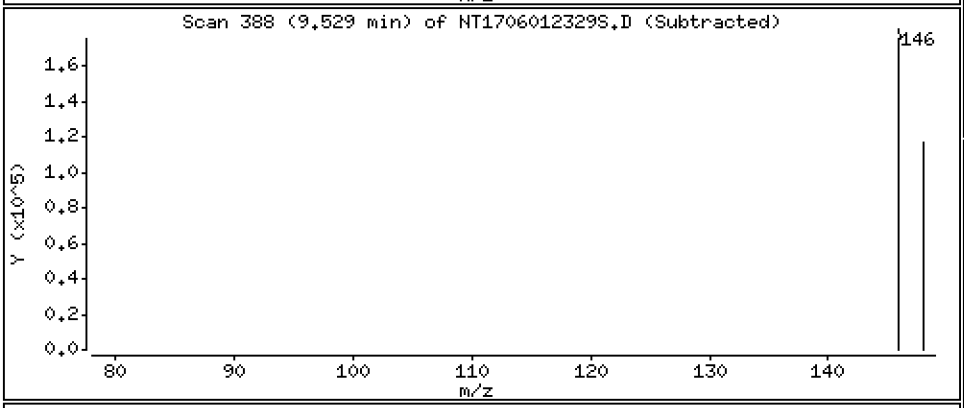
Column diameter: 0.25

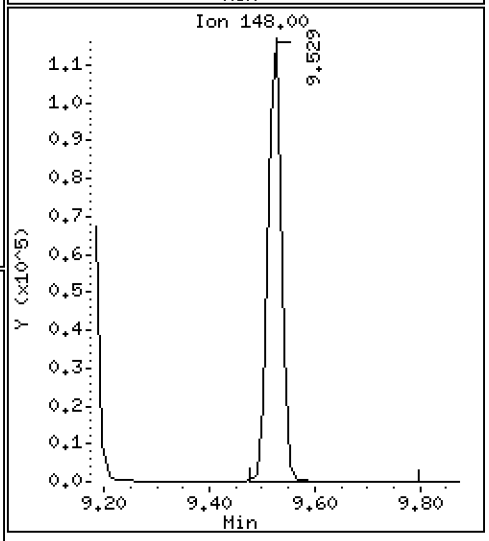
12 1,2-Dichlorobenzene

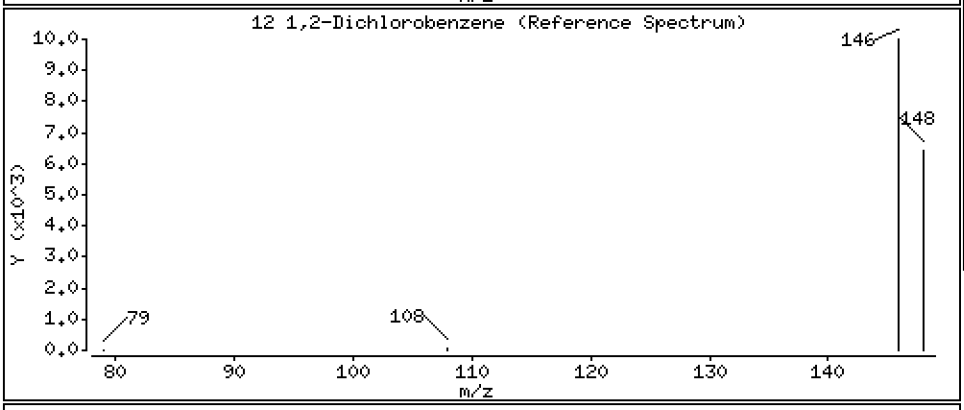
Concentration: 3.048 ug/mL

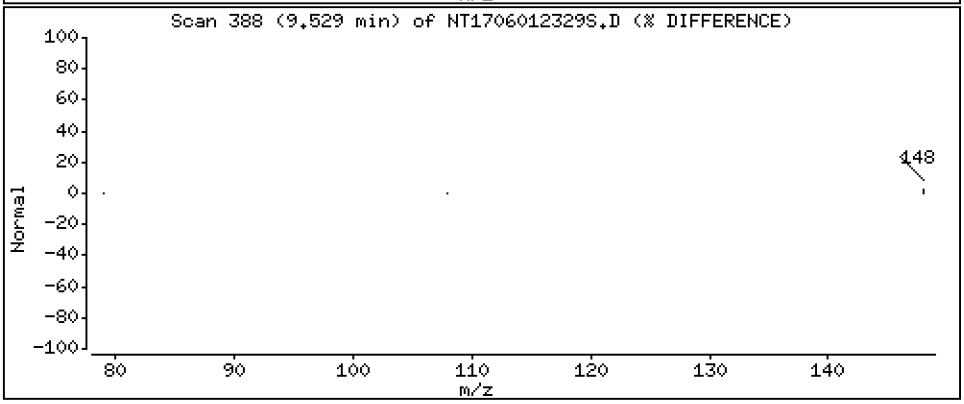












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

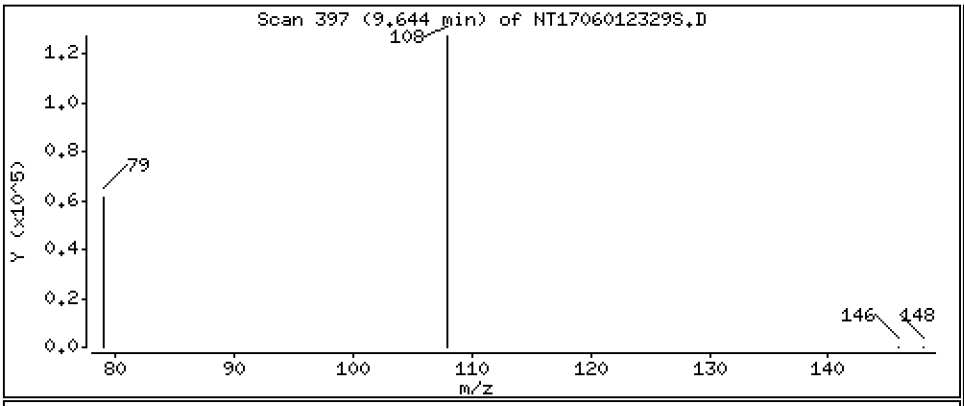
Operator: VTS

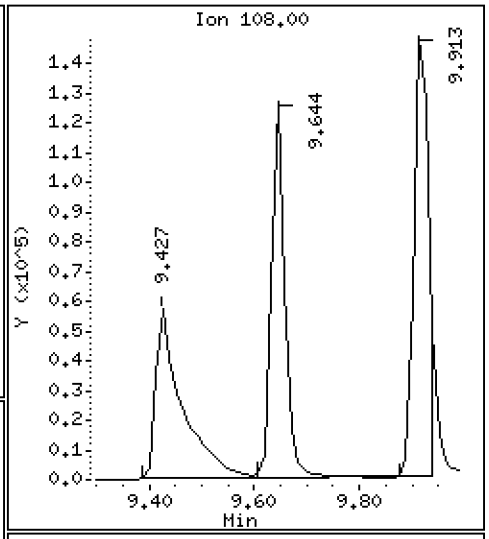
Column phase: ZB-5msi

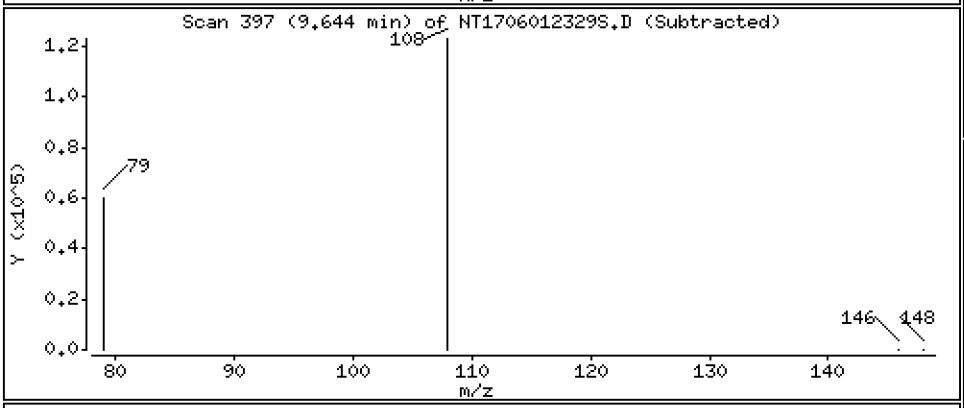
Column diameter: 0.25

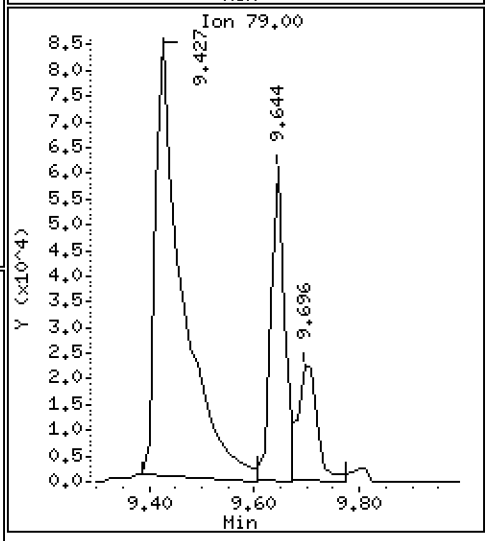
13 2-Methylphenol

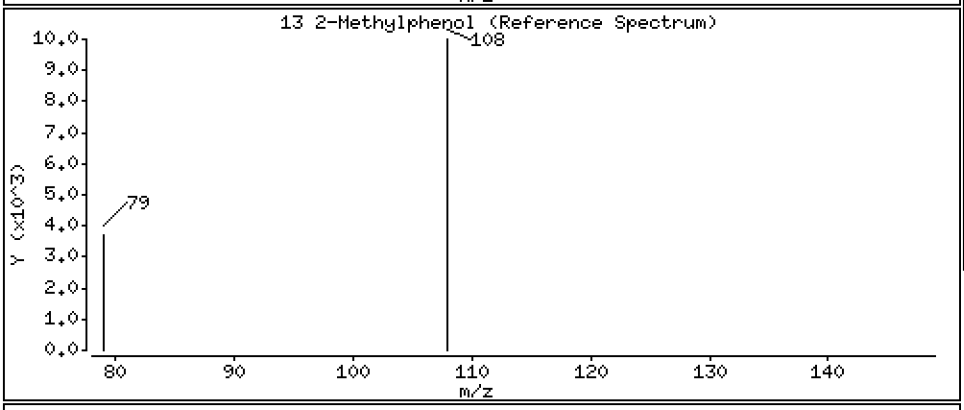
Concentration: 2.579 ug/mL

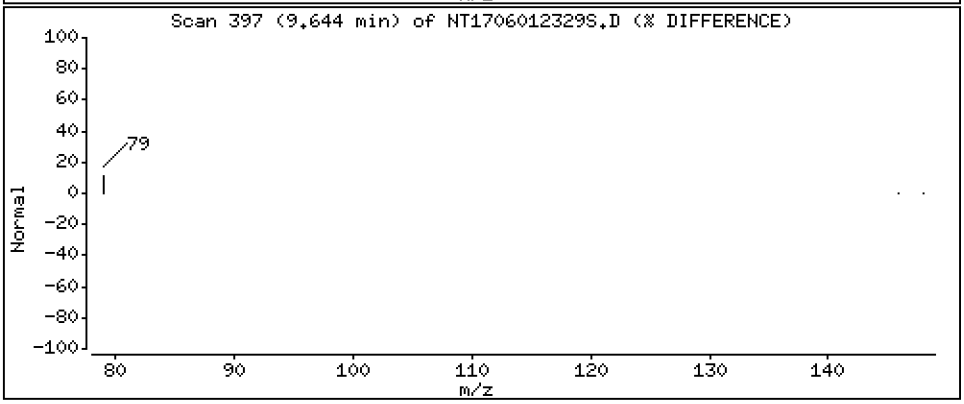












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

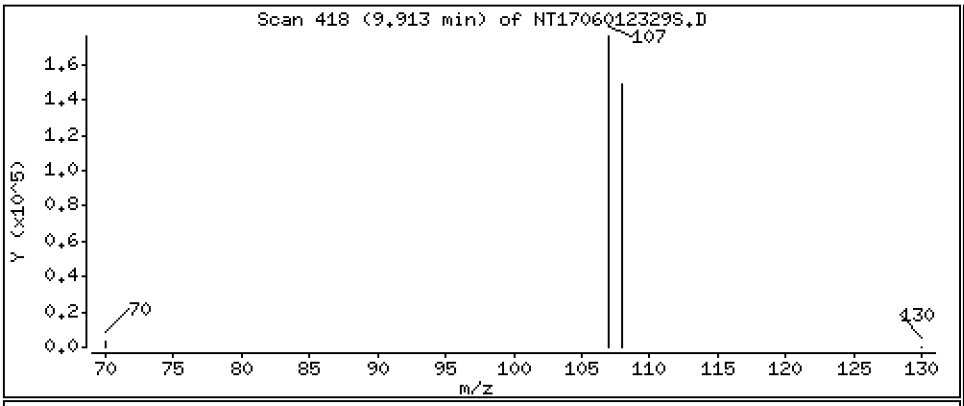
Operator: VTS

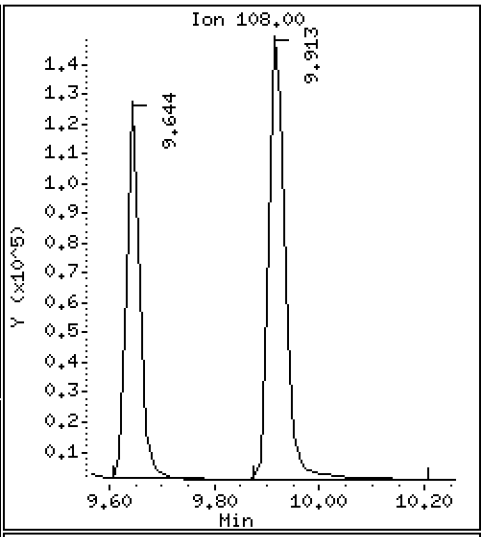
Column phase: ZB-5msi

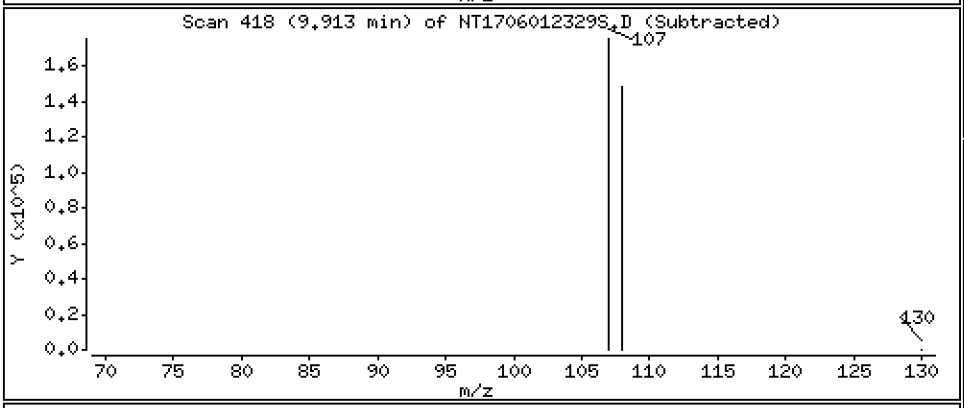
Column diameter: 0.25

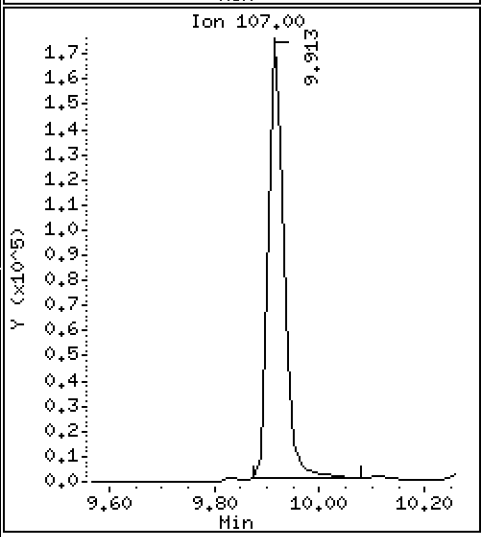
15 4-Methylphenol

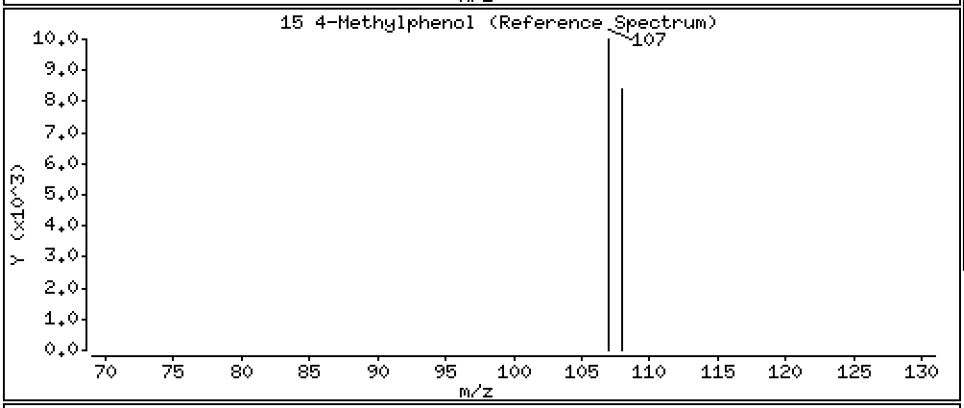
Concentration: 3.773 ug/mL

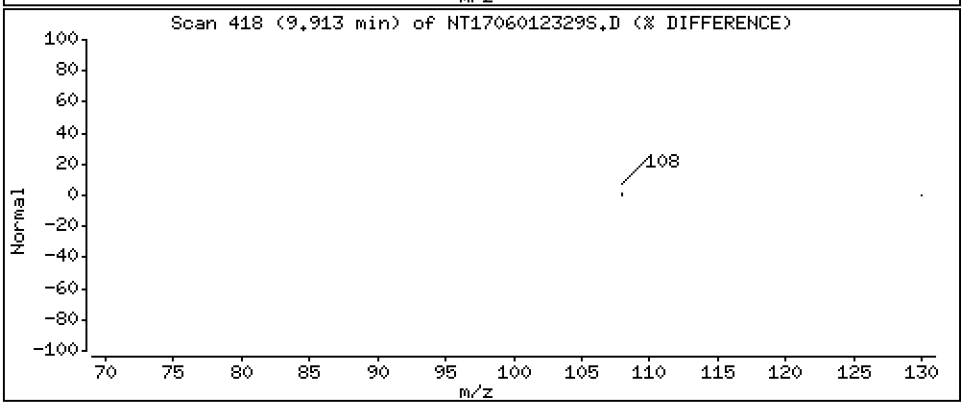












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

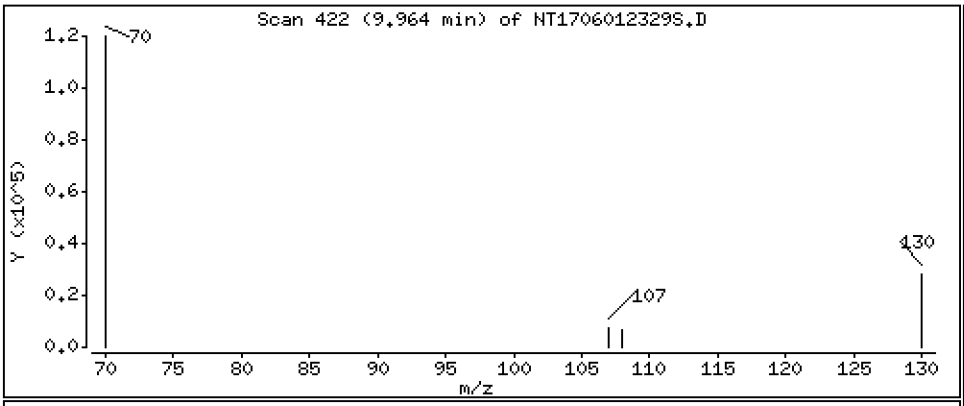
Operator: VTS

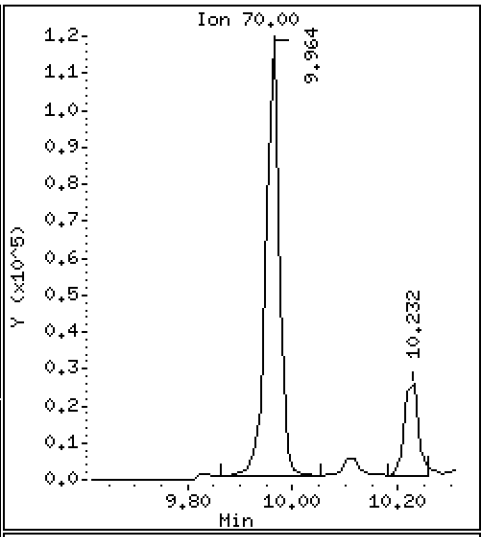
Column phase: ZB-5msi

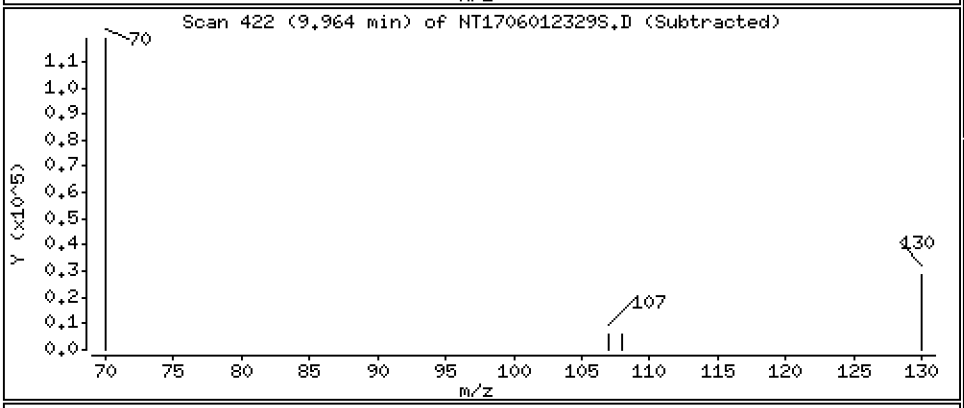
Column diameter: 0.25

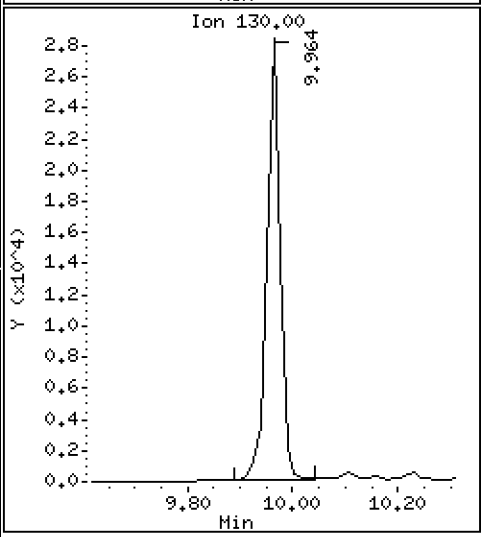
16 N-Nitroso-di-n-propylamine

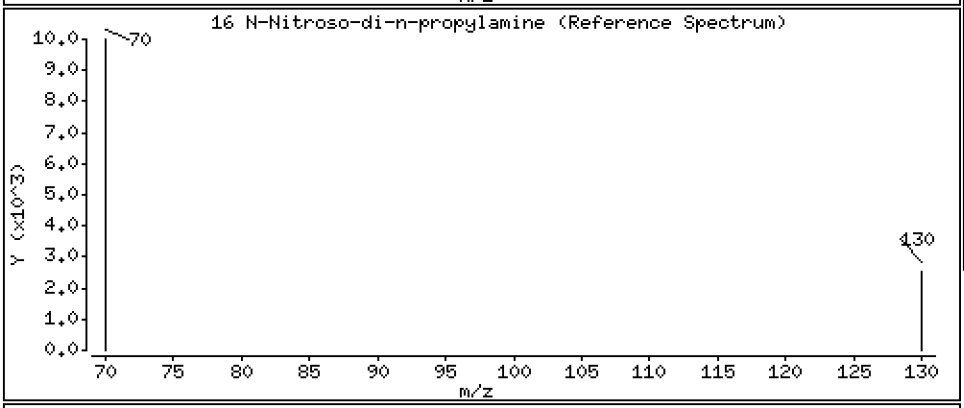
Concentration: 3.362 ug/mL

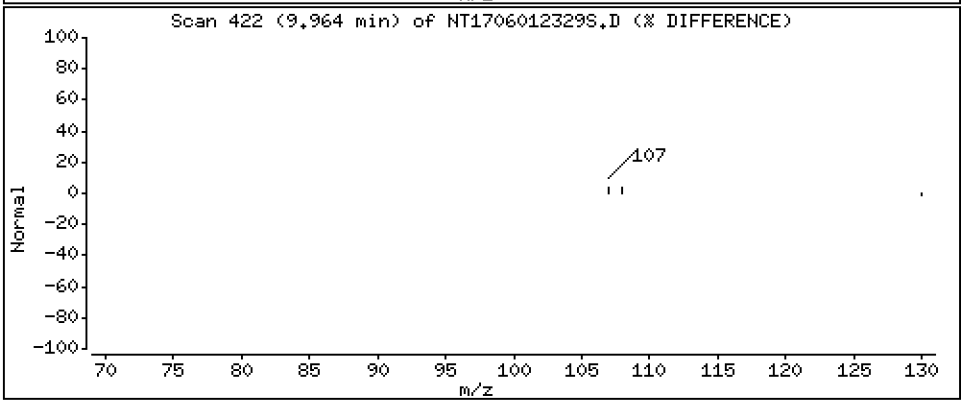












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123295.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

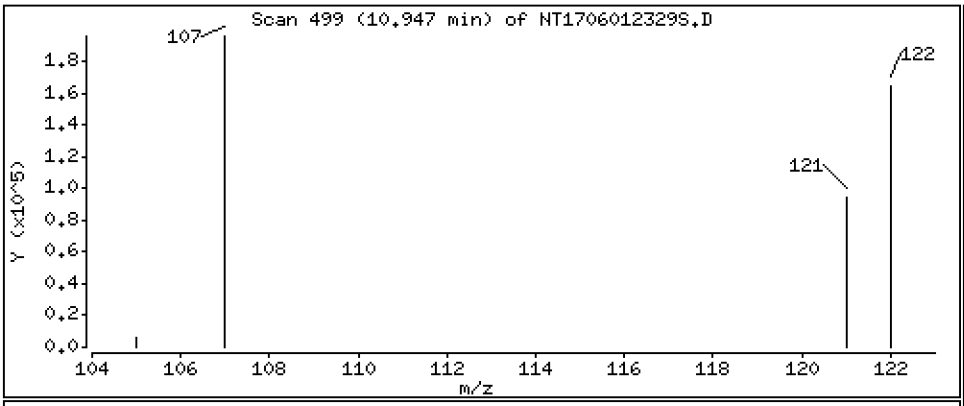
Operator: VTS

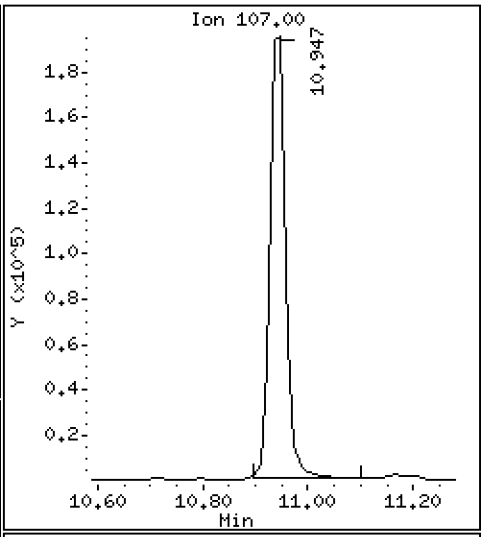
Column phase: ZB-5msi

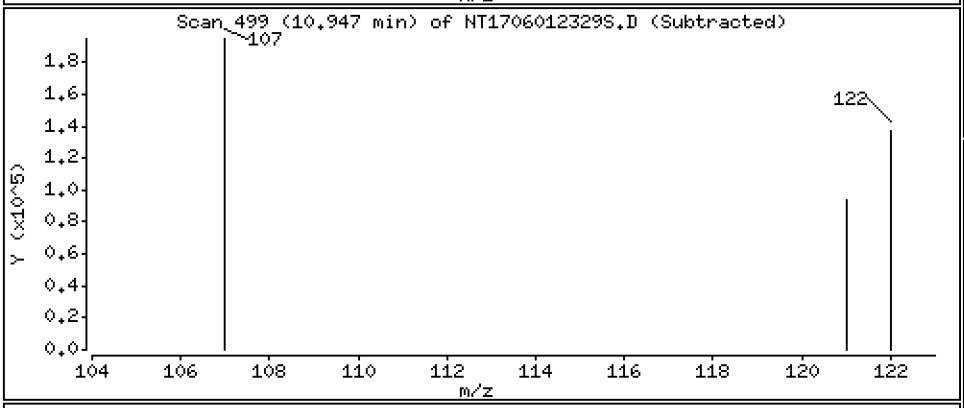
Column diameter: 0.25

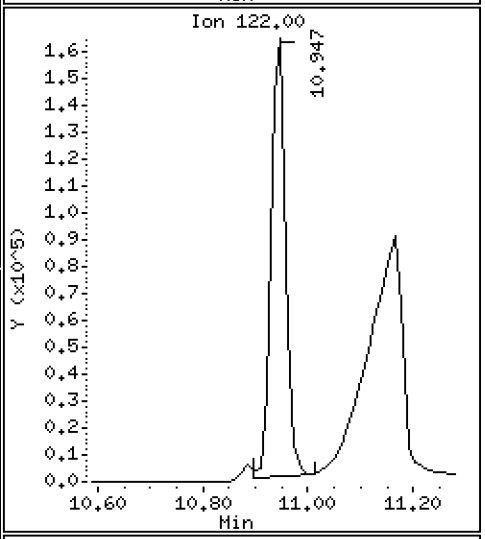
22 2,4-Dimethylphenol

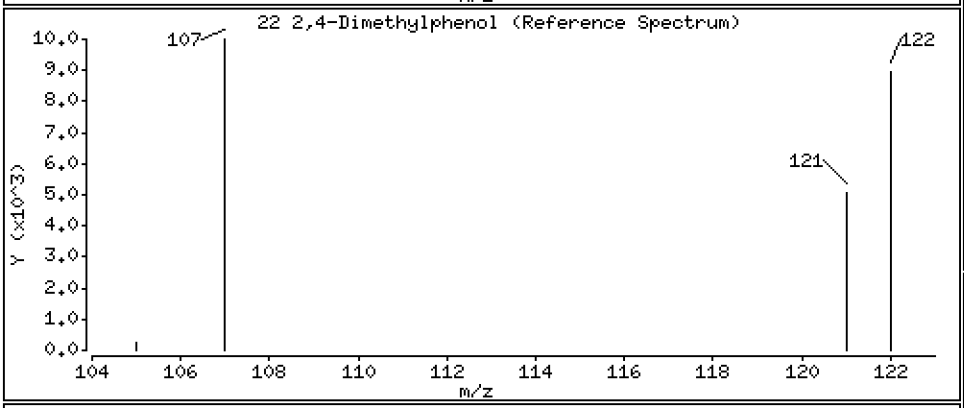
Concentration: 4.315 ug/mL

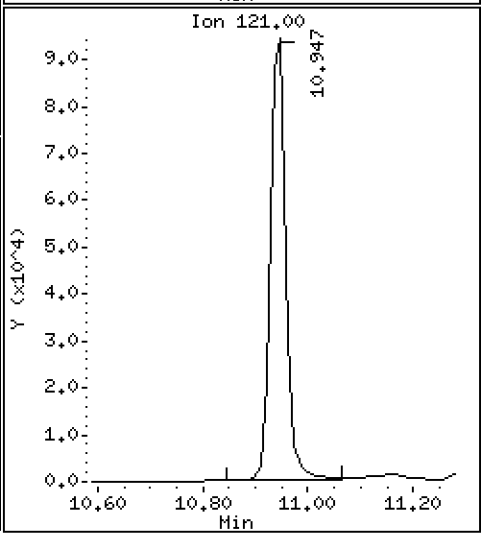


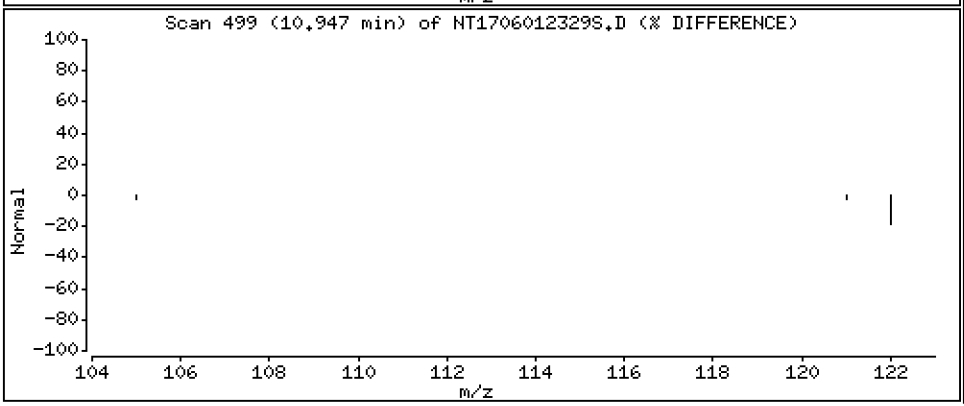












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123295.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

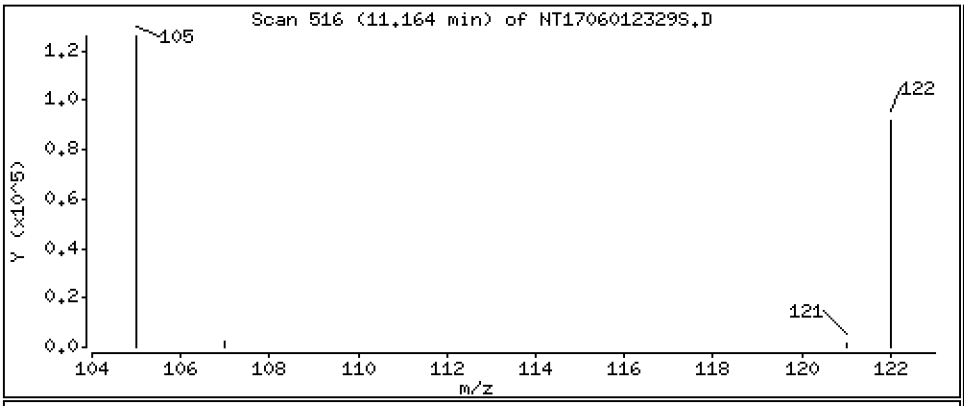
Operator: VTS

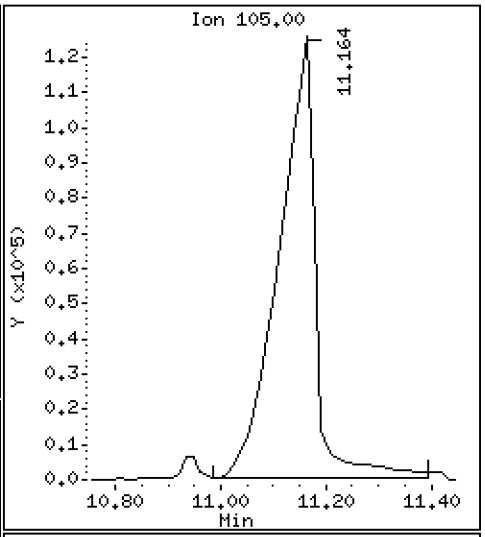
Column phase: ZB-5msi

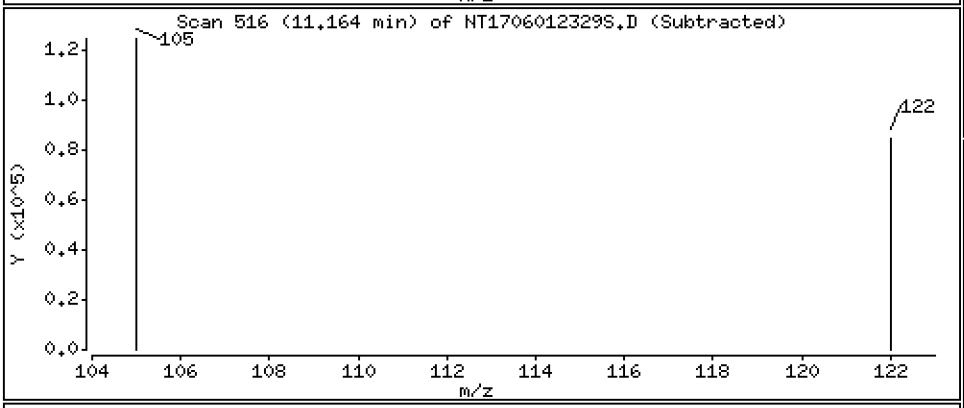
Column diameter: 0.25

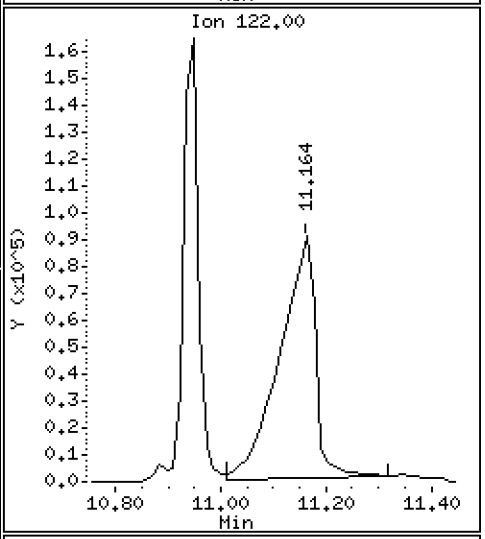
24 Benzoic acid

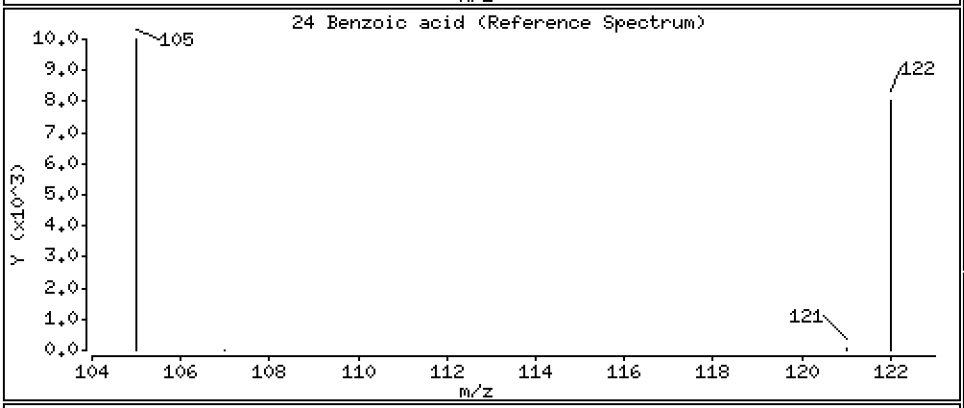
Concentration: 10.35 ug/mL

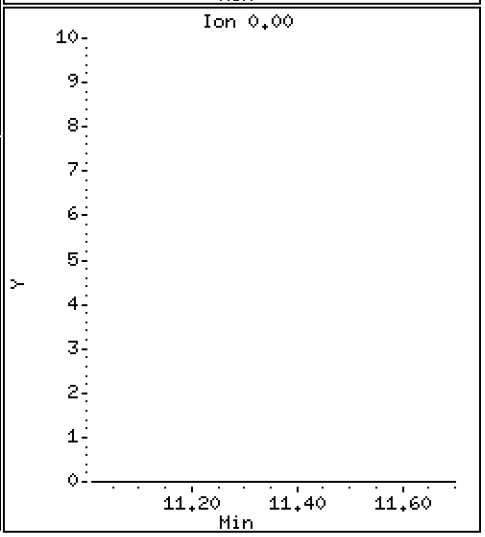


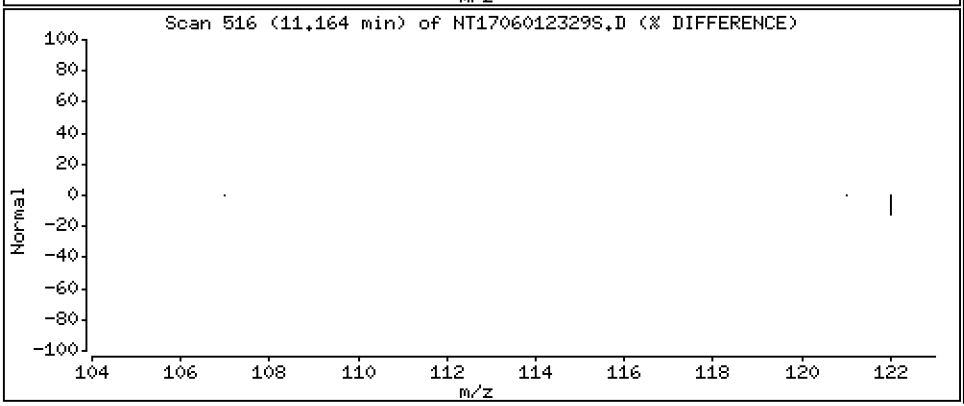












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

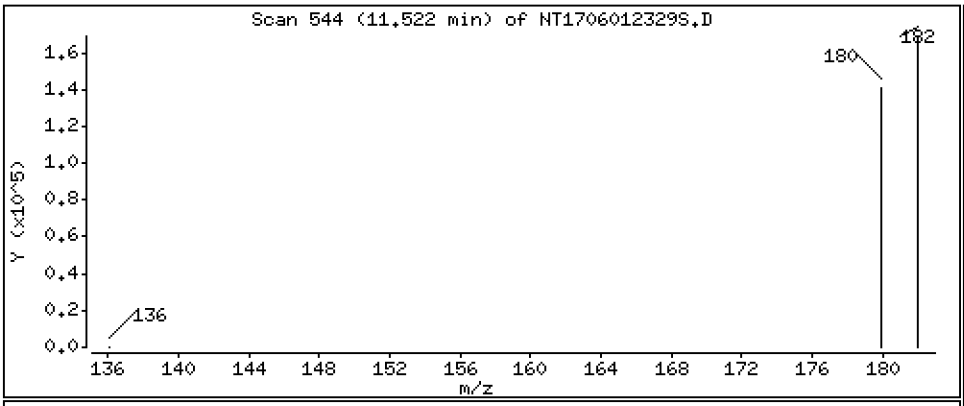
Operator: VTS

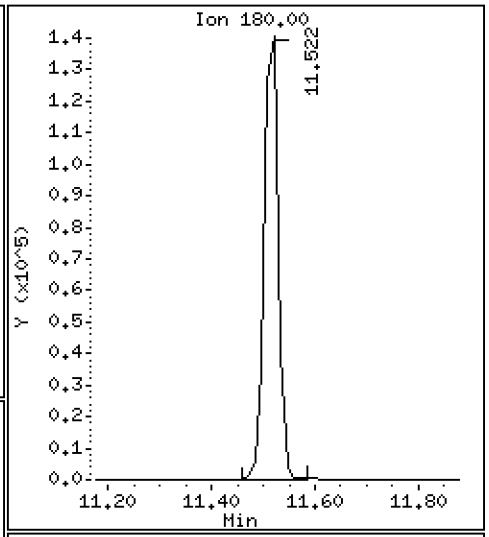
Column phase: ZB-5msi

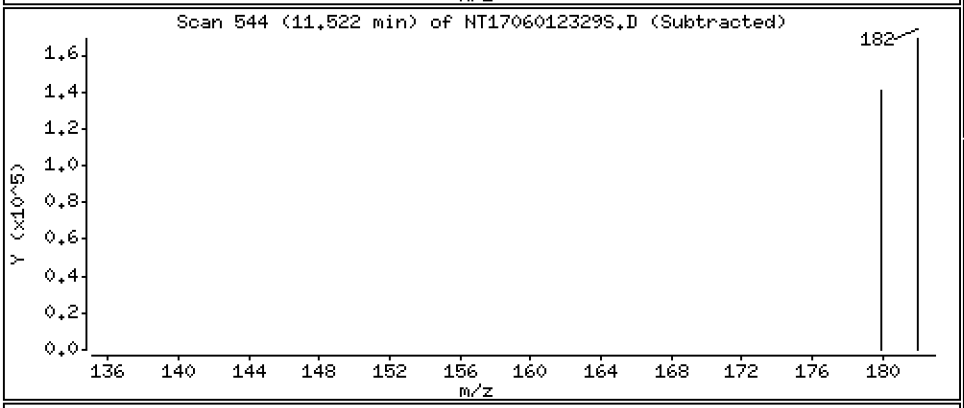
Column diameter: 0.25

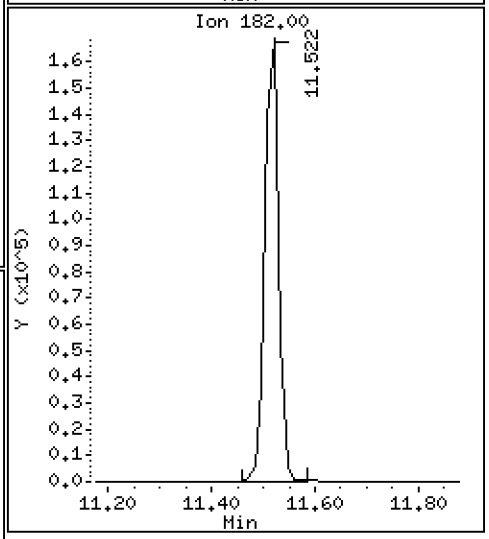
26 1,2,4-Trichlorobenzene

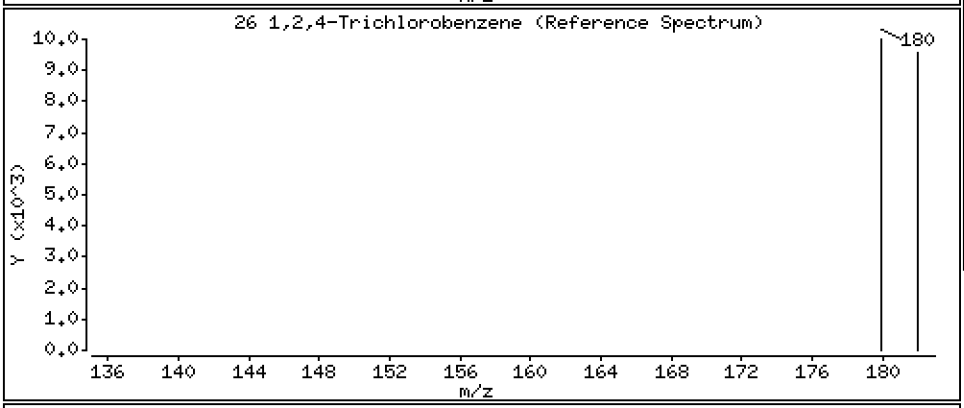
Concentration: 3.158 ug/mL

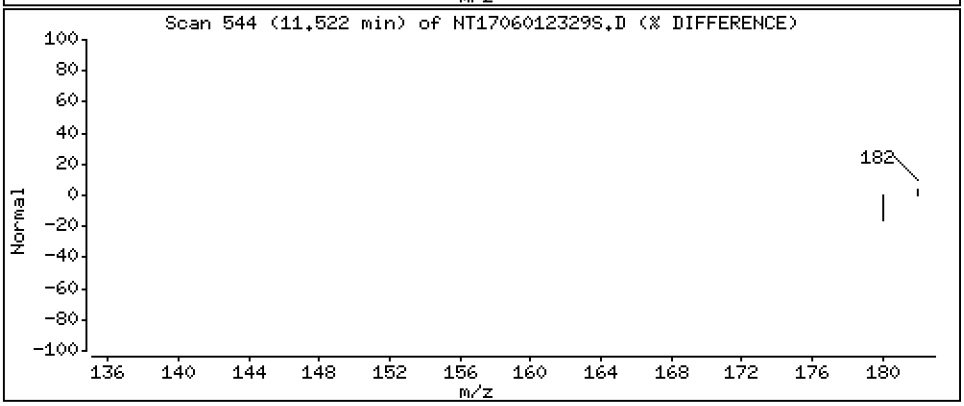












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123295.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

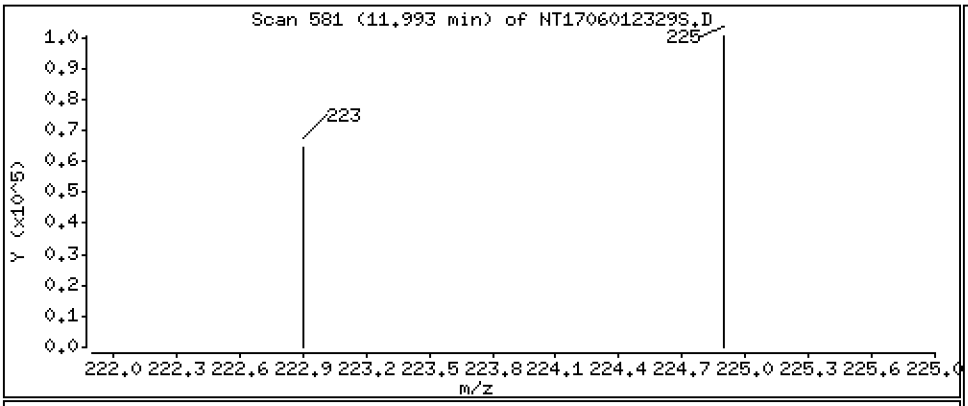
Operator: VTS

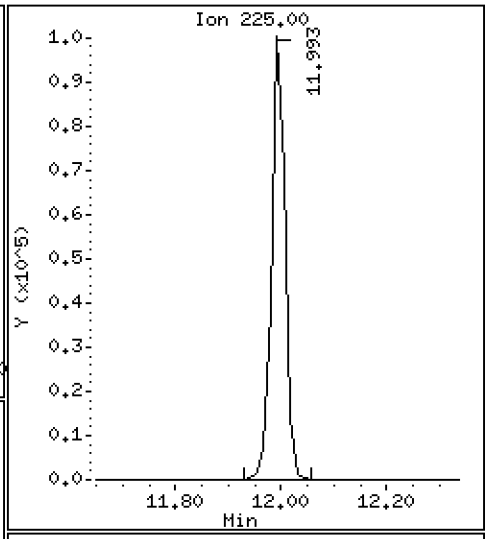
Column phase: ZB-5msi

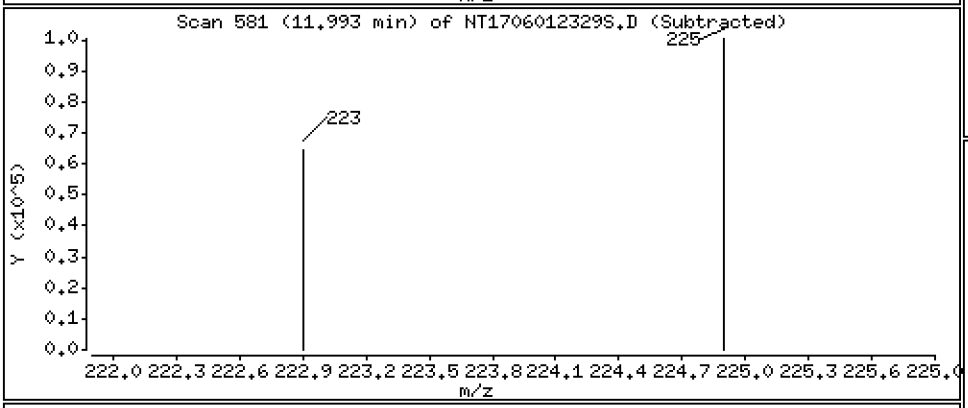
Column diameter: 0.25

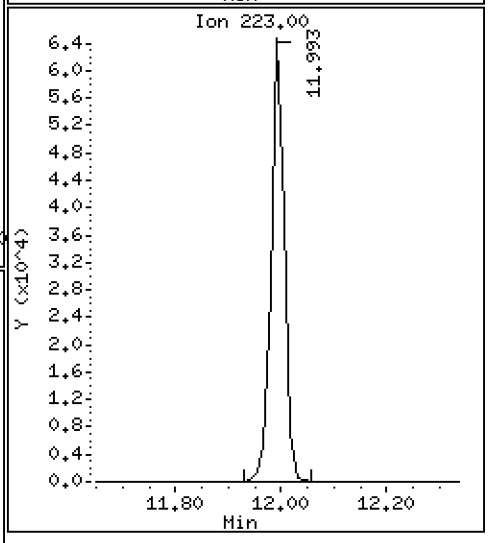
30 Hexachlorobutadiene

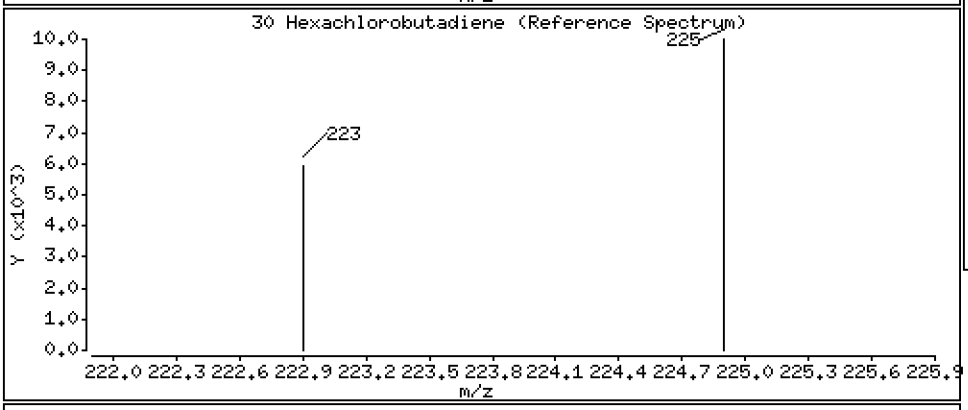
Concentration: 3.969 ug/mL

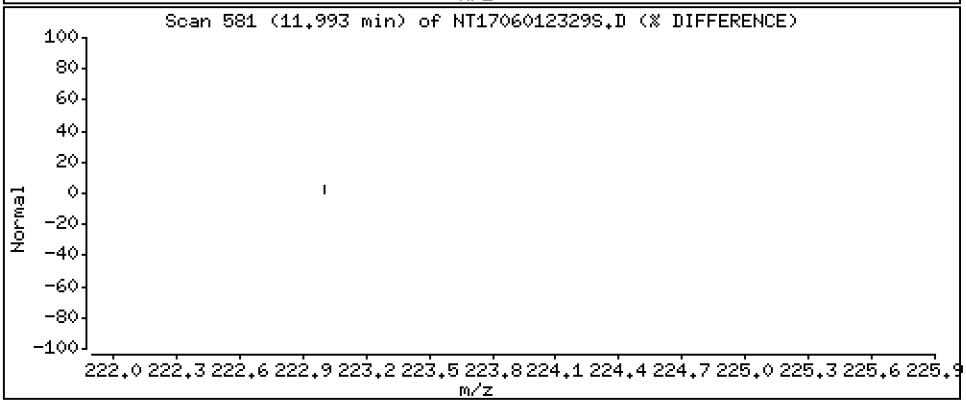












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

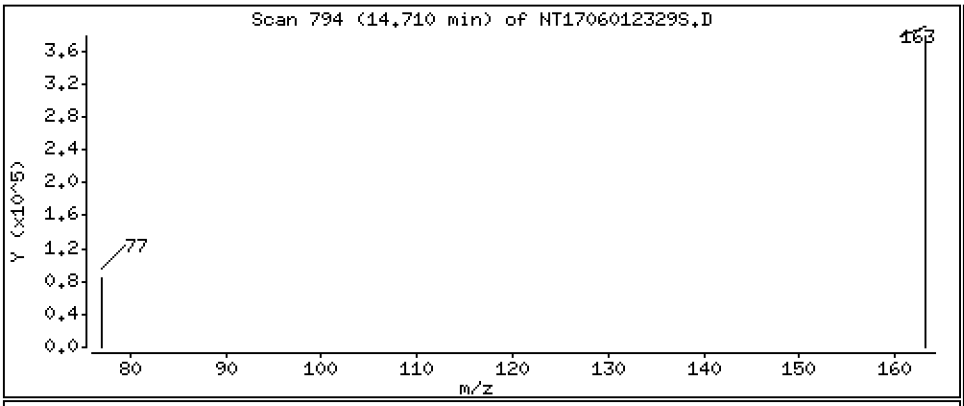
Operator: VTS

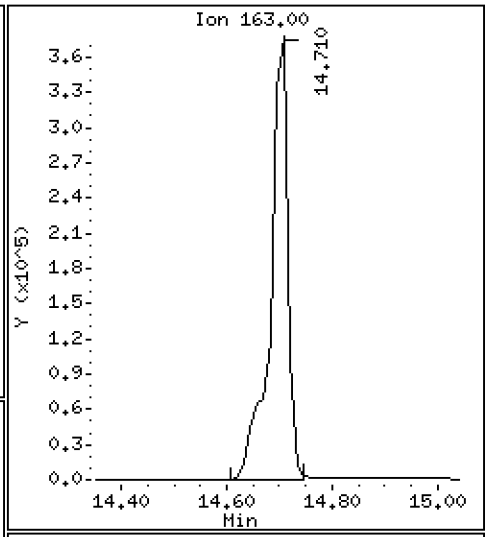
Column phase: ZB-5msi

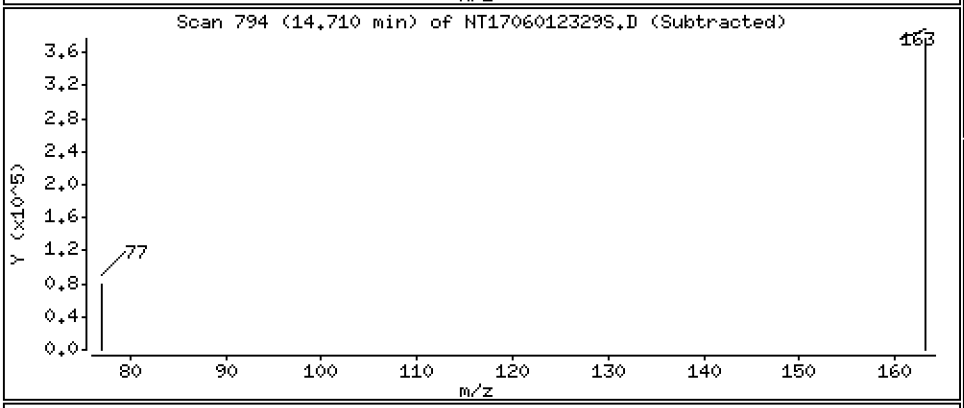
Column diameter: 0.25

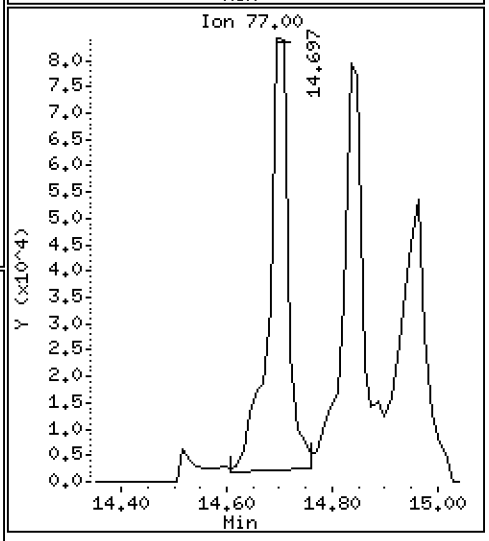
39 Dimethylphthalate

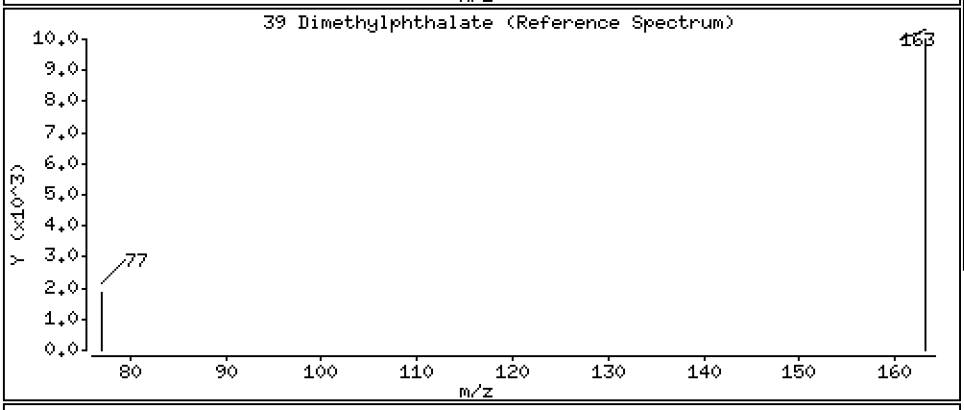
Concentration: 4.100 ug/mL

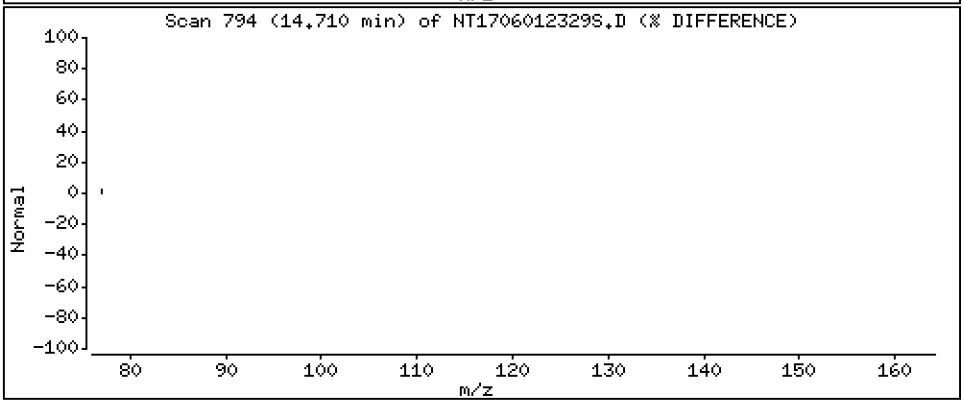












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

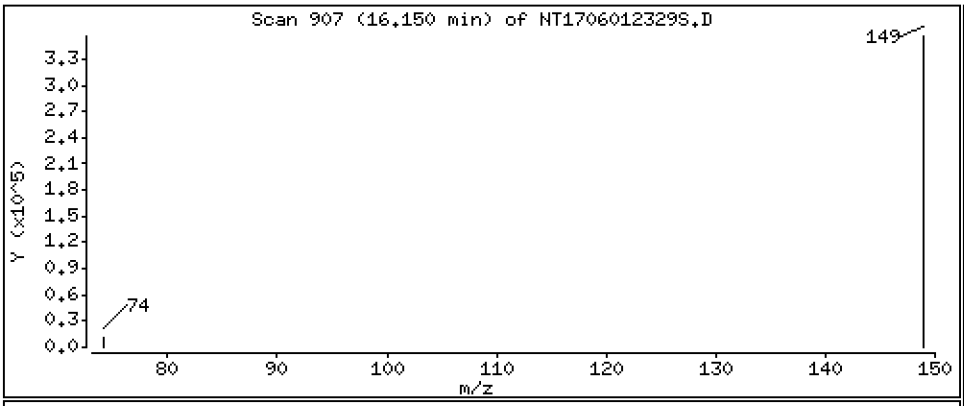
Operator: VTS

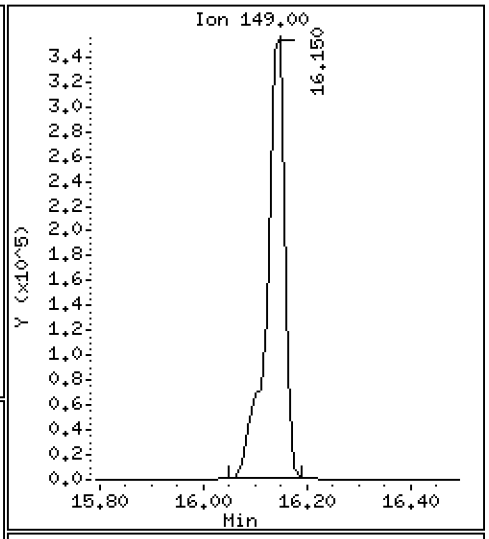
Column phase: ZB-5msi

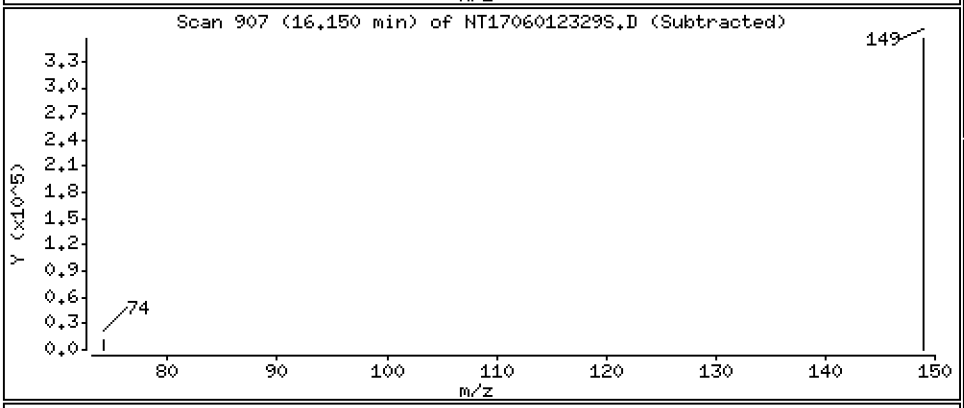
Column diameter: 0.25

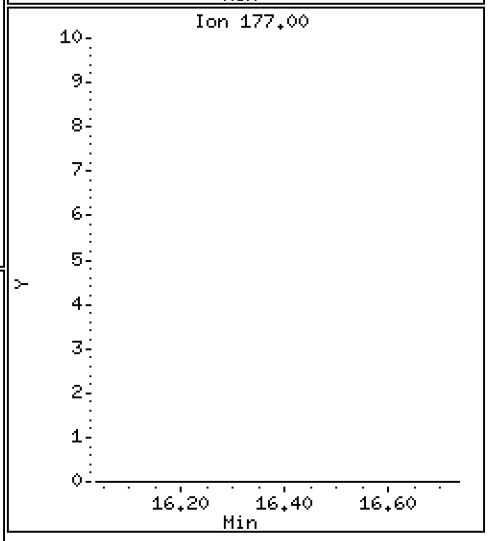
50 Diethylphthalate

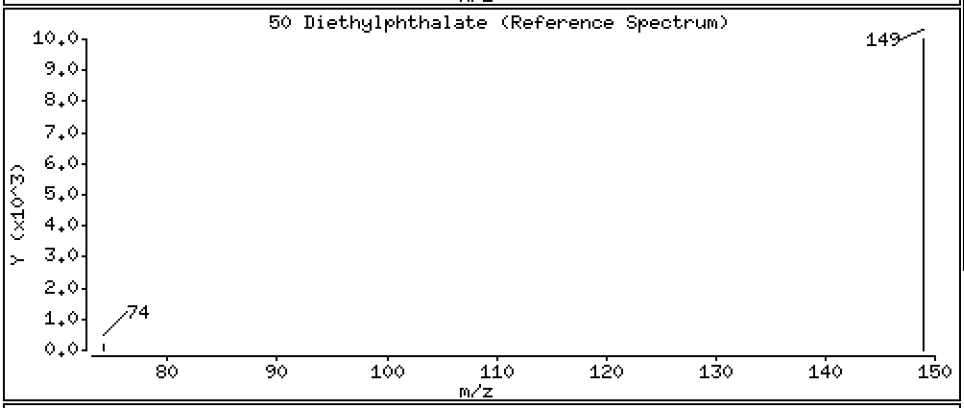
Concentration: 4.471 ug/mL

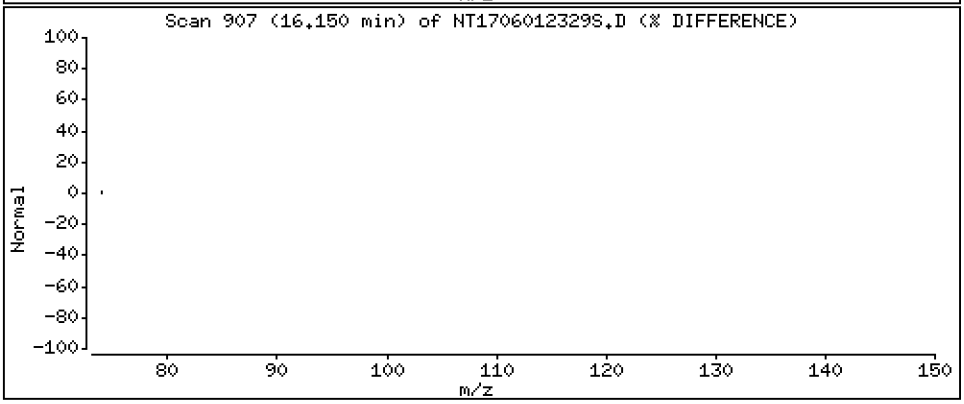












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123295.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

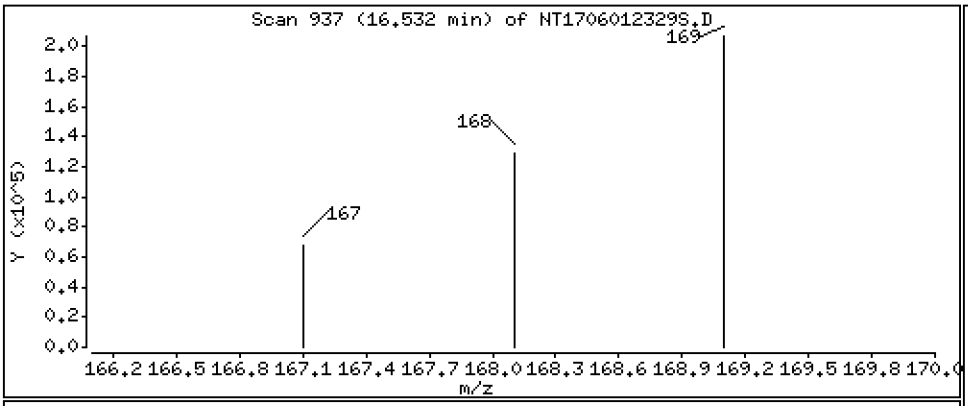
Operator: VTS

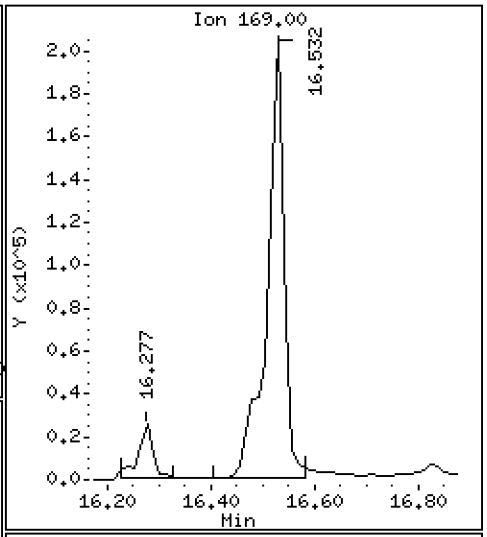
Column phase: ZB-5msi

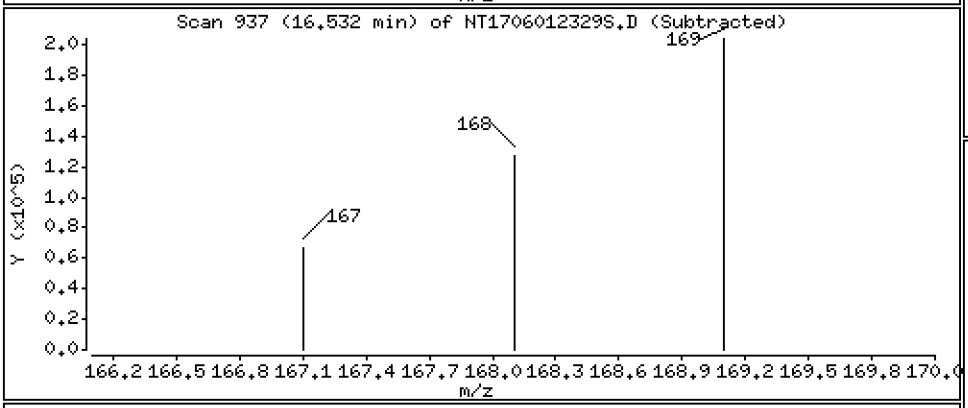
Column diameter: 0.25

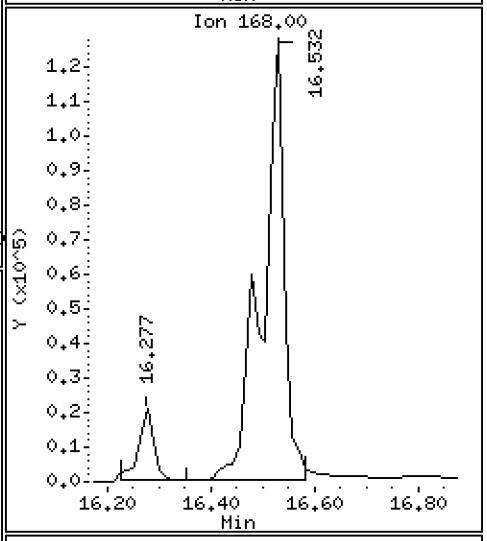
54 N-Nitrosodiphenylamine

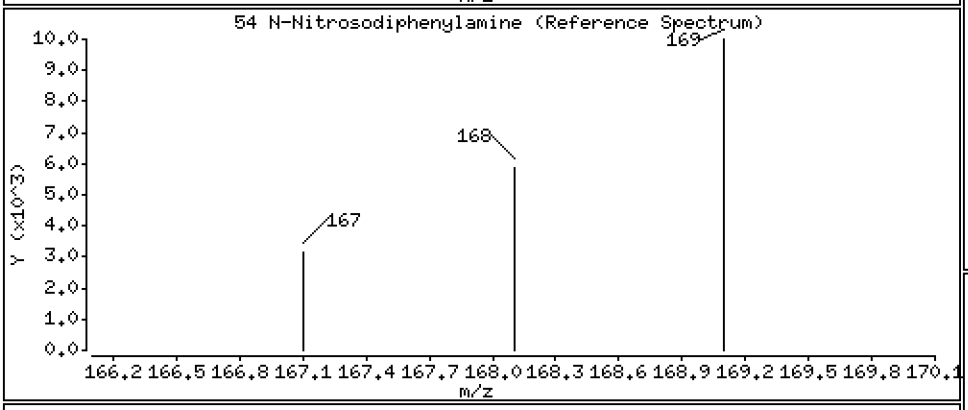
Concentration: 3.504 ug/mL

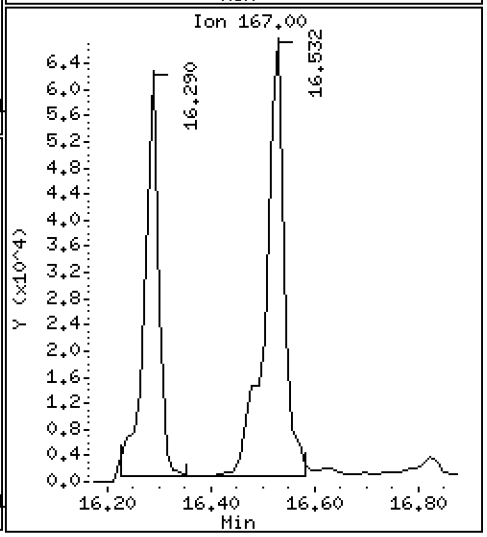


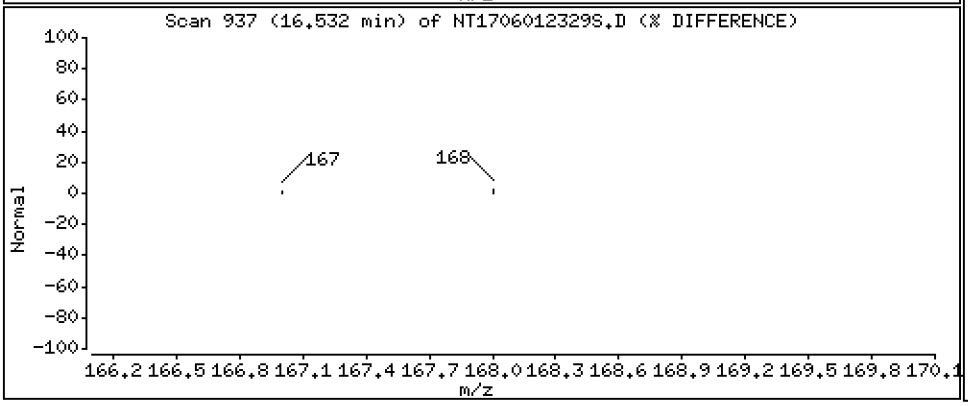












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

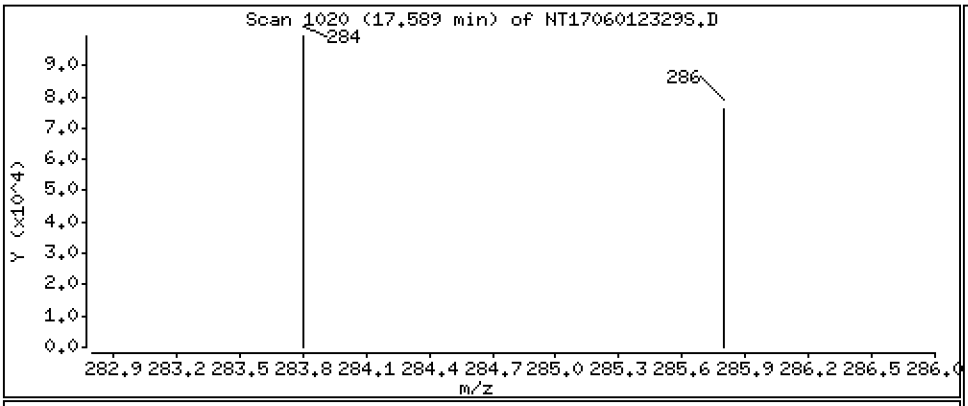
Operator: VTS

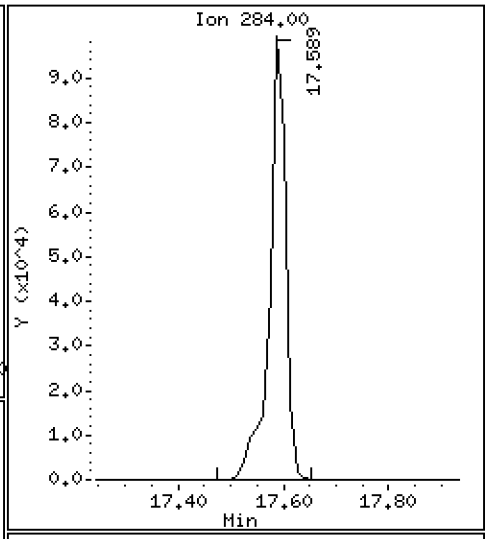
Column phase: ZB-5msi

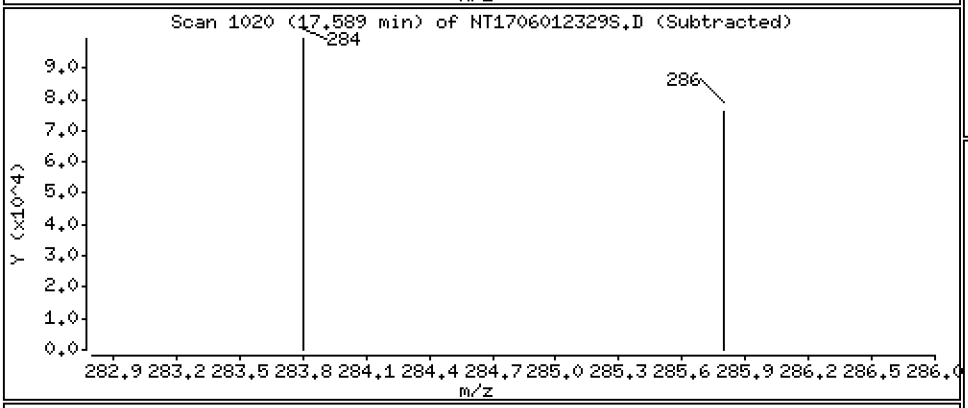
Column diameter: 0.25

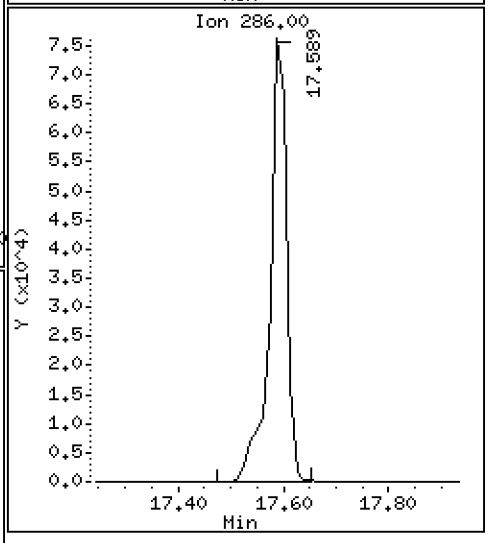
57 Hexachlorobenzene

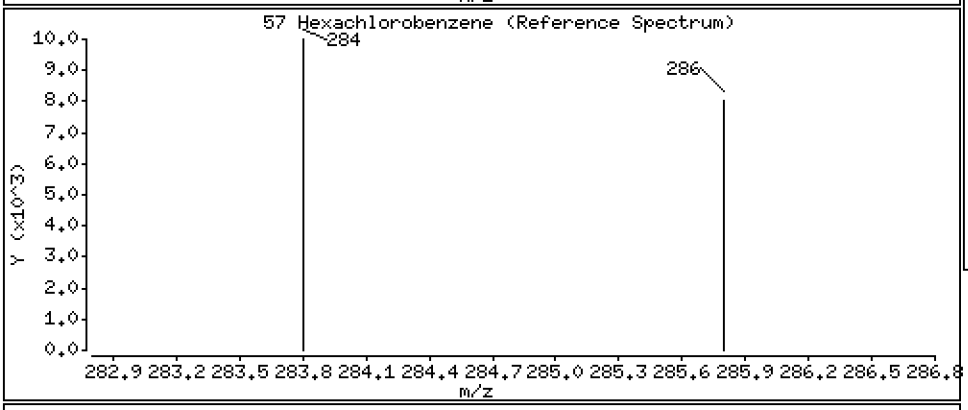
Concentration: 4.749 ug/mL

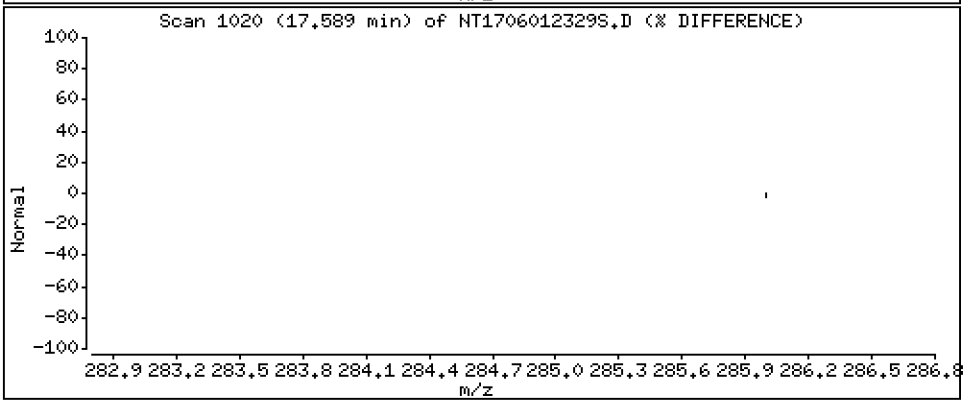












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

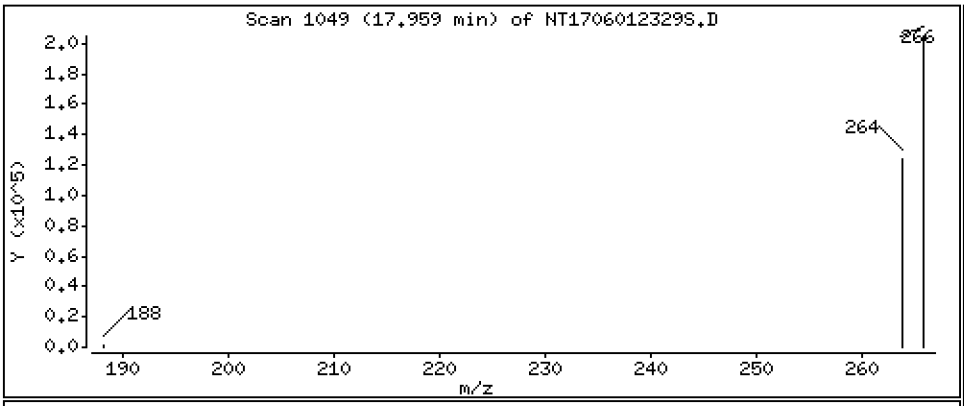
Operator: VTS

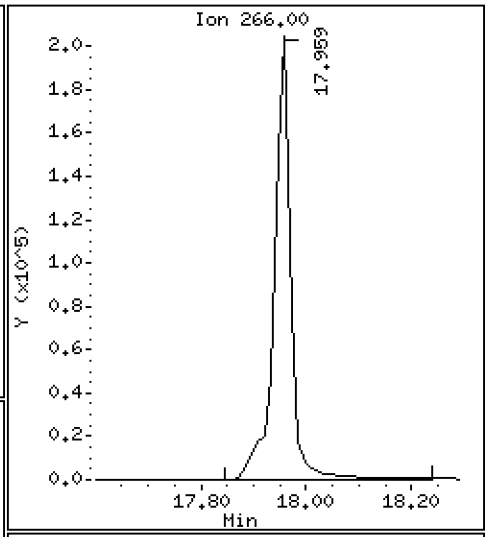
Column phase: ZB-5msi

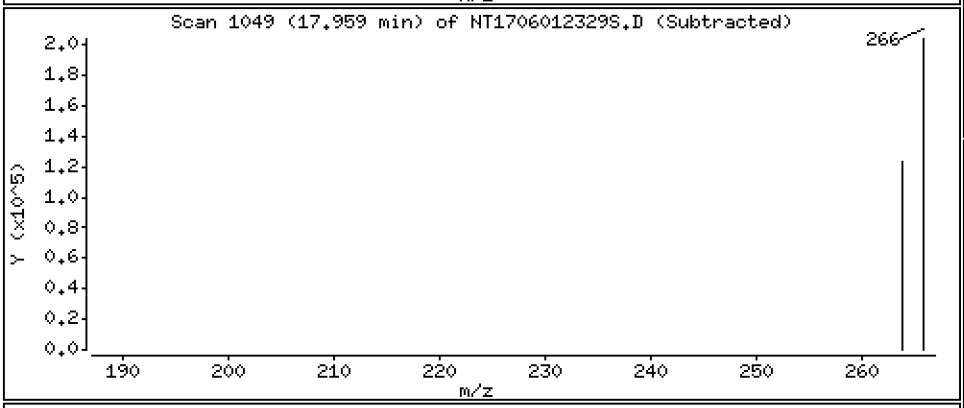
Column diameter: 0.25

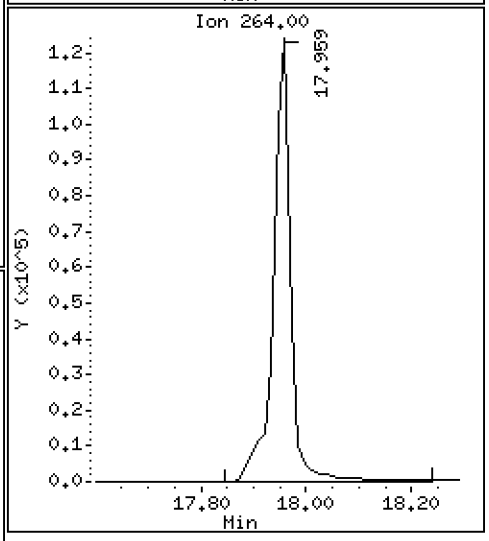
58 Pentachlorophenol

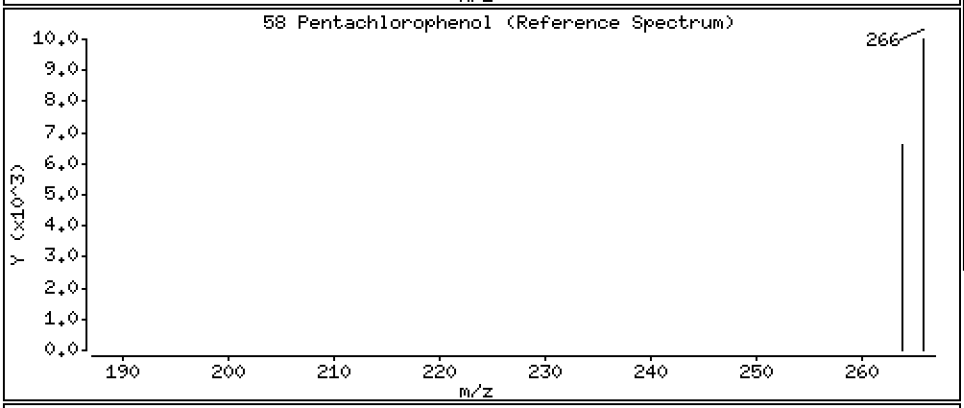
Concentration: 15.02 ug/mL

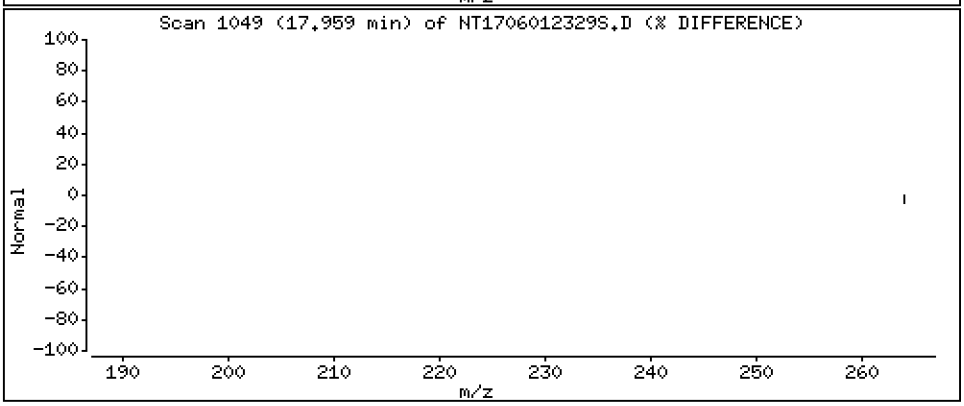












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

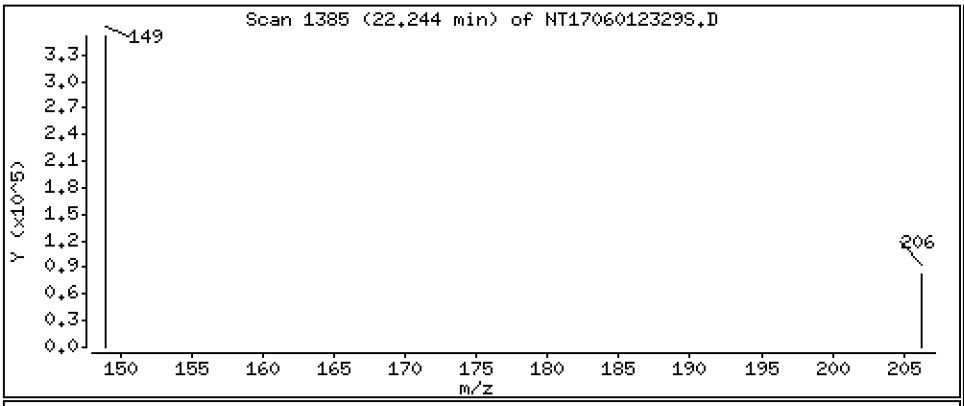
Operator: VTS

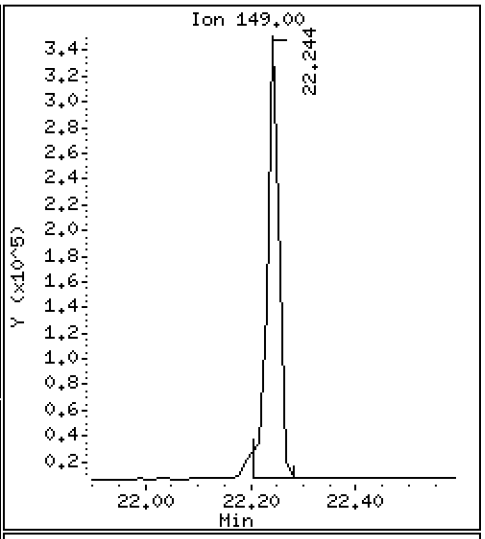
Column phase: ZB-5msi

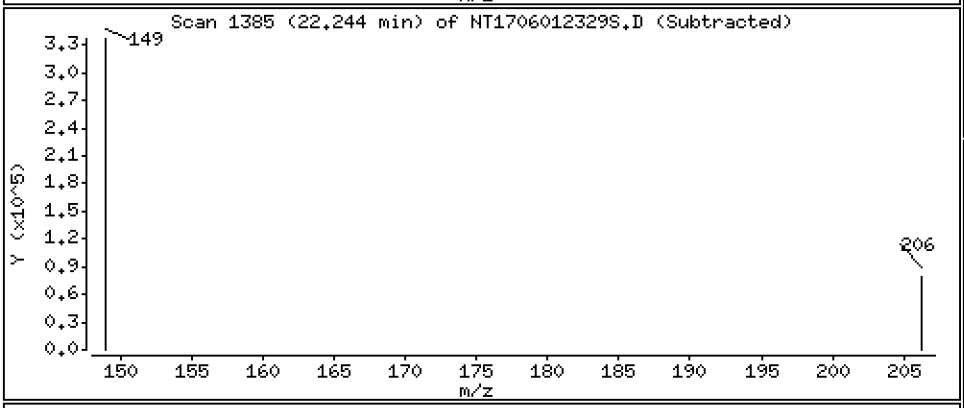
Column diameter: 0.25

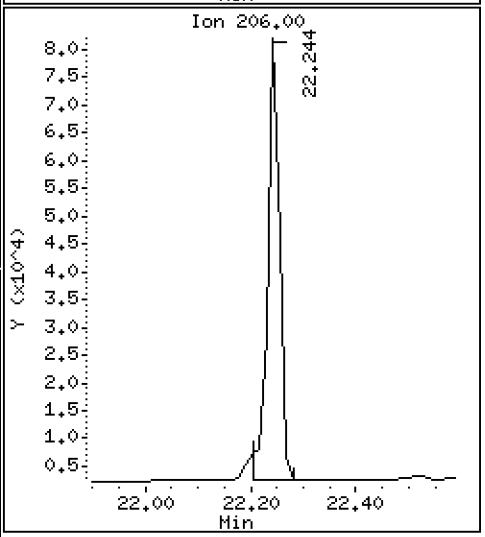
67 Butylbenzylphthalate

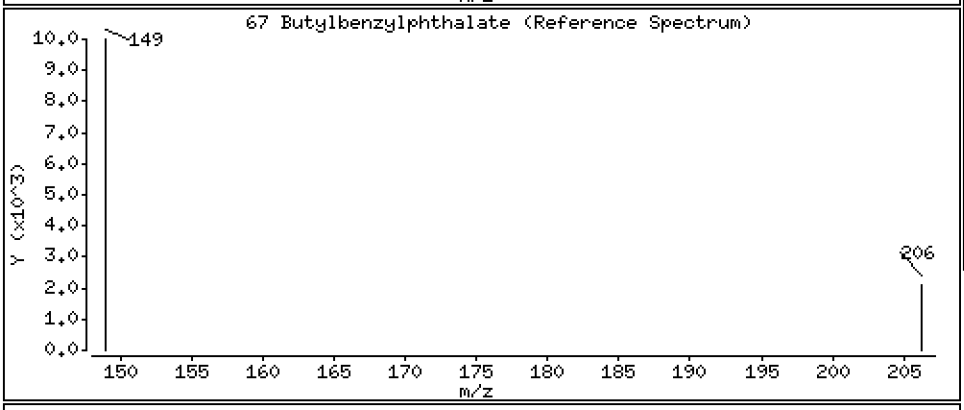
Concentration: 4.599 ug/mL

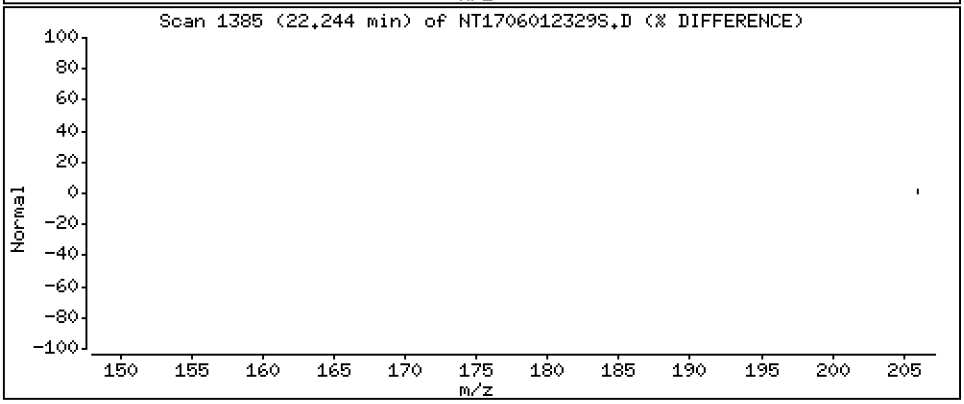












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

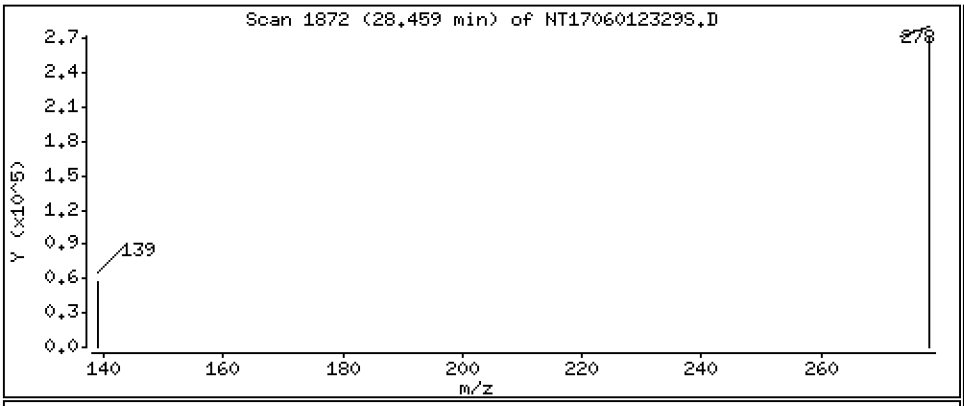
Operator: VTS

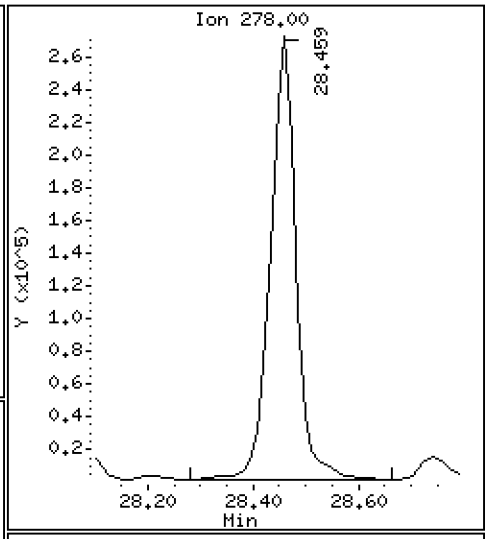
Column phase: ZB-5msi

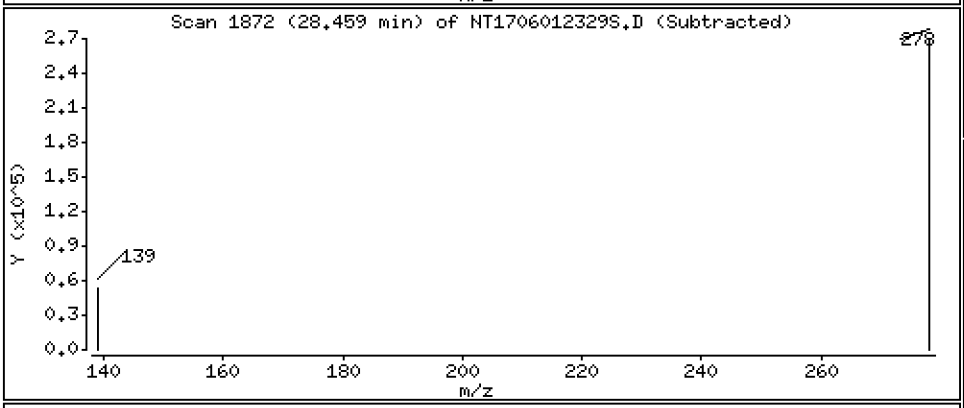
Column diameter: 0.25

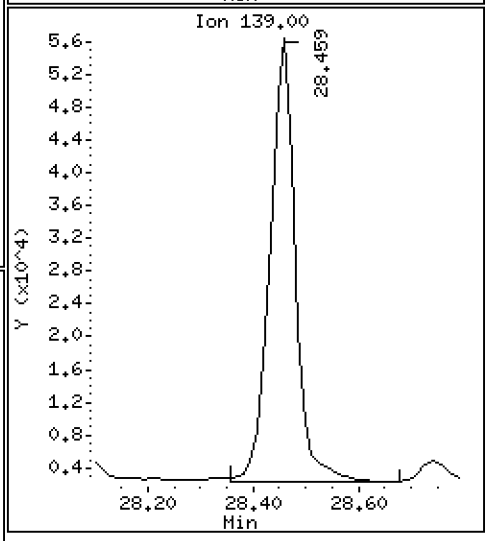
79 Dibenzo(a,h)anthracene

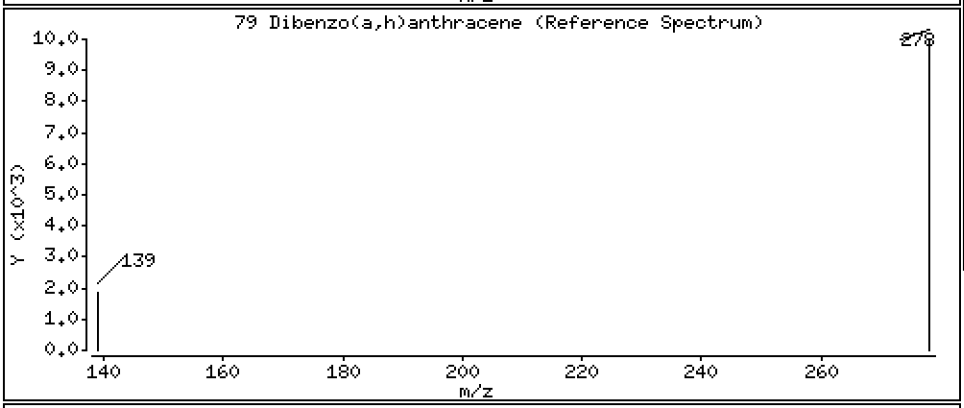
Concentration: 5.117 ug/mL

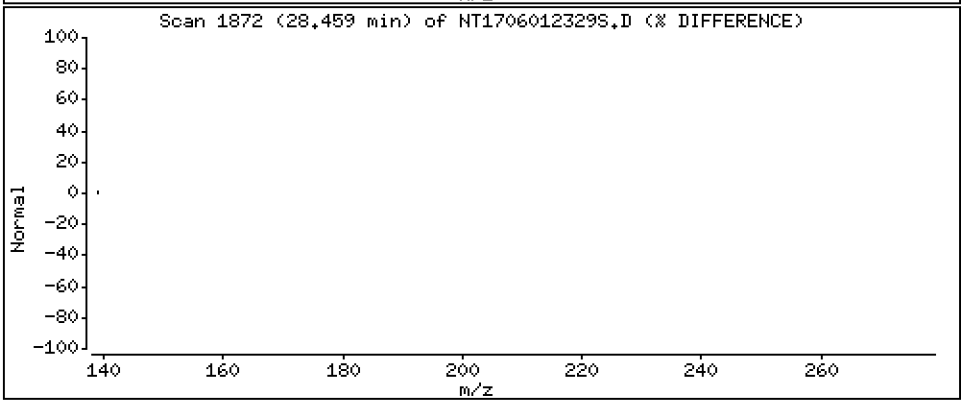












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D

Date : 02-JUN-2023 05:25

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-MSD2

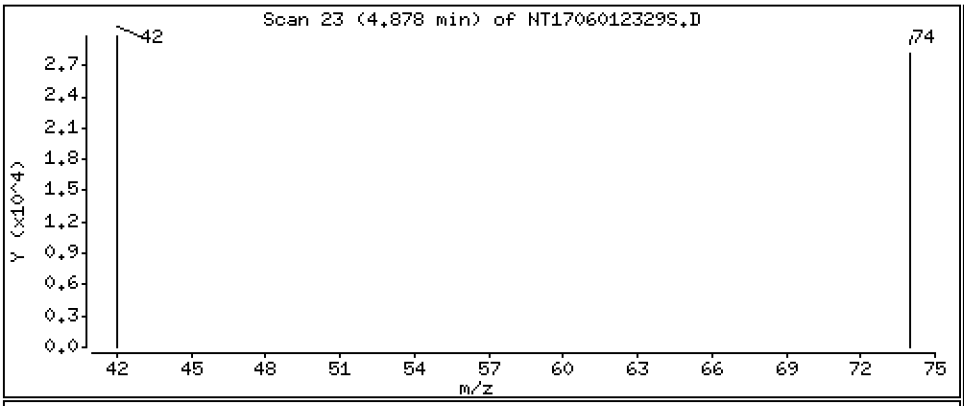
Operator: VTS

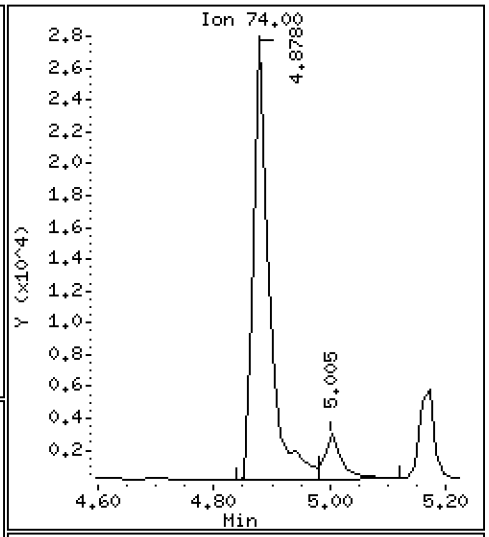
Column phase: ZB-5msi

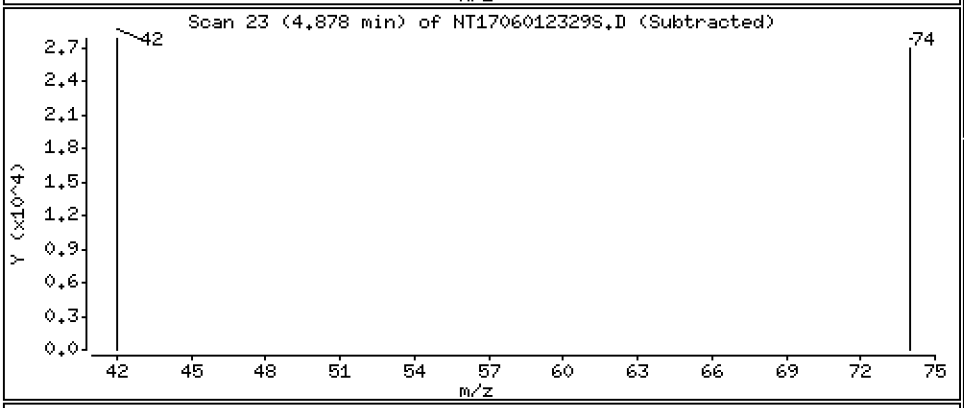
Column diameter: 0.25

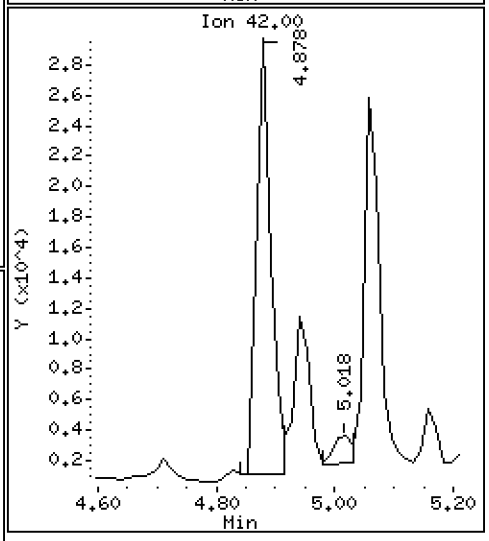
90 N-Nitrosodimethylamine

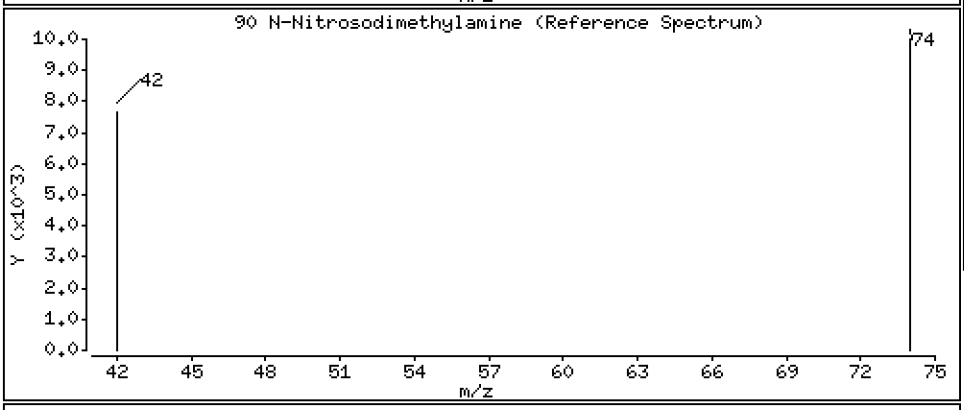
Concentration: 0.9705 ug/mL

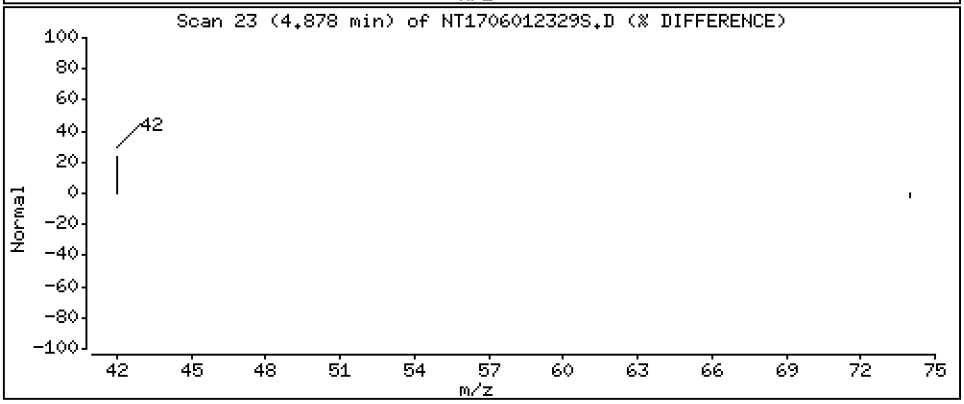












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012329S.D
Lab Smp Id: BLE0148-MSD2
Inj Date : 02-JUN-2023 05:25
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-MSD2
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.954	(0.762)	230088	2.75952	2.760(R)
	3 Phenol	94	8.546	8.547	(0.934)	1050715	8.45716	8.457
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	332232	2.98340	2.983
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	275671	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	334126	3.07908	3.079
	11 Benzyl alcohol	79	9.427	9.452	(1.031)	288715	4.07830	4.078
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	324132	3.04753	3.048
	13 2-Methylphenol	108	9.644	9.644	(1.054)	222057	2.57928	2.579
	15 4-Methylphenol	108	9.912	9.912	(1.084)	328277	3.77300	3.773
	16 N-Nitroso-di-n-propylamine	70	9.963	9.964	(1.089)	210825	3.36211	3.362
	22 2,4-Dimethylphenol	107	10.947	10.934	(0.944)	405458	4.31510	4.315
	24 Benzoic acid	105	11.164	11.100	(0.963)	605577	10.3452	10.35
	26 1,2,4-Trichlorobenzene	180	11.521	11.521	(0.993)	269247	3.15835	3.158
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	976810	4.00000	
	30 Hexachlorobutadiene	225	11.992	11.993	(1.034)	178141	3.96859	3.969
	39 Dimethylphthalate	163	14.709	14.696	(0.968)	863836	4.10046	4.100
*	42 Acenaphthene-d10	162	15.194	15.194	(1.000)	573676	4.00000	
	50 Diethylphthalate	149	16.150	16.137	(1.063)	855389	4.47099	4.471
	54 N-Nitrosodiphenylamine	169	16.531	16.519	(0.908)	460430	3.50364	3.504
	57 Hexachlorobenzene	284	17.588	17.588	(0.966)	211715	4.74918	4.749
	58 Pentachlorophenol	266	17.958	17.946	(0.986)	449842	15.0174	15.02
*	59 Phenanthrene-d10	188	18.213	18.201	(1.000)	932810	4.00000	
$	66 Terphenyl-d14	244	21.337	21.325	(0.919)	460048	4.29991	4.300(R)
	67 Butylbenzylphthalate	149	22.243	22.243	(0.958)	534715	4.59912	4.599
*	69 Chrysene-d12	240	23.225	23.213	(1.000)	563849	4.00000	
*	77 Perylene-d12	264	25.828	25.802	(1.000)	629097	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.459	28.446	(1.102)	907955	5.11690	5.117
	90 N-Nitrosodimethylamine	74	4.877	4.878	(0.533)	52226	0.97049	0.9705

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012329S.D
Lab Smp Id: BLE0148-MSD2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 02-JUN-2023
Calibration Time: 00:29
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	275671	3.82
27 Naphthalene-d8	874121	437061	1748242	976810	11.75
42 Acenaphthene-d10	524478	262239	1048956	573676	9.38
59 Phenanthrene-d10	807440	403720	1614880	932810	15.53
69 Chrysene-d12	527364	263682	1054728	563849	6.92
77 Perylene-d12	455527	227764	911054	629097	38.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.21	0.07
69 Chrysene-d12	23.21	22.71	23.71	23.23	0.05
77 Perylene-d12	25.80	25.30	26.30	25.83	0.10

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

REVIEW SUMMARY FOR FILE - NT1706012329S.D

Lab ID: BLE0148-MSD2
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 05:25

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.963	0.957	0.0055	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1706012321S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/22/23 22:49
Batch:	BLE0149	Laboratory ID:	BLE0149-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	18.44 g / 0.5 mL	Source Sample:	LDW23-IT1820

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Benzo(a)anthracene	300	214	D	421	D	69.0	42 - 120
Chrysene	300	294	D	529	D	78.5	48 - 120
Benzo(b)fluoranthene	300	263	D	440	D	59.3	52 - 137
Benzo(k)fluoranthene	300	143	D	302	D	53.3	37 - 129
Benzo(a)pyrene	300	250	D	422	D	57.2	36 - 120
Indeno(1,2,3-cd)pyrene	300	258	D	560	D	101	67 - 132
Dibenzo(a,h)anthracene	300	64.6	D	279	D	71.4	66 - 139

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/22/23 23:16
Batch:	BLE0149	Laboratory ID:	BLE0149-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	18.44 g / 0.5 mL	Source Sample:	LDW23-IT1820

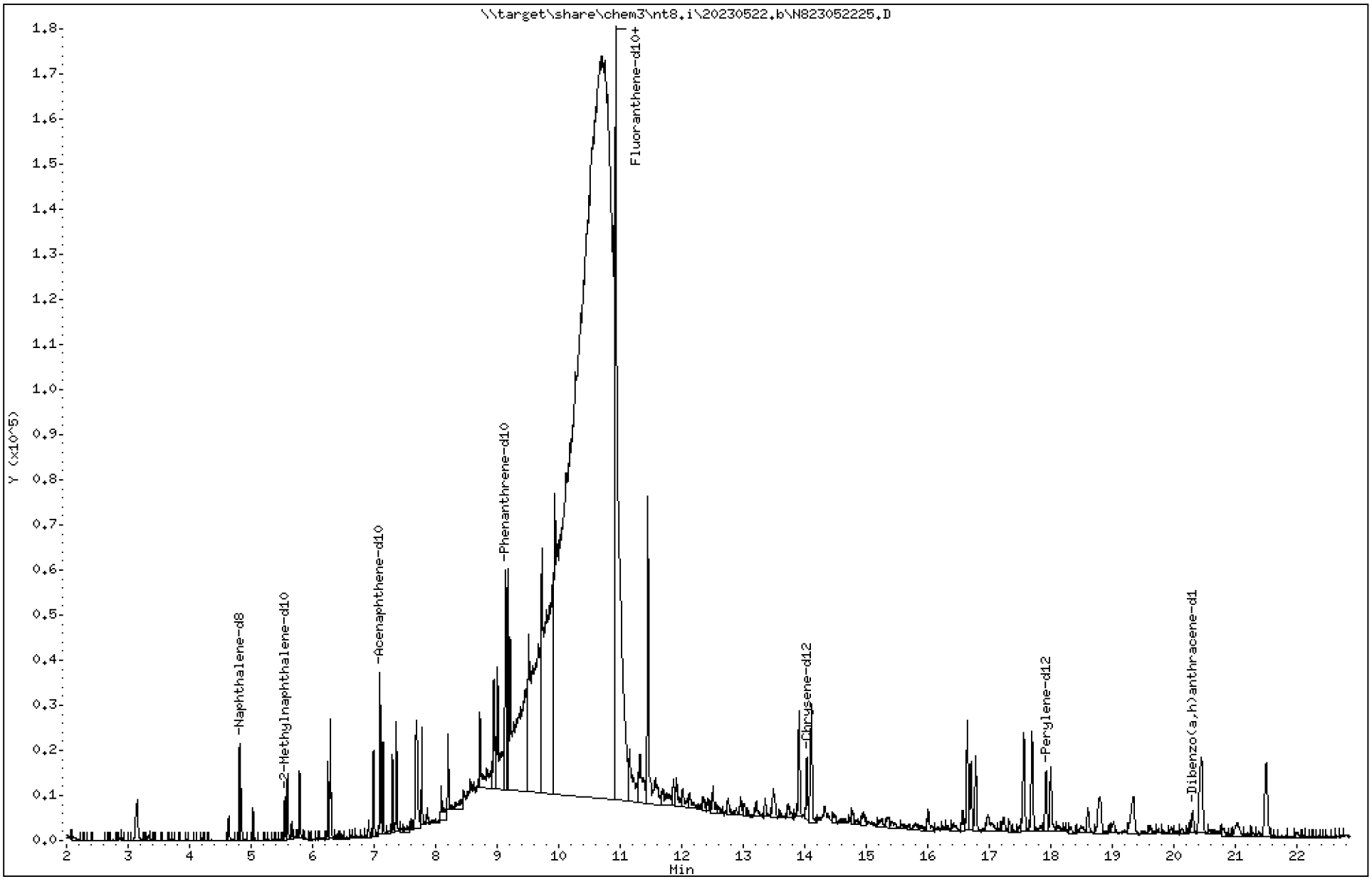
COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzo(a)anthracene	300	655	*, D	147 *	43.5 *	30	42 - 120
Chrysene	300	766	*, D	157 *	36.5 *	30	48 - 120
Benzo(b)fluoranthene	300	636	*, D	125	36.3 *	30	52 - 137
Benzo(k)fluoranthene	300	412	*, D	89.9	30.7 *	30	37 - 129
Benzo(a)pyrene	300	590	*, D	113	33.2 *	30	36 - 120
Indeno(1,2,3-cd)pyrene	300	697	*, D	146 *	21.8	30	67 - 132
Dibenzo(a,h)anthracene	300	321	D	85.4	14.0	30	66 - 139

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D
Date : 22-MAY-2023 22:49
Client ID:
Sample Info: BLE0149-MS1,3

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

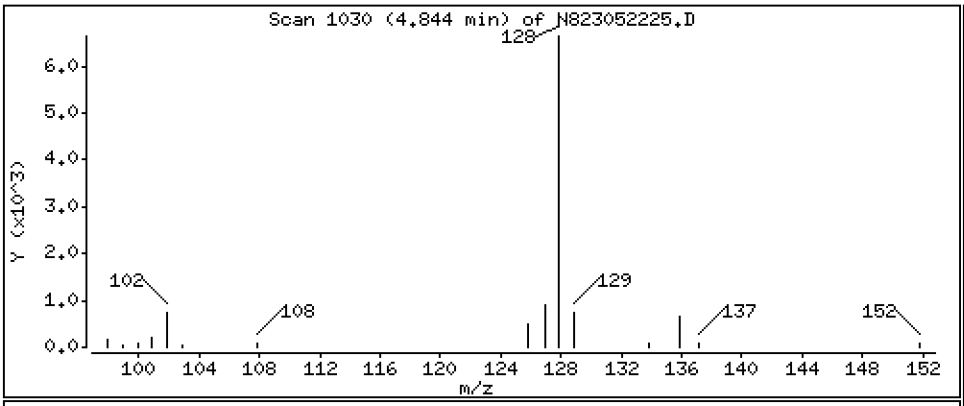
Operator: JZ

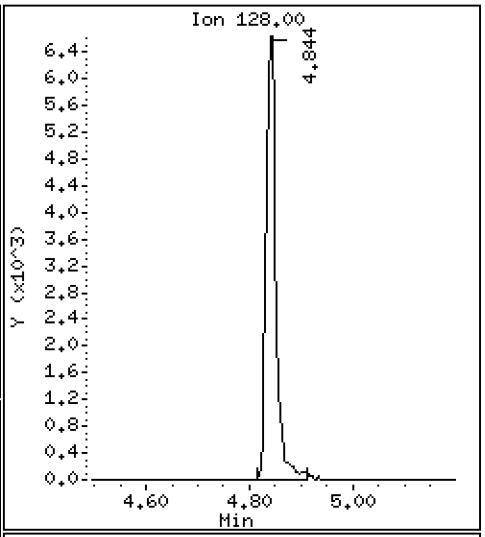
Column phase: Rxi-17sil

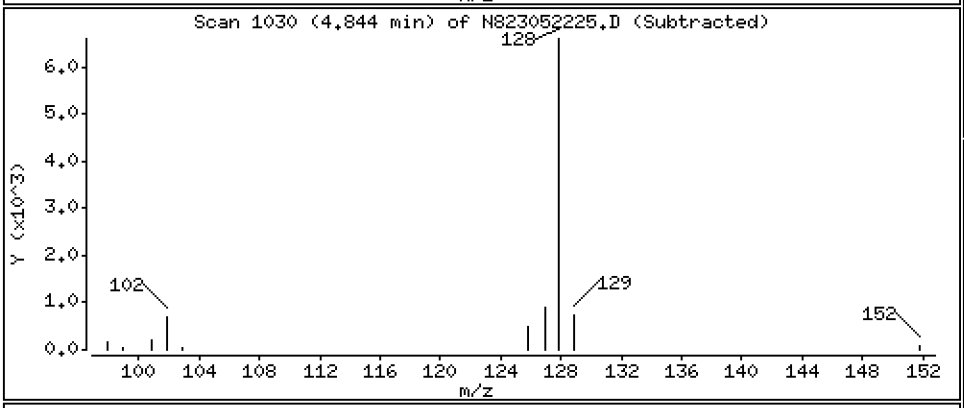
Column diameter: 0.25

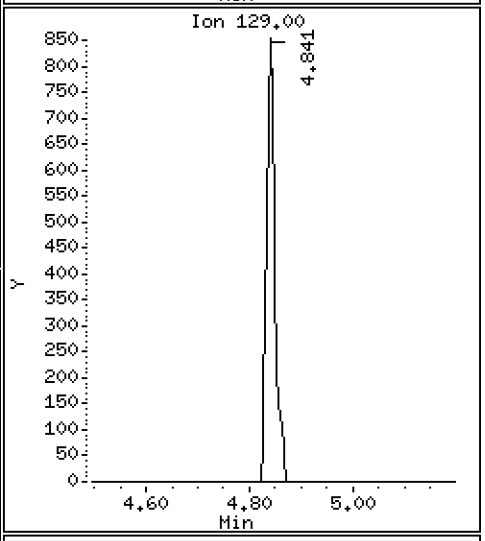
2 Naphthalene

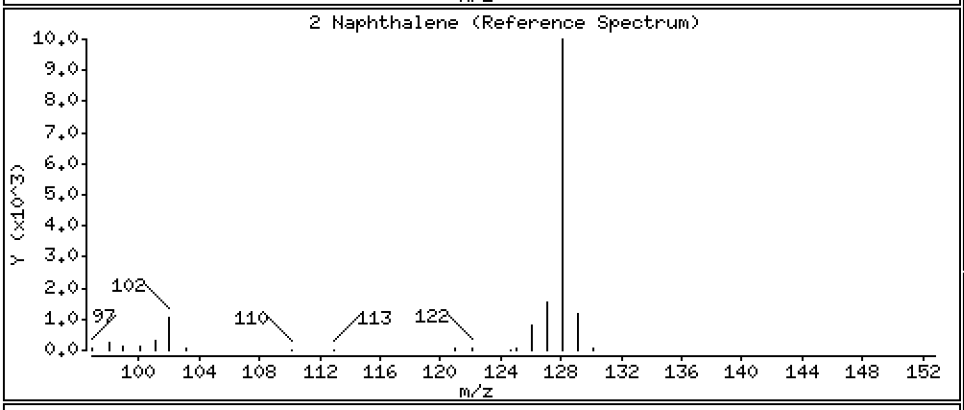
Concentration: 2.837 ug/mL

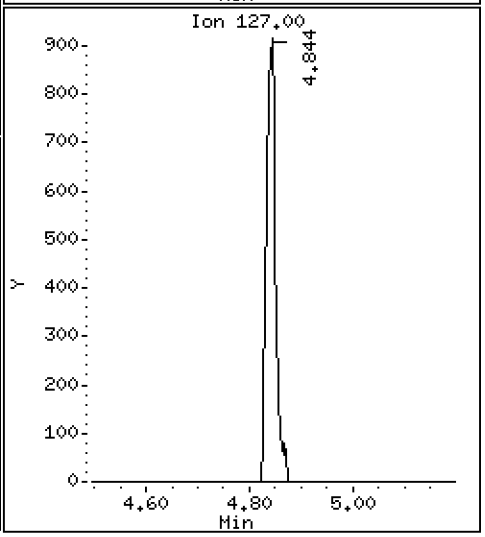


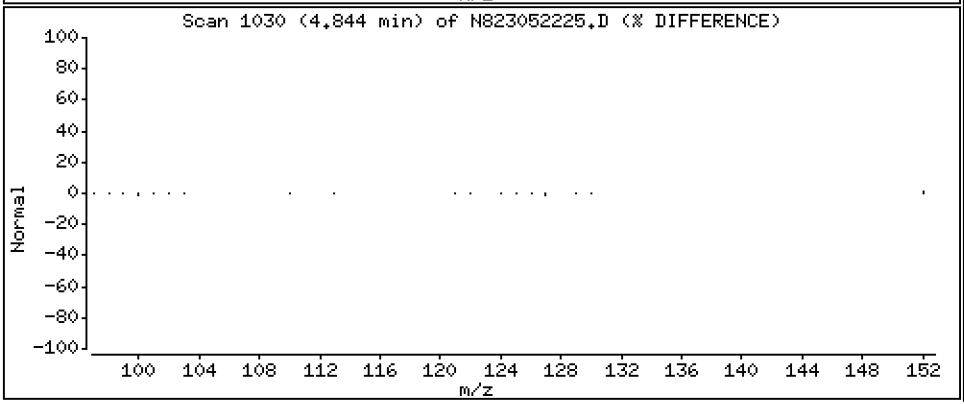












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

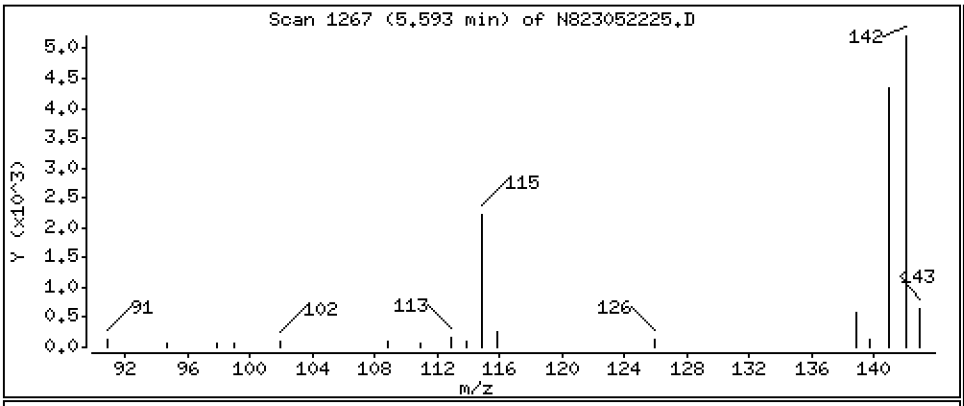
Operator: JZ

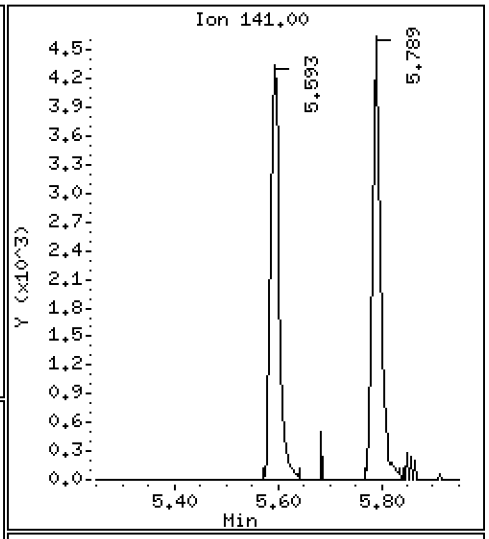
Column phase: Rxi-17sil

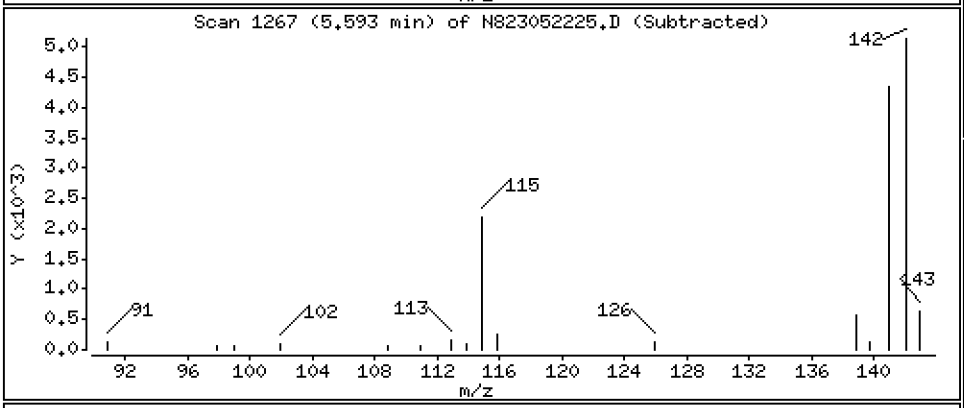
Column diameter: 0.25

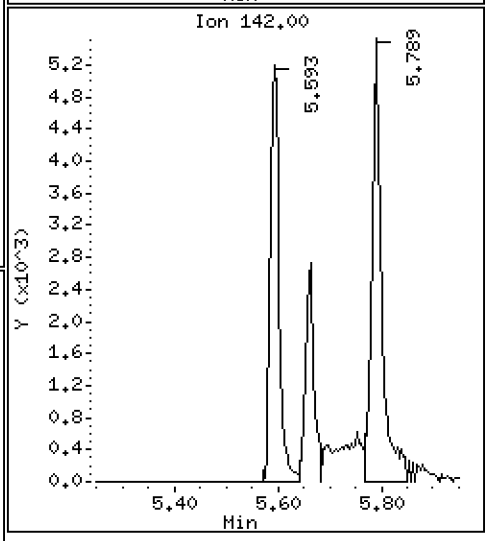
4 2-Methylnaphthalene

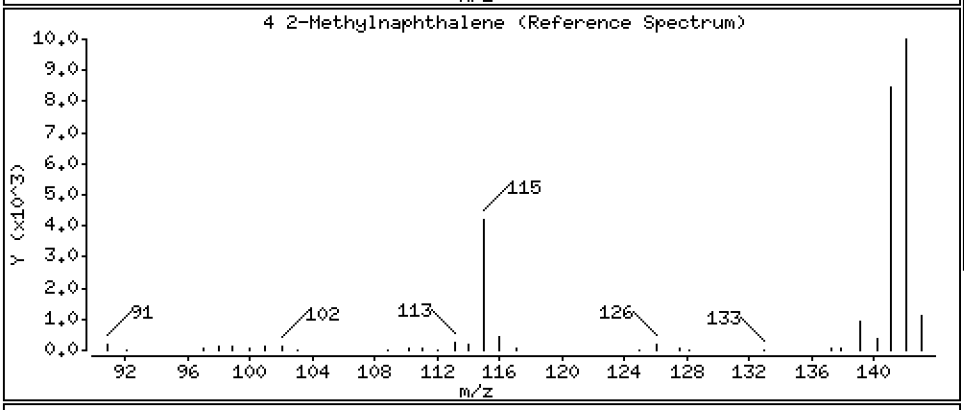
Concentration: 2.877 ug/mL

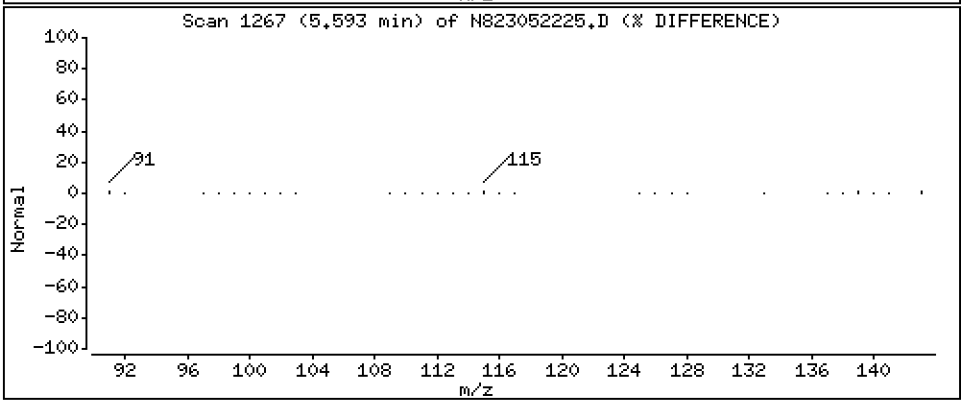












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

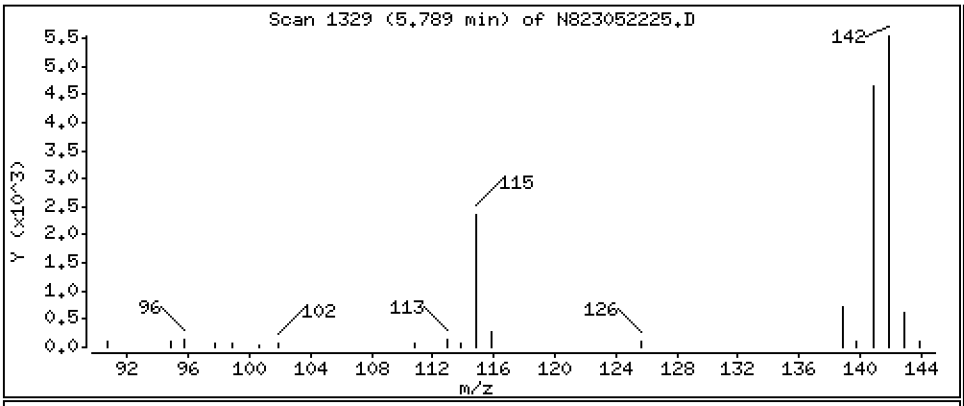
Operator: JZ

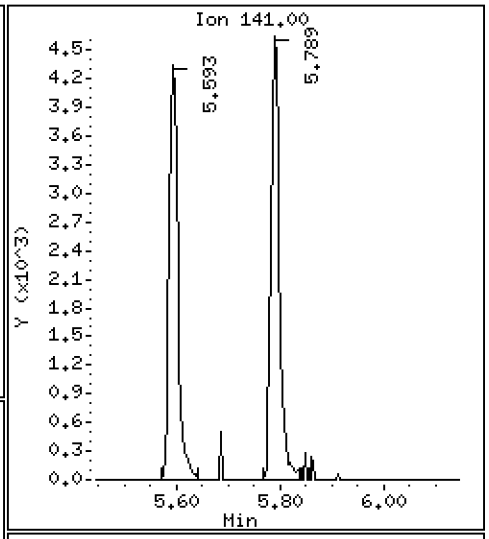
Column phase: Rxi-17sil

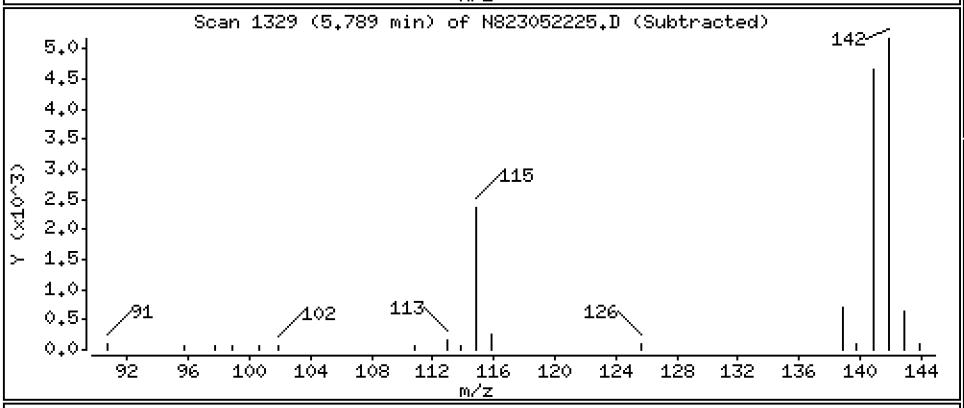
Column diameter: 0.25

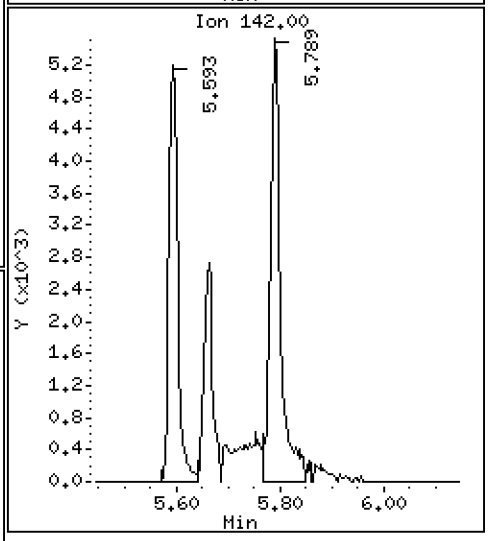
5 1-methylnaphthalene

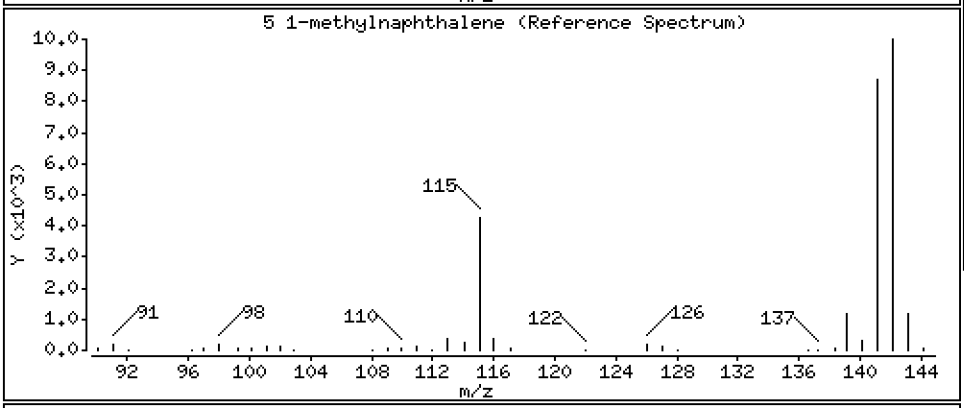
Concentration: 3.026 ug/mL

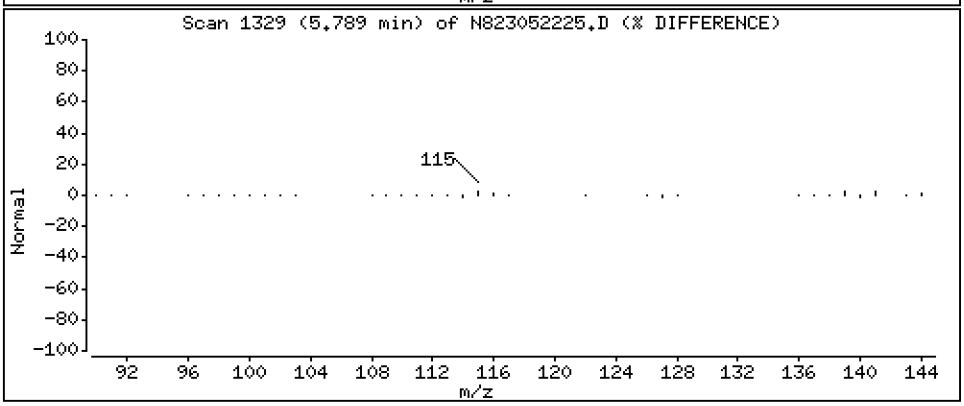












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

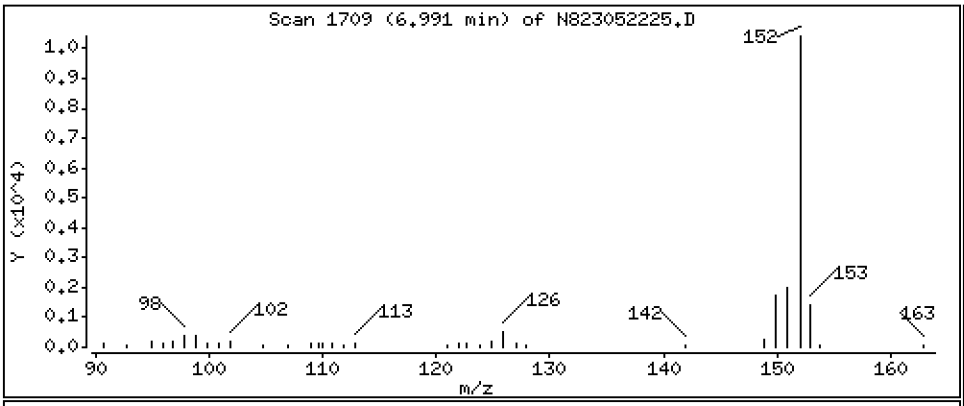
Operator: JZ

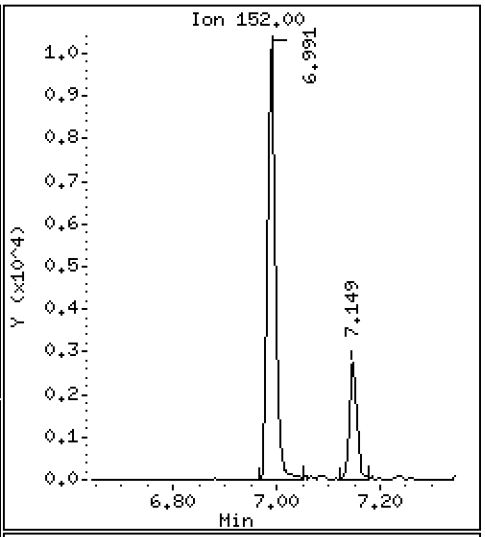
Column phase: Rxi-17sil

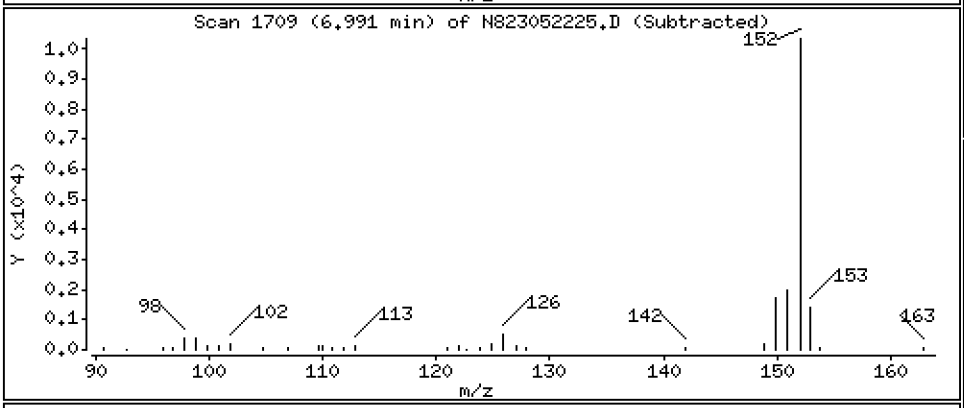
Column diameter: 0.25

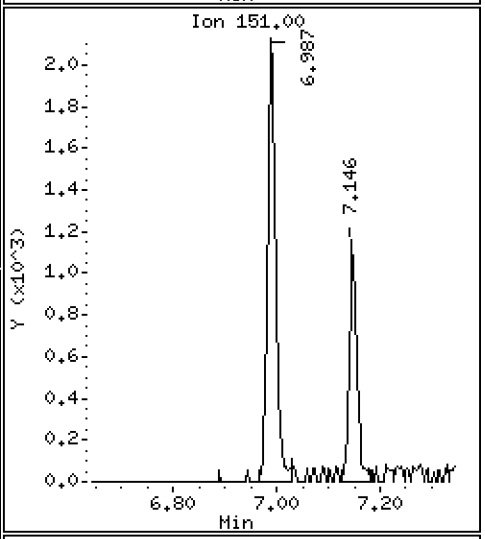
9 Acenaphthylene

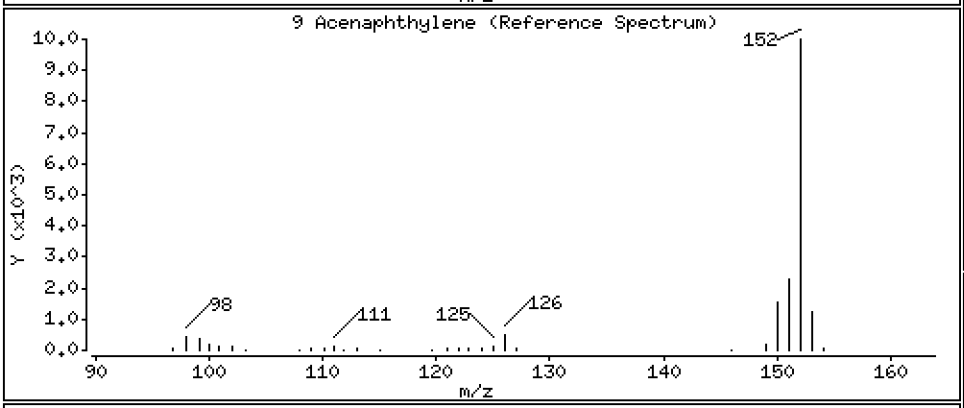
Concentration: 3.710 ug/mL

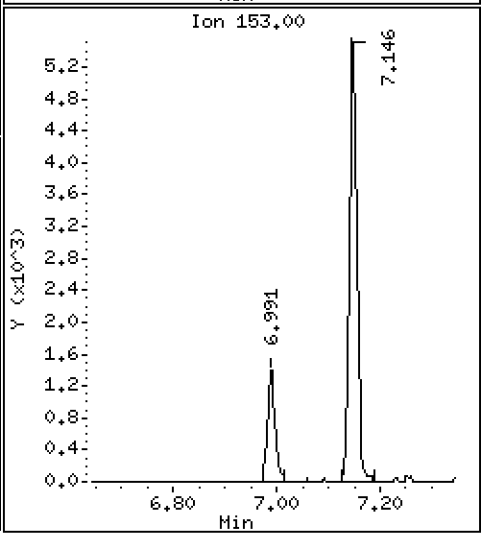


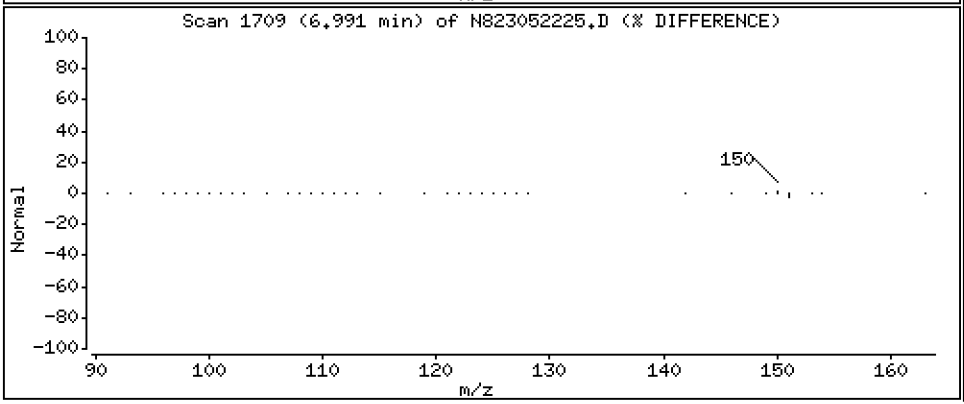












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

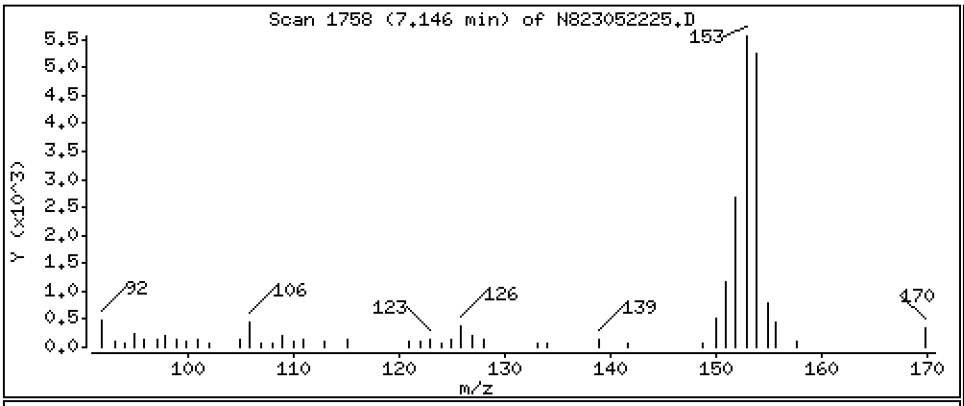
Operator: JZ

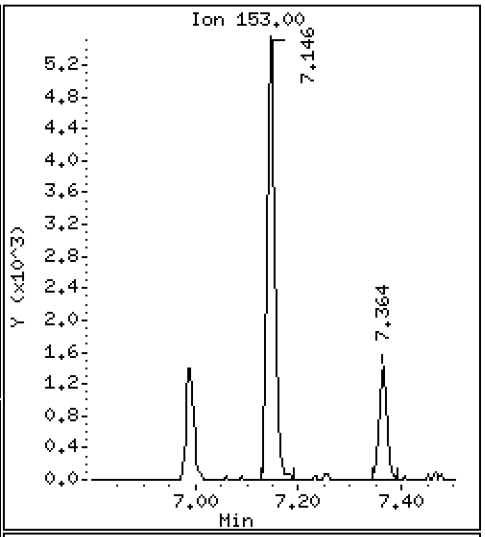
Column phase: Rxi-17sil

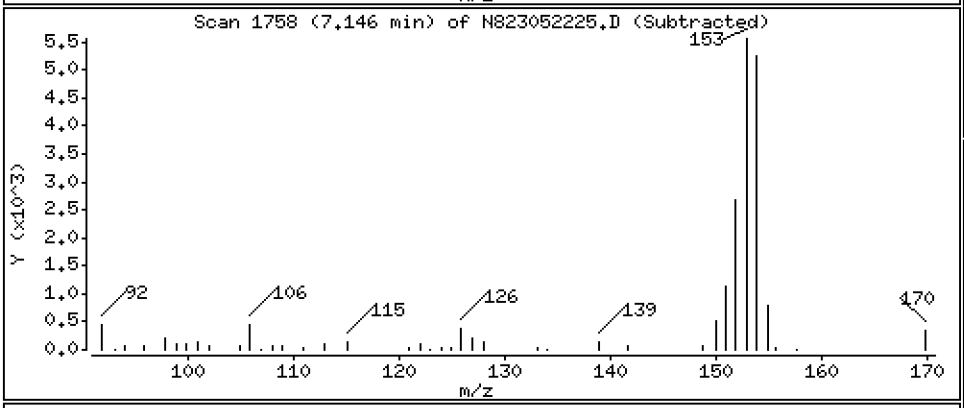
Column diameter: 0.25

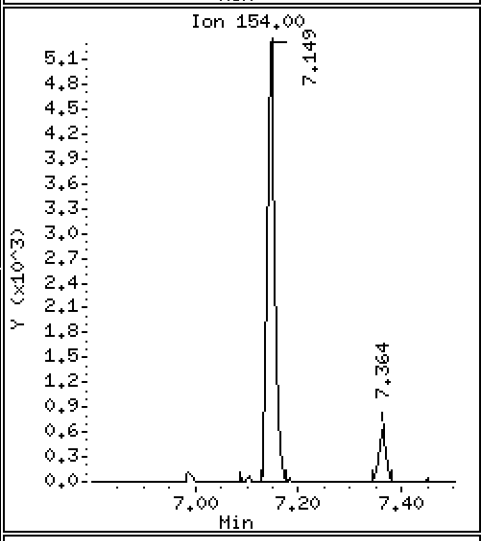
11 Acenaphthene

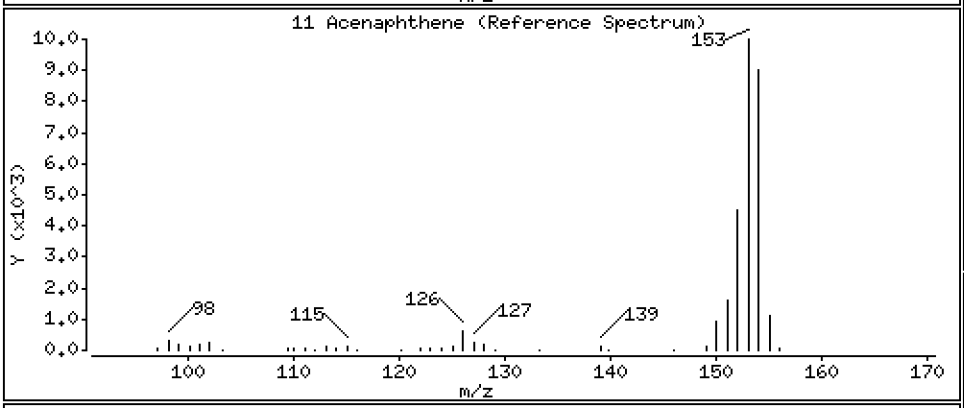
Concentration: 2.998 ug/mL

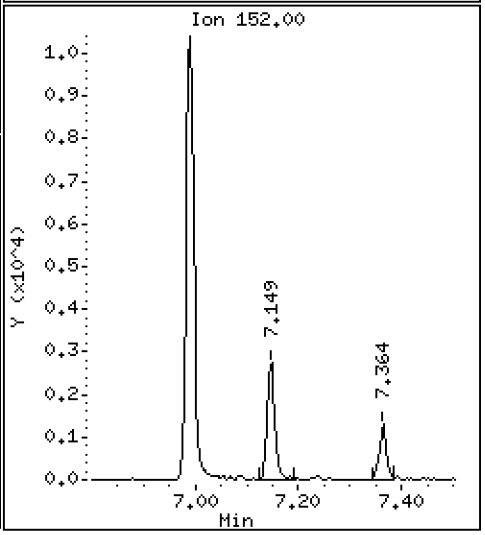


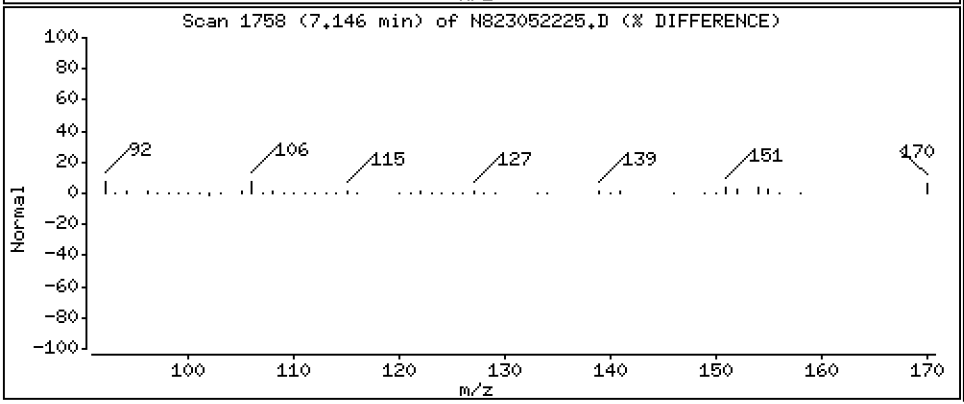












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

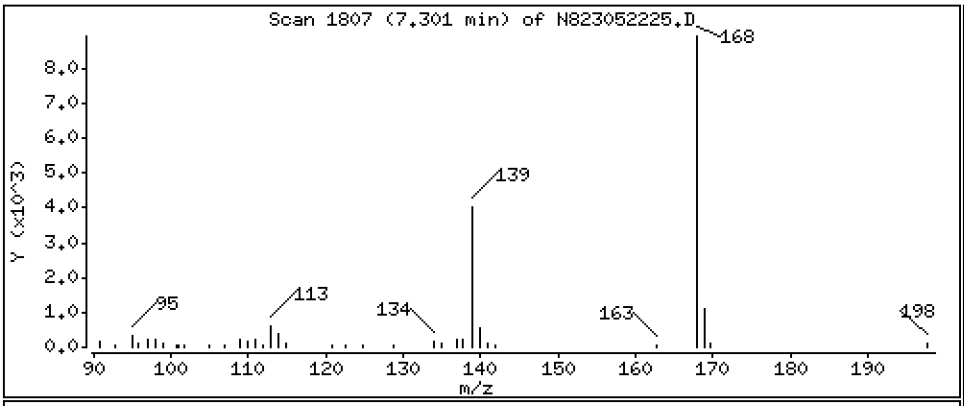
Operator: JZ

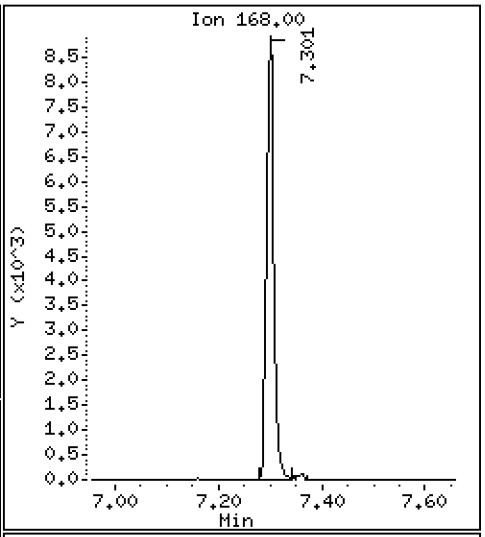
Column phase: Rxi-17sil

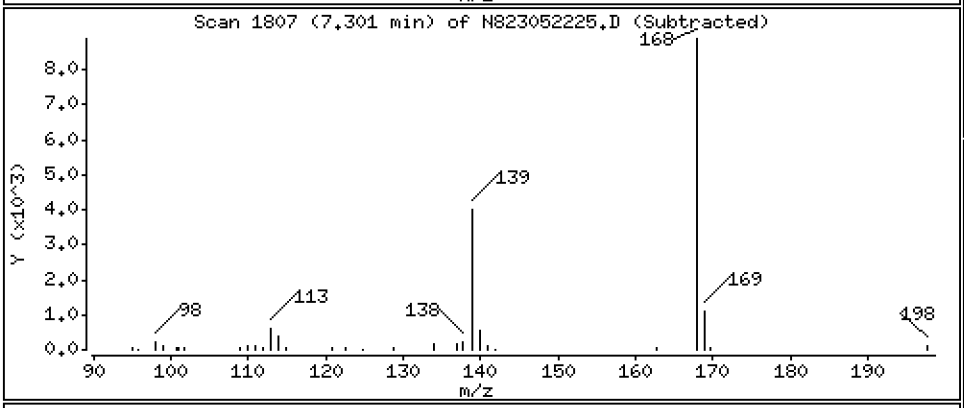
Column diameter: 0.25

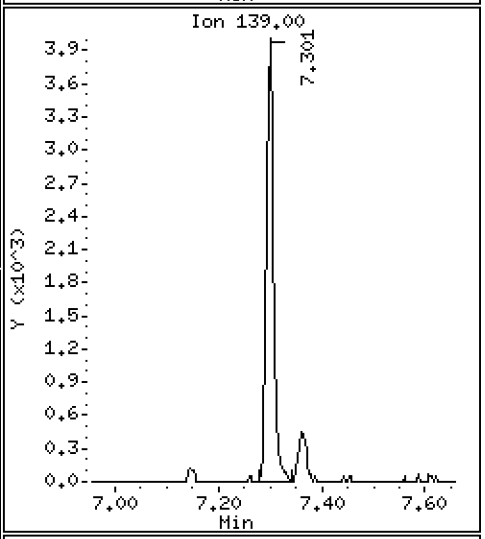
12 Dibenzofuran

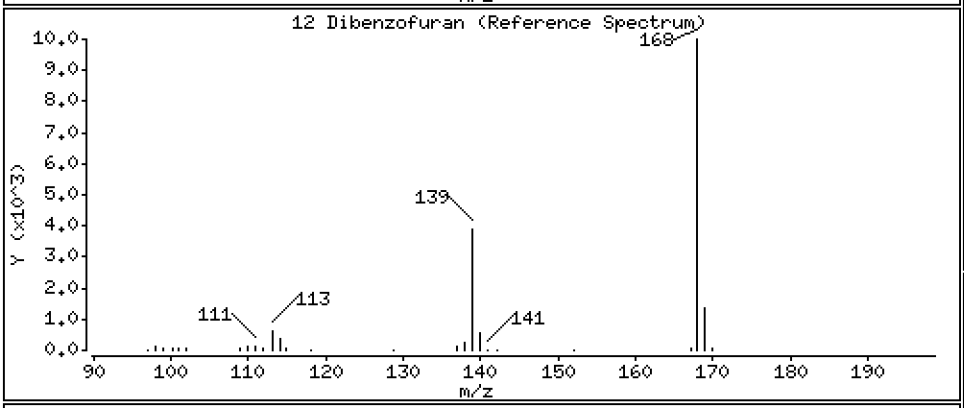
Concentration: 3.014 ug/mL

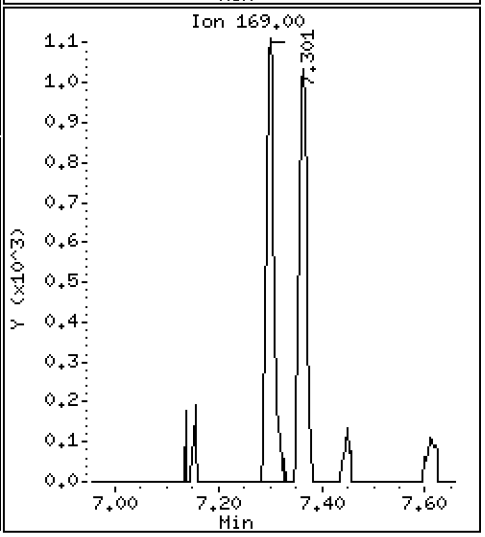


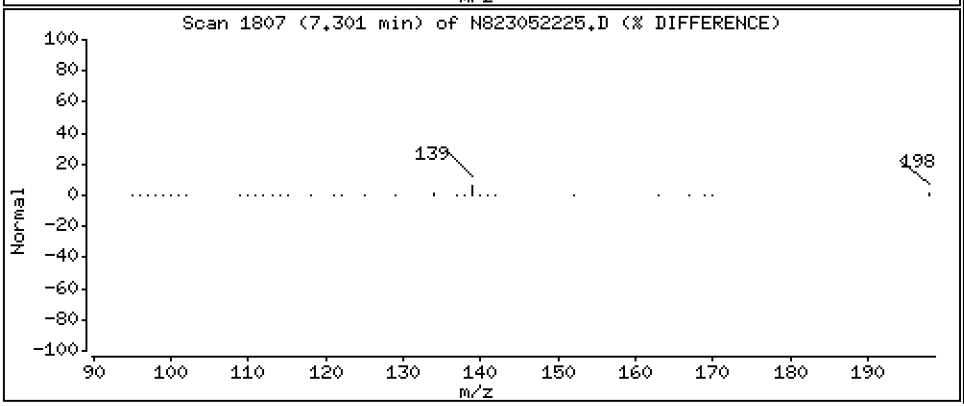












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

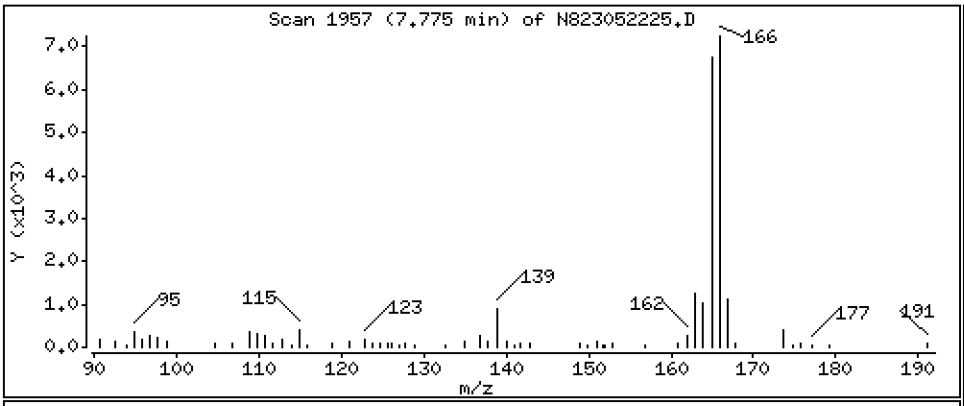
Operator: JZ

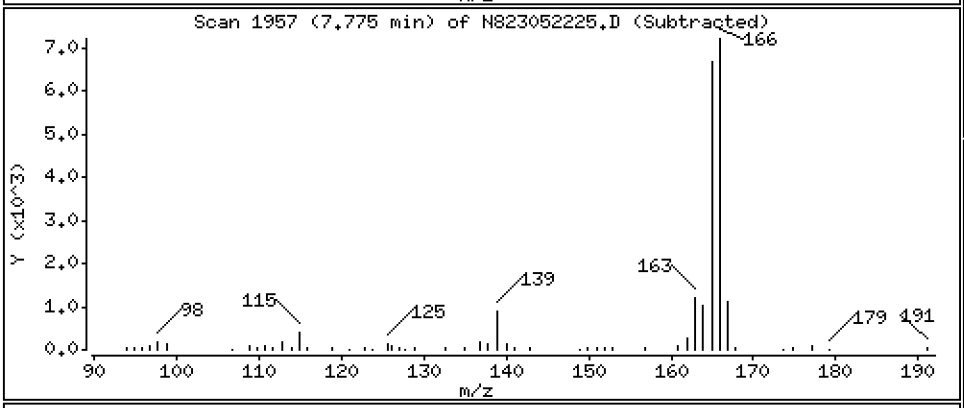
Column phase: Rxi-17sil

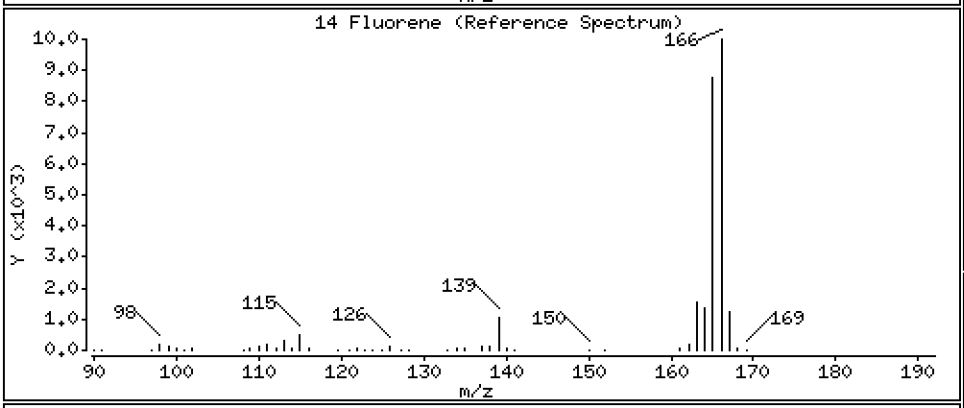
Column diameter: 0.25

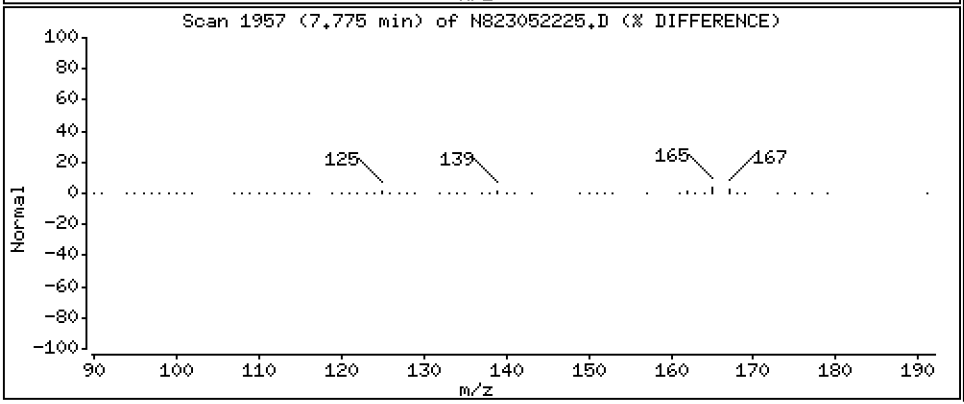
14 Fluorene

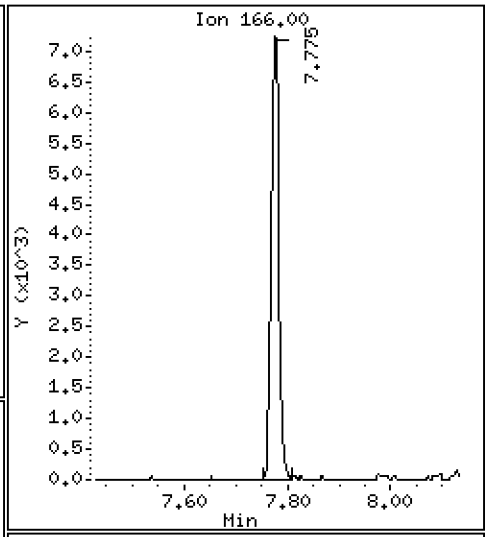
Concentration: 3.129 ug/mL

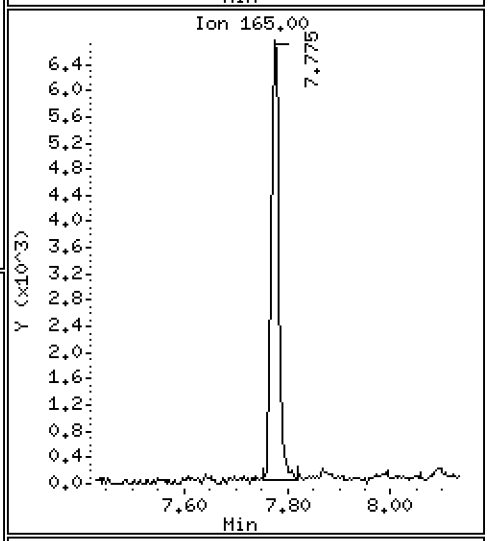


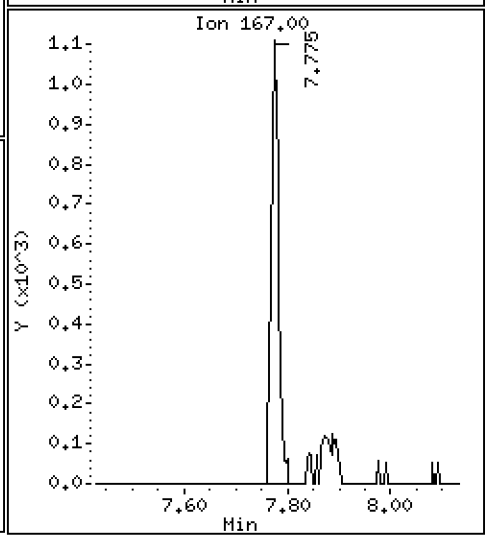












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

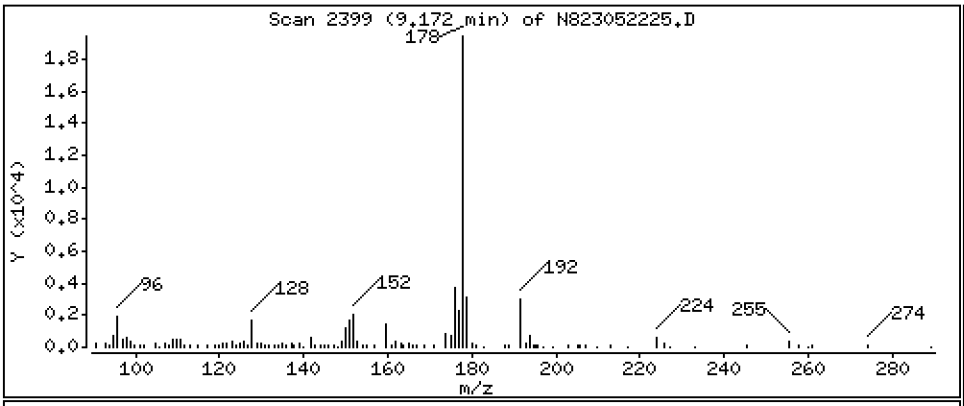
Operator: JZ

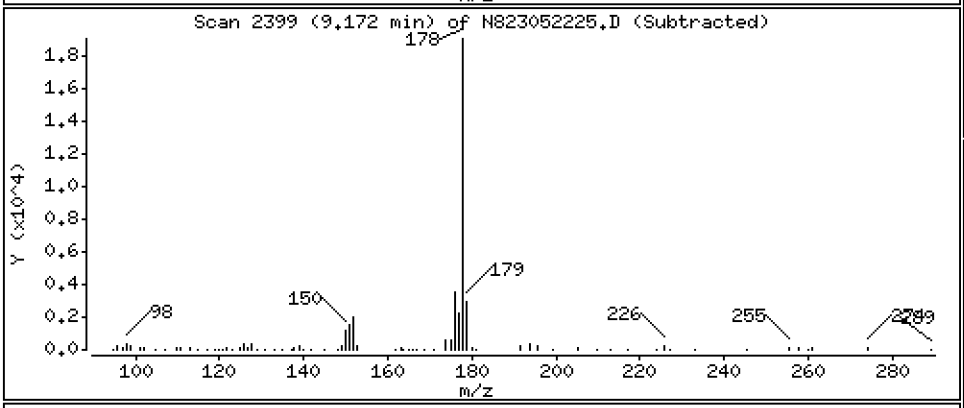
Column phase: Rxi-17sil

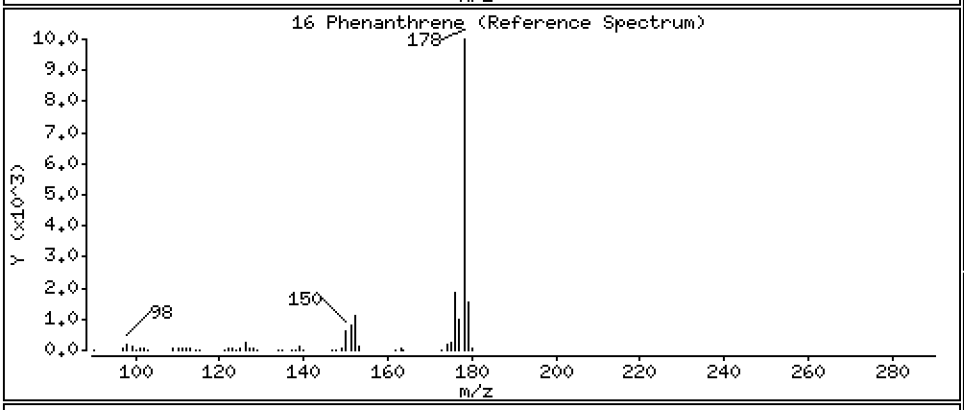
Column diameter: 0.25

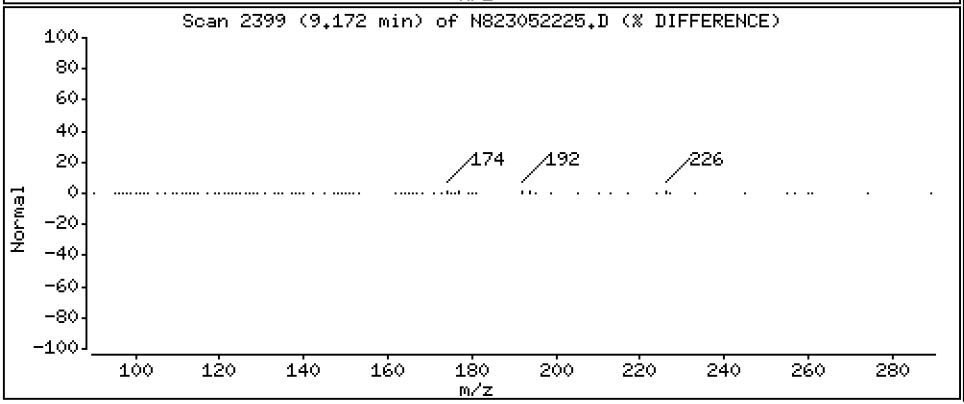
16 Phenanthrene

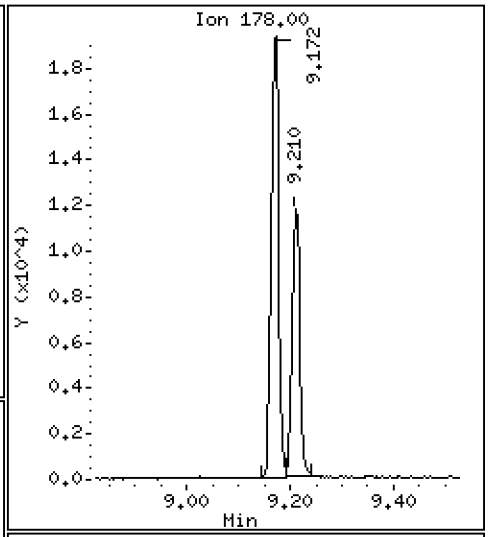
Concentration: 5.902 ug/mL

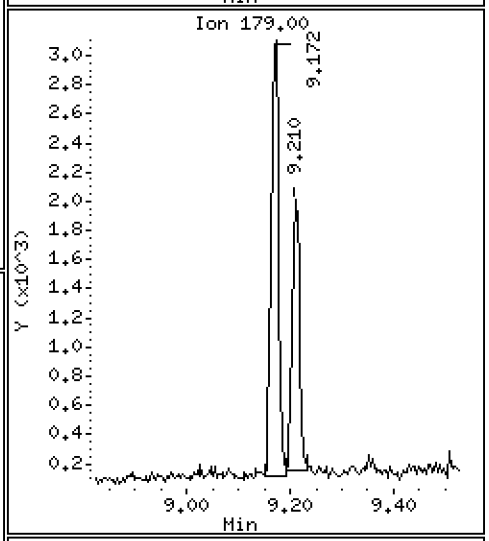


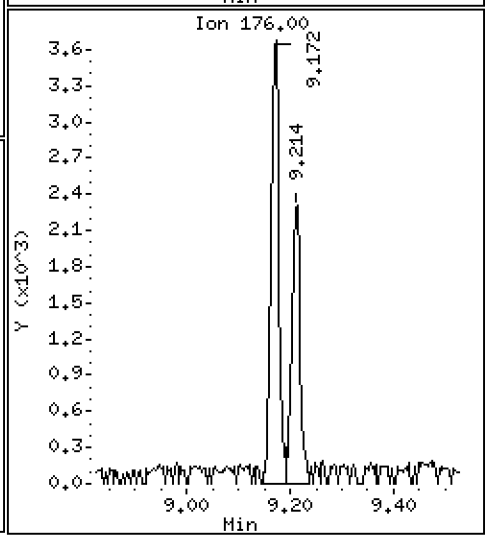












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

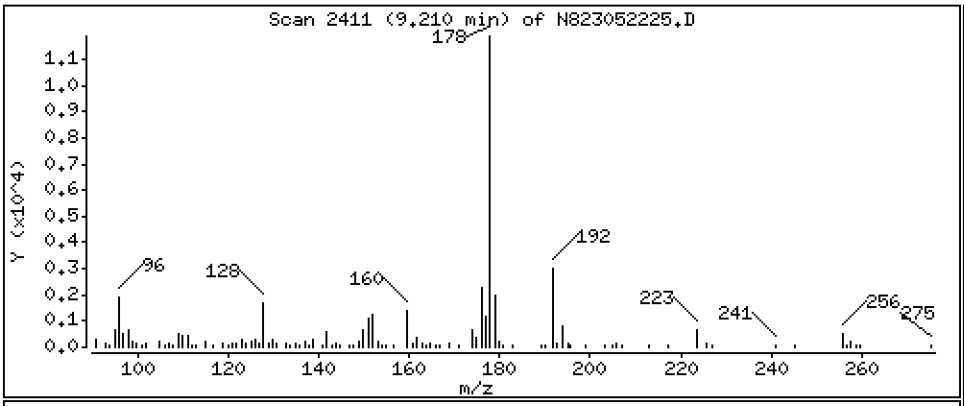
Operator: JZ

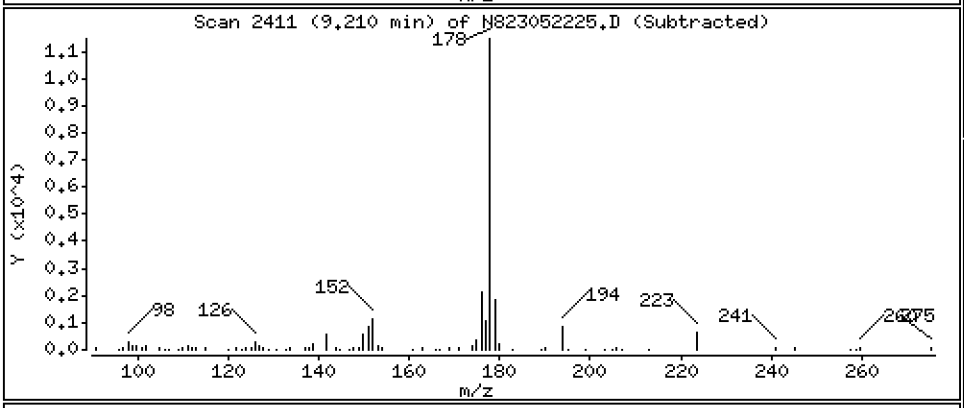
Column phase: Rxi-17sil

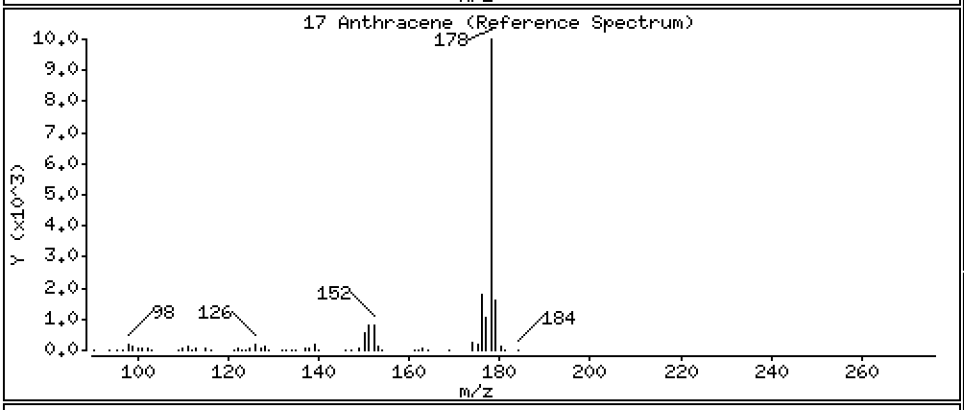
Column diameter: 0.25

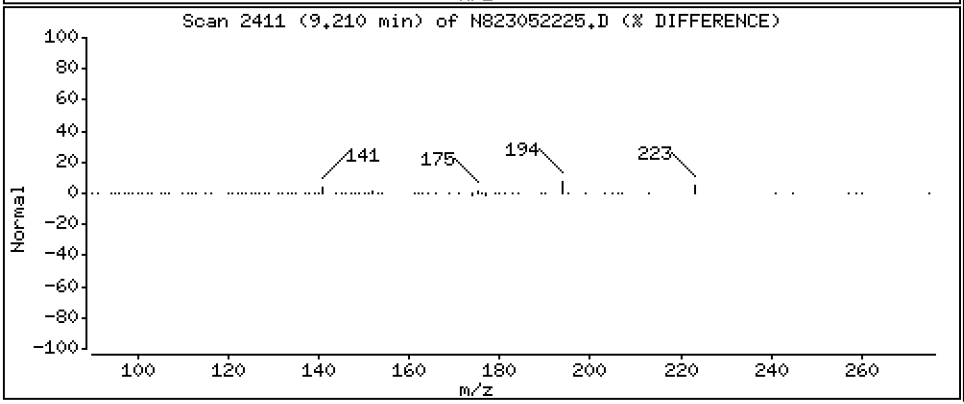
17 Anthracene

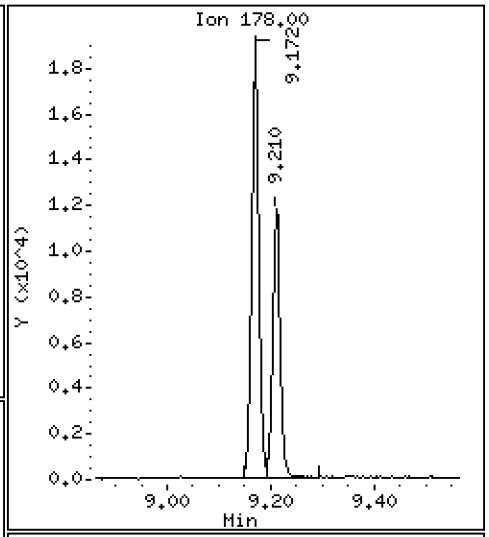
Concentration: 4.003 ug/mL

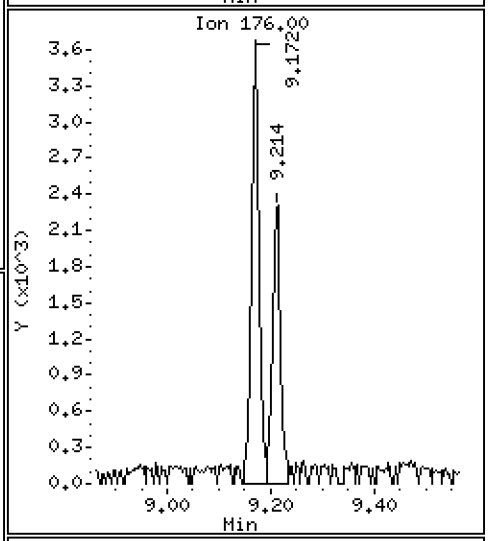


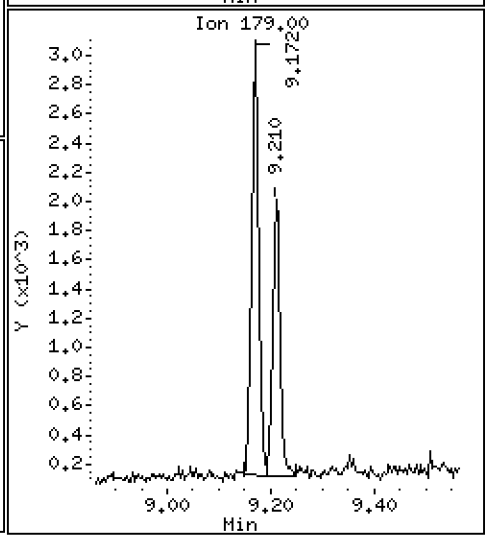












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

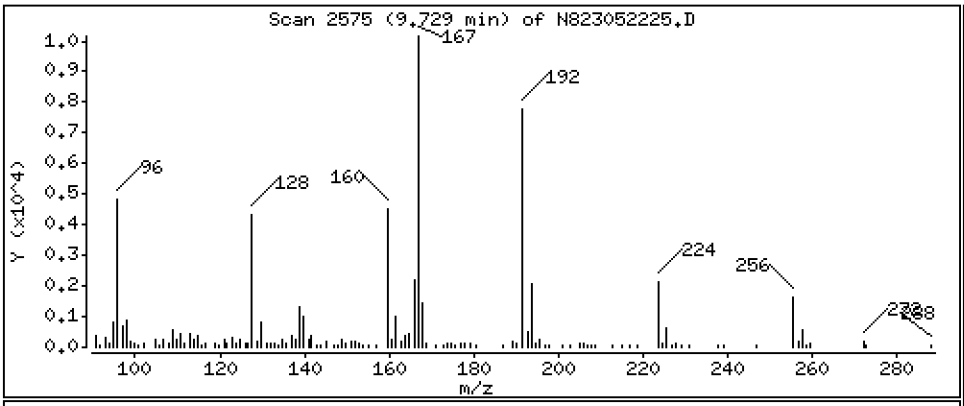
Operator: JZ

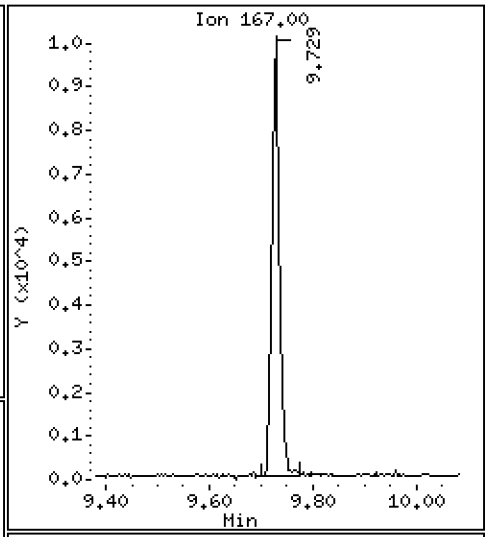
Column phase: Rxi-17sil

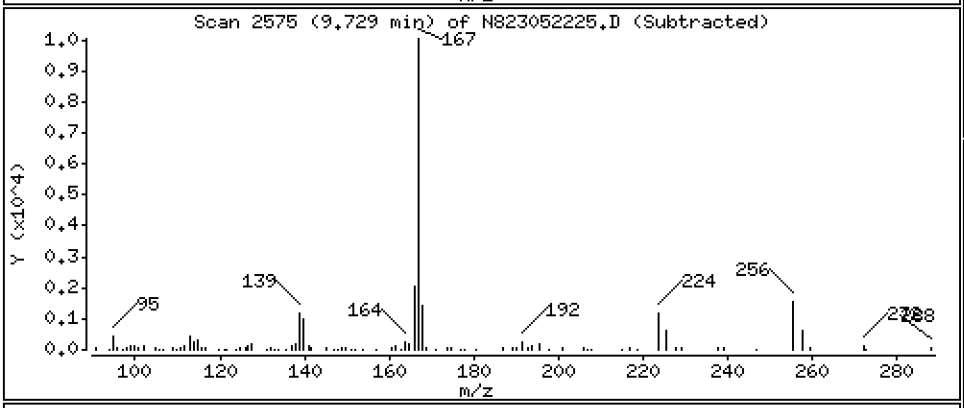
Column diameter: 0.25

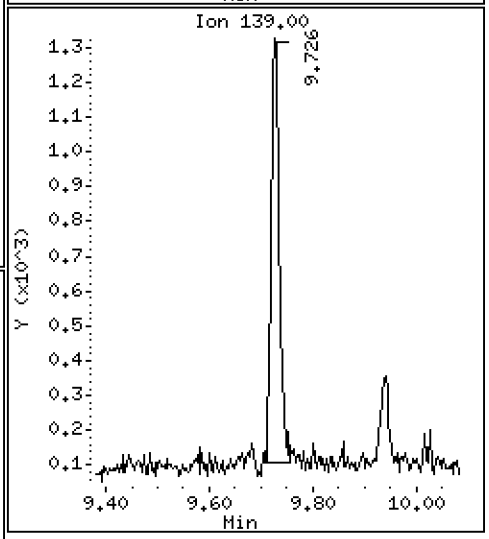
19 Carbazole

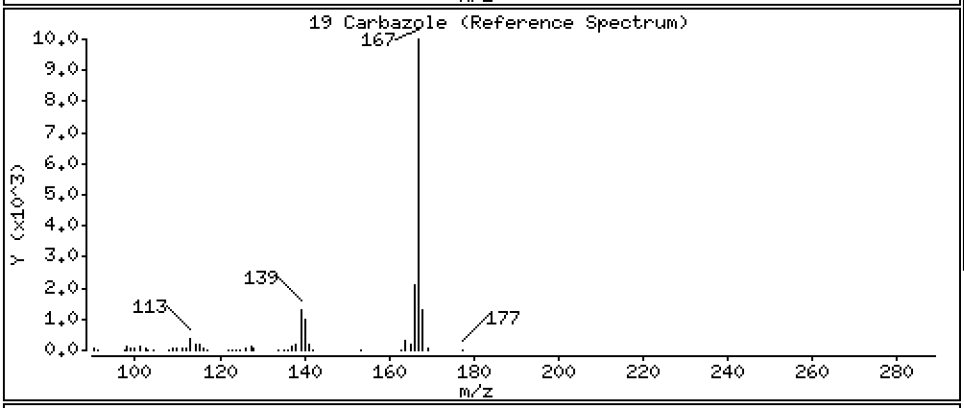
Concentration: 3.642 ug/mL

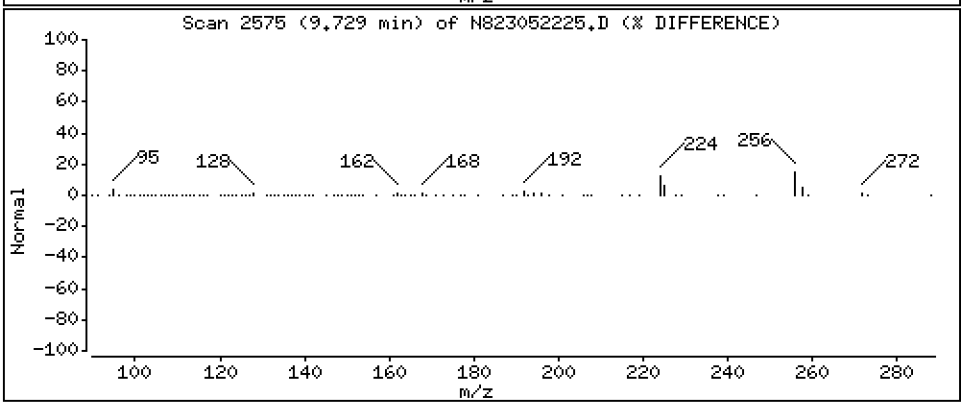












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

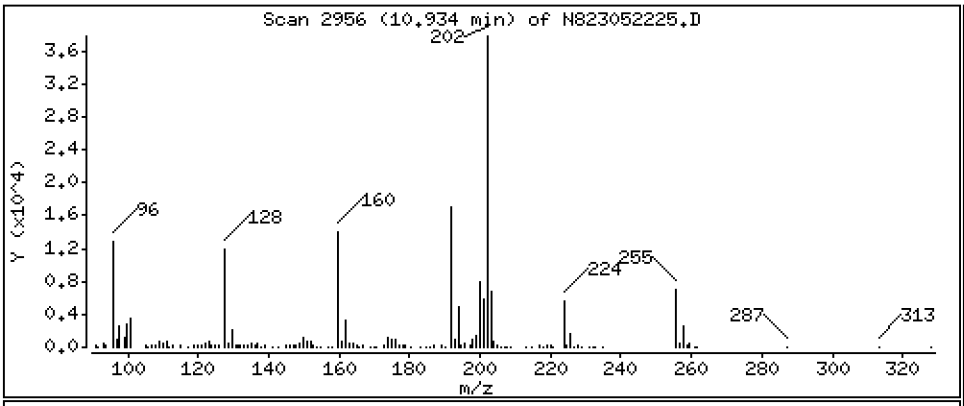
Operator: JZ

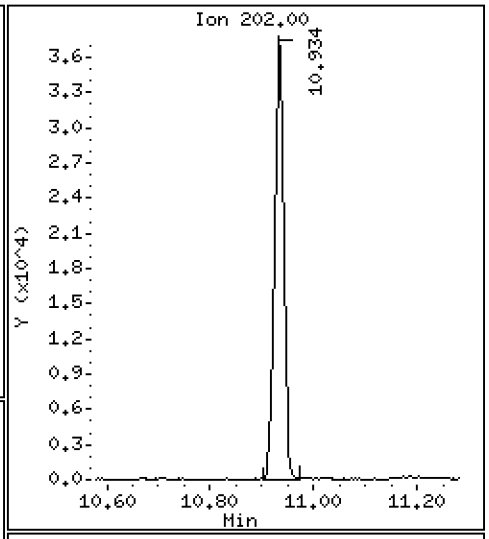
Column phase: Rxi-17sil

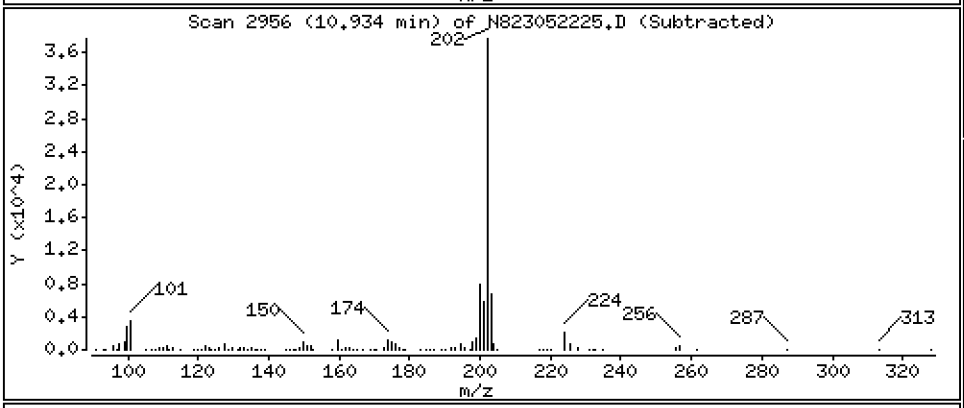
Column diameter: 0.25

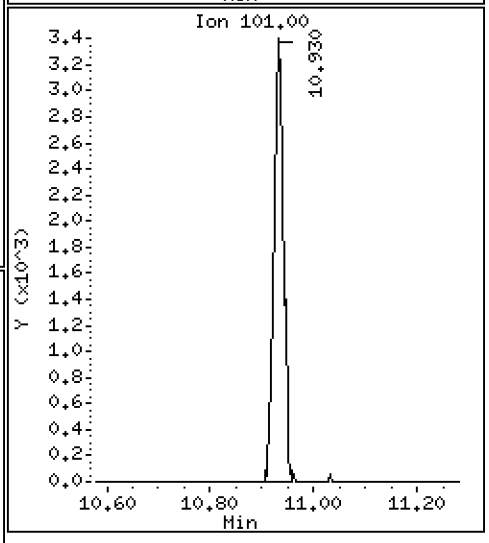
22 Fluoranthene

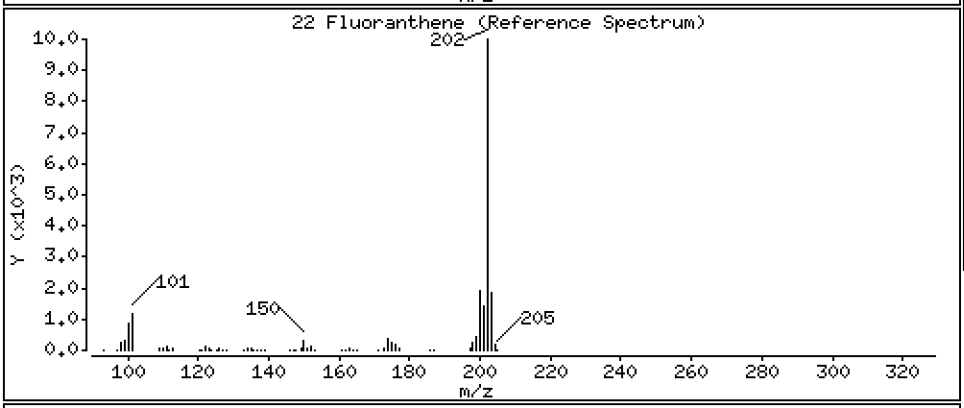
Concentration: 12.69 ug/mL

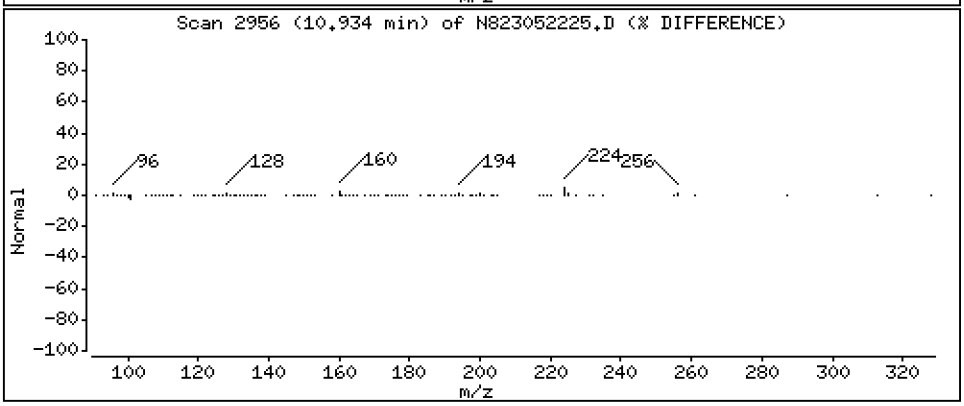












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

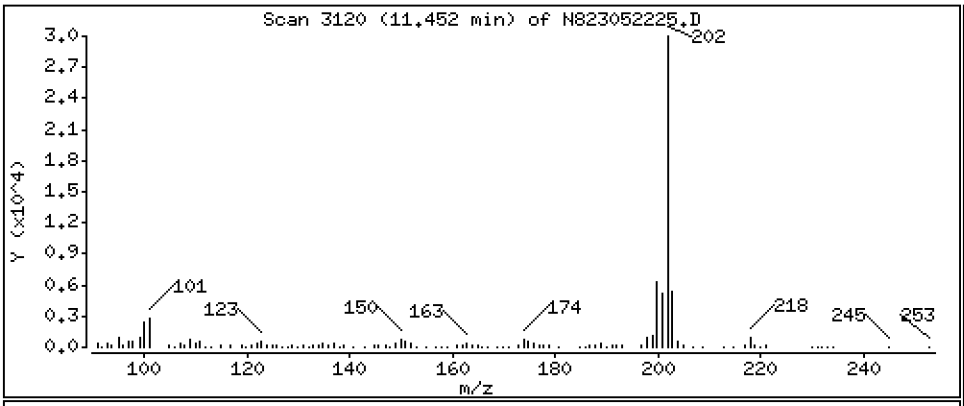
Operator: JZ

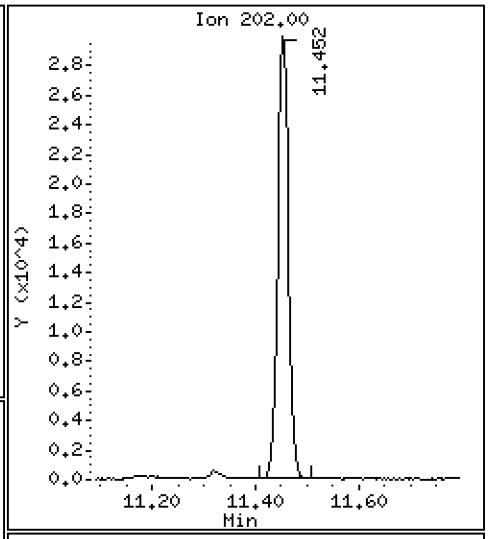
Column phase: Rxi-17sil

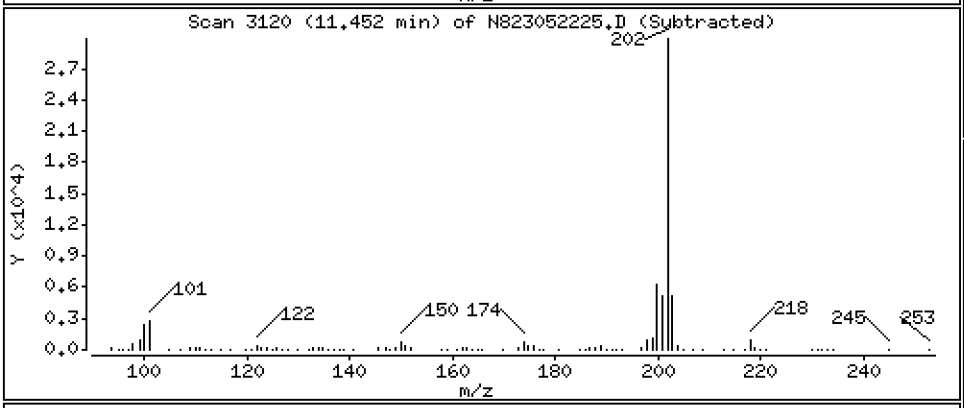
Column diameter: 0.25

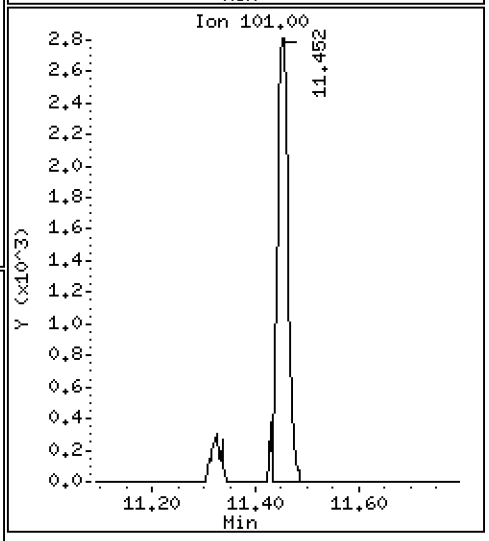
23 Pyrene

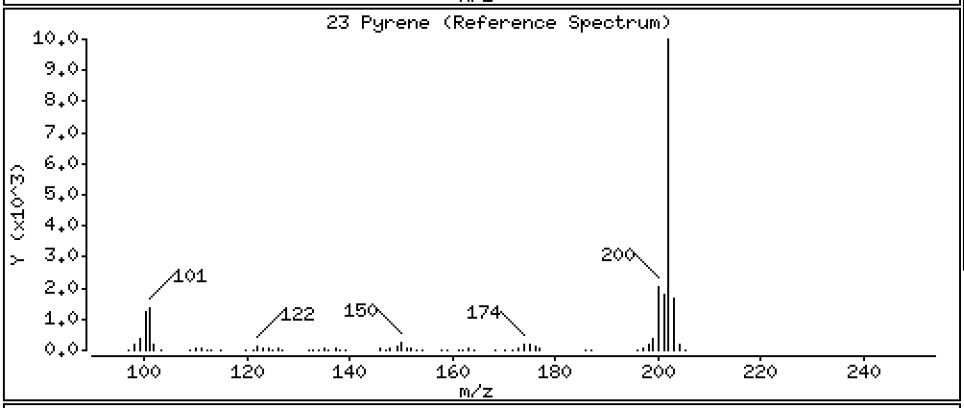
Concentration: 22.95 ug/mL

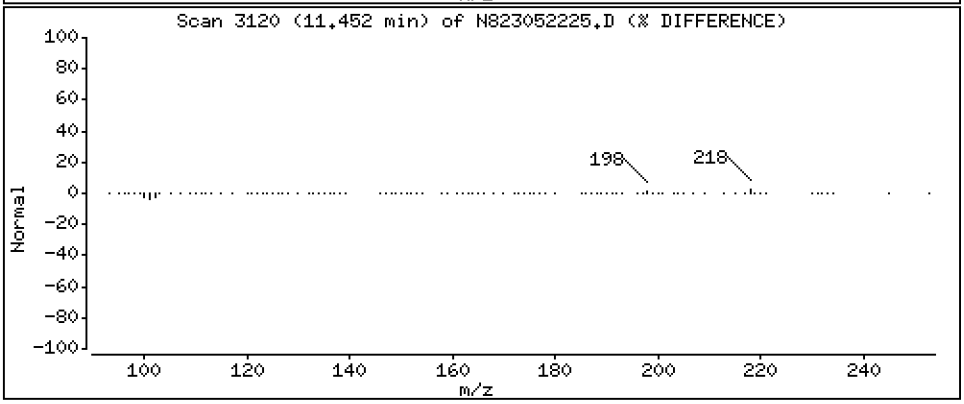












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

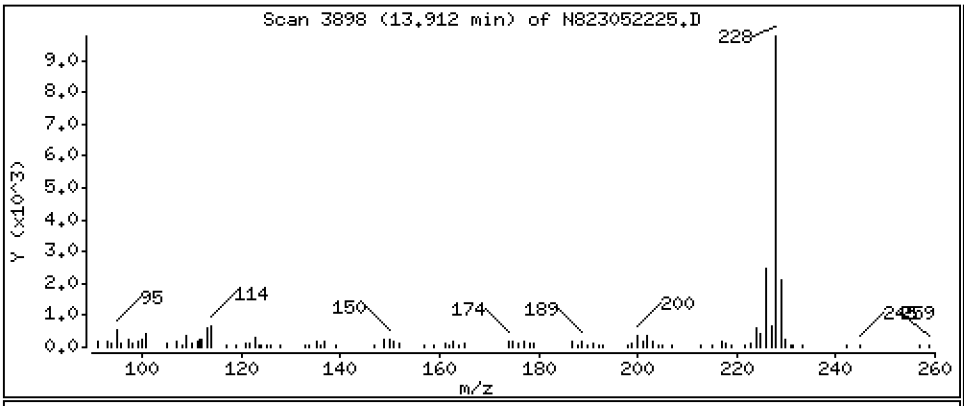
Operator: JZ

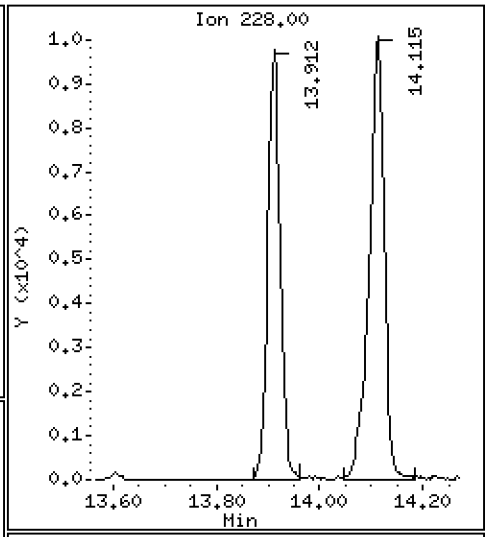
Column phase: Rxi-17sil

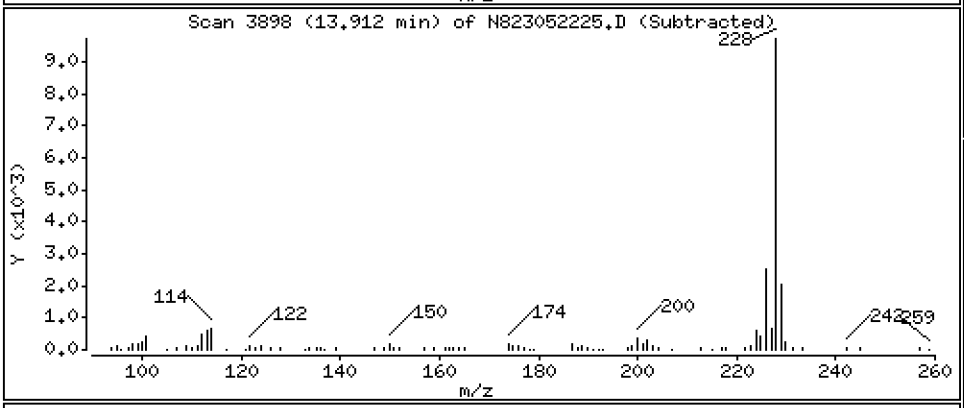
Column diameter: 0.25

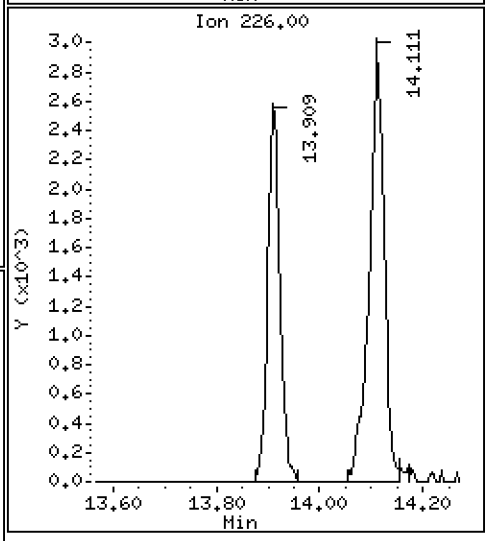
24 Benzo(a)anthracene

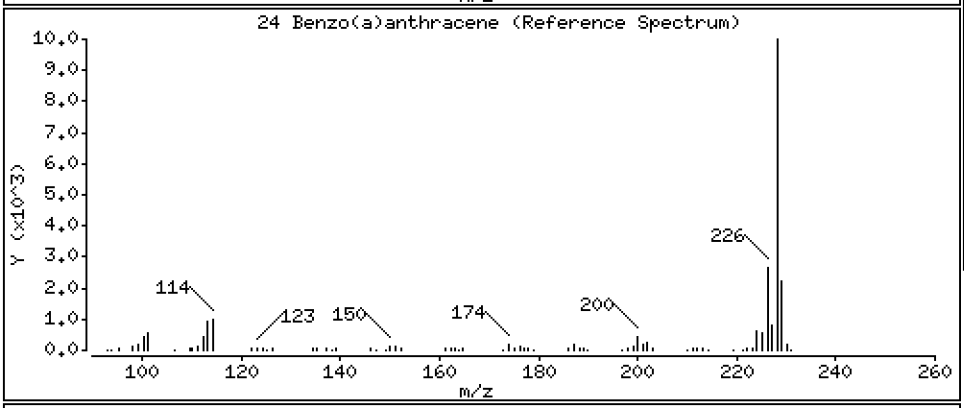
Concentration: 8.426 ug/mL

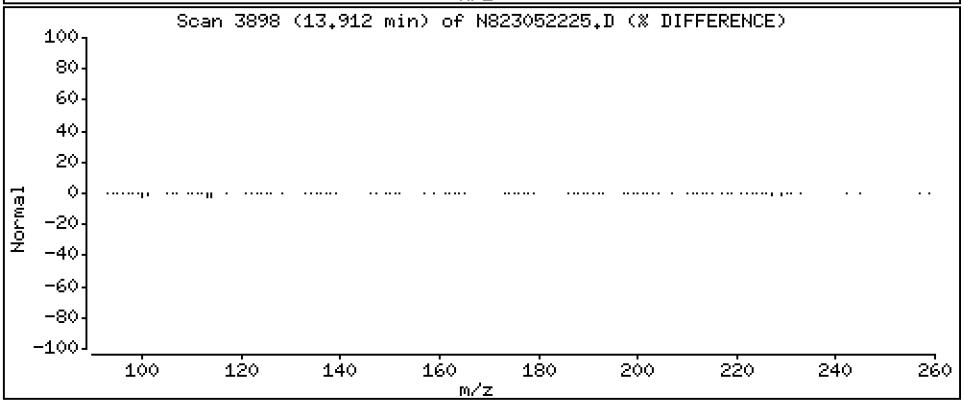












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

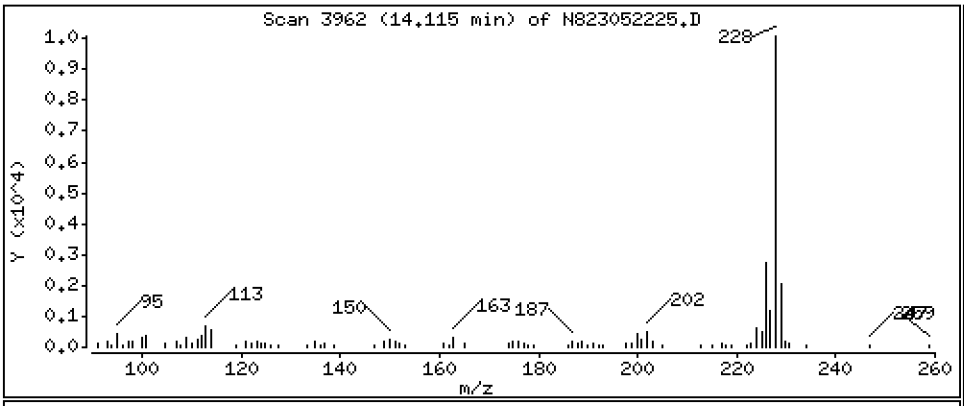
Operator: JZ

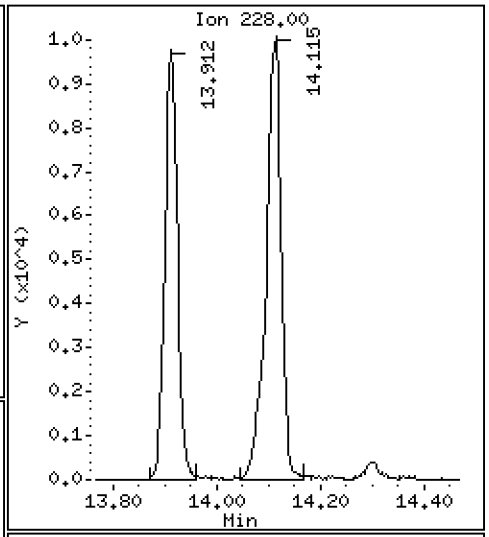
Column phase: Rxi-17sil

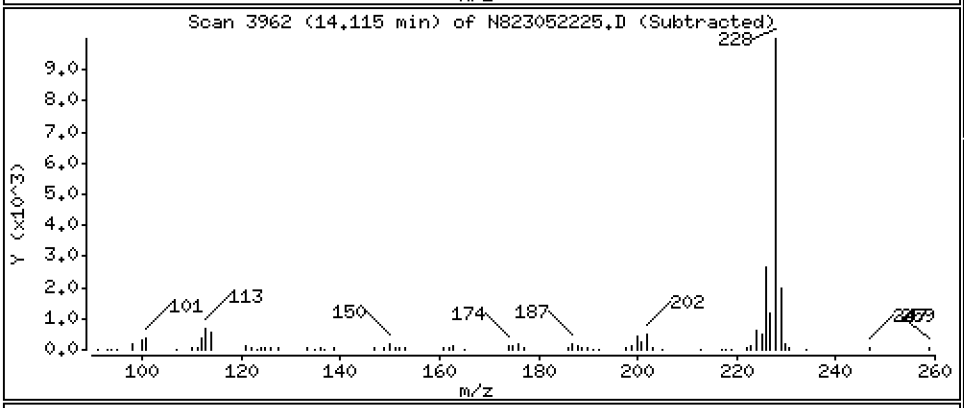
Column diameter: 0.25

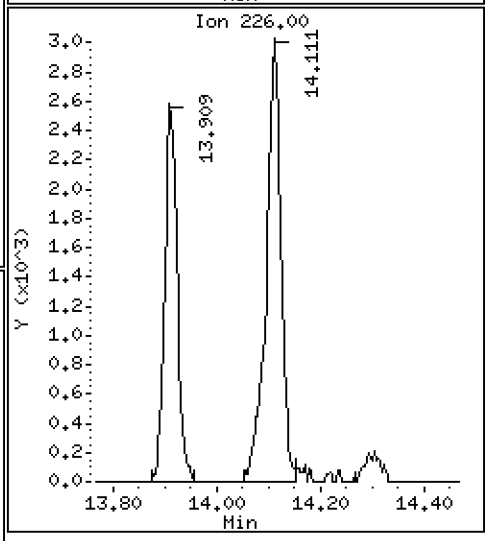
27 Chrysene

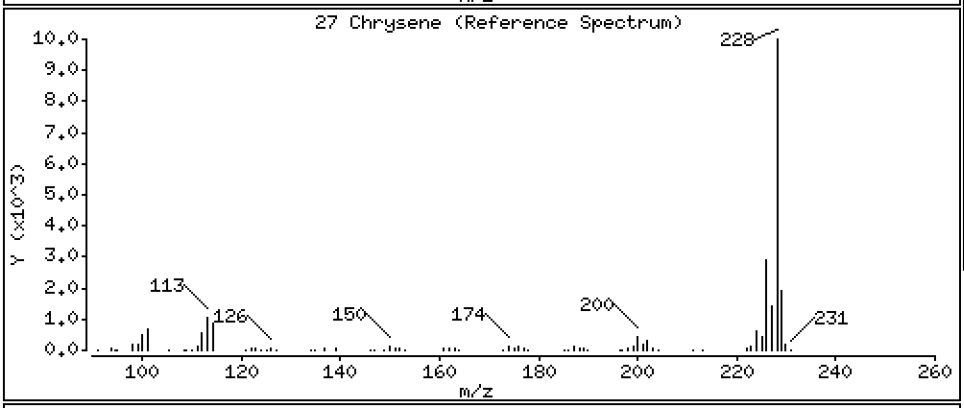
Concentration: 10.60 ug/mL

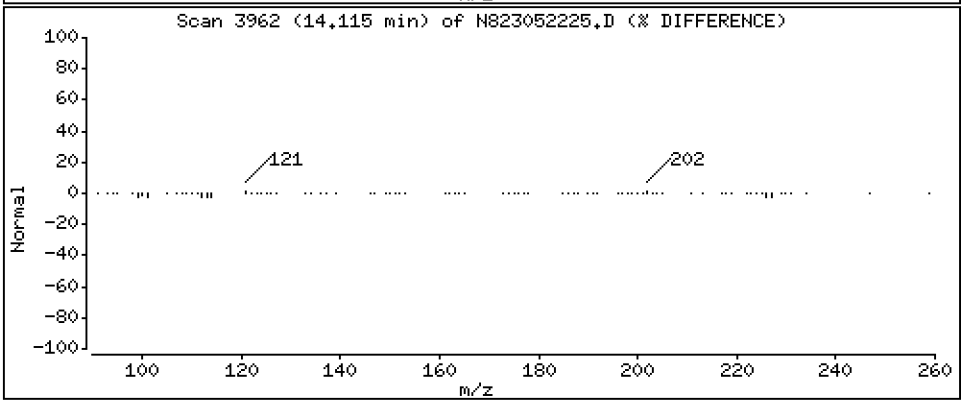












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

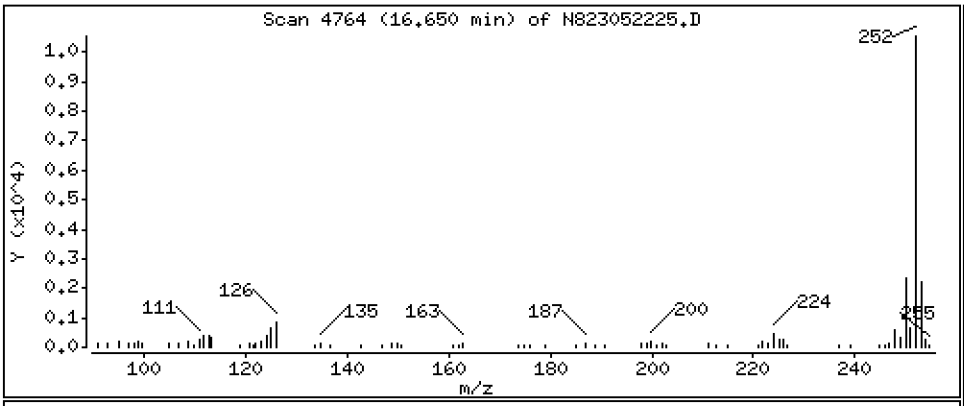
Operator: JZ

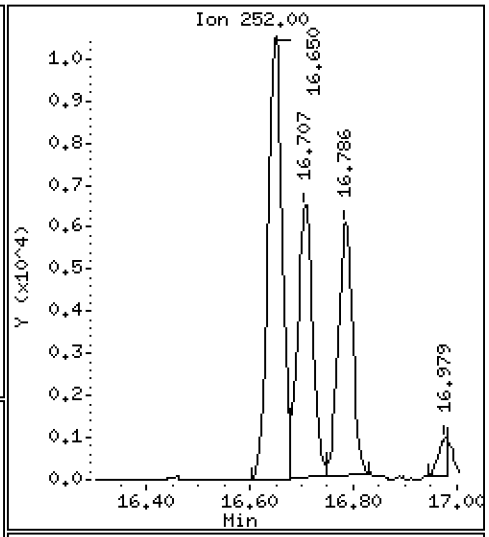
Column phase: Rxi-17sil

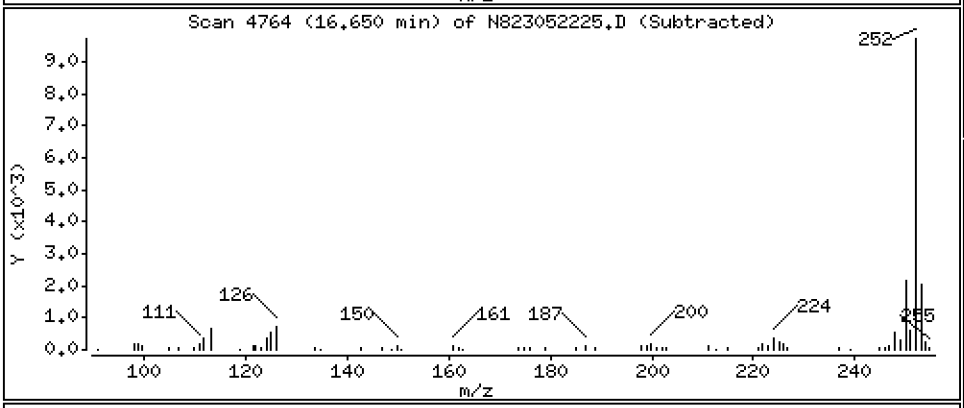
Column diameter: 0.25

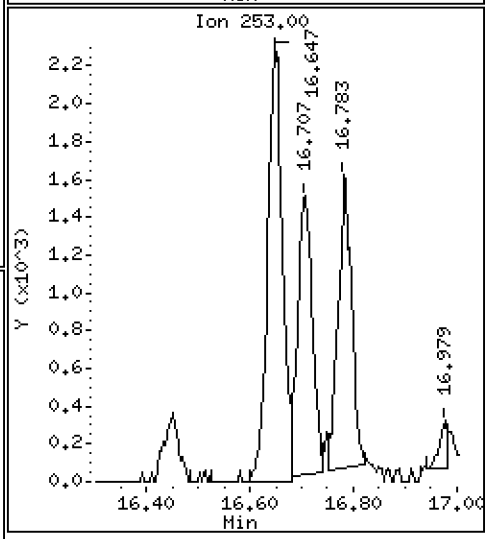
28 Benzo(b)fluoranthene

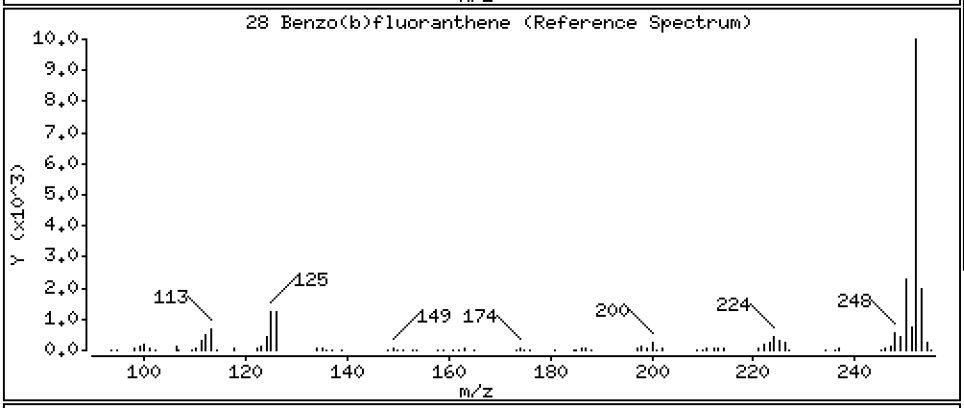
Concentration: 8.819 ug/mL

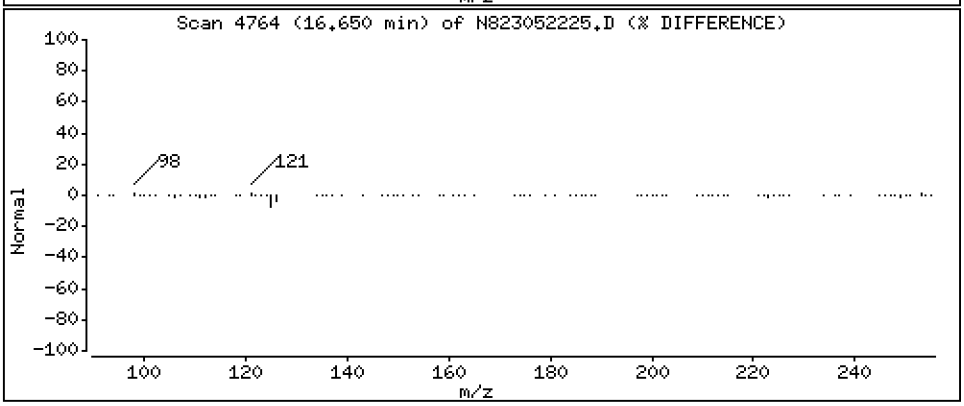












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

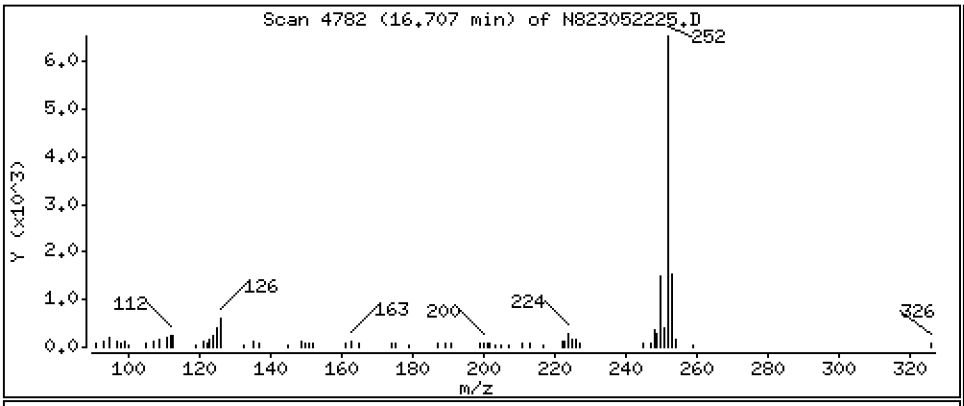
Operator: JZ

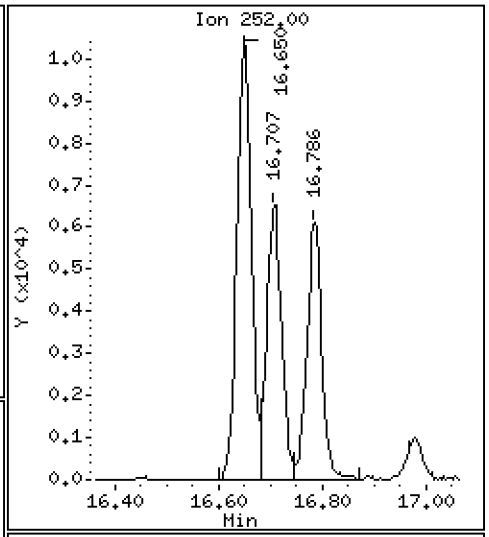
Column phase: Rxi-17sil

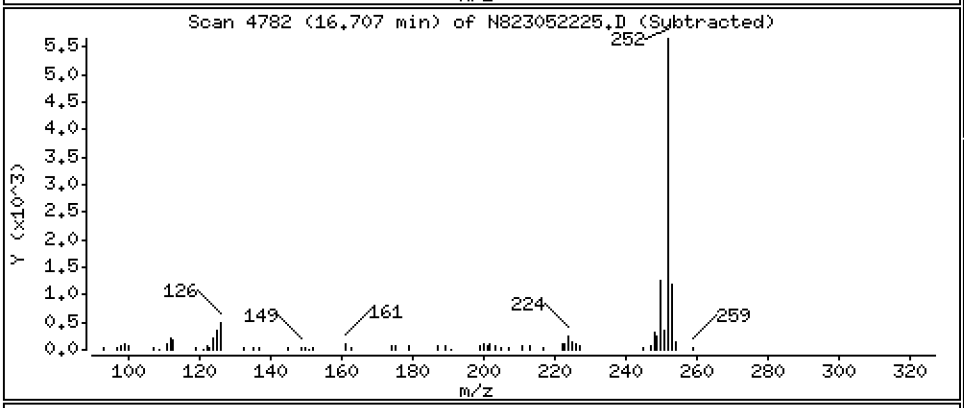
Column diameter: 0.25

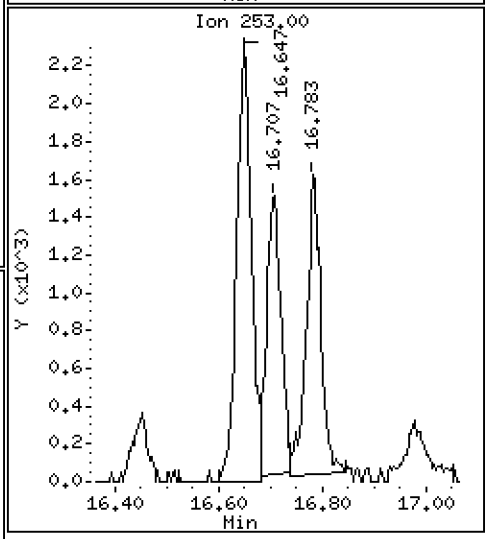
29 Benzo(k)fluoranthene

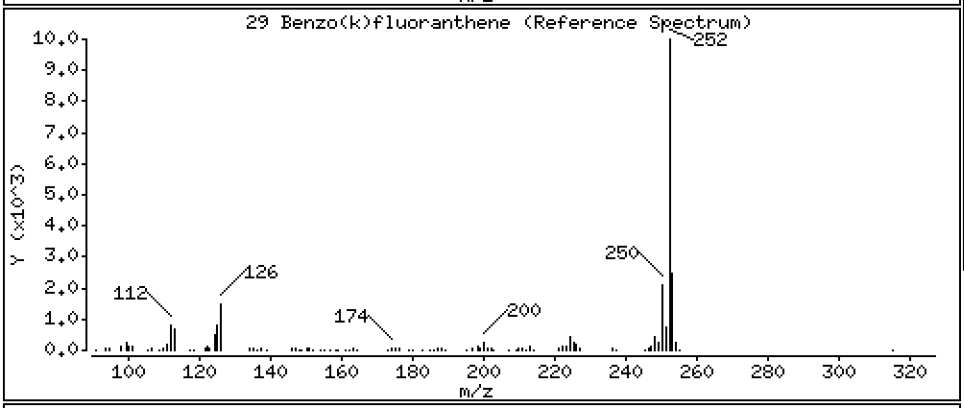
Concentration: 6.052 ug/mL

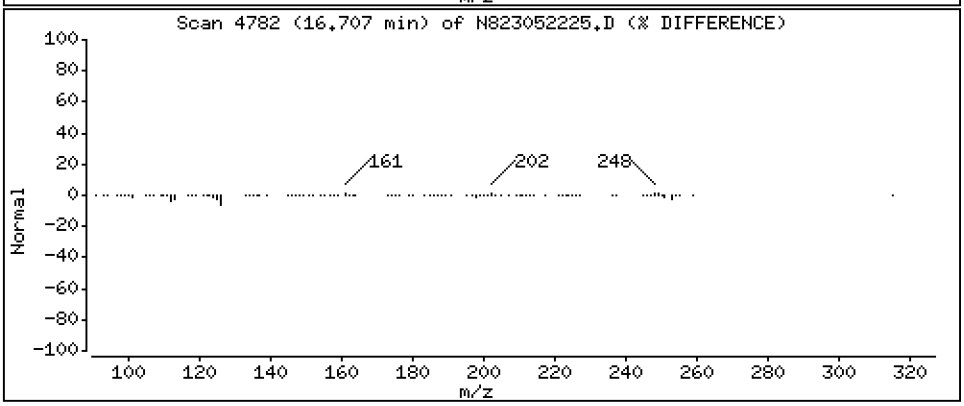












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

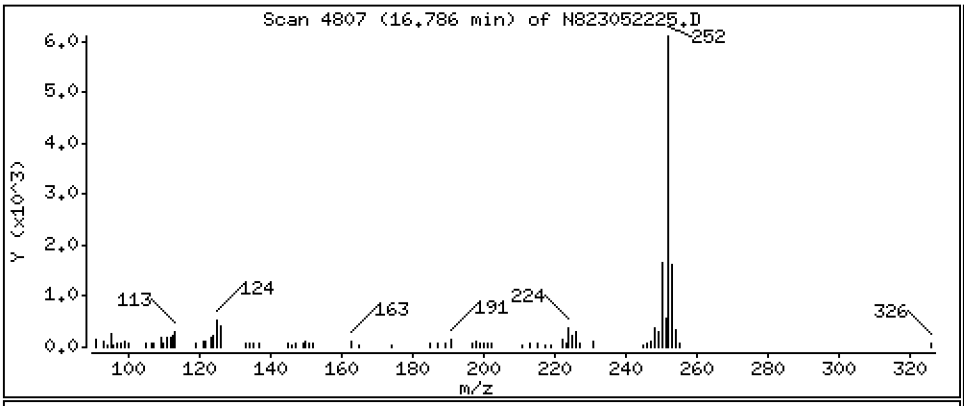
Operator: JZ

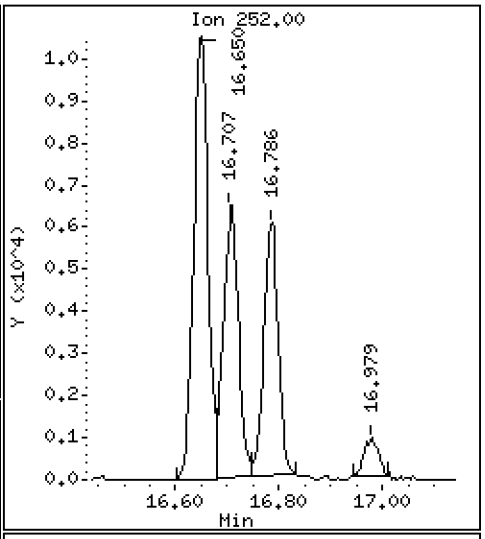
Column phase: Rxi-17sil

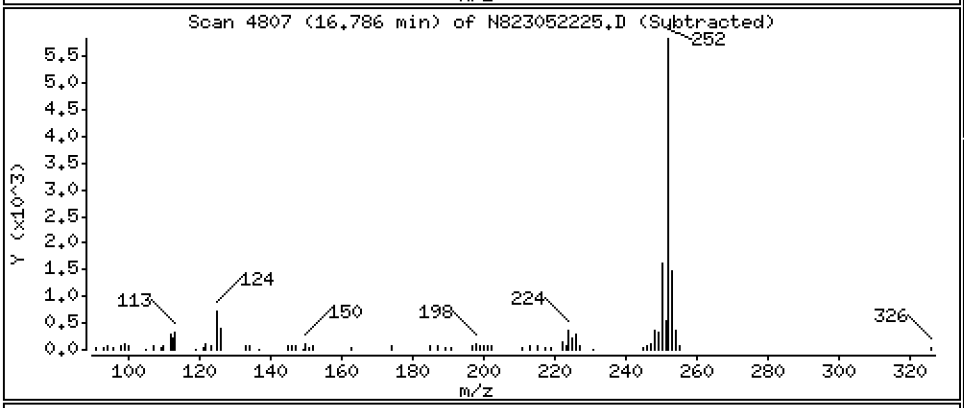
Column diameter: 0.25

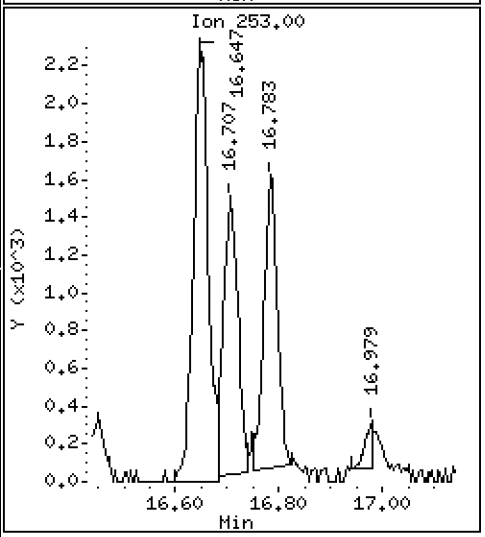
30 Benzo(j)fluoranthene

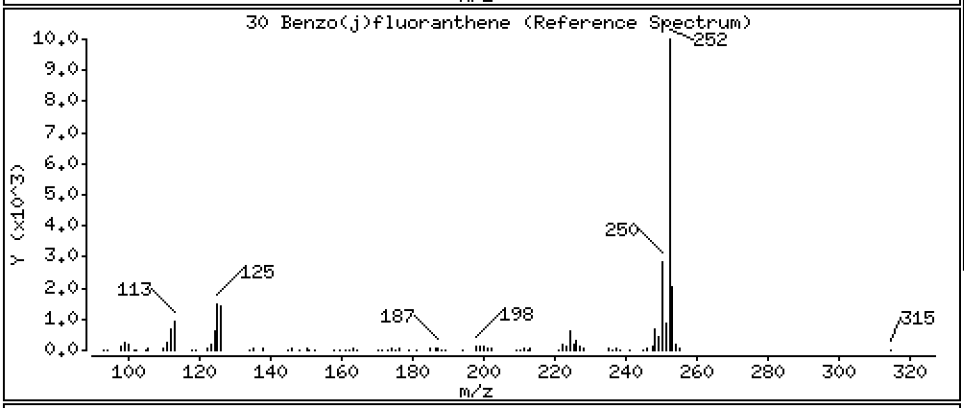
Concentration: 5.785 ug/mL

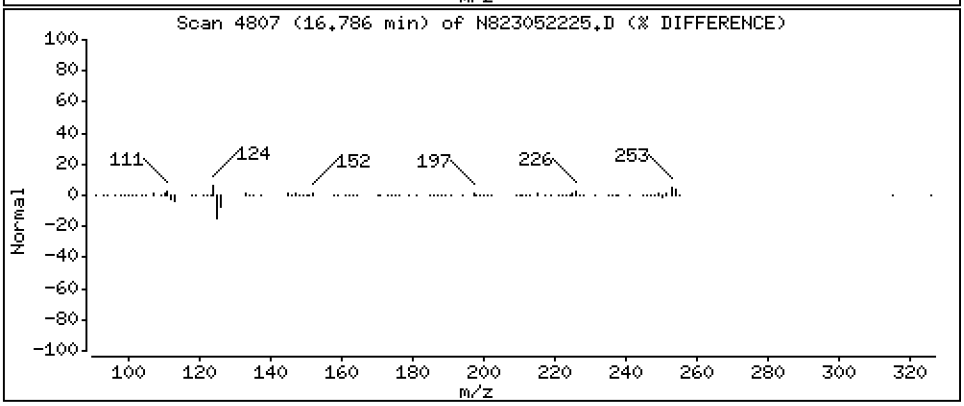












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

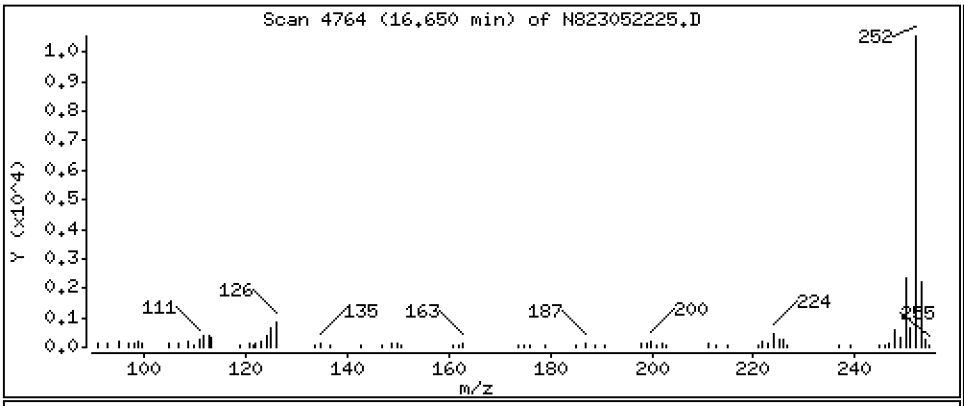
Operator: JZ

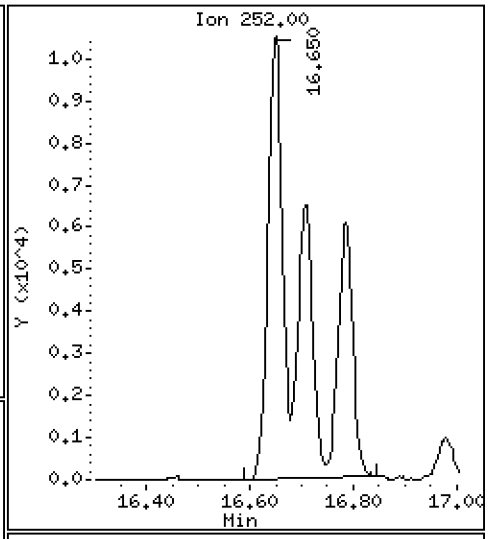
Column phase: Rxi-17sil

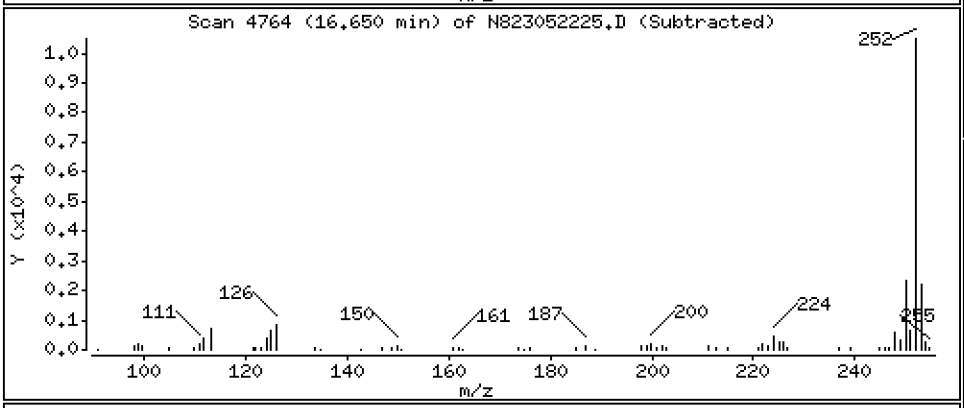
Column diameter: 0.25

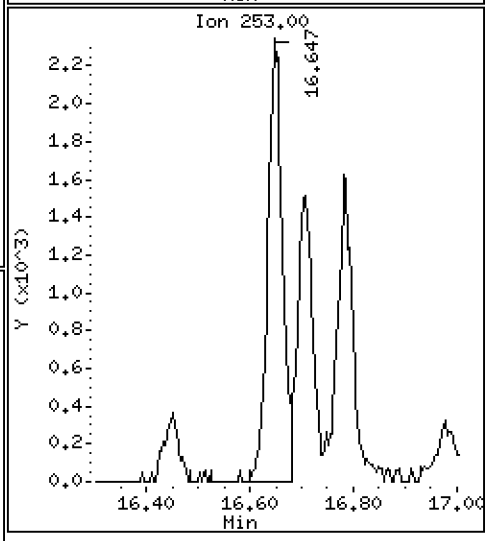
31 Total Benzofluoranthenes

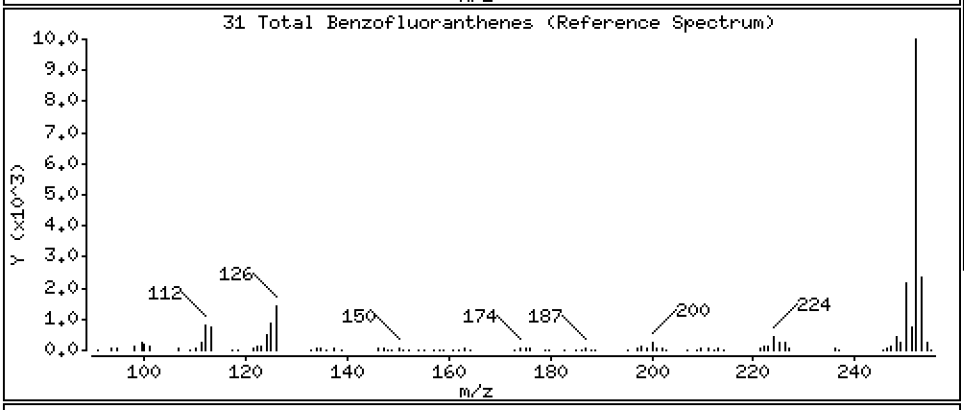
Concentration: 21.04 ug/mL

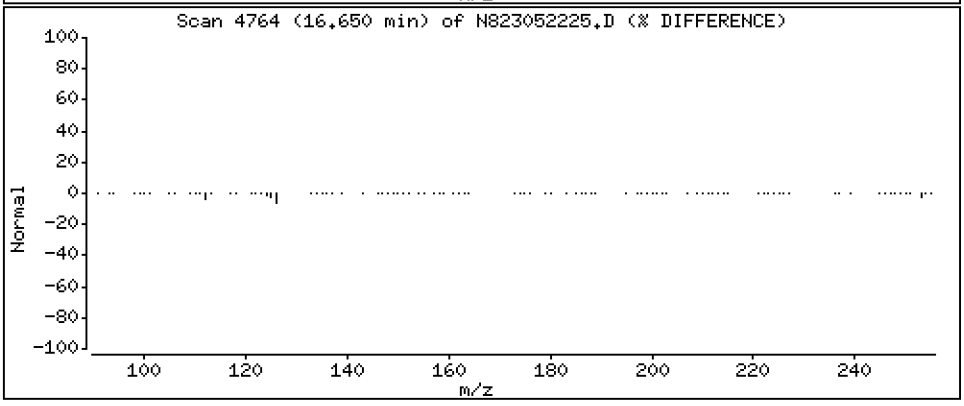












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

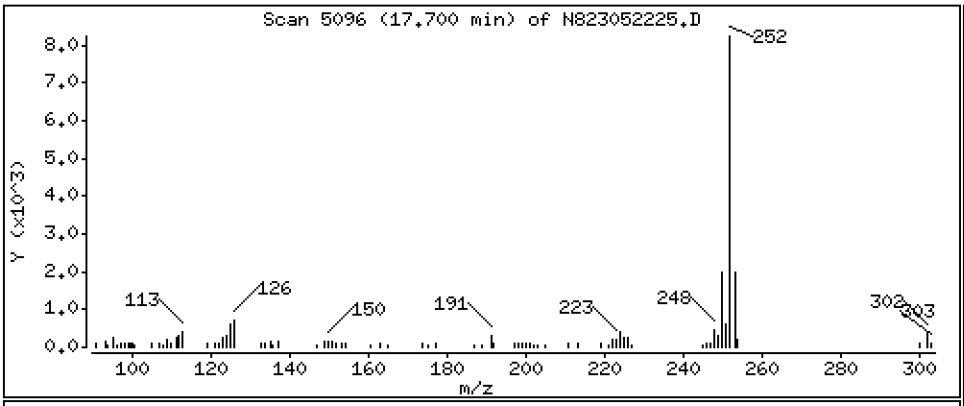
Operator: JZ

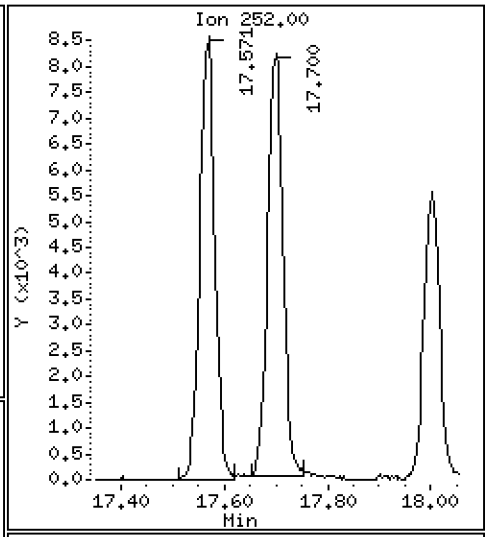
Column phase: Rxi-17sil

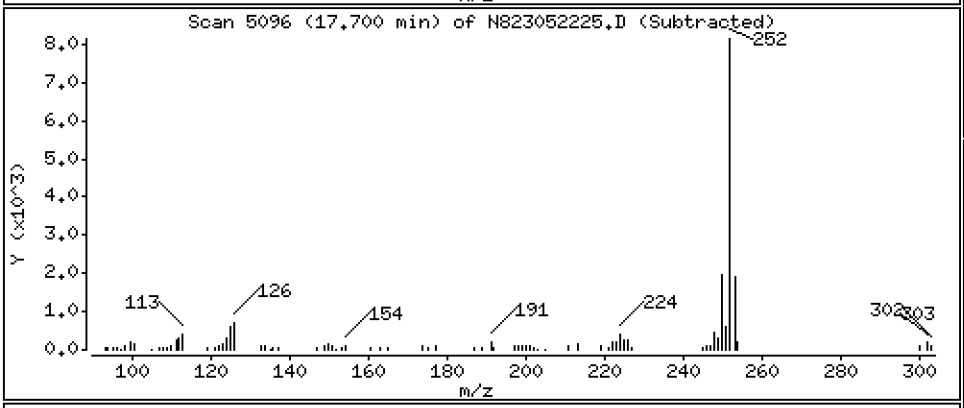
Column diameter: 0.25

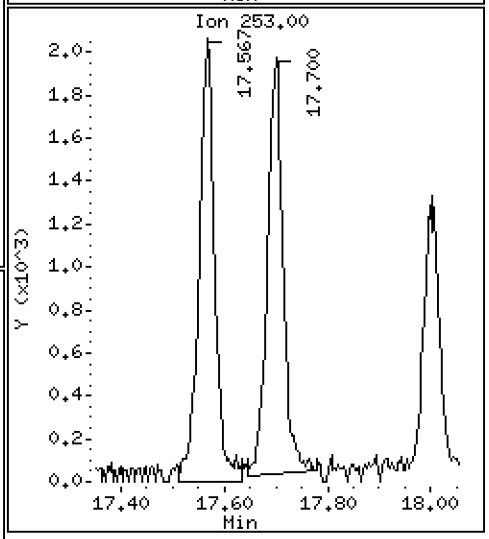
32 Benzo(a)pyrene

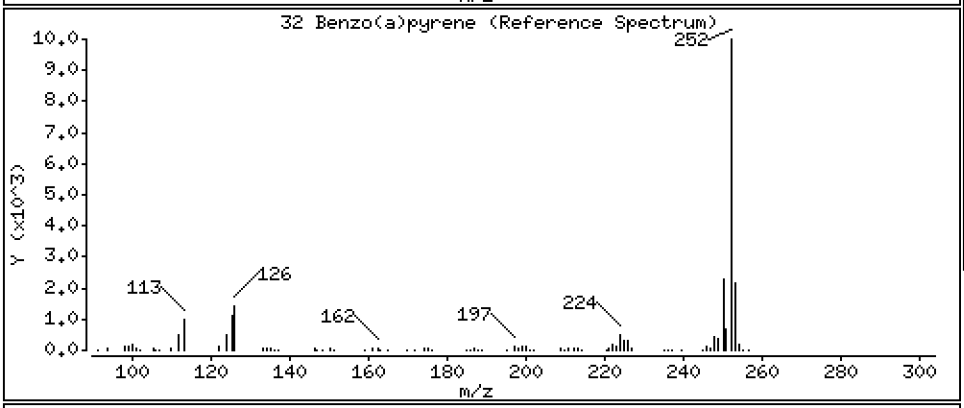
Concentration: 8.442 ug/mL

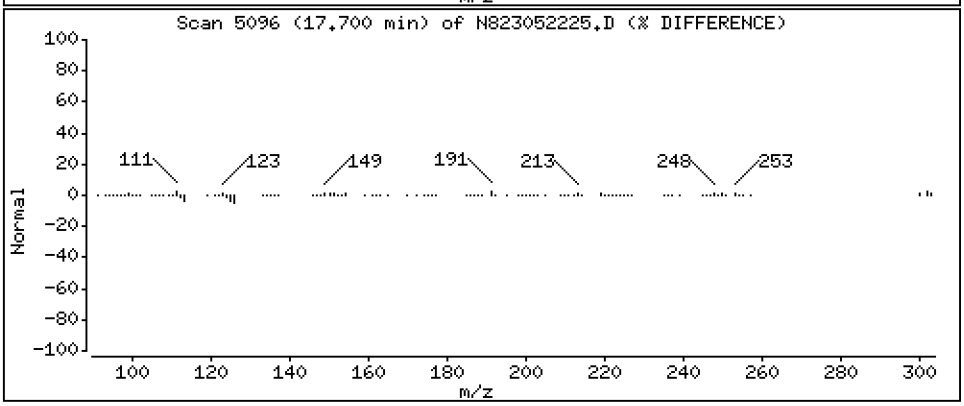












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

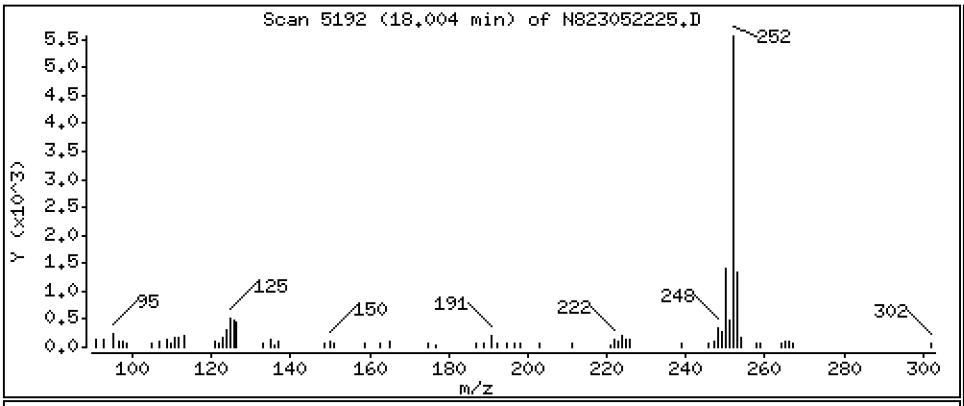
Operator: JZ

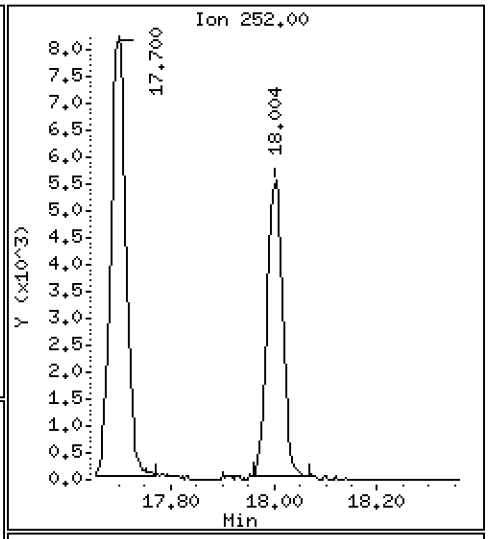
Column phase: Rxi-17sil

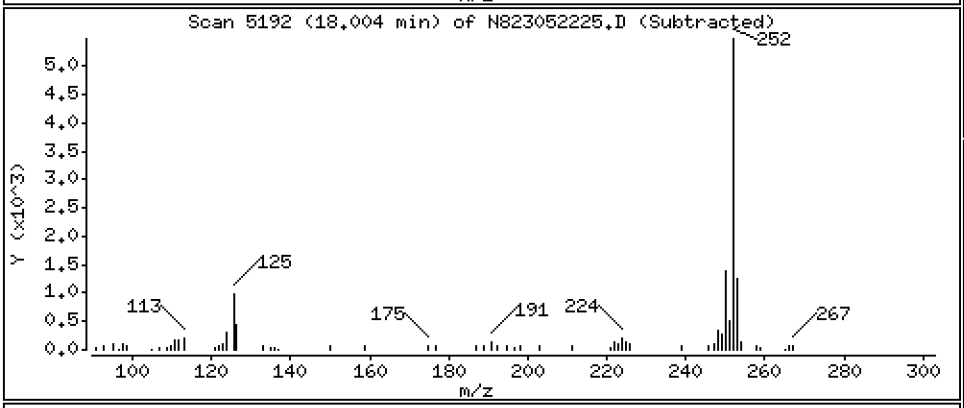
Column diameter: 0.25

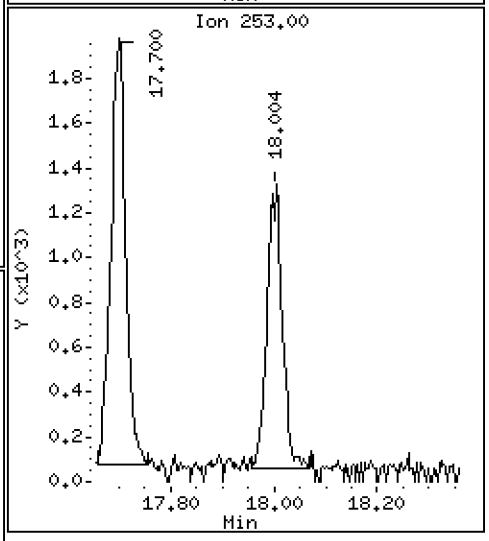
35 Perylene

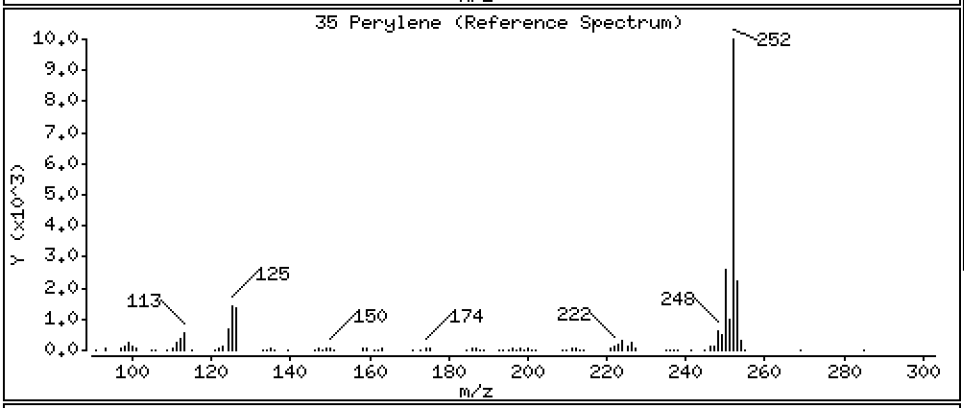
Concentration: 5.763 ug/mL

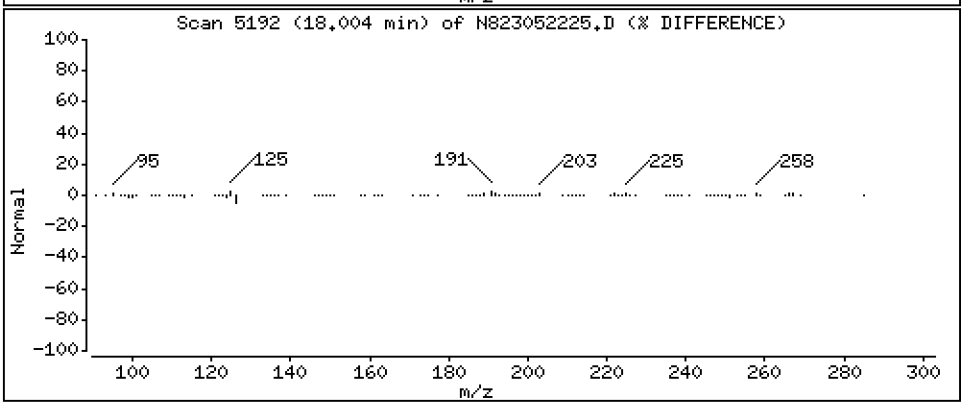












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

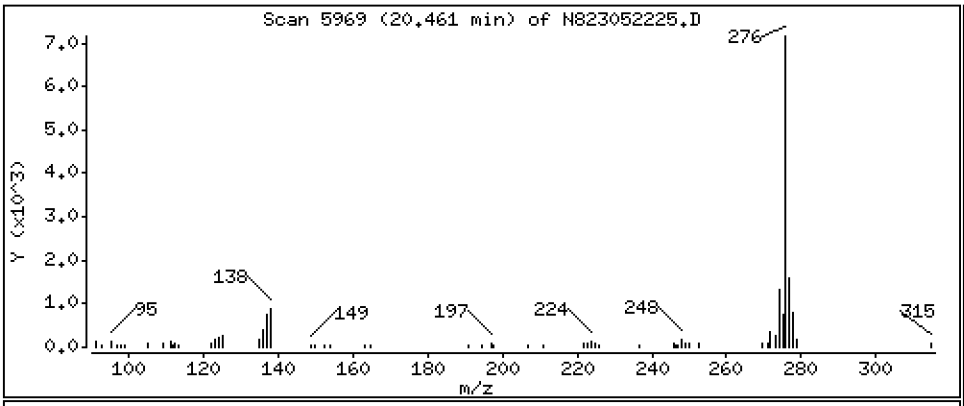
Operator: JZ

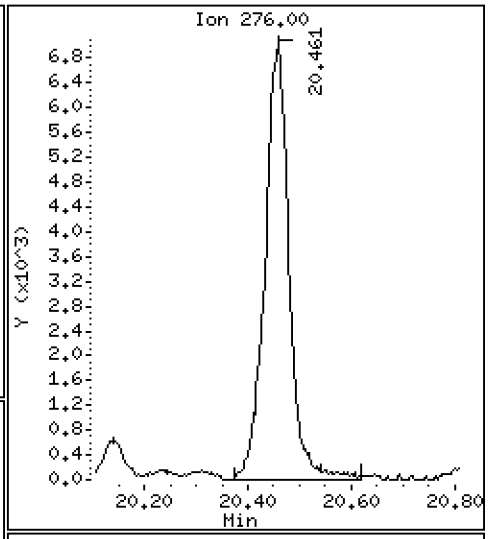
Column phase: Rxi-17sil

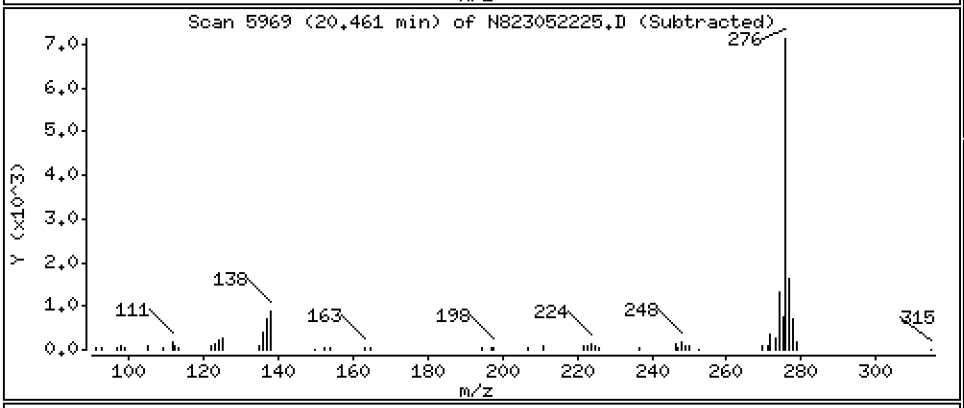
Column diameter: 0.25

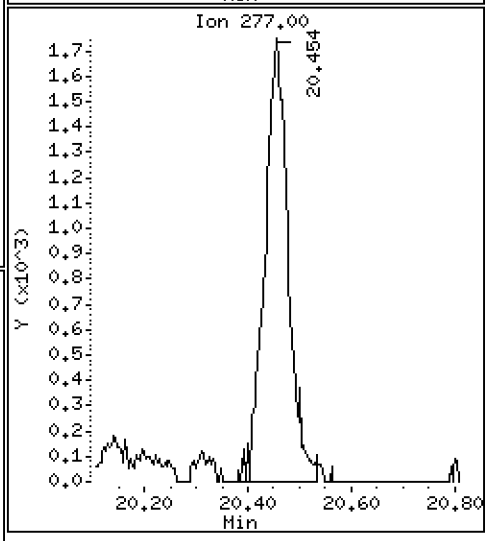
37 Indeno(1,2,3-cd)pyrene

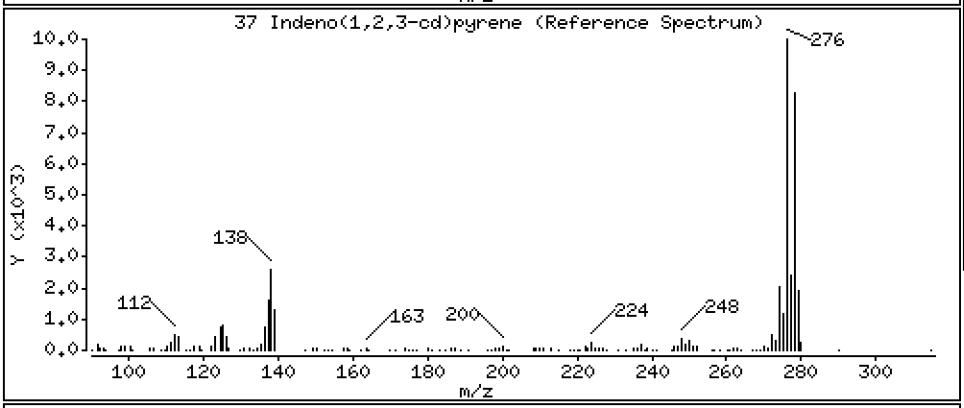
Concentration: 11.21 ug/mL

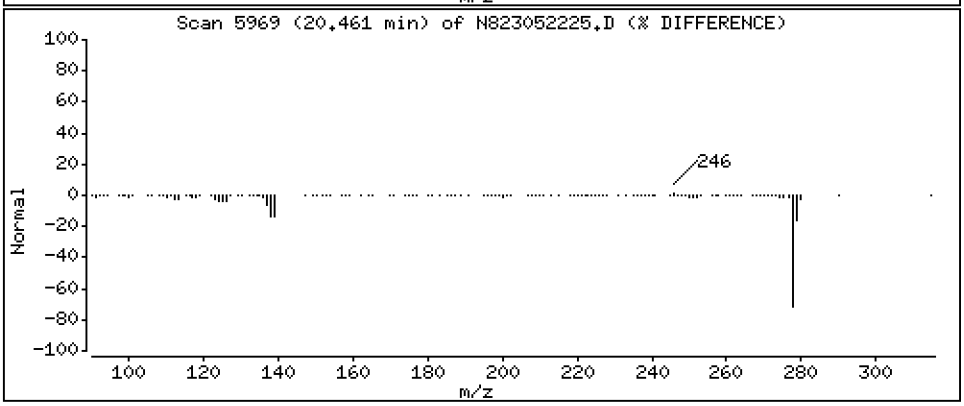












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

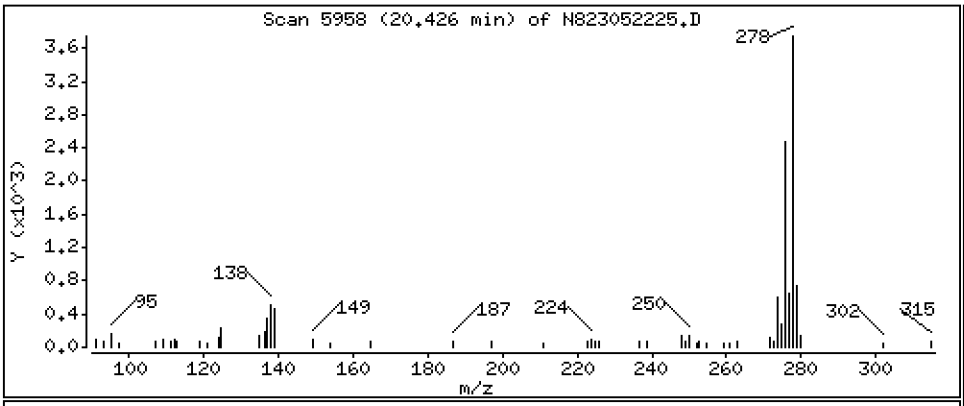
Operator: JZ

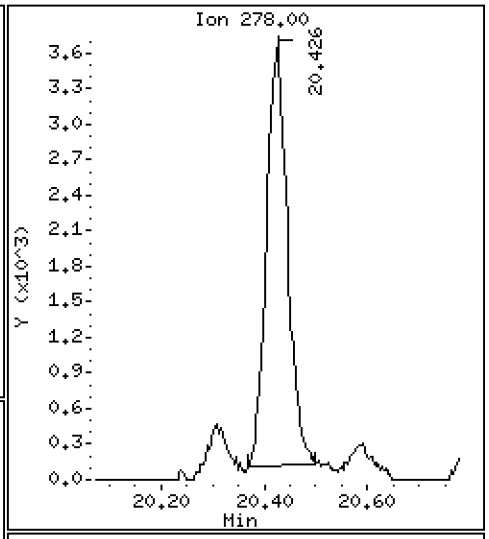
Column phase: Rxi-17sil

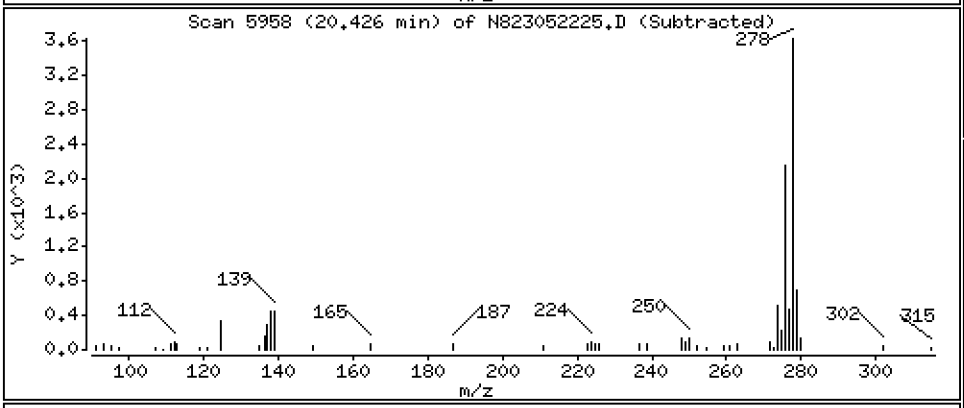
Column diameter: 0.25

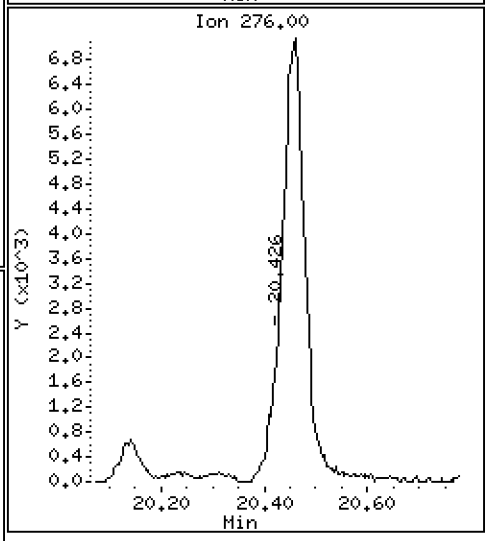
38 Dibenzo(a,h)anthracene

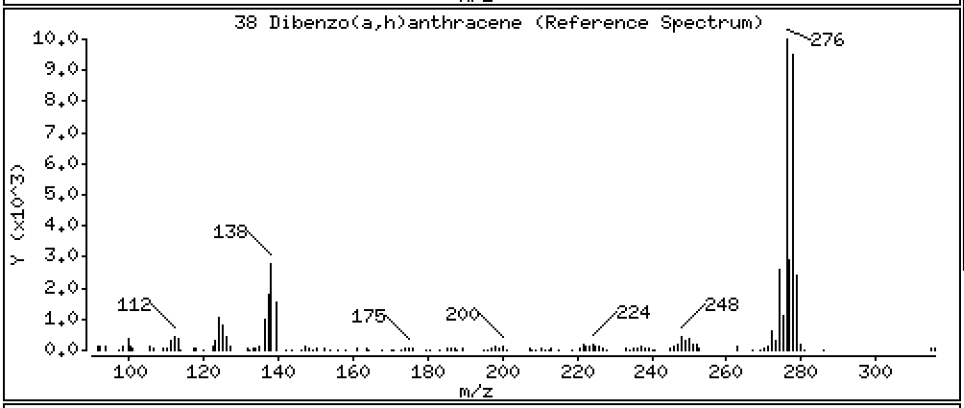
Concentration: 5.579 ug/mL

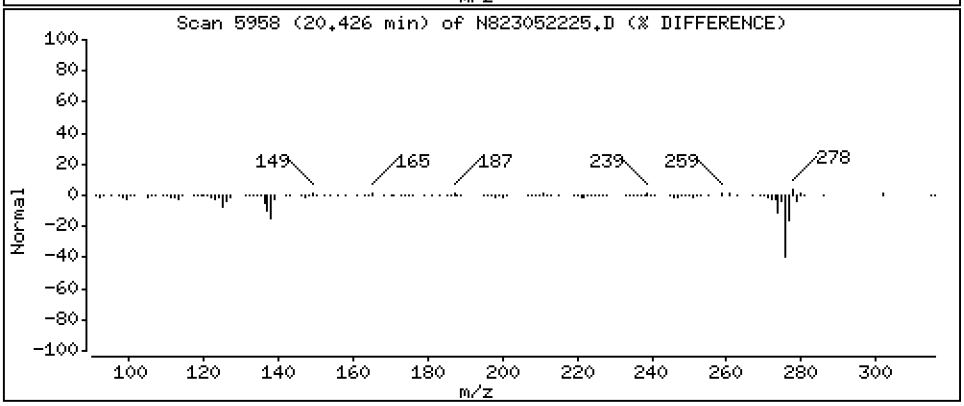












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052225.D

Date : 22-MAY-2023 22:49

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MS1,3

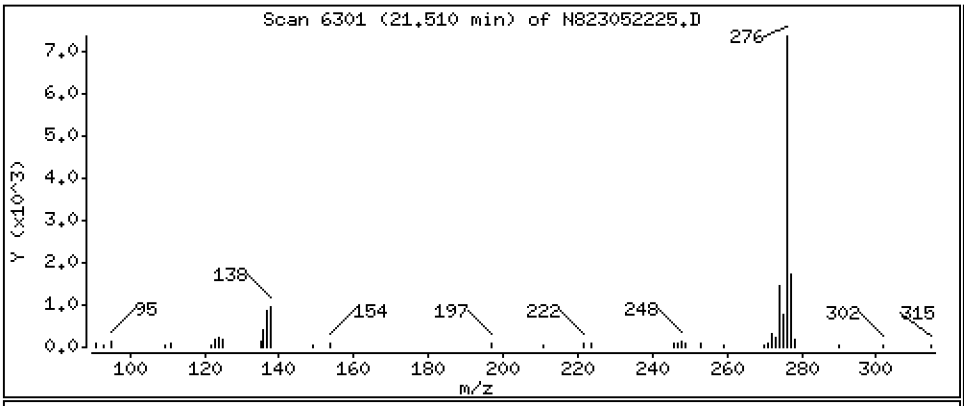
Operator: JZ

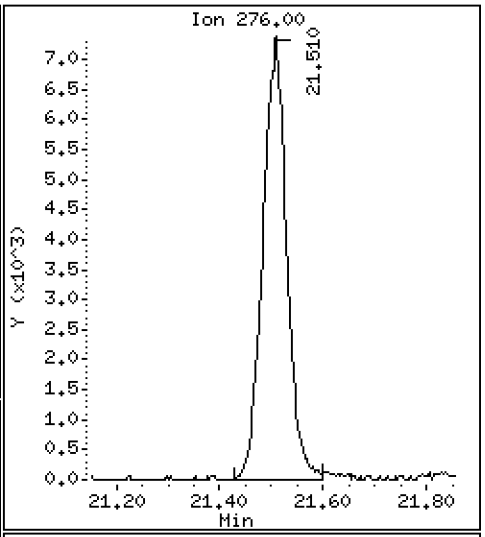
Column phase: Rxi-17sil

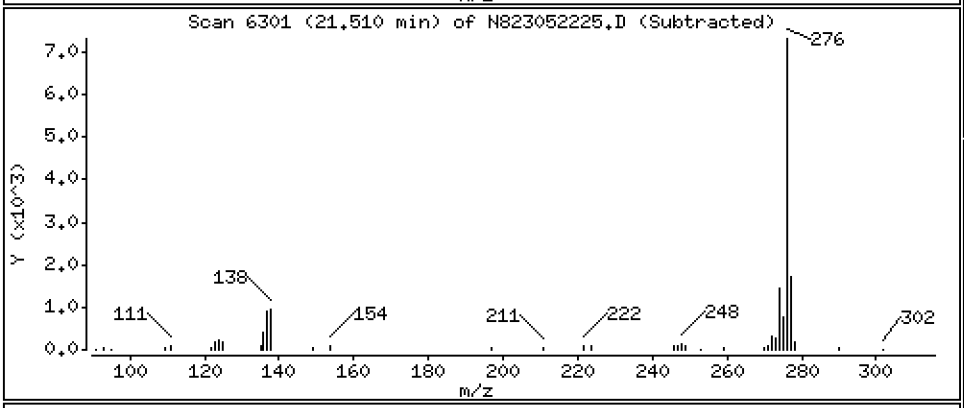
Column diameter: 0.25

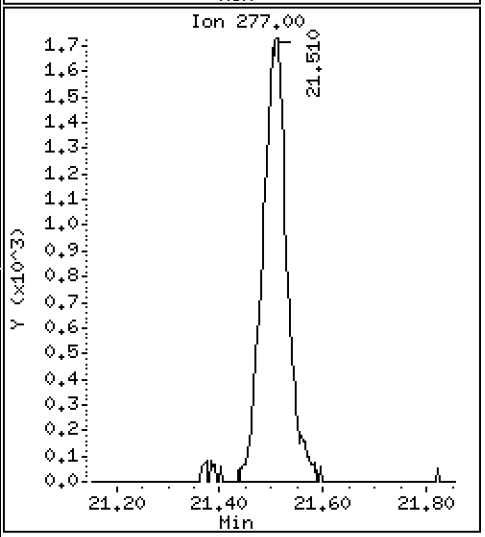
39 Benzo(g,h,i)perylene

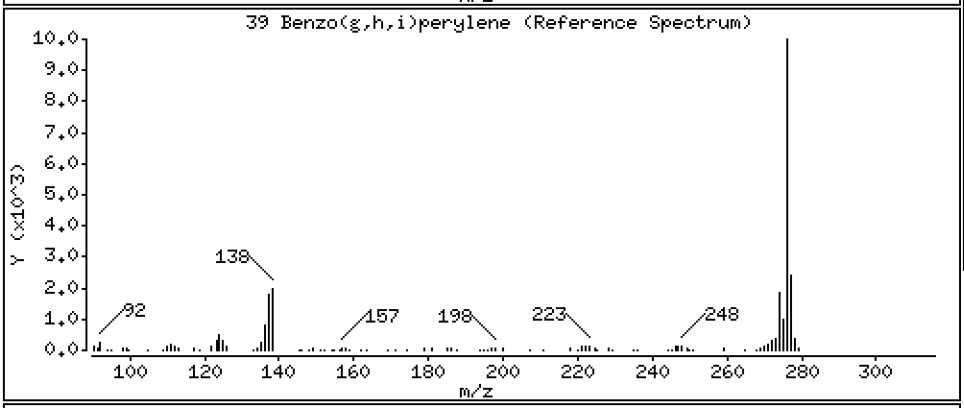
Concentration: 12.52 ug/mL

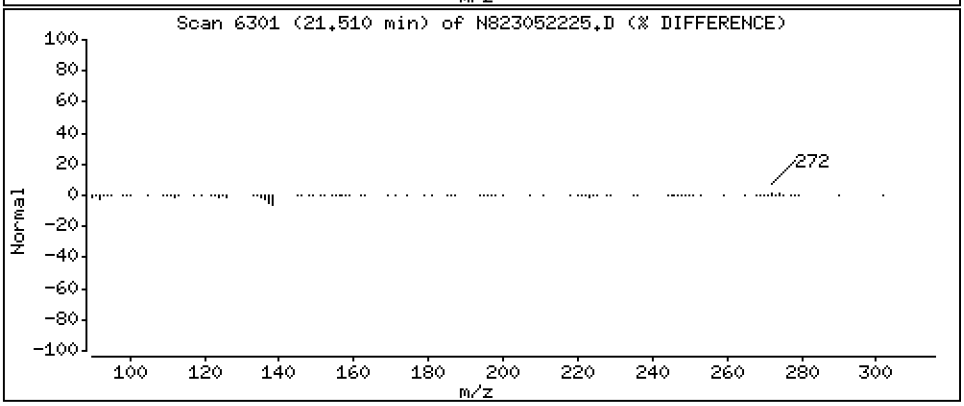












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230522.b\N823052225.D
Lab Smp Id: BLE0149-MS1
Inj Date : 22-MAY-2023 22:49
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0149-MS1,3
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Meth Date : 23-May-2023 10:38 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 25
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.812	4.818	(1.000)	18155	2.00000	
	2 Naphthalene	128	4.843	4.846	(1.007)	8748	0.94579	2.837
$	3 2-Methylnaphthalene-d10	152	5.545	5.551	(1.152)	3708	0.66130	1.984
	4 2-Methylnaphthalene	141	5.593	5.599	(1.162)	5037	0.95915	2.877
	5 1-methylnaphthalene	141	5.789	5.795	(1.203)	5252	1.00866	3.026
	9 Acenaphthylene	152	6.990	6.993	(0.985)	11293	1.23658	3.710
*	10 Acenaphthene-d10	164	7.098	7.101	(1.000)	10316	2.00000	
	11 Acenaphthene	153	7.145	7.151	(1.007)	5913	0.99935	2.998
	12 Dibenzofuran	168	7.300	7.306	(1.029)	8928	1.00462	3.014
	14 Fluorene	166	7.774	7.781	(1.095)	7397	1.04295	3.129
*	15 Phenanthrene-d10	188	9.134	9.140	(1.000)	18279	2.00000	
	16 Phenanthrene	178	9.172	9.175	(1.004)	19048	1.96737	5.902
	17 Anthracene	178	9.210	9.213	(1.008)	12116	1.33430	4.003
	19 Carbazole	167	9.728	9.731	(1.065)	10529	1.21395	3.642
	22 Fluoranthene	202	10.933	10.930	(1.197)	47092	4.22891	12.69
$	21 Fluoranthene-d10	212	10.892	10.895	(1.192)	7081	0.71764	2.153
	23 Pyrene	202	11.452	11.442	(0.816)	44010	7.65139	22.95
	24 Benzo(a)anthracene	228	13.912	13.918	(0.991)	16601	2.80878	8.426
*	25 Chrysene-d12	240	14.035	14.044	(1.000)	8984	2.00000	
	27 Chrysene	228	14.114	14.117	(1.006)	20513	3.53289	10.60
	28 Benzo(b)fluoranthene	252	16.650	16.653	(0.929)	20439	2.93968	8.819
	29 Benzo(k)fluoranthene	252	16.707	16.713	(0.932)	13215	2.01732	6.052
	30 Benzo(j)fluoranthene	252	16.786	16.789	(0.936)	11671	1.92828	5.785
	31 Total Benzofluoranthenes	252	16.650	16.653	(0.929)	45342	7.01280	21.04(M)
	32 Benzo(a)pyrene	252	17.700	17.703	(0.987)	17006	2.81387	8.442
*	33 Perylene-d12	264	17.924	17.934	(1.000)	10665	2.00000	
	35 Perylene	252	18.003	18.006	(1.004)	11658	1.92098	5.763
$	36 Dibenzo(a,h)anthracene-d14	292	20.308	20.318	(1.133)	5209	1.27931	3.838(M)
	37 Indeno(1,2,3-cd)pyrene	276	20.460	20.457	(1.141)	22984	3.73607	11.21
	38 Dibenzo(a,h)anthracene	278	20.425	20.425	(1.140)	10159	1.85969	5.579(M)
	39 Benzo(g,h,i)perylene	276	21.510	21.503	(1.200)	23775	4.17208	12.52

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823052225.D
Lab Smp Id: BLE0149-MS1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 22-MAY-2023
Calibration Time: 11:46
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	17081	8541	34162	18155	6.29
10 Acenaphthene-d10	9674	4837	19348	10316	6.64
15 Phenanthrene-d10	17710	8855	35420	18279	3.21
25 Chrysene-d12	15081	7541	30162	8984	-40.43
33 Perylene-d12	15623	7812	31246	10665	-31.74

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.13
10 Acenaphthene-d10	7.10	6.60	7.60	7.10	-0.04
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.04	-0.07
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.05

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

REVIEW SUMMARY FOR FILE - N823052225.D

Lab ID: BLE0149-MS1
nt8.i, 20230522.b\FSIMPNA230426.m,   22-MAY-2023 22:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

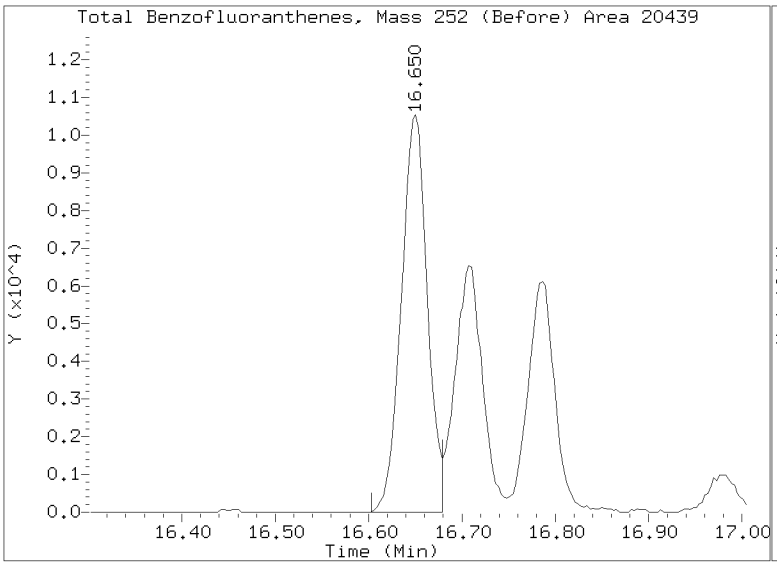
No RRT check performed

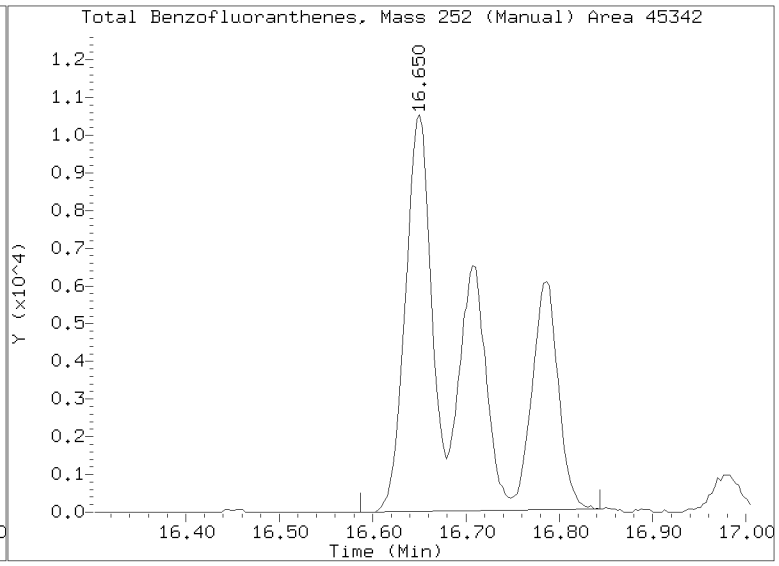
On Column LOD for nt8.i, 20230522.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

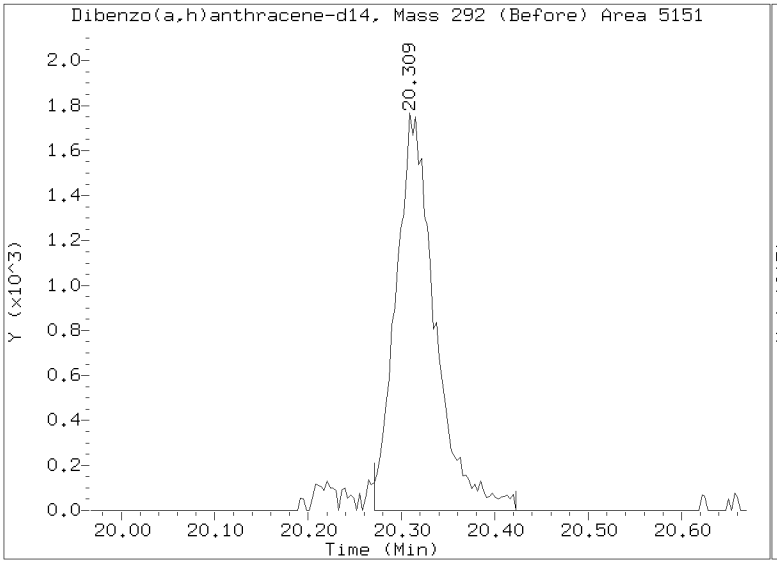
* Only compounds listed in the work order have been verified by the analyst *

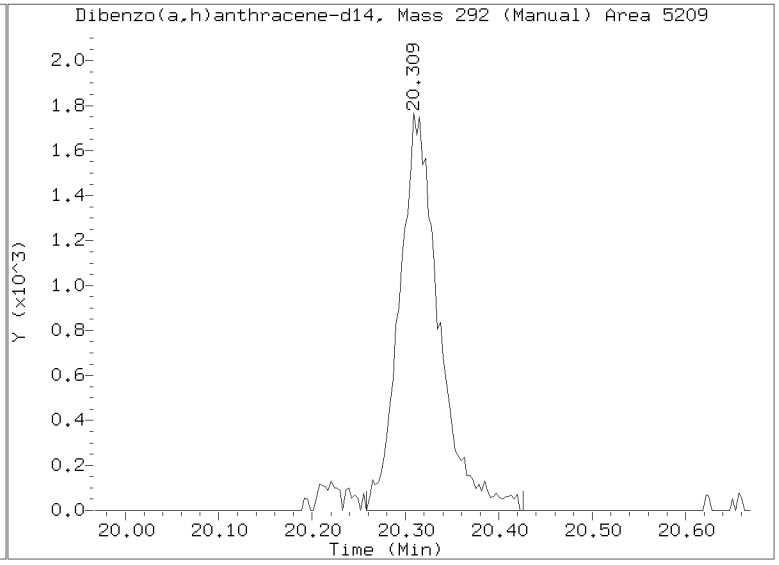
Quant Ion Manual Peak Adjustment Report

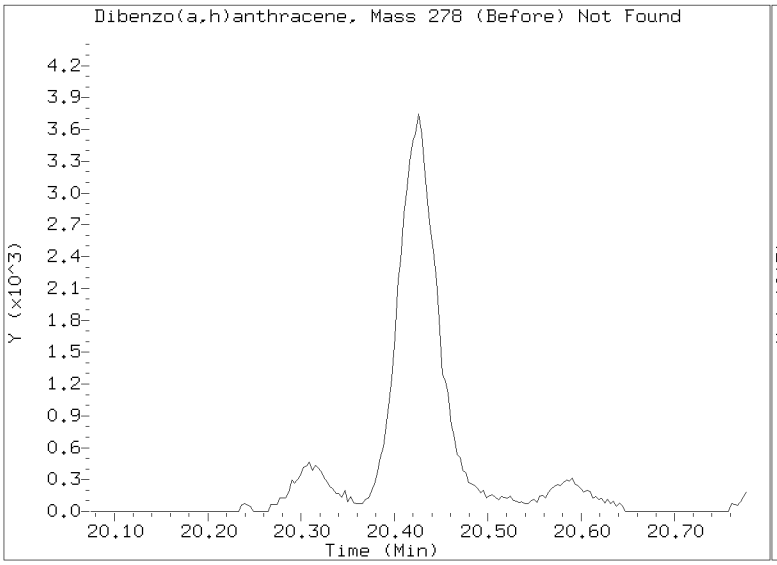
Datafile: //target/share/chem3/nt8.i/20230522.b/N823052225.D
Injection Date: 22-MAY-2023 22:49
Lab ID:BLE0149-MS1 Client ID:
Report Date: 05/23/2023 11:16

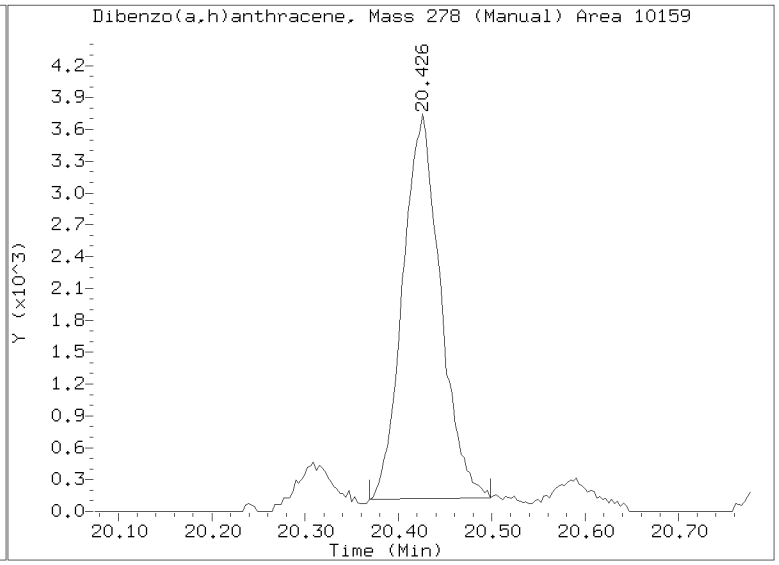












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

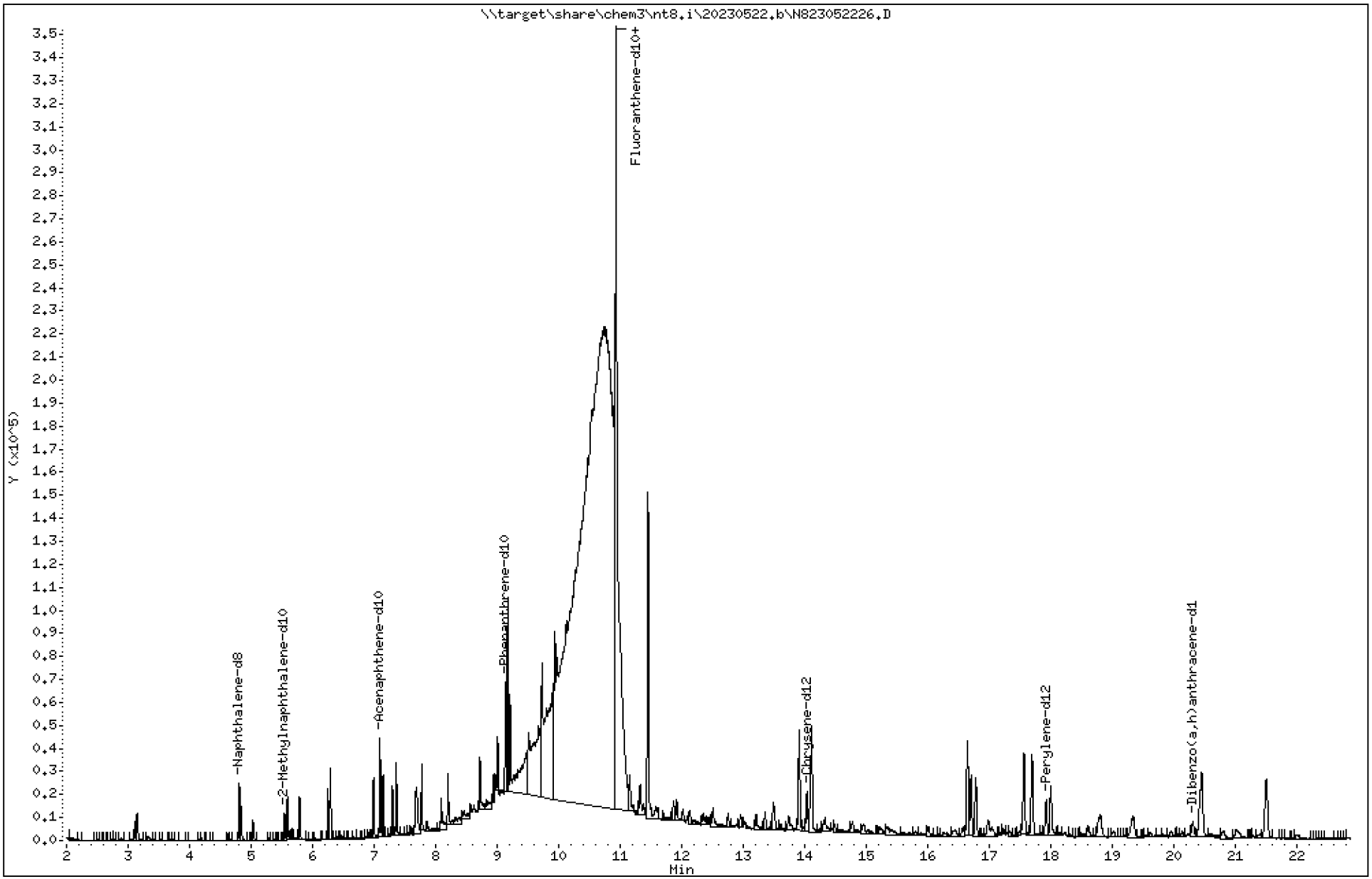
Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

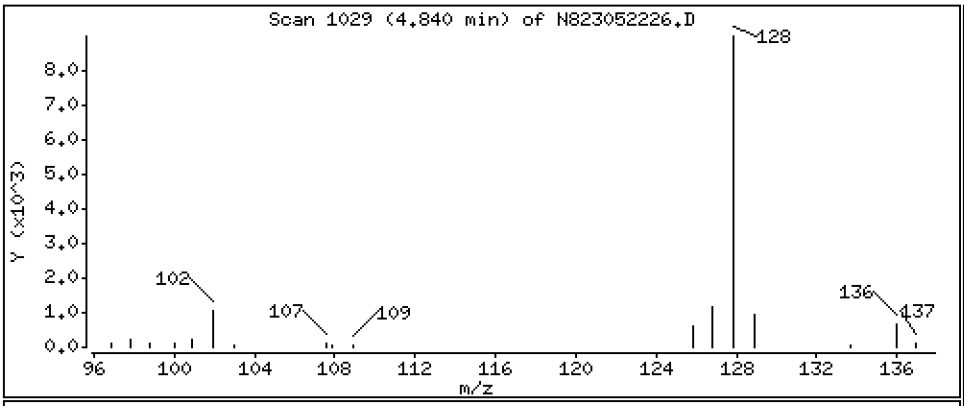
Operator: JZ

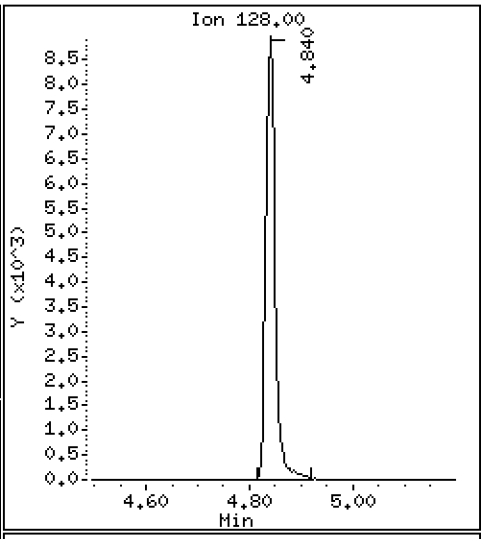
Column phase: Rxi-17sil

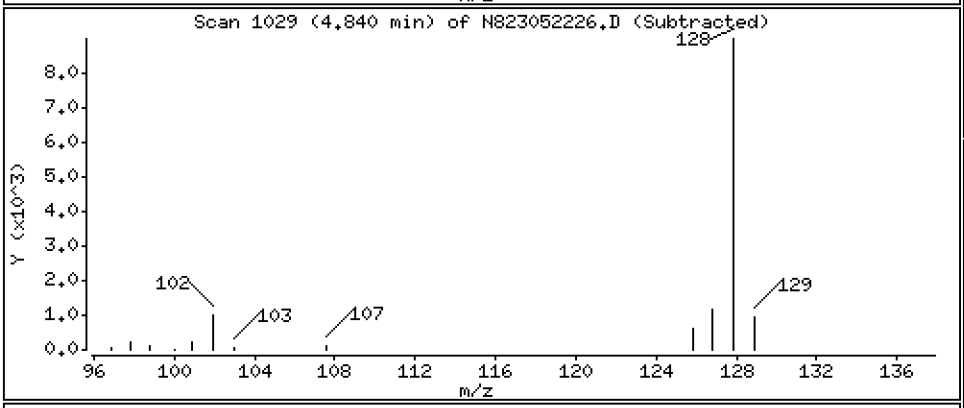
Column diameter: 0.25

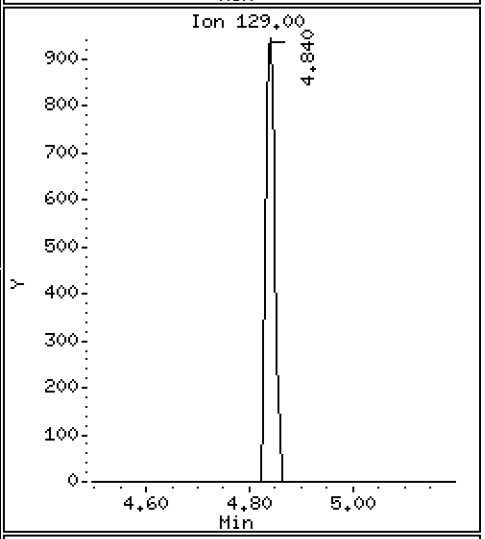
2 Naphthalene

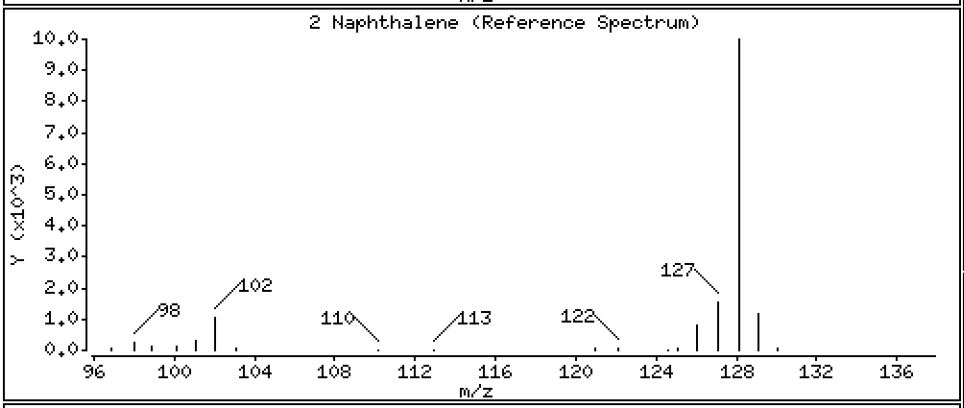
Concentration: 3.159 ug/mL

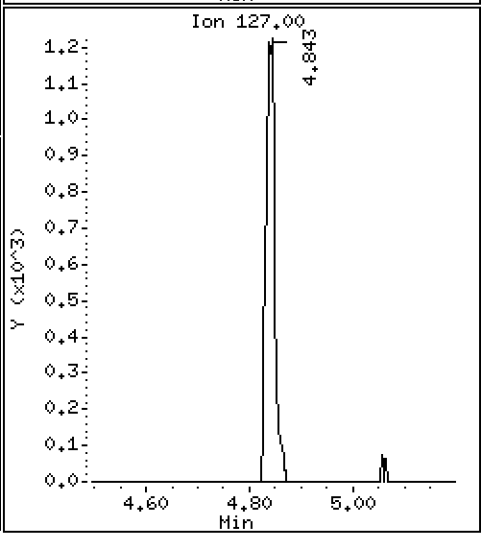


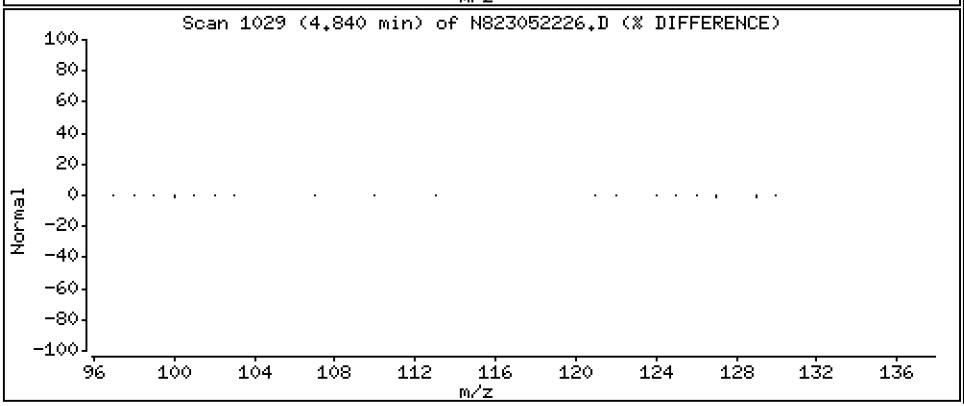












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

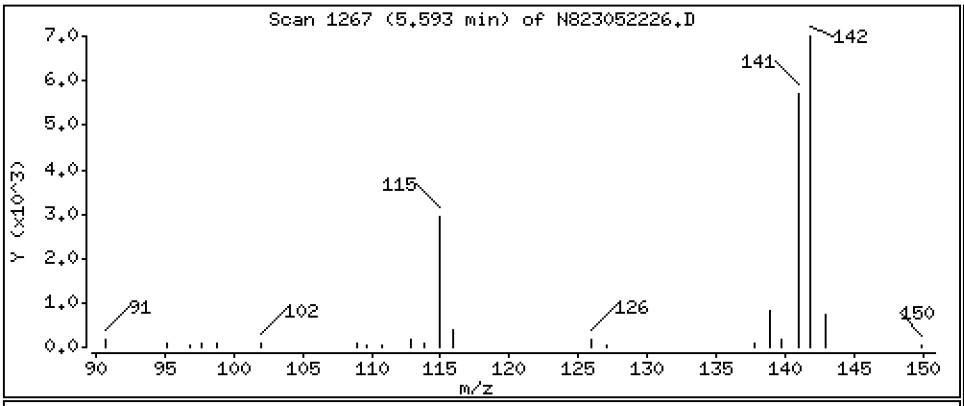
Operator: JZ

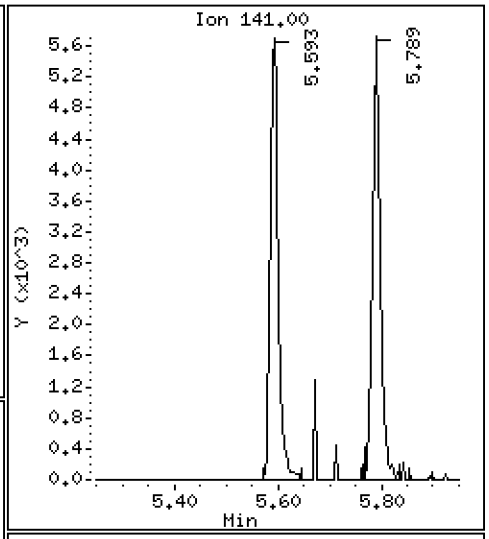
Column phase: Rxi-17sil

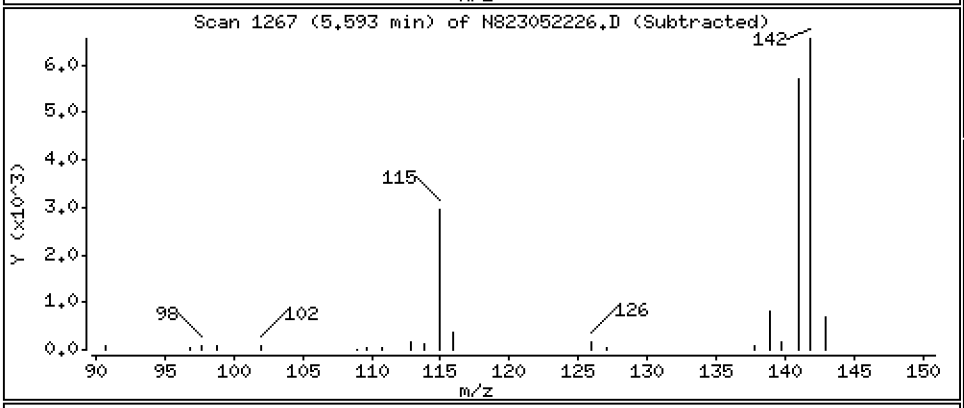
Column diameter: 0.25

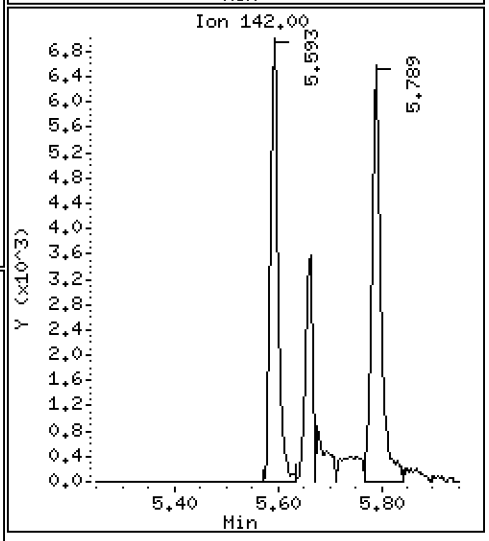
4 2-Methylnaphthalene

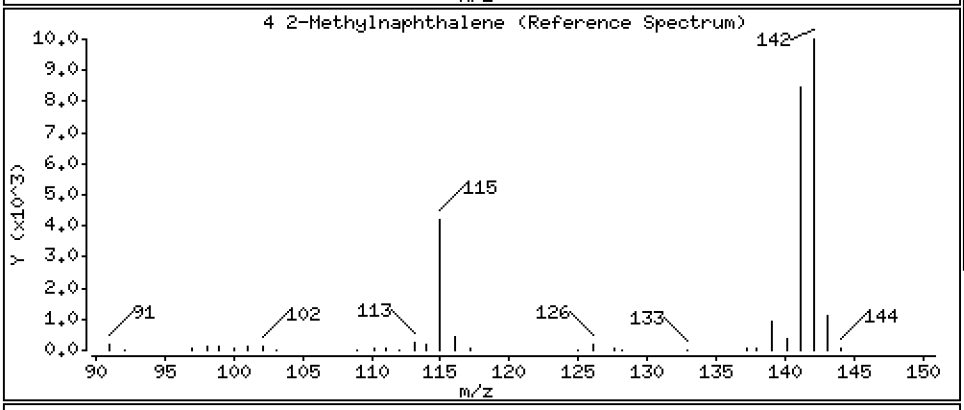
Concentration: 3.115 ug/mL

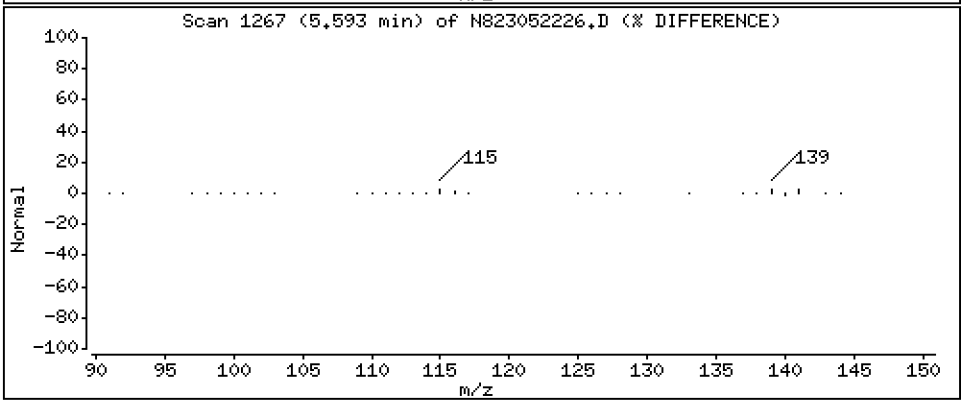












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

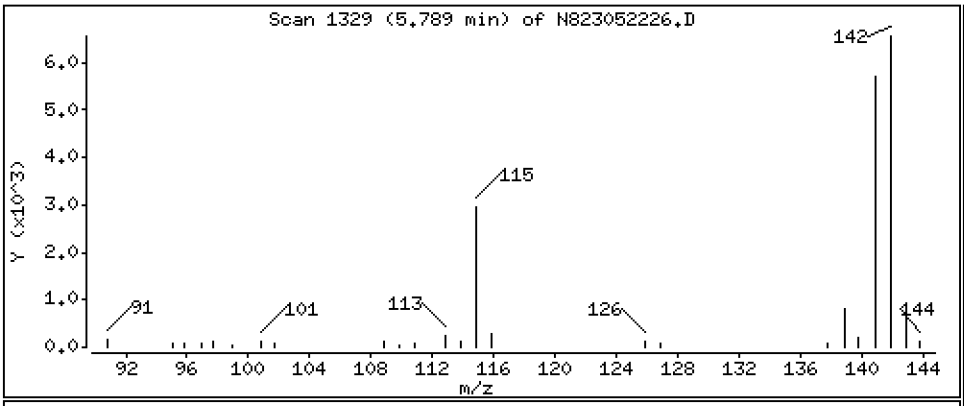
Operator: JZ

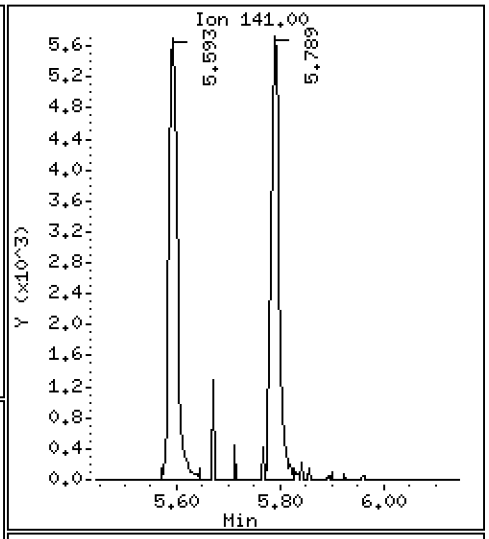
Column phase: Rxi-17sil

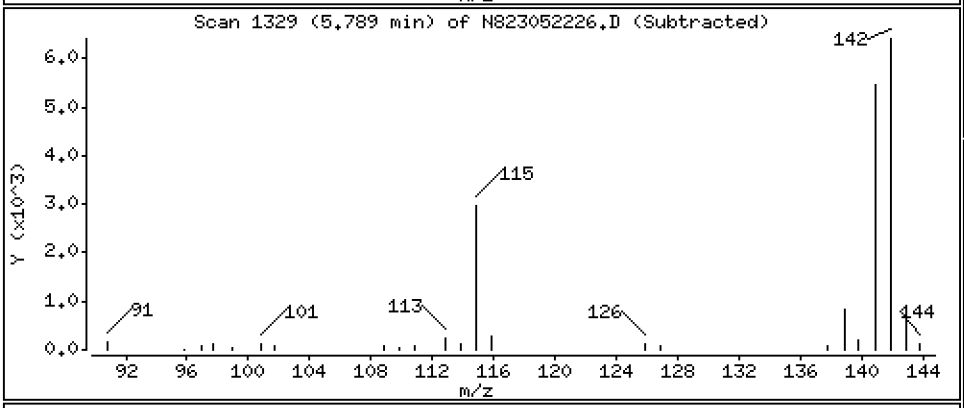
Column diameter: 0.25

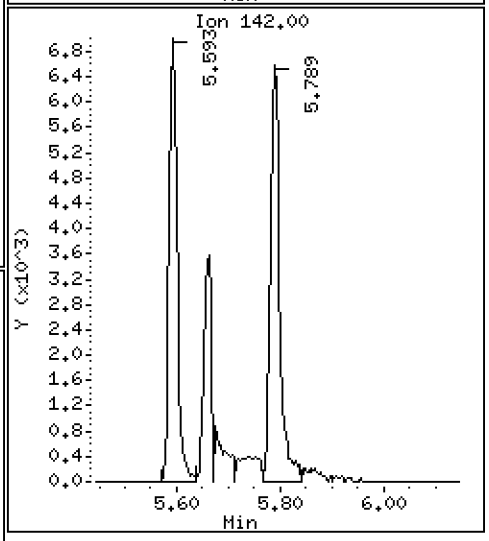
5 1-methylnaphthalene

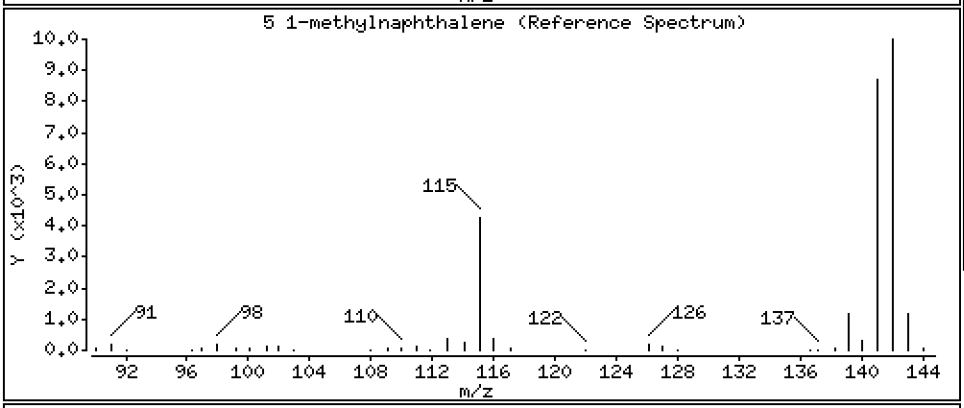
Concentration: 3.099 ug/mL

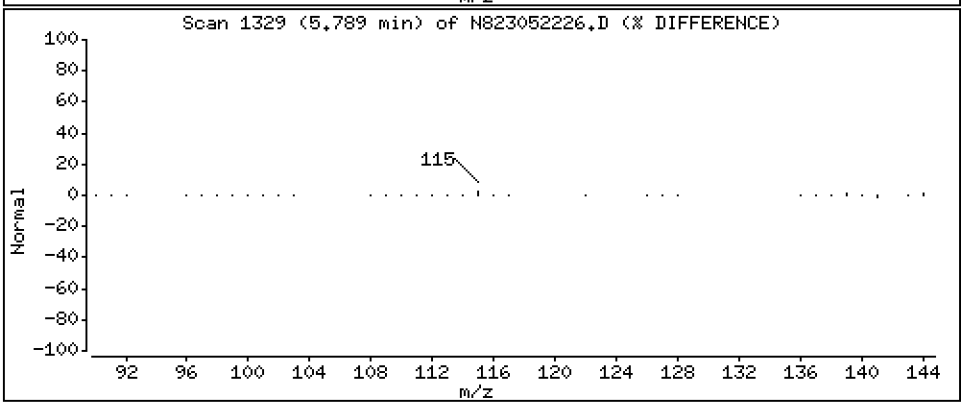












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

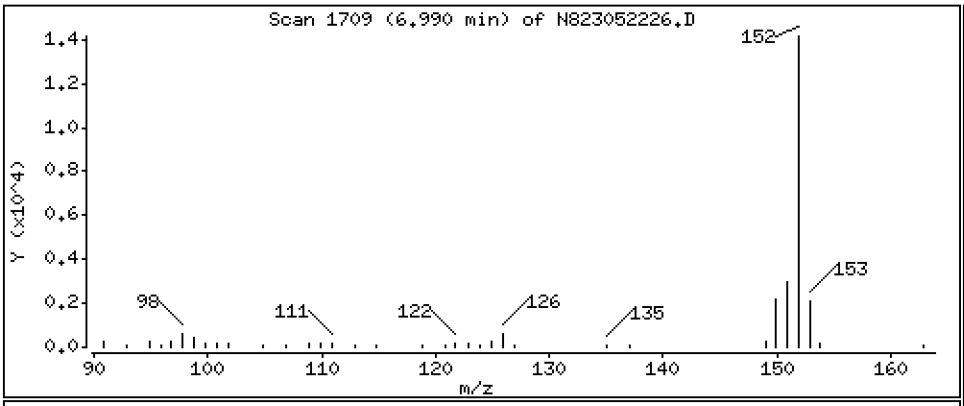
Operator: JZ

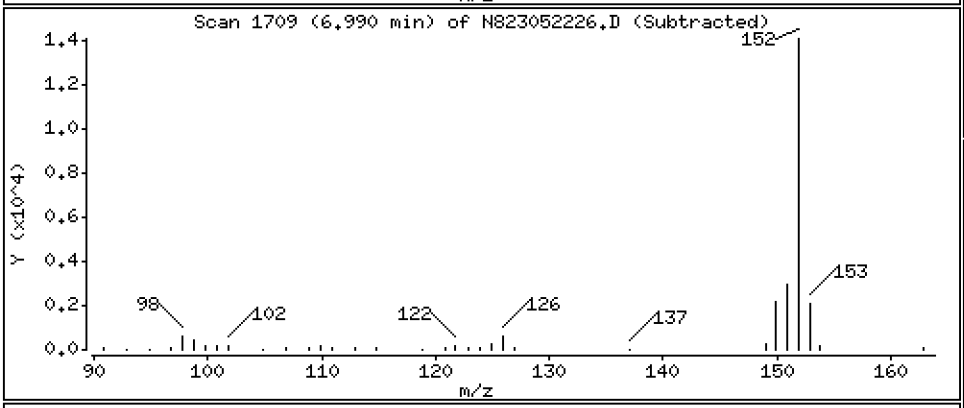
Column phase: Rxi-17sil

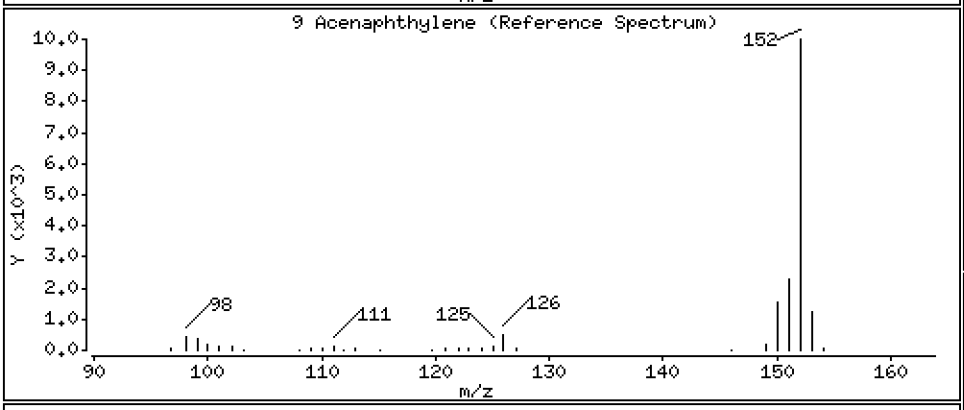
Column diameter: 0.25

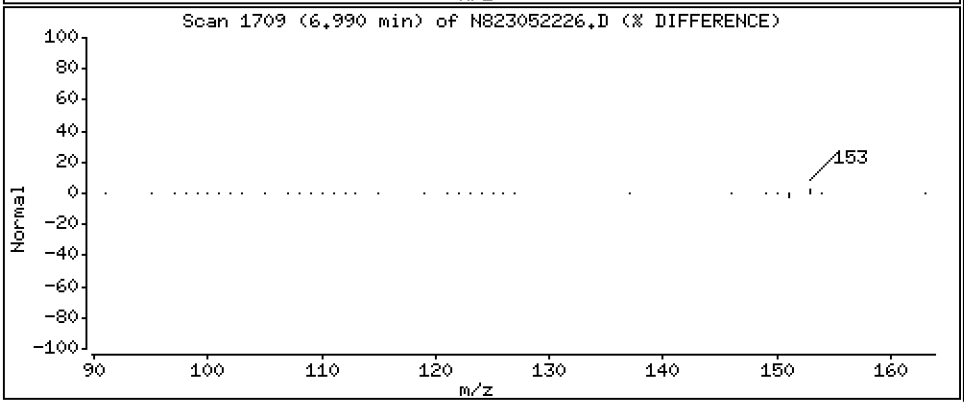
9 Acenaphthylene

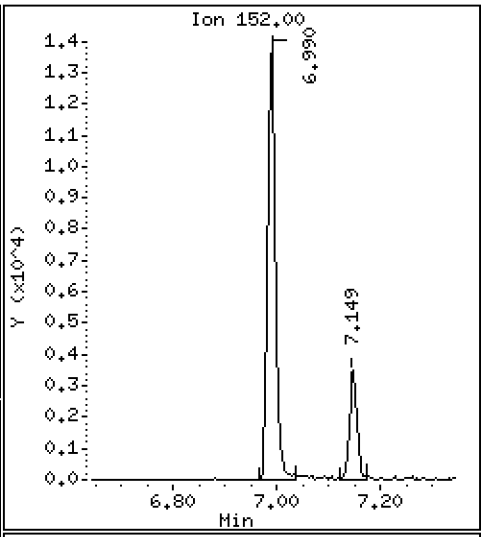
Concentration: 4.219 ug/mL

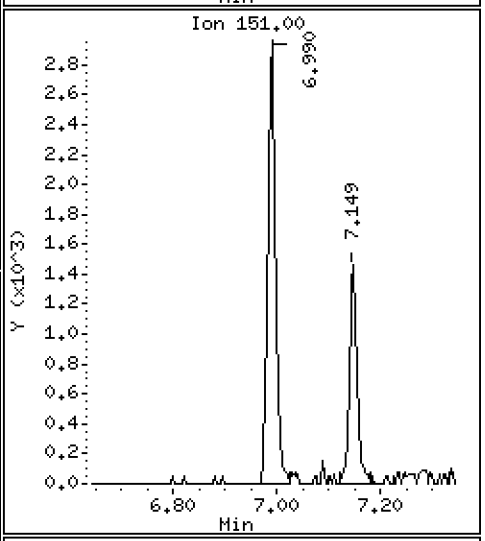


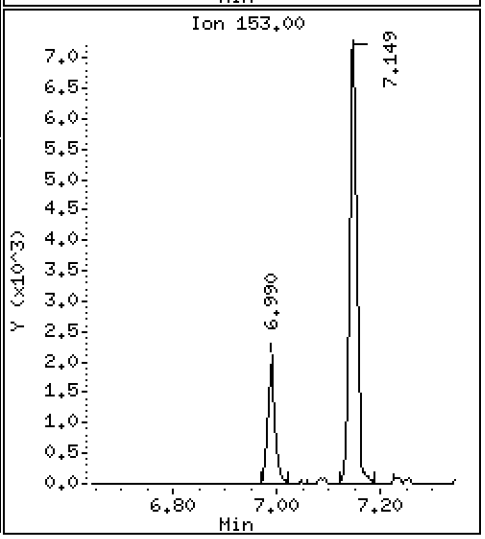












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

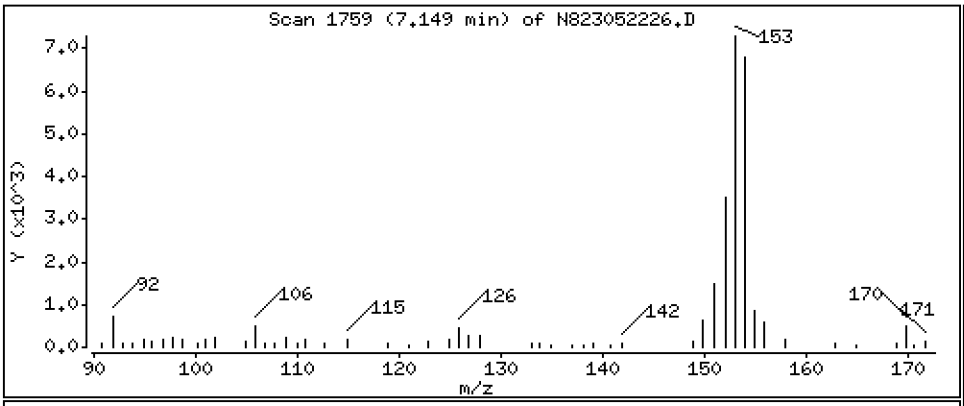
Operator: JZ

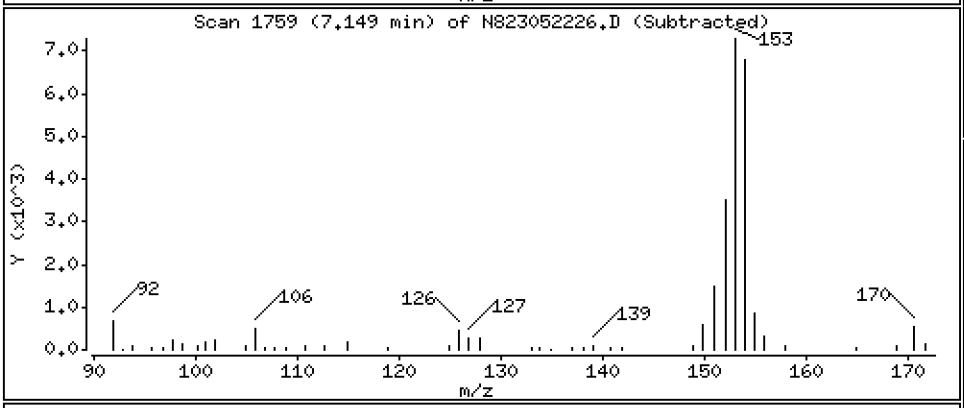
Column phase: Rxi-17sil

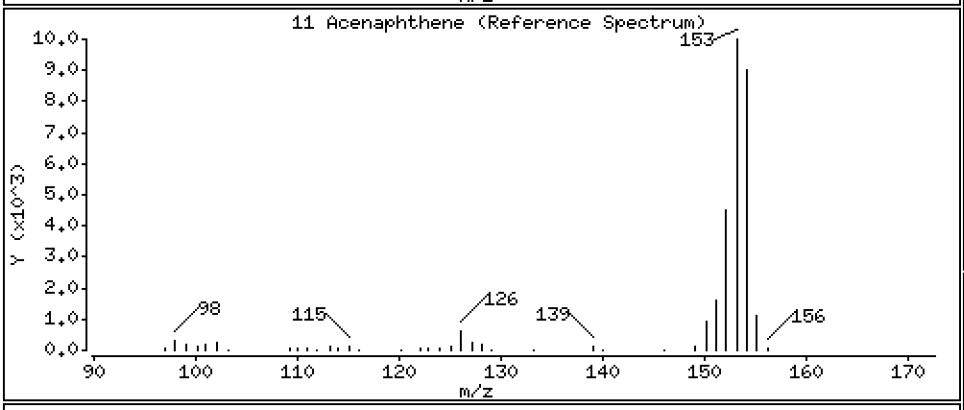
Column diameter: 0.25

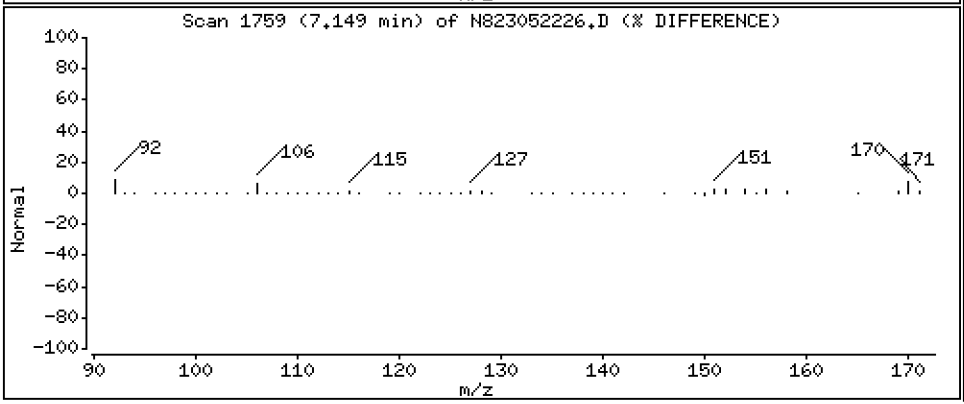
11 Acenaphthene

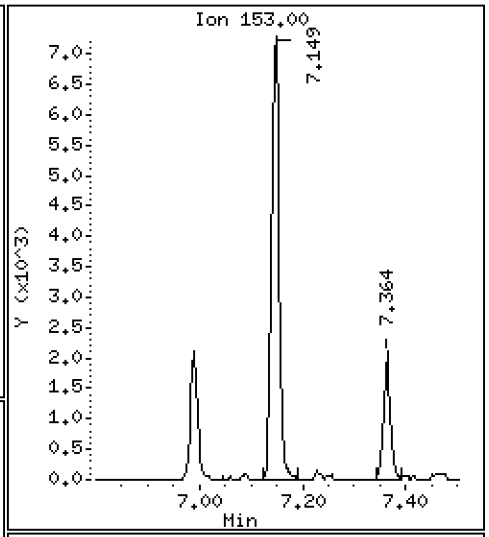
Concentration: 3.158 ug/mL

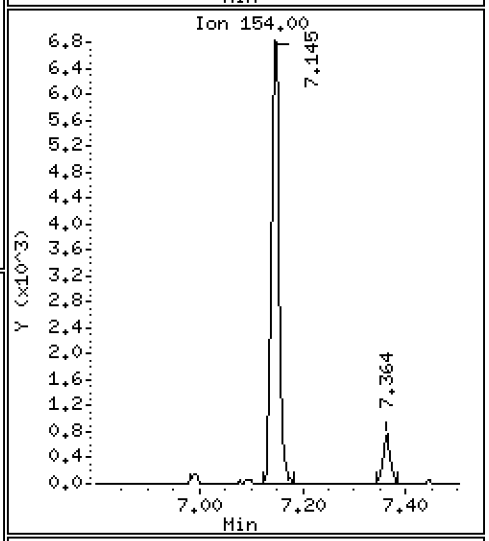


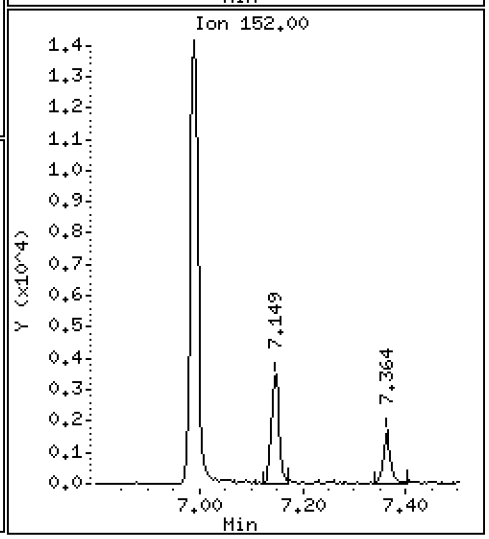












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

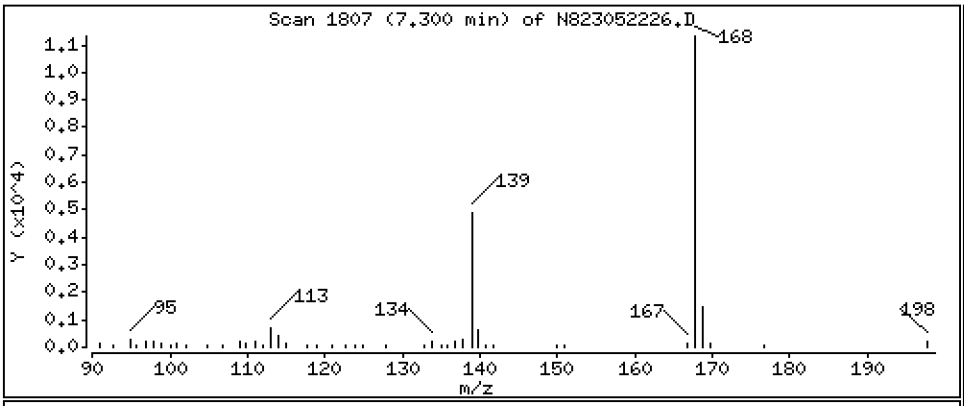
Operator: JZ

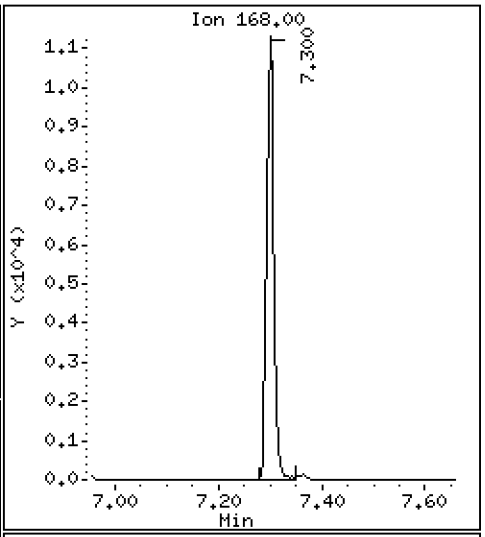
Column phase: Rxi-17sil

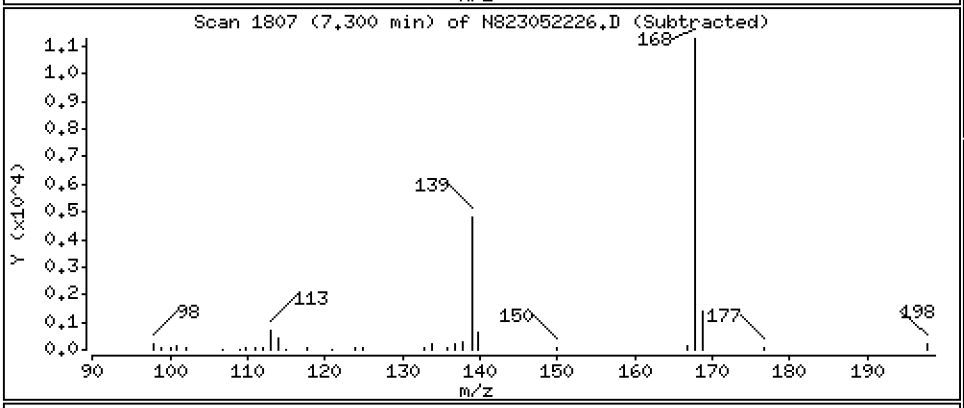
Column diameter: 0.25

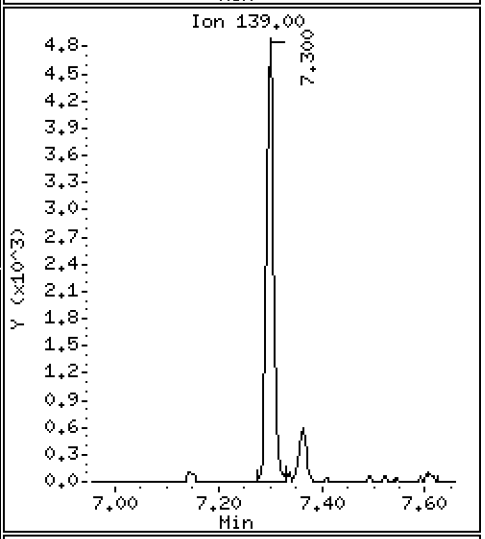
12 Dibenzofuran

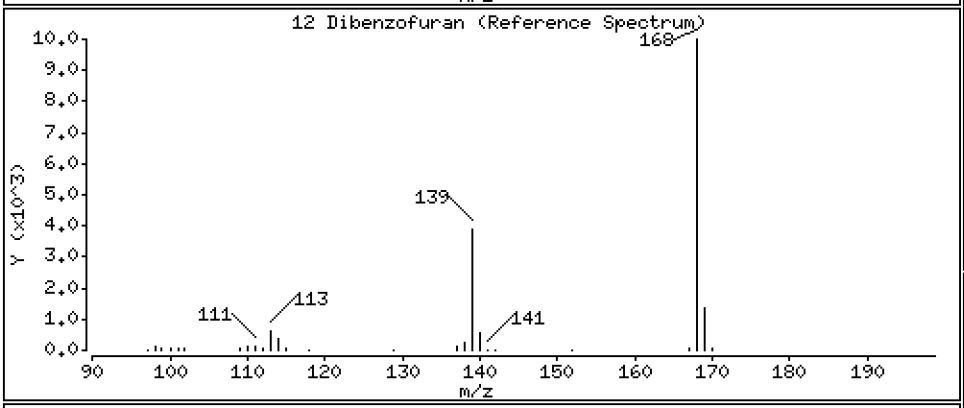
Concentration: 3.181 ug/mL

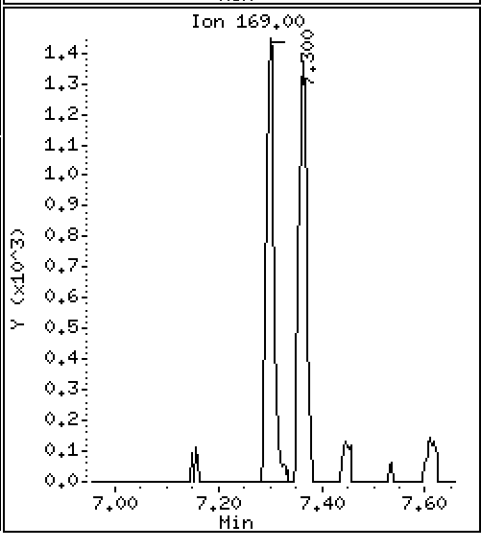


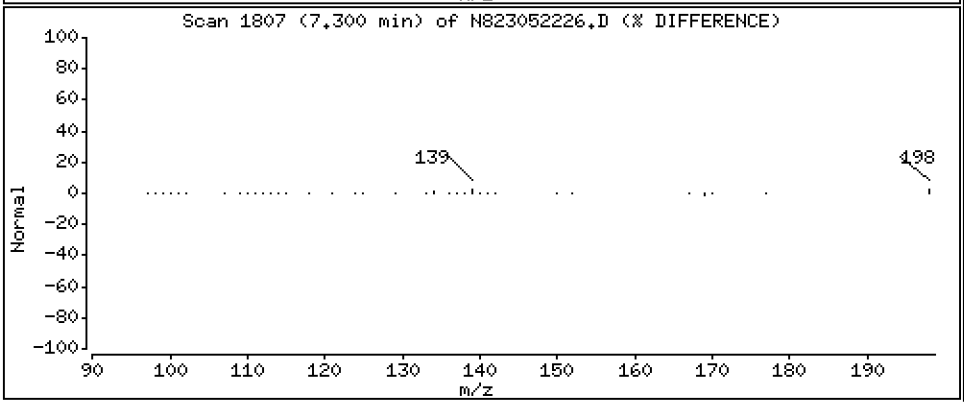












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

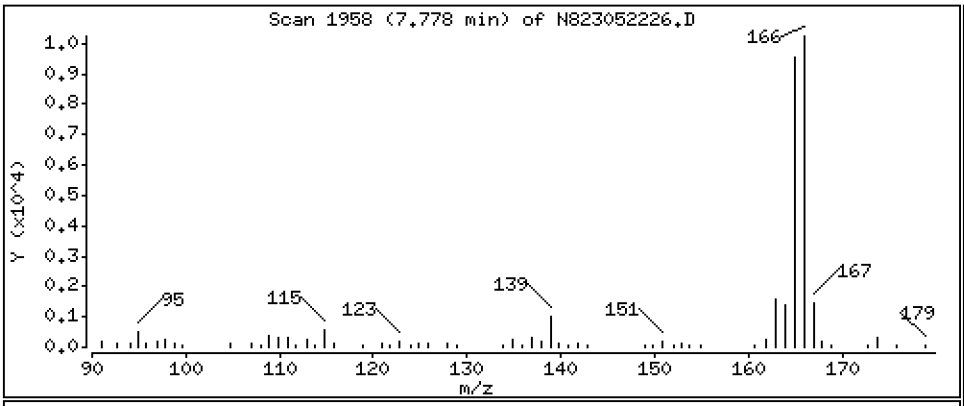
Operator: JZ

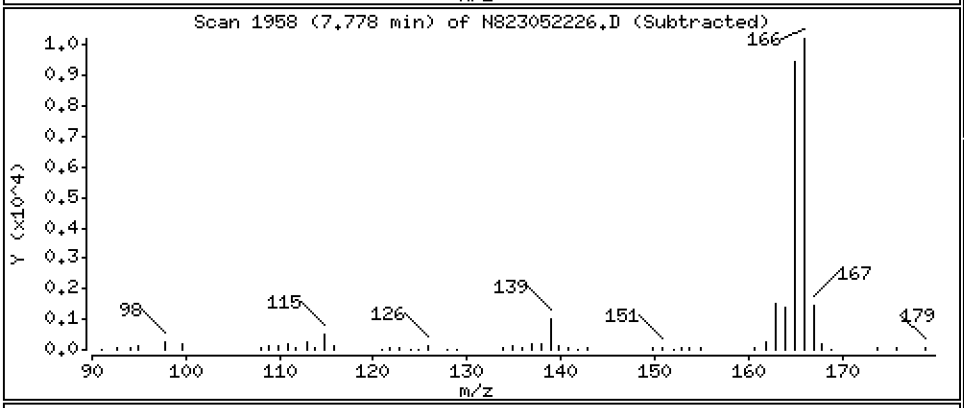
Column phase: Rxi-17sil

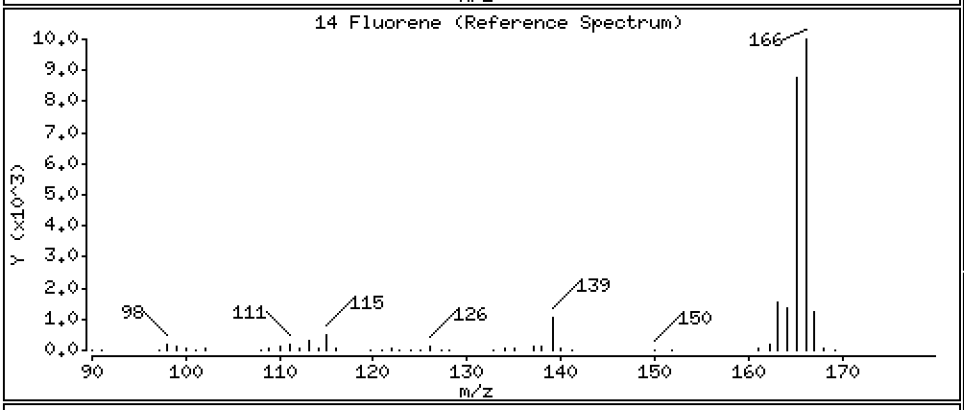
Column diameter: 0.25

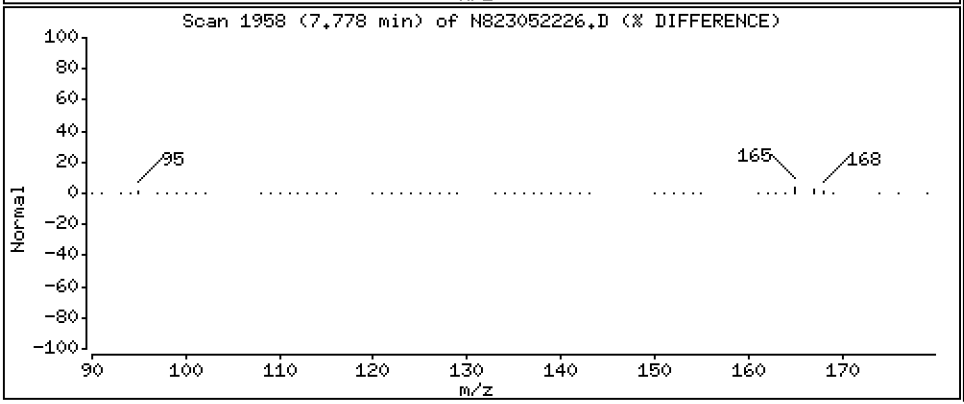
14 Fluorene

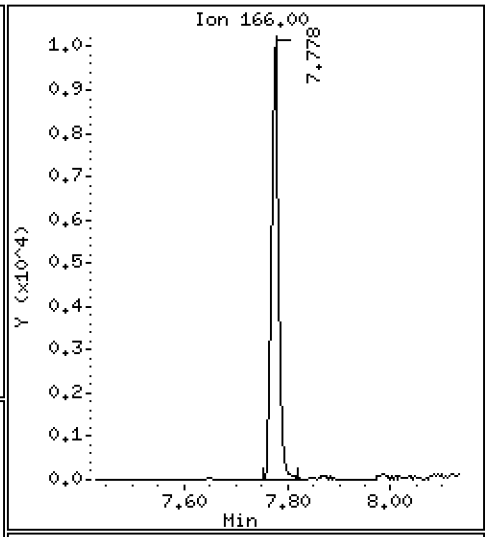
Concentration: 3.554 ug/mL

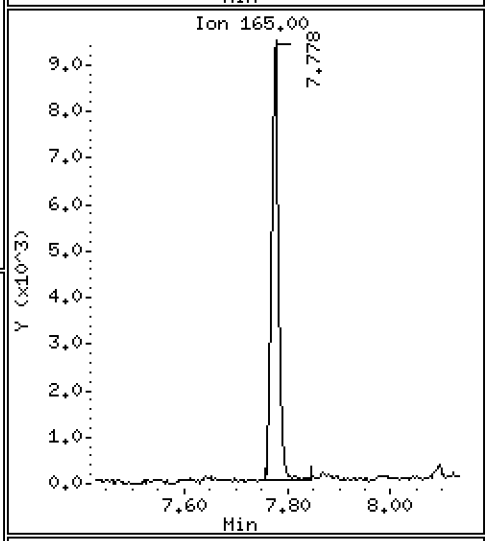


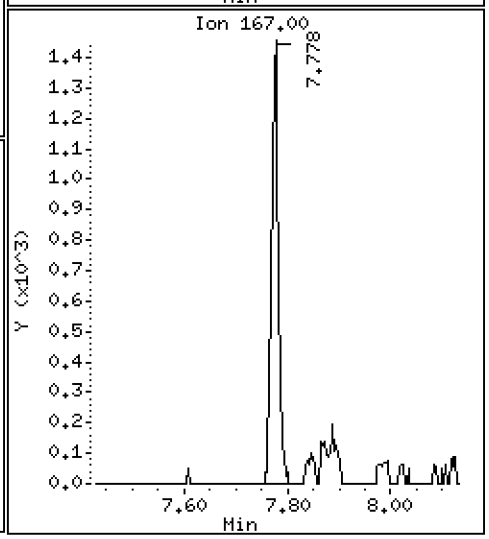












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

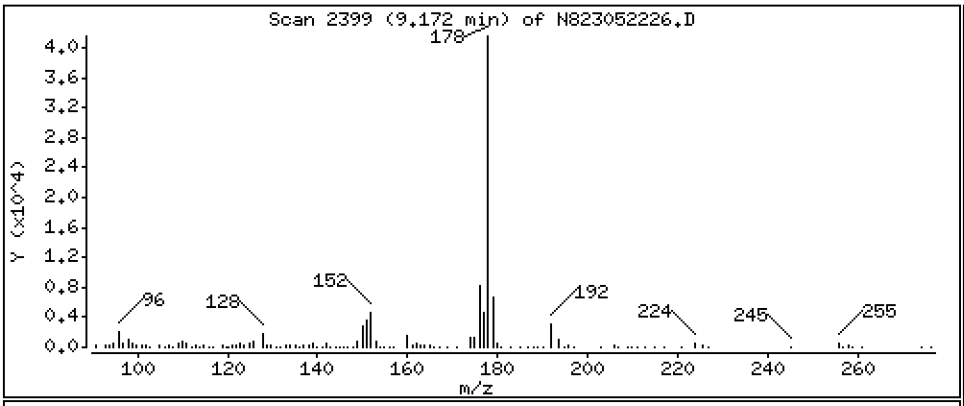
Operator: JZ

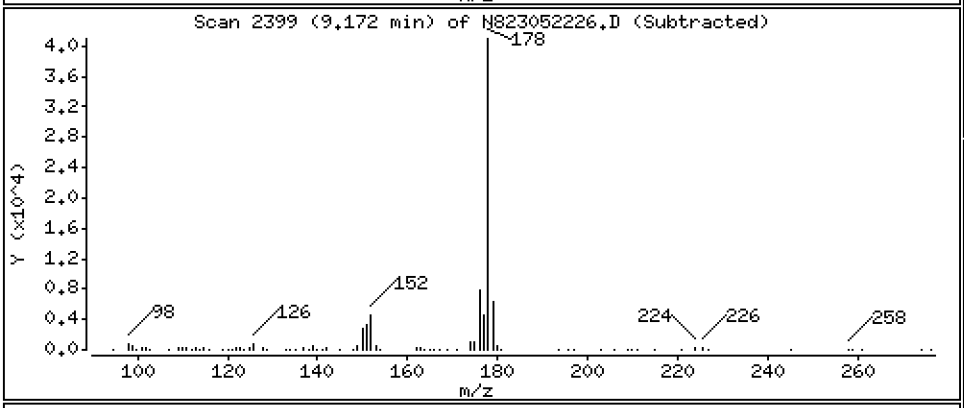
Column phase: Rxi-17sil

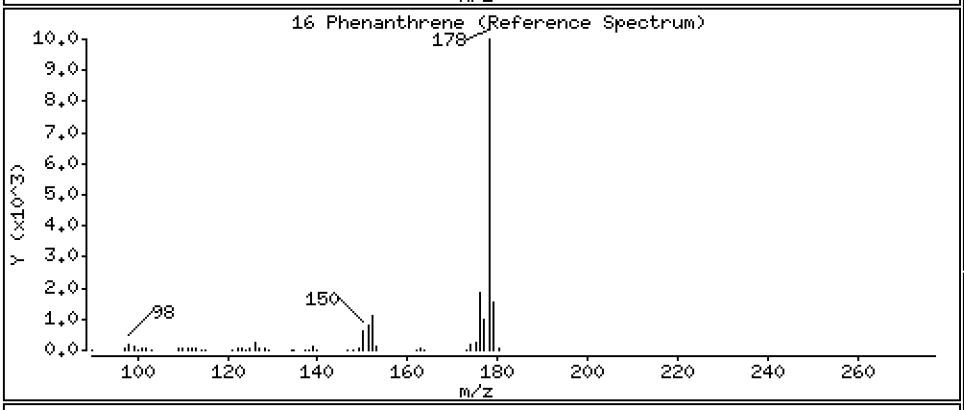
Column diameter: 0.25

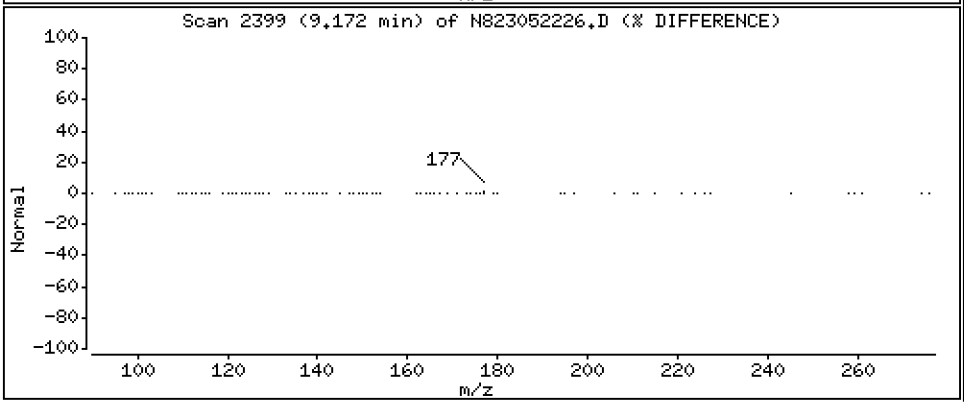
16 Phenanthrene

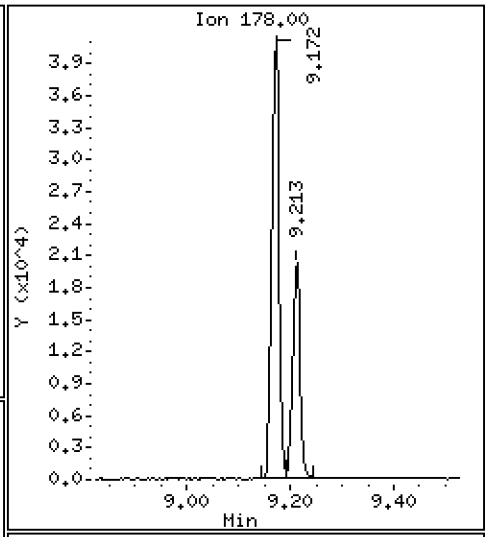
Concentration: 10.41 ug/mL

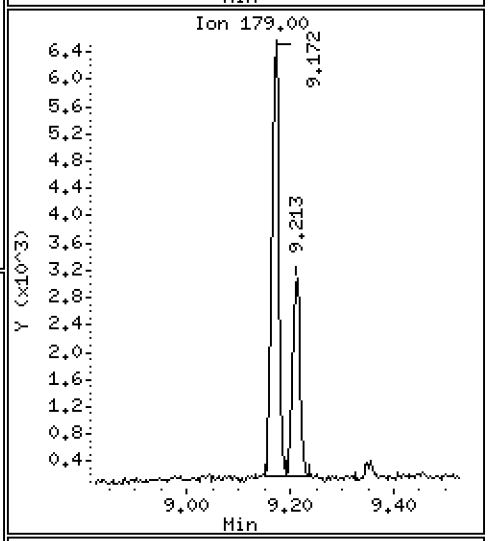


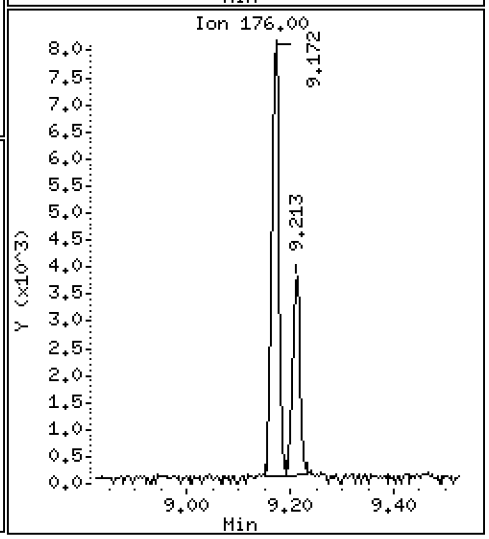












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

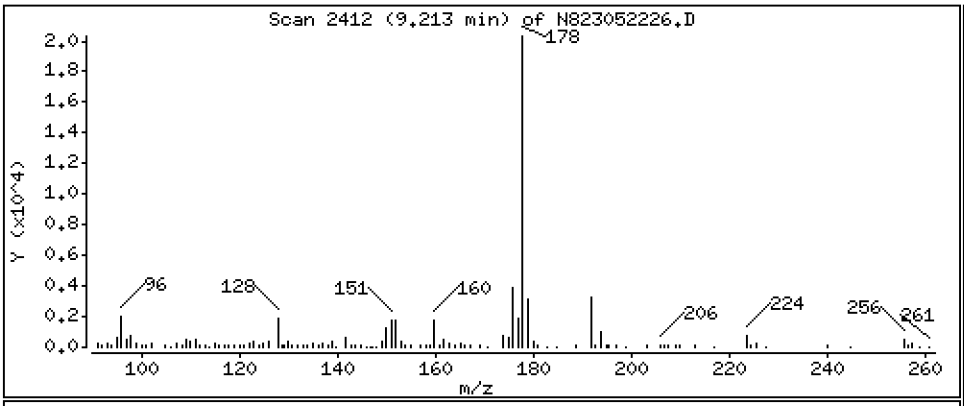
Operator: JZ

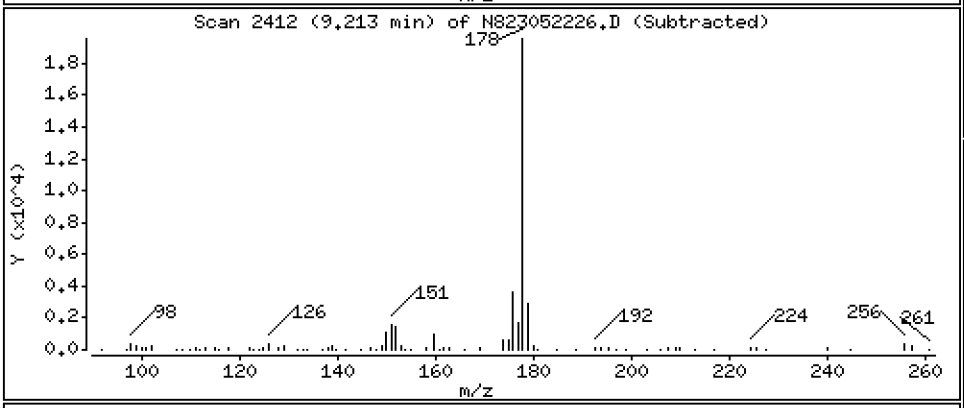
Column phase: Rxi-17sil

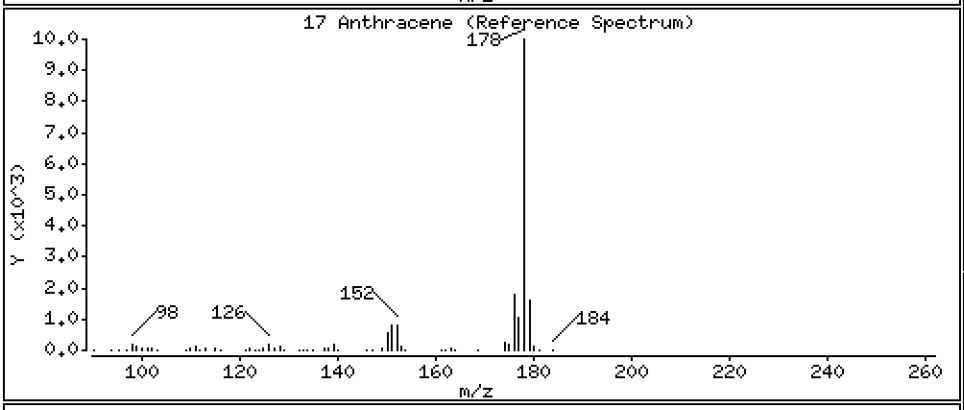
Column diameter: 0.25

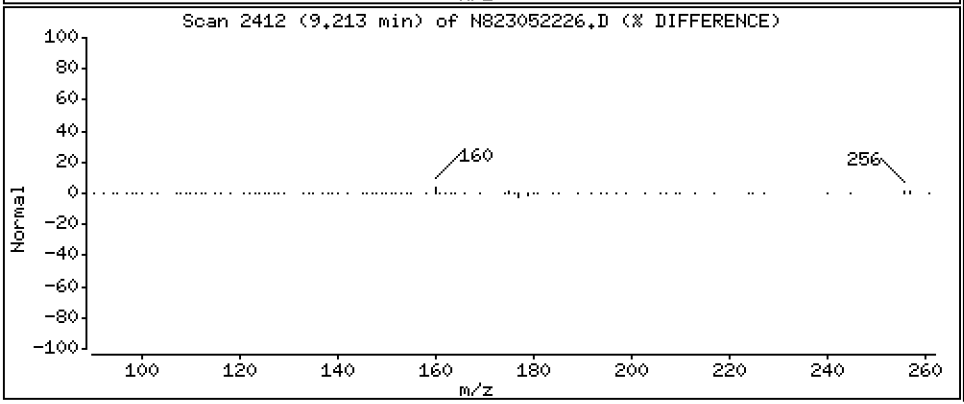
17 Anthracene

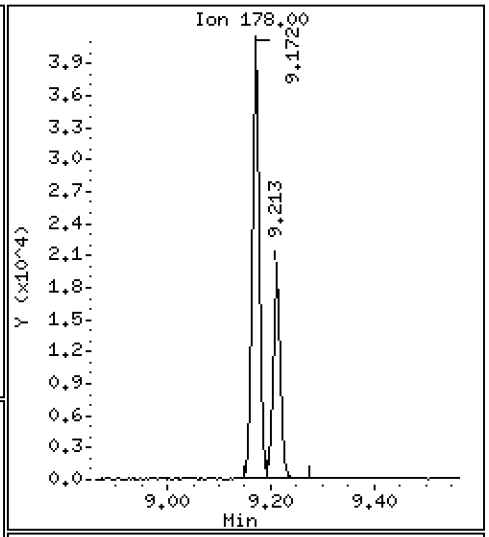
Concentration: 5.508 ug/mL

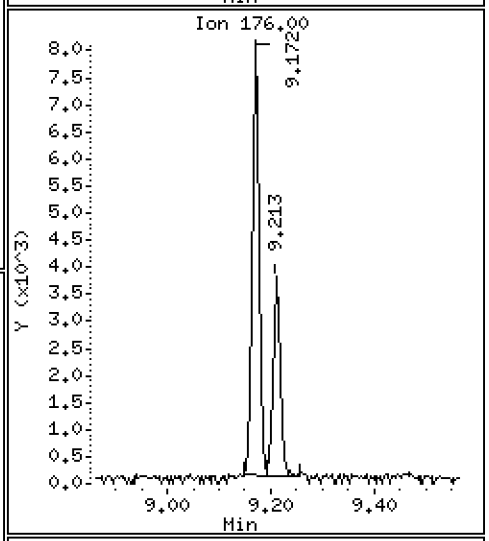


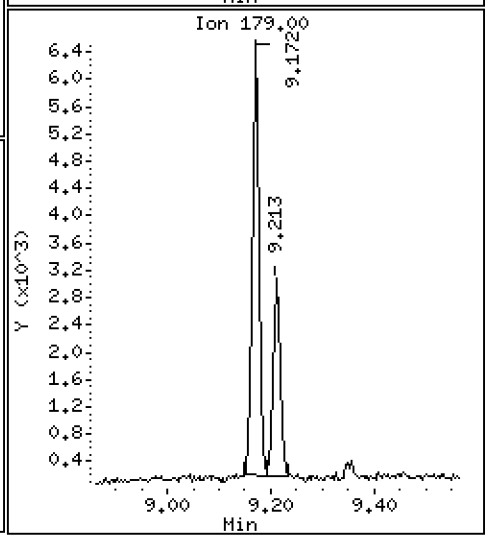












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

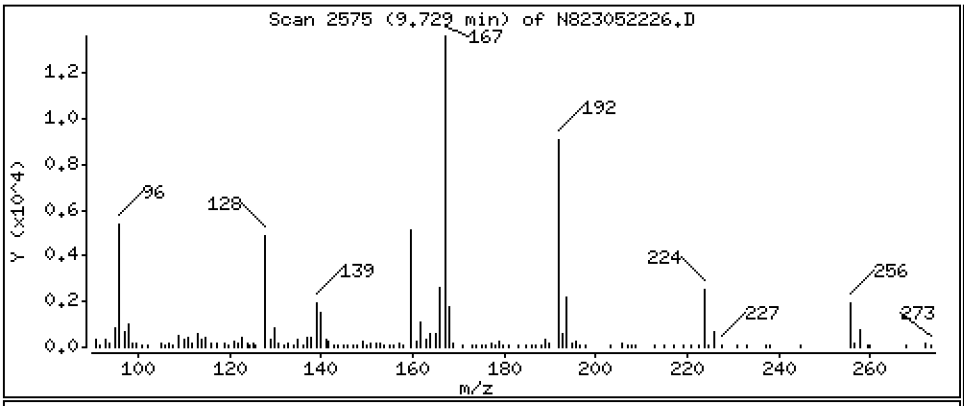
Operator: JZ

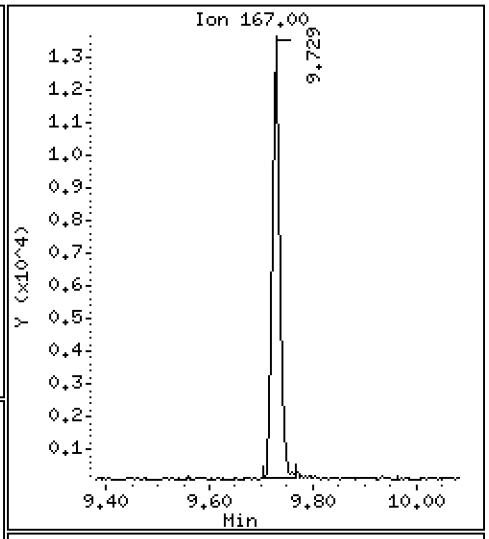
Column phase: Rxi-17sil

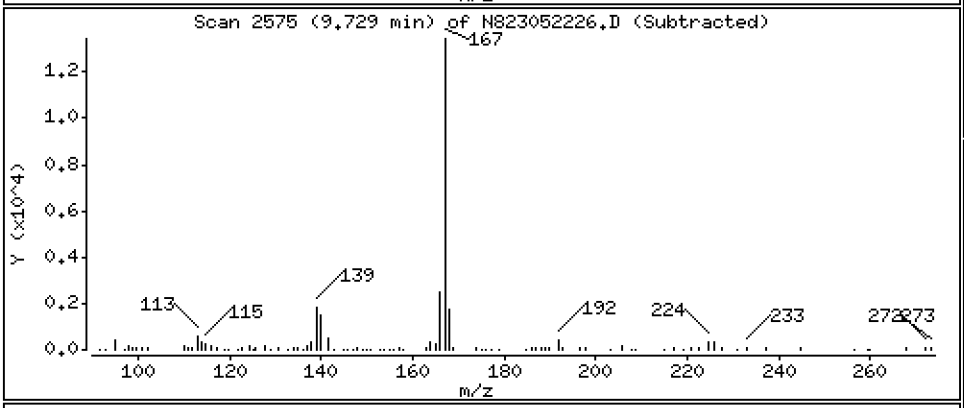
Column diameter: 0.25

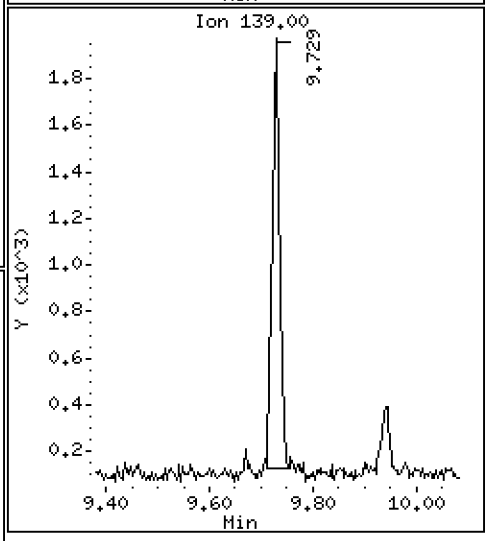
19 Carbazole

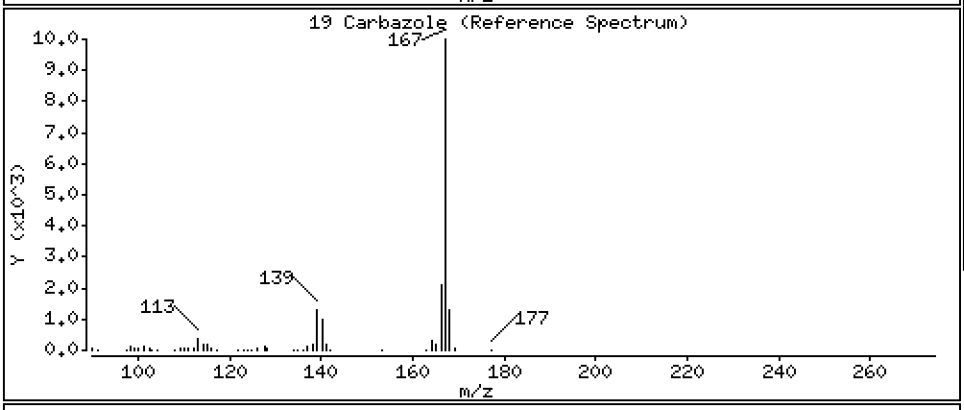
Concentration: 4.043 ug/mL

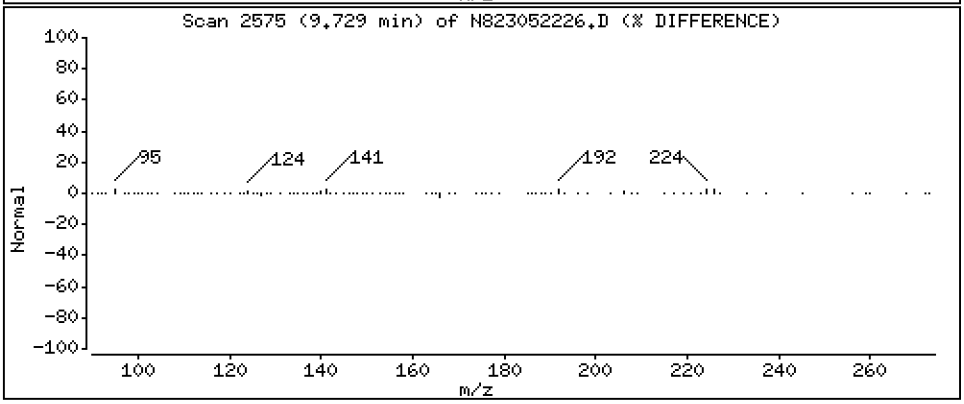












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

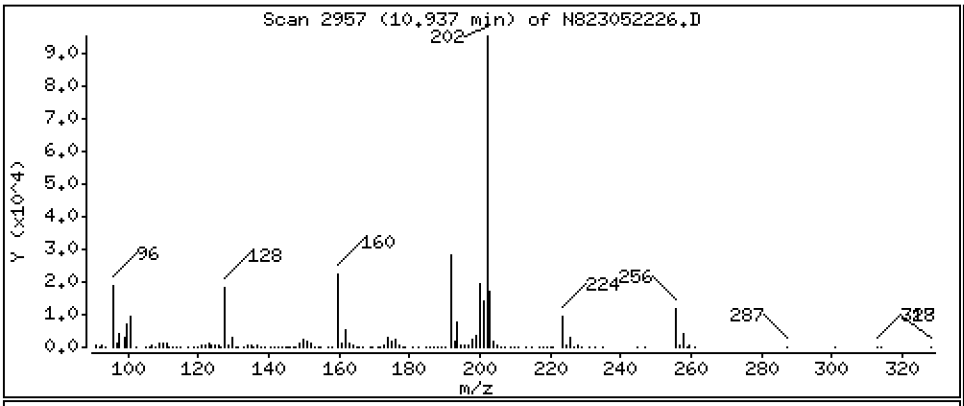
Operator: JZ

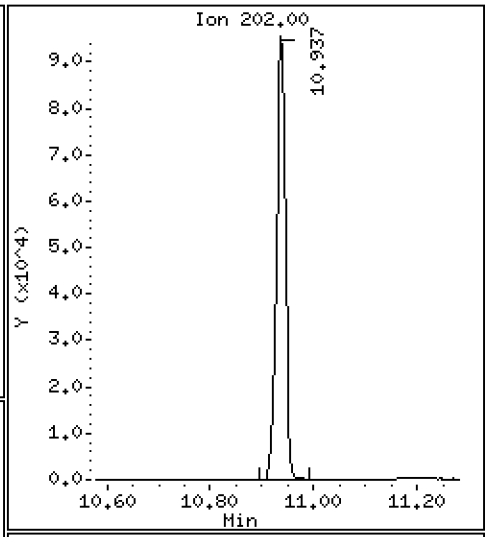
Column phase: Rxi-17sil

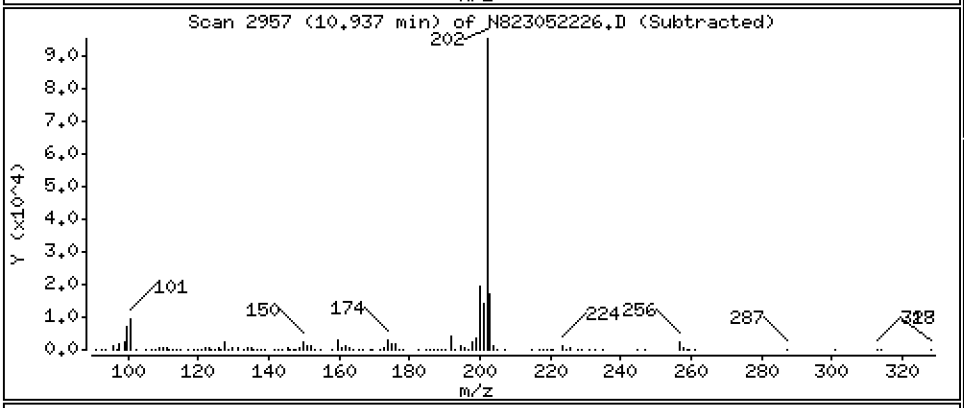
Column diameter: 0.25

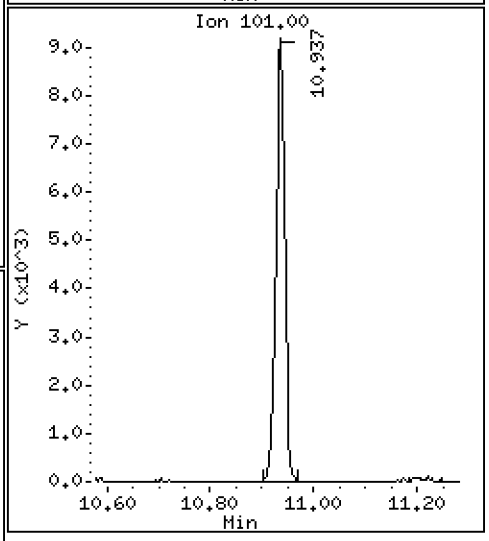
22 Fluoranthene

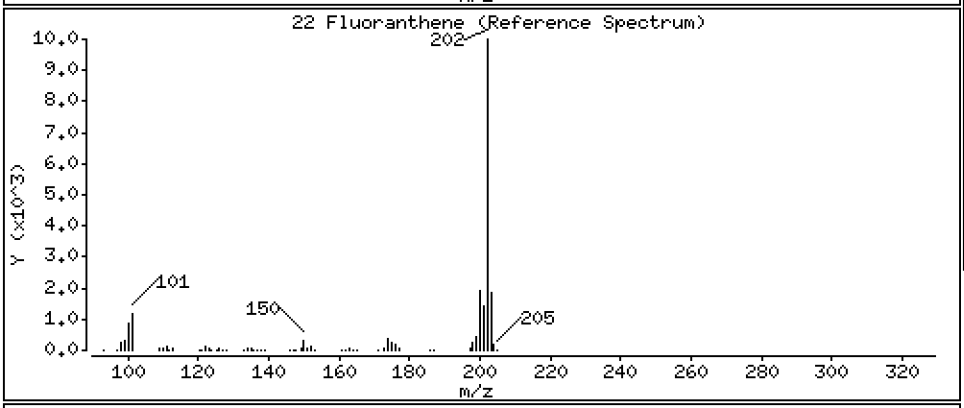
Concentration: 26.37 ug/mL

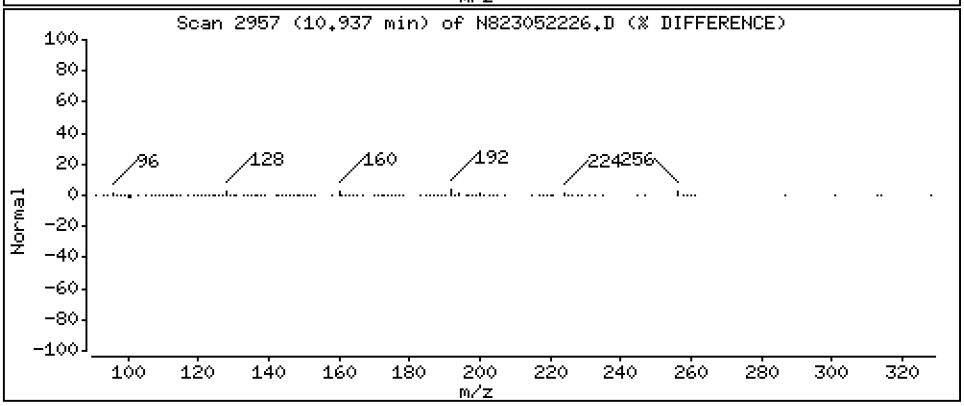












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

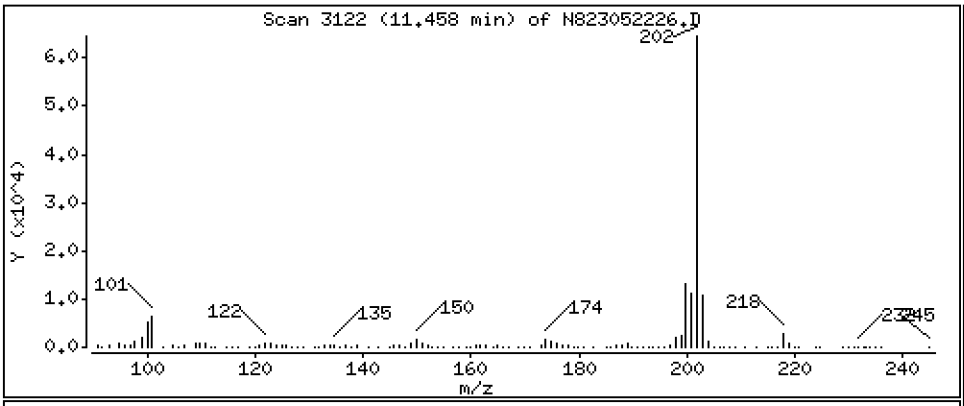
Operator: JZ

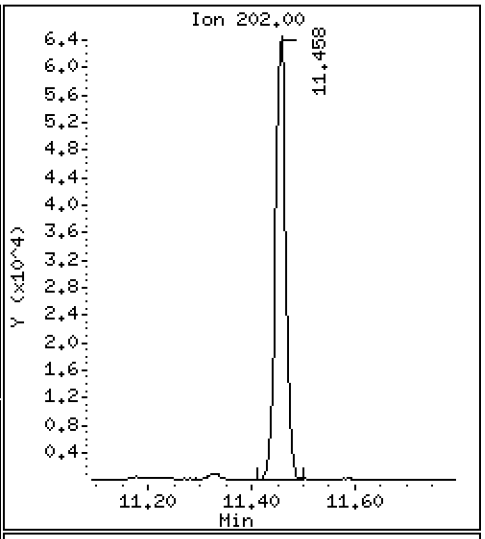
Column phase: Rxi-17sil

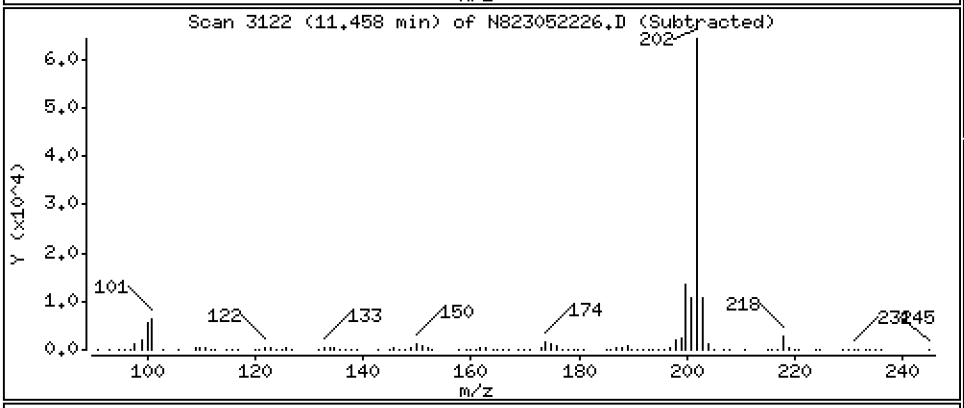
Column diameter: 0.25

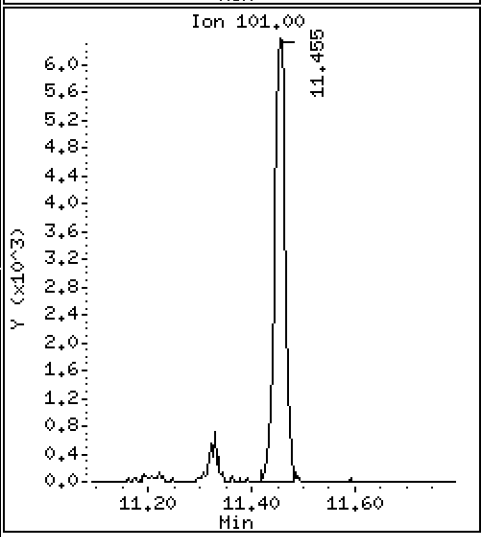
23 Pyrene

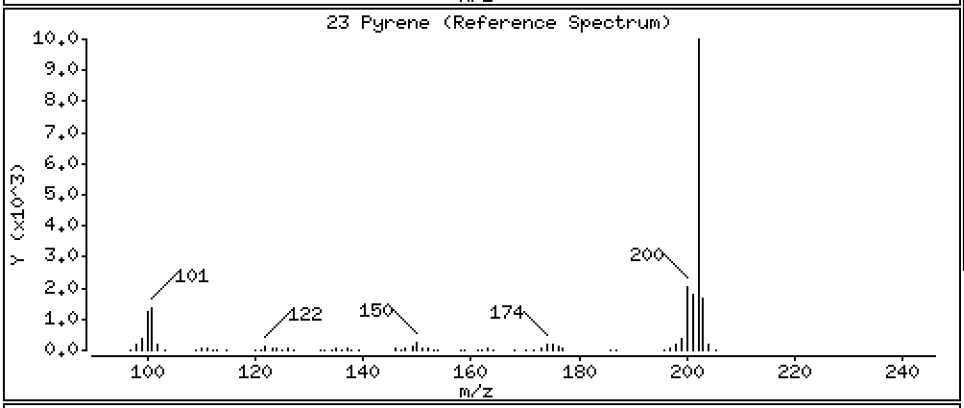
Concentration: 39.61 ug/mL

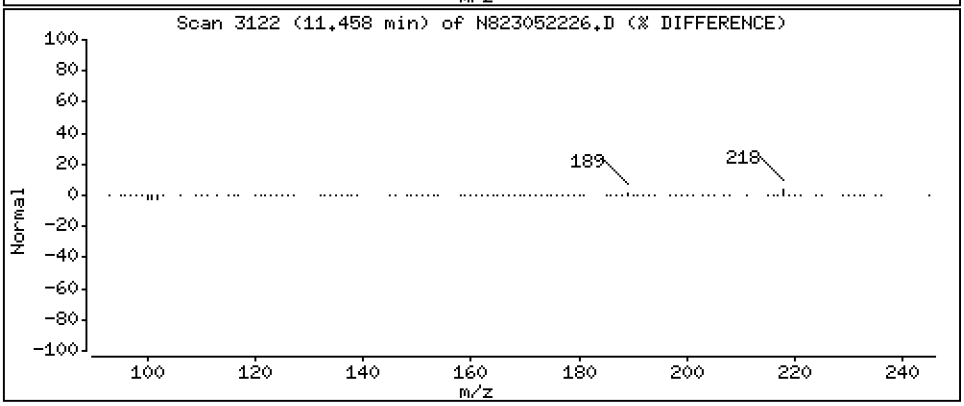












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

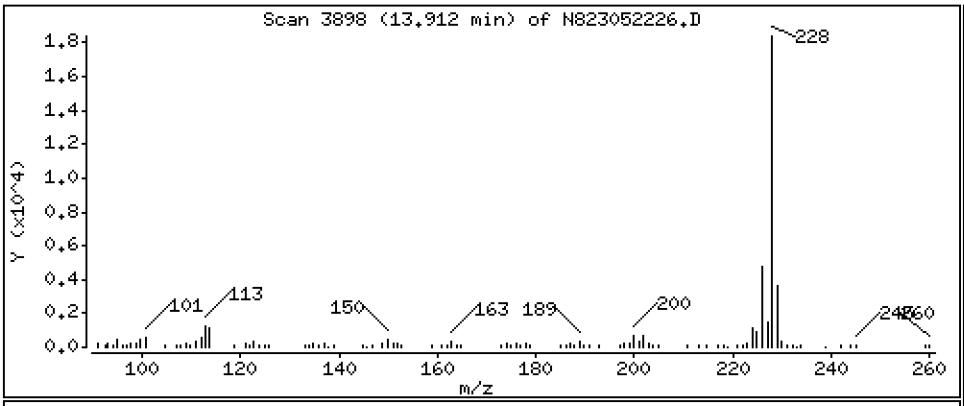
Operator: JZ

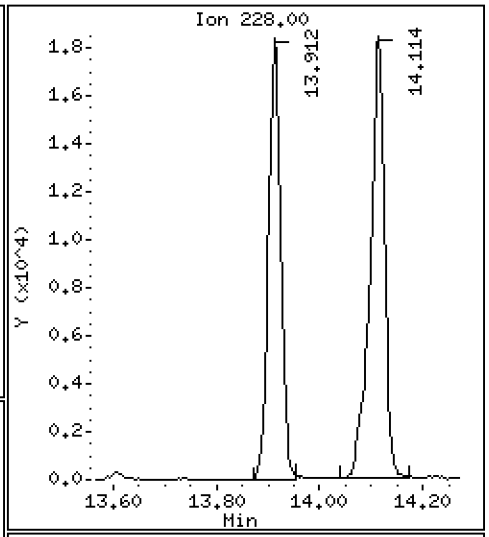
Column phase: Rxi-17sil

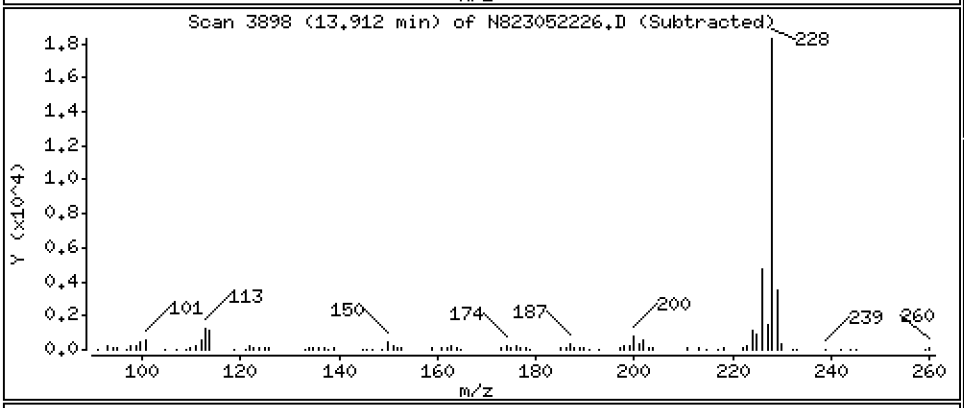
Column diameter: 0.25

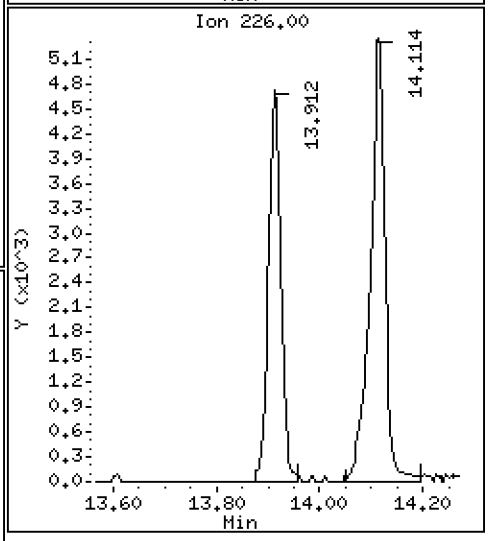
24 Benzo(a)anthracene

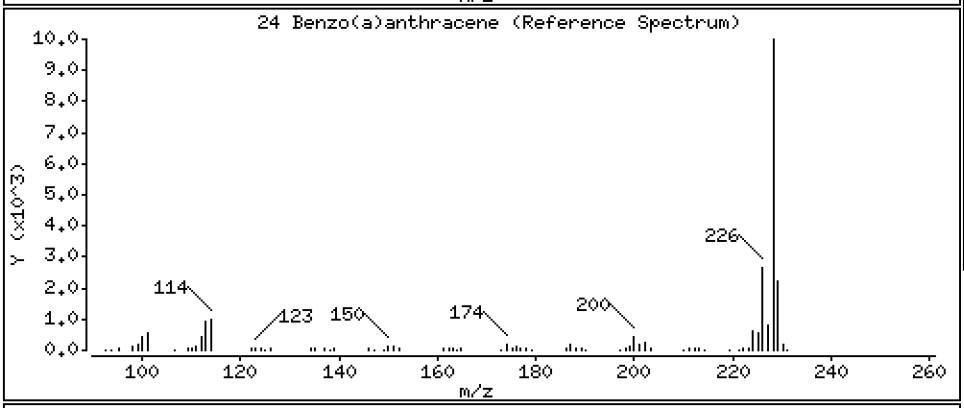
Concentration: 13.11 ug/mL

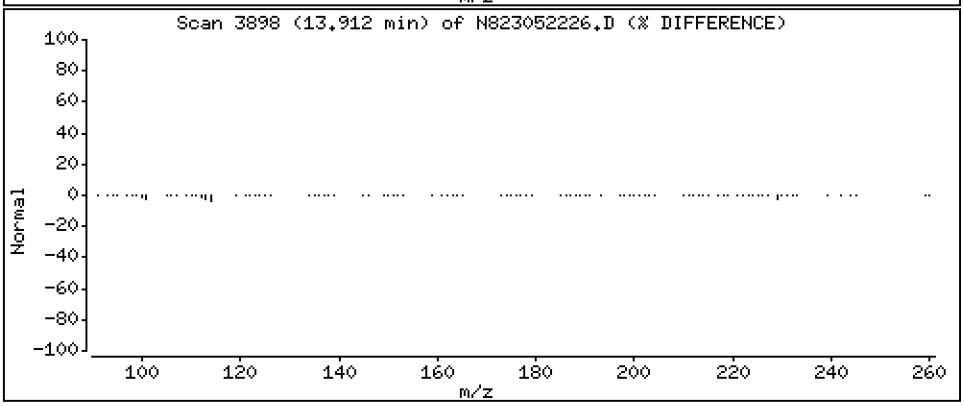












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

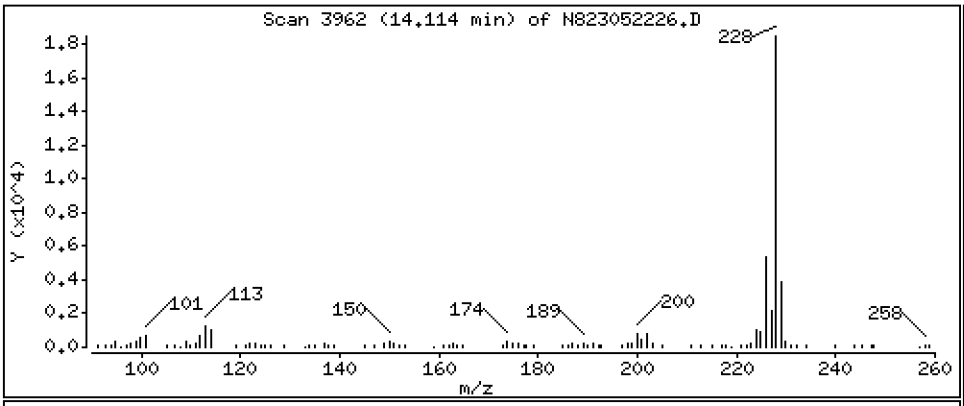
Operator: JZ

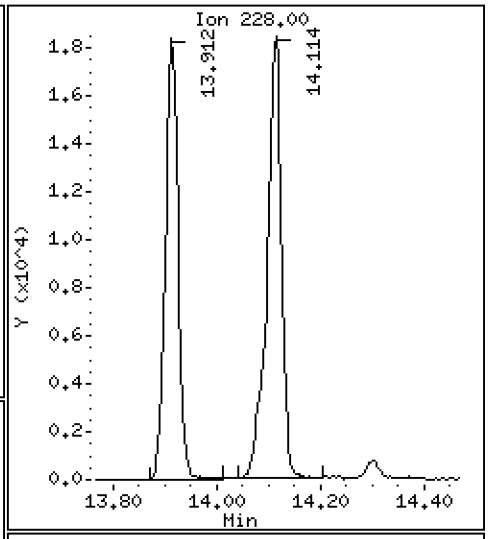
Column phase: Rxi-17sil

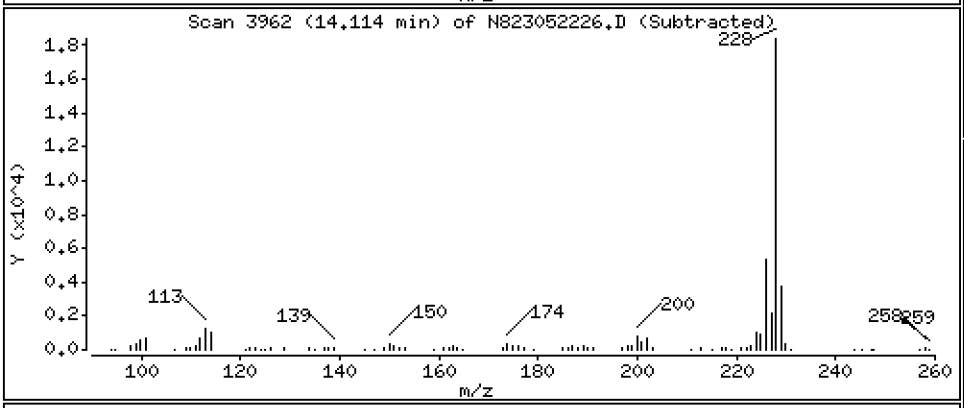
Column diameter: 0.25

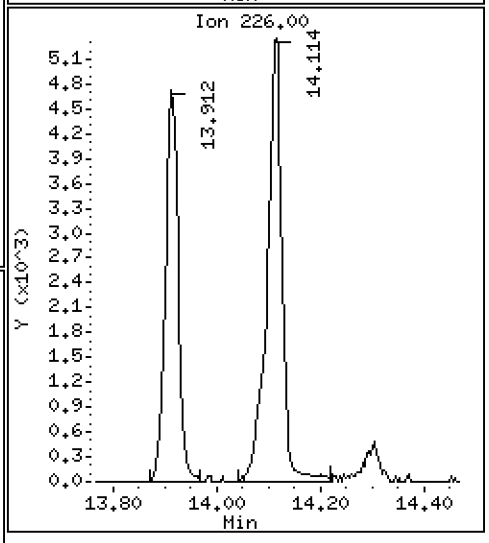
27 Chrysene

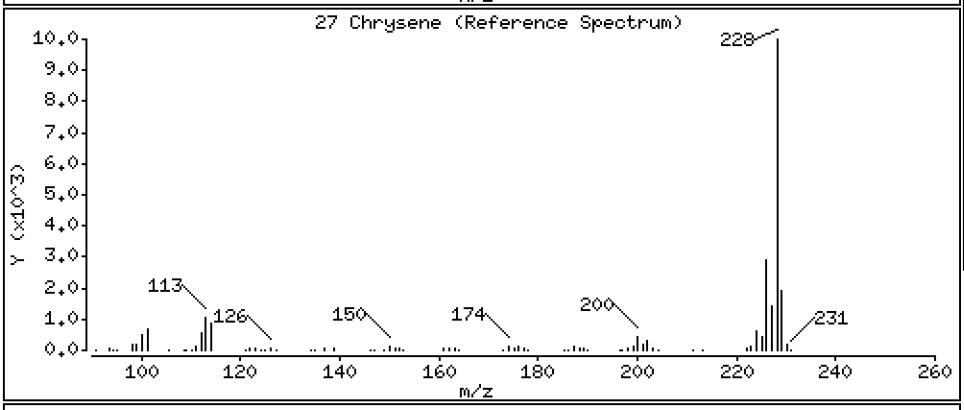
Concentration: 15.33 ug/mL

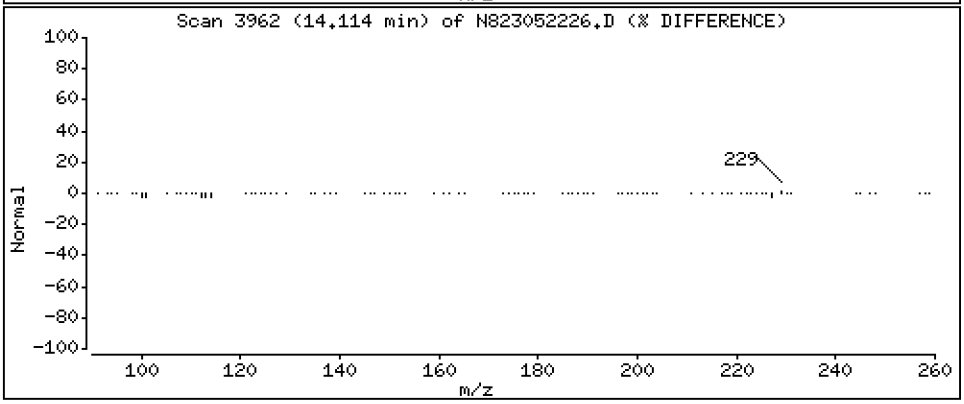












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

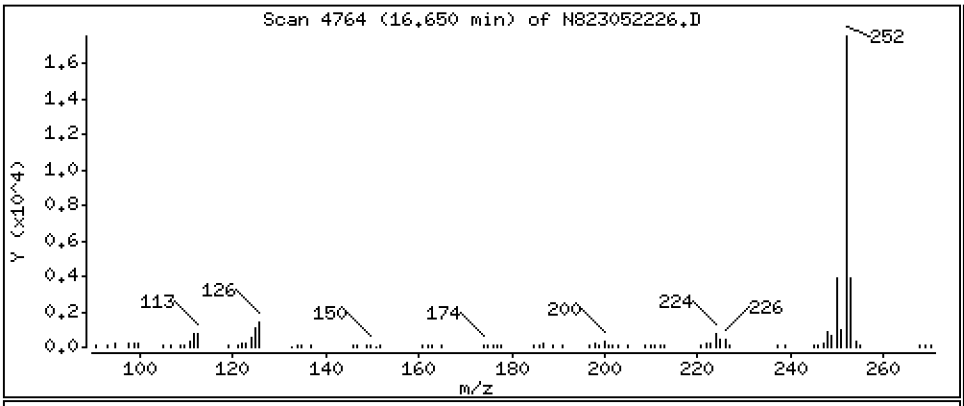
Operator: JZ

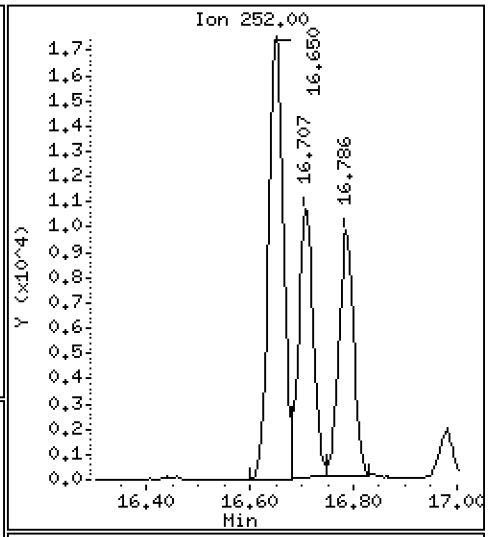
Column phase: Rxi-17sil

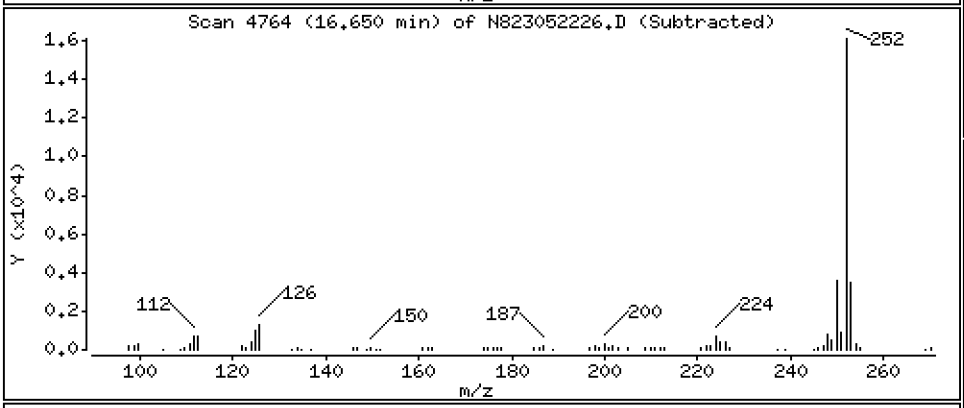
Column diameter: 0.25

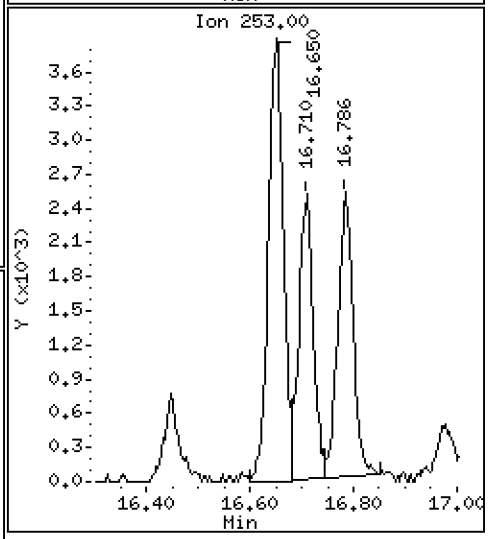
28 Benzo(b)fluoranthene

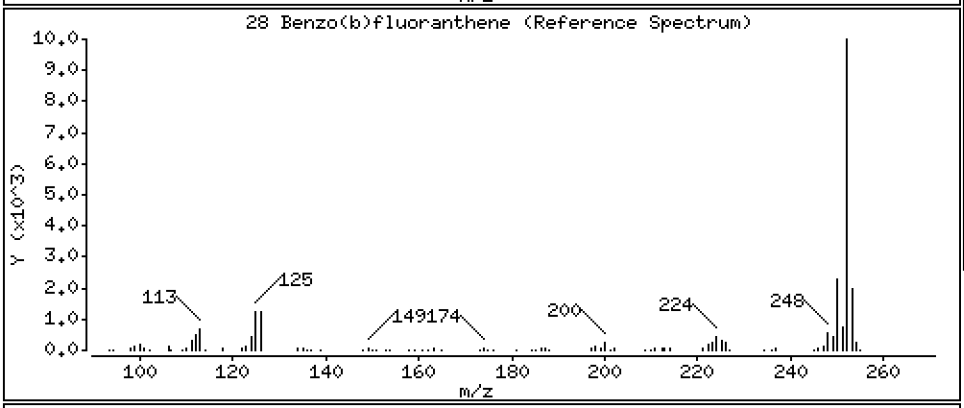
Concentration: 12.74 ug/mL

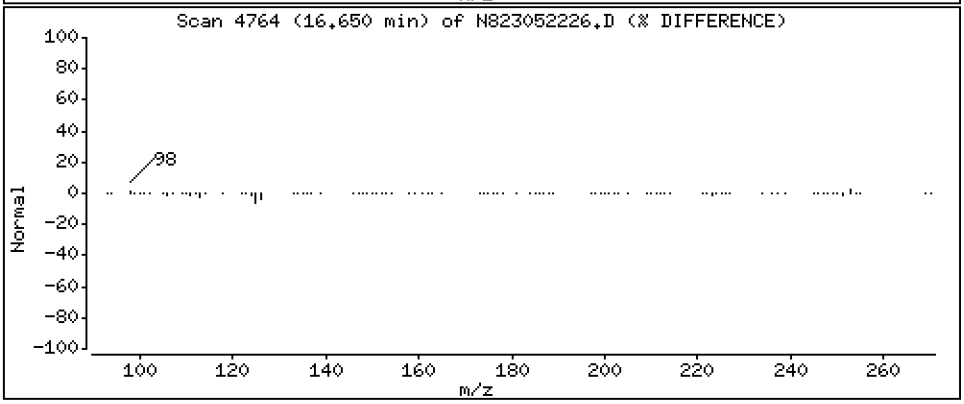












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

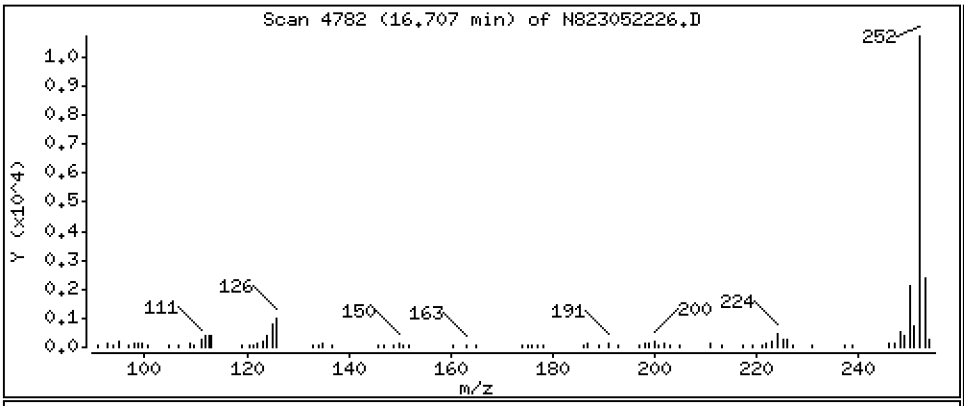
Operator: JZ

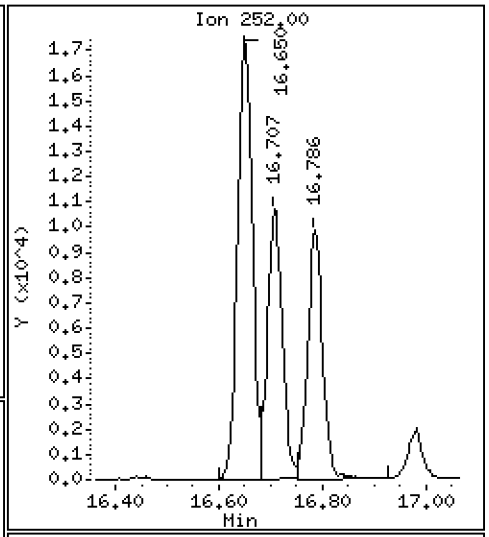
Column phase: Rxi-17sil

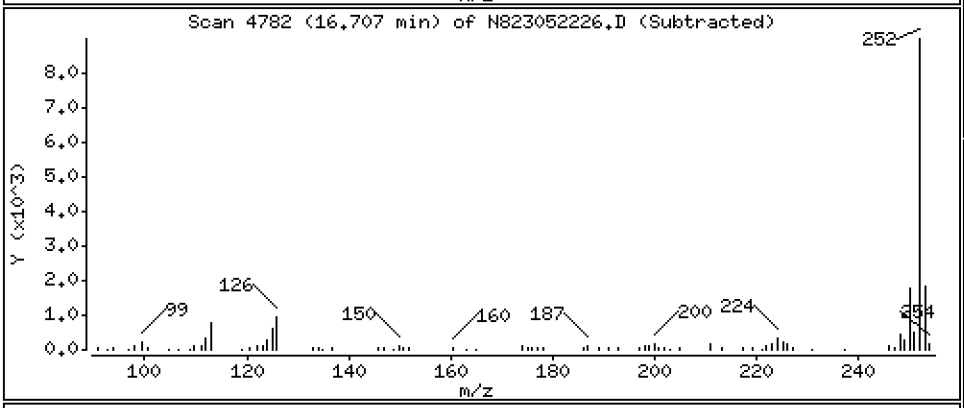
Column diameter: 0.25

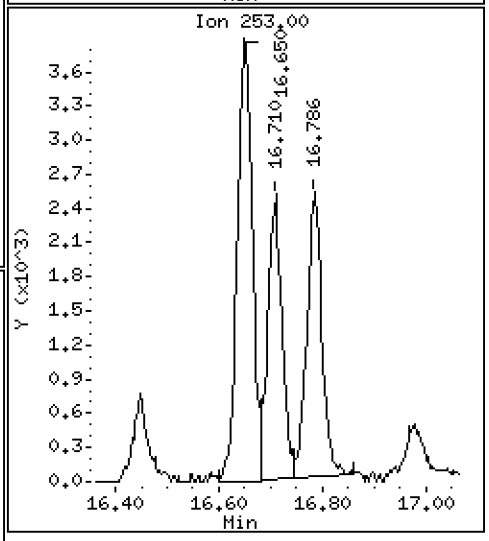
29 Benzo(k)fluoranthene

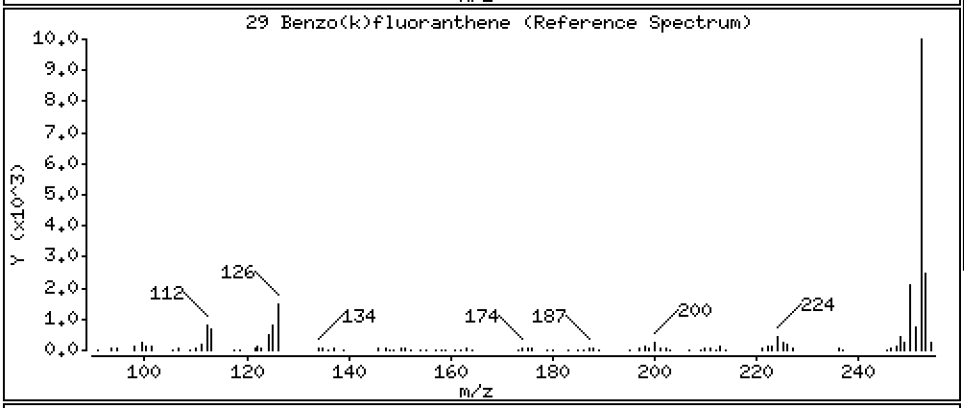
Concentration: 8.249 ug/mL

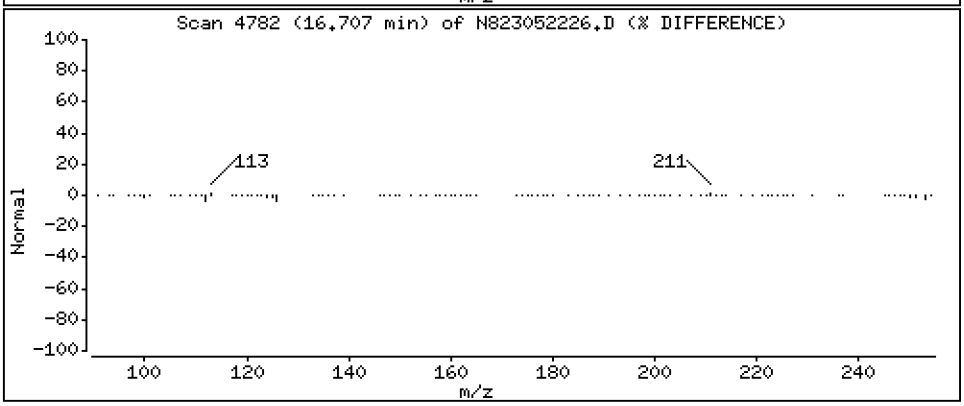












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

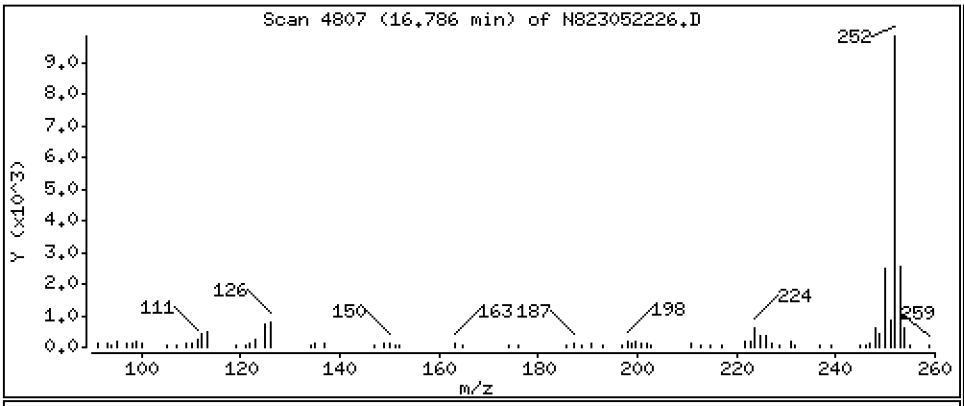
Operator: JZ

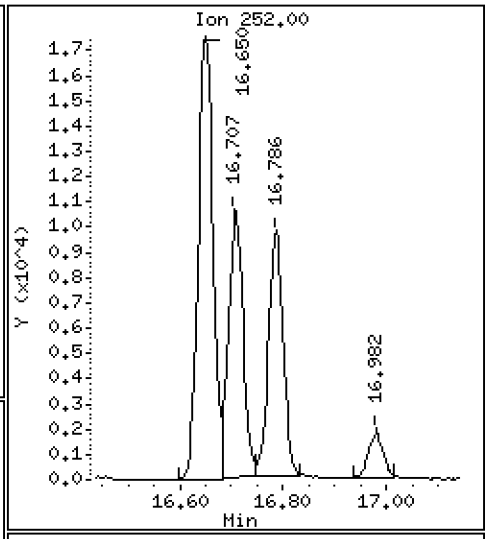
Column phase: Rxi-17sil

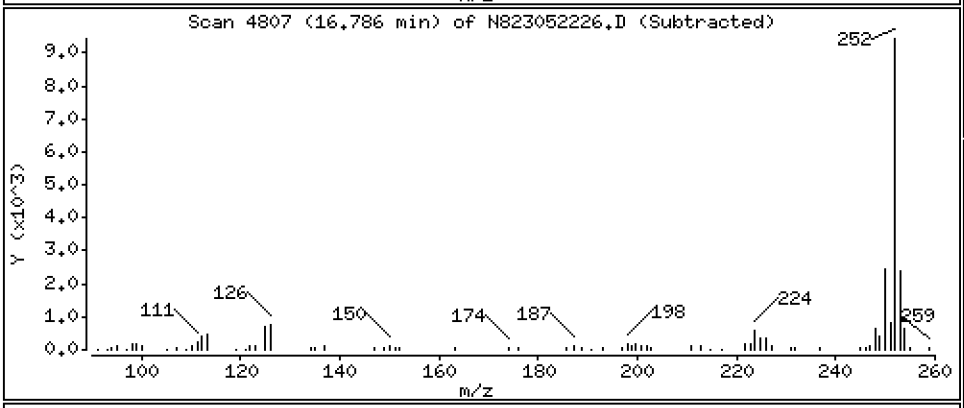
Column diameter: 0.25

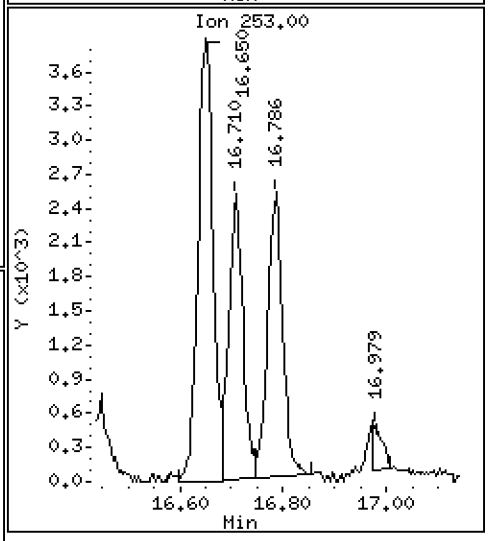
30 Benzo(j)fluoranthene

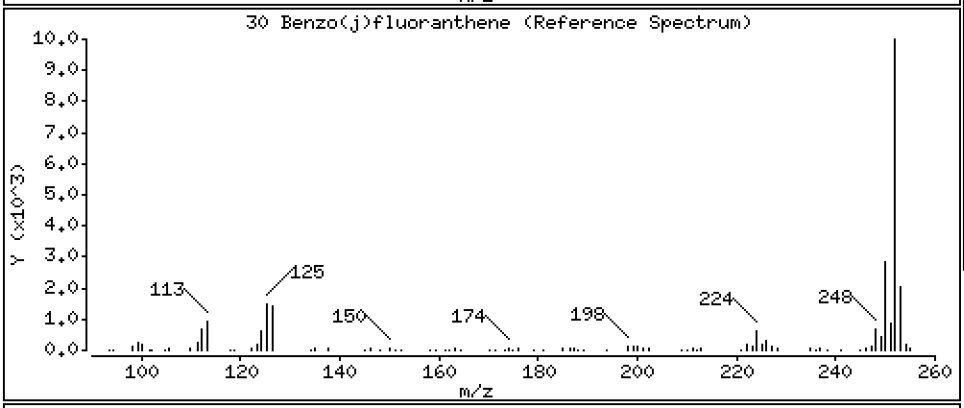
Concentration: 7.948 ug/mL

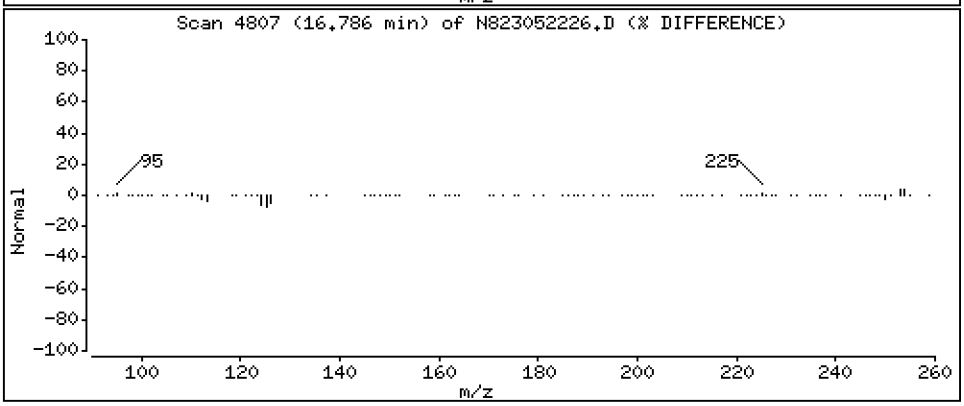












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

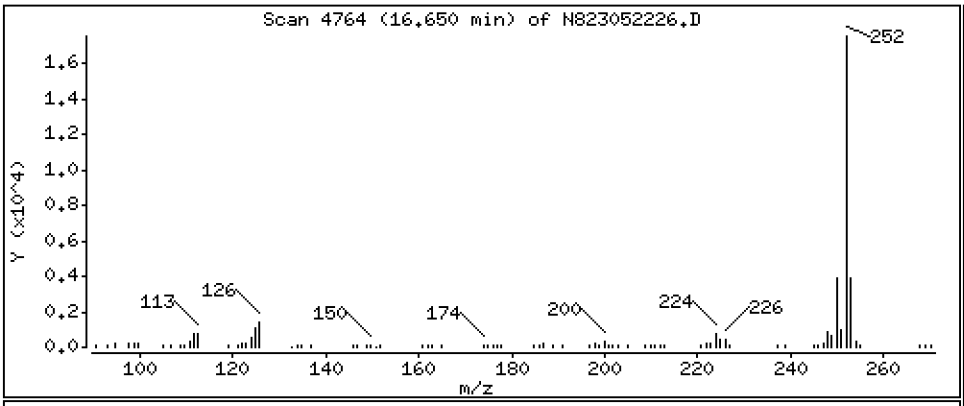
Operator: JZ

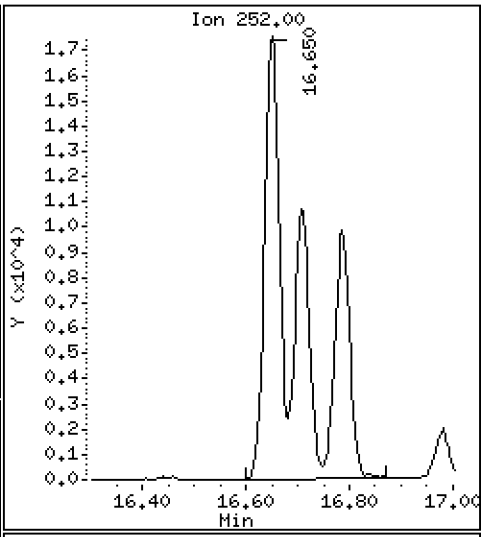
Column phase: Rxi-17sil

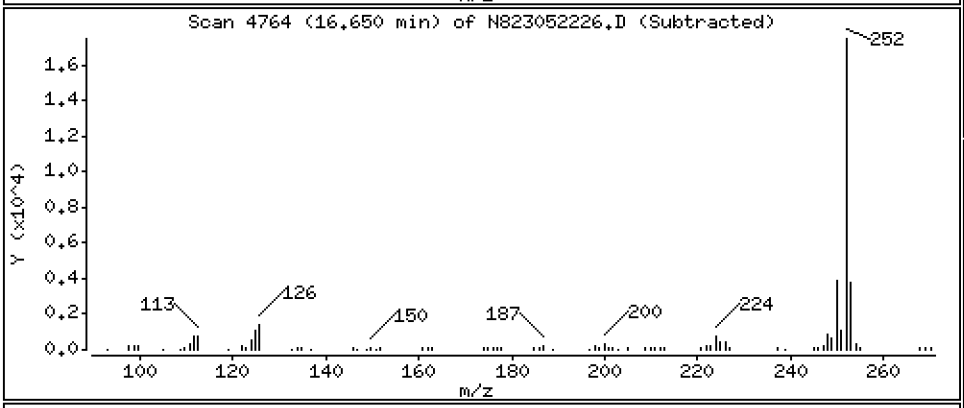
Column diameter: 0.25

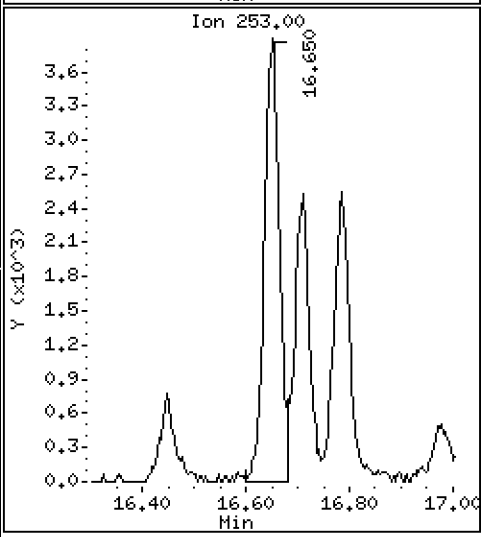
31 Total Benzofluoranthenes

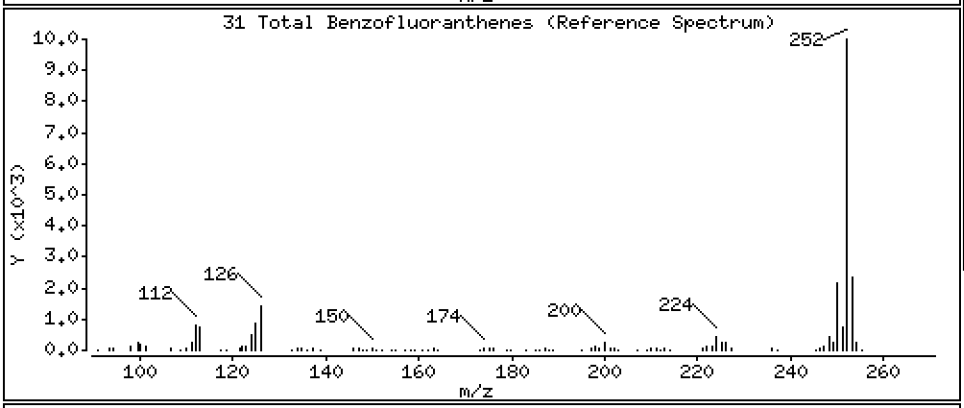
Concentration: 29.48 ug/mL

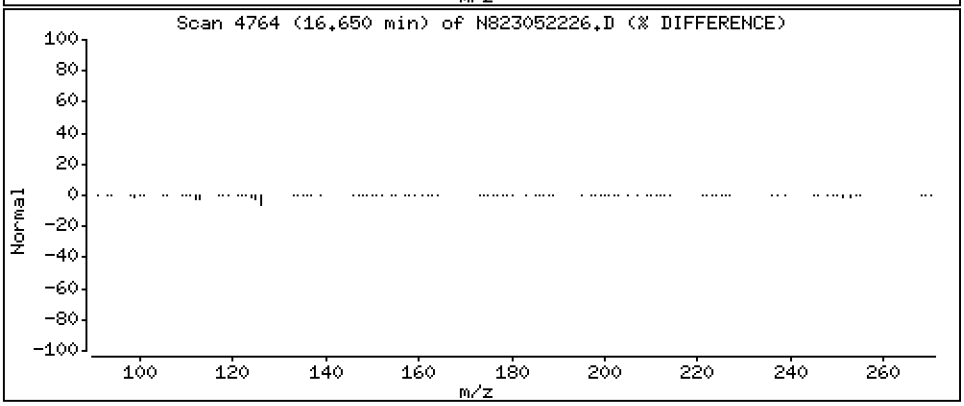












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

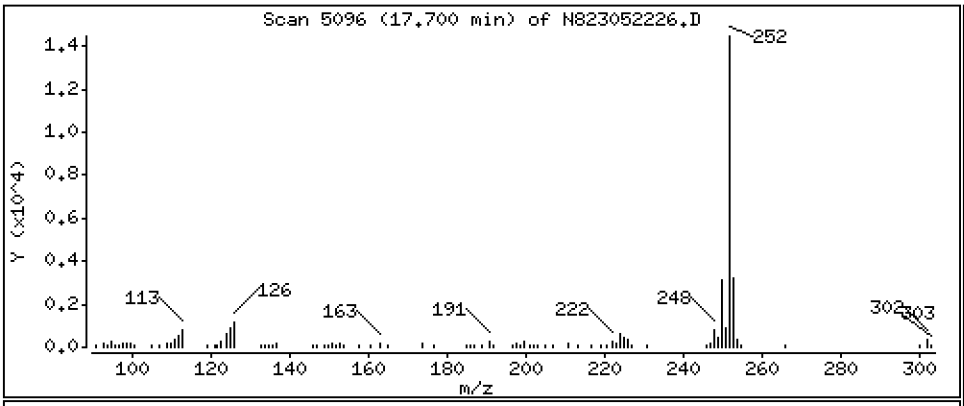
Operator: JZ

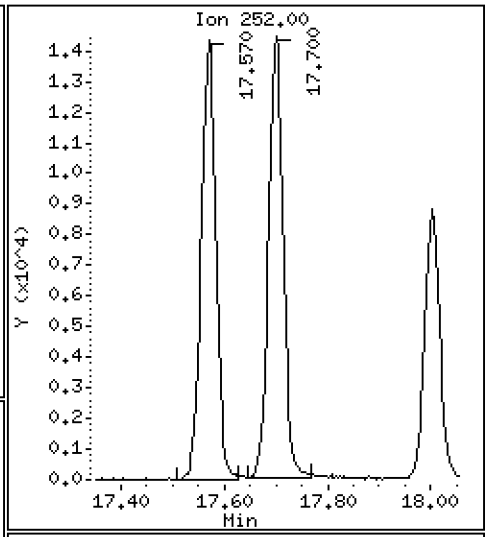
Column phase: Rxi-17sil

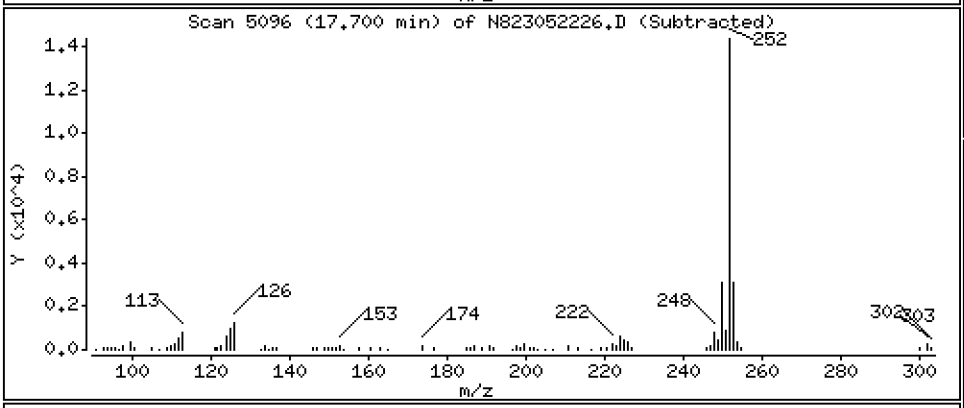
Column diameter: 0.25

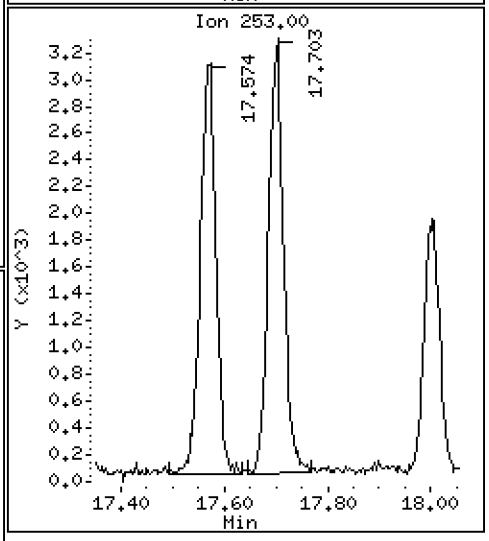
32 Benzo(a)pyrene

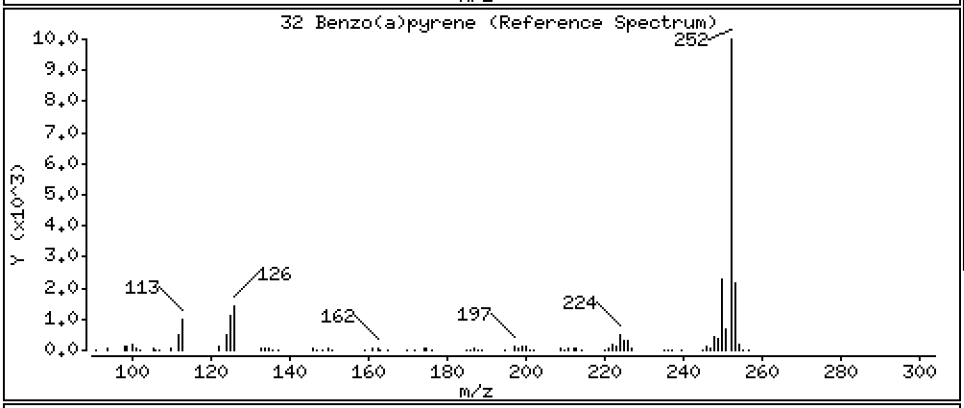
Concentration: 11.81 ug/mL

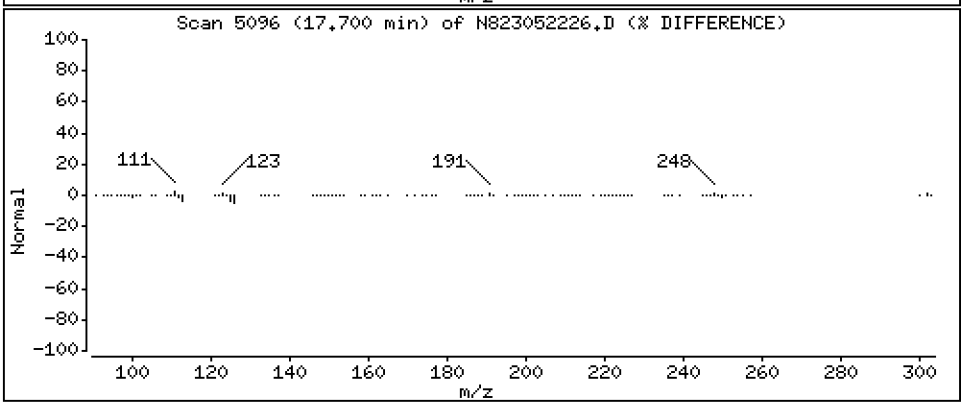












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

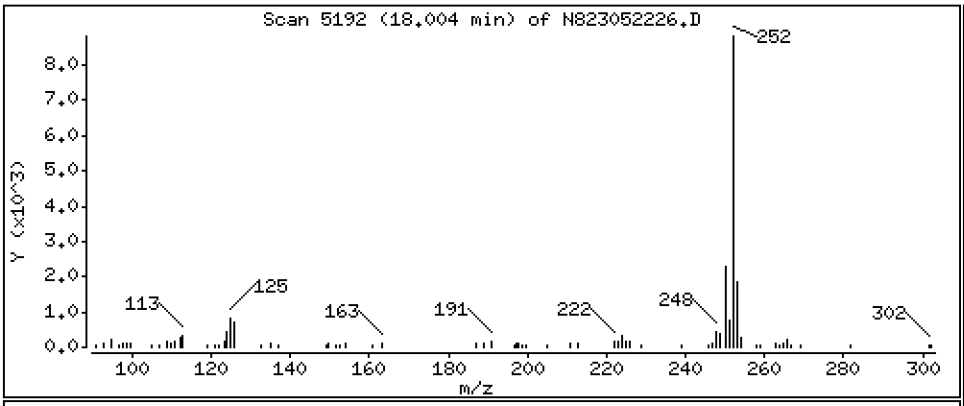
Operator: JZ

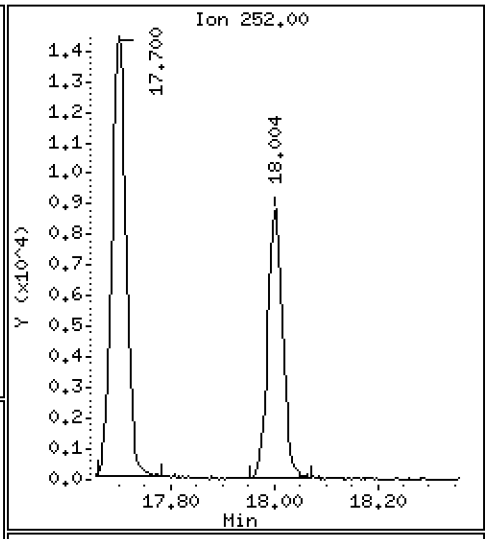
Column phase: Rxi-17sil

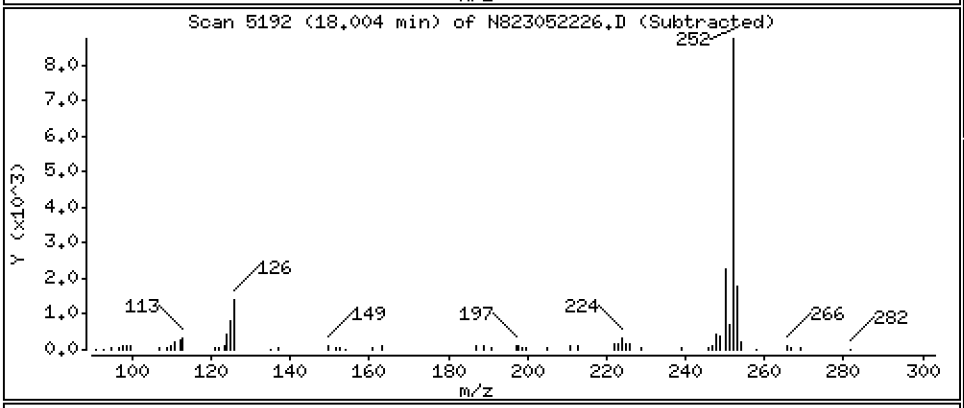
Column diameter: 0.25

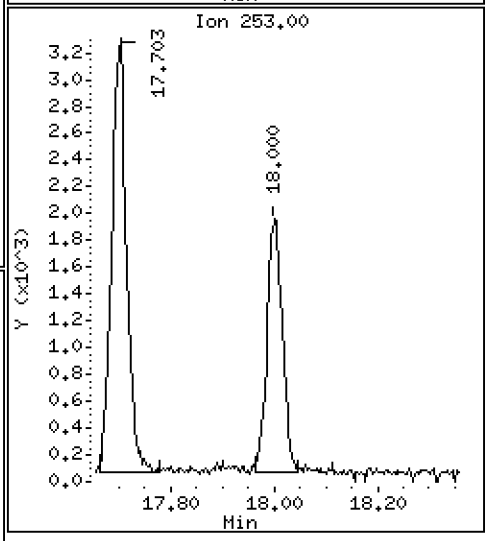
35 Perylene

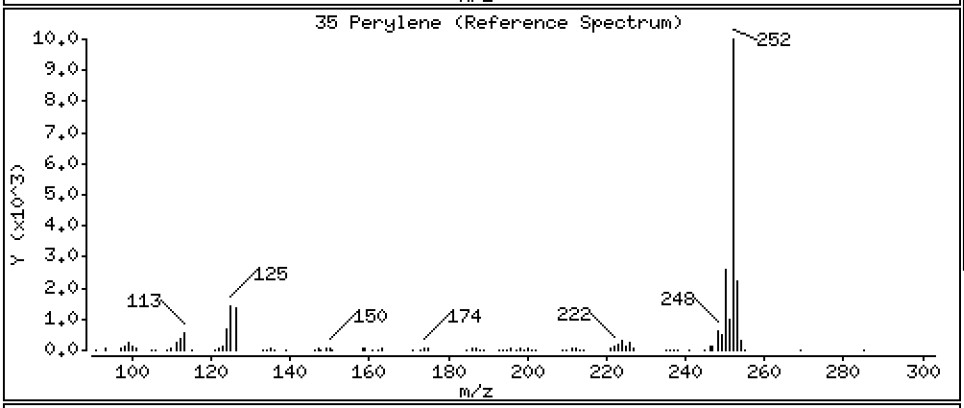
Concentration: 7.426 ug/mL

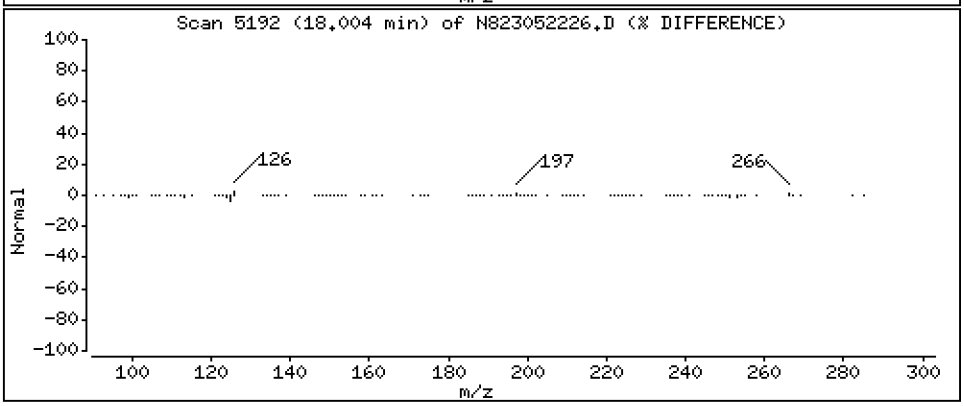












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

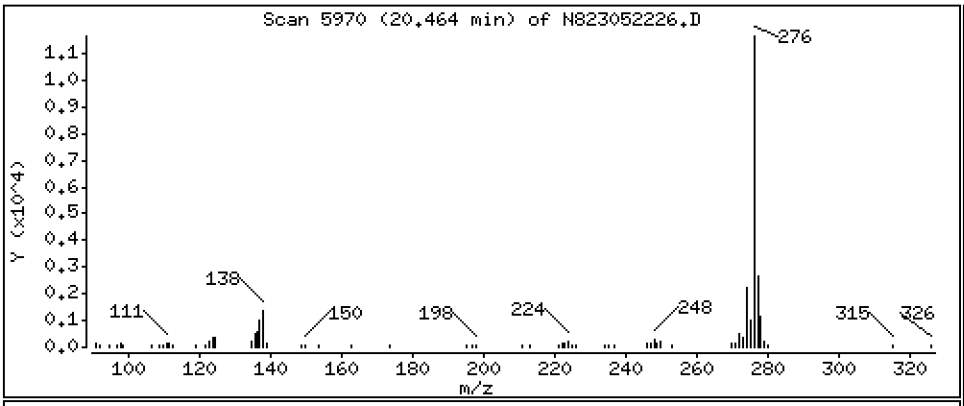
Operator: JZ

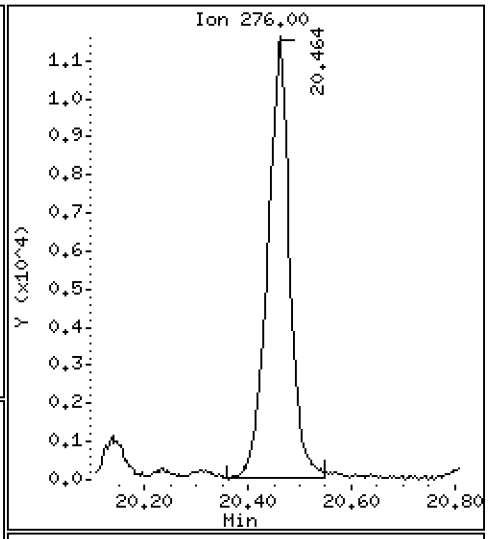
Column phase: Rxi-17sil

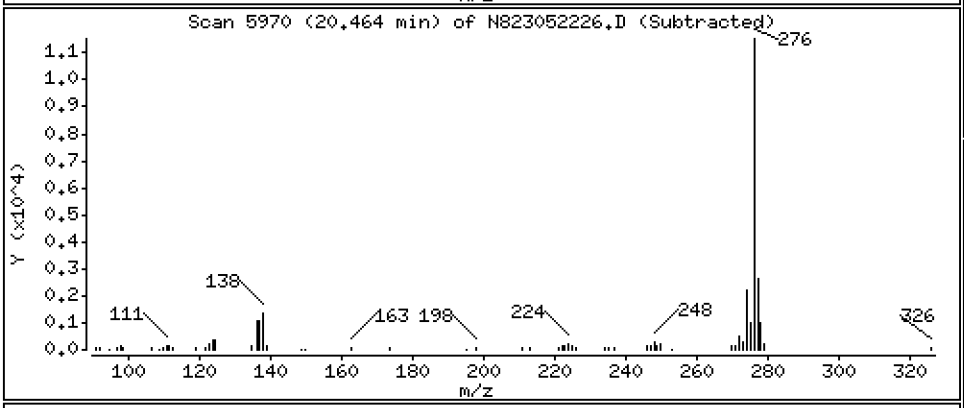
Column diameter: 0.25

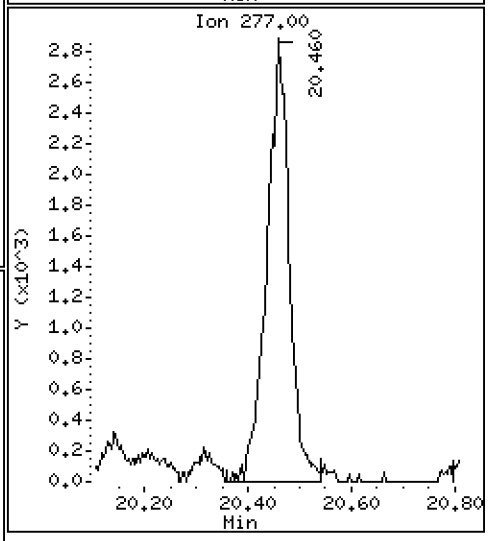
37 Indeno(1,2,3-cd)pyrene

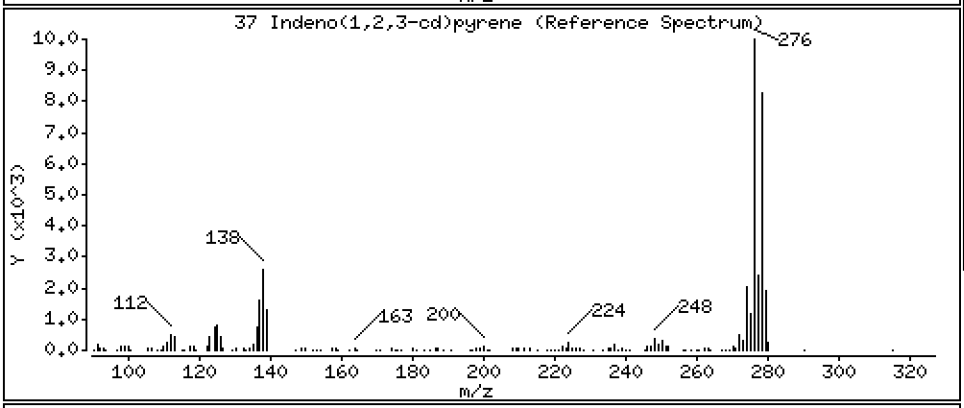
Concentration: 13.95 ug/mL

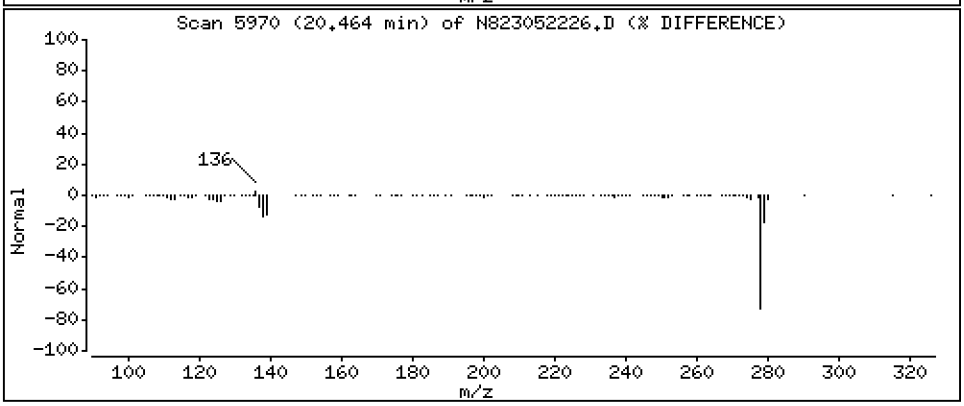












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

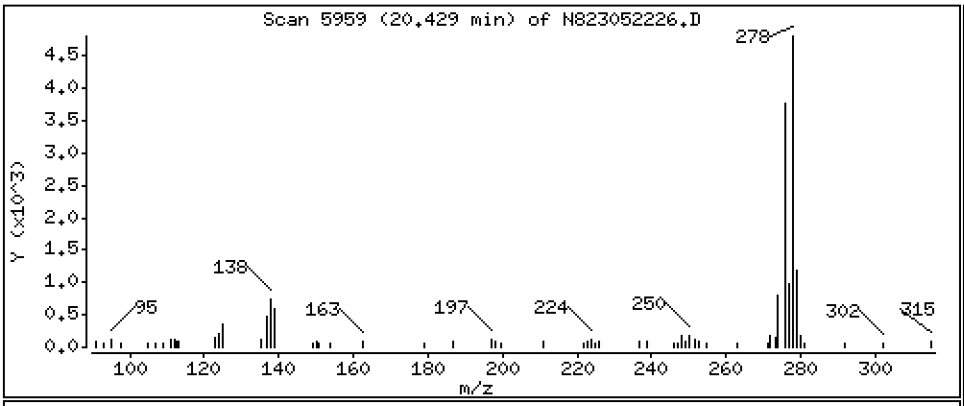
Operator: JZ

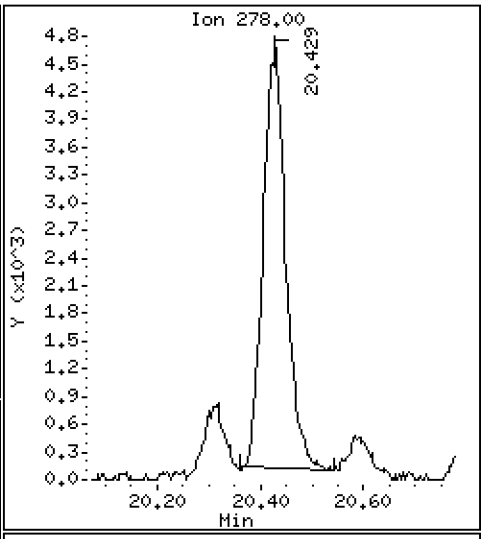
Column phase: Rxi-17sil

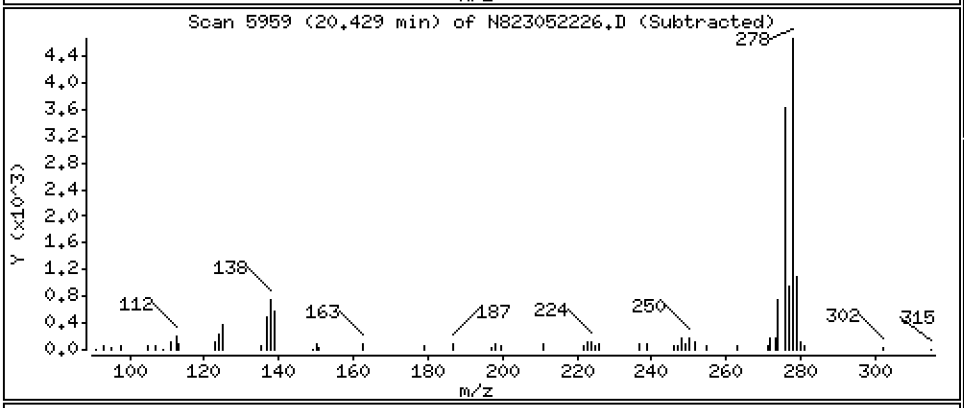
Column diameter: 0.25

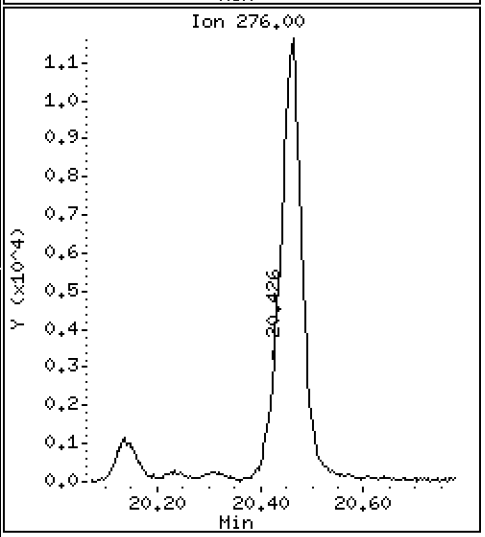
38 Dibenzo(a,h)anthracene

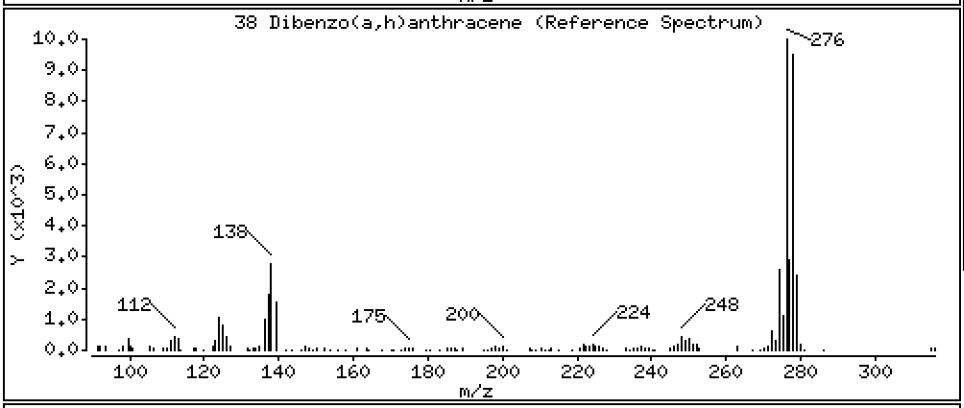
Concentration: 6.420 ug/mL

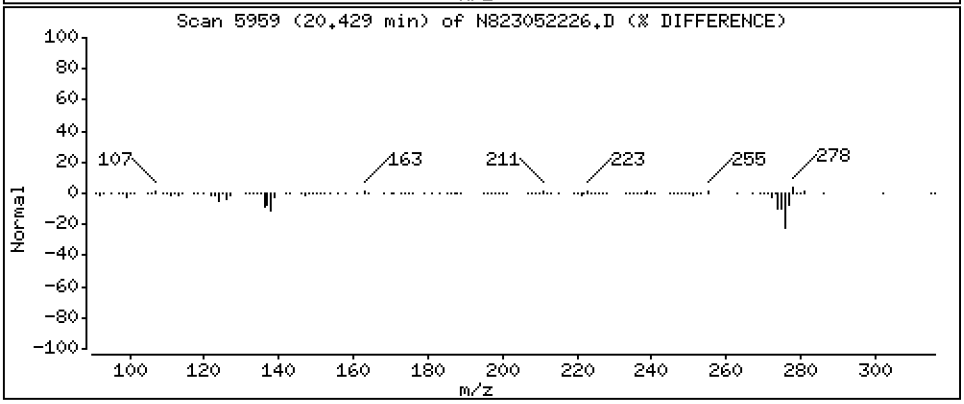












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052226.D

Date : 22-MAY-2023 23:16

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-MSD1,3

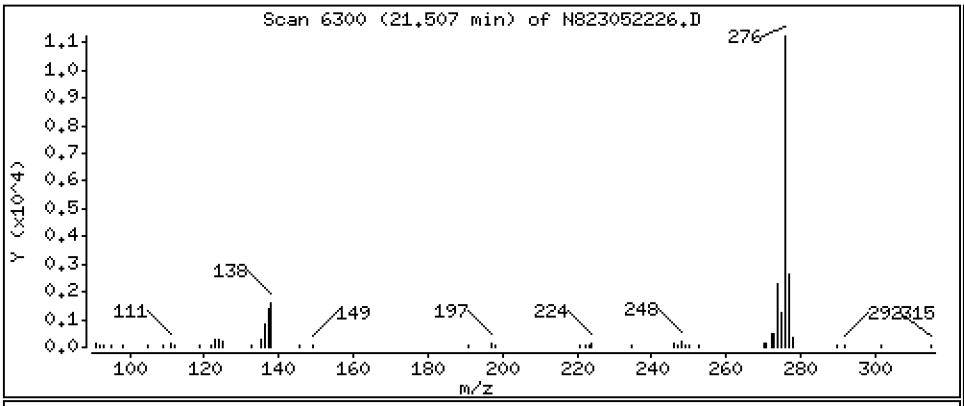
Operator: JZ

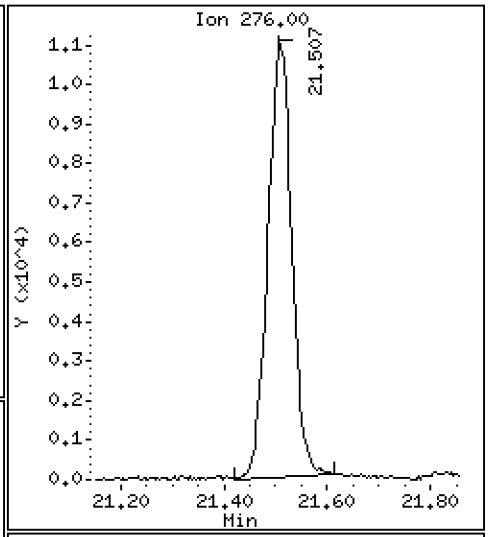
Column phase: Rxi-17sil

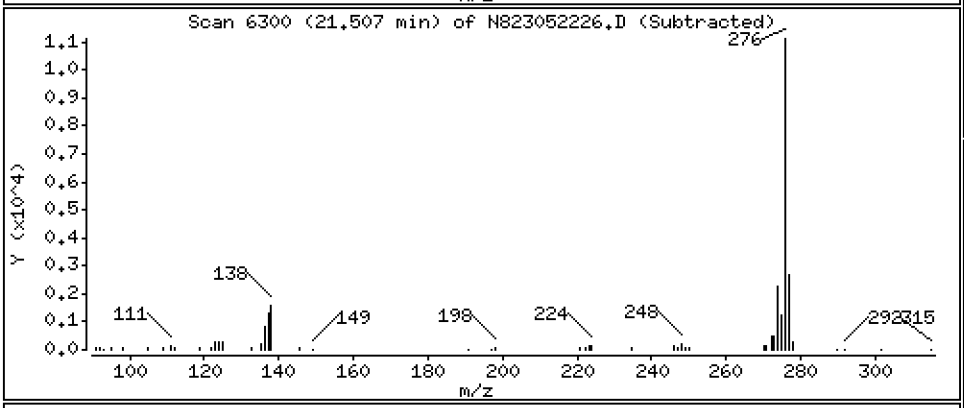
Column diameter: 0.25

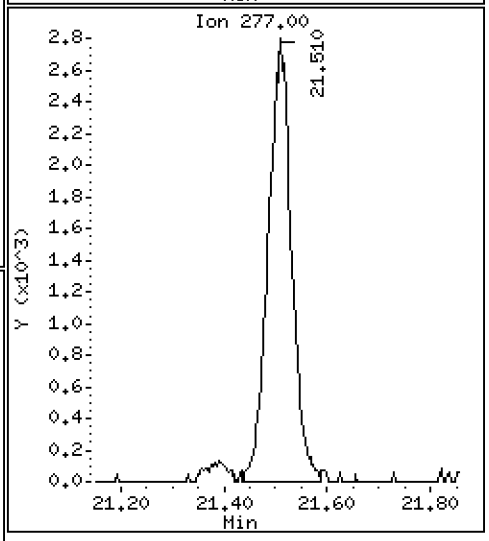
39 Benzo(g,h,i)perylene

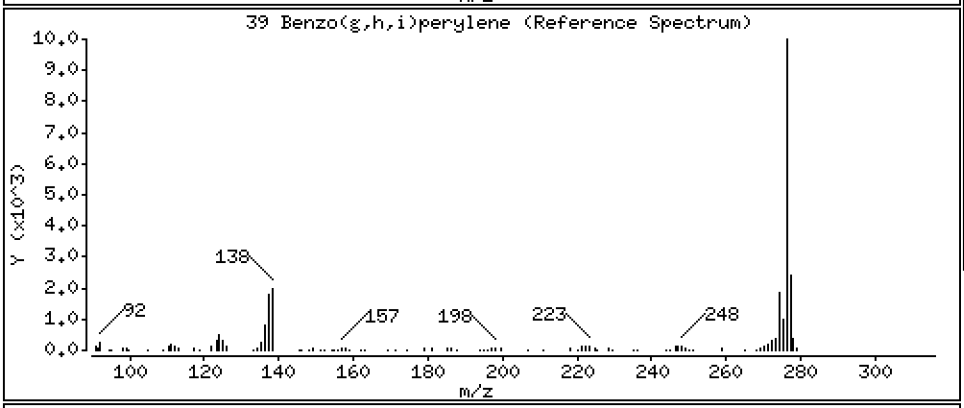
Concentration: 15.73 ug/mL

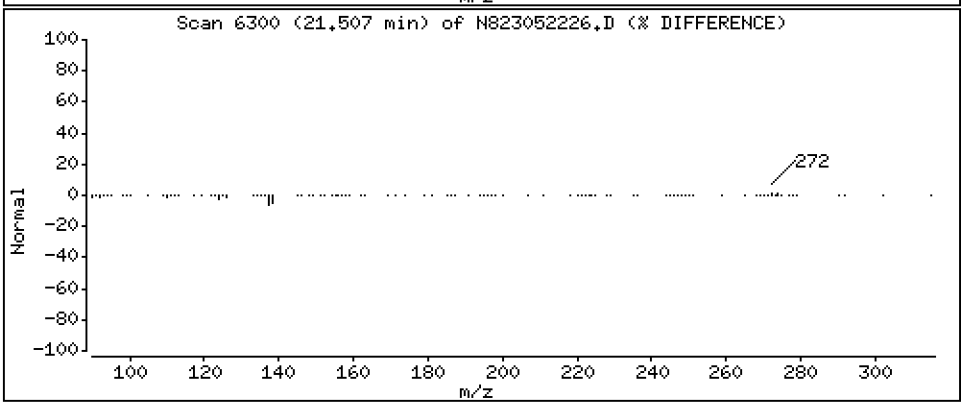












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230522.b\N823052226.D
Lab Smp Id: BLE0149-MSD1
Inj Date : 22-MAY-2023 23:16
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0149-MSD1,3
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Meth Date : 23-May-2023 10:38 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 26
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.811	4.818	(1.000)	20849	2.00000	
	2 Naphthalene	128	4.840	4.846	(1.006)	11186	1.05311	3.159
$	3 2-Methylnaphthalene-d10	152	5.545	5.551	(1.152)	4415	0.68564	2.057
	4 2-Methylnaphthalene	141	5.592	5.599	(1.162)	6262	1.03834	3.115
	5 1-methylnaphthalene	141	5.788	5.795	(1.203)	6176	1.03285	3.099
	9 Acenaphthylene	152	6.990	6.993	(0.985)	15256	1.40633	4.219
*	10 Acenaphthene-d10	164	7.097	7.101	(1.000)	12254	2.00000	
	11 Acenaphthene	153	7.148	7.151	(1.007)	7399	1.05273	3.158
	12 Dibenzofuran	168	7.300	7.306	(1.029)	11194	1.06039	3.181
	14 Fluorene	166	7.777	7.781	(1.096)	9981	1.18471	3.554
*	15 Phenanthrene-d10	188	9.134	9.140	(1.000)	21844	2.00000	
	16 Phenanthrene	178	9.172	9.175	(1.004)	40151	3.47019	10.41
	17 Anthracene	178	9.213	9.213	(1.009)	19923	1.83598	5.508
	19 Carbazole	167	9.728	9.731	(1.065)	13970	1.34781	4.043
	22 Fluoranthene	202	10.936	10.930	(1.197)	116960	8.78900	26.37
$	21 Fluoranthene-d10	212	10.895	10.895	(1.193)	8998	0.76310	2.289
	23 Pyrene	202	11.458	11.442	(0.816)	91202	13.2033	39.61
	24 Benzo(a)anthracene	228	13.912	13.918	(0.991)	31016	4.36975	13.11
*	25 Chrysene-d12	240	14.041	14.044	(1.000)	10789	2.00000	
	27 Chrysene	228	14.114	14.117	(1.005)	35630	5.10981	15.33
	28 Benzo(b)fluoranthene	252	16.650	16.653	(0.929)	35319	4.24513	12.74
	29 Benzo(k)fluoranthene	252	16.707	16.713	(0.932)	21554	2.74965	8.249
	30 Benzo(j)fluoranthene	252	16.786	16.789	(0.936)	19188	2.64931	7.948
	31 Total Benzofluoranthenes	252	16.650	16.653	(0.929)	76025	9.82629	29.48(M)
	32 Benzo(a)pyrene	252	17.700	17.703	(0.987)	28461	3.93545	11.81
*	33 Perylene-d12	264	17.930	17.934	(1.000)	12762	2.00000	(M)
	35 Perylene	252	18.003	18.006	(1.004)	17975	2.47520	7.426
$	36 Dibenzo(a,h)anthracene-d14	292	20.314	20.318	(1.133)	5799	1.19019	3.571(M)
	37 Indeno(1,2,3-cd)pyrene	276	20.463	20.457	(1.141)	34234	4.65039	13.95
	38 Dibenzo(a,h)anthracene	278	20.428	20.425	(1.139)	13988	2.13986	6.420(M)
	39 Benzo(g,h,i)perylene	276	21.507	21.503	(1.199)	35757	5.24367	15.73(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823052226.D
Lab Smp Id: BLE0149-MSD1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 22-MAY-2023
Calibration Time: 11:46
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	17081	8541	34162	20849	22.06
10 Acenaphthene-d10	9674	4837	19348	12254	26.67
15 Phenanthrene-d10	17710	8855	35420	21844	23.34
25 Chrysene-d12	15081	7541	30162	10789	-28.46
33 Perylene-d12	15623	7812	31246	12762	-18.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.13
10 Acenaphthene-d10	7.10	6.60	7.60	7.10	-0.05
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.04	-0.02
33 Perylene-d12	17.93	17.43	18.43	17.93	-0.02

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

REVIEW SUMMARY FOR FILE - N823052226.D

Lab ID: BLE0149-MSD1
nt8.i, 20230522.b\FSIMPNA230426.m,   22-MAY-2023 23:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

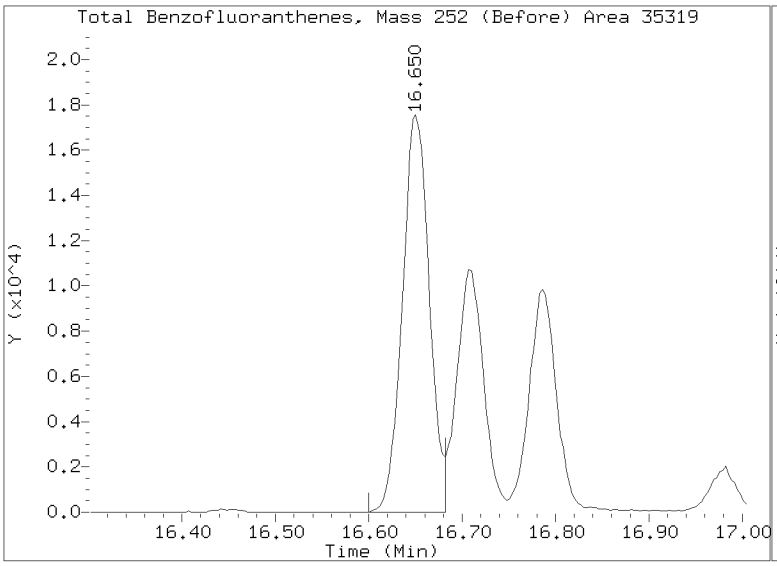
No RRT check performed

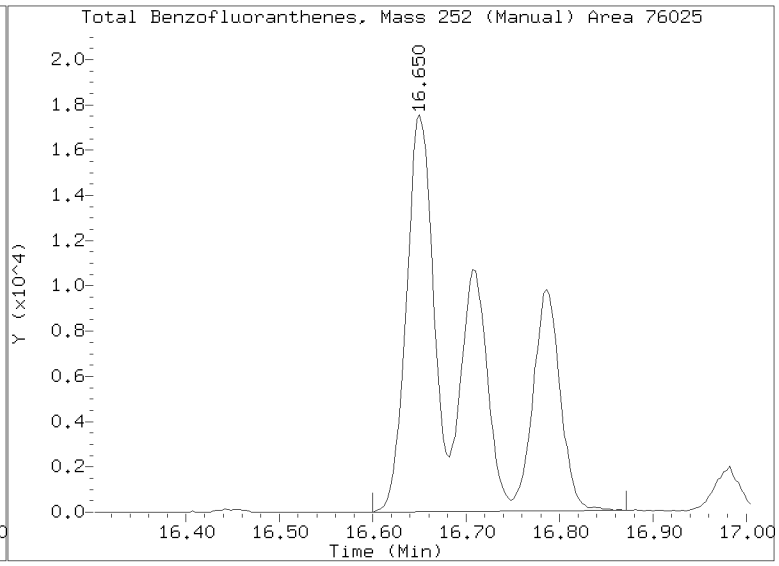
On Column LOD for nt8.i, 20230522.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

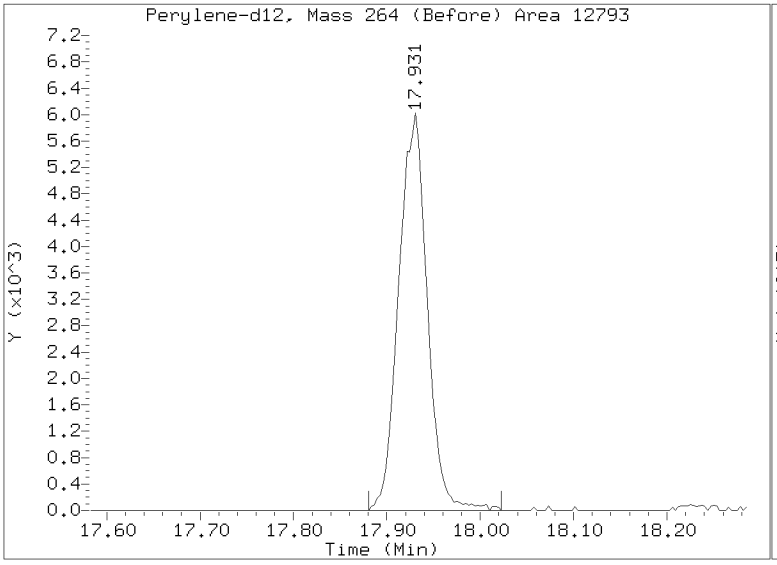
* Only compounds listed in the work order have been verified by the analyst *

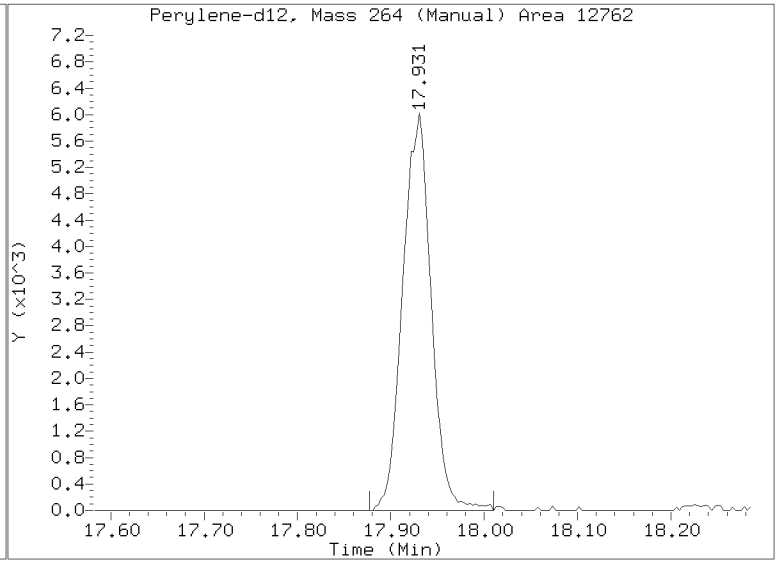
Quant Ion Manual Peak Adjustment Report

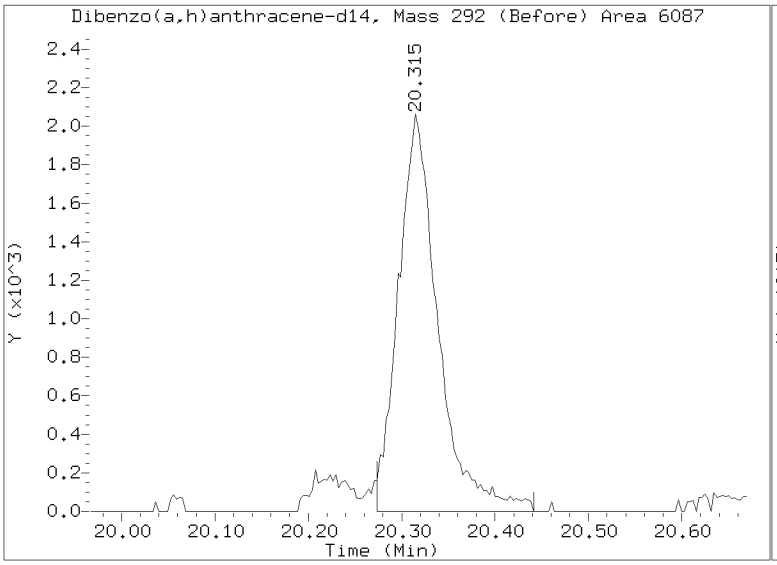
Datafile: //target/share/chem3/nt8.i/20230522.b/N823052226.D
Injection Date: 22-MAY-2023 23:16
Lab ID:BLE0149-MSD1 Client ID:
Report Date: 05/23/2023 11:16

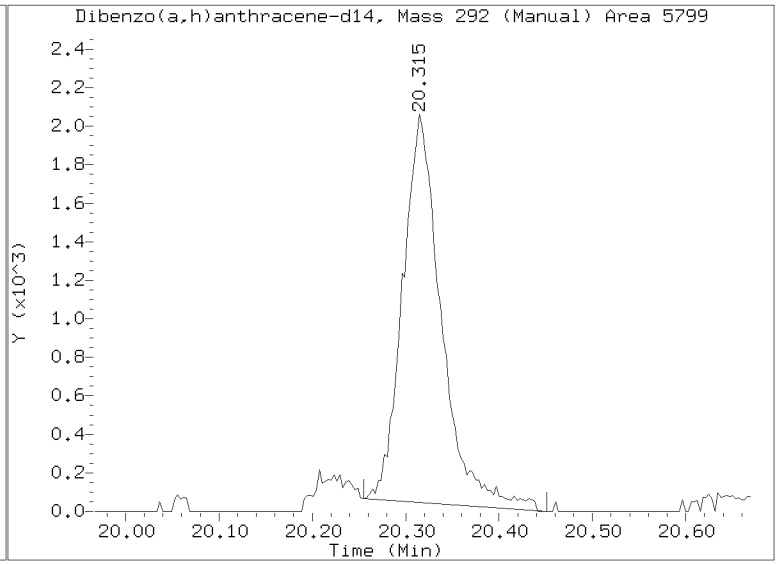






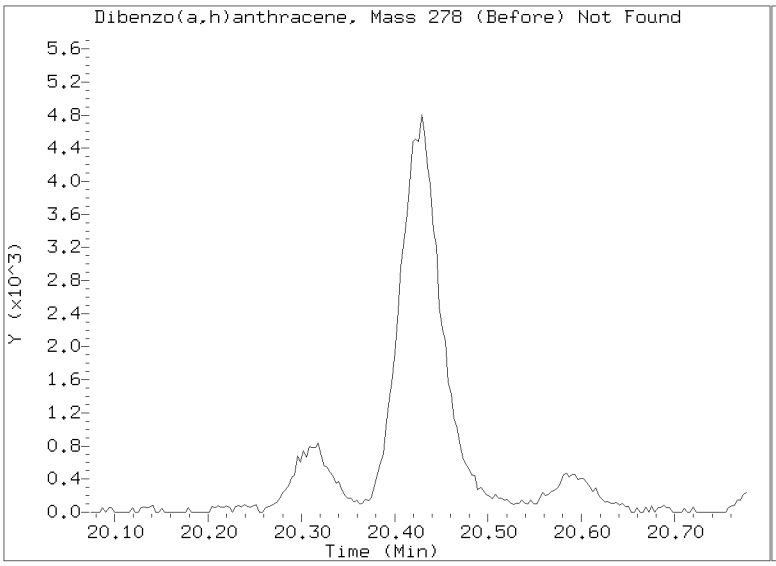


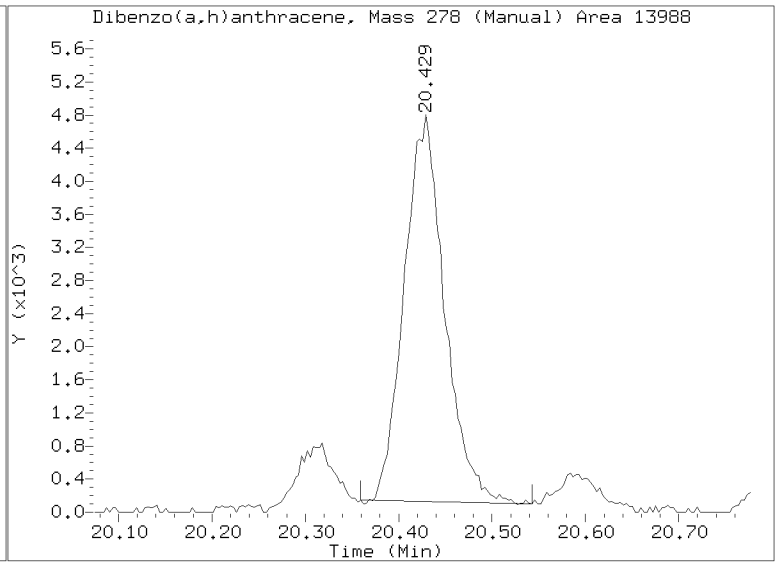


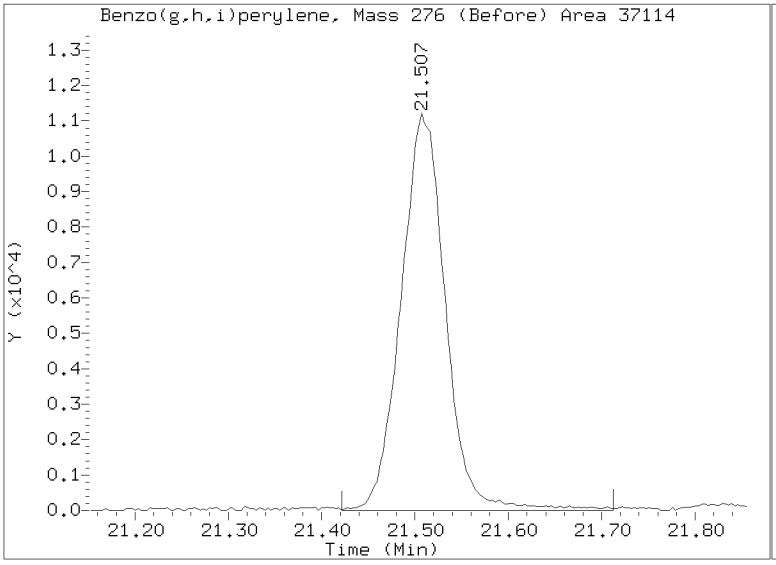


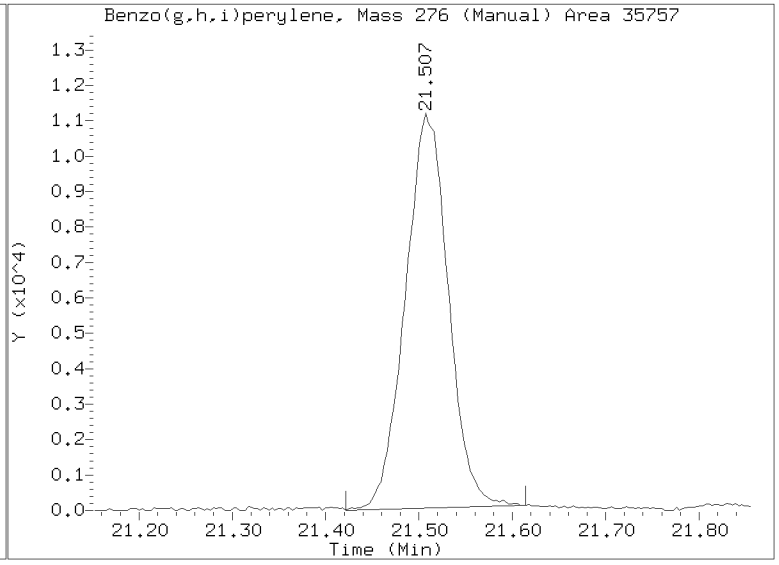
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230522.b/N823052226.D
Injection Date: 22-MAY-2023 23:16
Lab ID:BLE0149-MSD1 Client ID:
Report Date: 05/23/2023 11:16









Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0148-SRM2
Batch: BLE0148
Initial/Final: 1 g / 1 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 06/02/2023 6:02
Standard ID: K003477
Expires: 01/31/2024
Standard Lot#: CRM 143 (LRAC8918)
Description: CRM 143 BNAs - Sandy Loam

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
2,4-Dimethylphenol	6357.0	2770	21.7	200		43.5	0 - 220
1,2,4-Trichlorobenzene	1477.0	920	26.8	50.0		62.3	10 - 193
N-Nitrosodiphenylamine	2854.0	3290	13.1	50.0		115	40 - 160
Pentachlorophenol	3411.0	3870	21.3	200		114	10 - 206

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123305.D

Date : 02-JUN-2023 06:02

Client ID:

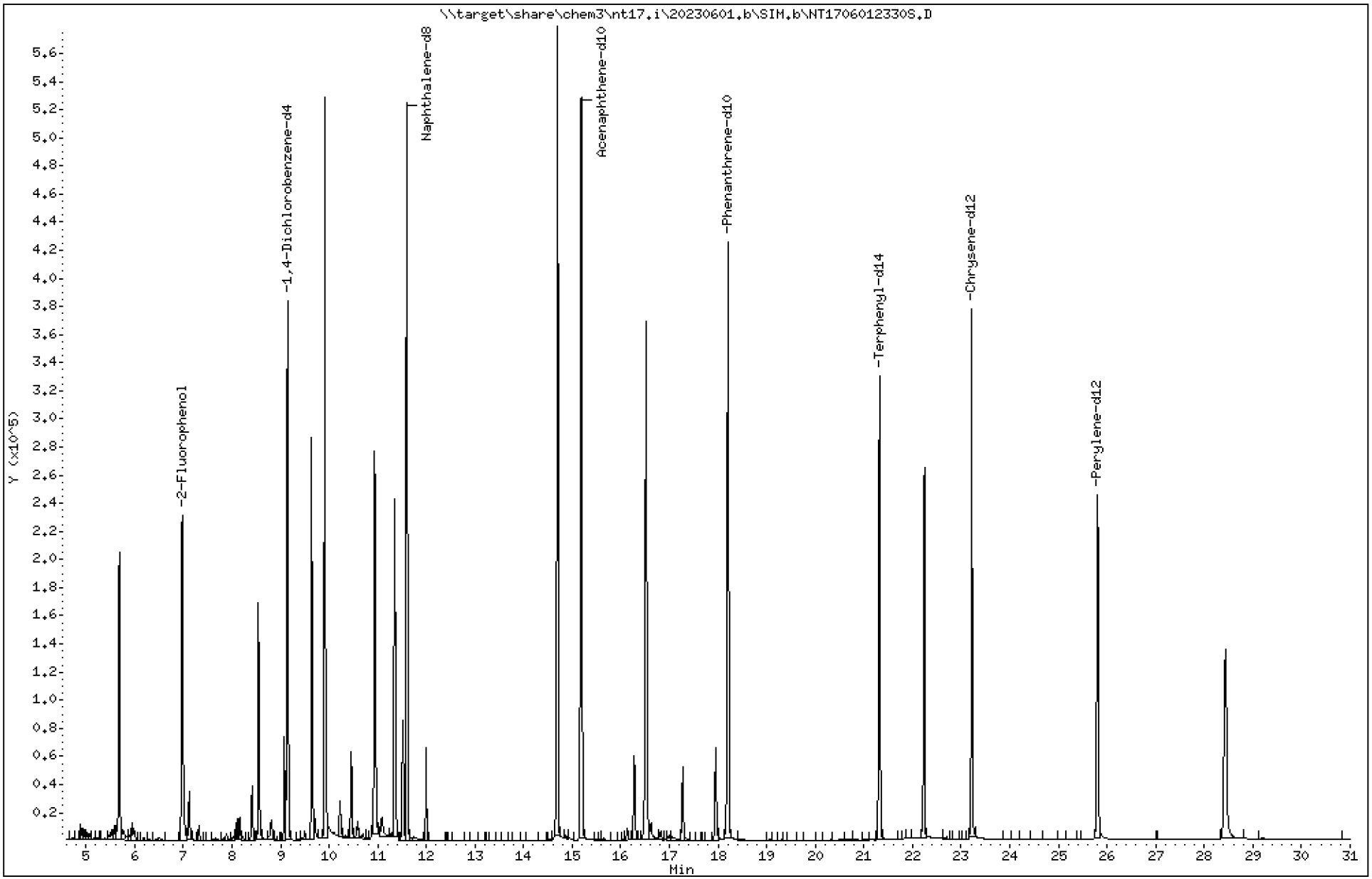
Sample Info: BLE0148-SRM2

Column phase: ZB-5msi

Instrument: nt17.i

Operator: VTS

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

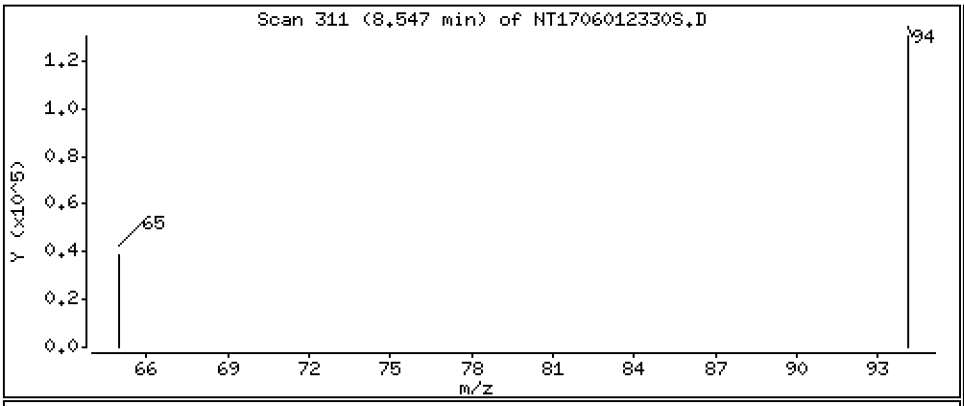
Operator: VTS

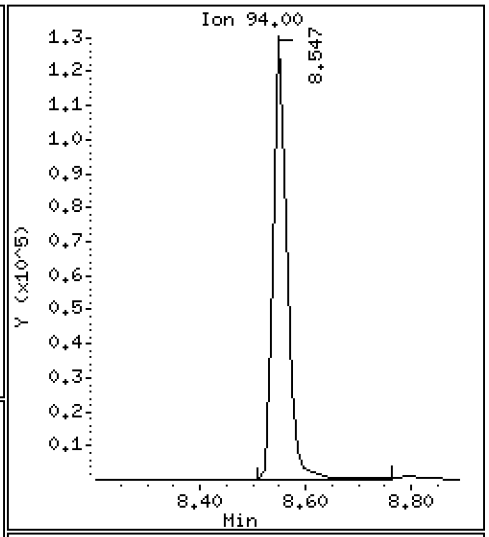
Column phase: ZB-5msi

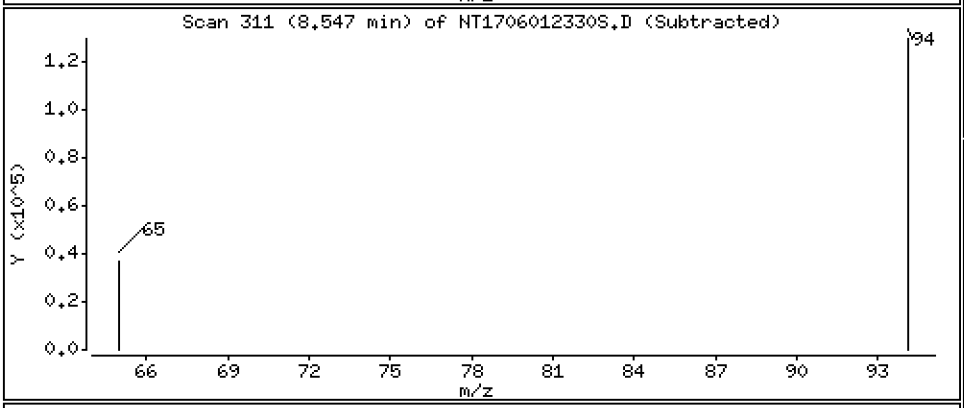
Column diameter: 0.25

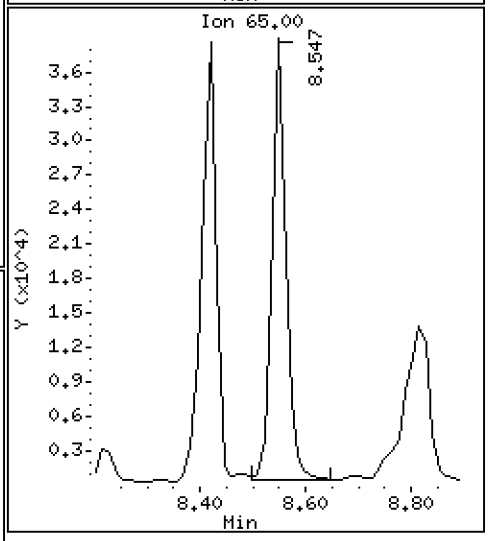
3 Phenol

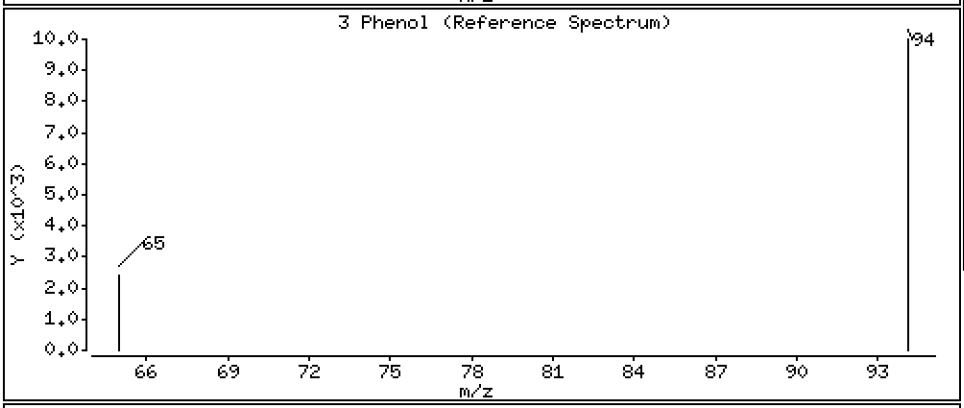
Concentration: 2.043 ug/mL

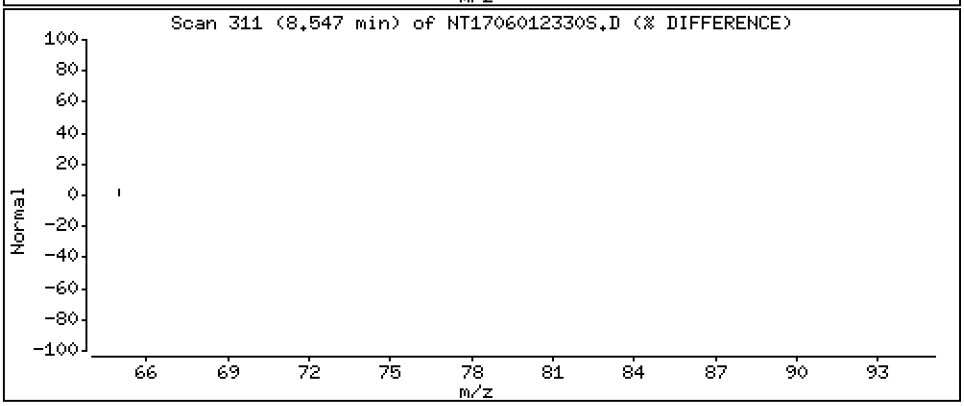












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

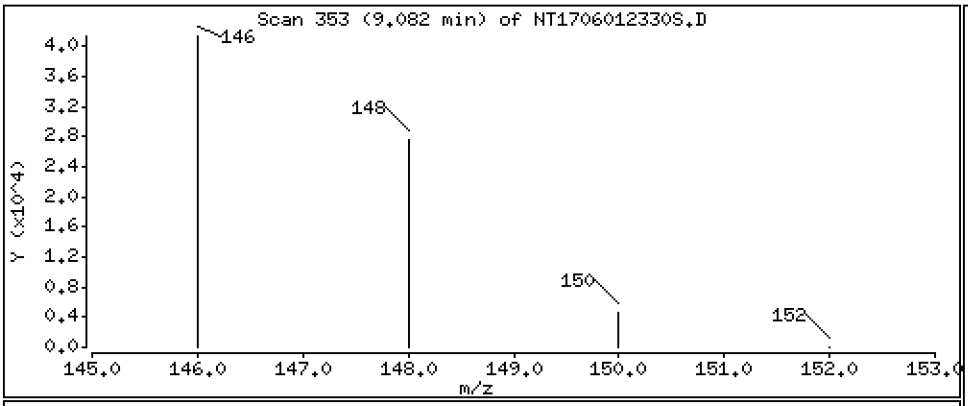
Operator: VTS

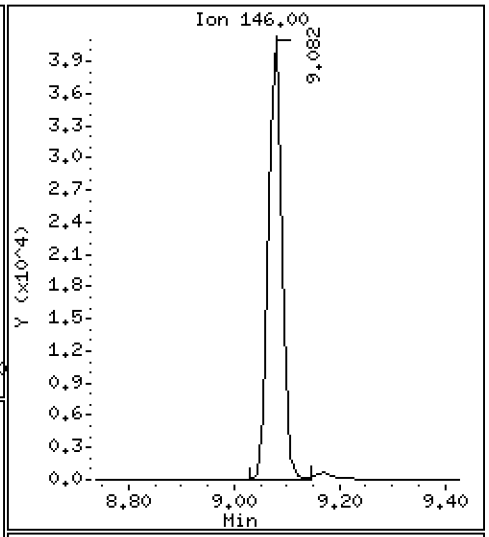
Column phase: ZB-5msi

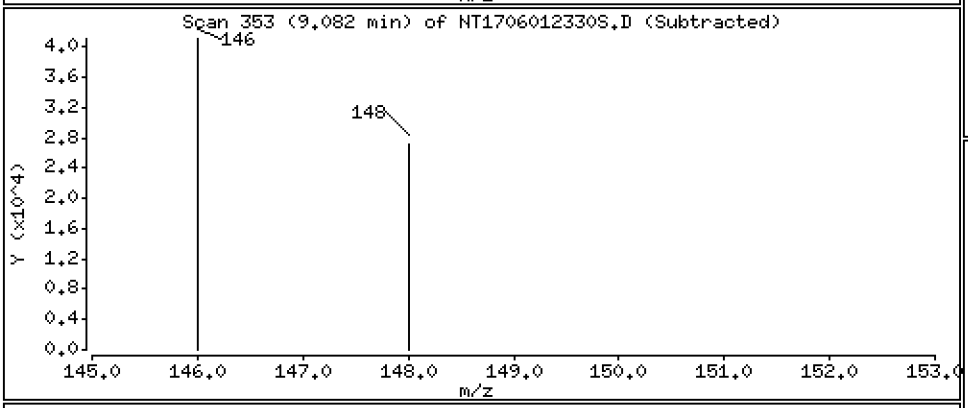
Column diameter: 0.25

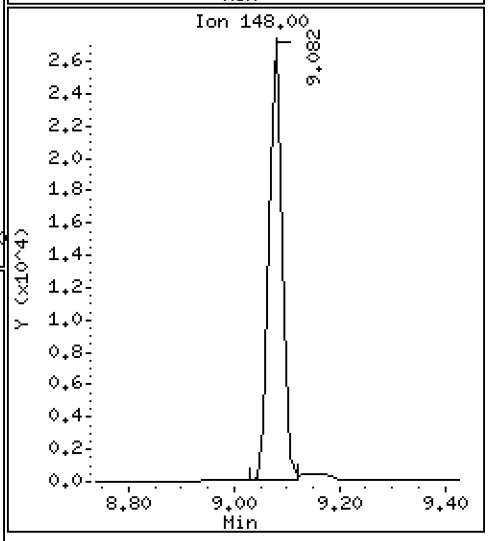
7 1,3-Dichlorobenzene

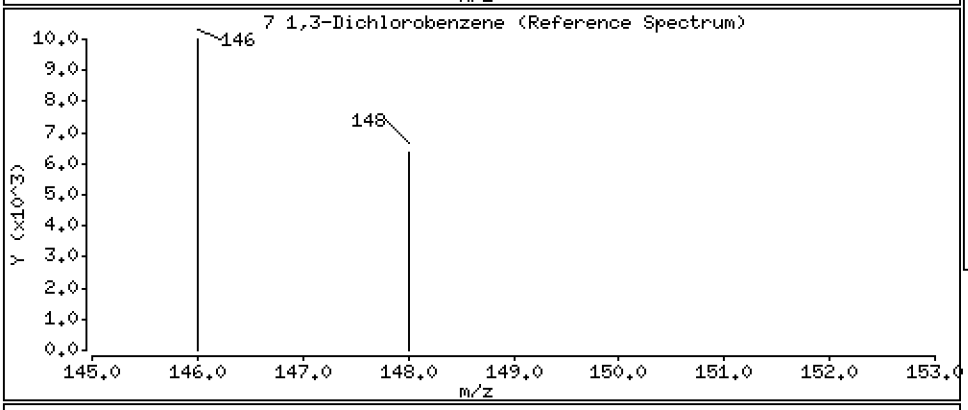
Concentration: 0.7050 ug/mL

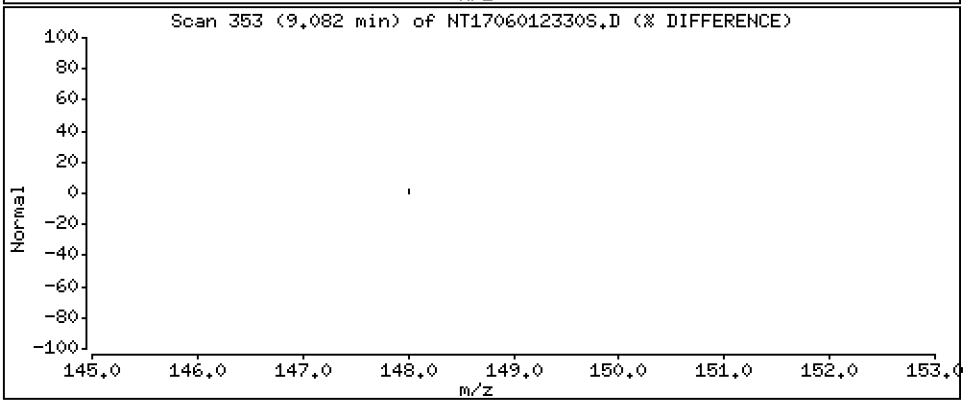












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

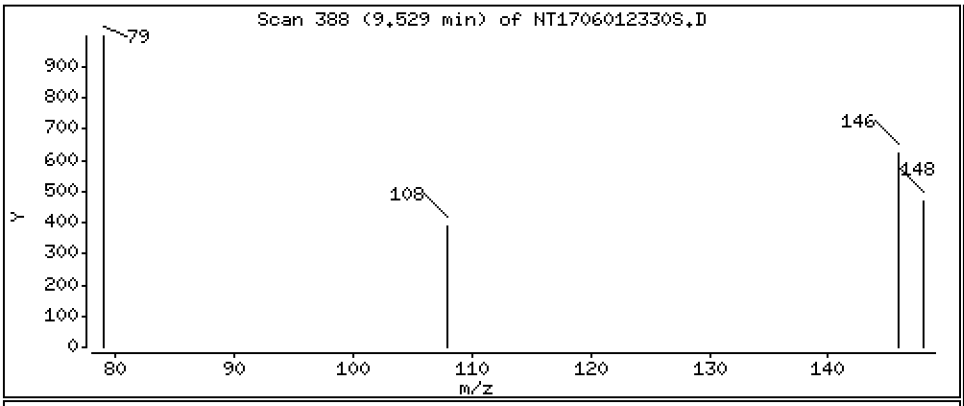
Operator: VTS

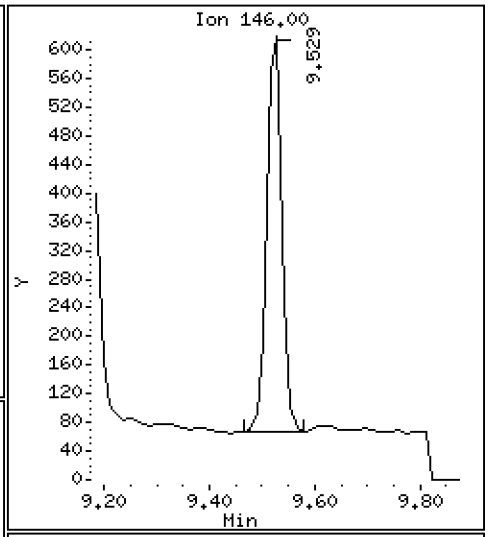
Column phase: ZB-5msi

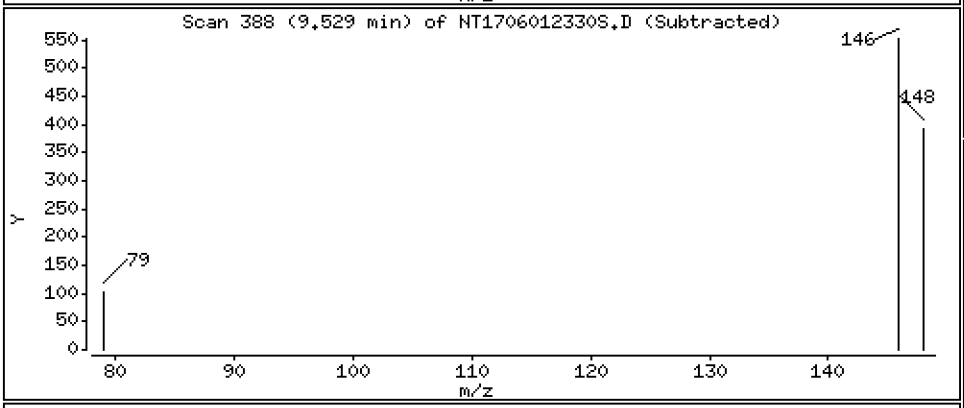
Column diameter: 0.25

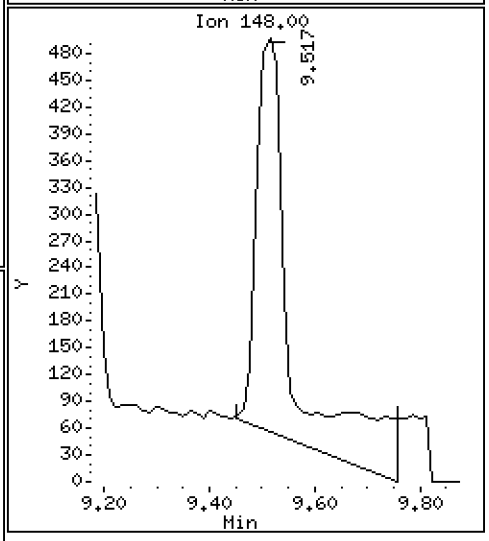
12 1,2-Dichlorobenzene

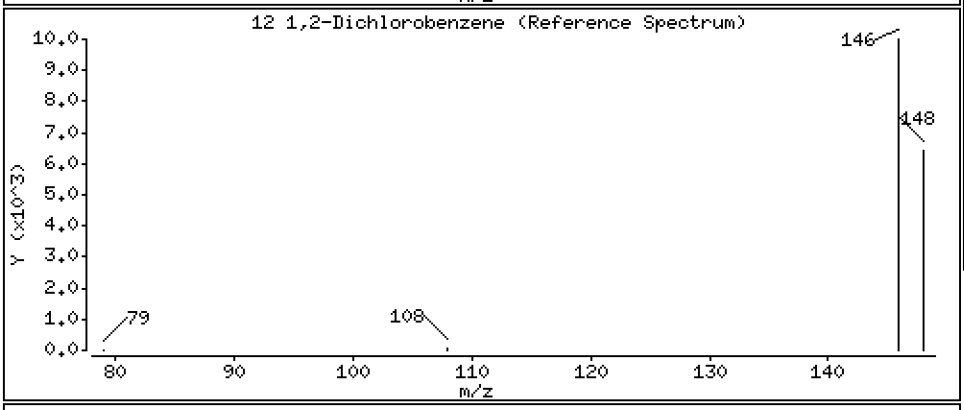
Concentration: 0.01092 ug/mL

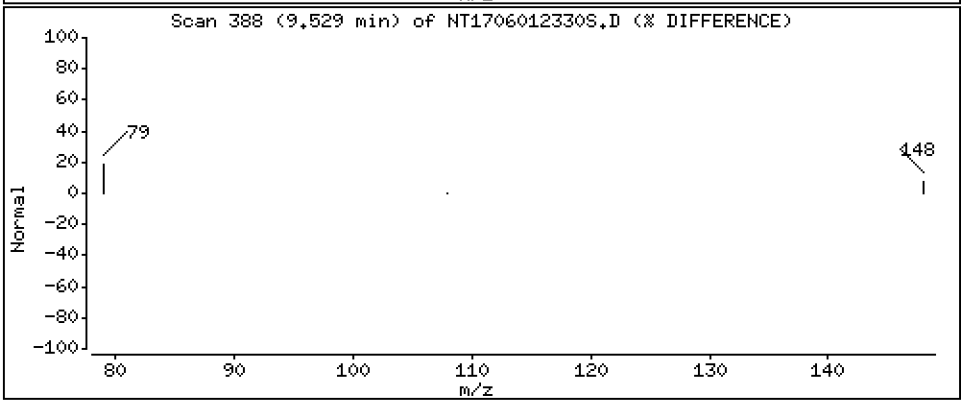












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

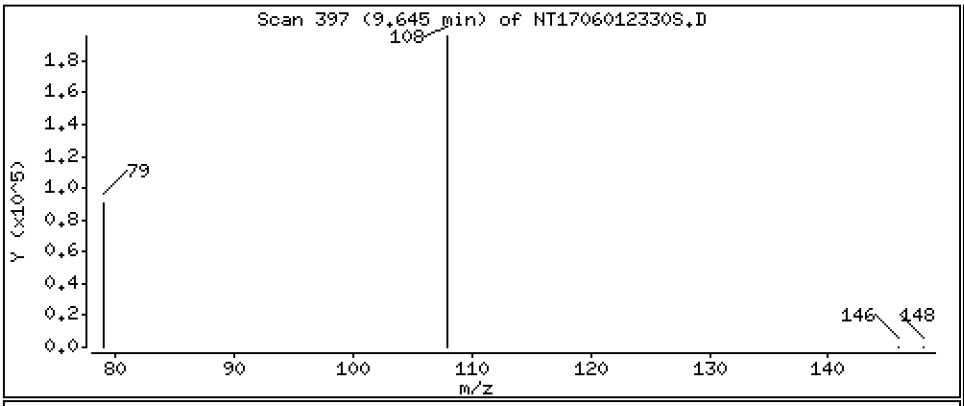
Operator: VTS

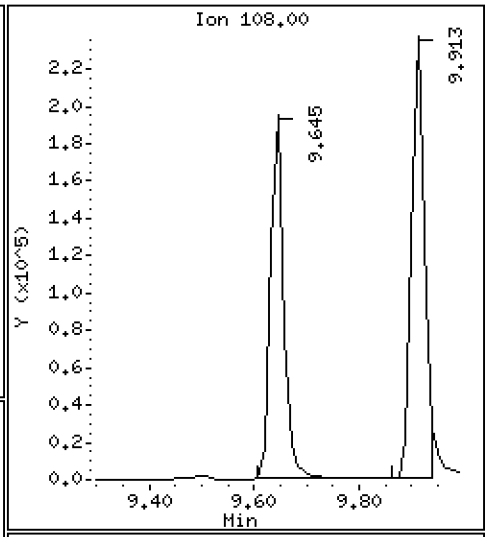
Column phase: ZB-5msi

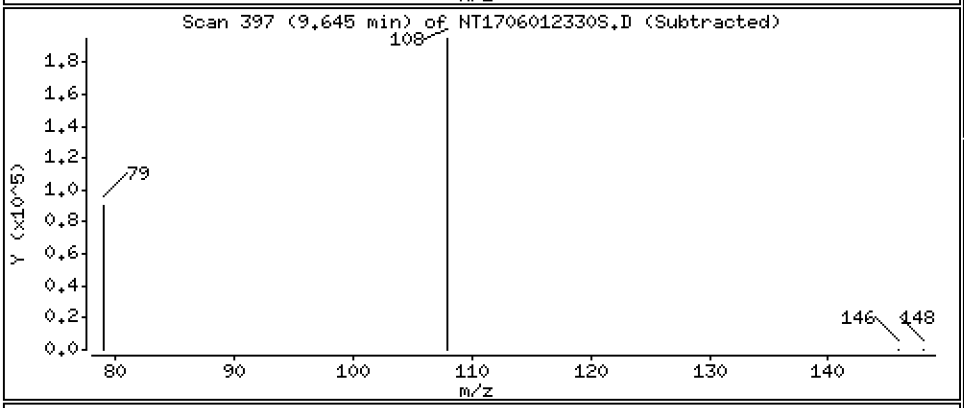
Column diameter: 0.25

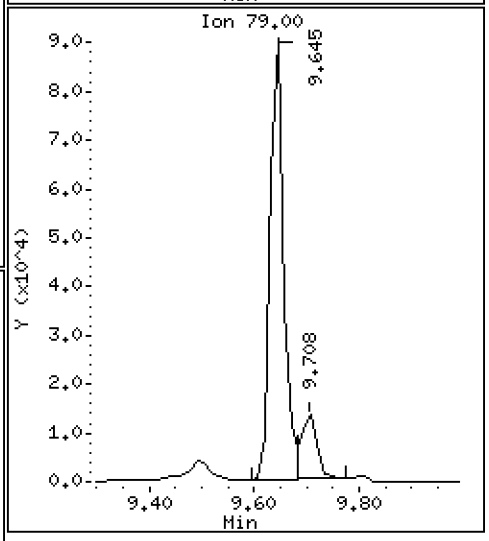
13 2-Methylphenol

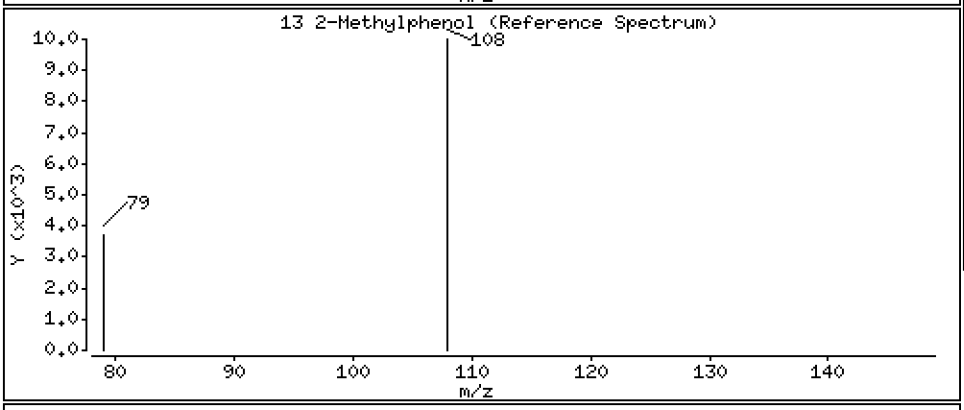
Concentration: 4.244 ug/mL

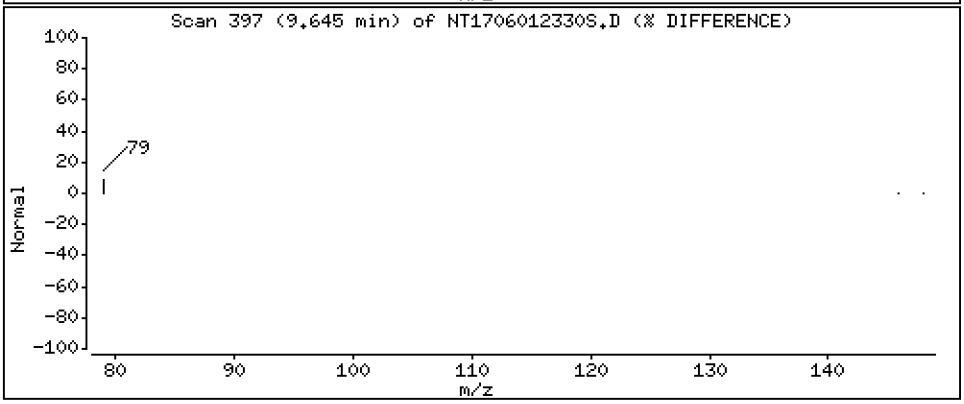












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

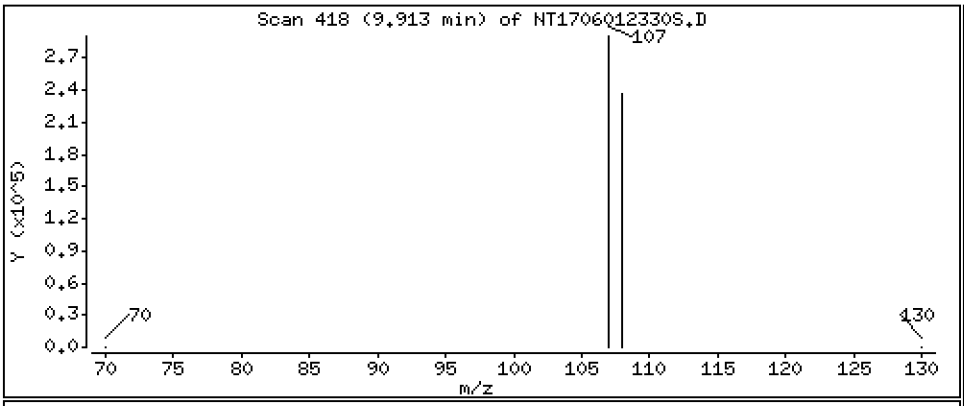
Operator: VTS

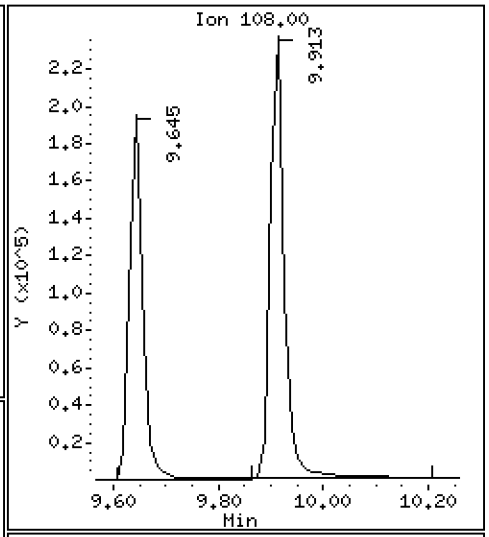
Column phase: ZB-5msi

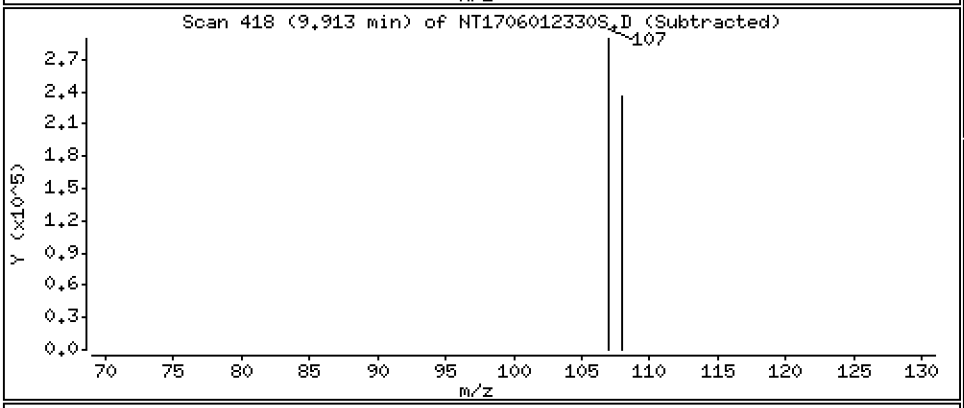
Column diameter: 0.25

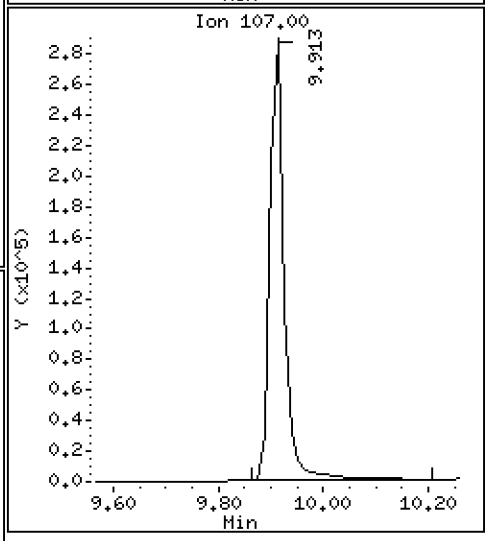
15 4-Methylphenol

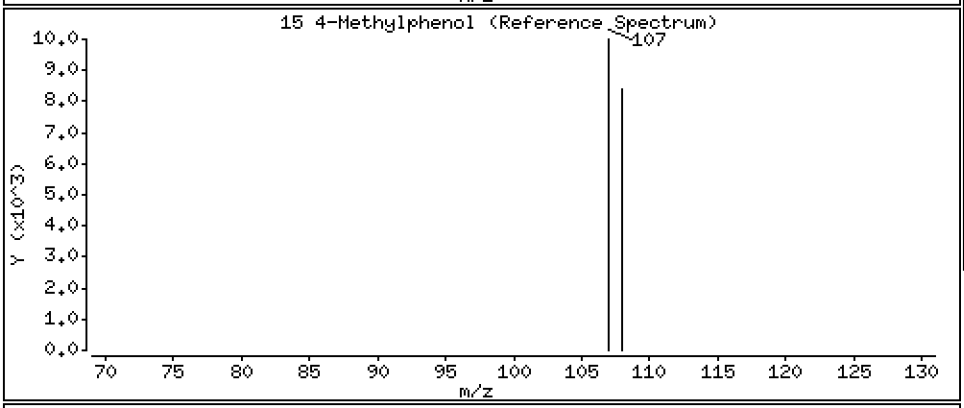
Concentration: 5.480 ug/mL

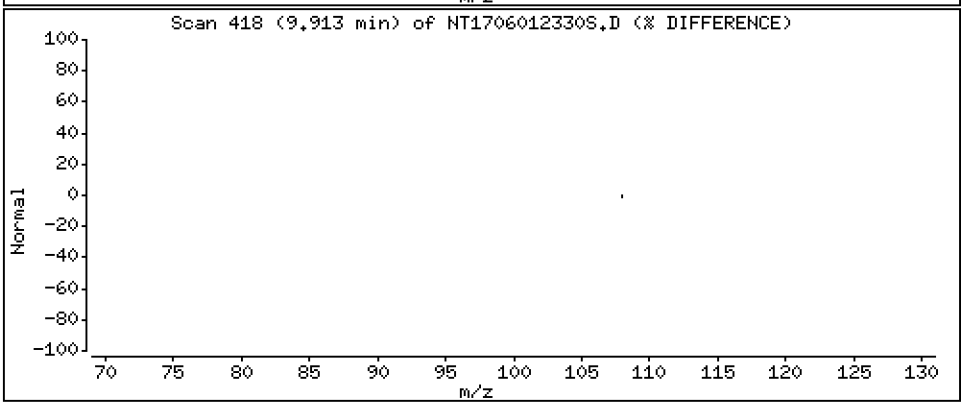












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

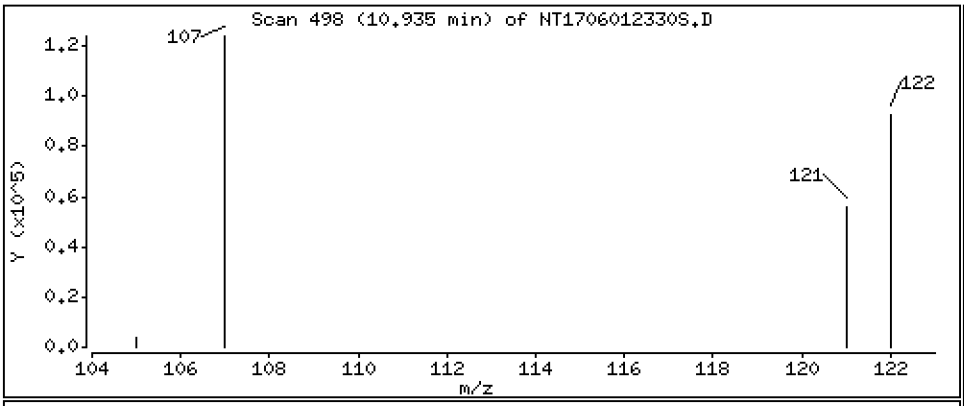
Operator: VTS

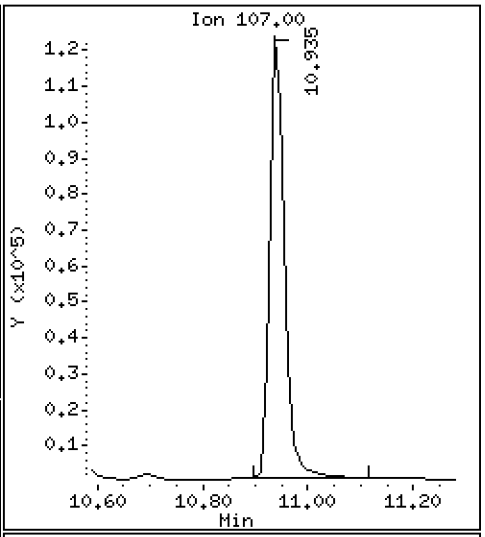
Column phase: ZB-5msi

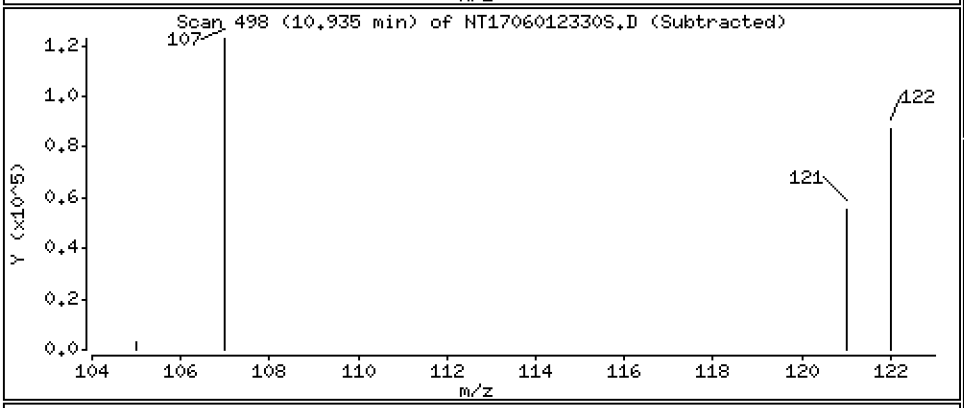
Column diameter: 0.25

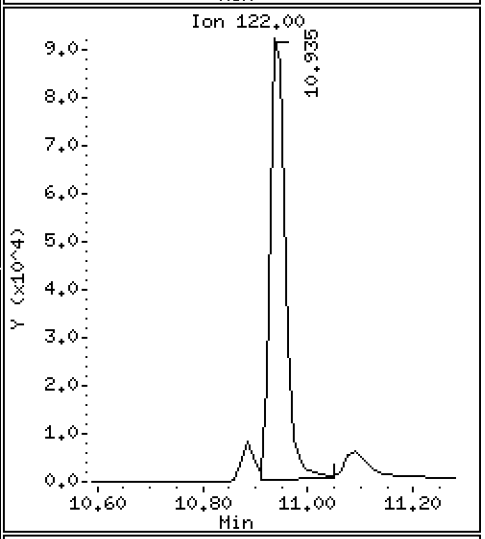
22 2,4-Dimethylphenol

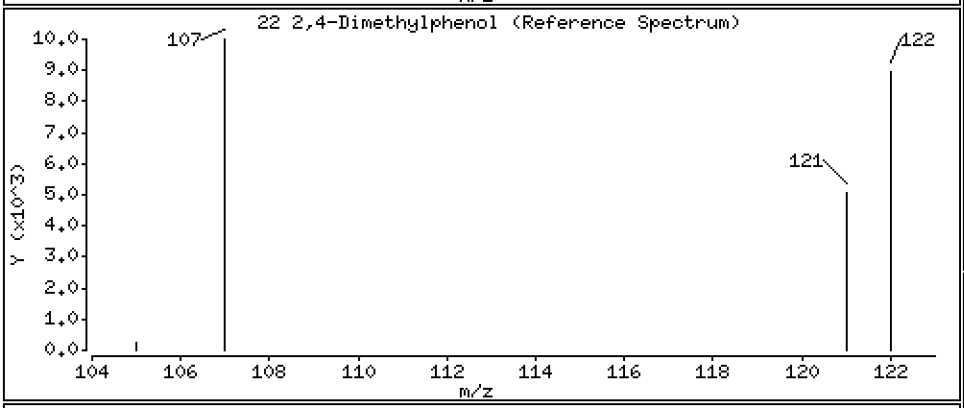
Concentration: 2.768 ug/mL

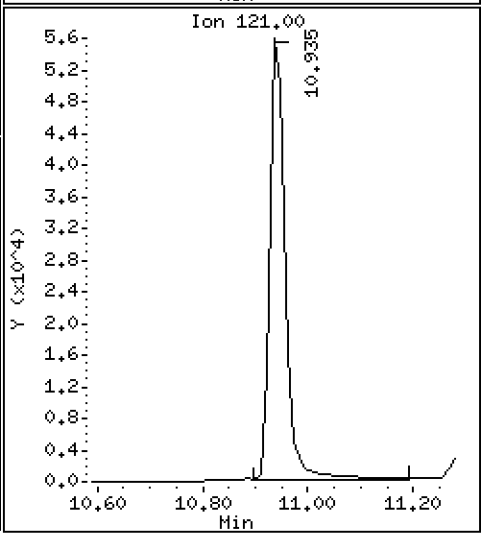


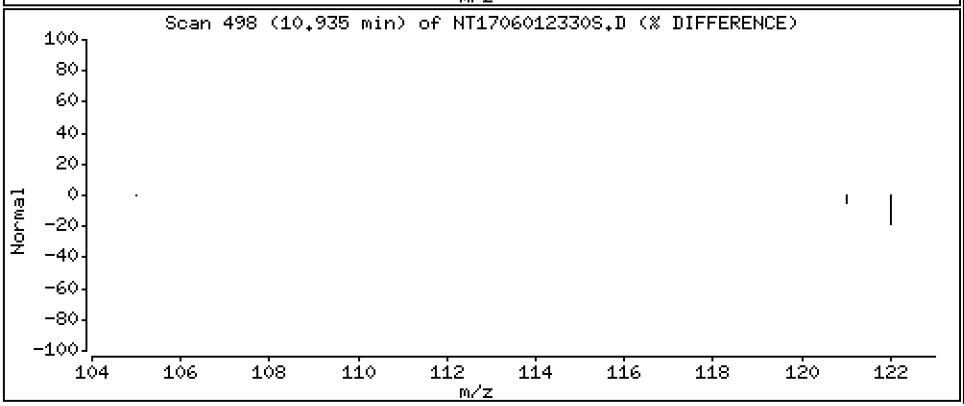












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

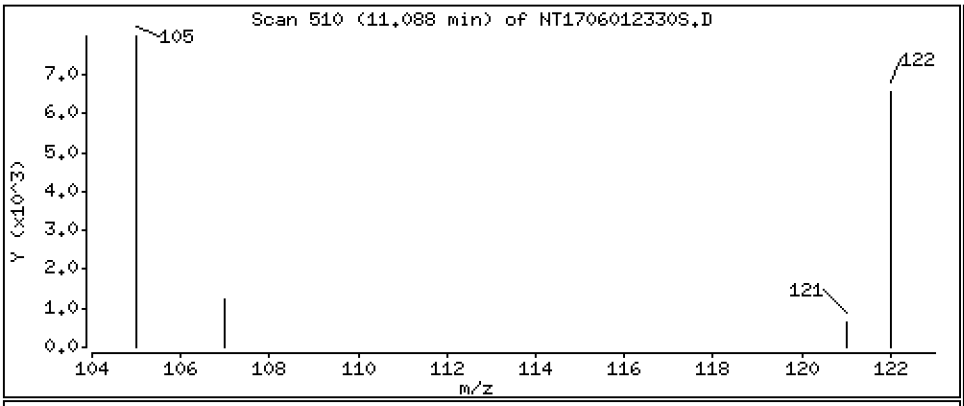
Operator: VTS

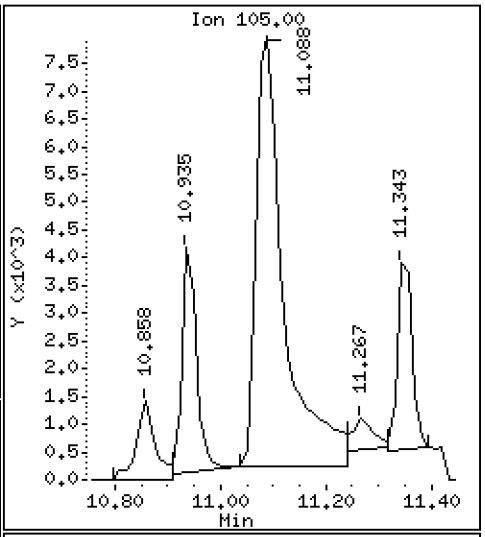
Column phase: ZB-5msi

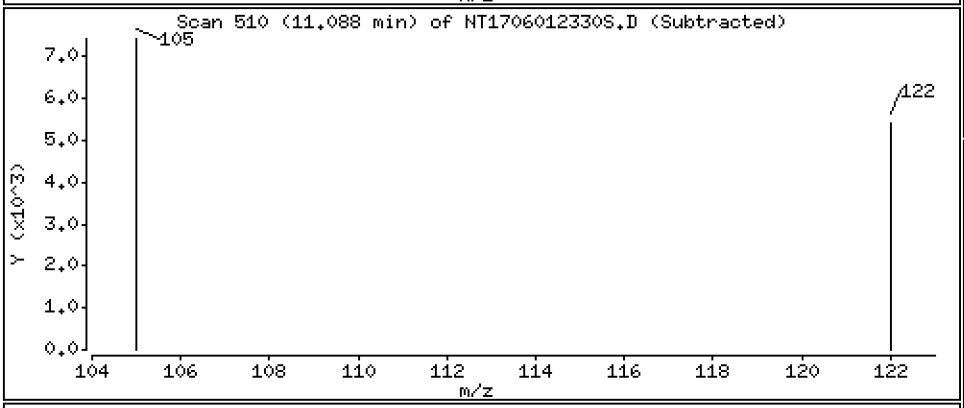
Column diameter: 0.25

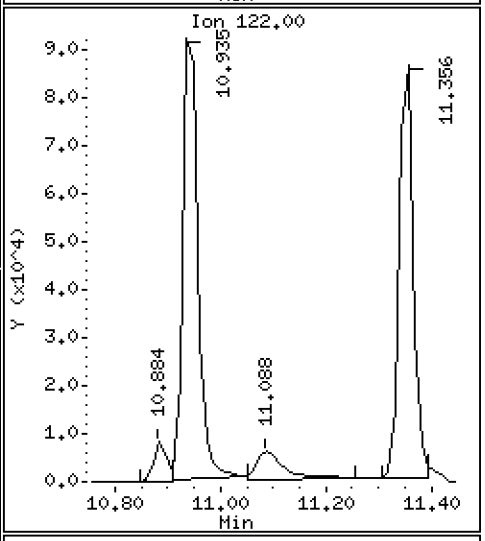
24 Benzoic acid

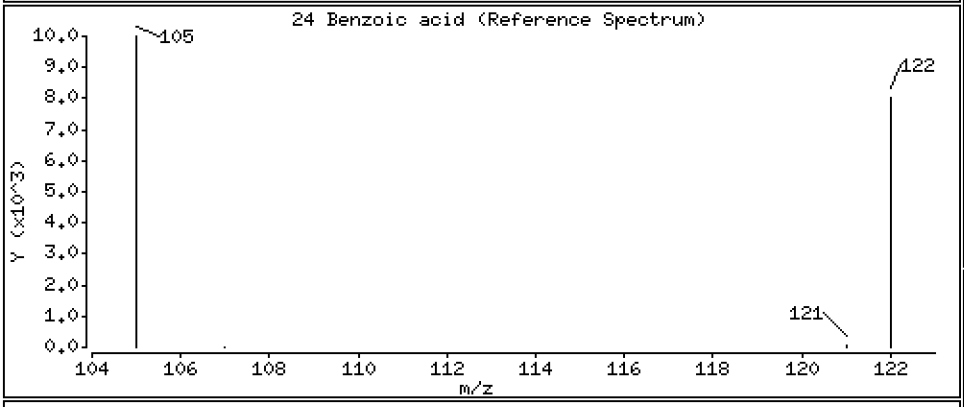
Concentration: 0.5297 ug/mL

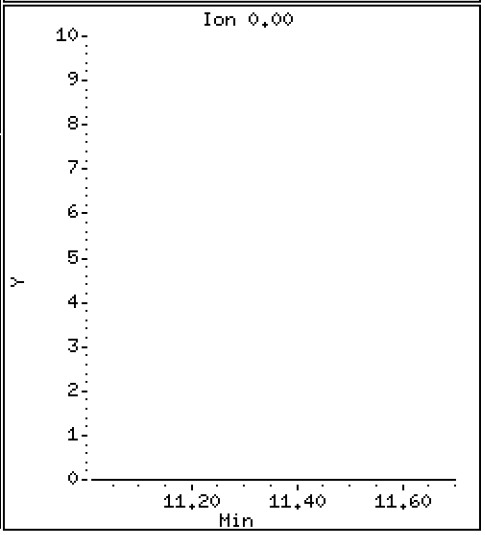


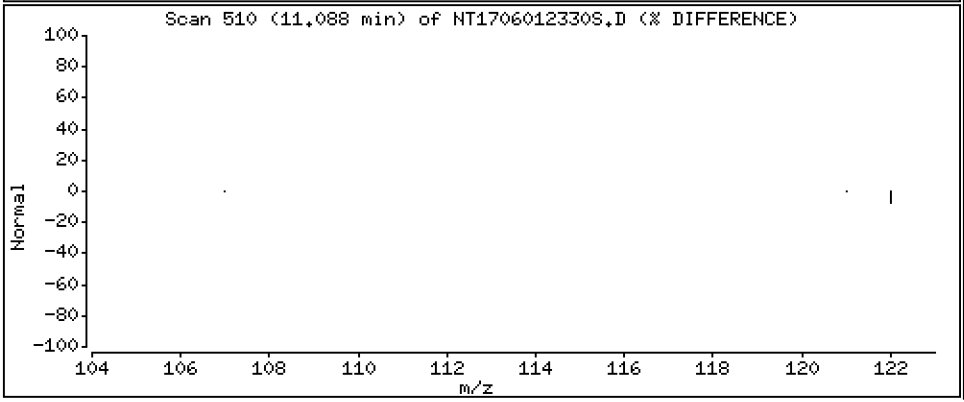












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

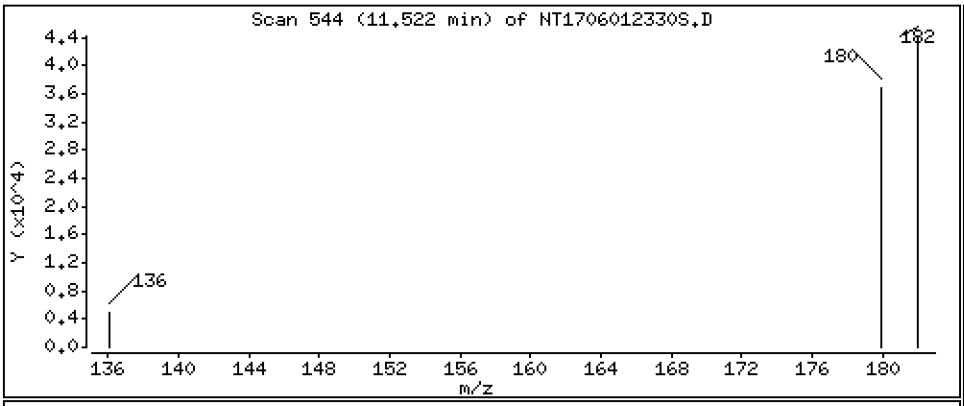
Operator: VTS

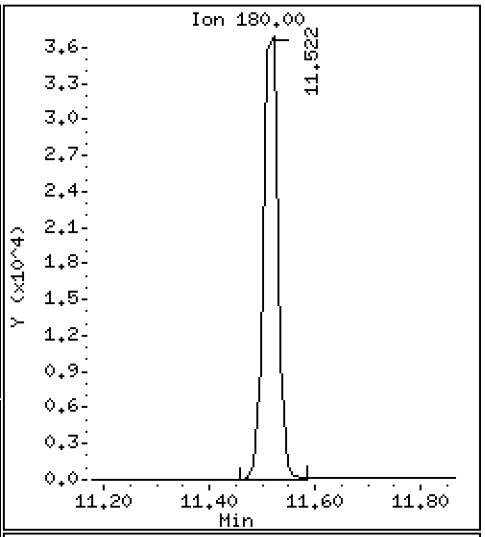
Column phase: ZB-5msi

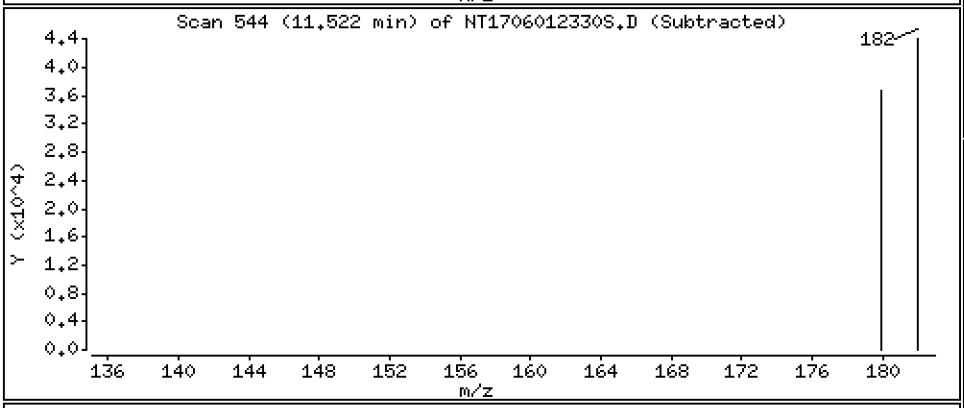
Column diameter: 0.25

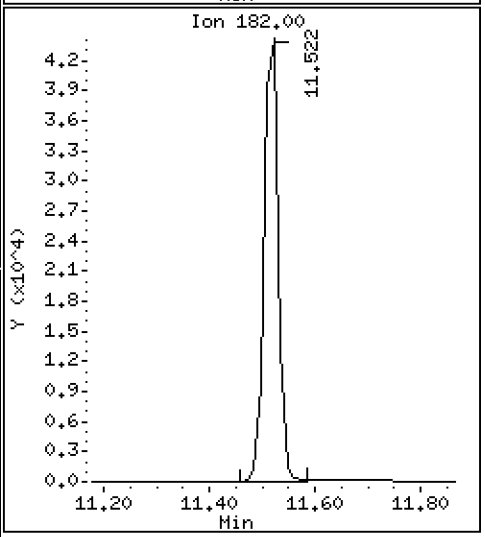
26 1,2,4-Trichlorobenzene

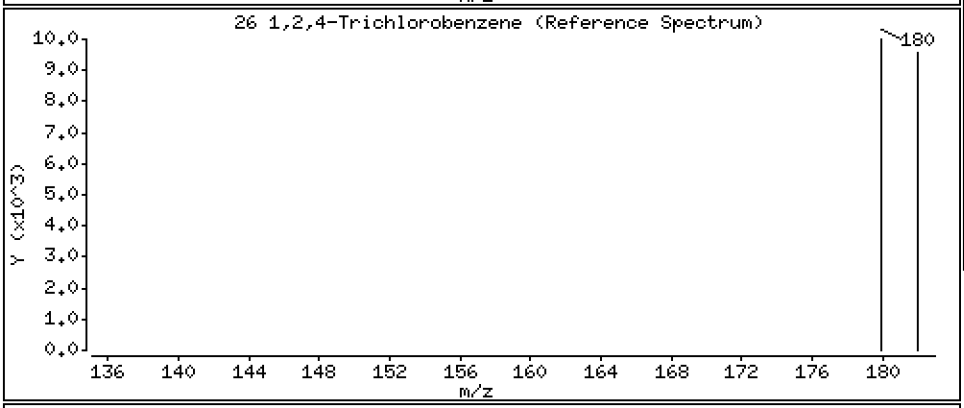
Concentration: 0.9199 ug/mL

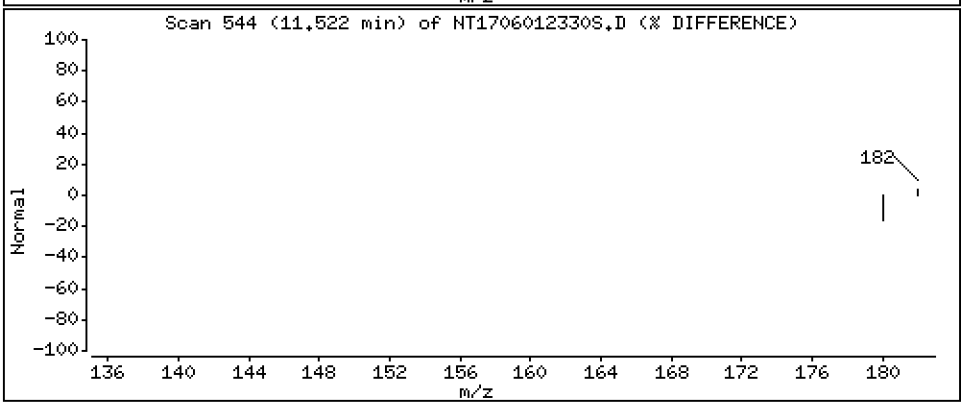












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

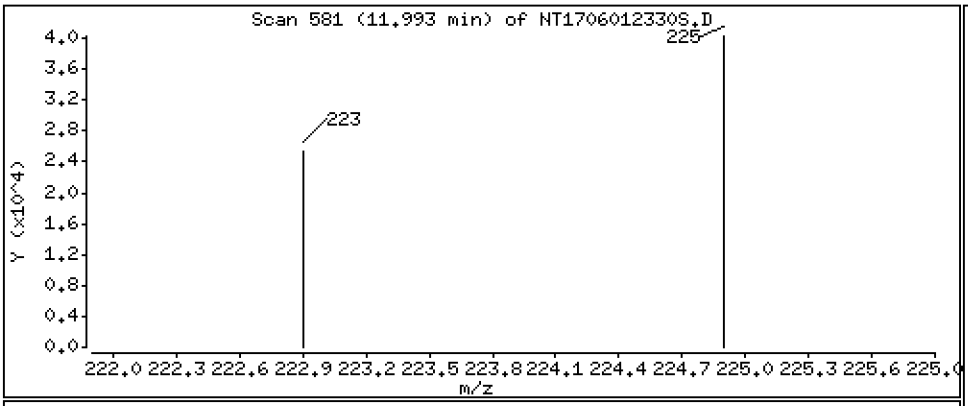
Operator: VTS

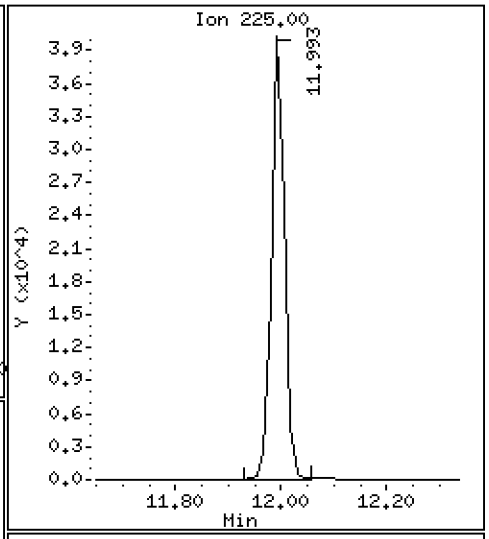
Column phase: ZB-5msi

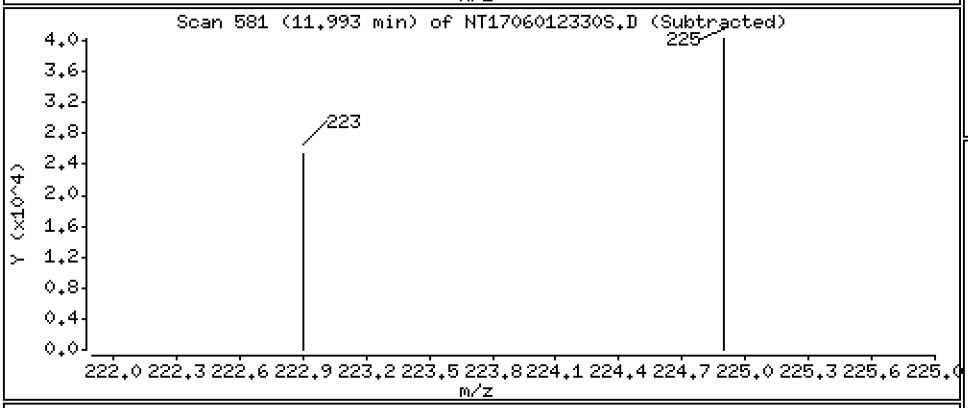
Column diameter: 0.25

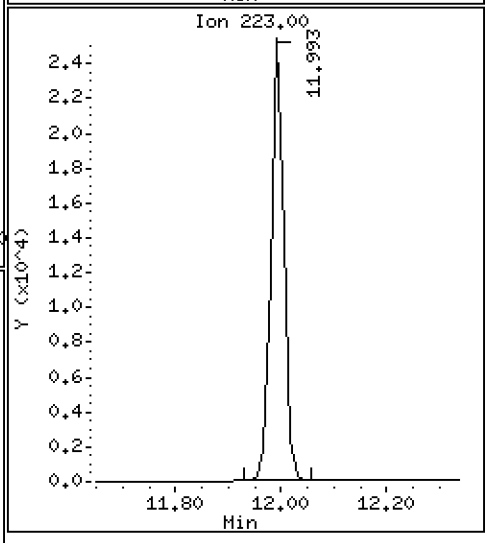
30 Hexachlorobutadiene

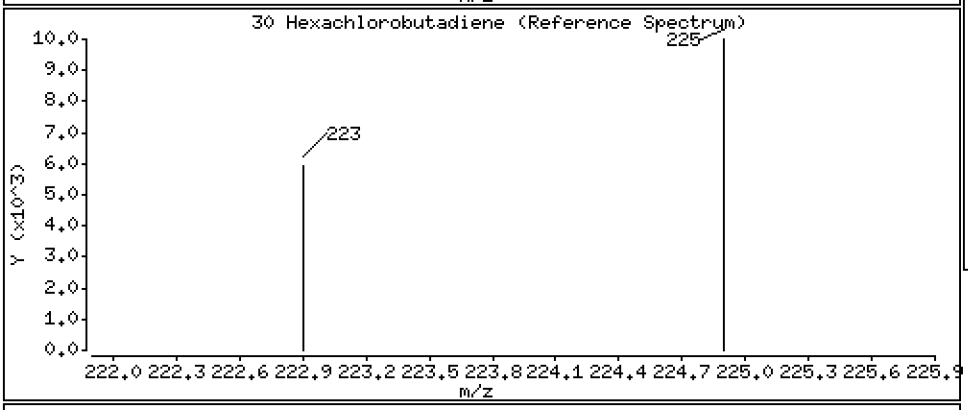
Concentration: 1.655 ug/mL

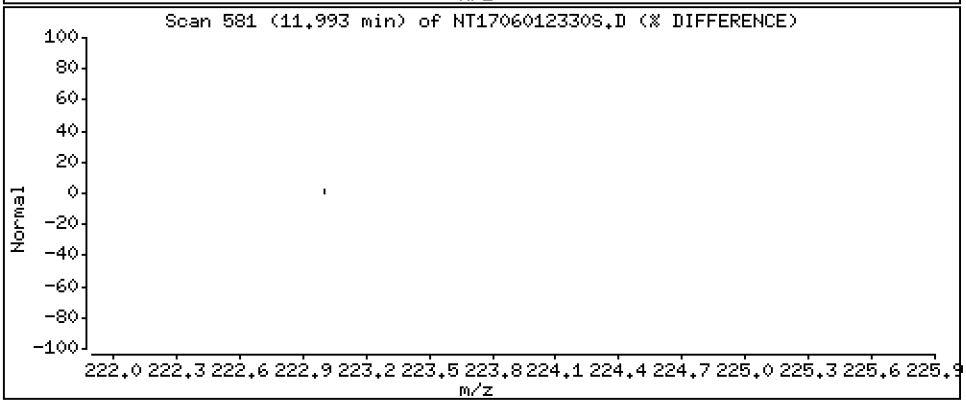












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

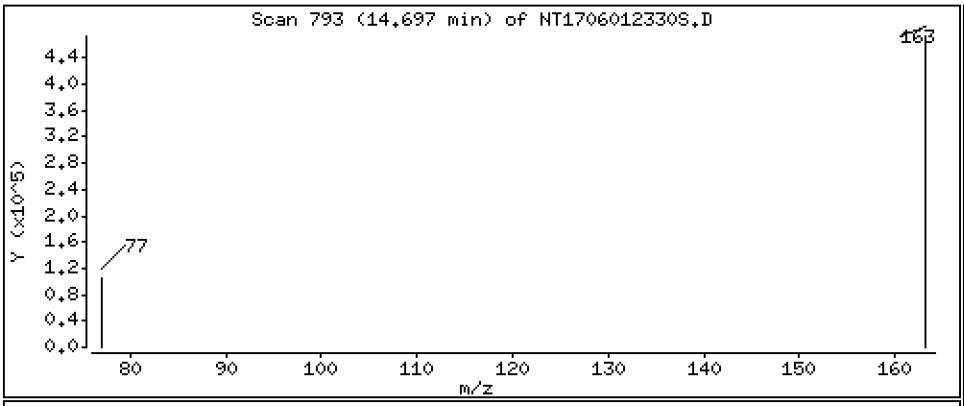
Operator: VTS

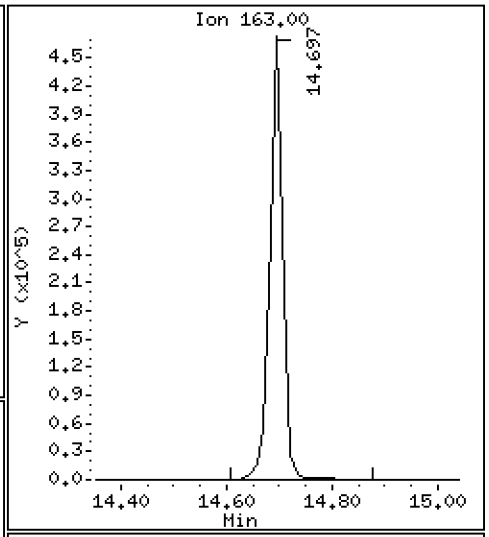
Column phase: ZB-5msi

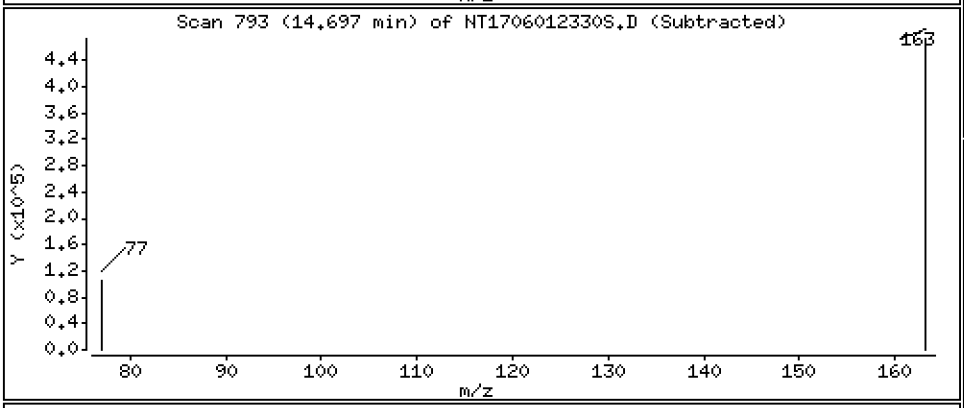
Column diameter: 0.25

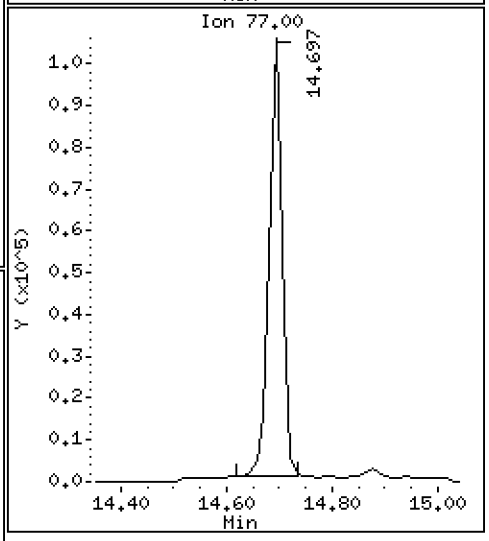
39 Dimethylphthalate

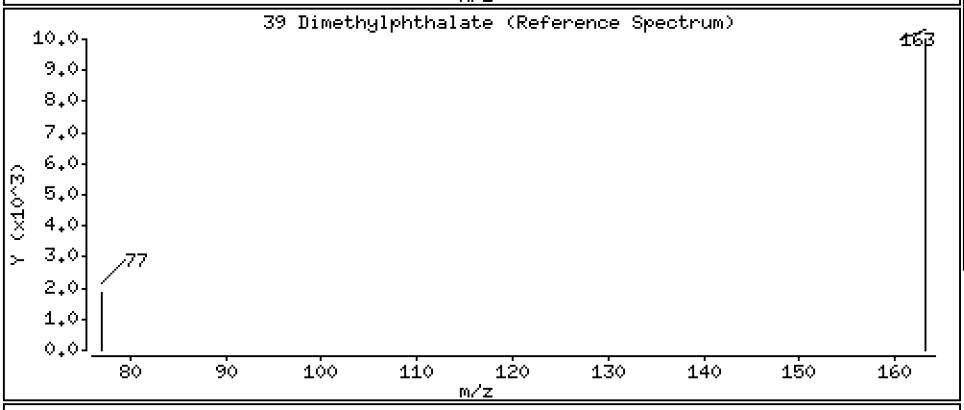
Concentration: 4.178 ug/mL

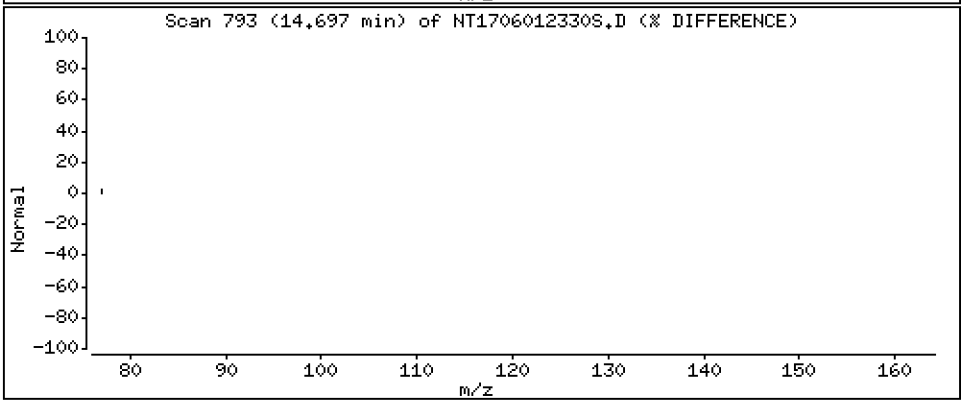












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

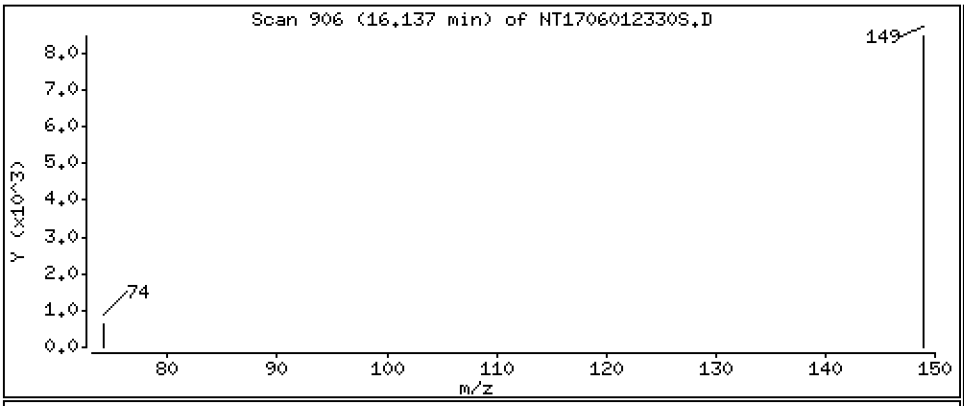
Operator: VTS

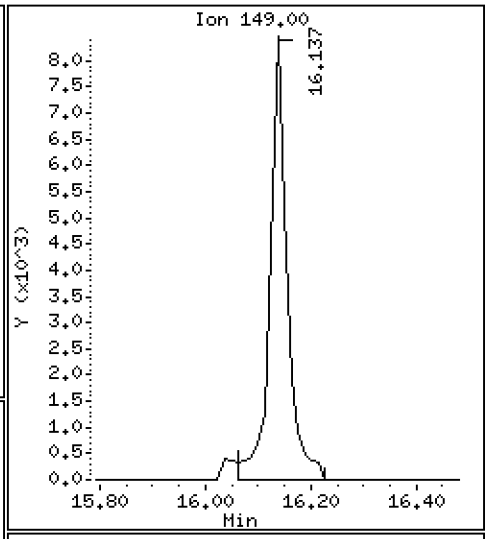
Column phase: ZB-5msi

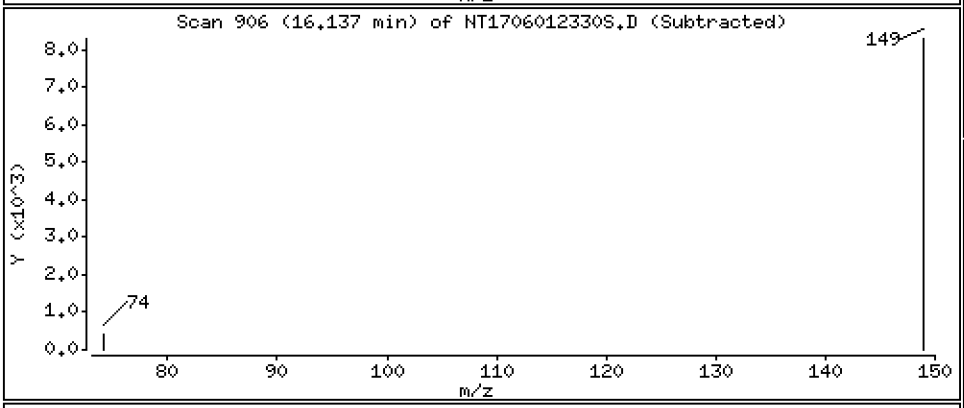
Column diameter: 0.25

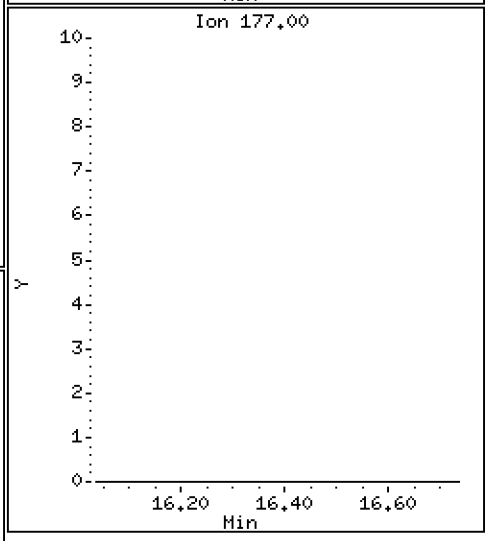
50 Diethylphthalate

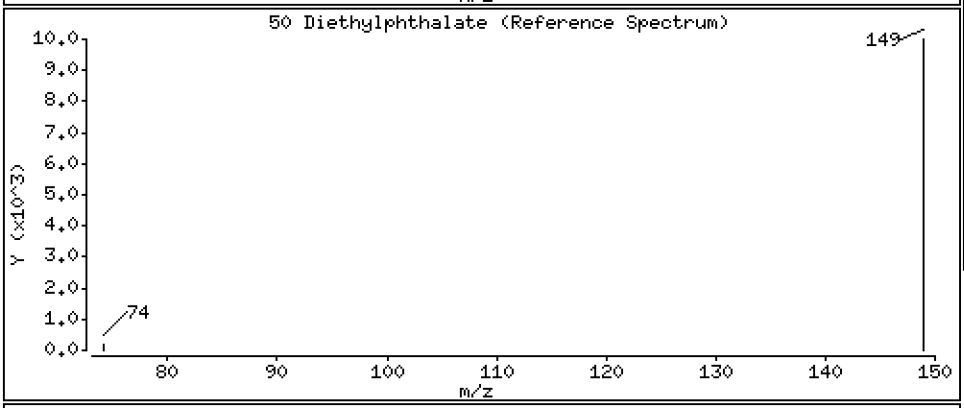
Concentration: 0.1098 ug/mL

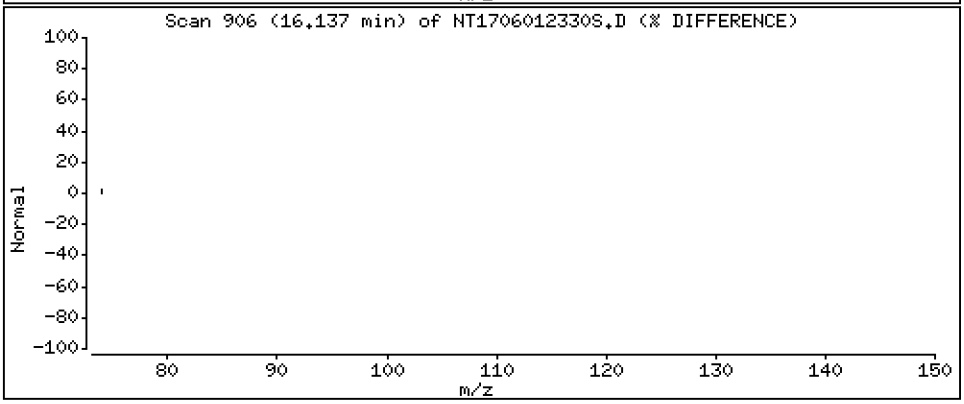












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

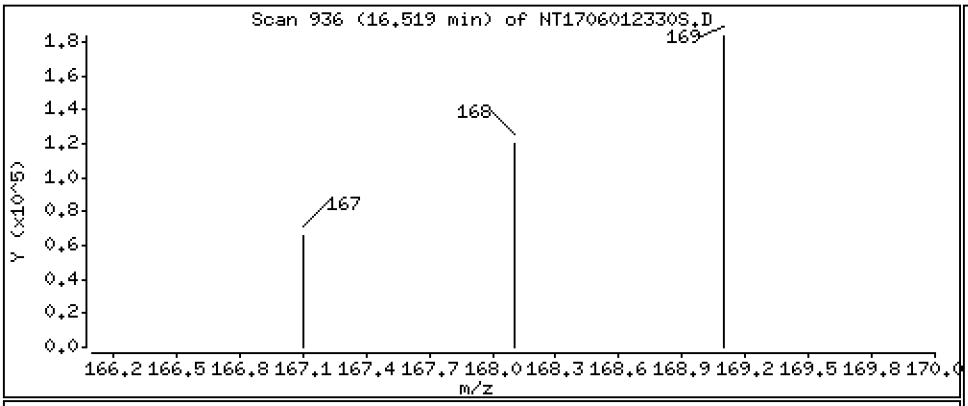
Operator: VTS

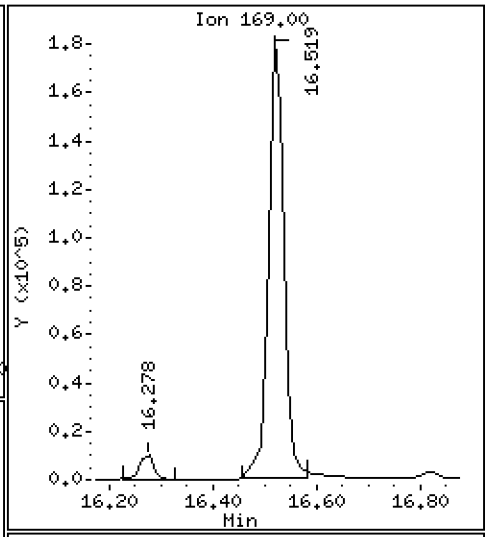
Column phase: ZB-5msi

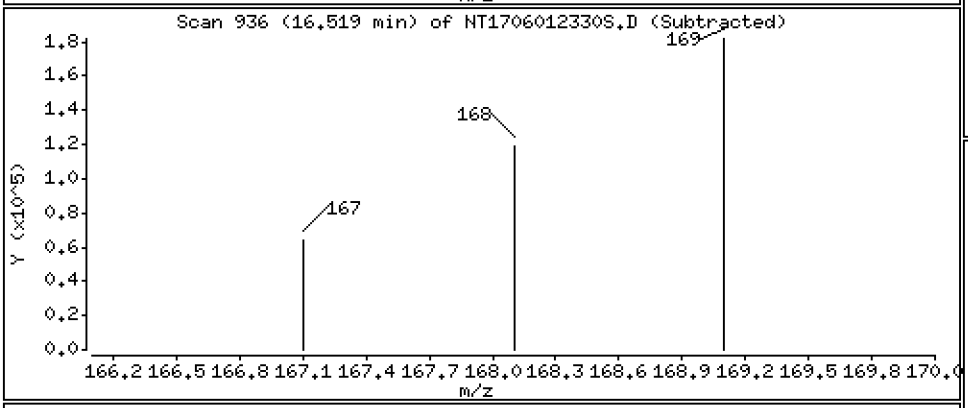
Column diameter: 0.25

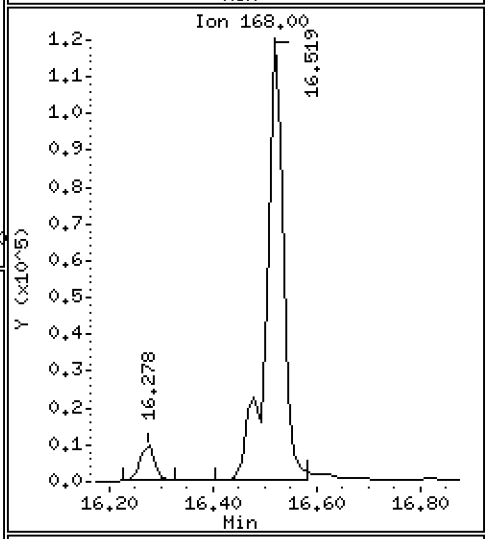
54 N-Nitrosodiphenylamine

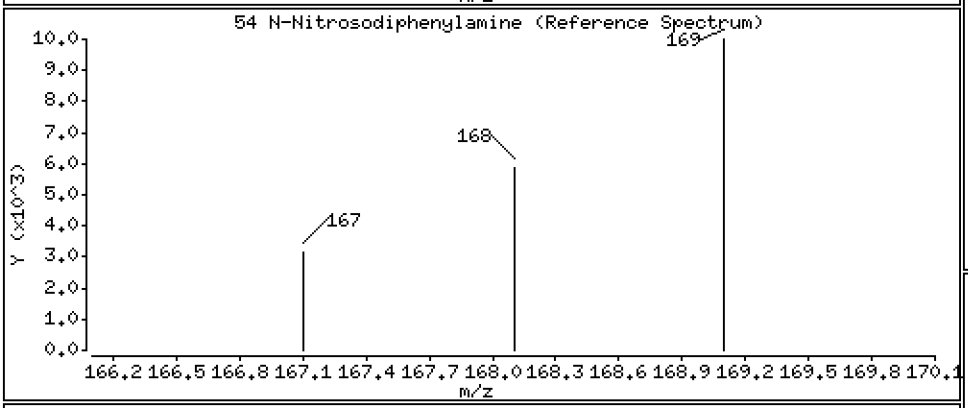
Concentration: 3.291 ug/mL

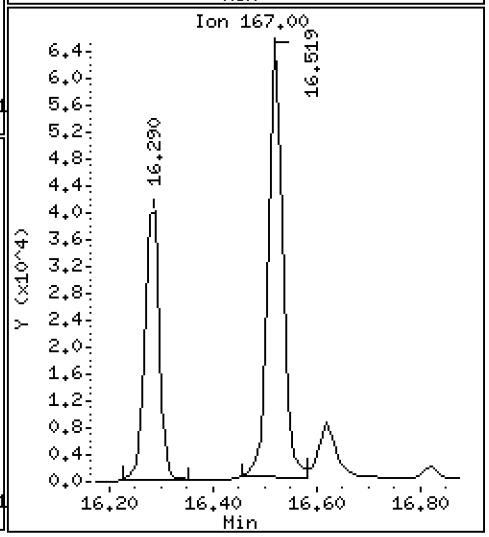


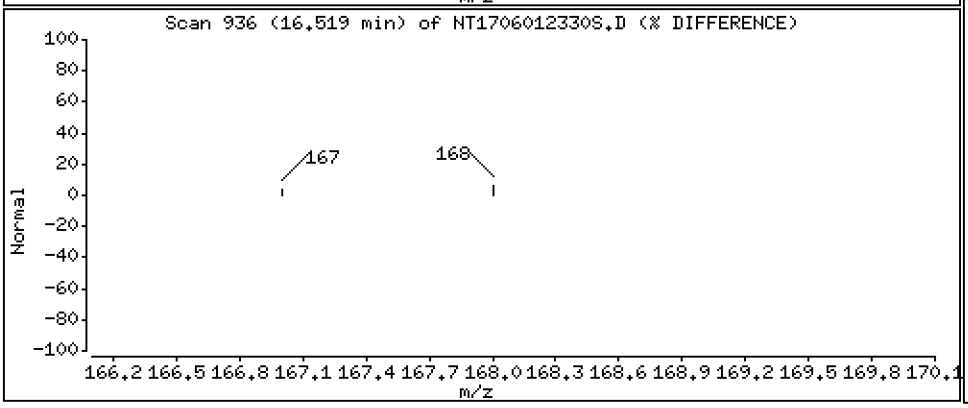












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

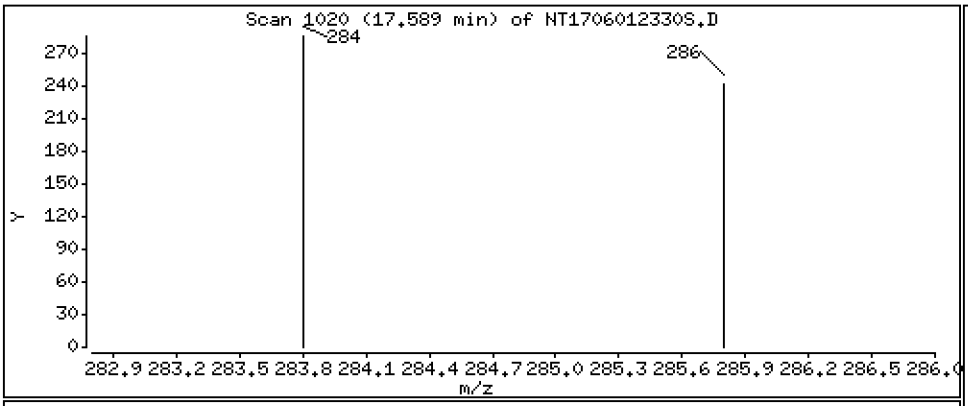
Operator: VTS

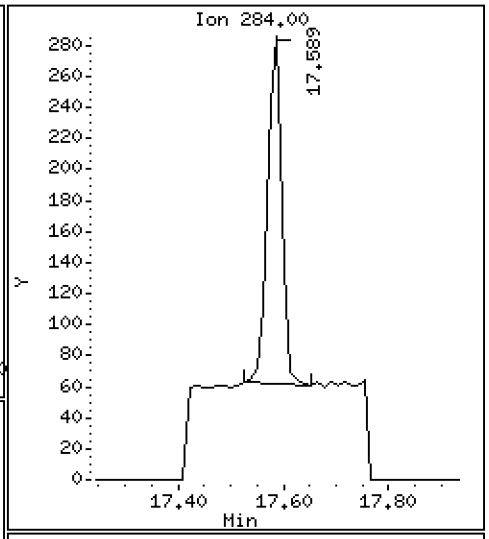
Column phase: ZB-5msi

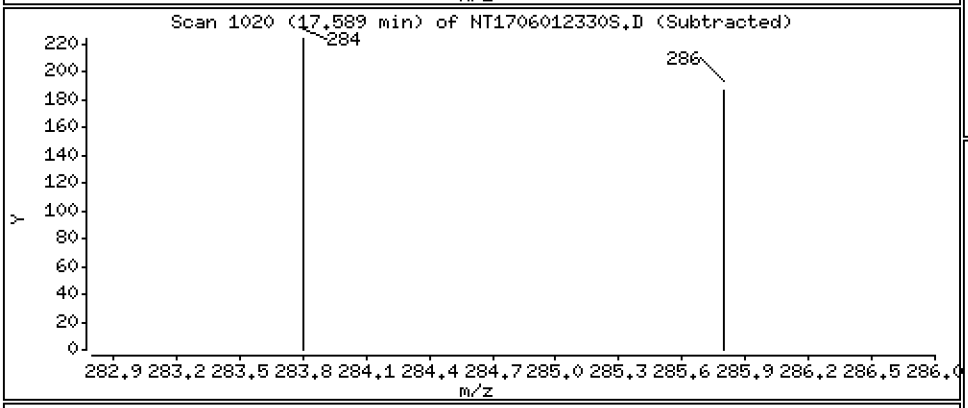
Column diameter: 0.25

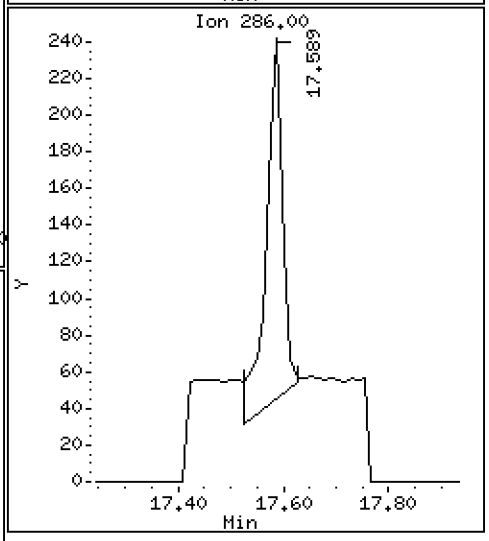
57 Hexachlorobenzene

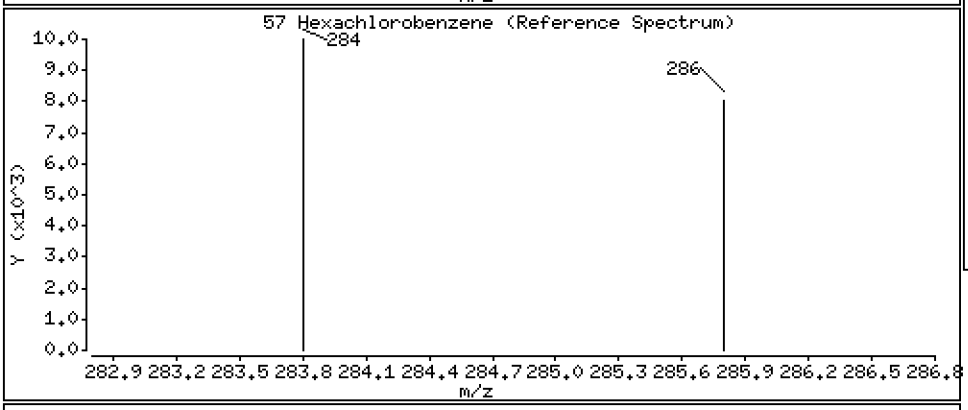
Concentration: 0.01119 ug/mL

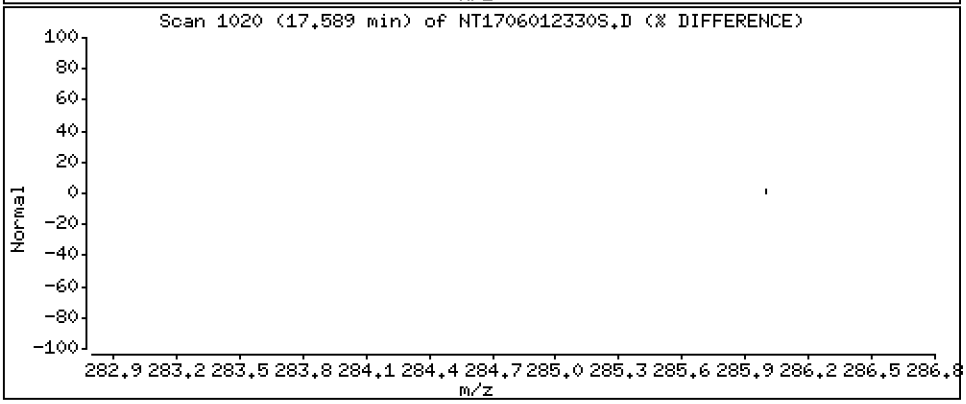












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

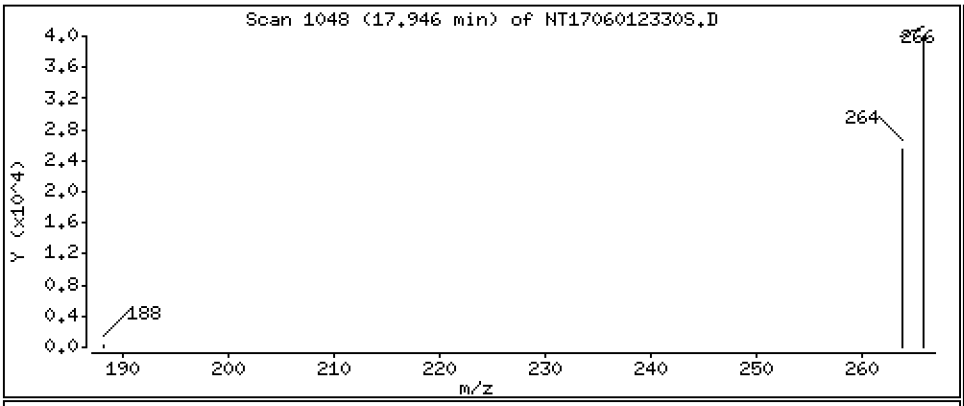
Operator: VTS

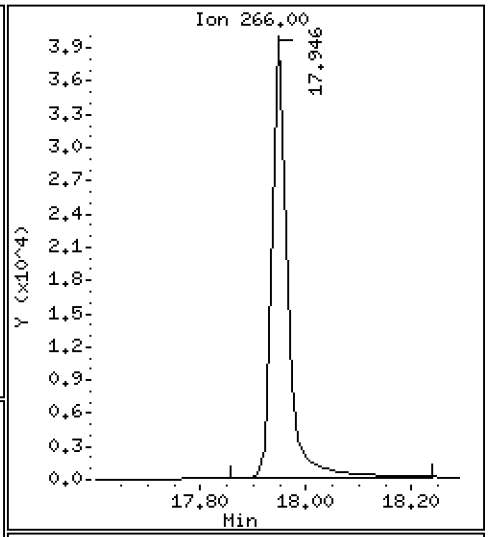
Column phase: ZB-5msi

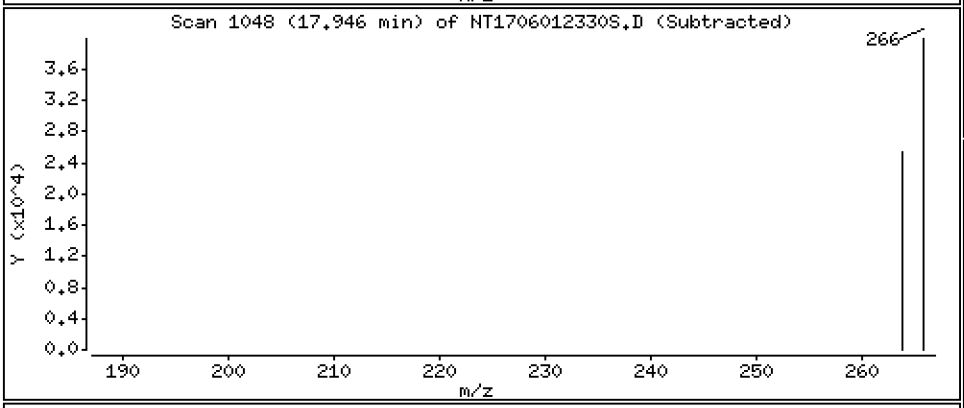
Column diameter: 0.25

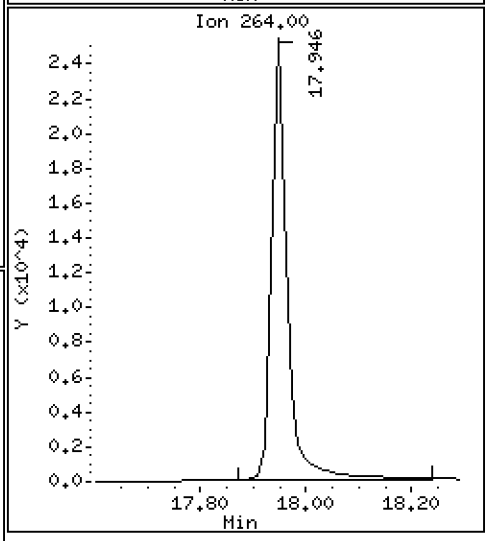
58 Pentachlorophenol

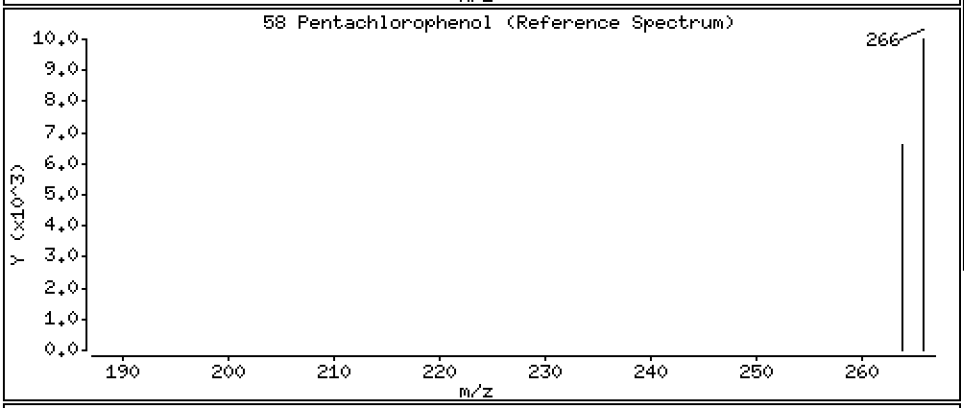
Concentration: 3.873 ug/mL

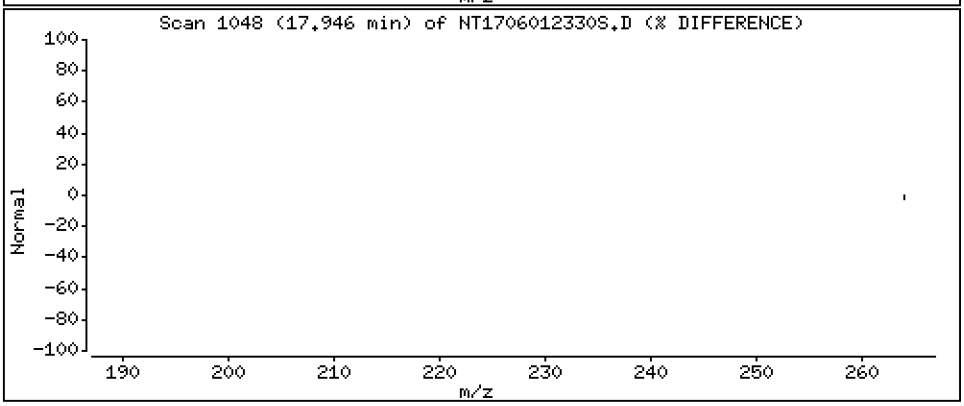












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

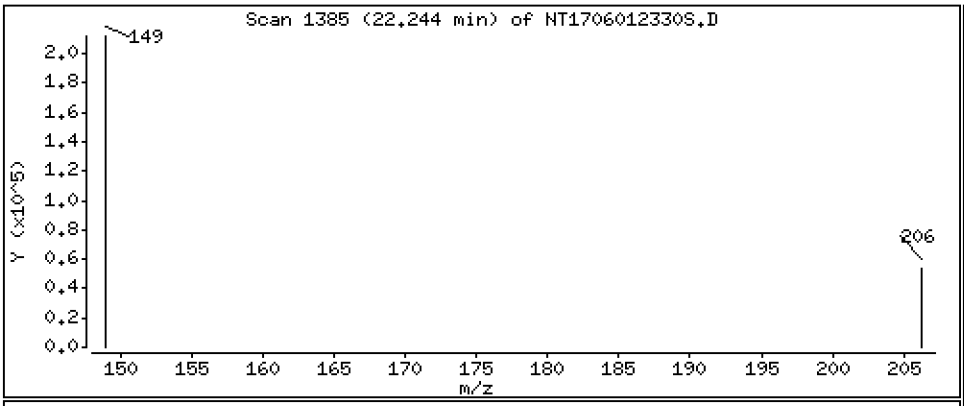
Operator: VTS

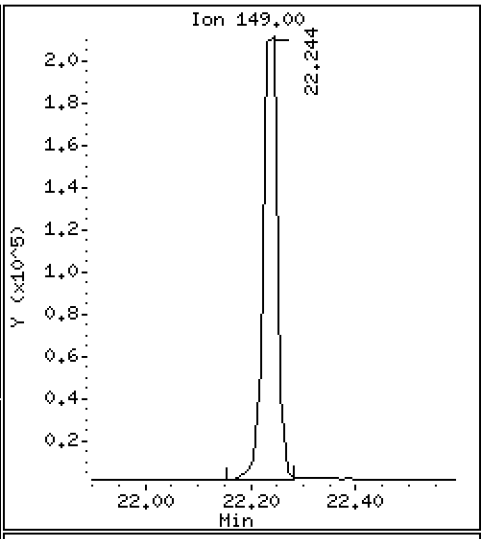
Column phase: ZB-5msi

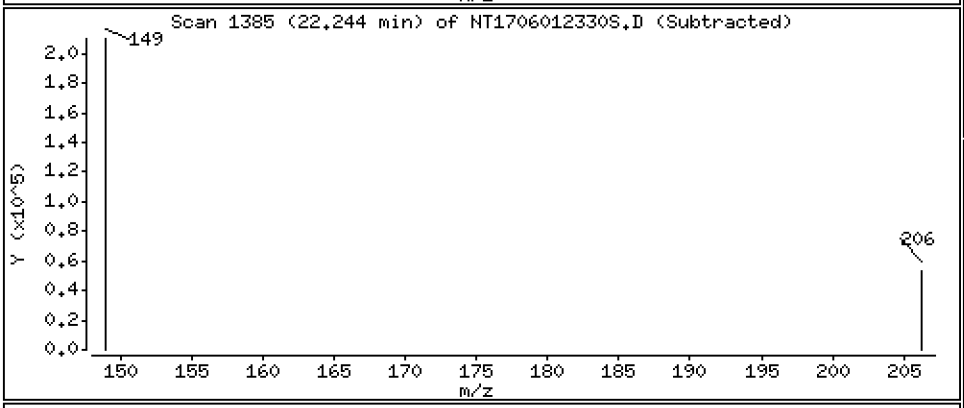
Column diameter: 0.25

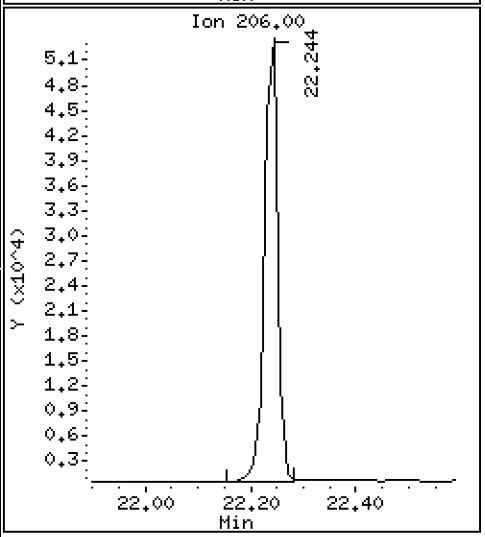
67 Butylbenzylphthalate

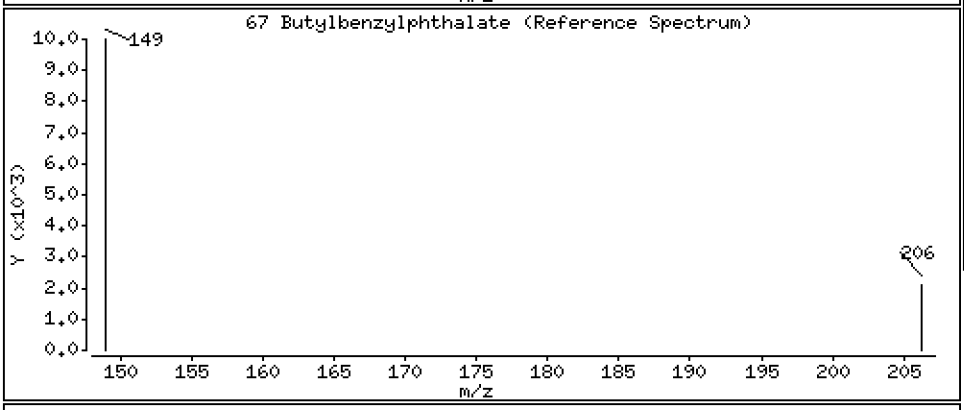
Concentration: 3.551 ug/mL

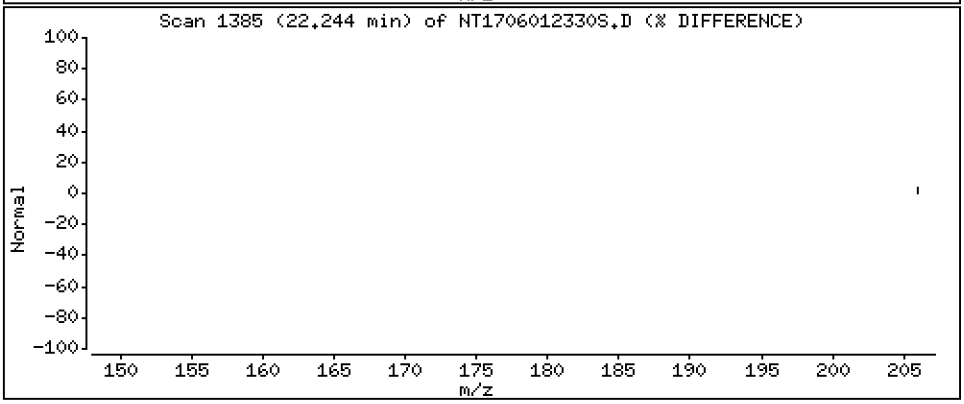












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

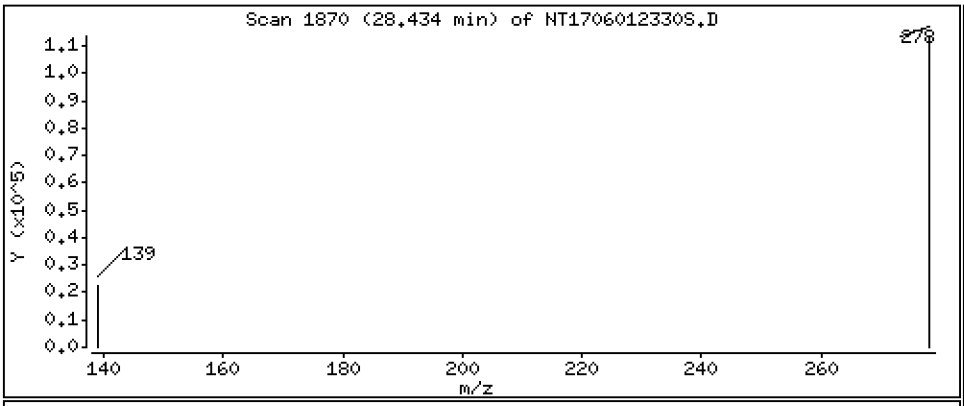
Operator: VTS

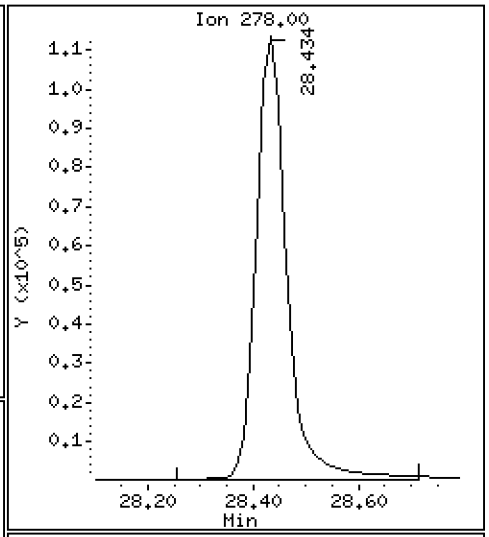
Column phase: ZB-5msi

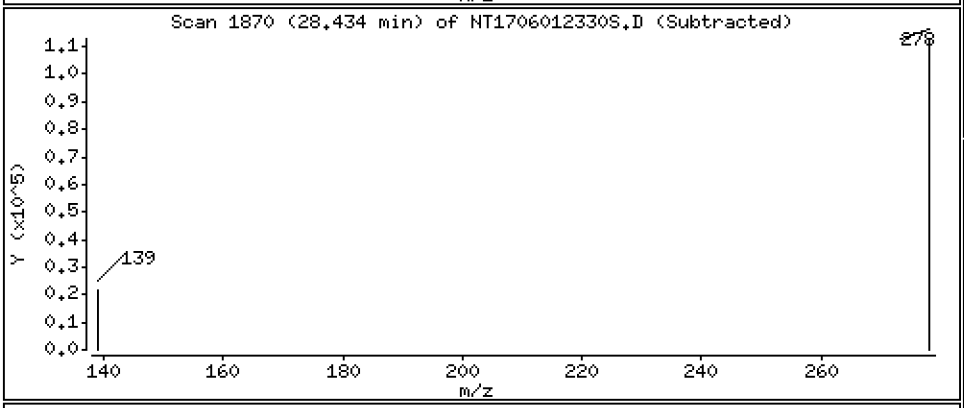
Column diameter: 0.25

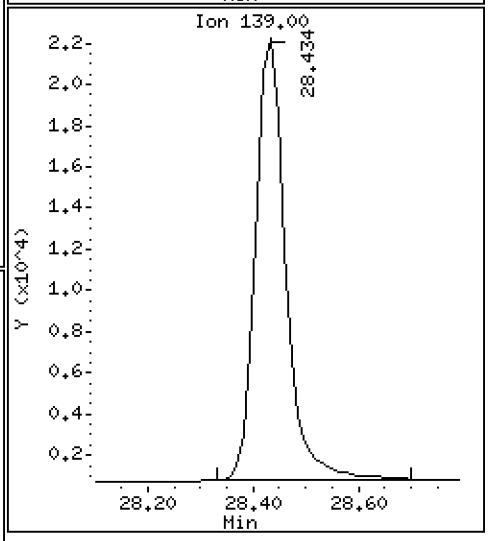
79 Dibenzo(a,h)anthracene

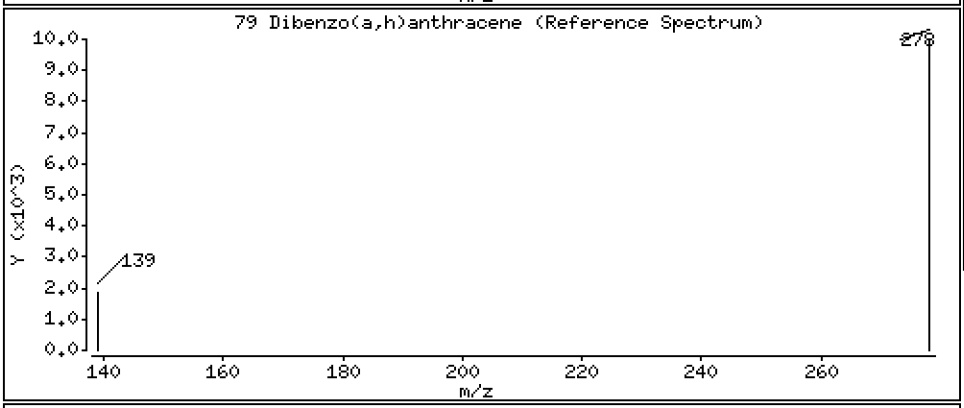
Concentration: 3.213 ug/mL

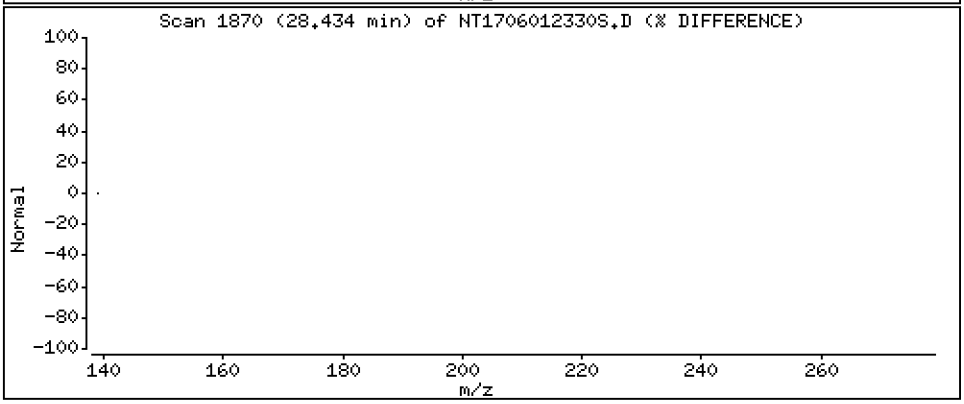












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D

Date : 02-JUN-2023 06:02

Client ID:

Instrument: nt17.i

Sample Info: BLE0148-SRM2

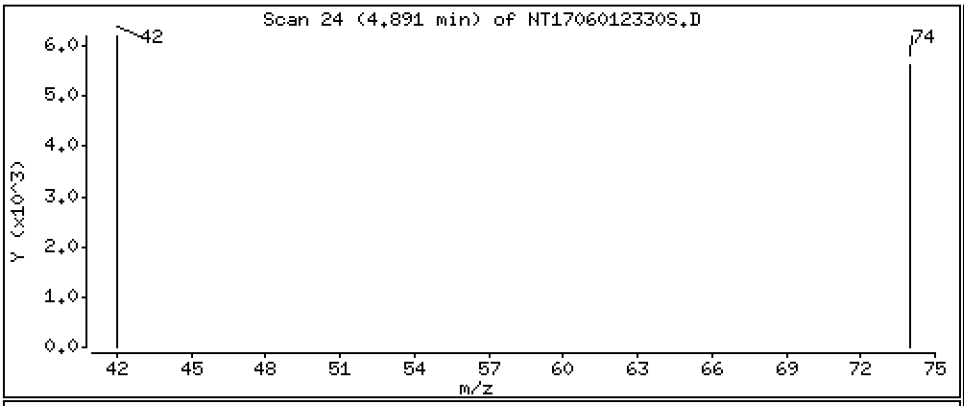
Operator: VTS

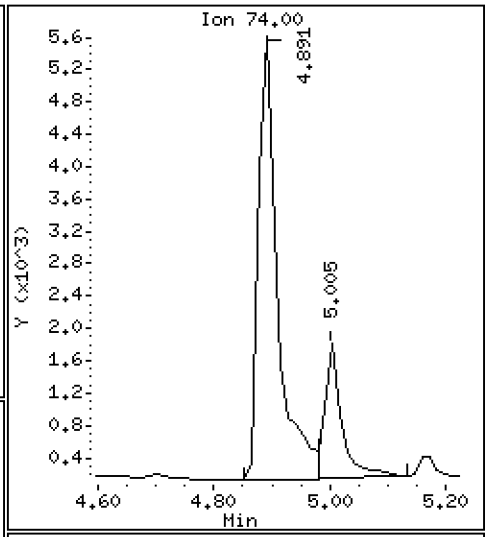
Column phase: ZB-5msi

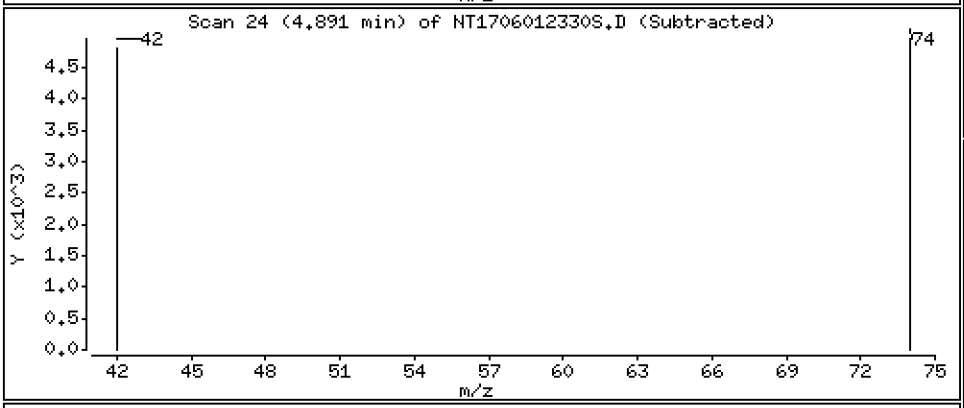
Column diameter: 0.25

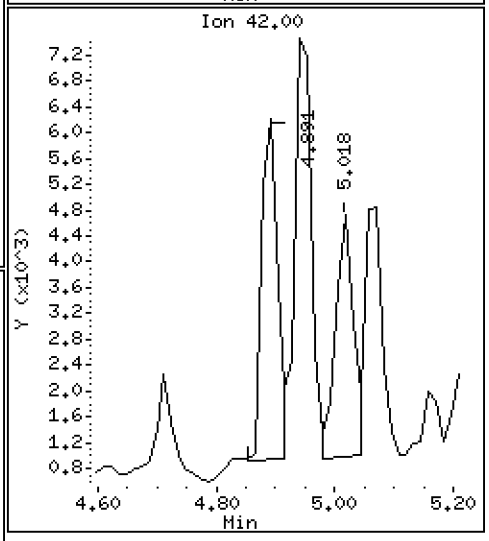
90 N-Nitrosodimethylamine

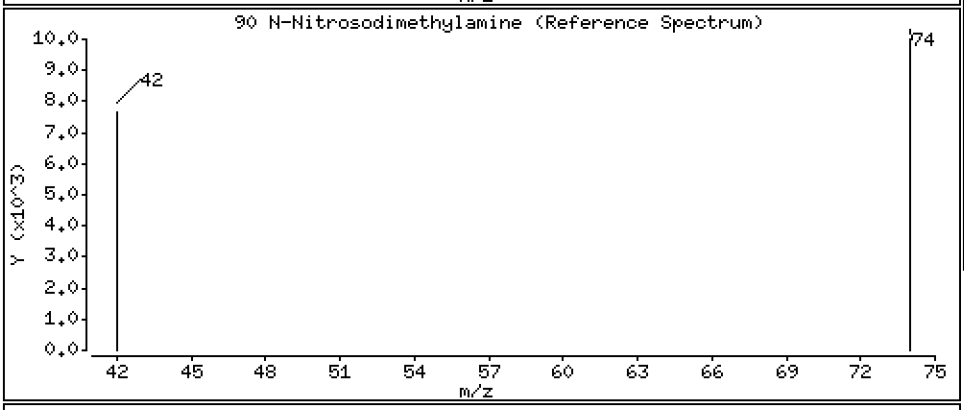
Concentration: 0.2506 ug/mL

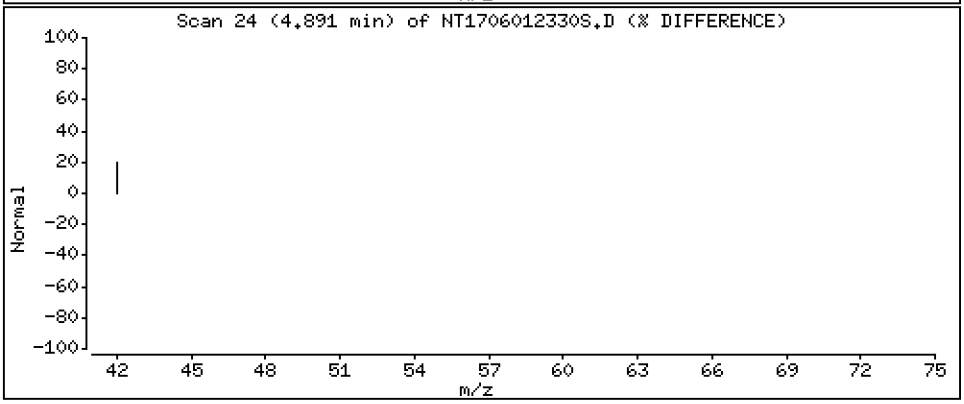












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012330S.D
Lab Smp Id: BLE0148-SRM2
Inj Date : 02-JUN-2023 06:02
Operator : VTS Inst ID: nt17.i
Smp Info : BLE0148-SRM2
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.979	6.954	(0.763)	293575	3.72901	3.729(R)
	3 Phenol	94	8.547	8.547	(0.934)	239697	2.04332	2.043
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	74132	0.70503	0.7050
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	260289	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	1097	0.01092	0.01092(M)
	13 2-Methylphenol	108	9.644	9.644	(1.054)	344965	4.24370	4.244
	15 4-Methylphenol	108	9.912	9.912	(1.084)	450199	5.48007	5.480
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.934	10.934	(0.943)	239914	2.76783	2.768
	24 Benzoic acid	105	11.087	11.100	(0.956)	28605	0.52973	0.5297
	26 1,2,4-Trichlorobenzene	180	11.521	11.521	(0.993)	72343	0.91991	0.9199
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	901096	4.00000	
	30 Hexachlorobutadiene	225	11.993	11.993	(1.034)	68531	1.65500	1.655
	39 Dimethylphthalate	163	14.696	14.696	(0.968)	807480	4.17830	4.178
*	42 Acenaphthene-d10	162	15.181	15.194	(1.000)	526260	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.063)	19273	0.10981	0.1098
	54 N-Nitrosodiphenylamine	169	16.519	16.519	(0.908)	364933	3.29054	3.291
	57 Hexachlorobenzene	284	17.588	17.588	(0.966)	421	0.01119	0.01119(M)
	58 Pentachlorophenol	266	17.945	17.946	(0.986)	85103	3.87329	3.873
*	59 Phenanthrene-d10	188	18.200	18.201	(1.000)	787218	4.00000	
$	66 Terphenyl-d14	244	21.325	21.325	(0.919)	471508	4.47449	4.474(R)
	67 Butylbenzylphthalate	149	22.243	22.243	(0.958)	406599	3.55073	3.551
*	69 Chrysene-d12	240	23.213	23.213	(1.000)	555347	4.00000	
*	77 Perylene-d12	264	25.802	25.802	(1.000)	502074	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.433	28.446	(1.102)	454951	3.21260	3.213
	90 N-Nitrosodimethylamine	74	4.890	4.878	(0.535)	12731	0.25055	0.2506

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012330S.D Calibration Time: 00:29
Lab Smp Id: BLE0148-SRM2
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	260289	-1.98
27 Naphthalene-d8	874121	437061	1748242	901096	3.09
42 Acenaphthene-d10	524478	262239	1048956	526260	0.34
59 Phenanthrene-d10	807440	403720	1614880	787218	-2.50
69 Chrysene-d12	527364	263682	1054728	555347	5.31
77 Perylene-d12	455527	227764	911054	502074	10.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.18	-0.08
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.21	22.71	23.71	23.21	-0.00
77 Perylene-d12	25.80	25.30	26.30	25.80	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012330S.D

Lab ID: BLE0148-SRM2
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 06:02

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1706012321S.D

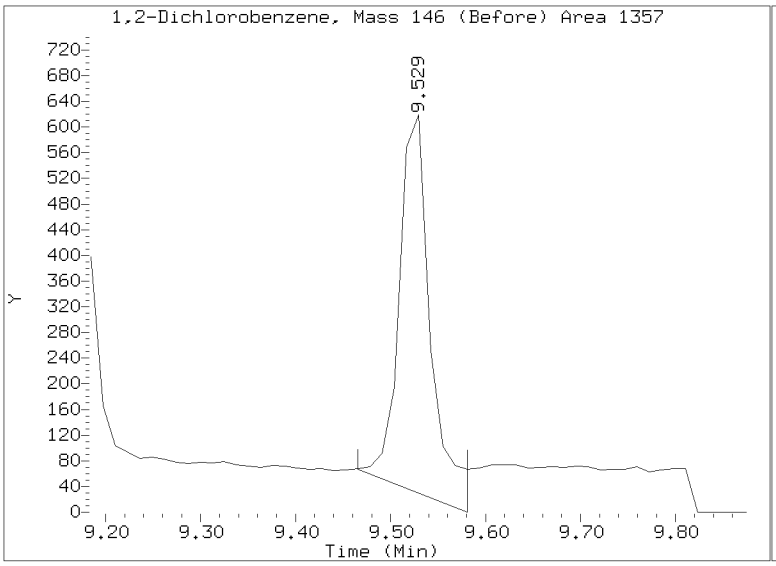
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

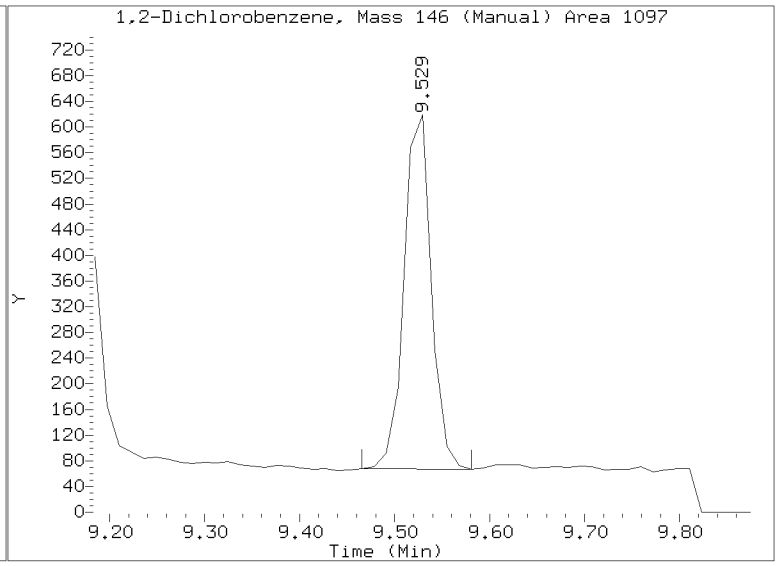
Exception: 1,2,4-Trichlorobenzene 0.0010

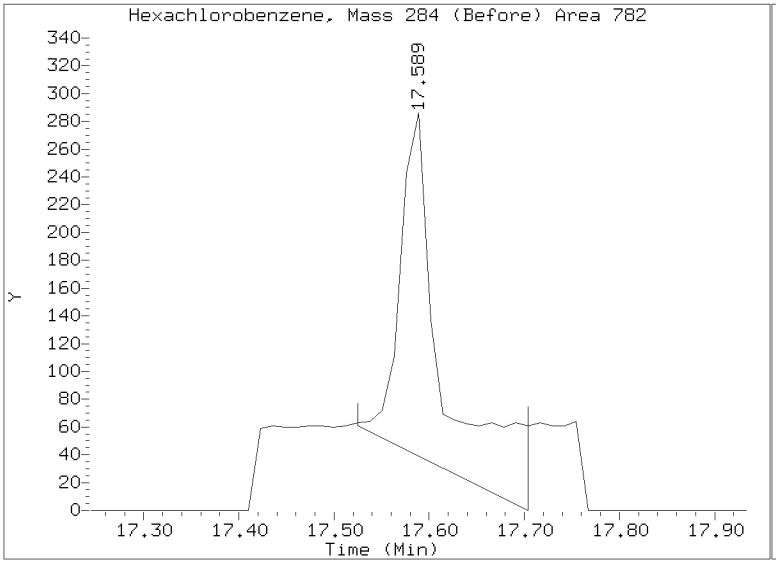
* Only compounds listed in the work order have been verified by the analyst *

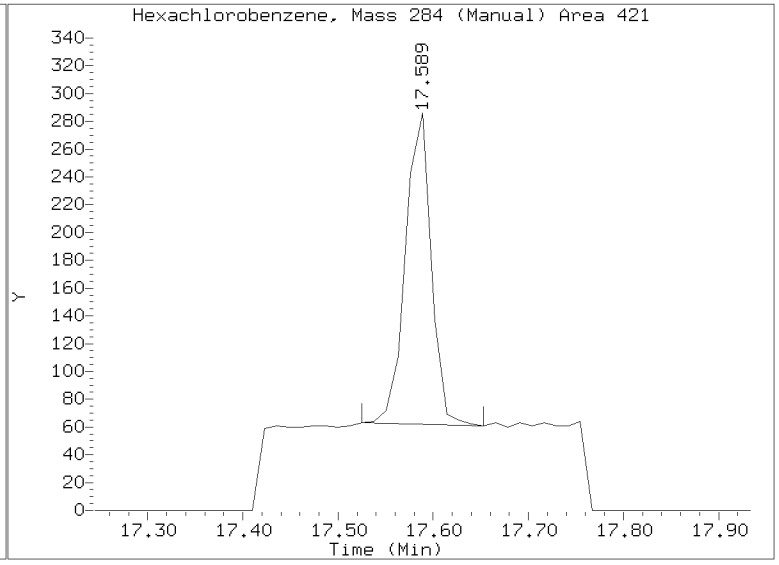
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230601.b/SIM.b/NT1706012330S.D
Injection Date: 02-JUN-2023 06:02
Lab ID:BLE0148-SRM2 Client ID:
Report Date: 06/06/2023 11:44









STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0149-SRM1
Batch: BLE0149
Initial/Final: 4.58 g / 0.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 05/22/2023 21:00
Standard ID: J007238
Expires: 01/09/2026
Standard Lot#: SQC017 (LRAC9745)
Description: SQC017-40G PAHs by HPLC40g

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Benzo(a)anthracene	119.00	64.3	1.80	10.9		54.0	31 - 170
Chrysene	229.26	133	2.30	10.9		58.0	13 - 186
Benzo(b)fluoranthene	322.05	182	3.00	10.9		56.5	33 - 167
Benzo(k)fluoranthene	282.75	55.9	1.66	10.9		19.8	14 - 186
Benzo(a)pyrene	71.507	71.1	1.34	10.9		99.4	24 - 176
Indeno(1,2,3-cd)pyrene	227.07	79.0	2.29	10.9		34.8	0 - 208
Dibenzo(a,h)anthracene	193.23	136	1.95	10.9		70.4	0 - 214

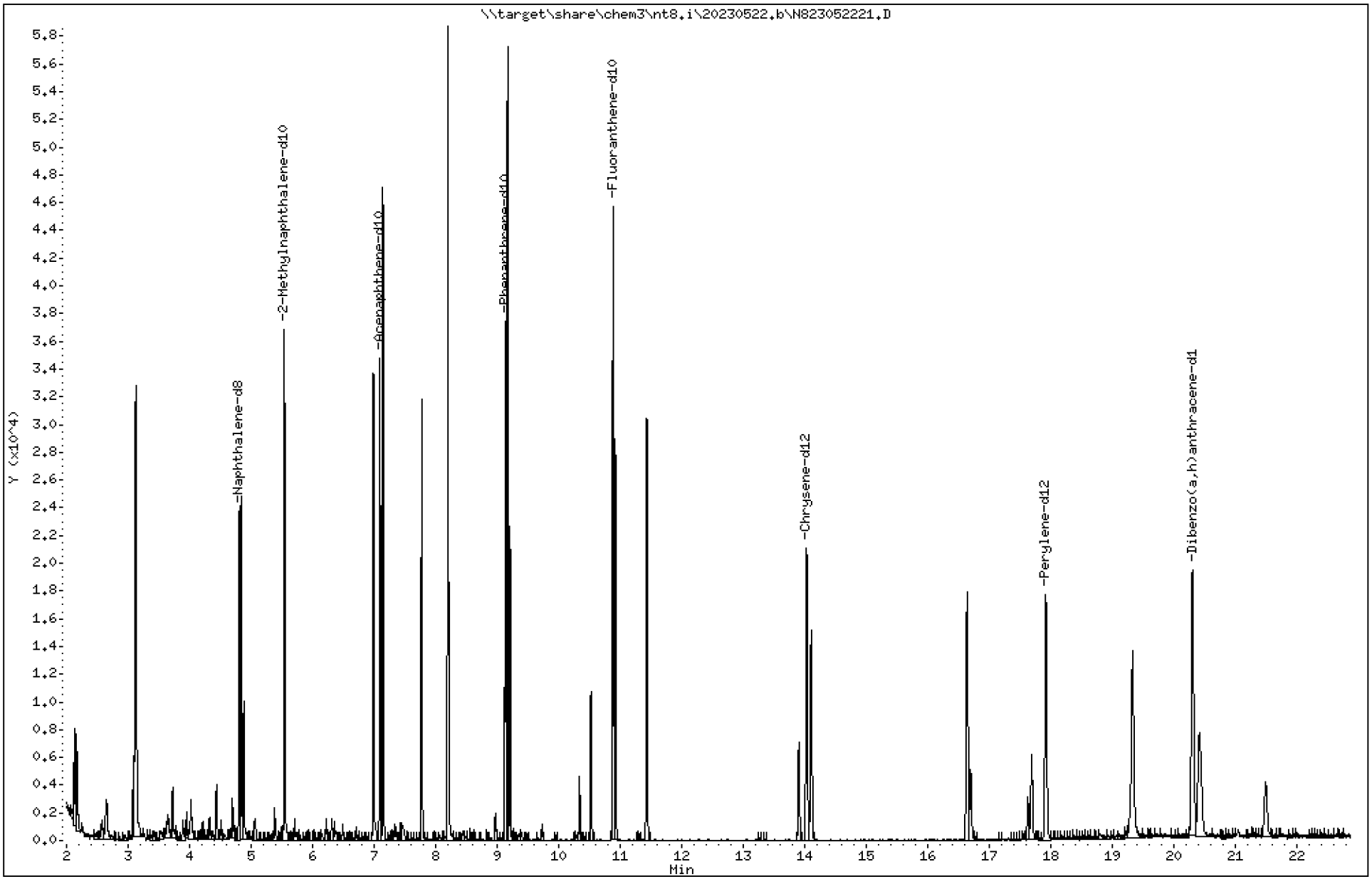
* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D
Date : 22-MAY-2023 21:00
Client ID:
Sample Info: BLE0149-SRM1,

Column phase: Rxi-17sil

Instrument: nt8.i

Operator: JZ
Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

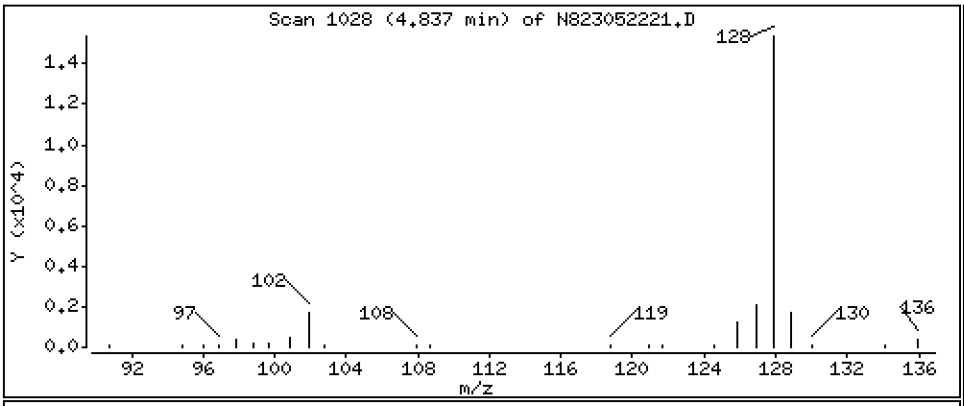
Operator: JZ

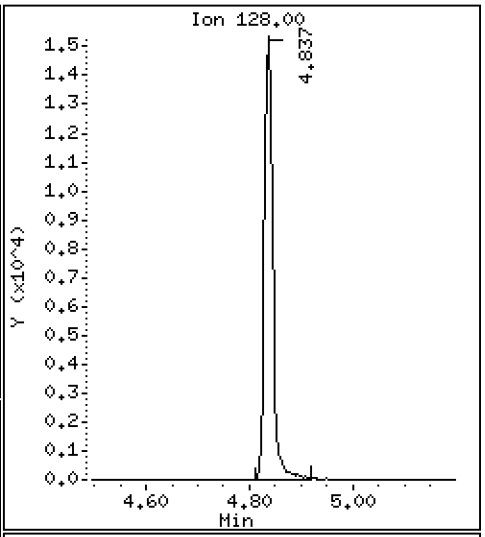
Column phase: Rxi-17sil

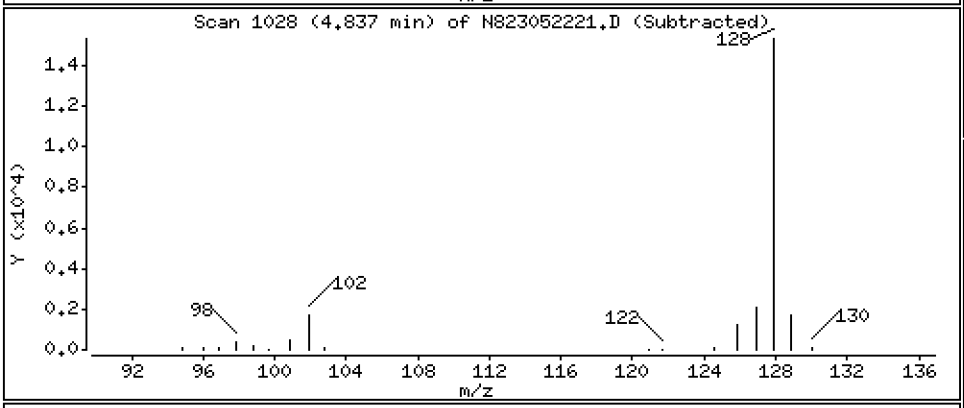
Column diameter: 0.25

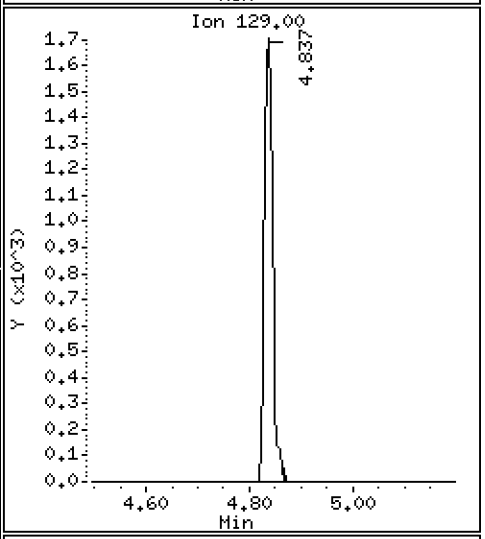
2 Naphthalene

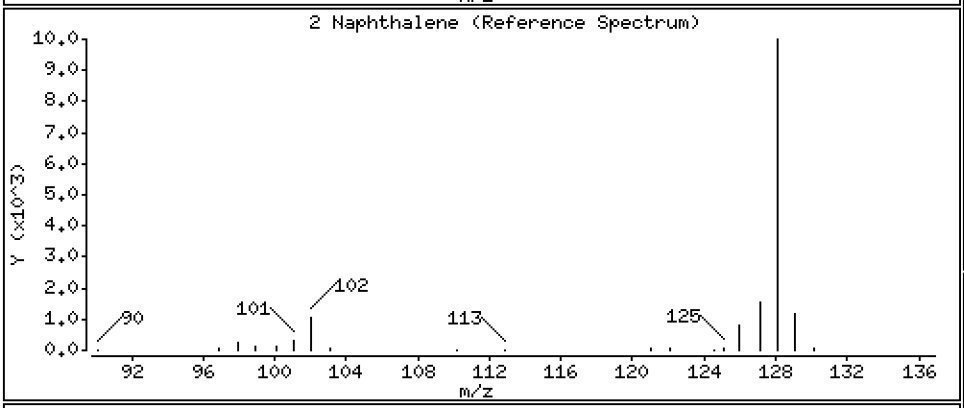
Concentration: 1.999 ug/mL

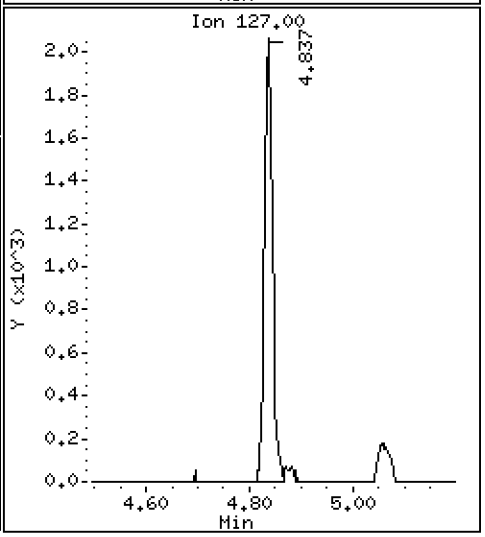


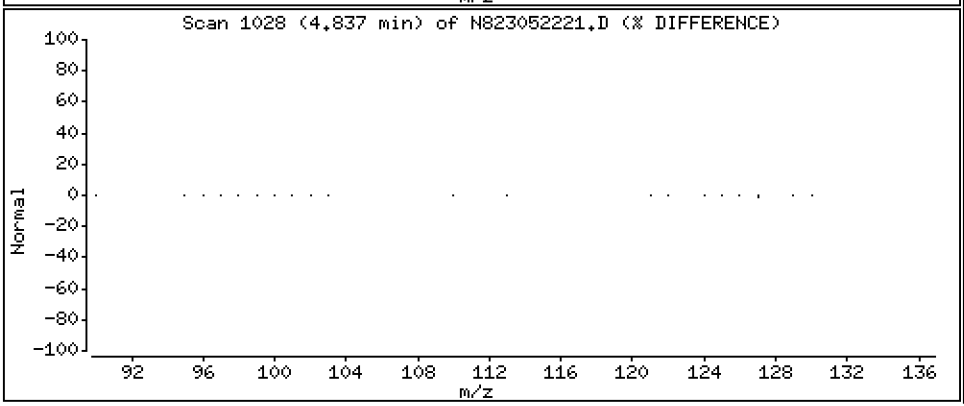












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

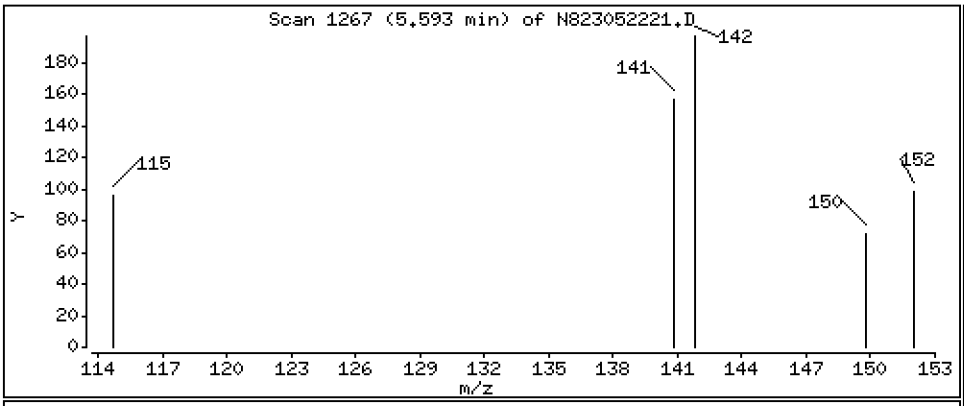
Operator: JZ

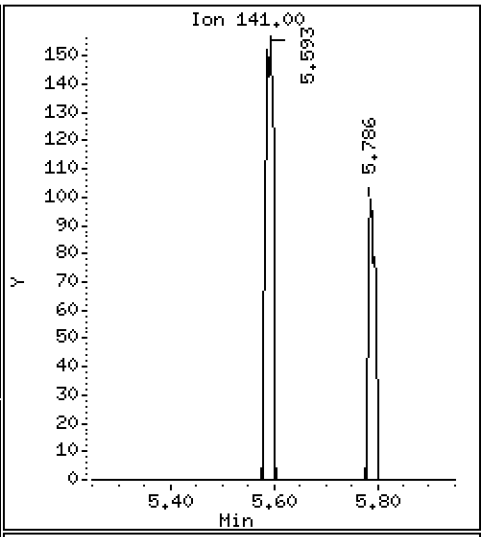
Column phase: Rxi-17sil

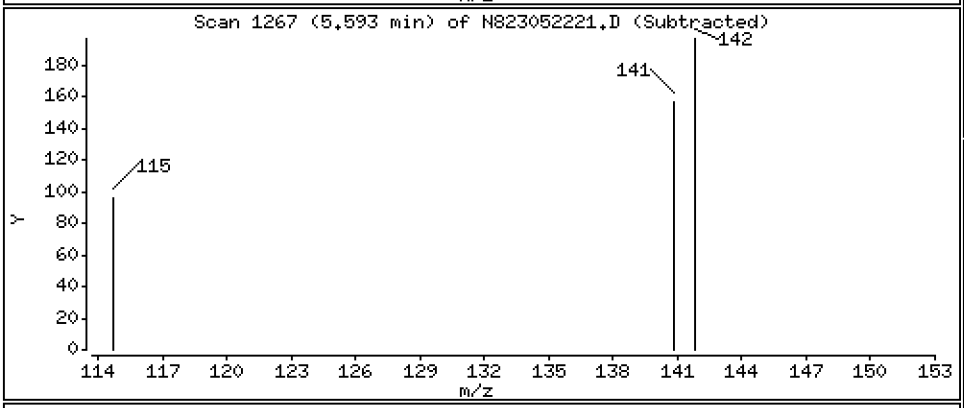
Column diameter: 0.25

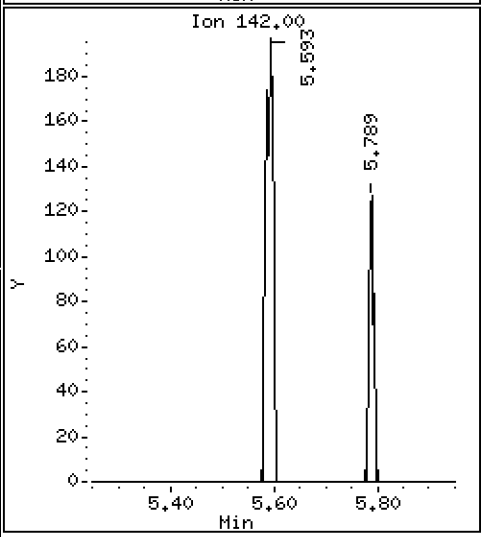
4 2-Methylnaphthalene

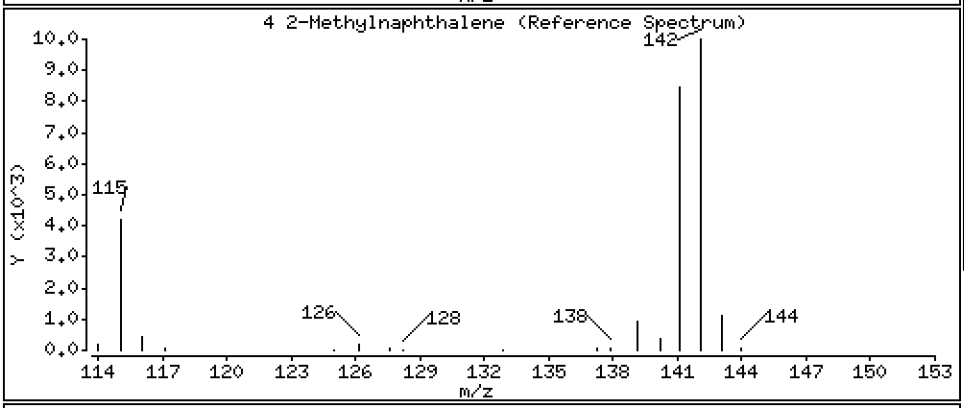
Concentration: 0.03243 ug/mL

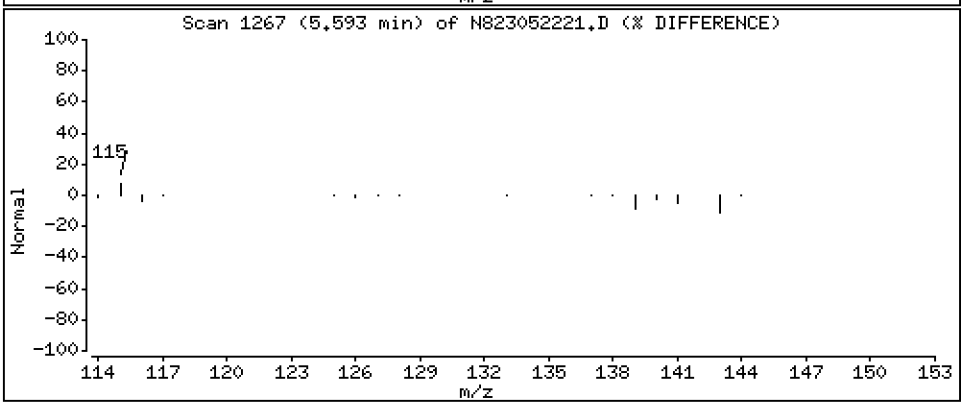












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

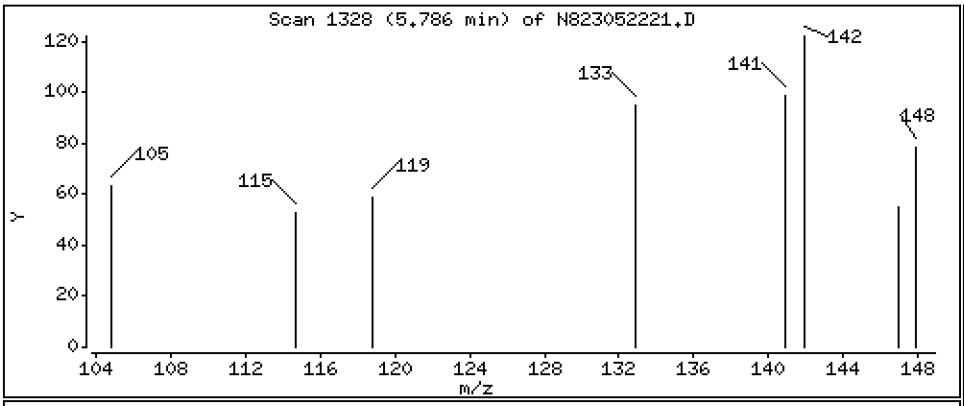
Operator: JZ

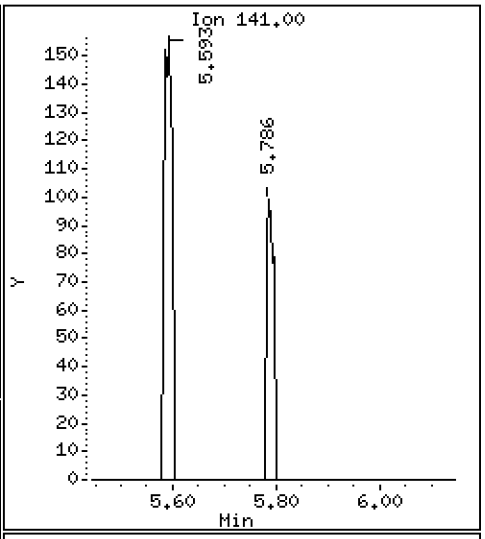
Column phase: Rxi-17sil

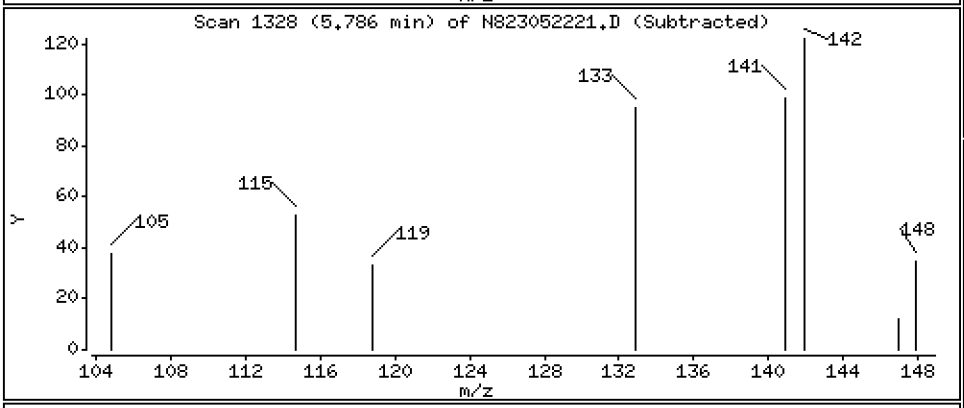
Column diameter: 0.25

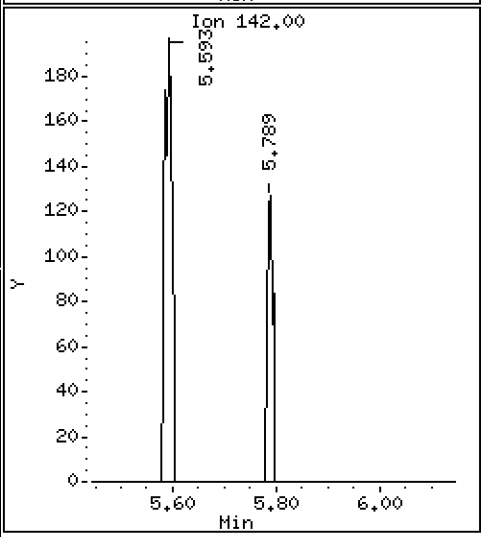
5 1-methylnaphthalene

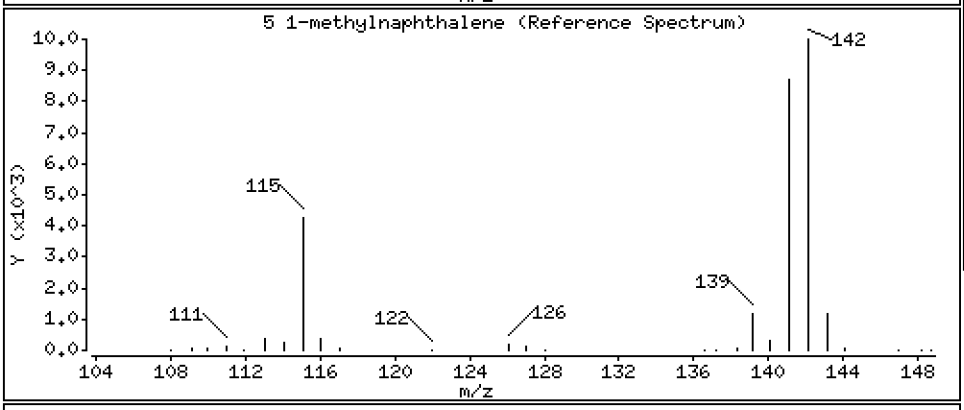
Concentration: 0.01967 ug/mL

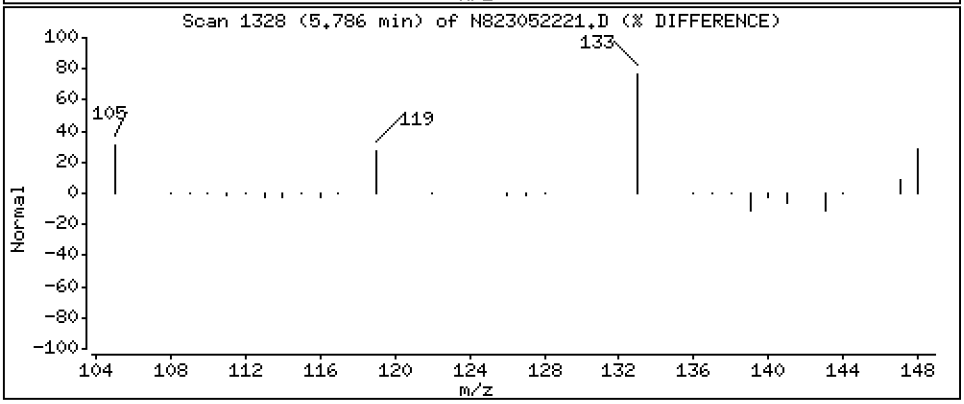












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

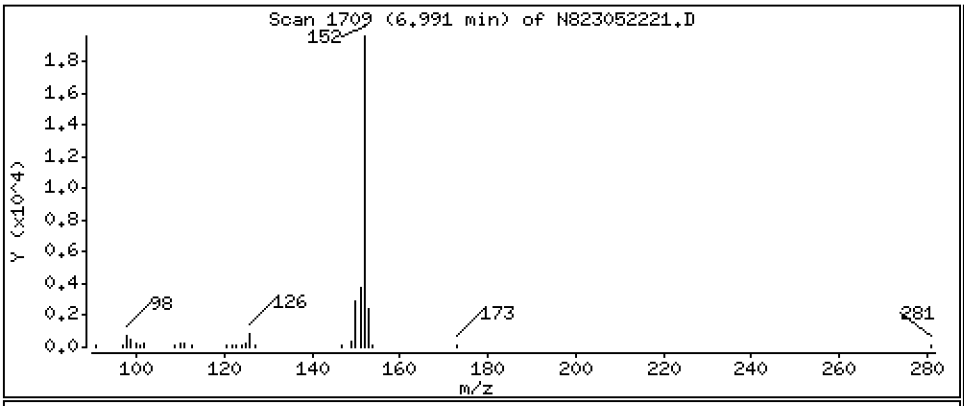
Operator: JZ

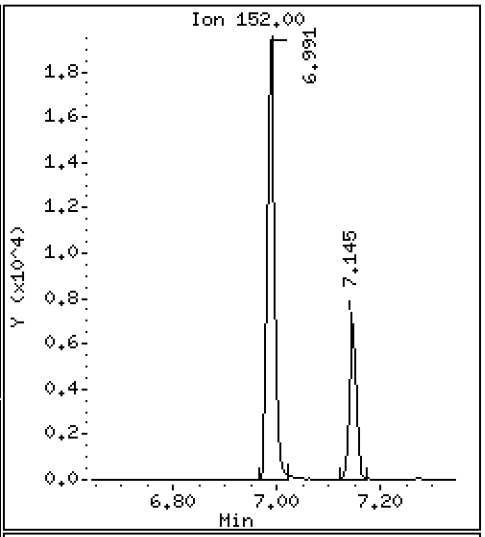
Column phase: Rxi-17sil

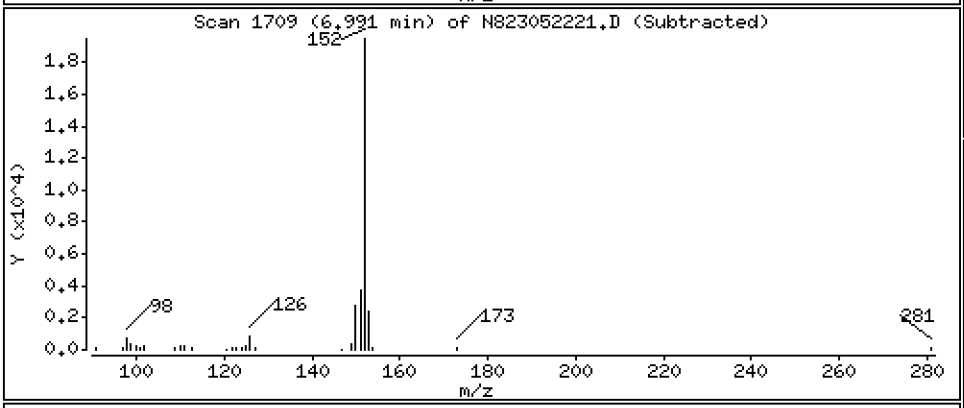
Column diameter: 0.25

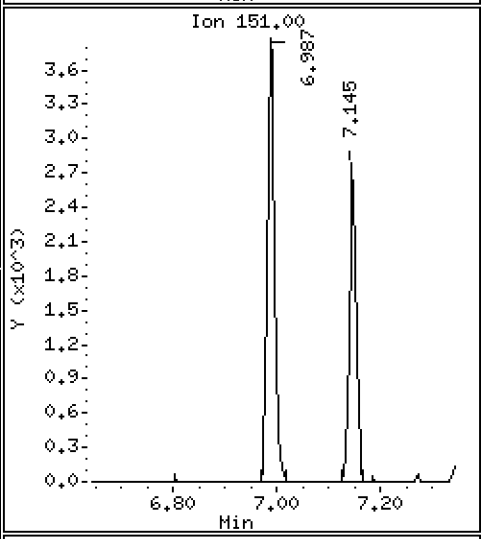
9 Acenaphthylene

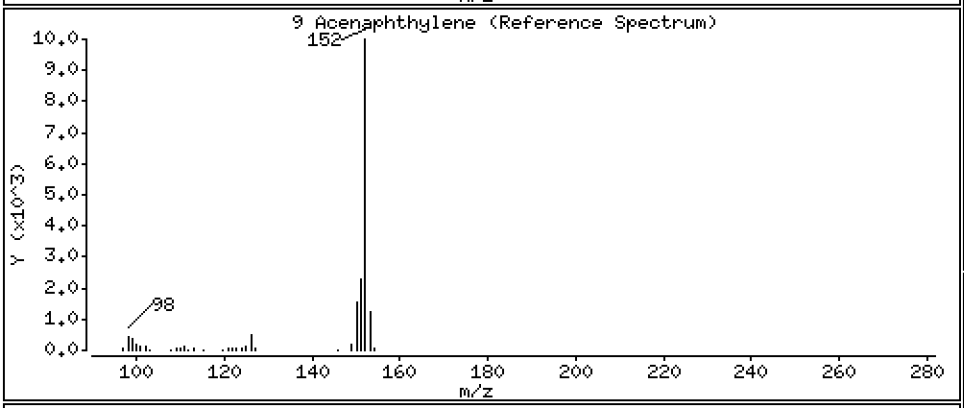
Concentration: 2.236 ug/mL

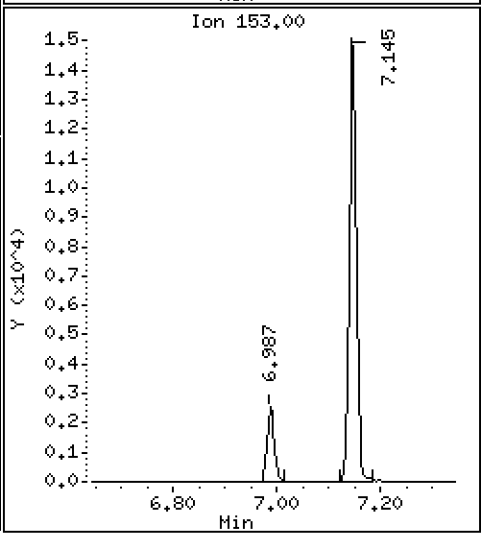


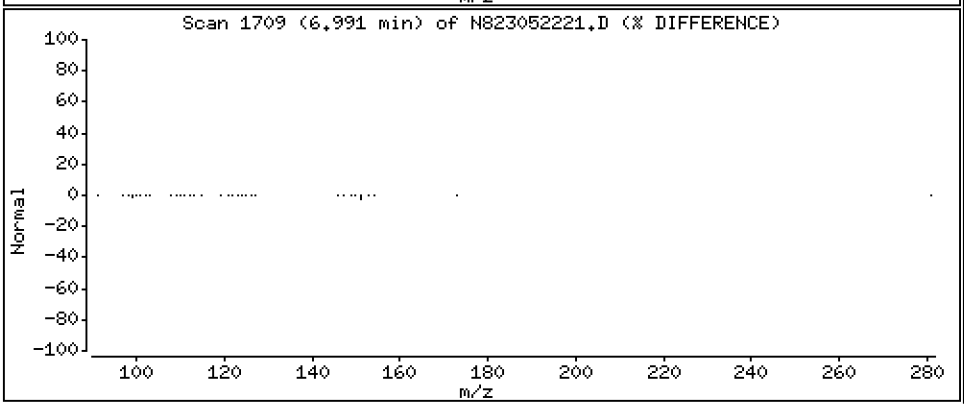












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

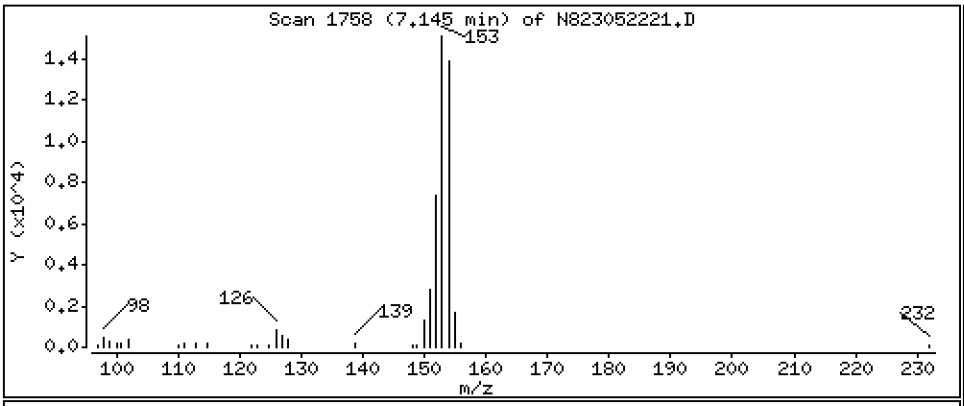
Operator: JZ

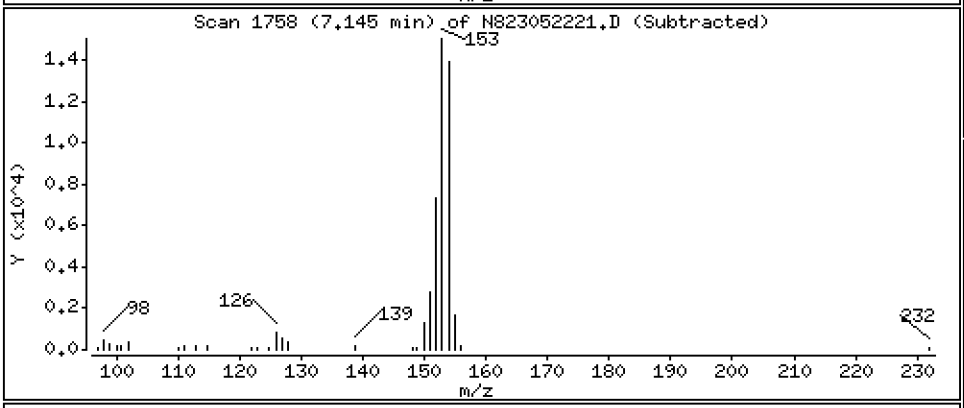
Column phase: Rxi-17sil

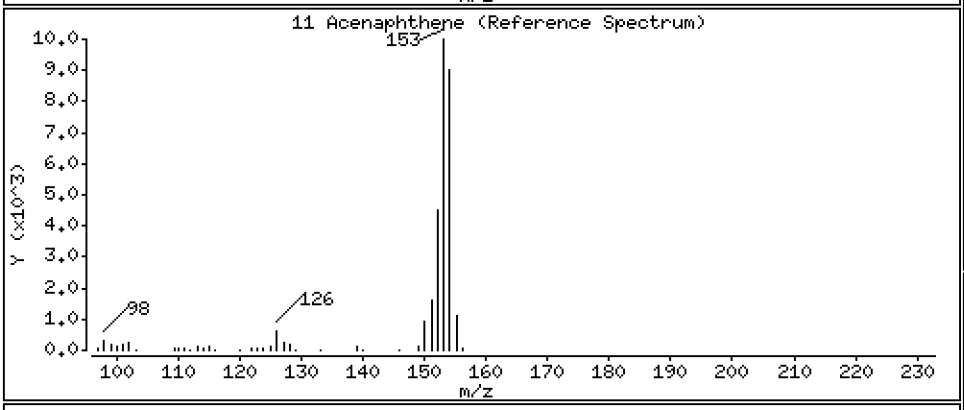
Column diameter: 0.25

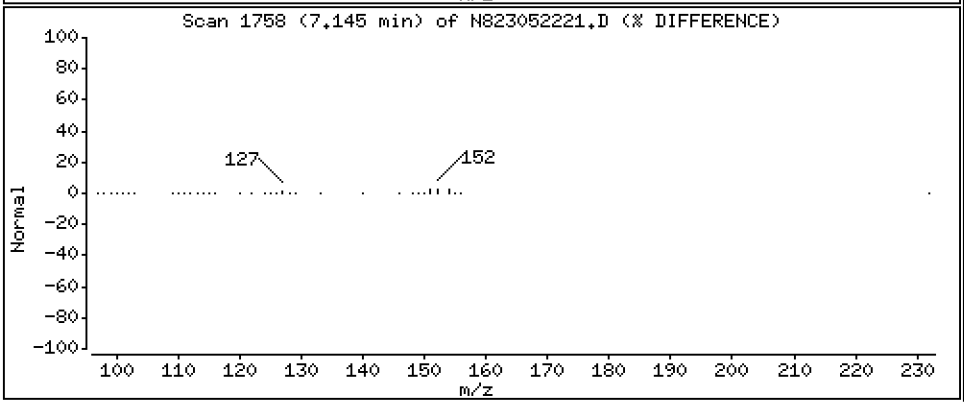
11 Acenaphthene

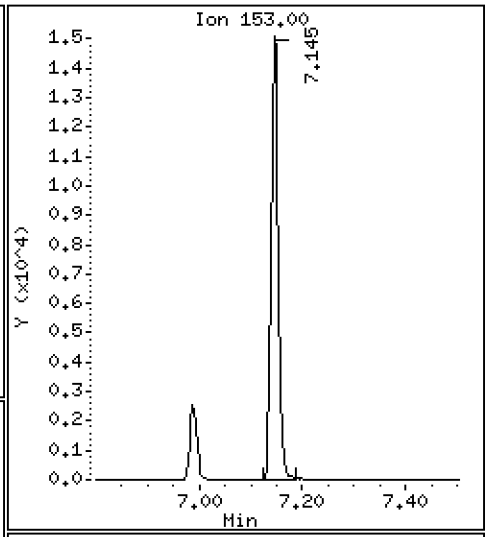
Concentration: 2.558 ug/mL

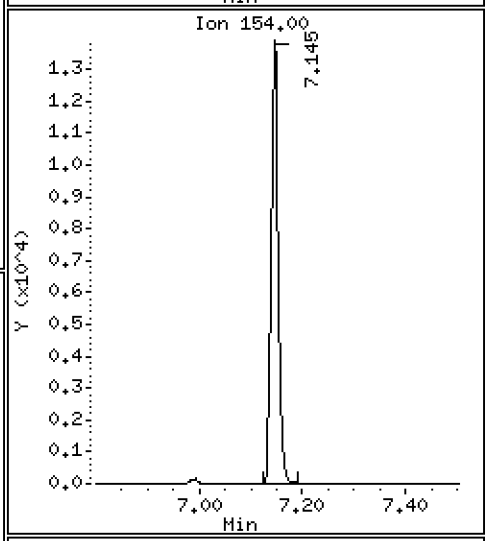


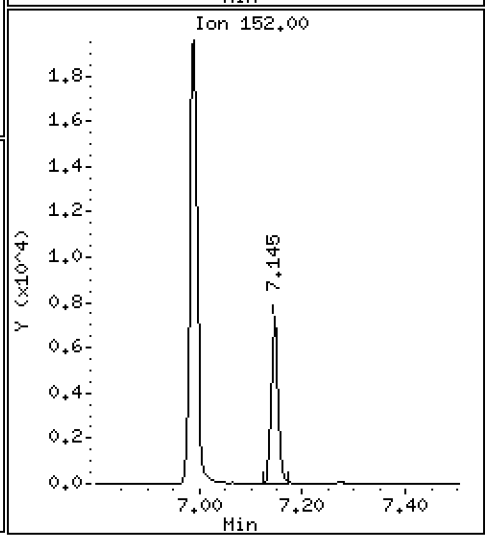












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

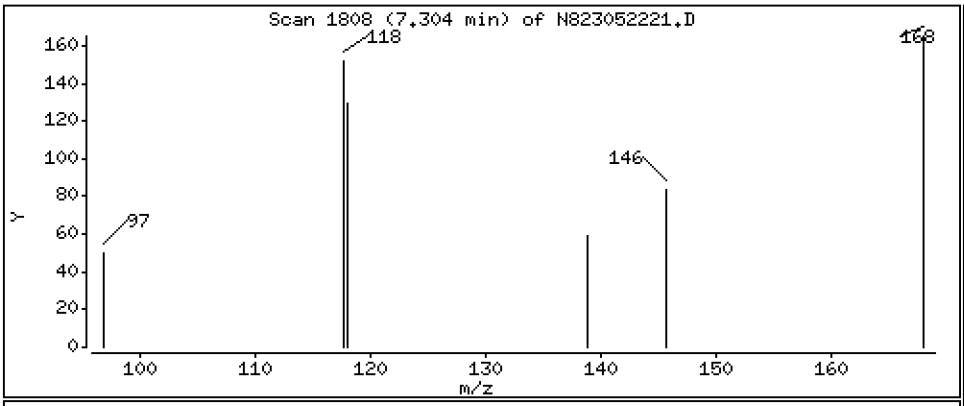
Operator: JZ

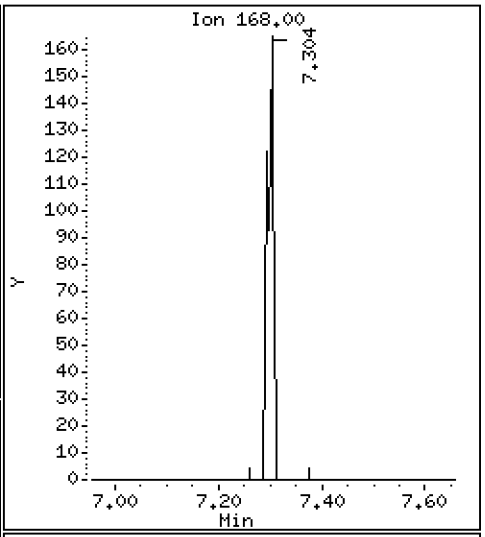
Column phase: Rxi-17sil

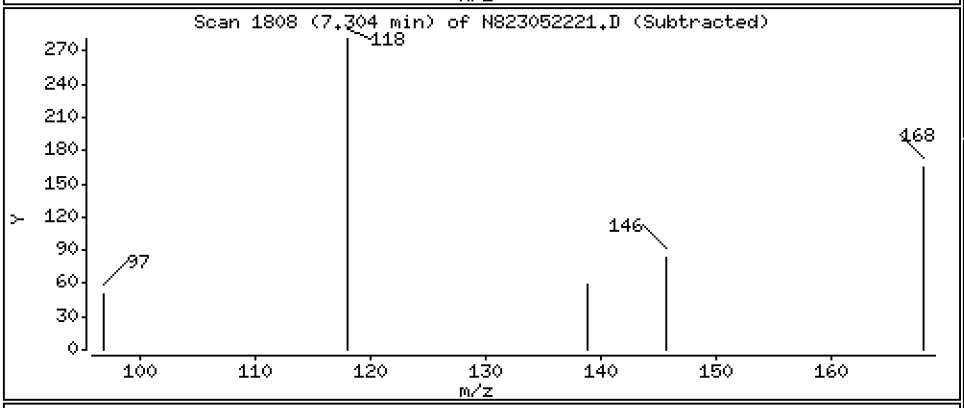
Column diameter: 0.25

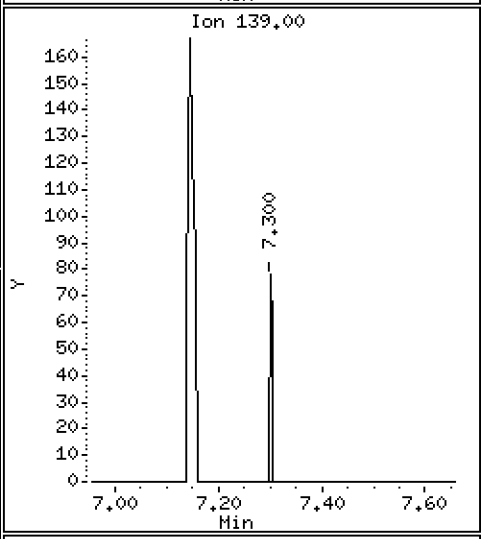
12 Dibenzofuran

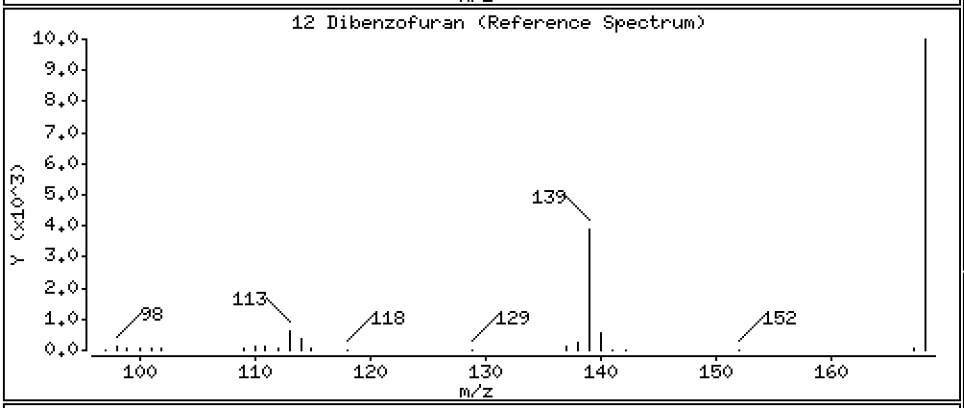
Concentration: 0.01631 ug/mL

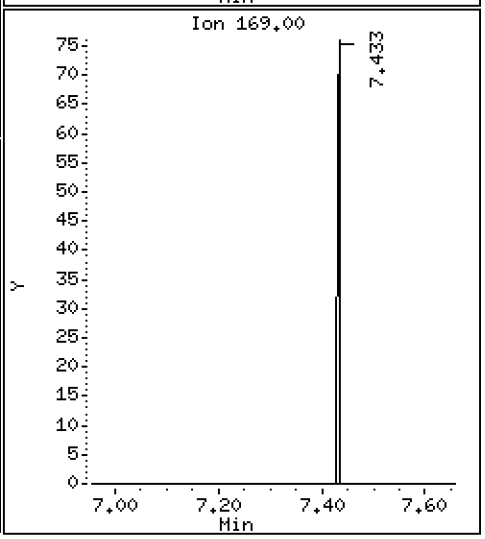


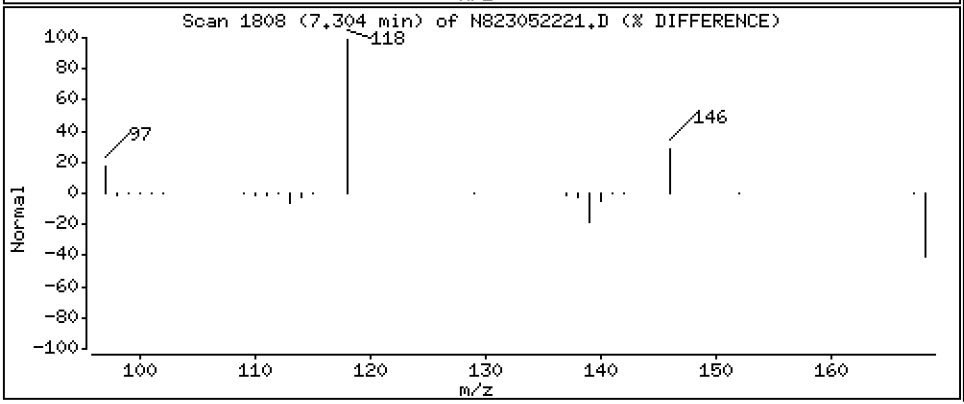












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

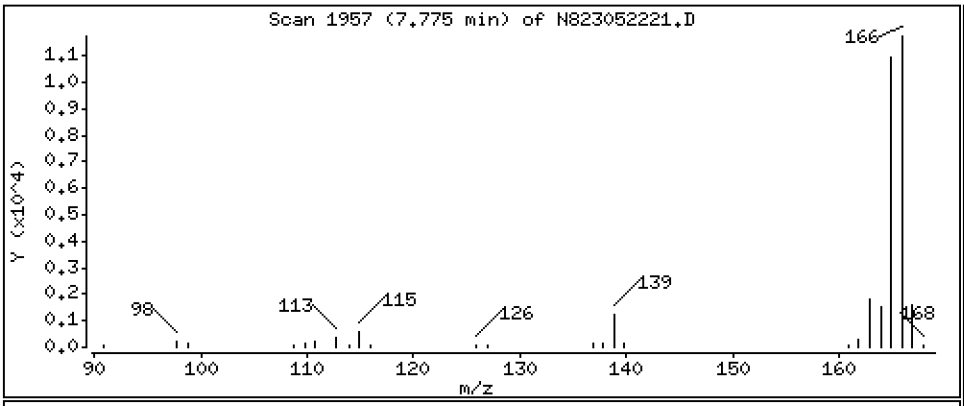
Operator: JZ

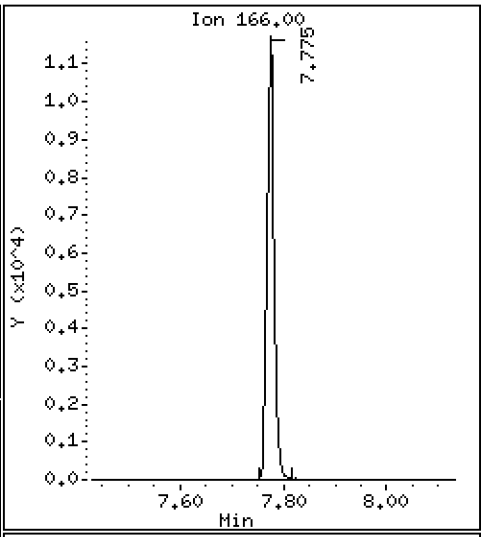
Column phase: Rxi-17sil

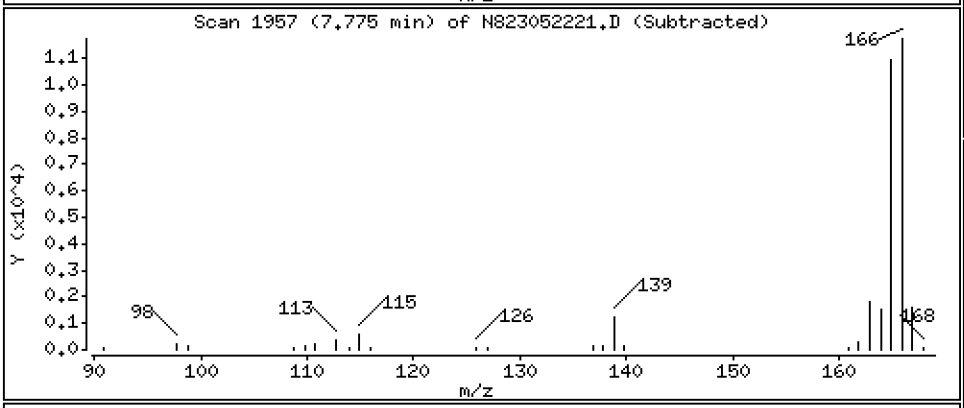
Column diameter: 0.25

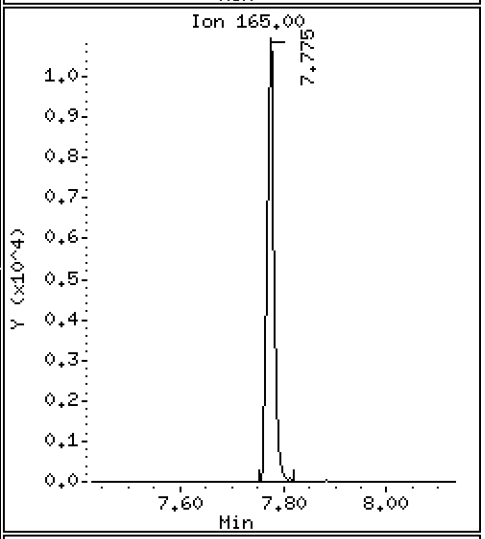
14 Fluorene

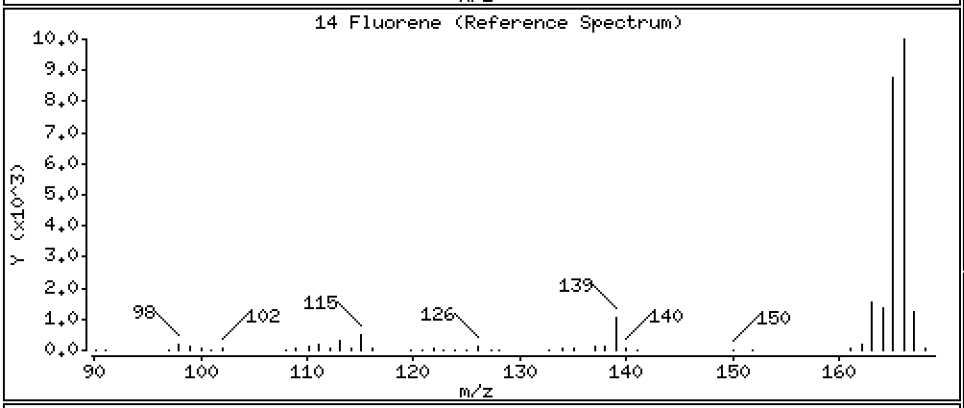
Concentration: 1.647 ug/mL

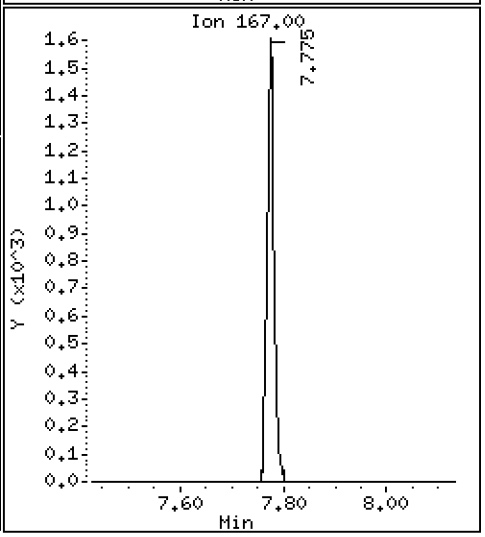


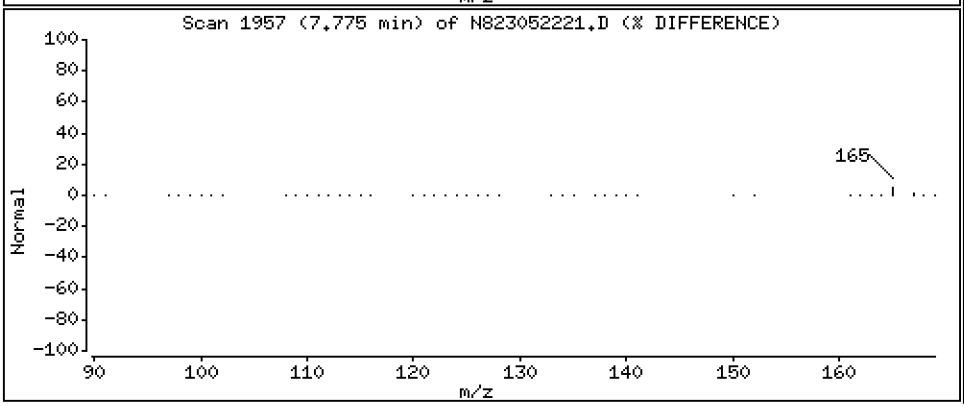












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

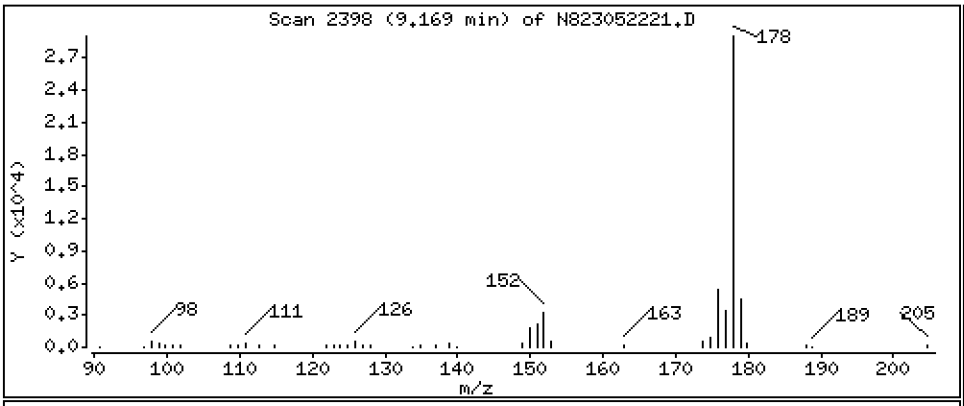
Operator: JZ

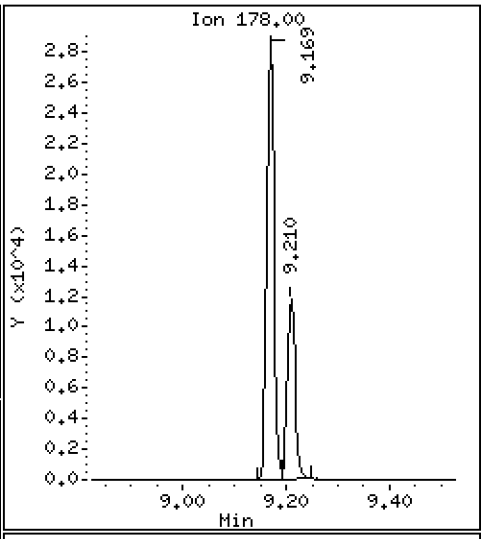
Column phase: Rxi-17sil

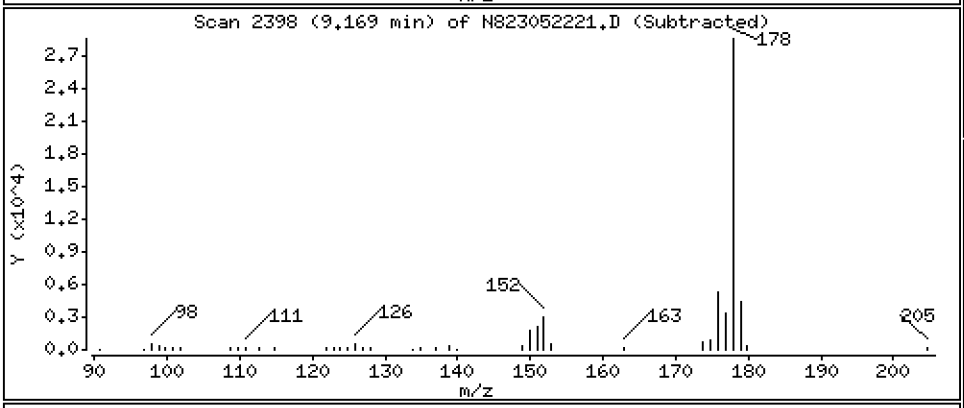
Column diameter: 0.25

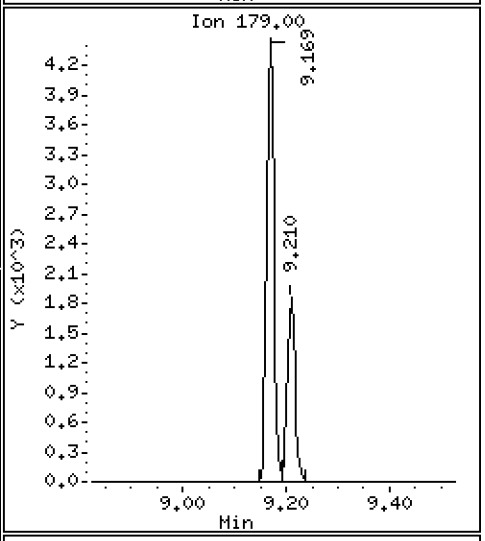
16 Phenanthrene

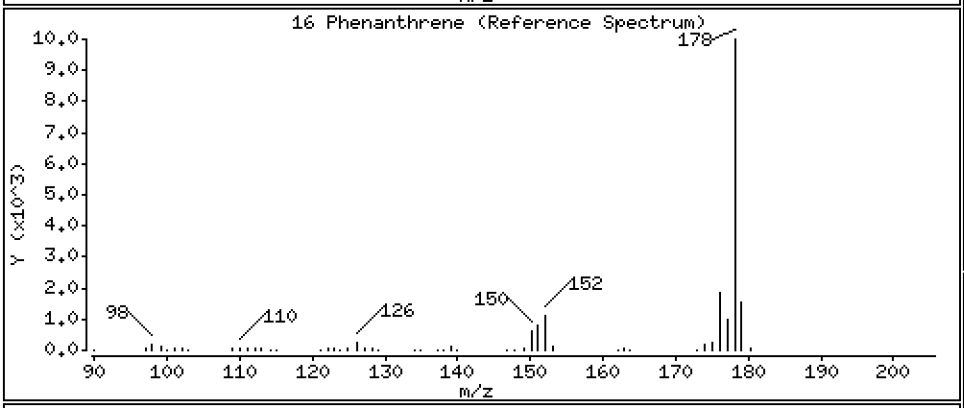
Concentration: 2.841 ug/mL

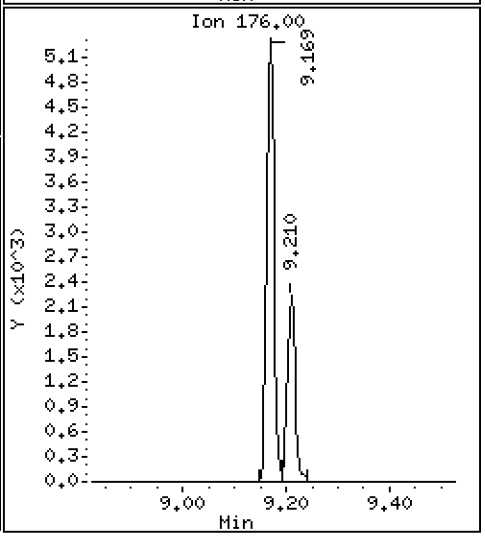


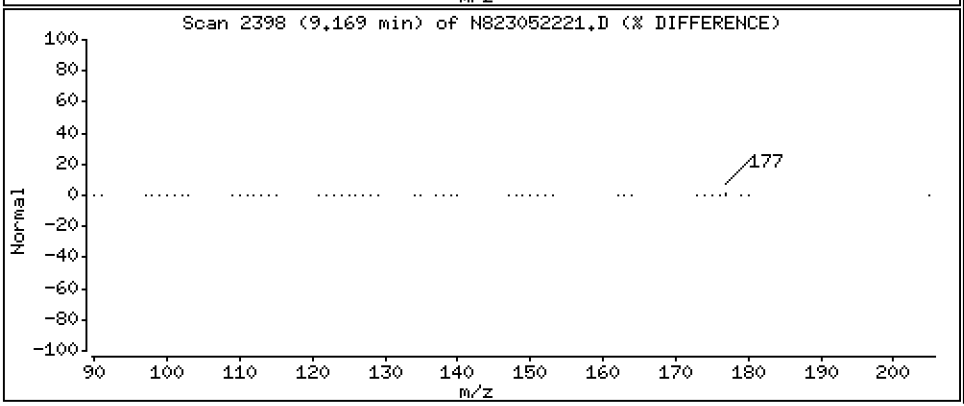












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

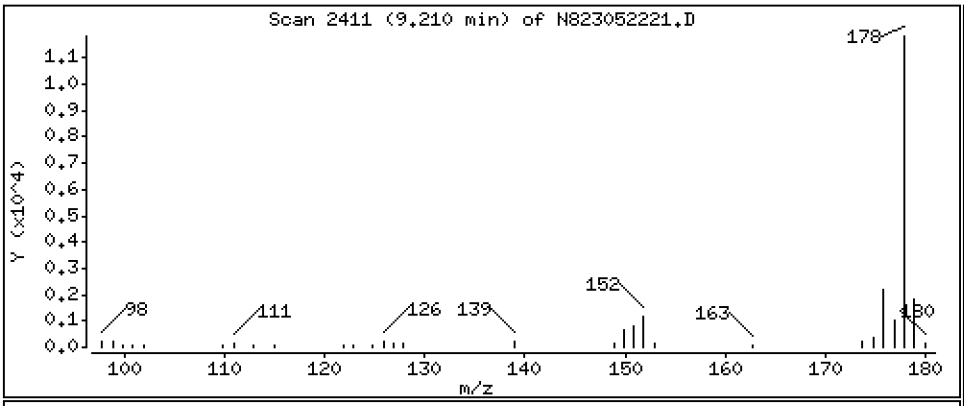
Operator: JZ

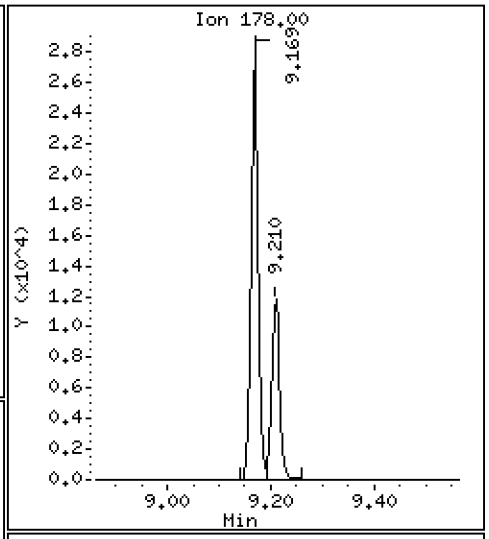
Column phase: Rxi-17sil

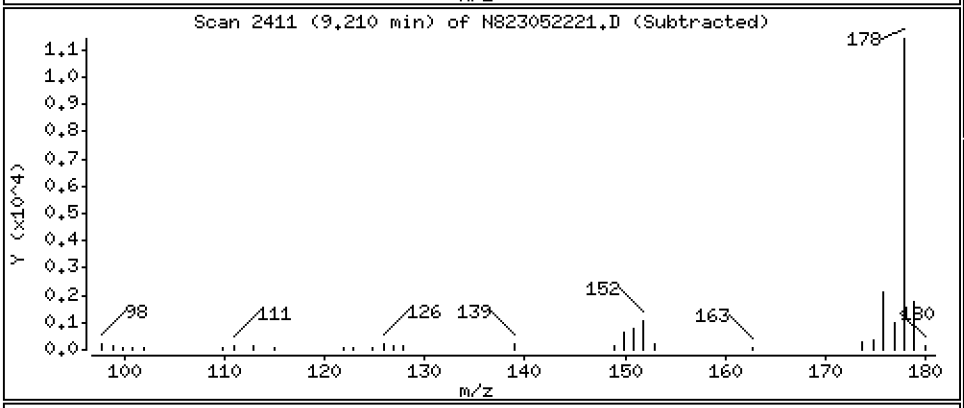
Column diameter: 0.25

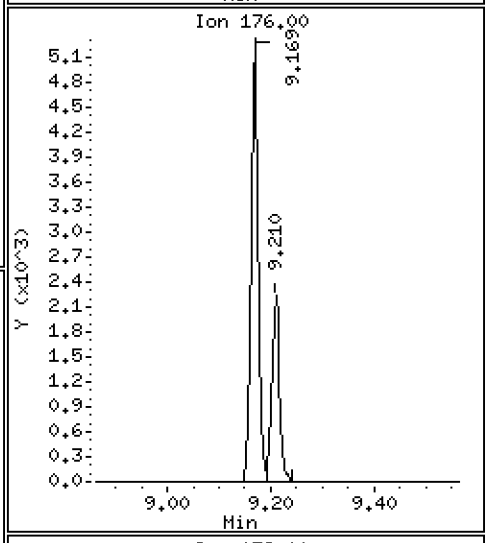
17 Anthracene

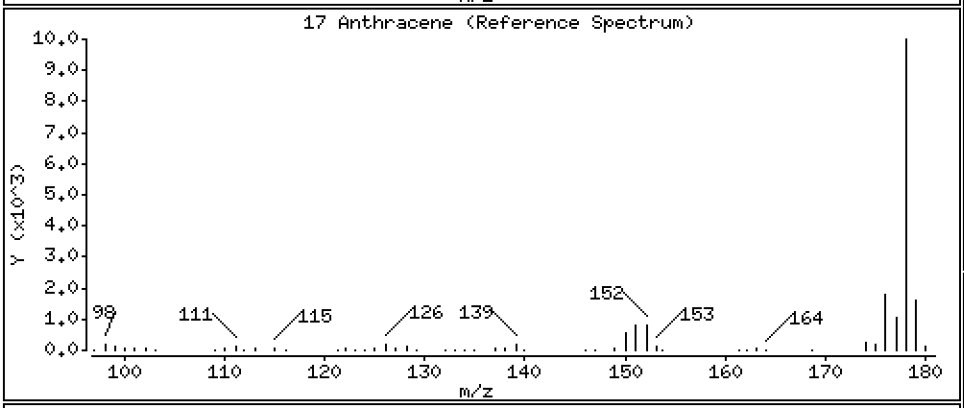
Concentration: 1.397 ug/mL

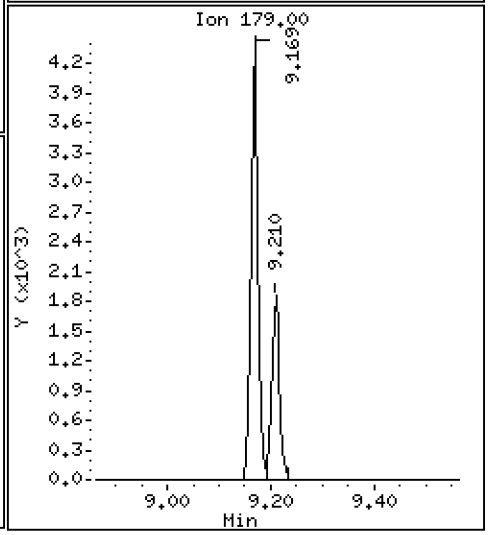


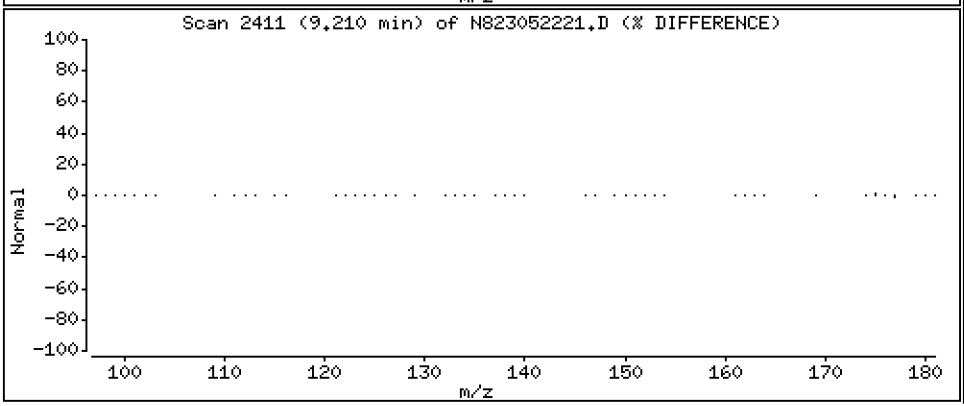












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

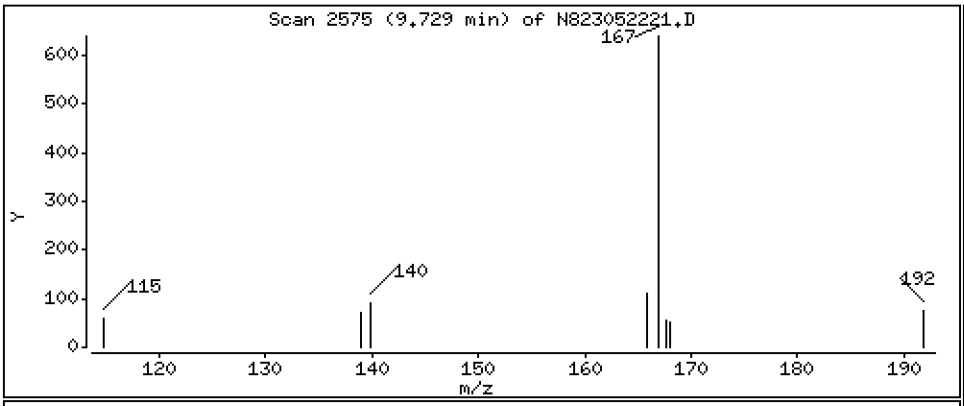
Operator: JZ

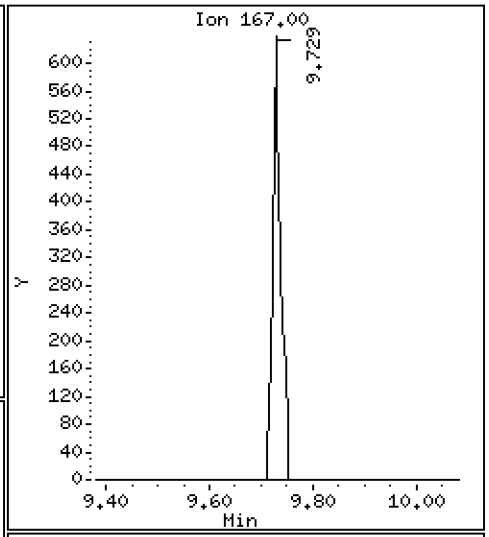
Column phase: Rxi-17sil

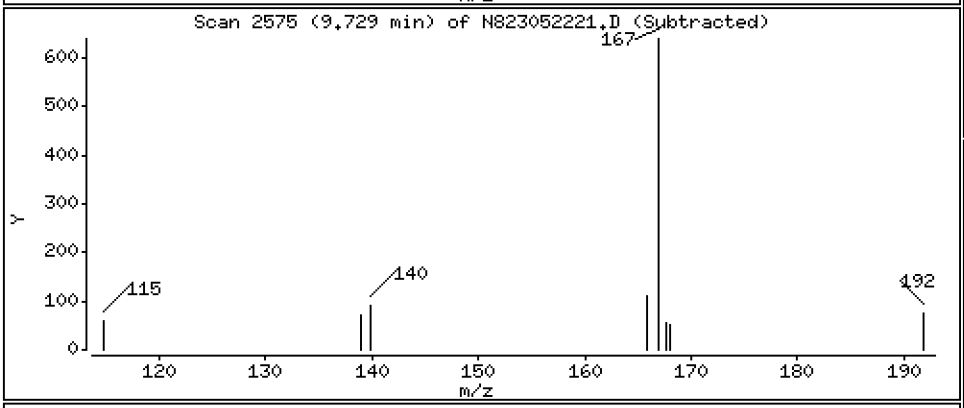
Column diameter: 0.25

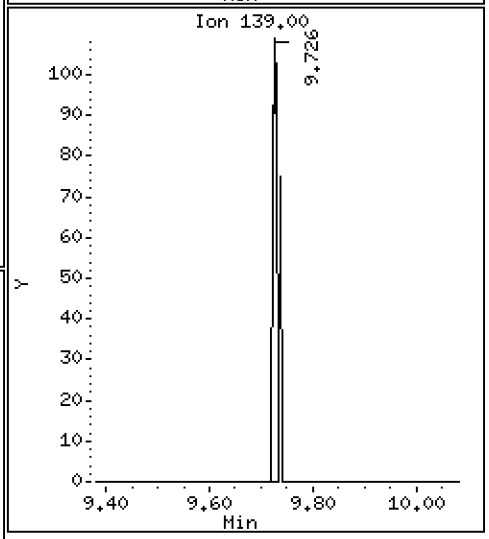
19 Carbazole

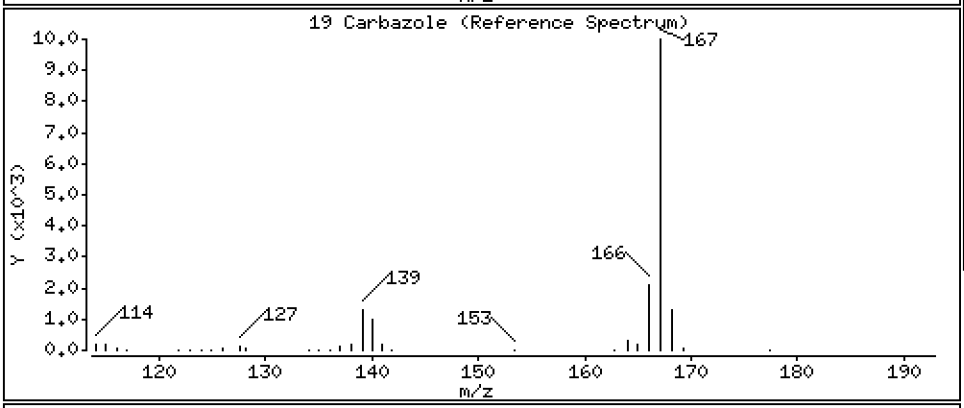
Concentration: 0.08055 ug/mL

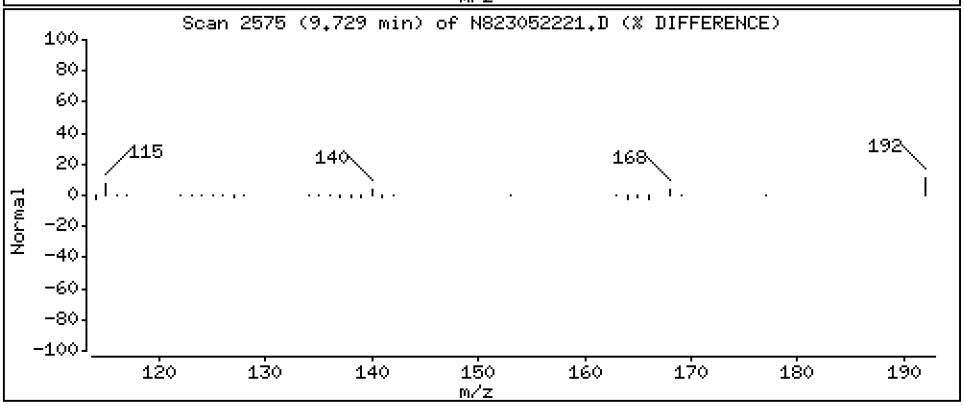












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

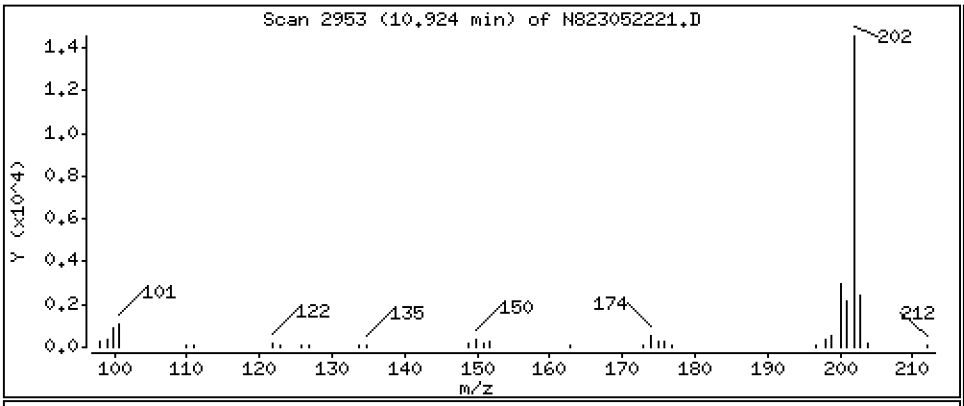
Operator: JZ

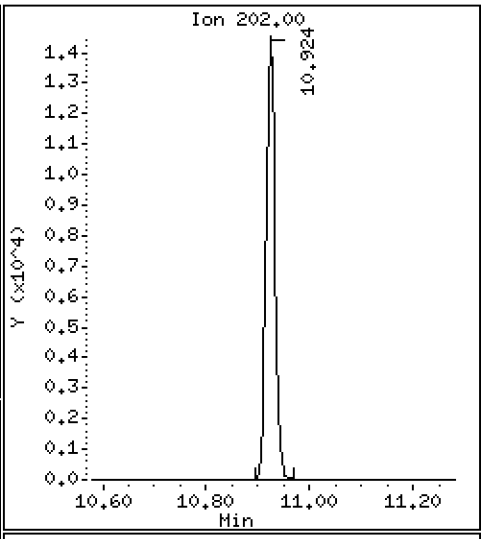
Column phase: Rxi-17sil

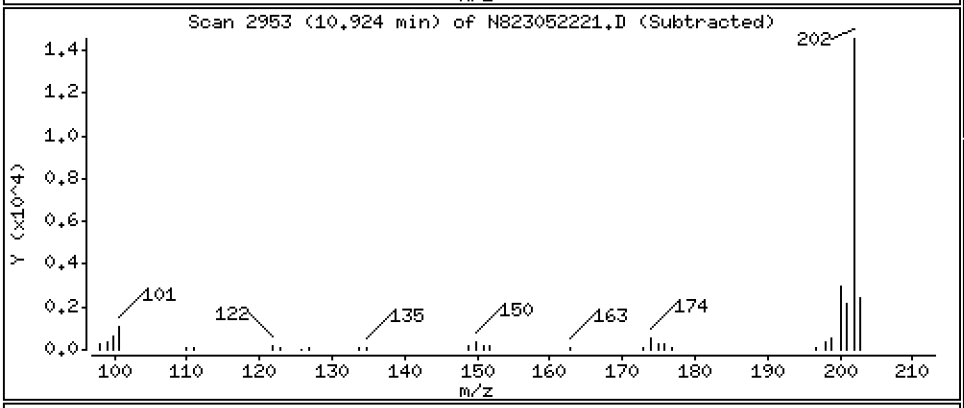
Column diameter: 0.25

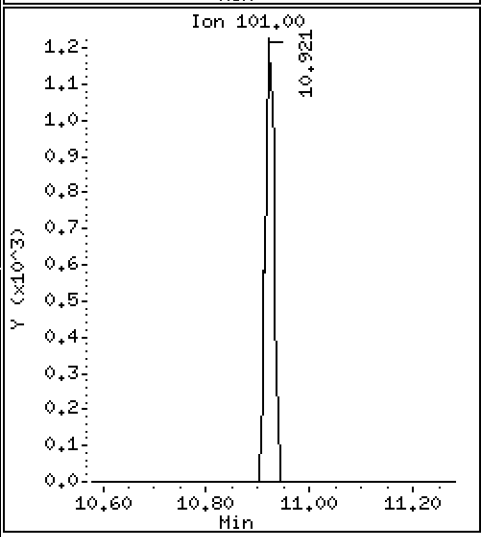
22 Fluoranthene

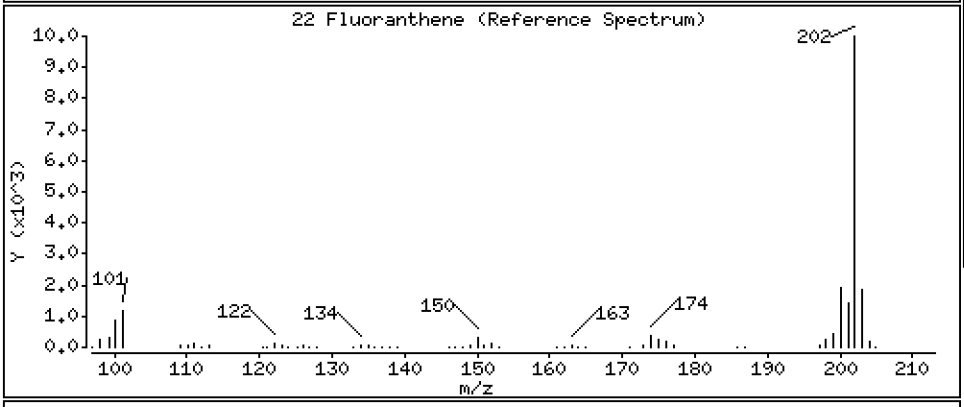
Concentration: 1.559 ug/mL

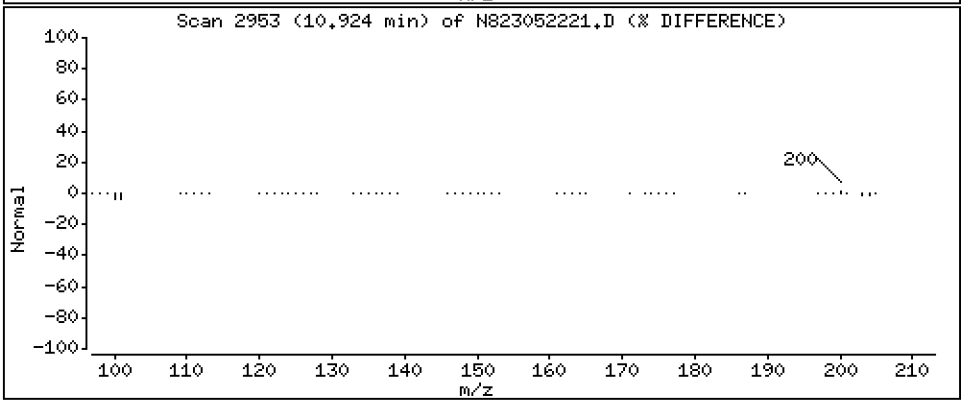












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

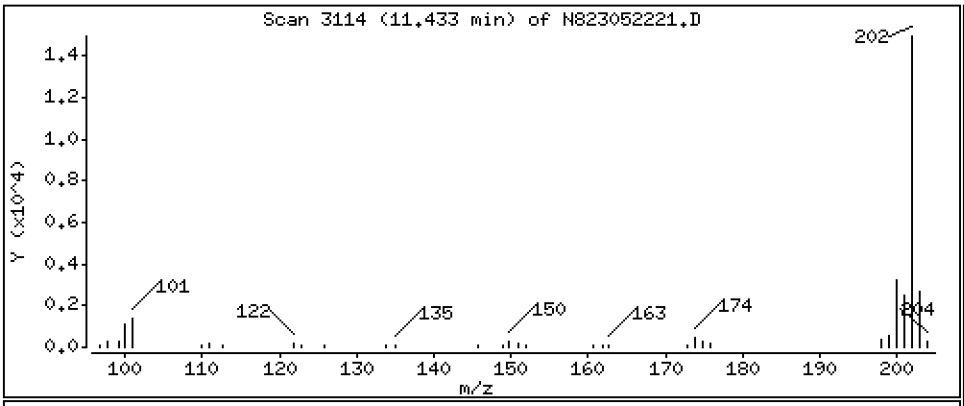
Operator: JZ

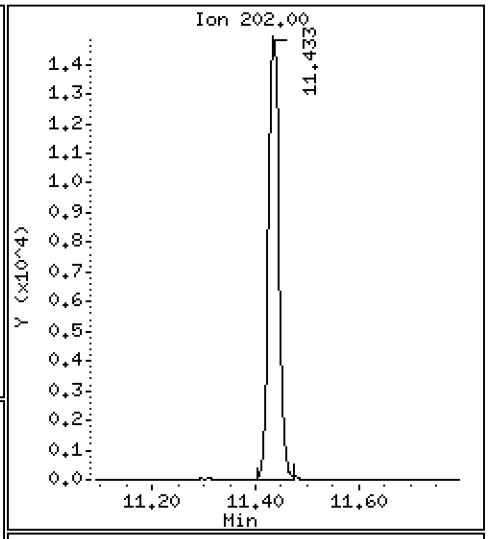
Column phase: Rxi-17sil

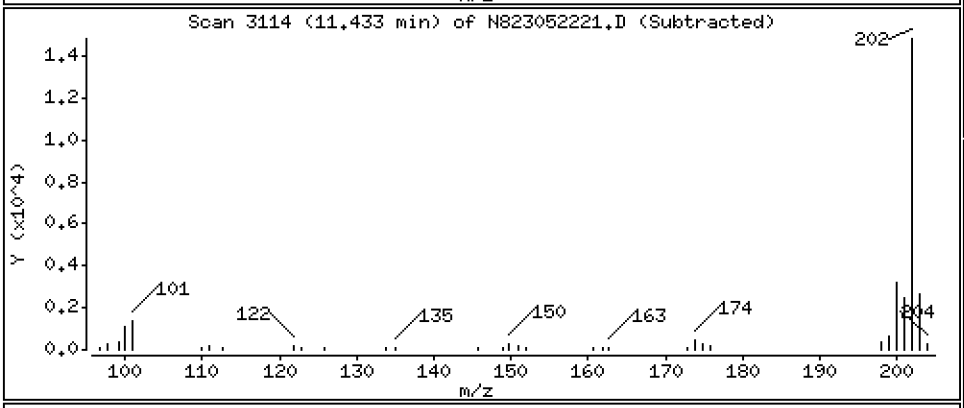
Column diameter: 0.25

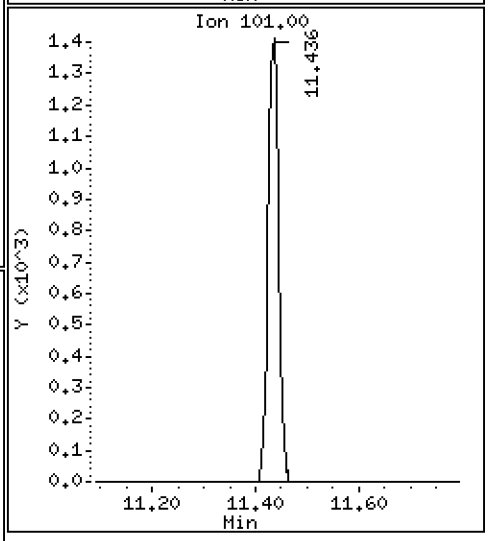
23 Pyrene

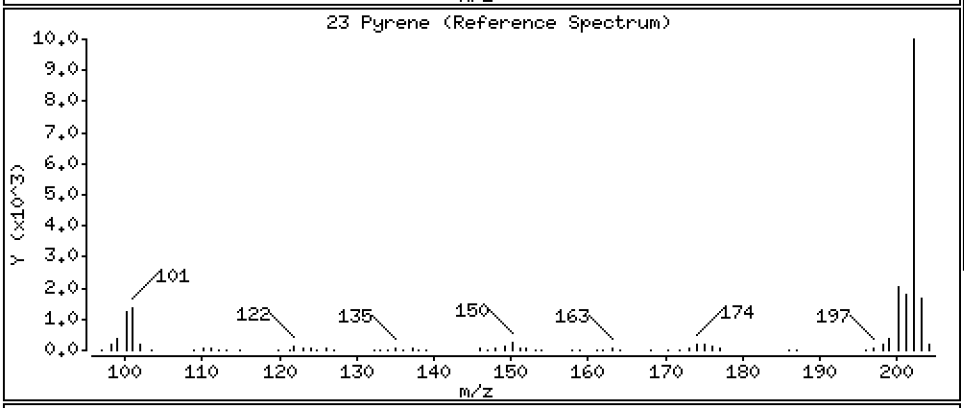
Concentration: 2.151 ug/mL

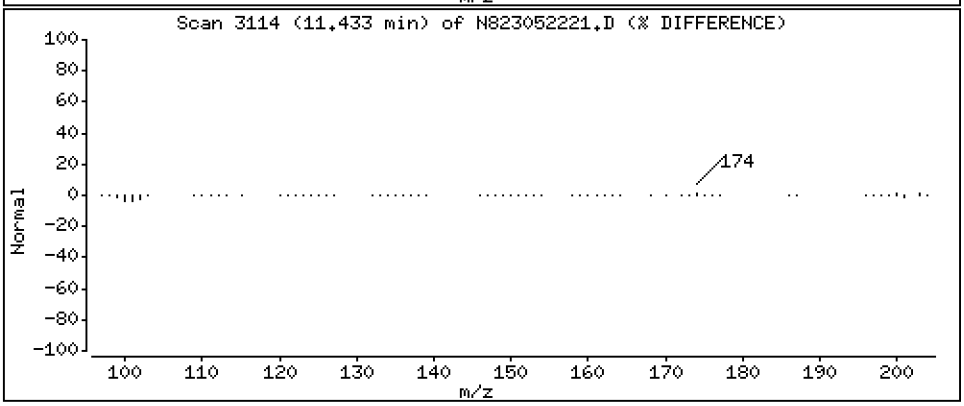












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

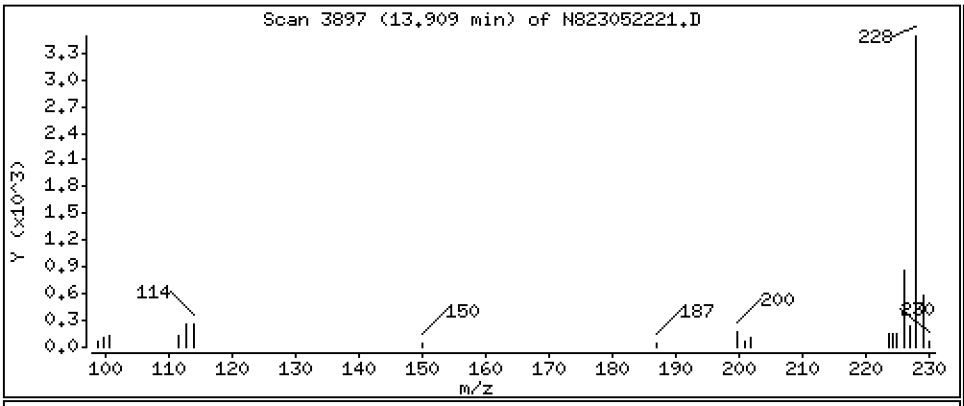
Operator: JZ

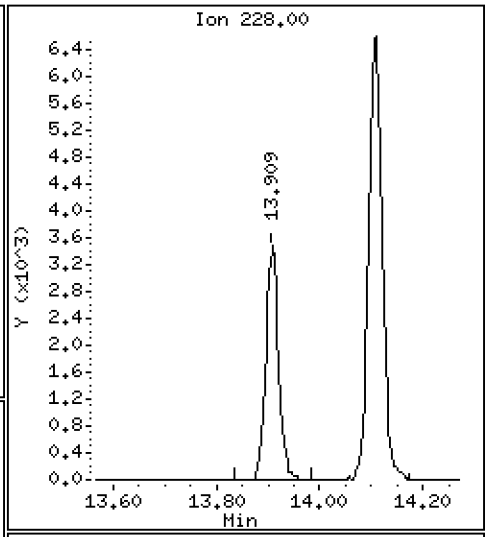
Column phase: Rxi-17sil

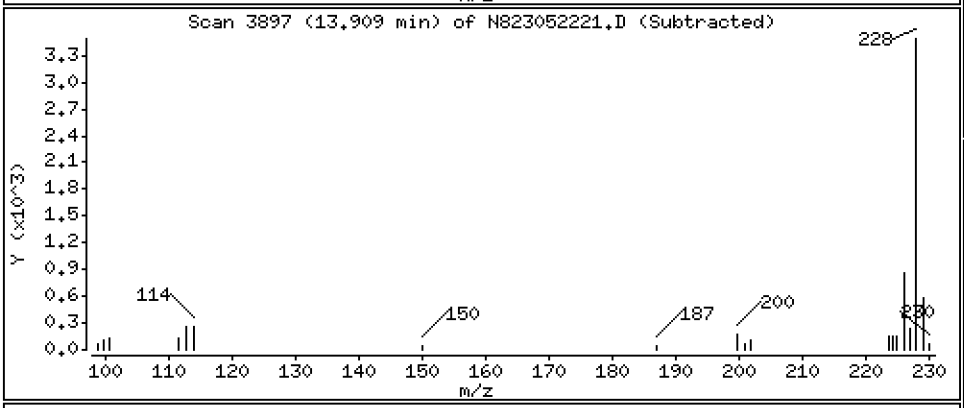
Column diameter: 0.25

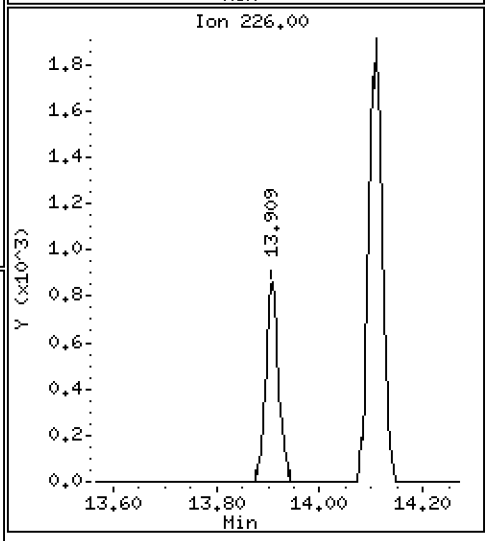
24 Benzo(a)anthracene

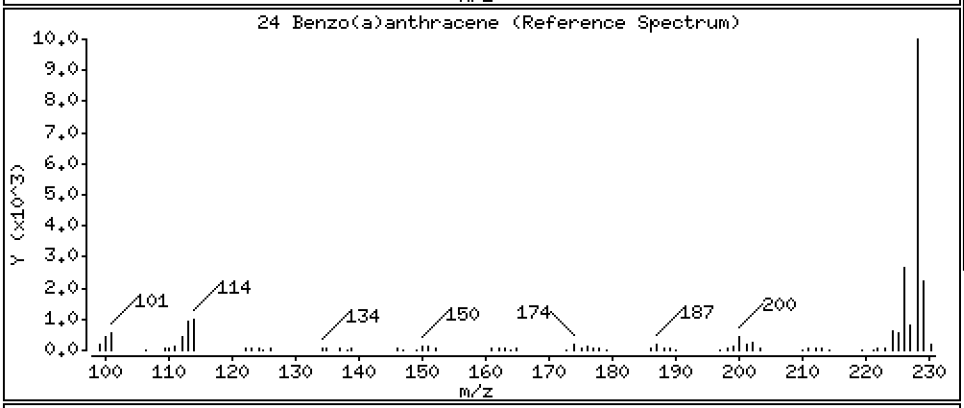
Concentration: 0.5887 ug/mL

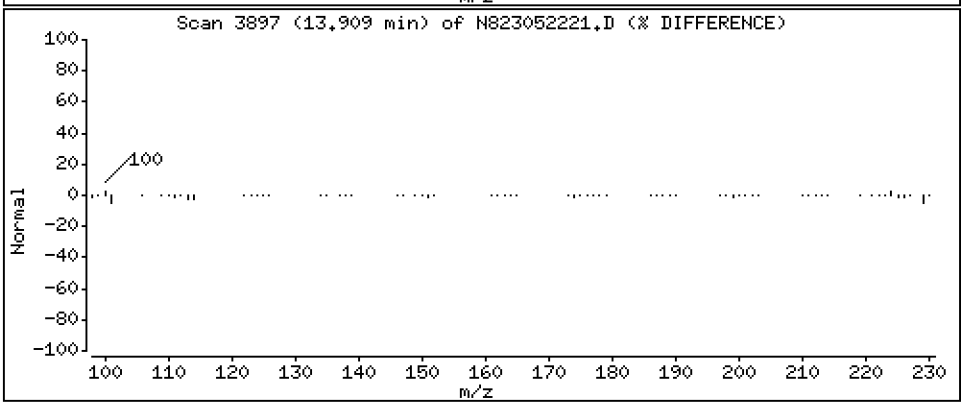












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

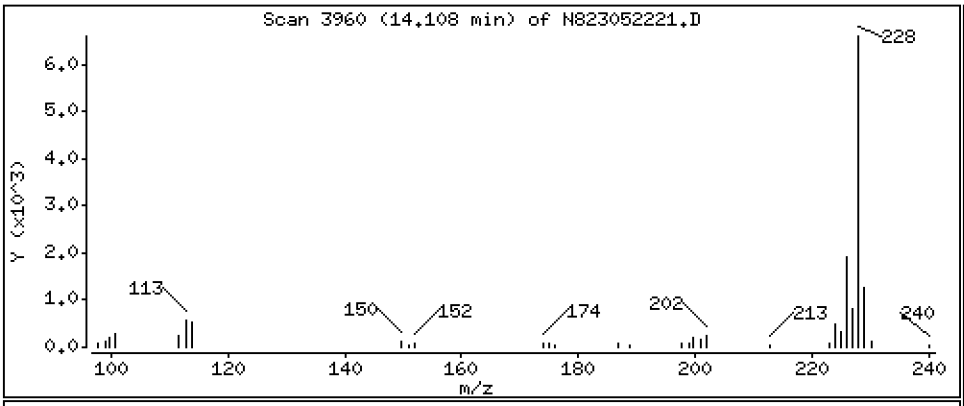
Operator: JZ

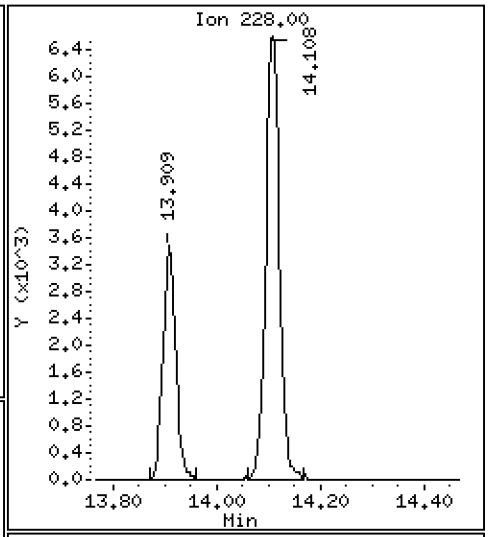
Column phase: Rxi-17sil

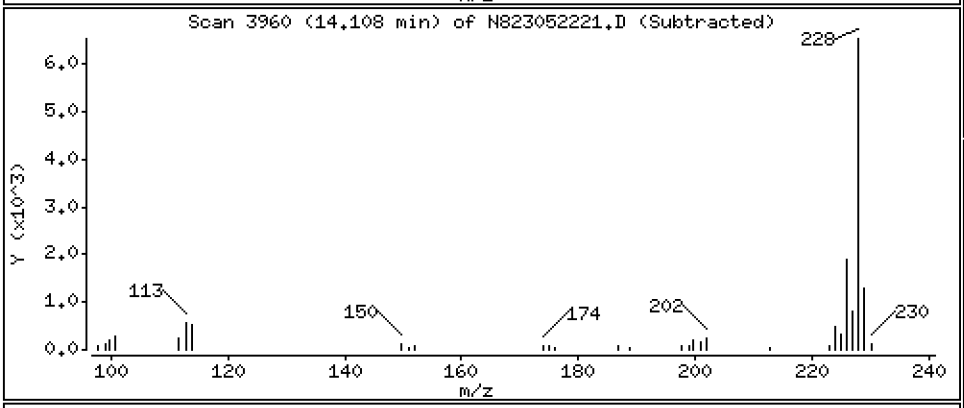
Column diameter: 0.25

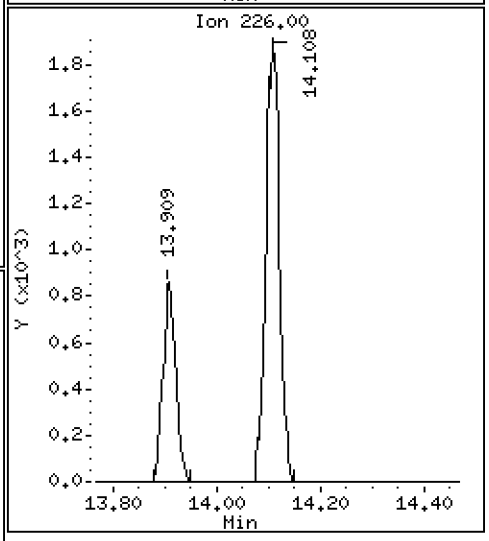
27 Chrysene

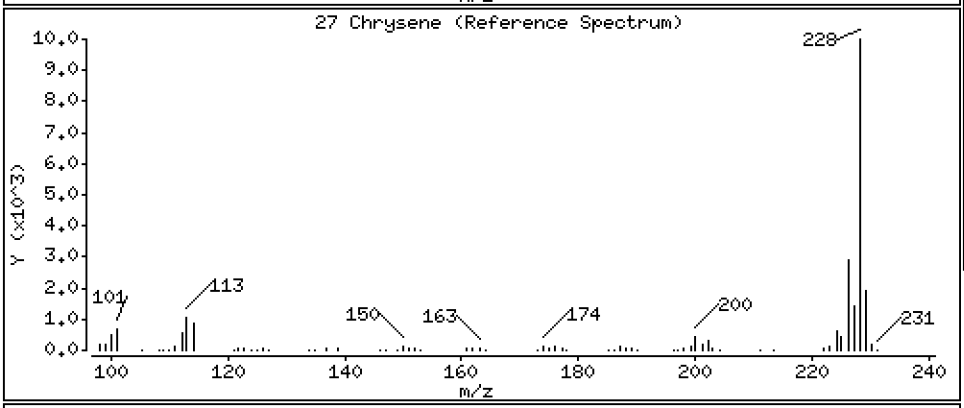
Concentration: 1.219 ug/mL

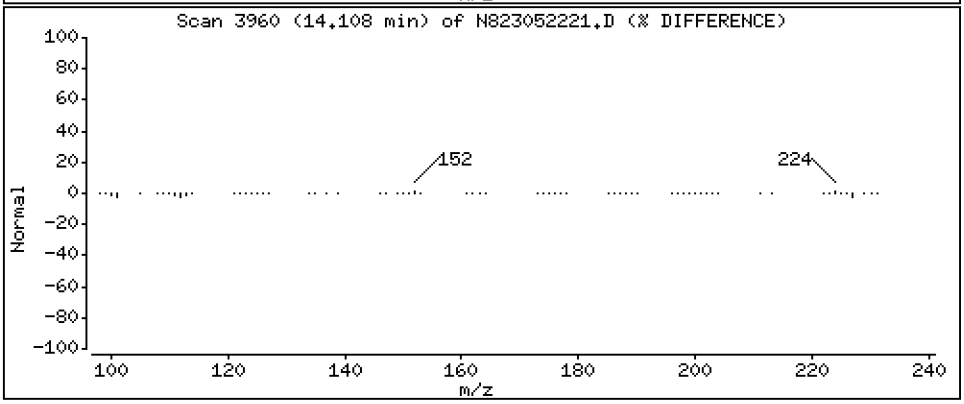












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

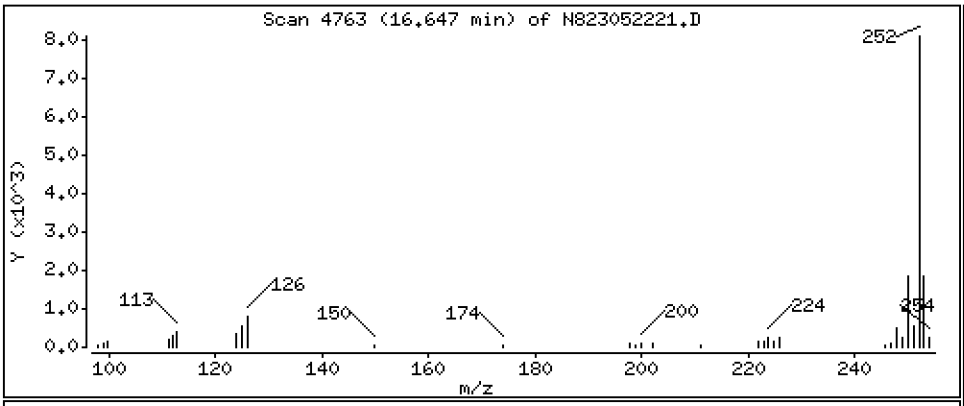
Operator: JZ

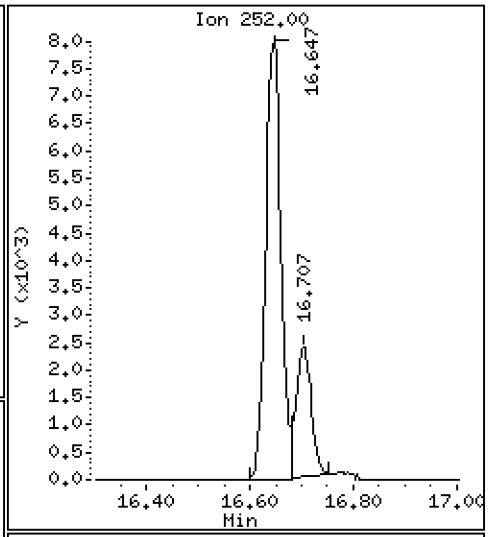
Column phase: Rxi-17sil

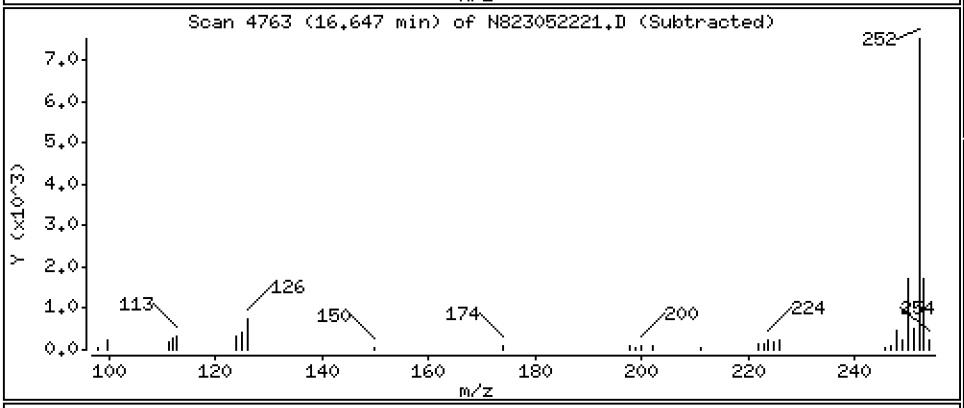
Column diameter: 0.25

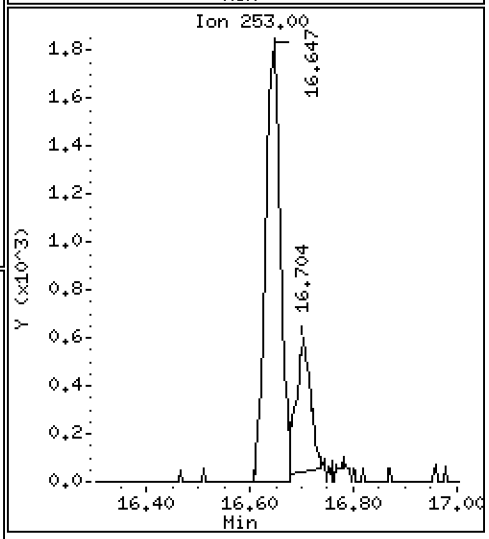
28 Benzo(b)fluoranthene

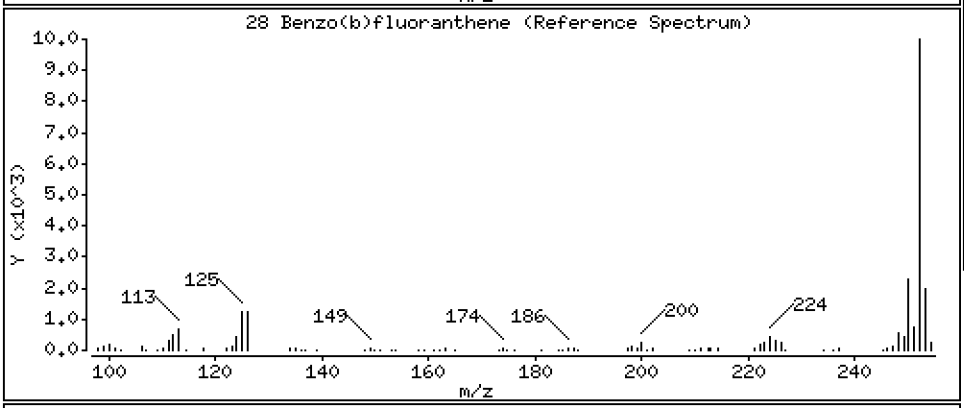
Concentration: 1.666 ug/mL

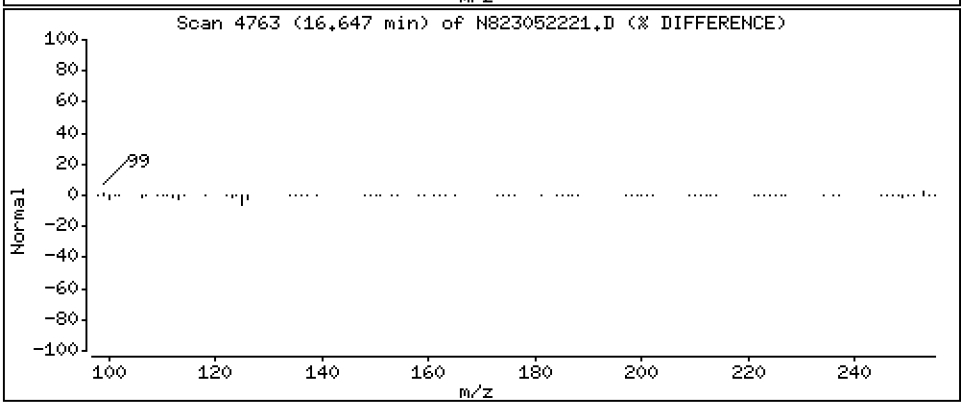












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

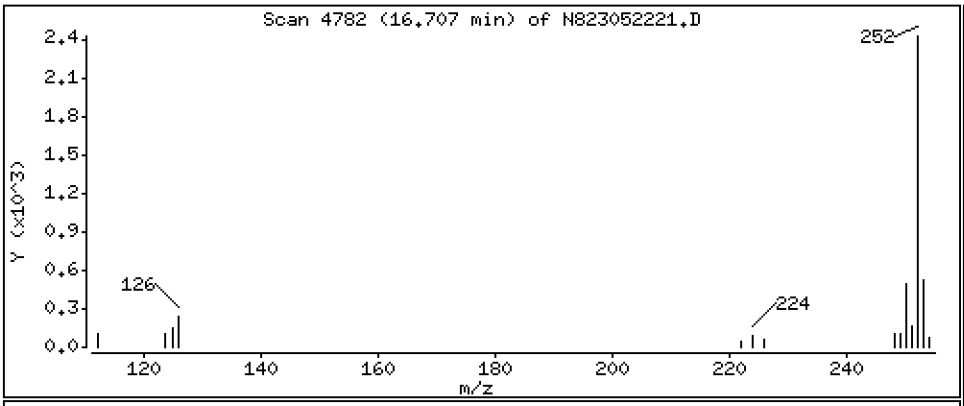
Operator: JZ

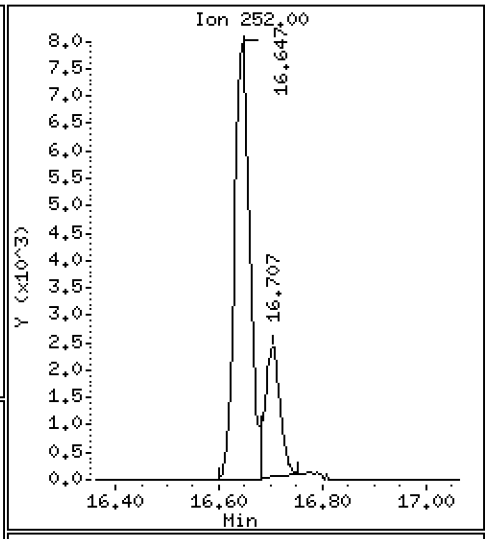
Column phase: Rxi-17sil

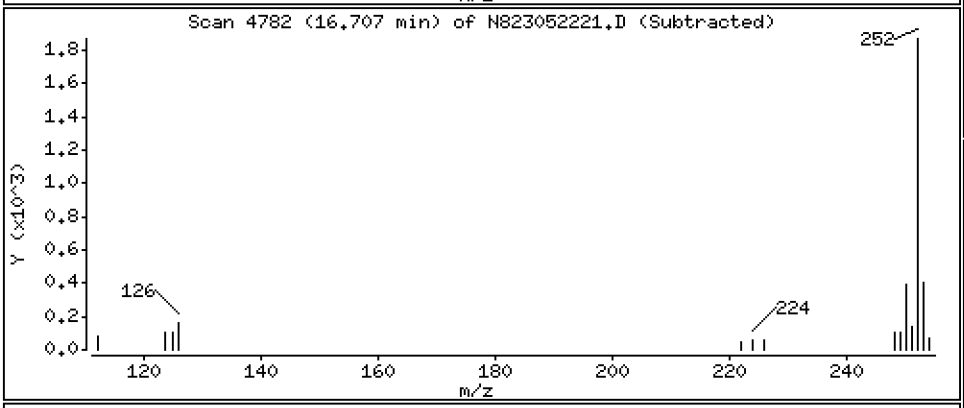
Column diameter: 0.25

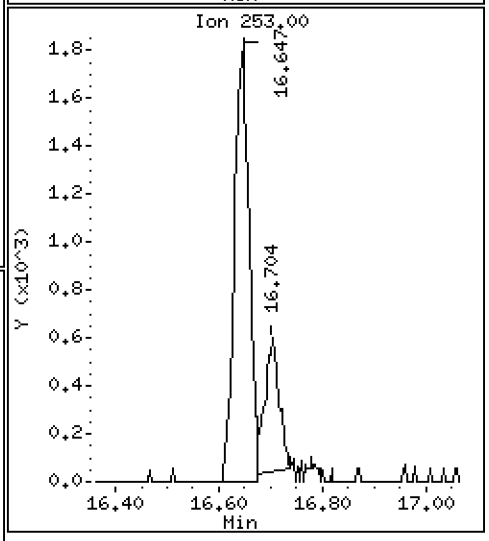
29 Benzo(k)fluoranthene

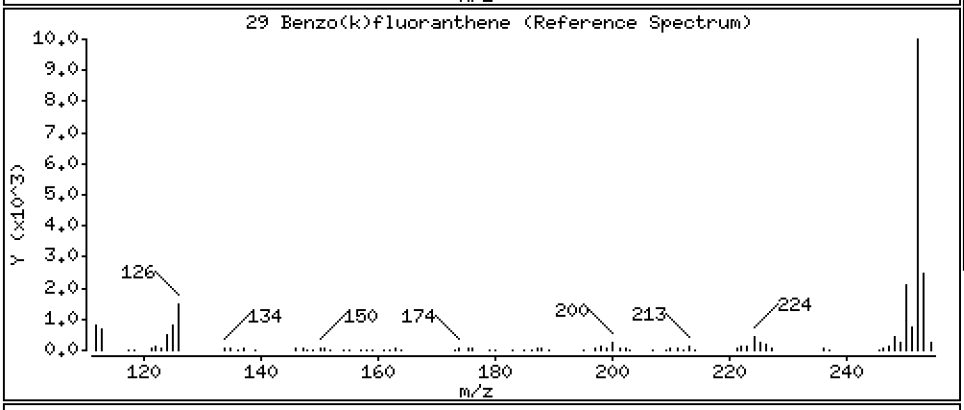
Concentration: 0.5121 ug/mL

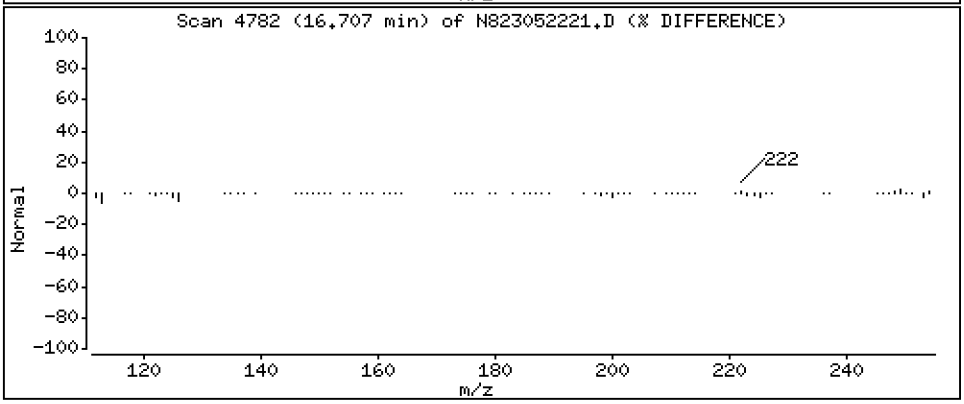












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

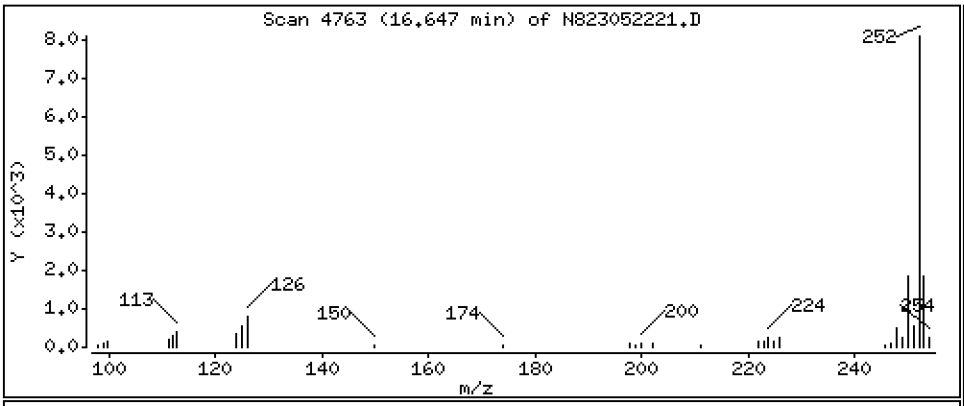
Operator: JZ

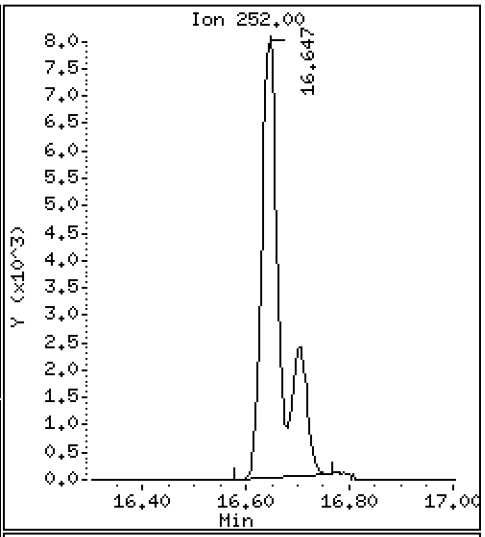
Column phase: Rxi-17sil

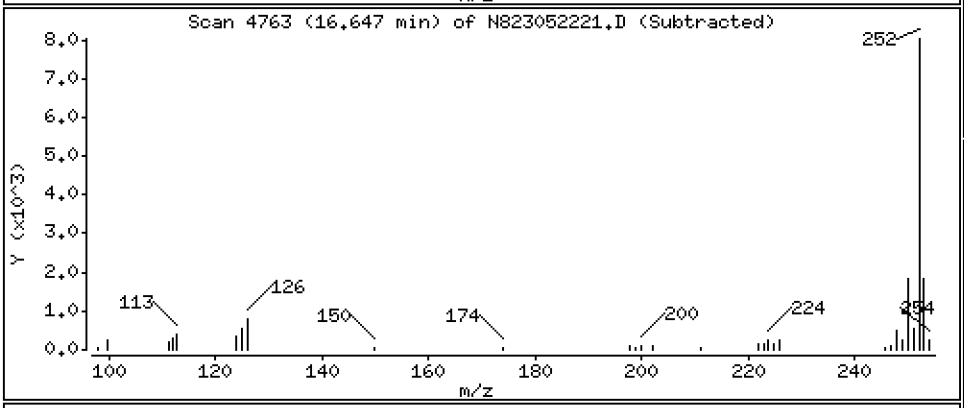
Column diameter: 0.25

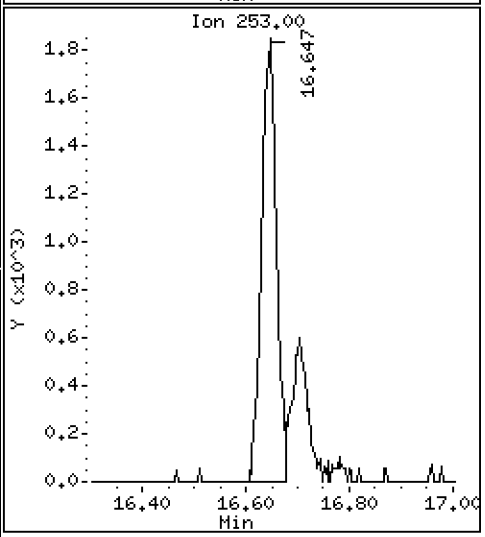
31 Total Benzofluoranthenes

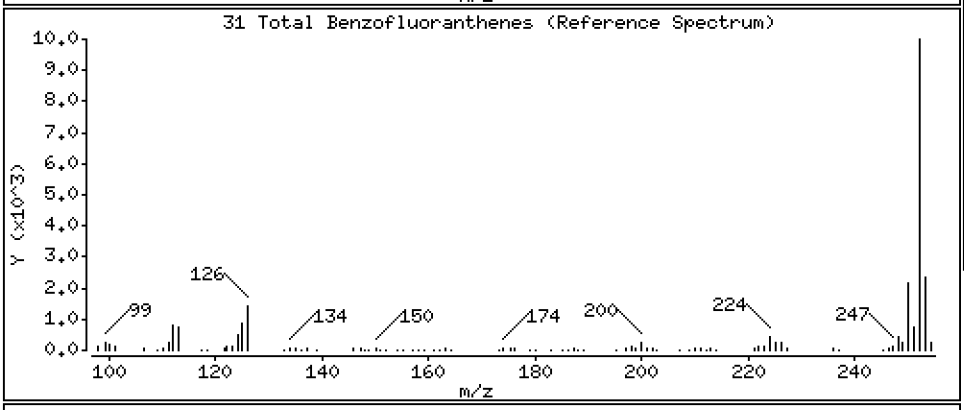
Concentration: 2.265 ug/mL

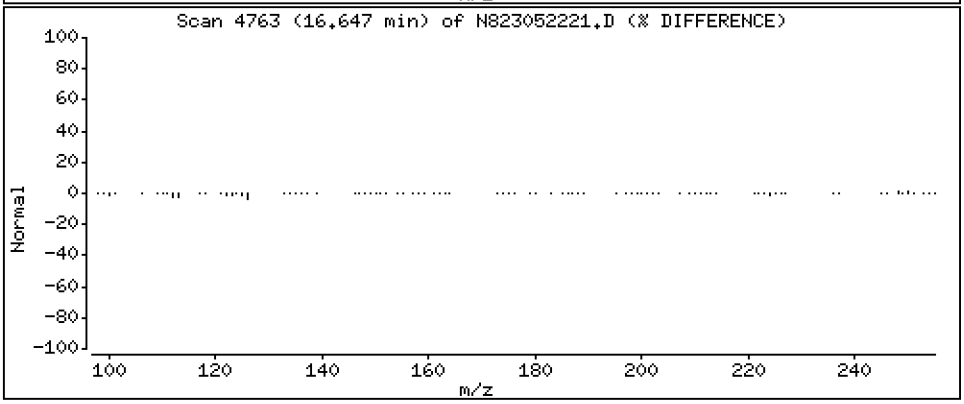












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

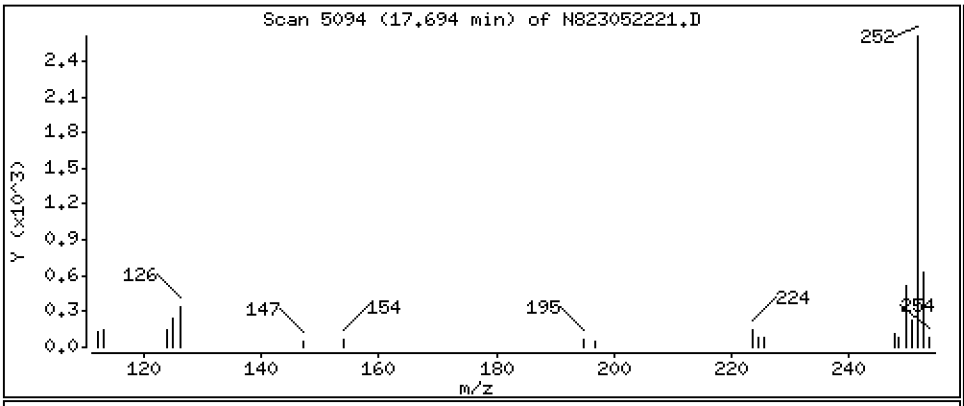
Operator: JZ

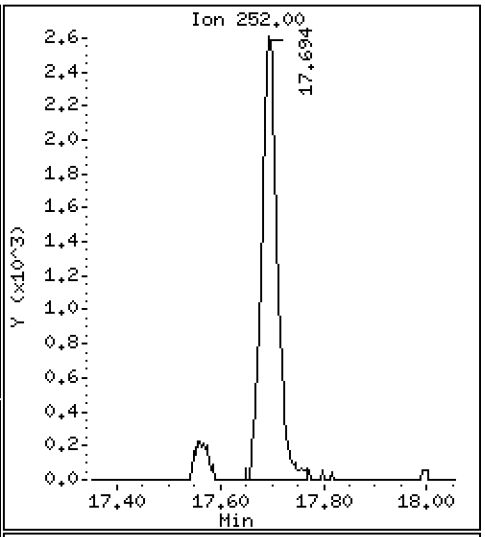
Column phase: Rxi-17sil

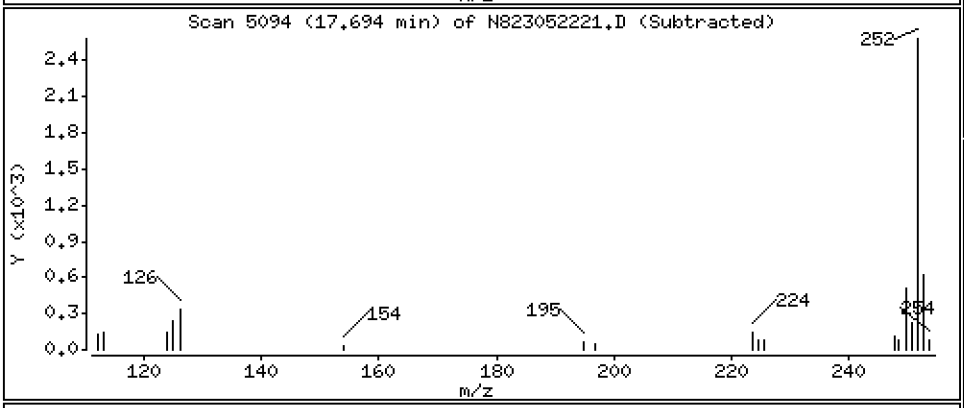
Column diameter: 0.25

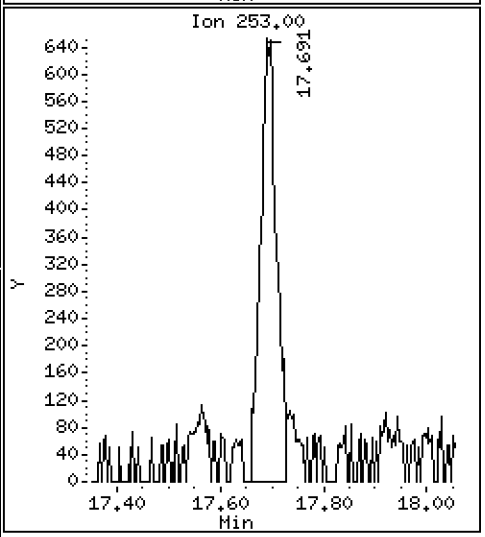
32 Benzo(a)pyrene

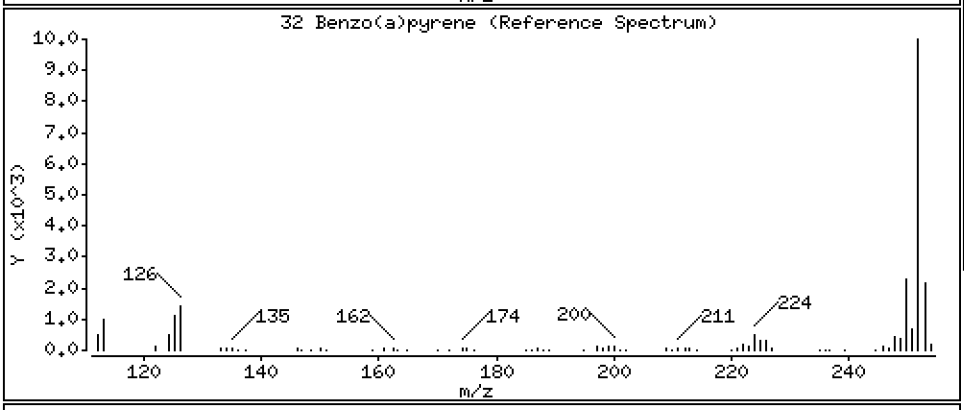
Concentration: 0.6510 ug/mL

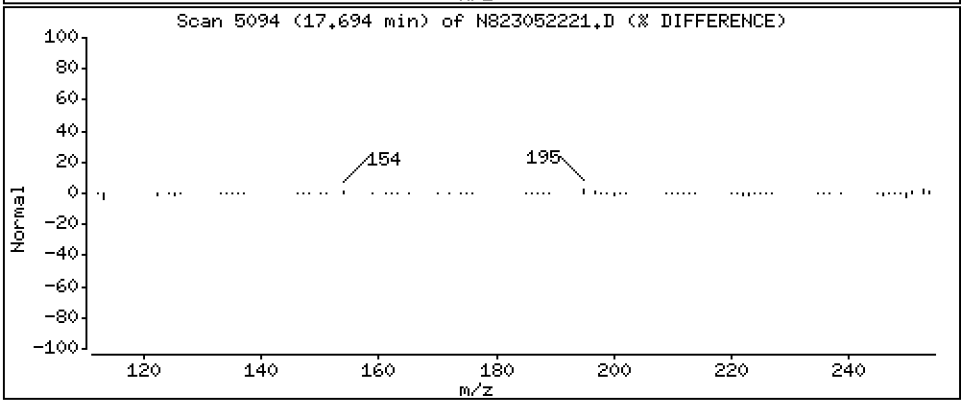












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

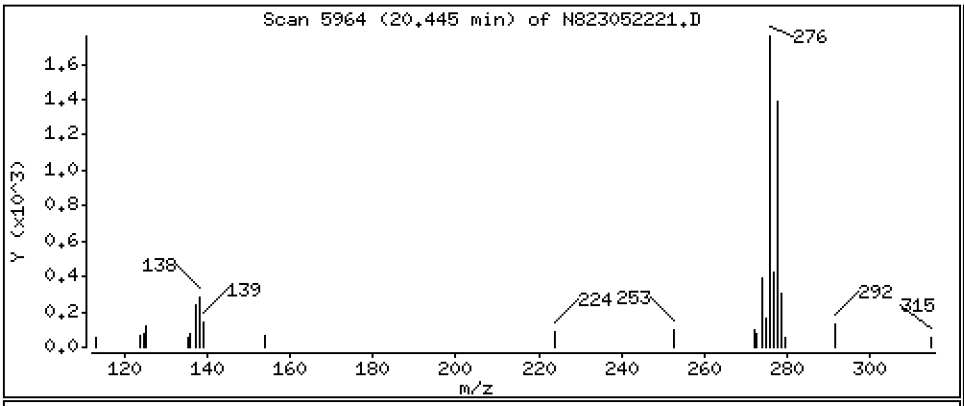
Operator: JZ

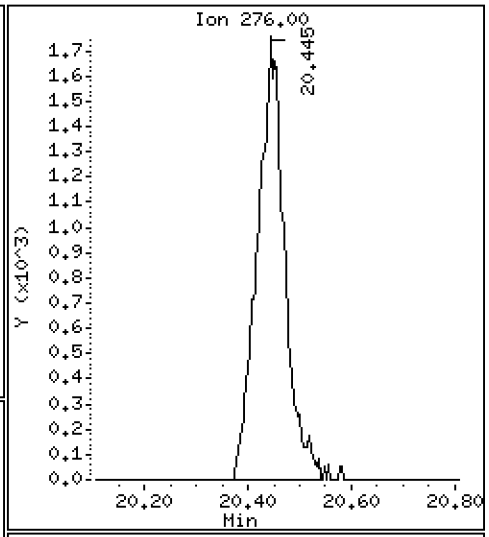
Column phase: Rxi-17sil

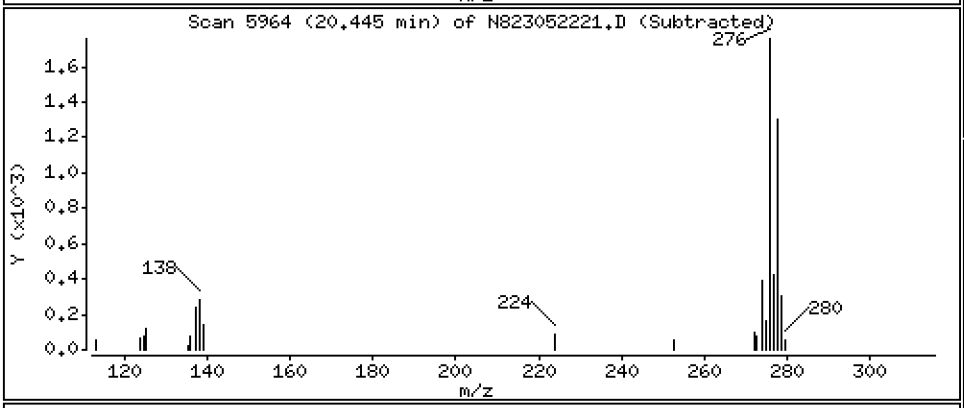
Column diameter: 0.25

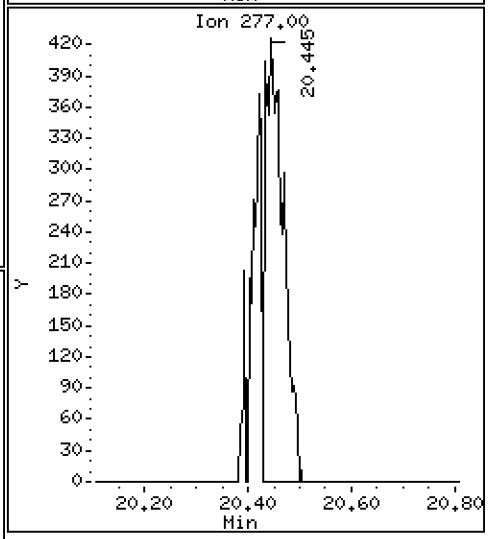
37 Indeno(1,2,3-cd)pyrene

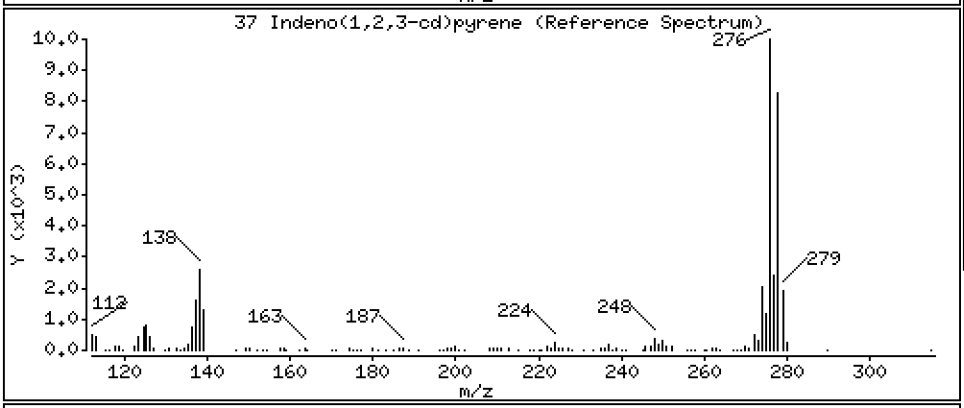
Concentration: 0.7238 ug/mL

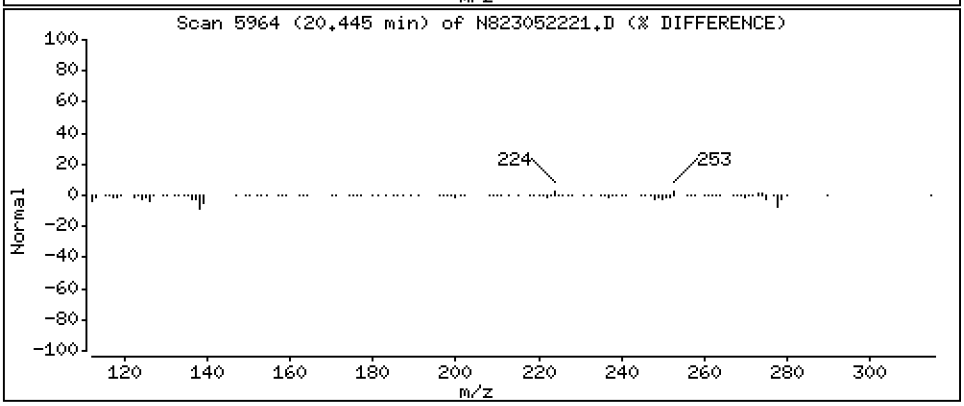












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

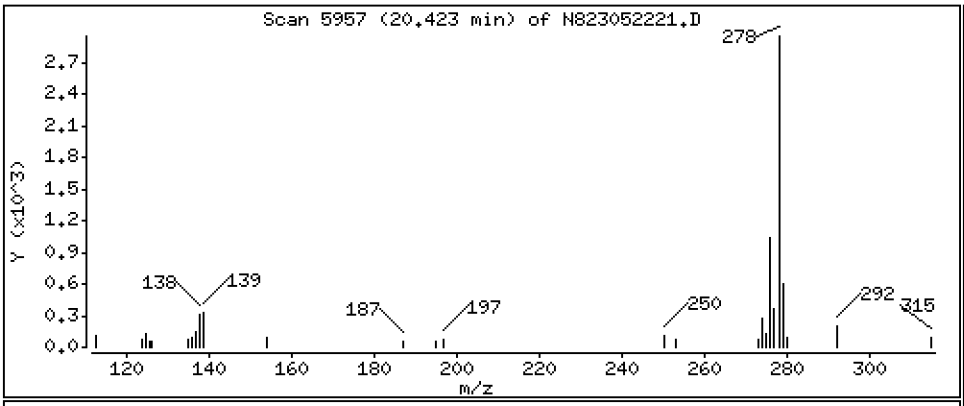
Operator: JZ

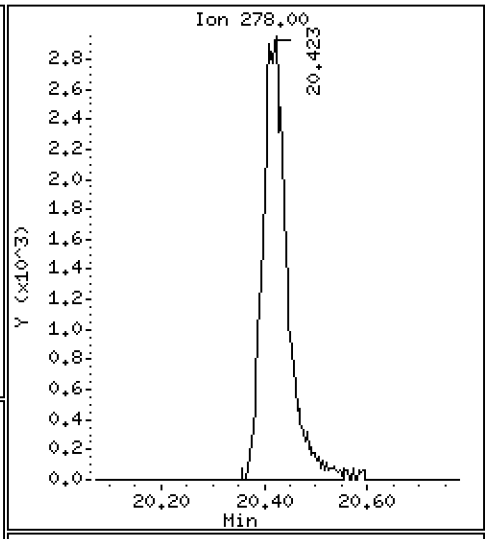
Column phase: Rxi-17sil

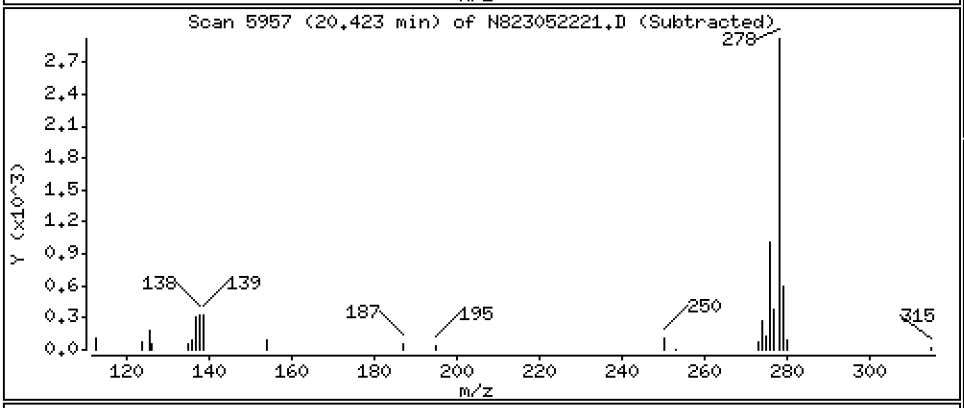
Column diameter: 0.25

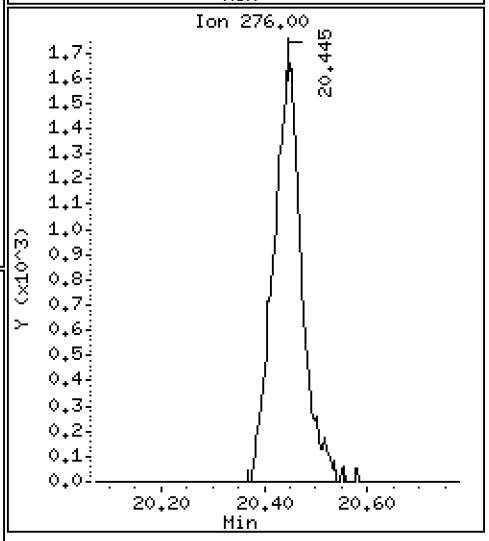
38 Dibenzo(a,h)anthracene

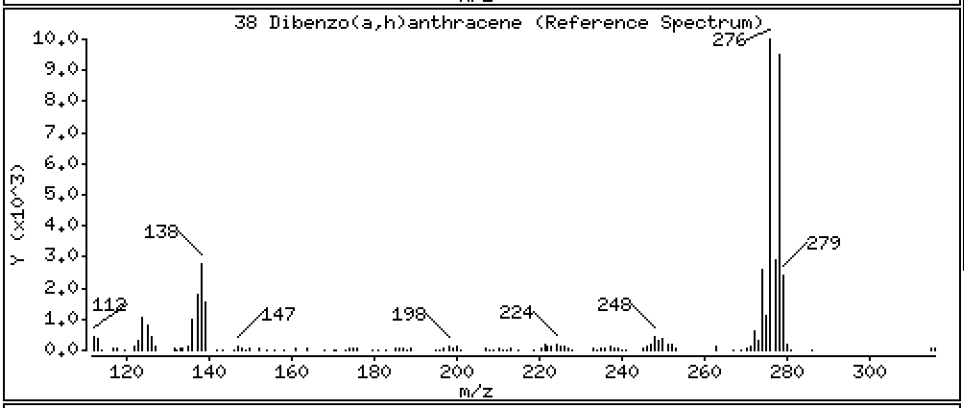
Concentration: 1.246 ug/mL

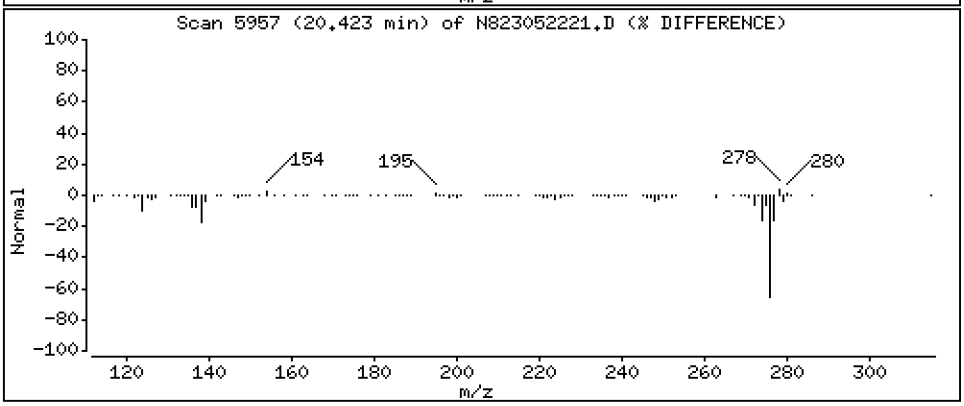












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052221.D

Date : 22-MAY-2023 21:00

Client ID:

Instrument: nt8.i

Sample Info: BLE0149-SRM1,

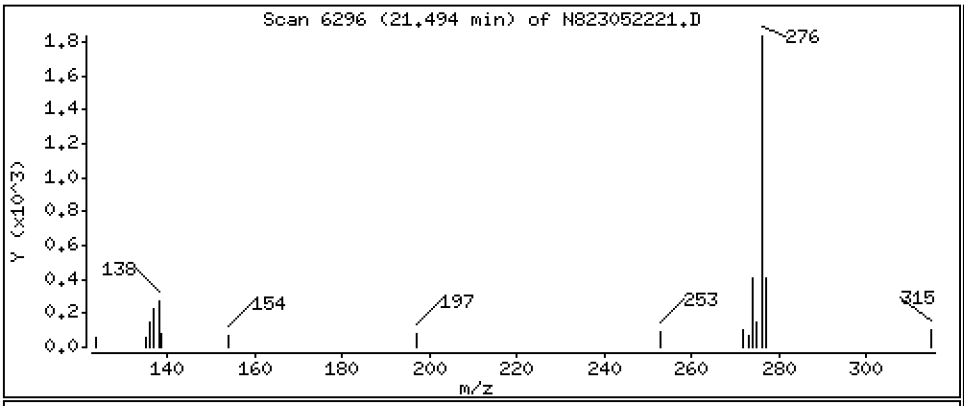
Operator: JZ

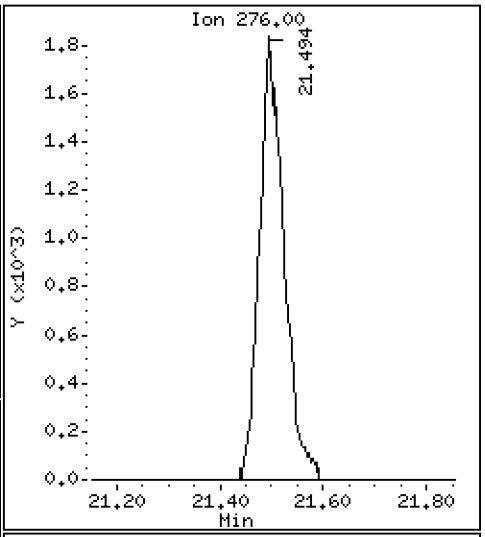
Column phase: Rxi-17sil

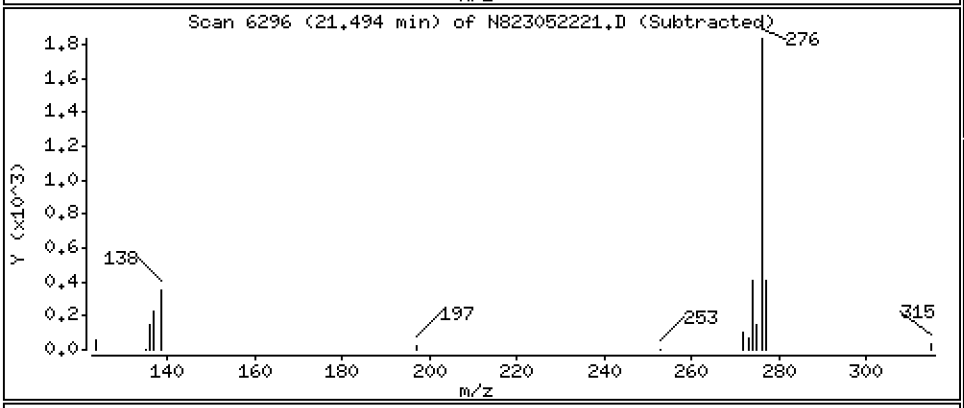
Column diameter: 0.25

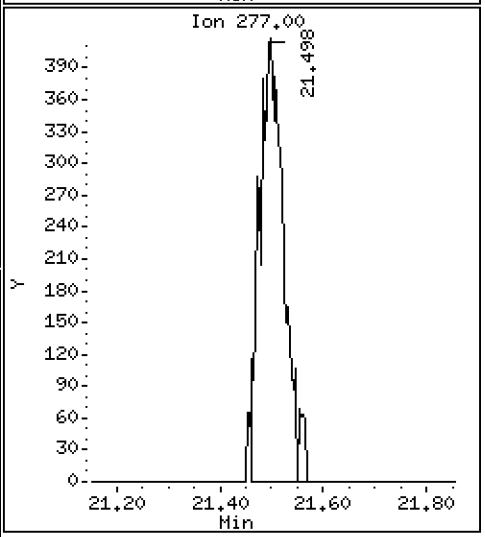
39 Benzo(g,h,i)perylene

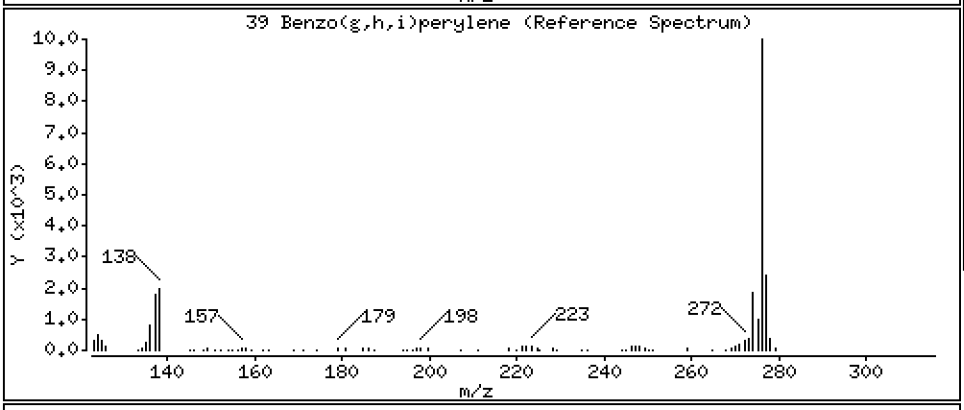
Concentration: 0.7316 ug/mL

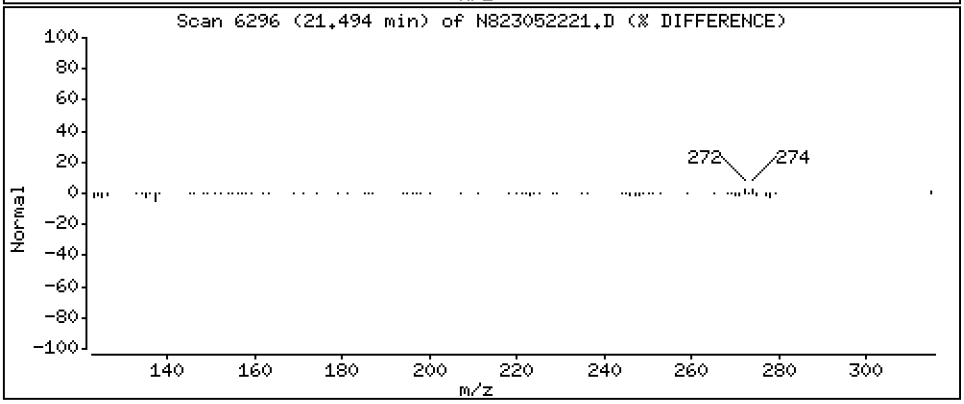












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230522.b\N823052221.D
Lab Smp Id: BLE0149-SRM1
Inj Date : 22-MAY-2023 21:00
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0149-SRM1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Meth Date : 23-May-2023 10:38 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.808	4.818	(1.000)	16843	2.00000	
	2 Naphthalene	128	4.837	4.846	(1.006)	17156	1.99931	1.999
$	3 2-Methylnaphthalene-d10	152	5.542	5.551	(1.153)	13101	2.51848	2.518
	4 2-Methylnaphthalene	141	5.592	5.599	(1.163)	158	0.03243	0.03243
	5 1-methylnaphthalene	141	5.785	5.795	(1.203)	95	0.01967	0.01967
	9 Acenaphthylene	152	6.990	6.993	(0.985)	19727	2.23619	2.236
*	10 Acenaphthene-d10	164	7.098	7.101	(1.000)	9965	2.00000	
	11 Acenaphthene	153	7.145	7.151	(1.007)	14622	2.55830	2.558
	12 Dibenzofuran	168	7.303	7.306	(1.029)	140	0.01631	0.01631(M)
	14 Fluorene	166	7.774	7.781	(1.095)	11285	1.64718	1.647
*	15 Phenanthrene-d10	188	9.134	9.140	(1.000)	18105	2.00000	
	16 Phenanthrene	178	9.169	9.175	(1.004)	27242	2.84073	2.841
	17 Anthracene	178	9.210	9.213	(1.008)	12564	1.39693	1.397
	19 Carbazole	167	9.728	9.731	(1.065)	692	0.08055	0.08055
	22 Fluoranthene	202	10.924	10.930	(1.196)	17190	1.55852	1.559
$	21 Fluoranthene-d10	212	10.886	10.895	(1.192)	27407	2.80433	2.804
	23 Pyrene	202	11.433	11.442	(0.815)	21246	2.15093	2.151
	24 Benzo(a)anthracene	228	13.908	13.918	(0.991)	5975	0.58868	0.5887(M)
*	25 Chrysene-d12	240	14.035	14.044	(1.000)	15428	2.00000	
	27 Chrysene	228	14.108	14.117	(1.005)	12155	1.21903	1.219
	28 Benzo(b)fluoranthene	252	16.647	16.653	(0.929)	16639	1.66587	1.666
	29 Benzo(k)fluoranthene	252	16.707	16.713	(0.932)	4819	0.51208	0.5121
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	16.647	16.653	(0.929)	21034	2.26457	2.265(M)
	32 Benzo(a)pyrene	252	17.693	17.703	(0.987)	5652	0.65100	0.6510(M)
*	33 Perylene-d12	264	17.924	17.934	(1.000)	15321	2.00000	
	35 Perylene	252	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.311	20.318	(1.133)	25465	4.35350	4.354
	37 Indeno(1,2,3-cd)pyrene	276	20.444	20.457	(1.141)	6397	0.72383	0.7238
	38 Dibenzo(a,h)anthracene	278	20.422	20.425	(1.139)	9779	1.24611	1.246(M)
	39 Benzo(g,h,i)perylene	276	21.494	21.503	(1.199)	5989	0.73158	0.7316

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823052221.D
Lab Smp Id: BLE0149-SRM1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 22-MAY-2023
Calibration Time: 11:46
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	17081	8541	34162	16843	-1.39
10 Acenaphthene-d10	9674	4837	19348	9965	3.01
15 Phenanthrene-d10	17710	8855	35420	18105	2.23
25 Chrysene-d12	15081	7541	30162	15428	2.30
33 Perylene-d12	15623	7812	31246	15321	-1.93

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.20
10 Acenaphthene-d10	7.10	6.60	7.60	7.10	-0.04
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.04	-0.07
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.05

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

REVIEW SUMMARY FOR FILE - N823052221.D

Lab ID: BLE0149-SRM1
nt8.i, 20230522.b\FSIMPNA230426.m,   22-MAY-2023 21:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

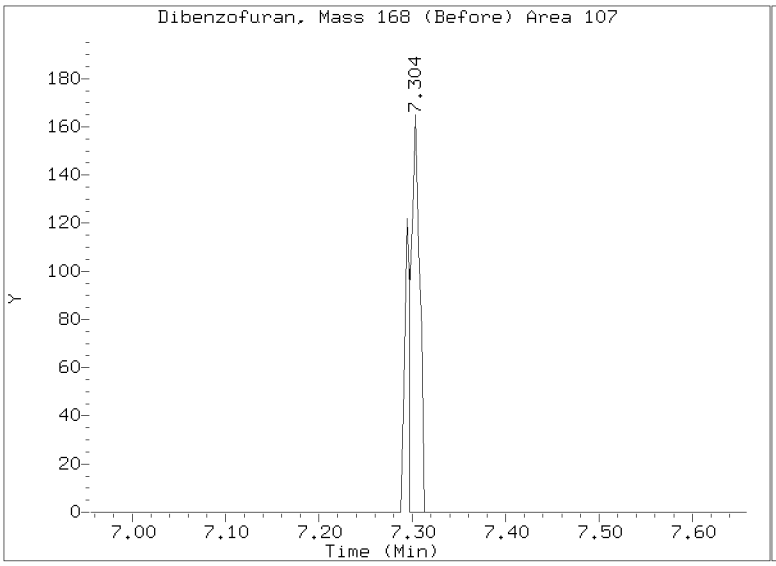
No RRT check performed

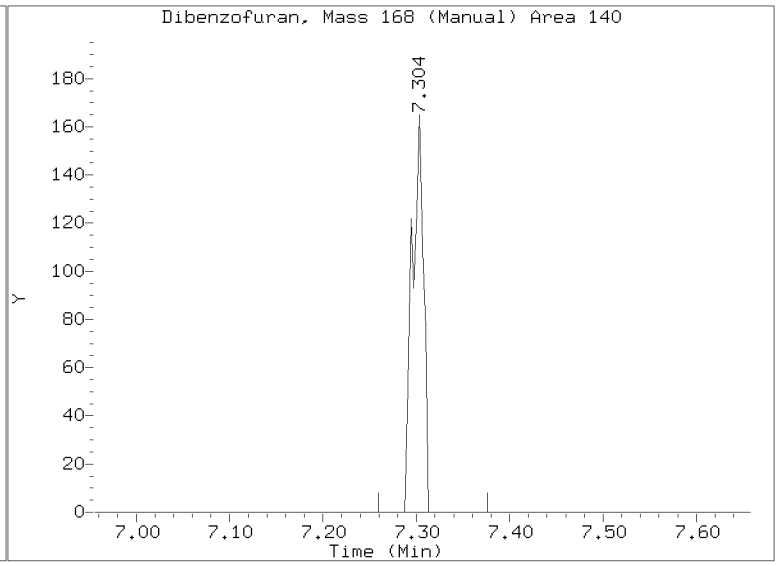
On Column LOD for nt8.i, 20230522.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

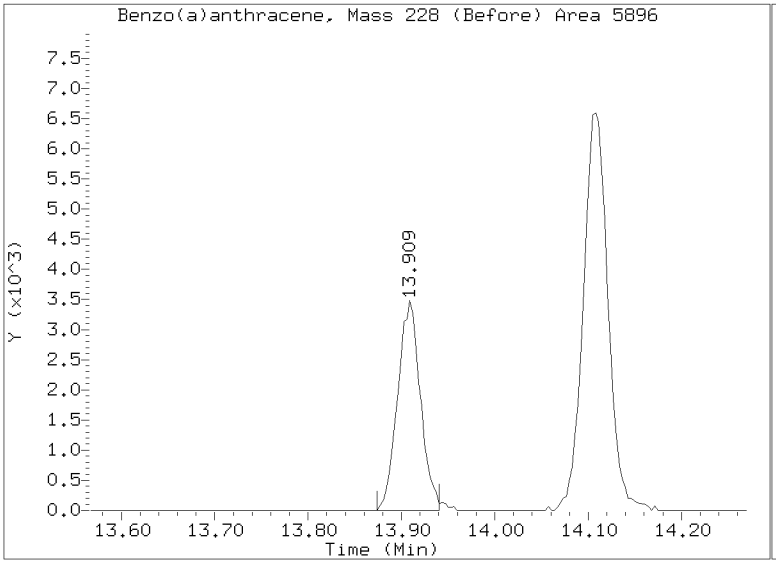
* Only compounds listed in the work order have been verified by the analyst *

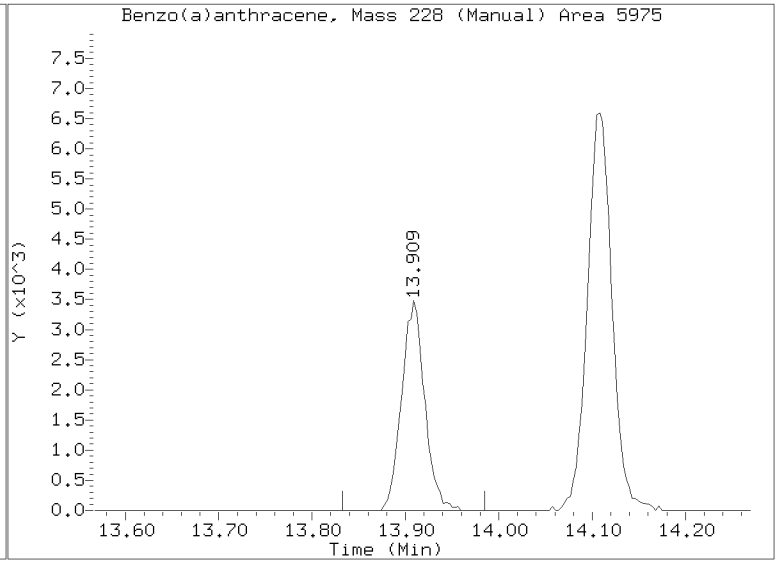
Quant Ion Manual Peak Adjustment Report

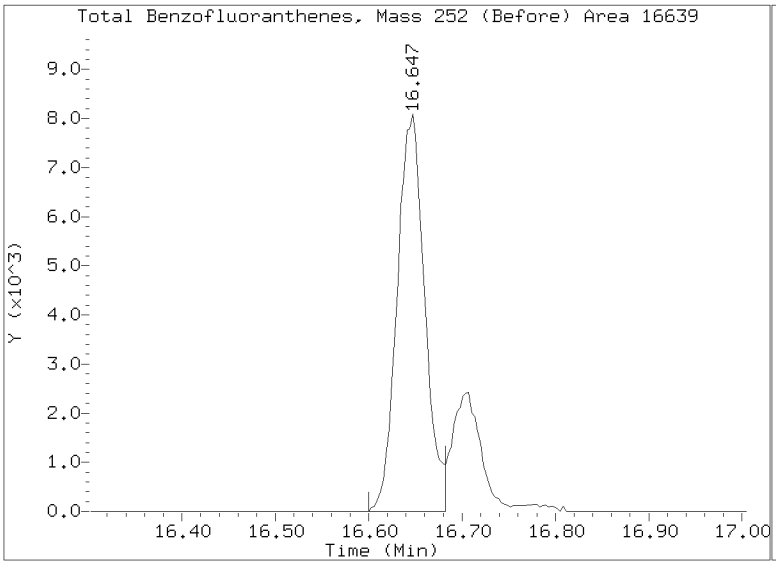
Datafile: //target/share/chem3/nt8.i/20230522.b/N823052221.D
Injection Date: 22-MAY-2023 21:00
Lab ID:BLE0149-SRM1 Client ID:
Report Date: 05/23/2023 10:49

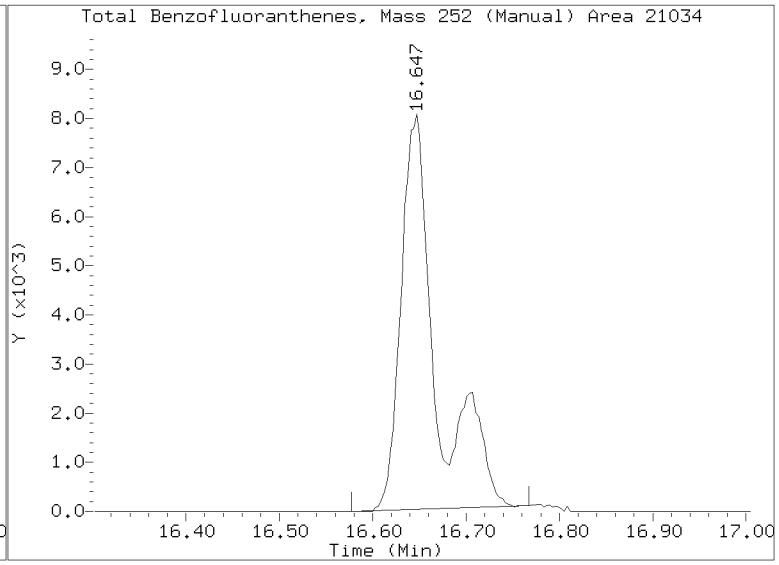






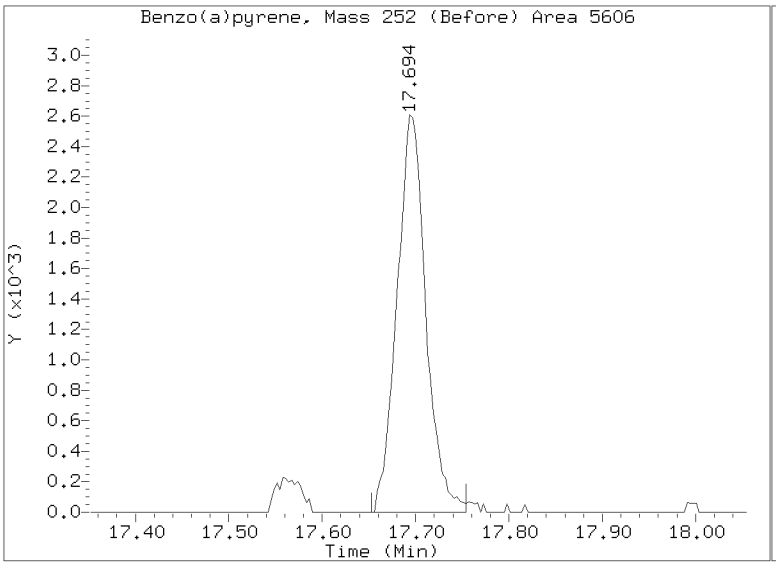


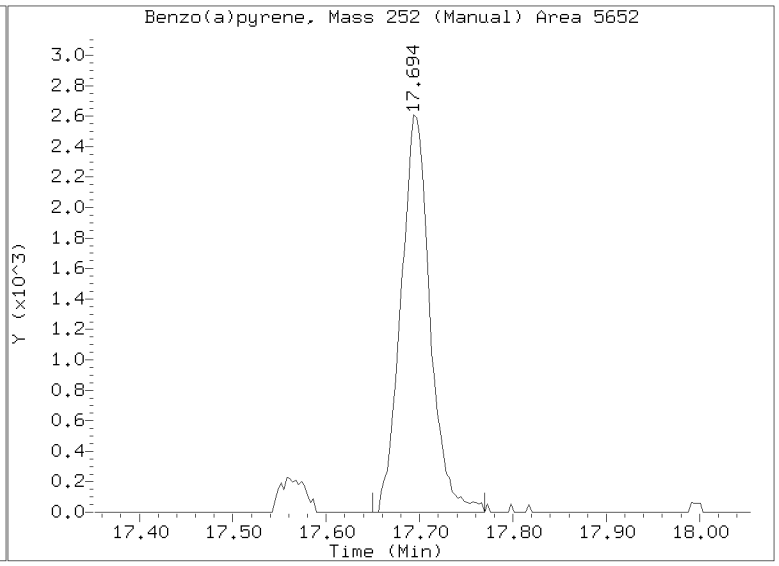


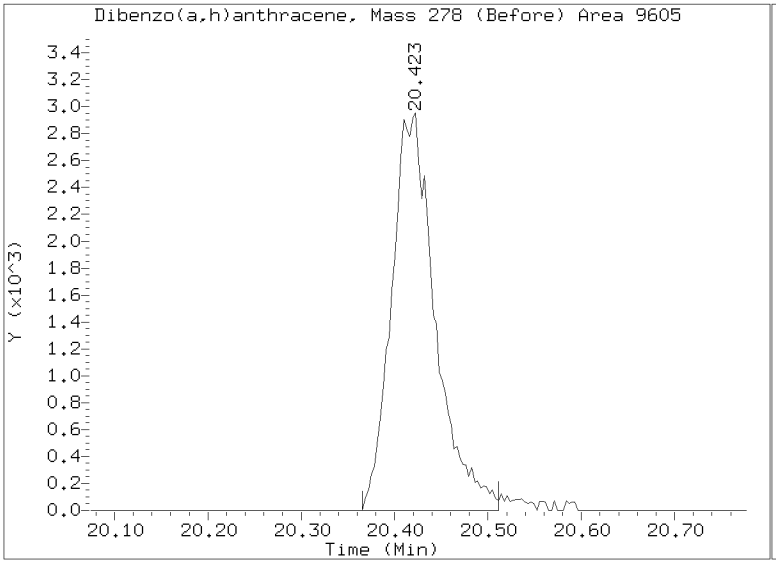


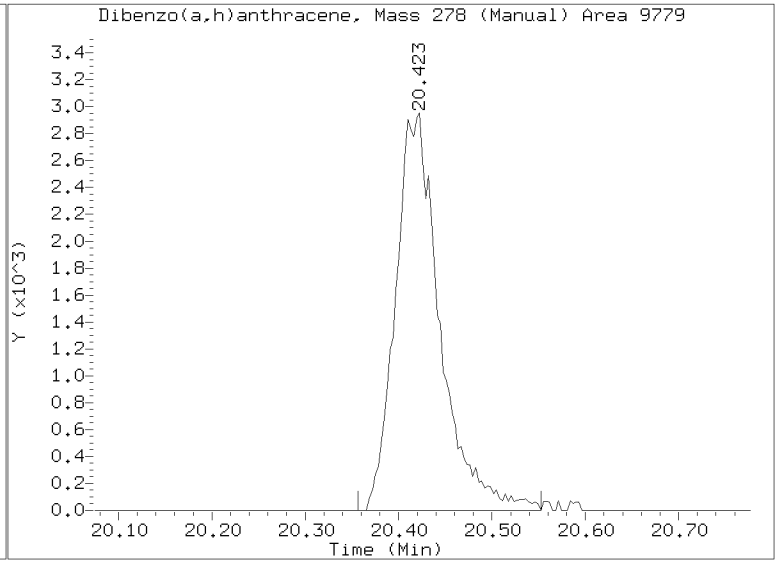
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230522.b/N823052221.D
Injection Date: 22-MAY-2023 21:00
Lab ID:BLE0149-SRM1 Client ID:
Report Date: 05/23/2023 10:49









Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

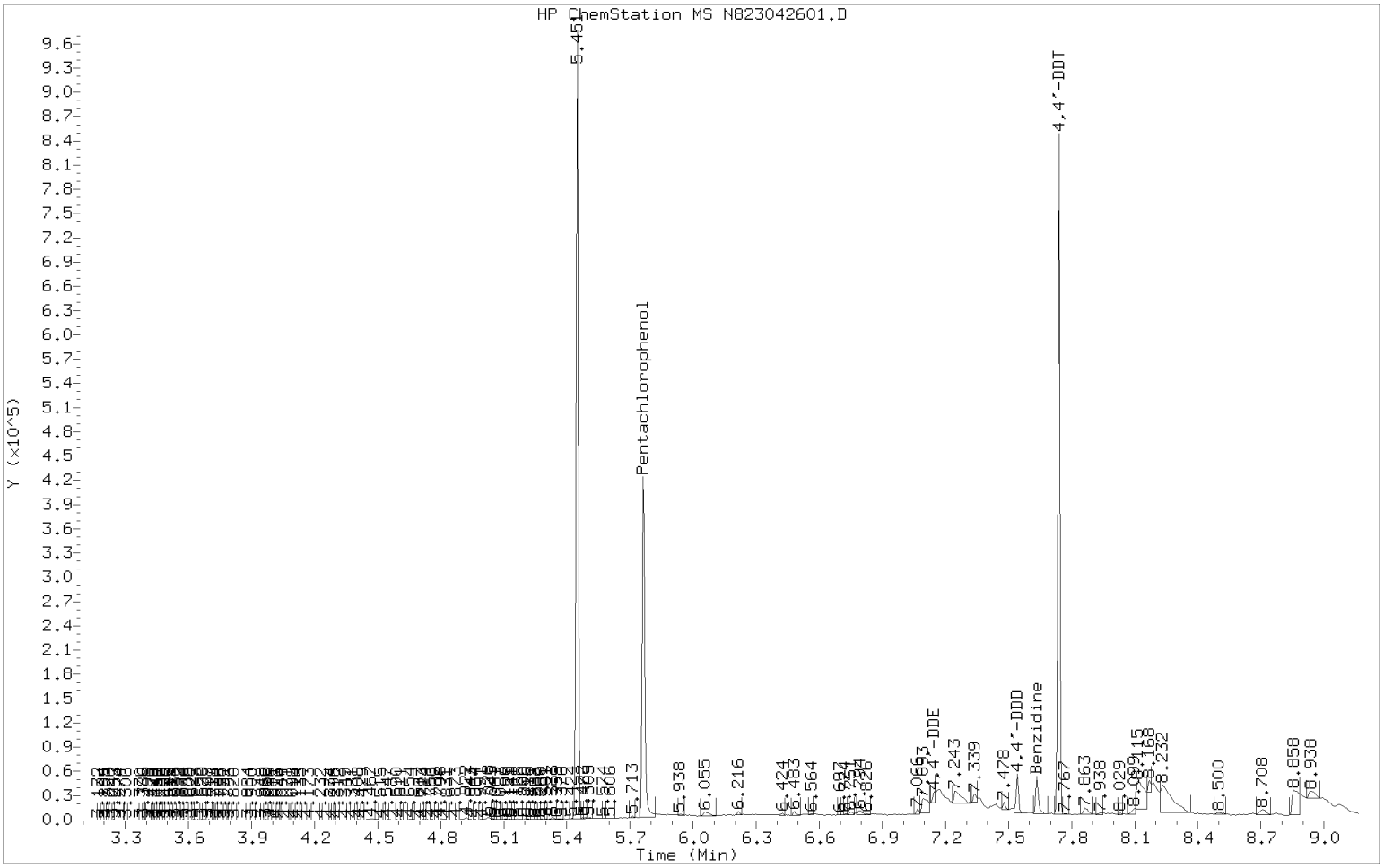
Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	N823042601.D	Injection Date:	04/26/23
Instrument ID:	NT8	Injection Time:	17:16
Sequence:	SLD0372	Lab Sample ID:	SLD0372-TUN1

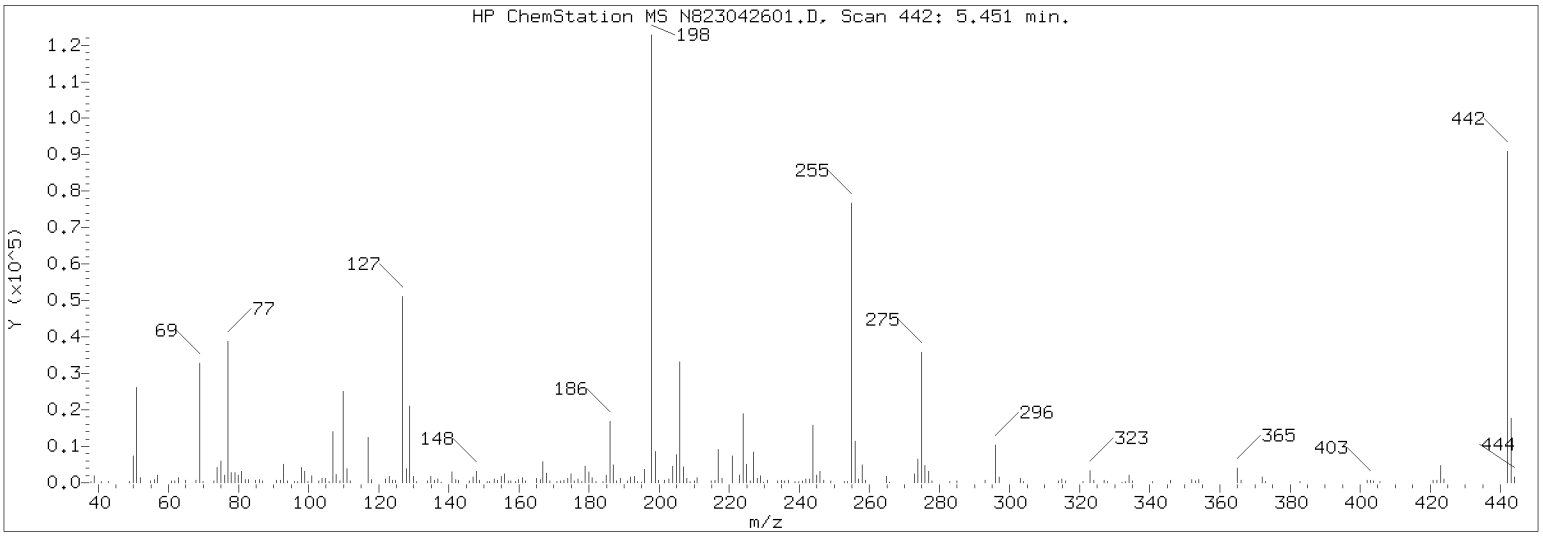
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	1.88	PASS
69	Less than 100% of 198	30.1	PASS
70	Less than 2% of 69	0.804	PASS
197	Less than 2% of 198	0.212	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.97	PASS
365	1 - 100% of 198	3.65	PASS
441	Less than 150% of 443	10.9	PASS
442	1 - 200% of 198	76.9	PASS
443	15 - 24% of 442	19.5	PASS
4,4'-DDD	Less than 20% of 4,4'-DDT		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Base peak, 100% relative abundance		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLD0372-TUN1	N823042601.D	04/26/2023	17:16
Cal Standard	SLD0372-CAL1	N823042603.D	04/26/2023	18:06
Cal Standard	SLD0372-CAL2	N823042604.D	04/26/2023	18:33
Cal Standard	SLD0372-CAL3	N823042605.D	04/26/2023	19:00
Cal Standard	SLD0372-CAL4	N823042606.D	04/26/2023	19:27
Cal Standard	SLD0372-CAL5	N823042607.D	04/26/2023	19:55
Cal Standard	SLD0372-CAL6	N823042608.D	04/26/2023	20:22
Secondary Cal Check	SLD0372-SCV1	N823042609.D	04/26/2023	20:49

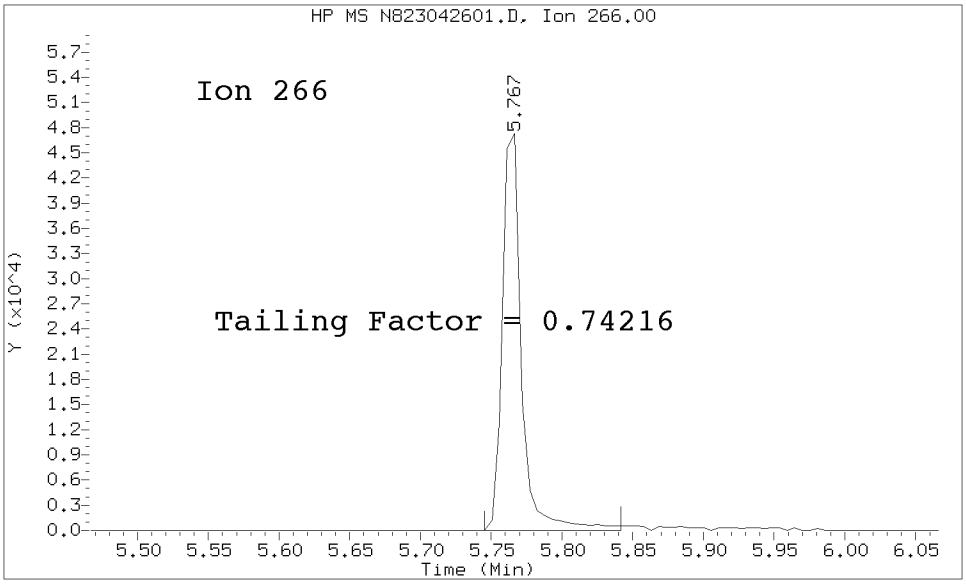
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230426.b/tune.b/N823042601.D/N823042601.D
Method Used: \20230426.b\tune.b\DFTPP.m Inst: nt8
Injection Date: 26-APR-2023 17:16 Operator: JZ
Sample Info: SLD0372-TUN1 DFTPP2304026
Report Date: 04/27/2023 10:37



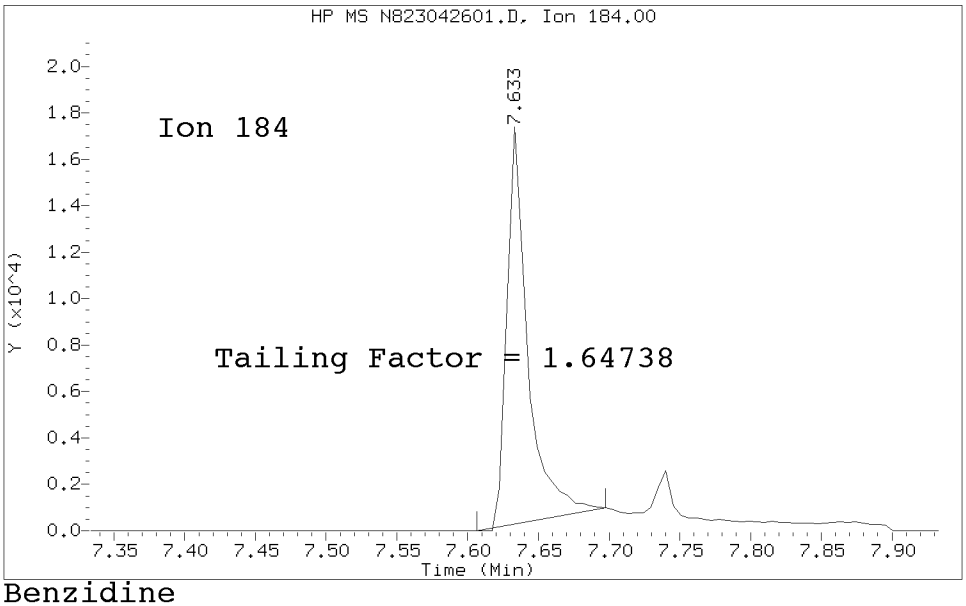


Datafile Analyzed: /20230426.b/tune.b/N823042601.D/N823042601.D
Method Used: \20230426.b\tune.b\DFTPP.m\sw846ddt.m Inst: nt8
Injection Date: 26-APR-2023 17:16 Operator: JZ
Sample Info: DFTPP2304026
Report Date: 04/27/2023 10:37



Pentachlorophenol
==========
Exp. RT = 5.831
Found RT = 5.767

Tail Factor = 0.742 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.548
Found RT = 7.633

Tail Factor = 1.647 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.7421603	2.000	PASS
Benzidine	1.6473779	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	88678			N/A
4,4-DDE	335	0.4	20.0	PASS
4,4-DDD	4965	5.3	20.0	PASS
4,4-DDD + DDE	5300	5.6	20.0	PASS

Tuning Sample, /nt8.i/20230426.b/tune.b/N823042601.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	25.12
68	Less than 2.00% of mass 69	0.57 (1.88)
69	Mass 69 relative abundance	30.15
70	Less than 2.00% of mass 69	0.24 (0.80)
127	10.00 - 80.00% of mass 198	44.51
197	Less than 2.00% of mass 198	0.21
199	5.00 - 9.00% of mass 198	6.97
275	10.00 - 60.00% of mass 198	28.71
365	Greater than 1.00% of mass 198	3.65
441	0.01 - 24.00% of mass 442	1.63 (2.12)
442	50.00 - 200.00% of mass 198	76.92
443	15.00 - 24.00% of mass 442	15.01 (19.51)

Data File: N823042601.D
Spectrum: Avg. Scans 441-443 (5.45), Background Scan 436
Location of Maximum: 198.00
Number of points: 216

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	259	122.00	629	189.00	763	258.00	3259
39.00	1543	123.00	1219	191.00	328	259.00	496
41.00	45	124.00	436	192.00	981	265.00	1218
43.00	2	125.00	433	193.00	1146	266.00	83
49.00	200	127.00	33968	194.00	133	273.00	1546
50.00	5356	128.00	2606	195.00	86	274.00	3984
51.00	19168	129.00	14073	196.00	2266	275.00	21912
52.00	1084	130.00	1224	197.00	162	276.00	2866
55.00	108	131.00	237	198.00	76320	277.00	2050
56.00	631	134.00	386	199.00	5317	278.00	264
57.00	1606	135.00	1187	200.00	361	283.00	133
61.00	298	136.00	428	201.00	393	285.00	277
62.00	392	137.00	773	203.00	697	293.00	424
63.00	1112	138.00	83	204.00	3031	296.00	6797
65.00	420	141.00	1993	205.00	4940	297.00	1078
68.00	432	142.00	616	206.00	20904	303.00	809
69.00	23008	143.00	440	207.00	2891	304.00	105
70.00	185	146.00	315	208.00	771	314.00	235
73.00	503	147.00	1039	209.00	225	315.00	728
74.00	3010	148.00	2177	210.00	339	316.00	386
75.00	4222	149.00	467	211.00	891	321.00	97
76.00	1466	151.00	231	215.00	239	323.00	2060
77.00	27280	152.00	216	216.00	499	324.00	326
78.00	1990	153.00	720	217.00	6004	327.00	427
79.00	2001	154.00	548	218.00	803	328.00	114
80.00	1522	155.00	1215	221.00	4276	332.00	87
81.00	2196	156.00	1571	222.00	300	333.00	115
82.00	531	157.00	272	223.00	1396	334.00	1361
83.00	682	158.00	292	224.00	12094	335.00	260
85.00	507	159.00	243	225.00	3156	341.00	119
86.00	661	160.00	509	226.00	269	346.00	497
87.00	320	161.00	936	227.00	5671	352.00	630
91.00	491	162.00	247	228.00	861	353.00	436
92.00	499	165.00	753	229.00	1152	354.00	558
93.00	3714	166.00	537	230.00	86	365.00	2785
94.00	257	167.00	3891	231.00	407	366.00	441
96.00	205	168.00	1823	234.00	399	372.00	970
97.00	92	169.00	279	235.00	339	373.00	131
98.00	2984	171.00	96	236.00	239	383.00	218
99.00	2258	172.00	341	237.00	381	402.00	459
100.00	183	173.00	433	239.00	129	403.00	493
101.00	1298	174.00	816	240.00	95	404.00	385
103.00	370	175.00	1572	241.00	287	406.00	97
104.00	735	176.00	336	242.00	712	421.00	465
105.00	831	177.00	751	243.00	725	422.00	209
106.00	144	178.00	218	244.00	9627	423.00	3075
107.00	9655	179.00	3020	245.00	1226	424.00	621
108.00	1527	180.00	1973	246.00	2064	441.00	1245
109.00	343	181.00	912	247.00	468	442.00	58704

110.00	16832	182.00	91	249.00	290	443.00	11455
111.00	2728	184.00	117	253.00	104	444.00	1029
112.00	350	185.00	1424	254.00	219		
116.00	337	186.00	10793	255.00	47768		
117.00	8906	187.00	3130	256.00	7127		
118.00	589	188.00	302	257.00	582		

Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

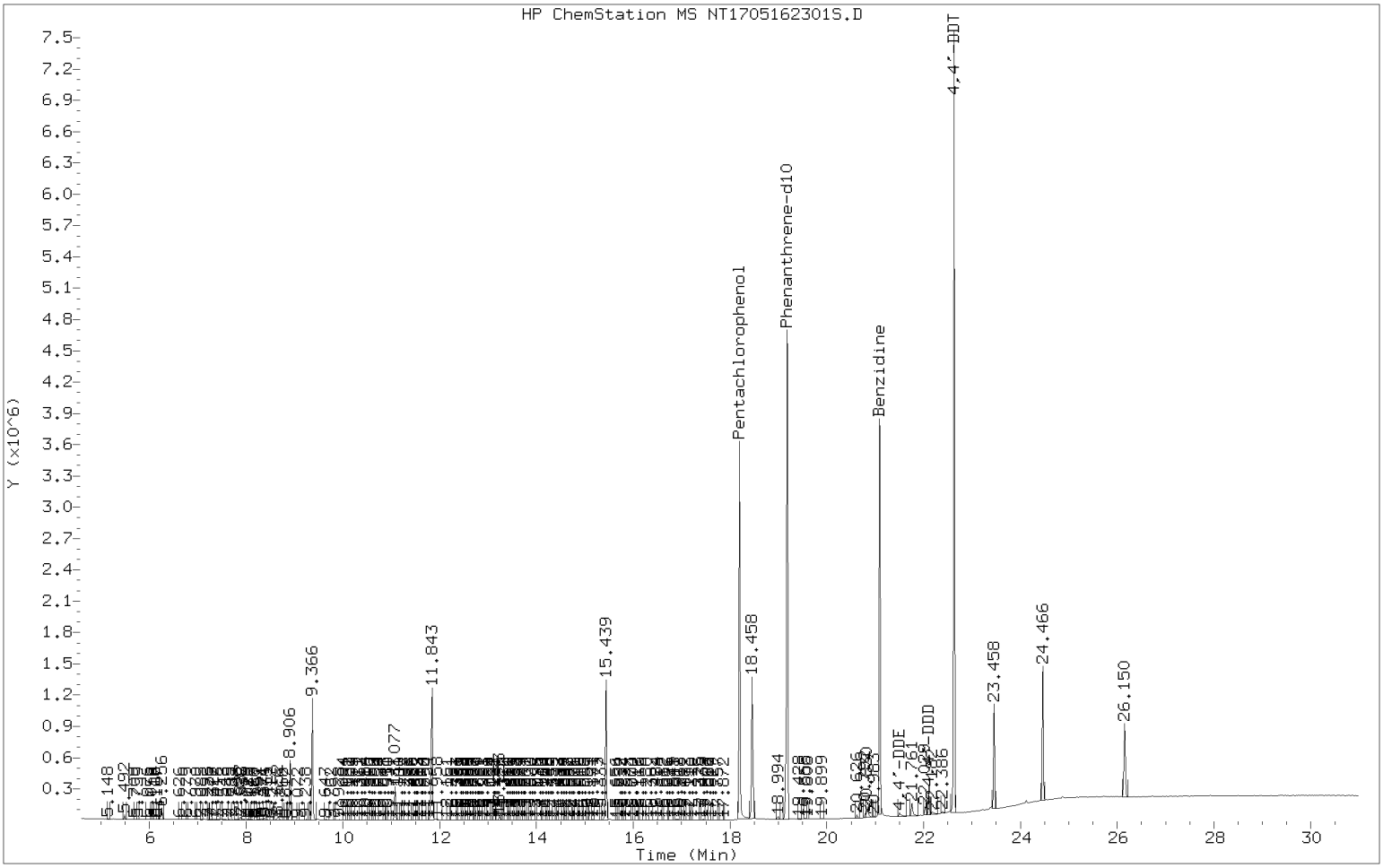
Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	NT1705162301S.D	Injection Date:	05/16/23
Instrument ID:	NT17	Injection Time:	18:14
Sequence:	SLE0339	Lab Sample ID:	SLE0339-TUN1

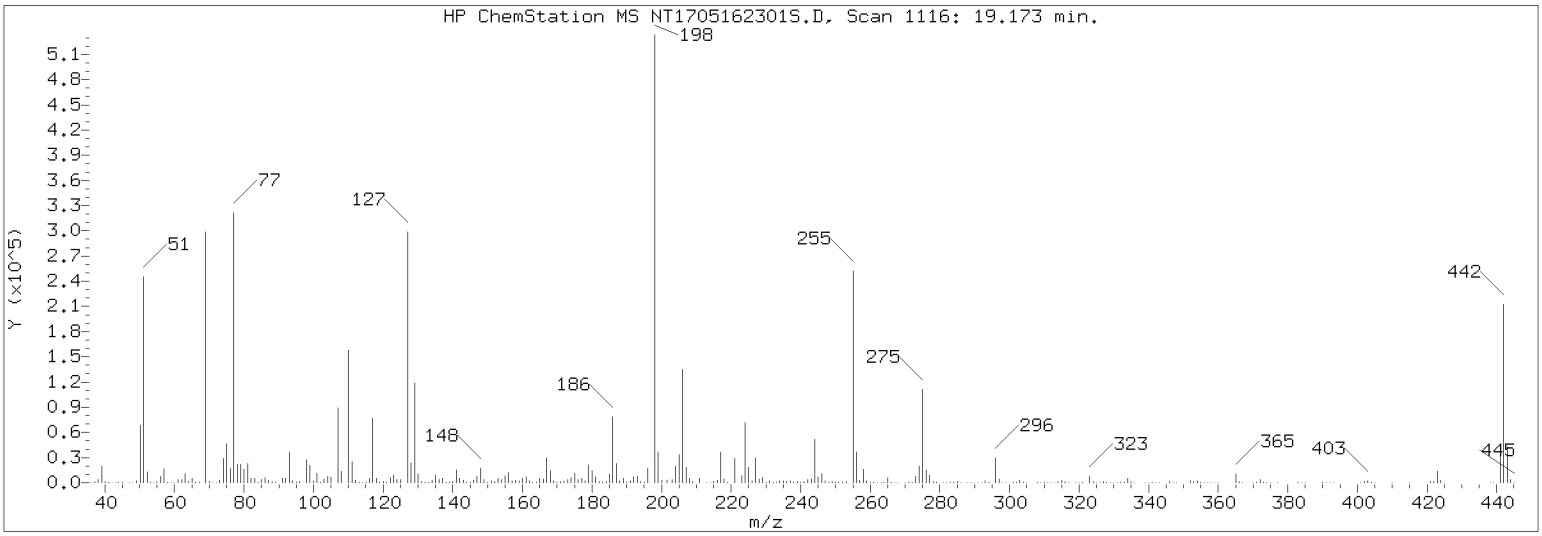
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	0	PASS
69	Less than 100% of 198	55.7	PASS
70	Less than 2% of 69	0.497	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.89	PASS
365	1 - 100% of 198	2.01	PASS
441	Less than 150% of 443	80.7	PASS
442	1 - 200% of 198	39.8	PASS
443	15 - 24% of 442	20.1	PASS
4,4'-DDD	Less than 20% of 4,4'-DDT		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Base peak, 100% relative abundance		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLE0339-TUN1	NT1705162301S.D	05/16/2023	18:14
Cal Standard	SLE0339-CAL8	NT1705162303S.D	05/16/2023	19:29
Cal Standard	SLE0339-CAL7	NT1705162304S.D	05/16/2023	20:07
Cal Standard	SLE0339-CAL6	NT1705162305S.D	05/16/2023	20:44
Cal Standard	SLE0339-CAL5	NT1705162306S.D	05/16/2023	21:22
Cal Standard	SLE0339-CAL4	NT1705162307S.D	05/16/2023	21:59
Cal Standard	SLE0339-CAL3	NT1705162308S.D	05/16/2023	22:37
Cal Standard	SLE0339-CAL2	NT1705162309S.D	05/16/2023	23:14
Cal Standard	SLE0339-CAL1	NT1705162310S.D	05/16/2023	23:51
Secondary Cal Check	SLE0339-SCV1	NT1705162311S.D	05/17/2023	0:29
Initial Cal Blank	SLE0339-ICB1	NT1705162312S.D	05/17/2023	1:07

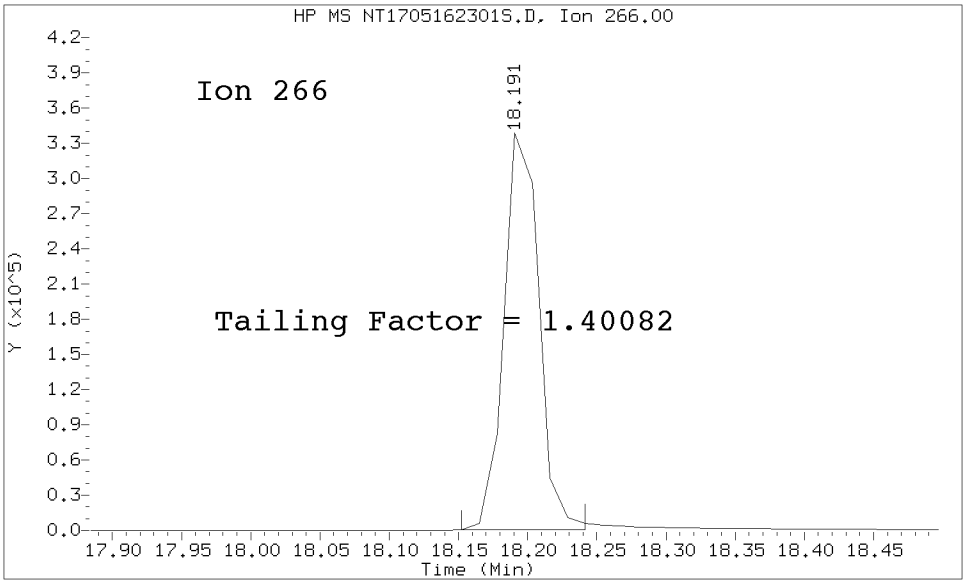
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230516.b/SIM.b/NT1705162301S.D/NT1705162301S.D
Method Used: \20230516.b\SIM.b\DFTPP8270E.m Inst: nt17
Injection Date: 16-MAY-2023 18:14 Operator: VTS
Sample Info: SLE0339-TUN1 SLE0339-TUN1
Report Date: 05/24/2023 06:46



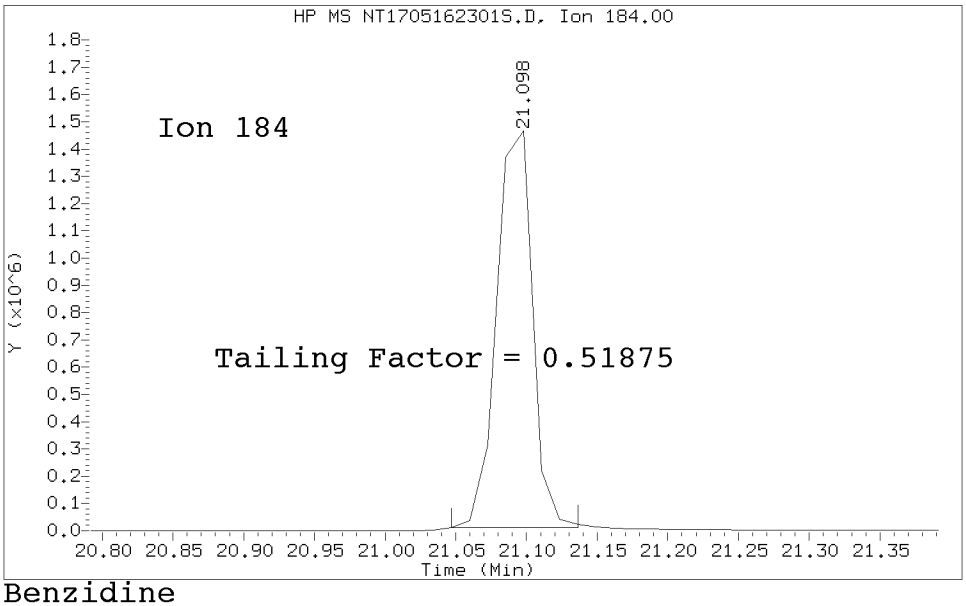


Datafile Analyzed: /20230516.b/SIM.b/NT1705162301S.D/NT1705162301S.D
Method Used: \20230516.b\DFTPP8270E.m\sw846ddt.m Inst: nt17
Injection Date: 16-MAY-2023 18:14 Operator: JGR
Sample Info: NT1705162301
Report Date: 05/24/2023 06:46



Pentachlorophenol
==========
Exp. RT = 18.191
Found RT = 18.191

Tail Factor = 1.401 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 21.098
Found RT = 21.098

Tail Factor = 0.519 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4008163	2.000	PASS
Benzidine	0.5187468	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1797024			N/A
4,4-DDE	5899	0.3	20.0	PASS
4,4-DDD	55596	3.0	20.0	PASS
4,4-DDD + DDE	61495	3.3	20.0	PASS

Tuning Sample, nt17.i/20230516.b/SIM.b/NT1705162301S.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	55.71
70	Less than 2.00% of mass 69	0.28 (0.50)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.89
365	1.00 - 100.00% of mass 198	2.01
441	Less than 150.00% of mass 443	6.45 (80.67)
442	Less than 200.00% of mass 198	39.79
443	15.00 - 24.00% of mass 442	8.00 (20.10)

Data File: NT1705162301S.D
Spectrum: HP ChemStation MS NT1705162301.D, Scan 1116: 19.173 min.
Location of Maximum: 198.00
Number of points: 331

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	373	125.00	3764	212.90	378	304.10	870
37.10	1236	127.00	299008	214.00	187	304.90	93
38.10	3574	128.00	23768	215.00	1418	308.00	456
39.10	19776	129.00	119136	216.10	3082	309.00	262
40.10	1147	130.00	10361	217.00	36592	310.00	402
41.10	878	131.00	1814	218.00	4762	311.00	86
42.00	117	132.00	965	219.00	396	312.00	116
43.10	290	133.10	535	221.00	29232	313.00	219
44.00	563	134.00	3393	223.00	8299	314.00	1504
45.00	582	135.00	9407	224.00	71792	315.00	3072
47.00	97	136.00	3952	225.00	17928	316.00	1521
48.00	170	137.00	4988	226.10	2276	317.00	314
49.10	2254	138.00	1078	227.00	30000	319.10	73
50.10	68392	139.00	652	228.00	4583	320.10	106
51.10	245312	140.00	1657	229.00	6282	321.00	853
52.10	13090	141.00	15600	230.00	812	323.00	7992
53.10	590	142.00	5275	231.00	2667	324.10	1422
54.10	108	143.00	3193	232.00	430	325.00	180
55.00	1424	144.00	947	233.00	547	326.10	206
56.00	7762	145.00	844	234.00	1964	327.00	1582
57.00	17056	146.00	3027	235.00	2156	328.00	897
58.00	866	147.00	7959	236.00	1308	329.00	186
59.10	293	148.00	17552	237.00	2222	329.90	82
60.00	267	149.00	3605	237.90	416	331.10	85
61.00	3445	150.00	847	239.00	1164	332.00	681
62.10	3924	151.10	1978	240.00	951	333.00	829
63.10	10682	152.00	1250	241.00	1482	334.00	5269
64.00	1343	153.00	5043	242.00	3506	335.00	1251
65.10	5380	154.00	3616	243.10	4237	335.90	192
66.00	439	155.00	8310	244.00	51672	339.00	128
67.10	548	156.00	12288	245.00	7098	340.10	147
69.00	297216	157.00	2390	246.00	10908	341.00	859
70.00	1476	158.00	3197	247.00	2147	342.00	240
70.90	268	159.00	2124	248.10	405	343.10	69
72.10	180	160.00	4998	249.00	1791	346.00	1668
73.00	2846	161.00	6841	250.00	400	347.00	375
74.10	28912	162.00	1948	250.90	471	348.00	75
75.00	46408	163.00	565	252.00	547	352.00	2294
76.10	17424	164.00	677	253.00	1432	353.00	1625
77.10	321920	165.00	5602	255.00	252288	354.10	2225
78.10	22048	166.00	4612	256.00	36264	355.00	516
79.00	22016	167.00	29864	257.00	3077	356.00	63
80.00	16324	168.00	14362	258.00	15639	356.90	53
81.00	22800	169.00	2523	259.00	2592	358.00	71
82.00	5387	170.00	957	260.10	431	359.00	210
83.00	5076	171.00	1311	261.00	461	360.10	57
84.00	563	172.00	2519	262.00	108	365.00	10733
85.00	4136	173.00	3591	263.10	161	366.00	1640
86.00	6323	174.00	6157	264.00	692	366.90	121

87.00	3104	175.00	11592	265.00	6219	370.00	199
88.00	1154	176.00	3445	266.00	980	371.00	691
89.00	552	177.00	5417	267.00	143	372.00	3968
91.00	5210	178.00	1917	267.90	329	373.00	1018
92.00	5631	179.00	21584	270.00	364	374.00	88
93.00	36336	180.00	14393	271.00	614	375.00	64
94.00	2258	181.00	6949	272.00	778	377.00	178
95.10	602	182.00	1161	273.00	7503	382.90	939
96.00	1677	183.00	749	274.00	19672	384.00	273
98.00	27664	184.00	1652	275.00	111592	385.00	126
99.00	20856	185.00	10677	276.00	15342	390.00	425
100.00	1939	186.00	78320	277.00	9319	391.00	350
101.00	11566	187.00	22896	278.00	1573	392.10	253
102.00	831	188.00	2244	279.00	451	393.00	72
103.00	4398	189.00	5077	281.00	219	401.00	268
104.00	7600	190.00	951	282.00	285	402.00	1410
105.00	7080	191.00	2327	283.00	1010	403.00	2061
107.00	89200	192.00	6979	284.00	690	404.00	774
108.00	13702	193.00	7409	285.00	1524	405.00	123
110.00	158144	194.00	1633	286.00	314	410.00	81
111.00	25024	195.10	1054	287.90	160	414.90	77
112.00	3002	196.00	17264	289.00	314	421.00	1760
113.00	864	198.00	533504	290.00	311	422.00	1730
114.00	302	199.00	36760	291.00	191	423.00	13610
115.10	463	200.00	2858	292.00	365	424.00	2795
116.00	5300	201.50	3067	293.00	1946	425.00	303
117.00	76832	203.00	3883	294.00	397	438.30	74
118.00	5637	204.00	19736	296.00	30016	439.10	152
119.00	739	205.00	33208	297.00	4246	441.10	34424
120.00	1147	206.00	134656	297.90	294	442.00	212288
121.00	584	207.00	18008	299.00	90	443.00	42672
122.00	6244	208.00	5001	301.10	394	444.00	3817
123.00	9329	209.00	1511	302.00	506	445.10	229
124.00	4061	211.00	5429	303.00	3269		

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GD00068	Instrument:	NT8
Calibration Date:	04/26/2023	Column (1):	RXI-17Sil ms

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Naphthalene	0.1	0.9731738	0.5	1.000485	1	1.070869	2.5	1.002449	5	1.028182	10	1.038458
2-Methylnaphthalene	0.1	0.5307165	0.5	0.5738934	1	0.6241908	2.5	0.5674742	5	0.5827577	10	0.5920999
1-Methylnaphthalene	0.1	0.5260713	0.5	0.5469348	1	0.6264622	2.5	0.5708541	5	0.5837739	10	0.5875494
Acenaphthylene	0.1	1.631377	0.5	1.607036	1	1.873475	2.5	1.762923	5	1.837153	10	1.91126
Acenaphthene	0.1	1.094979	0.5	1.103668	1	1.224715	2.5	1.108174	5	1.156803	10	1.194379
Dibenzofuran	0.1	1.59508	0.5	1.681138	1	1.860094	2.5	1.708342	5	1.711025	10	1.781988
Fluorene	0.1	1.278484	0.5	1.303892	1	1.464187	2.5	1.34939	5	1.383937	10	1.470294
Phenanthrene	0.1	1.007302	0.5	1.02867	1	1.130073	2.5	1.030384	5	1.061717	10	1.09797
Anthracene	0.1	0.8474125	0.5	0.9253415	1	1.105824	2.5	1.002236	5	1.033611	10	1.04679
Fluoranthene	0.1	1.140543	0.5	1.152203	1	1.32082	2.5	1.204434	5	1.242159	10	1.25034
Pyrene	0.1	1.200712	0.5	1.240022	1	1.309355	2.5	1.238408	5	1.321045	10	1.373308
Benzo(a)anthracene	0.1	1.22984	0.5	1.216005	1	1.322239	2.5	1.294913	5	1.380062	10	1.451517
Chrysene	0.1	1.324775	0.5	1.233132	1	1.312088	2.5	1.252954	5	1.29968	10	1.332893
Benzo(b)fluoranthene	0.1	1.288997	0.5	1.229528	1	1.328081	2.5	1.231665	5	1.330833	10	1.41402
Benzo(k)fluoranthene	0.1	1.193836	0.5	1.150185	1	1.274292	2.5	1.214154	5	1.243234	10	1.295064
Benzo(j)fluoranthene	0.1	1.088943	0.5	1.119639	1	1.205525	2.5	1.109753	5	1.134833	10	1.151499
Benzofluoranthenes, Total	0.3	1.184464	1.5	1.156589	3	1.262588	7.5	1.175062	15	1.221321	30	1.274916
Benzo(a)pyrene	0.1	1.032712	0.5	1.079103	1	1.201829	2.5	1.127932	5	1.154545	10	1.204021
Indeno(1,2,3-cd)pyrene	0.1	0.9537713	0.5	1.097162	1	1.242681	2.5	1.192932	5	1.203885	10	1.23156
Dibenzo(a,h)anthracene	0.1	0.8477967	0.5	0.9607608	1	1.101255	2.5	1.043343	5	1.086067	10	1.107335
Benzo(g,h,i)perylene	0.1	0.9213301	0.5	0.9964939	1	1.114775	2.5	1.08382	5	1.118622	10	1.176885
2-Methylnaphthalene-d10	0.1	0.5365231	0.5	0.5937348	1	0.6707553	2.5	0.6147495	5	0.6367872	10	0.6536472
Dibenzo[a,h]anthracene-d14	0.1	0.6282779	0.5	0.6933385	1	0.7729793	2.5	0.7807077	5	0.829378	10	0.876728
Fluoranthene-d10	0.1	0.9774556	0.5	1.02463	1	1.151684	2.5	1.059649	5	1.112037	10	1.152158

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GD00068	Instrument:	NT8
Calibration Date:	04/26/2023	Column (1):	RXI-17Sil ms

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Naphthalene	1.018936	3.4			RSD (15)	
2-Methylnaphthalene	0.5785221	5.3			RSD (15)	
1-Methylnaphthalene	0.5736076	6.1			RSD (15)	
Acenaphthylene	1.770537	7.2			RSD (15)	
Acenaphthene	1.14712	4.7			RSD (15)	
Dibenzofuran	1.722944	5.2			RSD (15)	
Fluorene	1.375031	5.8			RSD (15)	
Phenanthrene	1.059353	4.4			RSD (15)	
Anthracene	0.9935358	9.3			RSD (15)	
Fluoranthene	1.218416	5.5			RSD (15)	
Pyrene	1.280475	5.0			RSD (15)	
Benzo(a)anthracene	1.315763	6.8			RSD (15)	
Chrysene	1.292587	3.1			RSD (15)	
Benzo(b)fluoranthene	1.303854	5.4			RSD (15)	
Benzo(k)fluoranthene	1.228461	4.4			RSD (15)	
Benzo(j)fluoranthene	1.135032	3.6			RSD (15)	
Benzofluoranthenes, Total	1.21249	4.0			RSD (15)	
Benzo(a)pyrene	1.133357	6.0			RSD (15)	
Indeno(1,2,3-cd)pyrene	1.153665	9.6			RSD (15)	
Dibenzo(a,h)anthracene	1.024426	10.0			RSD (15)	
Benzo(g,h,i)perylene	1.068654	8.7			RSD (15)	
2-Methylnaphthalene-d10	0.6176995	7.8			RSD (15)	
Dibenzo[a,h]anthracene-d14	0.7635682	11.8			RSD (15)	
Fluoranthene-d10	1.079602	6.6			RSD (15)	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLD0372

Instrument: NT8
Calibration ID: GD00068

Printed: 4/27/2023 12:20:00PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLD0372-TUN1	QC		1		K004775			
SLD0372-ICB1	QC		2			L004537		
SLD0372-CAL1	QC		3		L000603	L004537		
SLD0372-CAL2	QC		4		L000604	L004537		
SLD0372-CAL3	QC		5		L000605	L004537		
SLD0372-CAL4	QC		6		L000606	L004537		
SLD0372-CAL5	QC		7		L000607	L004537		
SLD0372-CAL6	QC		8		L000608	L004537		
SLD0372-SCV1	QC		9		L000686	L004537		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230426.b

	Time	Filename	LabID	ClientId	DF										
1	1716	N823042601.D	SLD0372-TUN1		1	NO ISTDS FOUND									
2	1738	N823042602.D	SLD0372-ICB1		1	4.83	16370	7.12	9360	9.16	15764	14.08	15736	17.97	13577
3	1806	N823042603.D	SLD0372-CAL1		1	4.83	17222	7.11	9918	9.15	18763	14.07	18539	17.96	18495
4	1833	N823042604.D	SLD0372-CAL2		1	4.83	18547	7.11	10688	9.15	20788	14.07	20319	17.96	20821
5	1900	N823042605.D	SLD0372-CAL3		1	4.83	17610	7.11	10164	9.15	19712	14.07	20491	17.96	20562
6	1927	N823042606.D	SLD0372-CAL4		1	4.83	18699	7.11	10729	9.15	20748	14.07	20954	17.96	21563
7	1955	N823042607.D	SLD0372-CAL5		1	4.83	18501	7.11	10621	9.15	20636	14.07	20333	17.96	20900
8	2022	N823042608.D	SLD0372-CAL6		1	4.83	18987	7.11	10604	9.15	20735	14.07	20141	17.96	20342
9	2049	N823042609.D	SLD0372-SCV1		1	4.83	20718	7.11	12642	9.15	24547	14.07	24217	17.96	24956

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230426.b

ARI Job No.: SLD0 Method: FSIMPNA230426.m Instrument: nt8.i Date: 26-APR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1738	N823042602.D	SLD0372-ICB1		1	NO MANUAL INTEGRATION
1806	N823042603.D	SLD0372-CAL1		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1833	N823042604.D	SLD0372-CAL2		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1900	N823042605.D	SLD0372-CAL3		1	Total Benzofluoranthenes, Perylene, Dibenzo(a,h)anthracene,
1927	N823042606.D	SLD0372-CAL4		1	Total Benzofluoranthenes,
1955	N823042607.D	SLD0372-CAL5		1	Total Benzofluoranthenes,
2022	N823042608.D	SLD0372-CAL6		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene,
2049	N823042609.D	SLD0372-SCV1		1	Total Benzofluoranthenes,

Security Status Report

Date: 27-Apr-2023 12:21

N823042601.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042602.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042603.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042604.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042605.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042606.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042607.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042608.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042609.D	Data Locked	jianqing, 27-Apr-2023 12:21

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2023 18:06
End Cal Date : 26-APR-2023 20:22
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Last Edit : 27-Apr-2023 10:35 Jianqing
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt8.i\20230426.b\N823042603.D
Level 2: \\target\share\chem3\nt8.i\20230426.b\N823042604.D
Level 3: \\target\share\chem3\nt8.i\20230426.b\N823042605.D
Level 4: \\target\share\chem3\nt8.i\20230426.b\N823042606.D
Level 5: \\target\share\chem3\nt8.i\20230426.b\N823042607.D
Level 6: \\target\share\chem3\nt8.i\20230426.b\N823042608.D

	0.10000	0.50000	1.000	2.500	5.000	10.000	___	
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD
2 Naphthalene	0.97317	1.00049	1.07087	1.00245	1.02818	1.03846	1.01894	3.363
4 2-Methylnaphthalene	0.53072	0.57389	0.62419	0.56747	0.58276	0.59210	0.57852	5.309
5 1-methylnaphthalene	0.52607	0.54693	0.62646	0.57085	0.58377	0.58755	0.57361	6.074
6 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 Biphenyl	1.54265	1.48466	1.61590	1.48286	1.51654	1.58872	1.53855	3.561
8 2,6-Dimethylnaphthalene	0.98205	1.05651	1.17119	1.08670	1.11323	1.16298	1.09544	6.463
9 Acenaphthylene	1.63138	1.60704	1.87348	1.76292	1.83715	1.91126	1.77054	7.188
11 Acenaphthene	1.09498	1.10367	1.22471	1.10817	1.15680	1.19438	1.14712	4.690
12 Dibenzofuran	1.59508	1.68114	1.86009	1.70834	1.71103	1.78199	1.72294	5.240
13 1,6,7-Trimethylnaphthalene	0.94979	1.03593	1.18044	1.09341	1.11602	1.16181	1.08956	7.853
14 Fluorene	1.27848	1.30389	1.46419	1.34939	1.38394	1.47029	1.37503	5.831
16 Phenanthrene	1.00730	1.02867	1.13007	1.03038	1.06172	1.09797	1.05935	4.425
17 Anthracene	0.84741	0.92534	1.10582	1.00224	1.03361	1.04679	0.99354	9.348
18 Dibenzothiophene	0.90391	0.91649	1.06341	0.97058	1.00019	1.03959	0.98236	6.565
19 Carbazole	0.91137	0.89975	1.01116	0.91594	0.96121	0.99454	0.94900	4.947
20 1-Methylphenanthrene	0.74935	0.74428	0.86323	0.78959	0.81710	0.85815	0.80362	6.435

22 Fluoranthene	1.14054	1.15220	1.32082	1.20443	1.24216	1.25034	1.21842	5.532
23 Pyrene	1.20071	1.24002	1.30936	1.23841	1.32104	1.37331	1.28047	5.045
24 Benzo(a)anthracene	1.22984	1.21600	1.32224	1.29491	1.38006	1.45152	1.31576	6.830
27 Chrysene	1.32477	1.23313	1.31209	1.25295	1.29968	1.33289	1.29259	3.132
28 Benzo(b)fluoranthene	1.28900	1.22953	1.32808	1.23167	1.33083	1.41402	1.30385	5.359
29 Benzo(k)fluoranthene	1.19384	1.15018	1.27429	1.21415	1.24323	1.29506	1.22846	4.351
30 Benzo(j)fluoranthene	1.08894	1.11964	1.20552	1.10975	1.13483	1.15150	1.13503	3.577
31 Total Benzofluoranthenes	1.18446	1.15659	1.26259	1.17506	1.22132	1.27492	1.21249	4.006
32 Benzo(a)pyrene	1.03271	1.07910	1.20183	1.12793	1.15455	1.20402	1.13336	6.015
34 Benzo(e)pyrene	1.12895	1.17670	1.26291	1.18948	1.24278	1.30697	1.21797	5.320
35 Perylene	1.02514	1.10619	1.19881	1.13487	1.15114	1.21228	1.13807	5.978
37 Indeno(1,2,3-cd)pyrene	0.95377	1.09716	1.24268	1.19293	1.20389	1.23156	1.15367	9.590

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2023 18:06
End Cal Date : 26-APR-2023 20:22
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Last Edit : 27-Apr-2023 10:35 Jianqing
Curve Type : Average

	Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	___ RRF	% RSD
	38 Dibenzo(a,h)anthracene	0.84780	0.96076	1.10125	1.04334	1.08607	1.10733	1.02443	9.973
	39 Benzo(g,h,i)perylene	0.92133	0.99649	1.11477	1.08382	1.11862	1.17689	1.06865	8.726
$	3 2-Methylnaphthalene-d10	0.53652	0.59373	0.67076	0.61475	0.63679	0.65365	0.61770	7.813
$	21 Fluoranthene-d10	0.97746	1.02463	1.15168	1.05965	1.11204	1.15216	1.07960	6.597
$	36 Dibenzo(a,h)anthracene-d14	0.62828	0.69334	0.77298	0.78071	0.82938	0.87673	0.76357	11.824

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Batch File: \\target\share\chem3\nt8.i\20230426.b
Inst ID: nt8.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	N823042603	N823042604	N823042605	N823042606	N823042607	N823042608
INJ.DATE:	26-APR-2023	26-APR-2023	26-APR-2023	26-APR-2023	26-APR-2023	26-APR-2023
INJ.TIME:	18:06	18:33	19:00	19:27	19:55	20:22

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 1 Naphthalene-d8	4.828	4.828	4.828	4.828	4.828	4.828	4.828	1.828-7.828	4.828	0.000
2 Naphthalene	4.856	4.856	4.856	4.856	4.856	4.856	4.856	1.856-7.856	4.856	0.000
$ 3 2-Methylnaphthalene-d1	5.561	5.561	5.558	5.558	5.558	5.558	5.558	2.558-8.558	5.559	0.002
4 2-Methylnaphthalene	5.609	5.606	5.606	5.606	5.606	5.606	5.606	2.606-8.606	5.606	0.001
5 1-methylnaphthalene	5.805	5.802	5.802	5.802	5.802	5.805	5.805	2.805-8.805	5.803	0.002
6 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	7.152	4.152-10.152	+++++	+++++
7 Biphenyl	6.263	6.263	6.263	6.263	6.263	6.263	6.263	3.263-9.263	6.263	0.000
8 2,6-Dimethylnaphthalen	6.311	6.308	6.308	6.308	6.308	6.308	6.308	3.308-9.308	6.308	0.001
9 Acenaphthylene	7.006	7.003	7.007	7.003	7.003	7.003	7.003	4.003-10.003	7.004	0.002
* 10 Acenaphthene-d10	7.114	7.111	7.111	7.111	7.111	7.111	7.111	4.111-10.111	7.111	0.001
11 Acenaphthene	7.161	7.161	7.161	7.161	7.161	7.161	7.161	4.161-10.161	7.161	0.000
12 Dibenzofuran	7.320	7.316	7.316	7.313	7.313	7.316	7.316	4.316-10.316	7.316	0.002
13 1,6,7-Trimethylnaphtha	7.383	7.380	7.380	7.380	7.380	7.380	7.380	4.380-10.380	7.380	0.001
14 Fluorene	7.797	7.791	7.791	7.791	7.791	7.791	7.791	4.791-10.791	7.792	0.003
* 15 Phenanthrene-d10	9.153	9.150	9.150	9.150	9.150	9.150	9.150	6.150-12.150	9.151	0.001
16 Phenanthrene	9.188	9.185	9.185	9.185	9.185	9.188	9.188	6.188-12.188	9.186	0.002
17 Anthracene	9.229	9.226	9.226	9.226	9.226	9.229	9.229	6.229-12.229	9.227	0.002

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

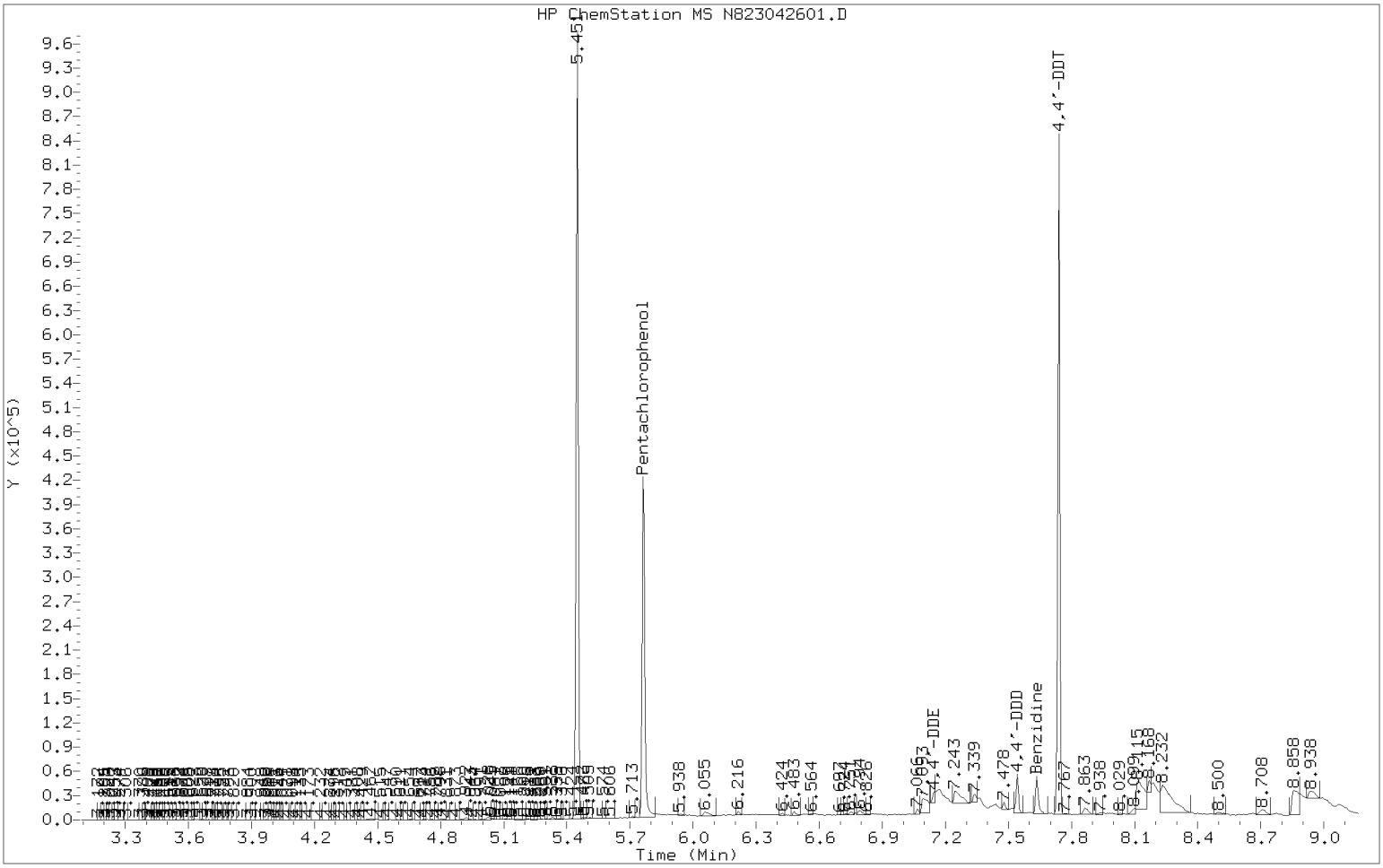
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

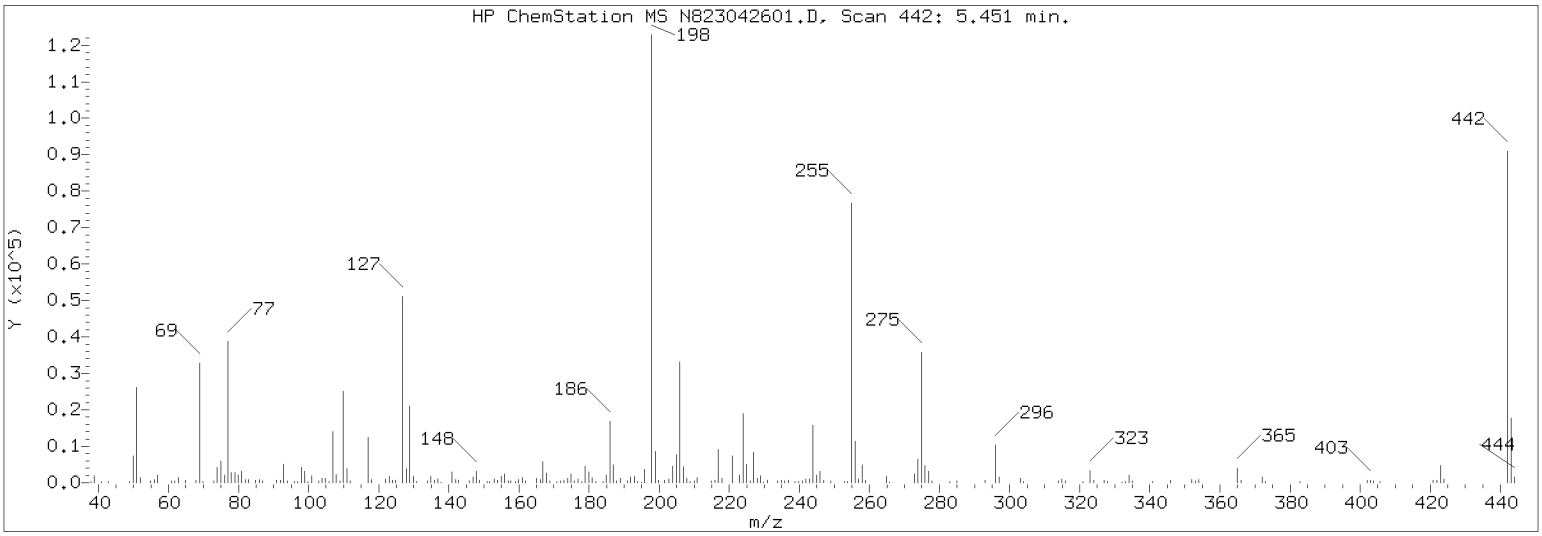
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Batch File: \\target\share\chem3\nt8.i\20230426.b
Inst ID: nt8.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 Dibenzothiophene	9.027	9.027	9.024	9.024	9.024	9.027	9.027	6.027-12.027	9.025	0.002
19 Carbazole	9.745	9.745	9.742	9.745	9.742	9.745	9.745	6.745-12.745	9.744	0.002
20 1-Methylphenanthrene	9.960	9.957	9.957	9.957	9.957	9.957	9.957	6.957-12.957	9.957	0.001
$ 21 Fluoranthene-d10	10.915	10.911	10.912	10.912	10.912	10.915	10.915	7.915-13.915	10.913	0.002
22 Fluoranthene	10.953	10.949	10.950	10.950	10.949	10.953	10.953	7.953-13.953	10.951	0.002
23 Pyrene	11.462	11.462	11.462	11.462	11.462	11.465	11.465	8.465-14.465	11.462	0.001
24 Benzo(a)anthracene	13.941	13.941	13.941	13.941	13.944	13.947	13.947	10.947-16.947	13.942	0.003
* 25 Chrysene-d12	14.070	14.070	14.070	14.067	14.067	14.070	14.070	11.070-17.070	14.069	0.002
27 Chrysene	14.146	14.143	14.143	14.140	14.143	14.146	14.146	11.146-17.146	14.144	0.002
28 Benzo(b)fluoranthene	16.676	16.679	16.682	16.682	16.685	16.692	16.692	13.692-19.692	16.683	0.005
29 Benzo(k)fluoranthene	16.742	16.739	16.739	16.739	16.742	16.752	16.752	13.752-19.752	16.742	0.005
30 Benzo(j)fluoranthene	16.818	16.815	16.815	16.818	16.821	16.831	16.831	13.831-19.831	16.820	0.006
31 Total Benzofluoranthen	16.676	16.679	16.682	16.682	16.685	16.692	16.692	13.692-19.692	16.683	0.005
32 Benzo(a)pyrene	17.729	17.729	17.732	17.732	17.732	17.738	17.738	14.738-20.738	17.732	0.003
* 33 Perylene-d12	17.960	17.959	17.963	17.960	17.963	17.963	17.963	14.963-20.963	17.961	0.002
34 Benzo(e)pyrene	17.605	17.602	17.599	17.599	17.602	17.608	17.608	14.609-20.608	17.603	0.004
35 Perylene	18.039	18.035	18.035	18.032	18.039	18.042	18.042	15.042-21.042	18.037	0.003
$ 36 Dibenzo(a,h)anthracene	20.353	20.356	20.350	20.356	20.363	20.372	20.372	17.372-23.372	20.358	0.008
37 Indeno(1,2,3-cd)pyrene	20.495	20.489	20.496	20.492	20.502	20.521	20.521	17.521-23.521	20.499	0.011
38 Dibenzo(a,h)anthracene	20.470	20.467	20.464	20.467	20.473	20.486	20.486	17.486-23.486	20.471	0.008
39 Benzo(g,h,i)perylene	21.558	21.545	21.552	21.552	21.558	21.570	21.570	18.570-24.570	21.556	0.009

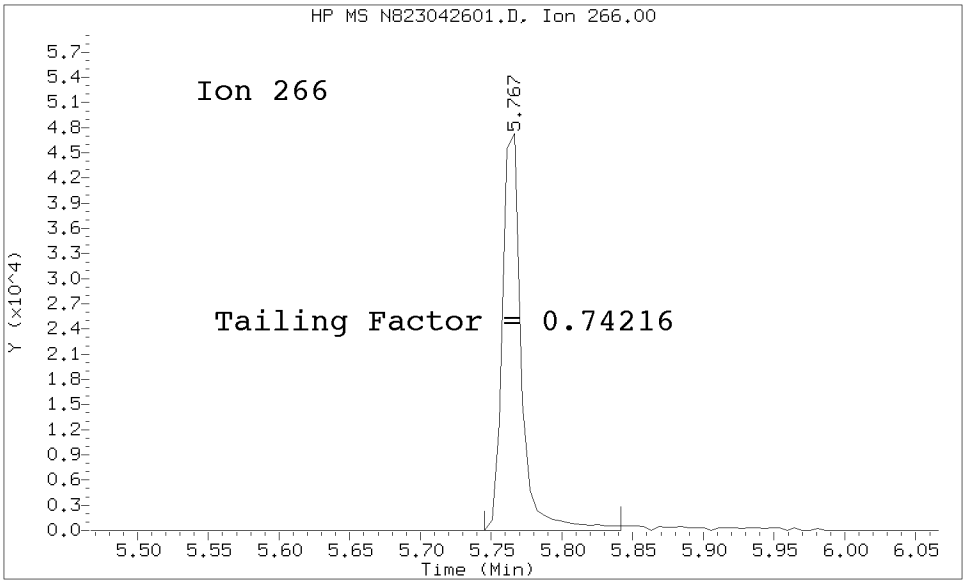
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230426.b/tune.b/N823042601.D/N823042601.D
Method Used: \20230426.b\tune.b\DFTPP.m Inst: nt8
Injection Date: 26-APR-2023 17:16 Operator: JZ
Sample Info: SLD0372-TUN1 DFTPP2304026
Report Date: 04/27/2023 10:37



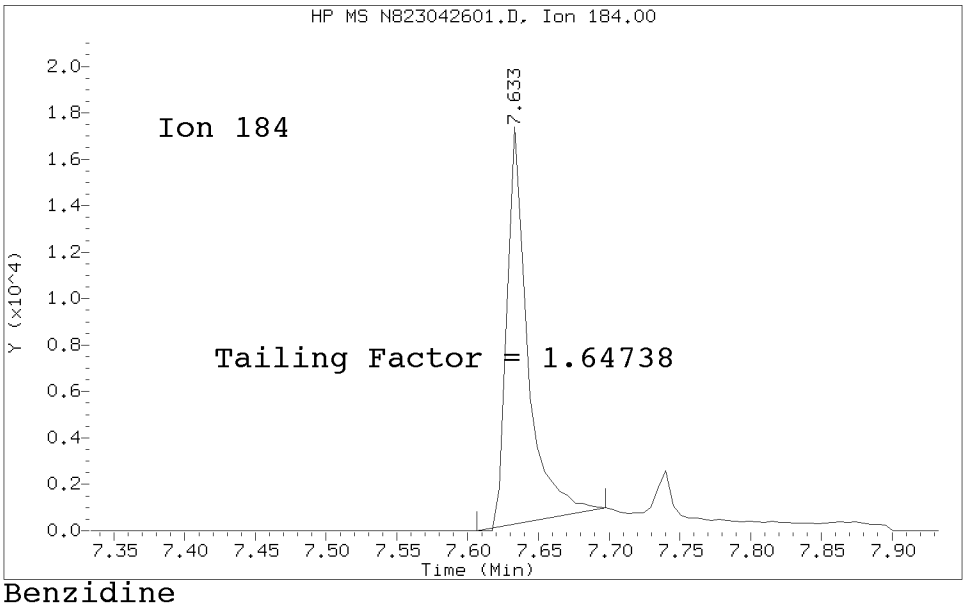


Datafile Analyzed: /20230426.b/tune.b/N823042601.D/N823042601.D
Method Used: \20230426.b\tune.b\DFTPP.m\sw846ddt.m Inst: nt8
Injection Date: 26-APR-2023 17:16 Operator: JZ
Sample Info: DFTPP2304026
Report Date: 04/27/2023 10:37



Pentachlorophenol
==========
Exp. RT = 5.831
Found RT = 5.767

Tail Factor = 0.742 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.548
Found RT = 7.633

Tail Factor = 1.647 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.7421603	2.000	PASS
Benzidine	1.6473779	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	88678			N/A
4,4-DDE	335	0.4	20.0	PASS
4,4-DDD	4965	5.3	20.0	PASS
4,4-DDD + DDE	5300	5.6	20.0	PASS

Tuning Sample, /nt8.i/20230426.b/tune.b/N823042601.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	25.12
68	Less than 2.00% of mass 69	0.57 (1.88)
69	Mass 69 relative abundance	30.15
70	Less than 2.00% of mass 69	0.24 (0.80)
127	10.00 - 80.00% of mass 198	44.51
197	Less than 2.00% of mass 198	0.21
199	5.00 - 9.00% of mass 198	6.97
275	10.00 - 60.00% of mass 198	28.71
365	Greater than 1.00% of mass 198	3.65
441	0.01 - 24.00% of mass 442	1.63 (2.12)
442	50.00 - 200.00% of mass 198	76.92
443	15.00 - 24.00% of mass 442	15.01 (19.51)

Data File: N823042601.D
Spectrum: Avg. Scans 441-443 (5.45), Background Scan 436
Location of Maximum: 198.00
Number of points: 216

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	259	122.00	629	189.00	763	258.00	3259
39.00	1543	123.00	1219	191.00	328	259.00	496
41.00	45	124.00	436	192.00	981	265.00	1218
43.00	2	125.00	433	193.00	1146	266.00	83
49.00	200	127.00	33968	194.00	133	273.00	1546
50.00	5356	128.00	2606	195.00	86	274.00	3984
51.00	19168	129.00	14073	196.00	2266	275.00	21912
52.00	1084	130.00	1224	197.00	162	276.00	2866
55.00	108	131.00	237	198.00	76320	277.00	2050
56.00	631	134.00	386	199.00	5317	278.00	264
57.00	1606	135.00	1187	200.00	361	283.00	133
61.00	298	136.00	428	201.00	393	285.00	277
62.00	392	137.00	773	203.00	697	293.00	424
63.00	1112	138.00	83	204.00	3031	296.00	6797
65.00	420	141.00	1993	205.00	4940	297.00	1078
68.00	432	142.00	616	206.00	20904	303.00	809
69.00	23008	143.00	440	207.00	2891	304.00	105
70.00	185	146.00	315	208.00	771	314.00	235
73.00	503	147.00	1039	209.00	225	315.00	728
74.00	3010	148.00	2177	210.00	339	316.00	386
75.00	4222	149.00	467	211.00	891	321.00	97
76.00	1466	151.00	231	215.00	239	323.00	2060
77.00	27280	152.00	216	216.00	499	324.00	326
78.00	1990	153.00	720	217.00	6004	327.00	427
79.00	2001	154.00	548	218.00	803	328.00	114
80.00	1522	155.00	1215	221.00	4276	332.00	87
81.00	2196	156.00	1571	222.00	300	333.00	115
82.00	531	157.00	272	223.00	1396	334.00	1361
83.00	682	158.00	292	224.00	12094	335.00	260
85.00	507	159.00	243	225.00	3156	341.00	119
86.00	661	160.00	509	226.00	269	346.00	497
87.00	320	161.00	936	227.00	5671	352.00	630
91.00	491	162.00	247	228.00	861	353.00	436
92.00	499	165.00	753	229.00	1152	354.00	558
93.00	3714	166.00	537	230.00	86	365.00	2785
94.00	257	167.00	3891	231.00	407	366.00	441
96.00	205	168.00	1823	234.00	399	372.00	970
97.00	92	169.00	279	235.00	339	373.00	131
98.00	2984	171.00	96	236.00	239	383.00	218
99.00	2258	172.00	341	237.00	381	402.00	459
100.00	183	173.00	433	239.00	129	403.00	493
101.00	1298	174.00	816	240.00	95	404.00	385
103.00	370	175.00	1572	241.00	287	406.00	97
104.00	735	176.00	336	242.00	712	421.00	465
105.00	831	177.00	751	243.00	725	422.00	209
106.00	144	178.00	218	244.00	9627	423.00	3075
107.00	9655	179.00	3020	245.00	1226	424.00	621
108.00	1527	180.00	1973	246.00	2064	441.00	1245
109.00	343	181.00	912	247.00	468	442.00	58704

110.00	16832	182.00	91	249.00	290	443.00	11455
111.00	2728	184.00	117	253.00	104	444.00	1029
112.00	350	185.00	1424	254.00	219		
116.00	337	186.00	10793	255.00	47768		
117.00	8906	187.00	3130	256.00	7127		
118.00	589	188.00	302	257.00	582		

Data File: \\target\share\chem3\nt8.i\20230426.b\N823042602.D

Date : 26-APR-2023 17:38

Client ID:

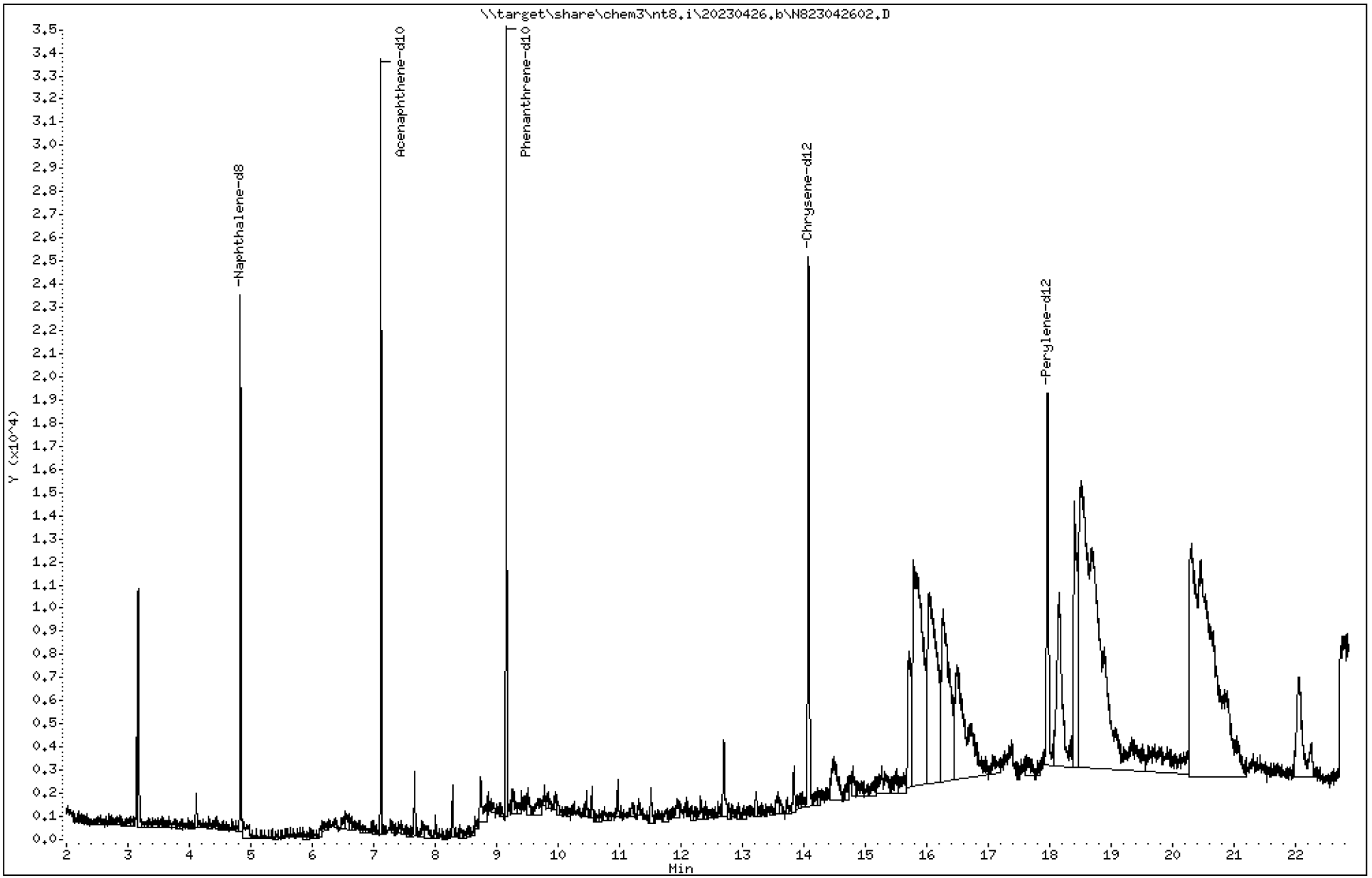
Instrument: nt8.i

Sample Info: ICB230426

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042602.D
Lab Smp Id: SLD0372-ICB1
Inj Date : 26-APR-2023 17:38
Operator : JZ Inst ID: nt8.i
Smp Info : ICB230426
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.831	4.827	(1.000)	16370	2.00000	
	2 Naphthalene	128	Compound Not Detected.					
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	Compound Not Detected.					
	5 1-methylnaphthalene	141	Compound Not Detected.					
	7 Biphenyl	154	Compound Not Detected.					
	8 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	9 Acenaphthylene	152	Compound Not Detected.					
*	10 Acenaphthene-d10	164	7.120	7.110	(1.000)	9360	2.00000	
	11 Acenaphthene	153	Compound Not Detected.					
	12 Dibenzofuran	168	Compound Not Detected.					
	13 1,6,7-Trimethylnaphthalene	170	Compound Not Detected.					
	14 Fluorene	166	Compound Not Detected.					
	18 Dibenzothiophene	184	Compound Not Detected.					
*	15 Phenanthrene-d10	188	9.156	9.150	(1.000)	15764	2.00000	
	16 Phenanthrene	178	Compound Not Detected.					
	17 Anthracene	178	Compound Not Detected.					
	19 Carbazole	167	Compound Not Detected.					
	20 1-Methylphenanthrene	192	Compound Not Detected.					
	22 Fluoranthene	202	Compound Not Detected.					
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	Compound Not Detected.					
	24 Benzo(a)anthracene	228	Compound Not Detected.					
*	25 Chrysene-d12	240	14.079	14.067	(1.000)	15736	2.00000	
	27 Chrysene	228	Compound Not Detected.					
	28 Benzo(b)fluoranthene	252	Compound Not Detected.					
	29 Benzo(k)fluoranthene	252	Compound Not Detected.					
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	Compound Not Detected.					
	34 Benzo(e)pyrene	252	Compound Not Detected.					
	32 Benzo(a)pyrene	252	Compound Not Detected.					
*	33 Perylene-d12	264	17.972	17.959	(1.000)	13577	2.00000	
	35 Perylene	252	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042602.D
Lab Smp Id: SLD0372-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	16370	-12.46
10 Acenaphthene-d10	10729	5365	21458	9360	-12.76
15 Phenanthrene-d10	20748	10374	41496	15764	-24.02
25 Chrysene-d12	20954	10477	41908	15736	-24.90
33 Perylene-d12	21563	10782	43126	13577	-37.04

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	0.06
10 Acenaphthene-d10	7.11	6.61	7.61	7.12	0.13
15 Phenanthrene-d10	9.15	8.65	9.65	9.16	0.07
25 Chrysene-d12	14.07	13.57	14.57	14.08	0.09
33 Perylene-d12	17.96	17.46	18.46	17.97	0.07

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

REVIEW SUMMARY FOR FILE - N823042602.D

Lab ID: SLD0372-ICB1
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 17:38

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

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

Data File: \\target\share\chem3\nt8.i\20230426.b\N823042603.D

Date : 26-APR-2023 18:06

Client ID:

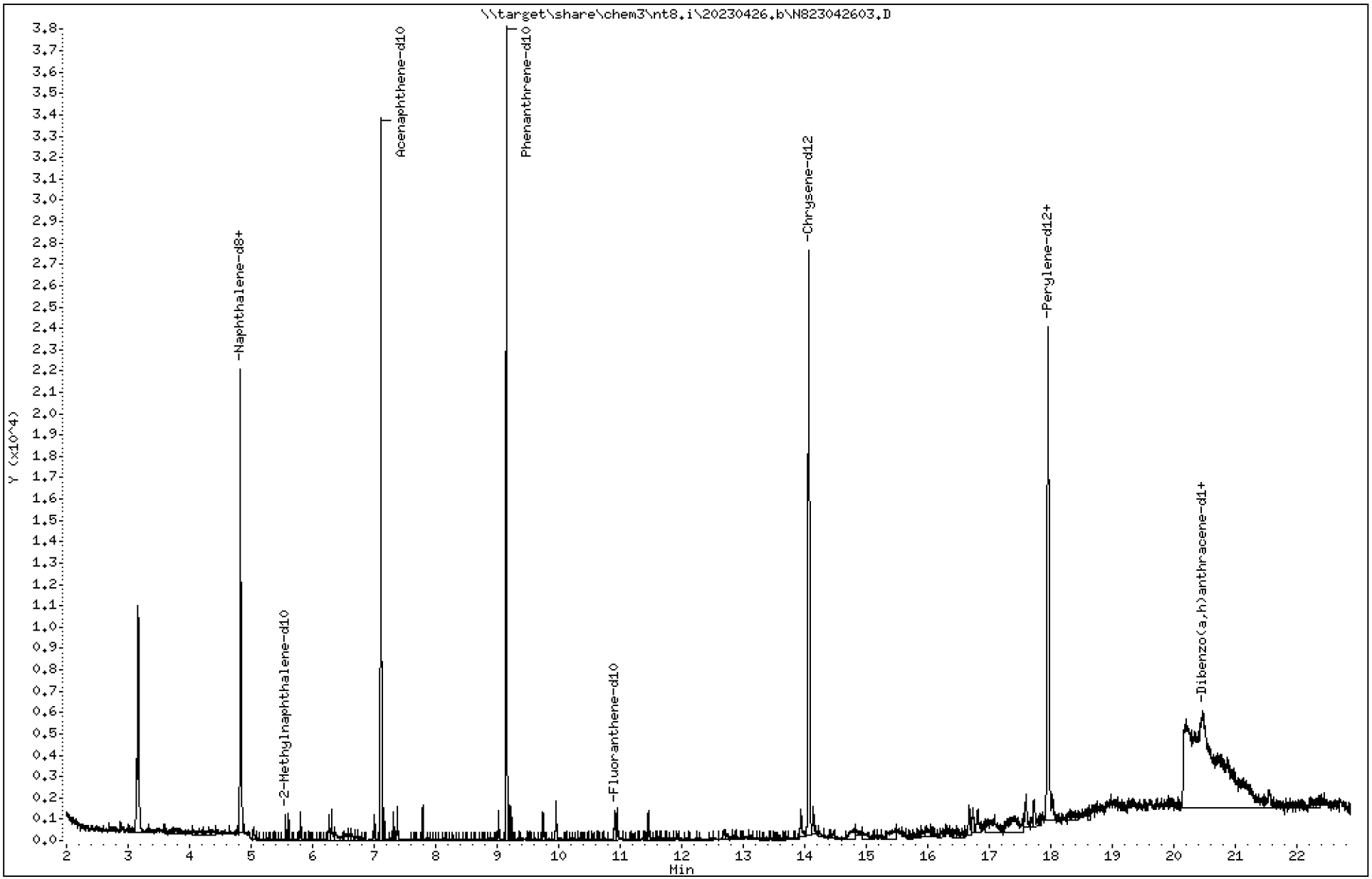
Instrument: nt8.i

Sample Info: IC01230426,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042603.D
Lab Smp Id: SLD0372-CAL1
Inj Date : 26-APR-2023 18:06
Operator : JZ Inst ID: nt8.i
Smp Info : IC01230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	17222	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	838	0.10000	0.09551
$	3 2-Methylnaphthalene-d10	152	5.561	5.558	(1.152)	462	0.10000	0.08686
	4 2-Methylnaphthalene	141	5.608	5.605	(1.162)	457	0.10000	0.09174
	5 1-methylnaphthalene	141	5.804	5.804	(1.202)	453	0.10000	0.09171
	7 Biphenyl	154	6.263	6.263	(0.880)	765	0.10000	0.1003
	8 2,6-Dimethylnaphthalene	156	6.310	6.307	(0.887)	487	0.10000	0.08965
	9 Acenaphthylene	152	7.006	7.003	(0.985)	809	0.10000	0.09214
*	10 Acenaphthene-d10	164	7.113	7.110	(1.000)	9918	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	543	0.10000	0.09545
	12 Dibenzofuran	168	7.319	7.316	(1.029)	791	0.10000	0.09258
	13 1,6,7-Trimethylnaphthalene	170	7.382	7.379	(1.038)	471	0.10000	0.08717
	14 Fluorene	166	7.796	7.790	(1.096)	634	0.10000	0.09298
	18 Dibenzothiophene	184	9.026	9.026	(0.986)	848	0.10000	0.09201
*	15 Phenanthrene-d10	188	9.153	9.150	(1.000)	18763	2.00000	
	16 Phenanthrene	178	9.188	9.188	(1.004)	945	0.10000	0.09509
	17 Anthracene	178	9.229	9.229	(1.008)	795	0.10000	0.08529
	19 Carbazole	167	9.744	9.744	(1.065)	855	0.10000	0.09603
	20 1-Methylphenanthrene	192	9.959	9.956	(1.088)	703	0.10000	0.09325
	22 Fluoranthene	202	10.952	10.952	(1.197)	1070	0.10000	0.09361
$	21 Fluoranthene-d10	212	10.914	10.914	(1.192)	917	0.10000	0.09054
	23 Pyrene	202	11.461	11.464	(0.815)	1113	0.10000	0.09377
	24 Benzo(a)anthracene	228	13.940	13.946	(0.991)	1140	0.10000	0.09347
*	25 Chrysene-d12	240	14.070	14.070	(1.000)	18539	2.00000	
	27 Chrysene	228	14.146	14.146	(1.005)	1228	0.10000	0.1025
	28 Benzo(b)fluoranthene	252	16.675	16.691	(0.929)	1192	0.10000	0.09886
	29 Benzo(k)fluoranthene	252	16.742	16.751	(0.932)	1104	0.10000	0.09718
	30 Benzo(j)fluoranthene	252	16.818	16.830	(0.936)	1007	0.10000	0.09594
	31 Total Benzofluoranthenes	252	16.675	16.691	(0.929)	3286	0.30000	0.2931(M)
	34 Benzo(e)pyrene	252	17.605	17.608	(0.980)	1044	0.10000	0.09269
	32 Benzo(a)pyrene	252	17.728	17.738	(0.987)	955	0.10000	0.09112
*	33 Perylene-d12	264	17.959	17.962	(1.000)	18495	2.00000	
	35 Perylene	252	18.038	18.041	(1.004)	948	0.10000	0.09008

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.353	20.372	(1.133)	581	0.10000	0.08228(M)
37 Indeno(1,2,3-cd)pyrene	276	20.495	20.520	(1.141)	882	0.10000	0.08267
38 Dibenzo(a,h)anthracene	278	20.470	20.485	(1.140)	784	0.10000	0.08276
39 Benzo(g,h,i)perylene	276	21.557	21.570	(1.200)	852	0.10000	0.08621

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042603.D
Lab Smp Id: SLD0372-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	17222	-7.90
10 Acenaphthene-d10	10729	5365	21458	9918	-7.56
15 Phenanthrene-d10	20748	10374	41496	18763	-9.57
25 Chrysene-d12	20954	10477	41908	18539	-11.53
33 Perylene-d12	21563	10782	43126	18495	-14.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	0.03
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042603.D

Lab ID: SLD0372-CAL1
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 18:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

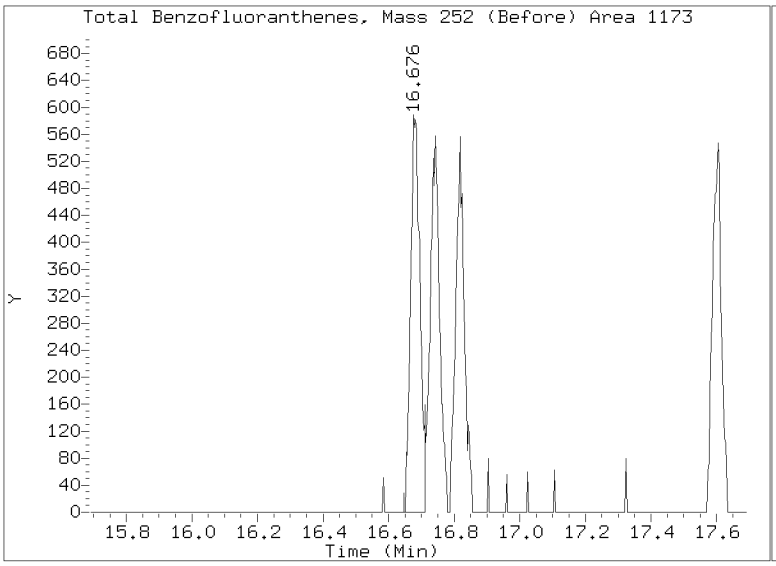
No RRT check performed

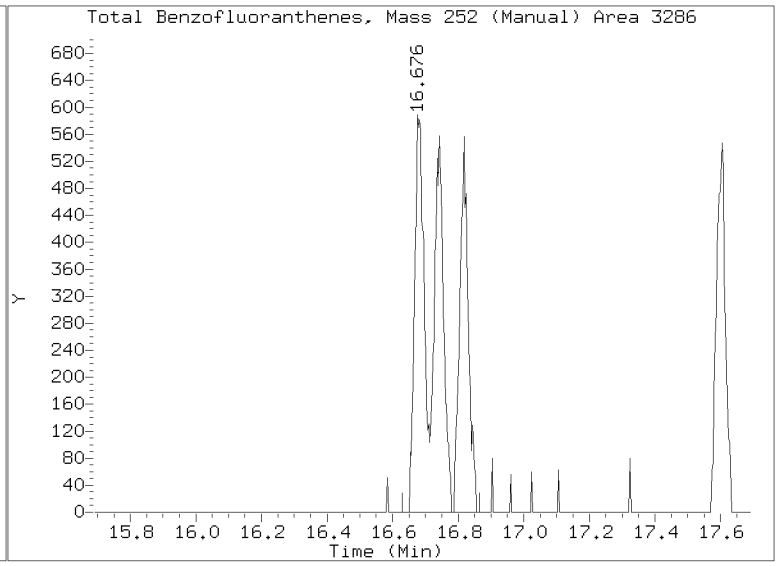
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

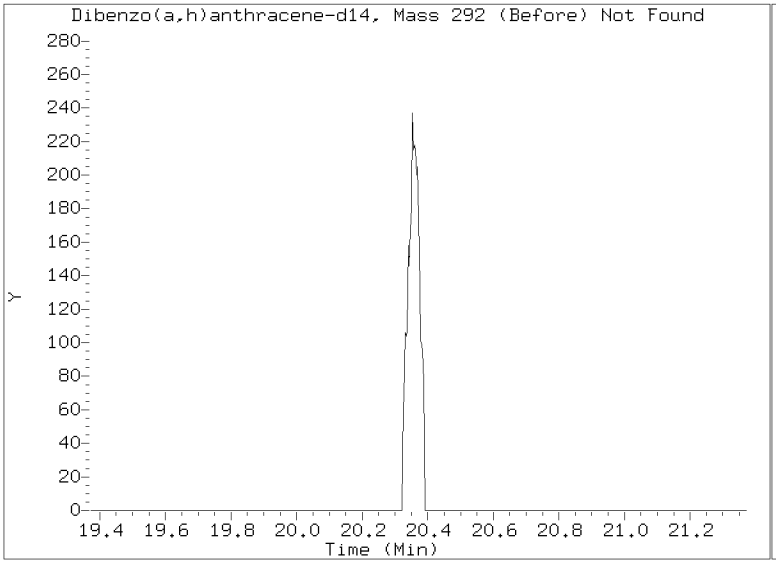
* Only compounds listed in the work order have been verified by the analyst *

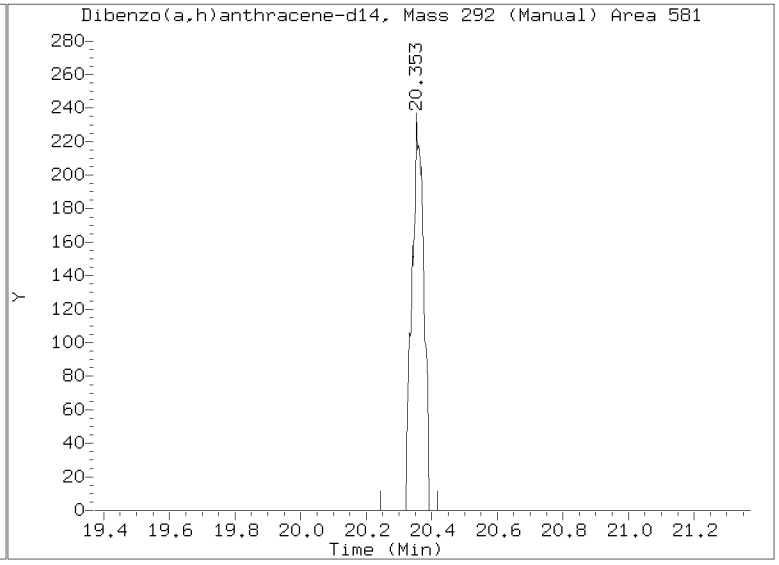
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042603.D
Injection Date: 26-APR-2023 18:06
Lab ID:SLD0372-CAL1 Client ID:
Report Date: 04/27/2023 10:37









Data File: \\target\share\chem3\nt8.i\20230426.b\N823042604.D

Date : 26-APR-2023 18:33

Client ID:

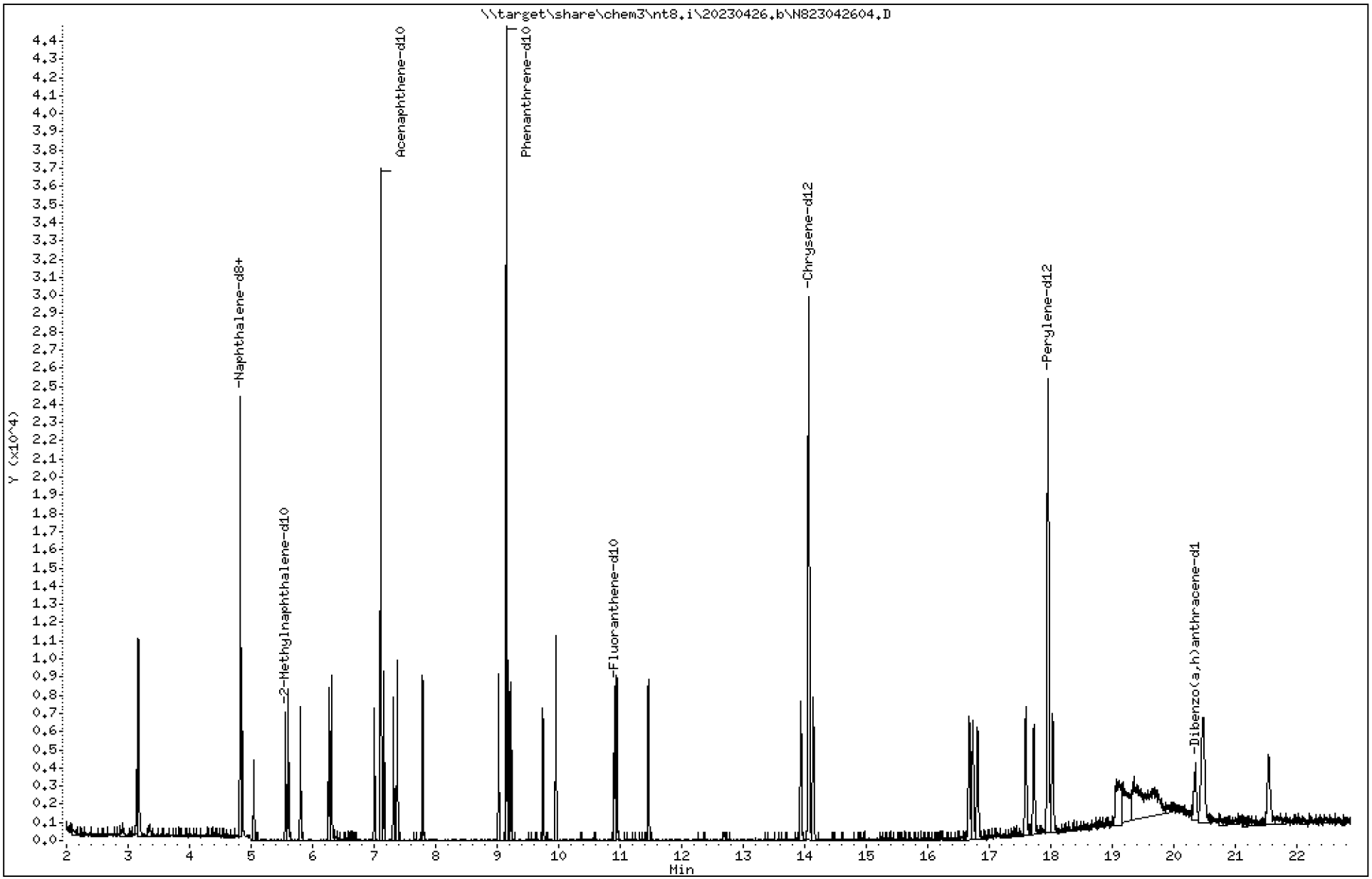
Instrument: nt8.i

Sample Info: IC05230426,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042604.D
Lab Smp Id: SLD0372-CAL2
Inj Date : 26-APR-2023 18:33
Operator : JZ Inst ID: nt8.i
Smp Info : IC05230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	18547	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	4639	0.50000	0.4909
$	3 2-Methylnaphthalene-d10	152	5.561	5.558	(1.152)	2753	0.50000	0.4806
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	2661	0.50000	0.4960
	5 1-methylnaphthalene	141	5.801	5.804	(1.202)	2536	0.50000	0.4767
	7 Biphenyl	154	6.263	6.263	(0.881)	3967	0.50000	0.4825
	8 2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	2823	0.50000	0.4822
	9 Acenaphthylene	152	7.003	7.003	(0.985)	4294	0.50000	0.4538
*	10 Acenaphthene-d10	164	7.110	7.110	(1.000)	10688	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	2949	0.50000	0.4811
	12 Dibenzofuran	168	7.316	7.316	(1.029)	4492	0.50000	0.4879
	13 1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	2768	0.50000	0.4754
	14 Fluorene	166	7.790	7.790	(1.096)	3484	0.50000	0.4741
	18 Dibenzothiophene	184	9.026	9.026	(0.987)	4763	0.50000	0.4665
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	20788	2.00000	
	16 Phenanthrene	178	9.185	9.188	(1.004)	5346	0.50000	0.4855
	17 Anthracene	178	9.226	9.229	(1.008)	4809	0.50000	0.4657
	19 Carbazole	167	9.744	9.744	(1.065)	4676	0.50000	0.4741
	20 1-Methylphenanthrene	192	9.956	9.956	(1.088)	3868	0.50000	0.4631
	22 Fluoranthene	202	10.949	10.952	(1.197)	5988	0.50000	0.4728
$	21 Fluoranthene-d10	212	10.911	10.914	(1.192)	5325	0.50000	0.4745
	23 Pyrene	202	11.461	11.464	(0.815)	6299	0.50000	0.4842
	24 Benzo(a)anthracene	228	13.940	13.946	(0.991)	6177	0.50000	0.4621
*	25 Chrysene-d12	240	14.070	14.070	(1.000)	20319	2.00000	
	27 Chrysene	228	14.142	14.146	(1.005)	6264	0.50000	0.4770
	28 Benzo(b)fluoranthene	252	16.678	16.691	(0.929)	6400	0.50000	0.4715
	29 Benzo(k)fluoranthene	252	16.738	16.751	(0.932)	5987	0.50000	0.4681
	30 Benzo(j)fluoranthene	252	16.814	16.830	(0.936)	5828	0.50000	0.4932
	31 Total Benzofluoranthenes	252	16.678	16.691	(0.929)	18061	1.50000	1.431(M)
	34 Benzo(e)pyrene	252	17.602	17.608	(0.980)	6125	0.50000	0.4831
	32 Benzo(a)pyrene	252	17.728	17.738	(0.987)	5617	0.50000	0.4761
*	33 Perylene-d12	264	17.959	17.962	(1.000)	20821	2.00000	
	35 Perylene	252	18.035	18.041	(1.004)	5758	0.50000	0.4860

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.356	20.372	(1.133)	3609	0.50000	0.4540(M)
37 Indeno(1,2,3-cd)pyrene	276	20.489	20.520	(1.141)	5711	0.50000	0.4755
38 Dibenzo(a,h)anthracene	278	20.466	20.485	(1.140)	5001	0.50000	0.4689
39 Benzo(g,h,i)perylene	276	21.545	21.570	(1.200)	5187	0.50000	0.4662

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042604.D
Lab Smp Id: SLD0372-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	18547	-0.81
10 Acenaphthene-d10	10729	5365	21458	10688	-0.38
15 Phenanthrene-d10	20748	10374	41496	20788	0.19
25 Chrysene-d12	20954	10477	41908	20319	-3.03
33 Perylene-d12	21563	10782	43126	20821	-3.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	-0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042604.D

Lab ID: SLD0372-CAL2
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 18:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

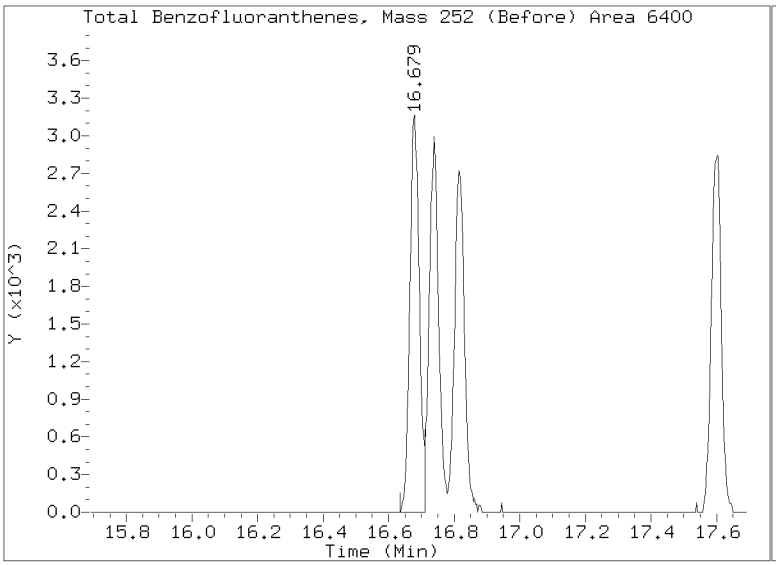
No RRT check performed

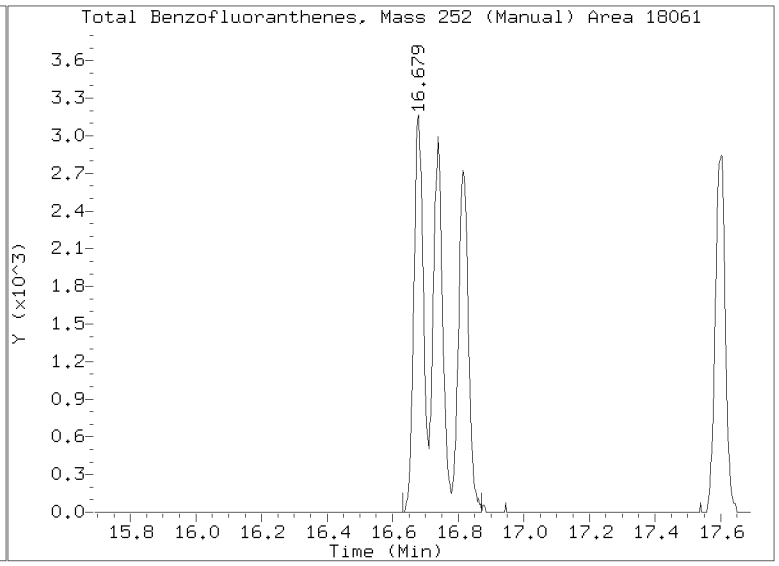
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

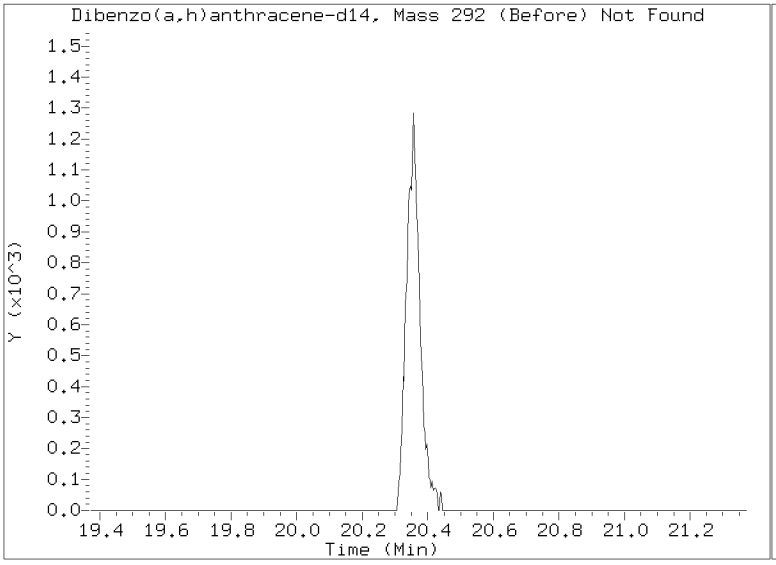
* Only compounds listed in the work order have been verified by the analyst *

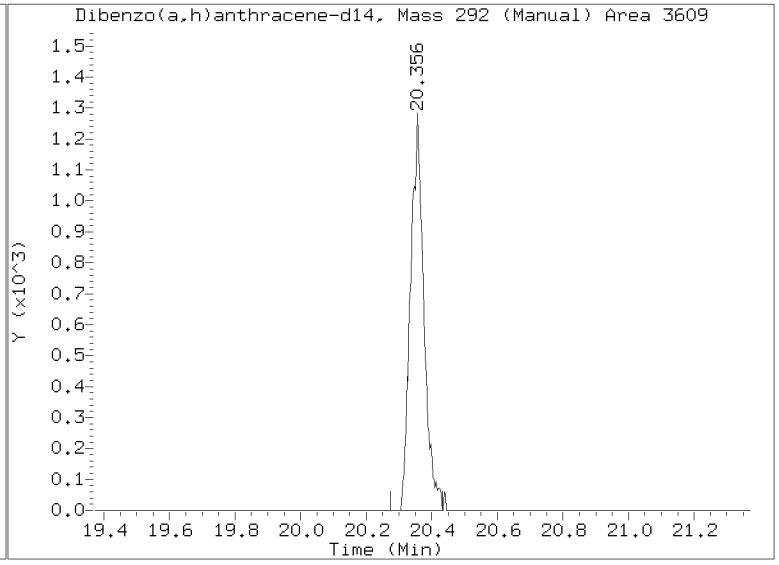
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042604.D
Injection Date: 26-APR-2023 18:33
Lab ID:SLD0372-CAL2 Client ID:
Report Date: 04/27/2023 10:37









Data File: \\target\share\chem3\nt8.i\20230426.b\N823042605.D

Date : 26-APR-2023 19:00

Client ID:

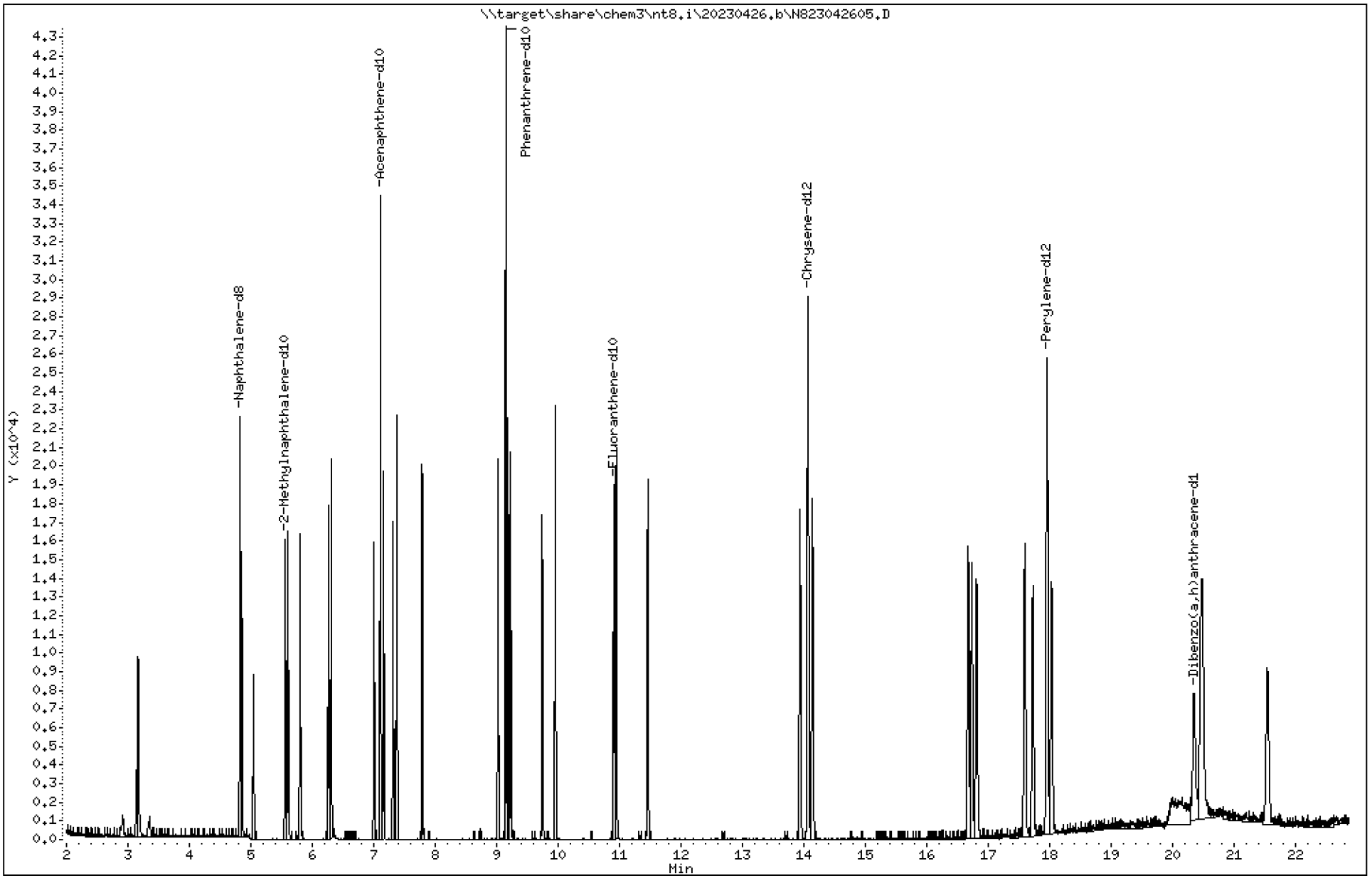
Instrument: nt8.i

Sample Info: IC1230426,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042605.D
Lab Smp Id: SLD0372-CAL3
Inj Date : 26-APR-2023 19:00
Operator : JZ Inst ID: nt8.i
Smp Info : IC1230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	17610	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	9429	1.00000	1.051
$	3 2-Methylnaphthalene-d10	152	5.558	5.558	(1.151)	5906	1.00000	1.086
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	5496	1.00000	1.079
	5 1-methylnaphthalene	141	5.801	5.804	(1.202)	5516	1.00000	1.092
	7 Biphenyl	154	6.263	6.263	(0.881)	8212	1.00000	1.050
	8 2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	5952	1.00000	1.069
	9 Acenaphthylene	152	7.006	7.003	(0.985)	9521	1.00000	1.058
*	10 Acenaphthene-d10	164	7.110	7.110	(1.000)	10164	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	6224	1.00000	1.068
	12 Dibenzofuran	168	7.316	7.316	(1.029)	9453	1.00000	1.080
	13 1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	5999	1.00000	1.083
	14 Fluorene	166	7.790	7.790	(1.096)	7441	1.00000	1.065
	18 Dibenzothiophene	184	9.023	9.026	(0.986)	10481	1.00000	1.083
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	19712	2.00000	
	16 Phenanthrene	178	9.185	9.188	(1.004)	11138	1.00000	1.067
	17 Anthracene	178	9.226	9.229	(1.008)	10899	1.00000	1.113
	19 Carbazole	167	9.741	9.744	(1.065)	9966	1.00000	1.066
	20 1-Methylphenanthrene	192	9.956	9.956	(1.088)	8508	1.00000	1.074
	22 Fluoranthene	202	10.949	10.952	(1.197)	13018	1.00000	1.084
$	21 Fluoranthene-d10	212	10.911	10.914	(1.192)	11351	1.00000	1.067
	23 Pyrene	202	11.461	11.464	(0.815)	13415	1.00000	1.023
	24 Benzo(a)anthracene	228	13.940	13.946	(0.991)	13547	1.00000	1.005
*	25 Chrysene-d12	240	14.070	14.070	(1.000)	20491	2.00000	
	27 Chrysene	228	14.143	14.146	(1.005)	13443	1.00000	1.015
	28 Benzo(b)fluoranthene	252	16.682	16.691	(0.929)	13654	1.00000	1.019
	29 Benzo(k)fluoranthene	252	16.739	16.751	(0.932)	13101	1.00000	1.037
	30 Benzo(j)fluoranthene	252	16.814	16.830	(0.936)	12394	1.00000	1.062
	31 Total Benzofluoranthenes	252	16.682	16.691	(0.929)	38942	3.00000	3.124(M)
	34 Benzo(e)pyrene	252	17.599	17.608	(0.980)	12984	1.00000	1.037
	32 Benzo(a)pyrene	252	17.731	17.738	(0.987)	12356	1.00000	1.060
*	33 Perylene-d12	264	17.962	17.962	(1.000)	20562	2.00000	
	35 Perylene	252	18.035	18.041	(1.004)	12325	1.00000	1.053(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.350	20.372	(1.133)	7947	1.00000	1.012
37 Indeno(1,2,3-cd)pyrene	276	20.495	20.520	(1.141)	12776	1.00000	1.077
38 Dibenzo(a,h)anthracene	278	20.463	20.485	(1.139)	11322	1.00000	1.075(M)
39 Benzo(g,h,i)perylene	276	21.551	21.570	(1.200)	11461	1.00000	1.043

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042605.D
Lab Smp Id: SLD0372-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	17610	-5.82
10 Acenaphthene-d10	10729	5365	21458	10164	-5.27
15 Phenanthrene-d10	20748	10374	41496	19712	-4.99
25 Chrysene-d12	20954	10477	41908	20491	-2.21
33 Perylene-d12	21563	10782	43126	20562	-4.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	-0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	0.02

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

REVIEW SUMMARY FOR FILE - N823042605.D

Lab ID: SLD0372-CAL3
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 19:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

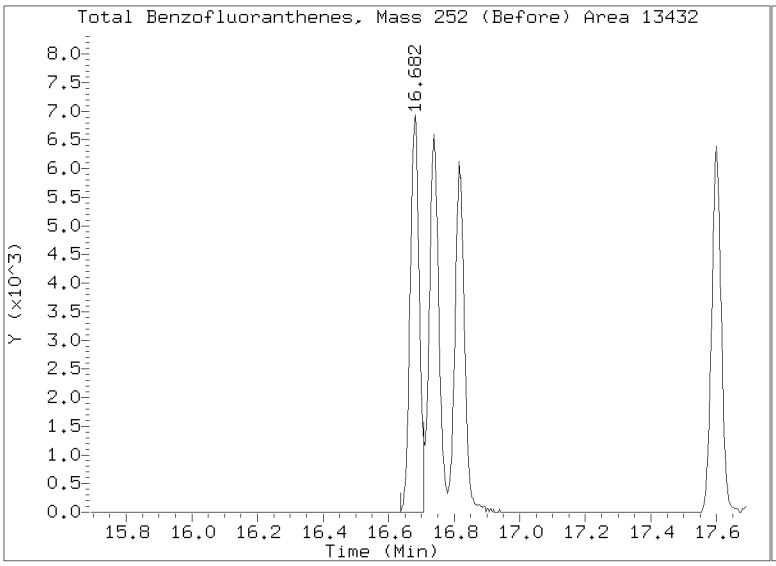
No RRT check performed

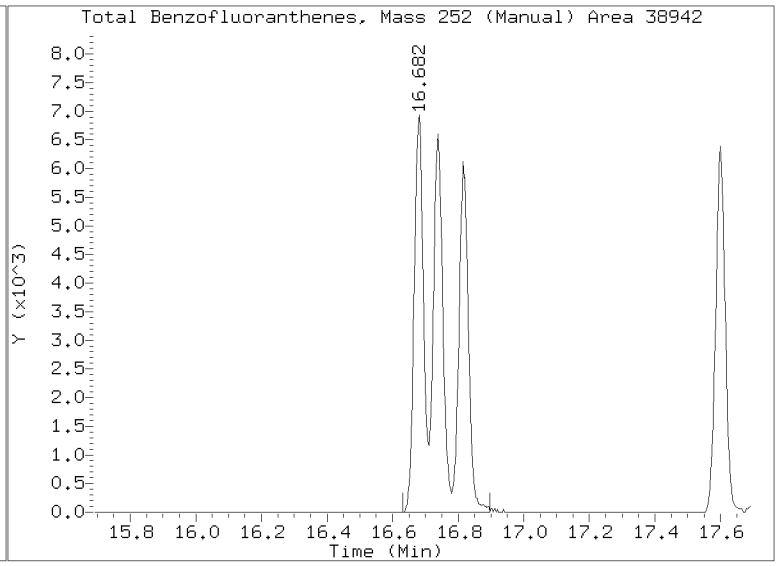
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

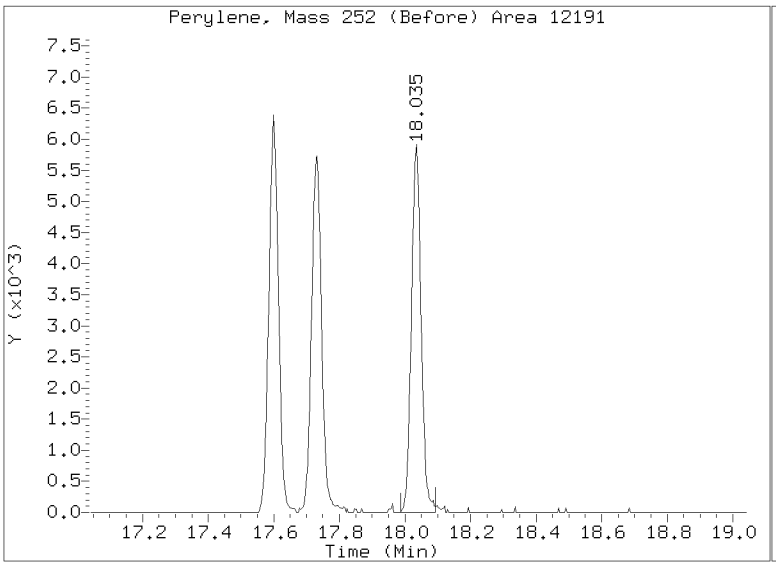
* Only compounds listed in the work order have been verified by the analyst *

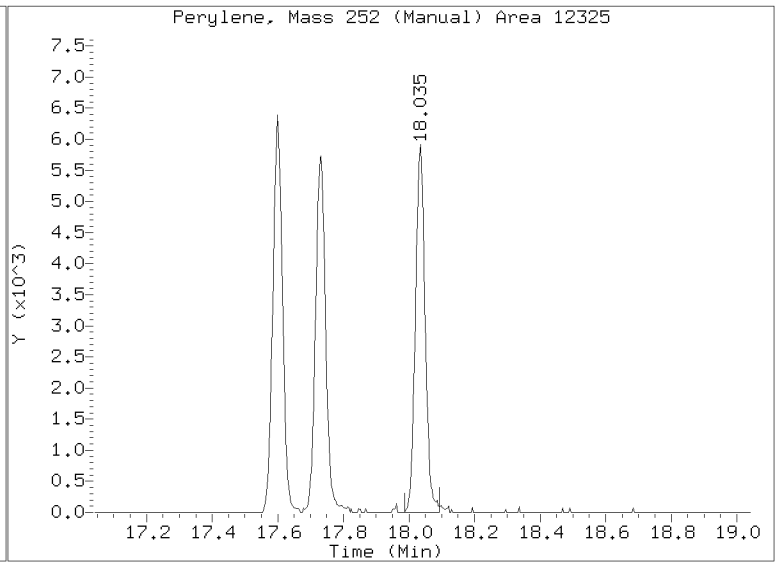
Quant Ion Manual Peak Adjustment Report

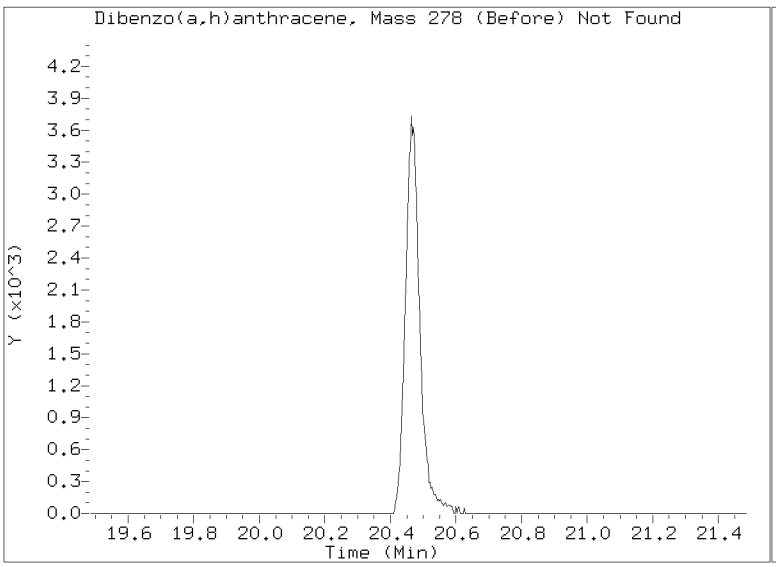
Datafile: //target/share/chem3/nt8.i/20230426.b/N823042605.D
Injection Date: 26-APR-2023 19:00
Lab ID:SLD0372-CAL3 Client ID:
Report Date: 04/27/2023 10:37

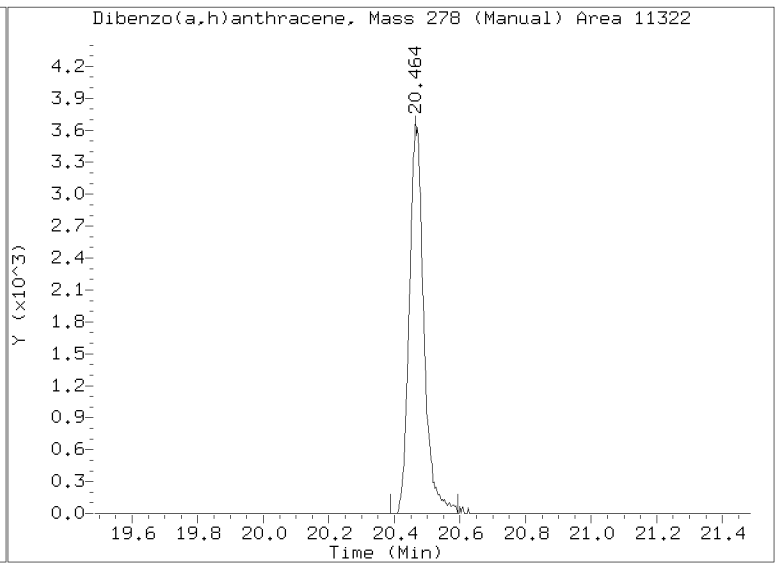








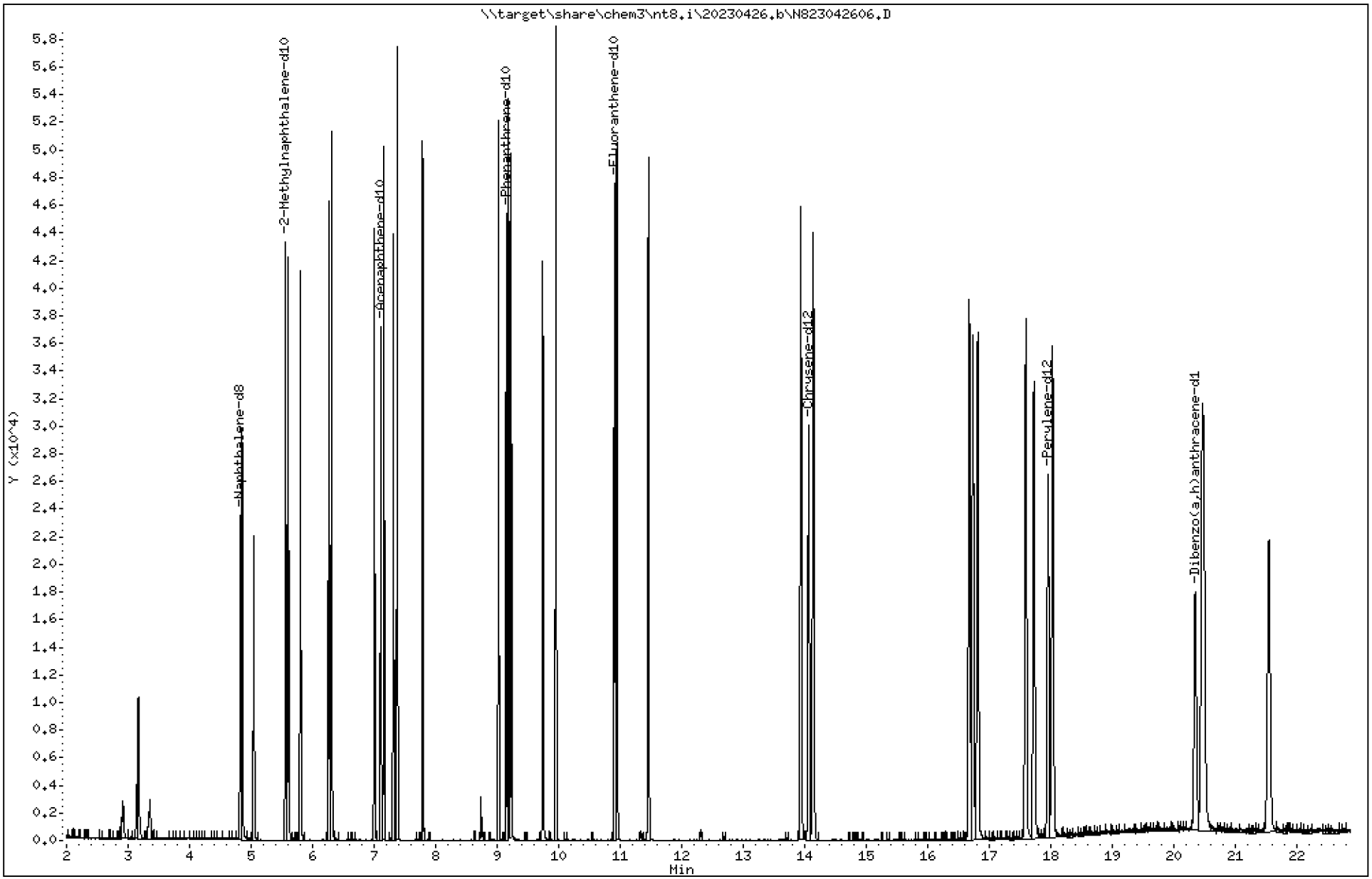




Data File: \\target\share\chem3\nt8.i\20230426.b\N823042606.D
Date : 26-APR-2023 19:27
Client ID:
Sample Info: IC25230426,

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042606.D
Lab Smp Id: SLD0372-CAL4
Inj Date : 26-APR-2023 19:27
Operator : JZ Inst ID: nt8.i
Smp Info : IC25230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	18699	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	23431	2.50000	2.460
$	3 2-Methylnaphthalene-d10	152	5.558	5.558	(1.151)	14369	2.50000	2.488
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	13264	2.50000	2.452
	5 1-methylnaphthalene	141	5.801	5.804	(1.202)	13343	2.50000	2.488
	7 Biphenyl	154	6.263	6.263	(0.881)	19887	2.50000	2.410
	8 2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	14574	2.50000	2.480
	9 Acenaphthylene	152	7.003	7.003	(0.985)	23643	2.50000	2.489
*	10 Acenaphthene-d10	164	7.110	7.110	(1.000)	10729	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	14862	2.50000	2.415
	12 Dibenzofuran	168	7.313	7.316	(1.028)	22911	2.50000	2.479
	13 1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	14664	2.50000	2.509
	14 Fluorene	166	7.790	7.790	(1.096)	18097	2.50000	2.453
	18 Dibenzothiophene	184	9.023	9.026	(0.986)	25172	2.50000	2.470
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	20748	2.00000	
	16 Phenanthrene	178	9.185	9.188	(1.004)	26723	2.50000	2.432
	17 Anthracene	178	9.226	9.229	(1.008)	25993	2.50000	2.522
	19 Carbazole	167	9.744	9.744	(1.065)	23755	2.50000	2.413
	20 1-Methylphenanthrene	192	9.956	9.956	(1.088)	20478	2.50000	2.456
	22 Fluoranthene	202	10.949	10.952	(1.197)	31237	2.50000	2.471
$	21 Fluoranthene-d10	212	10.911	10.914	(1.192)	27482	2.50000	2.454
	23 Pyrene	202	11.461	11.464	(0.815)	32437	2.50000	2.418
	24 Benzo(a)anthracene	228	13.940	13.946	(0.991)	33917	2.50000	2.460
*	25 Chrysene-d12	240	14.067	14.070	(1.000)	20954	2.00000	
	27 Chrysene	228	14.139	14.146	(1.005)	32818	2.50000	2.423
	28 Benzo(b)fluoranthene	252	16.682	16.691	(0.929)	33198	2.50000	2.362
	29 Benzo(k)fluoranthene	252	16.739	16.751	(0.932)	32726	2.50000	2.471
	30 Benzo(j)fluoranthene	252	16.818	16.830	(0.936)	29912	2.50000	2.444
	31 Total Benzofluoranthenes	252	16.682	16.691	(0.929)	95017	7.50000	7.268(M)
	34 Benzo(e)pyrene	252	17.599	17.608	(0.980)	32061	2.50000	2.442
	32 Benzo(a)pyrene	252	17.731	17.738	(0.987)	30402	2.50000	2.488
*	33 Perylene-d12	264	17.959	17.962	(1.000)	21563	2.00000	
	35 Perylene	252	18.032	18.041	(1.004)	30589	2.50000	2.493

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.356	20.372	(1.133)	21043	2.50000	2.556
37 Indeno(1,2,3-cd)pyrene	276	20.492	20.520	(1.141)	32154	2.50000	2.585
38 Dibenzo(a,h)anthracene	278	20.467	20.485	(1.140)	28122	2.50000	2.546
39 Benzo(g,h,i)perylene	276	21.551	21.570	(1.200)	29213	2.50000	2.535

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042606.D
Lab Smp Id: SLD0372-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	18699	0.00
10 Acenaphthene-d10	10729	5365	21458	10729	0.00
15 Phenanthrene-d10	20748	10374	41496	20748	0.00
25 Chrysene-d12	20954	10477	41908	20954	0.00
33 Perylene-d12	21563	10782	43126	21563	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.00
33 Perylene-d12	17.96	17.46	18.46	17.96	0.00

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

REVIEW SUMMARY FOR FILE - N823042606.D

Lab ID: SLD0372-CAL4
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 19:27

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

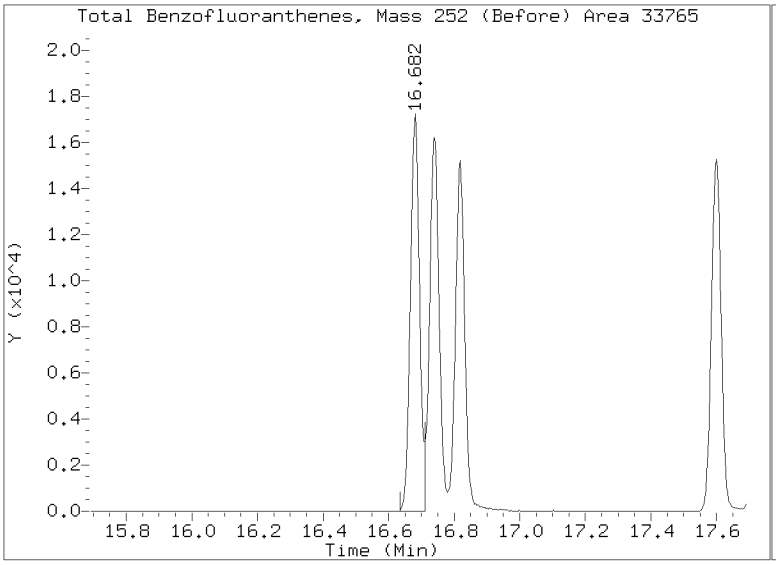
No RRT check performed

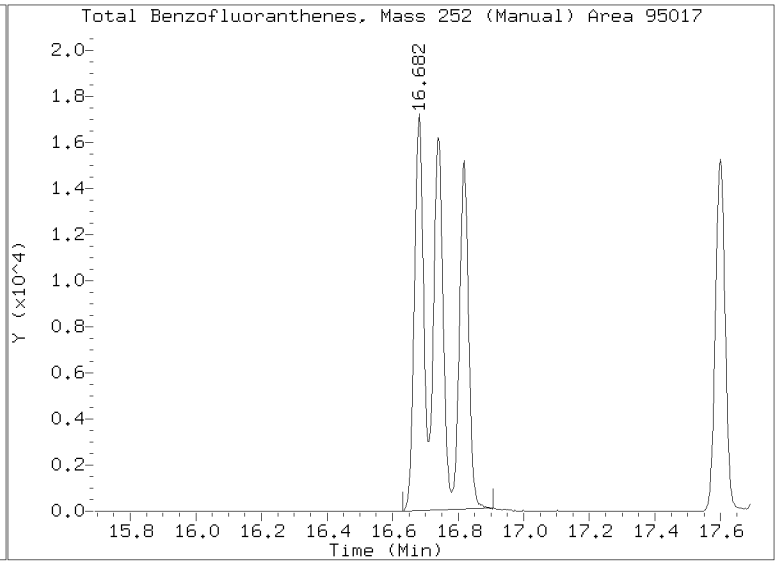
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042606.D
Injection Date: 26-APR-2023 19:27
Lab ID:SLD0372-CAL4 Client ID:
Report Date: 04/27/2023 10:37

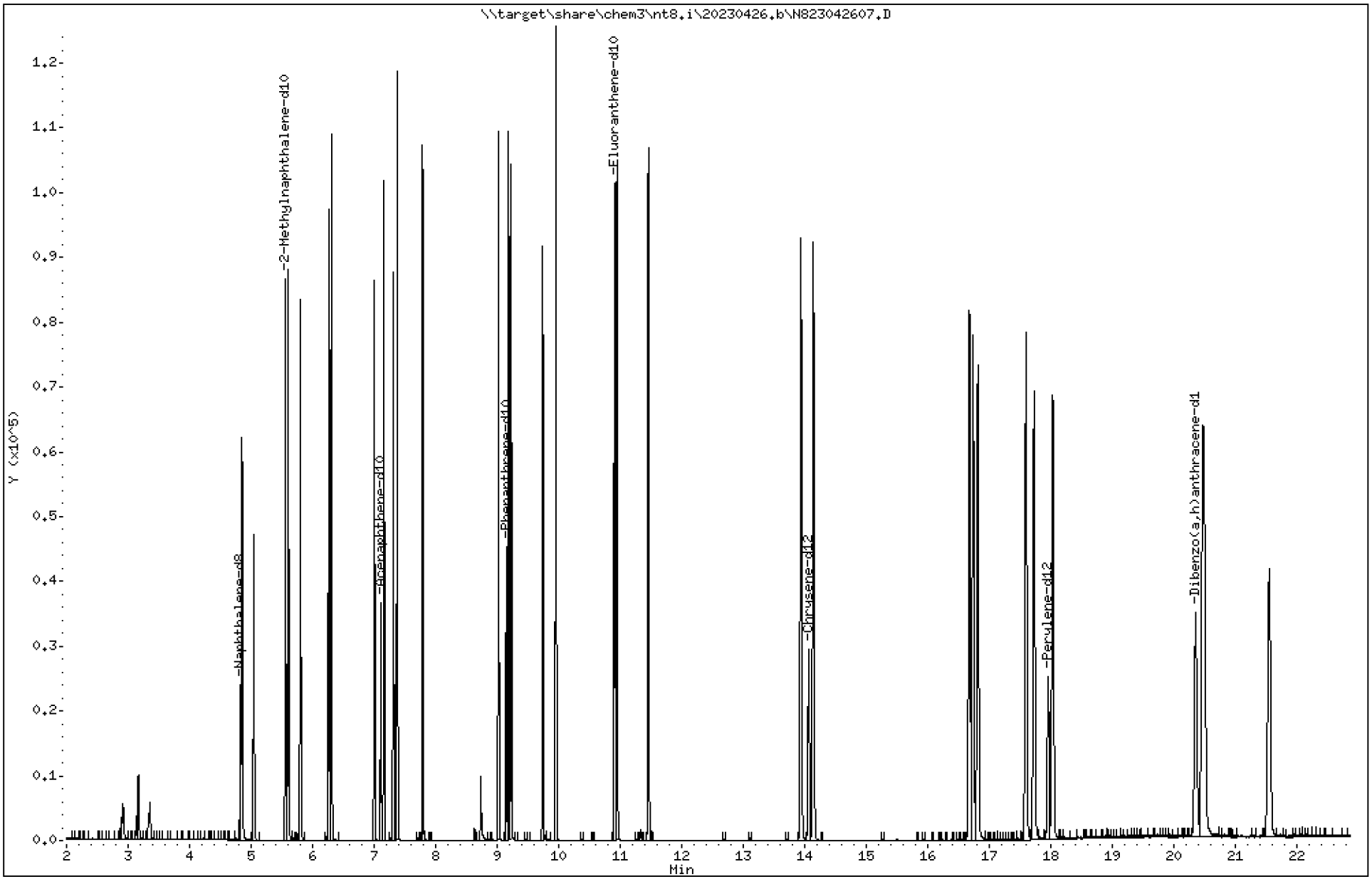




Data File: \\target\share\chem3\nt8.i\20230426.b\N823042607.D
Date : 26-APR-2023 19:55
Client ID:
Sample Info: IC5230426,

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042607.D
Lab Smp Id: SLD0372-CAL5
Inj Date : 26-APR-2023 19:55
Operator : JZ Inst ID: nt8.i
Smp Info : IC5230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	18501	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	47556	5.00000	5.045
$	3 2-Methylnaphthalene-d10	152	5.558	5.558	(1.151)	29453	5.00000	5.155
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	26954	5.00000	5.037
	5 1-methylnaphthalene	141	5.801	5.804	(1.202)	27001	5.00000	5.089
	7 Biphenyl	154	6.263	6.263	(0.881)	40268	5.00000	4.928
	8 2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	29559	5.00000	5.081
	9 Acenaphthylene	152	7.003	7.003	(0.985)	48781	5.00000	5.188
*	10 Acenaphthene-d10	164	7.110	7.110	(1.000)	10621	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	30716	5.00000	5.042
	12 Dibenzofuran	168	7.313	7.316	(1.028)	45432	5.00000	4.965
	13 1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	29633	5.00000	5.121
	14 Fluorene	166	7.790	7.790	(1.096)	36747	5.00000	5.032
	18 Dibenzothiophene	184	9.023	9.026	(0.986)	51600	5.00000	5.091
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	20636	2.00000	
	16 Phenanthrene	178	9.185	9.188	(1.004)	54774	5.00000	5.011
	17 Anthracene	178	9.226	9.229	(1.008)	53324	5.00000	5.202
	19 Carbazole	167	9.741	9.744	(1.065)	49589	5.00000	5.064
	20 1-Methylphenanthrene	192	9.956	9.956	(1.088)	42154	5.00000	5.084
	22 Fluoranthene	202	10.949	10.952	(1.197)	64083	5.00000	5.097
$	21 Fluoranthene-d10	212	10.911	10.914	(1.192)	57370	5.00000	5.150
	23 Pyrene	202	11.461	11.464	(0.815)	67152	5.00000	5.158
	24 Benzo(a)anthracene	228	13.943	13.946	(0.991)	70152	5.00000	5.244
*	25 Chrysene-d12	240	14.067	14.070	(1.000)	20333	2.00000	
	27 Chrysene	228	14.143	14.146	(1.005)	66066	5.00000	5.027
	28 Benzo(b)fluoranthene	252	16.685	16.691	(0.929)	69536	5.00000	5.103
	29 Benzo(k)fluoranthene	252	16.742	16.751	(0.932)	64959	5.00000	5.060
	30 Benzo(j)fluoranthene	252	16.821	16.830	(0.936)	59295	5.00000	4.999
	31 Total Benzofluoranthenes	252	16.685	16.691	(0.929)	191442	15.0000	15.11(M)
	34 Benzo(e)pyrene	252	17.602	17.608	(0.980)	64935	5.00000	5.102
	32 Benzo(a)pyrene	252	17.731	17.738	(0.987)	60325	5.00000	5.093
*	33 Perylene-d12	264	17.962	17.962	(1.000)	20900	2.00000	
	35 Perylene	252	18.038	18.041	(1.004)	60147	5.00000	5.057

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.362	20.372	(1.134)	43335	5.00000	5.431
37 Indeno(1,2,3-cd)pyrene	276	20.501	20.520	(1.141)	62903	5.00000	5.218
38 Dibenzo(a,h)anthracene	278	20.473	20.485	(1.140)	56747	5.00000	5.301
39 Benzo(g,h,i)perylene	276	21.557	21.570	(1.200)	58448	5.00000	5.234

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042607.D
Lab Smp Id: SLD0372-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	18501	-1.06
10 Acenaphthene-d10	10729	5365	21458	10621	-1.01
15 Phenanthrene-d10	20748	10374	41496	20636	-0.54
25 Chrysene-d12	20954	10477	41908	20333	-2.96
33 Perylene-d12	21563	10782	43126	20900	-3.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	-0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	-0.00
33 Perylene-d12	17.96	17.46	18.46	17.96	0.02

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

REVIEW SUMMARY FOR FILE - N823042607.D

Lab ID: SLD0372-CAL5
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 19:55

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

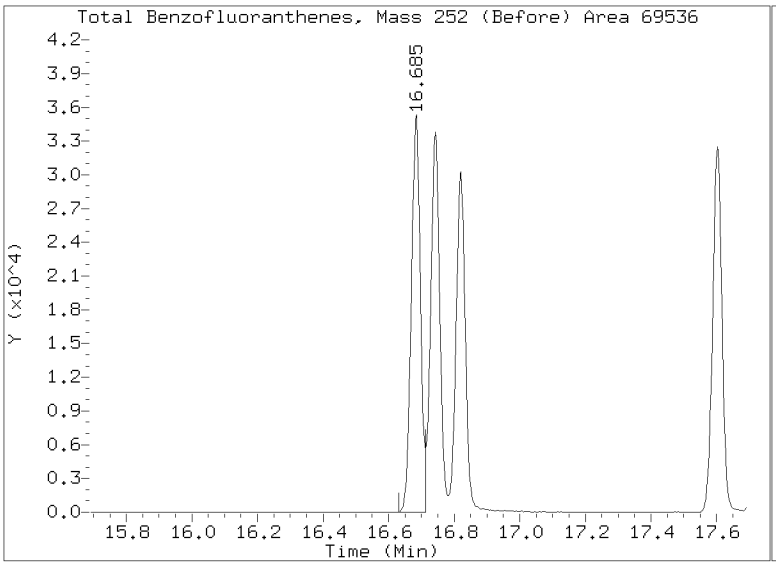
No RRT check performed

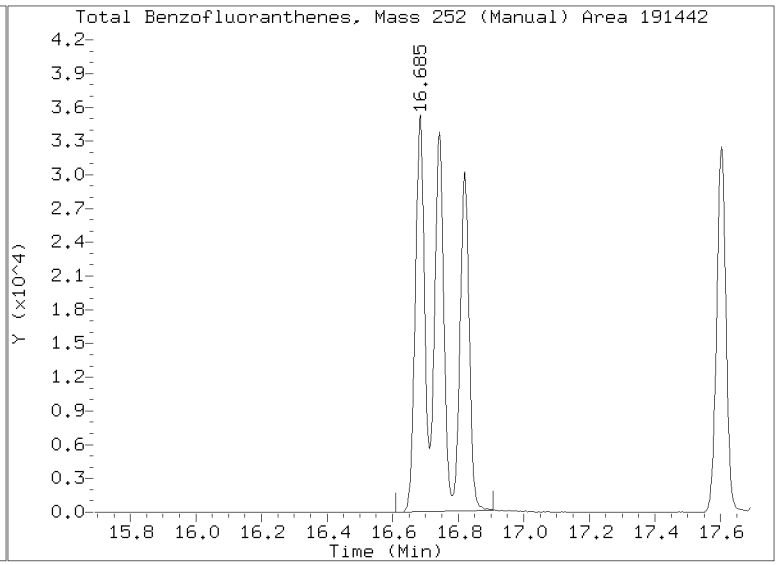
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

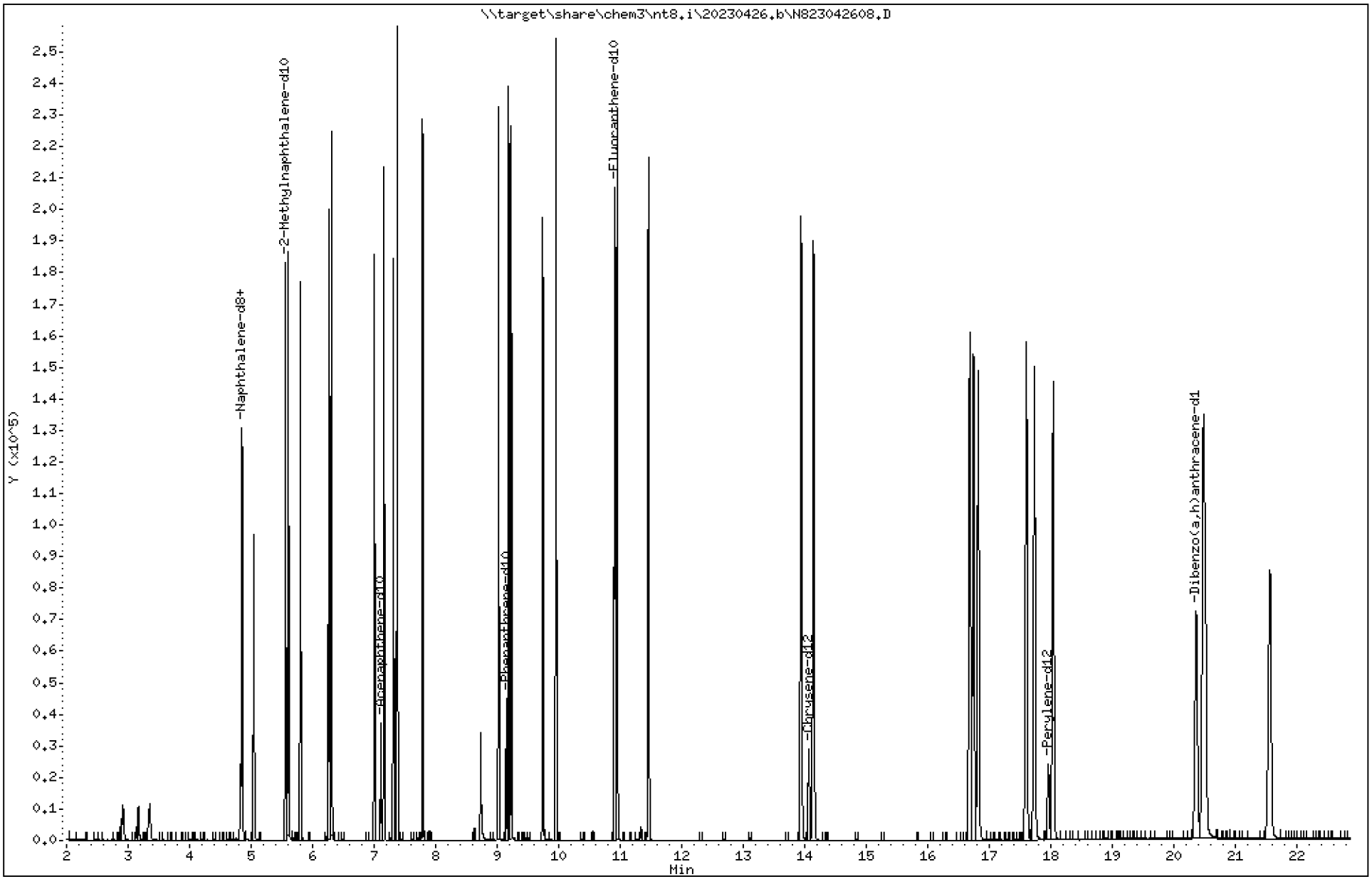
Datafile: //target/share/chem3/nt8.i/20230426.b/N823042607.D
Injection Date: 26-APR-2023 19:55
Lab ID:SLD0372-CAL5 Client ID:
Report Date: 04/27/2023 10:37





Data File: \\target\share\chem3\nt8.i\20230426.b\N823042608.D
Date : 26-APR-2023 20:22
Client ID:
Sample Info: IC10230426,

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042608.D
Lab Smp Id: SLD0372-CAL6
Inj Date : 26-APR-2023 20:22
Operator : JZ Inst ID: nt8.i
Smp Info : IC10230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1	Naphthalene-d8	136	4.827	4.827	(1.000)	18987	2.00000	
	2	Naphthalene	128	4.856	4.856	(1.006)	98586	10.0000	10.19
$	3	2-Methylnaphthalene-d10	152	5.558	5.558	(1.151)	62054	10.0000	10.58
	4	2-Methylnaphthalene	141	5.605	5.605	(1.161)	56211	10.0000	10.23
	5	1-methylnaphthalene	141	5.804	5.804	(1.202)	55779	10.0000	10.24
	7	Biphenyl	154	6.263	6.263	(0.881)	84234	10.0000	10.33
	8	2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	61661	10.0000	10.62
	9	Acenaphthylene	152	7.003	7.003	(0.985)	101335	10.0000	10.79
*	10	Acenaphthene-d10	164	7.110	7.110	(1.000)	10604	2.00000	
	11	Acenaphthene	153	7.161	7.161	(1.007)	63326	10.0000	10.41
	12	Dibenzofuran	168	7.316	7.316	(1.029)	94481	10.0000	10.34
	13	1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	61599	10.0000	10.66
	14	Fluorene	166	7.790	7.790	(1.096)	77955	10.0000	10.69
	18	Dibenzothiophene	184	9.026	9.026	(0.987)	107780	10.0000	10.58
*	15	Phenanthrene-d10	188	9.150	9.150	(1.000)	20735	2.00000	
	16	Phenanthrene	178	9.188	9.188	(1.004)	113832	10.0000	10.36
	17	Anthracene	178	9.229	9.229	(1.009)	108526	10.0000	10.54
	19	Carbazole	167	9.744	9.744	(1.065)	103109	10.0000	10.48
	20	1-Methylphenanthrene	192	9.956	9.956	(1.088)	88969	10.0000	10.68
	22	Fluoranthene	202	10.952	10.952	(1.197)	129629	10.0000	10.26
$	21	Fluoranthene-d10	212	10.914	10.914	(1.193)	119450	10.0000	10.67
	23	Pyrene	202	11.464	11.464	(0.815)	138299	10.0000	10.72
	24	Benzo(a)anthracene	228	13.946	13.946	(0.991)	146175	10.0000	11.03
*	25	Chrysene-d12	240	14.070	14.070	(1.000)	20141	2.00000	
	27	Chrysene	228	14.146	14.146	(1.005)	134229	10.0000	10.31
	28	Benzo(b)fluoranthene	252	16.691	16.691	(0.929)	143820	10.0000	10.84
	29	Benzo(k)fluoranthene	252	16.751	16.751	(0.933)	131721	10.0000	10.54
	30	Benzo(j)fluoranthene	252	16.830	16.830	(0.937)	117119	10.0000	10.15
	31	Total Benzofluoranthenes	252	16.691	16.691	(0.929)	389015	30.0000	31.54(M)
	34	Benzo(e)pyrene	252	17.608	17.608	(0.980)	132932	10.0000	10.73
	32	Benzo(a)pyrene	252	17.738	17.738	(0.988)	122461	10.0000	10.62
*	33	Perylene-d12	264	17.962	17.962	(1.000)	20342	2.00000	
	35	Perylene	252	18.041	18.041	(1.004)	123301	10.0000	10.65

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.372	20.372	(1.134)	89172	10.0000	11.48
37 Indeno(1,2,3-cd)pyrene	276	20.520	20.520	(1.142)	125262	10.0000	10.68
38 Dibenzo(a,h)anthracene	278	20.485	20.485	(1.140)	112627	10.0000	10.81(M)
39 Benzo(g,h,i)perylene	276	21.570	21.570	(1.201)	119701	10.0000	11.01

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042608.D
Lab Smp Id: SLD0372-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	18987	1.54
10 Acenaphthene-d10	10729	5365	21458	10604	-1.17
15 Phenanthrene-d10	20748	10374	41496	20735	-0.06
25 Chrysene-d12	20954	10477	41908	20141	-3.88
33 Perylene-d12	21563	10782	43126	20342	-5.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	-0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	0.02

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

REVIEW SUMMARY FOR FILE - N823042608.D

Lab ID: SLD0372-CAL6
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 20:22

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

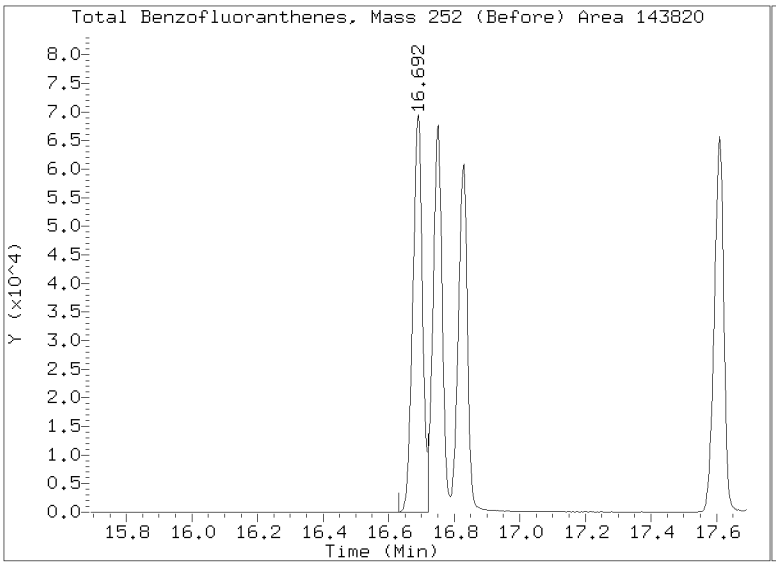
No RRT check performed

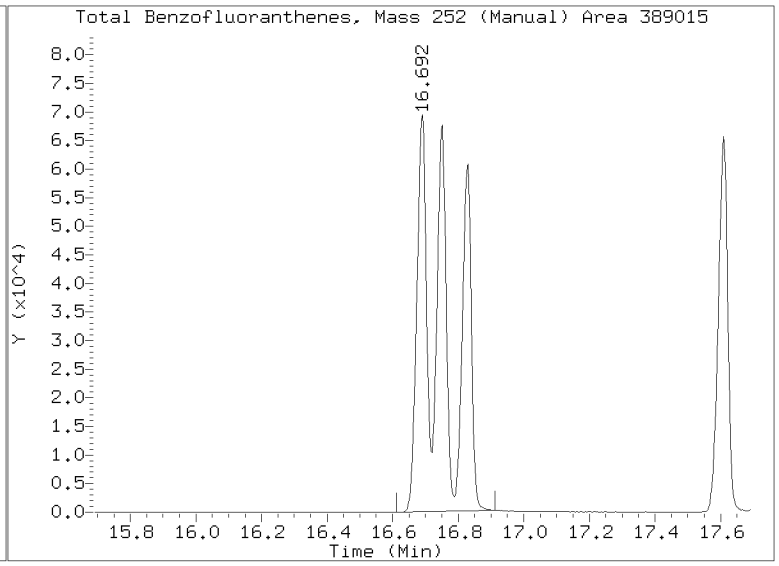
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

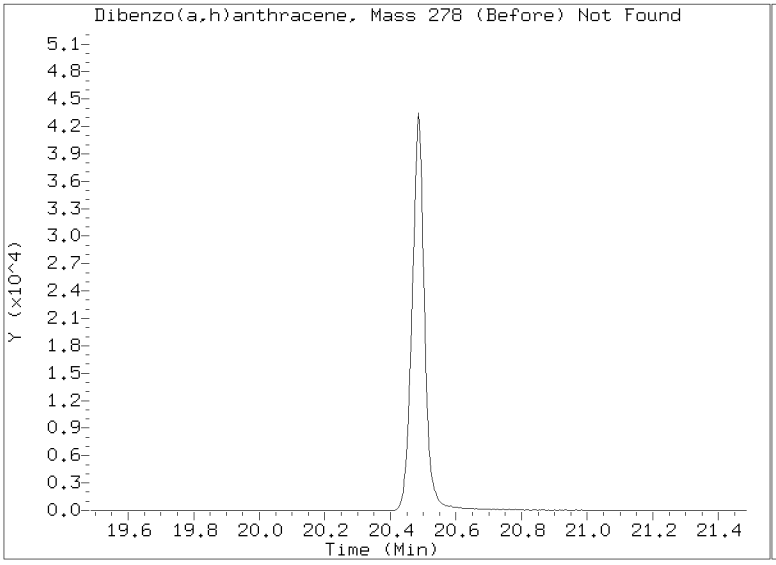
* Only compounds listed in the work order have been verified by the analyst *

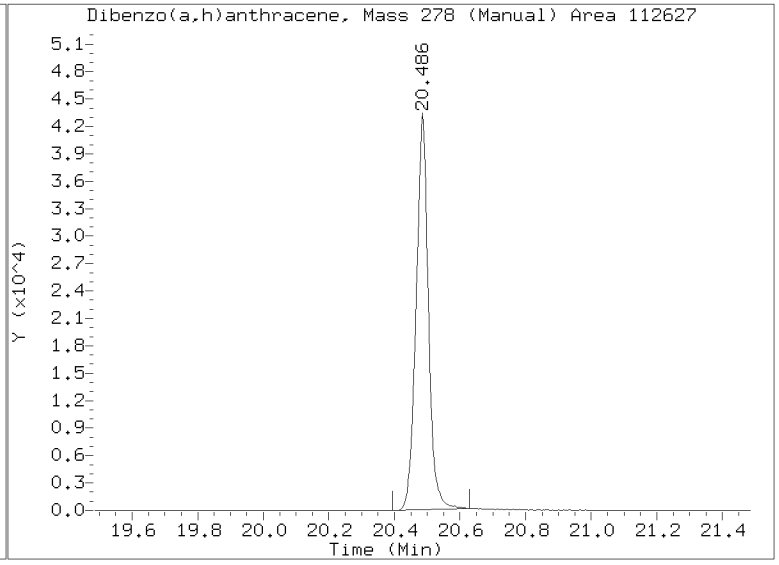
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042608.D
Injection Date: 26-APR-2023 20:22
Lab ID:SLD0372-CAL6 Client ID:
Report Date: 04/27/2023 10:37









Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

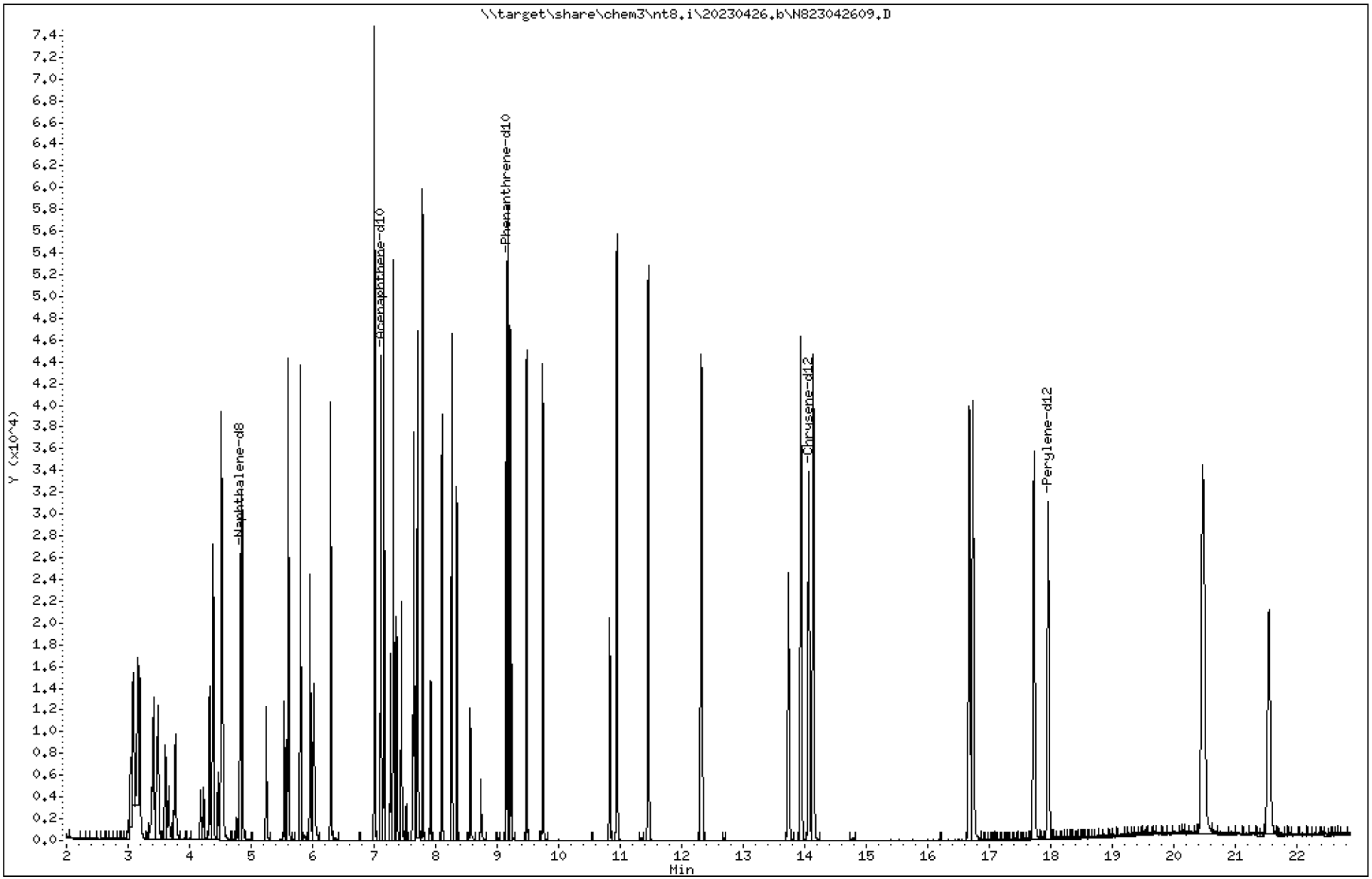
Sample Info: SCV230426

Volume Injected (uL): 1.0

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

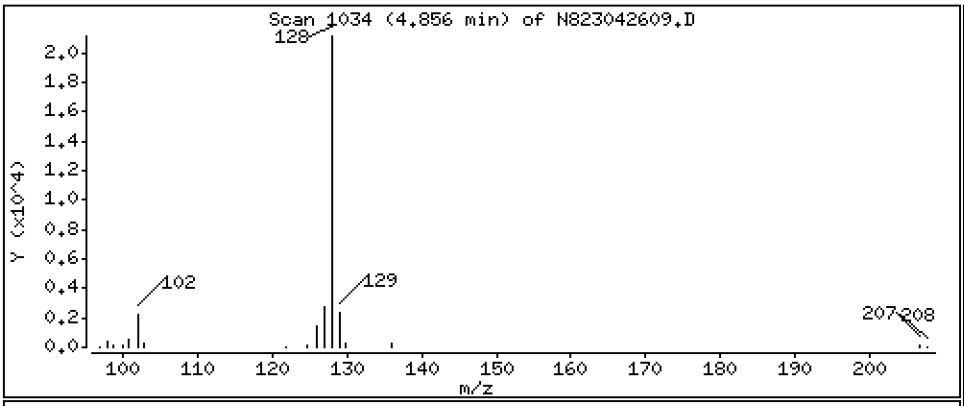
Operator: JZ

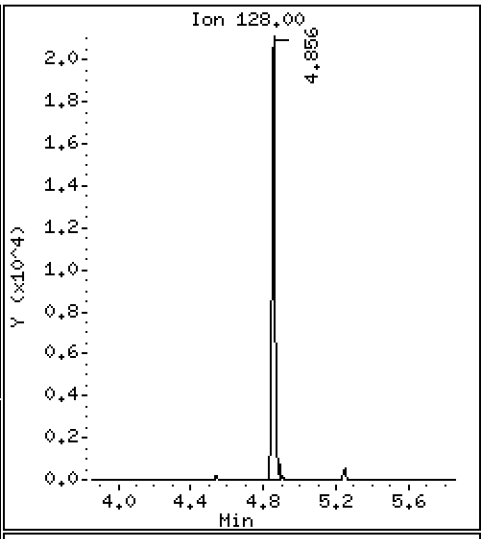
Column phase: Rxi-17sil

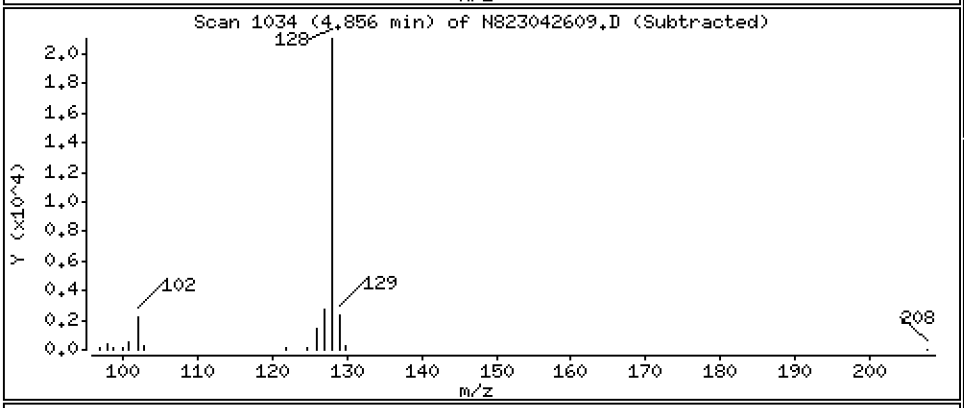
Column diameter: 0.25

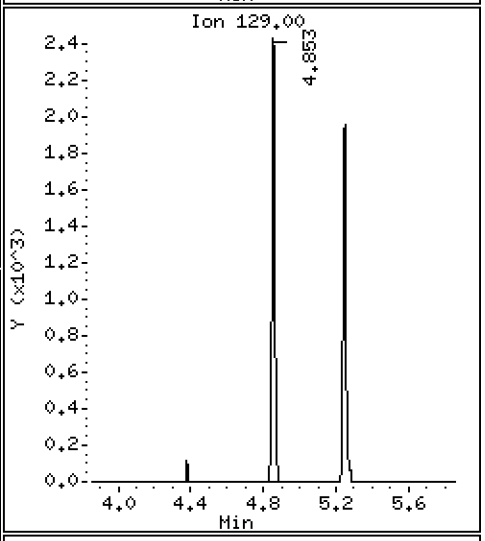
2 Naphthalene

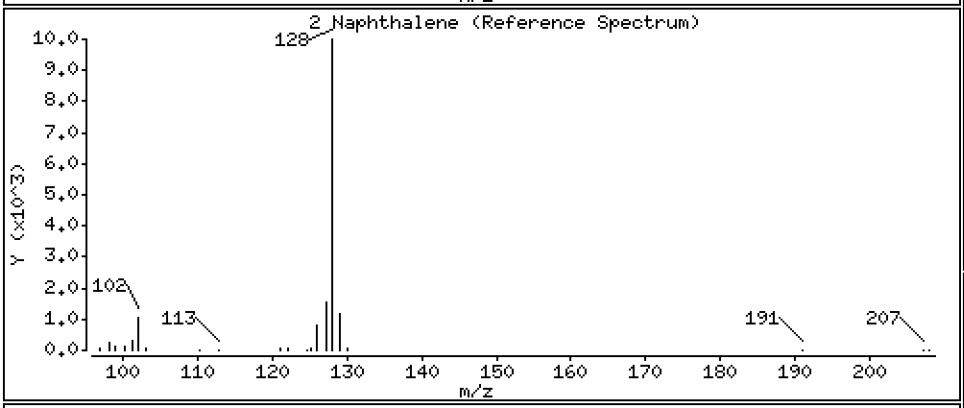
Concentration: 2.363 ug/L

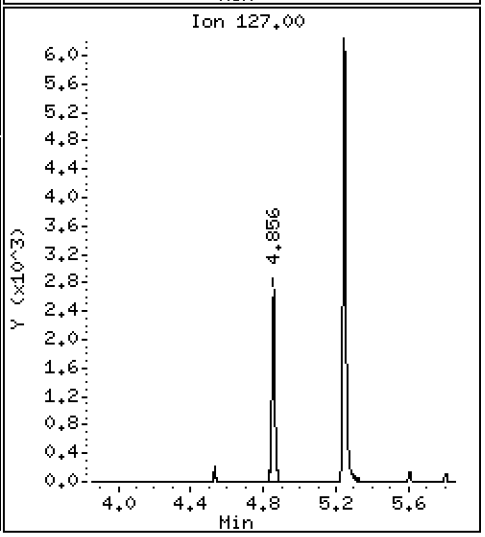


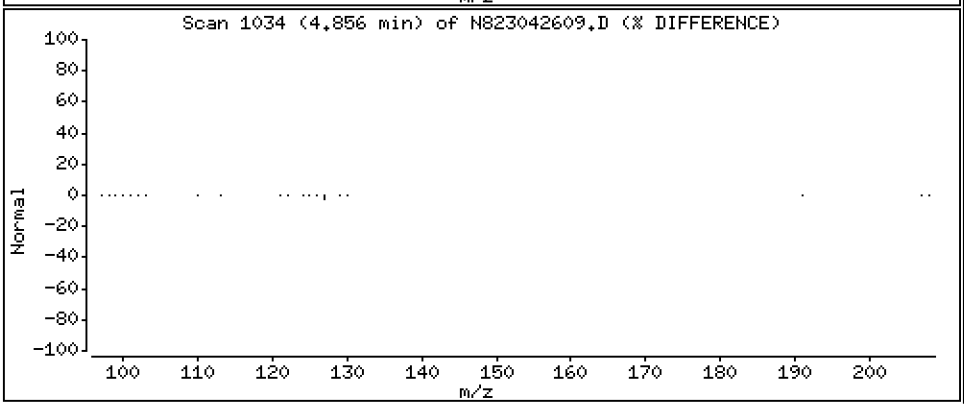












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

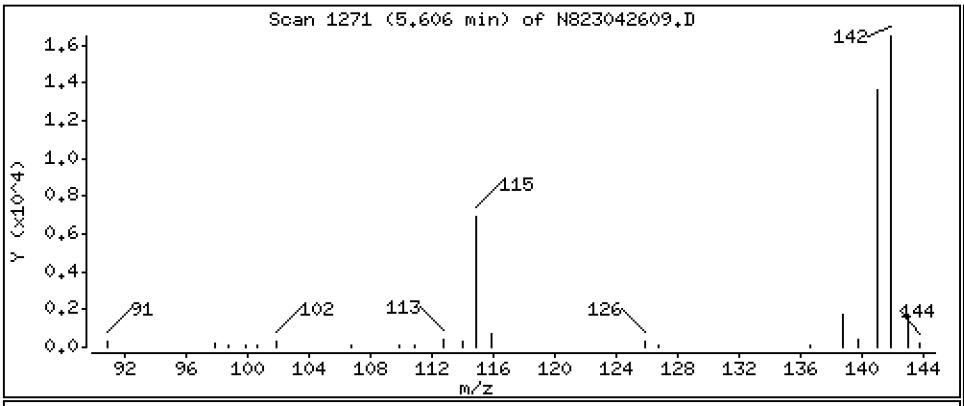
Operator: JZ

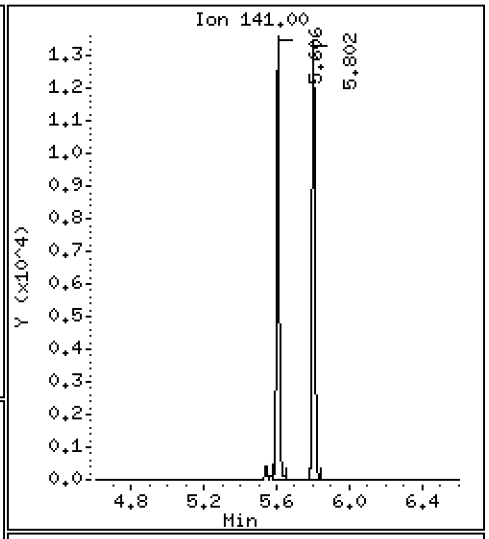
Column phase: Rxi-17sil

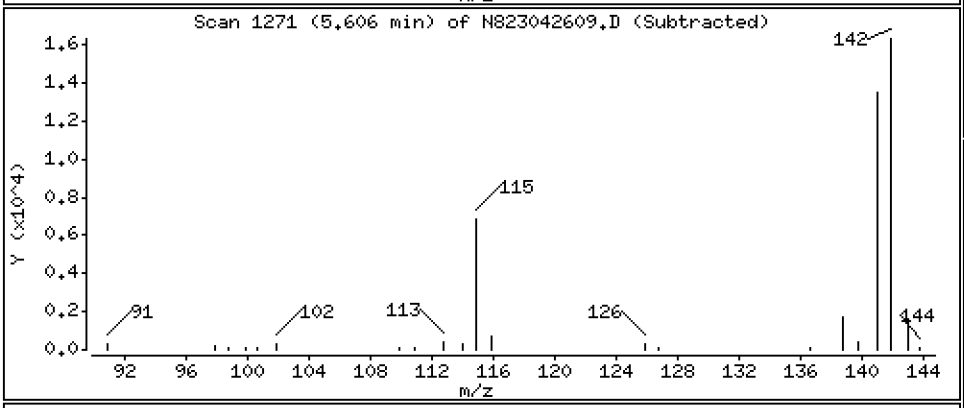
Column diameter: 0.25

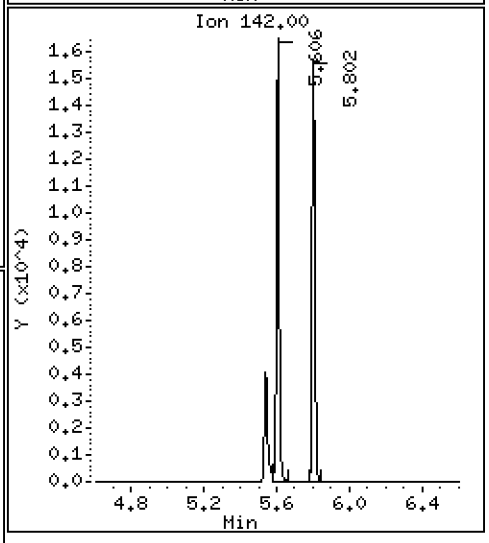
4 2-Methylnaphthalene

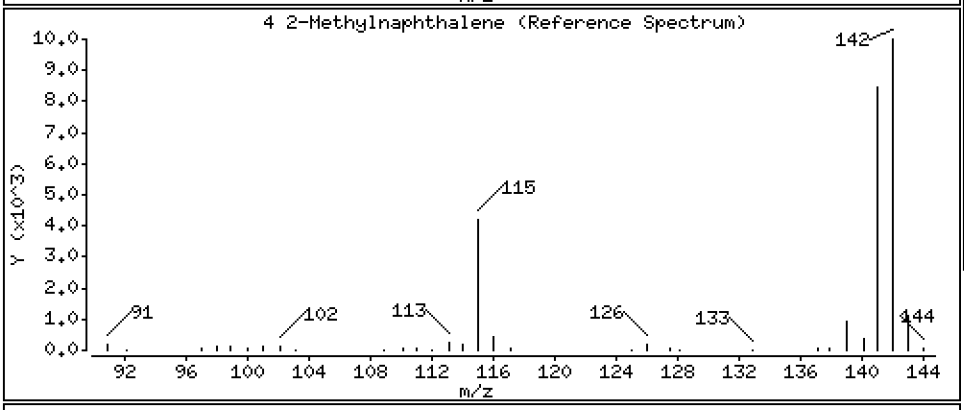
Concentration: 2.392 ug/L

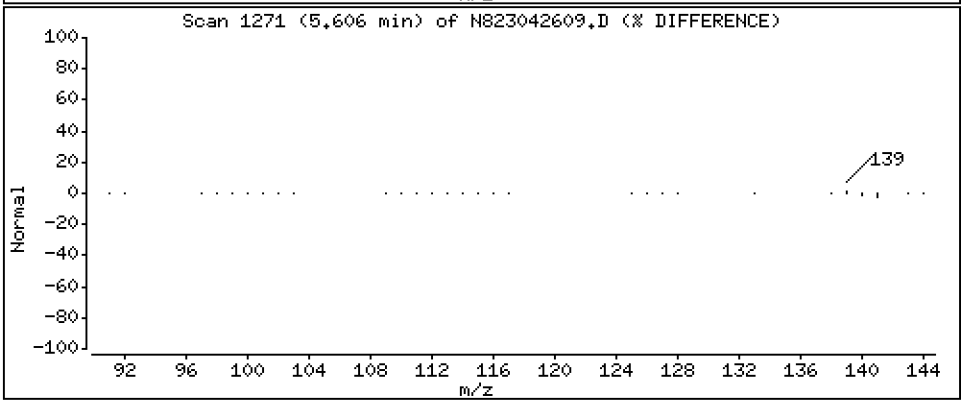












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

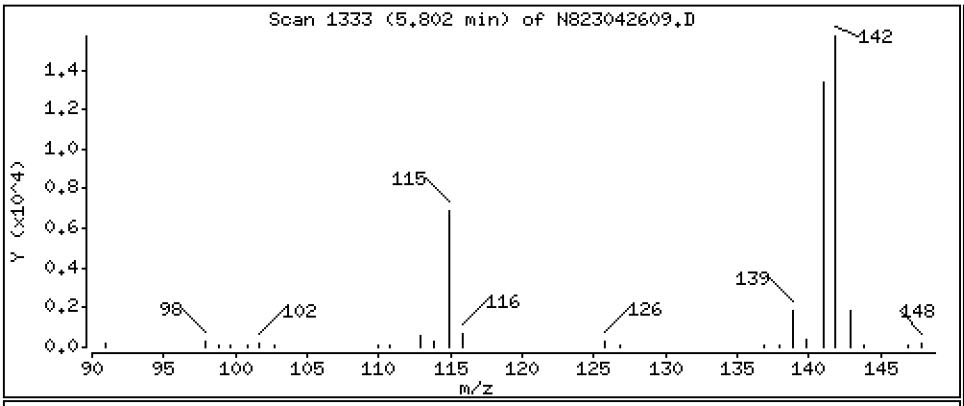
Operator: JZ

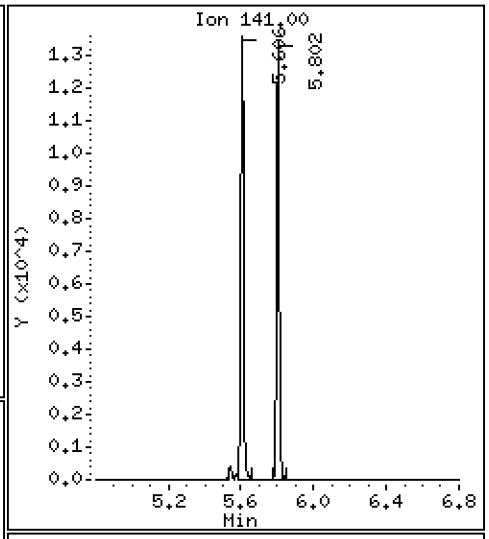
Column phase: Rxi-17sil

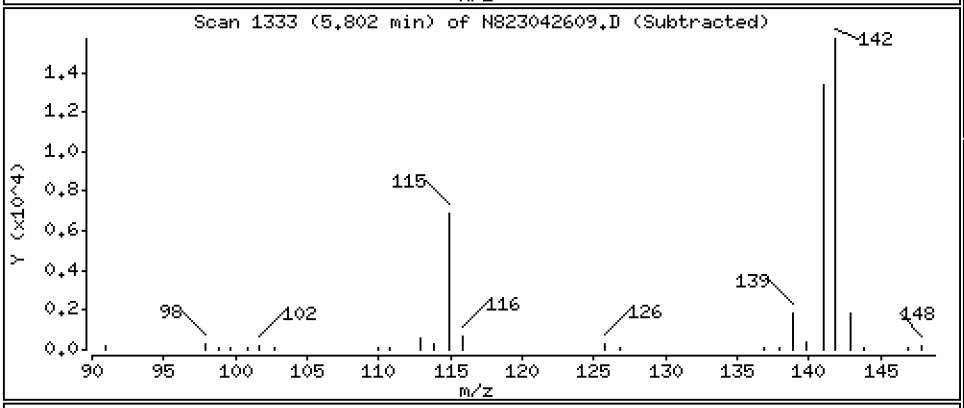
Column diameter: 0.25

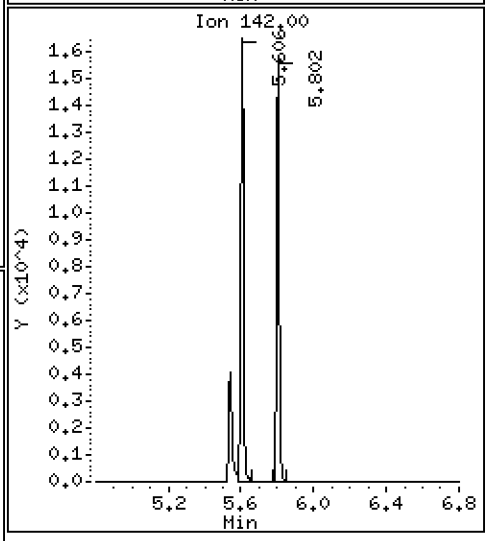
5 1-methylnaphthalene

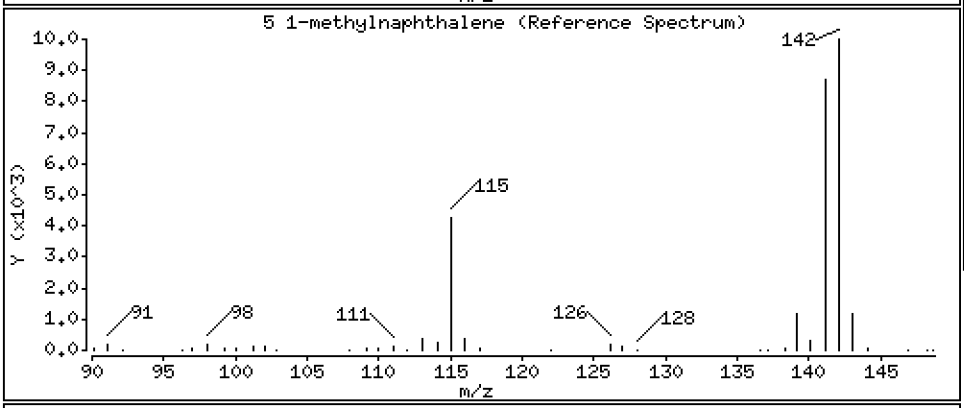
Concentration: 2.380 ug/L

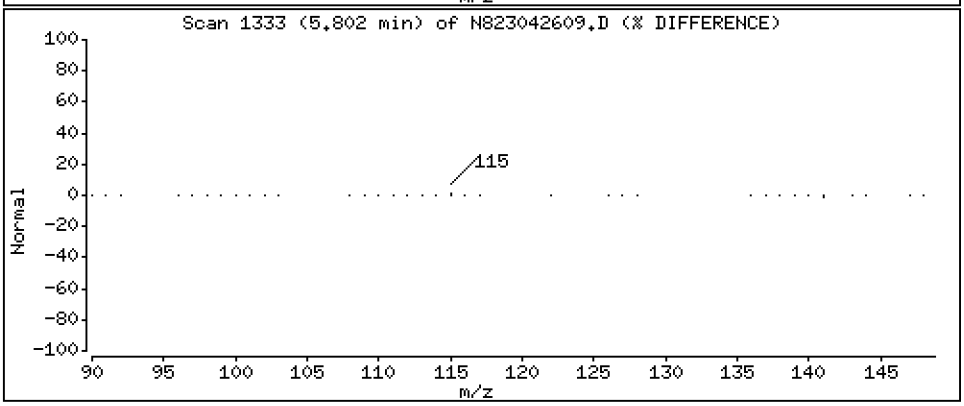












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

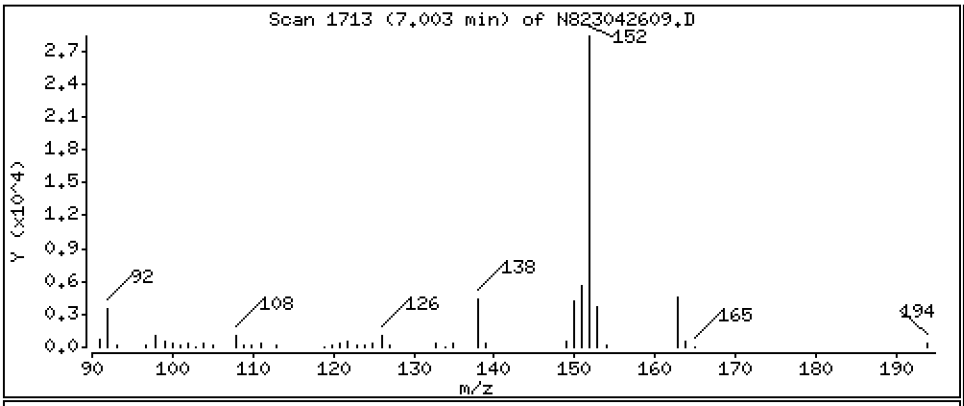
Operator: JZ

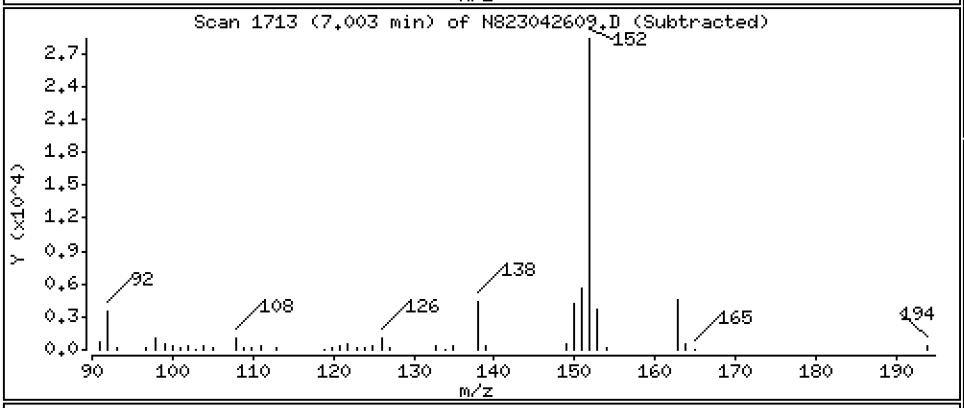
Column phase: Rxi-17sil

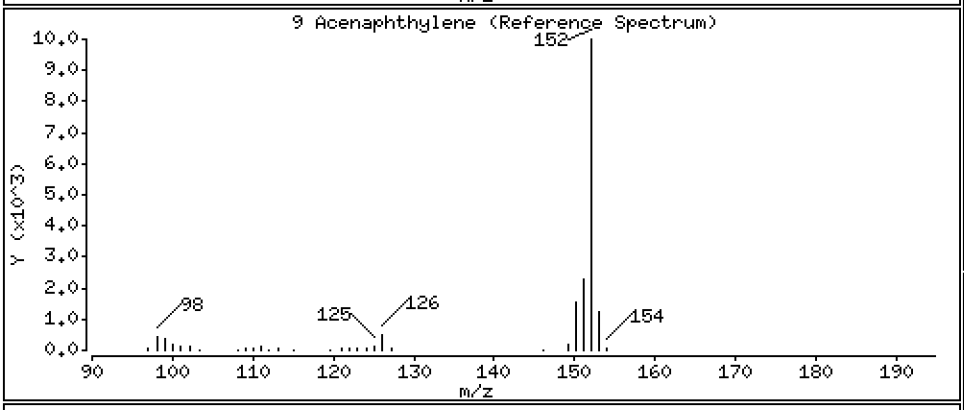
Column diameter: 0.25

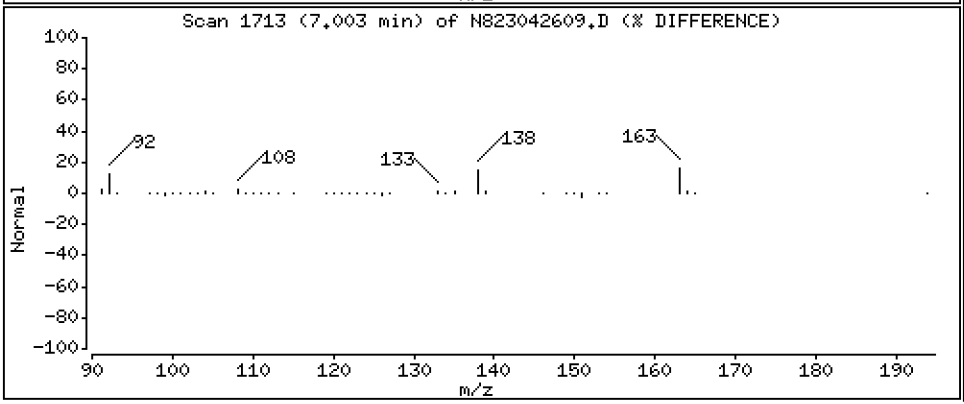
9 Acenaphthylene

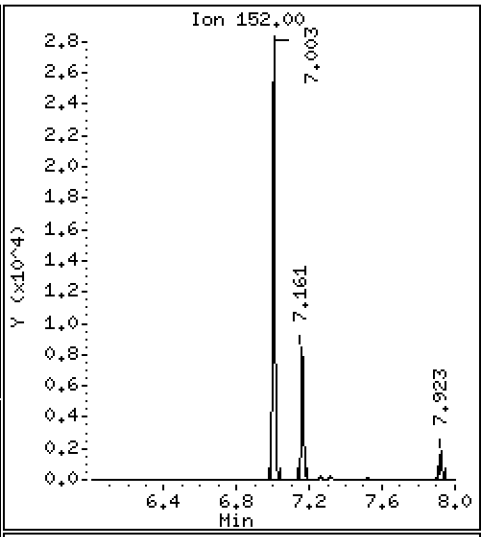
Concentration: 2.322 ug/L

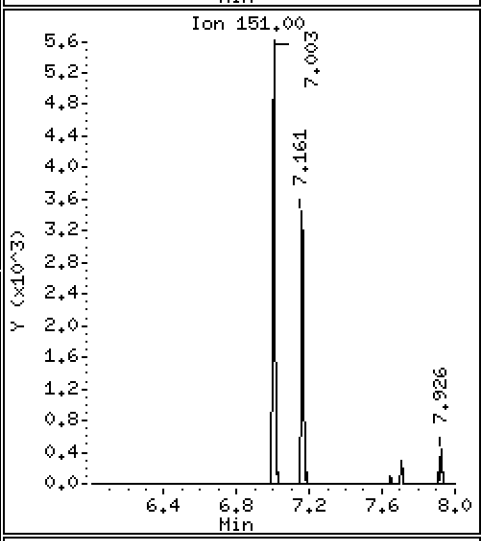


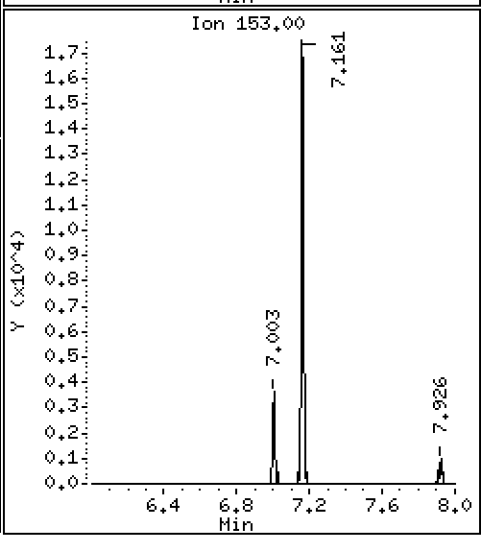












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

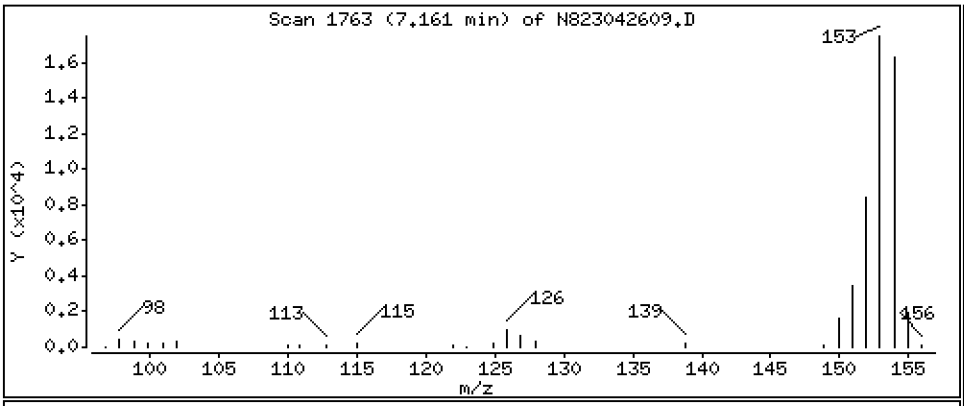
Operator: JZ

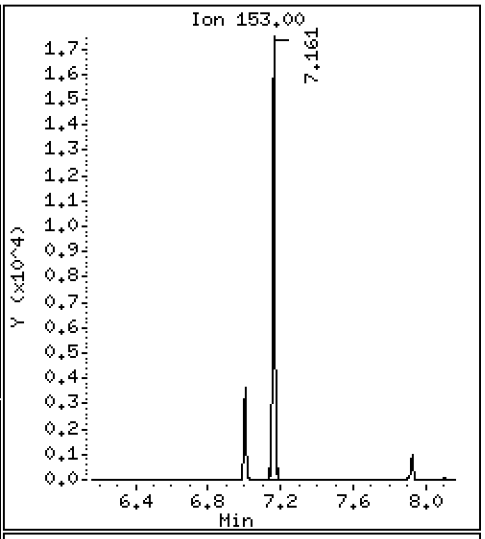
Column phase: Rxi-17sil

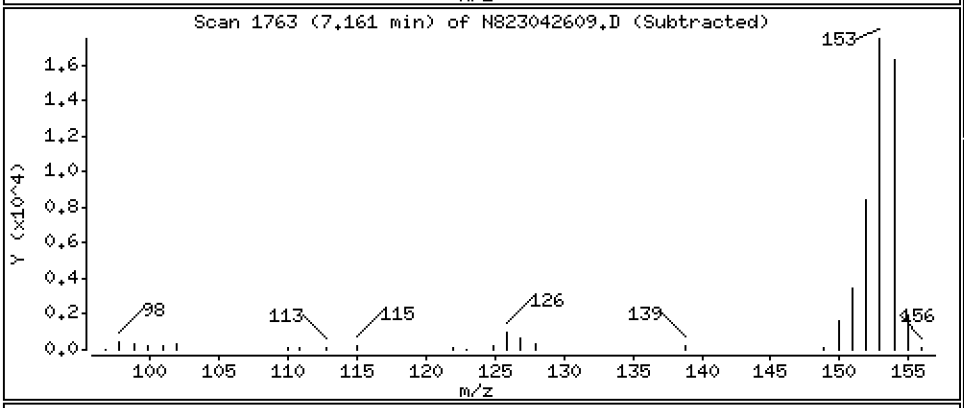
Column diameter: 0.25

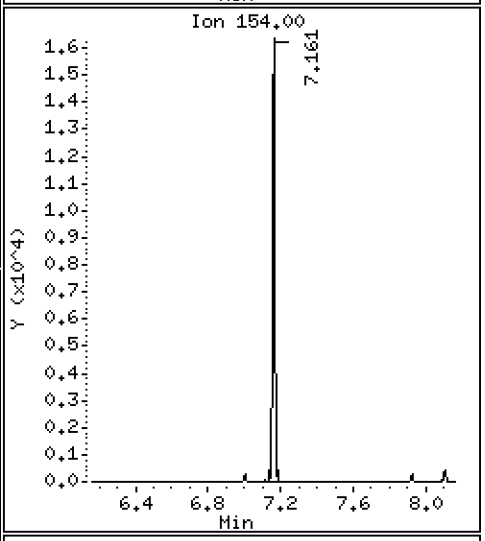
11 Acenaphthene

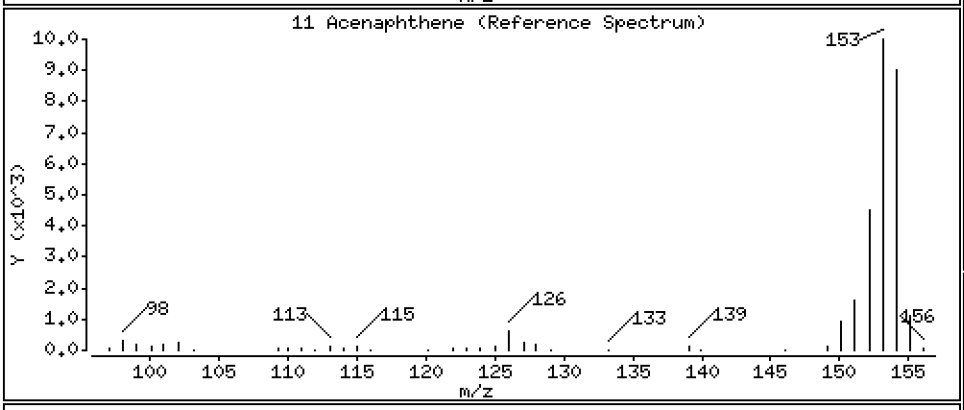
Concentration: 2.234 ug/L

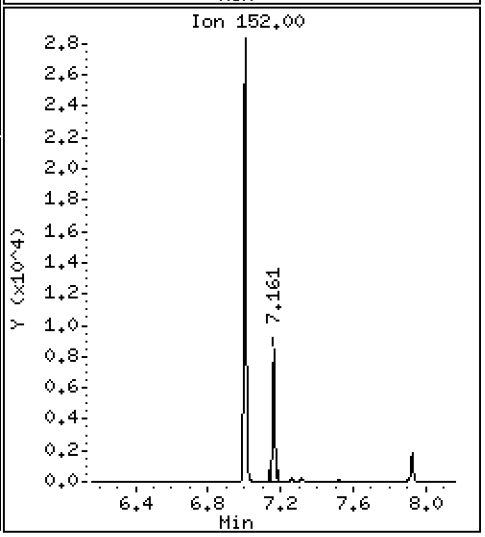


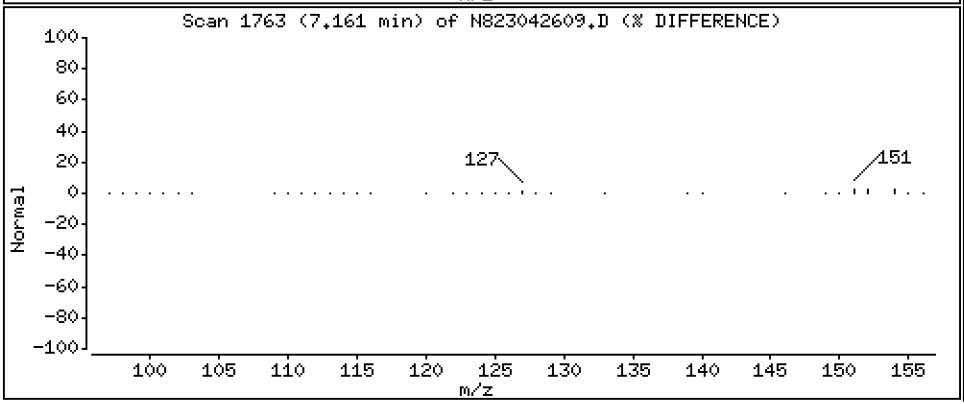












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

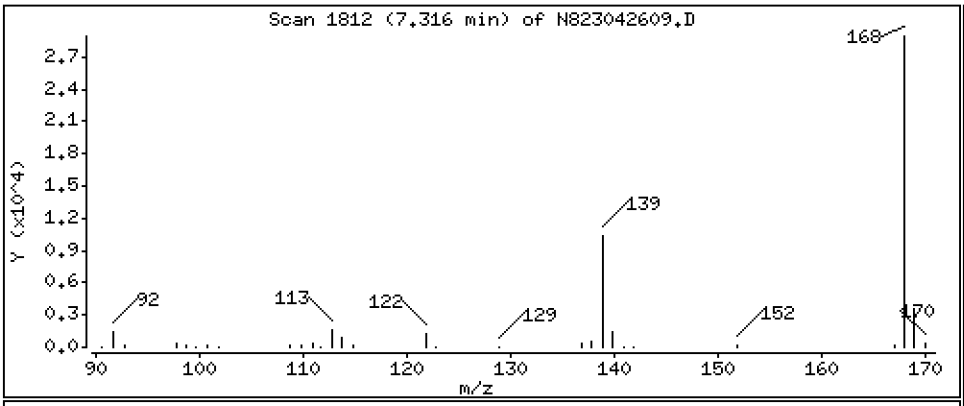
Operator: JZ

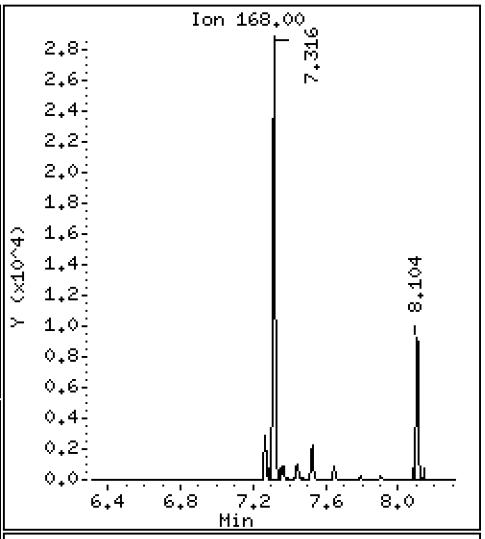
Column phase: Rxi-17sil

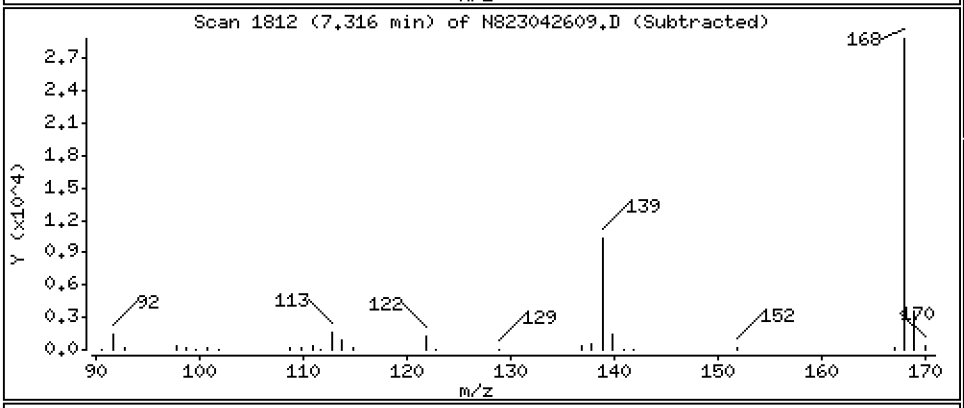
Column diameter: 0.25

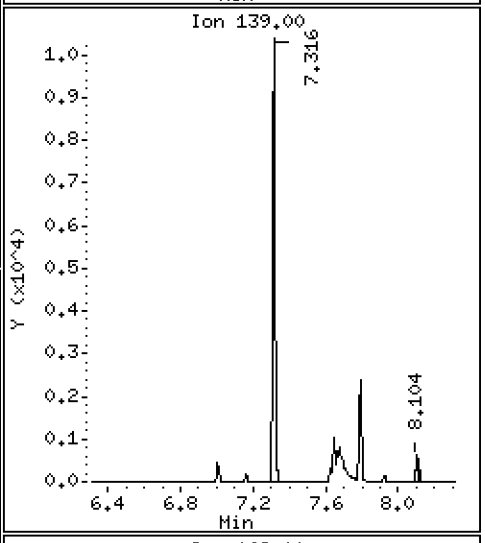
12 Dibenzofuran

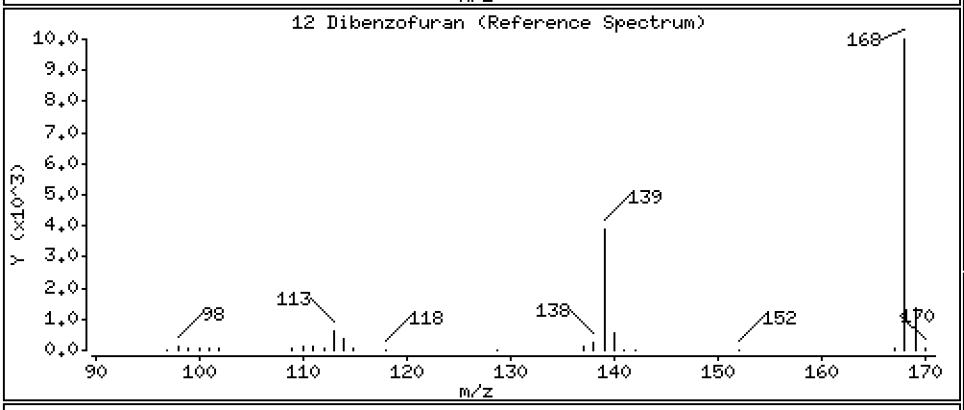
Concentration: 2.518 ug/L

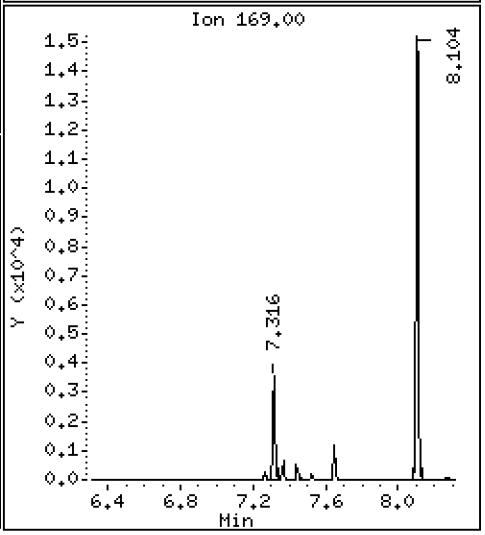


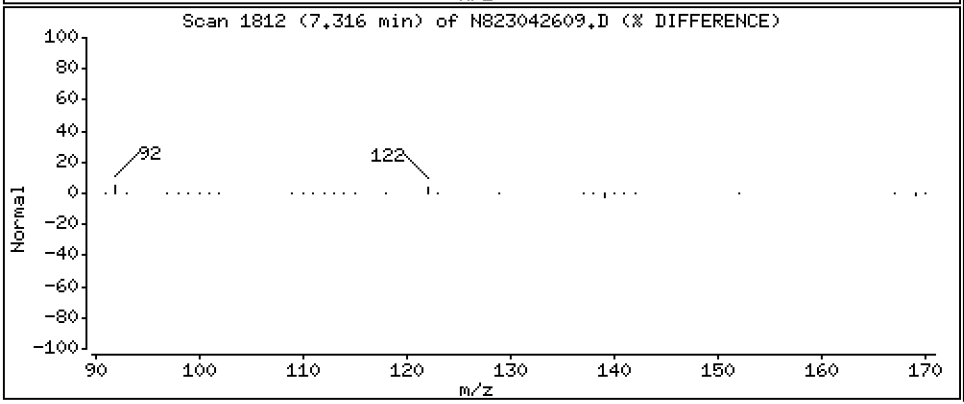












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

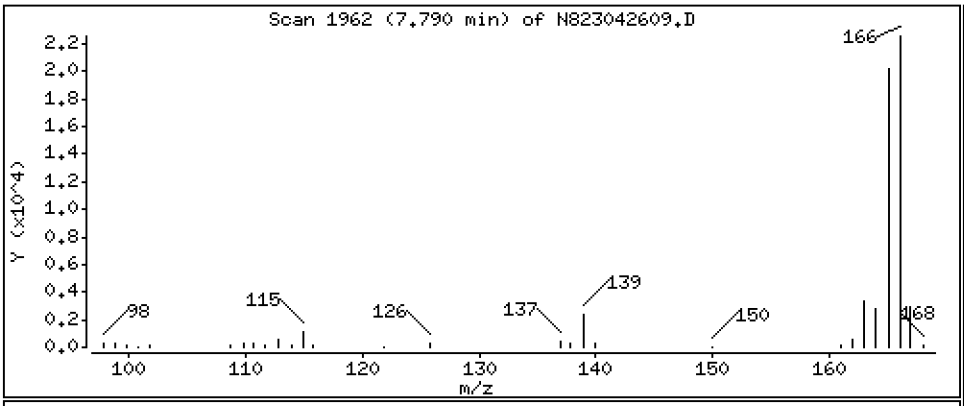
Operator: JZ

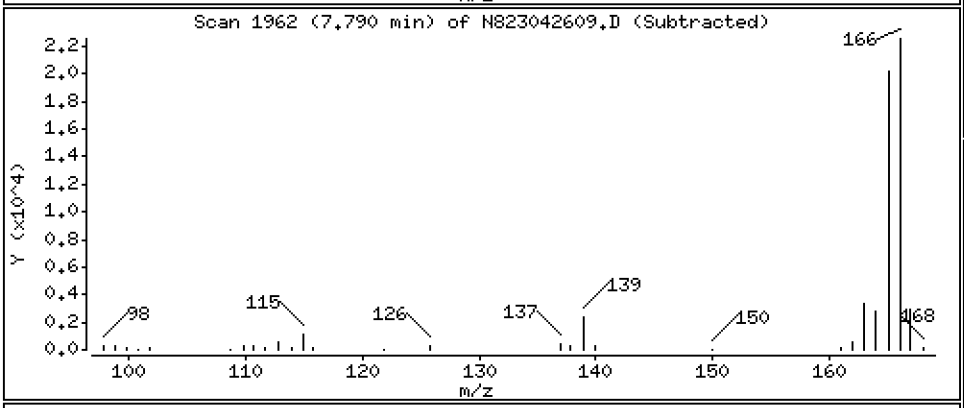
Column phase: Rxi-17sil

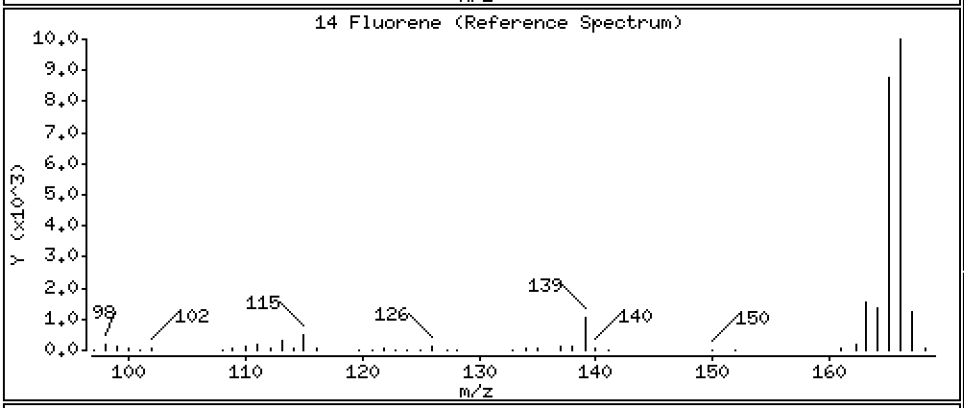
Column diameter: 0.25

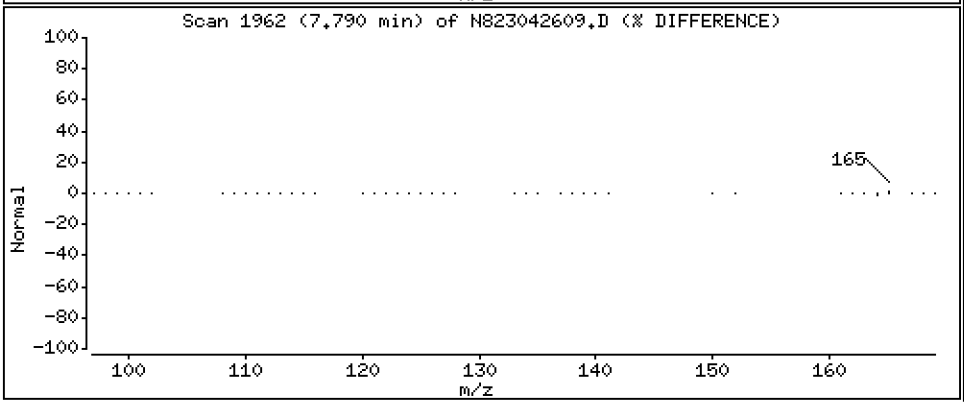
14 Fluorene

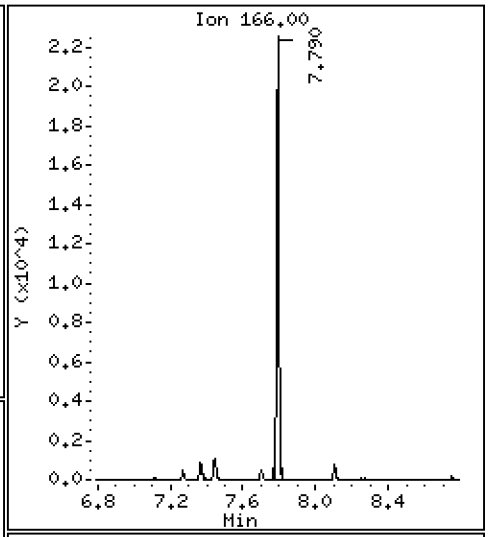
Concentration: 2.293 ug/L

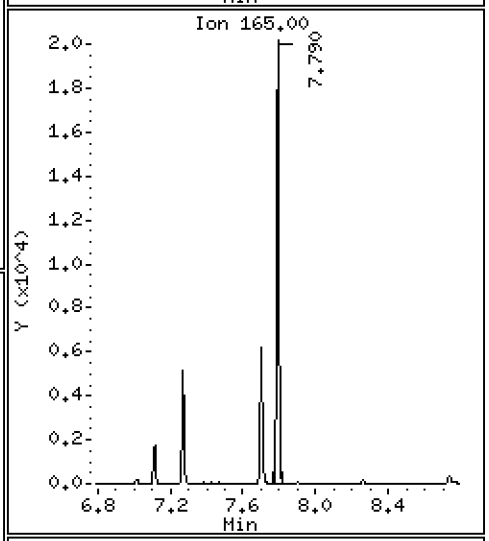


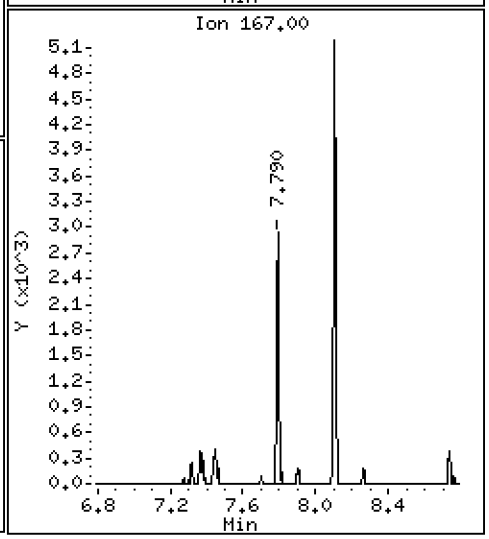












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

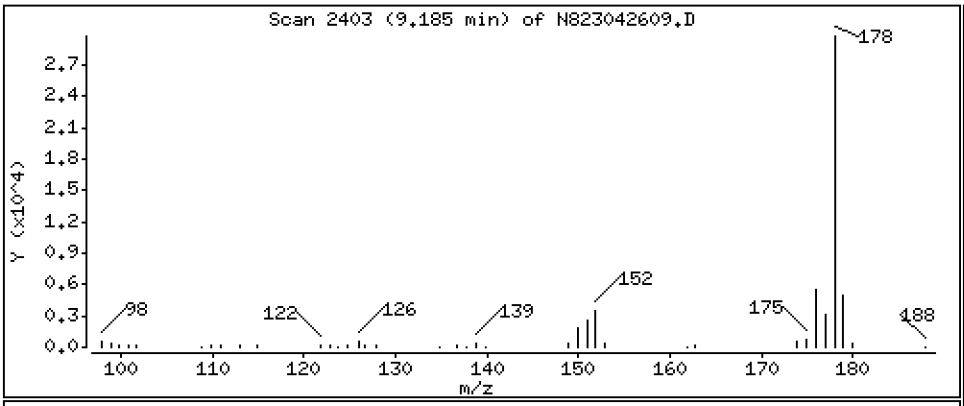
Operator: JZ

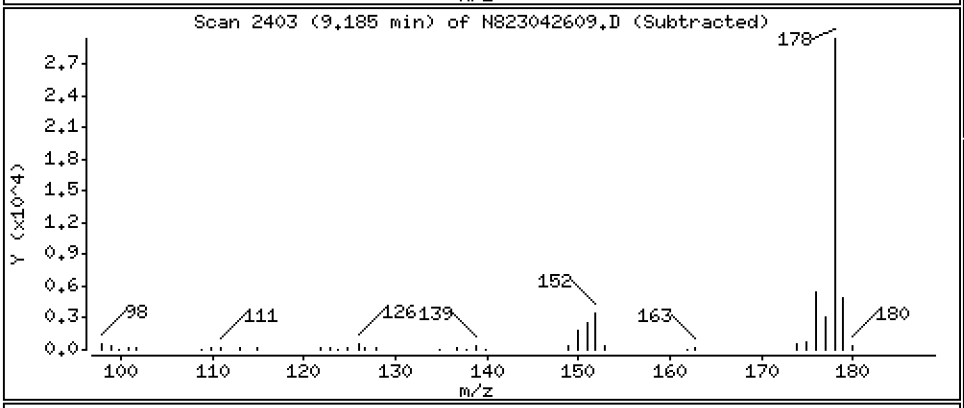
Column phase: Rxi-17sil

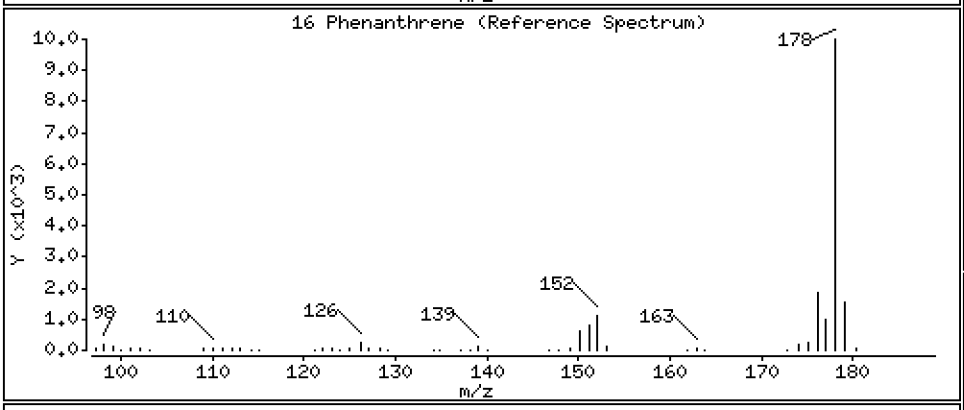
Column diameter: 0.25

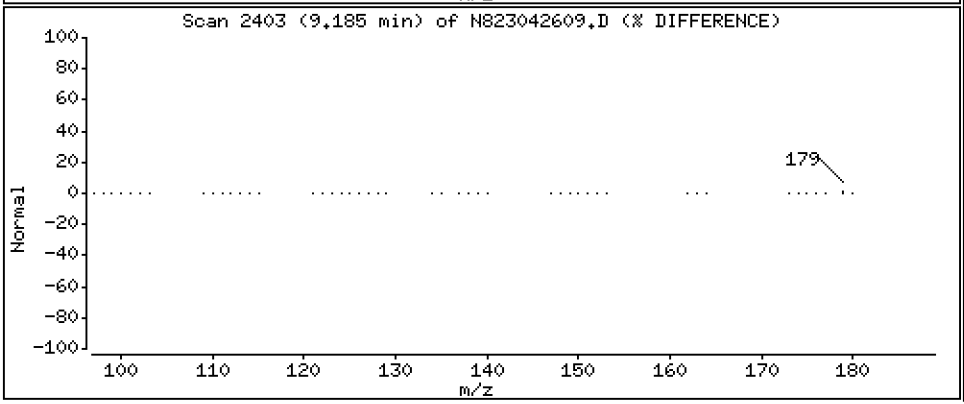
16 Phenanthrene

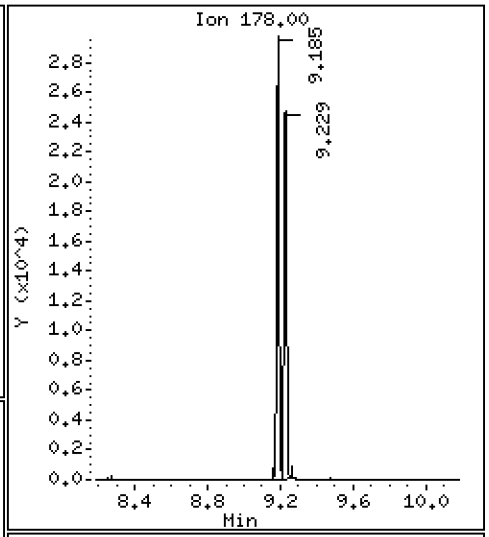
Concentration: 2.161 ug/L

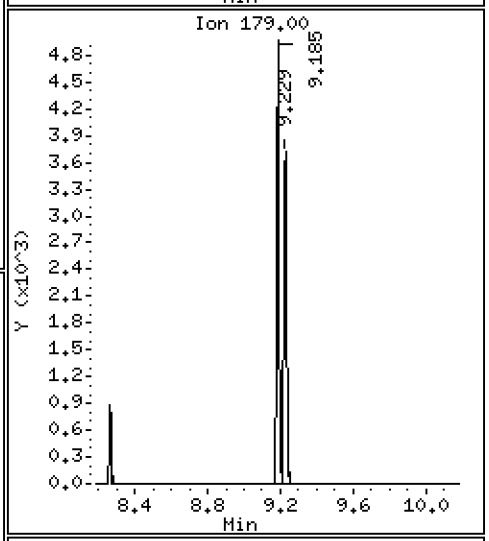


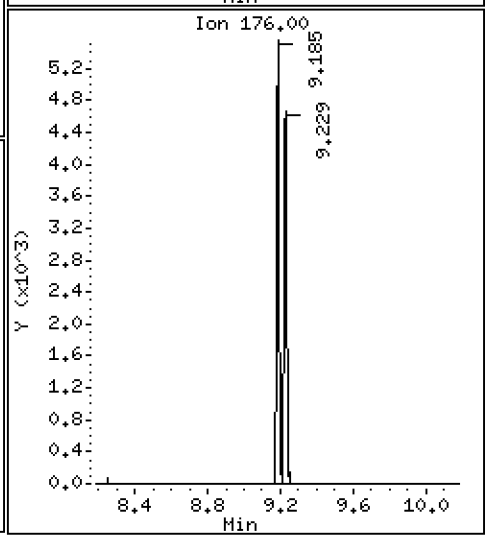












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

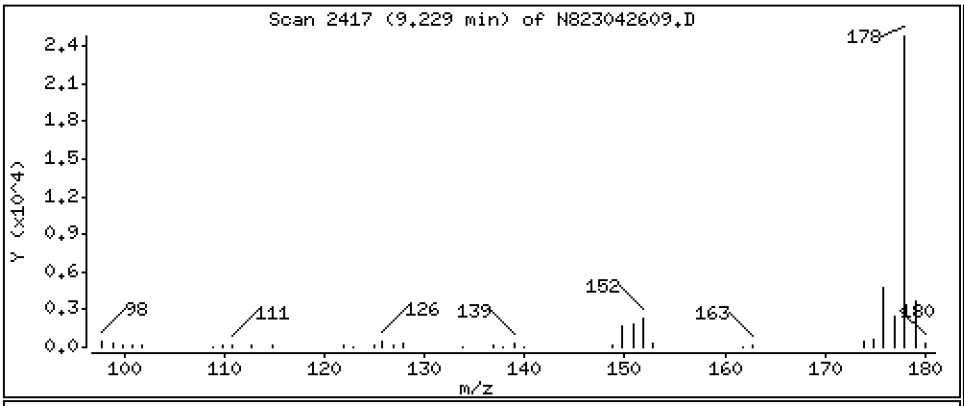
Operator: JZ

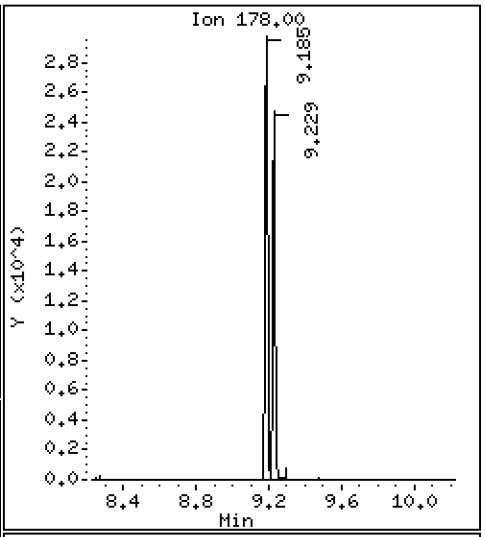
Column phase: Rxi-17sil

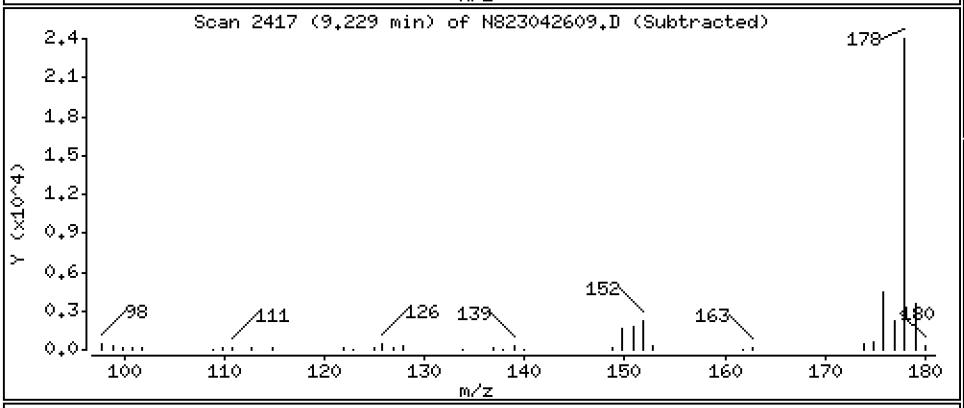
Column diameter: 0.25

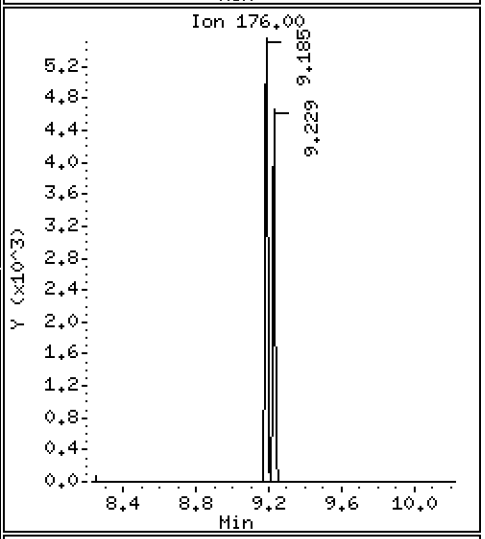
17 Anthracene

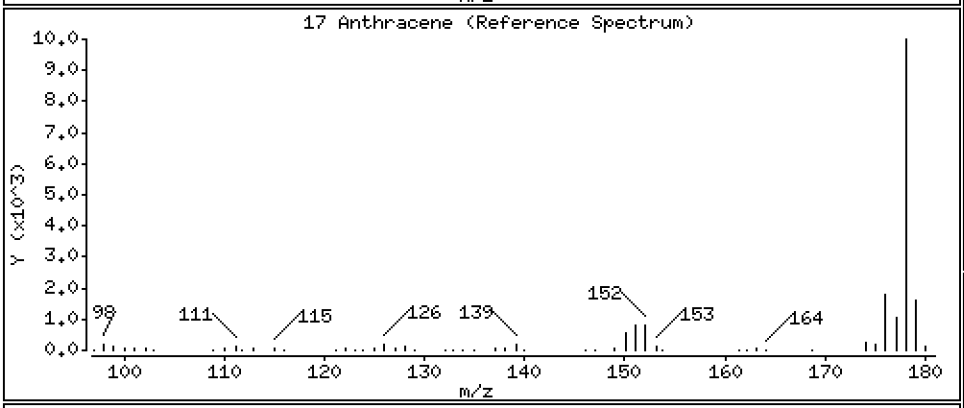
Concentration: 2.008 ug/L

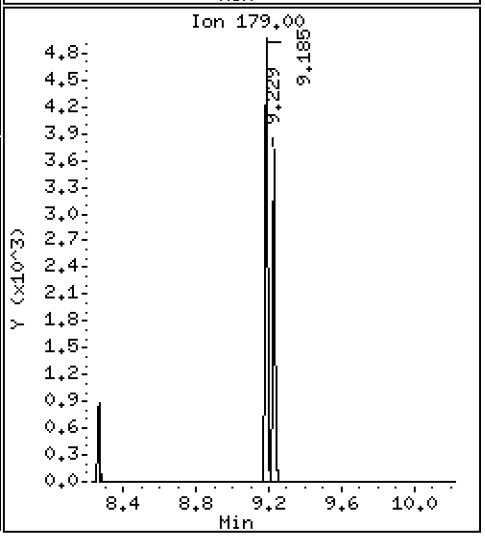


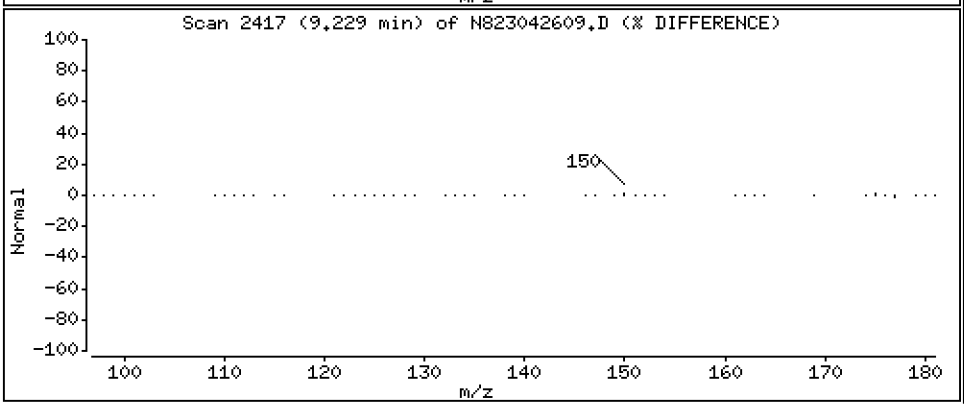












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

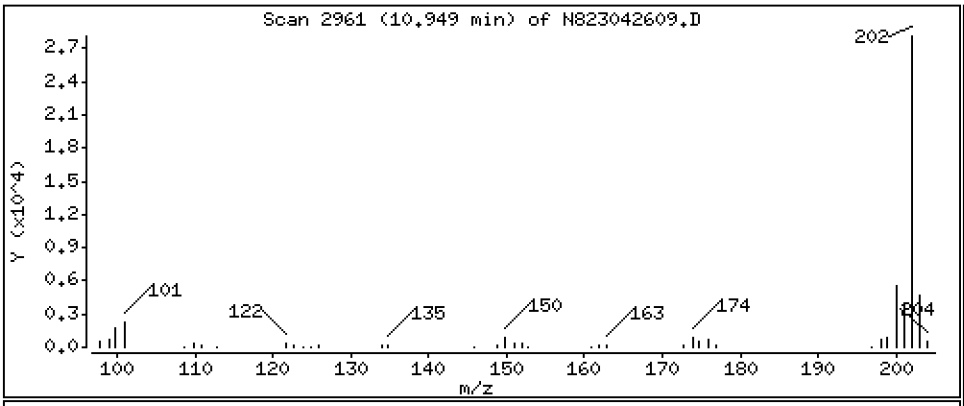
Operator: JZ

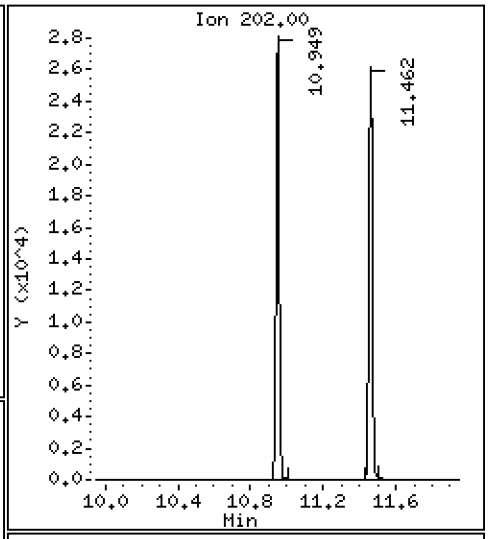
Column phase: Rxi-17sil

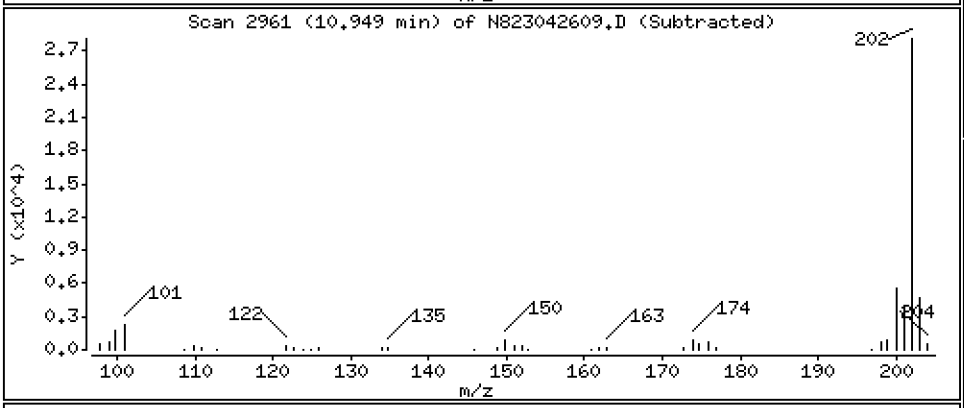
Column diameter: 0.25

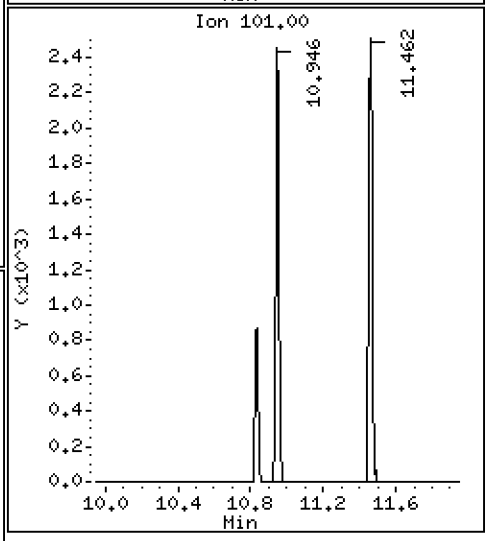
22 Fluoranthene

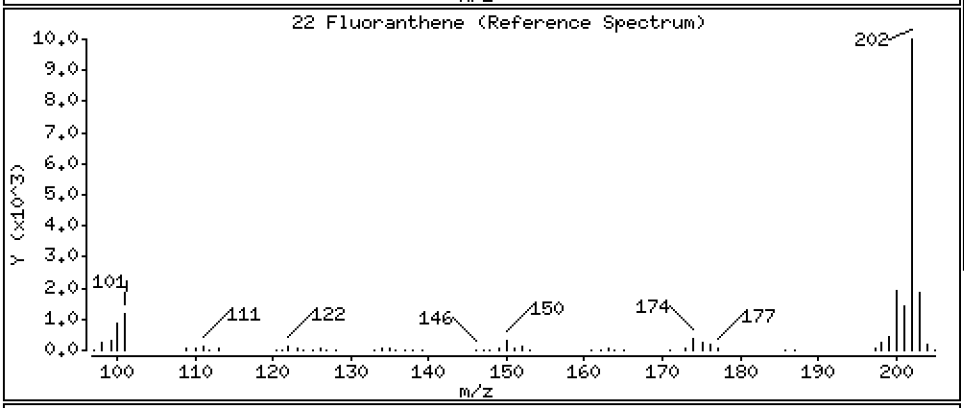
Concentration: 2.256 ug/L

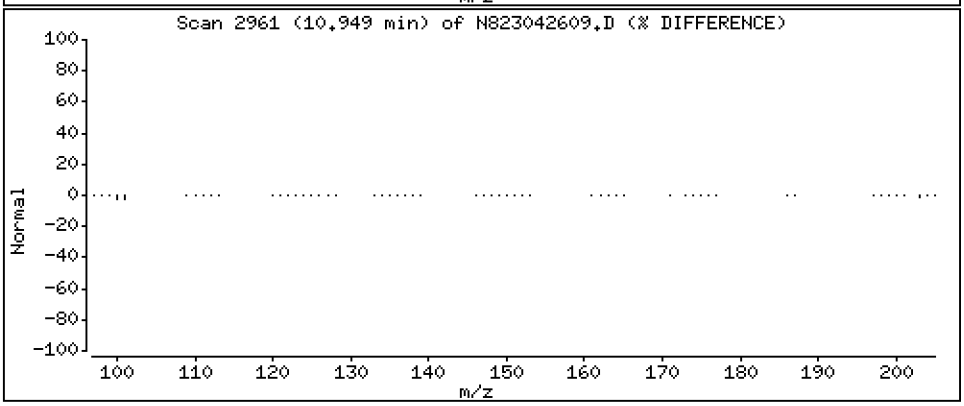












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

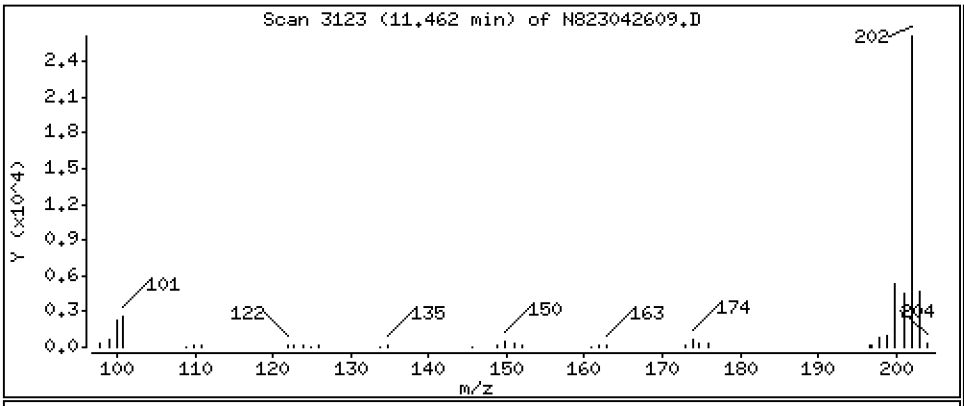
Operator: JZ

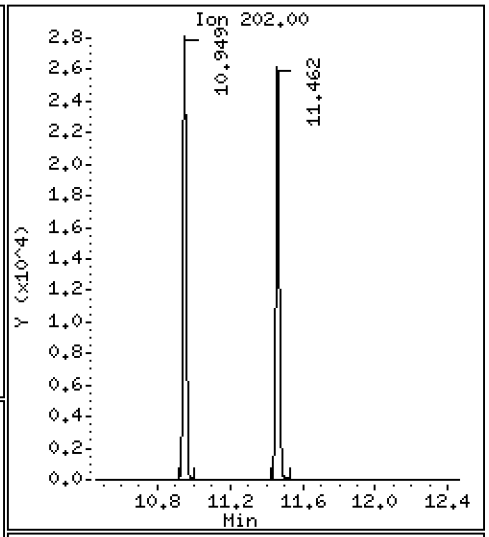
Column phase: Rxi-17sil

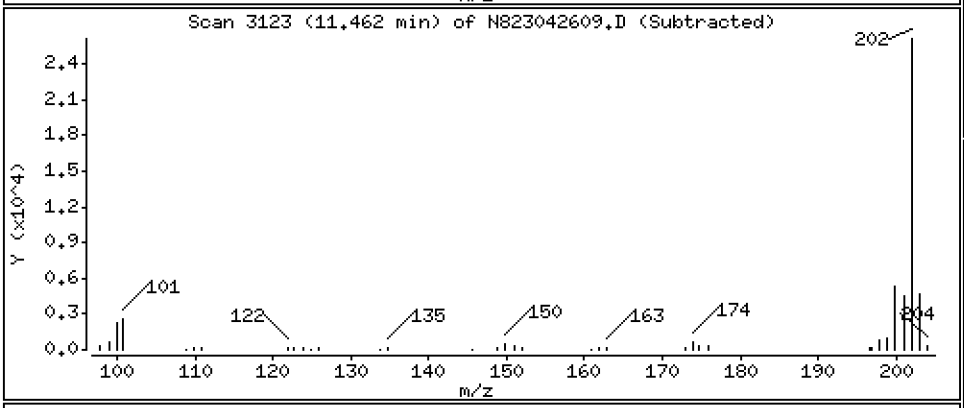
Column diameter: 0.25

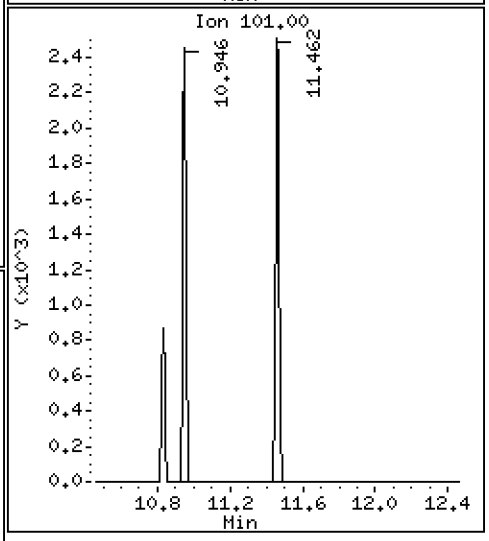
23 Pyrene

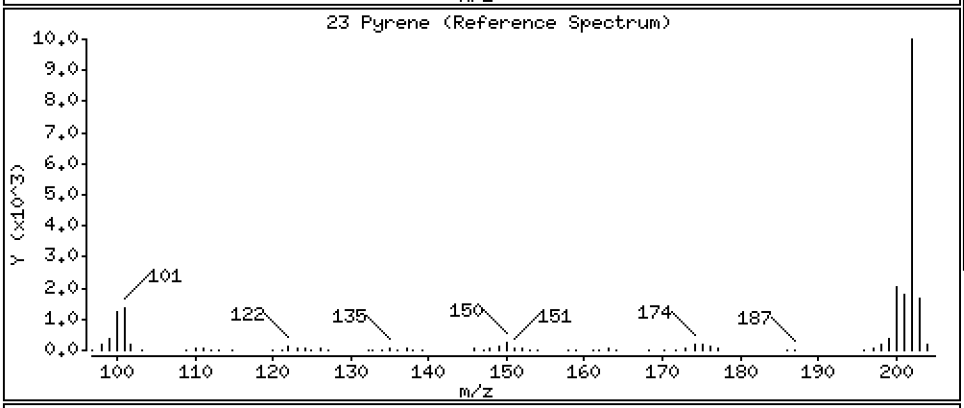
Concentration: 2.227 ug/L

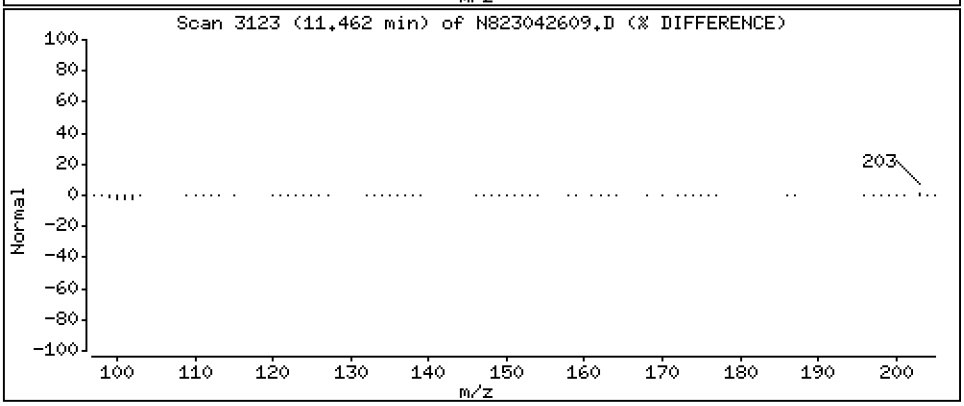












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

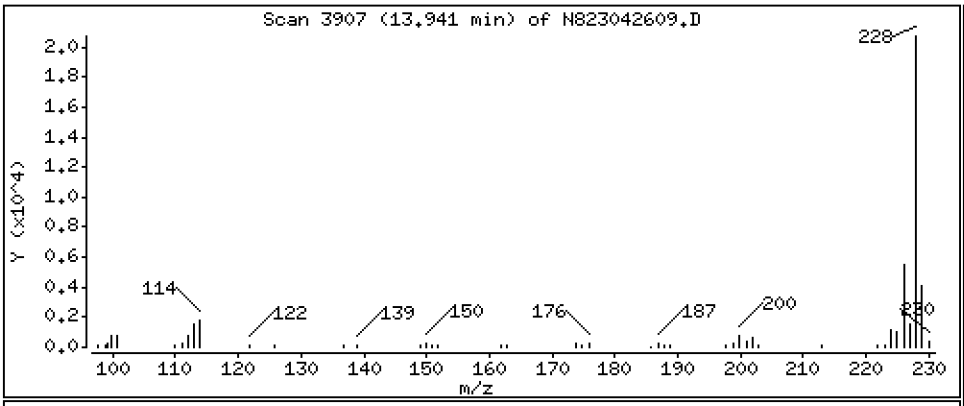
Operator: JZ

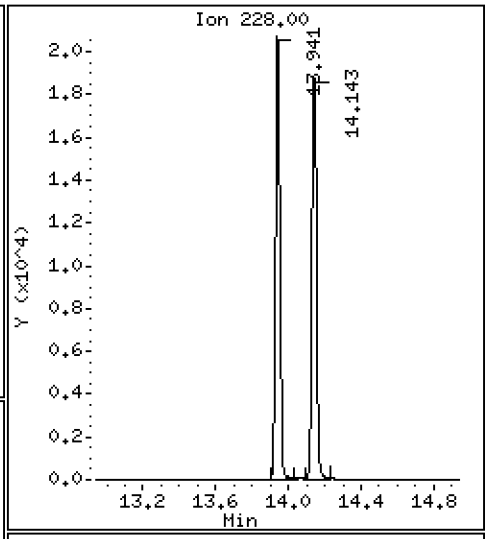
Column phase: Rxi-17sil

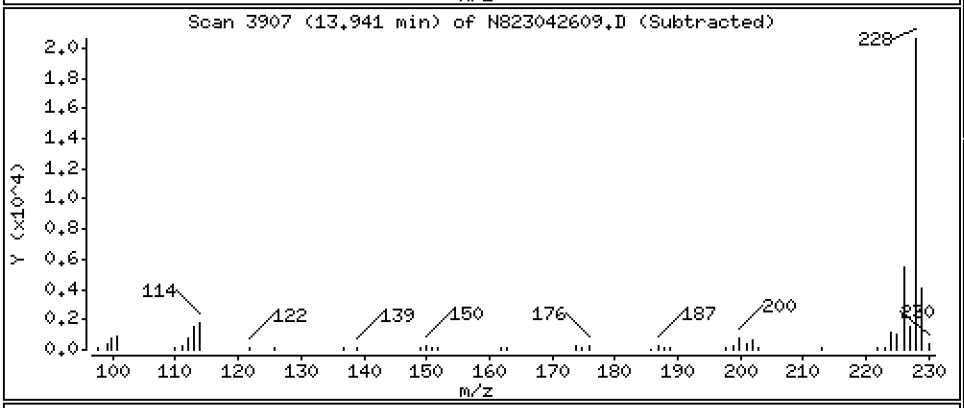
Column diameter: 0.25

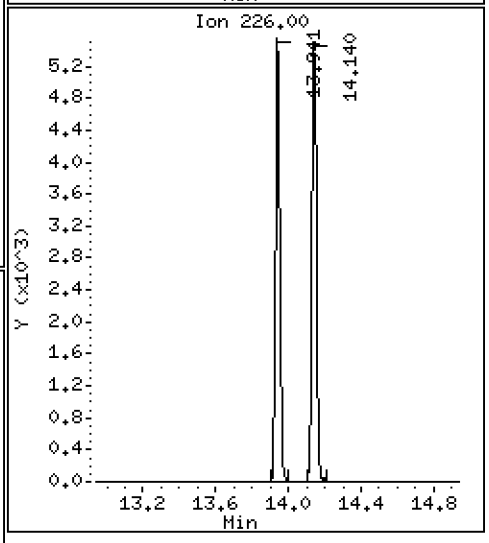
24 Benzo(a)anthracene

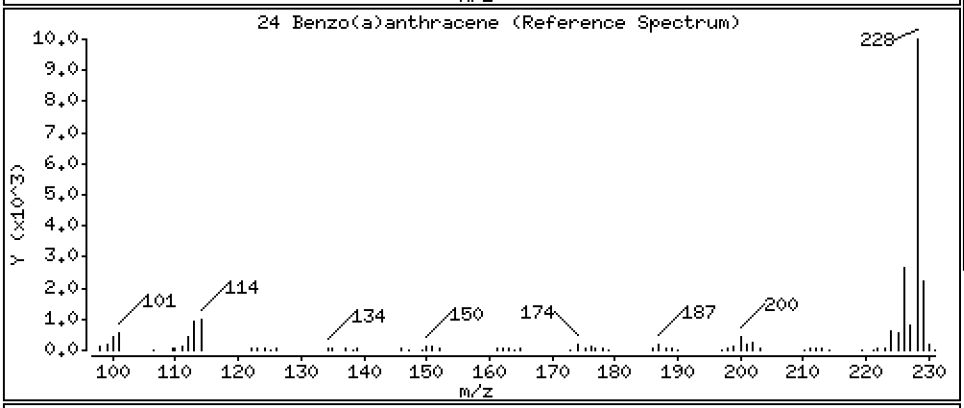
Concentration: 2.175 ug/L

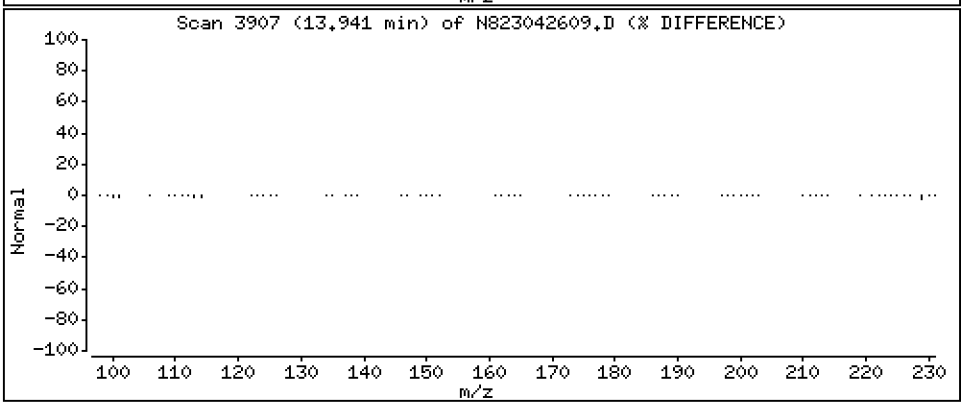












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

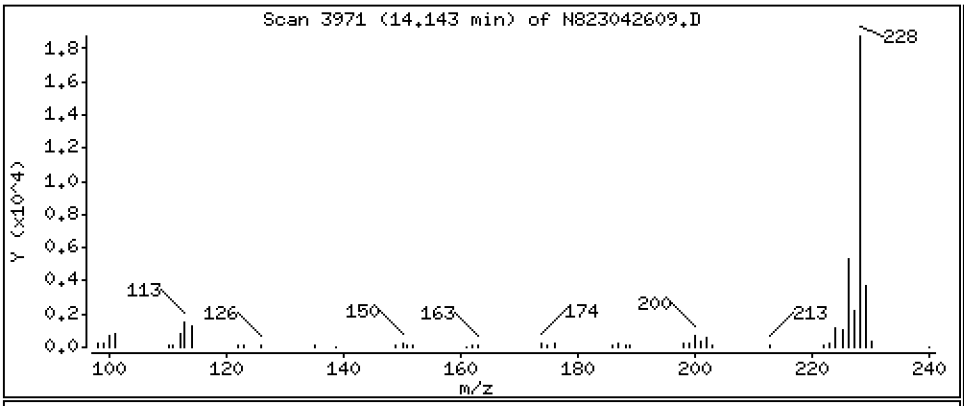
Operator: JZ

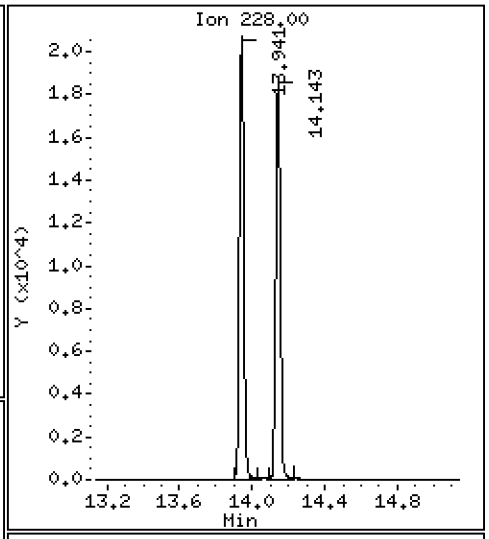
Column phase: Rxi-17sil

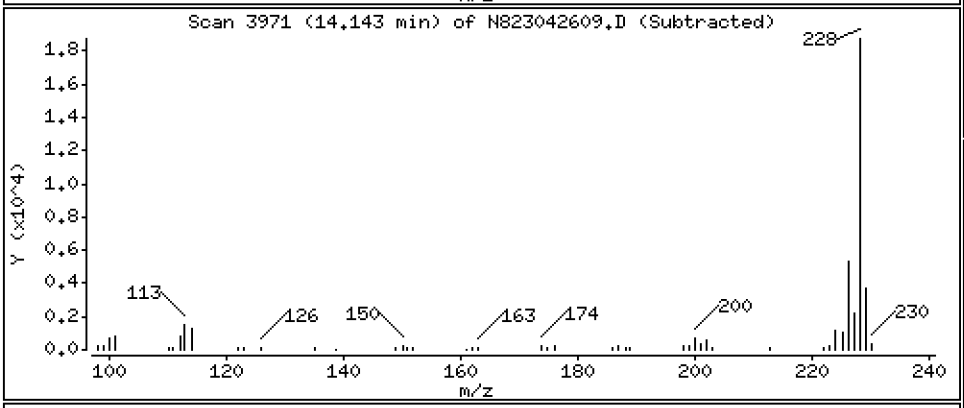
Column diameter: 0.25

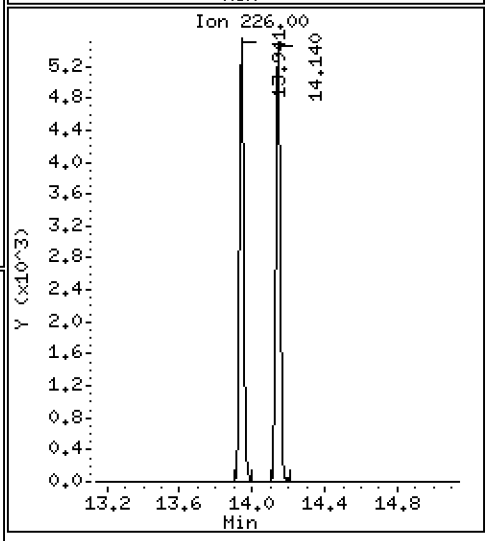
27 Chrysene

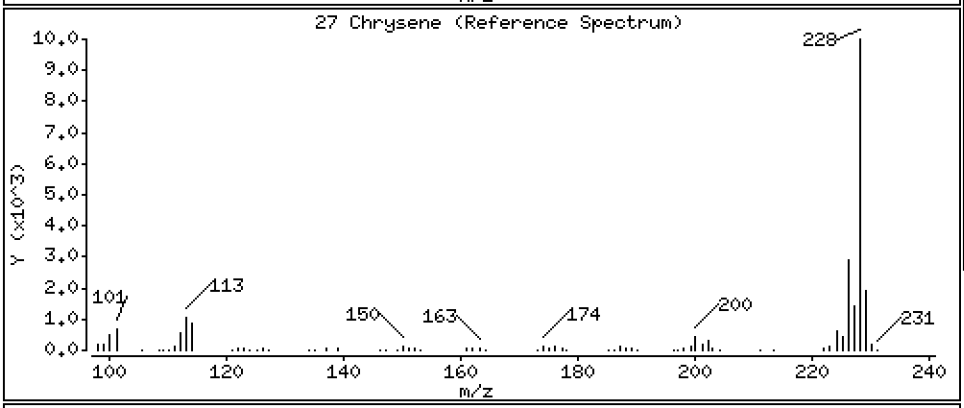
Concentration: 2.137 ug/L

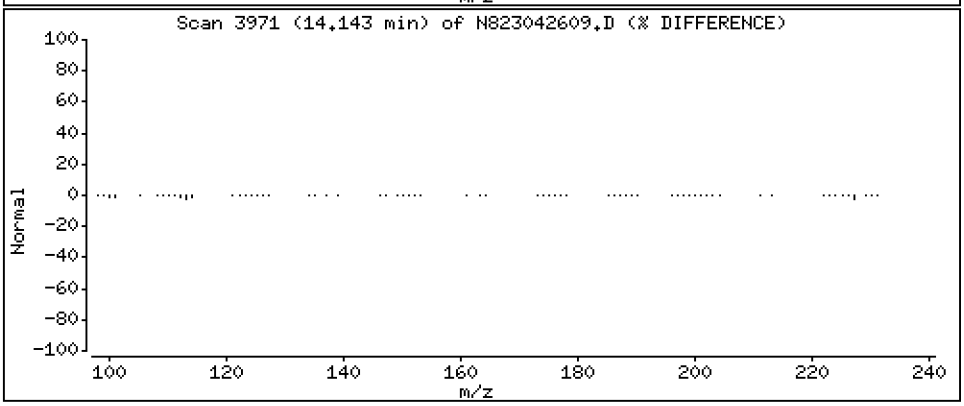












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

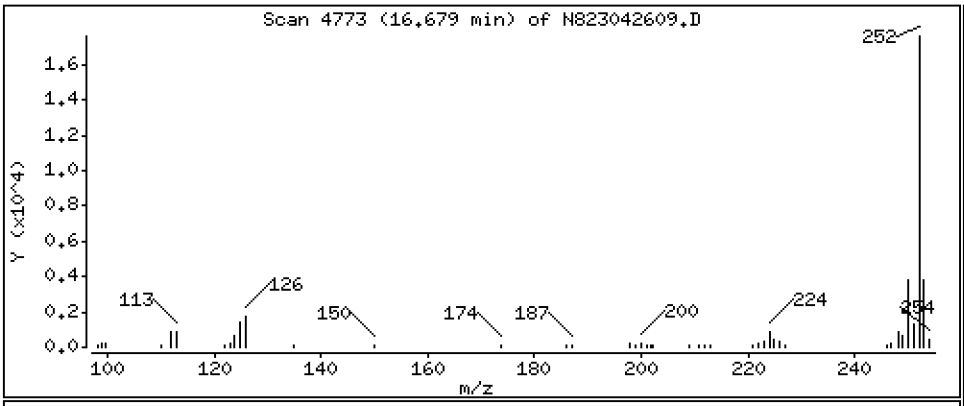
Operator: JZ

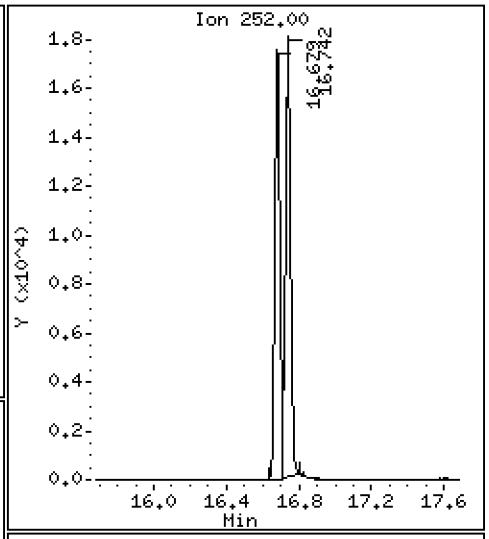
Column phase: Rxi-17sil

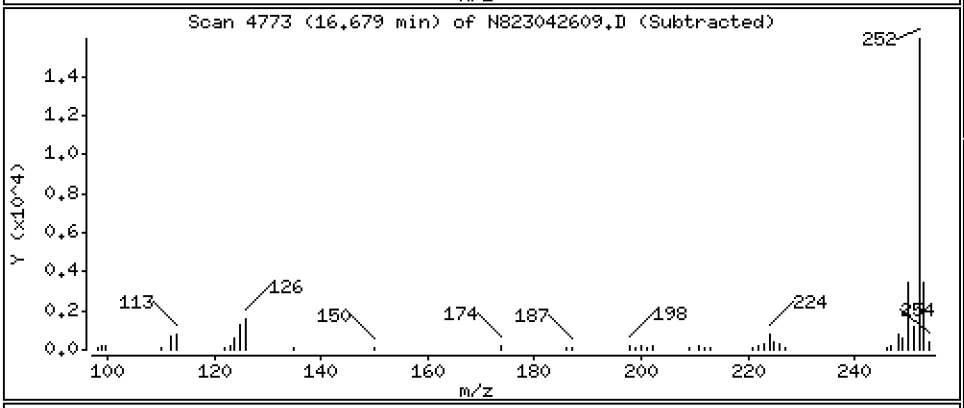
Column diameter: 0.25

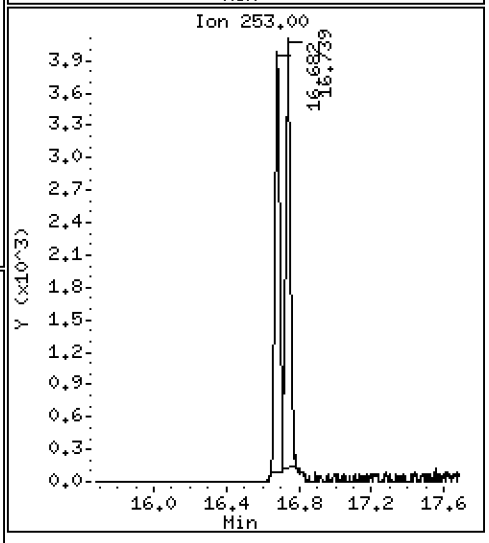
28 Benzo(b)fluoranthene

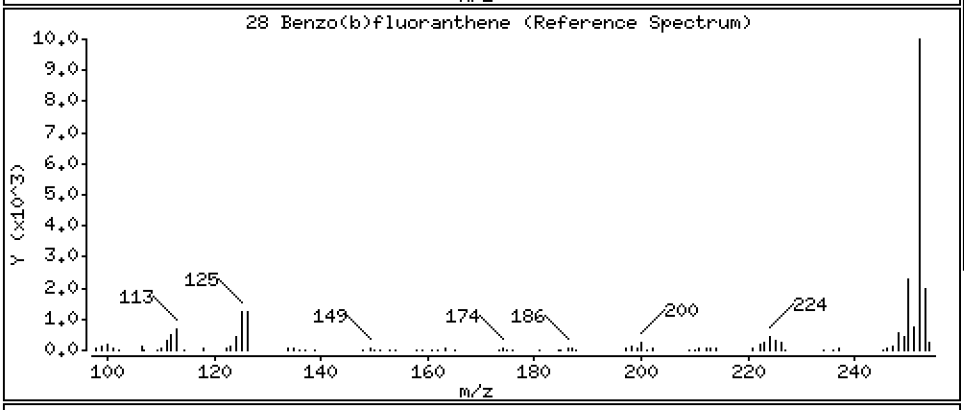
Concentration: 2.156 ug/L

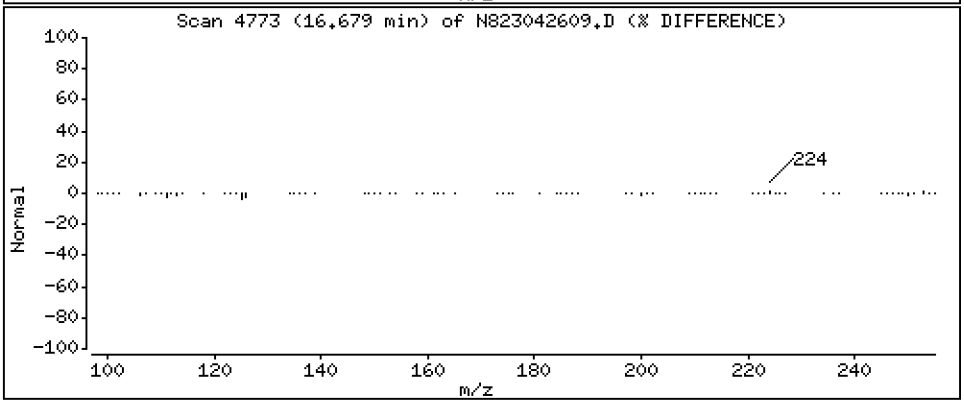












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

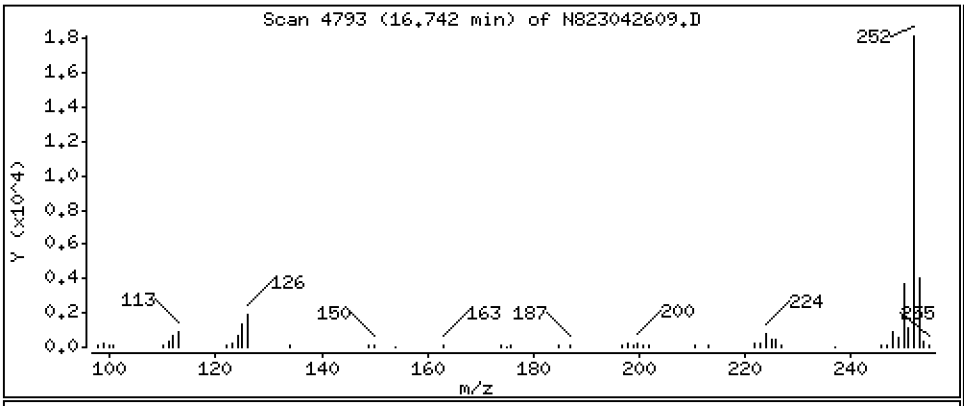
Operator: JZ

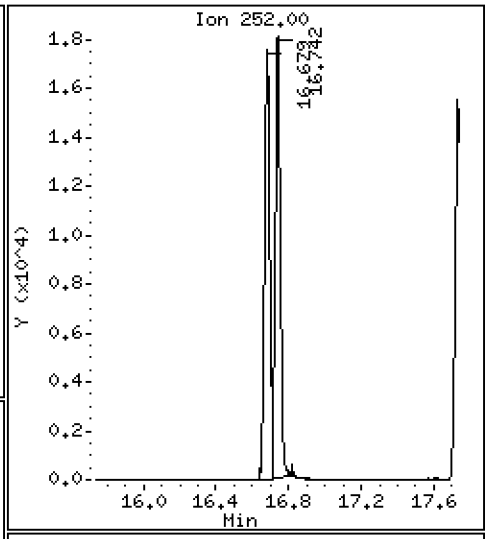
Column phase: Rxi-17sil

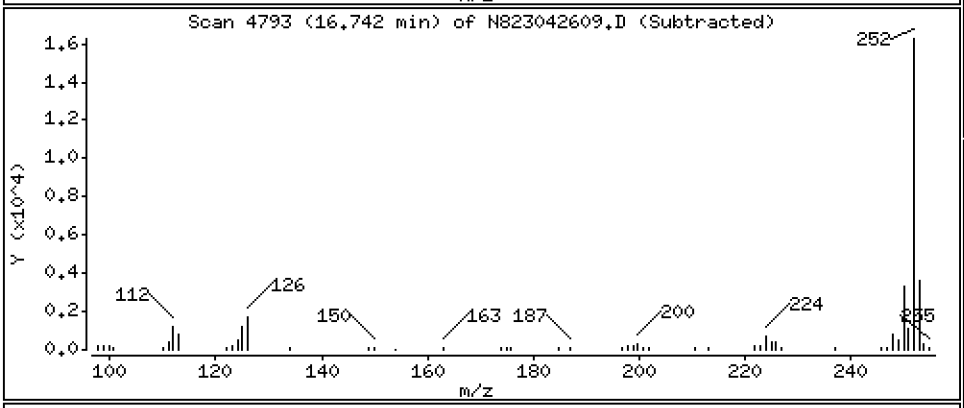
Column diameter: 0.25

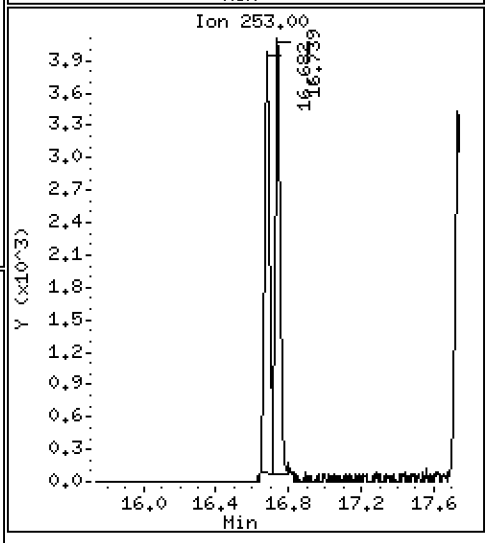
29 Benzo(k)fluoranthene

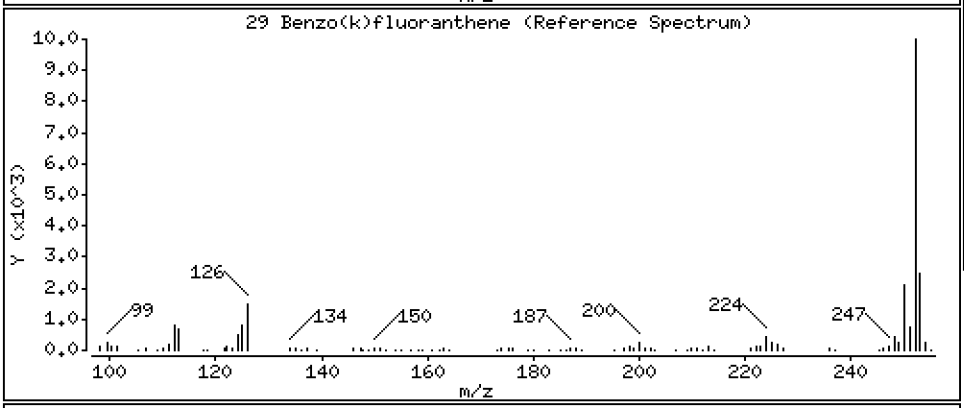
Concentration: 2.301 ug/L

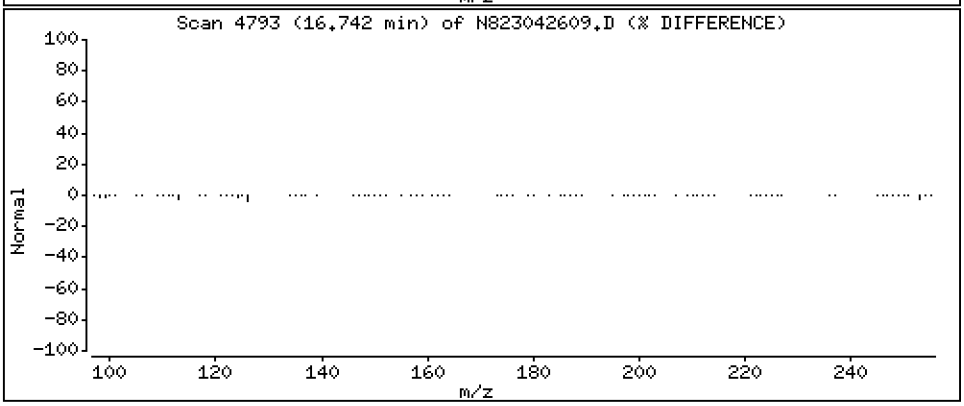












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

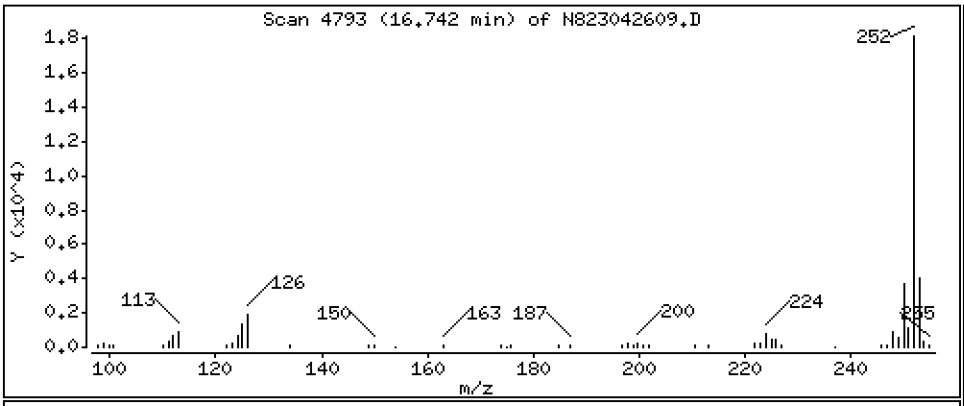
Operator: JZ

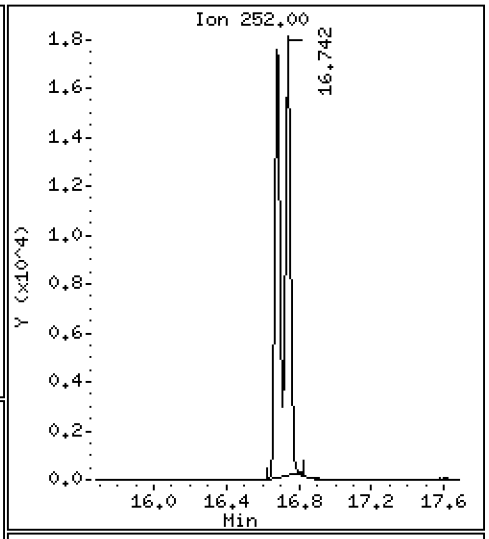
Column phase: Rxi-17sil

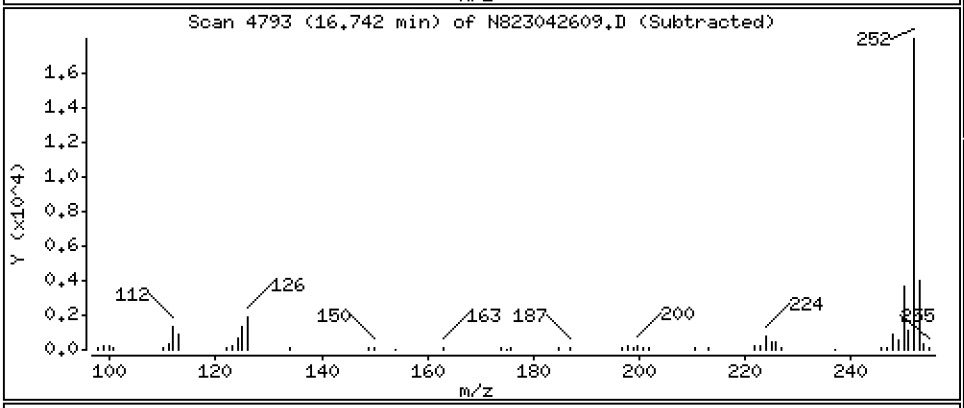
Column diameter: 0.25

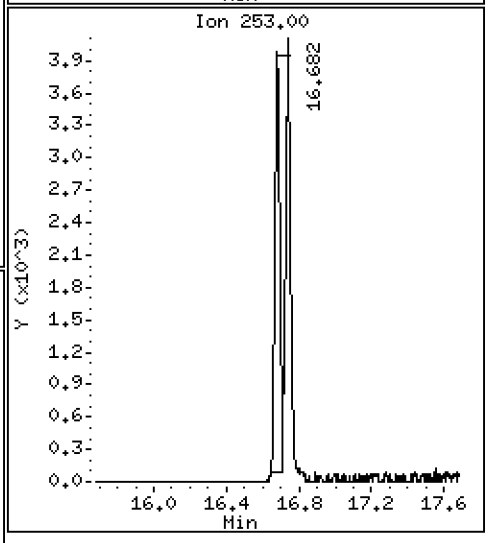
31 Total Benzofluoranthenes

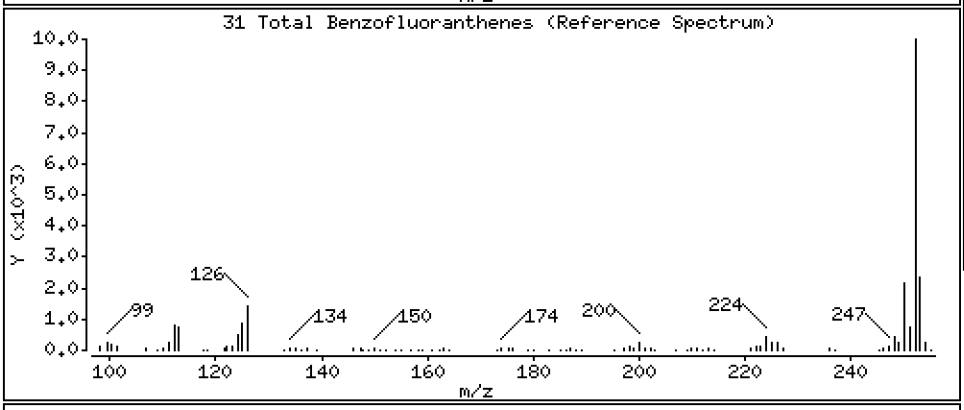
Concentration: 4.553 ug/L

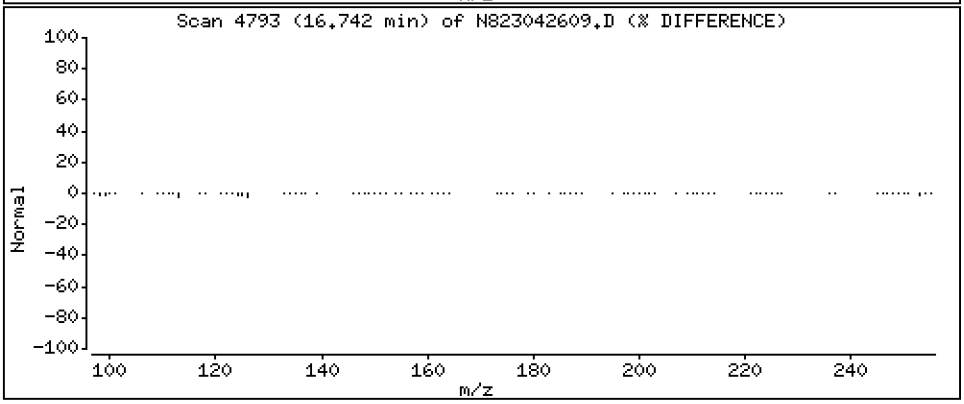












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

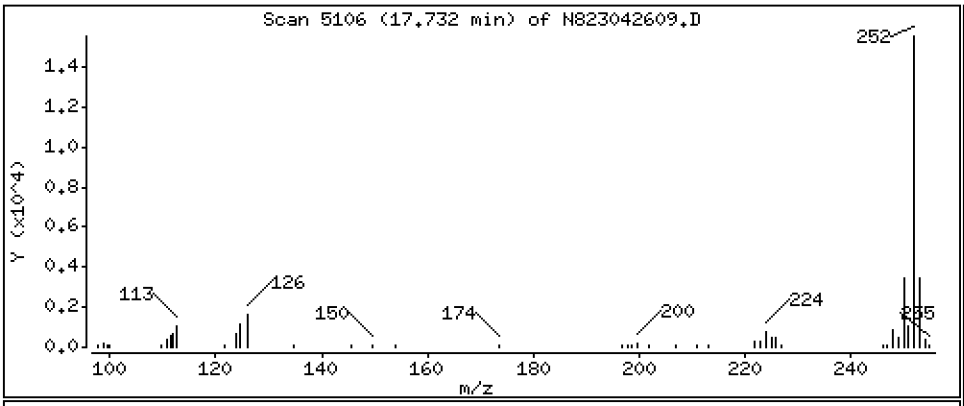
Operator: JZ

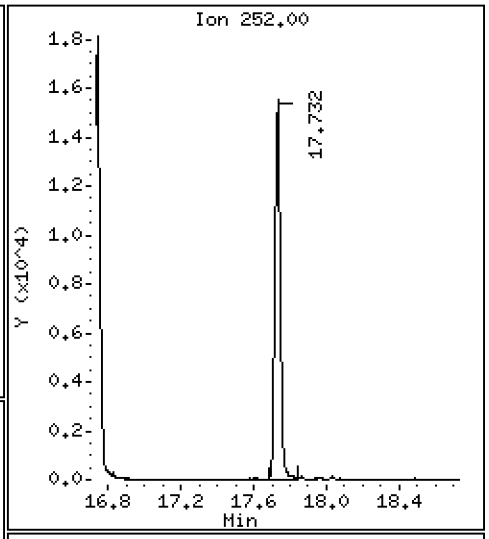
Column phase: Rxi-17sil

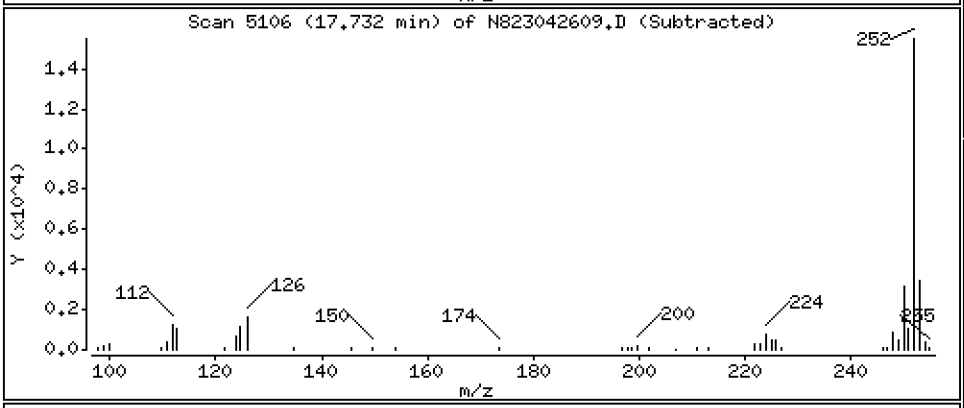
Column diameter: 0.25

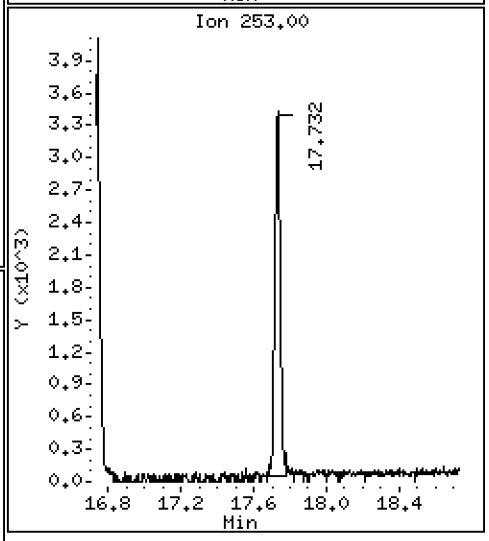
32 Benzo(a)pyrene

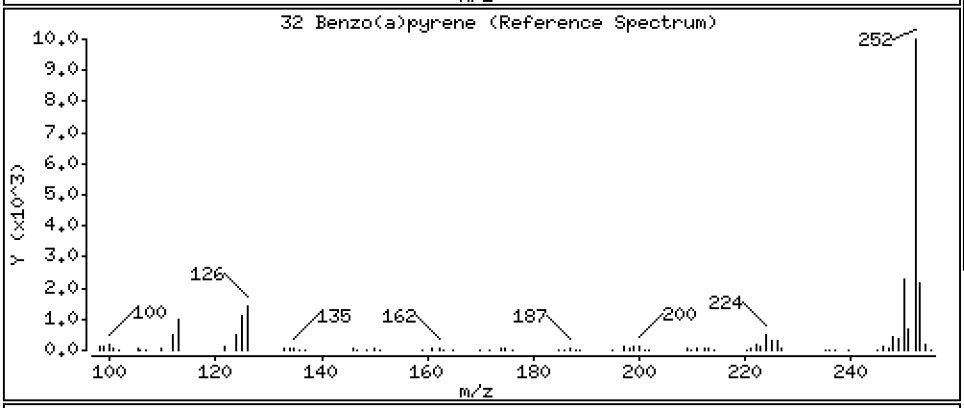
Concentration: 2.295 ug/L

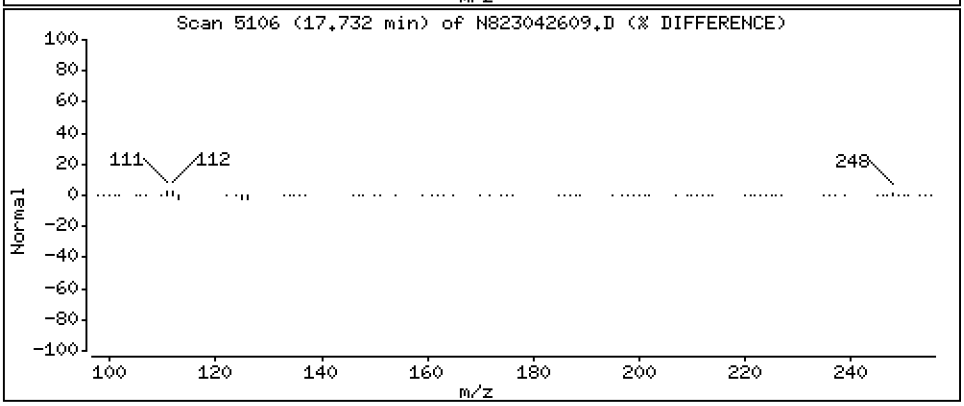












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

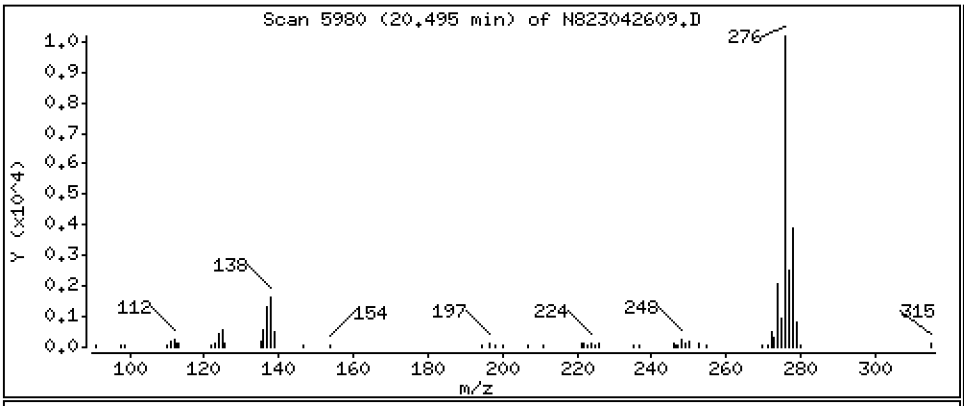
Operator: JZ

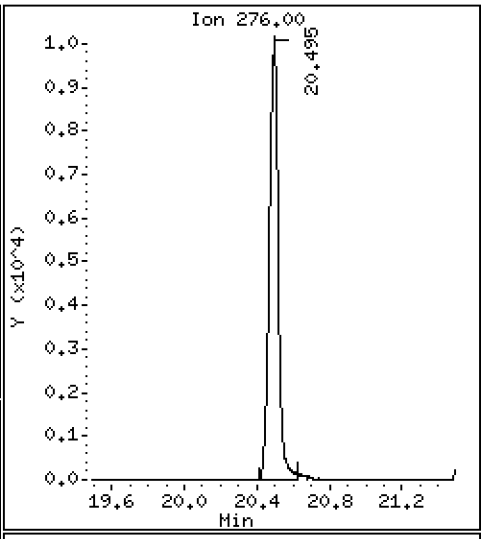
Column phase: Rxi-17sil

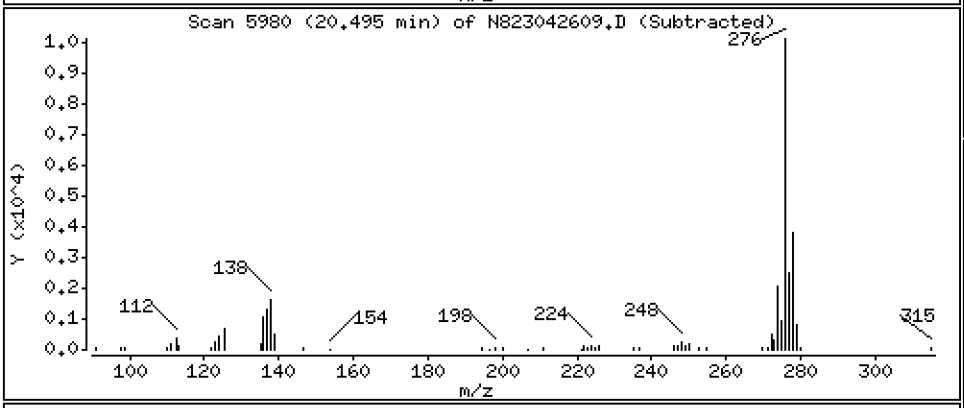
Column diameter: 0.25

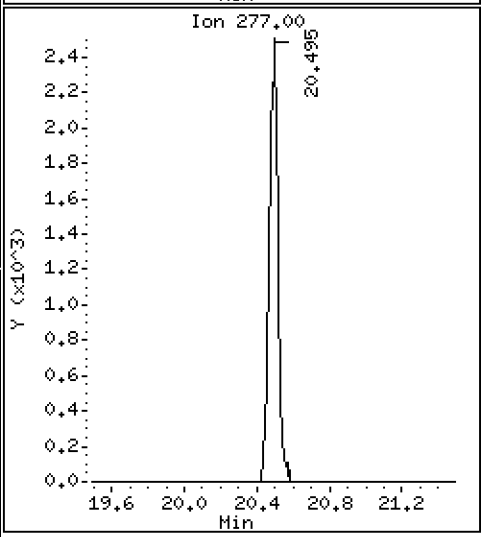
37 Indeno(1,2,3-cd)pyrene

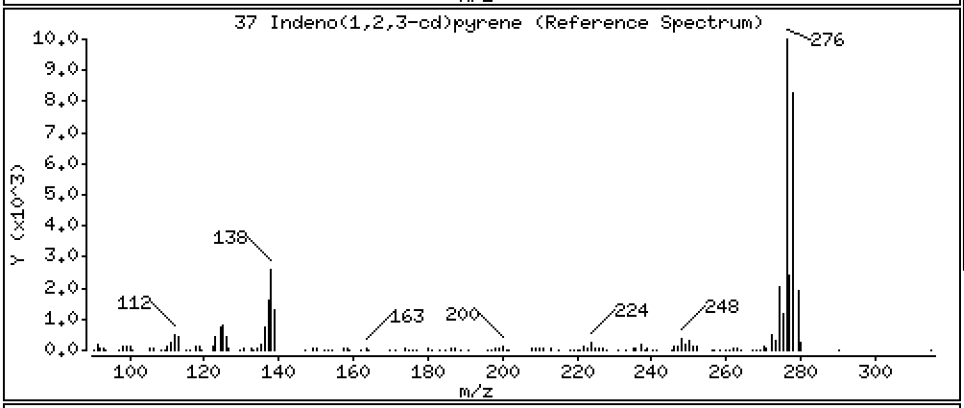
Concentration: 2.450 ug/L

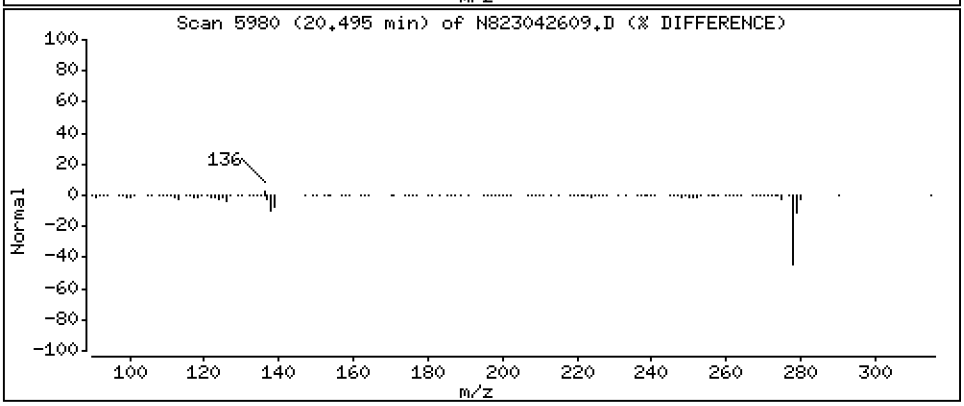












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

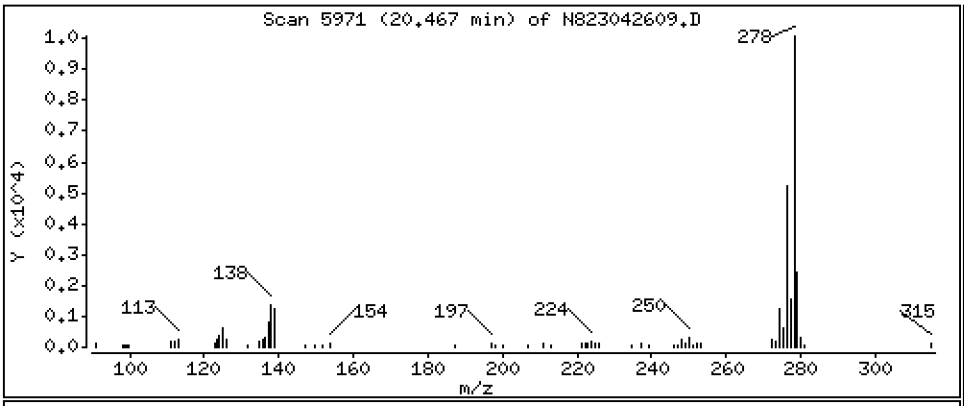
Operator: JZ

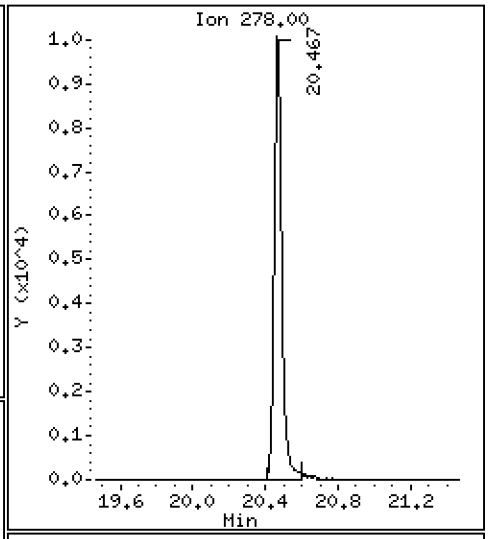
Column phase: Rxi-17sil

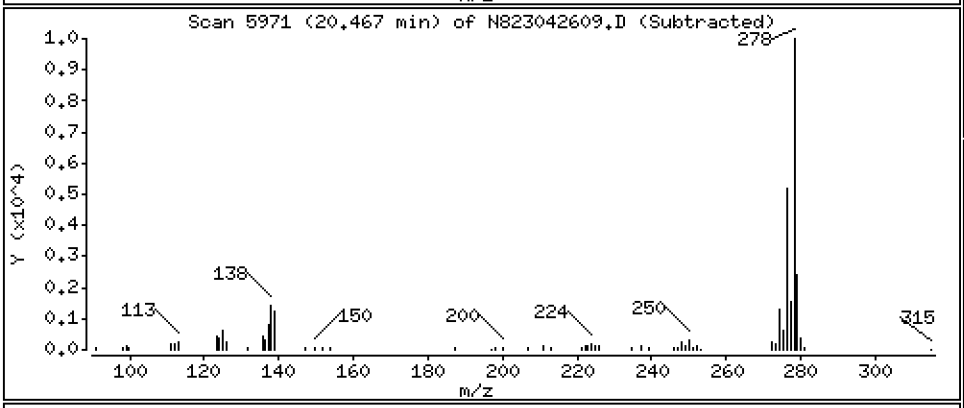
Column diameter: 0.25

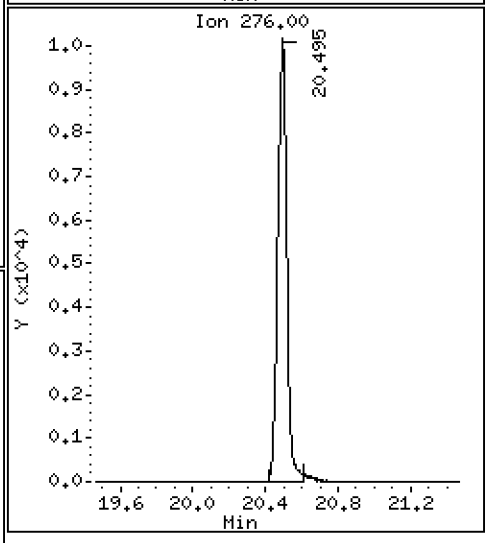
38 Dibenzo(a,h)anthracene

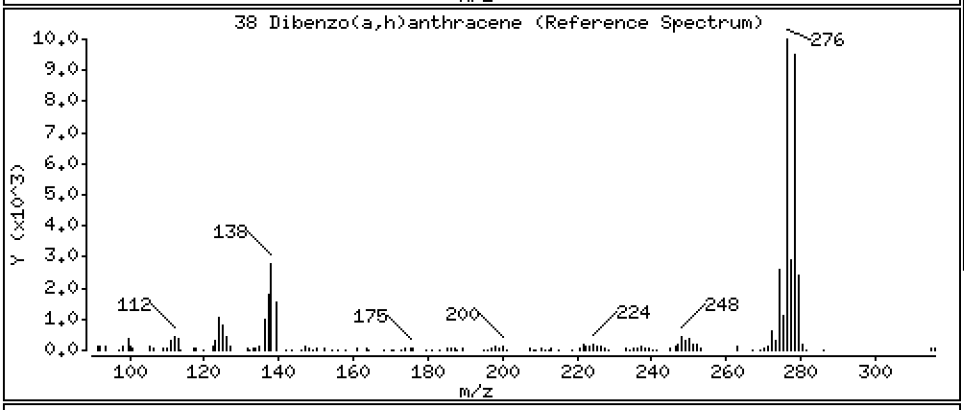
Concentration: 2.334 ug/L

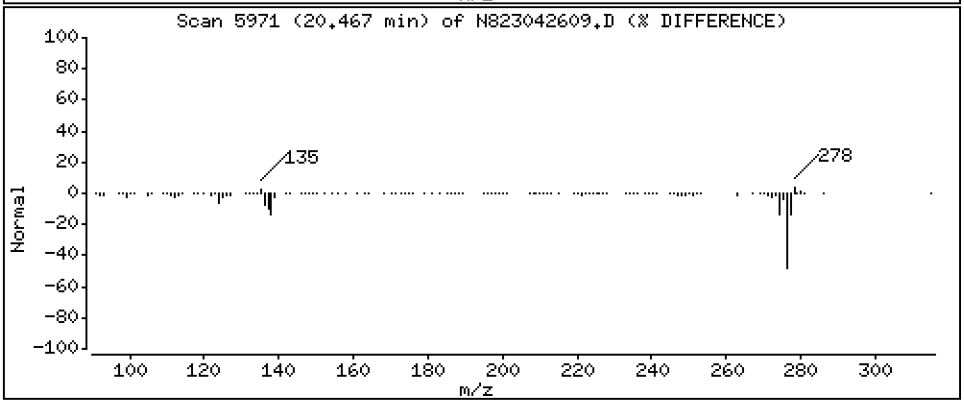












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

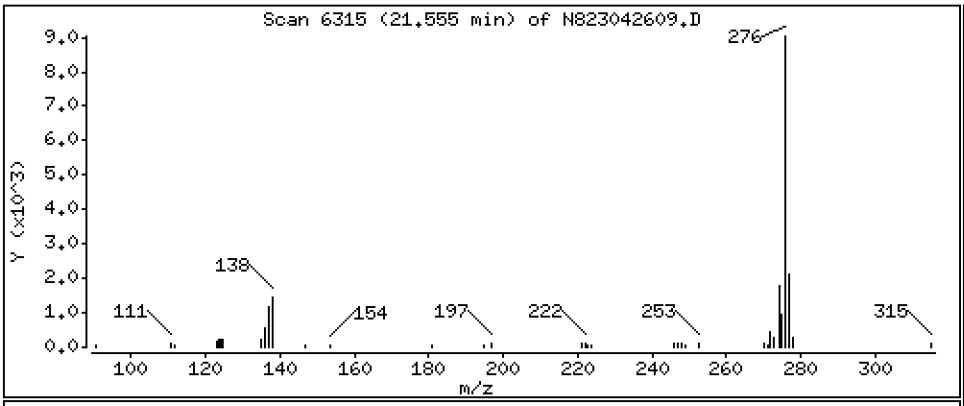
Operator: JZ

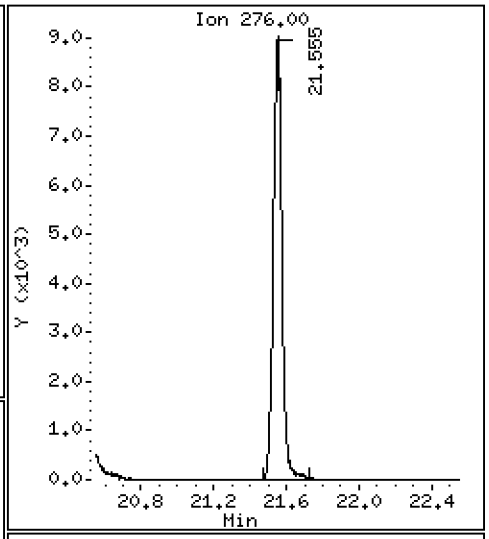
Column phase: Rxi-17sil

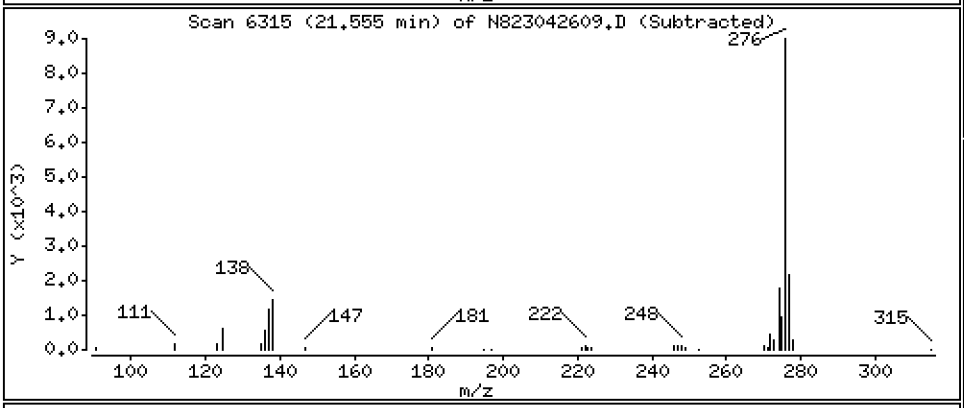
Column diameter: 0.25

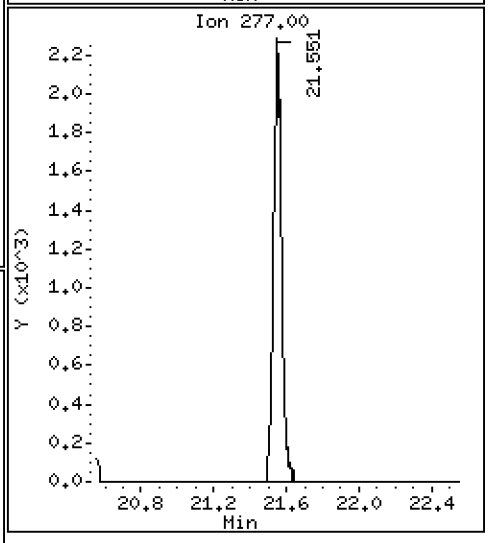
39 Benzo(g,h,i)perylene

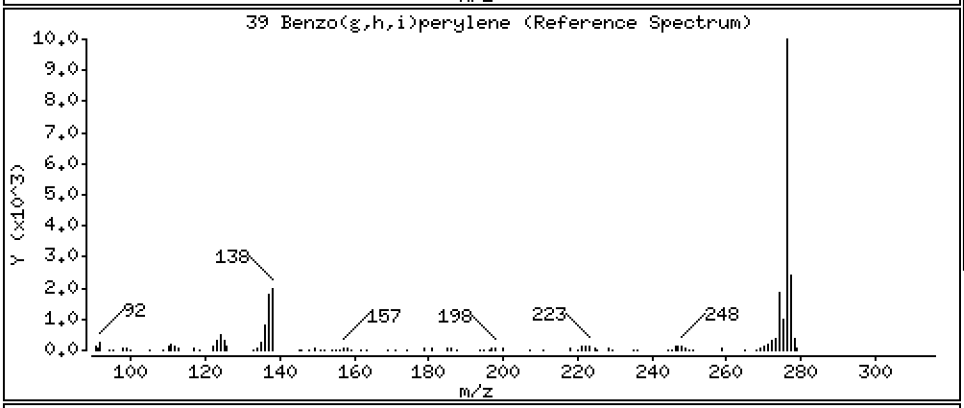
Concentration: 2.248 ug/L

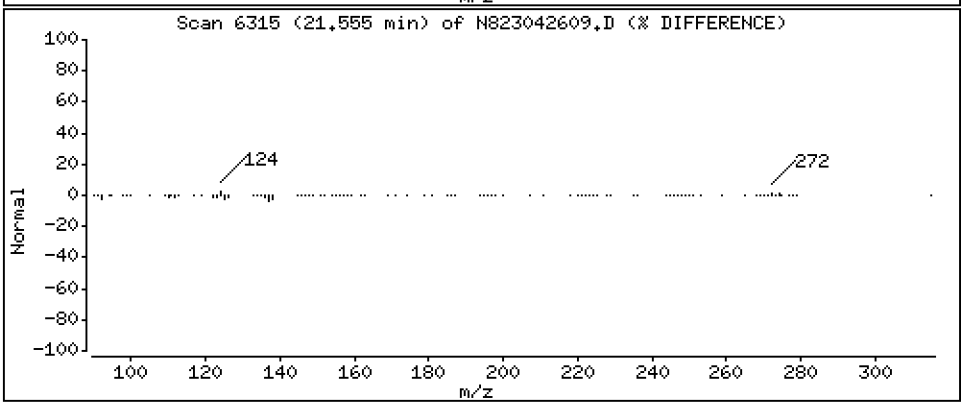












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042609.D
Lab Smp Id: SLD0372-SCV1
Inj Date : 26-APR-2023 20:49
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230426
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	20718	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	24938	2.36264	2.363
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	14334	2.39183	2.392
	5 1-methylnaphthalene	141	5.801	5.801	(1.202)	14142	2.38001	2.380
	9 Acenaphthylene	152	7.003	7.003	(0.984)	25991	2.32237	2.322
*	10 Acenaphthene-d10	164	7.113	7.110	(1.000)	12642	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	16198	2.23392	2.234
	12 Dibenzofuran	168	7.316	7.313	(1.028)	27419	2.51765	2.518
	14 Fluorene	166	7.790	7.790	(1.095)	19927	2.29268	2.293
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	24547	2.00000	
	16 Phenanthrene	178	9.184	9.185	(1.004)	28095	2.16083	2.161
	17 Anthracene	178	9.229	9.226	(1.009)	24487	2.00809	2.008
	22 Fluoranthene	202	10.949	10.949	(1.197)	33741	2.25628	2.256
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	11.461	11.461	(0.815)	34528	2.22695	2.227
	24 Benzo(a)anthracene	228	13.940	13.940	(0.991)	34655	2.17519	2.175
*	25 Chrysene-d12	240	14.070	14.067	(1.000)	24217	2.00000	
	27 Chrysene	228	14.142	14.139	(1.005)	33440	2.13657	2.137
	28 Benzo(b)fluoranthene	252	16.678	16.682	(0.929)	35085	2.15649	2.156
	29 Benzo(k)fluoranthene	252	16.742	16.739	(0.932)	35276	2.30130	2.301
	31 Total Benzofluoranthenes	252	16.742	16.682	(0.932)	68883	4.55291	4.553(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.731	17.731	(0.987)	32452	2.29472	2.295
*	33 Perylene-d12	264	17.959	17.959	(1.000)	24956	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.495	20.492	(1.141)	35264	2.44967	2.450
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.466	20.467	(1.140)	29838	2.33423	2.334
	39 Benzo(g,h,i)perylene	276	21.554	21.551	(1.200)	29972	2.24768	2.248

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042609.D
Lab Smp Id: SLD0372-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	20718	10.80
10 Acenaphthene-d10	10729	5365	21458	12642	17.83
15 Phenanthrene-d10	20748	10374	41496	24547	18.31
25 Chrysene-d12	20954	10477	41908	24217	15.57
33 Perylene-d12	21563	10782	43126	24956	15.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.01
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042609.D

Lab ID: SLD0372-SCV1
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 20:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

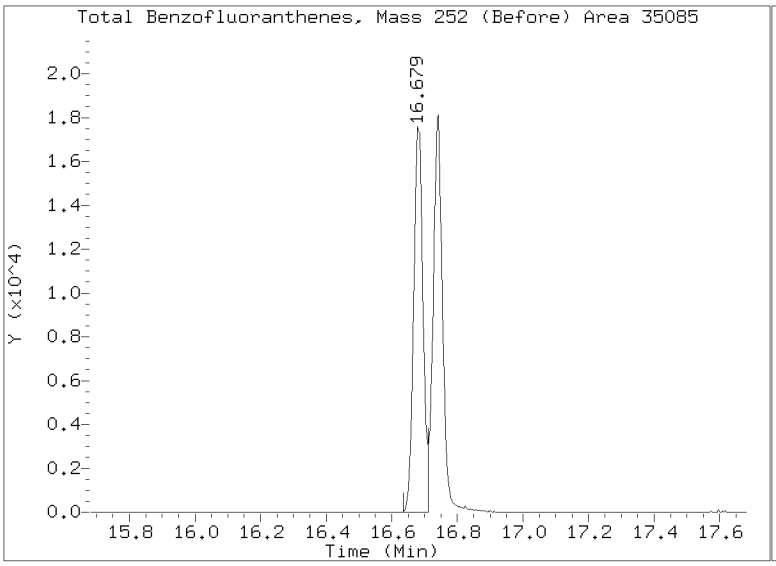
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, pnascv.sub = 0.0500

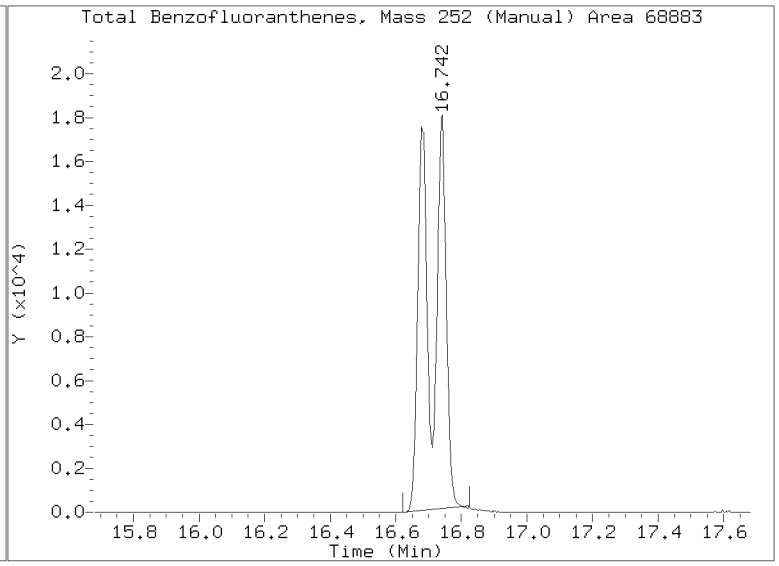
Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042609.D
Injection Date: 26-APR-2023 20:49
Lab ID:SLD0372-SCV1 Client ID:
Report Date: 04/27/2023 11:03





INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00070	Instrument:	NT17
Calibration Date:	05/16/2023	Column (1):	ZB-5MS

Calibration Comments: SIM ABN DUAL SCAN

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
1,4-Dichlorobenzene	0.05	1.691138	0.1	1.655409	0.2	1.598139	0.5	1.570033	1	1.553587	2.5	1.530901
1,2-Dichlorobenzene	0.05	1.593379	0.1	1.752436	0.2	1.537622	0.5	1.56151	1	1.490372	2.5	1.471163
Benzyl Alcohol	0.05	0.7992089	0.1	0.9533373	0.2	0.9961691	0.5	1.057984	1	1.009194	2.5	1.109553
Benzoic acid	0.2		0.4		0.8	1.818224E-02	2	7.882056E-02	4	0.1440004	10	0.2083584
2,4-Dimethylphenol	0.1	0.3686173	0.2	0.3926927	0.4	0.3929127	1	0.3983172	2	0.3920884	5	0.3936473
1,2,4-Trichlorobenzene	0.05	0.3693107	0.1	0.3657439	0.2	0.3594776	0.5	0.3516595	1	0.3453927	2.5	0.3405857
N-Nitrosodiphenylamine	0.05	0.5374742	0.1	0.5686295	0.2	0.5611377	0.5	0.5779646	1	0.5846267	2.5	0.5733399
Pentachlorophenol	0.1	2.188652E-02	0.2	4.148927E-02	0.4	4.372929E-02	1	5.895972E-02	2	7.925497E-02	5	0.1089373
2-Fluorophenol	0.075	0.934426	0.15	1.041412	0.3	1.133285	0.75	1.236632	1.5	1.306622	3.75	1.344967
p-Terphenyl-d14	0.05	0.8616656	0.1	0.7406533	0.2	0.7424803	0.5	0.7399778	1	0.7493396	2.5	0.7470775

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00070	Instrument:	NT17
Calibration Date:	05/16/2023	Column (1):	ZB-5MS

Calibration Comments: SIM ABN DUAL SCAN

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
1,4-Dichlorobenzene	5	1.526751	10	1.470473								
1,2-Dichlorobenzene	5	1.480587	10	1.45911								
Benzyl Alcohol	5	1.139568	10	1.15267								
Benzoic acid	20	0.2280701	40	0.244783								
2,4-Dimethylphenol	10	0.3743479	20	0.365561								
1,2,4-Trichlorobenzene	5	0.3329241	10	0.3276487								
N-Nitrosodiphenylamine	5	0.5489592	10	0.5560433								
Pentachlorophenol	10	0.1232907	20	0.1406918								
2-Fluorophenol	7.5	1.354833	15	1.326579								
p-Terphenyl-d14	5	0.7515412	10	0.7392585								

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00070	Instrument:	NT17
Calibration Date:	05/16/2023	Column (1):	ZB-5MS

Calibration Comments: SIM ABN DUAL SCAN

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
1,4-Dichlorobenzene	1.574554	4.6			RSD (15)	
1,2-Dichlorobenzene	1.543272	6.3			RSD (15)	
Benzyl Alcohol	1.027211	11.3			RSD (15)	
Benzoic acid	0.1537024	58.8	0.9927		LCOD (0.99)	
2,4-Dimethylphenol	0.3847731	3.4			RSD (15)	
1,2,4-Trichlorobenzene	0.3490929	4.3			RSD (15)	
N-Nitrosodiphenylamine	0.5635219	2.8			RSD (15)	
Pentachlorophenol	7.727995E-02	55.7		0.9980	QCOD (0.99)	
2-Fluorophenol	1.209845	13.0			RSD (15)	
p-Terphenyl-d14	0.7589992	5.5			RSD (15)	

Printed: 5/24/2023 7:09:37AM

ANALYSIS SEQUENCE

SLE0339

Instrument ID: NT17
Calibration ID: GE00070
MS EM Level: 1450 EV

GCMS Description: Agilent 7890B/5977B
GCMS Column ID: L004289

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0339-TUN1	MS Tune	QC		1	L005516		05/16/2023 18:14	NT1705162301S.D	VTS	
SLE0339-CAL8	CAL 10.0	QC		2	K011110	K010831	05/16/2023 19:29	NT1705162303S.D	JGR	
SLE0339-CAL7	CAL 5.0	QC		3	K011109	K010831	05/16/2023 20:07	NT1705162304S.D	JGR	
SLE0339-CAL6	CAL 2.5	QC		4	K011108	K010831	05/16/2023 20:44	NT1705162305S.D	JGR	
SLE0339-CAL5	CAL 1.0	QC		5	K011107	K010831	05/16/2023 21:22	NT1705162306S.D	JGR	
SLE0339-CAL4	CAL 0.50	QC		6	K011106	K010831	05/16/2023 21:59	NT1705162307S.D	JGR	
SLE0339-CAL3	CAL 0.20	QC		7	K011105	K010831	05/16/2023 22:37	NT1705162308S.D	JGR	
SLE0339-CAL2	CAL 0.10	QC		8	L002877	K010831	05/16/2023 23:14	NT1705162309S.D	JGR	
SLE0339-CAL1	CAL 0.05	QC		9	L002878	K010831	05/16/2023 23:51	NT1705162310S.D	JGR	
SLE0339-SCV1	SCV 5.0	QC		10	K010066	K010831	05/17/2023 00:29	NT1705162311S.D	JGR	
SLE0339-ICB1	Initial Cal Blank	QC		11	K005156	K010831	05/17/2023 01:07	NT1705162312S.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230516.b\SIM.b

	Time	Filename	LabID	ClientId	DF											
1	1814	NT1705162301S.D	SLE0339-TUN1		1	|NO ISTDS FOUND||										
2	1929	NT1705162303S.D	SLE0339-CAL8		1	| 9.38	304989	||11.85	1098933	||15.45	590948	||18.47	969131	||23.47	604233	||26.16	501580|
3	2007	NT1705162304S.D	SLE0339-CAL7		1	| 9.38	303993	||11.84	1096471	||15.44	588455	||18.47	962811	||23.46	594121	||26.16	517800|
4	2044	NT1705162305S.D	SLE0339-CAL6		1	| 9.38	312779	||11.84	1112850	||15.44	600559	||18.47	997102	||23.46	638760	||26.16	569257|
5	2122	NT1705162306S.D	SLE0339-CAL5		1	| 9.38	316066	||11.84	1102073	||15.44	583826	||18.47	970917	||23.46	590568	||26.16	537938|
6	2159	NT1705162307S.D	SLE0339-CAL4		1	| 9.38	310689	||11.84	1075836	||15.44	560079	||18.46	909163	||23.46	547811	||26.16	508065|
7	2237	NT1705162308S.D	SLE0339-CAL3		1	| 9.38	324202	||11.84	1123074	||15.44	587914	||18.46	972346	||23.46	582965	||26.15	529057|
8	2314	NT1705162309S.D	SLE0339-CAL2		1	| 9.38	342586	||11.84	1209699	||15.44	635389	||18.46	1076905	||23.46	694468	||26.16	649331|
9	2351	NT1705162310S.D	SLE0339-CAL1		1	| 9.38	317514	||11.84	1096096	||15.44	567814	||18.46	924770	||23.46	560403	||26.15	515224|
10	0029	NT1705162311S.D	SLE0339-SCV1		1	| 9.38	280298	||11.84	999390	||15.44	527927	||18.47	860054	||23.46	527529	||26.16	475440|
11	0107	NT1705162312S.D	SLE0339-ICB1		1	| 9.38	302680	||11.84	1065796	||15.44	551880	||18.46	903730	||23.46	538208	||26.15	508161|

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230516.b\SIM.b

Instrument: nt17.i Date: 16-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1814	NT1705162301S.D	SLE0339-TUN1	1	NO MANUAL INTEGRATION
1929	NT1705162303S.D	SLE0339-CAL8	1	Benzoic acid,
2007	NT1705162304S.D	SLE0339-CAL7	1	Benzoic acid,
2044	NT1705162305S.D	SLE0339-CAL6	1	Benzoic acid,
2122	NT1705162306S.D	SLE0339-CAL5	1	Benzoic acid,
2159	NT1705162307S.D	SLE0339-CAL4	1	Benzoic acid,
2237	NT1705162308S.D	SLE0339-CAL3	1	Benzoic acid,
2314	NT1705162309S.D	SLE0339-CAL2	1	NO MANUAL INTEGRATION
2351	NT1705162310S.D	SLE0339-CAL1	1	Benzyl alcohol, Pentachlorophenol,
0029	NT1705162311S.D	SLE0339-SCV1	1	NO MANUAL INTEGRATION
0107	NT1705162312S.D	SLE0339-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 24-May-2023 07:10

NT1705162301S.D	Data Locked	van, 24-May-2023 07:10
NT1705162303S.D	Data Locked	van, 24-May-2023 07:10
NT1705162304S.D	Data Locked	van, 24-May-2023 07:10
NT1705162305S.D	Data Locked	van, 24-May-2023 07:10
NT1705162306S.D	Data Locked	van, 24-May-2023 07:10
NT1705162307S.D	Data Locked	van, 24-May-2023 07:10
NT1705162308S.D	Data Locked	van, 24-May-2023 07:10
NT1705162309S.D	Data Locked	van, 24-May-2023 07:10
NT1705162310S.D	Data Locked	van, 24-May-2023 07:10
NT1705162311S.D	Data Locked	van, 24-May-2023 07:10
NT1705162312S.D	Data Locked	van, 24-May-2023 07:10

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Calibration File Names:
Level 1: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162310S.D
Level 2: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162309S.D
Level 3: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162308S.D
Level 4: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162307S.D
Level 5: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162306S.D
Level 6: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162305S.D
Level 7: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162304S.D
Level 8: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162303S.D

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
138 Chlorobenzilate	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
139 Isodrin	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
140 Diallate A	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
141 Diallate B	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
142 1,2-Dibromo-3-Chloropropane	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
135 2,3,5,6-Tetrachlorophenol	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
136 2,3,4,5-tetrachlorophenol	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
137 NewCpnd_131	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
133 Butylatedhydroxytoluene	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
132 3,6-Dimethylphenanthrene	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1 / 5.0000 Level 7	0.1000000 Level 2 / 10.0000 Level 8	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
144 alpha-Terpineol	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
125 Safrole	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
124 3,4-Dimethylphenol	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
123 Acetophenone	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
122 Furfuraldehyde	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
143 1,4-Dioxane	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
121 Quinoline	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
120 2,3,4,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
106 Guaiacol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
105 1-methylnaphthalene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
3 Phenol	1.51023	1.70024	1.72602	1.82915	1.89445	1.95412					
	1.92362	1.88396					AVRG		1.80272		8.25933
4 Bis(2-Chloroethyl)ether	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
6 2-Chlorophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
7 1,3-Dichlorobenzene	1.69441	1.70690	1.63762	1.61502	1.59572	1.58389					
	1.56474	1.52845					AVRG		1.61584		3.81605
9 1,4-Dichlorobenzene	1.69114	1.65541	1.59814	1.57003	1.55359	1.53090					
	1.52675	1.47047					AVRG		1.57455		4.56524

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
11 Benzyl alcohol	0.79921	0.95334	0.99617	1.05798	1.00919	1.10955					
	1.13957	1.15267					AVRG		1.02721		11.33041
12 1,2-Dichlorobenzene	1.59338	1.75244	1.53762	1.56151	1.49037	1.47116					
	1.48059	1.45911					AVRG		1.54327		6.27449
13 2-Methylphenol	1.18092	1.24699	1.23657	1.25154	1.27128	1.29630					
	1.25743	1.25262					AVRG		1.24921		2.64052
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
15 4-Methylphenol	1.05872	1.17530	1.20783	1.26107	1.31580	1.35817					
	1.37319	1.34972					AVRG		1.26248		8.67563
16 N-Nitroso-di-n-propylamine	0.83247	0.89648	0.90117	0.89306	0.92048	0.95340					
	0.94554	0.93637					AVRG		0.90987		4.25881
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
19 Nitrobenzene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
20 Isophorone	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
21 2-Nitrophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
22 2,4-Dimethylphenol	0.36862	0.39269	0.39291	0.39832	0.39209	0.39365					
	0.37435	0.36556					AVRG		0.38477		3.37930
23 Bis(2-Chloroethoxy)methane	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
24 Benzoic acid	*****	*****	4084	42399	158699	579679					
	1250361	2690001					LINR	0.000e+000	0.23971		0.99273
25 2,4-Dichlorophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
26 1,2,4-Trichlorobenzene	0.36931	0.36574	0.35948	0.35166	0.34539	0.34059					
	0.33292	0.32765					AVRG		0.34909		4.34135
28 Naphthalene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
29 4-Chloroaniline	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
30 Hexachlorobutadiene	0.18670	0.18395	0.18237	0.18228	0.18127	0.18340					
	0.18395	0.18659					AVRG		0.18381		1.07122
31 4-Chloro-3-methylphenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
32 2-Methylnaphthalene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
33 Hexachlorocyclopentadiene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
39 Dimethylphthalate	1.55417	1.49987	1.46681	1.45769	1.49016	1.46017					
	1.43193	1.39038					AVRG		1.46890		3.29723
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
43 3-Nitroaniline	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
44 Acenaphthene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
45 2,4-Dinitrophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
46 Dibenzofuran	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
47 4-Nitrophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
48 2,4-Dinitrotoluene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
49 Fluorene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
50 Diethylphthalate	1.29366	1.34078	1.32948	1.34347	1.37320	1.36411					
	1.33306	1.29416					AVRG		1.33399		2.16040
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
54 N-Nitrosodiphenylamine	0.53747	0.56863	0.56114	0.57796	0.58463	0.57334					
	0.54896	0.55604					AVRG		0.56352		2.78865
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
57 Hexachlorobenzene	0.19430	0.19017	0.18909	0.19114	0.18877	0.18874					
	0.19273	0.19434					AVRG		0.19116		1.23829

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
58 Pentachlorophenol	+++++	2234	4252	13401	38475	135777					
	296764	681744					QUAD	0.000e+000	9.29579	-3.13248	0.99908
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
67 Butylbenzylphthalate	0.74404	0.77665	0.80293	0.84743	0.84928	0.87703					
	0.87551	0.82547					AVRG		0.82479		5.74759
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
75 Benzo(k)fluoranthene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
76 Benzo(a)pyrene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
78 Indeno(1,2,3-cd)pyrene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
79 Dibenzo(a,h)anthracene	1.10694	1.10822	1.11198	1.13411	1.13601	1.12435					
	1.14386	1.16044					AVRG		1.12824		1.67827
80 Benzo(g,h,i)perylene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
90 N-Nitrosodimethylamine	0.65849	0.72863	0.75894	0.80050	0.82657	0.85012					
	0.82432	0.79919					AVRG		0.78085		8.05304
91 Aniline	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
101 Cholesterol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
102 beta-Sitosterol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
103 Pyridine	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 1 2-Fluorophenol	0.93443	1.04141	1.13329	1.23663	1.30662	1.34497					
	1.35483	1.32658					AVRG		1.20984		12.99690
$ 145 d8-1,4-Dioxane	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 2 Phenol-d5	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 5 2-Chlorophenol-d4	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 66 Terphenyl-d14	0.86167	0.74065	0.74248	0.73998	0.74934	0.74708					
	0.75154	0.73926					AVRG		0.75900		5.49863
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-MAY-2023 19:29
End Cal Date : 16-MAY-2023 23:51
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Last Edit : 23-May-2023 12:59 van

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Batch File: \\target\share\chem3\nt17.i\20230516.b\SIM.b
Inst ID: nt17.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	NT1705162303S	NT1705162304S	NT1705162305S	NT1705162306S	NT1705162307S	NT1705162308S	NT1705162309S	NT1705162310S
INJ.DATE:	16-MAY-2023	16-MAY-2023	16-MAY-2023	16-MAY-2023	16-MAY-2023	16-MAY-2023	16-MAY-2023	16-MAY-2023
INJ.TIME:	19:29	20:07	20:44	21:22	21:59	22:37	23:14	23:51

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	7.171	7.158	7.158	7.158	7.171	7.171	7.171	7.171	7.171	6.671-7.671	7.166	0.007
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.904	23.404-24.404	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Batch File: \\target\share\chem3\nt17.i\20230516.b\SIM.b
Inst ID: nt17.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.349	22.849-23.849	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.474	21.974-22.974	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.191	10.691-11.691	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.779	17.279-18.279	+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.310	15.810-16.810	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.707	17.207-18.207	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.921	8.421-9.421	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.736	3.236-4.236	+++++	+++++
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.914	2.414-3.414	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.148	19.648-20.648	+++++	+++++
120 2,3,4,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.588	15.088-16.088	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.587	38.087-39.087	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.382	19.882-20.882	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.734	18.234-19.234	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.987	16.487-17.487	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.204	14.704-15.704	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.586	21.086-22.086	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.692	17.192-18.192	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.247	15.747-16.747	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.055	17.555-18.555	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.228	16.728-17.728	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Batch File: \\target\share\chem3\nt17.i\20230516.b\SIM.b
Inst ID: nt17.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
	107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
	105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.899	12.399-13.399	+++++	+++++
$	2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.219	7.719-8.719	+++++	+++++
	3 Phenol	8.764	8.751	8.751	8.751	8.751	8.751	8.751	8.751	8.751	8.251-9.251	8.753	0.005
	4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.381	7.881-8.881	+++++	+++++
$	5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.466	7.966-8.966	+++++	+++++
	6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.490	7.990-8.990	+++++	+++++
	7 1,3-Dichlorobenzene	9.312	9.312	9.312	9.312	9.312	9.312	9.312	9.312	9.312	8.812-9.812	9.312	0.000
*	8 1,4-Dichlorobenzene-d4	9.376	9.376	9.376	9.376	9.376	9.376	9.376	9.376	9.376	8.876-9.876	9.376	0.000
	9 1,4-Dichlorobenzene	9.401	9.401	9.401	9.401	9.401	9.401	9.401	9.401	9.401	8.901-9.901	9.401	0.000
$	10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.164	8.664-9.664	+++++	+++++
	11 Benzyl alcohol	9.644	9.644	9.631	9.631	9.644	9.644	9.644	9.657	9.657	9.157-10.157	9.642	0.008
	12 1,2-Dichlorobenzene	9.759	9.759	9.759	9.759	9.759	9.759	9.759	9.759	9.759	9.259-10.259	9.759	0.000
	13 2-Methylphenol	9.861	9.848	9.848	9.848	9.848	9.848	9.861	9.861	9.861	9.361-10.361	9.853	0.007
	14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.381	8.881-9.881	+++++	+++++
	15 4-Methylphenol	10.129	10.117	10.117	10.117	10.117	10.117	10.129	10.130	10.130	9.630-10.630	10.122	0.007
	16 N-Nitroso-di-n-propyla	10.206	10.193	10.181	10.181	10.181	10.181	10.181	10.181	10.181	9.681-10.681	10.185	0.010
	17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.769	9.269-10.269	+++++	+++++
$	18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.893	9.393-10.393	+++++	+++++
	19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.932	9.432-10.432	+++++	+++++
	20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.375	9.875-10.875	+++++	+++++
	21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.549	10.049-11.049	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Batch File: \\target\share\chem3\nt17.i\20230516.b\SIM.b
Inst ID: nt17.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	11.164	11.164	11.164	11.151	11.151	11.151	11.151	11.164	11.164	10.664-11.664	11.158	0.007
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.804	10.304-11.304	+++++	+++++
	24 Benzoic acid	11.471	11.407	11.356	11.305	11.279	11.356	+++++	+++++	11.356	10.856-11.856	11.362	0.069
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.007	10.507-11.507	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.764	11.764	11.751	11.751	11.751	11.751	11.751	11.751	11.751	11.251-12.251	11.754	0.006
*	27 Naphthalene-d8	11.853	11.840	11.840	11.840	11.840	11.840	11.840	11.841	11.841	11.341-12.341	11.842	0.004
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.297	10.797-11.797	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.436	10.936-11.936	+++++	+++++
	30 Hexachlorobutadiene	12.235	12.235	12.235	12.235	12.235	12.235	12.235	12.235	12.235	11.735-12.735	12.235	0.000
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.411	11.911-12.911	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.682	12.182-13.182	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.146	12.646-13.646	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.309	12.809-13.809	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.386	12.886-13.886	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.456	12.956-13.956	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.665	13.165-14.165	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.928	13.428-14.428	+++++	+++++
	39 Dimethylphthalate	14.952	14.939	14.939	14.939	14.926	14.926	14.926	14.926	14.926	14.426-15.426	14.934	0.009
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.524	14.024-15.024	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.501	14.001-15.001	+++++	+++++
*	42 Acenaphthene-d10	15.449	15.437	15.436	15.436	15.437	15.436	15.436	15.437	15.437	14.937-15.937	15.438	0.005
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.779	14.279-15.279	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.895	14.395-15.395	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Batch File: \\target\share\chem3\nt17.i\20230516.b\SIM.b
Inst ID: nt17.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.003	14.503-15.503	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.220	14.720-15.720	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.135	14.635-15.635	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.305	14.805-15.805	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.931	15.431-16.431	+++++	+++++
	50 Diethylphthalate	16.392	16.380	16.380	16.380	16.380	16.380	16.380	16.380	16.380	15.880-16.880	16.381	0.005
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.923	15.423-16.423	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.039	15.539-16.539	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.139	15.639-16.639	+++++	+++++
	54 N-Nitrosodiphenylamine	16.787	16.774	16.774	16.774	16.762	16.762	16.762	16.774	16.774	16.274-17.274	16.771	0.009
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.463	15.963-16.963	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.918	16.418-17.418	+++++	+++++
	57 Hexachlorobenzene	17.844	17.844	17.844	17.844	17.844	17.844	17.844	17.844	17.844	17.344-18.344	17.844	0.000
	58 Pentachlorophenol	18.201	18.201	18.201	18.201	18.201	18.201	18.201	18.214	18.214	17.714-18.714	18.202	0.005
*	59 Phenanthrene-d10	18.469	18.469	18.469	18.469	18.456	18.456	18.456	18.456	18.456	17.956-18.956	18.462	0.007
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.885	17.385-18.385	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.978	17.478-18.478	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.311	17.811-18.811	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.123	18.623-19.623	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.276	19.776-20.776	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.694	20.194-21.194	+++++	+++++
$	66 Terphenyl-d14	21.567	21.555	21.555	21.554	21.555	21.554	21.554	21.555	21.555	21.055-22.055	21.556	0.005
	67 Butylbenzylphthalate	22.473	22.473	22.460	22.460	22.460	22.460	22.460	22.460	22.460	21.960-22.960	22.463	0.006
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.854	22.354-23.354	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Batch File: \\target\share\chem3\nt17.i\20230516.b\SIM.b
Inst ID: nt17.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	23.468	23.455	23.455	23.455	23.455	23.455	23.455	23.455	23.455	22.955-23.955	23.457	0.005
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.815	22.315-23.315	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.923	22.423-23.423	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.947	22.447-23.447	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.930	23.430-24.430	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.650	24.150-25.150	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.688	24.188-25.188	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.238	24.738-25.738	+++++	+++++
*	77 Perylene-d12	26.160	26.160	26.160	26.160	26.160	26.147	26.160	26.147	26.147	25.647-26.647	26.157	0.006
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.736	27.236-28.236	+++++	+++++
	79 Dibenzo(a,h)anthracene	28.969	28.957	28.957	28.944	28.944	28.944	28.944	28.944	28.944	28.444-29.444	28.950	0.010
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	28.435	27.935-28.935	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.085	15.585-16.585	+++++	+++++
	90 N-Nitrosodimethylamine	5.095	5.082	5.069	5.082	5.082	5.082	5.082	5.095	5.095	4.595-5.595	5.083	0.008
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.289	7.789-8.789	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.516	20.016-21.016	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

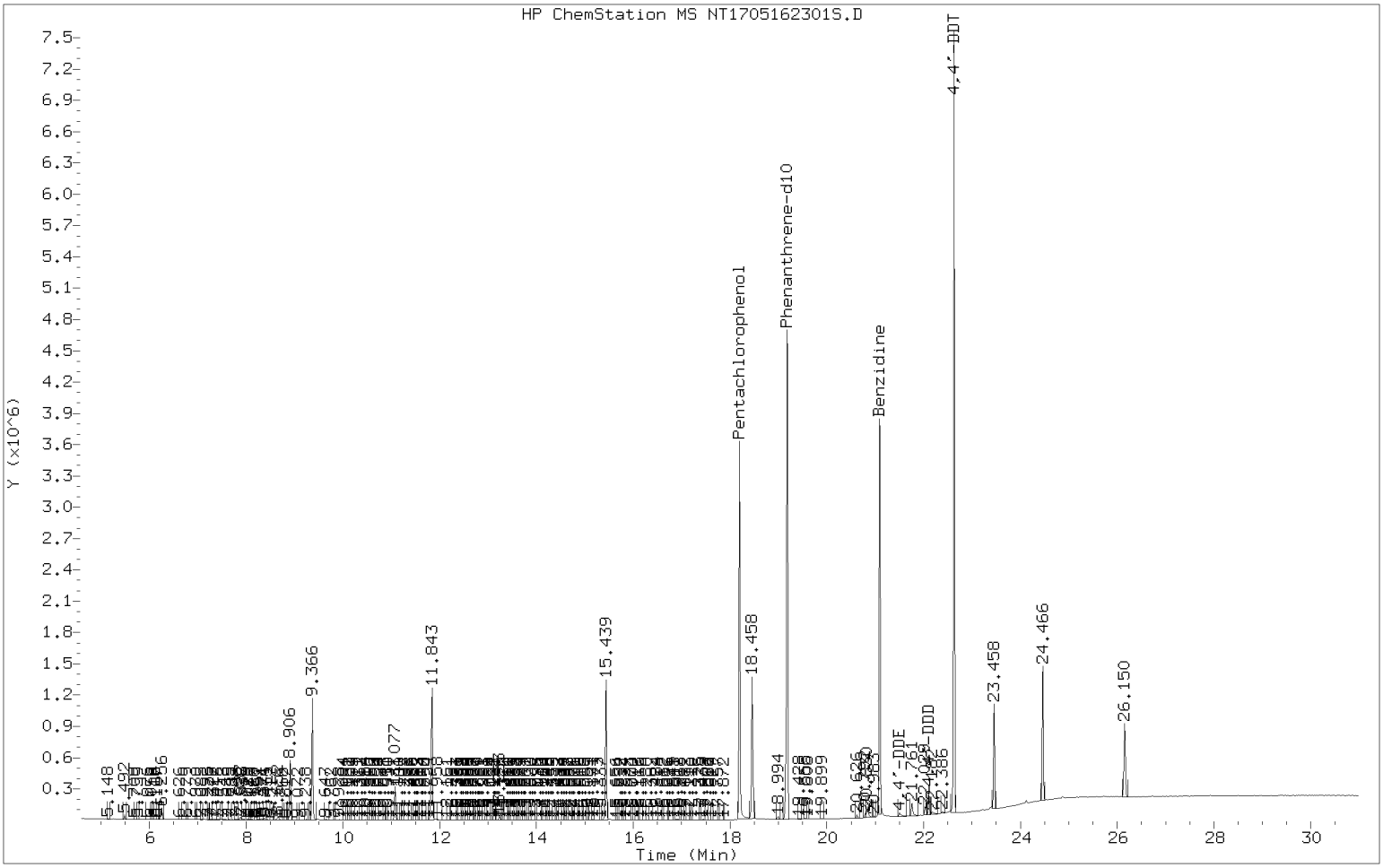
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

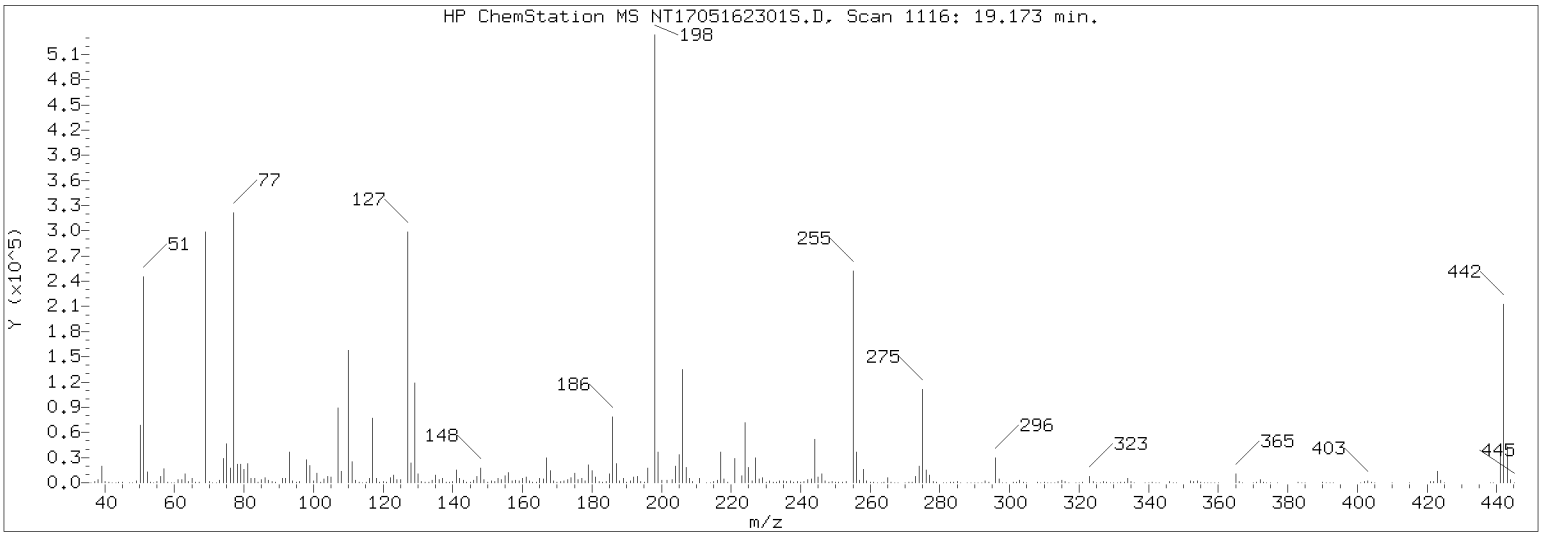
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Batch File: \\target\share\chem3\nt17.i\20230516.b\SIM.b
Inst ID: nt17.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.609	19.109-20.109	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.438	24.938-25.938	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.384	25.884-26.884	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.881	43.381-44.381	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	45.573	45.073-46.073	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.589	4.089-5.089	+++++	+++++

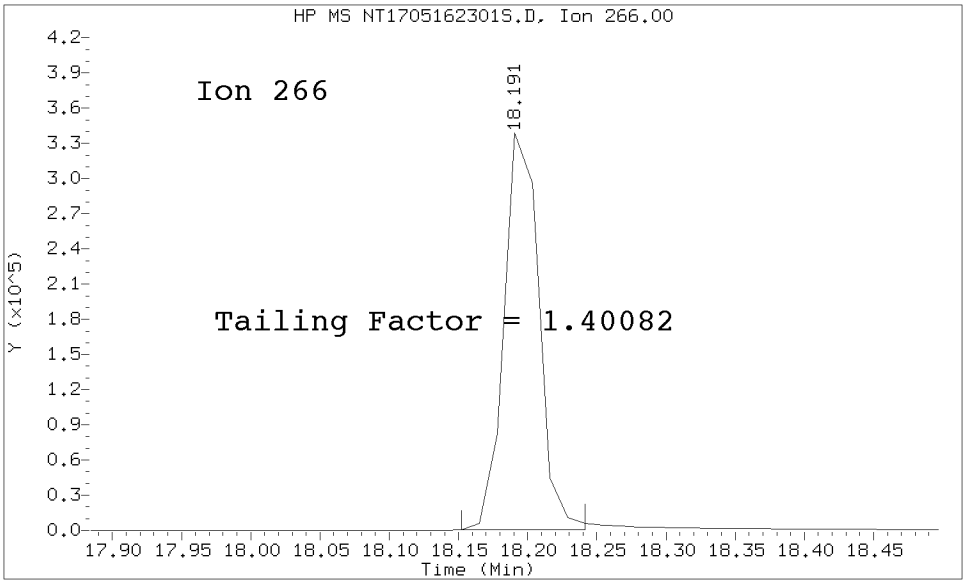
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230516.b/SIM.b/NT1705162301S.D/NT1705162301S.D
Method Used: \20230516.b\SIM.b\DFTPP8270E.m Inst: nt17
Injection Date: 16-MAY-2023 18:14 Operator: VTS
Sample Info: SLE0339-TUN1 SLE0339-TUN1
Report Date: 05/24/2023 06:46



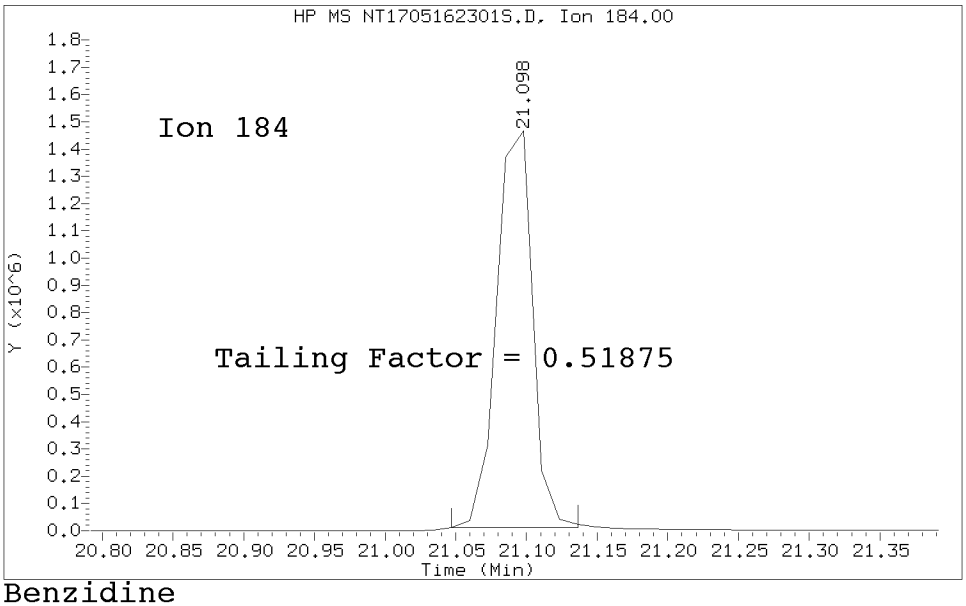


Datafile Analyzed: /20230516.b/SIM.b/NT1705162301S.D/NT1705162301S.D
Method Used: \20230516.b\DFTPP8270E.m\sw846ddt.m Inst: nt17
Injection Date: 16-MAY-2023 18:14 Operator: JGR
Sample Info: NT1705162301
Report Date: 05/24/2023 06:46



Pentachlorophenol
==========
Exp. RT = 18.191
Found RT = 18.191

Tail Factor = 1.401 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 21.098
Found RT = 21.098

Tail Factor = 0.519 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4008163	2.000	PASS
Benzidine	0.5187468	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1797024			N/A
4,4-DDE	5899	0.3	20.0	PASS
4,4-DDD	55596	3.0	20.0	PASS
4,4-DDD + DDE	61495	3.3	20.0	PASS

Tuning Sample, nt17.i/20230516.b/SIM.b/NT1705162301S.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	55.71
70	Less than 2.00% of mass 69	0.28 (0.50)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.89
365	1.00 - 100.00% of mass 198	2.01
441	Less than 150.00% of mass 443	6.45 (80.67)
442	Less than 200.00% of mass 198	39.79
443	15.00 - 24.00% of mass 442	8.00 (20.10)

Data File: NT1705162301S.D
Spectrum: HP ChemStation MS NT1705162301.D, Scan 1116: 19.173 min.
Location of Maximum: 198.00
Number of points: 331

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	373	125.00	3764	212.90	378	304.10	870
37.10	1236	127.00	299008	214.00	187	304.90	93
38.10	3574	128.00	23768	215.00	1418	308.00	456
39.10	19776	129.00	119136	216.10	3082	309.00	262
40.10	1147	130.00	10361	217.00	36592	310.00	402
41.10	878	131.00	1814	218.00	4762	311.00	86
42.00	117	132.00	965	219.00	396	312.00	116
43.10	290	133.10	535	221.00	29232	313.00	219
44.00	563	134.00	3393	223.00	8299	314.00	1504
45.00	582	135.00	9407	224.00	71792	315.00	3072
47.00	97	136.00	3952	225.00	17928	316.00	1521
48.00	170	137.00	4988	226.10	2276	317.00	314
49.10	2254	138.00	1078	227.00	30000	319.10	73
50.10	68392	139.00	652	228.00	4583	320.10	106
51.10	245312	140.00	1657	229.00	6282	321.00	853
52.10	13090	141.00	15600	230.00	812	323.00	7992
53.10	590	142.00	5275	231.00	2667	324.10	1422
54.10	108	143.00	3193	232.00	430	325.00	180
55.00	1424	144.00	947	233.00	547	326.10	206
56.00	7762	145.00	844	234.00	1964	327.00	1582
57.00	17056	146.00	3027	235.00	2156	328.00	897
58.00	866	147.00	7959	236.00	1308	329.00	186
59.10	293	148.00	17552	237.00	2222	329.90	82
60.00	267	149.00	3605	237.90	416	331.10	85
61.00	3445	150.00	847	239.00	1164	332.00	681
62.10	3924	151.10	1978	240.00	951	333.00	829
63.10	10682	152.00	1250	241.00	1482	334.00	5269
64.00	1343	153.00	5043	242.00	3506	335.00	1251
65.10	5380	154.00	3616	243.10	4237	335.90	192
66.00	439	155.00	8310	244.00	51672	339.00	128
67.10	548	156.00	12288	245.00	7098	340.10	147
69.00	297216	157.00	2390	246.00	10908	341.00	859
70.00	1476	158.00	3197	247.00	2147	342.00	240
70.90	268	159.00	2124	248.10	405	343.10	69
72.10	180	160.00	4998	249.00	1791	346.00	1668
73.00	2846	161.00	6841	250.00	400	347.00	375
74.10	28912	162.00	1948	250.90	471	348.00	75
75.00	46408	163.00	565	252.00	547	352.00	2294
76.10	17424	164.00	677	253.00	1432	353.00	1625
77.10	321920	165.00	5602	255.00	252288	354.10	2225
78.10	22048	166.00	4612	256.00	36264	355.00	516
79.00	22016	167.00	29864	257.00	3077	356.00	63
80.00	16324	168.00	14362	258.00	15639	356.90	53
81.00	22800	169.00	2523	259.00	2592	358.00	71
82.00	5387	170.00	957	260.10	431	359.00	210
83.00	5076	171.00	1311	261.00	461	360.10	57
84.00	563	172.00	2519	262.00	108	365.00	10733
85.00	4136	173.00	3591	263.10	161	366.00	1640
86.00	6323	174.00	6157	264.00	692	366.90	121

87.00	3104	175.00	11592	265.00	6219	370.00	199
88.00	1154	176.00	3445	266.00	980	371.00	691
89.00	552	177.00	5417	267.00	143	372.00	3968
91.00	5210	178.00	1917	267.90	329	373.00	1018
92.00	5631	179.00	21584	270.00	364	374.00	88
93.00	36336	180.00	14393	271.00	614	375.00	64
94.00	2258	181.00	6949	272.00	778	377.00	178
95.10	602	182.00	1161	273.00	7503	382.90	939
96.00	1677	183.00	749	274.00	19672	384.00	273
98.00	27664	184.00	1652	275.00	111592	385.00	126
99.00	20856	185.00	10677	276.00	15342	390.00	425
100.00	1939	186.00	78320	277.00	9319	391.00	350
101.00	11566	187.00	22896	278.00	1573	392.10	253
102.00	831	188.00	2244	279.00	451	393.00	72
103.00	4398	189.00	5077	281.00	219	401.00	268
104.00	7600	190.00	951	282.00	285	402.00	1410
105.00	7080	191.00	2327	283.00	1010	403.00	2061
107.00	89200	192.00	6979	284.00	690	404.00	774
108.00	13702	193.00	7409	285.00	1524	405.00	123
110.00	158144	194.00	1633	286.00	314	410.00	81
111.00	25024	195.10	1054	287.90	160	414.90	77
112.00	3002	196.00	17264	289.00	314	421.00	1760
113.00	864	198.00	533504	290.00	311	422.00	1730
114.00	302	199.00	36760	291.00	191	423.00	13610
115.10	463	200.00	2858	292.00	365	424.00	2795
116.00	5300	201.50	3067	293.00	1946	425.00	303
117.00	76832	203.00	3883	294.00	397	438.30	74
118.00	5637	204.00	19736	296.00	30016	439.10	152
119.00	739	205.00	33208	297.00	4246	441.10	34424
120.00	1147	206.00	134656	297.90	294	442.00	212288
121.00	584	207.00	18008	299.00	90	443.00	42672
122.00	6244	208.00	5001	301.10	394	444.00	3817
123.00	9329	209.00	1511	302.00	506	445.10	229
124.00	4061	211.00	5429	303.00	3269		

Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623035.D

Date : 16-MAY-2023 19:29

Client ID:

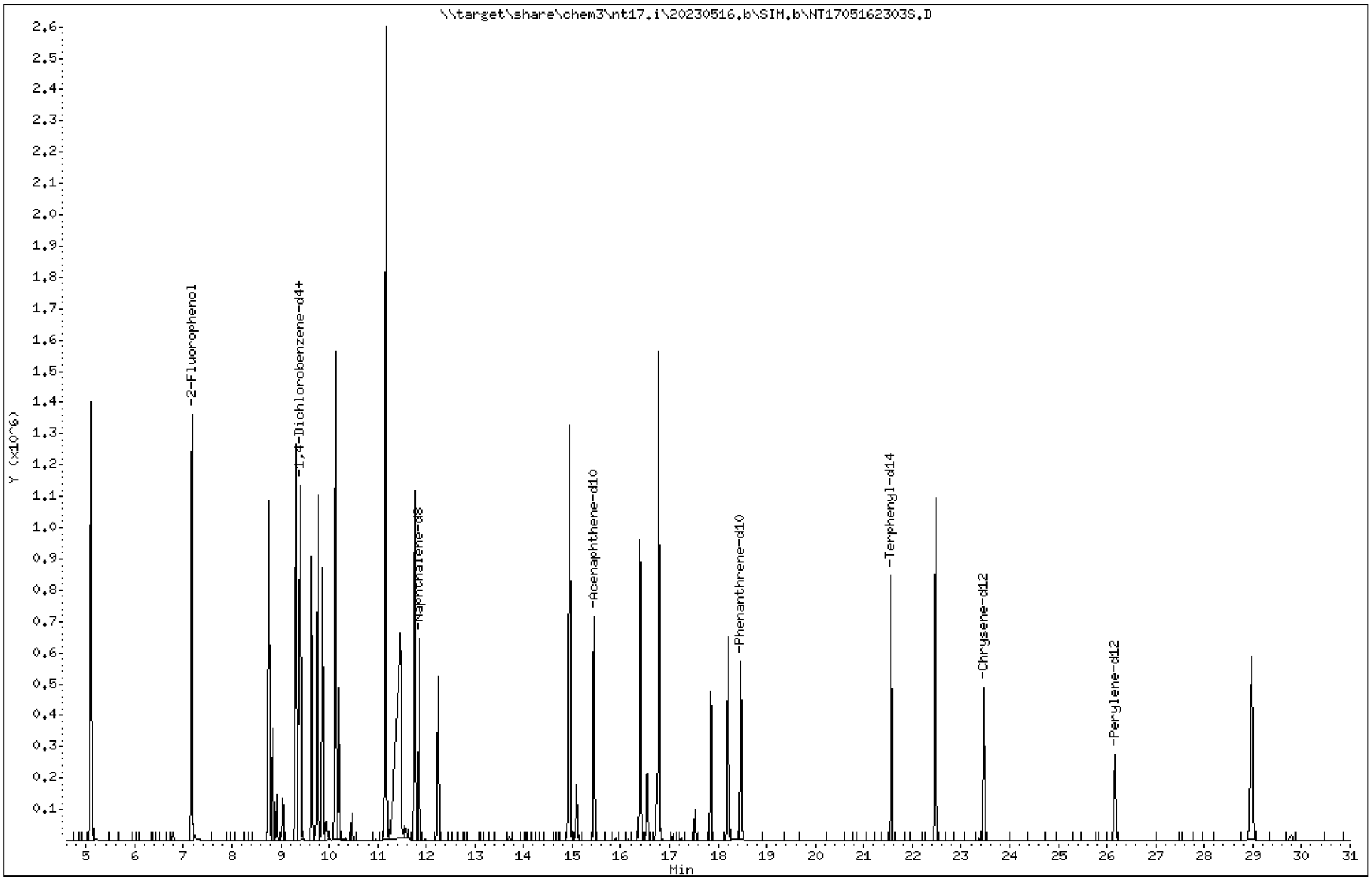
Sample Info: SLE0339-CAL8

Column phase: ZB-5msi

Instrument: nt17.i

Operator: JGR

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162303S.D
Lab Smp Id: SLE0339-CAL8
Inj Date : 16-MAY-2023 19:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-CAL8
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 3 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

								AMOUNTS	
		QUANT SIG						CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE		(ug/mL)	(ug/mL)
$	1 2-Fluorophenol	112	7.171	7.171	(0.765)	1517220		15.0000	16.45
	3 Phenol	94	8.763	8.751	(0.935)	1436469		10.0000	10.45
	7 1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	1165401		10.0000	9.459
*	8 1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	304989		4.00000	
	9 1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	1121195		10.0000	9.339
	11 Benzyl alcohol	79	9.643	9.656	(1.029)	878879		10.0000	11.22
	12 1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	1112531		10.0000	9.455
	13 2-Methylphenol	108	9.861	9.861	(1.052)	955092		10.0000	10.03
	15 4-Methylphenol	108	10.129	10.129	(1.080)	1029121		10.0000	10.69
	16 N-Nitroso-di-n-propylamine	70	10.206	10.180	(1.089)	713957		10.0000	10.29
	22 2,4-Dimethylphenol	107	11.164	11.164	(0.942)	2008635		20.0000	19.00
	24 Benzoic acid	105	11.470	11.356	(0.968)	2690001		40.0000	40.85(M)
	26 1,2,4-Trichlorobenzene	180	11.763	11.751	(0.992)	900160		10.0000	9.386
*	27 Naphthalene-d8	136	11.853	11.840	(1.000)	1098933		4.00000	
	30 Hexachlorobutadiene	225	12.235	12.235	(1.032)	512625		10.0000	10.15
	39 Dimethylphthalate	163	14.951	14.926	(0.968)	2054105		10.0000	9.465
*	42 Acenaphthene-d10	162	15.449	15.436	(1.000)	590948		4.00000	
	50 Diethylphthalate	149	16.392	16.379	(1.061)	1911957		10.0000	9.701
	54 N-Nitrosodiphenylamine	169	16.787	16.774	(0.909)	1347197		10.0000	9.867
	57 Hexachlorobenzene	284	17.843	17.843	(0.966)	470858		10.0000	10.17
	58 Pentachlorophenol	266	18.200	18.214	(0.986)	681744		20.0000	19.96
*	59 Phenanthrene-d10	188	18.468	18.455	(1.000)	969131		4.00000	
$	66 Terphenyl-d14	244	21.567	21.554	(0.919)	1116711		10.0000	9.740
	67 Butylbenzylphthalate	149	22.472	22.460	(0.958)	1246939		10.0000	10.01
*	69 Chrysene-d12	240	23.468	23.455	(1.000)	604233		4.00000	
*	77 Perylene-d12	264	26.159	26.147	(1.000)	501580		4.00000	
	79 Dibenzo(a,h)anthracene	278	28.969	28.943	(1.107)	1455128		10.0000	10.29
	90 N-Nitrosodimethylamine	74	5.094	5.094	(0.543)	1218715		20.0000	20.47

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162303S.D
Lab Smp Id: SLE0339-CAL8
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	304989	-3.50
27 Naphthalene-d8	1102073	551037	2204146	1098933	-0.28
42 Acenaphthene-d10	583826	291913	1167652	590948	1.22
59 Phenanthrene-d10	970917	485459	1941834	969131	-0.18
69 Chrysene-d12	590568	295284	1181136	604233	2.31
77 Perylene-d12	537938	268969	1075876	501580	-6.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.85	0.11
42 Acenaphthene-d10	15.44	14.94	15.94	15.45	0.08
59 Phenanthrene-d10	18.47	17.97	18.97	18.47	0.00
69 Chrysene-d12	23.46	22.96	23.96	23.47	0.05
77 Perylene-d12	26.16	25.66	26.66	26.16	0.00

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

REVIEW SUMMARY FOR FILE - NT1705162303S.D

Lab ID: SLE0339-CAL8
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   16-MAY-2023 19:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.968	0.000	0.9677	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

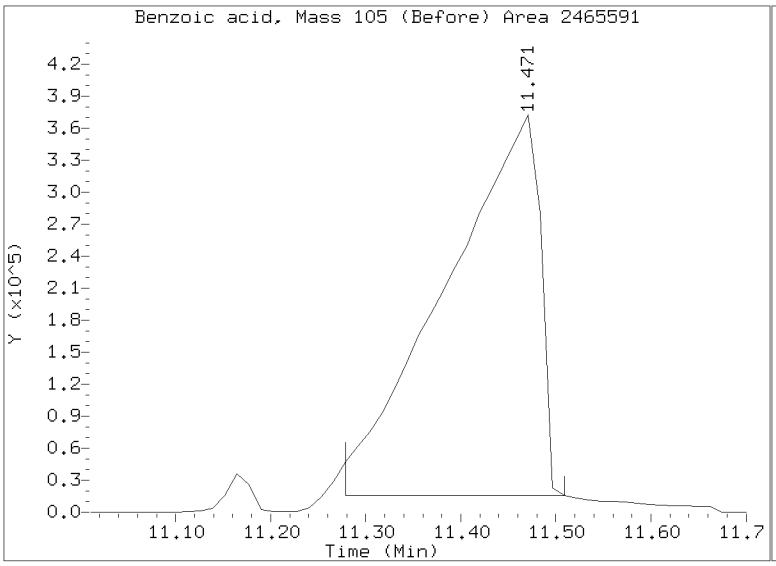
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

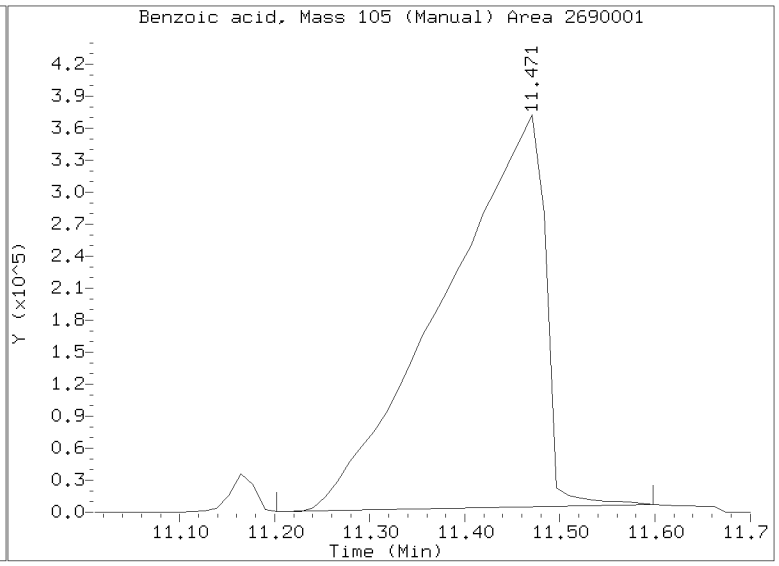
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/SIM.b/NT1705162303S.D
Injection Date: 16-MAY-2023 19:29
Lab ID:SLE0339-CAL8 Client ID:
Report Date: 05/24/2023 06:44

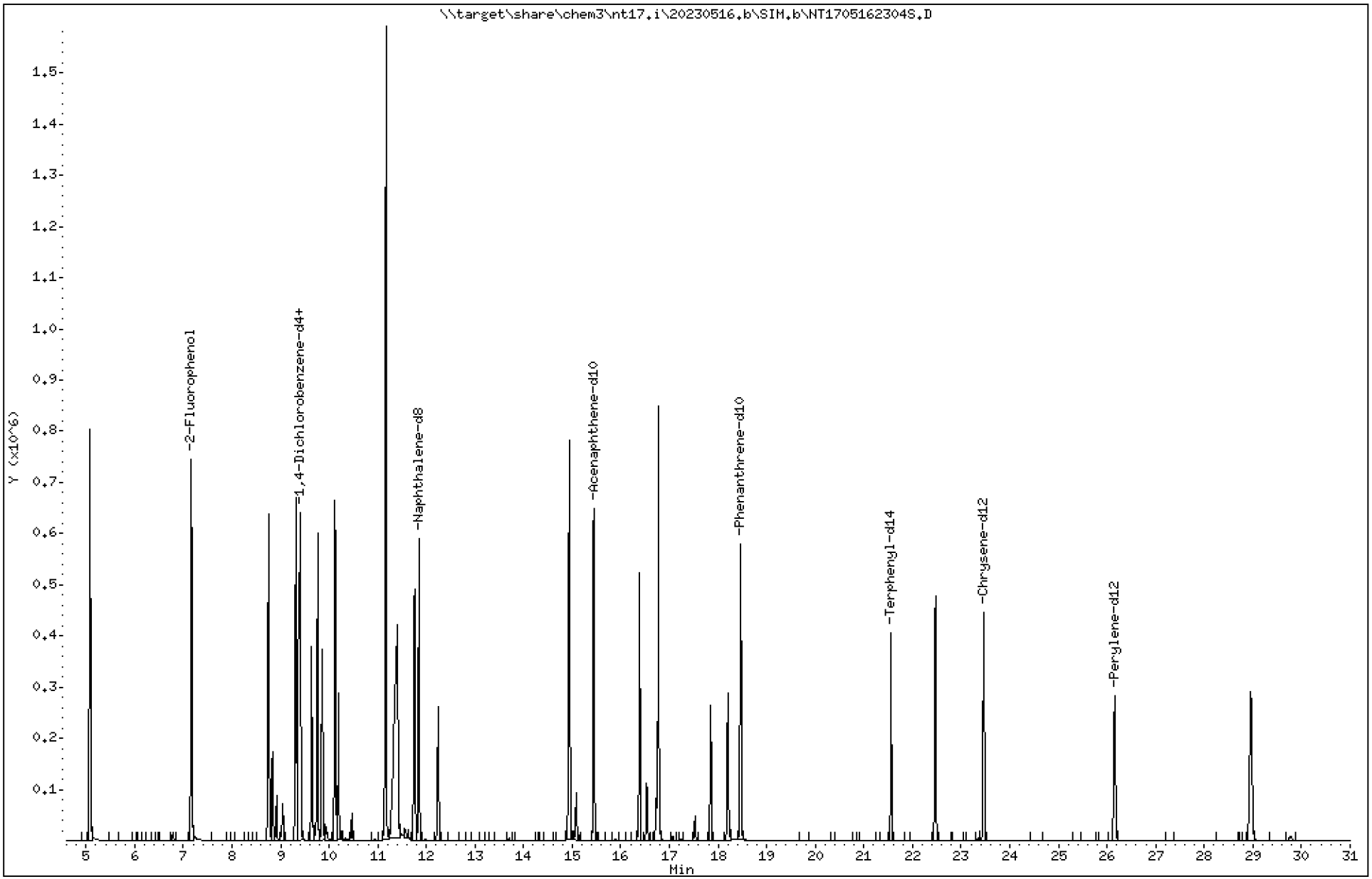




Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623045.D
Date : 16-MAY-2023 20:07
Client ID:
Sample Info: SLE0339-CAL7

Instrument: nt17.i
Operator: JGR
Column diameter: 0.25

Column phase: ZB-5msi



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162304S.D
Lab Smp Id: SLE0339-CAL7
Inj Date : 16-MAY-2023 20:07
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-CAL7
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 4 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

								AMOUNTS	
		QUANT SIG						CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE		(ug/mL)	(ug/mL)
$	1 2-Fluorophenol	112	7.158	7.171	(0.764)	772237		7.50000	8.399
	3 Phenol	94	8.751	8.751	(0.933)	730959		5.00000	5.335
	7 1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	594588		5.00000	4.842
*	8 1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	303993		4.00000	
	9 1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	580152		5.00000	4.848
	11 Benzyl alcohol	79	9.643	9.656	(1.029)	433026		5.00000	5.547
	12 1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	562610		5.00000	4.797
	13 2-Methylphenol	108	9.848	9.861	(1.050)	477811		5.00000	5.033
	15 4-Methylphenol	108	10.116	10.129	(1.079)	521802		5.00000	5.439
	16 N-Nitroso-di-n-propylamine	70	10.193	10.180	(1.087)	359296		5.00000	5.196
	22 2,4-Dimethylphenol	107	11.164	11.164	(0.943)	1026154		10.0000	9.729
	24 Benzoic acid	105	11.406	11.356	(0.963)	1250361		20.0000	19.03(M)
	26 1,2,4-Trichlorobenzene	180	11.764	11.751	(0.994)	456302		5.00000	4.768
*	27 Naphthalene-d8	136	11.840	11.840	(1.000)	1096471		4.00000	
	30 Hexachlorobutadiene	225	12.235	12.235	(1.033)	252124		5.00000	5.004
	39 Dimethylphthalate	163	14.939	14.926	(0.968)	1053286		5.00000	4.874
*	42 Acenaphthene-d10	162	15.436	15.436	(1.000)	588455		4.00000	
	50 Diethylphthalate	149	16.379	16.379	(1.061)	980559		5.00000	4.997
	54 N-Nitrosodiphenylamine	169	16.774	16.774	(0.908)	660680		5.00000	4.871
	57 Hexachlorobenzene	284	17.843	17.843	(0.966)	231953		5.00000	5.041
	58 Pentachlorophenol	266	18.200	18.214	(0.986)	296764		10.0000	10.27
*	59 Phenanthrene-d10	188	18.468	18.455	(1.000)	962811		4.00000	
$	66 Terphenyl-d14	244	21.554	21.554	(0.919)	558133		5.00000	4.951
	67 Butylbenzylphthalate	149	22.473	22.460	(0.958)	650199		5.00000	5.307
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	594121		4.00000	
*	77 Perylene-d12	264	26.159	26.147	(1.000)	517800		4.00000	
	79 Dibenzo(a,h)anthracene	278	28.956	28.943	(1.107)	740363		5.00000	5.069
	90 N-Nitrosodimethylamine	74	5.081	5.094	(0.542)	626467		10.0000	10.56

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162304S.D
Lab Smp Id: SLE0339-CAL7
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	303993	-3.82
27 Naphthalene-d8	1102073	551037	2204146	1096471	-0.51
42 Acenaphthene-d10	583826	291913	1167652	588455	0.79
59 Phenanthrene-d10	970917	485459	1941834	962811	-0.83
69 Chrysene-d12	590568	295284	1181136	594121	0.60
77 Perylene-d12	537938	268969	1075876	517800	-3.74

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.47	0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	0.00
77 Perylene-d12	26.16	25.66	26.66	26.16	0.00

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

REVIEW SUMMARY FOR FILE - NT1705162304S.D

Lab ID: SLE0339-CAL7
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   16-MAY-2023 20:07

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.963	0.000	0.9634	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

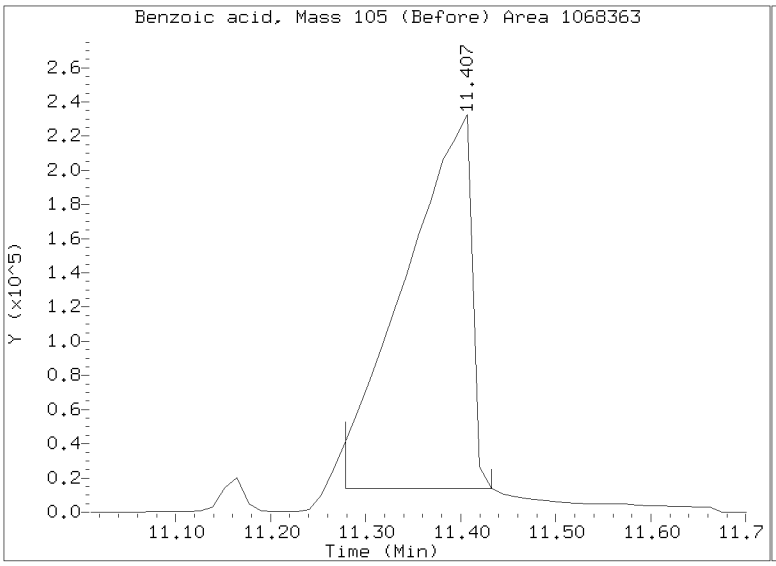
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

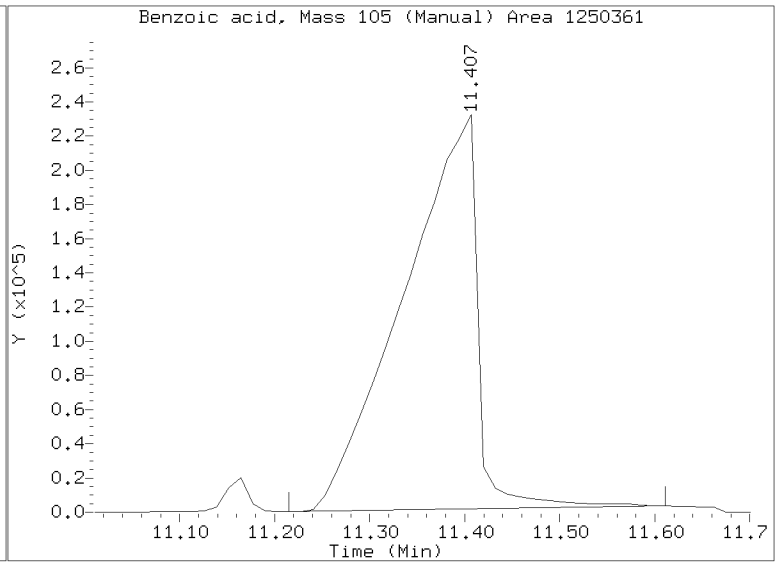
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/SIM.b/NT1705162304S.D
Injection Date: 16-MAY-2023 20:07
Lab ID:SLE0339-CAL7 Client ID:
Report Date: 05/24/2023 06:44





Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623058.D

Date : 16-MAY-2023 20:44

Client ID:

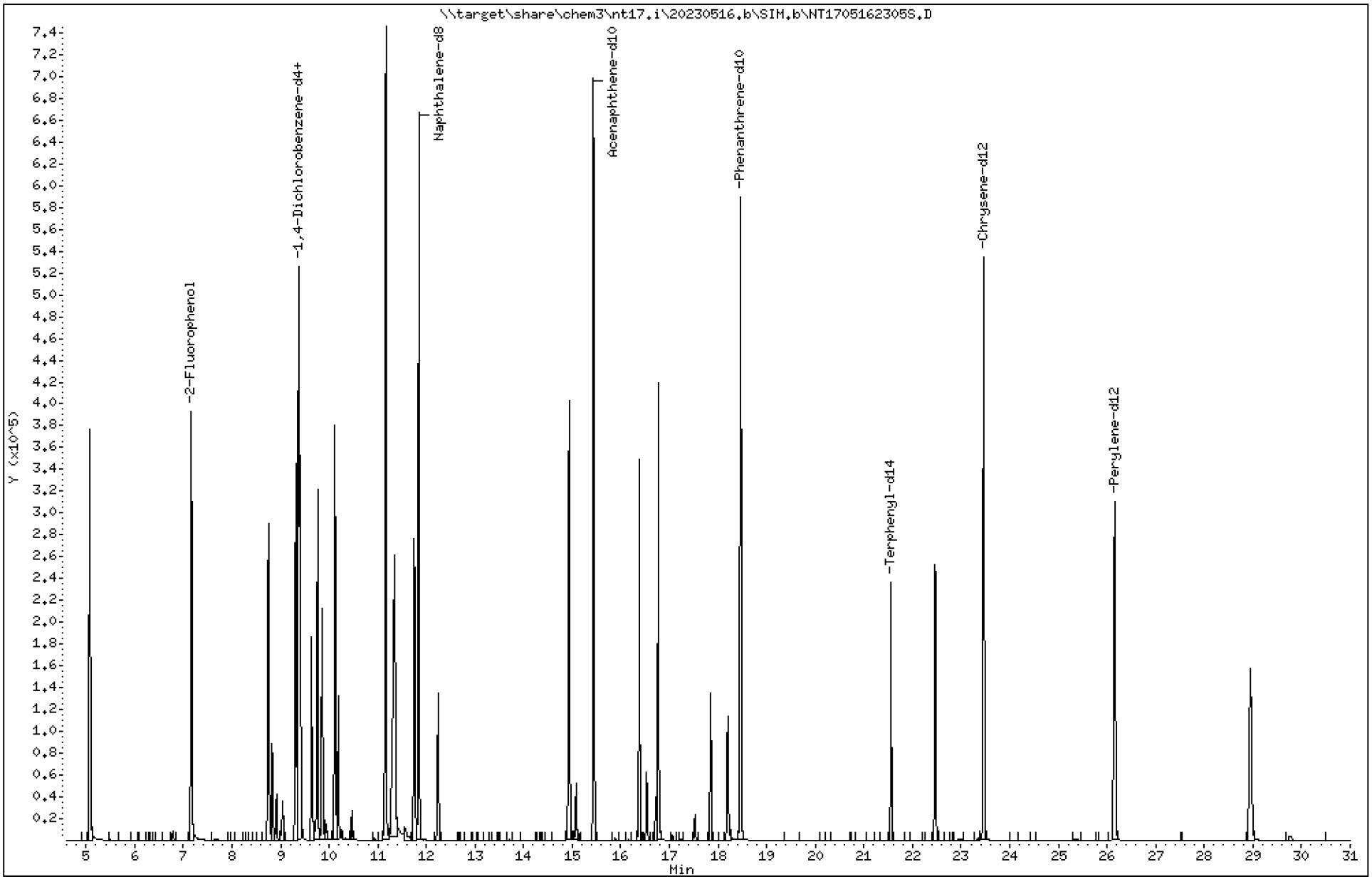
Instrument: nt17.i

Sample Info: SLE0339-CAL6

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162305S.D
Lab Smp Id: SLE0339-CAL6
Inj Date : 16-MAY-2023 20:44
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-CAL6
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
		QUANT SIG					CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1 2-Fluorophenol	112	7.158	7.171	(0.764)	394385	3.75000	4.169
	3 Phenol	94	8.751	8.751	(0.933)	382004	2.50000	2.710
	7 1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	309629	2.50000	2.451
*	8 1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	312779	4.00000	
	9 1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	299271	2.50000	2.431
	11 Benzyl alcohol	79	9.631	9.656	(1.027)	216903	2.50000	2.700
	12 1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	287593	2.50000	2.383
	13 2-Methylphenol	108	9.848	9.861	(1.050)	253409	2.50000	2.594
	15 4-Methylphenol	108	10.116	10.129	(1.079)	265505	2.50000	2.690
	16 N-Nitroso-di-n-propylamine	70	10.180	10.180	(1.086)	186377	2.50000	2.620
	22 2,4-Dimethylphenol	107	11.164	11.164	(0.943)	547588	5.00000	5.115
	24 Benzoic acid	105	11.355	11.356	(0.959)	579679	10.0000	8.692(M)
	26 1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	236888	2.50000	2.439
*	27 Naphthalene-d8	136	11.840	11.840	(1.000)	1112850	4.00000	
	30 Hexachlorobutadiene	225	12.235	12.235	(1.033)	127558	2.50000	2.494
	39 Dimethylphthalate	163	14.939	14.926	(0.968)	548075	2.50000	2.485
*	42 Acenaphthene-d10	162	15.436	15.436	(1.000)	600559	4.00000	
	50 Diethylphthalate	149	16.379	16.379	(1.061)	512017	2.50000	2.556
	54 N-Nitrosodiphenylamine	169	16.774	16.774	(0.908)	357299	2.50000	2.544
	57 Hexachlorobenzene	284	17.843	17.843	(0.966)	117623	2.50000	2.468
	58 Pentachlorophenol	266	18.200	18.214	(0.986)	135777	5.00000	4.831
*	59 Phenanthrene-d10	188	18.468	18.455	(1.000)	997102	4.00000	
$	66 Terphenyl-d14	244	21.554	21.554	(0.919)	298252	2.50000	2.461
	67 Butylbenzylphthalate	149	22.460	22.460	(0.958)	350134	2.50000	2.658
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	638760	4.00000	
*	77 Perylene-d12	264	26.159	26.147	(1.000)	569257	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.956	28.943	(1.107)	400026	2.50000	2.491
	90 N-Nitrosodimethylamine	74	5.069	5.094	(0.541)	332375	5.00000	5.444

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162305S.D
Lab Smp Id: SLE0339-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	312779	-1.04
27 Naphthalene-d8	1102073	551037	2204146	1112850	0.98
42 Acenaphthene-d10	583826	291913	1167652	600559	2.87
59 Phenanthrene-d10	970917	485459	1941834	997102	2.70
69 Chrysene-d12	590568	295284	1181136	638760	8.16
77 Perylene-d12	537938	268969	1075876	569257	5.82

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.47	0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	0.00
77 Perylene-d12	26.16	25.66	26.66	26.16	0.00

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

REVIEW SUMMARY FOR FILE - NT1705162305S.D

Lab ID: SLE0339-CAL6
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   16-MAY-2023 20:44

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.000	0.9590	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

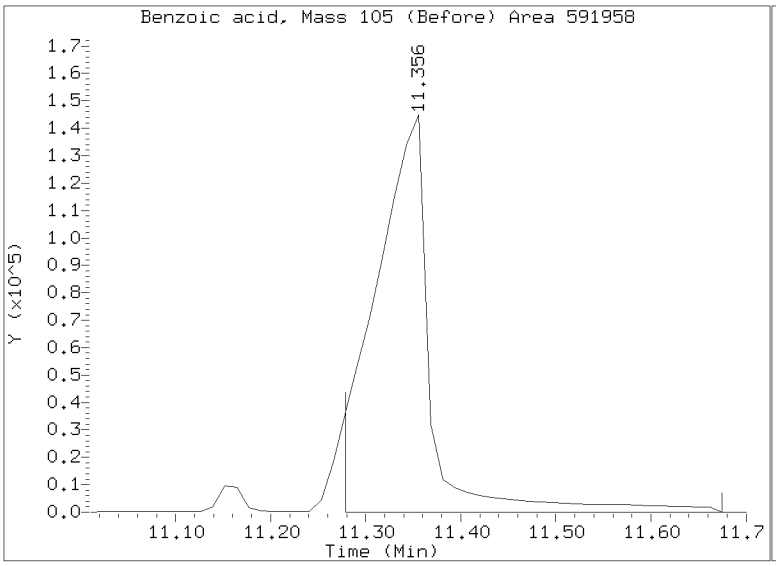
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

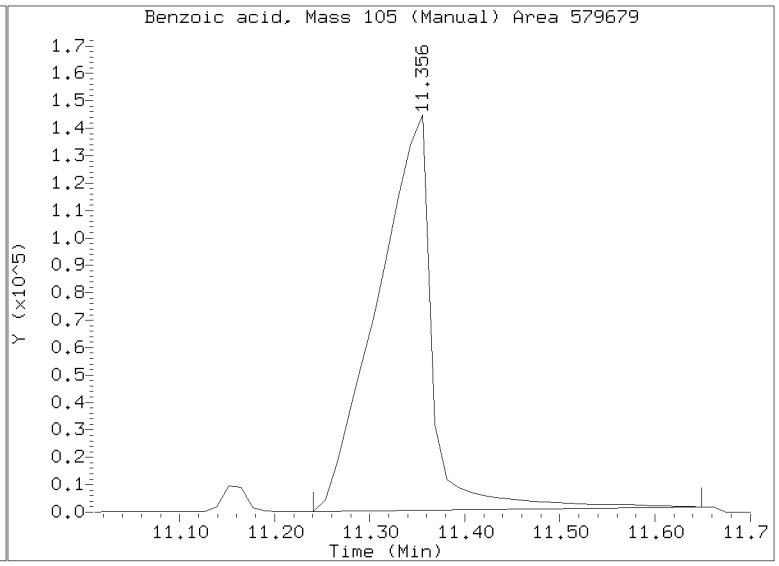
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/SIM.b/NT1705162305S.D
Injection Date: 16-MAY-2023 20:44
Lab ID:SLE0339-CAL6 Client ID:
Report Date: 05/24/2023 06:44





Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623065.D

Page 1

Date : 16-MAY-2023 21:22

Client ID:

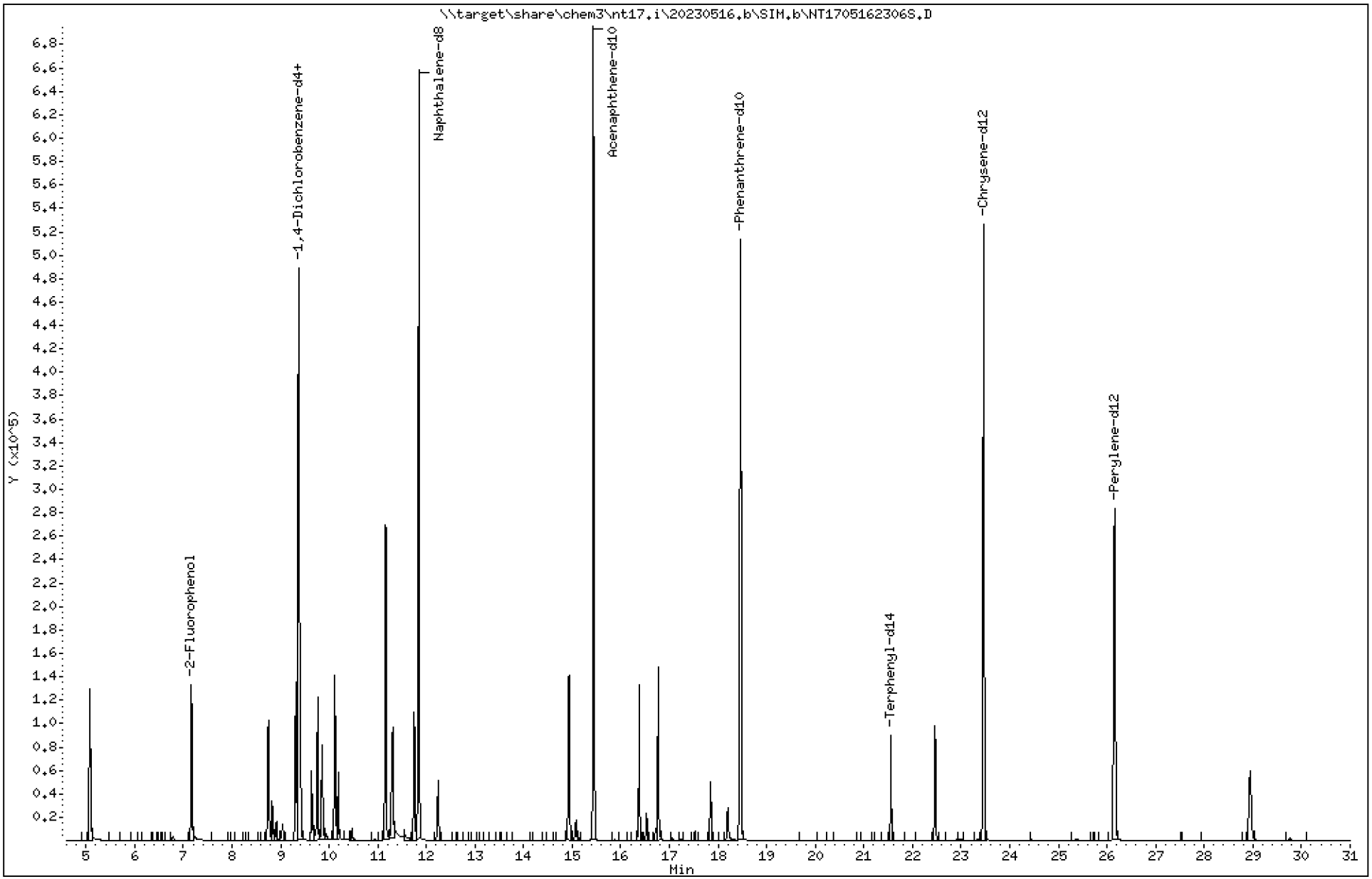
Instrument: nt17.i

Sample Info: SLE0339-CAL5

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162306S.D
Lab Smp Id: SLE0339-CAL5
Inj Date : 16-MAY-2023 21:22
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-CAL5
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	7.158	7.171	(0.764)	154867	1.50000	1.620
	3	Phenol	94	8.750	8.751	(0.933)	149693	1.00000	1.051
	7	1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	126088	1.00000	0.9875
*	8	1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	316066	4.00000	
	9	1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	122759	1.00000	0.9867
	11	Benzyl alcohol	79	9.631	9.656	(1.027)	79743	1.00000	0.9825
	12	1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	117764	1.00000	0.9657
	13	2-Methylphenol	108	9.848	9.861	(1.050)	100452	1.00000	1.018
	15	4-Methylphenol	108	10.116	10.129	(1.079)	103970	1.00000	1.042
	16	N-Nitroso-di-n-propylamine	70	10.180	10.180	(1.086)	72733	1.00000	1.012
	22	2,4-Dimethylphenol	107	11.151	11.164	(0.942)	216055	2.00000	2.038
	24	Benzoic acid	105	11.304	11.356	(0.955)	158699	4.00000	2.403(M)
	26	1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	95162	1.00000	0.9894
*	27	Naphthalene-d8	136	11.840	11.840	(1.000)	1102073	4.00000	
	30	Hexachlorobutadiene	225	12.235	12.235	(1.033)	49943	1.00000	0.9862
	39	Dimethylphthalate	163	14.939	14.926	(0.968)	217499	1.00000	1.014
*	42	Acenaphthene-d10	162	15.436	15.436	(1.000)	583826	4.00000	
	50	Diethylphthalate	149	16.379	16.379	(1.061)	200427	1.00000	1.029
	54	N-Nitrosodiphenylamine	169	16.774	16.774	(0.908)	141906	1.00000	1.037
	57	Hexachlorobenzene	284	17.843	17.843	(0.966)	45821	1.00000	0.9875
	58	Pentachlorophenol	266	18.200	18.214	(0.986)	38475	2.00000	1.454
*	59	Phenanthrene-d10	188	18.468	18.455	(1.000)	970917	4.00000	
$	66	Terphenyl-d14	244	21.554	21.554	(0.919)	110634	1.00000	0.9873
	67	Butylbenzylphthalate	149	22.460	22.460	(0.958)	125389	1.00000	1.030
*	69	Chrysene-d12	240	23.455	23.455	(1.000)	590568	4.00000	
*	77	Perylene-d12	264	26.159	26.147	(1.000)	537938	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.943	28.943	(1.106)	152776	1.00000	1.007
	90	N-Nitrosodimethylamine	74	5.081	5.094	(0.542)	130625	2.00000	2.117

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162306S.D
Lab Smp Id: SLE0339-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	316066	0.00
27 Naphthalene-d8	1102073	551037	2204146	1102073	0.00
42 Acenaphthene-d10	583826	291913	1167652	583826	0.00
59 Phenanthrene-d10	970917	485459	1941834	970917	0.00
69 Chrysene-d12	590568	295284	1181136	590568	0.00
77 Perylene-d12	537938	268969	1075876	537938	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.47	0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	0.00
77 Perylene-d12	26.16	25.66	26.66	26.16	0.00

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

REVIEW SUMMARY FOR FILE - NT1705162306S.D

Lab ID: SLE0339-CAL5
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   16-MAY-2023 21:22

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.955	0.000	0.9547	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

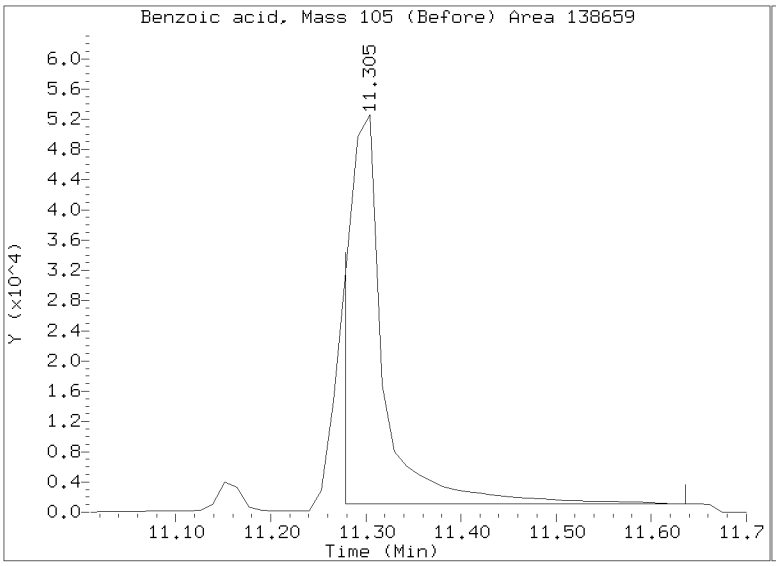
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

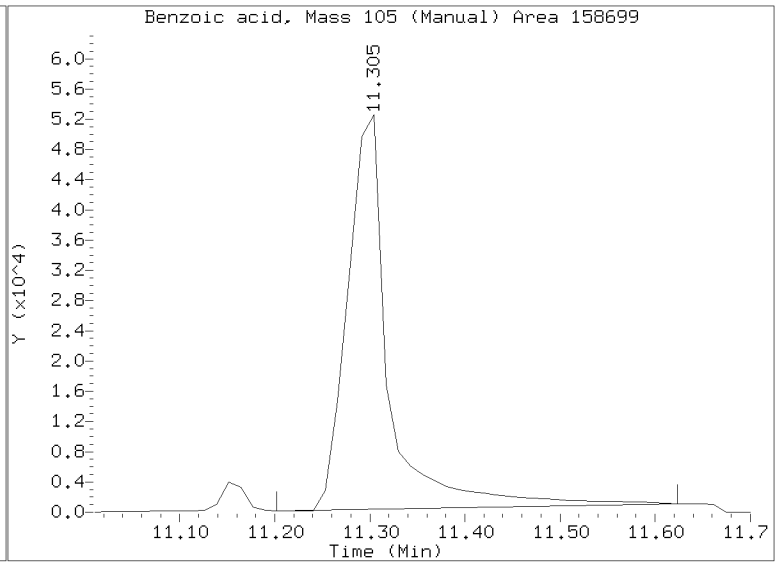
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/SIM.b/NT1705162306S.D
Injection Date: 16-MAY-2023 21:22
Lab ID:SLE0339-CAL5 Client ID:
Report Date: 05/24/2023 06:44





Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623075.D

Date : 16-MAY-2023 21:59

Client ID:

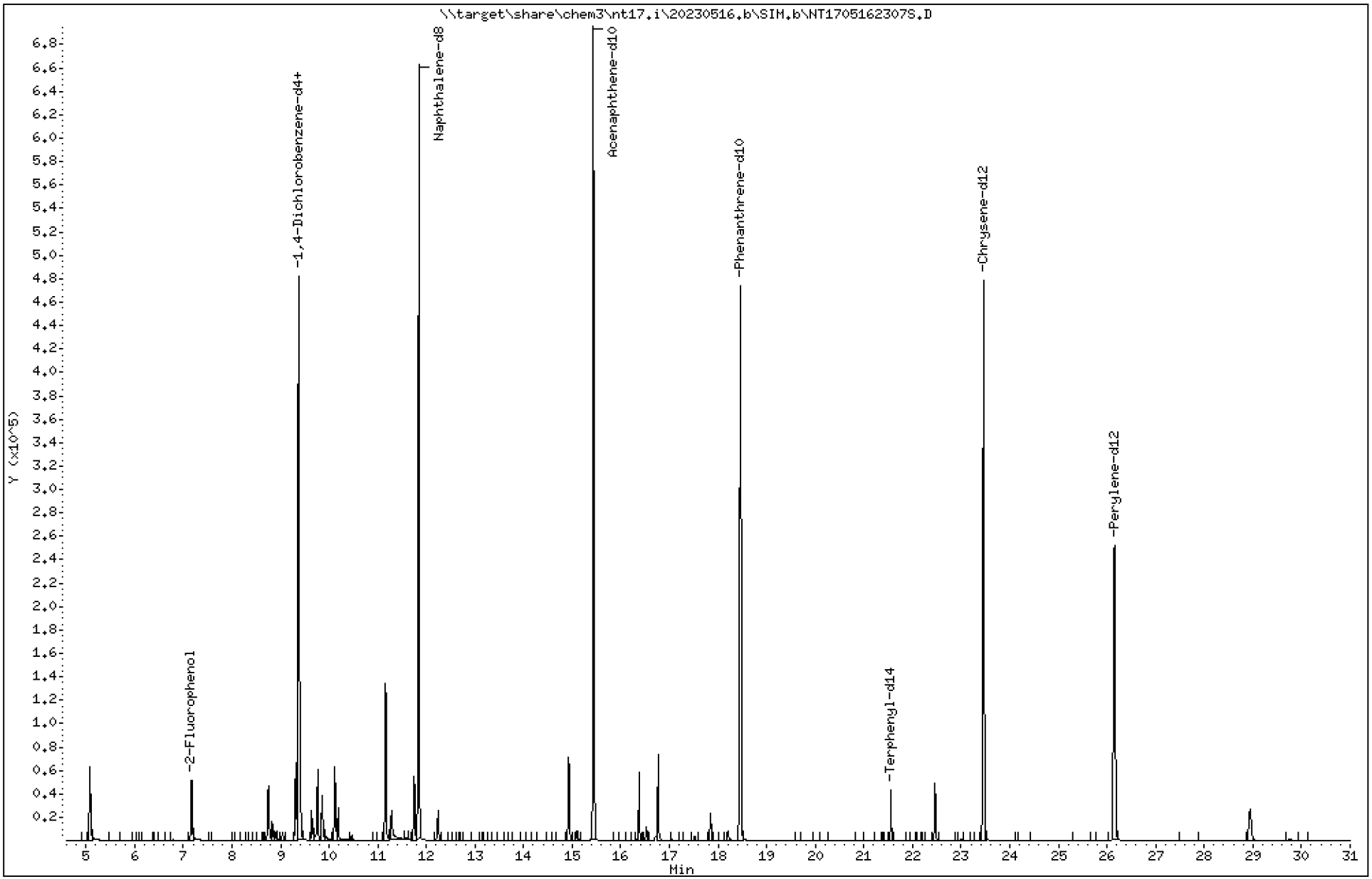
Instrument: nt17.i

Sample Info: SLE0339-CAL4

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162307S.D
Lab Smp Id: SLE0339-CAL4
Inj Date : 16-MAY-2023 21:59
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-CAL4
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

								AMOUNTS	
		QUANT SIG						CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE		(ug/mL)	(ug/mL)
$	1 2-Fluorophenol	112	7.171	7.171	(0.765)	72039		0.75000	0.7666
	3 Phenol	94	8.751	8.751	(0.933)	71037		0.50000	0.5073
	7 1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	62721		0.50000	0.4997
*	8 1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	310689		4.00000	
	9 1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	60974		0.50000	0.4986
	11 Benzyl alcohol	79	9.643	9.656	(1.029)	41088		0.50000	0.5150
	12 1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	60643		0.50000	0.5059
	13 2-Methylphenol	108	9.848	9.861	(1.050)	48605		0.50000	0.5009
	15 4-Methylphenol	108	10.116	10.129	(1.079)	48975		0.50000	0.4994
	16 N-Nitroso-di-n-propylamine	70	10.180	10.180	(1.086)	34683		0.50000	0.4908
	22 2,4-Dimethylphenol	107	11.151	11.164	(0.942)	107131		1.00000	1.035
	24 Benzoic acid	105	11.279	11.356	(0.953)	42399		2.00000	0.6576(M)
	26 1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	47291		0.50000	0.5037
*	27 Naphthalene-d8	136	11.840	11.840	(1.000)	1075836		4.00000	
	30 Hexachlorobutadiene	225	12.235	12.235	(1.033)	24513		0.50000	0.4958
	39 Dimethylphthalate	163	14.926	14.926	(0.967)	102053		0.50000	0.4962
*	42 Acenaphthene-d10	162	15.436	15.436	(1.000)	560079		4.00000	
	50 Diethylphthalate	149	16.379	16.379	(1.061)	94056		0.50000	0.5036
	54 N-Nitrosodiphenylamine	169	16.761	16.774	(0.908)	65683		0.50000	0.5128
	57 Hexachlorobenzene	284	17.843	17.843	(0.967)	21722		0.50000	0.4999
	58 Pentachlorophenol	266	18.200	18.214	(0.986)	13401		1.00000	0.5454
*	59 Phenanthrene-d10	188	18.455	18.455	(1.000)	909163		4.00000	
$	66 Terphenyl-d14	244	21.554	21.554	(0.919)	50671		0.50000	0.4875
	67 Butylbenzylphthalate	149	22.460	22.460	(0.958)	58029		0.50000	0.5137
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	547811		4.00000	
*	77 Perylene-d12	264	26.159	26.147	(1.000)	508065		4.00000	
	79 Dibenzo(a,h)anthracene	278	28.943	28.943	(1.106)	72025		0.50000	0.5026
	90 N-Nitrosodimethylamine	74	5.081	5.094	(0.542)	62177		1.00000	1.025

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162307S.D
Lab Smp Id: SLE0339-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	310689	-1.70
27 Naphthalene-d8	1102073	551037	2204146	1075836	-2.38
42 Acenaphthene-d10	583826	291913	1167652	560079	-4.07
59 Phenanthrene-d10	970917	485459	1941834	909163	-6.36
69 Chrysene-d12	590568	295284	1181136	547811	-7.24
77 Perylene-d12	537938	268969	1075876	508065	-5.55

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.46	-0.07
69 Chrysene-d12	23.46	22.96	23.96	23.46	0.00
77 Perylene-d12	26.16	25.66	26.66	26.16	0.00

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

REVIEW SUMMARY FOR FILE - NT1705162307S.D

Lab ID: SLE0339-CAL4
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   16-MAY-2023 21:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.953	0.000	0.9526	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

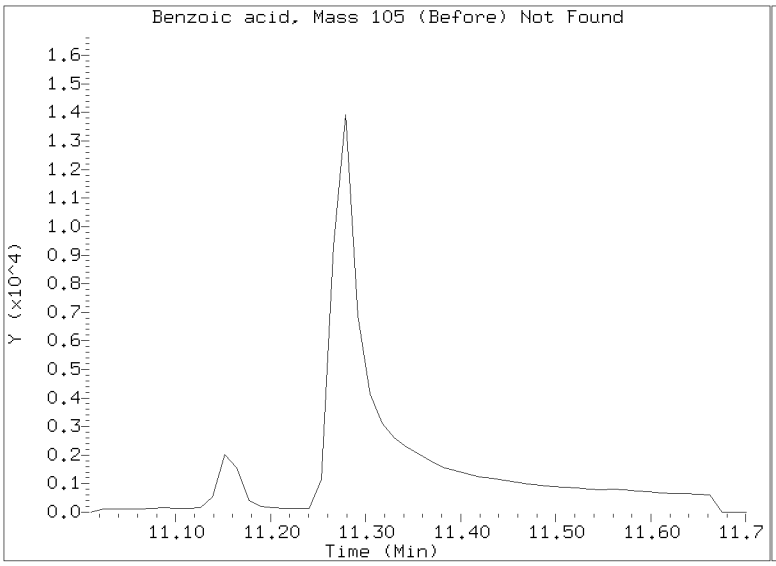
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

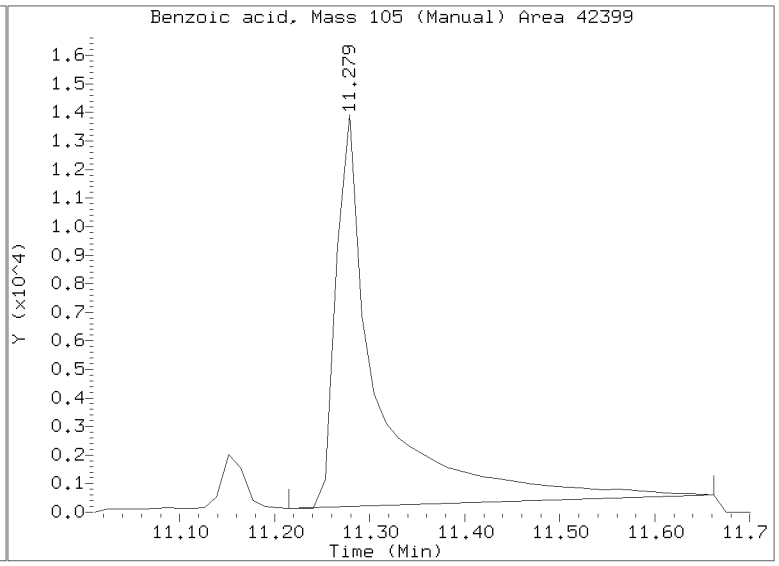
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/SIM.b/NT1705162307S.D
Injection Date: 16-MAY-2023 21:59
Lab ID:SLE0339-CAL4 Client ID:
Report Date: 05/24/2023 06:44





Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623085.D

Page 1

Date : 16-MAY-2023 22:37

Client ID:

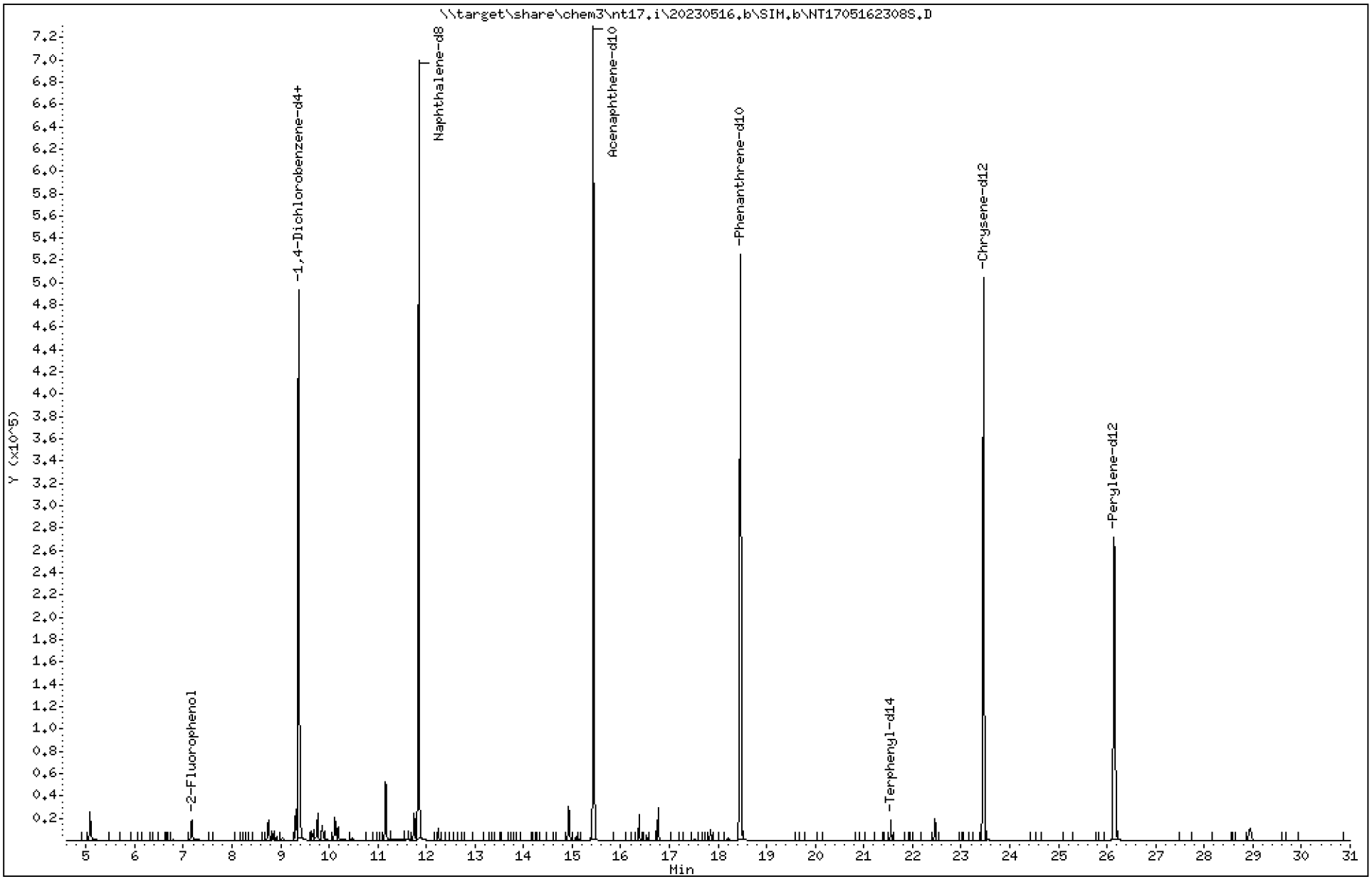
Instrument: nt17.i

Sample Info: SLE0339-CAL3

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162308S.D
Lab Smp Id: SLE0339-CAL3
Inj Date : 16-MAY-2023 22:37
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-CAL3
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.171	7.171	(0.765)	27556	0.30000	0.2810
	3 Phenol	94	8.750	8.751	(0.933)	27979	0.20000	0.1915
	7 1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	26546	0.20000	0.2027
*	8 1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	324202	4.00000	
	9 1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	25906	0.20000	0.2030
	11 Benzyl alcohol	79	9.643	9.656	(1.029)	16148	0.20000	0.1940
	12 1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	24925	0.20000	0.1993
	13 2-Methylphenol	108	9.848	9.861	(1.050)	20045	0.20000	0.1980
	15 4-Methylphenol	108	10.116	10.129	(1.079)	19579	0.20000	0.1913
	16 N-Nitroso-di-n-propylamine	70	10.180	10.180	(1.086)	14608	0.20000	0.1981
	22 2,4-Dimethylphenol	107	11.151	11.164	(0.942)	44127	0.40000	0.4085
	24 Benzoic acid	105	11.355	11.356	(0.959)	4084	0.80000	0.06068(M)
	26 1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	20186	0.20000	0.2059
*	27 Naphthalene-d8	136	11.840	11.840	(1.000)	1123074	4.00000	
	30 Hexachlorobutadiene	225	12.235	12.235	(1.033)	10241	0.20000	0.1984
	39 Dimethylphthalate	163	14.926	14.926	(0.967)	43118	0.20000	0.1997
*	42 Acenaphthene-d10	162	15.436	15.436	(1.000)	587914	4.00000	
	50 Diethylphthalate	149	16.379	16.379	(1.061)	39081	0.20000	0.1993
	54 N-Nitrosodiphenylamine	169	16.761	16.774	(0.908)	27281	0.20000	0.1992
	57 Hexachlorobenzene	284	17.843	17.843	(0.967)	9193	0.20000	0.1978
	58 Pentachlorophenol	266	18.200	18.214	(0.986)	4252	0.40000	0.1624
*	59 Phenanthrene-d10	188	18.455	18.455	(1.000)	972346	4.00000	
$	66 Terphenyl-d14	244	21.554	21.554	(0.919)	21642	0.20000	0.1956
	67 Butylbenzylphthalate	149	22.460	22.460	(0.958)	23404	0.20000	0.1947
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	582965	4.00000	
*	77 Perylene-d12	264	26.146	26.147	(1.000)	529057	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.943	28.943	(1.107)	29415	0.20000	0.1971
	90 N-Nitrosodimethylamine	74	5.081	5.094	(0.542)	24605	0.40000	0.3888

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162308S.D
Lab Smp Id: SLE0339-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	324202	2.57
27 Naphthalene-d8	1102073	551037	2204146	1123074	1.91
42 Acenaphthene-d10	583826	291913	1167652	587914	0.70
59 Phenanthrene-d10	970917	485459	1941834	972346	0.15
69 Chrysene-d12	590568	295284	1181136	582965	-1.29
77 Perylene-d12	537938	268969	1075876	529057	-1.65

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.46	-0.07
69 Chrysene-d12	23.46	22.96	23.96	23.46	0.00
77 Perylene-d12	26.16	25.66	26.66	26.15	-0.05

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

REVIEW SUMMARY FOR FILE - NT1705162308S.D

Lab ID: SLE0339-CAL3
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   16-MAY-2023 22:37

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.000	0.9590	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

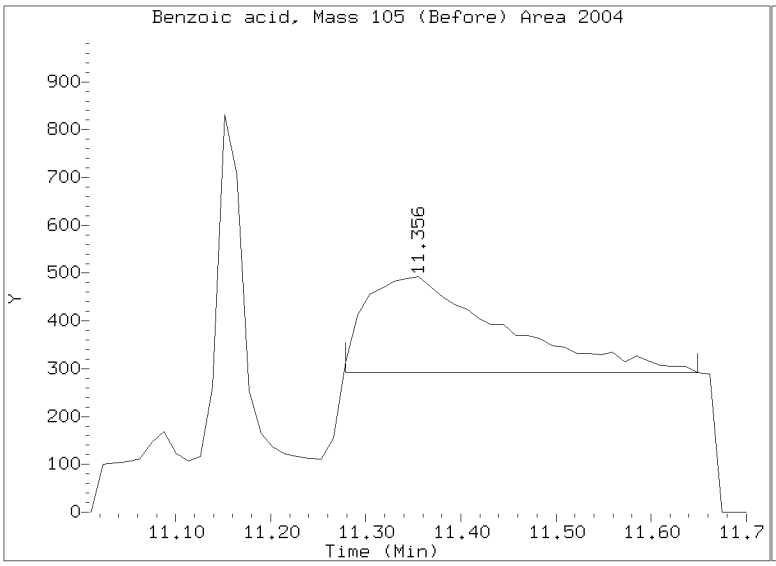
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

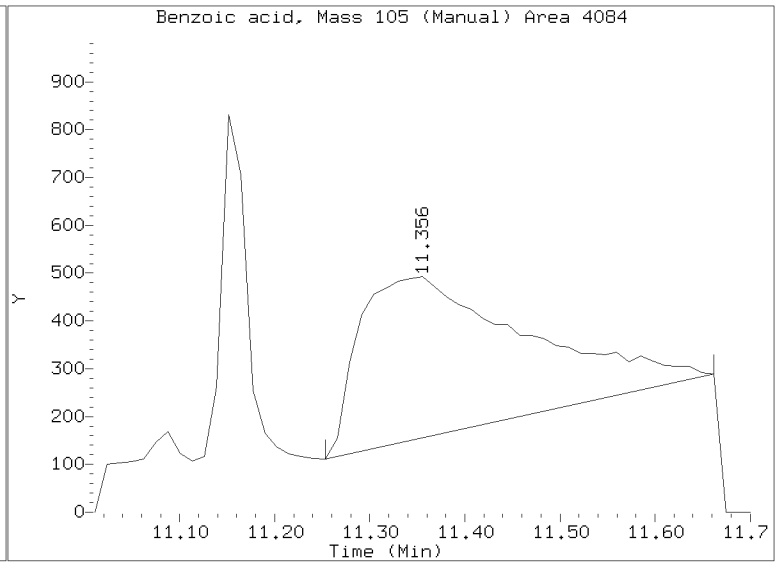
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/SIM.b/NT1705162308S.D
Injection Date: 16-MAY-2023 22:37
Lab ID:SLE0339-CAL3 Client ID:
Report Date: 05/24/2023 06:44





Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623095.D

Date : 16-MAY-2023 23:14

Client ID:

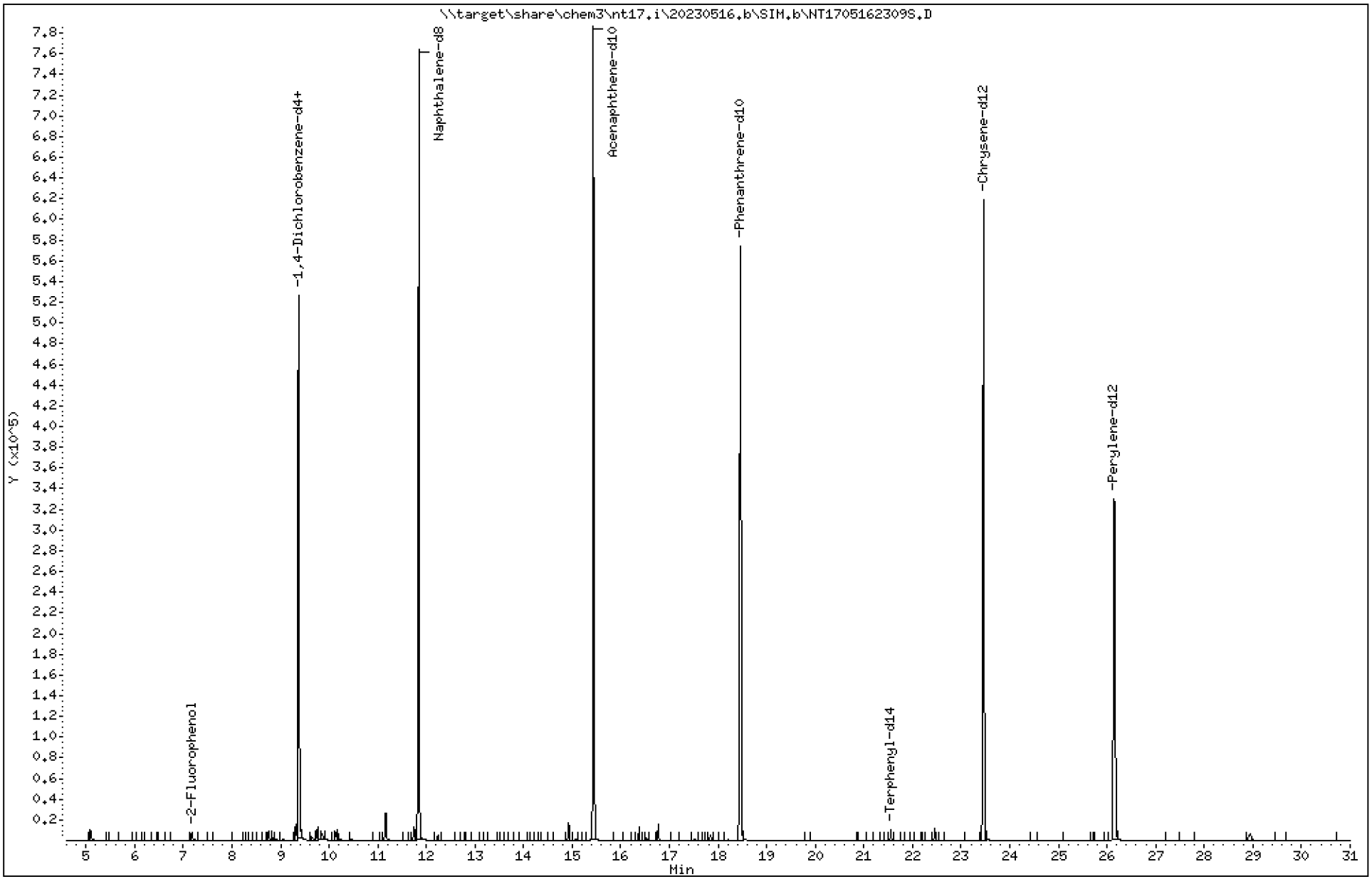
Instrument: nt17.i

Sample Info: SLE0339-CAL2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162309S.D
Lab Smp Id: SLE0339-CAL2
Inj Date : 16-MAY-2023 23:14
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-CAL2
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	7.171	7.171	(0.765)	13379	0.15000	0.1291
	3	Phenol	94	8.750	8.751	(0.933)	14562	0.10000	0.09432
	7	1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	14619	0.10000	0.1056
*	8	1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	342586	4.00000	
	9	1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	14178	0.10000	0.1051
	11	Benzyl alcohol	79	9.643	9.656	(1.029)	8165	0.10000	0.09281
	12	1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	15009	0.10000	0.1136
	13	2-Methylphenol	108	9.861	9.861	(1.052)	10680	0.10000	0.09982
	15	4-Methylphenol	108	10.129	10.129	(1.080)	10066	0.10000	0.09309
	16	N-Nitroso-di-n-propylamine	70	10.180	10.180	(1.086)	7678	0.10000	0.09853
	22	2,4-Dimethylphenol	107	11.151	11.164	(0.942)	23752	0.20000	0.2041
	24	Benzoic acid	105	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	11061	0.10000	0.1048
*	27	Naphthalene-d8	136	11.840	11.840	(1.000)	1209699	4.00000	
	30	Hexachlorobutadiene	225	12.235	12.235	(1.033)	5563	0.10000	0.1001
	39	Dimethylphthalate	163	14.926	14.926	(0.967)	23825	0.10000	0.1021
*	42	Acenaphthene-d10	162	15.436	15.436	(1.000)	635389	4.00000	
	50	Diethylphthalate	149	16.379	16.379	(1.061)	21298	0.10000	0.1005
	54	N-Nitrosodiphenylamine	169	16.761	16.774	(0.908)	15309	0.10000	0.1009
	57	Hexachlorobenzene	284	17.843	17.843	(0.967)	5120	0.10000	0.09948
	58	Pentachlorophenol	266	18.200	18.214	(0.986)	2234	0.20000	0.07708
*	59	Phenanthrene-d10	188	18.455	18.455	(1.000)	1076905	4.00000	
$	66	Terphenyl-d14	244	21.554	21.554	(0.919)	12859	0.10000	0.09758
	67	Butylbenzylphthalate	149	22.460	22.460	(0.958)	13484	0.10000	0.09416
*	69	Chrysene-d12	240	23.455	23.455	(1.000)	694468	4.00000	
*	77	Perylene-d12	264	26.159	26.147	(1.000)	649331	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.943	28.943	(1.106)	17990	0.10000	0.09823
	90	N-Nitrosodimethylamine	74	5.081	5.094	(0.542)	12481	0.20000	0.1866

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162309S.D
Lab Smp Id: SLE0339-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	342586	8.39
27 Naphthalene-d8	1102073	551037	2204146	1209699	9.77
42 Acenaphthene-d10	583826	291913	1167652	635389	8.83
59 Phenanthrene-d10	970917	485459	1941834	1076905	10.92
69 Chrysene-d12	590568	295284	1181136	694468	17.59
77 Perylene-d12	537938	268969	1075876	649331	20.71

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.46	-0.07
69 Chrysene-d12	23.46	22.96	23.96	23.46	0.00
77 Perylene-d12	26.16	25.66	26.66	26.16	0.00

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

REVIEW SUMMARY FOR FILE - NT1705162309S.D

Lab ID: SLE0339-CAL2
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   16-MAY-2023 23:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1705162310S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623105.D

Date : 16-MAY-2023 23:51

Client ID:

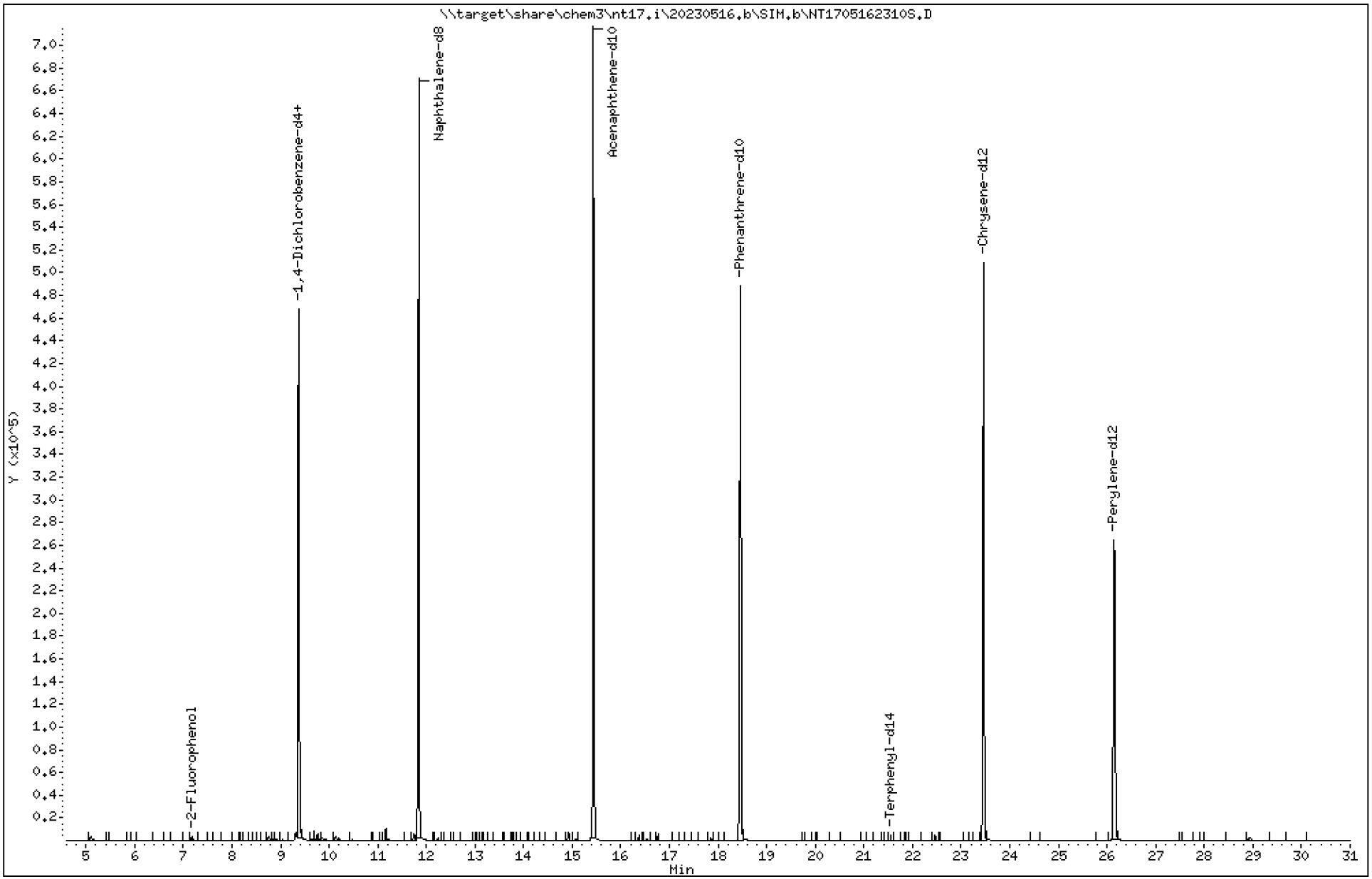
Sample Info: SLE0339-CAL1

Column phase: ZB-5msi

Instrument: nt17.i

Operator: JGR

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162310S.D
Lab Smp Id: SLE0339-CAL1
Inj Date : 16-MAY-2023 23:51
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-CAL1
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.171	7.171	(0.765)	5563	0.07500	0.05793
	3 Phenol	94	8.751	8.751	(0.933)	5994	0.05000	0.04189
	7 1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	6725	0.05000	0.05243
*	8 1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	317514	4.00000	
	9 1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	6712	0.05000	0.05370
	11 Benzyl alcohol	79	9.656	9.656	(1.030)	3172	0.05000	0.03890(M)
	12 1,2-Dichlorobenzene	146	9.759	9.759	(1.041)	6324	0.05000	0.05162
	13 2-Methylphenol	108	9.861	9.861	(1.052)	4687	0.05000	0.04727
	15 4-Methylphenol	108	10.129	10.129	(1.080)	4202	0.05000	0.04193
	16 N-Nitroso-di-n-propylamine	70	10.180	10.180	(1.086)	3304	0.05000	0.04575
	22 2,4-Dimethylphenol	107	11.164	11.164	(0.943)	10101	0.10000	0.09580
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	5060	0.05000	0.05290
*	27 Naphthalene-d8	136	11.840	11.840	(1.000)	1096096	4.00000	
	30 Hexachlorobutadiene	225	12.235	12.235	(1.033)	2558	0.05000	0.05078
	39 Dimethylphthalate	163	14.926	14.926	(0.967)	11031	0.05000	0.05290
*	42 Acenaphthene-d10	162	15.436	15.436	(1.000)	567814	4.00000	
	50 Diethylphthalate	149	16.379	16.379	(1.061)	9182	0.05000	0.04849
	54 N-Nitrosodiphenylamine	169	16.774	16.774	(0.909)	6213	0.05000	0.04769
	57 Hexachlorobenzene	284	17.843	17.843	(0.967)	2246	0.05000	0.05082
	58 Pentachlorophenol	266	18.213	18.214	(0.987)	506	0.10000	0.02034(M)
*	59 Phenanthrene-d10	188	18.455	18.455	(1.000)	924770	4.00000	
$	66 Terphenyl-d14	244	21.554	21.554	(0.919)	6036	0.05000	0.05676
	67 Butylbenzylphthalate	149	22.460	22.460	(0.958)	5212	0.05000	0.04510
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	560403	4.00000	
*	77 Perylene-d12	264	26.147	26.147	(1.000)	515224	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.943	28.943	(1.107)	7129	0.05000	0.04906
	90 N-Nitrosodimethylamine	74	5.094	5.094	(0.543)	5227	0.10000	0.08433

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162310S.D
Lab Smp Id: SLE0339-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	317514	0.46
27 Naphthalene-d8	1102073	551037	2204146	1096096	-0.54
42 Acenaphthene-d10	583826	291913	1167652	567814	-2.74
59 Phenanthrene-d10	970917	485459	1941834	924770	-4.75
69 Chrysene-d12	590568	295284	1181136	560403	-5.11
77 Perylene-d12	537938	268969	1075876	515224	-4.22

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.46	-0.07
69 Chrysene-d12	23.46	22.96	23.96	23.46	0.00
77 Perylene-d12	26.16	25.66	26.66	26.15	-0.05

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

REVIEW SUMMARY FOR FILE - NT1705162310S.D

Lab ID: SLE0339-CAL1
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   16-MAY-2023 23:51

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1705162310S.D

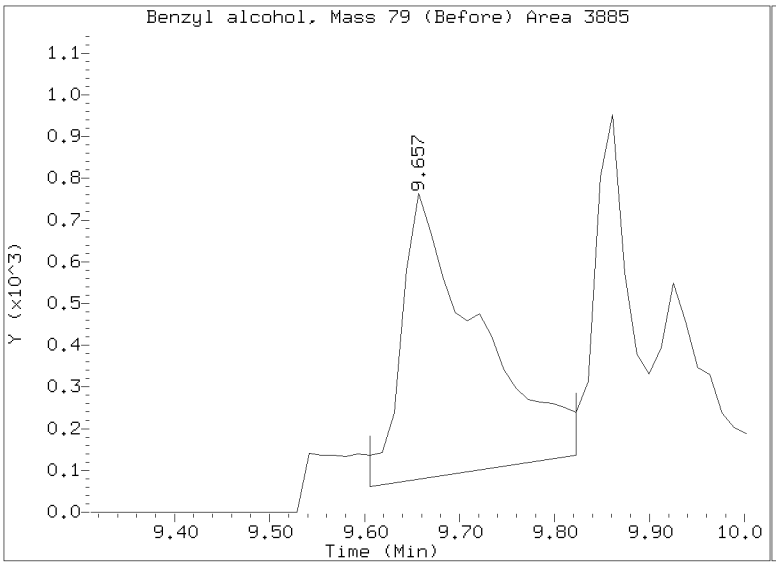
On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

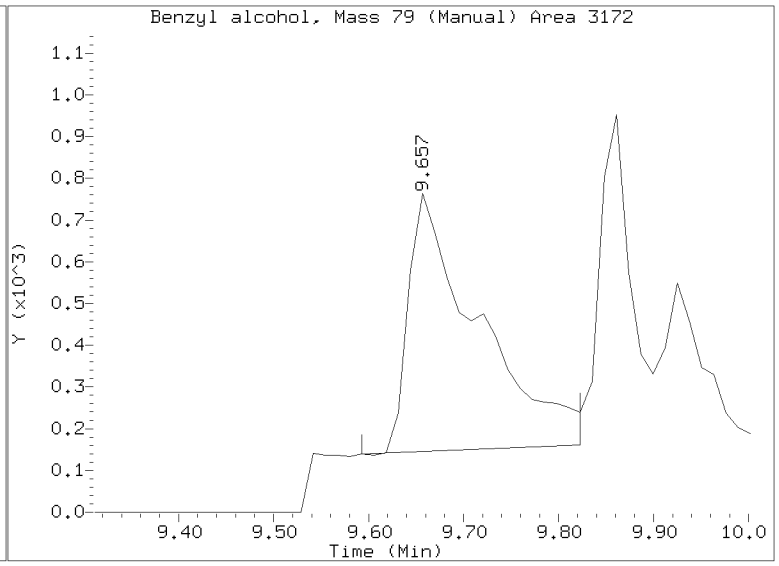
Exception: 1,2,4-Trichlorobenzene 0.0010

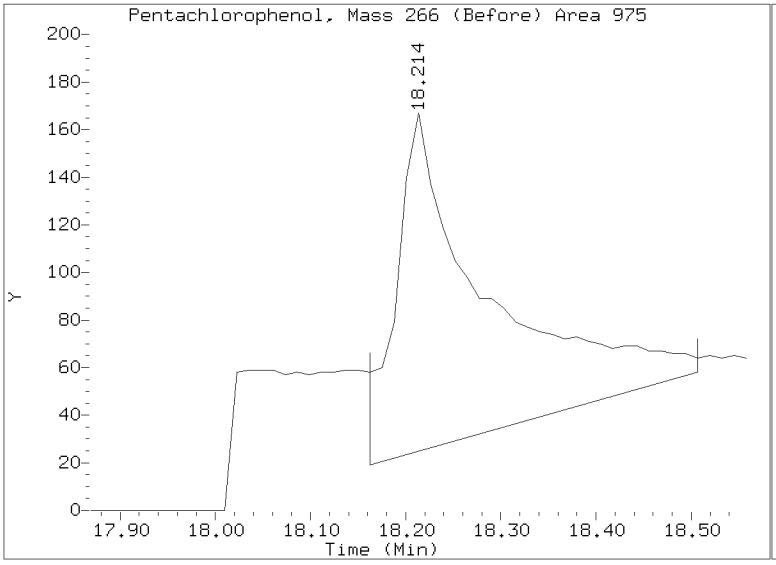
* Only compounds listed in the work order have been verified by the analyst *

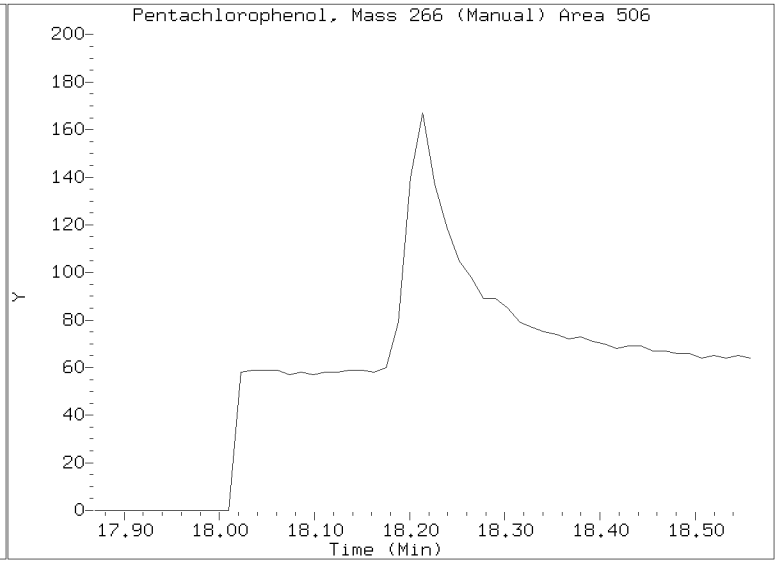
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt17.i/20230516.b/SIM.b/NT1705162310S.D
Injection Date: 16-MAY-2023 23:51
Lab ID:SLE0339-CAL1 Client ID:
Report Date: 05/24/2023 06:45









Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

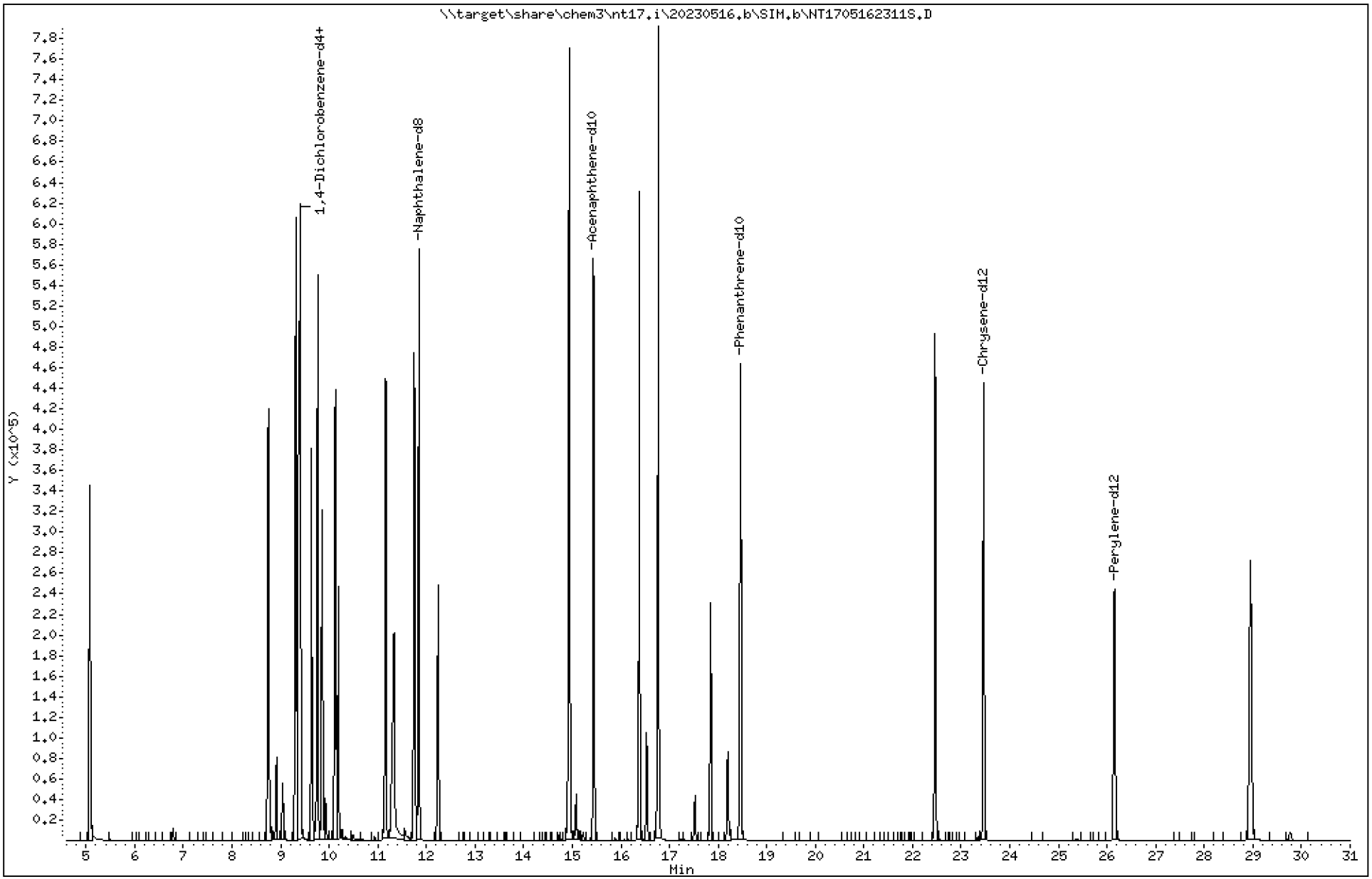
Instrument: nt17.i

Sample Info: SLE0339-SCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

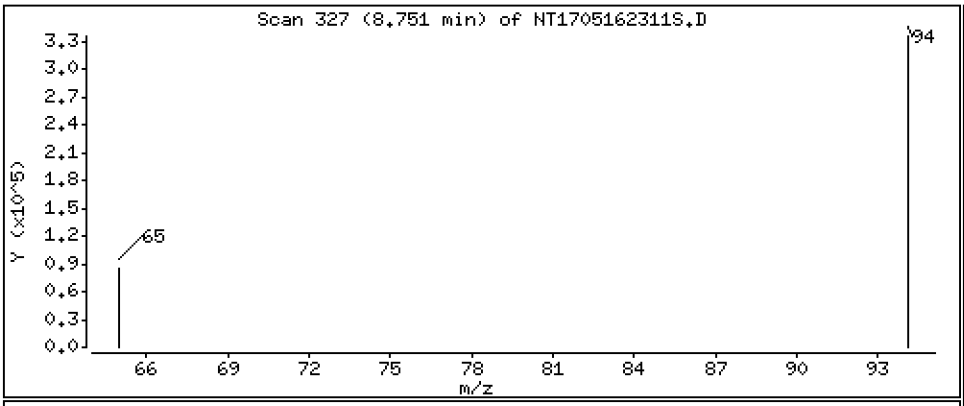
Operator: JGR

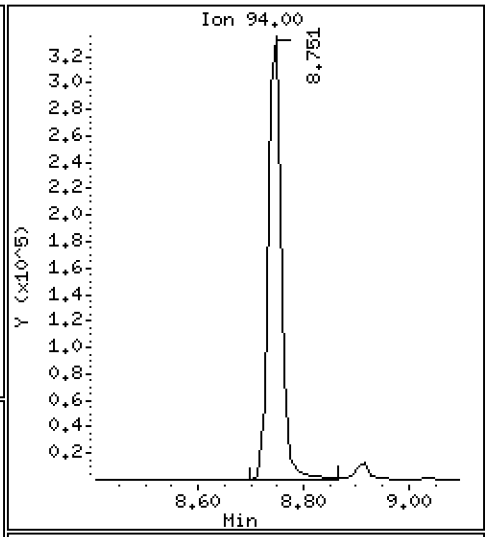
Column phase: ZB-5msi

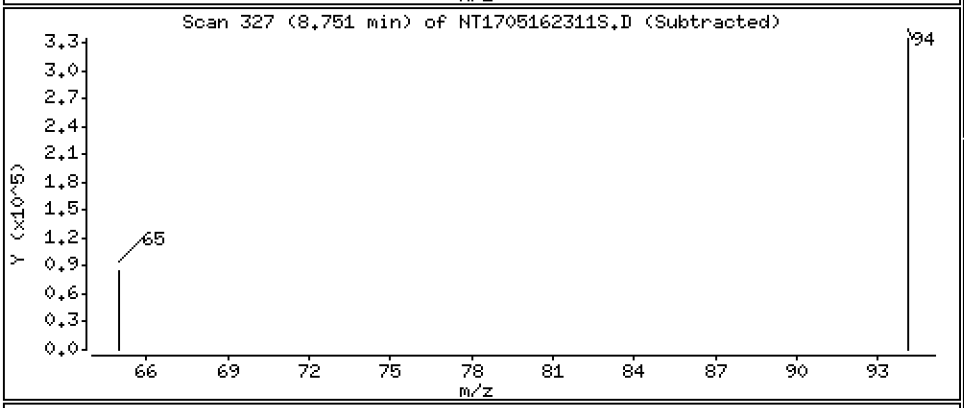
Column diameter: 0.25

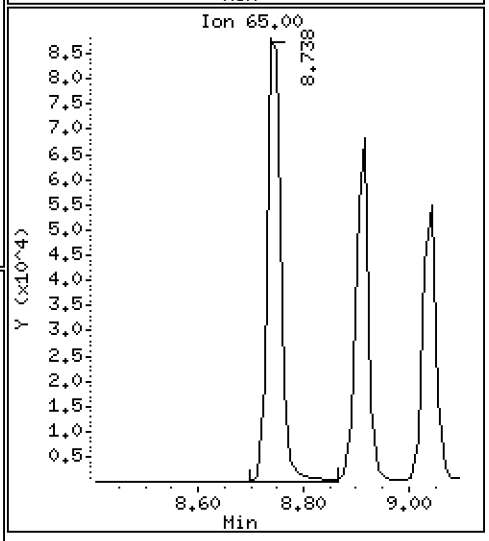
3 Phenol

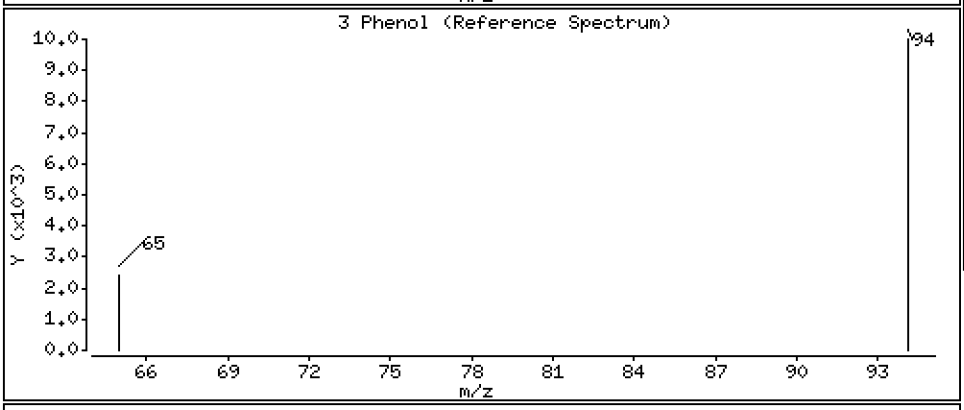
Concentration: 4.884 ug/mL

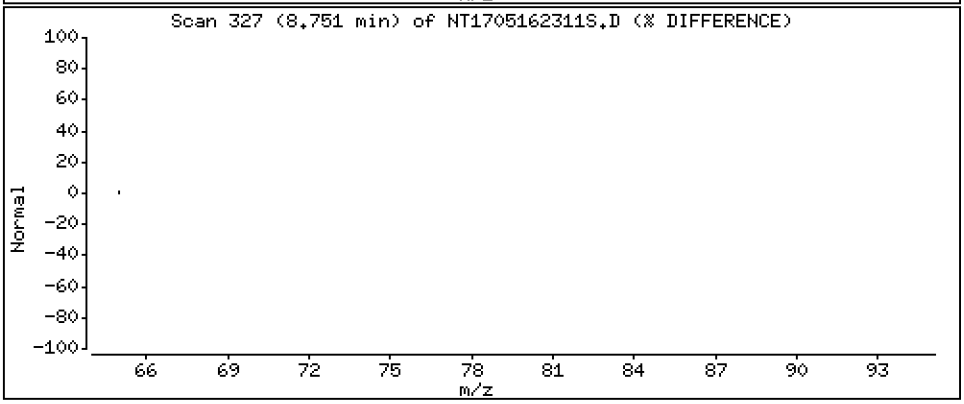












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

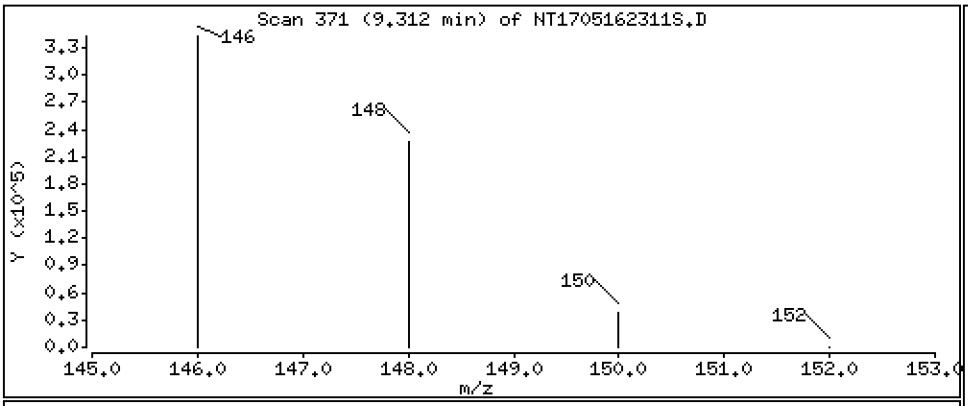
Operator: JGR

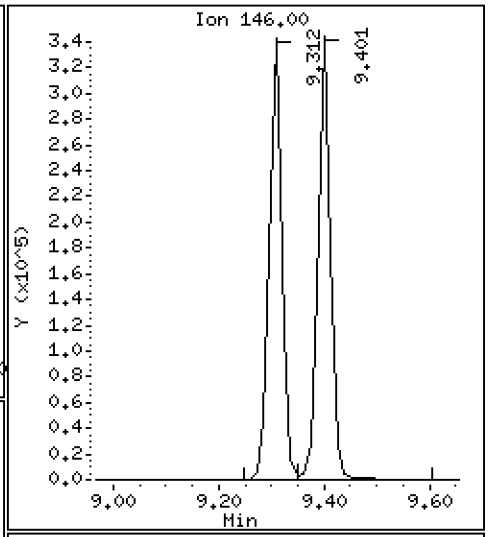
Column phase: ZB-5msi

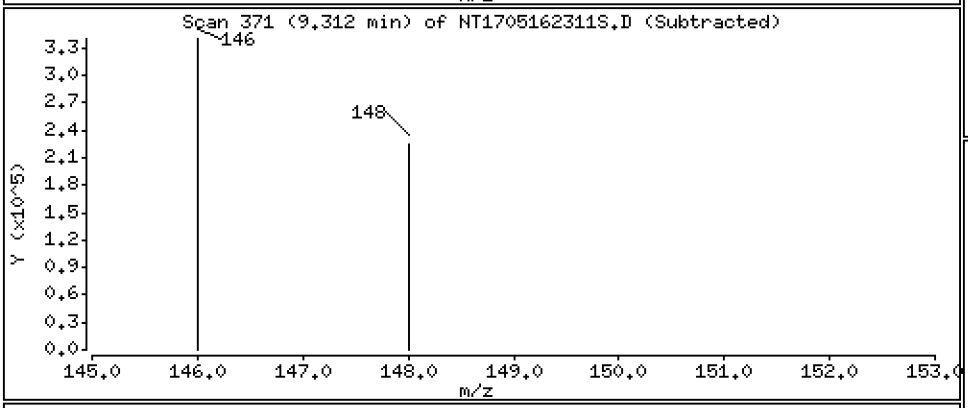
Column diameter: 0.25

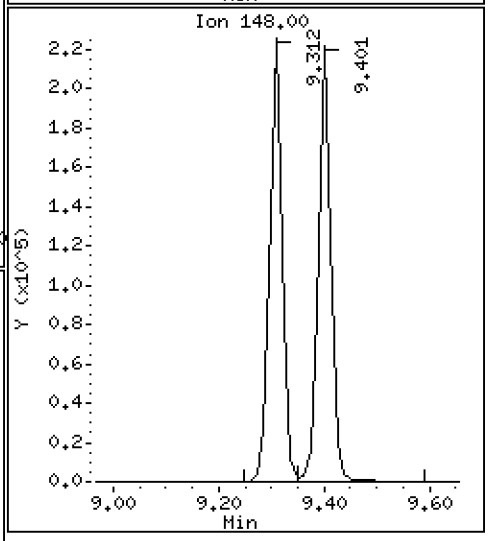
7 1,3-Dichlorobenzene

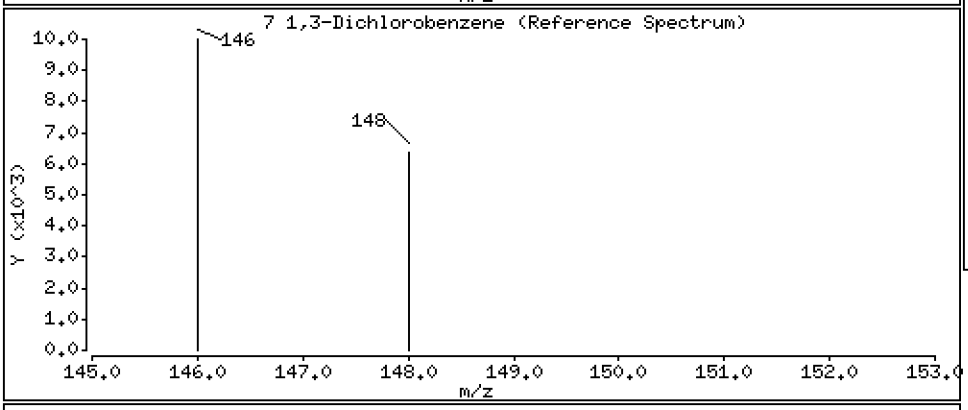
Concentration: 5.087 ug/mL

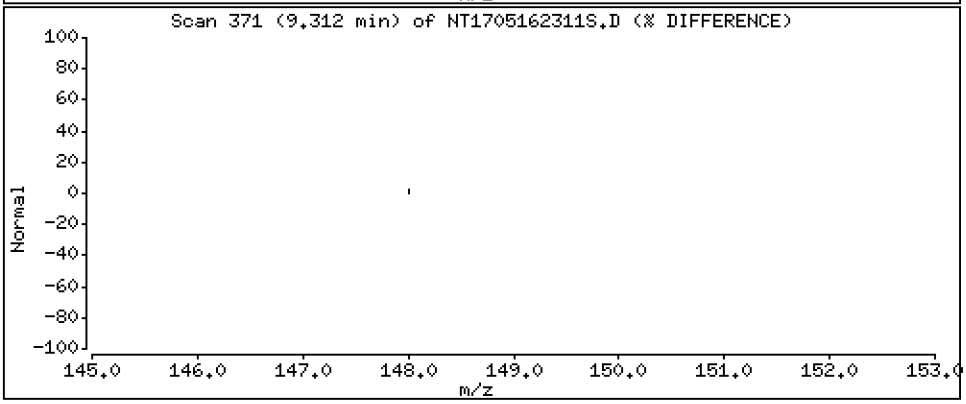












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

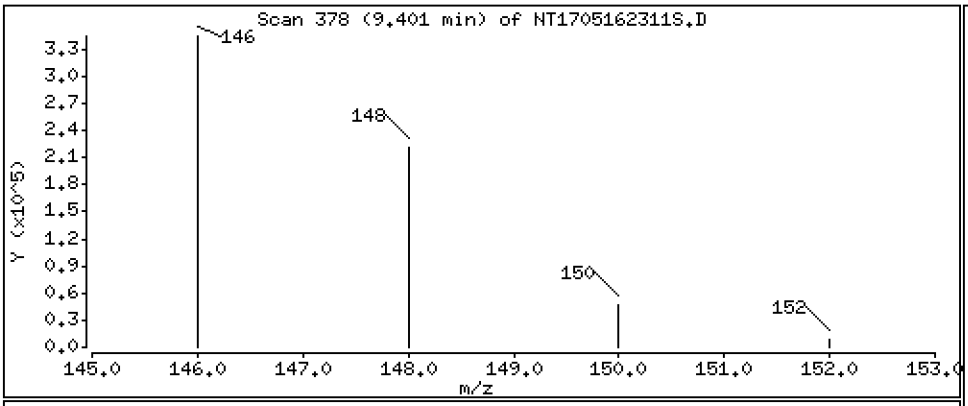
Operator: JGR

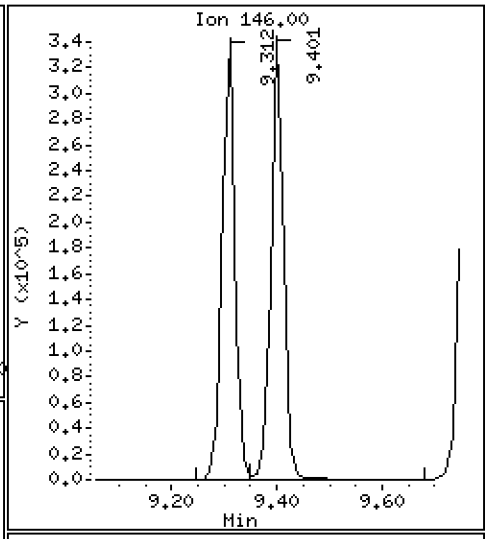
Column phase: ZB-5msi

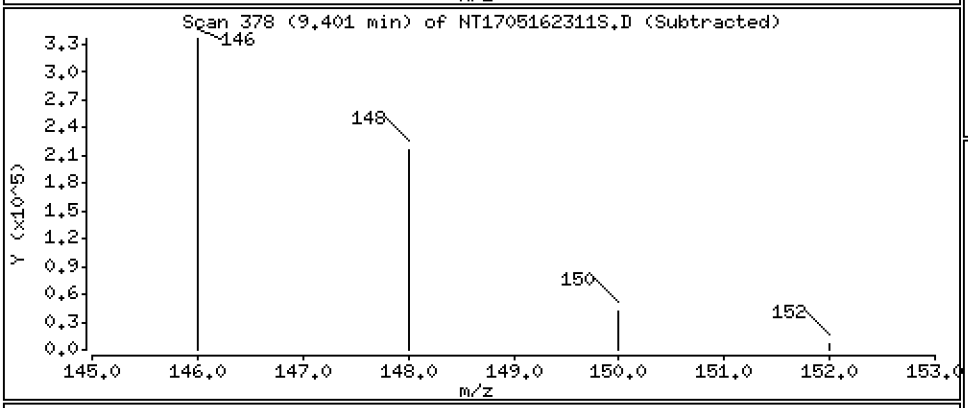
Column diameter: 0.25

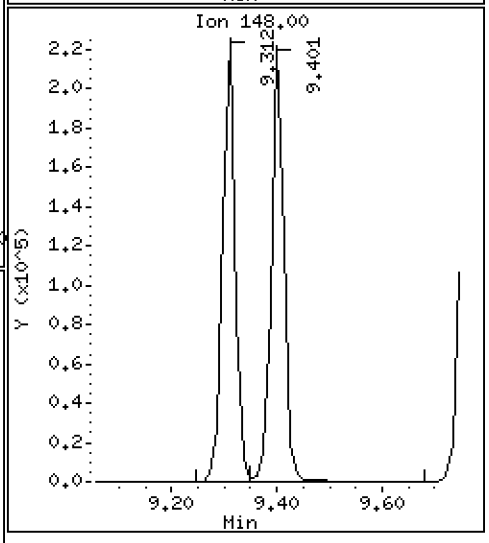
9 1,4-Dichlorobenzene

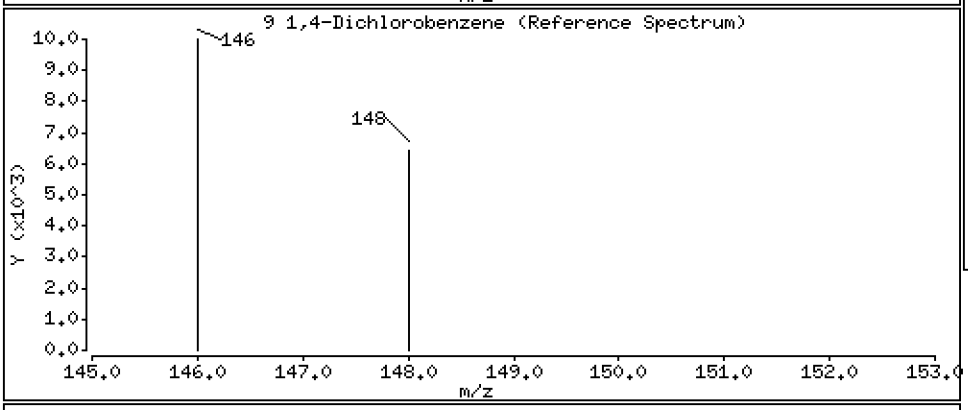
Concentration: 5.132 ug/mL

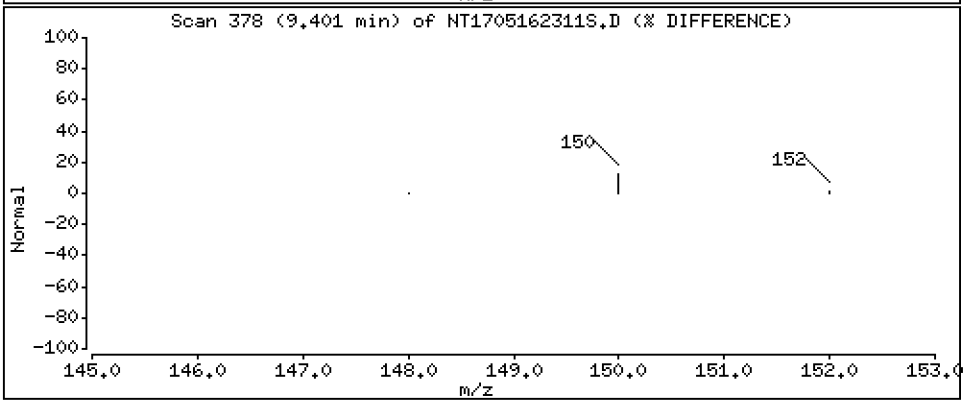












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

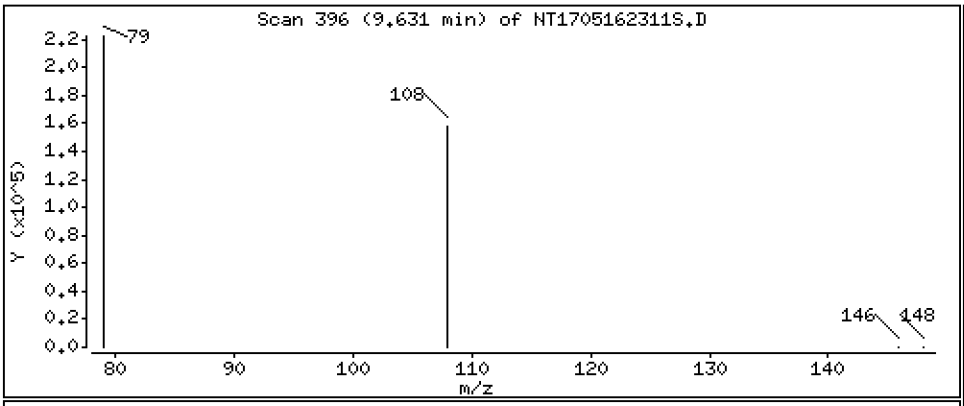
Operator: JGR

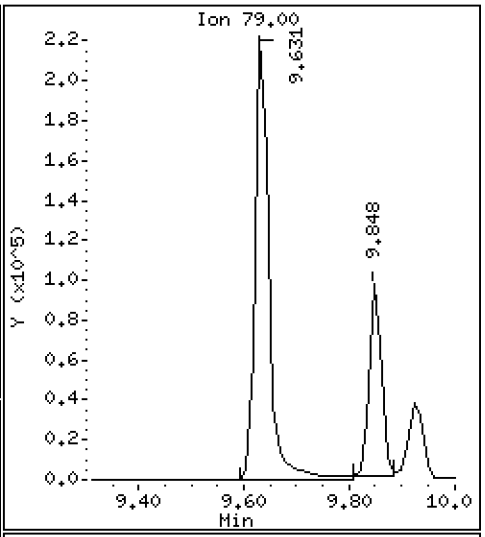
Column phase: ZB-5msi

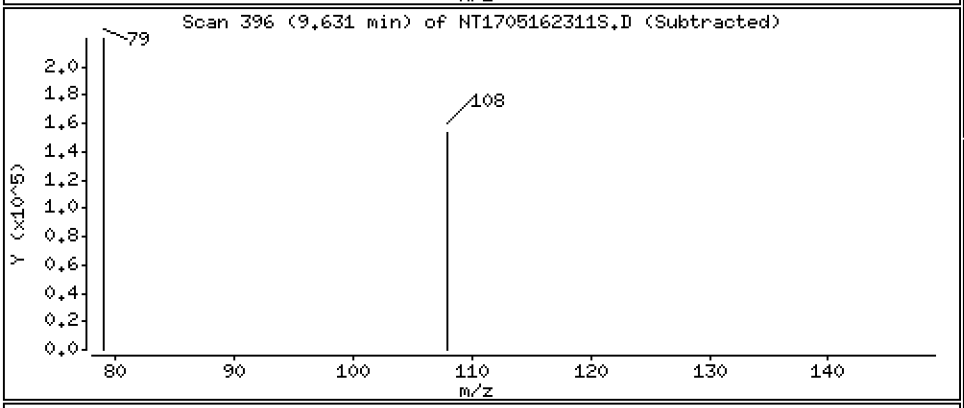
Column diameter: 0.25

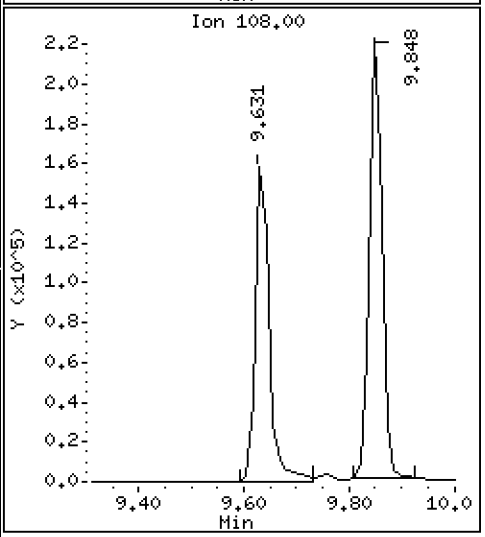
11 Benzyl alcohol

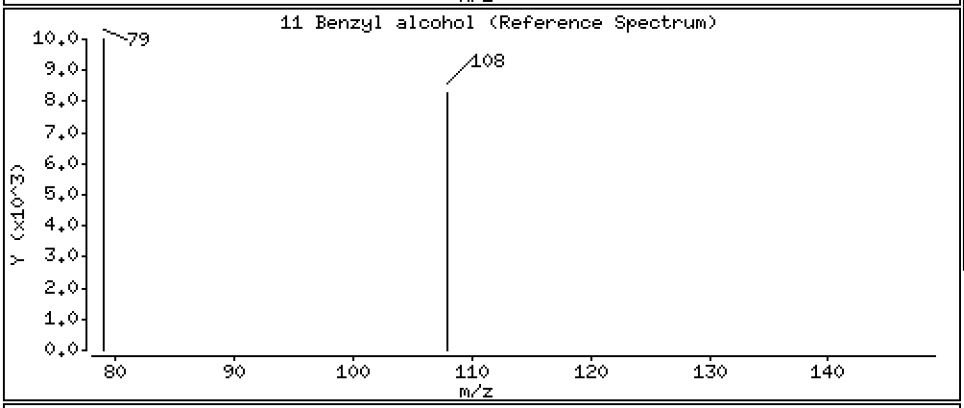
Concentration: 5.706 ug/mL

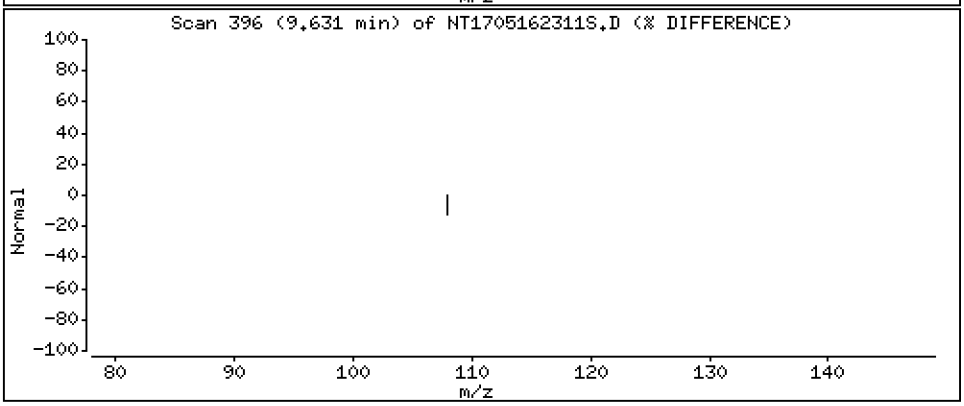












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

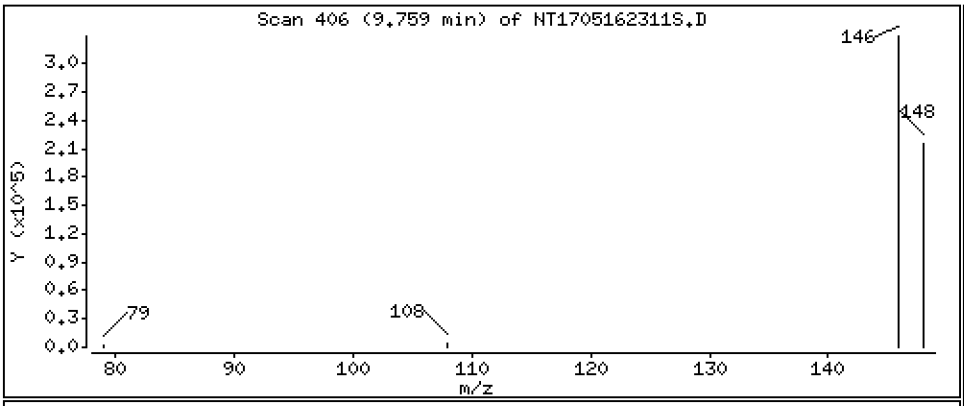
Operator: JGR

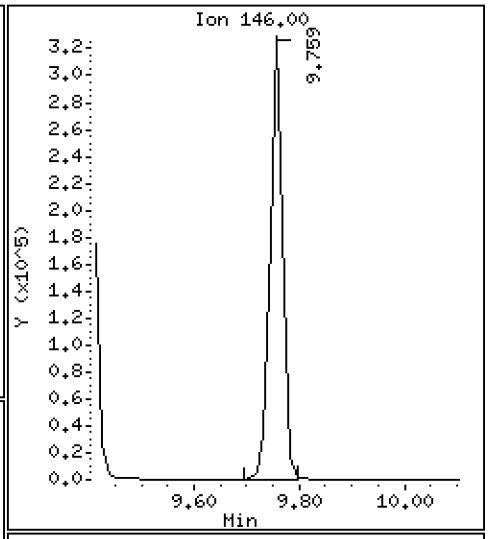
Column phase: ZB-5msi

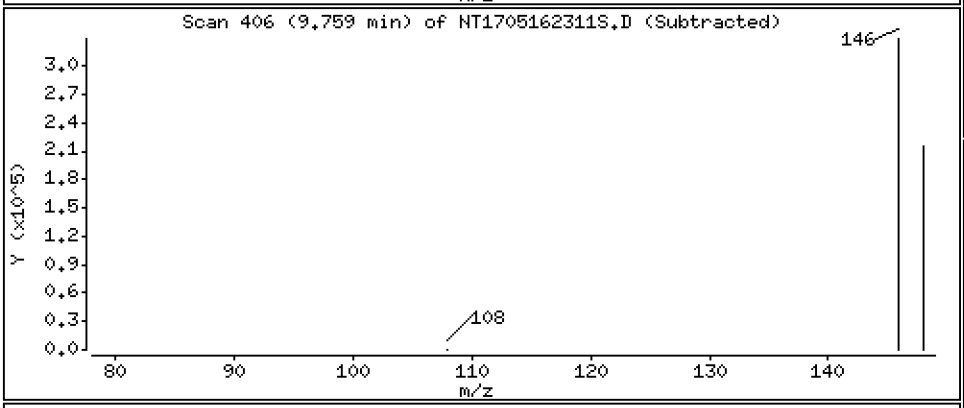
Column diameter: 0.25

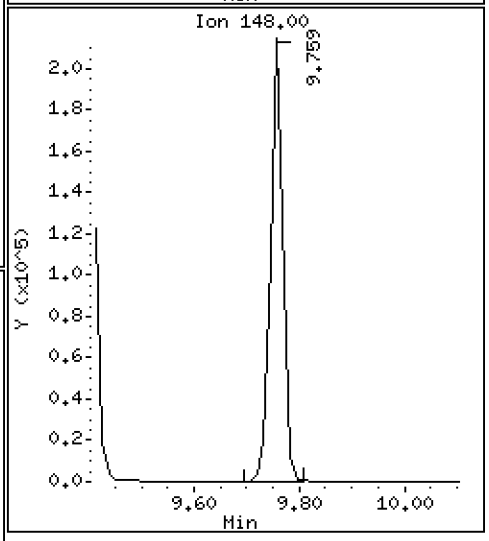
12 1,2-Dichlorobenzene

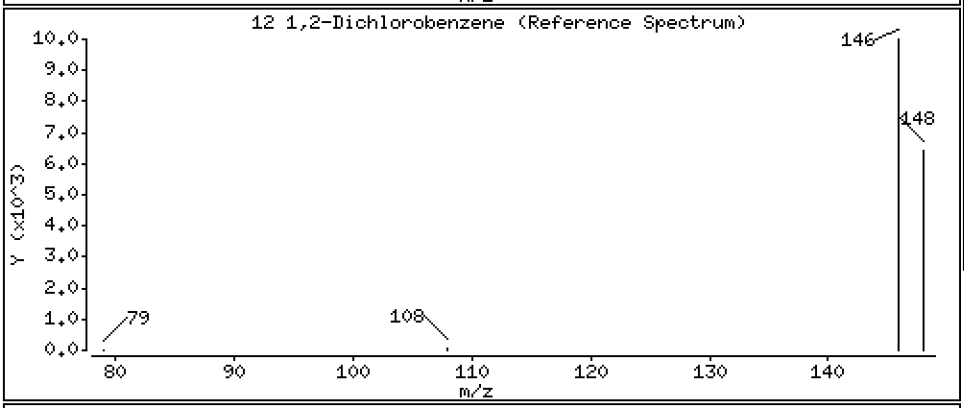
Concentration: 5.007 ug/mL

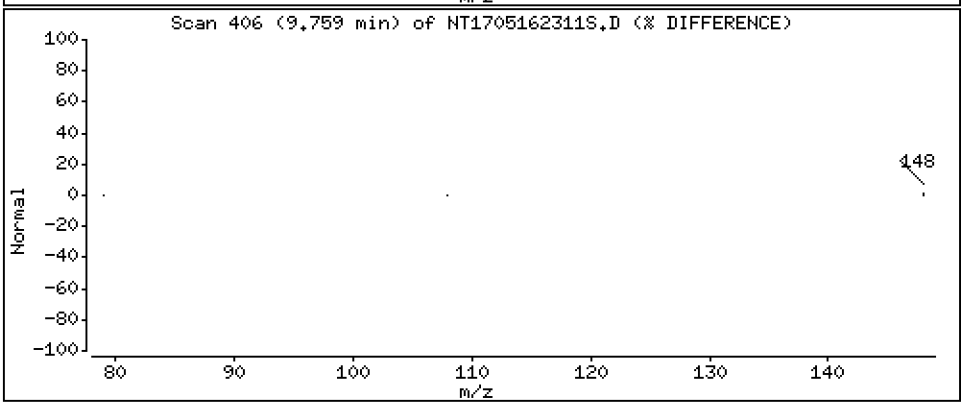












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

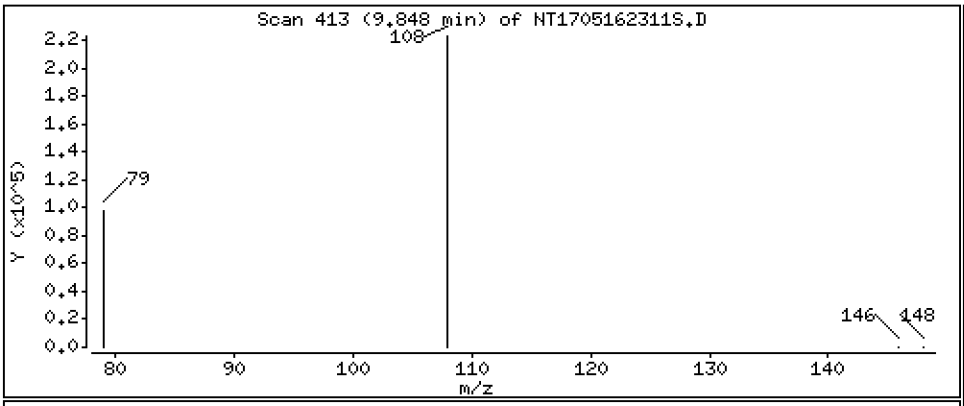
Operator: JGR

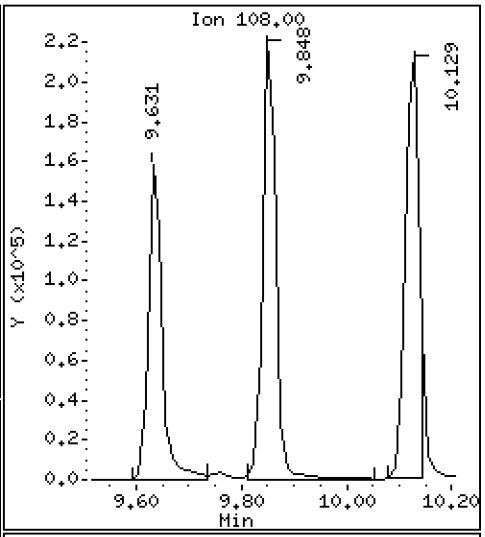
Column phase: ZB-5msi

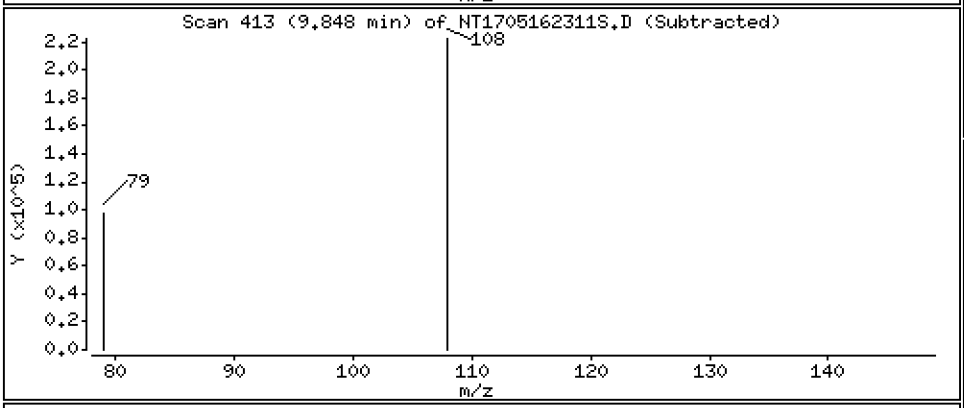
Column diameter: 0.25

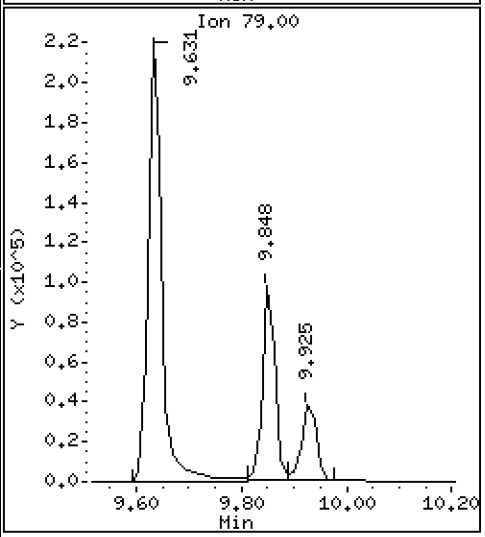
13 2-Methylphenol

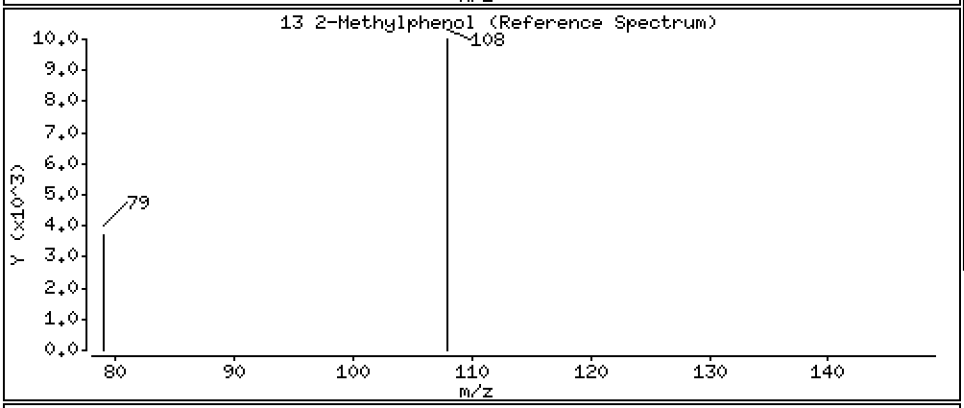
Concentration: 4.408 ug/mL

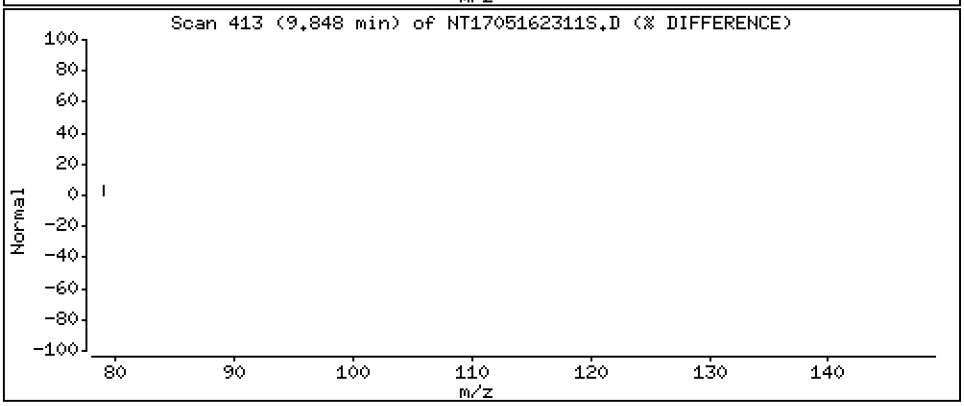












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

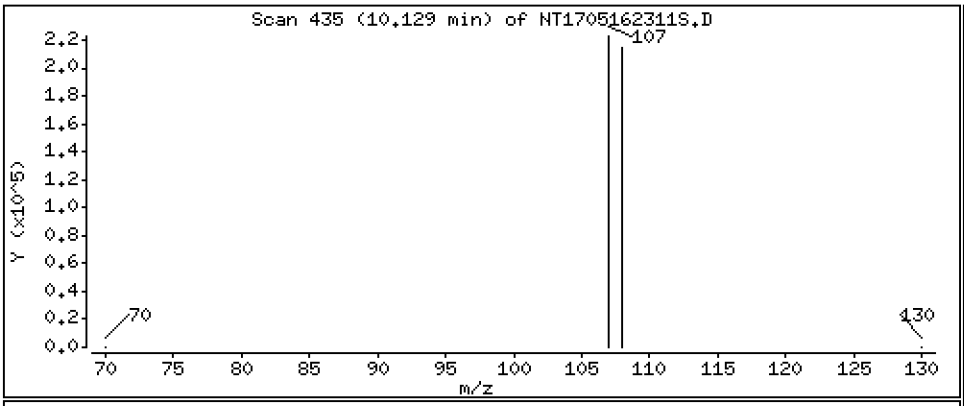
Operator: JGR

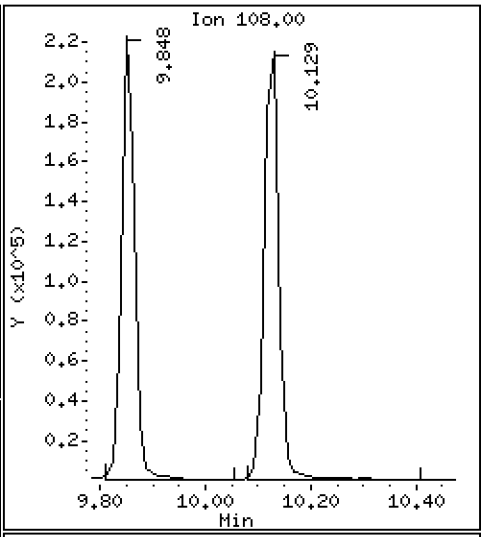
Column phase: ZB-5msi

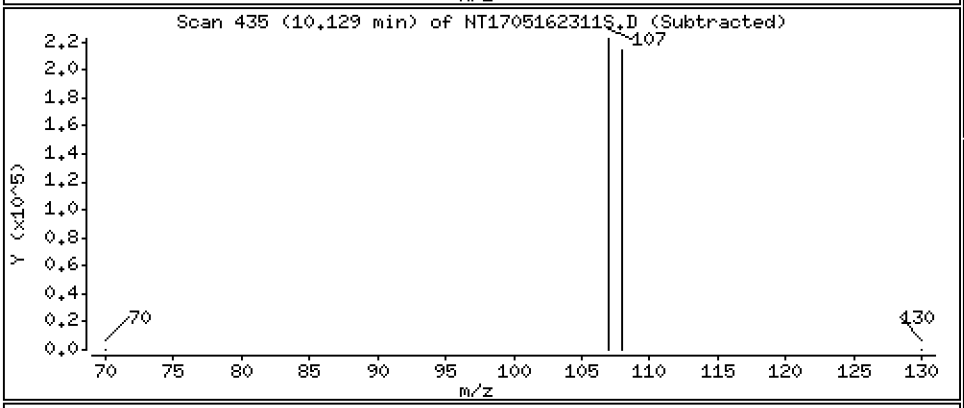
Column diameter: 0.25

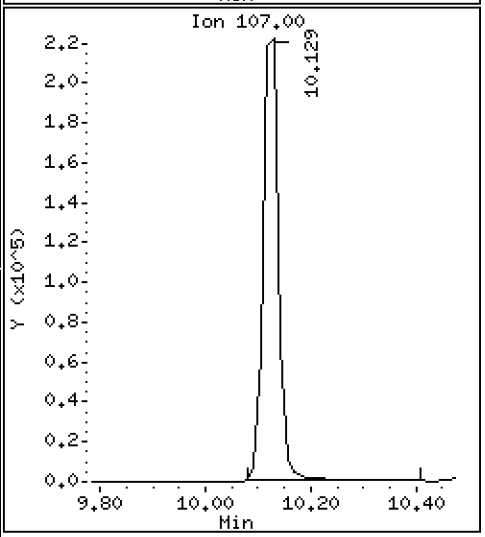
15 4-Methylphenol

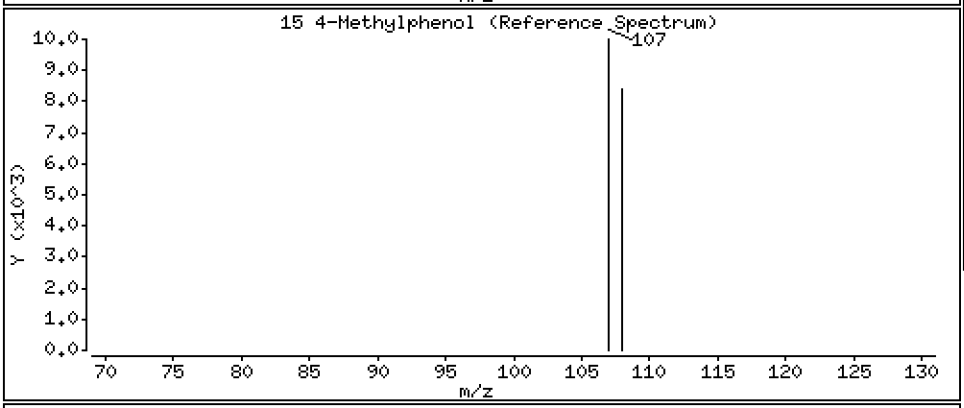
Concentration: 4.788 ug/mL

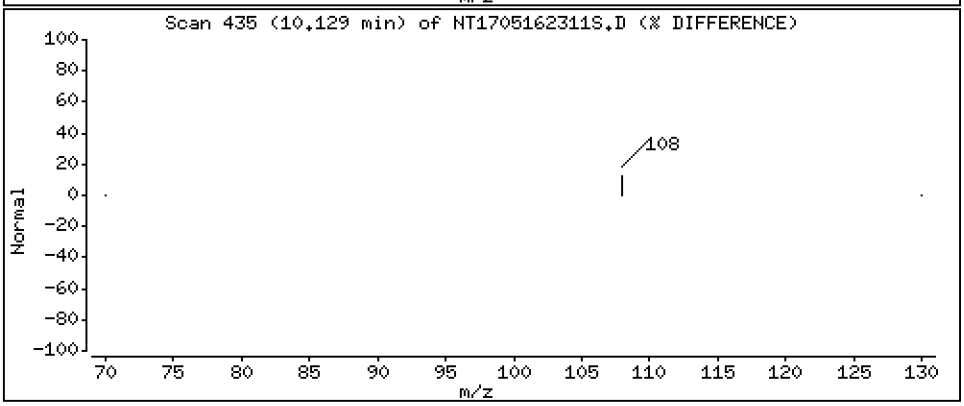












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

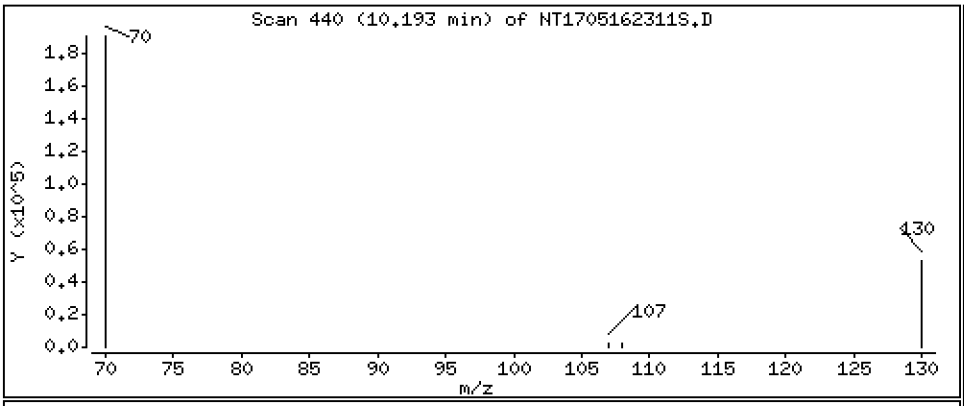
Operator: JGR

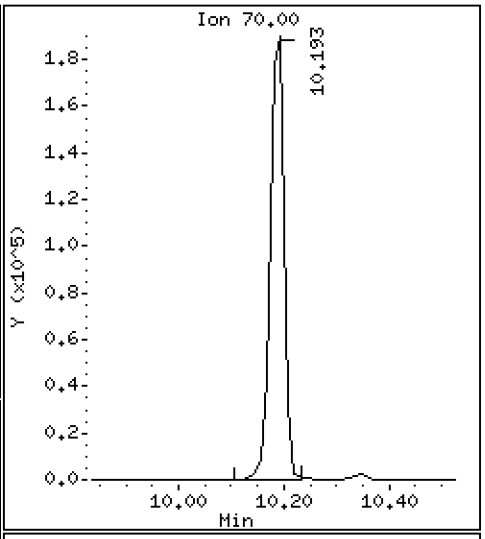
Column phase: ZB-5msi

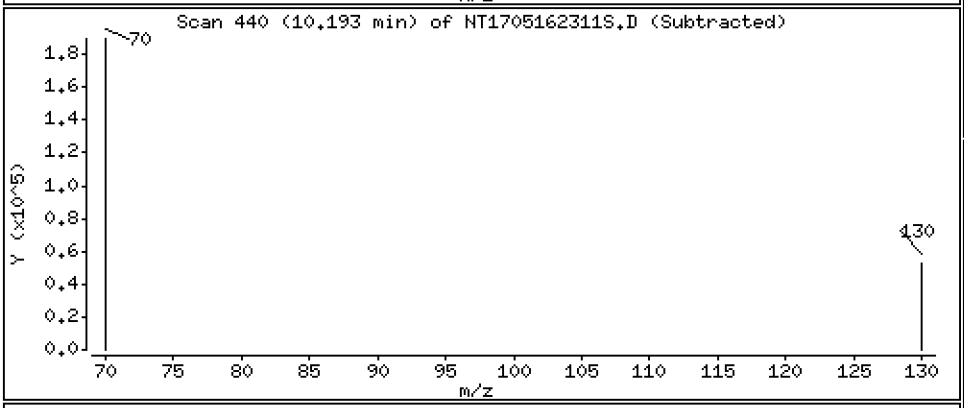
Column diameter: 0.25

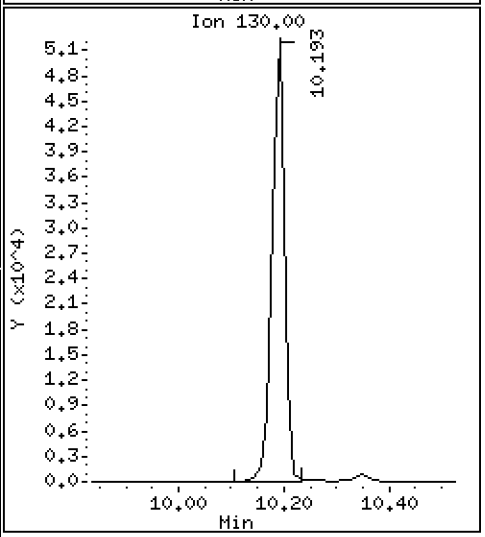
16 N-Nitroso-di-n-propylamine

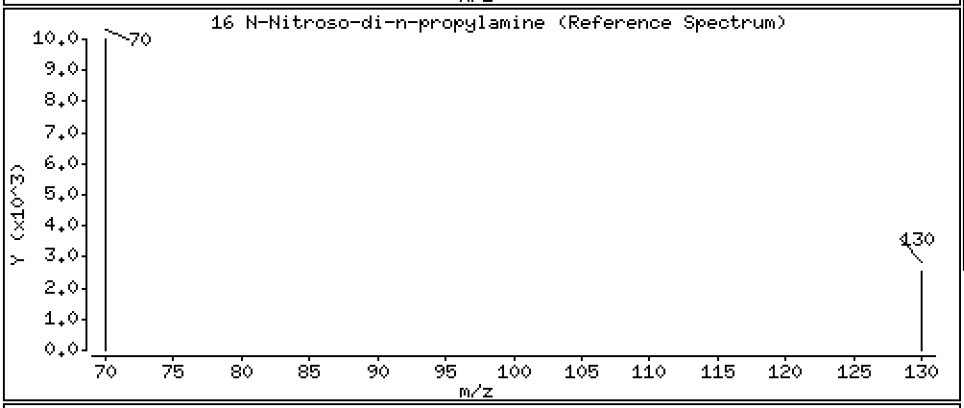
Concentration: 5.479 ug/mL

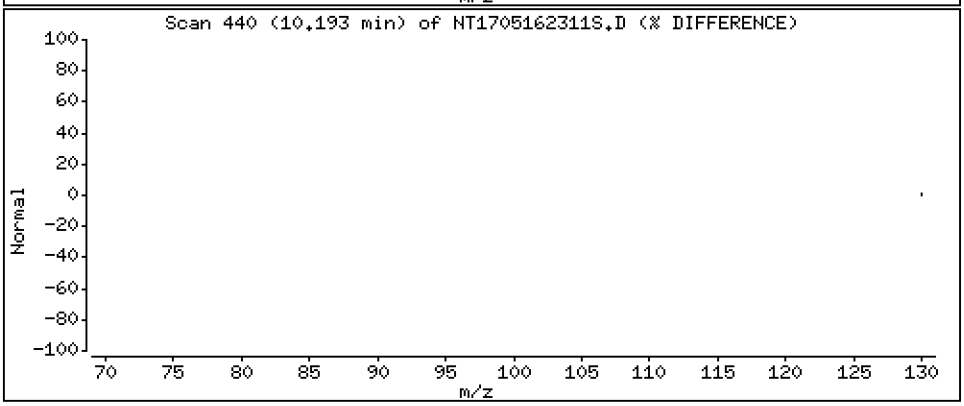












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

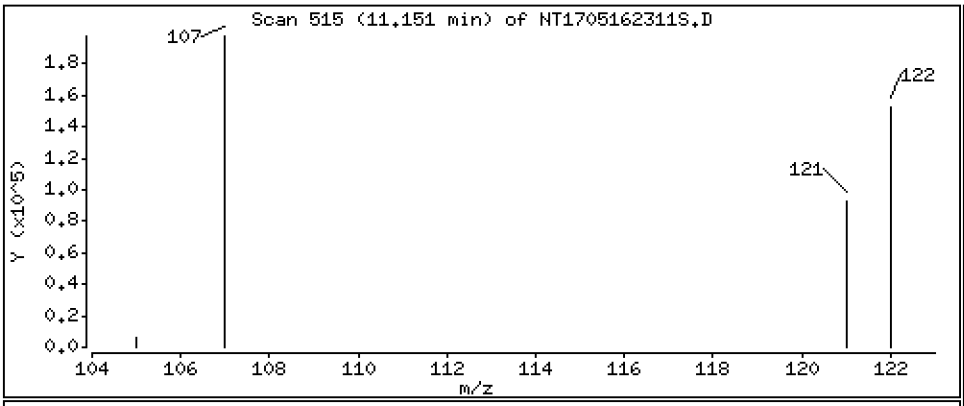
Operator: JGR

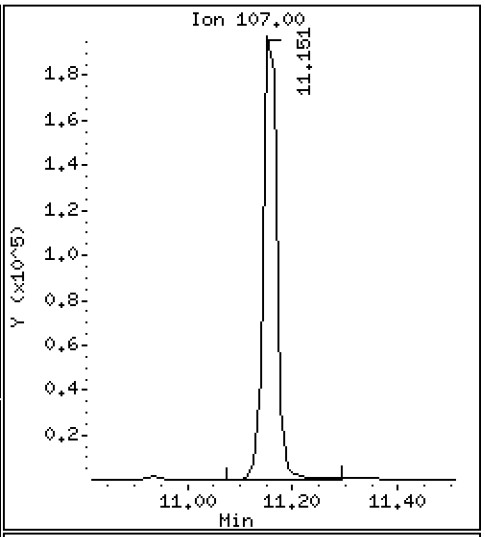
Column phase: ZB-5msi

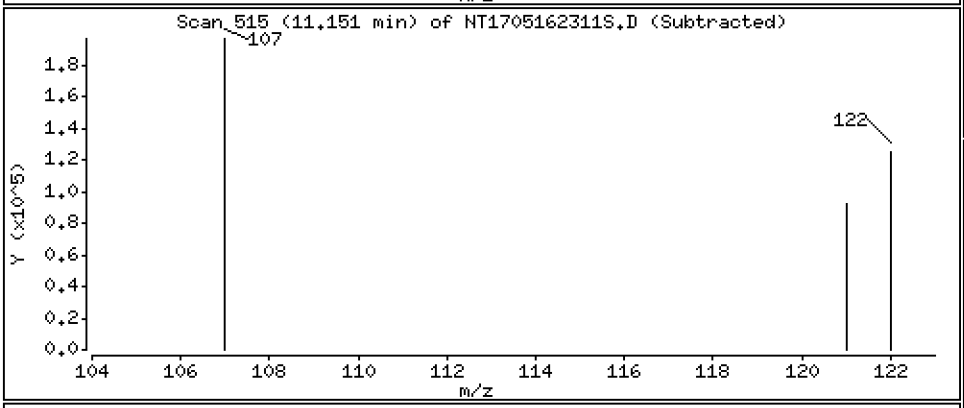
Column diameter: 0.25

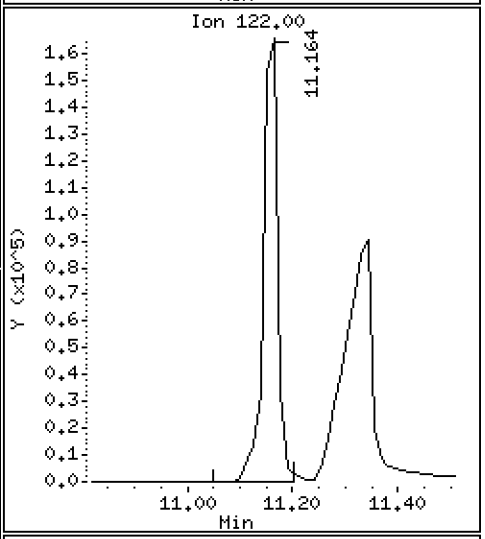
22 2,4-Dimethylphenol

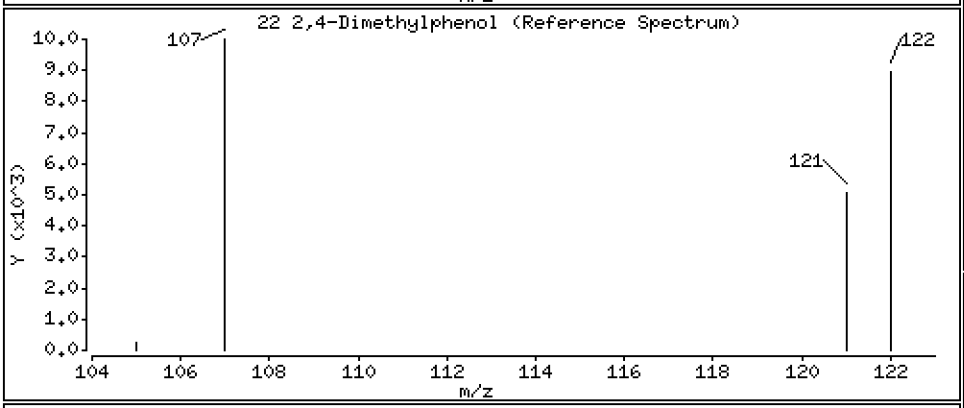
Concentration: 3.816 ug/mL

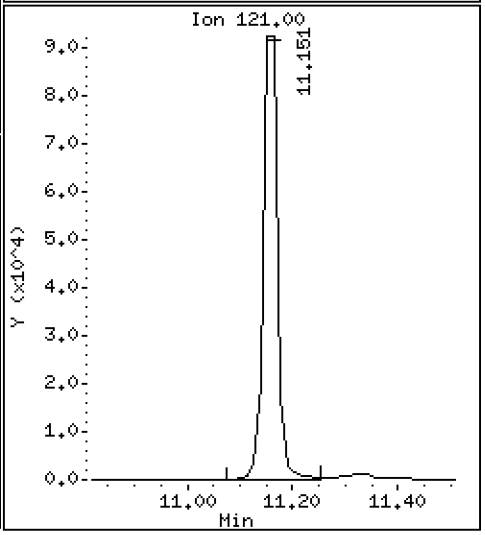


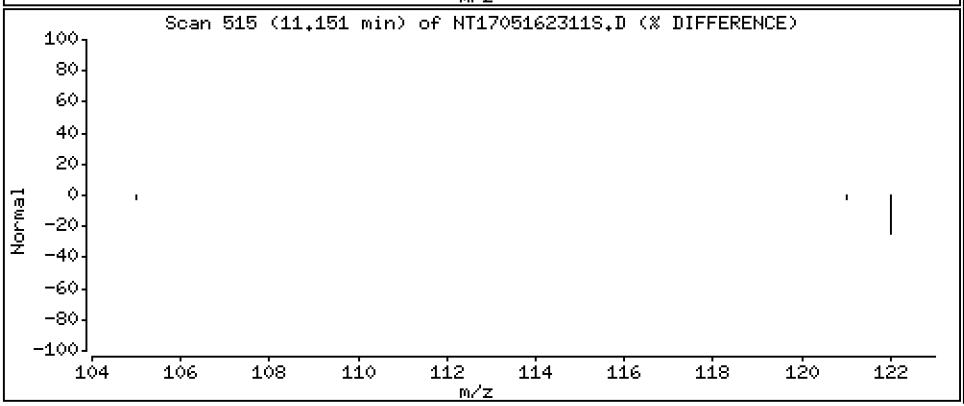












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

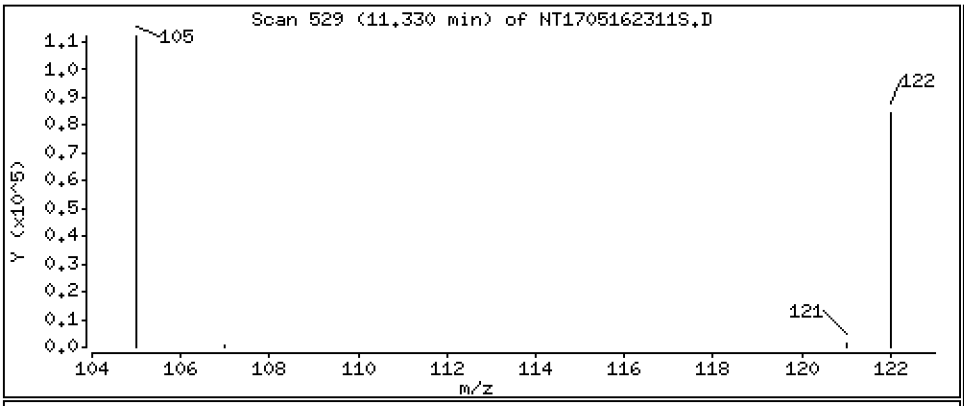
Operator: JGR

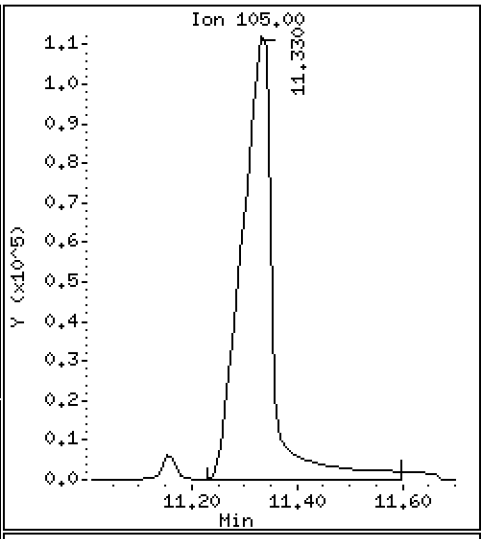
Column phase: ZB-5msi

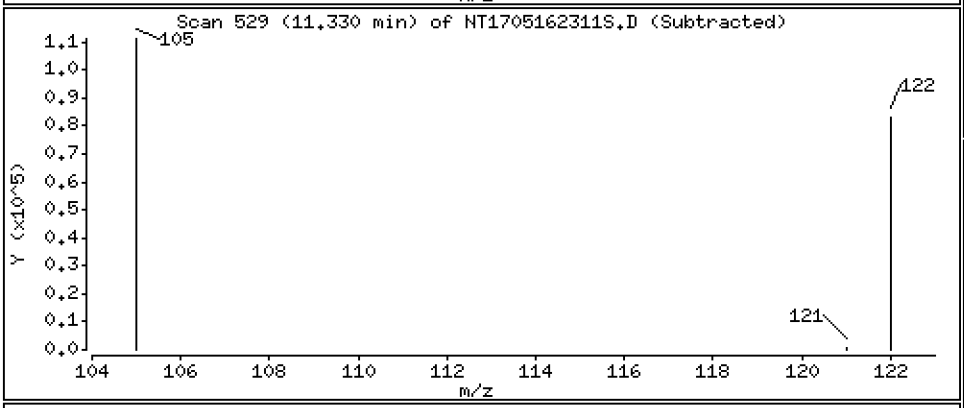
Column diameter: 0.25

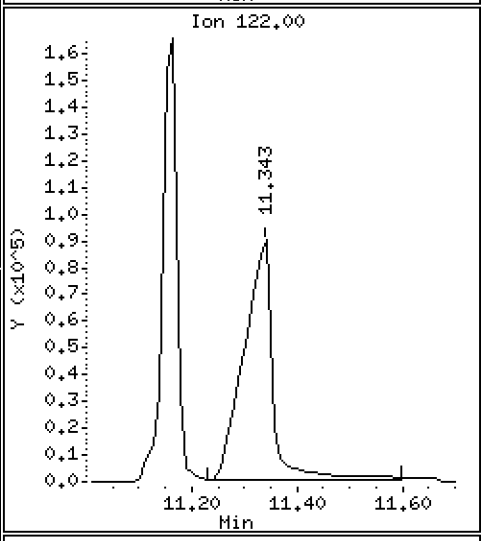
24 Benzoic acid

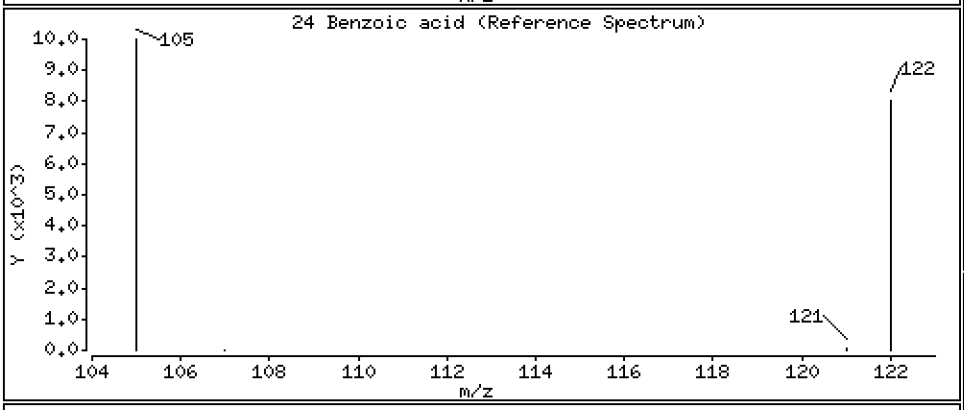
Concentration: 7.777 ug/mL

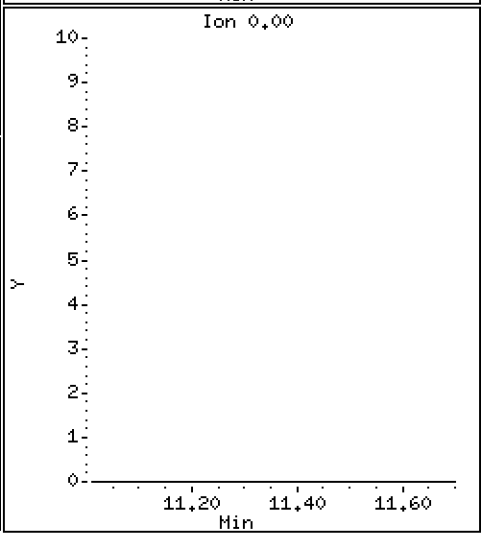


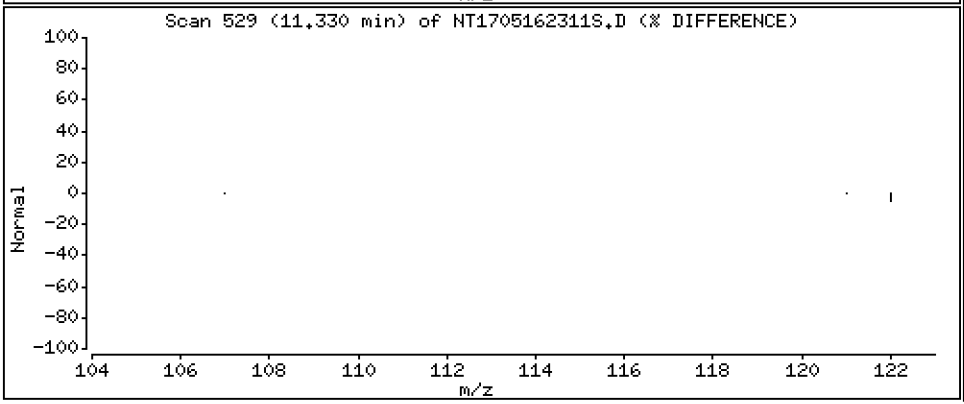












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

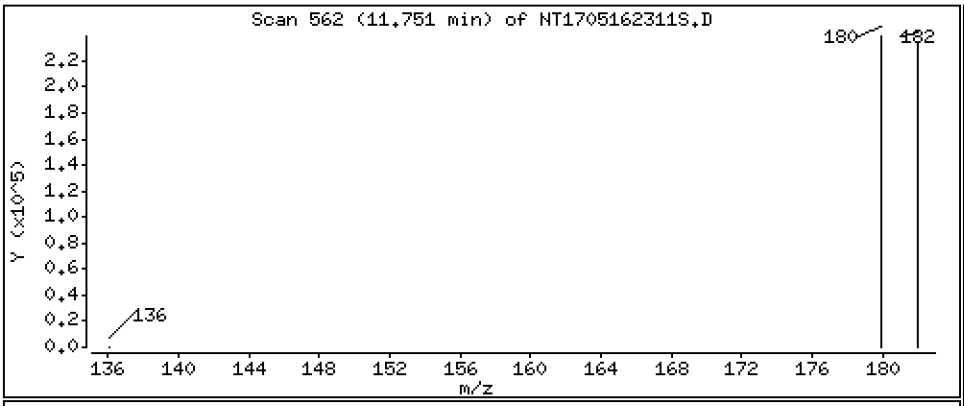
Operator: JGR

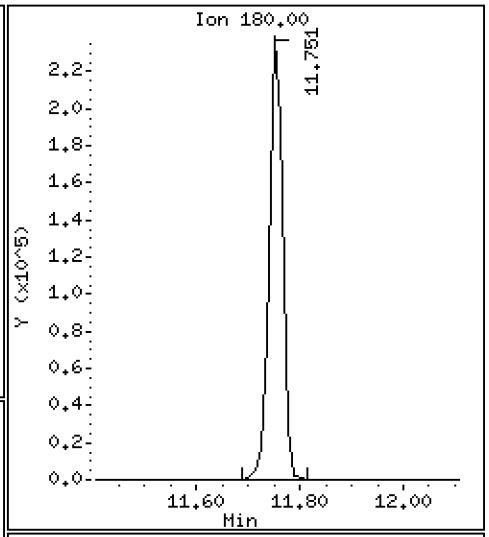
Column phase: ZB-5msi

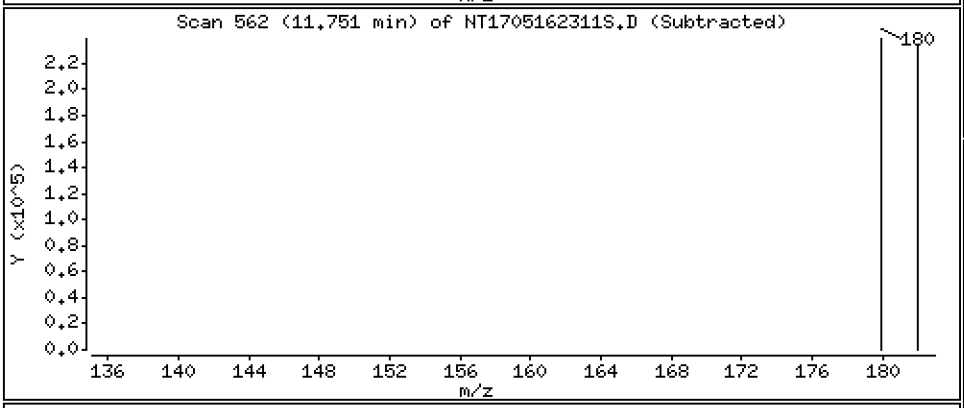
Column diameter: 0.25

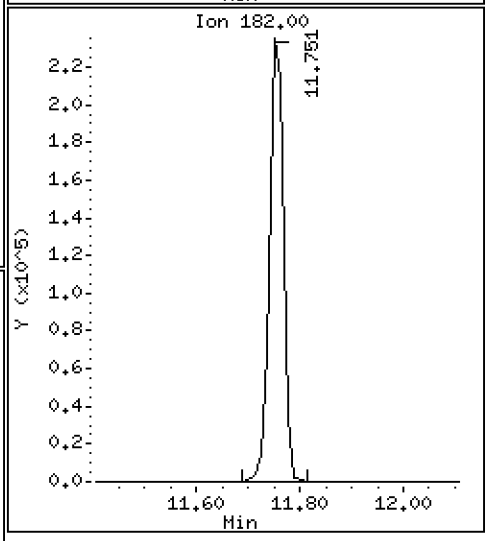
26 1,2,4-Trichlorobenzene

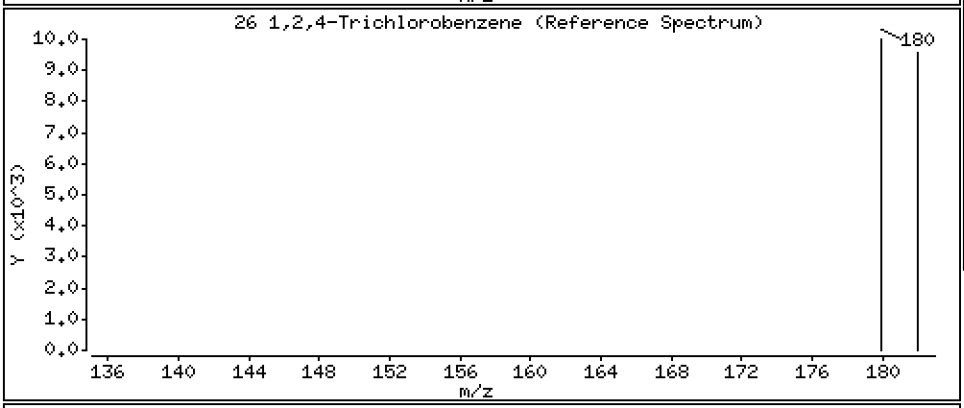
Concentration: 4.906 ug/mL

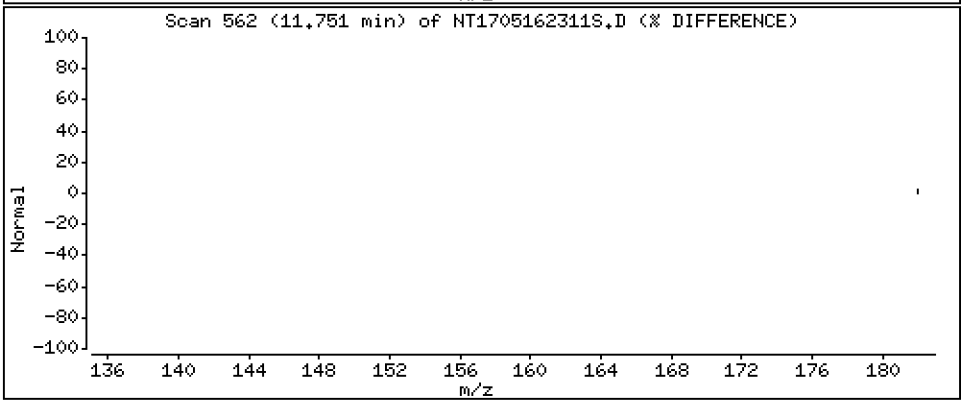












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

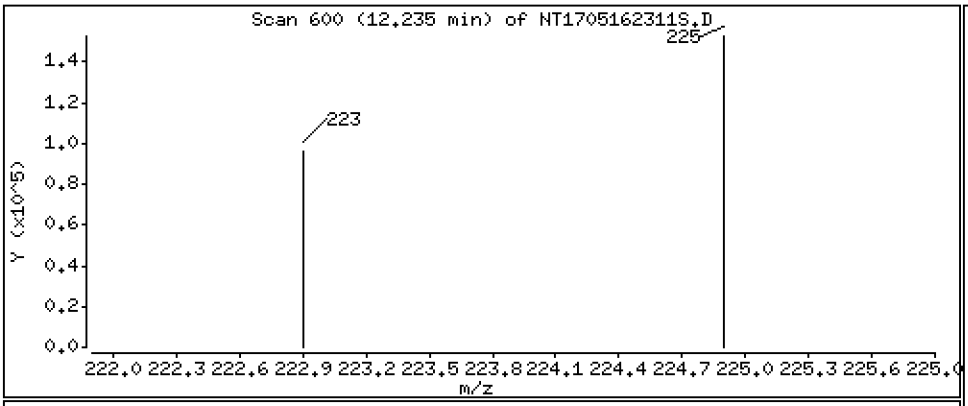
Operator: JGR

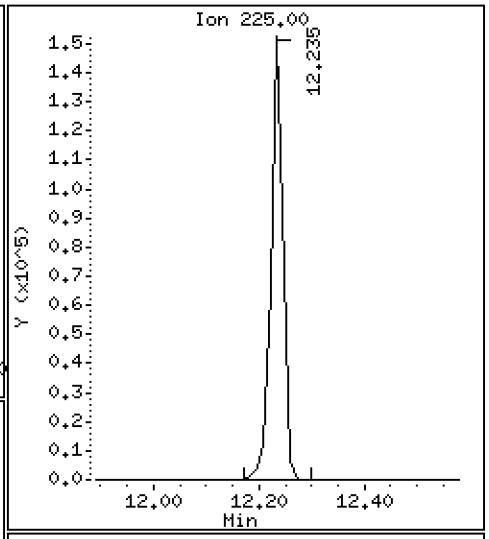
Column phase: ZB-5msi

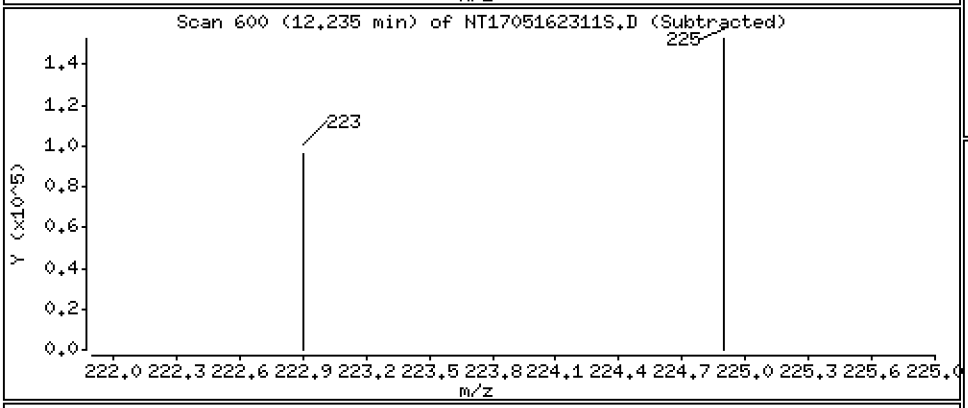
Column diameter: 0.25

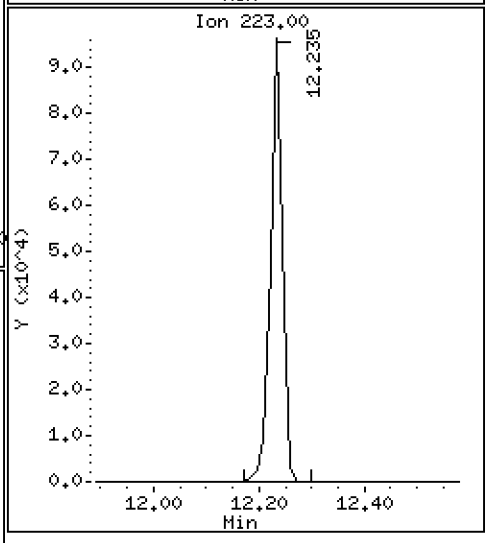
30 Hexachlorobutadiene

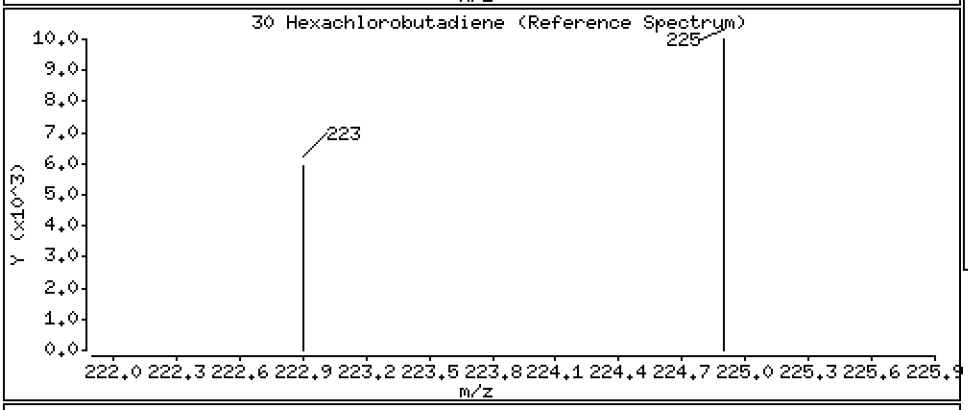
Concentration: 5.201 ug/mL

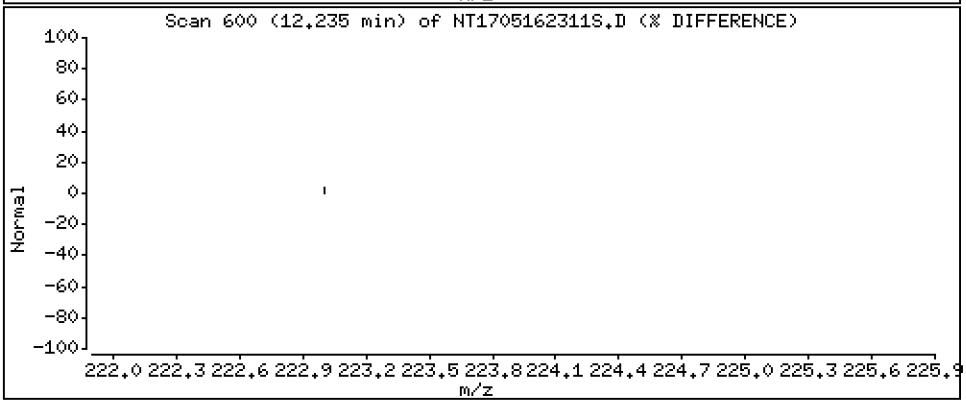












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

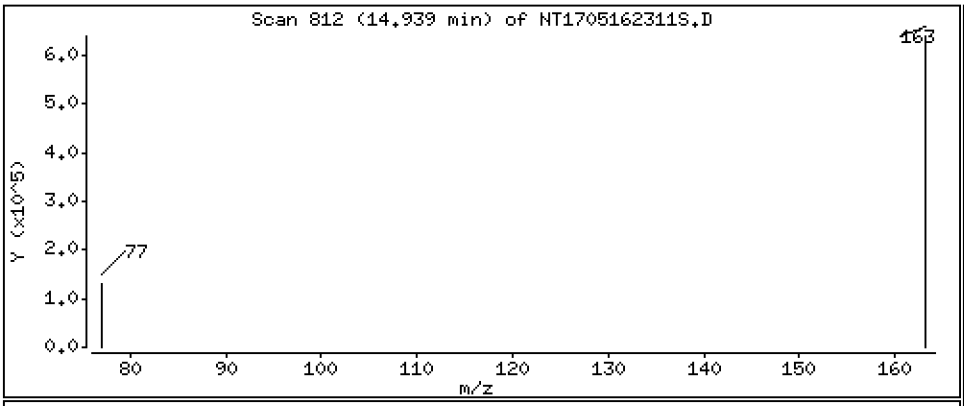
Operator: JGR

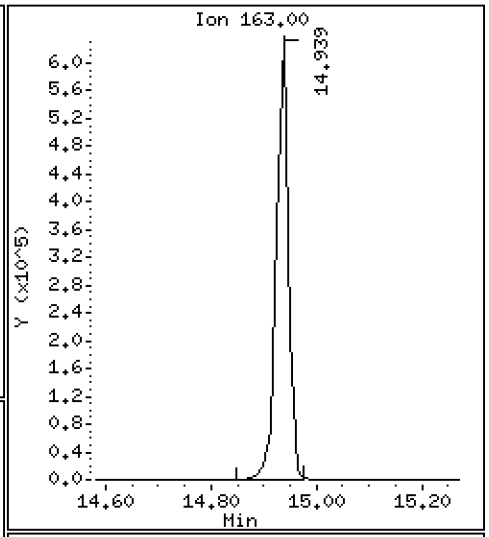
Column phase: ZB-5msi

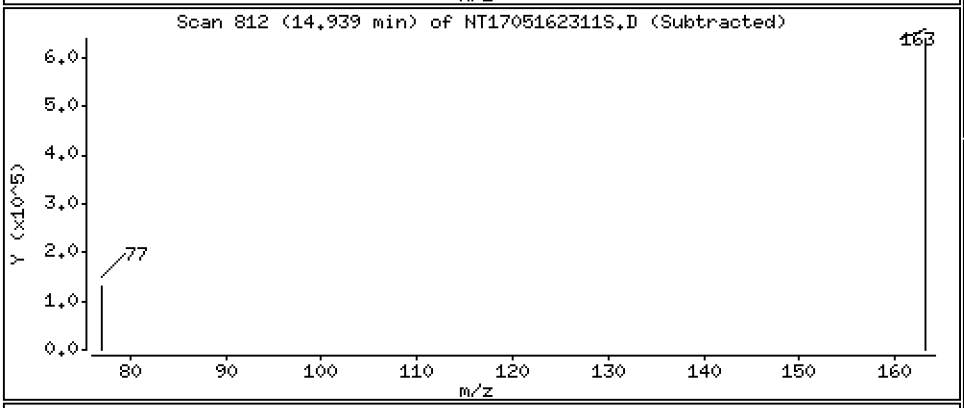
Column diameter: 0.25

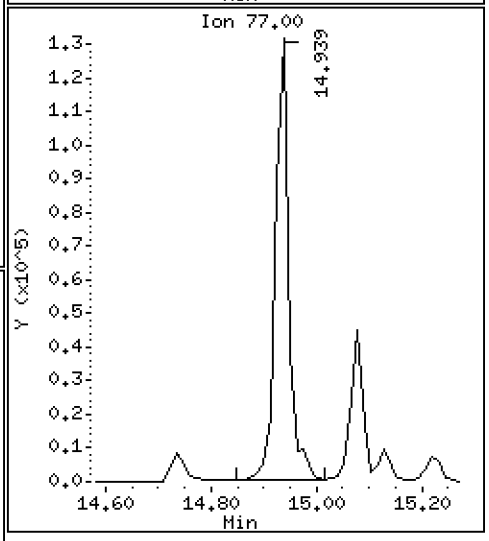
39 Dimethylphthalate

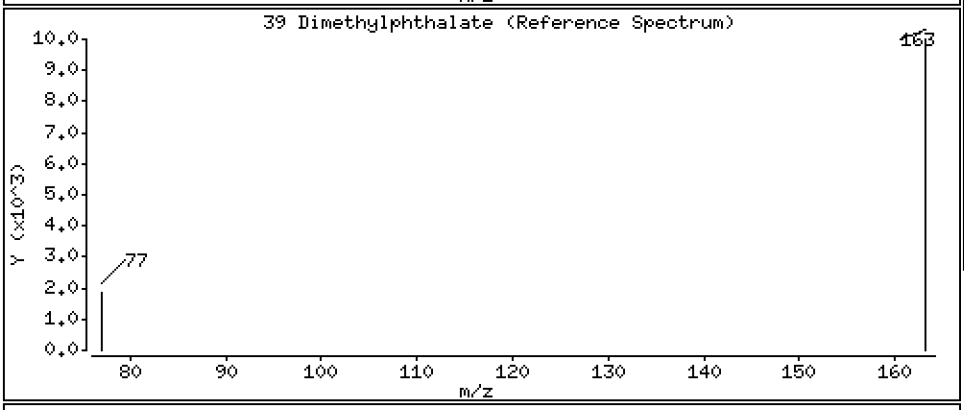
Concentration: 5.240 ug/mL

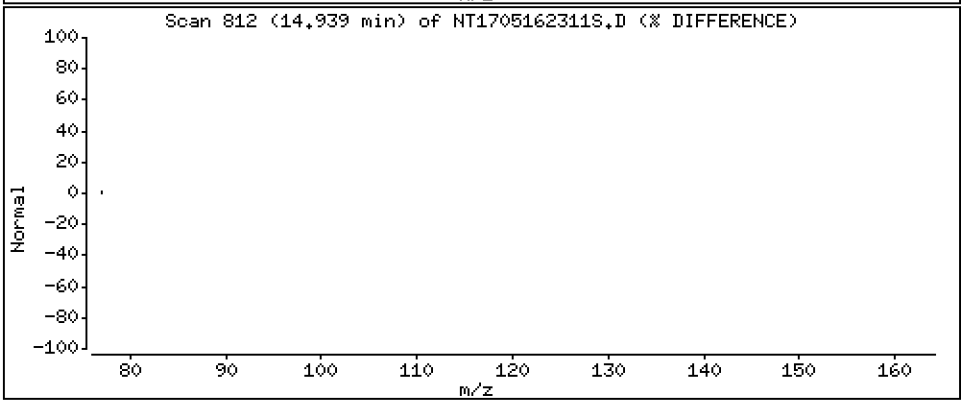












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

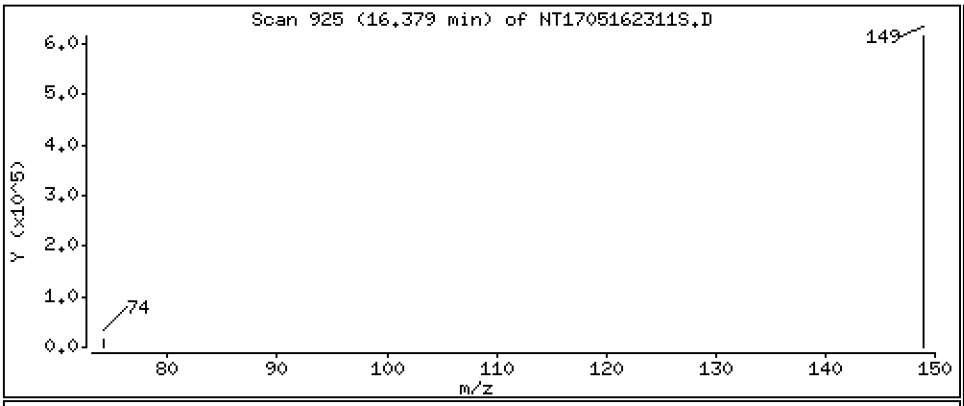
Operator: JGR

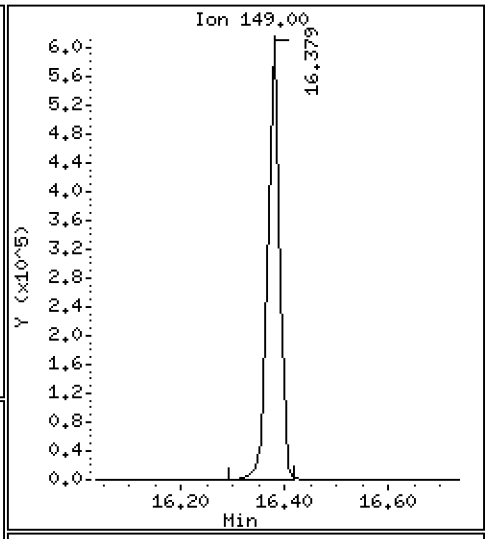
Column phase: ZB-5msi

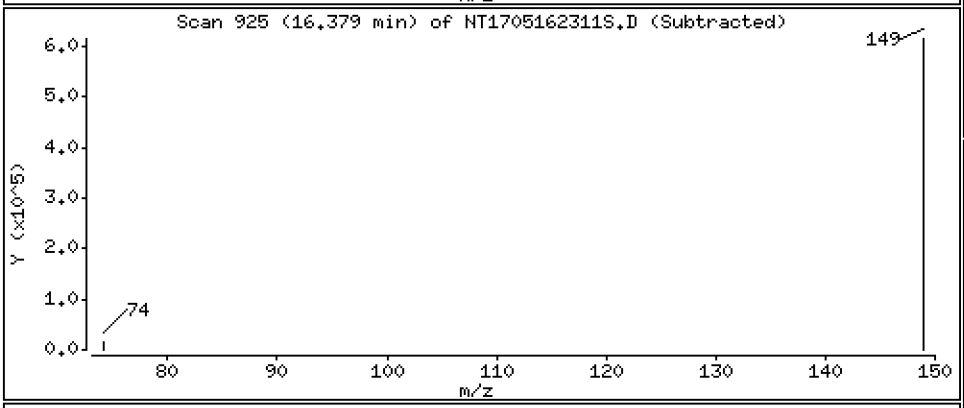
Column diameter: 0.25

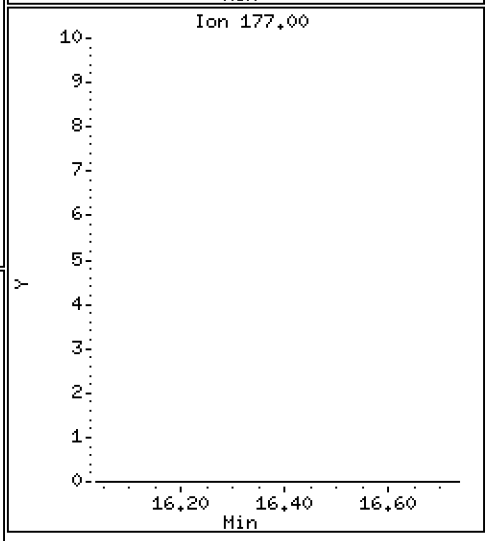
50 Diethylphthalate

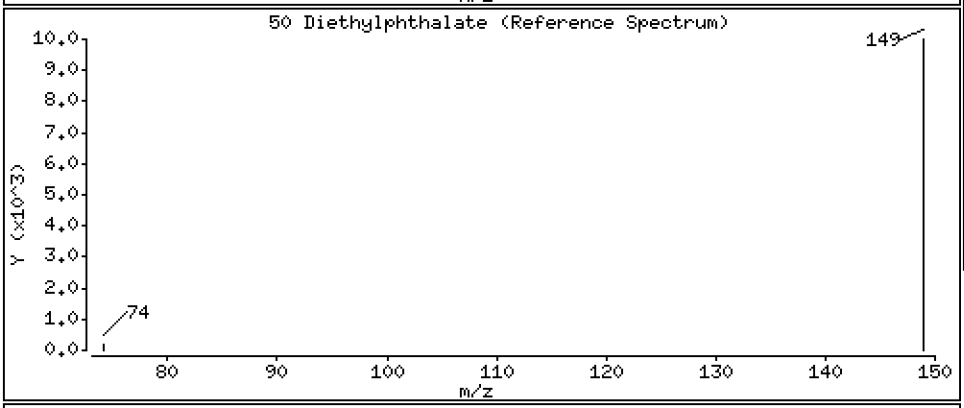
Concentration: 5.478 ug/mL

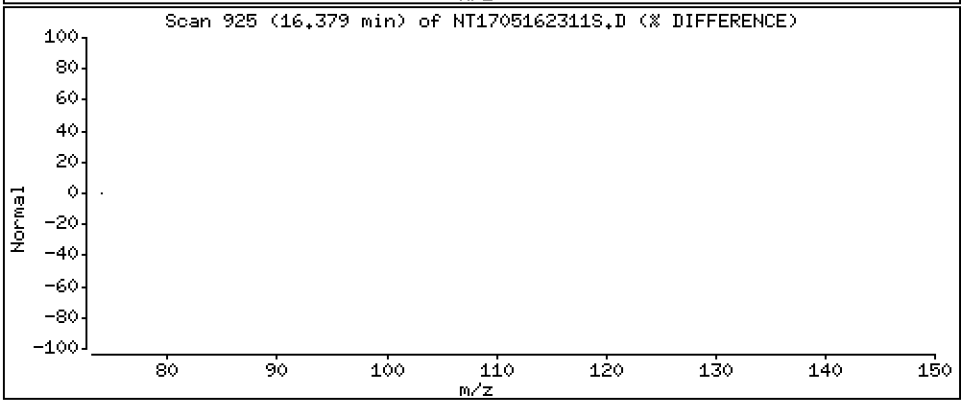












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

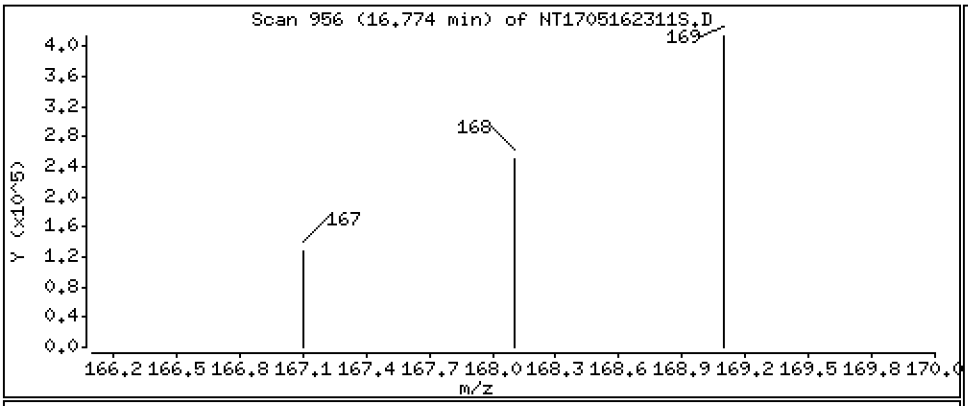
Operator: JGR

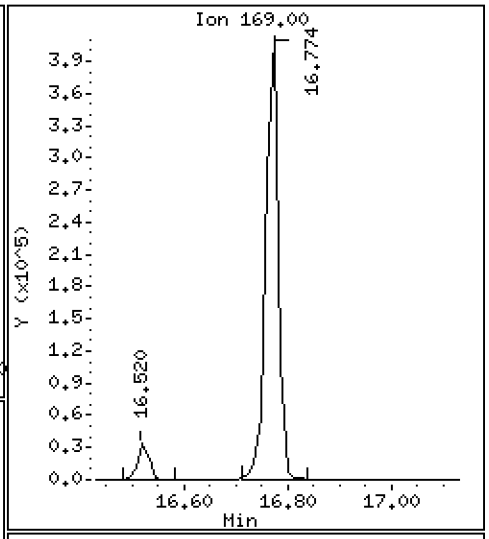
Column phase: ZB-5msi

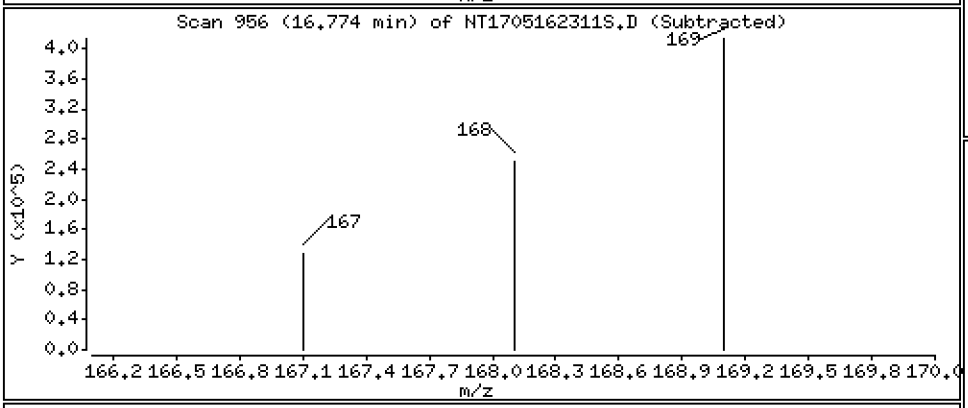
Column diameter: 0.25

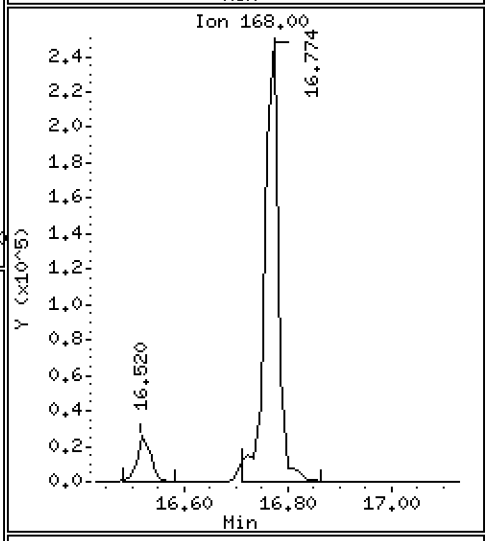
54 N-Nitrosodiphenylamine

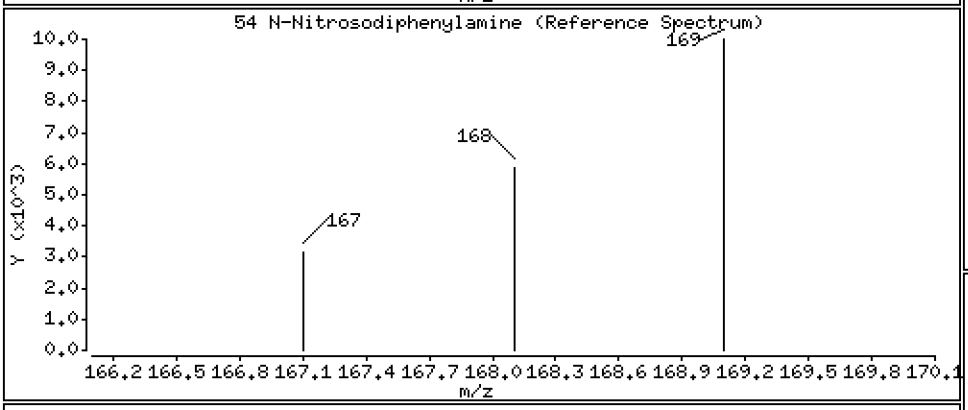
Concentration: 5.627 ug/mL

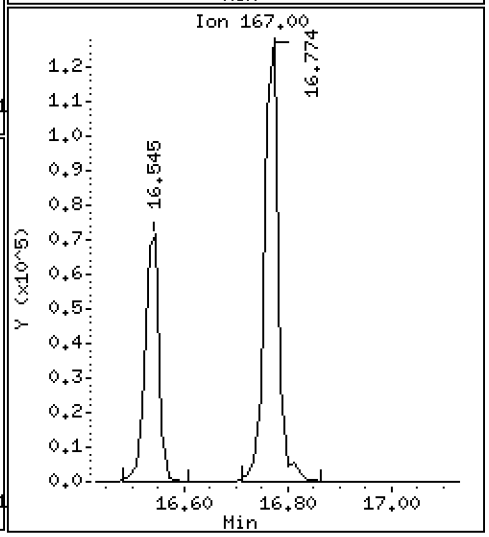


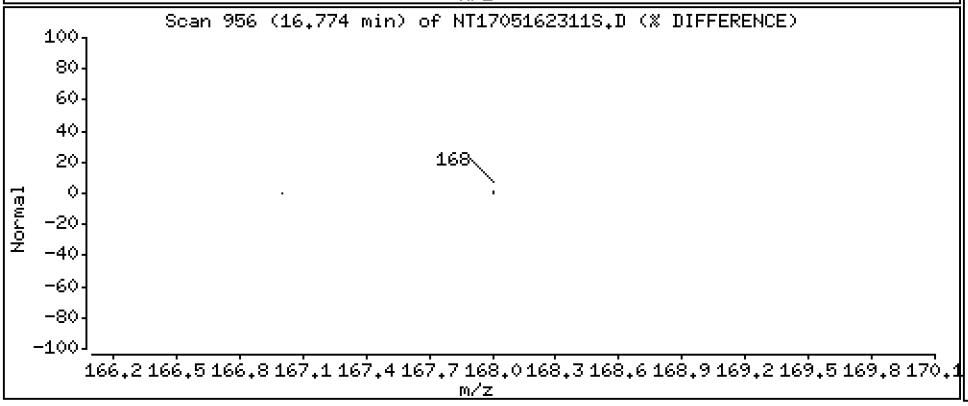












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

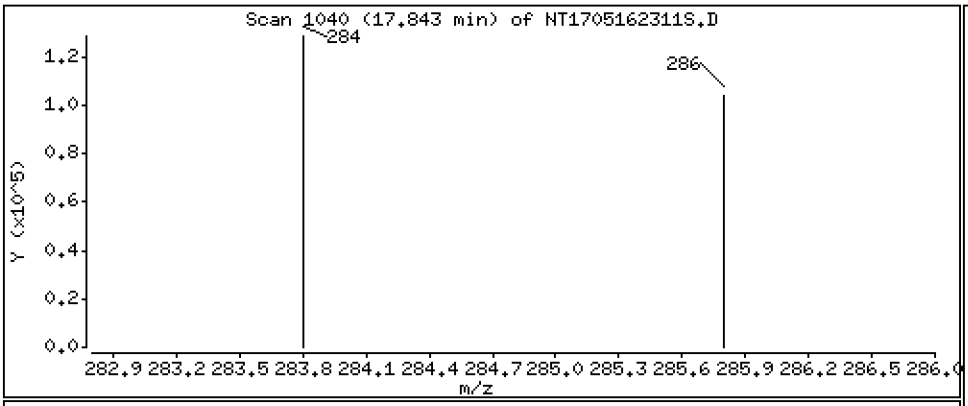
Operator: JGR

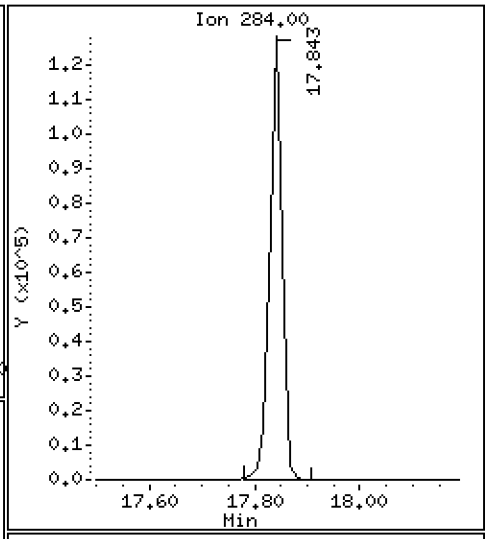
Column phase: ZB-5msi

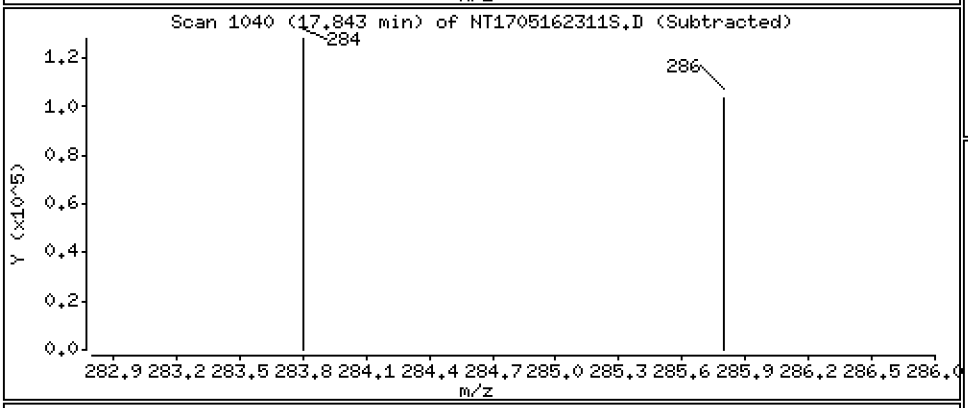
Column diameter: 0.25

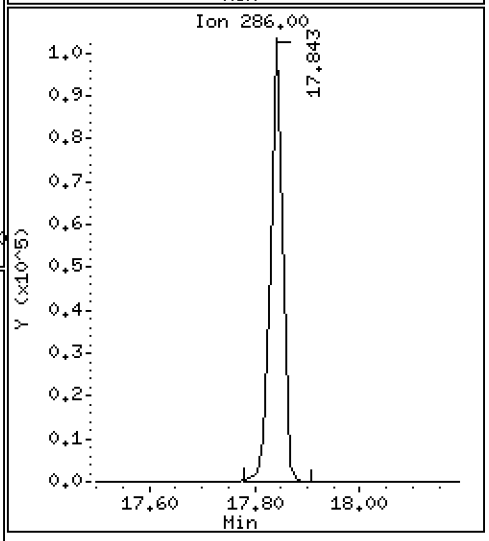
57 Hexachlorobenzene

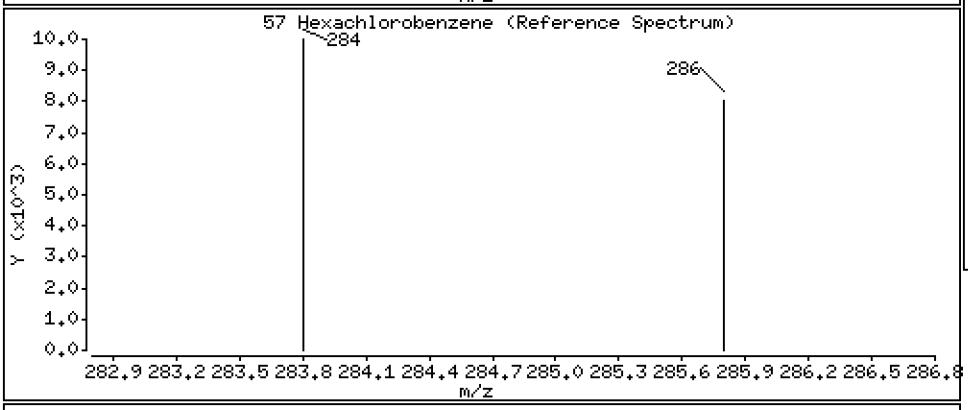
Concentration: 5.081 ug/mL

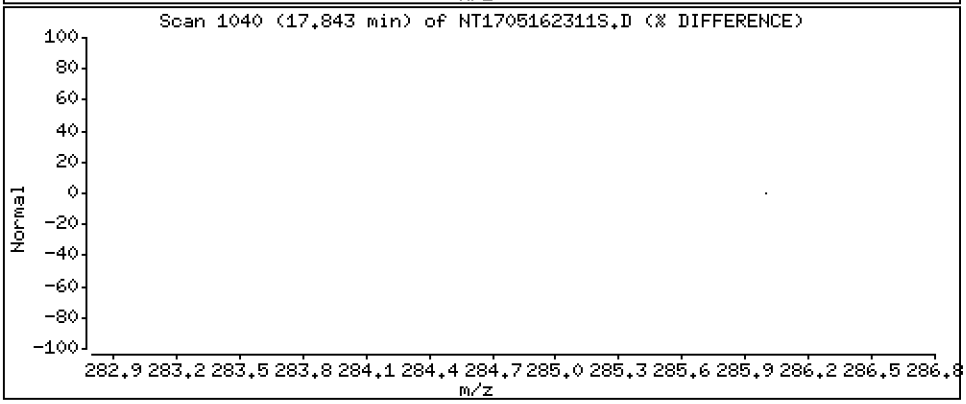












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

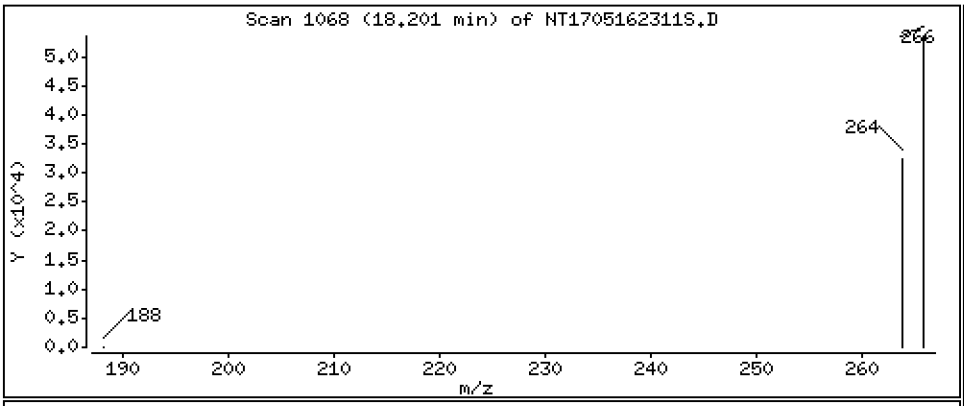
Operator: JGR

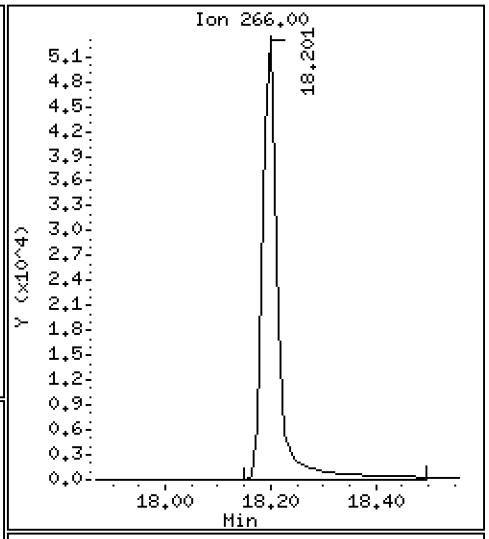
Column phase: ZB-5msi

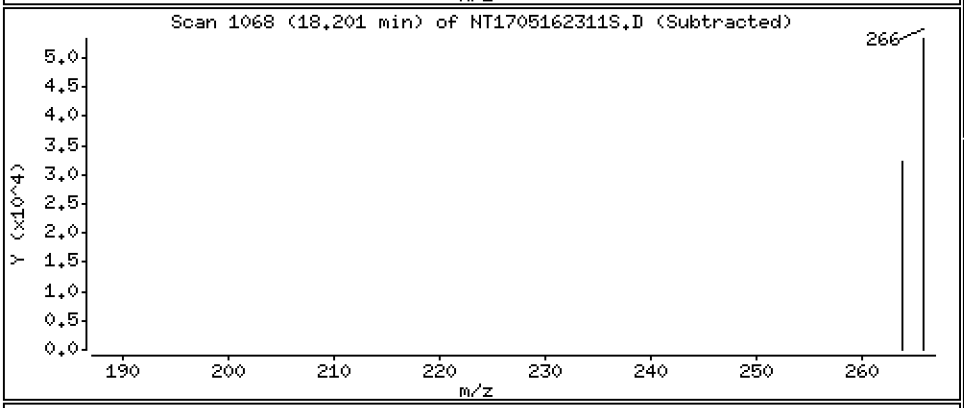
Column diameter: 0.25

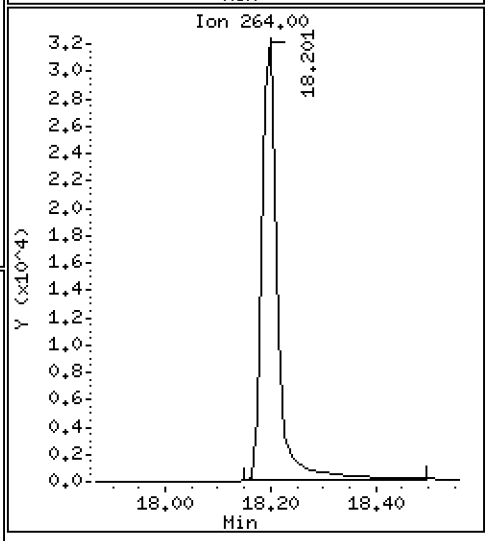
58 Pentachlorophenol

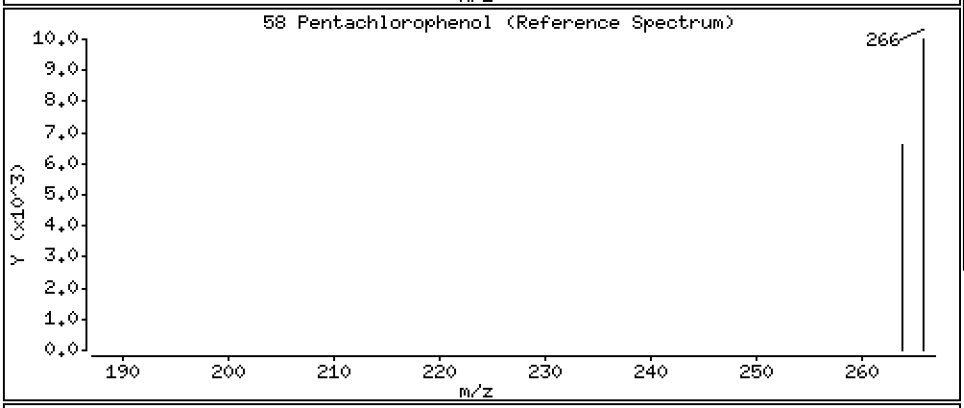
Concentration: 4.506 ug/mL

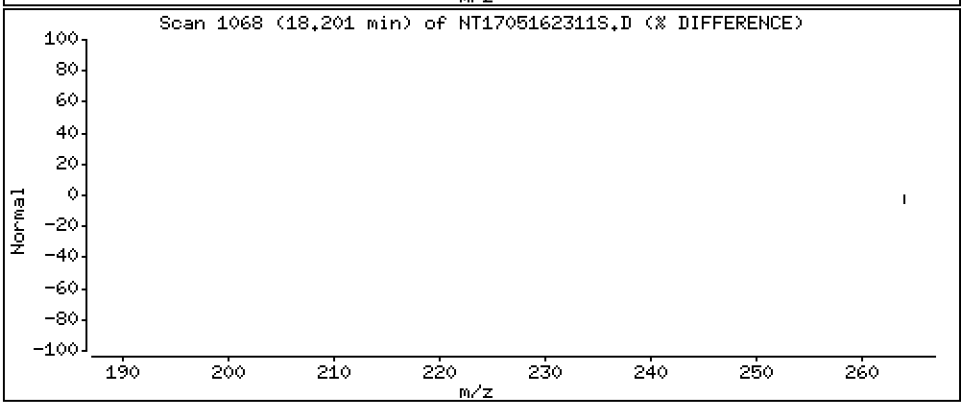












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

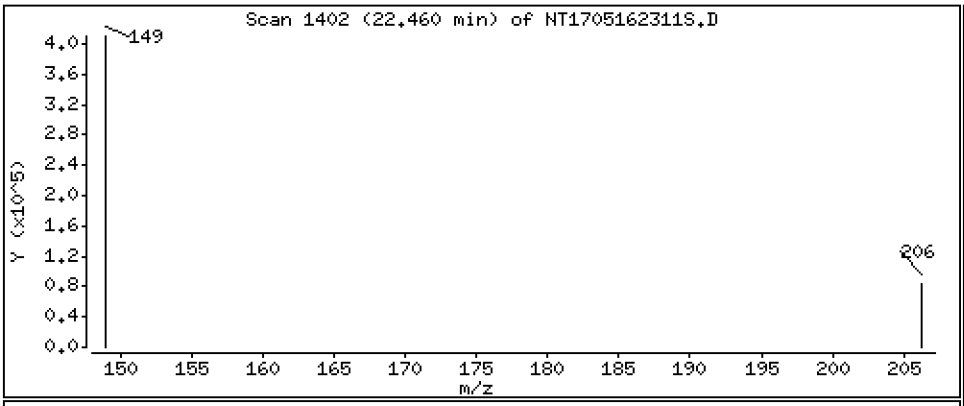
Operator: JGR

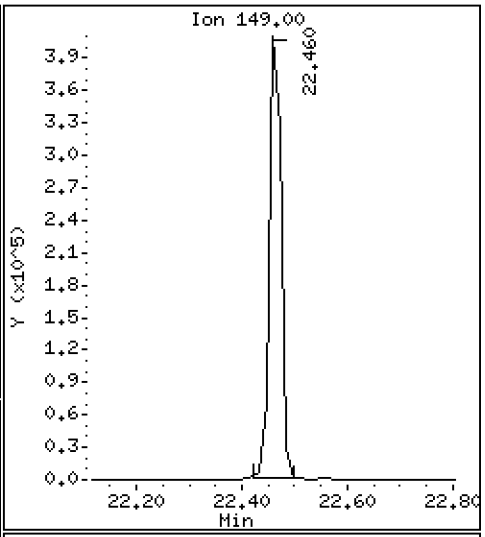
Column phase: ZB-5msi

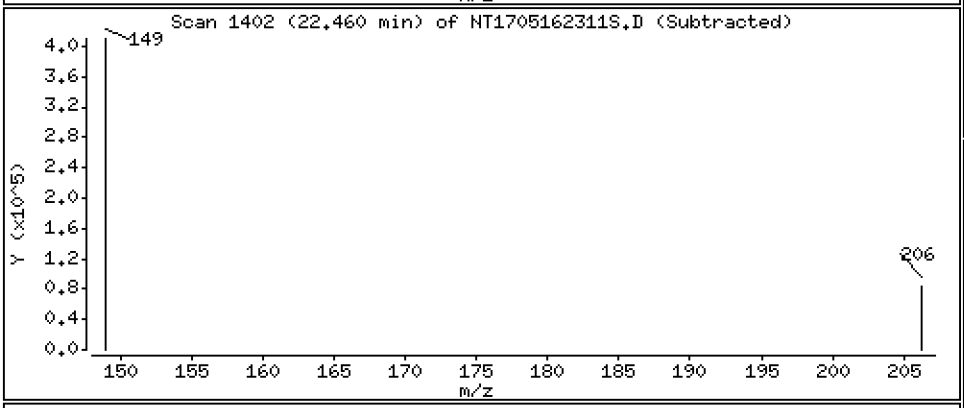
Column diameter: 0.25

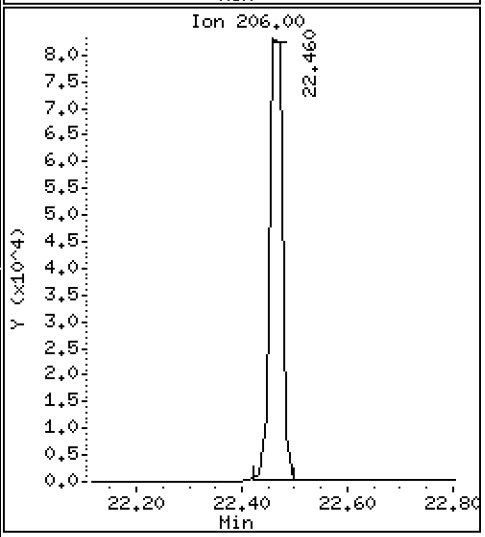
67 Butylbenzylphthalate

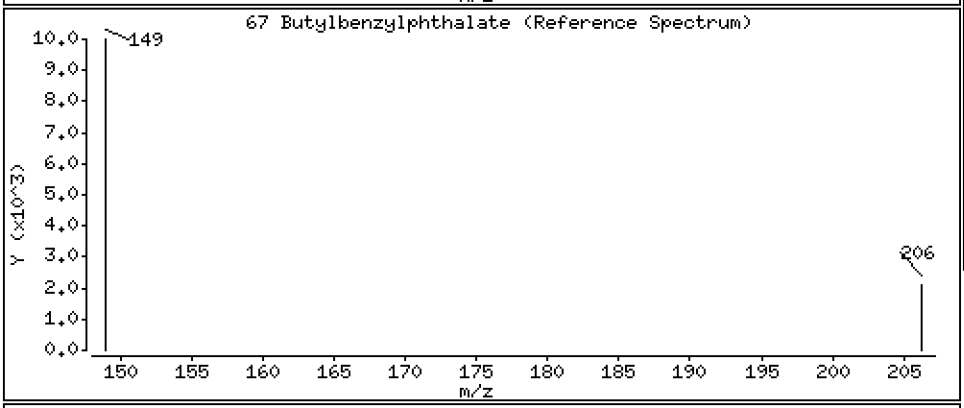
Concentration: 5.905 ug/mL

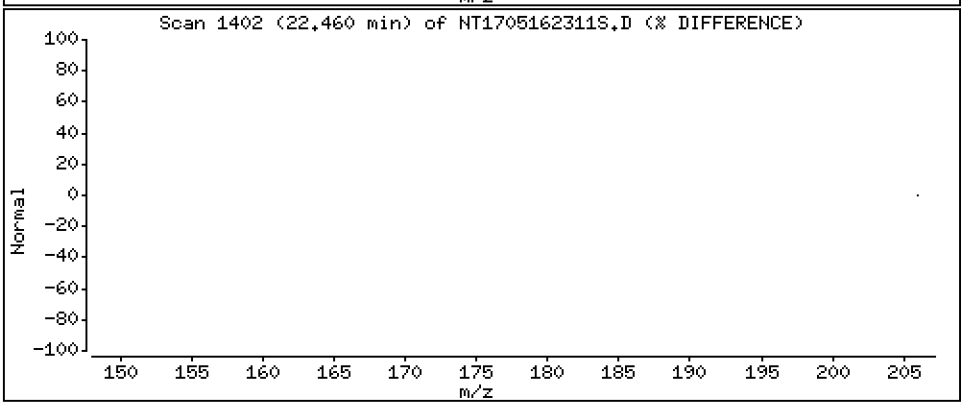












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

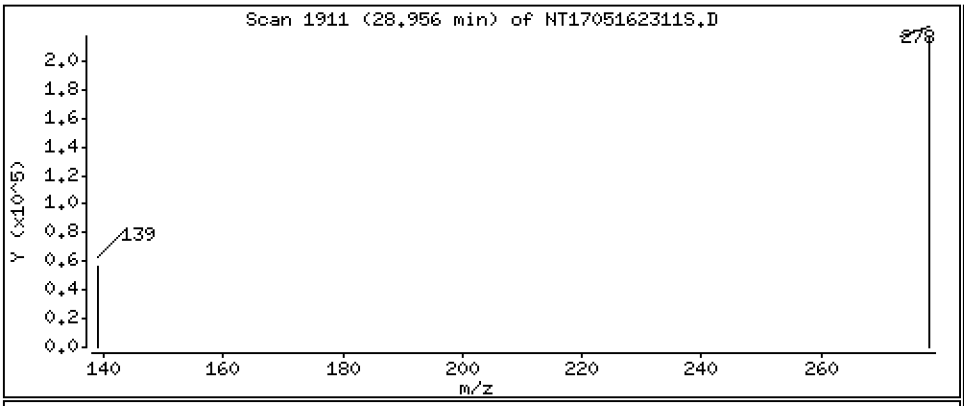
Operator: JGR

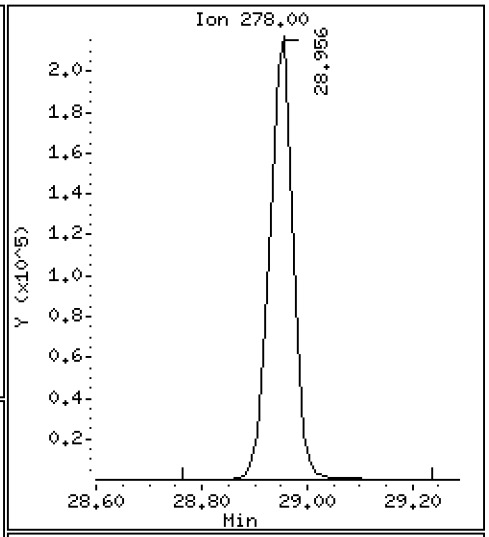
Column phase: ZB-5msi

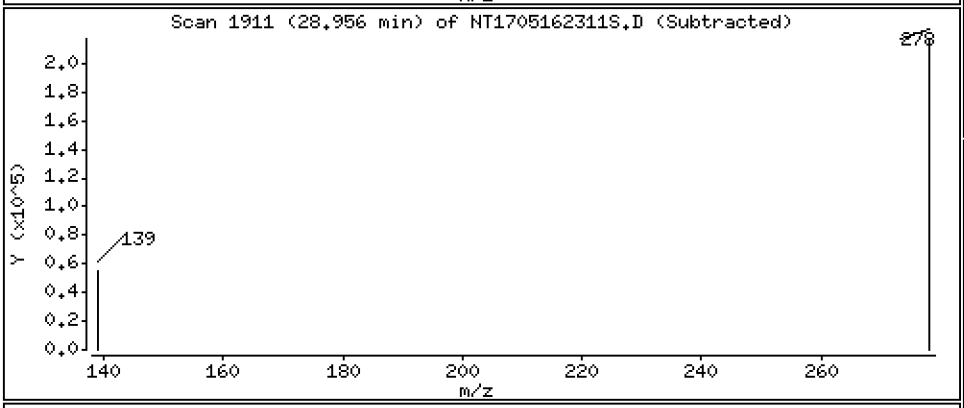
Column diameter: 0.25

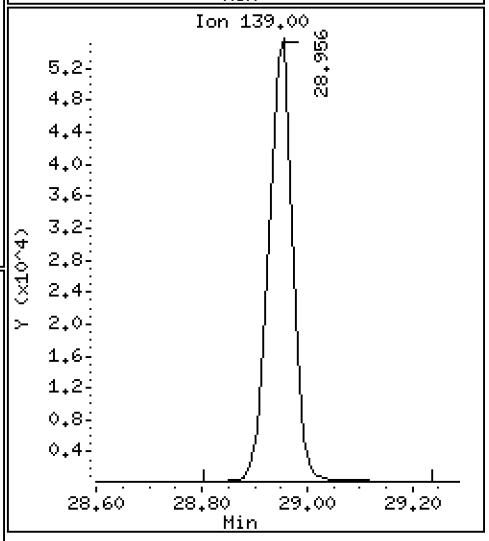
79 Dibenzo(a,h)anthracene

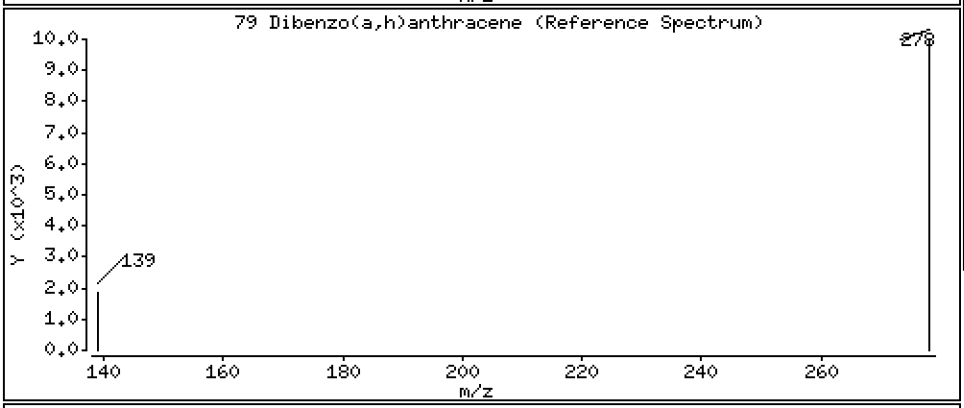
Concentration: 5.149 ug/mL

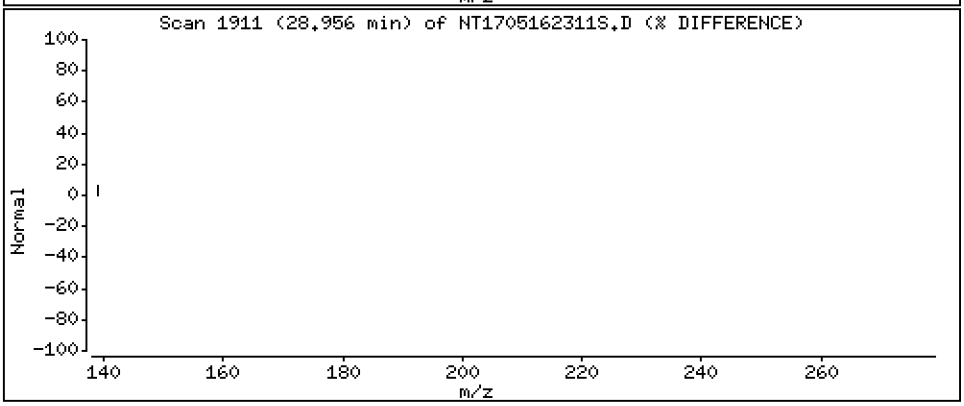












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

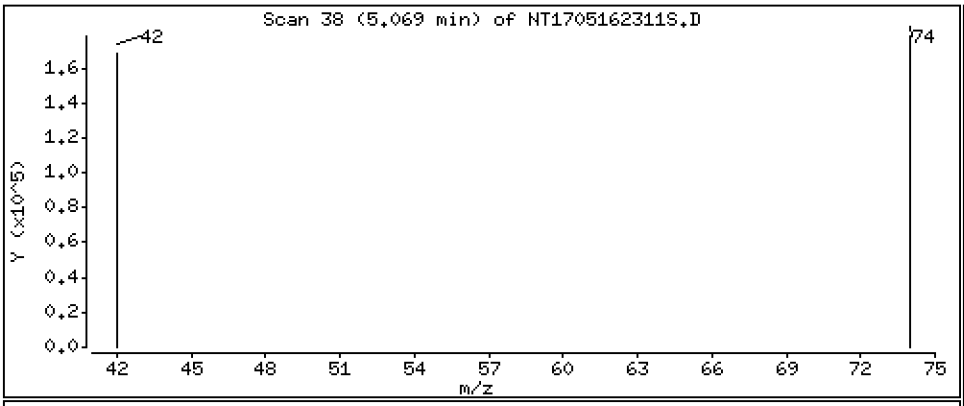
Operator: JGR

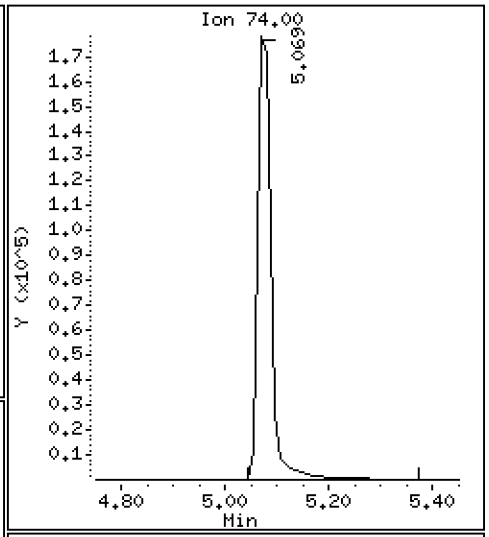
Column phase: ZB-5msi

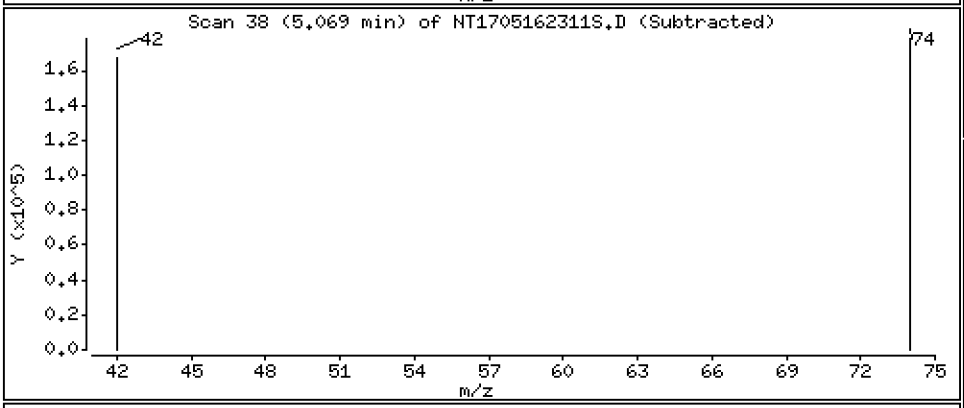
Column diameter: 0.25

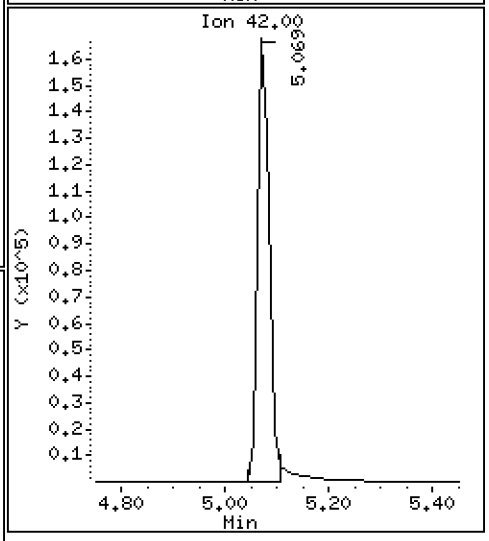
90 N-Nitrosodimethylamine

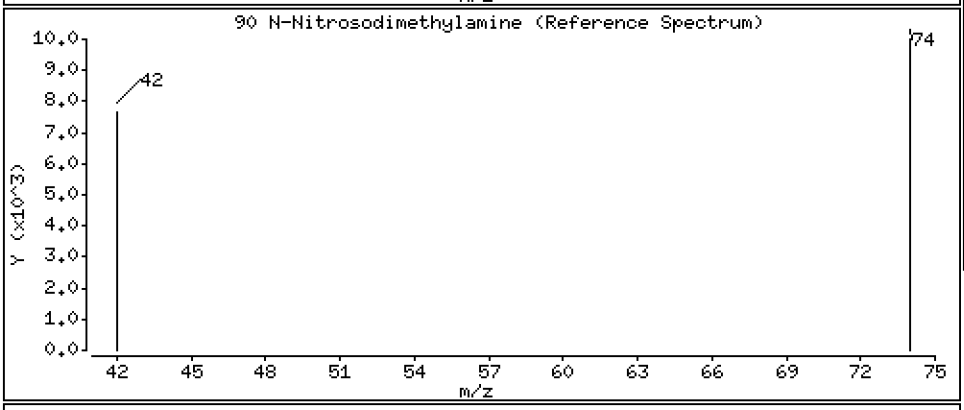
Concentration: 5.868 ug/mL

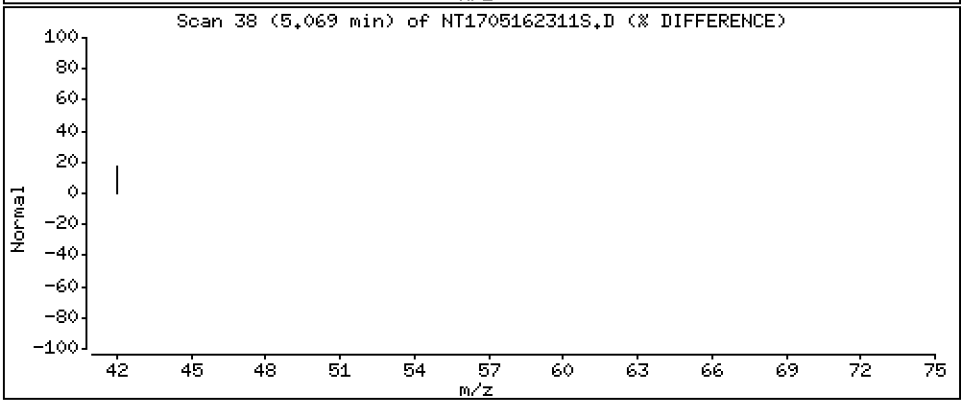












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D
Lab Smp Id: SLE0339-SCV1
Inj Date : 17-MAY-2023 00:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1	2-Fluorophenol	112	Compound Not Detected.					
	3	Phenol	94	8.750	8.751	(0.933)	616997	4.88420	4.884
	7	1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	575988	5.08691	5.087
*	8	1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	280298	4.00000	
	9	1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	566257	5.13211	5.132
	11	Benzyl alcohol	79	9.630	9.656	(1.027)	410745	5.70628	5.706
	12	1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	541461	5.00685	5.007
	13	2-Methylphenol	108	9.848	9.861	(1.050)	385832	4.40762	4.408
	15	4-Methylphenol	108	10.129	10.129	(1.080)	423610	4.78832	4.788
	16	N-Nitroso-di-n-propylamine	70	10.193	10.180	(1.087)	349317	5.47874	5.479
	22	2,4-Dimethylphenol	107	11.151	11.164	(0.942)	366886	3.81638	3.816
	24	Benzoic acid	105	11.329	11.356	(0.957)	465783	7.77732	7.777
	26	1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	427934	4.90638	4.906
*	27	Naphthalene-d8	136	11.840	11.840	(1.000)	999390	4.00000	
	30	Hexachlorobutadiene	225	12.235	12.235	(1.033)	238867	5.20120	5.201
	39	Dimethylphthalate	163	14.938	14.926	(0.968)	1015804	5.23967	5.240
*	42	Acenaphthene-d10	162	15.436	15.436	(1.000)	527927	4.00000	
	50	Diethylphthalate	149	16.379	16.379	(1.061)	964439	5.47782	5.478
	54	N-Nitrosodiphenylamine	169	16.774	16.774	(0.908)	681829	5.62729	5.627
	57	Hexachlorobenzene	284	17.843	17.843	(0.966)	208857	5.08140	5.081
	58	Pentachlorophenol	266	18.200	18.214	(0.986)	108866	4.50590	4.506
*	59	Phenanthrene-d10	188	18.468	18.455	(1.000)	860054	4.00000	
$	66	Terphenyl-d14	244	Compound Not Detected.					
	67	Butylbenzylphthalate	149	22.460	22.460	(0.958)	642329	5.90509	5.905
*	69	Chrysene-d12	240	23.455	23.455	(1.000)	527529	4.00000	
*	77	Perylene-d12	264	26.159	26.147	(1.000)	475440	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.956	28.943	(1.107)	690513	5.14916	5.149
	90	N-Nitrosodimethylamine	74	5.068	5.094	(0.541)	321072	5.86783	5.868

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162311S.D
Lab Smp Id: SLE0339-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	280298	-11.32
27 Naphthalene-d8	1102073	551037	2204146	999390	-9.32
42 Acenaphthene-d10	583826	291913	1167652	527927	-9.57
59 Phenanthrene-d10	970917	485459	1941834	860054	-11.42
69 Chrysene-d12	590568	295284	1181136	527529	-10.67
77 Perylene-d12	537938	268969	1075876	475440	-11.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.47	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
77 Perylene-d12	26.16	25.66	26.66	26.16	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162311S.D

Lab ID: SLE0339-SCV1
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   17-MAY-2023 00:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.957	0.000	0.9569	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623125.D

Page 1

Date : 17-MAY-2023 01:07

Client ID:

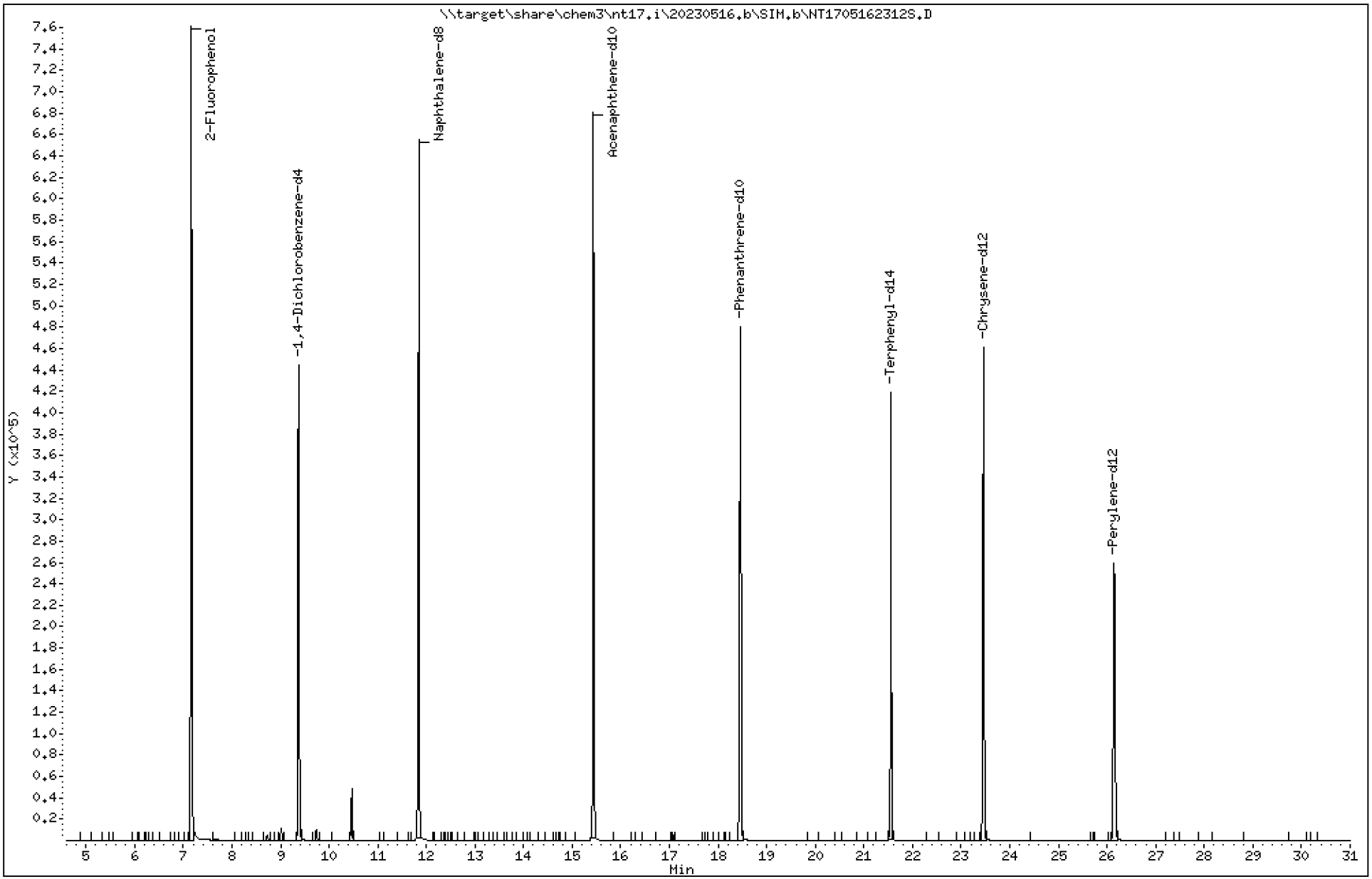
Instrument: nt17.i

Sample Info: SLE0339-ICB1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162312S.D
Lab Smp Id: SLE0339-ICB1
Inj Date : 17-MAY-2023 01:07
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-ICB1
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	7.158	7.171	(0.764)	743464	8.12095	8.121(R)
	3 Phenol	94	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	302680	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.840	11.840	(1.000)	1065796	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	15.436	15.436	(1.000)	551880	4.00000	
	50 Diethylphthalate	149	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.455	18.455	(1.000)	903730	4.00000	
$	66 Terphenyl-d14	244	21.554	21.554	(0.919)	538056	5.26861	5.269(R)
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	538208	4.00000	
*	77 Perylene-d12	264	26.146	26.147	(1.000)	508161	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162312S.D
Lab Smp Id: SLE0339-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	302680	-4.24
27 Naphthalene-d8	1102073	551037	2204146	1065796	-3.29
42 Acenaphthene-d10	583826	291913	1167652	551880	-5.47
59 Phenanthrene-d10	970917	485459	1941834	903730	-6.92
69 Chrysene-d12	590568	295284	1181136	538208	-8.87
77 Perylene-d12	537938	268969	1075876	508161	-5.54

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.46	-0.07
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
77 Perylene-d12	26.16	25.66	26.66	26.15	-0.05

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

REVIEW SUMMARY FOR FILE - NT1705162312S.D

Lab ID: SLE0339-ICB1
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   17-MAY-2023 01:07

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1705162310S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

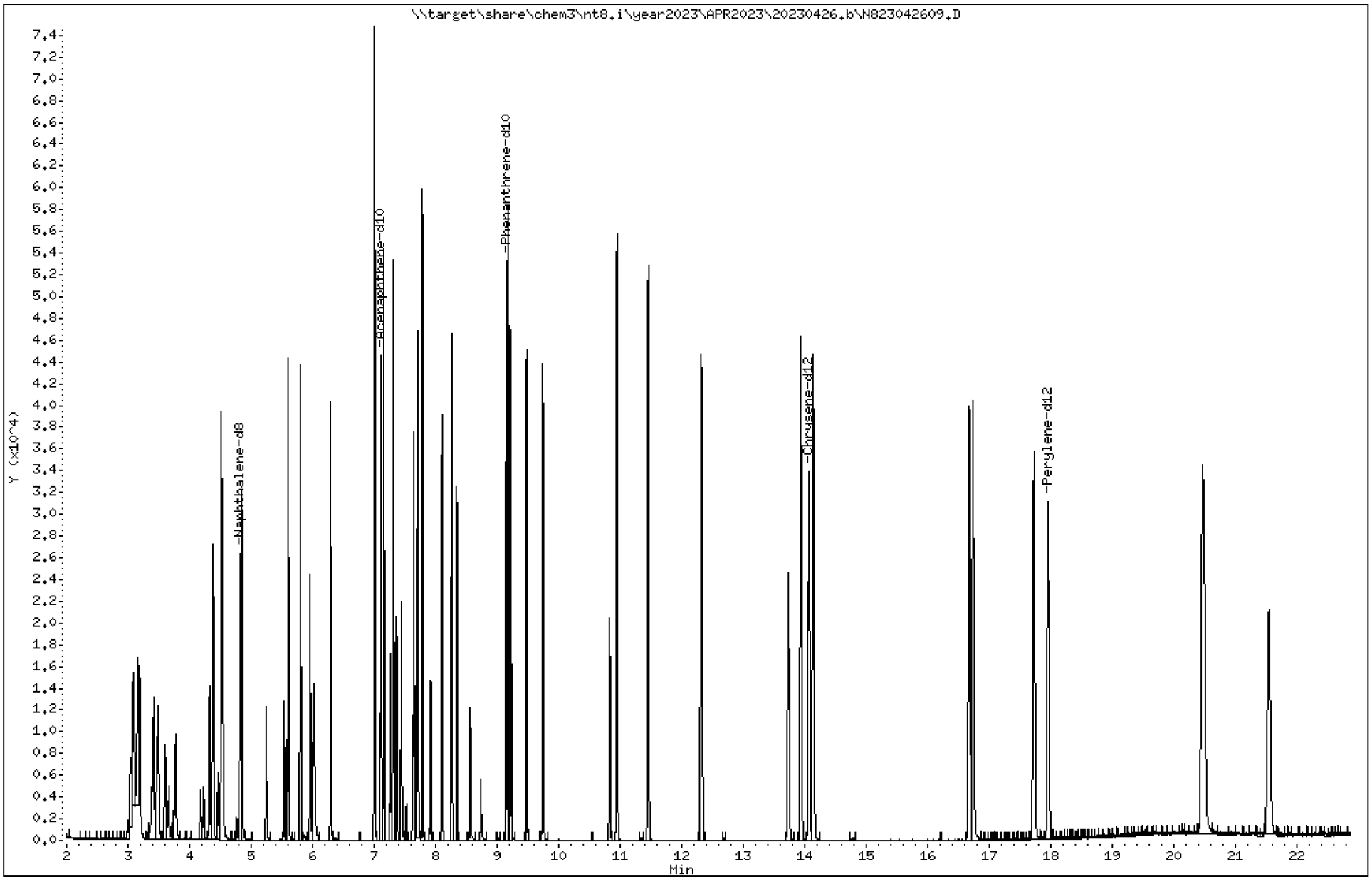
Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00068
Laboratory ID: SLD0372-SCV1
Sequence: SLD0372
Sequence Name: 8270 SIM PNA SCV
Standard ID: L000686

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.36	-5.5	
2-Methylnaphthalene	2.5000	2.39	-4.3	
1-Methylnaphthalene	2.5000	2.38	-4.8	
Acenaphthylene	2.5000	2.32	-7.1	
Acenaphthene	2.5000	2.23	-10.6	
Dibenzofuran	2.5000	2.52	0.7	
Fluorene	2.5000	2.29	-8.3	
Phenanthrene	2.5000	2.16	-13.6	
Anthracene	2.5000	2.01	-19.7	
Fluoranthene	2.5000	2.26	-9.7	
Pyrene	2.5000	2.23	-10.9	
Benzo(a)anthracene	2.5000	2.18	-13.0	
Chrysene	2.5000	2.14	-14.5	
Benzo(b)fluoranthene	2.5000	2.16	-13.7	
Benzo(k)fluoranthene	2.5000	2.30	-7.9	
Benzofluoranthenes, Total	5.0000	4.55	-8.9	
Benzo(a)pyrene	2.5000	2.29	-8.2	
Indeno(1,2,3-cd)pyrene	2.5000	2.45	-2.0	
Dibenzo(a,h)anthracene	2.5000	2.33	-6.6	
Benzo(g,h,i)perylene	2.5000	2.25	-10.1	

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D
Date : 26-APR-2023 20:49
Client ID:
Sample Info: SCV230426
Volume Injected (uL): 1.0
Column phase: Rxi-17sil

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

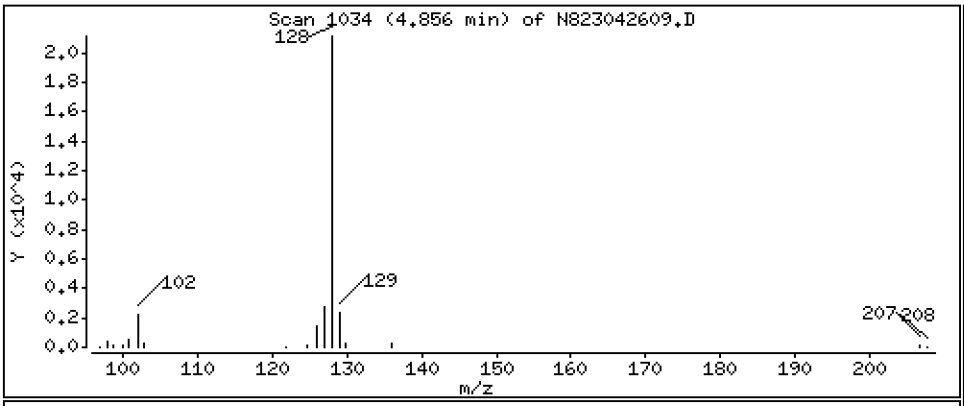
Operator: JZ

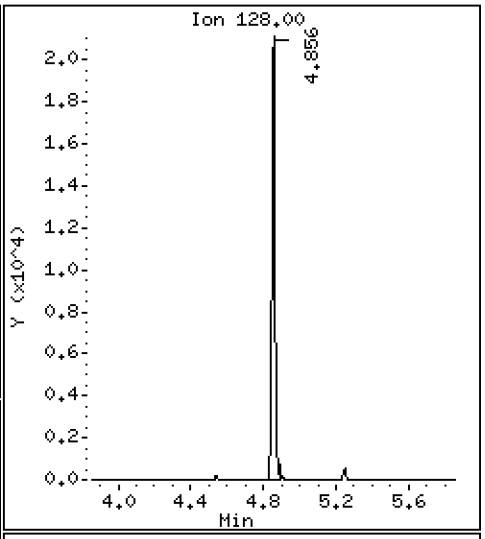
Column phase: Rxi-17sil

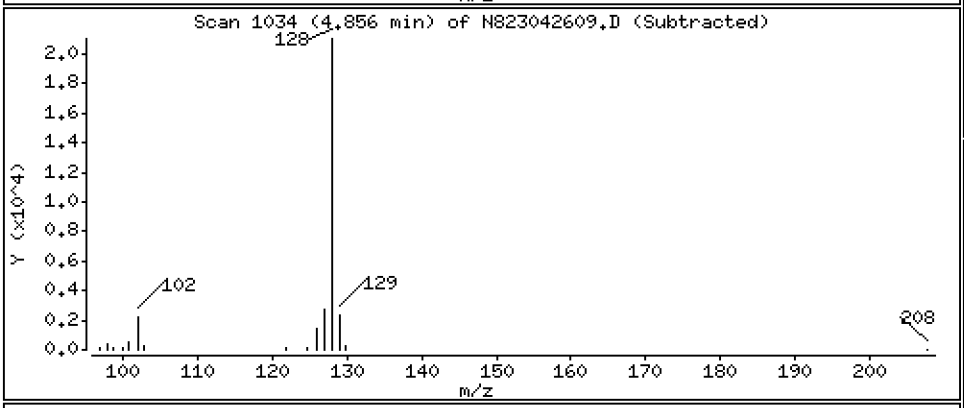
Column diameter: 0.25

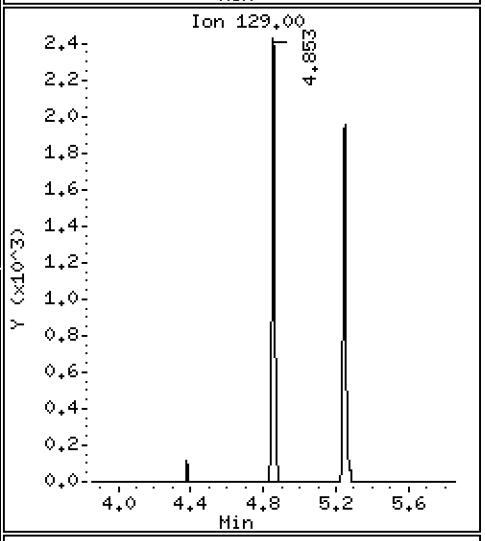
2 Naphthalene

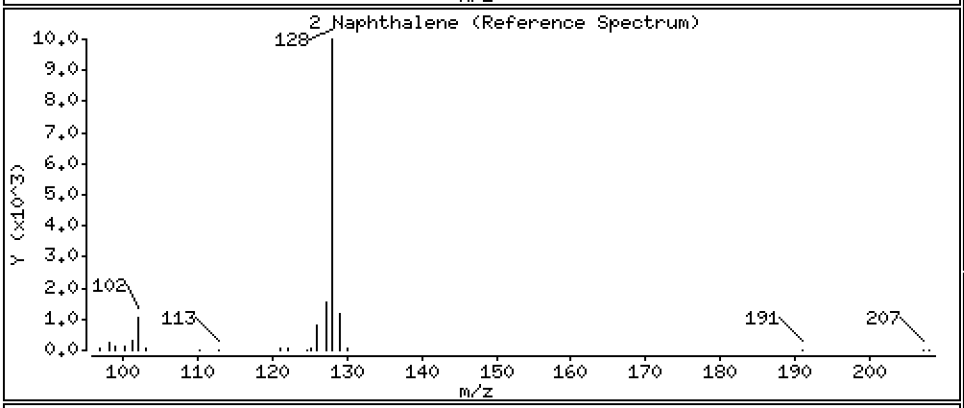
Concentration: 2.363 ug/L

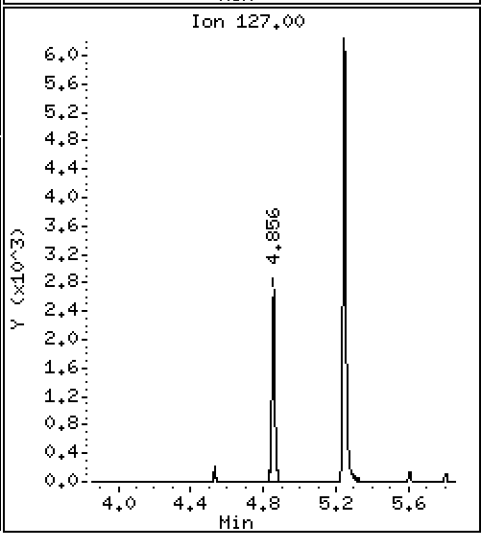


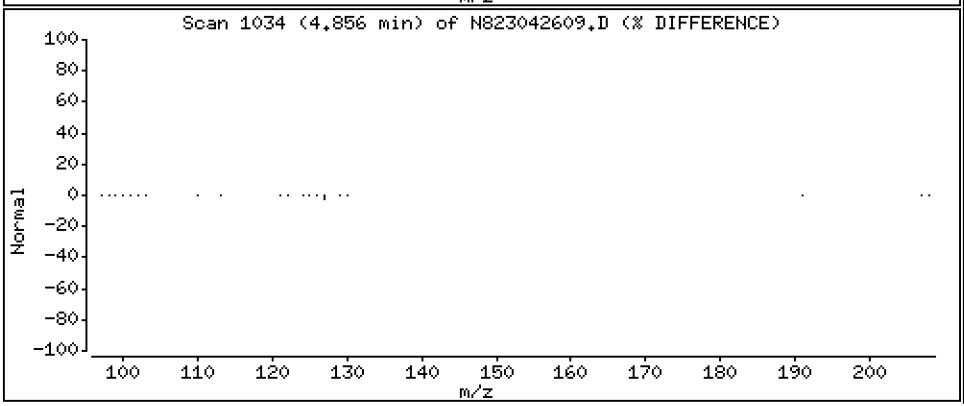












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

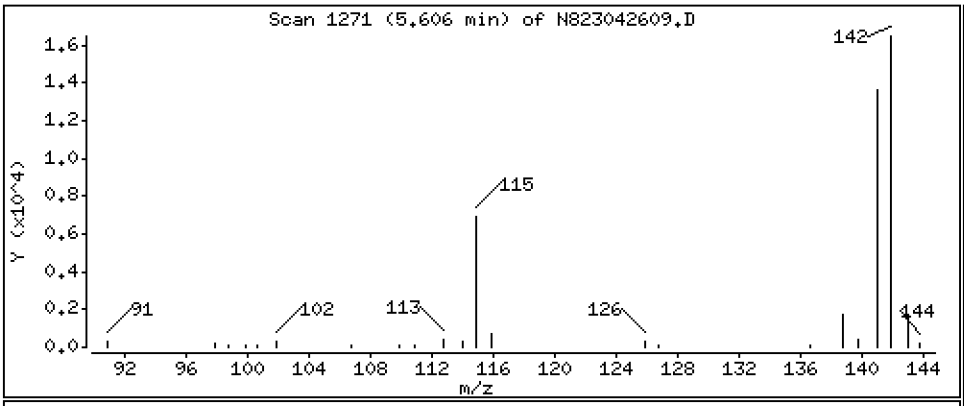
Operator: JZ

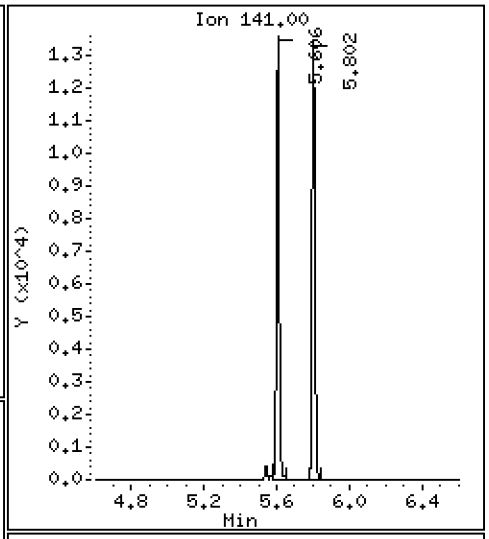
Column phase: Rxi-17sil

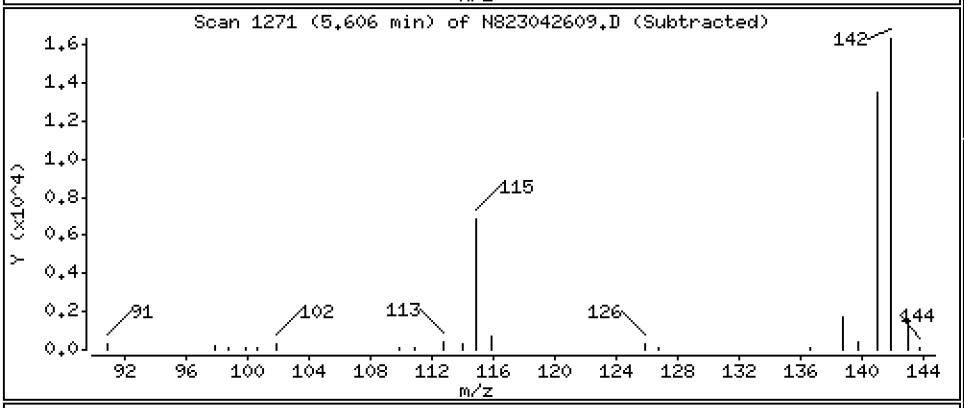
Column diameter: 0.25

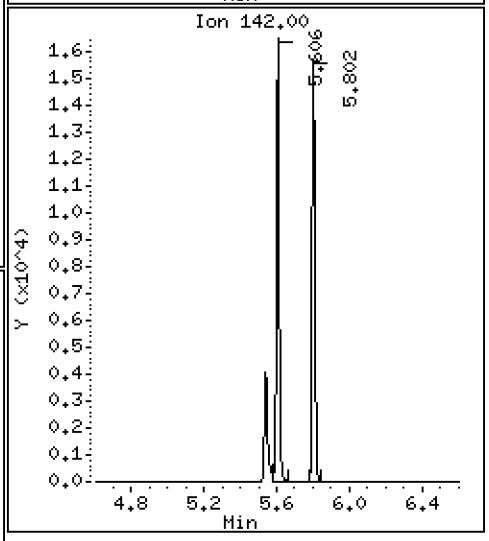
4 2-Methylnaphthalene

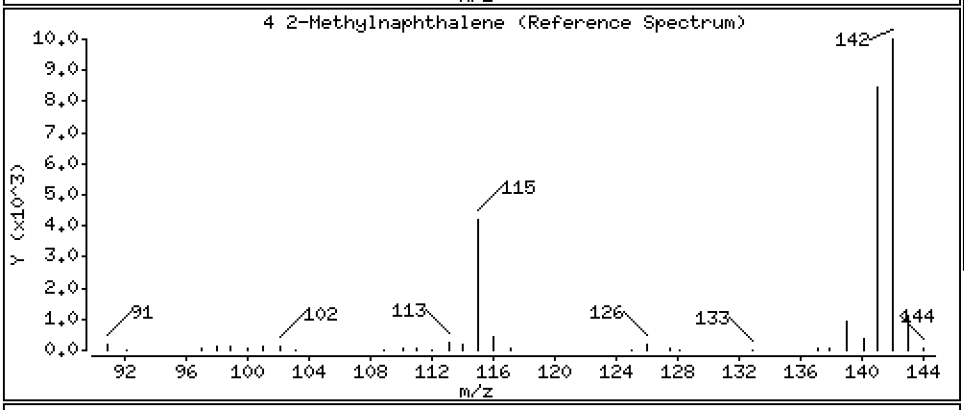
Concentration: 2.392 ug/L

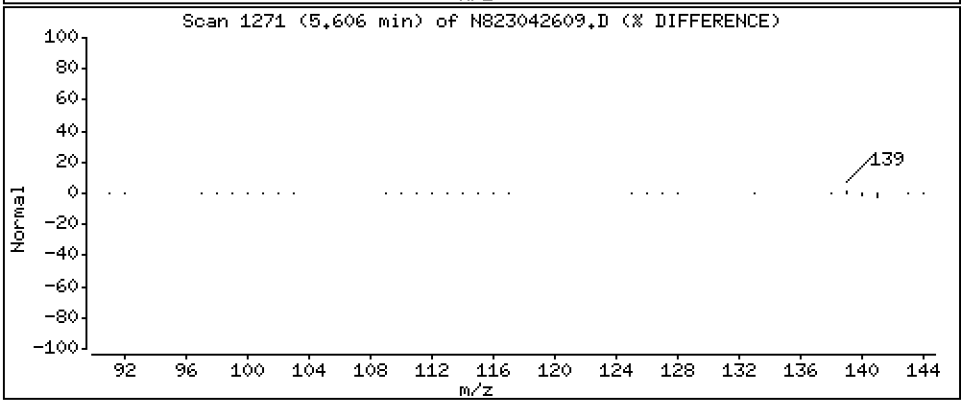












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

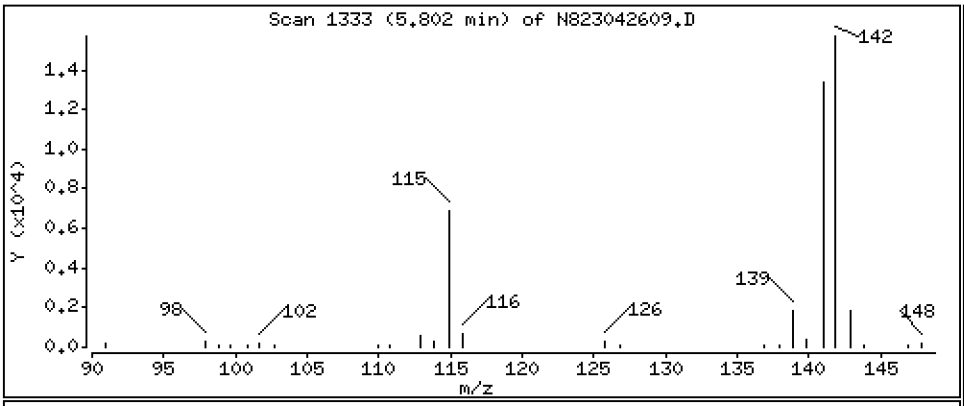
Operator: JZ

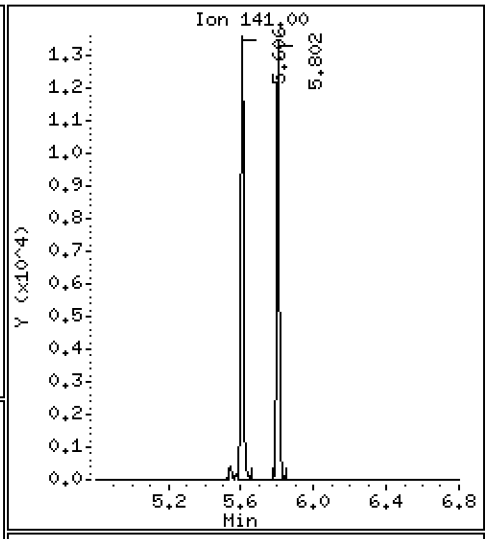
Column phase: Rxi-17sil

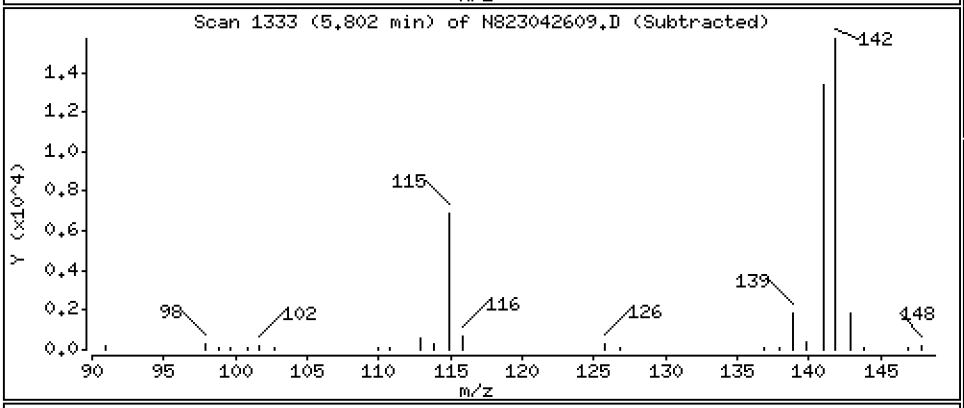
Column diameter: 0.25

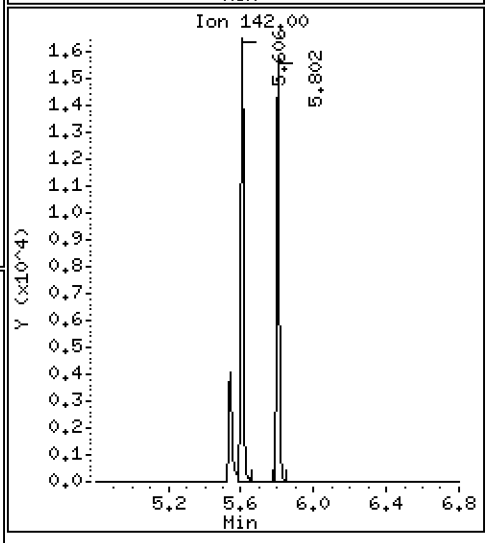
5 1-methylnaphthalene

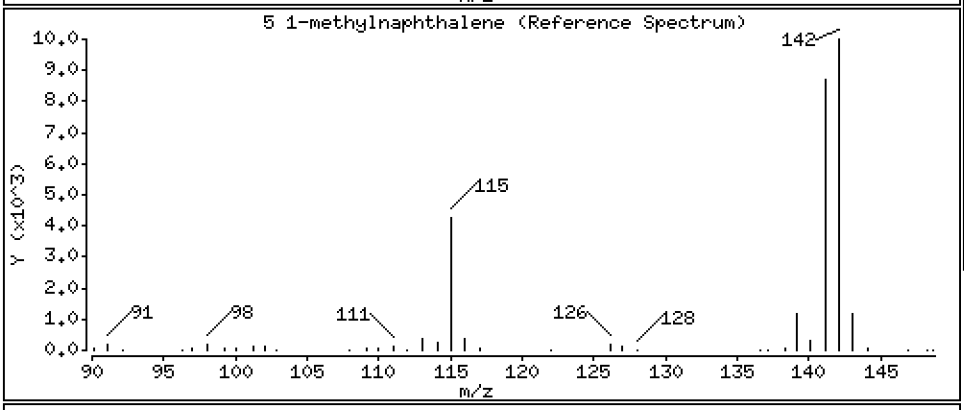
Concentration: 2.380 ug/L

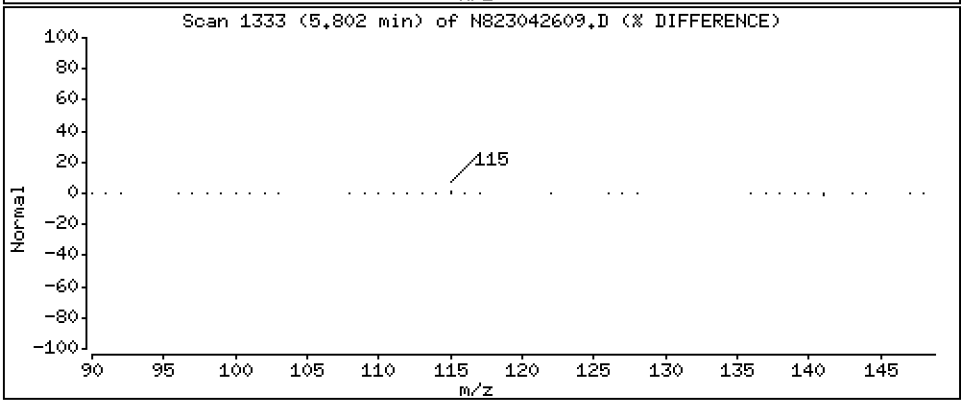












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

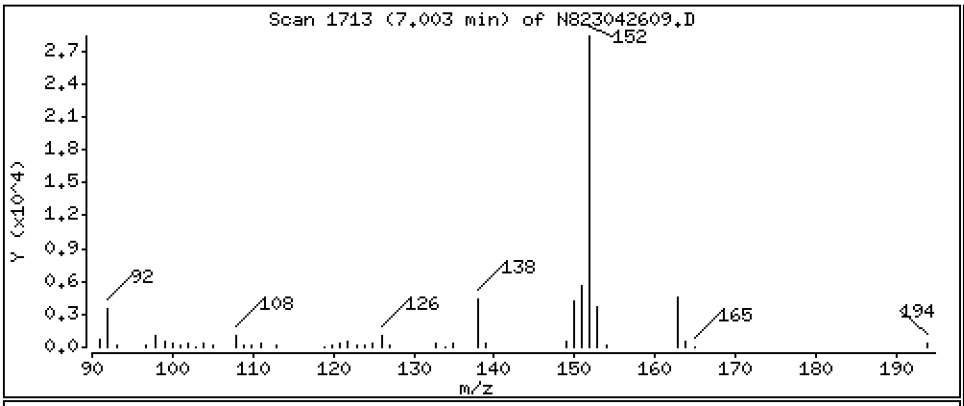
Operator: JZ

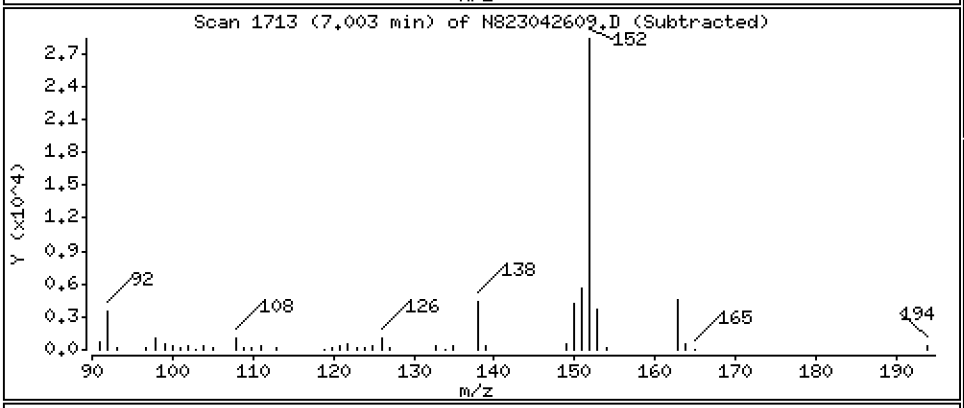
Column phase: Rxi-17sil

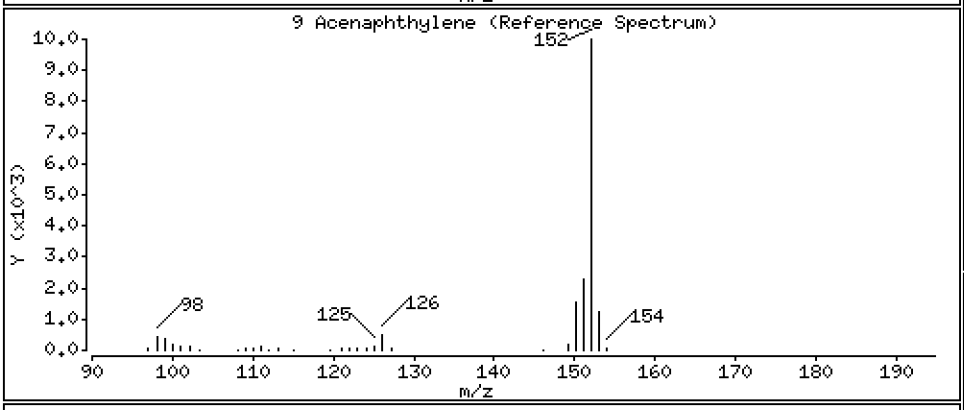
Column diameter: 0.25

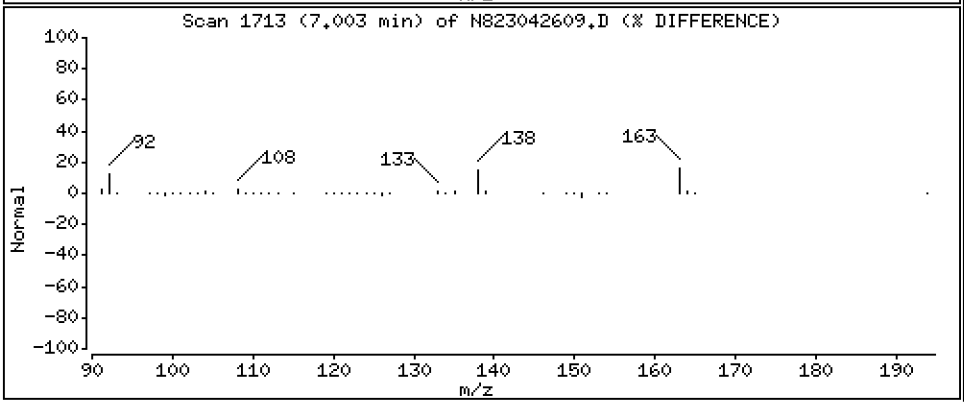
9 Acenaphthylene

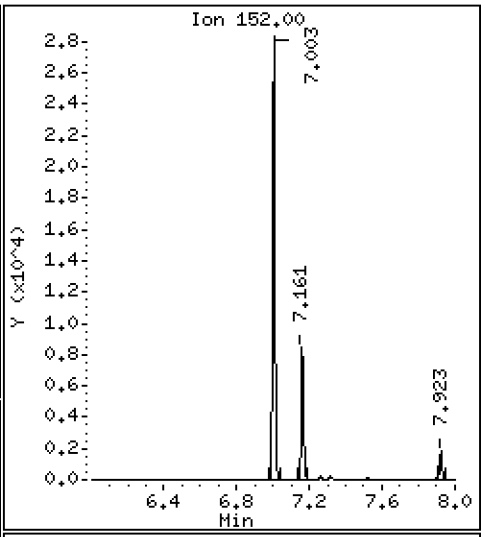
Concentration: 2.322 ug/L

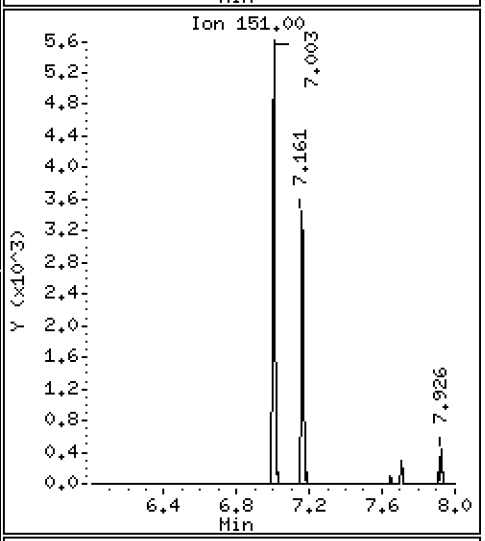


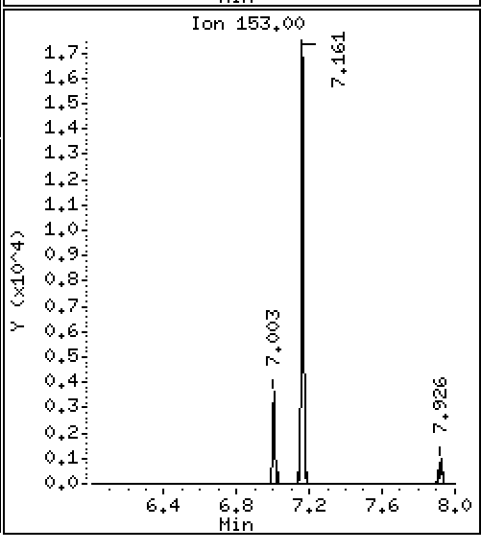












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

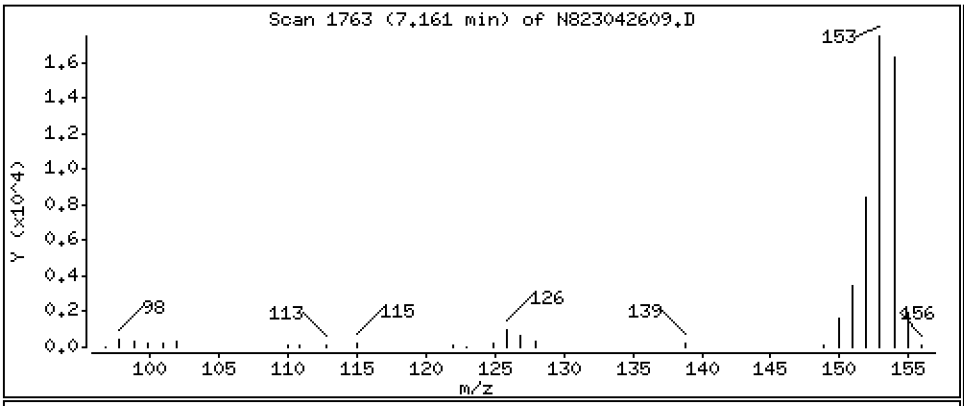
Operator: JZ

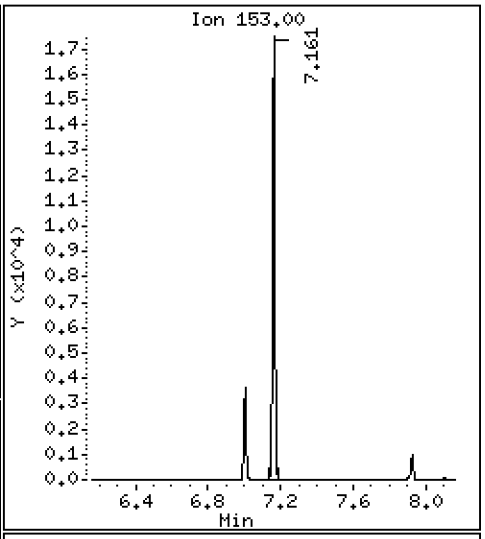
Column phase: Rxi-17sil

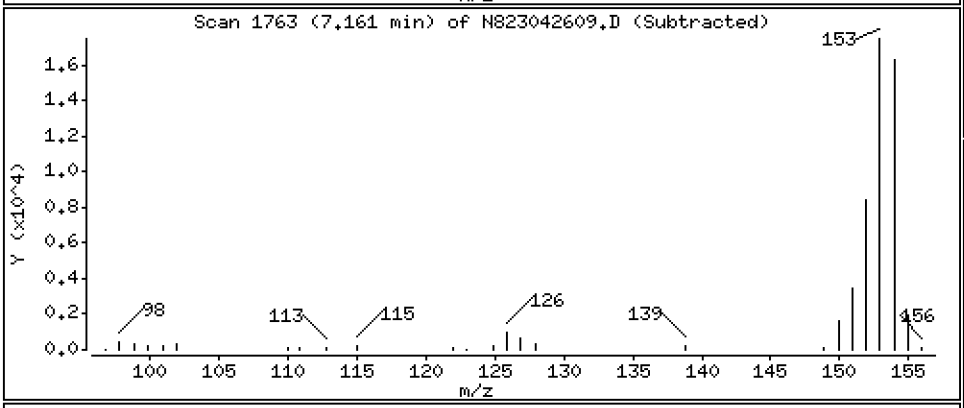
Column diameter: 0.25

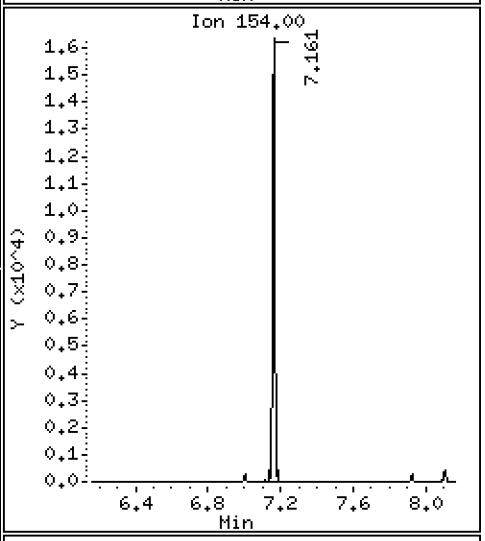
11 Acenaphthene

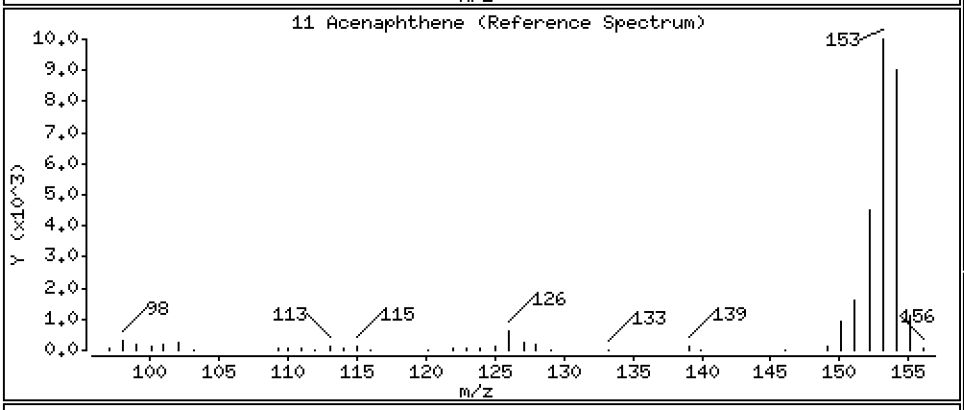
Concentration: 2.234 ug/L

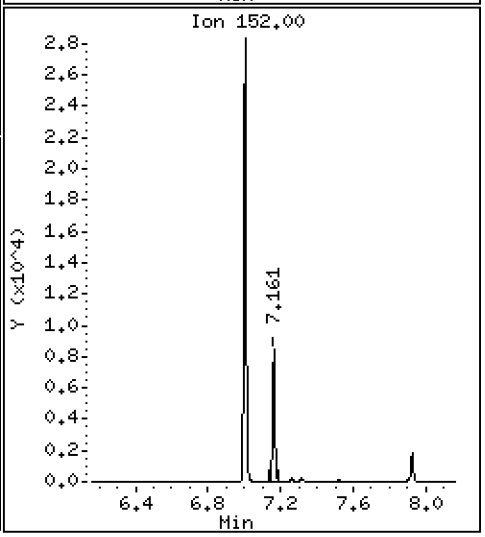


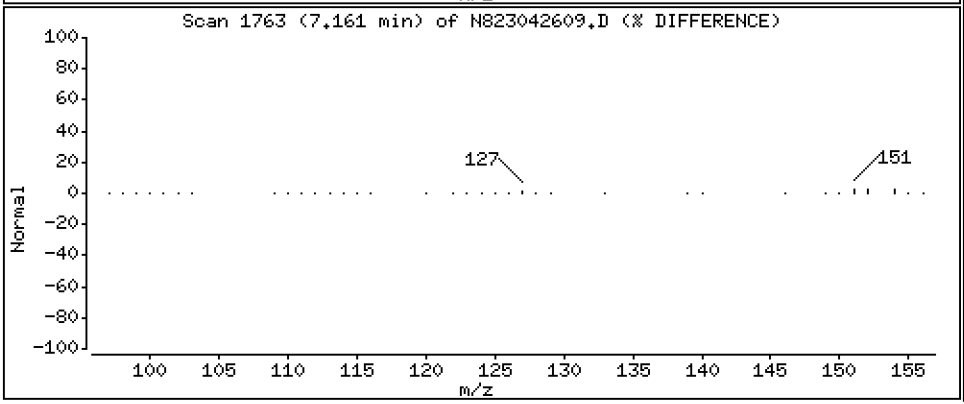












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

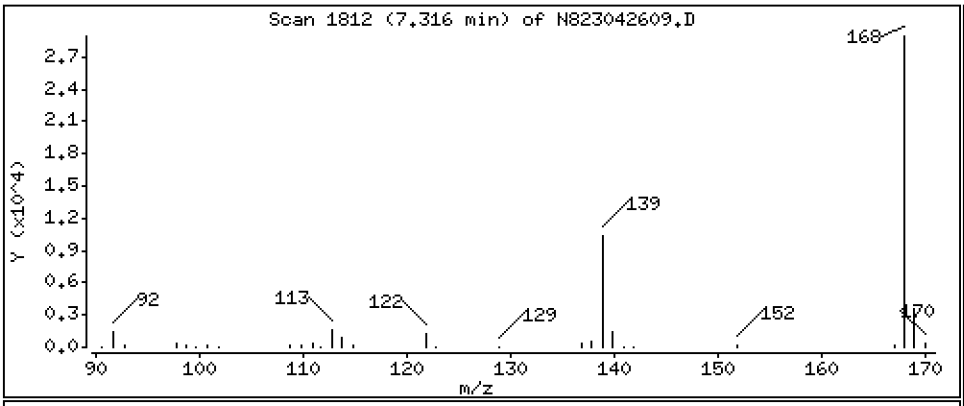
Operator: JZ

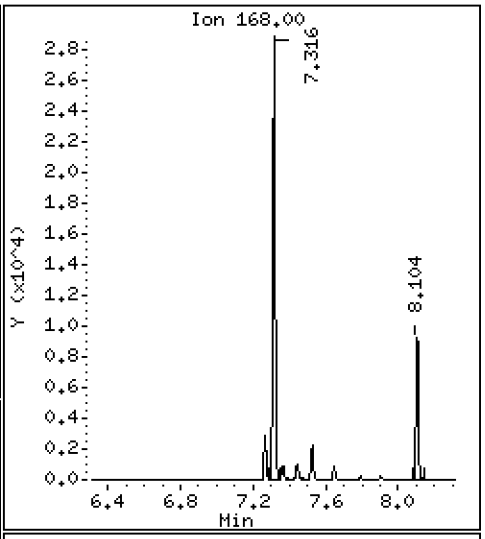
Column phase: Rxi-17sil

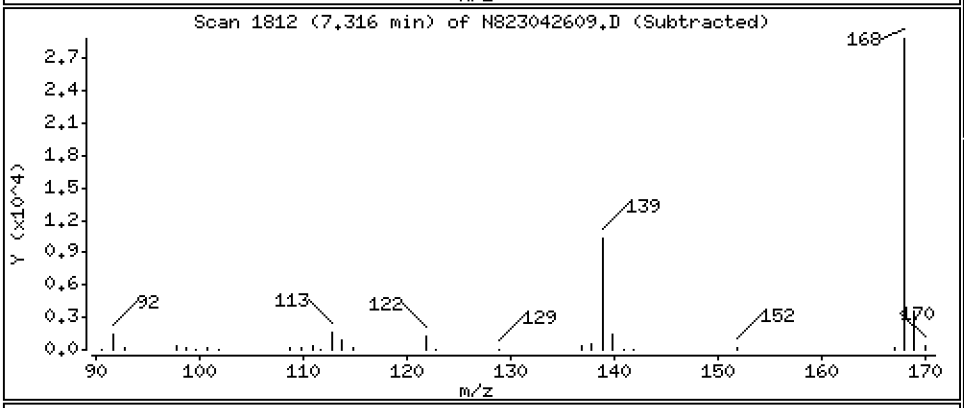
Column diameter: 0.25

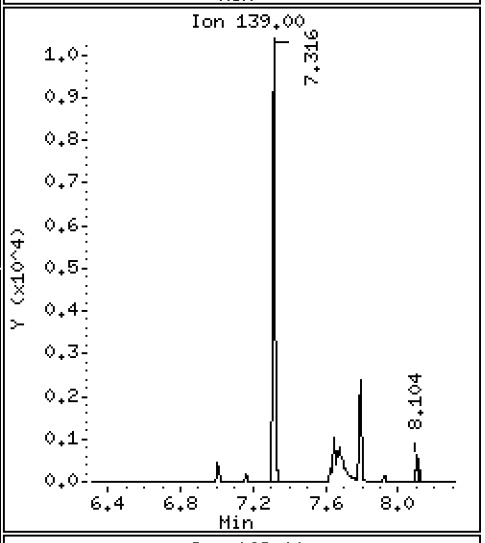
12 Dibenzofuran

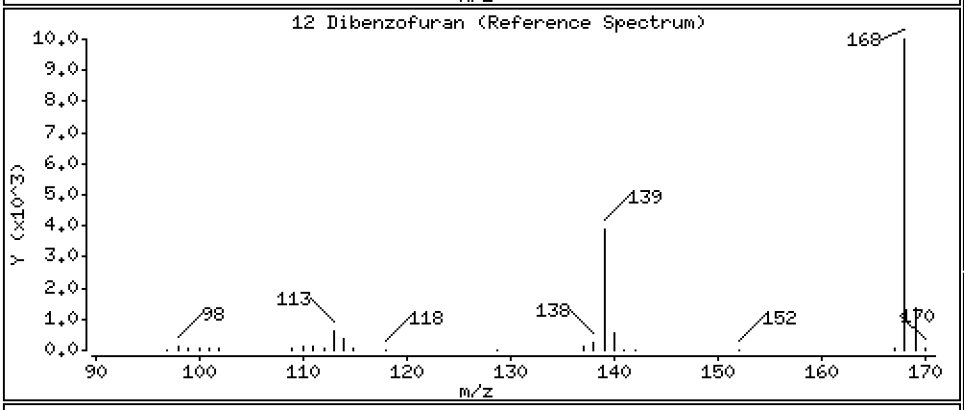
Concentration: 2.518 ug/L

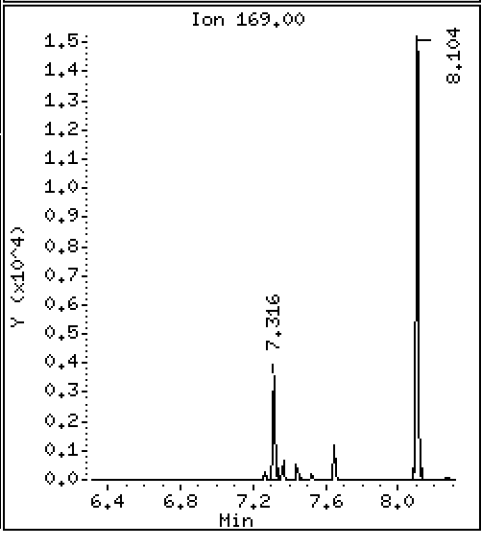


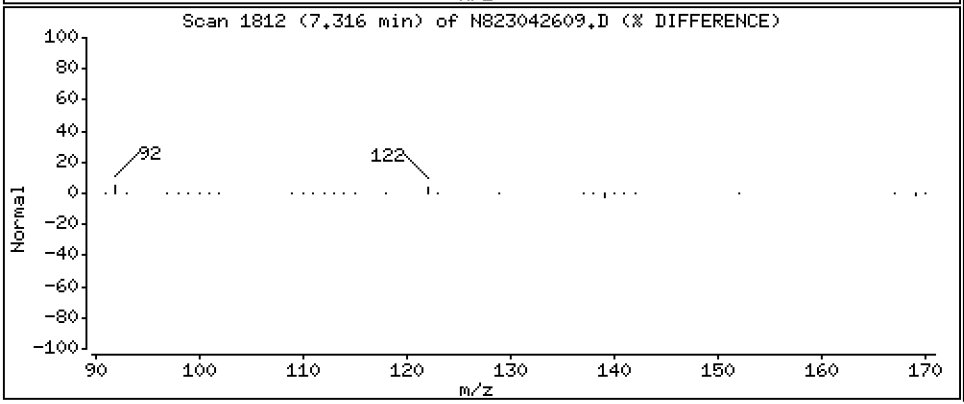












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

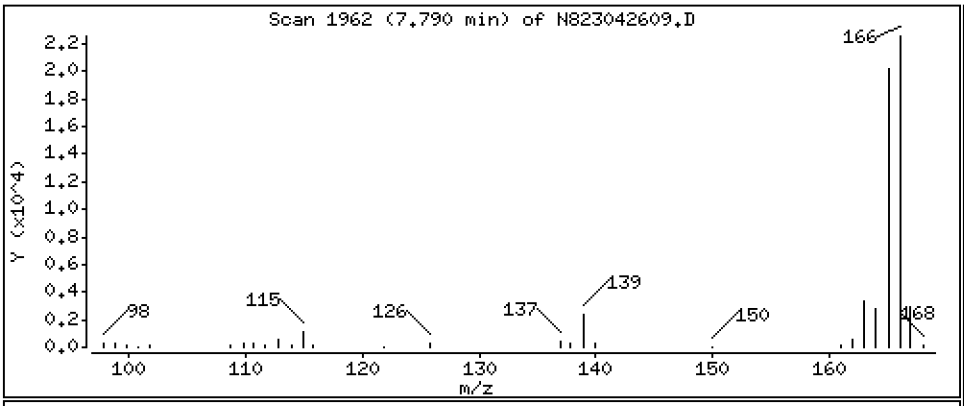
Operator: JZ

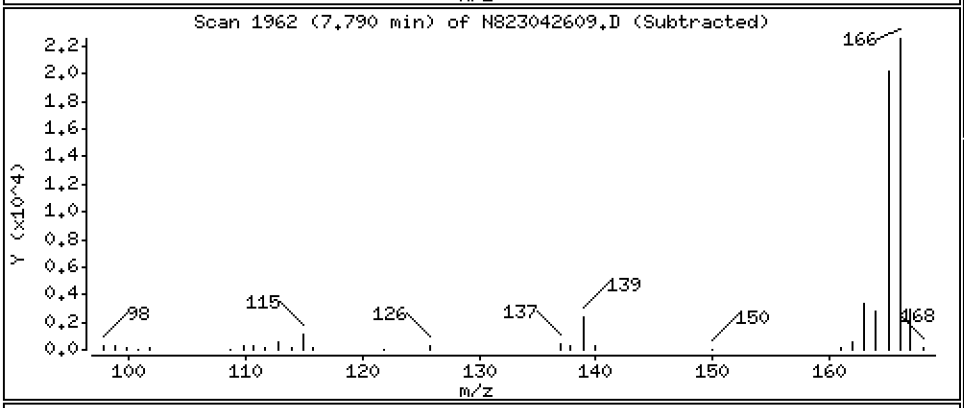
Column phase: Rxi-17sil

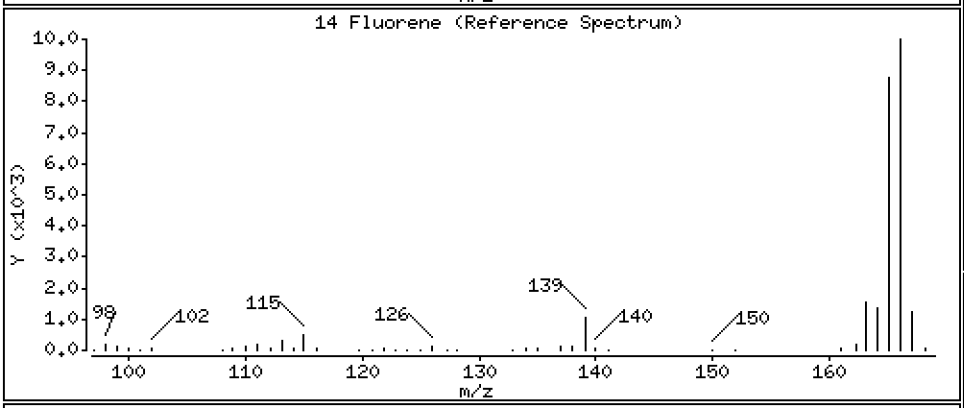
Column diameter: 0.25

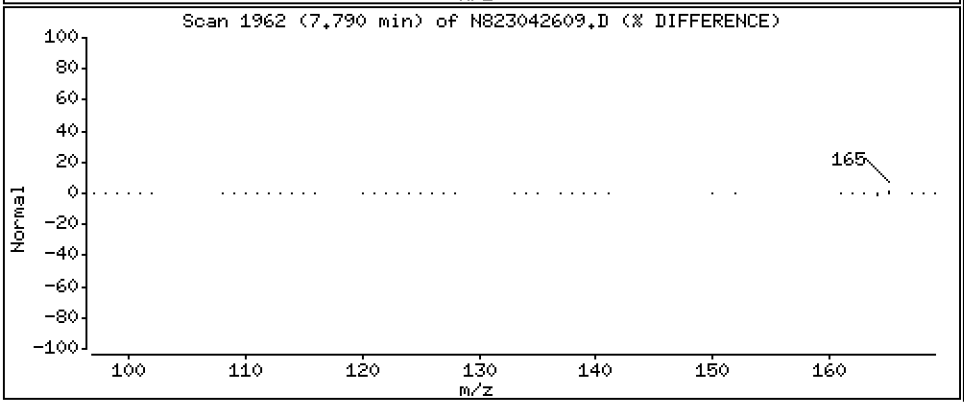
14 Fluorene

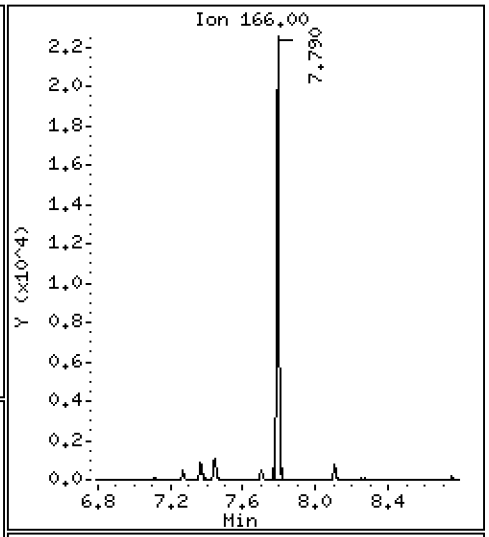
Concentration: 2.293 ug/L

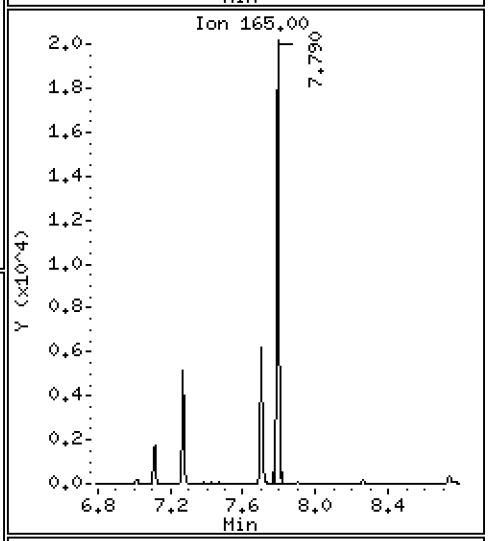


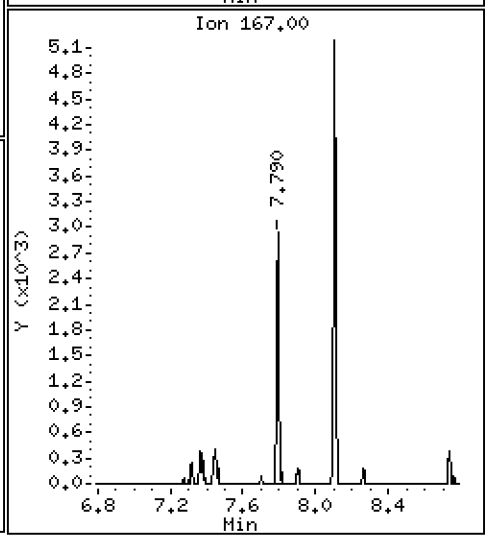












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

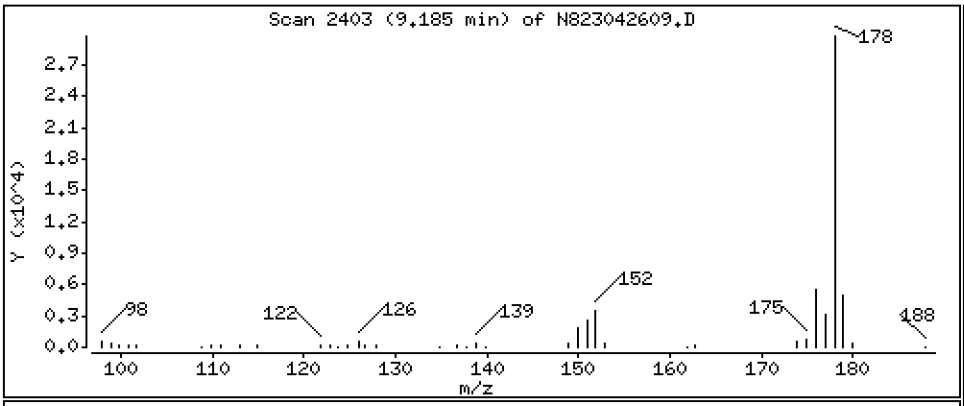
Operator: JZ

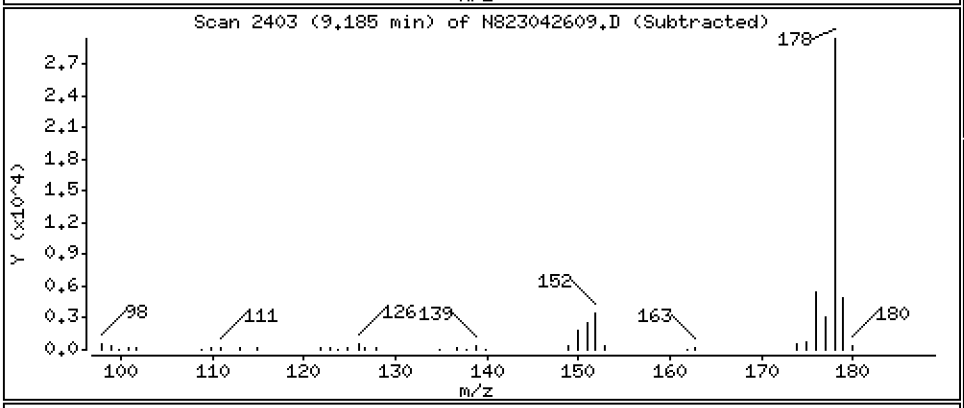
Column phase: Rxi-17sil

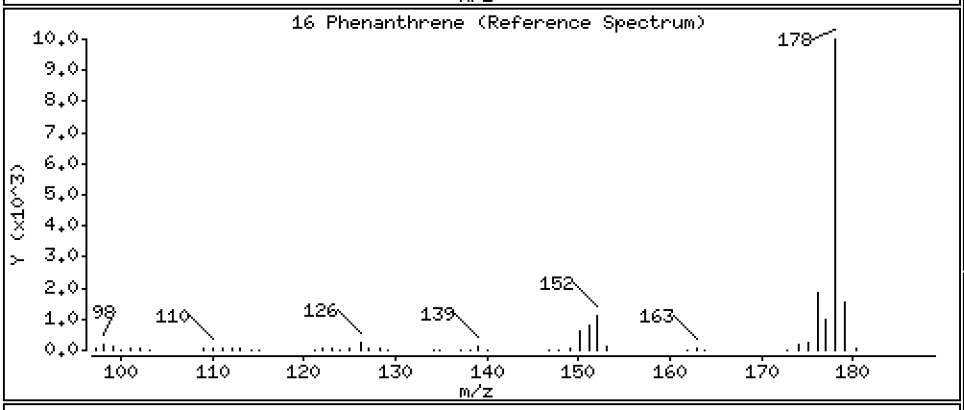
Column diameter: 0.25

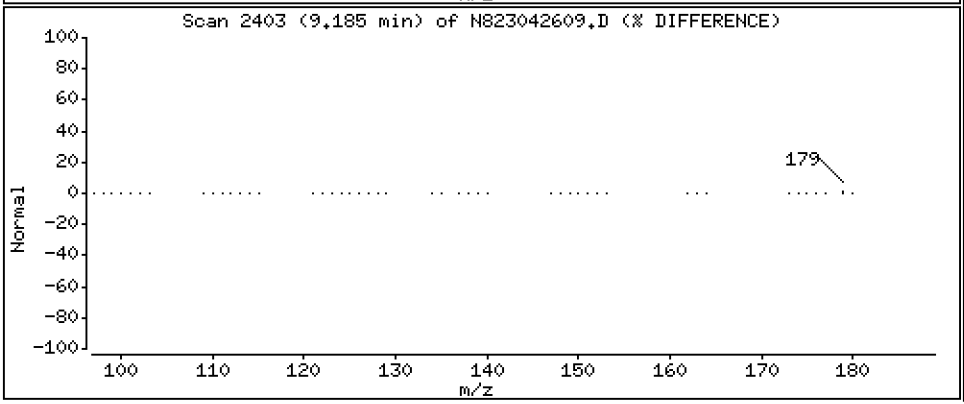
16 Phenanthrene

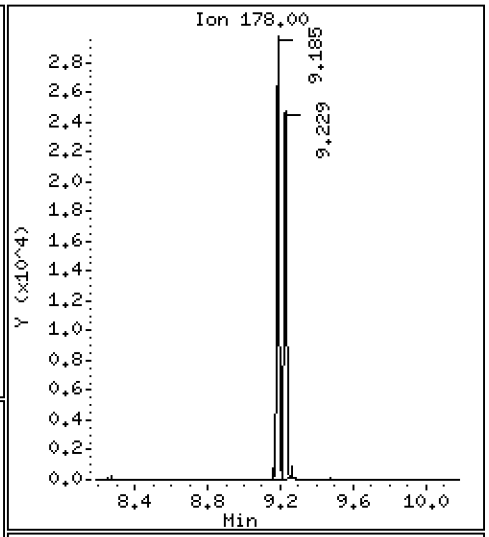
Concentration: 2.161 ug/L

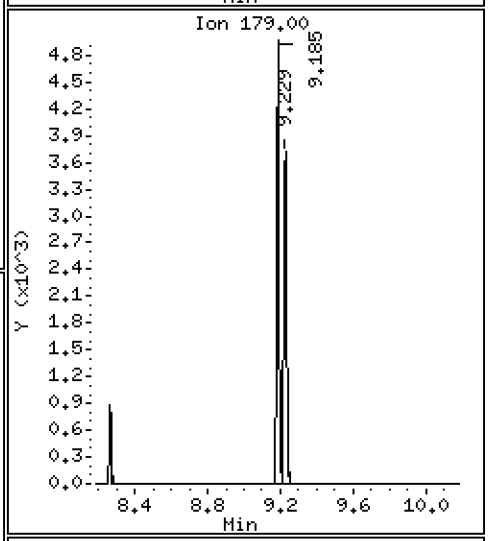


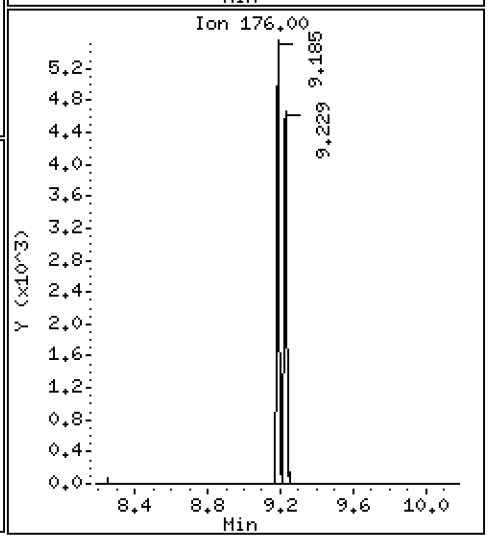












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

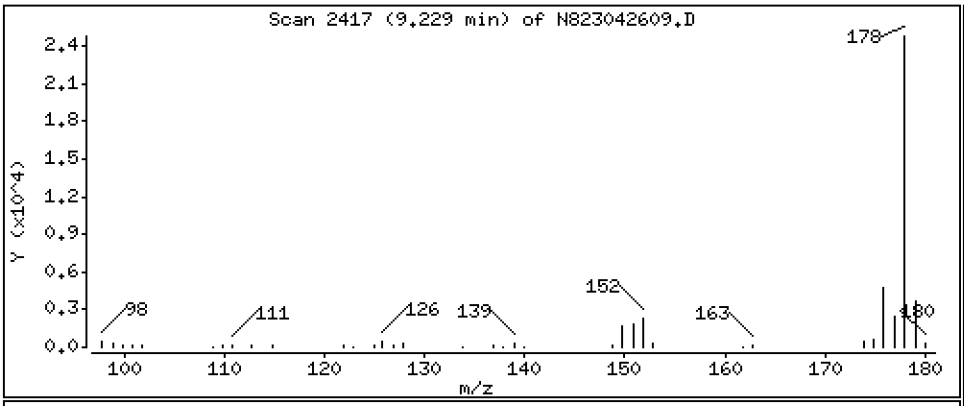
Operator: JZ

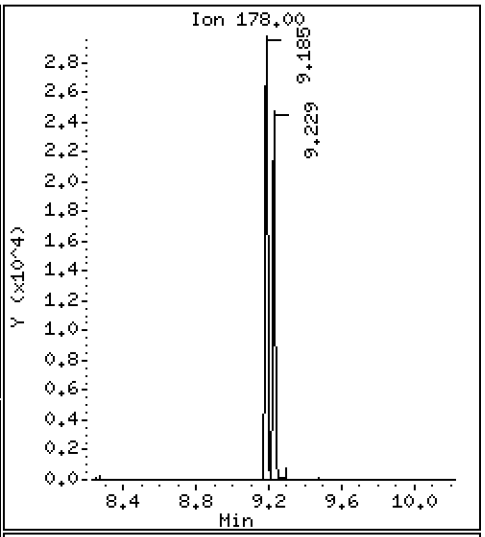
Column phase: Rxi-17sil

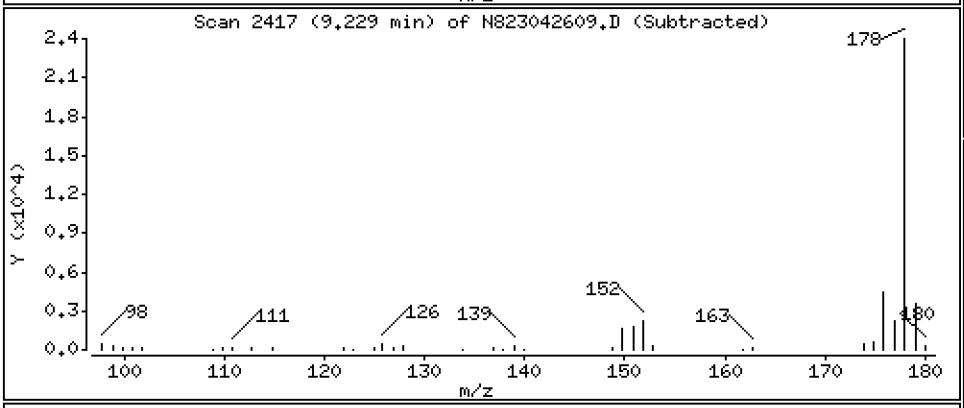
Column diameter: 0.25

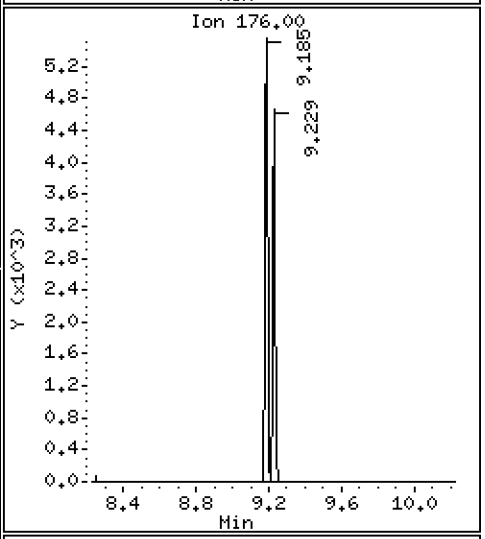
17 Anthracene

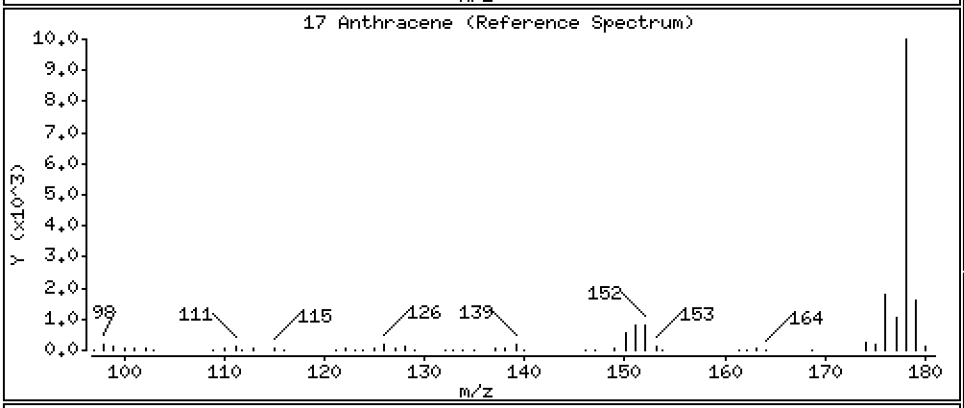
Concentration: 2.008 ug/L

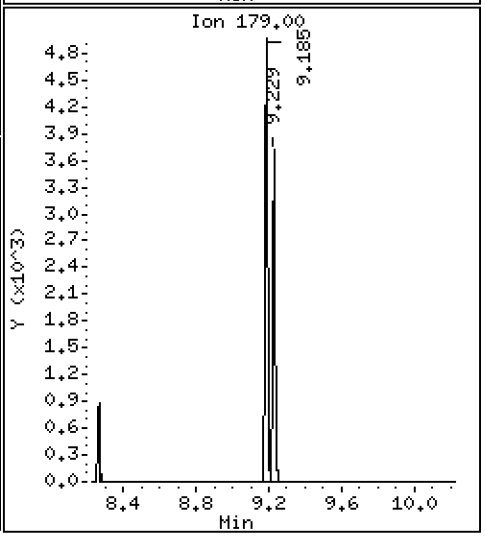


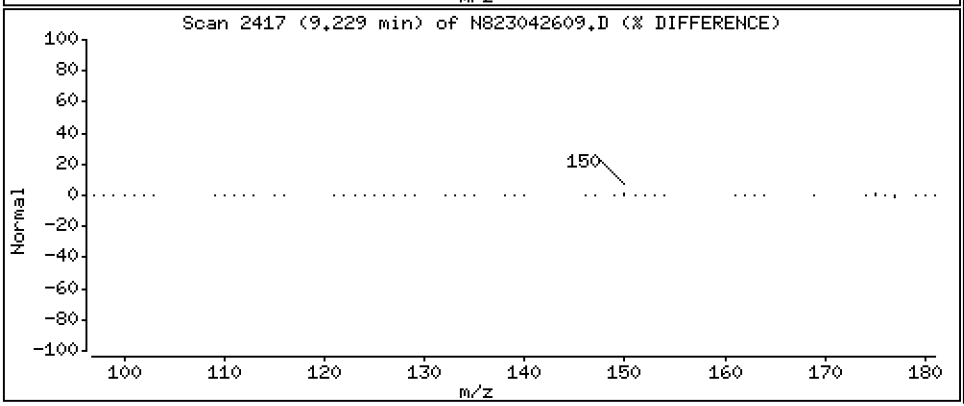












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

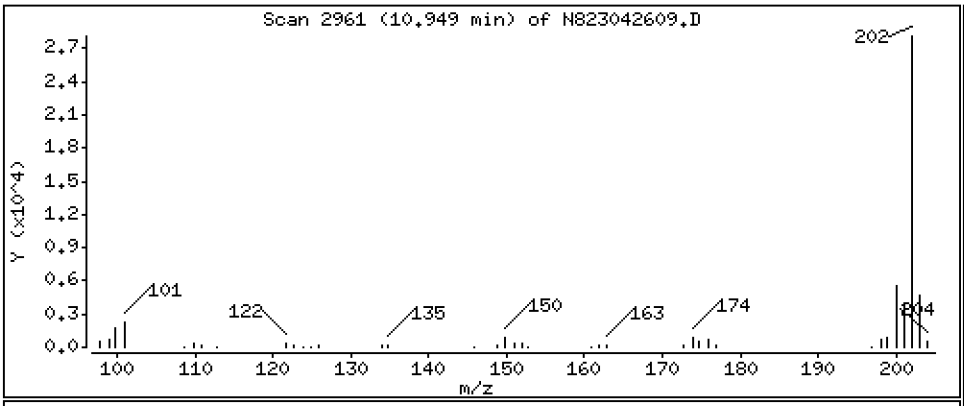
Operator: JZ

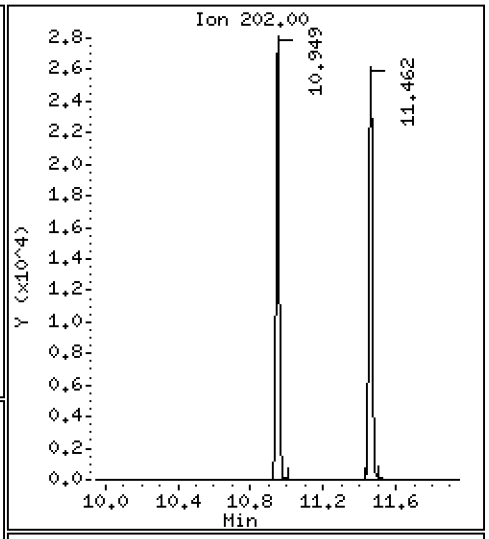
Column phase: Rxi-17sil

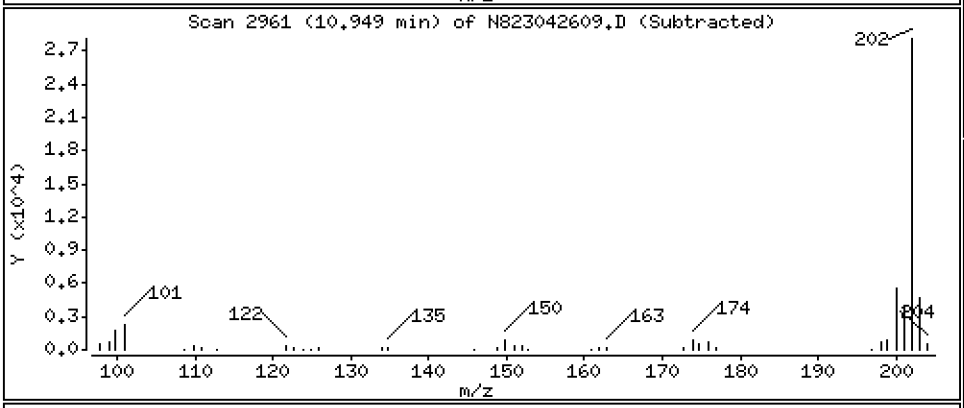
Column diameter: 0.25

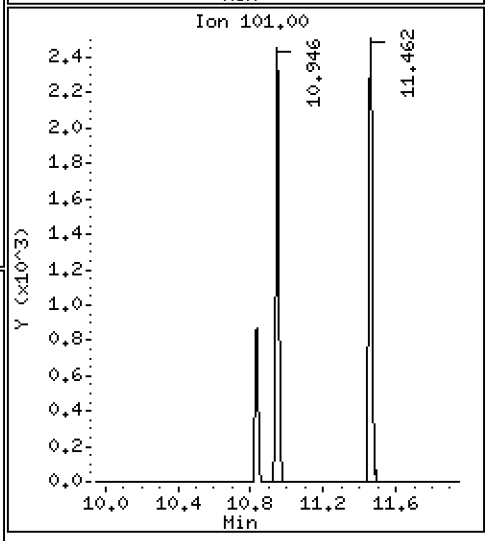
22 Fluoranthene

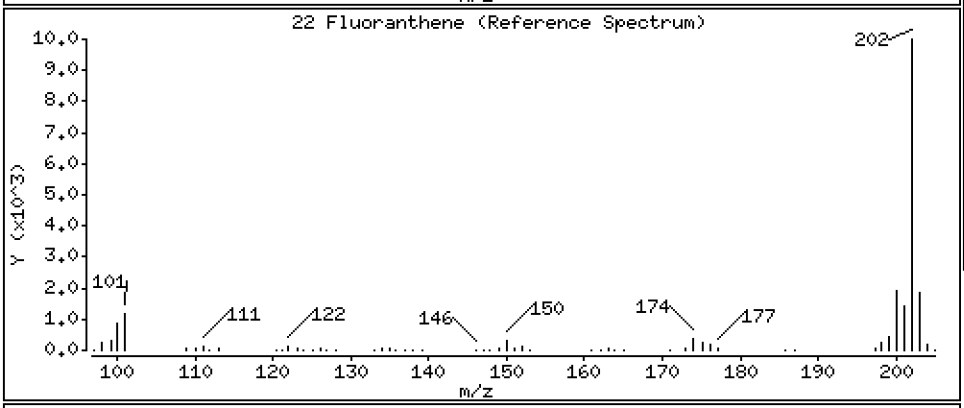
Concentration: 2.256 ug/L

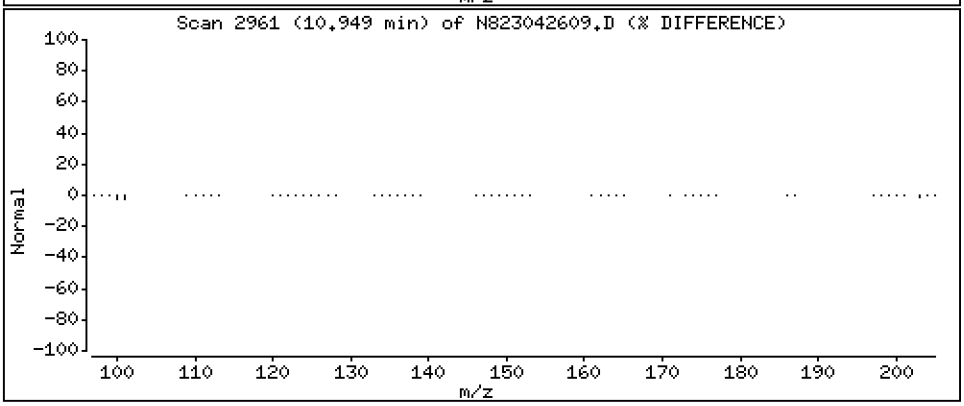












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

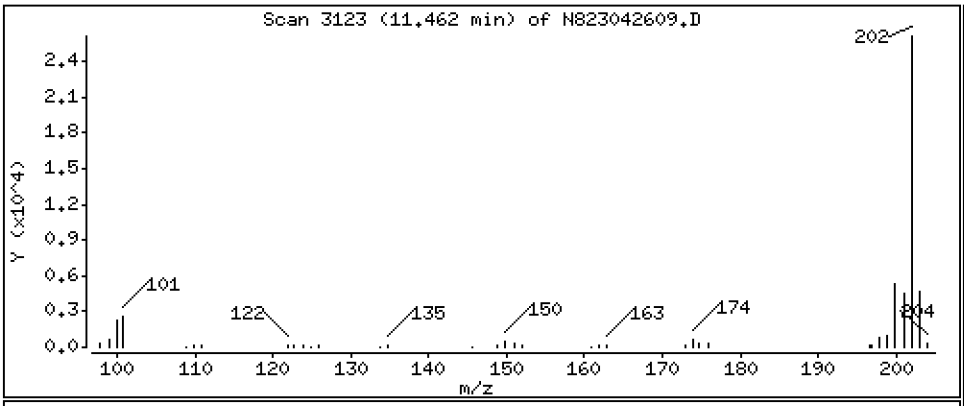
Operator: JZ

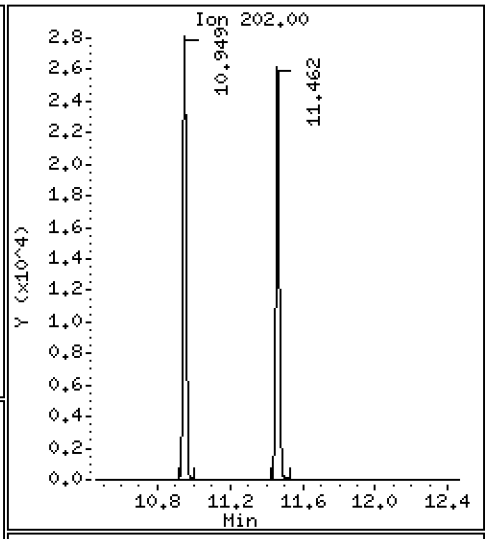
Column phase: Rxi-17sil

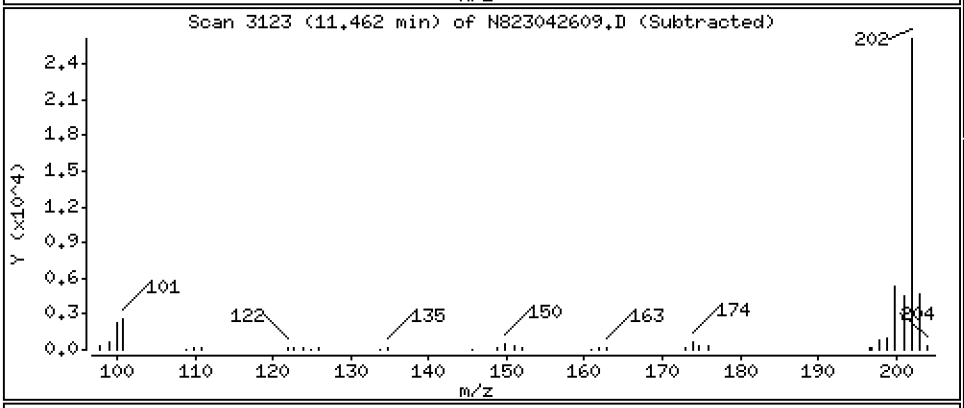
Column diameter: 0.25

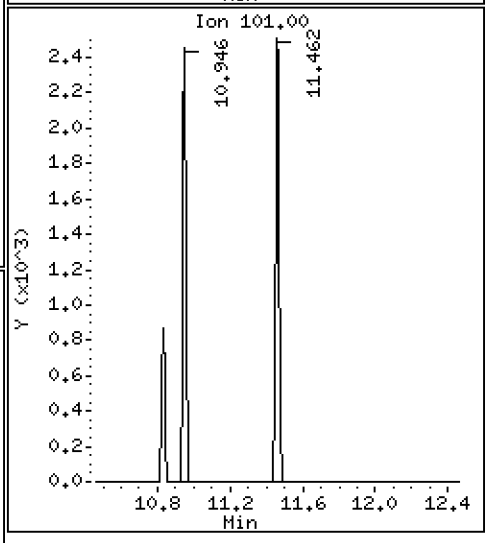
23 Pyrene

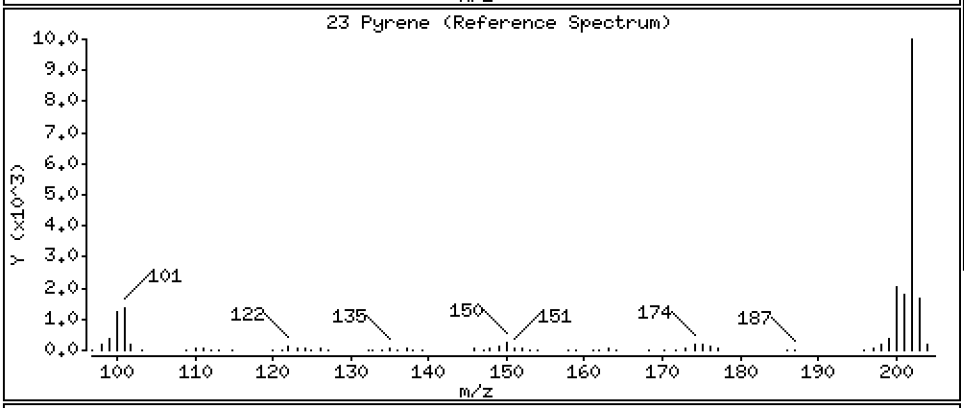
Concentration: 2.227 ug/L

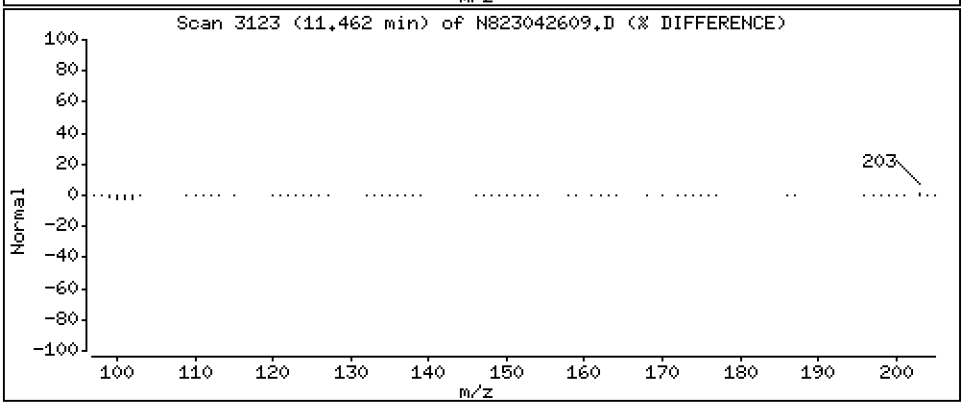












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

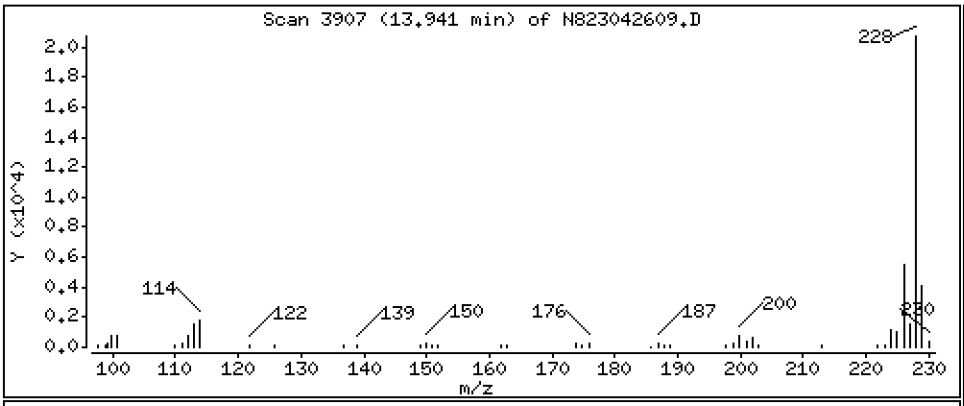
Operator: JZ

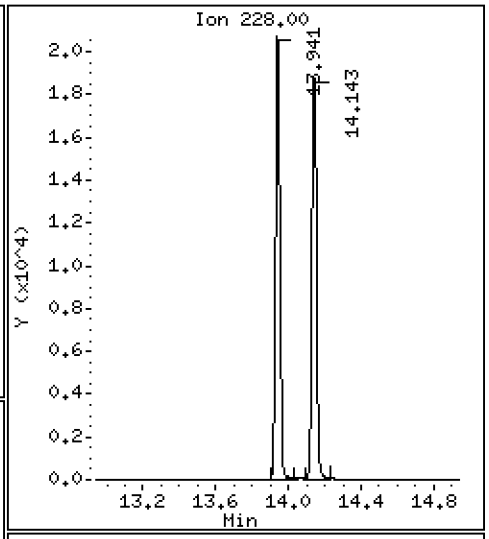
Column phase: Rxi-17sil

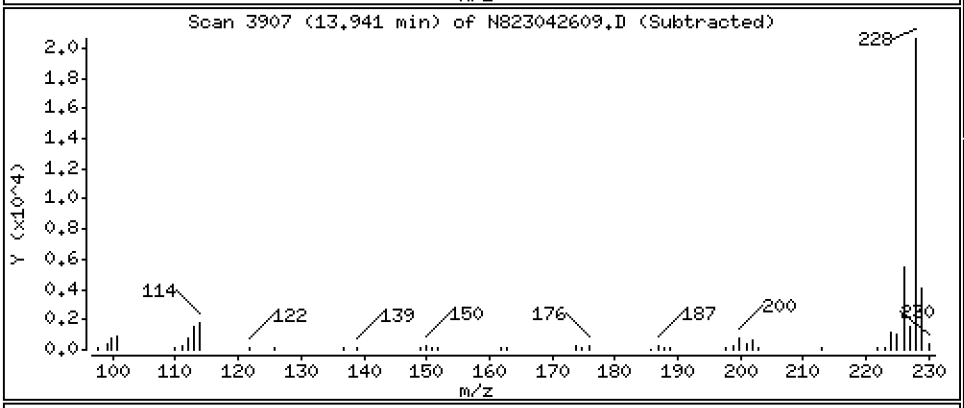
Column diameter: 0.25

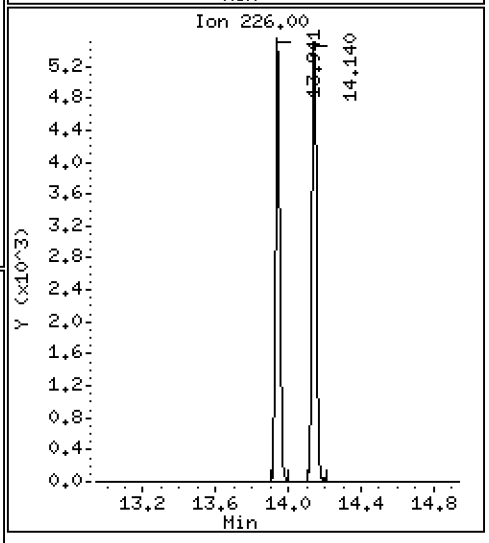
24 Benzo(a)anthracene

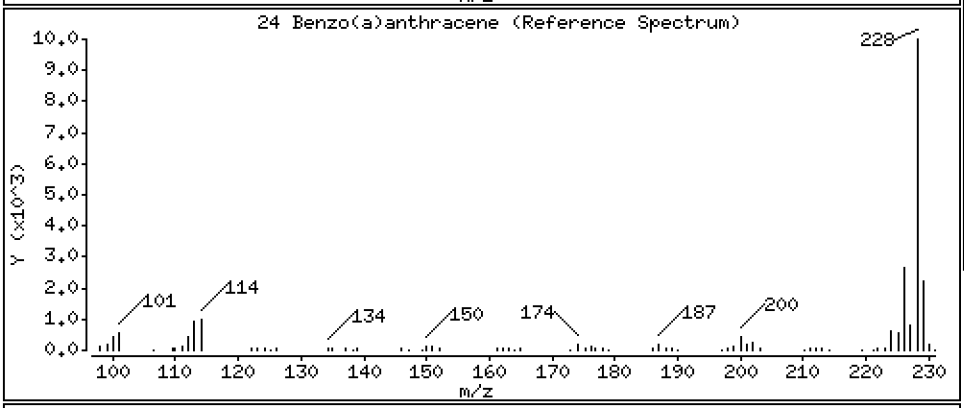
Concentration: 2.175 ug/L

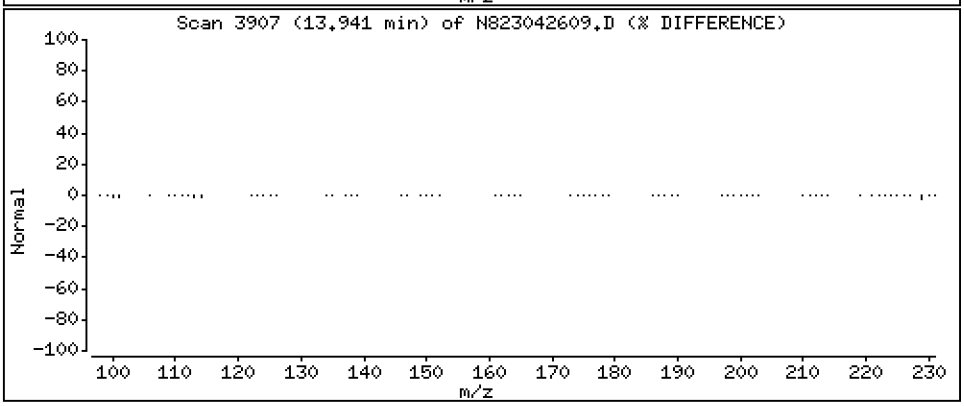












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

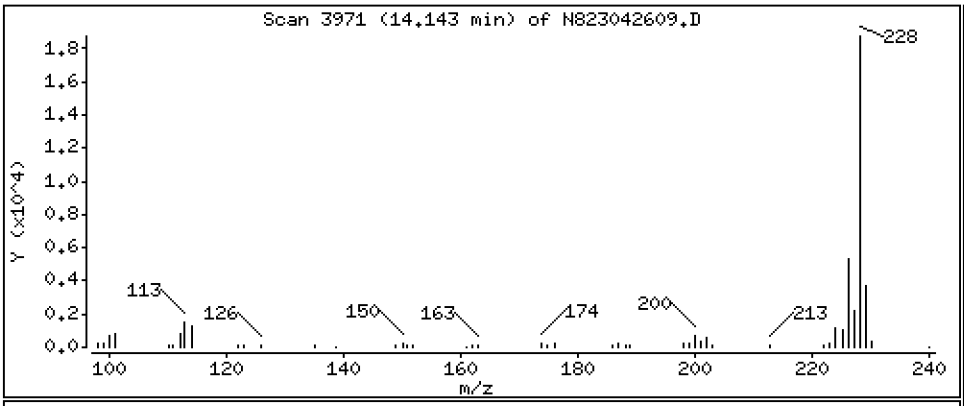
Operator: JZ

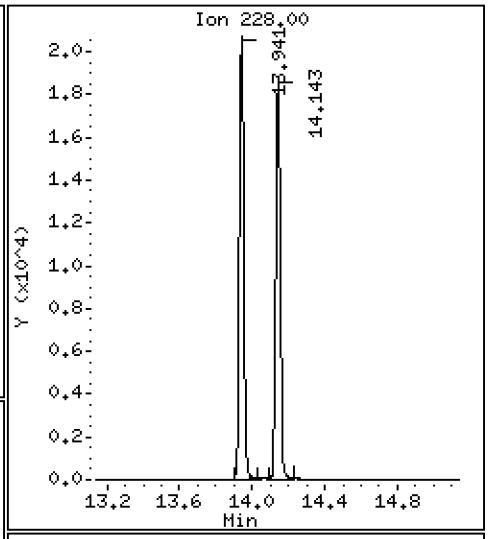
Column phase: Rxi-17sil

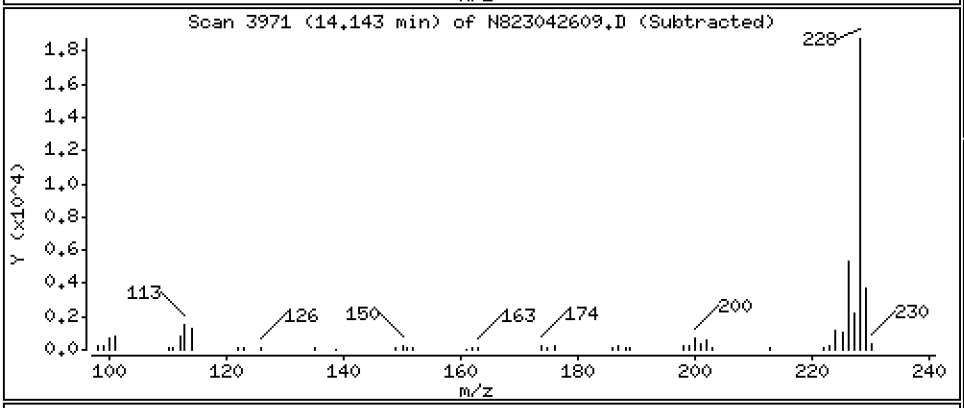
Column diameter: 0.25

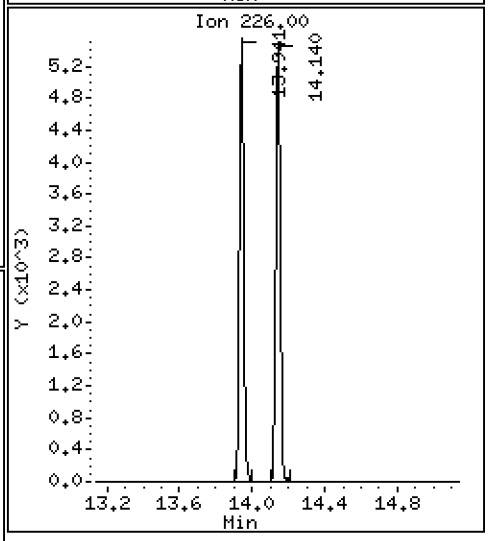
27 Chrysene

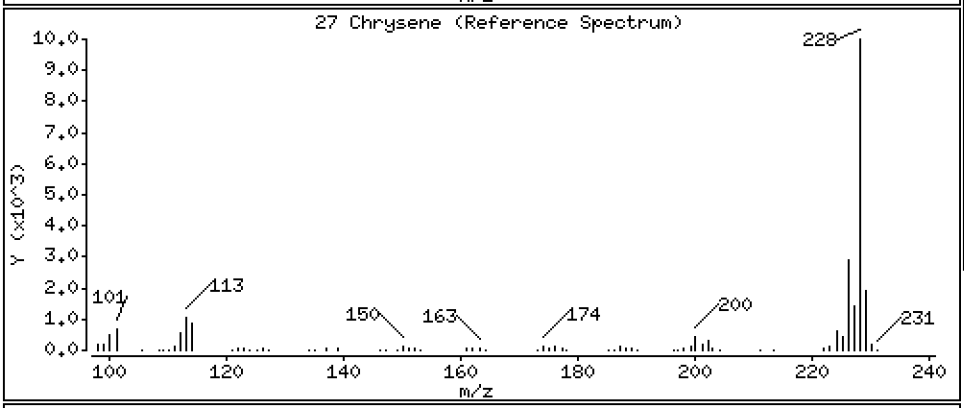
Concentration: 2.137 ug/L

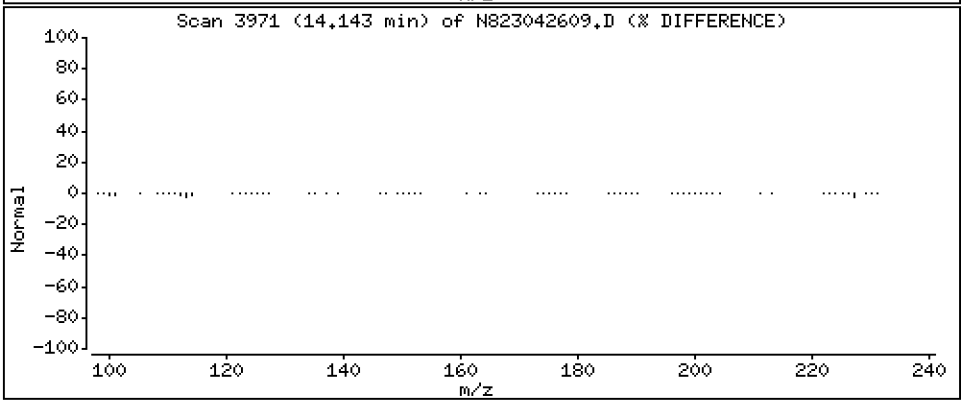












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

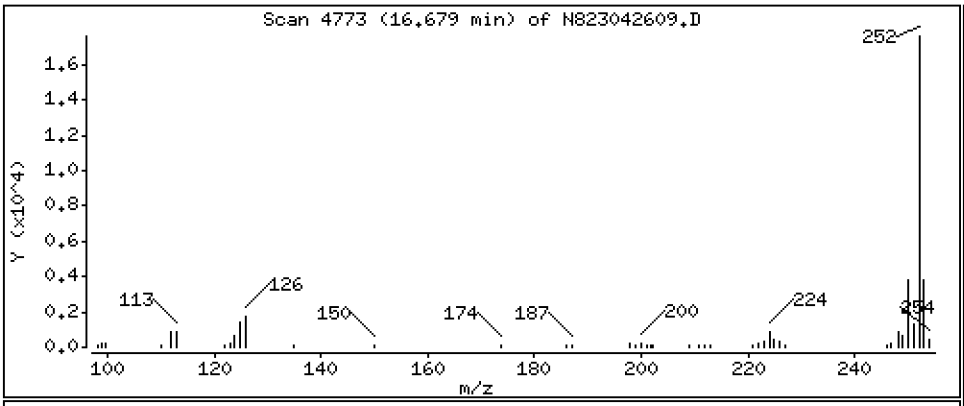
Operator: JZ

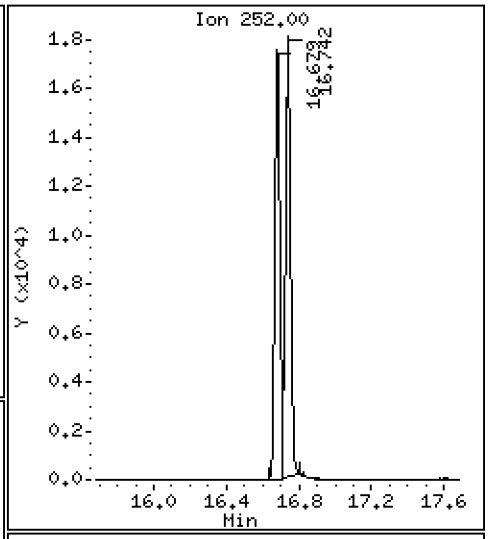
Column phase: Rxi-17sil

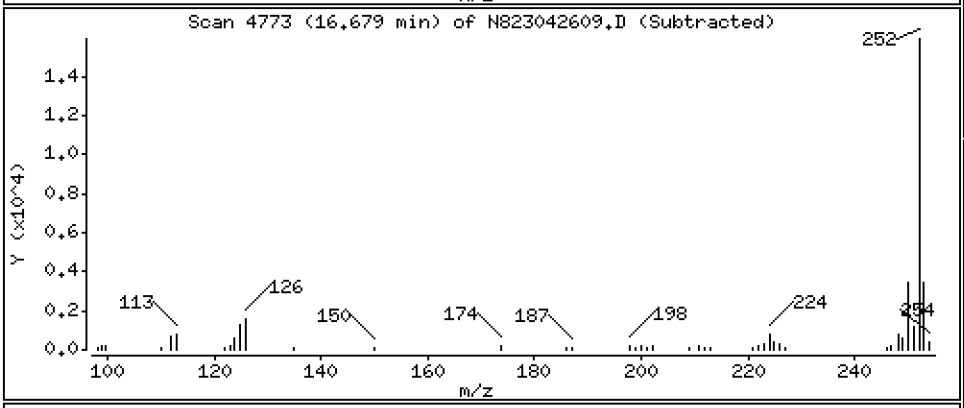
Column diameter: 0.25

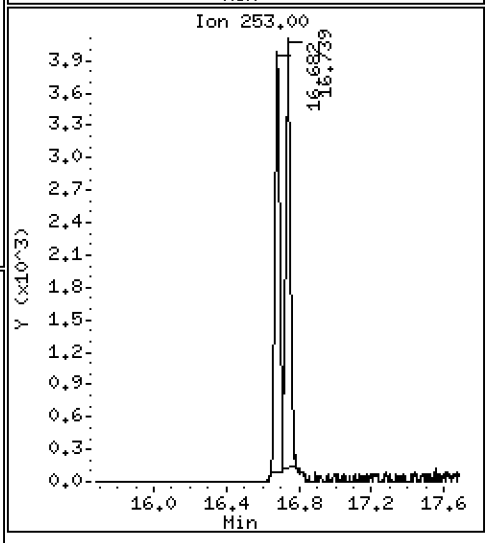
28 Benzo(b)fluoranthene

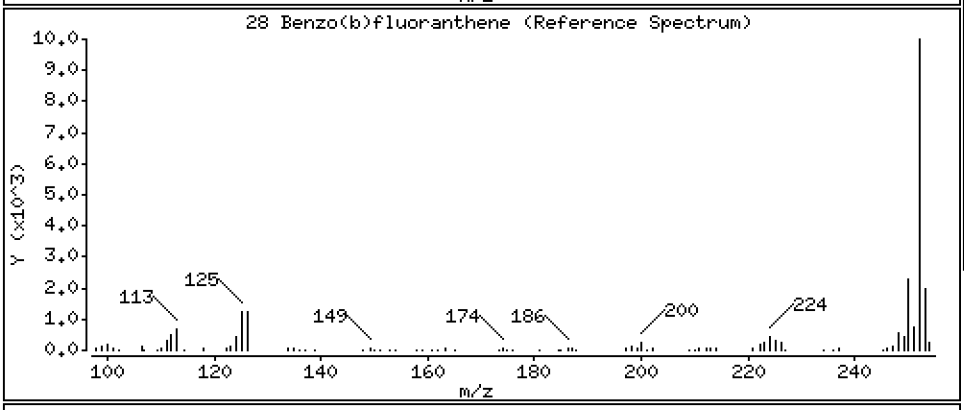
Concentration: 2.156 ug/L

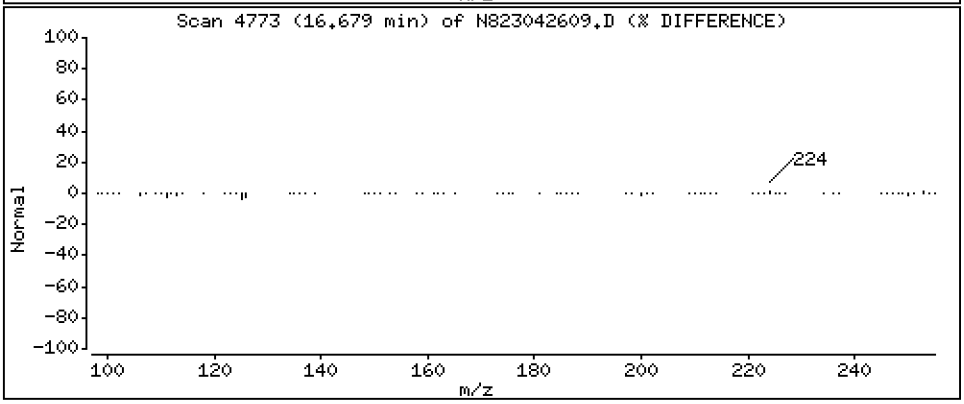












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

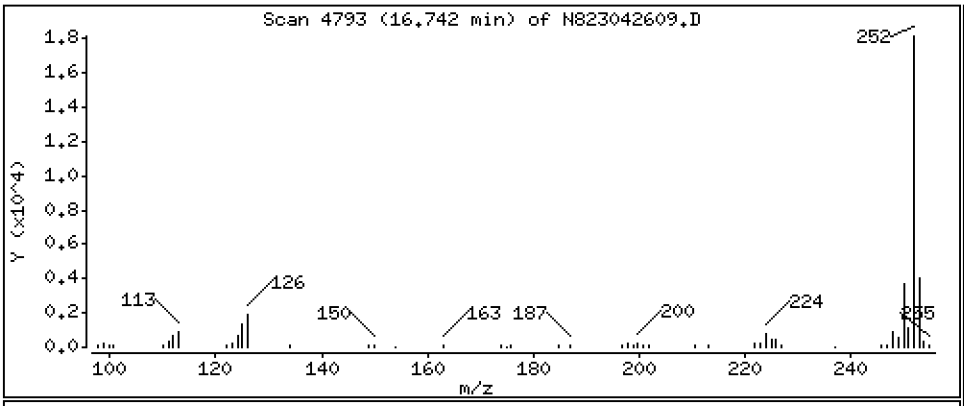
Operator: JZ

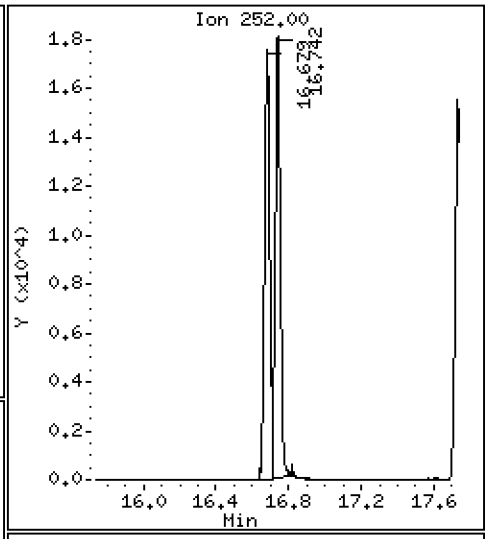
Column phase: Rxi-17sil

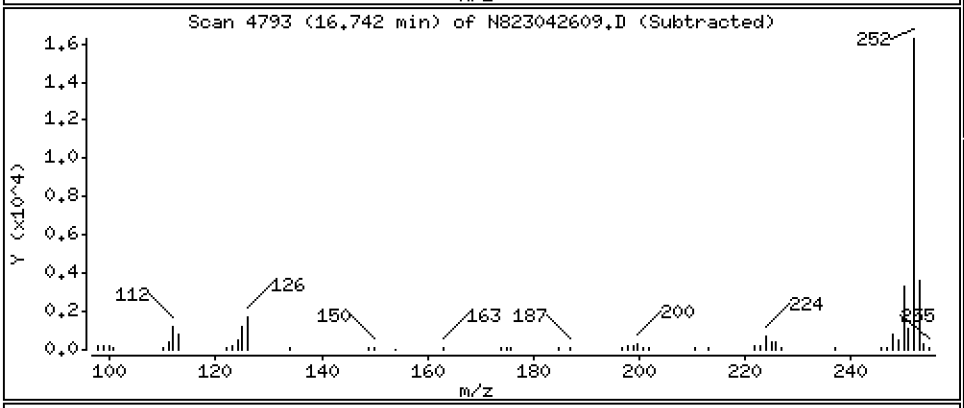
Column diameter: 0.25

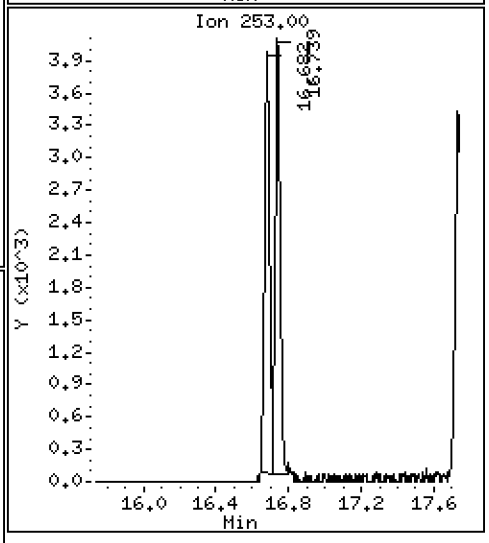
29 Benzo(k)fluoranthene

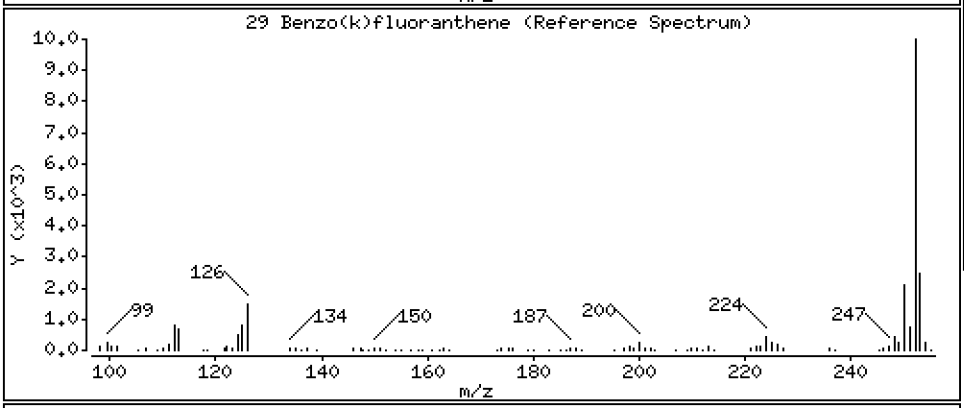
Concentration: 2.301 ug/L

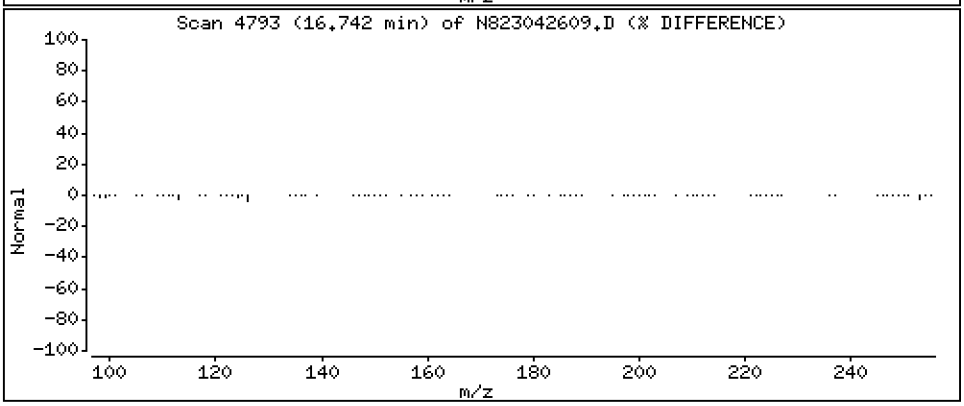












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

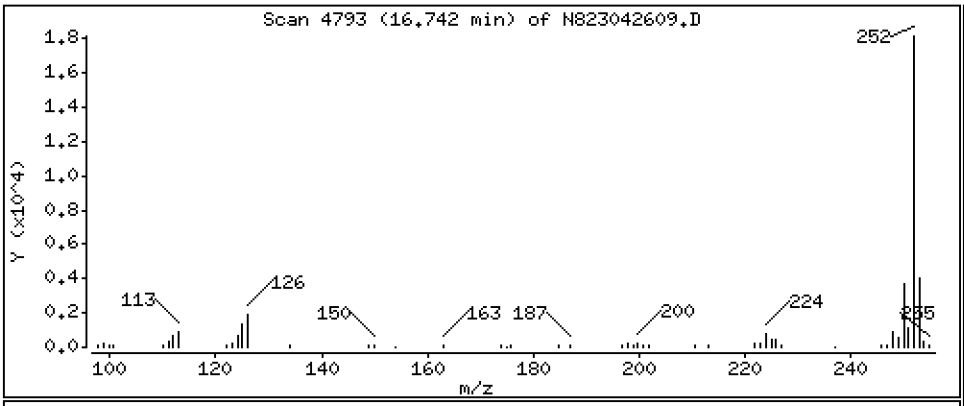
Operator: JZ

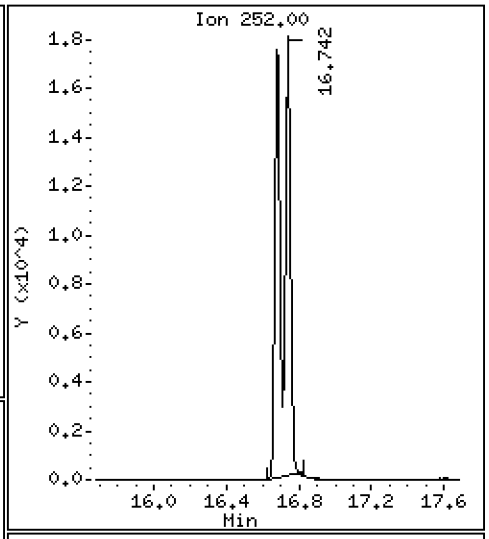
Column phase: Rxi-17sil

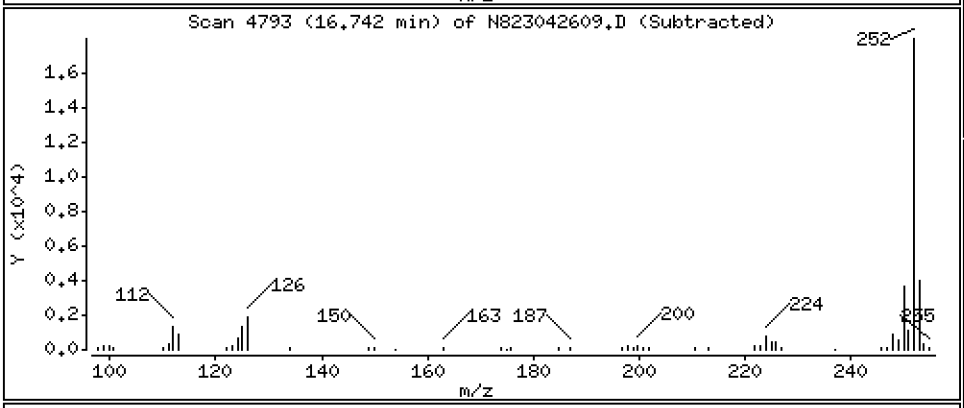
Column diameter: 0.25

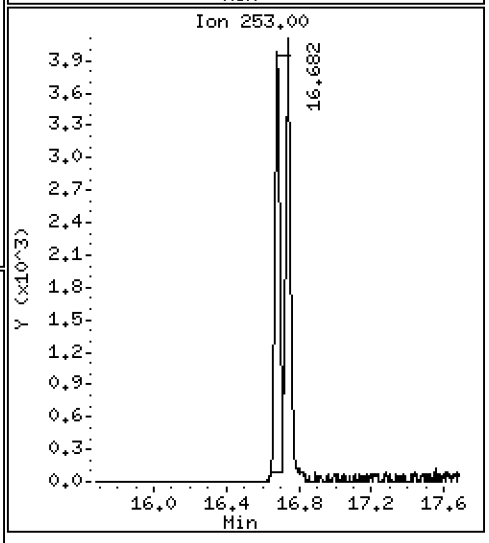
31 Total Benzofluoranthenes

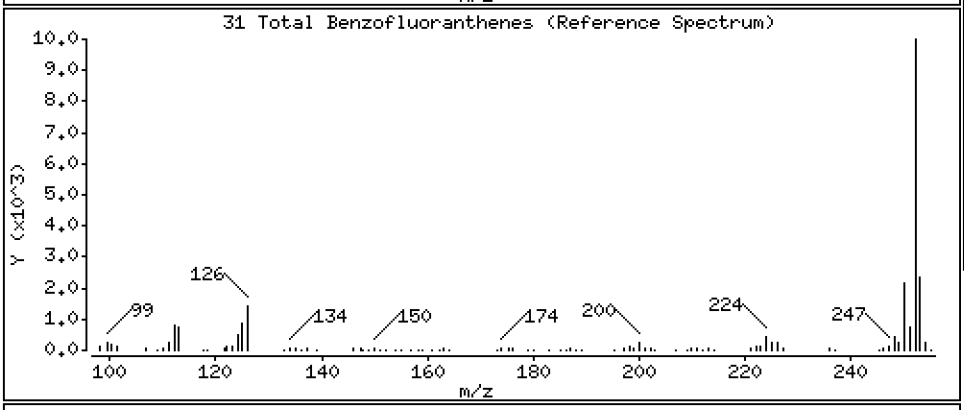
Concentration: 4.553 ug/L

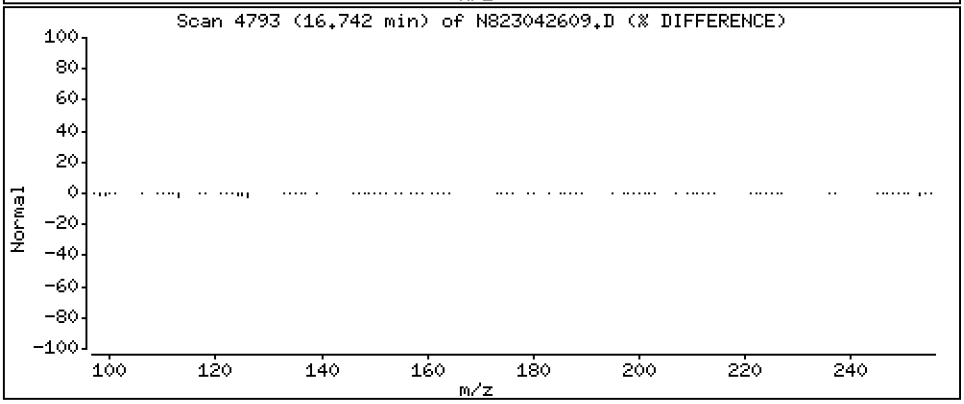












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

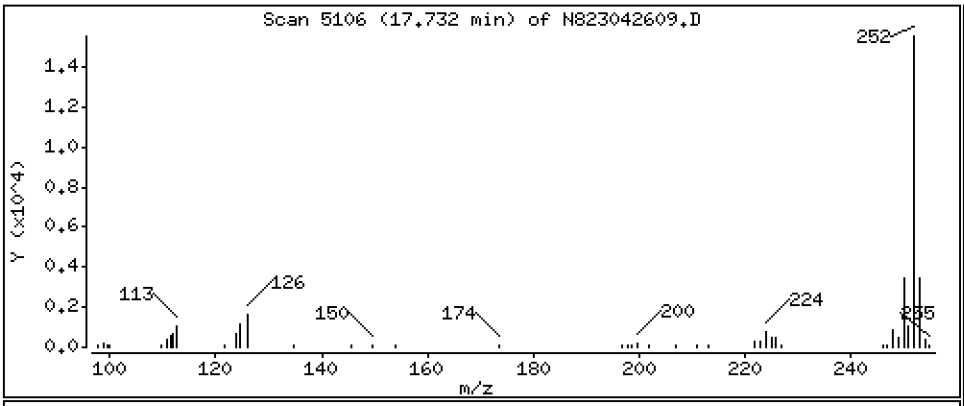
Operator: JZ

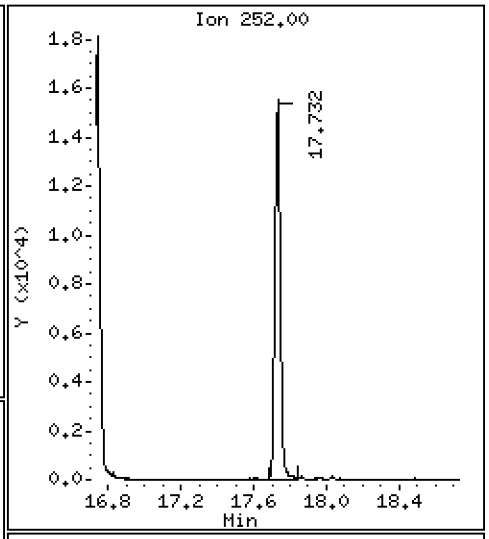
Column phase: Rxi-17sil

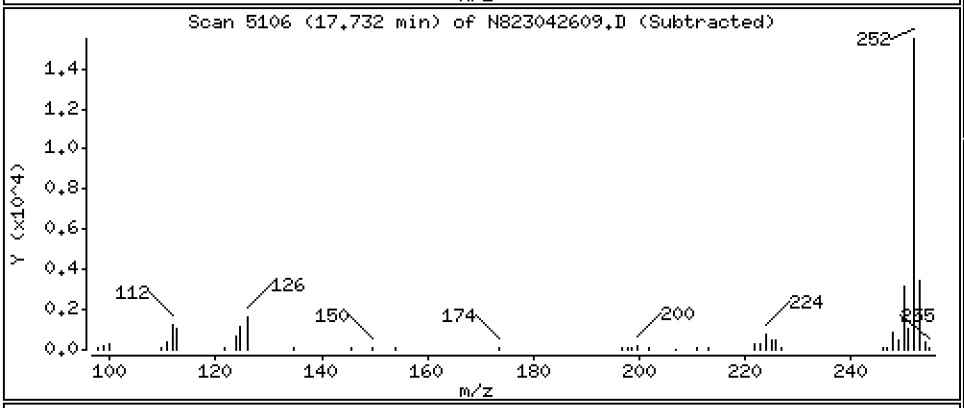
Column diameter: 0.25

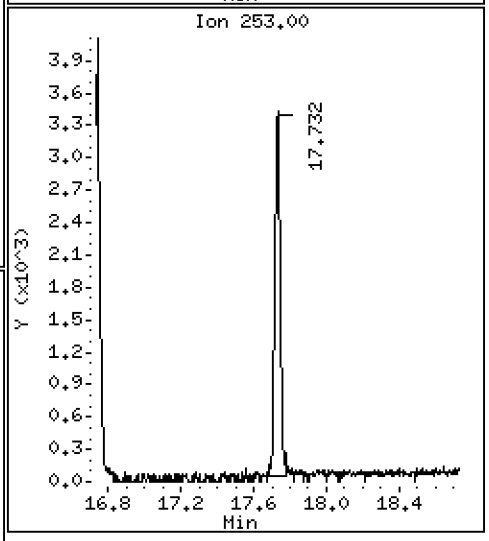
32 Benzo(a)pyrene

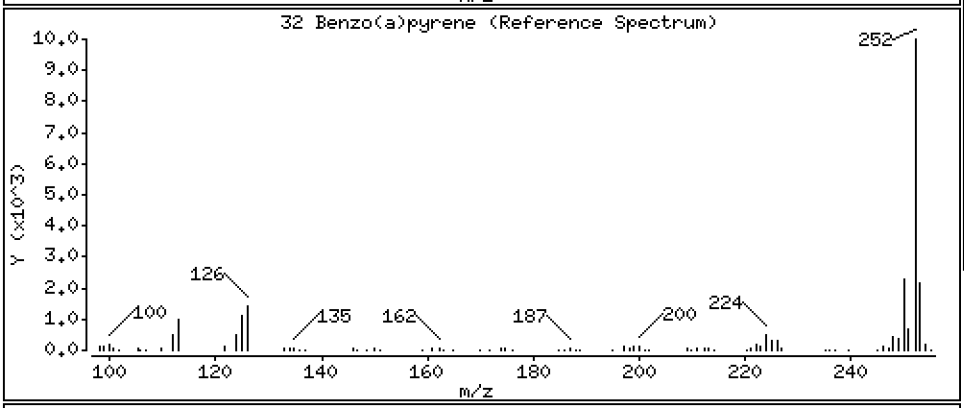
Concentration: 2.295 ug/L

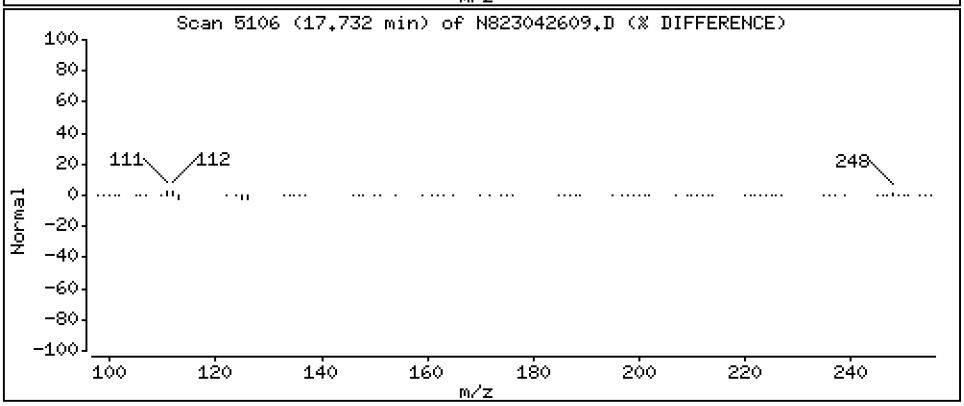












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

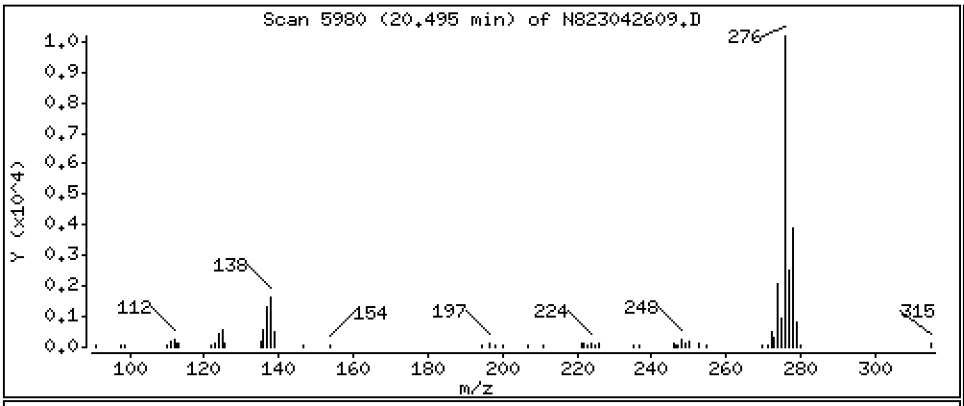
Operator: JZ

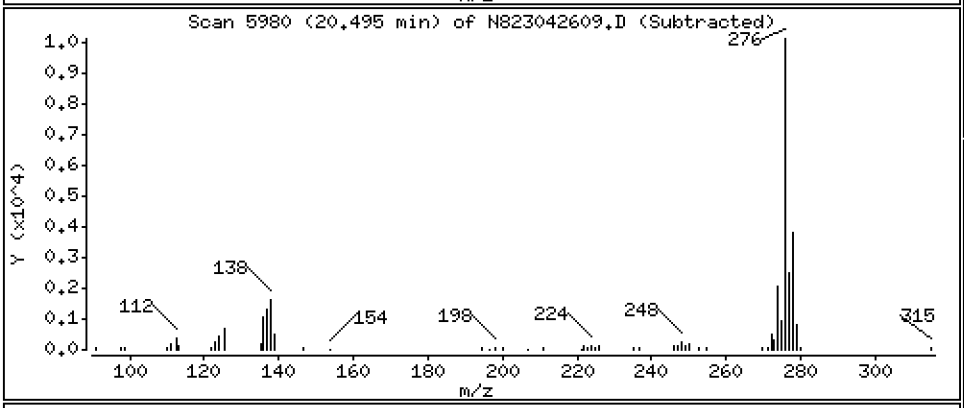
Column phase: Rxi-17sil

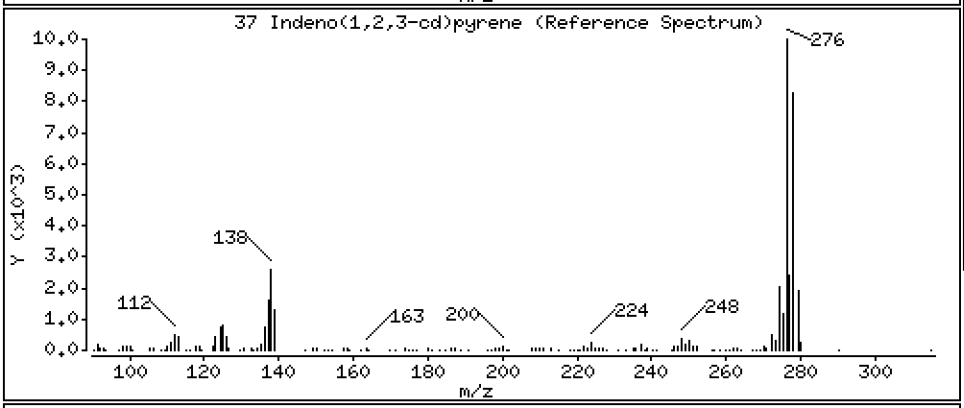
Column diameter: 0.25

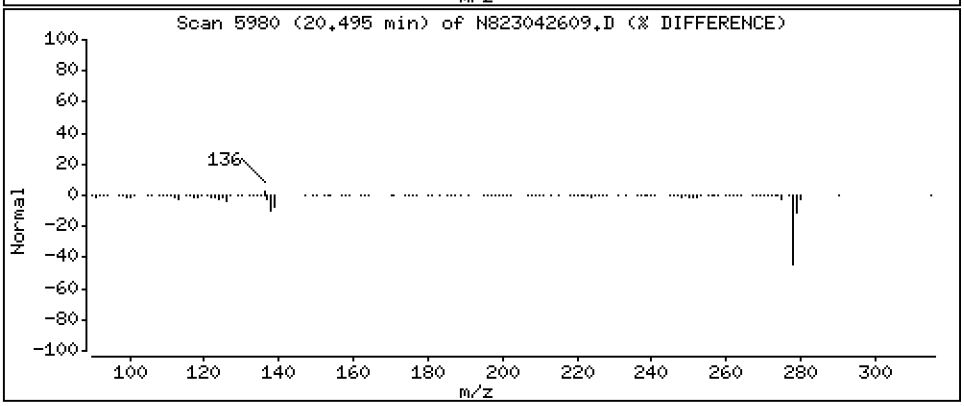
37 Indeno(1,2,3-cd)pyrene

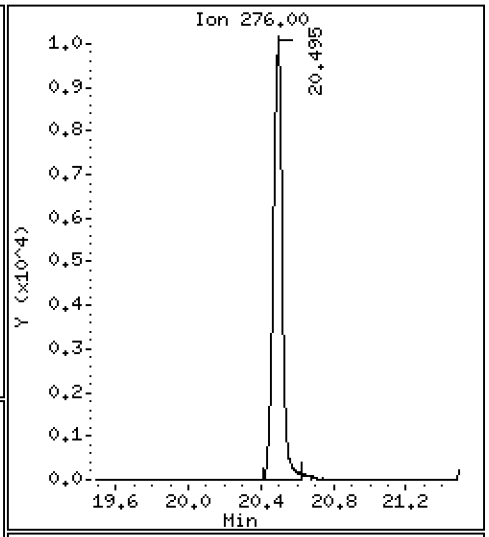
Concentration: 2.450 ug/L

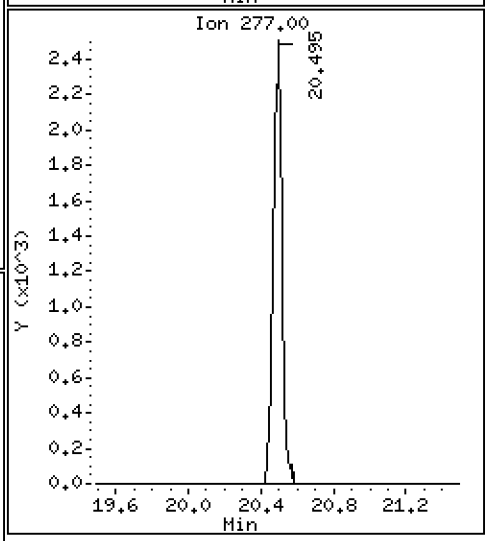












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

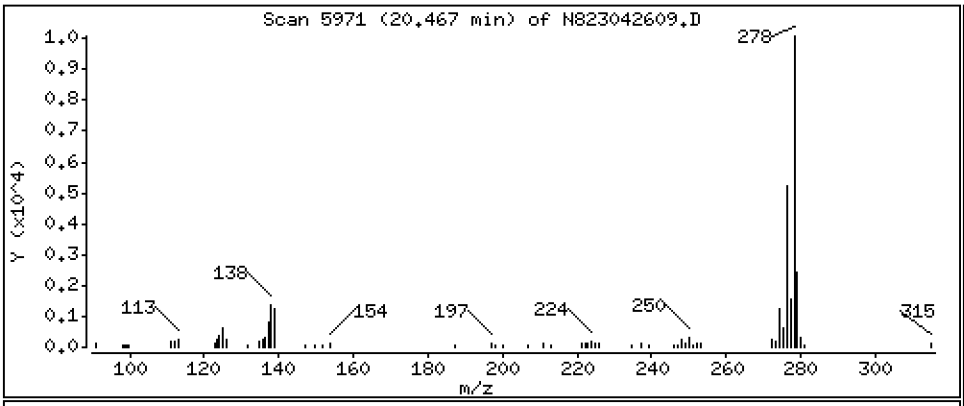
Operator: JZ

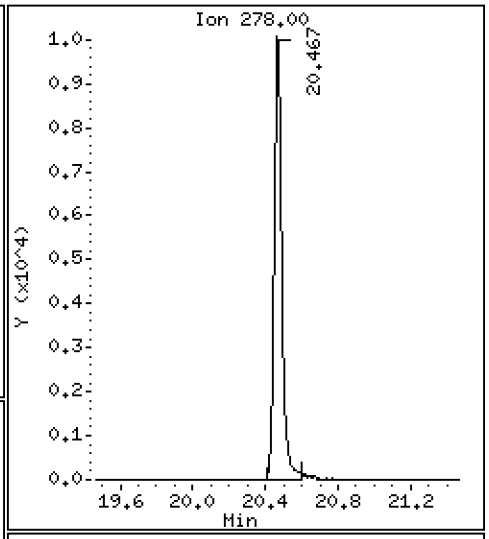
Column phase: Rxi-17sil

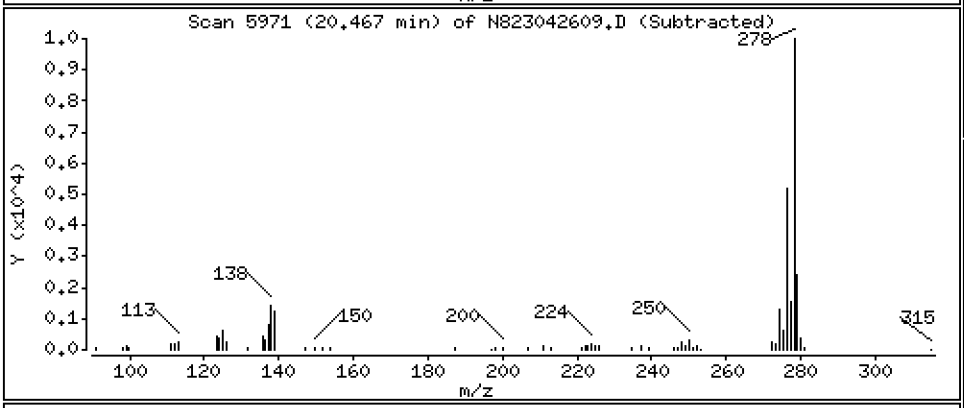
Column diameter: 0.25

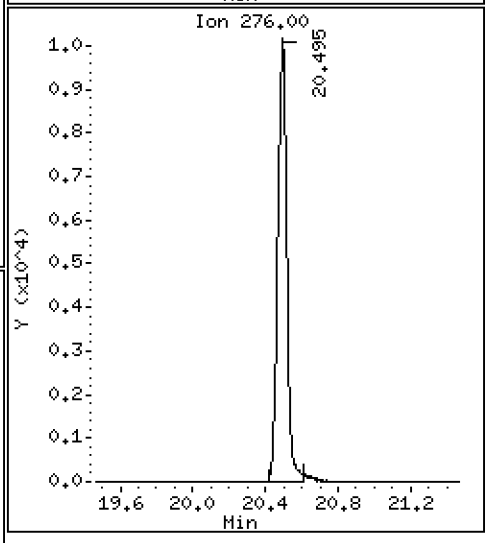
38 Dibenzo(a,h)anthracene

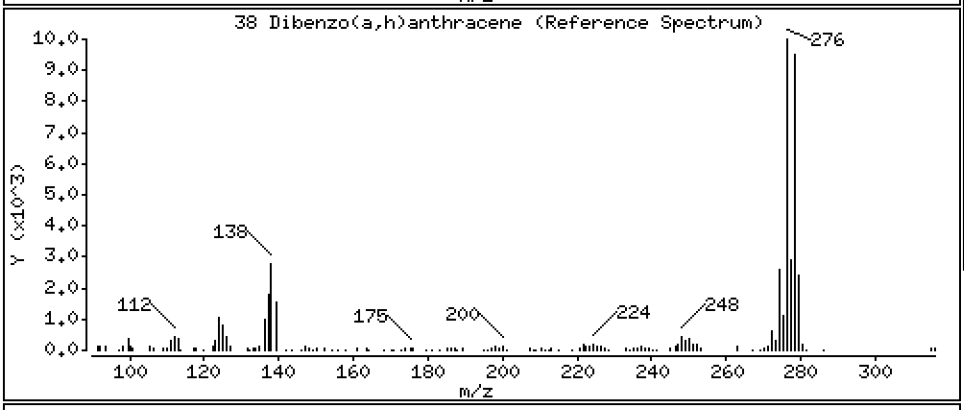
Concentration: 2.334 ug/L

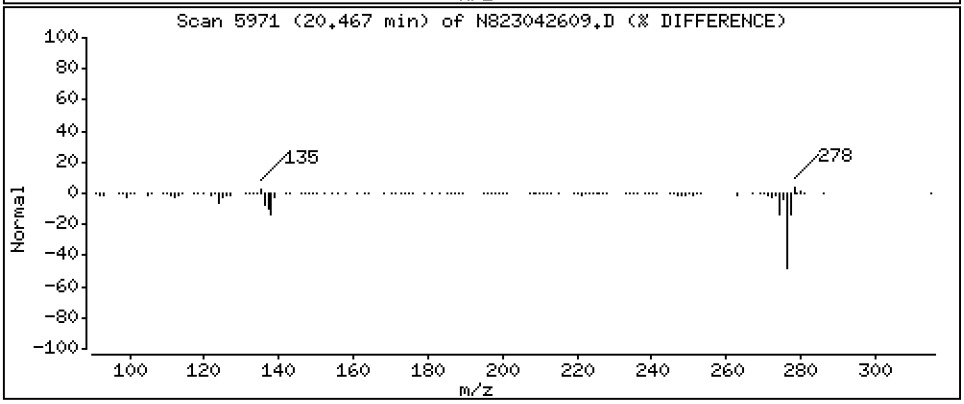












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

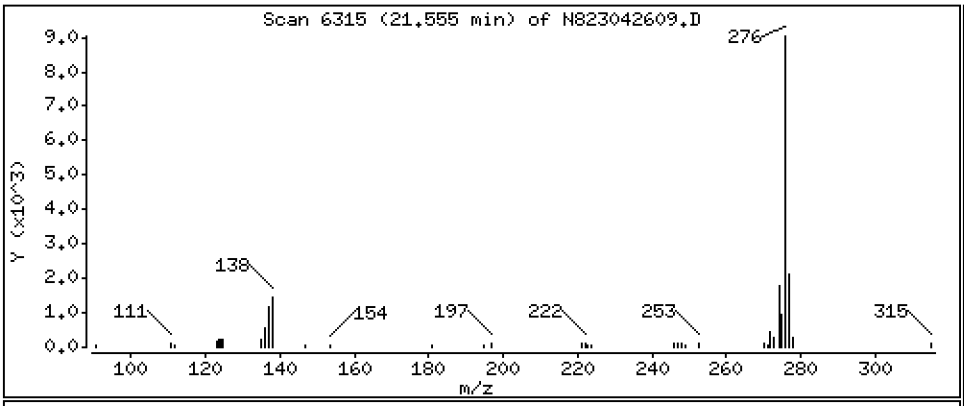
Operator: JZ

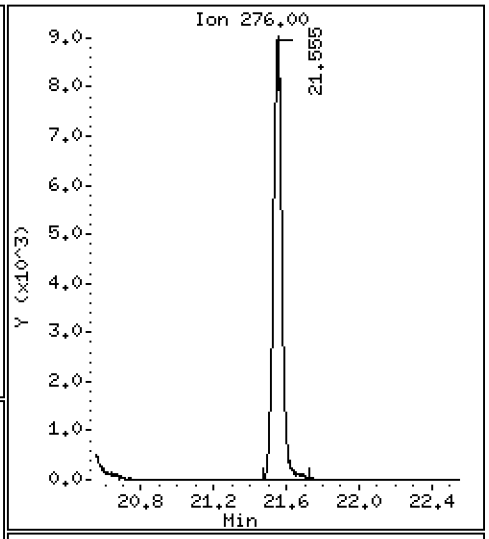
Column phase: Rxi-17sil

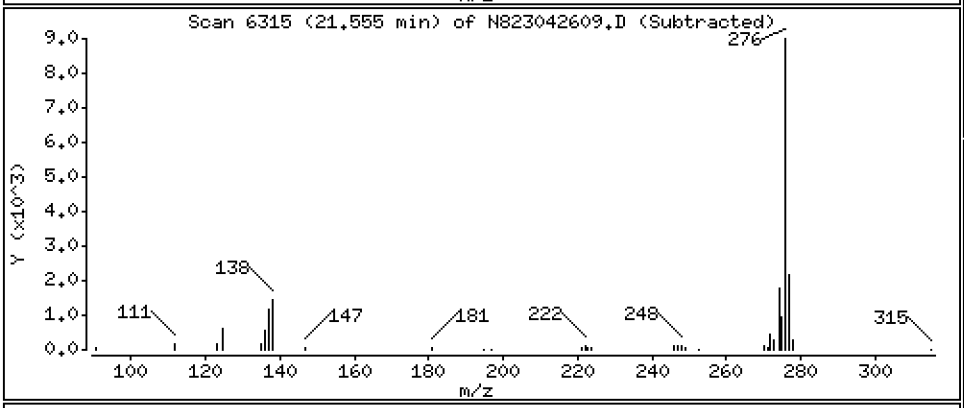
Column diameter: 0.25

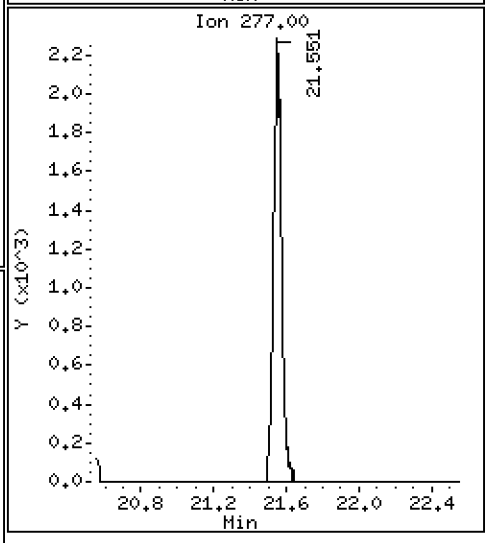
39 Benzo(g,h,i)perylene

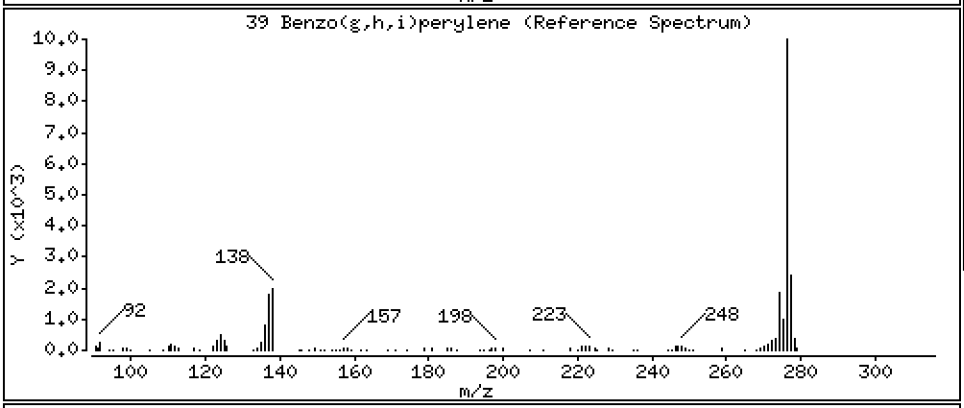
Concentration: 2.248 ug/L

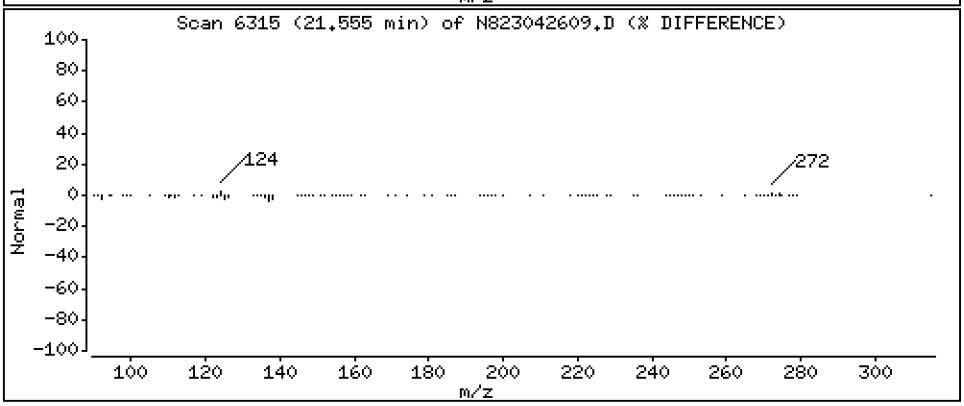












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D
Lab Smp Id: SLD0372-SCV1
Inj Date : 26-APR-2023 20:49
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230426
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA230426
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	20718	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	24938	2.36264	2.363
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	14334	2.39183	2.392
	5 1-methylnaphthalene	141	5.801	5.801	(1.202)	14142	2.38001	2.380
	9 Acenaphthylene	152	7.003	7.003	(0.984)	25991	2.32237	2.322
*	10 Acenaphthene-d10	164	7.113	7.110	(1.000)	12642	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	16198	2.23392	2.234
	12 Dibenzofuran	168	7.316	7.313	(1.028)	27419	2.51765	2.518
	14 Fluorene	166	7.790	7.790	(1.095)	19927	2.29268	2.293
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	24547	2.00000	
	16 Phenanthrene	178	9.184	9.185	(1.004)	28095	2.16083	2.161
	17 Anthracene	178	9.229	9.226	(1.009)	24487	2.00809	2.008
	22 Fluoranthene	202	10.949	10.949	(1.197)	33741	2.25628	2.256
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	11.461	11.461	(0.815)	34528	2.22695	2.227
	24 Benzo(a)anthracene	228	13.940	13.940	(0.991)	34655	2.17519	2.175
*	25 Chrysene-d12	240	14.070	14.067	(1.000)	24217	2.00000	
	27 Chrysene	228	14.142	14.139	(1.005)	33440	2.13657	2.137
	28 Benzo(b)fluoranthene	252	16.678	16.682	(0.929)	35085	2.15649	2.156
	29 Benzo(k)fluoranthene	252	16.742	16.739	(0.932)	35276	2.30130	2.301
	31 Total Benzofluoranthenes	252	16.742	16.682	(0.932)	68883	4.55291	4.553(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.731	17.731	(0.987)	32452	2.29472	2.295
*	33 Perylene-d12	264	17.959	17.959	(1.000)	24956	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.495	20.492	(1.141)	35264	2.44967	2.450
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.466	20.467	(1.140)	29838	2.33423	2.334
	39 Benzo(g,h,i)perylene	276	21.554	21.551	(1.200)	29972	2.24768	2.248

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042609.D
Lab Smp Id: SLD0372-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA23042
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	20718	10.80
10 Acenaphthene-d10	10729	5365	21458	12642	17.83
15 Phenanthrene-d10	20748	10374	41496	24547	18.31
25 Chrysene-d12	20954	10477	41908	24217	15.57
33 Perylene-d12	21563	10782	43126	24956	15.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.01
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042609.D

Lab ID: SLD0372-SCV1
nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m,   26-APR-2023 20:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

On Column LOD for nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m, pnascv.su

Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00070
Laboratory ID: SLE0339-SCV1
Sequence: SLE0339
Sequence Name: SCV 5.0
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
1,4-Dichlorobenzene	5.0000	5.1	2.6	20.00
1,2-Dichlorobenzene	5.0000	5.0	0.1	20.00
Benzyl Alcohol	5.0000	5.7	14.1	20.00
Benzoic acid	10.000	7.8	-22.2 *	20.00
2,4-Dimethylphenol	5.0000	3.8	-23.7 *	20.00
1,2,4-Trichlorobenzene	5.0000	4.9	-1.9	20.00
N-Nitrosodiphenylamine	5.0000	5.6	12.5	20.00
Pentachlorophenol	5.0000	4.5	-9.9	20.00
2-Fluorophenol	7.5000	0.00		
p-Terphenyl-d14	5.0000	0.00		

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

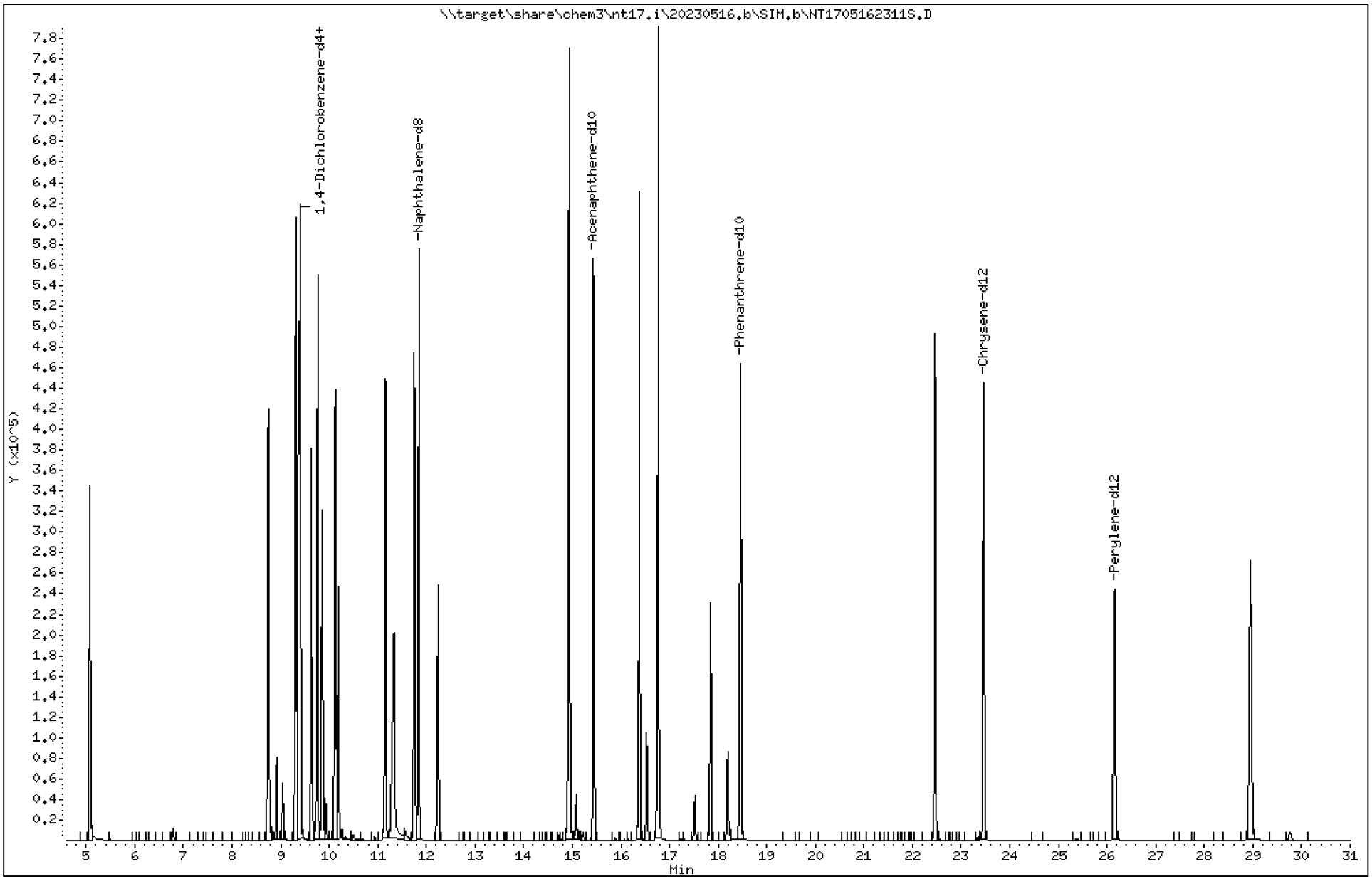
Instrument: nt17.i

Sample Info: SLE0339-SCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

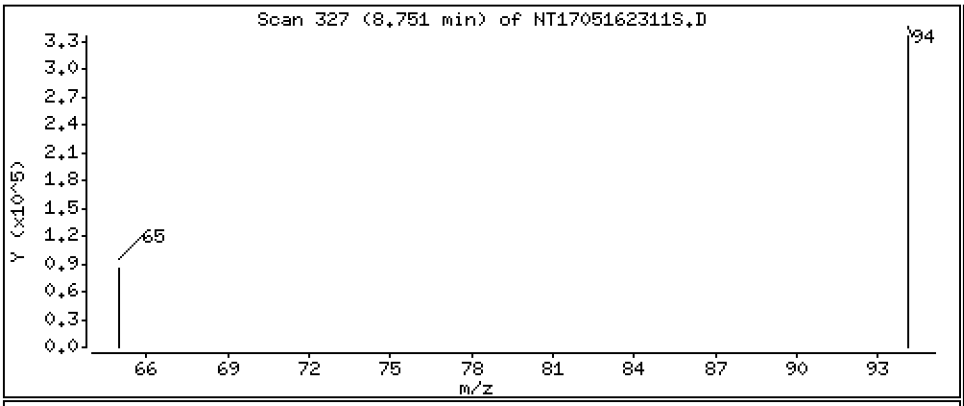
Operator: JGR

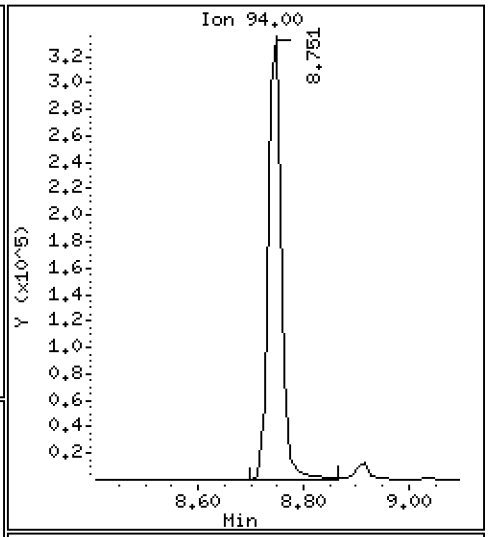
Column phase: ZB-5msi

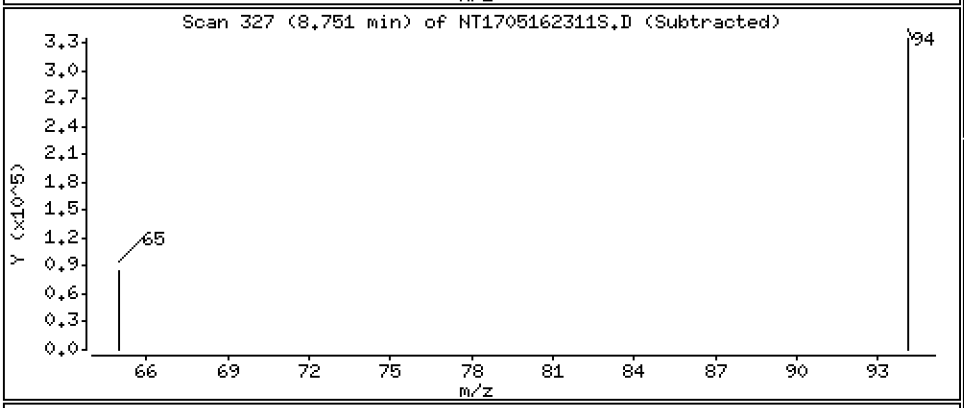
Column diameter: 0.25

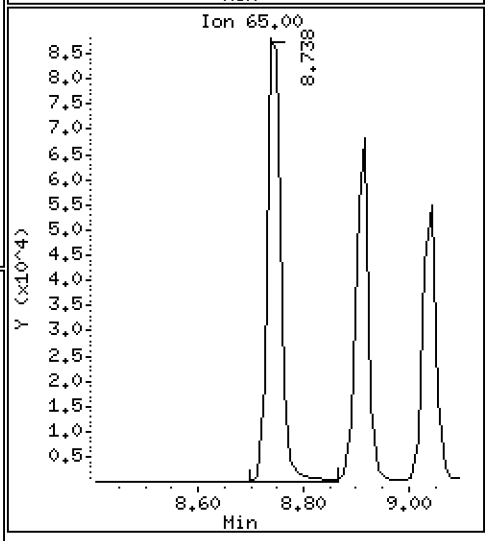
3 Phenol

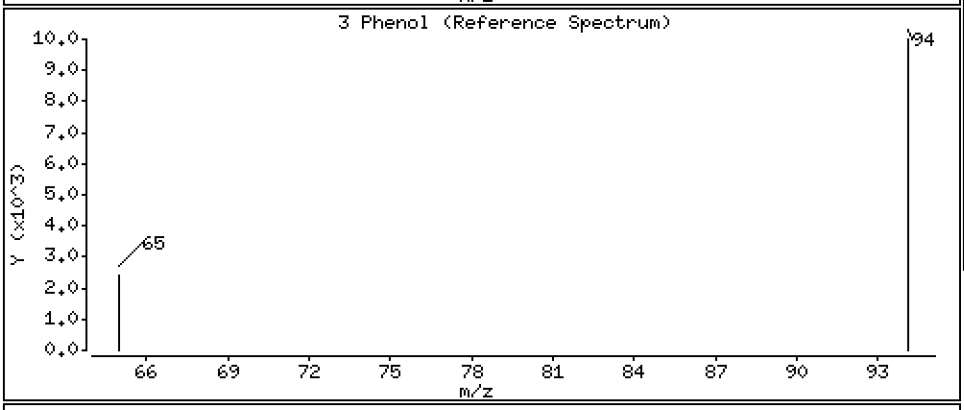
Concentration: 4.884 ug/mL

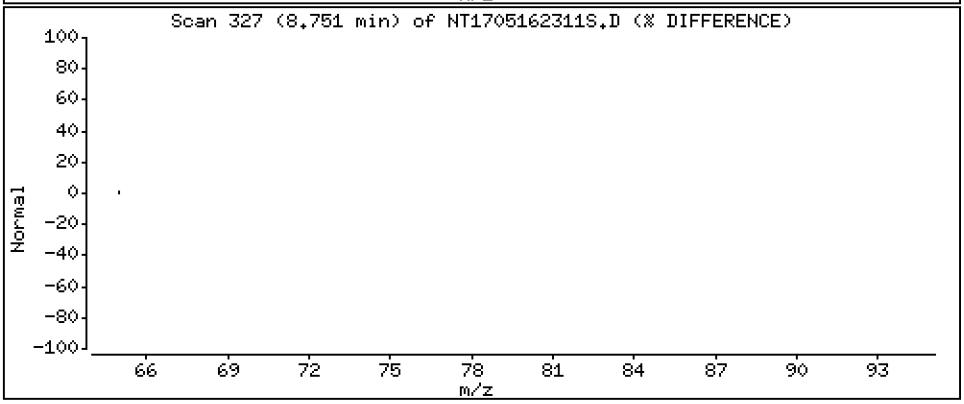












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

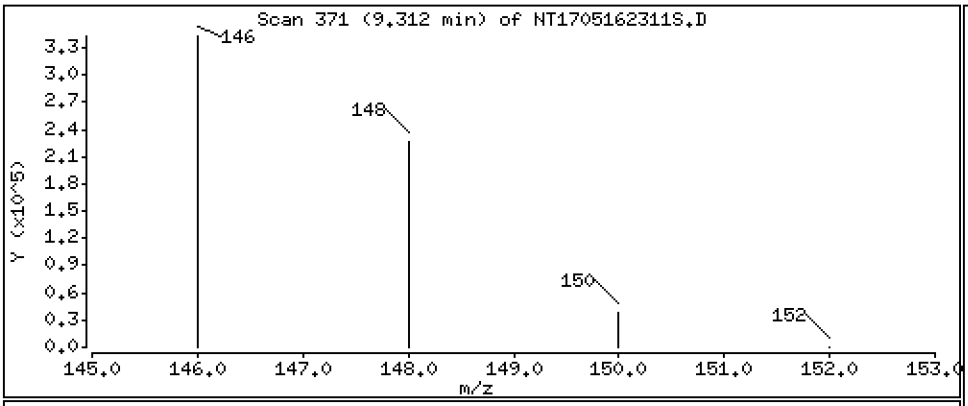
Operator: JGR

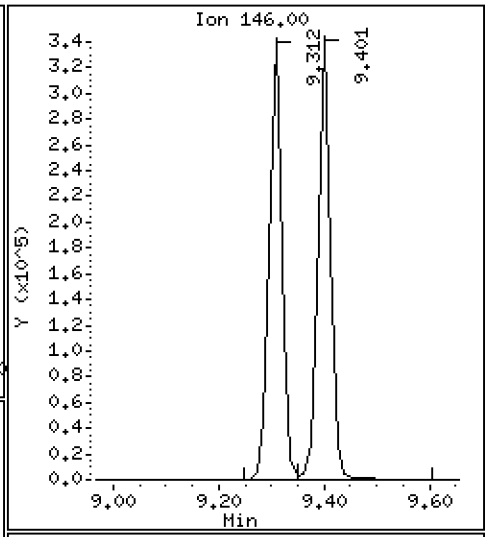
Column phase: ZB-5msi

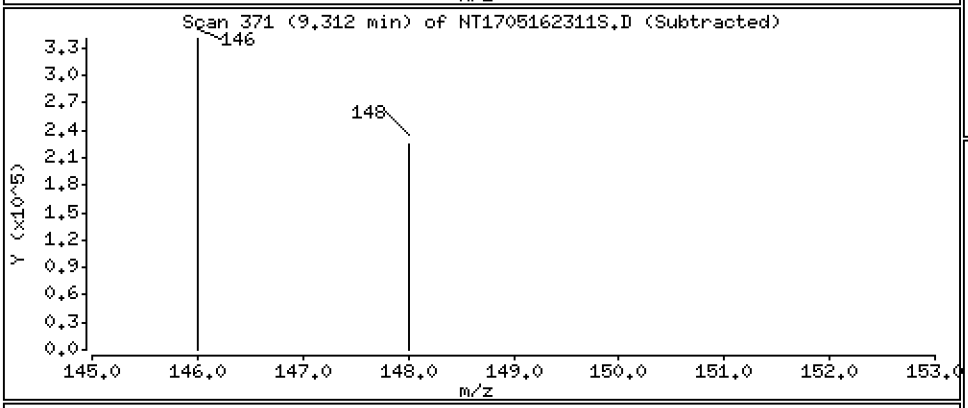
Column diameter: 0.25

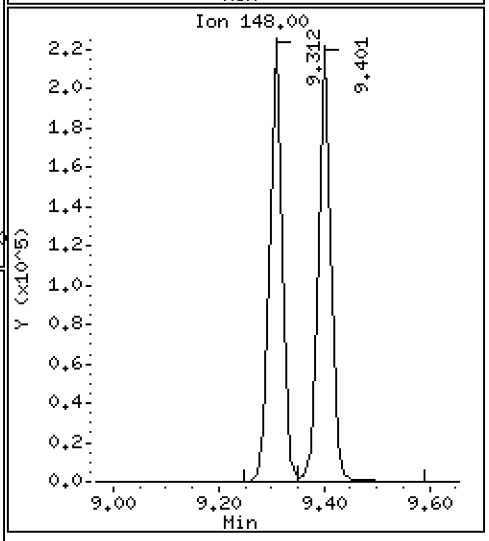
7 1,3-Dichlorobenzene

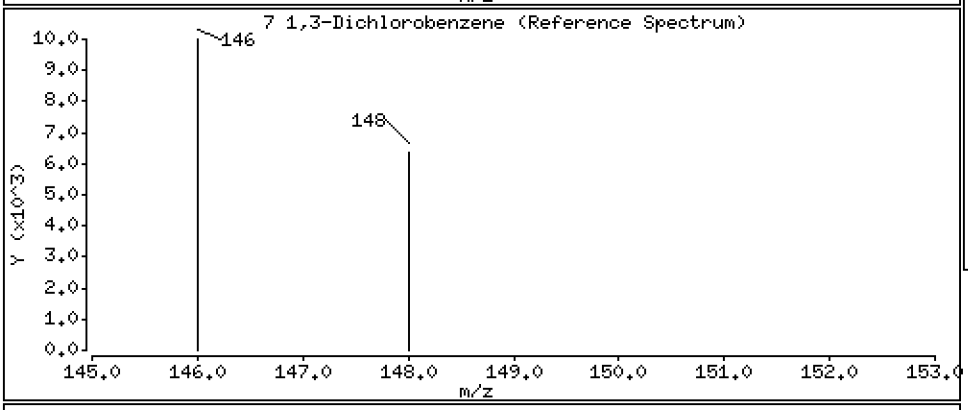
Concentration: 5.087 ug/mL

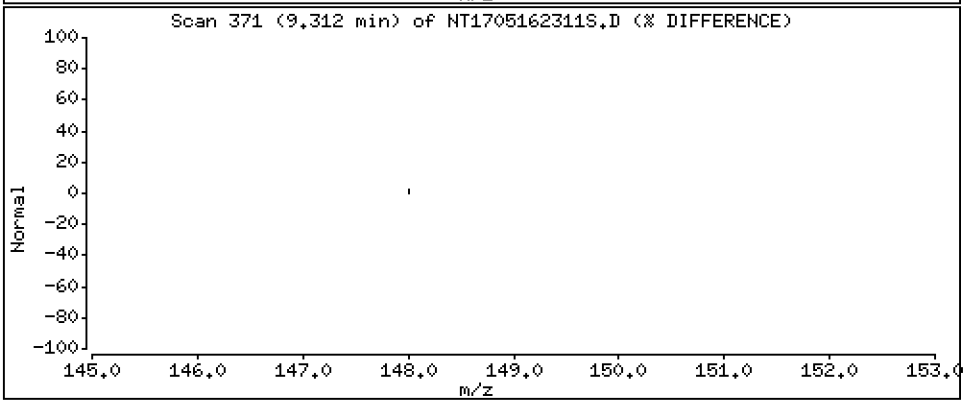












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

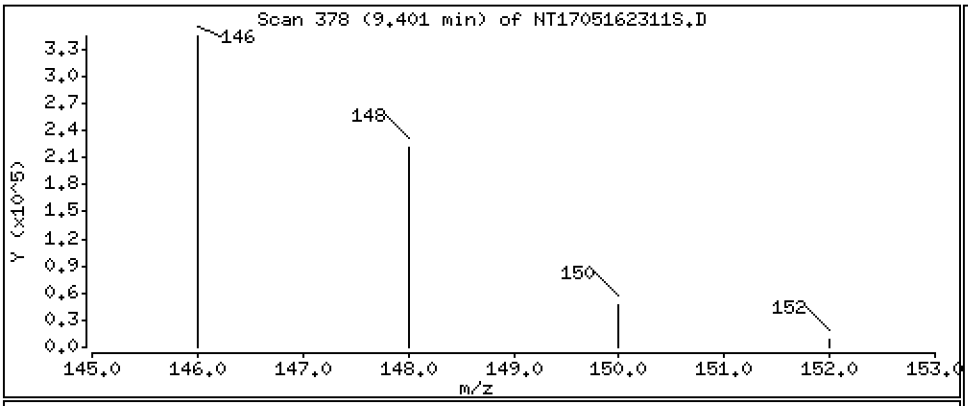
Operator: JGR

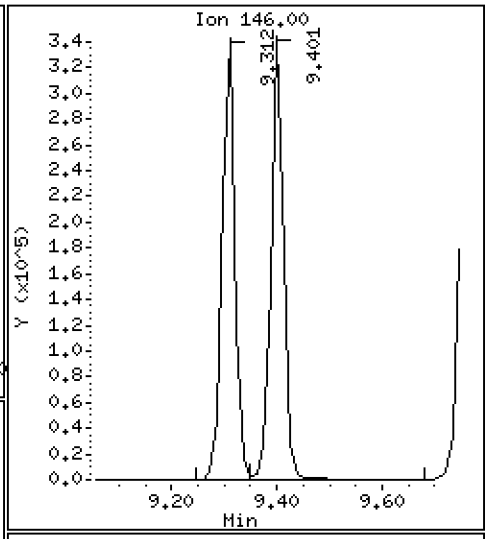
Column phase: ZB-5msi

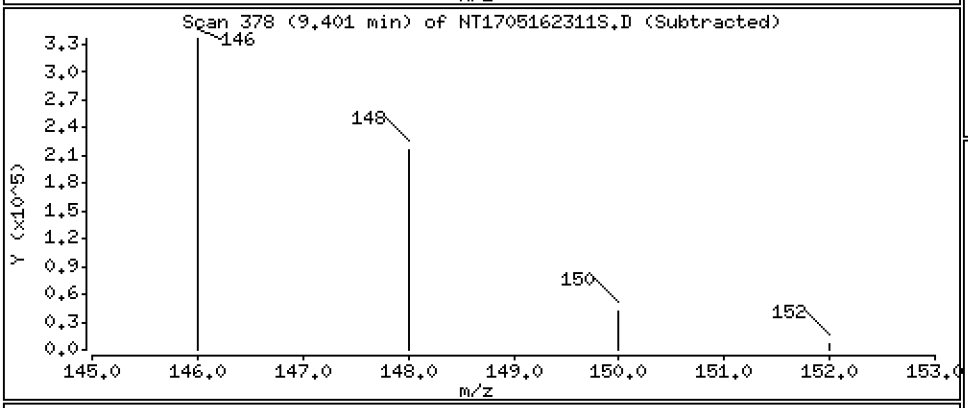
Column diameter: 0.25

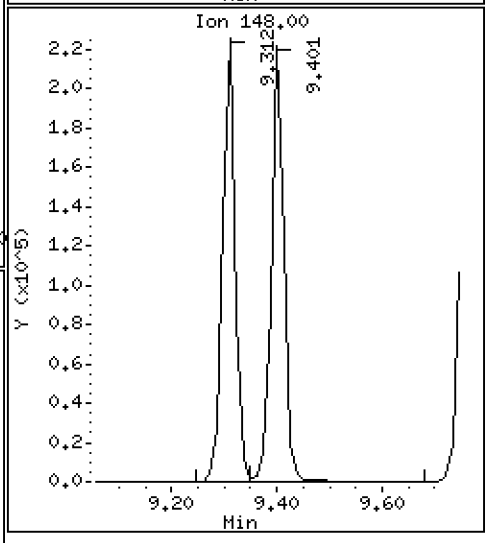
9 1,4-Dichlorobenzene

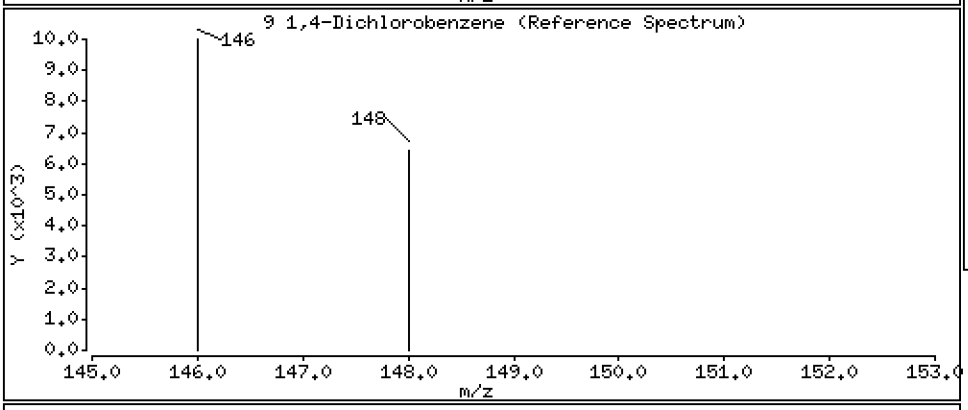
Concentration: 5.132 ug/mL

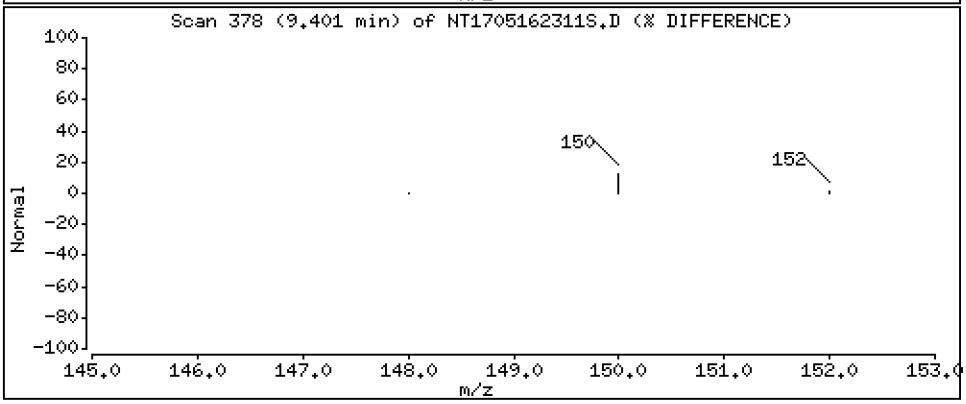












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

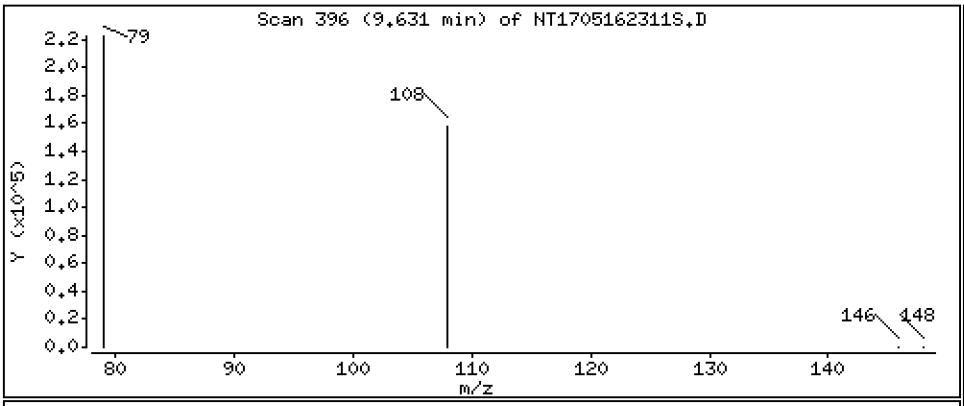
Operator: JGR

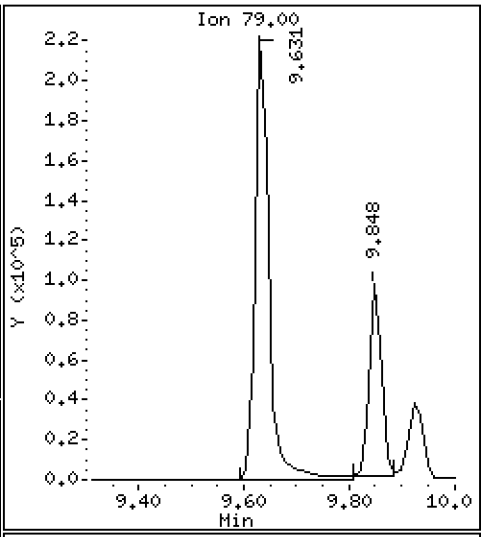
Column phase: ZB-5msi

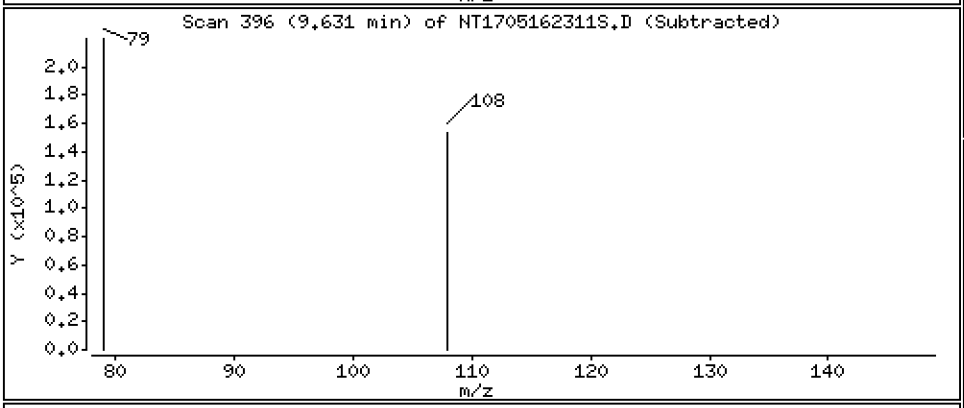
Column diameter: 0.25

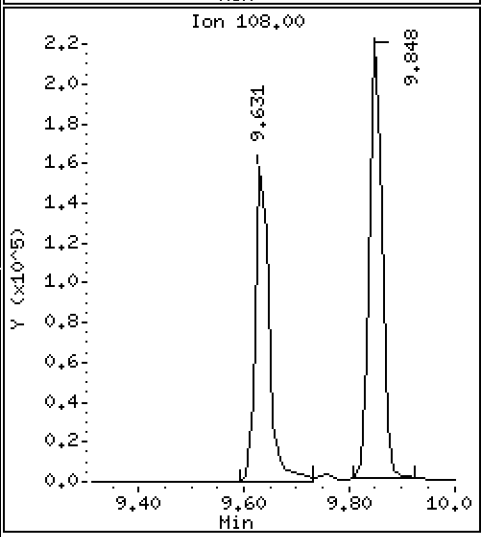
11 Benzyl alcohol

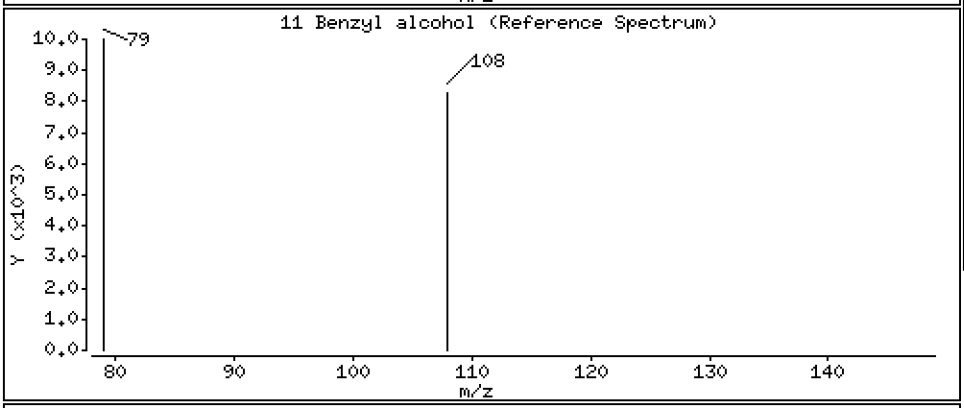
Concentration: 5.706 ug/mL

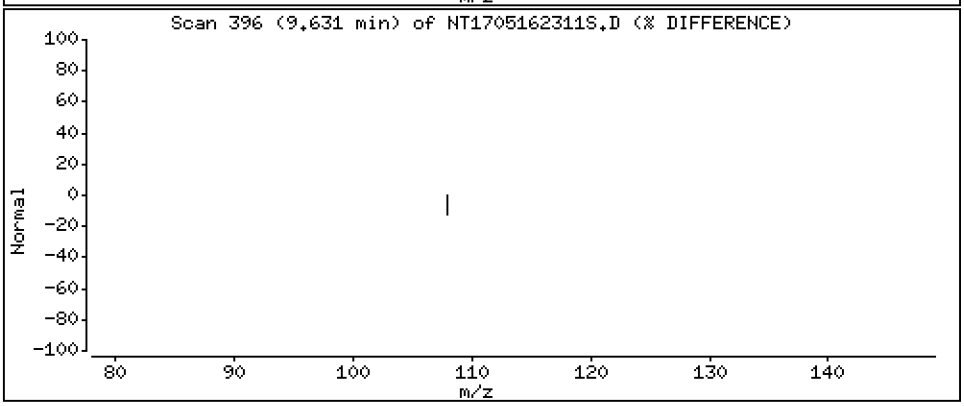












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

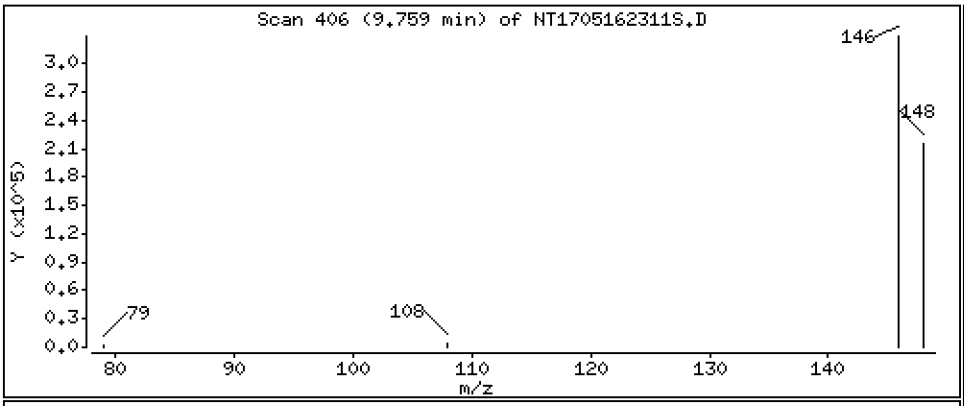
Operator: JGR

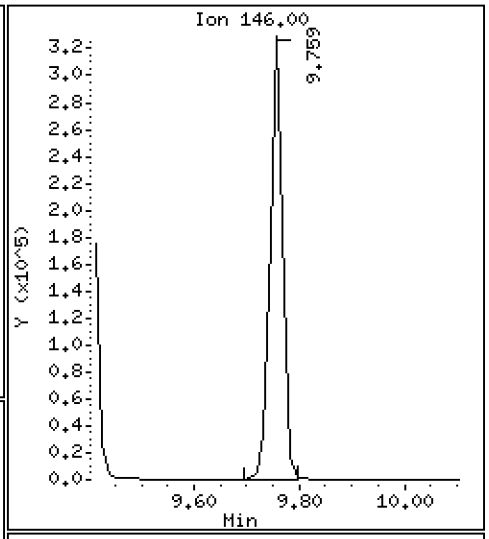
Column phase: ZB-5msi

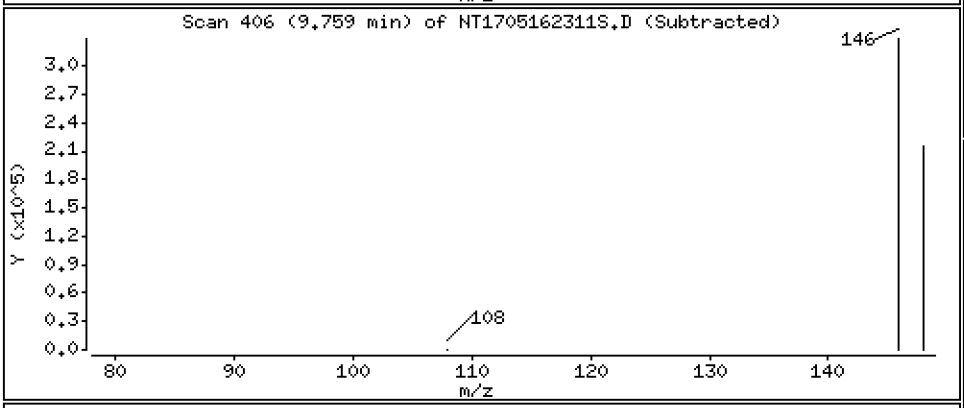
Column diameter: 0.25

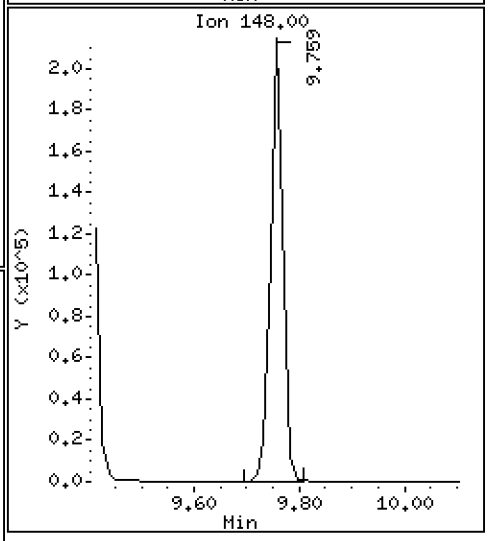
12 1,2-Dichlorobenzene

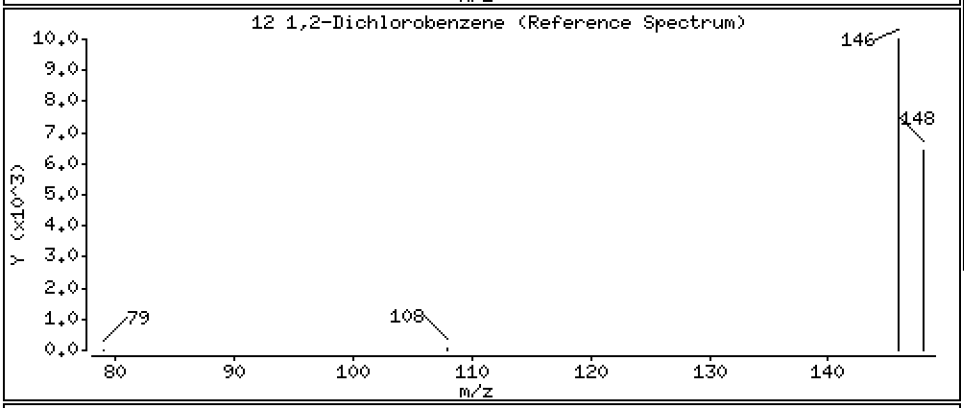
Concentration: 5.007 ug/mL

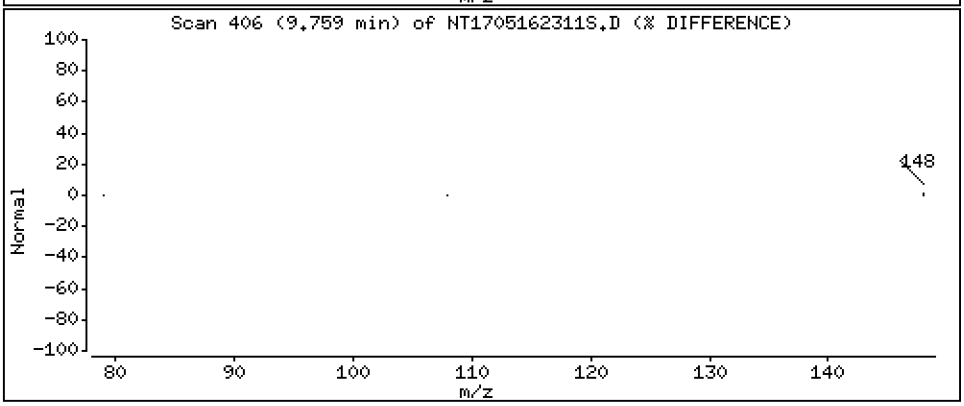












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

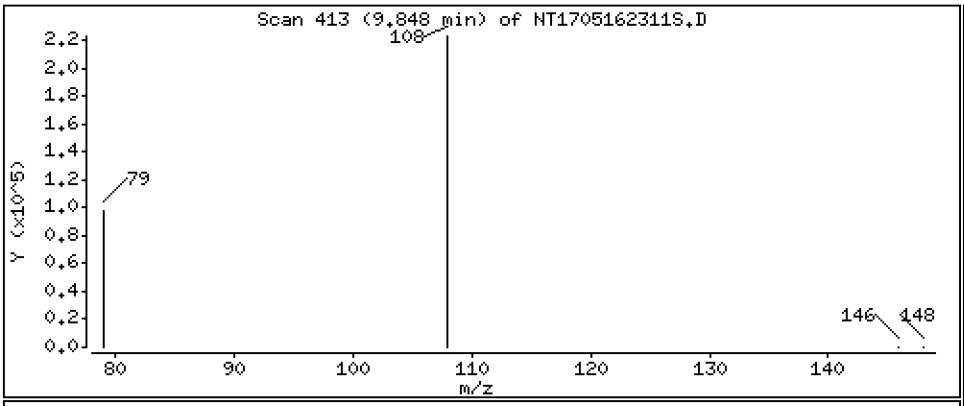
Operator: JGR

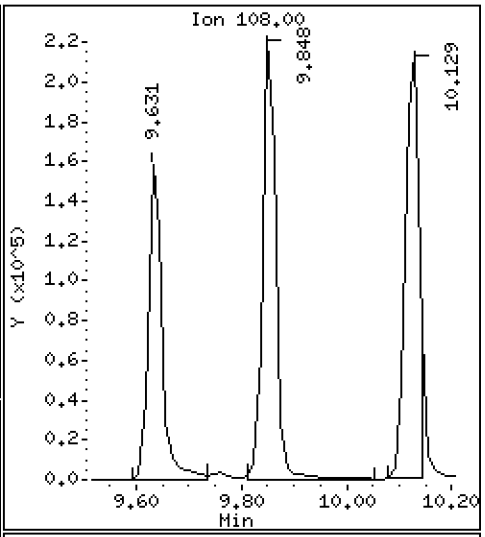
Column phase: ZB-5msi

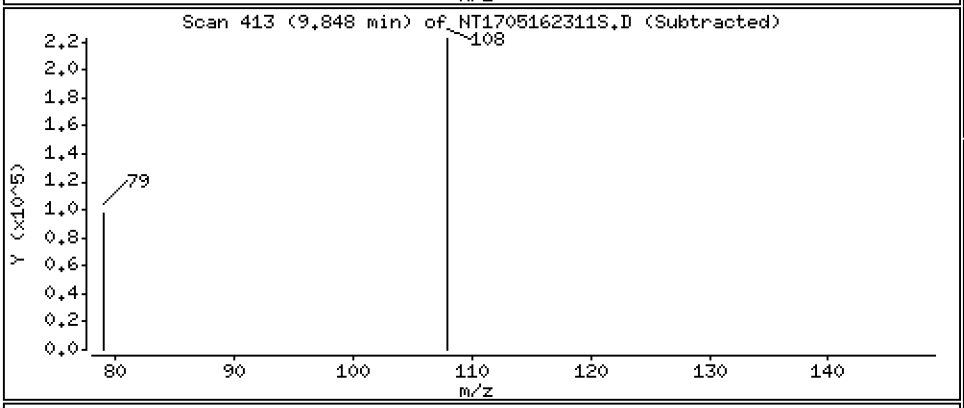
Column diameter: 0.25

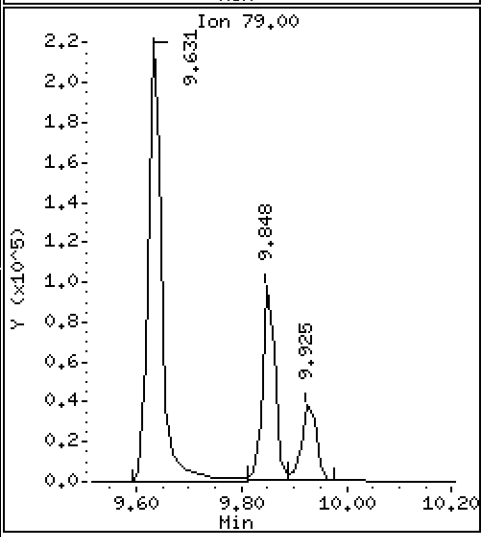
13 2-Methylphenol

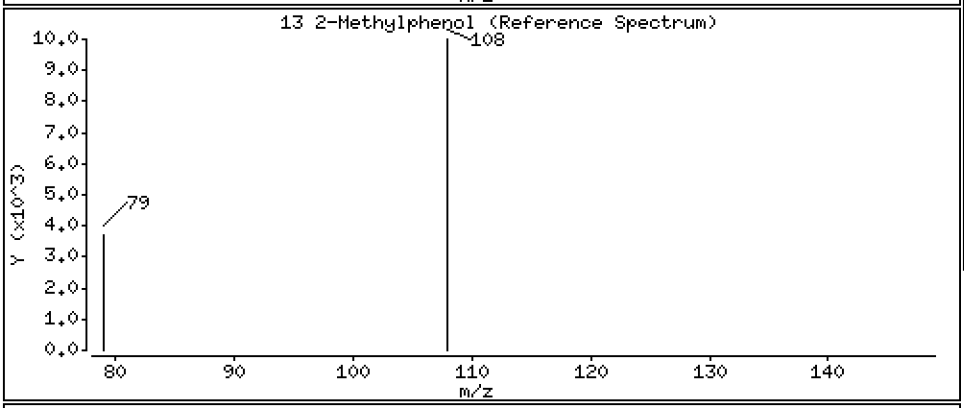
Concentration: 4.408 ug/mL

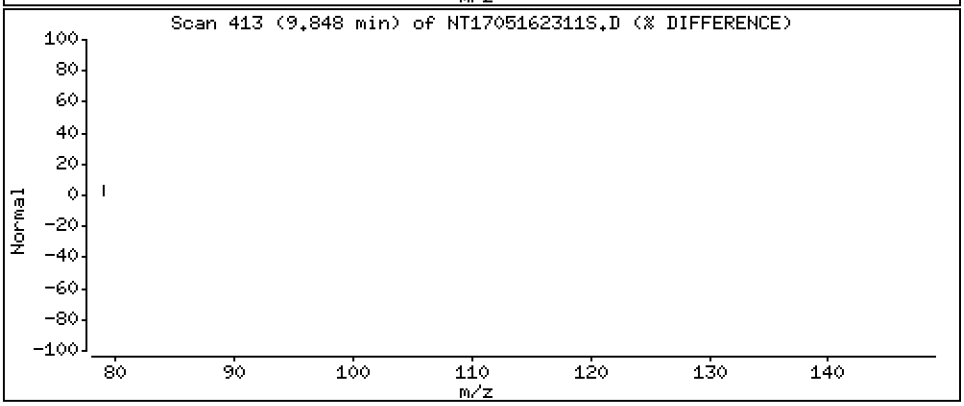












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

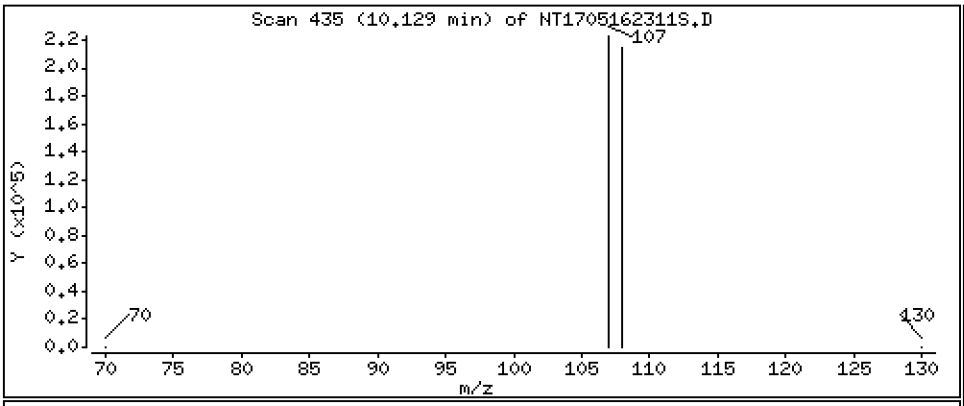
Operator: JGR

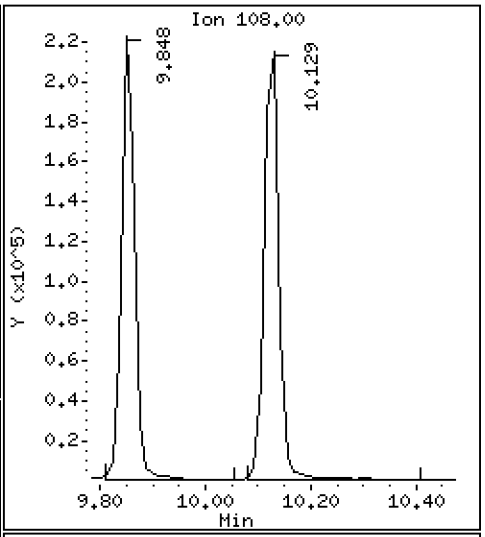
Column phase: ZB-5msi

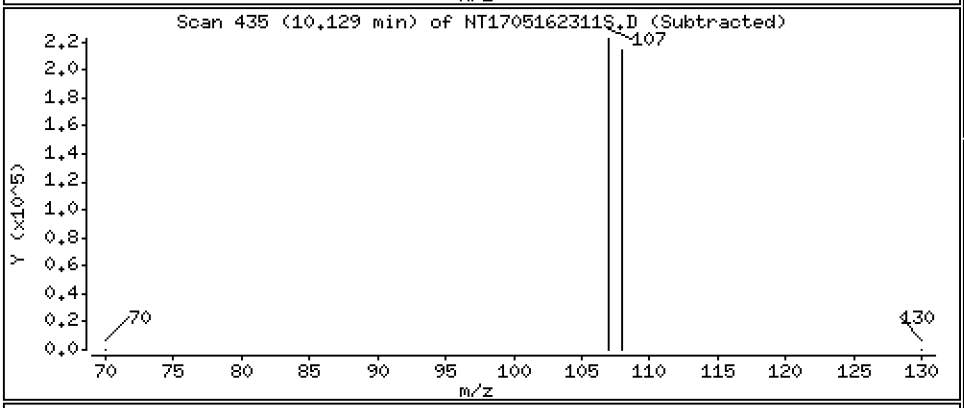
Column diameter: 0.25

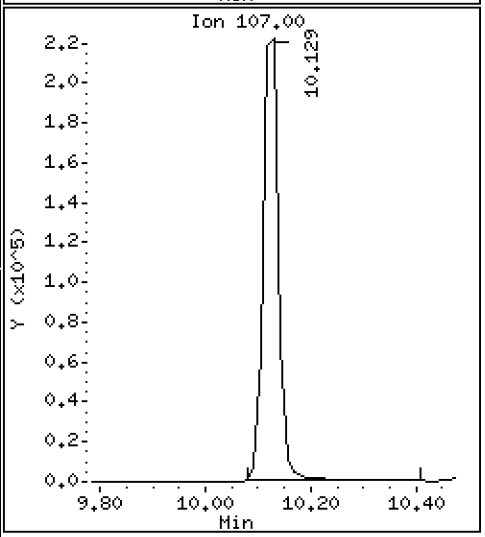
15 4-Methylphenol

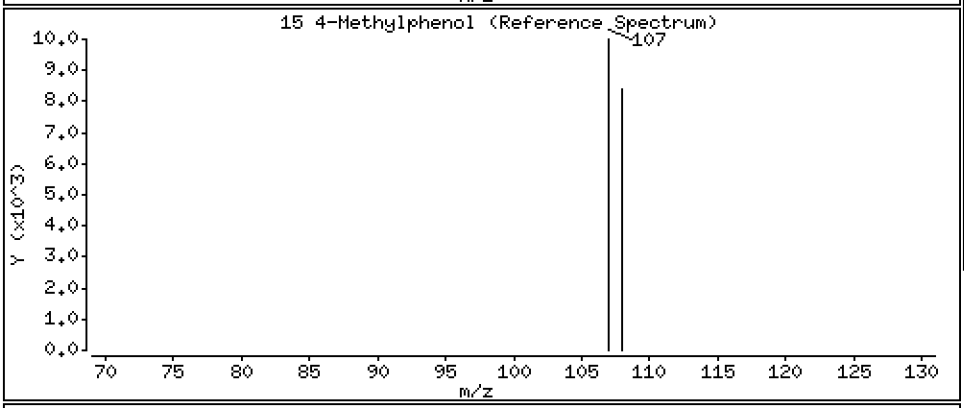
Concentration: 4.788 ug/mL

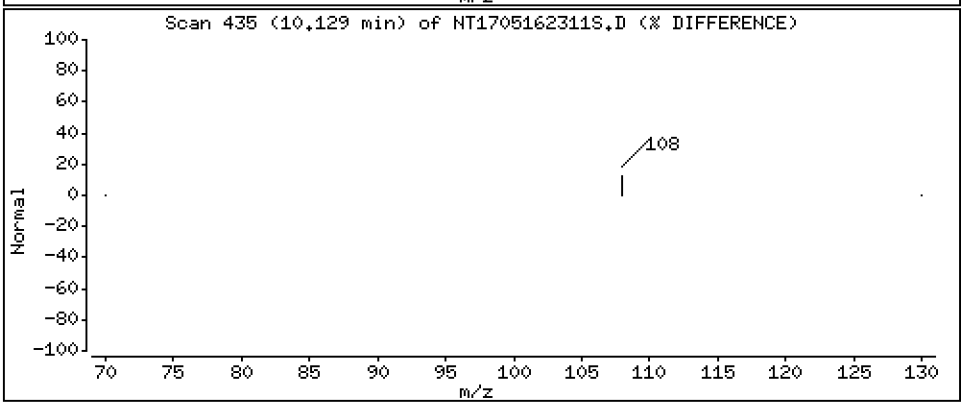












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

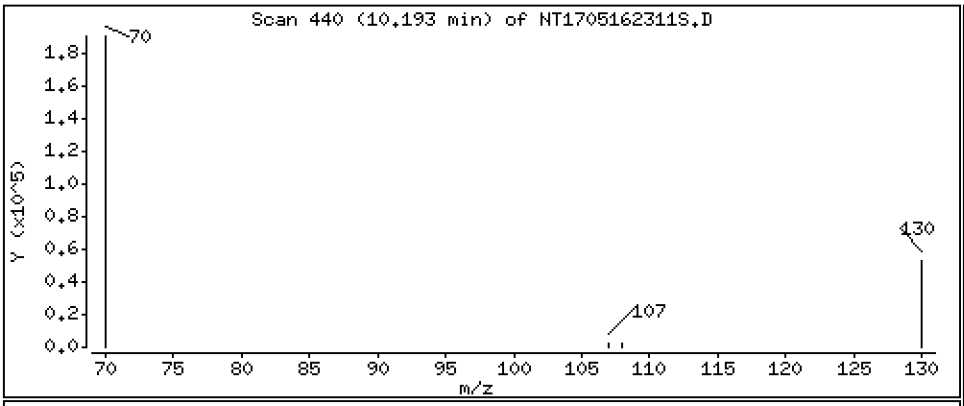
Operator: JGR

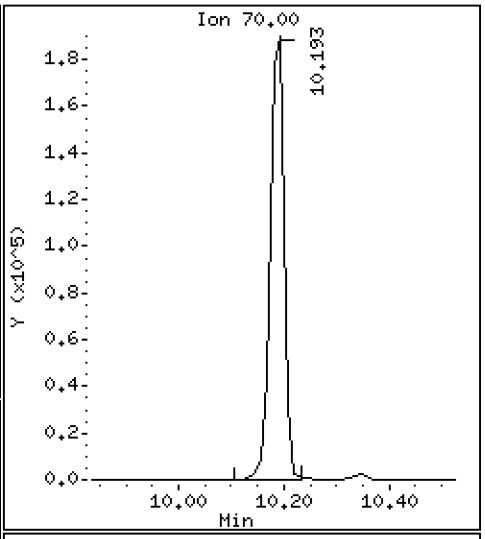
Column phase: ZB-5msi

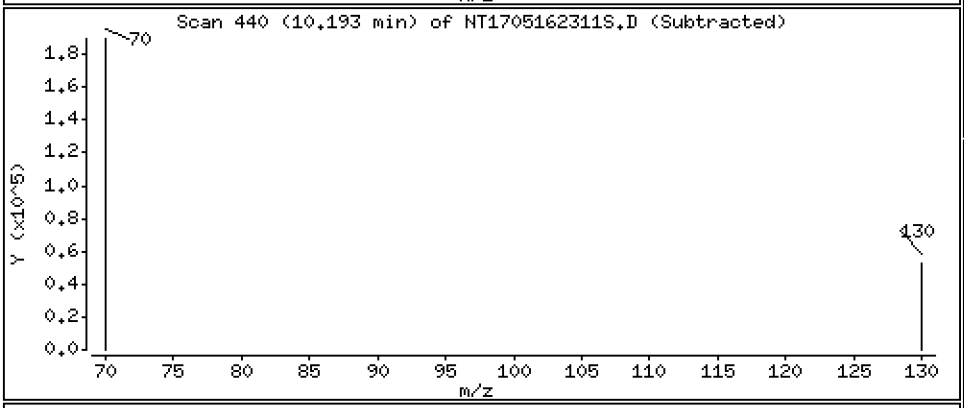
Column diameter: 0.25

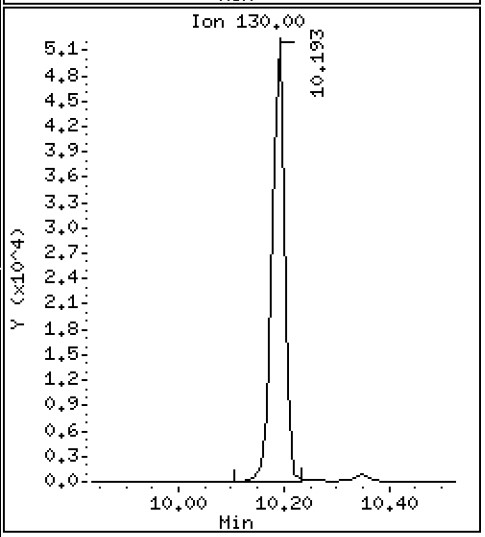
16 N-Nitroso-di-n-propylamine

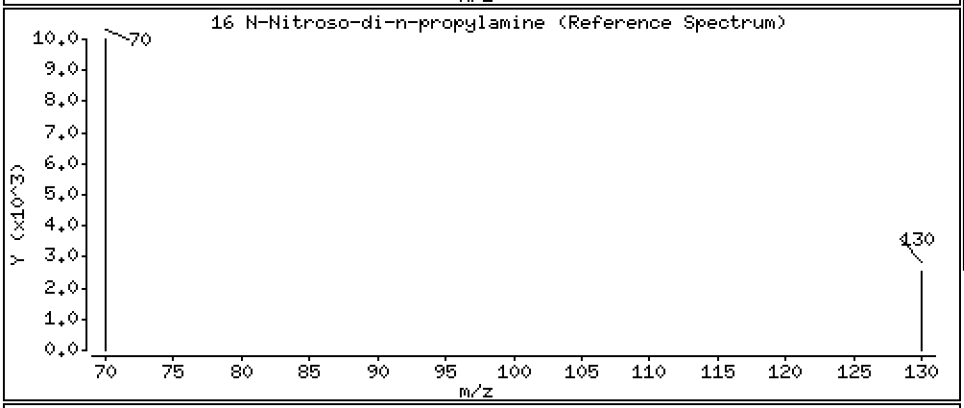
Concentration: 5.479 ug/mL

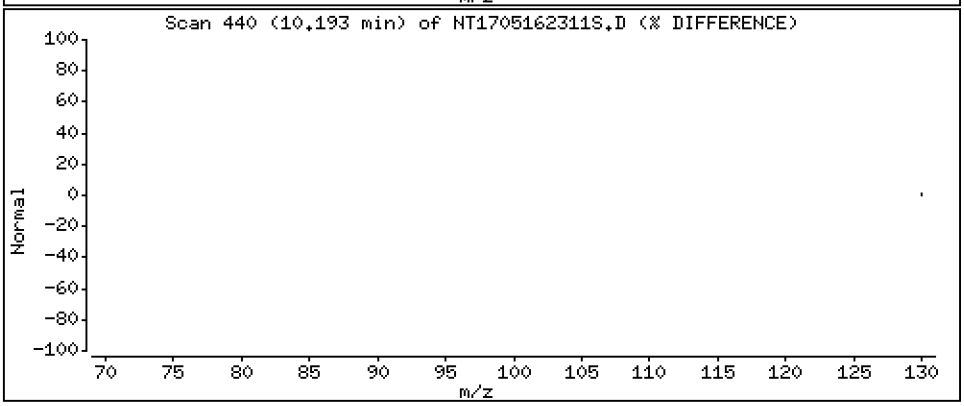












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

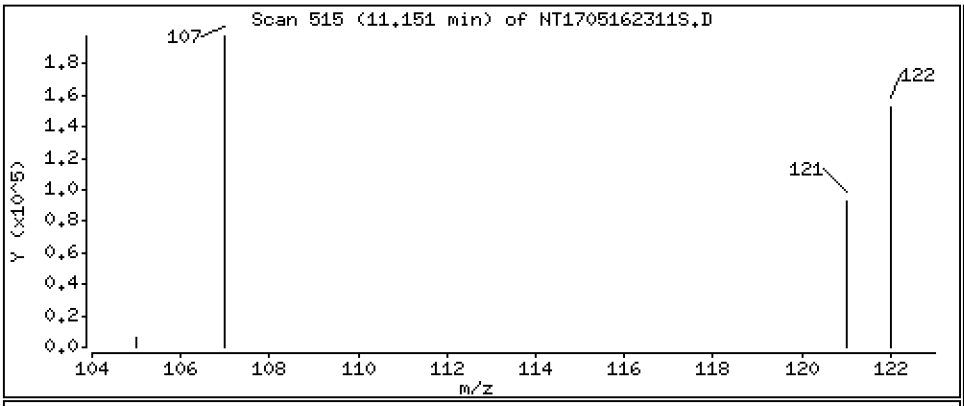
Operator: JGR

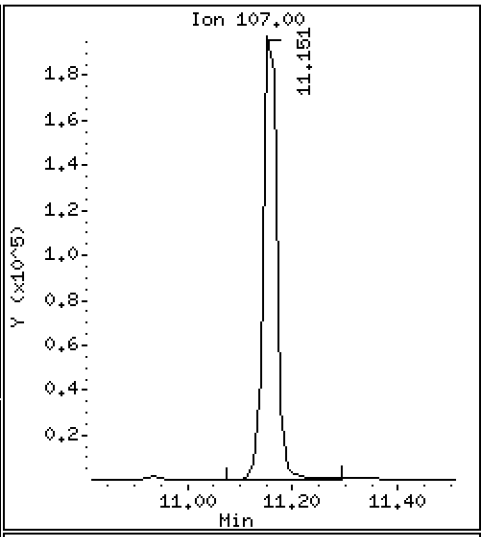
Column phase: ZB-5msi

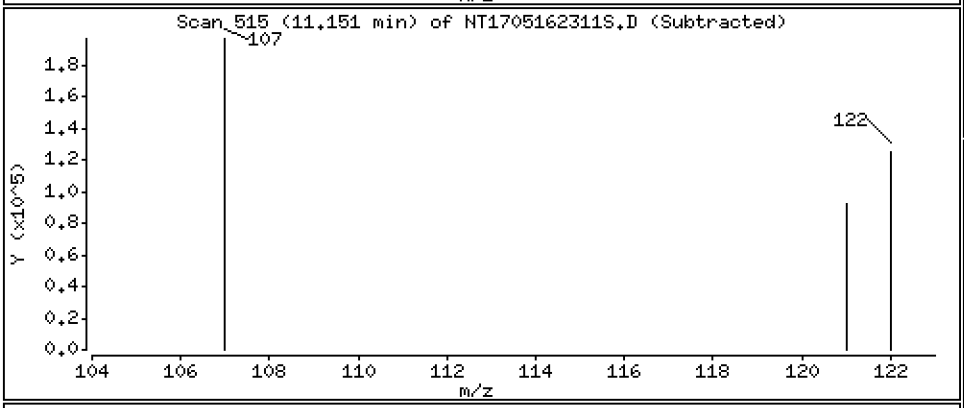
Column diameter: 0.25

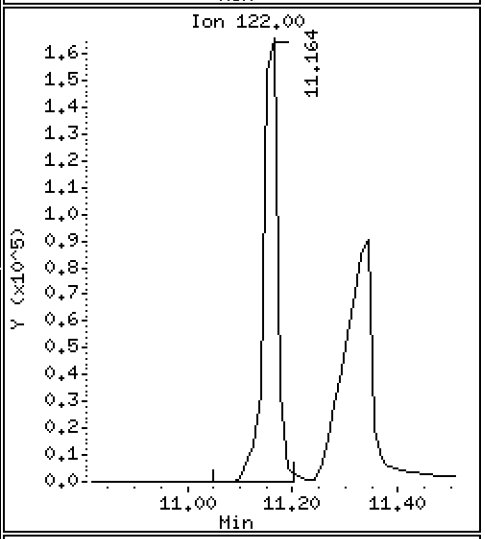
22 2,4-Dimethylphenol

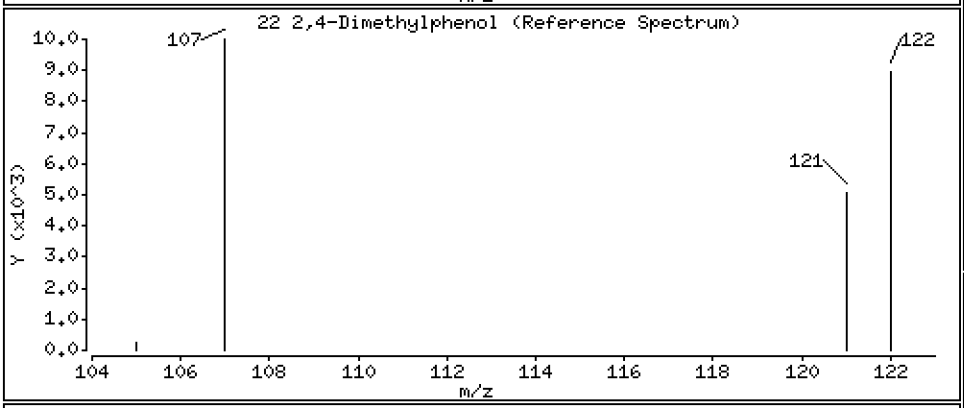
Concentration: 3.816 ug/mL

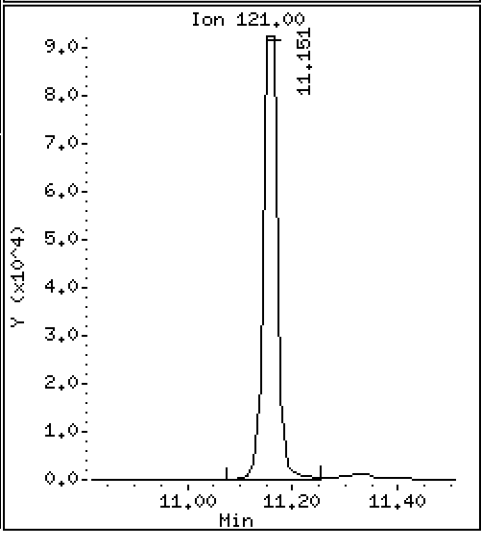


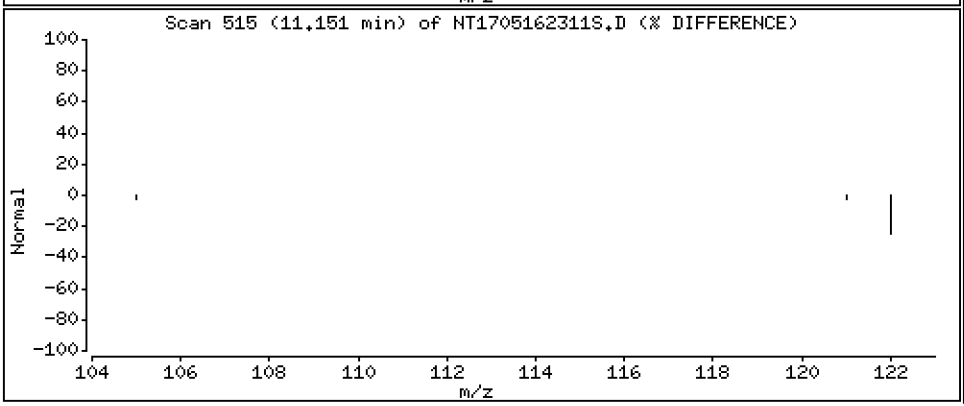












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

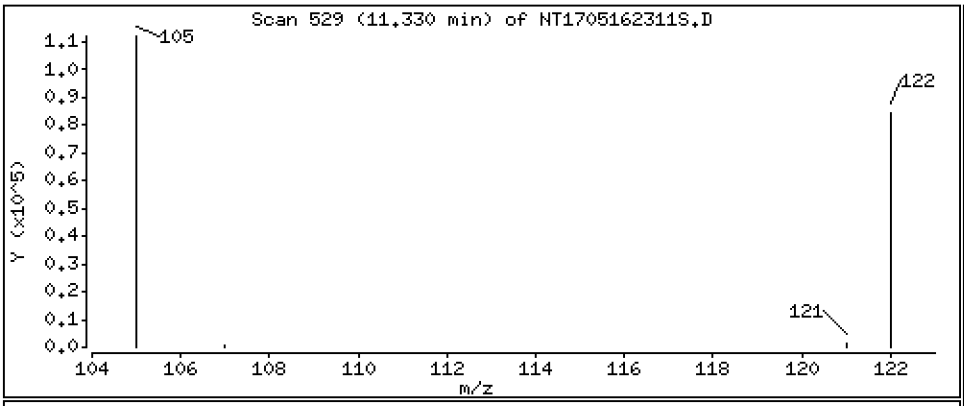
Operator: JGR

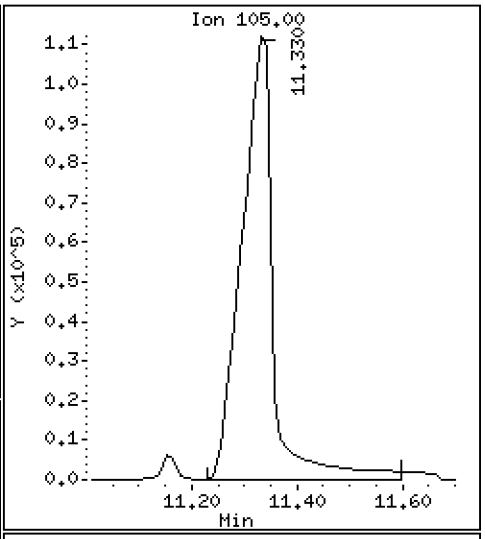
Column phase: ZB-5msi

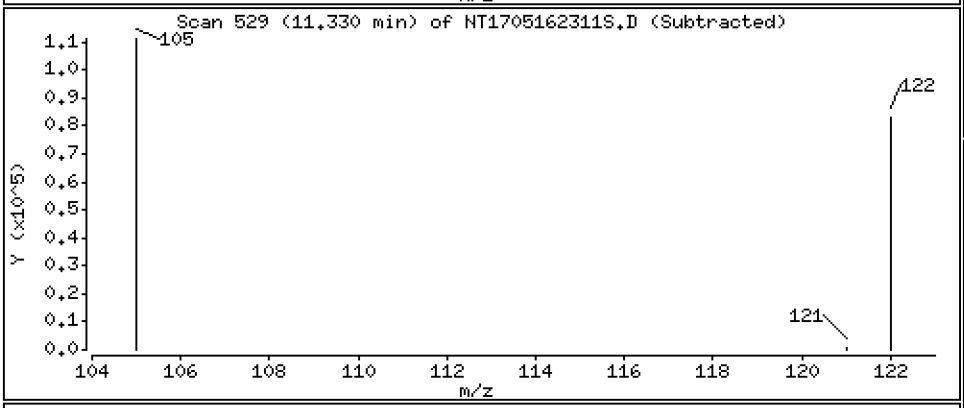
Column diameter: 0.25

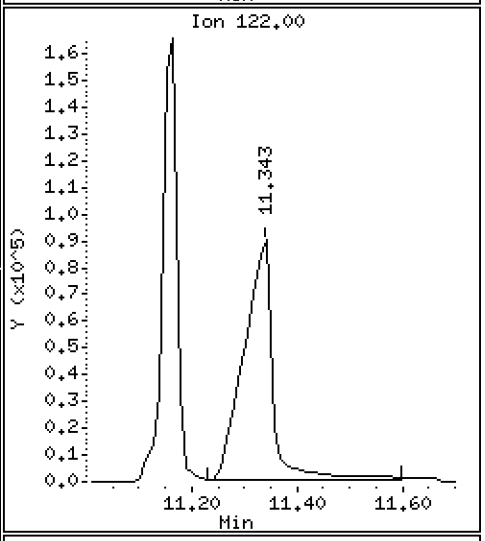
24 Benzoic acid

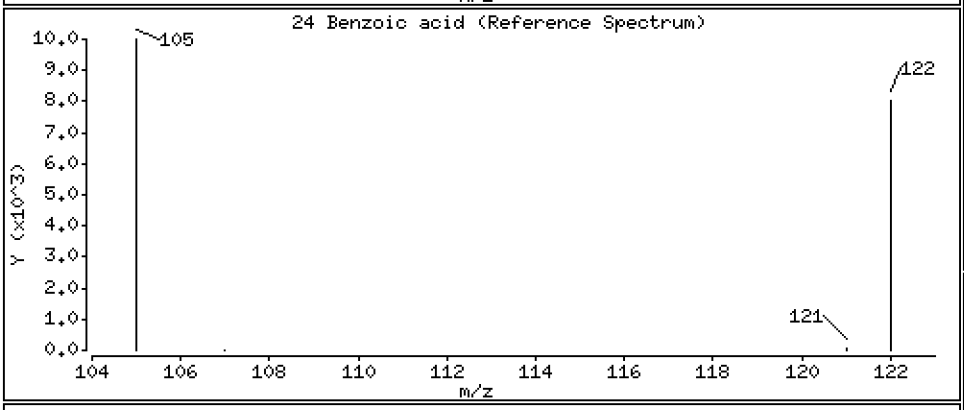
Concentration: 7.777 ug/mL

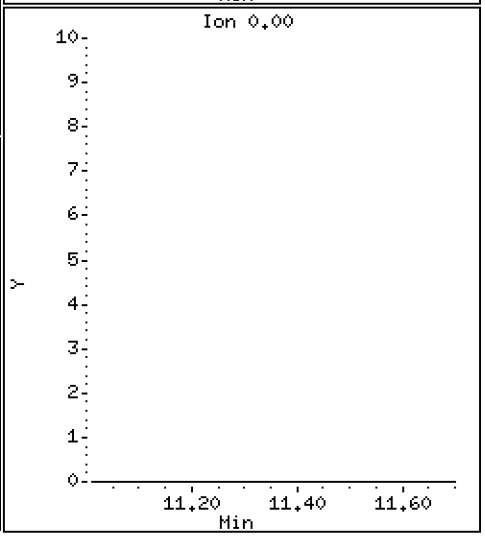


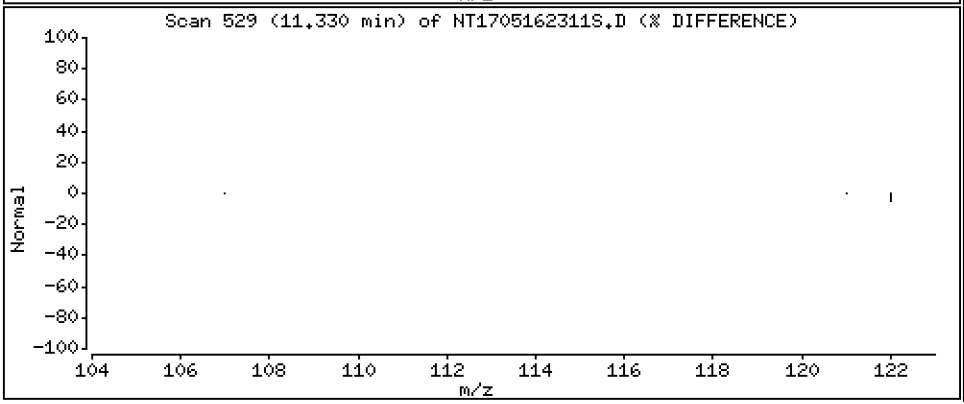












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

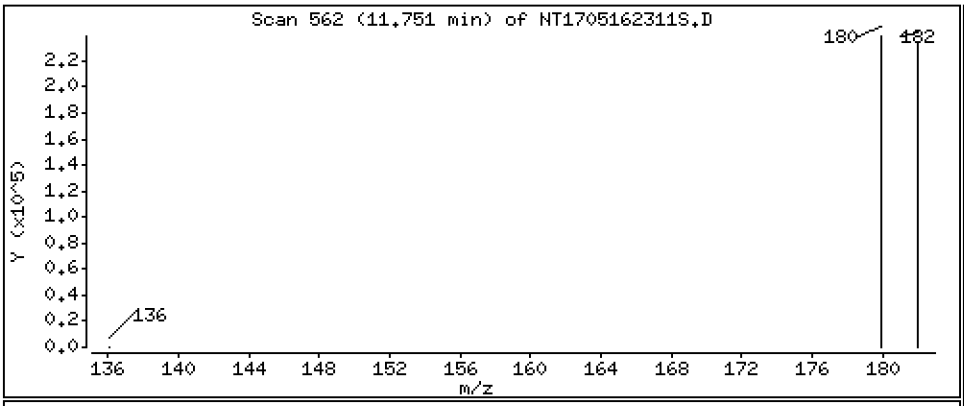
Operator: JGR

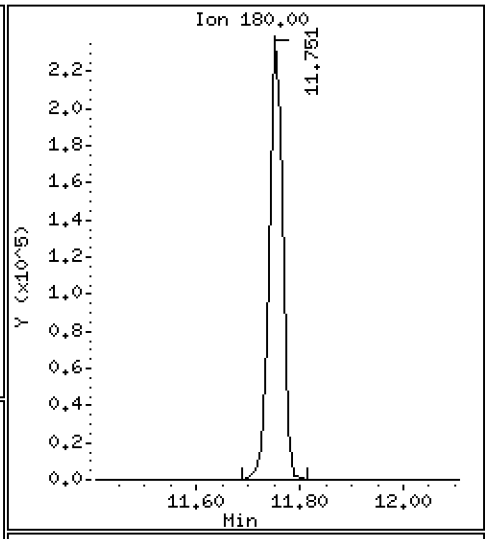
Column phase: ZB-5msi

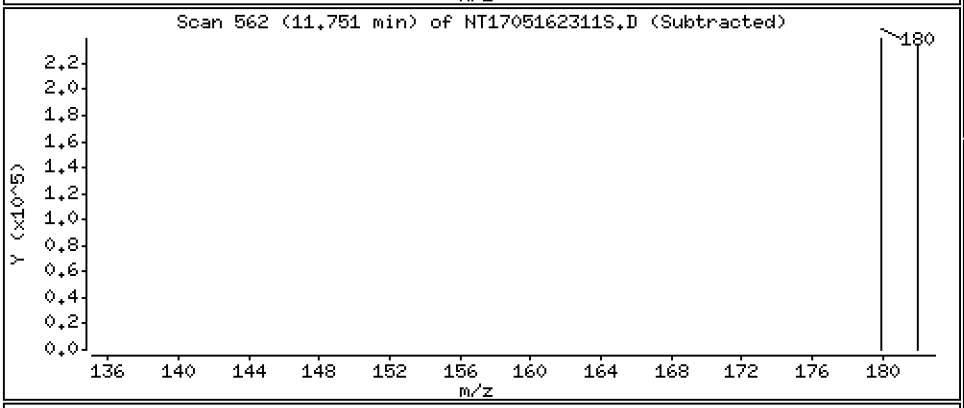
Column diameter: 0.25

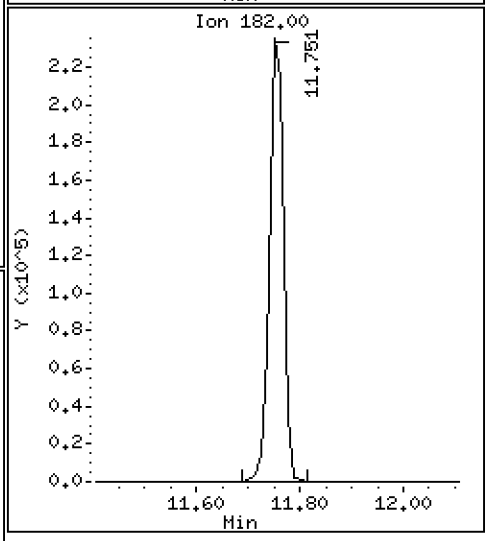
26 1,2,4-Trichlorobenzene

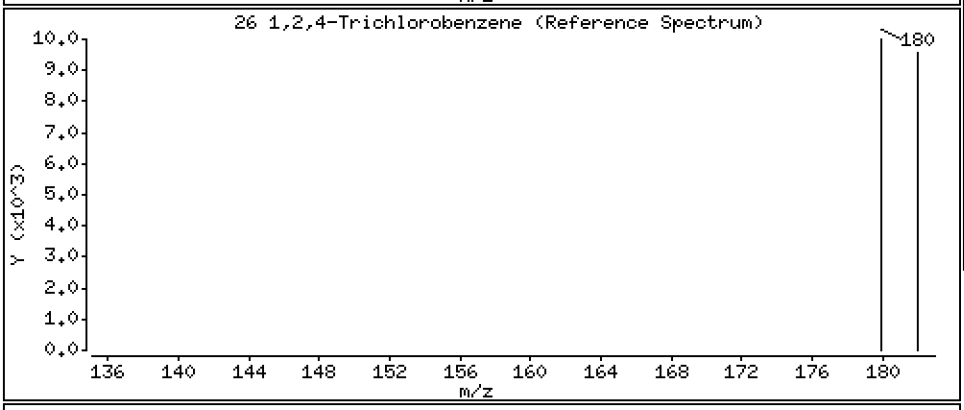
Concentration: 4.906 ug/mL

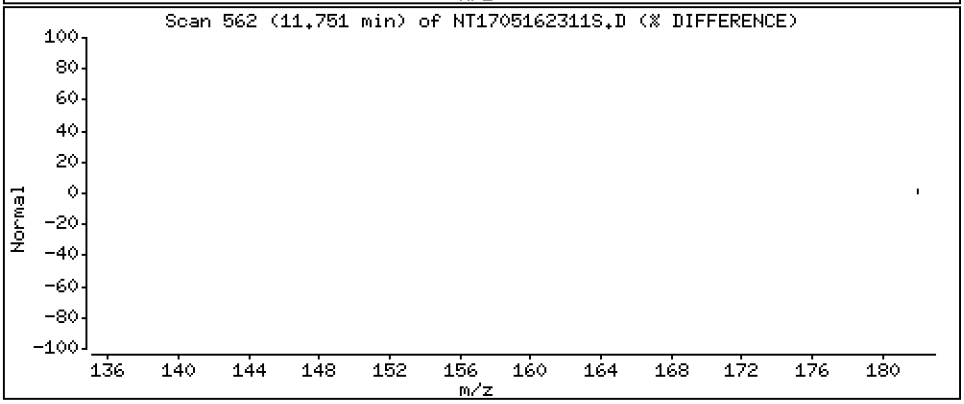












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

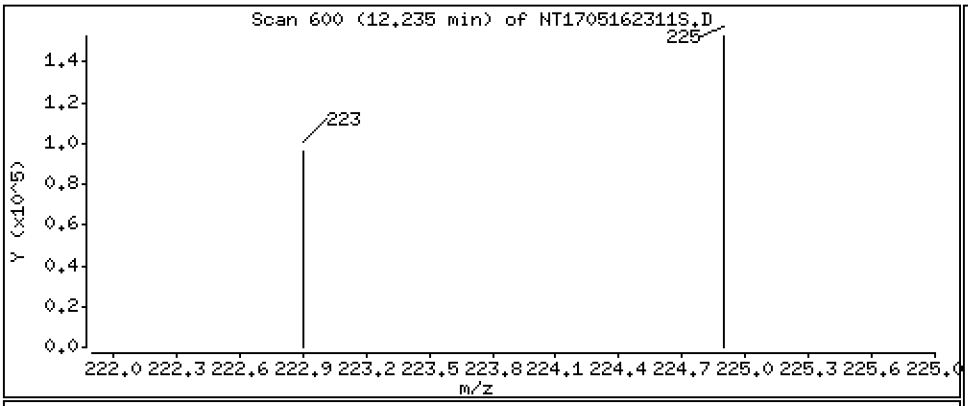
Operator: JGR

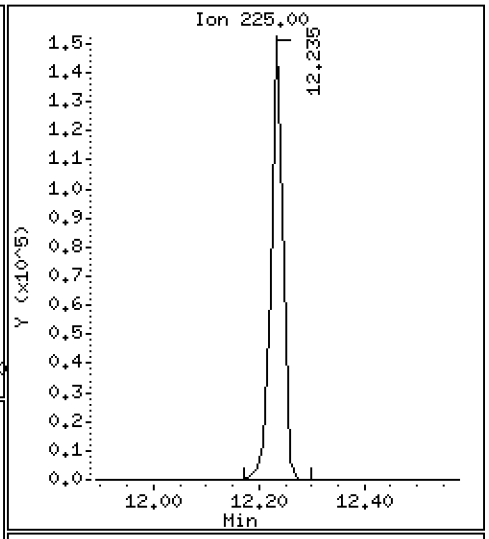
Column phase: ZB-5msi

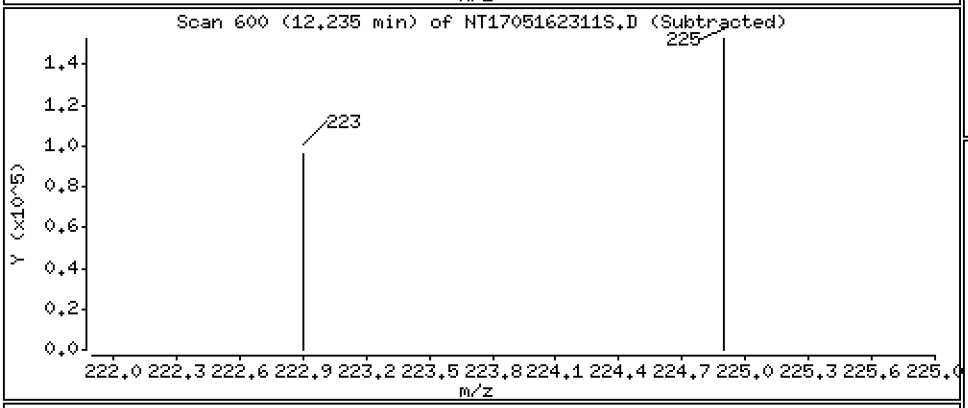
Column diameter: 0.25

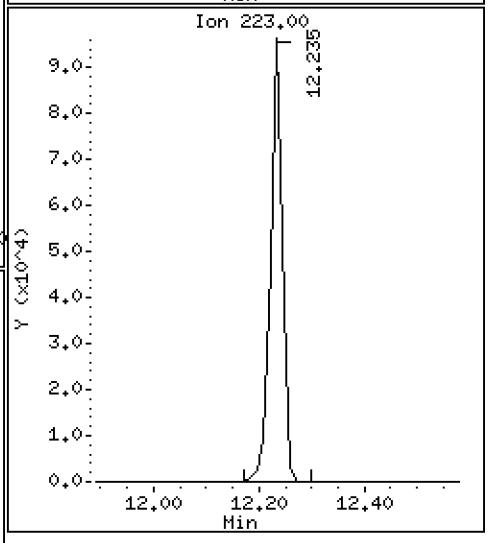
30 Hexachlorobutadiene

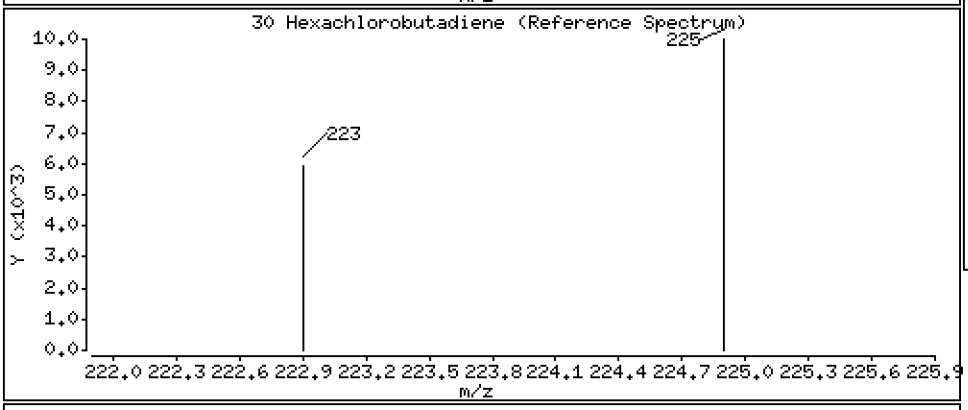
Concentration: 5.201 ug/mL

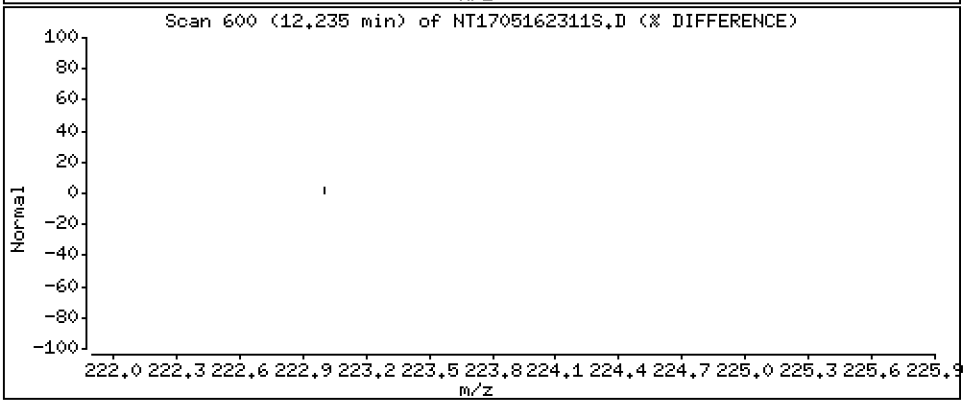












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

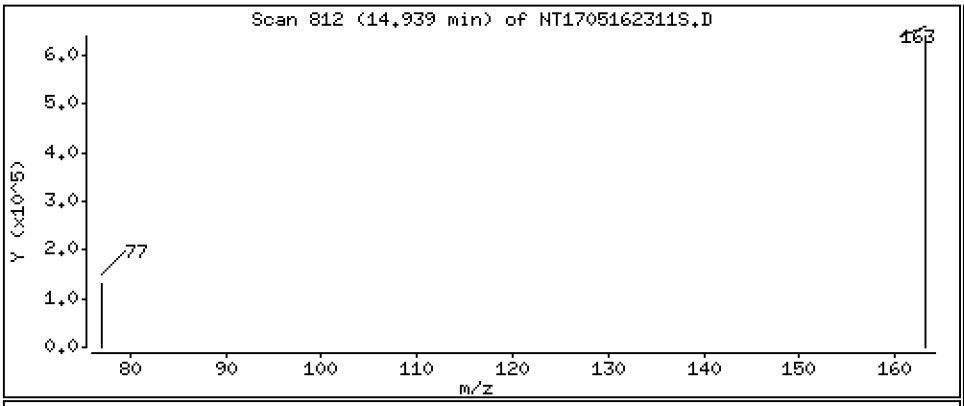
Operator: JGR

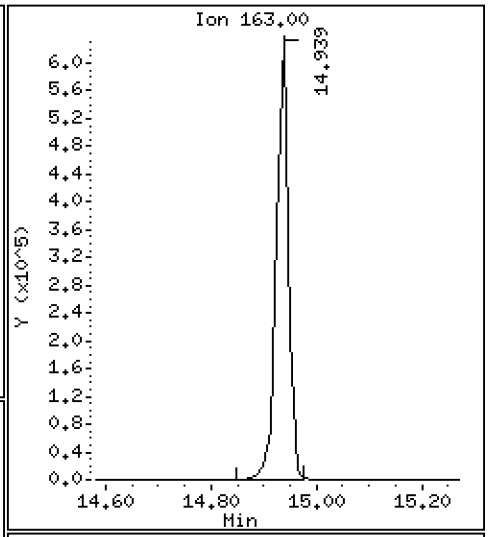
Column phase: ZB-5msi

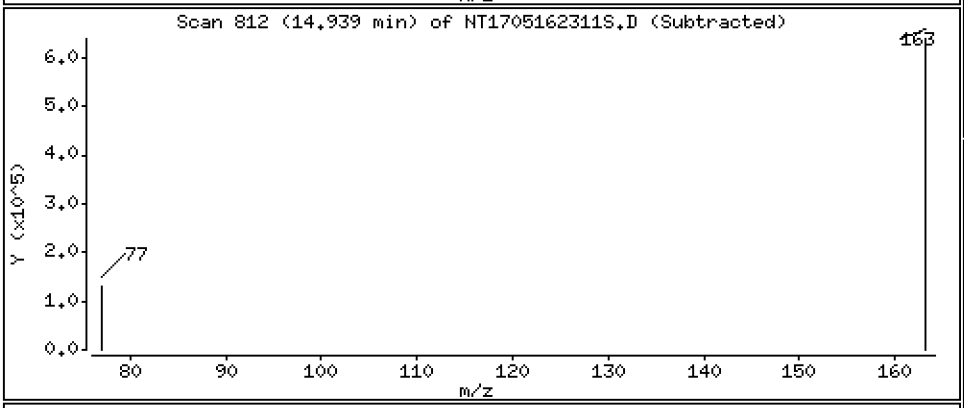
Column diameter: 0.25

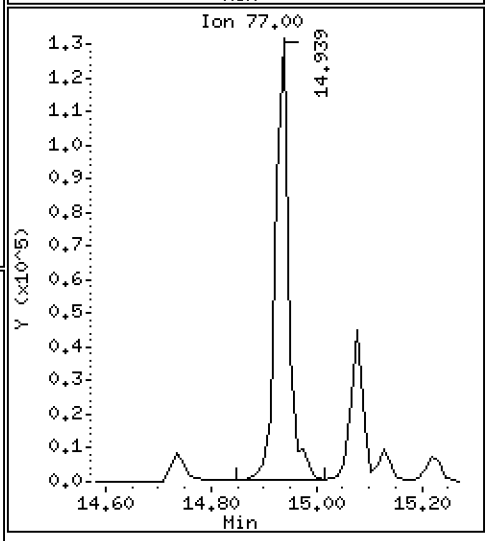
39 Dimethylphthalate

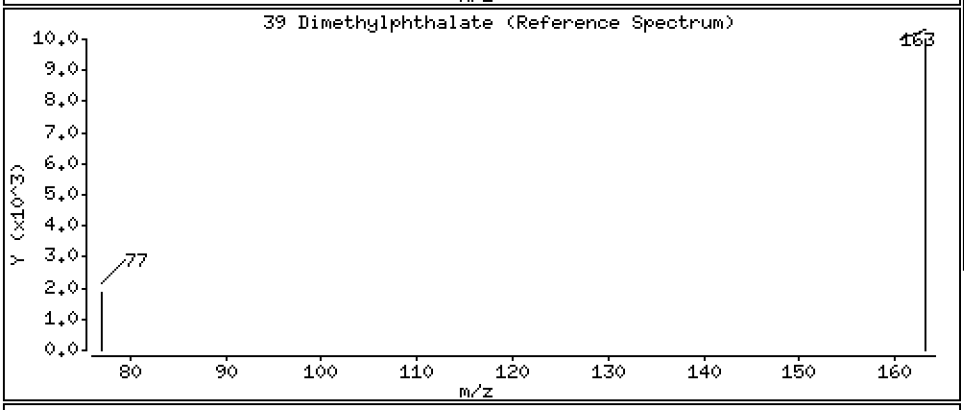
Concentration: 5.240 ug/mL

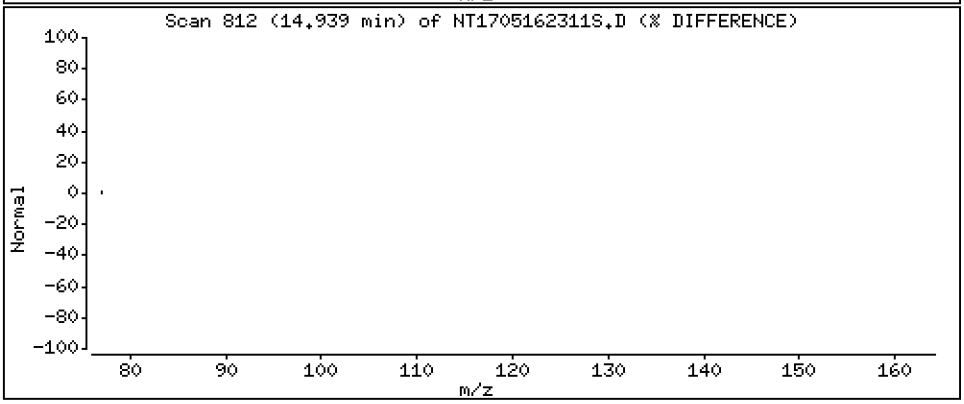












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

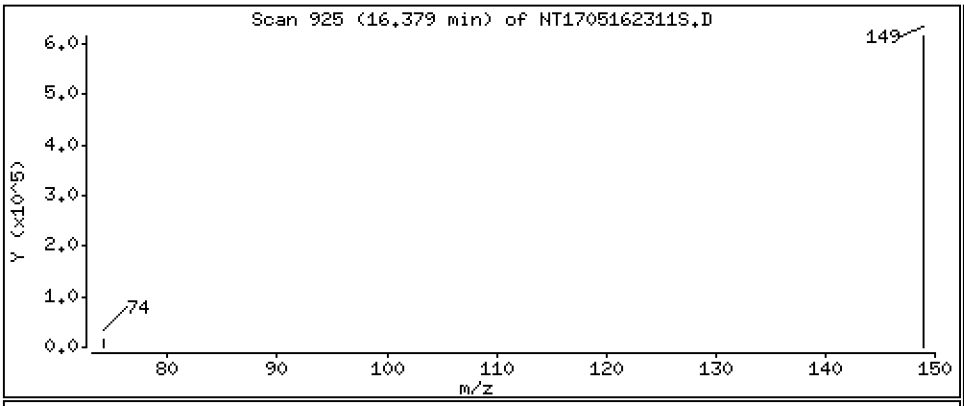
Operator: JGR

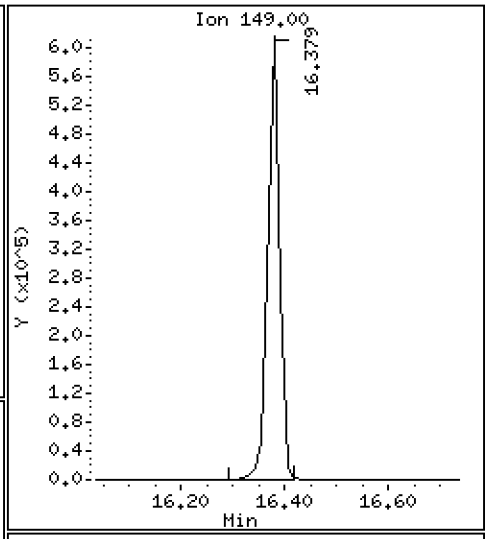
Column phase: ZB-5msi

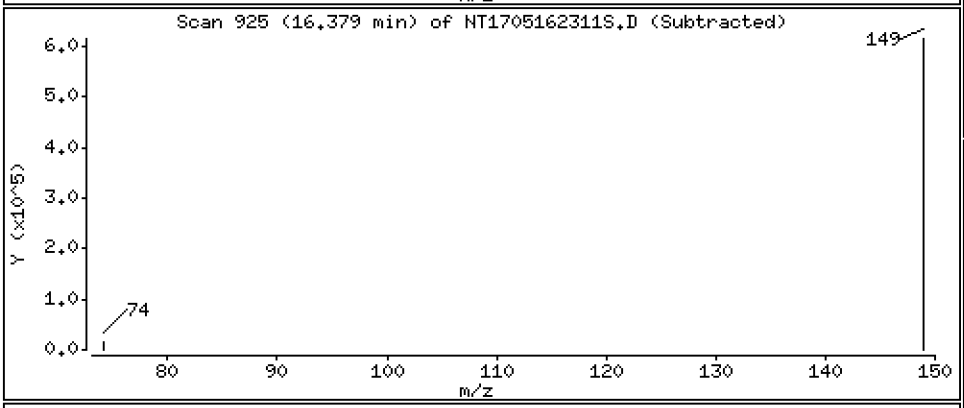
Column diameter: 0.25

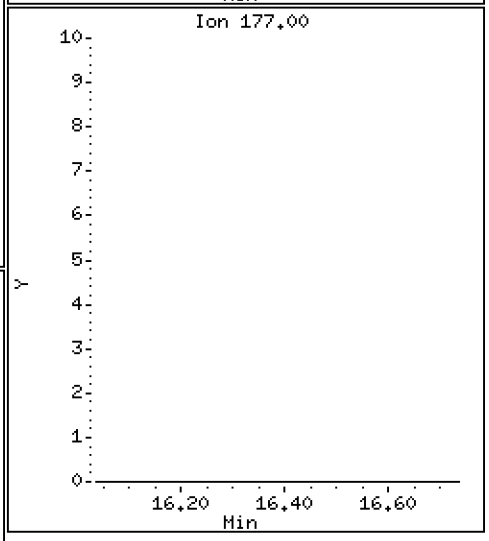
50 Diethylphthalate

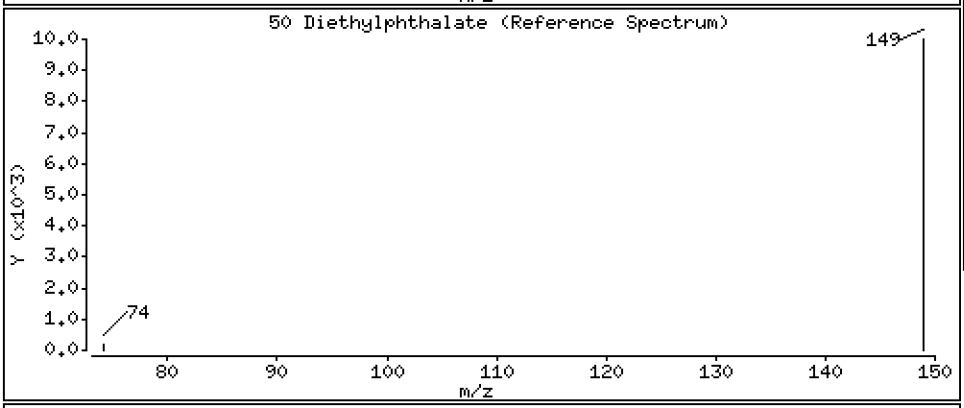
Concentration: 5.478 ug/mL

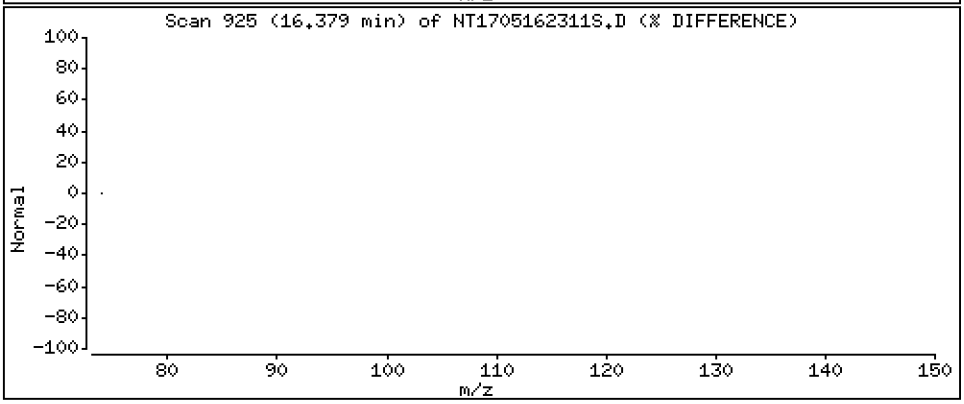












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

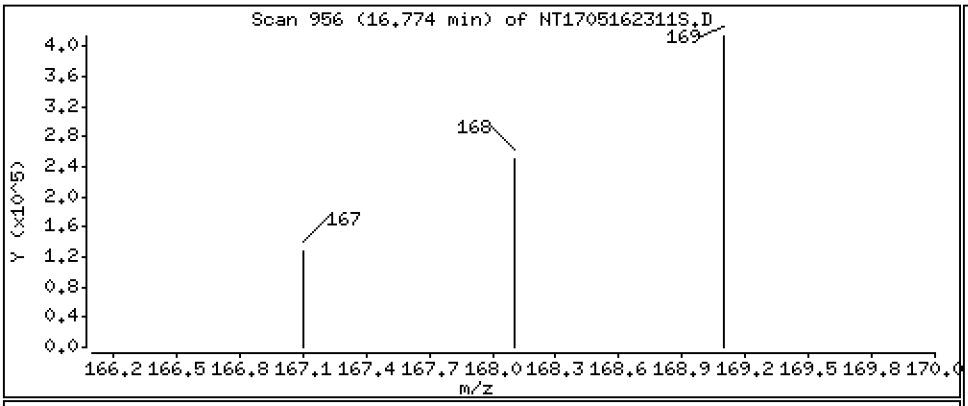
Operator: JGR

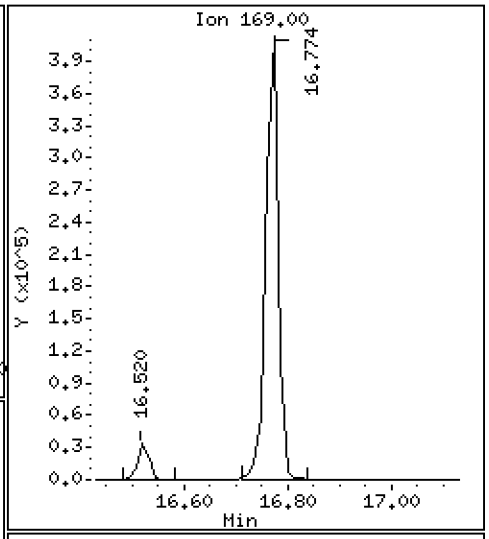
Column phase: ZB-5msi

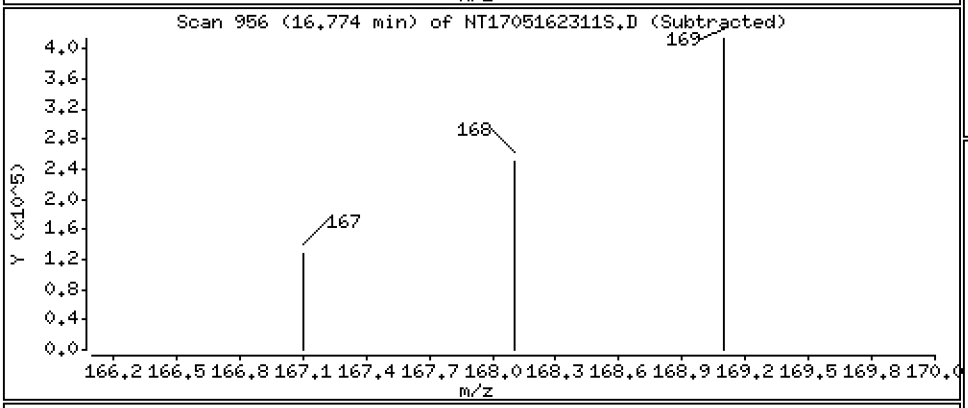
Column diameter: 0.25

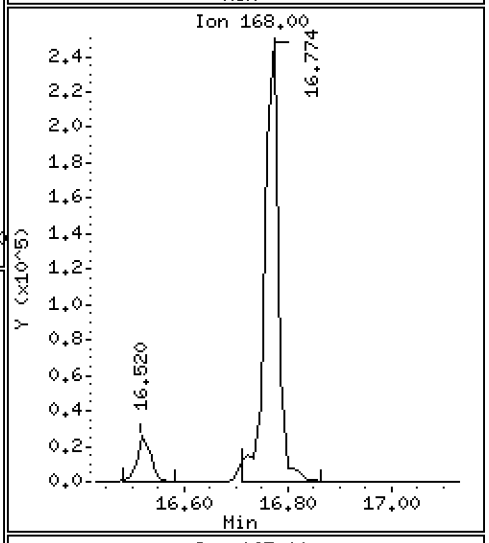
54 N-Nitrosodiphenylamine

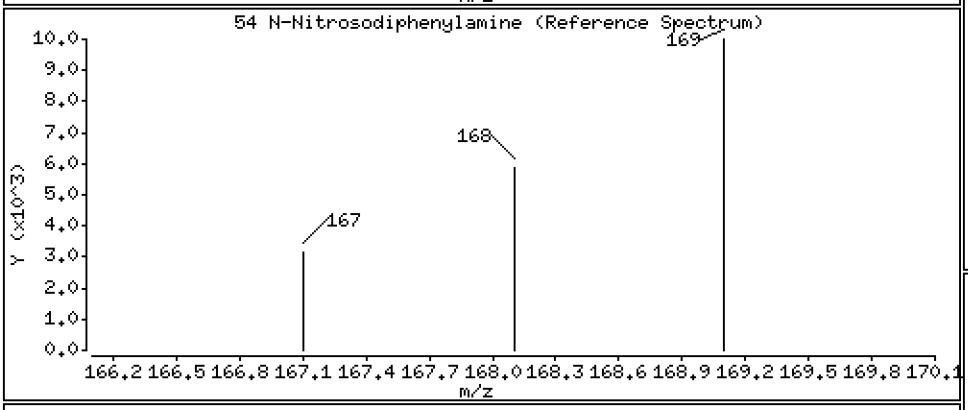
Concentration: 5.627 ug/mL

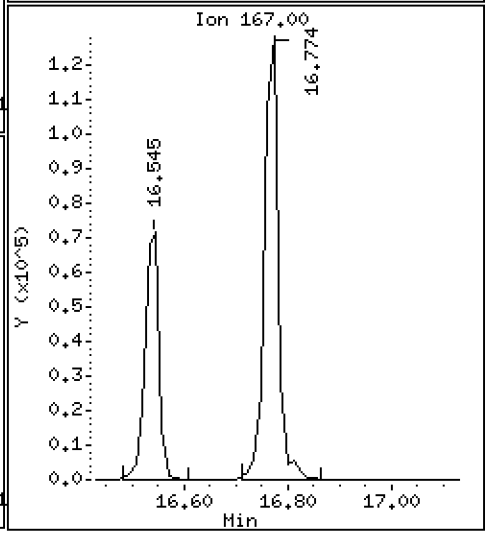


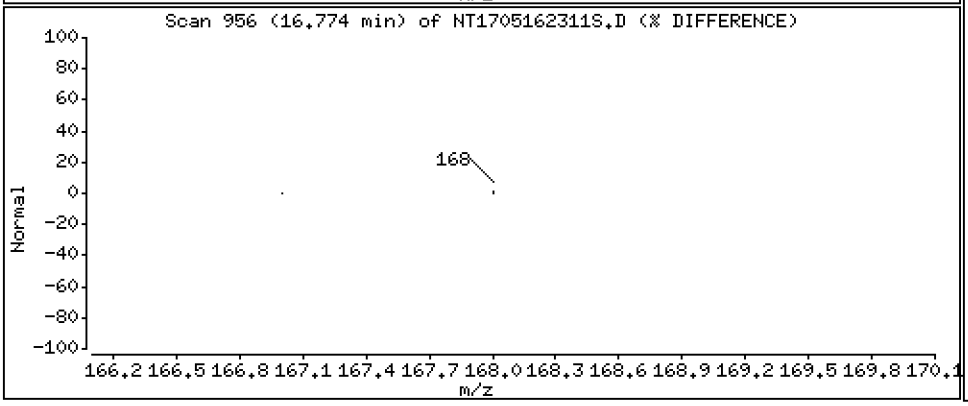












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

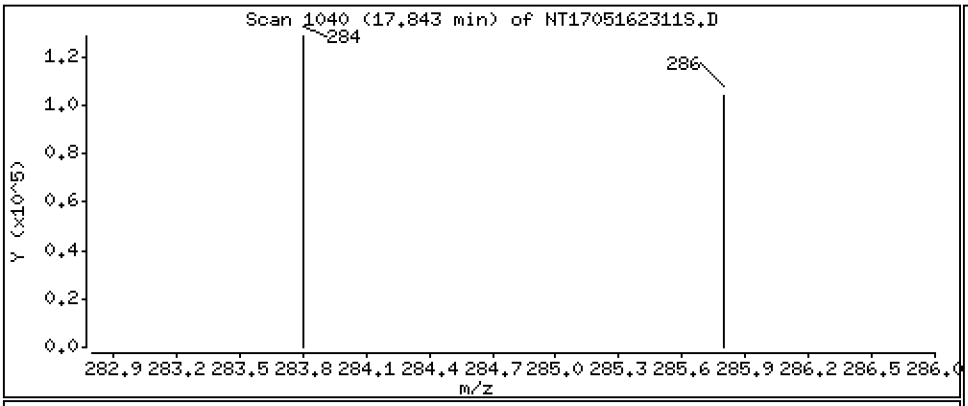
Operator: JGR

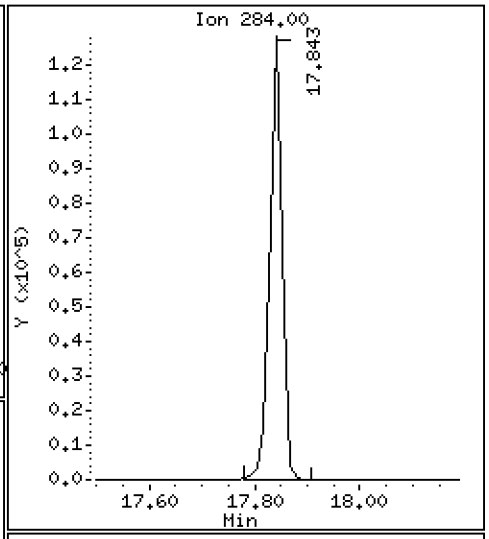
Column phase: ZB-5msi

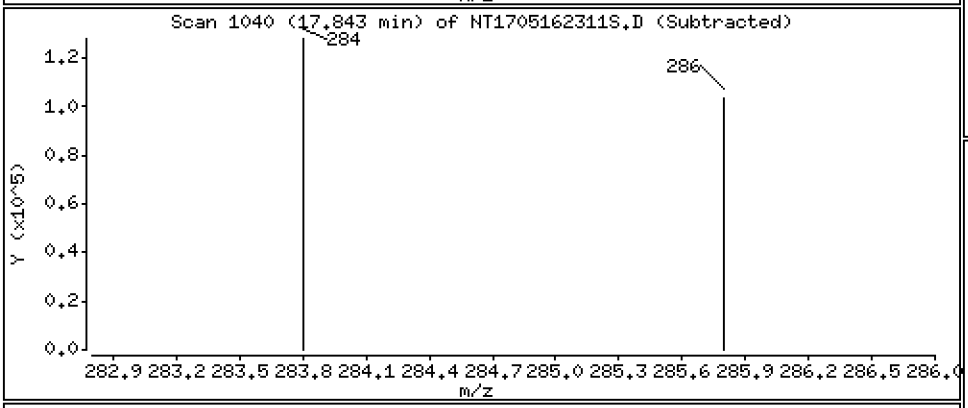
Column diameter: 0.25

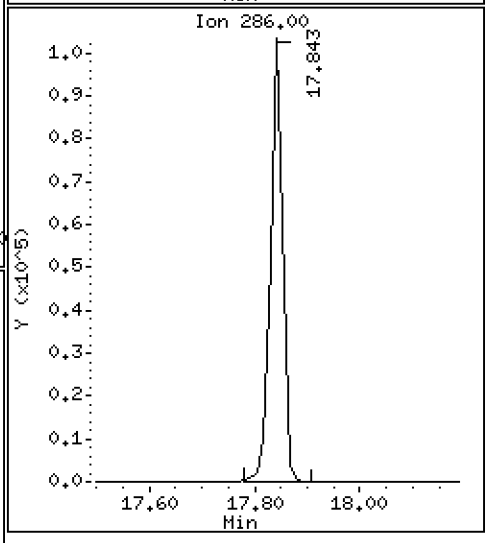
57 Hexachlorobenzene

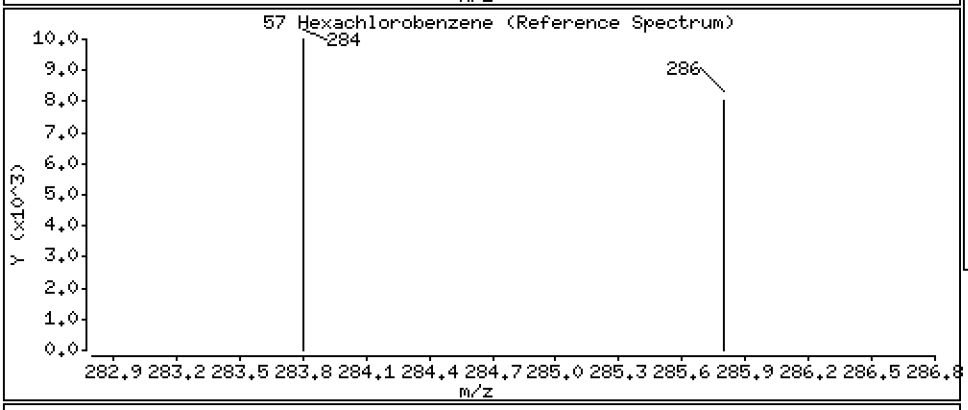
Concentration: 5.081 ug/mL

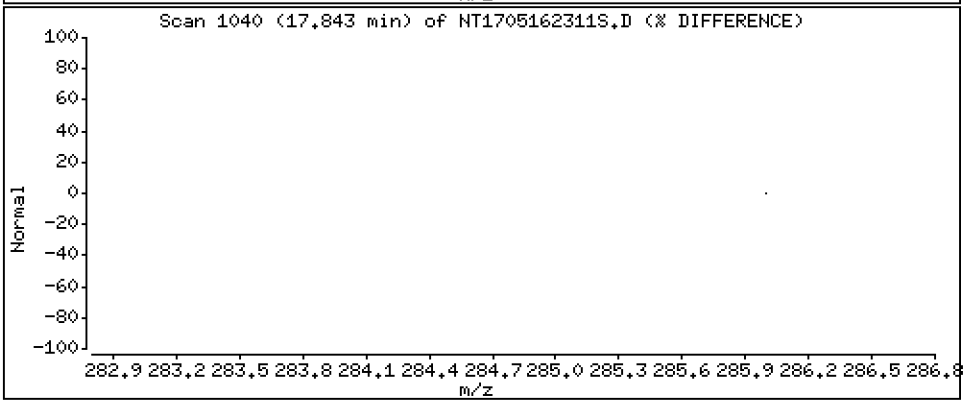












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

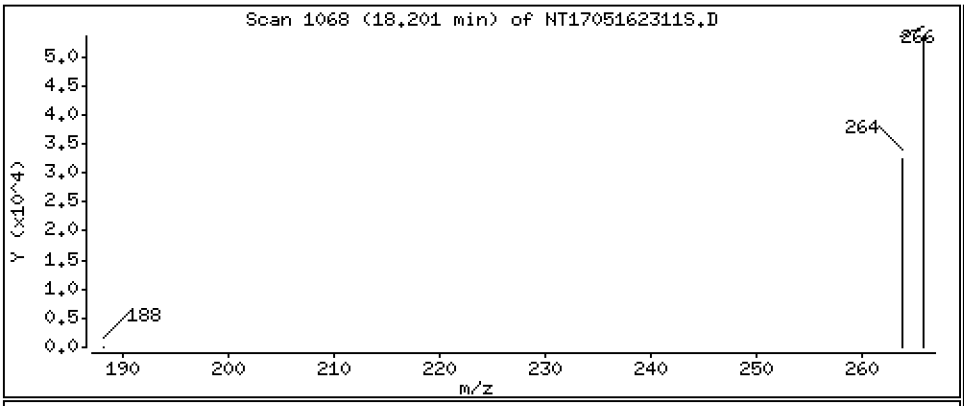
Operator: JGR

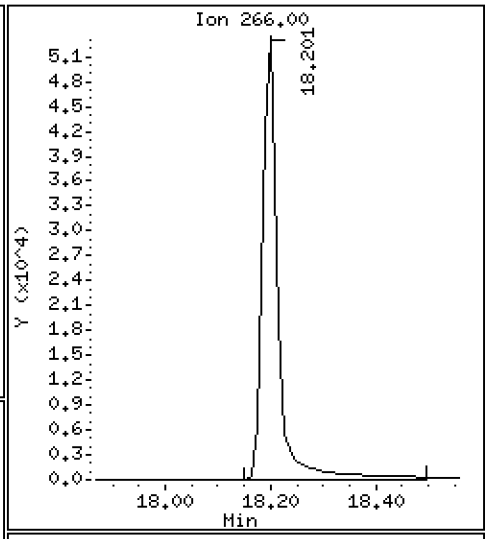
Column phase: ZB-5msi

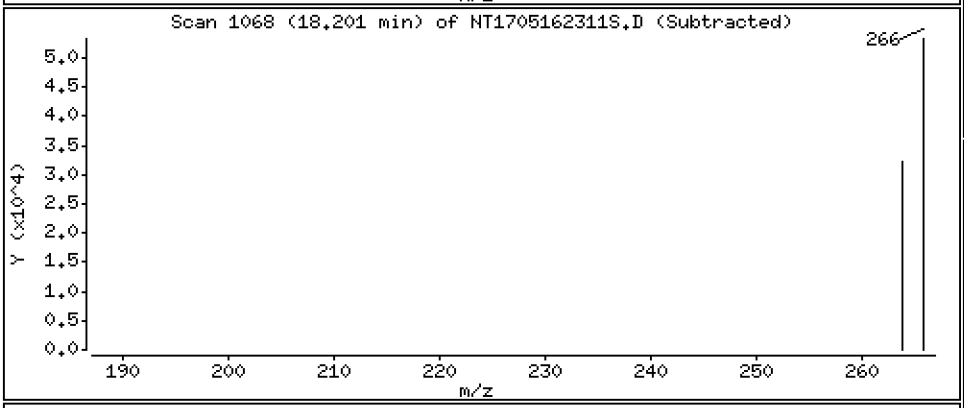
Column diameter: 0.25

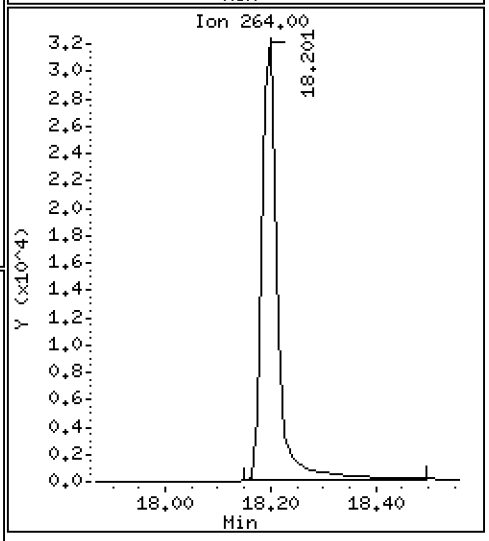
58 Pentachlorophenol

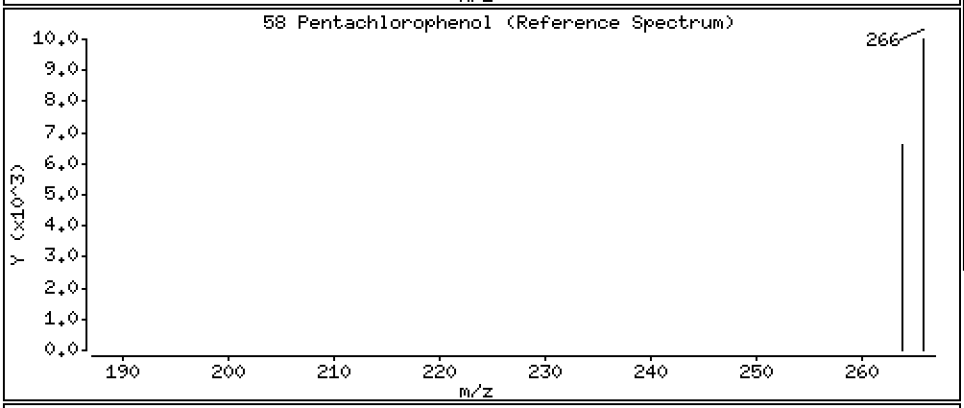
Concentration: 4.506 ug/mL

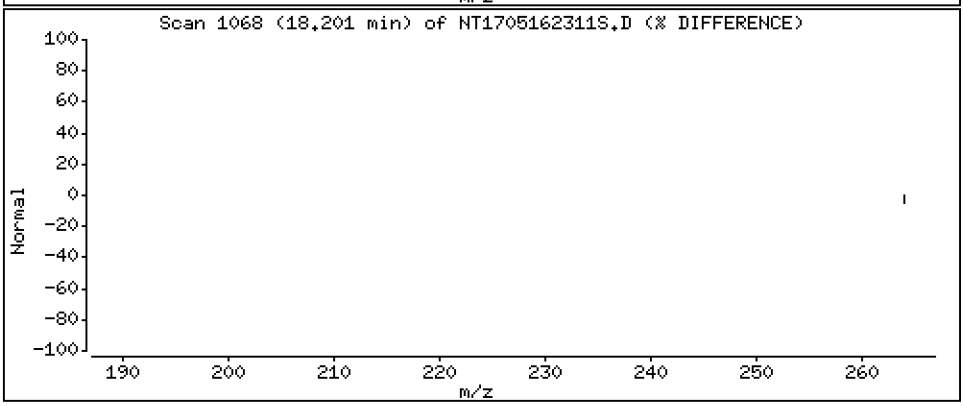












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

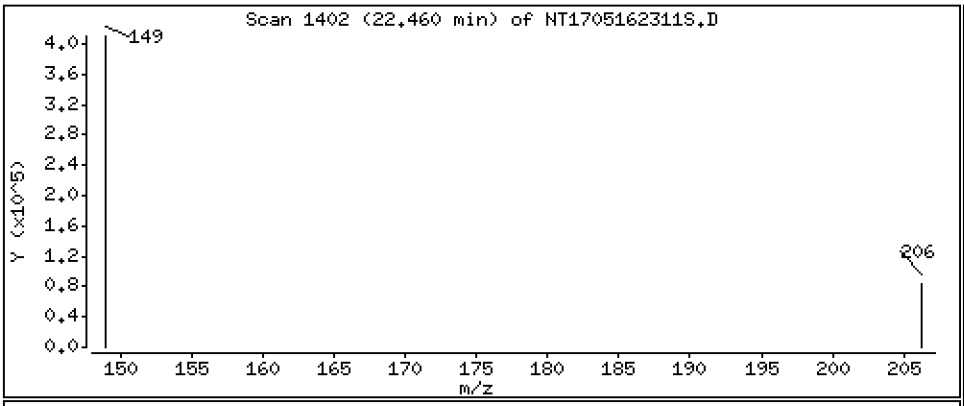
Operator: JGR

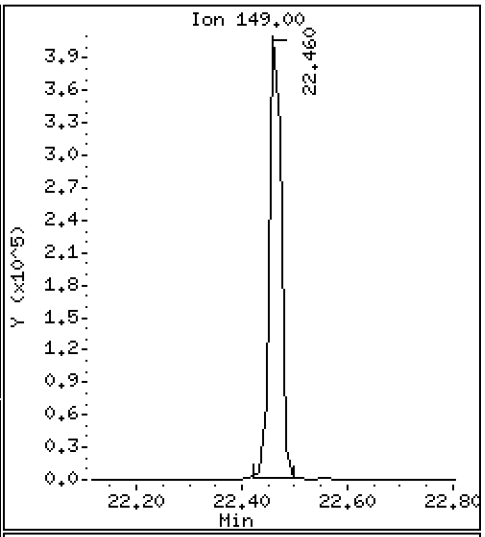
Column phase: ZB-5msi

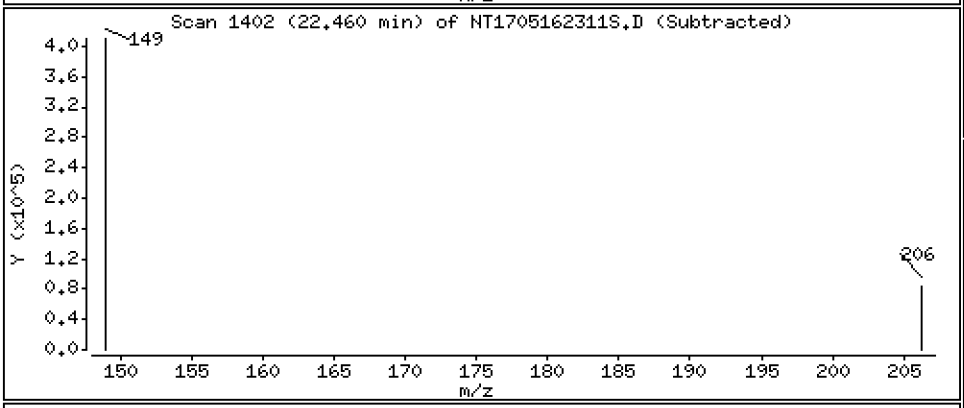
Column diameter: 0.25

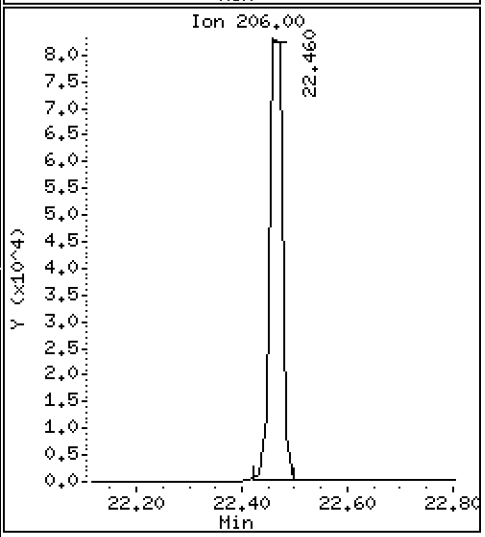
67 Butylbenzylphthalate

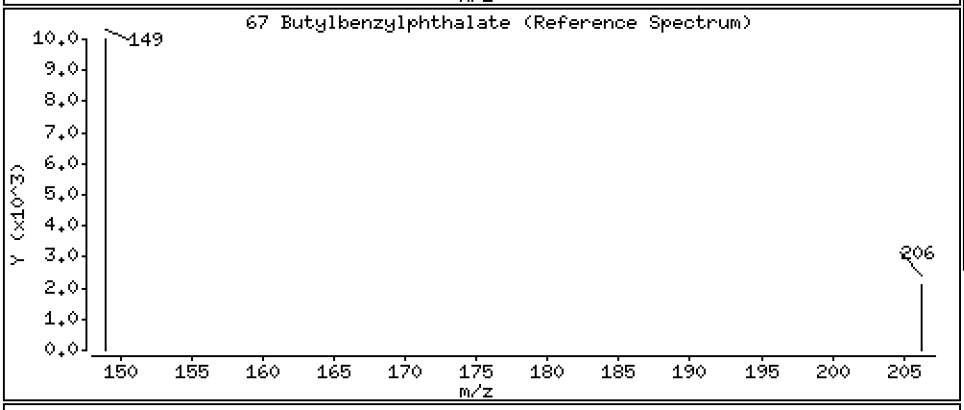
Concentration: 5.905 ug/mL

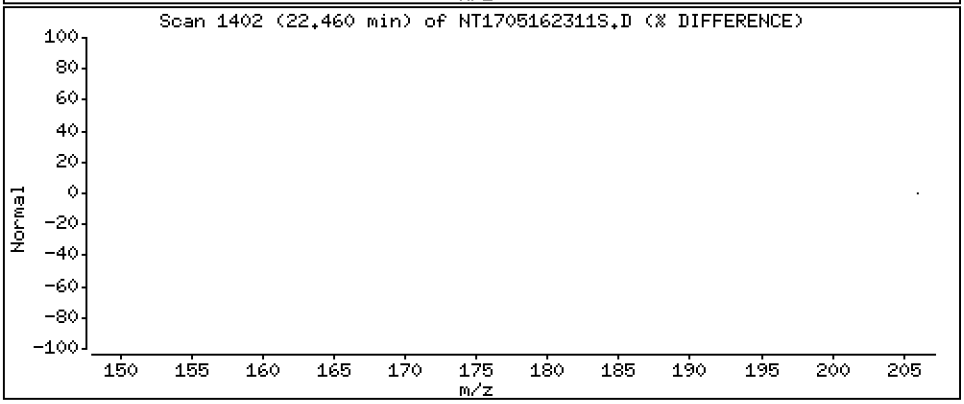












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

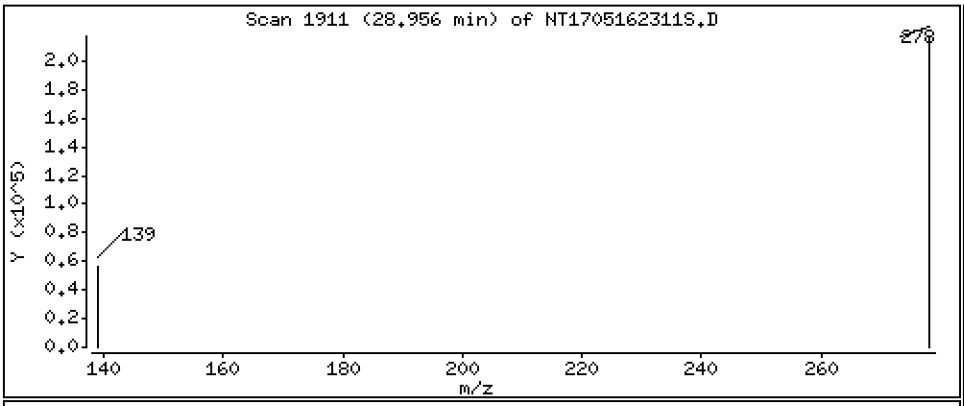
Operator: JGR

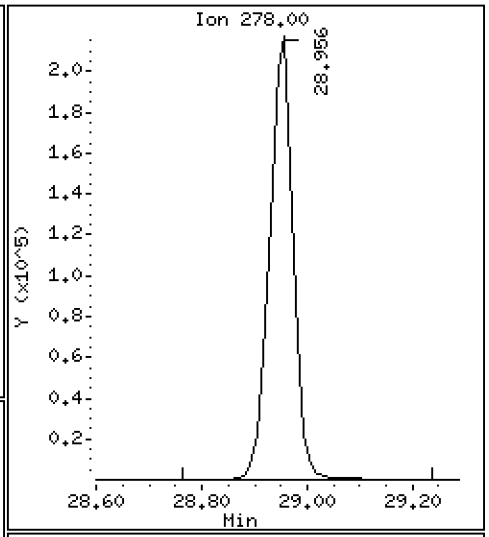
Column phase: ZB-5msi

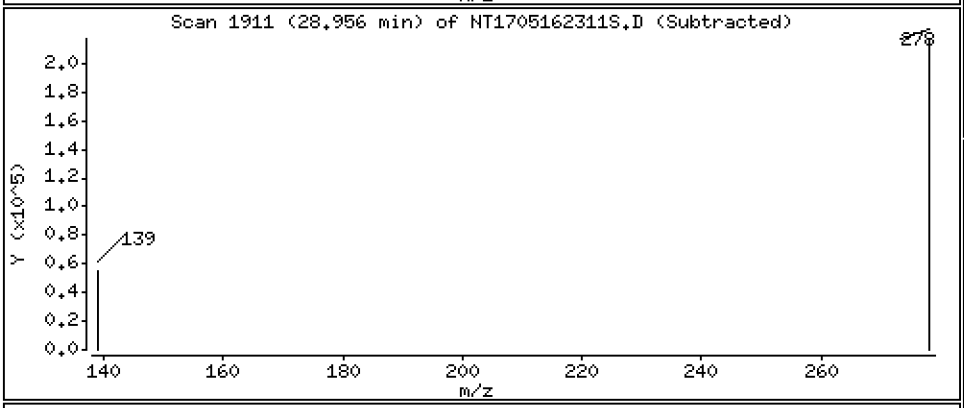
Column diameter: 0.25

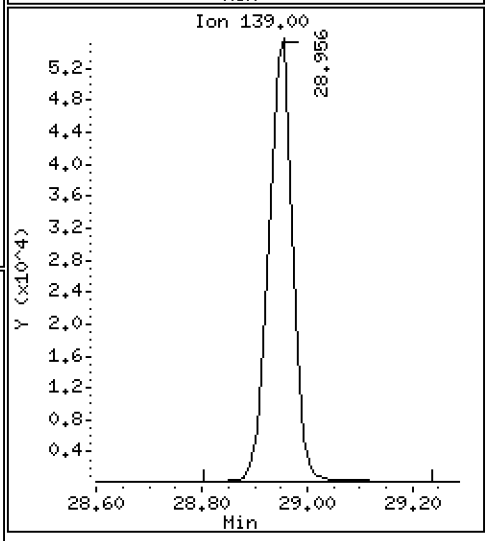
79 Dibenzo(a,h)anthracene

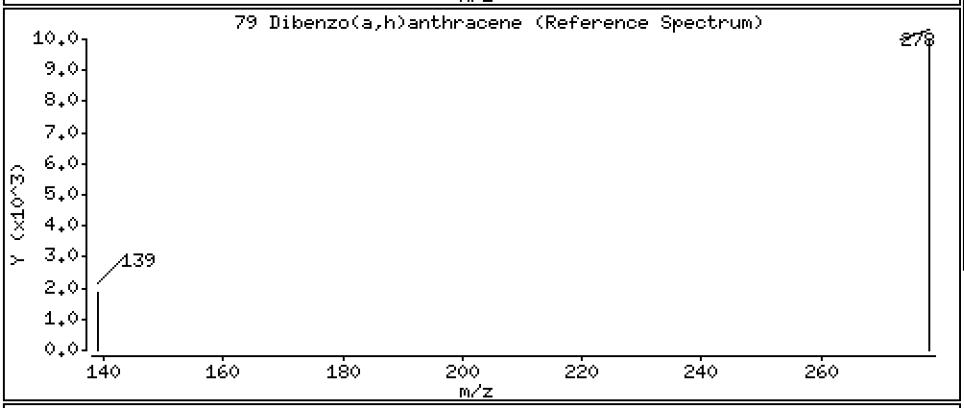
Concentration: 5.149 ug/mL

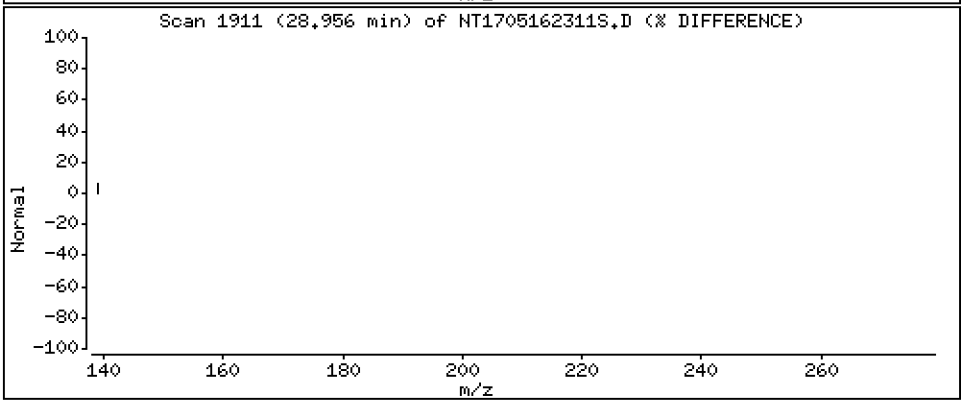












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

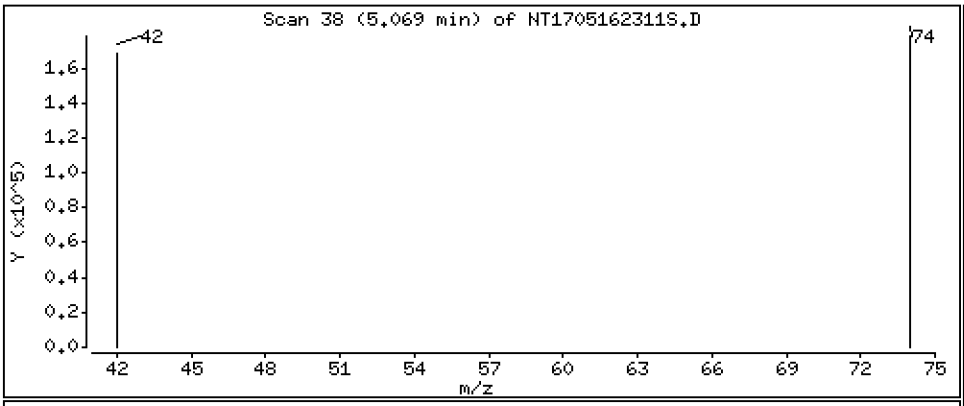
Operator: JGR

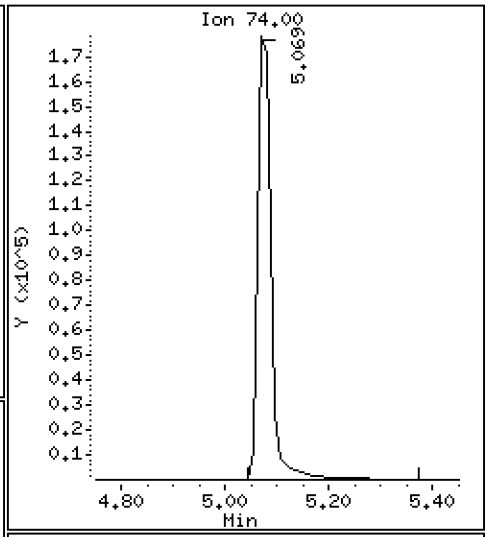
Column phase: ZB-5msi

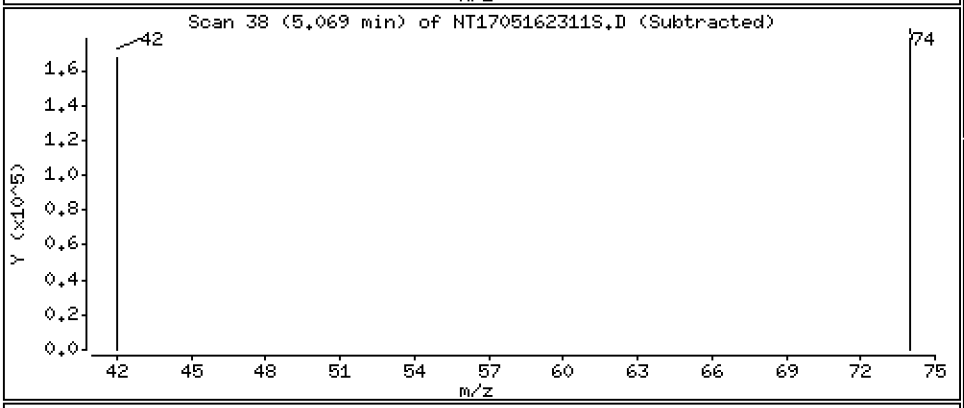
Column diameter: 0.25

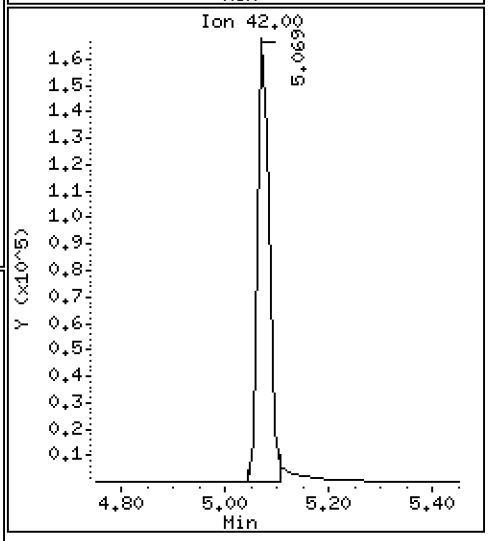
90 N-Nitrosodimethylamine

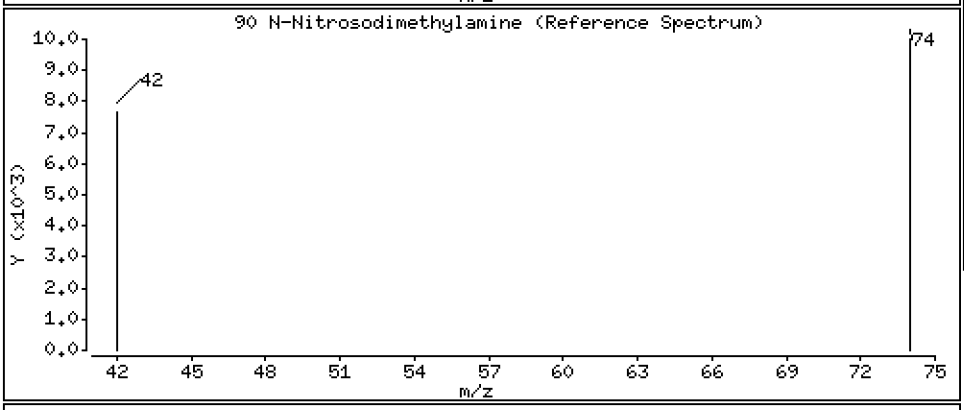
Concentration: 5.868 ug/mL

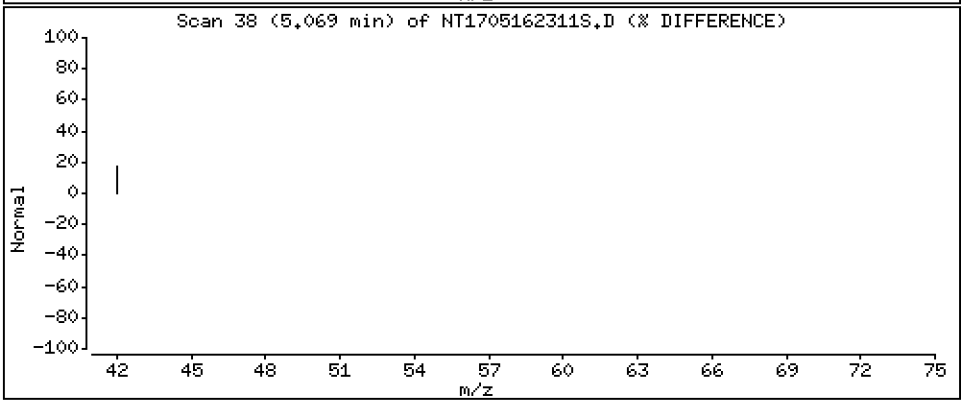












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D
Lab Smp Id: SLE0339-SCV1
Inj Date : 17-MAY-2023 00:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1	2-Fluorophenol	112	Compound Not Detected.					
	3	Phenol	94	8.750	8.751	(0.933)	616997	4.88420	4.884
	7	1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	575988	5.08691	5.087
*	8	1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	280298	4.00000	
	9	1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	566257	5.13211	5.132
	11	Benzyl alcohol	79	9.630	9.656	(1.027)	410745	5.70628	5.706
	12	1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	541461	5.00685	5.007
	13	2-Methylphenol	108	9.848	9.861	(1.050)	385832	4.40762	4.408
	15	4-Methylphenol	108	10.129	10.129	(1.080)	423610	4.78832	4.788
	16	N-Nitroso-di-n-propylamine	70	10.193	10.180	(1.087)	349317	5.47874	5.479
	22	2,4-Dimethylphenol	107	11.151	11.164	(0.942)	366886	3.81638	3.816
	24	Benzoic acid	105	11.329	11.356	(0.957)	465783	7.77732	7.777
	26	1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	427934	4.90638	4.906
*	27	Naphthalene-d8	136	11.840	11.840	(1.000)	999390	4.00000	
	30	Hexachlorobutadiene	225	12.235	12.235	(1.033)	238867	5.20120	5.201
	39	Dimethylphthalate	163	14.938	14.926	(0.968)	1015804	5.23967	5.240
*	42	Acenaphthene-d10	162	15.436	15.436	(1.000)	527927	4.00000	
	50	Diethylphthalate	149	16.379	16.379	(1.061)	964439	5.47782	5.478
	54	N-Nitrosodiphenylamine	169	16.774	16.774	(0.908)	681829	5.62729	5.627
	57	Hexachlorobenzene	284	17.843	17.843	(0.966)	208857	5.08140	5.081
	58	Pentachlorophenol	266	18.200	18.214	(0.986)	108866	4.50590	4.506
*	59	Phenanthrene-d10	188	18.468	18.455	(1.000)	860054	4.00000	
$	66	Terphenyl-d14	244	Compound Not Detected.					
	67	Butylbenzylphthalate	149	22.460	22.460	(0.958)	642329	5.90509	5.905
*	69	Chrysene-d12	240	23.455	23.455	(1.000)	527529	4.00000	
*	77	Perylene-d12	264	26.159	26.147	(1.000)	475440	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.956	28.943	(1.107)	690513	5.14916	5.149
	90	N-Nitrosodimethylamine	74	5.068	5.094	(0.541)	321072	5.86783	5.868

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162311S.D
Lab Smp Id: SLE0339-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	280298	-11.32
27 Naphthalene-d8	1102073	551037	2204146	999390	-9.32
42 Acenaphthene-d10	583826	291913	1167652	527927	-9.57
59 Phenanthrene-d10	970917	485459	1941834	860054	-11.42
69 Chrysene-d12	590568	295284	1181136	527529	-10.67
77 Perylene-d12	537938	268969	1075876	475440	-11.62

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.47	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
77 Perylene-d12	26.16	25.66	26.66	26.16	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162311S.D

Lab ID: SLE0339-SCV1
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   17-MAY-2023 00:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.957	0.000	0.9569	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00068
Laboratory ID: SLD0372-SCV1
Sequence: SLD0372
Standard ID: L000686

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.36	-5.5	
2-Methylnaphthalene	2.5000	2.39	-4.3	
1-Methylnaphthalene	2.5000	2.38	-4.8	
Acenaphthylene	2.5000	2.32	-7.1	
Acenaphthene	2.5000	2.23	-10.6	
Dibenzofuran	2.5000	2.52	0.7	
Fluorene	2.5000	2.29	-8.3	
Phenanthrene	2.5000	2.16	-13.6	
Anthracene	2.5000	2.01	-19.7	
Fluoranthene	2.5000	2.26	-9.7	
Pyrene	2.5000	2.23	-10.9	
Benzo(a)anthracene	2.5000	2.18	-13.0	
Chrysene	2.5000	2.14	-14.5	
Benzo(b)fluoranthene	2.5000	2.16	-13.7	
Benzo(k)fluoranthene	2.5000	2.30	-7.9	
Benzofluoranthenes, Total	5.0000	4.55	-8.9	
Benzo(a)pyrene	2.5000	2.29	-8.2	
Indeno(1,2,3-cd)pyrene	2.5000	2.45	-2.0	
Dibenzo(a,h)anthracene	2.5000	2.33	-6.6	
Benzo(g,h,i)perylene	2.5000	2.25	-10.1	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

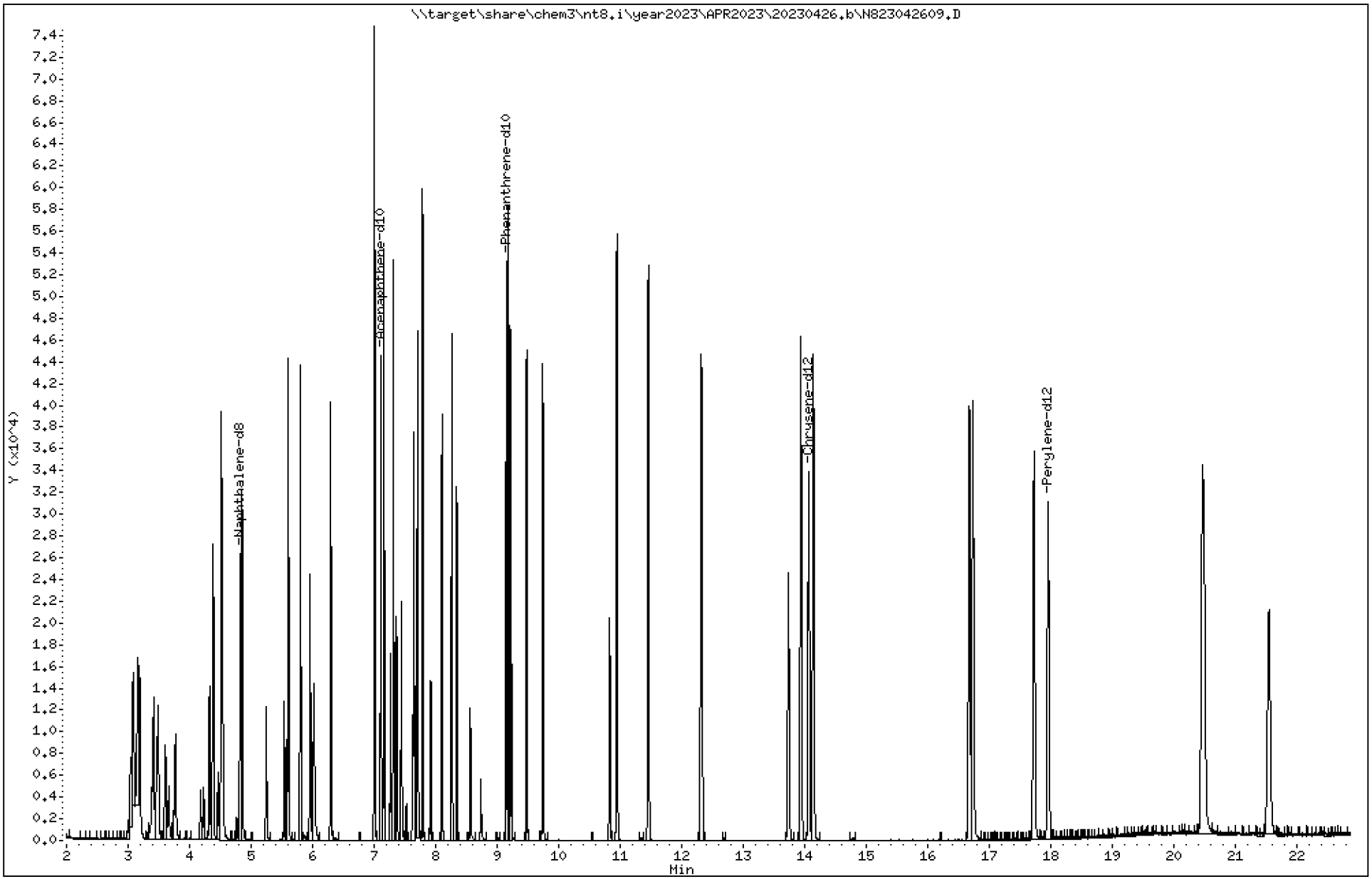
Sample Info: SCV230426

Volume Injected (uL): 1.0

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

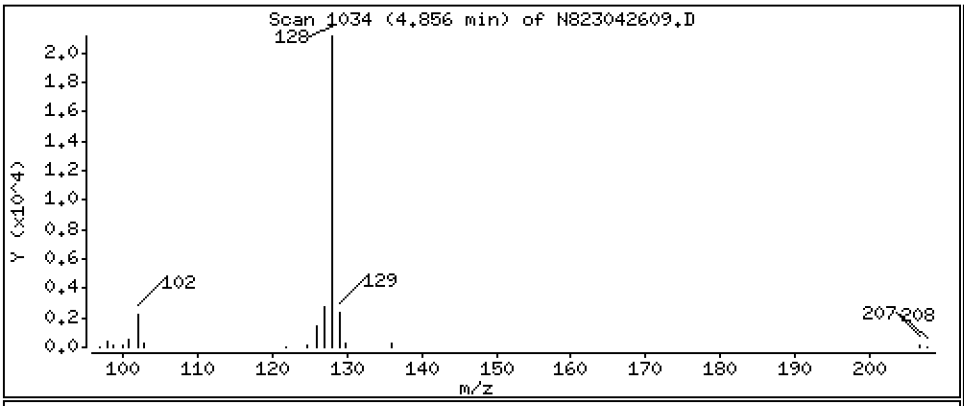
Operator: JZ

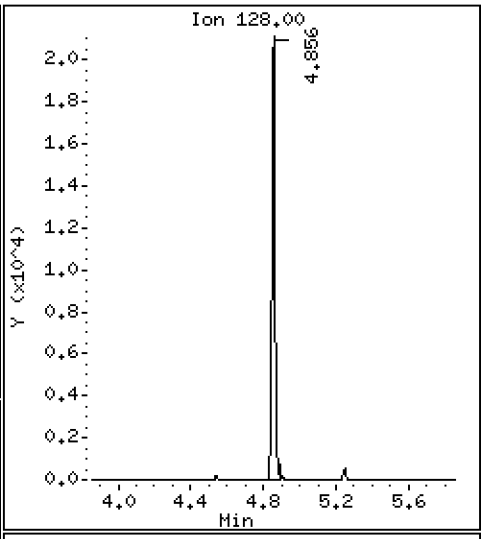
Column phase: Rxi-17sil

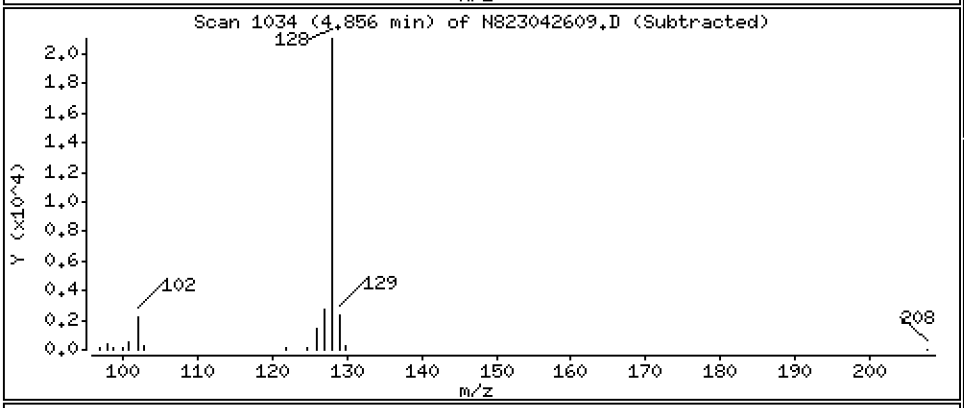
Column diameter: 0.25

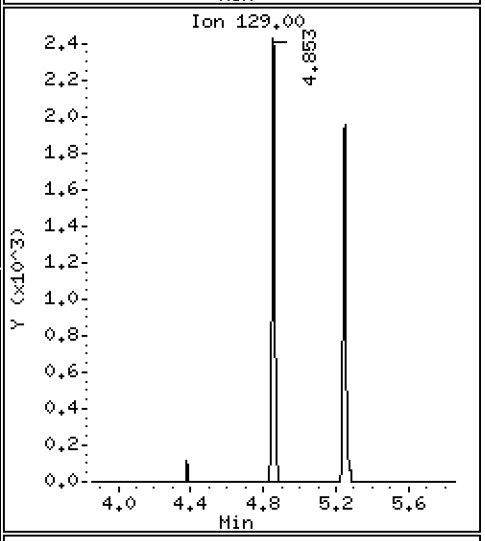
2 Naphthalene

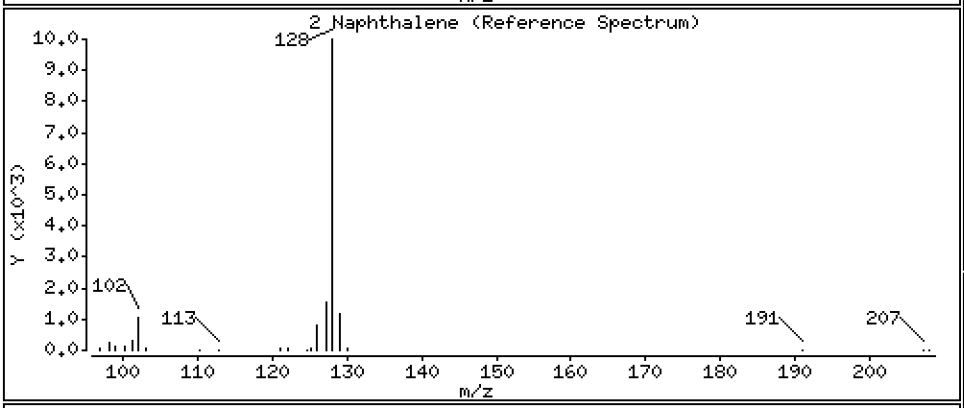
Concentration: 2.363 ug/L

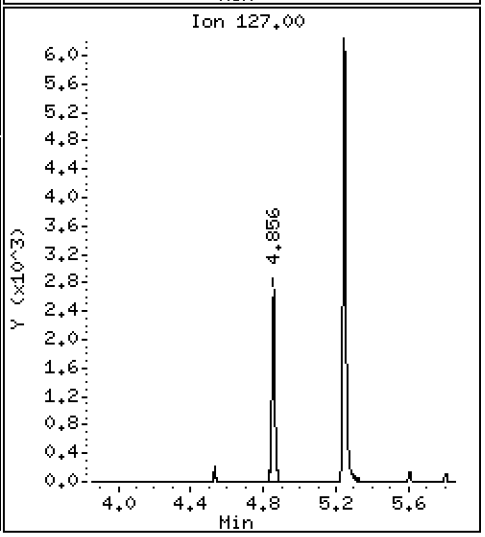


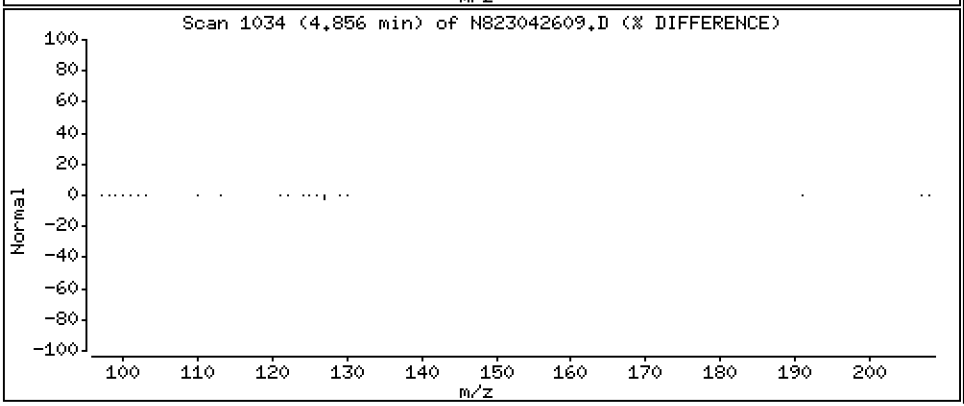












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

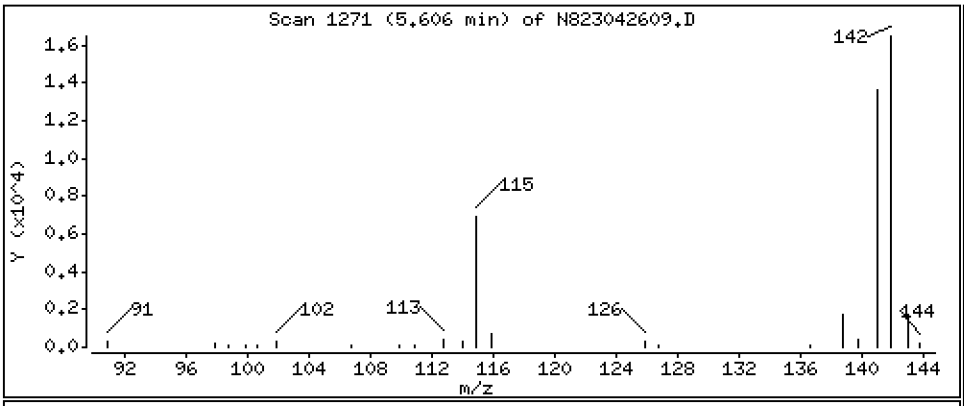
Operator: JZ

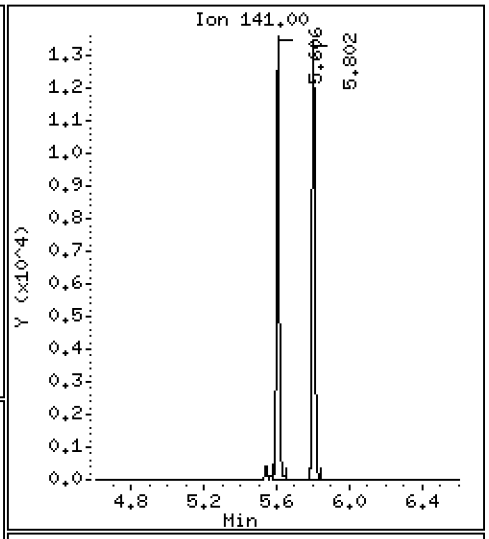
Column phase: Rxi-17sil

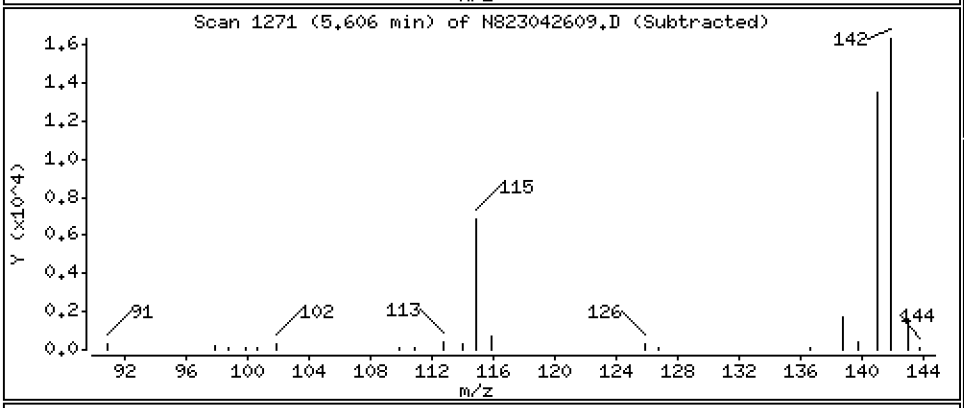
Column diameter: 0.25

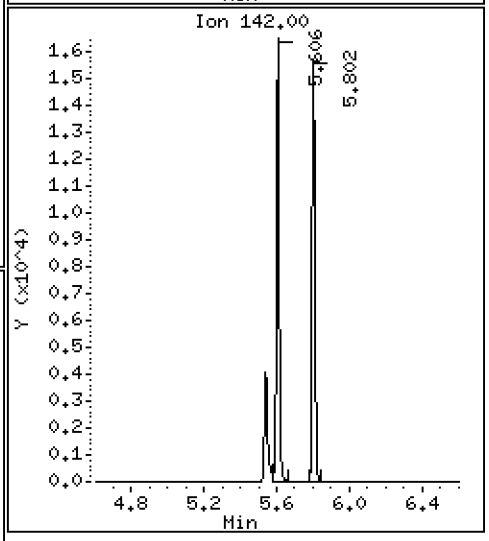
4 2-Methylnaphthalene

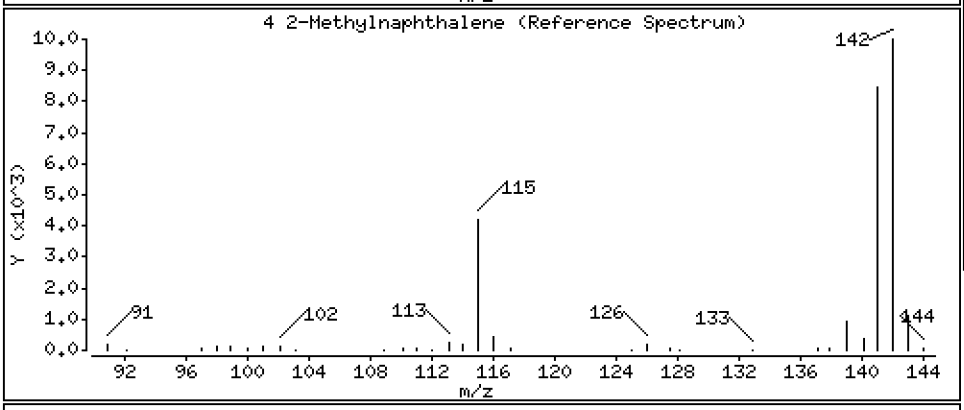
Concentration: 2.392 ug/L

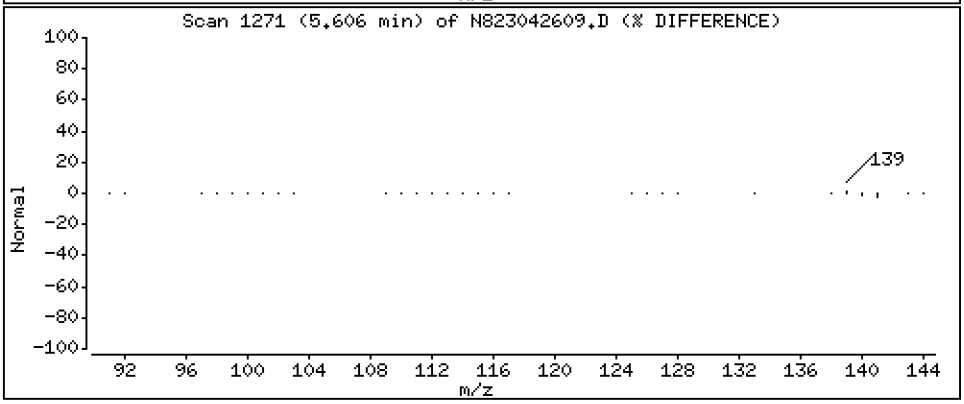












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

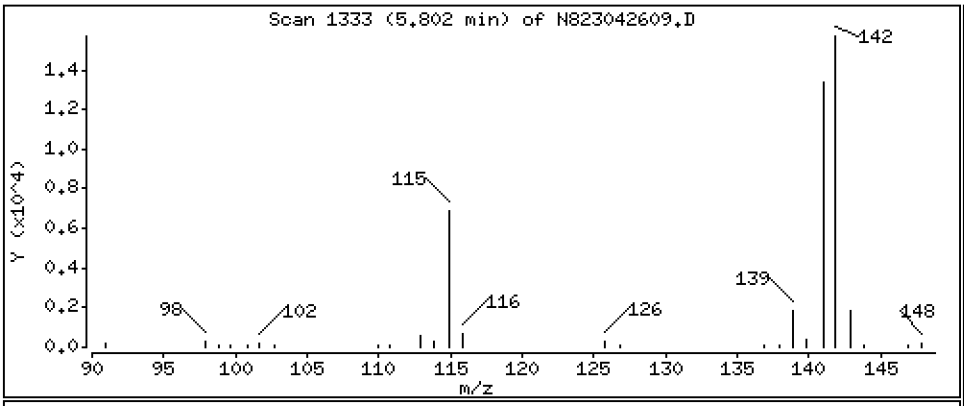
Operator: JZ

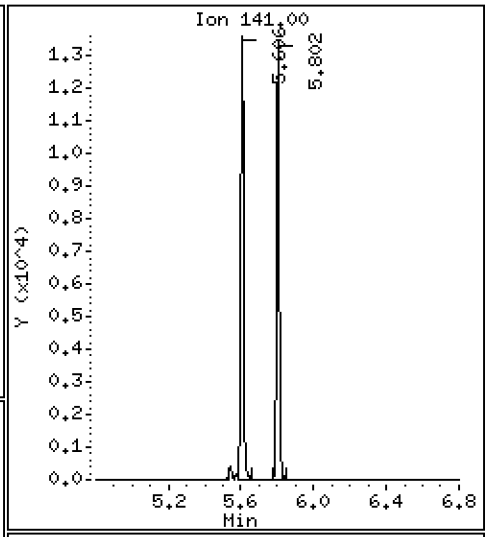
Column phase: Rxi-17sil

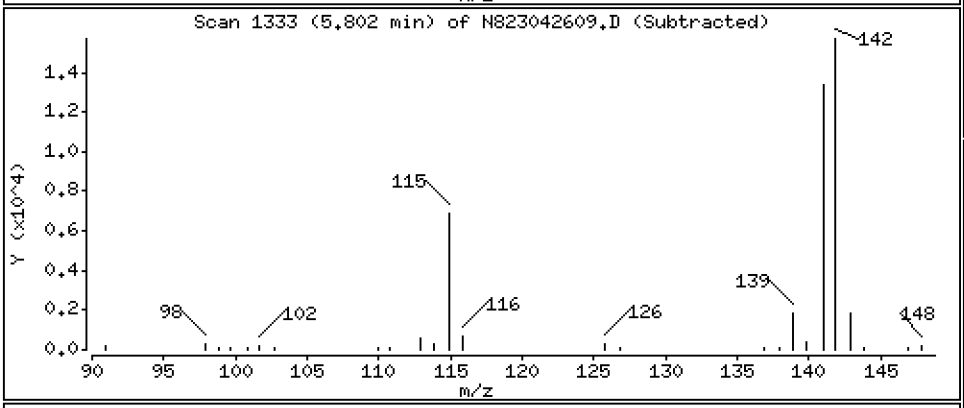
Column diameter: 0.25

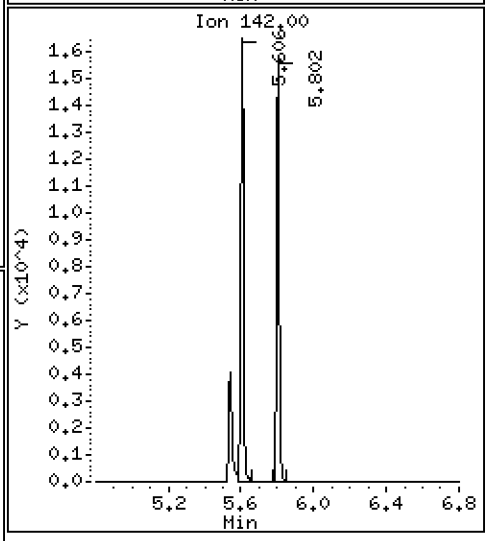
5 1-methylnaphthalene

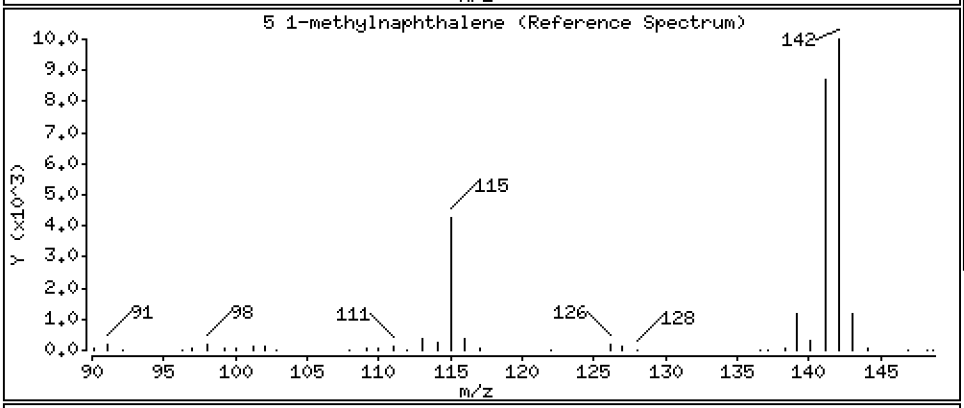
Concentration: 2.380 ug/L

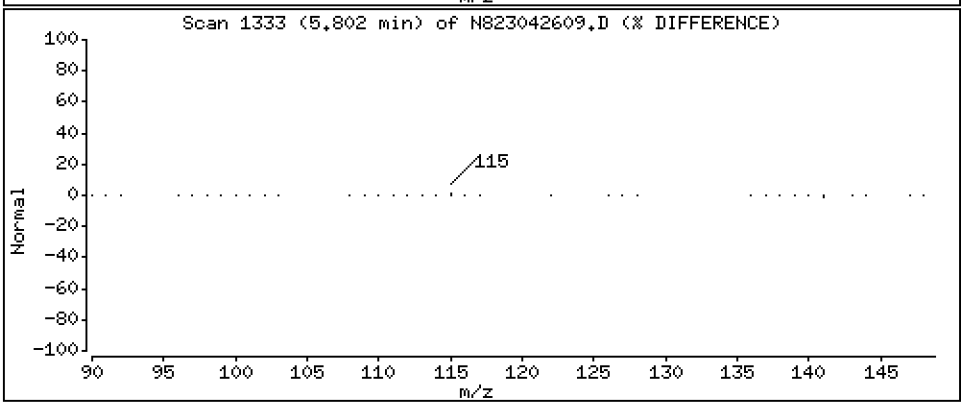












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

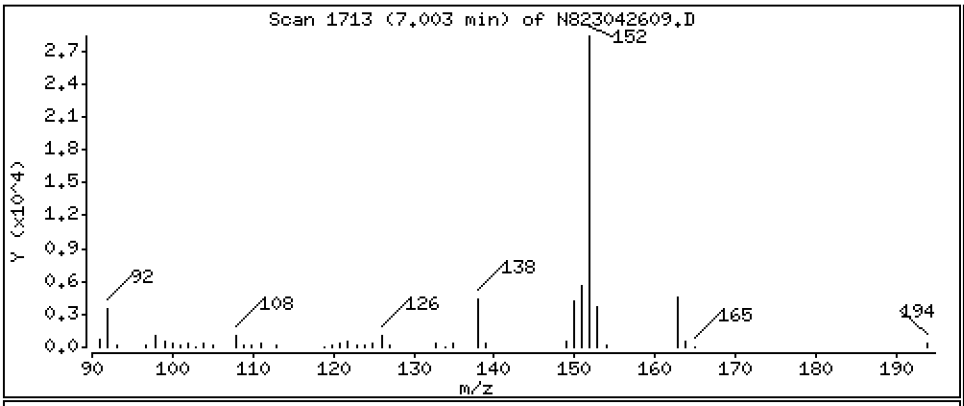
Operator: JZ

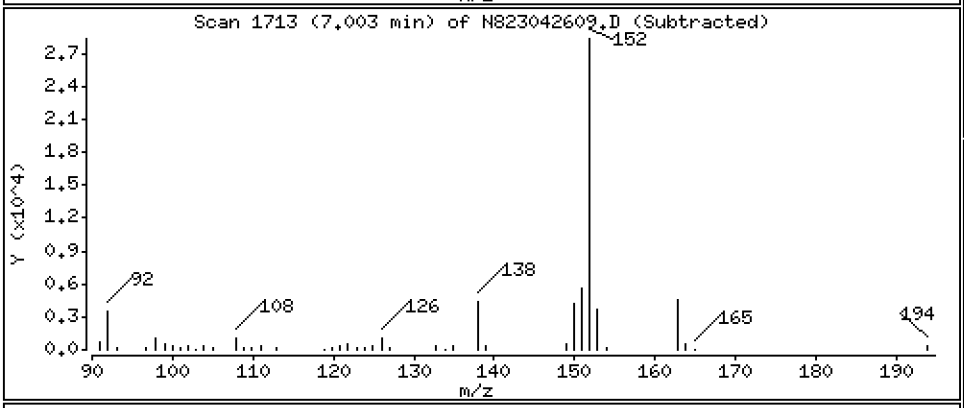
Column phase: Rxi-17sil

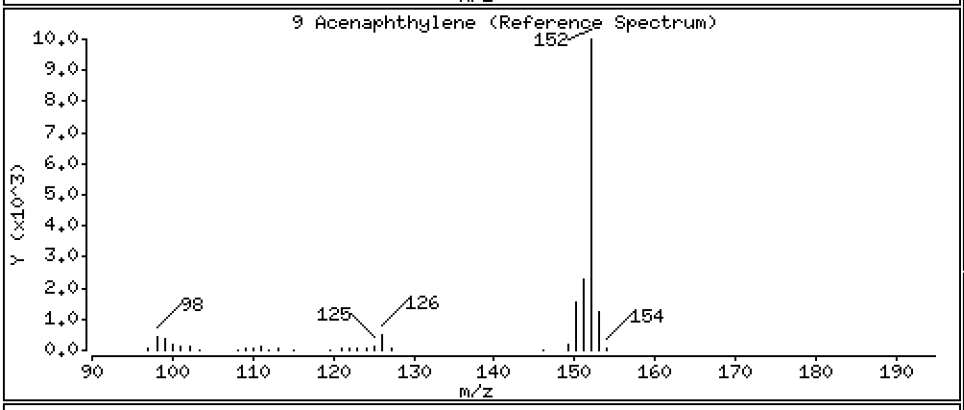
Column diameter: 0.25

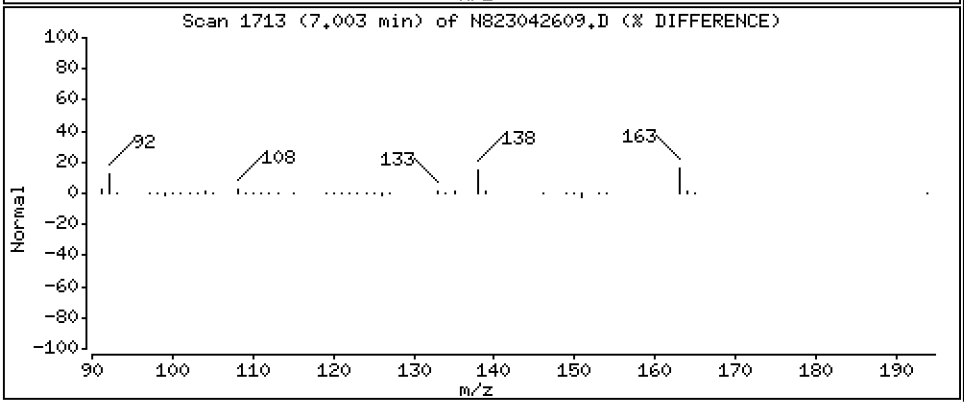
9 Acenaphthylene

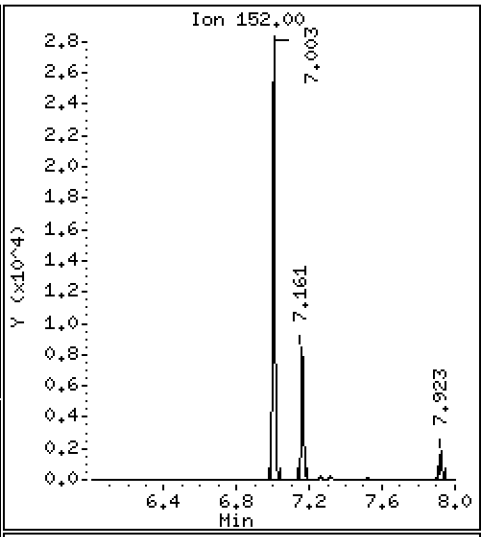
Concentration: 2.322 ug/L

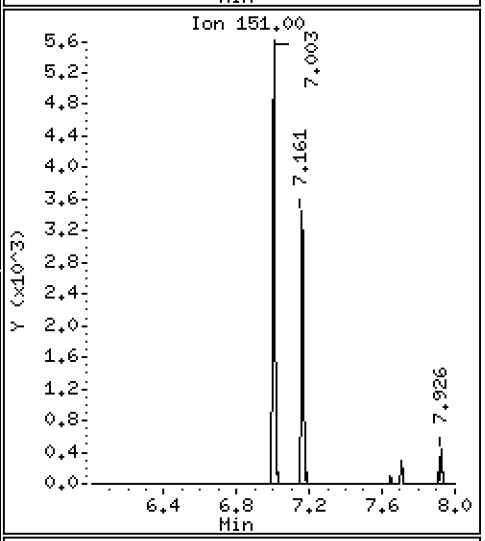


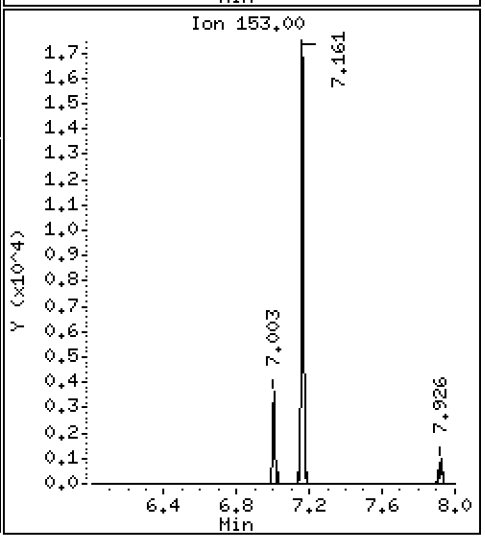












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

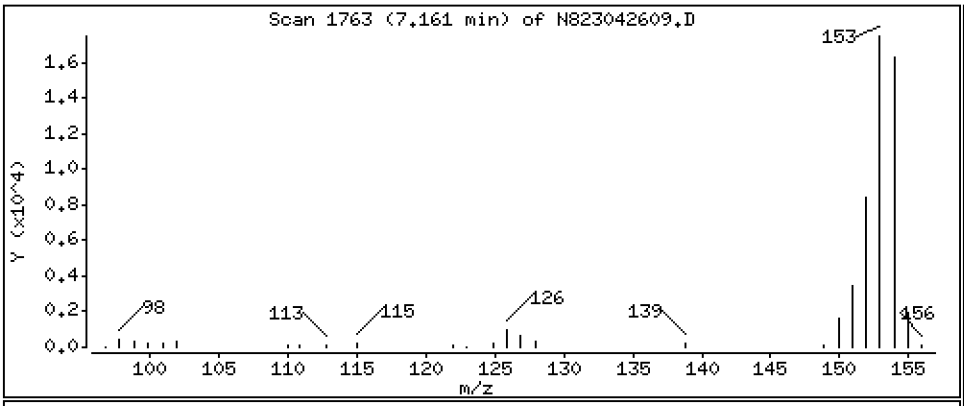
Operator: JZ

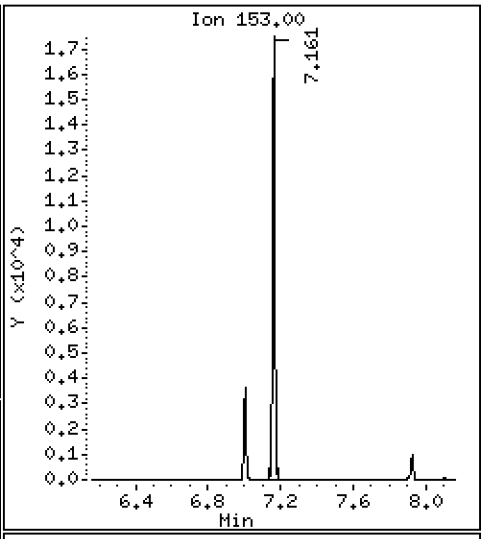
Column phase: Rxi-17sil

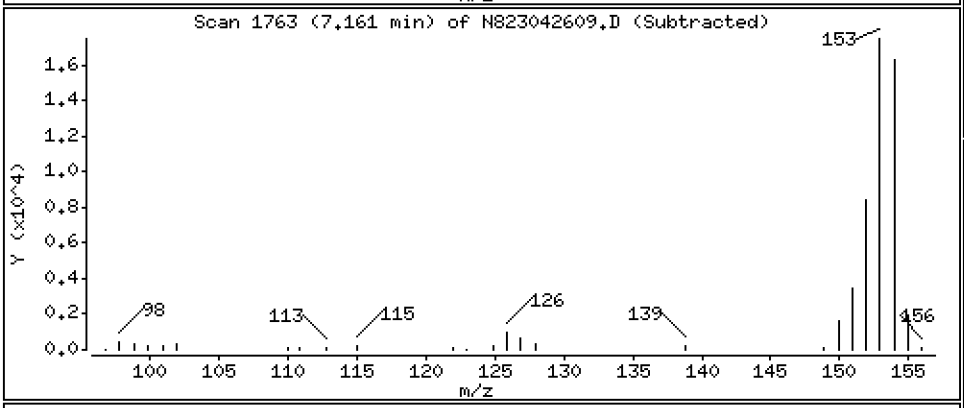
Column diameter: 0.25

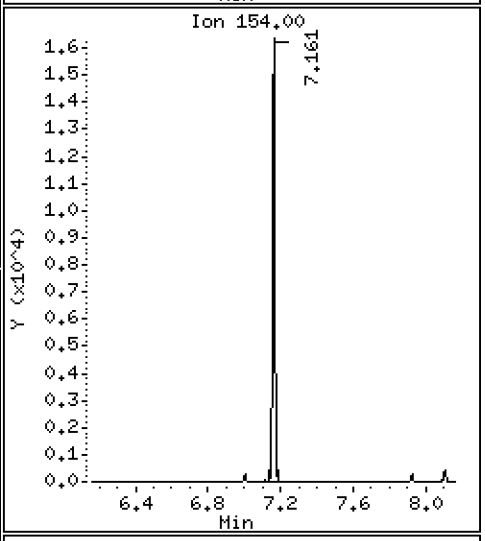
11 Acenaphthene

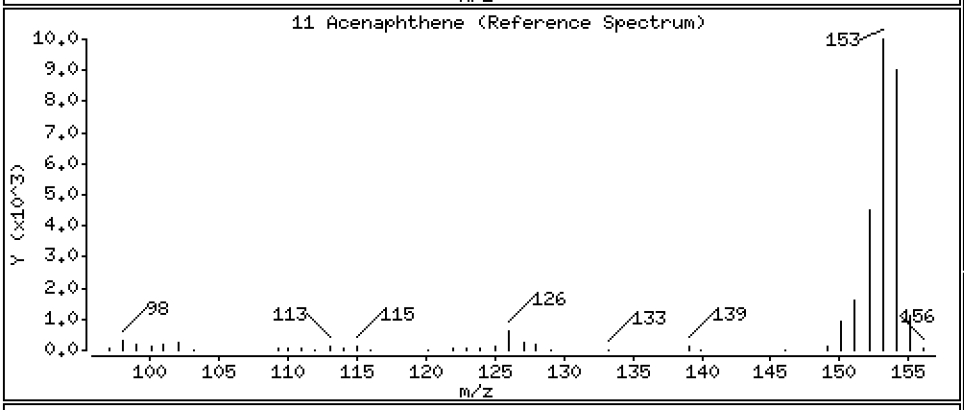
Concentration: 2.234 ug/L

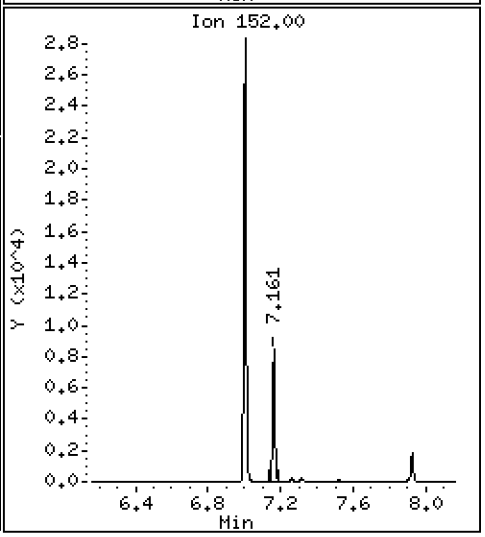


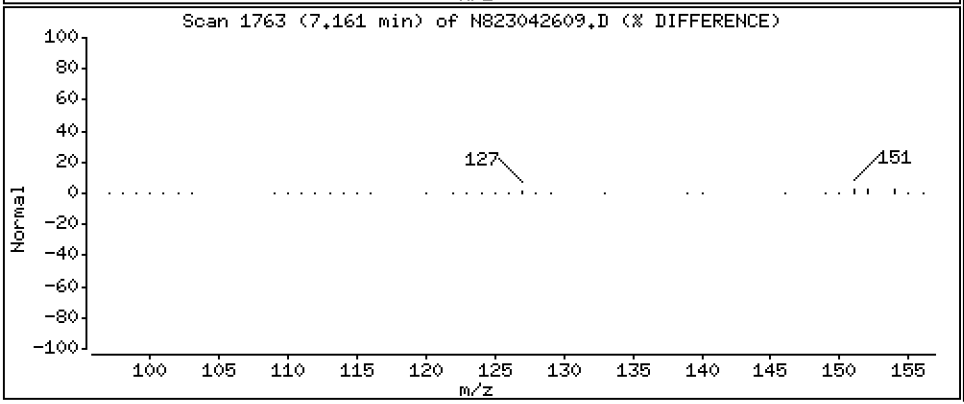












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

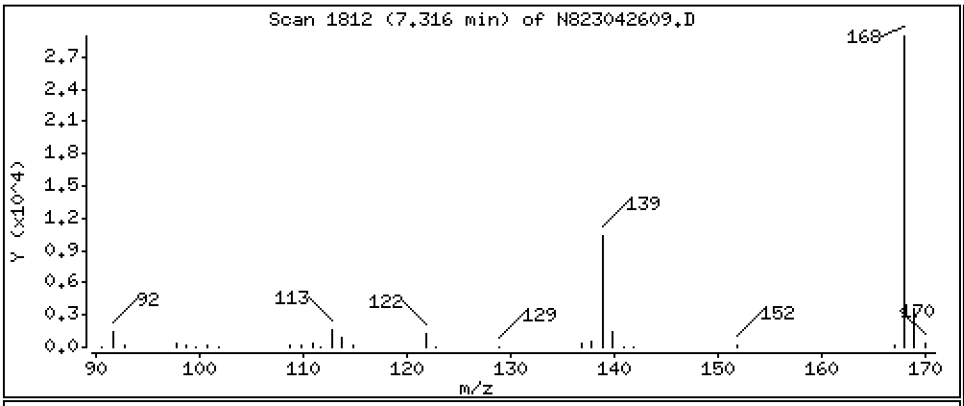
Operator: JZ

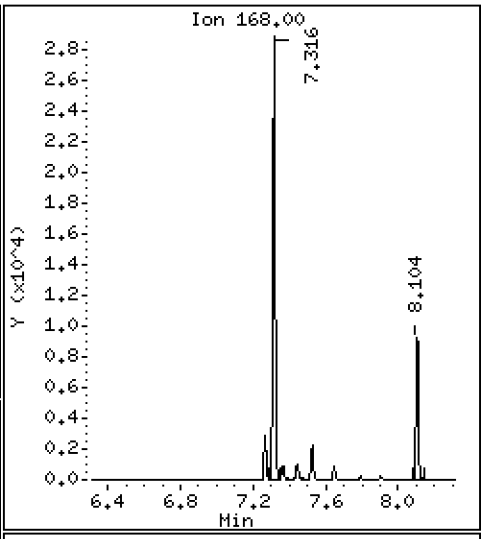
Column phase: Rxi-17sil

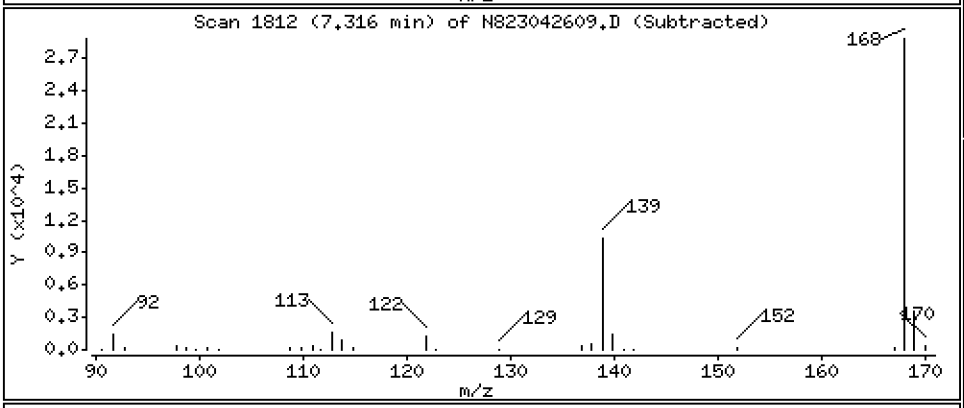
Column diameter: 0.25

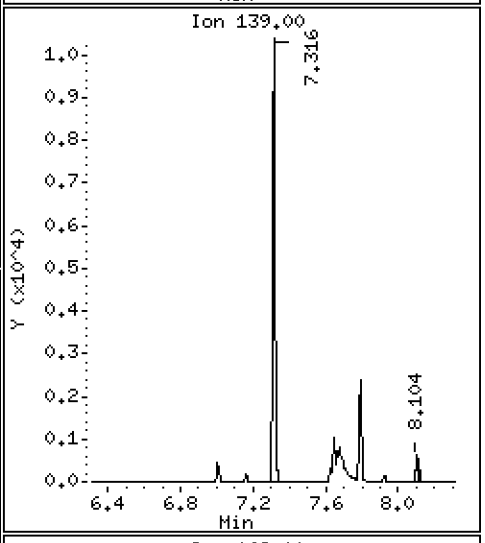
12 Dibenzofuran

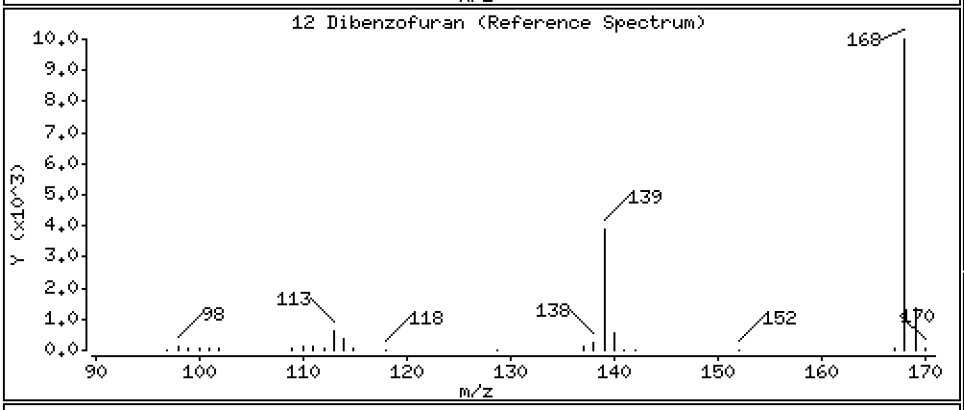
Concentration: 2.518 ug/L

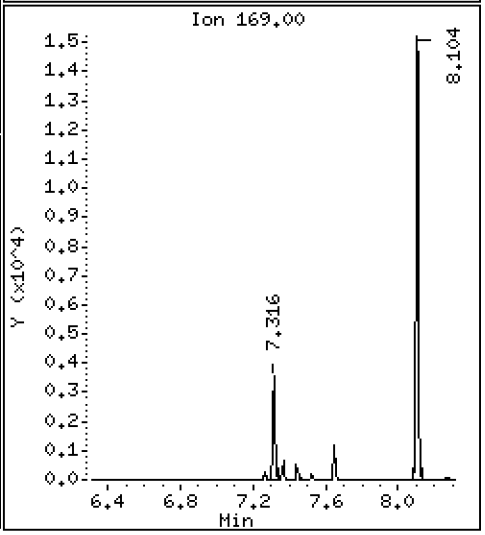


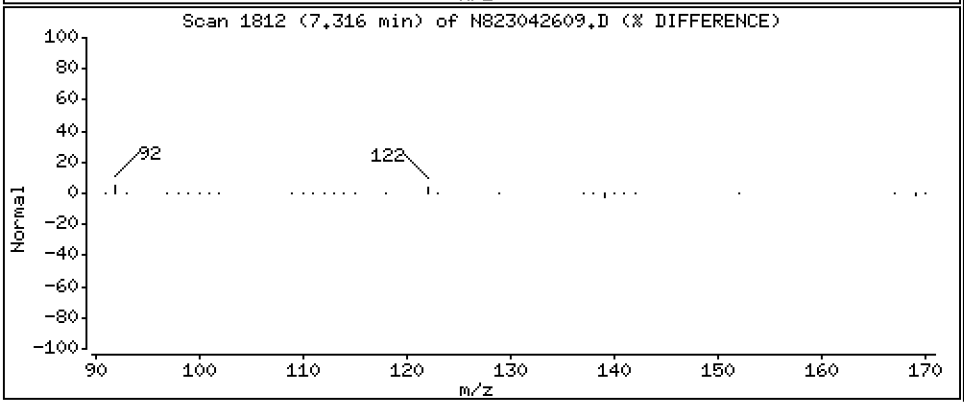












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

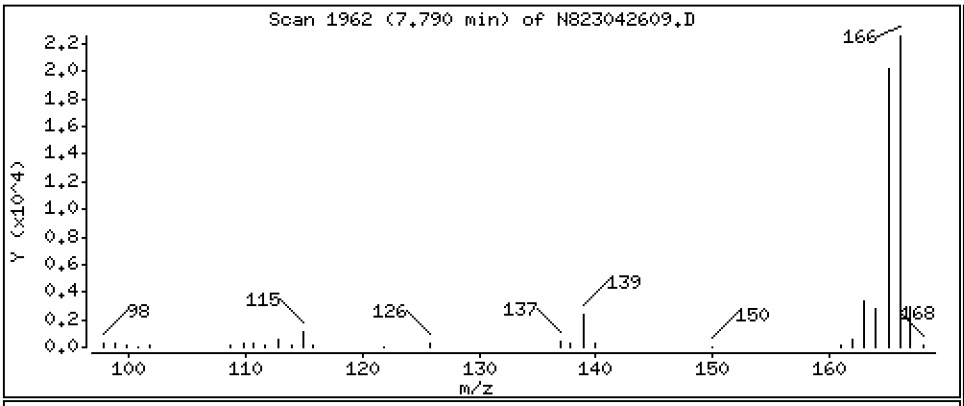
Operator: JZ

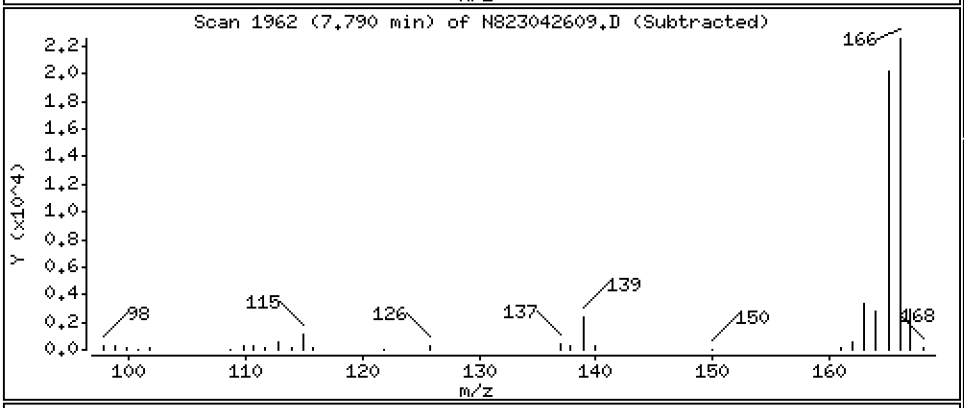
Column phase: Rxi-17sil

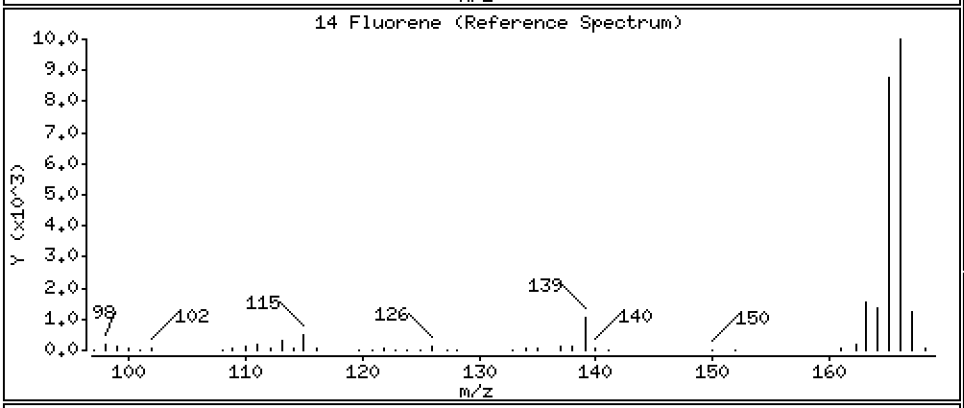
Column diameter: 0.25

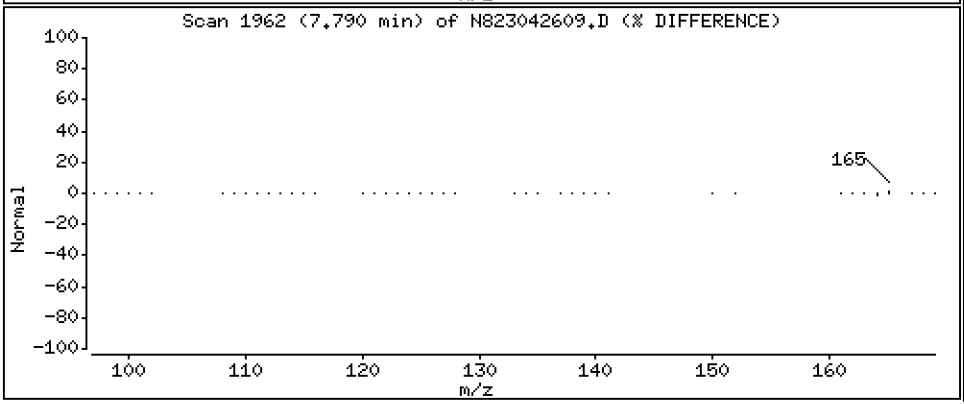
14 Fluorene

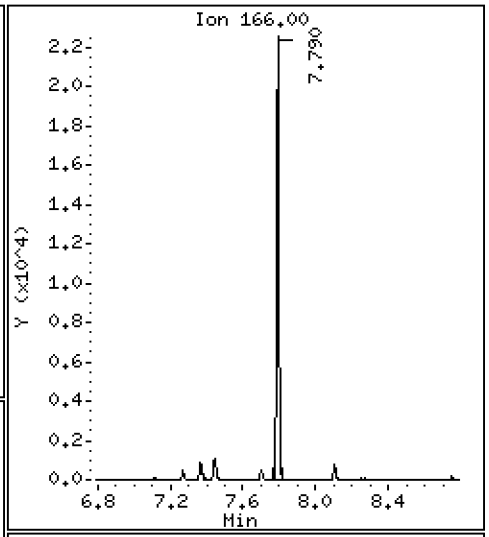
Concentration: 2.293 ug/L

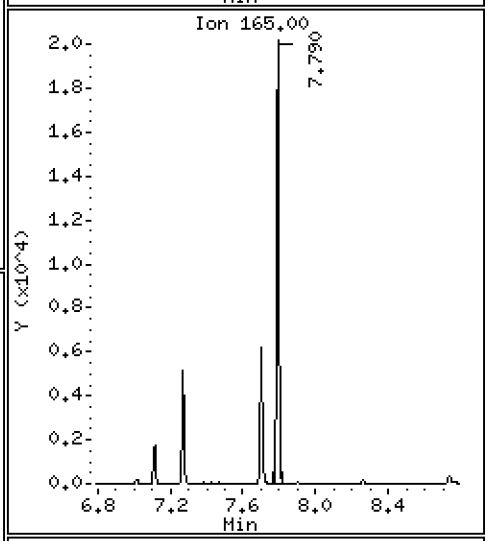


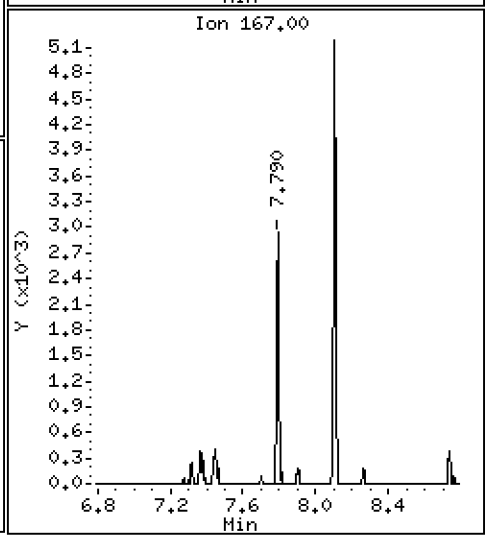












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

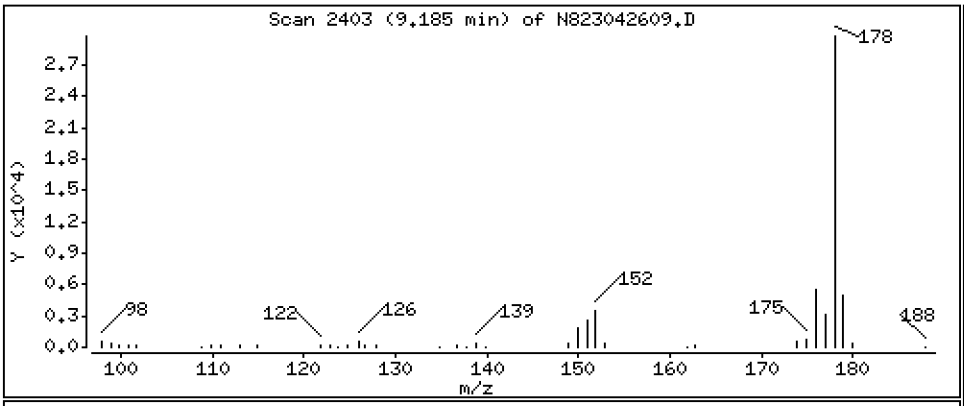
Operator: JZ

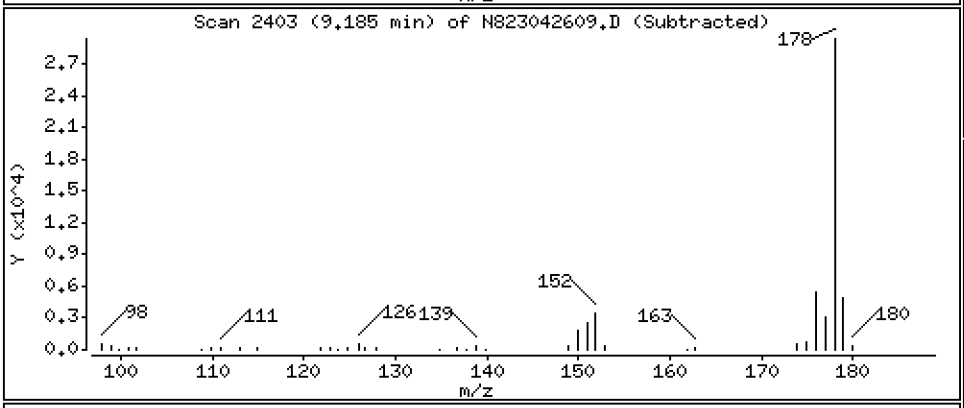
Column phase: Rxi-17sil

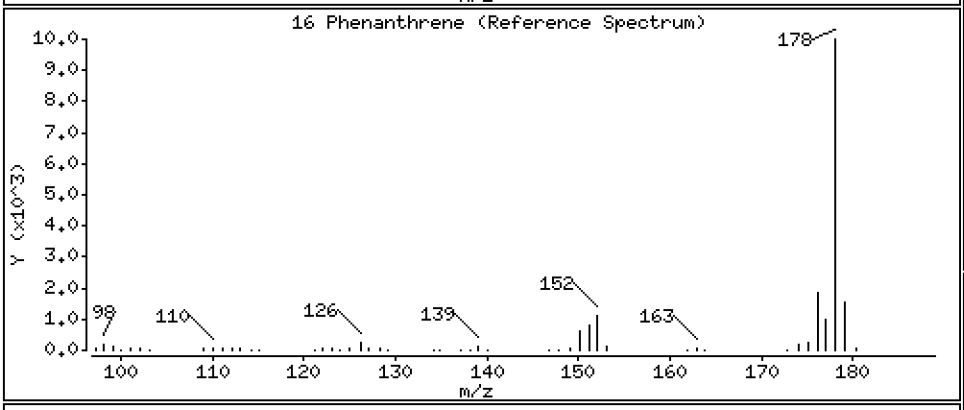
Column diameter: 0.25

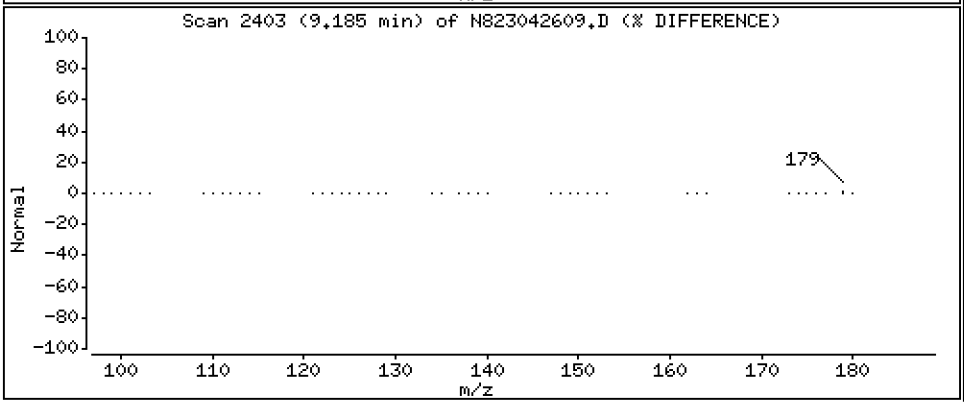
16 Phenanthrene

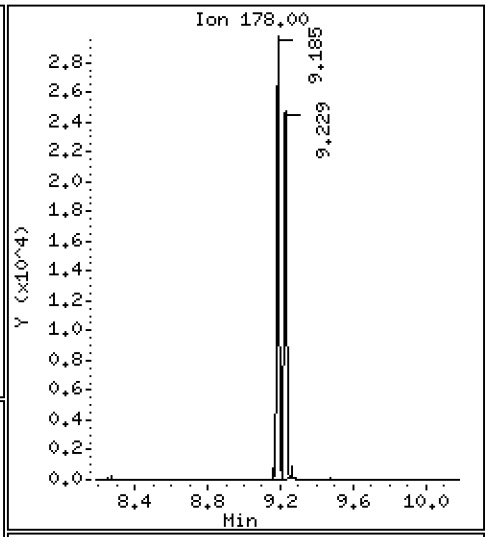
Concentration: 2.161 ug/L

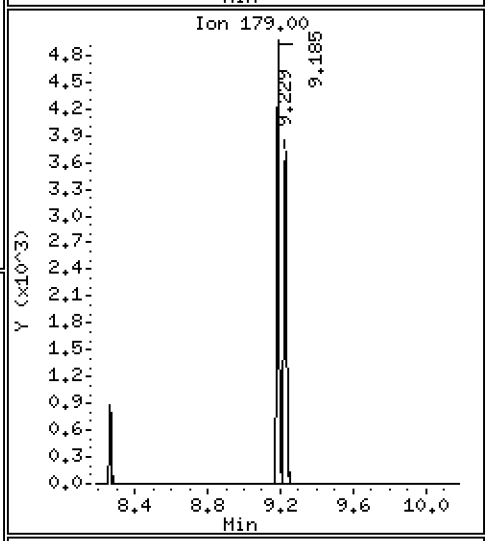


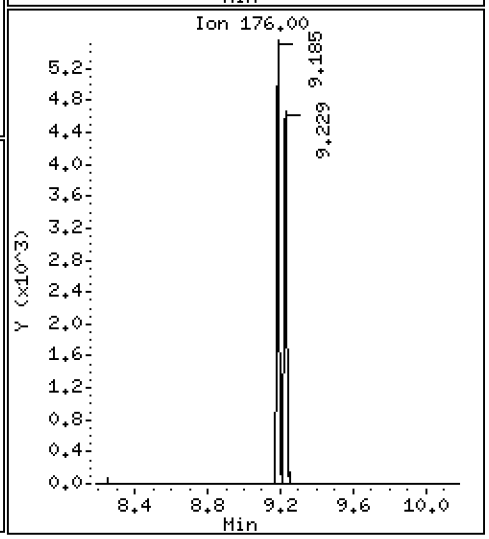












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

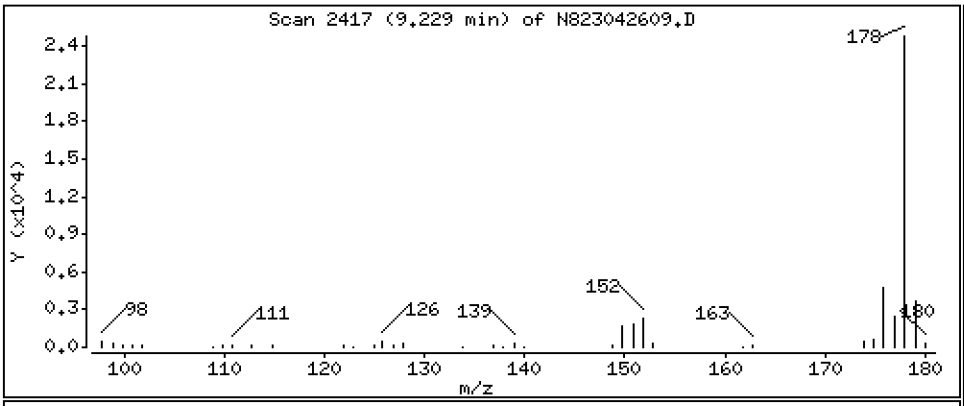
Operator: JZ

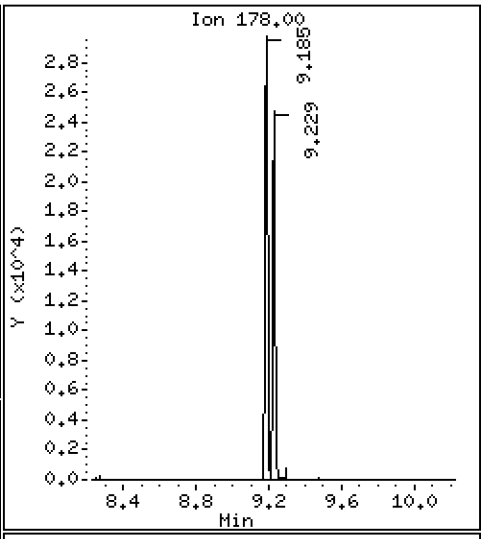
Column phase: Rxi-17sil

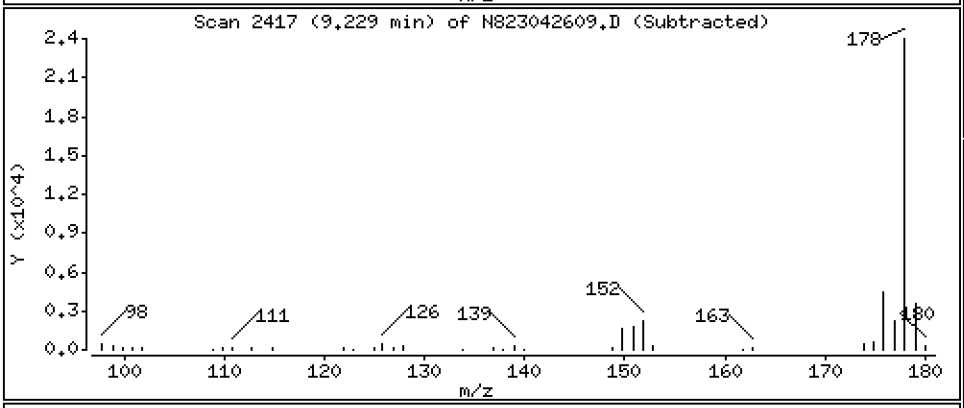
Column diameter: 0.25

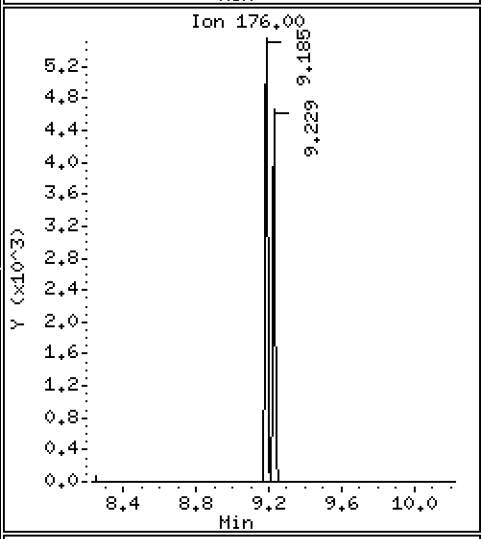
17 Anthracene

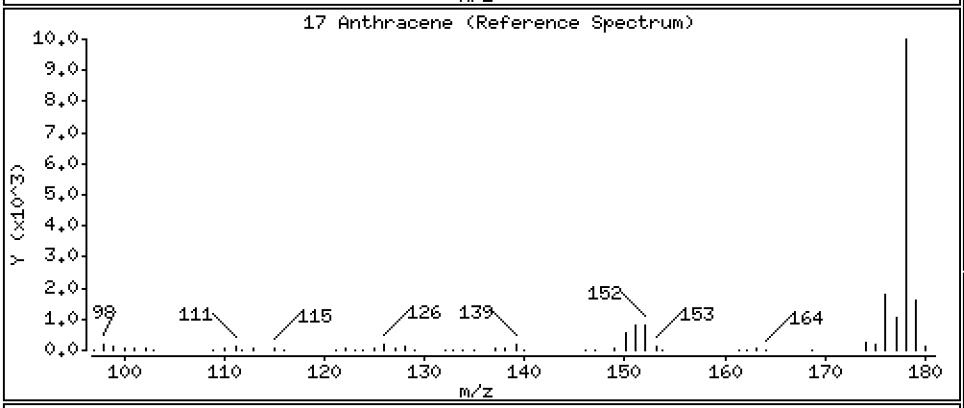
Concentration: 2.008 ug/L

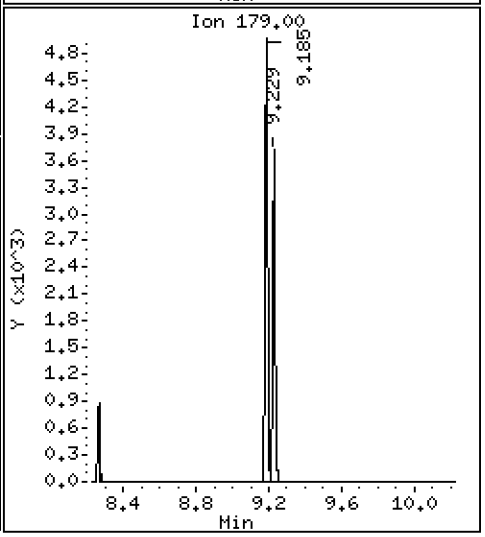


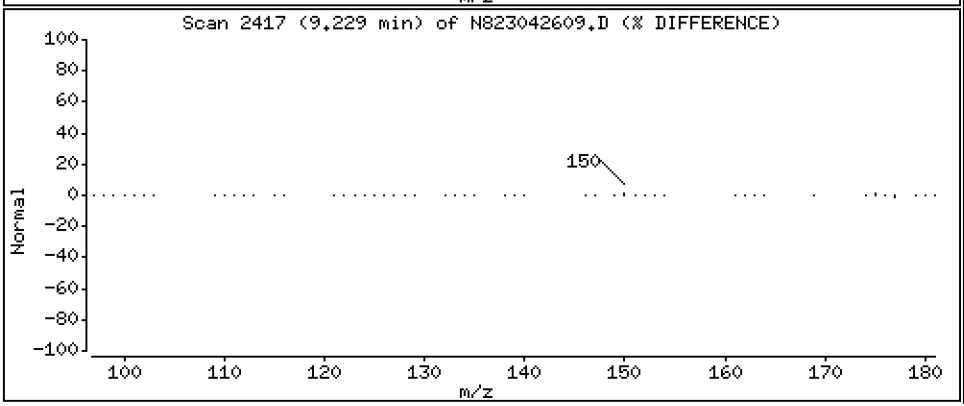












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

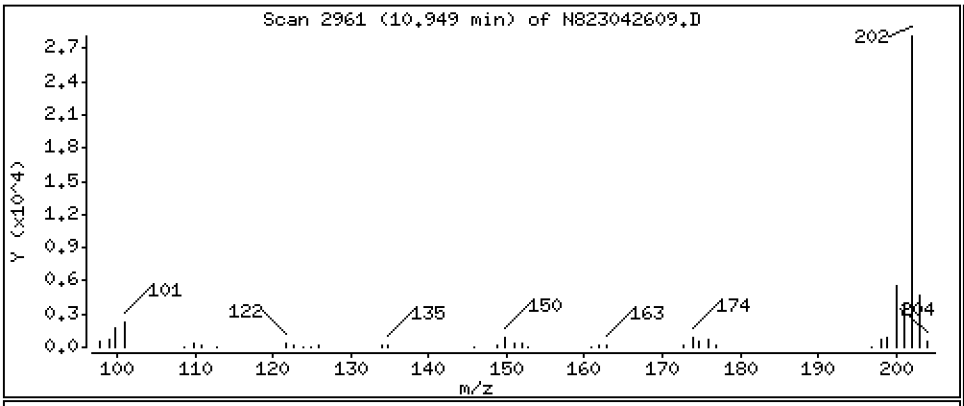
Operator: JZ

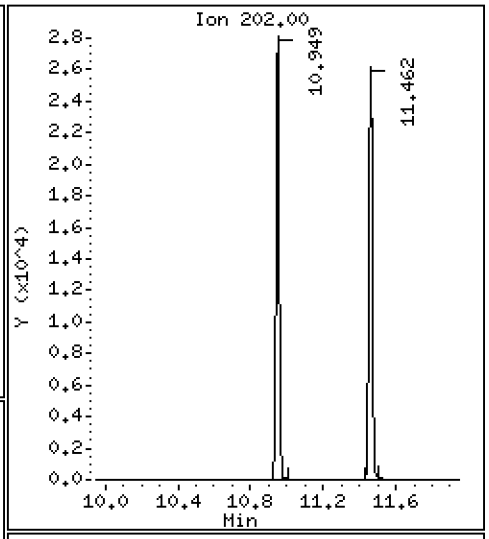
Column phase: Rxi-17sil

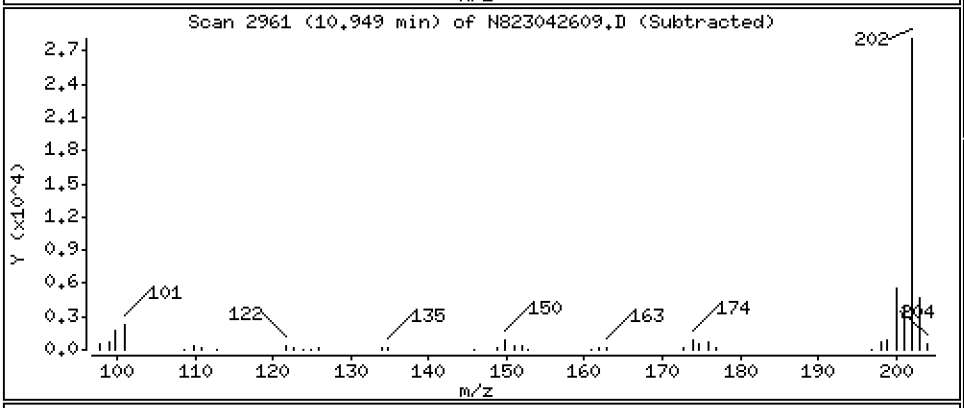
Column diameter: 0.25

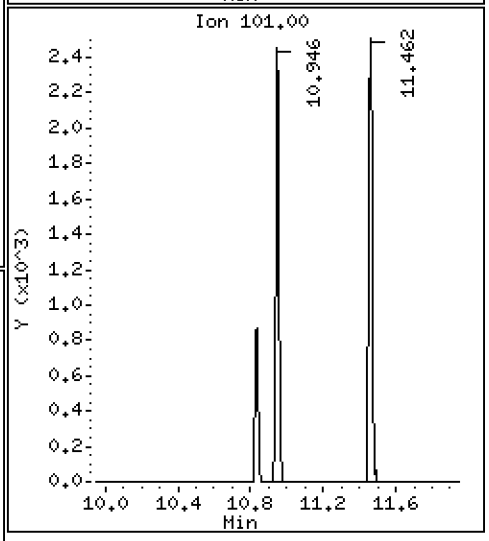
22 Fluoranthene

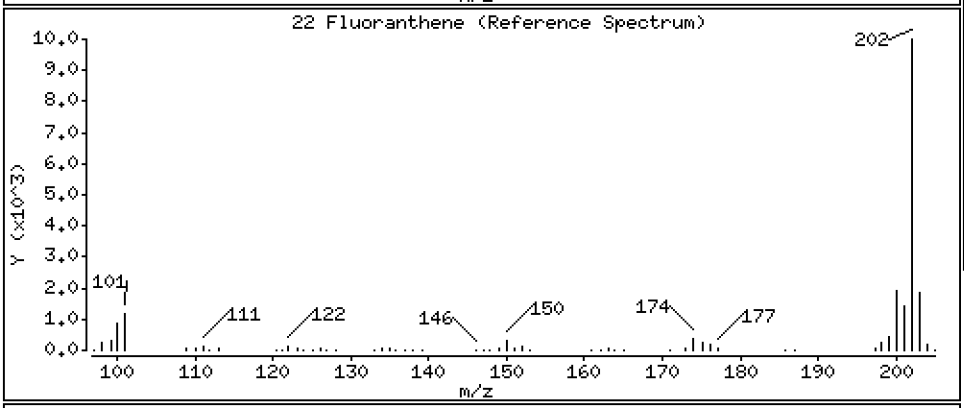
Concentration: 2.256 ug/L

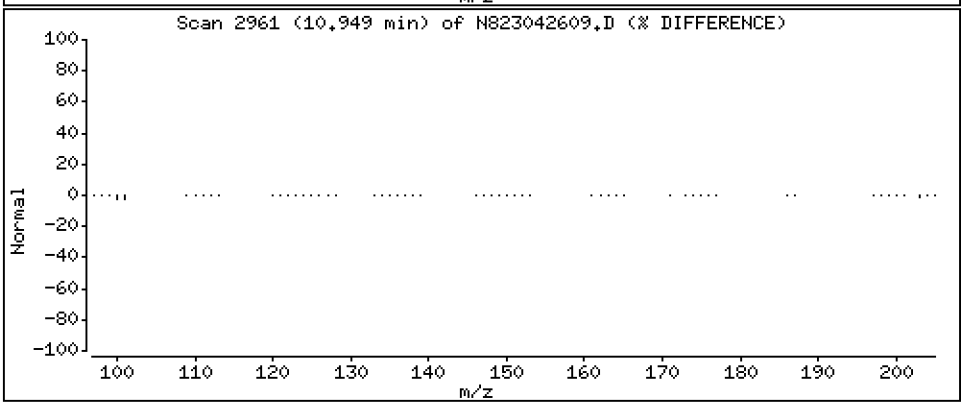












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

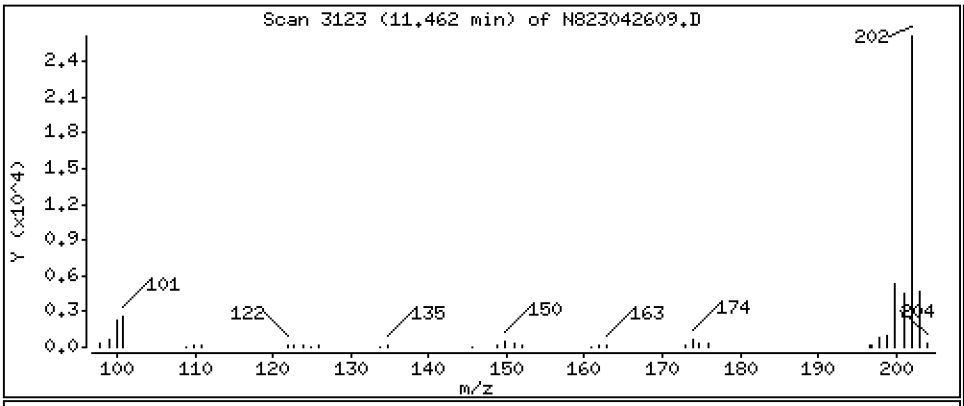
Operator: JZ

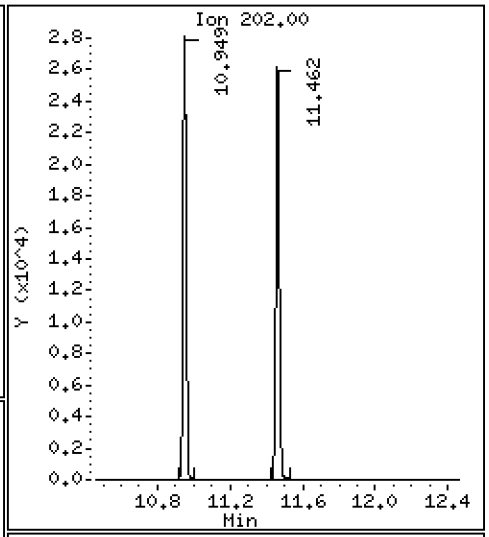
Column phase: Rxi-17sil

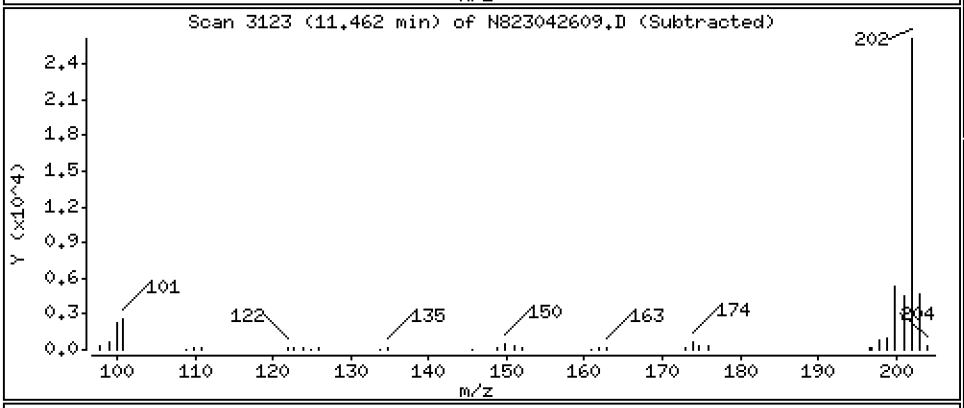
Column diameter: 0.25

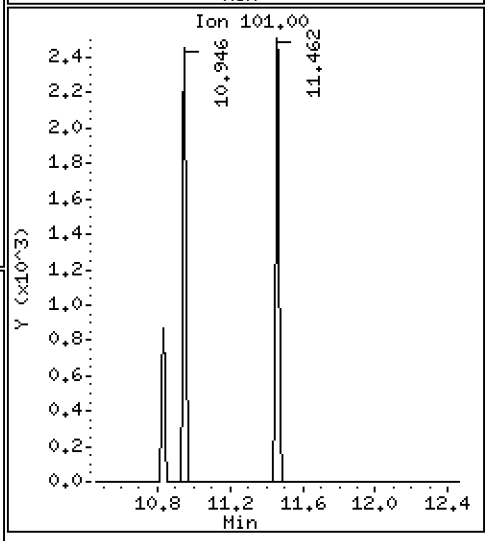
23 Pyrene

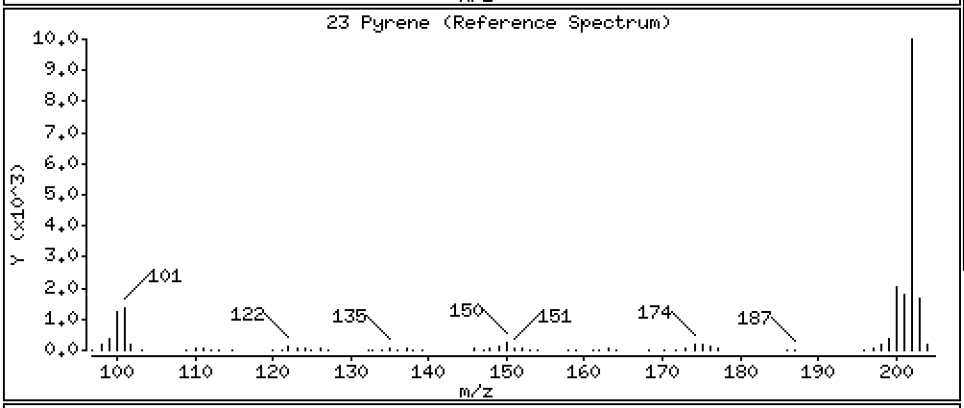
Concentration: 2.227 ug/L

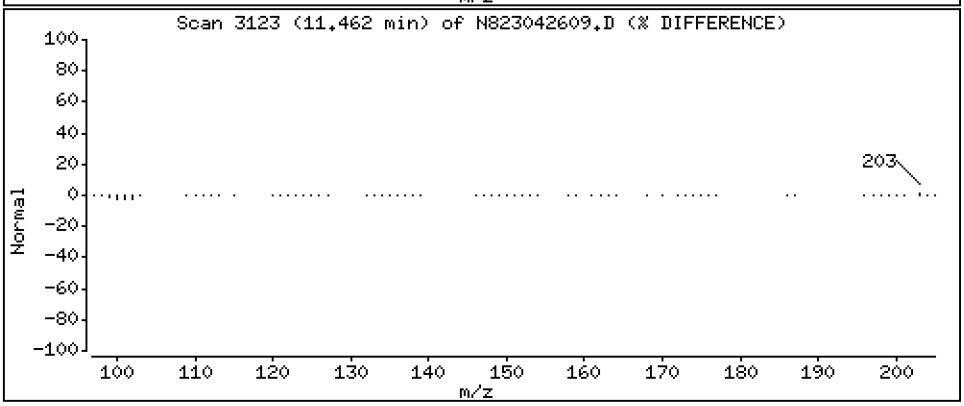












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

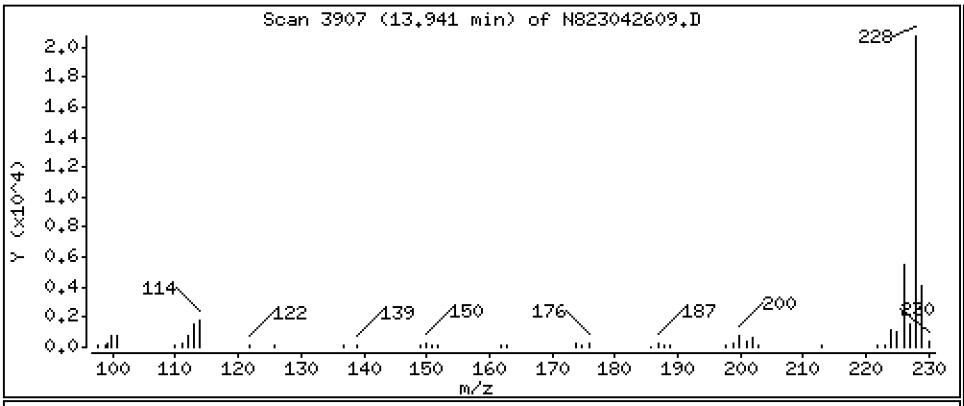
Operator: JZ

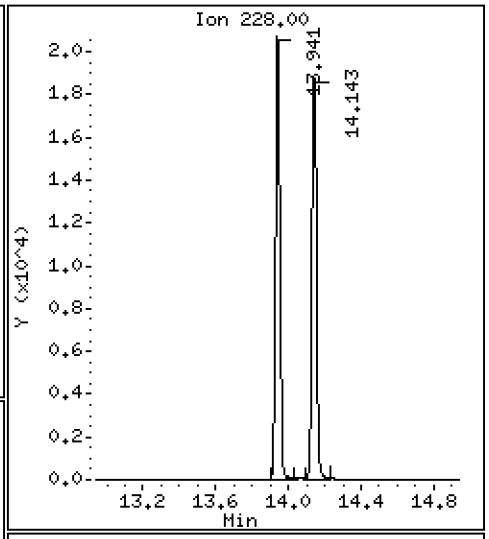
Column phase: Rxi-17sil

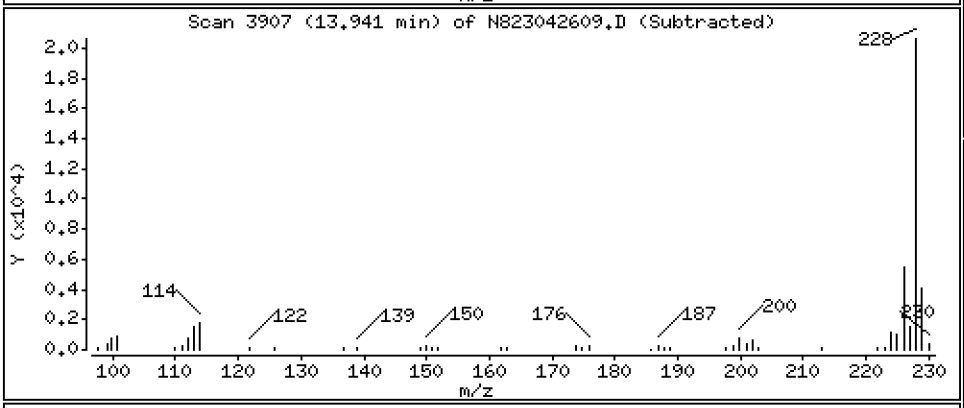
Column diameter: 0.25

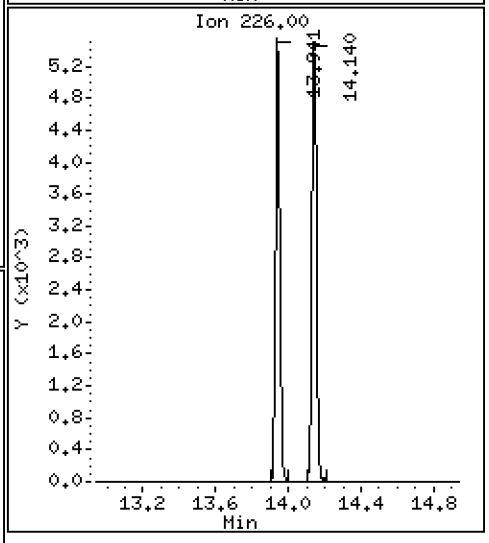
24 Benzo(a)anthracene

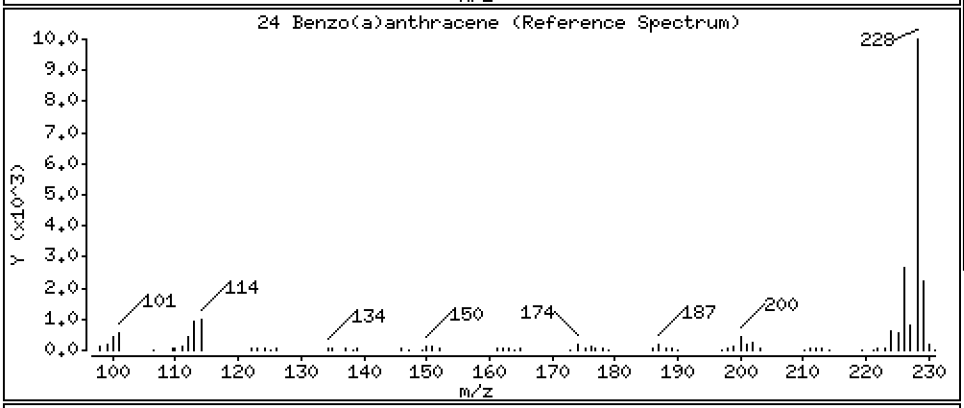
Concentration: 2.175 ug/L

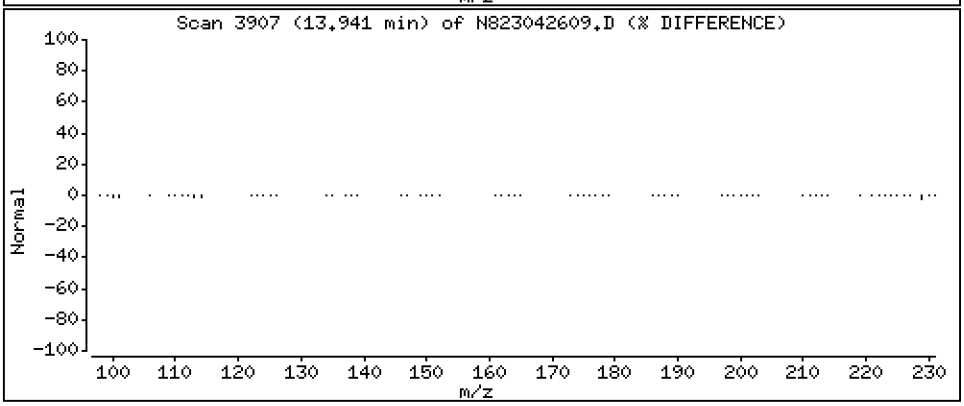












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

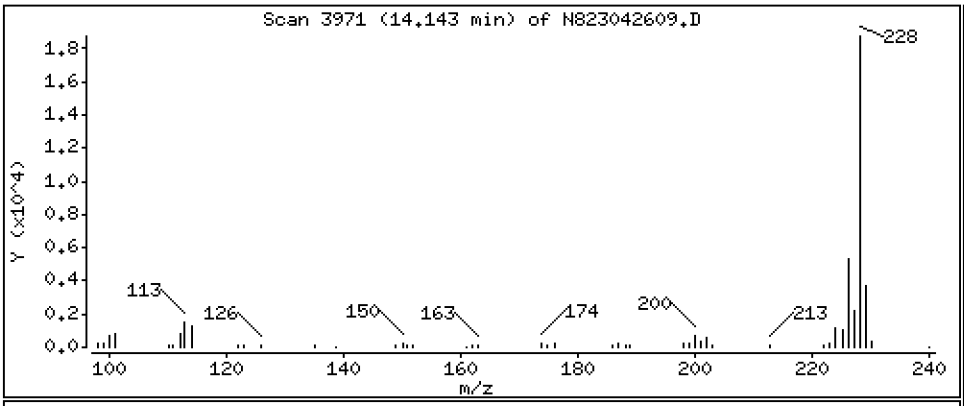
Operator: JZ

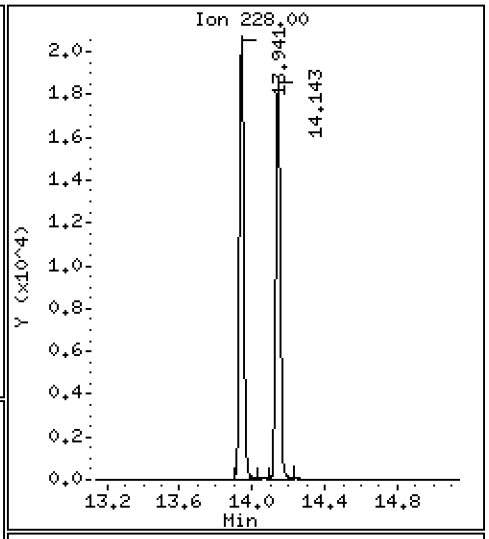
Column phase: Rxi-17sil

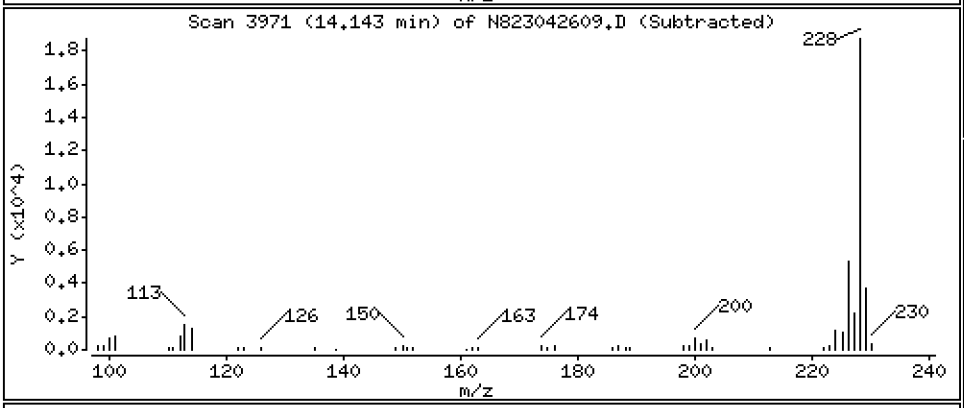
Column diameter: 0.25

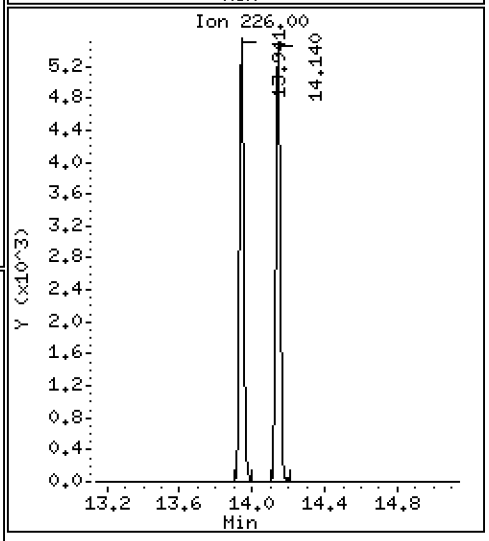
27 Chrysene

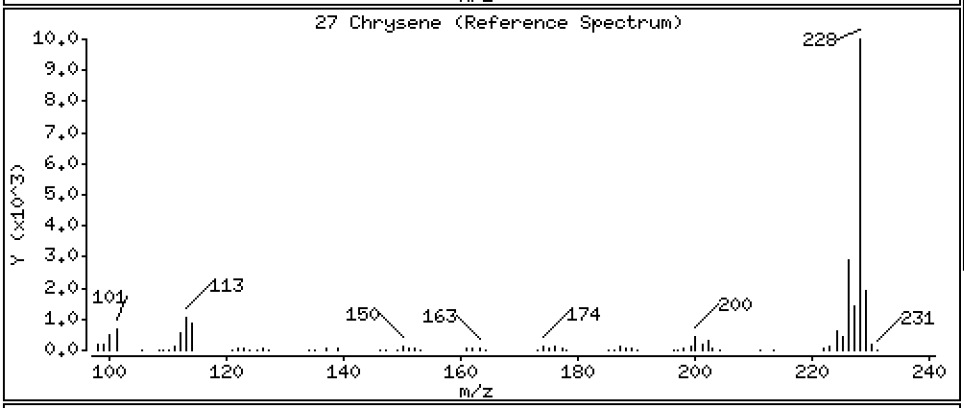
Concentration: 2.137 ug/L

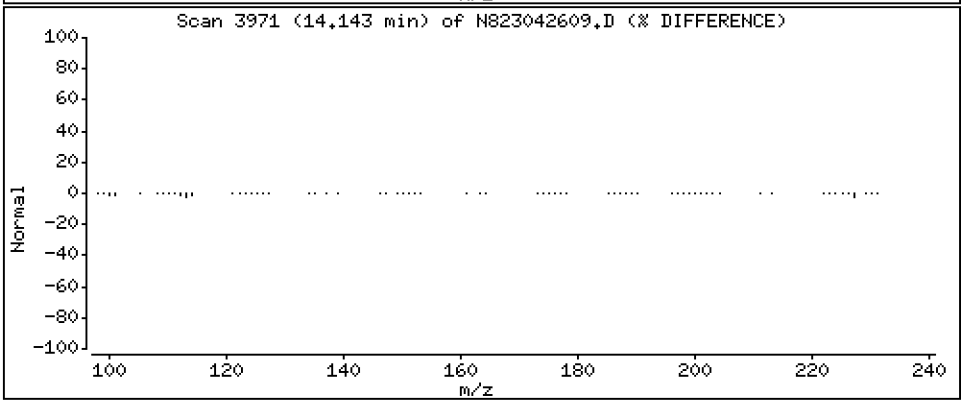












Date : 26-APR-2023 20:49

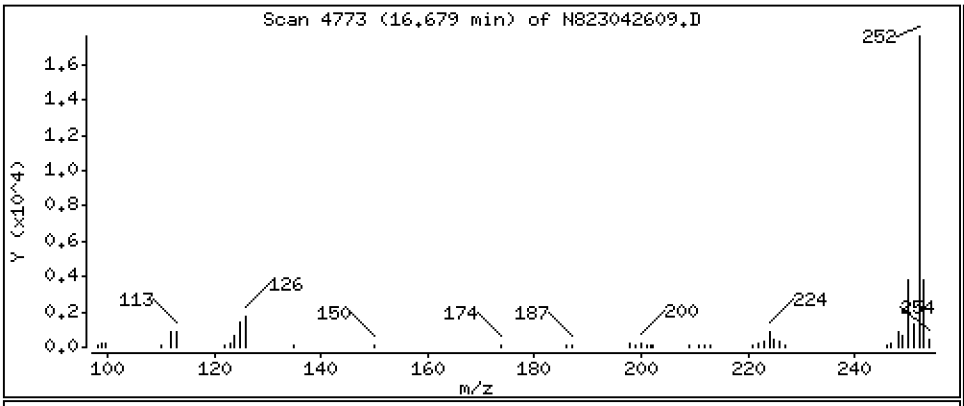
Client ID: Instrument: nt8.i

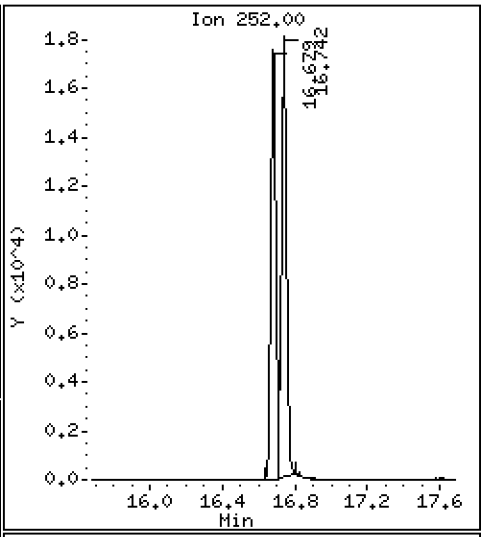
Sample Info: SCV230426

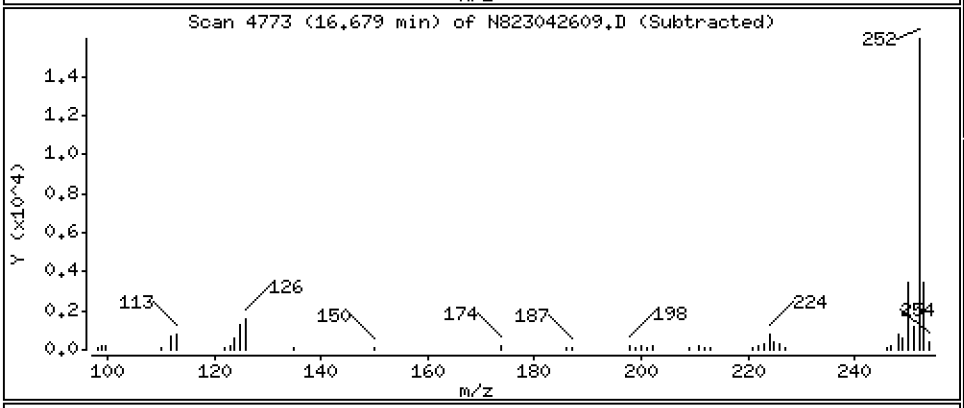
Volume Injected (uL): 1.0 Operator: JZ

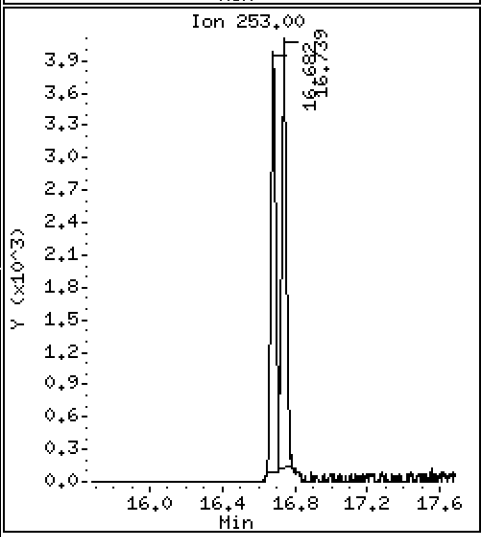
Column phase: Rxi-17sil Column diameter: 0.25

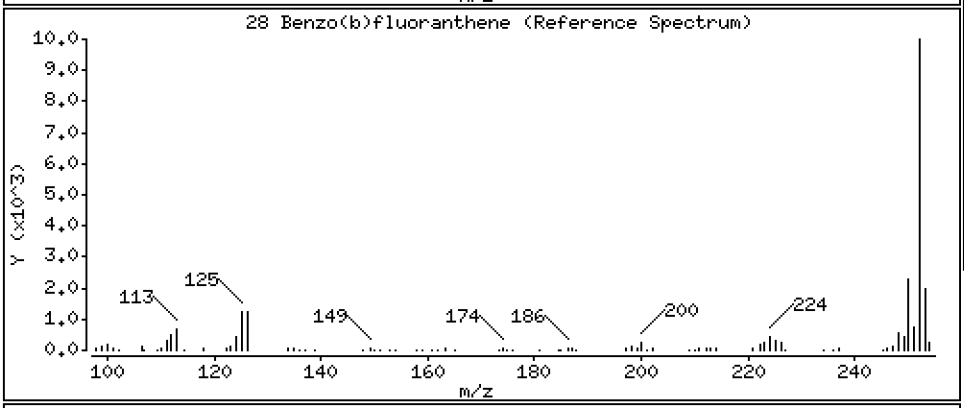
28 Benzo(b)fluoranthene Concentration: 2.156 ug/L

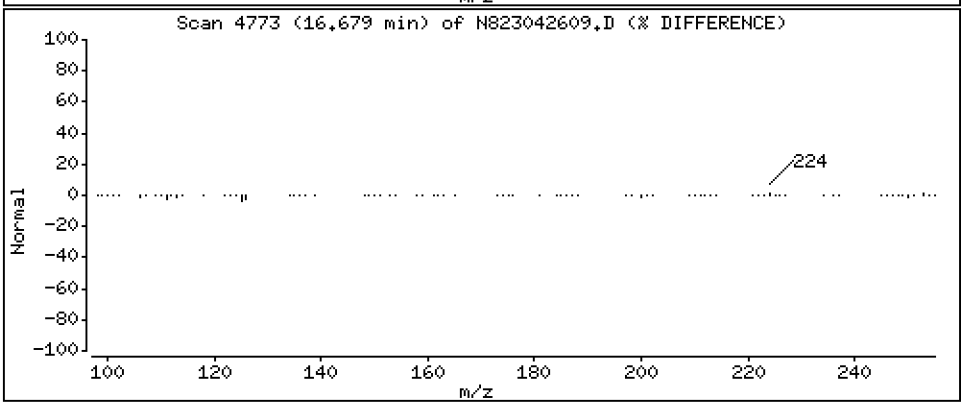












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

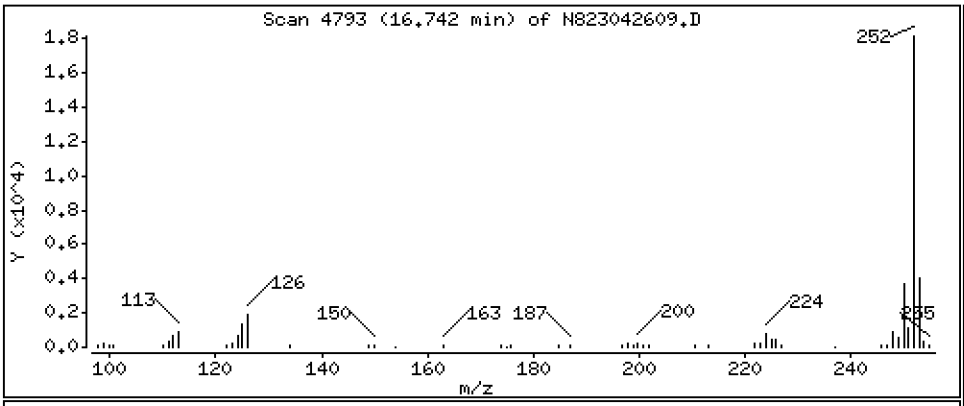
Operator: JZ

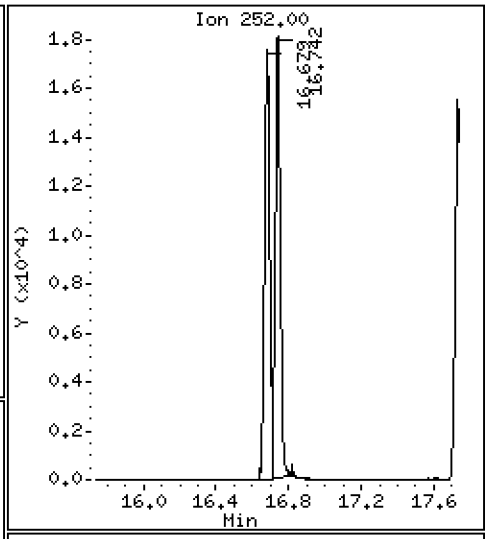
Column phase: Rxi-17sil

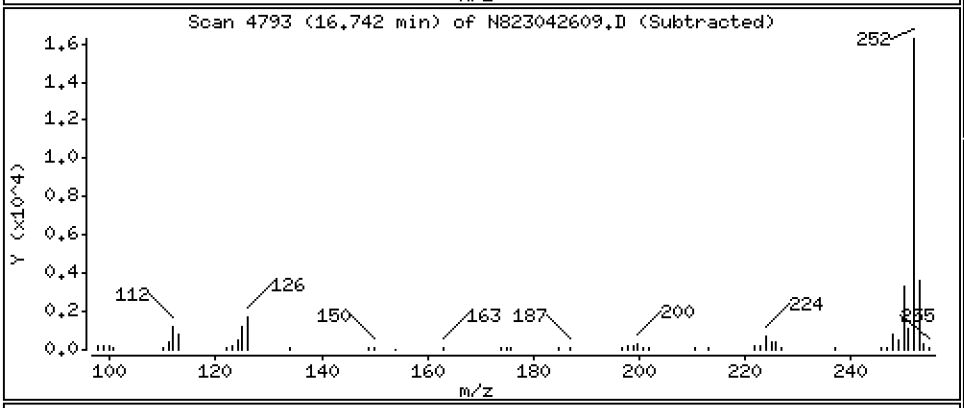
Column diameter: 0.25

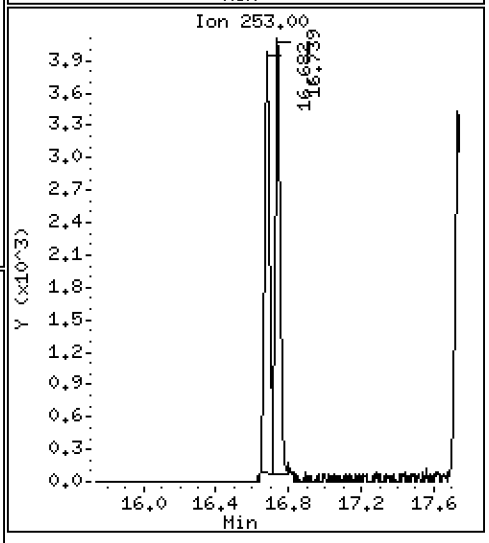
29 Benzo(k)fluoranthene

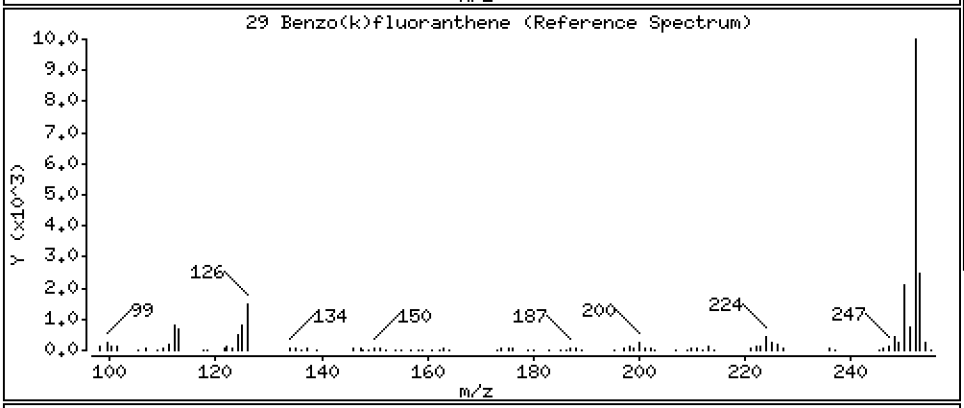
Concentration: 2.301 ug/L

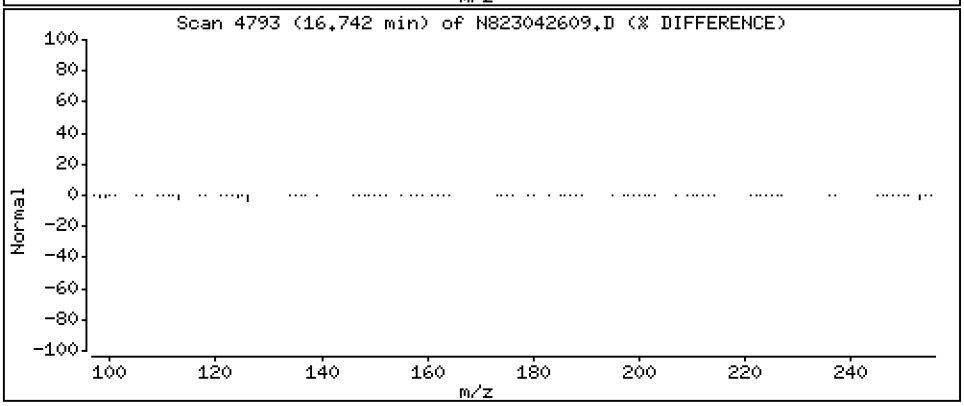












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

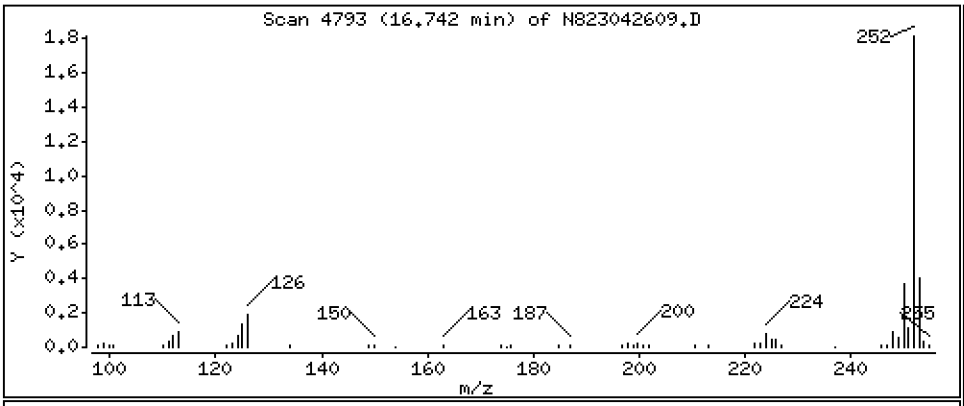
Operator: JZ

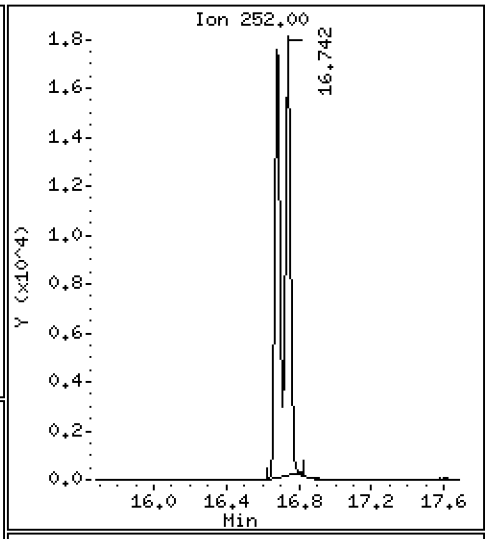
Column phase: Rxi-17sil

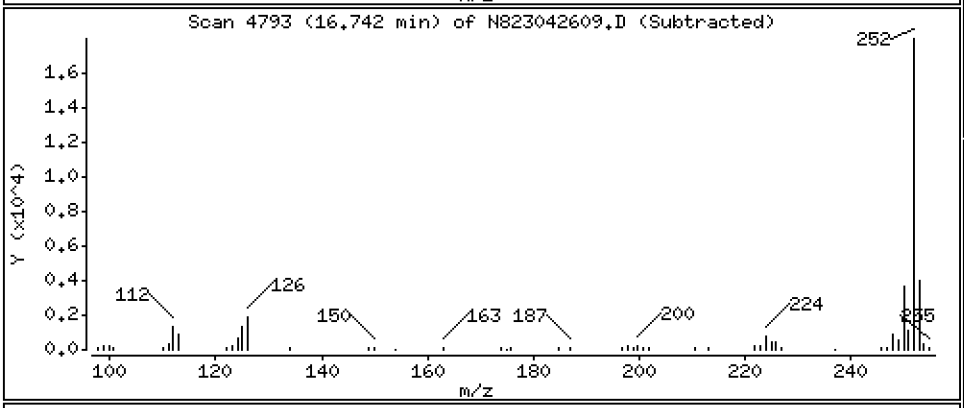
Column diameter: 0.25

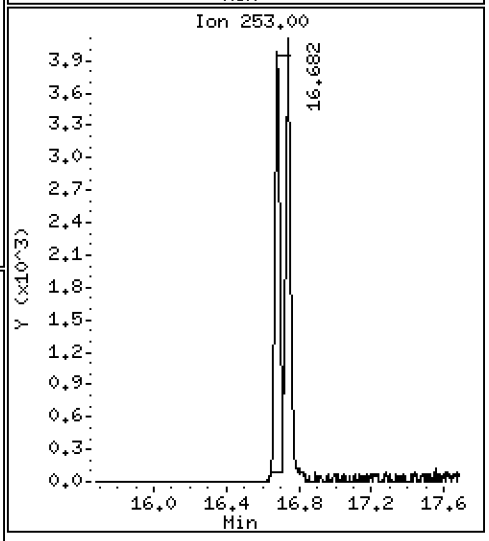
31 Total Benzofluoranthenes

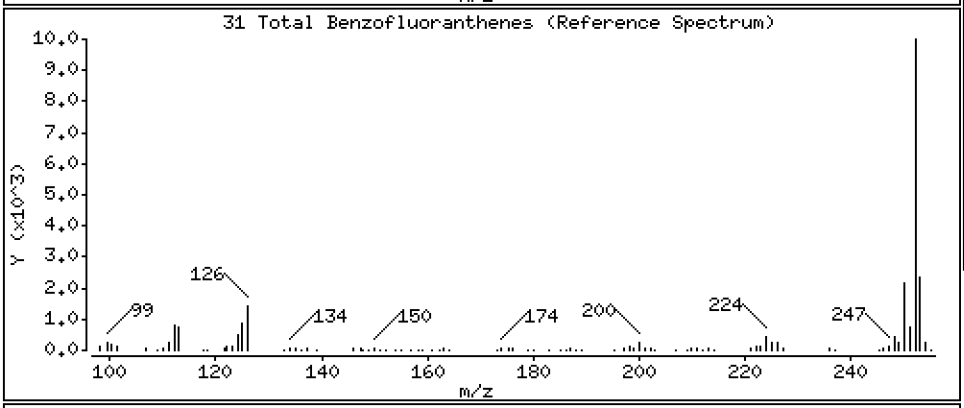
Concentration: 4.553 ug/L

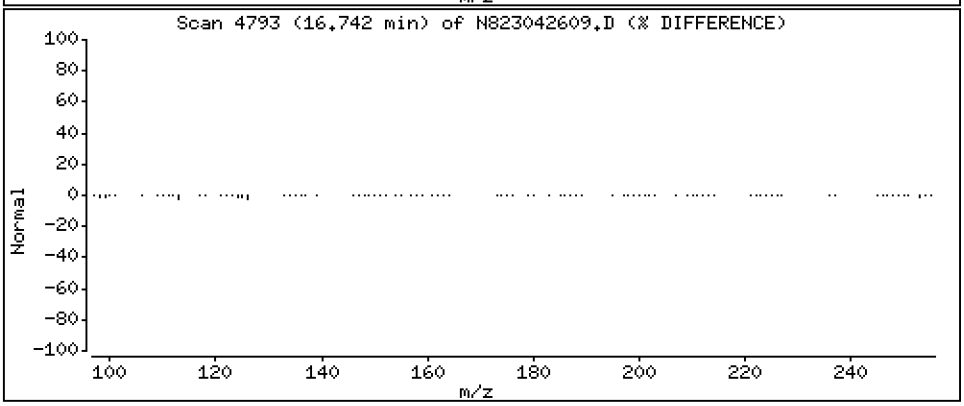












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

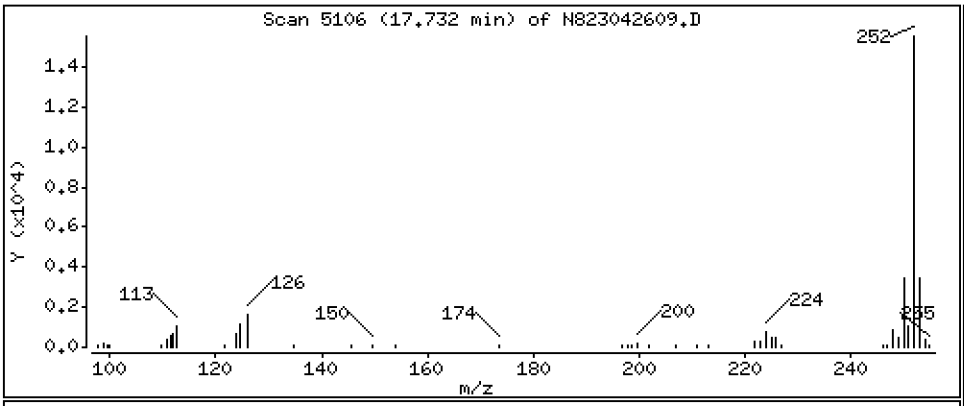
Operator: JZ

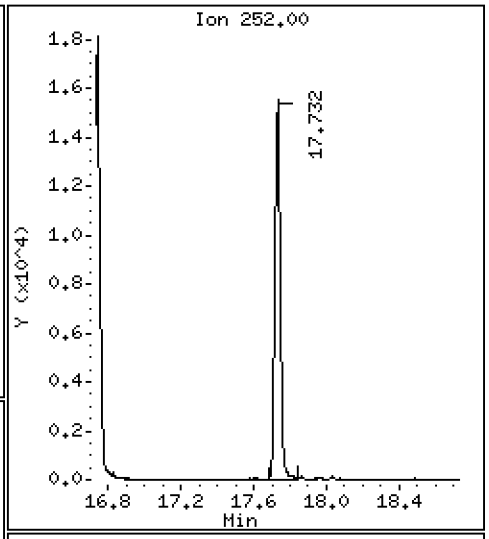
Column phase: Rxi-17sil

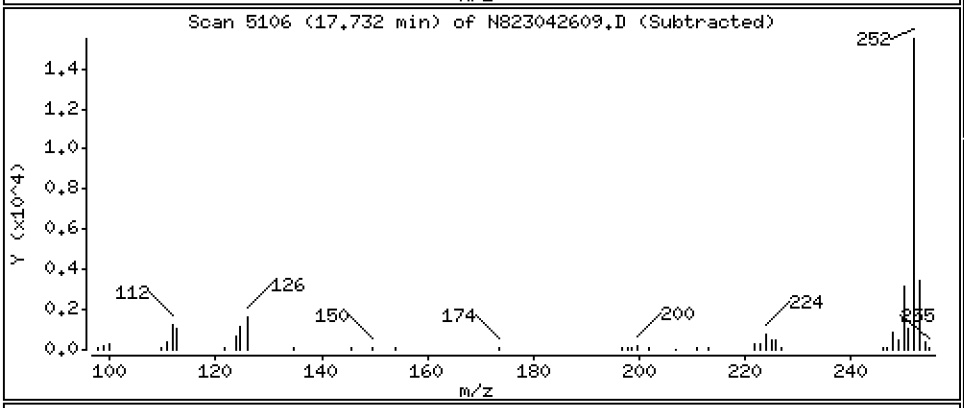
Column diameter: 0.25

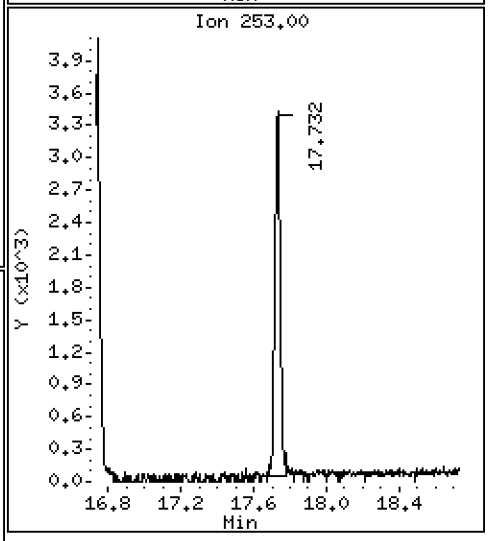
32 Benzo(a)pyrene

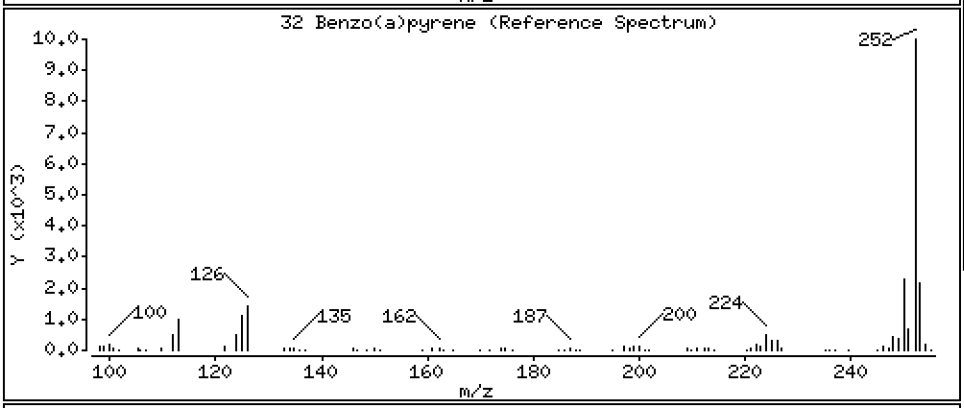
Concentration: 2.295 ug/L

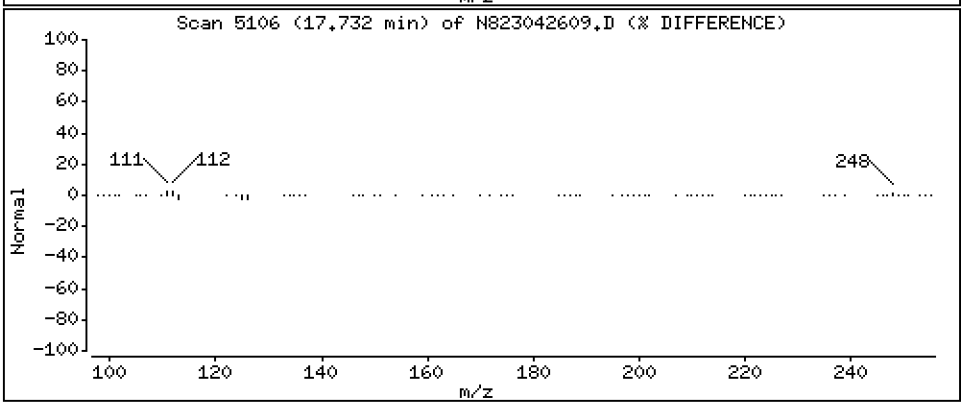












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

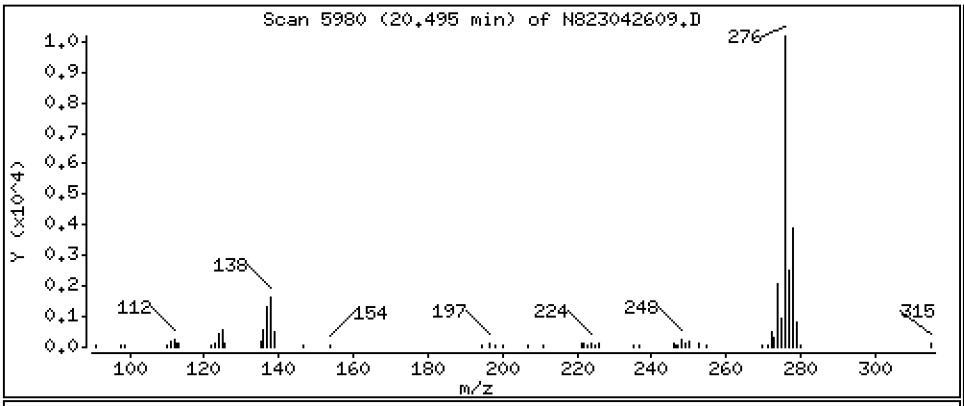
Operator: JZ

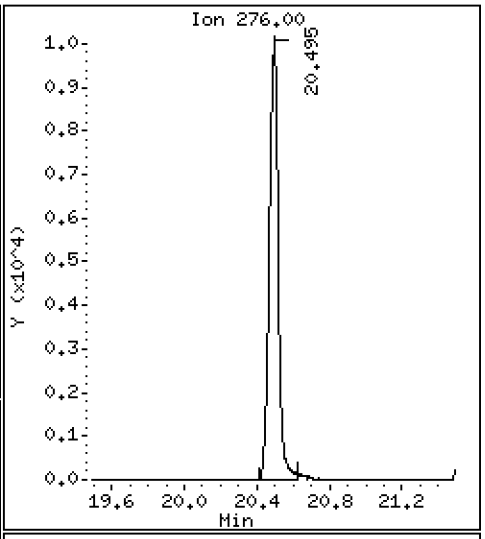
Column phase: Rxi-17sil

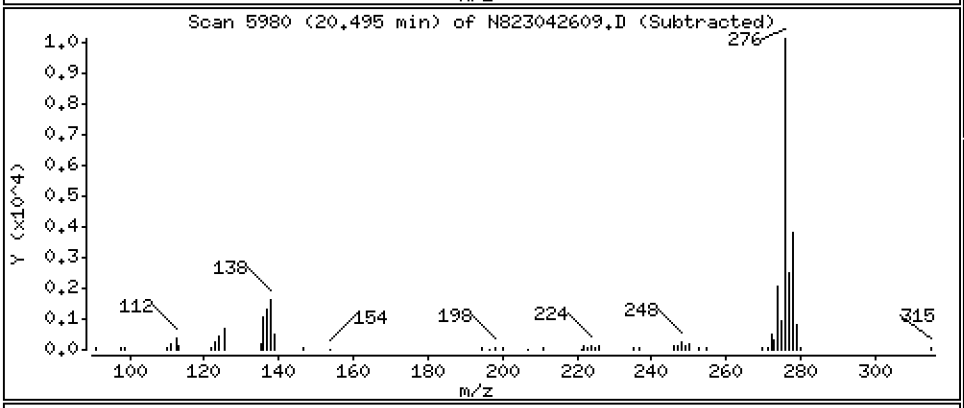
Column diameter: 0.25

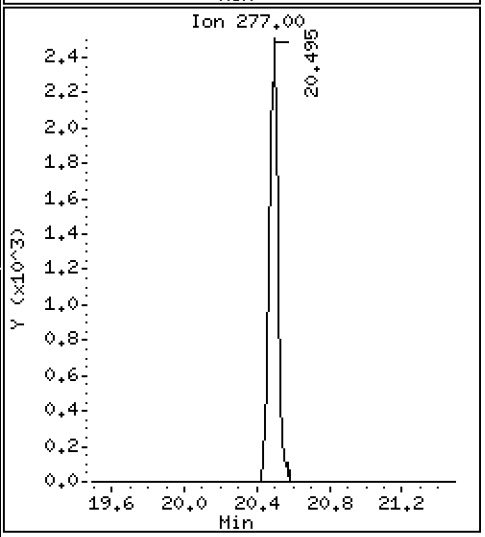
37 Indeno(1,2,3-cd)pyrene

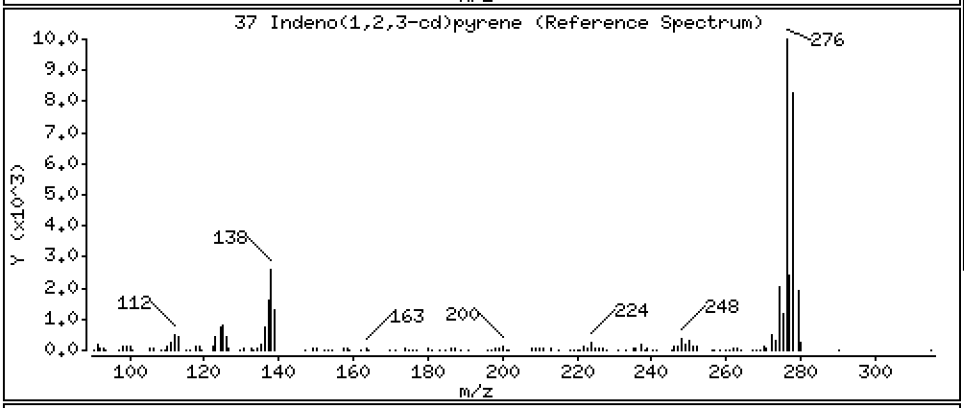
Concentration: 2.450 ug/L

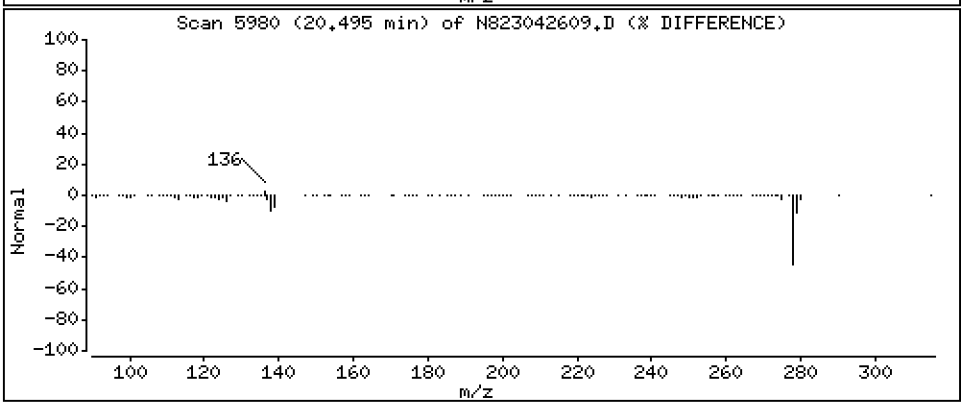












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

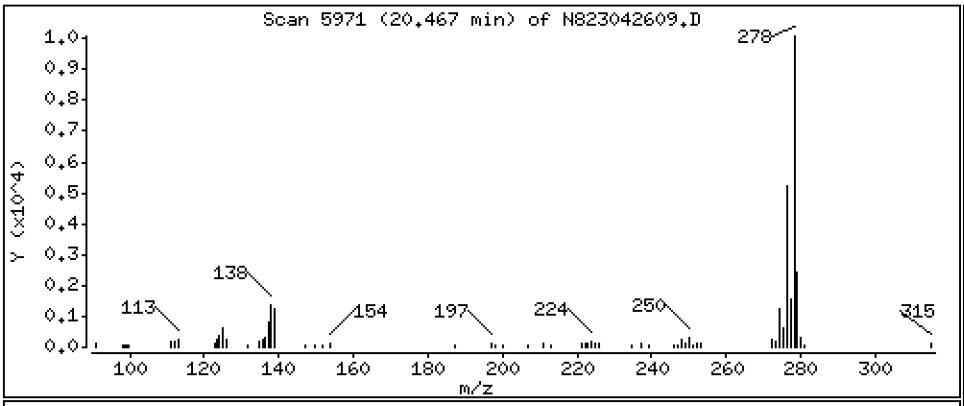
Operator: JZ

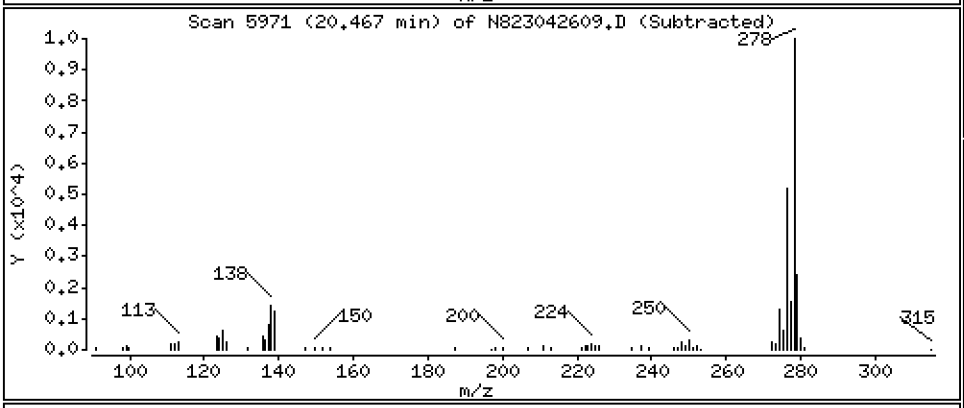
Column phase: Rxi-17sil

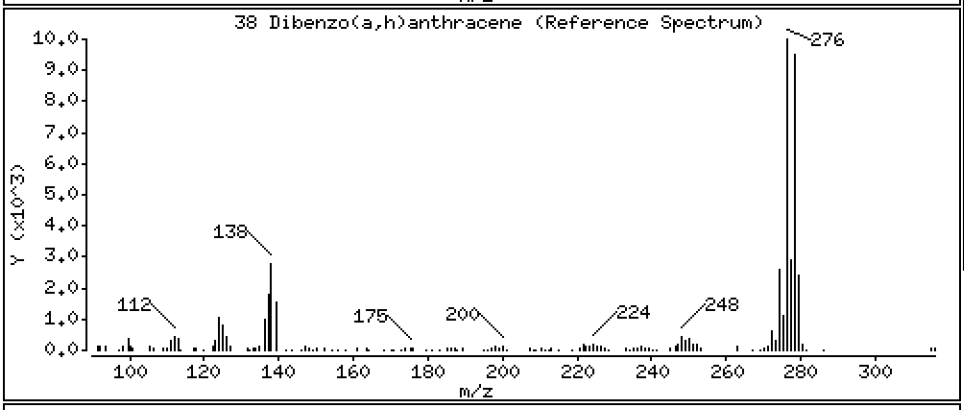
Column diameter: 0.25

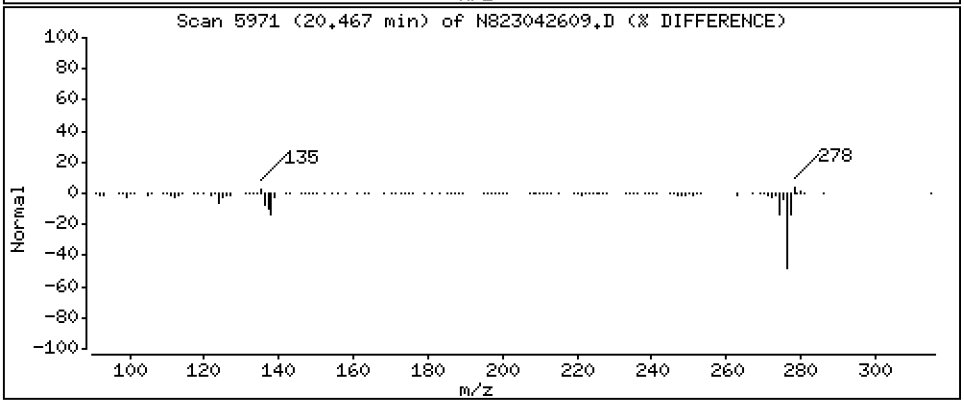
38 Dibenzo(a,h)anthracene

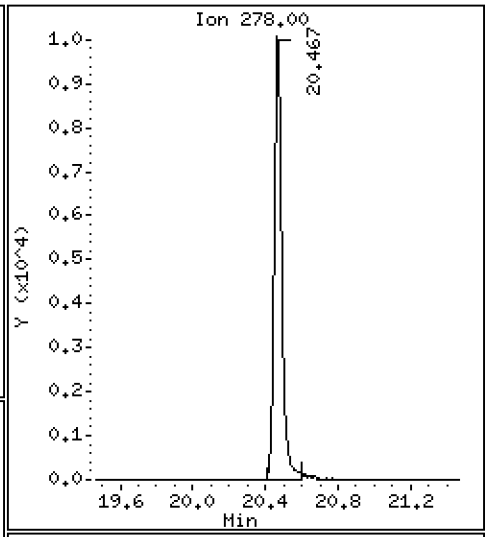
Concentration: 2.334 ug/L

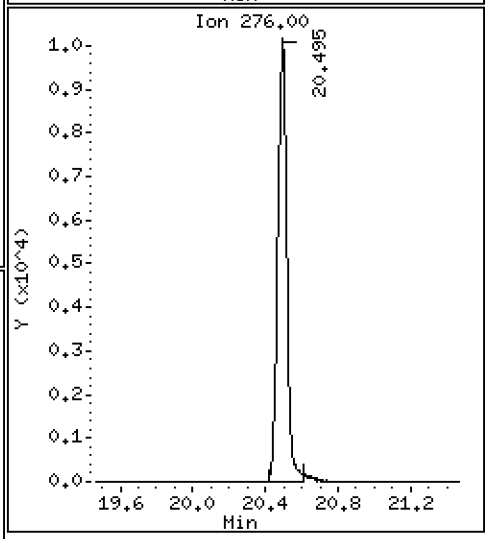












Date : 26-APR-2023 20:49

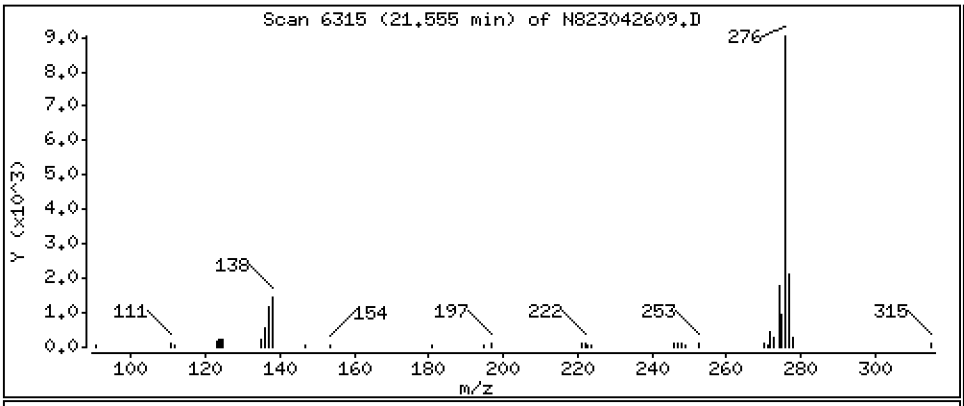
Client ID: Instrument: nt8.i

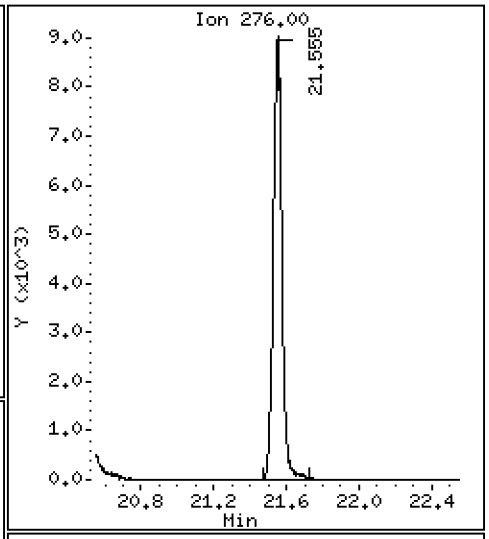
Sample Info: SCV230426

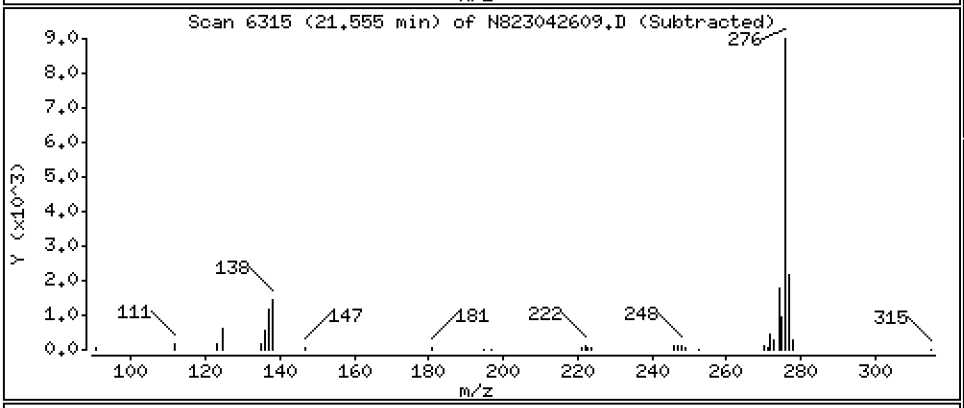
Volume Injected (uL): 1.0 Operator: JZ

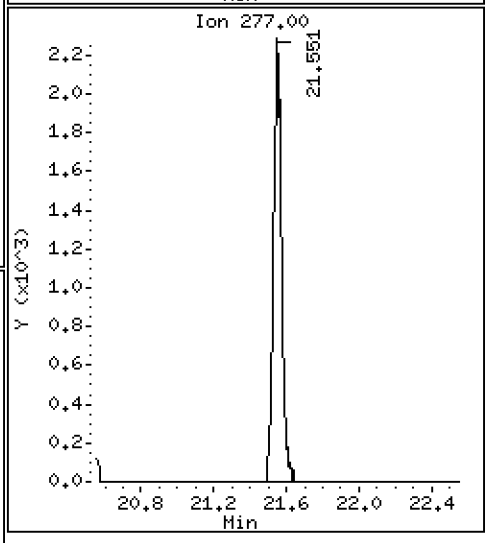
Column phase: Rxi-17sil Column diameter: 0.25

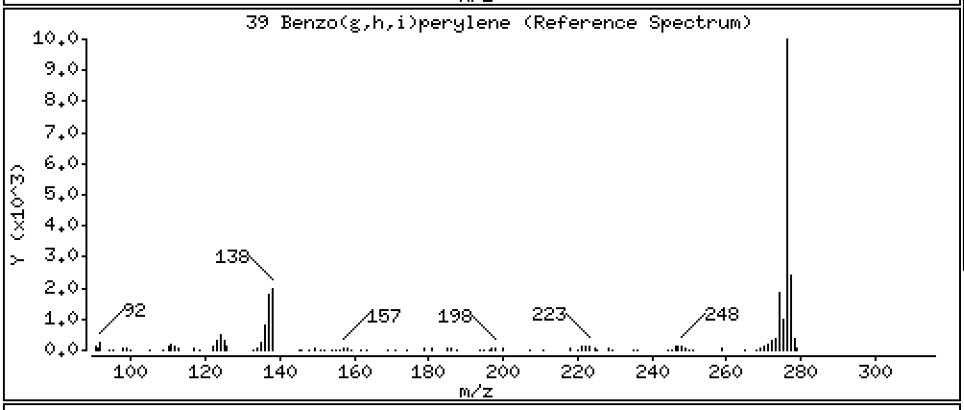
39 Benzo(g,h,i)perylene Concentration: 2.248 ug/L

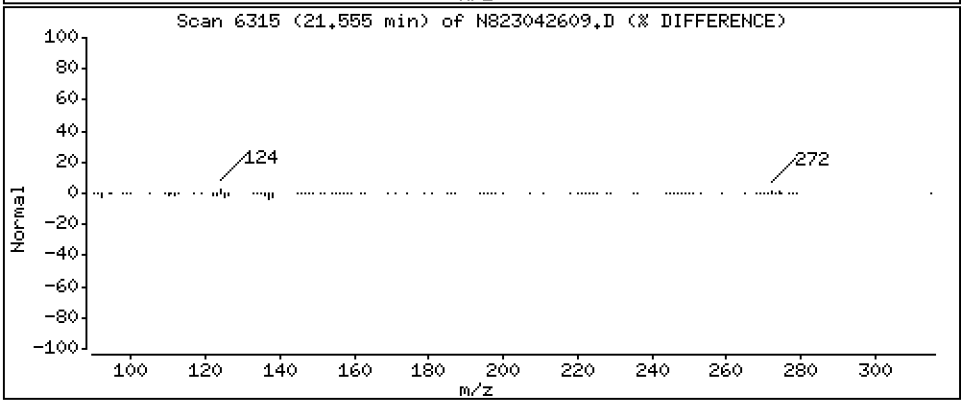












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D
Lab Smp Id: SLD0372-SCV1
Inj Date : 26-APR-2023 20:49
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230426
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA230426
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
* 1	Naphthalene-d8	136	4.827	4.827	(1.000)	20718	2.00000	
2	Naphthalene	128	4.856	4.856	(1.006)	24938	2.36264	2.363
$ 3	2-Methylnaphthalene-d10	152	Compound Not Detected.					
4	2-Methylnaphthalene	141	5.605	5.605	(1.161)	14334	2.39183	2.392
5	1-methylnaphthalene	141	5.801	5.801	(1.202)	14142	2.38001	2.380
9	Acenaphthylene	152	7.003	7.003	(0.984)	25991	2.32237	2.322
* 10	Acenaphthene-d10	164	7.113	7.110	(1.000)	12642	2.00000	
11	Acenaphthene	153	7.161	7.161	(1.007)	16198	2.23392	2.234
12	Dibenzofuran	168	7.316	7.313	(1.028)	27419	2.51765	2.518
14	Fluorene	166	7.790	7.790	(1.095)	19927	2.29268	2.293
* 15	Phenanthrene-d10	188	9.150	9.150	(1.000)	24547	2.00000	
16	Phenanthrene	178	9.184	9.185	(1.004)	28095	2.16083	2.161
17	Anthracene	178	9.229	9.226	(1.009)	24487	2.00809	2.008
22	Fluoranthene	202	10.949	10.949	(1.197)	33741	2.25628	2.256
$ 21	Fluoranthene-d10	212	Compound Not Detected.					
23	Pyrene	202	11.461	11.461	(0.815)	34528	2.22695	2.227
24	Benzo(a)anthracene	228	13.940	13.940	(0.991)	34655	2.17519	2.175
* 25	Chrysene-d12	240	14.070	14.067	(1.000)	24217	2.00000	
27	Chrysene	228	14.142	14.139	(1.005)	33440	2.13657	2.137
28	Benzo(b)fluoranthene	252	16.678	16.682	(0.929)	35085	2.15649	2.156
29	Benzo(k)fluoranthene	252	16.742	16.739	(0.932)	35276	2.30130	2.301
31	Total Benzofluoranthenes	252	16.742	16.682	(0.932)	68883	4.55291	4.553(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.731	17.731	(0.987)	32452	2.29472	2.295
*	33 Perylene-d12	264	17.959	17.959	(1.000)	24956	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.495	20.492	(1.141)	35264	2.44967	2.450
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.466	20.467	(1.140)	29838	2.33423	2.334
	39 Benzo(g,h,i)perylene	276	21.554	21.551	(1.200)	29972	2.24768	2.248

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042609.D
Lab Smp Id: SLD0372-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA23042
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	20718	10.80
10 Acenaphthene-d10	10729	5365	21458	12642	17.83
15 Phenanthrene-d10	20748	10374	41496	24547	18.31
25 Chrysene-d12	20954	10477	41908	24217	15.57
33 Perylene-d12	21563	10782	43126	24956	15.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.01
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042609.D

Lab ID: SLD0372-SCV1
nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m,   26-APR-2023 20:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

On Column LOD for nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m, pnascv.su

Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00070
Laboratory ID: SLE0339-SCV1
Sequence: SLE0339
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
1,4-Dichlorobenzene	5.0000	5.1	2.6	20.00
1,2-Dichlorobenzene	5.0000	5.0	0.1	20.00
Benzyl Alcohol	5.0000	5.7	14.1	20.00
Benzoic acid	10.000	7.8	-22.2 *	20.00
2,4-Dimethylphenol	5.0000	3.8	-23.7 *	20.00
1,2,4-Trichlorobenzene	5.0000	4.9	-1.9	20.00
N-Nitrosodiphenylamine	5.0000	5.6	12.5	20.00
Pentachlorophenol	5.0000	4.5	-9.9	20.00
2-Fluorophenol	7.5000	0.00		
p-Terphenyl-d14	5.0000	0.00		

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Page 1

Date : 17-MAY-2023 00:29

Client ID:

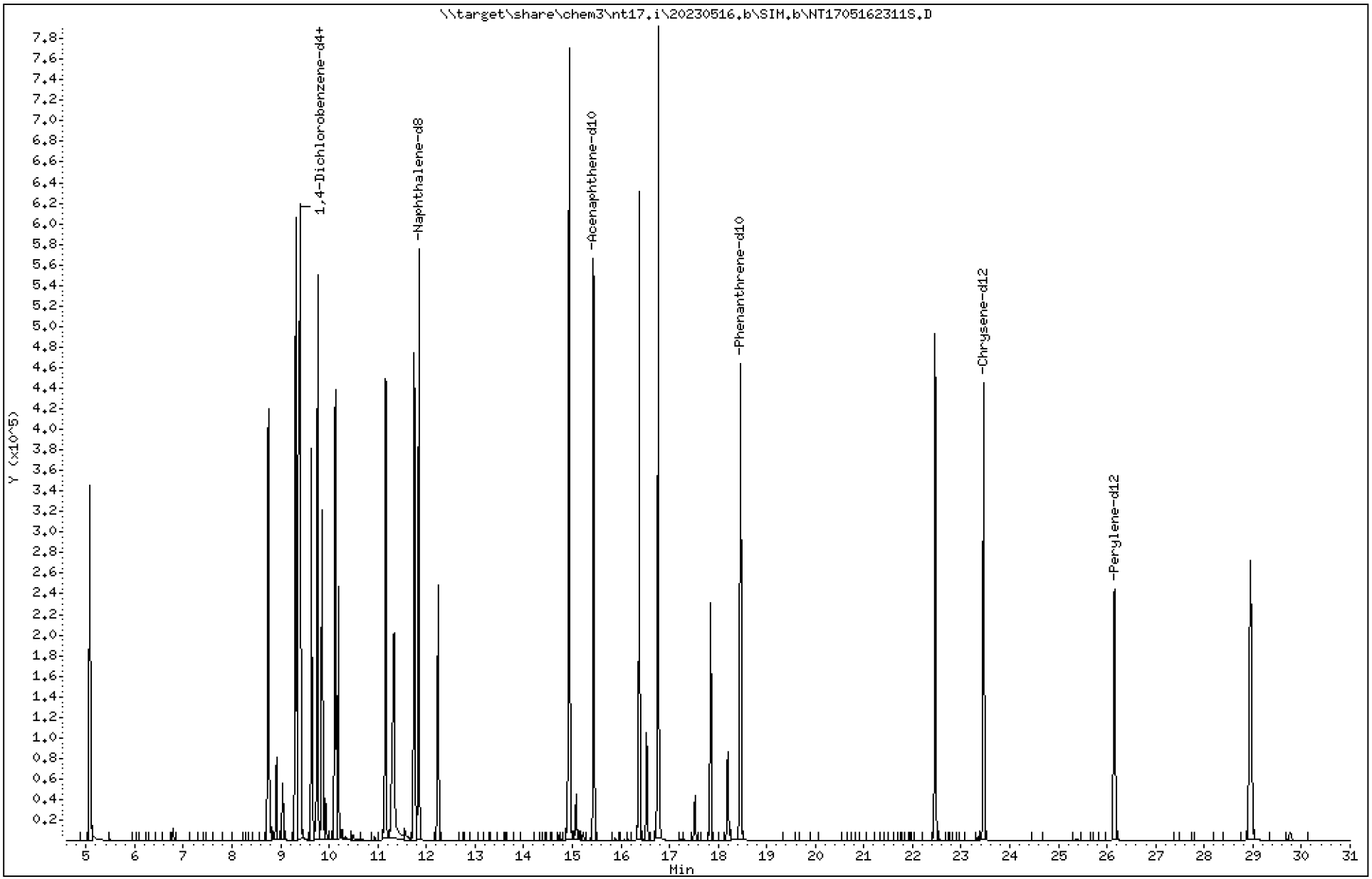
Instrument: nt17.i

Sample Info: SLE0339-SCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

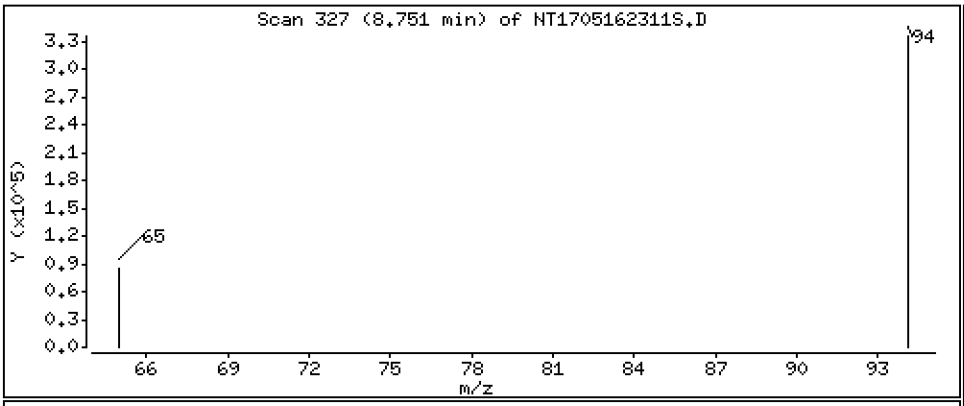
Operator: JGR

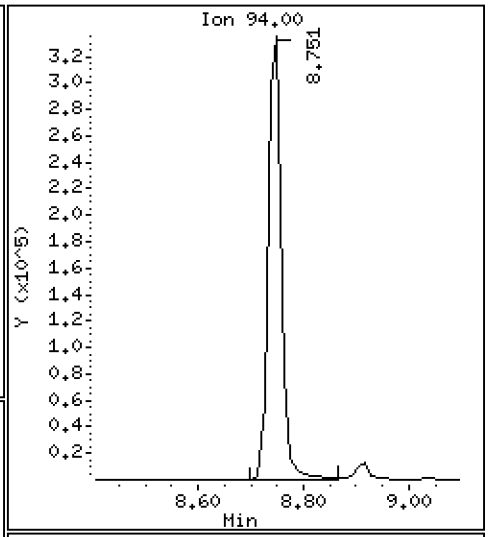
Column phase: ZB-5msi

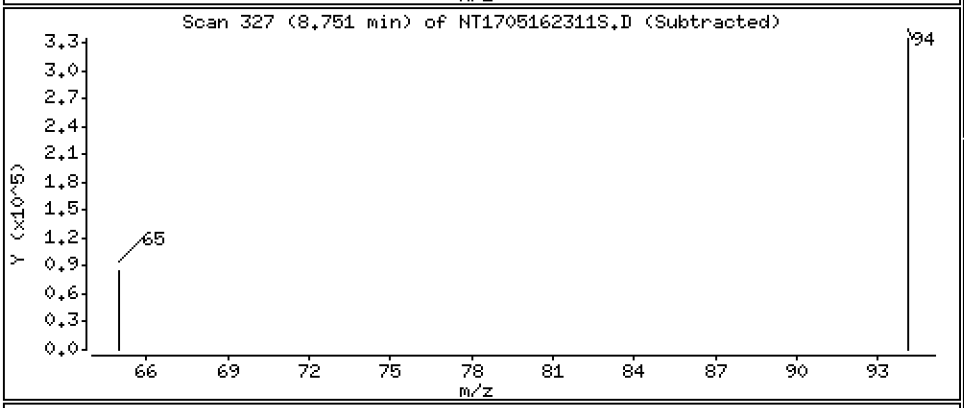
Column diameter: 0.25

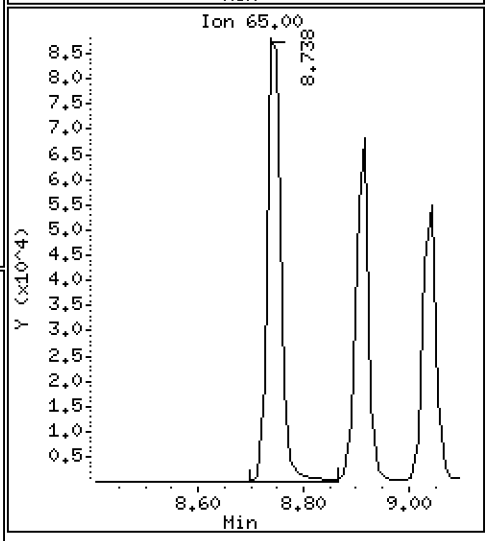
3 Phenol

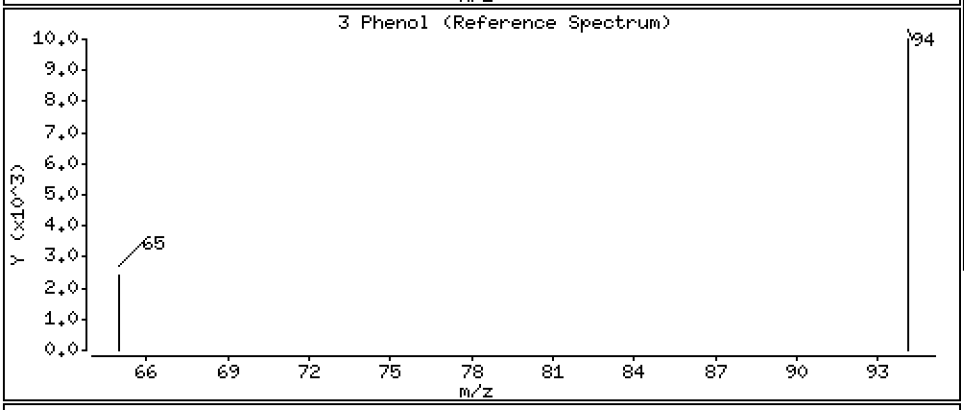
Concentration: 4.884 ug/mL

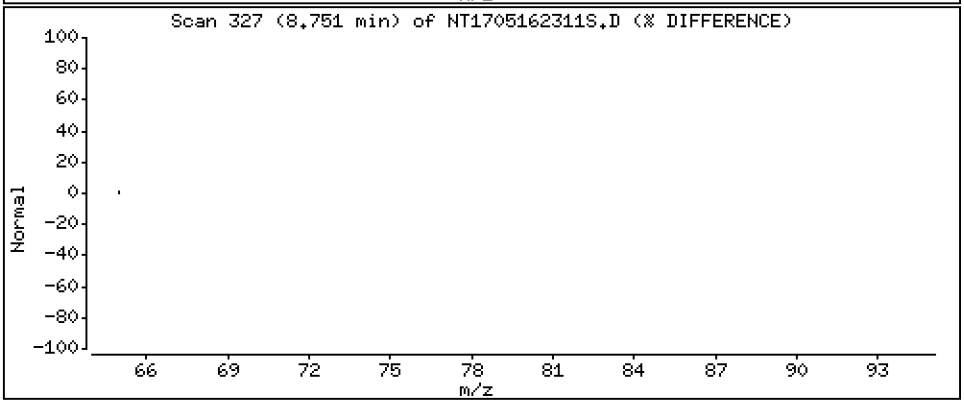












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

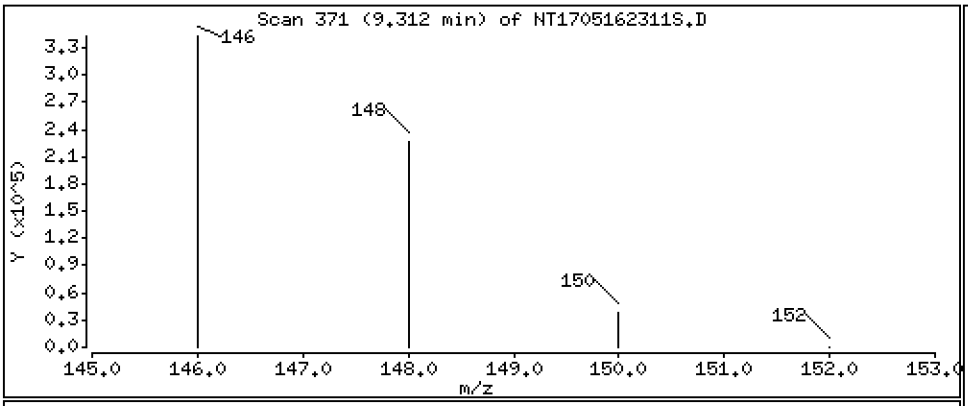
Operator: JGR

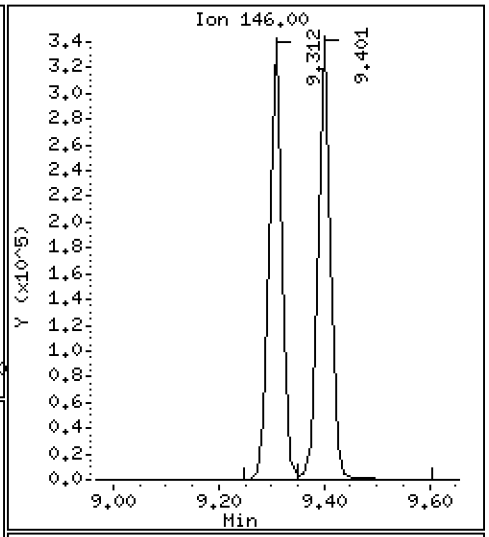
Column phase: ZB-5msi

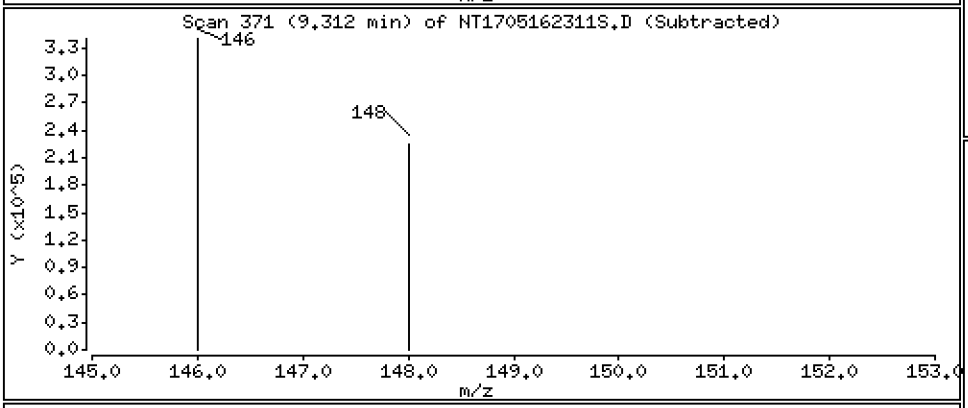
Column diameter: 0.25

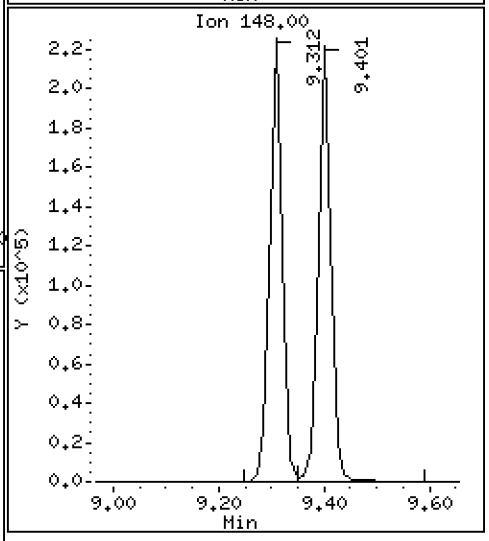
7 1,3-Dichlorobenzene

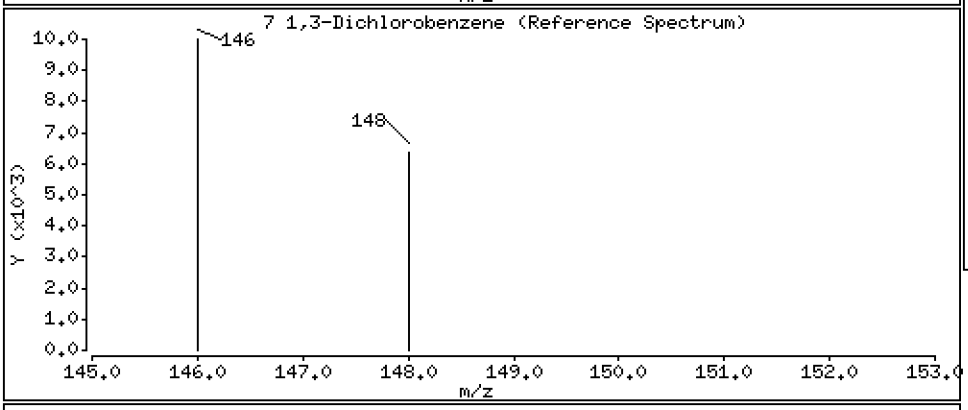
Concentration: 5.087 ug/mL

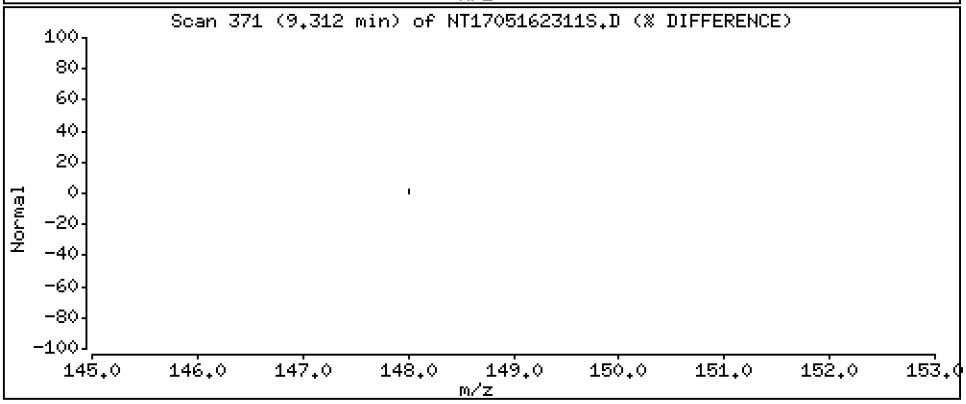












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

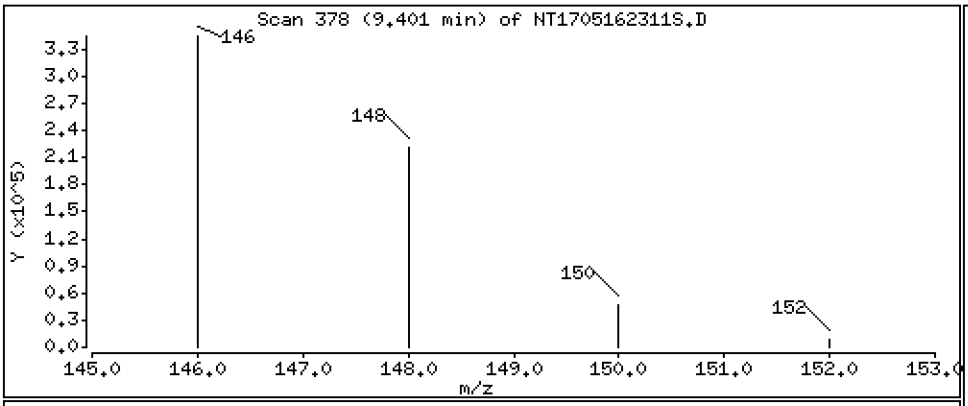
Operator: JGR

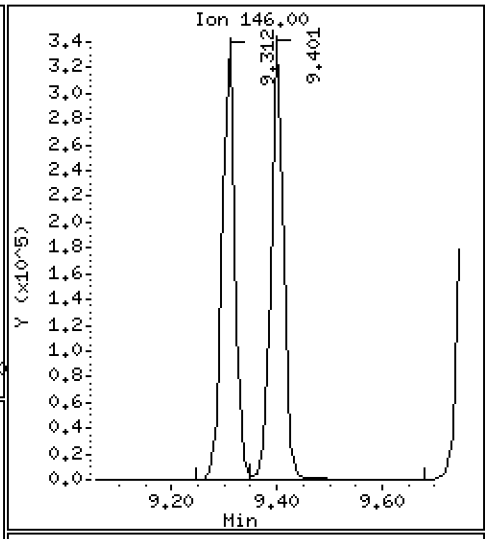
Column phase: ZB-5msi

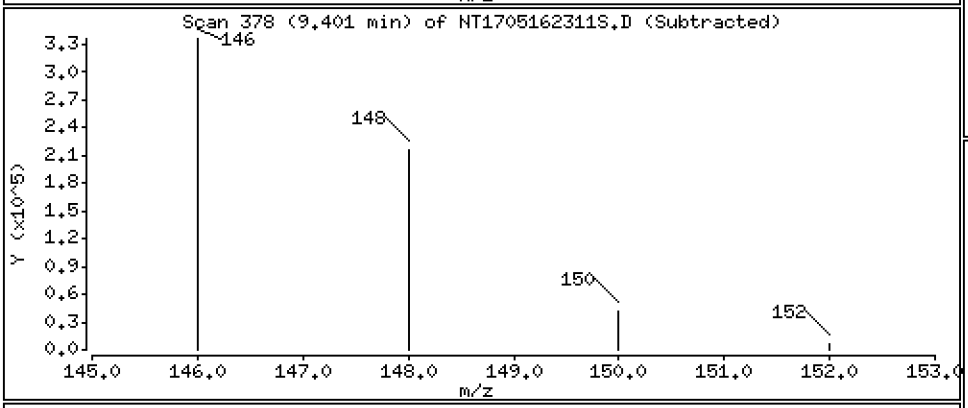
Column diameter: 0.25

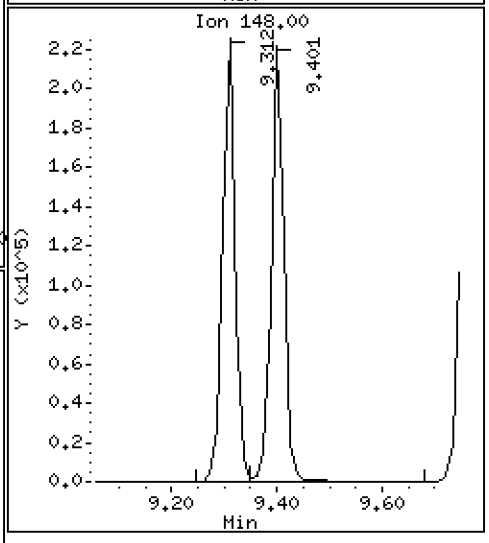
9 1,4-Dichlorobenzene

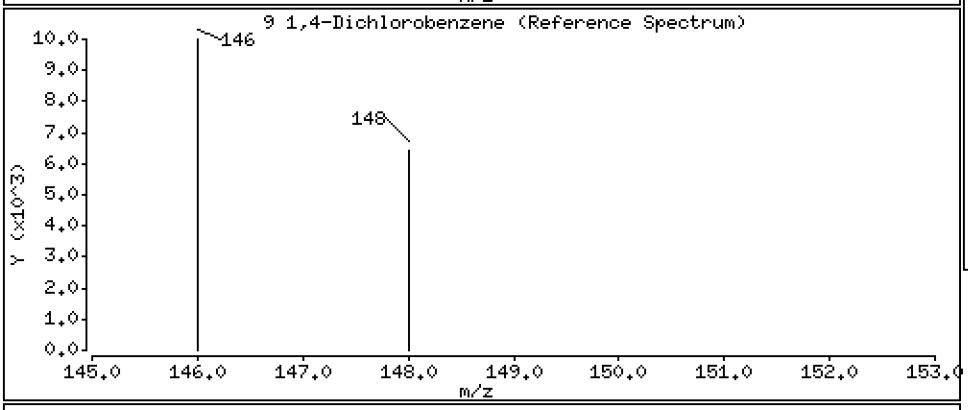
Concentration: 5.132 ug/mL

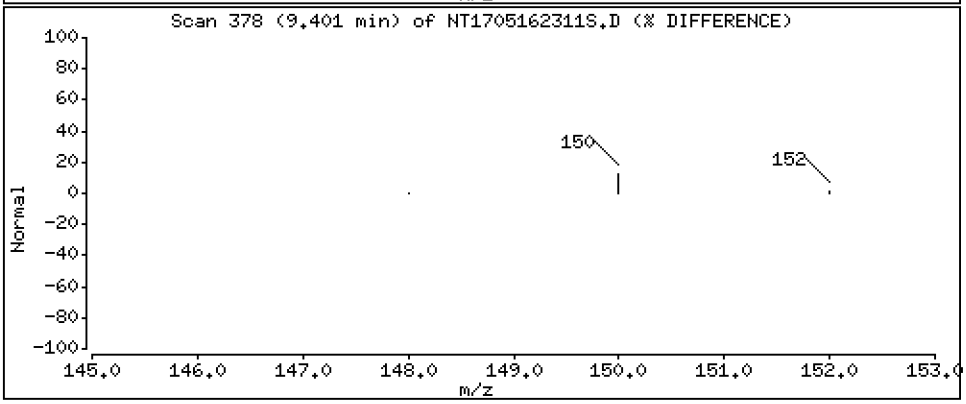












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

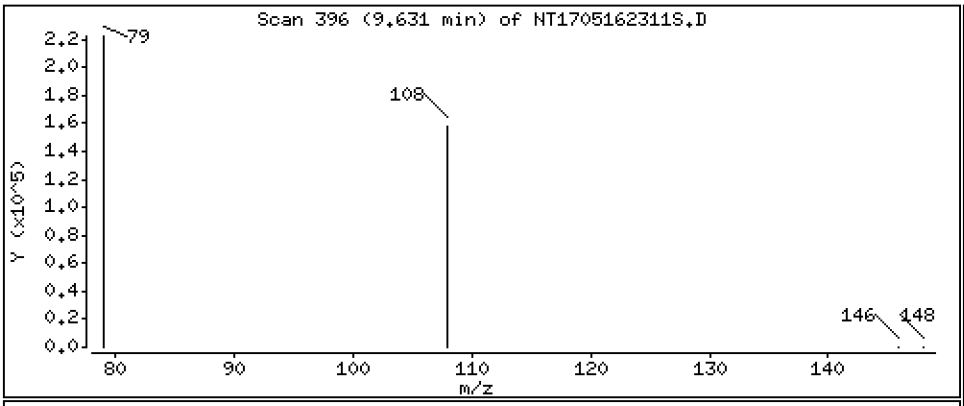
Operator: JGR

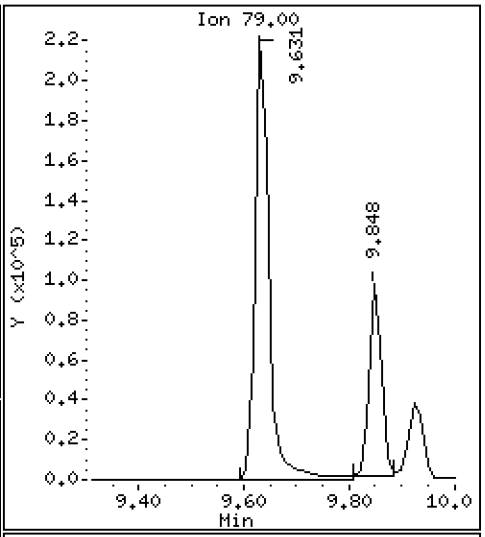
Column phase: ZB-5msi

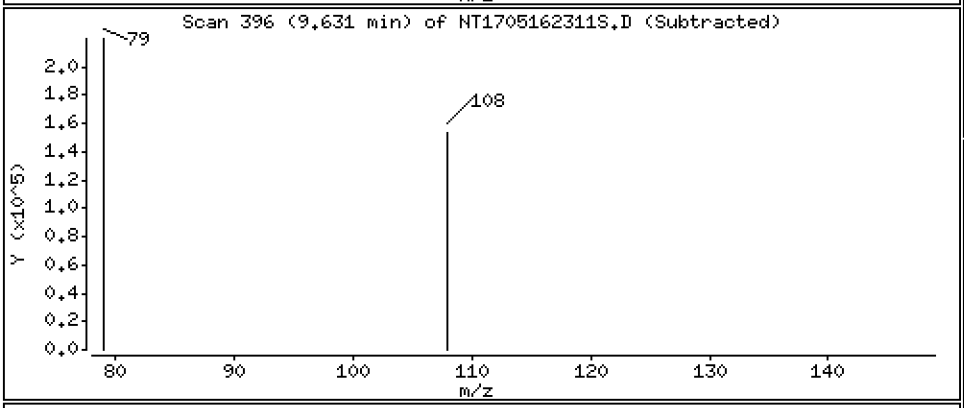
Column diameter: 0.25

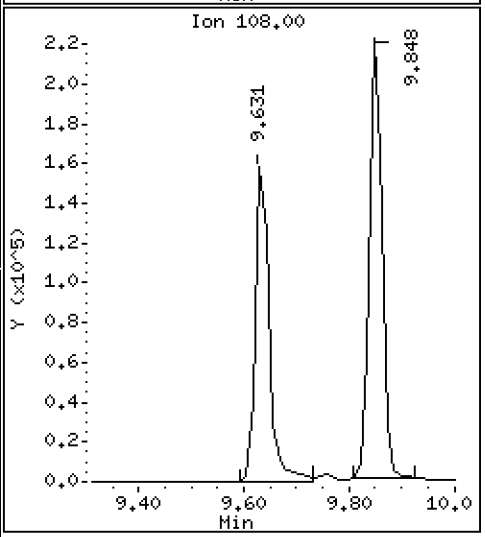
11 Benzyl alcohol

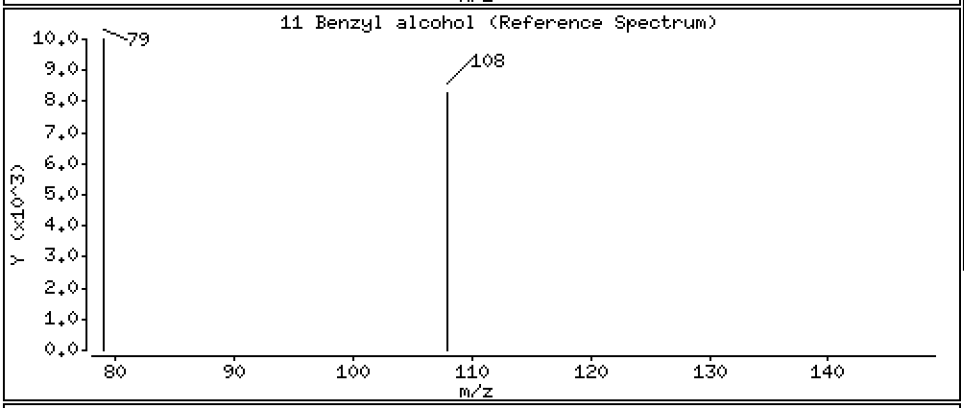
Concentration: 5.706 ug/mL

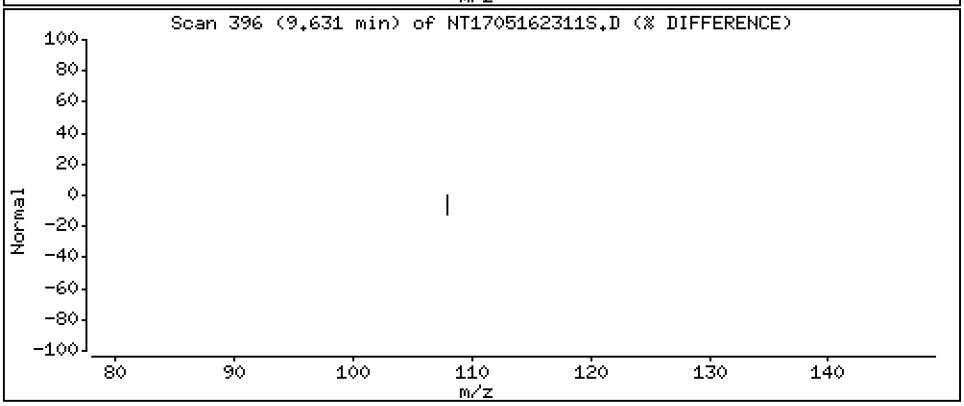












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

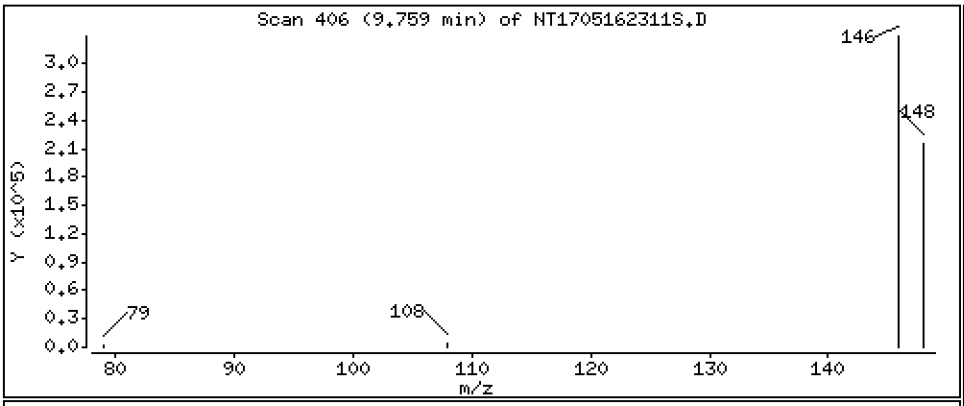
Operator: JGR

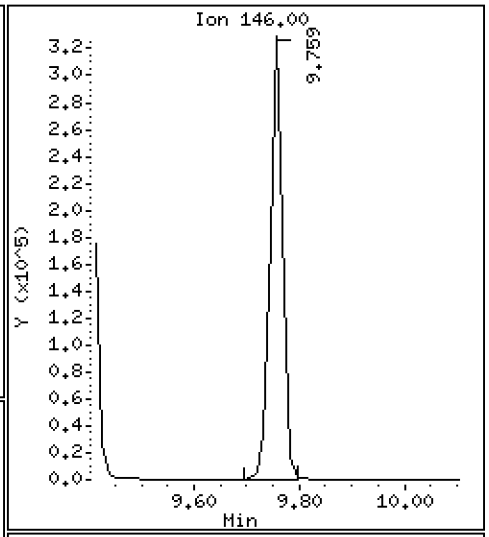
Column phase: ZB-5msi

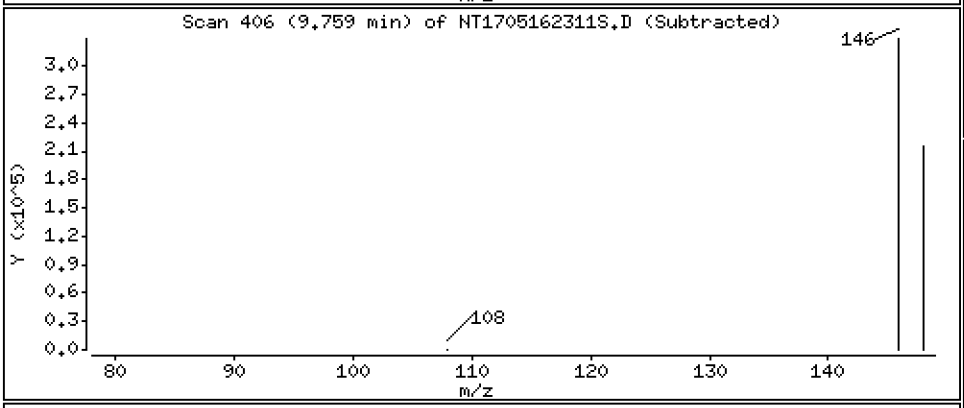
Column diameter: 0.25

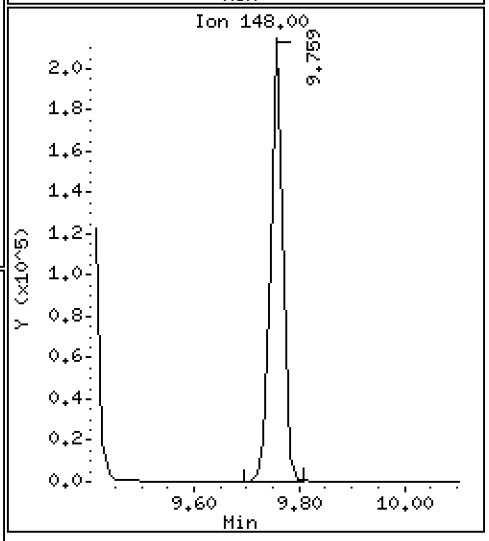
12 1,2-Dichlorobenzene

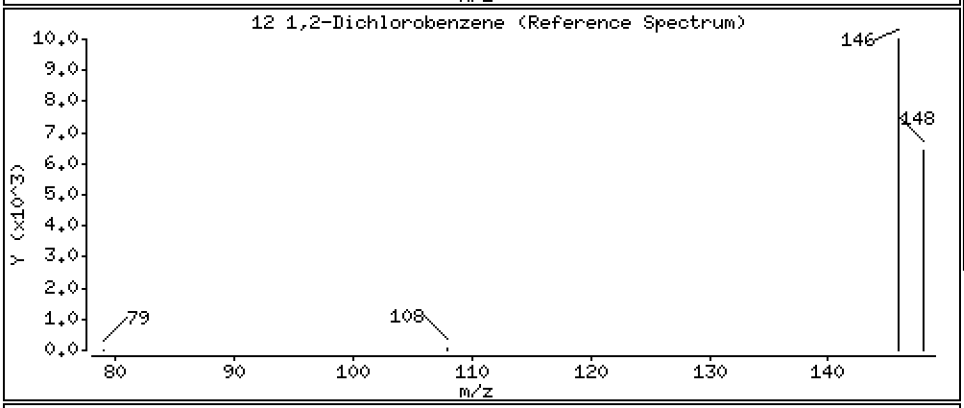
Concentration: 5.007 ug/mL

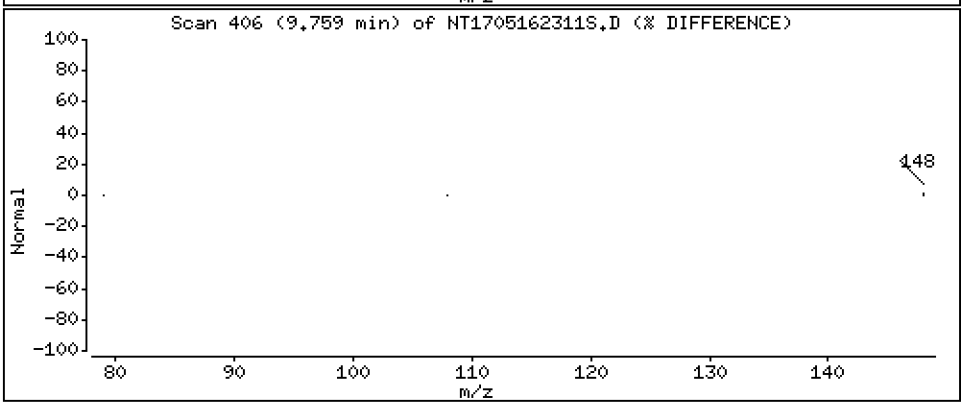












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

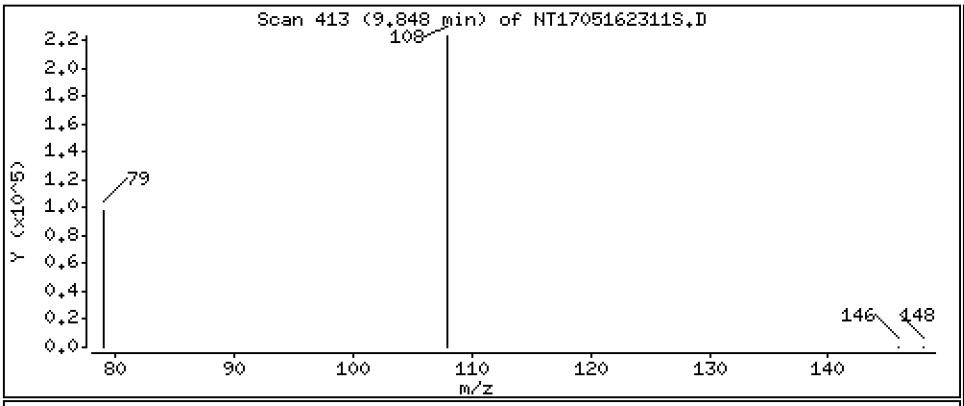
Operator: JGR

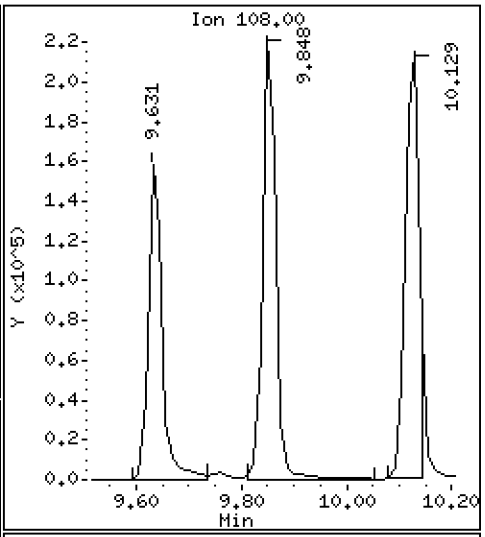
Column phase: ZB-5msi

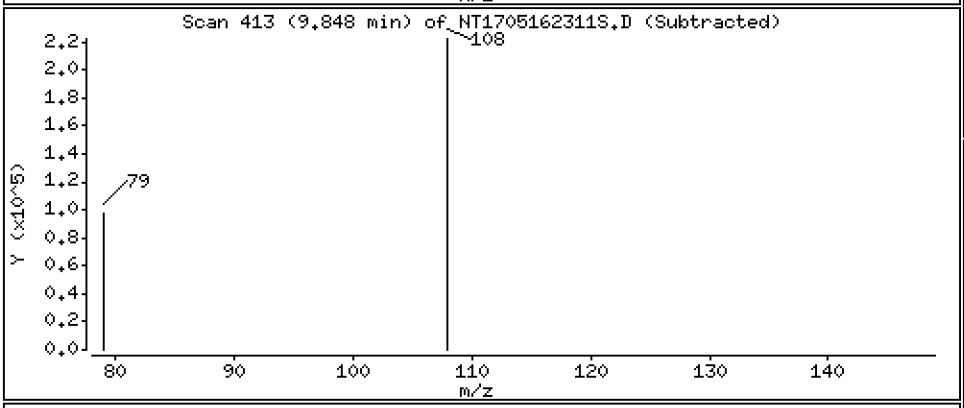
Column diameter: 0.25

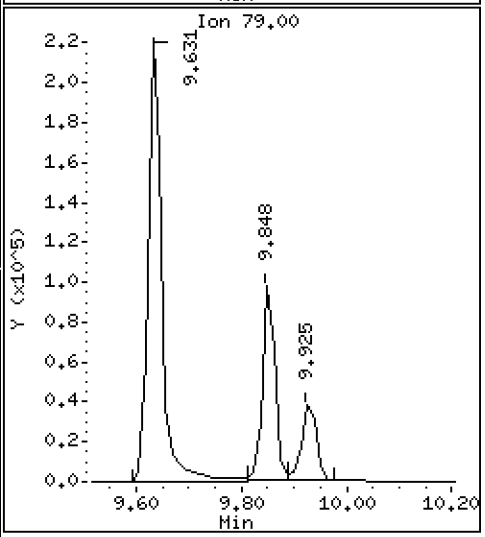
13 2-Methylphenol

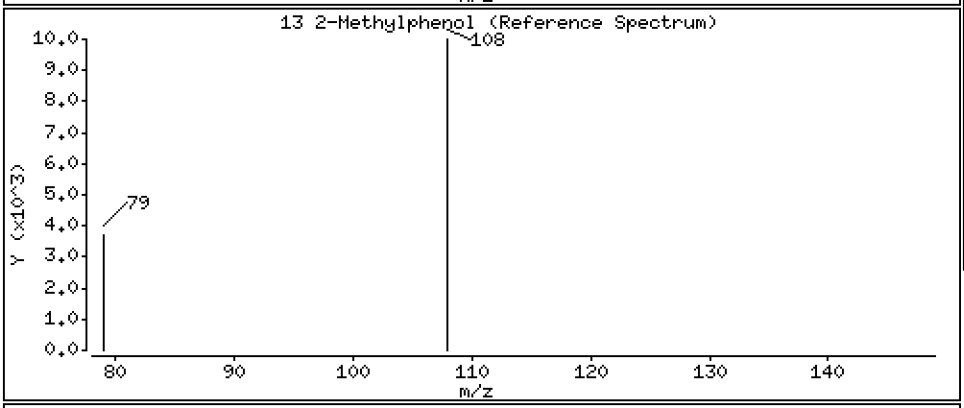
Concentration: 4.408 ug/mL

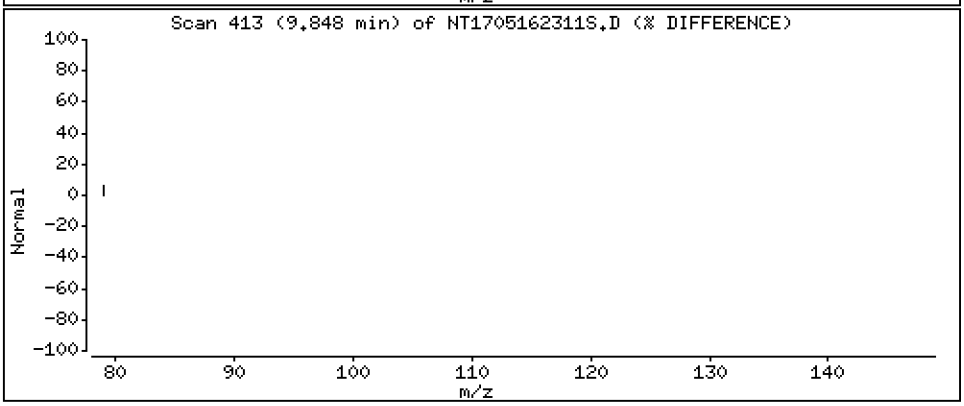












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

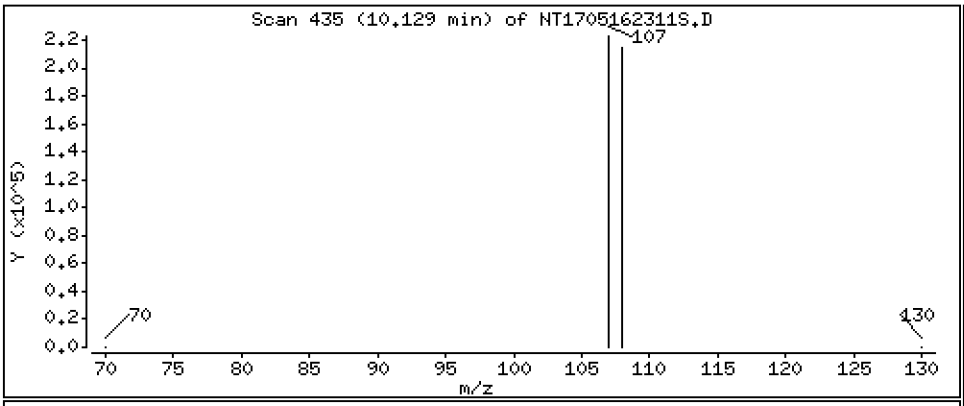
Operator: JGR

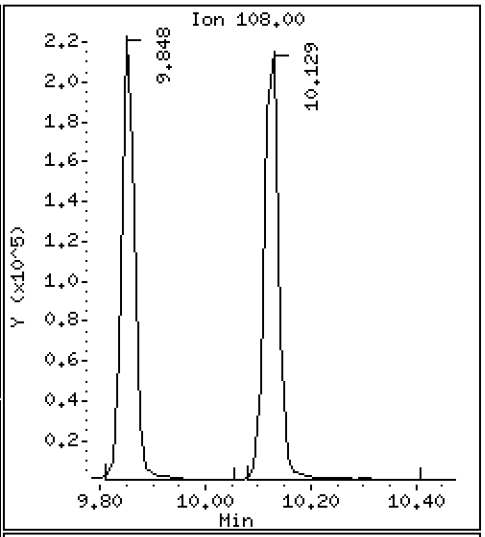
Column phase: ZB-5msi

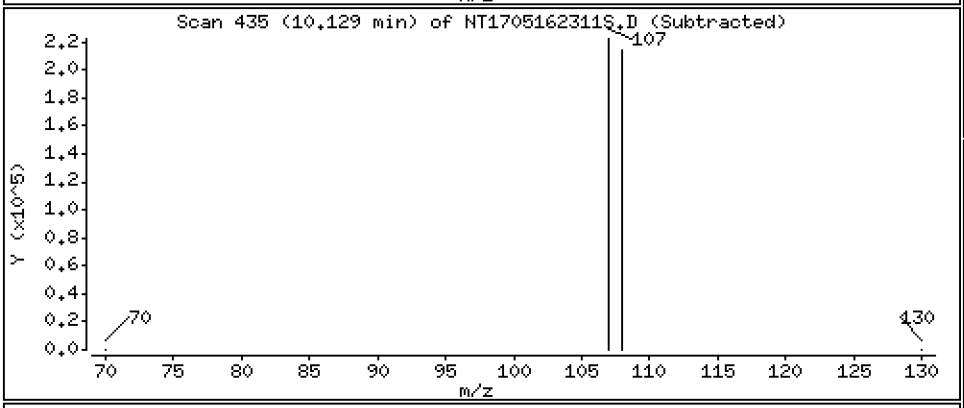
Column diameter: 0.25

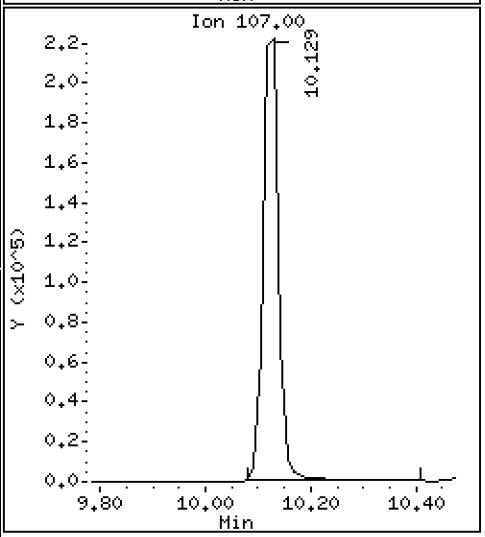
15 4-Methylphenol

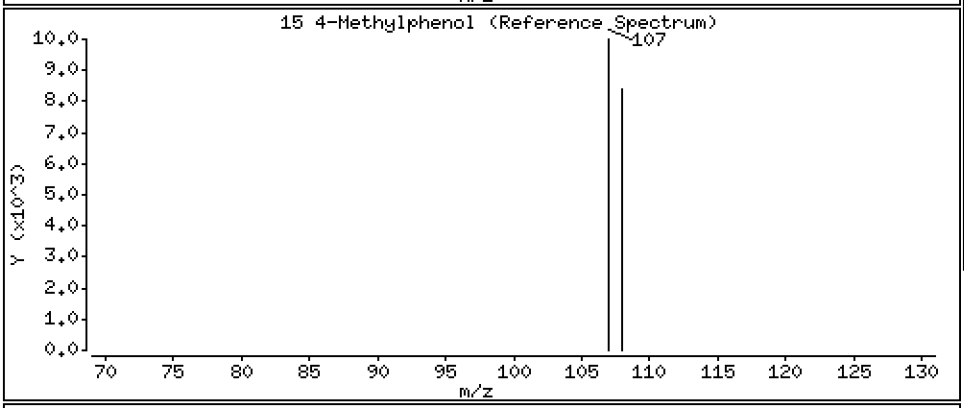
Concentration: 4.788 ug/mL

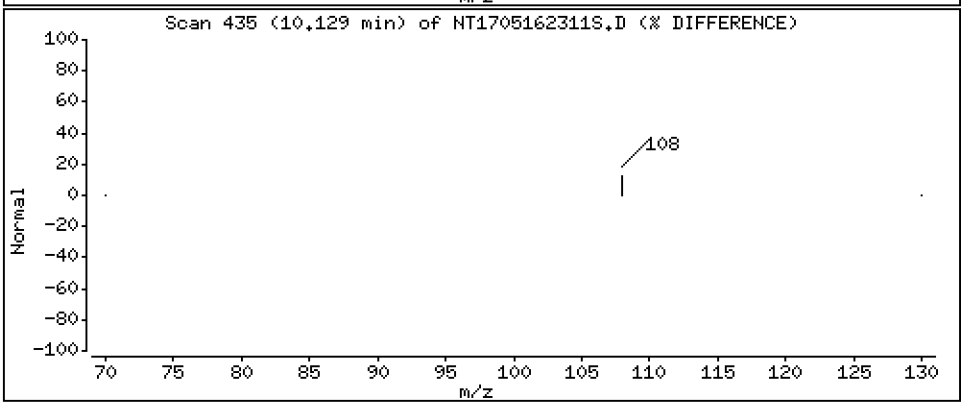












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

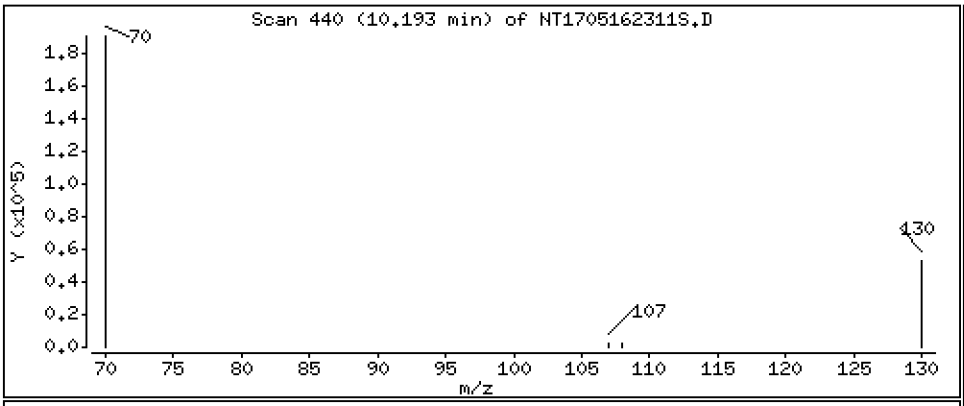
Operator: JGR

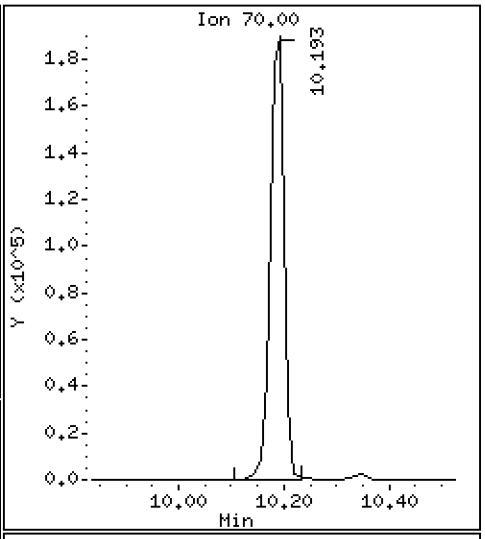
Column phase: ZB-5msi

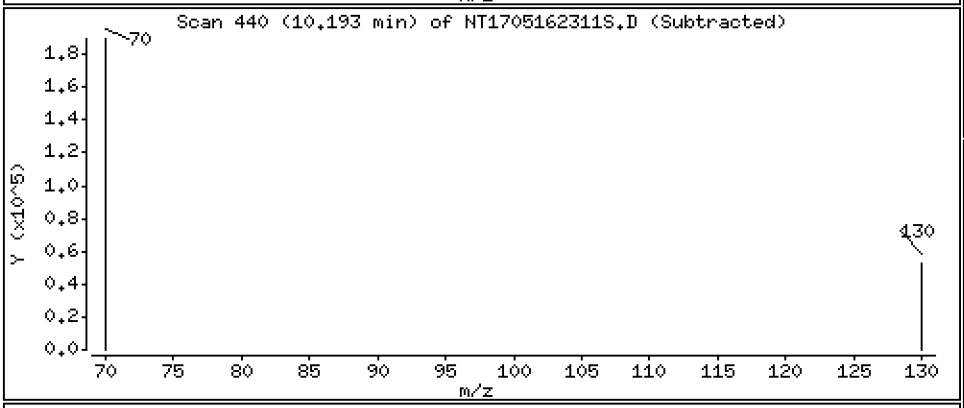
Column diameter: 0.25

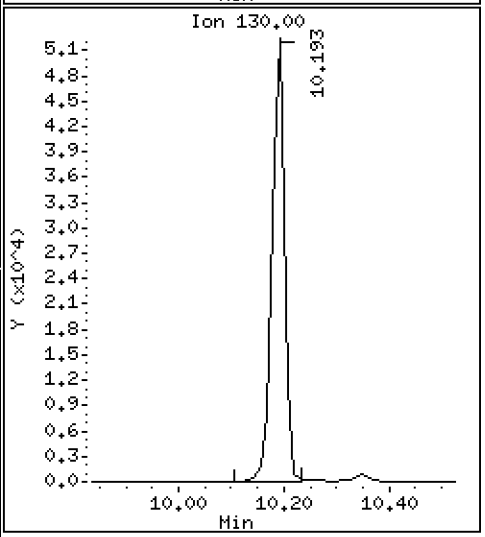
16 N-Nitroso-di-n-propylamine

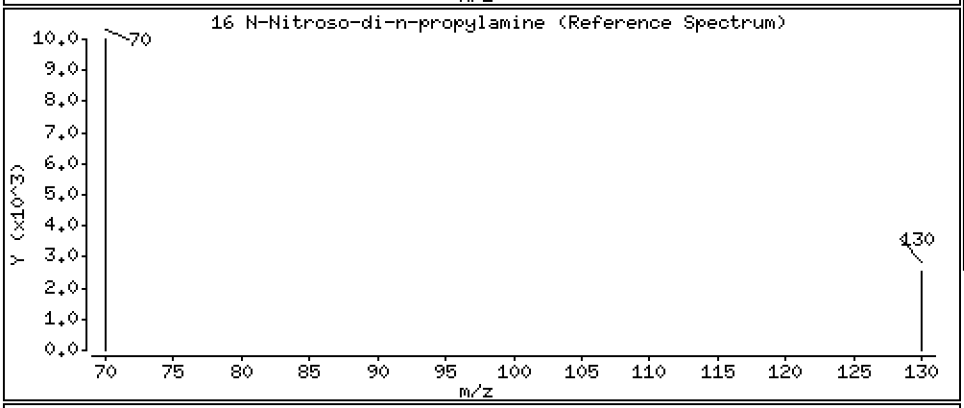
Concentration: 5.479 ug/mL

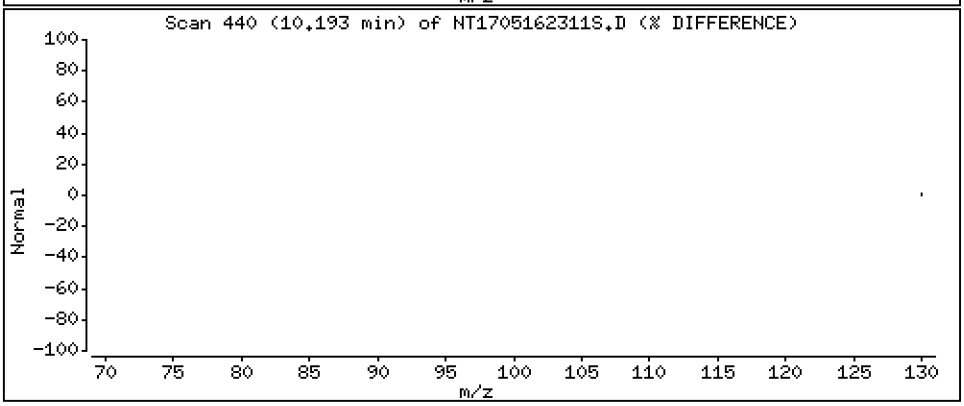












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

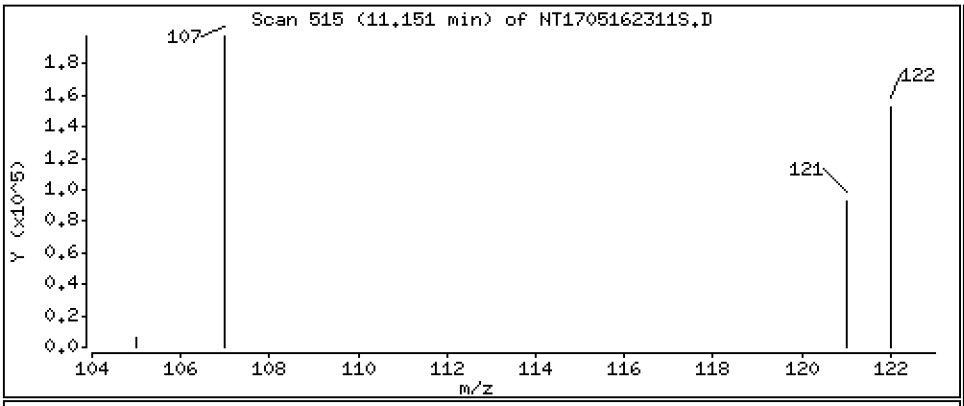
Operator: JGR

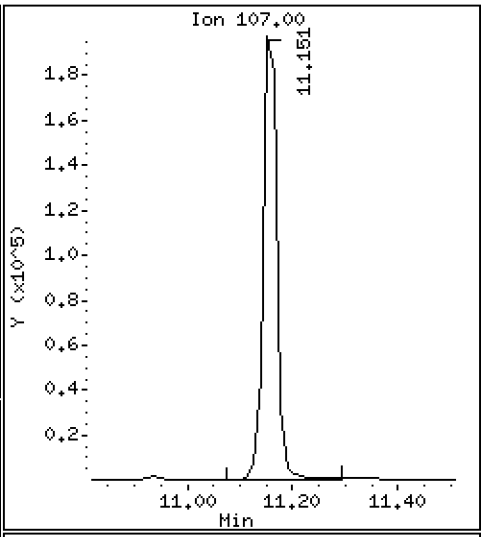
Column phase: ZB-5msi

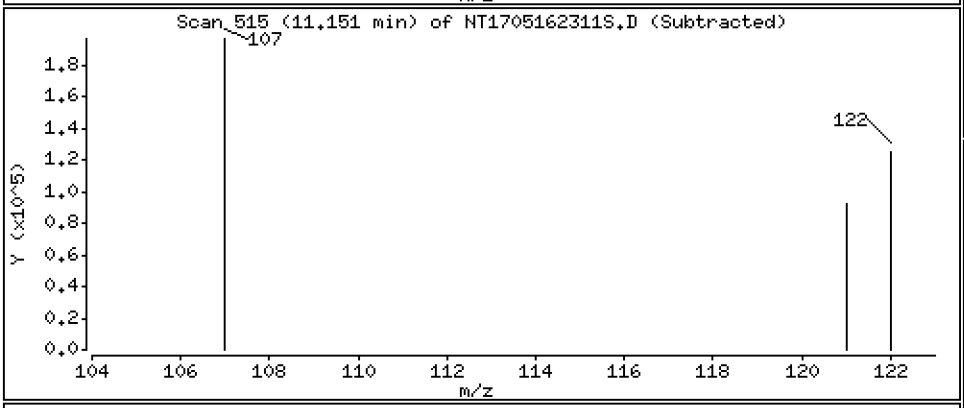
Column diameter: 0.25

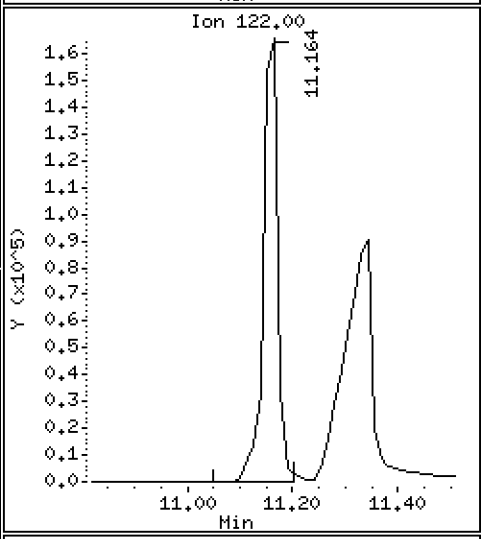
22 2,4-Dimethylphenol

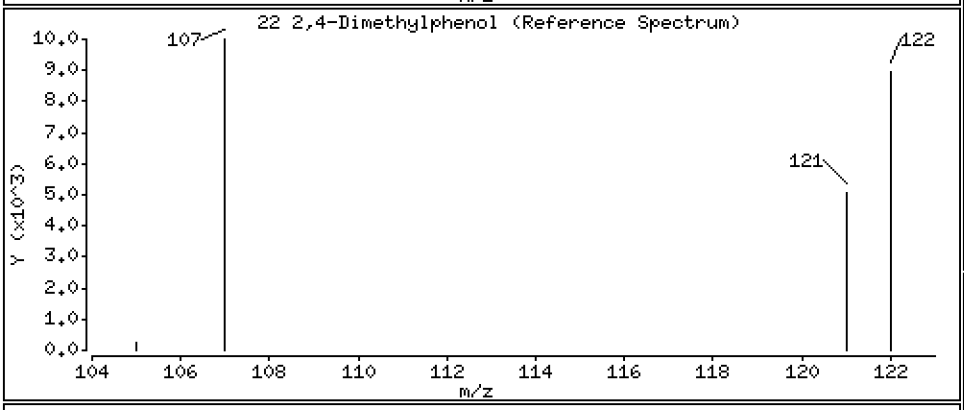
Concentration: 3.816 ug/mL

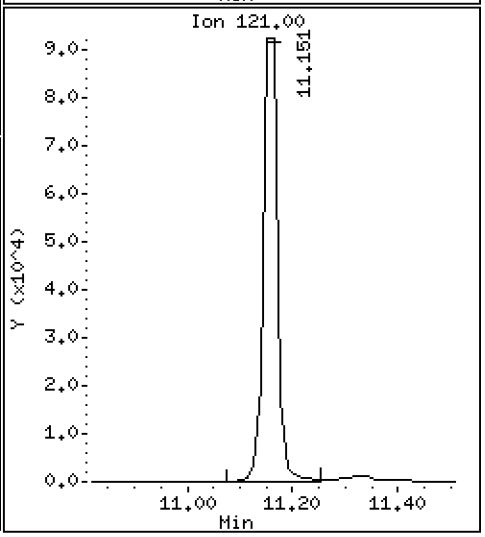


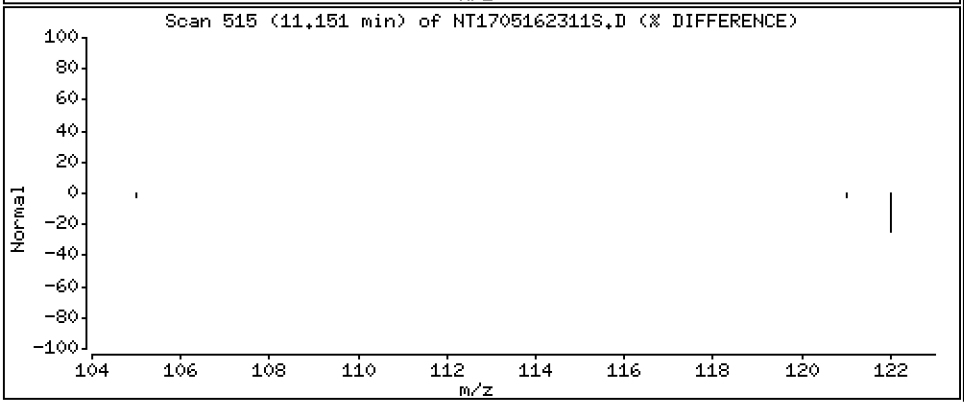












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

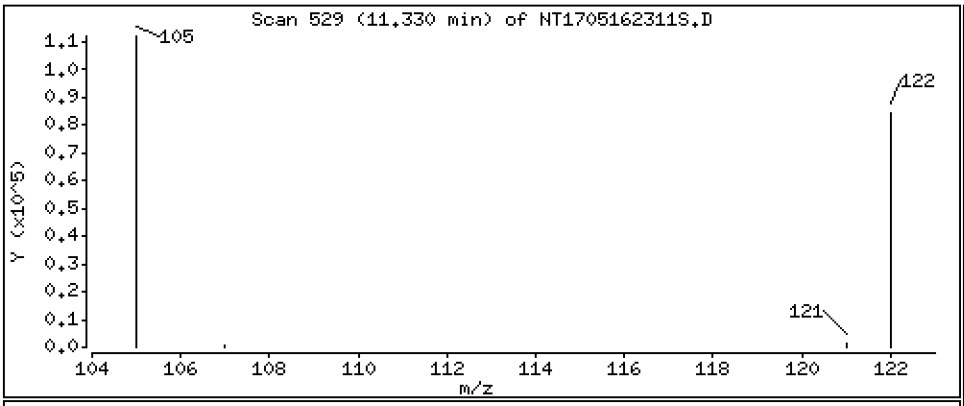
Operator: JGR

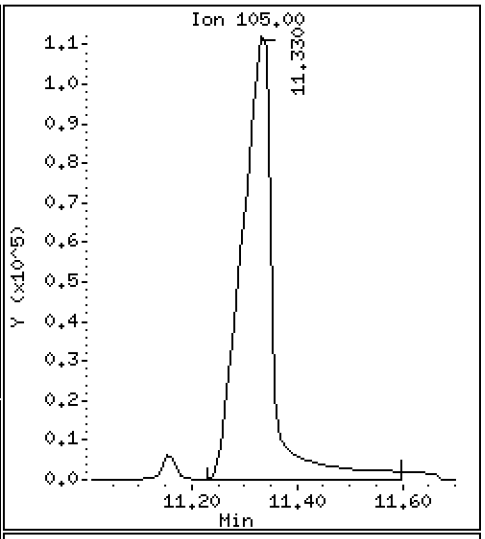
Column phase: ZB-5msi

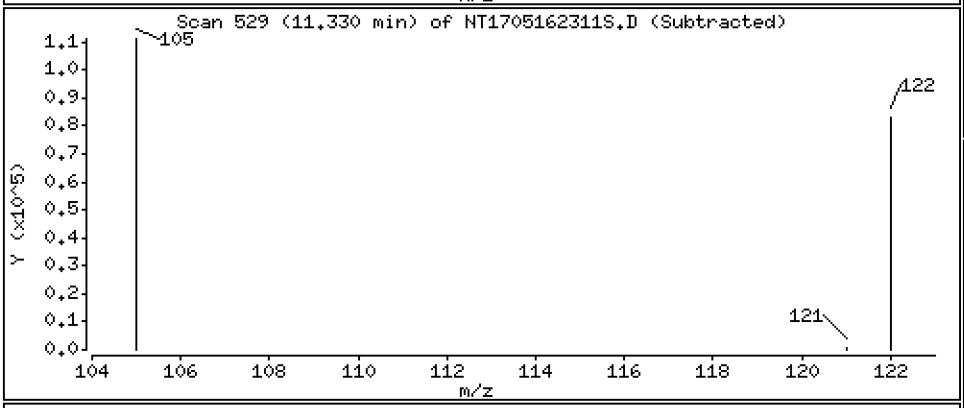
Column diameter: 0.25

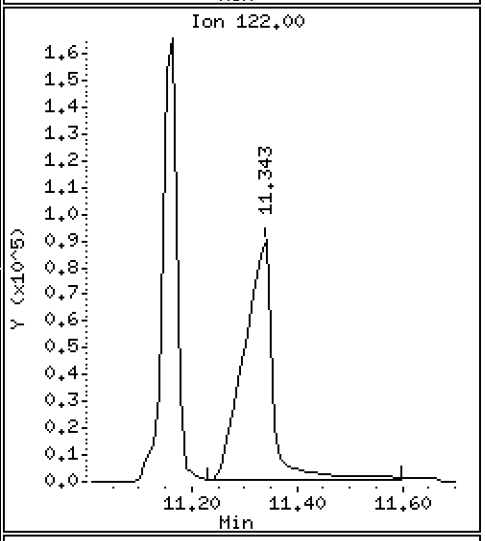
24 Benzoic acid

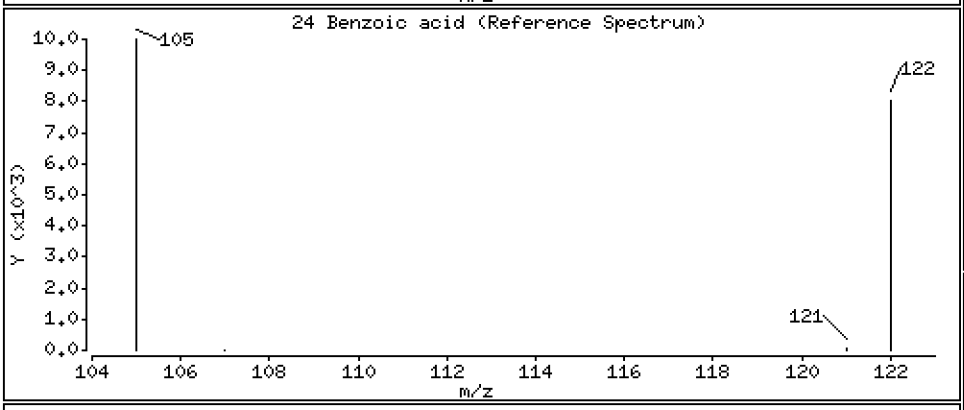
Concentration: 7.777 ug/mL

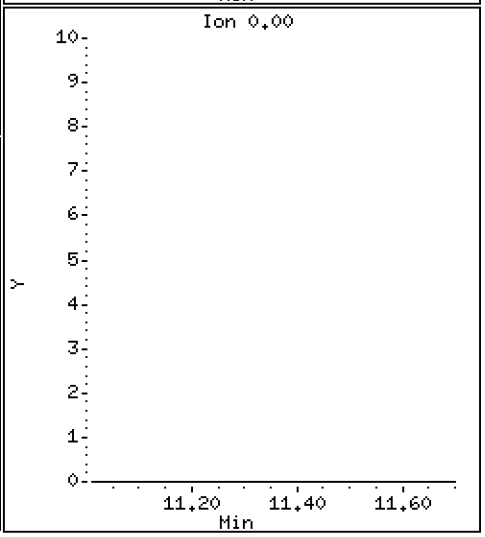


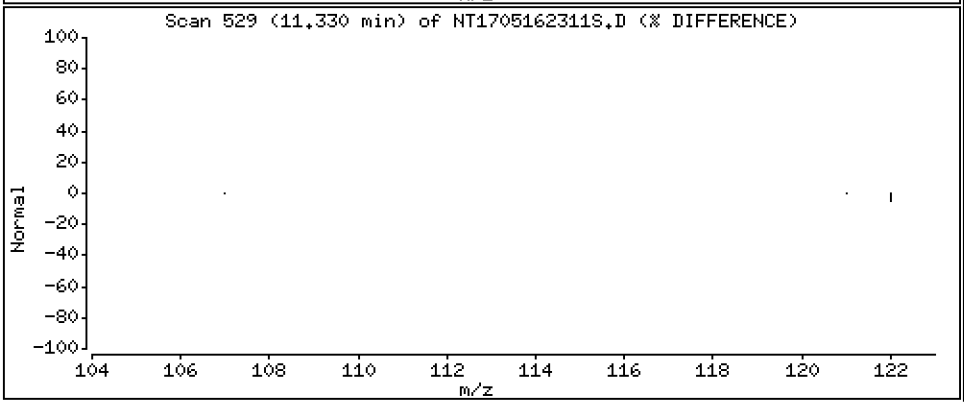












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

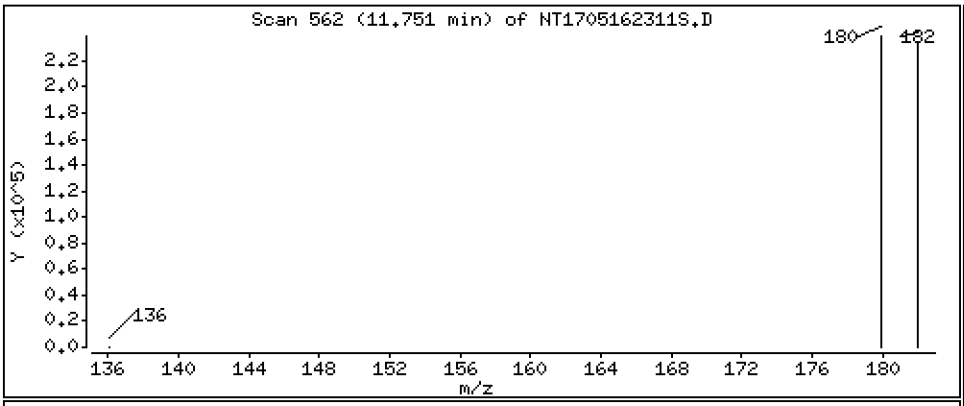
Operator: JGR

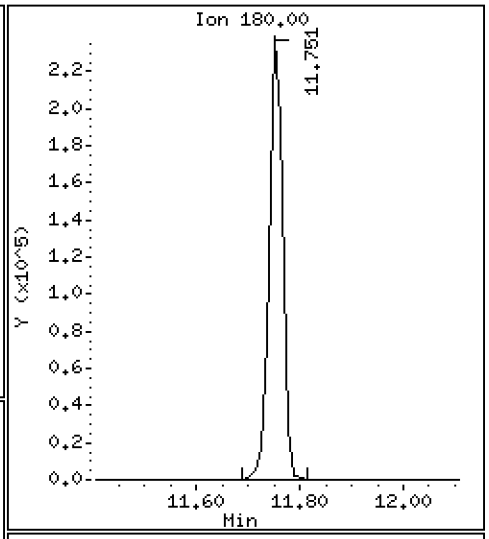
Column phase: ZB-5msi

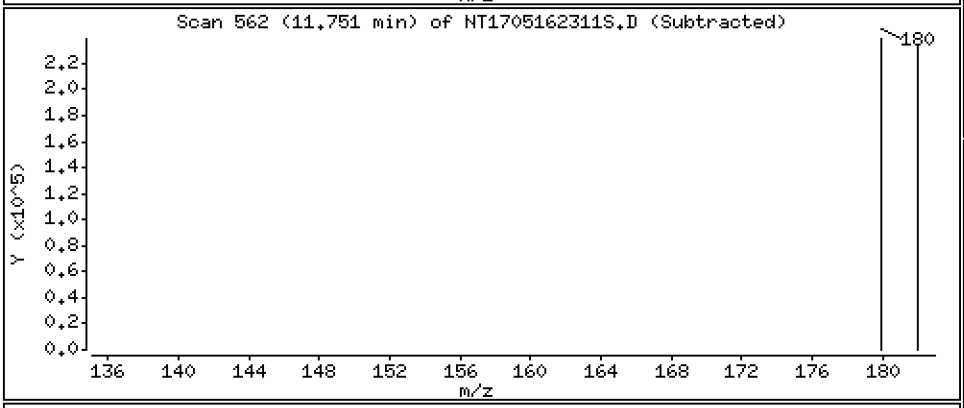
Column diameter: 0.25

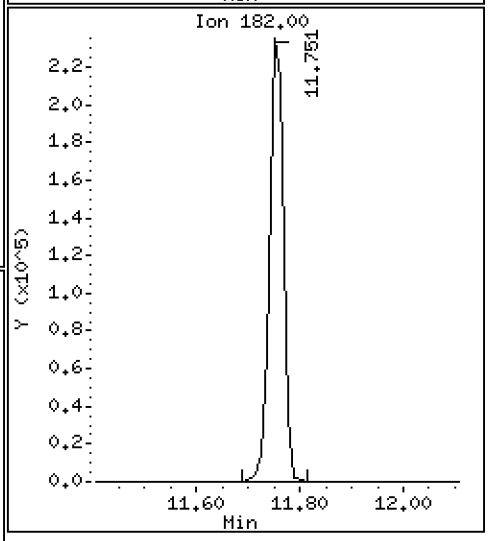
26 1,2,4-Trichlorobenzene

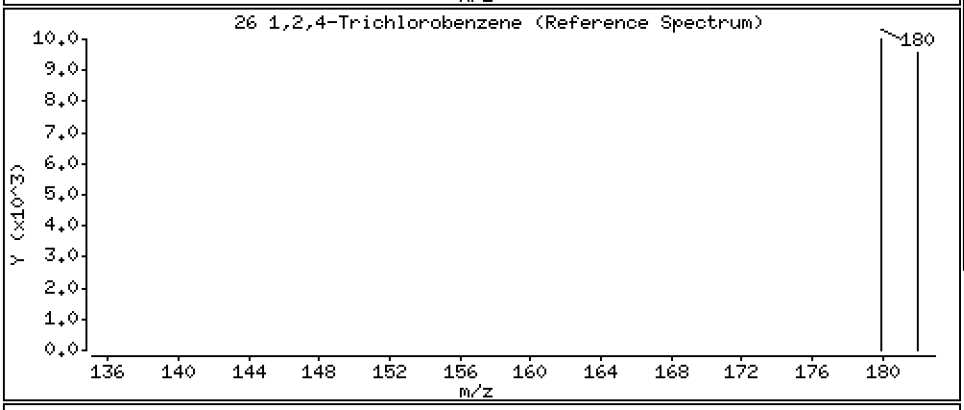
Concentration: 4.906 ug/mL

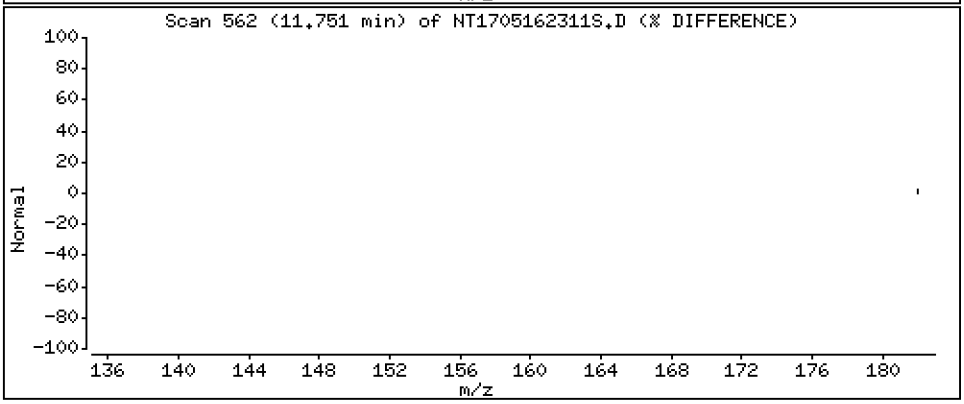












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

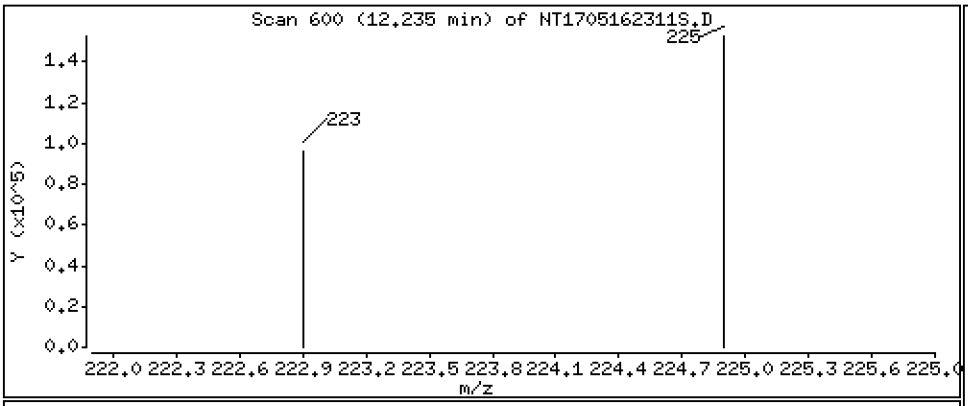
Operator: JGR

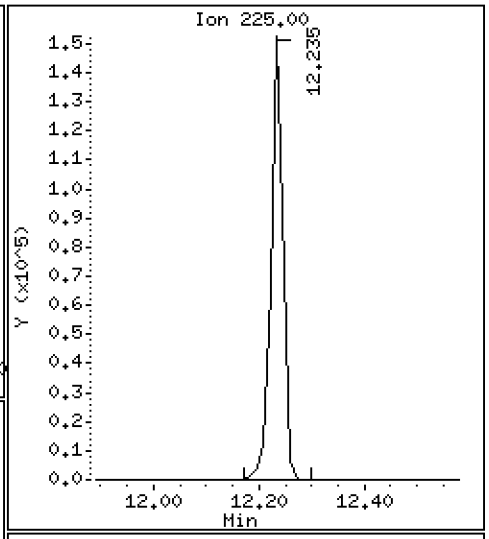
Column phase: ZB-5msi

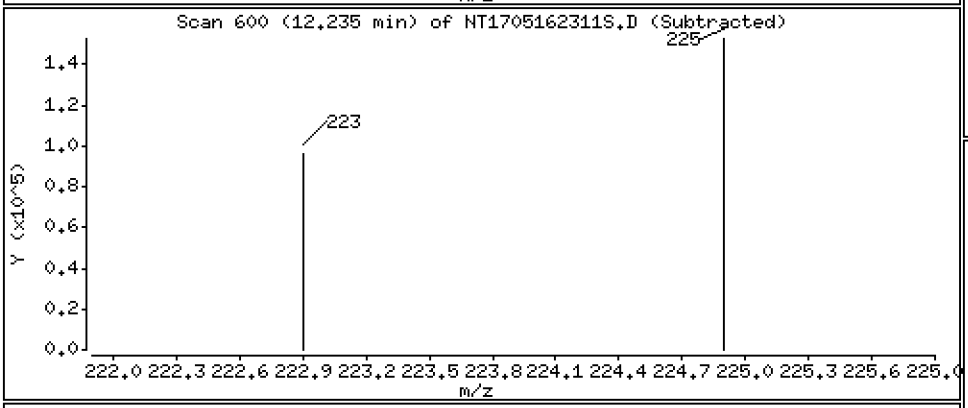
Column diameter: 0.25

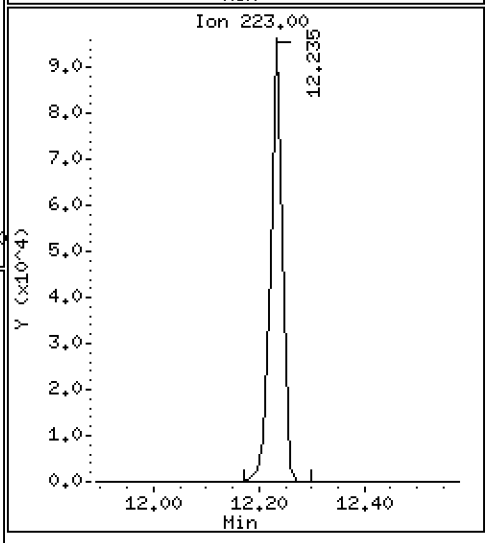
30 Hexachlorobutadiene

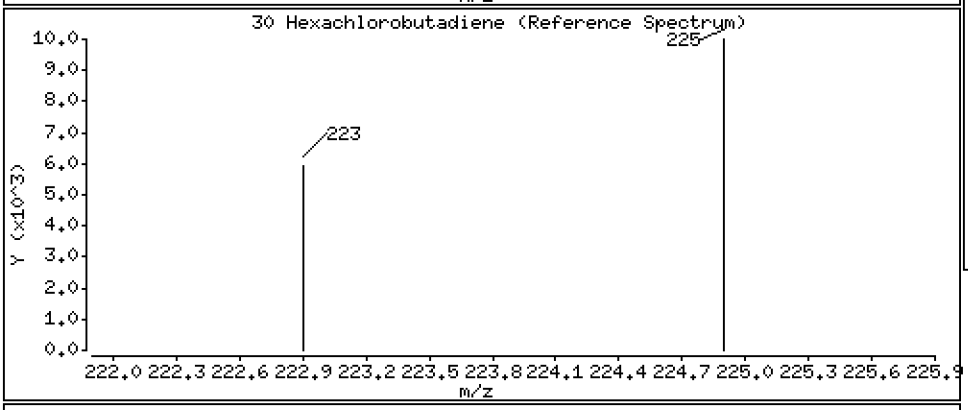
Concentration: 5.201 ug/mL

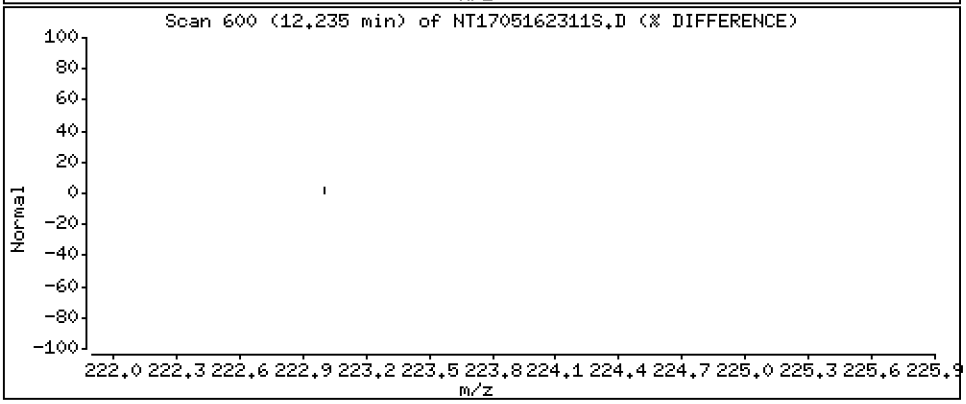












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

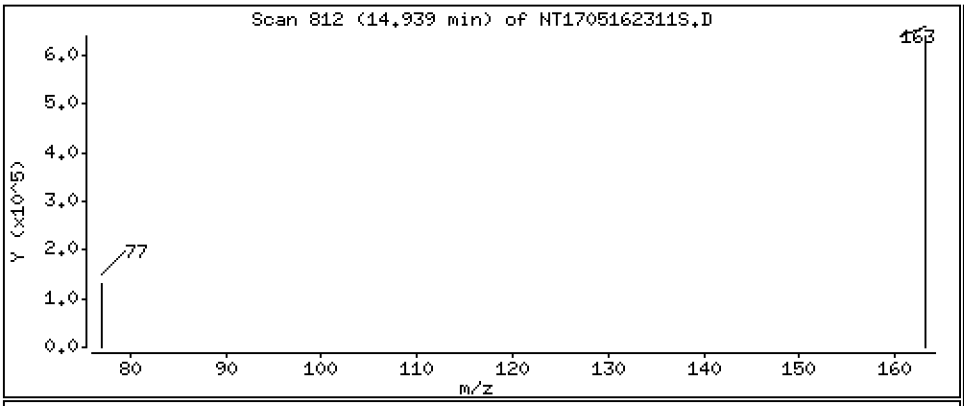
Operator: JGR

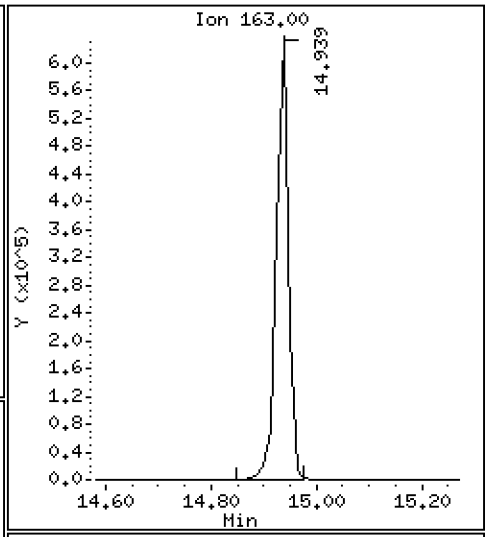
Column phase: ZB-5msi

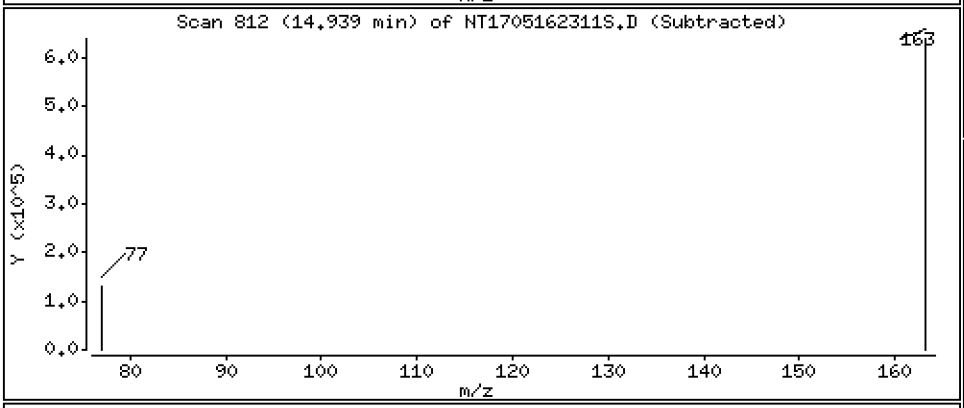
Column diameter: 0.25

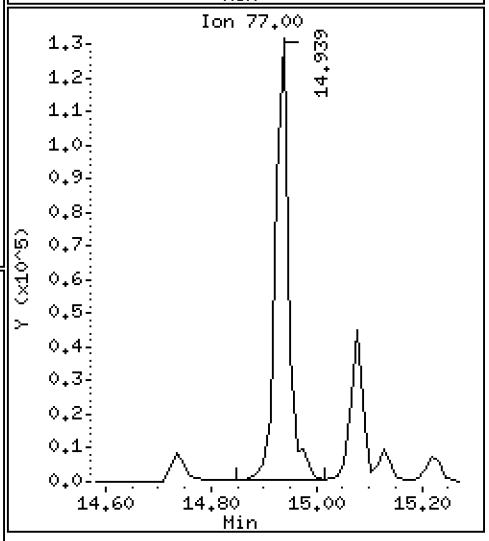
39 Dimethylphthalate

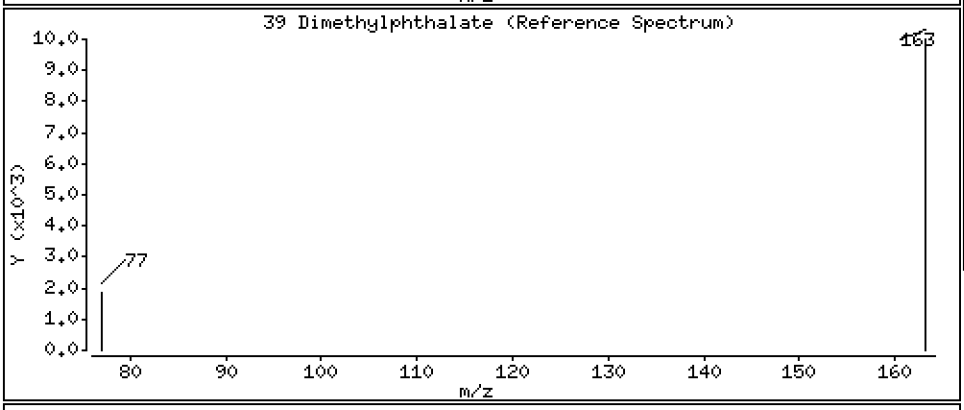
Concentration: 5.240 ug/mL

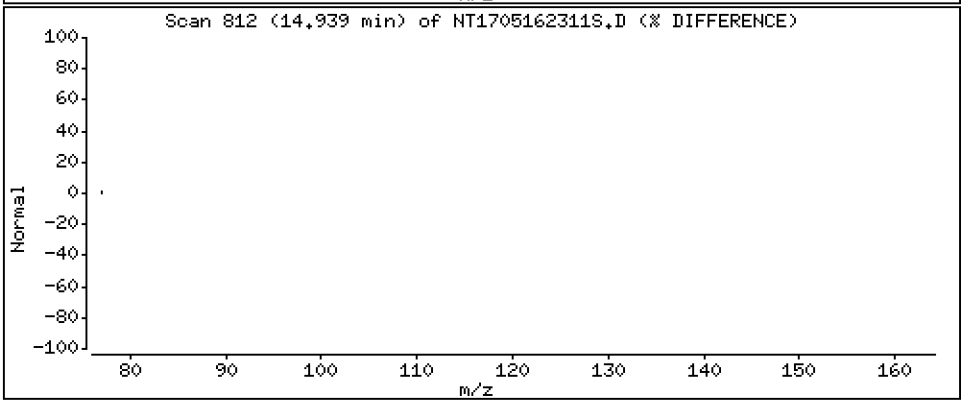












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

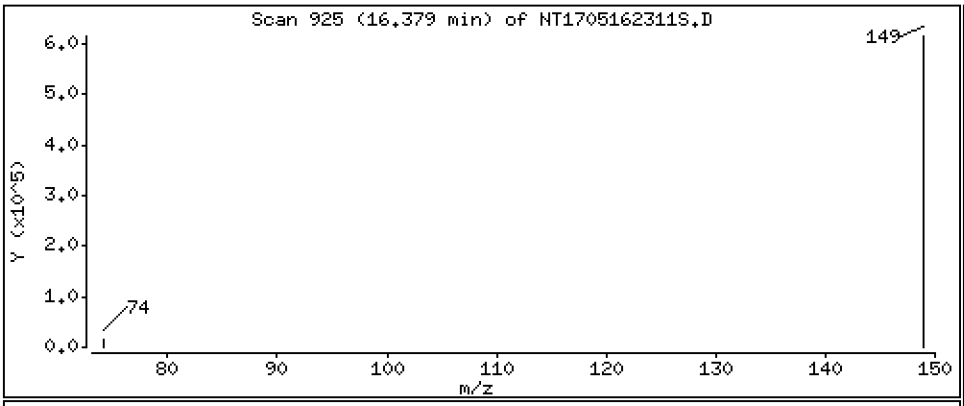
Operator: JGR

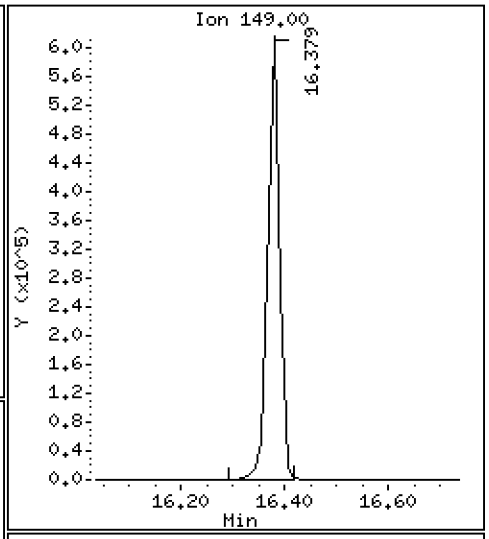
Column phase: ZB-5msi

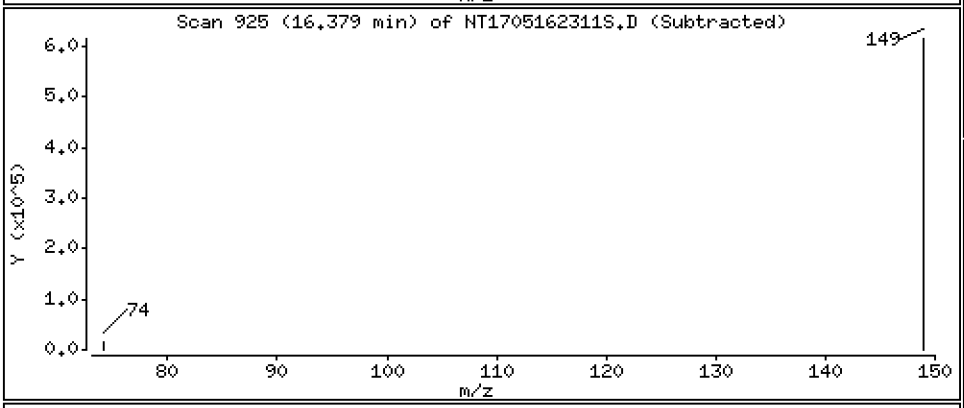
Column diameter: 0.25

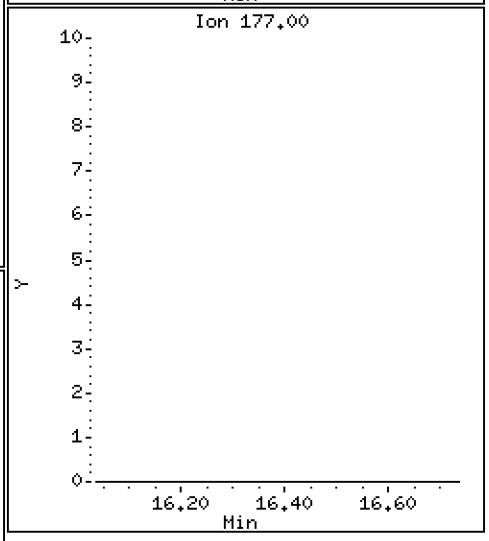
50 Diethylphthalate

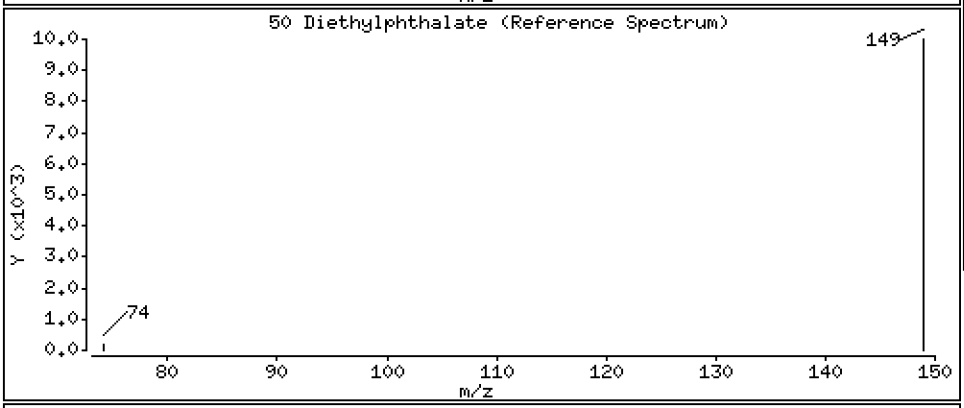
Concentration: 5.478 ug/mL

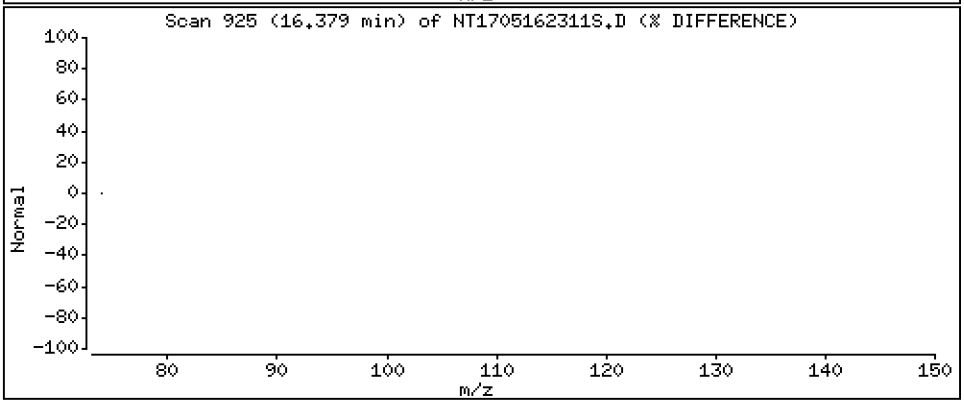












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

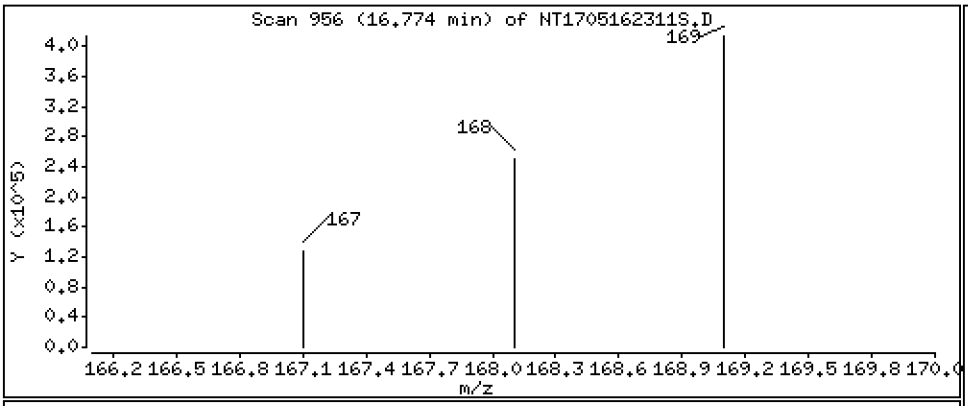
Operator: JGR

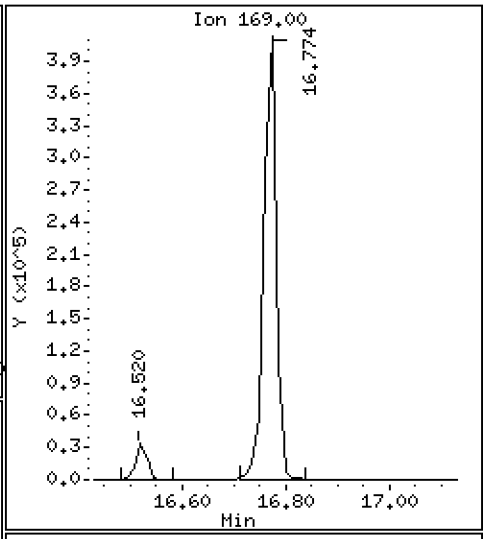
Column phase: ZB-5msi

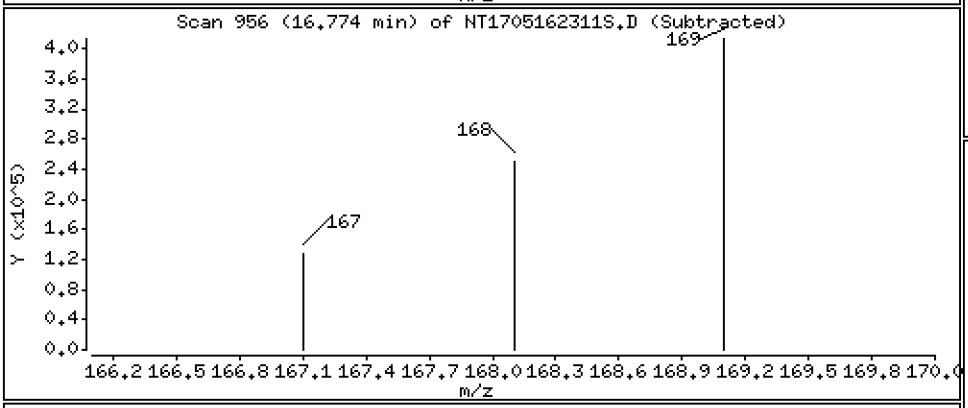
Column diameter: 0.25

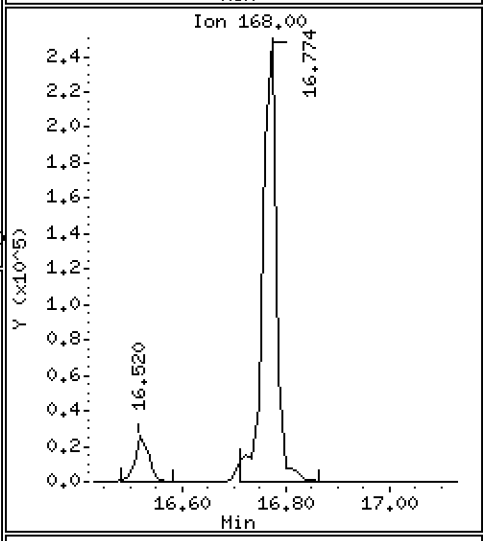
54 N-Nitrosodiphenylamine

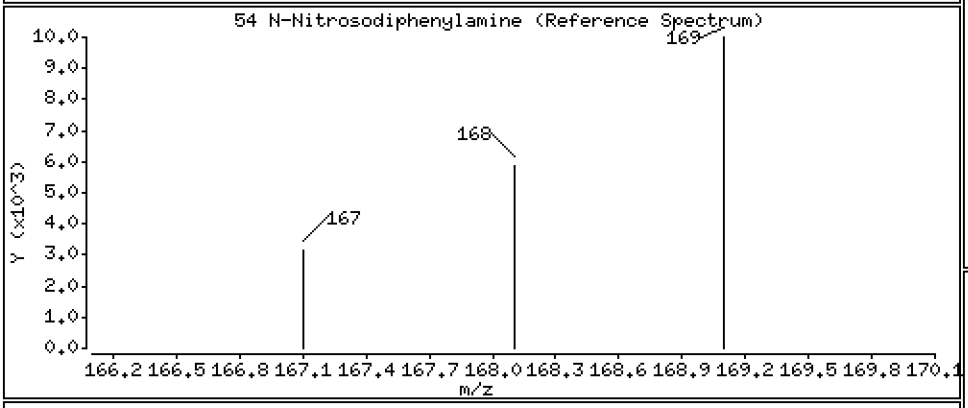
Concentration: 5.627 ug/mL

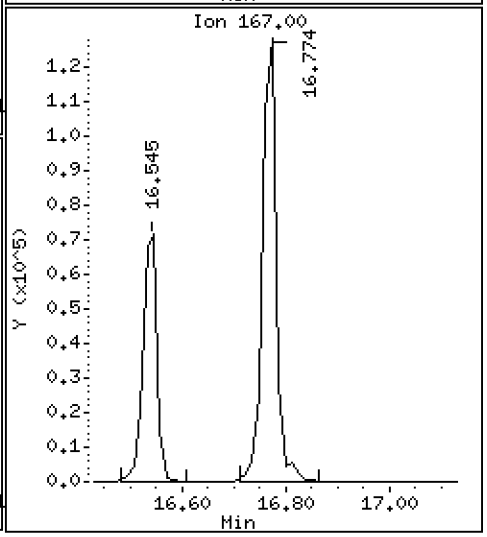


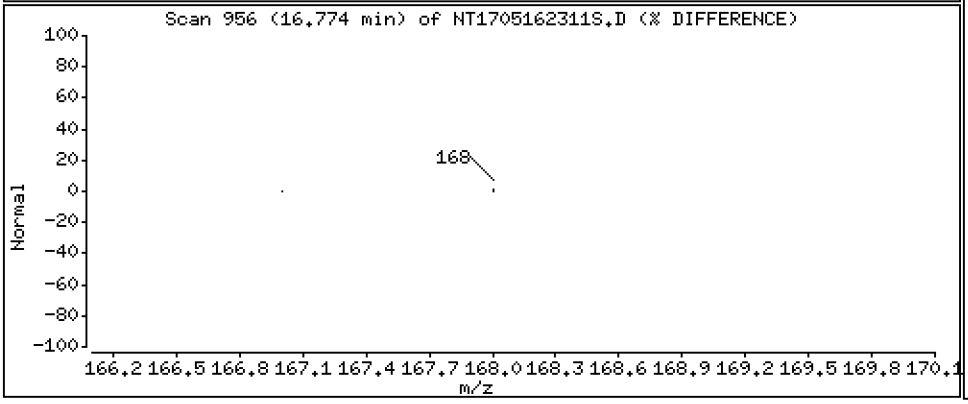












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

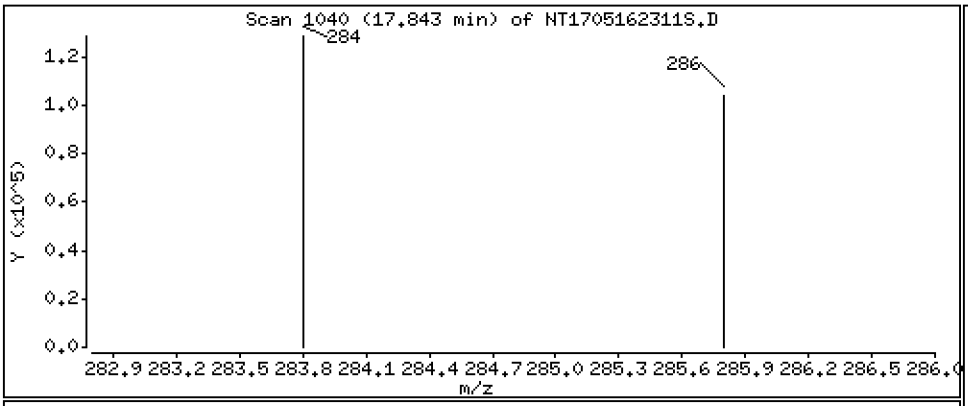
Operator: JGR

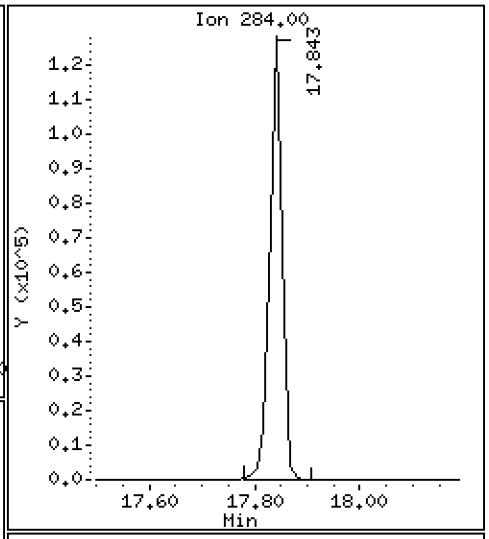
Column phase: ZB-5msi

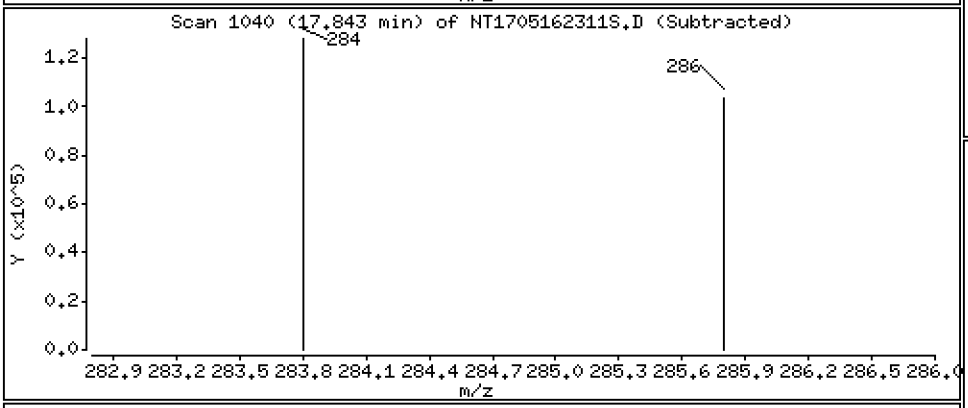
Column diameter: 0.25

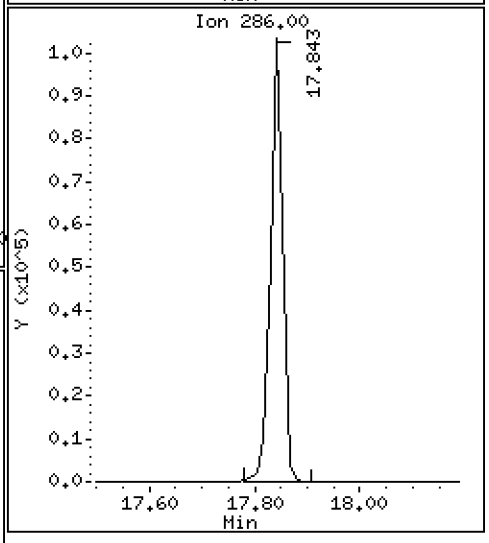
57 Hexachlorobenzene

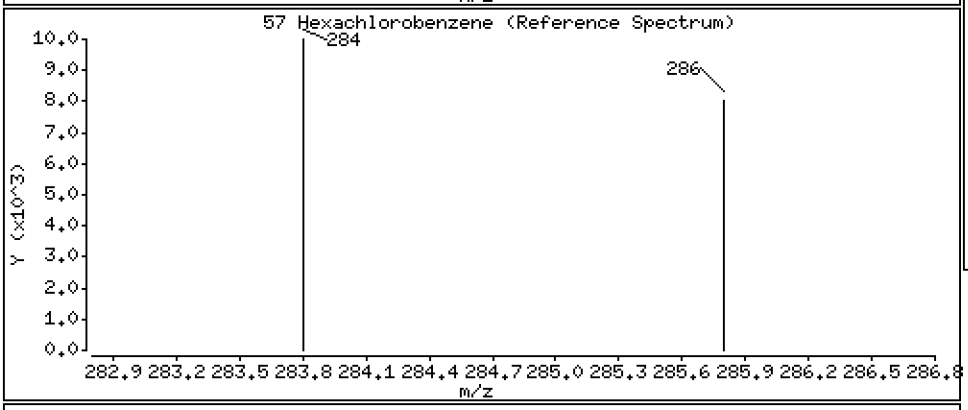
Concentration: 5.081 ug/mL

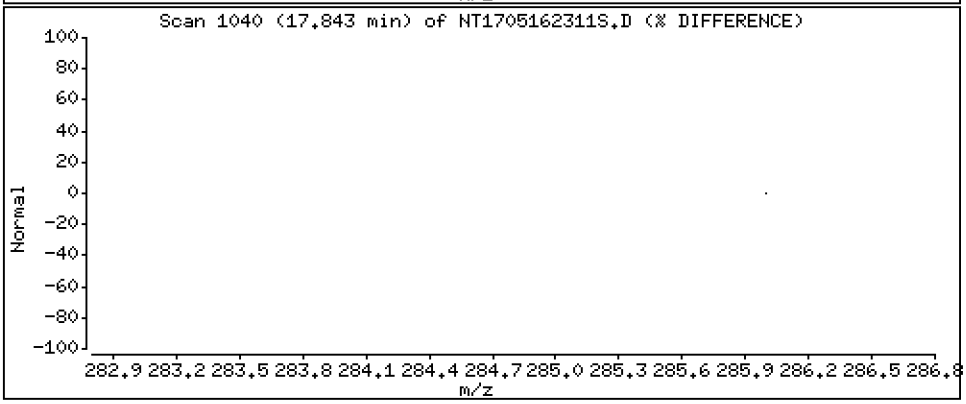












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

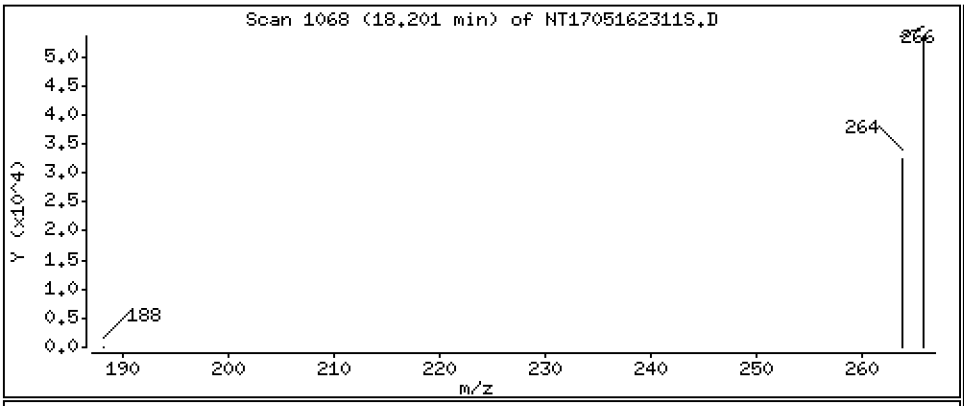
Operator: JGR

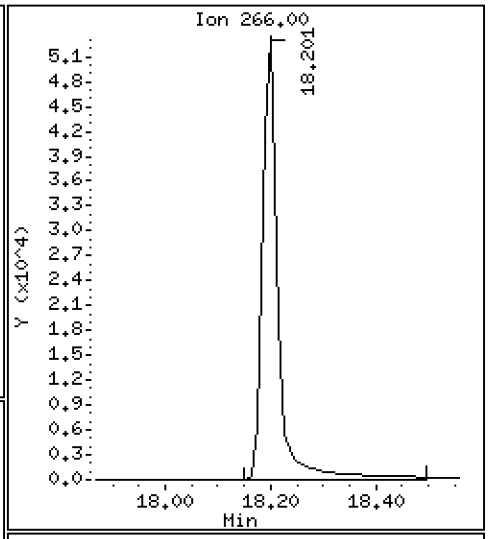
Column phase: ZB-5msi

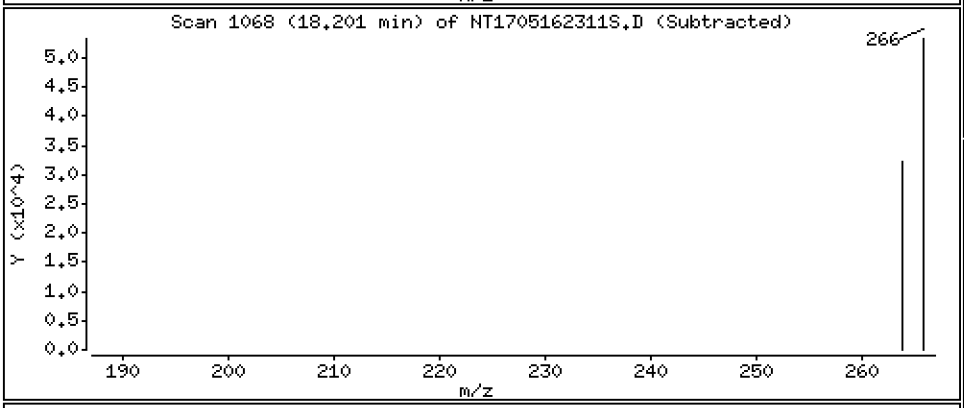
Column diameter: 0.25

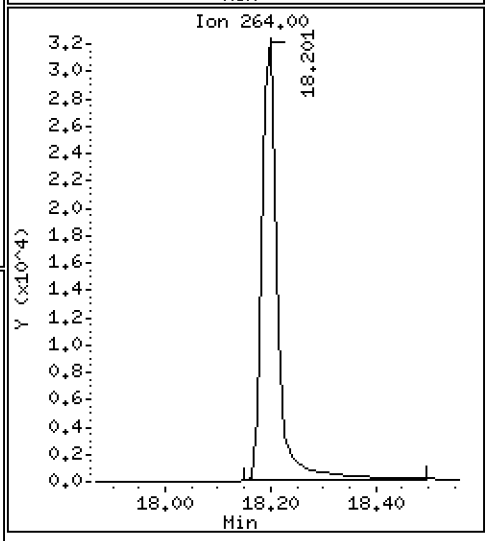
58 Pentachlorophenol

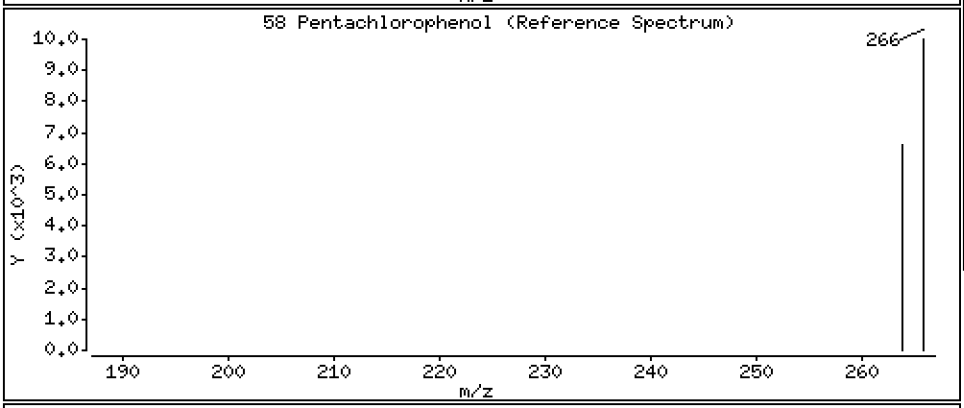
Concentration: 4.506 ug/mL

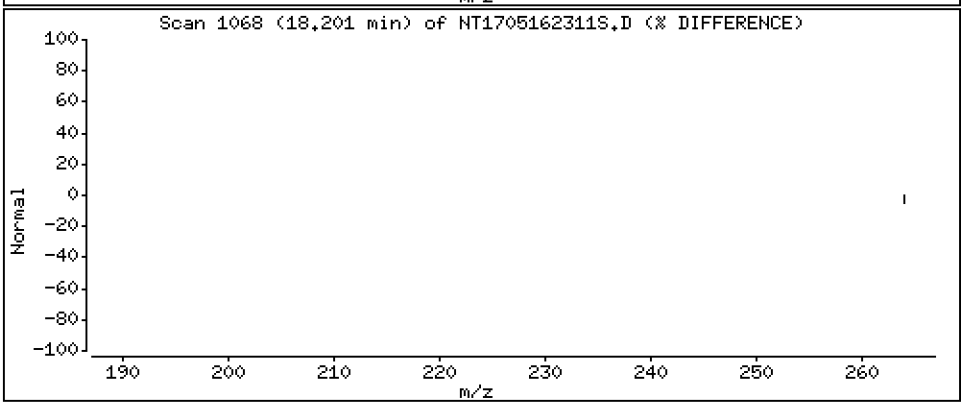












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

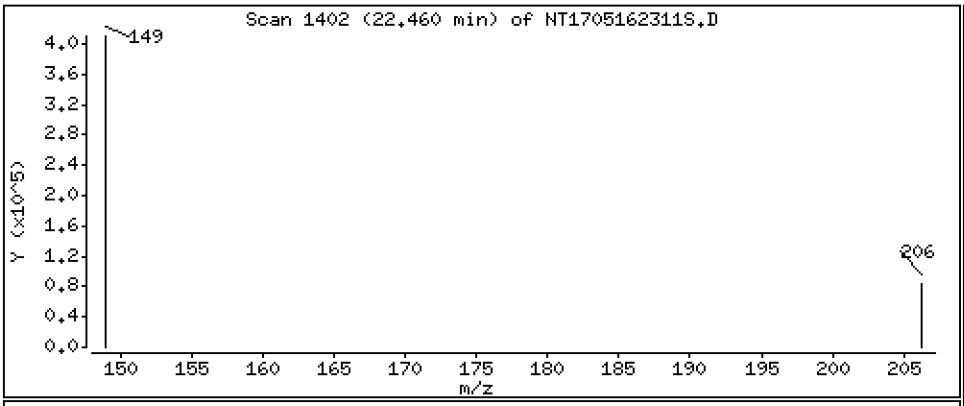
Operator: JGR

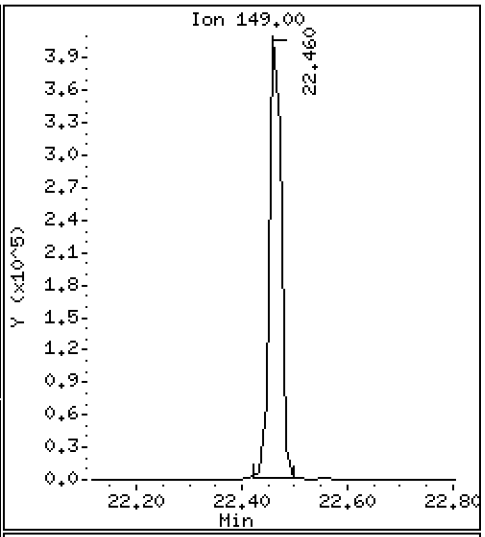
Column phase: ZB-5msi

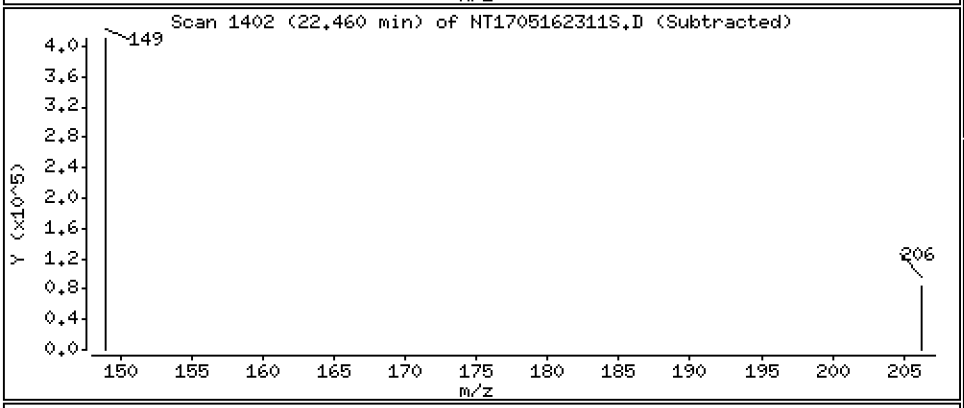
Column diameter: 0.25

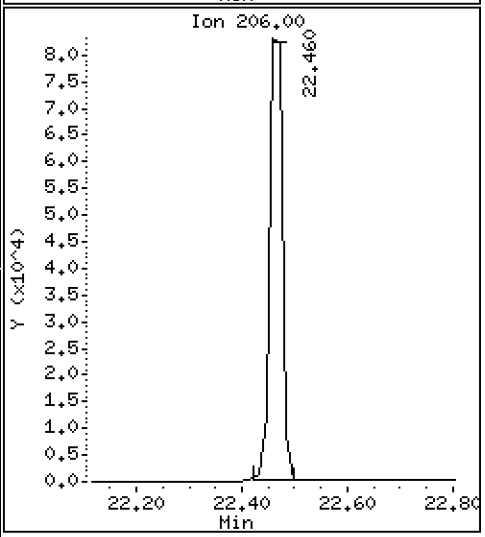
67 Butylbenzylphthalate

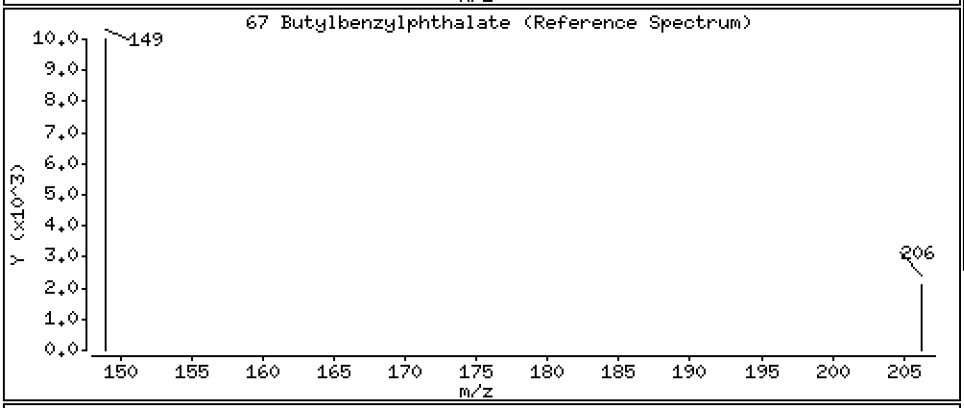
Concentration: 5.905 ug/mL

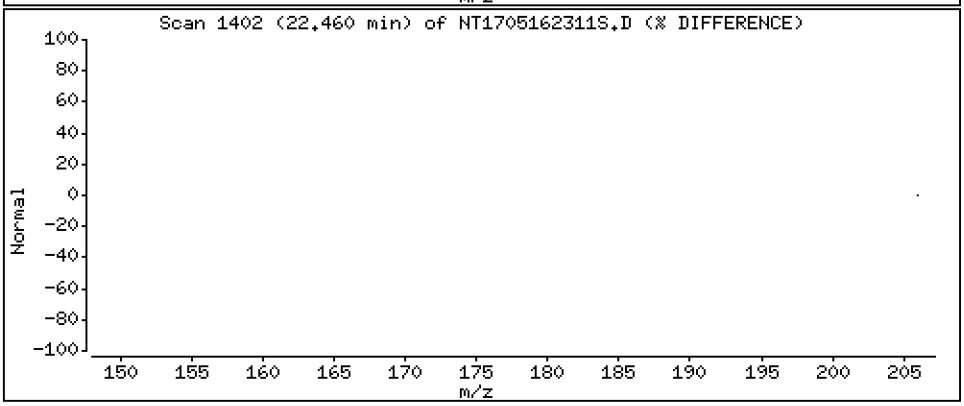












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

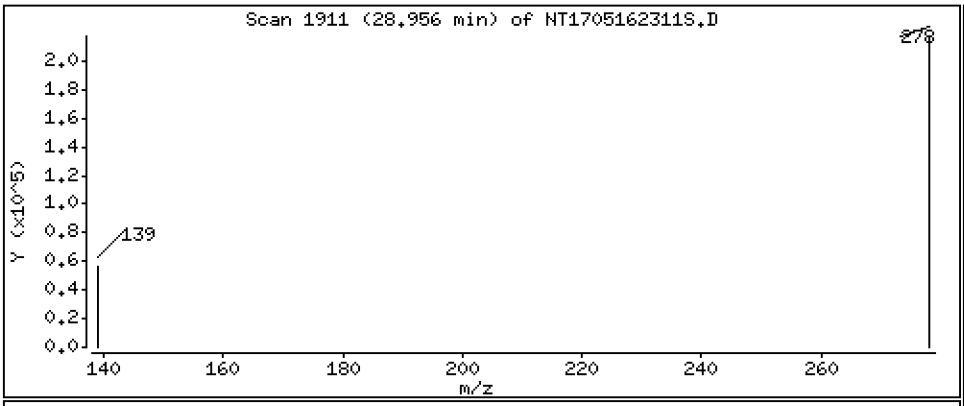
Operator: JGR

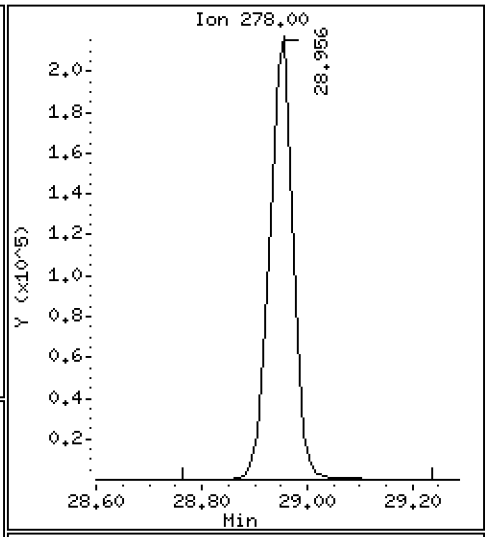
Column phase: ZB-5msi

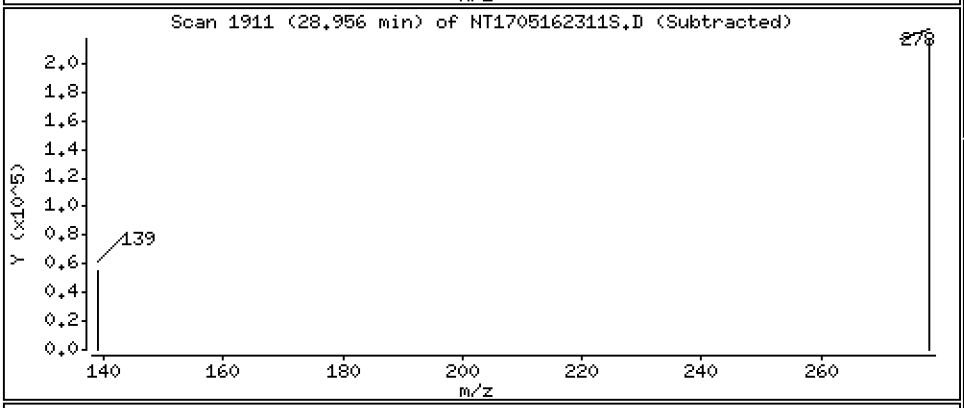
Column diameter: 0.25

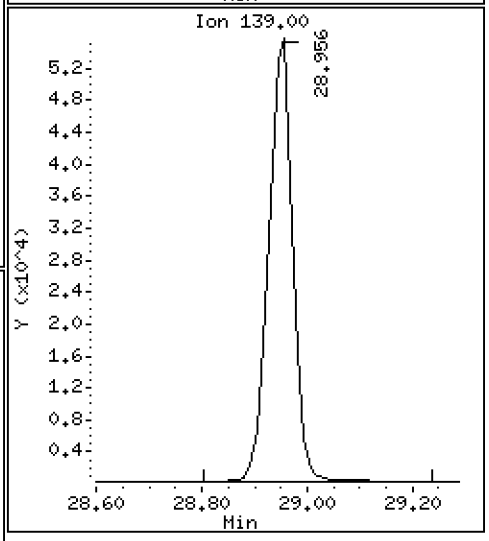
79 Dibenzo(a,h)anthracene

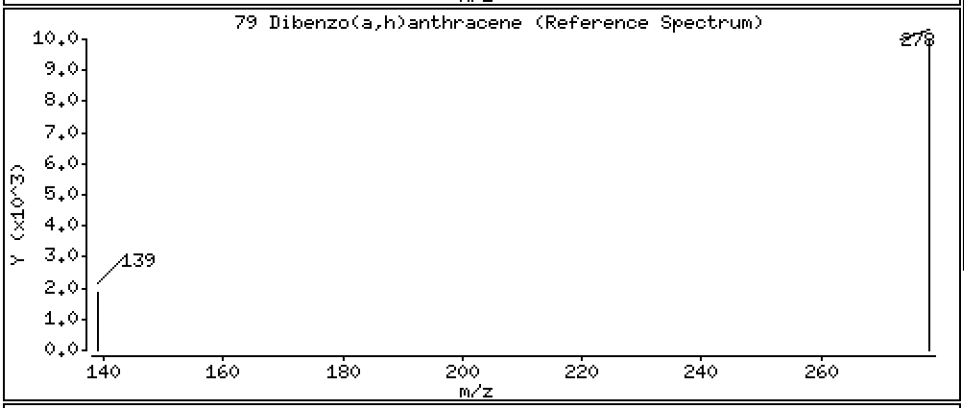
Concentration: 5.149 ug/mL

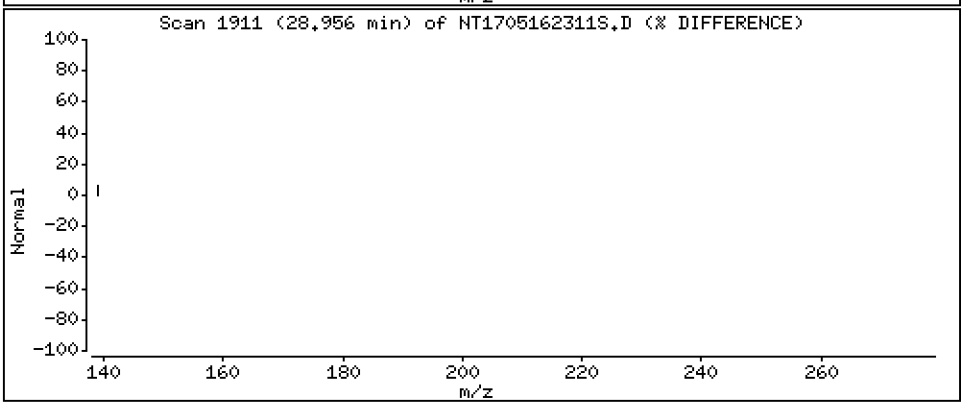












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

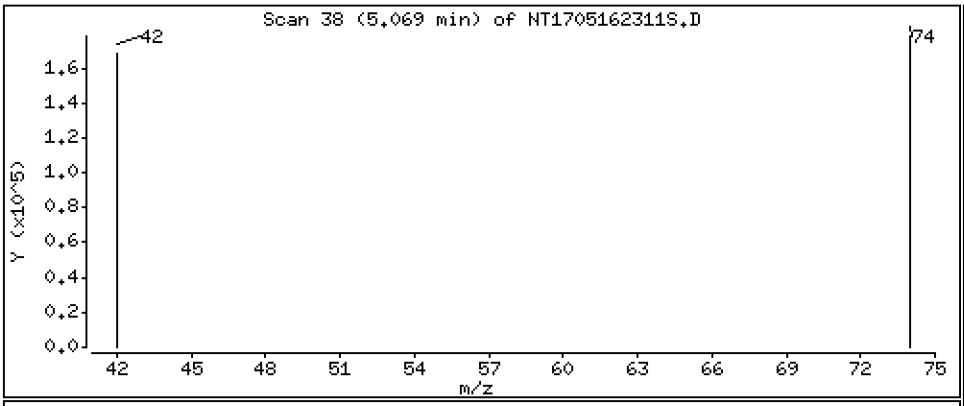
Operator: JGR

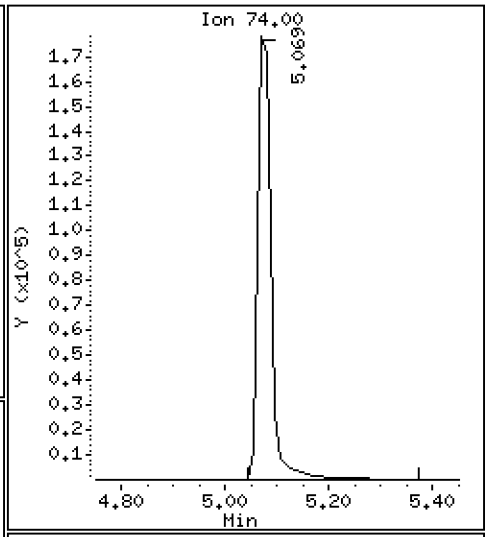
Column phase: ZB-5msi

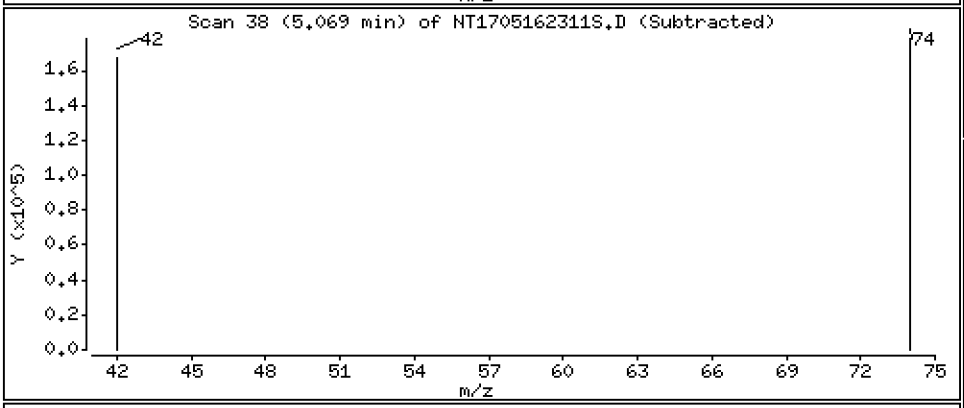
Column diameter: 0.25

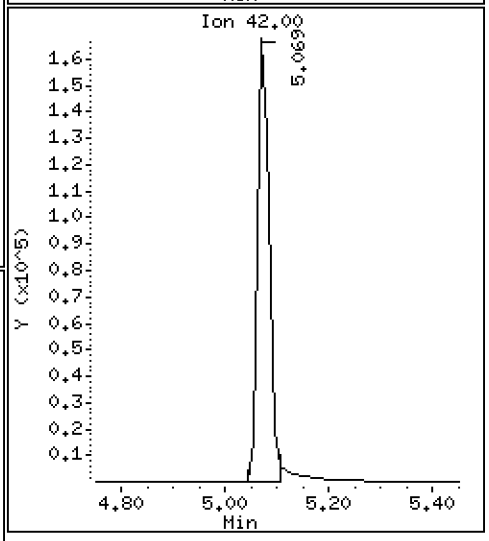
90 N-Nitrosodimethylamine

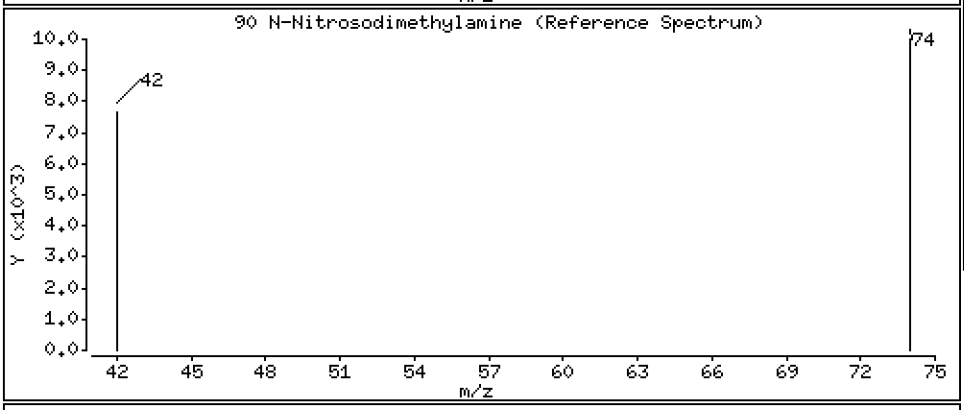
Concentration: 5.868 ug/mL

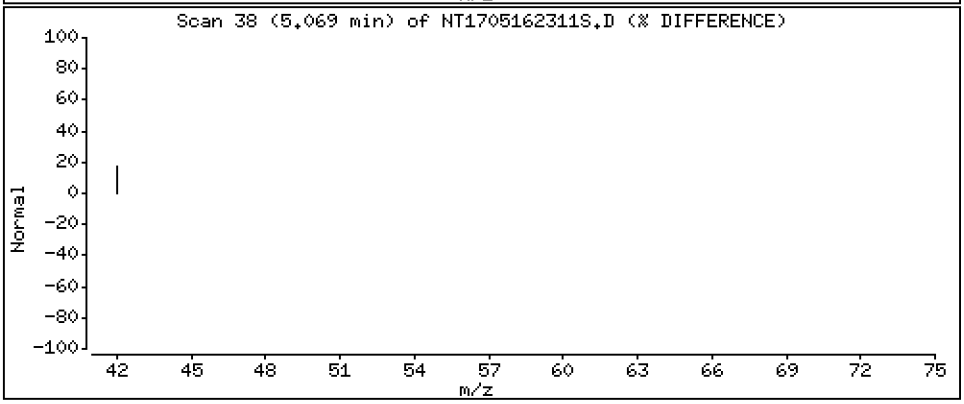












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D
Lab Smp Id: SLE0339-SCV1
Inj Date : 17-MAY-2023 00:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1	2-Fluorophenol	112	Compound Not Detected.					
	3	Phenol	94	8.750	8.751	(0.933)	616997	4.88420	4.884
	7	1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	575988	5.08691	5.087
*	8	1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	280298	4.00000	
	9	1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	566257	5.13211	5.132
	11	Benzyl alcohol	79	9.630	9.656	(1.027)	410745	5.70628	5.706
	12	1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	541461	5.00685	5.007
	13	2-Methylphenol	108	9.848	9.861	(1.050)	385832	4.40762	4.408
	15	4-Methylphenol	108	10.129	10.129	(1.080)	423610	4.78832	4.788
	16	N-Nitroso-di-n-propylamine	70	10.193	10.180	(1.087)	349317	5.47874	5.479
	22	2,4-Dimethylphenol	107	11.151	11.164	(0.942)	366886	3.81638	3.816
	24	Benzoic acid	105	11.329	11.356	(0.957)	465783	7.77732	7.777
	26	1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	427934	4.90638	4.906
*	27	Naphthalene-d8	136	11.840	11.840	(1.000)	999390	4.00000	
	30	Hexachlorobutadiene	225	12.235	12.235	(1.033)	238867	5.20120	5.201
	39	Dimethylphthalate	163	14.938	14.926	(0.968)	1015804	5.23967	5.240
*	42	Acenaphthene-d10	162	15.436	15.436	(1.000)	527927	4.00000	
	50	Diethylphthalate	149	16.379	16.379	(1.061)	964439	5.47782	5.478
	54	N-Nitrosodiphenylamine	169	16.774	16.774	(0.908)	681829	5.62729	5.627
	57	Hexachlorobenzene	284	17.843	17.843	(0.966)	208857	5.08140	5.081
	58	Pentachlorophenol	266	18.200	18.214	(0.986)	108866	4.50590	4.506
*	59	Phenanthrene-d10	188	18.468	18.455	(1.000)	860054	4.00000	
$	66	Terphenyl-d14	244	Compound Not Detected.					
	67	Butylbenzylphthalate	149	22.460	22.460	(0.958)	642329	5.90509	5.905
*	69	Chrysene-d12	240	23.455	23.455	(1.000)	527529	4.00000	
*	77	Perylene-d12	264	26.159	26.147	(1.000)	475440	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.956	28.943	(1.107)	690513	5.14916	5.149
	90	N-Nitrosodimethylamine	74	5.068	5.094	(0.541)	321072	5.86783	5.868

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162311S.D
Lab Smp Id: SLE0339-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	280298	-11.32
27 Naphthalene-d8	1102073	551037	2204146	999390	-9.32
42 Acenaphthene-d10	583826	291913	1167652	527927	-9.57
59 Phenanthrene-d10	970917	485459	1941834	860054	-11.42
69 Chrysene-d12	590568	295284	1181136	527529	-10.67
77 Perylene-d12	537938	268969	1075876	475440	-11.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.47	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
77 Perylene-d12	26.16	25.66	26.66	26.16	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162311S.D

Lab ID: SLE0339-SCV1
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   17-MAY-2023 00:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.957	0.000	0.9569	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GD00068
Lab File ID:	N823052202.D	Calibration Date:	04/26/2023
Sequence:	SLE0350	Injection Date:	05/22/23
Lab Sample ID:	SLE0350-ICV1	Injection Time:	11:46
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	2.5000	2.51	1.0189360	1.0246710		0.6	+/-20
2-Methylnaphthalene	A	2.5000	2.41	0.5785221	0.5571571		-3.7	+/-20
1-Methylnaphthalene	A	2.5000	2.43	0.5736076	0.5582811		-2.7	+/-20
Acenaphthylene	A	2.5000	2.50	1.7705370	1.7701050		-0.04	+/-20
Acenaphthene	A	2.5000	2.41	1.1471200	1.1063060		-3.6	+/-20
Dibenzofuran	A	2.5000	2.34	1.7229440	1.6106680		-6.5	+/-20
Fluorene	A	2.5000	2.34	1.3750310	1.2880710		-6.3	+/-20
Phenanthrene	A	2.5000	2.40	1.0593530	1.0183170		-3.9	+/-20
Anthracene	A	2.5000	2.57	0.9935358	1.0191760		2.6	+/-20
Fluoranthene	A	2.5000	2.36	1.2184160	1.1488200		-5.7	+/-20
Pyrene	A	2.5000	2.73	1.2804750	1.3956100		9.0	+/-20
Benzo(a)anthracene	A	2.5000	2.46	1.3157630	1.2965190		-1.5	+/-20
Chrysene	A	2.5000	2.44	1.2925870	1.2589620		-2.6	+/-20
Benzo(b)fluoranthene	A	2.5000	2.25	1.3038540	1.1750370		-9.9	+/-20
Benzo(k)fluoranthene	A	2.5000	2.51	1.2284610	1.2325930		0.3	+/-20
Benzo(j)fluoranthene	A	2.5000	2.29	1.1350320	1.0415410		-8.2	+/-20
Benzofluoranthenes, Total	A	7.5000	7.04	1.2124900	1.1384240		-6.1	+/-20
Benzo(a)pyrene	A	2.5000	2.37	1.1333570	1.0730850		-5.3	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.77	1.1536650	1.2798570		10.9	+/-20
Dibenzo(a,h)anthracene	A	2.5000	2.67	1.0244260	1.0946940		6.8	+/-20
Benzo(g,h,i)perylene	A	2.5000	2.83	1.0686540	1.2078600		13.0	+/-20
2-Methylnaphthalene-d10	A	2.5000	2.43	0.6176995	0.5990750		-3.0	+/-20
Dibenzo[a,h]anthracene-d14	A	2.5000	2.70	0.7635682	0.8257569		8.2	+/-20
Fluoranthene-d10	A	2.5000	2.38	1.0796020	1.0288420		-4.7	
Naphthalene-d8	A	2.0000	2.00	9130.5000	1.0000		0.0	
Acenaphthene-d10	A	2.0000	2.00	5227.0000	1.0000		0.0	
Phenanthrene-d10	A	2.0000	2.00	10115.1700	1.0000		0.0	
Chrysene-d12	A	2.0000	2.00	10064.7500	1.0000		0.0	
Perylene-d12	A	2.0000	2.00	10223.5800	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230522.b\N823052202.D

Page 1

Date : 22-MAY-2023 11:46

Client ID:

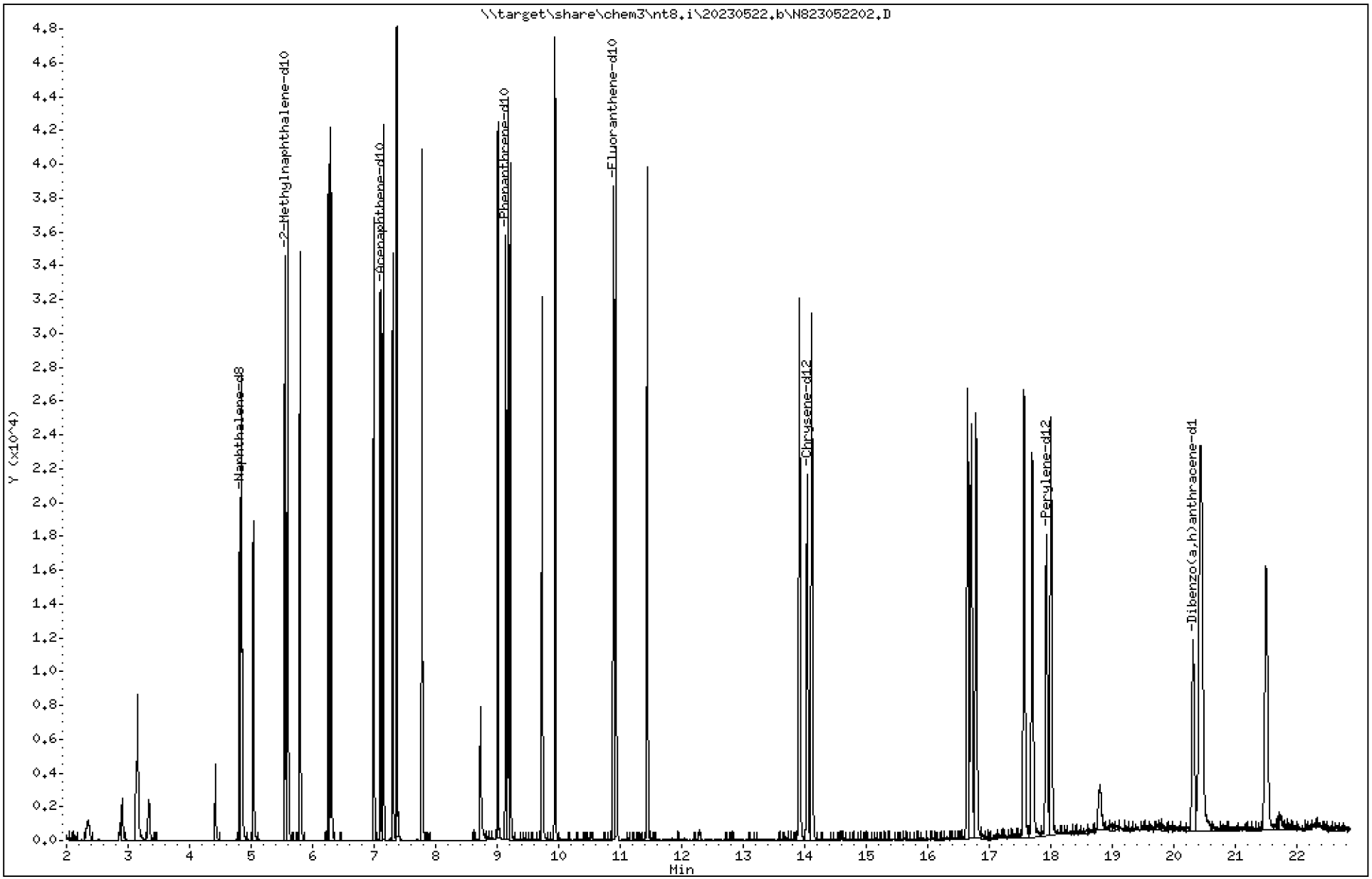
Instrument: nt8.i

Sample Info: ICV230522

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230522.b\N823052202.D
Lab Smp Id: SLE0350-ICV1
Inj Date : 22-MAY-2023 11:46
Operator : JZ Inst ID: nt8.i
Smp Info : ICV230522
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Meth Date : 23-May-2023 10:26 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1	Naphthalene-d8	136	4.818	4.818	(1.000)	17081	2.00000	
	2	Naphthalene	128	4.846	4.846	(1.006)	21878	2.50000	2.514
$	3	2-Methylnaphthalene-d10	152	5.551	5.551	(1.152)	12791	2.50000	2.425
	4	2-Methylnaphthalene	141	5.599	5.599	(1.162)	11896	2.50000	2.408
	5	1-methylnaphthalene	141	5.795	5.795	(1.203)	11920	2.50000	2.433
	7	Biphenyl	154	6.256	6.256	(0.881)	16906	2.50000	2.272
	8	2,6-Dimethylnaphthalene	156	6.301	6.301	(0.887)	12650	2.50000	2.387
	9	Acenaphthylene	152	6.993	6.993	(0.985)	21405	2.50000	2.499
*	10	Acenaphthene-d10	164	7.101	7.101	(1.000)	9674	2.00000	
	11	Acenaphthene	153	7.151	7.151	(1.007)	13378	2.50000	2.411
	12	Dibenzofuran	168	7.306	7.306	(1.029)	19477	2.50000	2.337
	13	1,6,7-Trimethylnaphthalene	170	7.369	7.369	(1.038)	12783	2.50000	2.426
	14	Fluorene	166	7.781	7.781	(1.096)	15576	2.50000	2.342
	18	Dibenzothiophene	184	9.014	9.014	(0.986)	21439	2.50000	2.465
*	15	Phenanthrene-d10	188	9.140	9.140	(1.000)	17710	2.00000	
	16	Phenanthrene	178	9.175	9.175	(1.004)	22543	2.50000	2.403
	17	Anthracene	178	9.213	9.213	(1.008)	22562	2.50000	2.565
	19	Carbazole	167	9.731	9.731	(1.065)	19430	2.50000	2.312
	20	1-Methylphenanthrene	192	9.943	9.943	(1.088)	17124	2.50000	2.406
	22	Fluoranthene	202	10.930	10.930	(1.196)	25432	2.50000	2.357
$	21	Fluoranthene-d10	212	10.895	10.895	(1.192)	22776	2.50000	2.382
	23	Pyrene	202	11.442	11.442	(0.815)	26309	2.50000	2.725
	24	Benzo(a)anthracene	228	13.918	13.918	(0.991)	24441	2.50000	2.463
*	25	Chrysene-d12	240	14.044	14.044	(1.000)	15081	2.00000	
	27	Chrysene	228	14.117	14.117	(1.005)	23733	2.50000	2.435
	28	Benzo(b)fluoranthene	252	16.653	16.653	(0.929)	22947	2.50000	2.253(M)
	29	Benzo(k)fluoranthene	252	16.713	16.713	(0.932)	24071	2.50000	2.508(M)
	30	Benzo(j)fluoranthene	252	16.789	16.789	(0.936)	20340	2.50000	2.294
	31	Total Benzofluoranthenes	252	16.653	16.653	(0.929)	66696	7.50000	7.042(M)
	34	Benzo(e)pyrene	252	17.573	17.573	(0.980)	22530	2.50000	2.368
	32	Benzo(a)pyrene	252	17.703	17.703	(0.987)	20956	2.50000	2.367
*	33	Perylene-d12	264	17.934	17.934	(1.000)	15623	2.00000	
	35	Perylene	252	18.006	18.006	(1.004)	21880	2.50000	2.461

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.318	20.318	(1.133)	16126	2.50000	2.704
37 Indeno(1,2,3-cd)pyrene	276	20.457	20.457	(1.141)	24994	2.50000	2.773
38 Dibenzo(a,h)anthracene	278	20.425	20.425	(1.139)	21378	2.50000	2.671(M)
39 Benzo(g,h,i)perylene	276	21.503	21.503	(1.199)	23588	2.50000	2.826

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823052202.D
Lab Smp Id: SLE0350-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 17-MAY-2023
Calibration Time: 15:26
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	17081	-8.65
10 Acenaphthene-d10	10729	5365	21458	9674	-9.83
15 Phenanthrene-d10	20748	10374	41496	17710	-14.64
25 Chrysene-d12	20954	10477	41908	15081	-28.03
33 Perylene-d12	21563	10782	43126	15623	-27.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.82	0.00
10 Acenaphthene-d10	7.10	6.60	7.60	7.10	0.00
15 Phenanthrene-d10	9.14	8.64	9.64	9.14	0.00
25 Chrysene-d12	14.04	13.54	14.54	14.04	0.00
33 Perylene-d12	17.93	17.43	18.43	17.93	0.00

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

REVIEW SUMMARY FOR FILE - N823052202.D

Lab ID: SLE0350-ICV1
nt8.i, 20230522.b\FSIMPNA230426.m,   22-MAY-2023 11:46

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

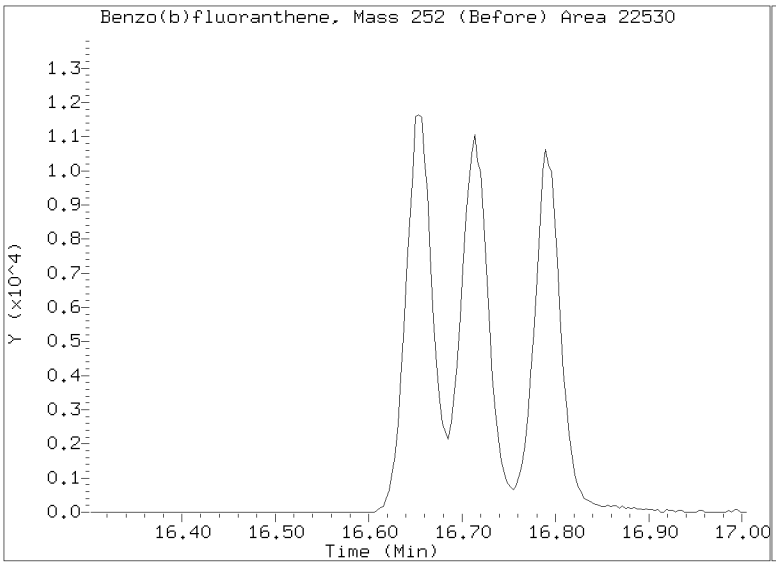
No RRT check performed

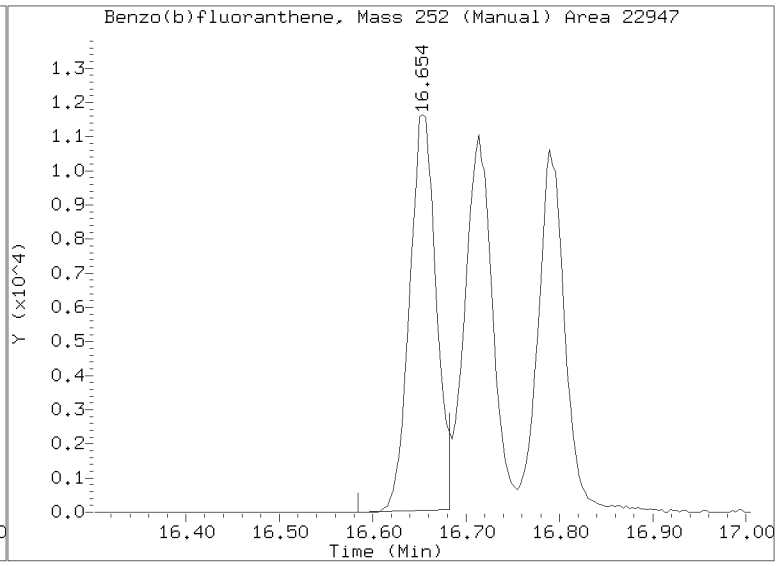
On Column LOD for nt8.i, 20230522.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

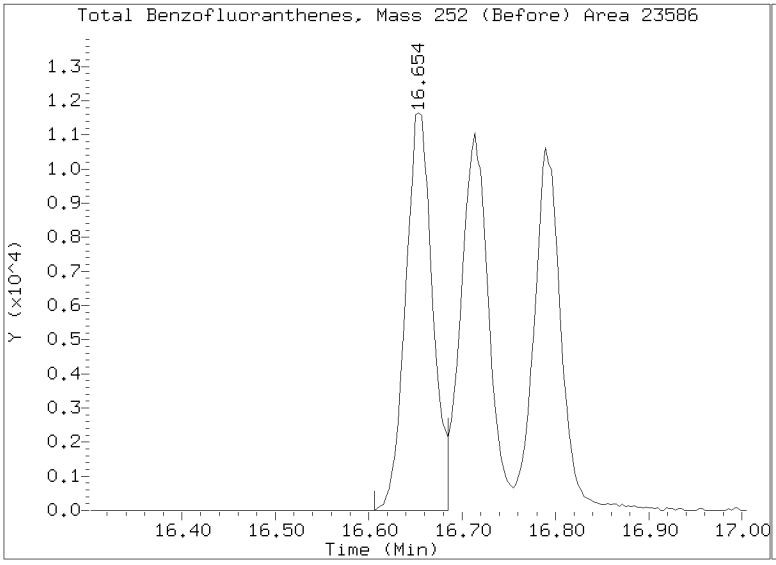
* Only compounds listed in the work order have been verified by the analyst *

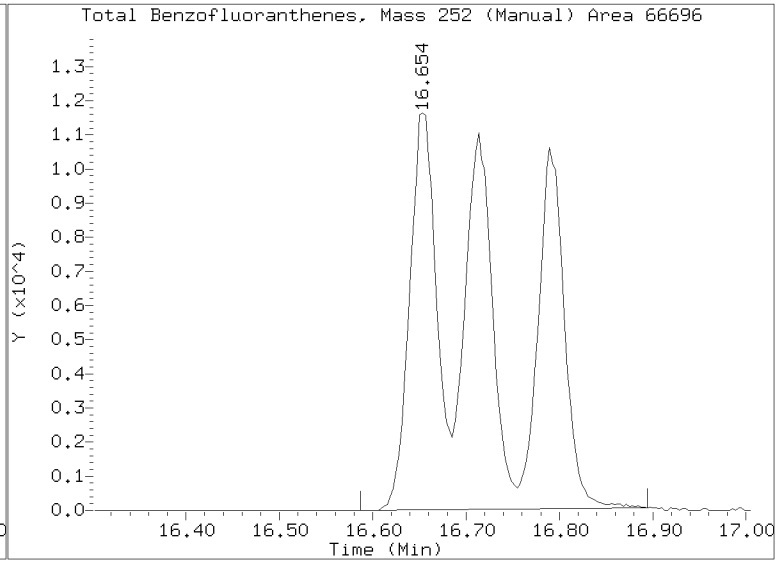
Quant Ion Manual Peak Adjustment Report

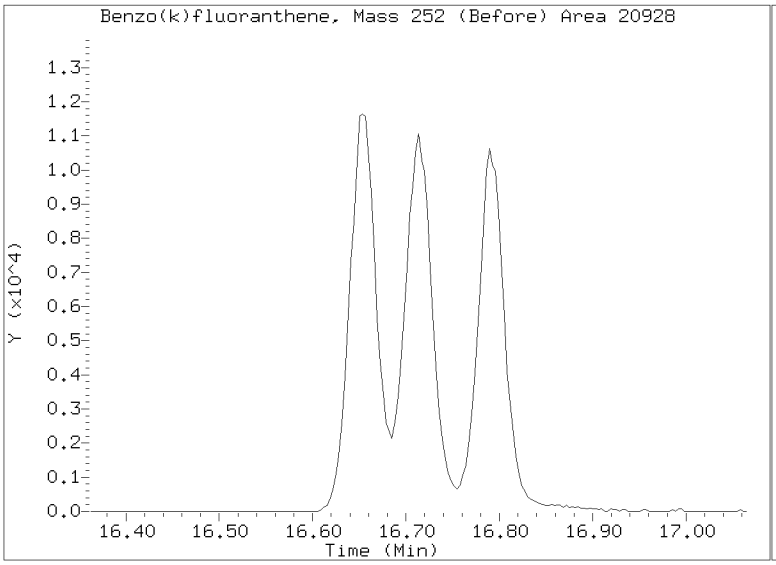
Datafile: //target/share/chem3/nt8.i/20230522.b/N823052202.D
Injection Date: 22-MAY-2023 11:46
Lab ID:SLE0350-ICV1 Client ID:
Report Date: 05/23/2023 10:26

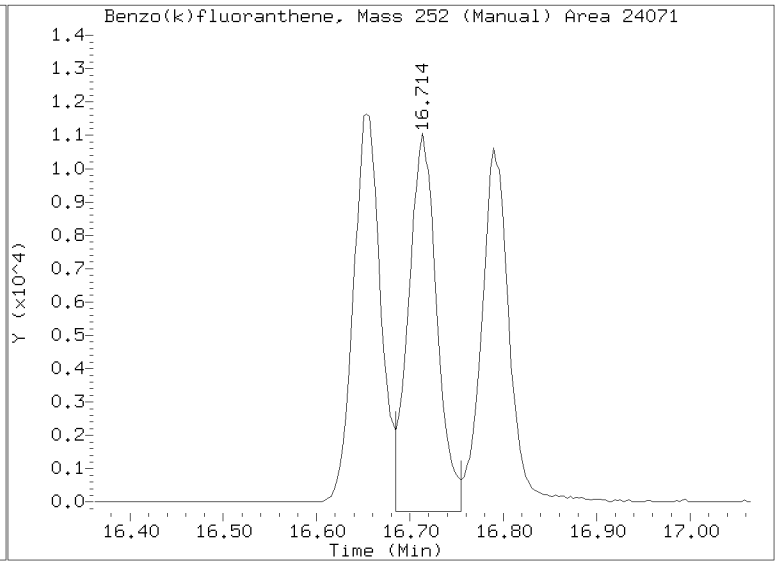






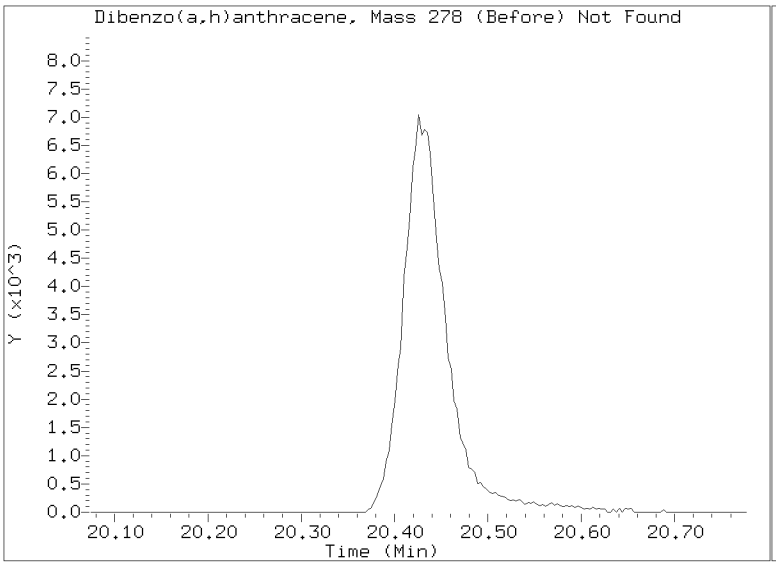


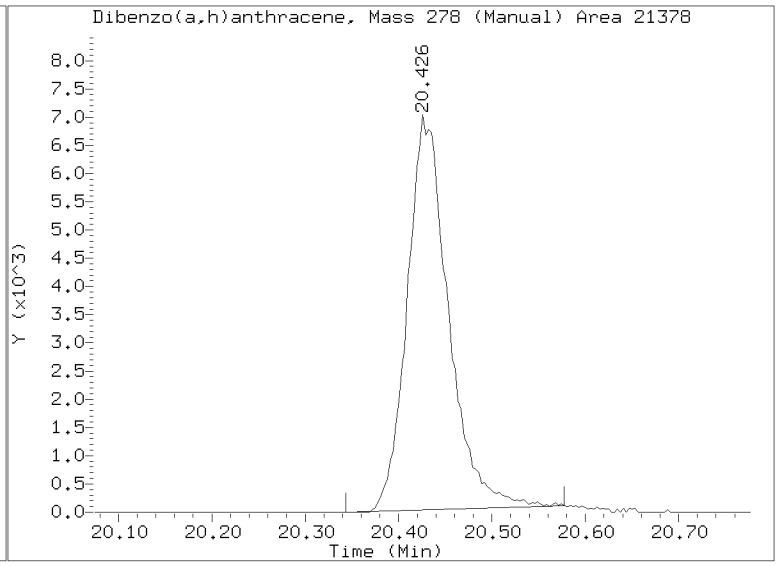




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230522.b/N823052202.D
Injection Date: 22-MAY-2023 11:46
Lab ID:SLE0350-ICV1 Client ID:
Report Date: 05/23/2023 10:26





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230522.b

Instrument: nt8.i Date: 22-MAY-2023 Method: 20230522.b\FSIMPNA230426.m

INITIAL CAL: 26-APR-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N823052202.D 22-MAY-2023 11:46

Compound	%D
NO Q-FLAGS	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00070
Lab File ID:	NT1706012305S.D	Calibration Date:	05/16/2023
Sequence:	SLF0037	Injection Date:	06/01/23
Lab Sample ID:	SLF0037-ICV1	Injection Time:	14:35
Sequence Name:	ABN 1.0		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.5745540	1.6128220		2.4	+/-20
1,2-Dichlorobenzene	A	1.0000	1.0	1.5432720	1.5592730		1.0	+/-20
Benzyl Alcohol	A	1.0000	1.1	1.0272110	1.1295830		10.0	+/-20
Benzoic acid	A	4.0000	3.8	0.1537024	0.2282416		-4.8	+/-20
2,4-Dimethylphenol	A	2.0000	2.0	0.3847731	0.3829329		-0.5	+/-20
1,2,4-Trichlorobenzene	A	1.0000	0.9	0.3490929	0.3280280		-6.0	+/-20
N-Nitrosodiphenylamine	A	1.0000	1.1	0.5635219	0.6012615		6.7	+/-20
Pentachlorophenol	A	2.0000	2.1	0.0772800	0.1125069		2.6	+/-20
2-Fluorophenol	A	1.5000	1.47	1.2098450	1.1869920		-1.9	+/-20
p-Terphenyl-d14	A	1.0000	1.14	0.7589992	0.8665758		14.2	+/-20
1,4-Dichlorobenzene-d4	A	4.0000	4.0	79150.5600	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	278594.8000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	147343.3000	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	243223.3000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	150416.5000	1.0000		0.0	
Perylene-d12	A	4.0000	4.0	135257.9000	1.0000		0.0	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123055.D

Date : 01-JUN-2023 14:35

Client ID:

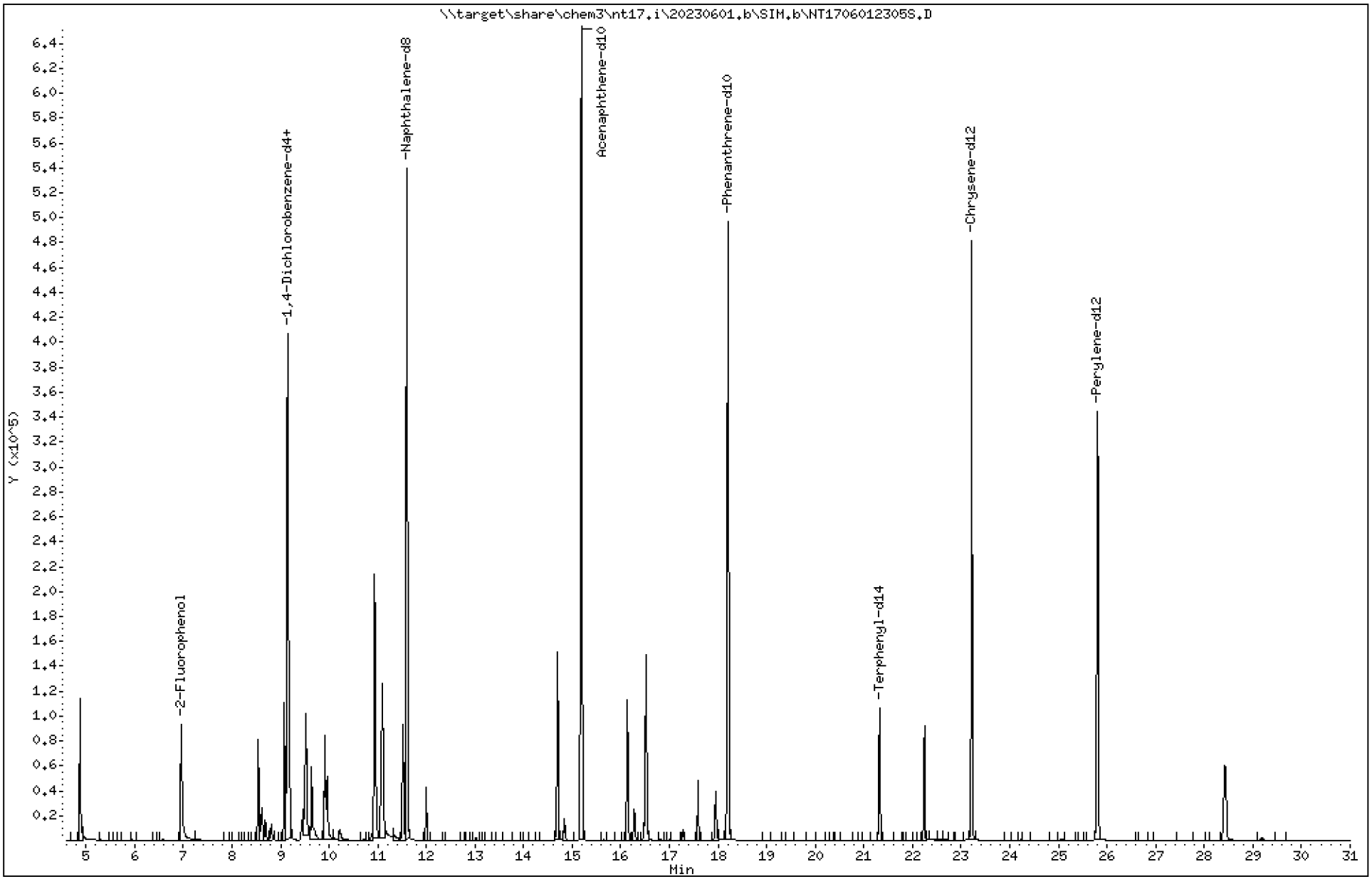
Sample Info: SLF0037-ICV1

Column phase: ZB-5msi

Instrument: nt17.i

Operator: YZ

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012305S.D
Lab Smp Id: SLF0037-ICV1
Inj Date : 01-JUN-2023 14:35
Operator : YZ Inst ID: nt17.i
Smp Info : SLF0037-ICV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 10:22 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.954	6.954	(0.760)	126083	1.50000	1.472
	3	Phenol	94	8.547	8.547	(0.934)	139819	1.00000	1.095
	7	1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	115773	1.00000	1.012
*	8	1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	283255	4.00000	
	9	1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	114210	1.00000	1.024
	11	Benzyl alcohol	79	9.465	9.465	(1.035)	79990	1.00000	1.100
	12	1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	110418	1.00000	1.010
	13	2-Methylphenol	108	9.644	9.644	(1.054)	89006	1.00000	1.006
	15	4-Methylphenol	108	9.912	9.912	(1.084)	88757	1.00000	0.9928
	16	N-Nitroso-di-n-propylamine	70	9.964	9.964	(1.089)	68034	1.00000	1.056
	22	2,4-Dimethylphenol	107	10.934	10.934	(0.943)	187941	2.00000	1.990
	24	Benzoic acid	105	11.100	11.100	(0.957)	224039	4.00000	3.809
	26	1,2,4-Trichlorobenzene	180	11.521	11.521	(0.993)	80497	1.00000	0.9397
*	27	Naphthalene-d8	136	11.598	11.598	(1.000)	981587	4.00000	
	30	Hexachlorobutadiene	225	11.993	11.993	(1.034)	50948	1.00000	1.129
	39	Dimethylphthalate	163	14.696	14.696	(0.967)	206329	1.00000	0.9476
*	42	Acenaphthene-d10	162	15.194	15.194	(1.000)	592919	4.00000	
	50	Diethylphthalate	149	16.137	16.137	(1.062)	186379	1.00000	0.9426
	54	N-Nitrosodiphenylamine	169	16.519	16.519	(0.908)	136462	1.00000	1.067
	57	Hexachlorobenzene	284	17.588	17.588	(0.966)	48593	1.00000	1.120
	58	Pentachlorophenol	266	17.946	17.946	(0.986)	51069	2.00000	2.052
*	59	Phenanthrene-d10	188	18.201	18.201	(1.000)	907838	4.00000	
$	66	Terphenyl-d14	244	21.325	21.325	(0.919)	144448	1.00000	1.142
	67	Butylbenzylphthalate	149	22.243	22.243	(0.958)	124934	1.00000	0.9087
*	69	Chrysene-d12	240	23.213	23.213	(1.000)	666753	4.00000	
*	77	Perylene-d12	264	25.802	25.802	(1.000)	648259	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.421	28.421	(1.101)	183880	1.00000	1.006
	90	N-Nitrosodimethylamine	74	4.865	4.865	(0.532)	106993	2.00000	1.935

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012305S.D
Lab Smp Id: SLF0037-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 11:14
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	283255	141628	566510	283255	0.00
27 Naphthalene-d8	981587	490794	1963174	981587	0.00
42 Acenaphthene-d10	592919	296460	1185838	592919	0.00
59 Phenanthrene-d10	907838	453919	1815676	907838	0.00
69 Chrysene-d12	666753	333377	1333506	666753	0.00
77 Perylene-d12	648259	324130	1296518	648259	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.21	22.71	23.71	23.21	0.00
77 Perylene-d12	25.80	25.30	26.30	25.80	0.00

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

REVIEW SUMMARY FOR FILE - NT1706012305S.D

Lab ID: SLF0037-ICV1
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   01-JUN-2023 14:35

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b\SIM.b

Instrument: nt17.i Date: 01-JUN-2023 Method: SIM.b\SIMABN2.m

INITIAL CAL: 16-MAY-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1706012305S.D 01-JUN-2023 14:35

Compound	%D
NO Q-FLAGS	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00070
Lab File ID:	NT1706012321S.D	Calibration Date:	05/16/2023
Sequence:	SLF0037	Injection Date:	06/02/23
Lab Sample ID:	SLF0037-ICV2	Injection Time:	00:29
Sequence Name:	ABN 1		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.5745540	1.6064560		2.0	+/-20
1,2-Dichlorobenzene	A	1.0000	1.0	1.5432720	1.5762830		2.1	+/-20
Benzyl Alcohol	A	1.0000	1.0	1.0272110	0.9801006		-4.6	+/-20
Benzoic acid	A	4.0000	3.6	0.1537024	0.2128447		-11.2	+/-20
2,4-Dimethylphenol	A	2.0000	1.9	0.3847731	0.3705414		-3.7	+/-20
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3490929	0.3384428		-3.1	+/-20
N-Nitrosodiphenylamine	A	1.0000	1.1	0.5635219	0.5922322		5.1	+/-20
Pentachlorophenol	A	2.0000	2.0	0.0772800	0.1095537		-0.04	+/-20
2-Fluorophenol	A	1.5000	1.41	1.2098450	1.1390290		-5.9	+/-20
p-Terphenyl-d14	A	1.0000	1.20	0.7589992	0.9089737		19.8	+/-20
1,4-Dichlorobenzene-d4	A	4.0000	4.0	79150.5600	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	278594.8000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	147343.3000	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	243223.3000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	150416.5000	1.0000		0.0	
Perylene-d12	A	4.0000	4.0	135257.9000	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123215.D

Date : 02-JUN-2023 00:29

Client ID:

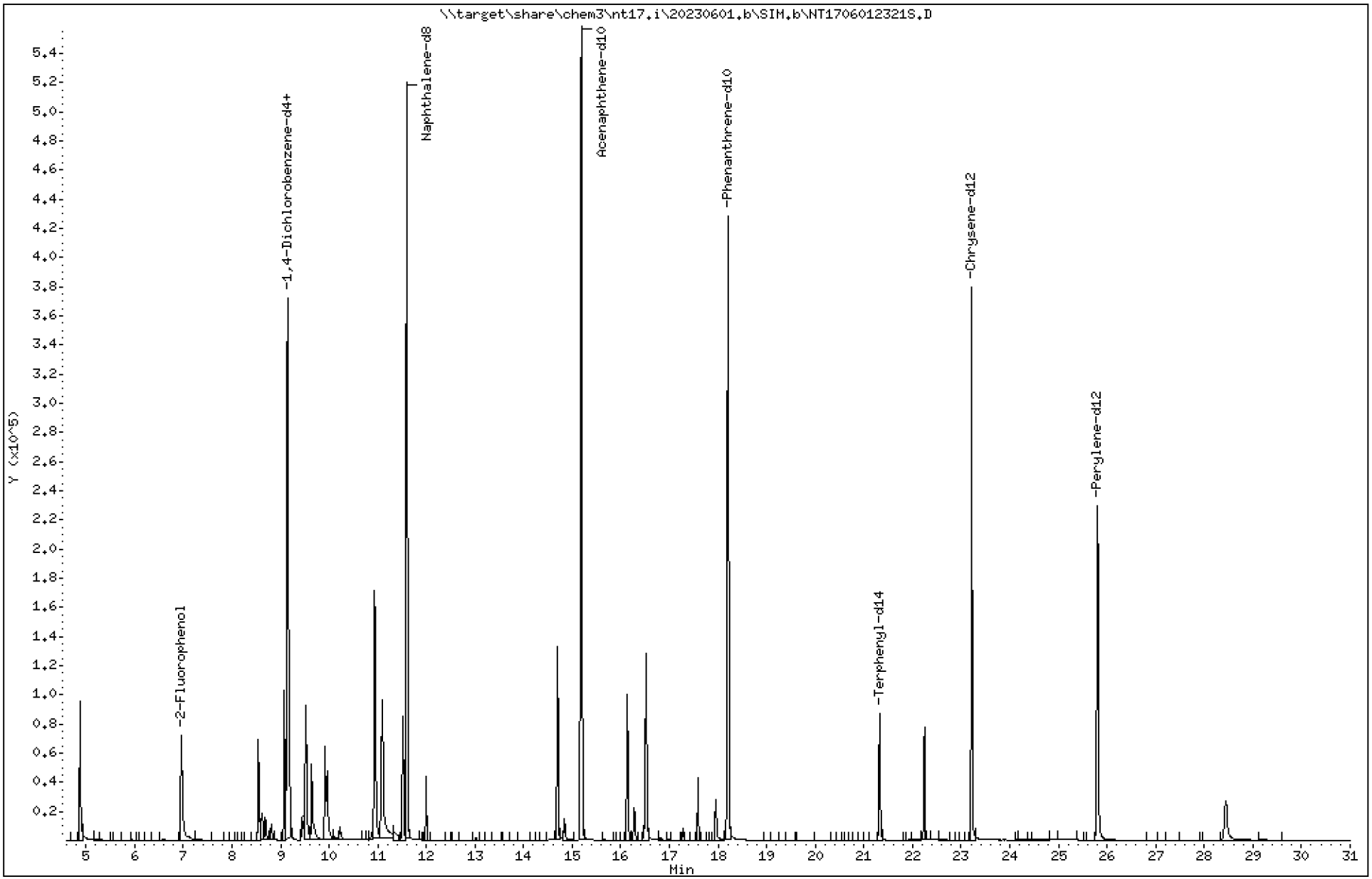
Sample Info: SLF0037-ICV2

Instrument: nt17.i

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012321S.D
Lab Smp Id: SLF0037-ICV2
Inj Date : 02-JUN-2023 00:29
Operator : VTS Inst ID: nt17.i
Smp Info : SLF0037-ICV2
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.954	6.954	(0.760)	113420	1.50000	1.412
	3	Phenol	94	8.547	8.547	(0.934)	117609	1.00000	0.9828
	7	1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	107730	1.00000	1.004
*	8	1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	265536	4.00000	
	9	1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	106643	1.00000	1.020
	11	Benzyl alcohol	79	9.452	9.452	(1.034)	65063	1.00000	0.9541
	12	1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	104640	1.00000	1.021
	13	2-Methylphenol	108	9.644	9.644	(1.054)	75187	1.00000	0.9067
	15	4-Methylphenol	108	9.912	9.912	(1.084)	70478	1.00000	0.8409
	16	N-Nitroso-di-n-propylamine	70	9.964	9.964	(1.089)	59852	1.00000	0.9909
	22	2,4-Dimethylphenol	107	10.934	10.934	(0.943)	161949	2.00000	1.926
	24	Benzoic acid	105	11.100	11.100	(0.957)	186052	4.00000	3.552
	26	1,2,4-Trichlorobenzene	180	11.521	11.521	(0.993)	73960	1.00000	0.9695
*	27	Naphthalene-d8	136	11.598	11.598	(1.000)	874121	4.00000	
	30	Hexachlorobutadiene	225	11.993	11.993	(1.034)	46705	1.00000	1.163
	39	Dimethylphthalate	163	14.696	14.696	(0.967)	183153	1.00000	0.9509
*	42	Acenaphthene-d10	162	15.194	15.194	(1.000)	524478	4.00000	
	50	Diethylphthalate	149	16.137	16.137	(1.062)	166648	1.00000	0.9528
	54	N-Nitrosodiphenylamine	169	16.519	16.519	(0.908)	119548	1.00000	1.051
	57	Hexachlorobenzene	284	17.588	17.588	(0.966)	43979	1.00000	1.140
	58	Pentachlorophenol	266	17.946	17.946	(0.986)	44229	2.00000	1.999
*	59	Phenanthrene-d10	188	18.201	18.201	(1.000)	807440	4.00000	
$	66	Terphenyl-d14	244	21.325	21.325	(0.919)	119840	1.00000	1.198
	67	Butylbenzylphthalate	149	22.243	22.243	(0.958)	104792	1.00000	0.9637
*	69	Chrysene-d12	240	23.213	23.213	(1.000)	527364	4.00000	
*	77	Perylene-d12	264	25.802	25.802	(1.000)	455527	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.446	28.446	(1.102)	111502	1.00000	0.8678
	90	N-Nitrosodimethylamine	74	4.878	4.878	(0.533)	101631	2.00000	1.961

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1706012321S.D
Lab Smp Id: SLF0037-ICV2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 01-JUN-2023
Calibration Time: 14:35
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	283255	141628	566510	265536	-6.26
27 Naphthalene-d8	981587	490794	1963174	874121	-10.95
42 Acenaphthene-d10	592919	296460	1185838	524478	-11.54
59 Phenanthrene-d10	907838	453919	1815676	807440	-11.06
69 Chrysene-d12	666753	333377	1333506	527364	-20.91
77 Perylene-d12	648259	324130	1296518	455527	-29.73

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	0.00
69 Chrysene-d12	23.21	22.71	23.71	23.21	0.00
77 Perylene-d12	25.80	25.30	26.30	25.80	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012321S.D

Lab ID: SLF0037-ICV2
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 00:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b\SIM.b

Instrument: nt17.i Date: 02-JUN-2023 Method: SIM.b\SIMABN2.m

INITIAL CAL: 16-MAY-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1706012321S.D 02-JUN-2023 00:29

Compound	%D
NO Q-FLAGS	

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GD00068
Lab File ID:	N823042609.D	Calibration Date:	04/26/2023
Sequence:	SLD0372	Injection Date:	04/26/23
Lab Sample ID:	SLD0372-SCV1	Injection Time:	20:49
Sequence Name:	8270 SIM PNA SCV		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Naphthalene	A	2.5000	2.36	1.0189360	0.9629501		-5.5	
2-Methylnaphthalene	A	2.5000	2.39	0.5785221	0.5534897		-4.3	
1-Methylnaphthalene	A	2.5000	2.38	0.5736076	0.5460759		-4.8	
Acenaphthylene	A	2.5000	2.32	1.7705370	1.6447400		-7.1	
Acenaphthene	A	2.5000	2.23	1.1471200	1.0250280		-10.6	
Dibenzofuran	A	2.5000	2.52	1.7229440	1.7351050		0.7	
Fluorene	A	2.5000	2.29	1.3750310	1.2610030		-8.3	
Phenanthrene	A	2.5000	2.16	1.0593530	0.9156312		-13.6	
Anthracene	A	2.5000	2.01	0.9935358	0.7980446		-19.7	
Fluoranthene	A	2.5000	2.26	1.2184160	1.0996370		-9.7	
Pyrene	A	2.5000	2.23	1.2804750	1.1406200		-10.9	
Benzo(a)anthracene	A	2.5000	2.18	1.3157630	1.1448160		-13.0	
Chrysene	A	2.5000	2.14	1.2925870	1.1046790		-14.5	
Benzo(b)fluoranthene	A	2.5000	2.16	1.3038540	1.1246990		-13.7	
Benzo(k)fluoranthene	A	2.5000	2.30	1.2284610	1.1308220		-7.9	
Benzofluoranthenes, Total	A	5.0000	4.55	1.2124900	1.1040710		-8.9	
Benzo(a)pyrene	A	2.5000	2.29	1.1333570	1.0402950		-8.2	
Indeno(1,2,3-cd)pyrene	A	2.5000	2.45	1.1536650	1.1304380		-2.0	
Dibenzo(a,h)anthracene	A	2.5000	2.33	1.0244260	0.9564994		-6.6	
Benzo(g,h,i)perylene	A	2.5000	2.25	1.0686540	0.9607950		-10.1	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

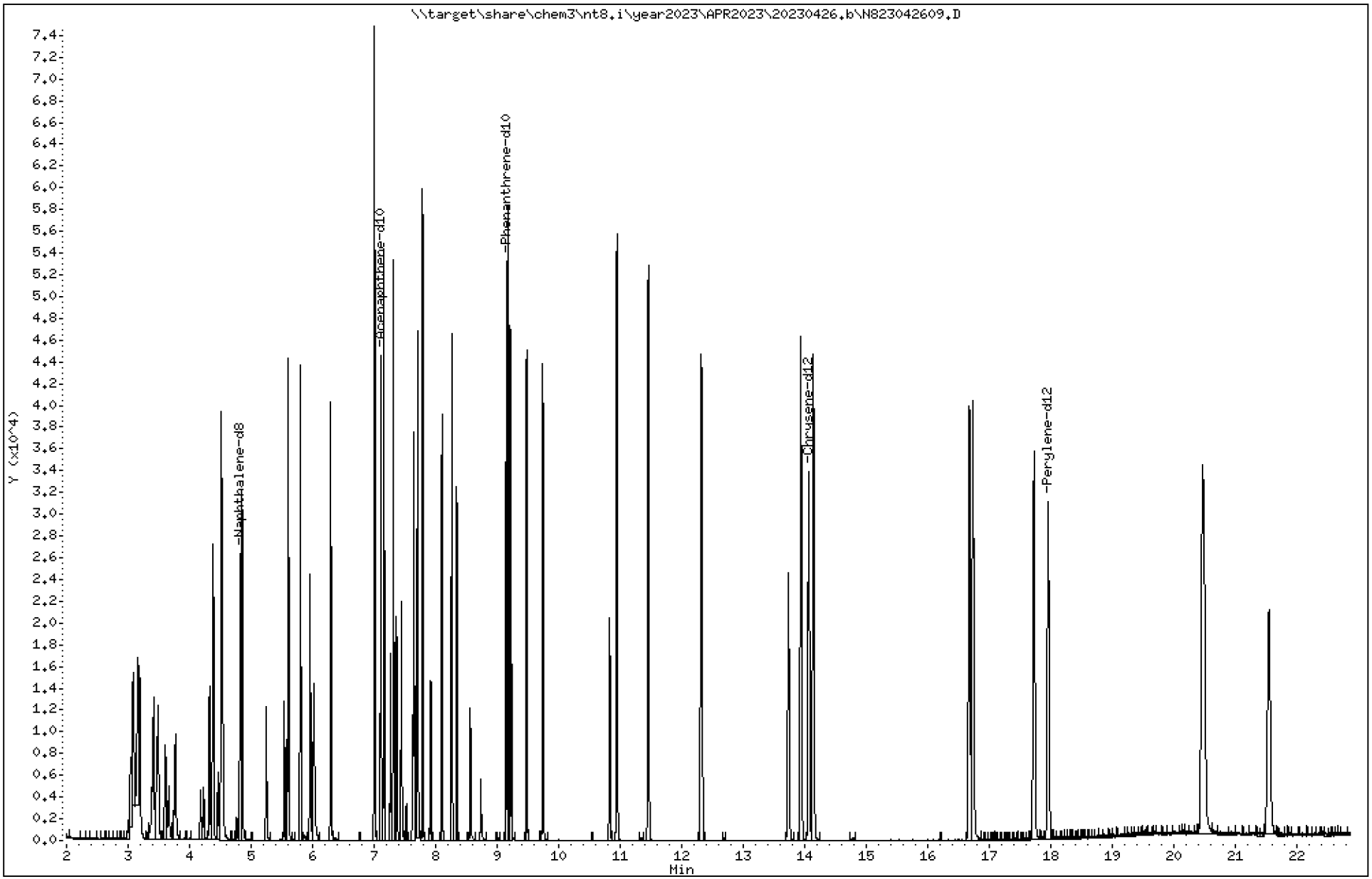
Sample Info: SCV230426

Volume Injected (uL): 1.0

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

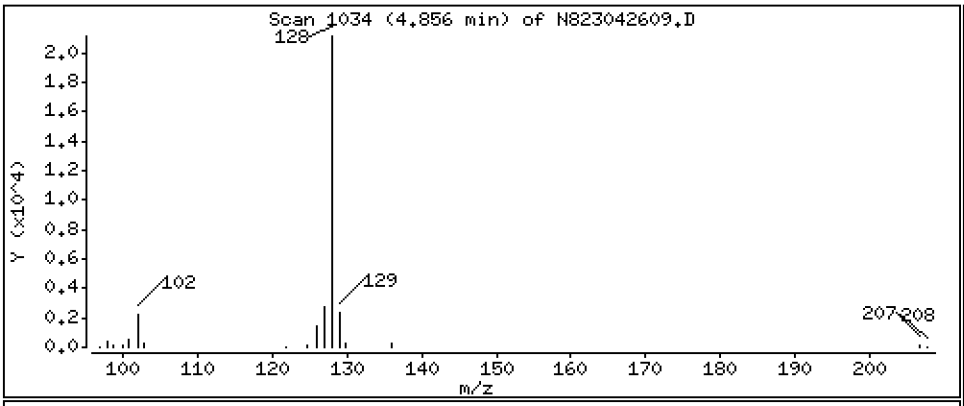
Operator: JZ

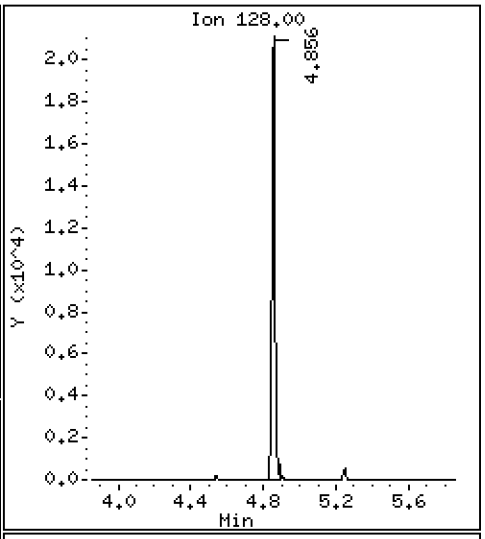
Column phase: Rxi-17sil

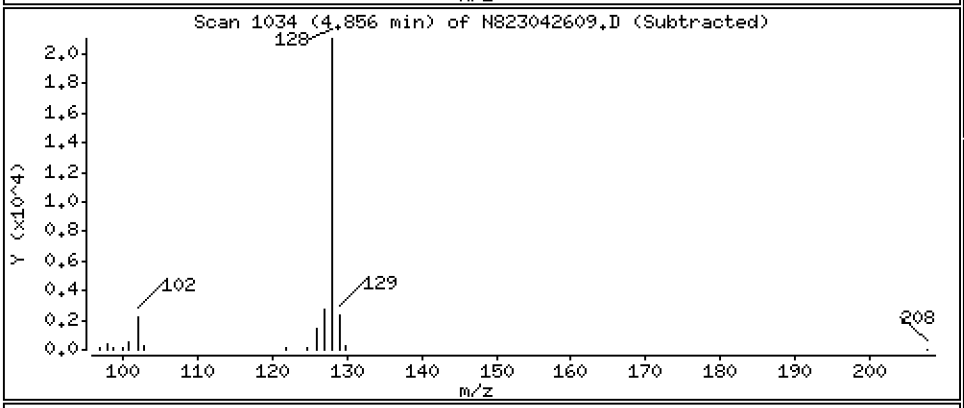
Column diameter: 0.25

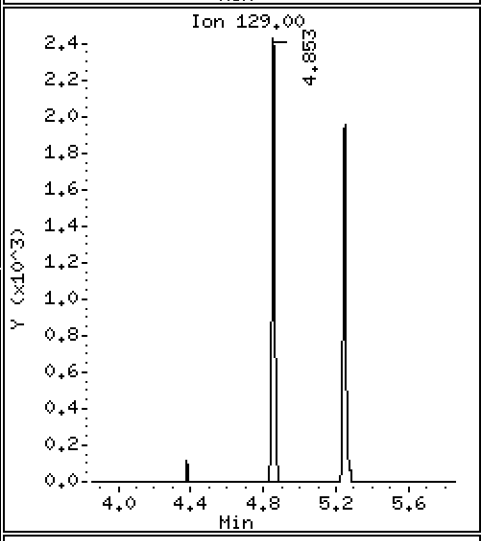
2 Naphthalene

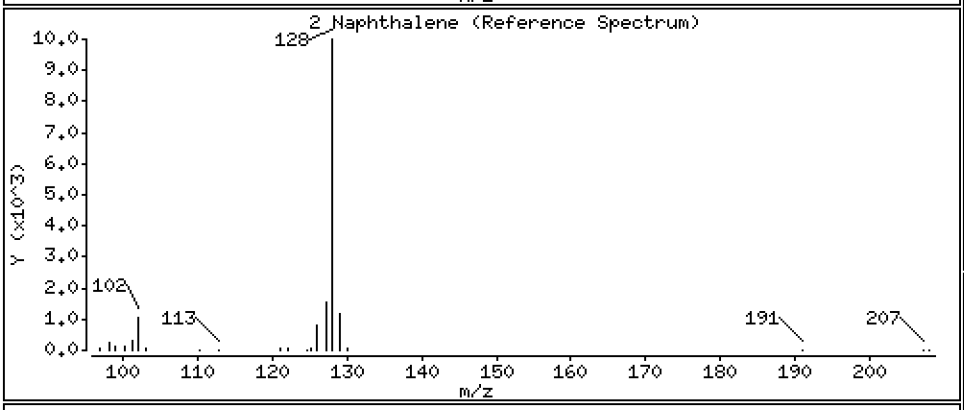
Concentration: 2.363 ug/L

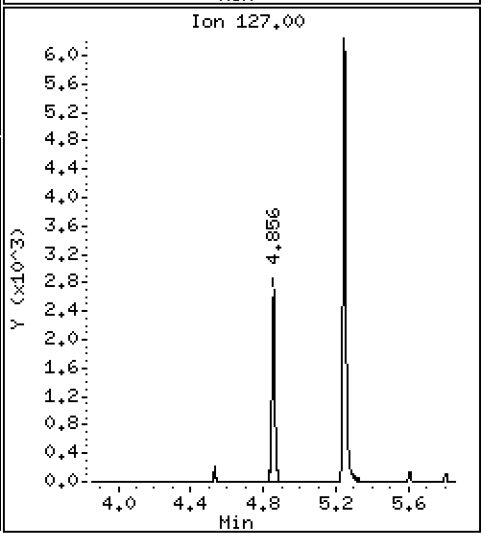


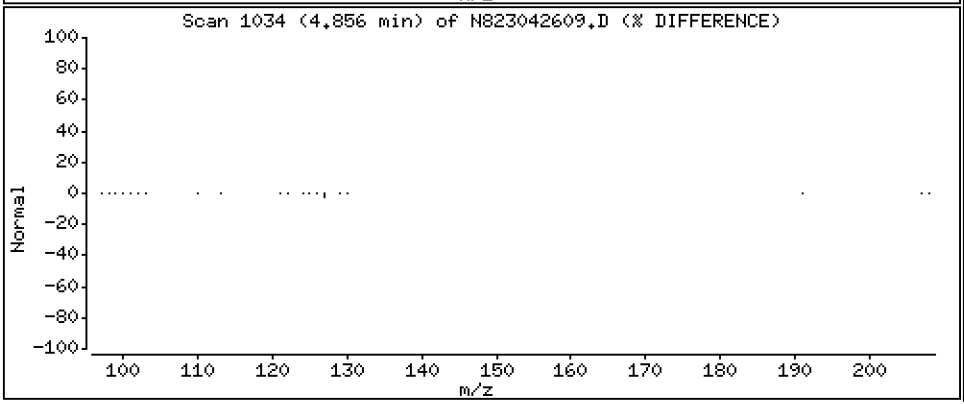












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

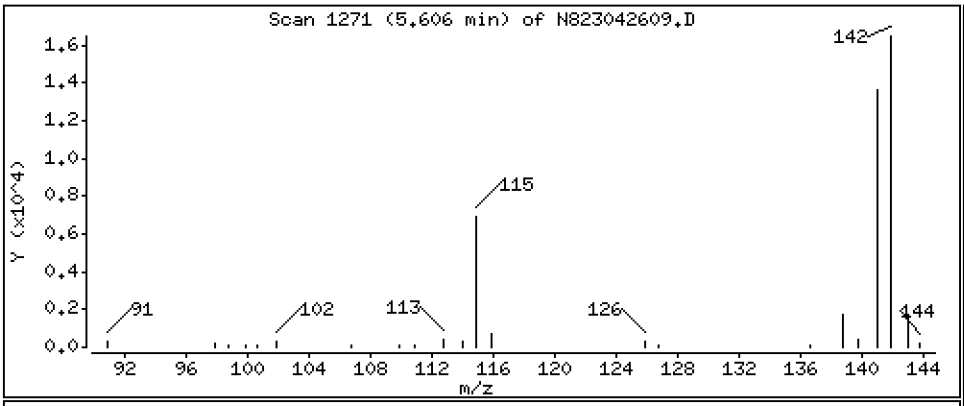
Operator: JZ

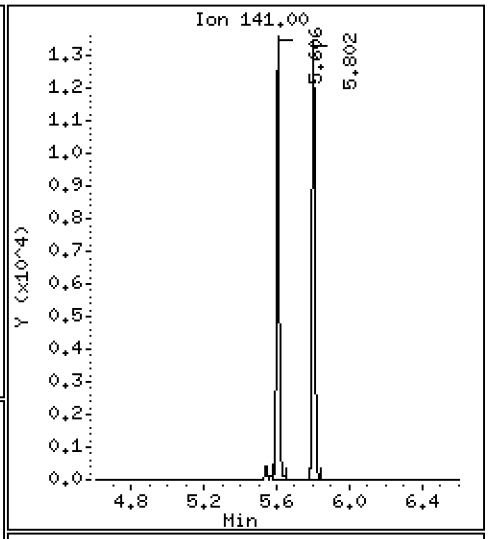
Column phase: Rxi-17sil

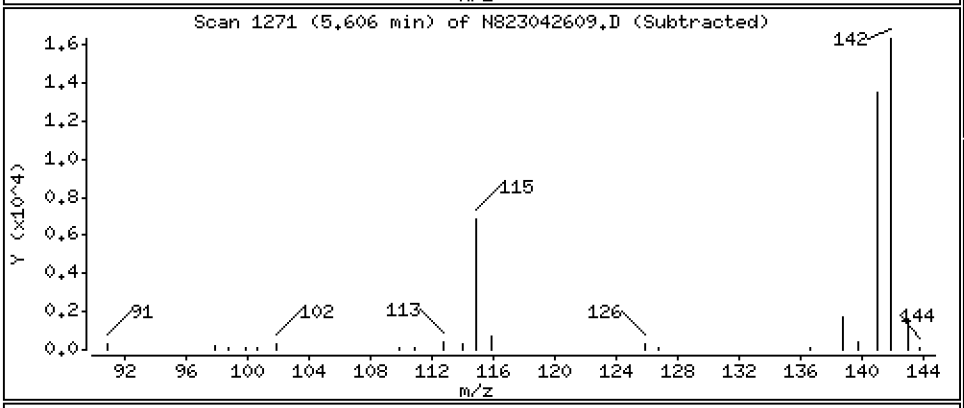
Column diameter: 0.25

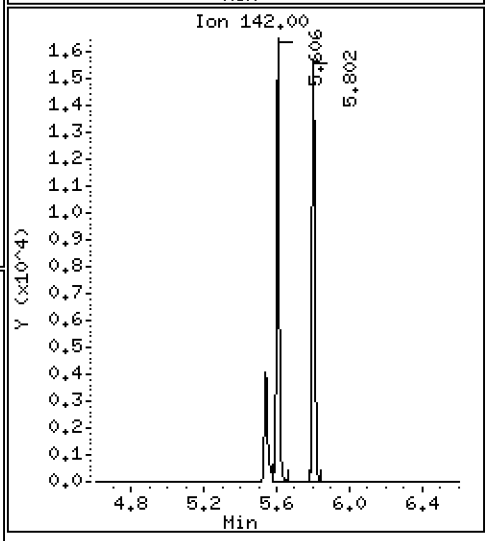
4 2-Methylnaphthalene

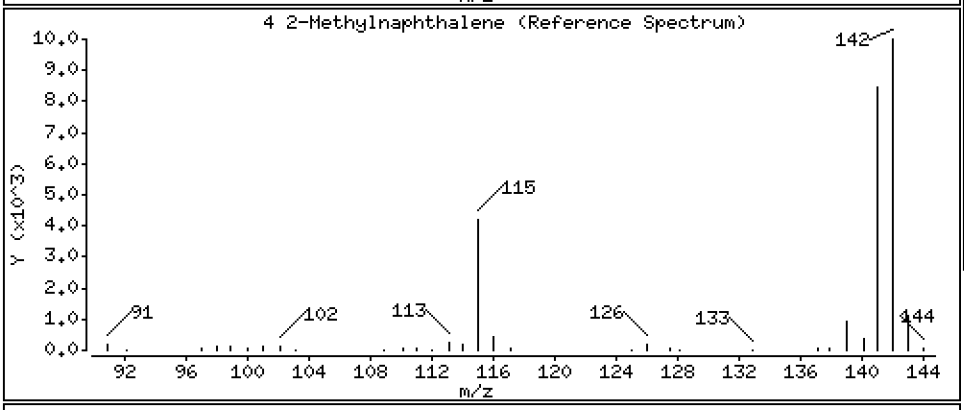
Concentration: 2.392 ug/L

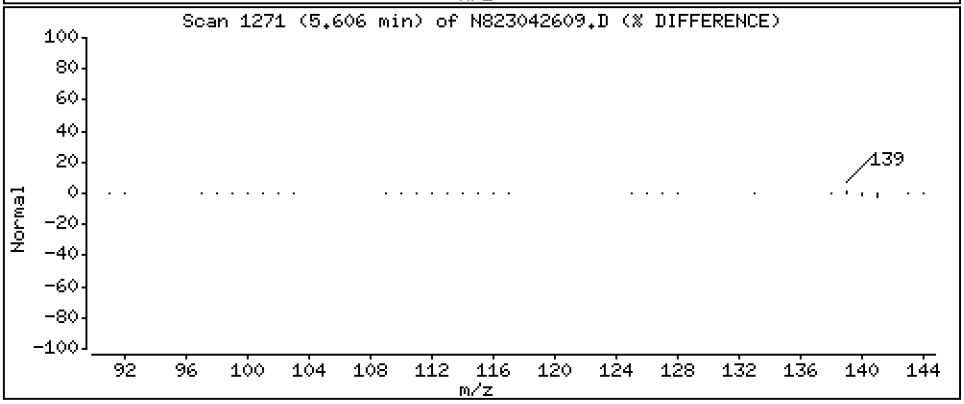












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

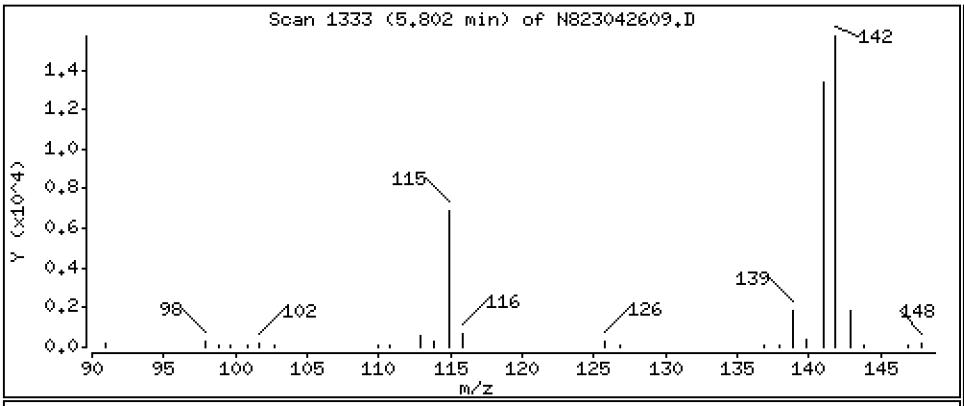
Operator: JZ

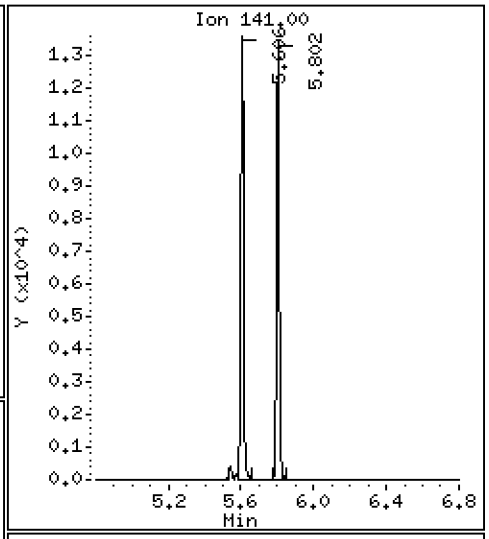
Column phase: Rxi-17sil

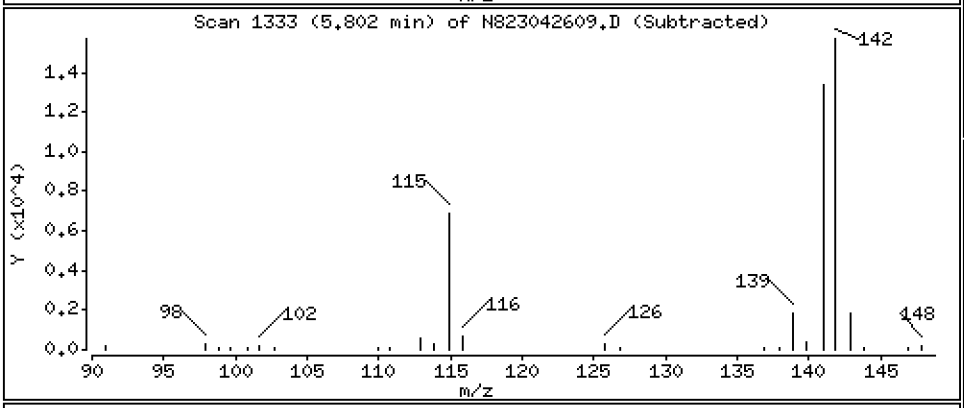
Column diameter: 0.25

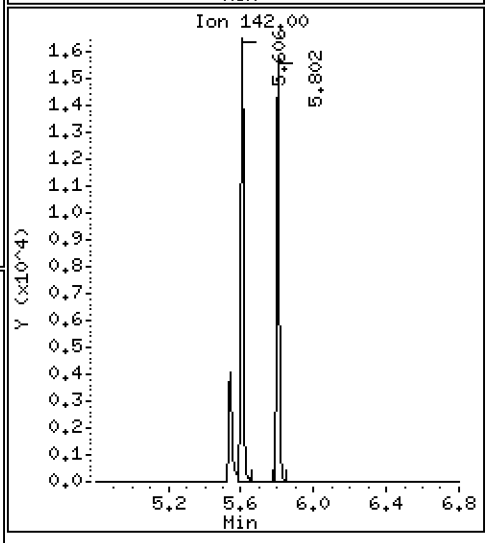
5 1-methylnaphthalene

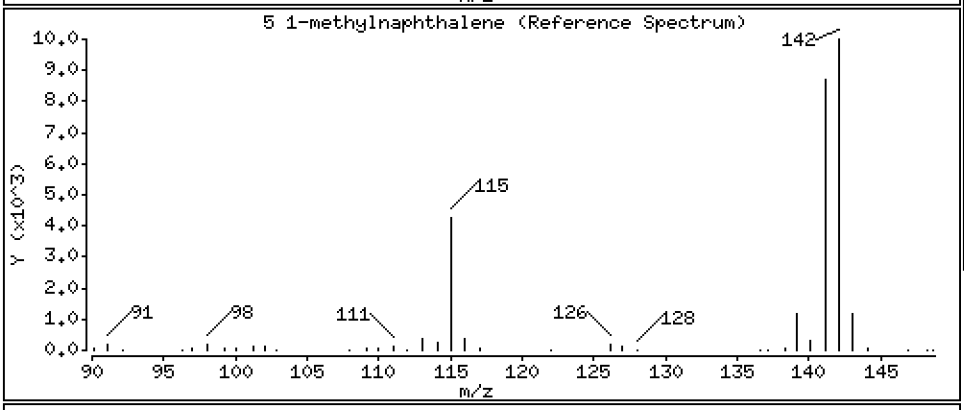
Concentration: 2.380 ug/L

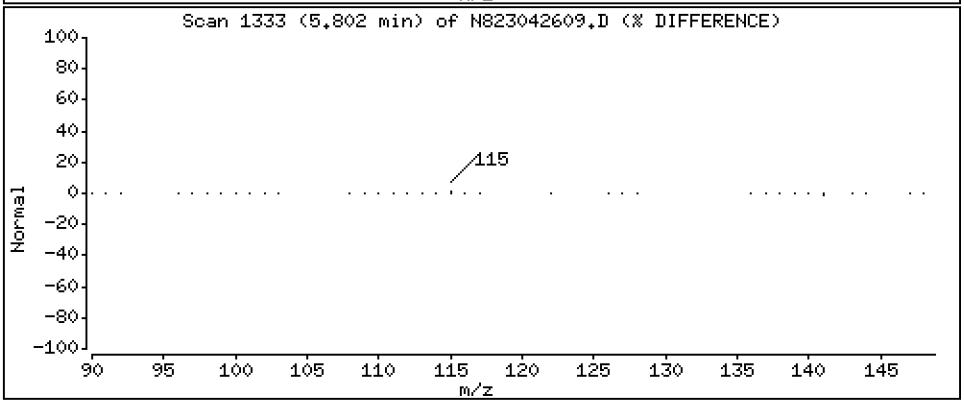












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

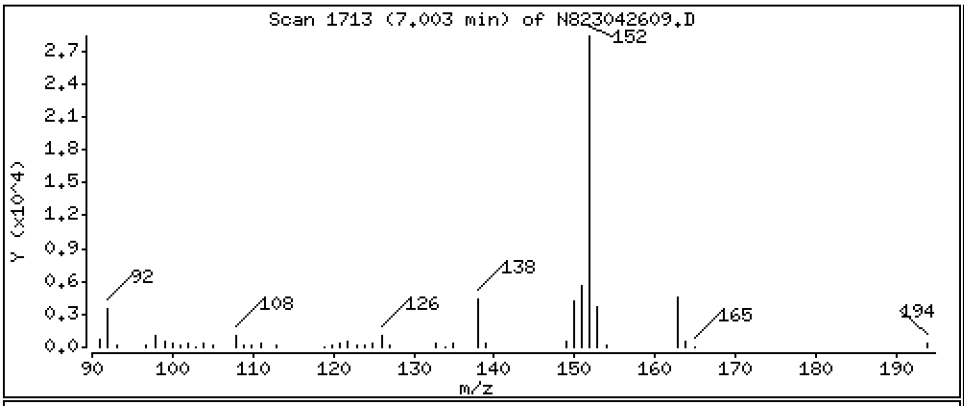
Operator: JZ

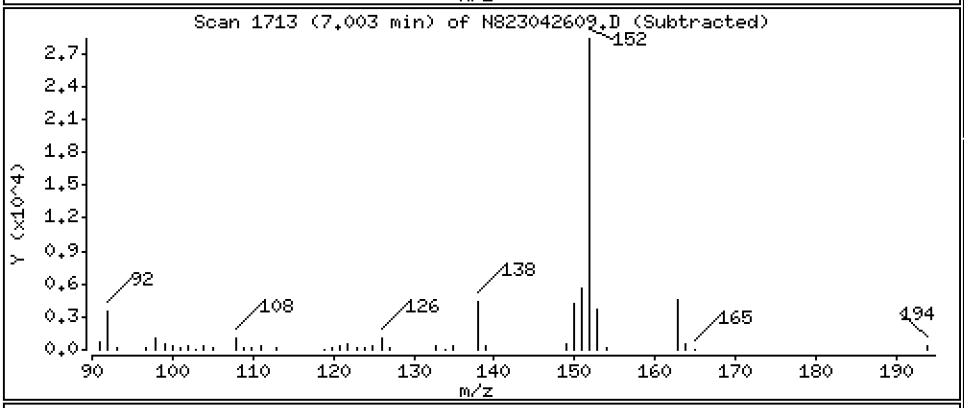
Column phase: Rxi-17sil

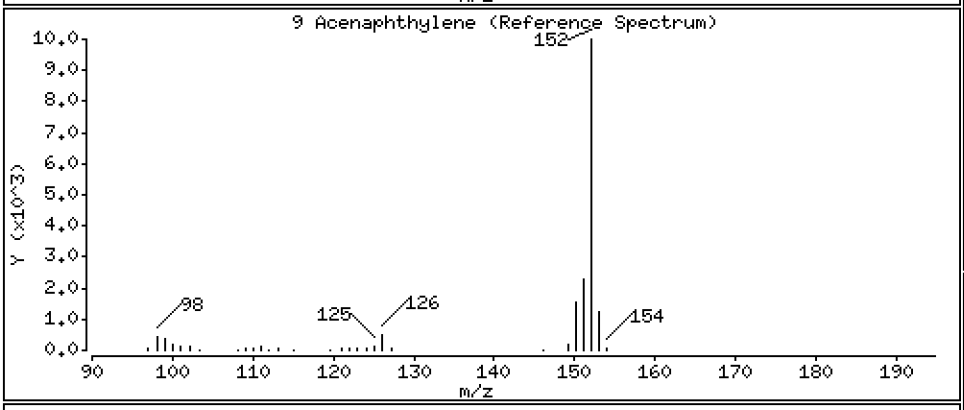
Column diameter: 0.25

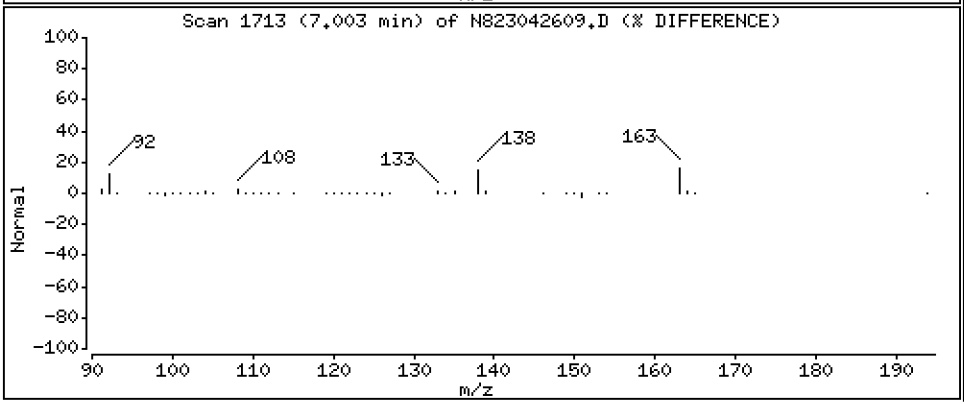
9 Acenaphthylene

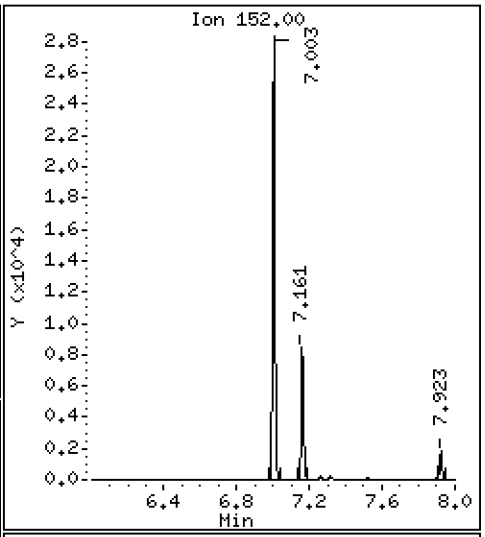
Concentration: 2.322 ug/L

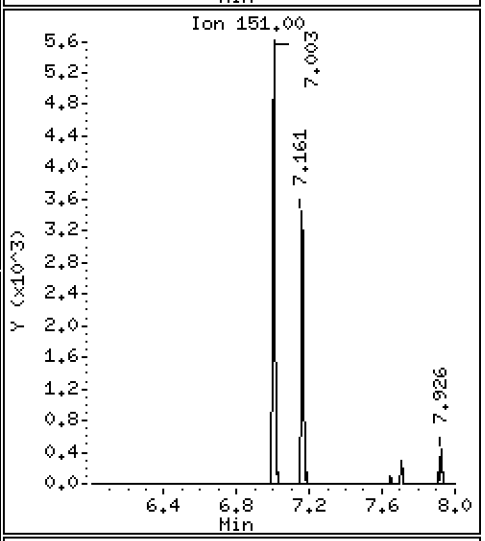


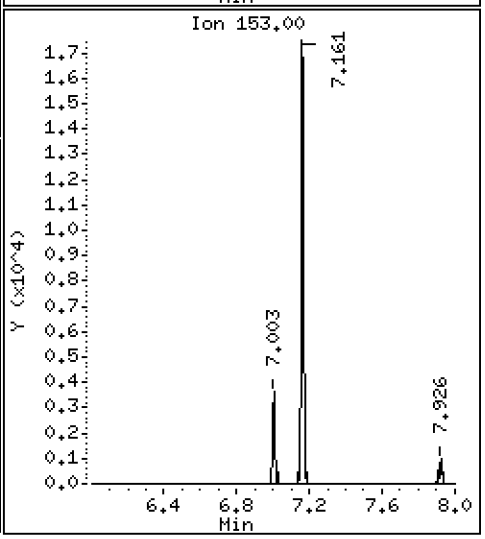












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

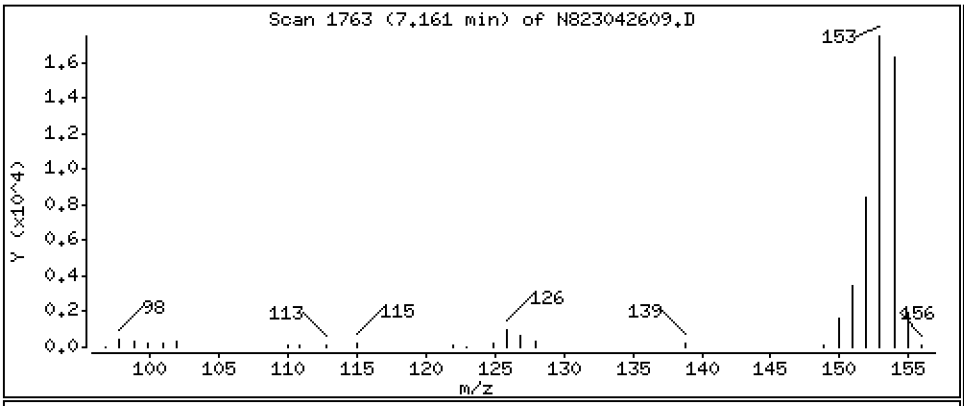
Operator: JZ

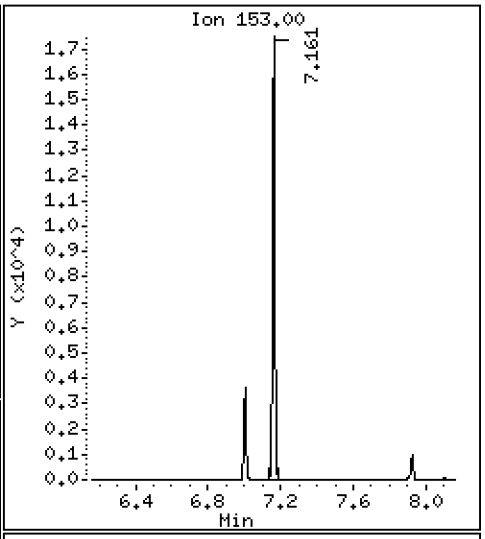
Column phase: Rxi-17sil

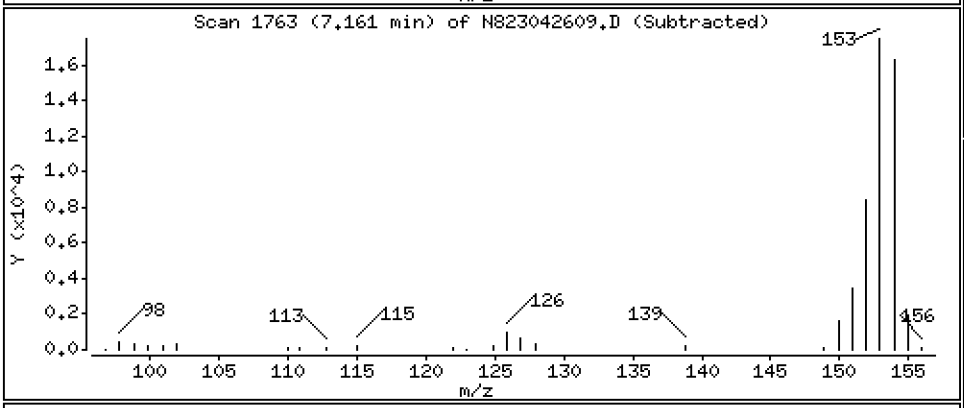
Column diameter: 0.25

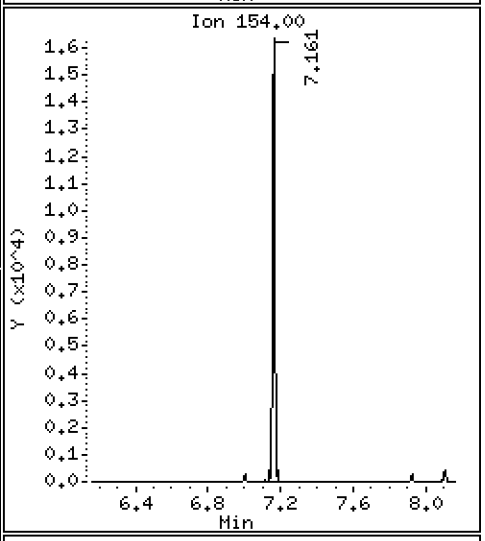
11 Acenaphthene

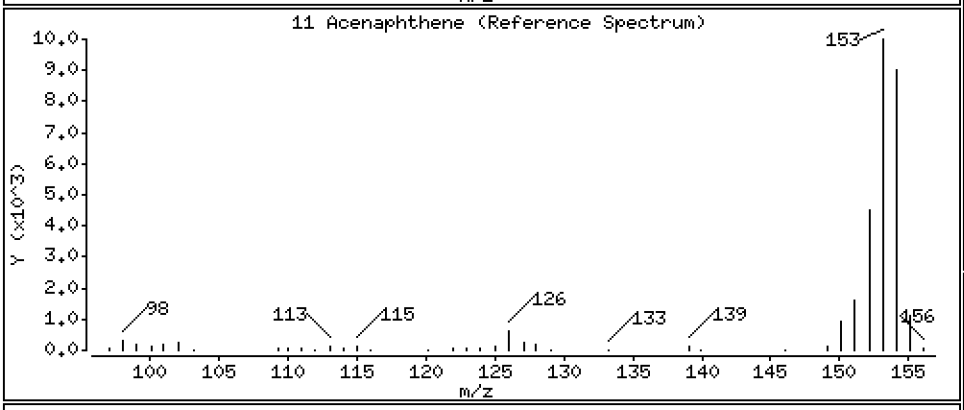
Concentration: 2.234 ug/L

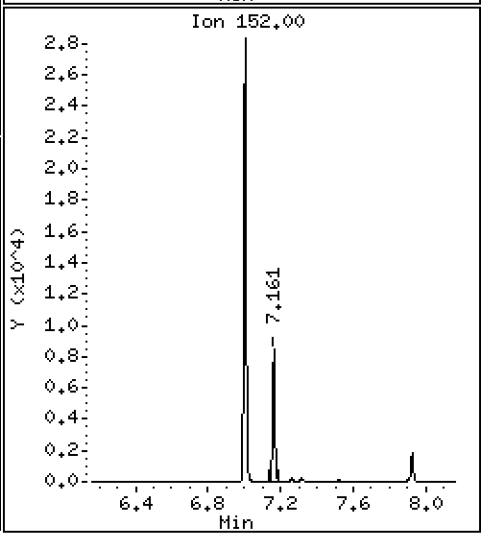


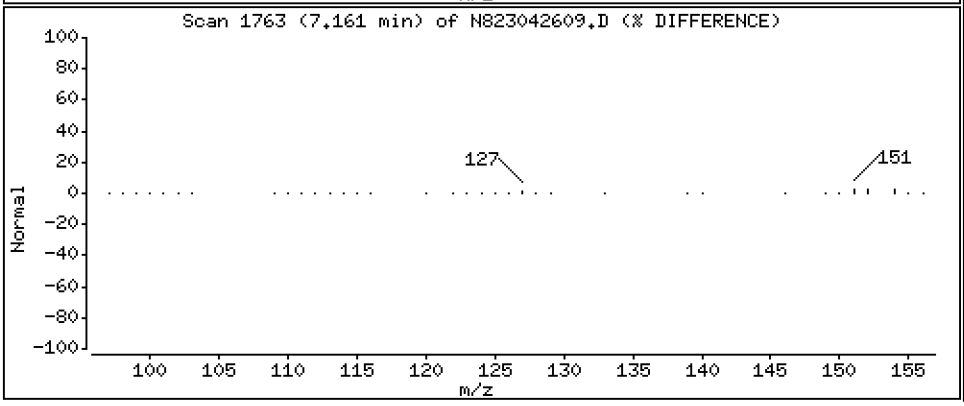












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

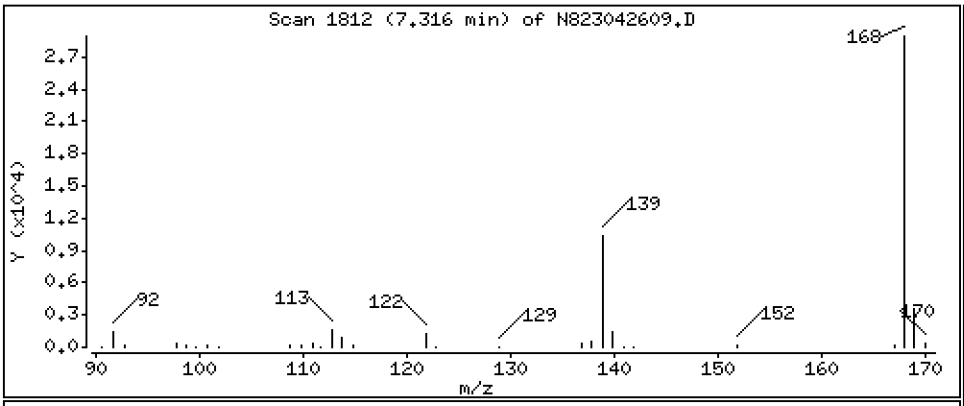
Operator: JZ

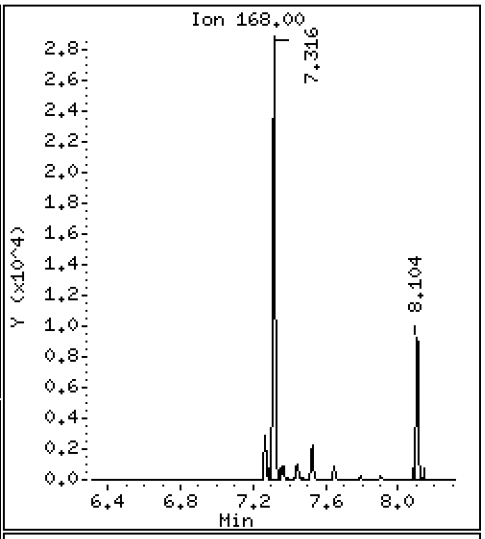
Column phase: Rxi-17sil

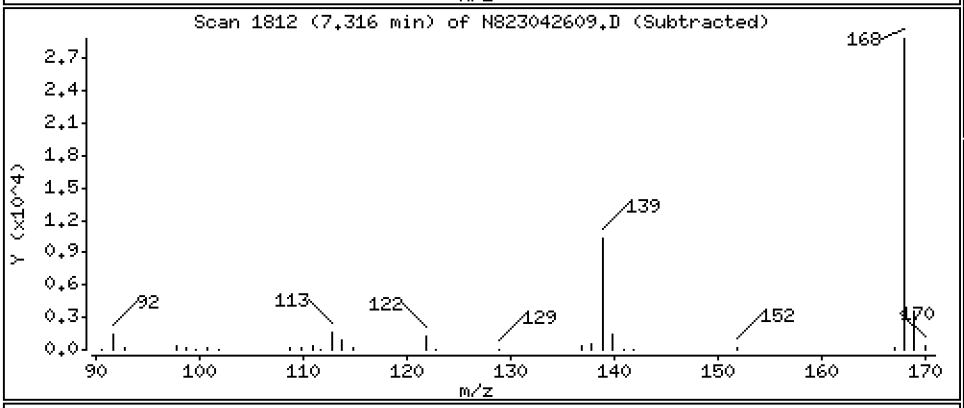
Column diameter: 0.25

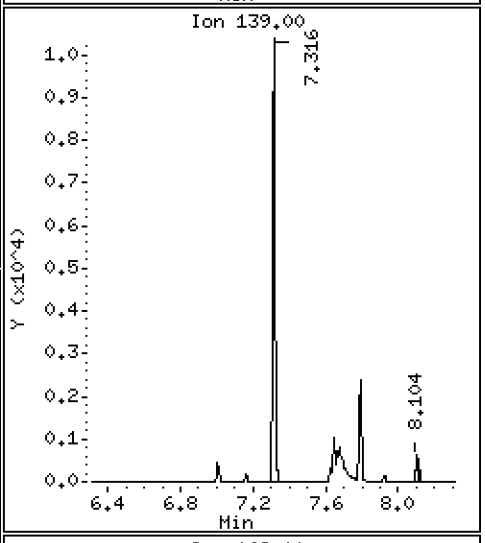
12 Dibenzofuran

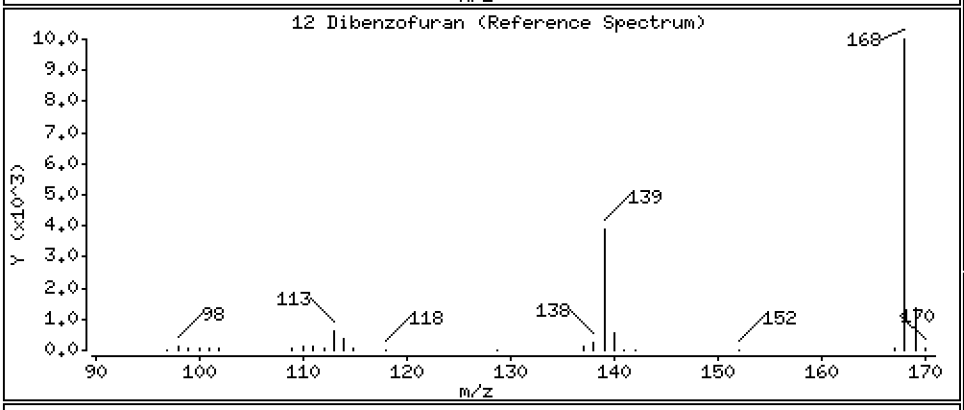
Concentration: 2.518 ug/L

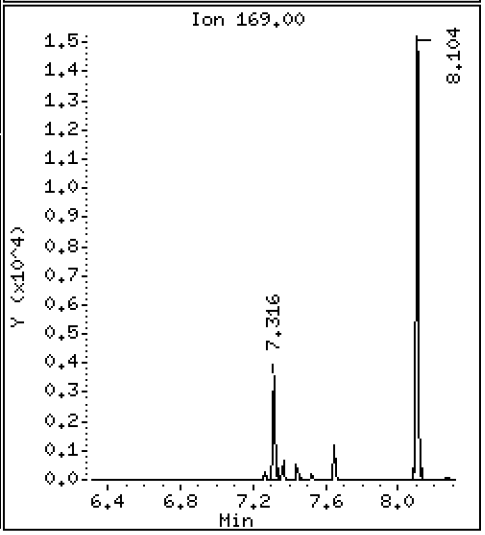


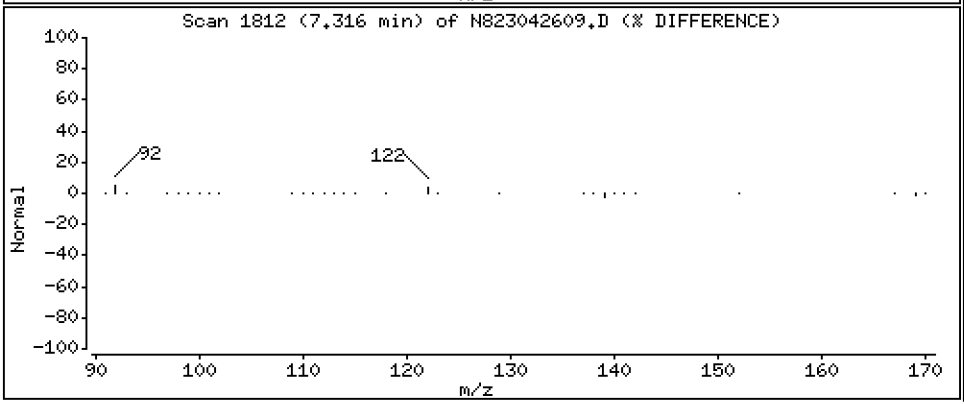












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

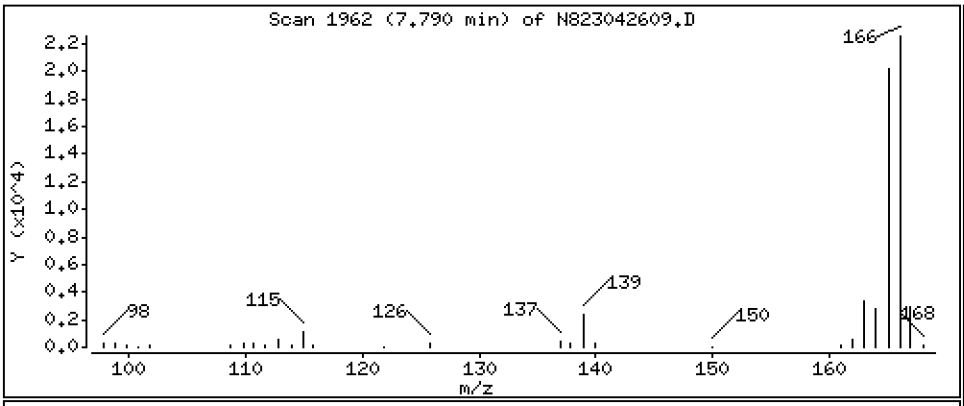
Operator: JZ

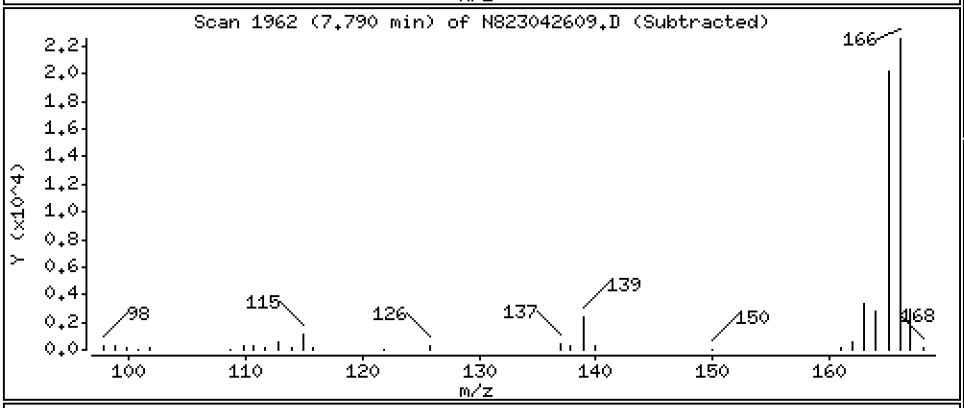
Column phase: Rxi-17sil

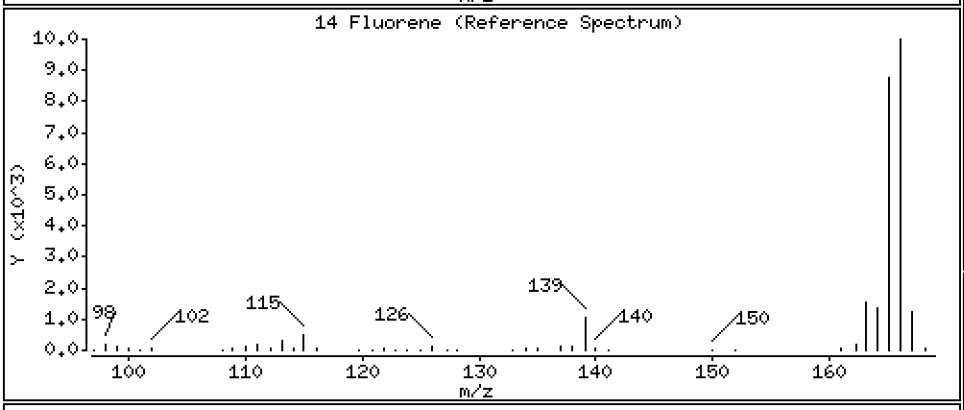
Column diameter: 0.25

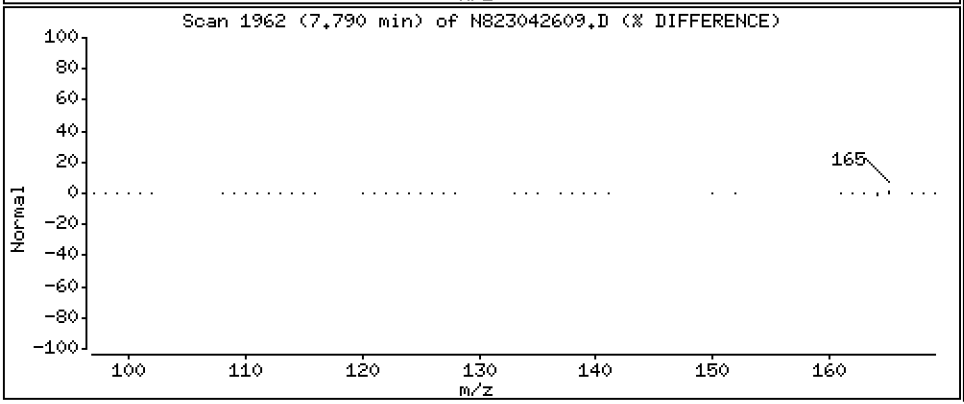
14 Fluorene

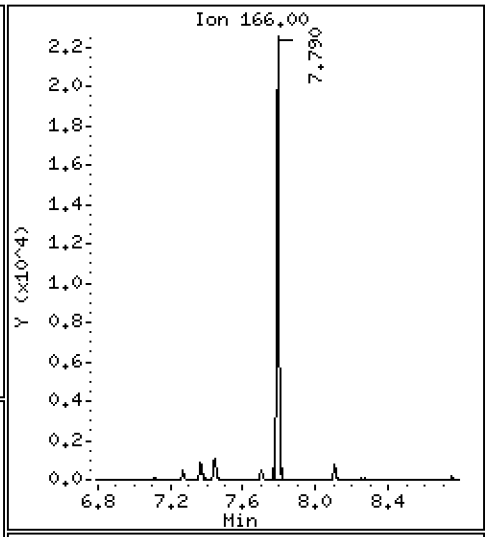
Concentration: 2.293 ug/L

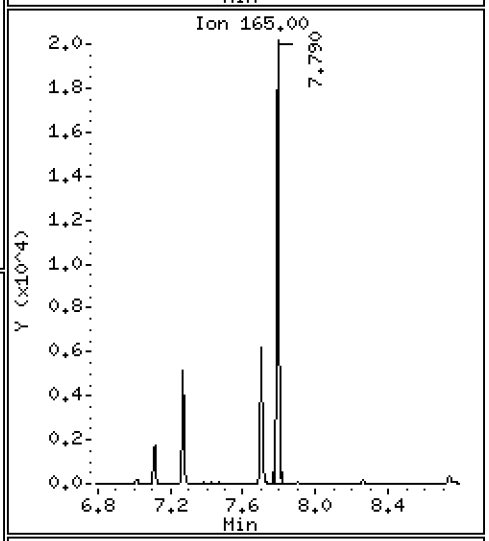


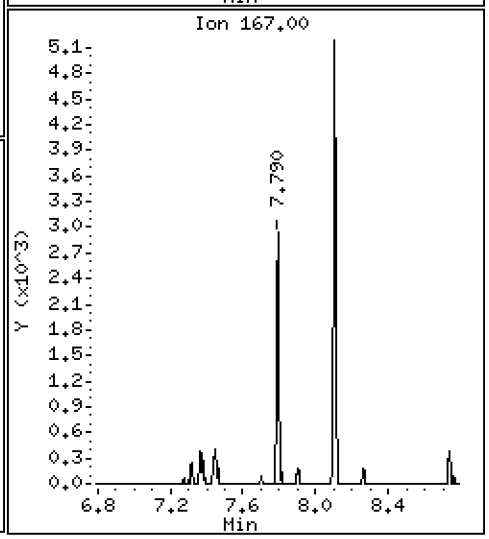












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

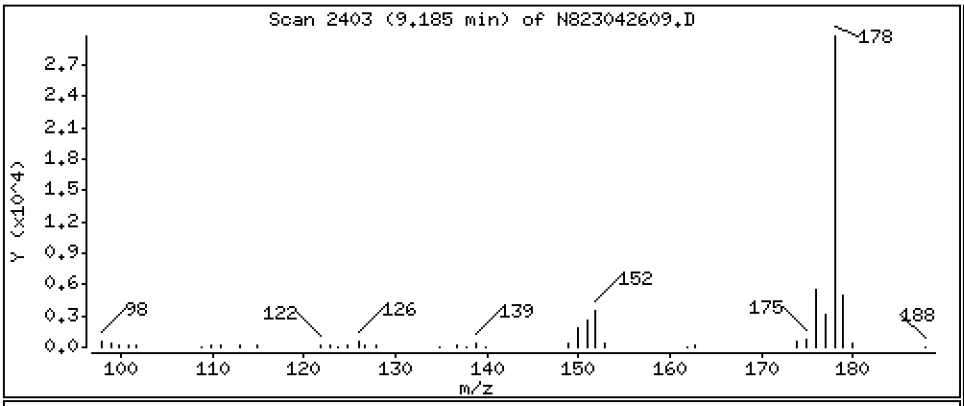
Operator: JZ

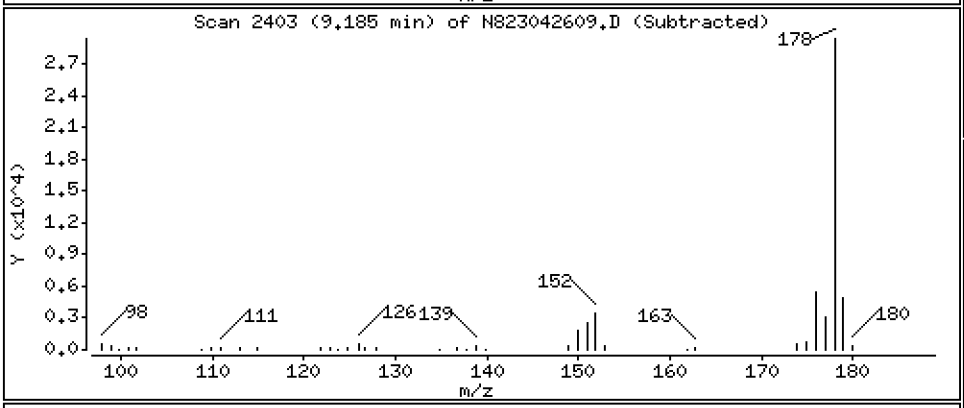
Column phase: Rxi-17sil

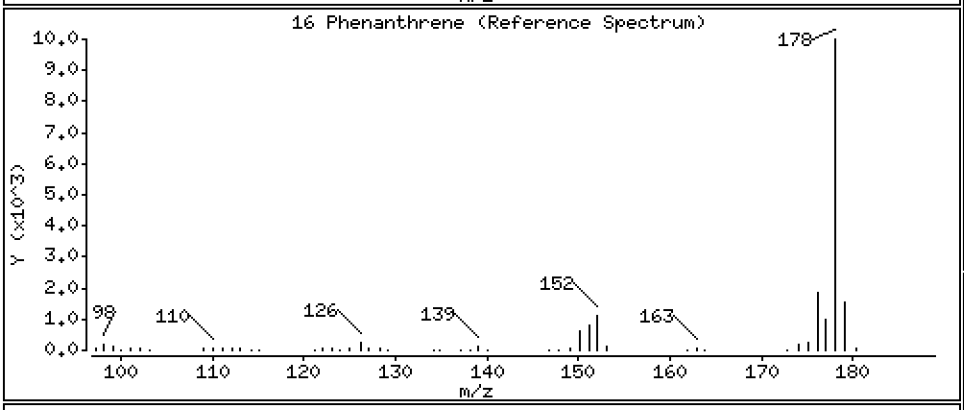
Column diameter: 0.25

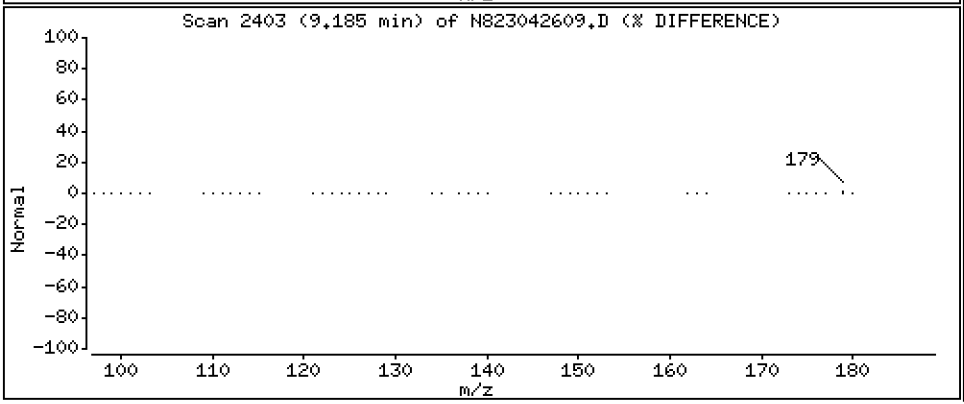
16 Phenanthrene

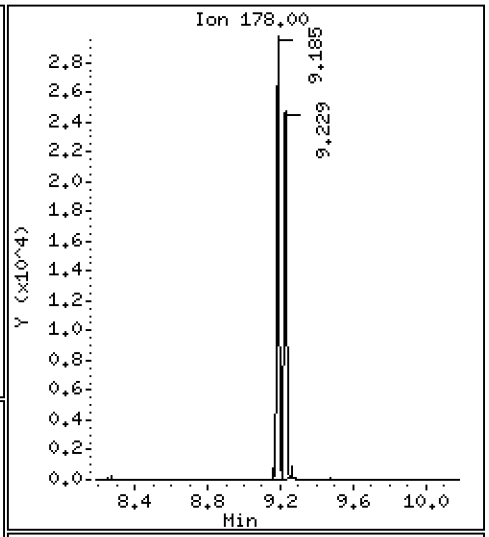
Concentration: 2.161 ug/L

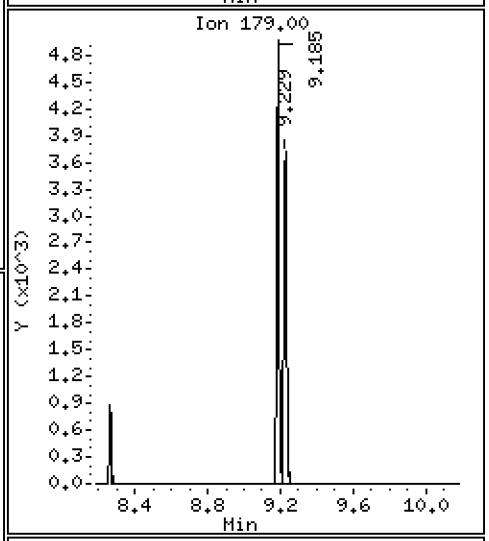


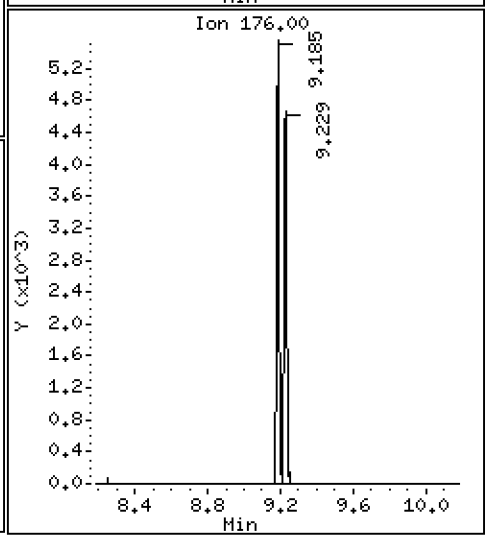












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

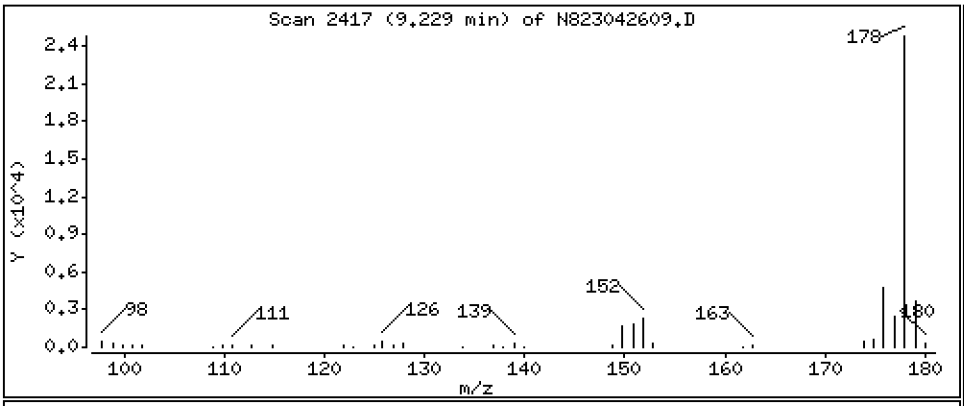
Operator: JZ

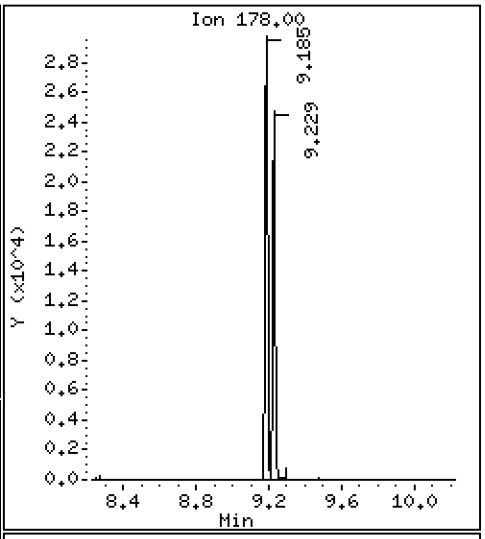
Column phase: Rxi-17sil

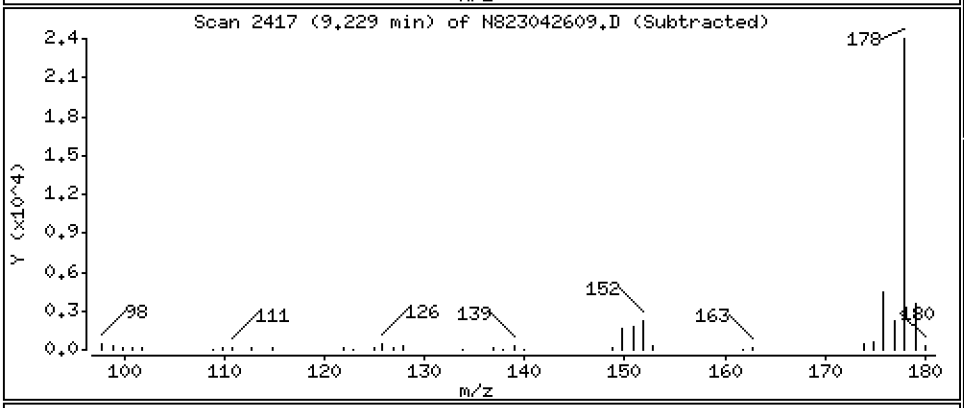
Column diameter: 0.25

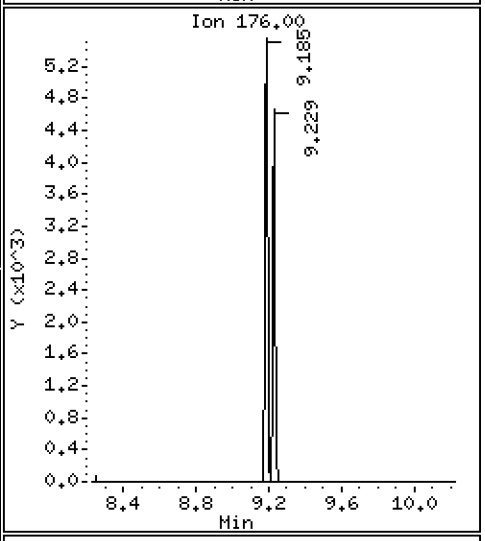
17 Anthracene

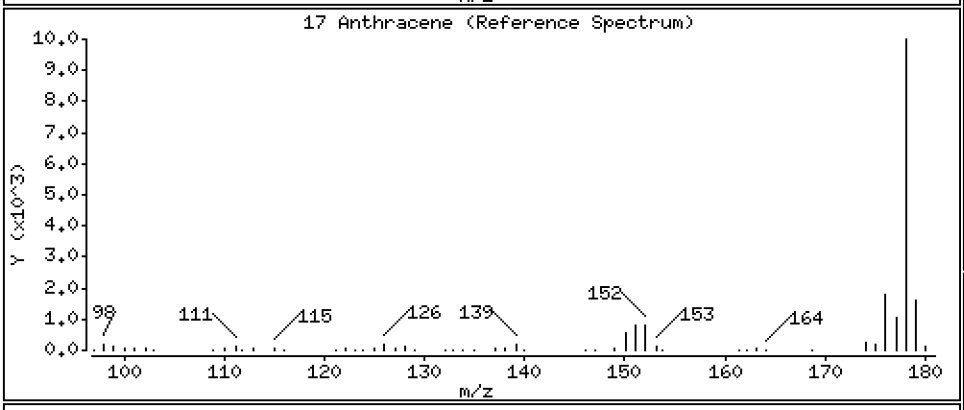
Concentration: 2.008 ug/L

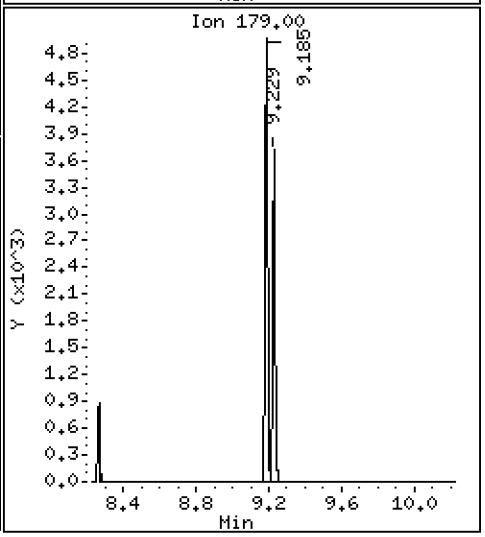


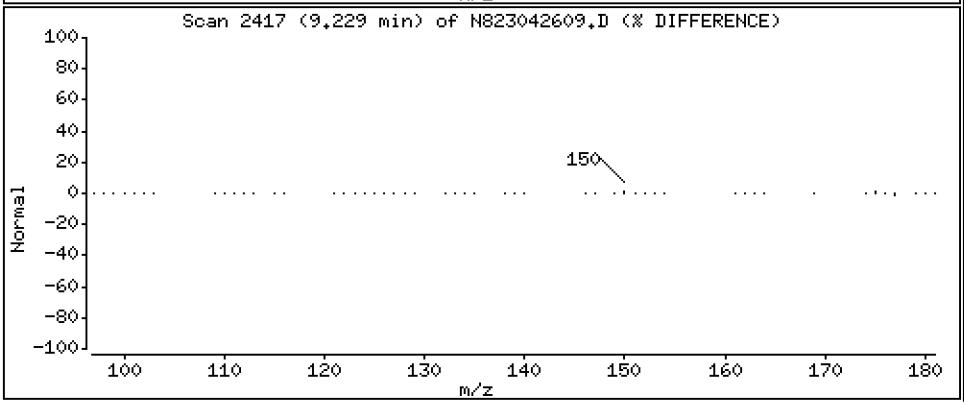












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

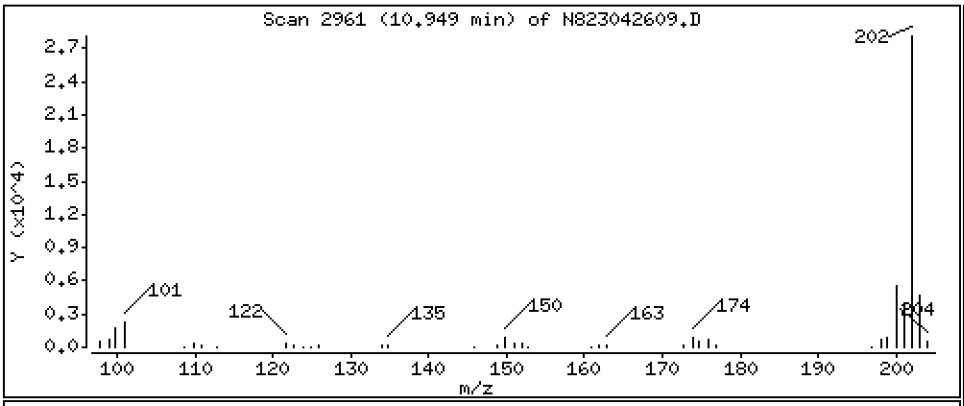
Operator: JZ

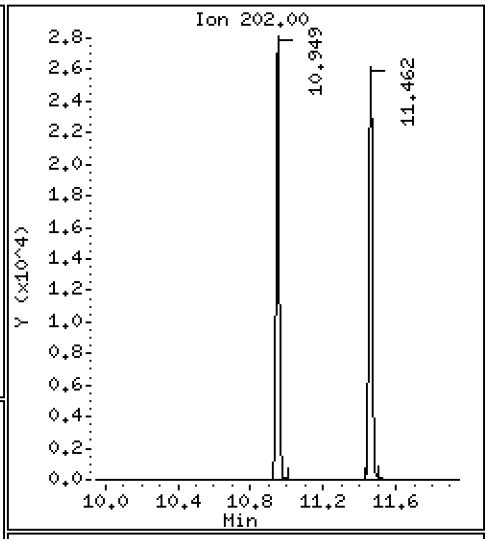
Column phase: Rxi-17sil

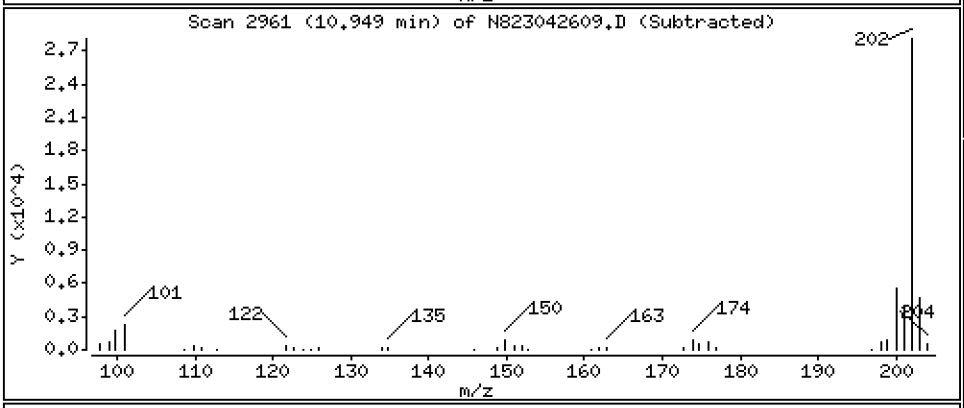
Column diameter: 0.25

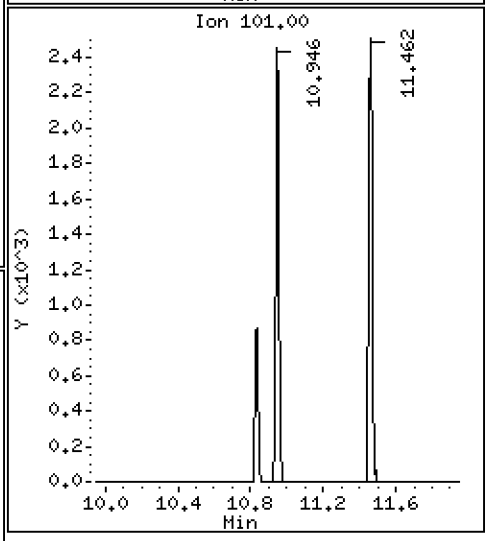
22 Fluoranthene

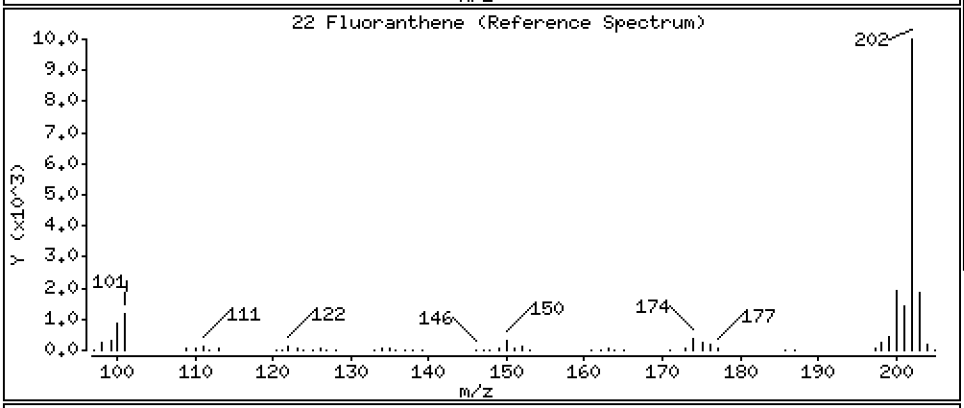
Concentration: 2.256 ug/L

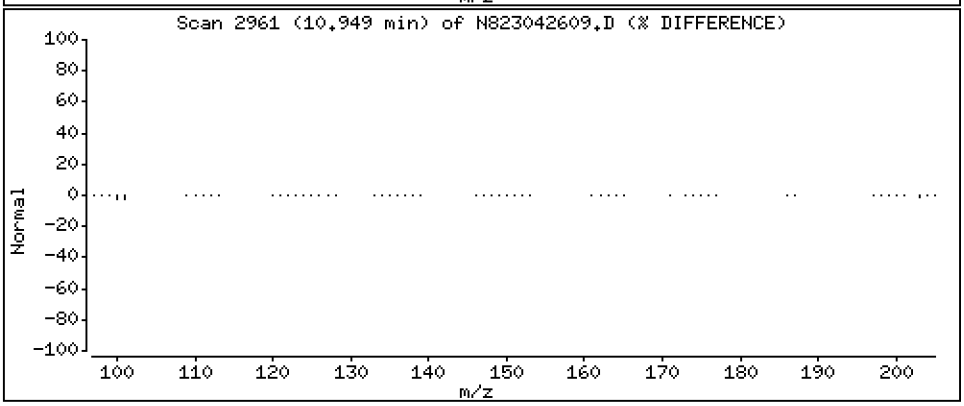












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

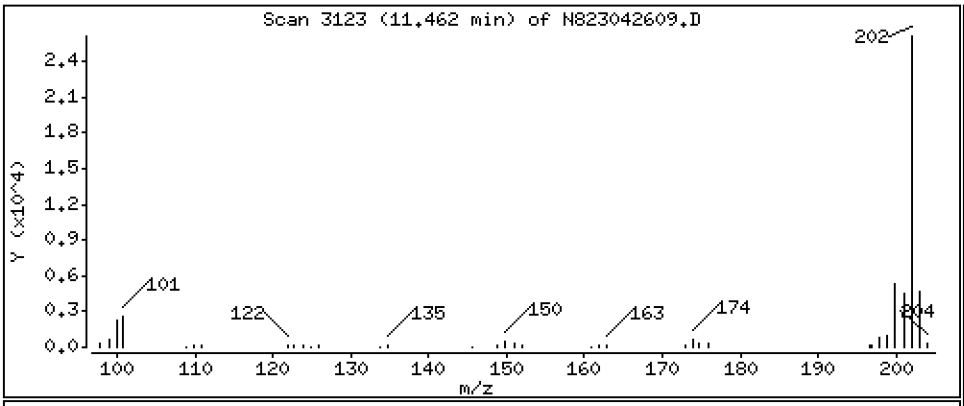
Operator: JZ

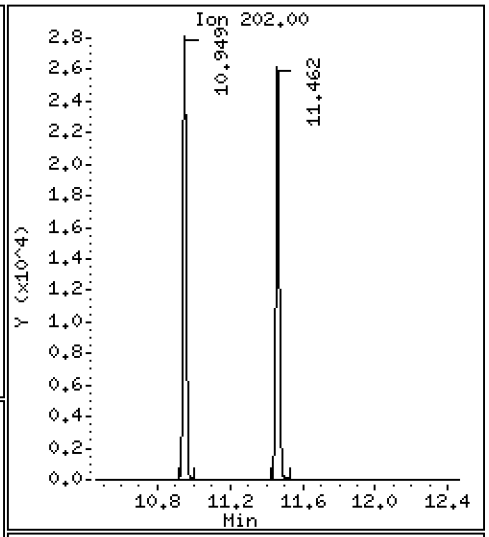
Column phase: Rxi-17sil

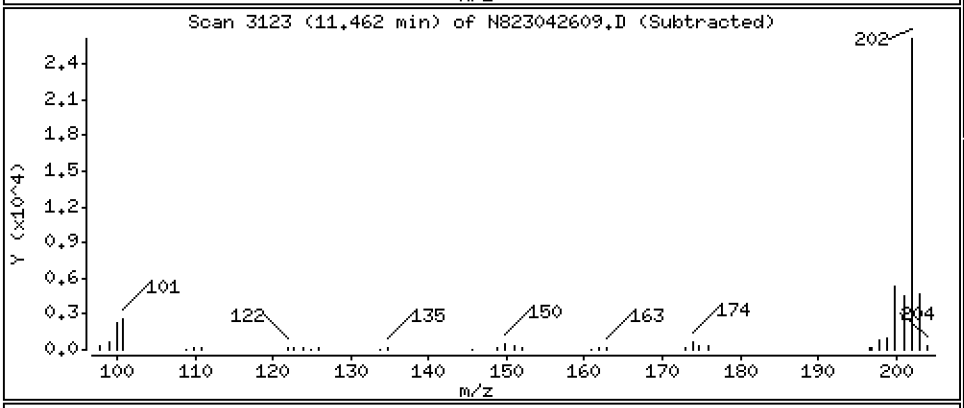
Column diameter: 0.25

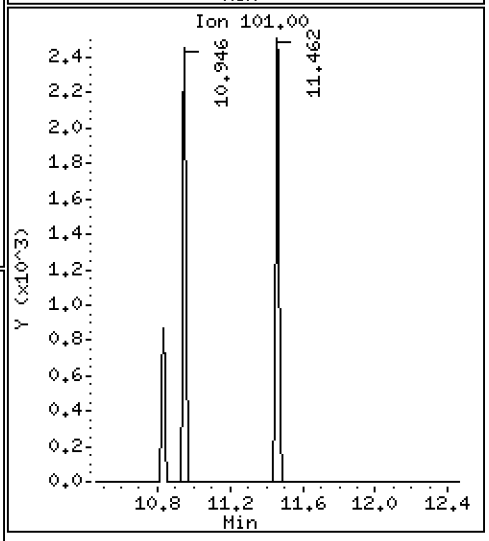
23 Pyrene

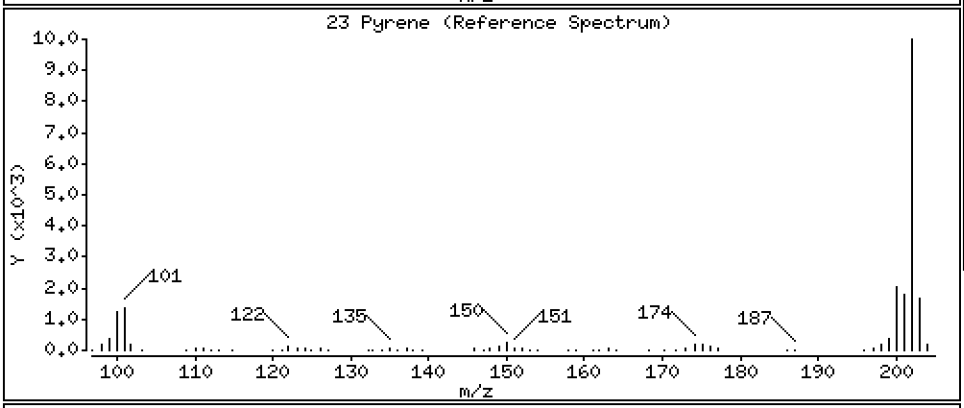
Concentration: 2.227 ug/L

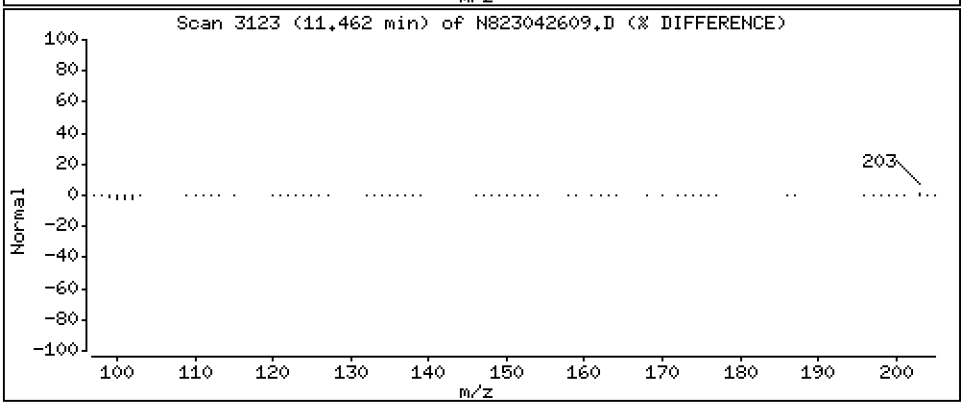












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

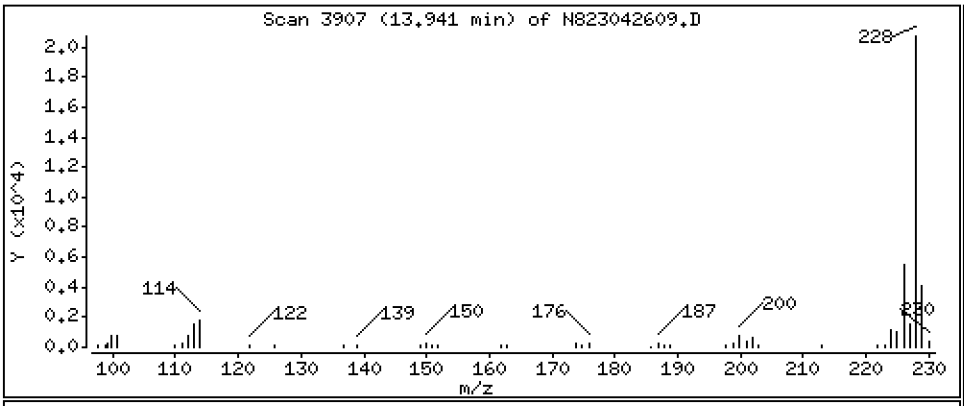
Operator: JZ

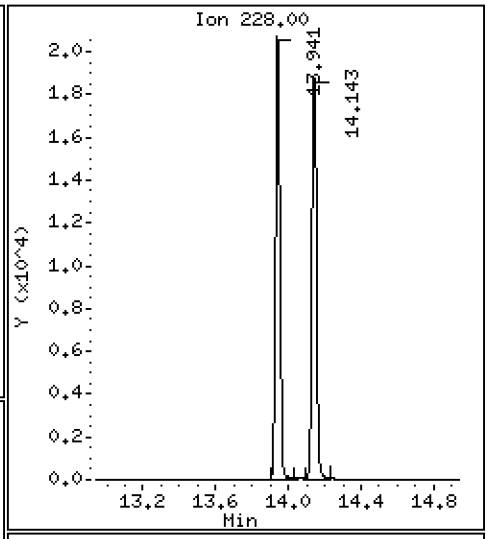
Column phase: Rxi-17sil

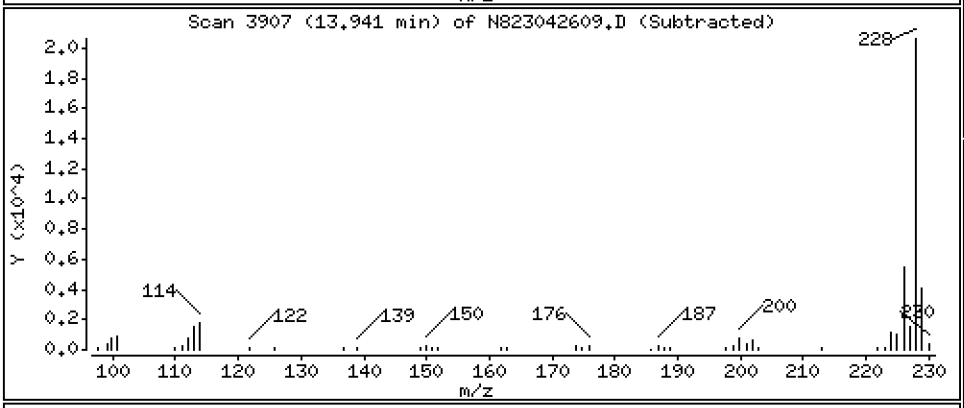
Column diameter: 0.25

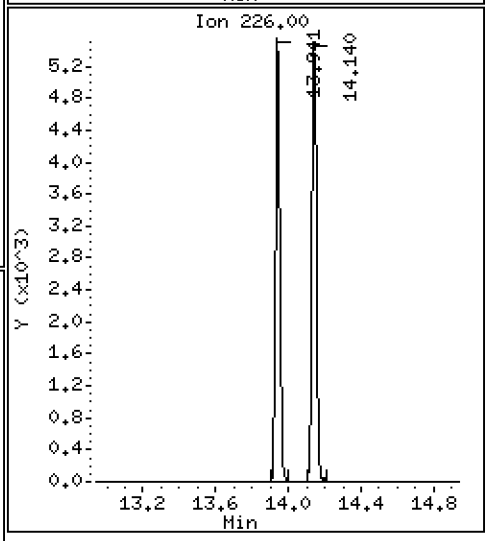
24 Benzo(a)anthracene

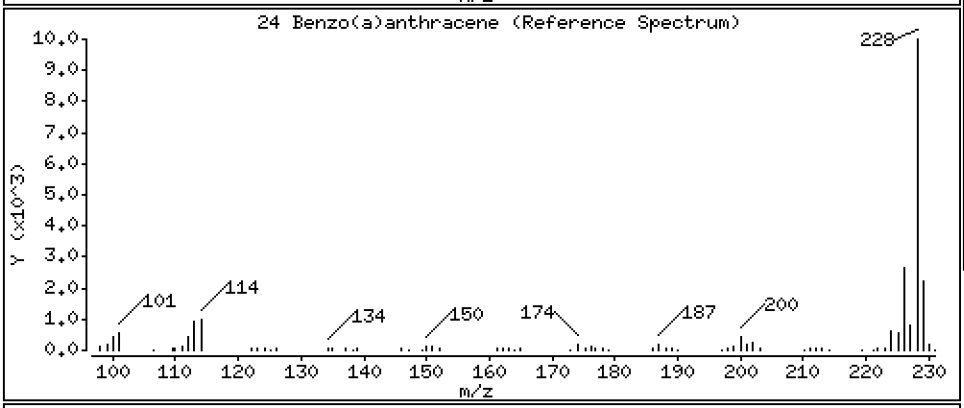
Concentration: 2.175 ug/L

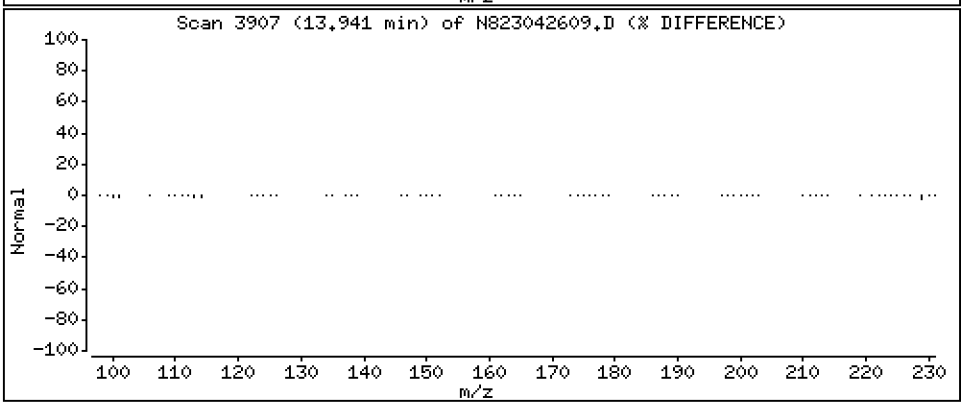












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

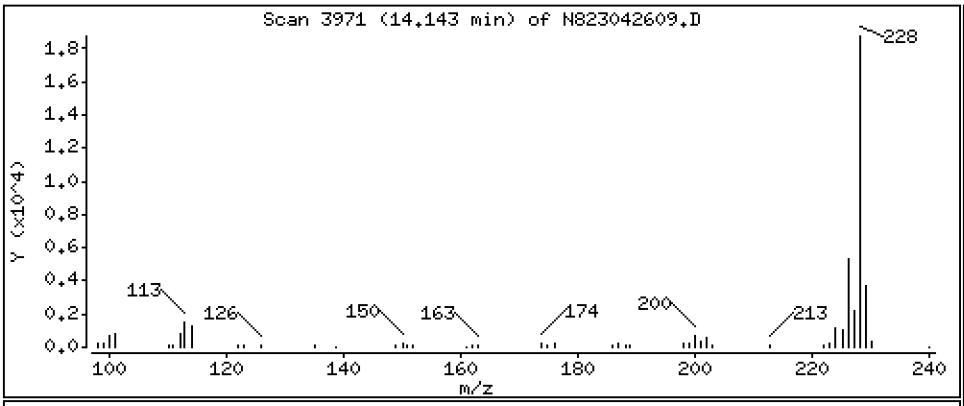
Operator: JZ

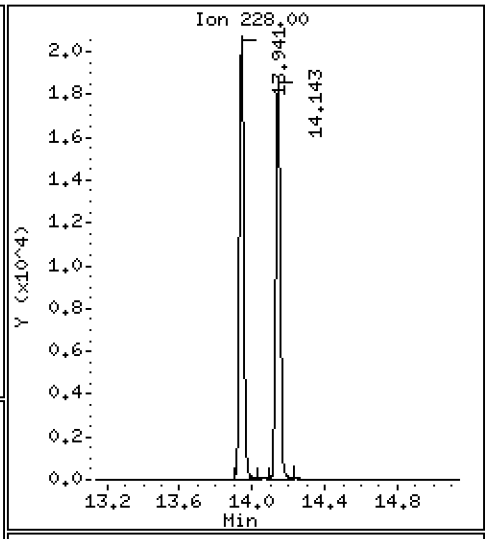
Column phase: Rxi-17sil

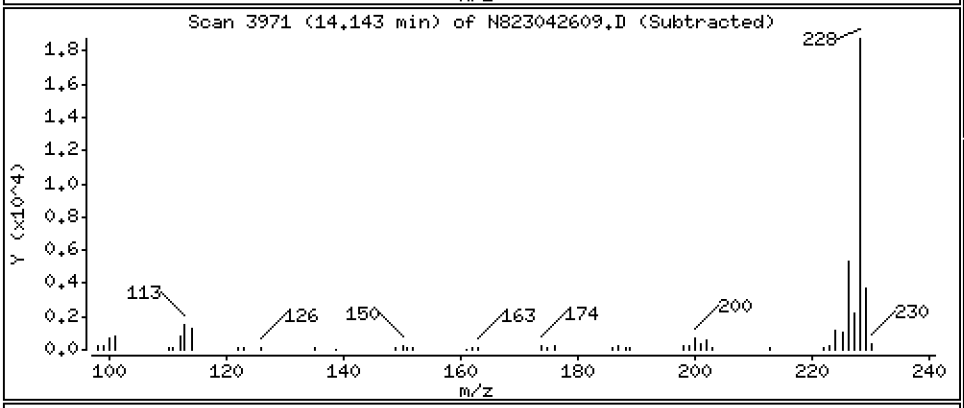
Column diameter: 0.25

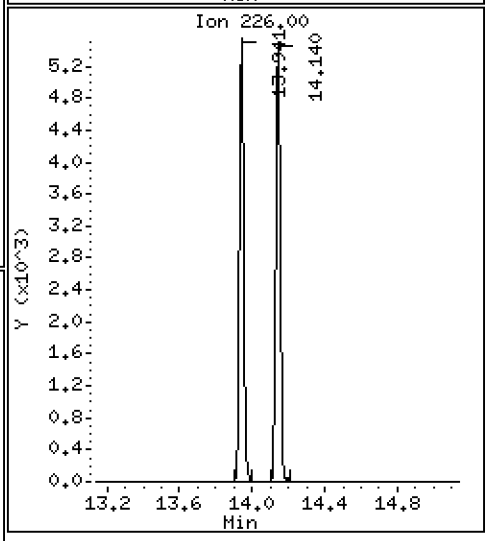
27 Chrysene

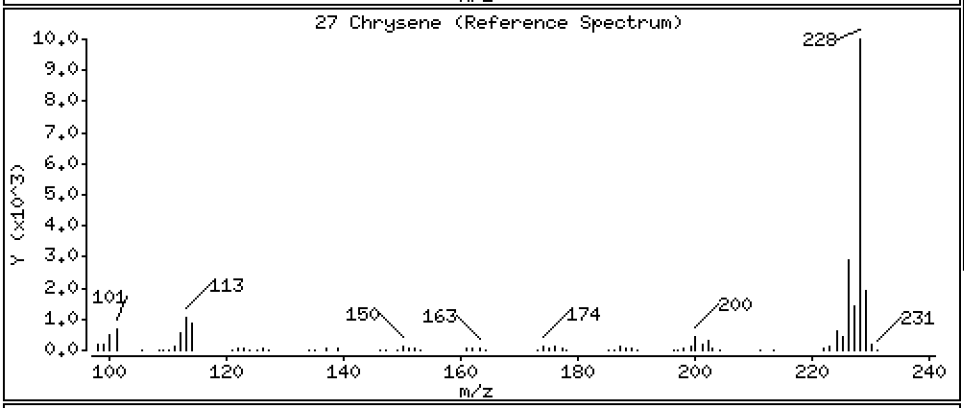
Concentration: 2.137 ug/L

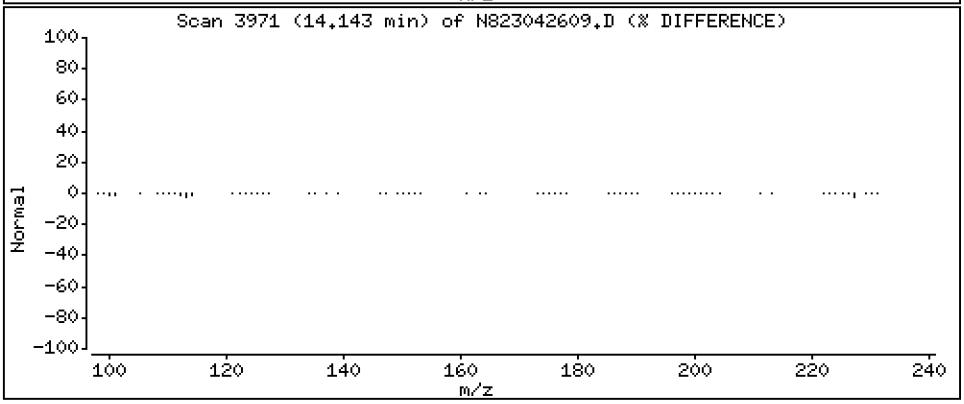












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

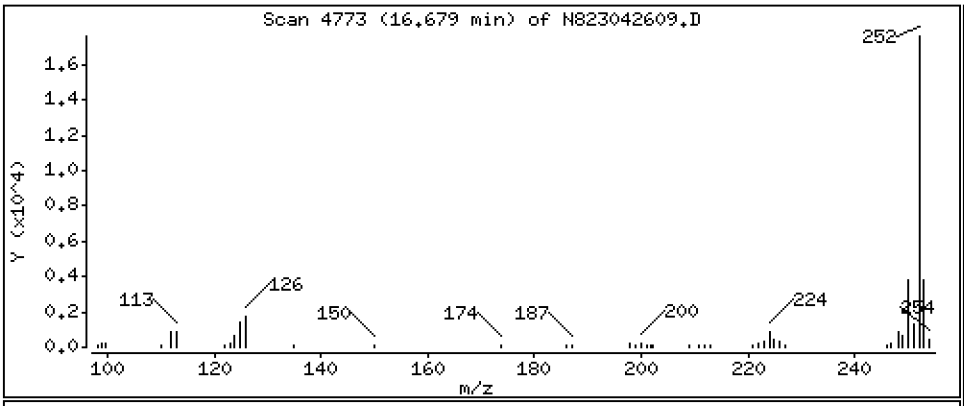
Operator: JZ

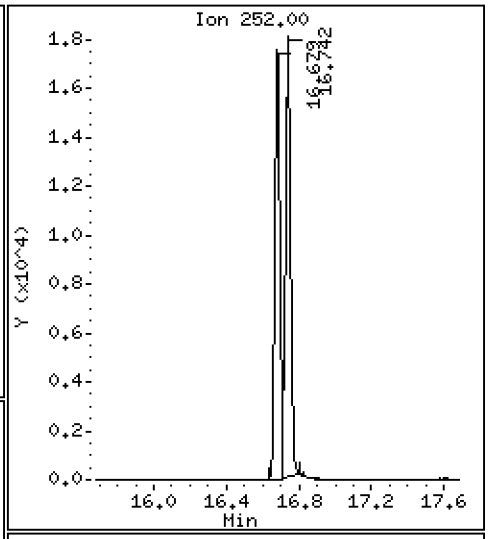
Column phase: Rxi-17sil

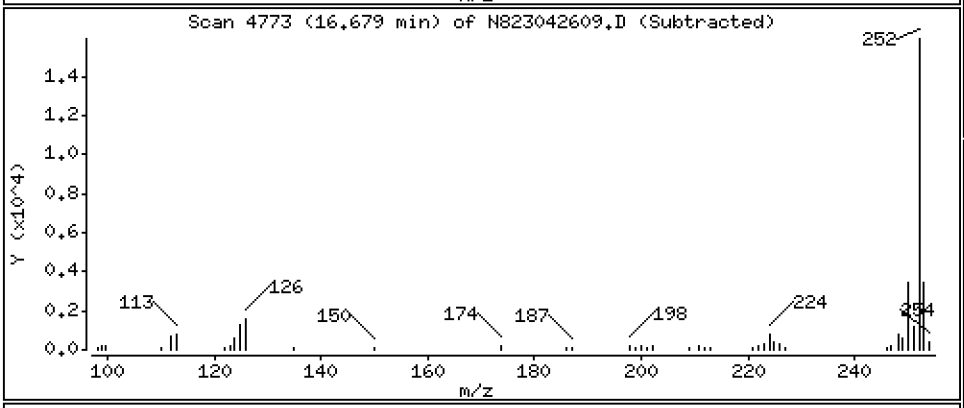
Column diameter: 0.25

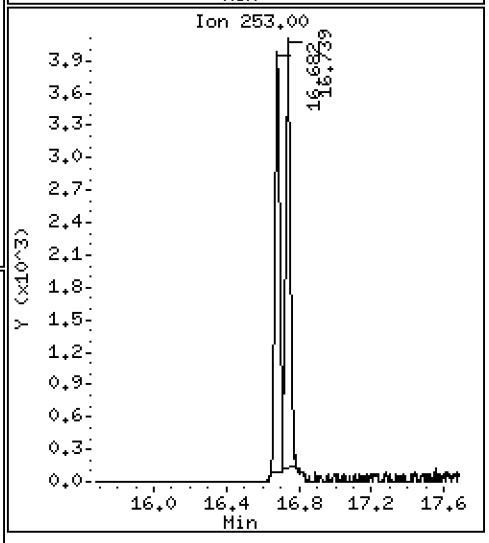
28 Benzo(b)fluoranthene

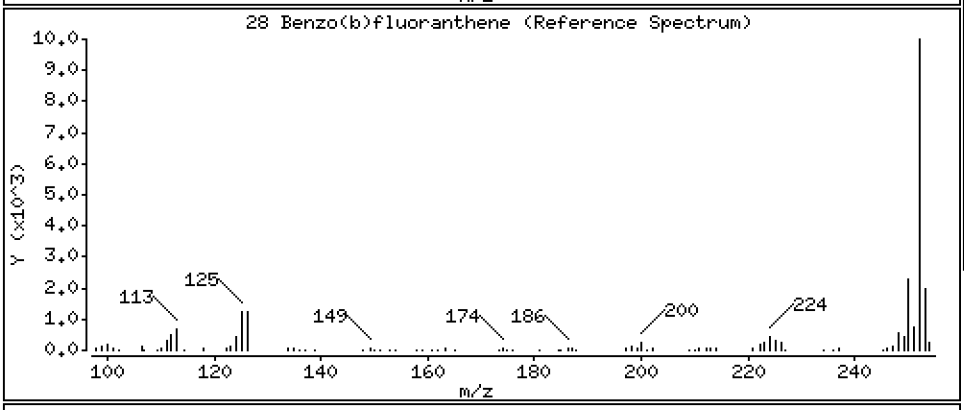
Concentration: 2.156 ug/L

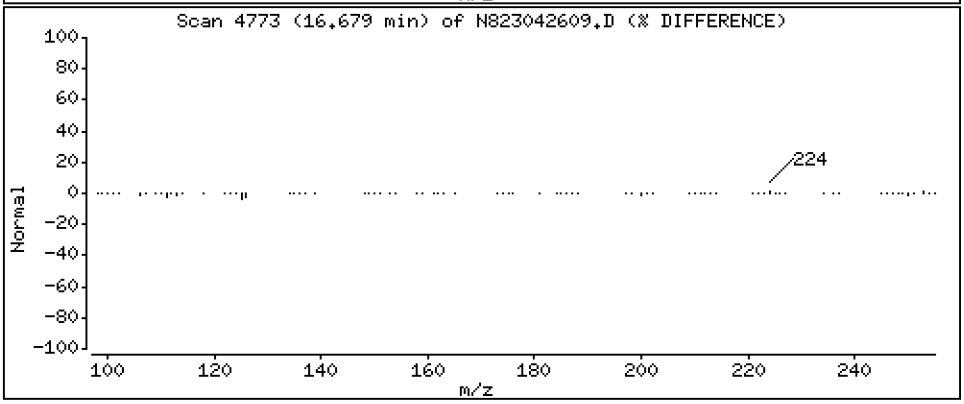












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

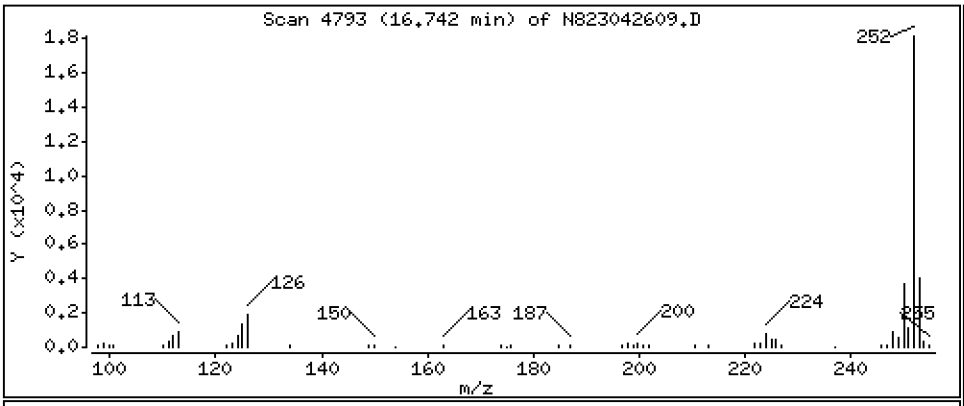
Operator: JZ

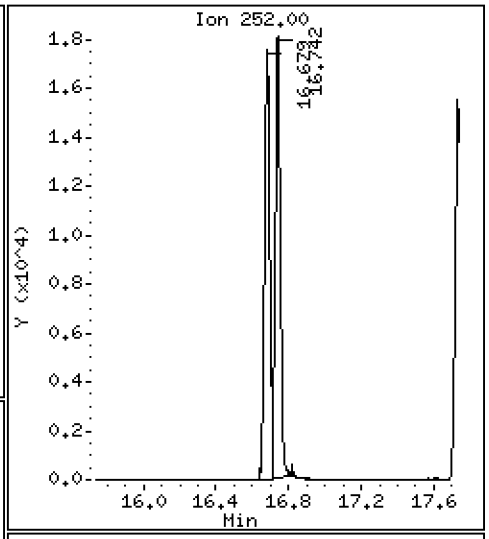
Column phase: Rxi-17sil

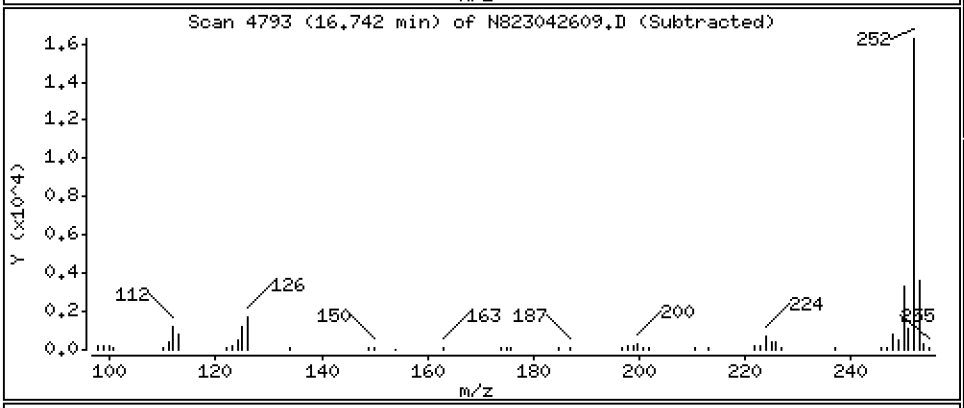
Column diameter: 0.25

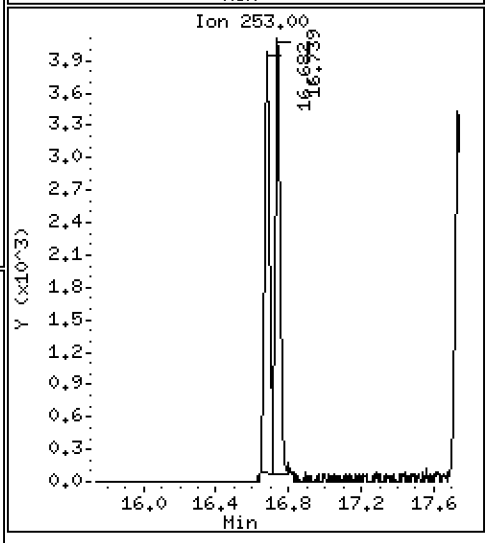
29 Benzo(k)fluoranthene

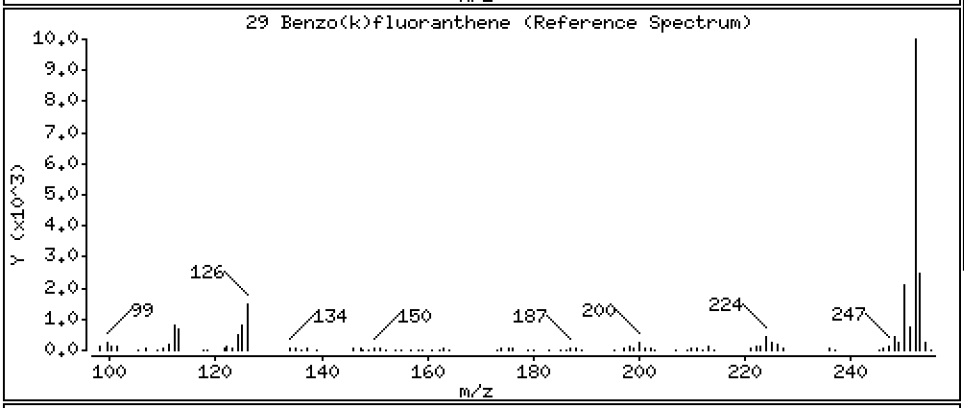
Concentration: 2.301 ug/L

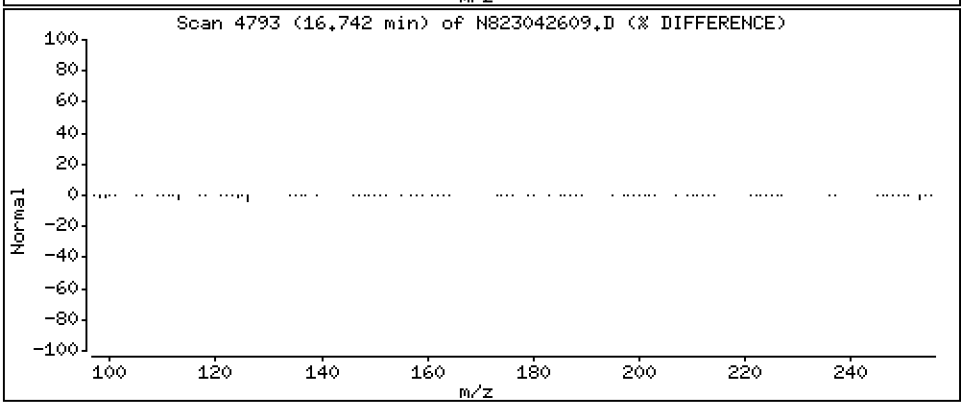












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

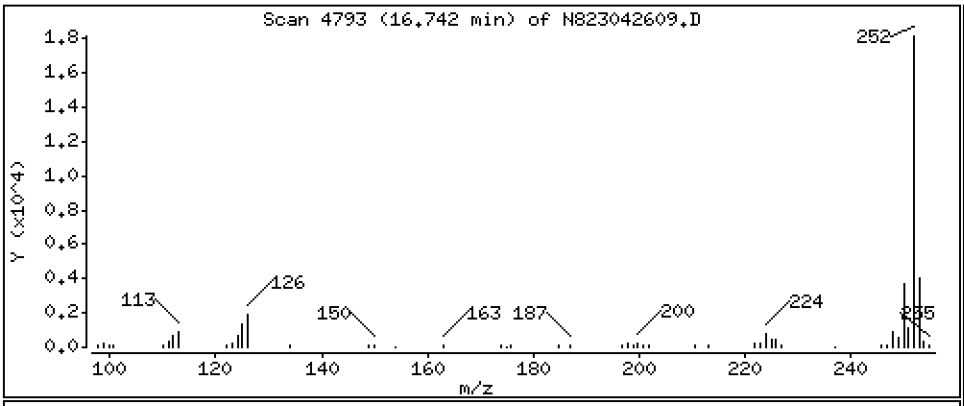
Operator: JZ

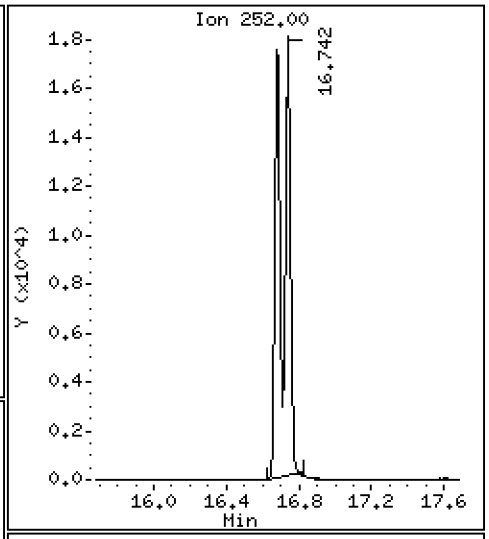
Column phase: Rxi-17sil

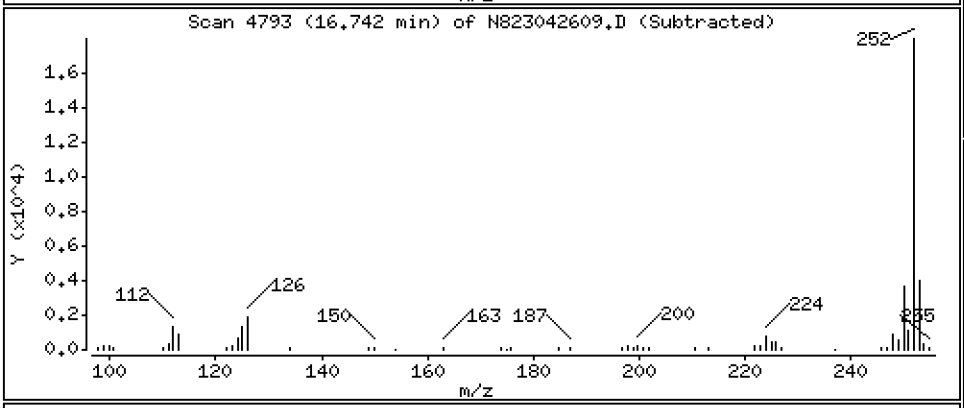
Column diameter: 0.25

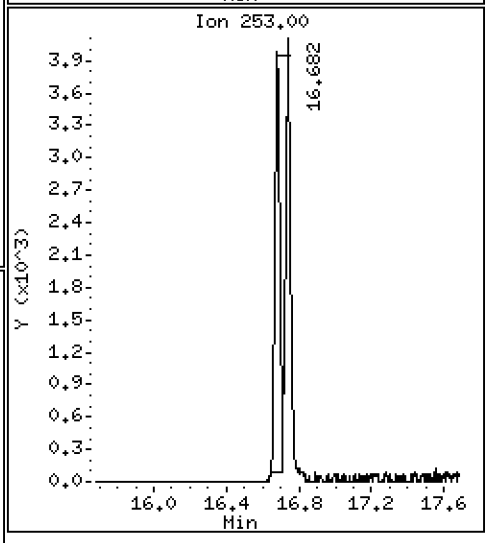
31 Total Benzofluoranthenes

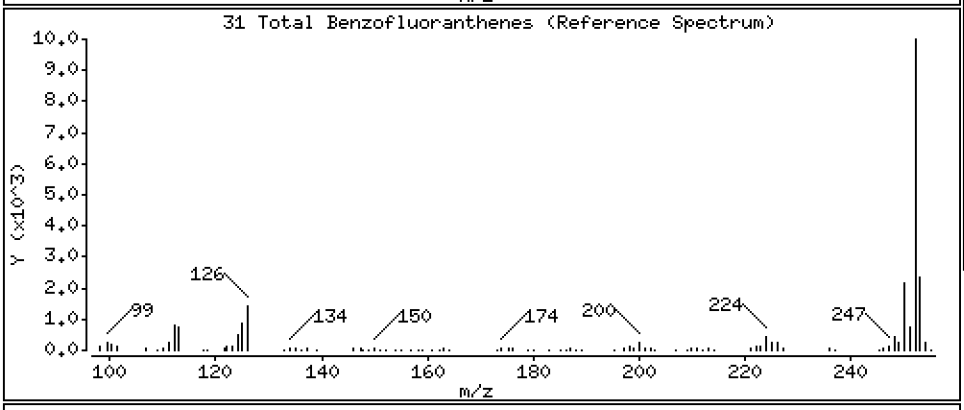
Concentration: 4.553 ug/L

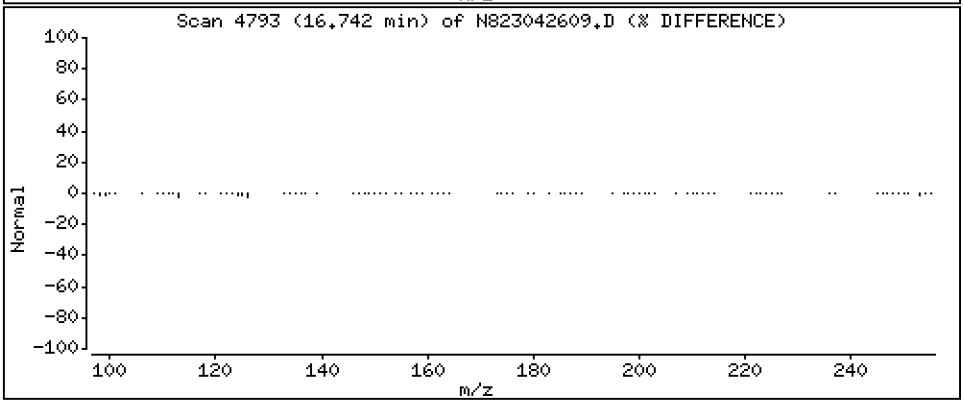












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

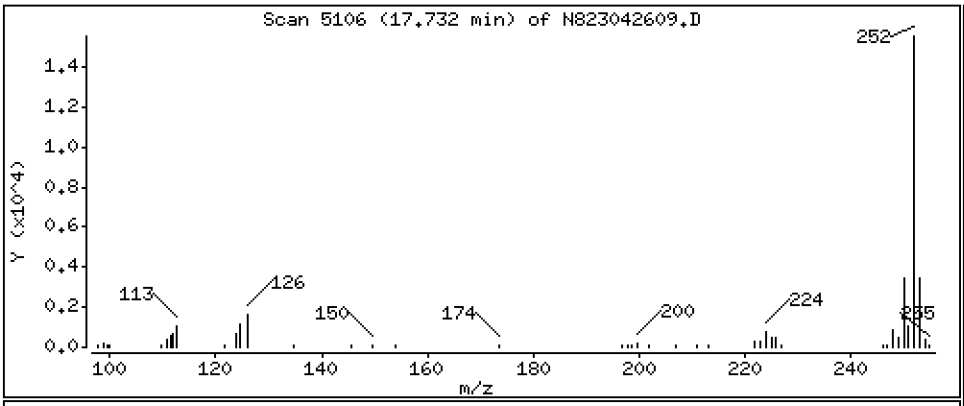
Operator: JZ

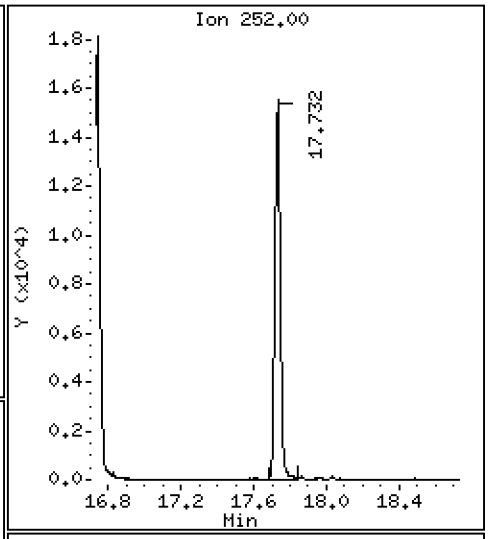
Column phase: Rxi-17sil

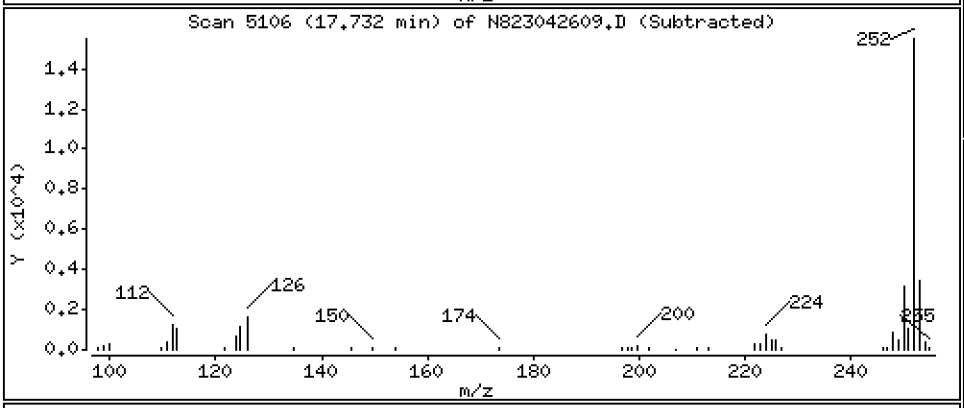
Column diameter: 0.25

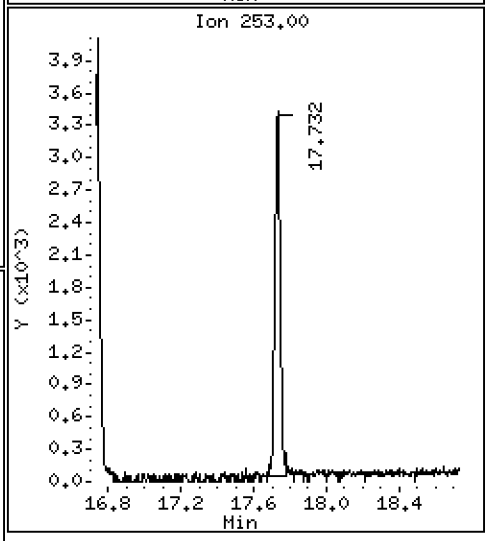
32 Benzo(a)pyrene

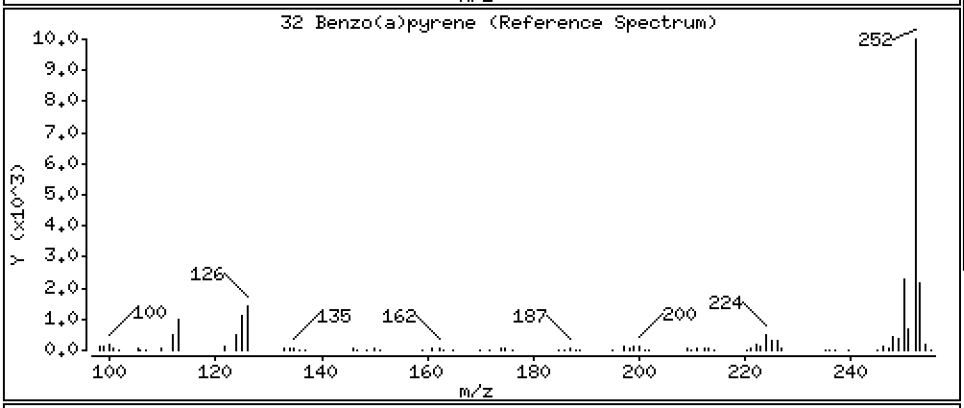
Concentration: 2.295 ug/L

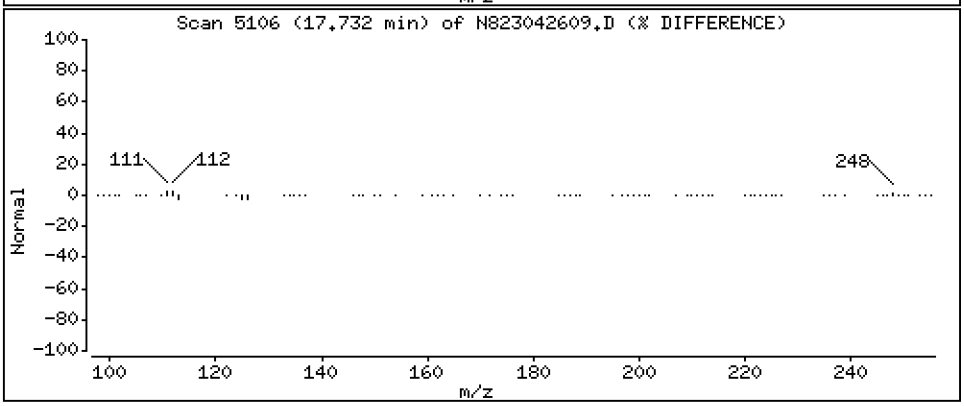












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

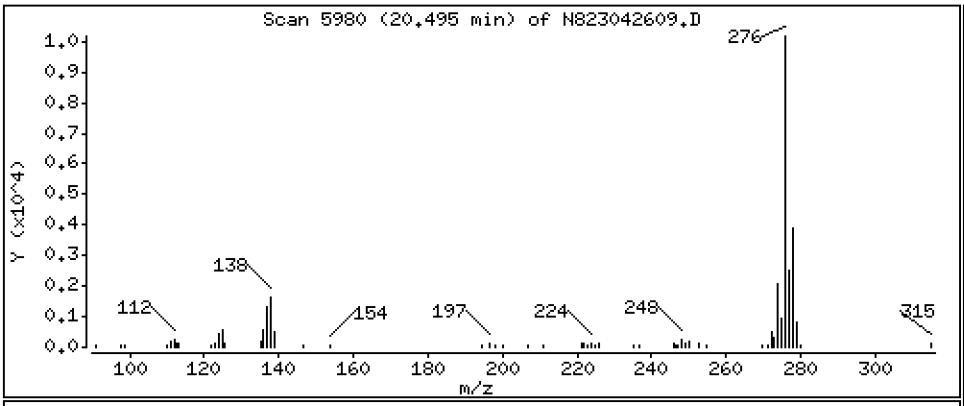
Operator: JZ

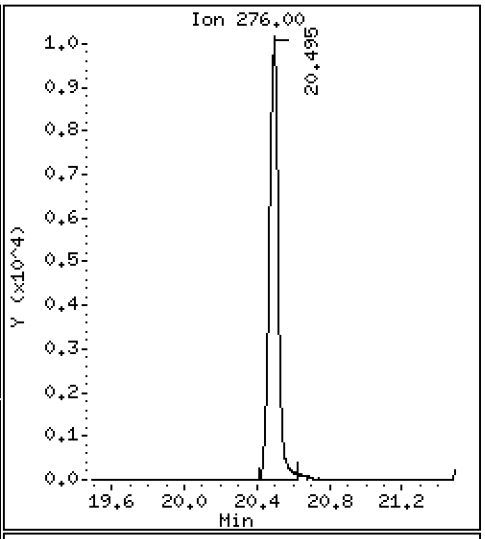
Column phase: Rxi-17sil

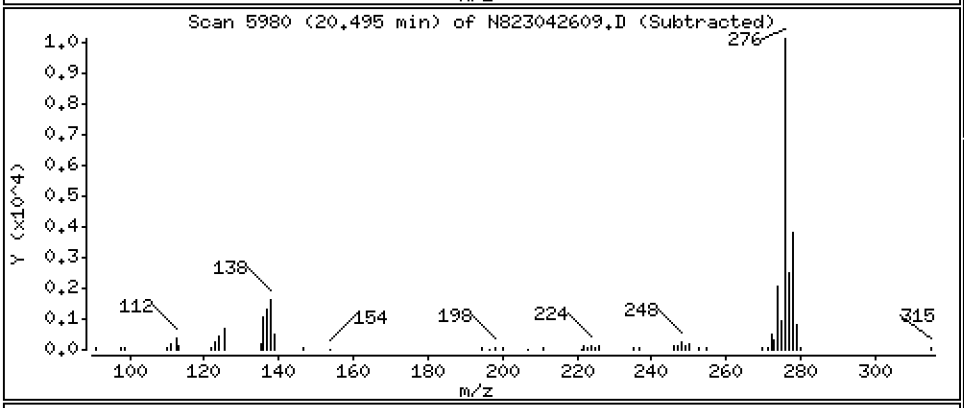
Column diameter: 0.25

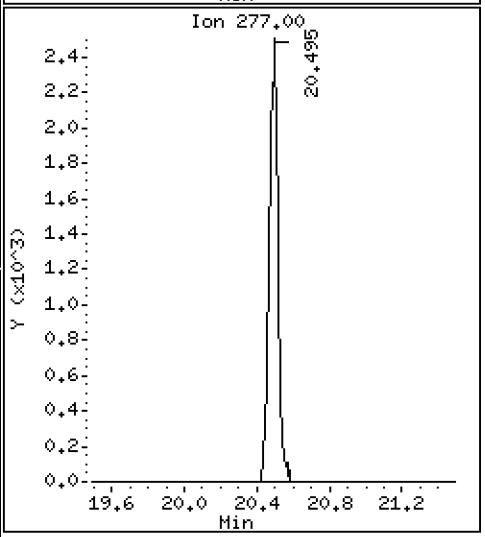
37 Indeno(1,2,3-cd)pyrene

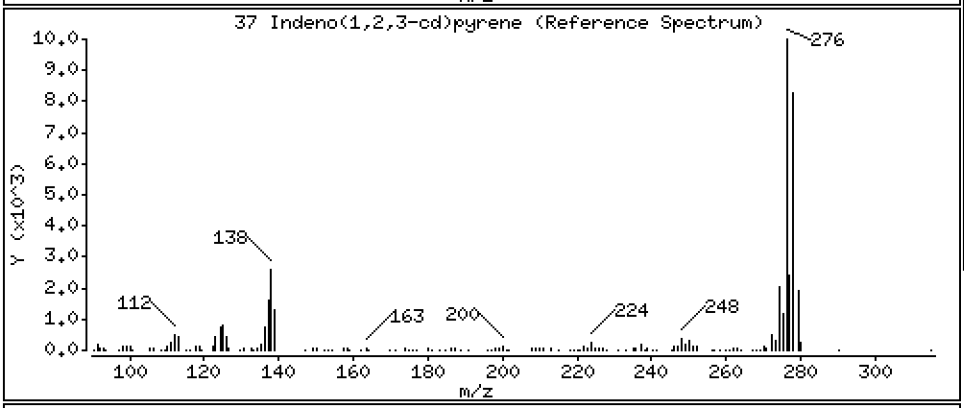
Concentration: 2.450 ug/L

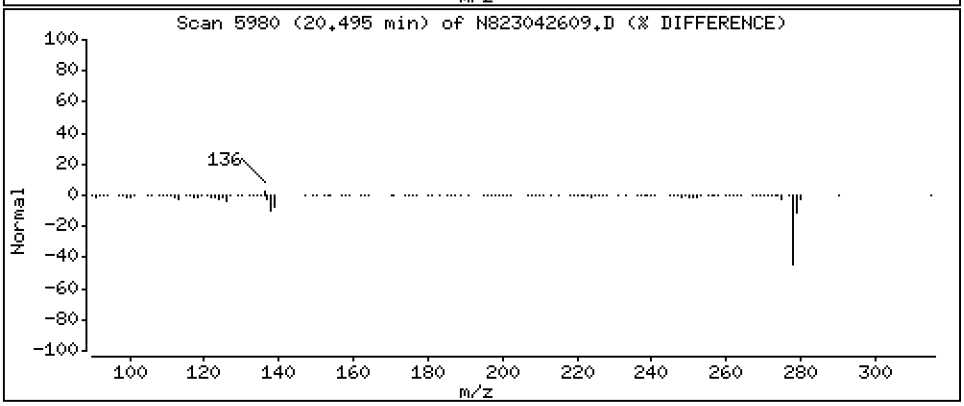












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

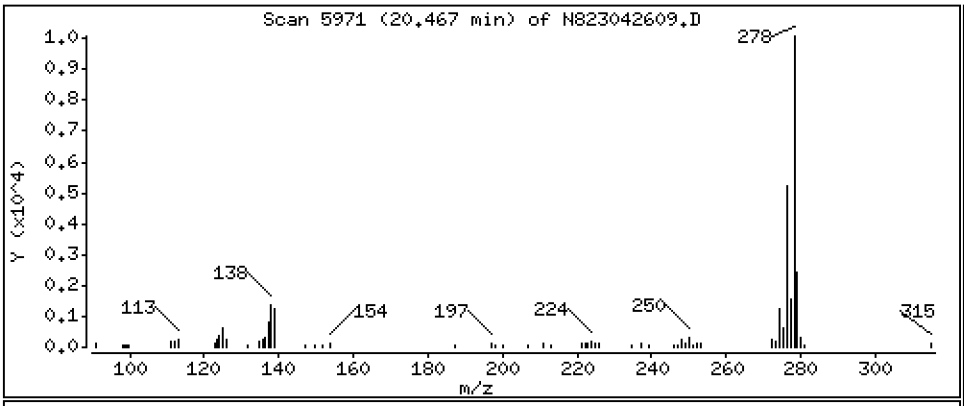
Operator: JZ

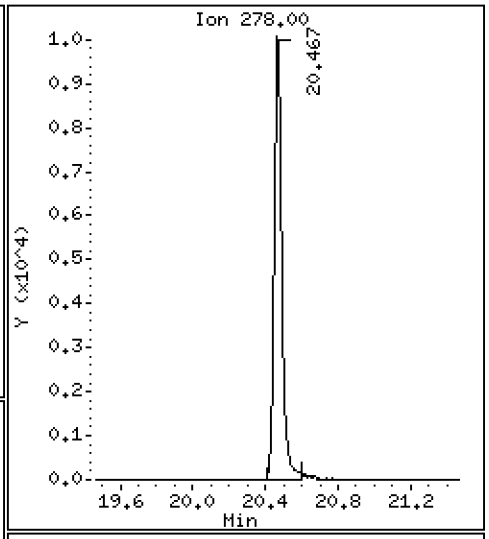
Column phase: Rxi-17sil

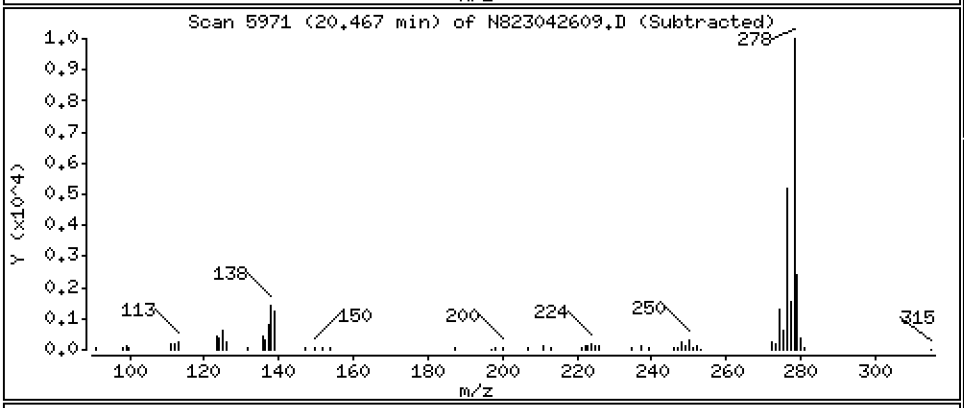
Column diameter: 0.25

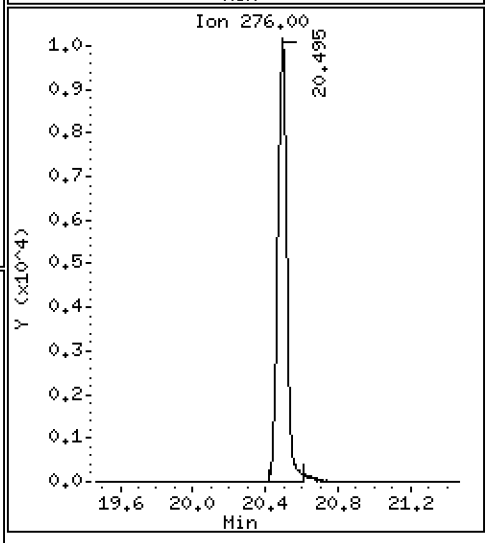
38 Dibenzo(a,h)anthracene

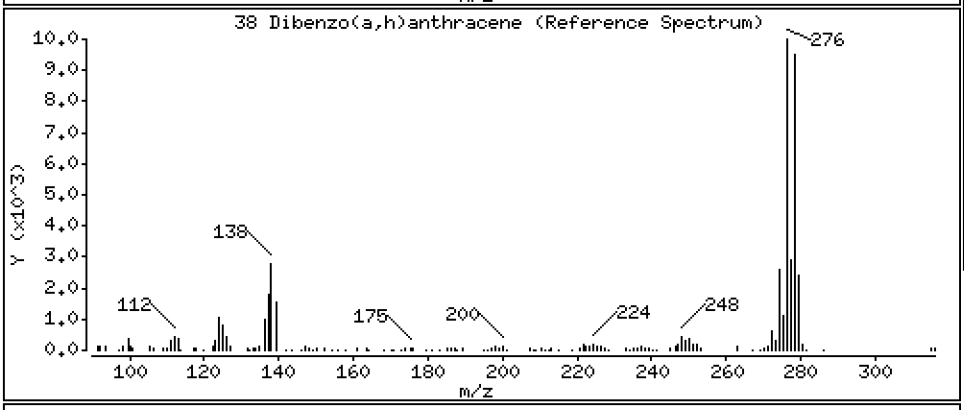
Concentration: 2.334 ug/L

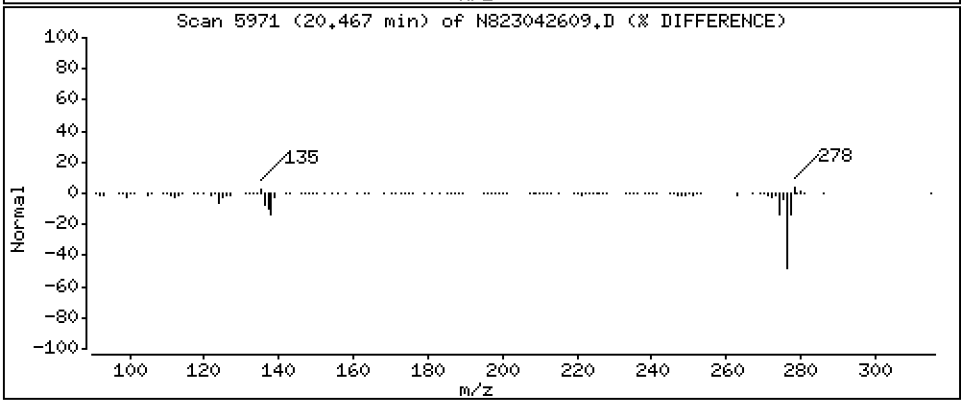












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

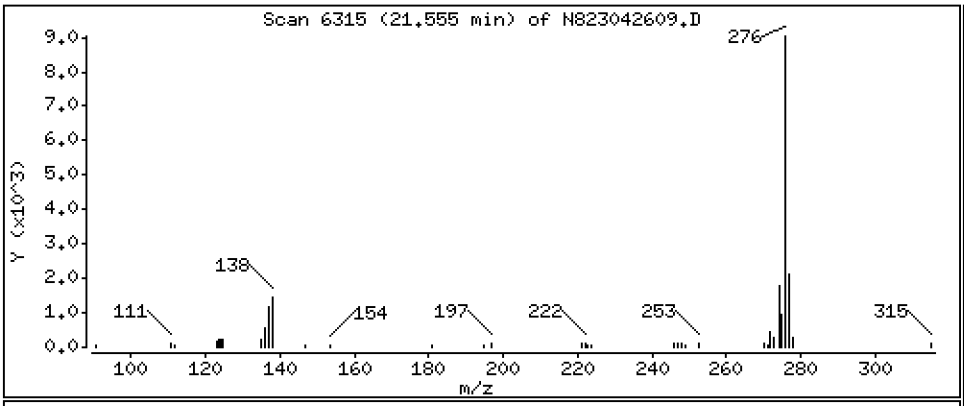
Operator: JZ

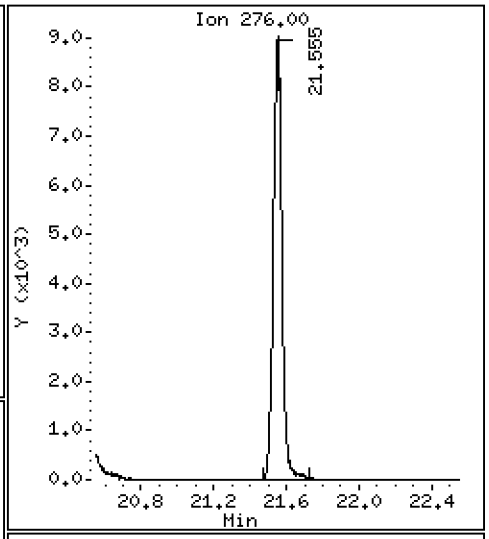
Column phase: Rxi-17sil

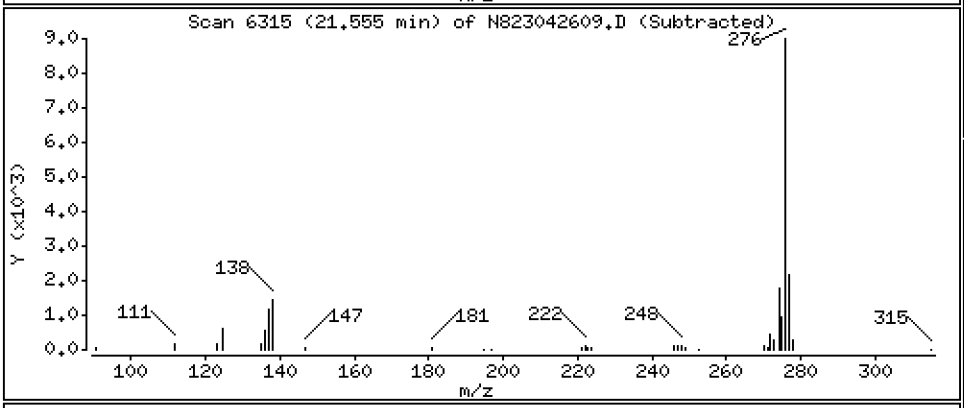
Column diameter: 0.25

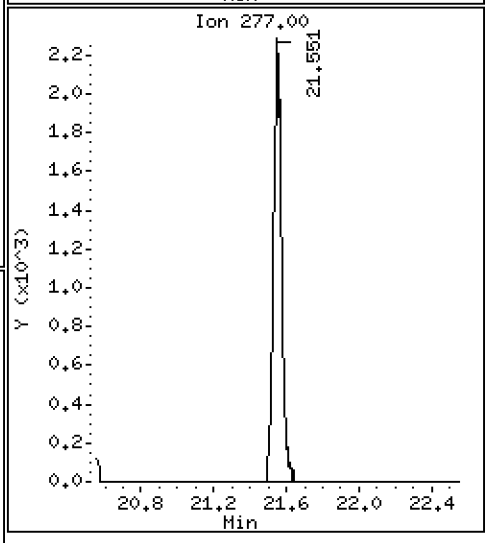
39 Benzo(g,h,i)perylene

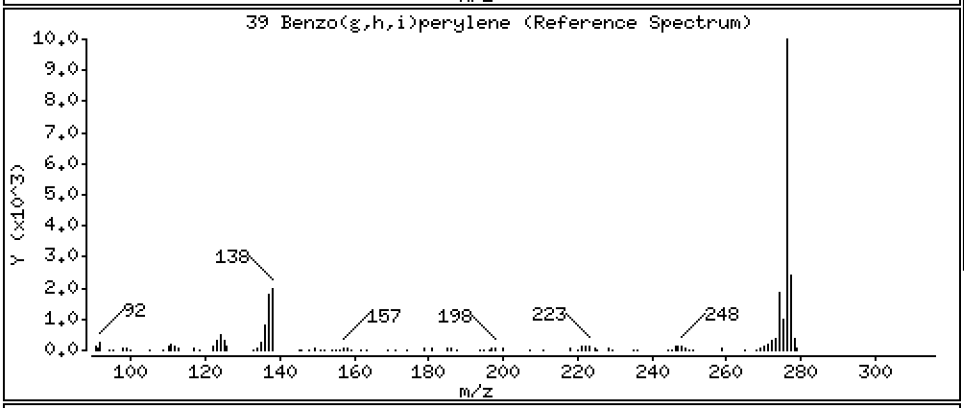
Concentration: 2.248 ug/L

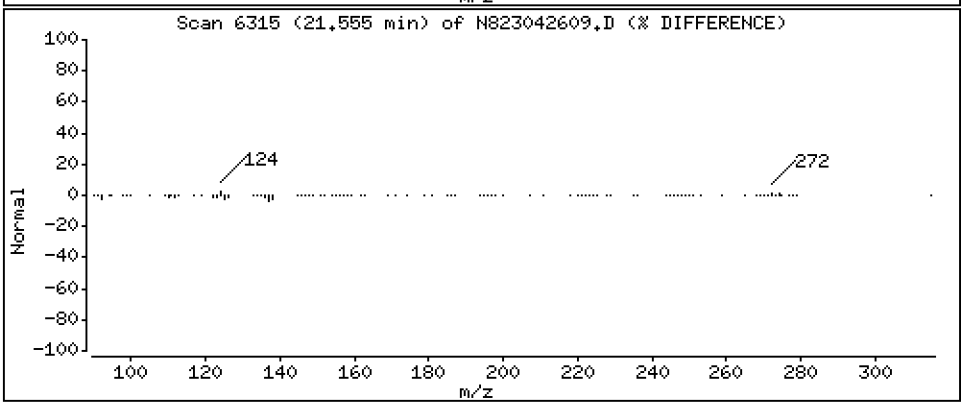












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D
Lab Smp Id: SLD0372-SCV1
Inj Date : 26-APR-2023 20:49
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230426
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA230426
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	20718	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	24938	2.36264	2.363
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	14334	2.39183	2.392
	5 1-methylnaphthalene	141	5.801	5.801	(1.202)	14142	2.38001	2.380
	9 Acenaphthylene	152	7.003	7.003	(0.984)	25991	2.32237	2.322
*	10 Acenaphthene-d10	164	7.113	7.110	(1.000)	12642	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	16198	2.23392	2.234
	12 Dibenzofuran	168	7.316	7.313	(1.028)	27419	2.51765	2.518
	14 Fluorene	166	7.790	7.790	(1.095)	19927	2.29268	2.293
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	24547	2.00000	
	16 Phenanthrene	178	9.184	9.185	(1.004)	28095	2.16083	2.161
	17 Anthracene	178	9.229	9.226	(1.009)	24487	2.00809	2.008
	22 Fluoranthene	202	10.949	10.949	(1.197)	33741	2.25628	2.256
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	11.461	11.461	(0.815)	34528	2.22695	2.227
	24 Benzo(a)anthracene	228	13.940	13.940	(0.991)	34655	2.17519	2.175
*	25 Chrysene-d12	240	14.070	14.067	(1.000)	24217	2.00000	
	27 Chrysene	228	14.142	14.139	(1.005)	33440	2.13657	2.137
	28 Benzo(b)fluoranthene	252	16.678	16.682	(0.929)	35085	2.15649	2.156
	29 Benzo(k)fluoranthene	252	16.742	16.739	(0.932)	35276	2.30130	2.301
	31 Total Benzofluoranthenes	252	16.742	16.682	(0.932)	68883	4.55291	4.553(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.731	17.731	(0.987)	32452	2.29472	2.295
*	33 Perylene-d12	264	17.959	17.959	(1.000)	24956	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.495	20.492	(1.141)	35264	2.44967	2.450
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.466	20.467	(1.140)	29838	2.33423	2.334
	39 Benzo(g,h,i)perylene	276	21.554	21.551	(1.200)	29972	2.24768	2.248

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042609.D
Lab Smp Id: SLD0372-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA23042
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	20718	10.80
10 Acenaphthene-d10	10729	5365	21458	12642	17.83
15 Phenanthrene-d10	20748	10374	41496	24547	18.31
25 Chrysene-d12	20954	10477	41908	24217	15.57
33 Perylene-d12	21563	10782	43126	24956	15.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.01
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042609.D

Lab ID: SLD0372-SCV1
nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m,   26-APR-2023 20:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

On Column LOD for nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m, pnascv.su

Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00070
Lab File ID:	NT1705162311S.D	Calibration Date:	05/16/2023
Sequence:	SLE0339	Injection Date:	05/17/23
Lab Sample ID:	SLE0339-SCV1	Injection Time:	00:29
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
1,4-Dichlorobenzene	A	5.0000	5.1	1.5745540	1.6161570		2.6	+/-20	
1,2-Dichlorobenzene	A	5.0000	5.0	1.5432720	1.5453870		0.1	+/-20	
Benzyl Alcohol	A	5.0000	5.7	1.0272110	1.1723090		14.1	+/-20	
Benzoic acid	A	10.000	7.8	0.1537024	0.1864269		-22.2	+/-20	*
2,4-Dimethylphenol	A	5.0000	3.8	0.3847731	0.2936879		-23.7	+/-20	*
1,2,4-Trichlorobenzene	A	5.0000	4.9	0.3490929	0.3425562		-1.9	+/-20	
N-Nitrosodiphenylamine	A	5.0000	5.6	0.5635219	0.6342197		12.5	+/-20	
Pentachlorophenol	A	5.0000	4.5	0.0772800	0.1012643		-9.9	+/-20	
2-Fluorophenol	A	7.5000	0.00	1.2098450					
p-Terphenyl-d14	A	5.0000	0.00	0.7589992					

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Page 1

Date : 17-MAY-2023 00:29

Client ID:

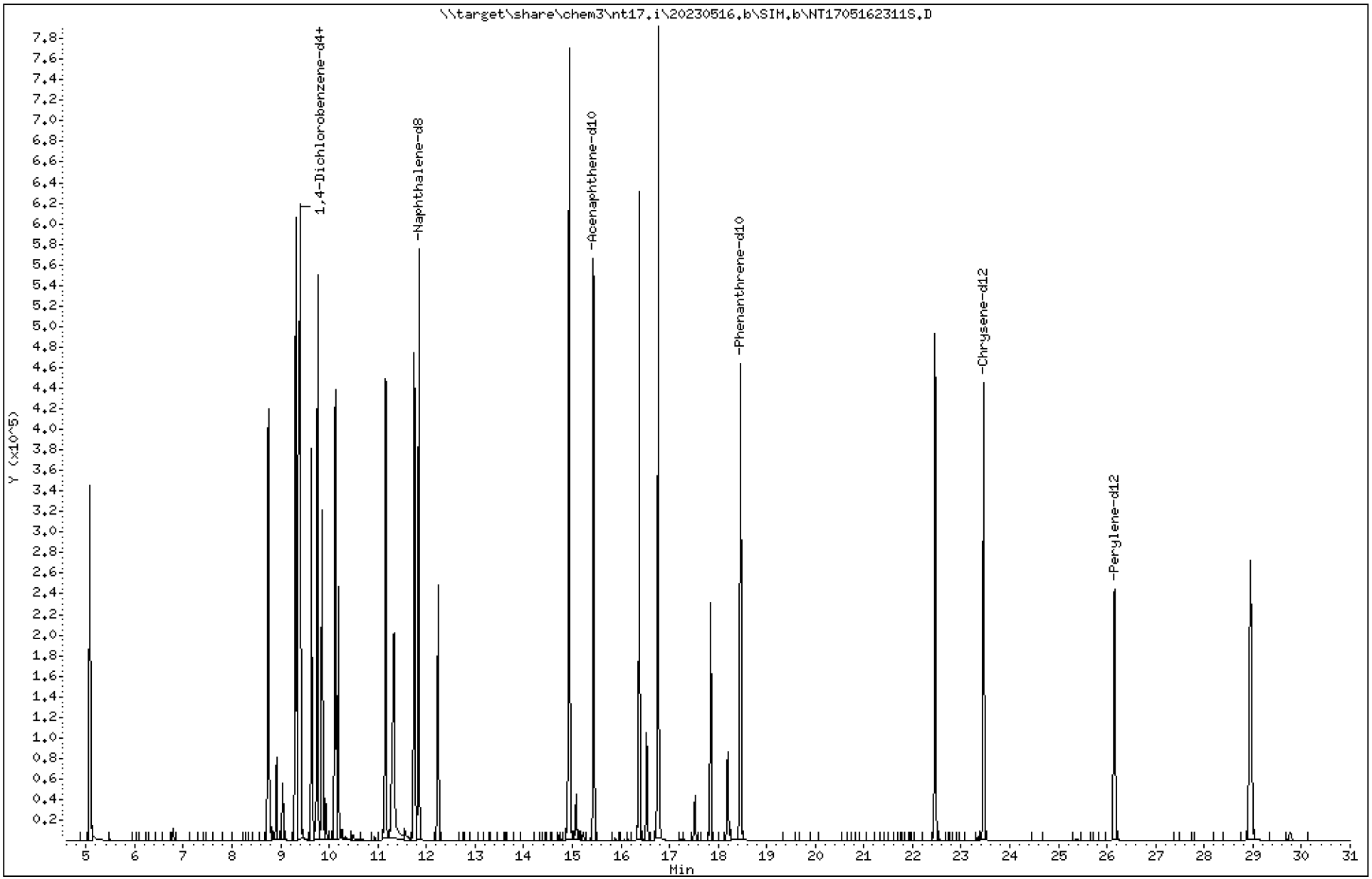
Instrument: nt17.i

Sample Info: SLE0339-SCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

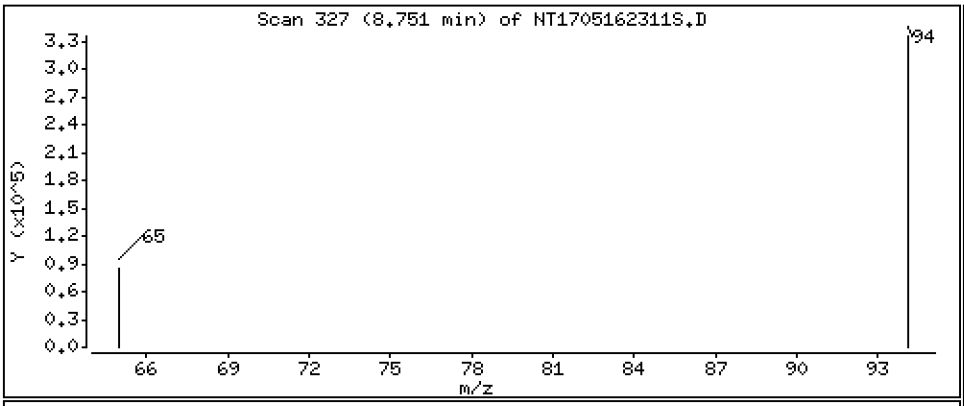
Operator: JGR

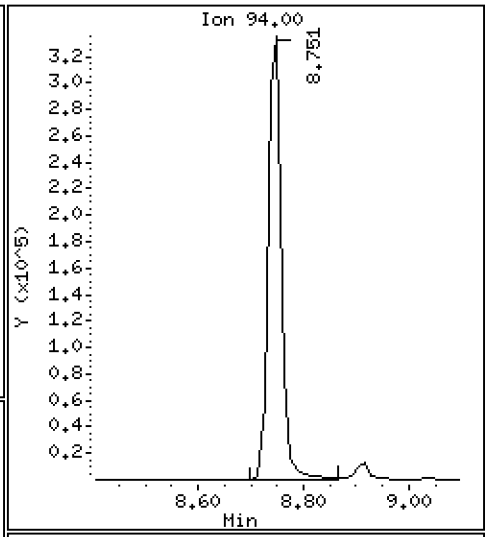
Column phase: ZB-5msi

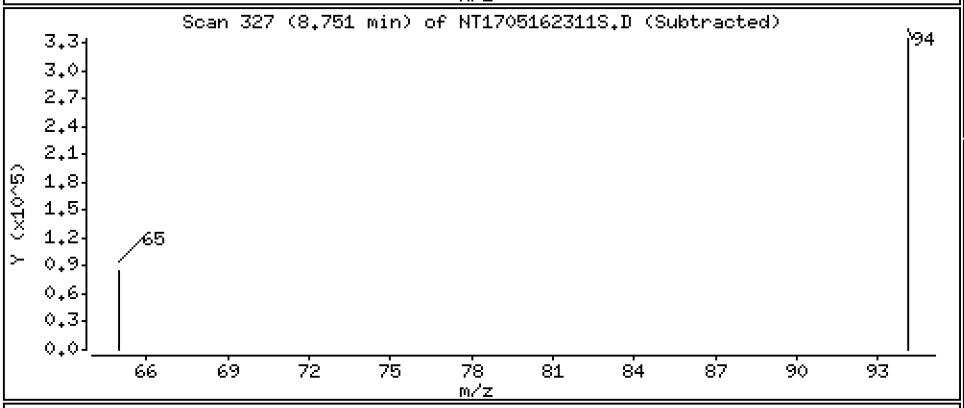
Column diameter: 0.25

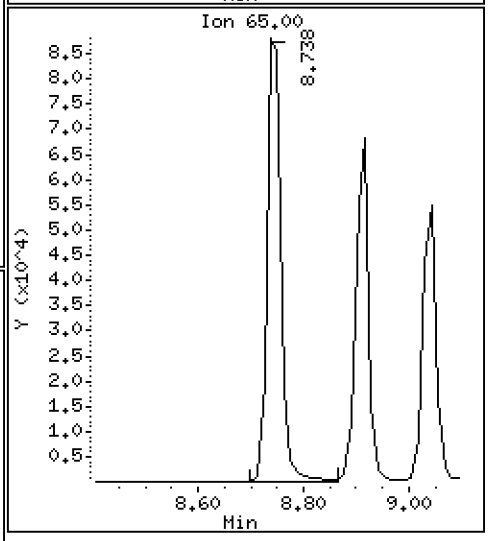
3 Phenol

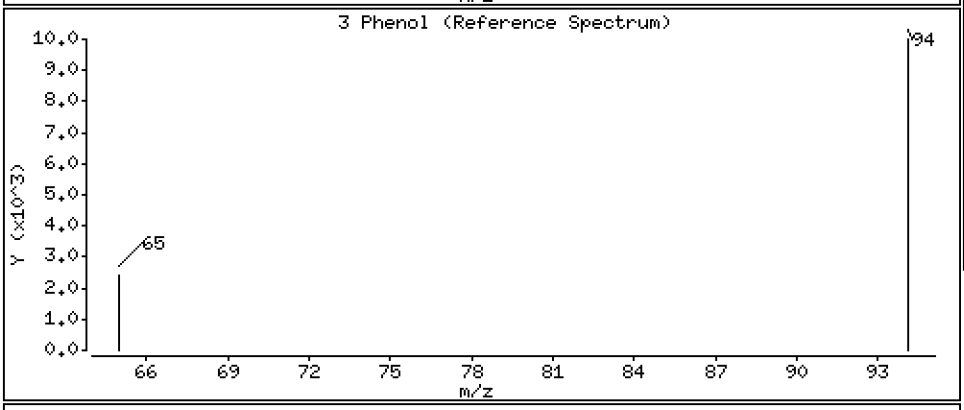
Concentration: 4.884 ug/mL

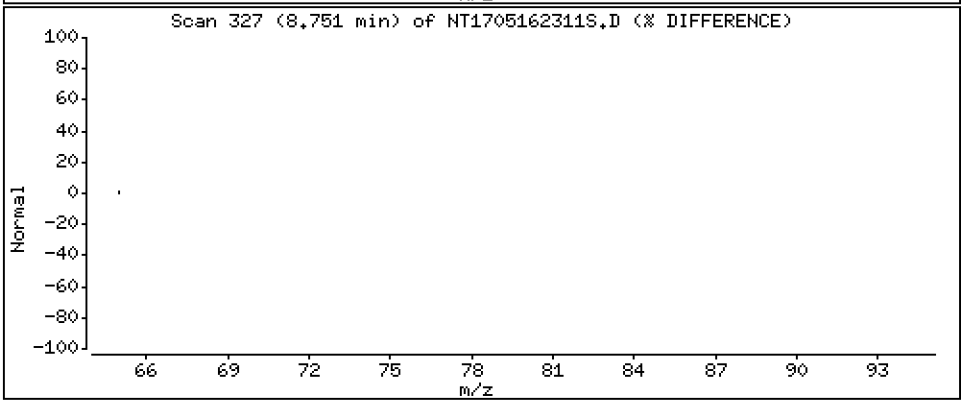












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

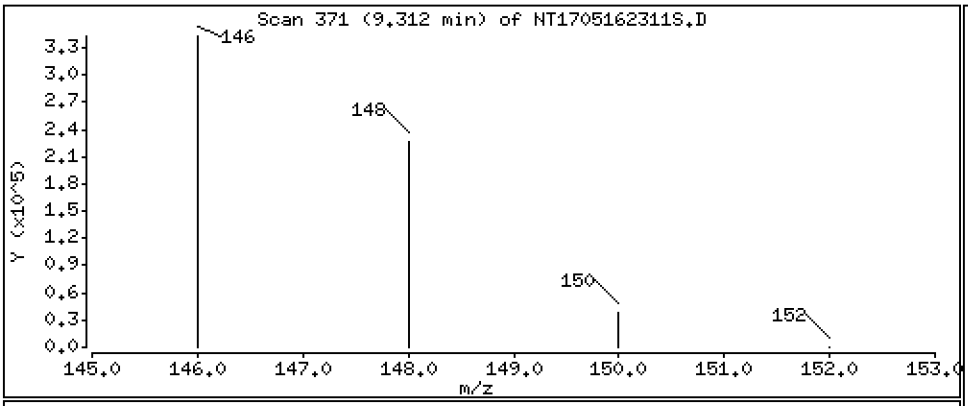
Operator: JGR

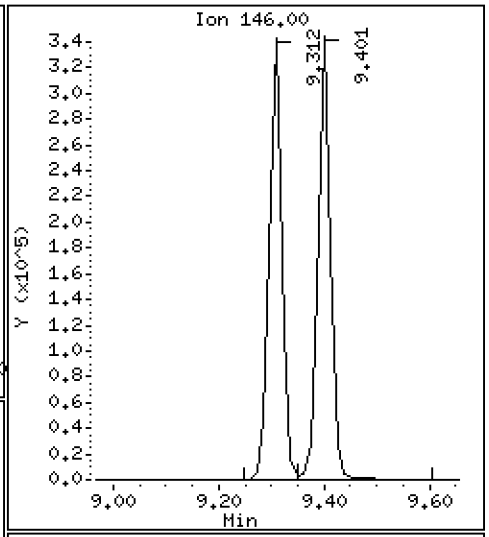
Column phase: ZB-5msi

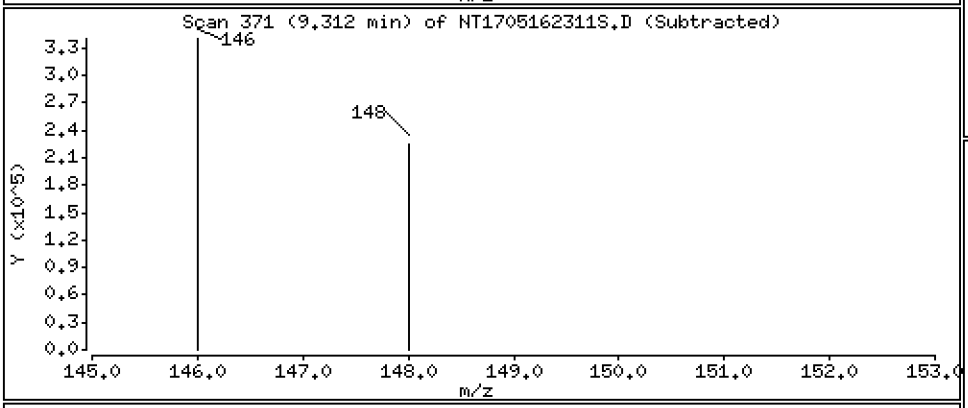
Column diameter: 0.25

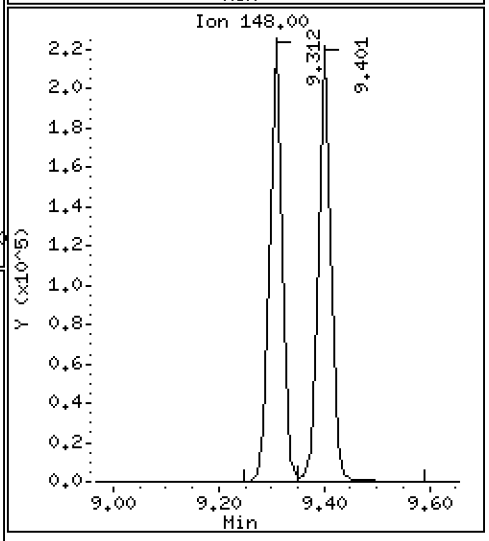
7 1,3-Dichlorobenzene

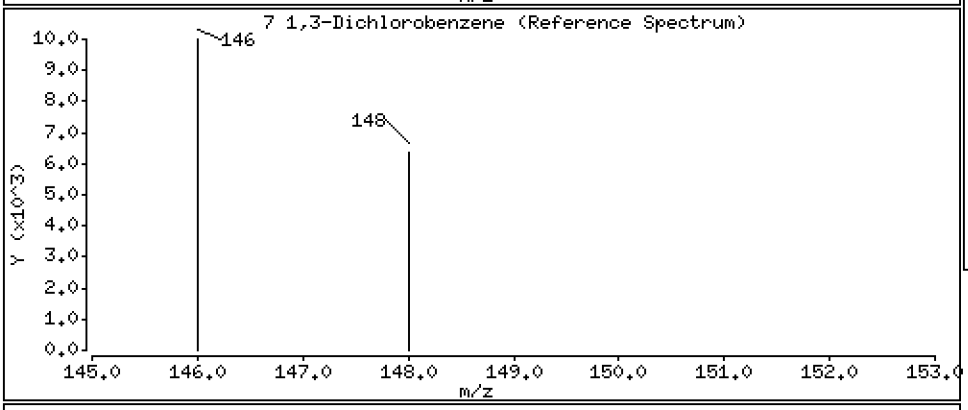
Concentration: 5.087 ug/mL

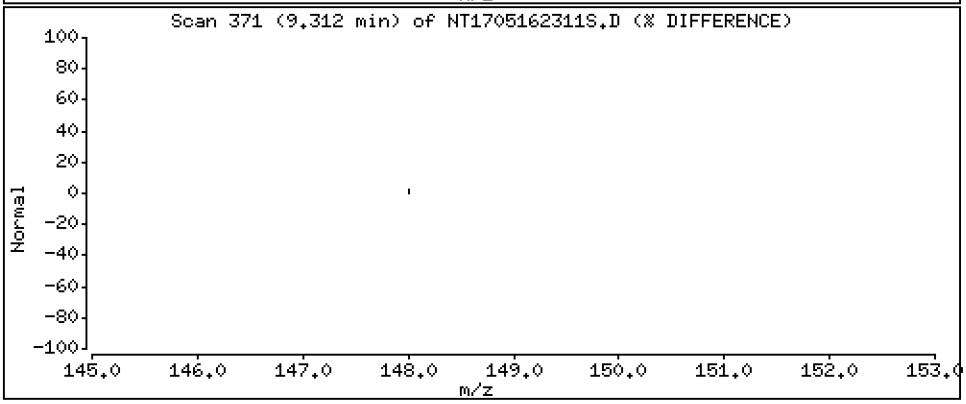












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

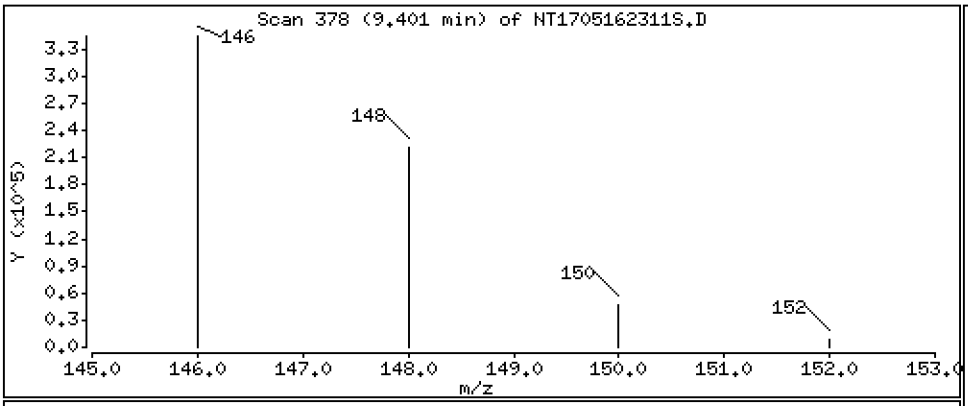
Operator: JGR

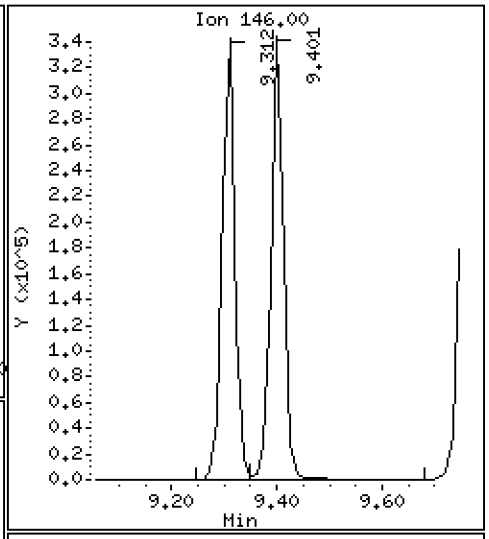
Column phase: ZB-5msi

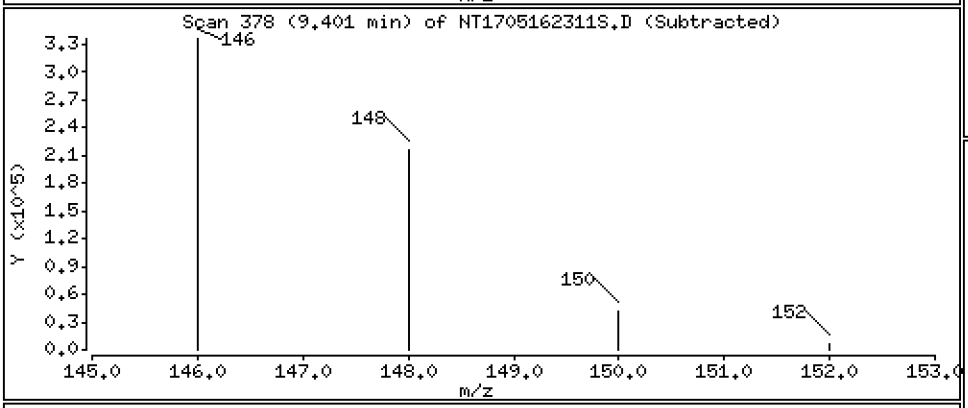
Column diameter: 0.25

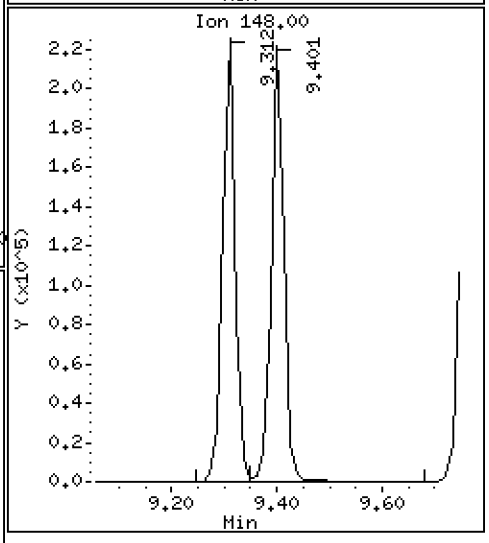
9 1,4-Dichlorobenzene

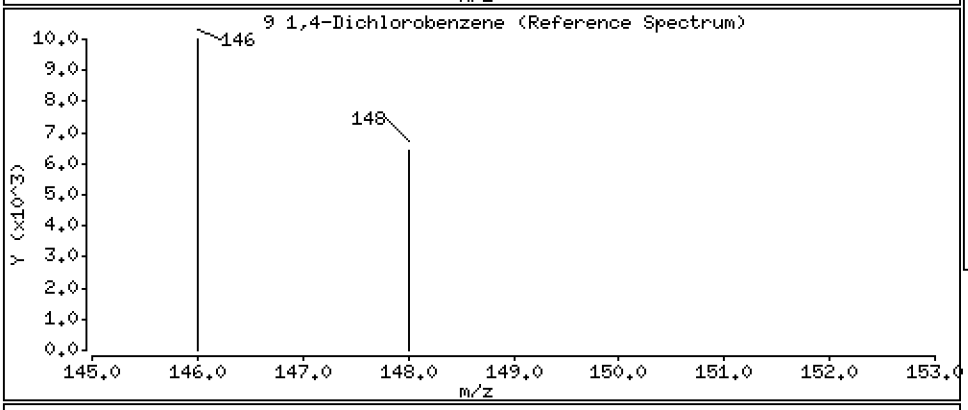
Concentration: 5.132 ug/mL

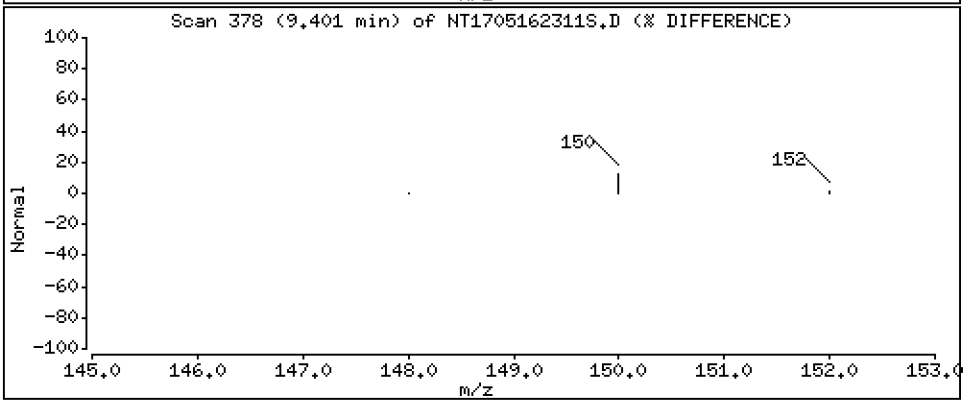












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

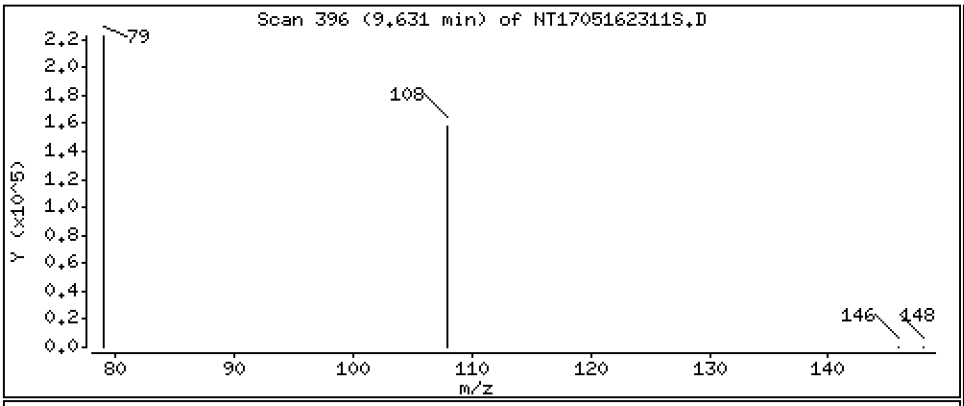
Operator: JGR

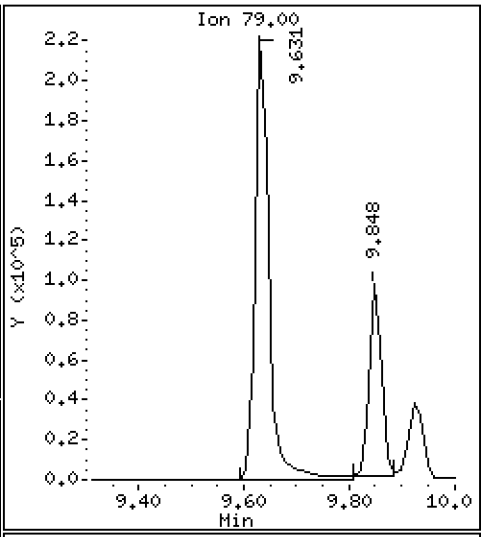
Column phase: ZB-5msi

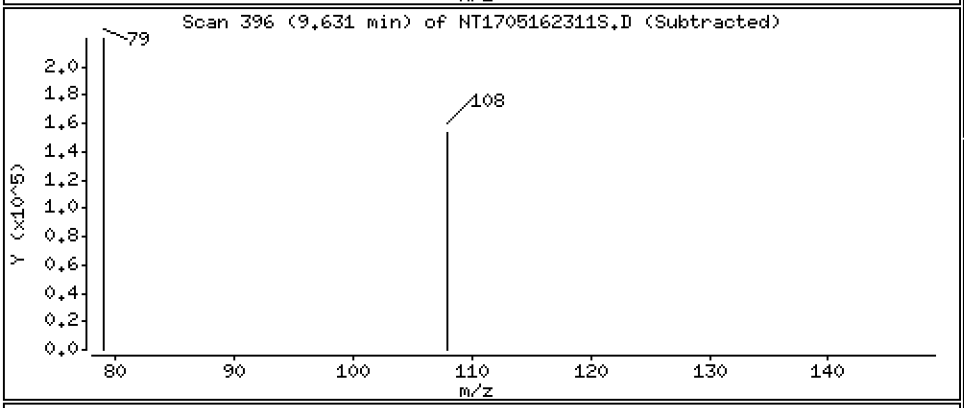
Column diameter: 0.25

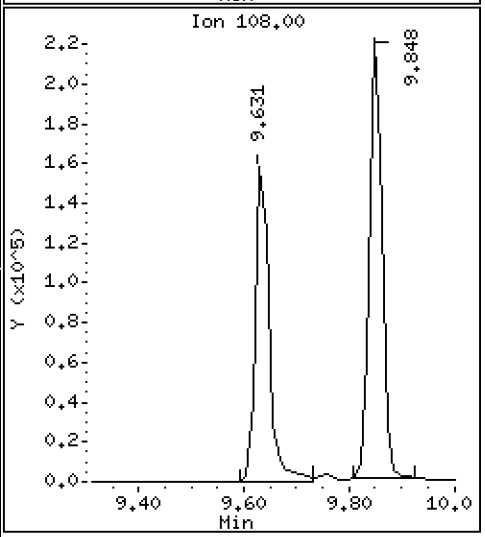
11 Benzyl alcohol

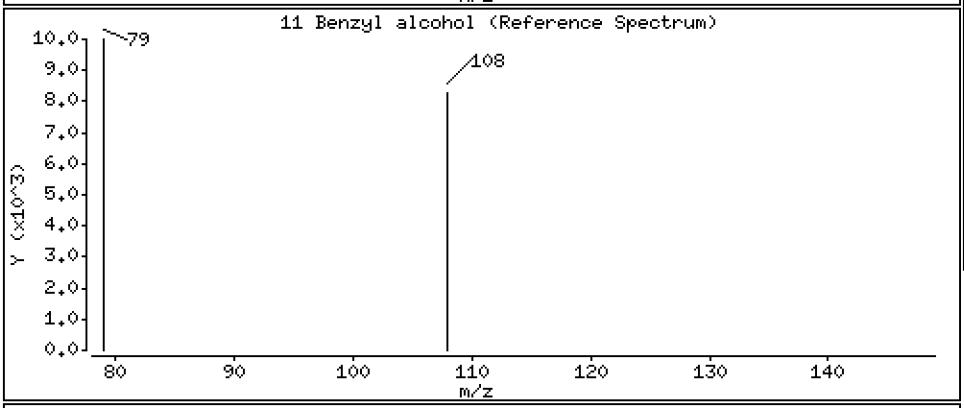
Concentration: 5.706 ug/mL

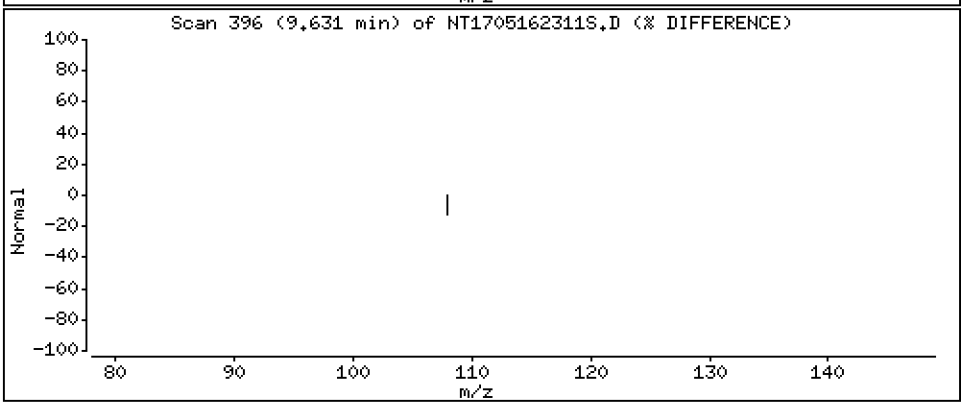












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

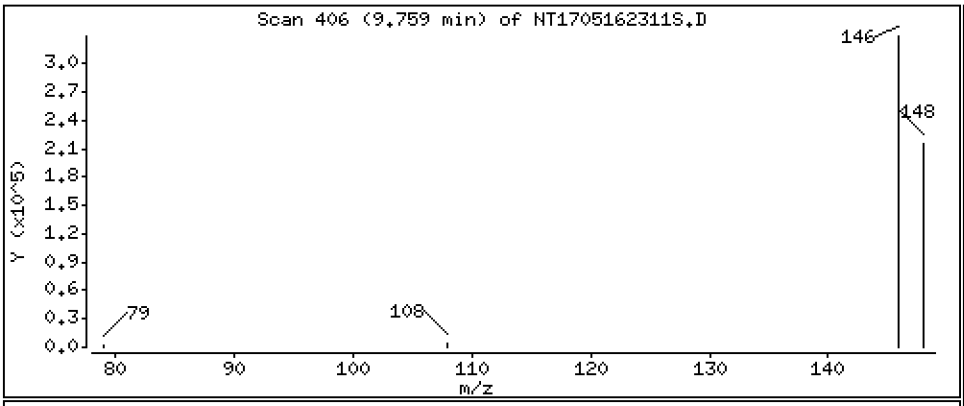
Operator: JGR

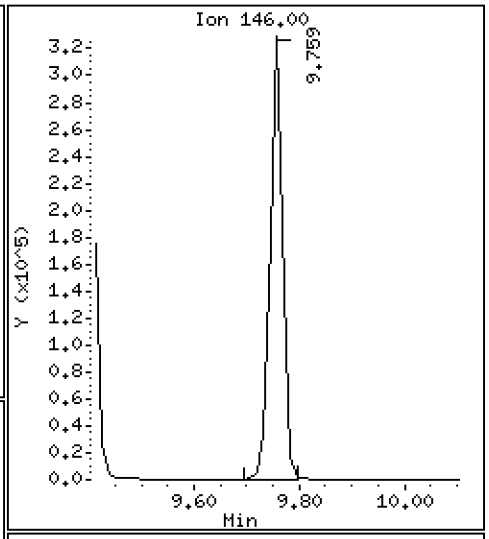
Column phase: ZB-5msi

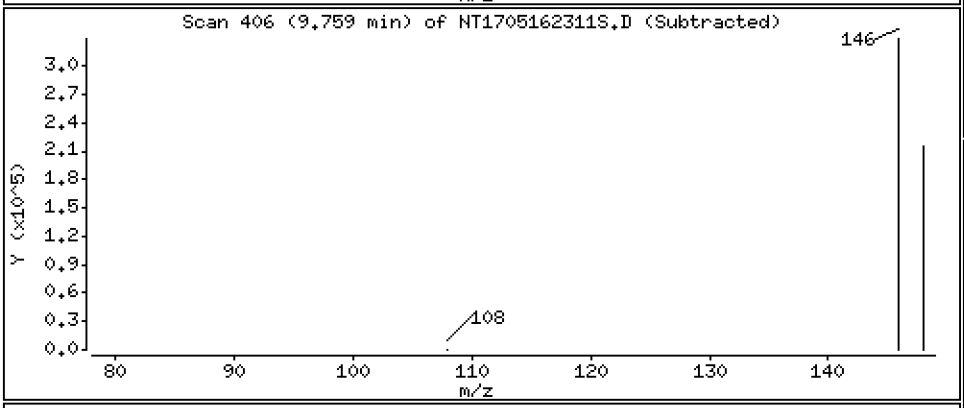
Column diameter: 0.25

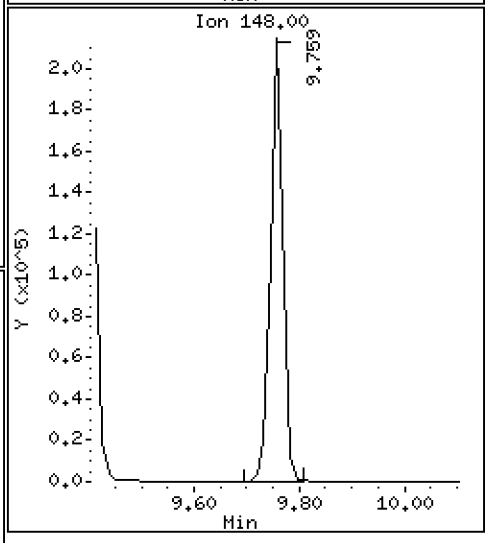
12 1,2-Dichlorobenzene

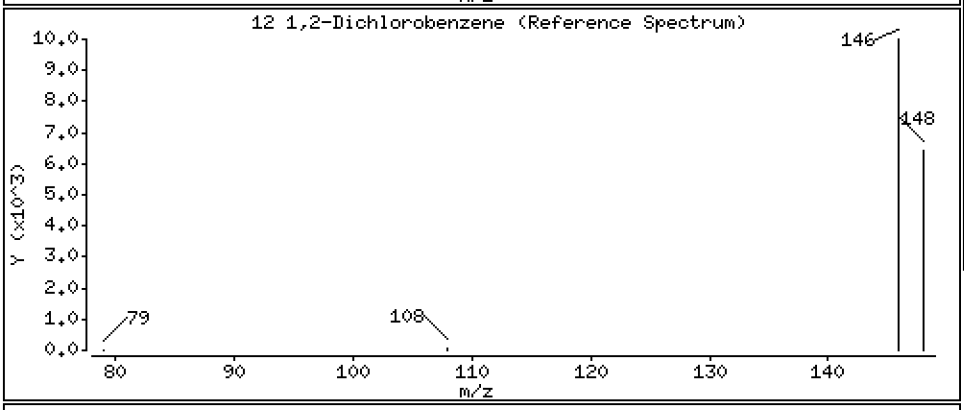
Concentration: 5.007 ug/mL

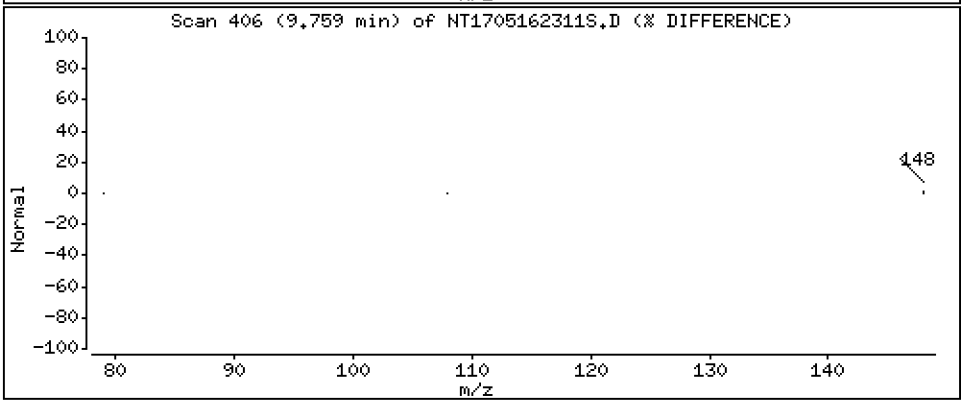












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

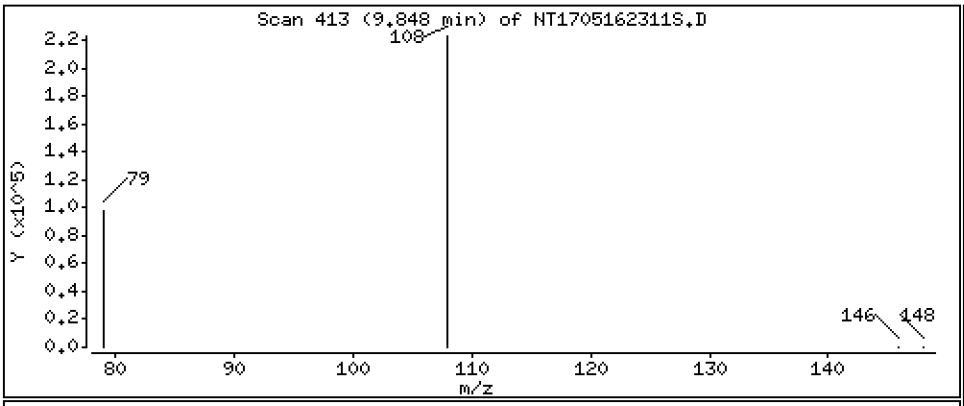
Operator: JGR

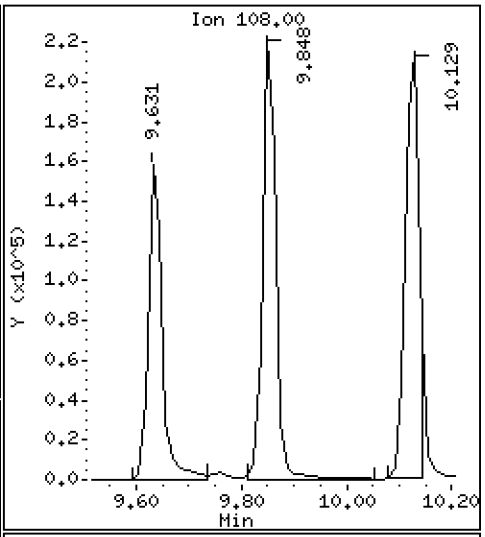
Column phase: ZB-5msi

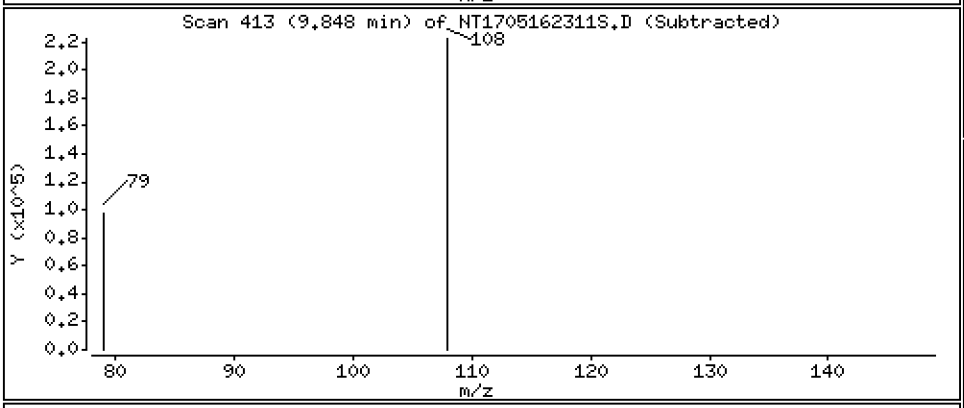
Column diameter: 0.25

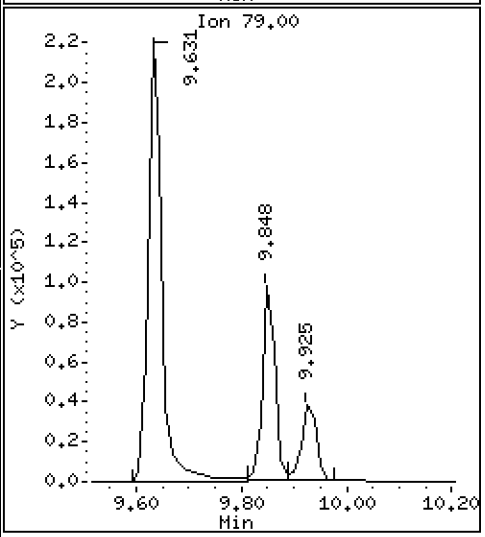
13 2-Methylphenol

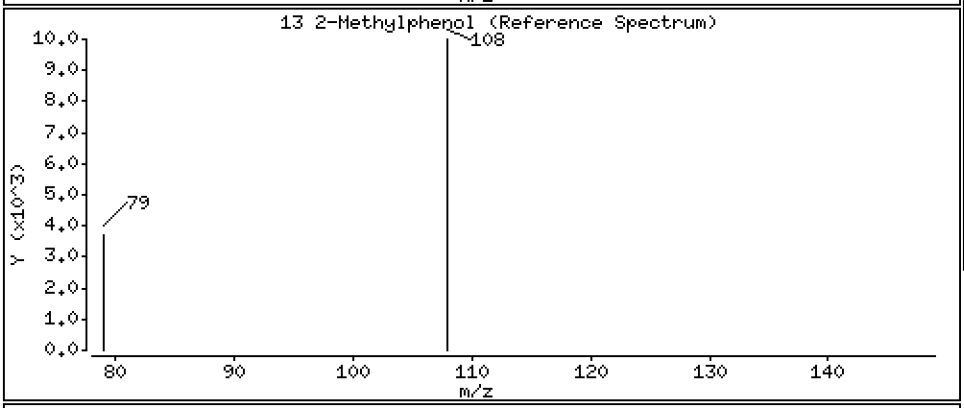
Concentration: 4.408 ug/mL

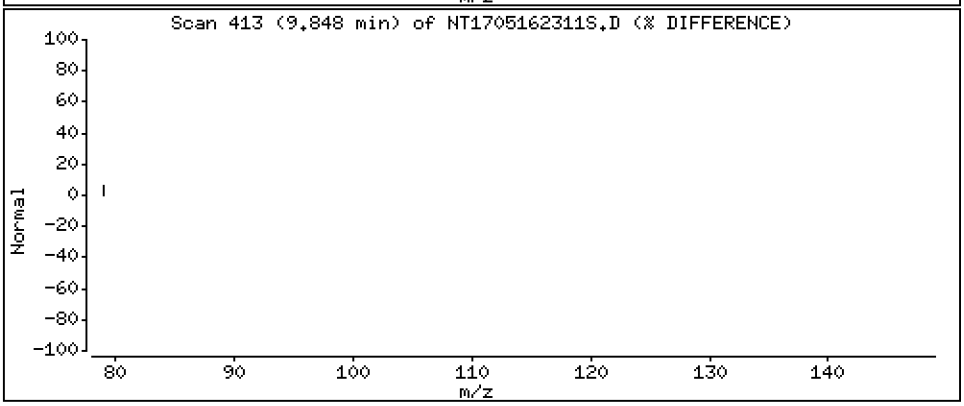












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

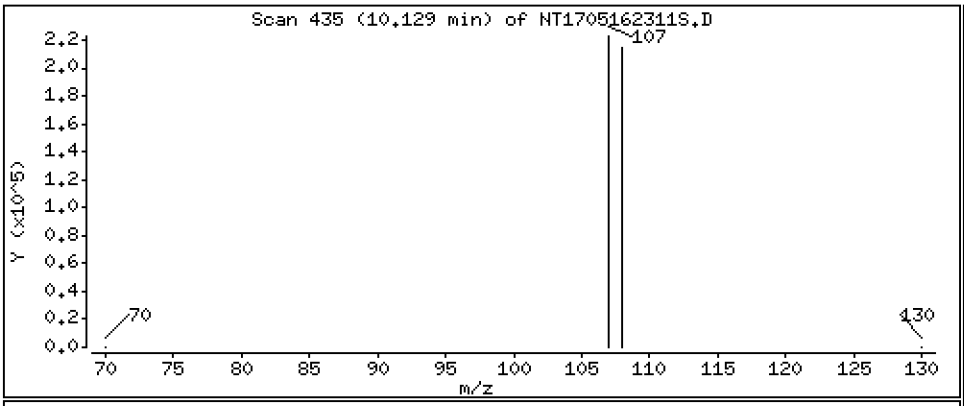
Operator: JGR

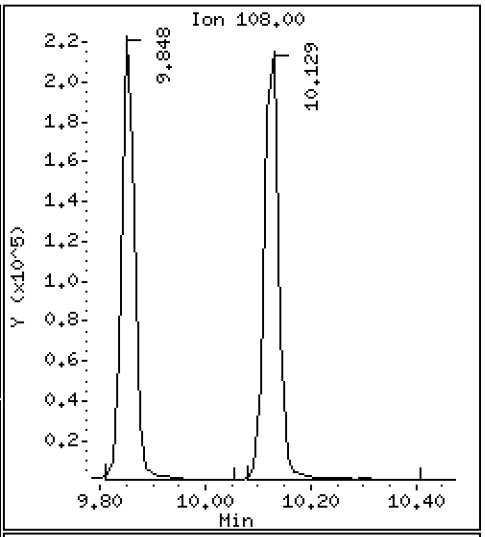
Column phase: ZB-5msi

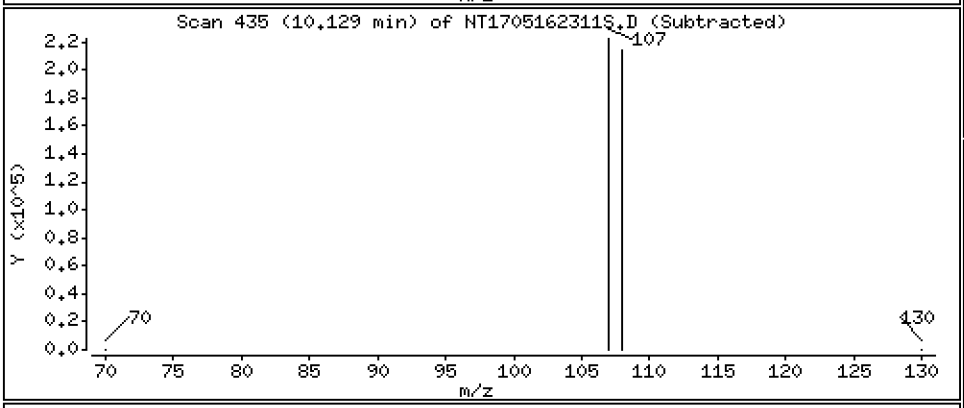
Column diameter: 0.25

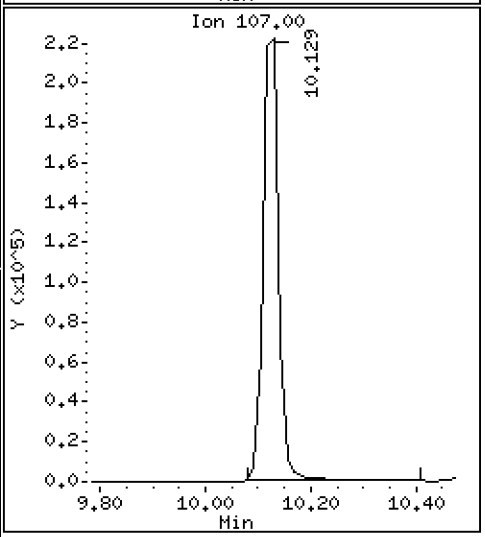
15 4-Methylphenol

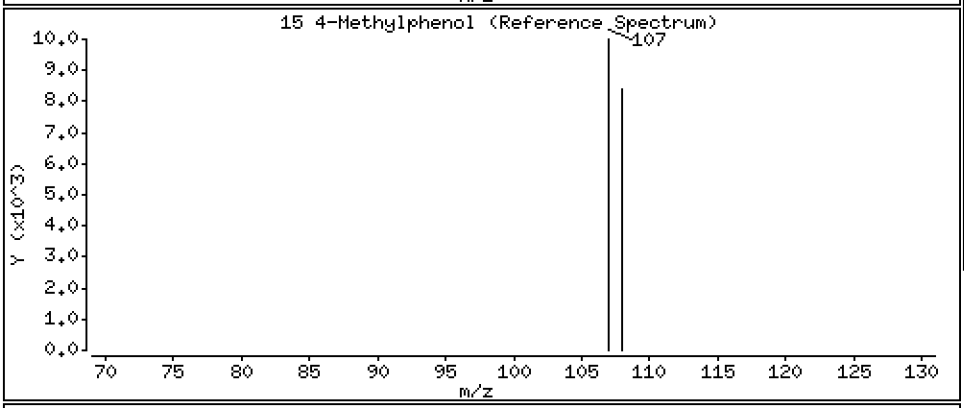
Concentration: 4.788 ug/mL

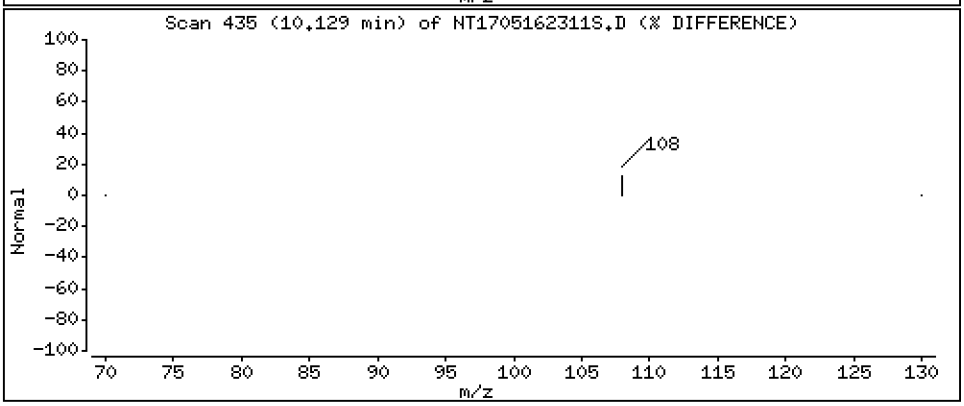












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

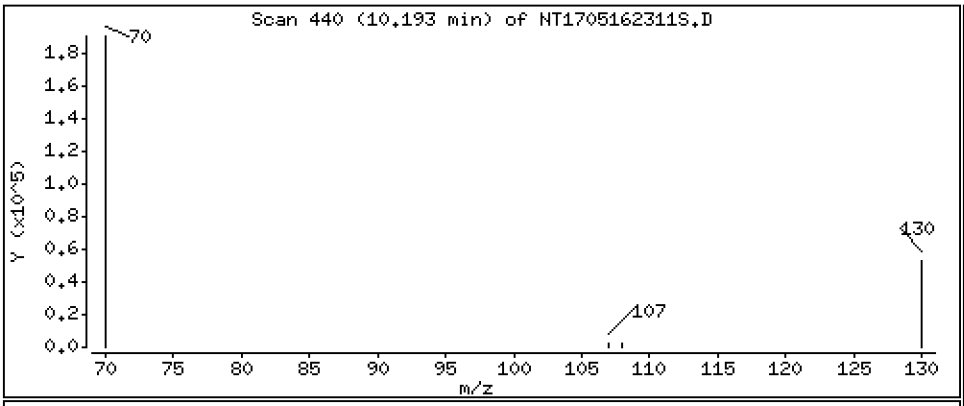
Operator: JGR

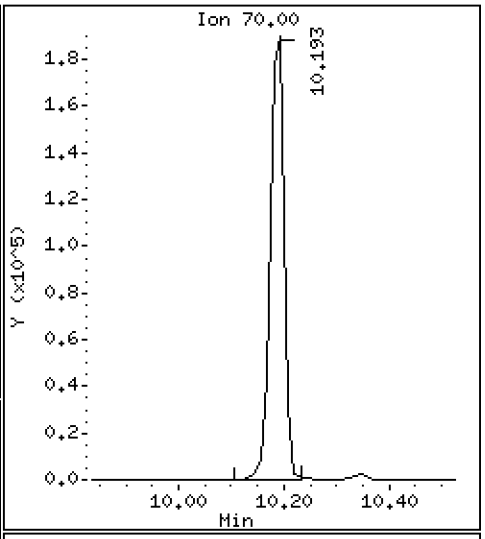
Column phase: ZB-5msi

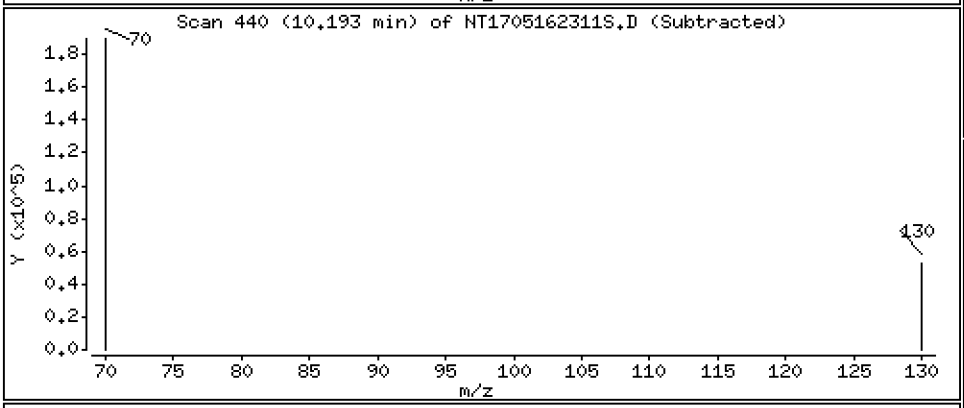
Column diameter: 0.25

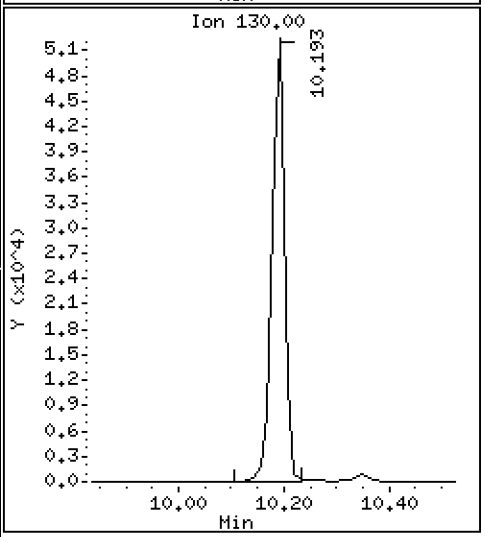
16 N-Nitroso-di-n-propylamine

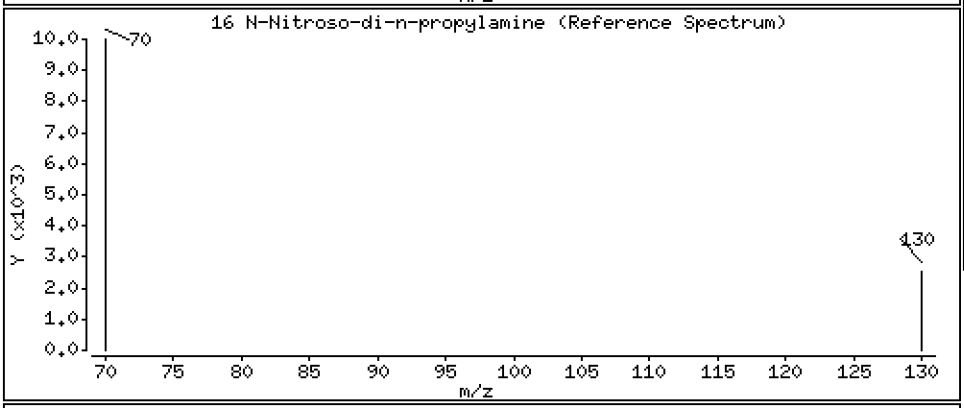
Concentration: 5.479 ug/mL

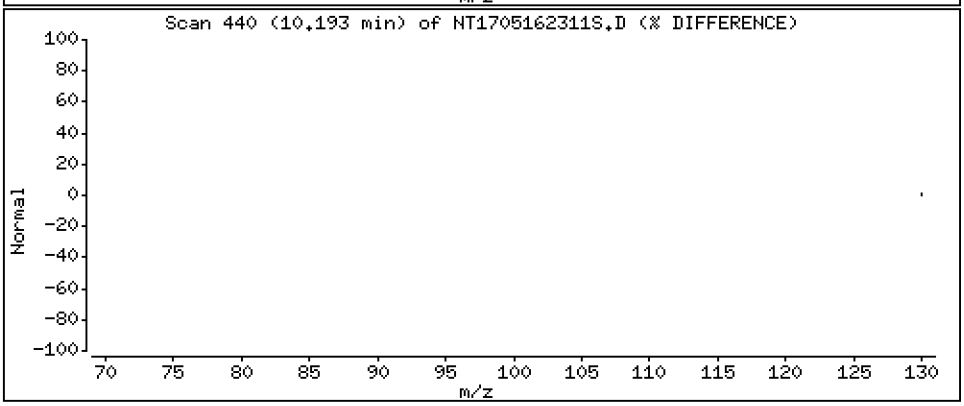












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

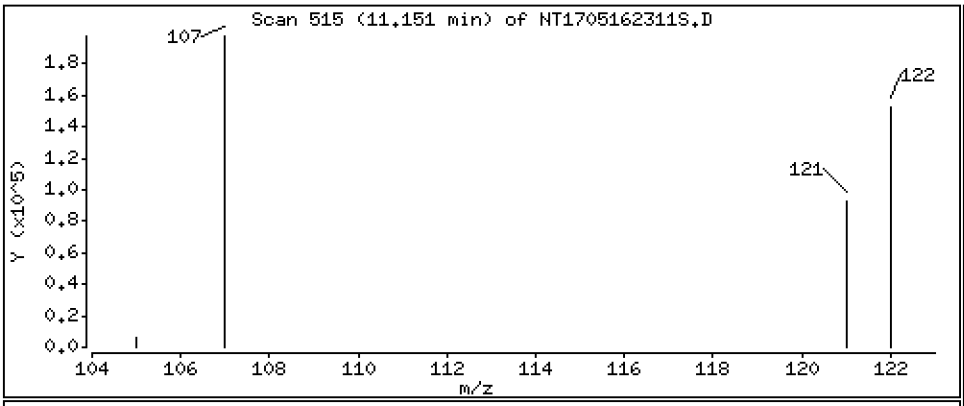
Operator: JGR

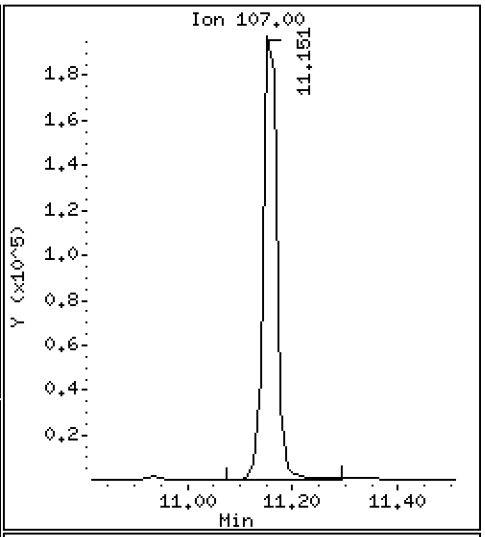
Column phase: ZB-5msi

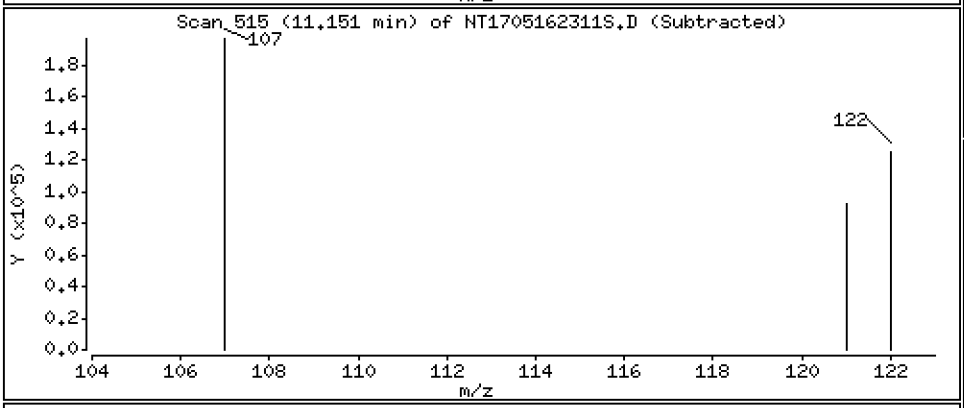
Column diameter: 0.25

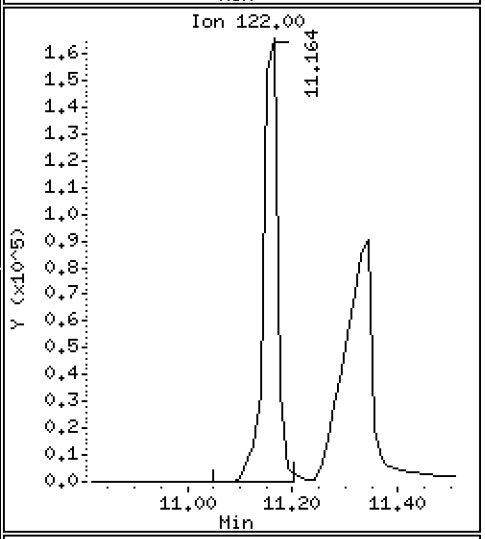
22 2,4-Dimethylphenol

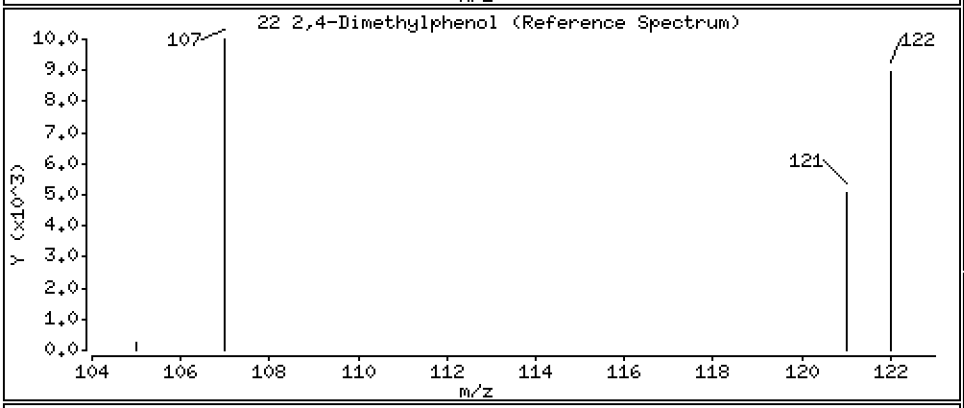
Concentration: 3.816 ug/mL

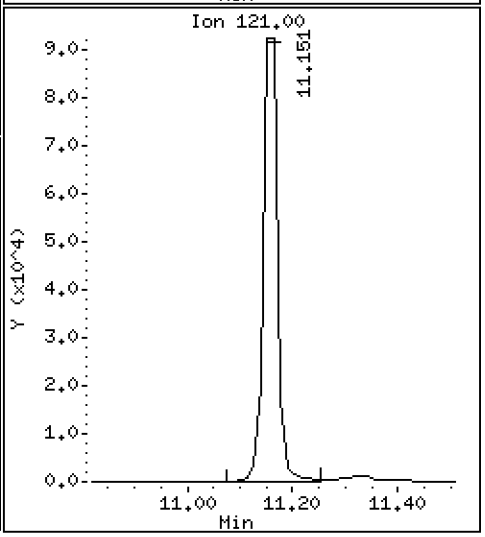


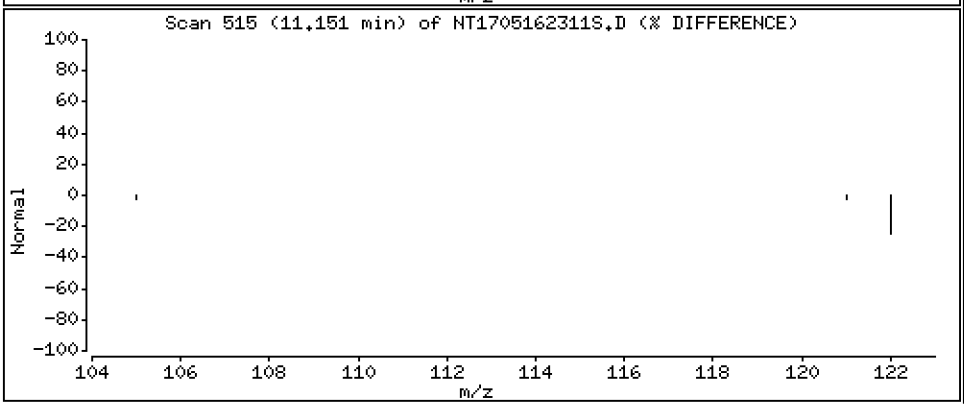












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

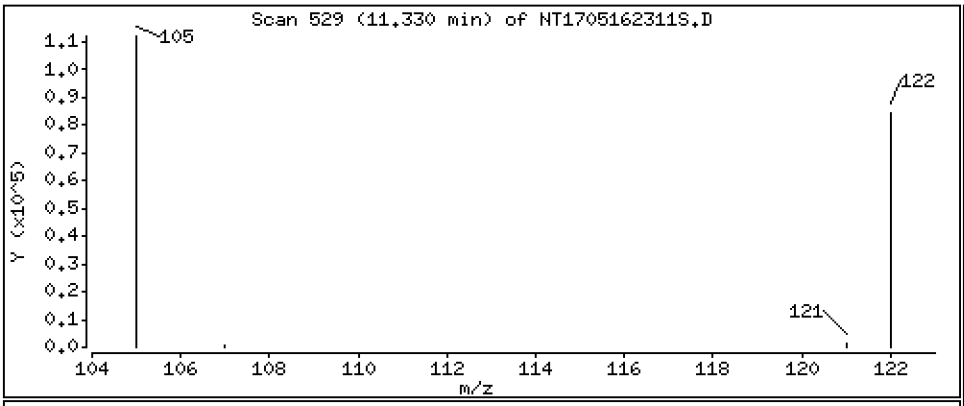
Operator: JGR

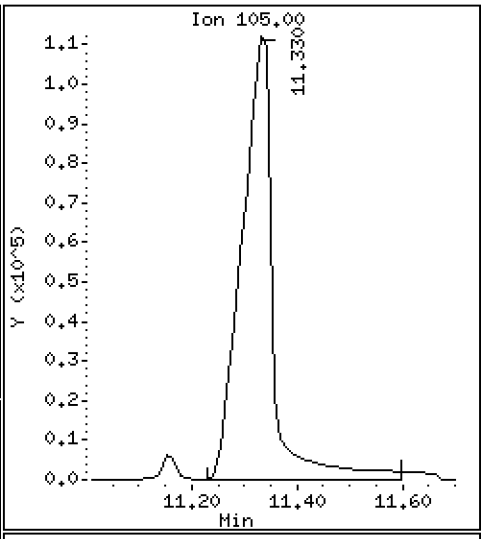
Column phase: ZB-5msi

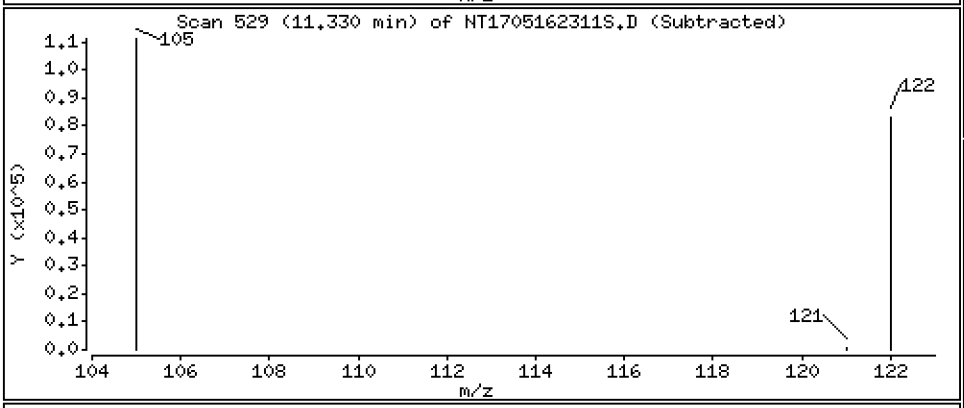
Column diameter: 0.25

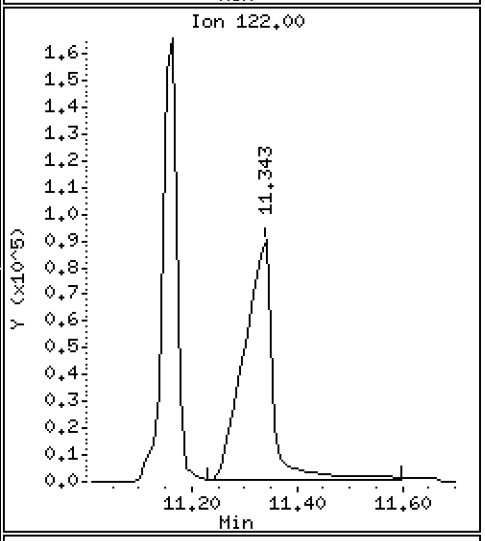
24 Benzoic acid

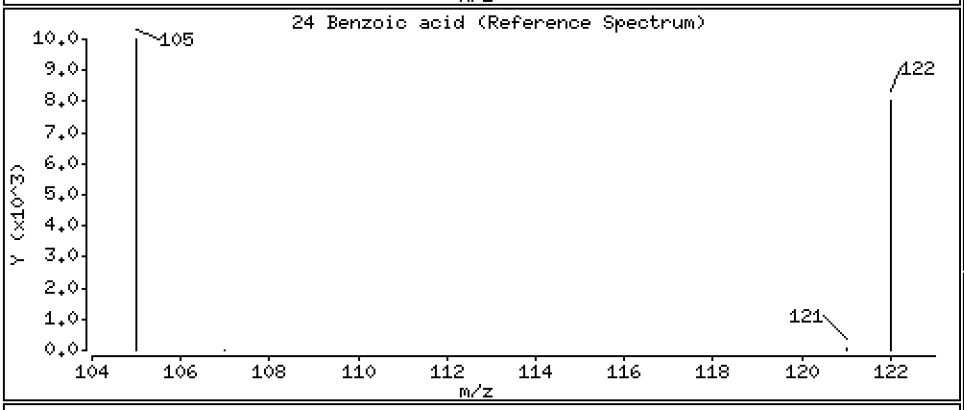
Concentration: 7.777 ug/mL

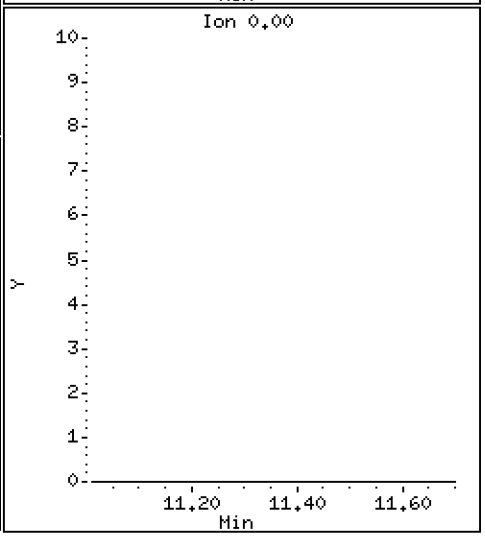


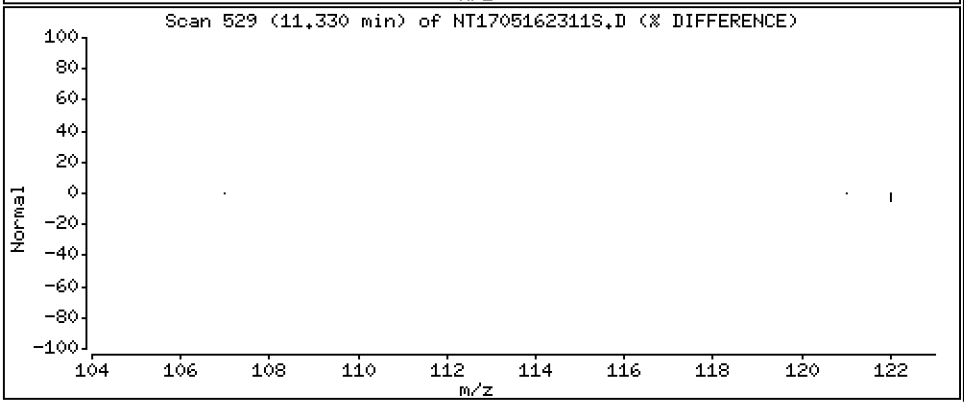












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

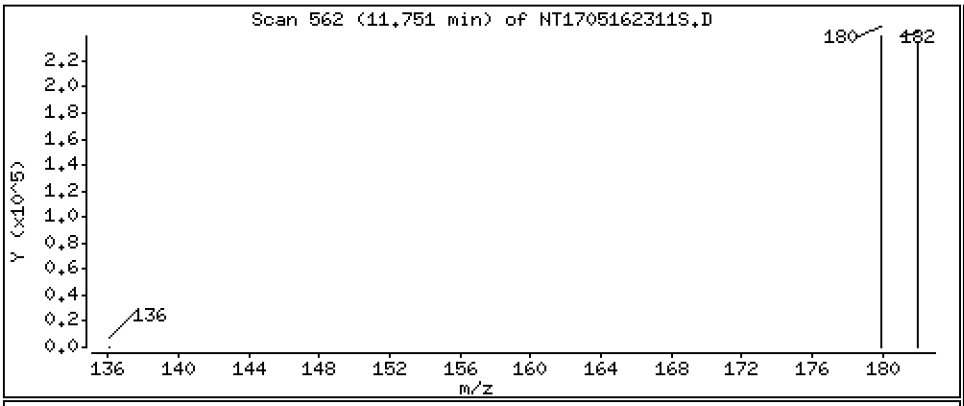
Operator: JGR

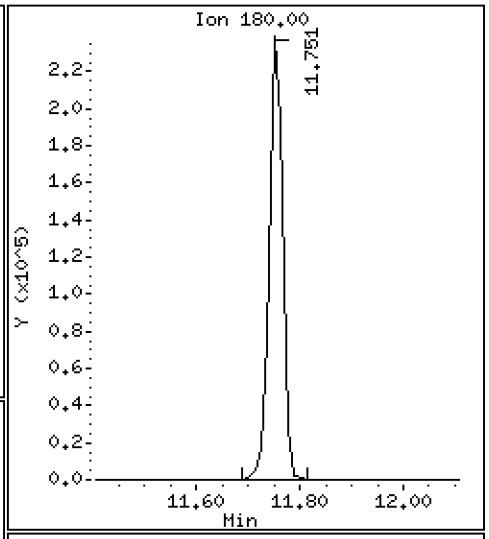
Column phase: ZB-5msi

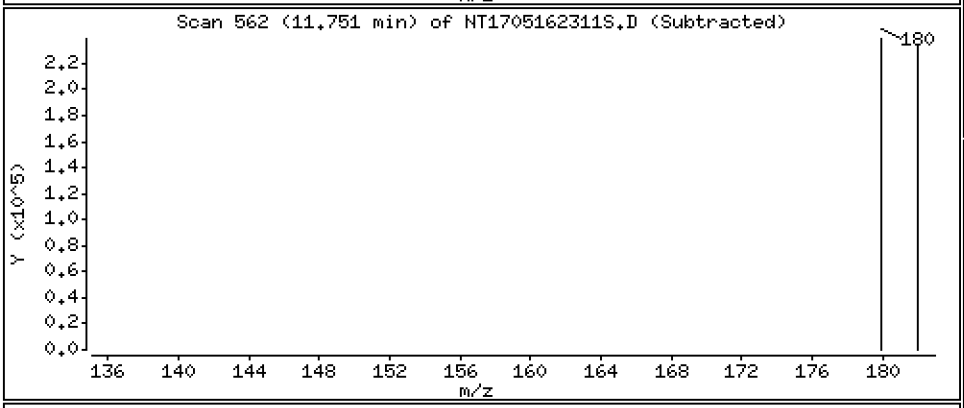
Column diameter: 0.25

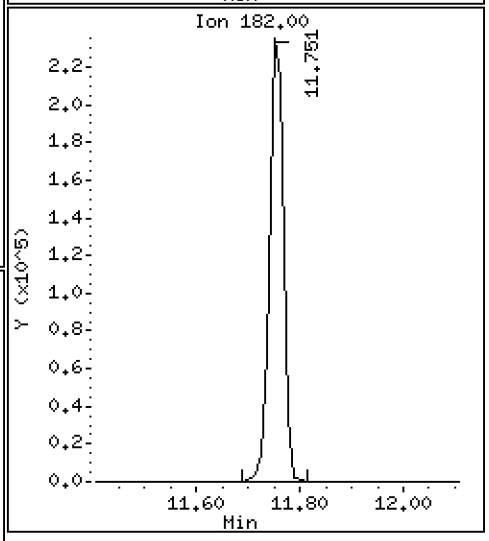
26 1,2,4-Trichlorobenzene

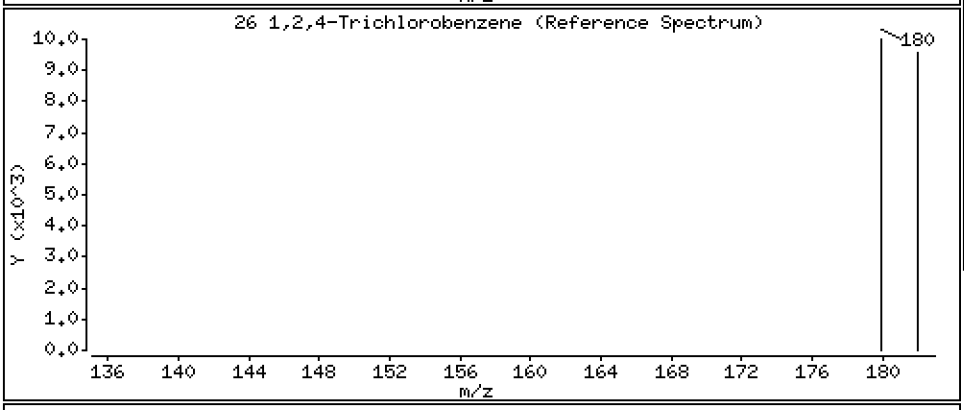
Concentration: 4.906 ug/mL

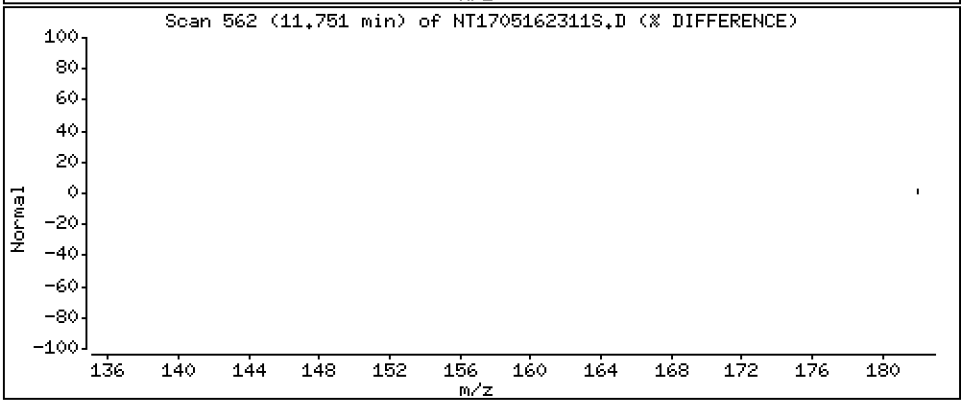












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

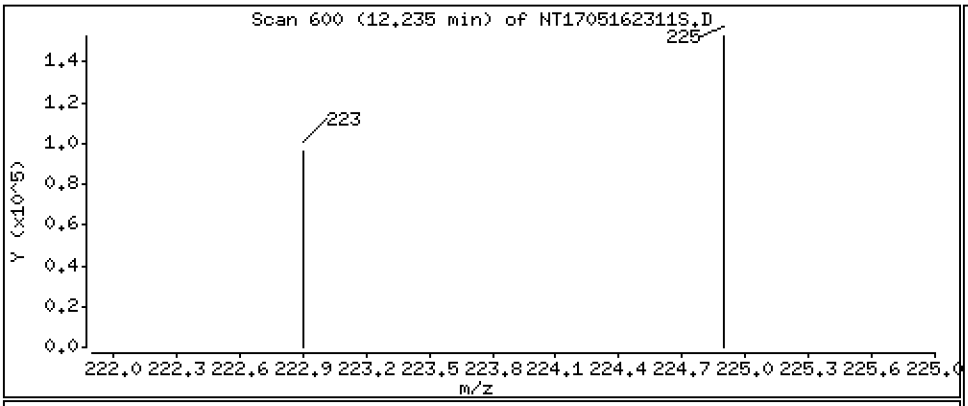
Operator: JGR

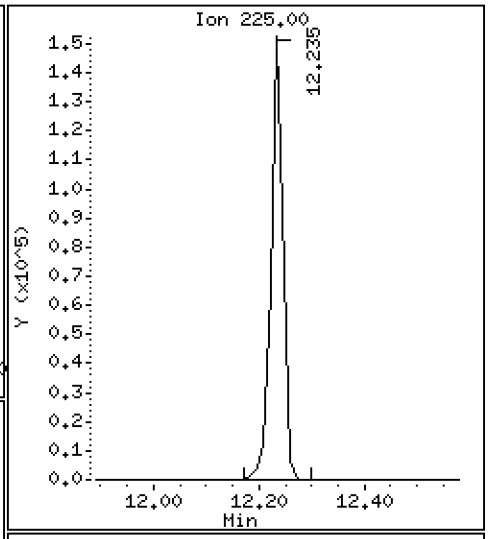
Column phase: ZB-5msi

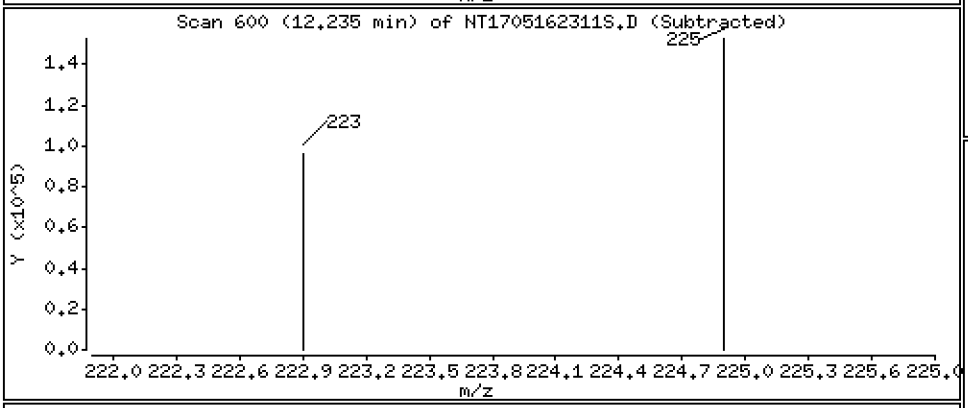
Column diameter: 0.25

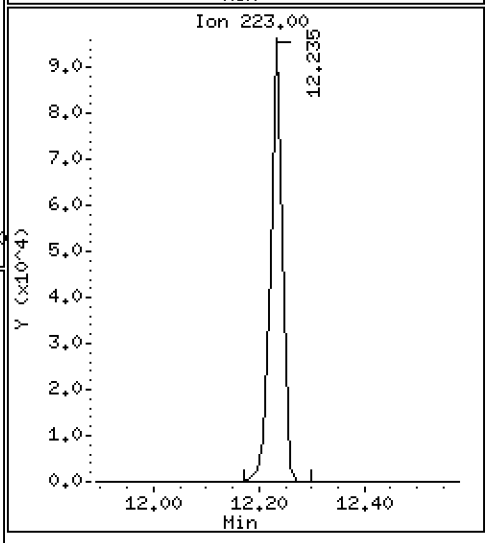
30 Hexachlorobutadiene

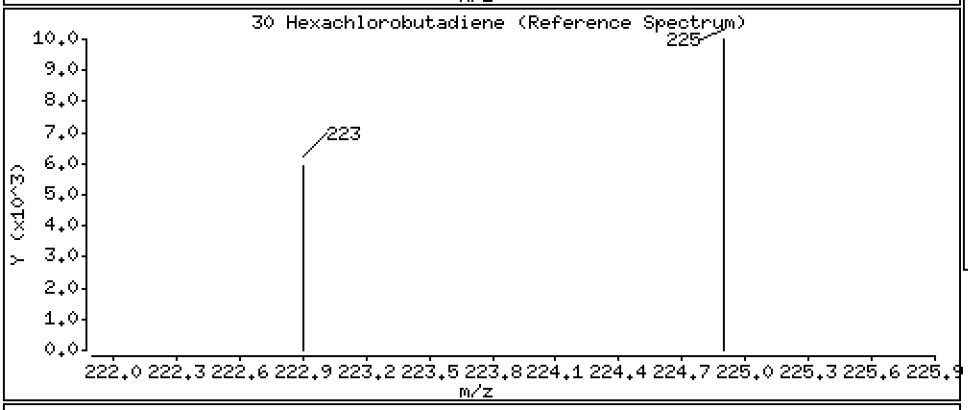
Concentration: 5.201 ug/mL

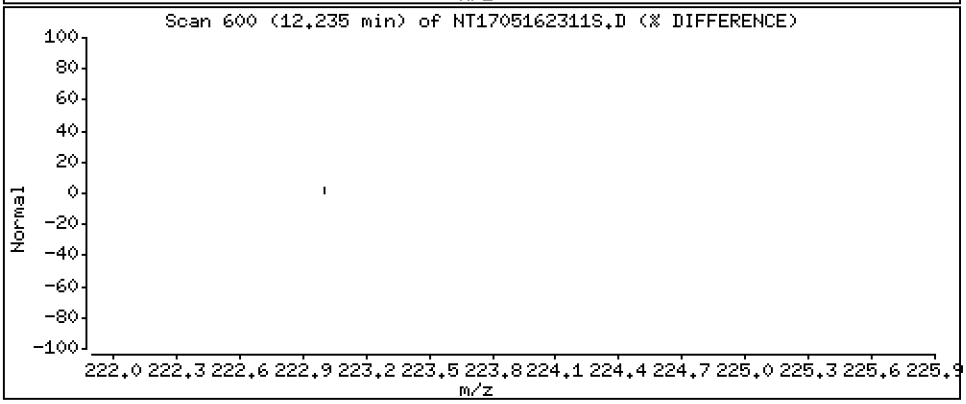












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

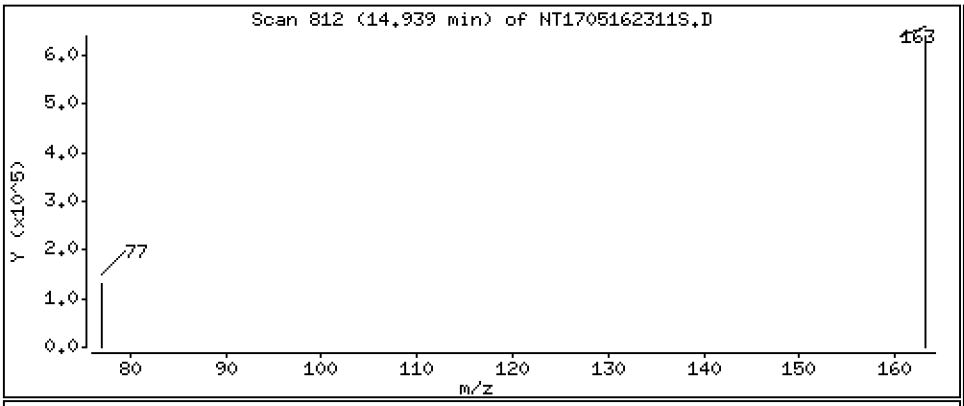
Operator: JGR

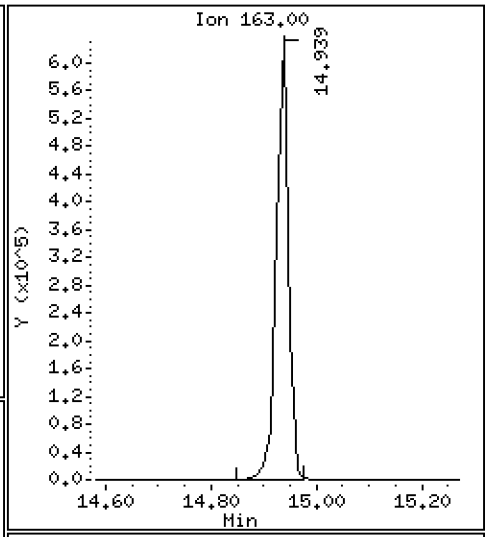
Column phase: ZB-5msi

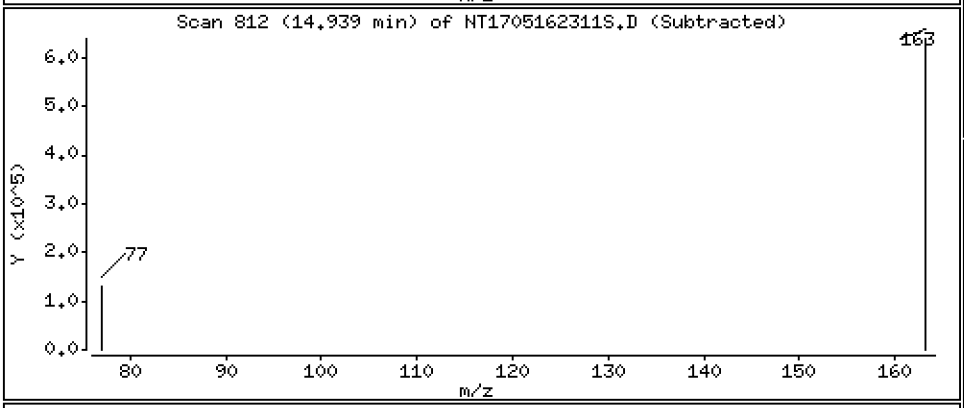
Column diameter: 0.25

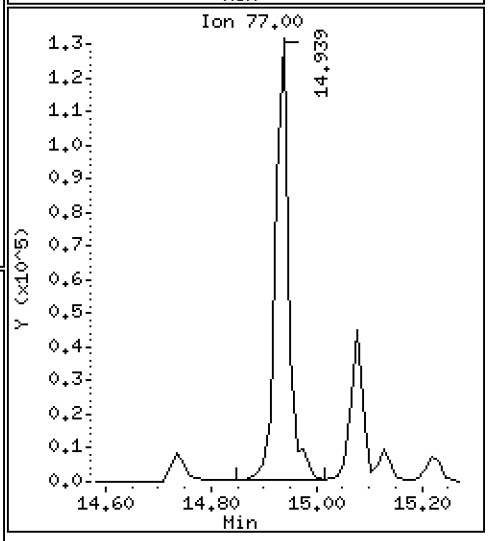
39 Dimethylphthalate

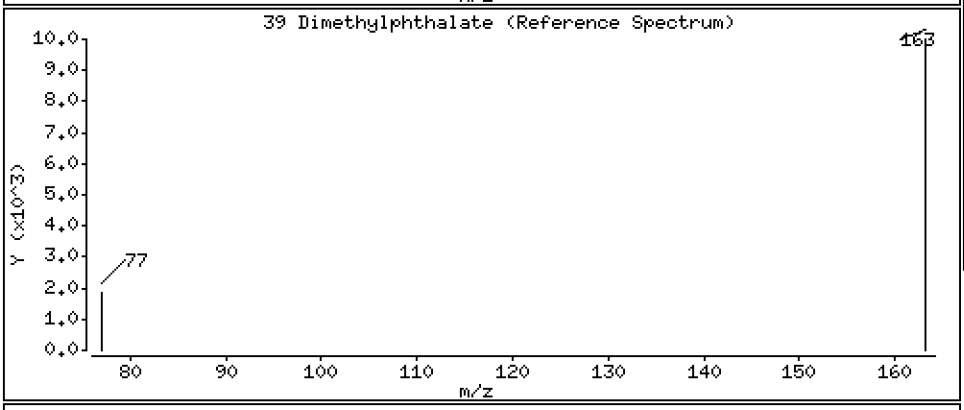
Concentration: 5.240 ug/mL

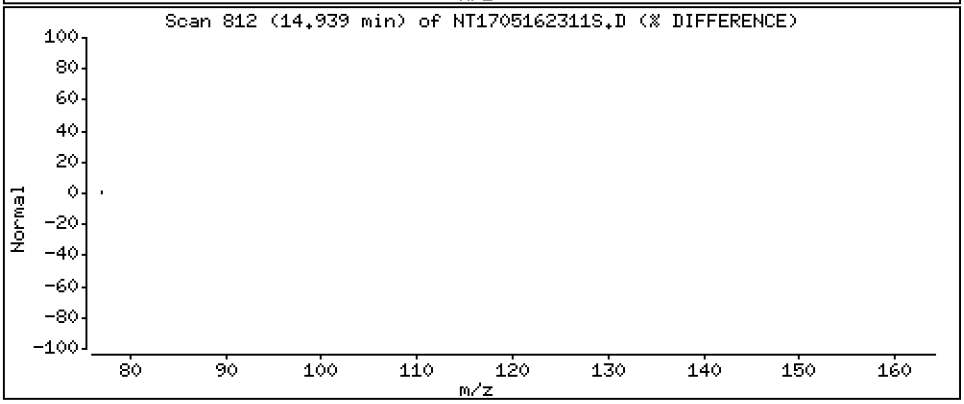












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT17051623115.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

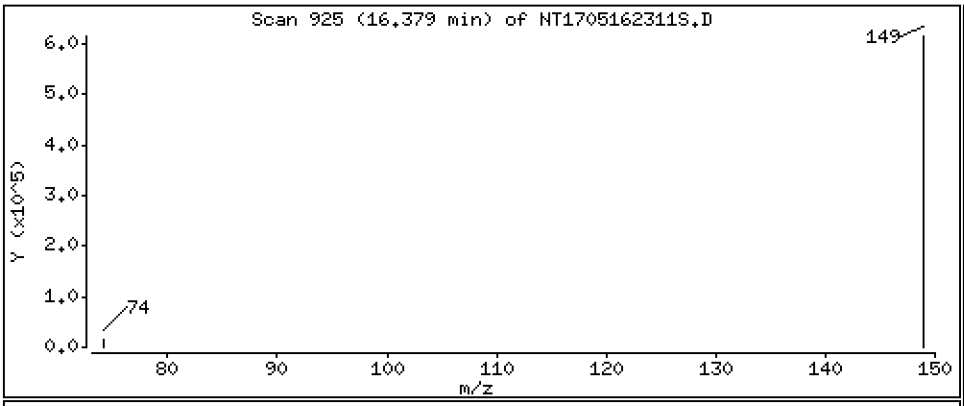
Operator: JGR

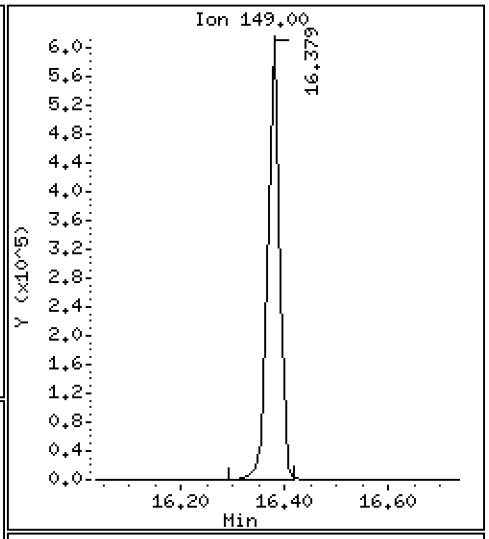
Column phase: ZB-5msi

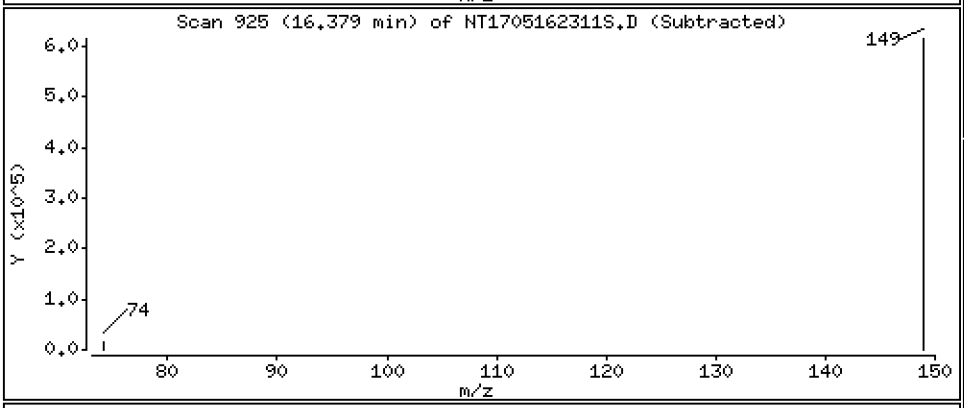
Column diameter: 0.25

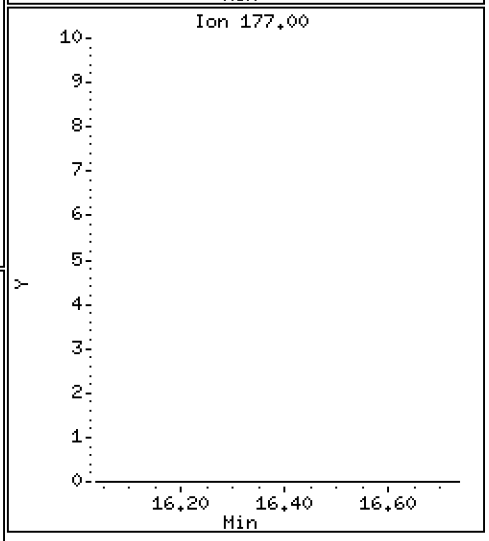
50 Diethylphthalate

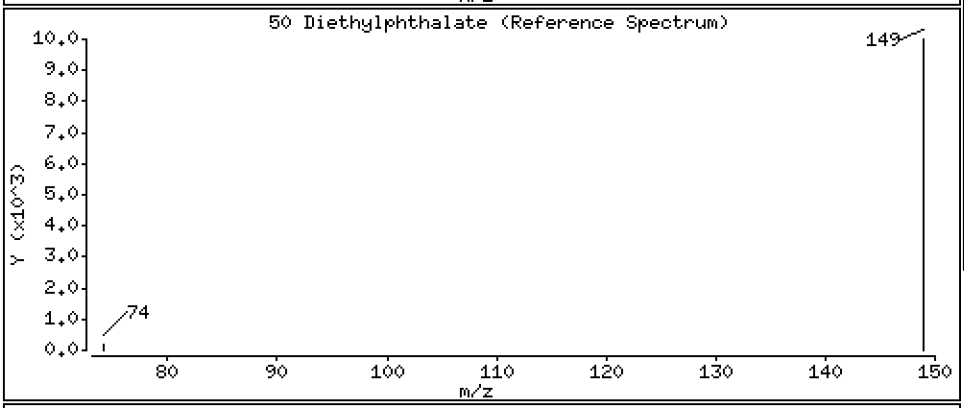
Concentration: 5.478 ug/mL

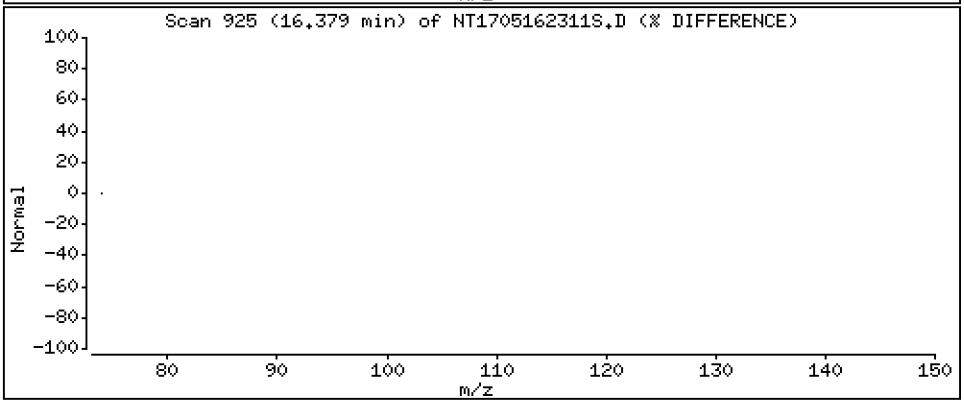












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

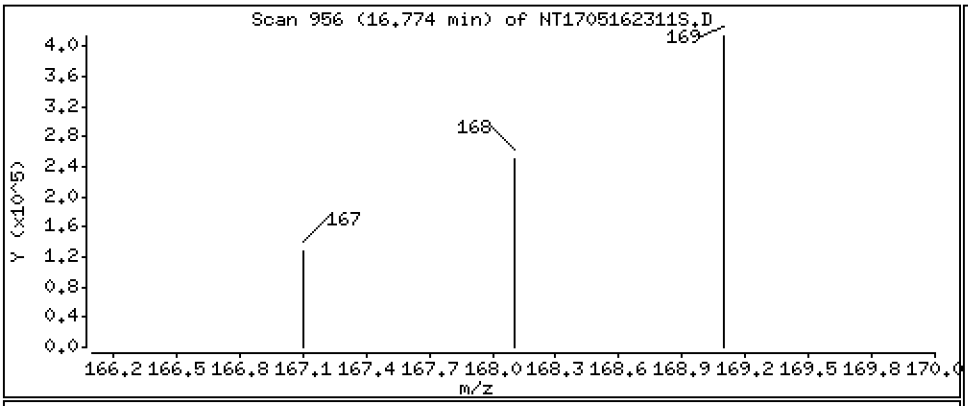
Operator: JGR

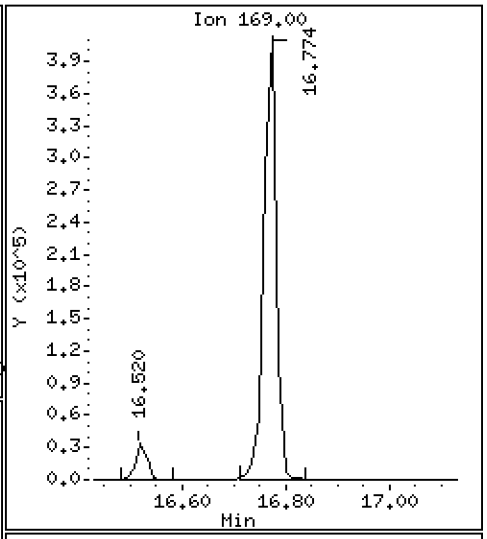
Column phase: ZB-5msi

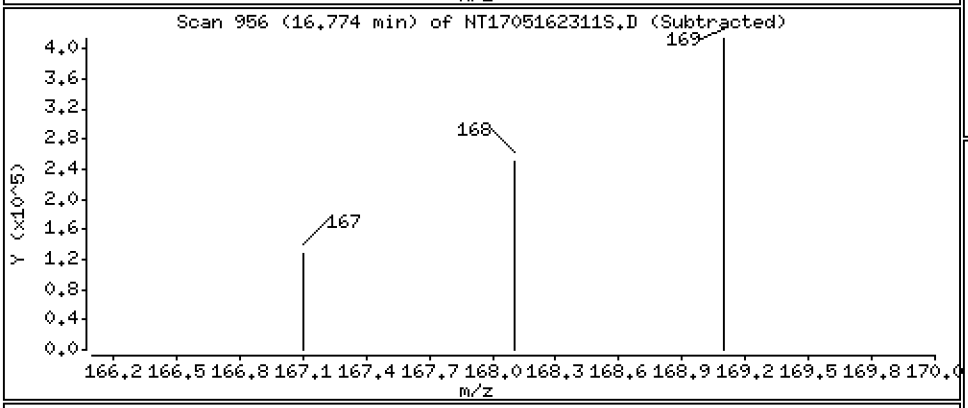
Column diameter: 0.25

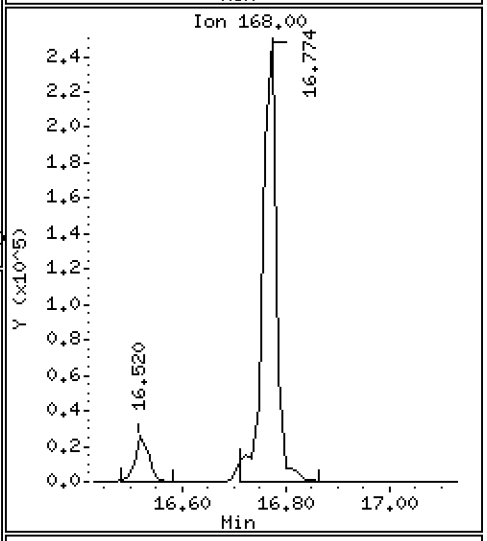
54 N-Nitrosodiphenylamine

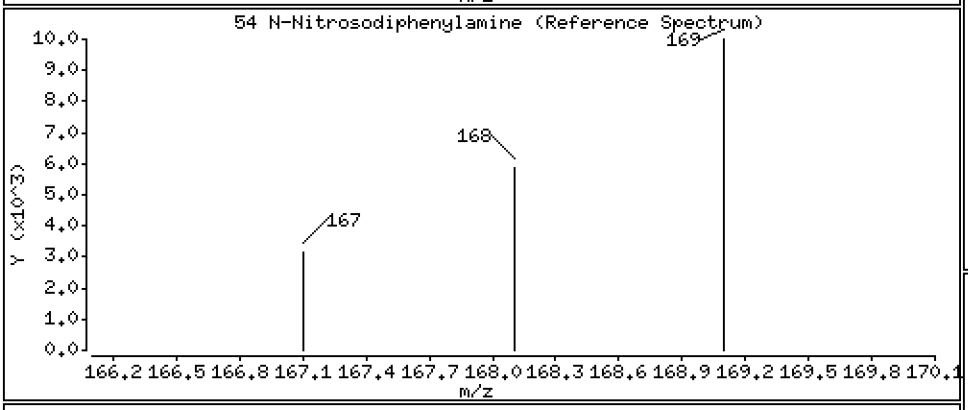
Concentration: 5.627 ug/mL

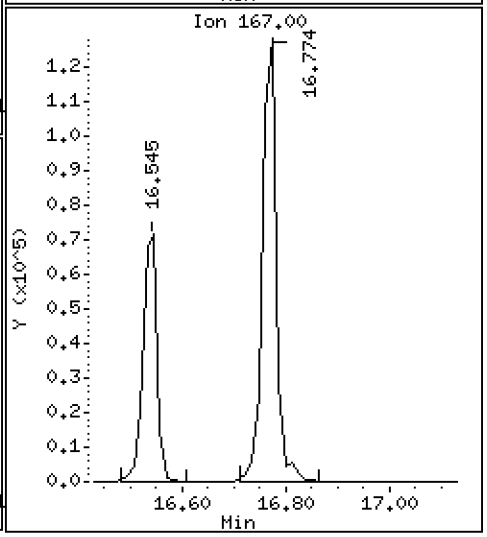


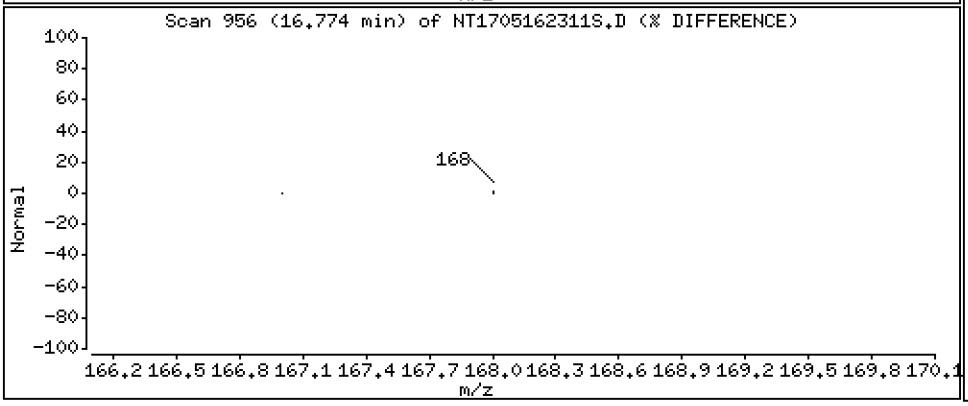












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

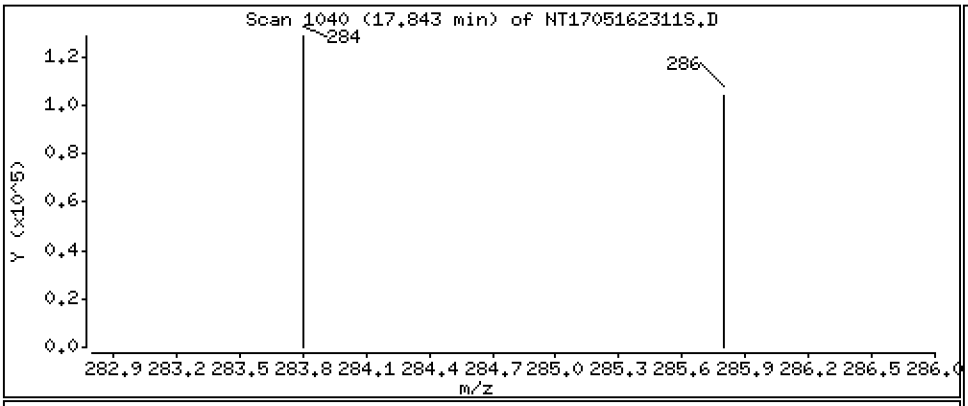
Operator: JGR

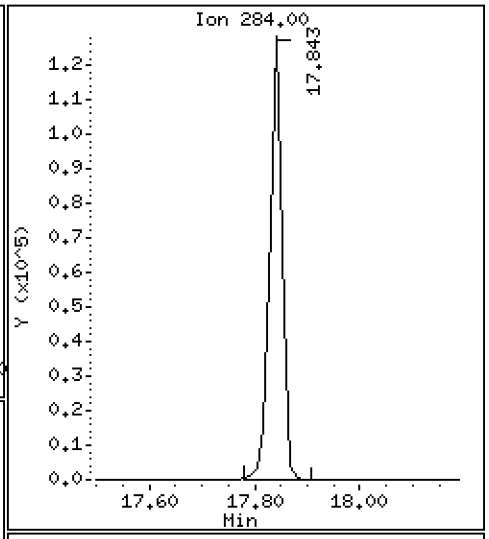
Column phase: ZB-5msi

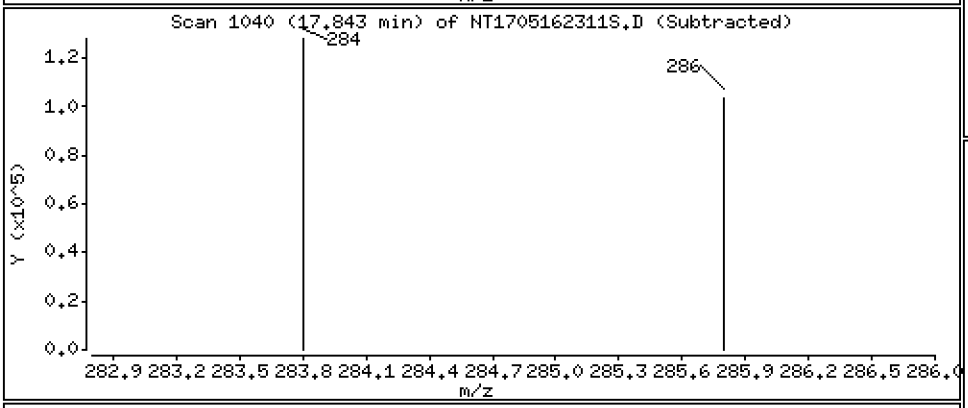
Column diameter: 0.25

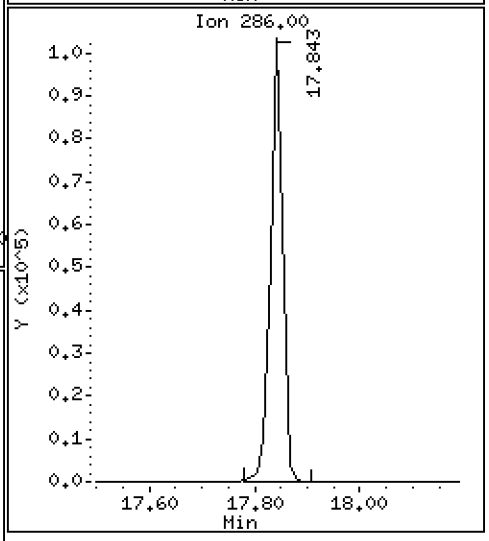
57 Hexachlorobenzene

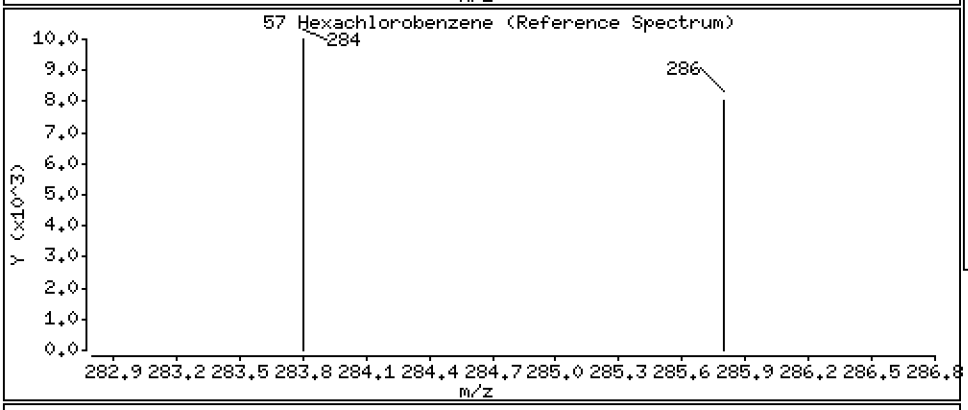
Concentration: 5.081 ug/mL

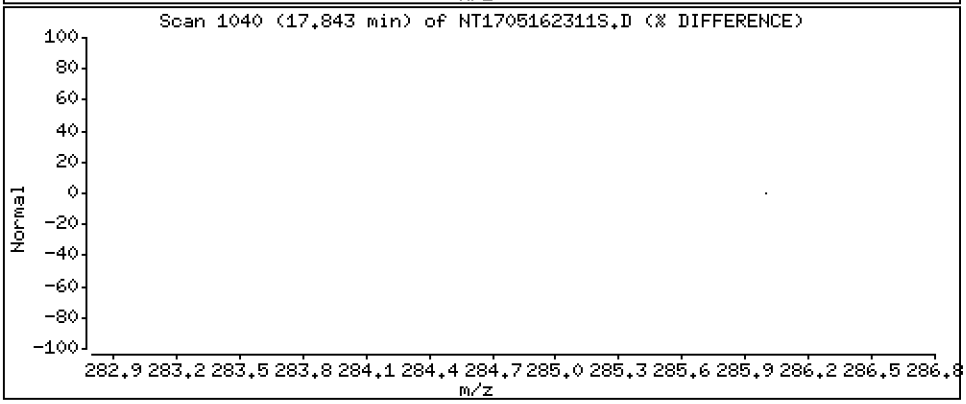












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

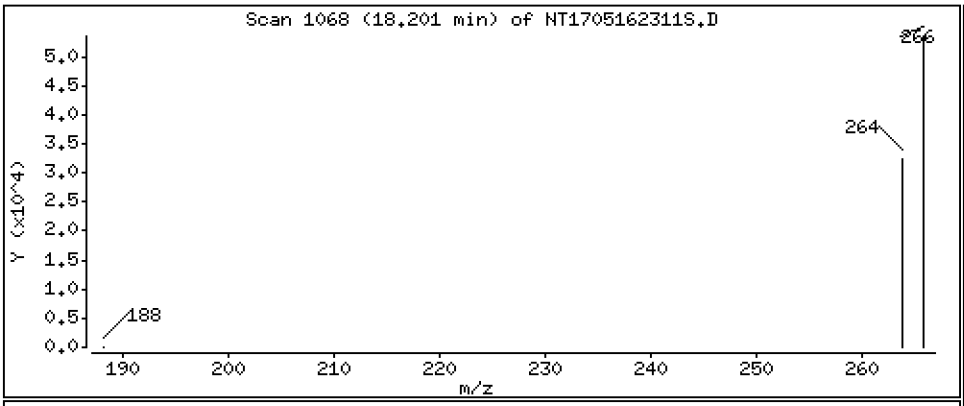
Operator: JGR

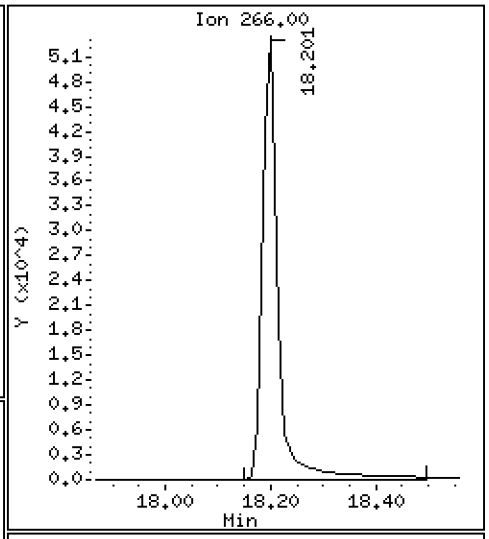
Column phase: ZB-5msi

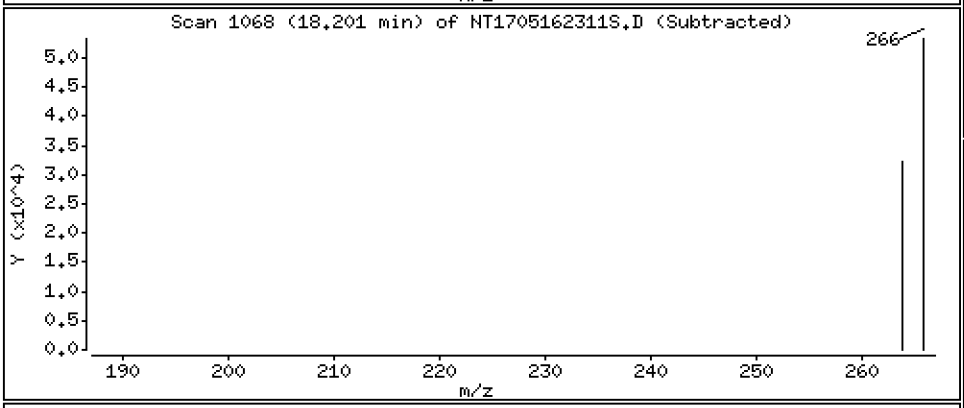
Column diameter: 0.25

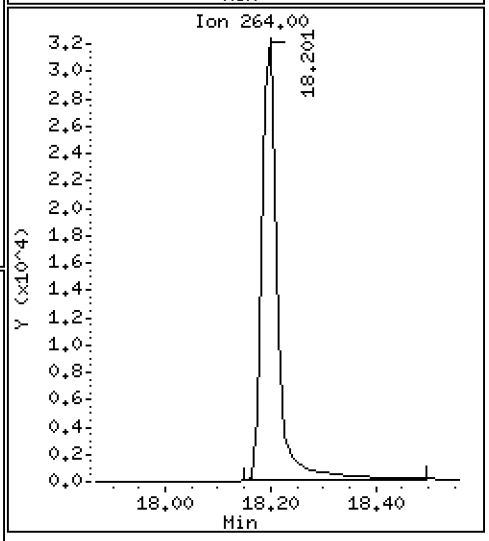
58 Pentachlorophenol

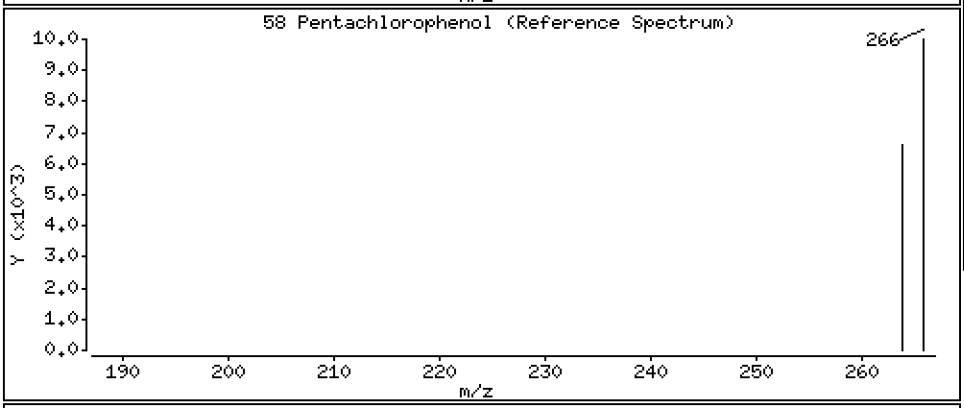
Concentration: 4.506 ug/mL

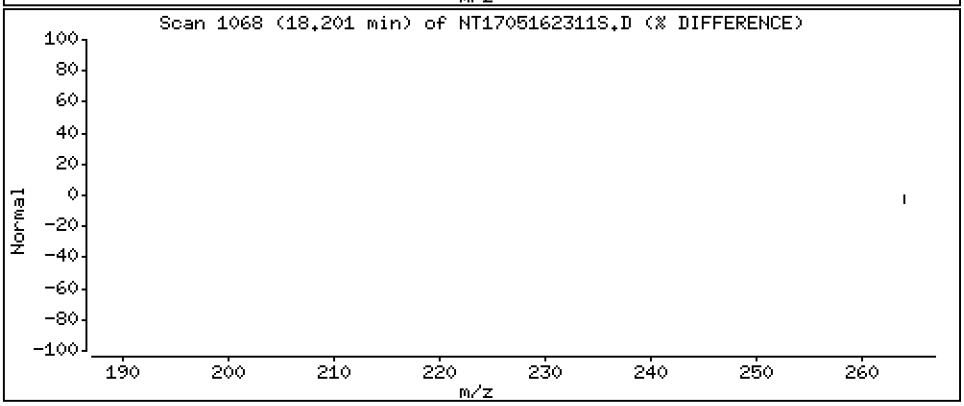












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

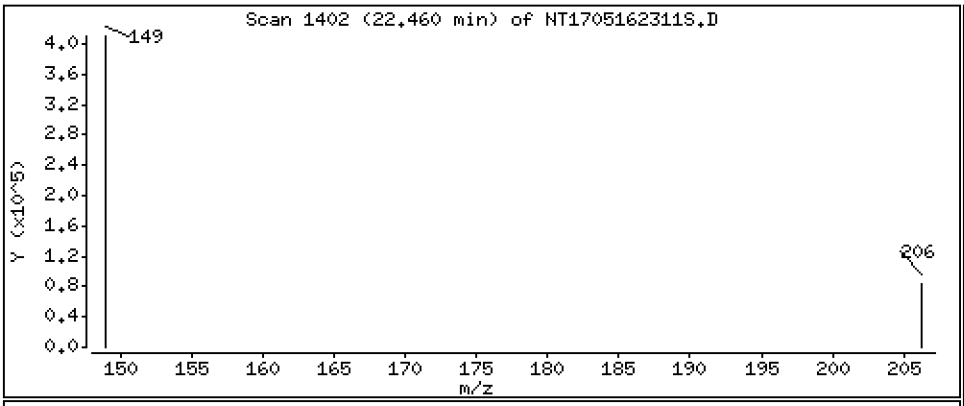
Operator: JGR

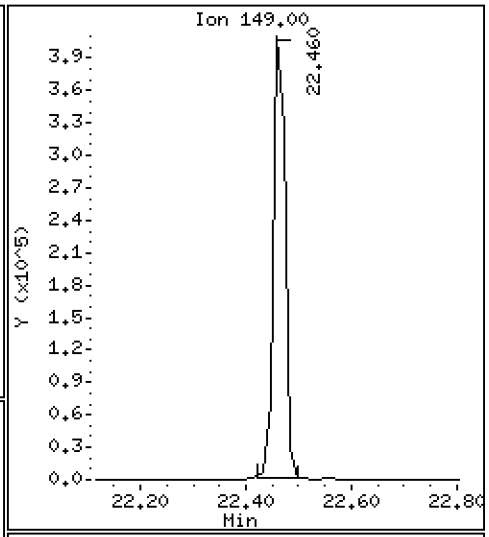
Column phase: ZB-5msi

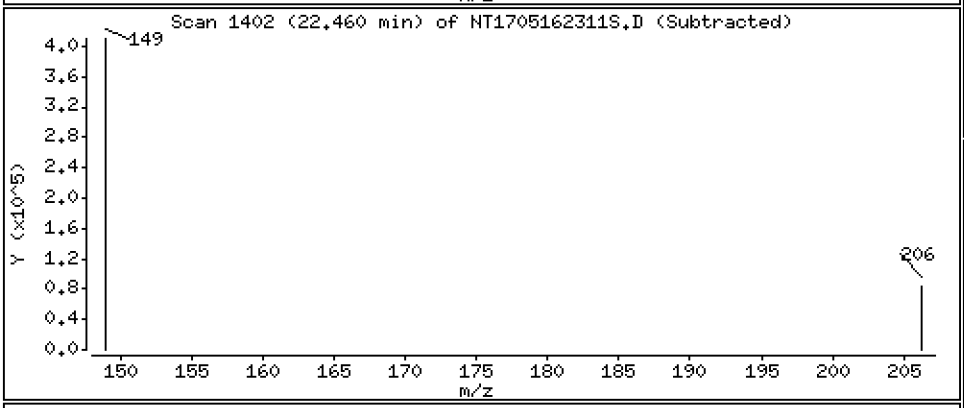
Column diameter: 0.25

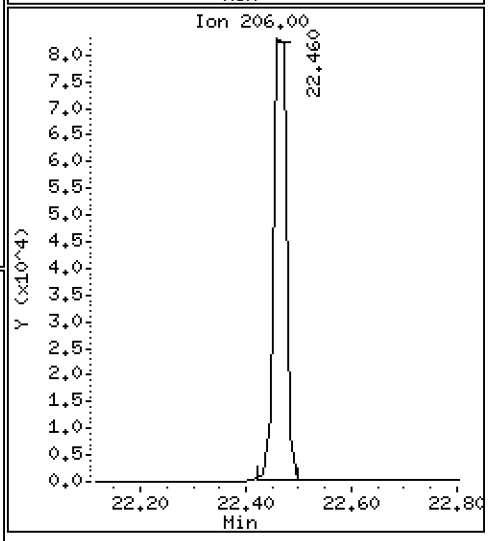
67 Butylbenzylphthalate

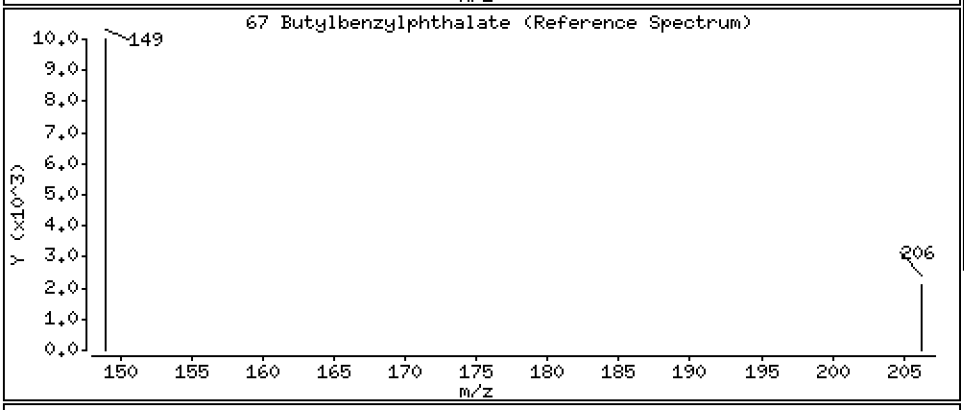
Concentration: 5.905 ug/mL

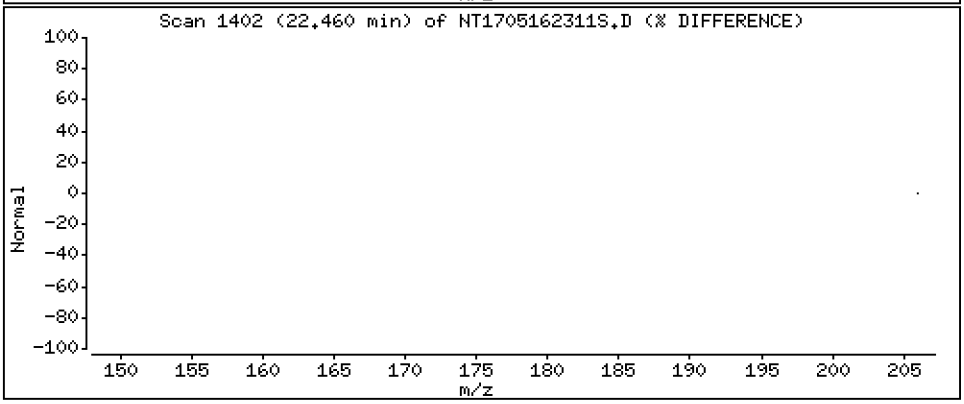












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

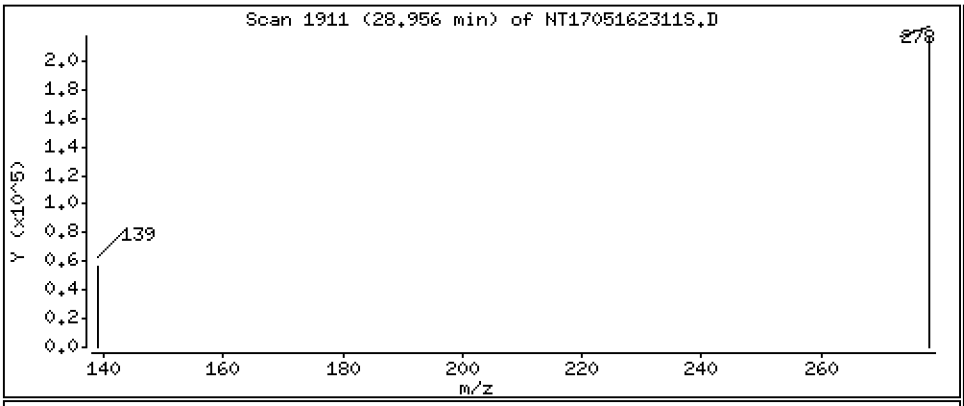
Operator: JGR

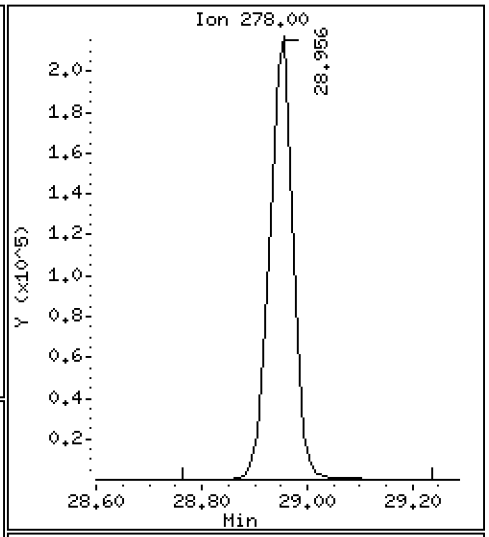
Column phase: ZB-5msi

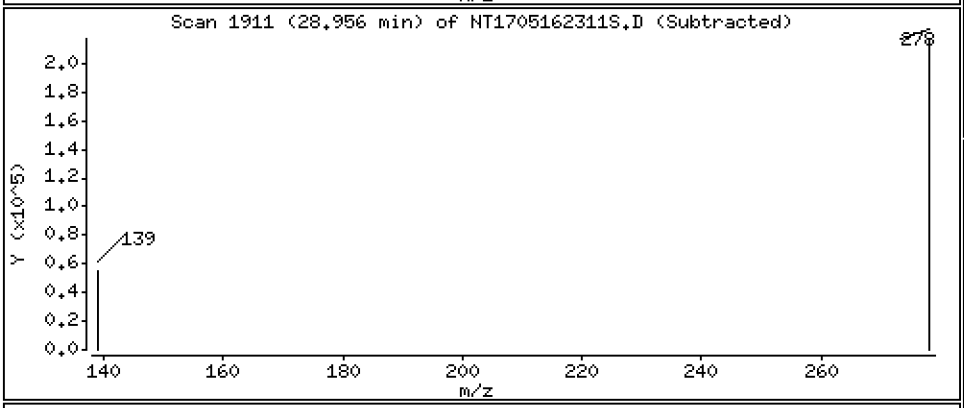
Column diameter: 0.25

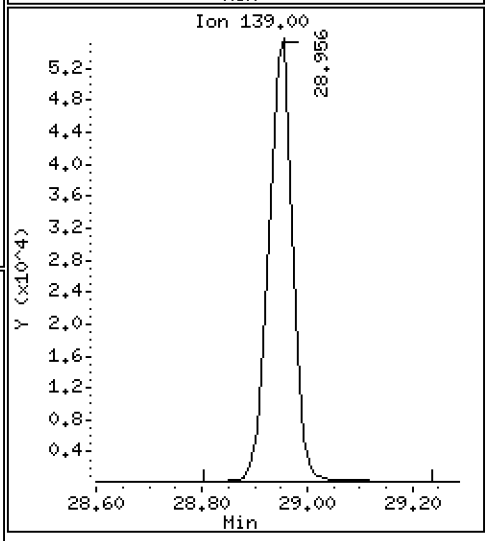
79 Dibenzo(a,h)anthracene

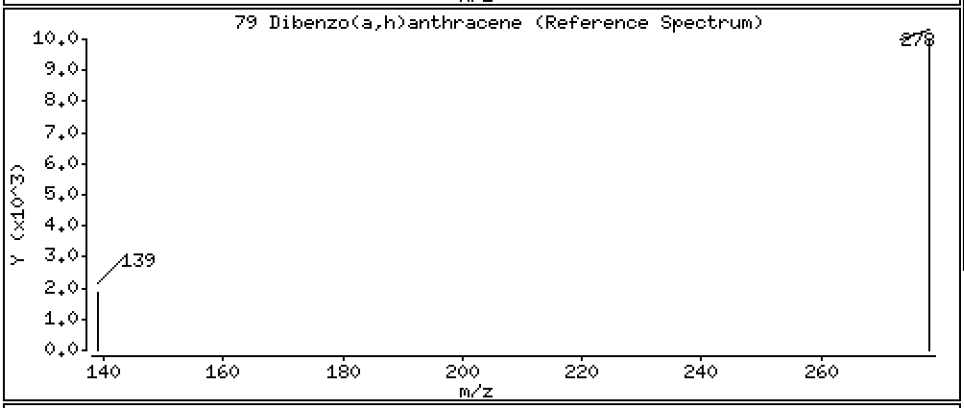
Concentration: 5.149 ug/mL

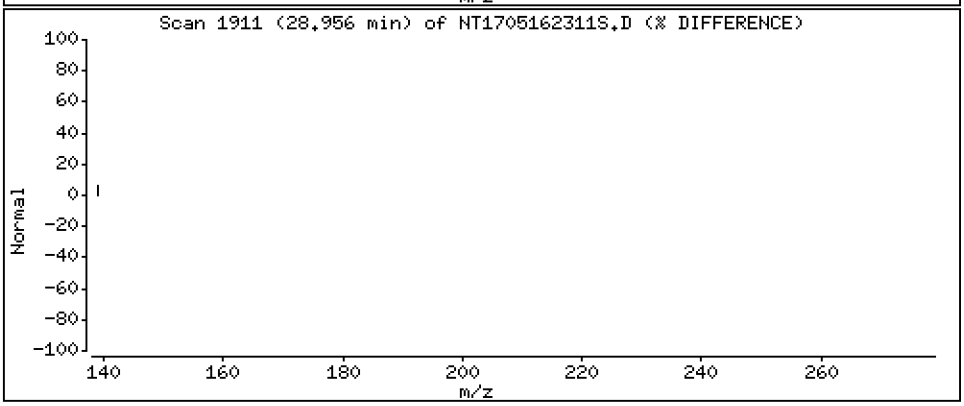












Data File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D

Date : 17-MAY-2023 00:29

Client ID:

Instrument: nt17.i

Sample Info: SLE0339-SCV1

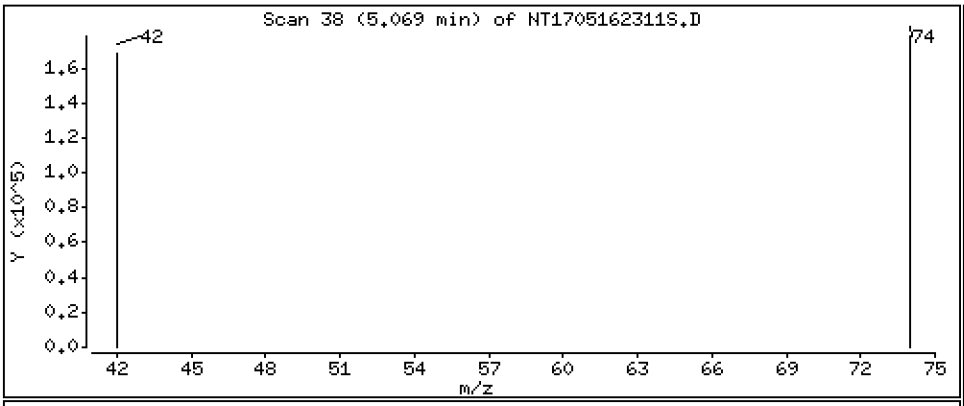
Operator: JGR

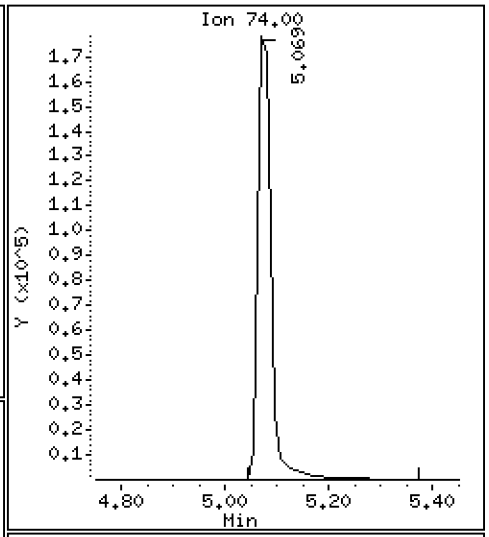
Column phase: ZB-5msi

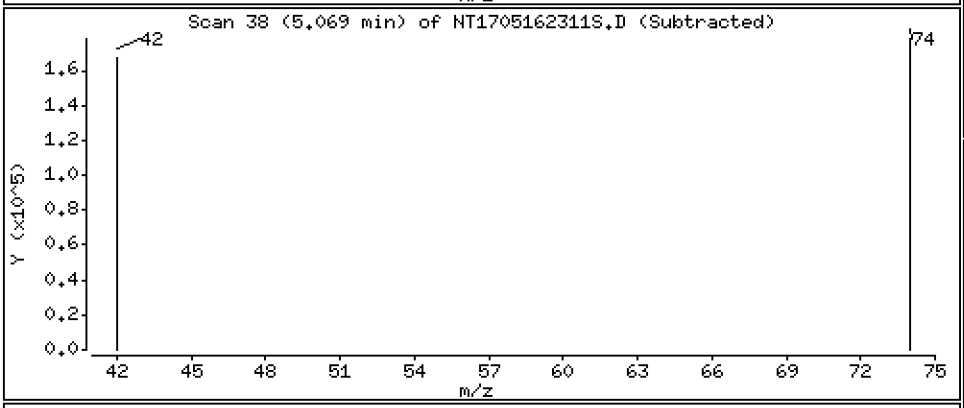
Column diameter: 0.25

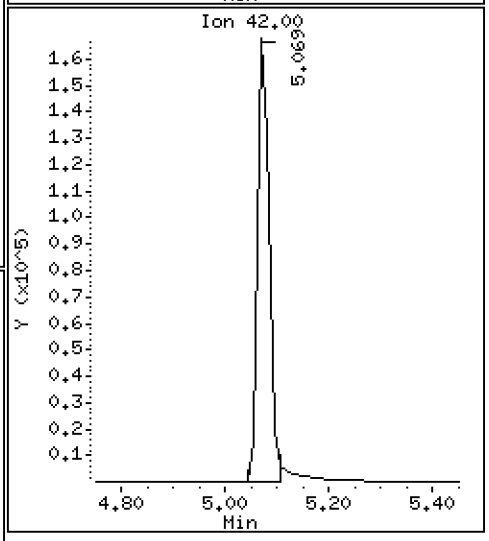
90 N-Nitrosodimethylamine

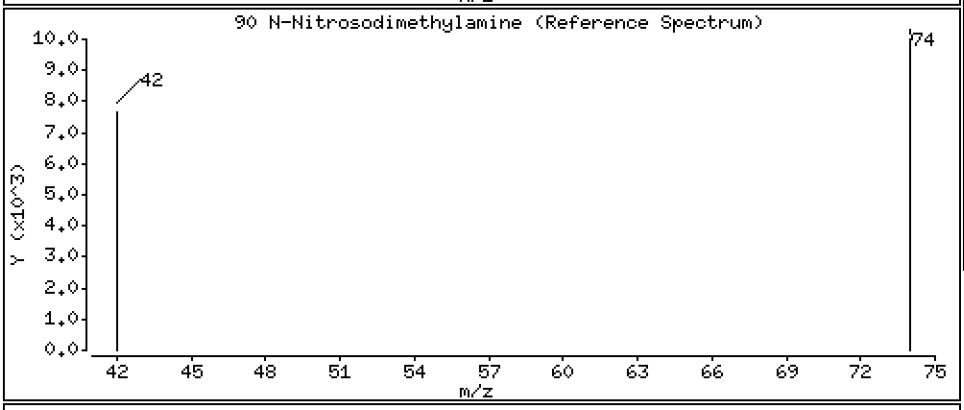
Concentration: 5.868 ug/mL

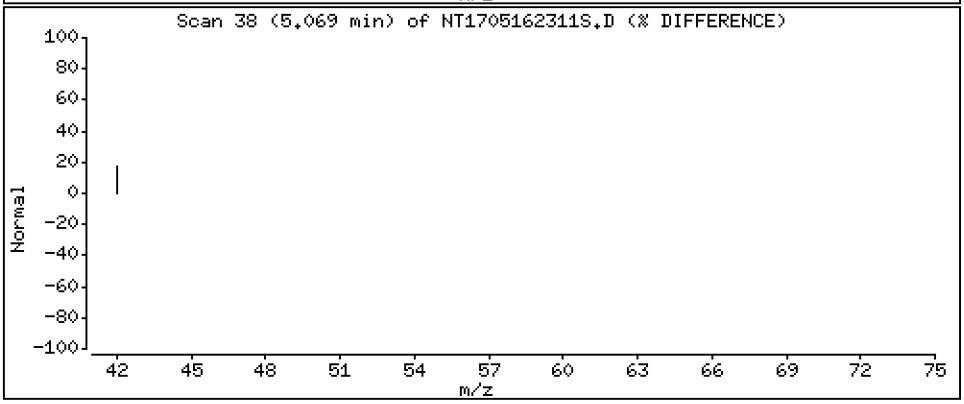












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230516.b\SIM.b\NT1705162311S.D
Lab Smp Id: SLE0339-SCV1
Inj Date : 17-MAY-2023 00:29
Operator : JGR Inst ID: nt17.i
Smp Info : SLE0339-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Meth Date : 23-May-2023 13:02 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1	2-Fluorophenol	112	Compound Not Detected.					
	3	Phenol	94	8.750	8.751	(0.933)	616997	4.88420	4.884
	7	1,3-Dichlorobenzene	146	9.311	9.311	(0.993)	575988	5.08691	5.087
*	8	1,4-Dichlorobenzene-d4	152	9.375	9.375	(1.000)	280298	4.00000	
	9	1,4-Dichlorobenzene	146	9.401	9.401	(1.003)	566257	5.13211	5.132
	11	Benzyl alcohol	79	9.630	9.656	(1.027)	410745	5.70628	5.706
	12	1,2-Dichlorobenzene	146	9.758	9.759	(1.041)	541461	5.00685	5.007
	13	2-Methylphenol	108	9.848	9.861	(1.050)	385832	4.40762	4.408
	15	4-Methylphenol	108	10.129	10.129	(1.080)	423610	4.78832	4.788
	16	N-Nitroso-di-n-propylamine	70	10.193	10.180	(1.087)	349317	5.47874	5.479
	22	2,4-Dimethylphenol	107	11.151	11.164	(0.942)	366886	3.81638	3.816
	24	Benzoic acid	105	11.329	11.356	(0.957)	465783	7.77732	7.777
	26	1,2,4-Trichlorobenzene	180	11.751	11.751	(0.992)	427934	4.90638	4.906
*	27	Naphthalene-d8	136	11.840	11.840	(1.000)	999390	4.00000	
	30	Hexachlorobutadiene	225	12.235	12.235	(1.033)	238867	5.20120	5.201
	39	Dimethylphthalate	163	14.938	14.926	(0.968)	1015804	5.23967	5.240
*	42	Acenaphthene-d10	162	15.436	15.436	(1.000)	527927	4.00000	
	50	Diethylphthalate	149	16.379	16.379	(1.061)	964439	5.47782	5.478
	54	N-Nitrosodiphenylamine	169	16.774	16.774	(0.908)	681829	5.62729	5.627
	57	Hexachlorobenzene	284	17.843	17.843	(0.966)	208857	5.08140	5.081
	58	Pentachlorophenol	266	18.200	18.214	(0.986)	108866	4.50590	4.506
*	59	Phenanthrene-d10	188	18.468	18.455	(1.000)	860054	4.00000	
$	66	Terphenyl-d14	244	Compound Not Detected.					
	67	Butylbenzylphthalate	149	22.460	22.460	(0.958)	642329	5.90509	5.905
*	69	Chrysene-d12	240	23.455	23.455	(1.000)	527529	4.00000	
*	77	Perylene-d12	264	26.159	26.147	(1.000)	475440	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.956	28.943	(1.107)	690513	5.14916	5.149
	90	N-Nitrosodimethylamine	74	5.068	5.094	(0.541)	321072	5.86783	5.868

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i
Lab File ID: NT1705162311S.D
Lab Smp Id: SLE0339-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt17.i\20230516.b\SIM.b\SIMABN2.m
Misc Info:

Calibration Date: 16-MAY-2023
Calibration Time: 21:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	316066	158033	632132	280298	-11.32
27 Naphthalene-d8	1102073	551037	2204146	999390	-9.32
42 Acenaphthene-d10	583826	291913	1167652	527927	-9.57
59 Phenanthrene-d10	970917	485459	1941834	860054	-11.42
69 Chrysene-d12	590568	295284	1181136	527529	-10.67
77 Perylene-d12	537938	268969	1075876	475440	-11.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.38	8.88	9.88	9.38	-0.00
27 Naphthalene-d8	11.84	11.34	12.34	11.84	-0.00
42 Acenaphthene-d10	15.44	14.94	15.94	15.44	-0.00
59 Phenanthrene-d10	18.47	17.97	18.97	18.47	-0.00
69 Chrysene-d12	23.46	22.96	23.96	23.46	-0.00
77 Perylene-d12	26.16	25.66	26.66	26.16	-0.00

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

REVIEW SUMMARY FOR FILE - NT1705162311S.D

Lab ID: SLE0339-SCV1
nt17.i, 20230516.b\SIM.b\SIMABN2.m,   17-MAY-2023 00:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.957	0.000	0.9569	Benzoic acid

RRT check based on Ccal File: SIM.b/NT1705162310S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GD00068
Lab File ID:	N823052227.D	Calibration Date:	04/26/2023
Sequence:	SLE0350	Injection Date:	05/22/23
Lab Sample ID:	SLE0350-CCV1	Injection Time:	23:43
Sequence Name:	Calibration Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Naphthalene	A	2.5000	2.48	1.0189360	1.0111930		-0.8	+/-50
2-Methylnaphthalene	A	2.5000	2.48	0.5785221	0.5728592		-1.0	+/-50
1-Methylnaphthalene	A	2.5000	2.52	0.5736076	0.5773617		0.7	+/-50
Acenaphthylene	A	2.5000	2.52	1.7705370	1.7863510		0.9	+/-50
Acenaphthene	A	2.5000	2.47	1.1471200	1.1327850		-1.2	+/-50
Dibenzofuran	A	2.5000	2.41	1.7229440	1.6637080		-3.4	+/-50
Fluorene	A	2.5000	2.48	1.3750310	1.3651270		-0.7	+/-50
Phenanthrene	A	2.5000	2.37	1.0593530	1.0037950		-5.2	+/-50
Anthracene	A	2.5000	2.56	0.9935358	1.0174530		2.4	+/-50
Fluoranthene	A	2.5000	2.35	1.2184160	1.1456090		-6.0	+/-50
Pyrene	A	2.5000	2.87	1.2804750	1.4693380		14.7	+/-50
Benzo(a)anthracene	A	2.5000	2.47	1.3157630	1.3011440		-1.1	+/-50
Chrysene	A	2.5000	2.44	1.2925870	1.2632870		-2.3	+/-50
Benzo(b)fluoranthene	A	2.5000	2.37	1.3038540	1.2380840		-5.0	+/-50
Benzo(k)fluoranthene	A	2.5000	2.40	1.2284610	1.1816030		-3.8	+/-50
Benzo(j)fluoranthene	A	2.5000	2.38	1.1350320	1.0821170		-4.7	+/-50
Benzofluoranthenes, Total	A	7.5000	7.13	1.2124900	1.1529010		-4.9	+/-50
Benzo(a)pyrene	A	2.5000	2.32	1.1333570	1.0538760		-7.0	+/-50
Indeno(1,2,3-cd)pyrene	A	2.5000	2.85	1.1536650	1.3131530		13.8	+/-50
Dibenzo(a,h)anthracene	A	2.5000	2.72	1.0244260	1.1126510		8.6	+/-50
Benzo(g,h,i)perylene	A	2.5000	2.89	1.0686540	1.2346910		15.5	+/-50
2-Methylnaphthalene-d10	A	2.5000	2.51	0.6176995	0.6197770		0.3	+/-50
Dibenzo[a,h]anthracene-d14	A	2.5000	2.84	0.7635682	0.8661809		13.4	+/-50
Fluoranthene-d10	A	2.5000	2.39	1.0796020	1.0340430		-4.2	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Page 1

Date : 22-MAY-2023 23:43

Client ID:

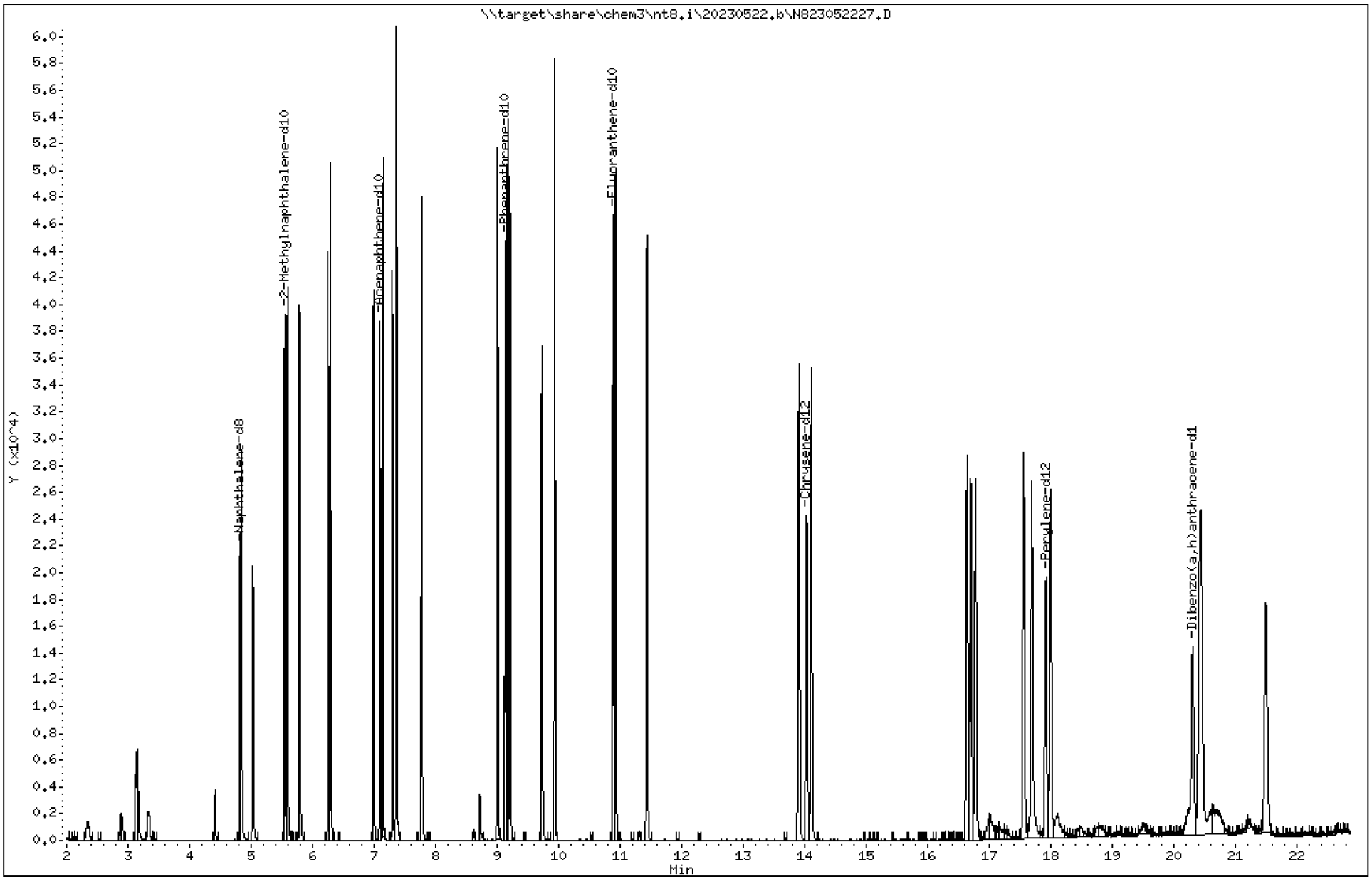
Instrument: nt8.i

Sample Info: CCV230522

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

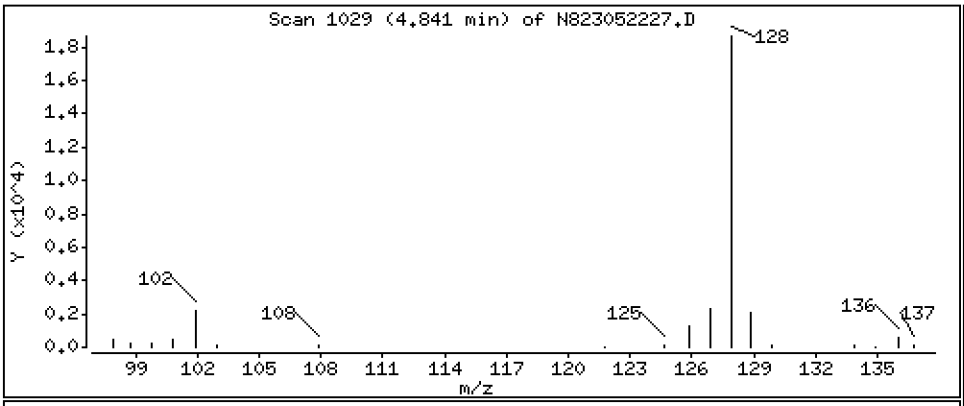
Operator: JZ

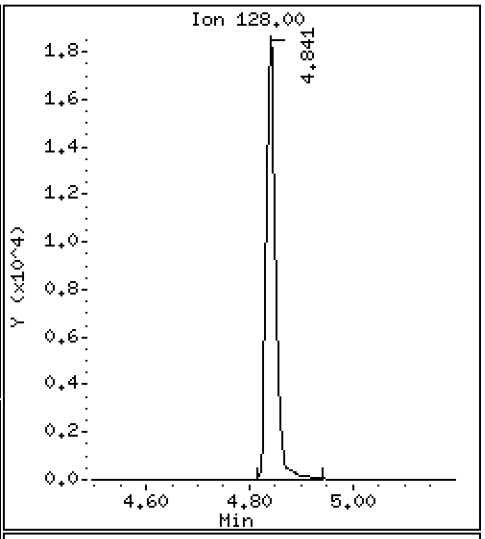
Column phase: Rxi-17sil

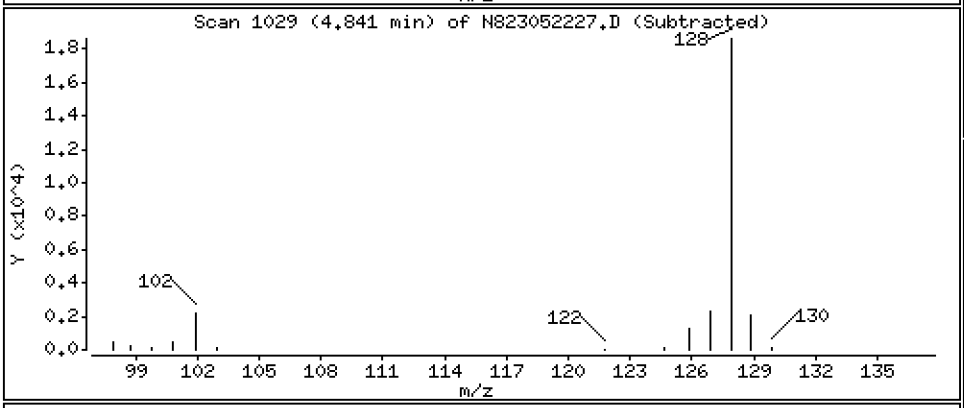
Column diameter: 0.25

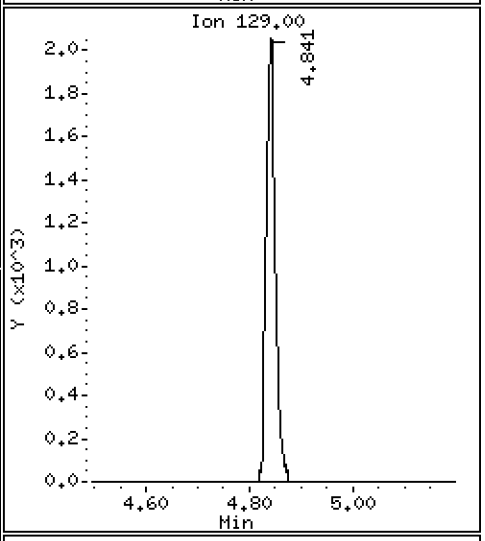
2 Naphthalene

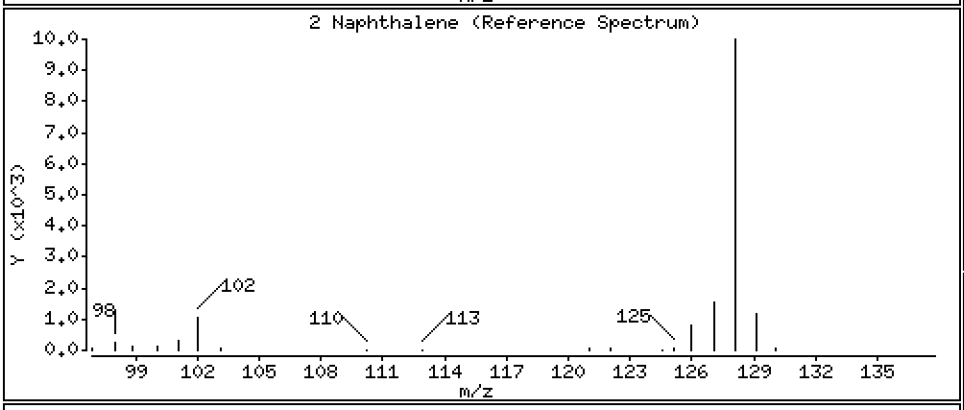
Concentration: 2.481 ug/mL

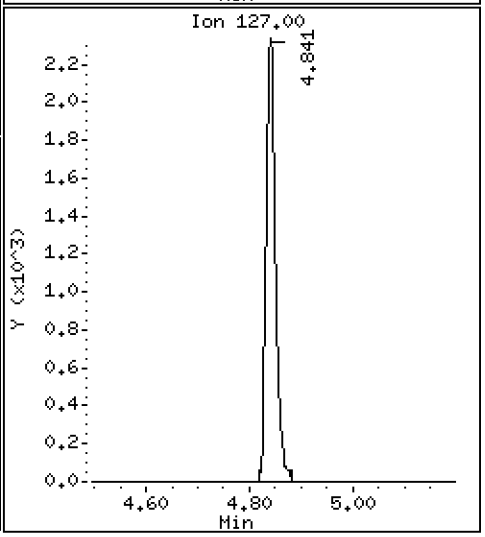


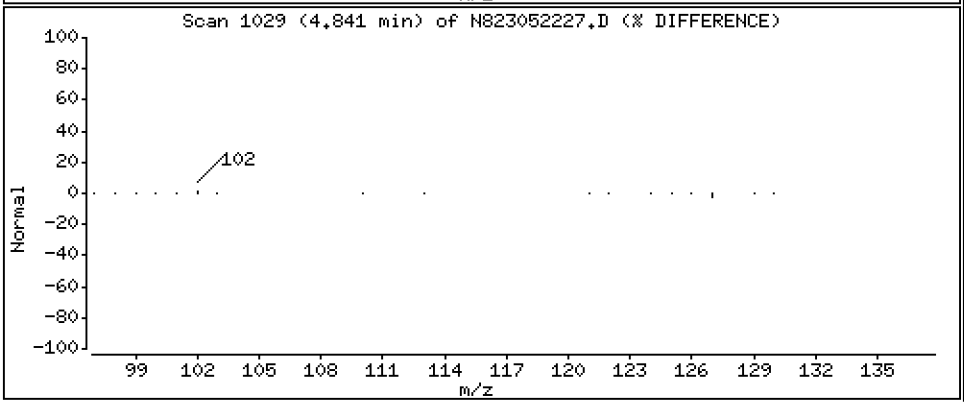












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

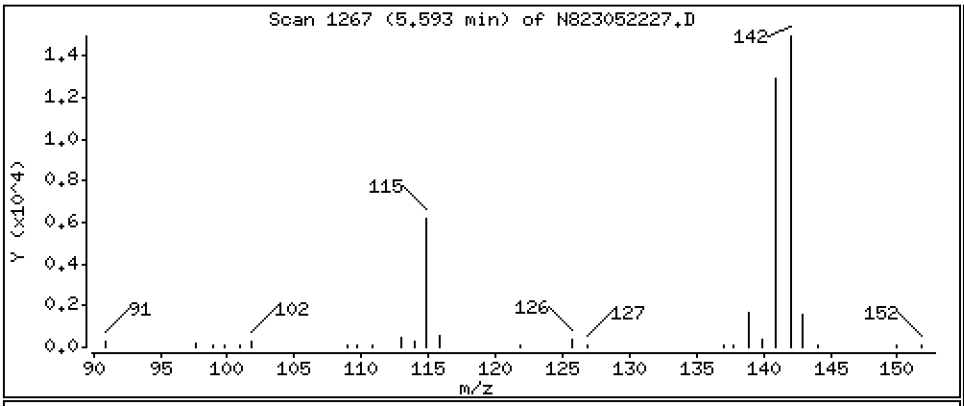
Operator: JZ

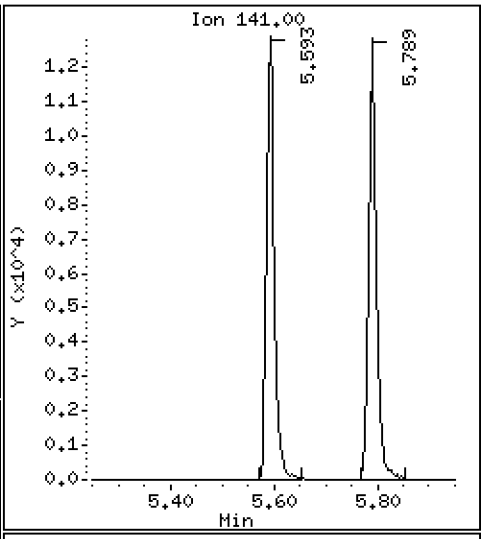
Column phase: Rxi-17sil

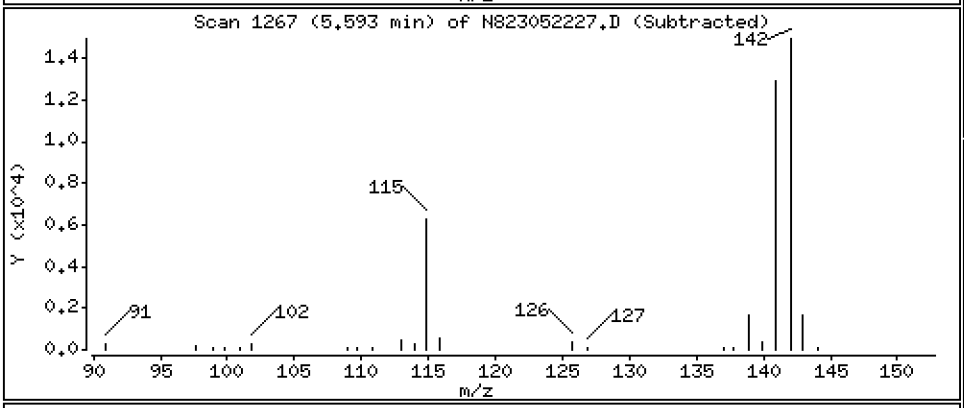
Column diameter: 0.25

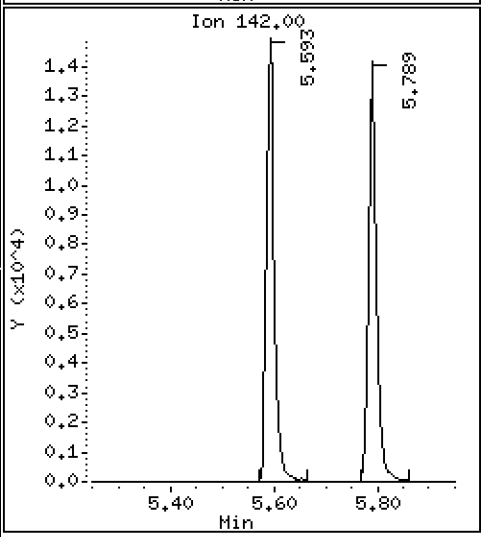
4 2-Methylnaphthalene

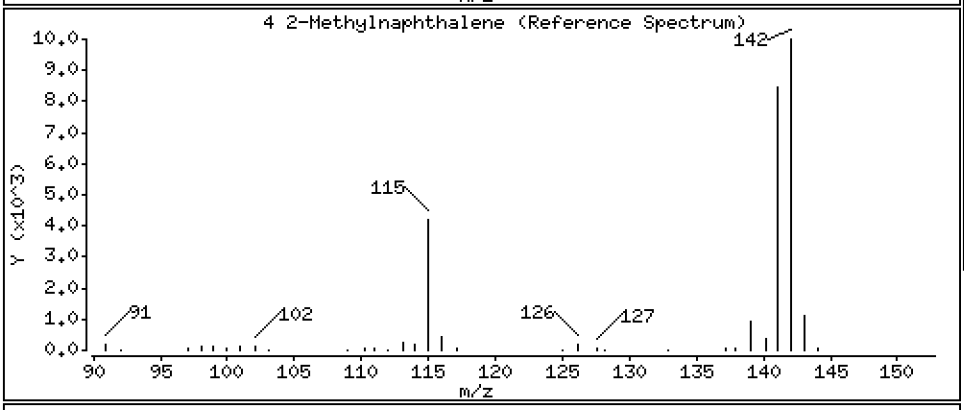
Concentration: 2.476 ug/mL

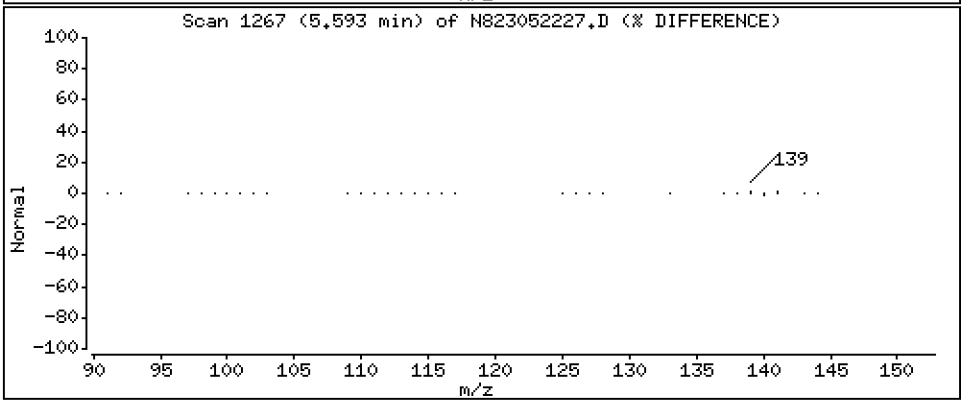












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

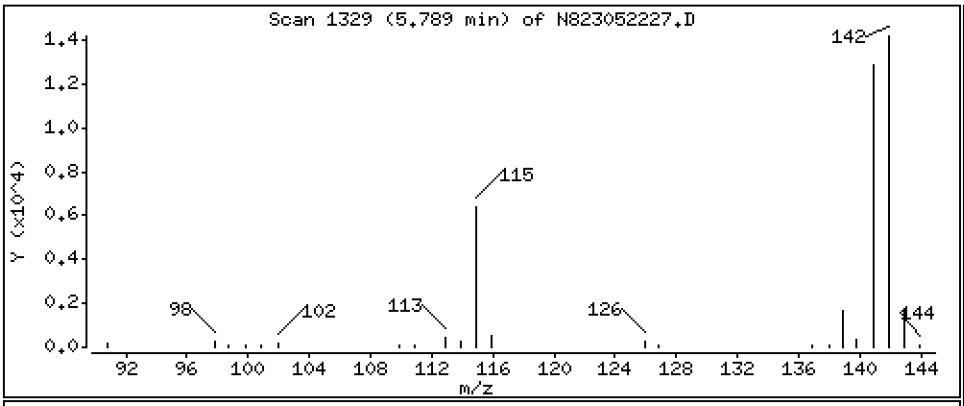
Operator: JZ

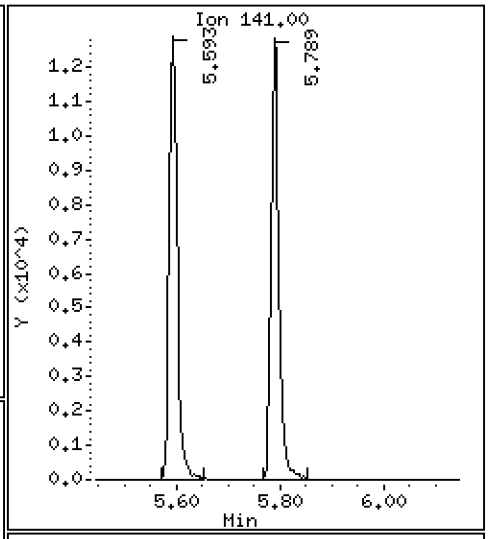
Column phase: Rxi-17sil

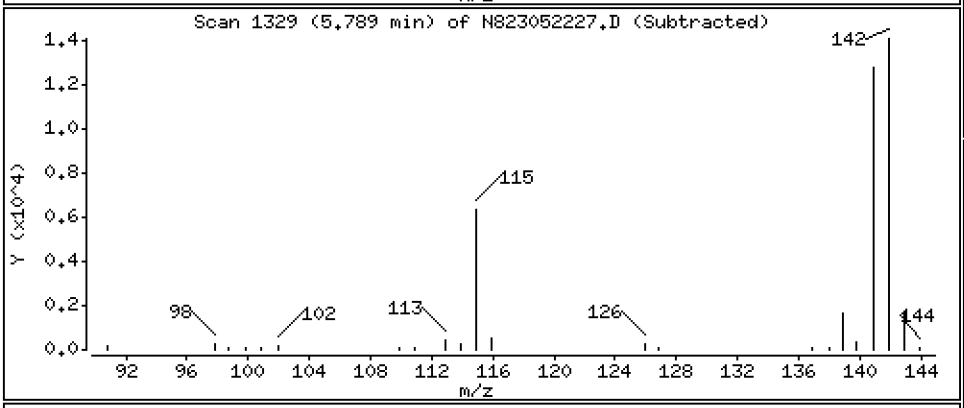
Column diameter: 0.25

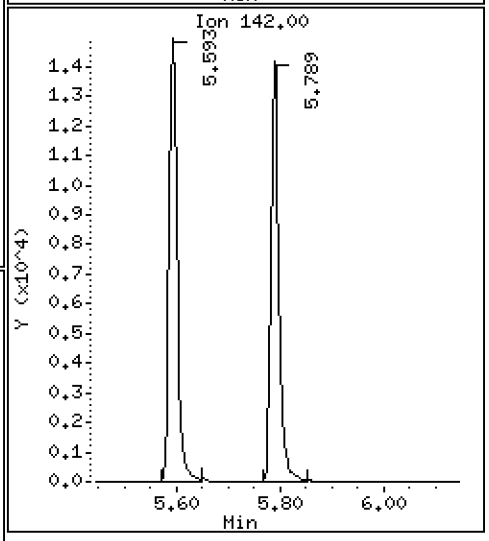
5 1-methylnaphthalene

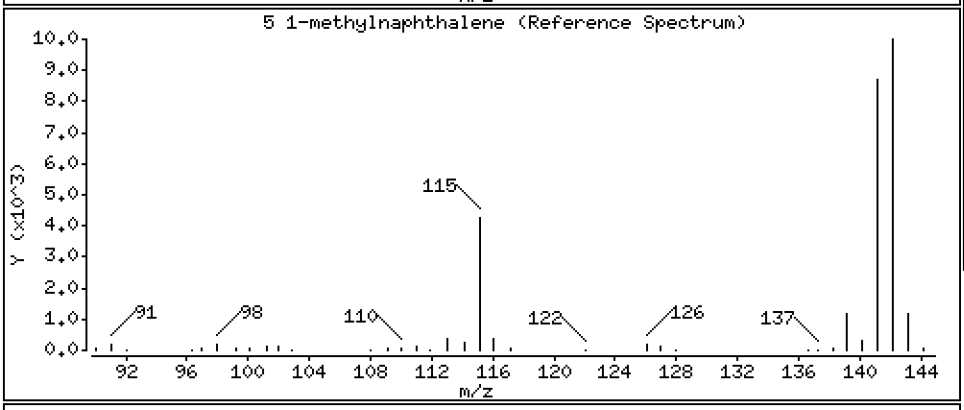
Concentration: 2.516 ug/mL

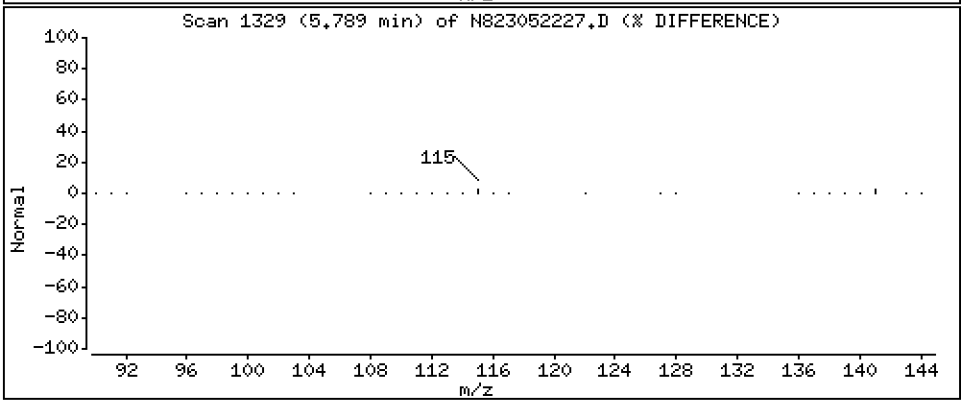












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

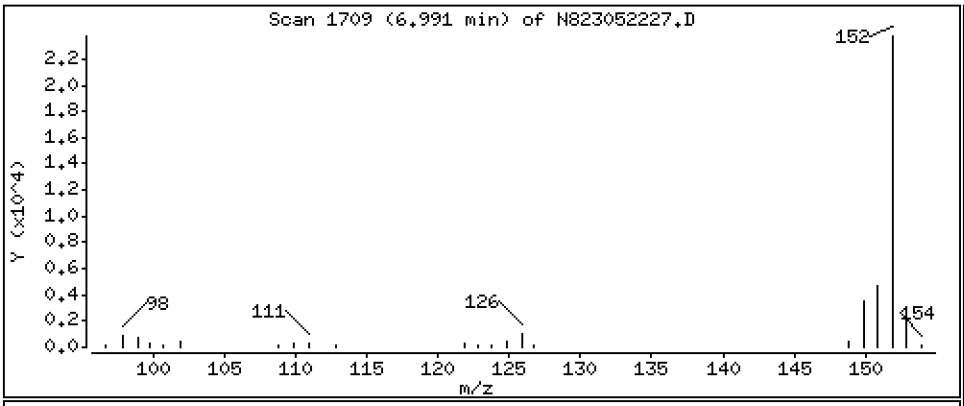
Operator: JZ

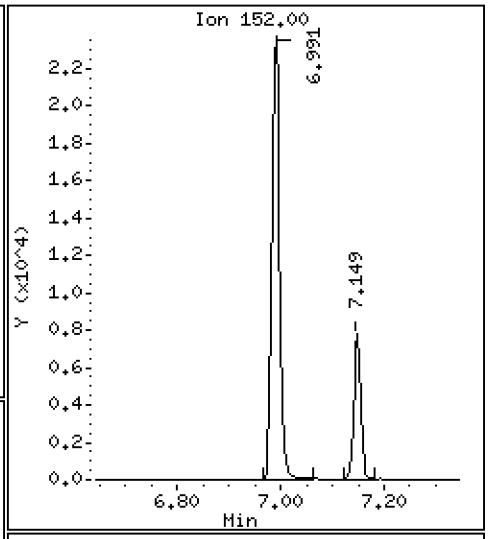
Column phase: Rxi-17sil

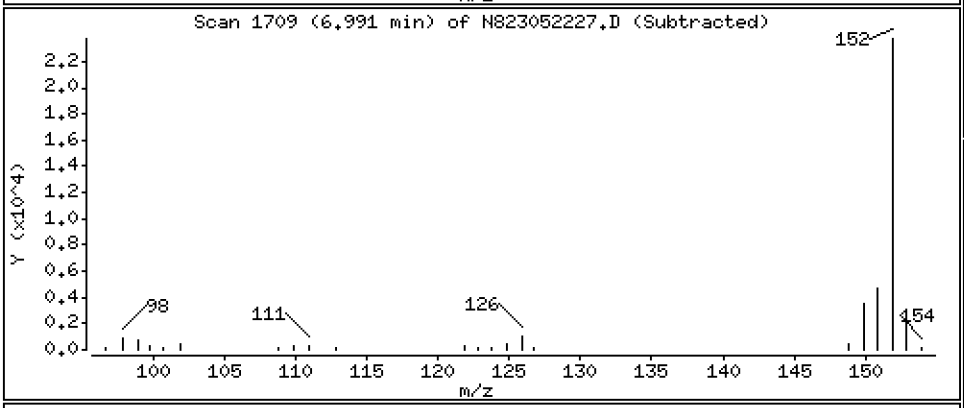
Column diameter: 0.25

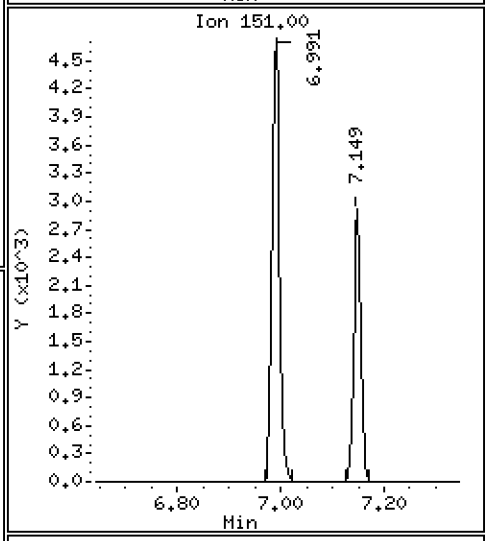
9 Acenaphthylene

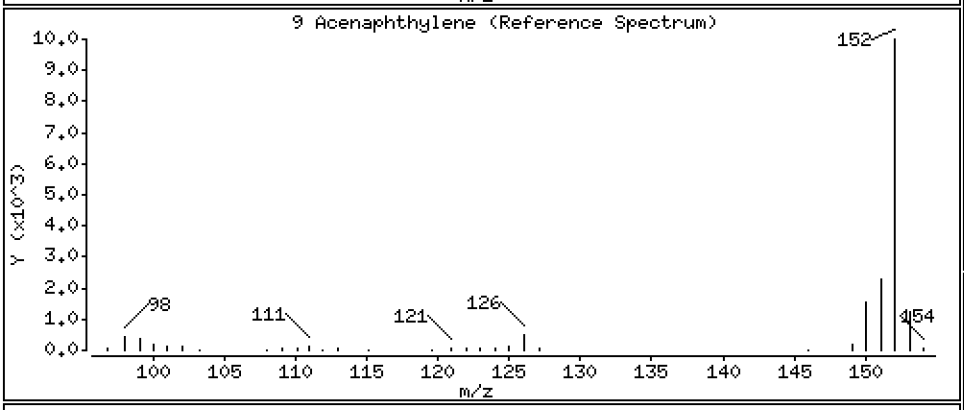
Concentration: 2.522 ug/mL

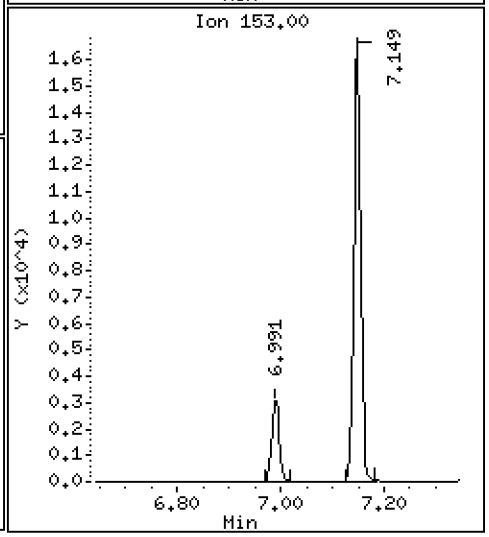


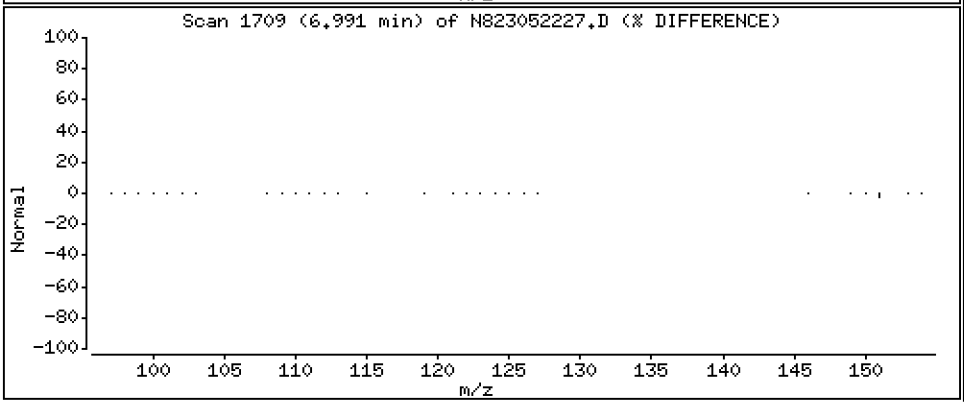












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

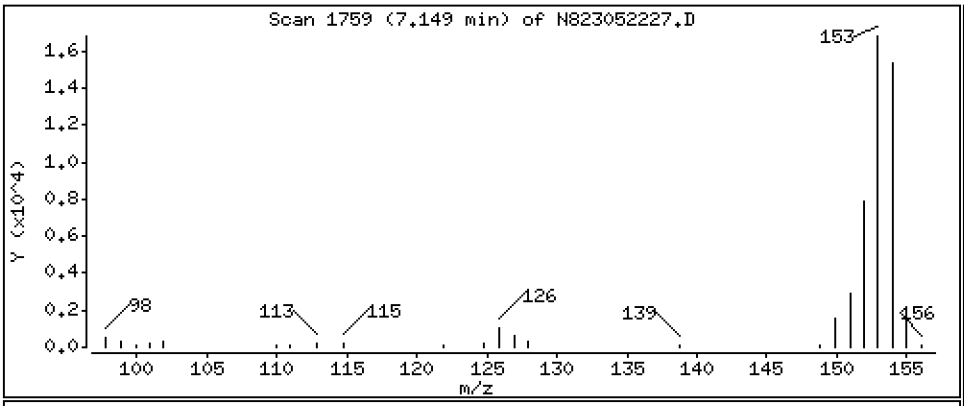
Operator: JZ

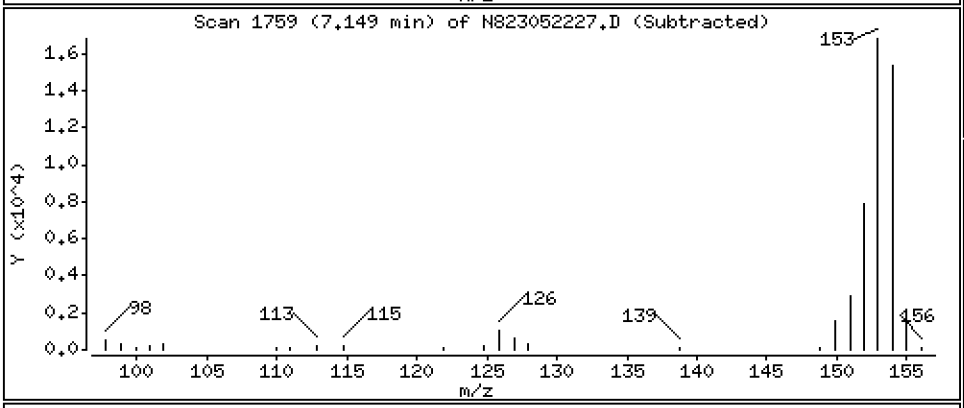
Column phase: Rxi-17sil

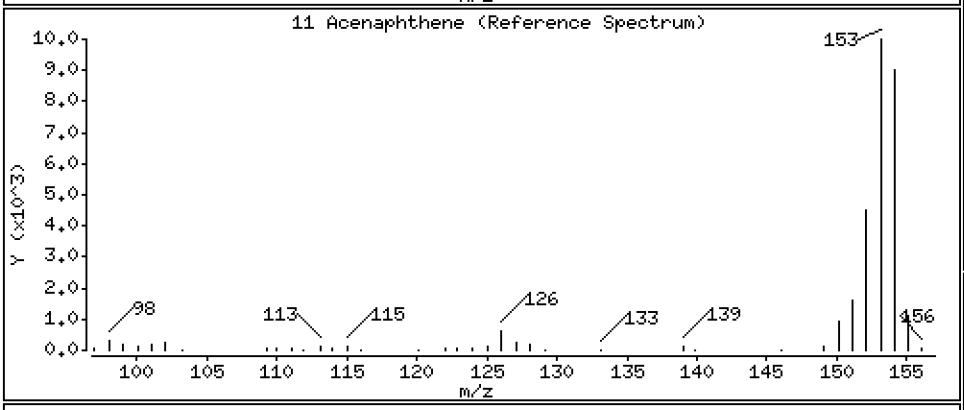
Column diameter: 0.25

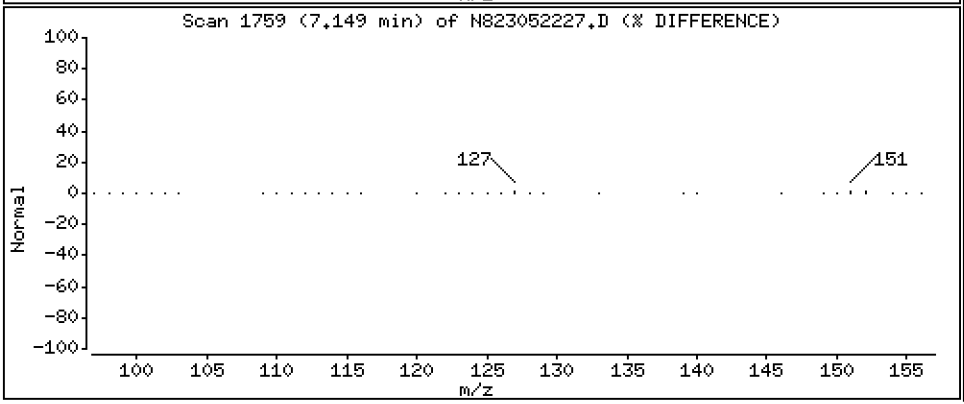
11 Acenaphthene

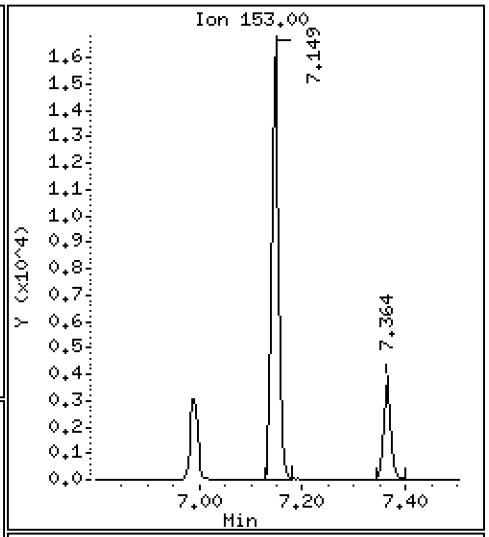
Concentration: 2.469 ug/mL

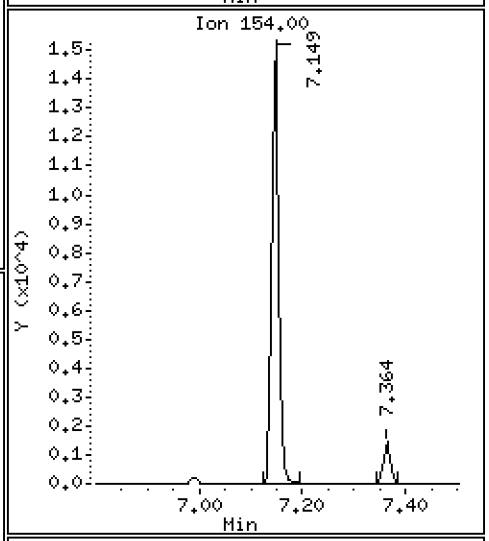


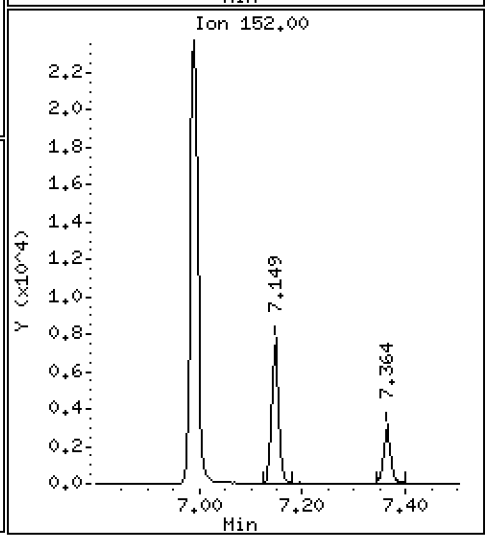












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

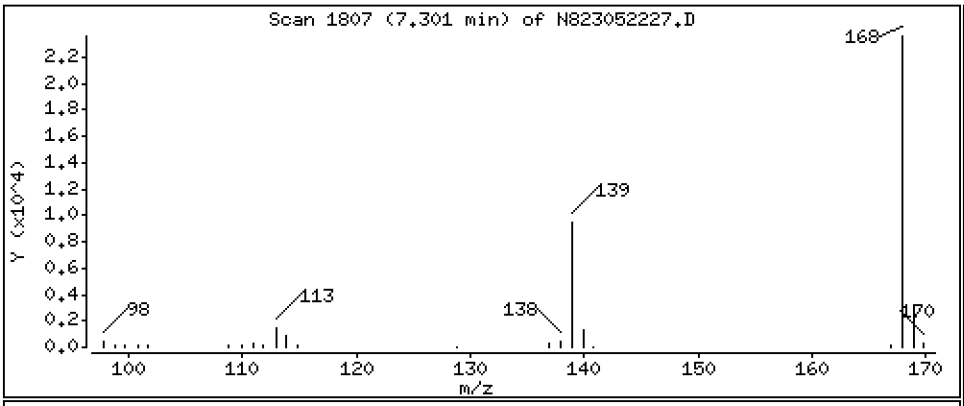
Operator: JZ

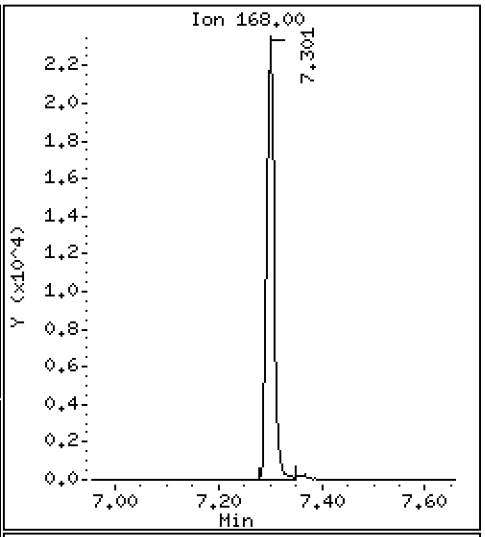
Column phase: Rxi-17sil

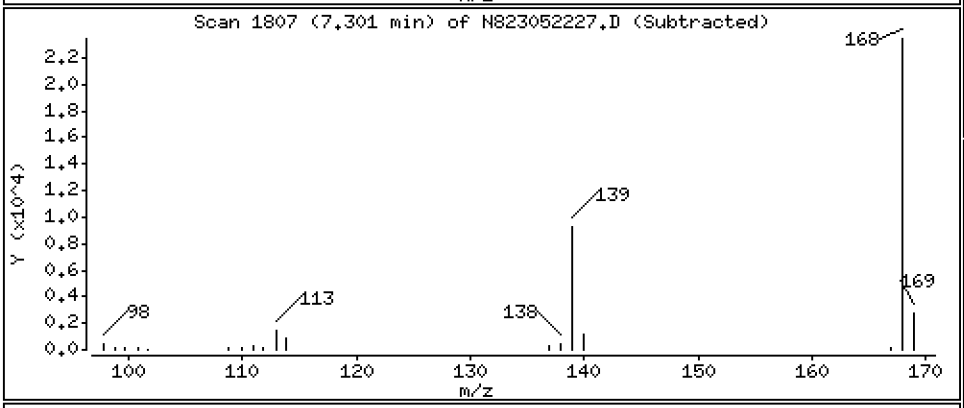
Column diameter: 0.25

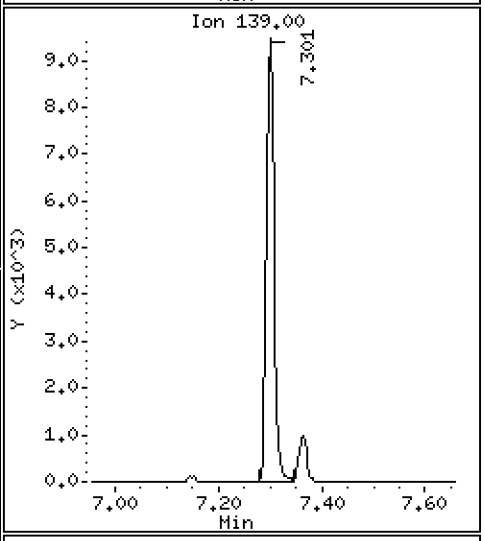
12 Dibenzofuran

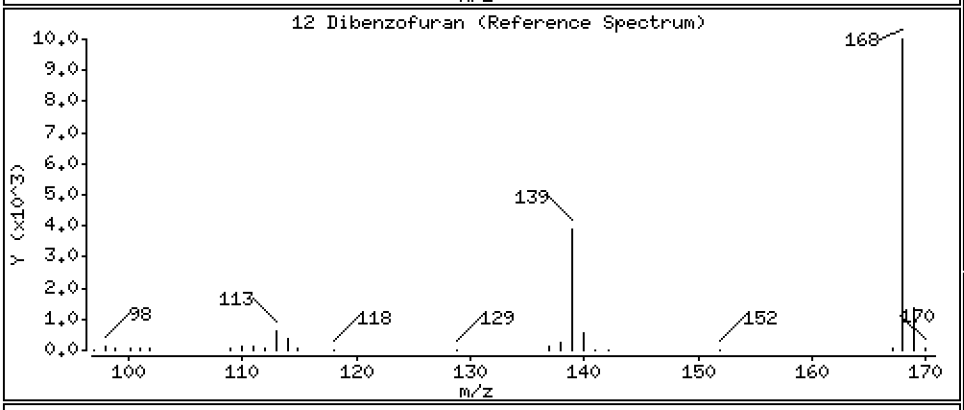
Concentration: 2.414 ug/mL

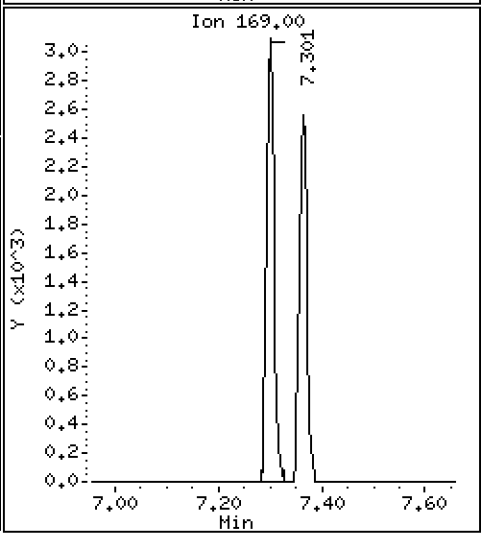


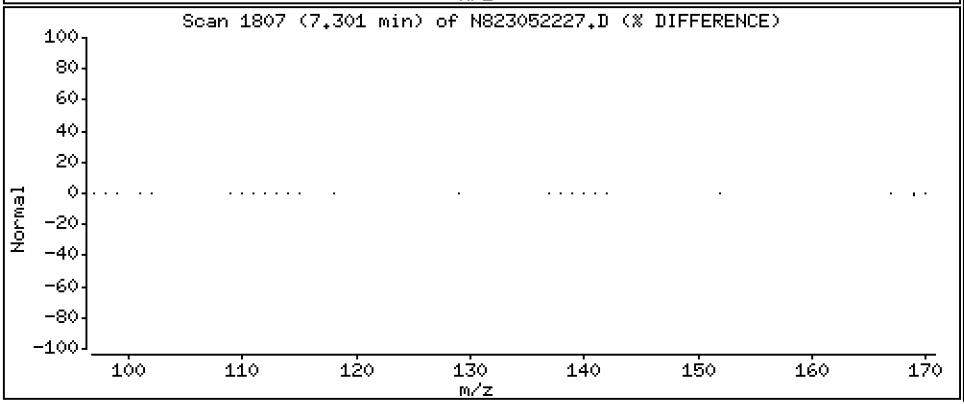












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

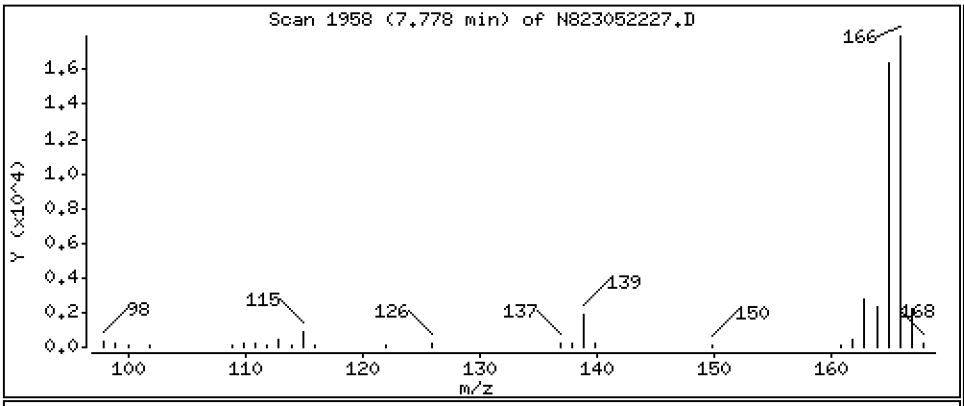
Operator: JZ

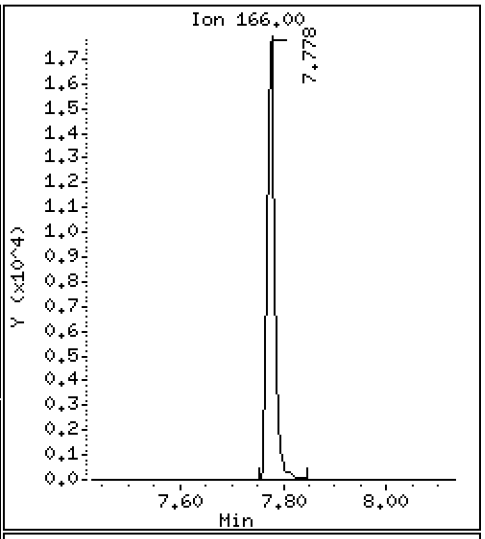
Column phase: Rxi-17sil

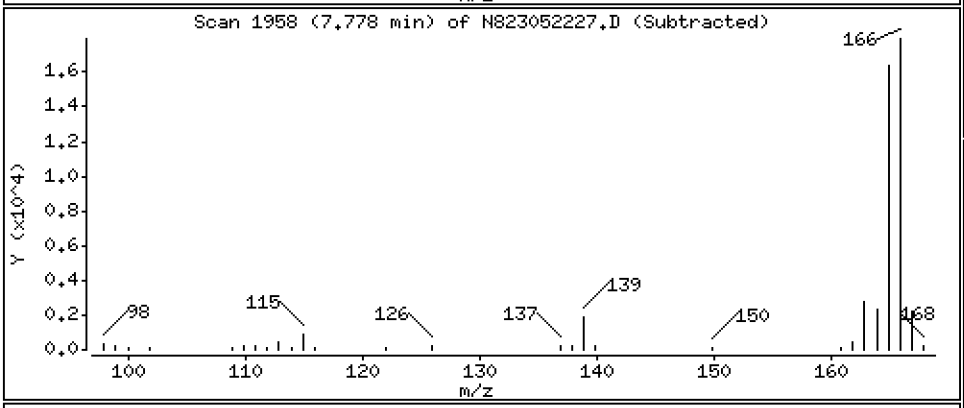
Column diameter: 0.25

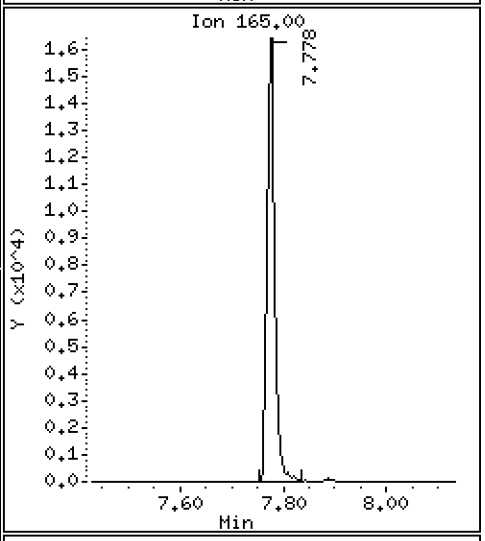
14 Fluorene

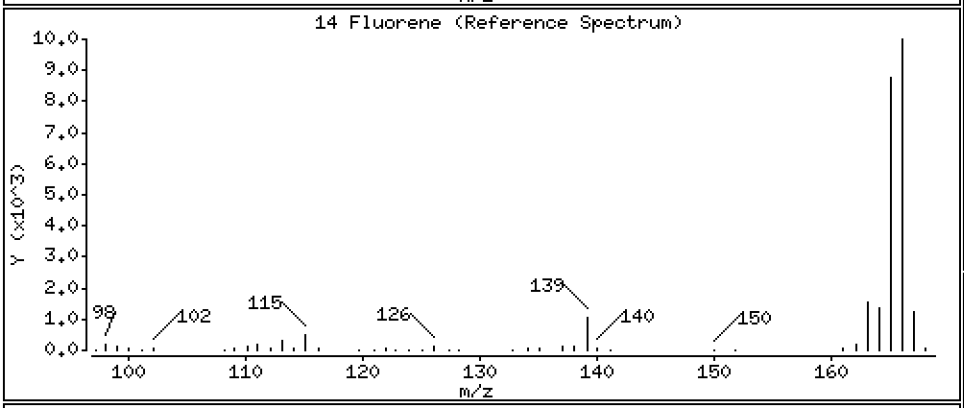
Concentration: 2.482 ug/mL

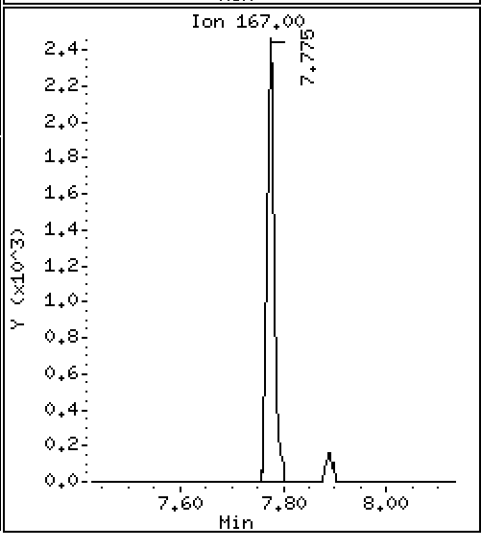


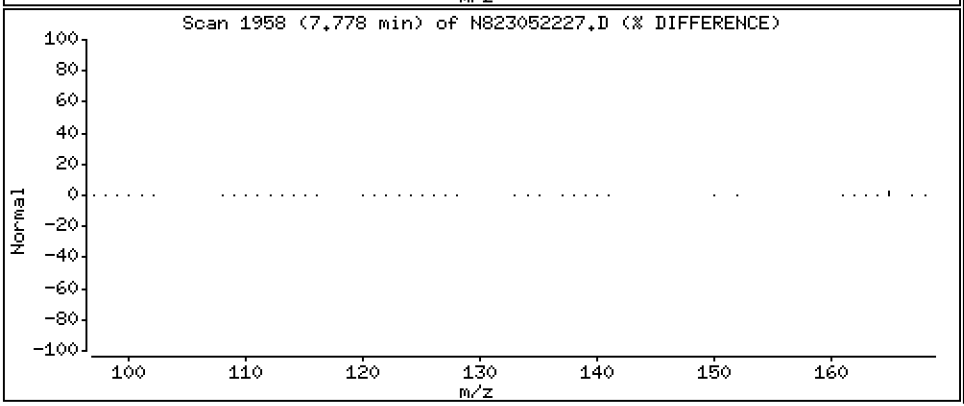












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

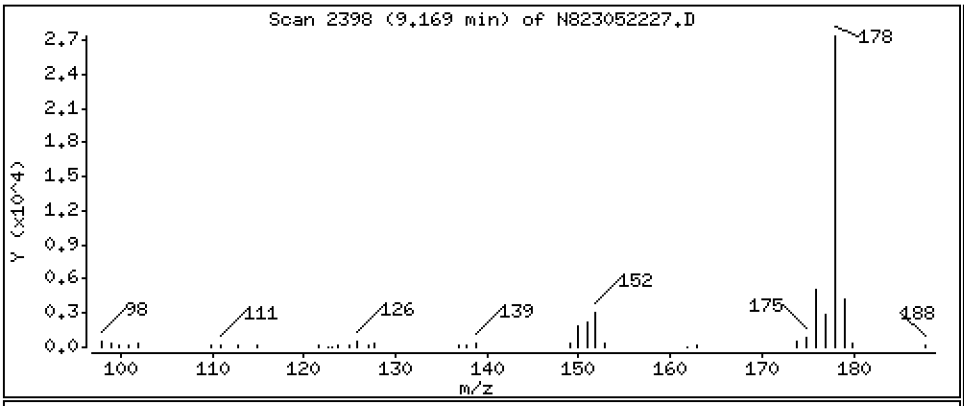
Operator: JZ

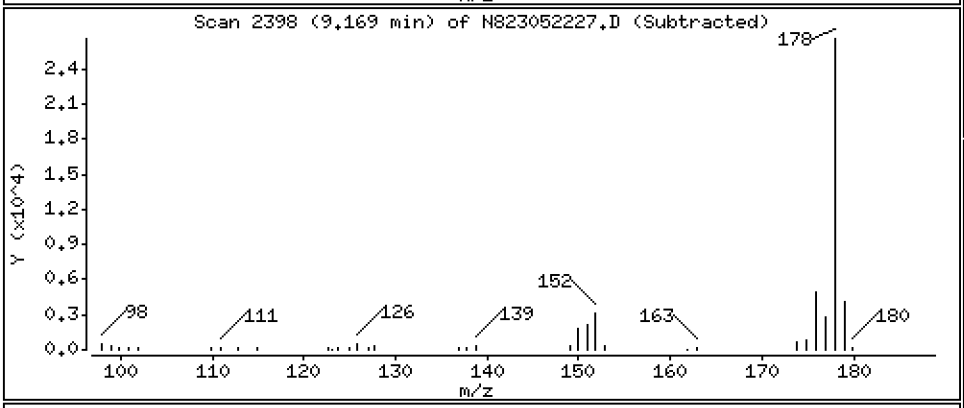
Column phase: Rxi-17sil

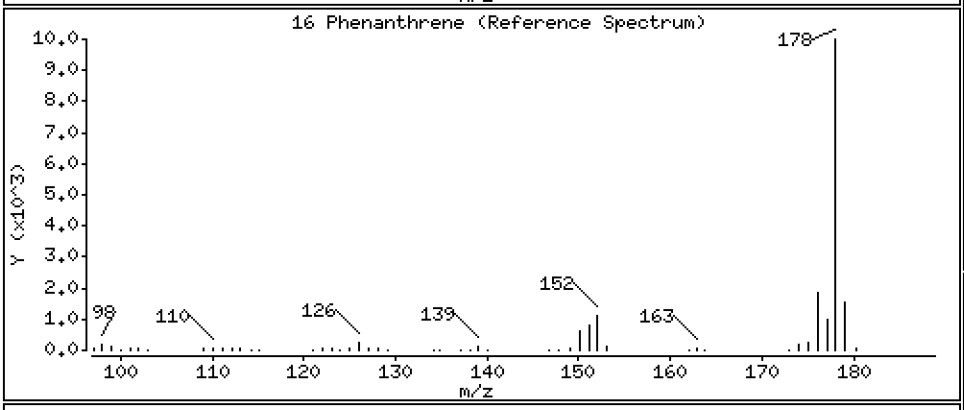
Column diameter: 0.25

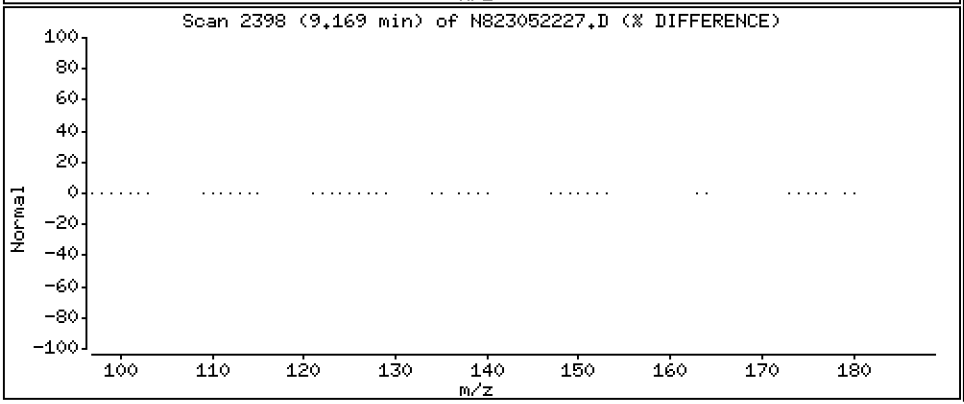
16 Phenanthrene

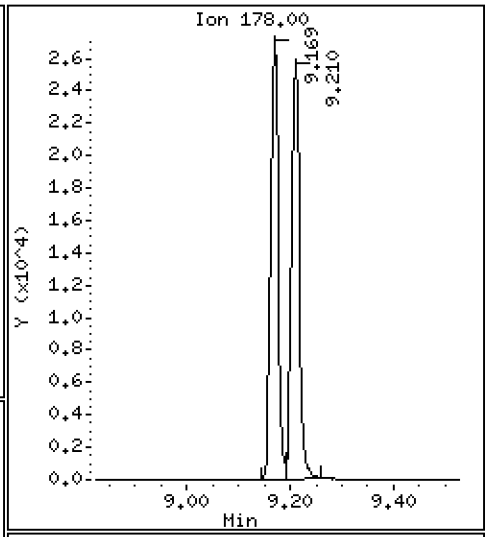
Concentration: 2.369 ug/mL

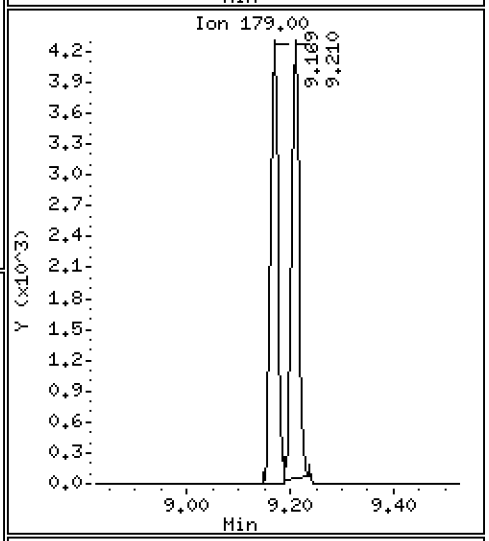


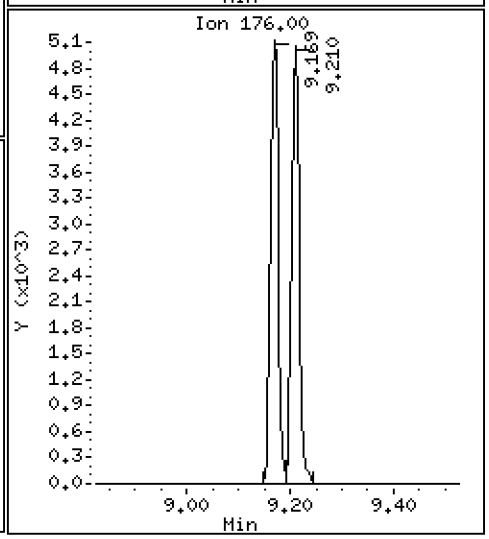












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

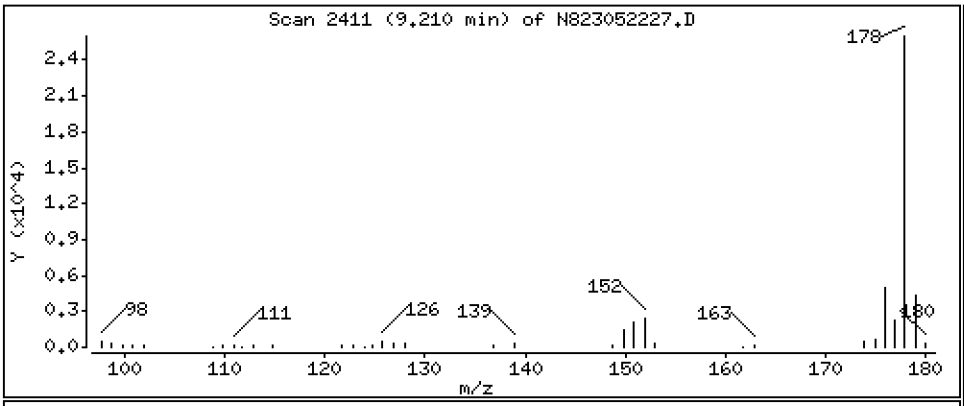
Operator: JZ

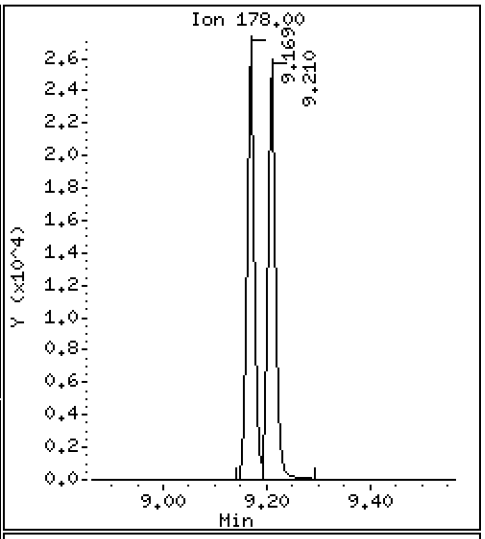
Column phase: Rxi-17sil

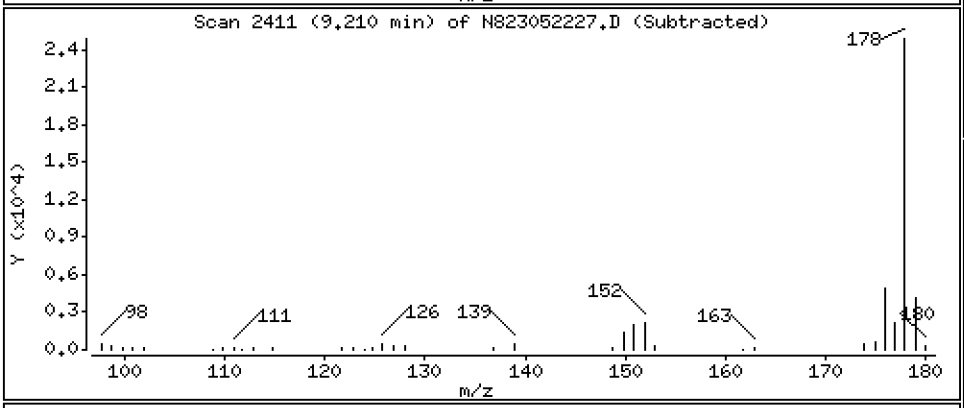
Column diameter: 0.25

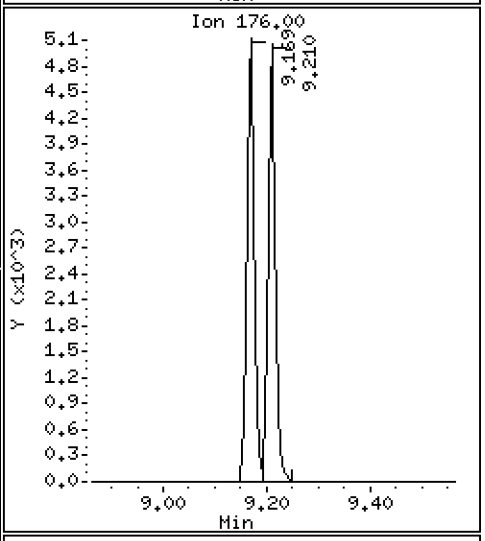
17 Anthracene

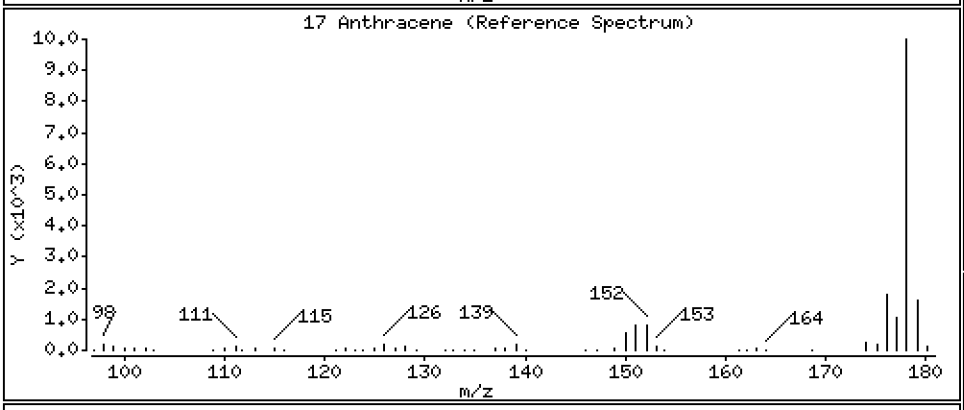
Concentration: 2.560 ug/mL

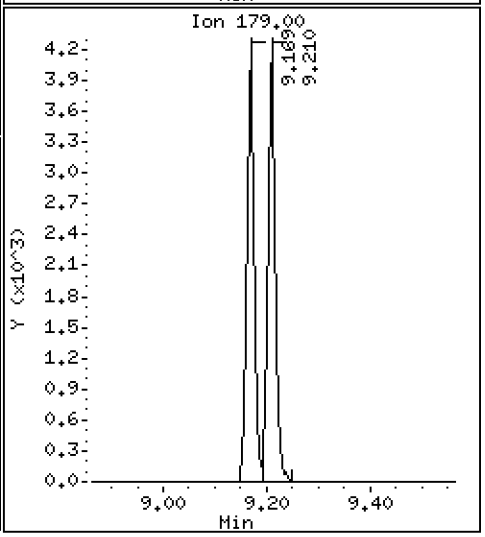


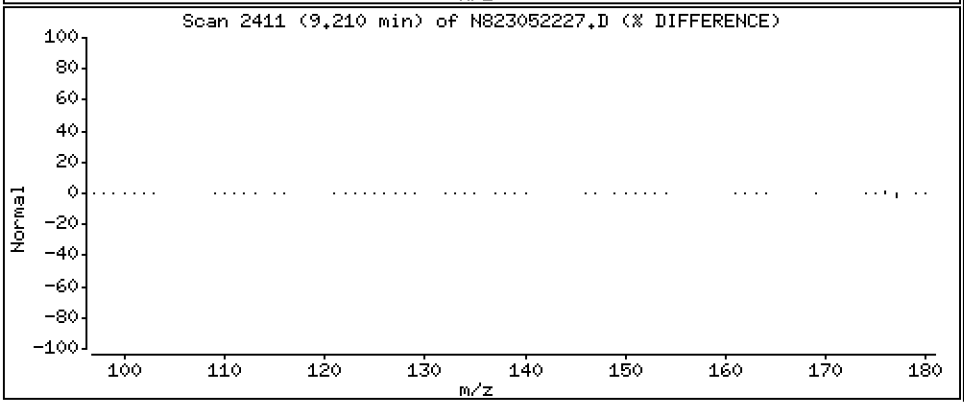












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

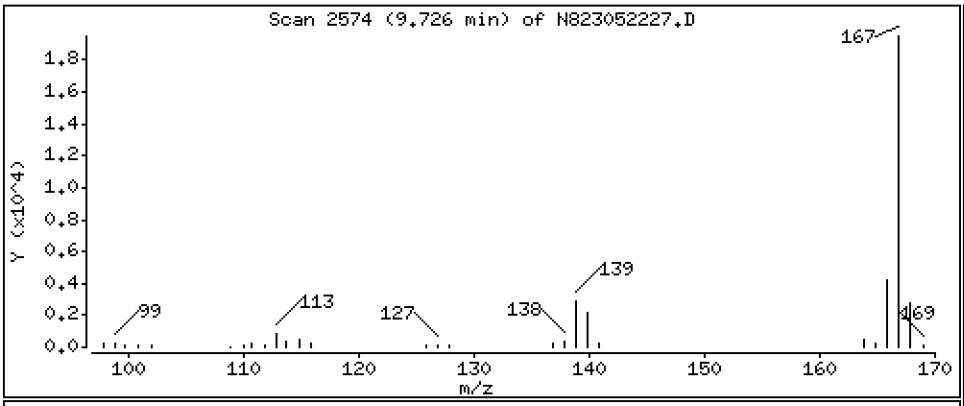
Operator: JZ

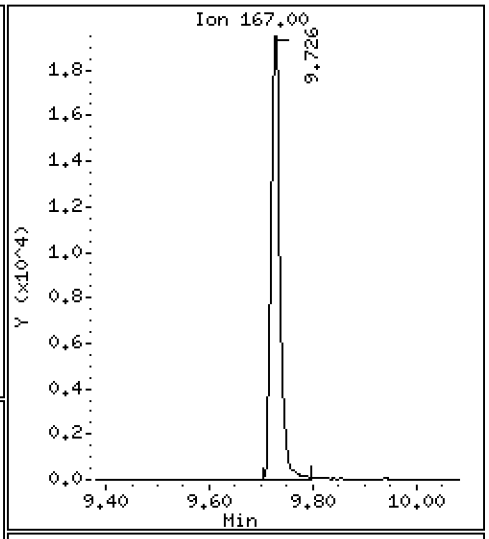
Column phase: Rxi-17sil

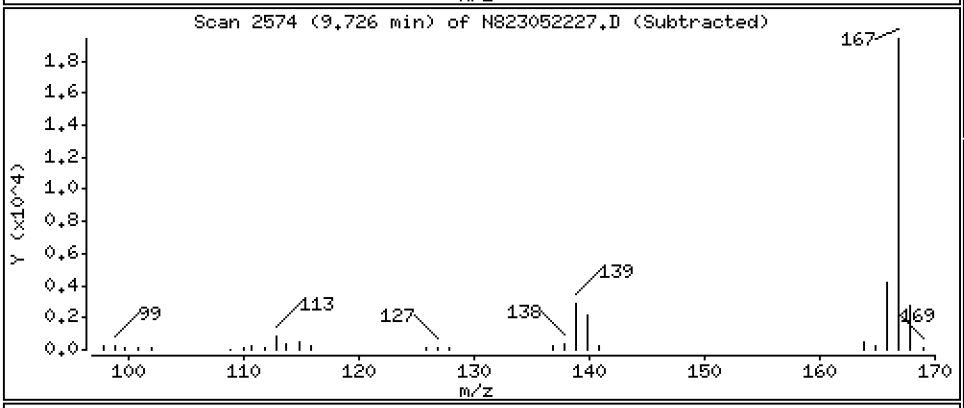
Column diameter: 0.25

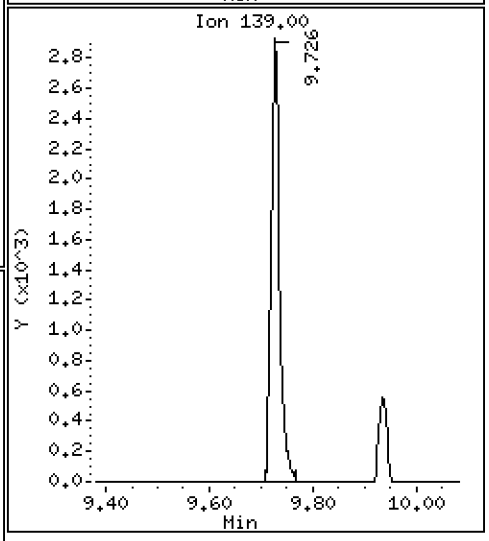
19 Carbazole

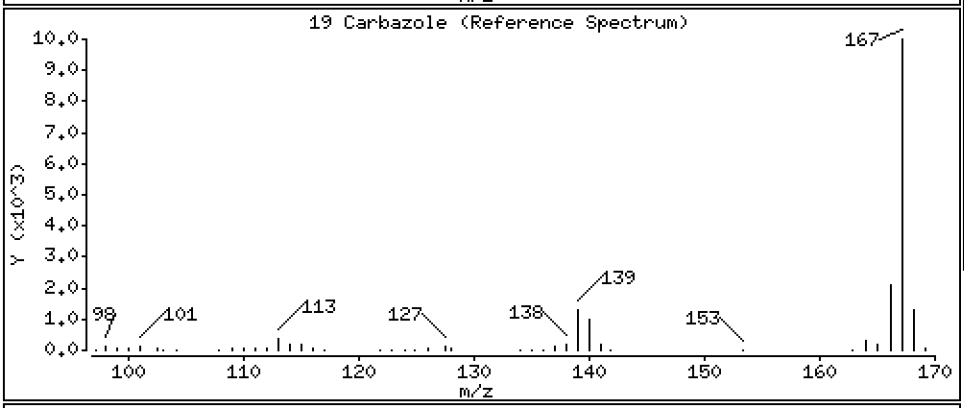
Concentration: 2.301 ug/mL

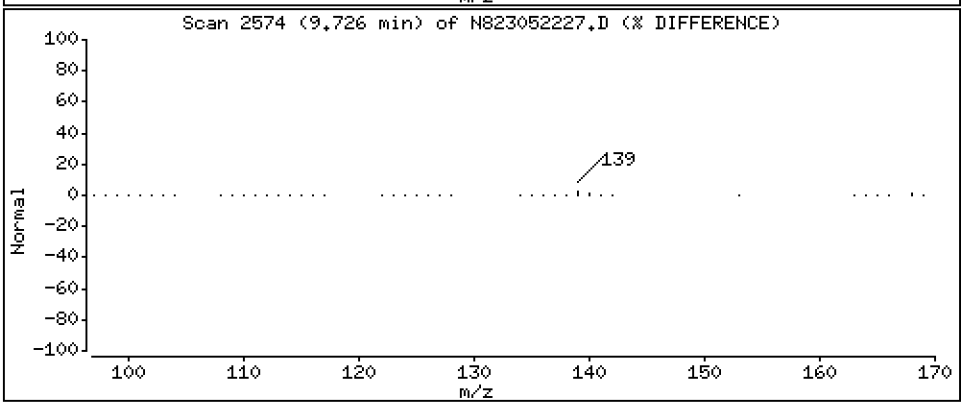












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

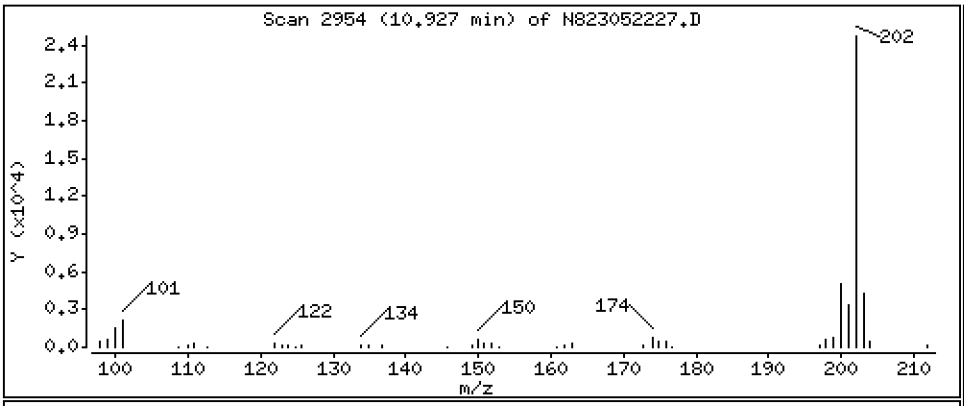
Operator: JZ

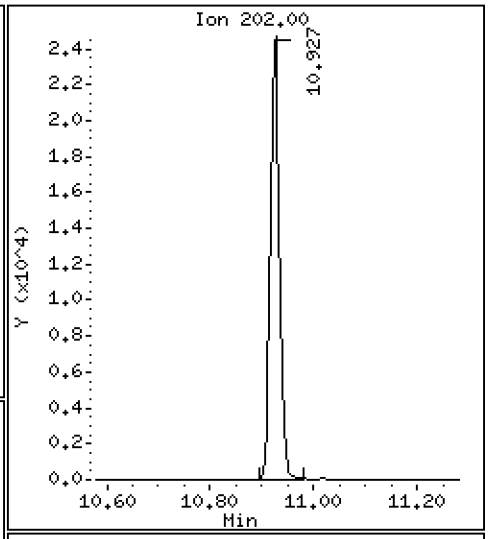
Column phase: Rxi-17sil

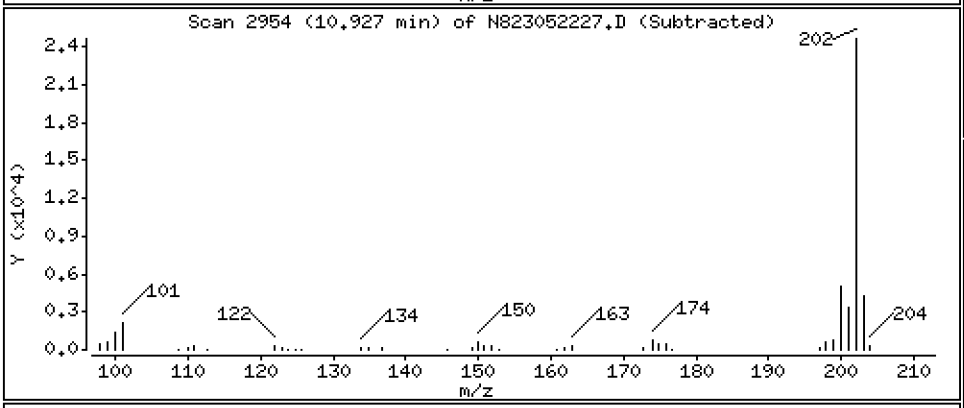
Column diameter: 0.25

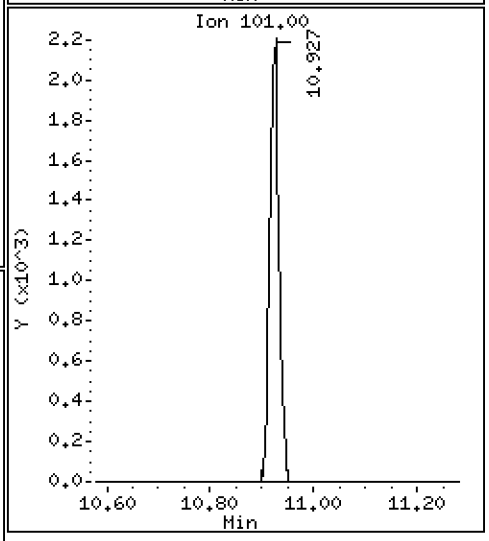
22 Fluoranthene

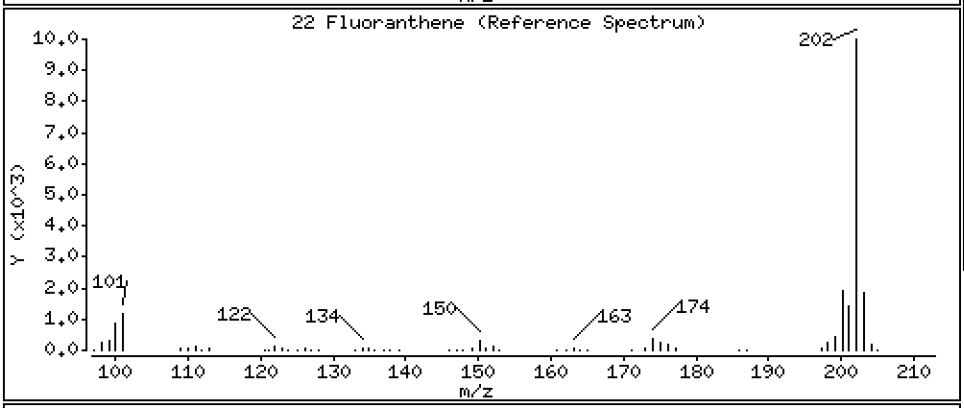
Concentration: 2.351 ug/mL

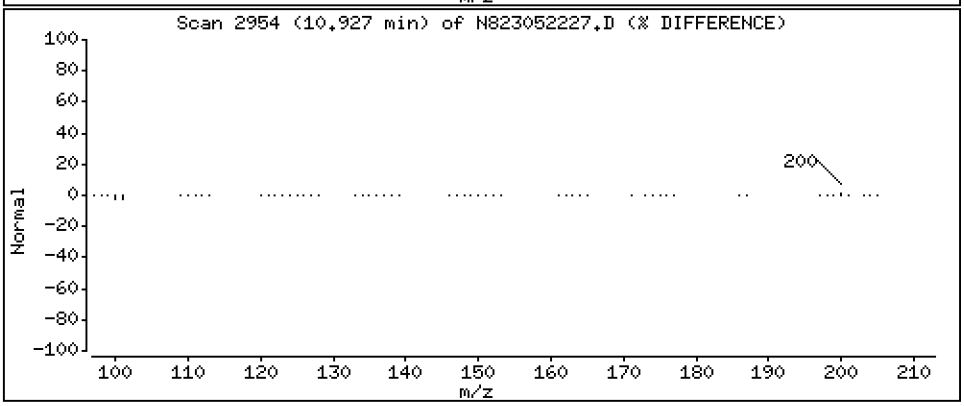












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

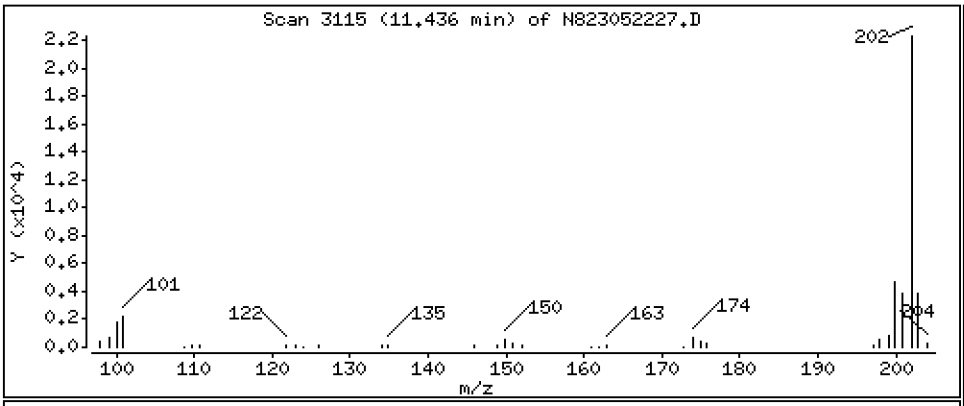
Operator: JZ

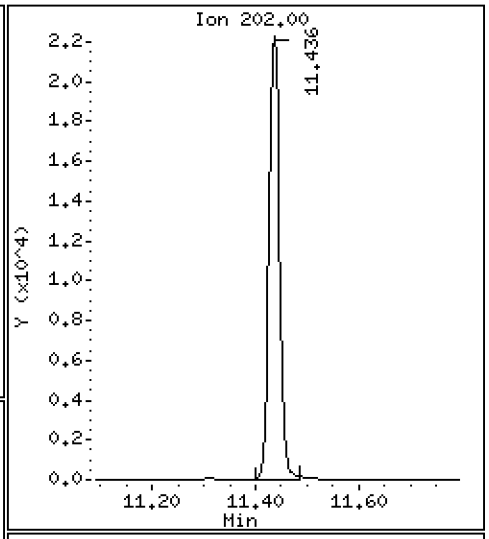
Column phase: Rxi-17sil

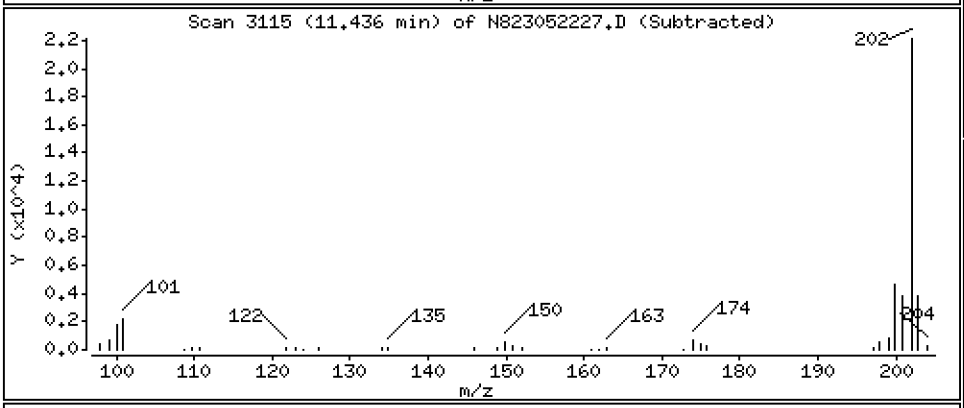
Column diameter: 0.25

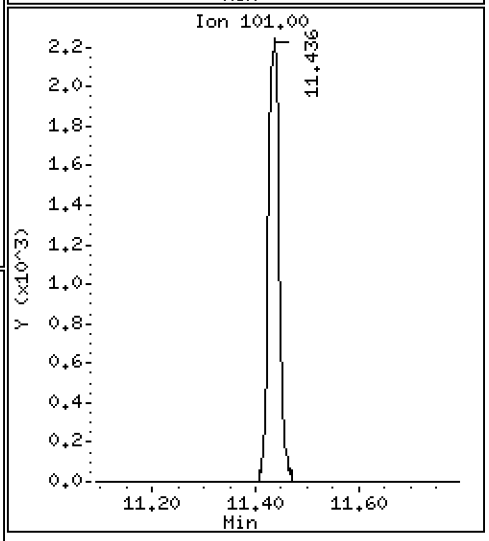
23 Pyrene

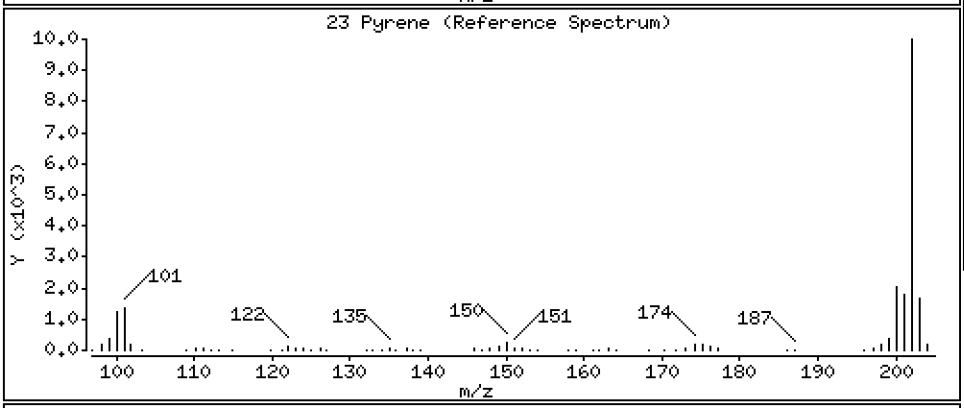
Concentration: 2.869 ug/mL

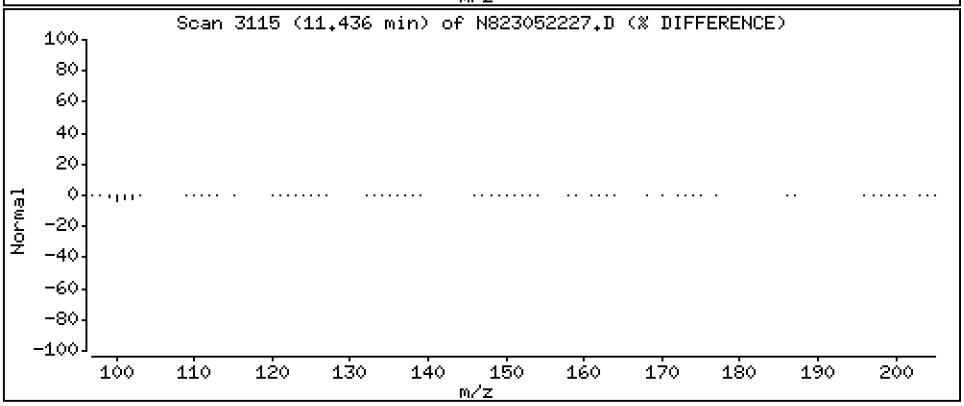












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

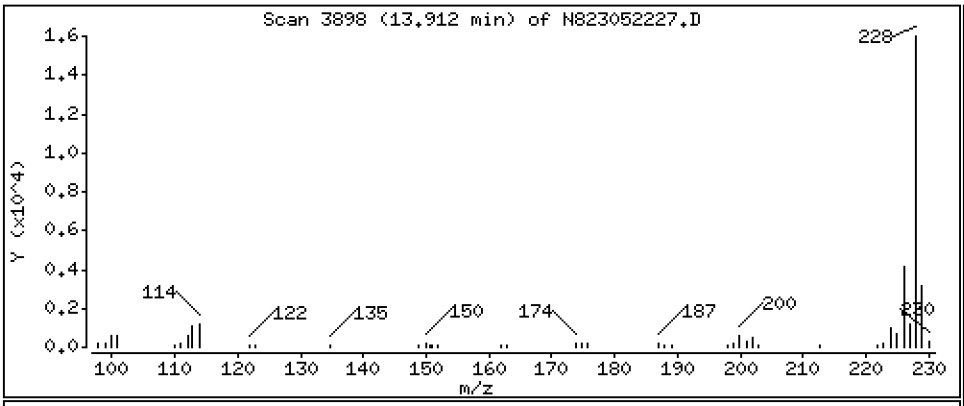
Operator: JZ

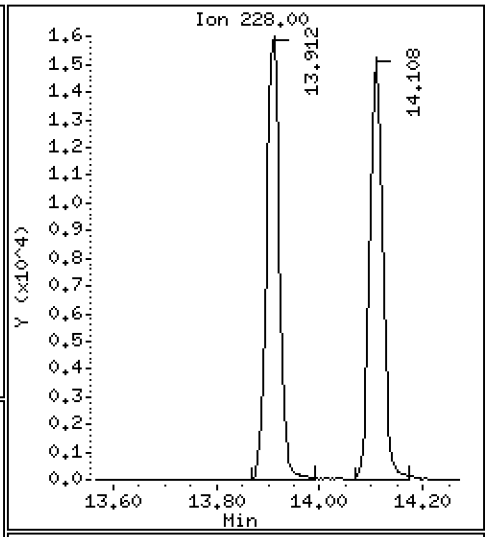
Column phase: Rxi-17sil

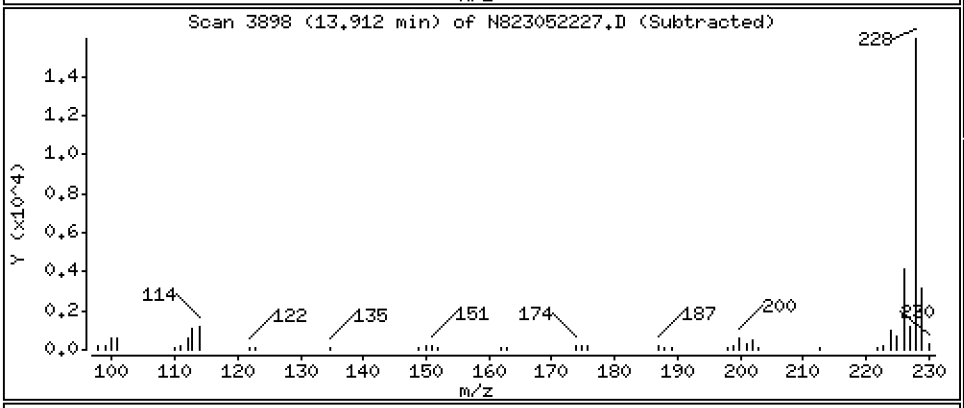
Column diameter: 0.25

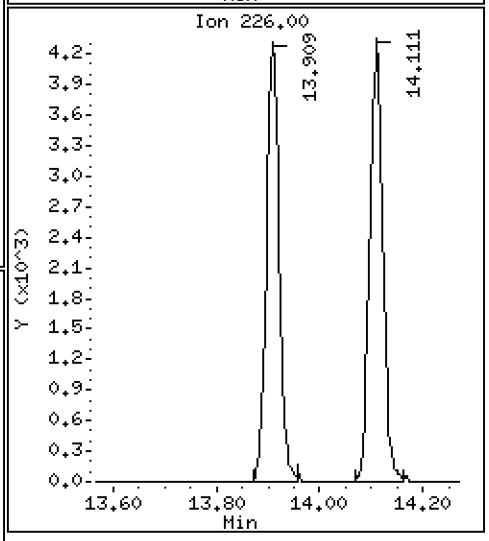
24 Benzo(a)anthracene

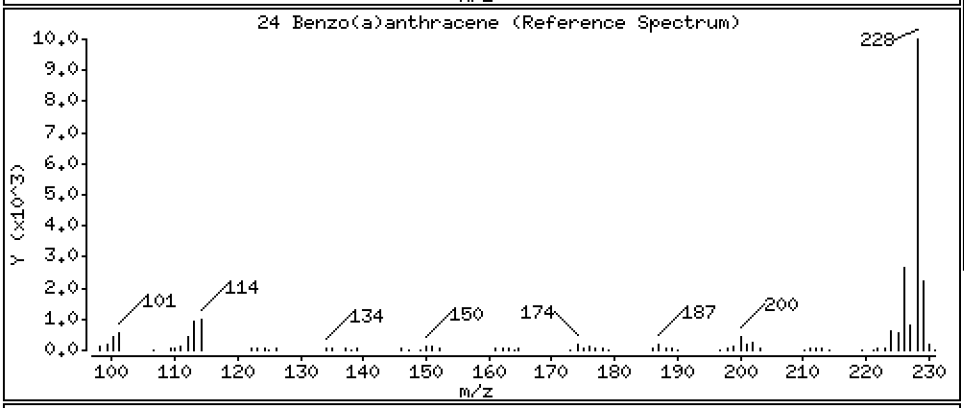
Concentration: 2.472 ug/mL

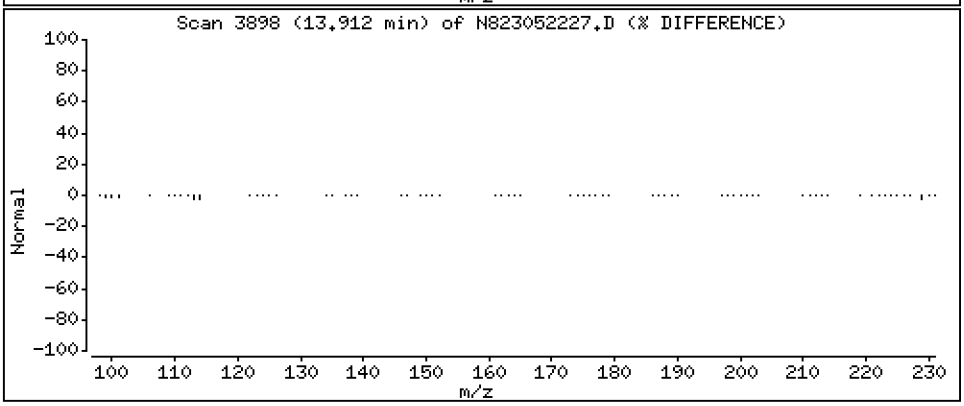












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

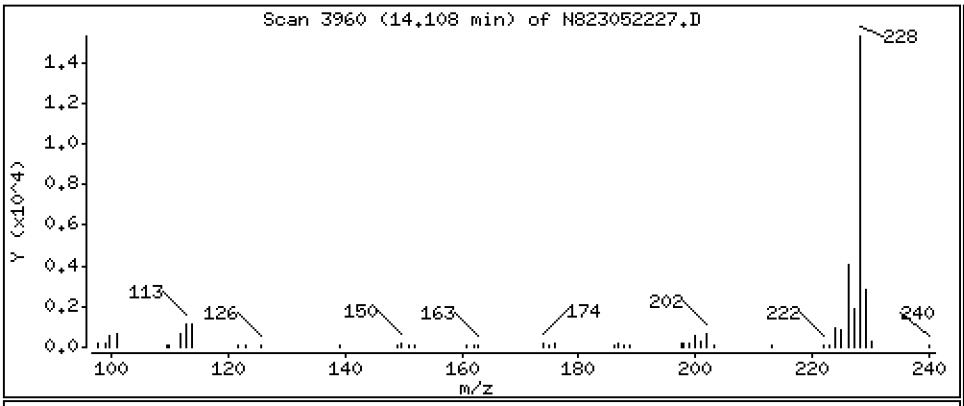
Operator: JZ

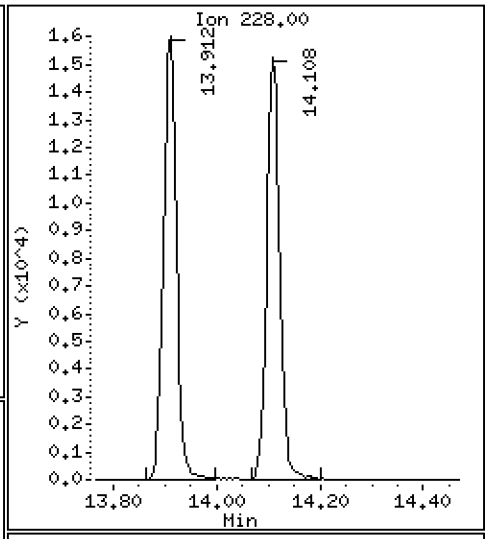
Column phase: Rxi-17sil

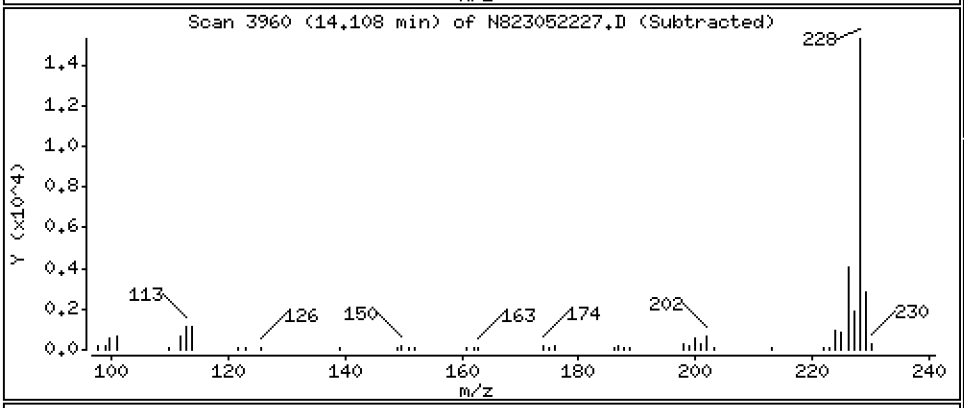
Column diameter: 0.25

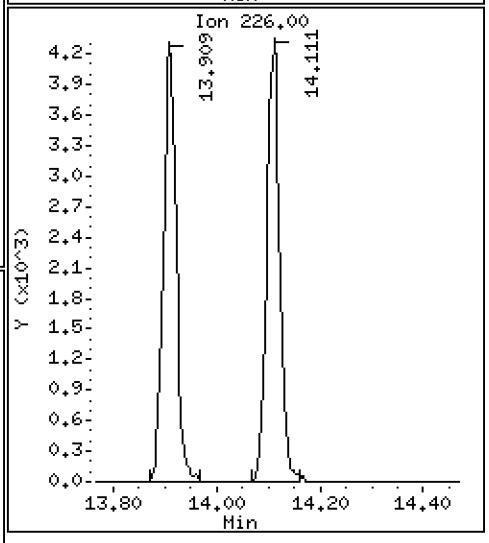
27 Chrysene

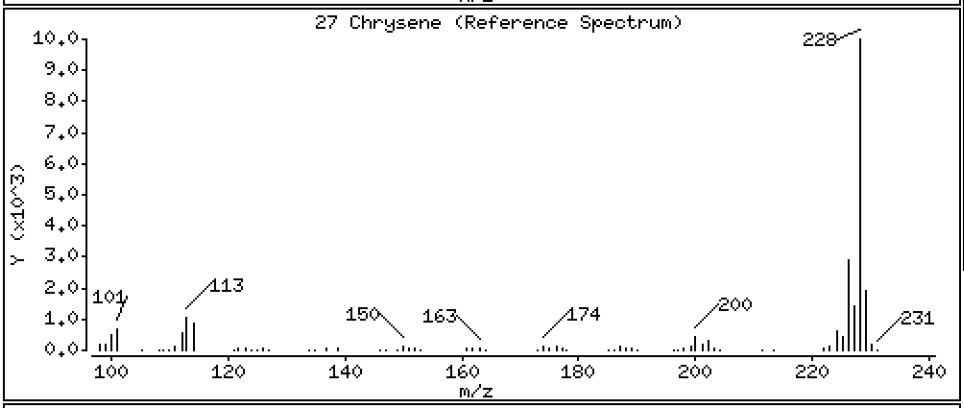
Concentration: 2.443 ug/mL

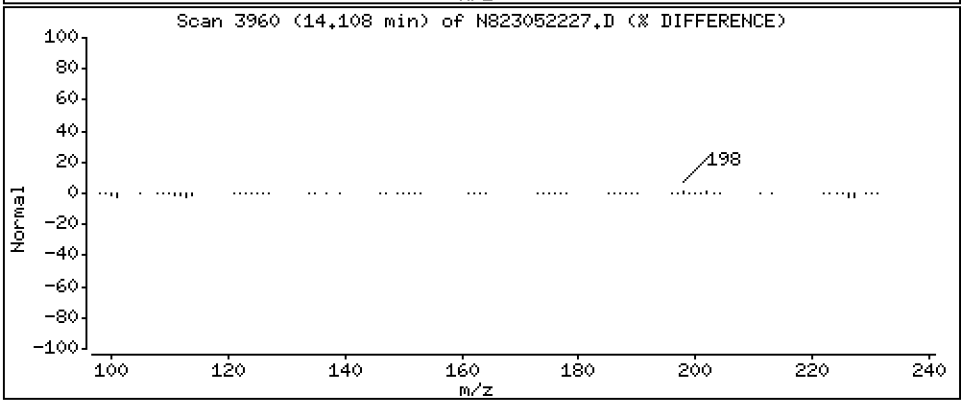












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

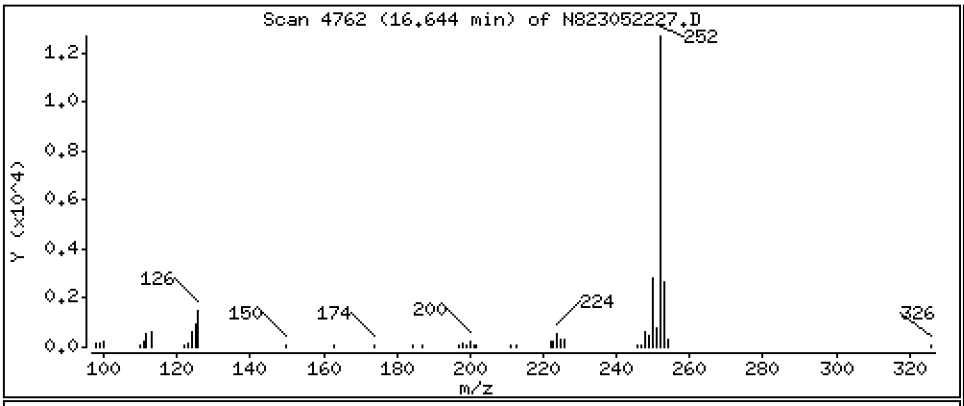
Operator: JZ

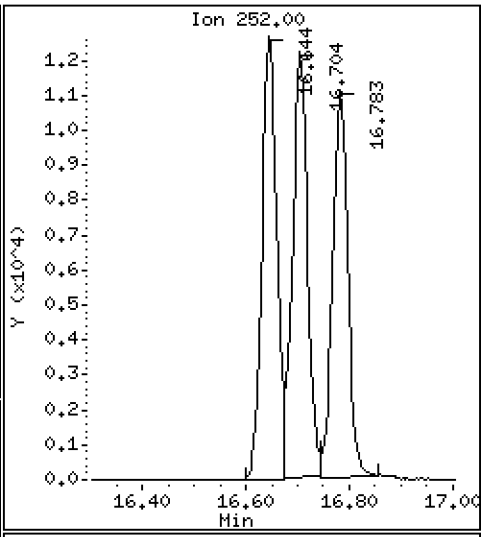
Column phase: Rxi-17sil

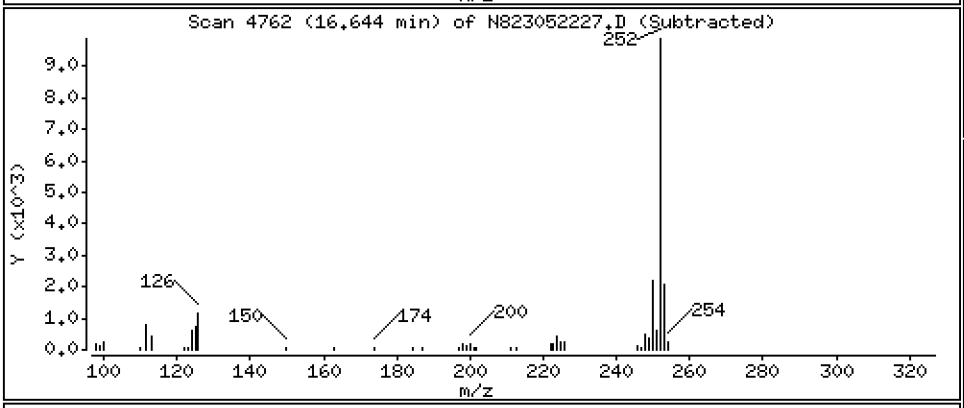
Column diameter: 0.25

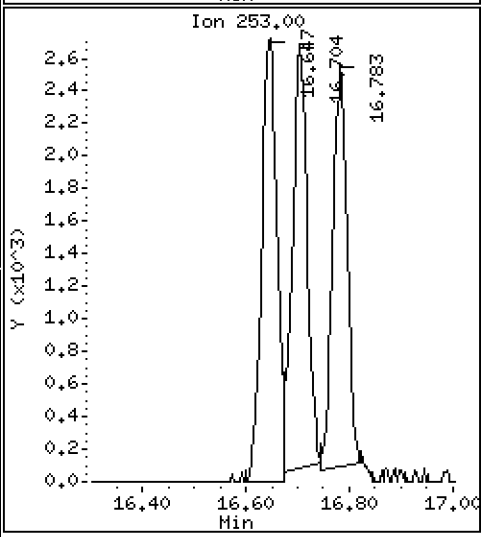
28 Benzo(b)fluoranthene

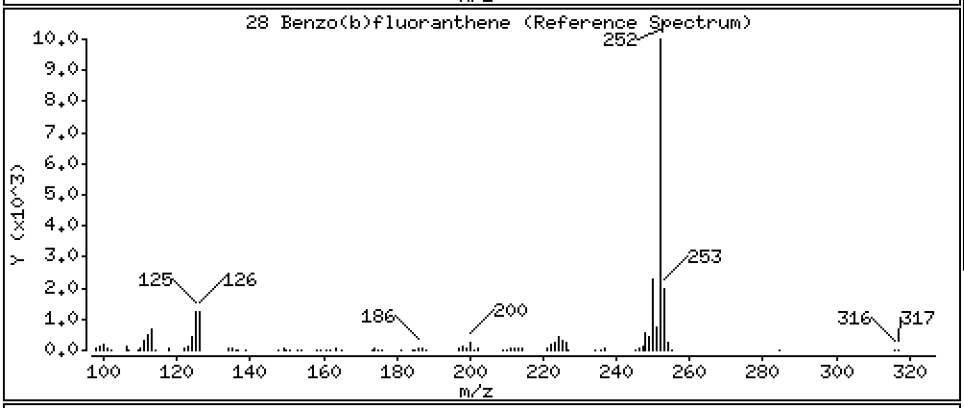
Concentration: 2.374 ug/mL

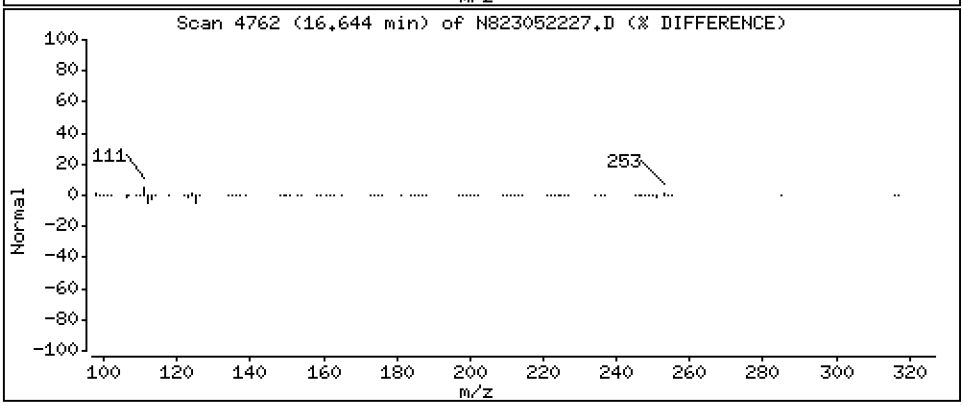












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

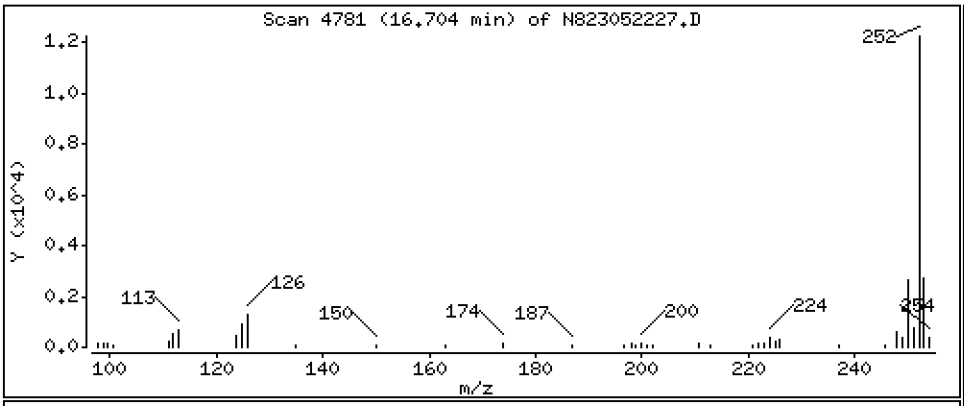
Operator: JZ

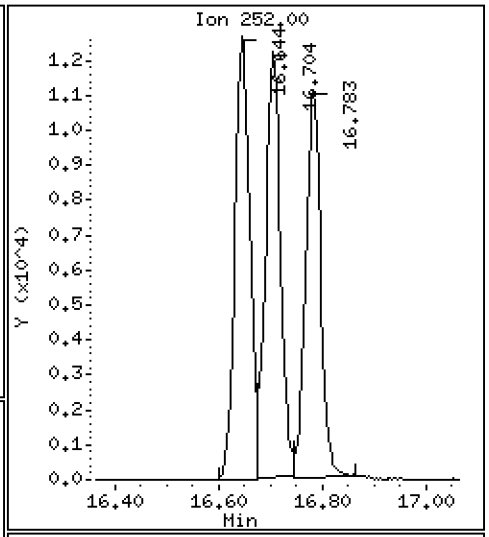
Column phase: Rxi-17sil

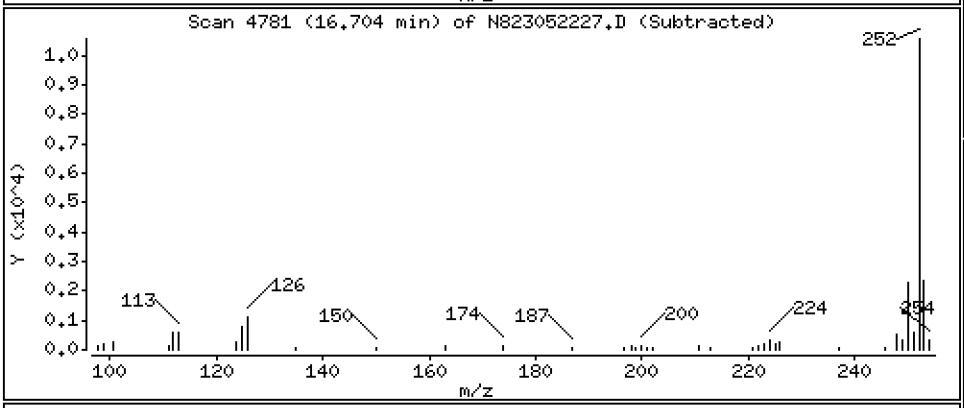
Column diameter: 0.25

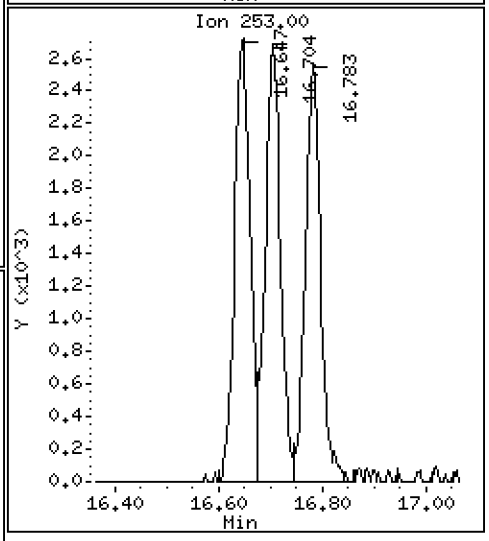
29 Benzo(k)fluoranthene

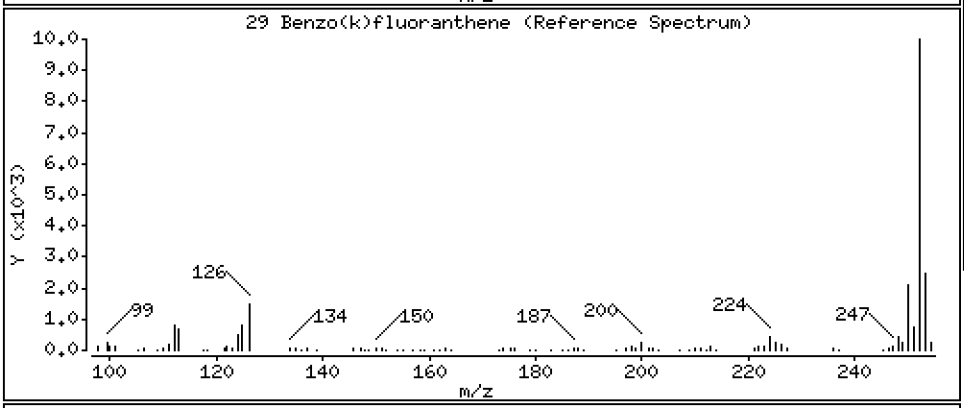
Concentration: 2.405 ug/mL

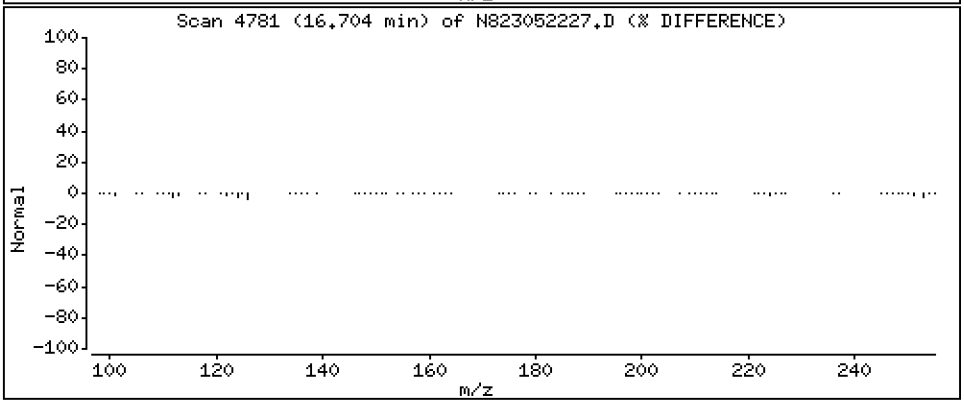












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

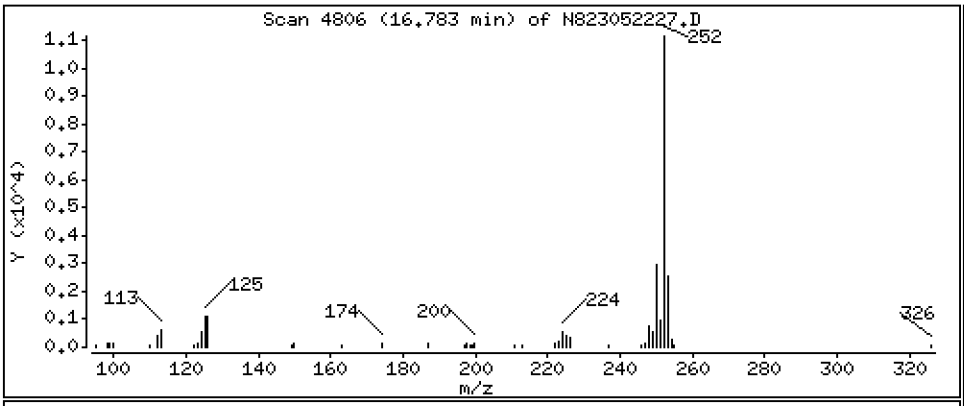
Operator: JZ

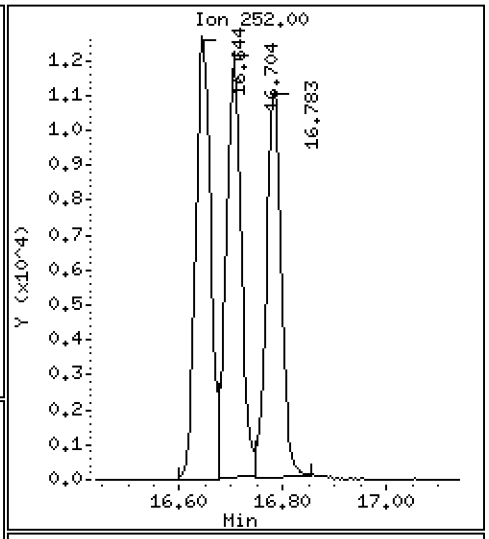
Column phase: Rxi-17sil

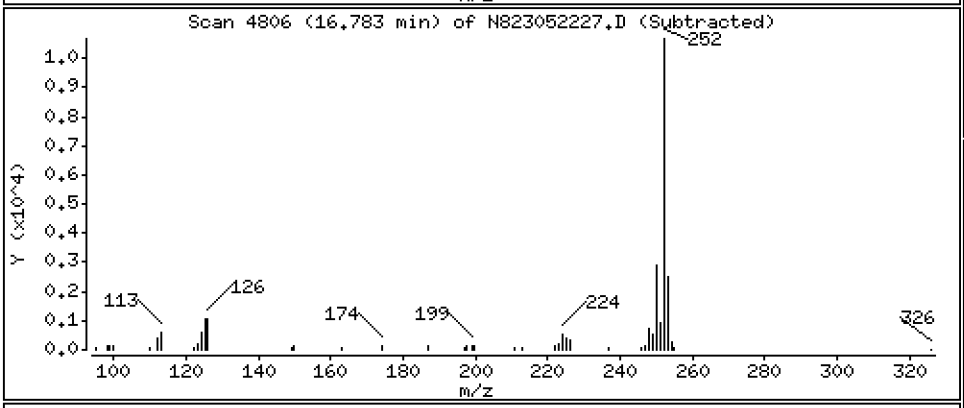
Column diameter: 0.25

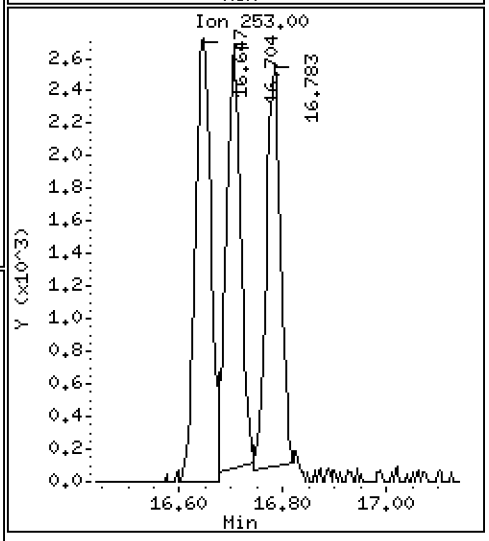
30 Benzo(j)fluoranthene

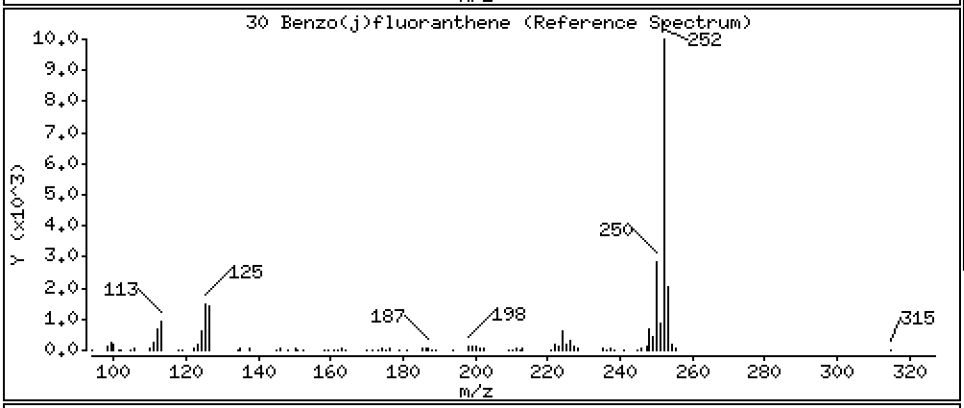
Concentration: 2.383 ug/mL

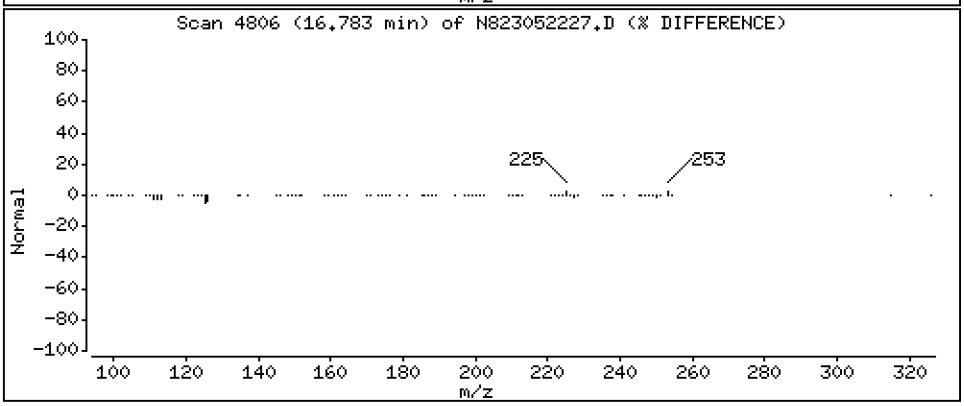












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

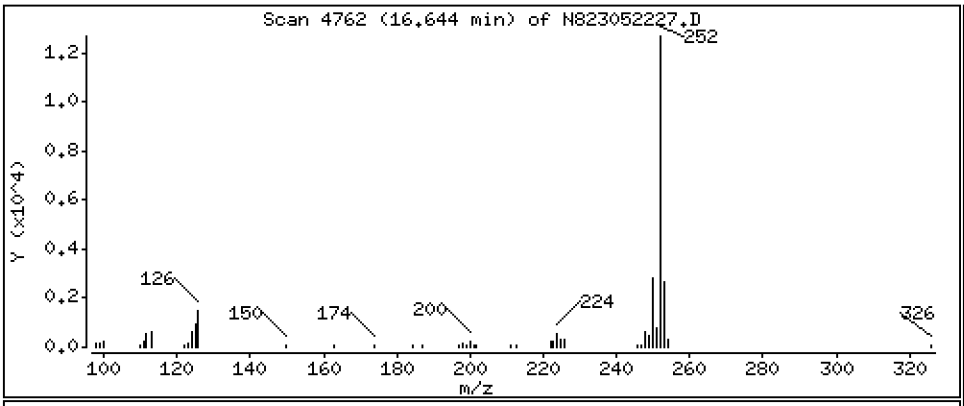
Operator: JZ

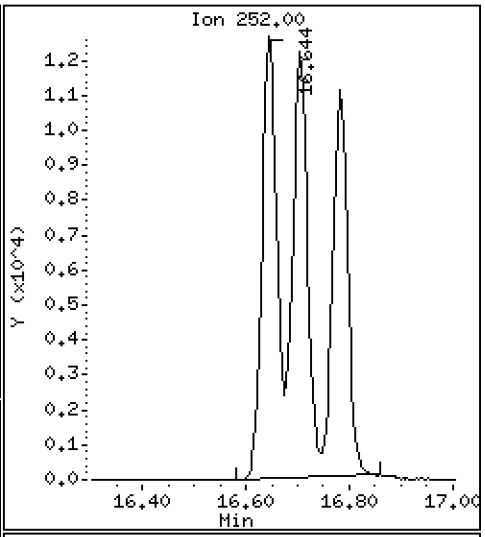
Column phase: Rxi-17sil

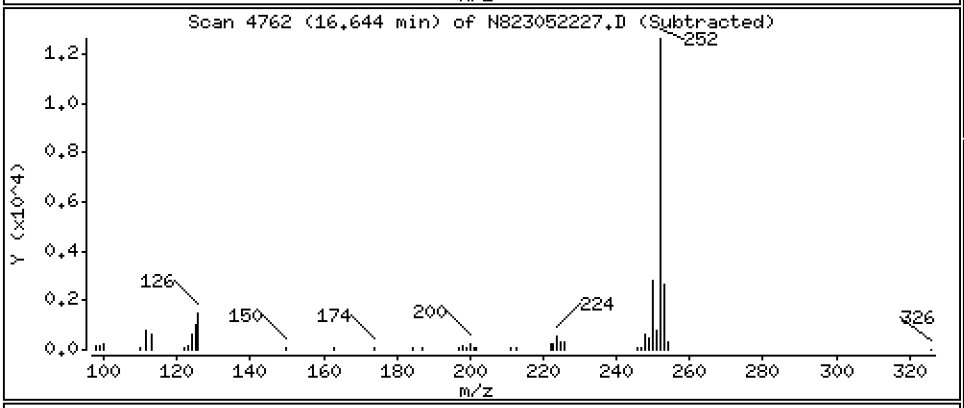
Column diameter: 0.25

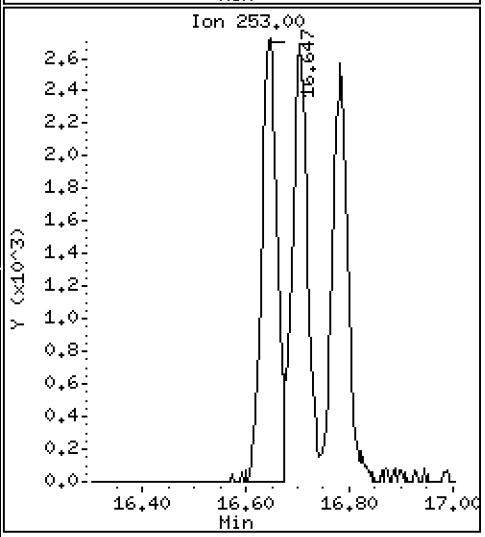
31 Total Benzofluoranthenes

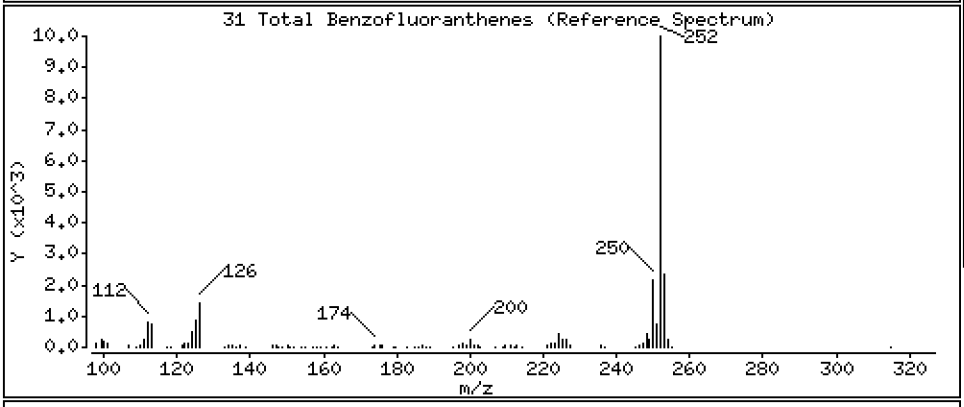
Concentration: 7.131 ug/mL

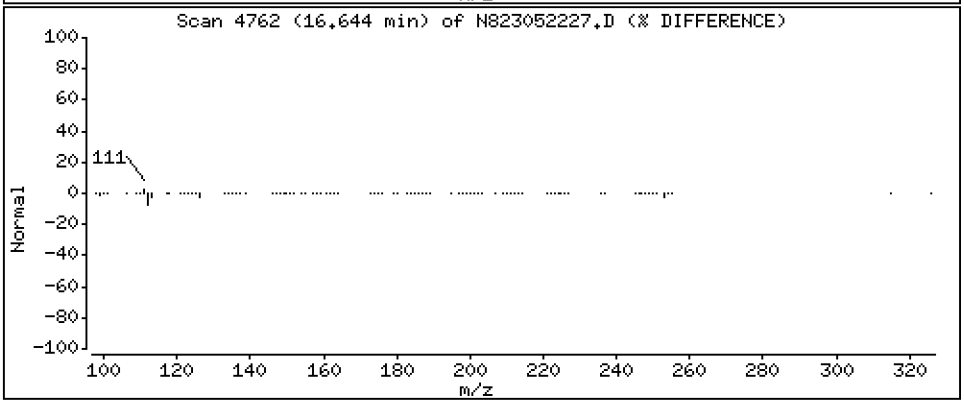












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

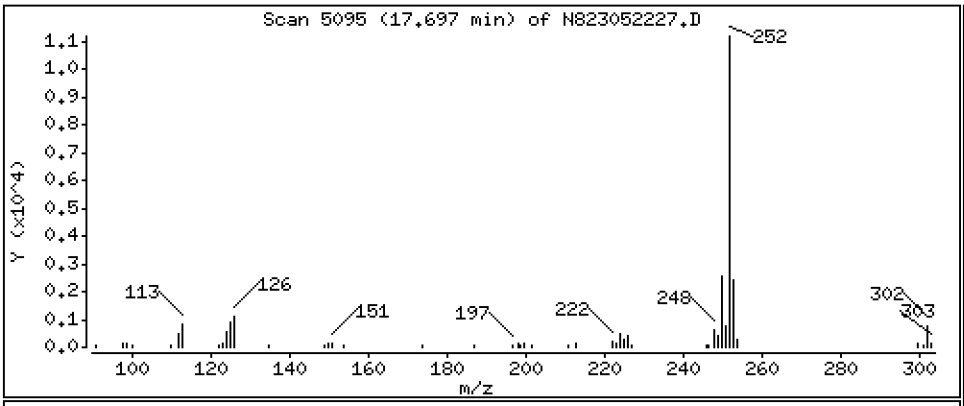
Operator: JZ

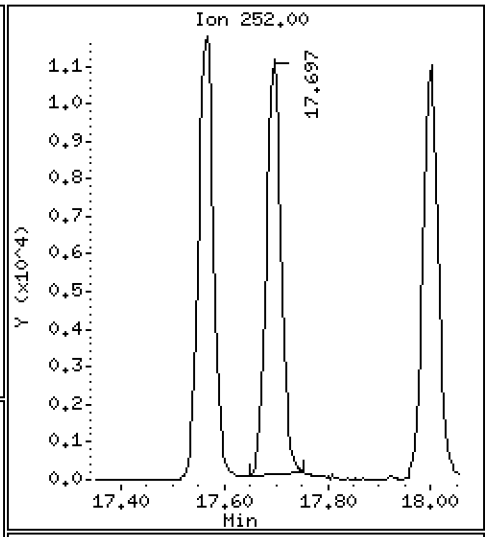
Column phase: Rxi-17sil

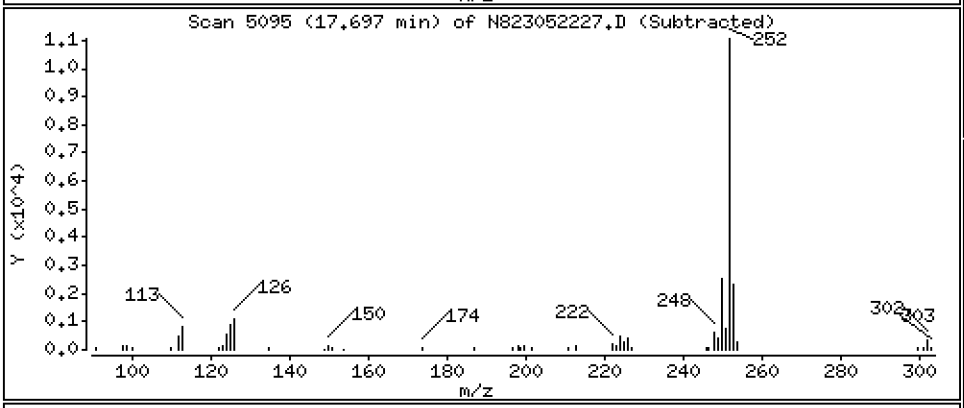
Column diameter: 0.25

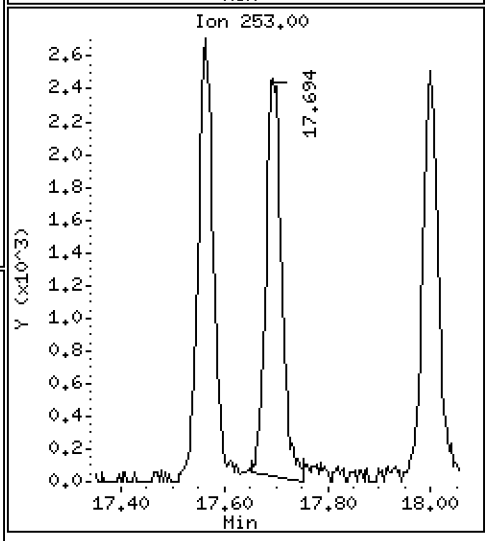
32 Benzo(a)pyrene

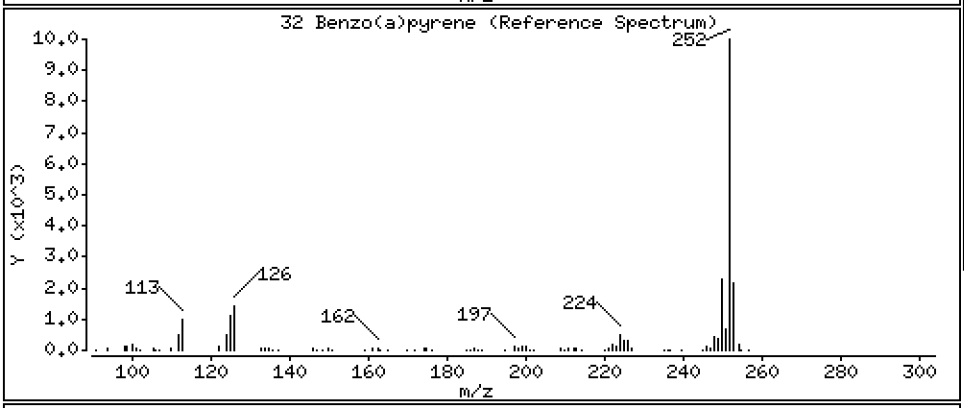
Concentration: 2.325 ug/mL

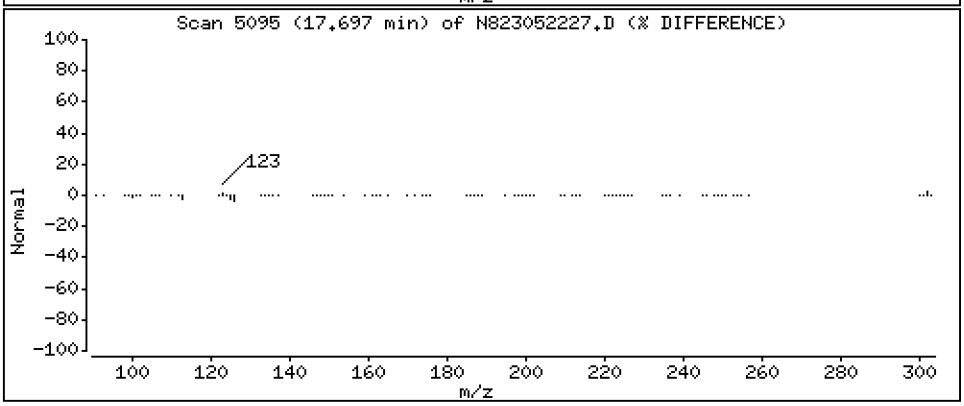












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

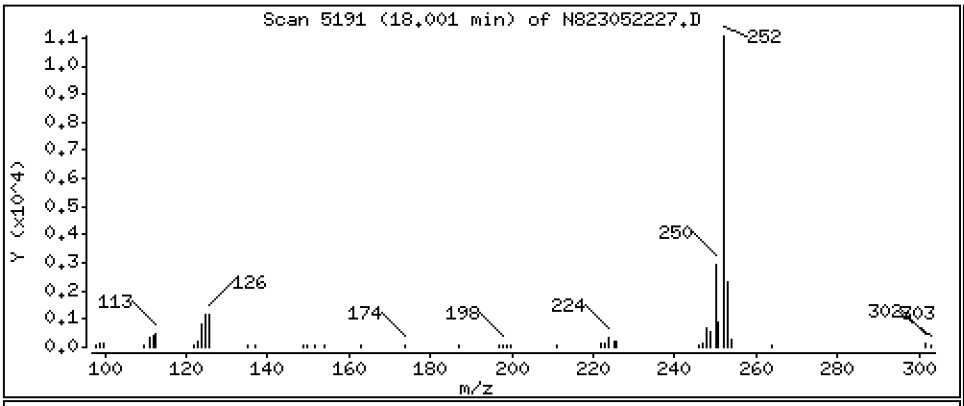
Operator: JZ

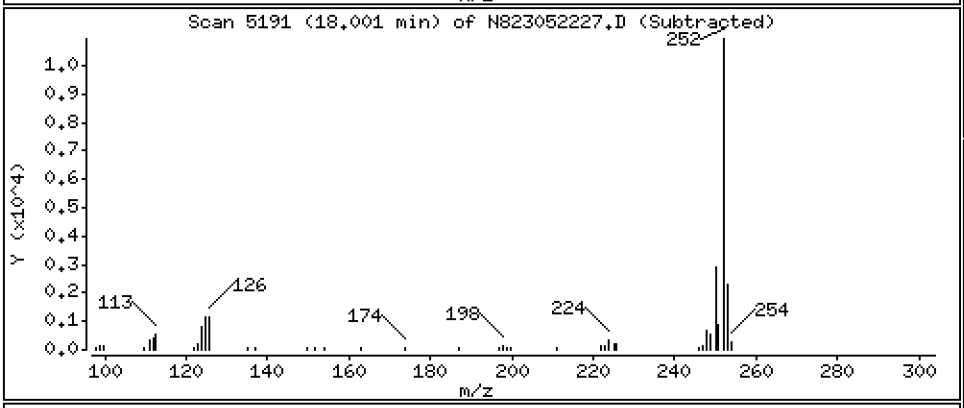
Column phase: Rxi-17sil

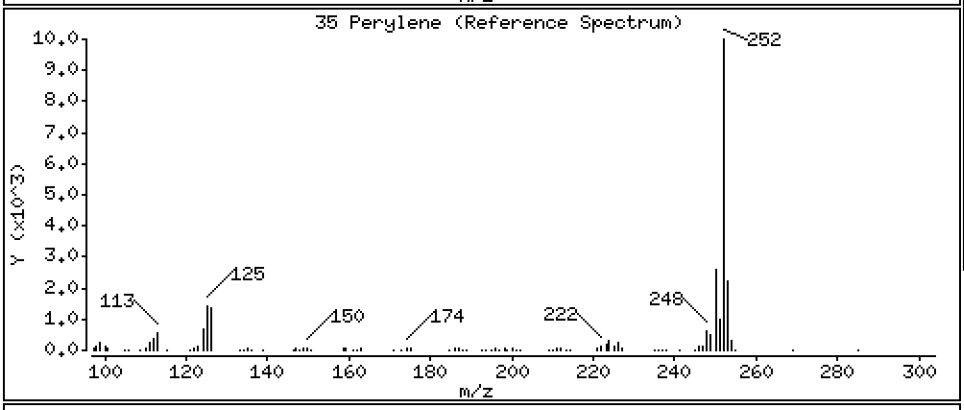
Column diameter: 0.25

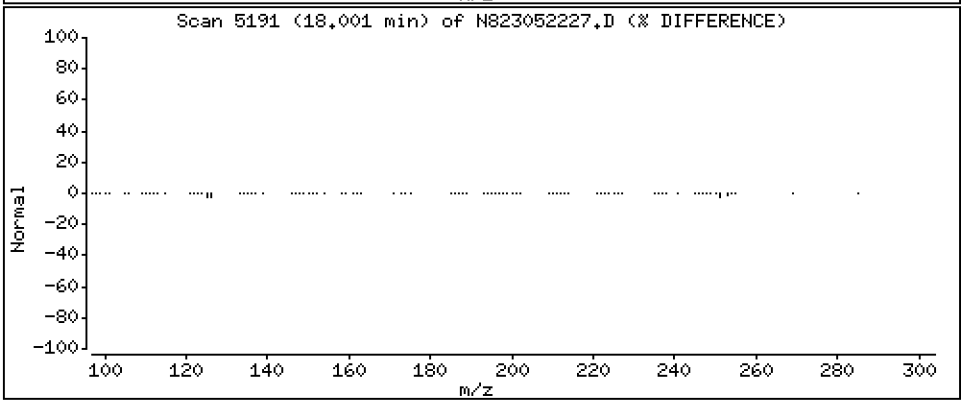
35 Perylene

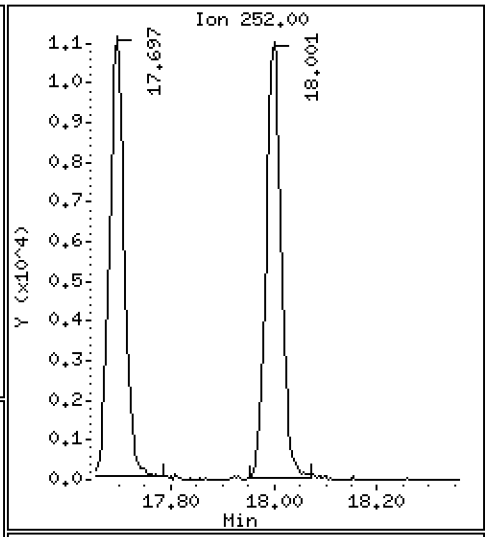
Concentration: 2.373 ug/mL

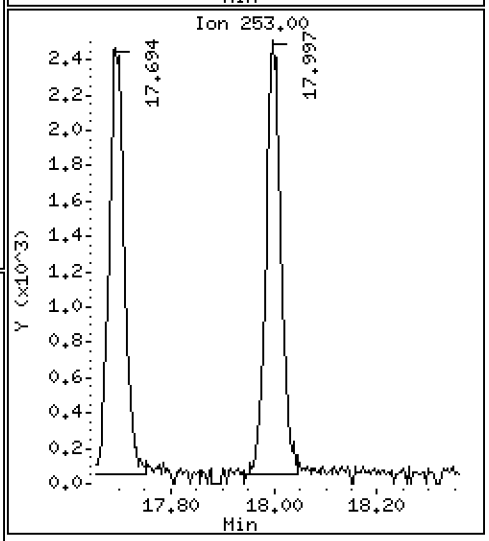












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

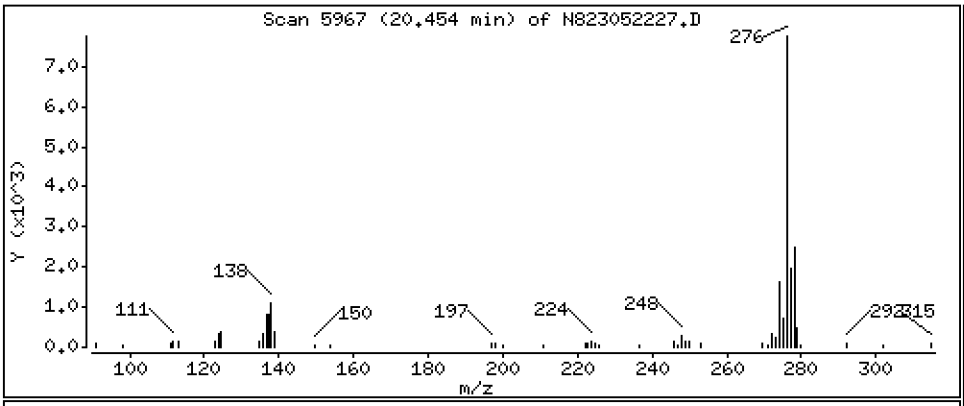
Operator: JZ

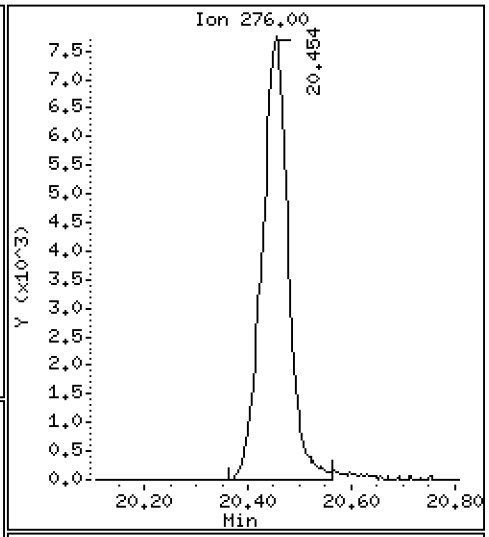
Column phase: Rxi-17sil

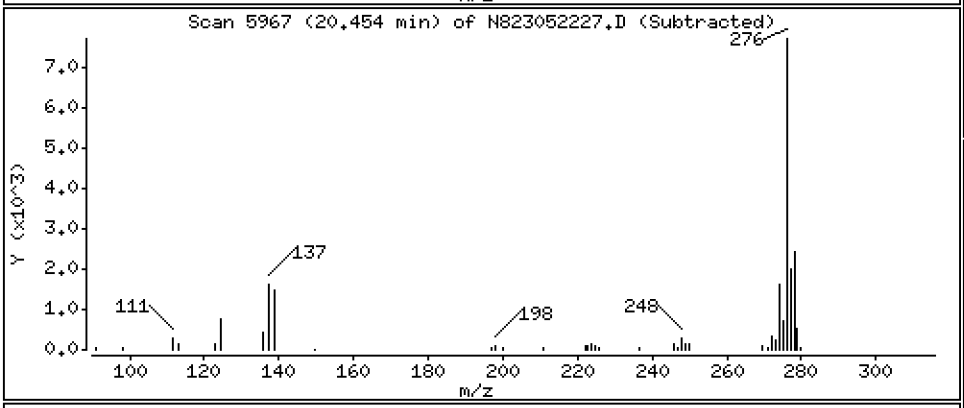
Column diameter: 0.25

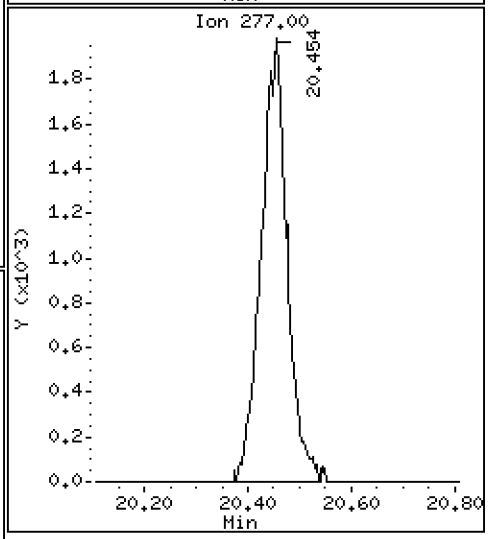
37 Indeno(1,2,3-cd)pyrene

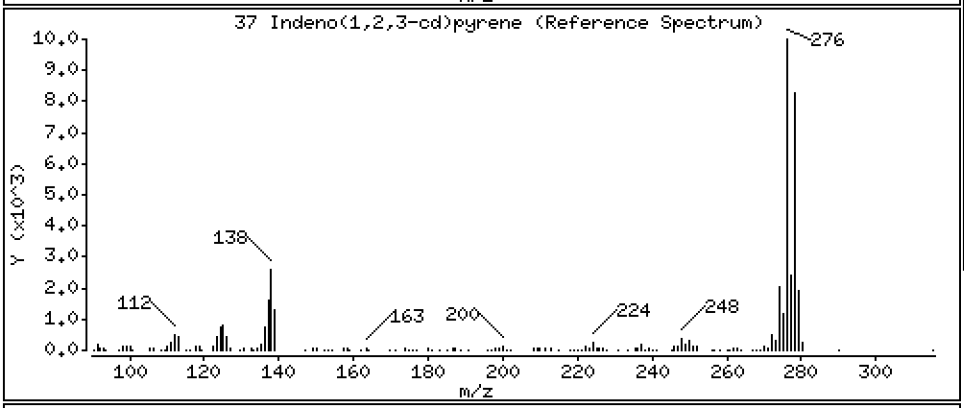
Concentration: 2.846 ug/mL

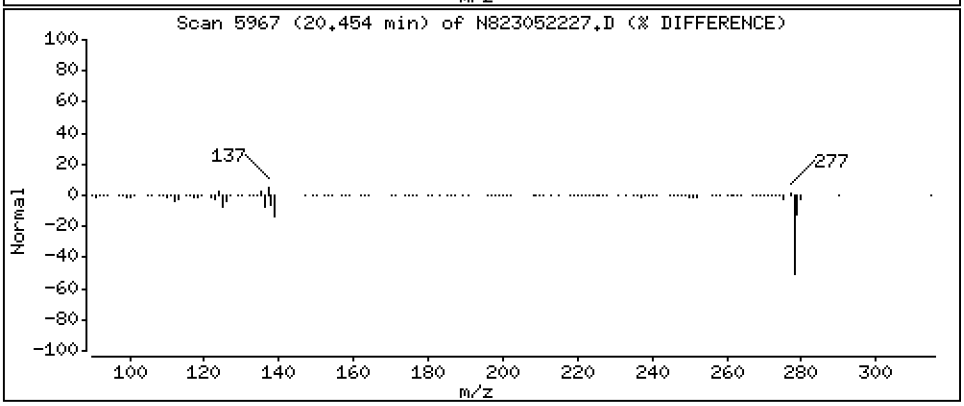












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

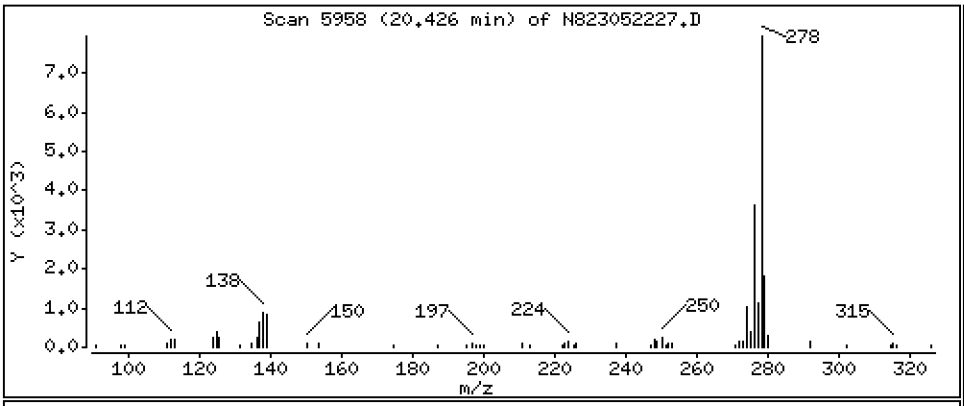
Operator: JZ

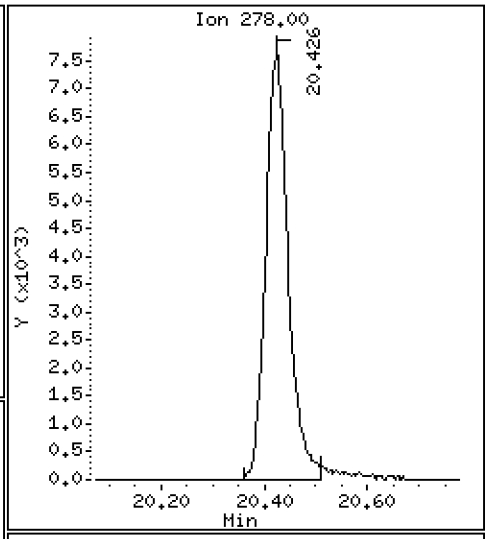
Column phase: Rxi-17sil

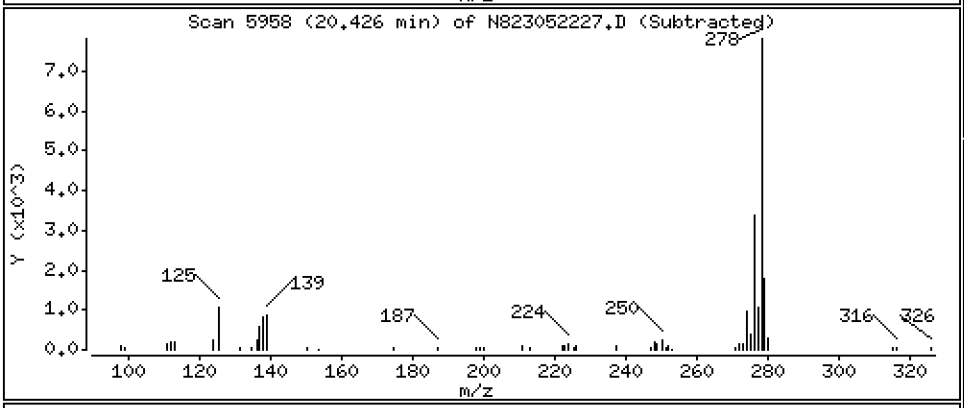
Column diameter: 0.25

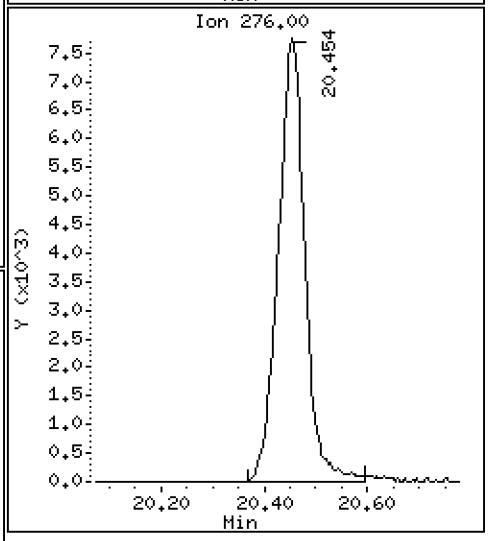
38 Dibenzo(a,h)anthracene

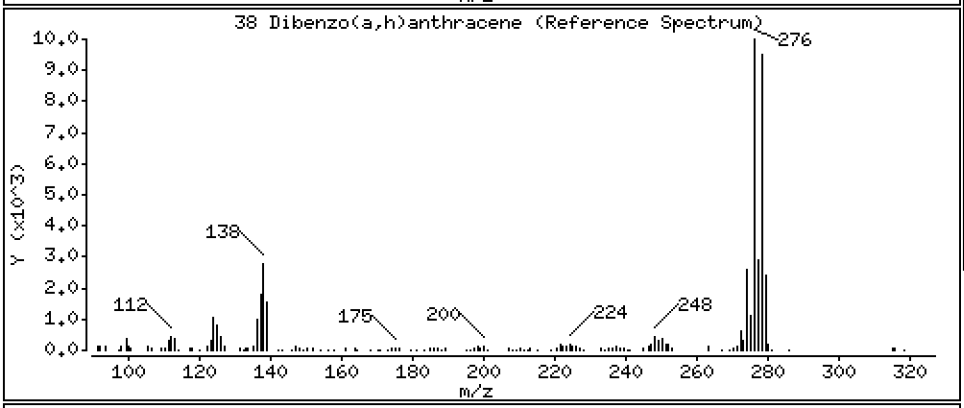
Concentration: 2.715 ug/mL

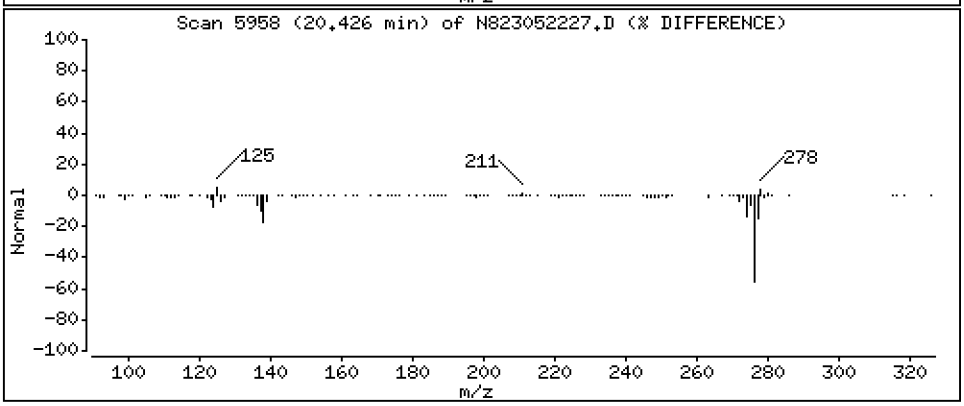












Data File: \\target\share\chem3\nt8.i\20230522.b\N823052227.D

Date : 22-MAY-2023 23:43

Client ID:

Instrument: nt8.i

Sample Info: CCV230522

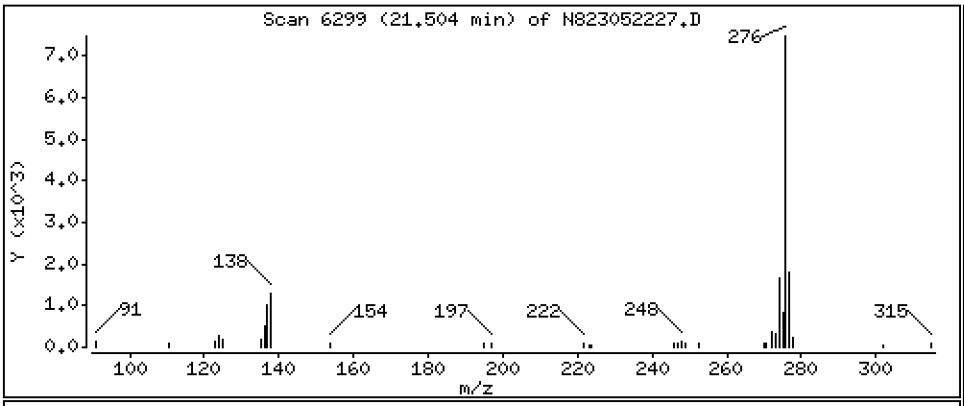
Operator: JZ

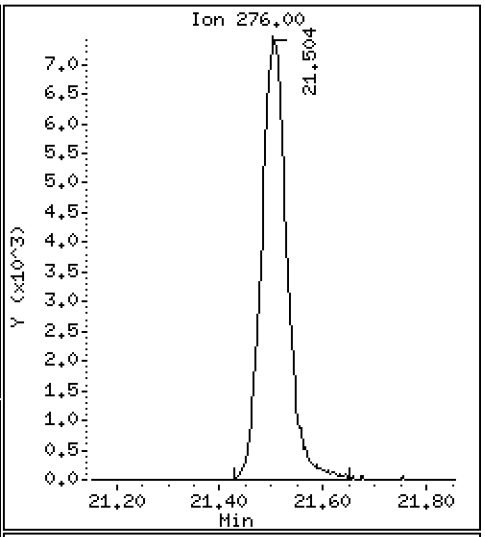
Column phase: Rxi-17sil

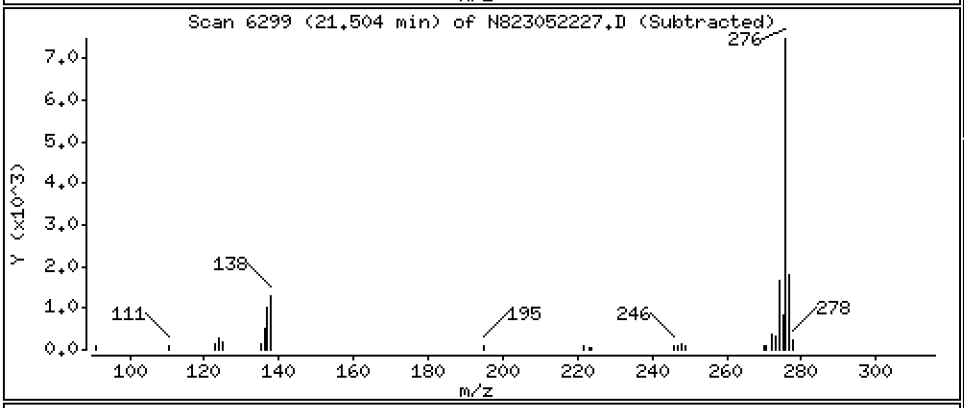
Column diameter: 0.25

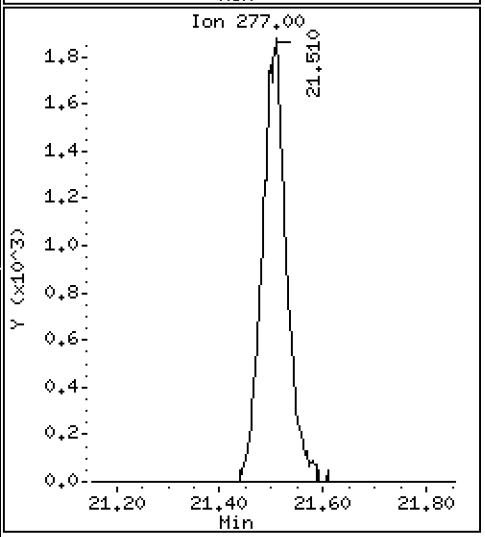
39 Benzo(g,h,i)perylene

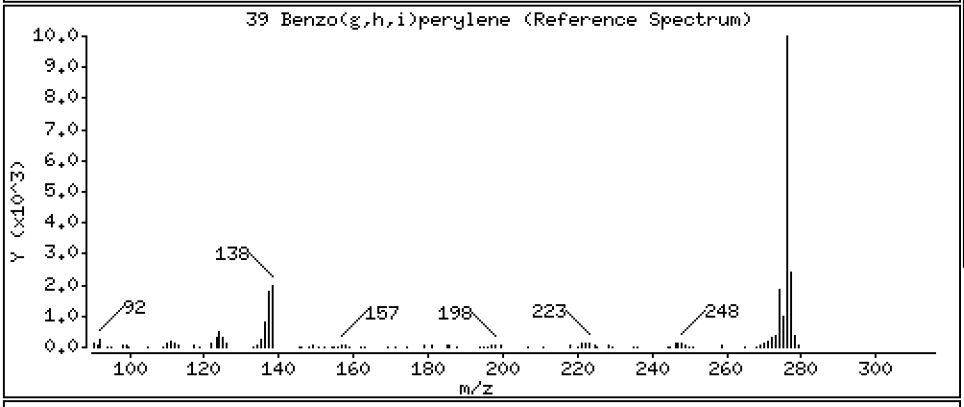
Concentration: 2.888 ug/mL

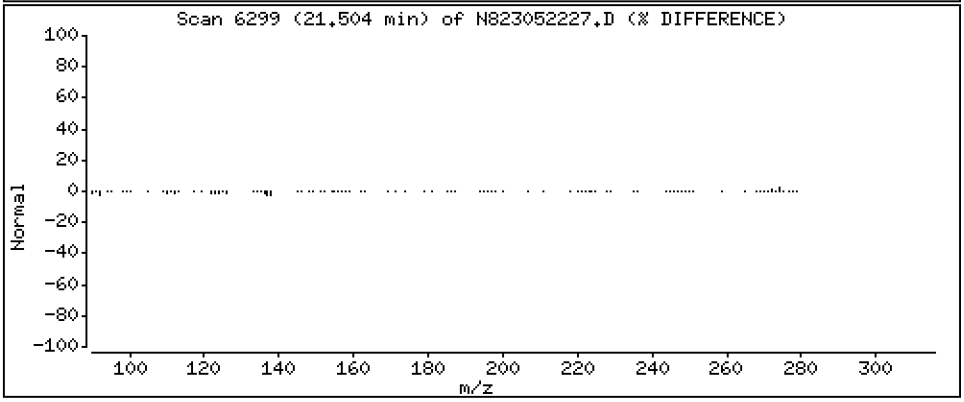












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230522.b\N823052227.D
Lab Smp Id: SLE0350-CCV1
Inj Date : 22-MAY-2023 23:43
Operator : JZ Inst ID: nt8.i
Smp Info : CCV230522
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Meth Date : 23-May-2023 10:38 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
*	1	Naphthalene-d8	136	4.812	4.818	(1.000)	19012	2.00000	
	2	Naphthalene	128	4.840	4.846	(1.006)	24031	2.48100	2.481
$	3	2-Methylnaphthalene-d10	152	5.545	5.551	(1.152)	14729	2.50841	2.508
	4	2-Methylnaphthalene	141	5.593	5.599	(1.162)	13614	2.47553	2.476
	5	1-methylnaphthalene	141	5.789	5.795	(1.203)	13721	2.51636	2.516
	9	Acenaphthylene	152	6.990	6.993	(0.985)	24703	2.52233	2.522
*	10	Acenaphthene-d10	164	7.098	7.101	(1.000)	11063	2.00000	
	11	Acenaphthene	153	7.148	7.151	(1.007)	15665	2.46876	2.469
	12	Dibenzofuran	168	7.300	7.306	(1.029)	23007	2.41405	2.414
	14	Fluorene	166	7.777	7.781	(1.096)	18878	2.48199	2.482
*	15	Phenanthrene-d10	188	9.134	9.140	(1.000)	21555	2.00000	
	16	Phenanthrene	178	9.169	9.175	(1.004)	27046	2.36889	2.369
	17	Anthracene	178	9.210	9.213	(1.008)	27414	2.56018	2.560
	19	Carbazole	167	9.725	9.731	(1.065)	23532	2.30079	2.301
	22	Fluoranthene	202	10.927	10.930	(1.196)	30867	2.35061	2.351
$	21	Fluoranthene-d10	212	10.889	10.895	(1.192)	27861	2.39450	2.395
	23	Pyrene	202	11.436	11.442	(0.815)	31633	2.86874	2.869
	24	Benzo(a)anthracene	228	13.912	13.918	(0.991)	28012	2.47222	2.472
*	25	Chrysene-d12	240	14.035	14.044	(1.000)	17223	2.00000	
	27	Chrysene	228	14.108	14.117	(1.005)	27197	2.44333	2.443
	28	Benzo(b)fluoranthene	252	16.644	16.653	(0.929)	25910	2.37389	2.374
	29	Benzo(k)fluoranthene	252	16.704	16.713	(0.932)	24728	2.40464	2.405
	30	Benzo(j)fluoranthene	252	16.783	16.789	(0.936)	22646	2.38345	2.383
	31	Total Benzofluoranthenes	252	16.644	16.653	(0.929)	72382	7.13141	7.131(M)
	32	Benzo(a)pyrene	252	17.697	17.703	(0.987)	22055	2.32468	2.325(M)
*	33	Perylene-d12	264	17.924	17.934	(1.000)	16742	2.00000	
	35	Perylene	252	18.000	18.006	(1.004)	22606	2.37288	2.373
$	36	Dibenzo(a,h)anthracene-d14	292	20.308	20.318	(1.133)	18127	2.83596	2.836
	37	Indeno(1,2,3-cd)pyrene	276	20.454	20.457	(1.141)	27481	2.84561	2.846
	38	Dibenzo(a,h)anthracene	278	20.425	20.425	(1.140)	23285	2.71530	2.715
	39	Benzo(g,h,i)perylene	276	21.504	21.503	(1.200)	25839	2.88843	2.888

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823052227.D
Lab Smp Id: SLE0350-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230522.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 22-MAY-2023
Calibration Time: 11:46
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	17081	8541	34162	19012	11.30
10 Acenaphthene-d10	9674	4837	19348	11063	14.36
15 Phenanthrene-d10	17710	8855	35420	21555	21.71
25 Chrysene-d12	15081	7541	30162	17223	14.20
33 Perylene-d12	15623	7812	31246	16742	7.16

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.13
10 Acenaphthene-d10	7.10	6.60	7.60	7.10	-0.04
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.04	-0.07
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.05

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

REVIEW SUMMARY FOR FILE - N823052227.D

Lab ID: SLE0350-CCV1
nt8.i, 20230522.b\FSIMPNA230426.m,   22-MAY-2023 23:43

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

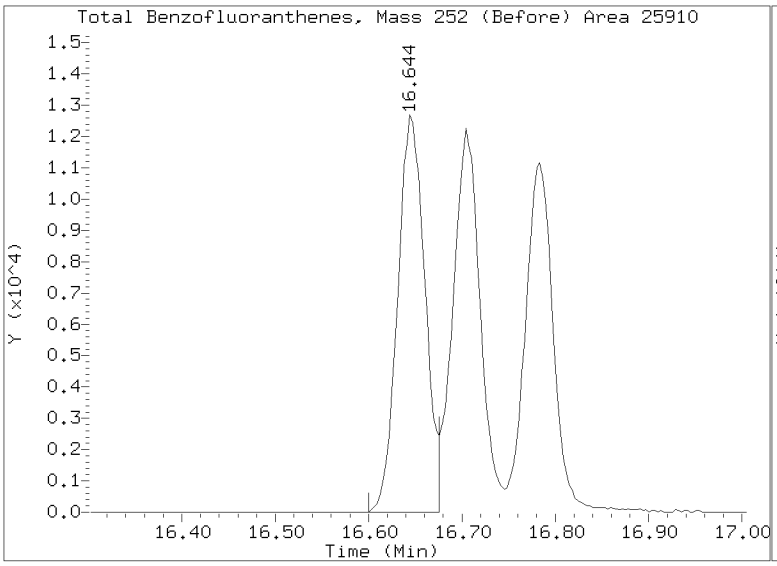
No RRT check performed

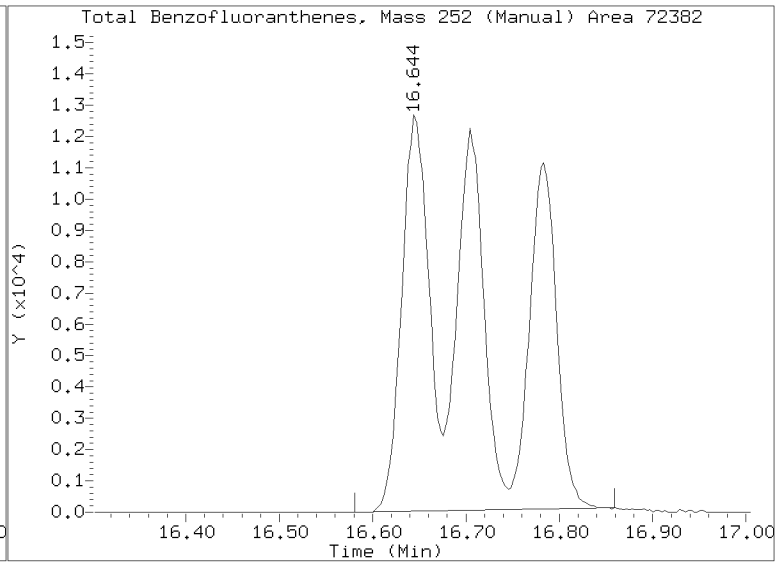
On Column LOD for nt8.i, 20230522.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

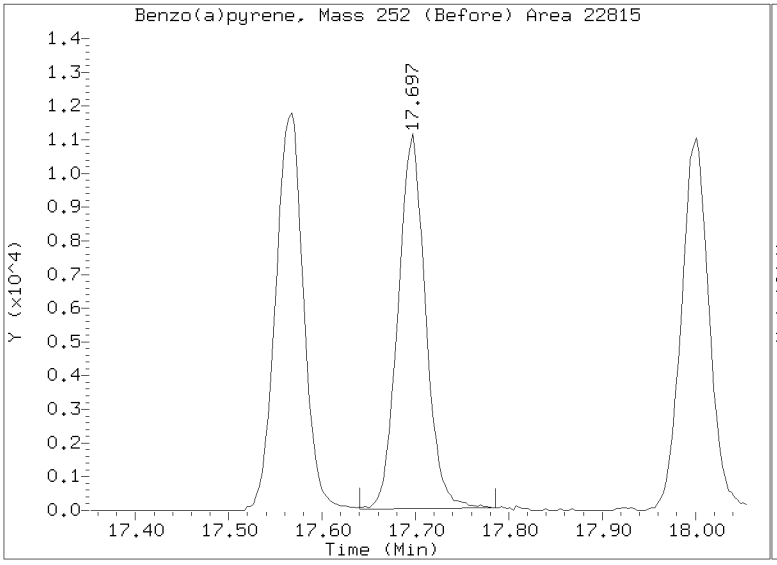
* Only compounds listed in the work order have been verified by the analyst *

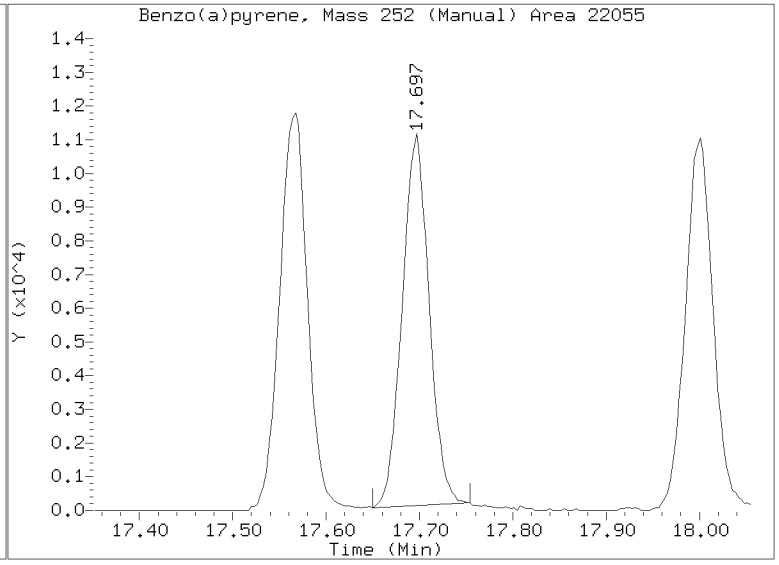
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230522.b/N823052227.D
Injection Date: 22-MAY-2023 23:43
Lab ID:SLE0350-CCV1 Client ID:
Report Date: 05/23/2023 11:41









Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00070
Lab File ID:	NT1706012339S.D	Calibration Date:	05/16/2023
Sequence:	SLF0037	Injection Date:	06/02/23
Lab Sample ID:	SLF0037-CCV1	Injection Time:	11:39
Sequence Name:	ABN 1.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.5745540	1.6024730		1.8	+/-50
1,2-Dichlorobenzene	A	1.0000	1.0	1.5432720	1.5438990		0.04	+/-50
Benzyl Alcohol	A	1.0000	1.0	1.0272110	1.0071990		-1.9	+/-50
Benzoic acid	A	4.0000	3.4	0.1537024	0.2026431		-15.5	+/-50
2,4-Dimethylphenol	A	2.0000	2.0	0.3847731	0.3777658		-1.8	+/-50
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3490929	0.3392629		-2.8	+/-50
N-Nitrosodiphenylamine	A	1.0000	1.0	0.5635219	0.5804006		3.0	+/-50
Pentachlorophenol	A	2.0000	1.9	0.0772800	0.1041426		-4.9	+/-50
2-Fluorophenol	A	1.5000	1.43	1.2098450	1.1555200		-4.5	+/-50
p-Terphenyl-d14	A	1.0000	1.18	0.7589992	0.8976428		18.3	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123395.D

Date : 02-JUN-2023 11:39

Client ID:

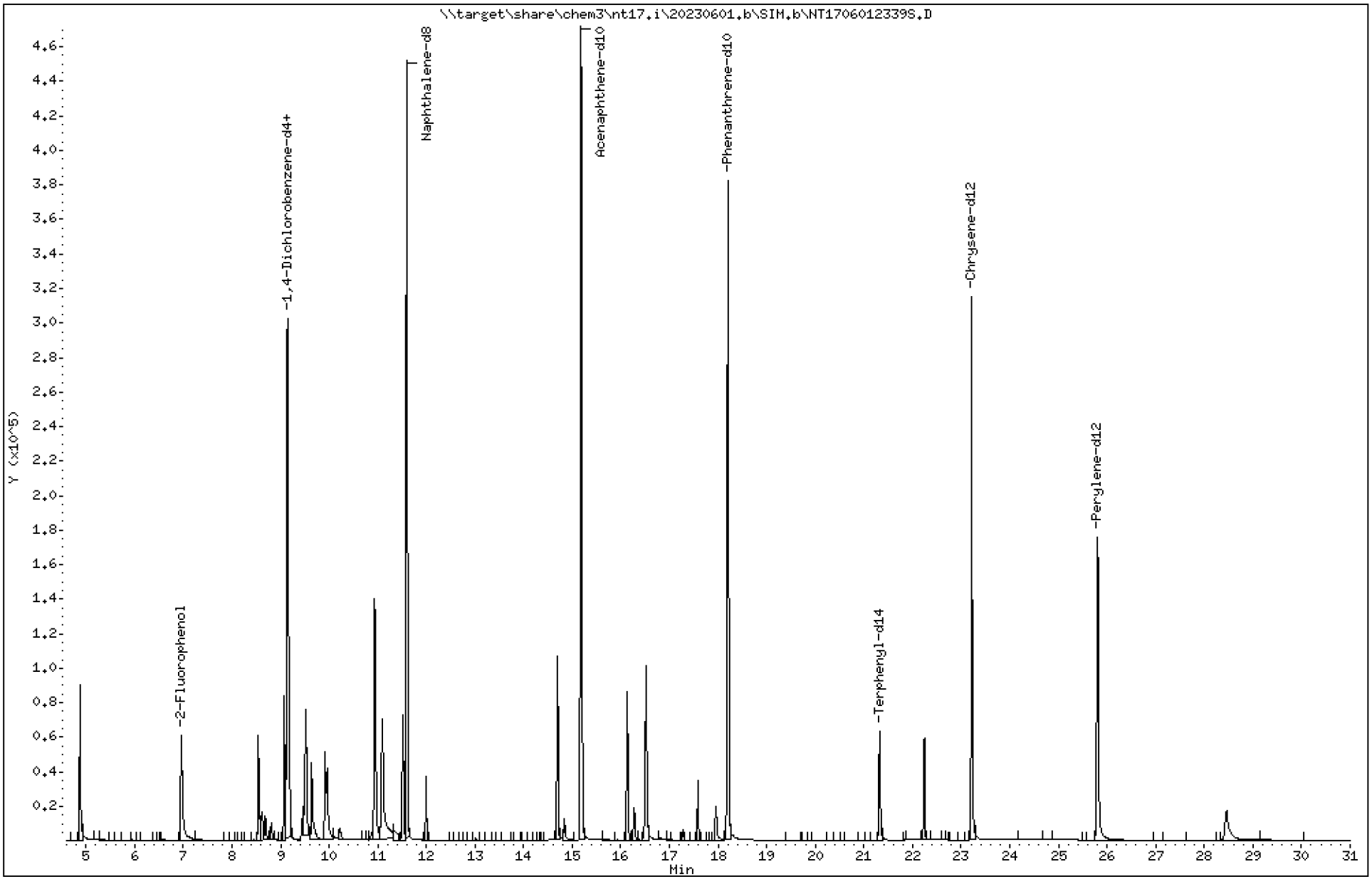
Sample Info: SLF0037-CCV1

Column phase: ZB-5msi

Instrument: nt17.i

Operator: VTS

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

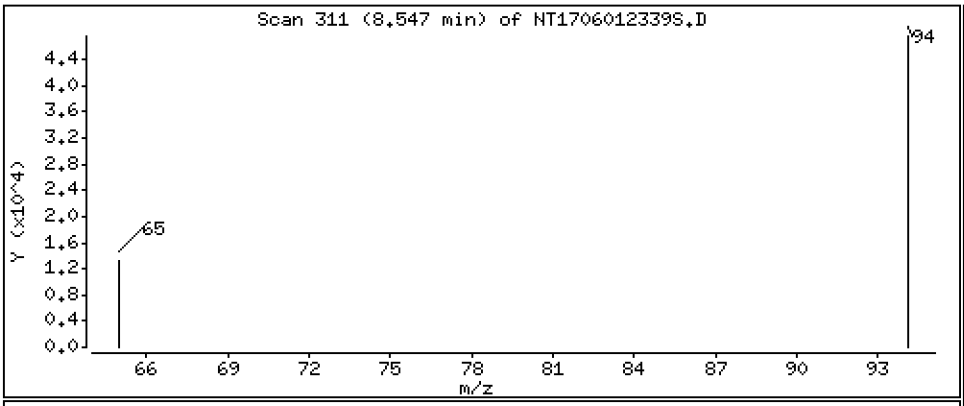
Operator: VTS

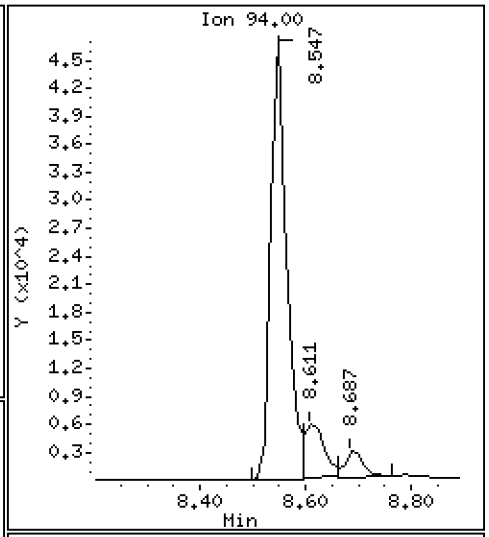
Column phase: ZB-5msi

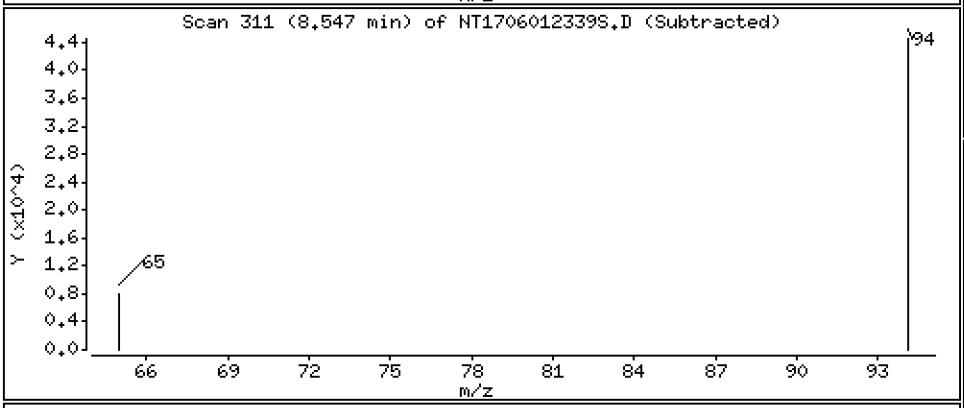
Column diameter: 0.25

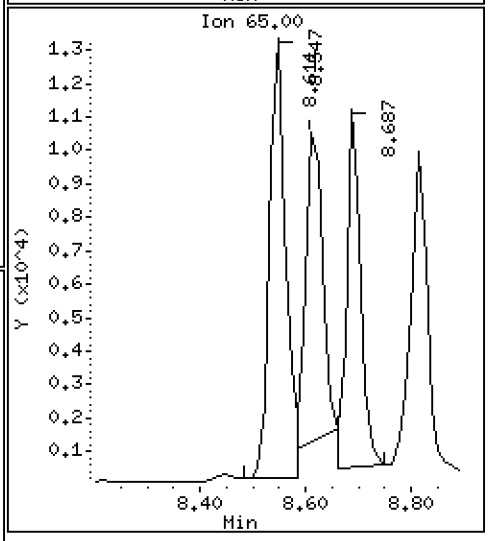
3 Phenol

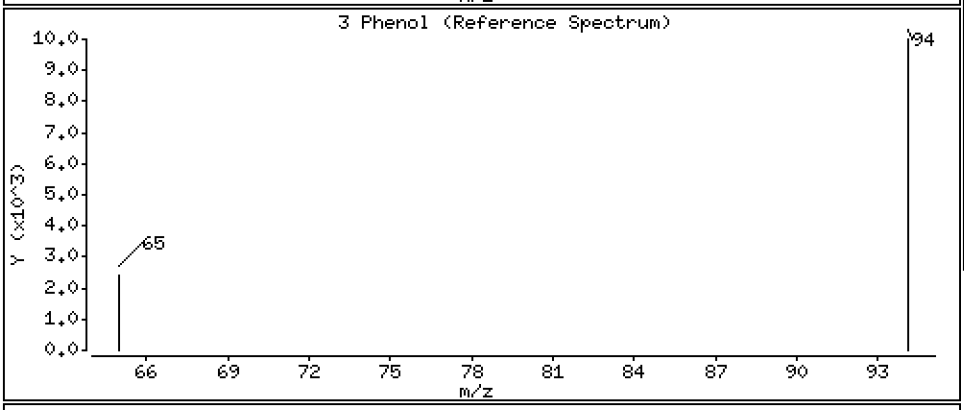
Concentration: 0.9917 ug/mL

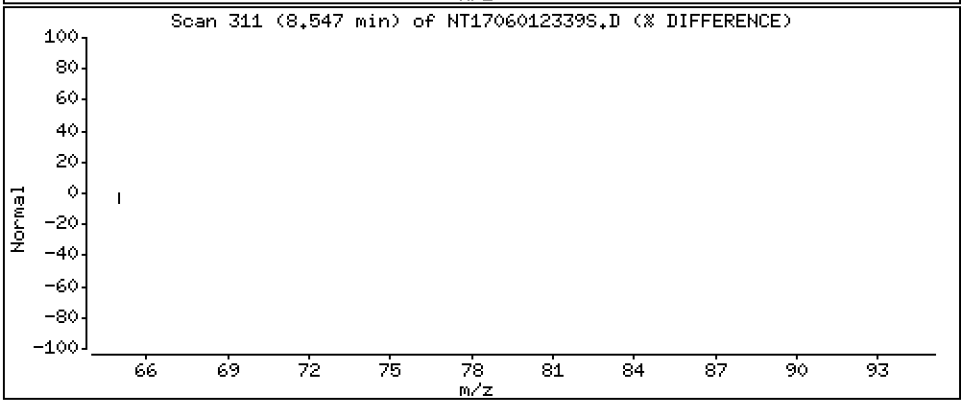












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

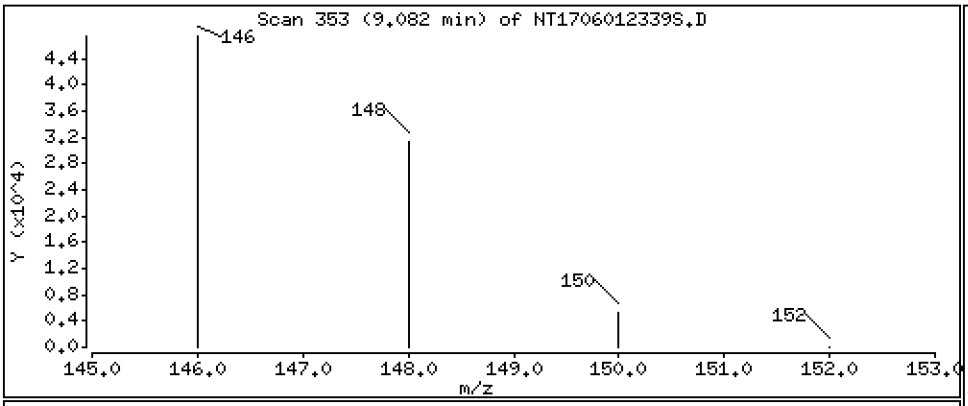
Operator: VTS

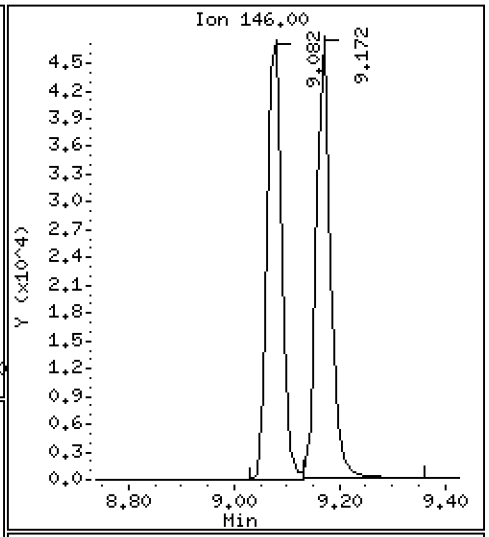
Column phase: ZB-5msi

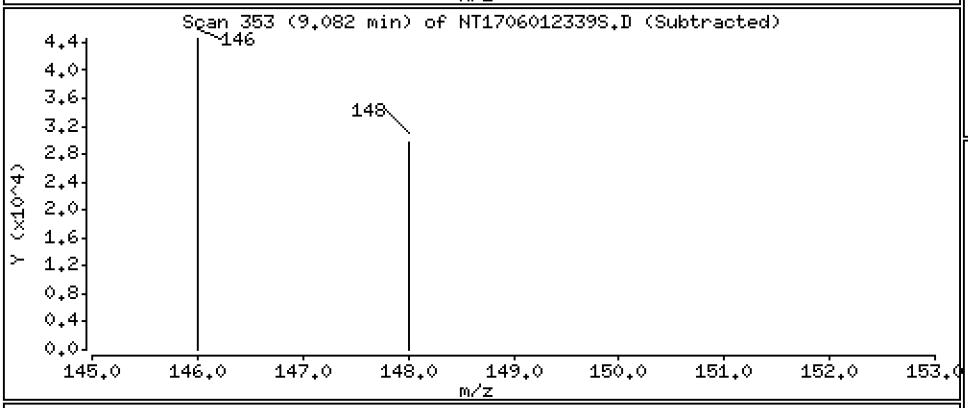
Column diameter: 0.25

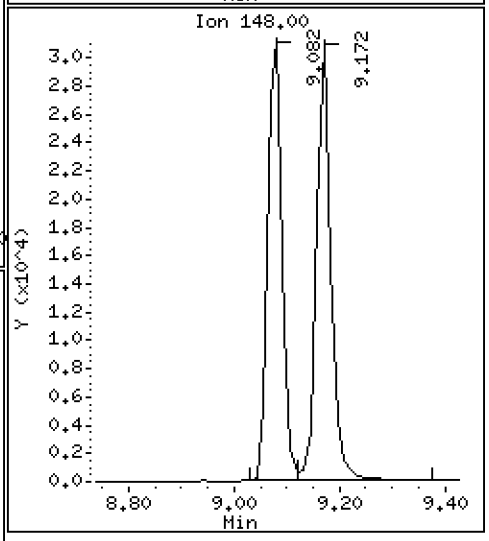
7 1,3-Dichlorobenzene

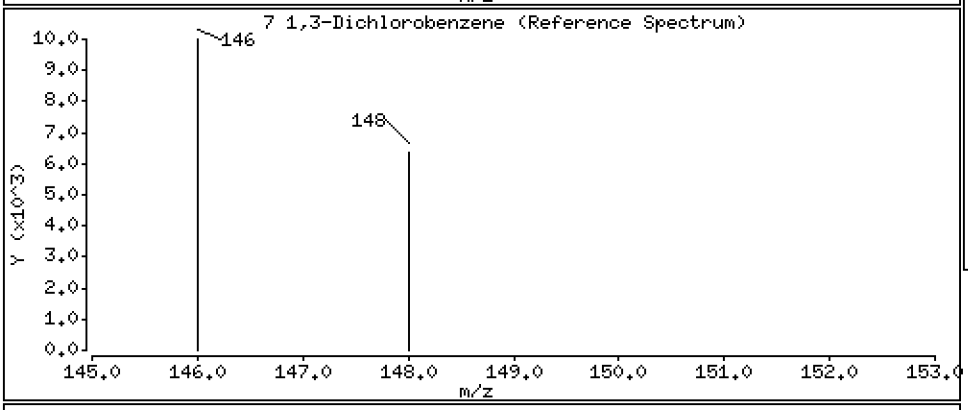
Concentration: 1.010 ug/mL

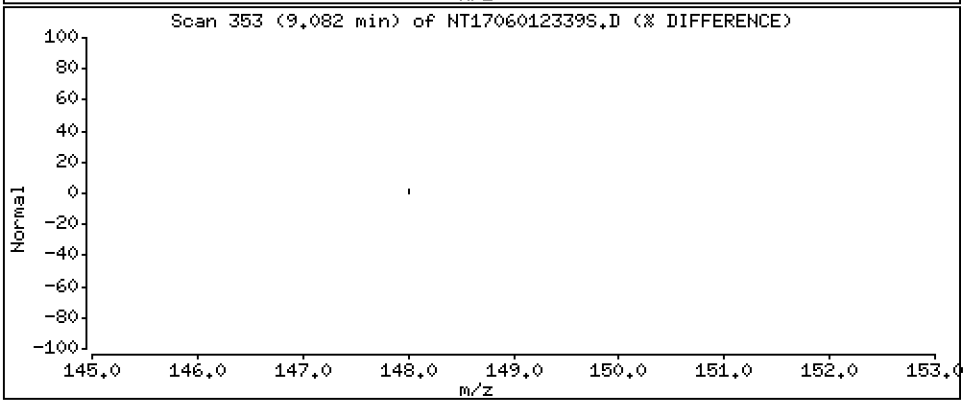












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

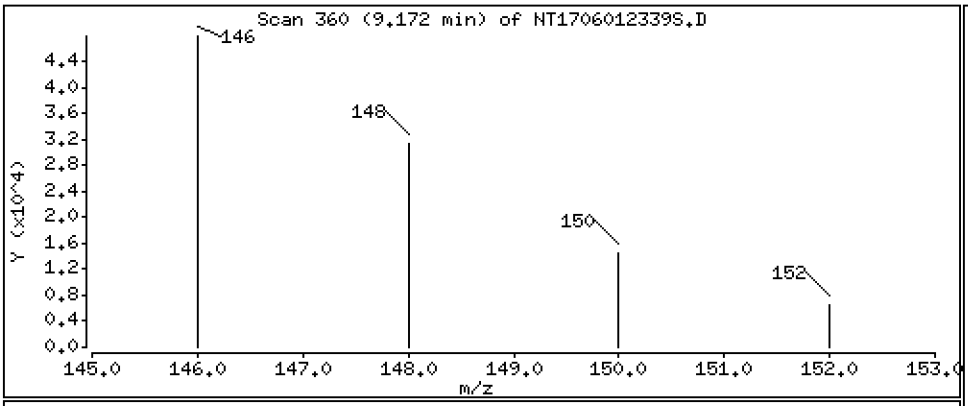
Operator: VTS

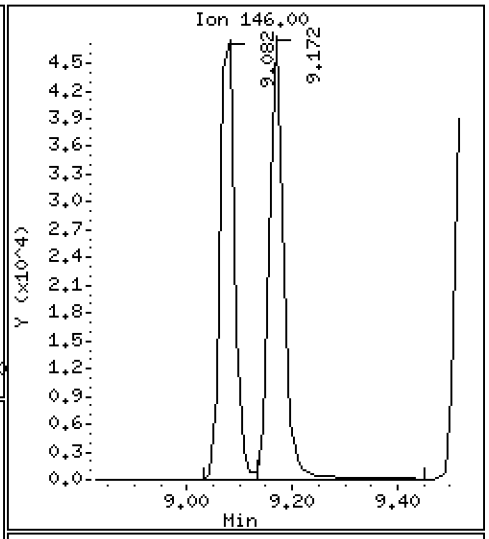
Column phase: ZB-5msi

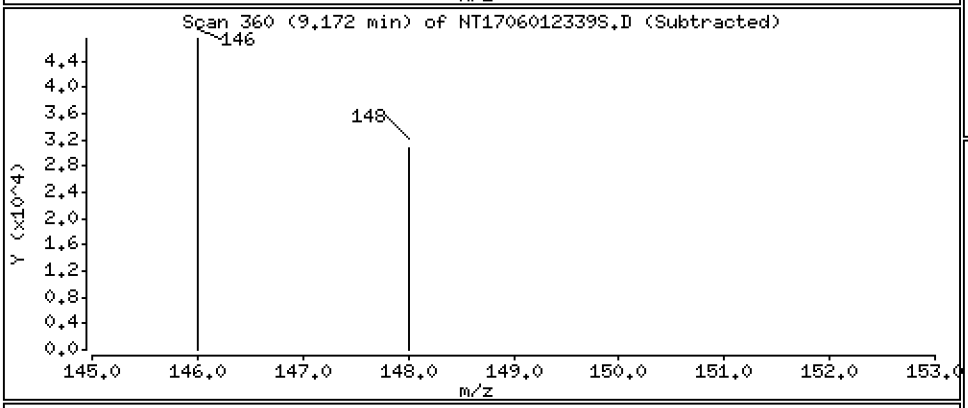
Column diameter: 0.25

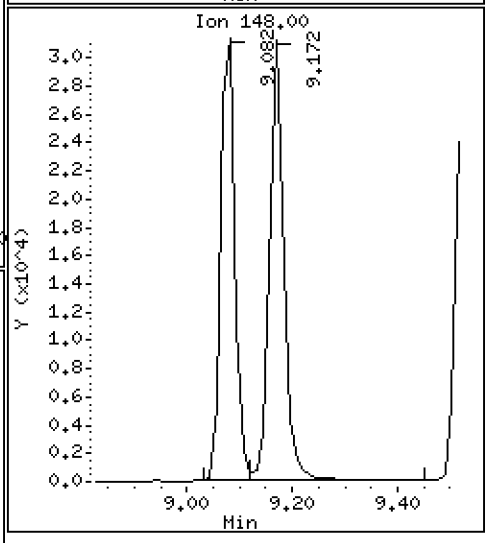
9 1,4-Dichlorobenzene

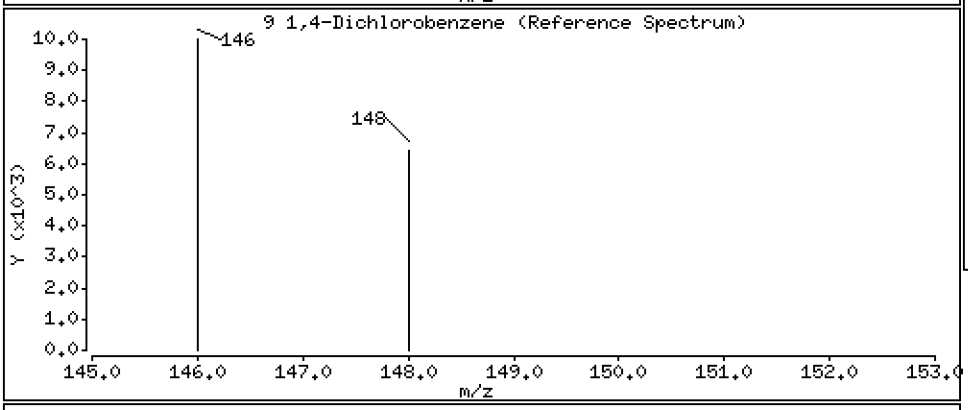
Concentration: 1.018 ug/mL

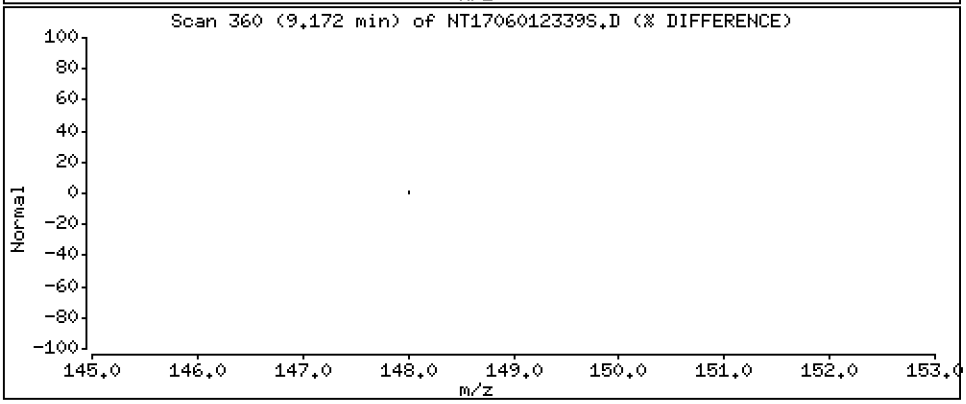












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

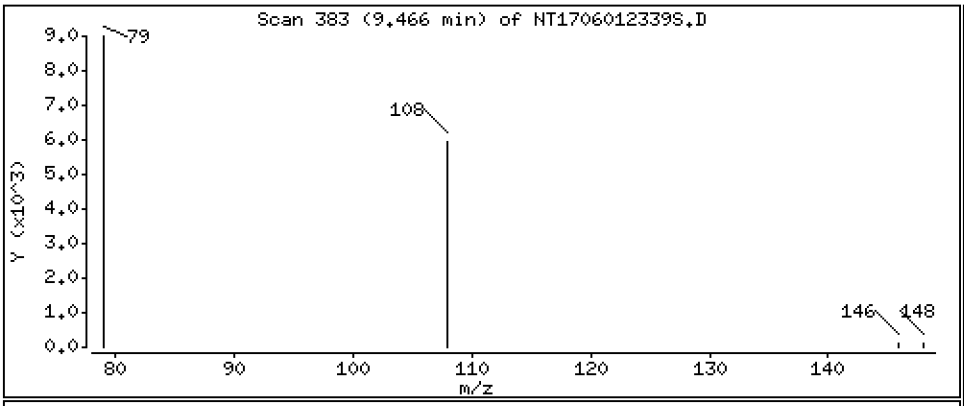
Operator: VTS

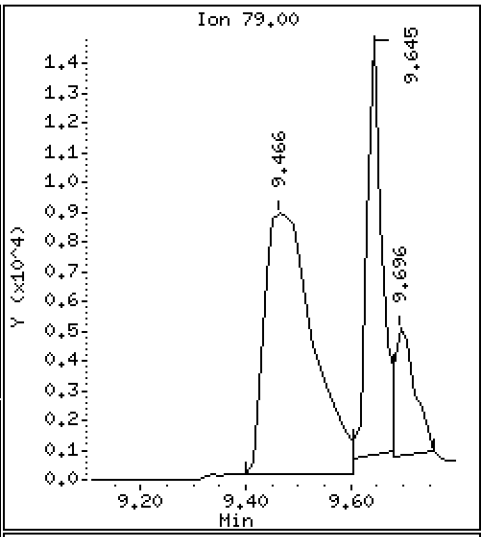
Column phase: ZB-5msi

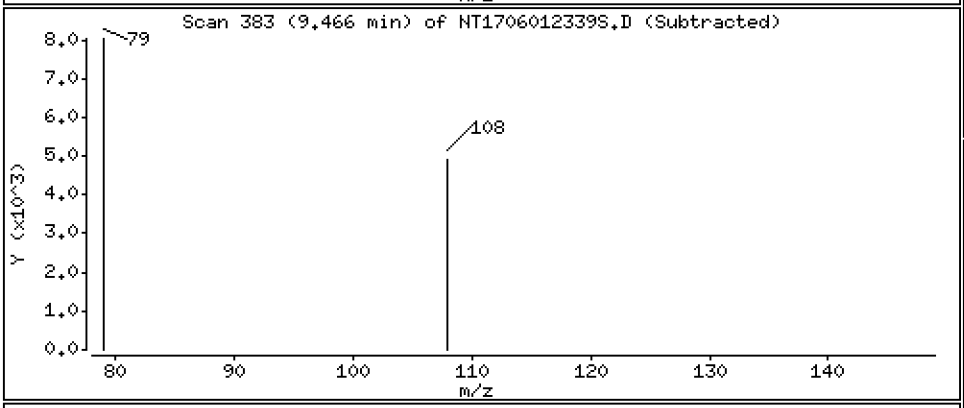
Column diameter: 0.25

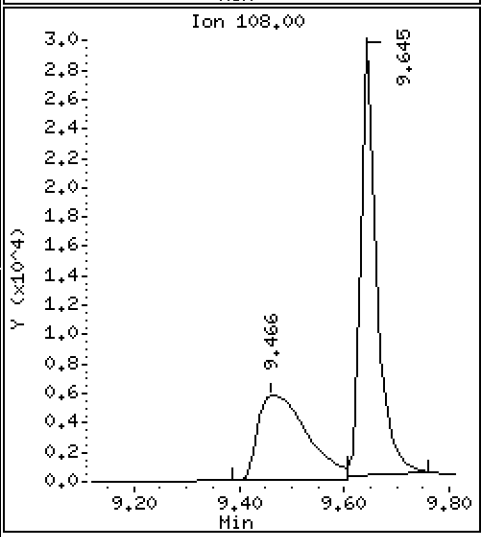
11 Benzyl alcohol

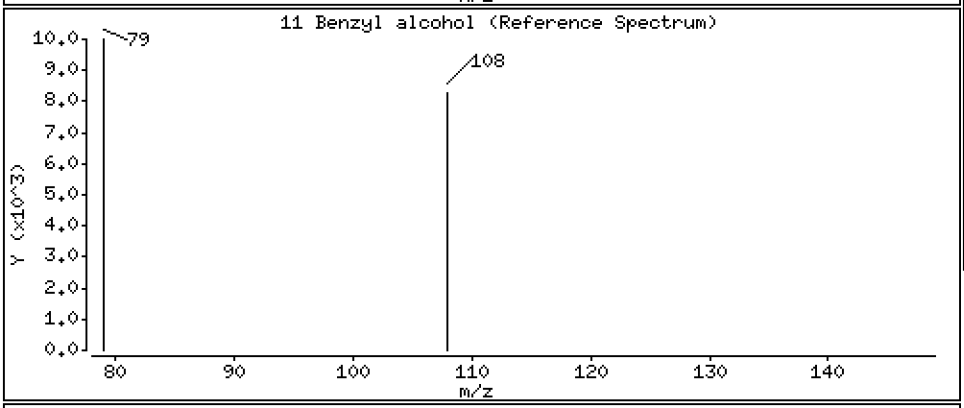
Concentration: 0.9805 ug/mL

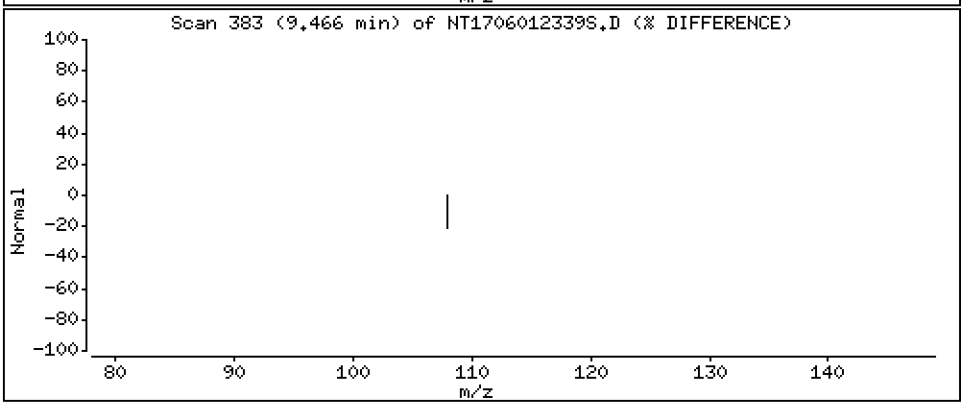












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

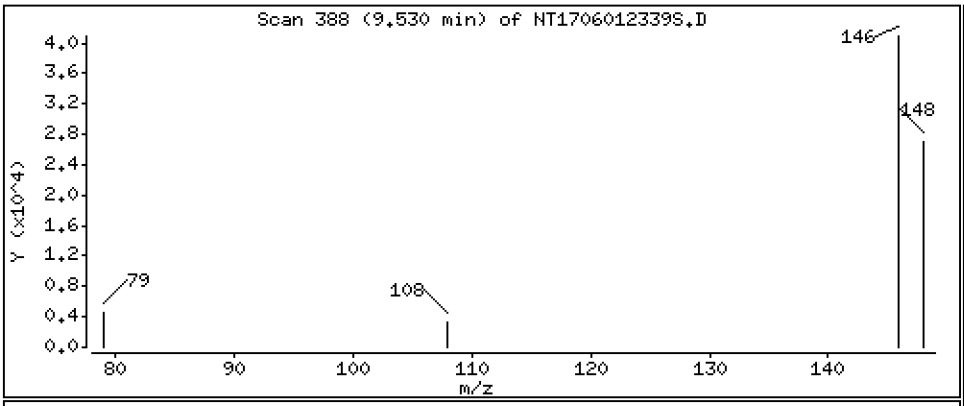
Operator: VTS

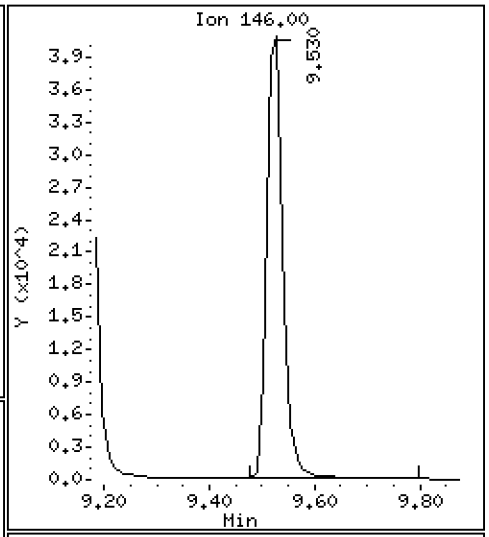
Column phase: ZB-5msi

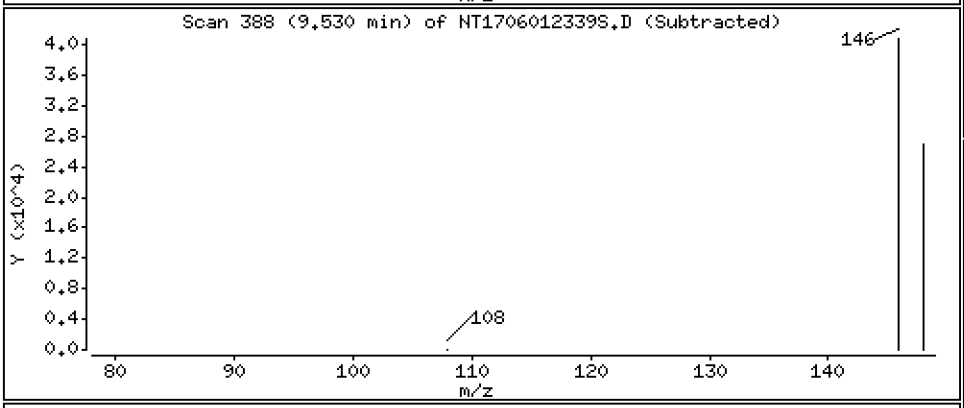
Column diameter: 0.25

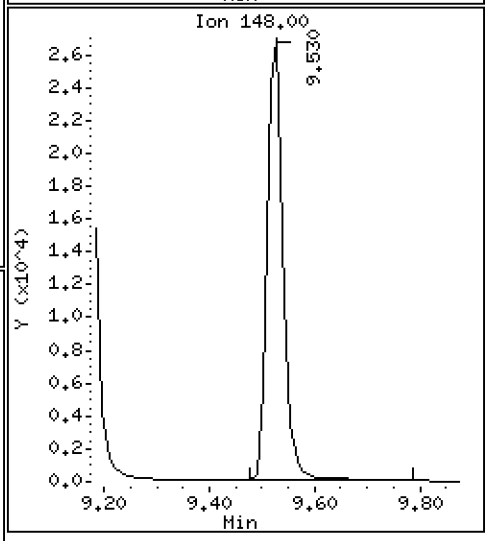
12 1,2-Dichlorobenzene

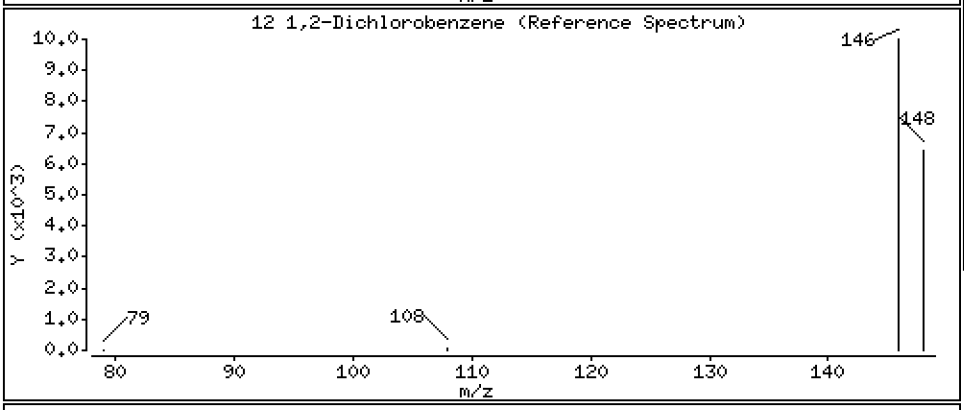
Concentration: 1.000 ug/mL

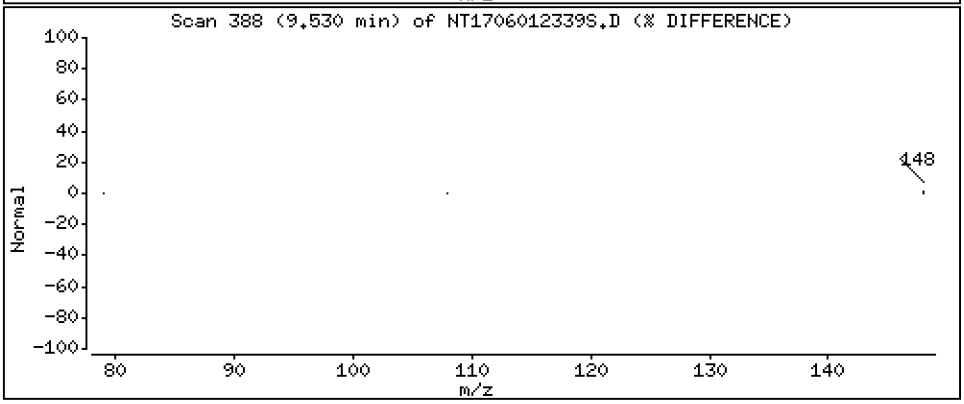












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

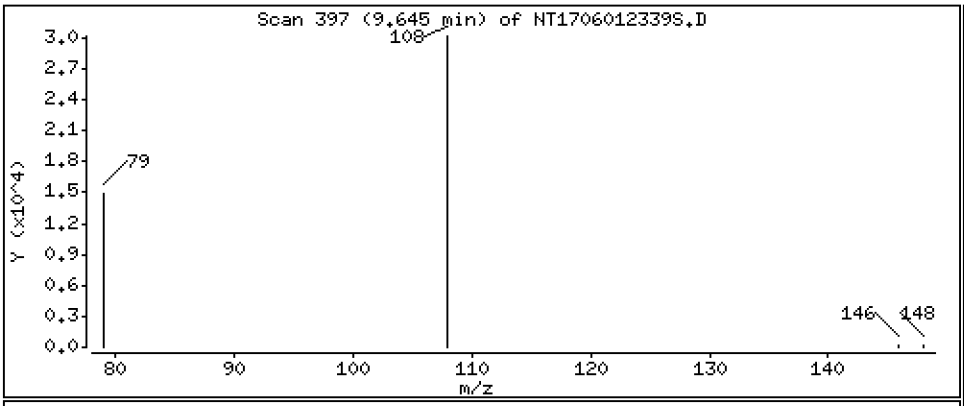
Operator: VTS

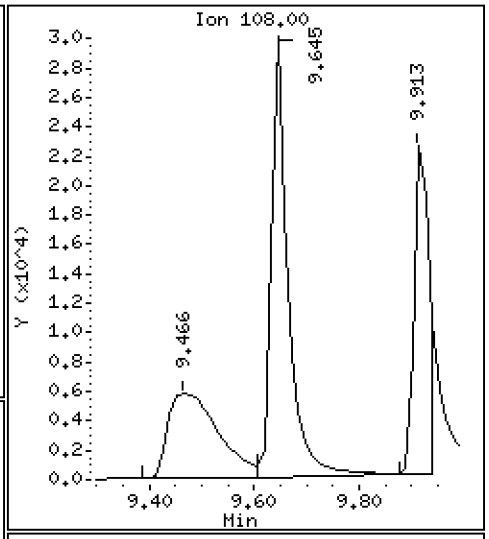
Column phase: ZB-5msi

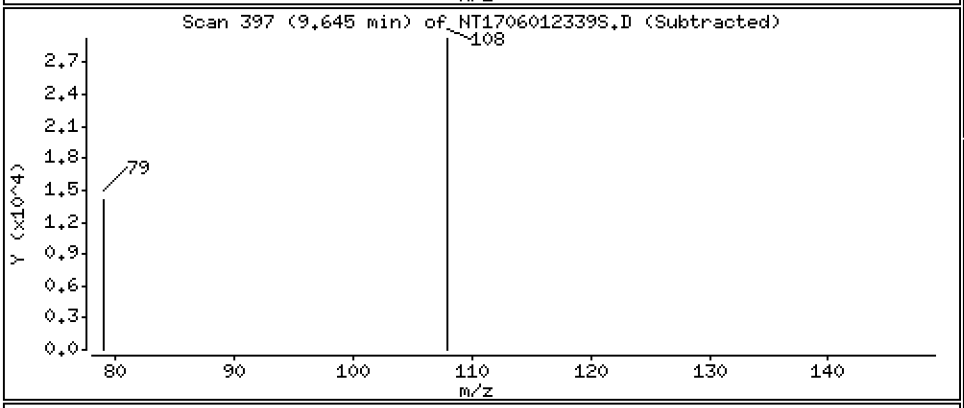
Column diameter: 0.25

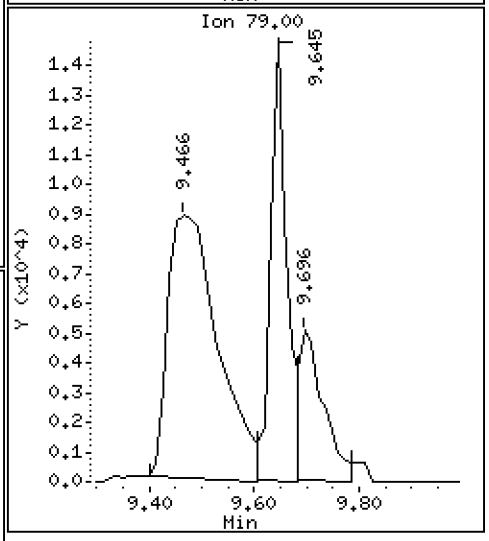
13 2-Methylphenol

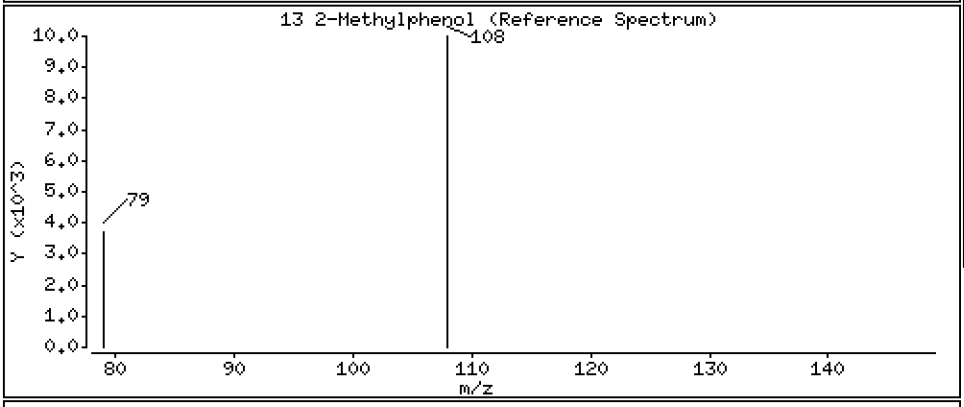
Concentration: 0.9259 ug/mL

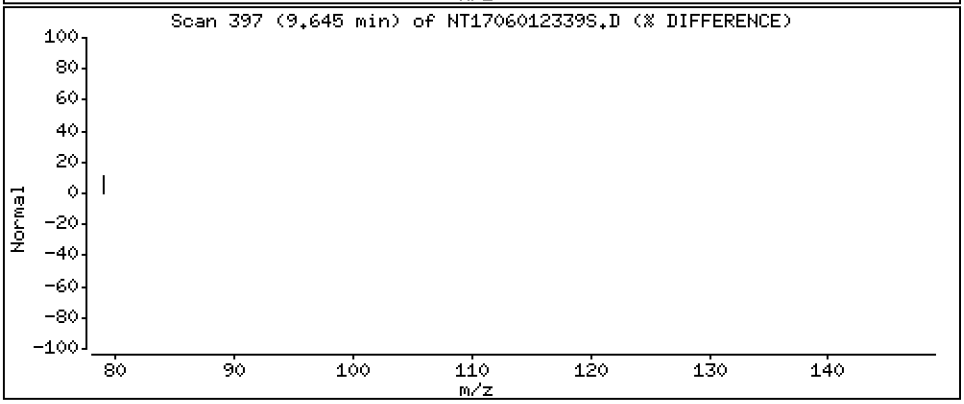












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

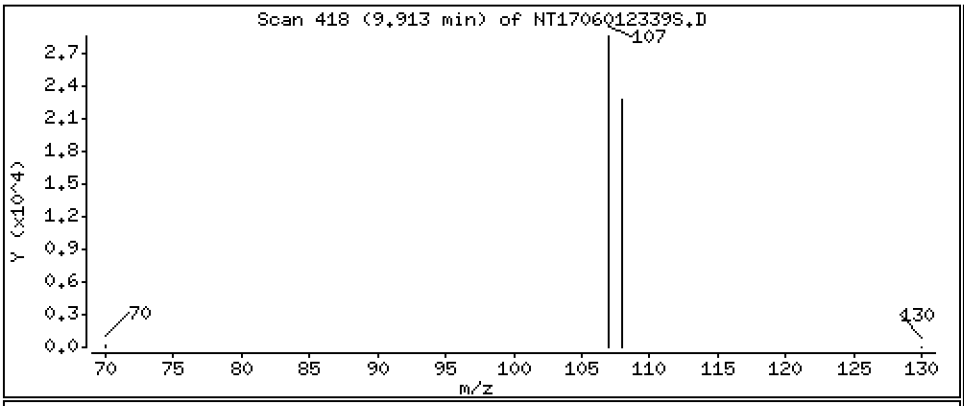
Operator: VTS

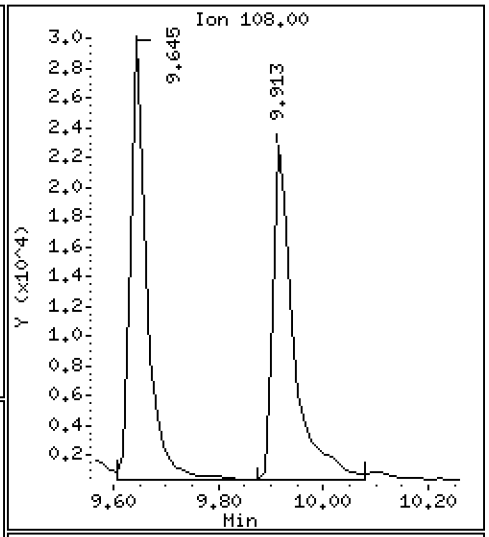
Column phase: ZB-5msi

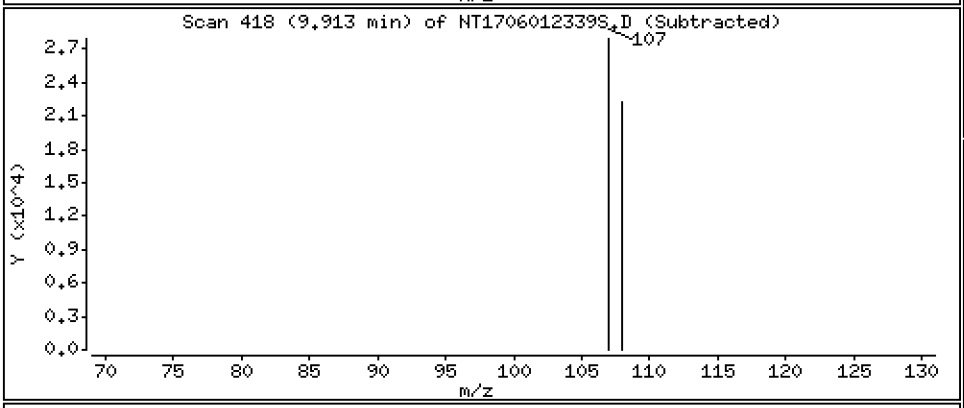
Column diameter: 0.25

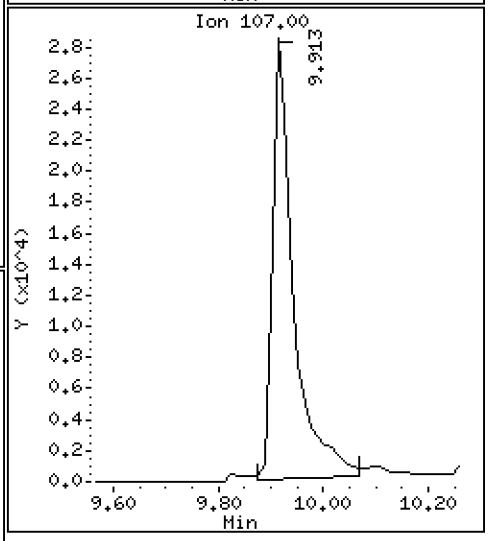
15 4-Methylphenol

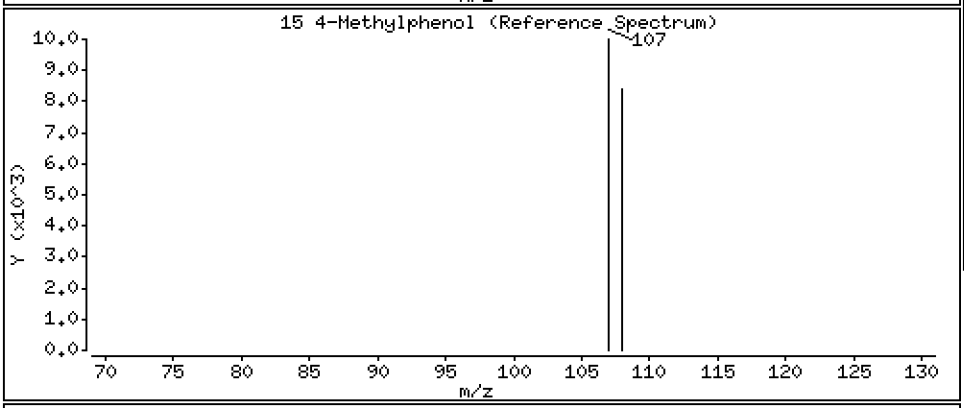
Concentration: 0.8583 ug/mL

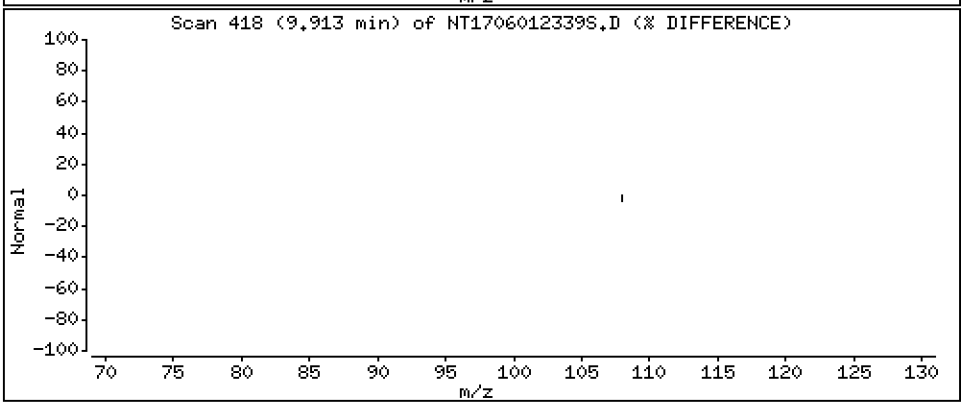












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

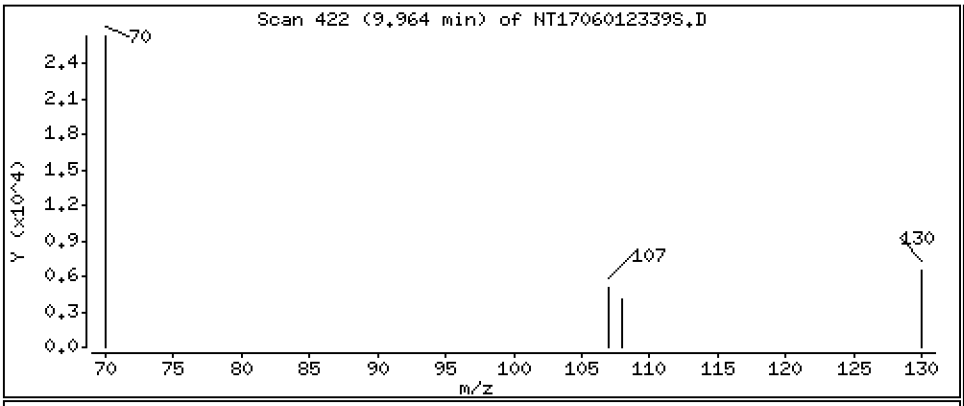
Operator: VTS

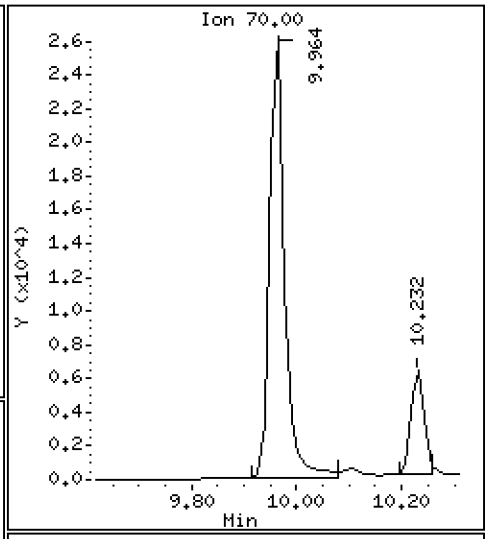
Column phase: ZB-5msi

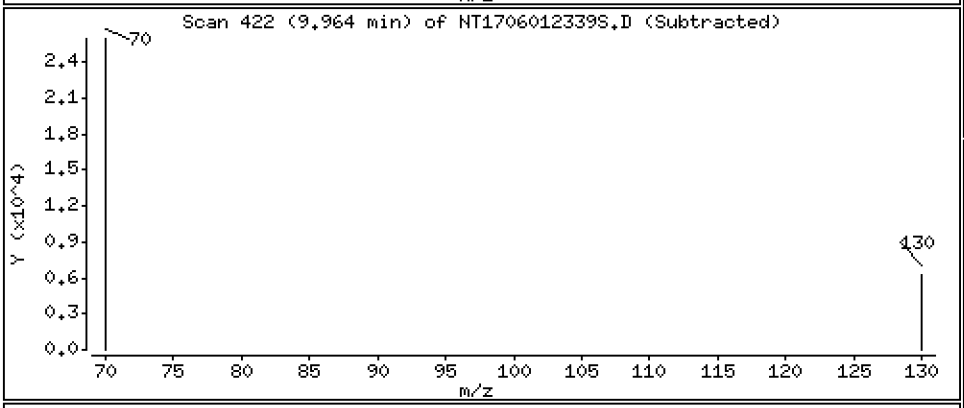
Column diameter: 0.25

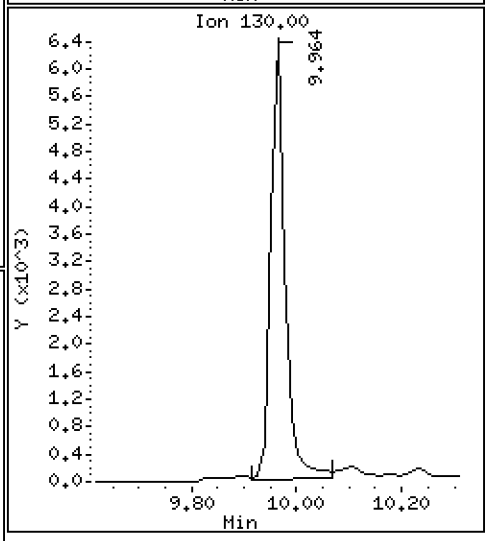
16 N-Nitroso-di-n-propylamine

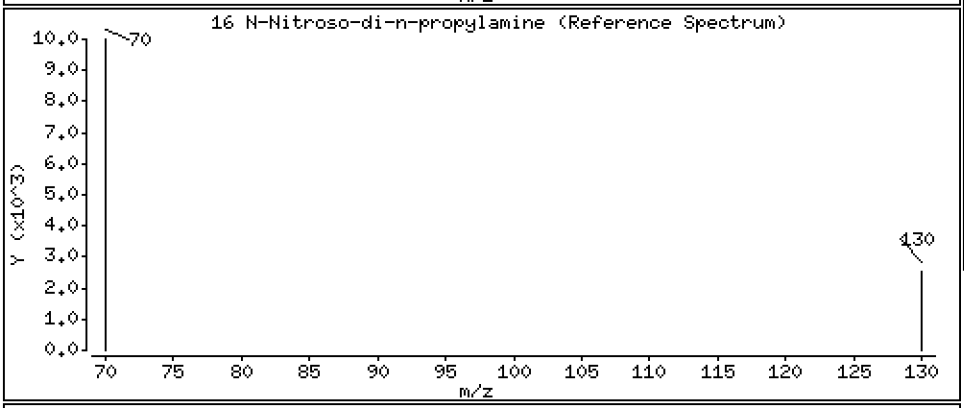
Concentration: 0.9967 ug/mL

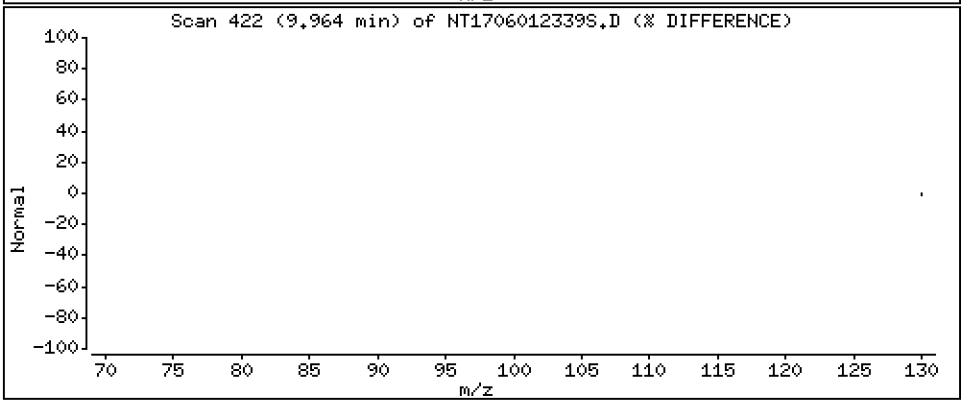












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123395.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

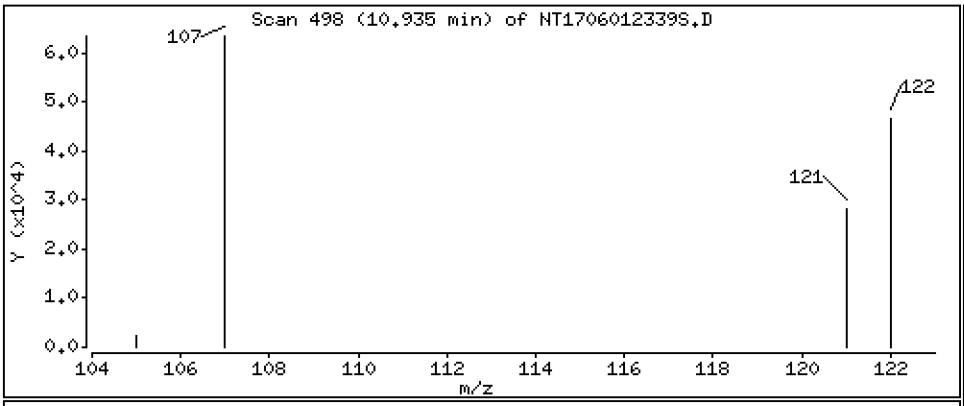
Operator: VTS

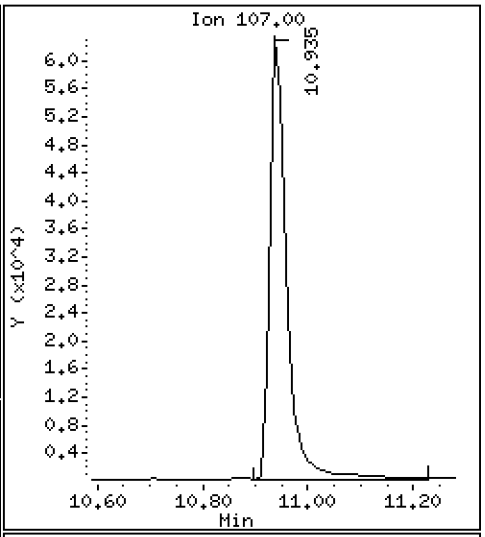
Column phase: ZB-5msi

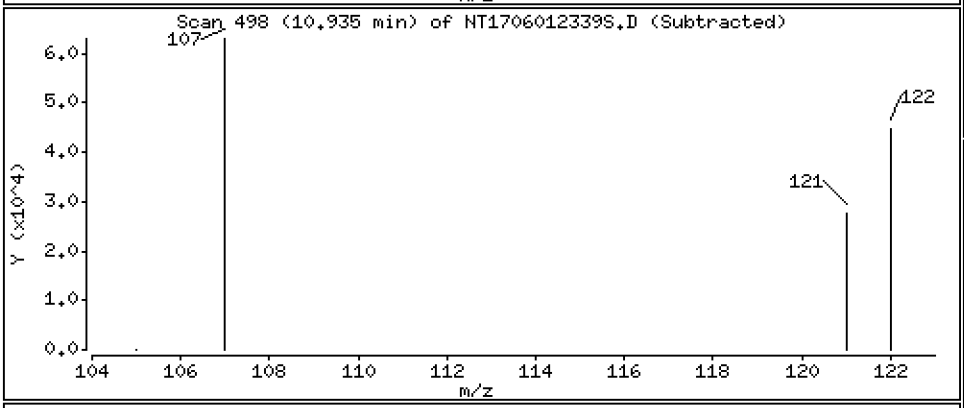
Column diameter: 0.25

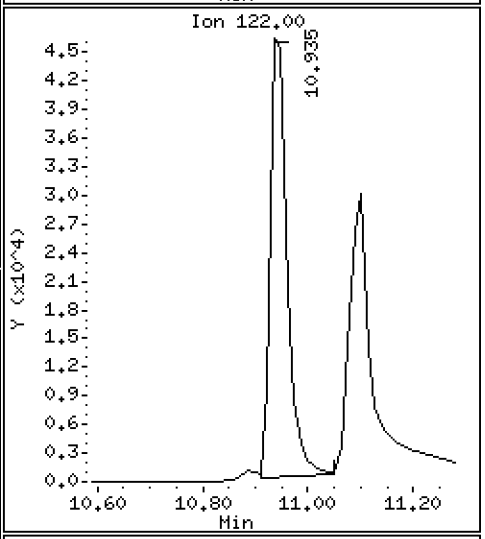
22 2,4-Dimethylphenol

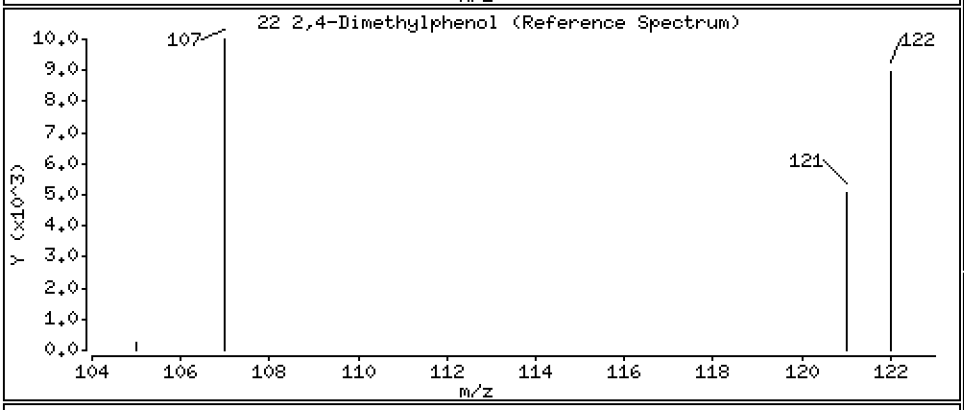
Concentration: 1.964 ug/mL

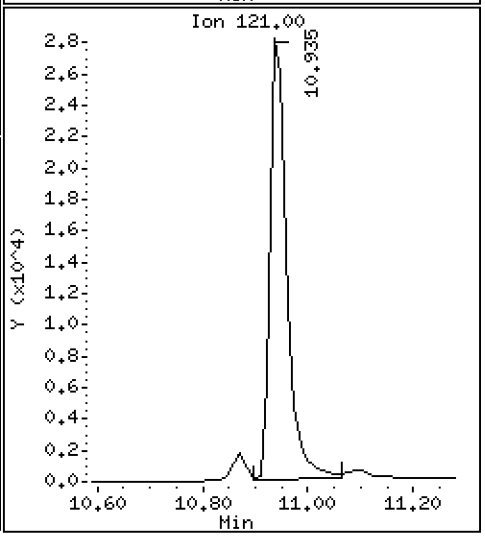


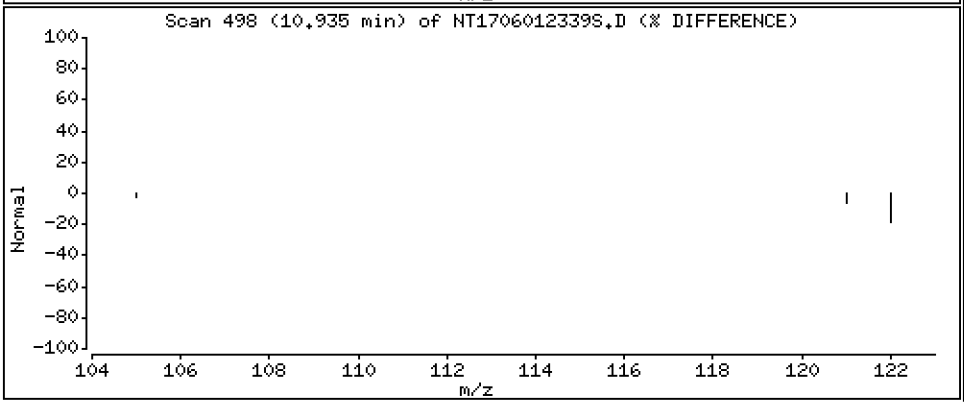












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123395.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

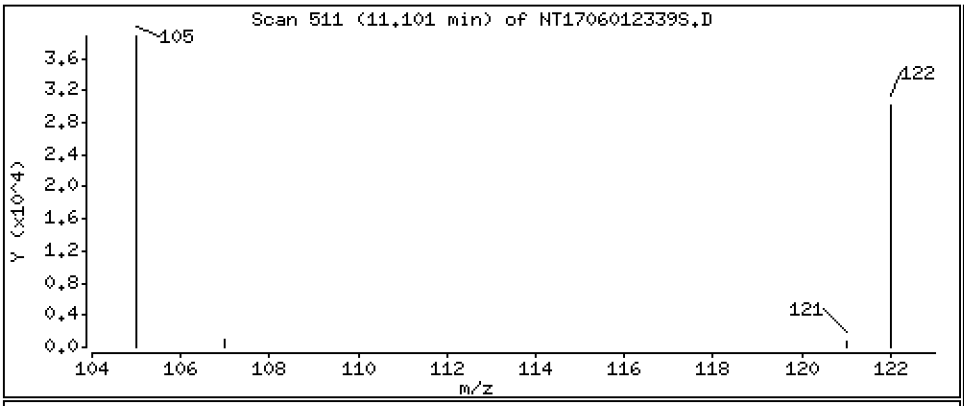
Operator: VTS

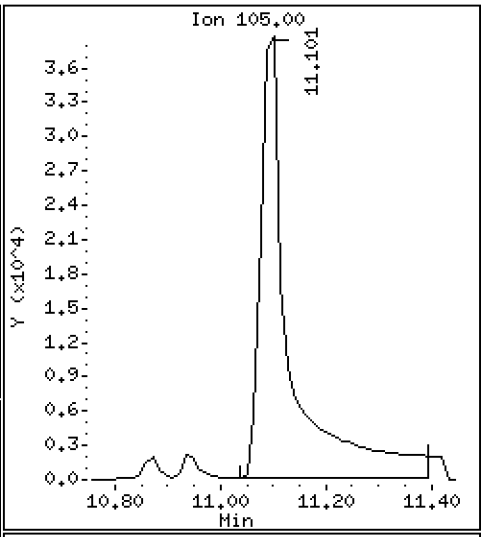
Column phase: ZB-5msi

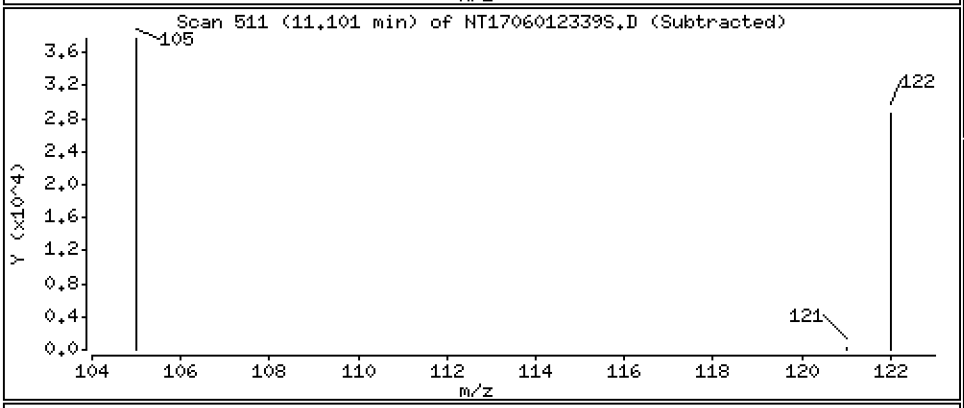
Column diameter: 0.25

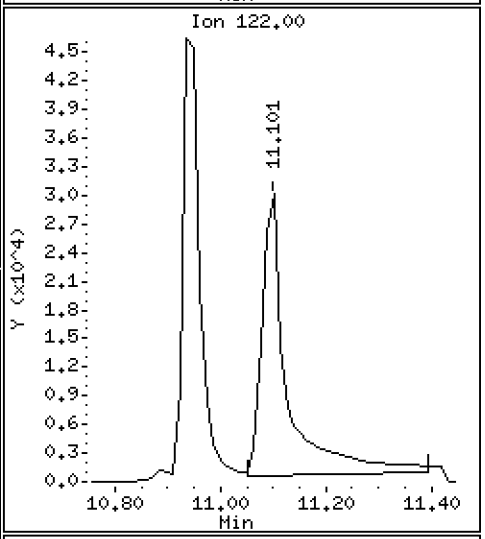
24 Benzoic acid

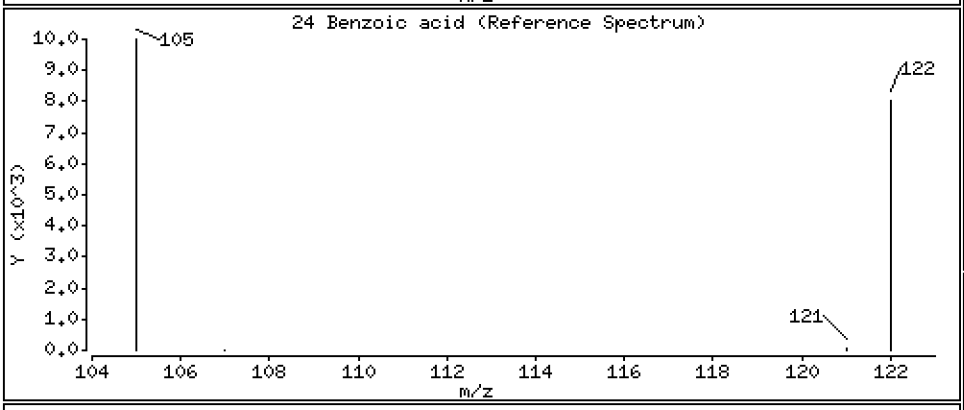
Concentration: 3.382 ug/mL

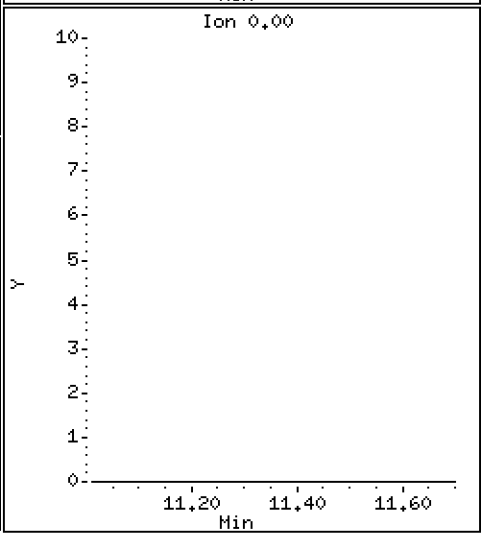


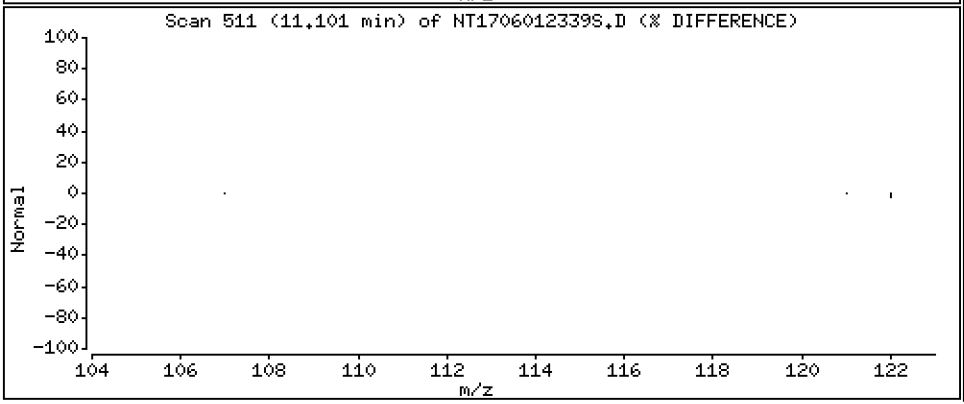












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123395.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

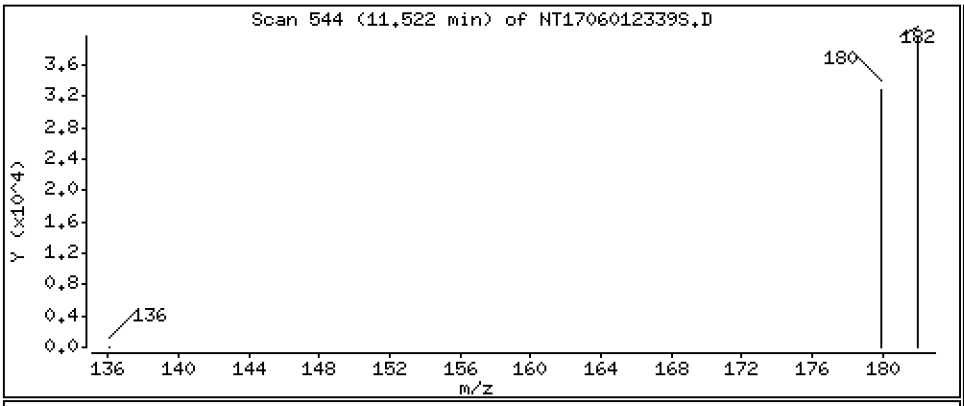
Operator: VTS

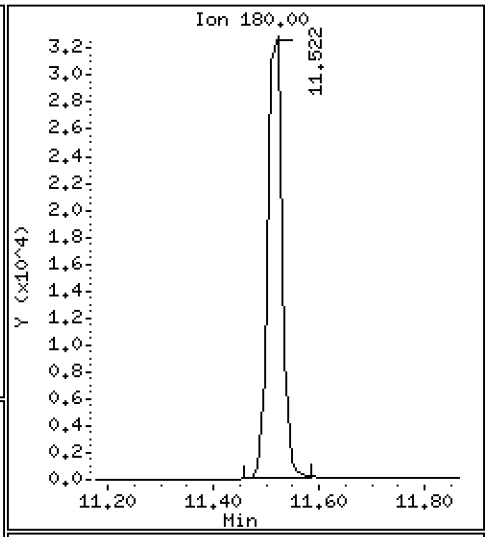
Column phase: ZB-5msi

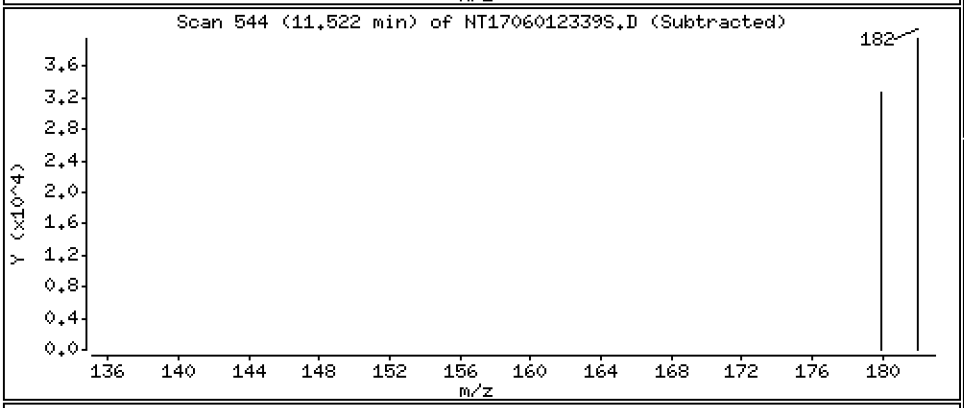
Column diameter: 0.25

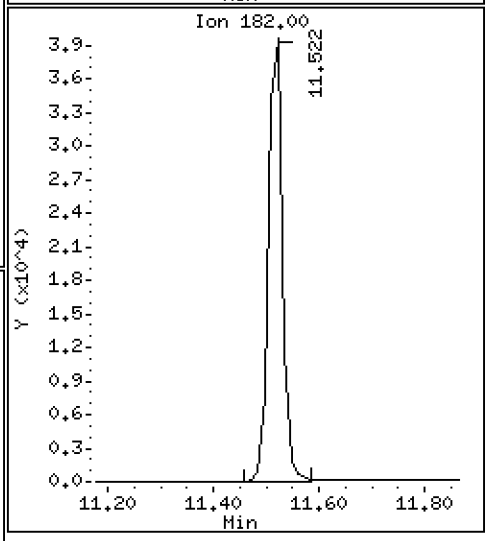
26 1,2,4-Trichlorobenzene

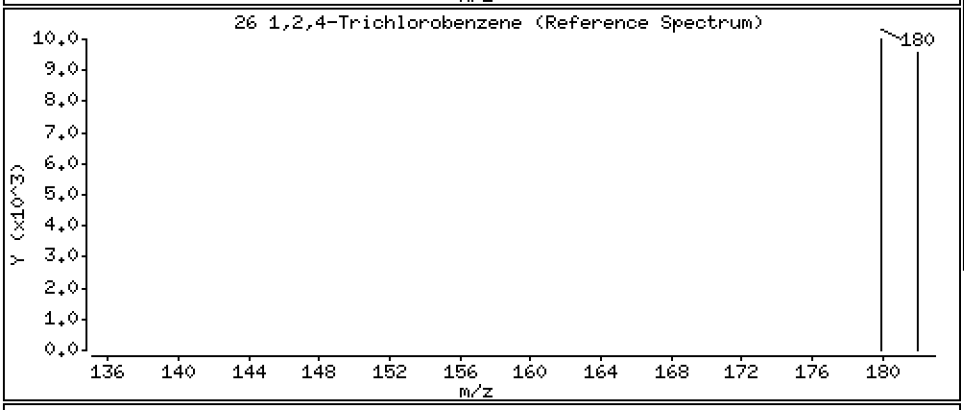
Concentration: 0.9718 ug/mL

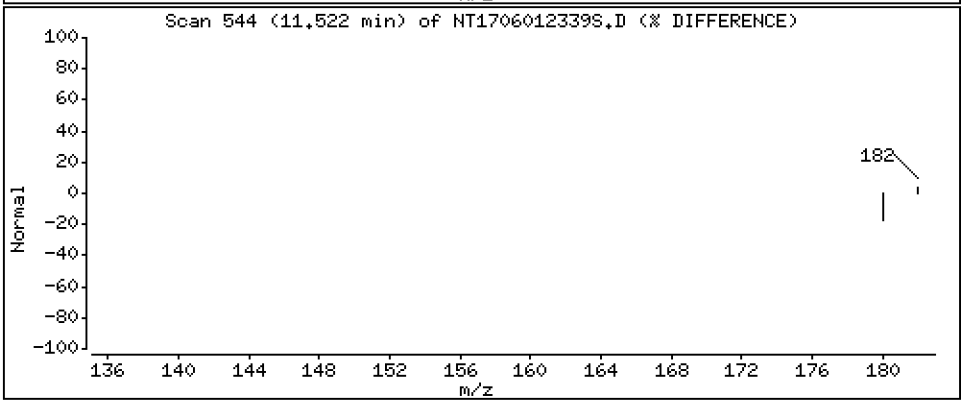












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123395.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

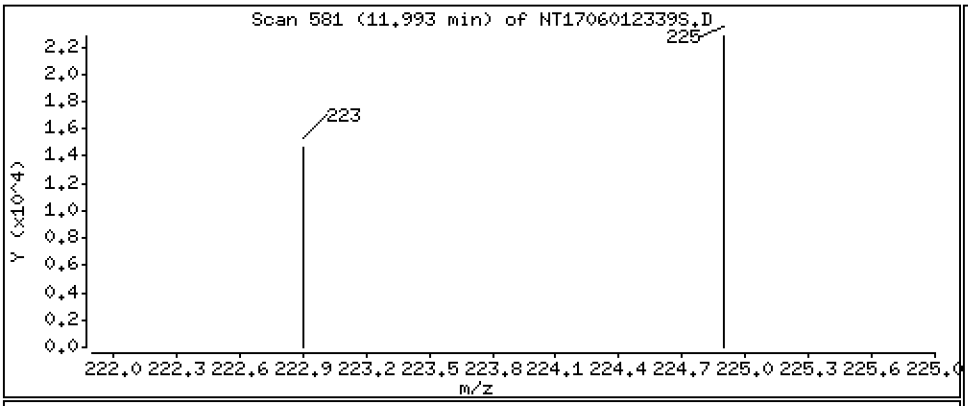
Operator: VTS

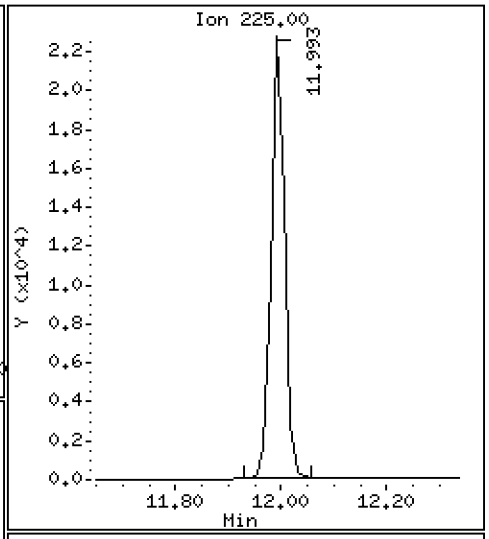
Column phase: ZB-5msi

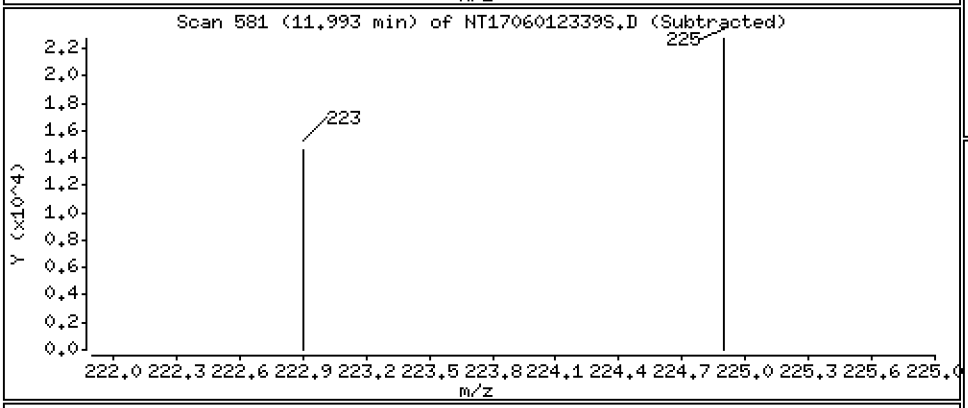
Column diameter: 0.25

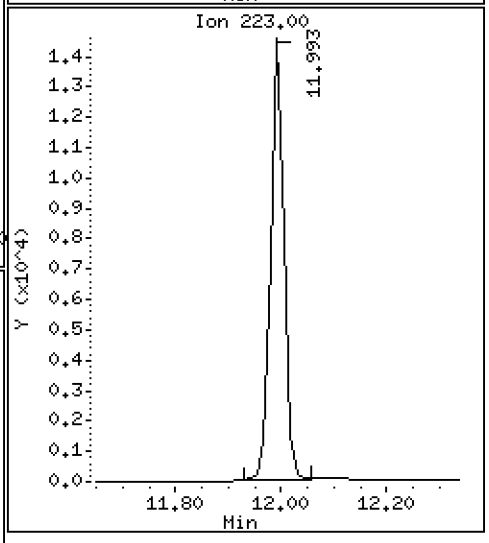
30 Hexachlorobutadiene

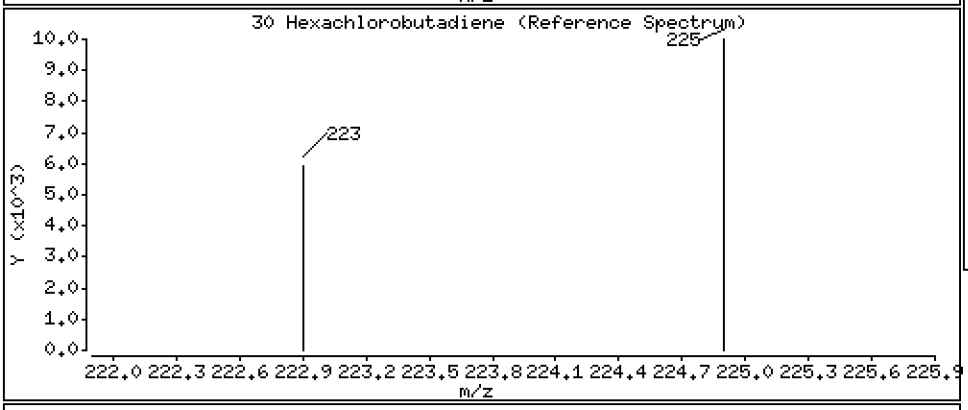
Concentration: 1.170 ug/mL

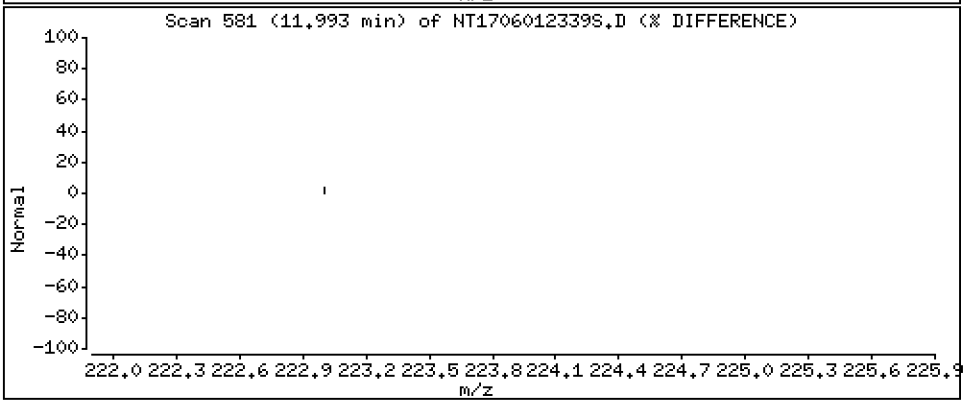












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123395.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

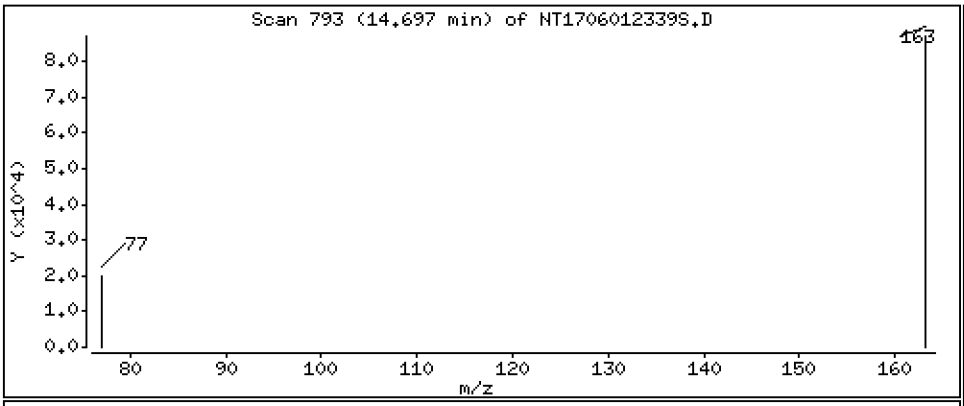
Operator: VTS

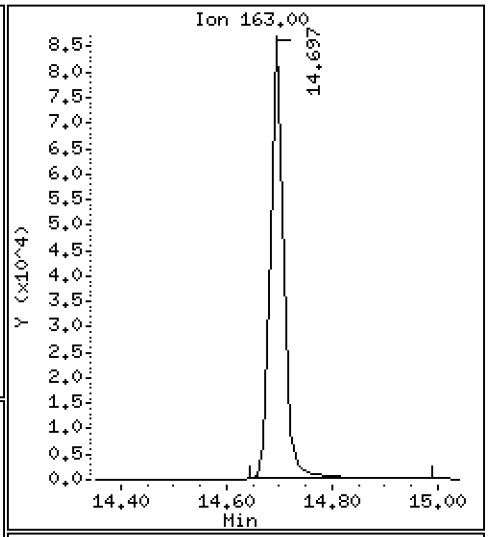
Column phase: ZB-5msi

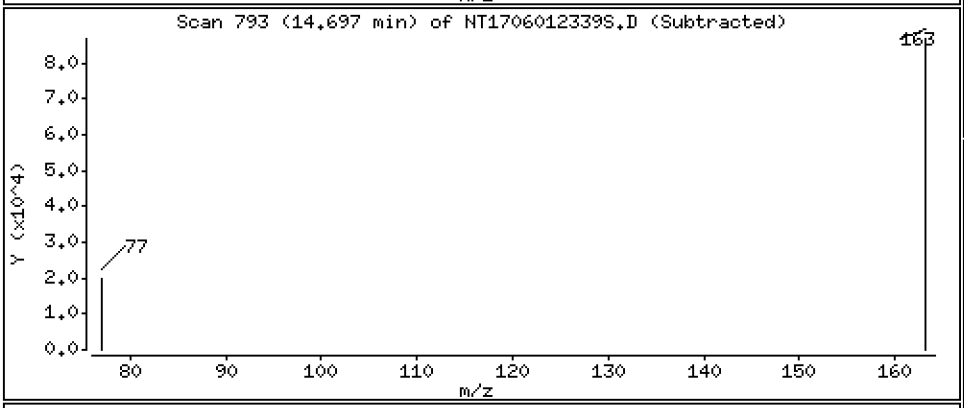
Column diameter: 0.25

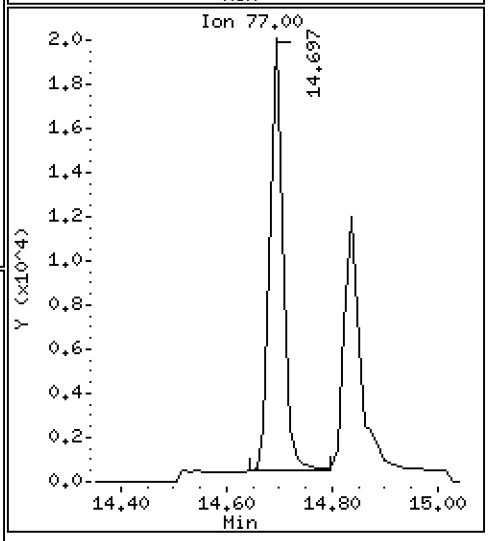
39 Dimethylphthalate

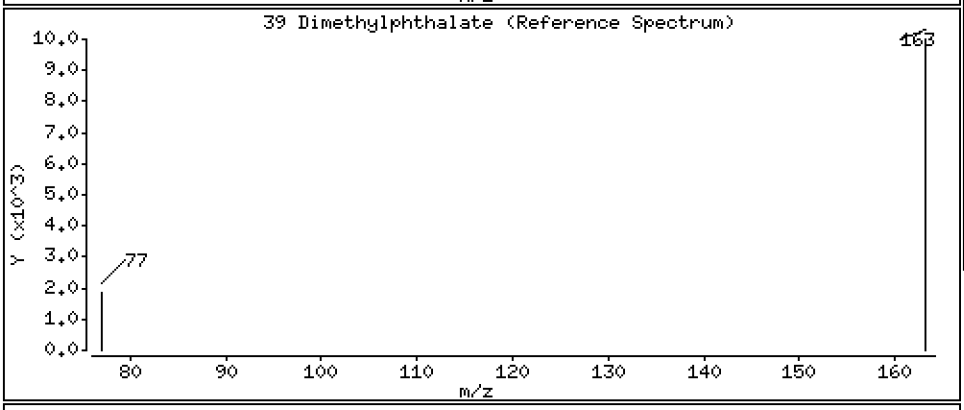
Concentration: 0.9434 ug/mL

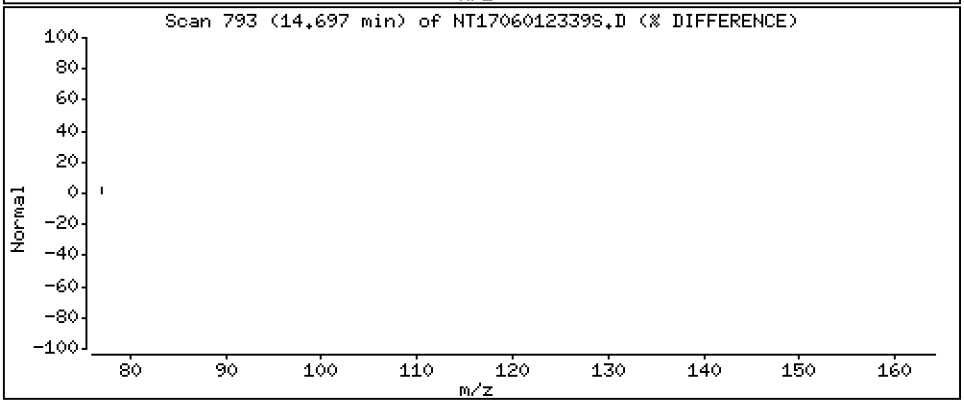












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123395.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

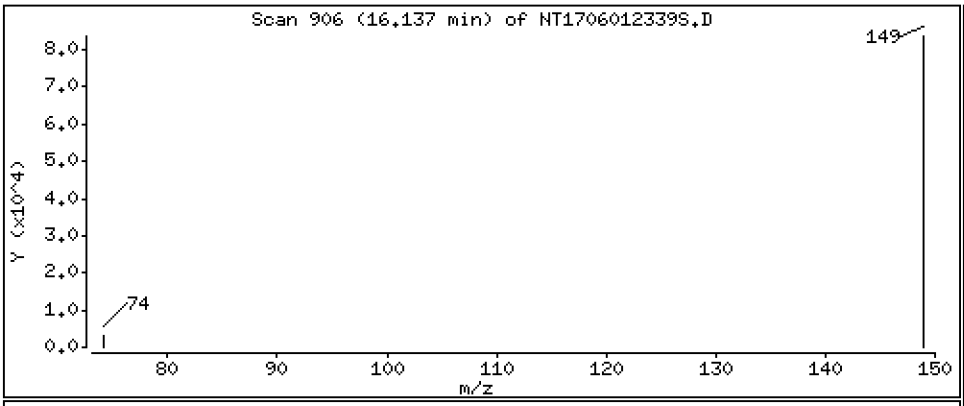
Operator: VTS

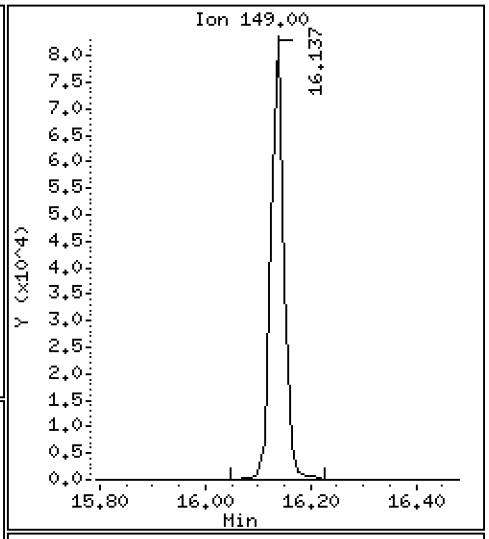
Column phase: ZB-5msi

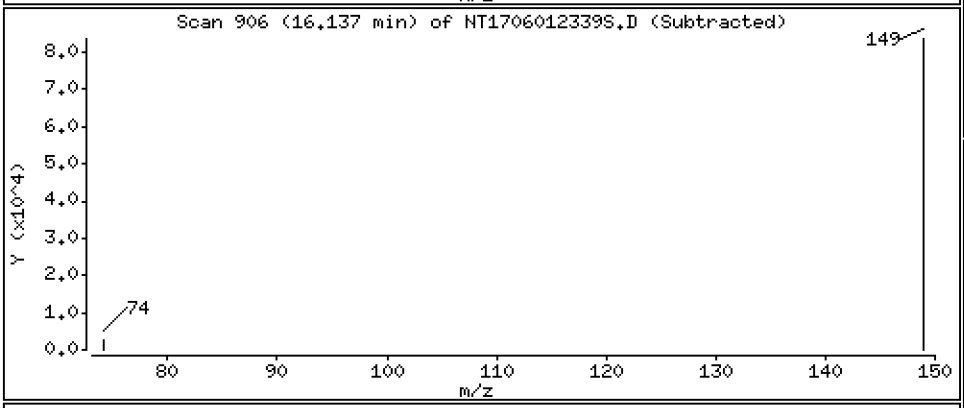
Column diameter: 0.25

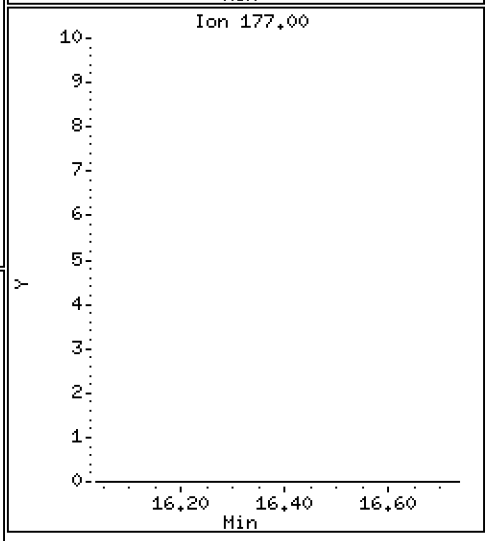
50 Diethylphthalate

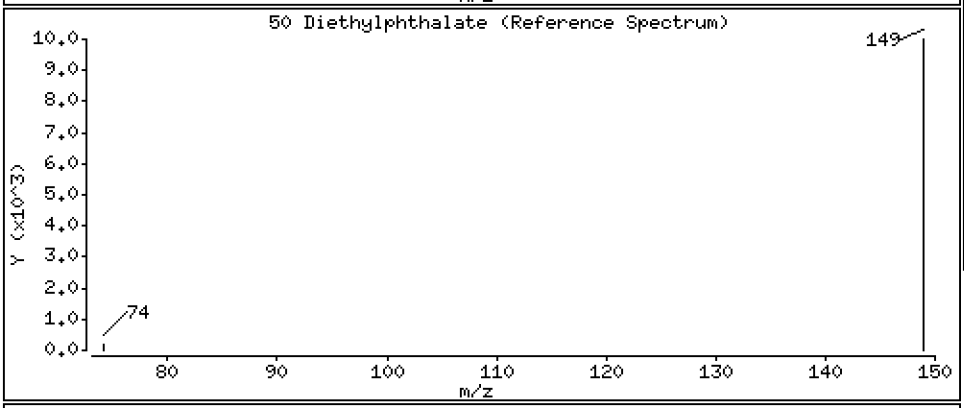
Concentration: 0.9777 ug/mL

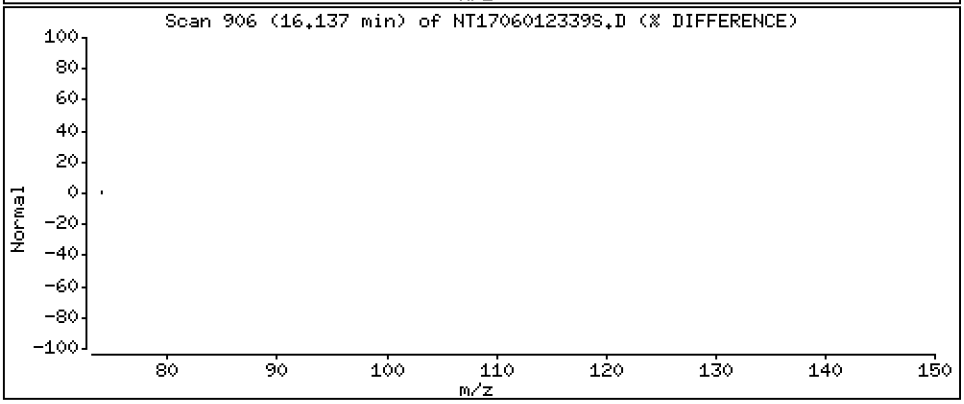












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123395.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

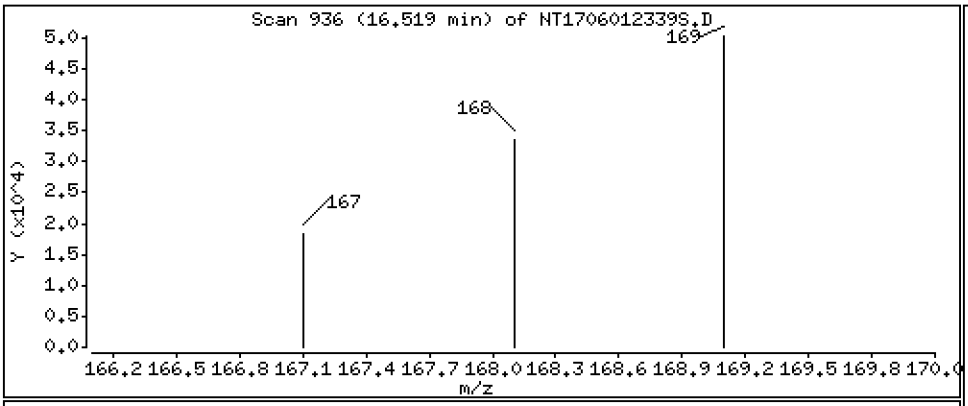
Operator: VTS

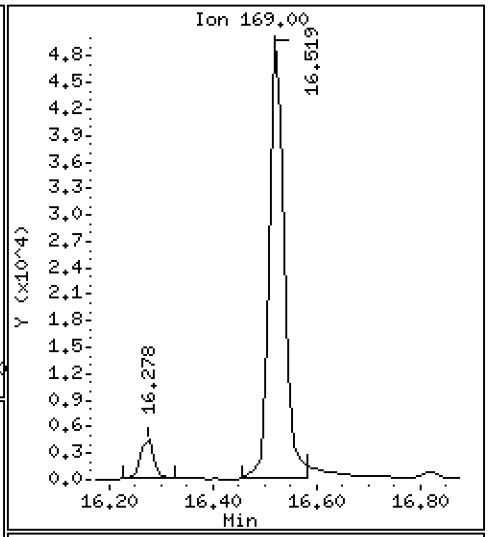
Column phase: ZB-5msi

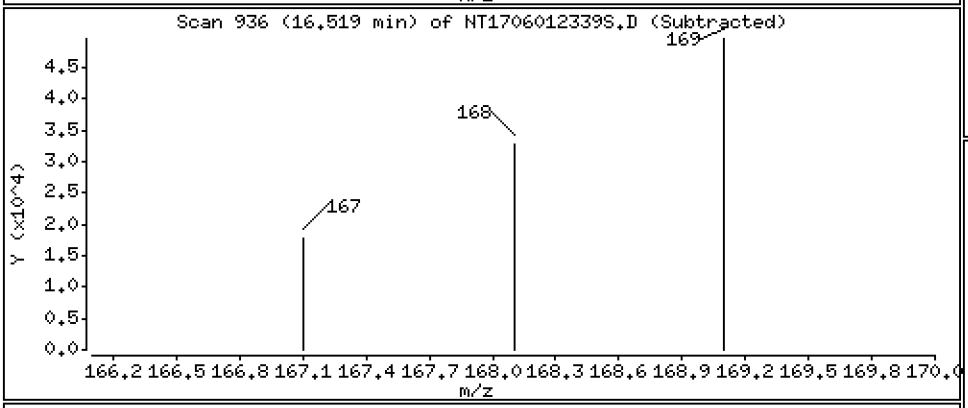
Column diameter: 0.25

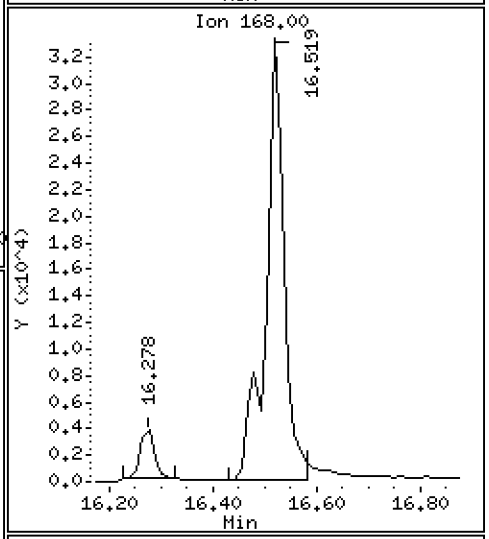
54 N-Nitrosodiphenylamine

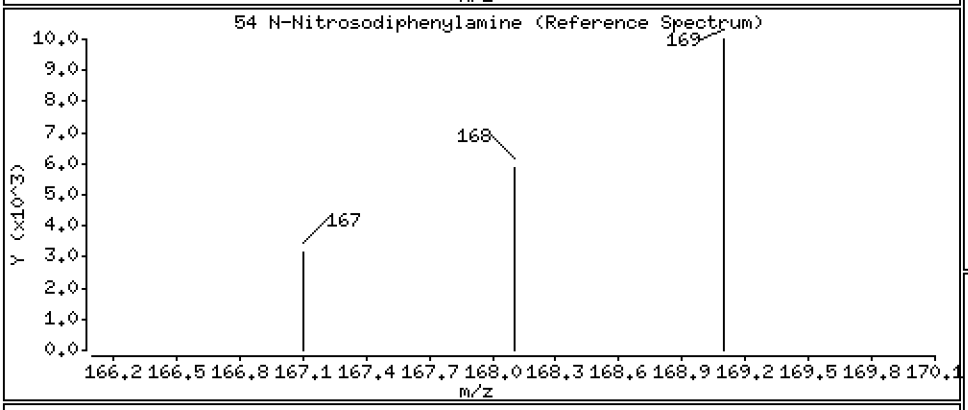
Concentration: 1.030 ug/mL

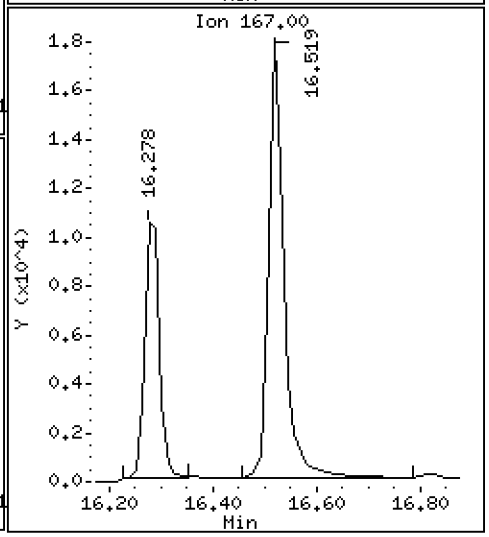


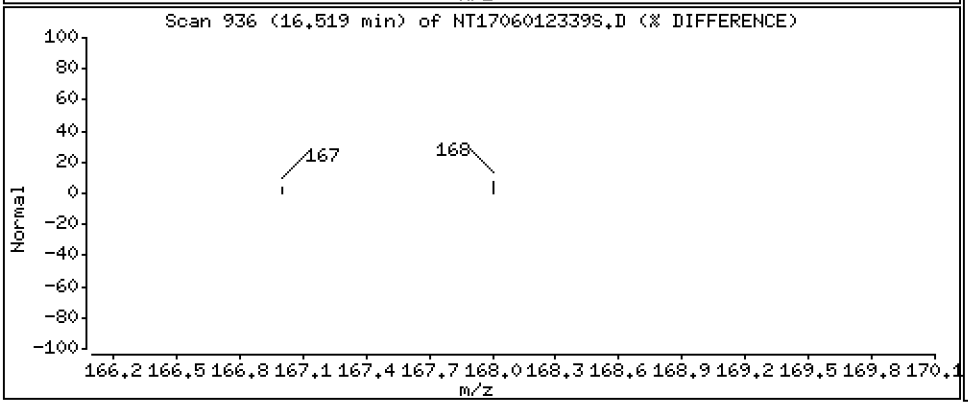












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

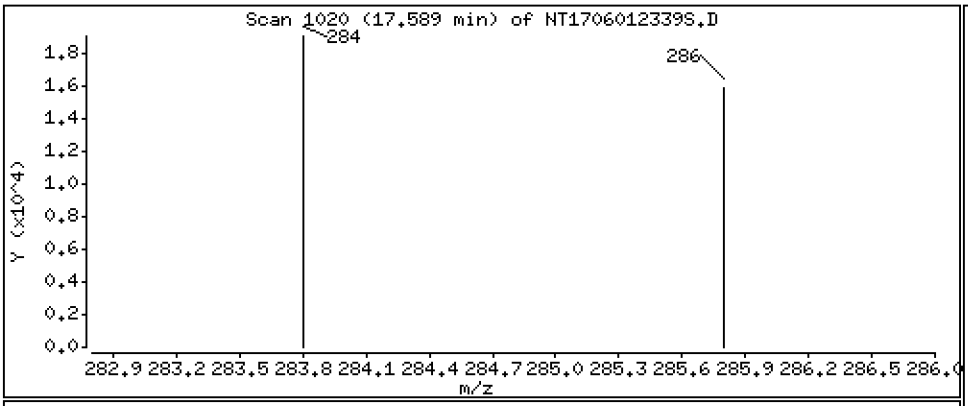
Operator: VTS

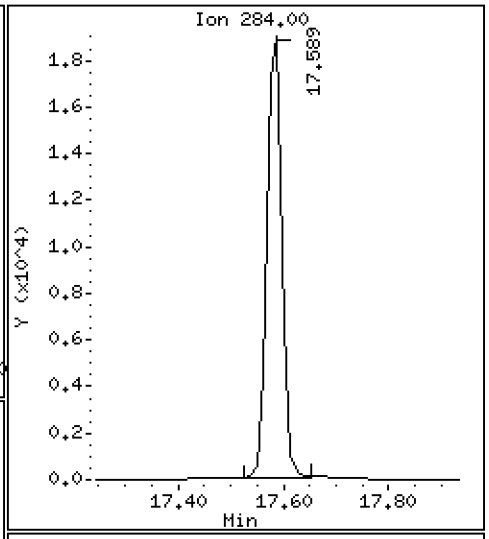
Column phase: ZB-5msi

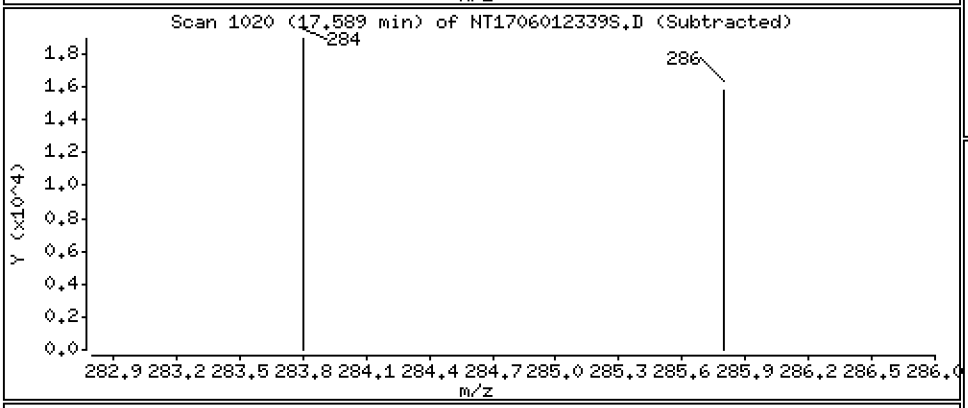
Column diameter: 0.25

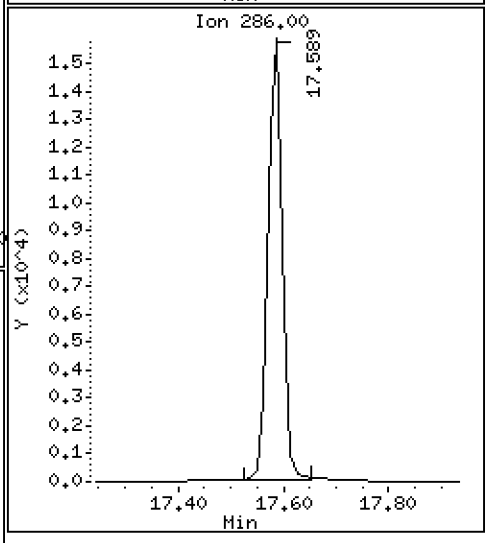
57 Hexachlorobenzene

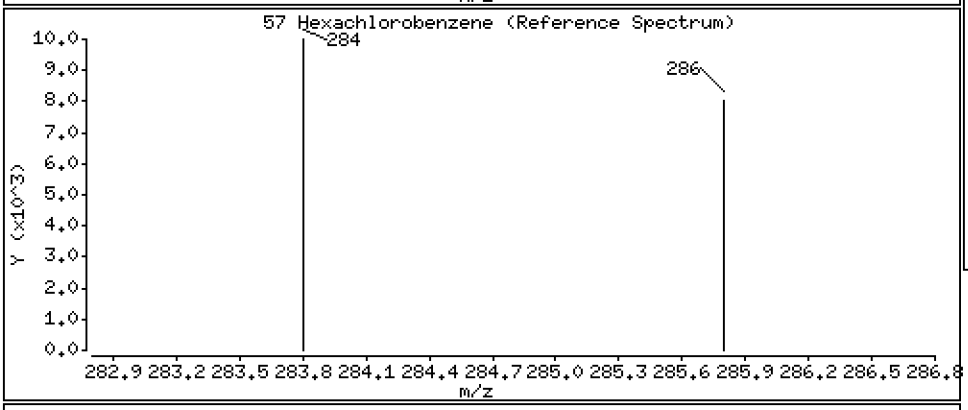
Concentration: 1.150 ug/mL

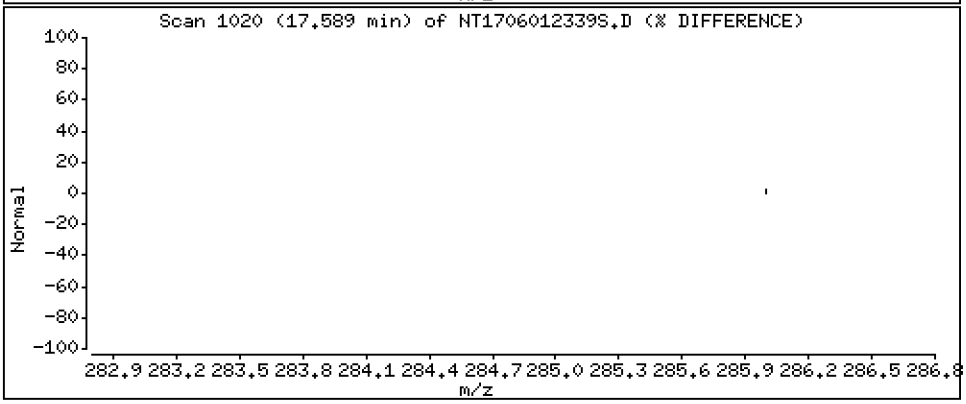












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

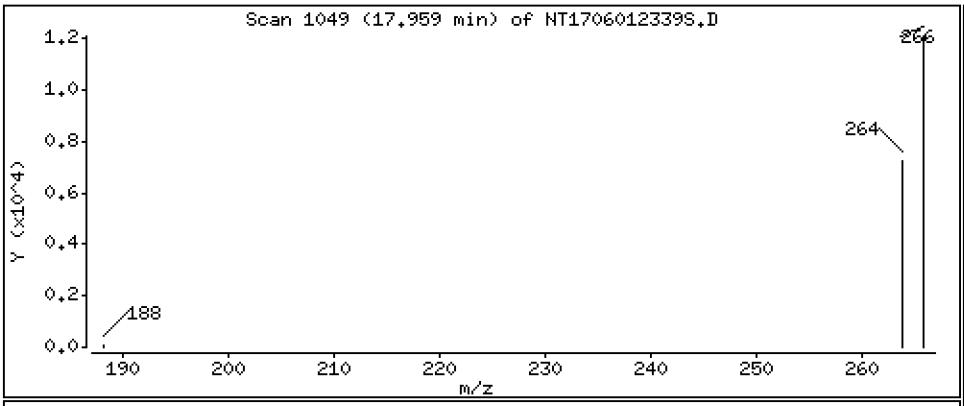
Operator: VTS

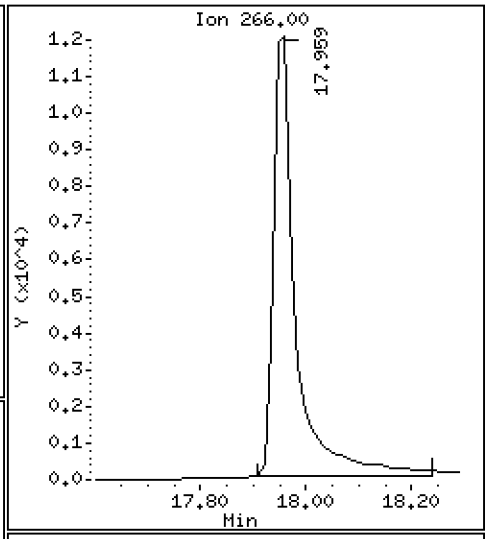
Column phase: ZB-5msi

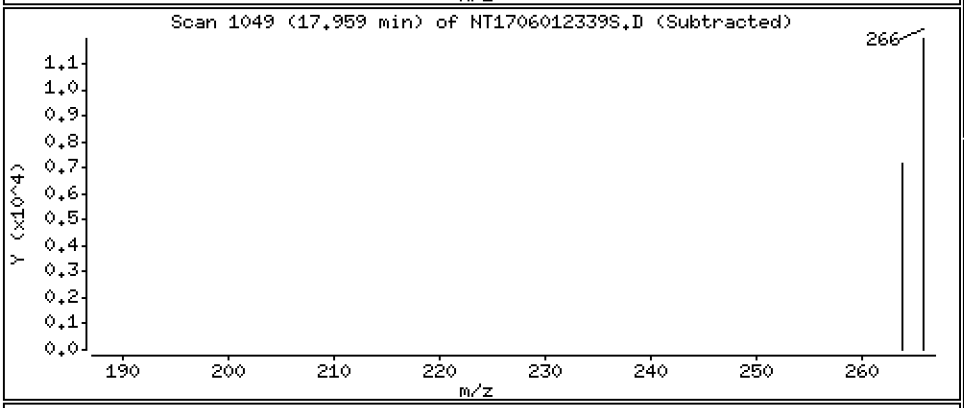
Column diameter: 0.25

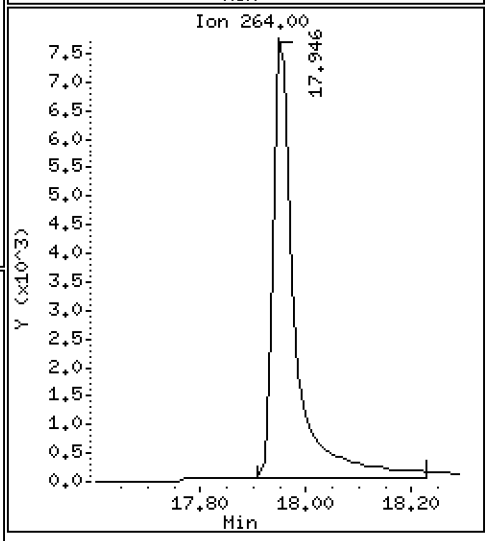
58 Pentachlorophenol

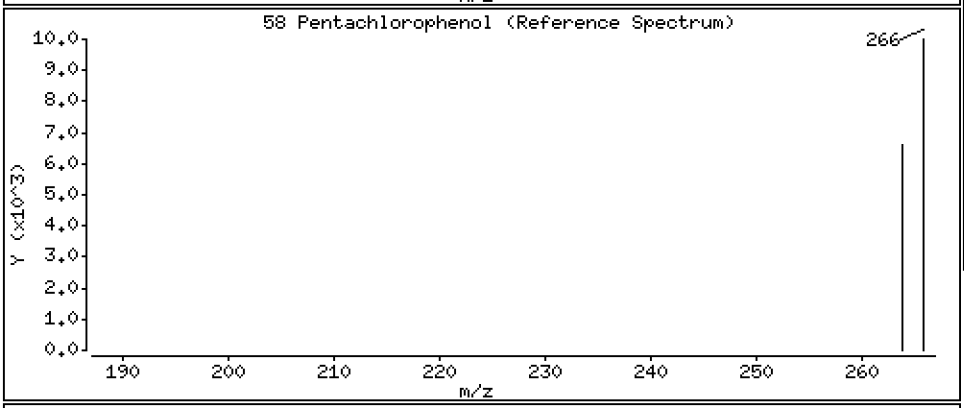
Concentration: 1.902 ug/mL

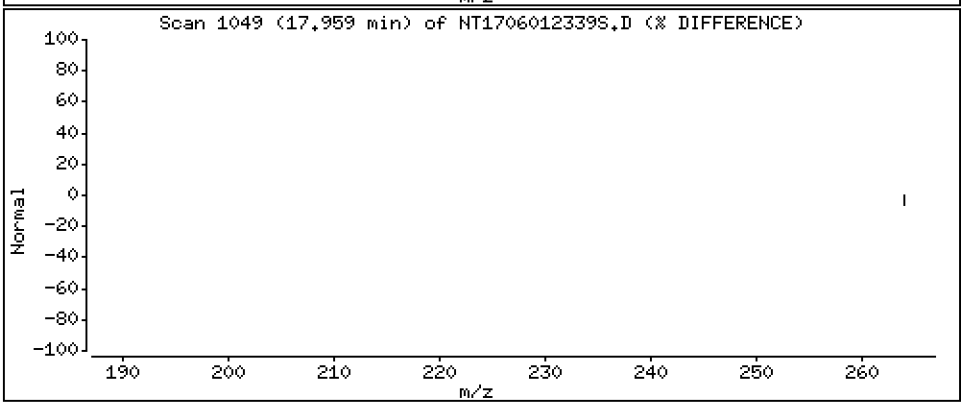












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

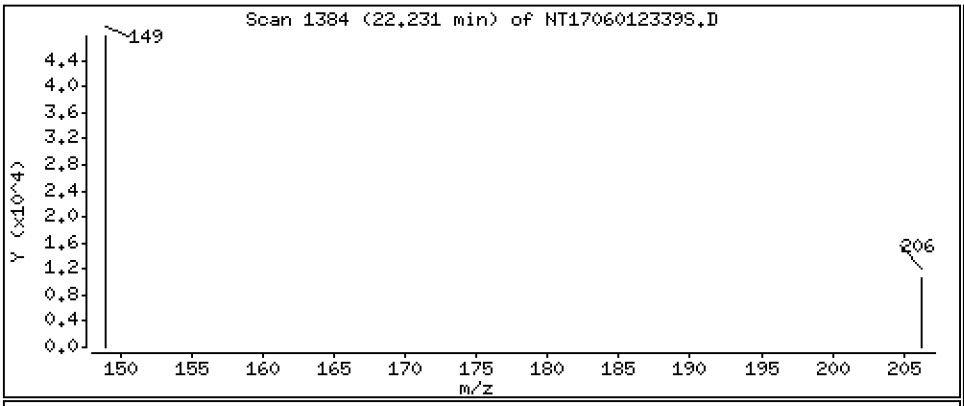
Operator: VTS

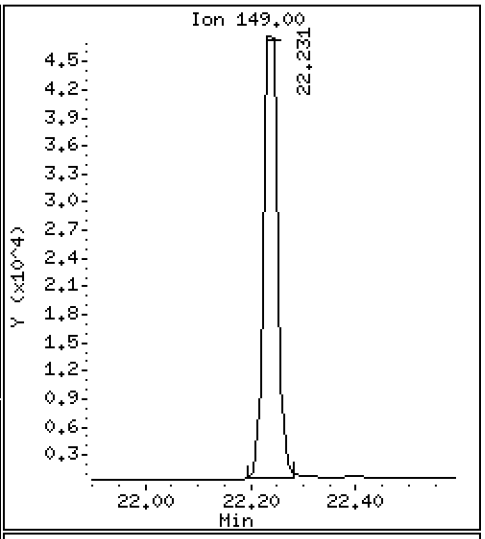
Column phase: ZB-5msi

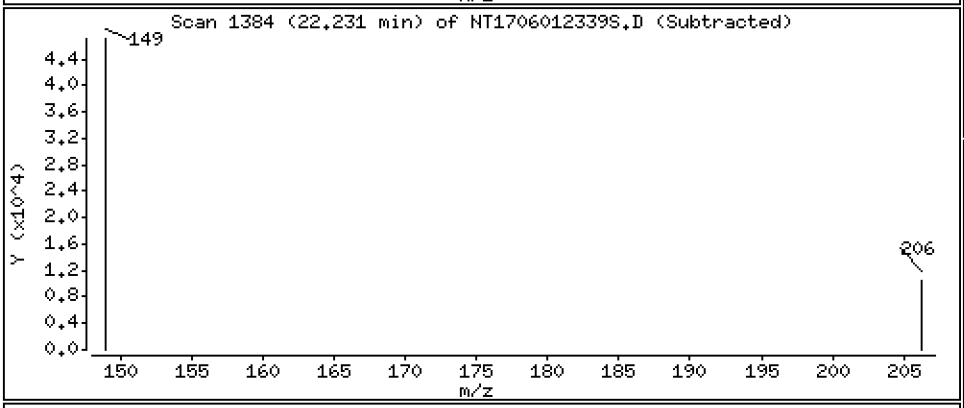
Column diameter: 0.25

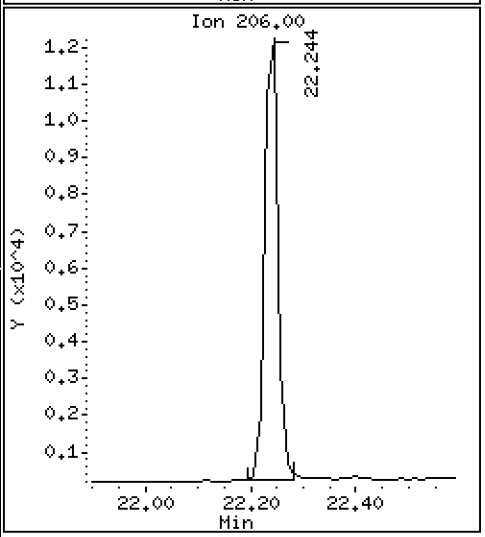
67 Butylbenzylphthalate

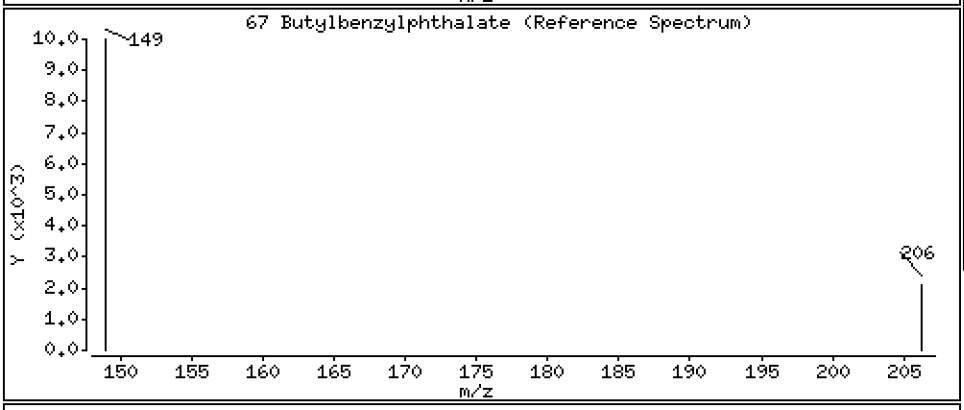
Concentration: 0.9733 ug/mL

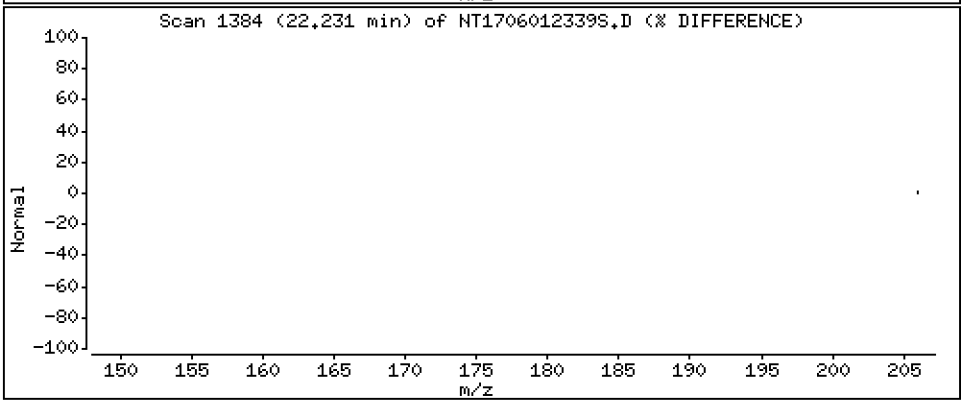












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

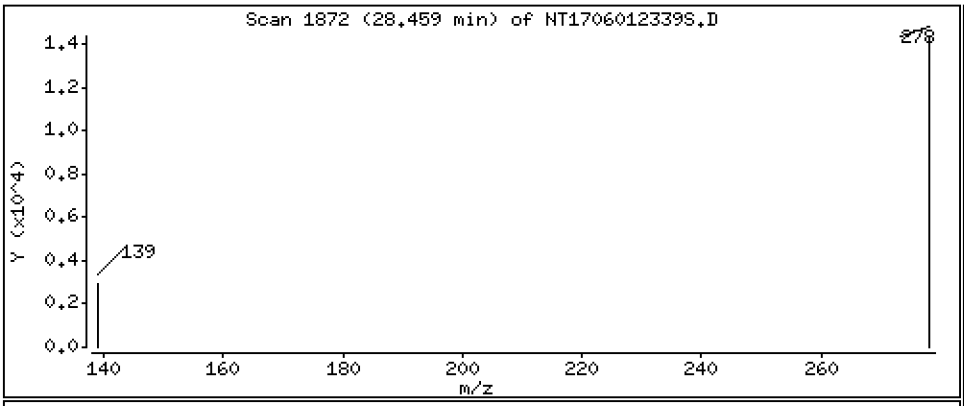
Operator: VTS

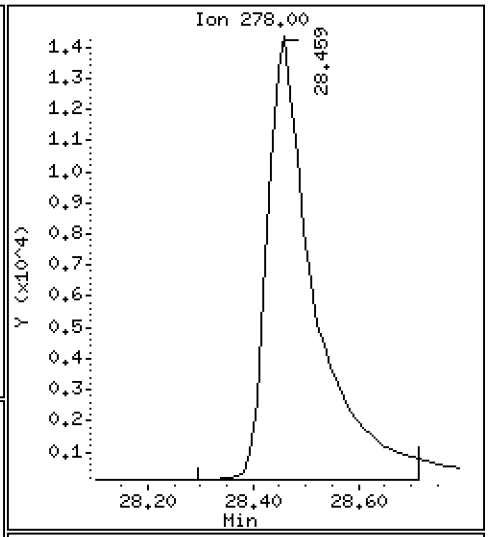
Column phase: ZB-5msi

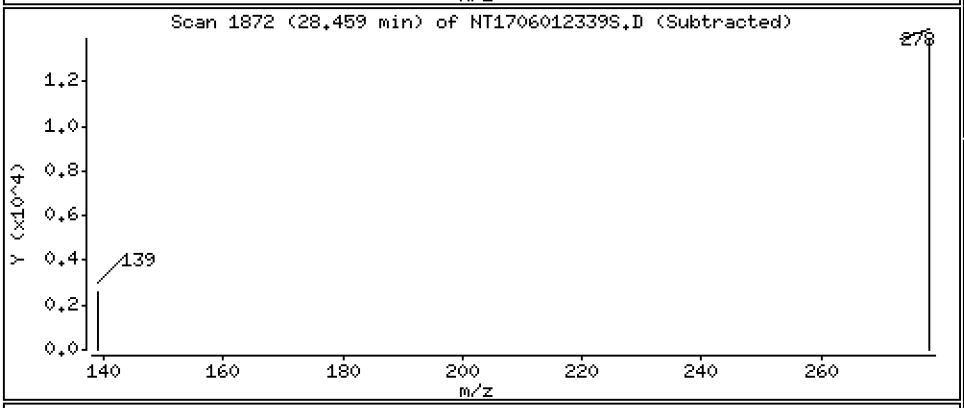
Column diameter: 0.25

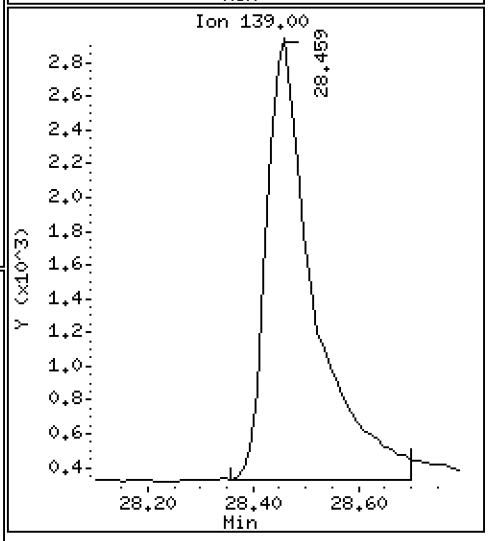
79 Dibenzo(a,h)anthracene

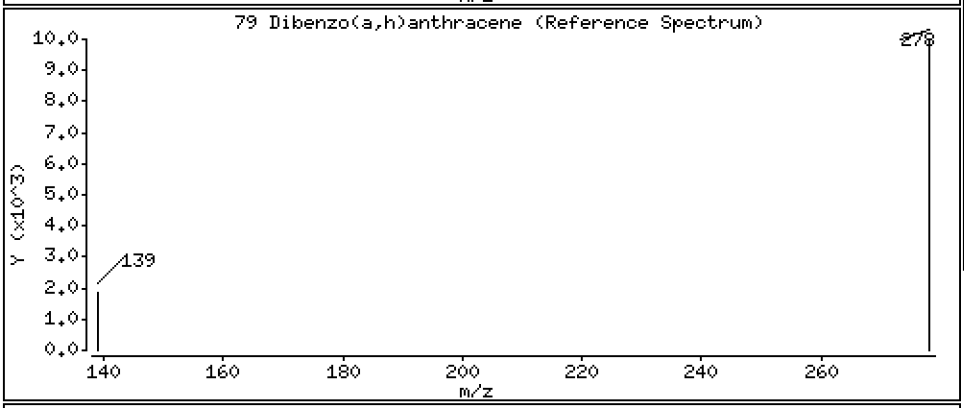
Concentration: 0.7998 ug/mL

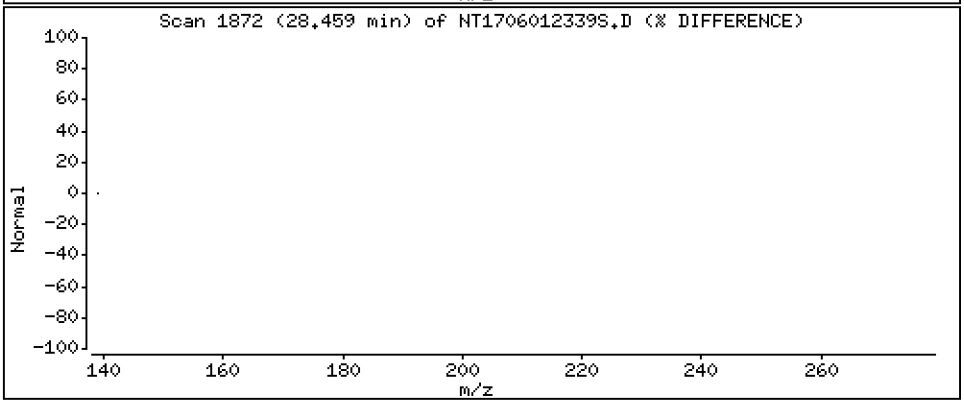












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D

Date : 02-JUN-2023 11:39

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-CCV1

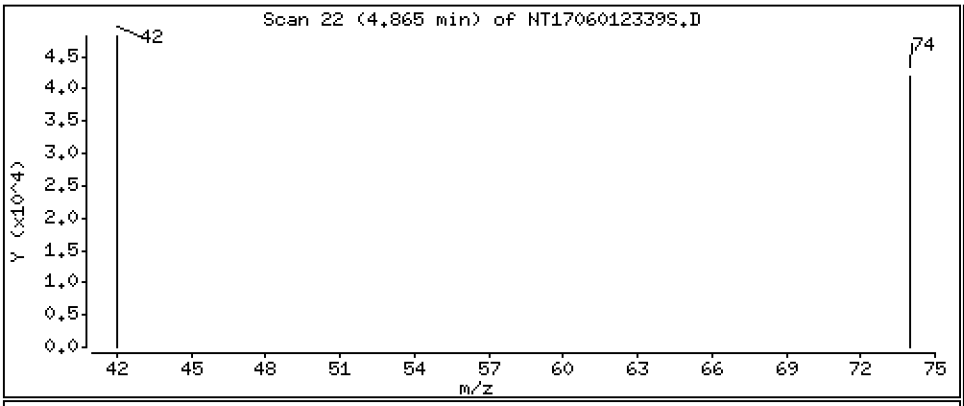
Operator: VTS

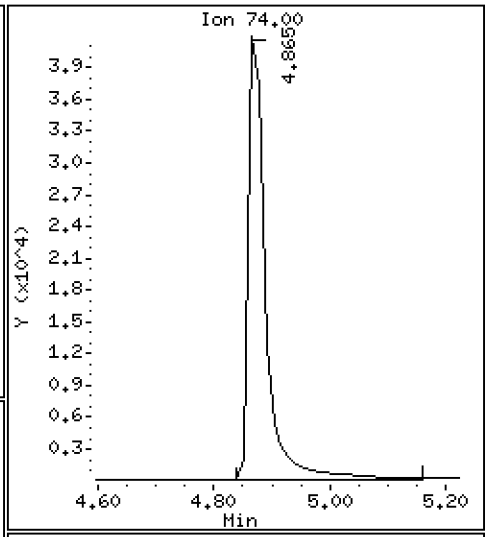
Column phase: ZB-5msi

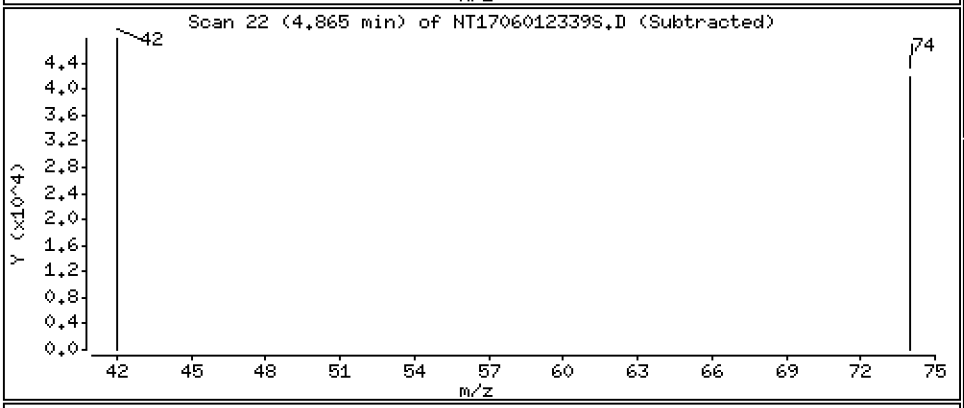
Column diameter: 0.25

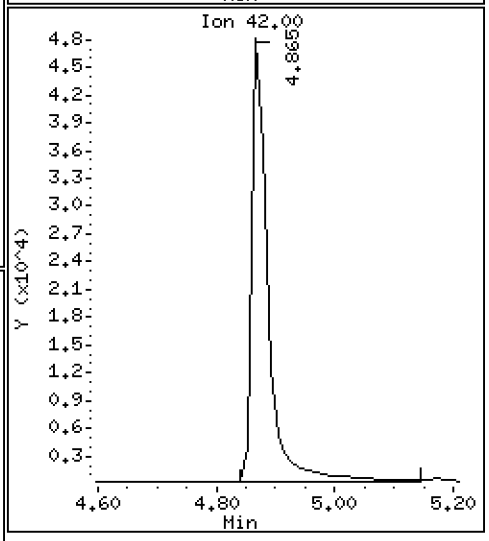
90 N-Nitrosodimethylamine

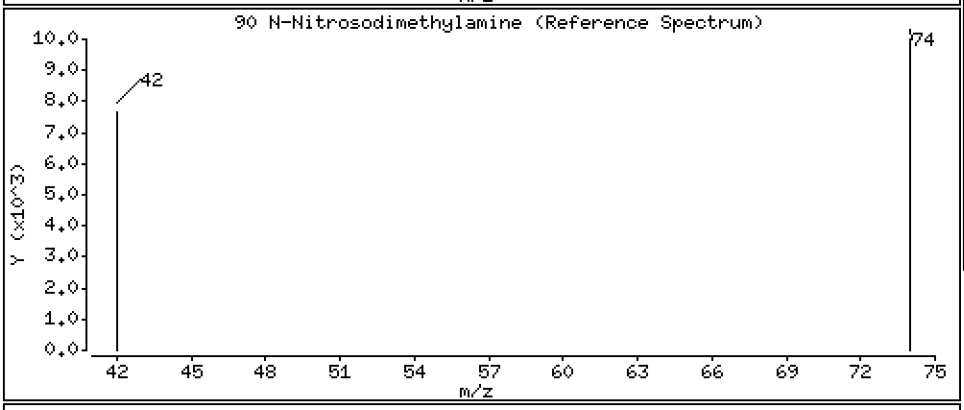
Concentration: 1.948 ug/mL

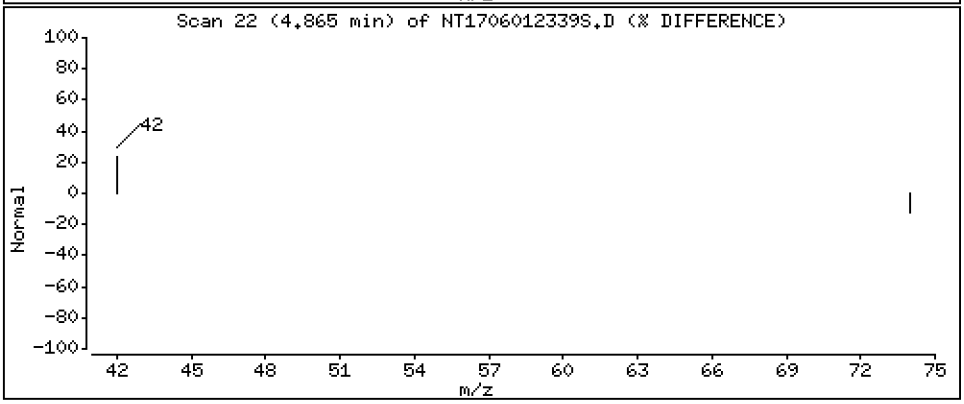












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012339S.D
Lab Smp Id: SLF0037-CCV1
Inj Date : 02-JUN-2023 11:39
Operator : VTS Inst ID: nt17.i
Smp Info : SLF0037-CCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 11:42 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.954	6.954	(0.760)	98836	1.43265	1.433(R)
	3 Phenol	94	8.547	8.547	(0.934)	101942	0.99169	0.9917
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	93048	1.00986	1.010
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	228090	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	91377	1.01773	1.018
	11 Benzyl alcohol	79	9.465	9.452	(1.035)	57433	0.98052	0.9805
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	88037	1.00041	1.000
	13 2-Methylphenol	108	9.644	9.644	(1.054)	65952	0.92586	0.9259
	15 4-Methylphenol	108	9.912	9.912	(1.084)	61785	0.85825	0.8583
	16 N-Nitroso-di-n-propylamine	70	9.963	9.964	(1.089)	51711	0.99668	0.9967
	22 2,4-Dimethylphenol	107	10.934	10.934	(0.943)	141509	1.96358	1.964
	24 Benzoic acid	105	11.100	11.100	(0.957)	151818	3.38153	3.382
	26 1,2,4-Trichlorobenzene	180	11.521	11.521	(0.993)	63543	0.97184	0.9718
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	749189	4.00000	
	30 Hexachlorobutadiene	225	11.993	11.993	(1.034)	40293	1.17036	1.170
	39 Dimethylphthalate	163	14.696	14.696	(0.968)	152678	0.94338	0.9434
*	42 Acenaphthene-d10	162	15.181	15.194	(1.000)	440715	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.063)	143693	0.97765	0.9777
	54 N-Nitrosodiphenylamine	169	16.519	16.519	(0.908)	99068	1.02995	1.030
	57 Hexachlorobenzene	284	17.588	17.588	(0.966)	37530	1.15020	1.150
	58 Pentachlorophenol	266	17.958	17.946	(0.987)	35552	1.90220	1.902
*	59 Phenanthrene-d10	188	18.200	18.201	(1.000)	682756	4.00000	
$	66 Terphenyl-d14	244	21.325	21.325	(0.919)	99466	1.18267	1.183(R)
	67 Butylbenzylphthalate	149	22.230	22.243	(0.958)	88955	0.97332	0.9733
*	69 Chrysene-d12	240	23.213	23.213	(1.000)	443232	4.00000	
*	77 Perylene-d12	264	25.802	25.802	(1.000)	396206	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.459	28.446	(1.103)	89386	0.79985	0.7998
	90 N-Nitrosodimethylamine	74	4.865	4.878	(0.532)	86752	1.94836	1.948

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 02-JUN-2023
Lab File ID: NT1706012339S.D Calibration Time: 00:29
Lab Smp Id: SLF0037-CCV1
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	265536	132768	531072	228090	-14.10
27 Naphthalene-d8	874121	437061	1748242	749189	-14.29
42 Acenaphthene-d10	524478	262239	1048956	440715	-15.97
59 Phenanthrene-d10	807440	403720	1614880	682756	-15.44
69 Chrysene-d12	527364	263682	1054728	443232	-15.95
77 Perylene-d12	455527	227764	911054	396206	-13.02

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.18	-0.08
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.21	22.71	23.71	23.21	-0.00
77 Perylene-d12	25.80	25.30	26.30	25.80	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012339S.D

Lab ID: SLF0037-CCV1
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   02-JUN-2023 11:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1706012321S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT17	Calibration:	GE00070
Lab File ID:	NT1706012307S.D	Calibration Date:	05/16/2023
Sequence:	SLF0037	Injection Date:	06/01/23
Lab Sample ID:	SLF0037-LCV1	Injection Time:	15:50
Sequence Name:	ABN 0.1		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.10000	0.1	1.5745540	1.7210110		9.3	
1,2-Dichlorobenzene	A	0.10000	0.1	1.5432720	1.6449010		6.6	
Benzyl Alcohol	A	0.10000	0.1	1.0272110	0.9894259		-3.7	
Benzoic acid	A	0.40000	0.1	0.1537024	0.0632294		-73.6	
2,4-Dimethylphenol	A	0.20000	0.2	0.3847731	0.3732355		-3.0	
1,2,4-Trichlorobenzene	A	0.10000	0.1	0.3490929	0.3540212		1.4	
N-Nitrosodiphenylamine	A	0.10000	0.1	0.5635219	0.5942560		5.5	
Pentachlorophenol	A	0.20000	0.1	0.0772800	0.0753343		-30.1	
2-Fluorophenol	A	0.15000	0.118	1.2098450	0.9526654		-21.3	
p-Terphenyl-d14	A	0.10000	0.118	0.7589992	0.8922693		17.6	

* Values outside of QC limits

Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123075.D

Date : 01-JUN-2023 15:50

Client ID:

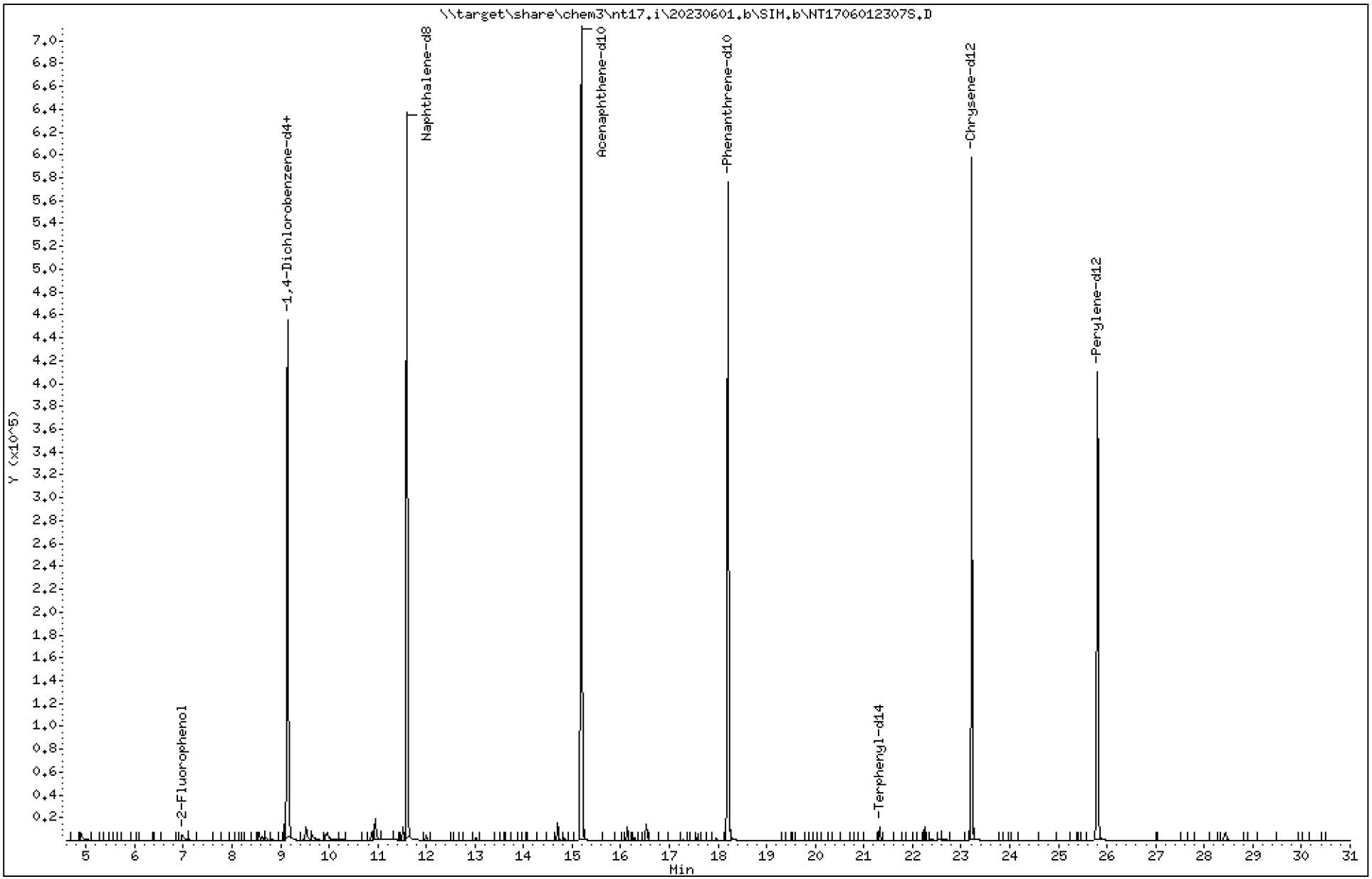
Sample Info: SLF0037-LCV1

Column phase: ZB-5msi

Instrument: nt17.i

Operator: VTS

Column diameter: 0.25



Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

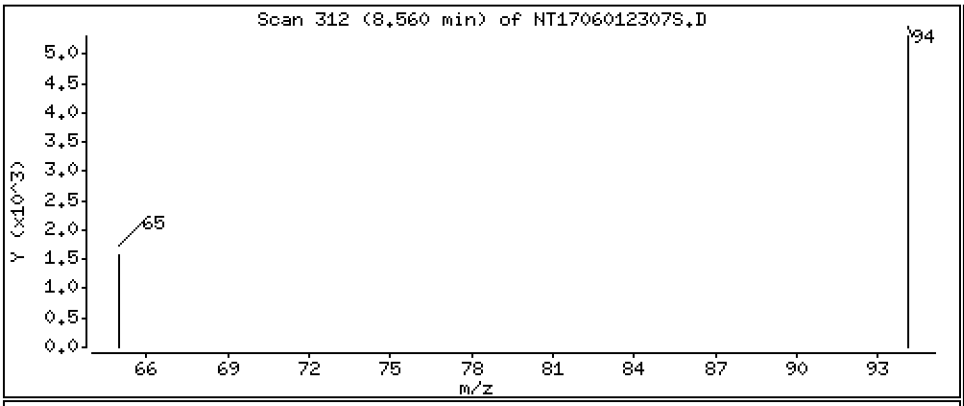
Operator: VTS

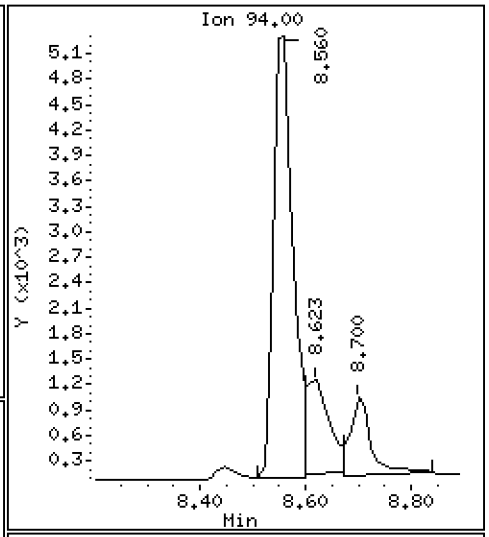
Column phase: ZB-5msi

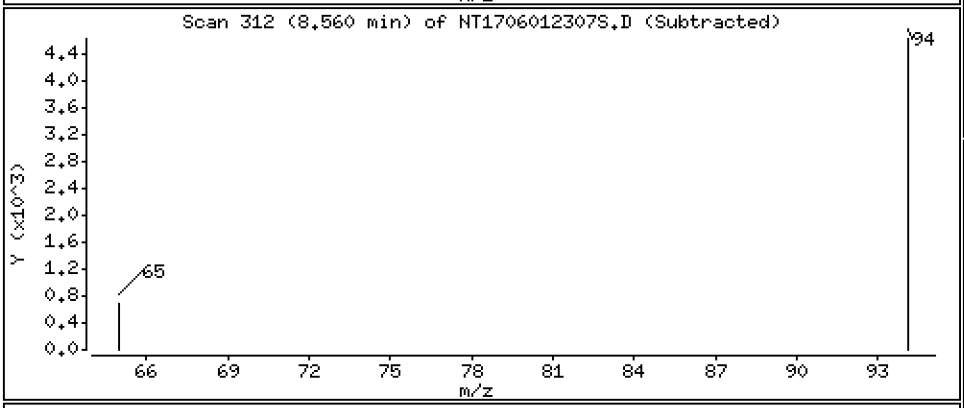
Column diameter: 0.25

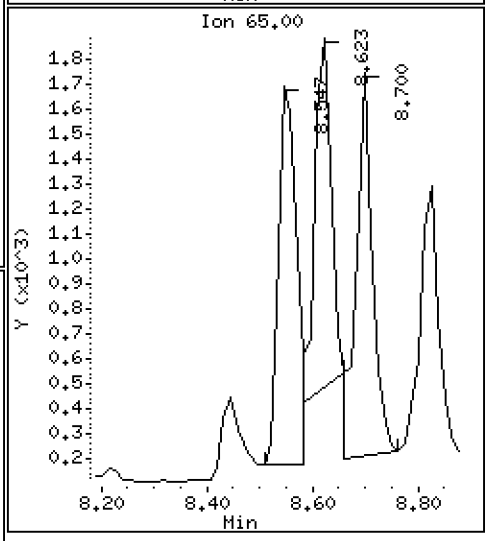
3 Phenol

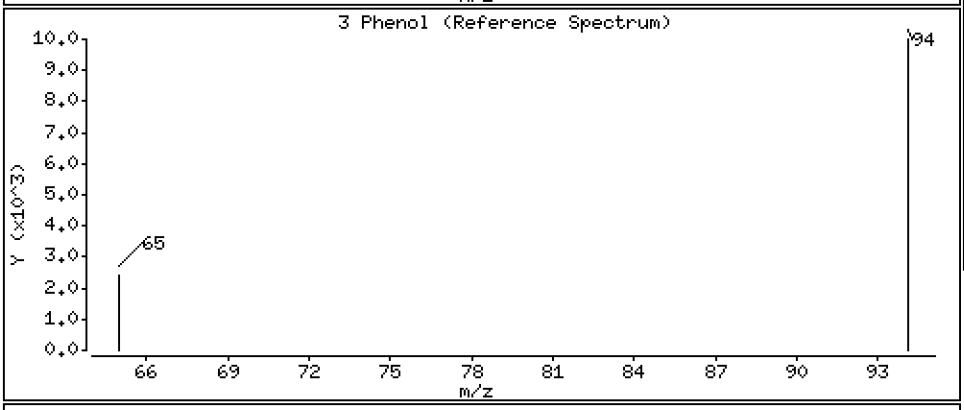
Concentration: 0.09298 ug/mL

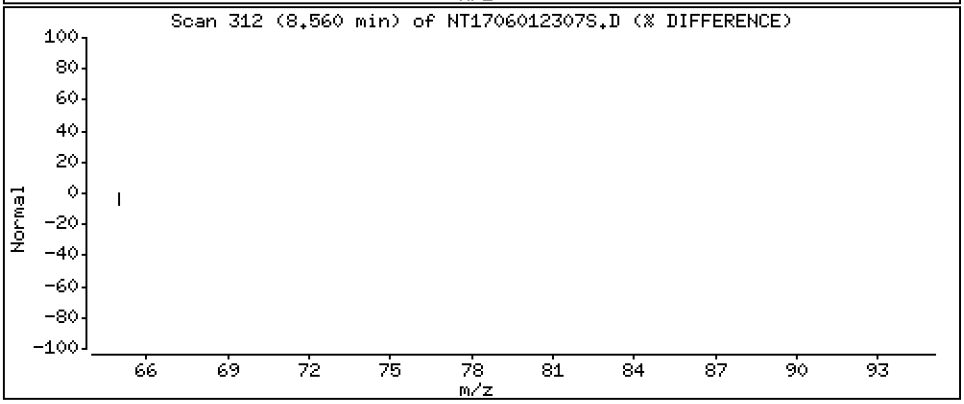












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

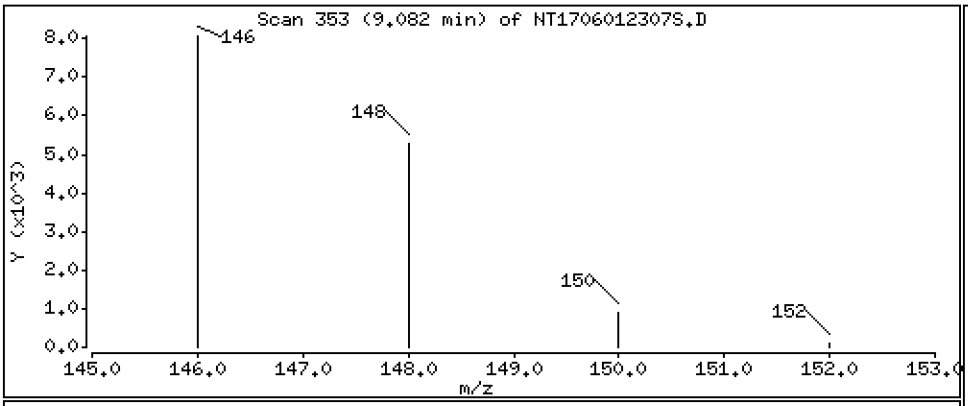
Operator: VTS

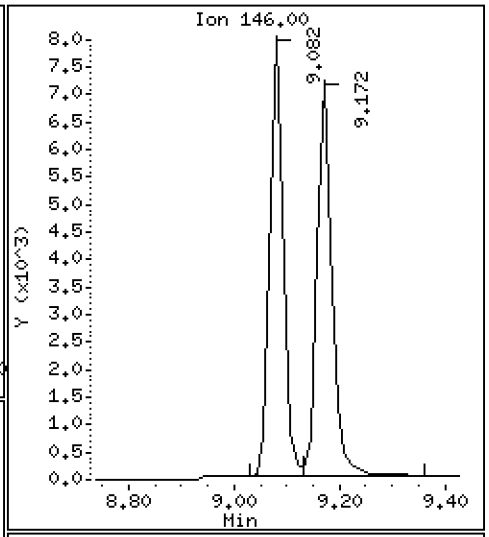
Column phase: ZB-5msi

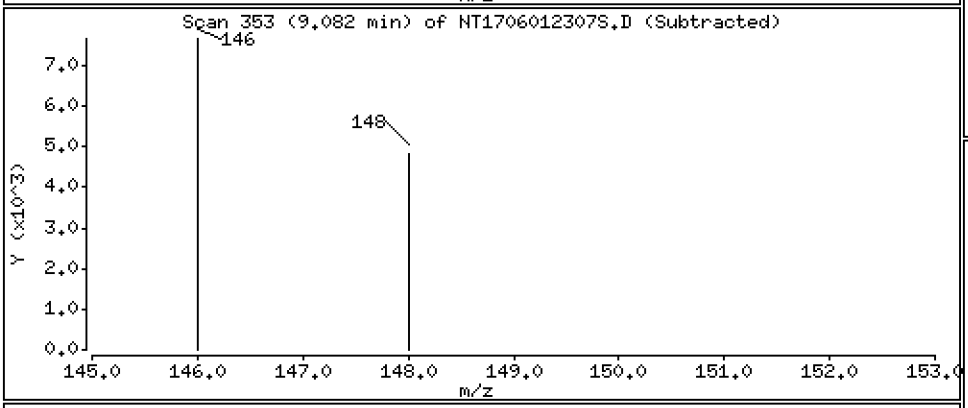
Column diameter: 0.25

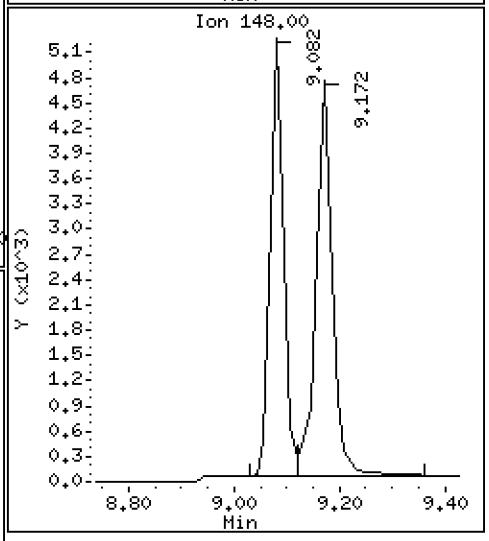
7 1,3-Dichlorobenzene

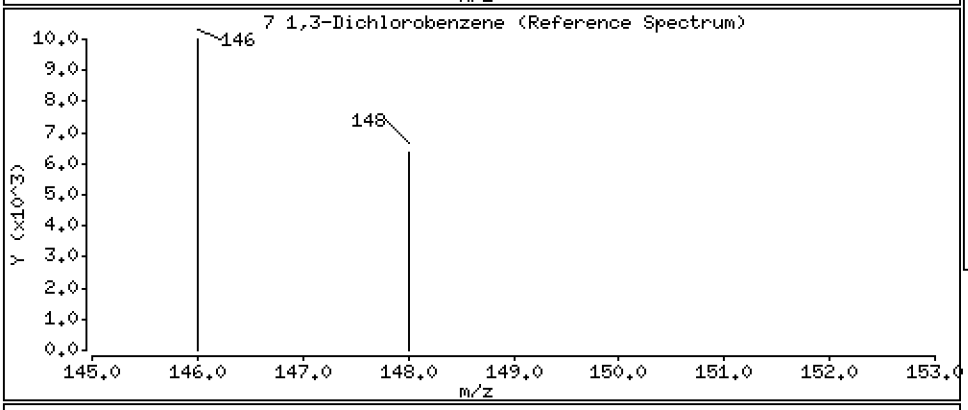
Concentration: 0.1052 ug/mL

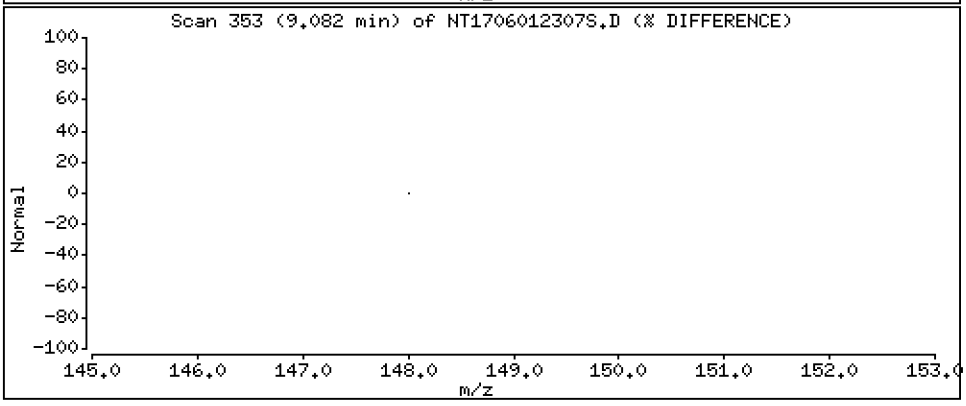












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

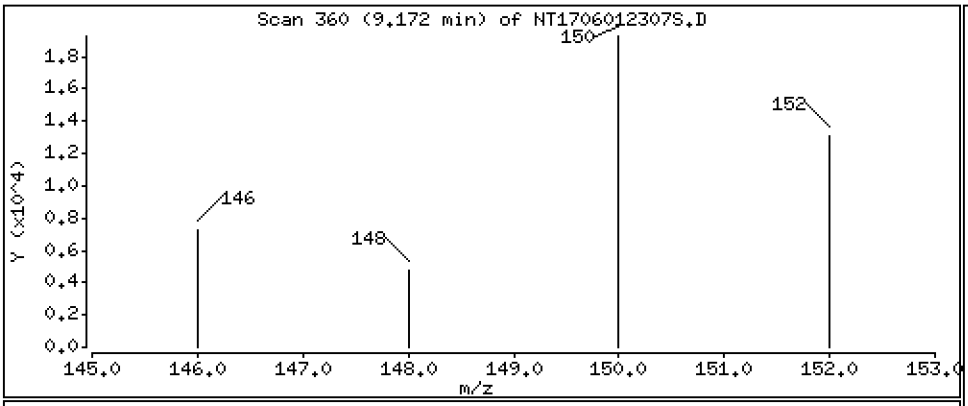
Operator: VTS

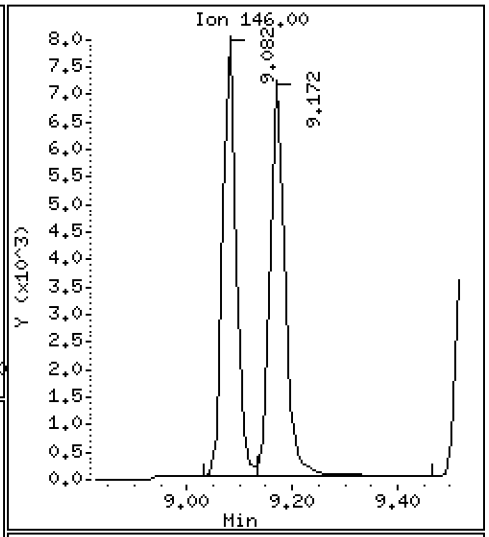
Column phase: ZB-5msi

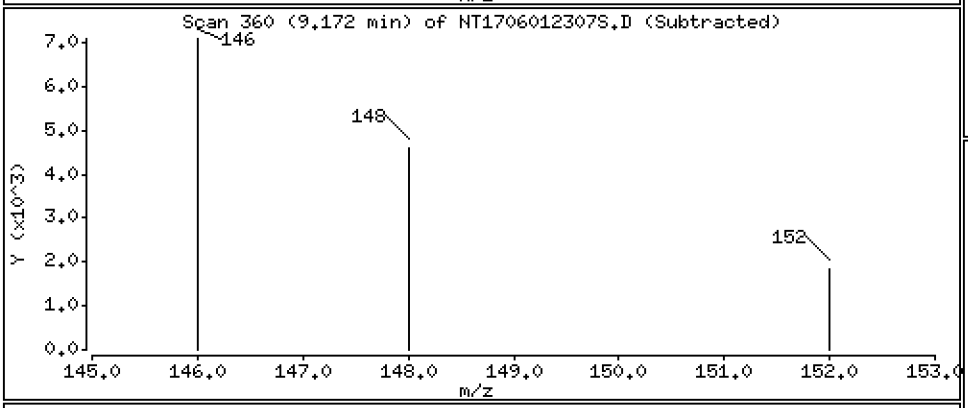
Column diameter: 0.25

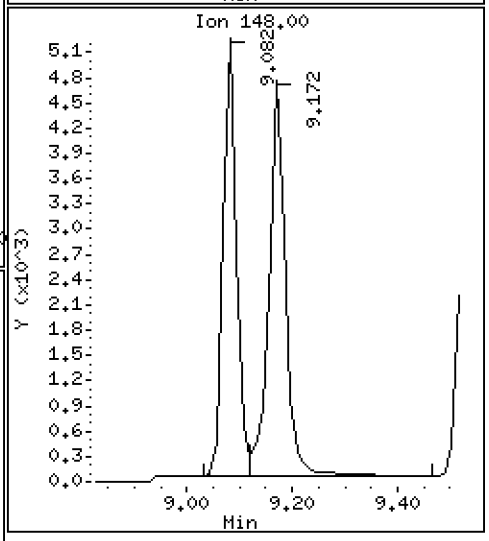
9 1,4-Dichlorobenzene

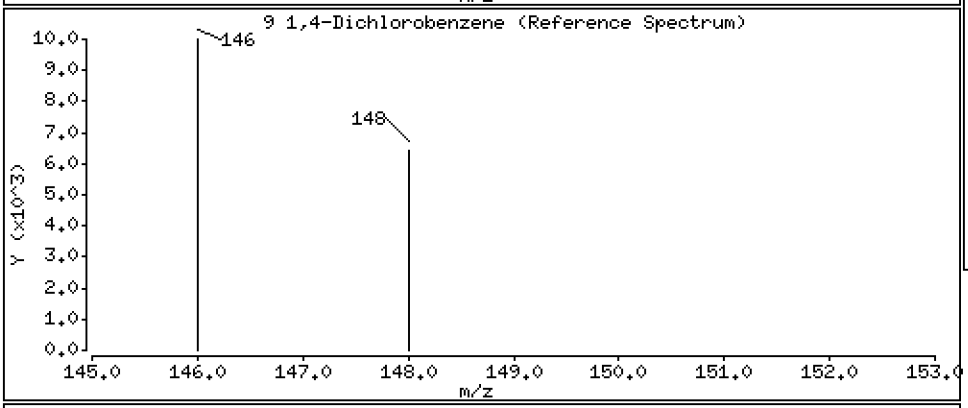
Concentration: 0.1093 ug/mL

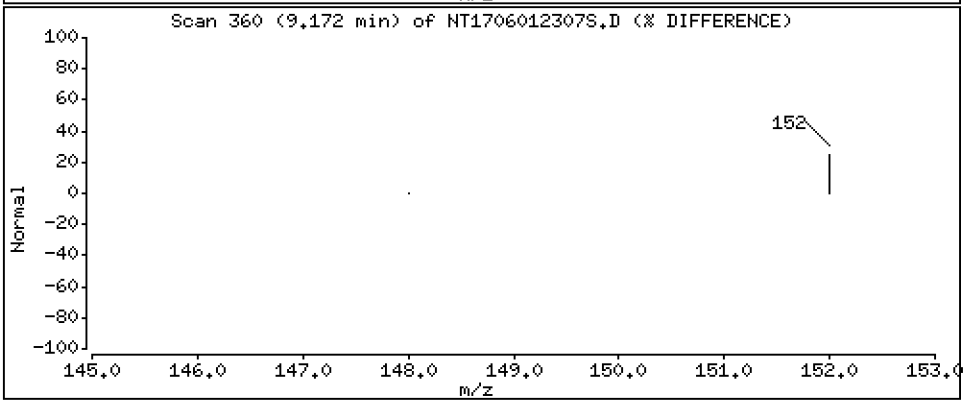












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

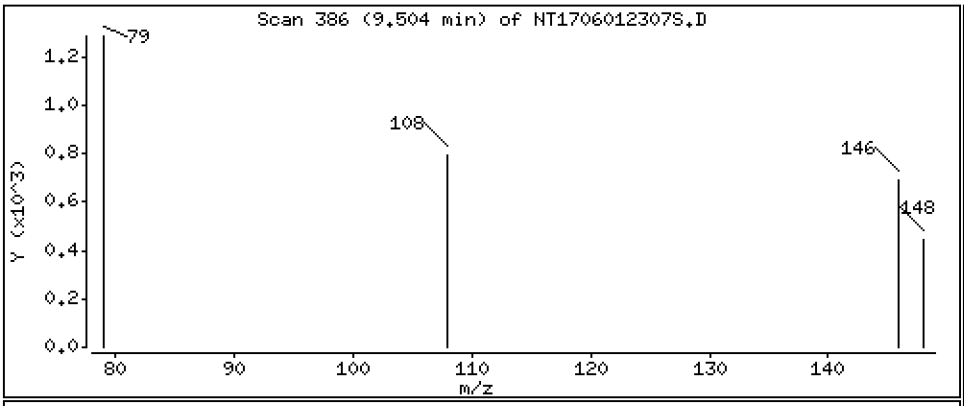
Operator: VTS

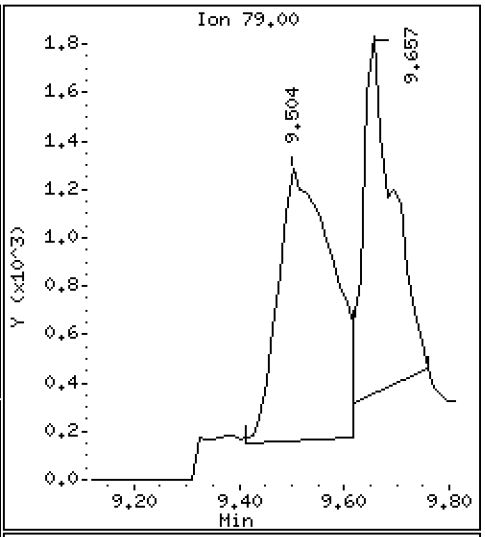
Column phase: ZB-5msi

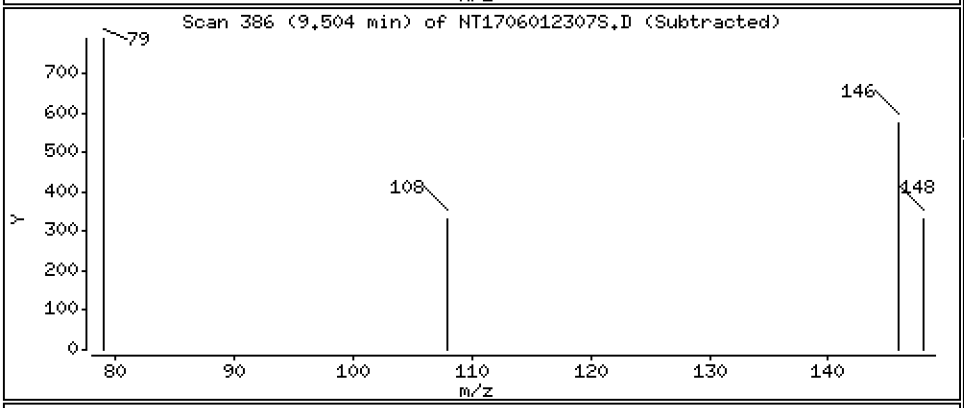
Column diameter: 0.25

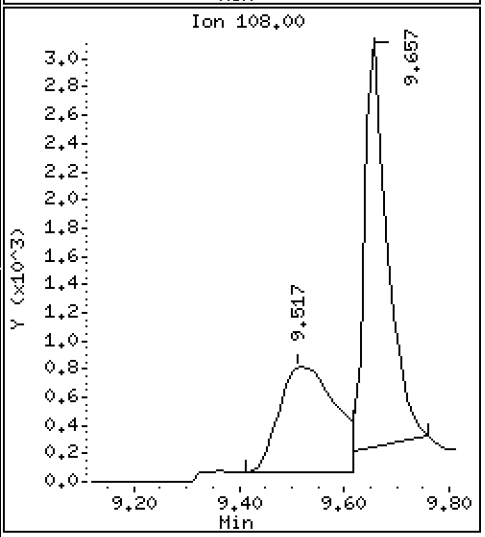
11 Benzyl alcohol

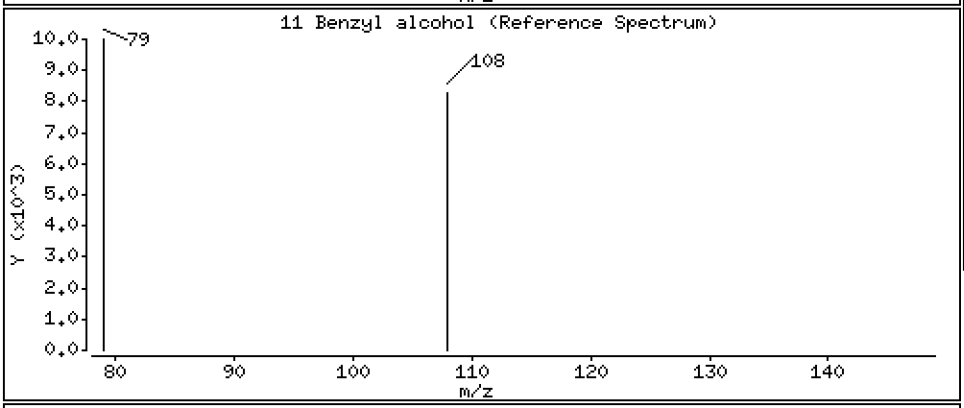
Concentration: 0.09632 ug/mL

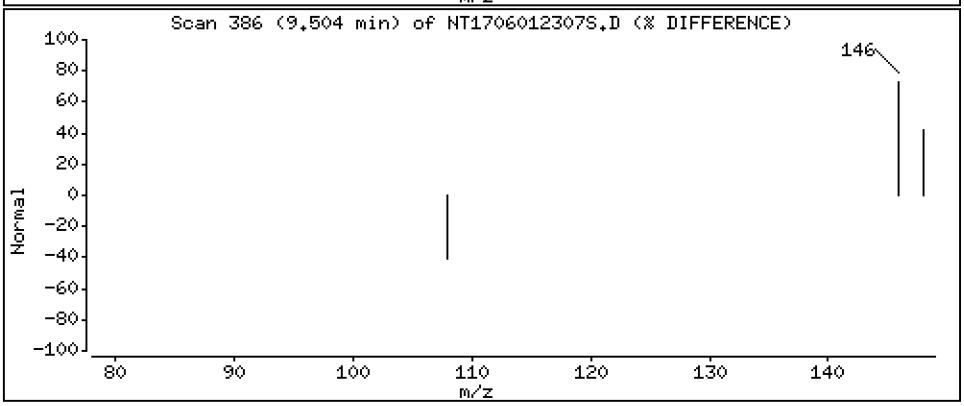












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

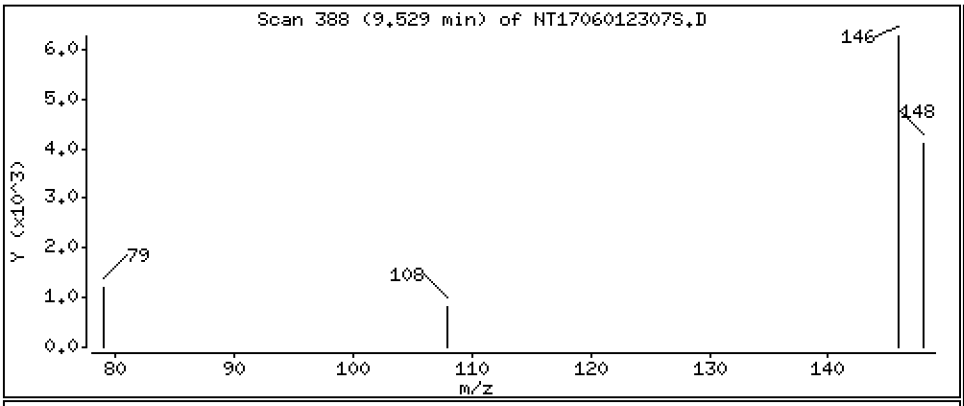
Operator: VTS

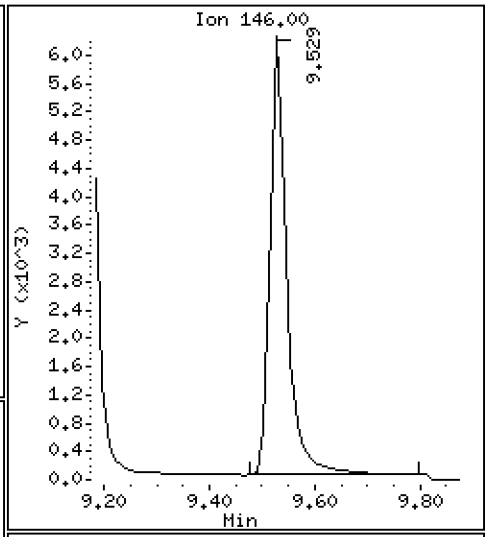
Column phase: ZB-5msi

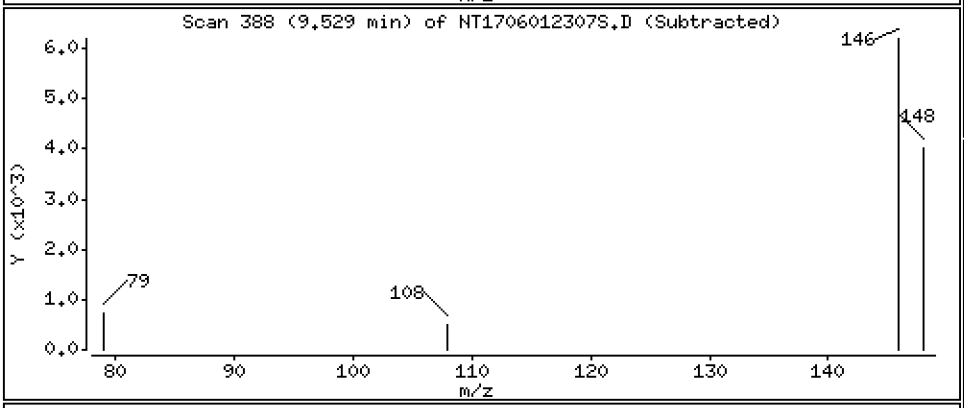
Column diameter: 0.25

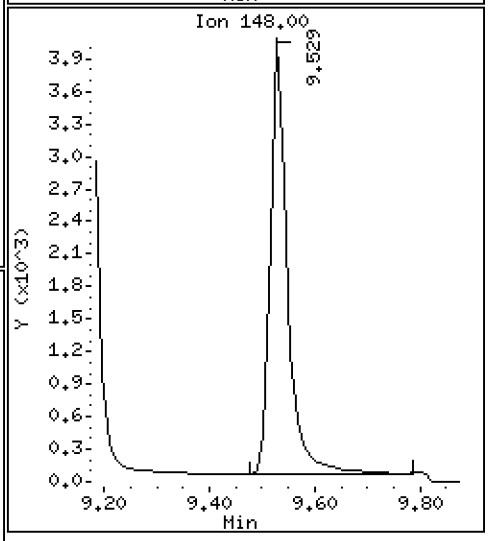
12 1,2-Dichlorobenzene

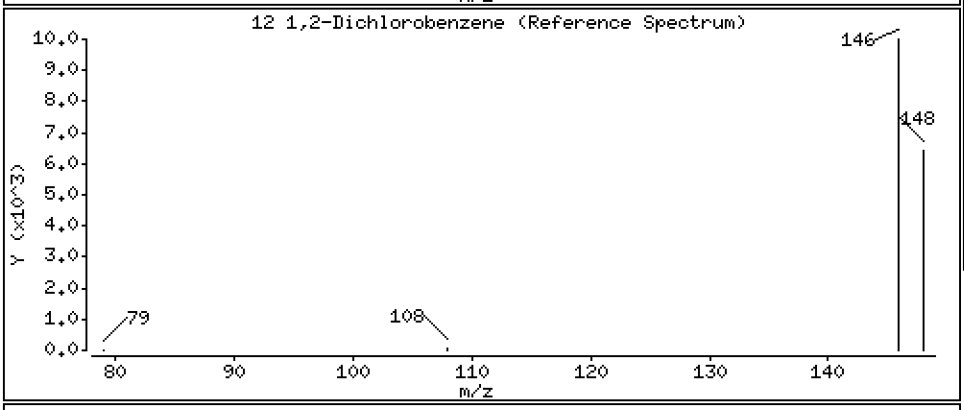
Concentration: 0.1066 ug/mL

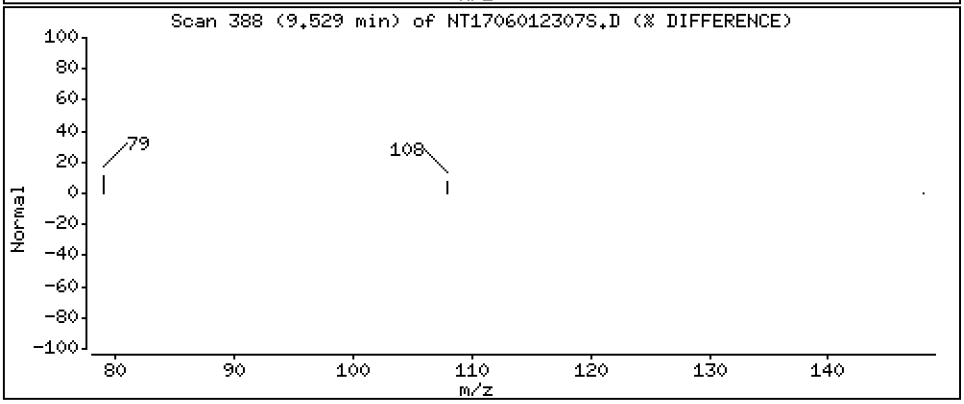












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

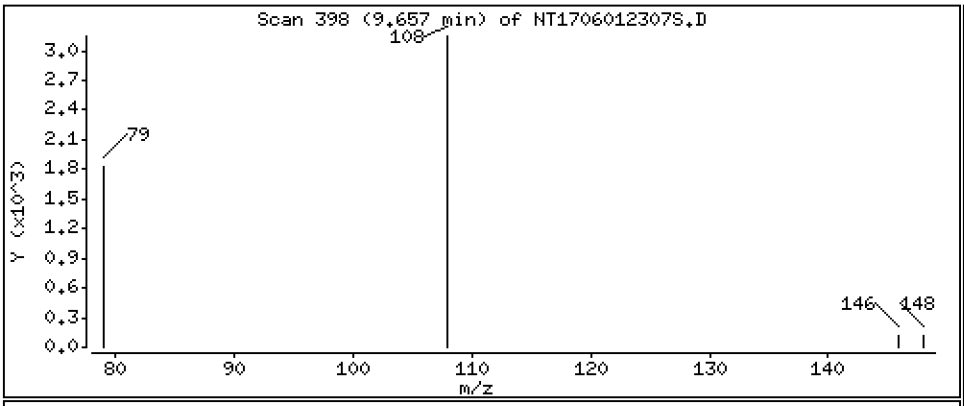
Operator: VTS

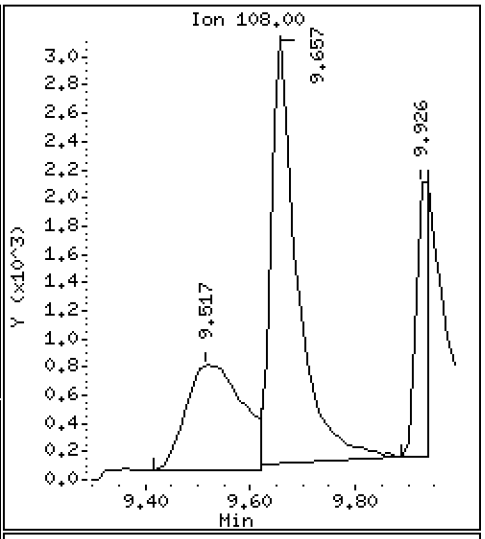
Column phase: ZB-5msi

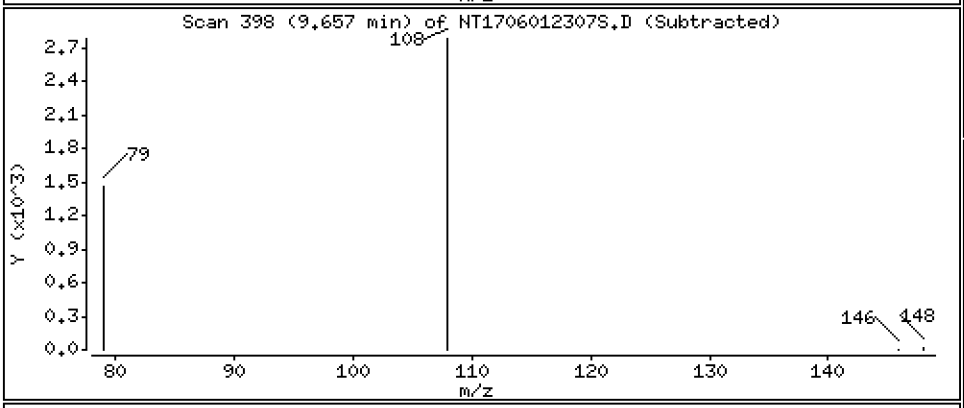
Column diameter: 0.25

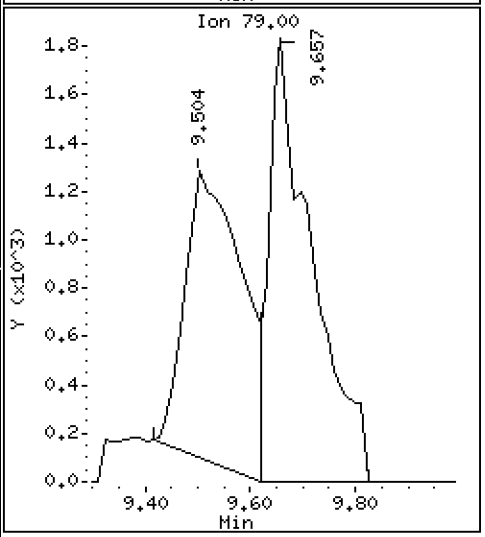
13 2-Methylphenol

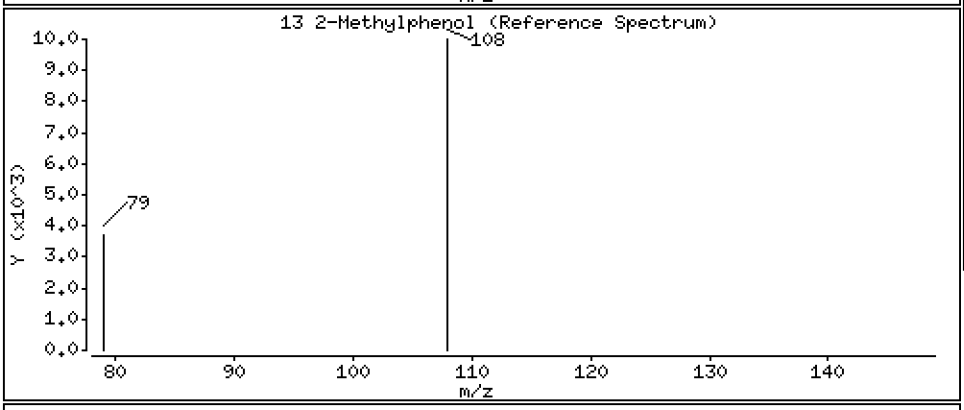
Concentration: 0.1011 ug/mL

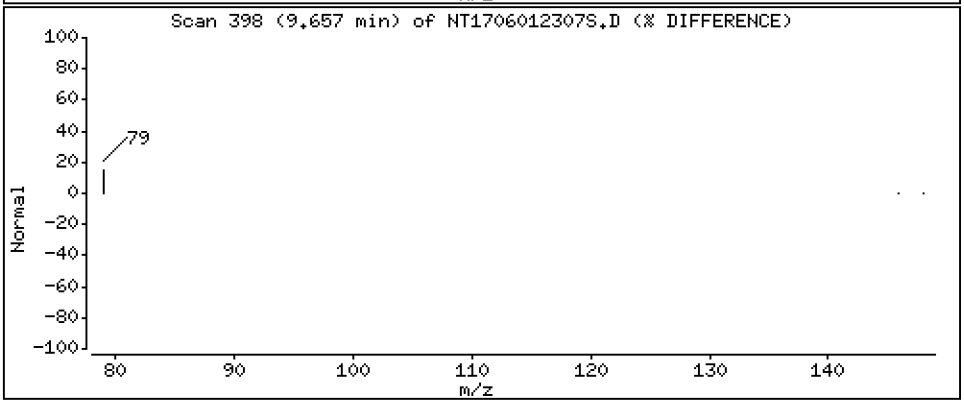












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

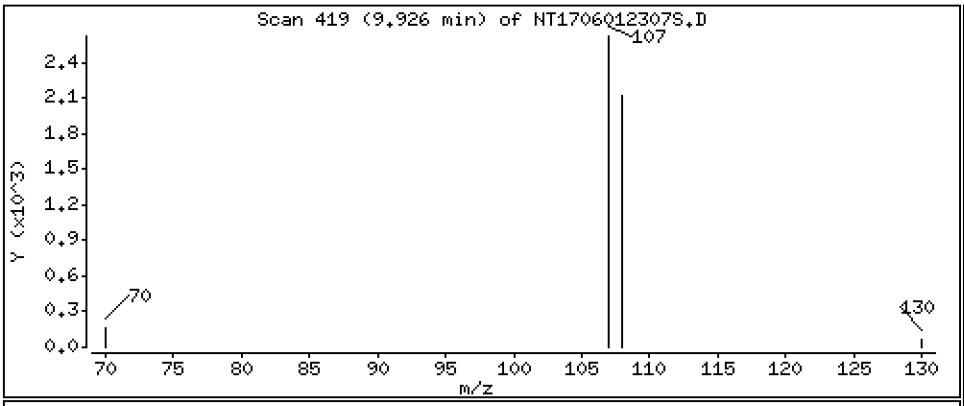
Operator: VTS

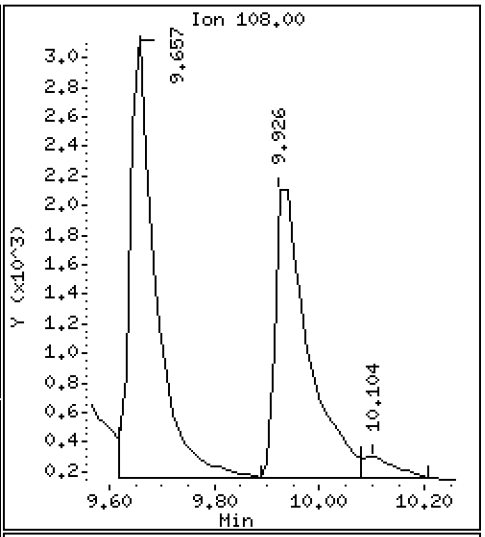
Column phase: ZB-5msi

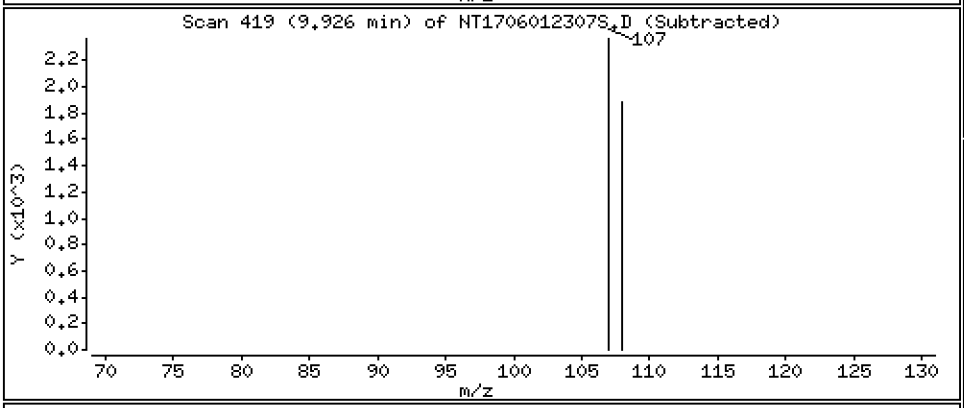
Column diameter: 0.25

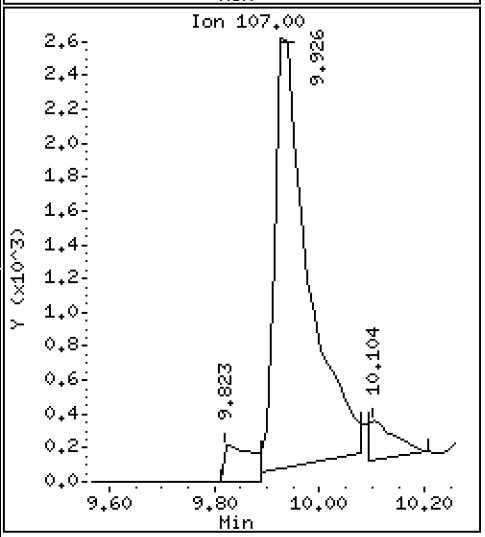
15 4-Methylphenol

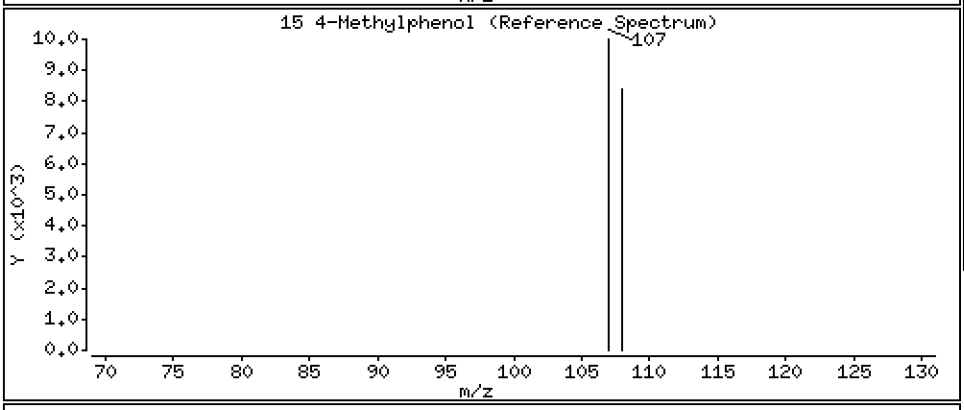
Concentration: 0.08045 ug/mL

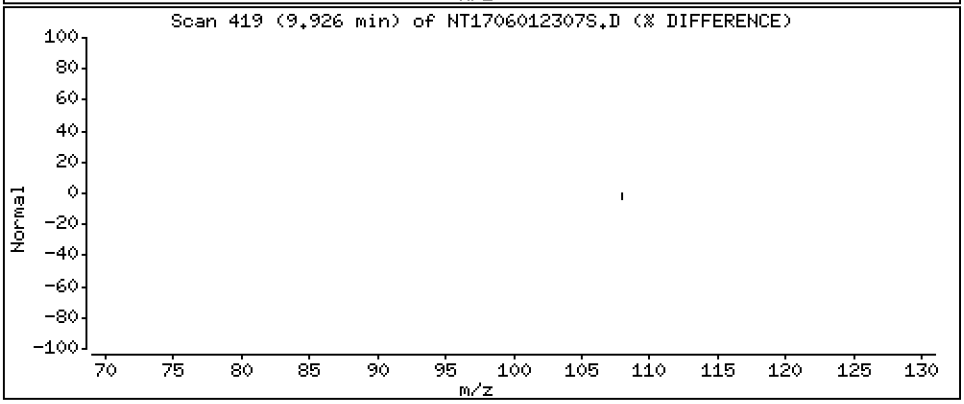












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

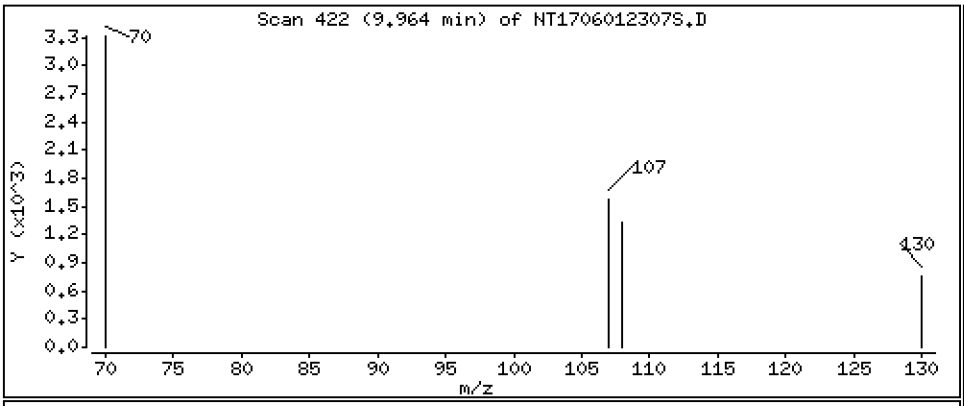
Operator: VTS

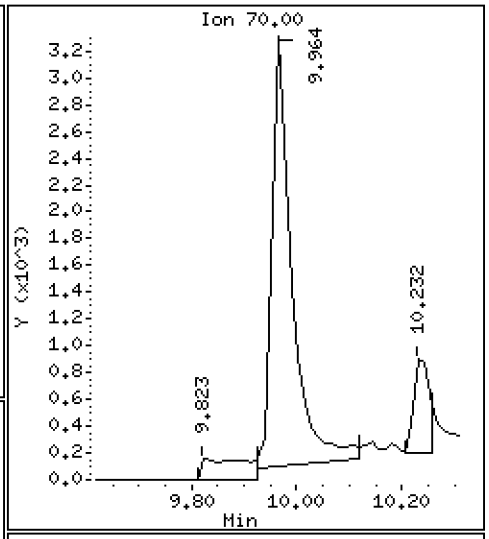
Column phase: ZB-5msi

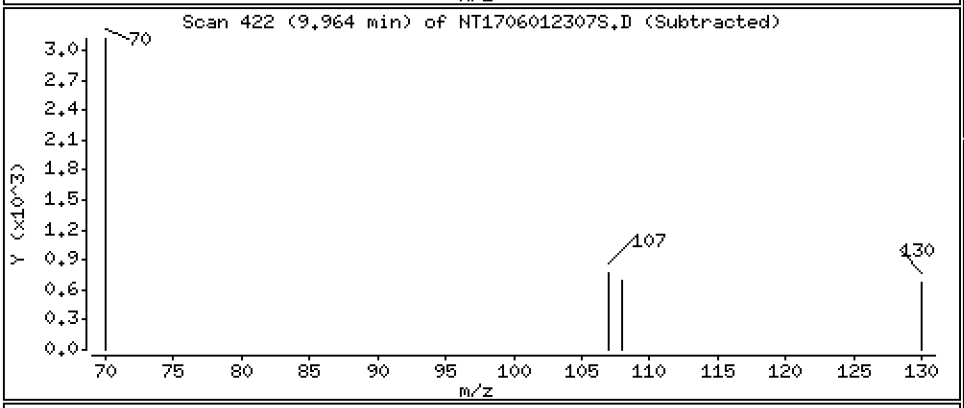
Column diameter: 0.25

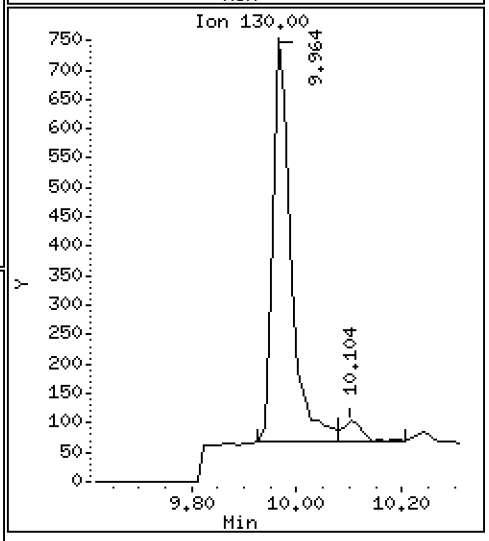
16 N-Nitroso-di-n-propylamine

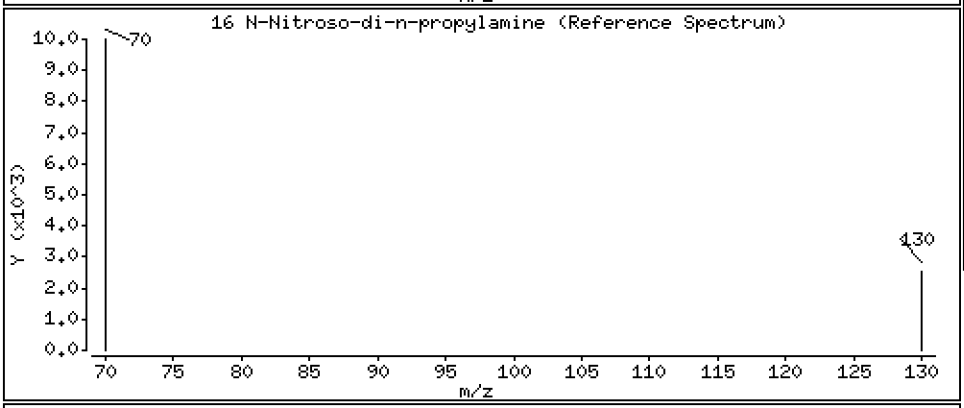
Concentration: 0.1114 ug/mL

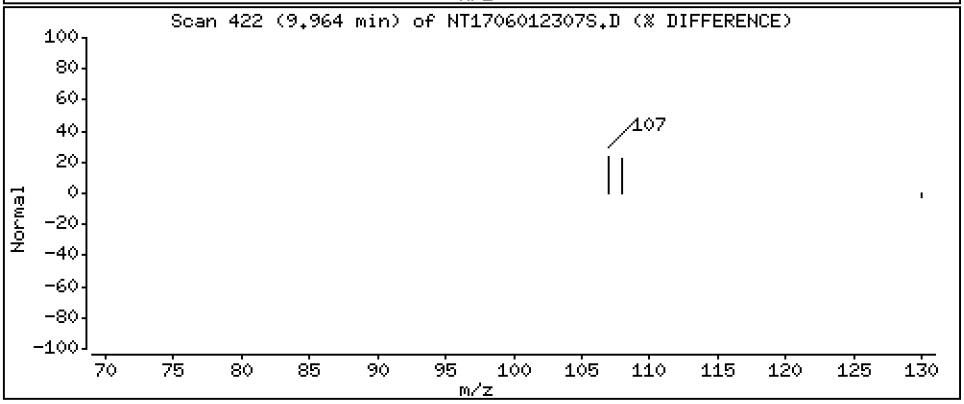












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123075.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

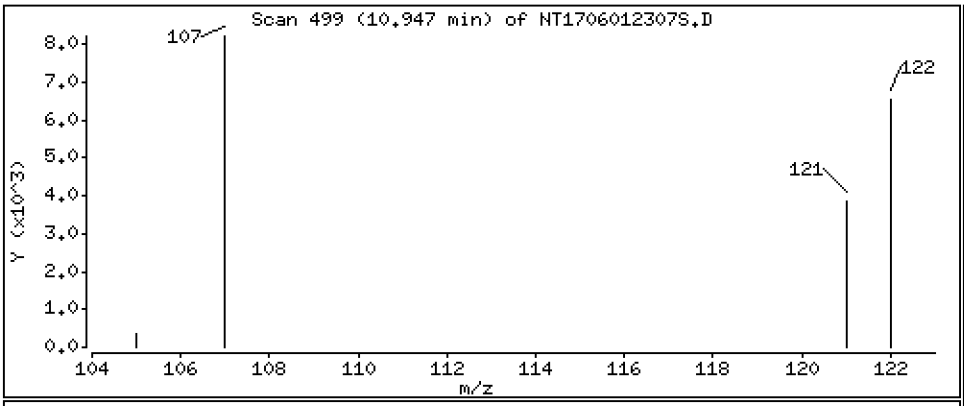
Operator: VTS

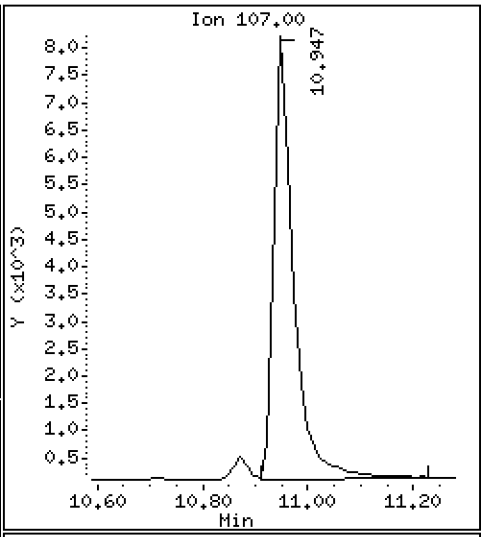
Column phase: ZB-5msi

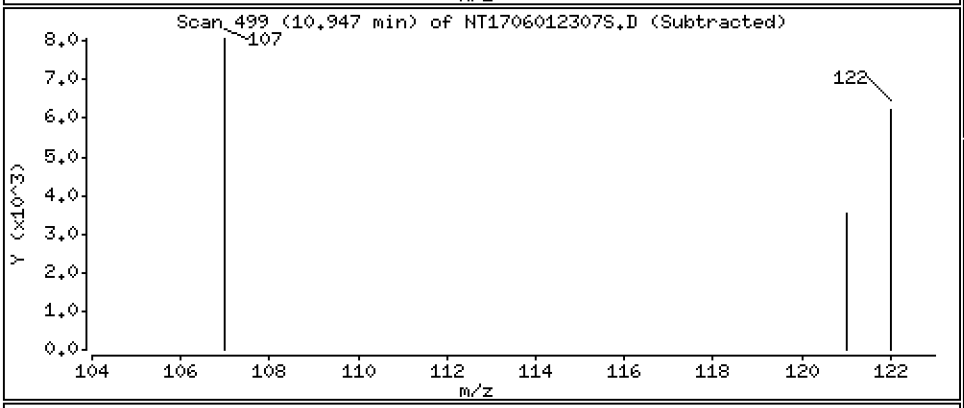
Column diameter: 0.25

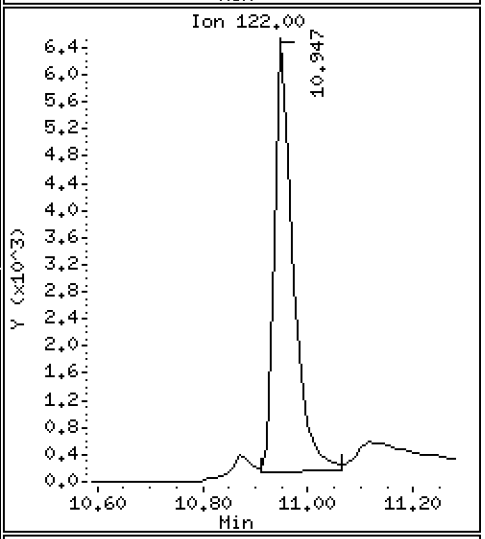
22 2,4-Dimethylphenol

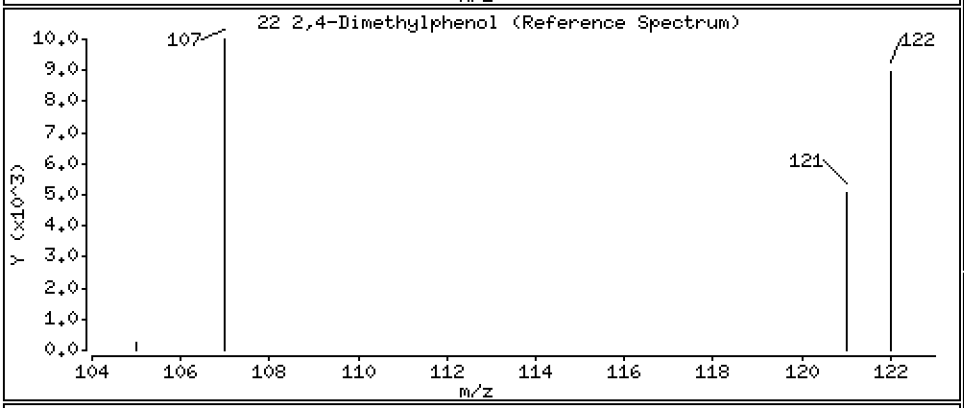
Concentration: 0.1940 ug/mL

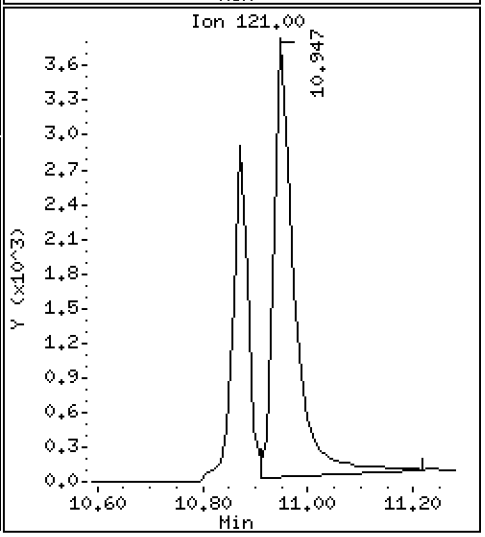


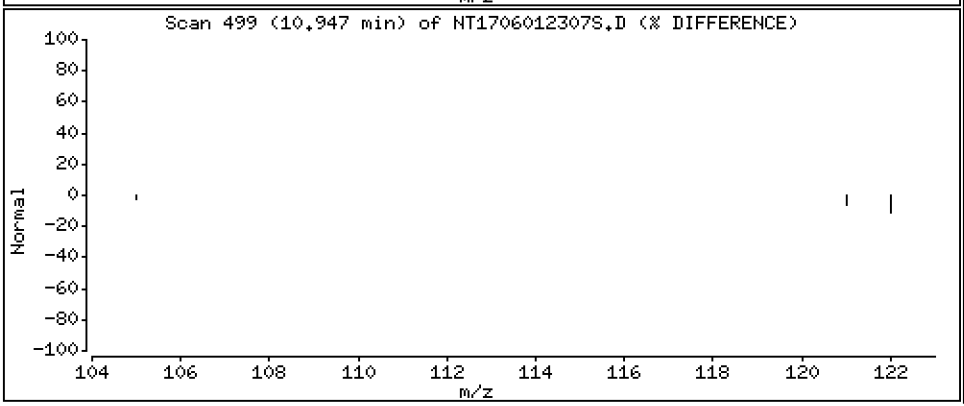












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123075.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

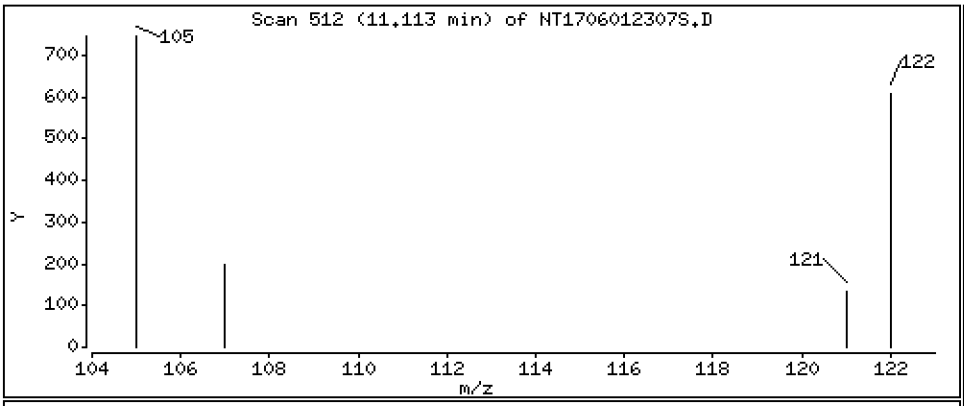
Operator: VTS

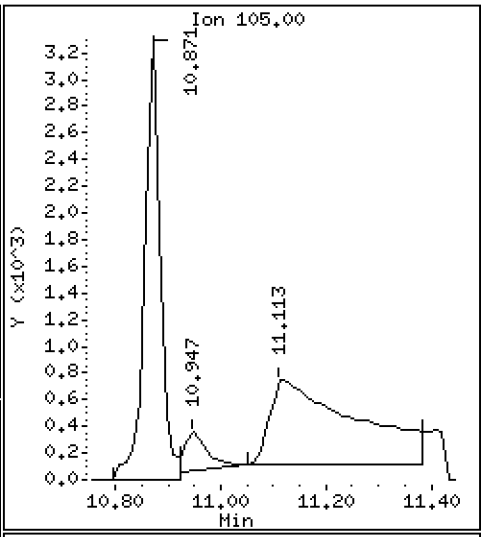
Column phase: ZB-5msi

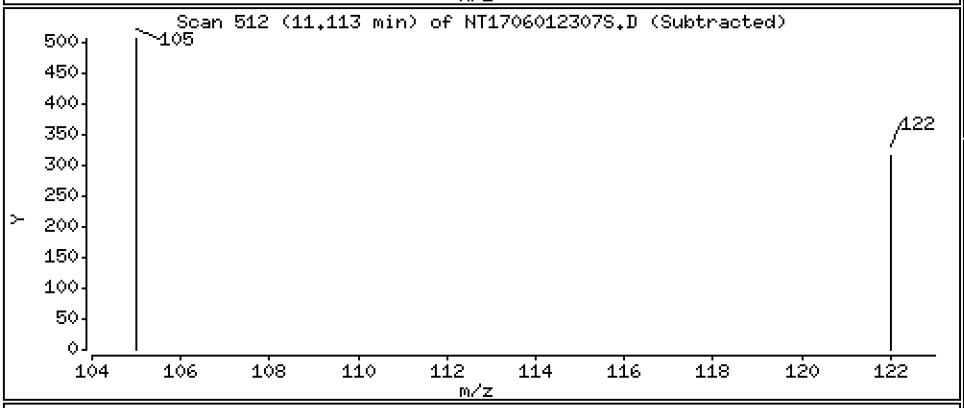
Column diameter: 0.25

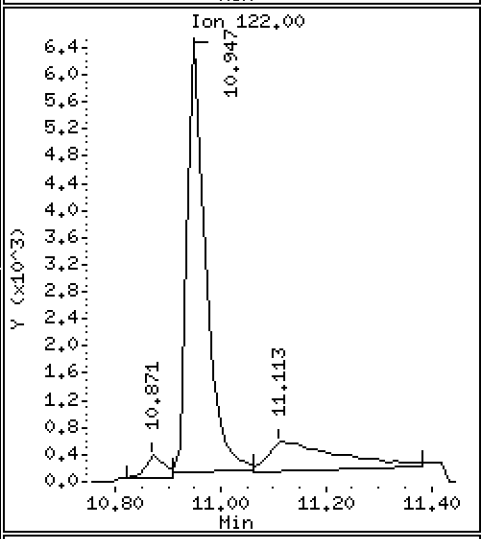
24 Benzoic acid

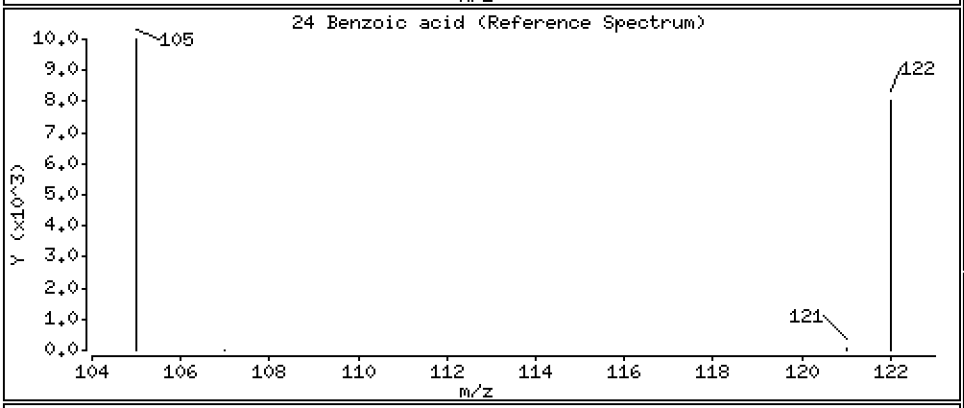
Concentration: 0.1055 ug/mL

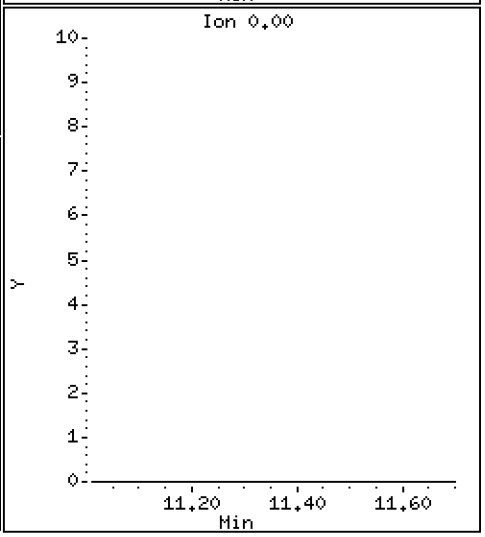


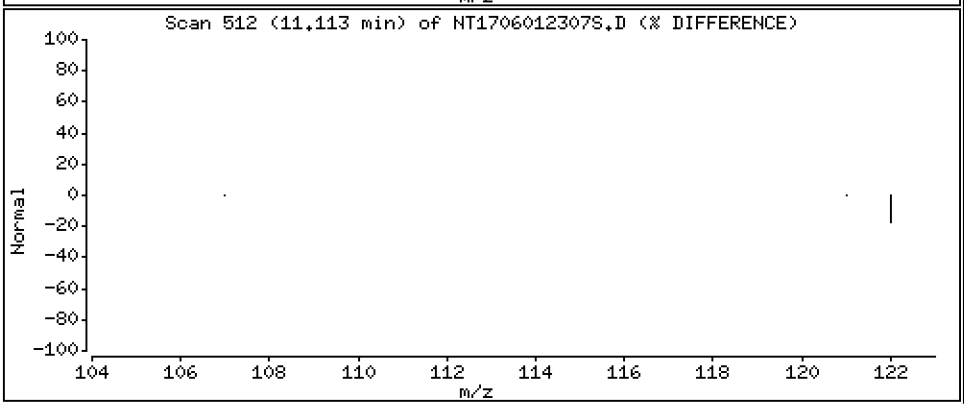












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

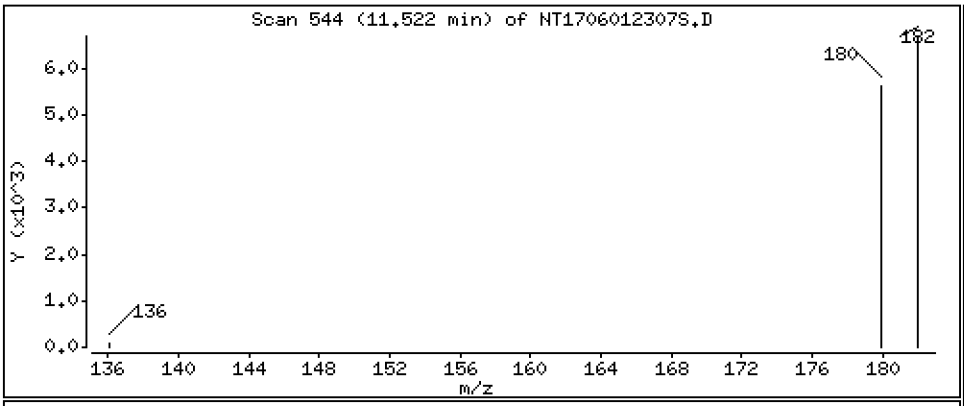
Operator: VTS

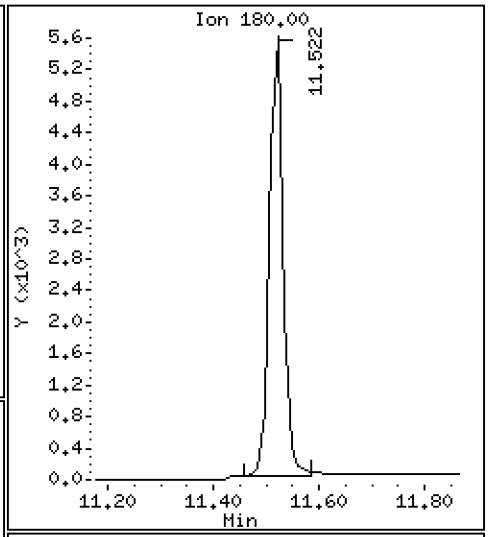
Column phase: ZB-5msi

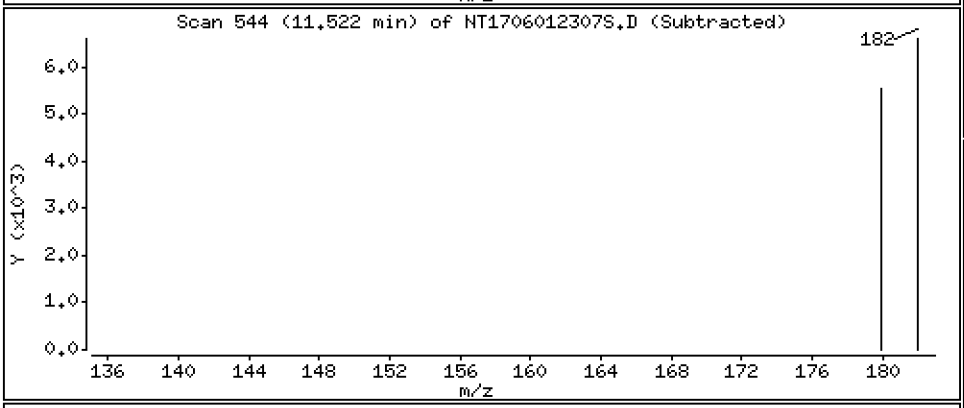
Column diameter: 0.25

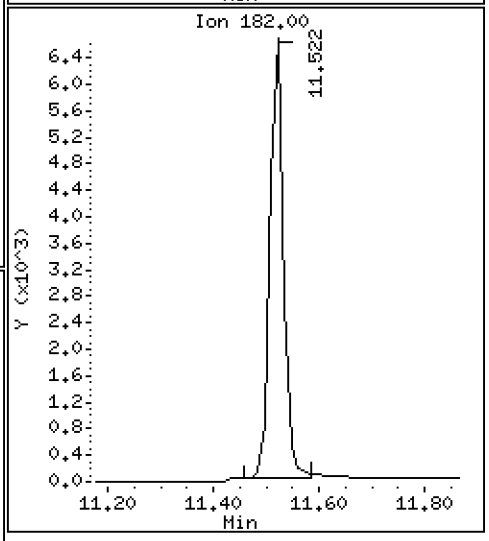
26 1,2,4-Trichlorobenzene

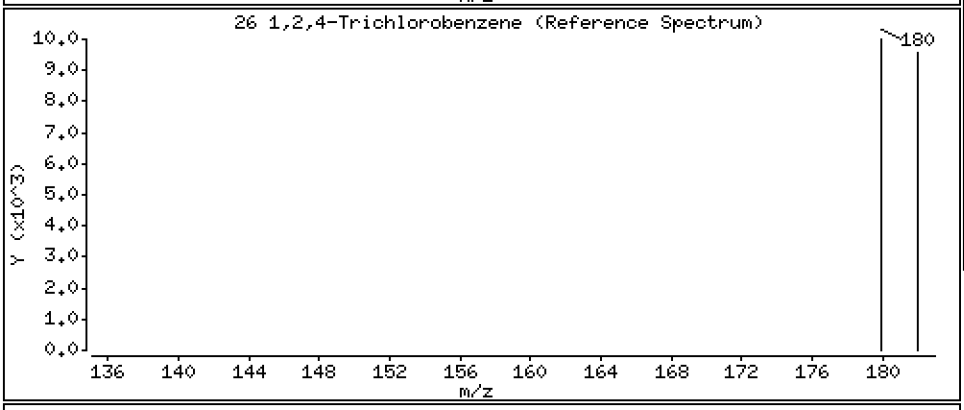
Concentration: 0.1014 ug/mL

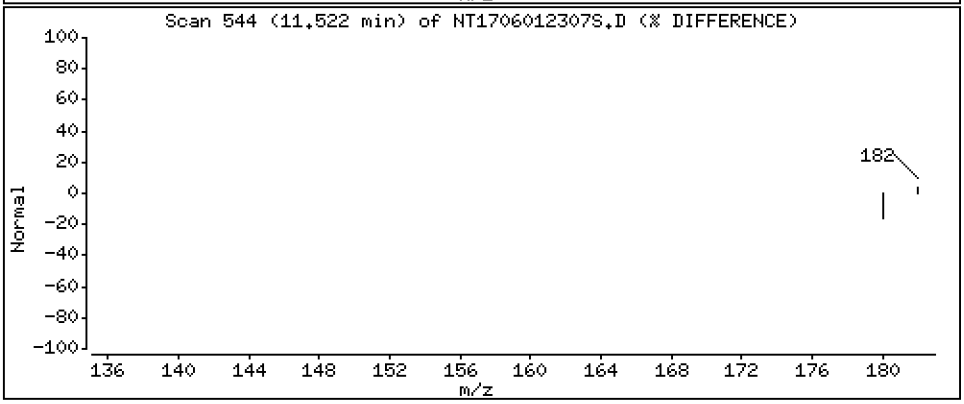












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123075.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

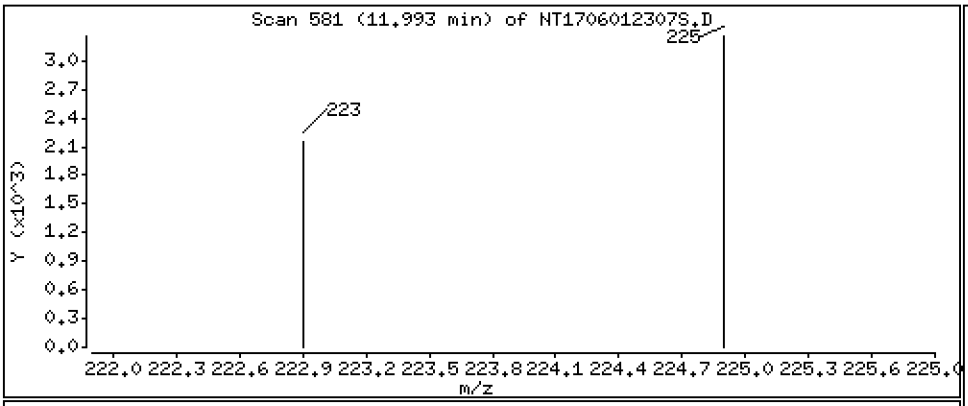
Operator: VTS

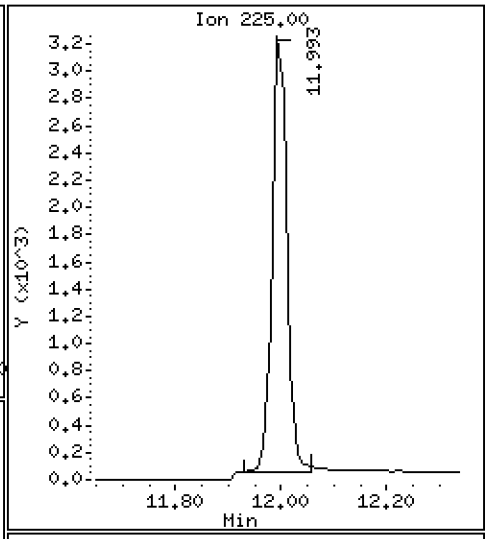
Column phase: ZB-5msi

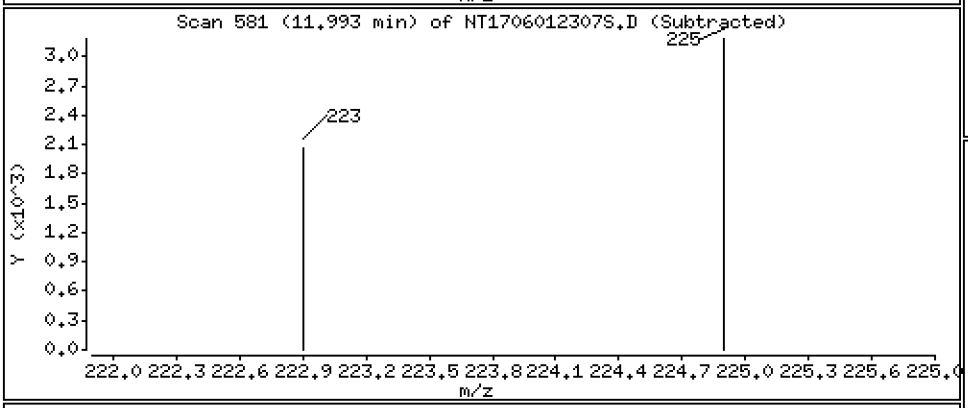
Column diameter: 0.25

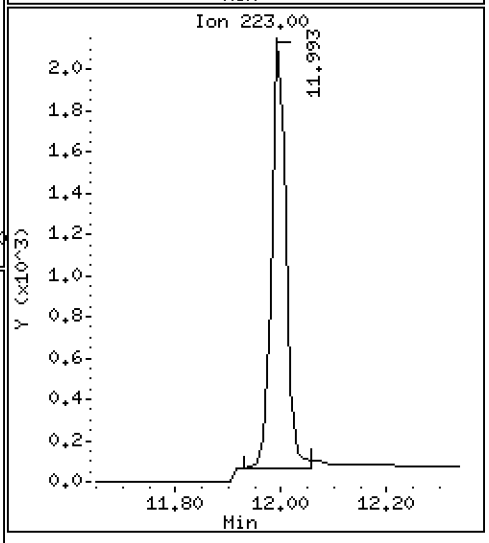
30 Hexachlorobutadiene

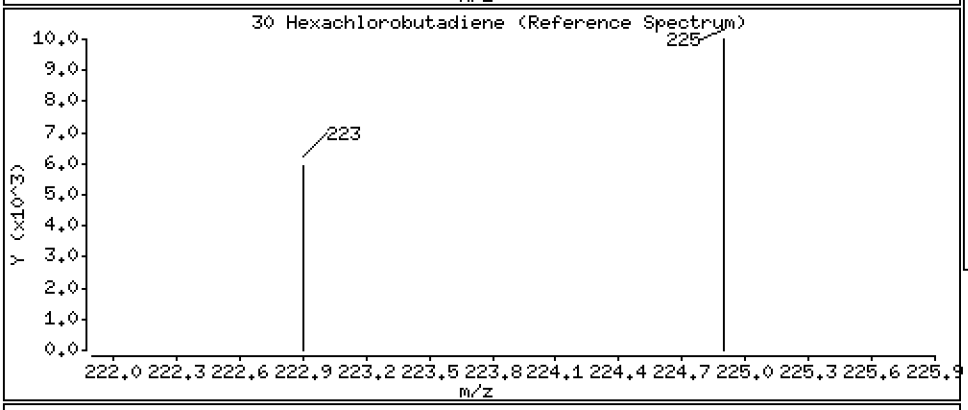
Concentration: 0.1203 ug/mL

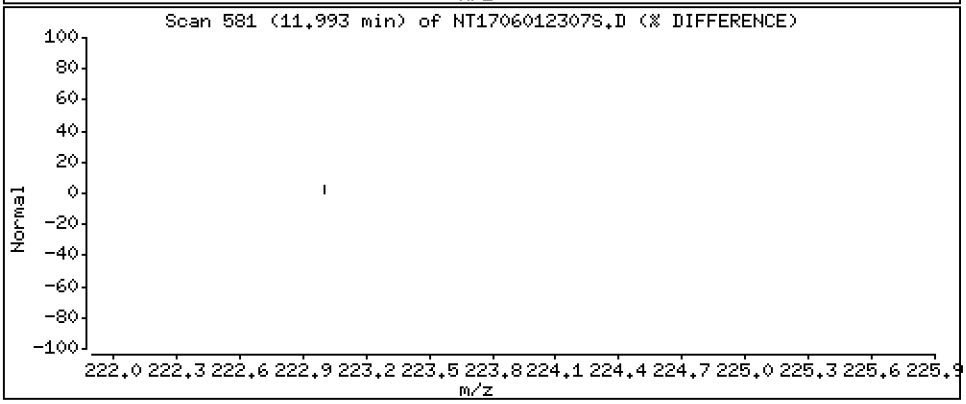












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

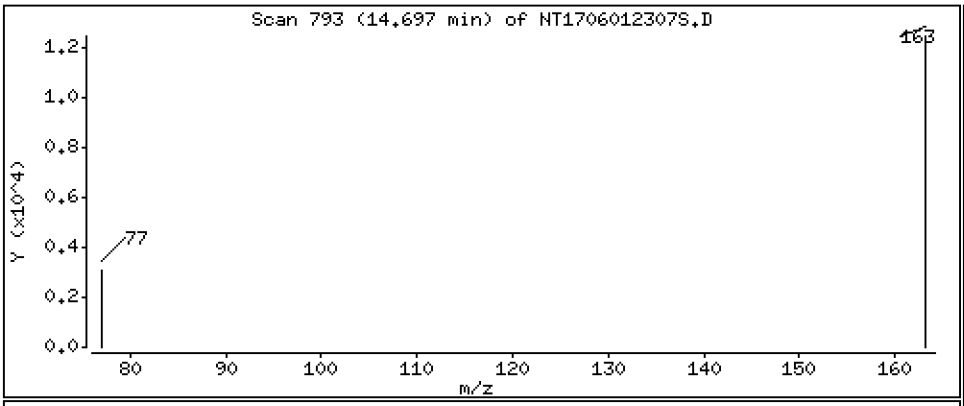
Operator: VTS

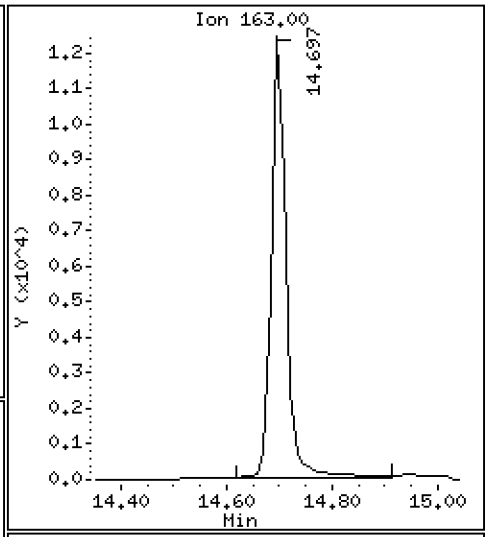
Column phase: ZB-5msi

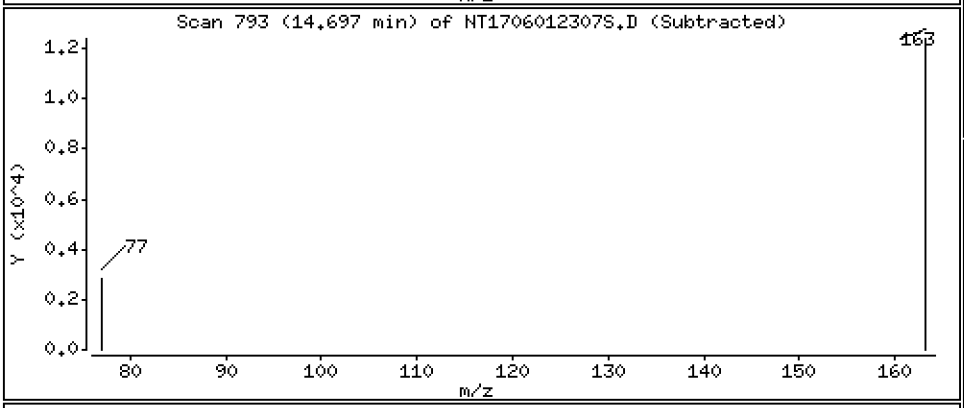
Column diameter: 0.25

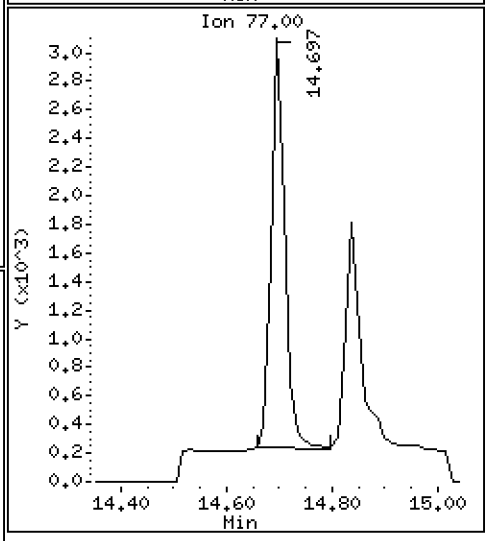
39 Dimethylphthalate

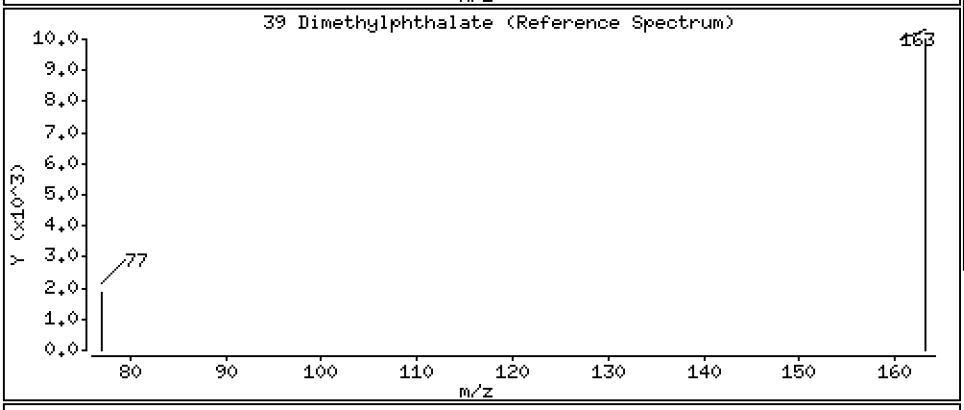
Concentration: 0.09830 ug/mL

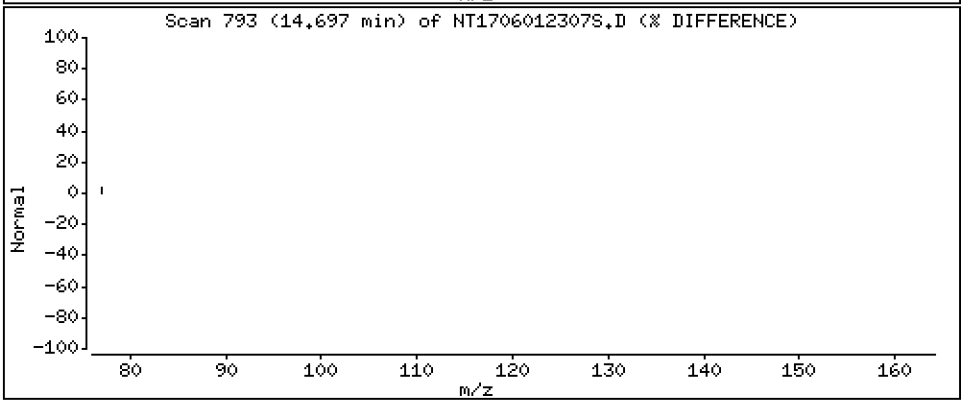












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

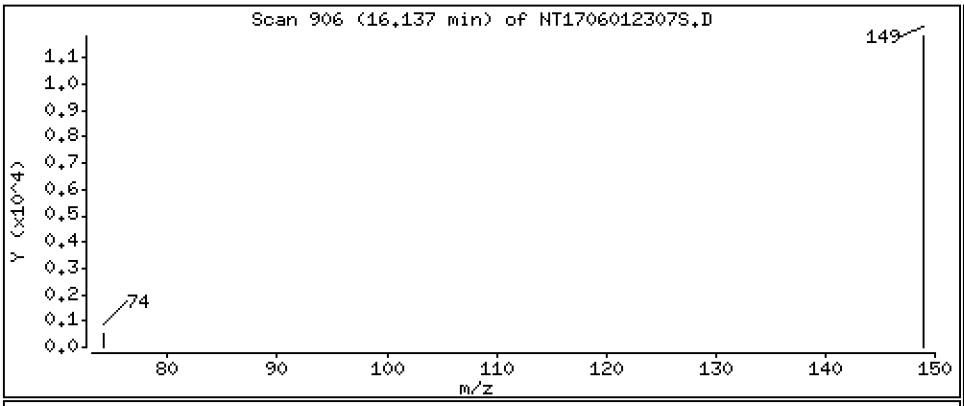
Operator: VTS

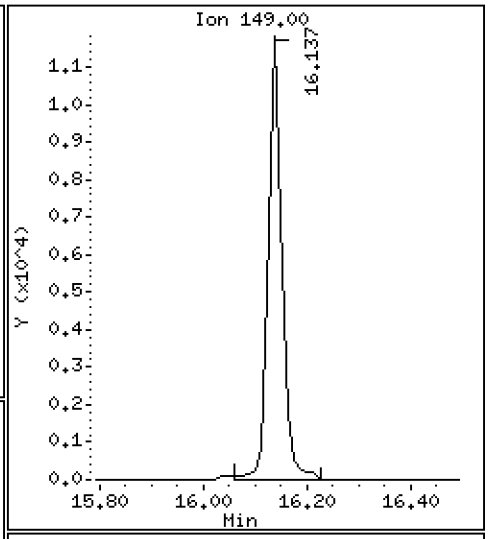
Column phase: ZB-5msi

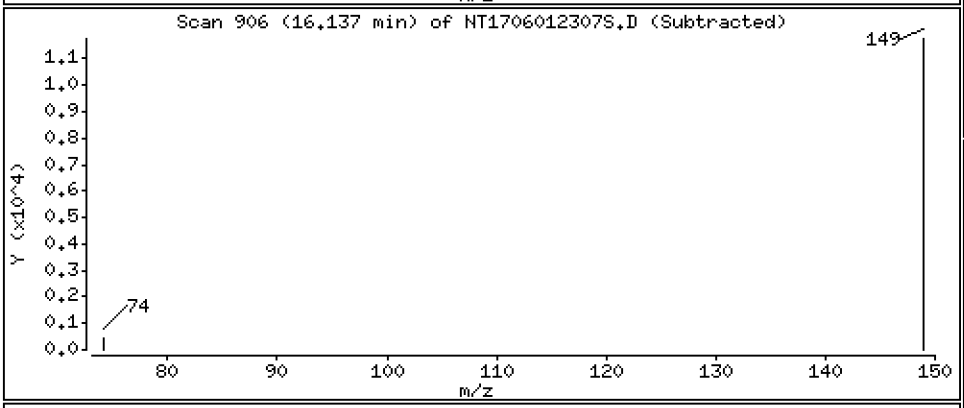
Column diameter: 0.25

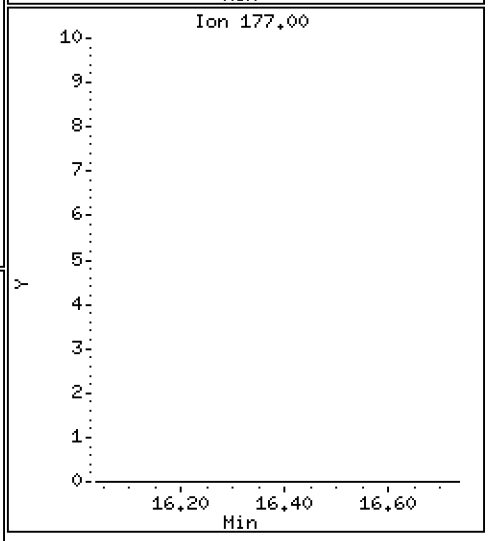
50 Diethylphthalate

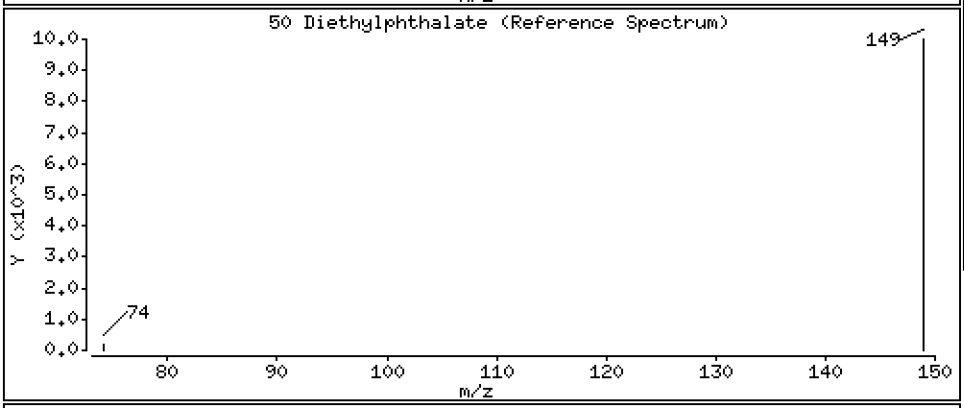
Concentration: 0.09776 ug/mL

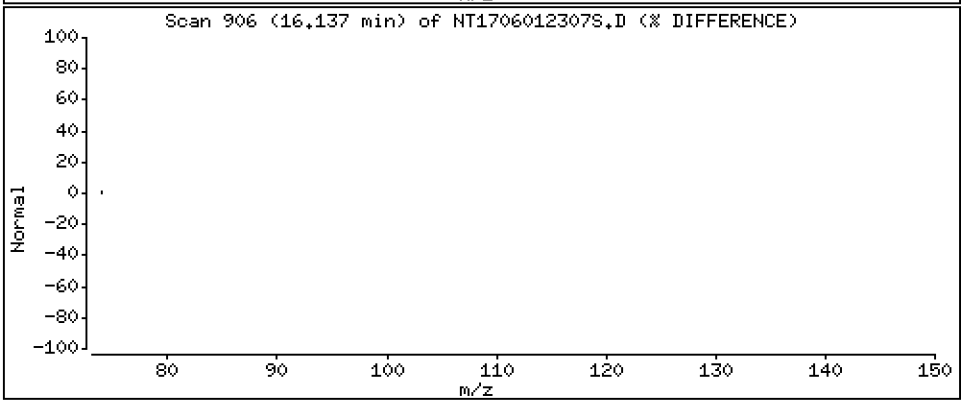












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT17060123075.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

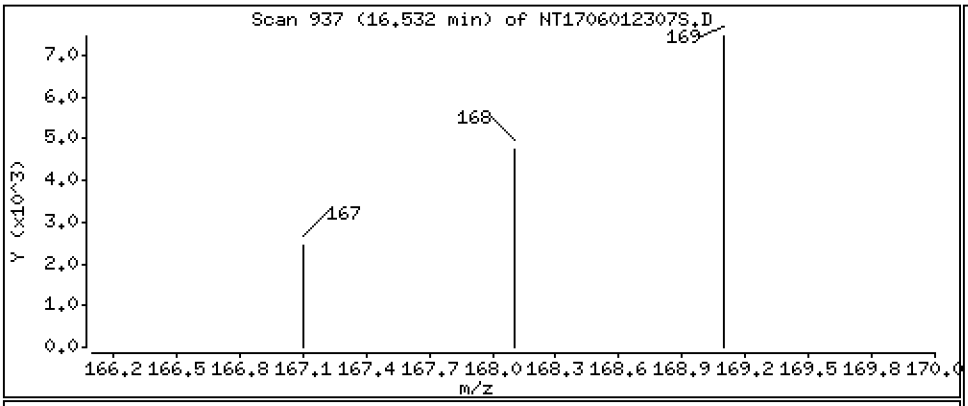
Operator: VTS

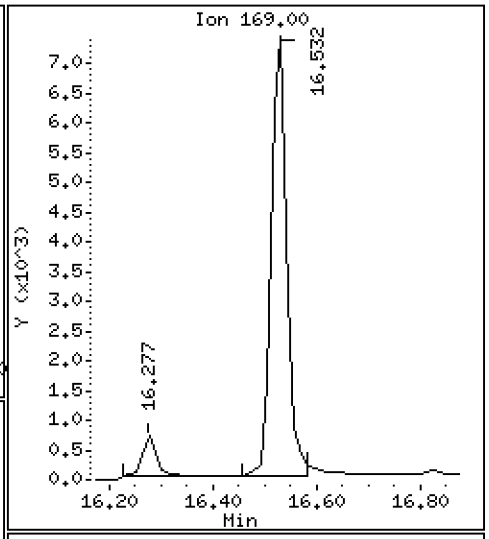
Column phase: ZB-5msi

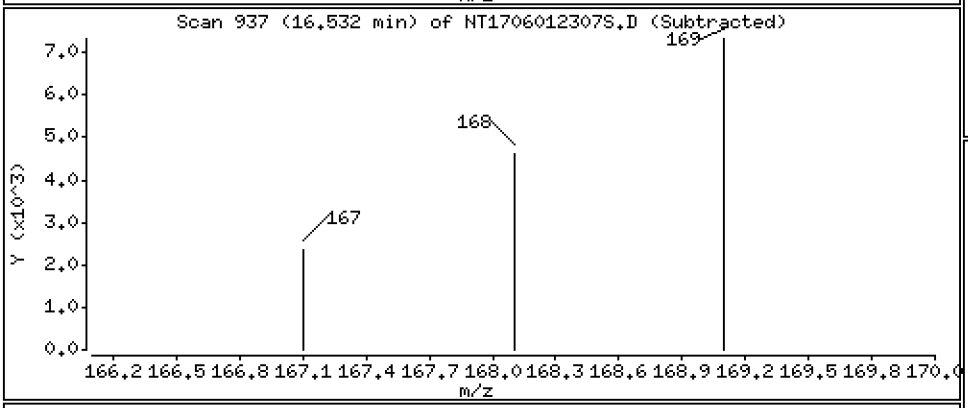
Column diameter: 0.25

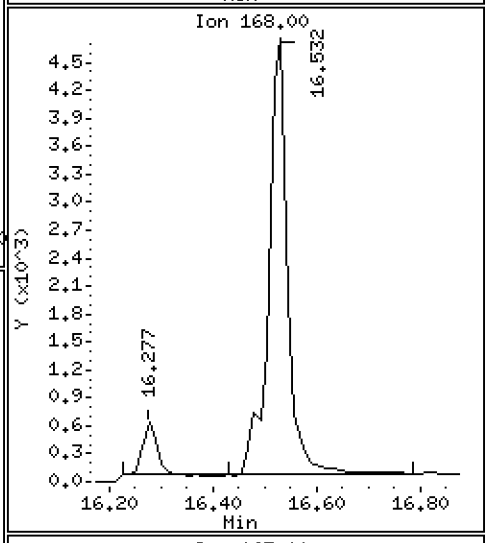
54 N-Nitrosodiphenylamine

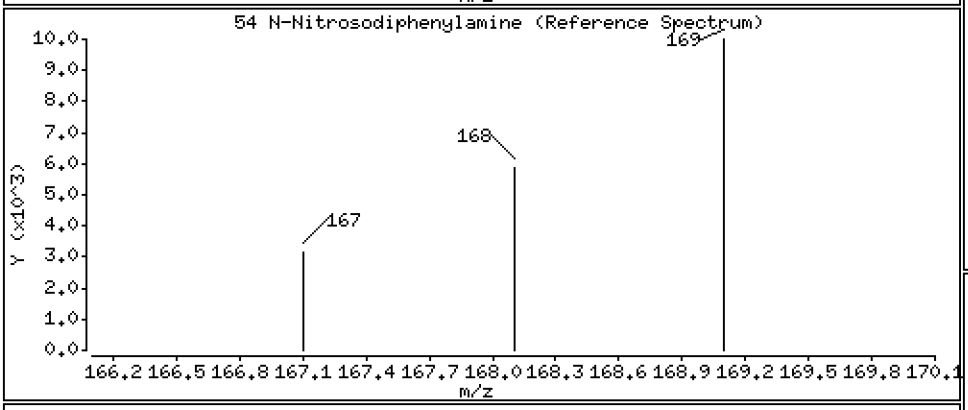
Concentration: 0.1055 ug/mL

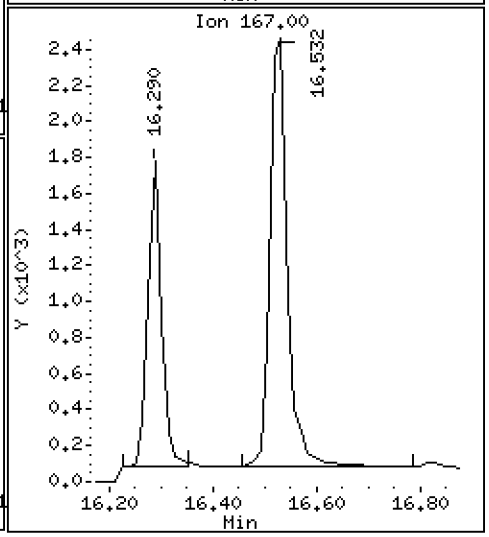


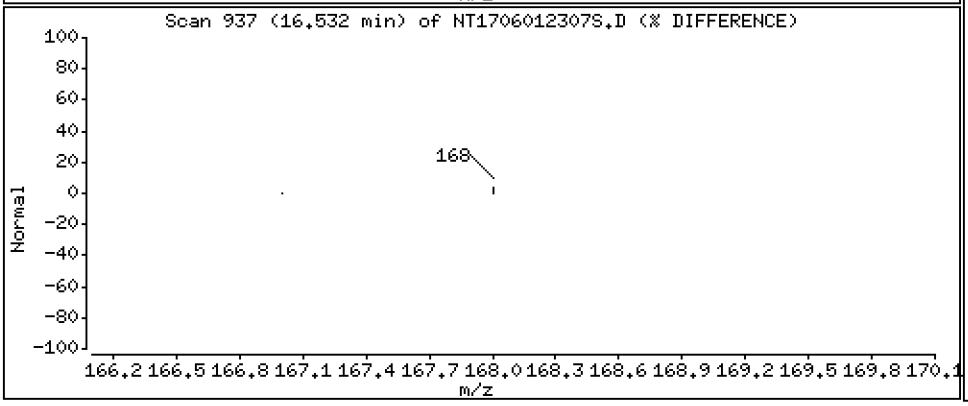












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

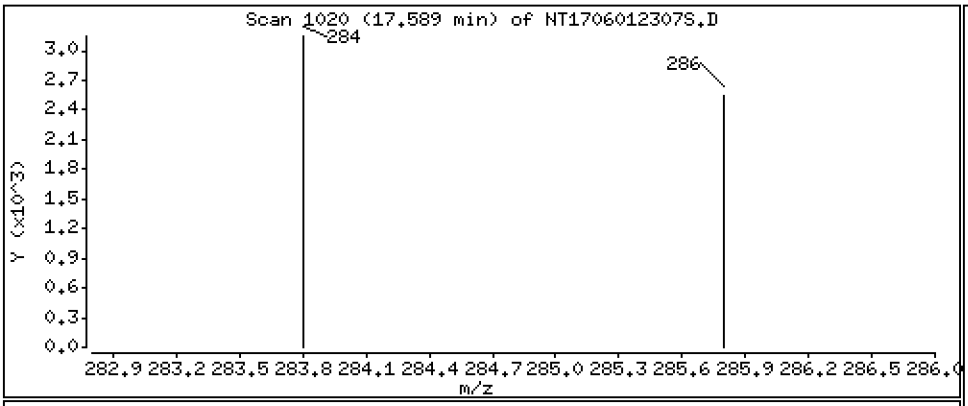
Operator: VTS

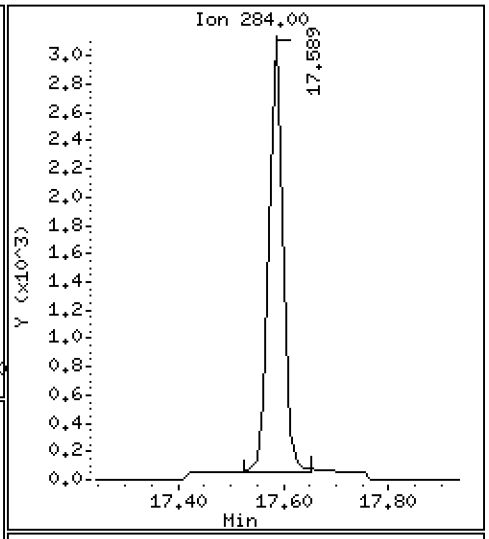
Column phase: ZB-5msi

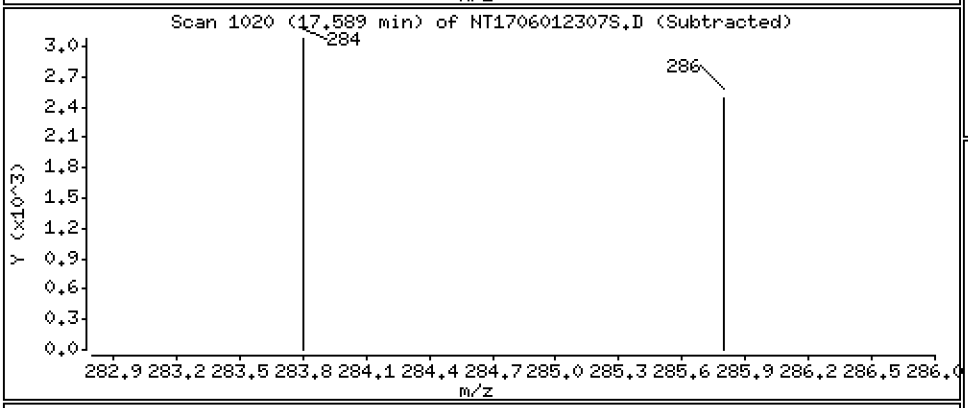
Column diameter: 0.25

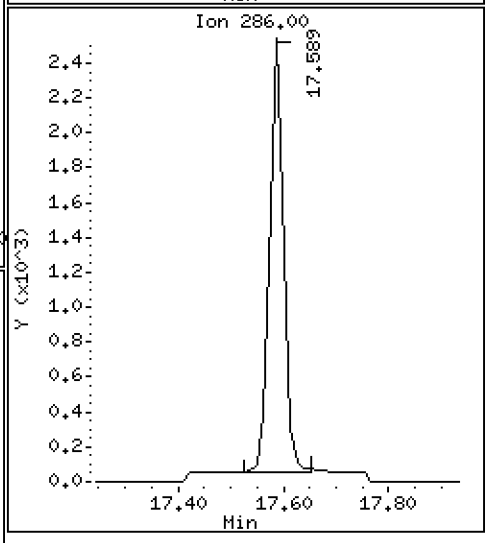
57 Hexachlorobenzene

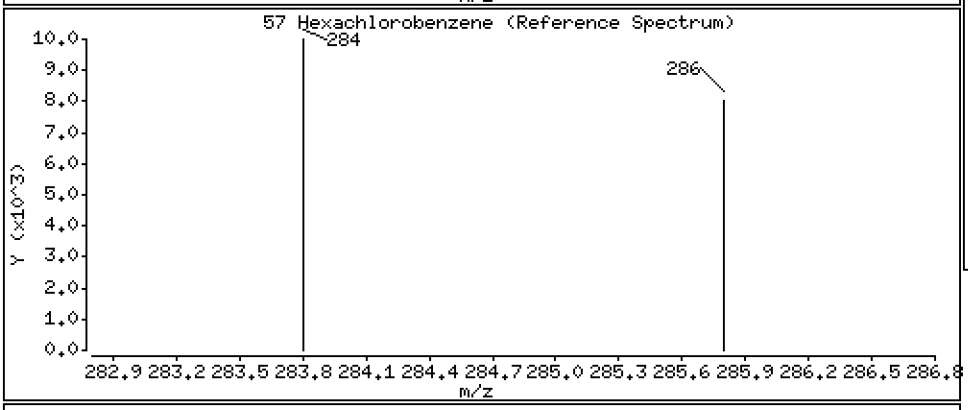
Concentration: 0.1175 ug/mL

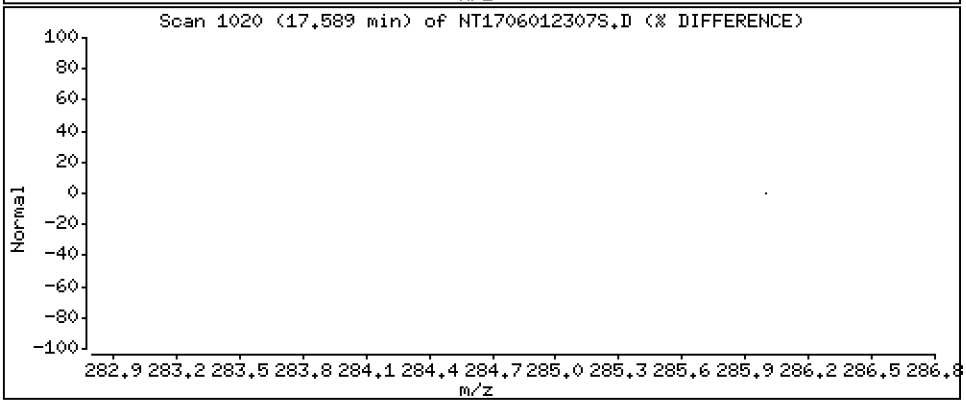












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

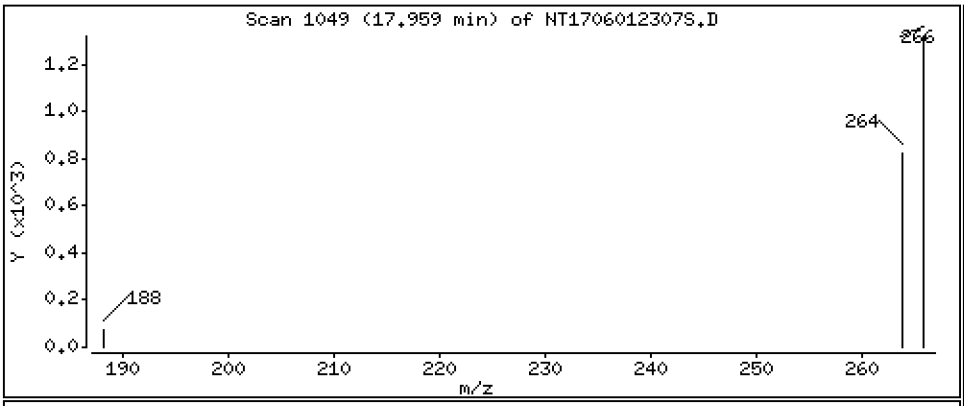
Operator: VTS

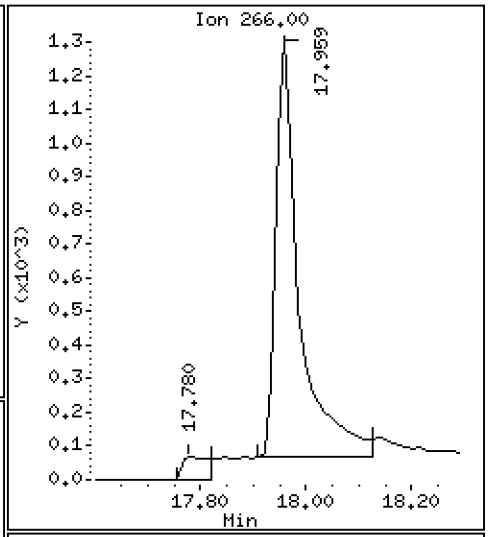
Column phase: ZB-5msi

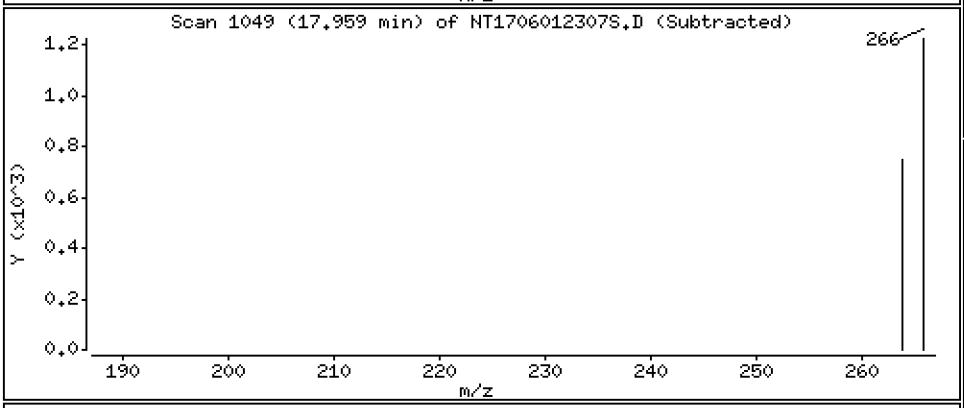
Column diameter: 0.25

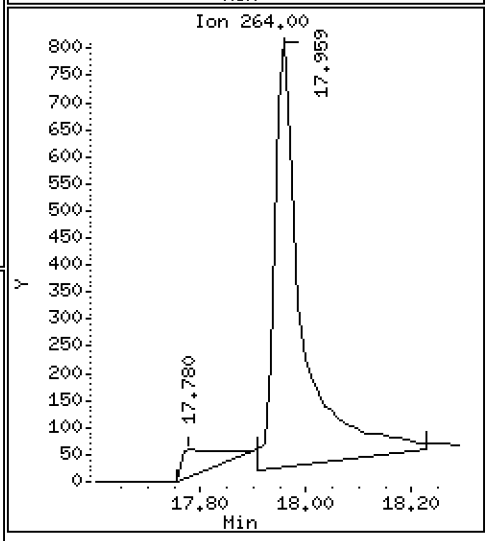
58 Pentachlorophenol

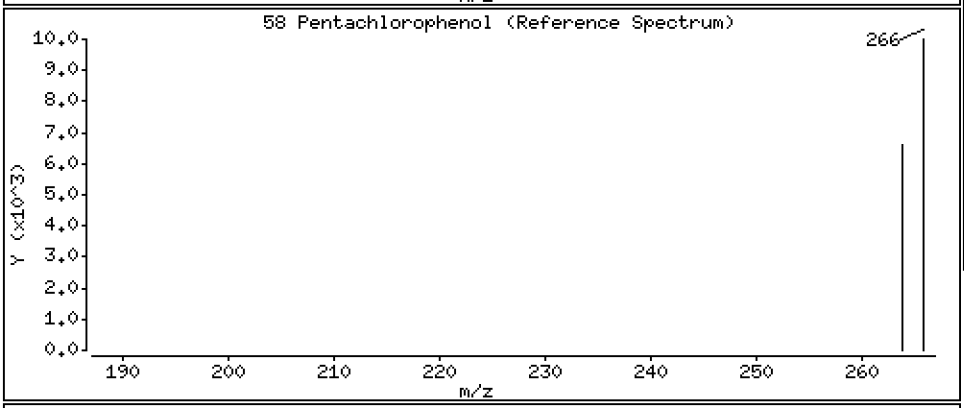
Concentration: 0.1399 ug/mL

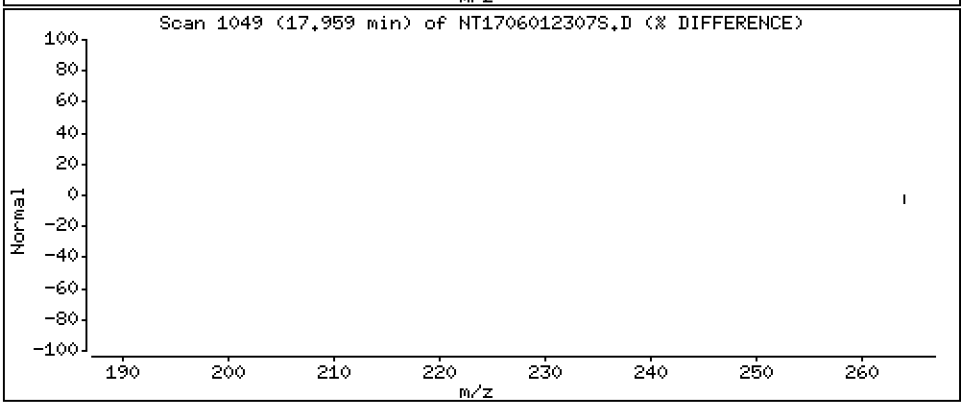












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

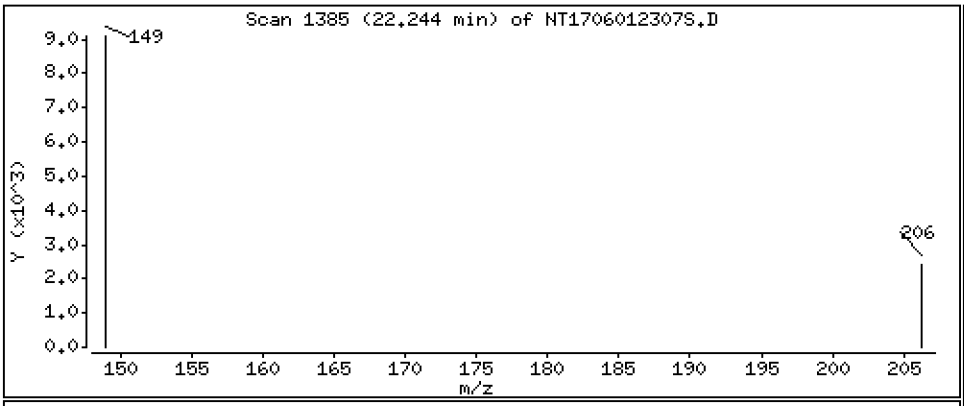
Operator: VTS

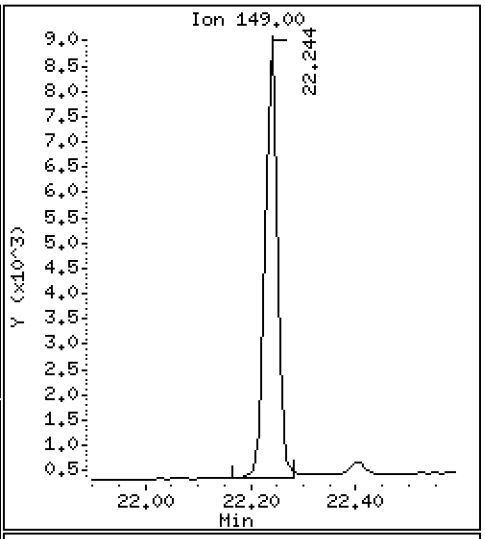
Column phase: ZB-5msi

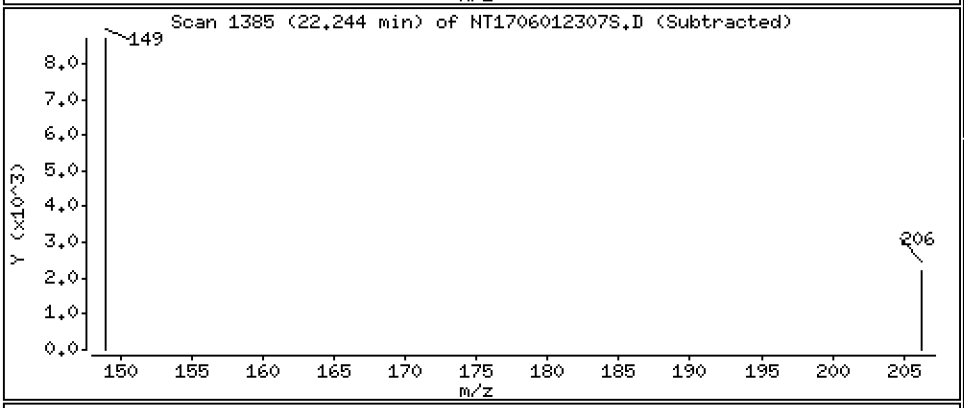
Column diameter: 0.25

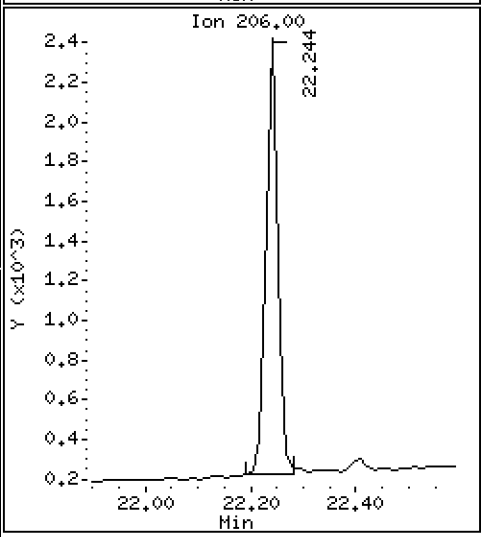
67 Butylbenzylphthalate

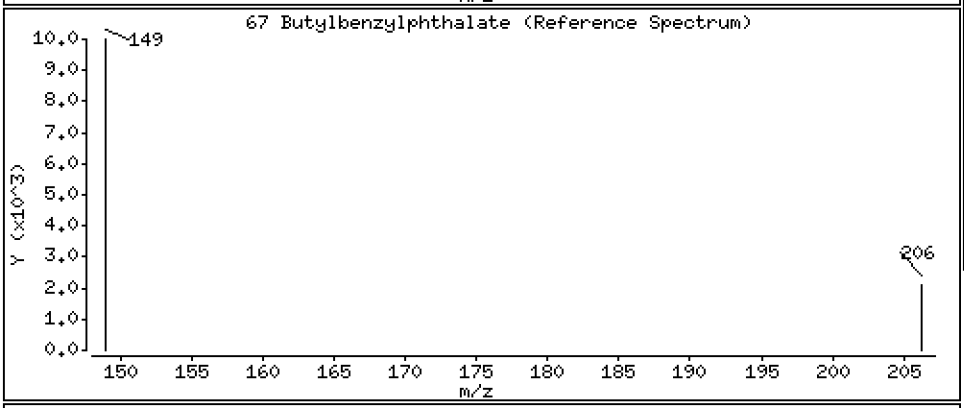
Concentration: 0.08859 ug/mL

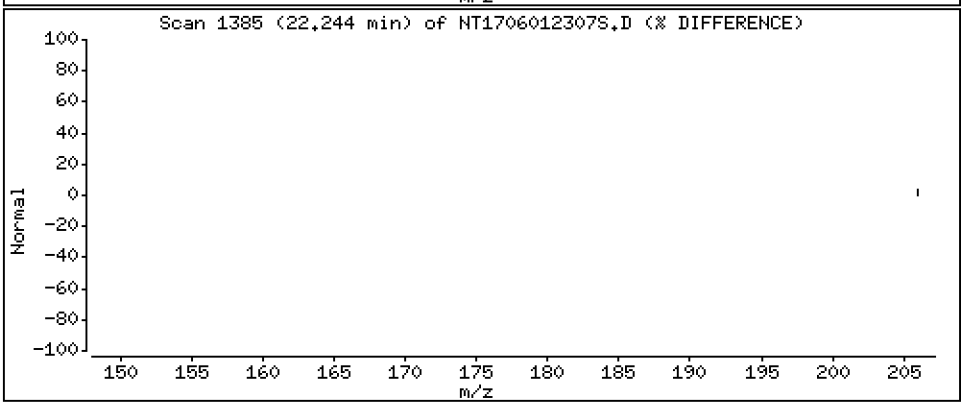












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

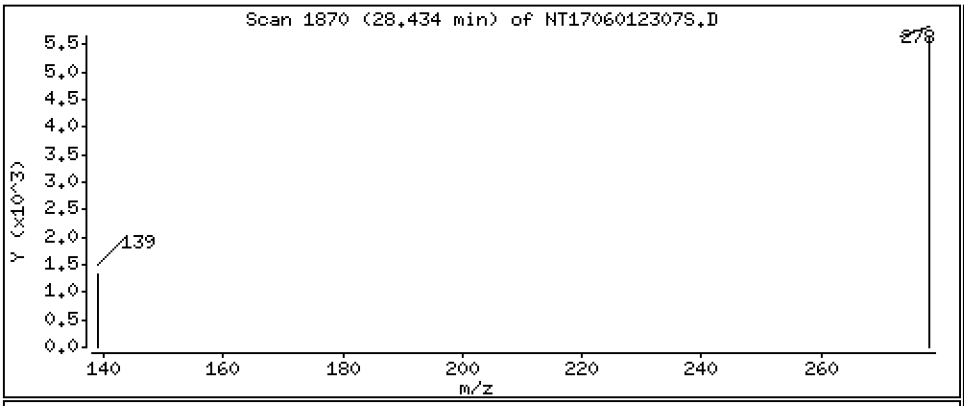
Operator: VTS

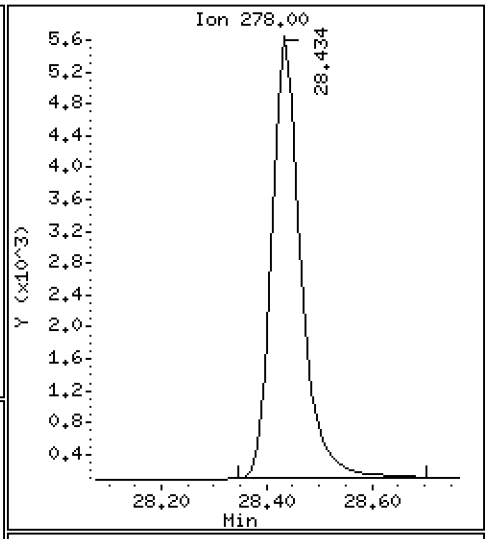
Column phase: ZB-5msi

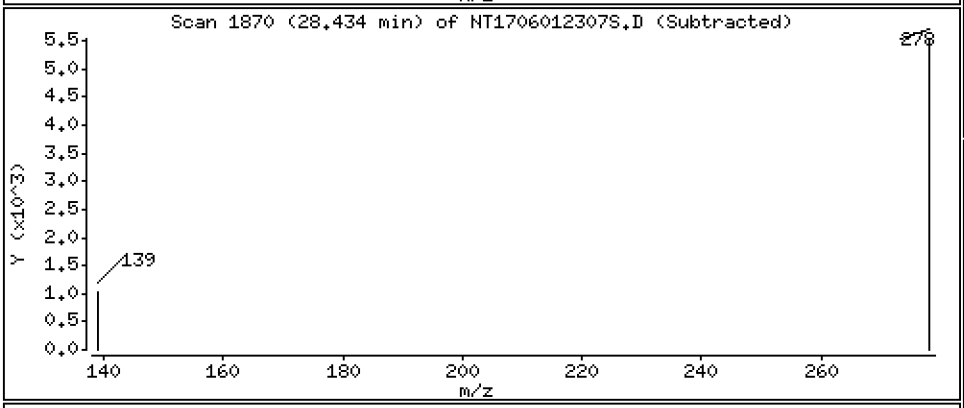
Column diameter: 0.25

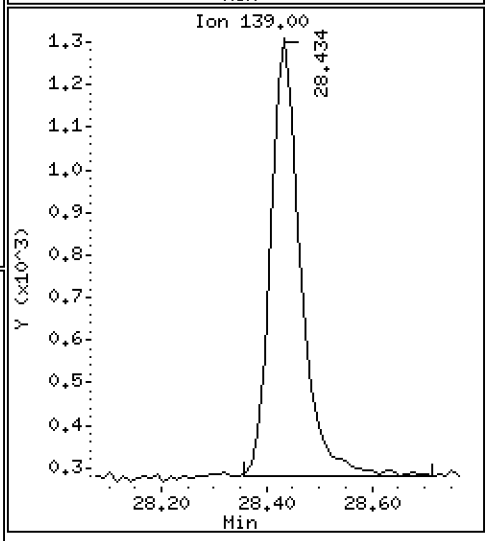
79 Dibenzo(a,h)anthracene

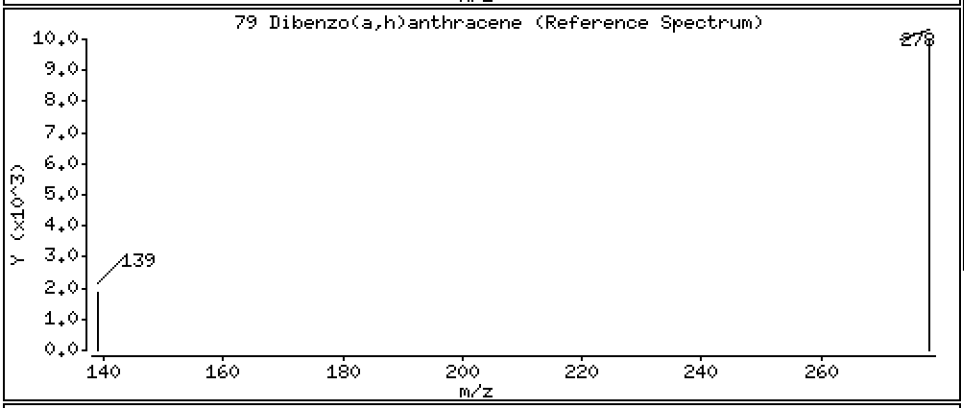
Concentration: 0.1019 ug/mL

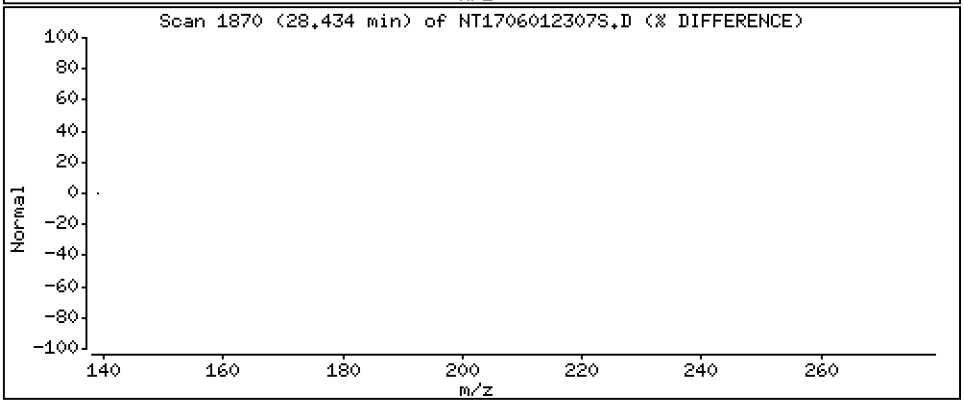












Data File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D

Date : 01-JUN-2023 15:50

Client ID:

Instrument: nt17.i

Sample Info: SLF0037-LCV1

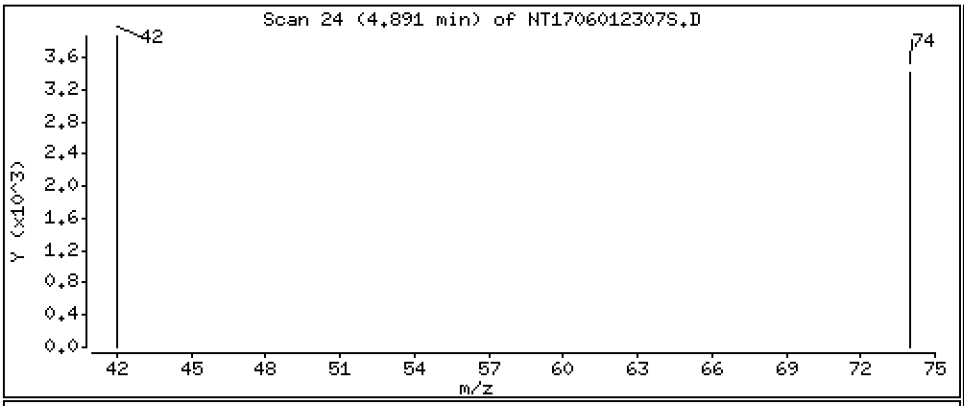
Operator: VTS

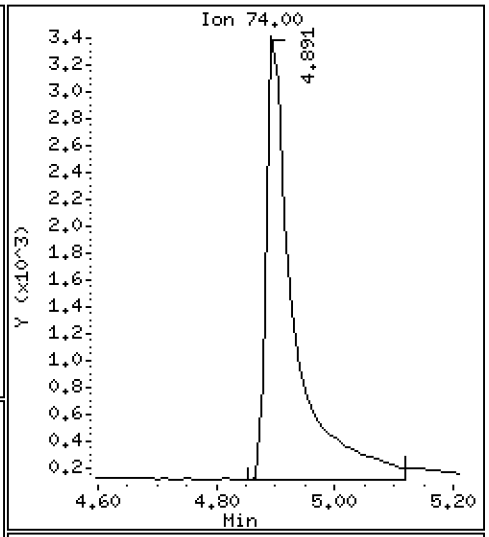
Column phase: ZB-5msi

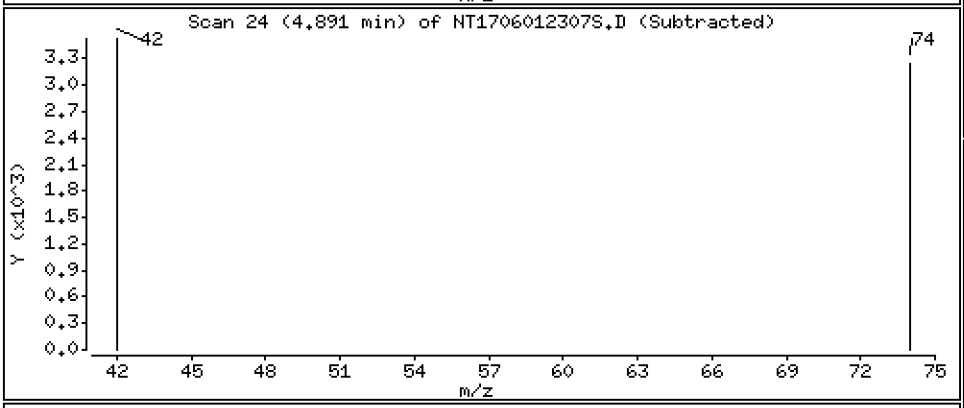
Column diameter: 0.25

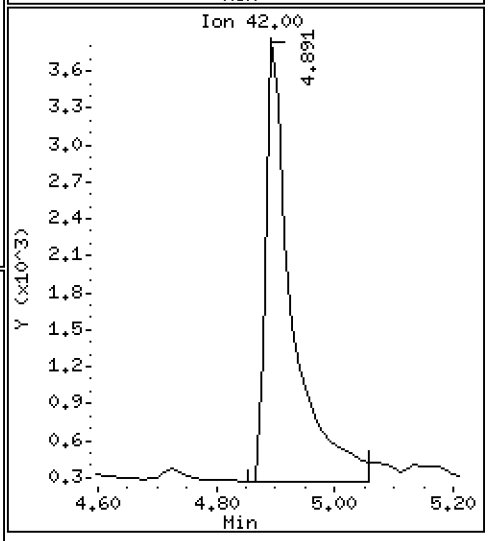
90 N-Nitrosodimethylamine

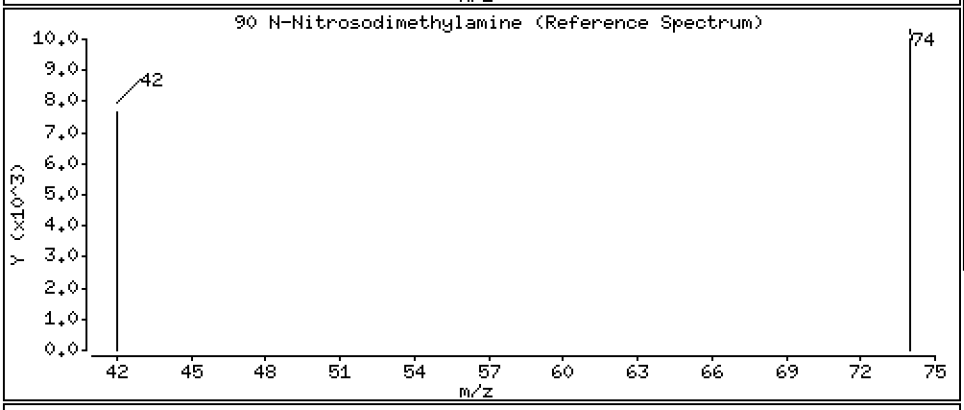
Concentration: 0.1696 ug/mL

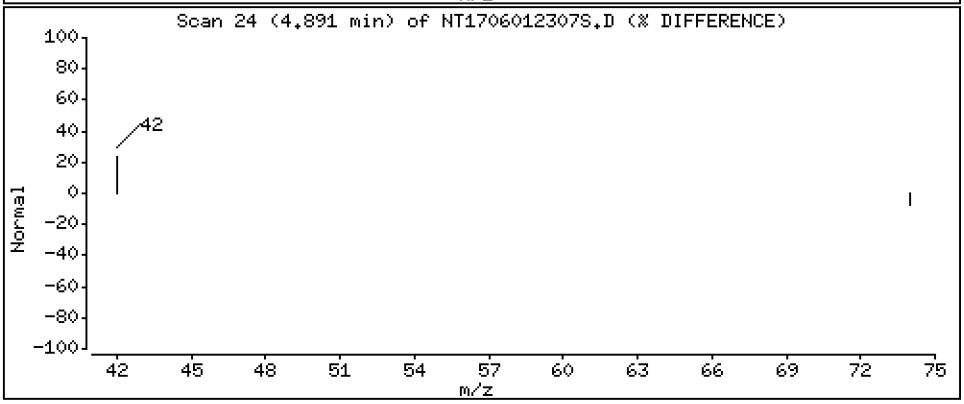












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt17.i\20230601.b\SIM.b\NT1706012307S.D
Lab Smp Id: SLF0037-LCV1
Inj Date : 01-JUN-2023 15:50
Operator : VTS Inst ID: nt17.i
Smp Info : SLF0037-LCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Meth Date : 06-Jun-2023 10:22 van Quant Type: ISTD
Cal Date : 16-MAY-2023 23:51 Cal File: NT1705162310S.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.979	6.954	(0.763)	11960	0.11811	0.1181(R)
	3 Phenol	94	8.559	8.547	(0.936)	14029	0.09298	0.09298
	7 1,3-Dichlorobenzene	146	9.082	9.082	(0.993)	14228	0.10521	0.1052
*	8 1,4-Dichlorobenzene-d4	152	9.146	9.146	(1.000)	334780	4.00000	
	9 1,4-Dichlorobenzene	146	9.171	9.171	(1.003)	14404	0.10930	0.1093
	11 Benzyl alcohol	79	9.503	9.465	(1.039)	8281	0.09632	0.09632
	12 1,2-Dichlorobenzene	146	9.529	9.529	(1.042)	13767	0.10659	0.1066
	13 2-Methylphenol	108	9.657	9.644	(1.056)	10569	0.10109	0.1011
	15 4-Methylphenol	108	9.925	9.912	(1.085)	8501	0.08045	0.08045
	16 N-Nitroso-di-n-propylamine	70	9.963	9.964	(1.089)	8487	0.11145	0.1114
	22 2,4-Dimethylphenol	107	10.947	10.934	(0.944)	21212	0.19400	0.1940
	24 Benzoic acid	105	11.113	11.100	(0.958)	7187	0.10551	0.1055
	26 1,2,4-Trichlorobenzene	180	11.521	11.521	(0.993)	10060	0.10141	0.1014
*	27 Naphthalene-d8	136	11.598	11.598	(1.000)	1136655	4.00000	
	30 Hexachlorobutadiene	225	11.993	11.993	(1.034)	6283	0.12029	0.1203
	39 Dimethylphthalate	163	14.696	14.696	(0.967)	23927	0.09830	0.09830
*	42 Acenaphthene-d10	162	15.194	15.194	(1.000)	662826	4.00000	
	50 Diethylphthalate	149	16.137	16.137	(1.062)	21611	0.09776	0.09776
	54 N-Nitrosodiphenylamine	169	16.531	16.519	(0.908)	15177	0.10545	0.1055
	57 Hexachlorobenzene	284	17.588	17.588	(0.966)	5738	0.11753	0.1175
	58 Pentachlorophenol	266	17.958	17.946	(0.987)	3848	0.13988	0.1399
*	59 Phenanthrene-d10	188	18.200	18.201	(1.000)	1021580	4.00000	
$	66 Terphenyl-d14	244	21.325	21.325	(0.919)	17321	0.11756	0.1176(R)
	67 Butylbenzylphthalate	149	22.243	22.243	(0.958)	14184	0.08859	0.08859
*	69 Chrysene-d12	240	23.213	23.213	(1.000)	776492	4.00000	
*	77 Perylene-d12	264	25.802	25.802	(1.000)	750355	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.433	28.421	(1.102)	21565	0.10189	0.1019
	90 N-Nitrosodimethylamine	74	4.890	4.865	(0.535)	11085	0.16962	0.1696

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt17.i Calibration Date: 01-JUN-2023
Lab File ID: NT1706012307S.D Calibration Time: 14:35
Lab Smp Id: SLF0037-LCV1
Analysis Type: SV Level:
Quant Type: ISTD Sample Type:
Operator: VTS
Method File: \\target\share\chem3\nt17.i\20230601.b\SIM.b\SIMABN2.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	283255	141628	566510	334780	18.19
27 Naphthalene-d8	981587	490794	1963174	1136655	15.80
42 Acenaphthene-d10	592919	296460	1185838	662826	11.79
59 Phenanthrene-d10	907838	453919	1815676	1021580	12.53
69 Chrysene-d12	666753	333377	1333506	776492	16.46
77 Perylene-d12	648259	324130	1296518	750355	15.75

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.15	8.65	9.65	9.15	-0.00
27 Naphthalene-d8	11.60	11.10	12.10	11.60	-0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	-0.00
59 Phenanthrene-d10	18.20	17.70	18.70	18.20	-0.00
69 Chrysene-d12	23.21	22.71	23.71	23.21	-0.00
77 Perylene-d12	25.80	25.30	26.30	25.80	-0.00

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

REVIEW SUMMARY FOR FILE - NT1706012307S.D

Lab ID: SLF0037-LCV1
nt17.i, 20230601.b\SIM.b\SIMABN2.m,   01-JUN-2023 15:50

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: SIM.b/NT1706012305S.D

On Column LOD for nt17.i, SIM.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0372	Instrument:	NT8
		Calibration:	GD00068

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLD0372-TUN1	N823042601.D	NA	04/26/23 17:16
8270 SIM PNA 0.1	SLD0372-CAL1	N823042603.D	NA	04/26/23 18:06
8270 SIM PNA 0.5	SLD0372-CAL2	N823042604.D	NA	04/26/23 18:33
8270 SIM PNA 1.0	SLD0372-CAL3	N823042605.D	NA	04/26/23 19:00
8270 SIM PNA 2.5	SLD0372-CAL4	N823042606.D	NA	04/26/23 19:27
8270 SIM PNA 5	SLD0372-CAL5	N823042607.D	NA	04/26/23 19:55
8270 SIM PNA 10	SLD0372-CAL6	N823042608.D	NA	04/26/23 20:22
8270 SIM PNA SCV	SLD0372-SCV1	N823042609.D	NA	04/26/23 20:49

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLD0372

Instrument: NT8
Calibration ID: GD00068

Printed: 4/27/2023 12:20:00PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLD0372-TUN1	QC		1		K004775			
SLD0372-ICB1	QC		2			L004537		
SLD0372-CAL1	QC		3		L000603	L004537		
SLD0372-CAL2	QC		4		L000604	L004537		
SLD0372-CAL3	QC		5		L000605	L004537		
SLD0372-CAL4	QC		6		L000606	L004537		
SLD0372-CAL5	QC		7		L000607	L004537		
SLD0372-CAL6	QC		8		L000608	L004537		
SLD0372-SCV1	QC		9		L000686	L004537		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230426.b

	Time	Filename	LabID	ClientId	DF										
1	1716	N823042601.D	SLD0372-TUN1		1	|NO ISTDS FOUND||									
2	1738	N823042602.D	SLD0372-ICB1		1	| 4.83	16370	| 7.12	9360	| 9.16	15764	|14.08	15736	|17.97	13577|
3	1806	N823042603.D	SLD0372-CAL1		1	| 4.83	17222	| 7.11	9918	| 9.15	18763	|14.07	18539	|17.96	18495|
4	1833	N823042604.D	SLD0372-CAL2		1	| 4.83	18547	| 7.11	10688	| 9.15	20788	|14.07	20319	|17.96	20821|
5	1900	N823042605.D	SLD0372-CAL3		1	| 4.83	17610	| 7.11	10164	| 9.15	19712	|14.07	20491	|17.96	20562|
6	1927	N823042606.D	SLD0372-CAL4		1	| 4.83	18699	| 7.11	10729	| 9.15	20748	|14.07	20954	|17.96	21563|
7	1955	N823042607.D	SLD0372-CAL5		1	| 4.83	18501	| 7.11	10621	| 9.15	20636	|14.07	20333	|17.96	20900|
8	2022	N823042608.D	SLD0372-CAL6		1	| 4.83	18987	| 7.11	10604	| 9.15	20735	|14.07	20141	|17.96	20342|
9	2049	N823042609.D	SLD0372-SCV1		1	| 4.83	20718	| 7.11	12642	| 9.15	24547	|14.07	24217	|17.96	24956|

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230426.b

ARI Job No.: SLD0 Method: FSIMPNA230426.m Instrument: nt8.i Date: 26-APR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1738	N823042602.D	SLD0372-ICB1		1	NO MANUAL INTEGRATION
1806	N823042603.D	SLD0372-CAL1		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1833	N823042604.D	SLD0372-CAL2		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1900	N823042605.D	SLD0372-CAL3		1	Total Benzofluoranthenes, Perylene, Dibenzo(a,h)anthracene,
1927	N823042606.D	SLD0372-CAL4		1	Total Benzofluoranthenes,
1955	N823042607.D	SLD0372-CAL5		1	Total Benzofluoranthenes,
2022	N823042608.D	SLD0372-CAL6		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene,
2049	N823042609.D	SLD0372-SCV1		1	Total Benzofluoranthenes,

Security Status Report

Date: 27-Apr-2023 12:21

N823042601.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042602.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042603.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042604.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042605.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042606.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042607.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042608.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042609.D	Data Locked	jianqing, 27-Apr-2023 12:21

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0339	Instrument:	NT17
		Calibration:	GE00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLE0339-TUN1	NT1705162301S.D	NA	05/16/23 18:14
CAL 10.0	SLE0339-CAL8	NT1705162303S.D	NA	05/16/23 19:29
CAL 5.0	SLE0339-CAL7	NT1705162304S.D	NA	05/16/23 20:07
CAL 2.5	SLE0339-CAL6	NT1705162305S.D	NA	05/16/23 20:44
CAL 1.0	SLE0339-CAL5	NT1705162306S.D	NA	05/16/23 21:22
CAL 0.50	SLE0339-CAL4	NT1705162307S.D	NA	05/16/23 21:59
CAL 0.20	SLE0339-CAL3	NT1705162308S.D	NA	05/16/23 22:37
CAL 0.10	SLE0339-CAL2	NT1705162309S.D	NA	05/16/23 23:14
CAL 0.05	SLE0339-CAL1	NT1705162310S.D	NA	05/16/23 23:51
SCV 5.0	SLE0339-SCV1	NT1705162311S.D	NA	05/17/23 00:29
Initial Cal Blank	SLE0339-ICB1	NT1705162312S.D	NA	05/17/23 01:07

ANALYSIS SEQUENCE

SLE0339

Instrument ID: NT17
Calibration ID: GE00070
MS EM Level: 1450 EV

GCMS Description: Agilent 7890B/5977B
GCMS Column ID: L004289

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0339-TUN1	MS Tune	QC		1	L005516		05/16/2023 18:14	NT1705162301S.D	VTS	
SLE0339-CAL8	CAL 10.0	QC		2	K011110	K010831	05/16/2023 19:29	NT1705162303S.D	JGR	
SLE0339-CAL7	CAL 5.0	QC		3	K011109	K010831	05/16/2023 20:07	NT1705162304S.D	JGR	
SLE0339-CAL6	CAL 2.5	QC		4	K011108	K010831	05/16/2023 20:44	NT1705162305S.D	JGR	
SLE0339-CAL5	CAL 1.0	QC		5	K011107	K010831	05/16/2023 21:22	NT1705162306S.D	JGR	
SLE0339-CAL4	CAL 0.50	QC		6	K011106	K010831	05/16/2023 21:59	NT1705162307S.D	JGR	
SLE0339-CAL3	CAL 0.20	QC		7	K011105	K010831	05/16/2023 22:37	NT1705162308S.D	JGR	
SLE0339-CAL2	CAL 0.10	QC		8	L002877	K010831	05/16/2023 23:14	NT1705162309S.D	JGR	
SLE0339-CAL1	CAL 0.05	QC		9	L002878	K010831	05/16/2023 23:51	NT1705162310S.D	JGR	
SLE0339-SCV1	SCV 5.0	QC		10	K010066	K010831	05/17/2023 00:29	NT1705162311S.D	JGR	
SLE0339-ICB1	Initial Cal Blank	QC		11	K005156	K010831	05/17/2023 01:07	NT1705162312S.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230516.b\SIM.b

	Time	Filename	LabID	ClientId	DF											
1	1814	NT1705162301S.D	SLE0339-TUN1		1	|NO ISTDS FOUND||										
2	1929	NT1705162303S.D	SLE0339-CAL8		1	| 9.38	304989	||11.85	1098933	||15.45	590948	||18.47	969131	||23.47	604233	||26.16	501580|
3	2007	NT1705162304S.D	SLE0339-CAL7		1	| 9.38	303993	||11.84	1096471	||15.44	588455	||18.47	962811	||23.46	594121	||26.16	517800|
4	2044	NT1705162305S.D	SLE0339-CAL6		1	| 9.38	312779	||11.84	1112850	||15.44	600559	||18.47	997102	||23.46	638760	||26.16	569257|
5	2122	NT1705162306S.D	SLE0339-CAL5		1	| 9.38	316066	||11.84	1102073	||15.44	583826	||18.47	970917	||23.46	590568	||26.16	537938|
6	2159	NT1705162307S.D	SLE0339-CAL4		1	| 9.38	310689	||11.84	1075836	||15.44	560079	||18.46	909163	||23.46	547811	||26.16	508065|
7	2237	NT1705162308S.D	SLE0339-CAL3		1	| 9.38	324202	||11.84	1123074	||15.44	587914	||18.46	972346	||23.46	582965	||26.15	529057|
8	2314	NT1705162309S.D	SLE0339-CAL2		1	| 9.38	342586	||11.84	1209699	||15.44	635389	||18.46	1076905	||23.46	694468	||26.16	649331|
9	2351	NT1705162310S.D	SLE0339-CAL1		1	| 9.38	317514	||11.84	1096096	||15.44	567814	||18.46	924770	||23.46	560403	||26.15	515224|
10	0029	NT1705162311S.D	SLE0339-SCV1		1	| 9.38	280298	||11.84	999390	||15.44	527927	||18.47	860054	||23.46	527529	||26.16	475440|
11	0107	NT1705162312S.D	SLE0339-ICB1		1	| 9.38	302680	||11.84	1065796	||15.44	551880	||18.46	903730	||23.46	538208	||26.15	508161|

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230516.b\SIM.b

Instrument: nt17.i Date: 16-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1814	NT1705162301S.D	SLE0339-TUN1	1	NO MANUAL INTEGRATION
1929	NT1705162303S.D	SLE0339-CAL8	1	Benzoic acid,
2007	NT1705162304S.D	SLE0339-CAL7	1	Benzoic acid,
2044	NT1705162305S.D	SLE0339-CAL6	1	Benzoic acid,
2122	NT1705162306S.D	SLE0339-CAL5	1	Benzoic acid,
2159	NT1705162307S.D	SLE0339-CAL4	1	Benzoic acid,
2237	NT1705162308S.D	SLE0339-CAL3	1	Benzoic acid,
2314	NT1705162309S.D	SLE0339-CAL2	1	NO MANUAL INTEGRATION
2351	NT1705162310S.D	SLE0339-CAL1	1	Benzyl alcohol, Pentachlorophenol,
0029	NT1705162311S.D	SLE0339-SCV1	1	NO MANUAL INTEGRATION
0107	NT1705162312S.D	SLE0339-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 24-May-2023 07:10

NT1705162301S.D	Data Locked	van, 24-May-2023 07:10
NT1705162303S.D	Data Locked	van, 24-May-2023 07:10
NT1705162304S.D	Data Locked	van, 24-May-2023 07:10
NT1705162305S.D	Data Locked	van, 24-May-2023 07:10
NT1705162306S.D	Data Locked	van, 24-May-2023 07:10
NT1705162307S.D	Data Locked	van, 24-May-2023 07:10
NT1705162308S.D	Data Locked	van, 24-May-2023 07:10
NT1705162309S.D	Data Locked	van, 24-May-2023 07:10
NT1705162310S.D	Data Locked	van, 24-May-2023 07:10
NT1705162311S.D	Data Locked	van, 24-May-2023 07:10
NT1705162312S.D	Data Locked	van, 24-May-2023 07:10

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0350	Instrument:	NT8
		Calibration:	GD00068

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLE0350-TUN1	N823052201.D	NA	05/22/23 11:29
Initial Cal Check	SLE0350-ICV1	N823052202.D	NA	05/22/23 11:46
ZZZZZ	BLE0158-BLK1	N823052203.D	Solid	05/22/23 12:37
ZZZZZ	BLE0158-BS1	N823052204.D	Solid	05/22/23 13:04
ZZZZZ	BLE0158-BSD1	N823052205.D	Solid	05/22/23 13:32
ZZZZZ	23C0085-01	N823052206.D	Solid	05/22/23 14:12
ZZZZZ	23C0085-02	N823052207.D	Solid	05/22/23 14:39
ZZZZZ	BLE0158-MS1	N823052208.D	Solid	05/22/23 15:06
ZZZZZ	BLE0158-MSD1	N823052209.D	Solid	05/22/23 15:33
ZZZZZ	23C0085-03	N823052210.D	Solid	05/22/23 16:01
ZZZZZ	23C0085-04	N823052211.D	Solid	05/22/23 16:28
ZZZZZ	23C0085-05	N823052212.D	Solid	05/22/23 16:55
ZZZZZ	23C0085-06	N823052213.D	Solid	05/22/23 17:22
ZZZZZ	23C0085-09	N823052214.D	Solid	05/22/23 17:49
ZZZZZ	23C0085-10	N823052215.D	Solid	05/22/23 18:17
ZZZZZ	23C0085-13	N823052216.D	Solid	05/22/23 18:44
ZZZZZ	23C0085-14	N823052217.D	Solid	05/22/23 19:11
Blank	BLE0149-BLK1	N823052218.D	Solid	05/22/23 19:38
LCS	BLE0149-BS1	N823052219.D	Solid	05/22/23 20:06
LCS Dup	BLE0149-BSD1	N823052220.D	Solid	05/22/23 20:33
Reference	BLE0149-SRM1	N823052221.D	Solid	05/22/23 21:00
ZZZZZ	23D0037-02	N823052222.D	Solid	05/22/23 21:27
ZZZZZ	23D0037-04	N823052223.D	Solid	05/22/23 21:54
LDW23-IT1820	23E0009-08	N823052224.D	Solid	05/22/23 22:22
LDW23-IT1820	BLE0149-MS1	N823052225.D	Solid	05/22/23 22:49
LDW23-IT1820	BLE0149-MSD1	N823052226.D	Solid	05/22/23 23:16
Calibration Check	SLE0350-CCV1	N823052227.D	NA	05/22/23 23:43

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLE0350

Instrument: NT8
Calibration ID: GD00068

Printed: 5/25/2023 10:37:50PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLE0350-TUN1	QC		1		L005045			
SLE0350-ICV1	QC		2		L000606	L004537		
BLE0158-BLK1	QC		3			L004537		
BLE0158-BS1	QC		4			L004537		
BLE0158-BSD1	QC		5			L004537		
23C0085-01	0E-SIM PAH (0.1ug/L or 5ug	B 02	6			L004537	SEE, LLC	DOD QSM
23C0085-02	0E-SIM PAH (0.1ug/L or 5ug	B 02	7			L004537	SEE, LLC	DOD QSM
BLE0158-MS1	QC		8			L004537		
BLE0158-MSD1	QC		9			L004537		
23C0085-03	0E-SIM PAH (0.1ug/L or 5ug	B 02	10			L004537	SEE, LLC	DOD QSM
23C0085-04	0E-SIM PAH (0.1ug/L or 5ug	B 02	11			L004537	SEE, LLC	DOD QSM
23C0085-05	0E-SIM PAH (0.1ug/L or 5ug	B 02	12			L004537	SEE, LLC	DOD QSM
23C0085-06	0E-SIM PAH (0.1ug/L or 5ug	B 02	13			L004537	SEE, LLC	DOD QSM
23C0085-09	0E-SIM PAH (0.1ug/L or 5ug	B 02	14			L004537	SEE, LLC	DOD QSM
23C0085-10	0E-SIM PAH (0.1ug/L or 5ug	B 02	15			L004537	SEE, LLC	DOD QSM
23C0085-13	0E-SIM PAH (0.1ug/L or 5ug	B 02	16			L004537	SEE, LLC	DOD QSM
23C0085-14	0E-SIM PAH (0.1ug/L or 5ug	B 02	17			L004537	SEE, LLC	DOD QSM
BLE0149-BLK1	QC		18			L004537		
BLE0149-BS1	QC		19			L004537		
BLE0149-BSD1	QC		20			L004537		
BLE0149-SRM1	QC		21			L004537		

Samples Loaded By Date

Data Processed By Date

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLE0350

Instrument: NT8
Calibration ID: GD00068

Printed: 5/25/2023 10:37:50PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23D0037-02	0E-SIM PAH (0.1ug/L or 5ug	A 04	22			L004537	Anchor QEA, LLC	
23D0037-04	0E-SIM PAH (0.1ug/L or 5ug	A 04	23			L004537	Anchor QEA, LLC	
23E0009-08	0E-SIM PAH (0.1ug/L or 5ug	A 01	24			L004537	Anchor QEA, LLC	
BLE0149-MS1	QC		25			L004537		
BLE0149-MSD1	QC		26			L004537		
SLE0350-CCV1	QC		27		L000606	L004537		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230522.b

	Time	Filename	LabID	ClientId	DF															
1	1129	N823052201.D	SLE0350-TUN1		1	|NO ISTDS FOUND||														
2	1146	N823052202.D	SLE0350-ICV1		1	| 4.82	17081	| 7.10	9674	| 9.14	17710	|14.04	15081	|17.93	15623 |					
3	1237	N823052203.D	BLE0158-BLK1		1	| 4.82	13959	| 7.10	8116	| 9.14	15476	|14.05	12911	|17.94	13330 |					
4	1304	N823052204.D	BLE0158-BS1		1	| 4.81	15747	| 7.10	9268	| 9.13	17153	|14.03	14136	|17.93	11764 |					
5	1332	N823052205.D	BLE0158-BSD1		1	| 4.81	15903	| 7.10	8871	| 9.13	16281	|14.04	13161	|17.92	10839 |					
6	1412	N823052206.D	23C0085-01		1	| 4.81	15017	| 7.10	8824	| 9.14	15804	|14.04	11349	|17.93	12358 |					
7	1439	N823052207.D	23C0085-02		1	| 4.81	16143	| 7.10	9328	| 9.13	15634	|14.04	11480	|17.92	12517 |					
8	1506	N823052208.D	BLE0158-MS1		1	| 4.81	15949	| 7.10	9140	| 9.13	15313	|14.03	10800	|17.92	11046 |					
9	1533	N823052209.D	BLE0158-MSD1		1	| 4.81	16147	| 7.10	9340	| 9.13	15434	|14.04	10908	|17.92	11515 |					
10	1601	N823052210.D	23C0085-03		1	| 4.81	15380	| 7.10	8803	| 9.13	14730	|14.04	10126	|17.92	11092 |					
11	1628	N823052211.D	23C0085-04		1	| 4.81	16005	| 7.10	9477	| 9.13	15674	|14.04	11250	|17.92	11151 |					
12	1655	N823052212.D	23C0085-05		1	| 4.81	16394	| 7.10	9422	| 9.13	15890	|14.03	12369	|17.92	12766 |					
13	1722	N823052213.D	23C0085-06		1	| 4.81	15558	| 7.10	9012	| 9.13	15280	|14.04	11416	|17.92	13251 |					
14	1749	N823052214.D	23C0085-09		1	| 4.81	16305	| 7.10	9611	| 9.13	16718	|14.04	13176	|17.92	13693 |					
15	1817	N823052215.D	23C0085-10		1	| 4.81	15930	| 7.10	9485	| 9.13	16334	|14.04	13249	|17.92	13298 |					
16	1844	N823052216.D	23C0085-13	E	1	| 4.81	17305	| 7.10	10060	| 9.13	16566	|14.04	11184	|17.92	12220 |					
17	1911	N823052217.D	23C0085-14	E	1	| 4.81	17223	| 7.10	9849	| 9.13	15736	|14.04	9601	|17.92	10639 |					
18	1938	N823052218.D	BLE0149-BLK1		1	| 4.81	15484	| 7.10	9378	| 9.13	16640	|14.04	14149	|17.92	14692 |					
19	2006	N823052219.D	BLE0149-BS1		1	| 4.81	17287	| 7.09	10107	| 9.13	18862	|14.04	15749	|17.92	14816 |					
20	2033	N823052220.D	BLE0149-BSD1		1	| 4.81	17781	| 7.10	10274	| 9.13	18966	|14.03	15349	|17.92	14458 |					

JZ 5/25/23

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230522.b

	Time	Filename	LabID	ClientId	DF																
21	2100	N823052221.D	BLE0149-SRM1		1	4.81	16843	7.10	9965	9.13	18105	14.04	15428	17.92	15321						
22	2127	N823052222.D	23D0037-02	E	3	4.81	17094	7.10	9930	9.13	18125	14.04	9481	17.94	11164						
23	2154	N823052223.D	23D0037-04	E	3	4.81	18335	7.10	10482	9.13	18691	14.04	9943	17.92	11989						
24	2222	N823052224.D	23E0009-08		3	4.81	17969	7.10	10478	9.13	18554	14.04	9682	17.93	11465						
25	2249	N823052225.D	BLE0149-MS1		3	4.81	18155	7.10	10316	9.13	18279	14.04	8984	17.92	10665						
26	2316	N823052226.D	BLE0149-MSD1		3	4.81	20849	7.10	12254	9.13	21844	14.04	10789	17.93	12762						
27	2343	N823052227.D	SLE0350-CCV1		1	4.81	19012	7.10	11063	9.13	21555	14.04	17223	17.92	16742						

JZ 5/25/23

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230522.b

ARI Job No.: SLE0 Method: FSIMPNA230426.m Instrument: nt8.i Date: 22-MAY-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1146	N823052202.D	SLE0350-ICV1		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Dibenzo(a,h)anthracene,
1237	N823052203.D	BLE0158-BLK1		1	NO MANUAL INTEGRATION
1304	N823052204.D	BLE0158-BS1		1	Dibenzo(a,h)anthracene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene,
1332	N823052205.D	BLE0158-BSD1		1	Dibenzo(a,h)anthracene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene,
1412	N823052206.D	23C0085-01		1	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Perylene, Benzo(a)pyrene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene, Dibenzo(a,h)anthracene-d14,
1439	N823052207.D	23C0085-02		1	Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Perylene, Benzo(a)pyrene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene, Carbazole,
1506	N823052208.D	BLE0158-MS1		1	Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene,
1533	N823052209.D	BLE0158-MSD1		1	Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene,
1601	N823052210.D	23C0085-03		1	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Benzo(a)pyrene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthe
1628	N823052211.D	23C0085-04		1	Dibenzo(a,h)anthracene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene,
1655	N823052212.D	23C0085-05		1	Perylene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene, Benzo(j)fluoranthene,
1722	N823052213.D	23C0085-06		1	Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Chrysene, Benzo(b)fluoranthene, Benzo(j)fluoranthene,
1749	N823052214.D	23C0085-09		1	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene, Benzo(j)fluo Carbazole,
1817	N823052215.D	23C0085-10		1	Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene, Carbazole,
1844	N823052216.D	23C0085-13		1	Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene,
1911	N823052217.D	23C0085-14		1	Dibenzo(a,h)anthracene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthene,
1938	N823052218.D	BLE0149-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230522.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2006	N823052219.D	BLE0149-BS1		1	Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
2033	N823052220.D	BLE0149-BSD1		1	Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
2100	N823052221.D	BLE0149-SRM1		1	Dibenzo(a,h)anthracene, Dibenzofuran, Benzo(a)pyrene, Benzo(a)anthracene, Total Benzofluoranthenes,
2127	N823052222.D	23D0037-02		3	Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Chrysene-d12, Perylene-d12,
2154	N823052223.D	23D0037-04		3	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Acenaphthylene, Acenaphthene, Total Benzofluoranthenes, Chrysene, Carbazole, Dibenzo(a,h)anthracene-d14,
2222	N823052224.D	23E0009-08		3	Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Total Benzofluoranthenes,
2249	N823052225.D	BLE0149-MS1		3	Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
2316	N823052226.D	BLE0149-MSD1		3	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Perylene-d12, Dibenzo(a,h)anthracene-d14,
2343	N823052227.D	SLE0350-CCV1		1	Benzo(a)pyrene, Total Benzofluoranthenes,

Security Status Report

Date: 25-May-2023 22:40

N823052201.D	Data Locked	jianqing, 25-May-2023 22:40
N823052202.D	Data Locked	jianqing, 25-May-2023 22:40
N823052203.D	Data Locked	jianqing, 25-May-2023 22:40
N823052204.D	Data Locked	jianqing, 25-May-2023 22:40
N823052205.D	Data Locked	jianqing, 25-May-2023 22:40
N823052206.D	Data Locked	jianqing, 25-May-2023 22:40
N823052207.D	Data Locked	jianqing, 25-May-2023 22:40
N823052208.D	Data Locked	jianqing, 25-May-2023 22:40
N823052209.D	Data Locked	jianqing, 25-May-2023 22:40
N823052210.D	Data Locked	jianqing, 25-May-2023 22:40
N823052211.D	Data Locked	jianqing, 25-May-2023 22:40
N823052212.D	Data Locked	jianqing, 25-May-2023 22:40
N823052213.D	Data Locked	jianqing, 25-May-2023 22:40
N823052214.D	Data Locked	jianqing, 25-May-2023 22:40
N823052215.D	Data Locked	jianqing, 25-May-2023 22:40
N823052216.D	Data Locked	jianqing, 25-May-2023 22:40
N823052217.D	Data Locked	jianqing, 25-May-2023 22:40
N823052218.D	Data Locked	jianqing, 25-May-2023 22:40
N823052219.D	Data Locked	jianqing, 25-May-2023 22:40
N823052220.D	Data Locked	jianqing, 25-May-2023 22:40
N823052221.D	Data Locked	jianqing, 25-May-2023 22:40
N823052222.D	Data Locked	jianqing, 25-May-2023 22:40
N823052223.D	Data Locked	jianqing, 25-May-2023 22:40
N823052224.D	Data Locked	jianqing, 25-May-2023 22:40
N823052225.D	Data Locked	jianqing, 25-May-2023 22:40
N823052226.D	Data Locked	jianqing, 25-May-2023 22:40
N823052227.D	Data Locked	jianqing, 25-May-2023 22:40

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0037	Instrument:	NT17
		Calibration:	GE00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLF0037-TUN1	NT1706012303S.D	NA	06/01/23 13:41
ABN 1.0	SLF0037-ICV1	NT1706012305S.D	NA	06/01/23 14:35
ABN 0.1	SLF0037-LCV1	NT1706012307S.D	NA	06/01/23 15:50
ZZZZZ	BLE0084-BLK2	NT1706012308S.D	Solid	06/01/23 16:27
ZZZZZ	BLE0084-BS2	NT1706012309S.D	Solid	06/01/23 17:04
ZZZZZ	BLE0084-BSD2	NT1706012310S.D	Solid	06/01/23 17:41
ZZZZZ	BLE0084-MS2	NT1706012311S.D	Solid	06/01/23 18:18
ZZZZZ	BLE0084-MSD2	NT1706012312S.D	Solid	06/01/23 18:56
ZZZZZ	23D0682-01	NT1706012313S.D	Solid	06/01/23 19:33
ZZZZZ	23D0682-02	NT1706012314S.D	Solid	06/01/23 20:09
ZZZZZ	23D0682-03	NT1706012315S.D	Solid	06/01/23 20:46
ZZZZZ	23D0682-04	NT1706012316S.D	Solid	06/01/23 21:23
ZZZZZ	23D0682-05	NT1706012317S.D	Solid	06/01/23 22:00
ZZZZZ	23D0682-06	NT1706012318S.D	Solid	06/01/23 22:38
ZZZZZ	23D0682-07	NT1706012319S.D	Solid	06/01/23 23:15
ABN 1	SLF0037-ICV2	NT1706012321S.D	NA	06/02/23 00:29
ZZZZZ	23D0682-08	NT1706012324S.D	Solid	06/02/23 02:20
Blank	BLE0148-BLK2	NT1706012325S.D	Solid	06/02/23 02:57
LCS	BLE0148-BS2	NT1706012326S.D	Solid	06/02/23 03:34
LCS Dup	BLE0148-BSD2	NT1706012327S.D	Solid	06/02/23 04:11
LDW23-SS1805	BLE0148-MS2	NT1706012328S.D	Solid	06/02/23 04:48
LDW23-SS1805	BLE0148-MSD2	NT1706012329S.D	Solid	06/02/23 05:25
Reference	BLE0148-SRM2	NT1706012330S.D	Solid	06/02/23 06:02
ZZZZZ	23D0394-07	NT1706012331S.D	Solid	06/02/23 06:40
ZZZZZ	23D0394-13	NT1706012332S.D	Solid	06/02/23 07:17
LDW23-SS1811	23E0009-01	NT1706012333S.D	Solid	06/02/23 07:54
LDW23-SS1805	23E0009-03	NT1706012334S.D	Solid	06/02/23 08:32
LDW23-SS1800	23E0009-05	NT1706012335S.D	Solid	06/02/23 09:09
LDW23-SS1820	23E0009-07	NT1706012336S.D	Solid	06/02/23 09:47

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0037	Instrument:	NT17
		Calibration:	GE00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ABN 1.0	SLF0037-CCV1	NT1706012339S.D	NA	06/02/23 11:39

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 6/6/2023 12:01:02PM

ANALYSIS SEQUENCE

SLF0037

Instrument ID: NT17
Calibration ID: GE00070
MS EM Level: 1525 EV

GCMS Description: Agilent 7890B/5977B
GCMS Column ID: L004289

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLF0037-TUN1	MS Tune	QC		1	L005516		06/01/2023 13:41	NT1706012303S.D	VTS	
SLF0037-ICV1	ABN 1.0	QC		2	L005948	L001570	06/01/2023 14:35	NT1706012305S.D	YZ	
SLF0037-LCV1	ABN 0.1	QC		3	L005953	L001570	06/01/2023 15:50	NT1706012307S.D	VTS	
BLE0084-BLK2	Blank	QC		4		L001570	06/01/2023 16:27	NT1706012308S.D	VTS	
BLE0084-BS2	LCS	QC		5		L001570	06/01/2023 17:04	NT1706012309S.D	VTS	
BLE0084-BSD2	LCS Dup	QC		6		L001570	06/01/2023 17:41	NT1706012310S.D	VTS	
BLE0084-MS2	Matrix Spike	QC		7		L001570	06/01/2023 18:18	NT1706012311S.D	VTS	
BLE0084-MSD2	Matrix Spike Dup	QC		8		L001570	06/01/2023 18:56	NT1706012312S.D	VTS	
23D0682-01	WSM-SG-08-0-1-23042	270E-SIM Dual Scan SVO	A 03	9		L001570	06/01/2023 19:33	NT1706012313S.D	VTS	
23D0682-02	WSM-SG-08-1-2-23042	270E-SIM Dual Scan SVO	A 03	10		L001570	06/01/2023 20:09	NT1706012314S.D	VTS	
23D0682-03	WSM-SG-09-0-1-23042	270E-SIM Dual Scan SVO	A 03	11		L001570	06/01/2023 20:46	NT1706012315S.D	VTS	
23D0682-04	WSM-SG-09-1-2-23042	270E-SIM Dual Scan SVO	A 03	12		L001570	06/01/2023 21:23	NT1706012316S.D	VTS	
23D0682-05	WSM-SG-10-0-1-23042	270E-SIM Dual Scan SVO	A 03	13		L001570	06/01/2023 22:00	NT1706012317S.D	VTS	
23D0682-06	WSM-SG-10-1-2-23042	270E-SIM Dual Scan SVO	A 03	14		L001570	06/01/2023 22:38	NT1706012318S.D	VTS	
23D0682-07	WSM-SG-11-0-1-23042	270E-SIM Dual Scan SVO	A 03	15		L001570	06/01/2023 23:15	NT1706012319S.D	VTS	
SLF0037-ICV2	ABN 1	QC		16	L005948	L001570	06/02/2023 00:29	NT1706012321S.D	VTS	
23D0682-08	WSM-SG-11-1-2-23042	270E-SIM Dual Scan SVO	A 03	17		L001570	06/02/2023 02:20	NT1706012324S.D	VTS	
BLE0148-BLK2	Blank	QC		18		L001570	06/02/2023 02:57	NT1706012325S.D	VTS	
BLE0148-BS2	LCS	QC		19		L001570	06/02/2023 03:34	NT1706012326S.D	VTS	
BLE0148-BSD2	LCS Dup	QC		20		L001570	06/02/2023 04:11	NT1706012327S.D	VTS	
BLE0148-MS2	Matrix Spike	QC		21		L001570	06/02/2023 04:48	NT1706012328S.D	VTS	
BLE0148-MSD2	Matrix Spike Dup	QC		22		L001570	06/02/2023 05:25	NT1706012329S.D	VTS	

ANALYSIS SEQUENCE

SLF0037

Instrument ID: NT17
Calibration ID: GE00070
MS EM Level: 1525 EV

GCMS Description: Agilent 7890B/5977B
GCMS Column ID: L004289

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
BLE0148-SRM2	Reference	QC		23		L001570	06/02/2023 06:02	NT1706012330S.D	VTS	
23D0394-07	LDW23-IT1087	270E-SIM Dual Scan SVO	A 02	24		L001570	06/02/2023 06:40	NT1706012331S.D	VTS	
23D0394-13	LDW23-IT1806	270E-SIM Dual Scan SVO	A 02	25		L001570	06/02/2023 07:17	NT1706012332S.D	VTS	
23E0009-01	LDW23-SS1811	270E-SIM Dual Scan SVO	A 01	26		L001570	06/02/2023 07:54	NT1706012333S.D	VTS	
23E0009-03	LDW23-SS1805	270E-SIM Dual Scan SVO	A 01	27		L001570	06/02/2023 08:32	NT1706012334S.D	VTS	
23E0009-05	LDW23-SS1800	270E-SIM Dual Scan SVO	A 01	28		L001570	06/02/2023 09:09	NT1706012335S.D	VTS	
23E0009-07	LDW23-SS1820	270E-SIM Dual Scan SVO	A 01	29		L001570	06/02/2023 09:47	NT1706012336S.D	VTS	
SLF0037-CCV1	ABN 1.0	QC		30	L005948	L001570	06/02/2023 11:39	NT1706012339S.D	VTS	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b\SIM.b

	Time	Filename	LabID	ClientId	DF												
1	1341	NT1706012303S.D	SLF0037-TUN1		1	NO ISTDS FOUND											
2	1435	NT1706012305S.D	SLF0037-ICV1		1	9.15	283255	11.60	981587	15.19	592919	18.20	907838	23.21	666753	25.80	648259
3	1550	NT1706012307S.D	SLF0037-LCV1		1	9.15	334780	11.60	1136655	15.19	662826	18.20	1021580	23.21	776492	25.80	750355
4	1627	NT1706012308S.D	BLE0084-BLK2		1	9.15	277836	11.60	1032158	15.18	613433	18.20	924608	23.21	692639	25.80	638619
5	1704	NT1706012309S.D	BLE0084-BS2		1	9.15	281989	11.60	1022796	15.19	613405	18.20	917463	23.21	682415	25.80	600147
6	1741	NT1706012310S.D	BLE0084-BSD2		1	9.15	289807	11.60	1046949	15.19	637726	18.20	953248	23.21	719976	25.80	627637
7	1818	NT1706012311S.D	BLE0084-MS2		1	9.15	289060	11.60	1023681	15.19	607573	18.20	905783	23.23	643656	25.82	513573
8	1856	NT1706012312S.D	BLE0084-MSD2		1	9.15	294294	11.60	1031435	15.19	609458	18.20	914895	23.23	697290	25.80	560262
9	1933	NT1706012313S.D	23D0682-01		1	9.15	302922	11.60	1073517	15.18	624981	18.20	902453	23.21	613500	25.80	419661
10	2009	NT1706012314S.D	23D0682-02		1	9.15	294938	11.60	1051201	15.18	600477	18.20	898218	23.23	625886	25.80	490686
11	2046	NT1706012315S.D	23D0682-03		1	9.15	303899	11.60	1085617	15.18	637538	18.20	936387	23.23	683583	25.82	503053
12	2123	NT1706012316S.D	23D0682-04		1	9.15	302117	11.60	1076554	15.19	631860	18.20	947634	23.23	621280	25.82	537902
13	2200	NT1706012317S.D	23D0682-05		1	9.15	300017	11.60	1091665	15.19	634750	18.21	993671	23.23	569868	25.82	534407
14	2238	NT1706012318S.D	23D0682-06		1	9.15	289754	11.60	1059072	15.19	611485	18.20	940829	23.23	606515	25.82	540895
15	2315	NT1706012319S.D	23D0682-07		1	9.15	284282	11.60	1042055	15.19	608916	18.21	939625	23.23	563459	25.82	523048
16	0029	NT1706012321S.D	SLF0037-ICV2		1	9.15	265536	11.60	874121	15.19	524478	18.20	807440	23.21	527364	25.80	455527
17	0143	NT1706012323S.D	SFL0037-LCV2		1	9.15	305482	11.60	966097	15.18	549410	18.20	838080	23.21	574093	25.80	508684
18	0220	NT1706012324S.D	23D0682-08		1	9.15	268143	11.60	967057	15.19	572543	18.20	894529	23.23	550587	25.82	477464
19	0257	NT1706012325S.D	BLE0148-BLK2		1	9.15	272978	11.60	949642	15.18	551269	18.20	838655	23.21	550926	25.80	457583
20	0334	NT1706012326S.D	BLE0148-BS2		1	9.15	262184	11.60	934527	15.19	569401	18.20	842050	23.21	578785	25.80	476619

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b\SIM.b

	Time	Filename	LabID	ClientId	DF												
21	0411	NT1706012327S.D	BLE0148-BSD2		1	9.15	274959	11.60	992690	15.19	601549	18.20	892939	23.21	603172	25.80	499514
22	0448	NT1706012328S.D	BLE0148-MS2		1	9.15	261433	11.60	934401	15.19	555590	18.21	925204	23.24	568981	25.83	703732
23	0525	NT1706012329S.D	BLE0148-MSD2		1	9.15	275671	11.60	976810	15.19	573676	18.21	932810	23.23	563849	25.83	629097
24	0602	NT1706012330S.D	BLE0148-SRM2		1	9.15	260289	11.60	901096	15.18	526260	18.20	787218	23.21	555347	25.80	502074
25	0640	NT1706012331S.D	23D0394-07		1	9.15	266021	11.60	913764	15.18	536822	18.20	800036	23.21	543033	25.80	478175
26	0717	NT1706012332S.D	23D0394-13		1	9.15	264974	11.60	944539	15.18	551574	18.20	847826	23.23	527917	25.82	537625
27	0754	NT1706012333S.D	23E0009-01		1	9.15	263090	11.60	926298	15.18	535315	18.20	852878	23.23	529916	25.82	542327
28	0832	NT1706012334S.D	23E0009-03		1	9.15	250430	11.60	898713	15.19	523176	18.21	822979	23.23	464918	25.83	558030
29	0909	NT1706012335S.D	23E0009-05		1	9.15	231789	11.60	839861	15.19	480947	18.21	757288	23.23	440825	25.82	534485
30	0947	NT1706012336S.D	23E0009-07		1	9.15	239173	11.60	859958	15.19	497755	18.21	802789	23.23	468002	25.83	551503
31	1139	NT1706012339S.D	SLF0037-CCV1		1	9.15	228090	11.60	749189	15.18	440715	18.20	682756	23.21	443232	25.80	396206

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt17.i\20230601.b\SIM.b

Instrument: nt17.i Date: 01-JUN-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1341	NT1706012303S.D	SLF0037-TUN1	1	NO MANUAL INTEGRATION
1435	NT1706012305S.D	SLF0037-ICV1	1	NO MANUAL INTEGRATION
1550	NT1706012307S.D	SLF0037-LCV1	1	NO MANUAL INTEGRATION
1627	NT1706012308S.D	BLE0084-BLK2	1	1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Benzoic acid, Dimethylphthalate,
1704	NT1706012309S.D	BLE0084-BS2	1	NO MANUAL INTEGRATION
1741	NT1706012310S.D	BLE0084-BSD2	1	NO MANUAL INTEGRATION
1818	NT1706012311S.D	BLE0084-MS2	1	2-Methylphenol,
1856	NT1706012312S.D	BLE0084-MSD2	1	2-Methylphenol,
1933	NT1706012313S.D	23D0682-01	1	Benzyl alcohol, 2,4-Dimethylphenol, Pentachlorophenol,
2009	NT1706012314S.D	23D0682-02	1	Benzyl alcohol, 1,2-Dichlorobenzene, N-Nitrosodiphenylamine,
2046	NT1706012315S.D	23D0682-03	1	2-Methylphenol, Pentachlorophenol,
2123	NT1706012316S.D	23D0682-04	1	1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 2-Methylphenol, 4-Methylphenol, 1,2,4-Trichlorobenzene,
2200	NT1706012317S.D	23D0682-05	1	Diethylphthalate, Pentachlorophenol,
2238	NT1706012318S.D	23D0682-06	1	1,2-Dichlorobenzene, Dimethylphthalate, Pentachlorophenol,
2315	NT1706012319S.D	23D0682-07	1	1,2-Dichlorobenzene, 2,4-Dimethylphenol,
0029	NT1706012321S.D	SLF0037-ICV2	1	NO MANUAL INTEGRATION
0143	NT1706012323S.D	SFL0037-LCV2	1	NO MANUAL INTEGRATION

Instrument: nt17.i Date: 02-JUN-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
0220	NT1706012324S.D	23D0682-08	1	1,2-Dichlorobenzene, 4-Methylphenol,
0257	NT1706012325S.D	BLE0148-BLK2	1	1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Dimethylphthalate,
0334	NT1706012326S.D	BLE0148-BS2	1	NO MANUAL INTEGRATION
0411	NT1706012327S.D	BLE0148-BSD2	1	NO MANUAL INTEGRATION
0448	NT1706012328S.D	BLE0148-MS2	1	NO MANUAL INTEGRATION
0525	NT1706012329S.D	BLE0148-MSD2	1	NO MANUAL INTEGRATION
0602	NT1706012330S.D	BLE0148-SRM2	1	1,2-Dichlorobenzene, Hexachlorobenzene,
0640	NT1706012331S.D	23D0394-07	1	NO MANUAL INTEGRATION
0717	NT1706012332S.D	23D0394-13	1	1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Benzoic acid, Dimethylphthalate,
0754	NT1706012333S.D	23E0009-01	1	2-Methylphenol, Benzoic acid, Diethylphthalate,
0832	NT1706012334S.D	23E0009-03	1	1,4-Dichlorobenzene, 1,2-Dichlorobenzene, Dimethylphthalate, Diethylphthalate,
0909	NT1706012335S.D	23E0009-05	1	Benzyl alcohol, 2-Methylphenol, Dimethylphthalate, Diethylphthalate, Pentachlorophenol,
0947	NT1706012336S.D	23E0009-07	1	1,2-Dichlorobenzene, Dimethylphthalate, Diethylphthalate,
1139	NT1706012339S.D	SLF0037-CCV1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 06-Jun-2023 12:02

NT1706012303S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012305S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012307S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012308S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012309S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012310S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012311S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012312S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012313S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012314S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012315S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012316S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012317S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012318S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012319S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012321S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012323S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012324S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012325S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012326S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012327S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012328S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012329S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012330S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012331S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012332S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012333S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012334S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012335S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012336S.D	Data Locked	van, 06-Jun-2023 12:02
NT1706012339S.D	Data Locked	van, 06-Jun-2023 12:02

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0339	Instrument:	NT17
Calibration:	GE00070	Calibration Date:	05/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLE0339-SCV1 (Solid)			Lab File ID: NT1705162311S.D			Analyzed: 05/17/23 00:29		
2-Fluorophenol	7.5000		0 - 200		7.166125	-7.1661	N/A	
p-Terphenyl-d14	5.0000		0 - 200		21.55563	-21.5556	N/A	
SLE0339-ICB1 (Solid)			Lab File ID: NT1705162312S.D			Analyzed: 05/17/23 01:07		
2-Fluorophenol	7.5000	108	27 - 120	7.158	7.166125	-0.0081	N/A	
p-Terphenyl-d14	5.0000	105	37 - 120	21.554	21.55563	-0.0016	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0350
Instrument: NT8
Calibration: GD00068
Calibration Date: 04/26/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLE0350-ICV1 (Water)				Lab File ID: N823052202.D			Analyzed: 05/22/23 11:46	
2-Methylnaphthalene-d10	2.5000	97.0	80 - 120	5.551	5.559	-0.0080	N/A	
Dibenzo[a,h]anthracene-d14	2.5000	108	80 - 120	20.318	20.35817	-0.0402	N/A	
Fluoranthene-d10	2.5000	95.3	80 - 120	10.895	10.912	-0.0170	N/A	
BLE0149-BLK1 (Solid)				Lab File ID: N823052218.D			Analyzed: 05/22/23 19:38	
2-Methylnaphthalene-d10	150.00	71.4	32 - 120	5.542	5.559	-0.0170	N/A	
Dibenzo[a,h]anthracene-d14	150.00	134	21 - 133	20.311	20.35817	-0.0472	N/A	*
Fluoranthene-d10	150.00	92.0	36 - 134	10.886	10.912	-0.0260	N/A	
BLE0149-BS1 (Solid)				Lab File ID: N823052219.D			Analyzed: 05/22/23 20:06	
2-Methylnaphthalene-d10	150.00	73.8	32 - 120	5.542	5.559	-0.0170	N/A	
Dibenzo[a,h]anthracene-d14	150.00	148	21 - 133	20.311	20.35817	-0.0472	N/A	*
Fluoranthene-d10	150.00	91.0	36 - 134	10.886	10.912	-0.0260	N/A	
BLE0149-BSD1 (Solid)				Lab File ID: N823052220.D			Analyzed: 05/22/23 20:33	
2-Methylnaphthalene-d10	150.00	78.7	32 - 120	5.542	5.559	-0.0170	N/A	
Dibenzo[a,h]anthracene-d14	150.00	150	21 - 133	20.315	20.35817	-0.0432	N/A	*
Fluoranthene-d10	150.00	91.5	36 - 134	10.889	10.912	-0.0230	N/A	
BLE0149-SRM1 (Solid)				Lab File ID: N823052221.D			Analyzed: 05/22/23 21:00	
2-Methylnaphthalene-d10	327.51	83.9	32 - 120	5.542	5.559	-0.0170	N/A	
Dibenzo[a,h]anthracene-d14	327.51	145	21 - 133	20.311	20.35817	-0.0472	N/A	*
Fluoranthene-d10	327.51	93.5	36 - 134	10.886	10.912	-0.0260	N/A	
23E0009-08 (Solid)				Lab File ID: N823052224.D			Analyzed: 05/22/23 22:22	
2-Methylnaphthalene-d10	149.75	72.8	32 - 120	5.545	5.559	-0.0140	N/A	
Dibenzo[a,h]anthracene-d14	149.75	138	21 - 133	20.312	20.35817	-0.0462	N/A	*
Fluoranthene-d10	149.75	82.7	36 - 134	10.895	10.912	-0.0170	N/A	
BLE0149-MS1 (Solid)				Lab File ID: N823052225.D			Analyzed: 05/22/23 22:49	
2-Methylnaphthalene-d10	149.83	66.1	32 - 120	5.545	5.559	-0.0140	N/A	
Dibenzo[a,h]anthracene-d14	149.83	128	21 - 133	20.308	20.35817	-0.0502	N/A	
Fluoranthene-d10	149.83	71.8	36 - 134	10.892	10.912	-0.0200	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0350	Instrument:	NT8
Calibration:	GD00068	Calibration Date:	04/26/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLE0149-MSD1 (Solid)			Lab File ID: N823052226.D			Analyzed: 05/22/23 23:16		
2-Methylnaphthalene-d10	149.83	68.6	32 - 120	5.545	5.559	-0.0140	N/A	
Dibenzo[a,h]anthracene-d14	149.83	119	21 - 133	20.314	20.35817	-0.0442	N/A	
Fluoranthene-d10	149.83	76.3	36 - 134	10.895	10.912	-0.0170	N/A	
SLE0350-CCV1 (Water)			Lab File ID: N823052227.D			Analyzed: 05/22/23 23:43		
2-Methylnaphthalene-d10	2.5000	100	50 - 150	5.545	5.559	-0.0140	N/A	
Dibenzo[a,h]anthracene-d14	2.5000	113	50 - 150	20.308	20.35817	-0.0502	N/A	
Fluoranthene-d10	2.5000	95.8	0 - 200	10.889	10.912	-0.0230	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0037	Instrument:	NT17
Calibration:	GE00070	Calibration Date:	05/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLF0037-ICV1 (Solid)				Lab File ID: NT1706012305S.D			Analyzed: 06/01/23 14:35	
2-Fluorophenol	1.5000	98.1	80 - 120	6.954	7.166125	-0.2121	N/A	
p-Terphenyl-d14	1.0000	114	80 - 120	21.325	21.55563	-0.2306	N/A	
SLF0037-LCV1 (Solid)				Lab File ID: NT1706012307S.D			Analyzed: 06/01/23 15:50	
2-Fluorophenol	0.15000	78.7	0 - 200	6.979	7.166125	-0.1871	N/A	
p-Terphenyl-d14	0.10000	118	0 - 200	21.325	21.55563	-0.2306	N/A	
SLF0037-ICV2 (Solid)				Lab File ID: NT1706012321S.D			Analyzed: 06/02/23 00:29	
2-Fluorophenol	1.5000	94.1	80 - 120	6.954	7.166125	-0.2121	N/A	
p-Terphenyl-d14	1.0000	120	80 - 120	21.325	21.55563	-0.2306	N/A	
BLE0148-BLK2 (Solid)				Lab File ID: NT1706012325S.D			Analyzed: 06/02/23 02:57	
2-Fluorophenol	750.00	57.4	27 - 120	6.98	7.166125	-0.1861	N/A	
p-Terphenyl-d14	500.00	91.3	37 - 120	21.325	21.55563	-0.2306	N/A	
BLE0148-BS2 (Solid)				Lab File ID: NT1706012326S.D			Analyzed: 06/02/23 03:34	
2-Fluorophenol	750.00	47.1	27 - 120	6.967	7.166125	-0.1991	N/A	
p-Terphenyl-d14	500.00	100	37 - 120	21.325	21.55563	-0.2306	N/A	
BLE0148-BSD2 (Solid)				Lab File ID: NT1706012327S.D			Analyzed: 06/02/23 04:11	
2-Fluorophenol	750.00	50.8	27 - 120	6.967	7.166125	-0.1991	N/A	
p-Terphenyl-d14	500.00	97.0	37 - 120	21.325	21.55563	-0.2306	N/A	
BLE0148-MS2 (Solid)				Lab File ID: NT1706012328S.D			Analyzed: 06/02/23 04:48	
2-Fluorophenol	749.96	35.5	27 - 120	6.967	7.166125	-0.1991	N/A	
p-Terphenyl-d14	499.97	76.7	37 - 120	21.337	21.55563	-0.2186	N/A	
BLE0148-MSD2 (Solid)				Lab File ID: NT1706012329S.D			Analyzed: 06/02/23 05:25	
2-Fluorophenol	749.96	36.8	27 - 120	6.967	7.166125	-0.1991	N/A	
p-Terphenyl-d14	499.97	86.0	37 - 120	21.337	21.55563	-0.2186	N/A	
BLE0148-SRM2 (Solid)				Lab File ID: NT1706012330S.D			Analyzed: 06/02/23 06:02	
2-Fluorophenol	7500.0	49.7	27 - 120	6.979	7.166125	-0.1871	N/A	
p-Terphenyl-d14	5000.0	89.5	37 - 120	21.325	21.55563	-0.2306	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0037	Instrument:	NT17
Calibration:	GE00070	Calibration Date:	05/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23E0009-01 (Solid)			Lab File ID: NT1706012333S.D			Analyzed: 06/02/23 07:54		
2-Fluorophenol	749.59	31.1	27 - 120	6.967	7.166125	-0.1991	N/A	
p-Terphenyl-d14	499.73	89.1	37 - 120	21.325	21.55563	-0.2306	N/A	
23E0009-03 (Solid)			Lab File ID: NT1706012334S.D			Analyzed: 06/02/23 08:32		
2-Fluorophenol	749.96	26.1	27 - 120	6.967	7.166125	-0.1991	N/A	*
p-Terphenyl-d14	499.97	87.0	37 - 120	21.338	21.55563	-0.2176	N/A	
23E0009-05 (Solid)			Lab File ID: NT1706012335S.D			Analyzed: 06/02/23 09:09		
2-Fluorophenol	747.69	28.8	27 - 120	6.967	7.166125	-0.1991	N/A	
p-Terphenyl-d14	498.46	87.4	37 - 120	21.337	21.55563	-0.2186	N/A	
23E0009-07 (Solid)			Lab File ID: NT1706012336S.D			Analyzed: 06/02/23 09:47		
2-Fluorophenol	748.17	36.8	27 - 120	6.967	7.166125	-0.1991	N/A	
p-Terphenyl-d14	498.78	90.2	37 - 120	21.337	21.55563	-0.2186	N/A	
SLF0037-CCV1 (Solid)			Lab File ID: NT1706012339S.D			Analyzed: 06/02/23 11:39		
2-Fluorophenol	1.5000	95.5	50 - 150	6.954	7.166125	-0.2121	N/A	
p-Terphenyl-d14	1.0000	118	50 - 150	21.325	21.55563	-0.2306	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0372	Instrument:	NT8
		Calibration:	GD00068

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLD0372-SCV1)		(Water)		Lab File ID: N823042609.D				Analyzed: 04/26/23 20:49	
Naphthalene-d8	20718	4.827	18699	4.827	111	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	12642	7.113	10729	7.11	118	50 - 200	0.003	+/-0.50	
Phenanthrene-d10	24547	9.15	20748	9.15	118	50 - 200	0.000	+/-0.50	
Chrysene-d12	24217	14.07	20954	14.067	116	50 - 200	0.003	+/-0.50	
Perylene-d12	24956	17.959	21563	17.959	116	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0339	Instrument:	NT17
		Calibration:	GE00070

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLE0339-SCV1)		(Solid)		Lab File ID: NT1705162311S.D				Analyzed: 05/17/23 00:29	
1,4-Dichlorobenzene-d4	280298	9.375	316066	9.375	89	50 - 200	0.000	+/-0.50	
Naphthalene-d8	999390	11.84	1102073	11.84	91	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	527927	15.436	583826	15.436	90	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	860054	18.468	970917	18.468	89	50 - 200	0.000	+/-0.50	
Chrysene-d12	527529	23.455	590568	23.455	89	50 - 200	0.000	+/-0.50	
Perylene-d12	475440	26.159	537938	26.159	88	50 - 200	0.000	+/-0.50	
Initial Cal Blank (SLE0339-ICB1)		(Solid)		Lab File ID: NT1705162312S.D				Analyzed: 05/17/23 01:07	
1,4-Dichlorobenzene-d4	302680	9.375	316066	9.375	96	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1065796	11.84	1102073	11.84	97	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	551880	15.436	583826	15.436	95	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	903730	18.455	970917	18.468	93	50 - 200	-0.013	+/-0.50	
Chrysene-d12	538208	23.455	590568	23.455	91	50 - 200	0.000	+/-0.50	
Perylene-d12	508161	26.146	537938	26.159	94	50 - 200	-0.013	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0350	Instrument:	NT8
		Calibration:	GD00068

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLE0350-ICV1)		(Water)		Lab File ID: N823052202.D				Analyzed: 05/22/23 11:46	
Naphthalene-d8	17081	4.818	17081	4.818	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	9674	7.101	9674	7.101	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	17710	9.14	17710	9.14	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	15081	14.044	15081	14.044	100	50 - 200	0.000	+/-0.50	
Perylene-d12	15623	17.934	15623	17.934	100	50 - 200	0.000	+/-0.50	
Blank (BLE0149-BLK1)		(Solid)		Lab File ID: N823052218.D				Analyzed: 05/22/23 19:38	
Naphthalene-d8	15484	4.805	17081	4.818	91	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	9378	7.098	9674	7.101	97	50 - 200	-0.003	+/-0.50	
Phenanthrene-d10	16640	9.134	17710	9.14	94	50 - 200	-0.006	+/-0.50	
Chrysene-d12	14149	14.035	15081	14.044	94	50 - 200	-0.009	+/-0.50	
Perylene-d12	14692	17.924	15623	17.934	94	50 - 200	-0.010	+/-0.50	
LCS (BLE0149-BS1)		(Solid)		Lab File ID: N823052219.D				Analyzed: 05/22/23 20:06	
Naphthalene-d8	17287	4.805	17081	4.818	101	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	10107	7.094	9674	7.101	104	50 - 200	-0.007	+/-0.50	
Phenanthrene-d10	18862	9.131	17710	9.14	107	50 - 200	-0.009	+/-0.50	
Chrysene-d12	15749	14.035	15081	14.044	104	50 - 200	-0.009	+/-0.50	
Perylene-d12	14816	17.918	15623	17.934	95	50 - 200	-0.016	+/-0.50	
LCS Dup (BLE0149-BSD1)		(Solid)		Lab File ID: N823052220.D				Analyzed: 05/22/23 20:33	
Naphthalene-d8	17781	4.805	17081	4.818	104	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	10274	7.098	9674	7.101	106	50 - 200	-0.003	+/-0.50	
Phenanthrene-d10	18966	9.134	17710	9.14	107	50 - 200	-0.006	+/-0.50	
Chrysene-d12	15349	14.032	15081	14.044	102	50 - 200	-0.012	+/-0.50	
Perylene-d12	14458	17.921	15623	17.934	93	50 - 200	-0.013	+/-0.50	
Reference (BLE0149-SRM1)		(Solid)		Lab File ID: N823052221.D				Analyzed: 05/22/23 21:00	
Naphthalene-d8	16843	4.808	17081	4.818	99	50 - 200	-0.010	+/-0.50	
Acenaphthene-d10	9965	7.098	9674	7.101	103	50 - 200	-0.003	+/-0.50	
Phenanthrene-d10	18105	9.134	17710	9.14	102	50 - 200	-0.006	+/-0.50	
Chrysene-d12	15428	14.035	15081	14.044	102	50 - 200	-0.009	+/-0.50	
Perylene-d12	15321	17.924	15623	17.934	98	50 - 200	-0.010	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0350
SDG: 23E0009
Project: AOC5 MR Phase 1
Instrument: NT8
Calibration: GD00068

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1820 (23E0009-08)		(Solid)		Lab File ID: N823052224.D				Analyzed: 05/22/23 22:22	
Naphthalene-d8	17969	4.808	17081	4.818	105	50 - 200	-0.010	+/-0.50	
Acenaphthene-d10	10478	7.098	9674	7.101	108	50 - 200	-0.003	+/-0.50	
Phenanthrene-d10	18554	9.134	17710	9.14	105	50 - 200	-0.006	+/-0.50	
Chrysene-d12	9682	14.035	15081	14.044	64	50 - 200	-0.009	+/-0.50	
Perylene-d12	11465	17.927	15623	17.934	73	50 - 200	-0.007	+/-0.50	
Matrix Spike (BLE0149-MS1)		(Solid)		Lab File ID: N823052225.D				Analyzed: 05/22/23 22:49	
Naphthalene-d8	18155	4.812	17081	4.818	106	50 - 200	-0.006	+/-0.50	
Acenaphthene-d10	10316	7.098	9674	7.101	107	50 - 200	-0.003	+/-0.50	
Phenanthrene-d10	18279	9.134	17710	9.14	103	50 - 200	-0.006	+/-0.50	
Chrysene-d12	8984	14.035	15081	14.044	60	50 - 200	-0.009	+/-0.50	
Perylene-d12	10665	17.924	15623	17.934	68	50 - 200	-0.010	+/-0.50	
Matrix Spike Dup (BLE0149-MSD1)		(Solid)		Lab File ID: N823052226.D				Analyzed: 05/22/23 23:16	
Naphthalene-d8	20849	4.811	17081	4.818	122	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	12254	7.097	9674	7.101	127	50 - 200	-0.004	+/-0.50	
Phenanthrene-d10	21844	9.134	17710	9.14	123	50 - 200	-0.006	+/-0.50	
Chrysene-d12	10789	14.041	15081	14.044	72	50 - 200	-0.003	+/-0.50	
Perylene-d12	12762	17.93	15623	17.934	82	50 - 200	-0.004	+/-0.50	
Calibration Check (SLE0350-CCV1)		(Water)		Lab File ID: N823052227.D				Analyzed: 05/22/23 23:43	
Naphthalene-d8	19012	4.812	17081	4.818	111	50 - 200	-0.006	+/-0.50	
Acenaphthene-d10	11063	7.098	9674	7.101	114	50 - 200	-0.003	+/-0.50	
Phenanthrene-d10	21555	9.134	17710	9.14	122	50 - 200	-0.006	+/-0.50	
Chrysene-d12	17223	14.035	15081	14.044	114	50 - 200	-0.009	+/-0.50	
Perylene-d12	16742	17.924	15623	17.934	107	50 - 200	-0.010	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0037	Instrument:	NT17
		Calibration:	GE00070

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLF0037-ICV1)		(Solid)	Lab File ID: NT1706012305S.D				Analyzed: 06/01/23 14:35		
1,4-Dichlorobenzene-d4	283255	9.146	283255	9.146	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	981587	11.598	981587	11.598	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	592919	15.194	592919	15.194	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	907838	18.201	907838	18.201	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	666753	23.213	666753	23.213	100	50 - 200	0.000	+/-0.50	
Perylene-d12	648259	25.802	648259	25.802	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLF0037-LCV1)		(Solid)	Lab File ID: NT1706012307S.D				Analyzed: 06/01/23 15:50		
1,4-Dichlorobenzene-d4	334780	9.146	283255	9.146	118	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1136655	11.598	981587	11.598	116	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	662826	15.194	592919	15.194	112	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	1021580	18.2	907838	18.201	113	50 - 200	-0.001	+/-0.50	
Chrysene-d12	776492	23.213	666753	23.213	116	50 - 200	0.000	+/-0.50	
Perylene-d12	750355	25.802	648259	25.802	116	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLF0037-ICV2)		(Solid)	Lab File ID: NT1706012321S.D				Analyzed: 06/02/23 00:29		
1,4-Dichlorobenzene-d4	265536	9.146	265536	9.146	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	874121	11.598	874121	11.598	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	524478	15.194	524478	15.194	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	807440	18.201	807440	18.201	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	527364	23.213	527364	23.213	100	50 - 200	0.000	+/-0.50	
Perylene-d12	455527	25.802	455527	25.802	100	50 - 200	0.000	+/-0.50	
Blank (BLE0148-BLK2)		(Solid)	Lab File ID: NT1706012325S.D				Analyzed: 06/02/23 02:57		
1,4-Dichlorobenzene-d4	272978	9.146	265536	9.146	103	50 - 200	0.000	+/-0.50	
Naphthalene-d8	949642	11.598	874121	11.598	109	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	551269	15.181	524478	15.194	105	50 - 200	-0.013	+/-0.50	
Phenanthrene-d10	838655	18.201	807440	18.201	104	50 - 200	0.000	+/-0.50	
Chrysene-d12	550926	23.213	527364	23.213	104	50 - 200	0.000	+/-0.50	
Perylene-d12	457583	25.802	455527	25.802	100	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0037	Instrument:	NT17
		Calibration:	GE00070

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (BLE0148-BS2)		(Solid)	Lab File ID: NT1706012326S.D					Analyzed: 06/02/23 03:34	
1,4-Dichlorobenzene-d4	262184	9.146	265536	9.146	99	50 - 200	0.000	+/-0.50	
Naphthalene-d8	934527	11.598	874121	11.598	107	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	569401	15.194	524478	15.194	109	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	842050	18.201	807440	18.201	104	50 - 200	0.000	+/-0.50	
Chrysene-d12	578785	23.213	527364	23.213	110	50 - 200	0.000	+/-0.50	
Perylene-d12	476619	25.802	455527	25.802	105	50 - 200	0.000	+/-0.50	
LCS Dup (BLE0148-BSD2)		(Solid)	Lab File ID: NT1706012327S.D					Analyzed: 06/02/23 04:11	
1,4-Dichlorobenzene-d4	274959	9.146	265536	9.146	104	50 - 200	0.000	+/-0.50	
Naphthalene-d8	992690	11.598	874121	11.598	114	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	601549	15.194	524478	15.194	115	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	892939	18.201	807440	18.201	111	50 - 200	0.000	+/-0.50	
Chrysene-d12	603172	23.213	527364	23.213	114	50 - 200	0.000	+/-0.50	
Perylene-d12	499514	25.802	455527	25.802	110	50 - 200	0.000	+/-0.50	
Matrix Spike (BLE0148-MS2)		(Solid)	Lab File ID: NT1706012328S.D					Analyzed: 06/02/23 04:48	
1,4-Dichlorobenzene-d4	261433	9.146	265536	9.146	98	50 - 200	0.000	+/-0.50	
Naphthalene-d8	934401	11.598	874121	11.598	107	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	555590	15.194	524478	15.194	106	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	925204	18.213	807440	18.201	115	50 - 200	0.012	+/-0.50	
Chrysene-d12	568981	23.238	527364	23.213	108	50 - 200	0.025	+/-0.50	
Perylene-d12	703732	25.828	455527	25.802	154	50 - 200	0.026	+/-0.50	
Matrix Spike Dup (BLE0148-MSD2)		(Solid)	Lab File ID: NT1706012329S.D					Analyzed: 06/02/23 05:25	
1,4-Dichlorobenzene-d4	275671	9.146	265536	9.146	104	50 - 200	0.000	+/-0.50	
Naphthalene-d8	976810	11.598	874121	11.598	112	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	573676	15.194	524478	15.194	109	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	932810	18.213	807440	18.201	116	50 - 200	0.012	+/-0.50	
Chrysene-d12	563849	23.225	527364	23.213	107	50 - 200	0.012	+/-0.50	
Perylene-d12	629097	25.828	455527	25.802	138	50 - 200	0.026	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0037	Instrument:	NT17
		Calibration:	GE00070

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Reference (BLE0148-SRM2)		(Solid)	Lab File ID: NT1706012330S.D				Analyzed: 06/02/23 06:02		
1,4-Dichlorobenzene-d4	260289	9.146	265536	9.146	98	50 - 200	0.000	+/-0.50	
Naphthalene-d8	901096	11.598	874121	11.598	103	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	526260	15.181	524478	15.194	100	50 - 200	-0.013	+/-0.50	
Phenanthrene-d10	787218	18.2	807440	18.201	97	50 - 200	-0.001	+/-0.50	
Chrysene-d12	555347	23.213	527364	23.213	105	50 - 200	0.000	+/-0.50	
Perylene-d12	502074	25.802	455527	25.802	110	50 - 200	0.000	+/-0.50	
LDW23-SS1811 (23E0009-01)		(Solid)	Lab File ID: NT1706012333S.D				Analyzed: 06/02/23 07:54		
1,4-Dichlorobenzene-d4	263090	9.146	265536	9.146	99	50 - 200	0.000	+/-0.50	
Naphthalene-d8	926298	11.598	874121	11.598	106	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	535315	15.181	524478	15.194	102	50 - 200	-0.013	+/-0.50	
Phenanthrene-d10	852878	18.201	807440	18.201	106	50 - 200	0.000	+/-0.50	
Chrysene-d12	529916	23.226	527364	23.213	100	50 - 200	0.013	+/-0.50	
Perylene-d12	542327	25.815	455527	25.802	119	50 - 200	0.013	+/-0.50	
LDW23-SS1805 (23E0009-03)		(Solid)	Lab File ID: NT1706012334S.D				Analyzed: 06/02/23 08:32		
1,4-Dichlorobenzene-d4	250430	9.146	265536	9.146	94	50 - 200	0.000	+/-0.50	
Naphthalene-d8	898713	11.598	874121	11.598	103	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	523176	15.194	524478	15.194	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	822979	18.213	807440	18.201	102	50 - 200	0.012	+/-0.50	
Chrysene-d12	464918	23.226	527364	23.213	88	50 - 200	0.013	+/-0.50	
Perylene-d12	558030	25.828	455527	25.802	123	50 - 200	0.026	+/-0.50	
LDW23-SS1800 (23E0009-05)		(Solid)	Lab File ID: NT1706012335S.D				Analyzed: 06/02/23 09:09		
1,4-Dichlorobenzene-d4	231789	9.146	265536	9.146	87	50 - 200	0.000	+/-0.50	
Naphthalene-d8	839861	11.598	874121	11.598	96	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	480947	15.194	524478	15.194	92	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	757288	18.213	807440	18.201	94	50 - 200	0.012	+/-0.50	
Chrysene-d12	440825	23.225	527364	23.213	84	50 - 200	0.012	+/-0.50	
Perylene-d12	534485	25.815	455527	25.802	117	50 - 200	0.013	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0037	Instrument:	NT17
		Calibration:	GE00070

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1820 (23E0009-07)		(Solid)		Lab File ID: NT1706012336S.D				Analyzed: 06/02/23 09:47	
1,4-Dichlorobenzene-d4	239173	9.146	265536	9.146	90	50 - 200	0.000	+/-0.50	
Naphthalene-d8	859958	11.598	874121	11.598	98	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	497755	15.194	524478	15.194	95	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	802789	18.213	807440	18.201	99	50 - 200	0.012	+/-0.50	
Chrysene-d12	468002	23.225	527364	23.213	89	50 - 200	0.012	+/-0.50	
Perylene-d12	551503	25.828	455527	25.802	121	50 - 200	0.026	+/-0.50	
Calibration Check (SLF0037-CCV1)		(Solid)		Lab File ID: NT1706012339S.D				Analyzed: 06/02/23 11:39	
1,4-Dichlorobenzene-d4	228090	9.146	265536	9.146	86	50 - 200	0.000	+/-0.50	
Naphthalene-d8	749189	11.598	874121	11.598	86	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	440715	15.181	524478	15.194	84	50 - 200	-0.013	+/-0.50	
Phenanthrene-d10	682756	18.2	807440	18.201	85	50 - 200	-0.001	+/-0.50	
Chrysene-d12	443232	23.213	527364	23.213	84	50 - 200	0.000	+/-0.50	
Perylene-d12	396206	25.802	455527	25.802	87	50 - 200	0.000	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1811 23E0009-01	04/28/23 10:38	05/01/23 09:42	05/05/23 11:23	7	14	06/02/23 07:54	28	40	
LDW23-SS1805 23E0009-03	04/28/23 16:15	05/01/23 09:42	05/05/23 11:23	6	14	06/02/23 08:32	28	40	
LDW23-SS1800 23E0009-05	04/29/23 10:10	05/01/23 09:42	05/05/23 11:23	6	14	06/02/23 09:09	28	40	
LDW23-SS1820 23E0009-07	04/29/23 14:00	05/01/23 09:42	05/05/23 11:23	5	14	06/02/23 09:47	28	40	
LDW23-IT1820 23E0009-08	04/29/23 14:10	05/01/23 09:42	05/13/23 12:36	13	14	05/22/23 22:22	9	40	
Matrix Spike BLE0148-MS2	04/28/23 16:15	05/01/23 09:42	05/05/23 11:23	6	14	06/02/23 04:48	28	40	
Matrix Spike Dup BLE0148-MSD2	04/28/23 16:15	05/01/23 09:42	05/05/23 11:23	6	14	06/02/23 05:25	28	40	
Matrix Spike BLE0149-MS1	04/29/23 14:10	05/01/23 09:42	05/13/23 12:35	13	14	05/22/23 22:49	9	40	
Matrix Spike Dup BLE0149-MSD1	04/29/23 14:10	05/01/23 09:42	05/13/23 12:35	13	14	05/22/23 23:16	9	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT17

Analyte	MDL	RL	Units
1,4-Dichlorobenzene	0.6	5.0	ug/kg
1,2-Dichlorobenzene	0.7	5.0	ug/kg
Benzyl Alcohol	2.5	20.0	ug/kg
Benzoic acid	13.4	100	ug/kg
2,4-Dimethylphenol	2.2	20.0	ug/kg
1,2,4-Trichlorobenzene	2.7	5.0	ug/kg
N-Nitrosodiphenylamine	1.3	5.0	ug/kg
Pentachlorophenol	2.1	20.0	ug/kg

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT8

Analyte	MDL	RL	Units
Benzo(a)anthracene	0.82	5.00	ug/kg
Chrysene	1.05	5.00	ug/kg
Benzo(b)fluoranthene	1.37	5.00	ug/kg
Benzo(k)fluoranthene	0.76	5.00	ug/kg
Benzo(a)pyrene	0.61	5.00	ug/kg
Indeno(1,2,3-cd)pyrene	1.05	5.00	ug/kg
Dibenzo(a,h)anthracene	0.89	5.00	ug/kg

I-8227

Certificate of Analysis

SIGMA-ALDRICH

Product Name	Pentachlorophenol, 97%
Product Number	P2604
Product Brand	ALDRICH
CAS Number	87-86-5
Molecular Formula	C_6Cl_5OH
Molecular Weight	266.34

TEST	SPECIFICATION	LOT 07119HO RESULTS
APPEARANCE	WHITE TO OFF-WHITE OR LIGHT BLUE POWDER	OFF-WHITE POWDER
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD
TITRATION	97.5% - 102.5% (WITH AGNO3 AFTER OXYGEN	100.5 % (WITH AGNO3 AFTER OXYGEN COMBUSTION)
GAS LIQUID CHROMATOGRAPHY	97.5% (MINIMUM)	99.9 %
SOLUBILITY		100 MG/ML, 95% ETOH: VERY HAZY, FAINT YELLOW SOLUTION
QUALITY CONTROL ACCEPTANCE DATE		JUNE 2001

Barbara Rajzer

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: NA

Chemical: Tributyl Phosphate

Manufacturer: Chemservice

Product #: O-916

Lot #: 59-57A

Purity: 99%

Analyst: VB

Element: B000954

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001873

Printed: 9/23/2013 11:47:03AM

Description:	SVOC 4,4 DDT	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	23-Sep-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 11:46 by JZ
Vendor:	Chem Service	Lot #:	198-128A
Vendor Catalog #:			

Comments

Neat, Purity @ 99.2%. (ARI#: 790A)

Analyte	CAS Number	Concentration	Units
4,4'-DDT	50-29-3	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 4,4' DDT

Manufacturer: Chem Service

Product #: _____

Lot #: 198-128A

Purity: 99.2%

Analyst: AB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001875

Printed: 9/23/2013 12:13:55PM

Description:	SVOC alpha-Terpineol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 12:13 by JZ
Vendor:	ACROS Organics	Lot #:	AD16481201
Vendor Catalog #:			

Comments

Neat, Purity @ 98%. (ARI#: I1582A)

Analyte	CAS Number	Concentration	Units
alpha-Terpineol	98-55-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: alpha-Terpineol

Manufacturer: Acros Organics

Product #: _____

Lot #: A0648170 1

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001885

Printed: 9/23/2013 3:45:57PM

Description:	SVOA Dibutyl Phenyl phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:45 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98.9%.

Analyte	CAS Number	Concentration	Units
Dibutyl Phenyl Phosphate	2528-36-1	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Dibutyl Phenyl Phosphate

Manufacturer: Monsanto

Product #: N/A

Lot #: N/A

Purity: 98.9%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001886

Printed: 9/23/2013 3:59:35PM

Description:	SVOC Triphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:59 by JZ
Vendor:	Aldrich	Lot #:	04902CM
Vendor Catalog #:			

Comments

Neat, Purity @ 99%.

Analyte	CAS Number	Concentration	Units
Triphenyl Phosphate	115-86-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Triphenyl phosphate

Manufacturer: Aldrich

Product #: _____

Lot #: 04907CM

Purity: 99%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001887

Printed: 9/23/2013 4:18:55PM

Description:	SVOC Butylated Hydroxytoluene	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 16:18 by JZ
Vendor:	SIGMA	Lot #:	39F-0197
Vendor Catalog #:			

Comments

neat,Purity @ 99.9%.

Analyte	CAS Number	Concentration	Units
Butylated Hydroxytoluene	128-37-0	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butylated Hydroxytoluene

Manufacturer: Sigma

Product #: _____

Lot #: 39F-0197

Purity: 99.8%

Analyst: AR

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001890

Printed: 9/23/2013 5:02:53PM

Description:	SVOC Butyl Diphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 17:02 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Butyl Diphenyl Phosphate	2752-95-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butyl Diphenyl Phosphate

Manufacturer: Monsanto

Product #: NA

Lot #: NA

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001941

Printed: 9/25/2013 1:45:31PM

Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

Comments

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

B001941
SVOA 2,4-Dinitrophenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: _____

Lot #: bEH 502 I

Purity: 90 ~ 94%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001945

Printed: 9/25/2013 3:23:22PM

Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

B001945
SVOC Benzoic Acid
Expires 12/31/2029
Prepared By Jianqing Zhou 12/31/2012

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: _____

Lot #: A0224339

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001948

Printed: 9/25/2013 3:37:51PM

Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

Comments

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

B001948
SVOA 4,6-Dinitro-2-Methylphenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: _____

Lot #: 179-31A

Purity: 99%

Analyst: KB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002054

Printed: 10/4/2013 6:32:21PM

Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

Comments

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL

B002054
SVOA 1-Methylnaphthalene
Solvent / Lot: NA
Prep: 12/13/2012 by JZ
Exp: 12/31/2029
Location:

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 67-53

Purity: 99%

Analyst: AZ

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002135

Printed: 10/15/2013 12:07:39PM

Description:	SVOA Benzidine	Expires:	31-Dec-29
Standard Type:	Analyte Spike	Prepared:	15-Oct-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	15-Oct-13 12:07 by JZ
Vendor:	SIGMA	Lot #:	18C0024
Vendor Catalog #:			

Comments

Purity @ 95%. ARI#: 0467.

Analyte	CAS Number	Concentration	Units
Benzidine	92-87-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzidine

Manufacturer: Sigma

Product #: B-3503

Lot #: 18C0024

Purity: 98%

Analyst: [signature]

Cambridge Isotope Laboratories, Inc.

50 Frontage Road, Andover, MA 01810-5413 USA
800.322.1174 (N.AMERICA) 978.749.8000 (INTERNATIONAL)
www.isotope.com

CERTIFICATE OF ANALYSIS

Product Name: DIBENZ[A,H]ANTHRACENE
(Isotopic Label & Enrichment Specification) (D14, 97%)

Lot Number: PR-14764/09163DA2

Catalog Number: DLM-677-0

I295

Product Information

Chemical Purity Specification:	≥ 98%
Labeled CAS Number:	NA
Unlabeled CAS Number:	53-70-3
Molecular Weight:	292.5
Chemical Formula:	C22D14
Storage:	Store at room temperature away from light and moisture.
Stability:	Stable if stored under recommended conditions.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible.

Approved by: Deborah E. Costa

Deborah E. Costa, Quality Assurance

Quality Control Tests and Results

GC/MS for Chemical Purity	99.3%
GC/MS for Isotopic Enrichment	97.4%
Melting Point Range Determination	263-265°C
1H NMR for Chemical Purity	Pass

E006466

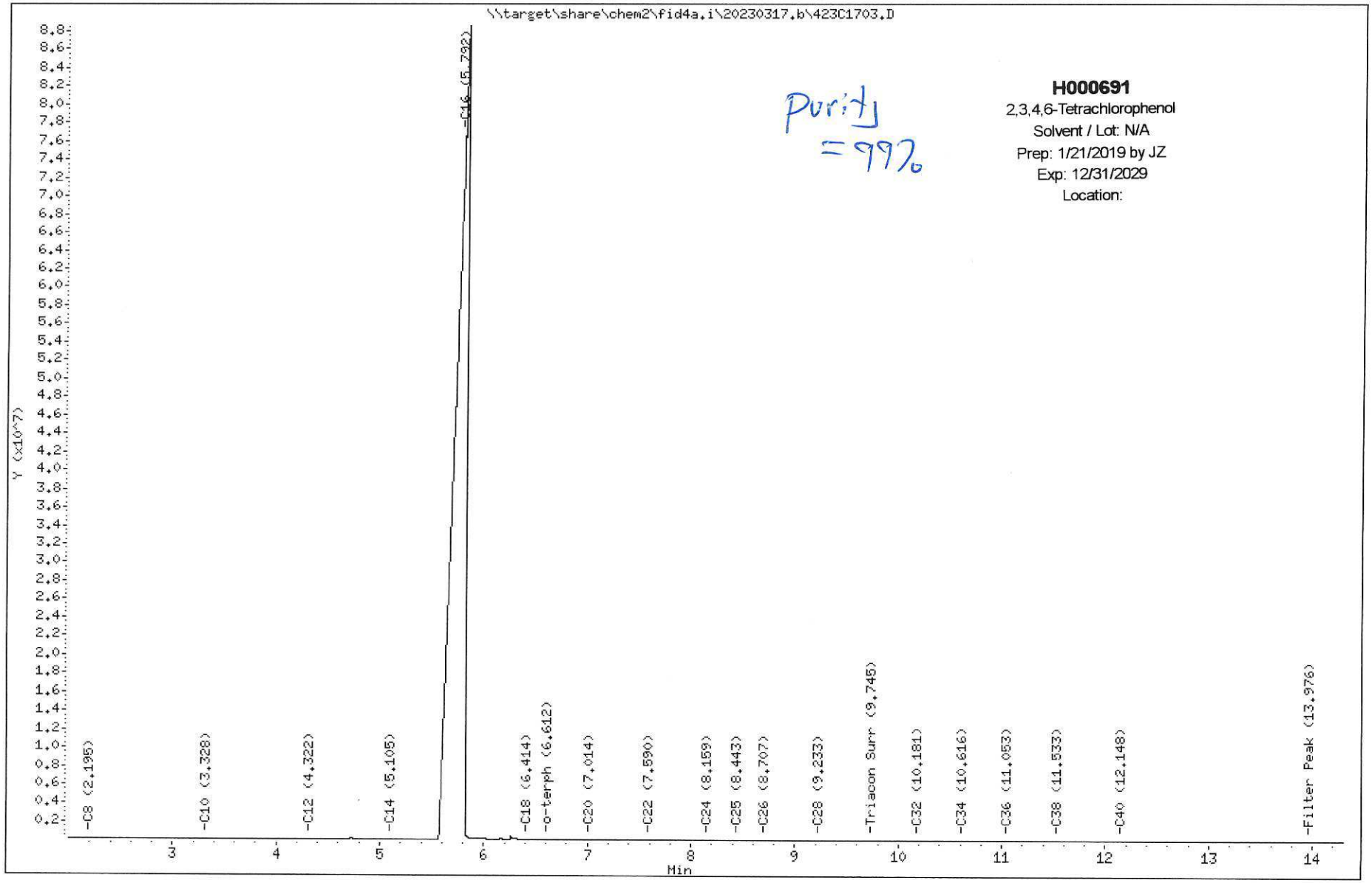
SVOA-d14-Dibenz(a,h)anthracene-NEAT
Solvent / Lot: NA
Prep: 11/9/2016 by VS
Exp: 5/8/2030
Location:

H000691

Data File: \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Date : 17-MAR-2023 10:46
Client ID:
Sample Info: K007226

Instrument: fid4a.i
Operator: AA
Column diameter: 0.25

Column phase: RTX-1



Purity
=99%

H000691
2,3,4,6-Tetrachlorophenol
Solvent / Lot: N/A
Prep: 1/21/2019 by JZ
Exp: 12/31/2029
Location:

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Lab Smp Id: K007226
Inj Date : 17-MAR-2023 10:46
Operator : AA Inst ID: fid4a.i
Smp Info : K007226
Misc Info :
Comment   :
Method   : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m
Meth Date : 17-Mar-2023 16:58 alfonso Quant Type: AREA%
Cal Date : 18-AUG-2022 11:51 Cal File: 422H1803.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon+ Compound Sublist: tph.sub
Target Version: 4.14
Processing Host: ALFONSO-201901

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA		COMPOUNDS
5.228	2027	2354	1.162	0.000		
5.276	4673	2682	0.574	0.000		
5.322	195	844	4.328	0.000		
5.331	977	1203	1.231	0.000		
5.356	490	993	2.027	0.000		
5.361	814	1044	1.283	0.000		
5.382	115	387	3.351	0.000		
5.399	619	960	1.551	0.000		
5.406	402	1035	2.576	0.000		
5.410	378	1122	2.968	0.000		
5.423	1663	1555	0.935	0.000		
5.452	5951	5020	0.844	0.000		
5.501	290	797	2.753	0.000		
5.523	2317	2472	1.067	0.000		
5.538	5946	6823	1.147	0.000		
5.792	501855376	76456669	0.152	74.449		6 C16
5.807	79757019	82319946	1.032	11.775		
5.823	77929961	88539160	1.136	11.505		
5.962	75333	84828	1.126	0.011		
5.986	474748	124326	0.262	0.070		
6.070	17103	57180	3.343	0.002		
6.074	120761	57565	0.477	0.017		
6.113	90233	47140	0.522	0.013		
6.165	407438	218439	0.536	0.060		
6.263	944101	374166	0.396	0.139		
6.414	114839	39498	0.344	0.016		7 C18
6.464	53190	31177	0.586	0.007		
6.523	31509	25870	0.821	0.004		
6.551	4785	23963	5.008	0.000		
6.559	51194	25409	0.496	0.007		
6.590	21354	21666	1.015	0.003		
6.612	35061	21127	0.603	0.005	$	8 o-terph
6.638	17712	19934	1.125	0.002		
6.672	22159	19651	0.887	0.003		
6.683	26846	19268	0.718	0.003		
6.708	5413	18142	3.351	0.000		
6.713	24941	18247	0.732	0.003		
6.747	50657	18478	0.365	0.007		
6.795	23973	17444	0.728	0.003		
6.814	28457	17895	0.629	0.004		
6.837	10746	15445	1.437	0.001		
6.871	29974	21406	0.714	0.004		
6.874	4287	21471	5.009	0.000		
6.882	20520	21675	1.056	0.003		
6.944	32864	17445	0.531	0.004		
6.978	9138	15347	1.679	0.001		
7.014	4130	13830	3.348	0.000		9 C20
7.025	12567	14083	1.121	0.001		
7.038	4952	14274	2.882	0.000		
7.044	6508	14578	2.240	0.000		
7.050	25344	14736	0.581	0.003		
7.099	5531	12365	2.236	0.000		
7.108	16440	12371	0.752	0.002		
7.129	9415	11275	1.198	0.001		
7.175	3589	10327	2.878	0.000		
7.182	7285	10474	1.438	0.001		
7.212	11252	10002	0.889	0.001		

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
	677340272	268782821		100.000	

Total unknown % area = 25.478

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

2-Chloronaphthalene

CATALOG NUMBER	N-10323-100MG
LOT NUMBER	10816400
DATE CERTIFIED	05/22/18
EXPIRATION DATE	05/31/24
CAS NUMBER	91-58-7
MOLECULAR FORMULA	C10H7Cl
MOLECULAR WEIGHT	162.62
STORAGE	Store at room temperature (20 - 25 °C).
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.

I010152
2-Chloronaphthalene NEAT
Expires 12/31/2079
Prepared By Joshua Rains 10/29/2020

Analytical Test	Value
% PURITY (GC/FID)	99.5

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Mary Beth O'Donnell
CSM/TC

COA Form
Revision 3 (3/2015)

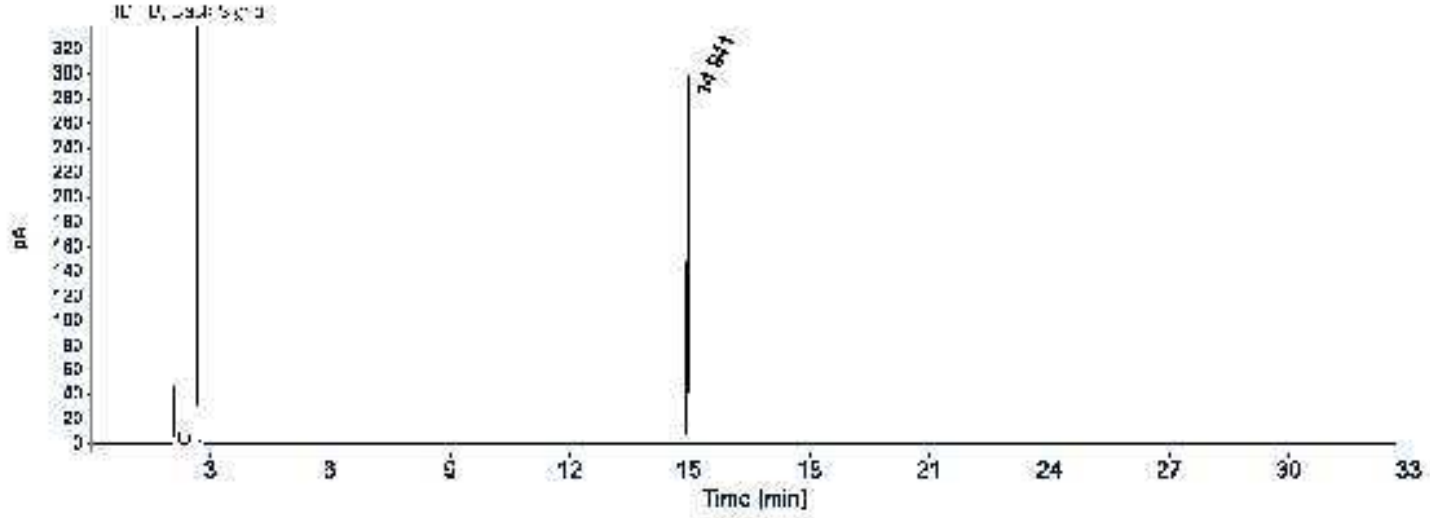
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\Chem32\1\Data\2018 Data\0518\2-Chloronaphtthalene.D
Sample name: 2-Chloronaphthalene

Instrument: GC3
Injection date: 5/22/2018 1:12:52 PM
Acq. method: REAR_SCREEN.M
Location: 209
Injection volume: 1.0uL
Col Type: pn# 7HG-G006-17-C **Diameter** 250.000 **Length** 30.000



Signal: FID1 B, Back Signal

RT [min]	Type	Width [min]	Area	Height	Area%
14.941	BB	0.0410	808.8124	308.5675	100.0000
		Sum	808.8124		

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

ACID STOC"

Product no.: 22523046
Lot no.: LRAC9812
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9812.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005200
SVOA-ABN ACID STOCK-200-800ug/ml
Solvent / Lot: DCM
Prep: 5/18/2021 by JZ
Exp: 5/31/2023
Location:

JZ 5/18/21

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate of Analysis - Certified Reference Material

PAHs by HPLC

Product no.: SQC017-40G
Lot no.: LRAC9745
Expiry Date: April 2024
Manufacturing Date: April 2021
Storage: REFRIGERATE
Solvent/Matrix: SOIL
Certificate version: LRAC9745.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Certified Values:

Analyte	*Units*	*Certified Value*
Dibenzo(a,h)anthracene	µg/Kg	177 ± 21
Acenaphthylene	µg/Kg	609 ± 49
Anthracene	µg/Kg	239 ± 22
Benzo(a)anthracene	µg/Kg	109 ± 8
Benzo(a)pyrene	µg/Kg	65.5 ± 5.2
Benzo(b)fluoranthene	µg/Kg	295 ± 20
Benzo(g,h,i)perylene	µg/Kg	176 ± 17
Naphthalene	µg/Kg	566 ± 47
Chrysene	µg/Kg	210 ± 19
Benzo(b+k)fluoranthene	µg/Kg	662 ± 81
Fluoranthene	µg/Kg	273 ± 17
Fluorene	µg/Kg	326 ± 20
Indeno(1,2,3-cd) pyrene	µg/Kg	208 ± 23
Phenanthrene	µg/Kg	220 ± 13
Pyrene	µg/Kg	380 ± 25
Acenaphthene	µg/Kg	459 ± 33
Benzo(k)fluoranthene	µg/Kg	259 ± 23

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Informational Values:

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
Dibenzo(a,h)anthracene	µg/Kg	0.00 to 379	67.4
Acenaphthylene	µg/Kg	140 to 1078	156
Anthracene	µg/Kg	26.0 to 452	71.1
Benzo(a)anthracene	µg/Kg	33.4 to 185	25.3
Benzo(a)pyrene	µg/Kg	15.6 to 115	16.6
Benzo(b)fluoranthene	µg/Kg	98.7 to 492	65.6
Benzo(g,h,i)perylene	µg/Kg	16.5 to 336	53.3
Naphthalene	µg/Kg	99.8 to 1032	155
Chrysene	µg/Kg	27.9 to 391	60.6
Benzo(b+k)fluoranthene	µg/Kg	265 to 1059	132
Fluoranthene	µg/Kg	113 to 433	53.3
Fluorene	µg/Kg	135 to 517	63.6
Indeno(1,2,3-cd) pyrene	µg/Kg	0.00 to 432	74.5
Phenanthrene	µg/Kg	92.8 to 346	42.2
Pyrene	µg/Kg	138 to 622	80.7
Acenaphthene	µg/Kg	154 to 764	102
Benzo(k)fluoranthene	µg/Kg	36.2 to 482	74.3

Additional Information:

DESCRIPTION

This product consist of a 4 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested show homogeneity.

Four samples have been provided for your convenience (multiple methods, multiple analysts, etc.)

The soil has been chemically stabilized with 1 mL of acetone to minimize degradation of the sample.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Note: Sample extracts and calibration solutions should be in the same solvent.

All values are based on a wet weight basis, do not correct for moisture.

Assume a 10g sample size for all calculations.

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: Package of 4 units of 10 g in amber jar

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 19-Apr-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9745.01	19-Apr-2021	Original Release Date

.

CERTIFIED WEIGHT REPORT

Part Number: **70476**
Lot Number: 092220
Description: Benzo(j)fluoranthene

Expiration Date: 092225
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 23060

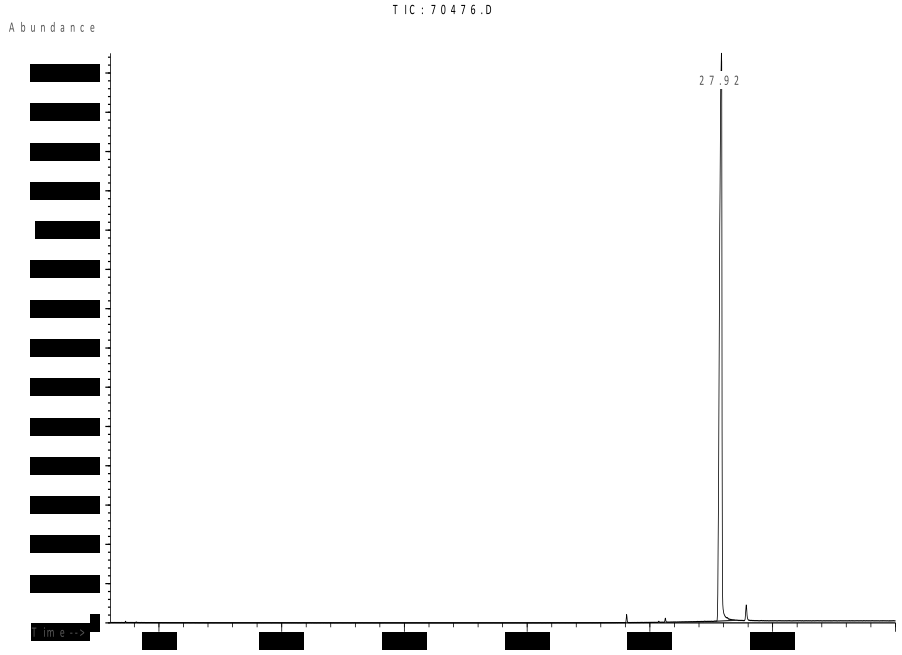
Solvent(s): **Lot#**
Methylene chloride 104929

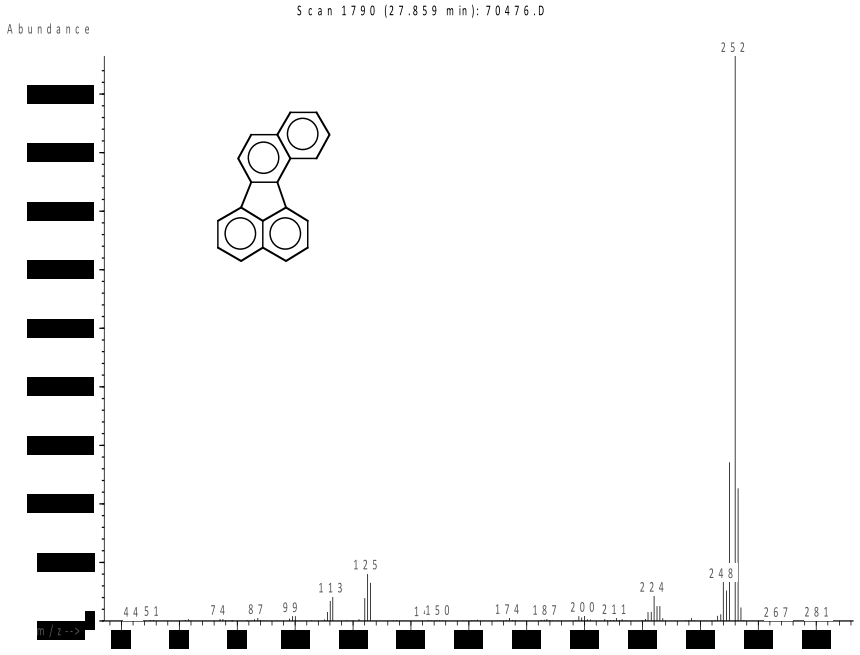
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 25.0 0.001 Flask Uncertainty

	092220
Formulated By: Benson Chan	DATE
	092220
Reviewed By: Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Benzo(j)fluoranthene	476	3-CSZ-153-20	1000	98.1	0.2	0.02547	0.02552	1001.8	5.7	205-82-3	0.2mg/m3	N/A

Method GC8MSD1M: Column:SBB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9 min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 290°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Candice Warren.





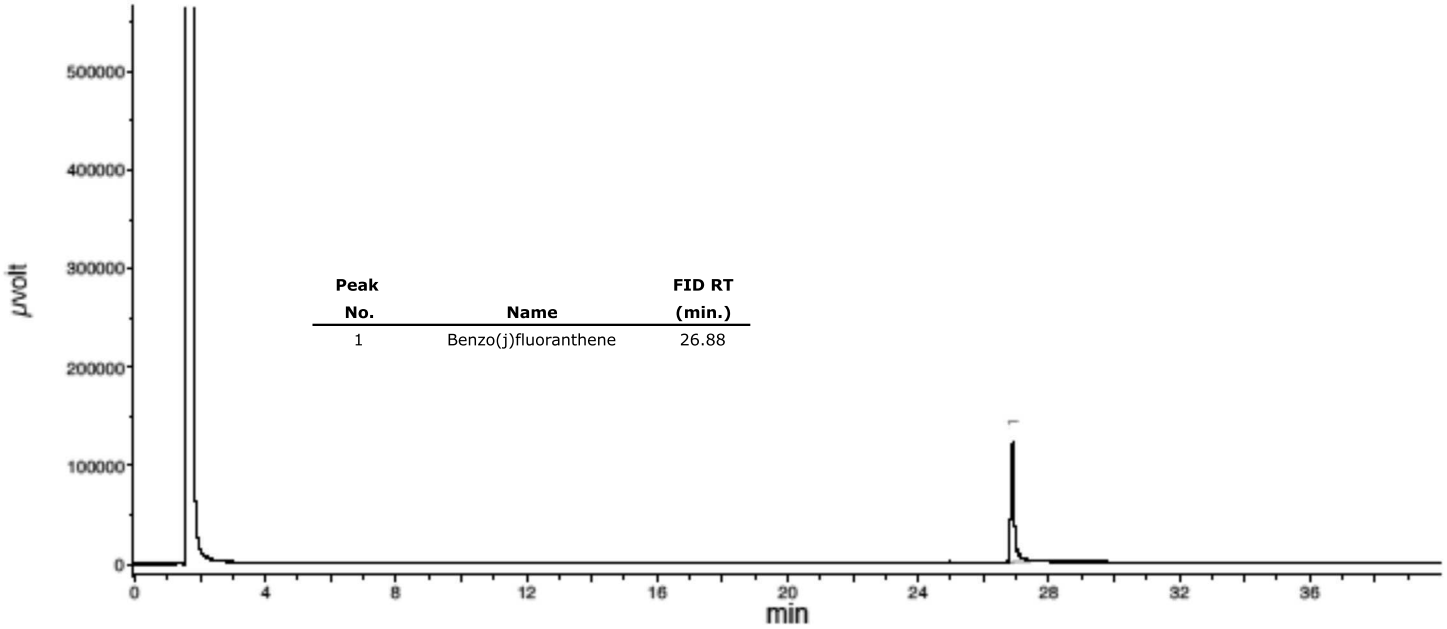
- **The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.**
- **Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).**
- **Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.**
- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
- **Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).**

Run 31, "P70476 L092220 [1000µg/mL in MeCl2]"

Run Length: 40.00 min, 23999 points at 10 points/second.
Created: Thu, Sep 24, 2020 at 2:33:43 AM.
Sampled: Sequence "092120-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments

GC9-M2 Analysis by Melissa Stonier
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates; Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) =360 mLOven Temp 1 = 50°C (1 min).
Rate = 10°C/min, Oven Temp 2 = 300°C (14 min), Total Run Time = 40 Minutes. Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = eDaq Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3



Peak No.	Name	FID RT (min.)
1	Benzo(j)fluoranthene	26.88

Agilent

Certificate of Analysis

J008074

SVOA PAH STD 2000ug/ml
Expires 6/30/2023
Prepared By Joshua Rains 8/5/2021

Product Name: PAH Standard

Product Number: US-106N-1

Lot Number: 0006540449

Lot Issue Date: 11-Jun-2020

Expiration Date: 30-Jun-2023

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

Matrix: methylene chloride/benzene (1:1)

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

Certificate of Analysis

Product Number: US-106N-1 **Lot Number:** 0006540449

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16062
Certification Date: November 19, 2020
Expiration Date: November 30, 2030

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

J008310
Benzidines std @2000ug/ml
Expires 11/30/2030
Prepared By Van Spohn 8/12/2021

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Sigma-Aldrich

Product Name:	2,4,6-Tribromophenol
Product Description:	99%
Product Brand:	Sigma-Aldrich
Product Number:	137715
Molecular Weight:	330.80
Molecular Formula:	$Br_3C_6H_2OH$
CAS Number:	118-79-6

TEST	SPECIFICATION	LOT 05110PD RESULTS
APPEARANCE:	WHITE TO OFF-WHITE TO PINK FLAKES, CHUNKS,	PINK BEADS
INFRARED SPECTRUM:		CONFORMS TO STRUCTURE.
GAS LIQUID:	98.5% (MINIMUM)	99.9%
QUALITY CONTROL:		NOVEMBER 2005

Barbara Rajzer

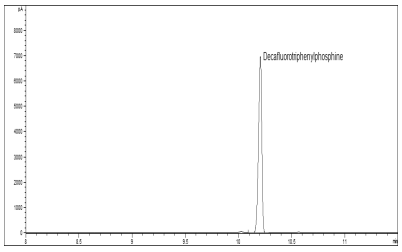
Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

J010541
SVOA-Tribromophenol-NEAT
Solvent / Lot: 05110PD
Prep: 10/1/2021 by VS
Exp: 3/30/2040
Location: voa freezer

Certificate of Analysis - Certified Reference Material

Decafluorotriphenylphosphine solution

Product no.: 48724-U
Lot no.: LRAD0628
Expiry Date: October 2024
Manufacturing Date: September 2021
Storage: ROOM TEMPERATURE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0628.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

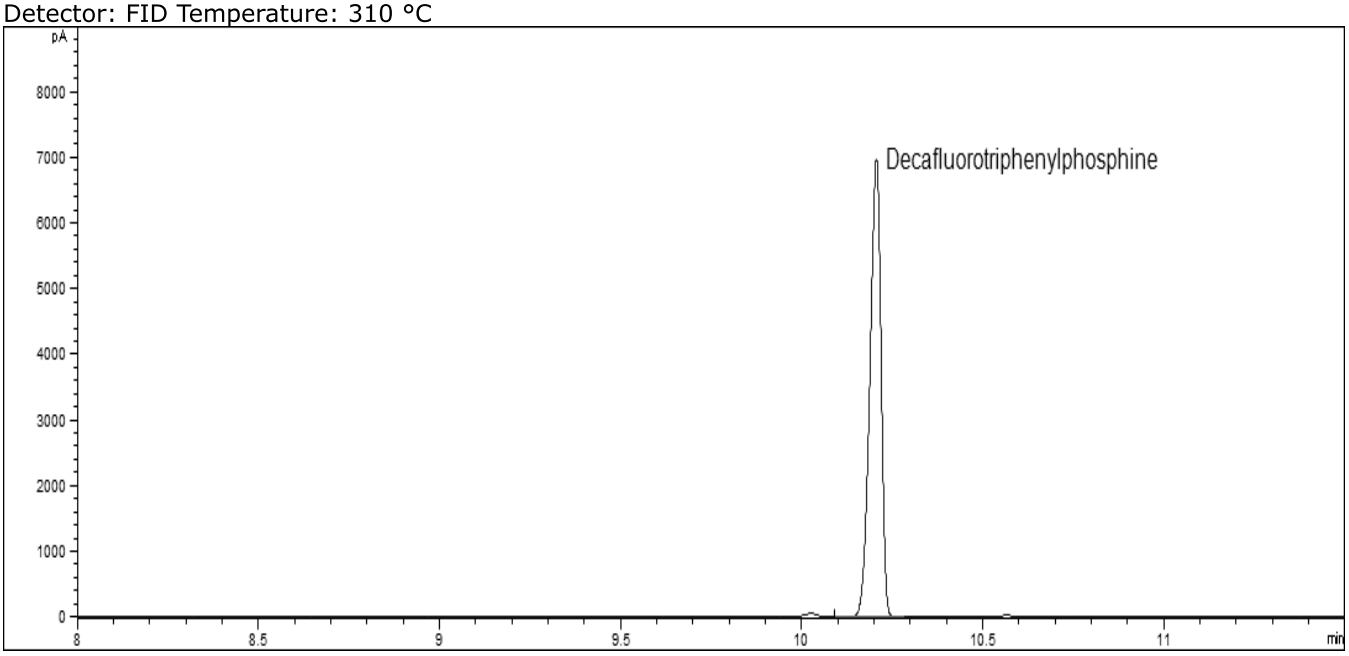


Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
DFTPP CAS# 5074-71-5	25.2 ± 2.6	mg/mL	97.0	10220909

ASSAY Method

METHOD: GC (BELLEFONTE)
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.3 mL/min
Inlet Temperature: 250 °C Injection Volume: 1 µL
Injection Mode: 25:1
Temperature Program: 120 °C (Hold 0 min) @ 12 °C/min to 260 °C (Hold 0 min)
Detector: FID Temperature: 310 °C



Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Elution details:

EO	RT(MIN)	ANALYTE
1	10.206	Decafluorotriphenylphosphine

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Minimum sample size: 1 µL

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 30-Sep-2021

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0628.01	30-Sep-2021	Original Release Date

.

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Certified Values

Analyte	*Units*	*Certified Value* [1,4]
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

Informational Values

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

Additional Information:

DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4ºC.

The sample has been intentionally prepared with an apparent headspace.

STORAGE

The sample should be stored at 4ºC. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4ºC.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID	CRM143-50G
Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.

Description

Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

1 **Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

***k*:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH **ISO/IEC 17025:2017 (ANAB Cert AT-1467)** and **ISO 17034:2016 (ANAB Cert AR-1470).**

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date	January 05, 2021
Version	0-152021

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

Part Number: 93462
Lot Number: 081021
Description: PAH Standard
30 components
Expiration Date: 081026
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

Solvent(s): Methylene chloride **Lot#** 105345

K3587

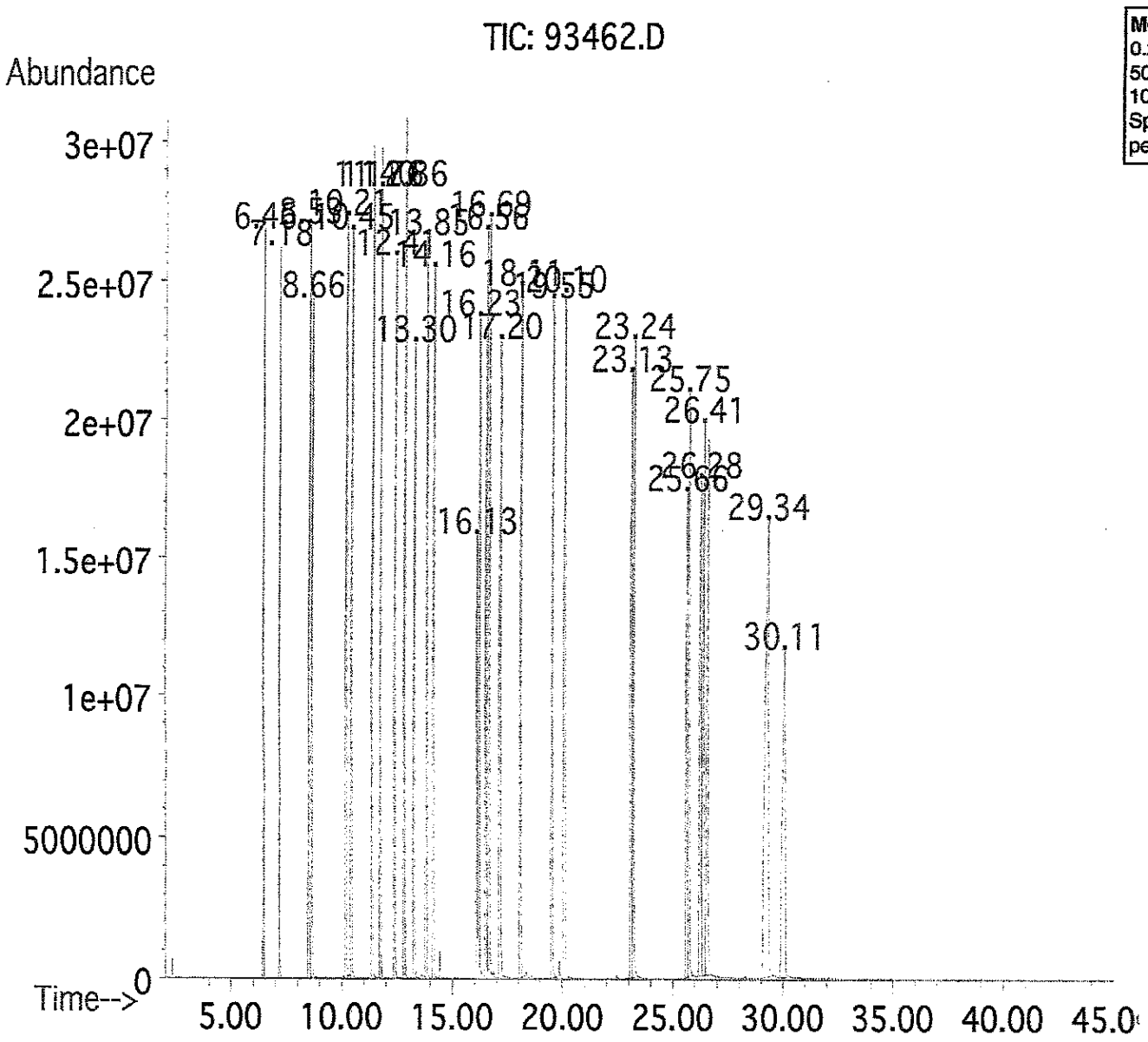
Formulated By: Prashant Chauhan 081021 DATE

Reviewed By: Pedro L. Rentas 081021 DATE

Volume(s) shown below were combined and diluted to (mL): 20.0 | 5E-05 Balance Uncertainty | 0.001 Flask Uncertainty

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(ug/mL)	Final Conc.(ug/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acenaphthene	10007	042420	0.50	10.00	0.042	2001.2	1000.4	9.4	83-32-9	N/A	ipr-rat 600mg/kg
2. Acenaphthylene	10007	042420	0.50	10.00	0.042	2000.2	999.9	9.4	208-96-8	N/A	N/A
3. Anthracene	10007	042420	0.50	10.00	0.042	2000.3	999.9	9.3	120-12-7	0.2mg/m3 (8H)	ipr-mus 430mg/kg
4. Benzo(a)anthracene	10007	042420	0.50	10.00	0.042	2001.3	1000.4	9.4	56-55-3	N/A	N/A
5. Benzo(a)pyrene	10007	042420	0.50	10.00	0.042	2000.0	999.8	9.3	50-32-8	0.2mg/m3 (8H)	scu-rat 50mg/kg
6. Benzo(b)fluoranthene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.3	205-99-2	N/A	N/A
7. Benzo(k)fluoranthene	10007	042420	0.50	10.00	0.042	2001.2	1000.4	9.4	207-08-9	N/A	N/A
8. Benzo(g,h,i)perylene	10007	042420	0.50	10.00	0.042	2000.0	999.8	9.3	191-24-2	N/A	N/A
9. Carbazole	10007	042420	0.50	10.00	0.042	2000.3	999.9	9.4	86-74-8	N/A	ipr-mus 200mg/kg
10. Chrysene	10007	042420	0.50	10.00	0.042	2000.8	1000.2	9.4	218-01-9	0.2mg/m3	N/A
11. Dibenzo(a,h)anthracene	10007	042420	0.50	10.00	0.042	2000.8	1000.2	9.4	53-70-3	0.2mg/m3	N/A
12. Fluoranthene	10007	042420	0.50	10.00	0.042	2000.3	999.9	9.4	206-44-0	N/A	orl-rat 2000mg/kg
13. Fluorene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.4	86-73-7	N/A	ipr-mus 2 g/kg
14. Indeno(1,2,3-cd)pyrene	10007	042420	0.50	10.00	0.042	2000.1	999.8	9.3	193-39-5	N/A	N/A
15. Naphthalene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.3	91-20-3	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
16. Phenanthrene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.4	85-01-8	0.2mg/m3/8H	orl-mus 700mg/kg
17. Pyrene	10007	042420	0.50	10.00	0.042	2001.0	1000.3	9.4	129-00-0	0.2mg/m3/8H	orl-rat 2700mg/kg
18. Benzo(e)pyrene	94851	081021	0.50	10.00	0.042	2002.1	1000.8	9.4	192-97-2	N/A	N/A
19. Biphenyl	94851	081021	0.50	10.00	0.042	2001.5	1000.5	9.4	92-52-4	0.2 ppm(1mg/m3/8H)	orl-rat 2400mg/kg
20. Decalin (49% cis, 51% trans)	94851	081021	0.50	10.00	0.042	2002.5	1001.0	9.4	91-17-8	N/A	N/A
21. Dibenzofuran	94851	081021	0.50	10.00	0.042	2002.3	1000.9	9.4	132-64-9	N/A	N/A
22. Dibenzothiophene	94851	081021	0.50	10.00	0.042	2002.5	1001.0	9.4	132-65-0	N/A	orl-mus 470 mg/kg
23. 2,6-Dimethylnaphthalene	94851	081021	0.50	10.00	0.042	2001.9	1000.7	9.4	581-42-0	N/A	N/A
24. 1-Methylnaphthalene	94851	081021	0.50	10.00	0.042	2002.2	1000.9	9.4	90-12-0	N/A	orl-rat 1840mg/kg
25. 2-Methylnaphthalene	94851	081021	0.50	10.00	0.042	2000.6	1000.1	9.4	91-57-6	N/A	orl-rat 1630mg/kg
26. 1-Methylphenanthrene	94851	081021	0.50	10.00	0.042	2002.3	1000.9	13.2	832-69-9	N/A	N/A
27. Pentachlorophenol	94851	081021	0.50	10.00	0.042	3961.5	1980.3	18.6	87-86-5	0.5mg/m3/8H (skin)	orl-rat 27mg/kg
28. Perylene	94851	081021	0.50	10.00	0.042	2001.9	1000.7	9.4	198-55-0	N/A	N/A
29. Thianaphthene	94851	081021	0.50	10.00	0.042	2003.1	1001.3	9.4	95-15-8	N/A	N/A
30. 2,3,5-Trimethylnaphthalene	94851	081021	0.50	10.00	0.042	2003.1	1001.3	9.5	2245-38-7	N/A	N/A

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



Method GC8MSD-2Long: Column:SPB-5 (30m X 0.25mm ID X 0.25μm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (14min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Gina McLane.

Retention Time (min.)	
Decahydronaphthalene (Decalin) (isomer)	6.46
Decahydronaphthalene (Decalin) (isomer)	7.18
Naphthalene	8.53
Thianaphthene	8.66
2-Methylnaphthalene	10.21
1-Methylnaphthalene	10.45
Biphenyl	11.4
2,6-Dimethylnaphthalene	11.76
Acenaphthylene	12.41
Acenaphthene	12.86
Dibenzofuran	13.3
2,3,5-Trimethylnaphthalene	13.85
Fluorene	14.16
Pentachlorophenol	16.13
Dibenzothiophene	16.23
Phenanthrene	16.56
Anthracene	16.69
Carbazole	17.2
1-Methylphenanthrene	18.11
Fluoranthene	19.55
Pyrene	20.1
Benzo(a)anthracene	23.13
Chrysene	23.24
Benzo(b)fluoranthene	25.66
Benzo(k)fluoranthene	25.75
Perylene	26.28
Benzo(a)pyrene	26.41
Benzo(e)pyrene	26.61
Indeno(1,2,3-cd)pyrene	29.34
Dibenzo(a,h)anthracene	29.34
Benzo(g,h,i)perylene	30.11

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101291	**Lot Number:**	CL11000
Description:	GC/MS Tuning Mix	**Certification Date:**	May 9, 2014
Storage:	4 °C	**Expiration Date:**	December 31, 2023
Provided As:	1 mL in 2 mL Ampoule in Methylene chloride	**Revision Date:**	August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

K003891
GC/MS Tune solution-1000ug/ml
Solvent / Lot: CL11000
Prep: 4/22/2022 by VS
Exp: 12/31/2023
Location:

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111106/13_us

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-103N-1 **Lot Issue Date:** 25-May-2021

Lot Number: 0006609664 **Expiration Date:** 30-Jun-2024

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
benzoic acid	000065-85-0	RM01884	2005 ± 10 µg/mL
o-cresol	000095-48-7	RM12877	2005 ± 10 µg/mL
p-cresol	000106-44-5	RM01988	2005 ± 10 µg/mL
2,4,5-trichlorophenol	000095-95-4	NT00344	2004 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

5/11/22

K004539
toxic sub mix#1
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 6/30/2024
Location:

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: Phenols Standard
Product Number: US-107N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006648297
Lot Issue Date: 17-Nov-2021
Expiration Date: 31-Dec-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
4-chloro-3-methylphenol	2006	± 10 µg/mL	000059-50-7	RM01885
2-chlorophenol	2007	± 10 µg/mL	000095-57-8	RM01871
2,4-dichlorophenol	2005	± 10 µg/mL	000120-83-2	RM13878
2,4-dimethylphenol	2006	± 10 µg/mL	000105-67-9	RM13009
2,4-dinitrophenol	2006	± 10 µg/mL	000051-28-5	RM02112
2-methyl-4,6-dinitrophenol	2005	± 10 µg/mL	000534-52-1	RM02292
2-nitrophenol	2007	± 10 µg/mL	000088-75-5	RM13445
4-nitrophenol	2006	± 10 µg/mL	000100-02-7	RM03752
pentachlorophenol	2006	± 10 µg/mL	000087-86-5	RM02474
phenol	2006	± 10 µg/mL	000108-95-2	RM11471
2,4,6-trichlorophenol	2006	± 10 µg/mL	000088-06-2	RM18096

Matrix: methylene chloride (dichloromethane)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

5/11/22

CSD-QA-015.1

K004540
phenols mix
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 12/31/2024
Location:

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: PAH Standard
Product Number: US-106N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006627349
Lot Issue Date: 17-Sep-2021
Expiration Date: 31-Oct-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
acenaphthene	2007 ±	10 µg/mL	000083-32-9	RM10879
acenaphthylene	2004 ±	10 µg/mL	000208-96-8	RM10891
anthracene	2006 ±	10 µg/mL	000120-12-7	RM14212
benz[a]anthracene	2006 ±	10 µg/mL	000056-55-3	RM16072
benzo[b]fluoranthene	2006 ±	10 µg/mL	000205-99-2	RM14571
benzo[k]fluoranthene	2006 ±	10 µg/mL	000207-08-9	RM18376
benzo[ghi]perylene	2006 ±	10 µg/mL	000191-24-2	RM15761
benzo[a]pyrene	2006 ±	10 µg/mL	000050-32-8	RM17573
chrysene	2007 ±	10 µg/mL	000218-01-9	RM13771
dibenz[a,h]anthracene	2006 ±	10 µg/mL	000053-70-3	RM06786
fluoranthene	2006 ±	10 µg/mL	000206-44-0	RM12277
fluorene	2006 ±	10 µg/mL	000086-73-7	RM09441
indeno[1,2,3-cd]pyrene	2006 ±	10 µg/mL	000193-39-5	RM14192
naphthalene	2007 ±	10 µg/mL	000091-20-3	RM10445
phenanthrene	2005 ±	10 µg/mL	000085-01-8	RM10495
pyrene	2005 ±	10 µg/mL	000129-00-0	RM16126

Matrix: methylene chloride/benzene (1:1)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

K004541
SVOA PAH STD 2000ug/ml
Solvent / Lot: DCM/BENZENE
Prep: 5/11/2022 by JZ
Exp: 10/31/2024
Location: Fridge 19

CSD-QA-015.1

11/22

Reference Materials Producer
Cert #2495.01

Certificate of Analysis

Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics**® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

Certificate of Reference Material

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021 Certifying Officer: Shannon Mora

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory , please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

Distributed By SPEX CertiPrep

SPEX CertiPrep®

Your Science is Our Passion.®

203 Norcross Ave. Metuchen, NJ 08840

www.spexcertiprep.com • E-mail: crmsales@spexcsp.com

Phone: 1-732-549-7144 • Fax 1-732-603-9647

Accredited to 17025 & Guide 34 ISO Certified to 9001

ACCREDITED
Reference Materials Producer
Cert #2495.01

ECS

Certificate of Analysis

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542

Certificate of Reference Material

Catalog Number: ECS-A-030

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Lot No. AA210126005

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Nave

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

Distiributied By SPEX CertiPrep

SPEX CertiPrep®

Your Science is Our Passion.®

203 Norcross Ave. Metiuchen, NJ 08840

www.spexcertiprep.com • E-mail: crmsales@spexcsp.com

Phone: 1-732-549-7144 • Fax 1-732-603-9647

Accredited to 17025 & Guide 34 ISO Certified to 9001

Agilent

Certificate of Analysis

Product Name: 1-Methylnaphthalene Standard

Product Number: EPA-1225-1 **Lot Issue Date:** 19-Jul-2021

Lot Number: 0006624769 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
1-methylnaphthalene	000090-12-0	RM07712	999.3 ± 5.0 µg/mL

Matrix: methanol (methyl alcohol)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

K004543
1-Methylnaphthalene
Solvent / Lot: MEOH
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

5/11/22

Sample lot approver:
Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 1 of 1
www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert
No. AT-1937

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-104N-1 **Lot Issue Date:** 02-Jul-2021

Lot Number: 0006620643 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

K004544
toxic sub mix#2
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

05/11/22

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0181243

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2025 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Elution Order	Compound	Gr (weig					
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ2508) **Purity** 99%	1,50		+/- 53.3632	µg/mL	Stressed	
2	Phenol-d6 **CAS #** 13127-88-3 (Lot PR-31262) **Purity** 99%	1,506.0	µg/mL	+/- 8.9452 +/- 43.9882 +/- 53.3632	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,510.0	µg/mL	+/- 8.9689 +/- 44.1050 +/- 53.5049	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32542/022621DB1 **Purity** 99%	1,004.0	µg/mL	+/- 5.9635 +/- 29.3255 +/- 35.5754	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,008.0	µg/mL	+/- 5.9872 +/- 29.4423 +/- 35.7172	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 19169) **Purity** 99%	1,006.0	µg/mL	+/- 5.9753 +/- 29.3839 +/- 35.6463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,506.0	µg/mL	+/- 8.9452 +/- 43.9882 +/- 53.3632	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed	

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101246	**Lot Number:**	CL17953
Description:	Benzoic Acid	**Certification Date:**	January 31, 2022
Storage:	4 °C	**Expiration Date:**	January 31, 2032
Provided As:	1 mL in 2 mL Ampoule in Methylene Chloride		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

K004603
Benzoic Acid @2000ug/ml
Solvent / Lot: N/A
Prep: 5/13/2022 by JZ
Exp: 1/31/2032
Location: GC

5/13/22

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17662
Certification Date: December 2, 2021
Expiration Date: November 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

K004604
Benzidines std @2000ug/ml
Solvent / Lot: MeCl2
Prep: 5/13/2022 by JZ
Exp: 11/30/2031
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64591018_us

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33913 **Lot No.:** A0183500

Description : SOM01.0 SIM Analysis Standard

SOM01.0 SIM Analysis Standard 2000µg/mL, Methylene chloride, 1mL /ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 29, 2028 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Methylnaphthalene-d10	2,003.5 µg/mL	+/- 11.7578 µg/mL	Gravimetric
	CAS # 7297-45-2 (Lot EF-135)		+/- 90.2539 µg/mL	Unstressed
	Purity 96%		+/- 100.1449 µg/mL	Stressed
2	Fluoranthene-d10	2,006.0 µg/mL	+/- 11.7723 µg/mL	Gravimetric
	CAS # 93951-69-0 (Lot PR-20668)		+/- 90.3656 µg/mL	Unstressed
	Purity 99%		+/- 100.2689 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

K004605
SOMO 1.0 SIM DMC
Solvent / Lot: A0183500
Prep: 5/14/2022 by VS
Exp: 2/29/2028
Location:

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

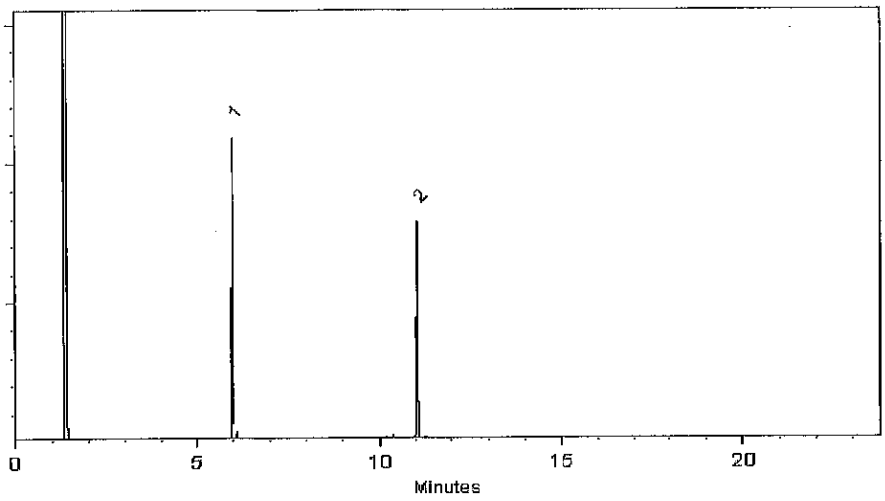
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 29-Mar-2022 **Balance:** B345965662

Ciara Windle - Operations Technician I

Date Passed: 01-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

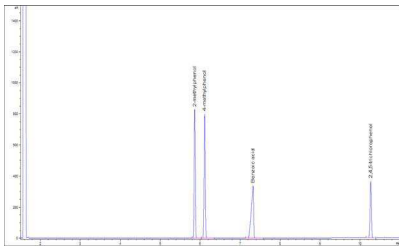
Supelco®

www.sigmaaldrich.com

Certificate of Analysis - Certified Reference Material

EPA TCL Hazardous Substances Mix 1

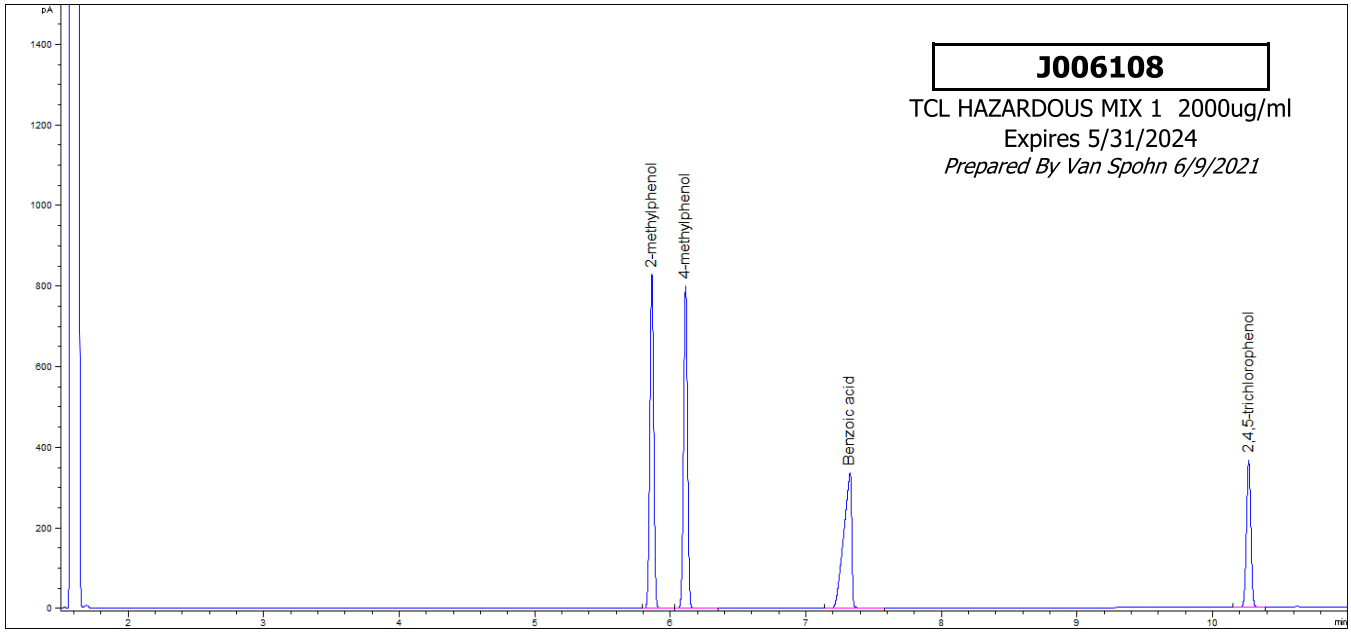
Product no.: 48907
Lot no.: LRAC9610
Expiry Date: May 2024
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAC9610.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Elution order*	*Raw Material Lot*
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

Informational Values:



Additional Information:
Analytical Method Parameters:
Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)
Carrier Gas: H2, Flow: 4.5 mL/min
Inlet Temperature: 170 °C, Injection Volume: 1 µL
Injection Mode: Split, Split Ratio: 20:1

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)
Detector: FID
Detector Temperature: 310 °C

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 20-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom}\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

.

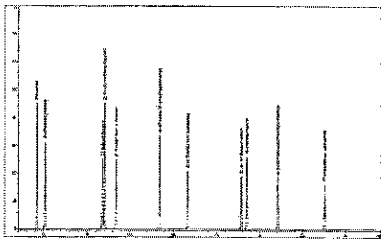
Supelco®

www.sigmaaldrich.com

Certificate of Analysis - Certified Reference Material

EPA TCL Phenols Mix

Product no.: 48904
Lot no.: LRAD0139
Expiry Date: July 2024
Manufacturing Date: July 2021
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0139.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



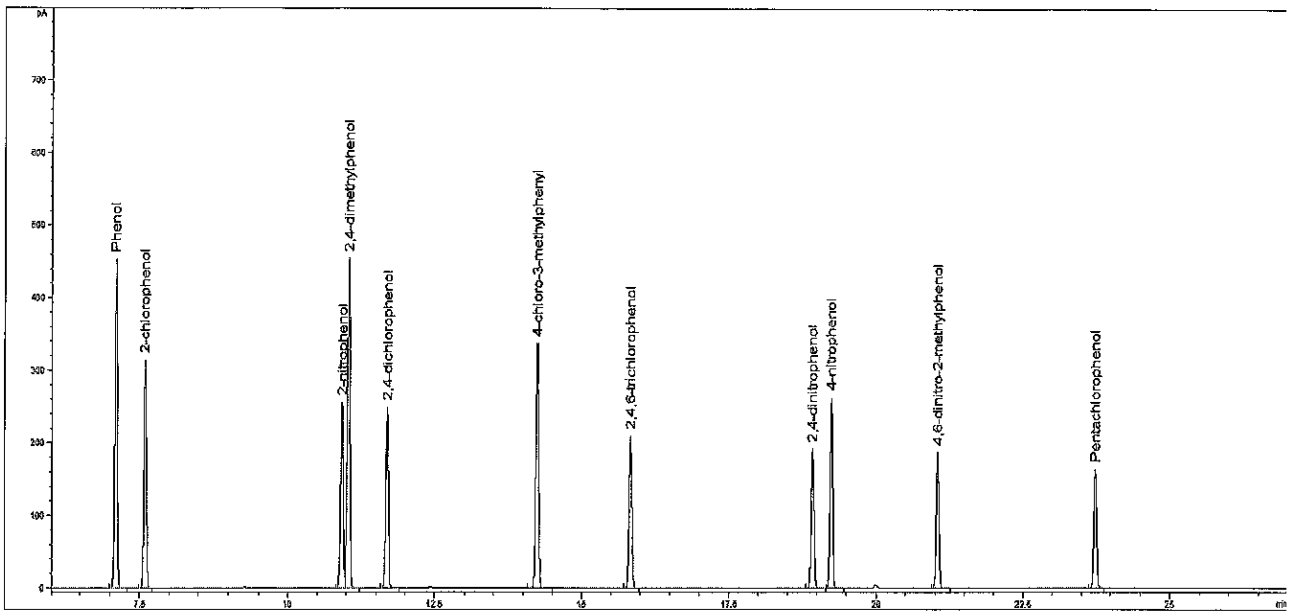
Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

ASSAY Method

J013597
TCL Phenols Mix 2000ug/ml
Solvent / Lot: LRAD0139
Prep: 12/30/2021 by VS
Exp: 7/31/2024
Location:

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.



METHOD: GC (Bellefonte Method)

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.5 mL/min
Inlet Temperature: 200 °C Injection Volume: 1.0 µL
Injection Mode: 25:1
Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)
Detector: FID Temperature: 310 °C

Elution details:

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorphenol
6	14.242	4-chloro-3-m3thylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 12-Jul-2021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{hom\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0139.01	12-Jul-2021	Original Release Date

.

RESTEK® C

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

K007194
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO187400
Prep: 8/5/2022 by VS
Exp: 4/30/2026
Location:

Certificate of Analysis

IAL

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0187400

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2026 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ3299) **Purity** 99%	1,508.0 µg/mL	+/- 8.9571 µg/mL +/- 44.0466 µg/mL +/- 53.4340 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d6 **CAS #** 13127-88-3 (Lot SL210831) **Purity** 99%	1,510.0 µg/mL	+/- 8.9689 µg/mL +/- 44.1050 µg/mL +/- 53.5049 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,512.0 µg/mL	+/- 8.9808 µg/mL +/- 44.1635 µg/mL +/- 53.5758 µg/mL	Gravimetric Unstressed Stressed
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32597) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 29.3255 µg/mL +/- 35.5754 µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 29.3255 µg/mL +/- 35.5754 µg/mL	Gravimetric Unstressed Stressed
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 00021384) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 29.3255 µg/mL +/- 35.5754 µg/mL	Gravimetric Unstressed Stressed
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,502.0 µg/mL	+/- 8.9214 µg/mL +/- 43.8714 µg/mL +/- 53.2214 µg/mL	Gravimetric Unstressed Stressed

8	p-Terphenyl-d14		1,002.0	µg/mL	+/-	5.9516	µg/mL	Gravimetric
	CAS # 1718-51-0	(Lot PR-30504)			+/-	29.2671	µg/mL	Unstressed
	Purity 99%				+/-	35.5046	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

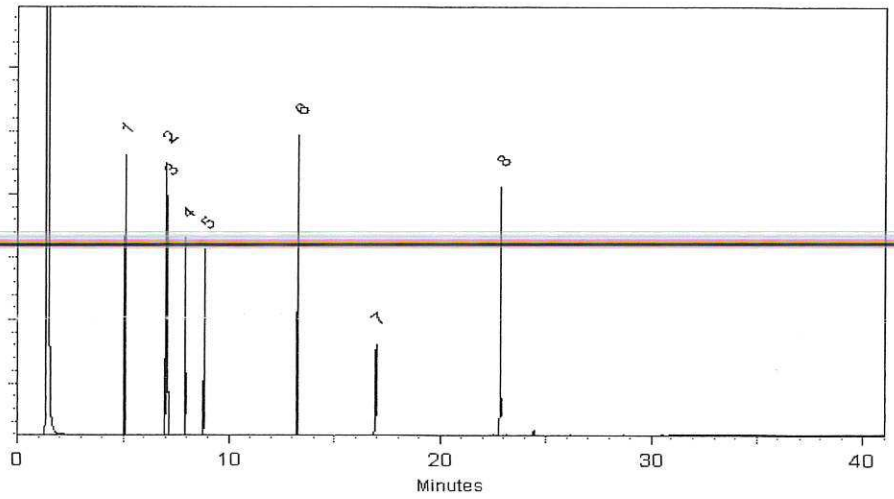
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Bryan Snyder - Operations Tech I

Date Mixed: 17-Jul-2022 **Balance:** 1128353505

Christie Mills - Operations Tech II - ARM QC

Date Passed: 21-Jul-2022

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18355
Certification Date: July 25, 2022
Expiration Date: August 31, 2023

Aaron Dukes, Certified Reference Materials Manager

K007995
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: N/A
Prep: 8/29/2022 by JZ
Exp: 8/31/2023
Location: FREEZER 44

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAD2751
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2751.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

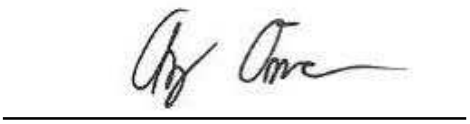
Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 03 JUN 2022



Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

ACID STOCK

Product no.: 22523046
Lot no.: LRAD2750
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2750.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	800	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	800	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	801	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1799	µg/mL	66.9	STBJ5751
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	800	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	800	µg/mL	100.0	BCCD4461
4-NITROPHENOL CAS# 100-02-7	800	µg/mL	100.0	MKCN1089
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1800	µg/mL	100.0	BCBX5762
PENTACHLOROPHENOL CAS# 87-86-5	800	µg/mL	99.0	23614-01
BENZOIC ACID CAS# 65-85-0	1800	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Certificate issue date: 03 JUN 2022

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2750.01	03 JUN 2022	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL18939
Certification Date: September 7, 2022
Expiration Date: August 31, 2032

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 3.812%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.419%

L001288
Benzidines std @2000ug/ml
Solvent / Lot: CL18939
Prep: 2/7/2023 by VS
Exp: 8/31/2032
Location: GC

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64631018 us

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101443
Lot Number: CL18741
Description: Aniline
Certification Date: July 21, 2022
Storage: 4 °C
Expiration Date: July 31, 2030
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 1.719%

L001290
Anline-1000ug/mL
Solvent / Lot: CL18741
Prep: 2/7/2023 by VS
Exp: 7/31/2030
Location: GC

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Aaron Dukes, Certified Reference Materials Manager

L001291
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: CL18811
Prep: 2/7/2023 by VS
Exp: 11/30/2023
Location: FREEZER 44

Component	CAS #	µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 1.643%
Acenaphthylene	208-96-8	1000	± 1.317%
Anthracene	120-12-7	1000	± 2.136%
Azobenzene	103-33-3	1000	± 1.630%
Benzo(a)anthracene	56-55-3	1000	± 2.372%
Benzo(a)pyrene	50-32-8	1000	± 3.028%
Benzo(b)fluoranthene	205-99-2	1000	± 2.377%
Benzo(k)fluoranthene	207-08-9	1000	± 2.286%
Benzo(g,h,i)perylene	191-24-2	1000	± 2.561%
Benzyl alcohol	100-51-6	1000	± 1.803%
Benzyl butyl phthalate	85-68-7	1000	± 1.855%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 1.626%
bis(2-Chloroethyl) ether	111-44-4	1000	± 1.776%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 2.406%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 2.415%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 2.350%
4-Bromophenyl phenyl ether	101-55-3	1000	± 1.708%
Carbazole	86-74-8	1000	± 1.844%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 2.831%
4-Chloro-3-methylphenol	59-50-7	1000	± 1.571%
2-Chloronaphthalene	91-58-7	1000	± 2.022%
2-Chlorophenol	95-57-8	1000	± 2.001%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 1.634%
Chrysene	218-01-9	1000	± 2.358%
Dibenz(a,h)anthracene	53-70-3	1000	± 2.452%
Dibenzofuran	132-64-9	1000	± 0.310%
Di-n-butyl phthalate	84-74-2	1000	± 2.347%
1,2-Dichlorobenzene	95-50-1	1000	± 1.803%
1,3-Dichlorobenzene	541-73-1	1000	± 1.808%
1,4-Dichlorobenzene	106-46-7	1000	± 1.503%
2,4-Dichlorophenol	120-83-2	1000	± 1.393%
Diethyl phthalate	84-66-2	1000	± 1.870%
2,4-Dimethylphenol	105-67-9	1000	± 2.495%
Dimethyl phthalate	131-11-3	1000	± 2.113%
1,2-Dinitrobenzene	528-29-0	1000	± 0.240%
1,3-Dinitrobenzene	99-65-0	1000	± 1.221%
1,4-Dinitrobenzene	100-25-4	1000	± 0.246%
2,4-Dinitrophenol	51-28-5	1000	± 0.519%
2,4-Dinitrotoluene	121-14-2	1000	± 2.242%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18811
Description: 8270 Calibration Standard
Certification Date: August 9, 2022
Storage: -18 °C
Expiration Date: November 30, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 2.154%
Di-n-octyl phthalate	117-84-0	1000	± 2.670%
Fluoranthene	206-44-0	1000	± 2.103%
Fluorene	86-73-7	1000	± 0.890%
Hexachlorobenzene	118-74-1	1000	± 1.210%
Hexachlorobutadiene	87-68-3	1000	± 1.304%
Hexachlorocyclopentadiene	77-47-4	1000	± 1.510%
Hexachloroethane	67-72-1	1000	± 3.281%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 1.921%
Isophorone	78-59-1	1000	± 2.022%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 1.661%
1-Methylnaphthalene	90-12-0	1000	± 1.929%
2-Methylnaphthalene	91-57-6	1000	± 2.220%
2-Methylphenol	95-48-7	1000	± 2.168%
3-Methylphenol	108-39-4	500	± 1.025%
4-Methylphenol	106-44-5	500	± 1.064%
Naphthalene	91-20-3	1000	± 1.199%
2-Nitroaniline	88-74-4	1000	± 1.874%
3-Nitroaniline	99-09-2	1000	± 2.146%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 1.704%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 2.051%
4-Nitrophenol	100-02-7	1000	± 1.413%
N-Nitrosodimethylamine	62-75-9	1000	± 0.545%
N-Nitrosodiphenylamine	86-30-6	1000	± 1.669%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.712%
Pentachlorophenol	87-86-5	1000	± 2.454%
Phenanthrene	85-01-8	1000	± 2.072%
Phenol	108-95-2	1000	± 2.140%
Pyrene	129-00-0	1000	± 1.869%
Pyridine	110-86-1	1000	± 0.545%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 2.552%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 2.220%
1,2,4-Trichlorobenzene	120-82-1	1000	± 1.632%
2,4,5-Trichlorophenol	95-95-4	1000	± 1.596%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.481%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101291	**Lot Number:**	CL11000
Description:	GC/MS Tuning Mix	**Certification Date:**	May 9, 2014
Storage:	4 °C	**Expiration Date:**	December 31, 2023
Provided As:	1 mL in 2 mL Ampoule in Methylene chloride	**Revision Date:**	August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

LOO 1648

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111110613_US

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101291
Description: GC/MS Tuning Mix
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene chloride

Lot Number: CL11000
Certification Date: May 9, 2014
Expiration Date: December 31, 2023
Revision Date: August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

LOO1648

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC Guide 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC Guide 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC Guide 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC Guide 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL_111106.13_us

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1811

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-01 A	File ID:	23060215.D
Sampled:	04/28/23 10:38	Prepared:	05/05/23 17:03	Analyzed:	06/02/23 16:22
% Solids:	69.29	Preparation:	EPA 3546 (Microwave)	Initial/Final:	18.05 g Wet / 2.5 mL
Batch:	BLE0150	Sequence:	SLF0091	Calibration:	GF00024
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9956*	*6.40*	*80.0*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9956*	*6.85*	*85.6*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9956*	*5.48*	*68.5*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9956*	*5.68*	*71.0*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060215.D
Data file 2: /20230602.b/B20230602.b/23060215.D
Method: \20230602.b\PEST.m
Compound Sublist: wpest.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: 23E0009-01
Client ID:
Injection Date: 02-JUN-2023 16:22
Report Date: 06/08/2023 11:23
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			5.210	0.028	17695	0.00	3.72	---	beta-BHC
4.848	-0.009	50657	----			5.36	0.00	---	delta-BHC
4.599	0.005	41861	----			4.28	0.00	---	gamma-BHC (Lindane)
5.066	-0.013	21279	5.634	0.015	38288	2.30	4.10	56.2*	Heptachlor
5.421	0.021	77515	----			8.40	0.00	---	Aldrin
----			6.660	-0.017	167875	0.00	20.59	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
6.763	-0.014	119260	7.403	-0.013	39016	15.04	5.01	100.1*	Dieldrin
6.437	-0.004	128741	7.208	-0.000	78706	17.53	10.55	49.7*	4,4'-DDE
----			7.710	-0.030	42180	0.00	6.54	---	Endrin
7.245	-0.019	17832	7.941	-0.011	116666	3.27	19.16	141.8*	Endosulfan II
7.087	-0.003	155420	7.816	0.001	105640	29.35	18.15	47.2*	4,4'-DDD M
----			----			0.00	0.00	---	Endosulfan sulfate
7.372	-0.012	47026	8.143	0.009	227909	8.60	40.05	129.3*	4,4'-DDT M
7.901	0.026	23438	----			9.61	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
7.724	0.030	40733	8.282	-0.001	34314	10.02	8.25	19.4	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
6.386	0.022	54468	----			6.68	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			4.568	-0.010	19921	0.00	1.88	---	Hexachlorobenzene
----			----			0.00	0.00	---	Oxychlordane
6.063	0.008	39704	6.859	-0.012	146461	10.06	30.69	101.3*	2,4-DDE
----			6.976	-0.012	61206	0.00	9.12	---	trans-Nonachlor
6.615	-0.017	54647	----			14.85	0.00	---	2,4-DDD
6.928	0.017	13567	----			3.15	0.00	---	2,4-DDT
7.056	-0.007	118337	----			18.32	0.00	---	cis-Nonachlor
8.027	-0.010	99962	----			24.36	0.00	---	Mirex
1.762	-0.012	877	----			0.00	0.00	---	Hexachloroethane
----			----			0.00	0.00	---	Kepone
3.784	0.000	207374	4.098	0.001	223774	27.41	28.42	3.6	Tetrachloro-m-xylene
9.321	0.000	128442	10.253	0.001	137046	32.02	34.25	6.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	596282	-3.7
Hexabromobiphenyl	493109	392603	-20.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	622851	-10.5
Hexabromobiphenyl	461581	380040	-17.7

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

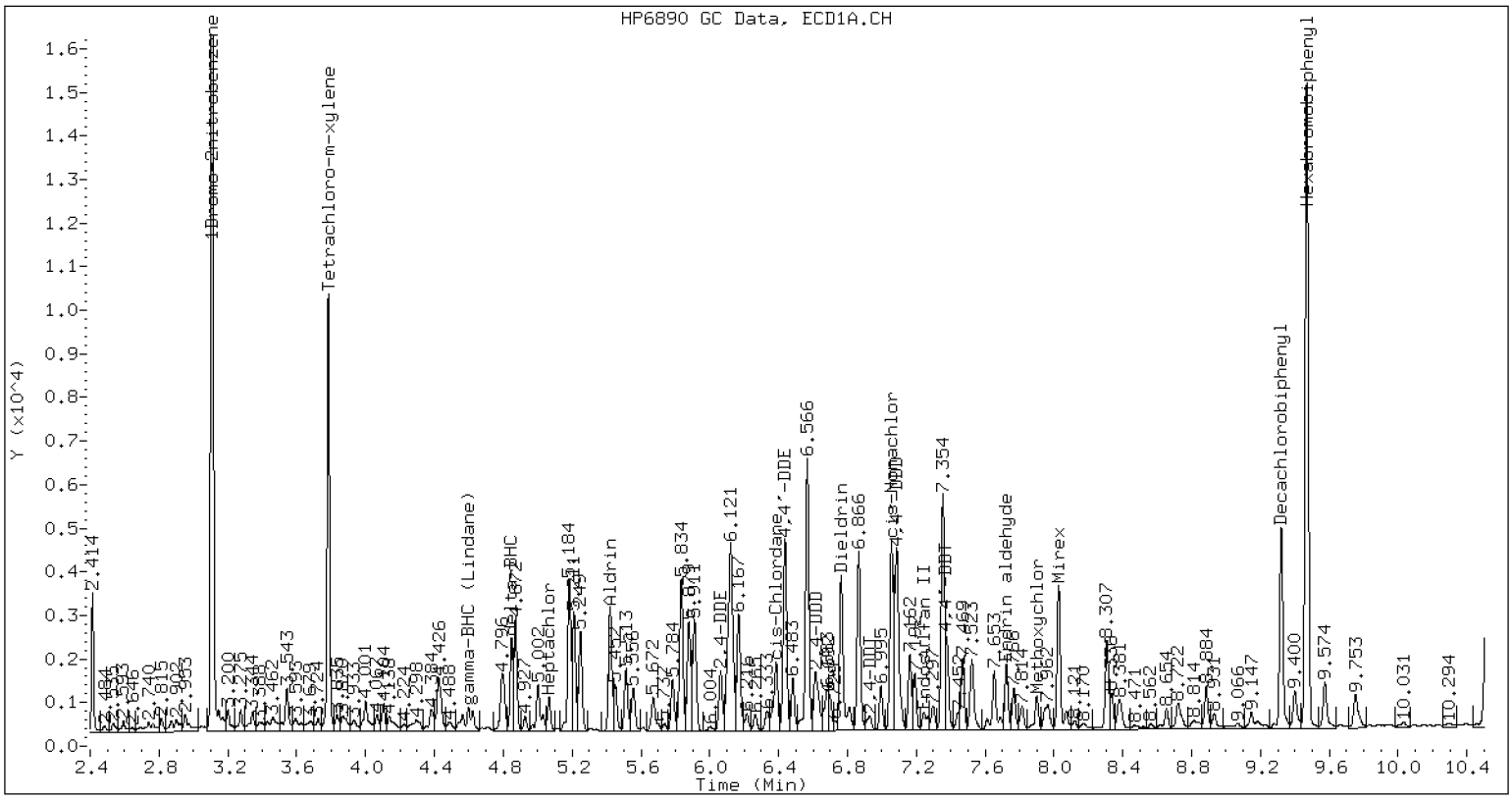
		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	---			0.000	1	---			0.000
Toxaphene	2	---			0.000	2	---			0.000
Toxaphene	3	---			0.000	3	---			0.000
Toxaphene	4	---			0.000	4	---			0.000
Toxaphene	5	---			0.000	5	---			0.000

STX-CLPAve: <3 Quant Peaks CLP2Ave: <3 Quant Peaks

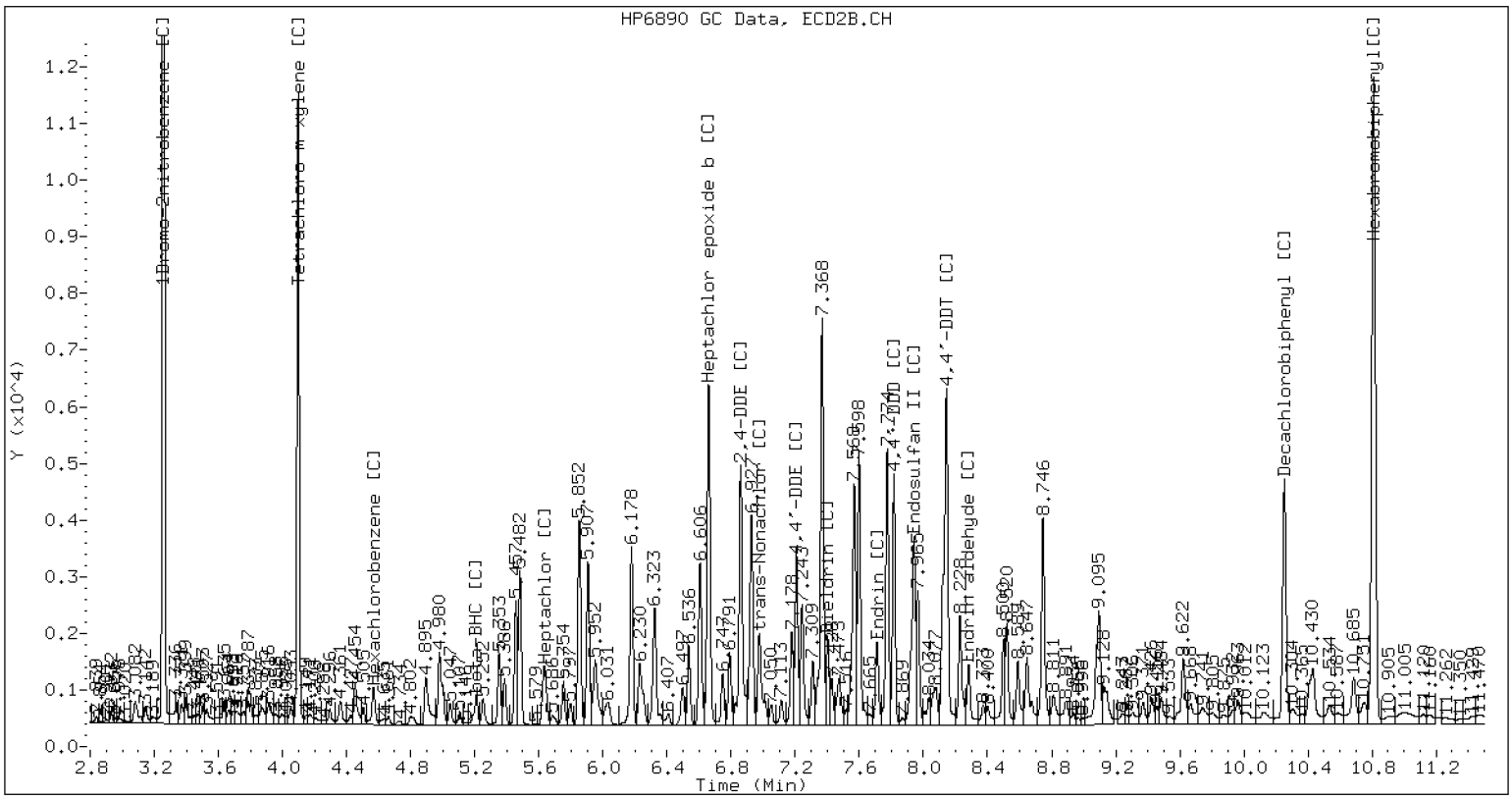
		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	---			0.000	1	---			0.000
Chlordane (NOS)	2	---			0.000	2	---			0.000
Chlordane (NOS)	3	---			0.000	3	---			0.000

STX-CLPAve: <3 Quant Peaks CLP2Ave: <3 Quant Peaks

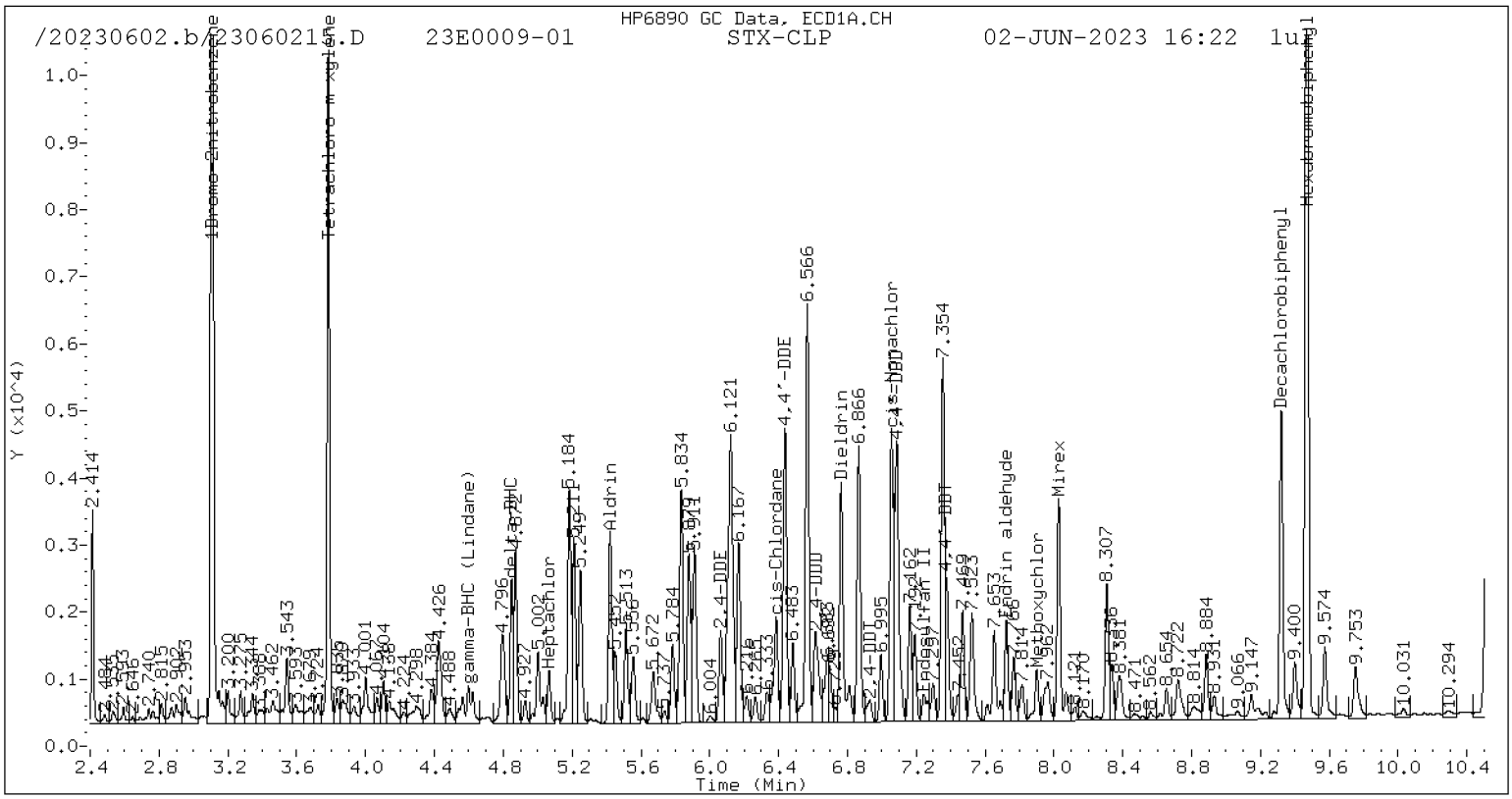
/20230602.b/23060215.D 23E0009-01 STX-CLP 02-JUN-2023 16:22 1ul



/20230602.b/B20230602.b/23060215.D 23E0009-01 CLP2 02-JUN-2023 16:22 1ul

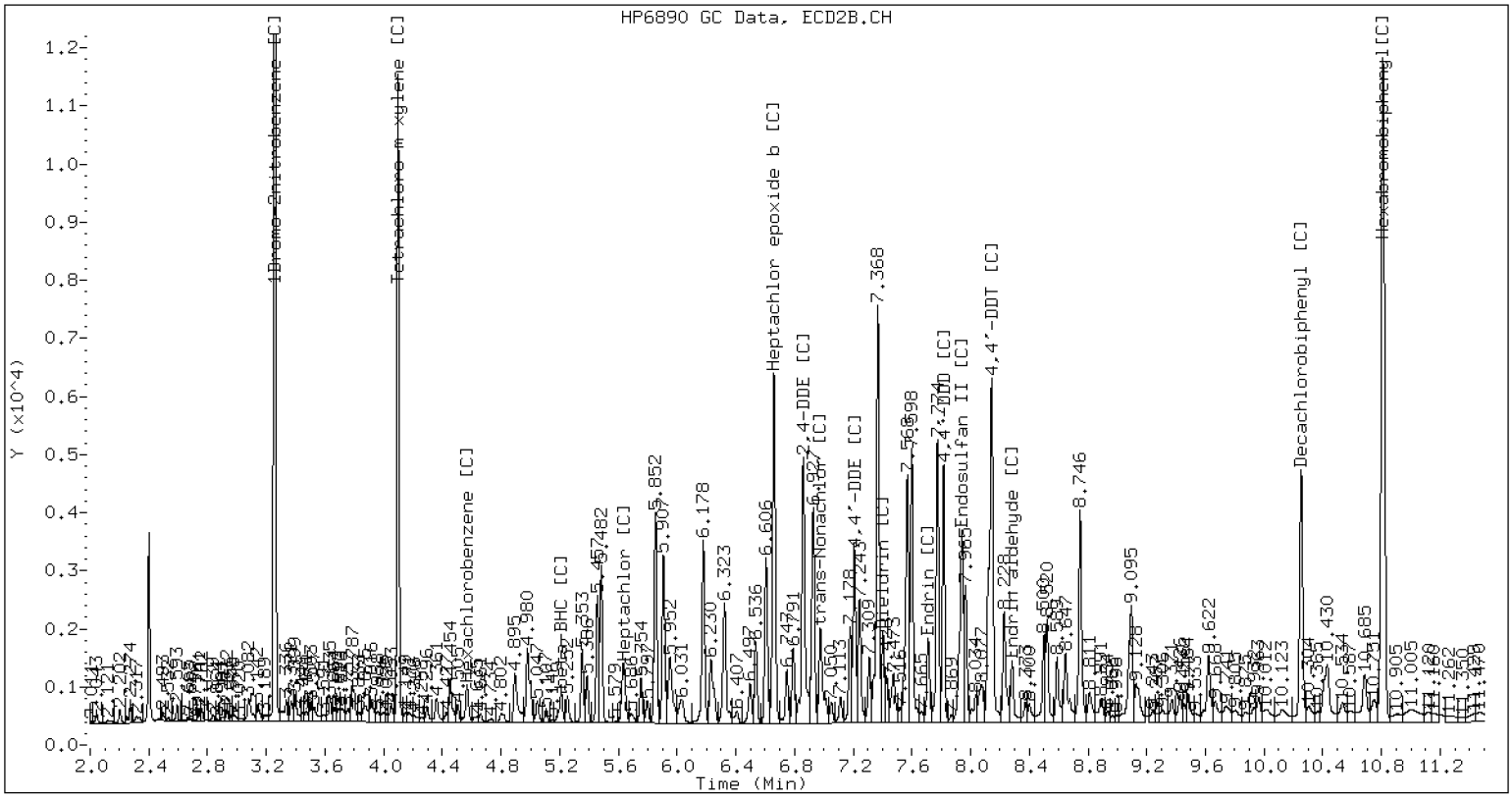


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

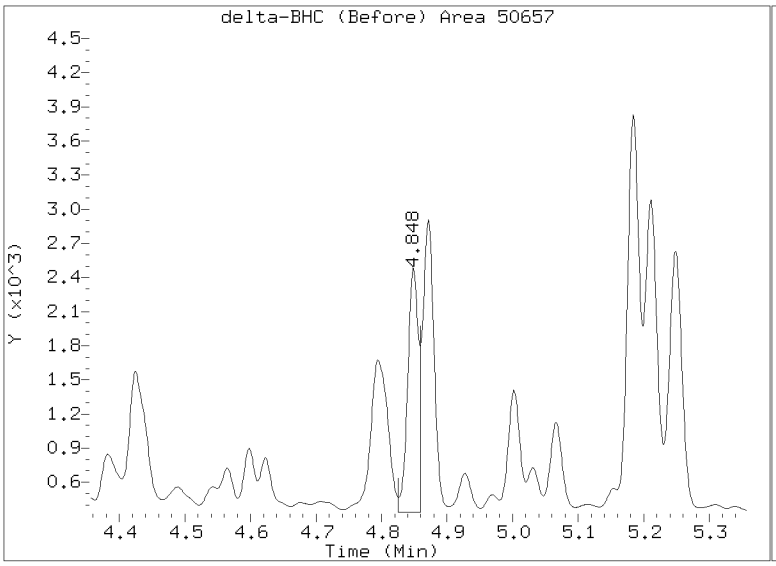
/20230602.b/B20230602.b/23060215.D 23E0009-01 CLP2

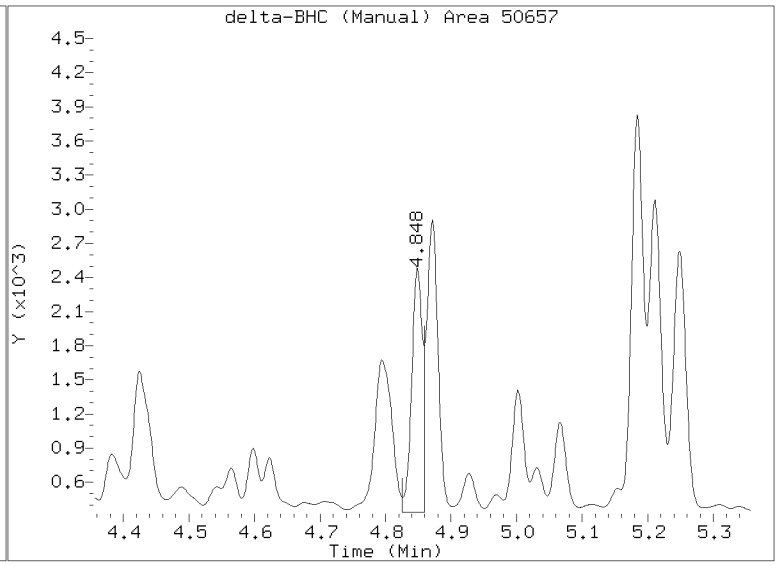


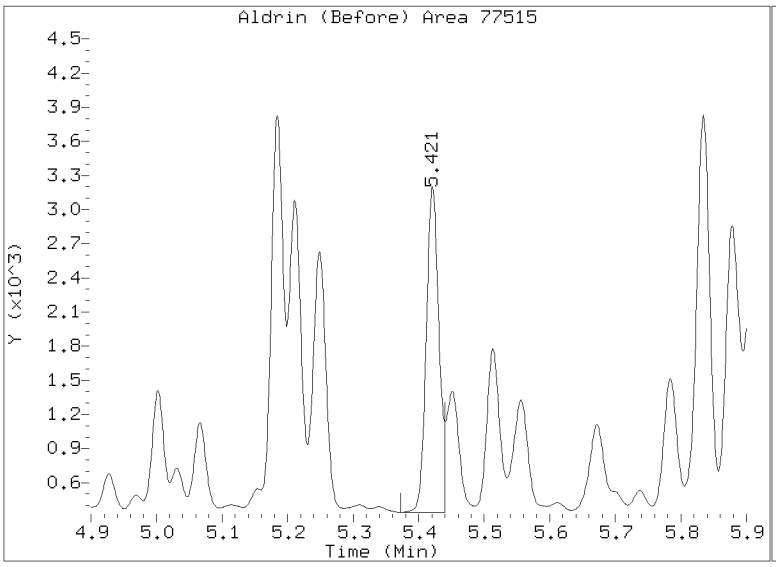
CLP-2 Manual Integration: NO

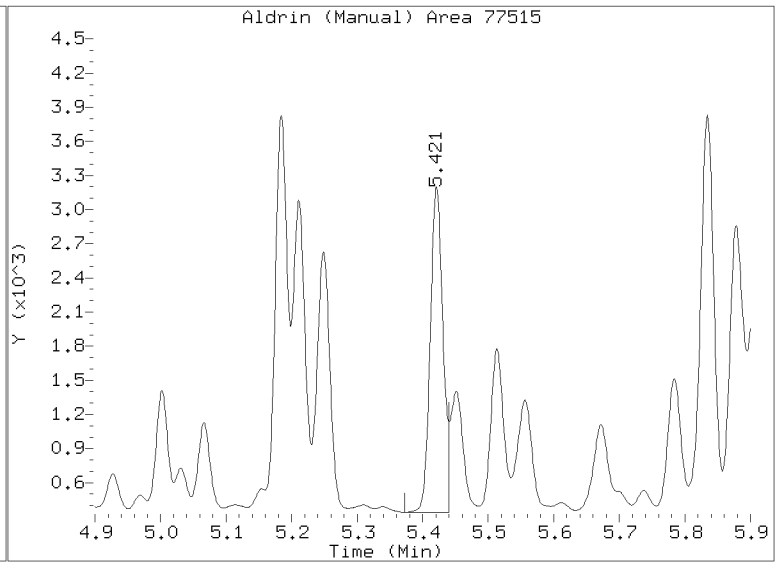
Manual Peak Adjustment Report, STX-CLP

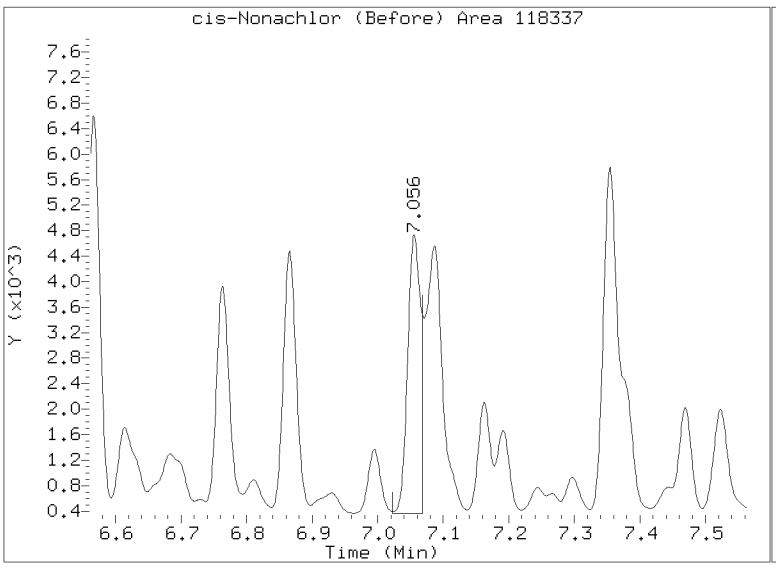
Datafile: /20230602.b/23060215.D
Injection Date: 02-JUN-2023 16:22
Lab ID:23E0009-01 Client ID:
Report Date: 06/08/2023 11:23

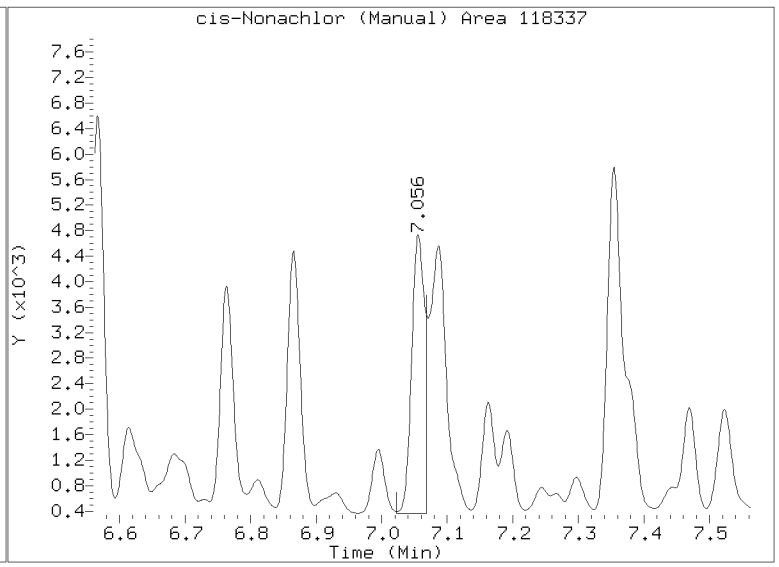






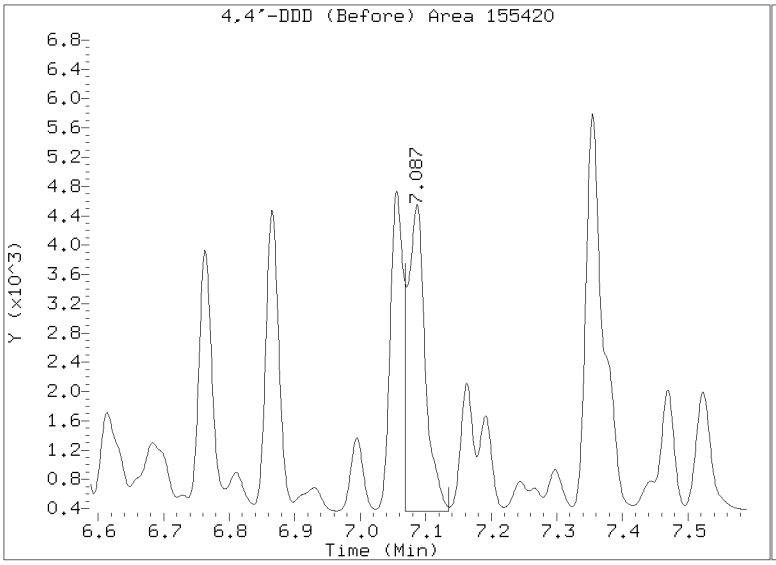


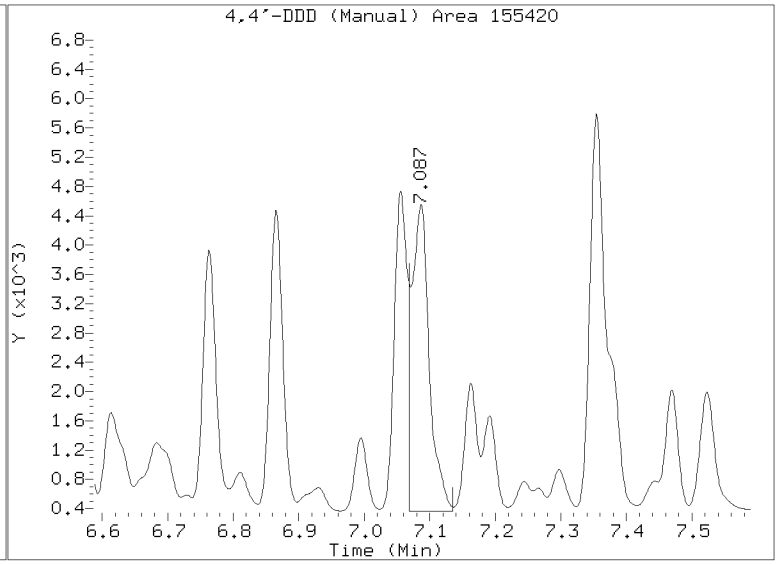


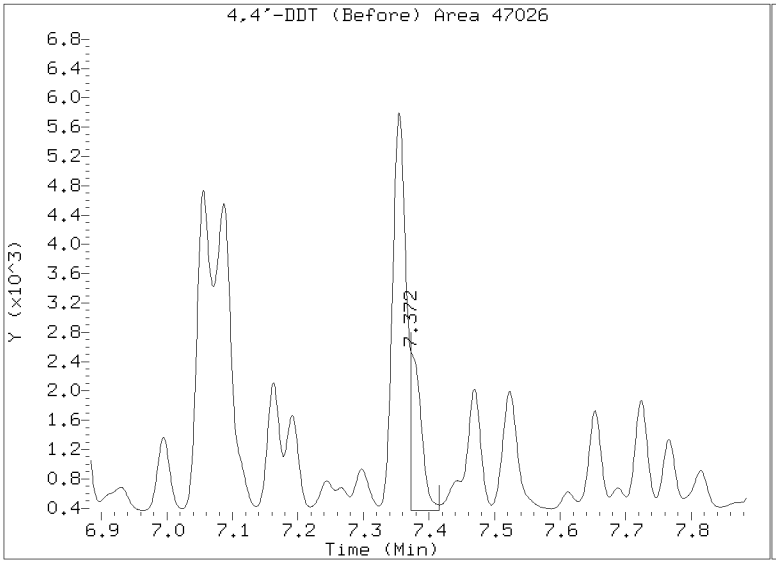


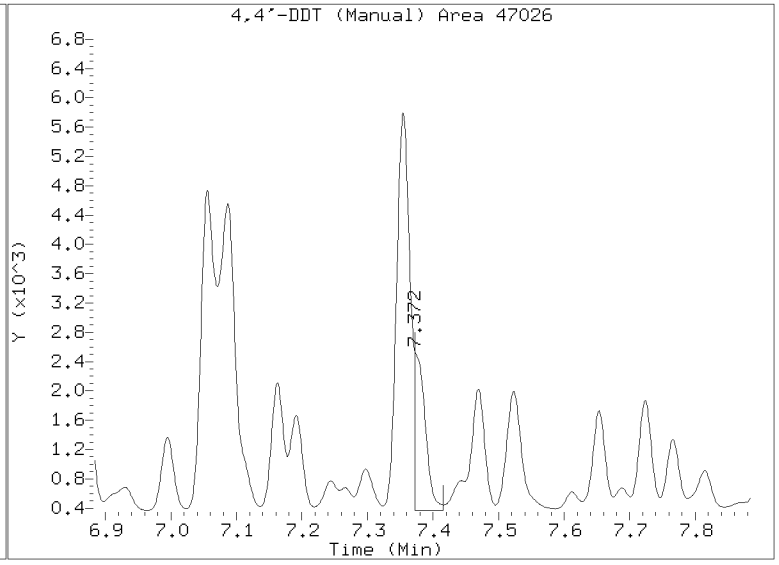
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230602.b/23060215.D
Injection Date: 02-JUN-2023 16:22
Lab ID:23E0009-01 Client ID:
Report Date: 06/08/2023 11:23









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1805

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-03 A	File ID:	23060216.D
Sampled:	04/28/23 16:15	Prepared:	05/05/23 17:03	Analyzed:	06/02/23 16:41
% Solids:	50.79	Preparation:	EPA 3546 (Microwave)	Initial/Final:	24.62 g Wet / 2.5 mL
Batch:	BLE0150	Sequence:	SLF0091	Calibration:	GF00024
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9971*	*6.41*	*80.2*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9971*	*6.50*	*81.3*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9971*	*4.80*	*60.0*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9971*	*5.15*	*64.4*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060216.D
Data file 2: /20230602.b/B20230602.b/23060216.D
Method: \20230602.b\PEST.m
Compound Sublist: wpest.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: 23E0009-03
Client ID:
Injection Date: 02-JUN-2023 16:41
Report Date: 06/08/2023 11:23
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			4.728	0.011	6039	0.00	0.48	---	alpha-BHC
----			5.209	0.028	9274	0.00	1.79	---	beta-BHC
4.849	-0.008	31242	5.556	0.029	1240	3.12	0.12	185.3*	delta-BHC M
----			5.106	0.003	7635	0.00	0.69	---	gamma-BHC (Lindane)
5.067	-0.012	19689	5.634	0.015	25927	2.01	2.56	24.1	Heptachlor
5.420	0.020	37312	6.023	0.007	17325	3.81	1.69	77.1*	Aldrin M
6.065	-0.008	19877	6.660	-0.016	110944	2.30	12.53	138.1*	Heptachlor epoxide b M
----			7.114	-0.008	7770	0.00	1.01	---	Endosulfan I
6.764	-0.013	91868	7.403	-0.013	32547	10.92	3.85	95.8*	Dieldrin N
6.436	-0.005	90860	7.209	0.001	36429	11.66	4.50	88.7*	4,4'-DDE
----			7.711	-0.029	33468	0.00	5.50	---	Endrin
----			7.942	-0.009	81371	0.00	14.17	---	Endosulfan II
7.076	-0.013	65357	7.816	0.001	34385	12.68	6.26	67.8*	4,4'-DDD M
----			----			0.00	0.00	---	Endosulfan sulfate
7.374	-0.011	48167	8.144	0.009	168163	9.05	31.33	110.4*	4,4'-DDT MN
----			----			0.00	0.00	---	Methoxychlor
8.380	-0.024	48096	9.096	0.023	119746	8.56	20.53	82.3*	Endrin ketone N
----			8.282	-0.002	45938	0.00	11.70	---	Endrin aldehyde
----			6.897	0.009	11308	0.00	1.31	---	trans-Chlordane
----			7.051	0.003	9866	0.00	1.16	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			4.563	-0.015	24893	0.00	2.16	---	Hexachlorobenzene
----			----			0.00	0.00	---	Oxychlordane
----			6.860	-0.011	88091	0.00	17.00	---	2,4-DDE
----			7.002	0.014	7201	0.00	1.14	---	trans-Nonachlor
6.613	-0.019	35518	7.427	-0.001	5142	9.92	1.34	152.4*	2,4-DDD N
6.929	0.019	8461	7.775	0.024	117464	2.02	26.99	172.2*	2,4-DDT
7.057	-0.006	129567	----			20.60	0.00	---	cis-Nonachlor
8.029	-0.009	135552	9.057	0.003	15420	33.94	4.00	157.8*	Mirex MN
1.761	-0.013	904	1.689	0.013	50342	0.00	0.00	---	Hexachloroethane
6.567	-0.021	114280	7.351	0.015	17803	0.00	0.00	---	Kepone
3.784	0.000	192509	4.097	0.001	220122	23.99	25.75	7.1	Tetrachloro-m-xylene
9.322	0.002	125210	10.253	0.002	122694	32.06	32.50	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	632460	2.2
Hexabromobiphenyl	493109	382159	-22.5

Column 2

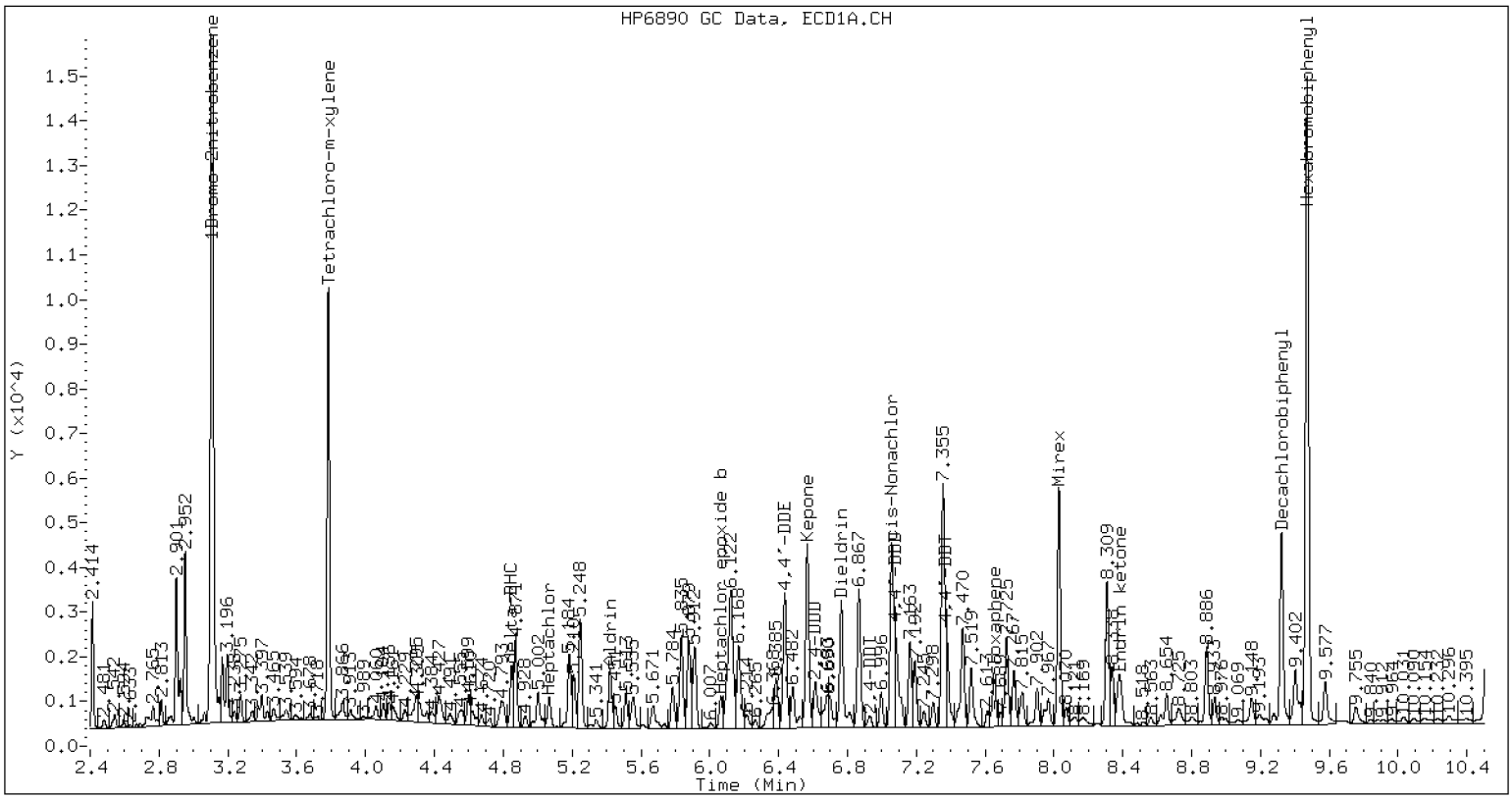
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	676222	-2.8
Hexabromobiphenyl	461581	358532	-22.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

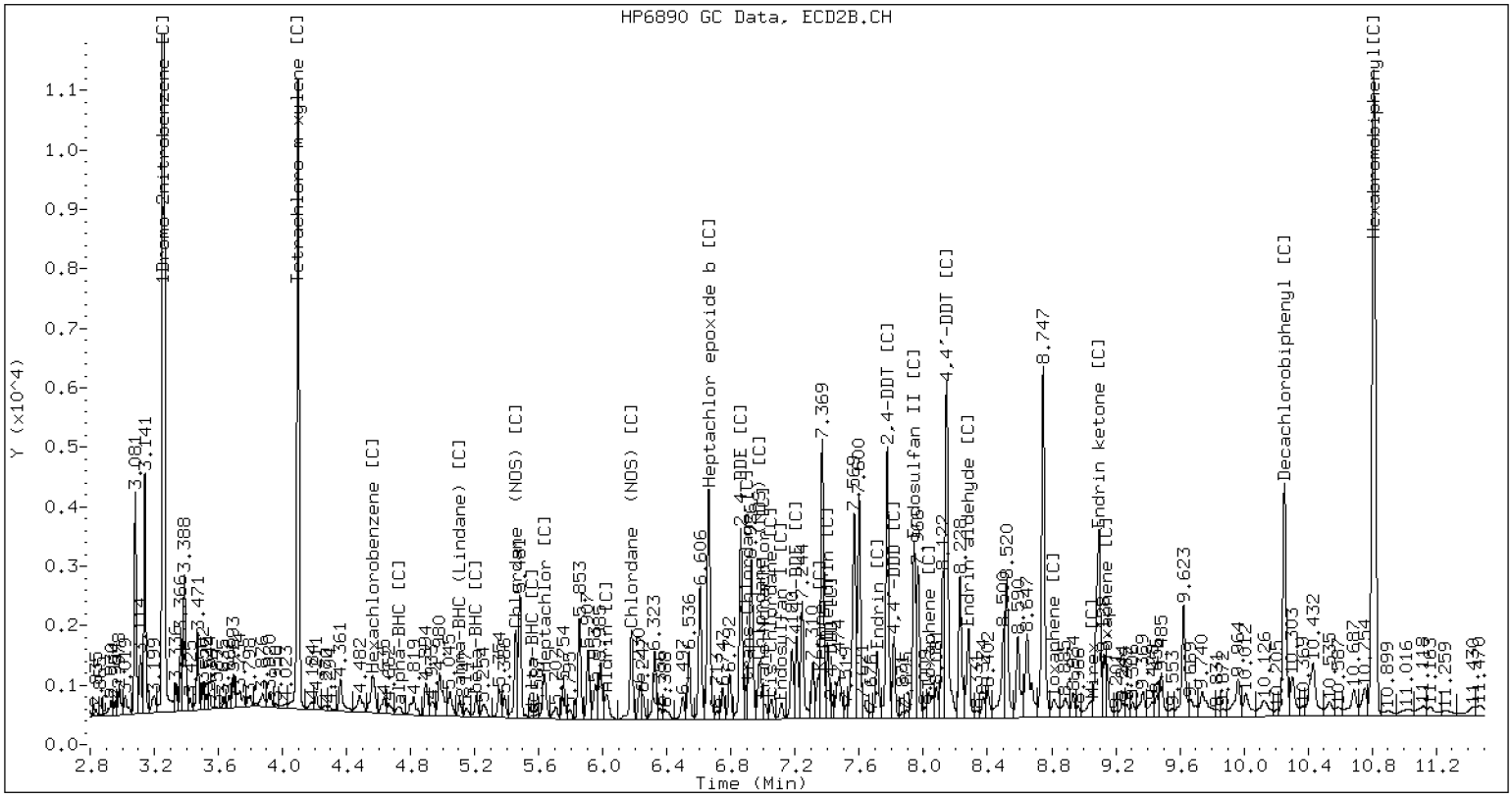
		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.929	-0.016	8461	84.5	1	7.403	0.012	32547	322.0
Toxaphene	2	7.374	-0.006	48167	330.3	2	8.035	0.001	19613	64.0
Toxaphene	3	7.654	-0.017	38925	162.2	3	8.282	-0.005	45938	198.8
Toxaphene	4	8.029	-0.001	135552	559.7	4	8.813	-0.024	15238	70.1
Toxaphene	5	8.380	-0.003	48096	252.6	5	9.143	-0.020	19960	154.6
Total STX-CLPAve (5 peaks): 277.873						Total CLP2Ave (5 peaks): 161.875				RPD = 53*
Corrected Ave (4 peaks): 207.405						Corrected Ave (4 peaks): 121.852				RPD = 52*

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	---			0.000	1	5.456	0.008	37273	140.9
Chlordane (NOS)	2	---			0.000	2	6.178	-0.000	42826	140.3
Chlordane (NOS)	3	---			0.000	3	6.976	-0.012	33043	32.6
STX-CLPAve: <3 Quant Peaks						CLP2Ave: 104.575				

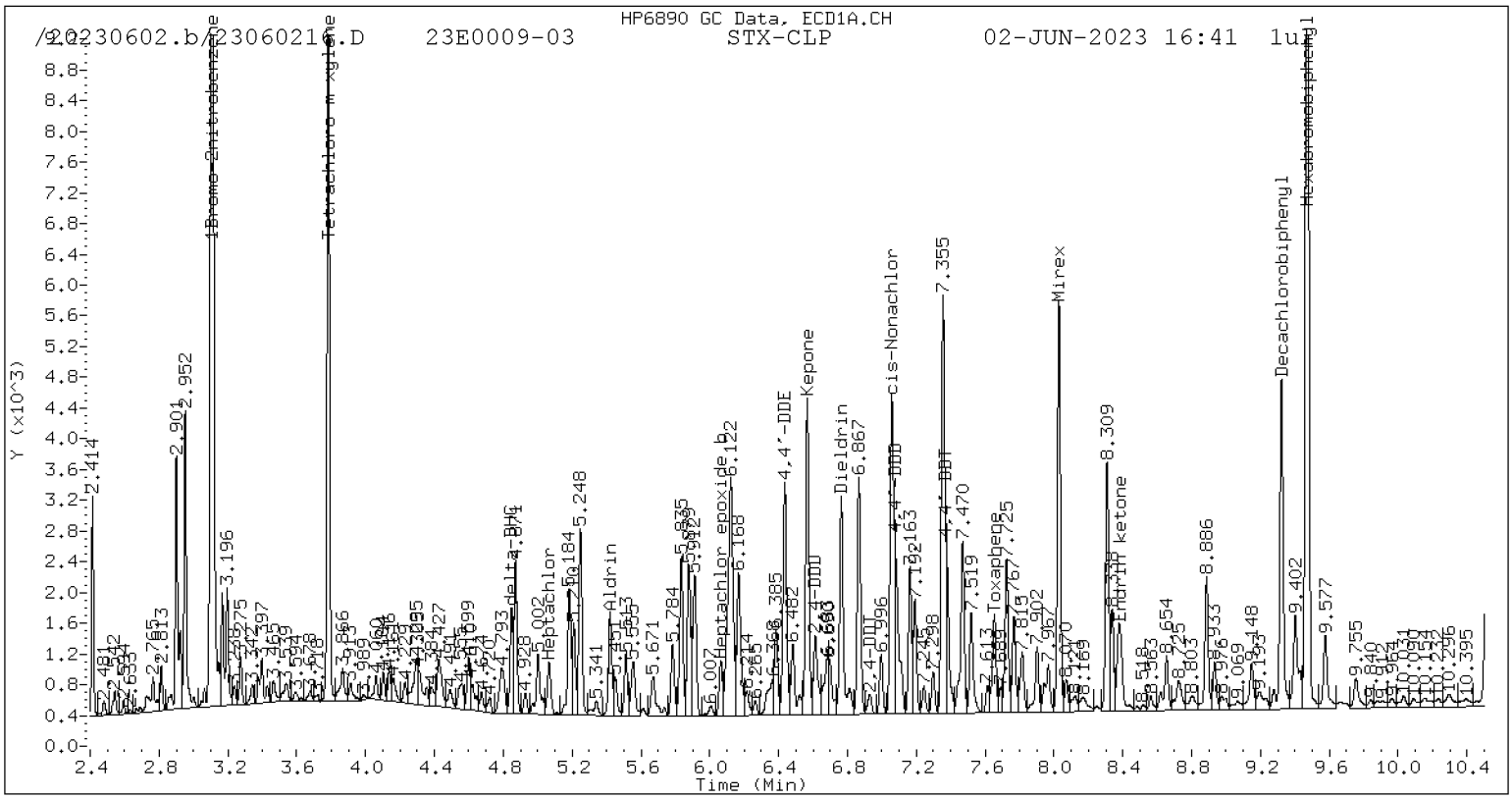
/20230602.b/23060216.D 23E0009-03 STX-CLP 02-JUN-2023 16:41 1ul



/20230602.b/B20230602.b/23060216.D 23E0009-03 CLP2 02-JUN-2023 16:41 1ul

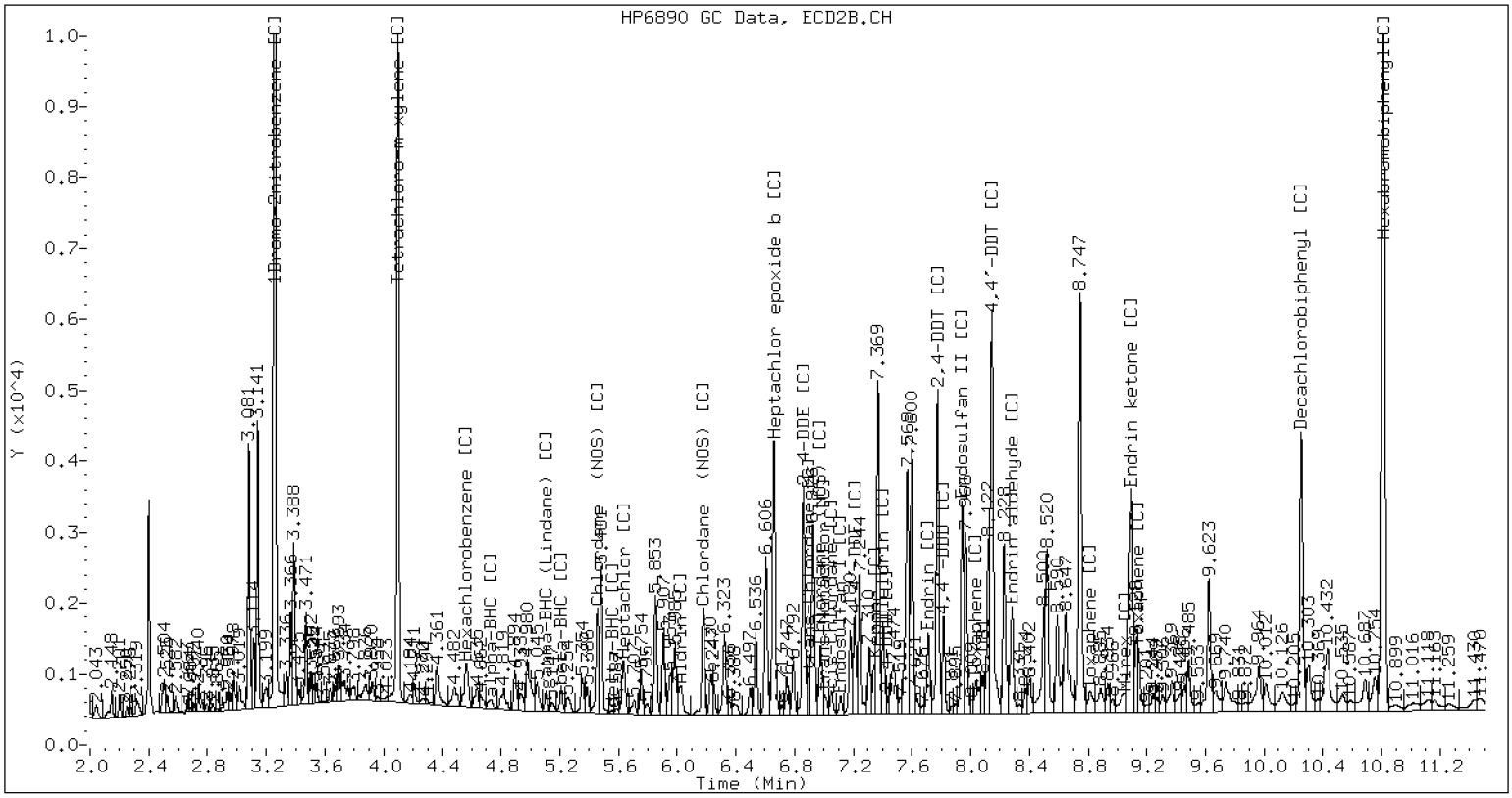


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

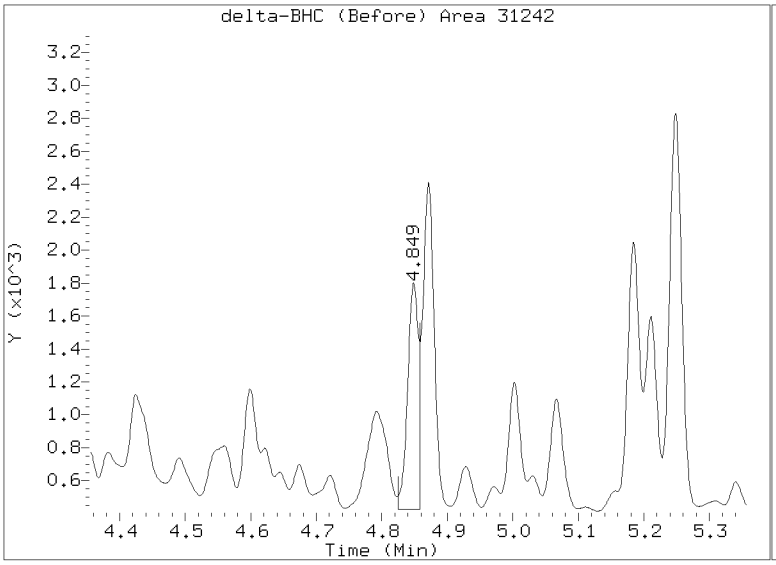
/20230602.b/B20230602.b/23060216.D 23E0009-03 CLP2

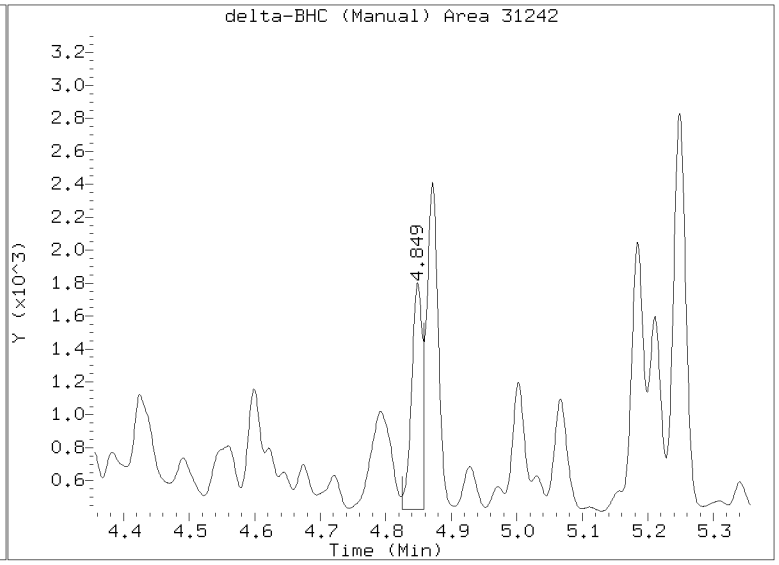


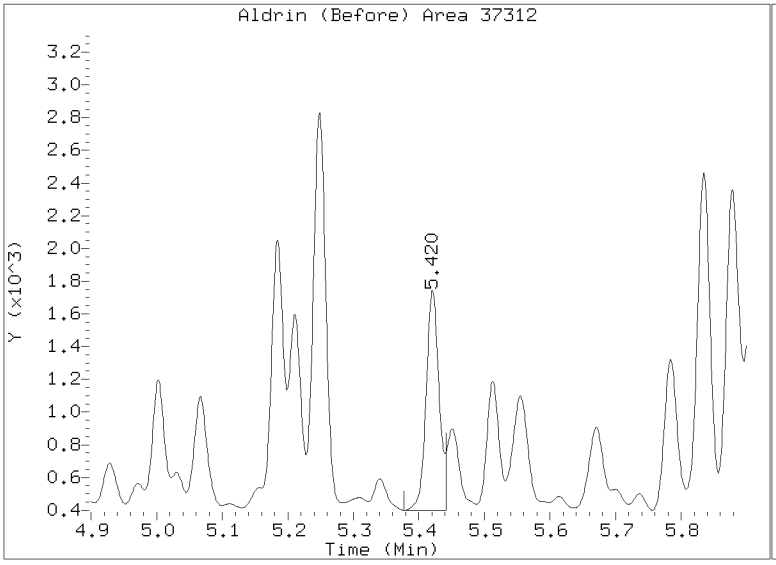
CLP-2 Manual Integration: YES

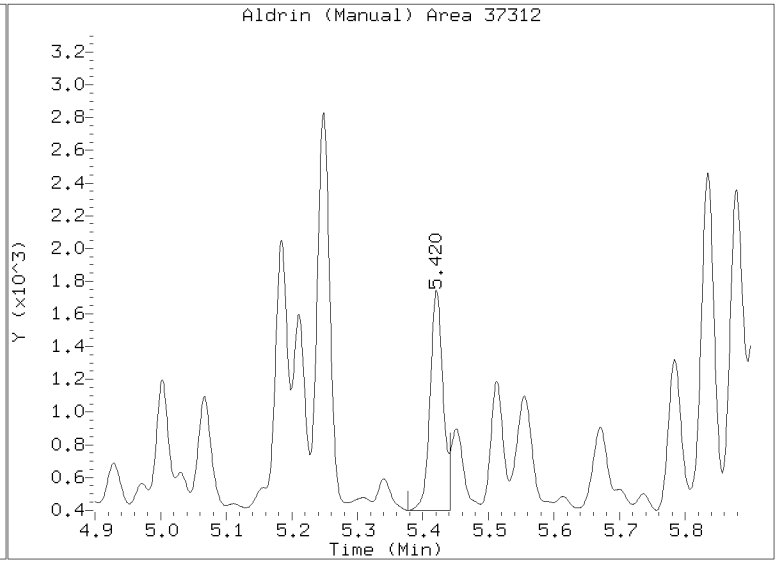
Manual Peak Adjustment Report, STX-CLP

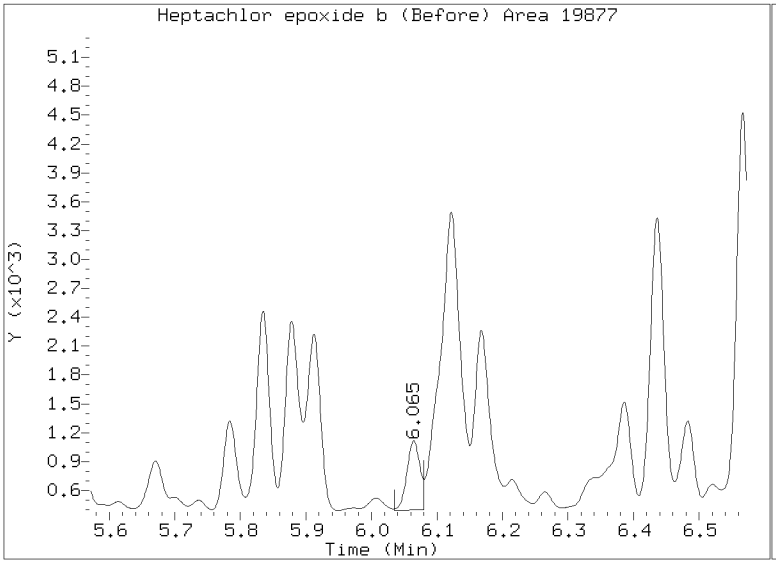
Datafile: /20230602.b/23060216.D
Injection Date: 02-JUN-2023 16:41
Lab ID:23E0009-03 Client ID:
Report Date: 06/08/2023 11:23

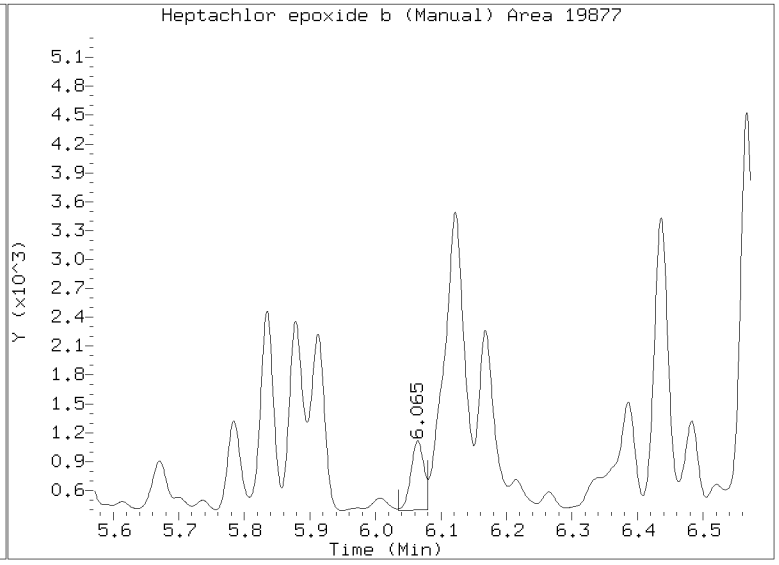






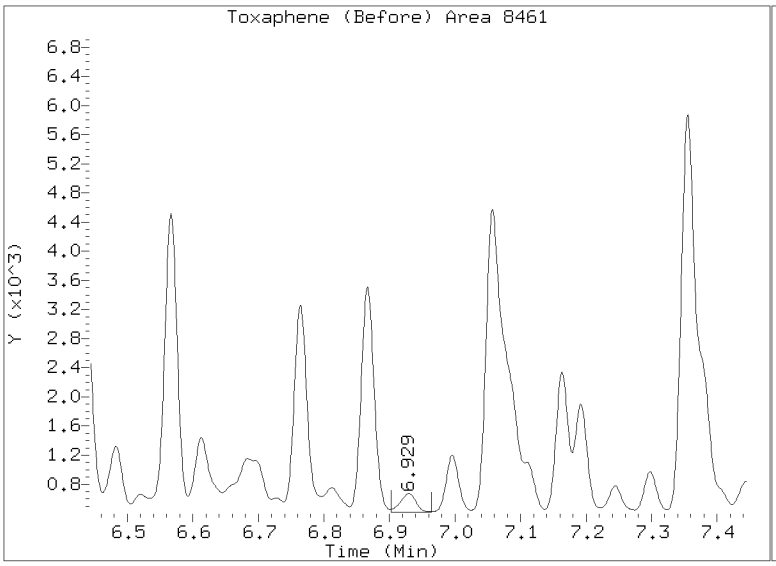


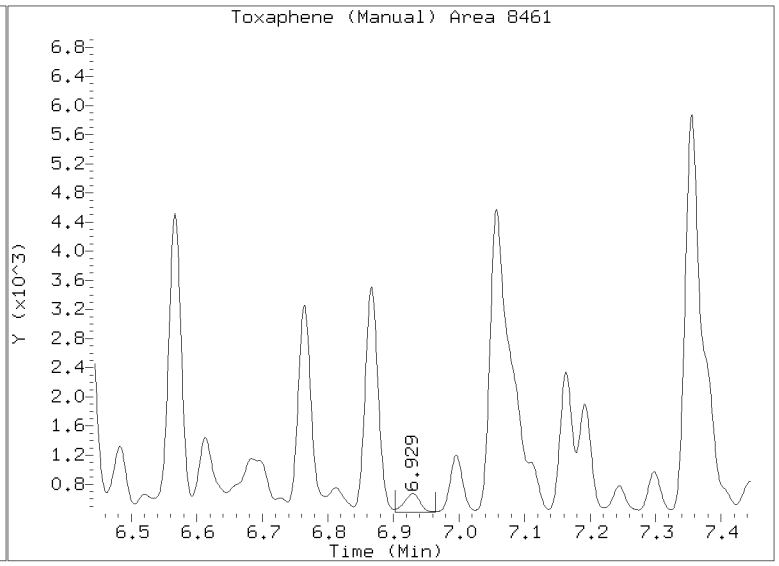


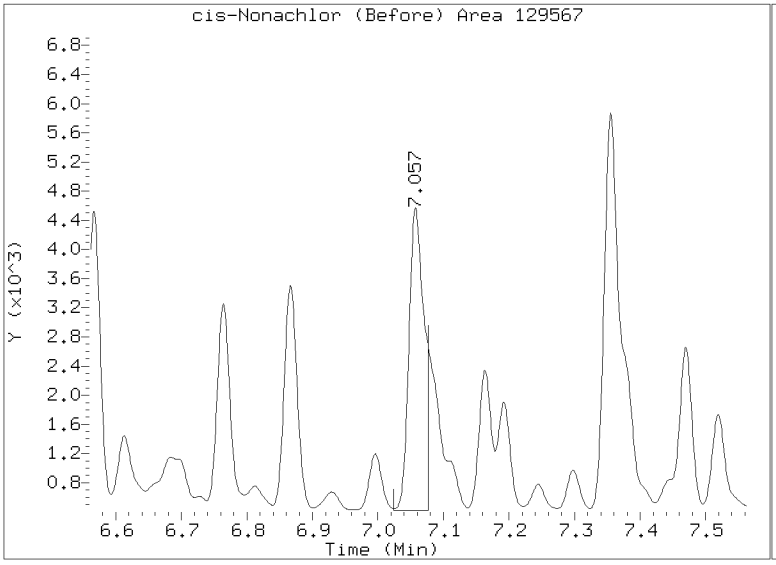


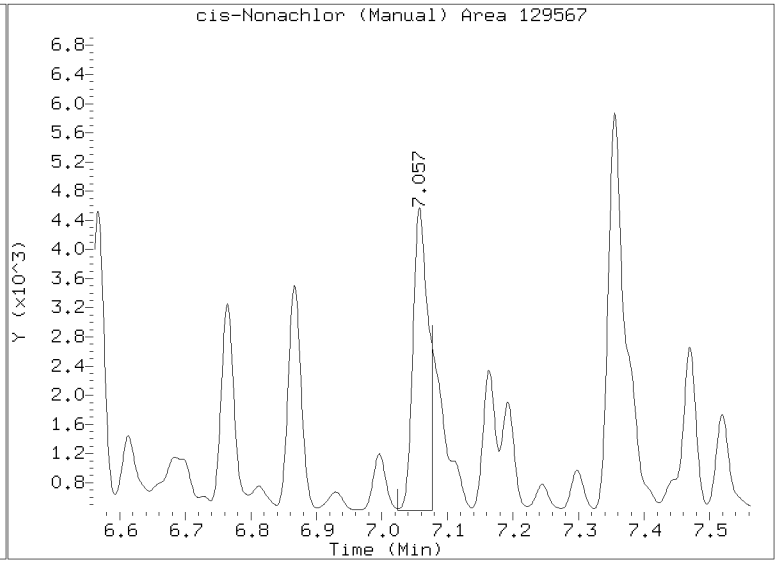
Manual Peak Adjustment Report, STX-CLP

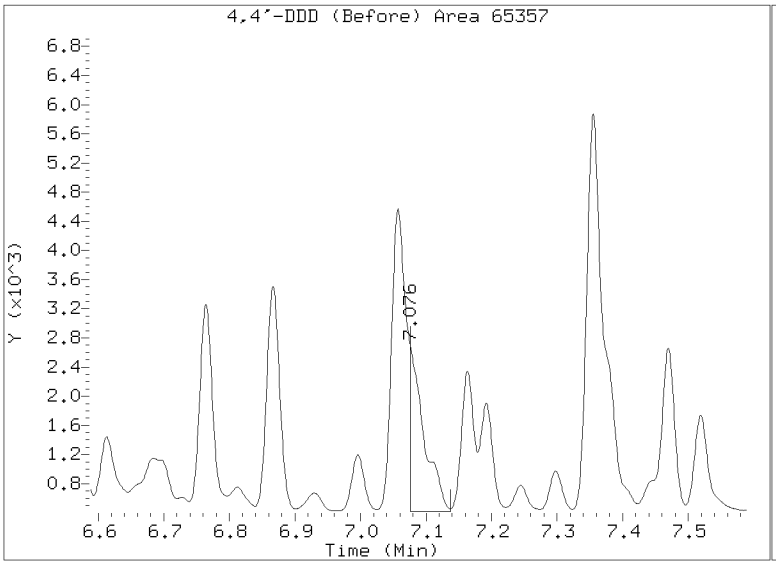
Datafile: /20230602.b/23060216.D
Injection Date: 02-JUN-2023 16:41
Lab ID:23E0009-03 Client ID:
Report Date: 06/08/2023 11:23

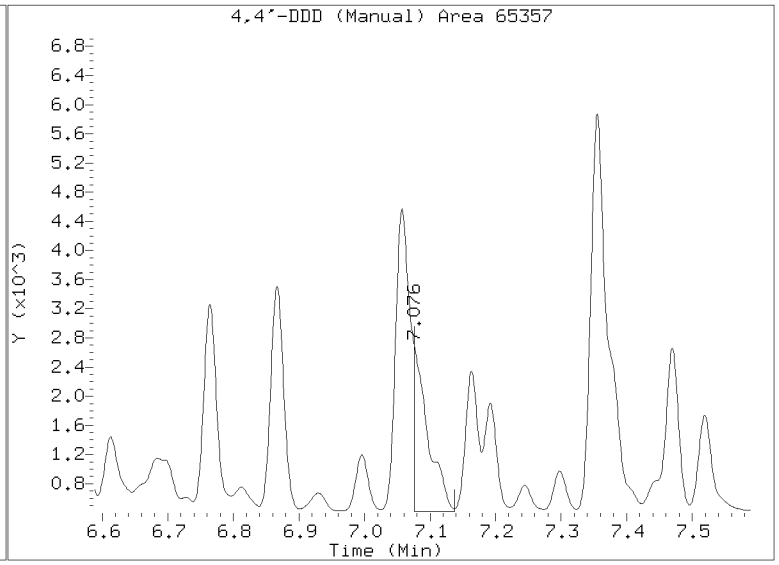






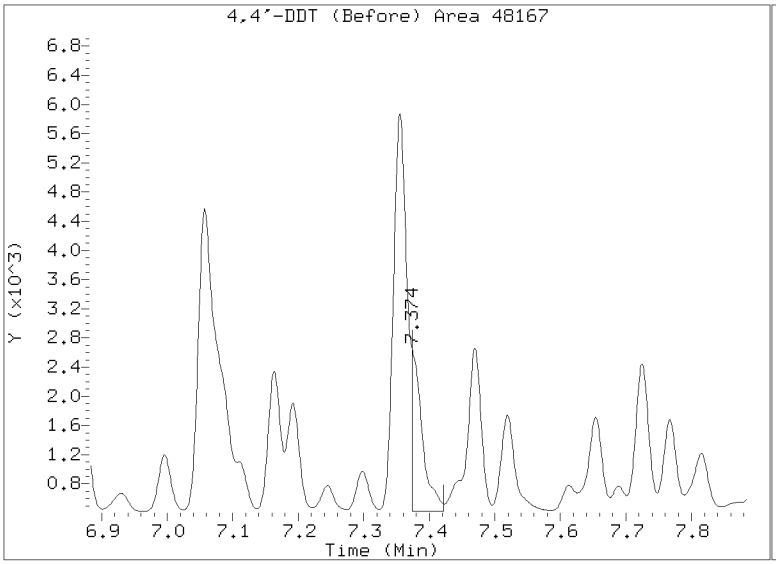


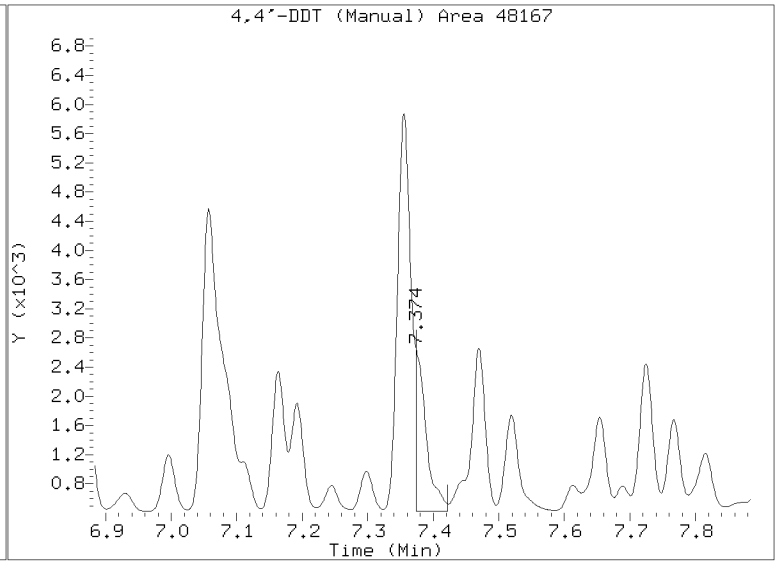


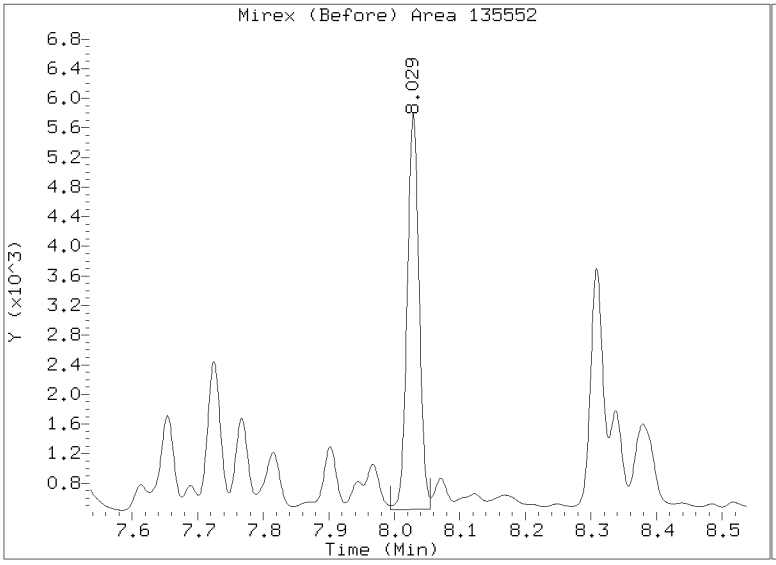


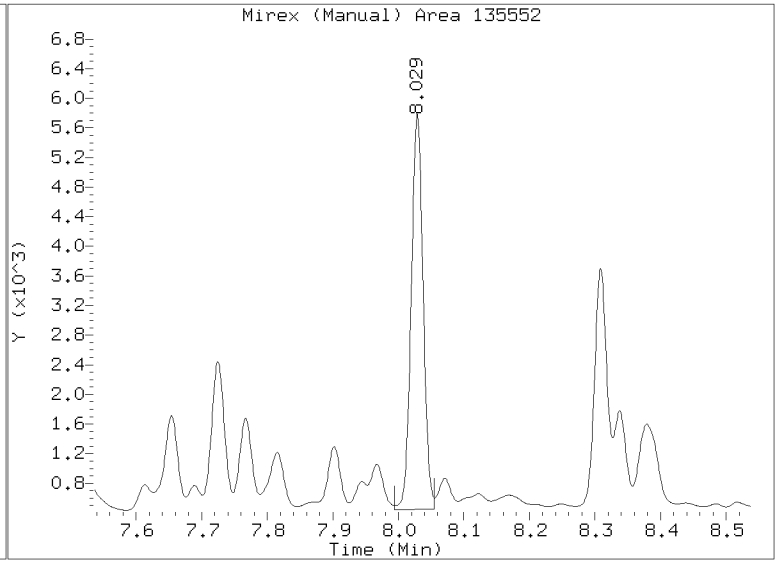
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230602.b/23060216.D
Injection Date: 02-JUN-2023 16:41
Lab ID:23E0009-03 Client ID:
Report Date: 06/08/2023 11:23



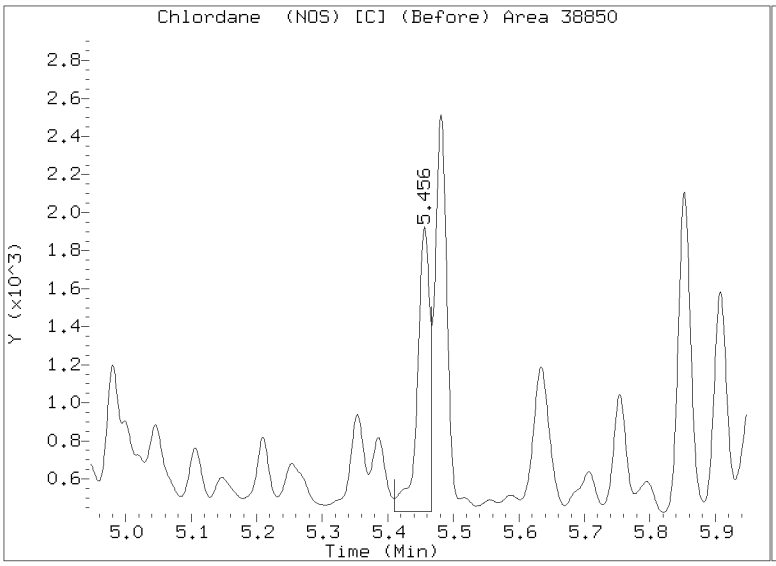


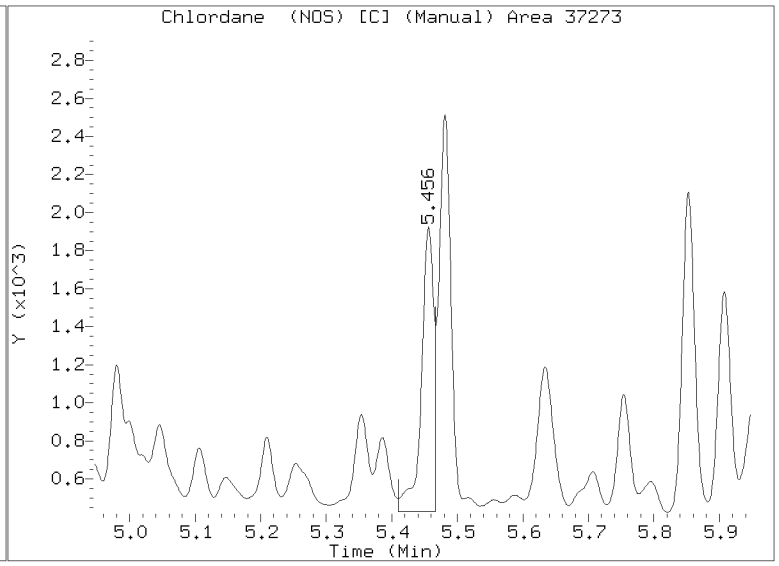


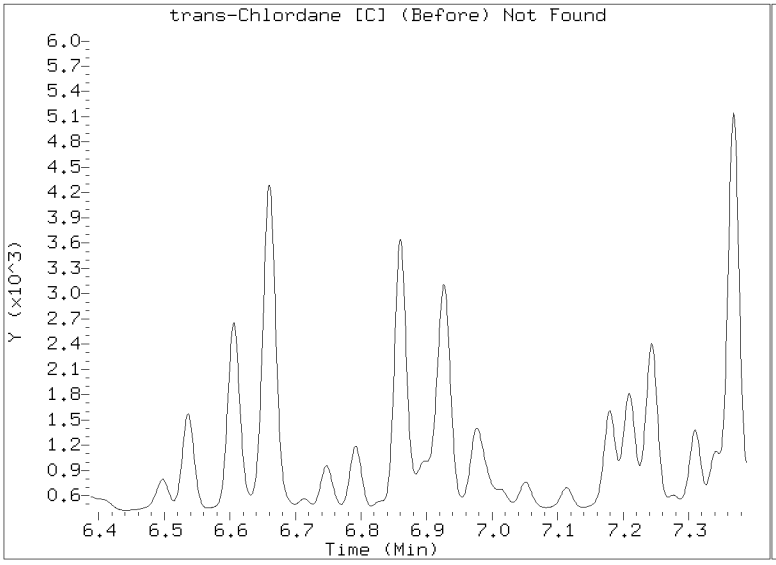


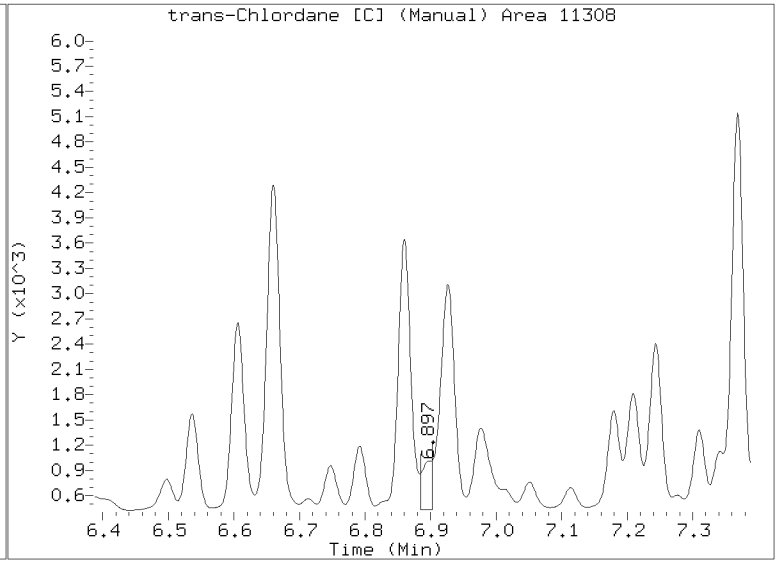
Manual Peak Adjustment Report, CLP-2

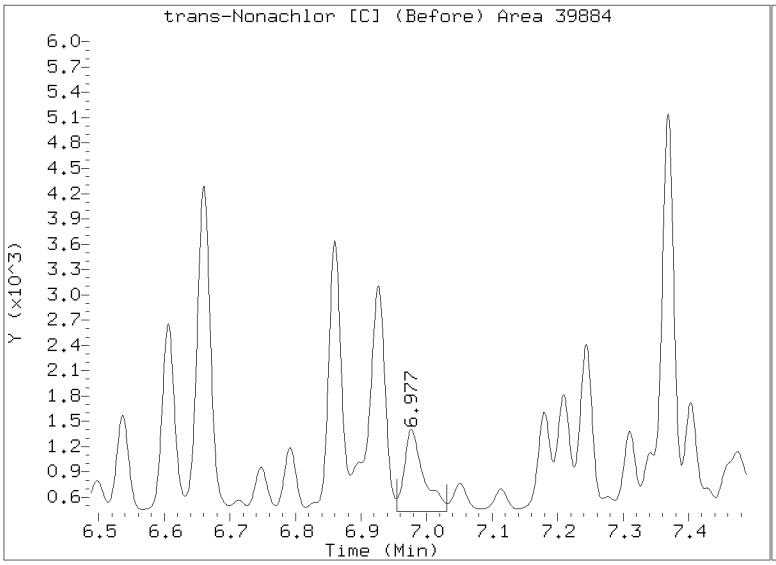
Datafile: /20230602.b/B20230602.b/23060216.D
Injection Date: 02-JUN-2023 16:41
Lab ID:23E0009-03 Client ID:

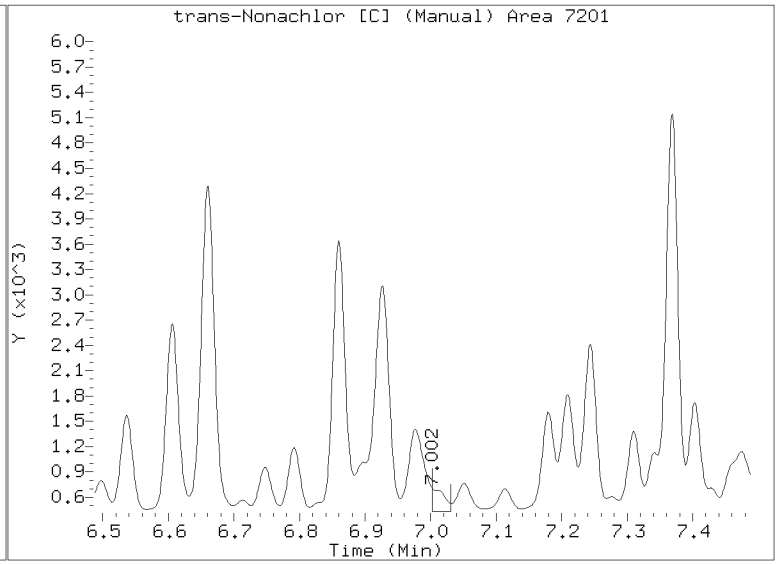






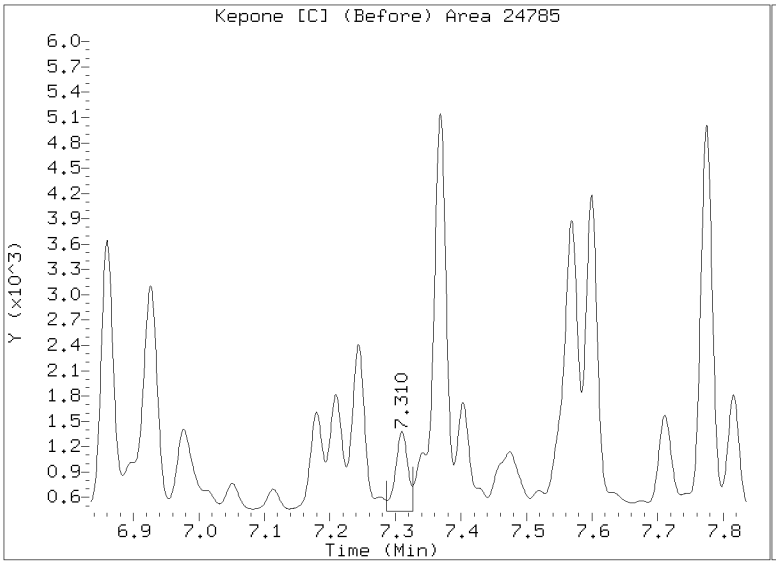


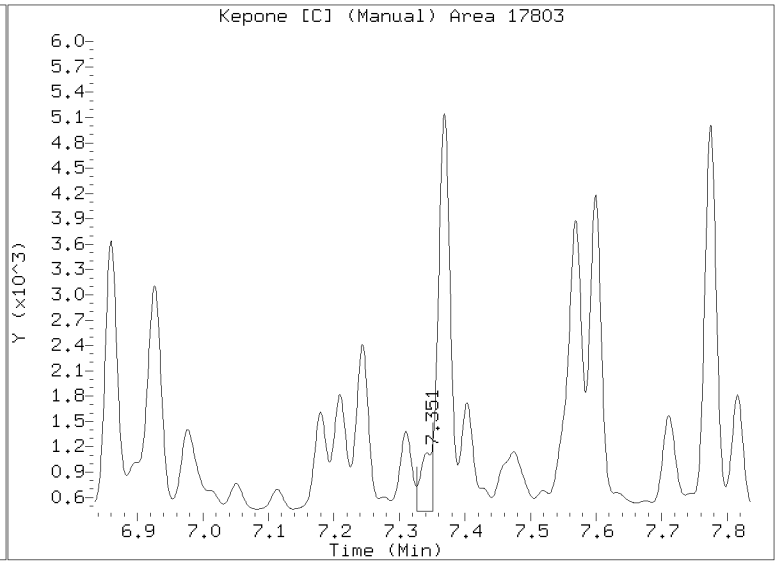


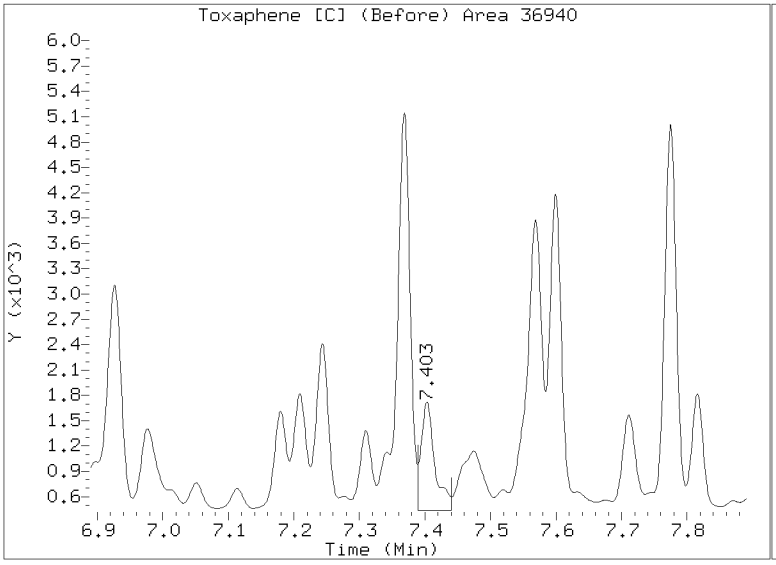


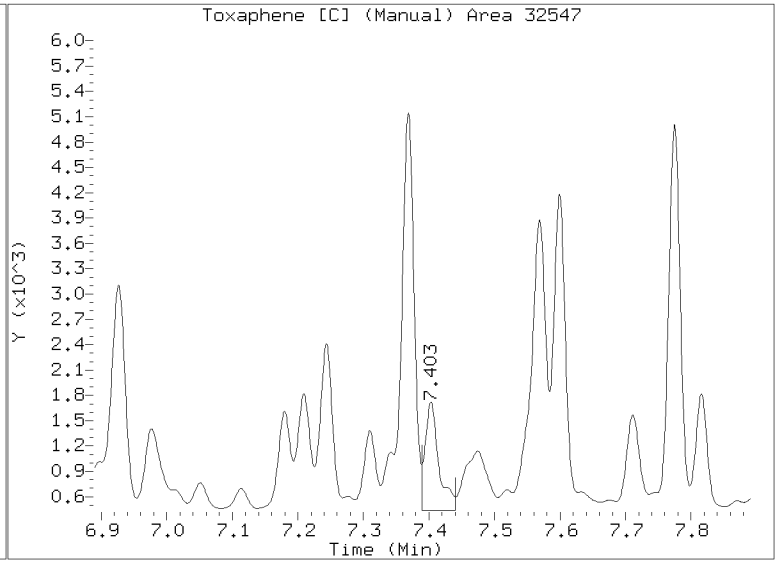
Manual Peak Adjustment Report, CLP-2

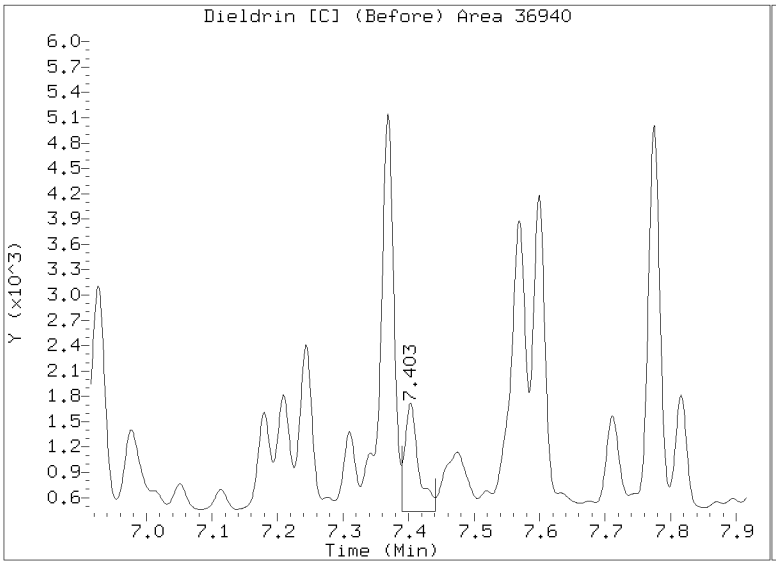
Datafile: /20230602.b/B20230602.b/23060216.D
Injection Date: 02-JUN-2023 16:41
Lab ID:23E0009-03 Client ID:

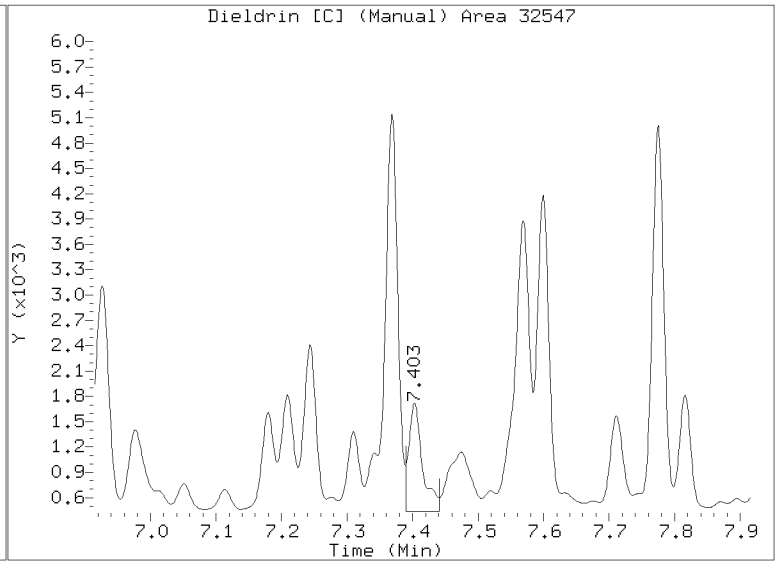






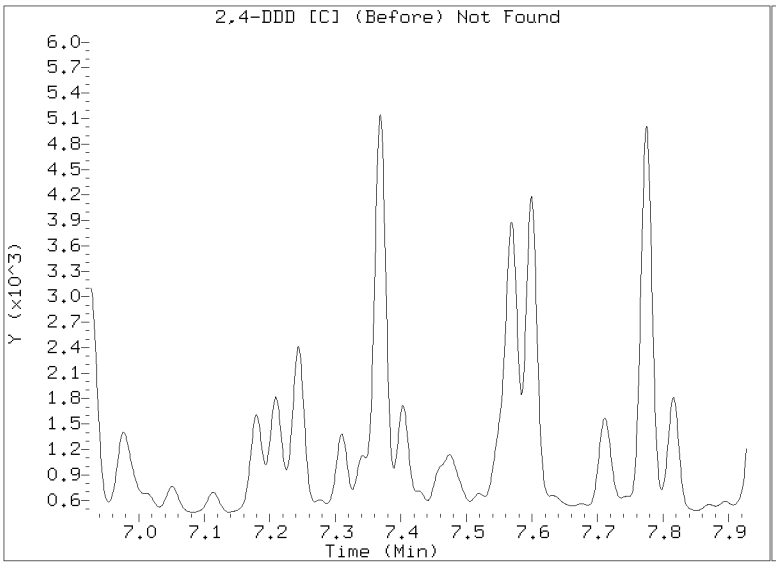


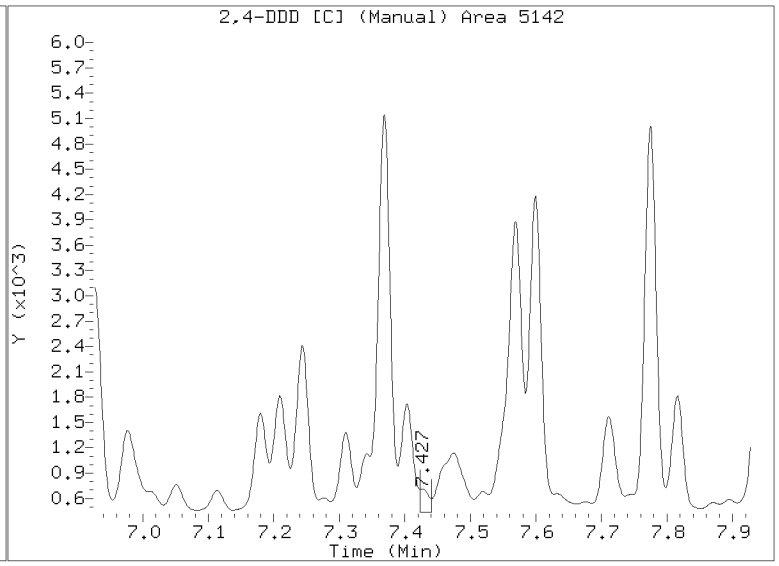


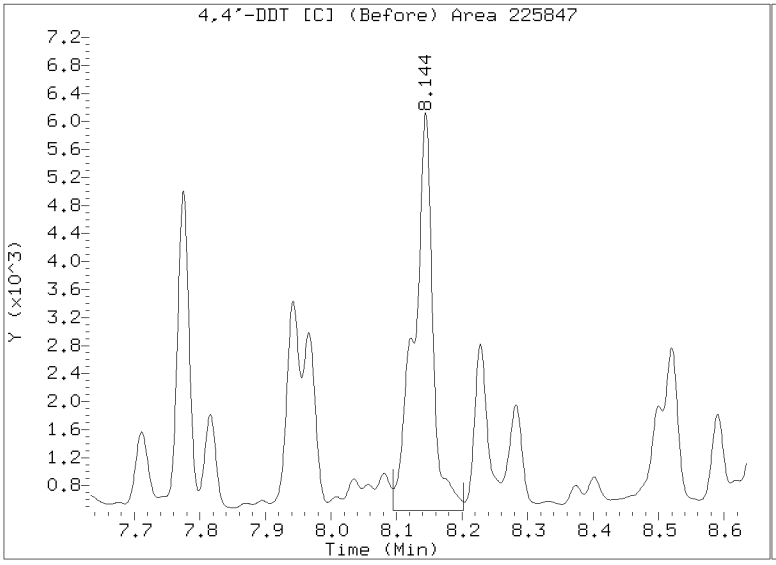


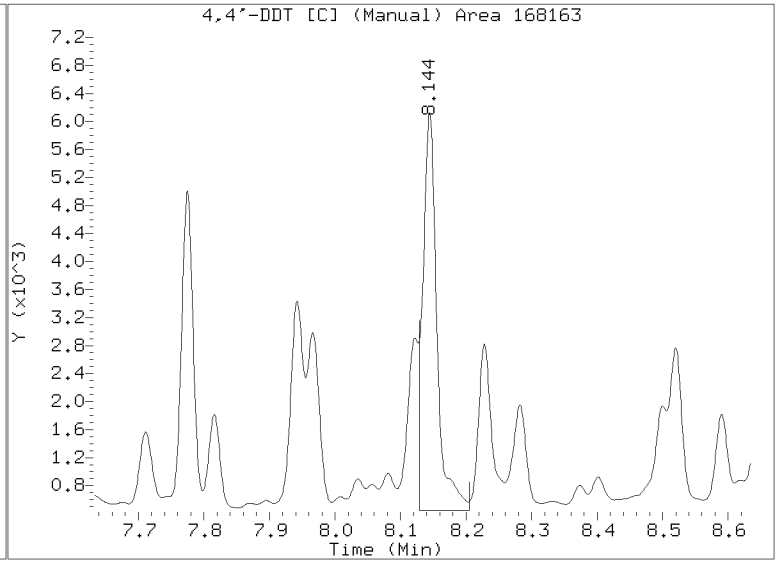
Manual Peak Adjustment Report, CLP-2

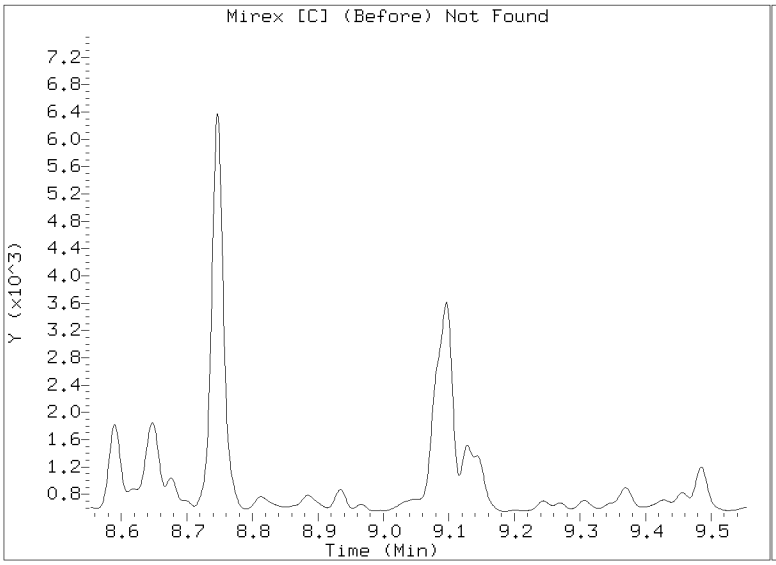
Datafile: /20230602.b/B20230602.b/23060216.D
Injection Date: 02-JUN-2023 16:41
Lab ID:23E0009-03 Client ID:

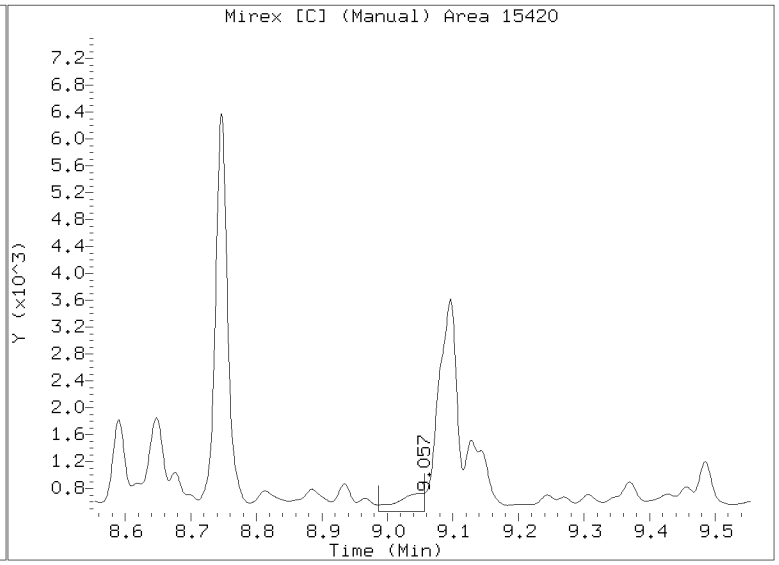






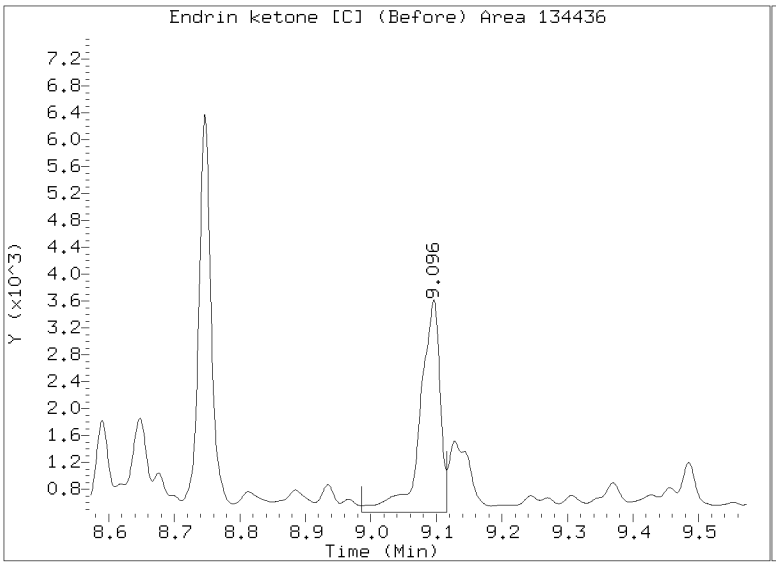


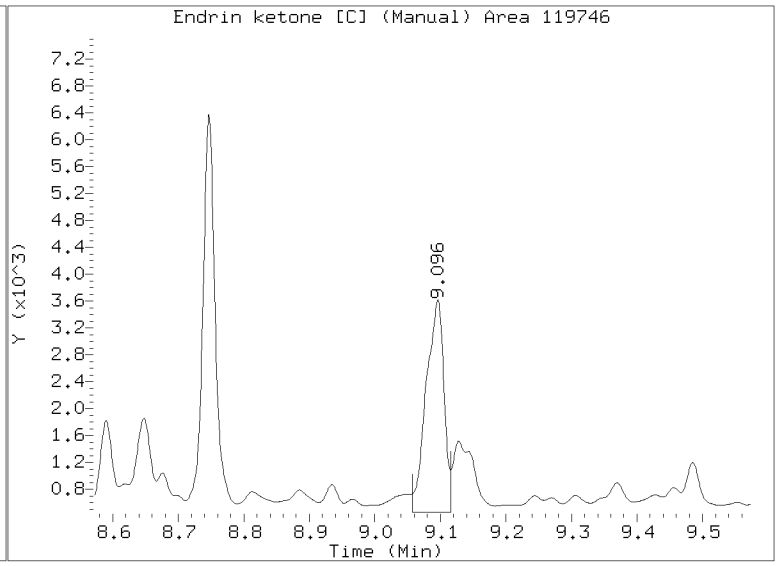




Manual Peak Adjustment Report, CLP-2

Datafile: /20230602.b/B20230602.b/23060216.D
Injection Date: 02-JUN-2023 16:41
Lab ID:23E0009-03 Client ID:





Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1800

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-05 A	File ID:	23060217.D
Sampled:	04/29/23 10:10	Prepared:	05/05/23 17:03	Analyzed:	06/02/23 17:00
% Solids:	47.45	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.37 g Wet / 2.5 mL
Batch:	BLE0150	Sequence:	SLF0091	Calibration:	GF00024
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9920*	*7.19*	*90.0*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9920*	*7.42*	*92.8*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9920*	*4.81*	*60.1*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9920*	*5.35*	*66.9*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060217.D
Data file 2: /20230602.b/B20230602.b/23060217.D
Method: \20230602.b\PEST.m
Compound Sublist: wpest.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: 23E0009-05
Client ID:
Injection Date: 02-JUN-2023 17:00
Report Date: 06/08/2023 11:23
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
4.849	-0.008	39206	----			3.85	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
5.066	-0.013	24716	5.635	0.015	34862	2.48	3.67	38.7	Heptachlor
5.421	0.021	45058	6.022	0.006	18134	4.53	1.89	82.3*	Aldrin M
6.066	-0.007	29090	6.661	-0.016	141718	3.31	17.09	135.2*	Heptachlor epoxide b
----			7.114	-0.007	9974	0.00	1.38	---	Endosulfan I
6.765	-0.013	144585	7.404	-0.012	57476	16.92	7.25	80.0*	Dieldrin
6.436	-0.005	125126	7.209	0.001	47870	15.80	6.31	85.9*	4,4'-DDE
----			7.711	-0.029	51063	0.00	8.72	---	Endrin
----			7.943	-0.009	215261	0.00	38.91	---	Endosulfan II
----			7.816	0.001	43479	0.00	8.22	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
7.373	-0.012	92153	8.145	0.010	335641	17.92	64.92	113.5*	4,4'-DDT M
7.903	0.028	34810	8.748	-0.030	159885	15.18	67.85	126.9*	Methoxychlor
----			9.097	0.024	133958	0.00	23.84	---	Endrin ketone
----			8.281	-0.002	61745	0.00	16.33	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			7.051	0.003	11951	0.00	1.50	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
----			----			0.00	0.00	---	Oxychlordane
----			6.860	-0.011	138821	0.00	28.60	---	2,4-DDE
----			6.977	-0.011	55834	0.00	9.16	---	trans-Nonachlor
6.614	-0.018	56118	----			16.22	0.00	---	2,4-DDD
6.929	0.019	13694	7.775	0.024	169915	3.38	40.54	169.2*	2,4-DDT
7.059	-0.004	266197	----			43.82	0.00	---	cis-Nonachlor
8.029	-0.008	147244	----			38.16	0.00	---	Mirex
1.761	-0.013	962	1.688	0.012	44345	0.00	0.00	---	Hexachloroethane
----			7.310	-0.026	30217	0.00	0.00	---	Kepone
3.784	0.000	196157	4.098	0.001	214420	24.05	26.78	10.7	Tetrachloro-m-xylene
9.323	0.003	135842	10.255	0.003	134978	36.01	37.13	3.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	642794	3.9
Hexabromobiphenyl	493109	369165	-25.1

Column 2

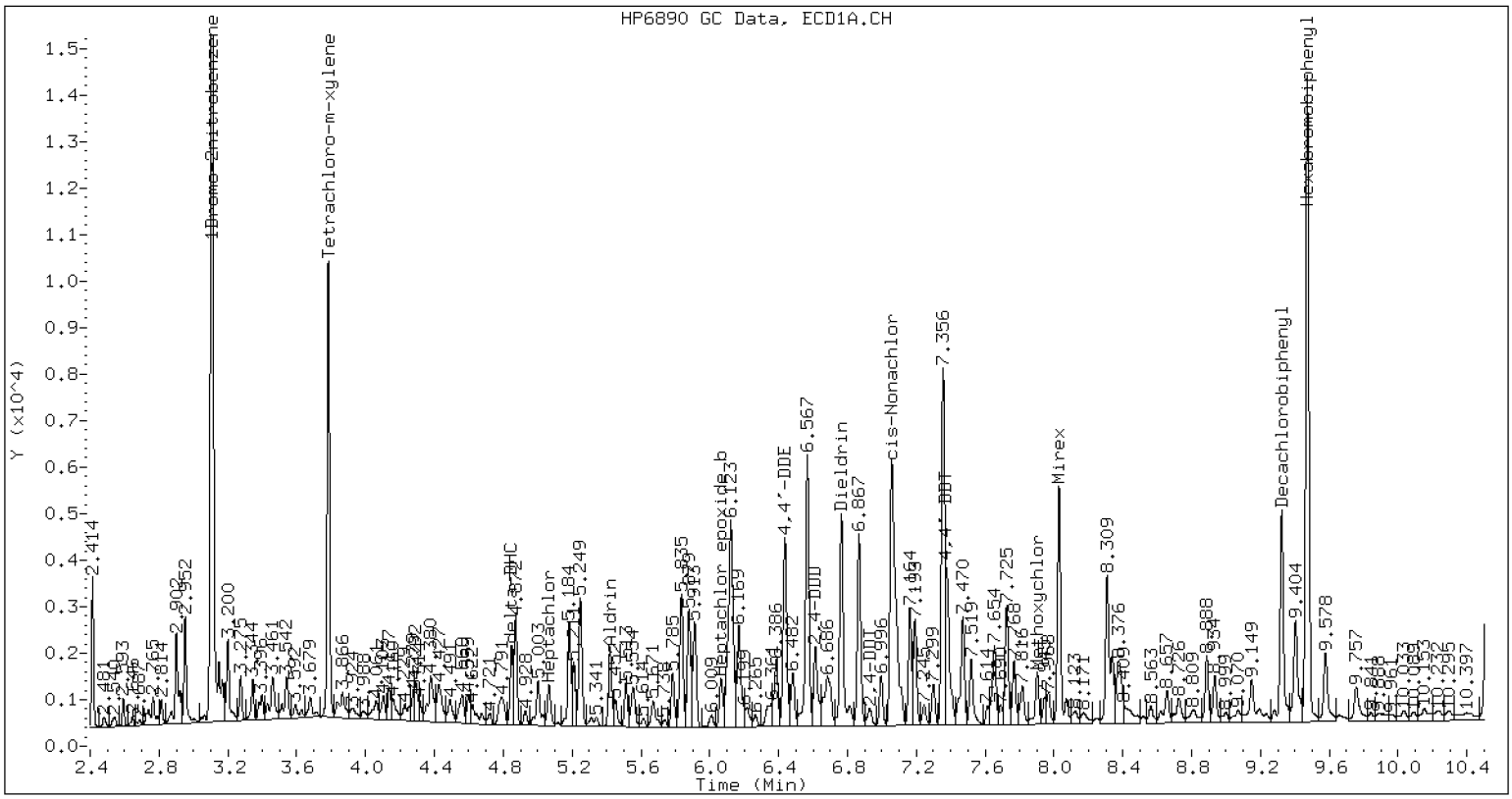
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	633428	-9.0
Hexabromobiphenyl	461581	345295	-25.2

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

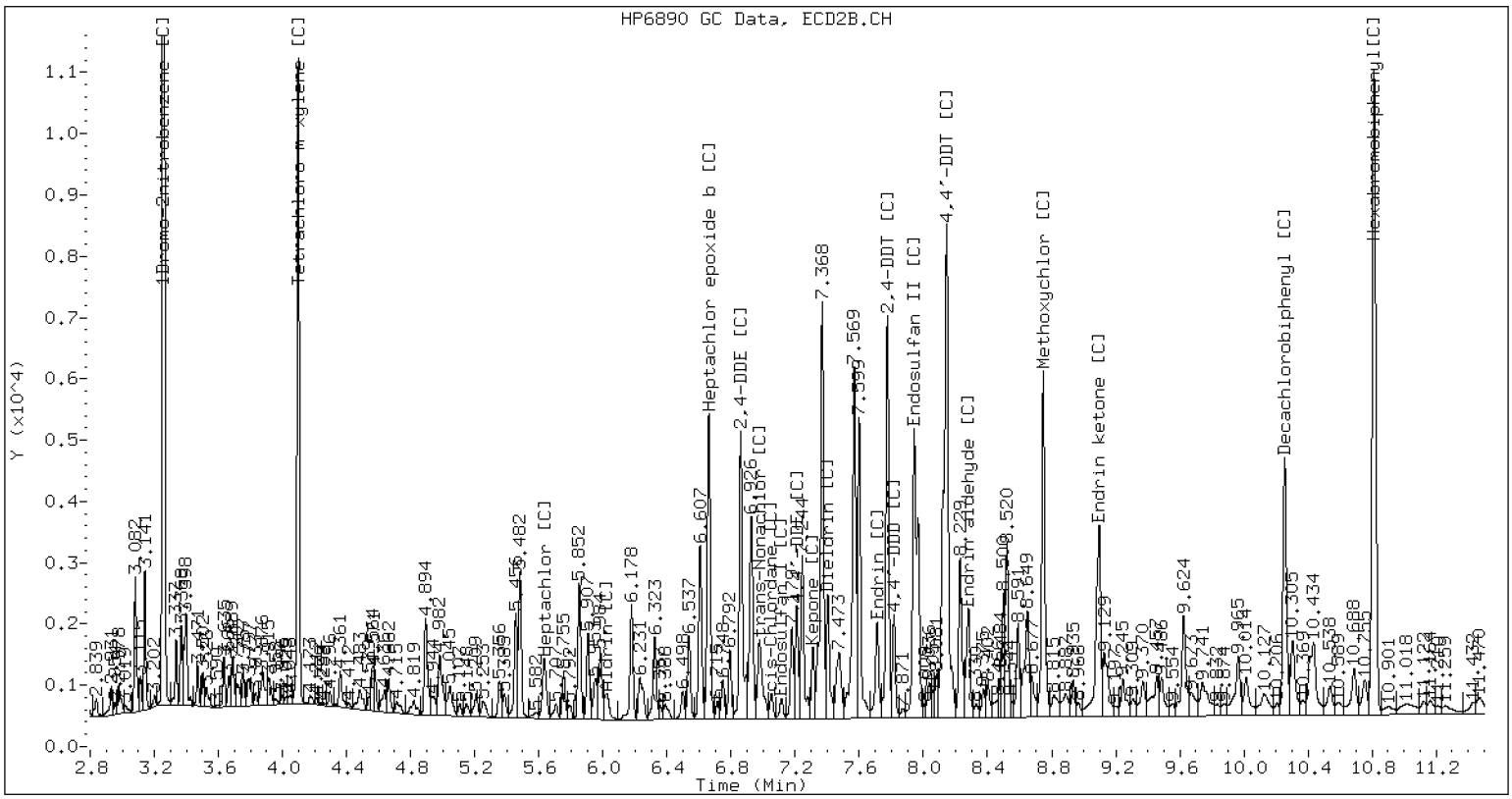
		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	---			0.000	1	---			0.000
Toxaphene	2	---			0.000	2	---			0.000
Toxaphene	3	---			0.000	3	---			0.000
Toxaphene	4	---			0.000	4	---			0.000
Toxaphene	5	---			0.000	5	---			0.000
	STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks				

		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	---			0.000	1	---			0.000
Chlordane (NOS)	2	---			0.000	2	---			0.000
Chlordane (NOS)	3	---			0.000	3	---			0.000
	STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks				

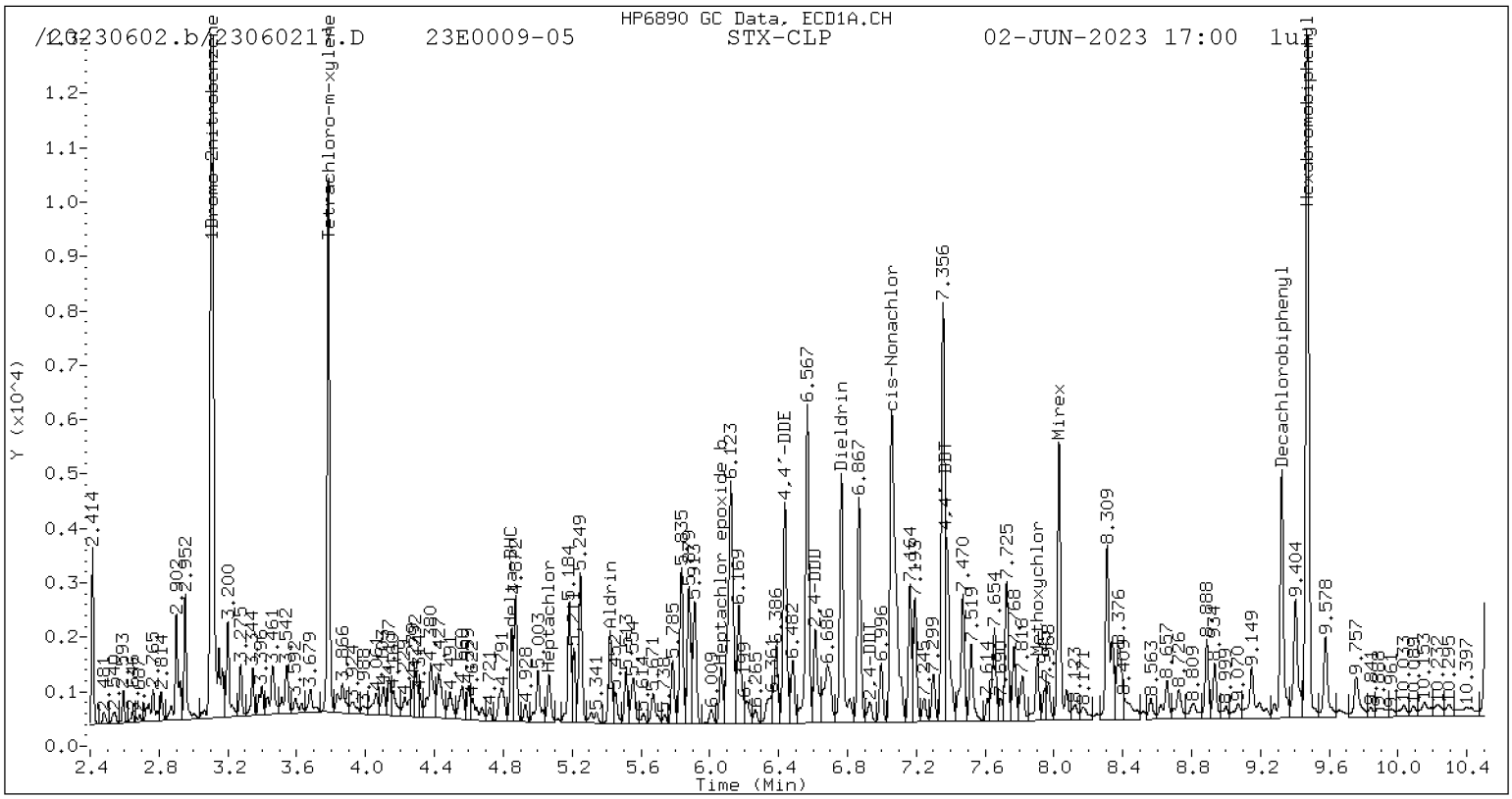
/20230602.b/23060217.D 23E0009-05 STX-CLP 02-JUN-2023 17:00 1ul



/20230602.b/B20230602.b/23060217.D 23E0009-05 CLP2 02-JUN-2023 17:00 1ul

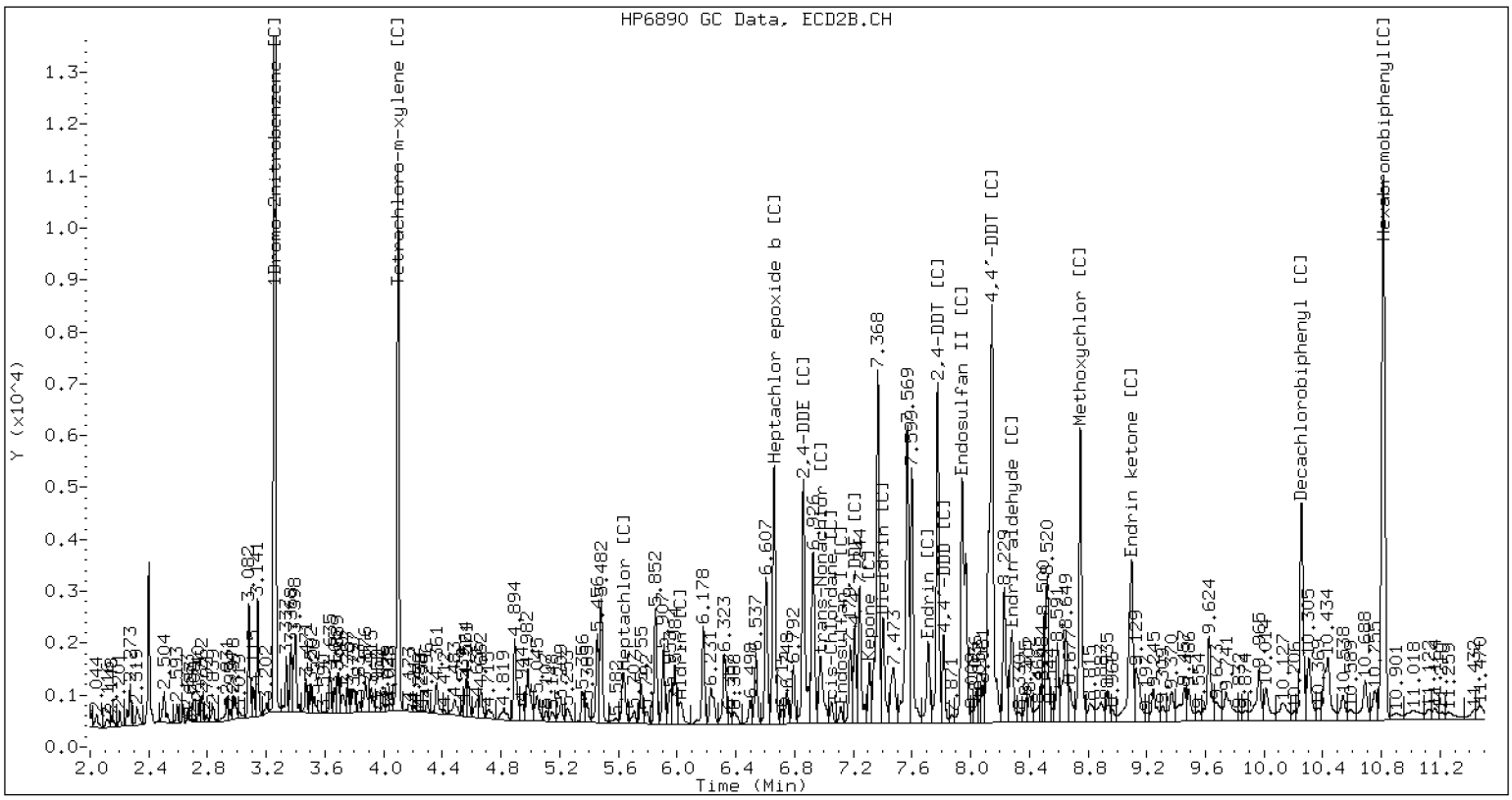


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

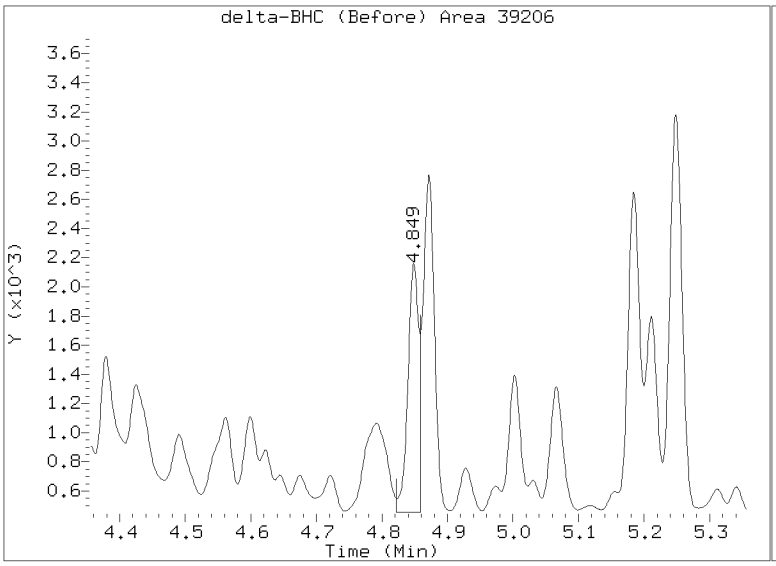
/20230602.b/B20230602.b/23060217.D 23E0009-05 CLP2

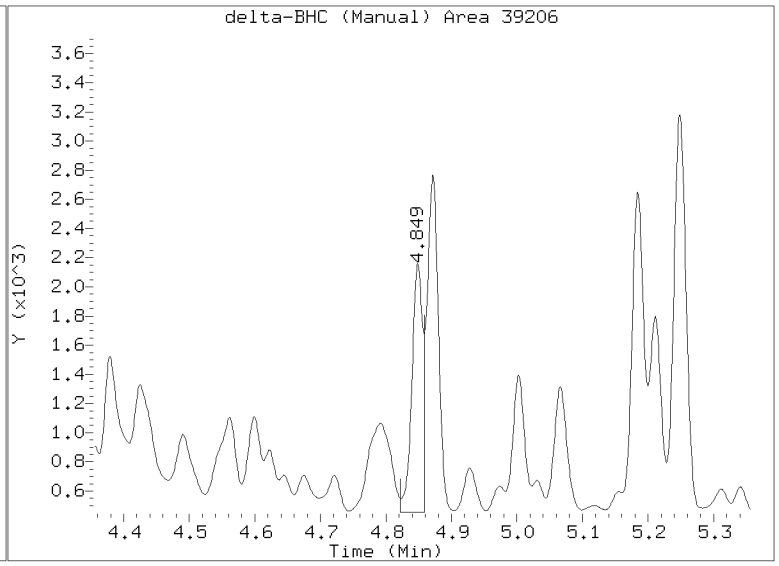


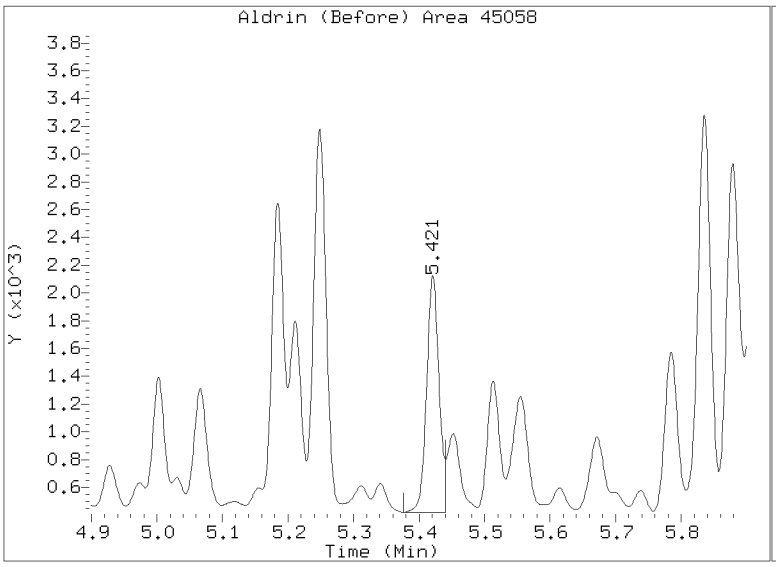
CLP-2 Manual Integration: NO

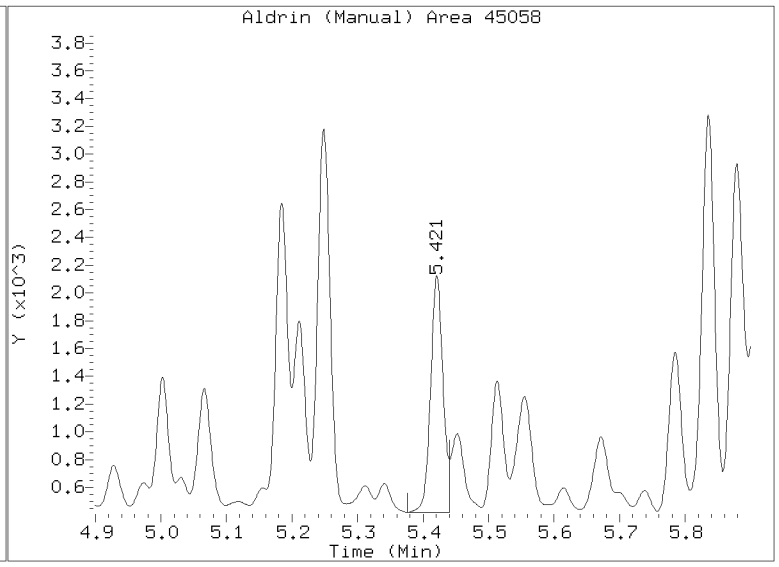
Manual Peak Adjustment Report, STX-CLP

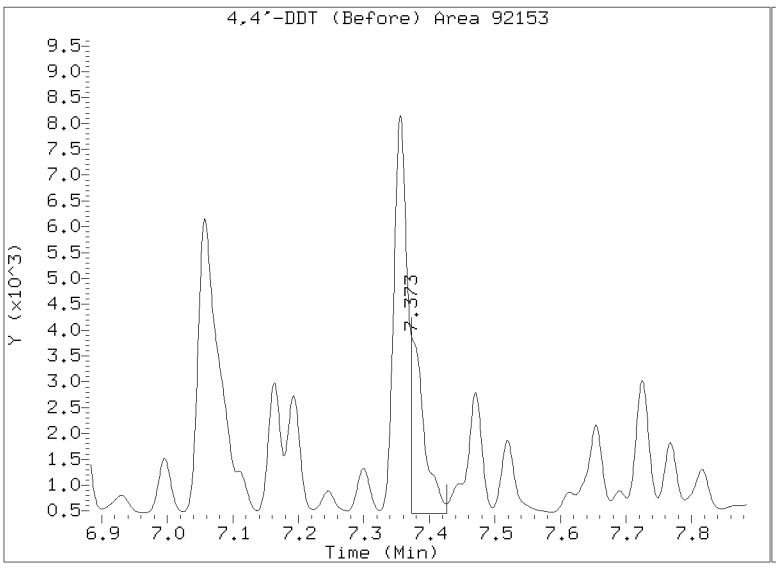
Datafile: /20230602.b/23060217.D
Injection Date: 02-JUN-2023 17:00
Lab ID:23E0009-05 Client ID:
Report Date: 06/08/2023 11:23

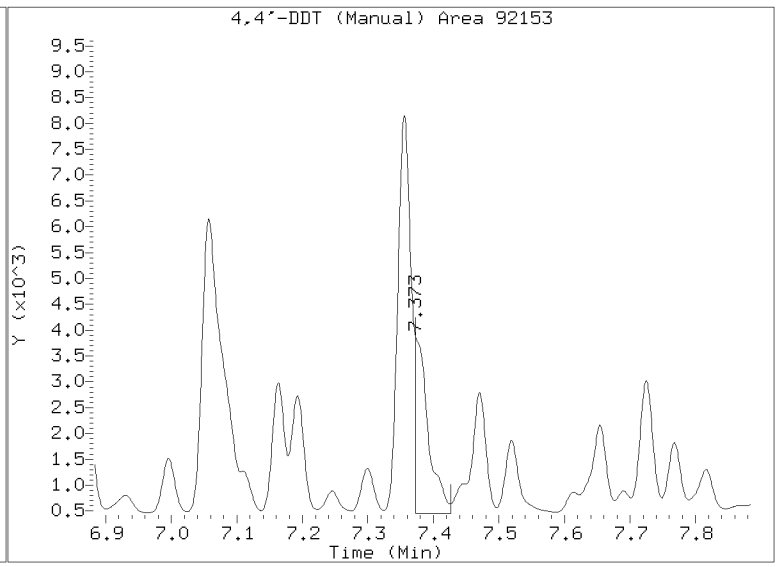












Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1820

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-07 A	File ID:	23060218.D
Sampled:	04/29/23 14:00	Prepared:	05/05/23 17:03	Analyzed:	06/02/23 17:18
% Solids:	53.18	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.59 g Wet / 2.5 mL
Batch:	BLE0150	Sequence:	SLF0091	Calibration:	GF00024
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.47	0.14	0.50	J

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9712*	*6.68*	*83.8*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9712*	*6.53*	*81.9*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9712*	*5.16*	*64.8*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9712*	*5.21*	*65.4*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060218.D
Data file 2: /20230602.b/B20230602.b/23060218.D
Method: \20230602.b\PEST.m
Compound Sublist: wpest.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: 23E0009-07
Client ID:
Injection Date: 02-JUN-2023 17:18
Report Date: 06/08/2023 11:23
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
5.065	-0.014	13707	----			1.46	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
6.065	-0.008	13558	6.659	-0.018	57708	1.64	6.69	121.3*	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
6.763	-0.014	46099	----			5.73	0.00	---	Dieldrin
6.437	-0.004	61285	7.209	0.000	31139	8.23	3.94	70.4*	4,4'-DDE
----			7.710	-0.030	23024	0.00	3.87	---	Endrin
----			7.964	0.012	35178	0.00	6.26	---	Endosulfan II
7.075	-0.014	46720	7.815	-0.000	29059	9.50	5.41	54.9*	4,4'-DDD M
----			----			0.00	0.00	---	Endosulfan sulfate
7.377	-0.007	26684	8.143	0.008	138701	5.25	26.40	133.6*	4,4'-DDT M
7.901	0.027	16006	----			7.07	0.00	---	Methoxychlor
8.395	-0.009	71179	9.095	0.021	51562	13.28	9.03	38.1	Endrin ketone M
----			8.281	-0.003	19765	0.00	5.15	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
4.136	0.000	25137	4.579	0.001	26994	2.37	2.40	1.4	Hexachlorobenzene M
----			----			0.00	0.00	---	Oxychlordane
----			6.858	-0.013	53598	0.00	10.61	---	2,4-DDE
----			----			0.00	0.00	---	trans-Nonachlor
6.614	-0.018	27479	----			8.04	0.00	---	2,4-DDD
----			7.774	0.023	57139	0.00	13.41	---	2,4-DDT
7.057	-0.006	67624	----			11.27	0.00	---	cis-Nonachlor
8.028	-0.010	54739	----			14.37	0.00	---	Mirex
1.761	-0.013	706	1.688	0.012	64328	0.00	0.00	---	Hexachloroethane
6.566	-0.022	75835	----			0.00	0.00	---	Kepone
3.784	0.000	198777	4.098	0.001	217975	25.91	26.16	0.9	Tetrachloro-m-xylene
9.321	0.001	124821	10.253	0.002	120998	33.51	32.75	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	604697	-2.3
Hexabromobiphenyl	493109	364551	-26.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	659190	-5.3
Hexabromobiphenyl	461581	350887	-24.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

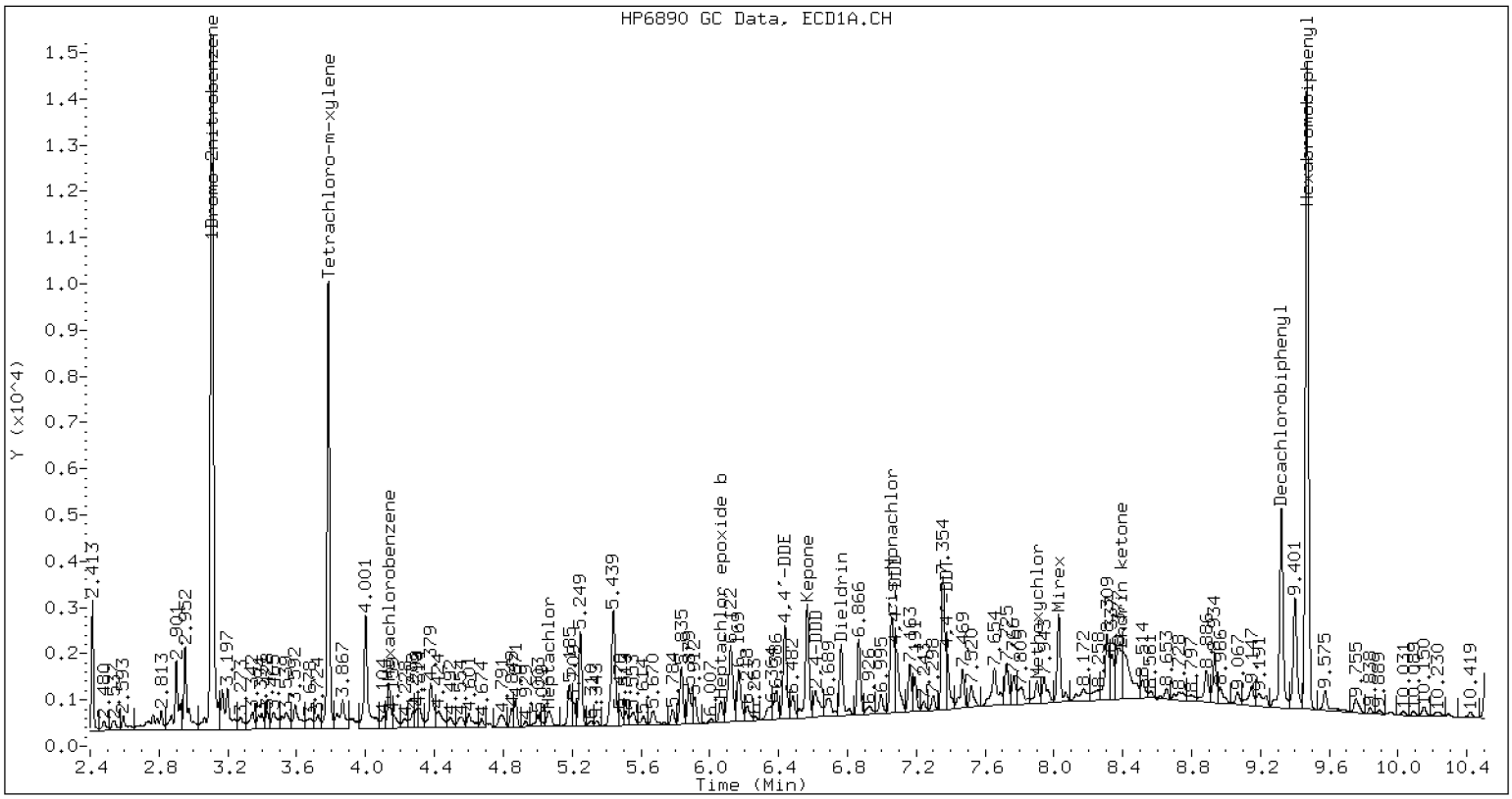
		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	---			0.000	1	---			0.000
Toxaphene	2	---			0.000	2	---			0.000
Toxaphene	3	---			0.000	3	---			0.000
Toxaphene	4	---			0.000	4	---			0.000
Toxaphene	5	---			0.000	5	---			0.000

STX-CLPAve: <3 Quant Peaks CLP2Ave: <3 Quant Peaks

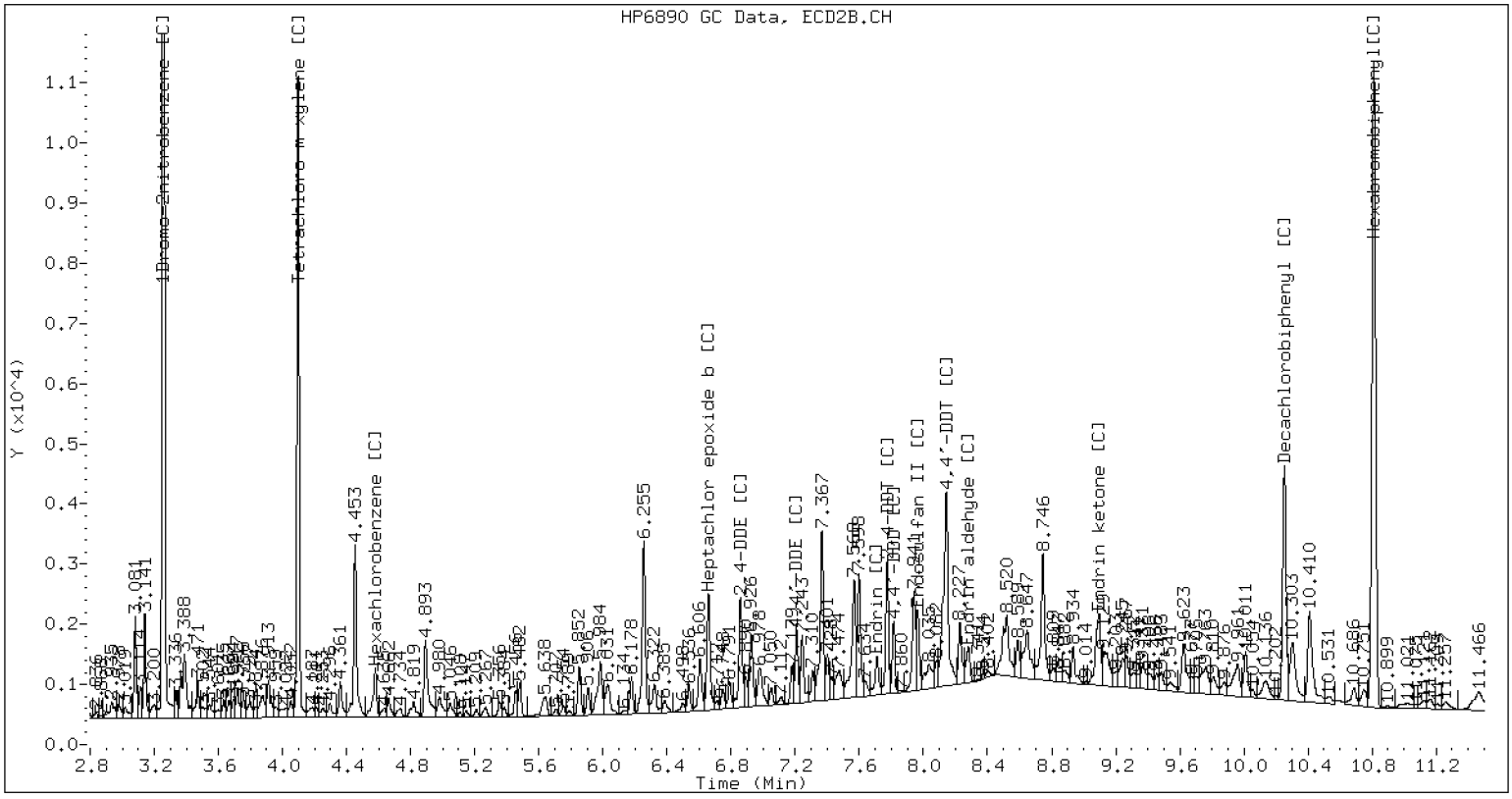
		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	---			0.000	1	---			0.000
Chlordane (NOS)	2	---			0.000	2	---			0.000
Chlordane (NOS)	3	---			0.000	3	---			0.000

STX-CLPAve: <3 Quant Peaks CLP2Ave: <3 Quant Peaks

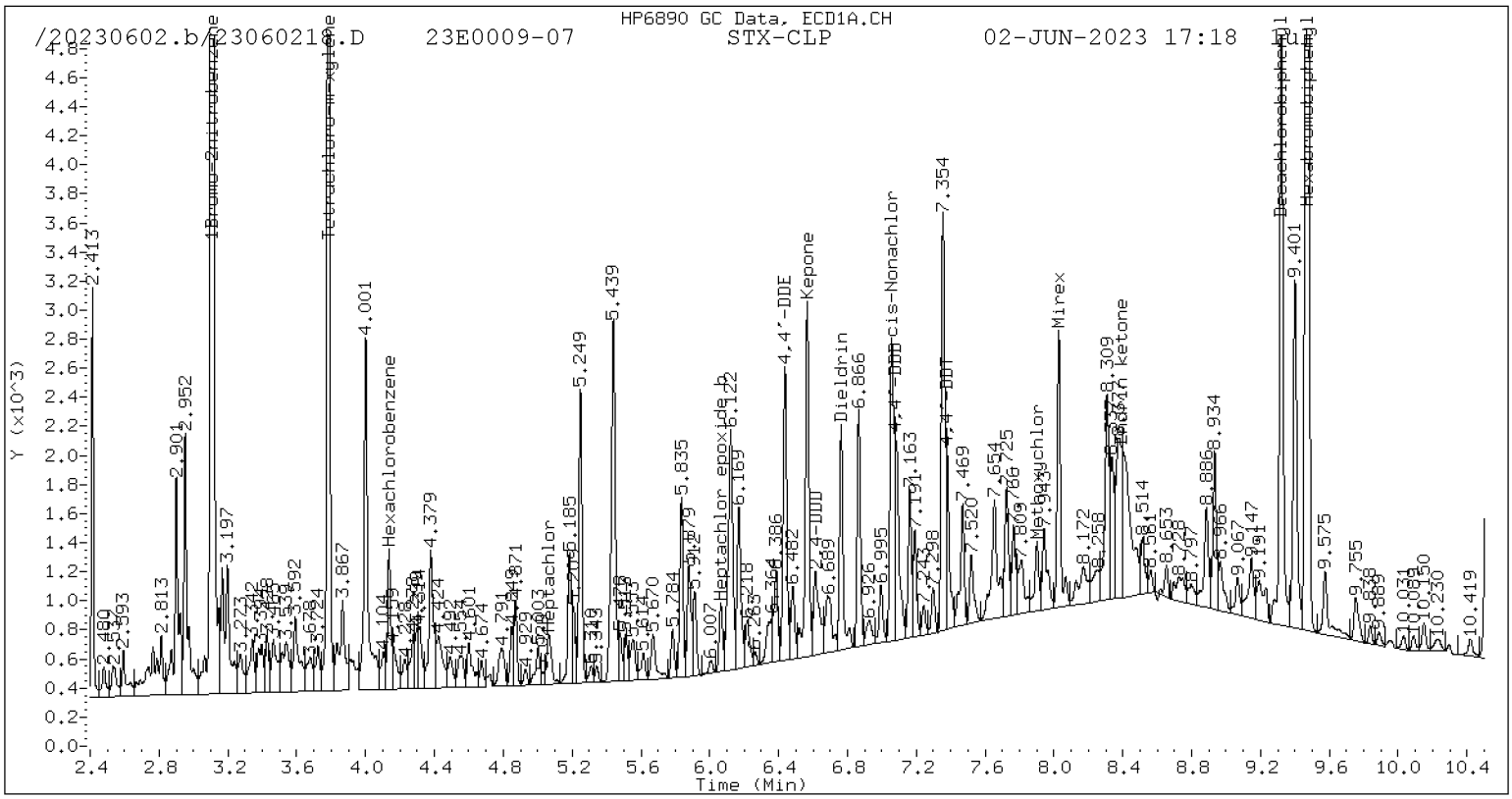
/20230602.b/23060218.D 23E0009-07 STX-CLP 02-JUN-2023 17:18 1ul



/20230602.b/B20230602.b/23060218.D 23E0009-07 CLP2 02-JUN-2023 17:18 1ul

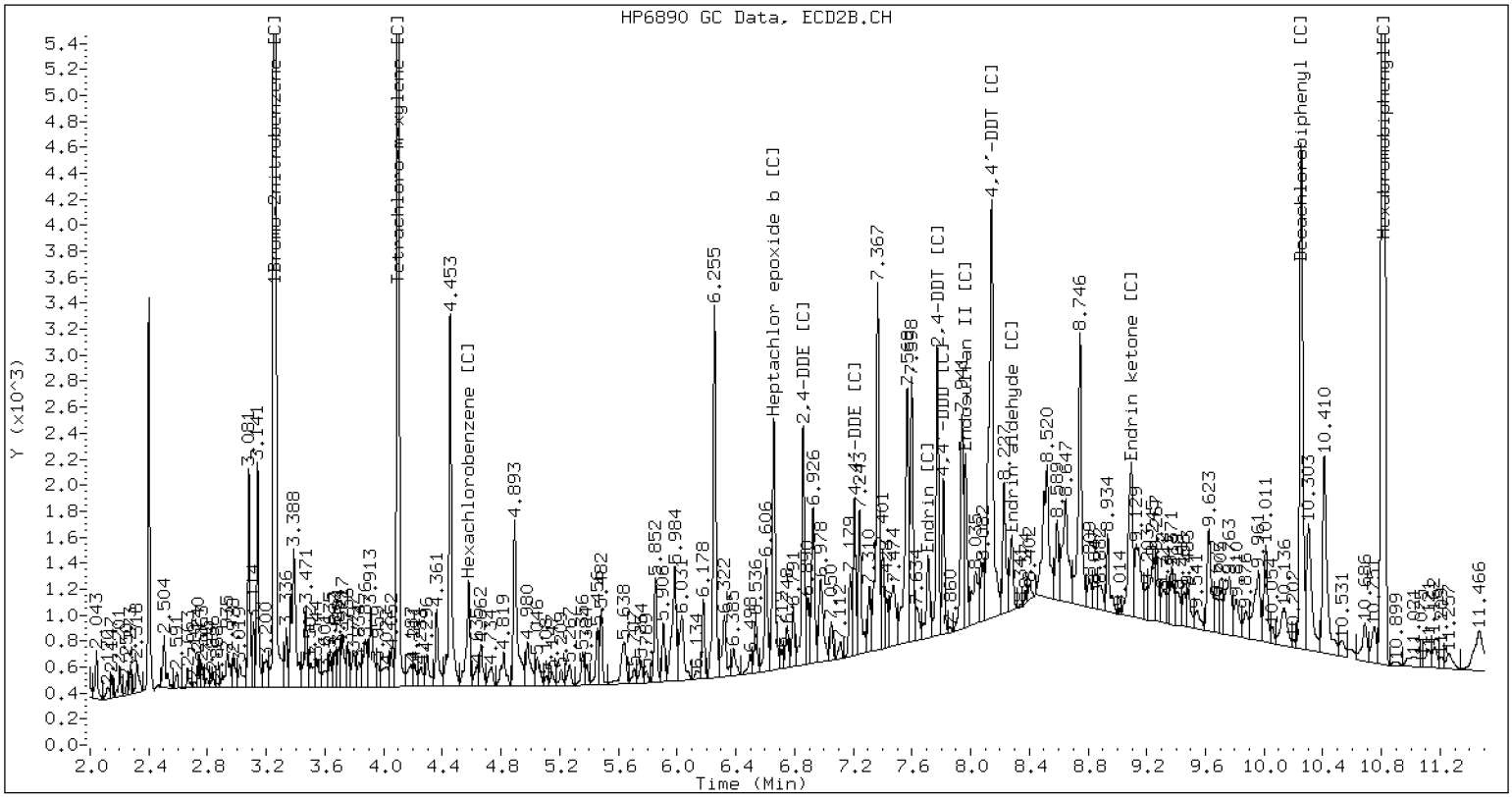


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

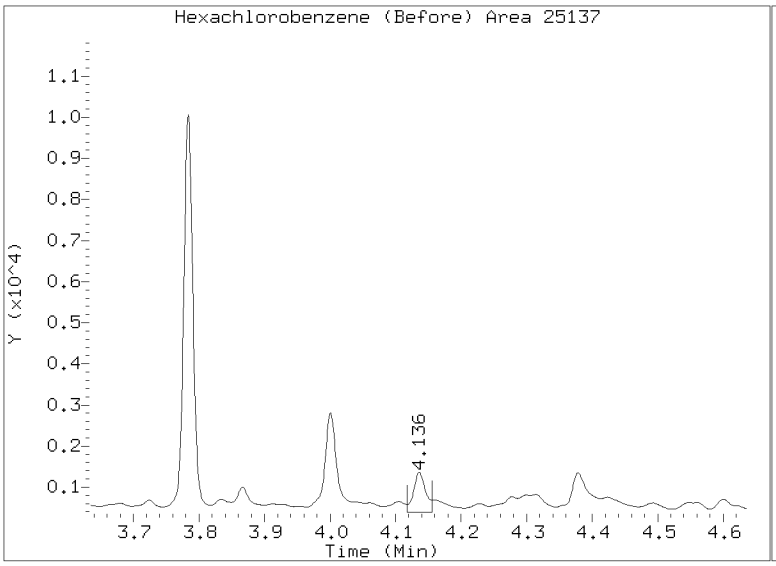
/20230602.b/B20230602.b/23060218.D 23E0009-07 CLP2

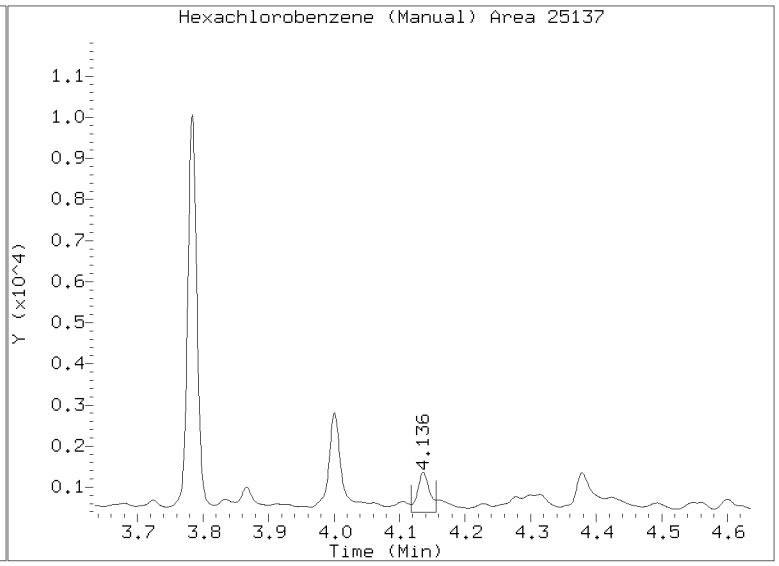


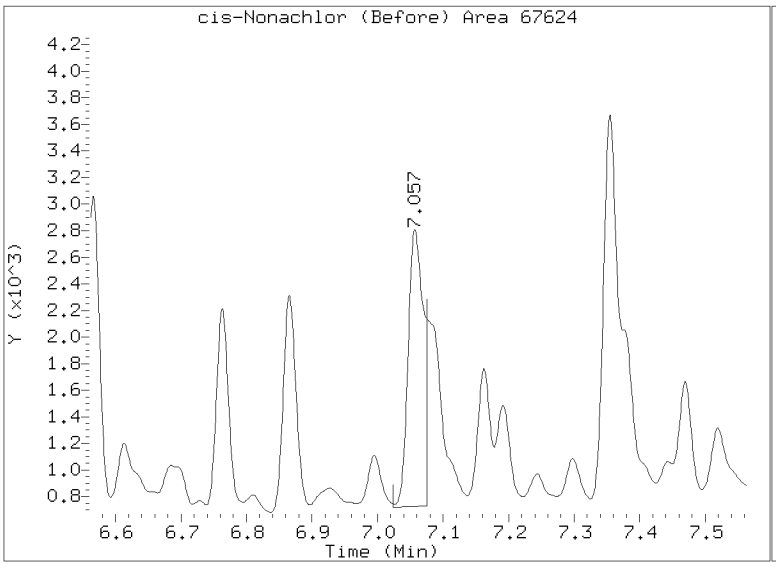
CLP-2 Manual Integration: NO

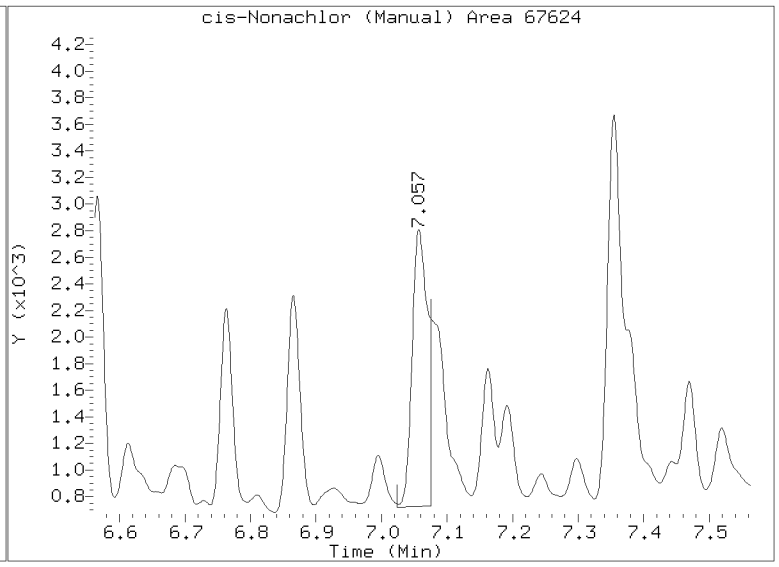
Manual Peak Adjustment Report, STX-CLP

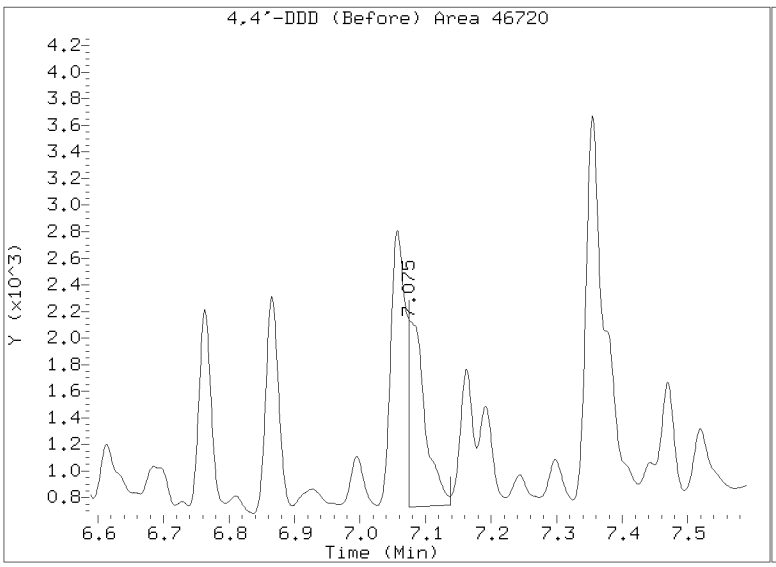
Datafile: /20230602.b/23060218.D
Injection Date: 02-JUN-2023 17:18
Lab ID:23E0009-07 Client ID:
Report Date: 06/08/2023 11:23

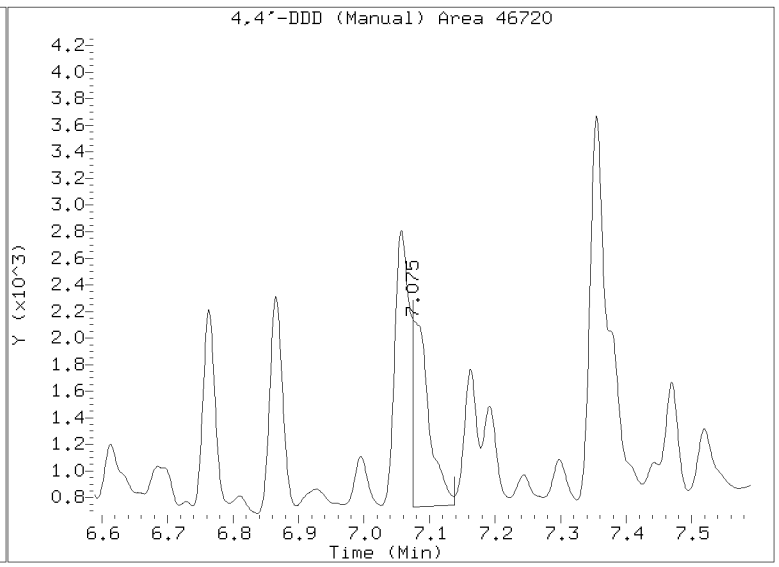






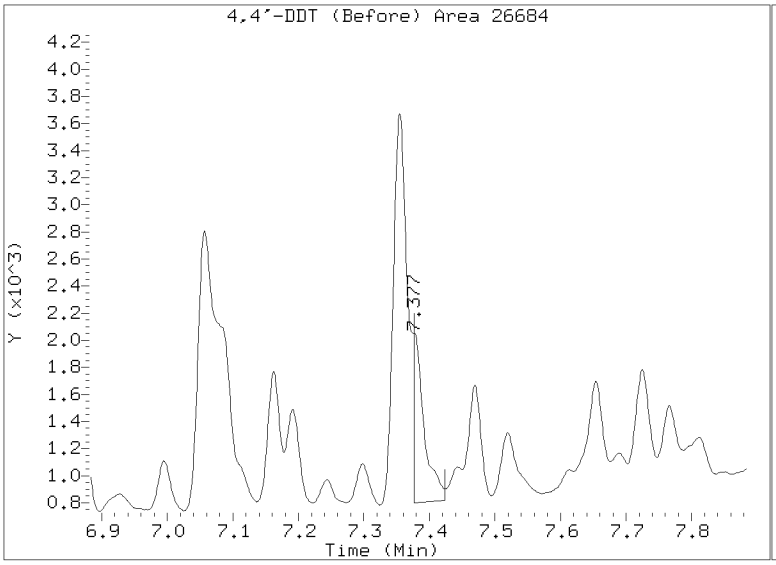


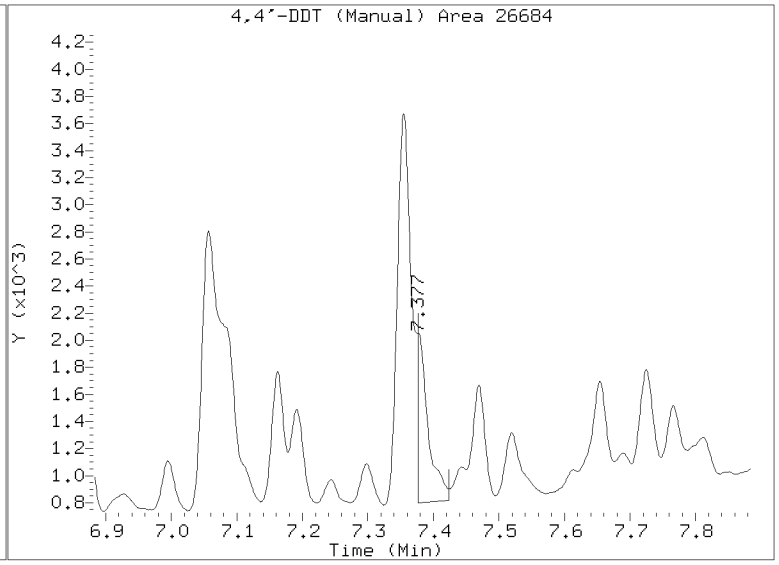


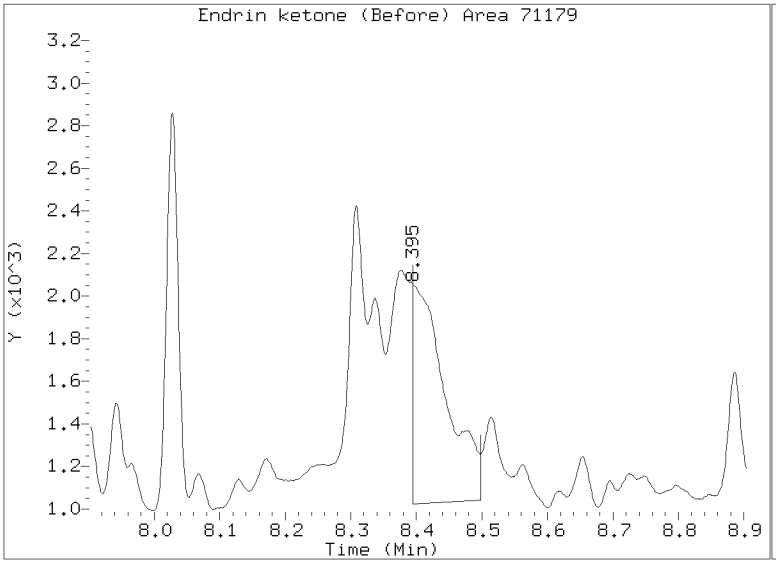


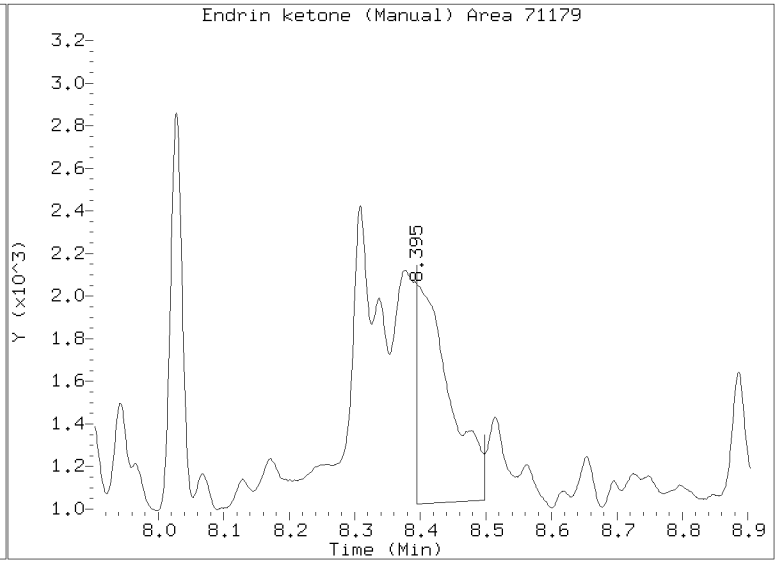
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230602.b/23060218.D
Injection Date: 02-JUN-2023 17:18
Lab ID:23E0009-07 Client ID:
Report Date: 06/08/2023 11:23









PREPARATION BATCH SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0150 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01	23060215.D	05/05/23 17:03	
LDW23-SS1805	23E0009-03	23060216.D	05/05/23 17:03	
LDW23-SS1800	23E0009-05	23060217.D	05/05/23 17:03	
LDW23-SS1820	23E0009-07	23060218.D	05/05/23 17:03	
Blank	BLE0150-BLK1	23060208.D	05/05/23 17:03	
LCS	BLE0150-BS1	23060209.D	05/05/23 17:03	
LCS Dup	BLE0150-BSD1	23060210.D	05/05/23 17:03	
LDW23-SS1800	BLE0150-MS1	23060211.D	05/05/23 17:03	
LDW23-SS1800	BLE0150-MSD1	23060212.D	05/05/23 17:03	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0150

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

Matrix: Solid Date Prepared: 05/11/23 5/4/23 Balance ID: B14646261 4 Set Up By: CTO 5/4/23

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)
23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
62	Toxaphene
44	WND
QLS 10	QLS Spike

Analysis: 8081B Pest (PSDDA)

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Actual	(REQ) GPC (1:1) (1) 2 3	(Yes / No) Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL ~~Ethyl Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23D0394-07 A	87.2	(14.34)	14.35	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23D0394-13 A	76.5	(16.35)	16.36	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23E0009-01 A	69.3	(18.04)	18.05	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23E0009-03 A	50.8	(24.61)	24.62	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23E0009-05 A	47.5	(26.34)	26.37	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23E0009-07 A	53.2	(23.51)	23.56 JD 5/14/23	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Actual	(REQ) GPC (1:1) (1) 2 3	(Yes / No) Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL ~~Ethyl Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLE0150-BLK1	100.0	(12.50)	12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLE0150-BS1	100.0	(12.50)	12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLE0150-BSD1	100.0	(12.50)	12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLE0150-MS1	47.5	(26.34)	26.34	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23E0009-05
BLE0150-MSD1	47.5	(26.34)	26.34	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23E0009-05

Client ID verified By 05/11/23 — Date

NRS 5/31/23 — Preparation Reviewed By — Date

05/11/23 17:13 — Extraction Date and Time

Printed: 5/4/2023 2:14:40PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0150

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)
23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
GT (1) 2 3
GT 5/12/23
Analyst/Date

Pre GPC KD
100°C
(No Exchange)
(1) 3 4 (5) 6
RT 5/25
Analyst/Date

TurboVap
Pre GPC
1 2 3 (4) 5
SH 5/25/23
Analyst/Date

Post GPC KD
80 - 85°C
Hexane Exchange
(2 X 20 mL)
100°C
(1) (2) 3 4 (5) 6
RT 5/30
Analyst/Date

TurboVap
Pre-Cleanups
1 2 3 (4) 5
TLG 5/31/23
Analyst/Date

TurboVap
Post-Cleanups
1 2 (3) 4 5
MKS 5/31/23
Analyst/Date

Vialing
MKS 5/31/23

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: GT Date: 5/12/23	
Hexane	L#03504
80:20 Hexane/Acetone	L#02246
1:1 Hexane/Acetone	L#04534
Neutral Glass Wool	L#03662
Anhydrous Sodium Sulfate	L#05#16
Pre GPC KD Analyst: RT Date: 5/25/23	
Hexane	L#03500
Anhydrous Sodium Sulfate	L#05#16
Neutral Glass Wool	L#03662
GPC Filter Prep Analyst: SH Date: 5/25/23	
Methylene Chloride	K#05941
GPC Filter	L#01799
GPC Analyst: SH Date: 5/26/23	
Methylene Chloride	K#05741
GPC Calibration File	CK L#287 - GPC2
Post GPC KD Analyst: RT Date: 5/30/23	
Methylene Chloride	K#05941
Hexane	D#03504
Vialing Analyst: TLG / MKS Date: 5/31/23	
Hexane	K#03504
Sulfuric Acid	L#05399
Ethyl Acetate	N/A
Tetrabutylammonium hydrogensulfate (TBAS)	L#03024
Sodium Sulfite	L#02457

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID		Vol uL	Analyst	Witness
Surrogate 2µg/mL	N Exp Date:	L003667	50µL	GT	✓
Spike (Freezer) 0.5/1/5µg/mL	3 Exp Date:	L003590	100µL	GT	✓

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0150

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Analyst/Date	Silica Gel (SPE) Darts	LP03133

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0150

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23D0394: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <B>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </B>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <B>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </B>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessels. 3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask using a funnel containing neutral glasswool. 8. Rinse with Hexane. 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD to 5mL at 100°C. (NO HEXANE EXCHANGE). 12. TurboVap 13. GPC 14. After GPC: KD at 80 - 85°C 15. Exchange to Hexane at 100°C 2 x 20 mL). 16. TurboVap. 17. Cleanups, If Acid cleaning do not add Ethyl Acetate for Sulfur Clean. Do Not Acid Clean if Acid liable compounds are requested. 18. Vial in Hexane. A. Need Total Solids Y / N B. Archive/Freeze Y / N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

~~PAH~~ PEST

Extraction Parameter: ~~PCB~~ Extraction Batch: BLE0850

Total Solids Batch: BLE0848 Work Order(s): 23E0009

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= ϕ1, ϕ3 – ϕ8.	ϕ5/ϕ2/23
☒ Standing Water Decanted (Not shared)= ϕ1, ϕ2 – ϕ8.	ϕ5/ϕ2/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? ~~1~~ 5: 1% = ϕ2.	ϕ5/ϕ2/23
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	ϕ5/ϕ2/23
☒ Multiple Jars Y / N	ϕ5/ϕ2/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : BLK1

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

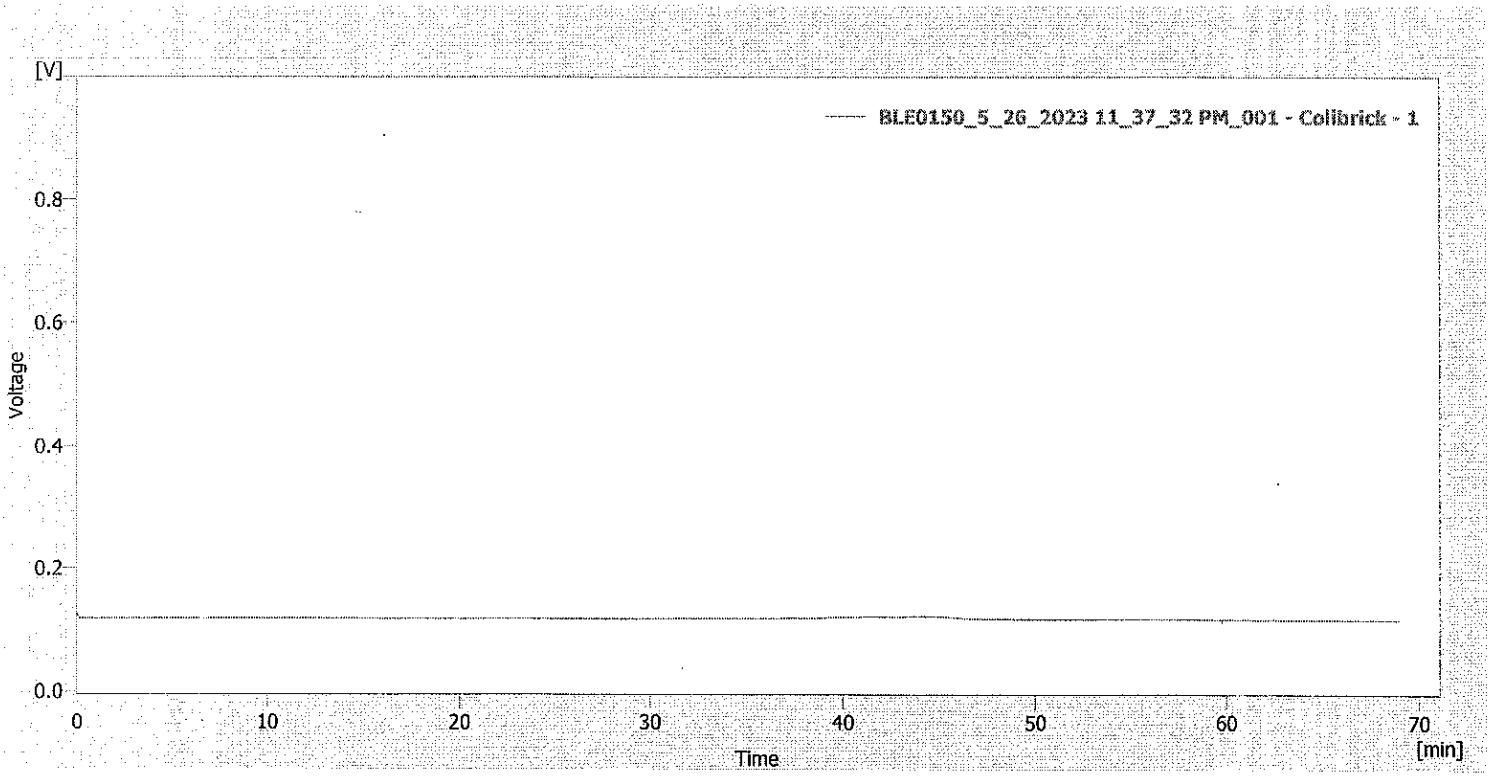
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/26/2023 11:37 PM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : BS1

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

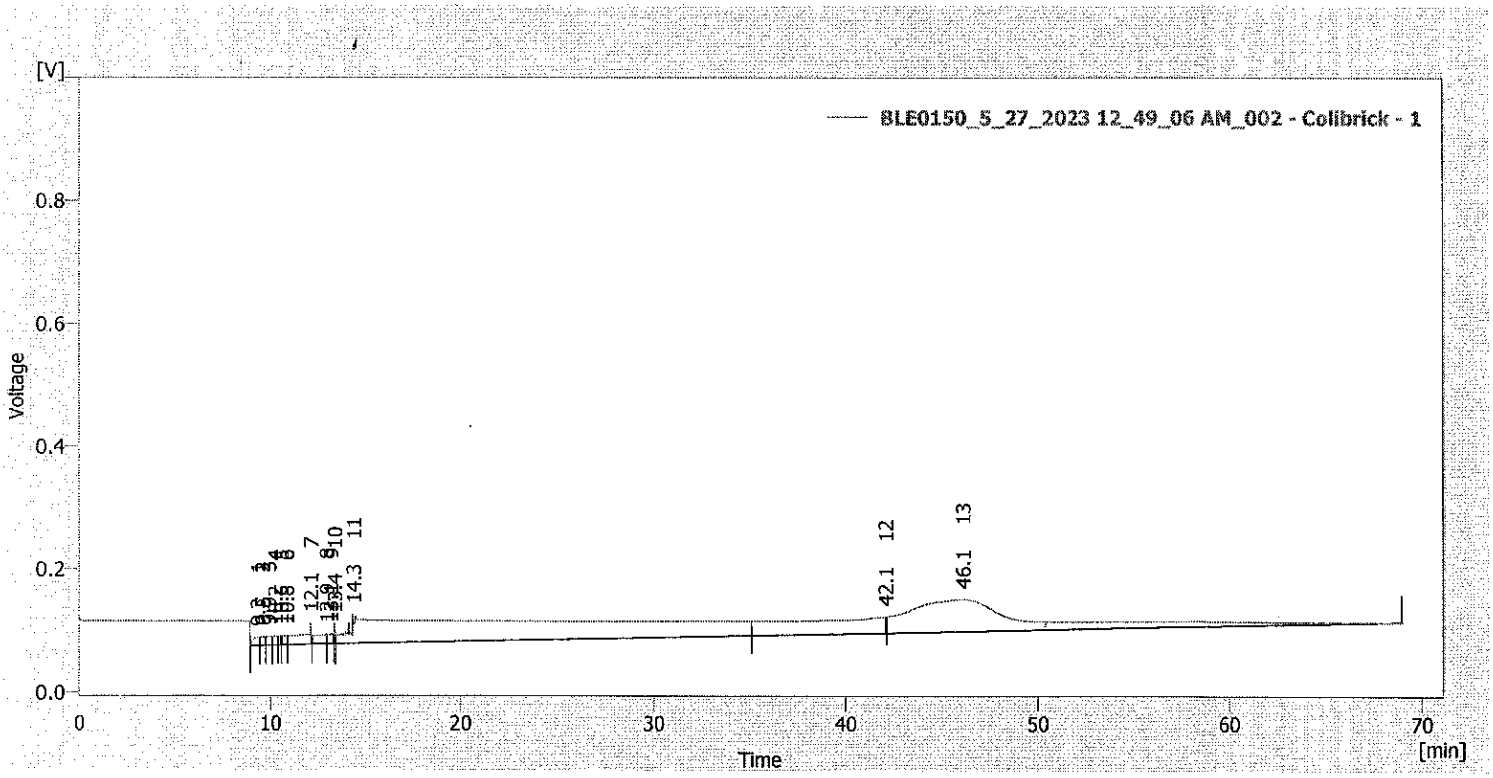
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 12:49 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : BSD1

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

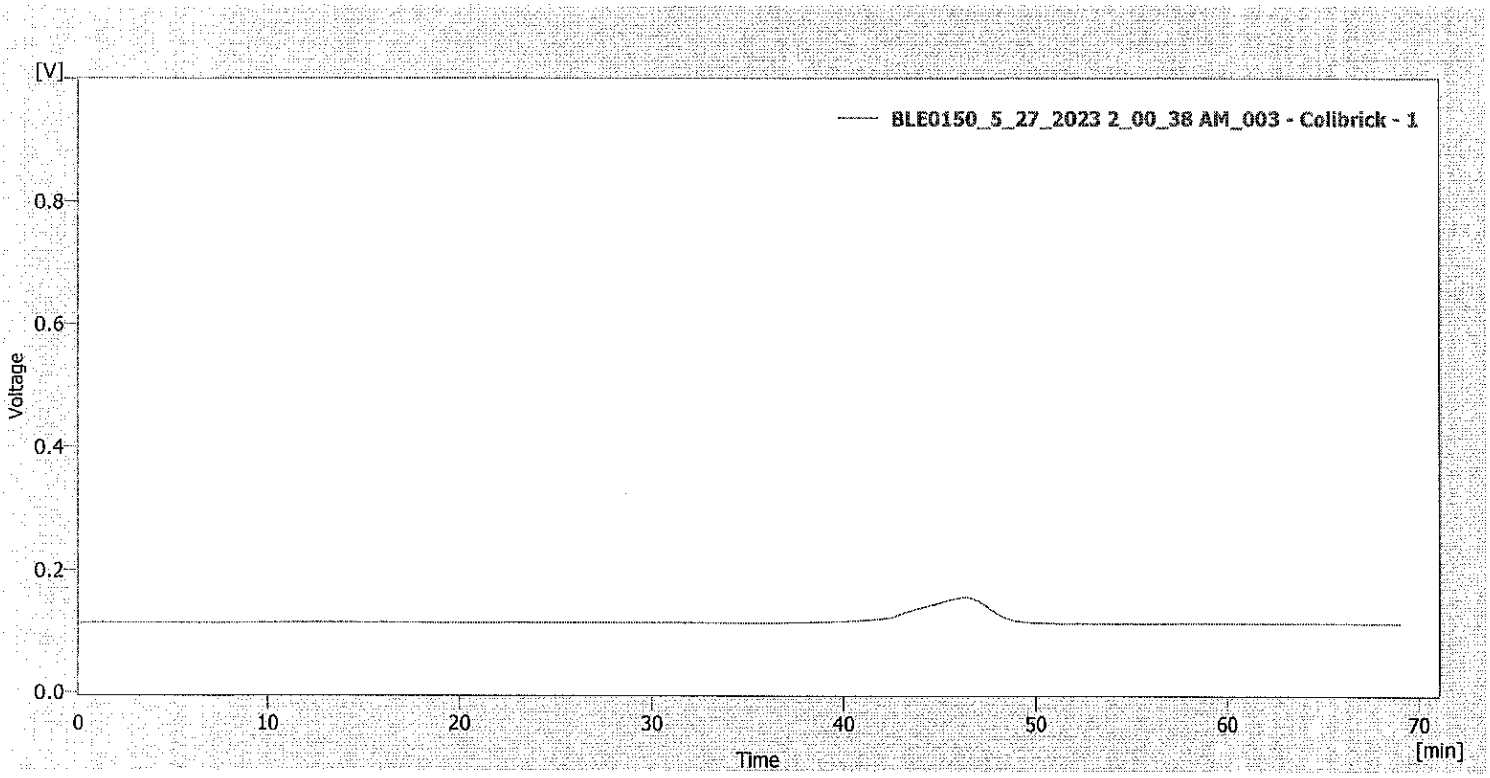
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 2:00 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : 23D0394-07

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

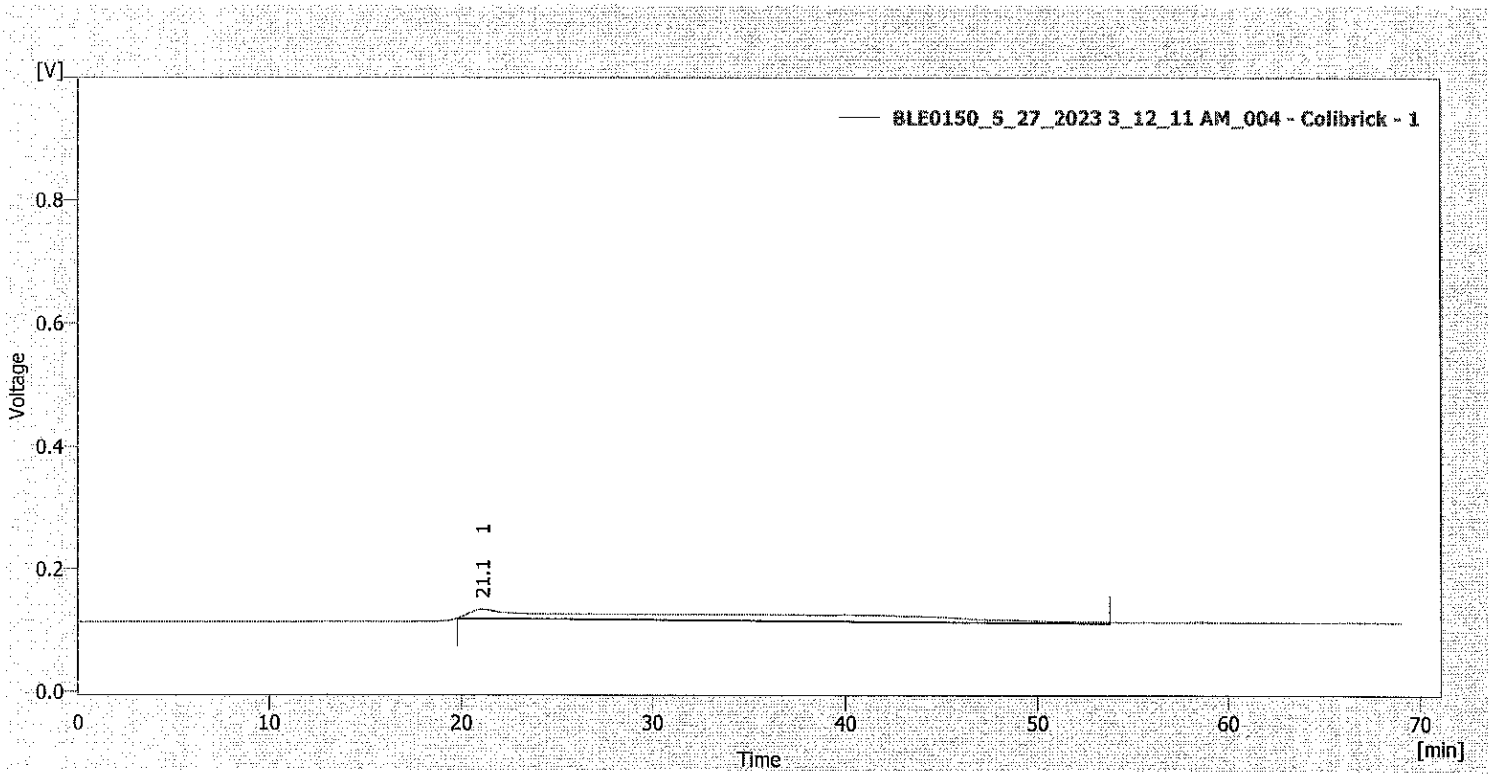
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 3:12 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : 23D0394-13

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

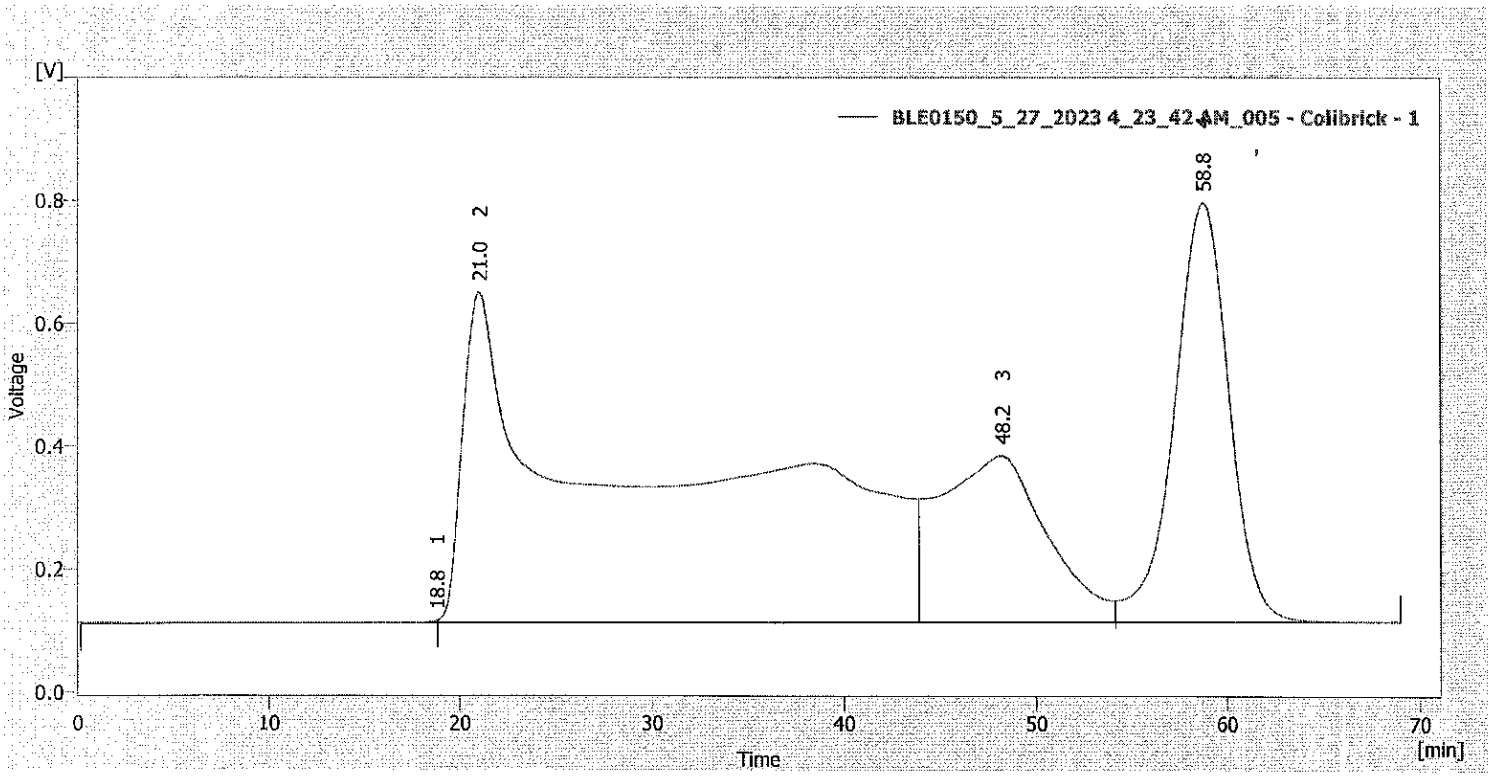
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 4:23 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : 23E0009-01

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

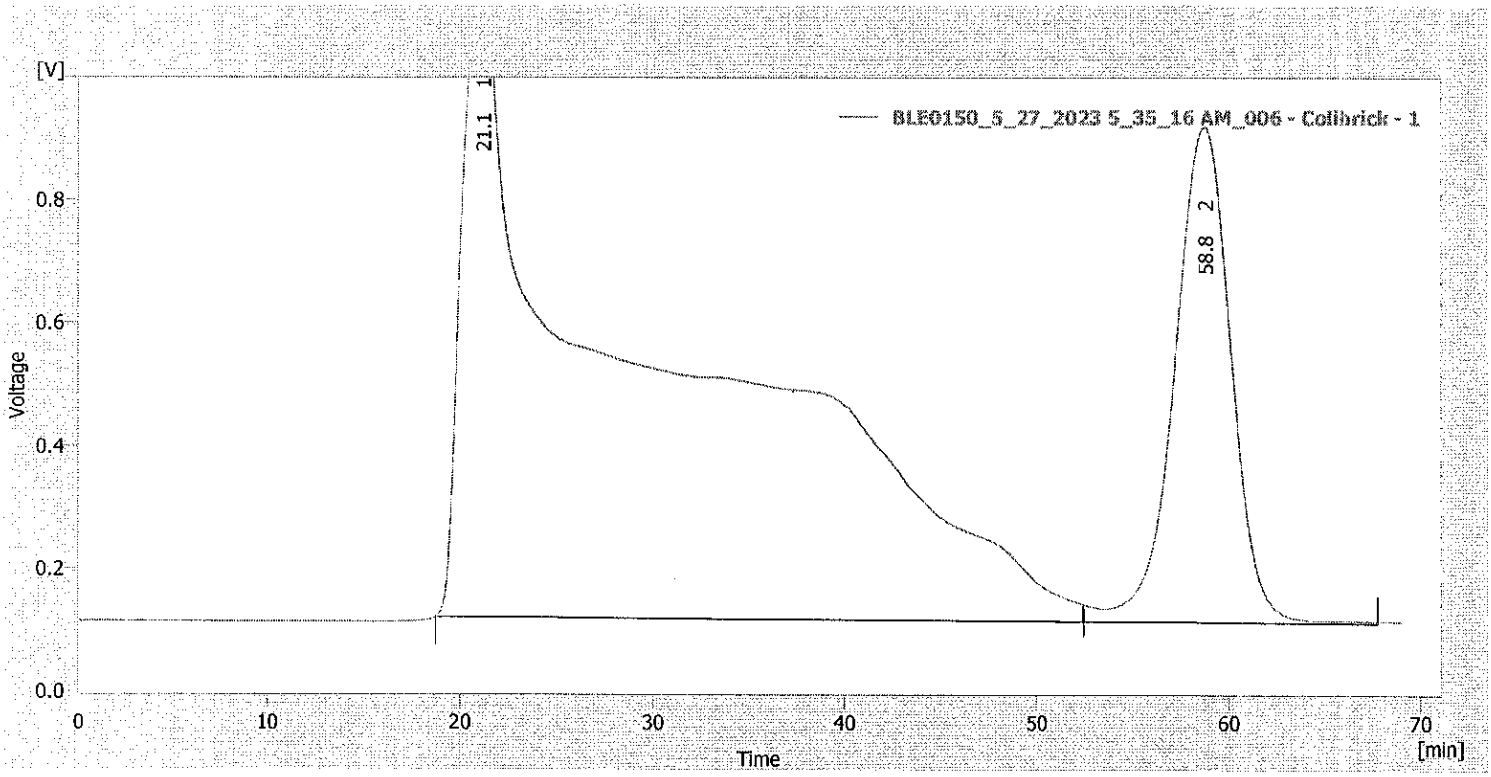
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 5:35 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : 23E0009-03

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

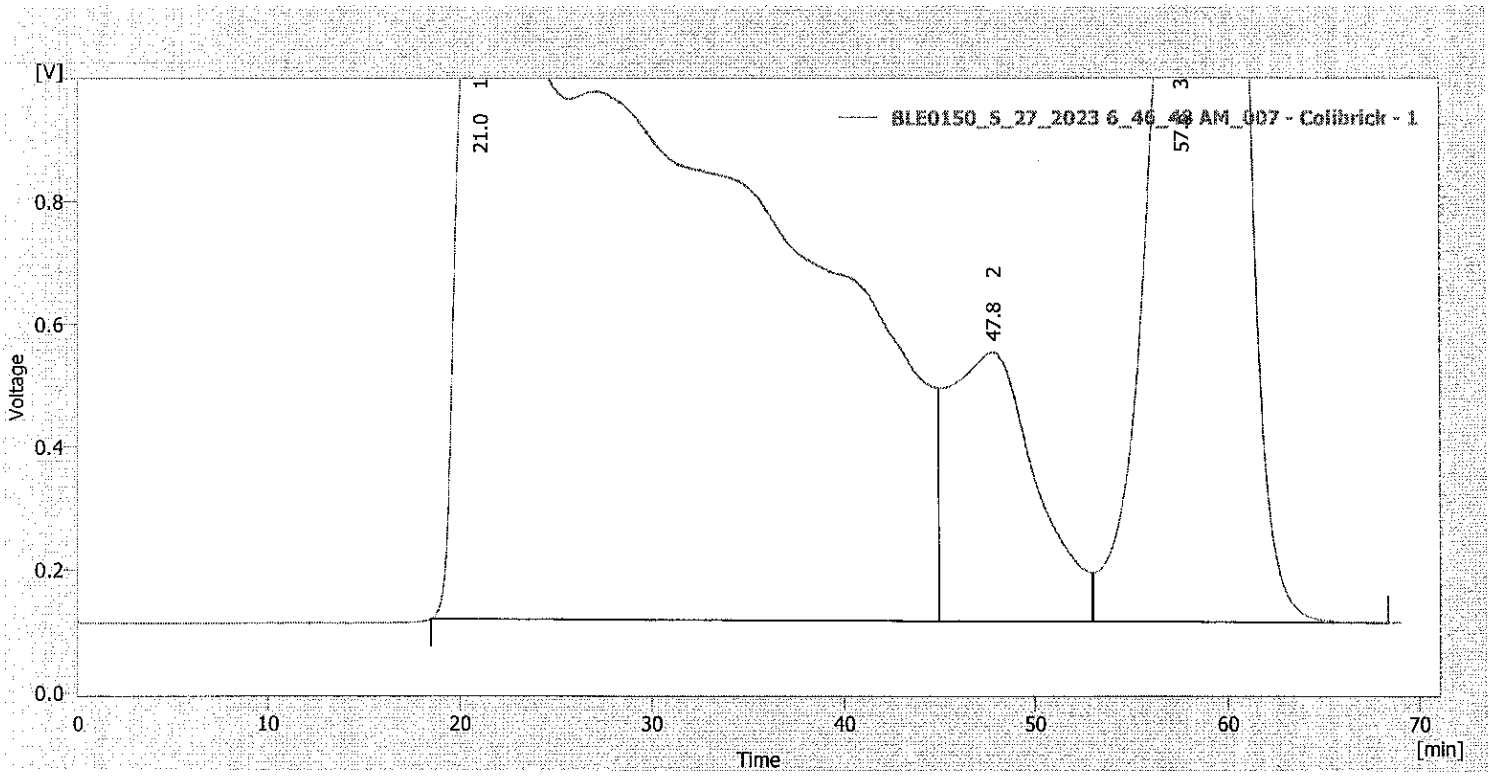
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 6:46 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : 23E0009-05

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

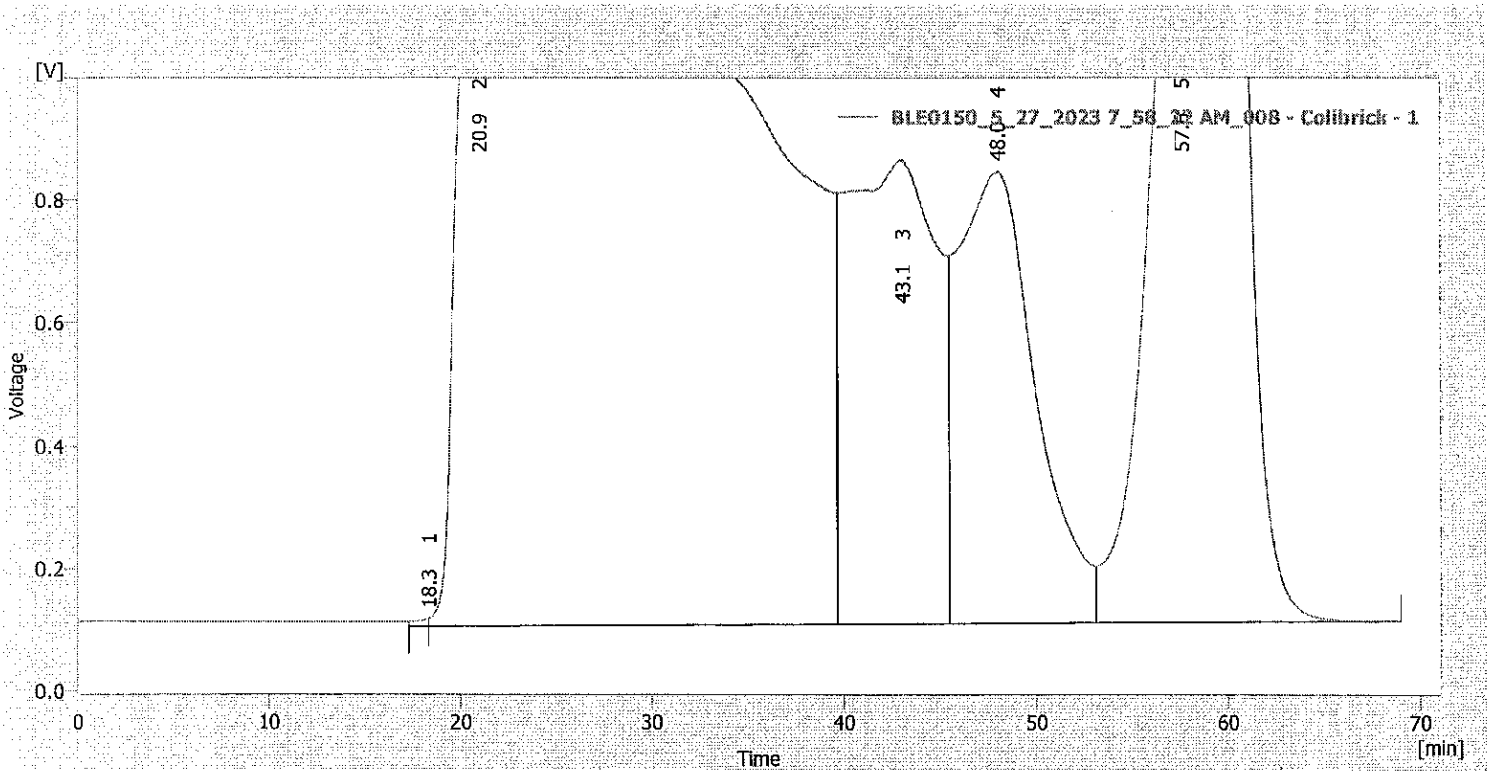
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 7:58 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : MS1

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

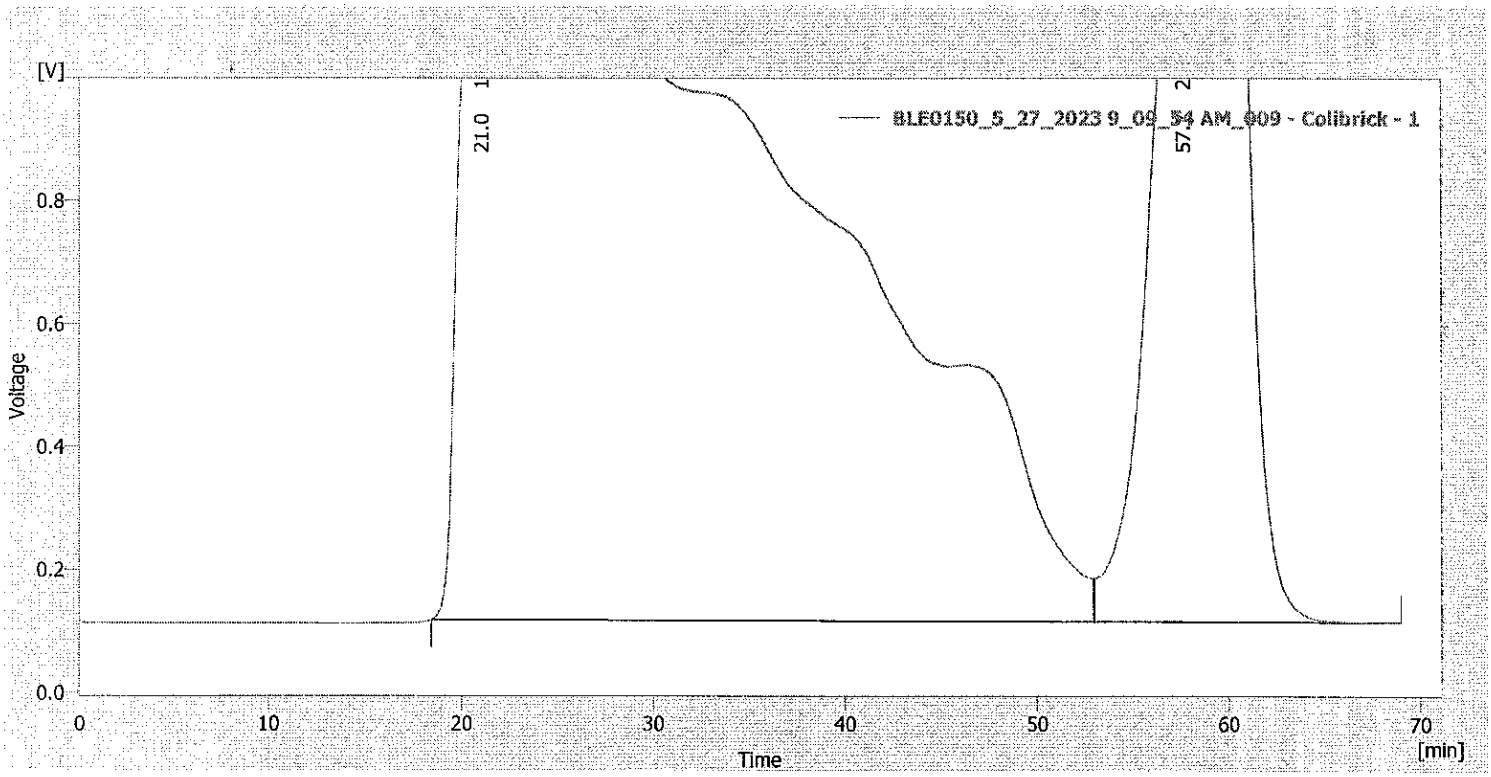
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 9:09 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : MSD1

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

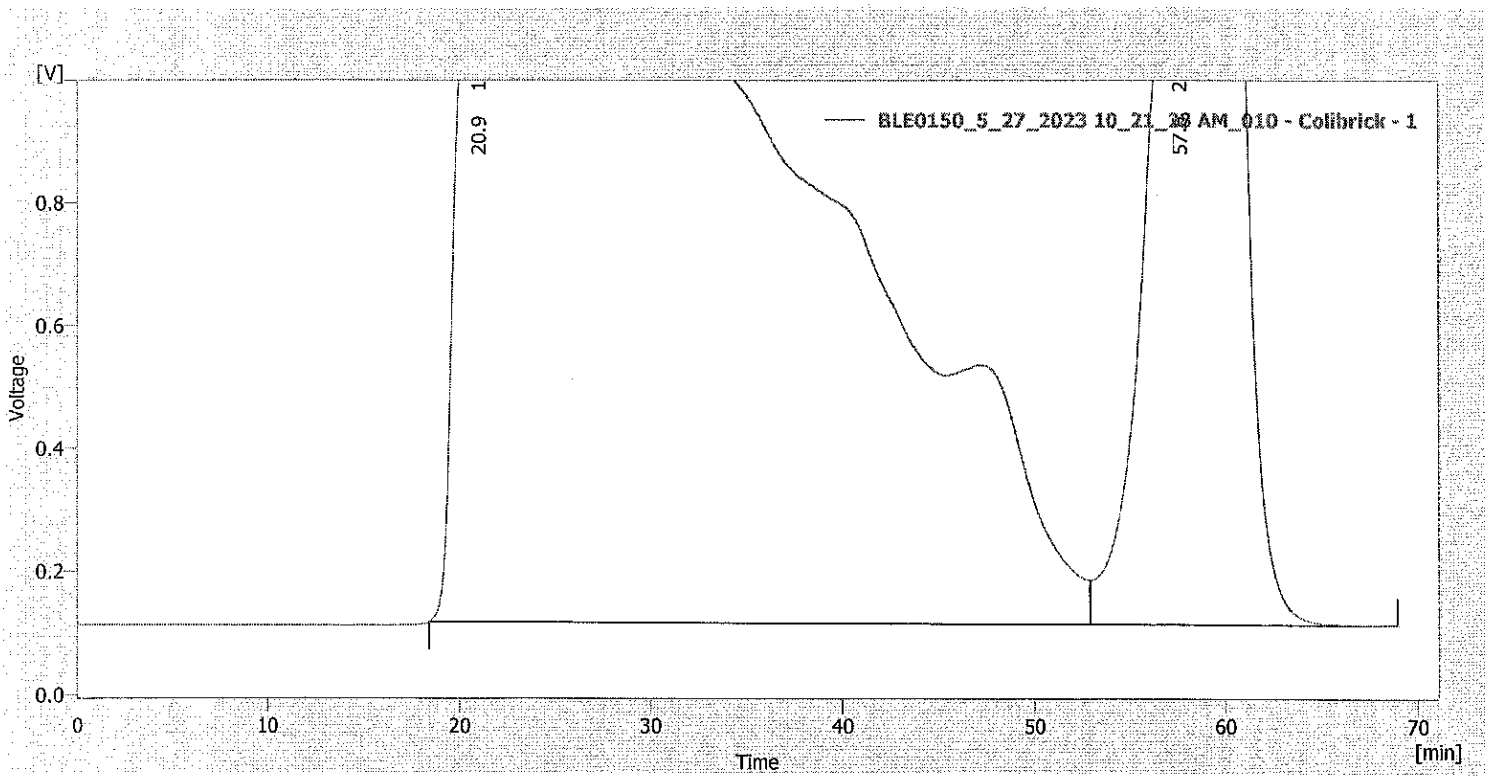
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 10:21 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



GPC1

PEST-PNA_Method_GPC1

BLE0150

Sample Description:

Sample ID : BLE0150

Sample : 23E0009-07

Method : PEST-PNA_Method_GPC1

Description : PEST-PNA METHOD GPC 1

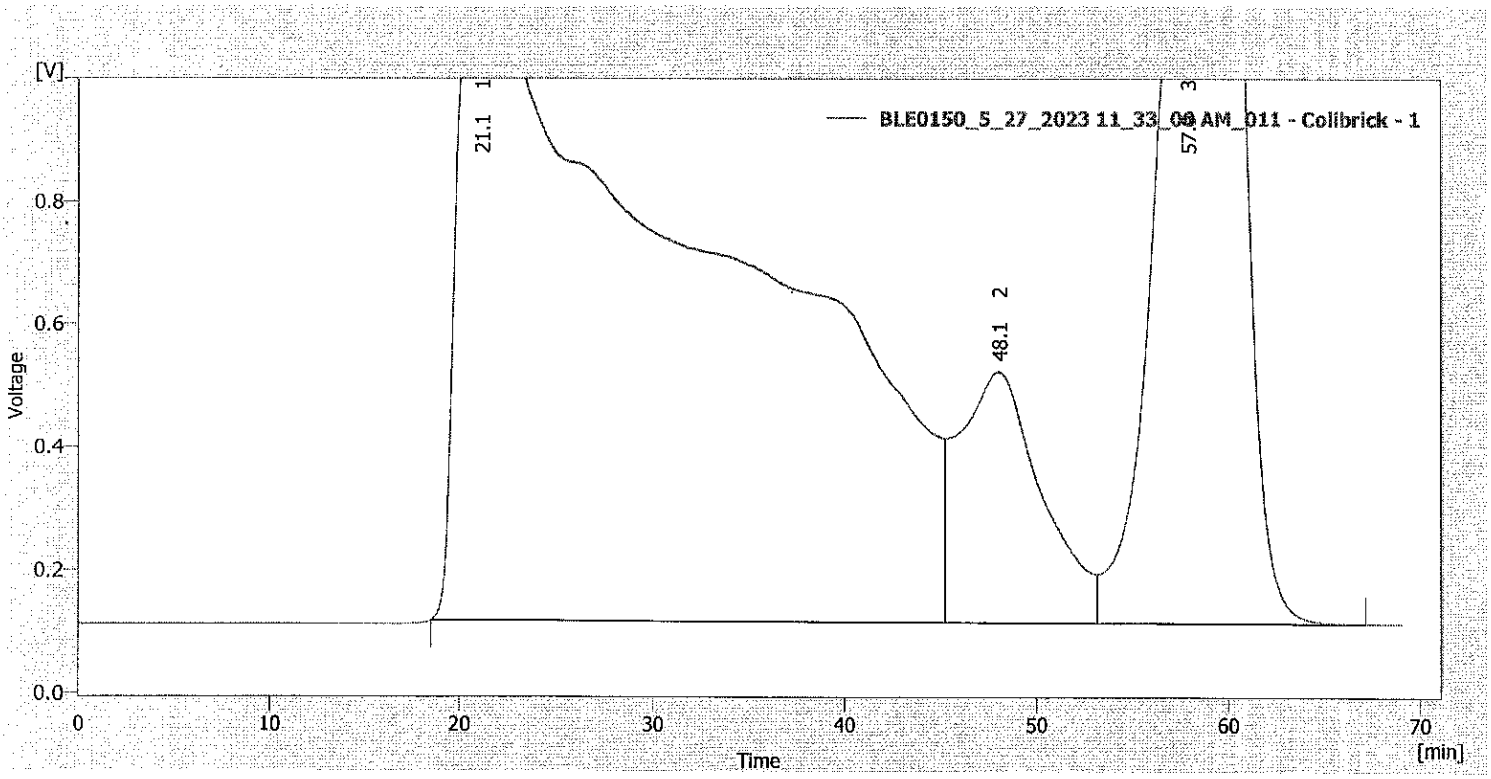
Created : 10/18/2013 6:05 AM

By : Administrator

Modified : 5/27/2023 11:33 AM

Time and Input Events Table (PEST-PNA_Method_GPC1)

	Input					Output			
Name	Type	Source	Input	Value	Units	Output Type	Output	Parameter	Store
Set_dump	Time Idle >	---	---	0.010	min	Colibrick	gpc1collect	High	☐
Start_collect	Run Time >	---	---	35.000	min	Colibrick	gpc1collect	Low	☐
Start_dump	Run Time >	---	---	58.000	min	Colibrick	gpc1collect	High	☐
Next_fract	Run Time >	---	---	67.800	min	GPC1Fraction	Next	---	☐
Error-Pump-Off	Time Idle >	---	---	78.000	min	Colibrick	GPC1-Poweroff	Low	☐



Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0266	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01	23060215.D	05/31/2023	
LDW23-SS1805	23E0009-03	23060216.D	05/31/2023	
LDW23-SS1800	23E0009-05	23060217.D	05/31/2023	
LCS Dup	BLE0150-BSD1	23060210.D	05/31/2023	
LCS	BLE0150-BS1	23060209.D	05/31/2023	
Matrix Spike	BLE0150-MS1	23060211.D	05/31/2023	
Blank	BLE0150-BLK1	23060208.D	05/31/2023	
LDW23-SS1820	23E0009-07	23060218.D	05/31/2023	
Matrix Spike Dup	BLE0150-MSD1	23060212.D	05/31/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0266

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLC0092-GPC1** **Printed: 5/31/2023 6:03:39PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0394-07	A	LDW23-IT1087	A 03	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23D0394-13	A	LDW23-IT1806	A 03	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-01	A	LDW23-SS1811	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-03	A	LDW23-SS1805	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-05	A	LDW23-SS1800	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-07	A	LDW23-SS1820	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
BLE0150-BLK1	-	Blank	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-BS1	-	LCS	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-BSD1	-	LCS Dup	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-MS1	-	Matrix Spike	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	5/31/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0267	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS	BLE0150-BS1	23060209.D	05/31/2023	
Matrix Spike Dup	BLE0150-MSD1	23060212.D	05/31/2023	
Blank	BLE0150-BLK1	23060208.D	05/31/2023	
LCS Dup	BLE0150-BSD1	23060210.D	05/31/2023	
Matrix Spike	BLE0150-MS1	23060211.D	05/31/2023	
LDW23-SS1800	23E0009-05	23060217.D	05/31/2023	
LDW23-SS1820	23E0009-07	23060218.D	05/31/2023	
LDW23-SS1811	23E0009-01	23060215.D	05/31/2023	
LDW23-SS1805	23E0009-03	23060216.D	05/31/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0267

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 5/31/2023 6:04:11PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0394-07	A	LDW23-IT1087	A 03	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23D0394-13	A	LDW23-IT1806	A 03	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-01	A	LDW23-SS1811	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-03	A	LDW23-SS1805	A 01	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-05	A	LDW23-SS1800	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-07	A	LDW23-SS1820	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
BLE0150-BLK1	-	Blank	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-BS1	-	LCS	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-BSD1	-	LCS Dup	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-MS1	-	Matrix Spike	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	5/31/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0268	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS Dup	BLE0150-BSD1	23060210.D	05/31/2023	
LDW23-SS1820	23E0009-07	23060218.D	05/31/2023	
LDW23-SS1811	23E0009-01	23060215.D	05/31/2023	
Matrix Spike	BLE0150-MS1	23060211.D	05/31/2023	
LCS	BLE0150-BS1	23060209.D	05/31/2023	
Blank	BLE0150-BLK1	23060208.D	05/31/2023	
Matrix Spike Dup	BLE0150-MSD1	23060212.D	05/31/2023	
LDW23-SS1800	23E0009-05	23060217.D	05/31/2023	
LDW23-SS1805	23E0009-03	23060216.D	05/31/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0268

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 5/31/2023 6:04:42PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0394-07	A	LDW23-IT1087	A 03	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23D0394-13	A	LDW23-IT1806	A 03	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-01	A	LDW23-SS1811	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-03	A	LDW23-SS1805	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-05	A	LDW23-SS1800	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-07	A	LDW23-SS1820	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
BLE0150-BLK1	-	Blank	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-BS1	-	LCS	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-BSD1	-	LCS Dup	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-MS1	-	Matrix Spike	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	5/31/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0269	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Matrix Spike	BLE0150-MS1	23060211.D	05/31/2023	
Matrix Spike Dup	BLE0150-MSD1	23060212.D	05/31/2023	
LDW23-SS1800	23E0009-05	23060217.D	05/31/2023	
LCS Dup	BLE0150-BSD1	23060210.D	05/31/2023	
LDW23-SS1805	23E0009-03	23060216.D	05/31/2023	
LDW23-SS1811	23E0009-01	23060215.D	05/31/2023	
Blank	BLE0150-BLK1	23060208.D	05/31/2023	
LCS	BLE0150-BS1	23060209.D	05/31/2023	
LDW23-SS1820	23E0009-07	23060218.D	05/31/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0269

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 5/31/2023 6:05:14PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0394-07	A	LDW23-IT1087	A 03	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23D0394-13	A	LDW23-IT1806	A 03	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-01	A	LDW23-SS1811	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-03	A	LDW23-SS1805	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-05	A	LDW23-SS1800	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
23E0009-07	A	LDW23-SS1820	A 02	2.5	2.5	8081B Pest (PSDDA)	5/31/2023	NRB	
BLE0150-BLK1	-	Blank	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-BS1	-	LCS	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-BSD1	-	LCS Dup	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-MS1	-	Matrix Spike	-	2.5	2.5	-	5/31/2023	NRB	
BLE0150-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	5/31/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8081B

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLE0150-BLK1	File ID:	23060208.D
Sampled:	N/A	Prepared:	05/05/23 17:03	Analyzed:	06/02/23 14:12
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLE0150	Sequence:	SLF0091	Calibration:	GF00024
Instrument:	ECD6	Column:	STX-CLP	Cleanups:	GPC, Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
118-74-1	Hexachlorobenzene	1	0.50	U	0.15	0.50

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	6.25	78.2	30 - 160	
Decachlorobiphenyl [2C]	8.0000	6.54	81.8	30 - 160	
Tetrachlorometaxylene	8.0000	5.46	68.2	30 - 160	
Tetrachlorometaxylene [2C]	8.0000	5.49	68.6	30 - 160	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060208.D
Data file 2: /20230602.b/B20230602.b/23060208.D
Method: \20230602.b\PEST.m
Compound Sublist: wpest.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLE0150-BLK1
Client ID:
Injection Date: 02-JUN-2023 14:12
Report Date: 06/08/2023 11:22
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			2.432	0.004	7343	0.00	0.59	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
----			----			0.00	0.00	---	Oxychlordane
----			----			0.00	0.00	---	2,4-DDE
----			----			0.00	0.00	---	trans-Nonachlor
----			----			0.00	0.00	---	2,4-DDD
----			----			0.00	0.00	---	2,4-DDT
----			----			0.00	0.00	---	cis-Nonachlor
----			----			0.00	0.00	---	Mirex
----			----			0.00	0.00	---	Hexachloroethane
----			7.328	-0.008	331	0.00	0.00	---	Kepone
3.784	0.000	208648	4.098	0.001	236546	27.28	27.43	0.6	Tetrachloro-m-xylene
9.320	-0.000	152871	10.252	0.001	150562	31.27	32.70	4.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	602901	-2.6
Hexabromobiphenyl	493109	478442	-3.0

Column 2

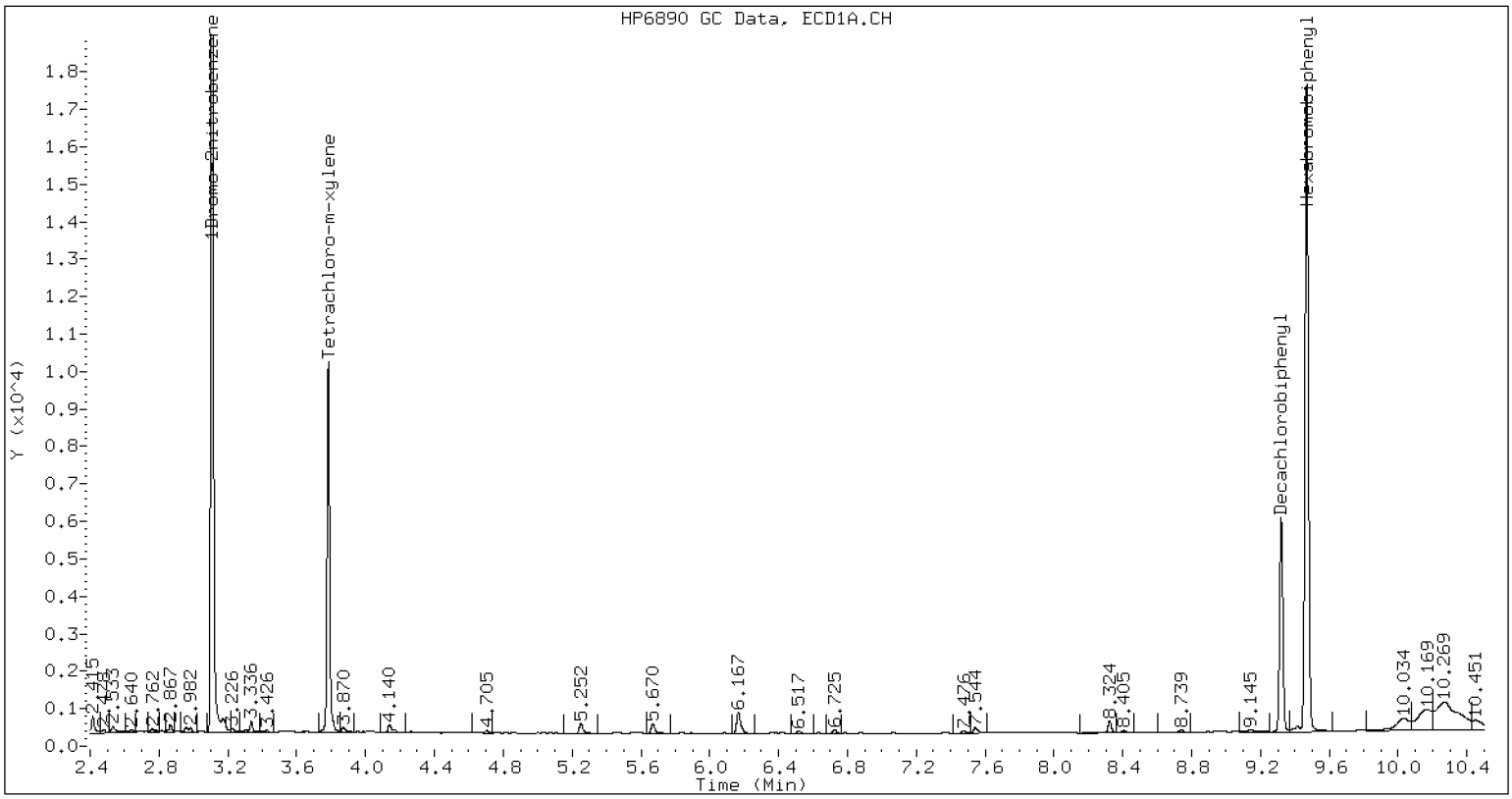
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	682155	-2.0
Hexabromobiphenyl	461581	437280	-5.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

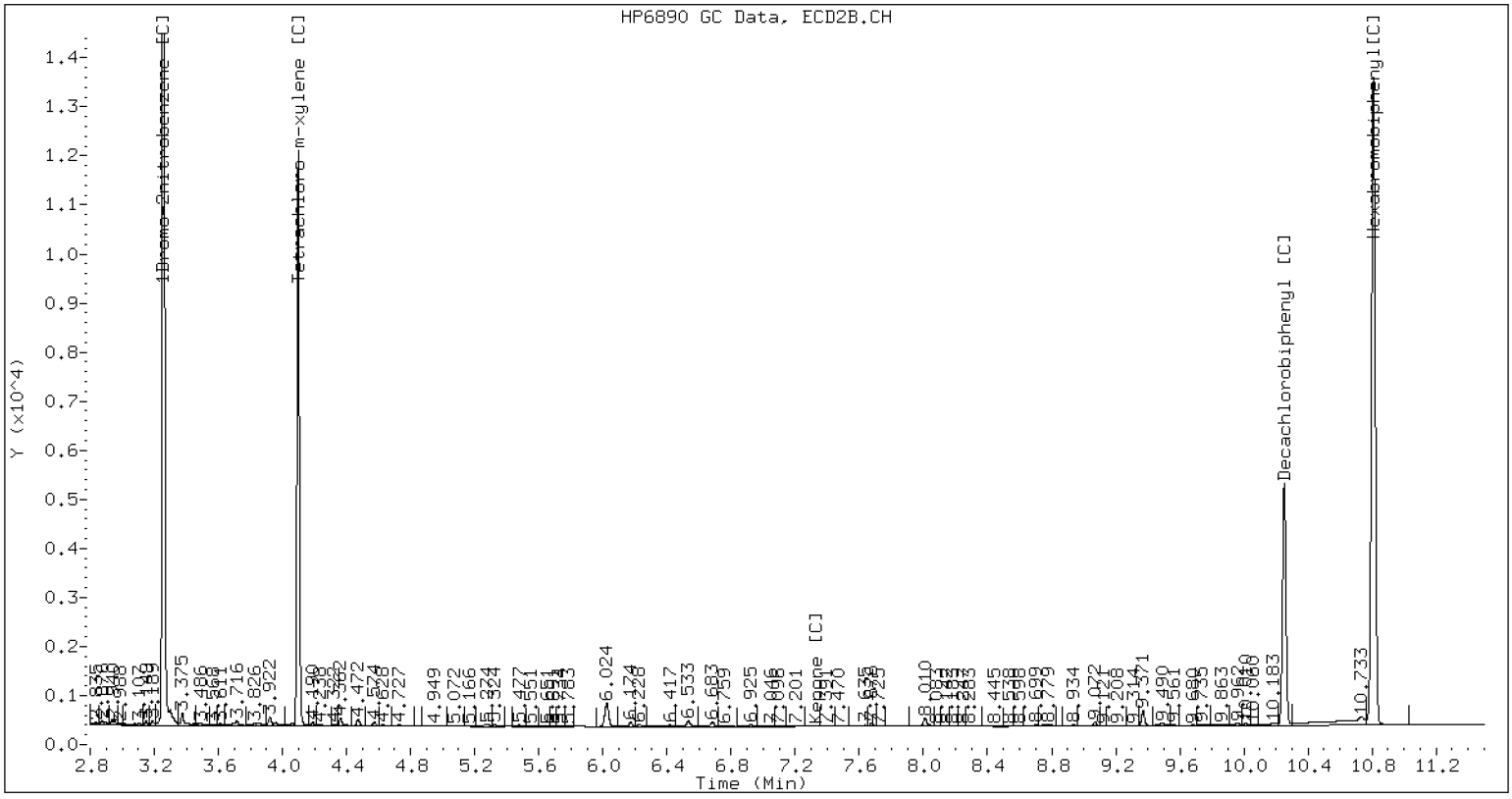
		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	---			0.000	1	---			0.000
Toxaphene	2	---			0.000	2	---			0.000
Toxaphene	3	---			0.000	3	---			0.000
Toxaphene	4	---			0.000	4	---			0.000
Toxaphene	5	---			0.000	5	---			0.000
	STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks				

		STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	---			0.000	1	---			0.000
Chlordane (NOS)	2	---			0.000	2	---			0.000
Chlordane (NOS)	3	---			0.000	3	---			0.000
	STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks				

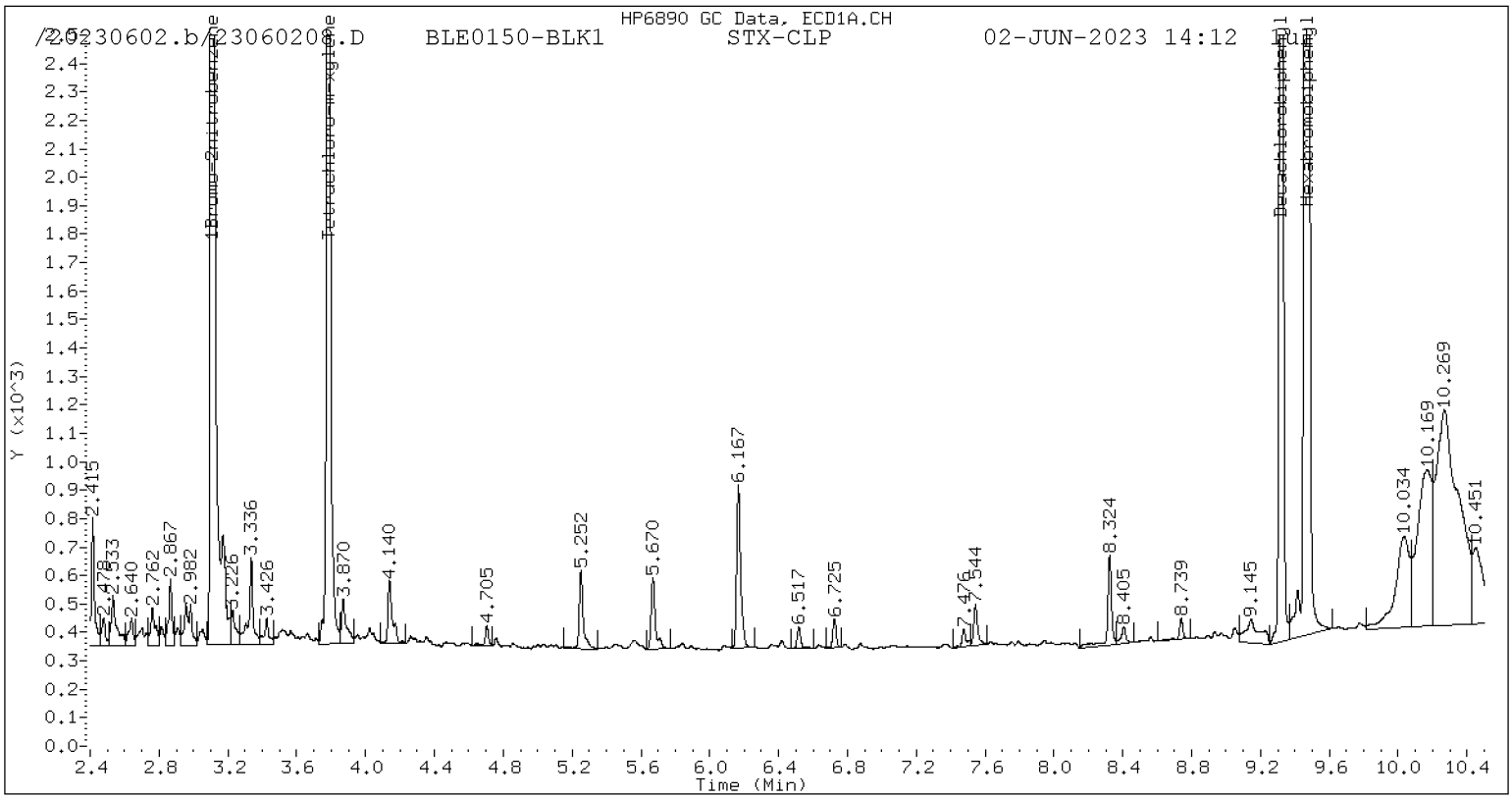
/20230602.b/23060208.D BLE0150-BLK1 STX-CLP 02-JUN-2023 14:12 1ul



/20230602.b/B20230602.b/23060208.D BLE0150-BLK1 CLP2 02-JUN-2023 14:12 1ul

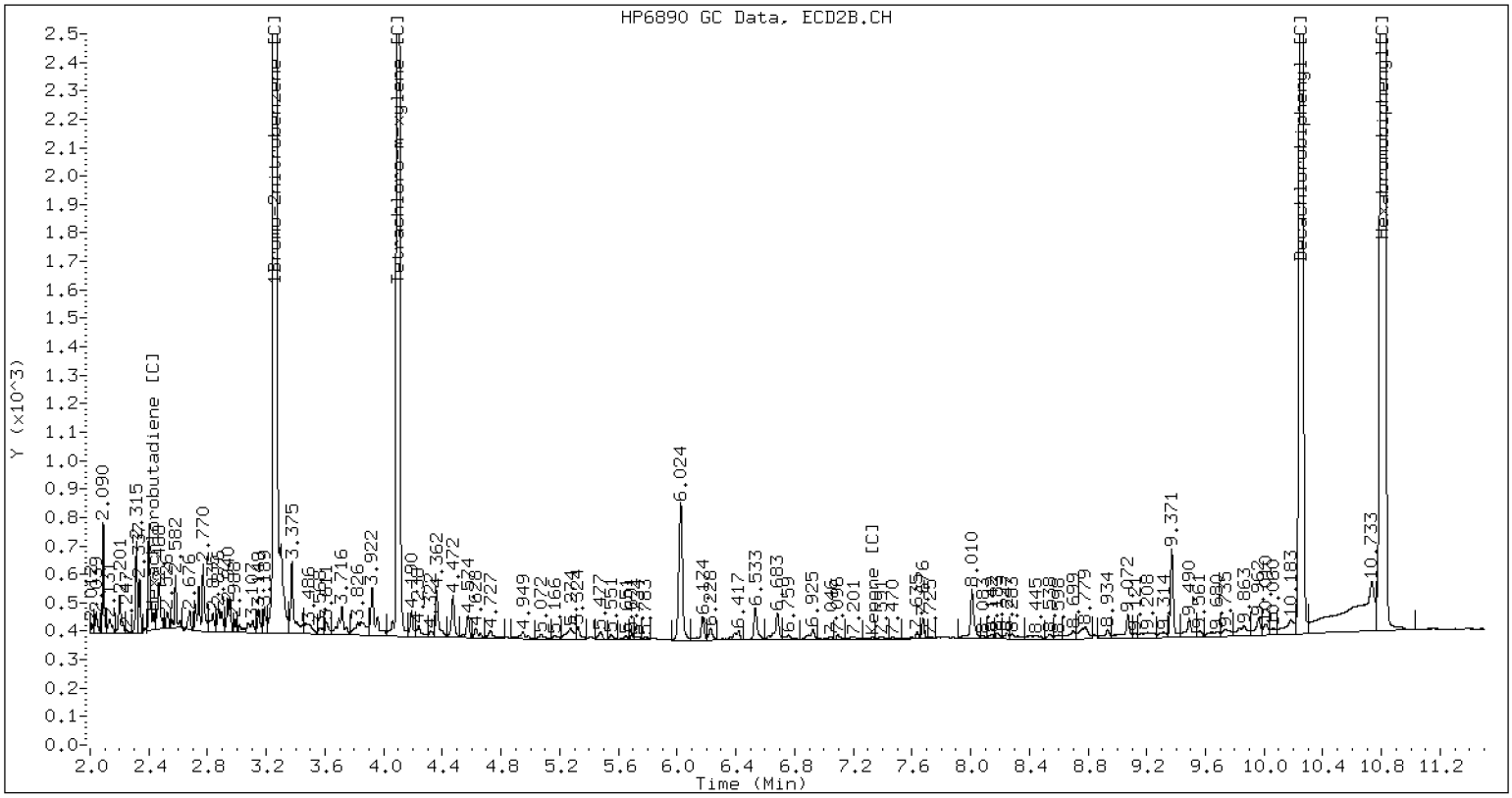


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230602.b/B20230602.b/23060208.D BLE0150-BLK1 CLP2



CLP-2 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 14:30
Batch:	BLE0150	Laboratory ID:	BLE0150-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	2.64		66.0	26 - 128

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	4.00	2.83		70.7	6.81	30	26 - 128

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060209.D
Data file 2: /20230602.b/B20230602.b/23060209.D
Method: \20230602.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLE0150-BS1
Client ID:
Injection Date: 02-JUN-2023 14:30
Report Date: 06/08/2023 11:22
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	-0.001	165288	4.717	-0.000	178762	13.98	13.41	4.2	alpha-BHC
4.674	-0.000	67520	5.182	0.000	72693	13.85	13.32	3.9	beta-BHC
4.857	0.000	150316	5.527	0.000	164689	15.10	14.99	0.7	delta-BHC
4.594	-0.000	147024	5.103	-0.000	160695	14.27	13.66	4.4	gamma-BHC (Lindane)
5.079	-0.000	135330	5.619	-0.000	142258	13.91	13.29	4.6	Heptachlor
5.400	-0.000	133443	6.016	-0.000	125781	13.74	11.62	16.7	Aldrin
6.073	0.000	121713	6.677	0.001	132439	14.16	14.16	0.0	Heptachlor epoxide b
6.516	-0.000	183662	7.121	-0.000	192067	22.99	23.63	2.7	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
6.441	-0.000	234309	7.208	-0.000	247907	30.30	28.97	4.5	4,4'-DDE
----			----			0.00	0.00	---	Endrin
7.265	0.000	68373	7.951	-0.000	69542	9.79	9.40	4.0	Endosulfan II
7.089	-0.000	200134	7.815	-0.000	212668	29.54	30.05	1.7	4,4'-DDD
8.128	-0.001	159086	8.551	-0.000	162891	25.02	25.17	0.6	Endosulfan sulfate
7.384	-0.001	210946	8.134	-0.000	214707	30.14	31.05	3.0	4,4'-DDT
7.874	-0.000	7208	8.776	-0.001	12769	2.31	4.05	54.7*	Methoxychlor
8.403	-0.001	179744	9.073	-0.000	168779	24.34	22.46	8.1	Endrin ketone
7.694	-0.000	29762	8.284	0.000	29988	5.72	5.93	3.6	Endrin aldehyde
6.216	-0.000	135566	6.889	0.001	131188	15.88	14.37	10.0	trans-Chlordane
6.363	-0.001	125020	7.049	0.001	127686	14.56	14.18	2.6	cis-Chlordane
2.283	-0.001	161295	2.427	-0.001	197861	12.39	15.21	20.4	Hexachlorobutadiene
4.136	-0.000	145559	4.579	0.000	154895	13.21	12.72	3.8	Hexachlorobenzene
3.783	-0.000	225292	4.096	-0.000	252557	28.29	27.97	1.1	Tetrachloro-m-xylene
9.320	-0.000	164057	10.251	-0.000	160345	31.96	32.97	3.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

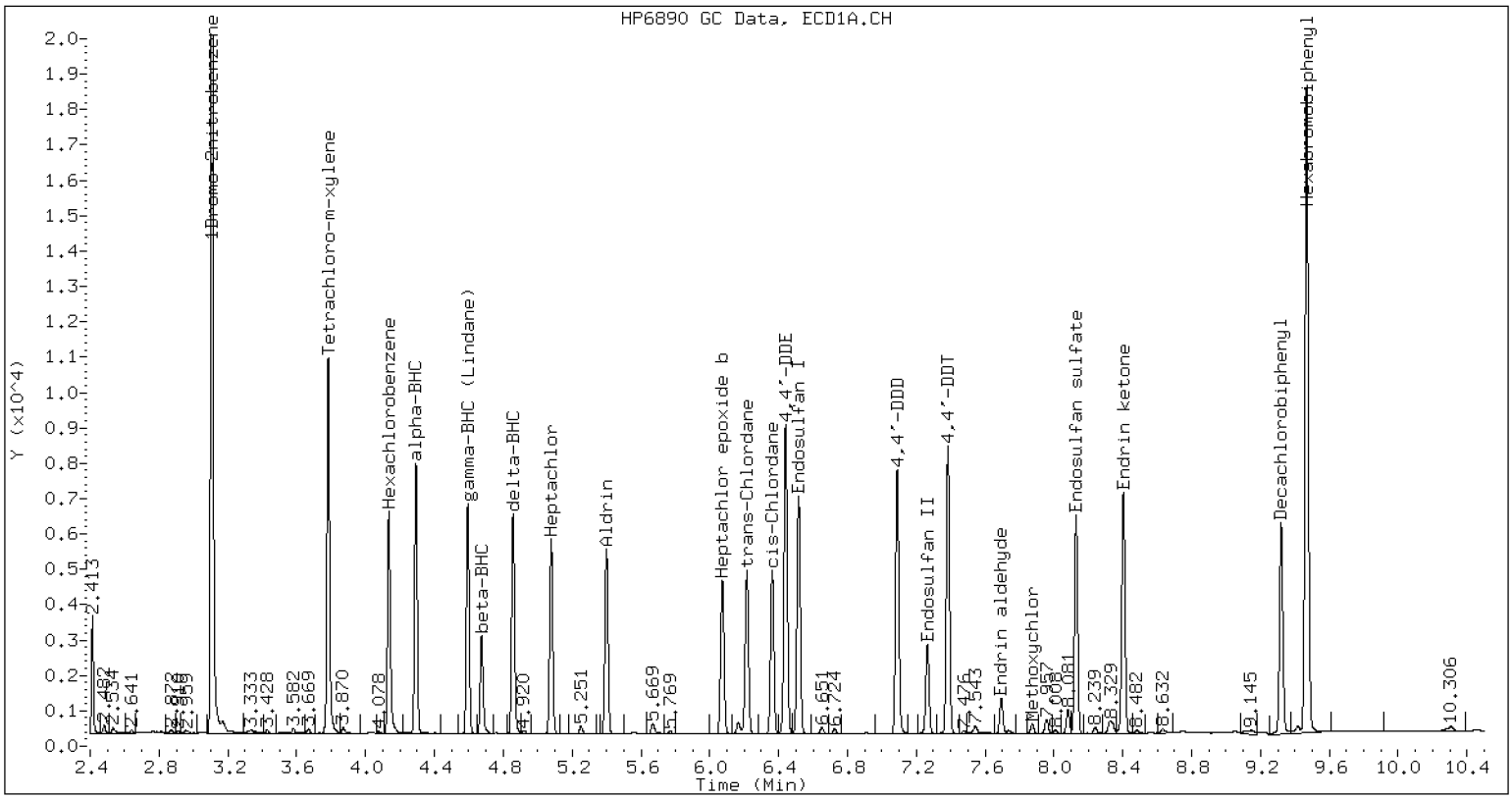
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	627765	1.4
Hexabromobiphenyl	493109	502296	1.9

Column 2

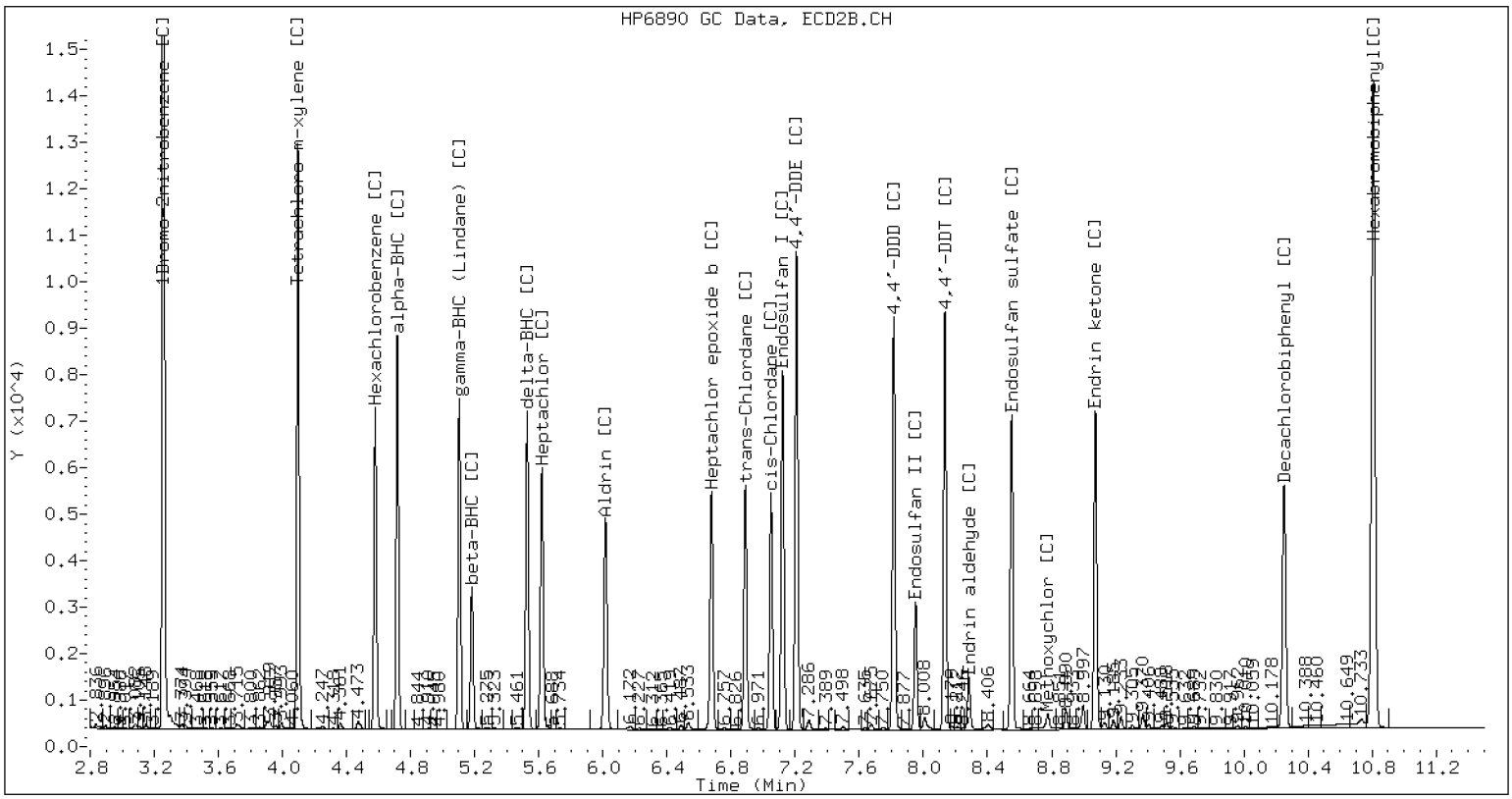
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	714295	2.6
Hexabromobiphenyl	461581	461902	0.1

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

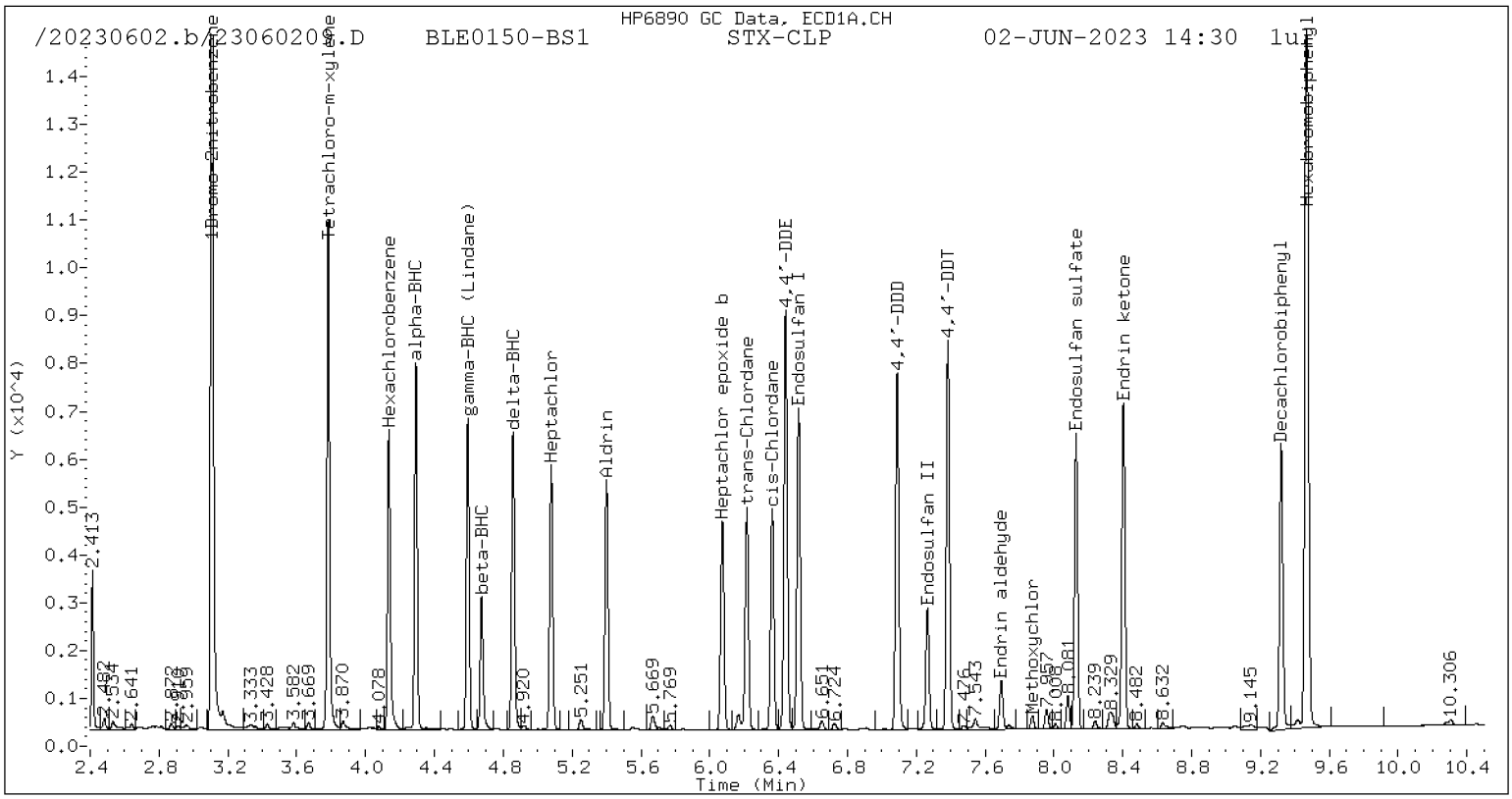
/20230602.b/23060209.D BLE0150-BS1 STX-CLP 02-JUN-2023 14:30 1ul



/20230602.b/B20230602.b/23060209.D BLE0150-BS1 CLP2 02-JUN-2023 14:30 1ul

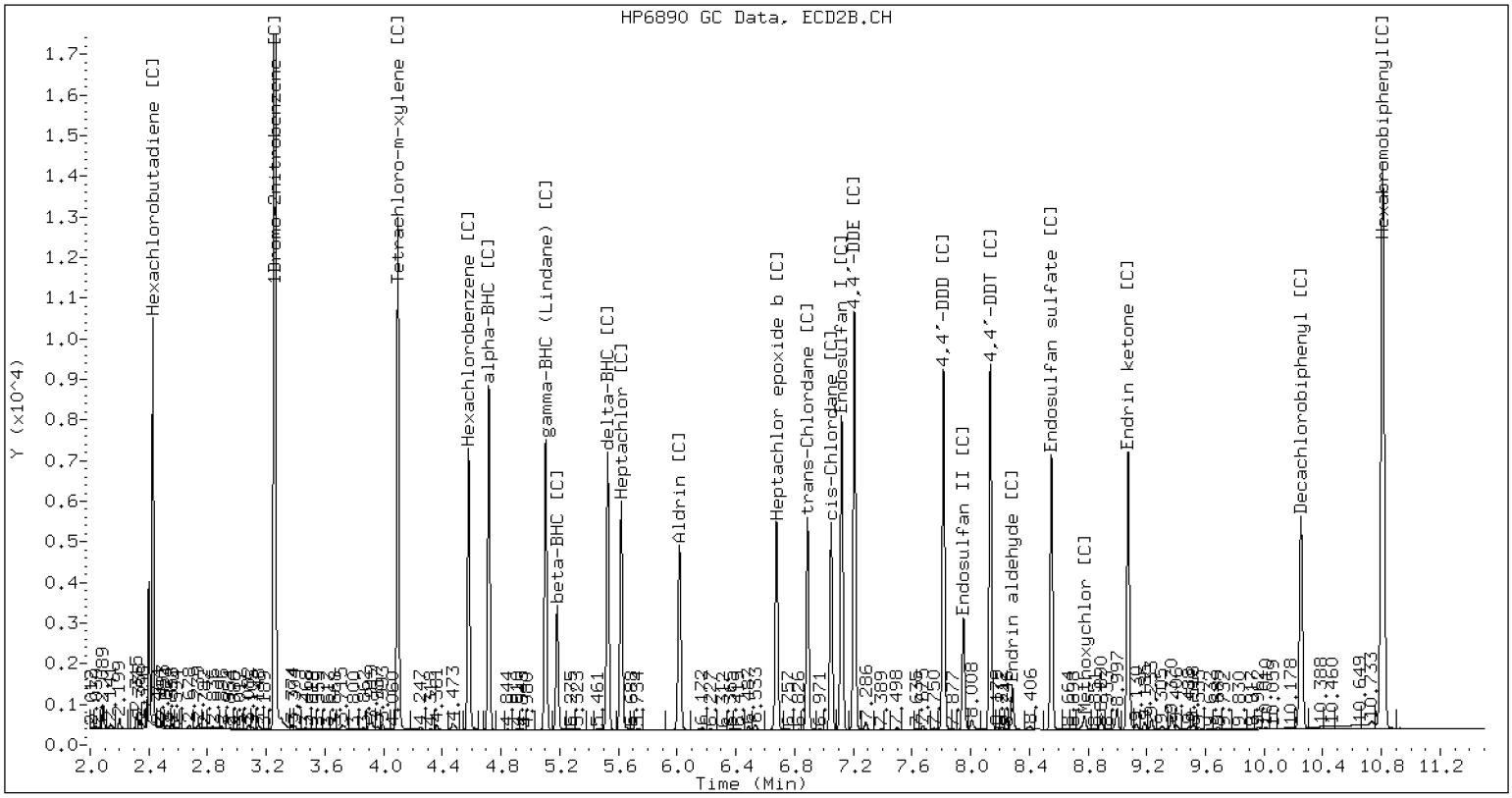


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230602.b/B20230602.b/23060209.D BLE0150-BS1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060210.D
Data file 2: /20230602.b/B20230602.b/23060210.D
Method: \20230602.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLE0150-BSD1
Client ID:
Injection Date: 02-JUN-2023 14:49
Report Date: 06/08/2023 11:22
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	-0.000	181605	4.716	-0.001	196961	15.24	14.51	4.9	alpha-BHC
4.675	0.000	72862	5.182	0.000	79037	14.82	14.22	4.2	beta-BHC
4.857	0.000	162888	5.527	-0.000	178846	16.24	15.99	1.5	delta-BHC
4.594	0.000	161184	5.103	-0.000	176214	15.51	14.70	5.4	gamma-BHC (Lindane)
5.079	-0.000	146870	5.620	0.000	155893	14.97	14.29	4.6	Heptachlor
5.400	-0.000	144858	6.016	0.000	136770	14.79	12.41	17.5	Aldrin
6.073	0.001	110188	6.677	0.001	141925	12.72	14.90	15.8	Heptachlor epoxide b
6.516	-0.001	199449	7.121	0.000	210359	24.76	25.41	2.6	Endosulfan I
----			7.428	0.012	1026	0.00	0.11	---	Dieldrin
6.440	-0.001	252894	7.208	-0.000	269272	32.43	30.90	4.9	4,4'-DDE
----			7.750	0.010	2197	0.00	0.28	---	Endrin
7.265	0.000	68245	7.952	0.000	71887	9.79	9.68	1.1	Endosulfan II
7.089	0.000	214829	7.815	-0.000	229926	31.76	32.37	1.9	4,4'-DDD
8.128	-0.001	167132	8.551	0.000	174169	26.33	26.81	1.8	Endosulfan sulfate
7.384	-0.000	226098	8.134	-0.000	233402	32.37	33.62	3.8	4,4'-DDT
7.874	-0.000	9215	8.776	-0.001	16368	2.96	5.17	54.4*	Methoxychlor
8.404	-0.000	191538	9.073	-0.000	183950	25.99	24.39	6.4	Endrin ketone
7.694	0.000	28902	8.284	0.000	30245	5.57	5.96	6.8	Endrin aldehyde
6.216	0.000	135808	6.889	0.001	142672	15.77	15.34	2.8	trans-Chlordane
6.363	-0.000	135000	7.049	0.001	139056	15.60	15.16	2.8	cis-Chlordane
2.283	-0.001	171170	2.427	-0.001	208104	13.04	15.71	18.5	Hexachlorobutadiene
4.136	0.000	157099	4.579	0.000	168410	14.14	13.57	4.1	Hexachlorobenzene
3.784	0.000	233306	4.097	-0.000	266438	29.05	28.97	0.3	Tetrachloro-m-xylene
9.320	-0.001	168235	10.251	-0.000	167353	32.84	34.28	4.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

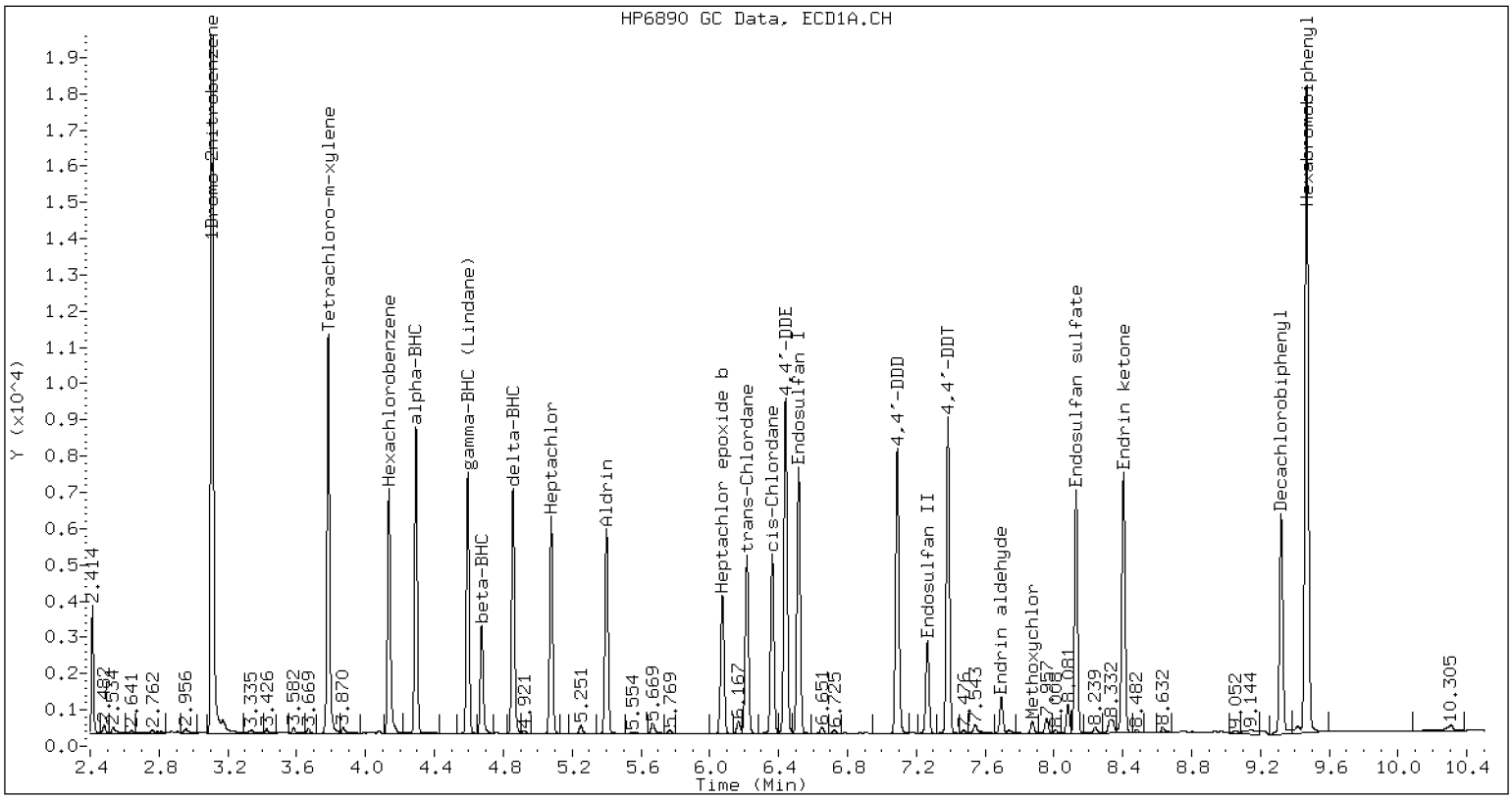
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	632899	2.3
Hexabromobiphenyl	493109	501396	1.7

Column 2

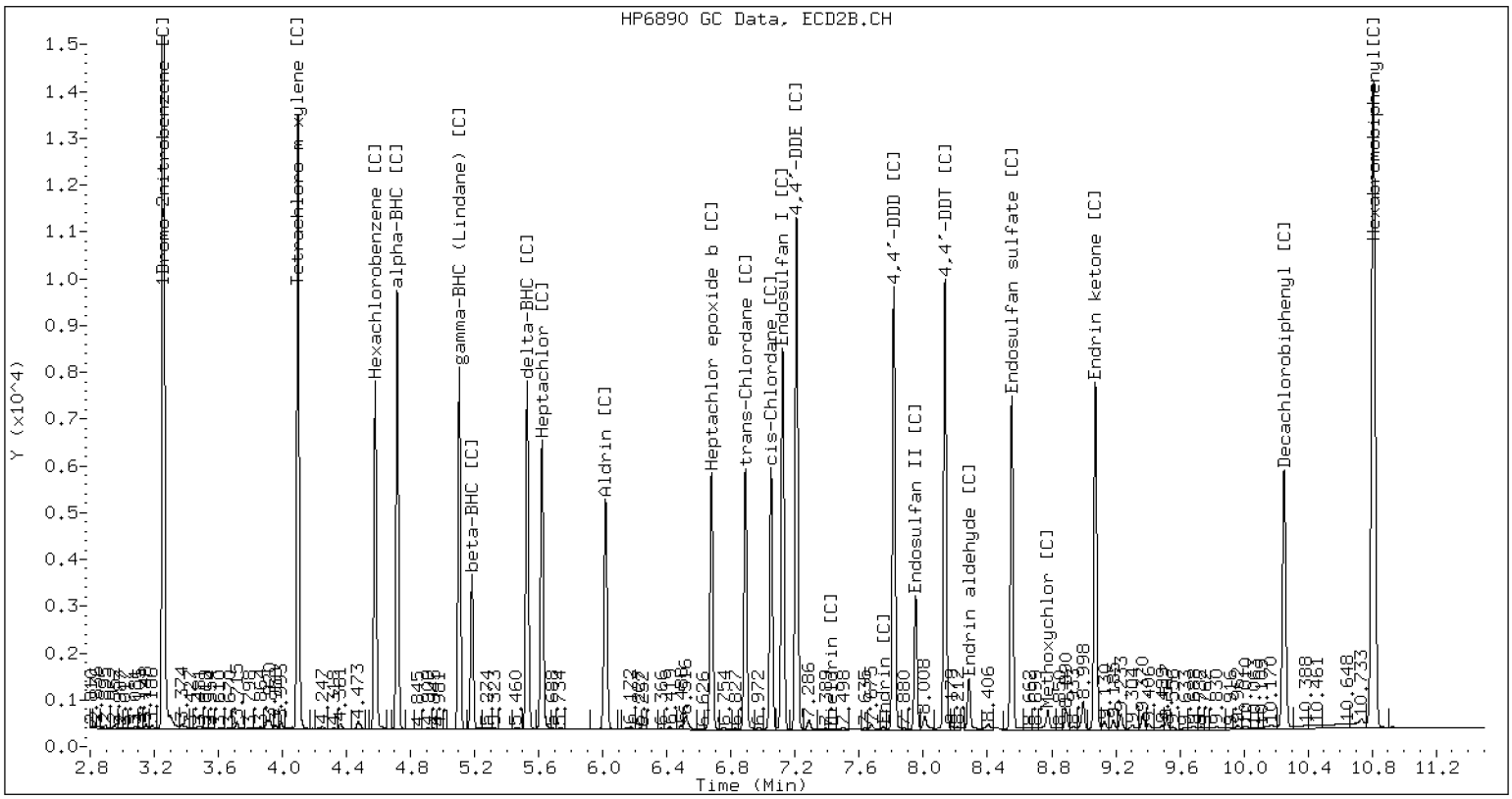
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	727529	4.5
Hexabromobiphenyl	461581	463617	0.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

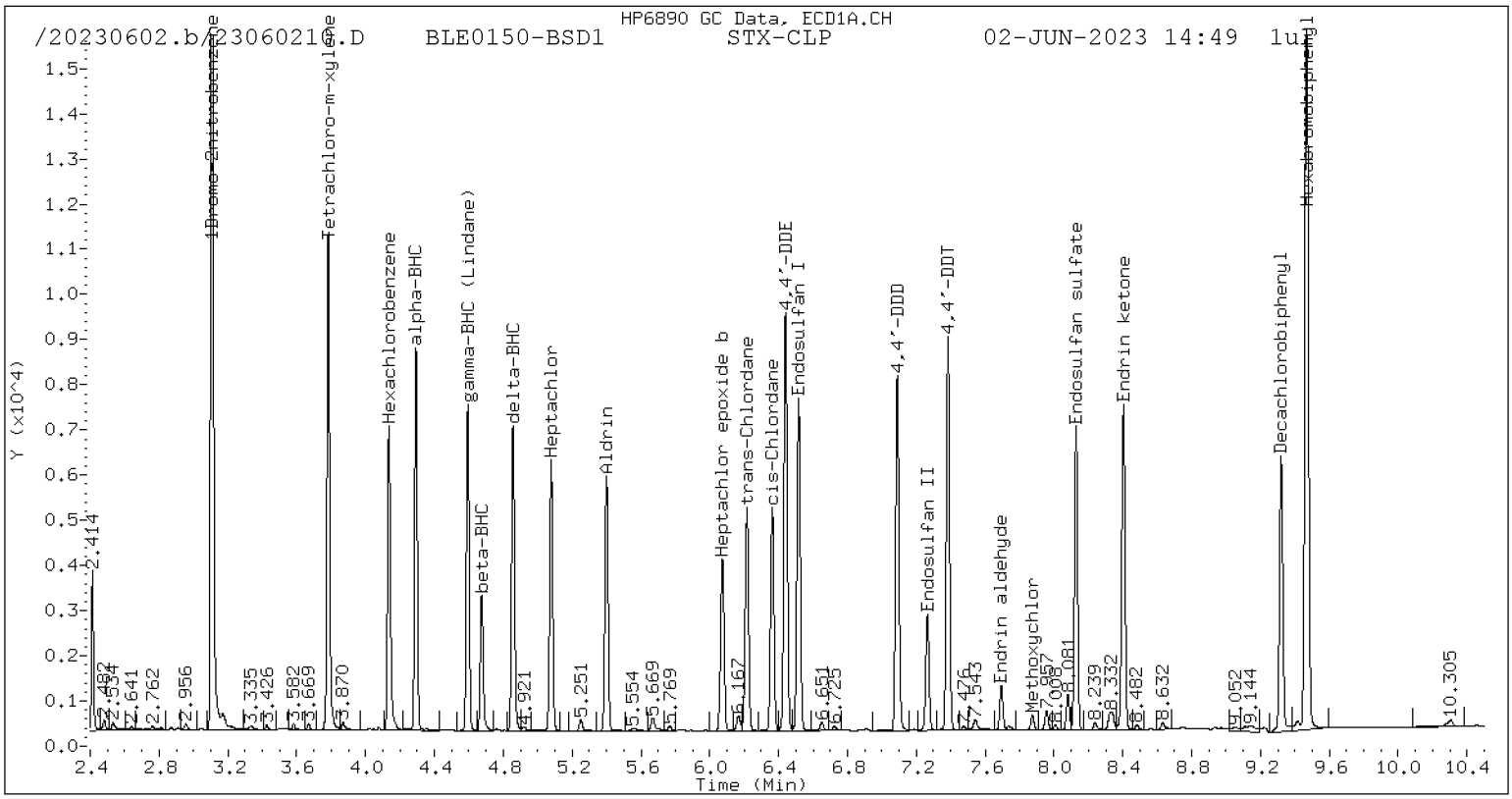
/20230602.b/23060210.D BLE0150-BSD1 STX-CLP 02-JUN-2023 14:49 1ul



/20230602.b/B20230602.b/23060210.D BLE0150-BSD1 CLP2 02-JUN-2023 14:49 1ul

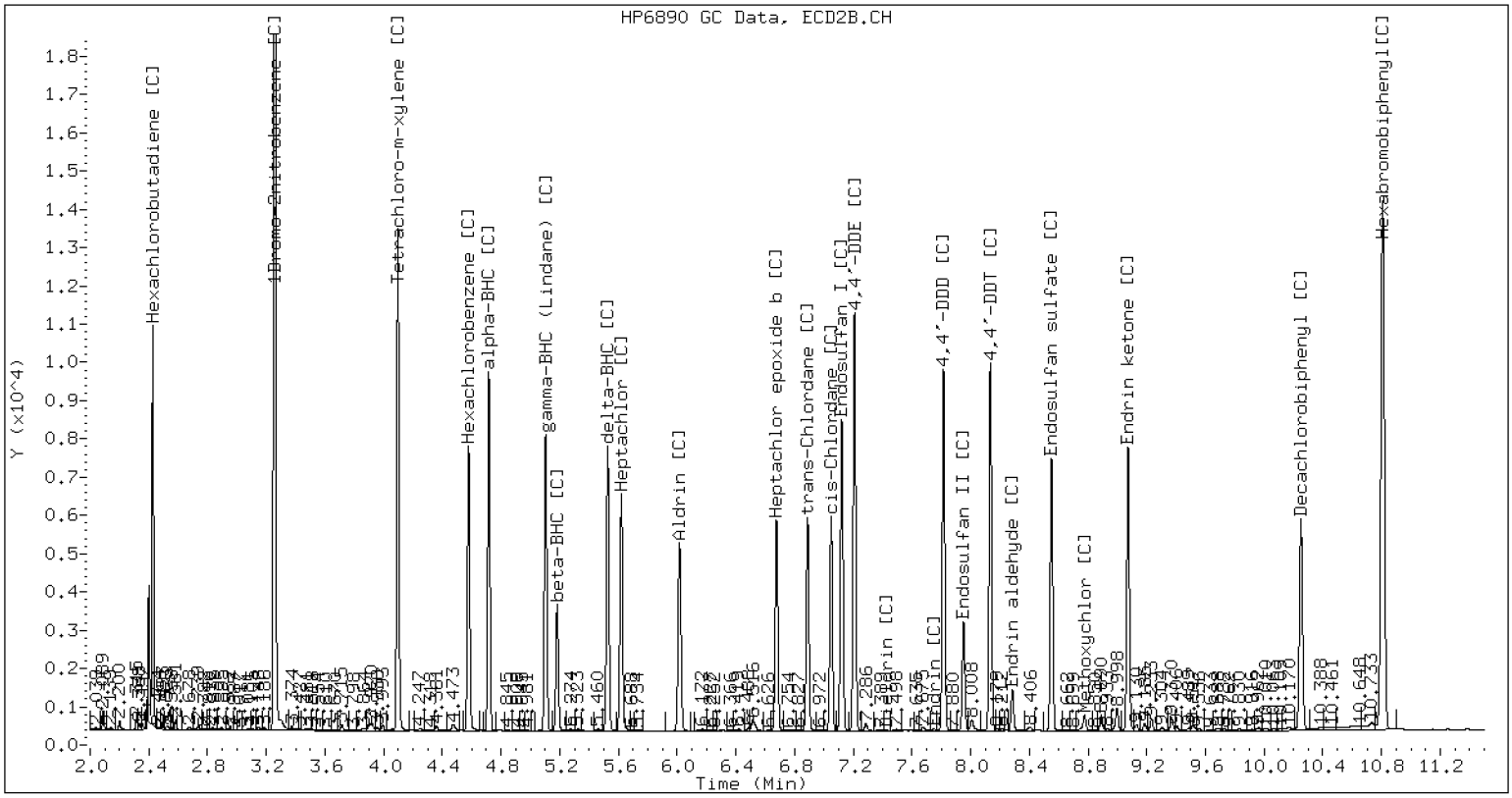


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230602.b/B20230602.b/23060210.D BLE0150-BSD1 CLP2



CLP-2 Manual Integration: NO

MS / MS DUPLICATE RECOVERY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 15:08
Batch:	BLE0150	Laboratory ID:	BLE0150-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	26.34 g / 2.5 mL	Source Sample:	LDW23-SS1800

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	ND	U	2.68		67.0	26 - 128

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/02/23 15:26
Batch:	BLE0150	Laboratory ID:	BLE0150-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	26.34 g / 2.5 mL	Source Sample:	LDW23-SS1800

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	4.00	2.22		55.4	18.9	30	26 - 128

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060211.D
Data file 2: /20230602.b/B20230602.b/23060211.D
Method: \20230602.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLE0150-MS1
Client ID:
Injection Date: 02-JUN-2023 15:08
Report Date: 06/08/2023 11:22
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	-0.000	182830	4.718	0.001	141114	14.32	11.01	26.2	alpha-BHC
4.675	0.000	58408	5.182	0.001	63949	11.09	12.18	9.4	beta-BHC
4.857	0.000	198829	5.527	0.000	117120	18.50	11.09	50.1*	delta-BHC
4.595	0.001	156639	5.104	0.001	121645	14.08	10.75	26.8	gamma-BHC (Lindane)
5.078	-0.001	123384	5.621	0.001	137304	11.74	13.33	12.7	Heptachlor
5.402	0.002	149567	6.016	0.001	114206	14.26	10.97	26.1	Aldrin
6.072	-0.001	109491	6.663	-0.014	225099	11.80	25.02	71.8*	Heptachlor epoxide b
6.518	0.001	126469	7.121	0.000	126029	14.66	16.12	9.5	Endosulfan I
6.764	-0.013	95535	7.402	-0.014	44290	10.60	5.15	69.2*	Dieldrin
6.440	-0.001	298601	7.209	0.000	225420	35.76	27.39	26.5	4,4'-DDE
----			----			0.00	0.00	---	Endrin
7.264	-0.001	63991	7.945	-0.006	213768	11.42	35.68	103.0*	Endosulfan II
7.088	-0.002	354251	7.816	0.001	185087	65.18	32.31	67.4*	4,4'-DDD
8.129	0.000	119144	8.552	0.001	113584	23.36	21.68	7.5	Endosulfan sulfate
7.383	-0.002	382929	8.139	0.005	417963	68.21	74.65	9.0	4,4'-DDT
7.901	0.027	36861	----			14.73	0.00	---	Methoxychlor
8.404	-0.000	137279	9.075	0.002	202053	23.18	33.21	35.6	Endrin ketone
----			8.281	-0.002	44687	0.00	10.92	---	Endrin aldehyde
6.216	0.001	99171	6.890	0.002	99284	10.75	11.31	5.0	trans-Chlordane
6.364	0.001	148827	7.050	0.001	99304	16.05	11.47	33.3	cis-Chlordane
2.283	-0.001	142953	2.427	-0.001	137550	10.17	10.99	7.8	Hexachlorobutadiene
4.136	0.000	159415	4.579	0.001	156992	13.40	13.40	0.0	Hexachlorobenzene
3.784	0.000	202289	4.097	0.000	230158	23.52	26.50	11.9	Tetrachloro-m-xylene
9.322	0.001	133423	10.253	0.002	131741	32.41	33.46	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

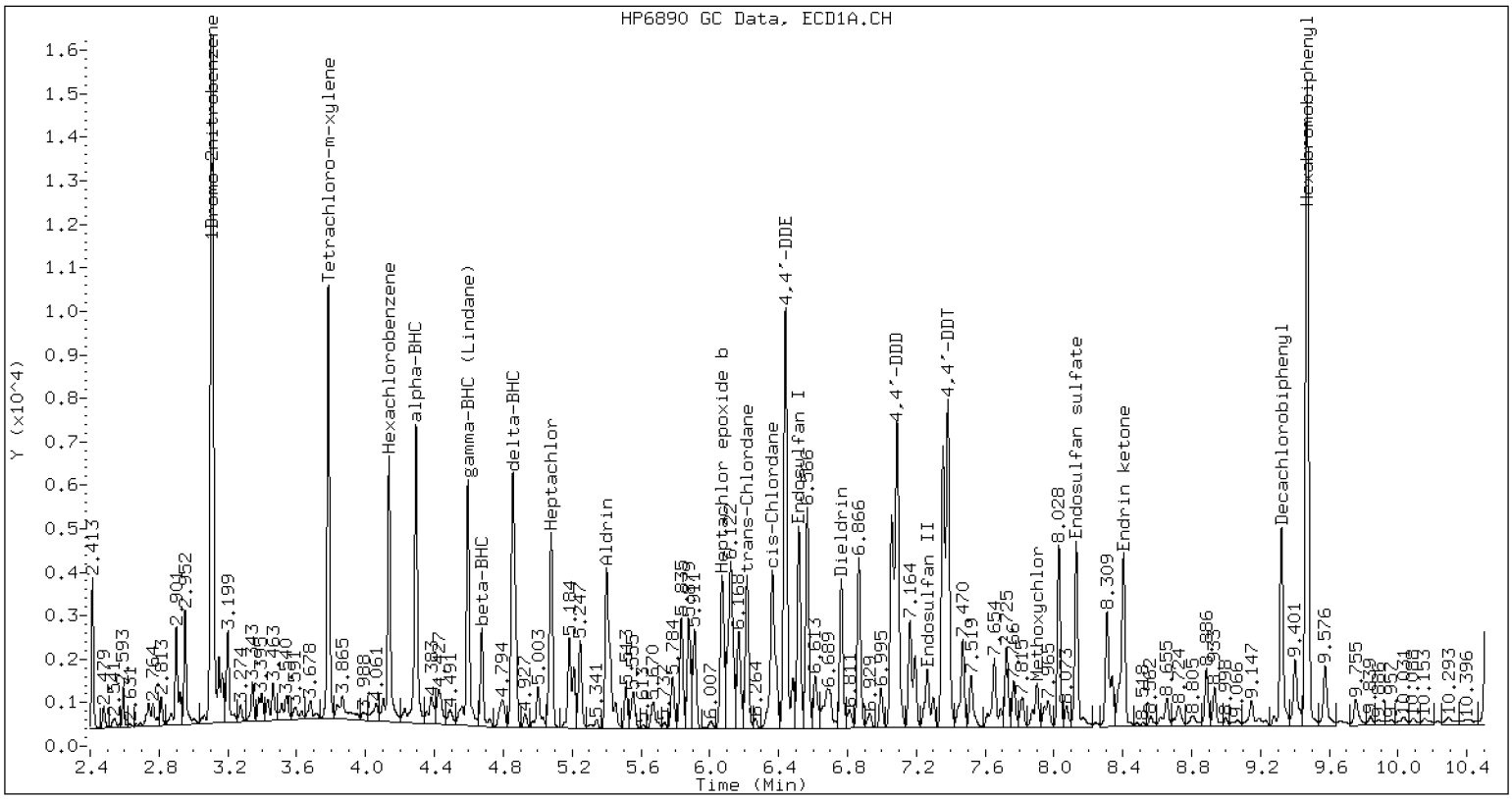
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	677880	9.5
Hexabromobiphenyl	493109	402920	-18.3

Column 2

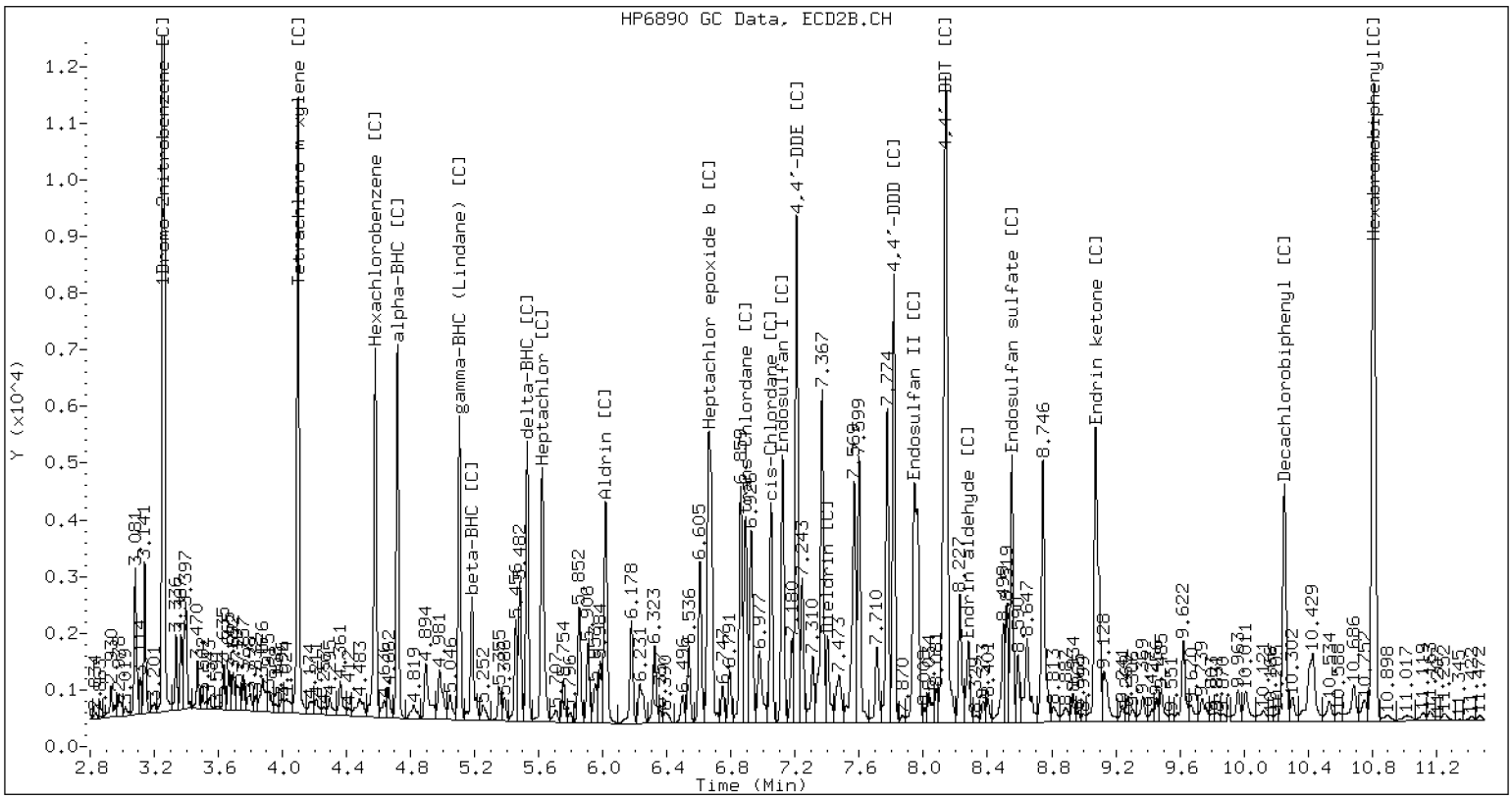
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	687095	-1.3
Hexabromobiphenyl	461581	373947	-19.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

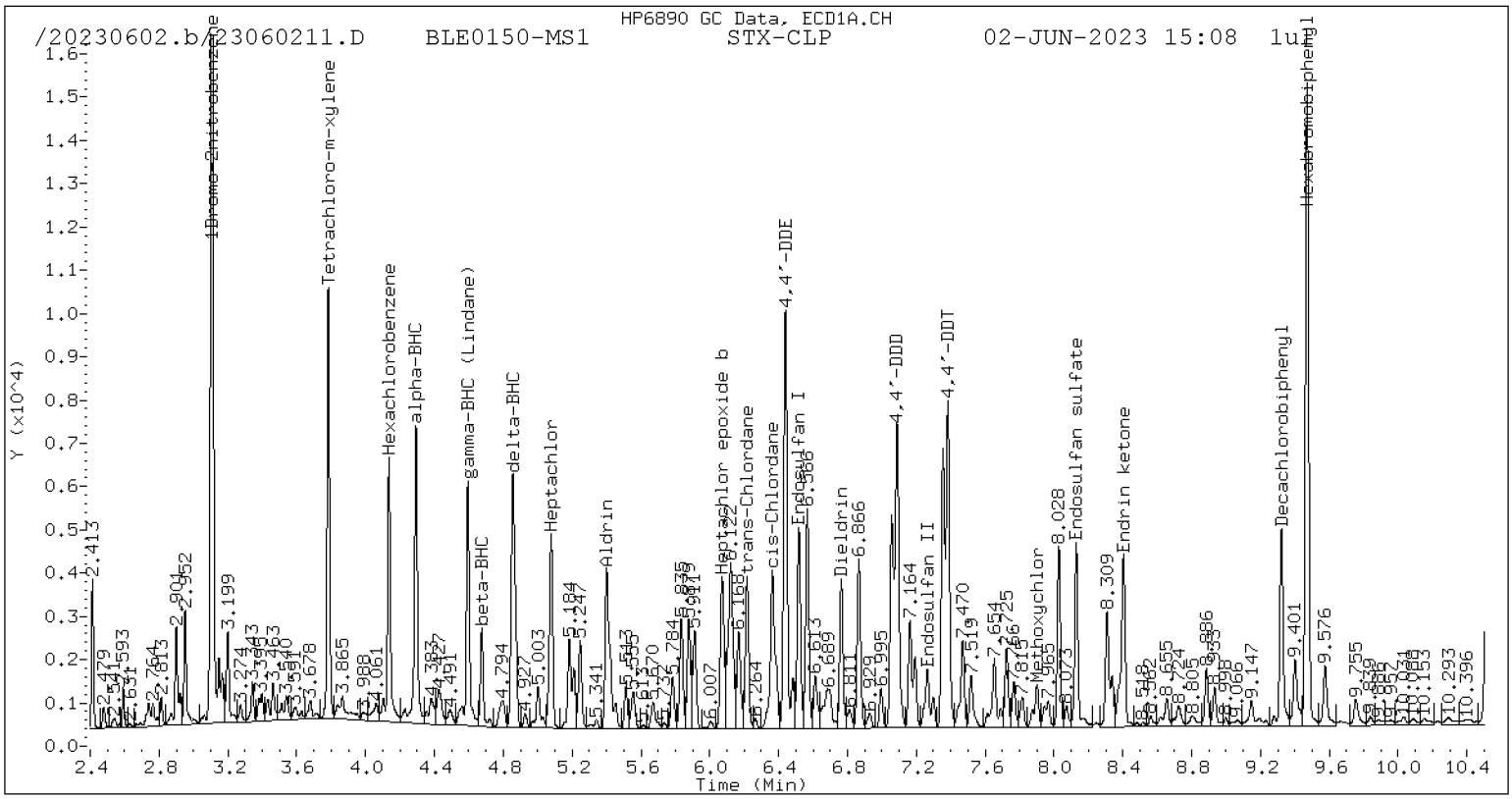
/20230602.b/23060211.D BLE0150-MS1 STX-CLP 02-JUN-2023 15:08 1ul



/20230602.b/B20230602.b/23060211.D BLE0150-MS1 CLP2 02-JUN-2023 15:08 1ul

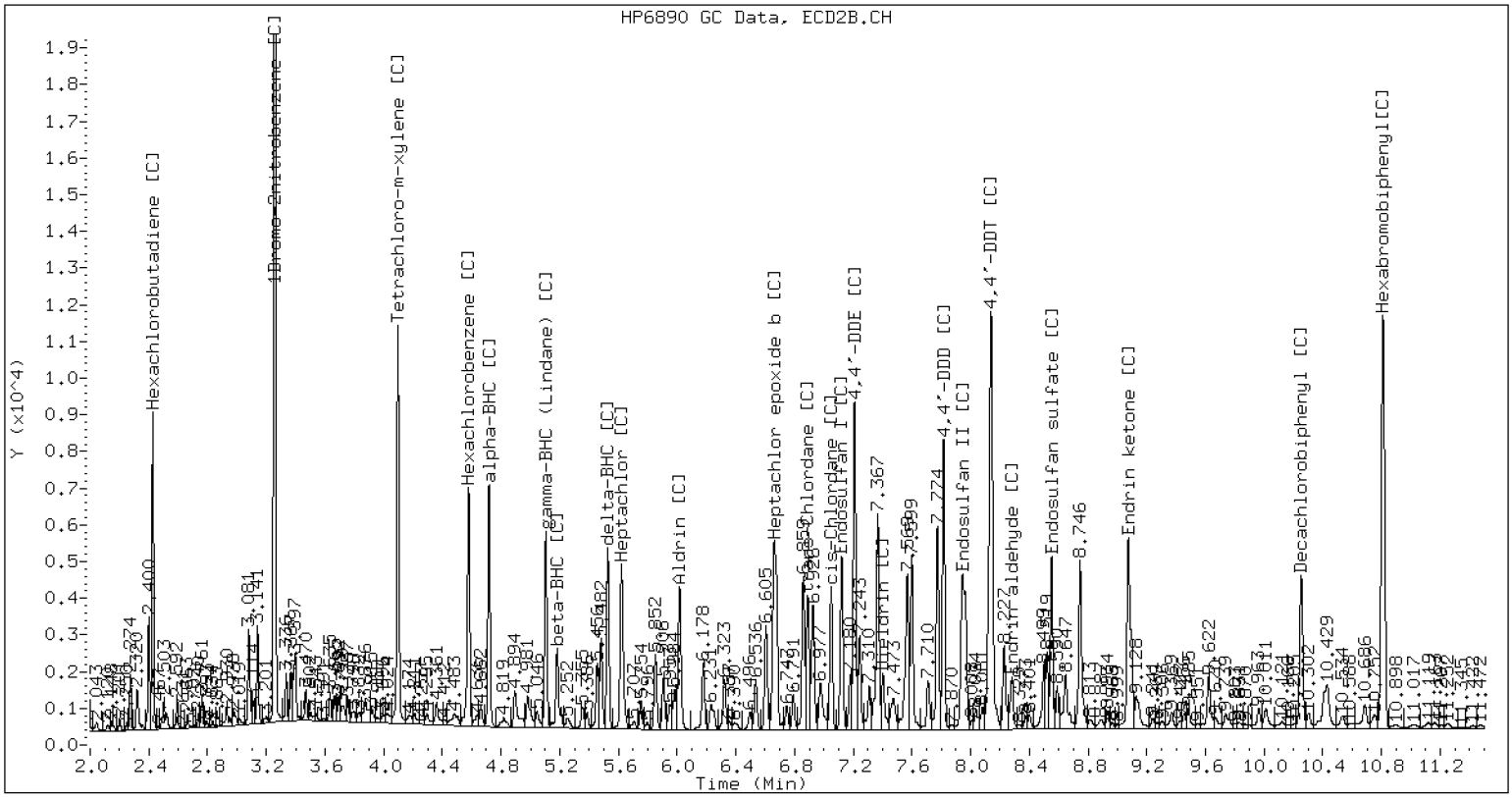


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230602.b/B20230602.b/23060211.D BLE0150-MS1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060212.D
Data file 2: /20230602.b/B20230602.b/23060212.D
Method: \20230602.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLE0150-MSD1
Client ID:
Injection Date: 02-JUN-2023 15:26
Report Date: 06/08/2023 11:22
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	0.000	182299	4.718	0.000	139285	14.02	11.48	19.9	alpha-BHC
4.675	0.001	52616	5.183	0.001	57369	9.81	11.55	16.3	beta-BHC
4.857	0.001	197648	5.528	0.001	112824	18.05	11.29	46.1*	delta-BHC
4.595	0.001	129936	5.104	0.001	118193	11.46	11.04	3.8	gamma-BHC (Lindane) M
5.078	-0.001	126197	5.621	0.002	137751	11.79	14.14	18.1	Heptachlor
5.403	0.002	149401	6.016	0.000	116790	13.98	11.86	16.4	Aldrin
6.073	-0.000	111233	6.662	-0.014	216258	11.76	25.41	73.4*	Heptachlor epoxide b
6.518	0.001	130954	7.122	0.001	124593	14.90	16.85	12.3	Endosulfan I
6.764	-0.013	93929	7.402	-0.014	43579	10.23	5.36	62.5*	Dieldrin
6.440	-0.001	303681	7.209	0.000	247340	35.69	31.77	11.6	4,4'-DDE
7.057	0.029	127729	7.711	-0.030	38087	21.65	6.30	109.9*	Endrin M
7.264	-0.001	35251	7.962	0.011	81315	6.55	14.24	74.0*	Endosulfan II
7.089	-0.000	222459	7.816	0.001	175222	42.61	32.08	28.2	4,4'-DDD M
8.130	0.000	116763	8.552	0.001	111578	23.83	22.33	6.5	Endosulfan sulfate
7.383	-0.001	257937	8.139	0.005	412487	47.84	77.27	47.1*	4,4'-DDT M
7.902	0.027	35268	----			14.67	0.00	---	Methoxychlor
8.405	0.001	115569	9.076	0.003	204866	20.31	35.32	53.9*	Endrin ketone M
7.724	0.030	88156	8.275	-0.009	78937	22.00	20.22	8.4	Endrin aldehyde
6.217	0.001	109178	6.889	0.001	94674	11.62	11.40	2.0	trans-Chlordane
6.365	0.001	146009	7.050	0.002	94311	15.46	11.51	29.3	cis-Chlordane
2.283	-0.000	146132	2.427	-0.001	168223	10.21	14.21	32.8	Hexachlorobutadiene
4.136	-0.000	134381	4.579	0.001	153143	11.08	13.82	21.9	Hexachlorobenzene M
3.784	0.000	218077	4.097	0.001	222793	24.89	27.11	8.6	Tetrachloro-m-xylene
9.322	0.002	138000	10.254	0.003	137146	34.89	36.53	4.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

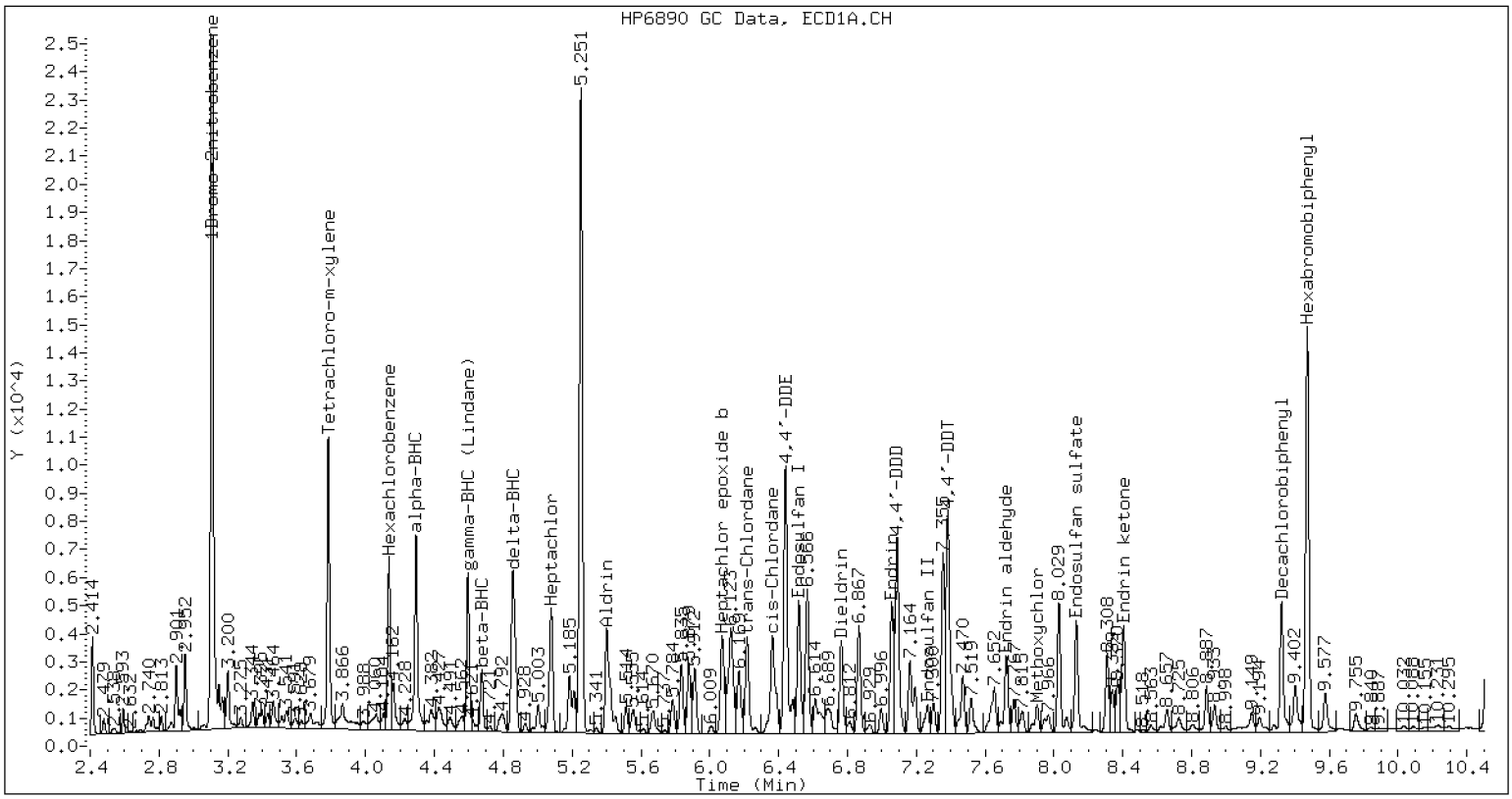
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	690617	11.6
Hexabromobiphenyl	493109	387022	-21.5

Column 2

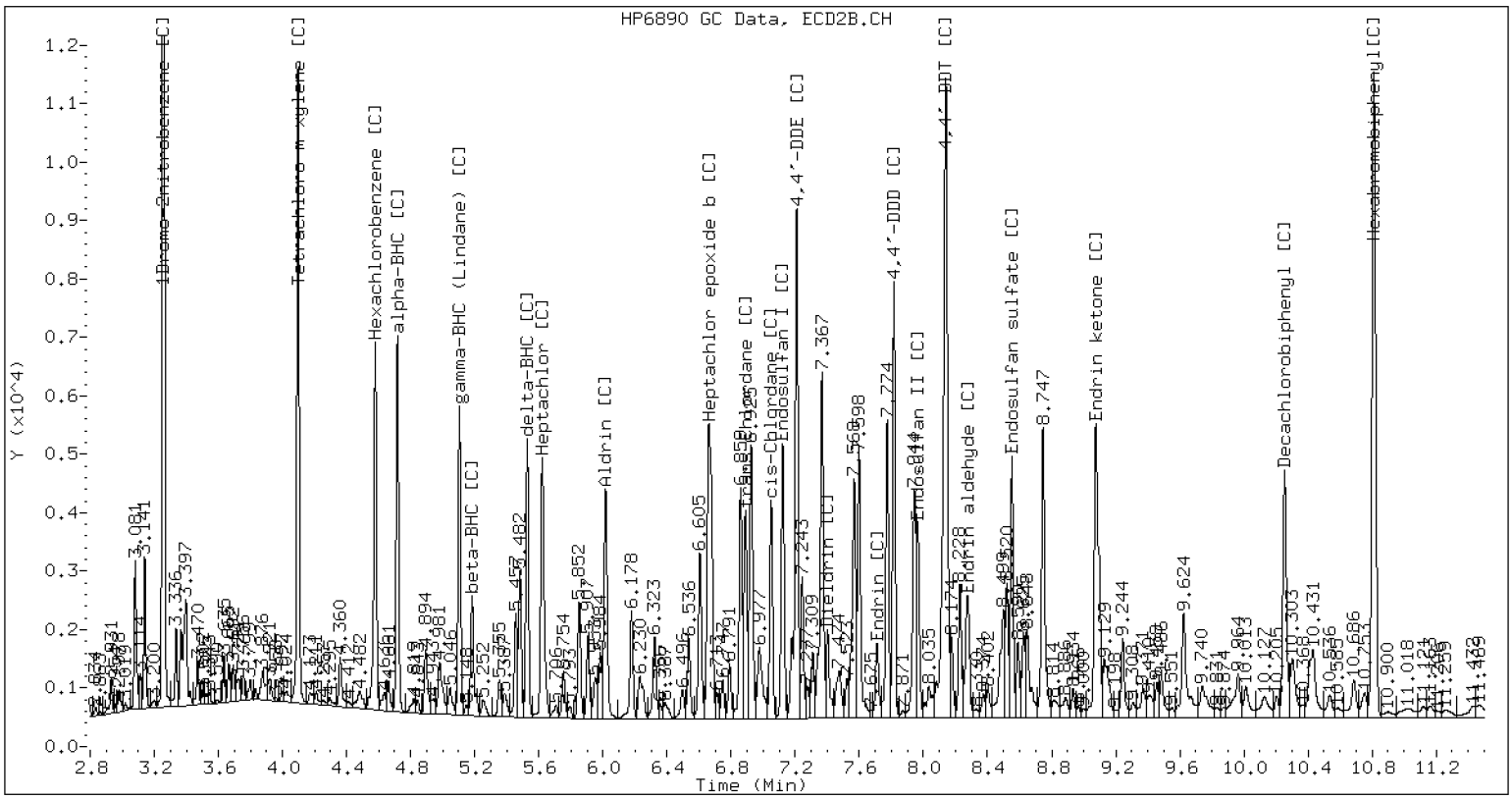
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	649981	-6.6
Hexabromobiphenyl	461581	356523	-22.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

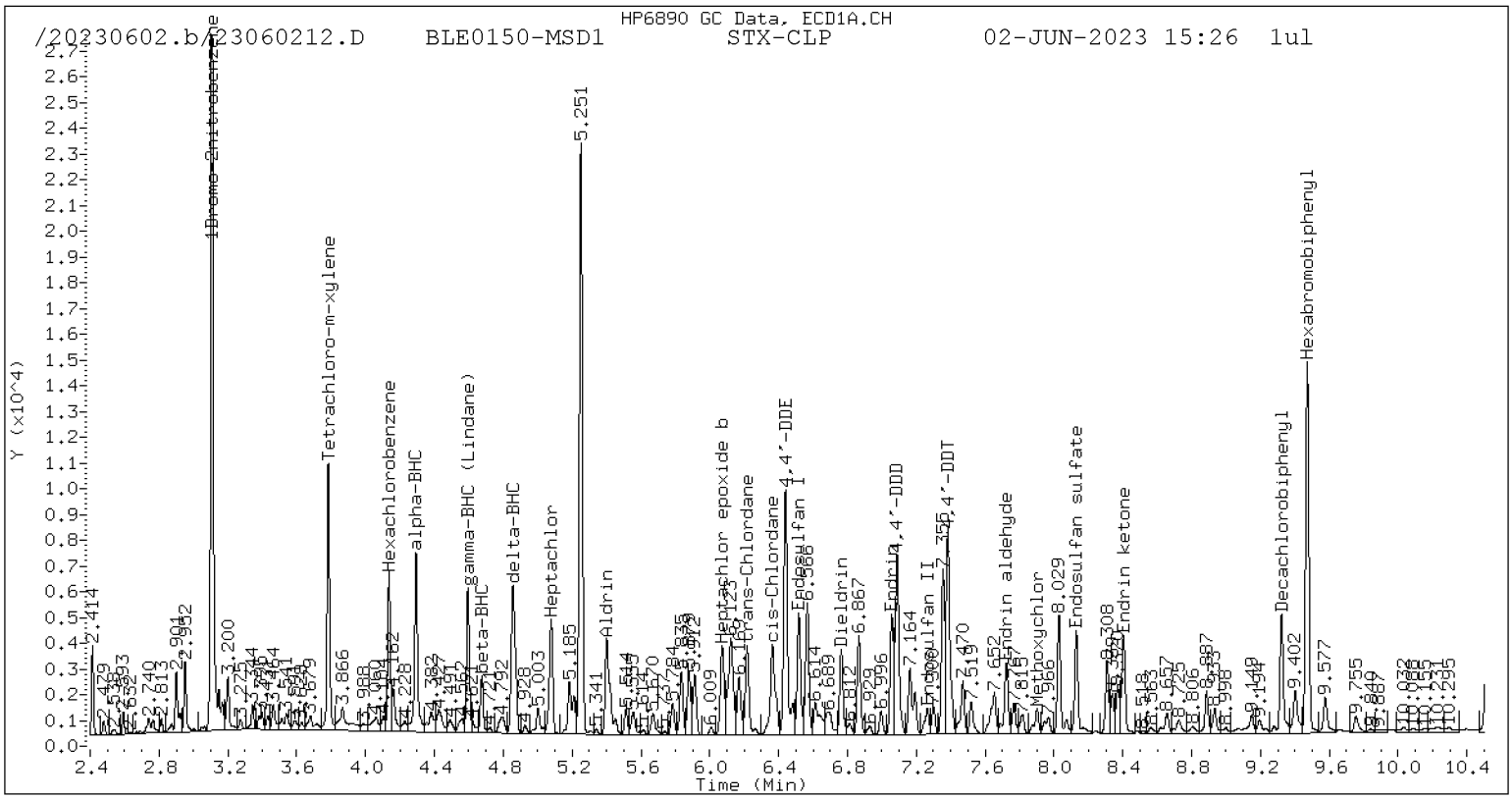
/20230602.b/23060212.D BLE0150-MSD1 STX-CLP 02-JUN-2023 15:26 1ul



/20230602.b/B20230602.b/23060212.D BLE0150-MSD1 CLP2 02-JUN-2023 15:26 1ul

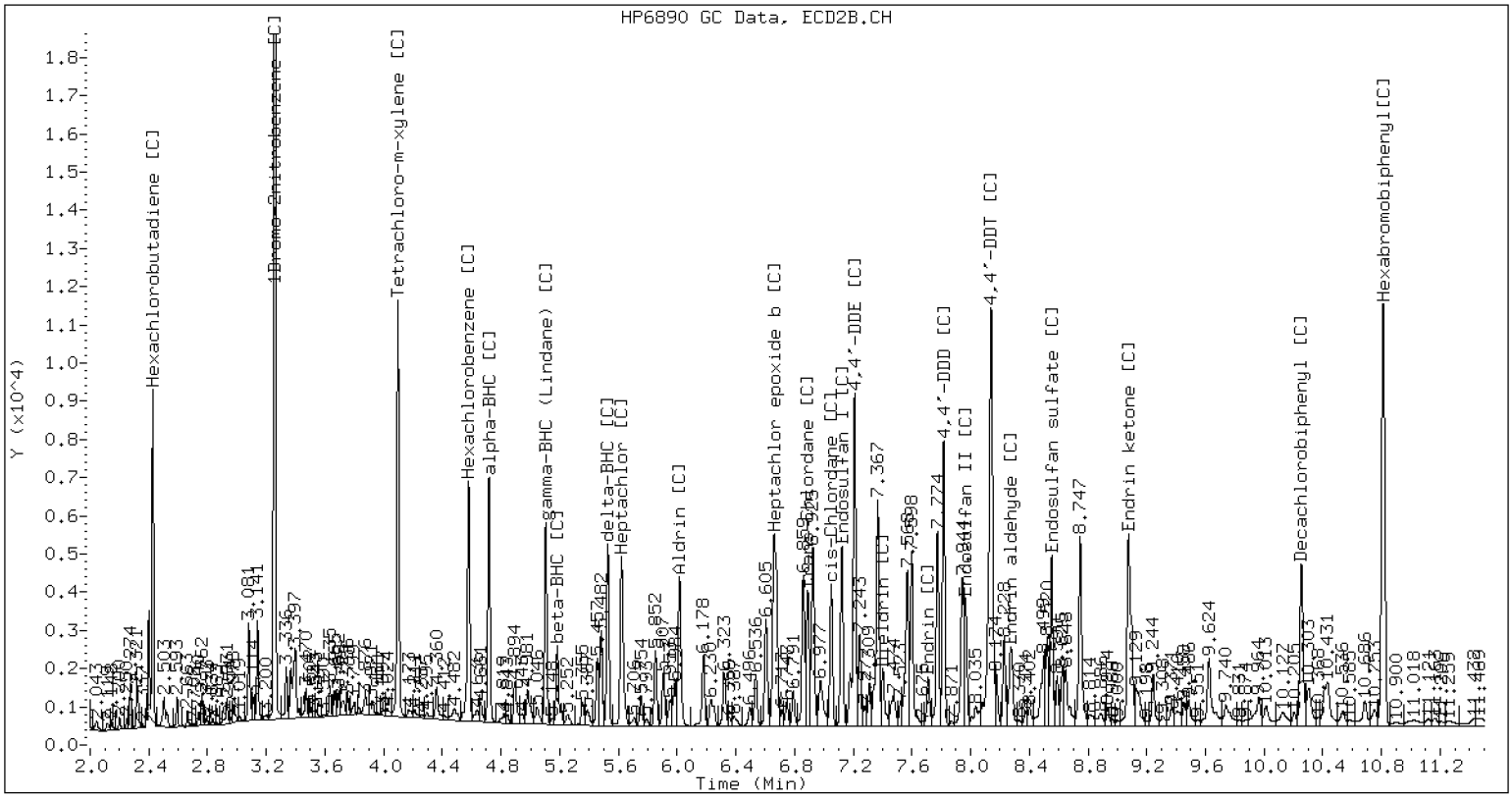


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

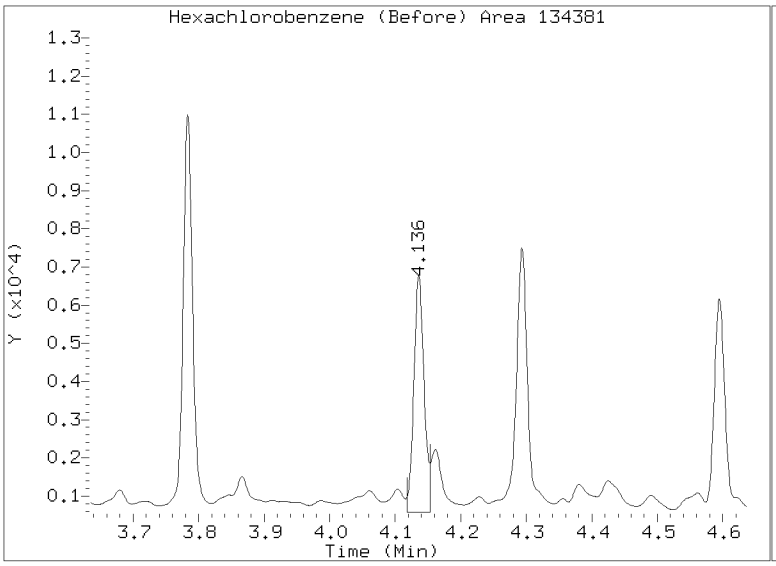
/20230602.b/B20230602.b/23060212.D BLE0150-MSD1 CLP2

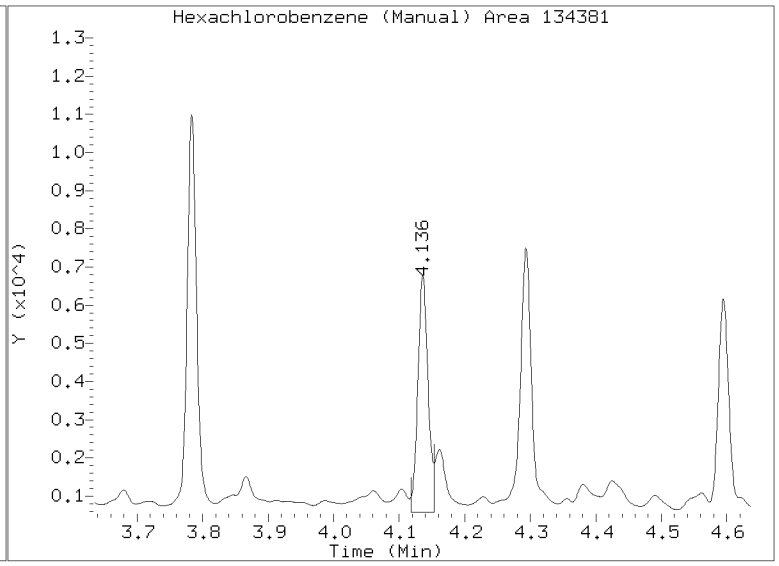


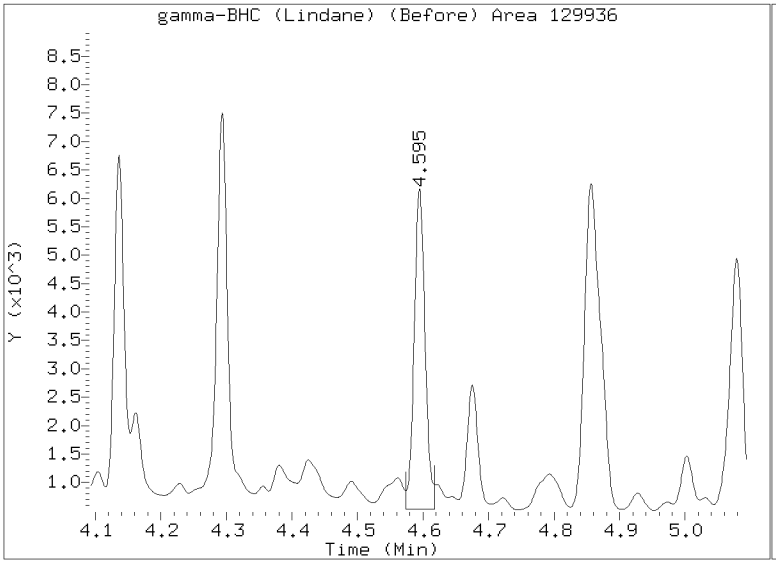
CLP-2 Manual Integration: NO

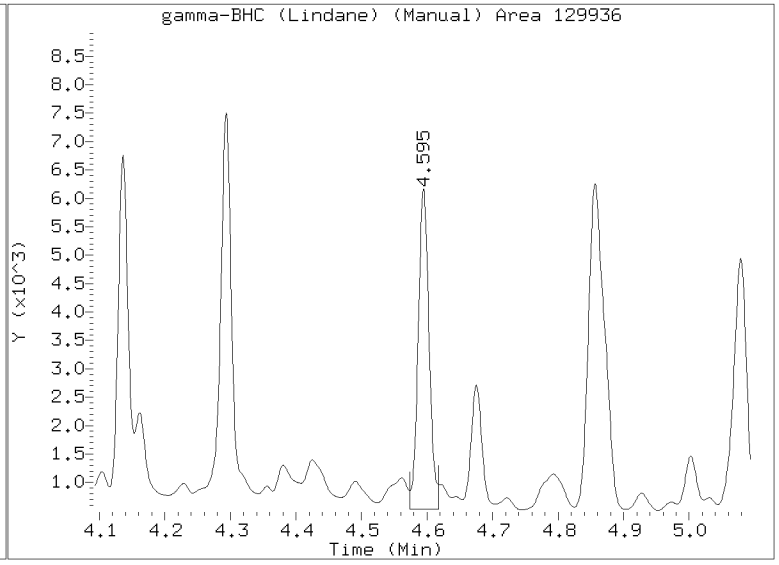
Manual Peak Adjustment Report, STX-CLP

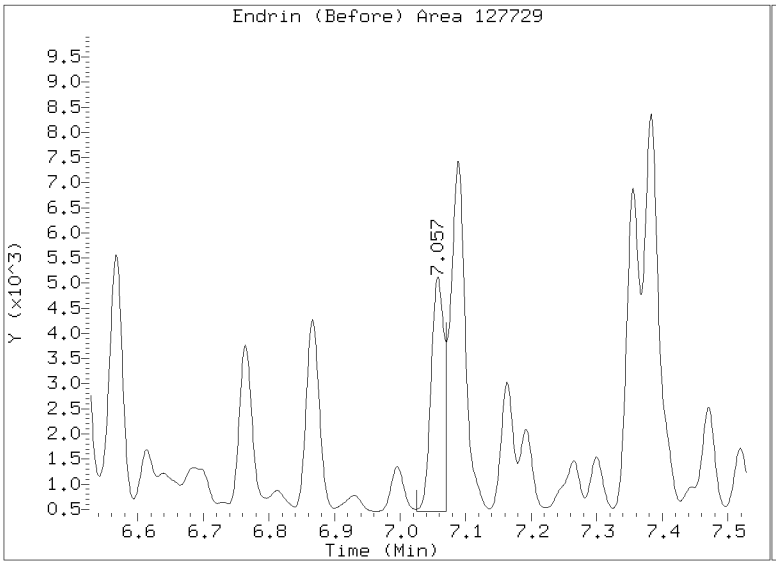
Datafile: /20230602.b/23060212.D
Injection Date: 02-JUN-2023 15:26
Lab ID:BLE0150-MSD1 Client ID:
Report Date: 06/08/2023 11:23

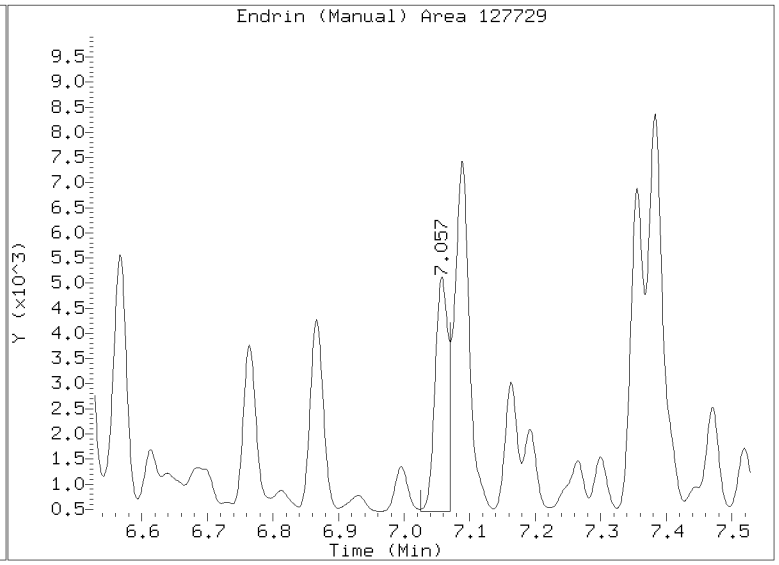






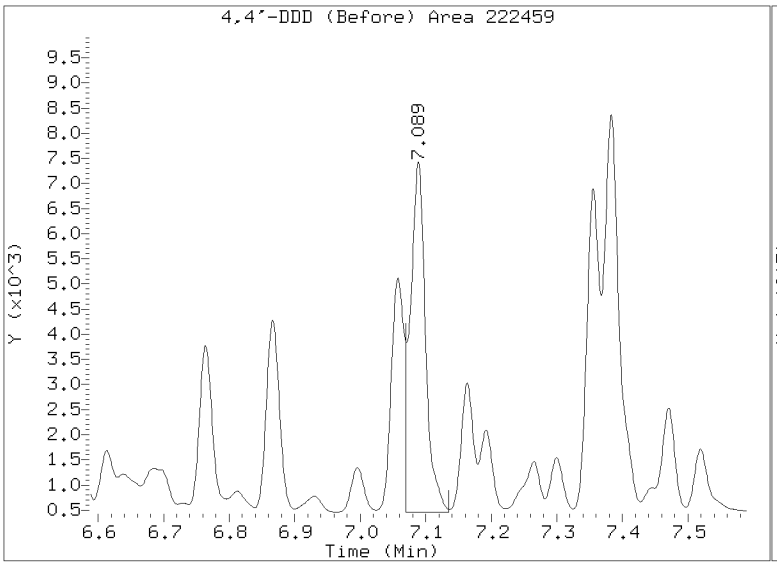


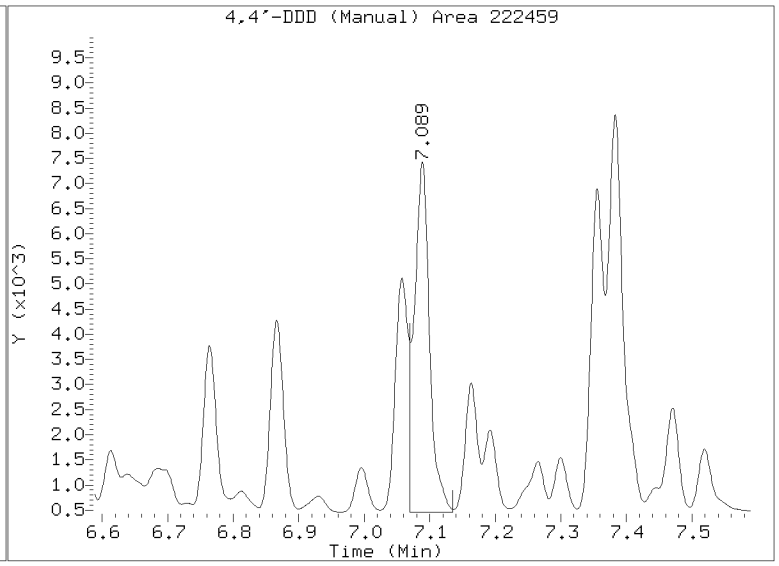


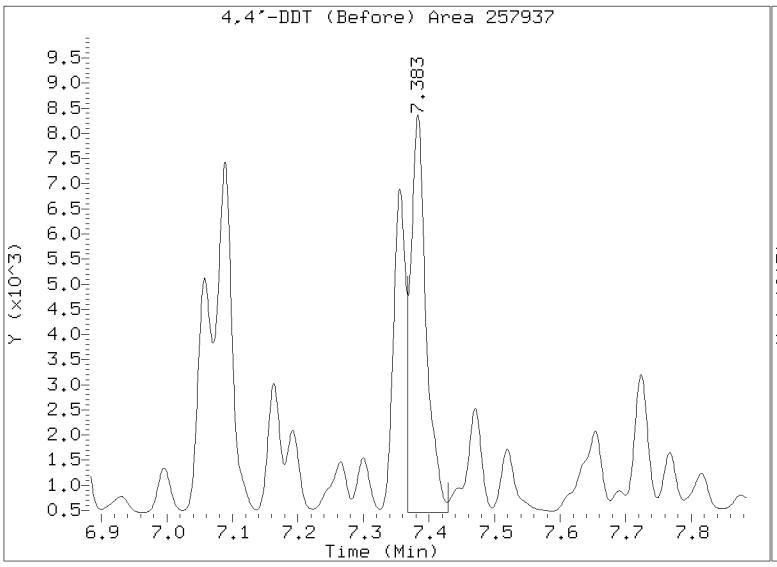


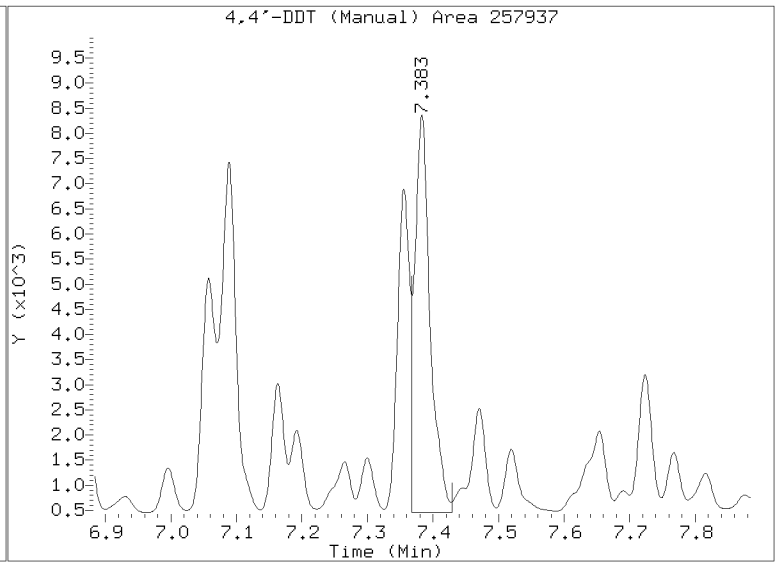
Manual Peak Adjustment Report, STX-CLP

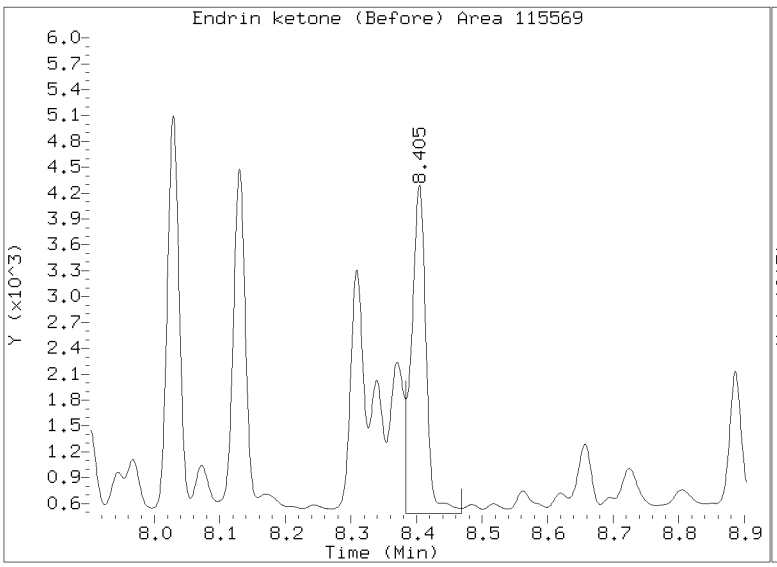
Datafile: /20230602.b/23060212.D
Injection Date: 02-JUN-2023 15:26
Lab ID:BLE0150-MSD1 Client ID:
Report Date: 06/08/2023 11:23

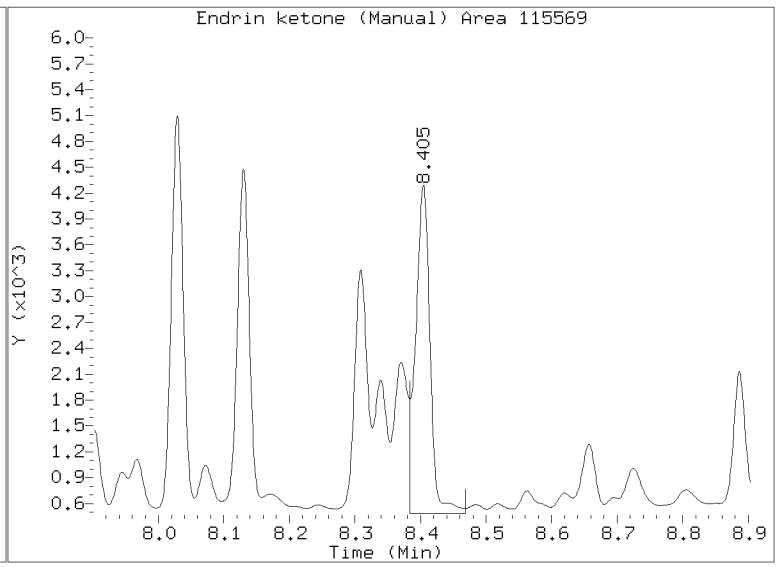












INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (1):	STX-CLP

Calibration Comments: PEST

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
alpha-BHC	1.25	1.522098	2.5	1.474423	5	1.536413	10	1.532988	20	1.538353	40	1.489009
beta-BHC	1.25	0.6961534	2.5	0.6586351	5	0.6368546	10	0.625766	20	0.615751	40	0.5686209
gamma-BHC (Lindane)	1.25	1.341213	2.5	1.297859	5	1.324992	10	1.33675	20	1.34339	40	1.291869
delta-BHC	1.25	1.229283	2.5	1.212216	5	1.264047	10	1.28608	20	1.315431	40	1.294456
Heptachlor	1.25	1.34695	2.5	1.272211	5	1.288958	10	1.263627	20	1.24764	40	1.16599
Aldrin	1.25	1.314692	2.5	1.247067	5	1.261128	10	1.261173	20	1.255997	40	1.191664
Heptachlor Epoxide	1.25	1.218458	2.5	1.166403	5	1.14661	10	1.110848	20	1.082846	40	1.005746
trans-Chlordane (beta-Chlordane)	1.25	1.161086	2.5	1.100323	5	1.106022	10	1.100993	20	1.095811	40	1.045037
cis-Chlordane (alpha-chlordane)	1.25	1.190746	2.5	1.121244	5	1.118654	10	1.104958	20	1.092321	40	1.03579
Endosulfan I	1.25	1.141601	2.5	1.062204	5	1.054337	10	1.029544	20	1.015747	40	0.9430438
4,4'-DDE	2.5	1.024204	5	0.9954708	10	1.01892	20	1.012244	40	1.007297	80	0.947236
Dieldrin	2.5	1.15248	5	1.114253	10	1.12039	20	1.093033	40	1.069629	80	0.9847366
Endrin	2.5	1.318312	5	1.295686	10	1.283465	20	1.245561	40	1.209615	80	1.156323
Endosulfan II	2.5	1.230007	5	1.189916	10	1.174142	20	1.13579	40	1.097737	80	1.035954
4,4'-DDD	2.5	1.137613	5	1.11508	10	1.111994	20	1.094253	40	1.078901	80	1.053182
Endrin Aldehyde	2.5	0.9789223	5	0.876482	10	0.8555279	20	0.8287038	40	0.7993567	80	0.7669835
4,4'-DDT	2.5	1.155942	5	1.142363	10	1.147478	20	1.129482	40	1.120523	80	1.097945
Endosulfan Sulfate	2.5	1.133797	5	1.067783	10	1.05226	20	1.014306	40	0.9888199	80	0.9590431
Endrin Ketone	2.5	1.394625	5	1.282941	10	1.230421	20	1.163579	40	1.117757	80	1.072605
Methoxychlor	12.5	0.6049736	25	0.5735	50	0.5335185	100	0.4913194	200	0.4557564	400	0.4275212
Hexachlorobutadiene	1.25	2.144858	2.5	1.69997	5	1.689178	10	1.609397	20	1.570093	40	1.477813
Hexachlorobenzene	1.25	1.631972	2.5	1.49987	5	1.460168	10	1.393676	20	1.347584	40	1.29269
Decachlorobiphenyl	2.5	1.041131	5	0.9026442	10	0.8896708	20	0.7939499	40	0.7416129	80	0.7046478
Tetrachlorometaxylene	2.5	1.158758	5	1.088707	10	1.061018	20	1.026919	40	0.9943546	80	0.9162085

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (1):	STX-CLP

Calibration Comments: PEST

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC	80	1.450689										
beta-BHC	80	0.5486064										
gamma-BHC (Lindane)	80	1.257154										
delta-BHC	80	1.275745										
Heptachlor	80	1.096339										
Aldrin	80	1.134431										
Heptachlor Epoxide	80	0.9365342										
trans-Chlordane (beta-Chlordane)	80	1.008387										
cis-Chlordane (alpha-chlordane)	80	0.9948561										
Endosulfan I	80	0.8800028										
4,4'-DDE	160	0.8935221										
Dieldrin	160	0.9114007										
Endrin	160	1.027842										
Endosulfan II	160	0.9259065										
4,4'-DDD	160	0.9633336										
Endrin Aldehyde	160	0.6920409										
4,4'-DDT	160	1.008428										
Endosulfan Sulfate	160	0.8725964										
Endrin Ketone	160	0.9699346										
Methoxychlor	800	0.3909649										
Hexachlorobutadiene	80	1.418863										
Hexachlorobenzene	80	1.20499										
2,4'-DDE			2.5	0.9001608	5	0.8554024	10	0.8435263	20	0.8164916	40	0.7901528
2,4'-DDD			2.5	0.8707888	5	0.820237	10	0.7293311	20	0.7571382	40	0.7323639
2,4'-DDT			2.5	0.9738249	5	0.9235815	10	0.904473	20	0.8880213	40	0.8621105
Oxychlordane			2.5	1.264132	5	1.188334	10	1.124728	20	1.105939	40	1.077201
cis-Nonachlor			2.5	1.434477	5	1.372093	10	1.343296	20	1.317088	40	1.294575

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (1):	STX-CLP

Calibration Comments: PEST

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
trans-Nonachlor			2.5	1.410859	5	1.349003	10	1.321107	20	1.287999	40	1.260527
Mirex			2.5	1.017314	5	0.9170622	10	0.8464463	20	0.8151396	40	0.7820569
Decachlorobiphenyl	160	0.6487935										
Tetrachlorometaxylene	160	0.859172										

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (1):	STX-CLP

Calibration Comments: PEST

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE	80	0.7429629	160	0.6814711								
2,4'-DDD	80	0.6932275	160	0.6450658								
2,4'-DDT	80	0.8238453	160	0.7701519								
Oxychlordane	80	1.028134	160	0.9554015								
cis-Nonachlor	80	1.254783	160	1.198926								
trans-Nonachlor	80	1.210955	160	1.144877								
Mirex	80	0.7542087	160	0.7207716								

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (1):	STX-CLP

Calibration Comments: PEST

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (1):	STX-CLP

Calibration Comments: PEST

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (1):	STX-CLP

Calibration Comments: PEST

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC	1.506282	2.3			RSD (20)	
beta-BHC	0.6214839	8.1			RSD (20)	
gamma-BHC (Lindane)	1.313318	2.5			RSD (20)	
delta-BHC	1.26818	2.9			RSD (20)	
Heptachlor	1.240245	6.7			RSD (20)	
Aldrin	1.238022	4.7			RSD (20)	
Heptachlor Epoxide	1.095349	8.9			RSD (20)	
trans-Chlordane (beta-Chlordane)	1.088237	4.5			RSD (20)	
cis-Chlordane (alpha-chlordane)	1.094081	5.8			RSD (20)	
Endosulfan I	1.018069	8.3			RSD (20)	
4,4'-DDE	0.9855563	4.9			RSD (20)	
Dieldrin	1.063703	8.0			RSD (20)	
Endrin	1.219543	8.3			RSD (20)	
Endosulfan II	1.112779	9.4			RSD (20)	
4,4'-DDD	1.079194	5.4			RSD (20)	
Endrin Aldehyde	0.8282882	10.9			RSD (20)	
4,4'-DDT	1.114594	4.5			RSD (20)	
Endosulfan Sulfate	1.012658	8.3			RSD (20)	
Endrin Ketone	1.17598	12.0			RSD (20)	
Methoxychlor	0.4967934	15.7			RSD (20)	
Hexachlorobutadiene	1.658596	14.3			RSD (20)	
Hexachlorobenzene	1.404421	10.1			RSD (20)	
2,4'-DDE	0.8043097	9.2			RSD (20)	
2,4'-DDD	0.749736	10.1			RSD (20)	
2,4'-DDT	0.8780012	7.6			RSD (20)	
Oxychlordane	1.106267	9.2			RSD (20)	
cis-Nonachlor	1.316463	5.9			RSD (20)	
trans-Nonachlor	1.283618	6.9			RSD (20)	
Mirex	0.8361428	12.2			RSD (20)	
Decachlorobiphenyl	0.8174929	16.6			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (1):	STX-CLP

Calibration Comments: PEST

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Tetrachlorometaxylene	1.01502	10.1			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (2):	STX-CLPII

Calibration Comments: PEST

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
alpha-BHC [2C]	1.25	1.446285	2.5	1.4212	5	1.47362	10	1.510682	20	1.545851	40	1.56571
beta-BHC [2C]	1.25	0.6896482	2.5	0.6250481	5	0.6158738	10	0.6021066	20	0.5961879	40	0.5920552
gamma-BHC (Lindane) [2C]	1.25	1.312113	2.5	1.272444	5	1.303606	10	1.326083	20	1.35277	40	1.365079
delta-BHC [2C]	1.25	1.193131	2.5	1.162932	5	1.182069	10	1.222456	20	1.261238	40	1.326736
Heptachlor [2C]	1.25	1.269077	2.5	1.20422	5	1.203706	10	1.207133	20	1.210481	40	1.198678
Aldrin [2C]	1.25	1.25233	2.5	1.195363	5	1.204068	10	1.22017	20	1.233857	40	1.234327
Heptachlor Epoxide [2C]	1.25	1.133348	2.5	1.089848	5	1.059017	10	1.044806	20	1.041316	40	1.024547
trans-Chlordane (beta-Chlordane) [2C]	1.25	1.073078	2.5	1.019354	5	1.01898	10	1.015858	20	1.025119	40	1.033329
cis-Chlordane (alpha-chlordane) [2C]	1.25	1.066263	2.5	1.019263	5	1.021243	10	1.002074	20	1.003962	40	1.003591
Endosulfan I [2C]	1.25	0.9730827	2.5	0.9276021	5	0.9020157	10	0.9151953	20	0.9147981	40	0.9052473
4,4'-DDE [2C]	2.5	1.001076	5	0.9695036	10	0.9735342	20	0.9830164	40	0.9749158	80	0.9486247
Dieldrin [2C]	2.5	1.060664	5	1.02058	10	1.021074	20	1.021867	40	1.011551	80	0.9824086
Endrin [2C]	2.5	1.498381	5	1.414017	10	1.371417	20	1.365947	40	1.337278	80	1.311703
Endosulfan II [2C]	2.5	1.390574	5	1.455612	10	1.25257	20	1.264175	40	1.23363	80	1.233353
4,4'-DDD [2C]	2.5	1.330003	5	1.246651	10	1.210852	20	1.227587	40	1.215657	80	1.212536
Endrin Aldehyde [2C]	2.5	0.9995739	5	0.9047692	10	0.8576982	20	0.8740432	40	0.8543896	80	0.8493184
4,4'-DDT [2C]	2.5	1.284499	5	1.197519	10	1.188837	20	1.197924	40	1.18936	80	1.198637
Endosulfan Sulfate [2C]	2.5	1.221743	5	1.144019	10	1.141767	20	1.114691	40	1.097151	80	1.101519
Endrin Ketone [2C]	2.5	1.427037	5	1.667108	10	1.301447	20	1.232585	40	1.194352	80	1.184845
Methoxychlor [2C]	12.5	0.6845137	25	0.5971921	50	0.5658657	100	0.5373681	200	0.5019219	400	0.4841341
Hexachlorobutadiene [2C]	1.25	1.741598	2.5	1.599117	5	1.368764	10	1.378853	20	1.362915	40	1.446657
Hexachlorobenzene [2C]	1.25	1.53742	2.5	1.427286	5	1.391035	10	1.352587	20	1.330613	40	1.303929
Decachlorobiphenyl [2C]	2.5	1.037318	5	0.9211818	10	0.9064013	20	0.8081022	40	0.7609845	80	0.752278
Tetrachlorometaxylene [2C]	2.5	1.089631	5	1.052398	10	1.048674	20	1.031152	40	1.008229	80	0.9719274

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (2):	STX-CLPII

Calibration Comments: PEST

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC [2C]	80	1.487126										
beta-BHC [2C]	80	0.5584748										
gamma-BHC (Lindane) [2C]	80	1.293119										
delta-BHC [2C]	80	1.262527										
Heptachlor [2C]	80	1.101411										
Aldrin [2C]	80	1.146256										
Heptachlor Epoxide [2C]	80	0.9384552										
trans-Chlordane (beta-Chlordane) [2C]	80	0.9718043										
cis-Chlordane (alpha-chlordane) [2C]	80	0.9423791										
Endosulfan I [2C]	80	0.8344376										
4,4'-DDE [2C]	160	0.8574482										
Dieldrin [2C]	160	0.889829										
Endrin [2C]	160	1.199839										
Endosulfan II [2C]	160	1.141585										
4,4'-DDD [2C]	160	1.13557										
Endrin Aldehyde [2C]	160	0.7907682										
4,4'-DDT [2C]	160	1.127855										
Endosulfan Sulfate [2C]	160	1.026483										
Endrin Ketone [2C]	160	1.103974										
Methoxychlor [2C]	800	0.4508137										
Hexachlorobutadiene [2C]	80	1.299057										
Hexachlorobenzene [2C]	80	1.207506										
2,4'-DDE [2C]			2.5	0.6904399	5	0.6521884	10	0.6390298	20	0.5990063	40	0.6019871
2,4'-DDD [2C]			2.5	0.9752453	5	0.8542877	10	0.8857006	20	0.8585133	40	0.8434469
2,4'-DDT [2C]			2.5	1.101524	5	0.9589422	10	1.000179	20	0.9717969	40	0.9606392
Oxychlordane [2C]			2.5	0.9303946	5	0.8879678	10	0.8727388	20	0.8190725	40	0.8301969
cis-Nonachlor [2C]			2.5	1.601106	5	1.430321	10	1.506942	20	1.483054	40	1.478279

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (2):	STX-CLPII

Calibration Comments: PEST

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
trans-Nonachlor [2C]			2.5	1.567777	5	1.377207	10	1.412166	20	1.412721	40	1.41643
Mirex [2C]			2.5	1.028328	5	0.8968046	10	0.8829646	20	0.8460843	40	0.8164052
Decachlorobiphenyl [2C]	160	0.7101246										
Tetrachlorometaxylene [2C]	160	0.8777714										

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (2):	STX-CLPII

Calibration Comments: PEST

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE [2C]	80	0.5757403	160	0.5323861								
2,4'-DDD [2C]	80	0.8174879	160	0.7674083								
2,4'-DDT [2C]	80	0.9302177	160	0.874422								
Oxychlordane [2C]	80	0.8060272	160	0.7630902								
cis-Nonachlor [2C]	80	1.438679	160	1.36527								
trans-Nonachlor [2C]	80	1.39098	160	1.308185								
Mirex [2C]	80	0.7875097	160	0.7579819								

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (2):	STX-CLPII

Calibration Comments: PEST

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc		Conc		Conc		Conc		Conc		Conc	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (2):	STX-CLPII

Calibration Comments: PEST

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (2):	STX-CLPII

Calibration Comments: PEST

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC [2C]	1.492925	3.5			RSD (20)	
beta-BHC [2C]	0.6113421	6.6			RSD (20)	
gamma-BHC (Lindane) [2C]	1.317888	2.5			RSD (20)	
delta-BHC [2C]	1.230156	4.6			RSD (20)	
Heptachlor [2C]	1.199244	4.1			RSD (20)	
Aldrin [2C]	1.212339	2.9			RSD (20)	
Heptachlor Epoxide [2C]	1.047334	5.7			RSD (20)	
trans-Chlordane (beta-Chlordane) [2C]	1.022503	2.9			RSD (20)	
cis-Chlordane (alpha-chlordane) [2C]	1.008396	3.6			RSD (20)	
Endosulfan I [2C]	0.9103398	4.5			RSD (20)	
4,4'-DDE [2C]	0.9583027	4.9			RSD (20)	
Dieldrin [2C]	1.001139	5.4			RSD (20)	
Endrin [2C]	1.35694	6.8			RSD (20)	
Endosulfan II [2C]	1.281643	8.3			RSD (20)	
4,4'-DDD [2C]	1.225551	4.7			RSD (20)	
Endrin Aldehyde [2C]	0.8757944	7.4			RSD (20)	
4,4'-DDT [2C]	1.197804	3.8			RSD (20)	
Endosulfan Sulfate [2C]	1.121053	5.3			RSD (20)	
Endrin Ketone [2C]	1.301621	14.7			RSD (20)	
Methoxychlor [2C]	0.5459728	14.4			RSD (20)	
Hexachlorobutadiene [2C]	1.456709	10.8			RSD (20)	
Hexachlorobenzene [2C]	1.364339	7.6			RSD (20)	
2,4'-DDE [2C]	0.6129683	8.5			RSD (20)	
2,4'-DDD [2C]	0.8574414	7.5			RSD (20)	
2,4'-DDT [2C]	0.971103	7.2			RSD (20)	
Oxychlordane [2C]	0.8442126	6.7			RSD (20)	
cis-Nonachlor [2C]	1.47195	5.0			RSD (20)	
trans-Nonachlor [2C]	1.412209	5.5			RSD (20)	
Mirex [2C]	0.8594397	10.4			RSD (20)	
Decachlorobiphenyl [2C]	0.8423415	13.9			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GF00024	Instrument:	ECD6
Calibration Date:	06/02/2023	Column (2):	STX-CLPII

Calibration Comments: PEST

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Tetrachlorometaxylene [2C]	1.011398	6.9			RSD (20)	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLF0020

Instrument: ECD6
Calibration ID: GF00024

Printed: 6/8/2023 3:06:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLF0020-PEM1	QC		1		L002116	L000844		
SLF0020-CAL1	QC		2		L003348	L000844		
SLF0020-CAL2	QC		3		L003347	L000844		
SLF0020-CAL3	QC		4		L003346	L000844		
SLF0020-CAL4	QC		5		L003345	L000844		
SLF0020-CAL5	QC		6		L003344	L000844		
SLF0020-CAL6	QC		7		L003343	L000844		
SLF0020-CAL7	QC		8		L000560	L000844		
SLF0020-CAL8	QC		9		L003342	L000844		
SLF0020-CAL9	QC		10		L003341	L000844		
SLF0020-CALA	QC		11		L003340	L000844		
SLF0020-CALB	QC		12		L003339	L000844		
SLF0020-CALC	QC		13		L003338	L000844		
SLF0020-CALD	QC		14		L003337	L000844		
SLF0020-CALE	QC		15		L000377	L000844		
SLF0020-CALF	QC		16		L004742	L000844		
SLF0020-CALG	QC		17		L004741	L000844		
SLF0020-CALH	QC		18		L004740	L000844		
SLF0020-CALI	QC		19		L004739	L000844		
SLF0020-CALJ	QC		20		L004738	L000844		
SLF0020-CALK	QC		21		L004737	L000844		

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLF0020

Instrument: ECD6
Calibration ID: GF00024

Printed: 6/8/2023 3:06:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLF0020-CALL	QC		22		L004439	L000844		
SLF0020-CALM	QC		23		L003398	L000844		
SLF0020-CALN	QC		24		L003397	L000844		
SLF0020-CALO	QC		25		L003396	L000844		
SLF0020-CALP	QC		26		L003395	L000844		
SLF0020-CALQ	QC		27		L003394	L000844		
SLF0020-CALR	QC		28		L003393	L000844		
SLF0020-CALS	QC		29		L000559	L000844		
SLF0020-SCV1	QC		30		L003155	L000844		
SLF0020-SCV2	QC		31		L003156	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230601.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	01-JUN-2023 16:02	23060103.D	1	RINSE3	
2	01-JUN-2023 16:21	23060104.D	1	SEQ-IBL1	
3	01-JUN-2023 16:39	23060105.D	1	SLF0020-PEM1	
4	01-JUN-2023 16:58	23060106.D	1	SLF0020-CAL1	
5	01-JUN-2023 17:16	23060107.D	1	SLF0020-CAL2	
6	01-JUN-2023 17:35	23060108.D	1	SLF0020-CAL3	
7	01-JUN-2023 17:54	23060109.D	1	SLF0020-CAL4	
8	01-JUN-2023 18:12	23060110.D	1	SLF0020-CAL5	
9	01-JUN-2023 18:31	23060111.D	1	SLF0020-CAL6	
10	01-JUN-2023 18:49	23060112.D	1	SLF0020-CAL7	
11	01-JUN-2023 19:08	23060113.D	1	SLF0020-CAL8	
12	01-JUN-2023 19:26	23060114.D	1	SLF0020-CAL9	
13	01-JUN-2023 19:45	23060115.D	1	SLF0020-CALA	
14	01-JUN-2023 20:04	23060116.D	1	SLF0020-CALB	
15	01-JUN-2023 20:22	23060117.D	1	SLF0020-CALC	
16	01-JUN-2023 20:41	23060118.D	1	SLF0020-CALD	
17	01-JUN-2023 20:59	23060119.D	1	SLF0020-CALE	
18	01-JUN-2023 21:18	23060120.D	1	SLF0020-CALF	
19	01-JUN-2023 21:36	23060121.D	1	SLF0020-CALG	
20	01-JUN-2023 21:55	23060122.D	1	SLF0020-CALH	
21	01-JUN-2023 22:14	23060123.D	1	SLF0020-CALI	
22	01-JUN-2023 22:32	23060124.D	1	SLF0020-CALJ	
23	01-JUN-2023 22:51	23060125.D	1	SLF0020-CALK	
24	01-JUN-2023 23:09	23060126.D	1	SLF0020-CALL	
25	01-JUN-2023 23:28	23060127.D	1	SLF0020-CALM	
26	01-JUN-2023 23:46	23060128.D	1	SLF0020-CALN	
27	02-JUN-2023 00:05	23060129.D	1	SLF0020-CALO	
28	02-JUN-2023 00:23	23060130.D	1	SLF0020-CALP	
29	02-JUN-2023 00:42	23060131.D	1	SLF0020-CALQ	
30	02-JUN-2023 01:00	23060132.D	1	SLF0020-CALR	
31	02-JUN-2023 01:19	23060133.D	1	SLF0020-CALS	
32	02-JUN-2023 01:38	23060134.D	1	SLF0020-SCV1	
33	02-JUN-2023 01:56	23060135.D	1	SLF0020-SCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230601.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 01-JUN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1602	23060103.D	RINSE3		1	NO MANUAL INTEGRATION
1621	23060104.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
1639	23060105.D	SLF0020-PEM1		1	NO MANUAL INTEGRATION
1658	23060106.D	SLF0020-CAL1		1	Decachlorobiphenyl,
1716	23060107.D	SLF0020-CAL2		1	Decachlorobiphenyl,
1735	23060108.D	SLF0020-CAL3		1	NO MANUAL INTEGRATION
1754	23060109.D	SLF0020-CAL4		1	NO MANUAL INTEGRATION
1812	23060110.D	SLF0020-CAL5		1	NO MANUAL INTEGRATION
1831	23060111.D	SLF0020-CAL6		1	NO MANUAL INTEGRATION
1849	23060112.D	SLF0020-CAL7		1	NO MANUAL INTEGRATION
1908	23060113.D	SLF0020-CAL8		1	NO MANUAL INTEGRATION
1926	23060114.D	SLF0020-CAL9		1	NO MANUAL INTEGRATION
1945	23060115.D	SLF0020-CALA		1	NO MANUAL INTEGRATION
2004	23060116.D	SLF0020-CALB		1	NO MANUAL INTEGRATION
2022	23060117.D	SLF0020-CALC		1	NO MANUAL INTEGRATION
2041	23060118.D	SLF0020-CALD		1	NO MANUAL INTEGRATION
2059	23060119.D	SLF0020-CALE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230601.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2118	23060120.D	SLF0020-CALF		1	NO MANUAL INTEGRATION
2136	23060121.D	SLF0020-CALG		1	NO MANUAL INTEGRATION
2155	23060122.D	SLF0020-CALH		1	NO MANUAL INTEGRATION
2214	23060123.D	SLF0020-CALI		1	NO MANUAL INTEGRATION
2232	23060124.D	SLF0020-CALJ		1	NO MANUAL INTEGRATION
2251	23060125.D	SLF0020-CALK		1	NO MANUAL INTEGRATION
2309	23060126.D	SLF0020-CALL		1	NO MANUAL INTEGRATION
2328	23060127.D	SLF0020-CALM		1	NO MANUAL INTEGRATION
2346	23060128.D	SLF0020-CALN		1	NO MANUAL INTEGRATION
0005	23060129.D	SLF0020-CALO		1	NO MANUAL INTEGRATION
0023	23060130.D	SLF0020-CALP		1	NO MANUAL INTEGRATION
0042	23060131.D	SLF0020-CALQ		1	NO MANUAL INTEGRATION
0100	23060132.D	SLF0020-CALR		1	NO MANUAL INTEGRATION
0119	23060133.D	SLF0020-CALS		1	NO MANUAL INTEGRATION
0138	23060134.D	SLF0020-SCV1		1	NO MANUAL INTEGRATION
0156	23060135.D	SLF0020-SCV2		1	NO MANUAL INTEGRATION

Security Status Report

Date: 08-Jun-2023 14:54

23060103.D	Data Locked	yev, 08-
23060104.D	Data Locked	yev, 08-
23060105.D	Data Locked	yev, 08-
23060106.D	Data Locked	yev, 08-
23060107.D	Data Locked	yev, 08-
23060108.D	Data Locked	yev, 08-
23060109.D	Data Locked	yev, 08-
23060110.D	Data Locked	yev, 08-
23060111.D	Data Locked	yev, 08-
23060112.D	Data Locked	yev, 08-
23060113.D	Data Locked	yev, 08-
23060114.D	Data Locked	yev, 08-
23060115.D	Data Locked	yev, 08-
23060116.D	Data Locked	yev, 08-
23060117.D	Data Locked	yev, 08-
23060118.D	Data Locked	yev, 08-
23060119.D	Data Locked	yev, 08-
23060120.D	Data Locked	yev, 08-
23060121.D	Data Locked	yev, 08-
23060122.D	Data Locked	yev, 08-
23060123.D	Data Locked	yev, 08-
23060124.D	Data Locked	yev, 08-
23060125.D	Data Locked	yev, 08-
23060126.D	Data Locked	yev, 08-
23060127.D	Data Locked	yev, 08-
23060128.D	Data Locked	yev, 08-
23060129.D	Data Locked	yev, 08-
23060130.D	Data Locked	yev, 08-
23060131.D	Data Locked	yev, 08-
23060132.D	Data Locked	yev, 08-
23060133.D	Data Locked	yev, 08-
23060134.D	Data Locked	yev, 08-
23060135.D	Data Locked	yev, 08-

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	23060106	23060107	23060108	23060109	23060110	23060111	23060112
INJ.DATE:	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023
INJ.TIME:	16:58	17:16	17:35	17:54	18:12	18:31	18:49

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.282	2.283	2.282	2.283	2.283	2.283	2.283	2.283	2.253-2.313	2.283	0.000
* 2 1Bromo-2nitrobenzene	3.107	3.107	3.107	3.107	3.107	3.107	3.107	3.107	3.077-3.137	3.107	0.000
* 3 Hexabromobiphenyl	9.468	9.468	9.468	9.469	9.469	9.469	9.469	9.469	9.439-9.499	9.468	0.000
$ 4 Tetrachloro-m-xylene	3.784	3.784	3.784	3.784	3.784	3.784	3.784	3.784	3.754-3.814	3.784	0.000
5 Hexachlorobenzene	4.136	4.137	4.137	4.136	4.136	4.136	4.136	4.136	4.106-4.166	4.136	0.000
6 alpha-BHC	4.293	4.293	4.293	4.293	4.294	4.293	4.293	4.293	4.263-4.323	4.293	0.000
7 gamma-BHC (Lindane)	4.594	4.595	4.595	4.594	4.595	4.594	4.594	4.594	4.564-4.624	4.594	0.000
8 beta-BHC	4.676	4.676	4.676	4.675	4.675	4.675	4.675	4.675	4.645-4.705	4.675	0.001
9 delta-BHC	4.858	4.859	4.858	4.858	4.858	4.858	4.857	4.857	4.827-4.887	4.858	0.001
10 Heptachlor	5.079	5.079	5.079	5.079	5.079	5.079	5.079	5.079	5.049-5.109	5.079	0.000
11 Aldrin	5.400	5.401	5.401	5.400	5.401	5.401	5.400	5.400	5.370-5.430	5.401	0.000
12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
14 Heptachlor epoxide b	6.073	6.074	6.074	6.073	6.073	6.073	6.073	6.073	6.043-6.103	6.073	0.001
15 cis-Chlordane	6.364	6.364	6.363	6.363	6.364	6.363	6.364	6.364	6.334-6.394	6.364	0.000
16 trans-Chlordane	6.216	6.217	6.217	6.216	6.217	6.216	6.216	6.216	6.186-6.246	6.216	0.000
17 Endosulfan I	6.517	6.517	6.517	6.517	6.517	6.517	6.517	6.517	6.487-6.547	6.517	0.000

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18	4,4'-DDE	6.443	6.443	6.442	6.442	6.442	6.442	6.441	6.441	6.411-6.471	6.442	0.001
19	Dieldrin	6.778	6.778	6.778	6.778	6.778	6.778	6.777	6.777	6.747-6.807	6.778	0.000
20	Endrin	7.029	7.029	7.028	7.029	7.029	7.029	7.029	7.029	6.998-7.059	7.029	0.000
21	4,4'-DDD	7.091	7.091	7.090	7.090	7.090	7.090	7.089	7.089	7.059-7.119	7.090	0.000
22	Endosulfan II	7.265	7.265	7.265	7.265	7.265	7.265	7.265	7.265	7.235-7.295	7.265	0.000
23	4,4'-DDT	7.385	7.385	7.384	7.385	7.385	7.384	7.384	7.384	7.354-7.414	7.385	0.000
24	Endrin aldehyde	7.694	7.695	7.694	7.695	7.694	7.694	7.694	7.694	7.664-7.724	7.694	0.000
25	Methoxychlor	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.875	7.845-7.905	7.875	0.000
26	Endosulfan sulfate	8.130	8.129	8.129	8.129	8.129	8.129	8.129	8.129	8.099-8.159	8.129	0.000
27	Endrin ketone	8.404	8.404	8.404	8.404	8.404	8.404	8.404	8.404	8.374-8.434	8.404	0.000
$ 28	Decachlorobiphenyl	9.320	9.320	9.320	9.320	9.320	9.320	9.320	9.320	9.290-9.350	9.320	0.000
29	Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
30	Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
31	Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
32	Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
33	Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
34	Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
35	Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
36	Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
37	Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
38	Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.945	6.915-6.975	+++++	+++++
39	2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.055	6.025-6.085	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.632	6.602-6.662	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.911	6.881-6.941	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.958	5.928-5.988	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.345	6.315-6.375	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.063	7.033-7.093	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.037	8.007-8.067	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.993	4.963-5.023	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	23060113	23060114	23060115	23060116	23060117	23060118	23060119
INJ.DATE:	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023
INJ.TIME:	19:08	19:26	19:45	20:04	20:22	20:41	20:59

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.283	2.253-2.313	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.107	3.108	3.107	3.108	3.107	3.107	3.107	3.107	3.077-3.137	3.107	0.000
*	3 Hexabromobiphenyl	9.469	9.468	9.469	9.469	9.469	9.469	9.469	9.469	9.439-9.499	9.469	0.000
$	4 Tetrachloro-m-xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.784	3.754-3.814	+++++	+++++
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.136	4.106-4.166	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.293	4.263-4.323	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.594	4.564-4.624	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.675	4.645-4.705	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.857	4.827-4.887	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.079	5.049-5.109	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.400	5.370-5.430	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.073	6.043-6.103	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.364	6.334-6.394	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.216	6.186-6.246	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.517	6.487-6.547	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.441	6.411-6.471	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.777	6.747-6.807	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.029	6.998-7.059	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.089	7.059-7.119	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.265	7.235-7.295	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.384	7.354-7.414	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.694	7.664-7.724	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.875	7.845-7.905	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.129	8.099-8.159	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.404	8.374-8.434	+++++	+++++
$	28 Decachlorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.320	9.290-9.350	+++++	+++++
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.945	6.915-6.975	+++++	+++++
	39 2,4-DDE	6.057	6.058	6.057	6.057	6.056	6.056	6.055	6.055	6.025-6.085	6.056	0.001

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.634	6.633	6.634	6.634	6.633	6.633	6.632	6.632	6.602-6.662	6.633	0.001
41 2,4-DDT	6.912	6.912	6.912	6.912	6.912	6.911	6.911	6.911	6.881-6.941	6.911	0.000
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	5.959	5.959	5.958	5.958	5.959	5.958	5.958	5.958	5.928-5.988	5.958	0.000
44 trans-Nonachlor	6.346	6.346	6.346	6.346	6.346	6.346	6.345	6.345	6.315-6.375	6.346	0.000
45 cis-Nonachlor	7.064	7.063	7.064	7.064	7.064	7.063	7.063	7.063	7.033-7.093	7.063	0.000
46 Mirex	8.038	8.038	8.038	8.038	8.038	8.038	8.037	8.037	8.007-8.067	8.038	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.993	4.963-5.023	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b\B20230601.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	23060106	23060107	23060108	23060109	23060110	23060111	23060112
INJ.DATE:	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023
INJ.TIME:	16:58	17:16	17:35	17:54	18:12	18:31	18:49

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene [C]	2.426	2.427	2.427	2.427	2.427	2.428	2.428	2.428	2.398-2.458	2.427	0.001
*	2 1Bromo-2nitrobenzene [	3.256	3.256	3.256	3.256	3.256	3.257	3.256	3.256	3.226-3.286	3.256	0.000
*	3 Hexabromobiphenyl[C]	10.807	10.806	10.808	10.808	10.808	10.808	10.809	10.809	10.779-10.839	10.808	0.001
$	4 Tetrachloro-m-xylene [	4.096	4.097	4.097	4.097	4.097	4.097	4.097	4.097	4.067-4.127	4.097	0.000
	5 Hexachlorobenzene [C]	4.579	4.579	4.579	4.579	4.579	4.579	4.578	4.578	4.548-4.608	4.579	0.000
	6 alpha-BHC [C]	4.716	4.717	4.717	4.717	4.717	4.717	4.717	4.717	4.687-4.747	4.717	0.000
	7 gamma-BHC (Lindane) [C	5.104	5.104	5.104	5.104	5.104	5.104	5.104	5.104	5.074-5.134	5.104	0.000
	8 beta-BHC [C]	5.182	5.183	5.183	5.182	5.182	5.183	5.182	5.182	5.152-5.212	5.182	0.000
	9 delta-BHC [C]	5.527	5.528	5.527	5.527	5.527	5.528	5.527	5.527	5.497-5.557	5.527	0.000
	10 Heptachlor [C]	5.619	5.619	5.619	5.619	5.620	5.620	5.619	5.619	5.589-5.649	5.619	0.001
	11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
	12 Aldrin [C]	6.015	6.016	6.016	6.016	6.016	6.017	6.016	6.016	5.986-6.046	6.016	0.000
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
	14 Heptachlor epoxide b [	6.676	6.677	6.676	6.677	6.677	6.677	6.676	6.676	6.646-6.706	6.677	0.001
	15 cis-Chlordane [C]	7.049	7.049	7.049	7.050	7.050	7.049	7.048	7.048	7.018-7.078	7.049	0.000
	16 trans-Chlordane [C]	6.888	6.889	6.889	6.889	6.889	6.889	6.888	6.888	6.858-6.918	6.889	0.000
	17 Endosulfan I [C]	7.122	7.121	7.121	7.122	7.122	7.121	7.121	7.121	7.091-7.151	7.121	0.000

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b\B20230601.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE [C]	7.208	7.208	7.209	7.209	7.209	7.209	7.208	7.208	7.178-7.238	7.209	0.000
19 Dieldrin [C]	7.416	7.416	7.416	7.416	7.417	7.416	7.416	7.416	7.386-7.446	7.416	0.000
20 Endrin [C]	7.740	7.740	7.740	7.740	7.741	7.740	7.740	7.740	7.710-7.770	7.740	0.000
21 4,4'-DDD [C]	7.815	7.815	7.816	7.815	7.816	7.816	7.815	7.815	7.785-7.845	7.816	0.000
22 Endosulfan II [C]	7.952	7.952	7.952	7.951	7.952	7.952	7.952	7.952	7.922-7.982	7.952	0.000
23 4,4'-DDT [C]	8.135	8.134	8.135	8.134	8.134	8.134	8.134	8.134	8.104-8.164	8.134	0.000
24 Endrin aldehyde [C]	8.284	8.284	8.284	8.284	8.284	8.284	8.284	8.284	8.254-8.314	8.284	0.000
25 Endosulfan sulfate [C]	8.551	8.551	8.551	8.551	8.551	8.551	8.551	8.551	8.521-8.581	8.551	0.000
26 Methoxychlor [C]	8.777	8.776	8.777	8.776	8.777	8.777	8.777	8.777	8.747-8.807	8.777	0.000
27 Endrin ketone [C]	9.072	9.072	9.073	9.072	9.072	9.073	9.073	9.073	9.043-9.103	9.073	0.000
$ 28 Decachlorobiphenyl [C]	10.250	10.250	10.251	10.251	10.251	10.251	10.251	10.251	10.221-10.281	10.251	0.001
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.391	7.361-7.421	+++++	+++++
39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.871	6.841-6.901	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b\B20230601.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.428	7.398-7.458	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.751	7.721-7.781	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.988	6.958-7.018	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.810	7.780-7.840	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.054	9.024-9.084	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.448	5.418-5.478	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b\B20230601.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	23060113	23060114	23060115	23060116	23060117	23060118	23060119
INJ.DATE:	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023	01-JUN-2023
INJ.TIME:	19:08	19:26	19:45	20:04	20:22	20:41	20:59

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.428	2.398-2.458	+++++	+++++
*	2 1Bromo-2nitrobenzene [	3.256	3.257	3.256	3.257	3.256	3.256	3.256	3.256	3.226-3.286	3.256	0.000
*	3 Hexabromobiphenyl[C]	10.808	10.808	10.809	10.808	10.808	10.809	10.808	10.809	10.779-10.839	10.808	0.001
$	4 Tetrachloro-m-xylene [	+++++	+++++	+++++	+++++	+++++	+++++	4.097	4.097	4.067-4.127	4.097	0.000
	5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.578	4.548-4.608	+++++	+++++
	6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.717	4.687-4.747	+++++	+++++
	7 gamma-BHC (Lindane) [C	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.104	5.074-5.134	+++++	+++++
	8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.182	5.152-5.212	+++++	+++++
	9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.527	5.497-5.557	+++++	+++++
	10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.619	5.589-5.649	+++++	+++++
	11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
	12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.016	5.986-6.046	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
	14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.676	6.646-6.706	+++++	+++++
	15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.048	7.018-7.078	+++++	+++++
	16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.888	6.858-6.918	+++++	+++++
	17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.121	7.091-7.151	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b\B20230601.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.208	7.178-7.238	+++++	+++++
19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.416	7.386-7.446	+++++	+++++
20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.740	7.710-7.770	+++++	+++++
21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.815	7.785-7.845	+++++	+++++
22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.952	7.922-7.982	+++++	+++++
23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.134	8.104-8.164	+++++	+++++
24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.284	8.254-8.314	+++++	+++++
25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.551	8.521-8.581	+++++	+++++
26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.777	8.747-8.807	+++++	+++++
27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.073	9.043-9.103	+++++	+++++
$ 28 Decachlorobiphenyl [C]	+++++	+++++	+++++	10.252	10.254	10.253	10.251	10.251	10.221-10.281	10.253	0.001
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.391	7.361-7.421	+++++	+++++
39 2,4-DDE [C]	6.872	6.872	6.872	6.872	6.872	6.872	6.871	6.871	6.841-6.901	6.872	0.000

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20230601.b\B20230601.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	7.429	7.429	7.429	7.429	7.429	7.429	7.428	7.428	7.398-7.458	7.429	0.000
41 2,4-DDT [C]	7.751	7.751	7.751	7.751	7.751	7.752	7.751	7.751	7.721-7.781	7.751	0.000
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	6.572	6.572	6.573	6.573	6.572	6.572	6.572	6.572	6.542-6.602	6.572	0.000
44 trans-Nonachlor [C]	6.989	6.989	6.988	6.989	6.988	6.988	6.988	6.988	6.958-7.018	6.988	0.000
45 cis-Nonachlor [C]	7.811	7.811	7.811	7.811	7.811	7.811	7.810	7.810	7.780-7.840	7.811	0.000
46 Mirex [C]	9.054	9.054	9.054	9.054	9.054	9.054	9.054	9.054	9.024-9.084	9.054	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.448	5.418-5.478	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd6.i\20230601.b\23060127.D
Level 2: \\target\share\chem4\ecd6.i\20230601.b\23060128.D
Level 3: \\target\share\chem4\ecd6.i\20230601.b\23060129.D
Level 4: \\target\share\chem4\ecd6.i\20230601.b\23060130.D
Level 5: \\target\share\chem4\ecd6.i\20230601.b\23060131.D
Level 6: \\target\share\chem4\ecd6.i\20230601.b\23060132.D
Level 7: \\target\share\chem4\ecd6.i\20230601.b\23060133.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
						80.000 Level 7		
1 Hexachlorobutadiene	2.14486	1.69997	1.68918	1.60940	1.57009	1.47781		
	1.41886						1.65860	14.342
5 Hexachlorobenzene	1.63197	1.49987	1.46017	1.39368	1.34758	1.29269		
	1.20499						1.40442	10.053
6 alpha-BHC	1.52210	1.47442	1.53641	1.53299	1.53835	1.48901		
	1.45069						1.50628	2.316
7 gamma-BHC (Lindane)	1.34121	1.29786	1.32499	1.33675	1.34339	1.29187		
	1.25715						1.31332	2.452
8 beta-BHC	0.69615	0.65864	0.63685	0.62577	0.61575	0.56862		
	0.54861						0.62148	8.138
9 delta-BHC	1.22928	1.21222	1.26405	1.28608	1.31543	1.29446		
	1.27575						1.26818	2.873
10 Heptachlor	1.34695	1.27221	1.28896	1.26363	1.24764	1.16599		
	1.09634						1.24025	6.714
11 Aldrin	1.31469	1.24707	1.26113	1.26117	1.25600	1.19166		
	1.13443						1.23802	4.691

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
12 Chlorthalonil	*****	*****	*****	*****	*****	*****	*****	*****	*****
13 Heptachlor Epoxide a	*****	*****	*****	*****	*****	*****	*****	*****	*****
14 Heptachlor epoxide b	1.21846	1.16640	1.14661	1.11085	1.08285	1.00575	0.93653	1.09535	8.858
15 cis-Chlordane	1.19075	1.12124	1.11865	1.10496	1.09232	1.03579	0.99486	1.09408	5.787
16 trans-Chlordane	1.16109	1.10032	1.10602	1.10099	1.09581	1.04504	1.00839	1.08824	4.475
17 Endosulfan I	1.14160	1.06220	1.05434	1.02954	1.01575	0.94304	0.88000	1.01807	8.349
18 4,4'-DDE	1.02420	0.99547	1.01892	1.01224	1.00730	0.94724	0.89352	0.98556	4.871
19 Dieldrin	1.15248	1.11425	1.12039	1.09303	1.06963	0.98474	0.91140	1.06370	8.049
20 Endrin	1.31831	1.29569	1.28347	1.24556	1.20961	1.15632	1.02784	1.21954	8.279
21 4,4'-DDD	1.13761	1.11508	1.11199	1.09425	1.07890	1.05318	0.96333	1.07919	5.364
22 Endosulfan II	1.23001	1.18992	1.17414	1.13579	1.09774	1.03595	0.92591	1.11278	9.356

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
23 4,4'-DDT	1.15594	1.14236	1.14748	1.12948	1.12052	1.09795	1.00843	1.11459	4.541
24 Endrin aldehyde	0.97892	0.87648	0.85553	0.82870	0.79936	0.76698	0.69204	0.82829	10.901
25 Methoxychlor	0.60497	0.57350	0.53352	0.49132	0.45576	0.42752	0.39096	0.49679	15.732
26 Endosulfan sulfate	1.13380	1.06778	1.05226	1.01431	0.98882	0.95904	0.87260	1.01266	8.296
27 Endrin ketone	1.39463	1.28294	1.23042	1.16358	1.11776	1.07260	0.96993	1.17598	11.970
29 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
31 Aroclor-1232(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
32 Aroclor-1242(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(6)	*****	*****	*****	*****	*****	*****	*****	*****	*****
33 Aroclor-1248(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
34 Aroclor-1254(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
35 Aroclor-1260(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
36 Aroclor-1262(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
37 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
38 Toxaphene(1)	0.02320	0.02367	0.02375	0.02325	0.02088	0.01750	0.01448	0.02096	17.350
(2)	0.03464	0.03323	0.03573	0.03451	0.03061	0.02396	0.02101	0.03053	18.951
(3)	0.05588	0.05824	0.05686	0.05524	0.04964	0.04173	0.03401	0.05023	18.190
(4)	0.05736	0.05876	0.05772	0.05598	0.04906	0.04145	0.03453	0.05069	18.647
(5)	0.04250	0.04407	0.04414	0.04423	0.04043	0.03455	0.02910	0.03986	14.714

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
39 2,4-DDE	0.90016	0.85540	0.84353	0.81649	0.79015	0.74296	0.68147	0.80431	9.156
40 2,4-DDD	0.87079	0.82024	0.72933	0.75714	0.73236	0.69323	0.64507	0.74974	10.121
41 2,4-DDT	0.97382	0.92358	0.90447	0.88802	0.86211	0.82385	0.77015	0.87800	7.623
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Oxychlordane	1.26413	1.18833	1.12473	1.10594	1.07720	1.02813	0.95540	1.10627	9.167
44 trans-Nonachlor	1.41086	1.34900	1.32111	1.28800	1.26053	1.21095	1.14488	1.28362	6.892
45 cis-Nonachlor	1.43448	1.37209	1.34330	1.31709	1.29457	1.25478	1.19893	1.31646	5.871
46 Mirex	1.01731	0.91706	0.84645	0.81514	0.78206	0.75421	0.72077	0.83614	12.242
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Chlordane (NOS)(1)	0.03428	0.03293	0.03181	0.03175	0.03161	0.03172	0.03125	0.03219	3.277
(2)	0.04735	0.04401	0.04678	0.03930	0.03790	0.03713	0.03528	0.04111	11.869

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(3)	0.24804	0.23429	0.22975	0.22767	0.22114	0.21724	0.20727	0.22648	5.759
49 Trifluralin	*****	*****	*****	*****	*****	*****	*****	*****	*****
50 Dacthal	*****	*****	*****	*****	*****	*****	*****	*****	*****
51 Oxadiazon	*****	*****	*****	*****	*****	*****	*****	*****	*****
52 Kelthane	*****	*****	*****	*****	*****	*****	*****	*****	*****
53 Chlorpyrifos	*****	*****	*****	*****	*****	*****	*****	*****	*****
54 Methyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
55 Ethyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
56 Kepone	*****	*****	*****	*****	*****	*****	*****	*****	*****
57 1-Chloropyrene	*****	*****	*****	*****	*****	*****	*****	*****	*****
$ 4 Tetrachloro-m-xylene	1.15876	1.08871	1.06102	1.02692	0.99435	0.91621	0.85917	1.01502	10.081

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m
Last Edit : 02-Jun-2023 10:07 ecd6.i
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
$ 28 Decachlorobiphenyl	1.04113	0.90264	0.88967	0.79395	0.74161	0.70465		
	0.64879						0.81749	16.561

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Last Edit : 02-Jun-2023 08:34 jrains
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd6.i\20230601.b\20230601.b\23060127.D
Level 2: \\target\share\chem4\ecd6.i\20230601.b\20230601.b\23060128.D
Level 3: \\target\share\chem4\ecd6.i\20230601.b\20230601.b\23060129.D
Level 4: \\target\share\chem4\ecd6.i\20230601.b\20230601.b\23060130.D
Level 5: \\target\share\chem4\ecd6.i\20230601.b\20230601.b\23060131.D
Level 6: \\target\share\chem4\ecd6.i\20230601.b\20230601.b\23060132.D
Level 7: \\target\share\chem4\ecd6.i\20230601.b\20230601.b\23060133.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
1 Hexachlorobutadiene [C]	1.74160	1.59912	1.36876	1.37885	1.36291	1.44666	1.29906	1.45671	10.818
5 Hexachlorobenzene [C]	1.53742	1.42729	1.39103	1.35259	1.33061	1.30393	1.20751	1.36434	7.579
6 alpha-BHC [C]	1.44628	1.42120	1.47362	1.51068	1.54585	1.56571	1.48713	1.49292	3.474
7 gamma-BHC (Lindane) [C]	1.31211	1.27244	1.30361	1.32608	1.35277	1.36508	1.29312	1.31789	2.483
8 beta-BHC [C]	0.68965	0.62505	0.61587	0.60211	0.59619	0.59206	0.55847	0.61134	6.618
9 delta-BHC [C]	1.19313	1.16293	1.18207	1.22246	1.26124	1.32674	1.26253	1.23016	4.647
10 Heptachlor [C]	1.26908	1.20422	1.20371	1.20713	1.21048	1.19868	1.10141	1.19924	4.125
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Last Edit : 02-Jun-2023 08:34 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
12 Aldrin [C]	1.25233	1.19536	1.20407	1.22017	1.23386	1.23433	1.14626	1.21234	2.883
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Heptachlor epoxide b [C]	1.13335	1.08985	1.05902	1.04481	1.04132	1.02455	0.93846	1.04733	5.750
15 cis-Chlordane [C]	1.06626	1.01926	1.02124	1.00207	1.00396	1.00359	0.94238	1.00840	3.637
16 trans-Chlordane [C]	1.07308	1.01935	1.01898	1.01586	1.02512	1.03333	0.97180	1.02250	2.912
17 Endosulfan I [C]	0.97308	0.92760	0.90202	0.91520	0.91480	0.90525	0.83444	0.91034	4.515
18 4,4'-DDE [C]	1.00108	0.96950	0.97353	0.98302	0.97492	0.94862	0.85745	0.95830	4.920
19 Dieldrin [C]	1.06066	1.02058	1.02107	1.02187	1.01155	0.98241	0.88983	1.00114	5.409
20 Endrin [C]	1.49838	1.41402	1.37142	1.36595	1.33728	1.31170	1.19984	1.35694	6.772
21 4,4'-DDD [C]	1.33000	1.24665	1.21085	1.22759	1.21566	1.21254	1.13557	1.22555	4.704
22 Endosulfan II [C]	1.39057	1.45561	1.25257	1.26417	1.23363	1.23335	1.14159	1.28164	8.278

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Last Edit : 02-Jun-2023 08:34 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
23 4,4'-DDT [C]	1.28450	1.19752	1.18884	1.19792	1.18936	1.19864	1.12785	1.19780	3.820
24 Endrin aldehyde [C]	0.99957	0.90477	0.85770	0.87404	0.85439	0.84932	0.79077	0.87579	7.353
25 Endosulfan sulfate [C]	1.22174	1.14402	1.14177	1.11469	1.09715	1.10152	1.02648	1.12105	5.281
26 Methoxychlor [C]	0.68451	0.59719	0.56587	0.53737	0.50192	0.48413	0.45081	0.54597	14.404
27 Endrin ketone [C]	1.42704	1.66711	1.30145	1.23259	1.19435	1.18484	1.10397	1.30162	14.654
29 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Last Edit : 02-Jun-2023 08:34 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
31 Aroclor-1232(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
32 Aroclor-1242(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Last Edit : 02-Jun-2023 08:34 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
33 Aroclor-1248(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
34 Aroclor-1254(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Last Edit : 02-Jun-2023 08:34 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
35 Aroclor-1260(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
36 Aroclor-1262(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Last Edit : 02-Jun-2023 08:34 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
37 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
38 Toxaphene [C](1)	0.02533	0.02563	0.02422	0.02382	0.02159	0.01920	0.01810	0.02256	13.254
(2)	0.08210	0.07968	0.07457	0.07130	0.06364	0.05570	0.05193	0.06842	17.050
(3)	0.05774	0.05806	0.05615	0.05463	0.05004	0.04346	0.04086	0.05156	13.562
(4)	0.05207	0.05336	0.05160	0.05120	0.04727	0.04282	0.04125	0.04851	9.945
(5)	0.03128	0.03174	0.03030	0.03026	0.02798	0.02544	0.02469	0.02881	9.823
39 2,4-DDE [C]	0.69044	0.65219	0.63903	0.59901	0.60199	0.57574	0.53239	0.61297	8.533

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Last Edit : 02-Jun-2023 08:34 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
40 2,4-DDD [C]	0.97525	0.85429	0.88570	0.85851	0.84345	0.81749	0.76741	0.85744	7.466
41 2,4-DDT [C]	1.10152	0.95894	1.00018	0.97180	0.96064	0.93022	0.87442	0.97110	7.175
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Oxychlordane [C]	0.93039	0.88797	0.87274	0.81907	0.83020	0.80603	0.76309	0.84421	6.670
44 trans-Nonachlor [C]	1.56778	1.37721	1.41217	1.41272	1.41643	1.39098	1.30819	1.41221	5.539
45 cis-Nonachlor [C]	1.60111	1.43032	1.50694	1.48305	1.47828	1.43868	1.36527	1.47195	4.984
46 Mirex [C]	1.14864	0.96745	0.88296	0.84608	0.81641	0.78751	0.75798	0.88672	15.141
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Chlordane (NOS) [C](1)	0.03346	0.03162	0.03010	0.03036	0.03019	0.03049	0.03291	0.03130	4.432
(2)	0.04088	0.03881	0.03724	0.03607	0.03467	0.03371	0.03142	0.03611	8.835
(3)	0.12582	0.12199	0.12194	0.12259	0.11980	0.11794	0.10984	0.11999	4.247

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-JUN-2023 16:58
End Cal Date : 02-JUN-2023 01:19
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20230601.b\PEST.m\PESTB.m
Last Edit : 02-Jun-2023 08:34 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 4 Tetrachloro-m-xylene [C]	1.08963	1.05240	1.04867	1.03115	1.00823	0.97193	0.87777	1.01140	6.874
$ 28 Decachlorobiphenyl [C]	1.03732	0.92118	0.90640	0.80810	0.76098	0.75228	0.71012	0.84234	13.855

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SLF0020-PEM1 InstID,Data File: ecd6.i, 23060105.D

Analysis Date: 01-JUN-2023 16:39 Init. Calib. Date: 01-JUN-2023

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.107	630131
4,4'-DDE	6.443	8510
Endrin	7.029	658070
4,4'-DDD	7.090	10205
4,4'-DDT	7.385	603579
Endrin ketone	8.405	10517
Endrin aldehyde	7.695	5057
Hexabromobiphenyl	9.468	502889
Tetrachloro-m-xylene	3.784	302699
Decachlorobiphenyl	9.320	178461

DDT Percent Breakdown = 3.0 %
((8510+10205) * 100)/(8510+10205+603579)

Endrin Percent Breakdown = 2.3 %
((5057+10517) * 100)/(5057+10517+658070)

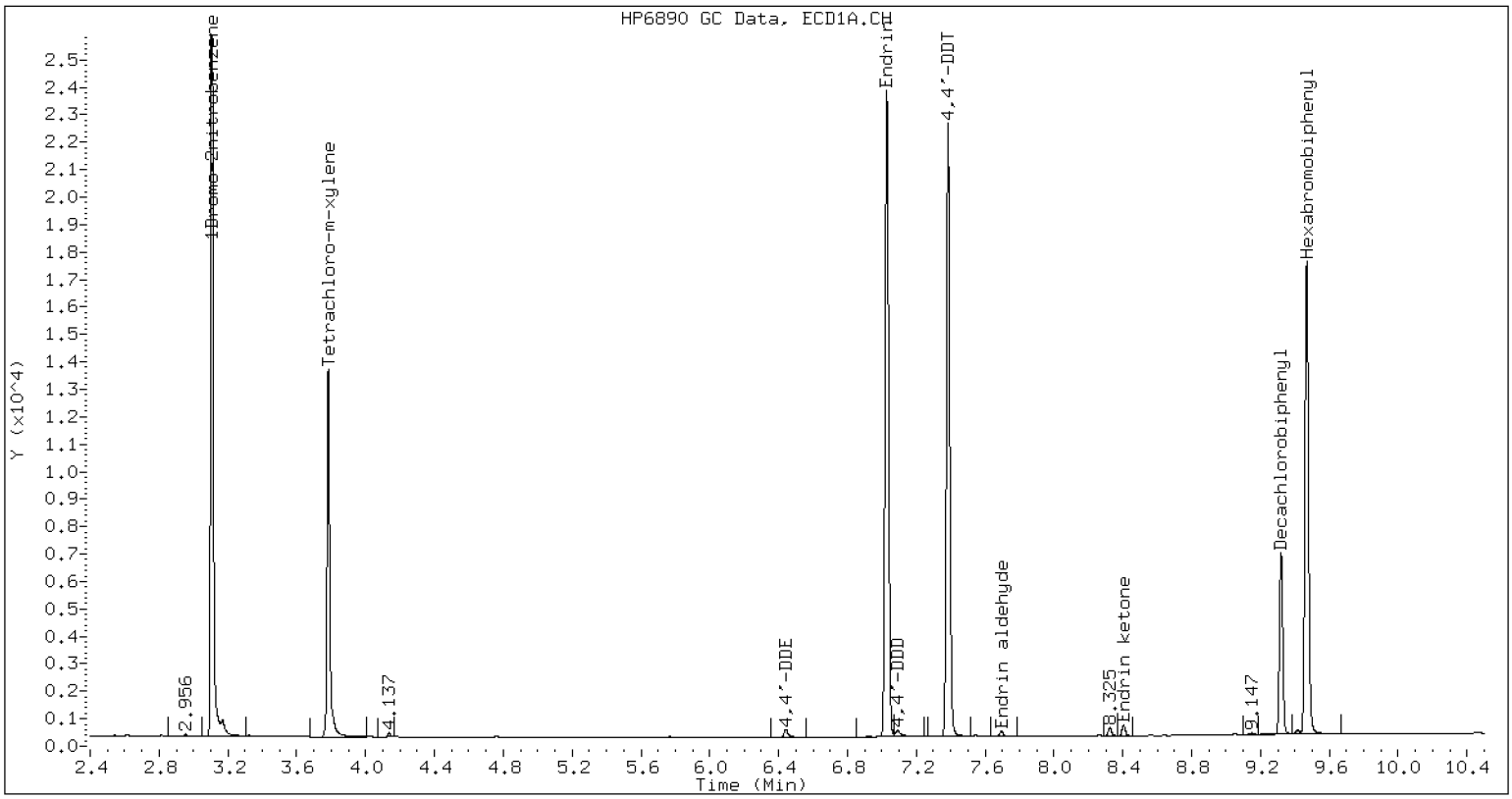
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.256	708404
4,4'-DDE [C]	7.208	8903
Endrin [C]	7.740	698048
4,4'-DDD [C]	7.815	16977
4,4'-DDT [C]	8.134	615598
Endrin ketone [C]	9.071	7755
Endrin aldehyde [C]	8.283	4762
Hexabromobiphenyl[C]	10.807	454283
Tetrachloro-m-xylene [C]	4.097	348283
Decachlorobiphenyl [C]	10.250	173553

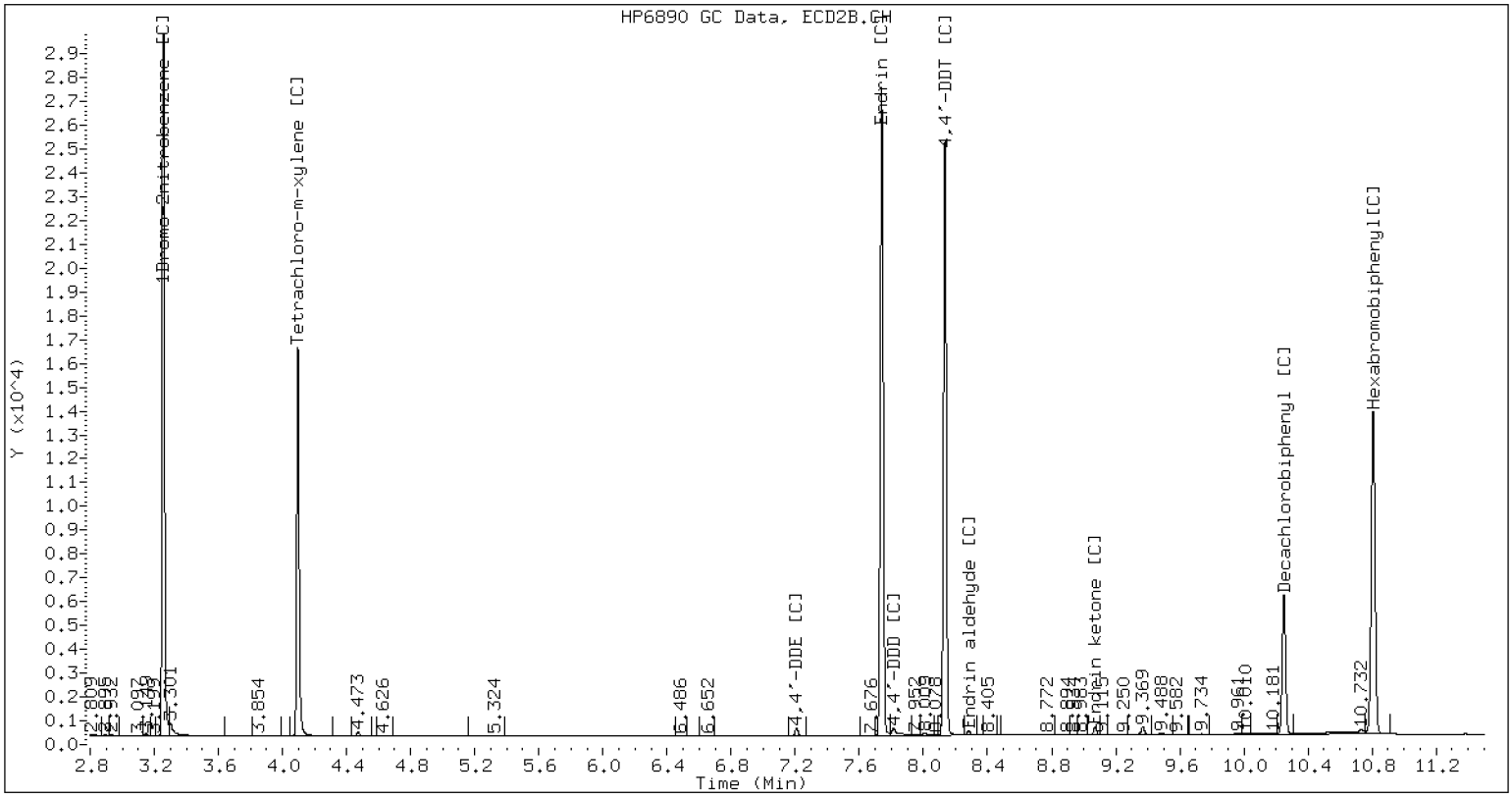
DDT Percent Breakdown = 4.0 %
((8903+16977) * 100)/(8903+16977+615598)

Endrin Percent Breakdown = 1.8 %
((4762+7755) * 100)/(4762+7755+698048)

/20230601.b/23060105.D SLF0020-PEM1 STX-CLP 01-JUN-2023 16:39 1ul



/20230601.b/B20230601.b/23060105.D SLF0020-PEM1 CLP2 01-JUN-2023



Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060106.D
Data file 2: /20230601.b/B20230601.b/23060106.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CAL1
Client ID:
Injection Date: 01-JUN-2023 16:58
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	0.000	14061	4.716	-0.001	14854	1.26	1.21	4.2	alpha-BHC
4.676	0.001	6431	5.182	0.000	7083	1.40	1.41	0.7	beta-BHC
4.858	0.002	11356	5.527	-0.000	12254	1.21	1.21	0.1	delta-BHC
4.594	0.000	12390	5.104	-0.000	13476	1.28	1.24	2.5	gamma-BHC (Lindane)
5.079	-0.000	12443	5.619	-0.001	13034	1.36	1.32	2.6	Heptachlor
5.400	0.000	12145	6.015	-0.000	12862	1.33	1.29	2.8	Aldrin
6.073	-0.000	11256	6.676	-0.000	11640	1.39	1.35	2.8	Heptachlor epoxide b
6.517	0.000	10546	7.122	0.000	9994	1.40	1.34	4.8	Endosulfan I
6.778	0.000	21293	7.416	0.000	21787	2.71	2.65	2.2	Dieldrin
6.443	0.002	18923	7.208	0.000	20563	2.60	2.61	0.5	4,4'-DDE
7.029	0.000	19348	7.740	-0.000	19889	2.70	2.76	2.1	Endrin
7.265	0.001	18052	7.952	0.000	18458	2.76	2.71	1.9	Endosulfan II N
7.091	0.001	16696	7.815	0.000	17654	2.64	2.71	2.9	4,4'-DDD N
8.130	0.000	16640	8.551	-0.000	16217	2.80	2.72	2.7	Endosulfan sulfate N
7.385	0.001	16965	8.134	-0.000	17050	2.59	2.68	3.3	4,4'-DDT N
7.875	0.001	44394	8.777	-0.000	45430	15.22	15.67	2.9	Methoxychlor N
8.404	0.000	20468	9.073	-0.001	18942	2.96	2.74	7.8	Endrin ketone N
7.694	0.001	14367	8.284	0.001	13268	2.95	2.85	3.5	Endrin aldehyde N
6.216	0.001	10726	6.888	0.000	11021	1.33	1.31	1.7	trans-Chlordane
6.364	0.000	11000	7.049	0.001	10951	1.36	1.32	2.9	cis-Chlordane
2.282	-0.001	19814	2.426	-0.001	17887	1.62	1.49	7.8	Hexachlorobutadiene
4.136	0.001	15076	4.579	0.000	15790	1.45	1.41	3.1	Hexachlorobenzene
3.784	0.000	21409	4.096	-0.000	22382	2.85	2.69	5.8	Tetrachloro-m-xylene
9.320	-0.000	15280	10.250	-0.001	13769	3.18	3.08	3.4	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

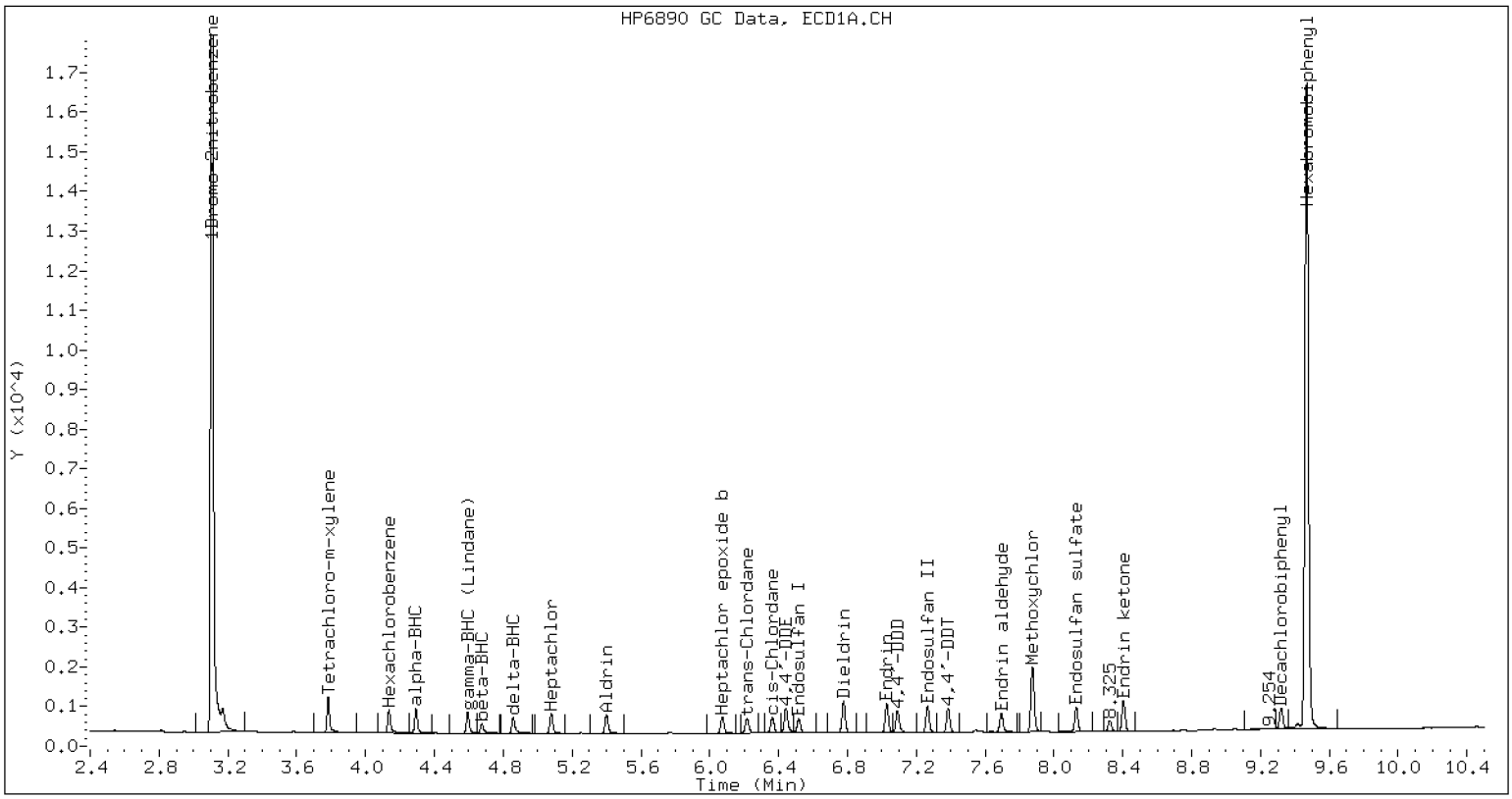
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	591226	-4.5
Hexabromobiphenyl	493109	469643	-4.8

Column 2

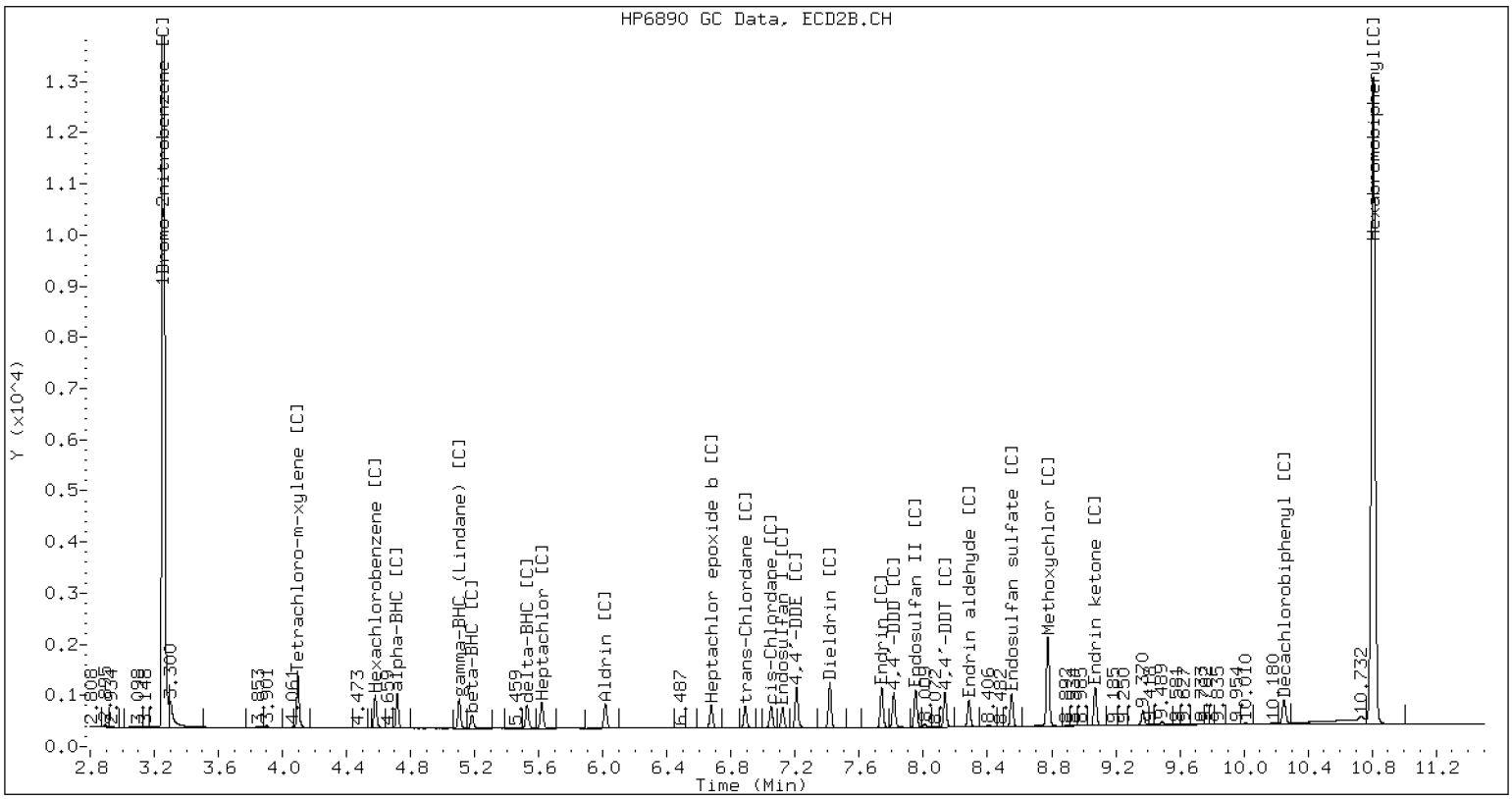
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	657309	-5.6
Hexabromobiphenyl	461581	424757	-8.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

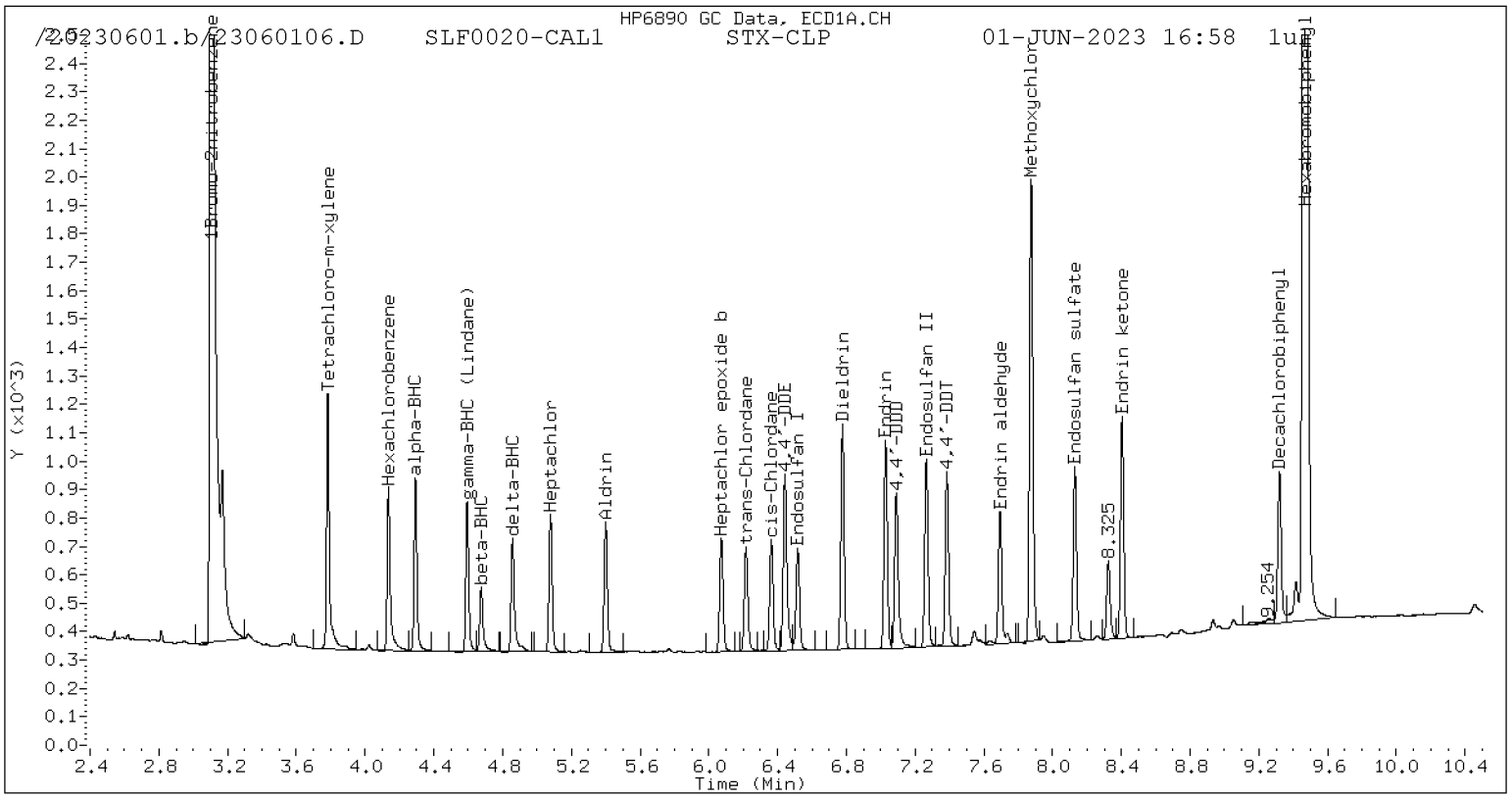
/20230601.b/23060106.D SLF0020-CAL1 STX-CLP 01-JUN-2023 16:58 1ul



/20230601.b/B20230601.b/23060106.D SLF0020-CAL1 CLP2 01-JUN-2023 16:58 1ul

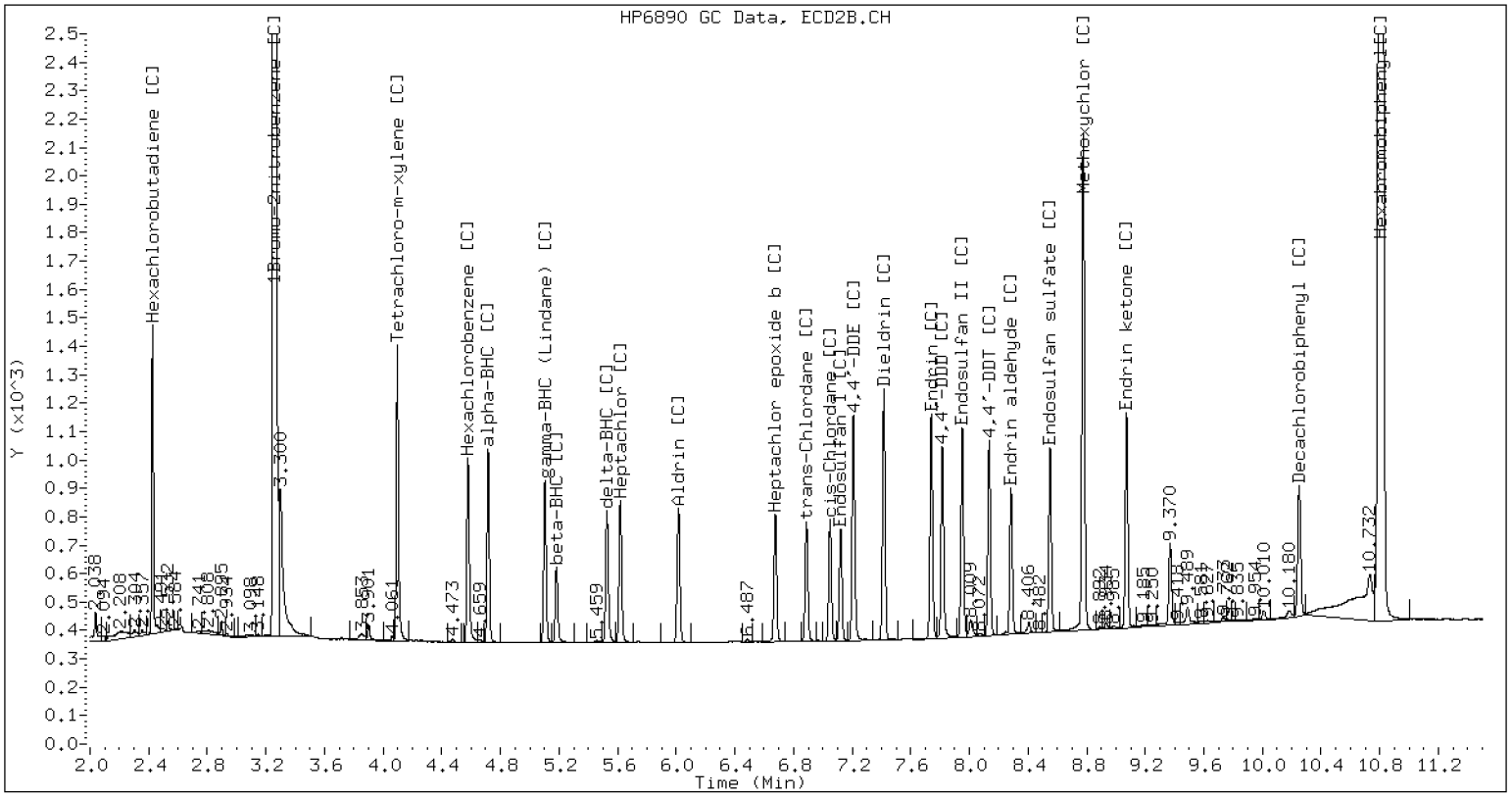


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

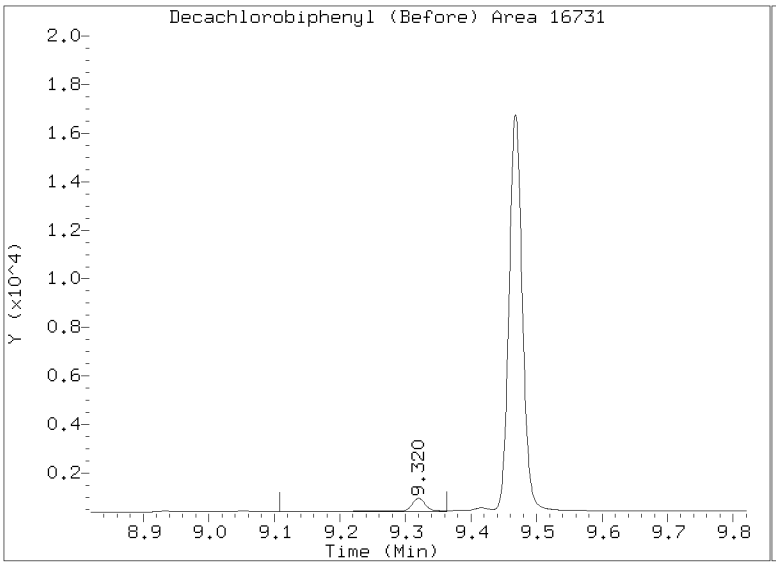
/20230601.b/B20230601.b/23060106.D SLF0020-CAL1 CLP2

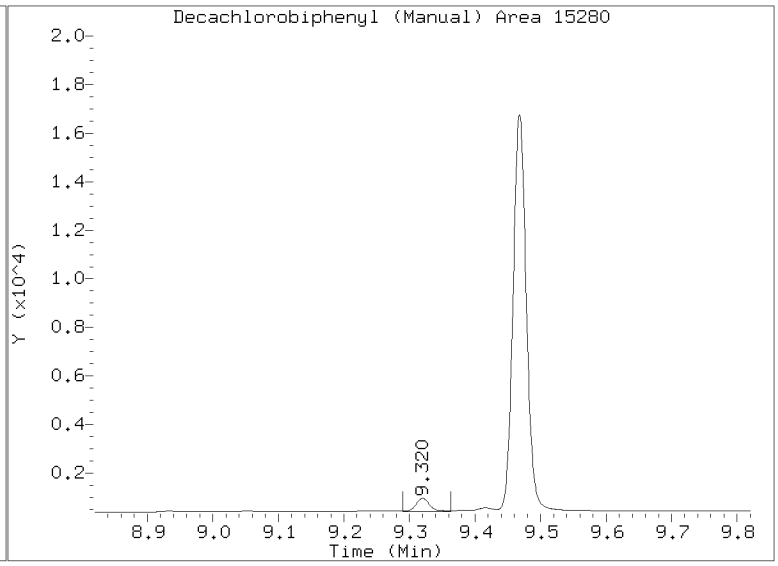


CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, STX-CLP

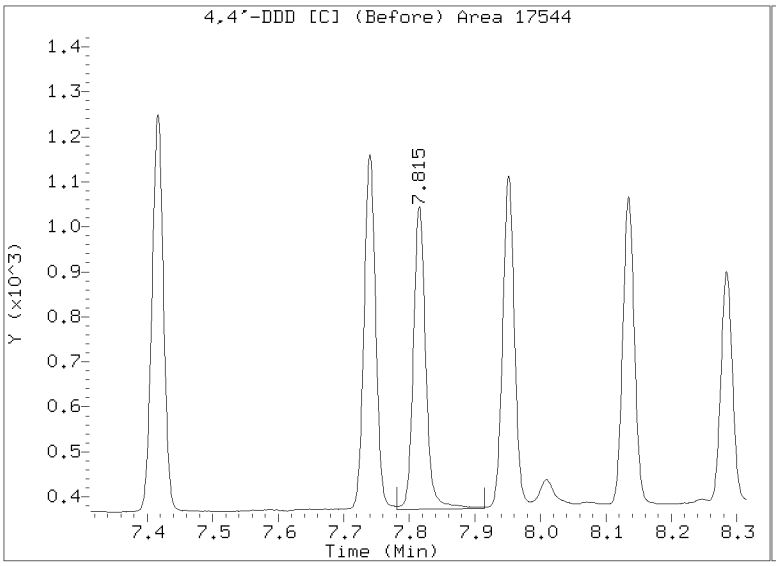
Datafile: /20230601.b/23060106.D
Injection Date: 01-JUN-2023 16:58
Lab ID:SLF0020-CAL1 Client ID:
Report Date: 06/08/2023 12:32

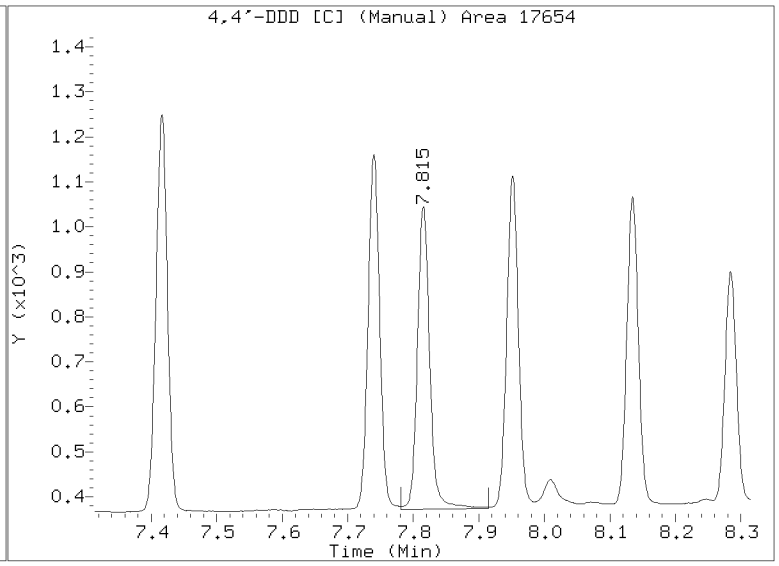


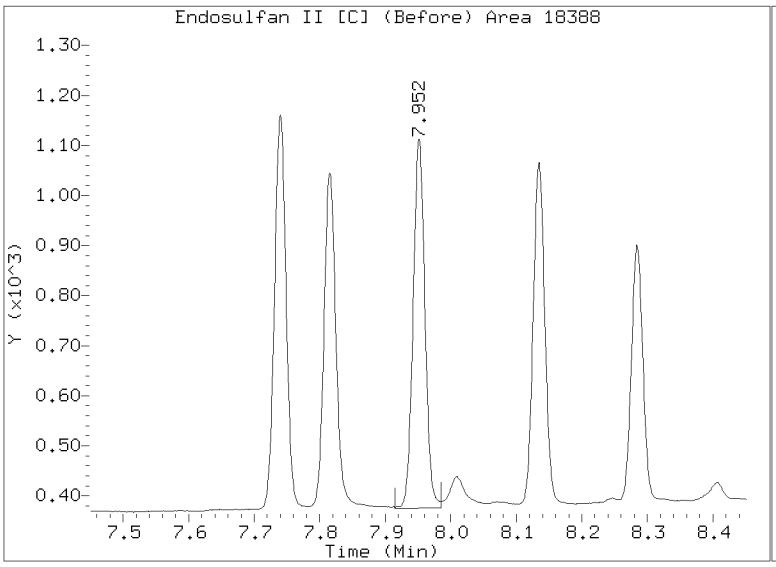


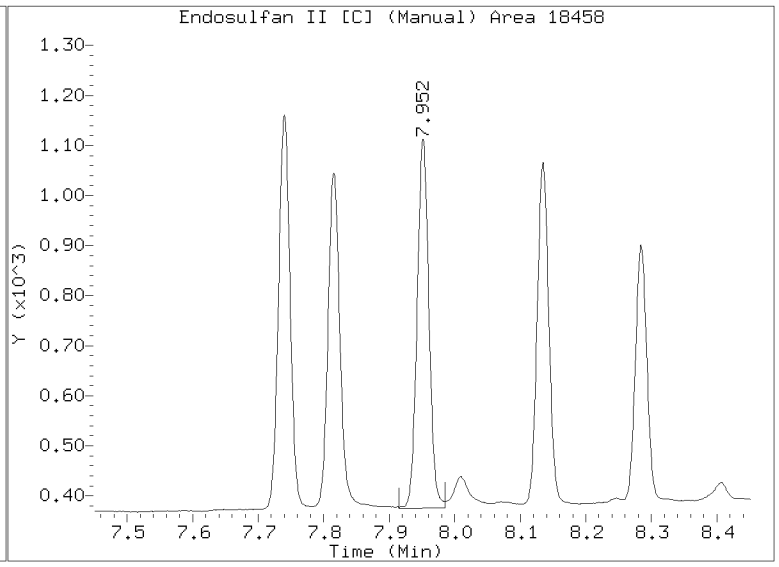
Manual Peak Adjustment Report, CLP-2

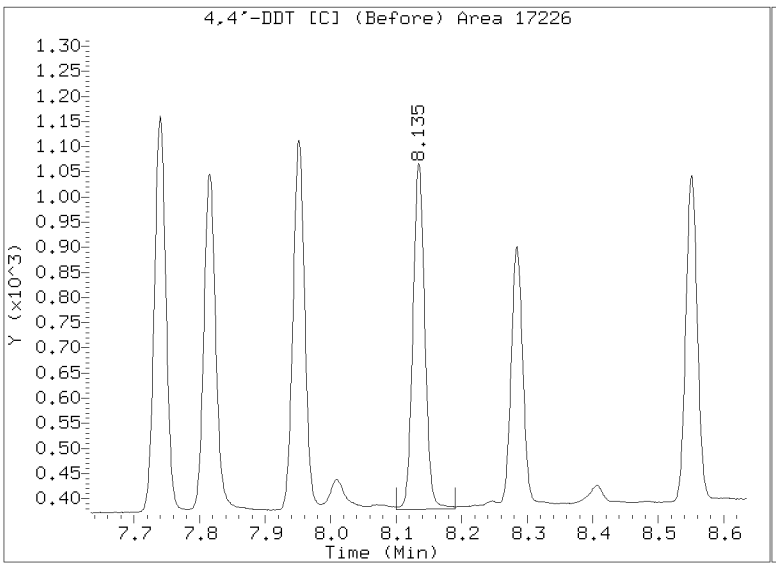
Datafile: /20230601.b/B20230601.b/23060106.D
Injection Date: 01-JUN-2023 16:58
Lab ID:SLF0020-CAL1 Client ID:

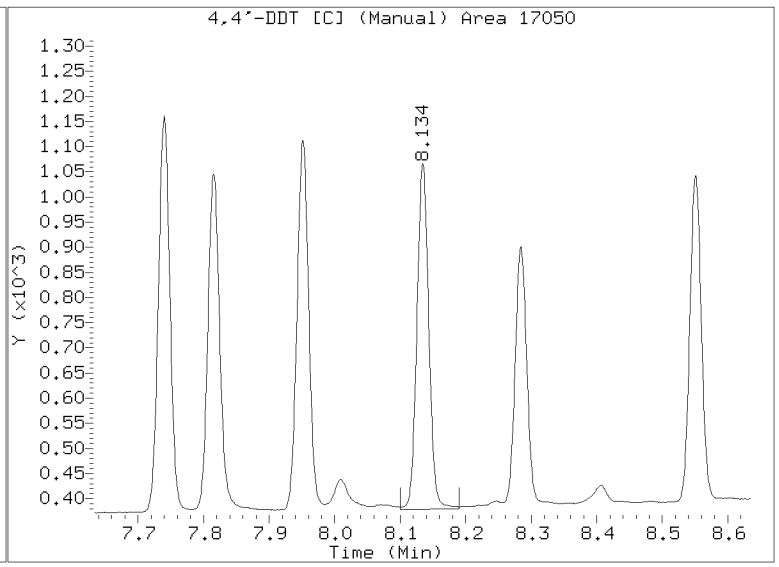






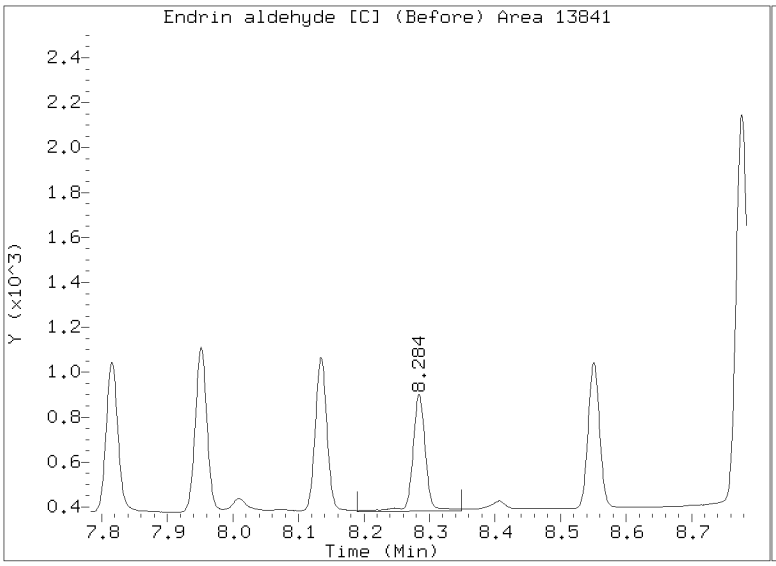


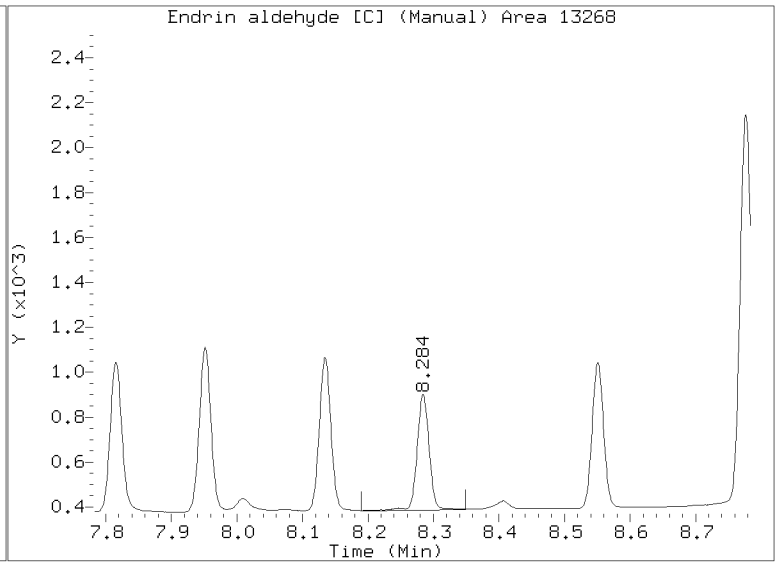


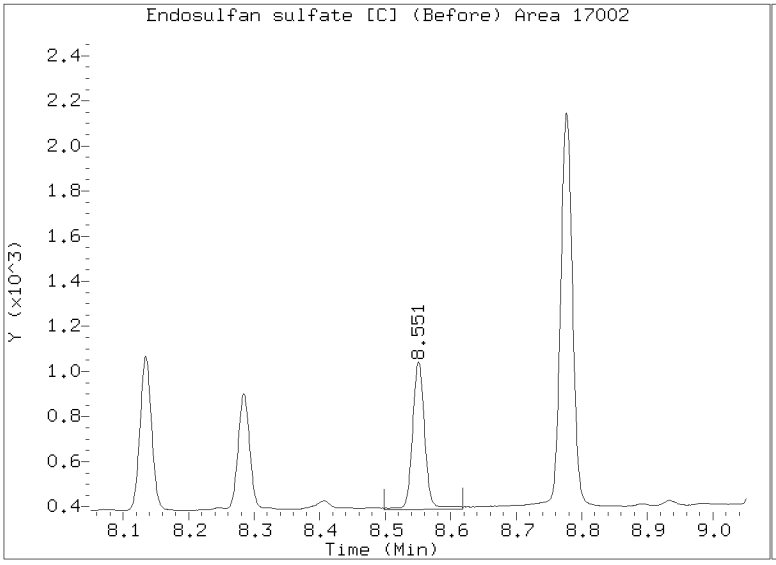


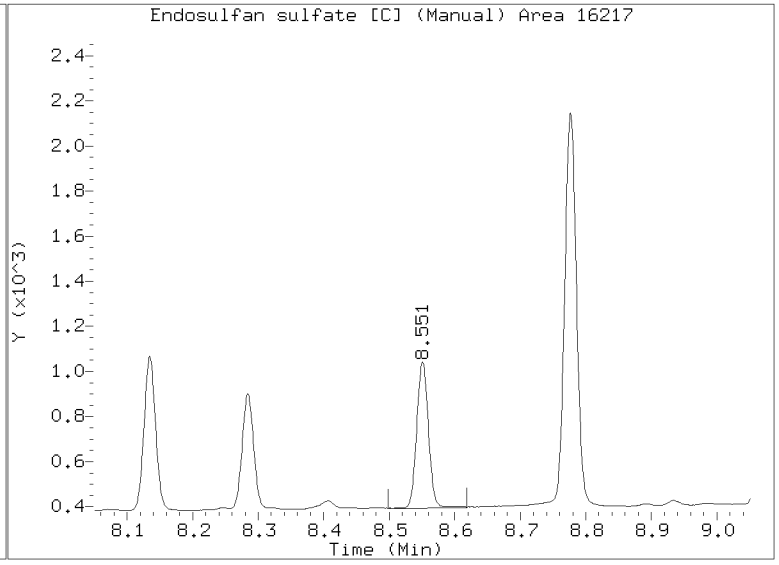
Manual Peak Adjustment Report, CLP-2

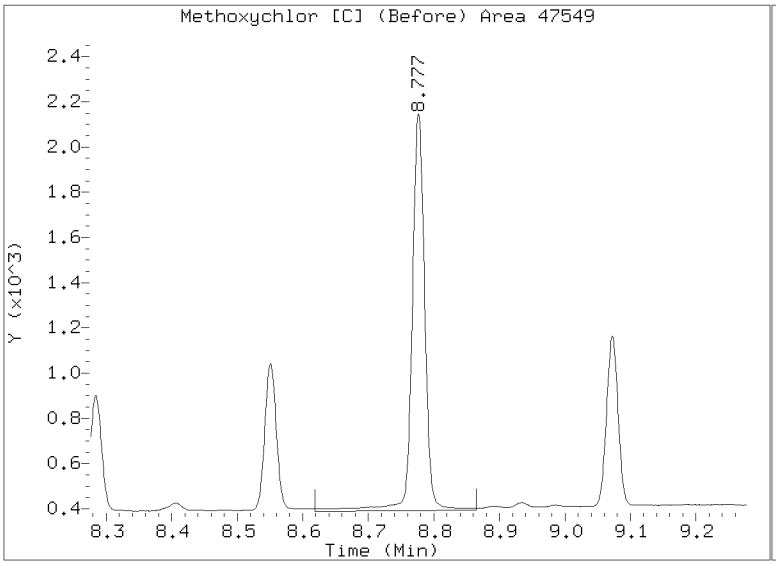
Datafile: /20230601.b/B20230601.b/23060106.D
Injection Date: 01-JUN-2023 16:58
Lab ID:SLF0020-CAL1 Client ID:

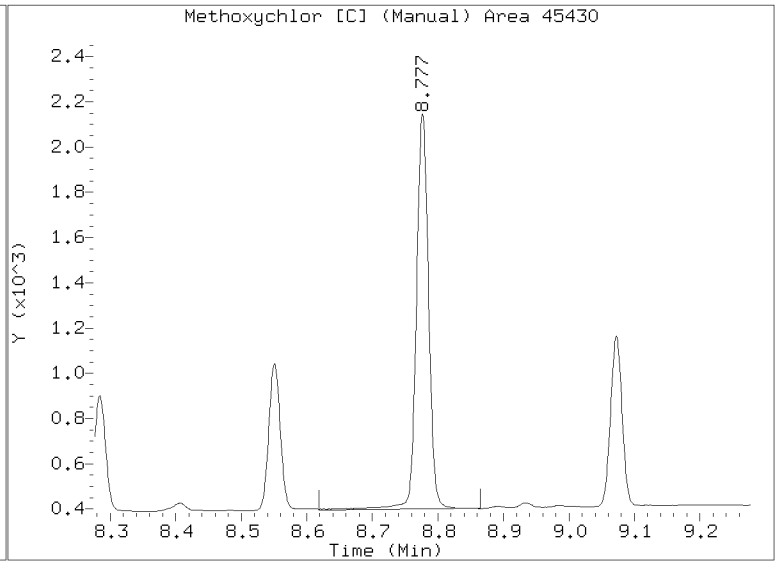






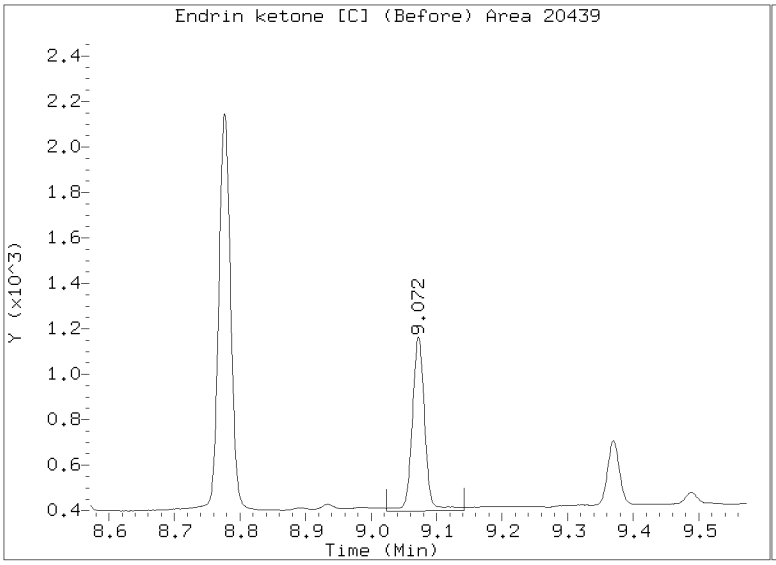


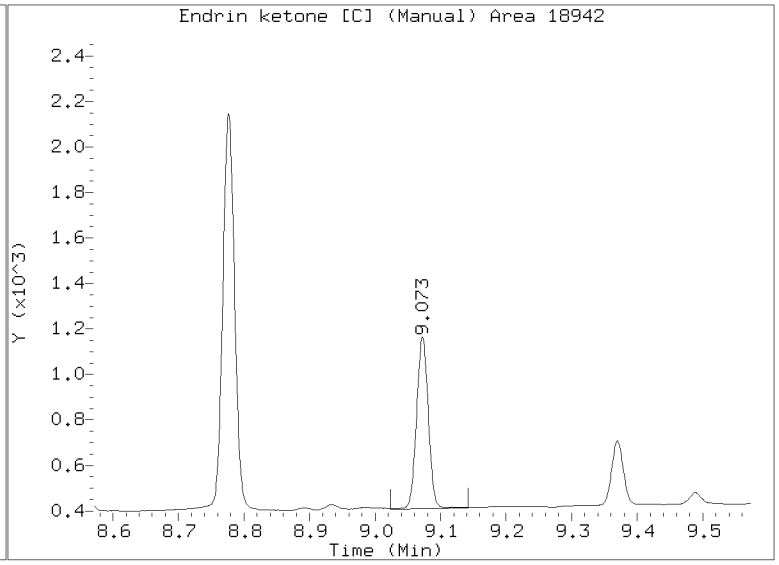


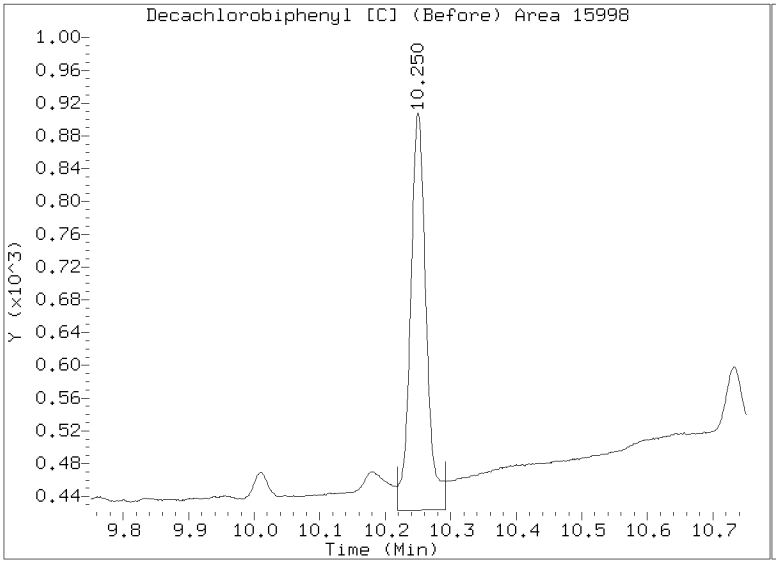


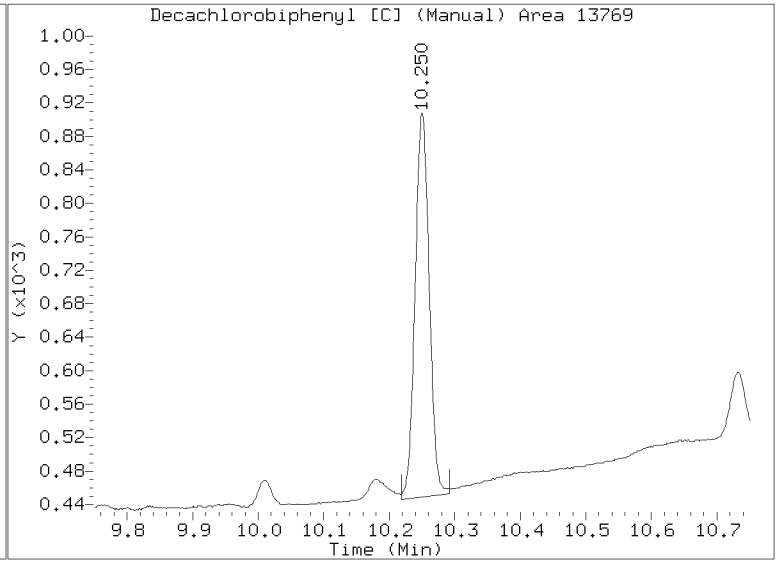
Manual Peak Adjustment Report, CLP-2

Datafile: /20230601.b/B20230601.b/23060106.D
Injection Date: 01-JUN-2023 16:58
Lab ID:SLF0020-CAL1 Client ID:









Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060107.D
Data file 2: /20230601.b/B20230601.b/23060107.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CAL2
Client ID:
Injection Date: 01-JUN-2023 17:16
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	0.000	29319	4.717	-0.000	31289	2.45	2.38	2.8	alpha-BHC
4.676	0.002	13097	5.183	0.001	13761	2.65	2.56	3.6	beta-BHC
4.859	0.002	24105	5.528	0.001	25603	2.39	2.36	1.1	delta-BHC
4.595	0.001	25808	5.104	0.000	28014	2.47	2.41	2.3	gamma-BHC (Lindane)
5.079	0.000	25298	5.619	0.000	26512	2.56	2.51	2.1	Heptachlor
5.401	0.001	24798	6.016	-0.000	26317	2.52	2.46	2.1	Aldrin
6.074	0.001	23194	6.677	0.000	23994	2.66	2.60	2.3	Heptachlor epoxide b
6.517	0.000	21122	7.121	-0.000	20422	2.61	2.55	2.4	Endosulfan I
6.778	0.001	44314	7.416	-0.000	44938	5.24	5.10	2.7	Dieldrin
6.443	0.002	39590	7.208	-0.000	42689	5.05	5.06	0.2	4,4'-DDE
7.029	0.000	40462	7.740	-0.000	40148	5.31	5.21	1.9	Endrin N
7.265	0.001	37159	7.952	0.001	41329	5.35	5.68	6.0	Endosulfan II N
7.091	0.001	34822	7.815	-0.000	35396	5.17	5.09	1.6	4,4'-DDD N
8.129	-0.000	33345	8.551	-0.000	32482	5.27	5.10	3.3	Endosulfan sulfate N
7.385	0.001	35674	8.134	-0.001	34001	5.12	5.00	2.5	4,4'-DDT N
7.875	0.000	89547	8.776	-0.001	84780	28.86	27.35	5.4	Methoxychlor N
8.404	-0.000	40064	9.072	-0.001	47334	5.45	6.40	16.0	Endrin ketone N
7.695	0.001	27371	8.283	-0.001	25689	5.29	5.17	2.4	Endrin aldehyde N
6.217	0.001	21880	6.889	0.001	22442	2.53	2.49	1.4	trans-Chlordane
6.364	0.000	22296	7.049	0.001	22440	2.56	2.53	1.4	cis-Chlordane
2.283	-0.001	33804	2.427	-0.001	35206	2.56	2.74	6.9	Hexachlorobutadiene
4.137	0.001	29825	4.579	0.001	31423	2.67	2.62	2.1	Hexachlorobenzene
3.784	0.000	43298	4.097	0.000	46339	5.36	5.20	3.0	Tetrachloro-m-xylene
9.320	-0.001	28188	10.250	-0.001	26155	5.52	5.47	1.0	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

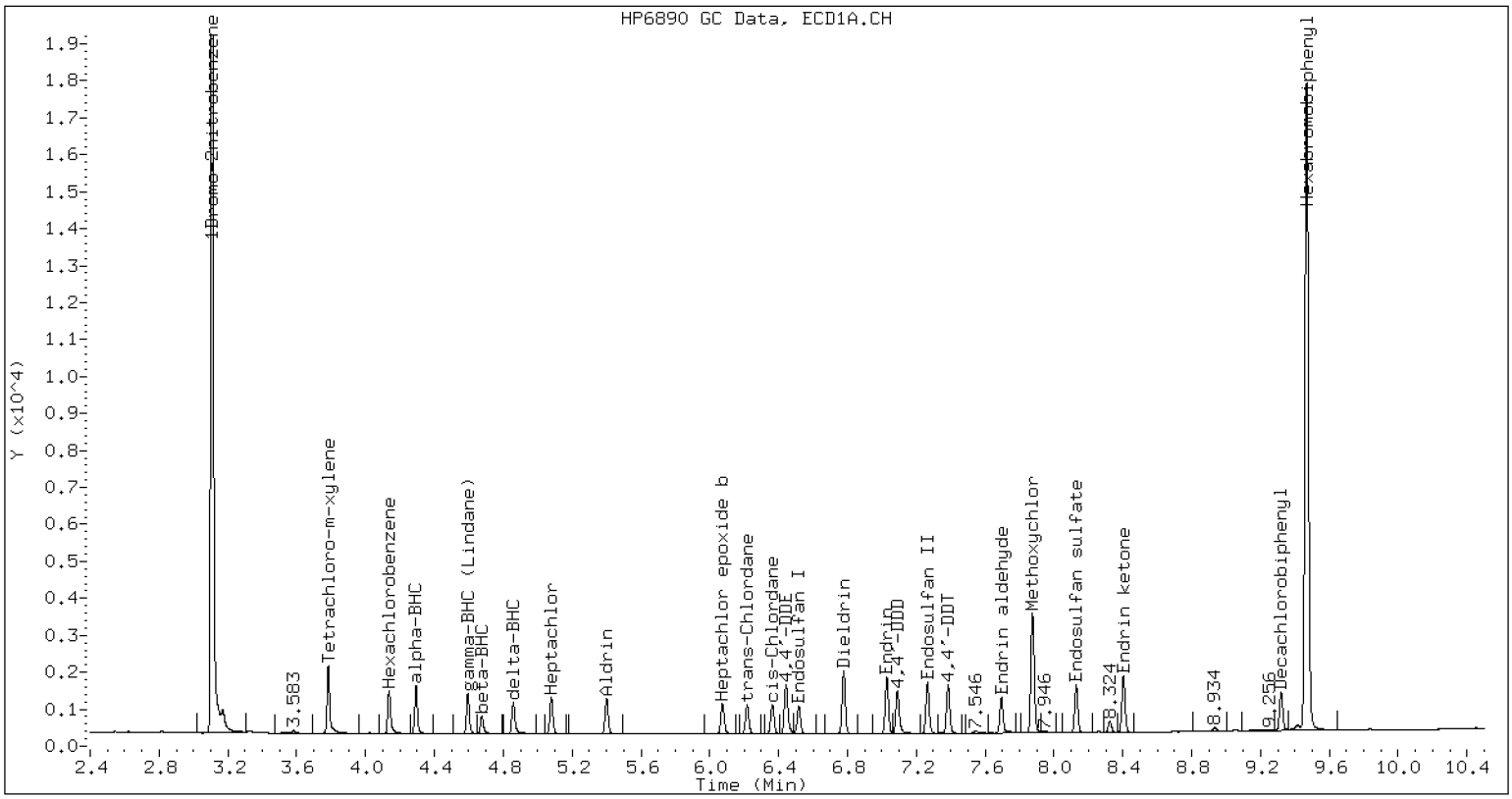
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	636322	2.8
Hexabromobiphenyl	493109	499652	1.3

Column 2

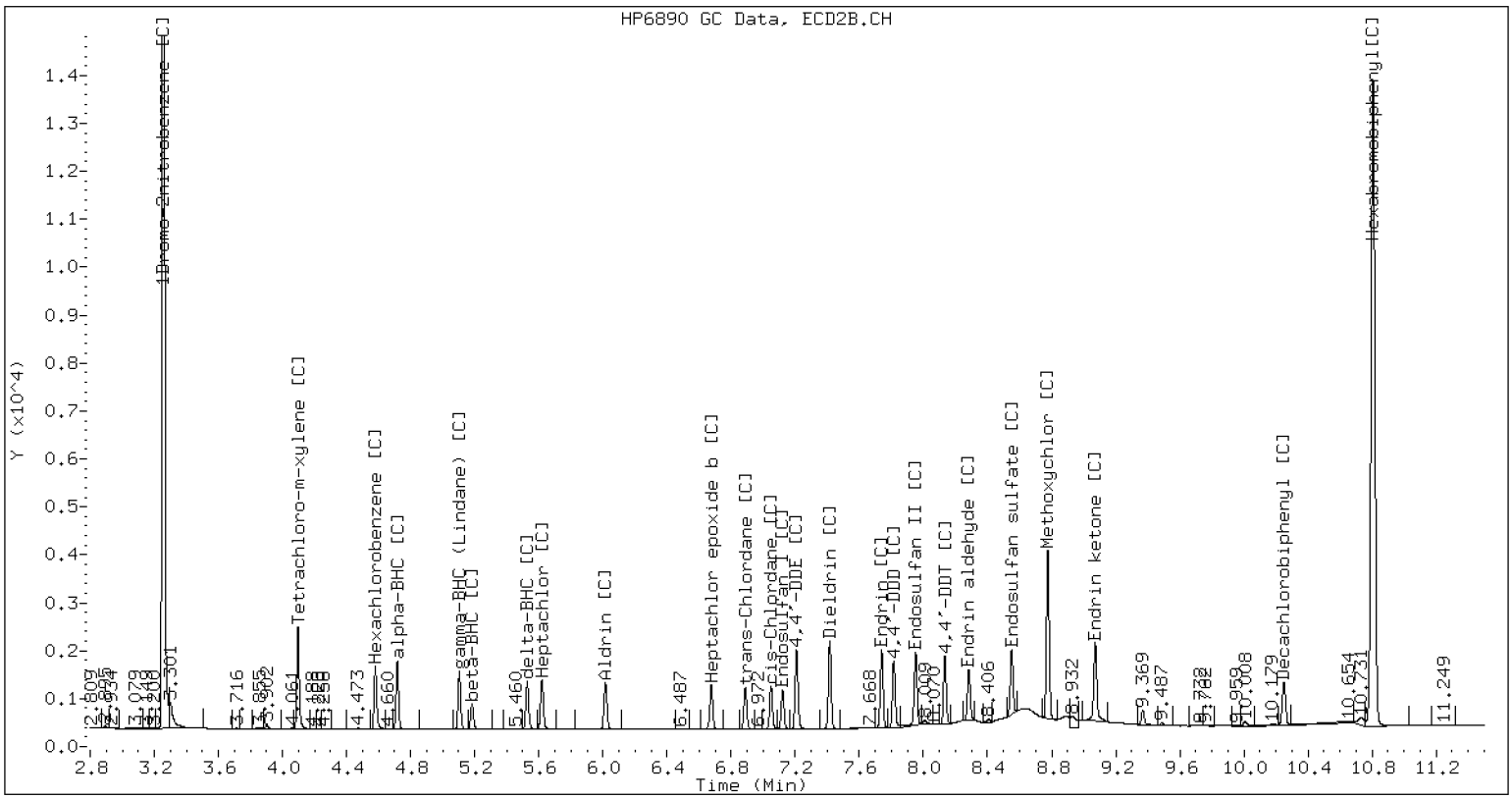
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	704509	1.2
Hexabromobiphenyl	461581	454286	-1.6

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

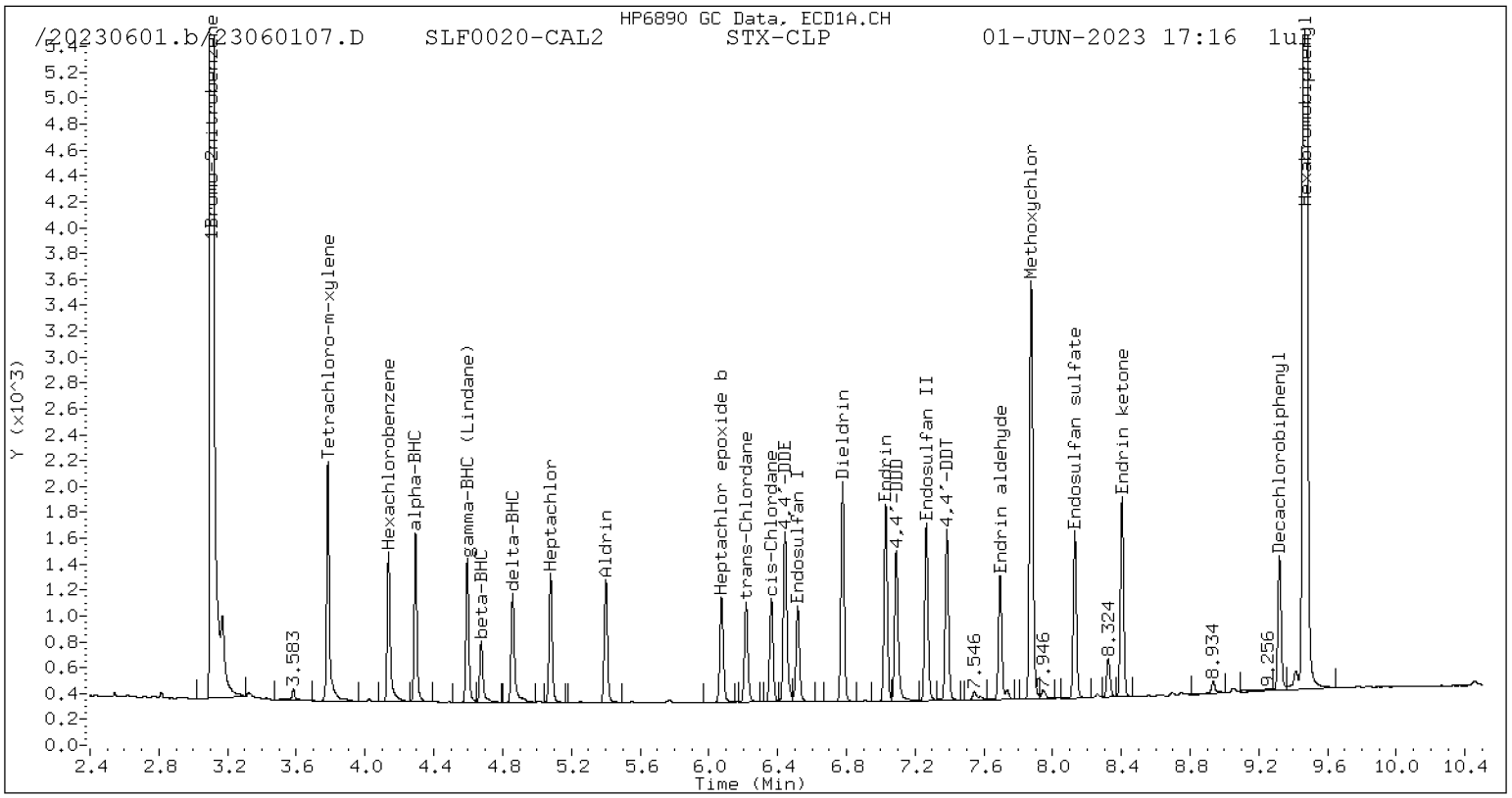
/20230601.b/23060107.D SLF0020-CAL2 STX-CLP 01-JUN-2023 17:16 1ul



/20230601.b/B20230601.b/23060107.D SLF0020-CAL2 CLP2 01-JUN-2023 17:16 1ul

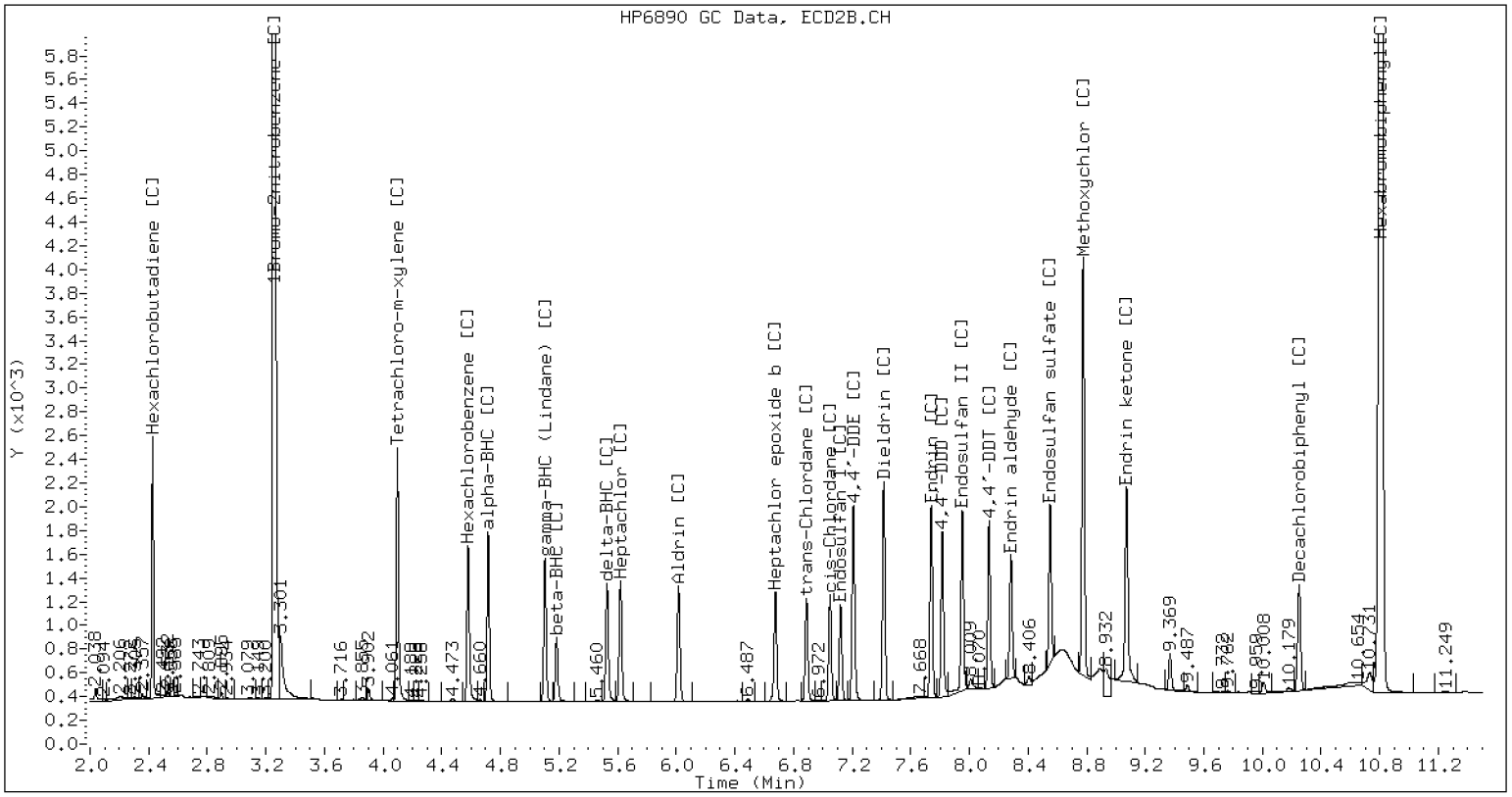


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

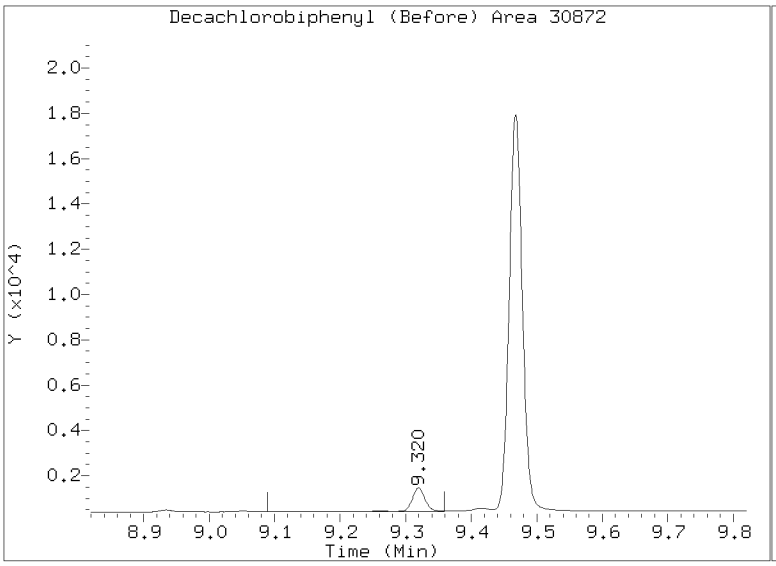
/20230601.b/B20230601.b/23060107.D SLF0020-CAL2 CLP2

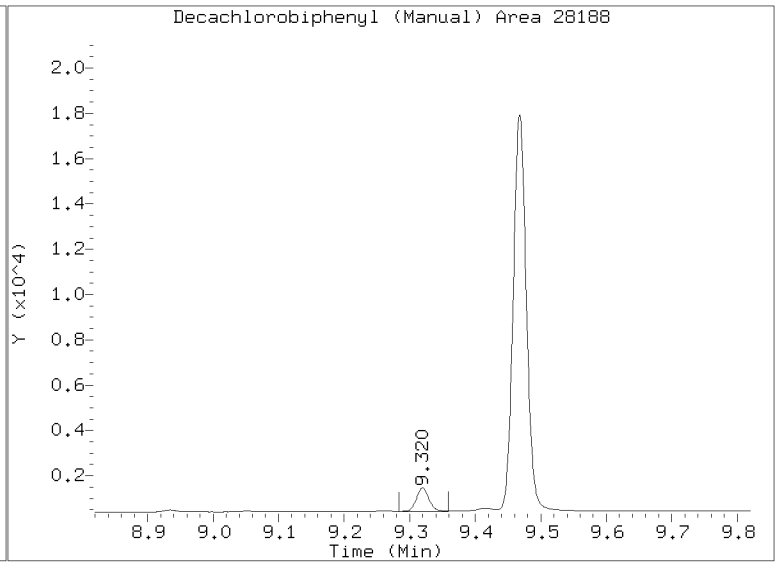


CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, STX-CLP

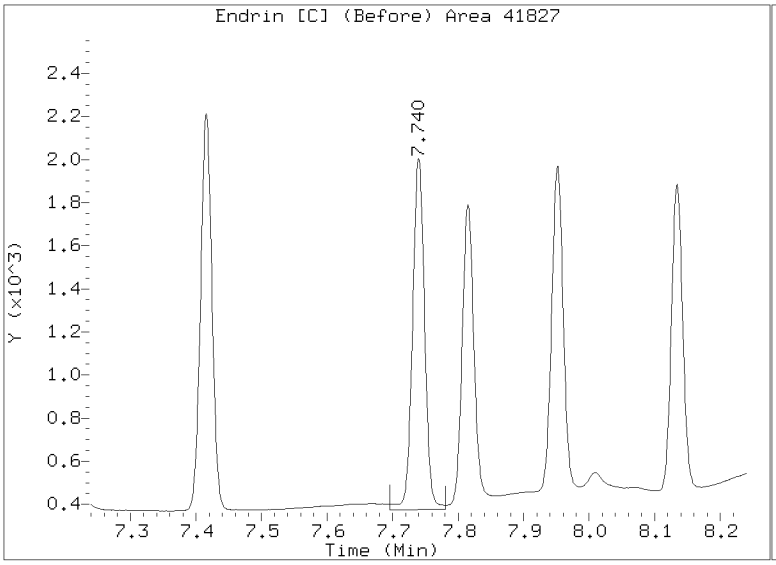
Datafile: /20230601.b/23060107.D
Injection Date: 01-JUN-2023 17:16
Lab ID:SLF0020-CAL2 Client ID:
Report Date: 06/08/2023 12:32

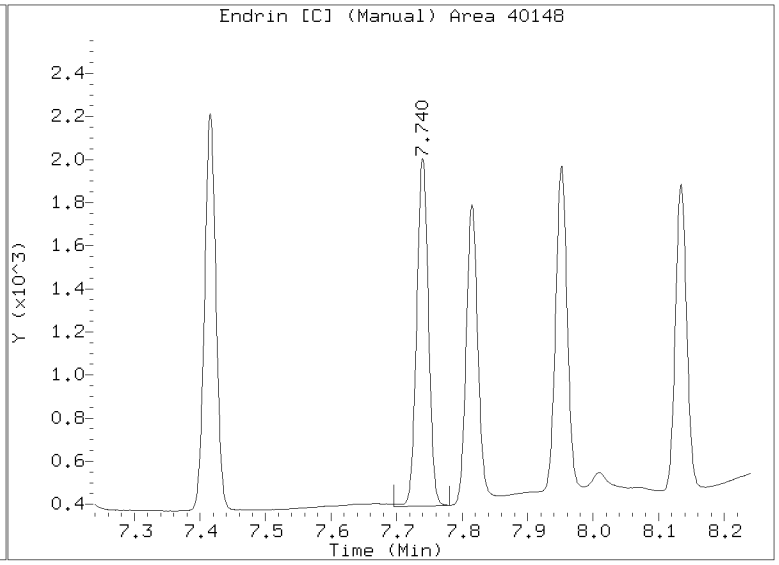


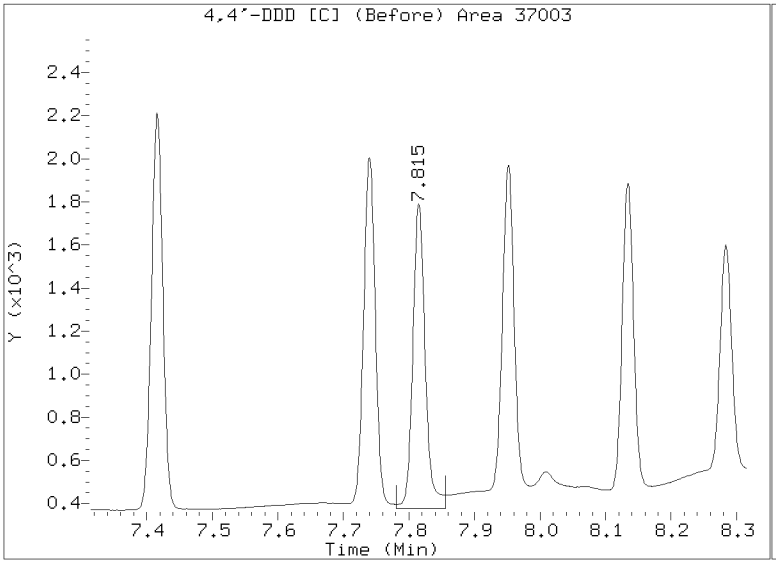


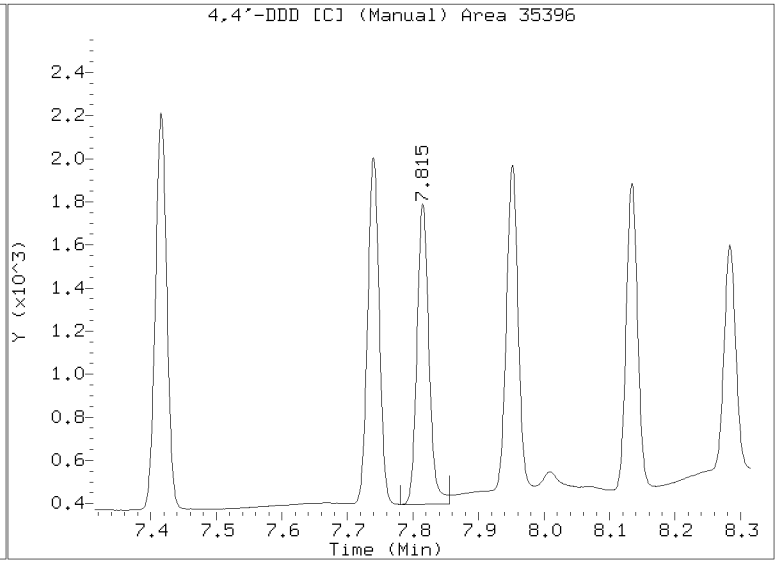
Manual Peak Adjustment Report, CLP-2

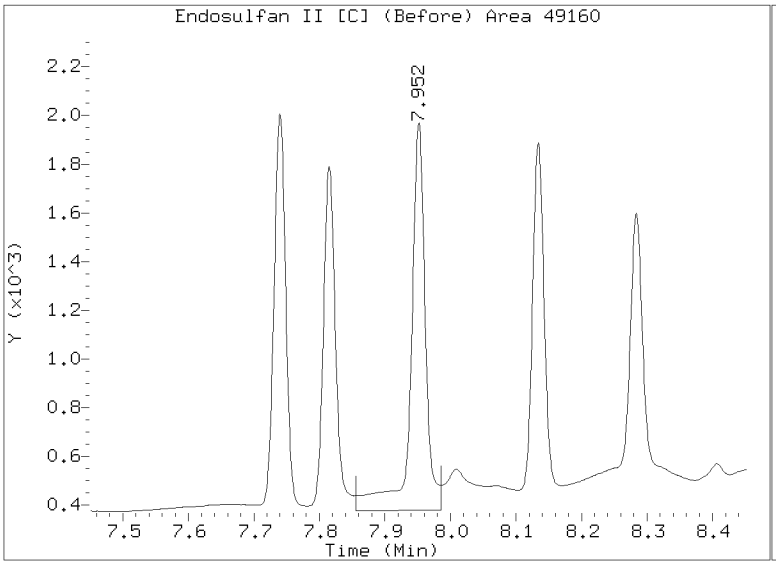
Datafile: /20230601.b/B20230601.b/23060107.D
Injection Date: 01-JUN-2023 17:16
Lab ID:SLF0020-CAL2 Client ID:

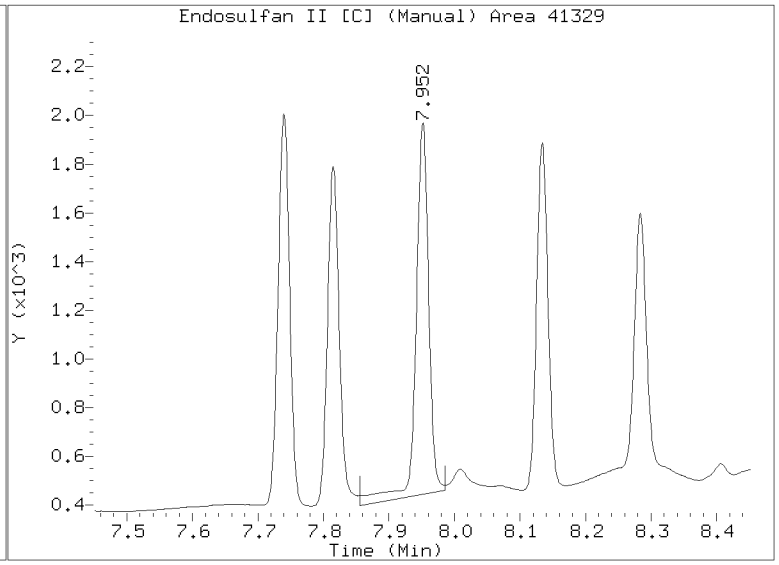






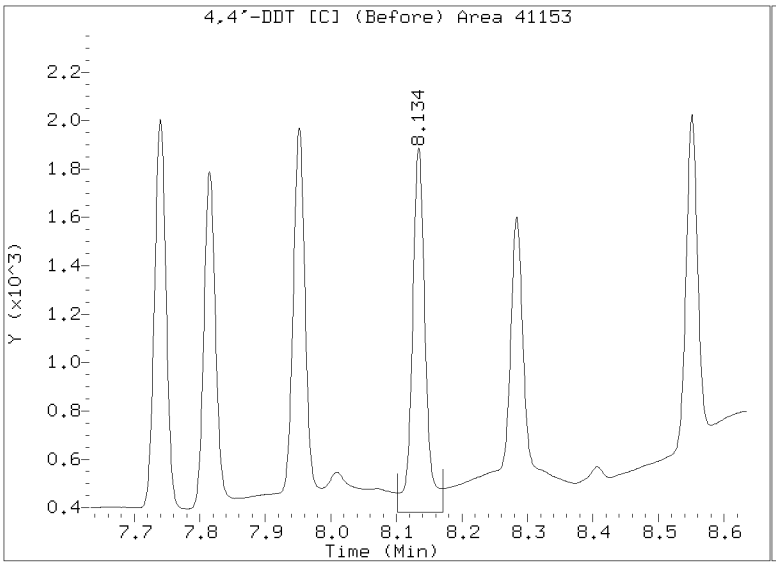


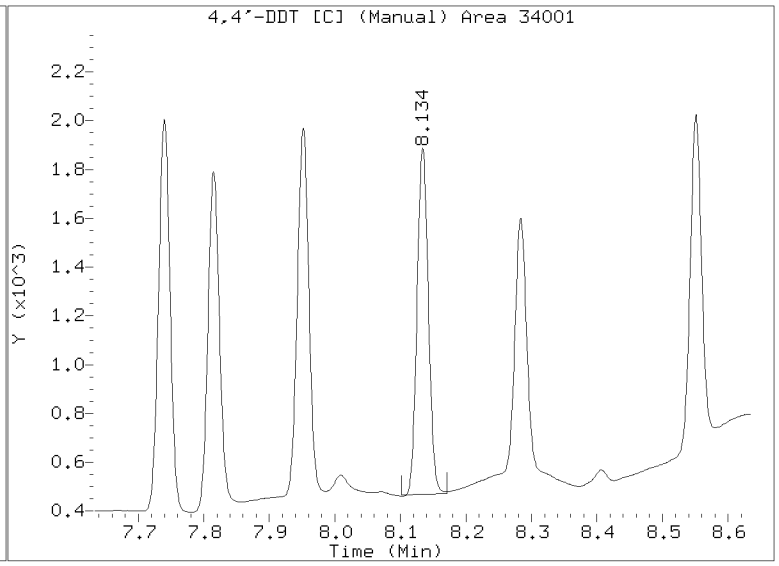


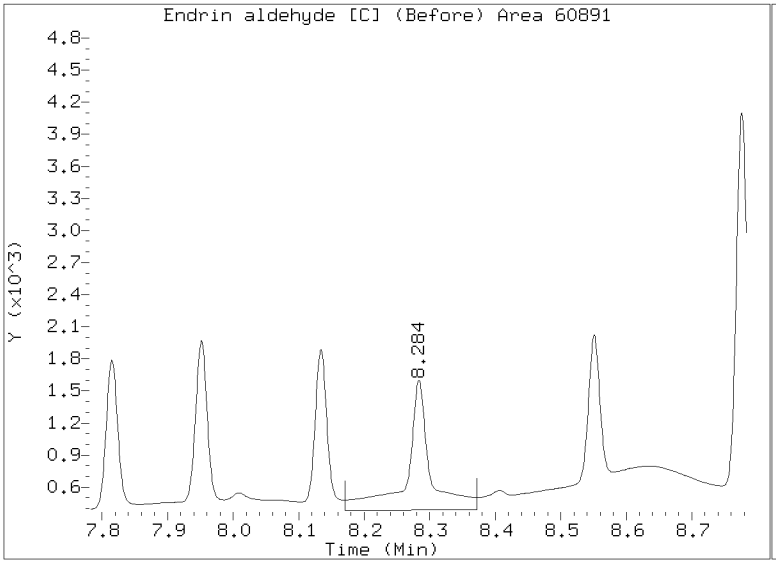


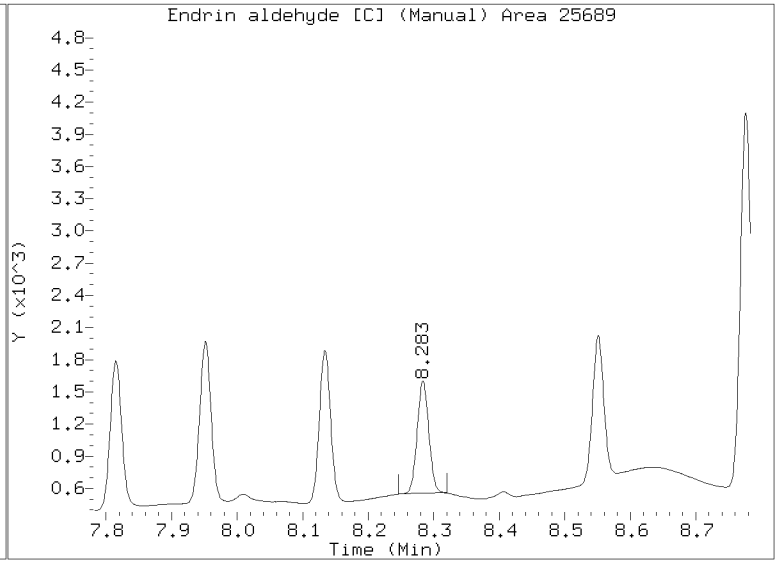
Manual Peak Adjustment Report, CLP-2

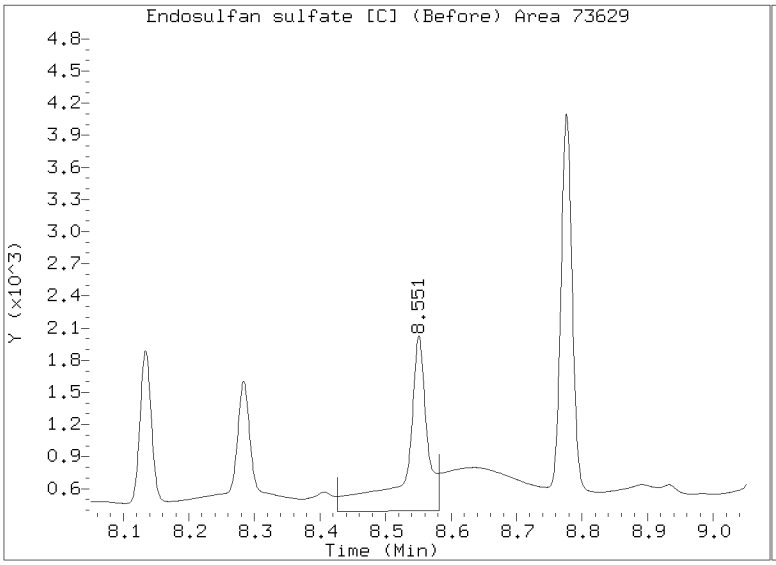
Datafile: /20230601.b/B20230601.b/23060107.D
Injection Date: 01-JUN-2023 17:16
Lab ID:SLF0020-CAL2 Client ID:

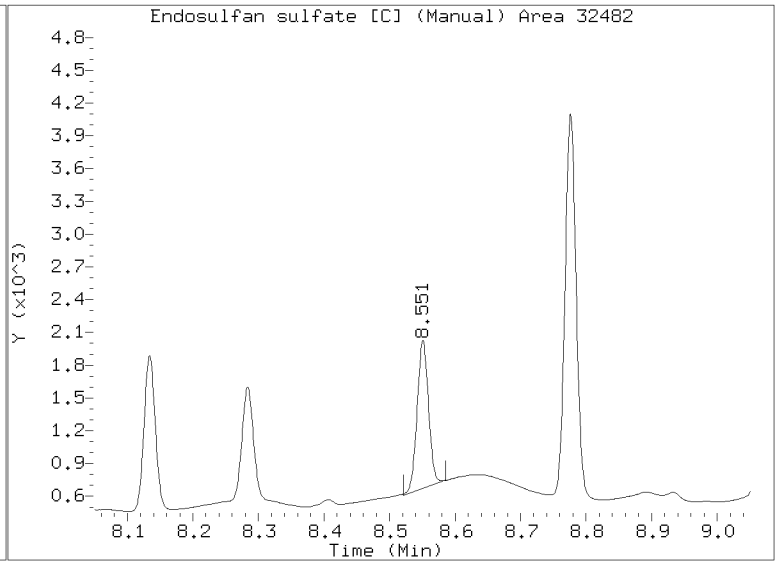






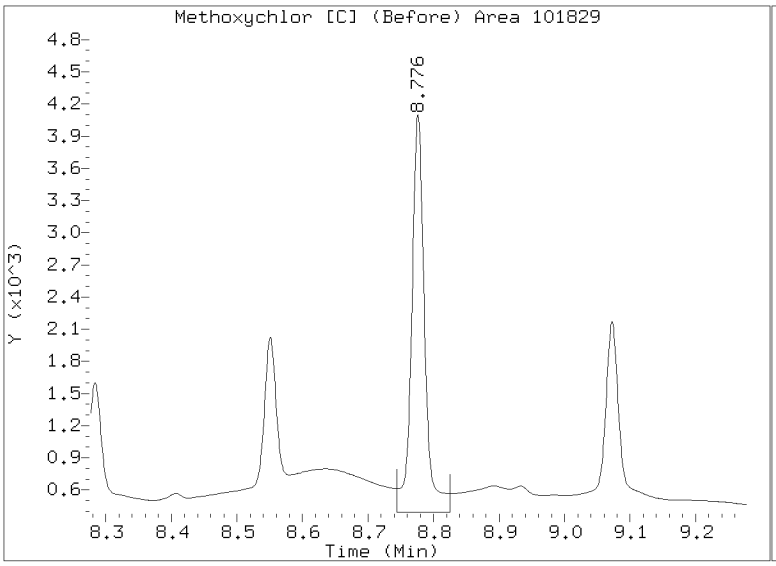


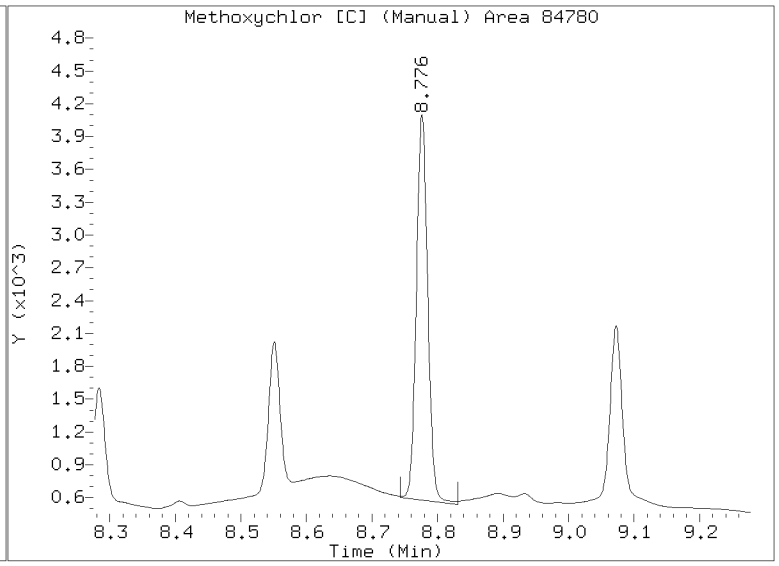


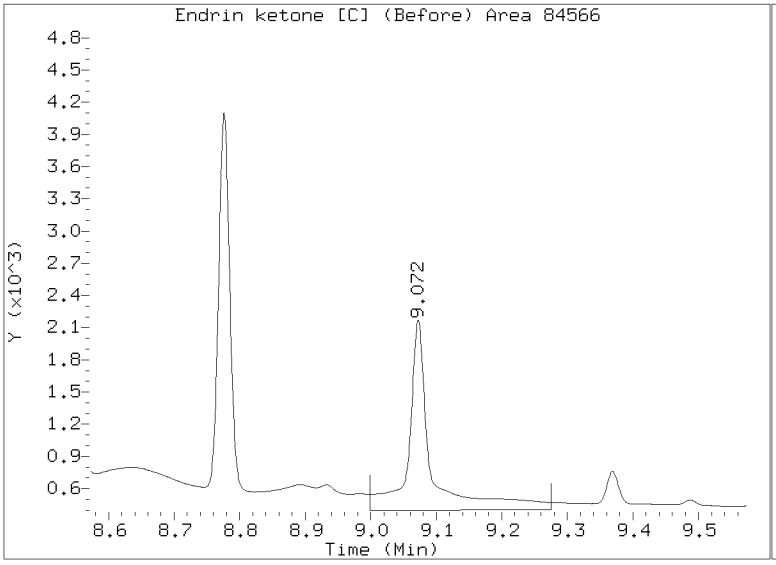


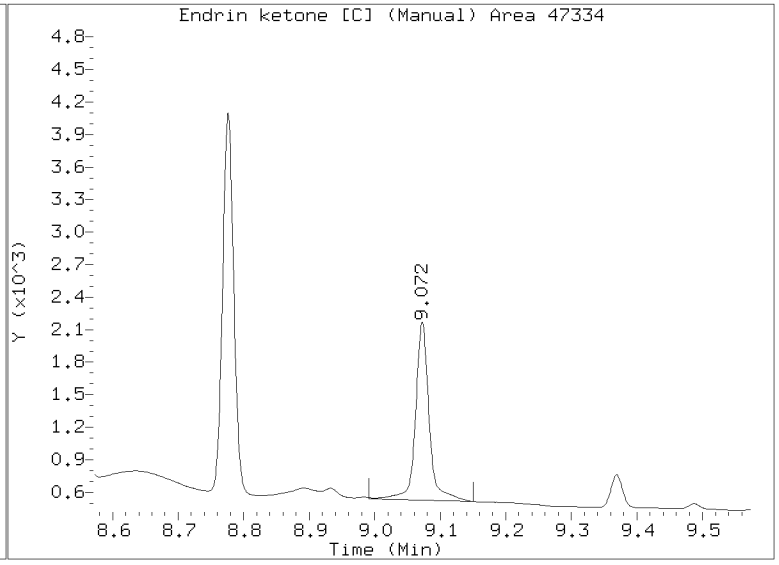
Manual Peak Adjustment Report, CLP-2

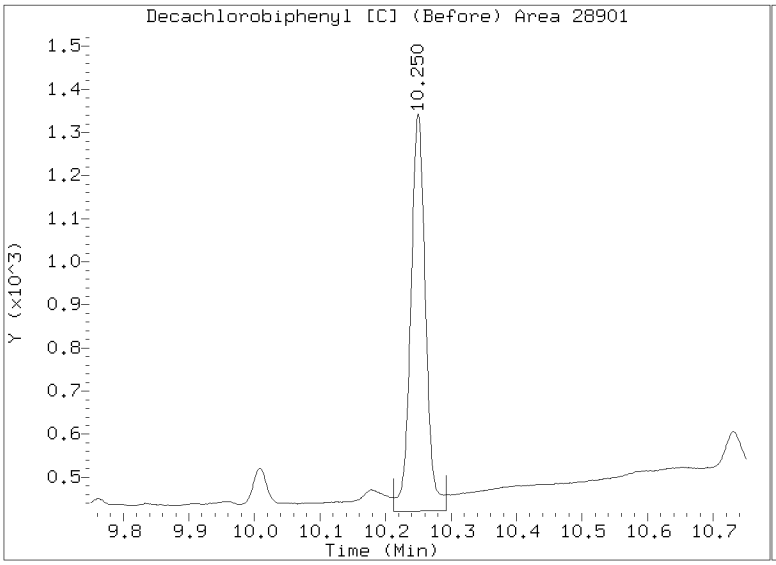
Datafile: /20230601.b/B20230601.b/23060107.D
Injection Date: 01-JUN-2023 17:16
Lab ID:SLF0020-CAL2 Client ID:

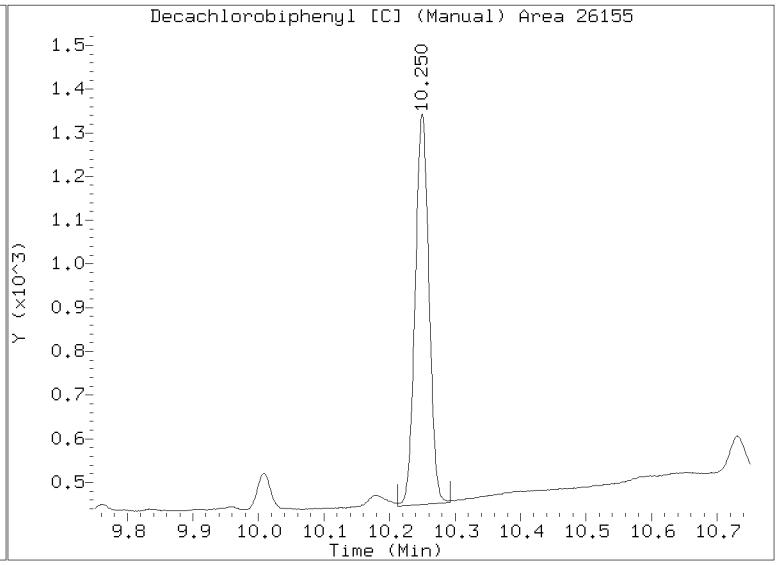












Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060108.D
Data file 2: /20230601.b/B20230601.b/23060108.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CAL3
Client ID:
Injection Date: 01-JUN-2023 17:35
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	0.000	61058	4.717	0.000	65111	5.10	4.94	3.3	alpha-BHC
4.676	0.001	25309	5.183	0.001	27212	5.12	5.04	1.7	beta-BHC
4.858	0.001	50234	5.527	-0.000	52229	4.98	4.80	3.7	delta-BHC
4.595	0.001	52656	5.104	0.000	57599	5.04	4.95	2.0	gamma-BHC (Lindane)
5.079	-0.000	51224	5.619	-0.001	53185	5.20	5.02	3.5	Heptachlor
5.401	0.000	50118	6.016	0.000	53201	5.09	4.97	2.5	Aldrin
6.074	0.001	45567	6.676	0.000	46792	5.23	5.06	3.5	Heptachlor epoxide b
6.517	-0.000	41900	7.121	-0.000	39855	5.18	4.95	4.4	Endosulfan I N
6.778	0.000	89050	7.416	0.000	90231	10.53	10.20	3.2	Dieldrin N
6.442	0.001	80985	7.209	0.000	86030	10.34	10.16	1.8	4,4'-DDE N
7.028	-0.000	81347	7.740	0.000	78929	10.52	10.11	4.0	Endrin N
7.265	0.000	74418	7.952	0.000	72089	10.55	9.77	7.7	Endosulfan II N
7.090	0.000	70479	7.816	0.001	69688	10.30	9.88	4.2	4,4'-DDD N
8.129	-0.000	66693	8.551	0.000	65712	10.39	10.18	2.0	Endosulfan sulfate N
7.384	-0.000	72728	8.135	0.000	68421	10.30	9.93	3.7	4,4'-DDT N
7.875	0.000	169074	8.776	-0.001	162836	53.70	51.82	3.6	Methoxychlor N
8.404	-0.000	77985	9.073	-0.000	74902	10.46	10.00	4.5	Endrin ketone N
7.694	0.000	54224	8.284	0.000	49363	10.33	9.79	5.3	Endrin aldehyde N
6.217	0.001	43954	6.889	0.001	45023	5.08	4.98	2.0	trans-Chlordane
6.363	-0.000	44456	7.050	0.001	45123	5.11	5.06	1.0	cis-Chlordane N
2.282	-0.001	67129	2.427	-0.001	60478	5.09	4.70	8.0	Hexachlorobutadiene
4.137	0.001	58028	4.579	0.000	61462	5.20	5.10	2.0	Hexachlorobenzene
3.784	0.000	84331	4.097	-0.000	92670	10.45	10.37	0.8	Tetrachloro-m-xylene
9.320	-0.000	56388	10.251	0.000	52166	10.88	10.76	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

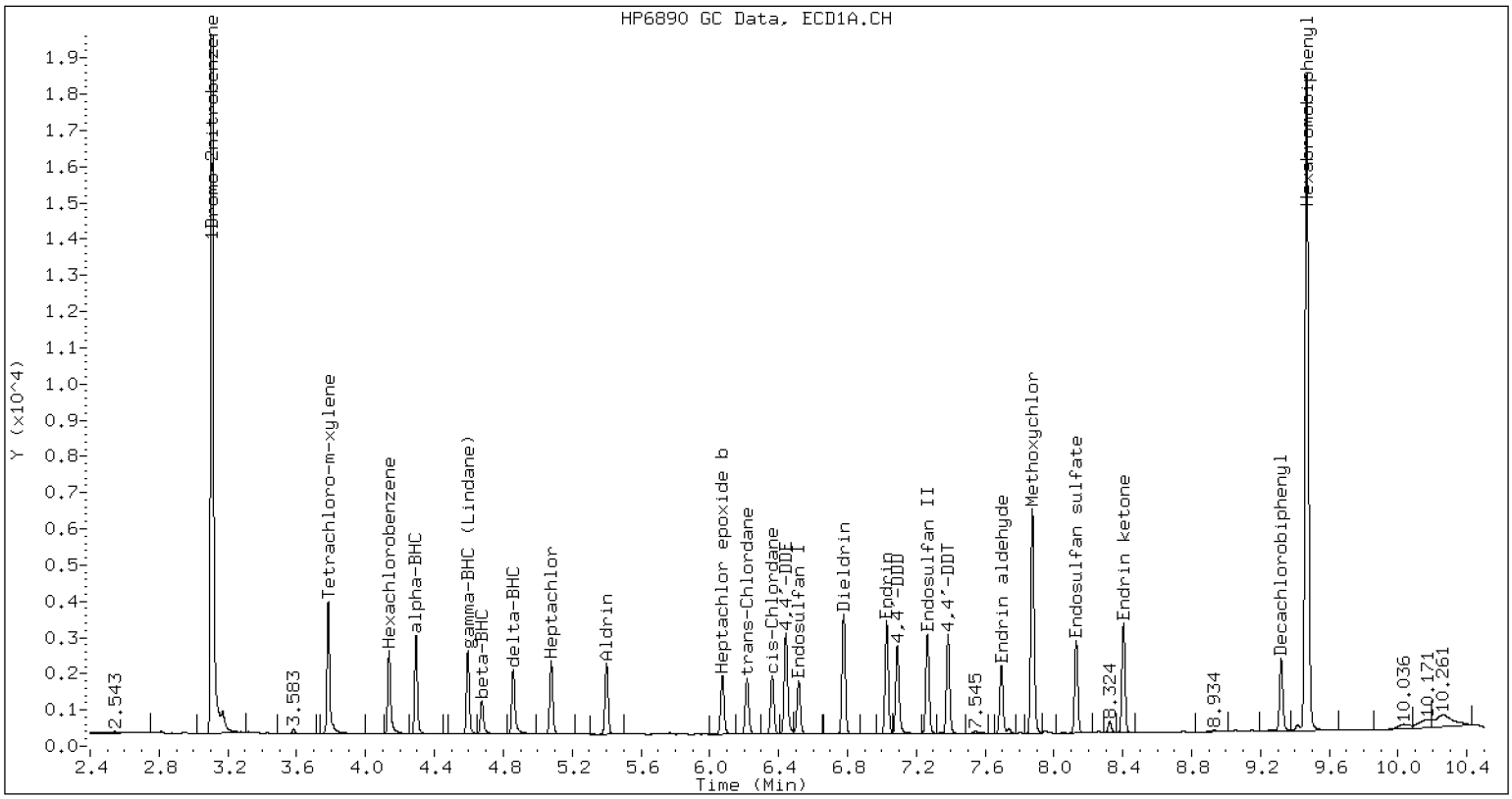
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	635850	2.7
Hexabromobiphenyl	493109	507046	2.8

Column 2

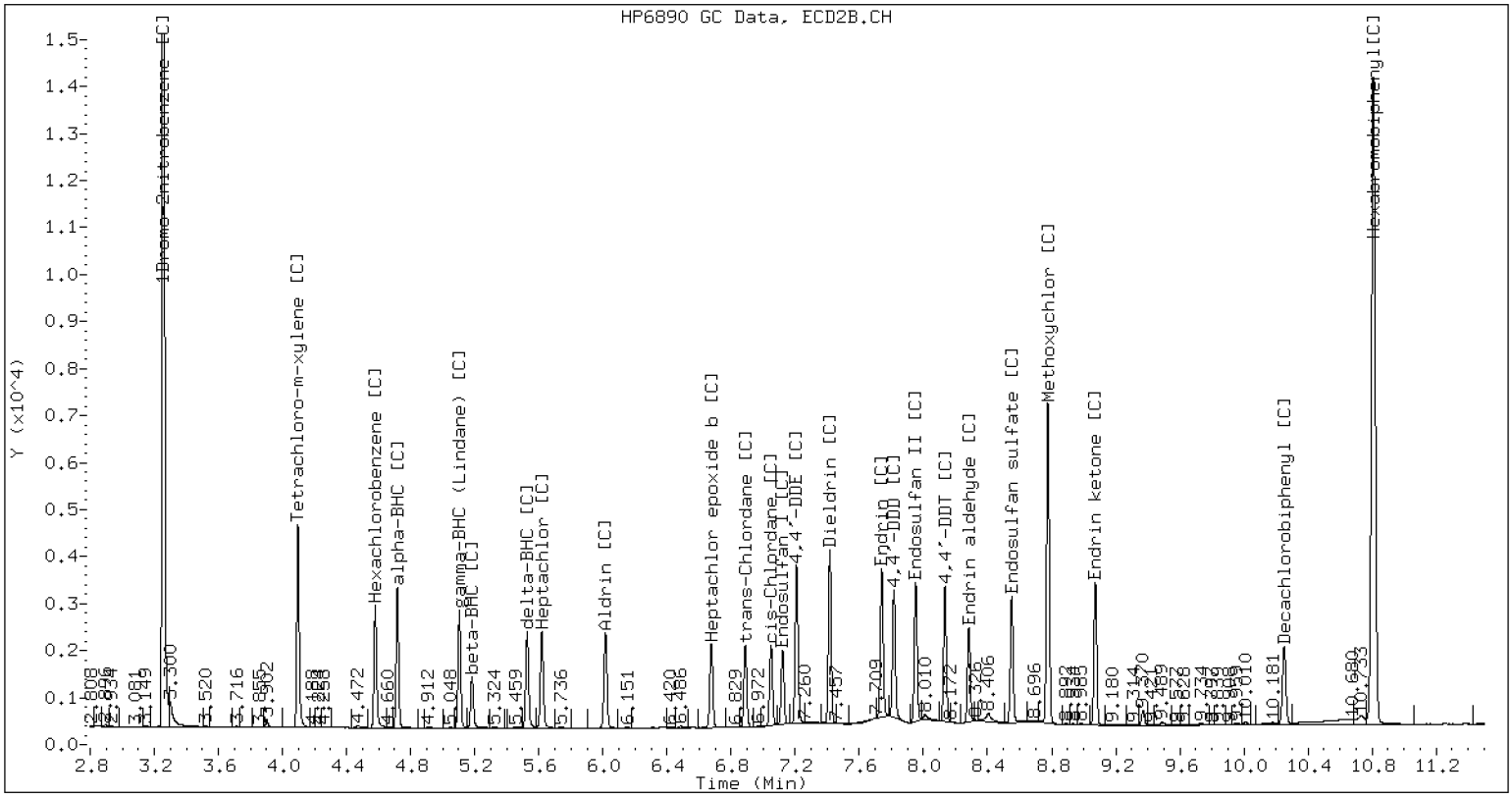
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	706950	1.6
Hexabromobiphenyl	461581	460423	-0.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

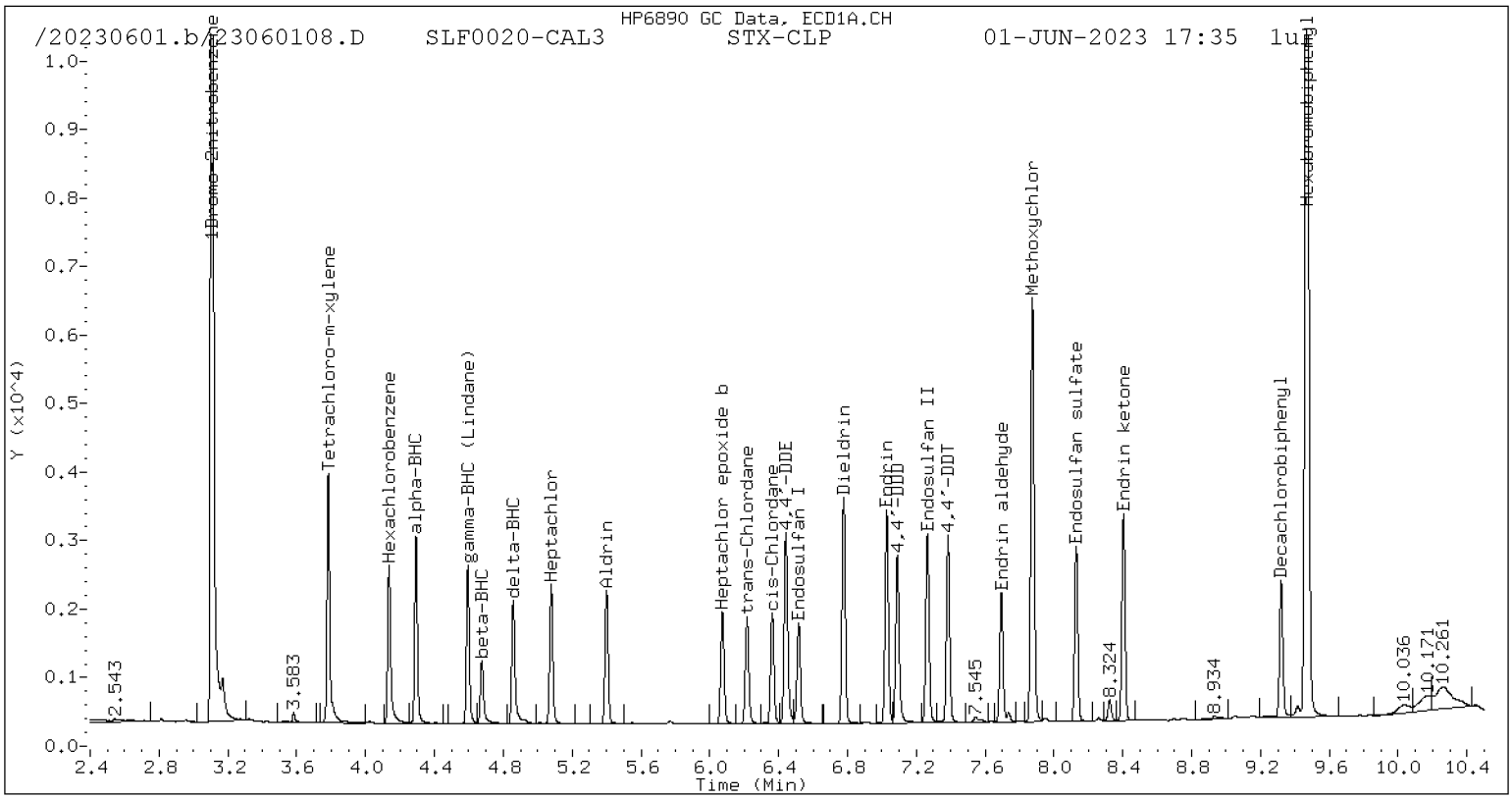
/20230601.b/23060108.D SLF0020-CAL3 STX-CLP 01-JUN-2023 17:35 1ul



/20230601.b/B20230601.b/23060108.D SLF0020-CAL3 CLP2 01-JUN-2023 17:35 1ul

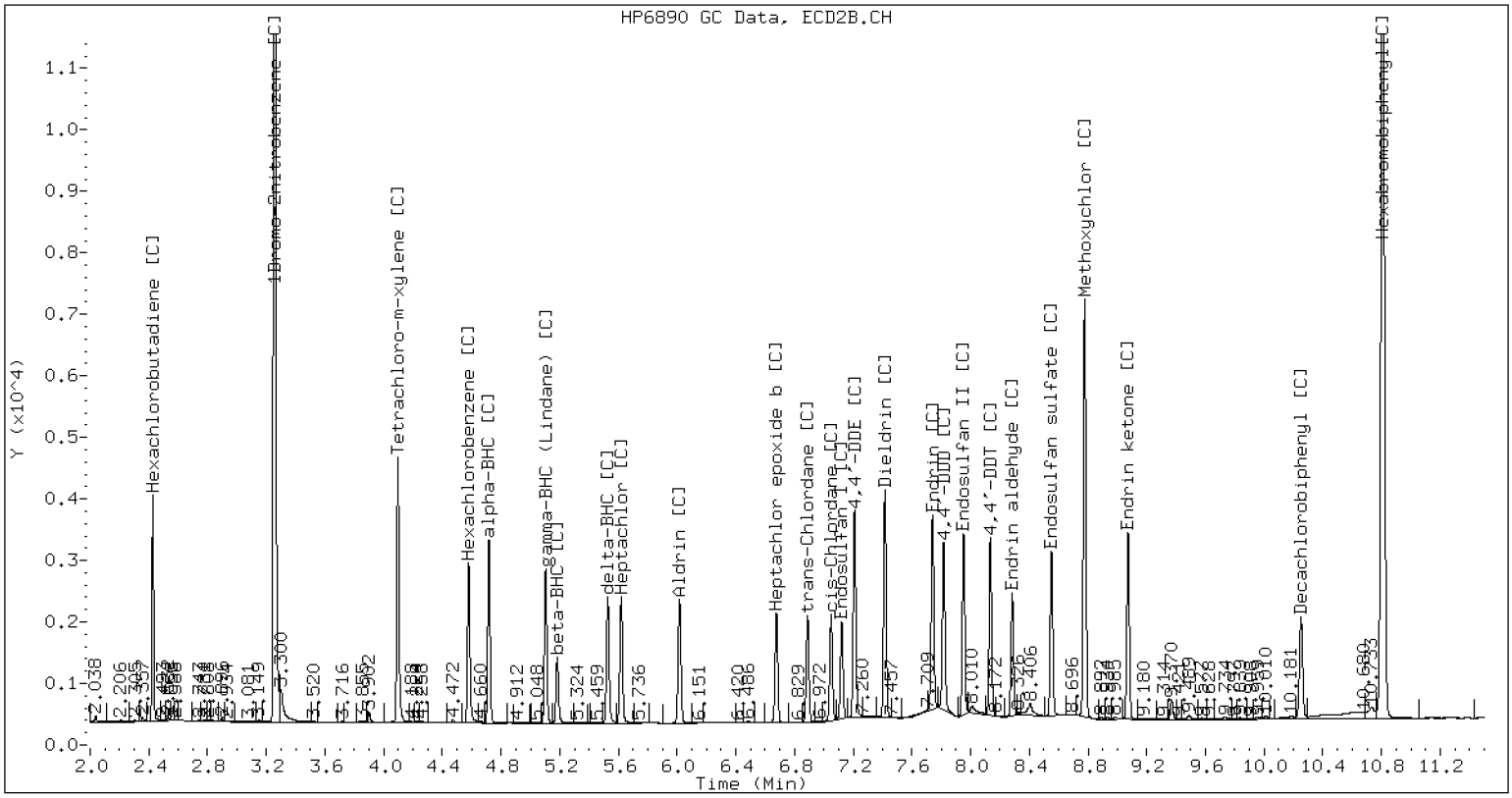


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

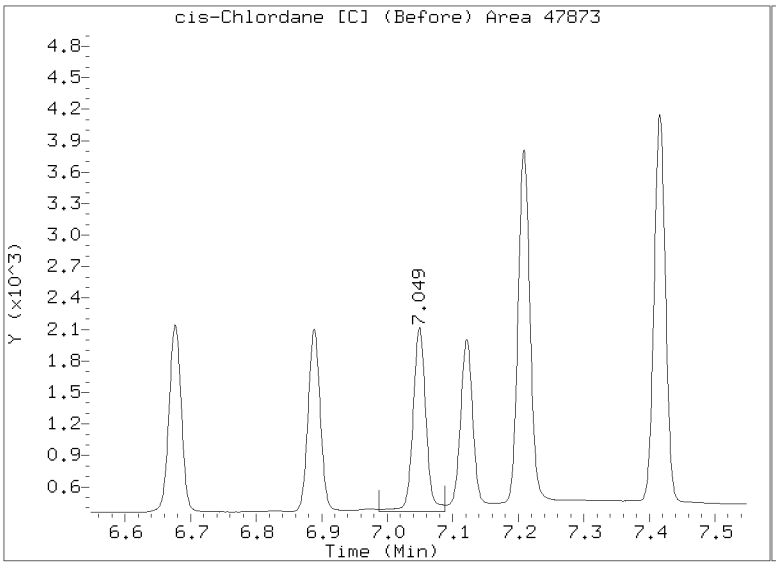
/20230601.b/B20230601.b/23060108.D SLF0020-CAL3 CLP2

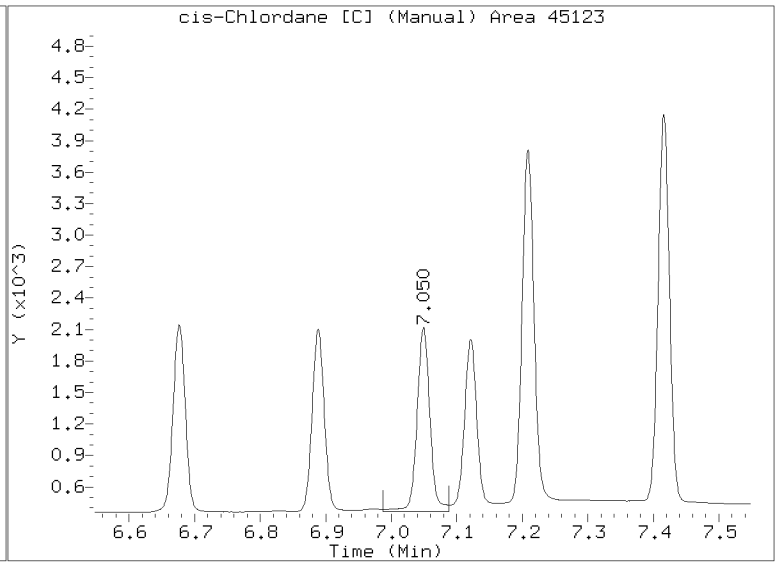


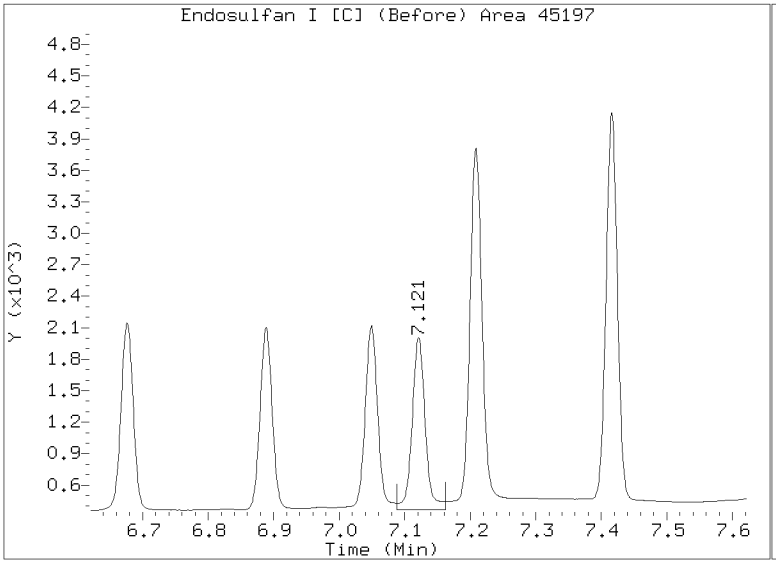
CLP-2 Manual Integration: YES

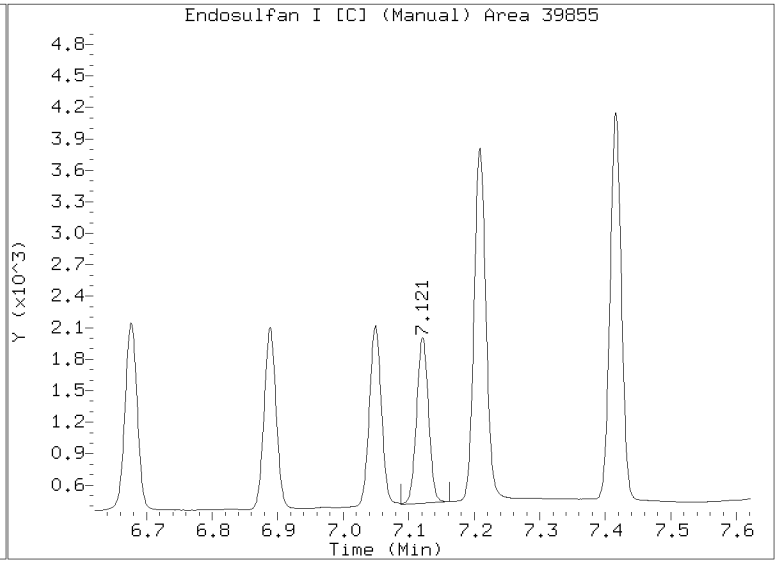
Manual Peak Adjustment Report, CLP-2

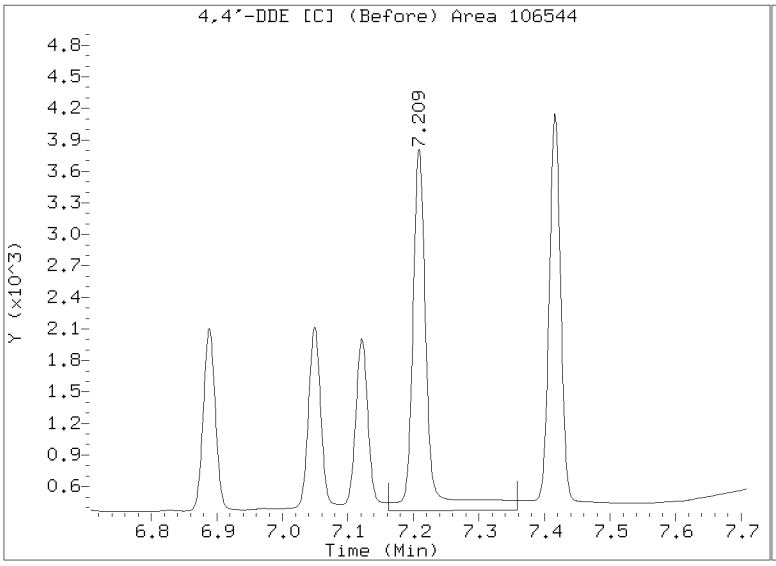
Datafile: /20230601.b/B20230601.b/23060108.D
Injection Date: 01-JUN-2023 17:35
Lab ID:SLF0020-CAL3 Client ID:

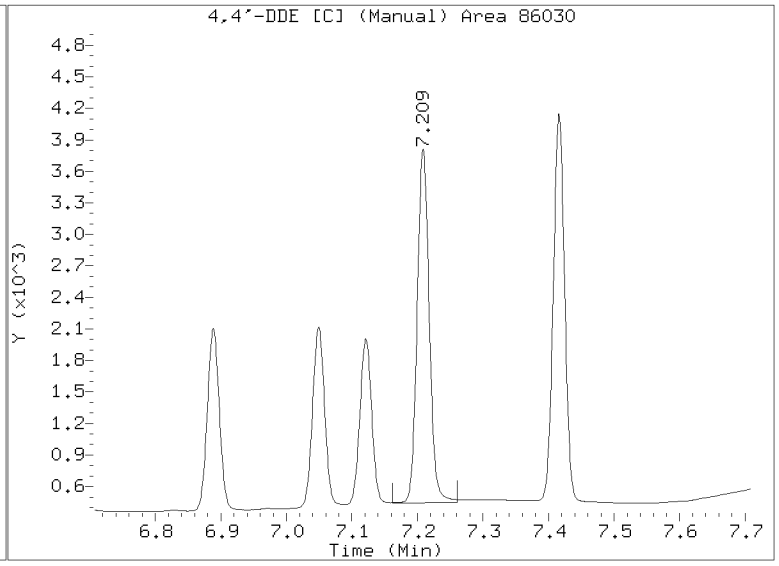






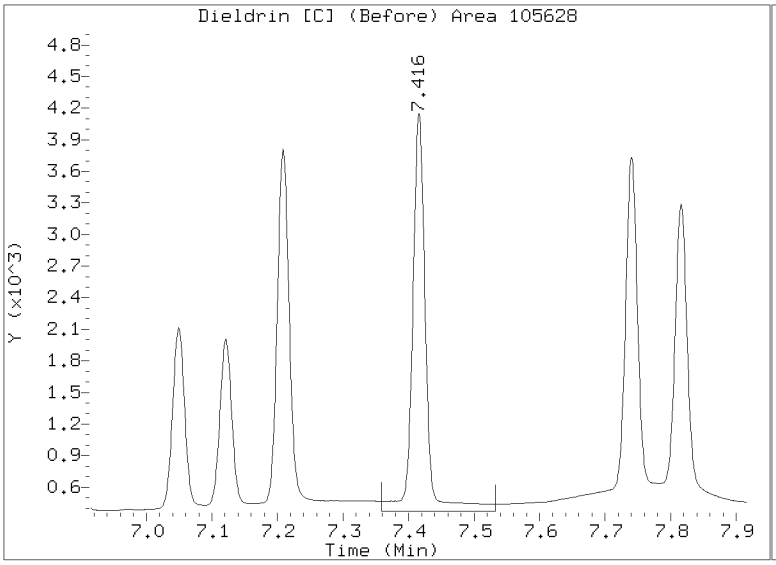


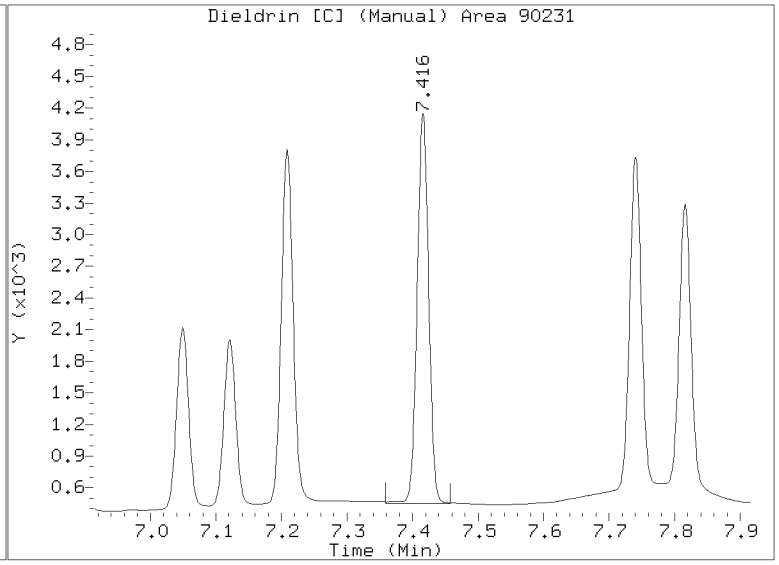


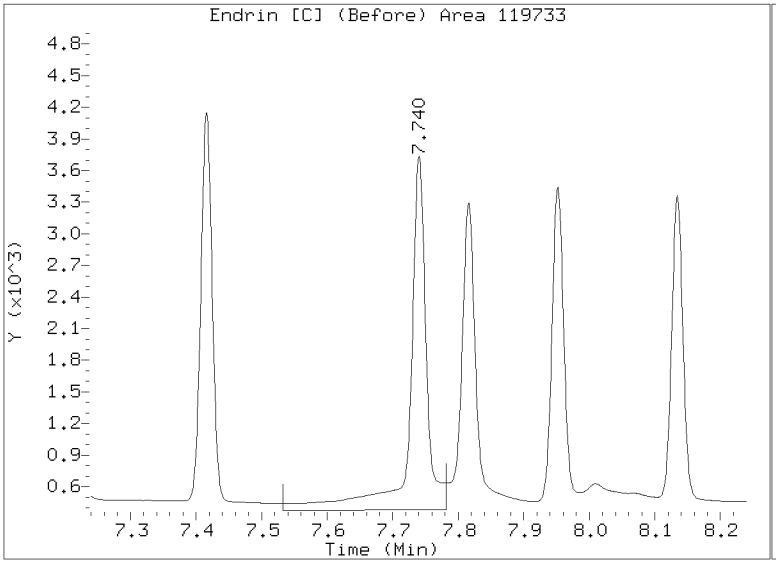


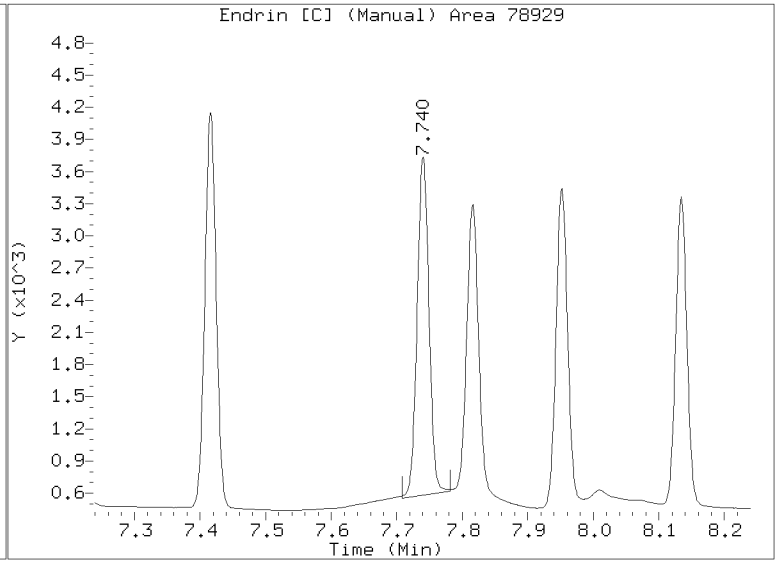
Manual Peak Adjustment Report, CLP-2

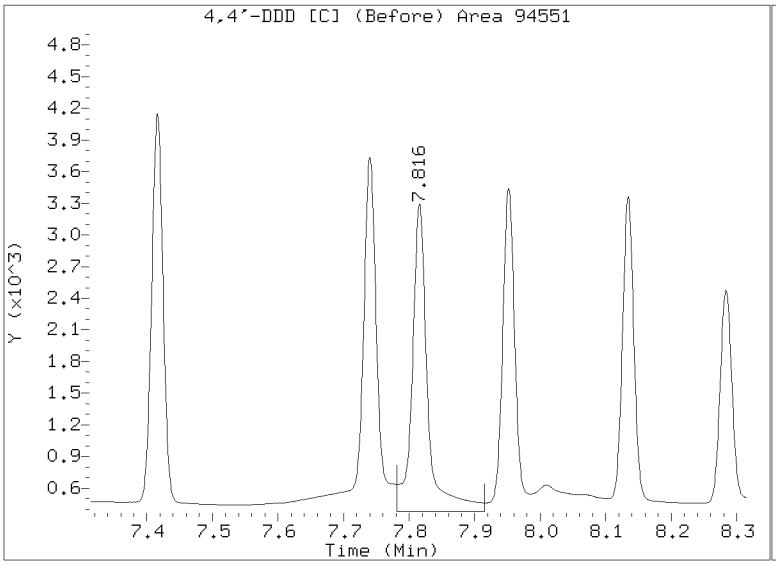
Datafile: /20230601.b/B20230601.b/23060108.D
Injection Date: 01-JUN-2023 17:35
Lab ID:SLF0020-CAL3 Client ID:

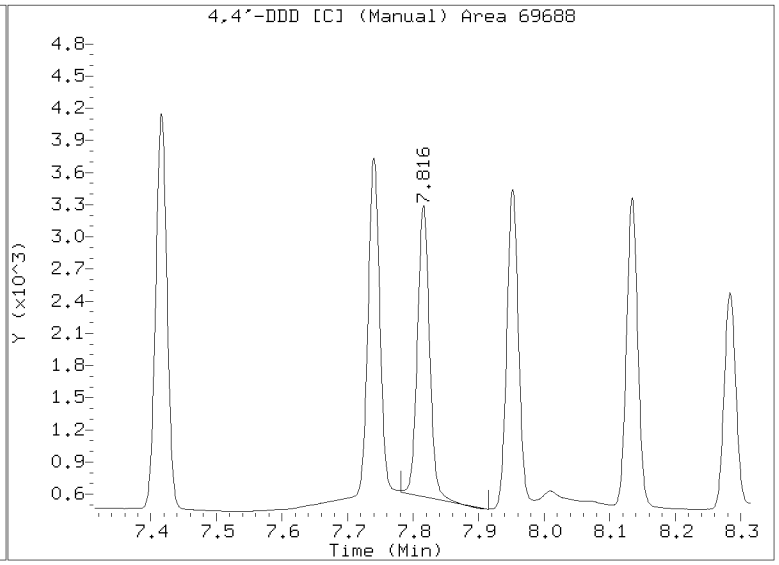






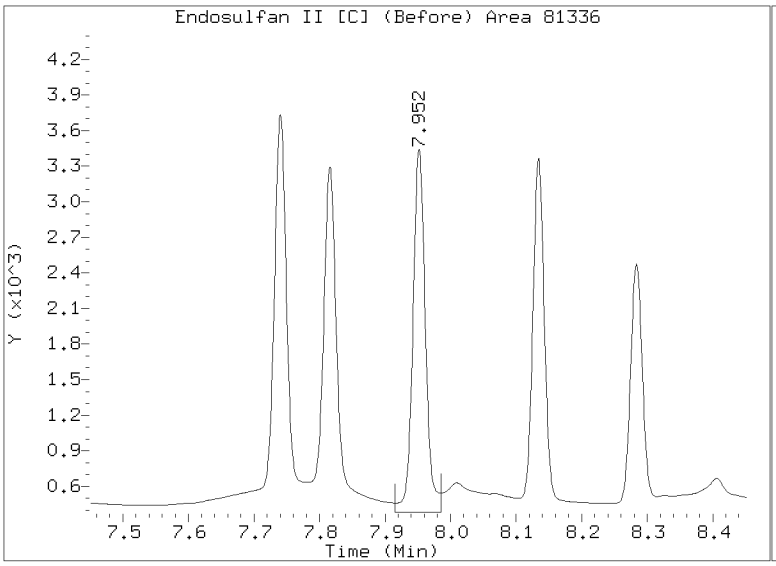


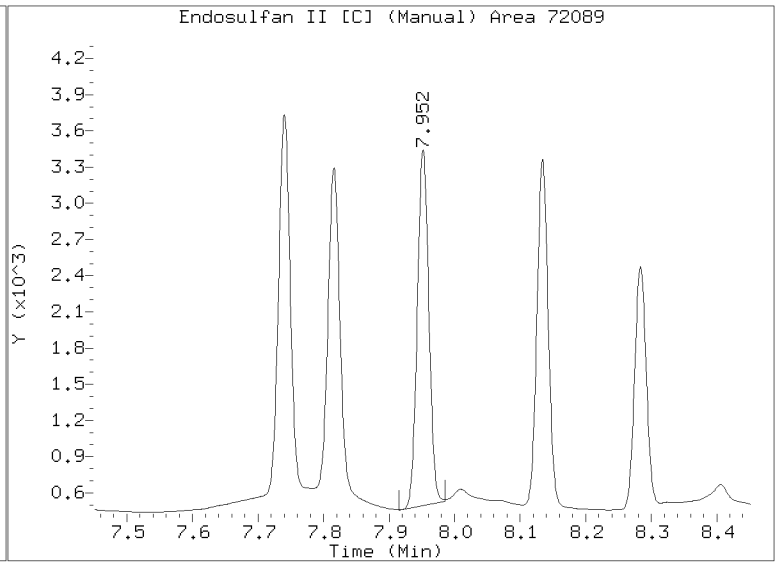


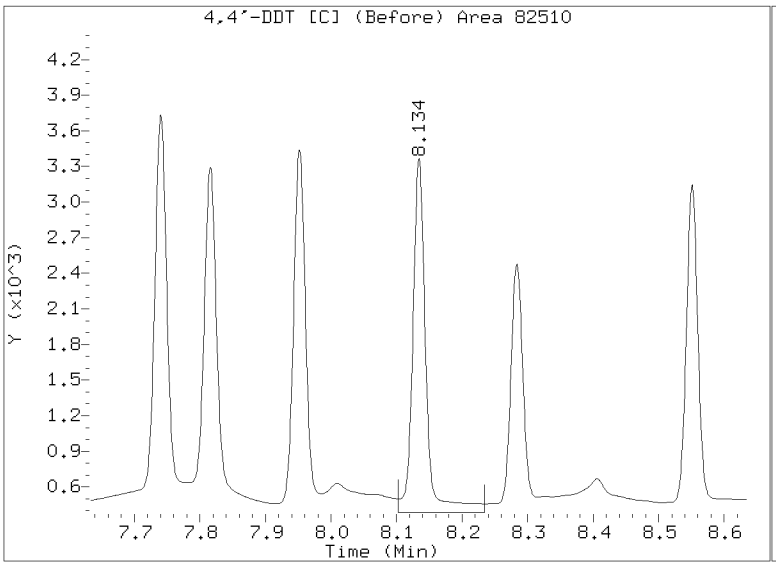


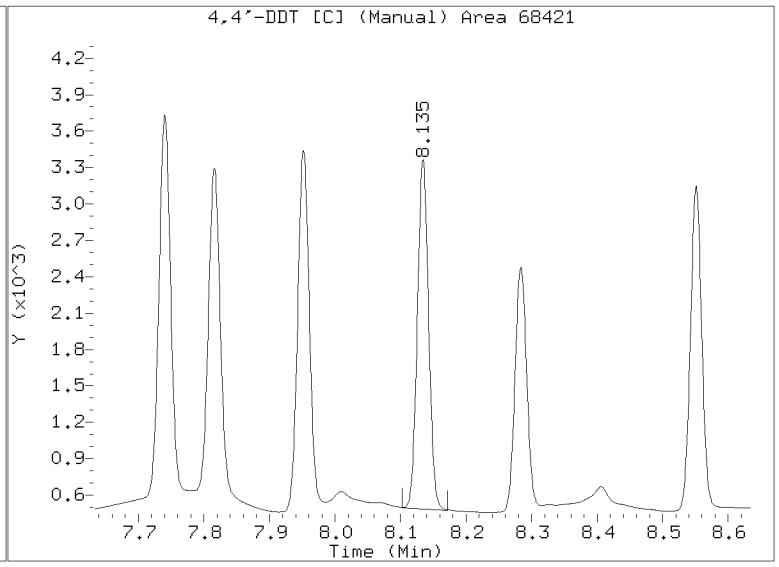
Manual Peak Adjustment Report, CLP-2

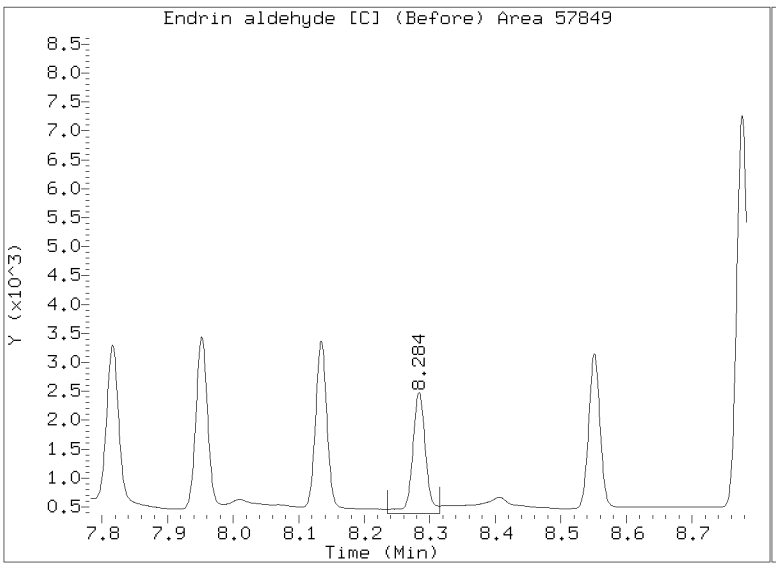
Datafile: /20230601.b/B20230601.b/23060108.D
Injection Date: 01-JUN-2023 17:35
Lab ID:SLF0020-CAL3 Client ID:

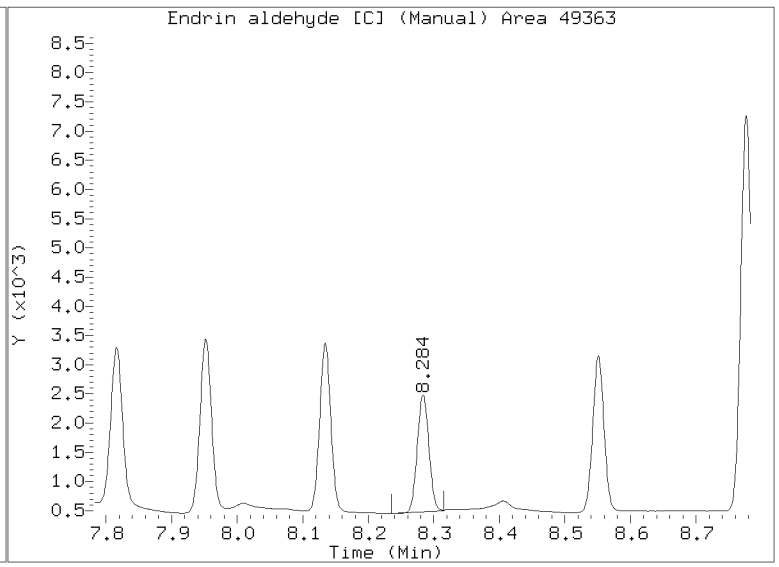






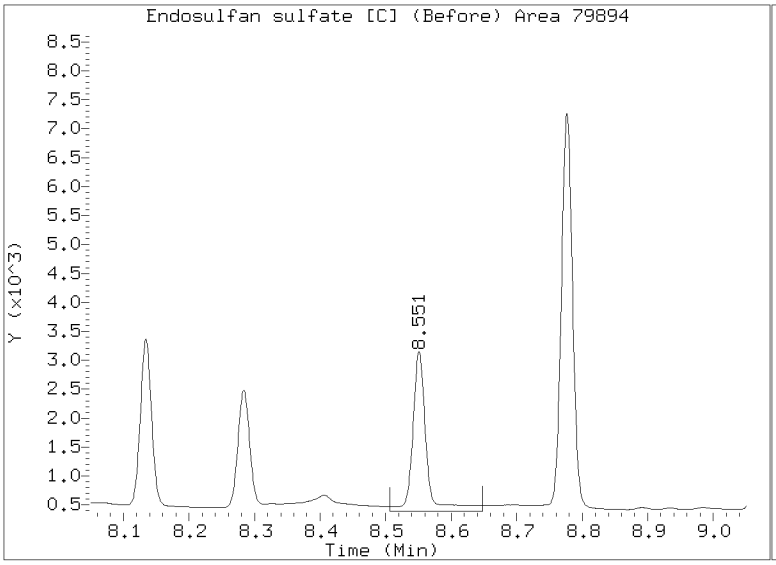


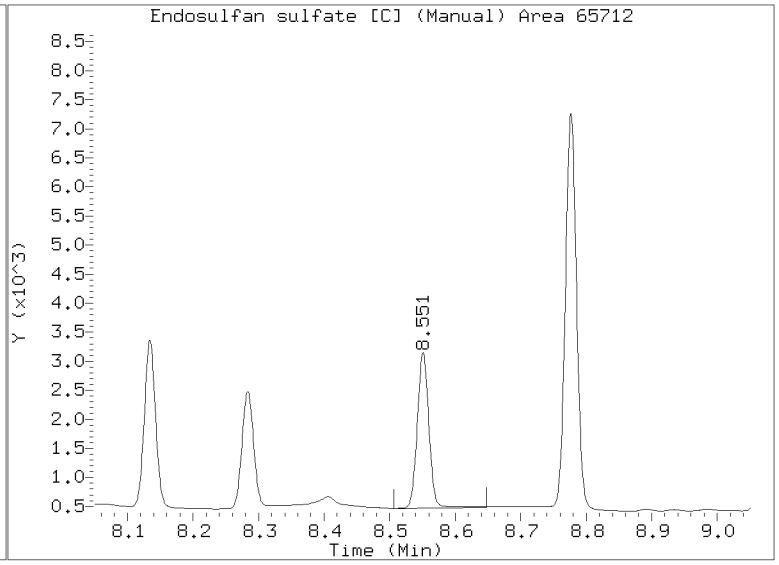


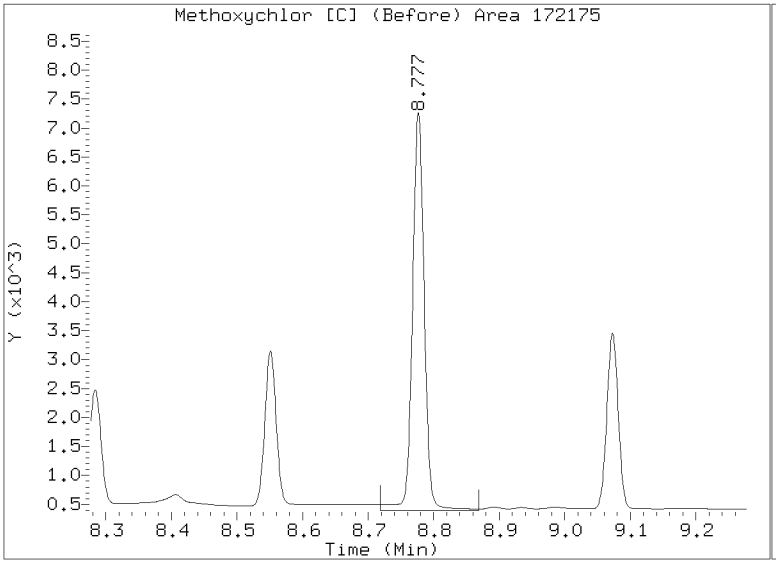


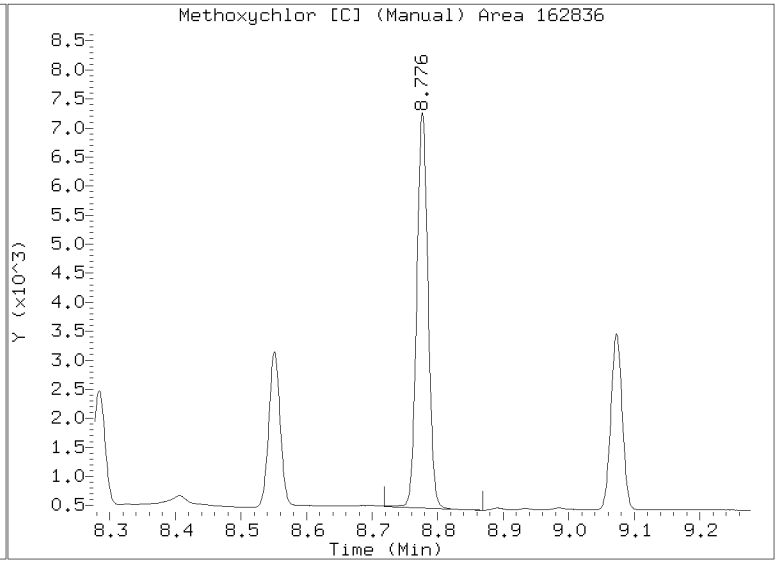
Manual Peak Adjustment Report, CLP-2

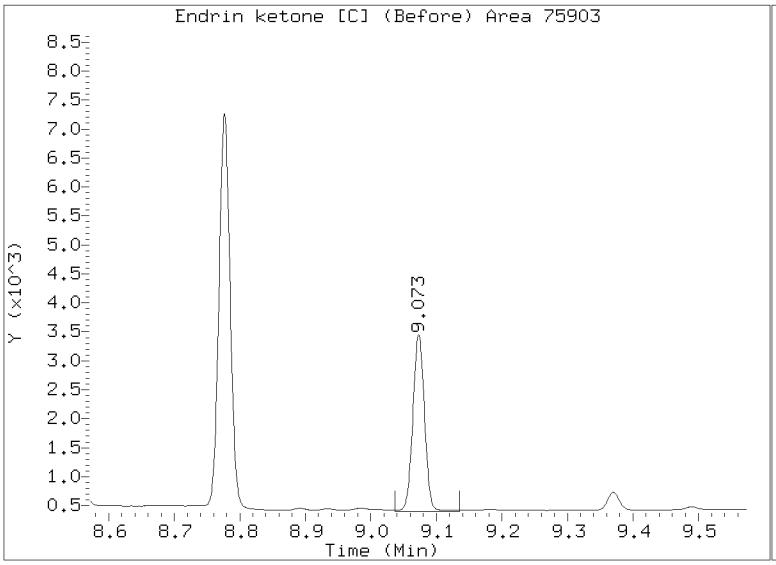
Datafile: /20230601.b/B20230601.b/23060108.D
Injection Date: 01-JUN-2023 17:35
Lab ID:SLF0020-CAL3 Client ID:

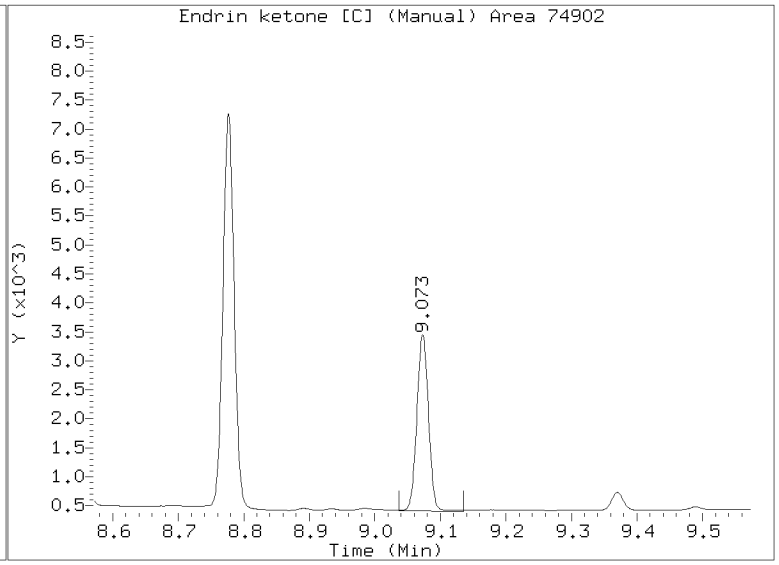












Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060109.D
Data file 2: /20230601.b/B20230601.b/23060109.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CAL4
Client ID:
Injection Date: 01-JUN-2023 17:54
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	0.000	121803	4.717	-0.000	133491	10.18	10.12	0.6	alpha-BHC
4.675	0.001	49720	5.182	0.001	53205	10.07	9.85	2.2	beta-BHC
4.858	0.001	102185	5.527	0.000	108022	10.14	9.94	2.0	delta-BHC
4.594	0.000	106211	5.104	0.000	117179	10.18	10.06	1.1	gamma-BHC (Lindane)
5.079	0.000	100401	5.619	-0.000	106668	10.19	10.07	1.2	Heptachlor
5.400	0.000	100206	6.016	-0.000	107820	10.19	10.06	1.2	Aldrin
6.073	0.001	88262	6.677	0.000	92324	10.14	9.98	1.6	Heptachlor epoxide b
6.517	0.000	81802	7.122	0.000	80871	10.11	10.05	0.6	Endosulfan I
6.778	0.001	173693	7.416	0.000	180594	20.55	20.41	0.7	Dieldrin
6.442	0.001	160855	7.209	0.001	173728	20.54	20.52	0.1	4,4'-DDE
7.029	0.000	157371	7.740	-0.000	158778	20.43	20.13	1.4	Endrin
7.265	0.001	143502	7.951	-0.000	146948	20.41	19.73	3.4	Endosulfan II
7.090	0.001	138254	7.815	0.000	142695	20.28	20.03	1.2	4,4'-DDD
8.129	-0.000	128153	8.551	-0.000	129572	20.03	19.89	0.7	Endosulfan sulfate
7.385	0.001	142705	8.134	-0.000	139247	20.27	20.00	1.3	4,4'-DDT
7.875	0.000	310380	8.776	-0.001	312319	98.90	98.42	0.5	Methoxychlor
8.404	-0.000	147013	9.072	-0.001	143276	19.79	18.94	4.4	Endrin ketone
7.695	0.001	104703	8.284	0.000	101599	20.01	19.96	0.3	Endrin aldehyde
6.216	0.001	87479	6.889	0.001	89766	10.12	9.94	1.8	trans-Chlordane
6.363	-0.000	87794	7.050	0.001	88548	10.10	9.94	1.6	cis-Chlordane
2.283	-0.000	127874	2.427	-0.001	121842	9.70	9.47	2.5	Hexachlorobutadiene
4.136	0.000	110734	4.579	0.000	119521	9.92	9.91	0.1	Hexachlorobenzene
3.784	-0.000	163187	4.097	0.000	182235	20.23	20.39	0.8	Tetrachloro-m-xylene
9.320	-0.000	100312	10.251	-0.000	93934	19.42	19.19	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

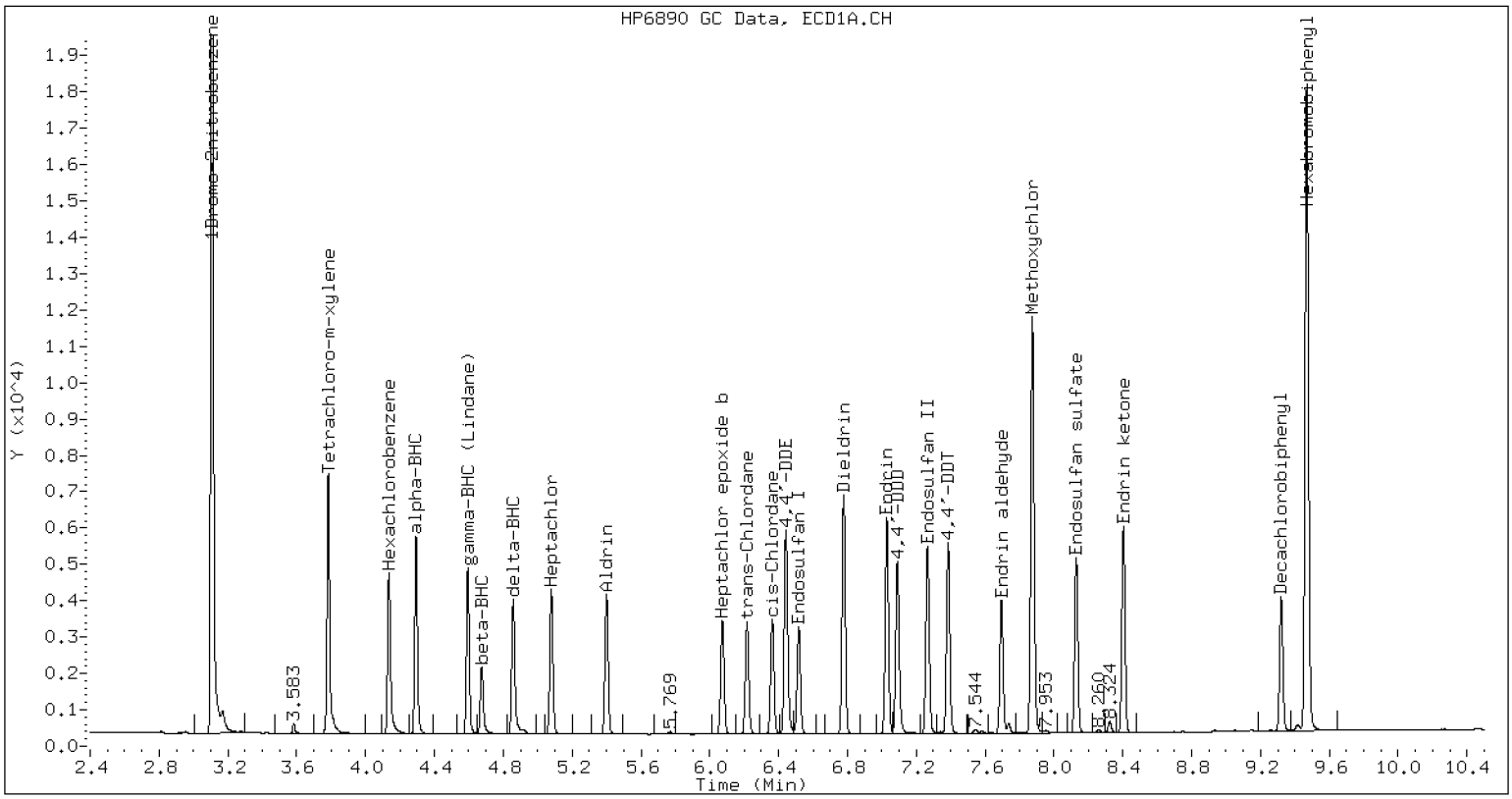
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	635637	2.7
Hexabromobiphenyl	493109	505382	2.5

Column 2

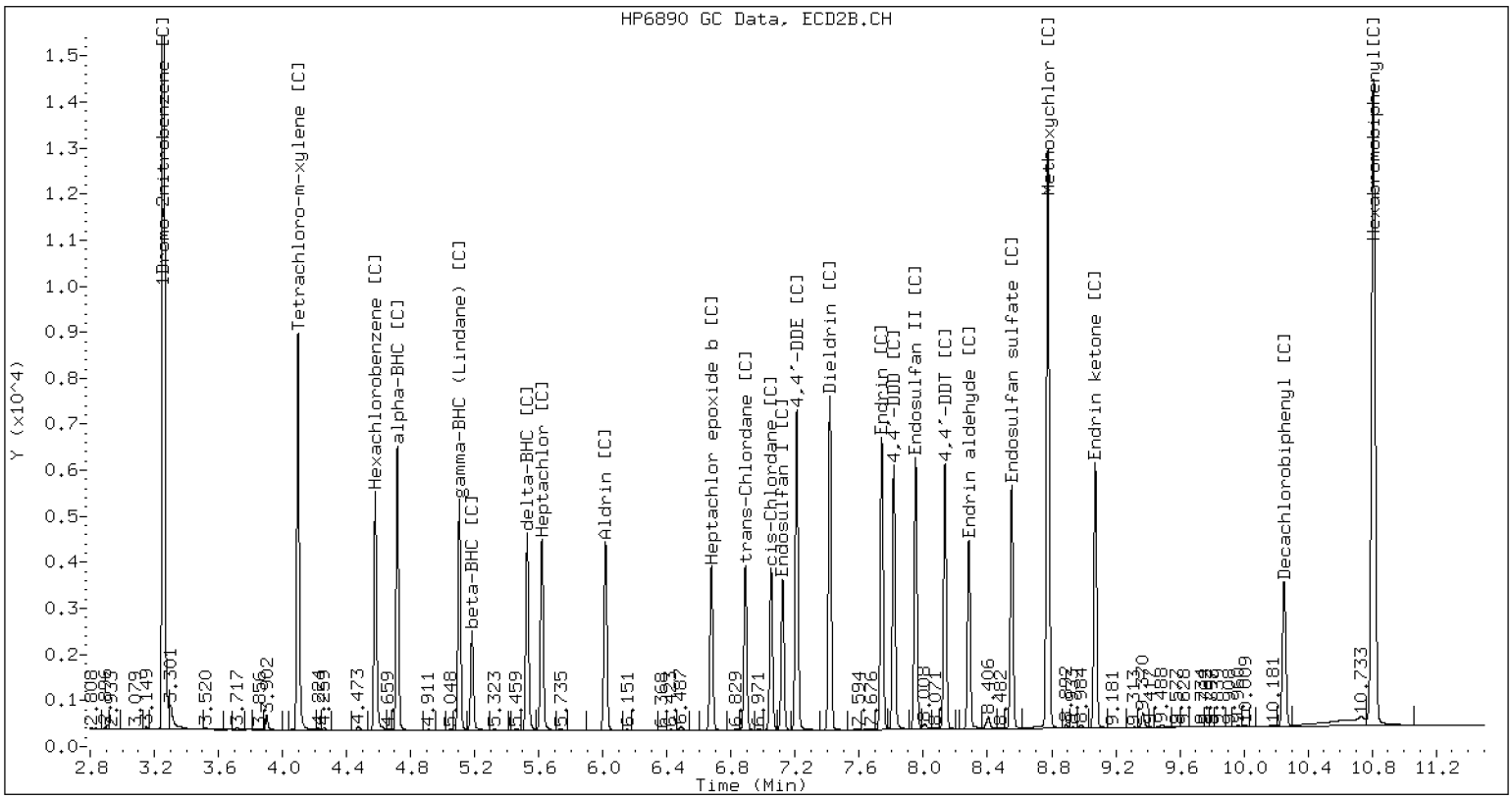
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	706918	1.6
Hexabromobiphenyl	461581	464961	0.7

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

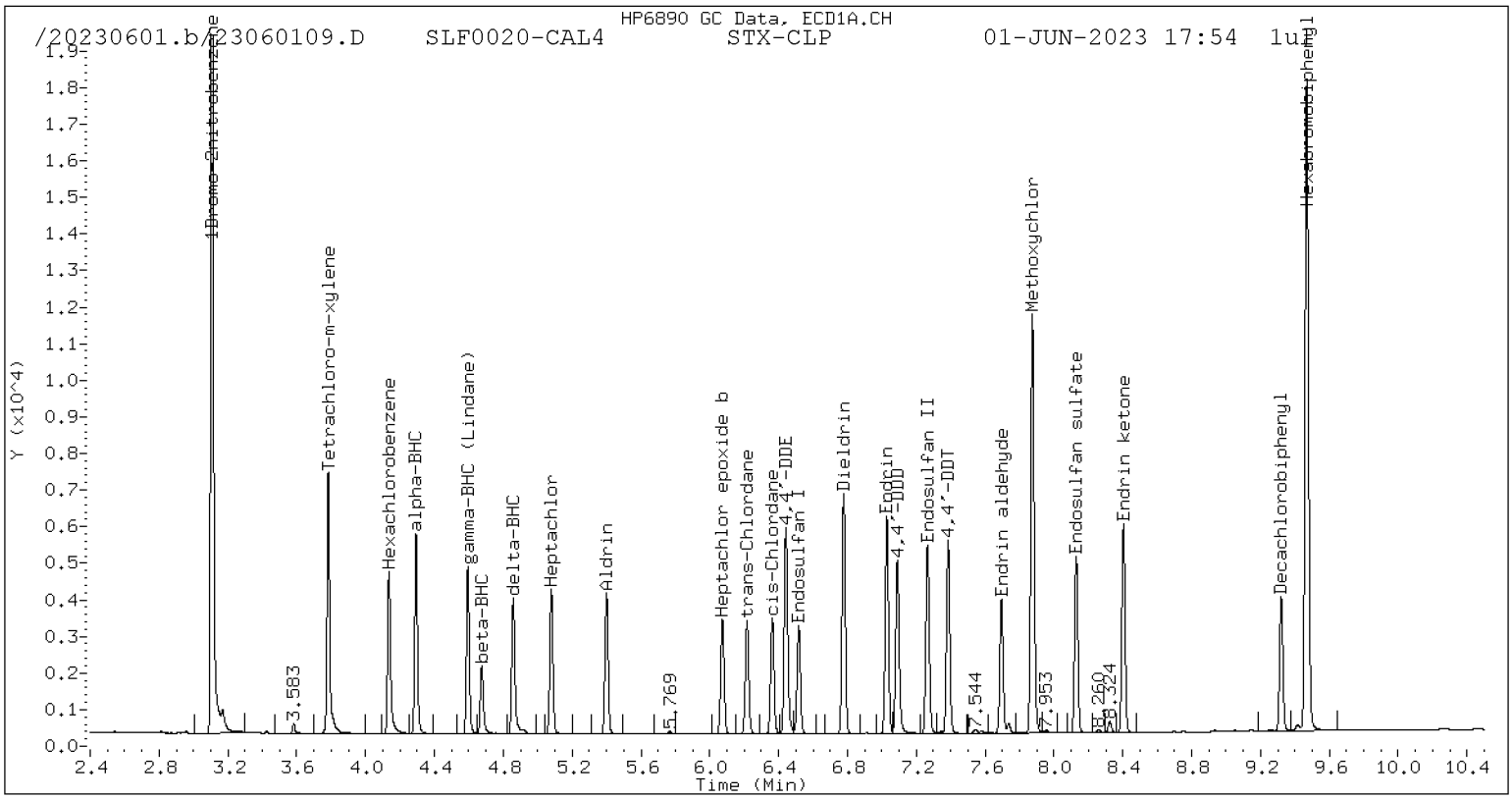
/20230601.b/23060109.D SLF0020-CAL4 STX-CLP 01-JUN-2023 17:54 1ul



/20230601.b/B20230601.b/23060109.D SLF0020-CAL4 CLP2 01-JUN-2023 17:54 1ul

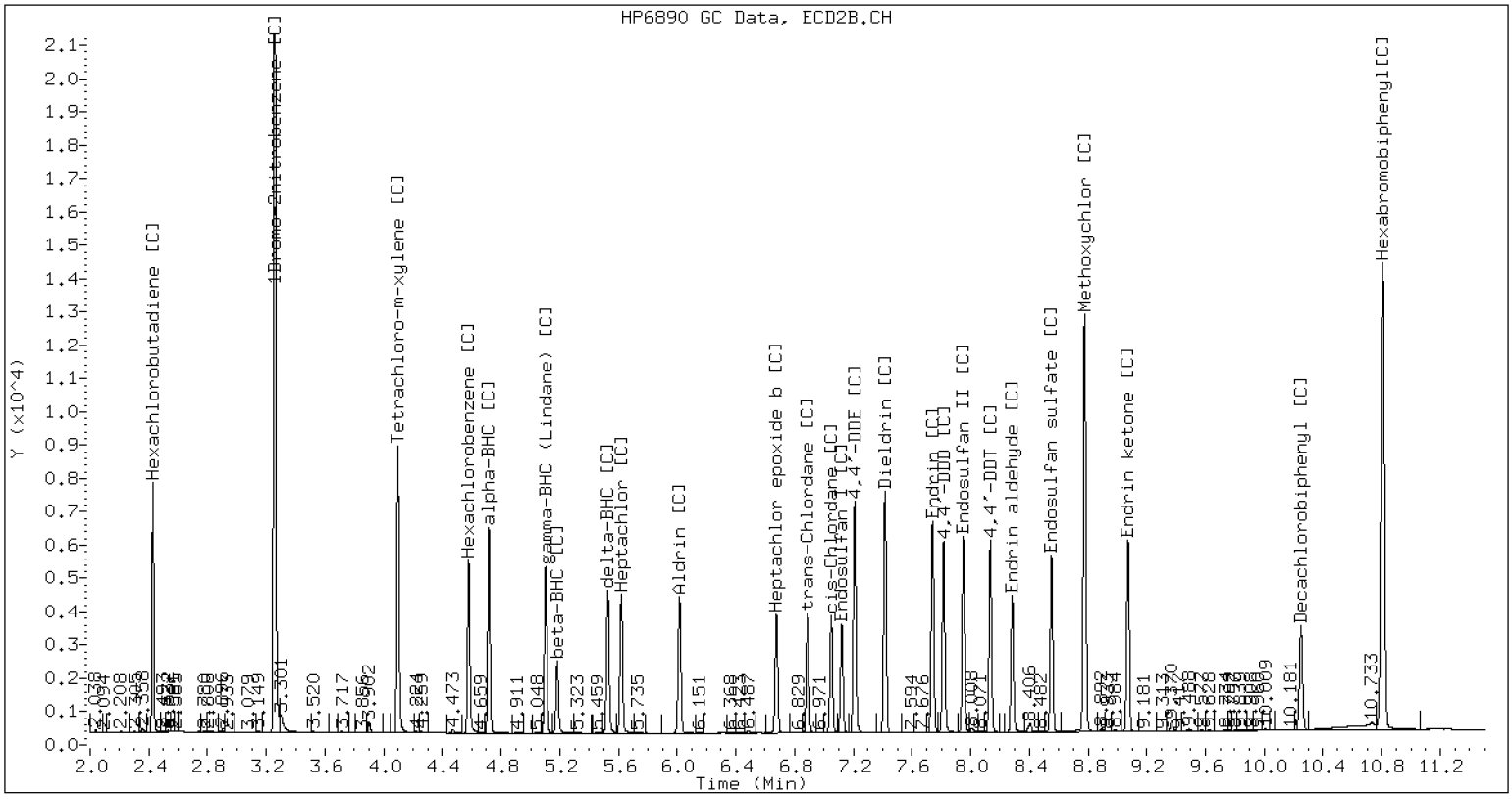


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060109.D SLF0020-CAL4 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060110.D
Data file 2: /20230601.b/B20230601.b/23060110.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CAL5
Client ID:
Injection Date: 01-JUN-2023 18:12
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.294	0.000	238024	4.717	0.000	268953	20.43	20.71	1.4	alpha-BHC
4.675	0.000	95273	5.182	0.001	103727	19.82	19.50	1.6	beta-BHC
4.858	0.001	203532	5.527	0.001	219435	20.75	20.51	1.2	delta-BHC
4.595	0.001	207858	5.104	0.000	235360	20.46	20.53	0.3	gamma-BHC (Lindane)
5.079	0.000	193043	5.620	0.000	210604	20.12	20.19	0.3	Heptachlor
5.401	0.001	194336	6.016	0.001	214671	20.29	20.35	0.3	Aldrin
6.073	0.001	167545	6.677	0.001	181172	19.77	19.89	0.6	Heptachlor epoxide b
6.517	0.000	157163	7.122	0.000	159160	19.95	20.10	0.7	Endosulfan I
6.778	0.001	331000	7.417	0.001	351987	40.22	40.42	0.5	Dieldrin
6.442	0.001	311711	7.209	0.000	339239	40.88	40.69	0.5	4,4'-DDE
7.029	0.000	298236	7.741	0.001	308631	39.67	39.42	0.6	Endrin
7.265	0.000	270652	7.952	0.000	284710	39.46	38.50	2.5	Endosulfan II
7.090	0.000	266008	7.816	0.001	280562	39.99	39.68	0.8	4,4'-DDD
8.129	-0.000	243798	8.551	0.000	253212	39.06	39.15	0.2	Endosulfan sulfate
7.385	0.001	276270	8.134	-0.000	274493	40.21	39.72	1.2	4,4'-DDT
7.875	0.000	561844	8.777	-0.000	579194	183.48	183.86	0.2	Methoxychlor
8.404	0.000	275588	9.072	-0.001	275645	38.02	36.70	3.5	Endrin ketone
7.694	0.001	197085	8.284	0.001	197185	38.60	39.02	1.1	Endrin aldehyde
6.217	0.001	169551	6.889	0.001	178354	20.14	20.05	0.4	trans-Chlordane
6.364	0.000	169011	7.050	0.001	174673	19.97	19.91	0.3	cis-Chlordane
2.283	-0.000	242935	2.427	-0.001	237125	18.93	18.71	1.2	Hexachlorobutadiene
4.136	0.000	208507	4.579	0.001	231505	19.19	19.51	1.6	Hexachlorobenzene
3.784	0.000	307706	4.097	0.000	350831	39.19	39.87	1.7	Tetrachloro-m-xylene
9.320	-0.000	182848	10.251	0.000	175628	36.29	36.14	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

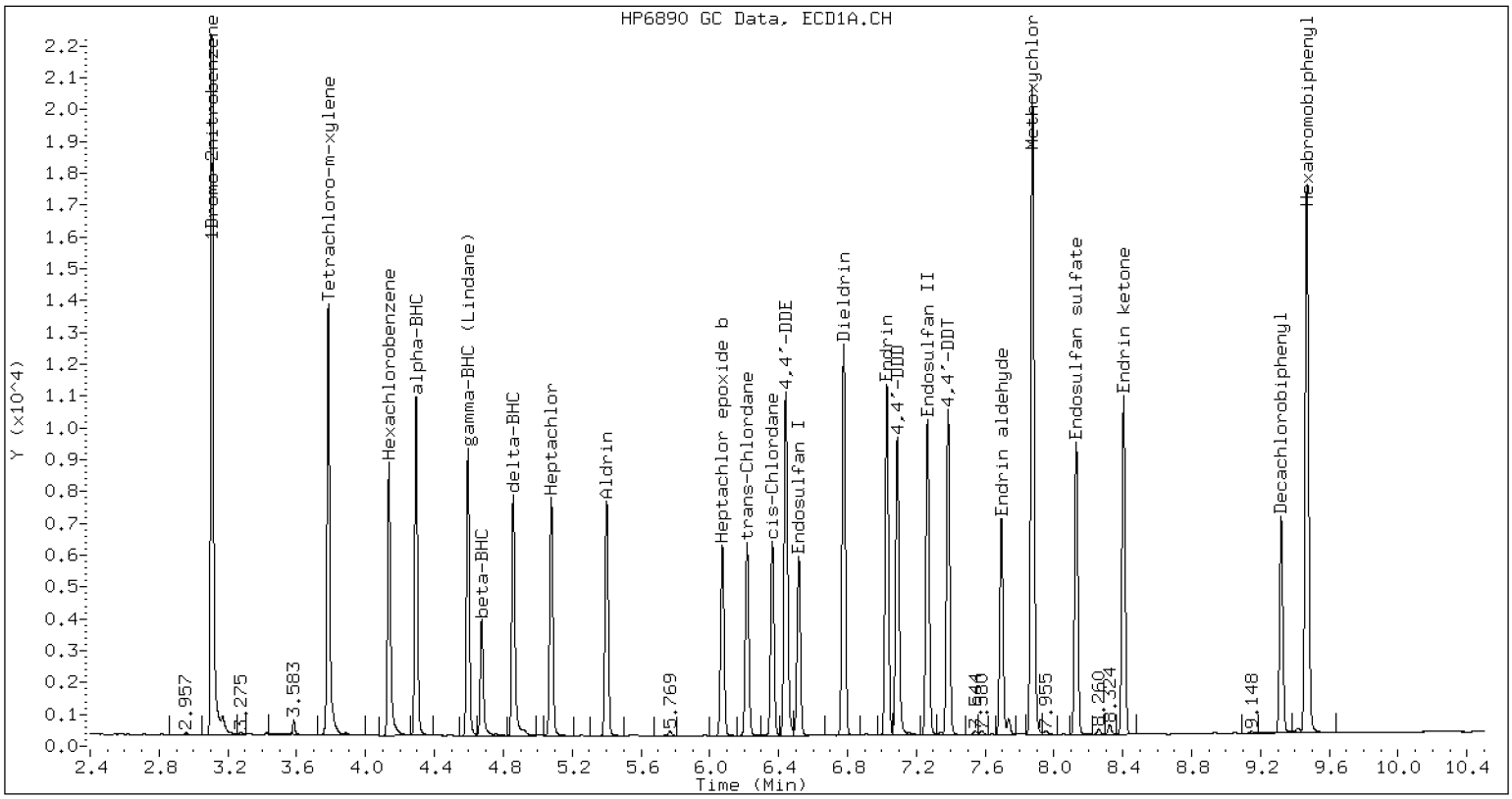
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	618906	0.0
Hexabromobiphenyl	493109	493109	0.0

Column 2

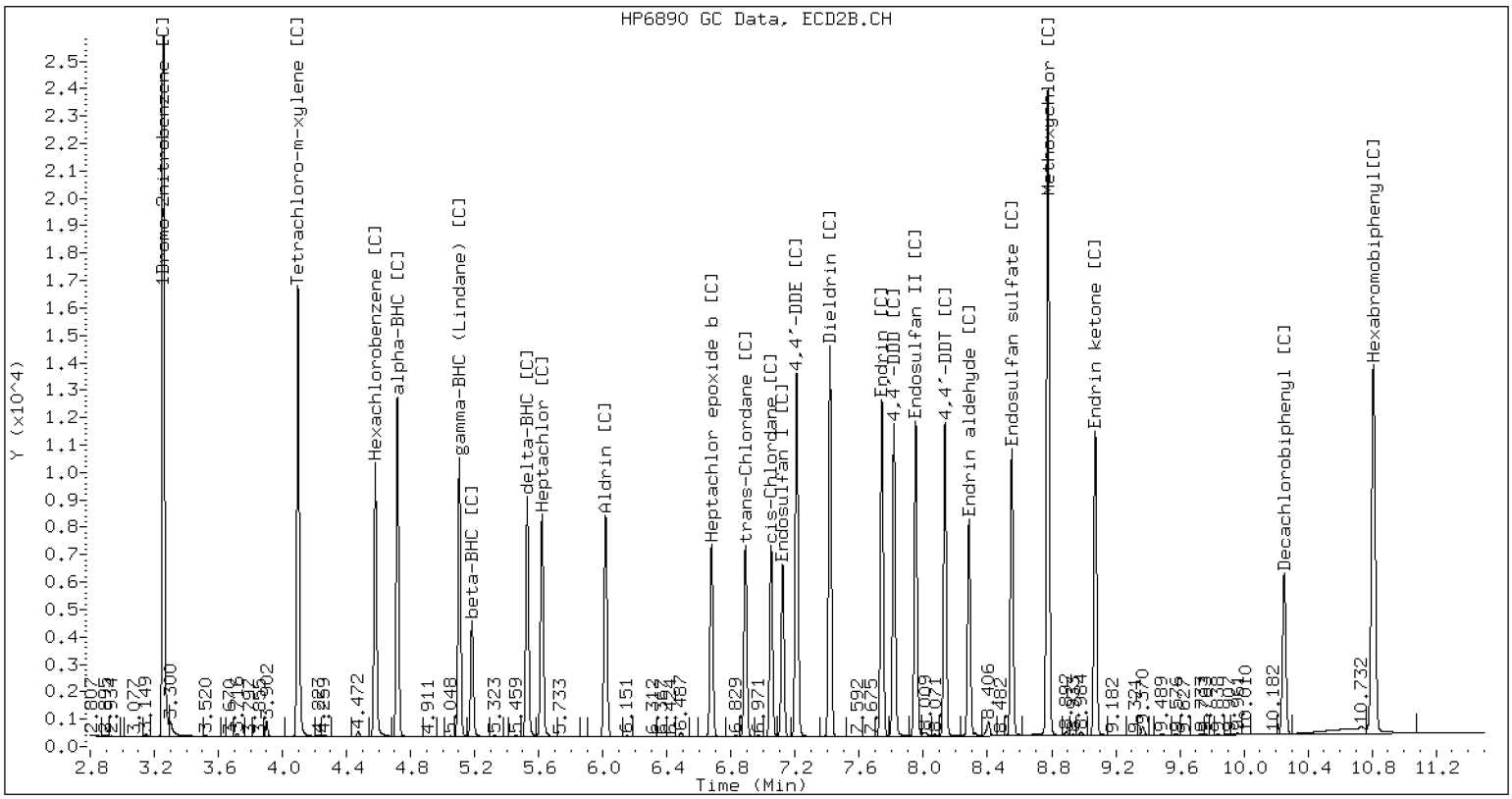
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	695935	0.0
Hexabromobiphenyl	461581	461581	0.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

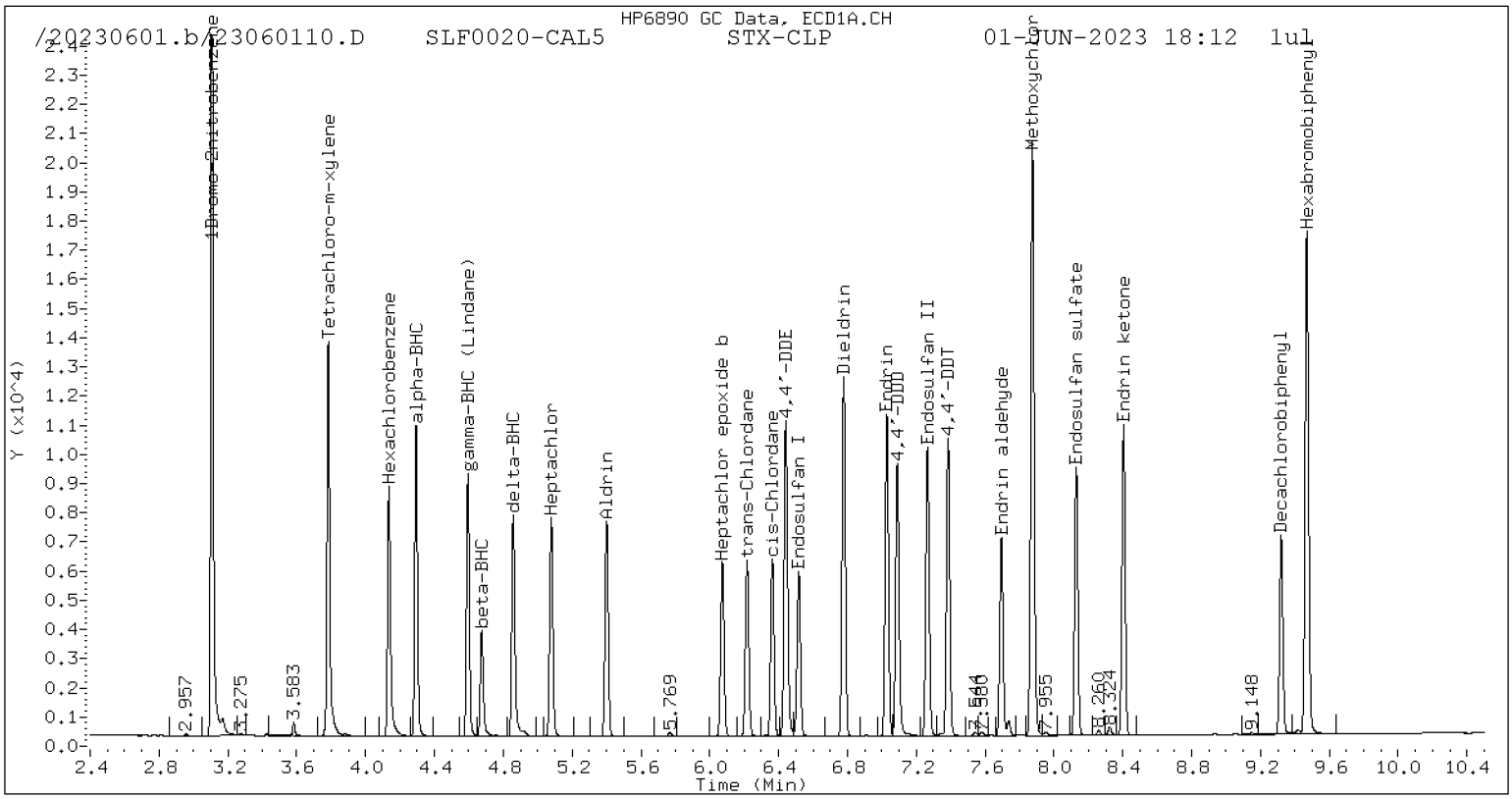
/20230601.b/23060110.D SLF0020-CAL5 STX-CLP 01-JUN-2023 18:12 1ul



/20230601.b/B20230601.b/23060110.D SLF0020-CAL5 CLP2 01-JUN-2023 18:12 1ul

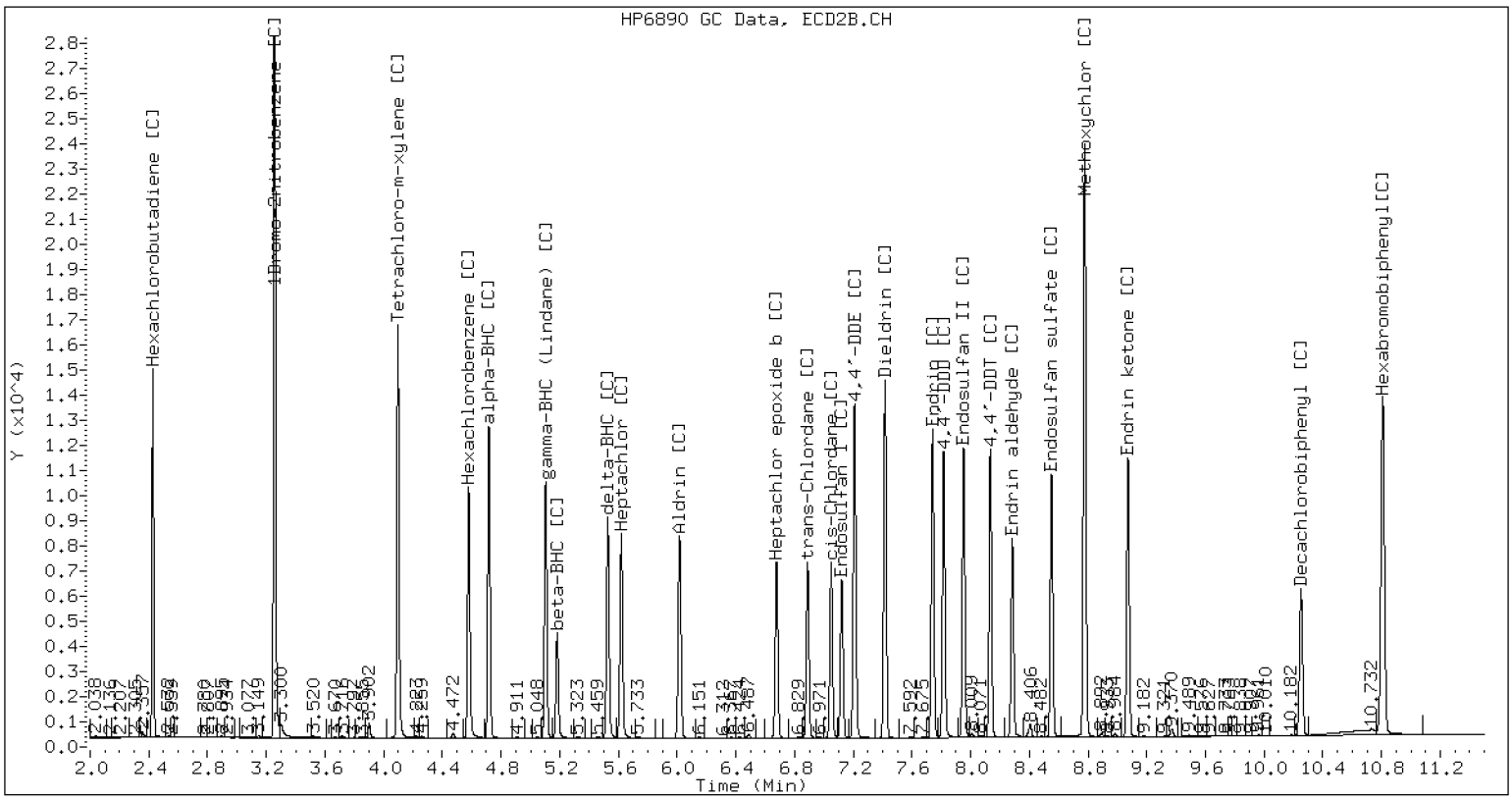


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060110.D SLF0020-CAL5 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060111.D
Data file 2: /20230601.b/B20230601.b/23060111.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CAL6
Client ID:
Injection Date: 01-JUN-2023 18:31
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	0.000	469725	4.717	0.000	537184	39.54	41.95	5.9	alpha-BHC
4.675	0.000	179378	5.183	0.001	203130	36.60	38.74	5.7	beta-BHC
4.858	0.001	408351	5.528	0.001	455194	40.83	43.14	5.5	delta-BHC
4.594	0.000	407535	5.104	0.001	468349	39.35	41.43	5.2	gamma-BHC (Lindane)
5.079	0.000	367825	5.620	0.001	411258	37.61	39.98	6.1	Heptachlor
5.401	0.001	375924	6.017	0.001	423489	38.50	40.73	5.6	Aldrin
6.073	0.000	317274	6.677	0.001	351515	36.73	39.13	6.3	Heptachlor epoxide b
6.517	0.000	297494	7.121	0.000	310584	37.05	39.78	7.1	Endosulfan I
6.778	0.000	621293	7.416	0.000	674115	74.06	78.50	5.8	Dieldrin
6.442	0.001	597633	7.209	0.000	650933	76.89	79.19	3.0	4,4'-DDE
7.029	0.000	557482	7.740	0.000	590791	75.85	77.33	1.9	Endrin
7.265	0.000	499450	7.952	0.001	555502	74.48	76.99	3.3	Endosulfan II
7.090	0.000	507756	7.816	0.001	546126	78.07	79.15	1.4	4,4'-DDD
8.129	-0.001	462370	8.551	-0.000	496124	75.76	78.61	3.7	Endosulfan sulfate
7.384	-0.000	529337	8.134	-0.000	539866	78.81	80.06	1.6	4,4'-DDT
7.875	-0.000	1030574	8.777	-0.001	1090270	344.22	354.69	3.0	Methoxychlor
8.404	-0.000	517120	9.073	-0.001	533654	72.97	72.82	0.2	Endrin ketone
7.694	0.000	369775	8.284	0.000	382533	74.08	77.58	4.6	Endrin aldehyde
6.216	0.001	329669	6.889	0.001	354528	38.41	40.42	5.1	trans-Chlordane
6.363	-0.000	326752	7.049	0.001	344325	37.87	39.81	5.0	cis-Chlordane
2.283	-0.000	466193	2.428	-0.000	496338	35.64	39.72	10.8	Hexachlorobutadiene
4.136	0.000	407794	4.579	0.001	447369	36.82	38.23	3.8	Hexachlorobenzene
3.784	0.000	578057	4.097	0.000	666923	72.21	76.88	6.3	Tetrachloro-m-xylene
9.320	-0.000	339722	10.251	-0.000	338826	68.96	71.45	3.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

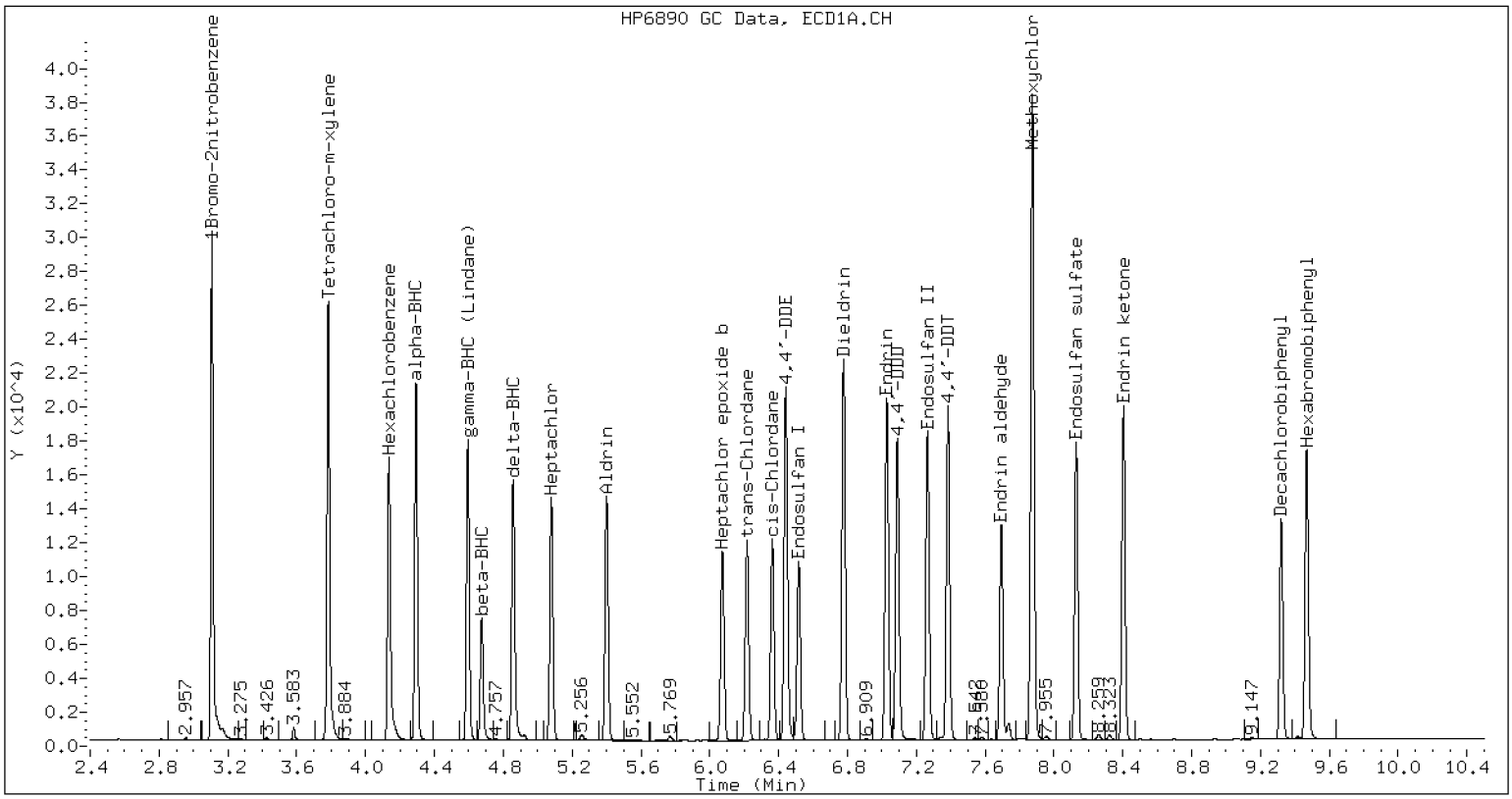
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	630923	1.9
Hexabromobiphenyl	493109	482116	-2.2

Column 2

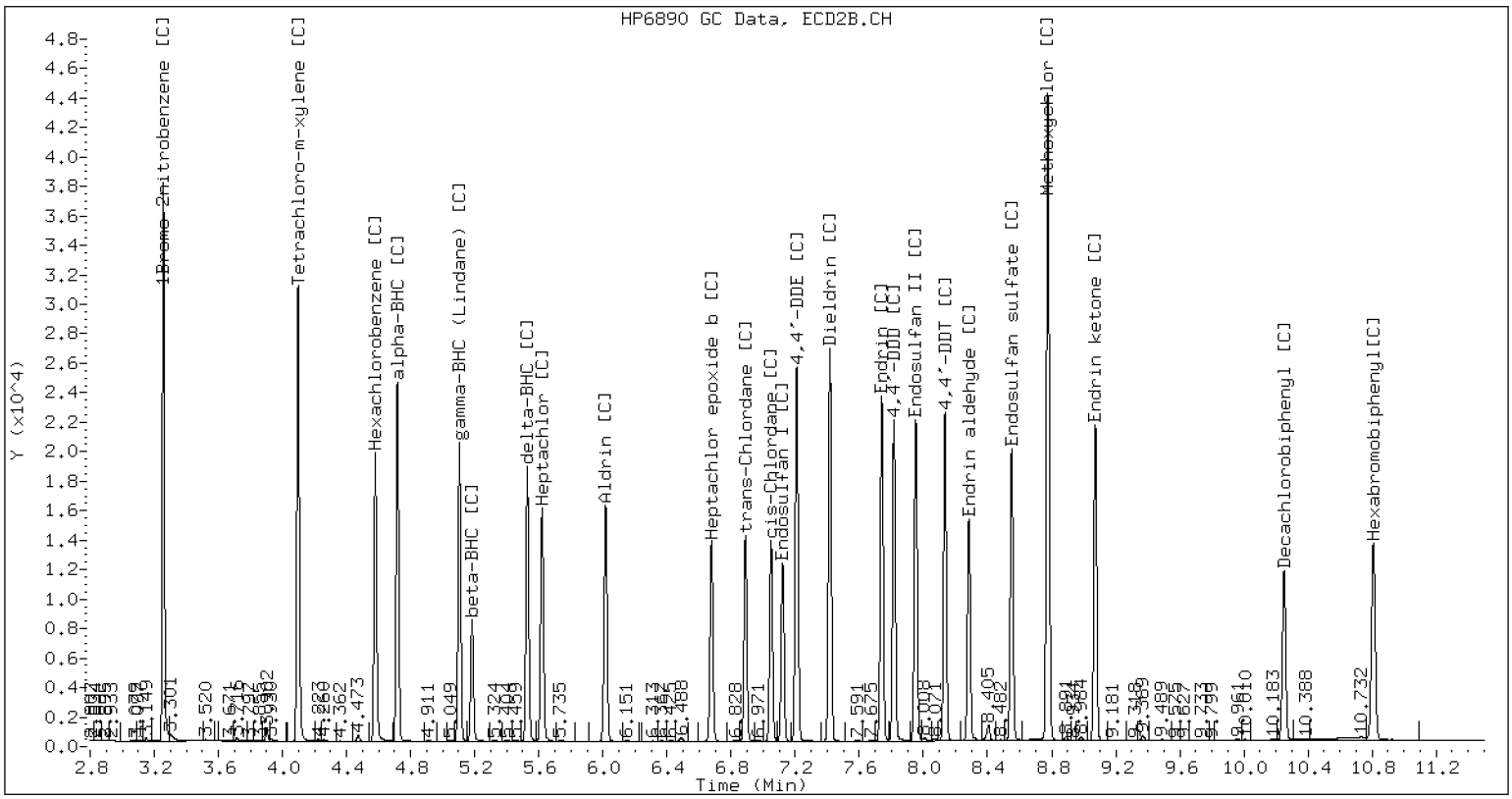
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	686186	-1.4
Hexabromobiphenyl	461581	450400	-2.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

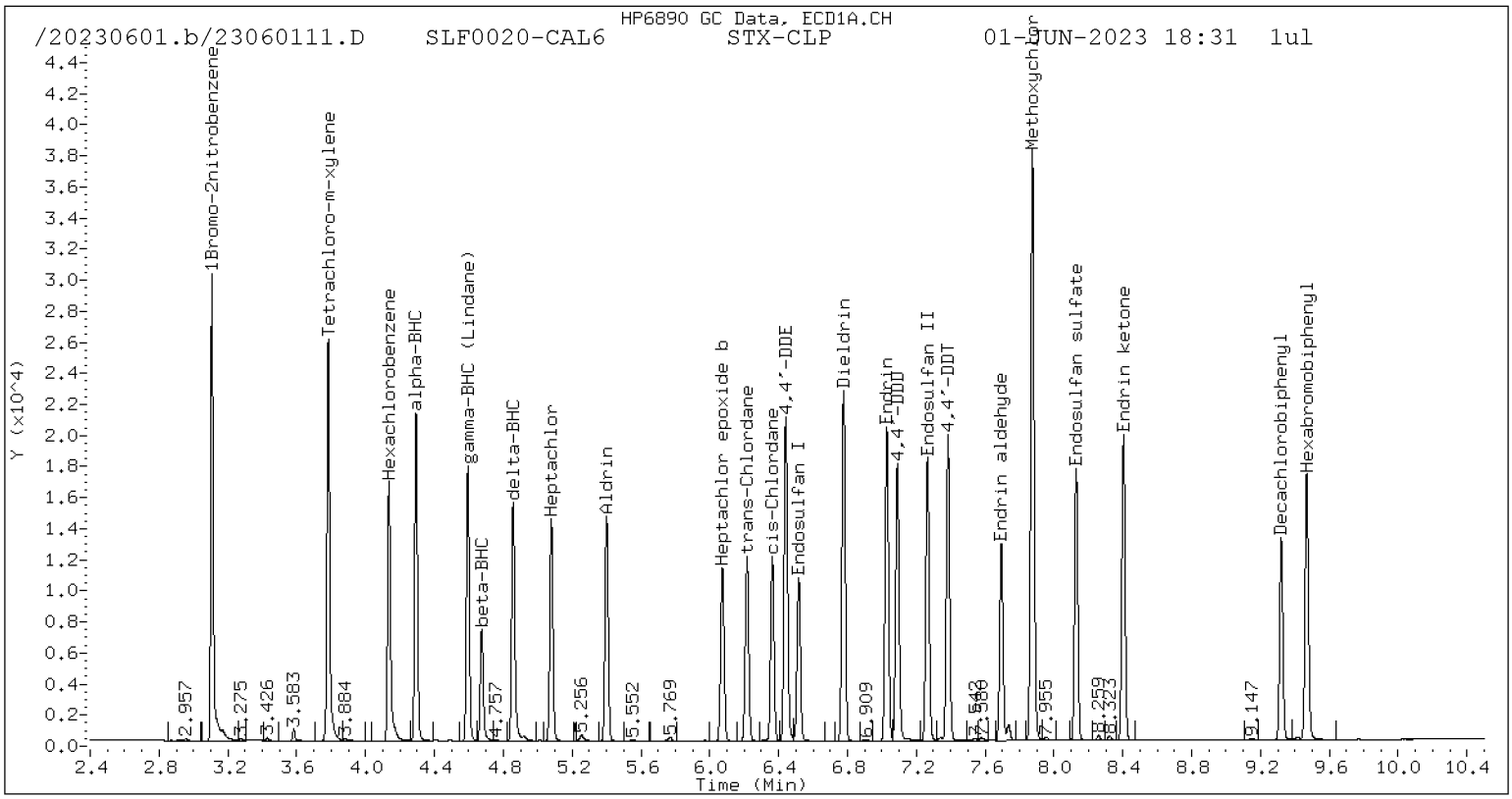
/20230601.b/23060111.D SLF0020-CAL6 STX-CLP 01-JUN-2023 18:31 1ul



/20230601.b/B20230601.b/23060111.D SLF0020-CAL6 CLP2 01-JUN-2023 18:31 1ul

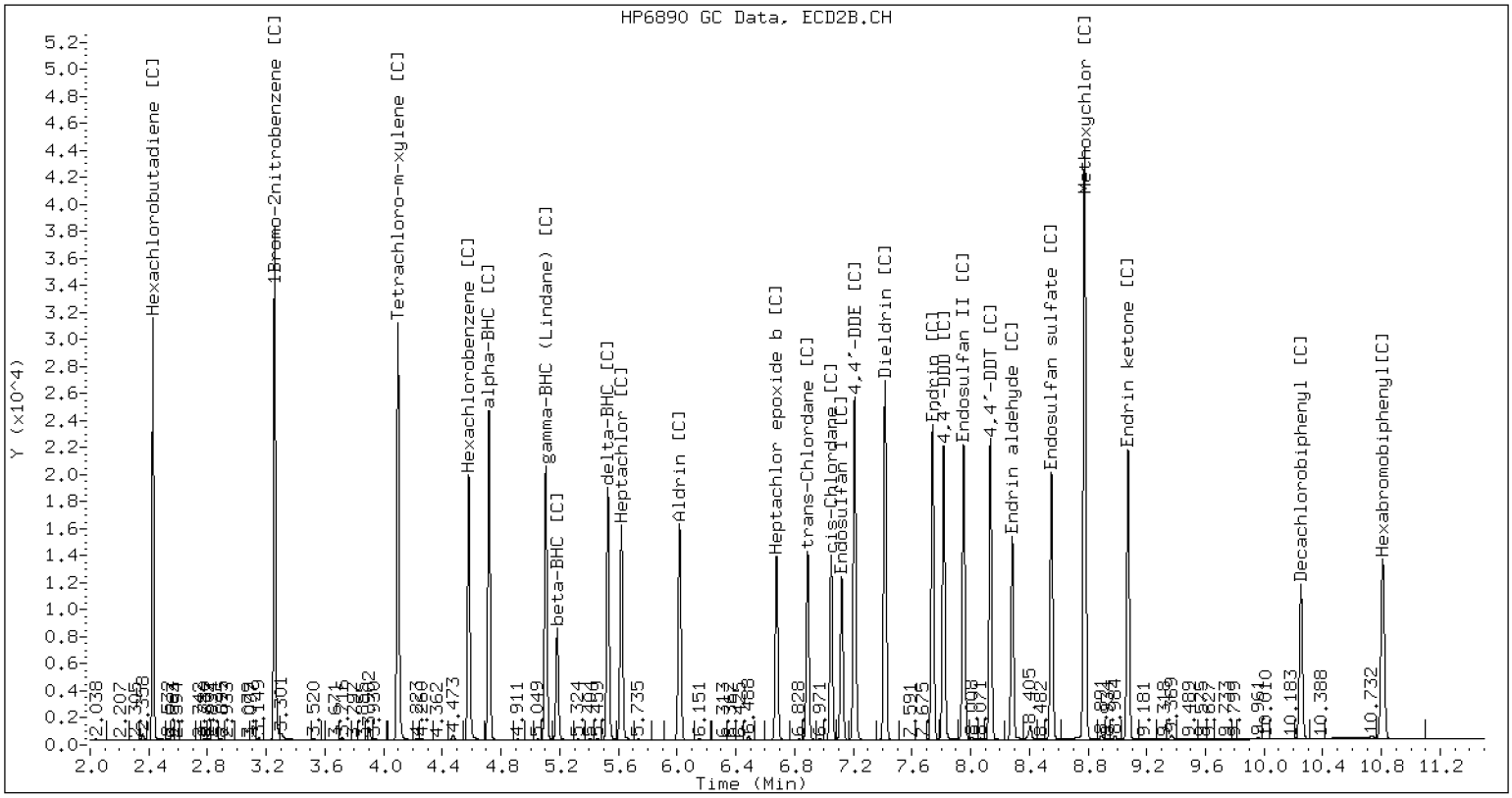


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060111.D SLF0020-CAL6 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060112.D
Data file 2: /20230601.b/B20230601.b/23060112.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CAL7
Client ID:
Injection Date: 01-JUN-2023 18:49
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	0.000	911501	4.717	0.000	1053593	77.05	79.69	3.4	alpha-BHC
4.675	0.000	344702	5.182	0.000	395666	70.62	73.08	3.4	beta-BHC
4.857	0.000	801580	5.527	0.000	894470	80.48	82.11	2.0	delta-BHC
4.594	0.000	789899	5.104	0.000	916144	76.58	78.50	2.5	gamma-BHC (Lindane)
5.079	0.000	688855	5.619	0.000	780323	70.72	73.47	3.8	Heptachlor
5.400	0.000	712789	6.016	0.000	812095	73.31	75.64	3.1	Aldrin
6.073	0.000	588446	6.676	0.000	664873	68.40	71.68	4.7	Heptachlor epoxide b
6.517	0.000	552926	7.121	0.000	591179	69.15	73.33	5.9	Endosulfan I
6.777	0.000	1145308	7.416	0.000	1260845	137.09	142.21	3.7	Dieldrin
6.441	0.000	1122841	7.208	0.000	1214963	145.06	143.16	1.3	4,4'-DDE
7.029	0.000	1020205	7.740	0.000	1099223	134.85	141.48	4.8	Endrin
7.265	0.000	919027	7.952	0.000	1045854	133.13	142.52	6.8	Endosulfan II
7.089	0.000	956176	7.815	0.000	1040343	142.82	148.25	3.7	4,4'-DDD
8.129	0.000	866113	8.551	0.000	940404	137.87	146.50	6.1	Endosulfan sulfate
7.384	0.000	1000935	8.134	0.000	1033275	144.76	150.66	4.0	4,4'-DDT
7.875	0.000	1940300	8.777	0.000	2065047	629.58	660.57	4.8	Methoxychlor
8.404	0.000	962728	9.073	0.000	1011397	131.97	135.70	2.8	Endrin ketone
7.694	0.000	686899	8.284	0.000	724456	133.68	144.47	7.8	Endrin aldehyde
6.216	0.000	633593	6.888	0.000	688500	74.13	76.03	2.5	trans-Chlordane
6.364	0.000	625091	7.048	0.000	667653	72.74	74.76	2.7	cis-Chlordane
2.283	0.000	891504	2.428	0.000	920351	68.44	71.34	4.2	Hexachlorobutadiene
4.136	0.000	757123	4.578	0.000	855489	68.64	70.80	3.1	Hexachlorobenzene
3.784	0.000	1079675	4.097	0.000	1243760	135.43	138.86	2.5	Tetrachloro-m-xylene
9.320	0.000	643973	10.251	0.000	650575	126.98	134.89	6.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

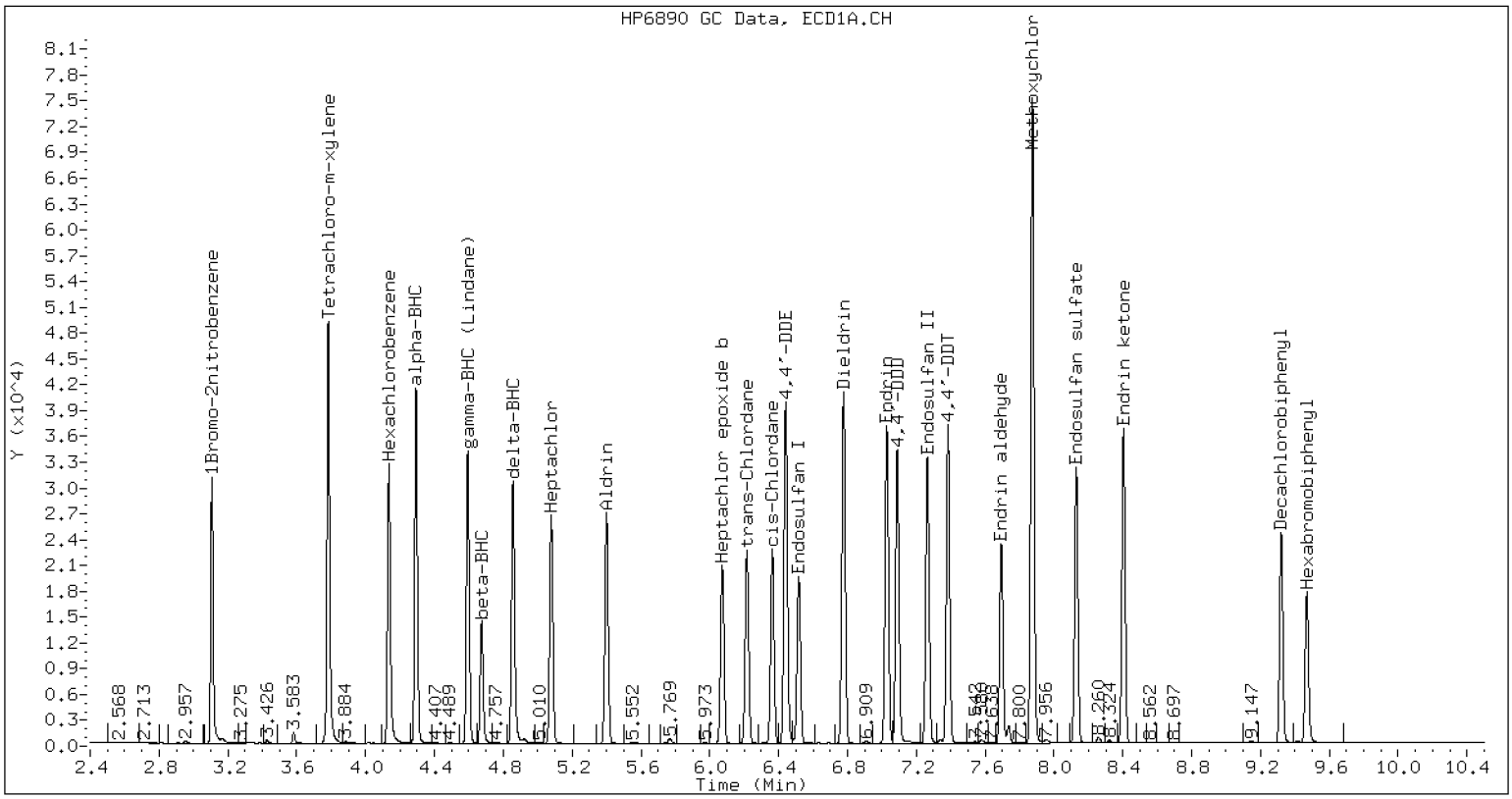
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	628323	1.5
Hexabromobiphenyl	493109	496285	0.6

Column 2

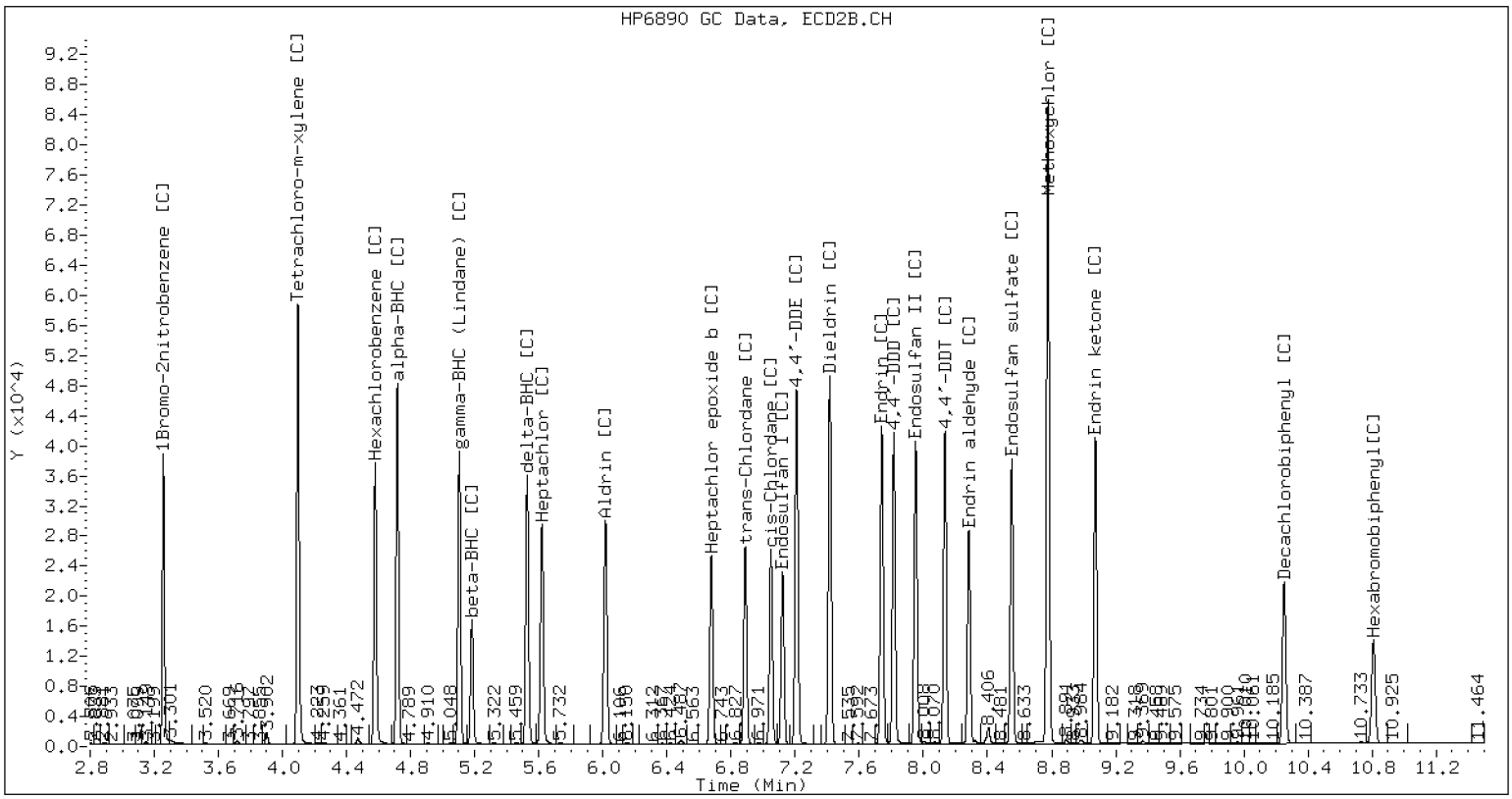
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	708476	1.8
Hexabromobiphenyl	461581	458071	-0.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

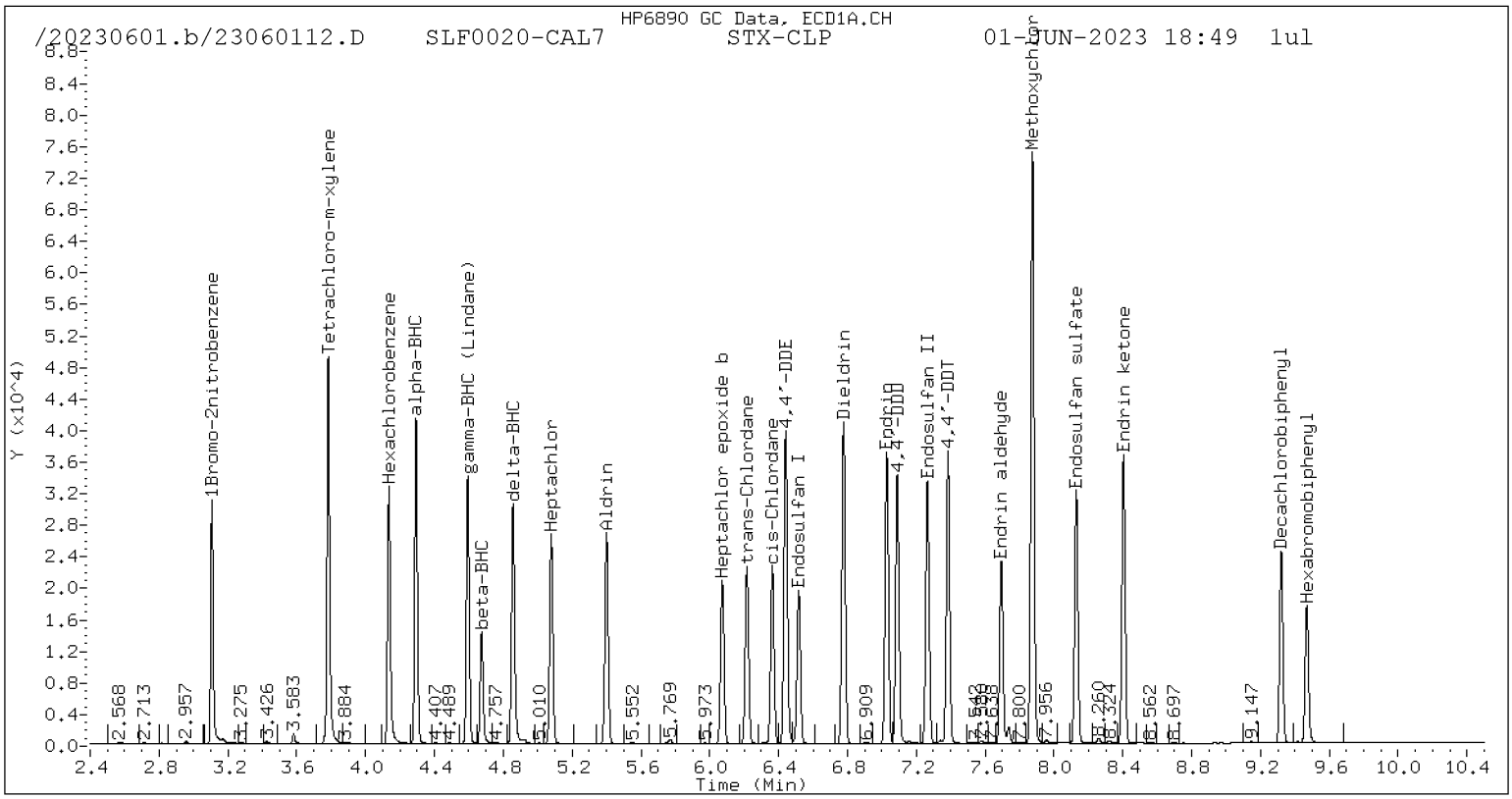
/20230601.b/23060112.D SLF0020-CAL7 STX-CLP 01-JUN-2023 18:49 1ul



/20230601.b/B20230601.b/23060112.D SLF0020-CAL7 CLP2 01-JUN-2023 18:49 1ul

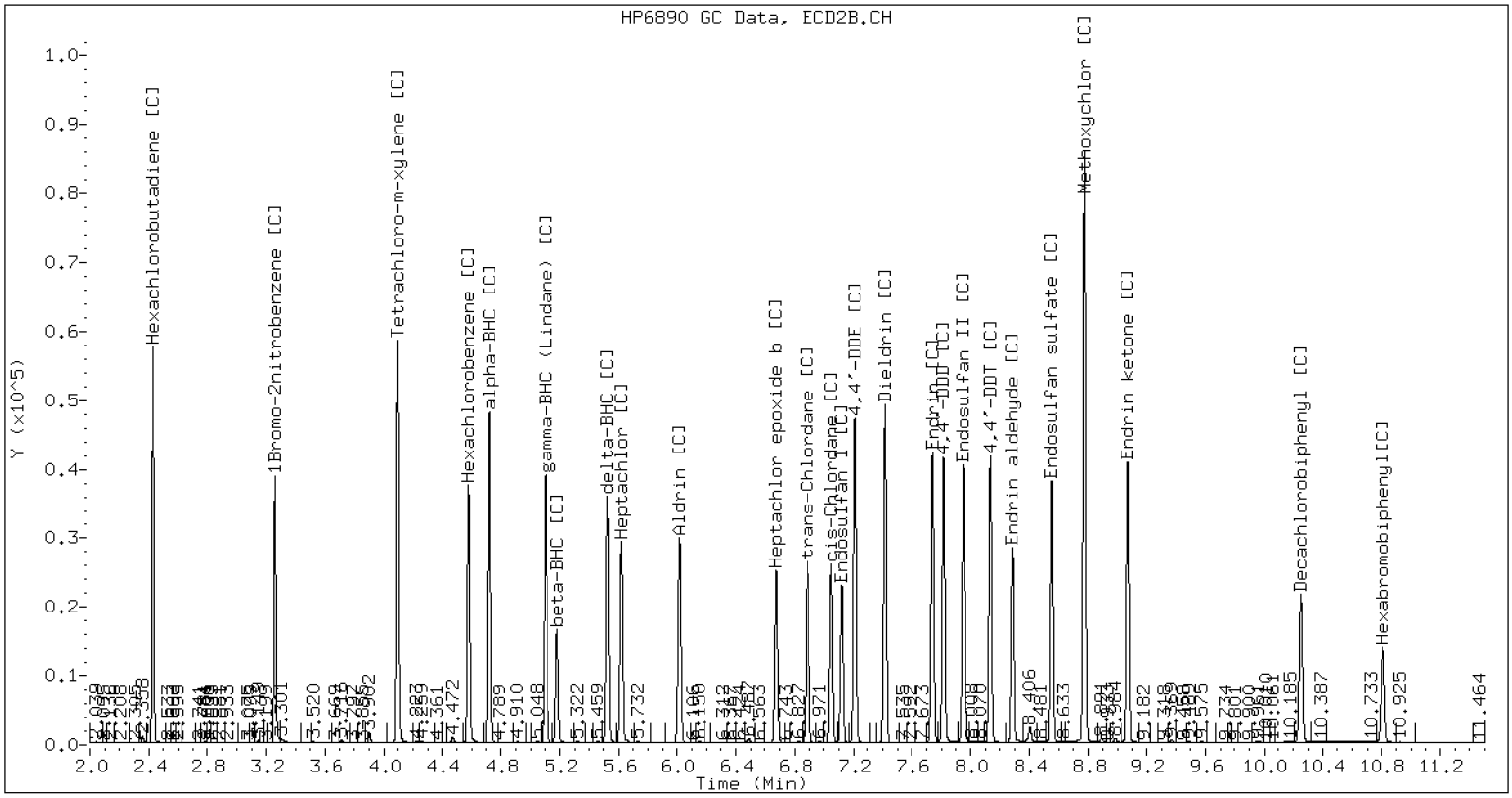


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060112.D SLF0020-CAL7 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060113.D
Data file 2: /20230601.b/B20230601.b/23060113.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CAL8
Client ID:
Injection Date: 01-JUN-2023 19:08
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.959	0.001	18894	6.572	0.001	19794	2.86	2.76	3.6	Oxychlordane
6.057	0.002	13454	6.872	0.001	14689	2.80	2.82	0.6	2,4-DDE
6.346	0.001	21087	6.989	0.000	21826	2.75	2.78	1.0	trans-Nonachlor
6.634	0.002	13015	7.429	0.001	13577	2.90	2.84	2.1	2,4-DDD
6.912	0.001	14555	7.751	-0.000	15335	2.77	2.84	2.2	2,4-DDT
7.064	0.001	21440	7.811	0.000	22290	2.72	2.72	0.2	cis-Nonachlor
8.038	0.000	15205	9.054	0.000	14316	3.04	2.99	1.7	Mirex N
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

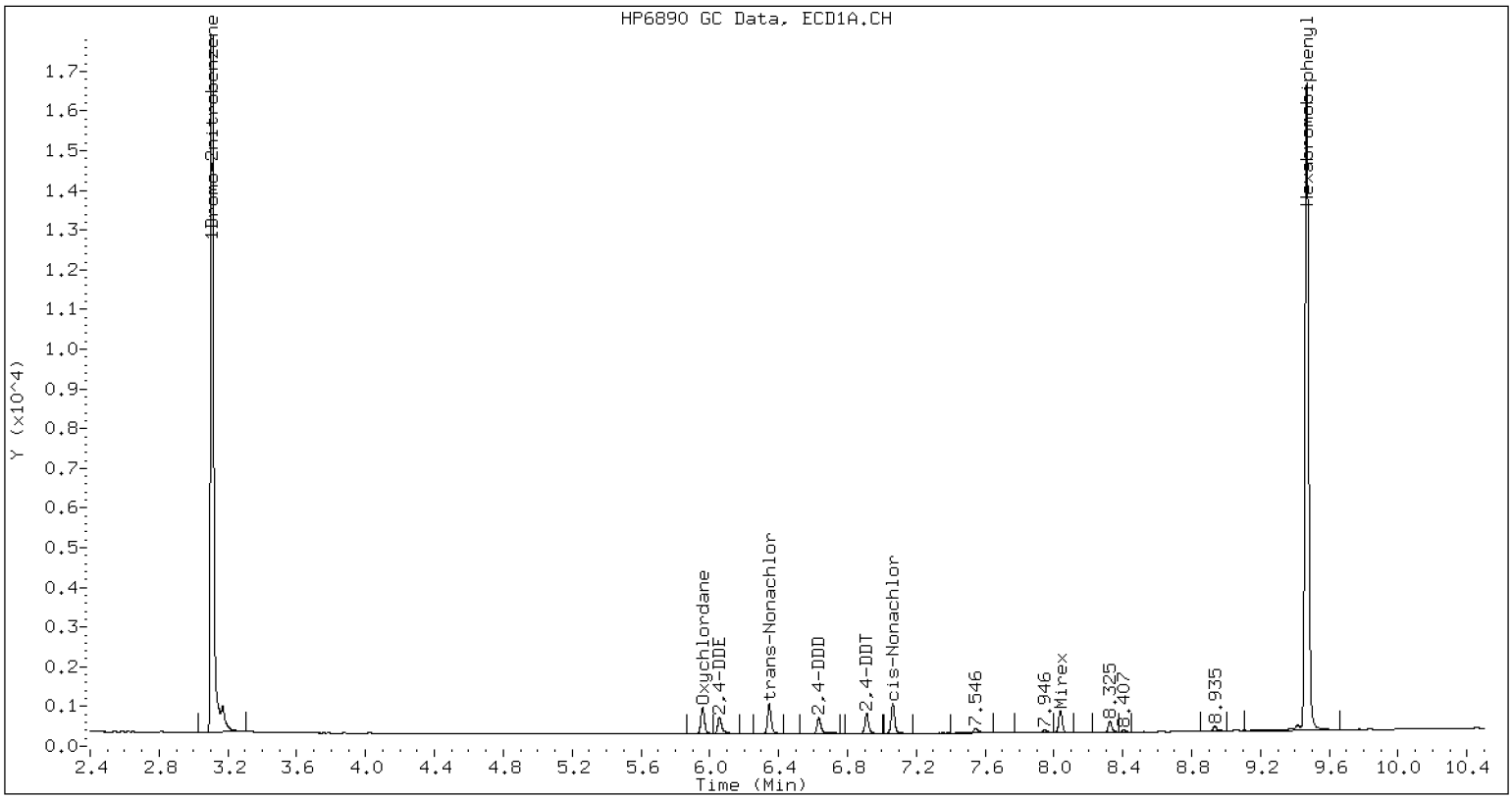
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	603413	-2.5
Hexabromobiphenyl	493109	478279	-3.0

Column 2

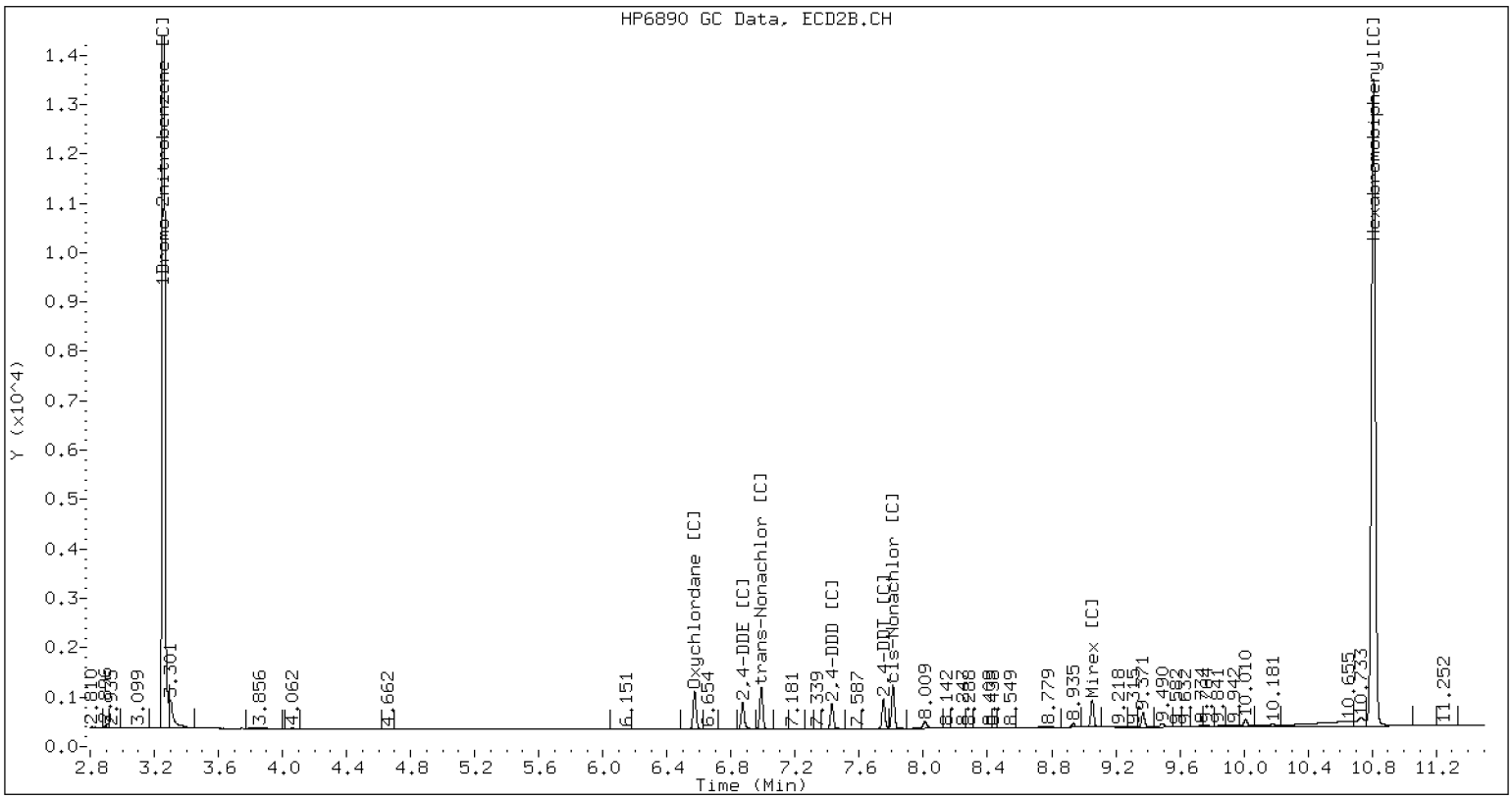
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	680795	-2.2
Hexabromobiphenyl	461581	445492	-3.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

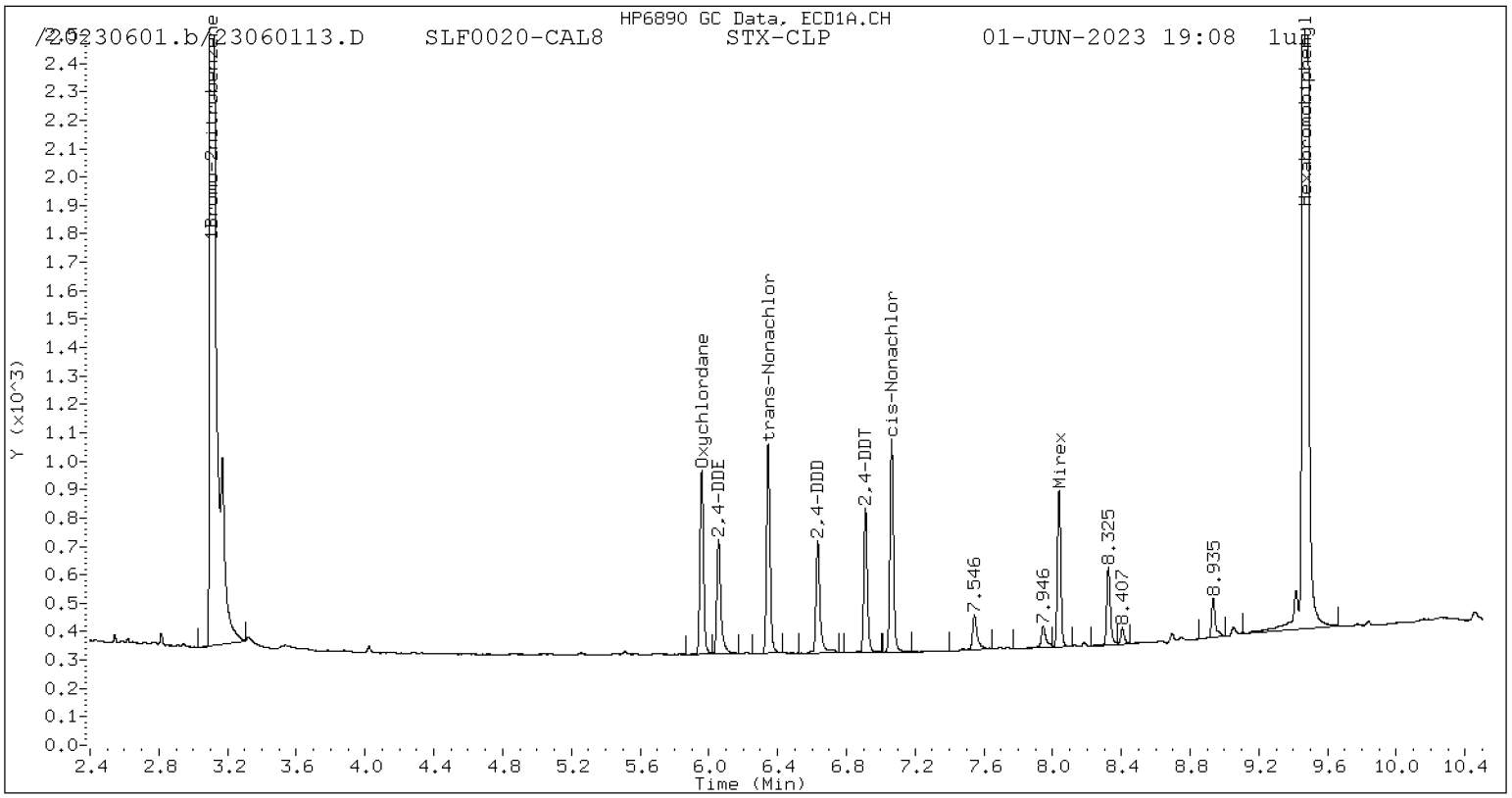
/20230601.b/23060113.D SLF0020-CAL8 STX-CLP 01-JUN-2023 19:08 1ul



/20230601.b/B20230601.b/23060113.D SLF0020-CAL8 CLP2 01-JUN-2023 19:08 1ul

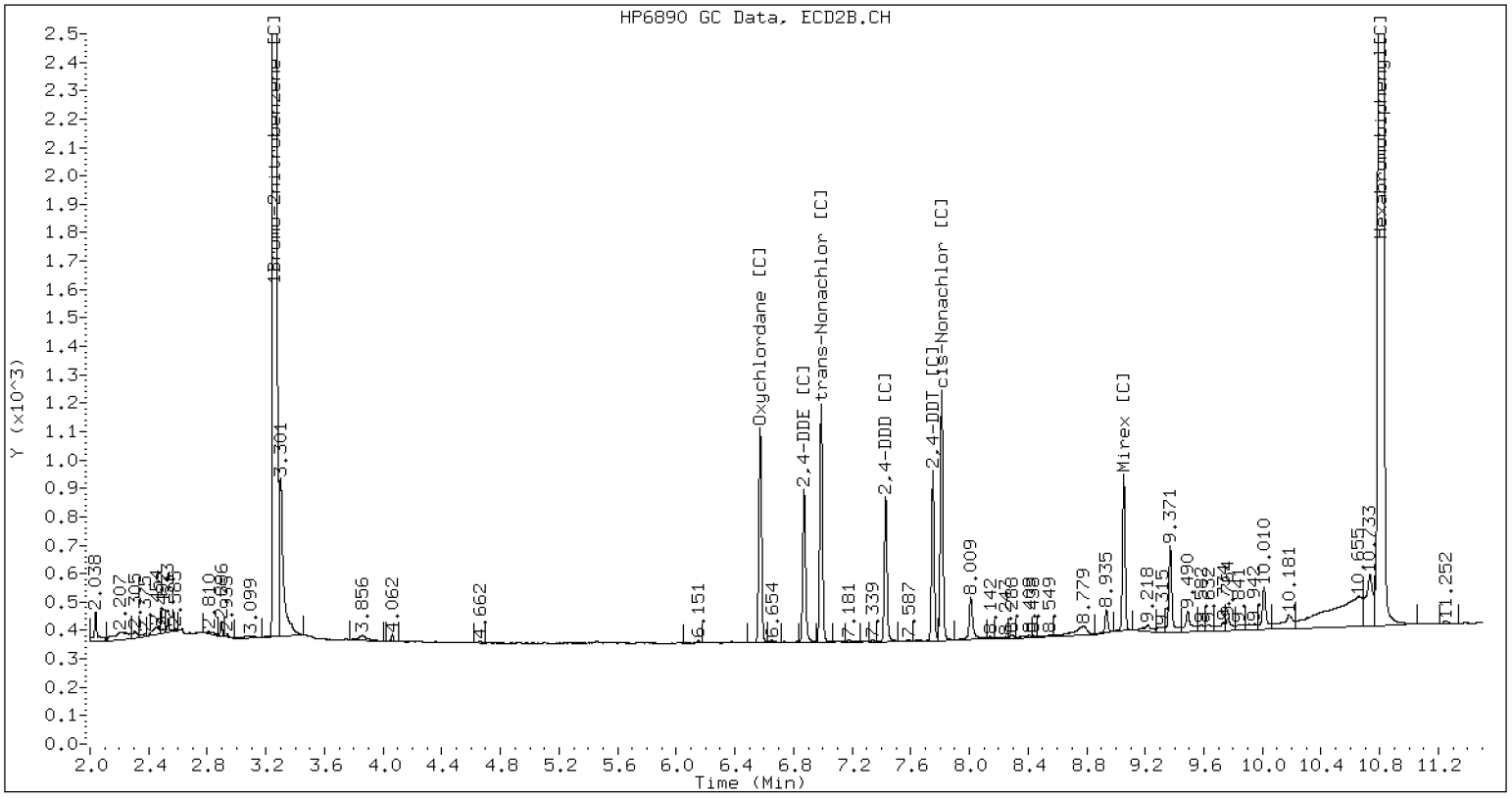


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

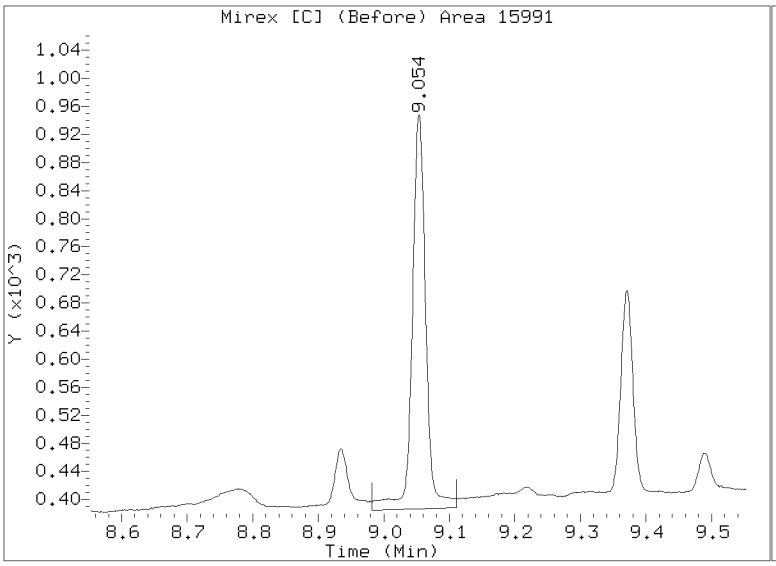
/20230601.b/B20230601.b/23060113.D SLF0020-CAL8 CLP2

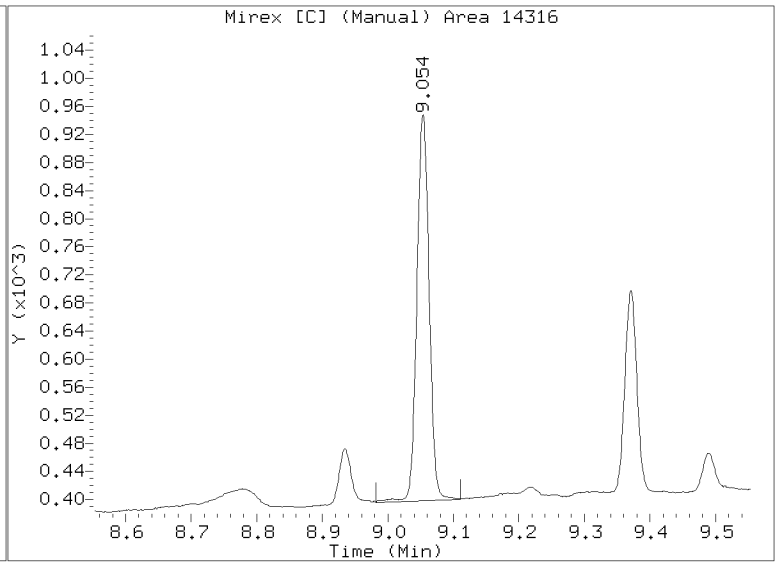


CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, CLP-2

Datafile: /20230601.b/B20230601.b/23060113.D
Injection Date: 01-JUN-2023 19:08
Lab ID:SLF0020-CAL8 Client ID:





Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060114.D
Data file 2: /20230601.b/B20230601.b/23060114.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CAL9
Client ID:
Injection Date: 01-JUN-2023 19:26
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.959	0.001	37003	6.572	0.001	39367	5.37	5.26	2.1	Oxychlordane
6.058	0.002	26636	6.872	0.001	28914	5.32	5.32	0.0	2,4-DDE
6.346	0.001	42006	6.989	0.001	42887	5.25	4.88	7.5	trans-Nonachlor
6.633	0.001	25541	7.429	0.001	26603	5.47	4.98	9.3	2,4-DDD
6.912	0.001	28759	7.751	0.001	29862	5.26	4.94	6.3	2,4-DDT
7.063	0.001	42725	7.811	0.001	44541	5.21	4.86	7.0	cis-Nonachlor
8.038	0.001	28556	9.054	0.000	27927	5.48	5.22	5.0	Mirex N
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

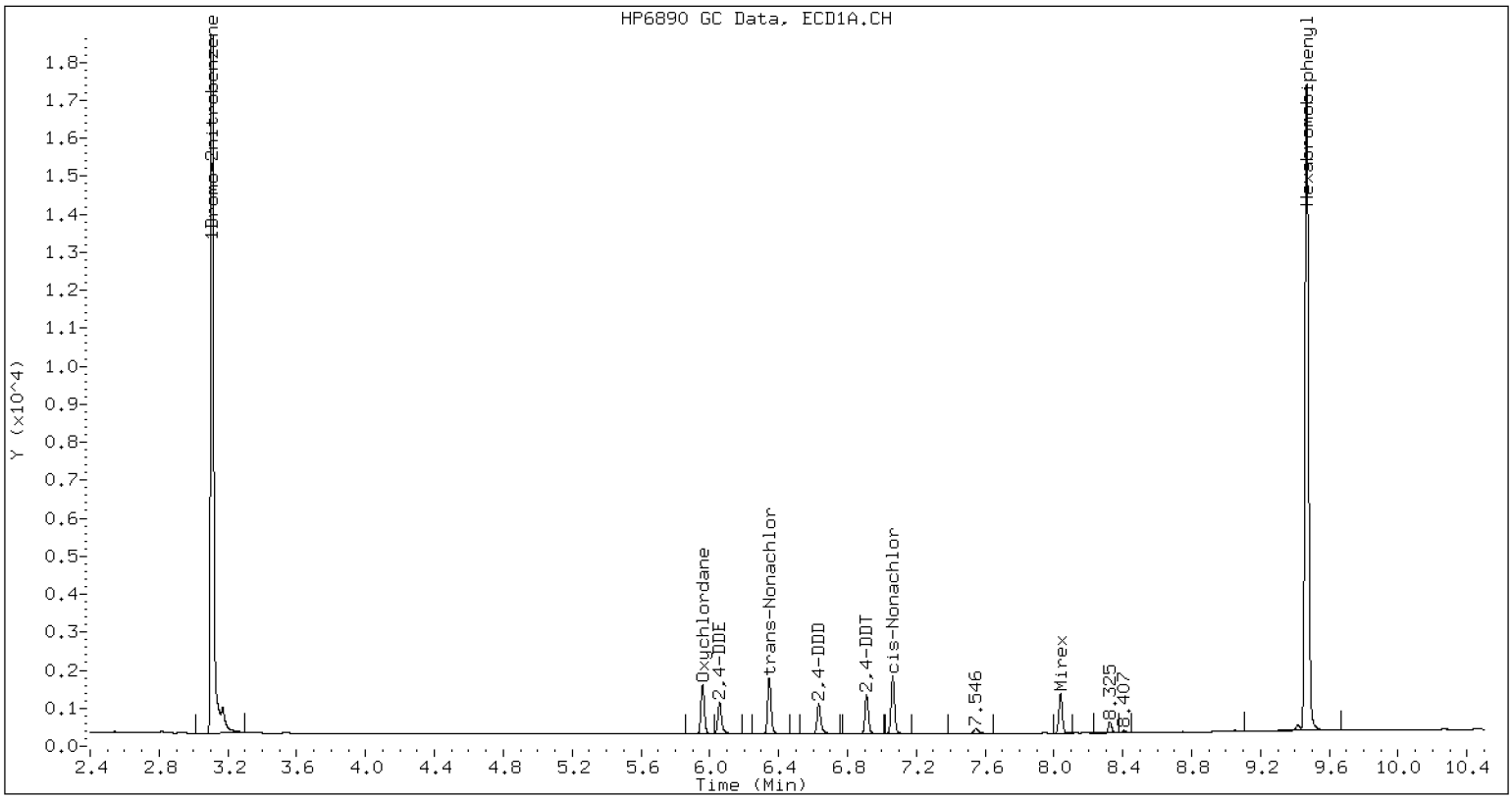
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	623521	0.7
Hexabromobiphenyl	493109	498217	1.0

Column 2

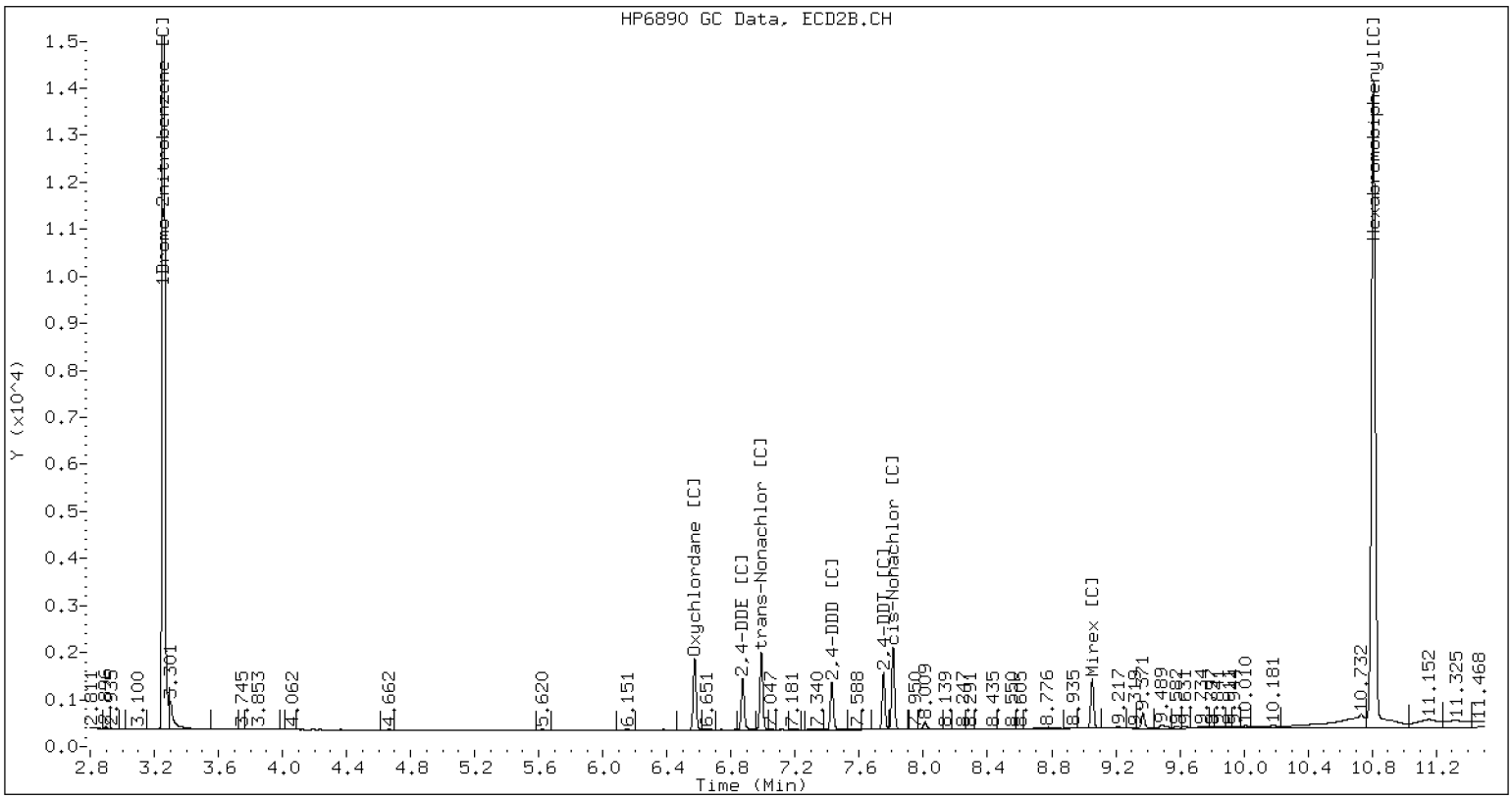
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	709341	1.9
Hexabromobiphenyl	461581	498249	7.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

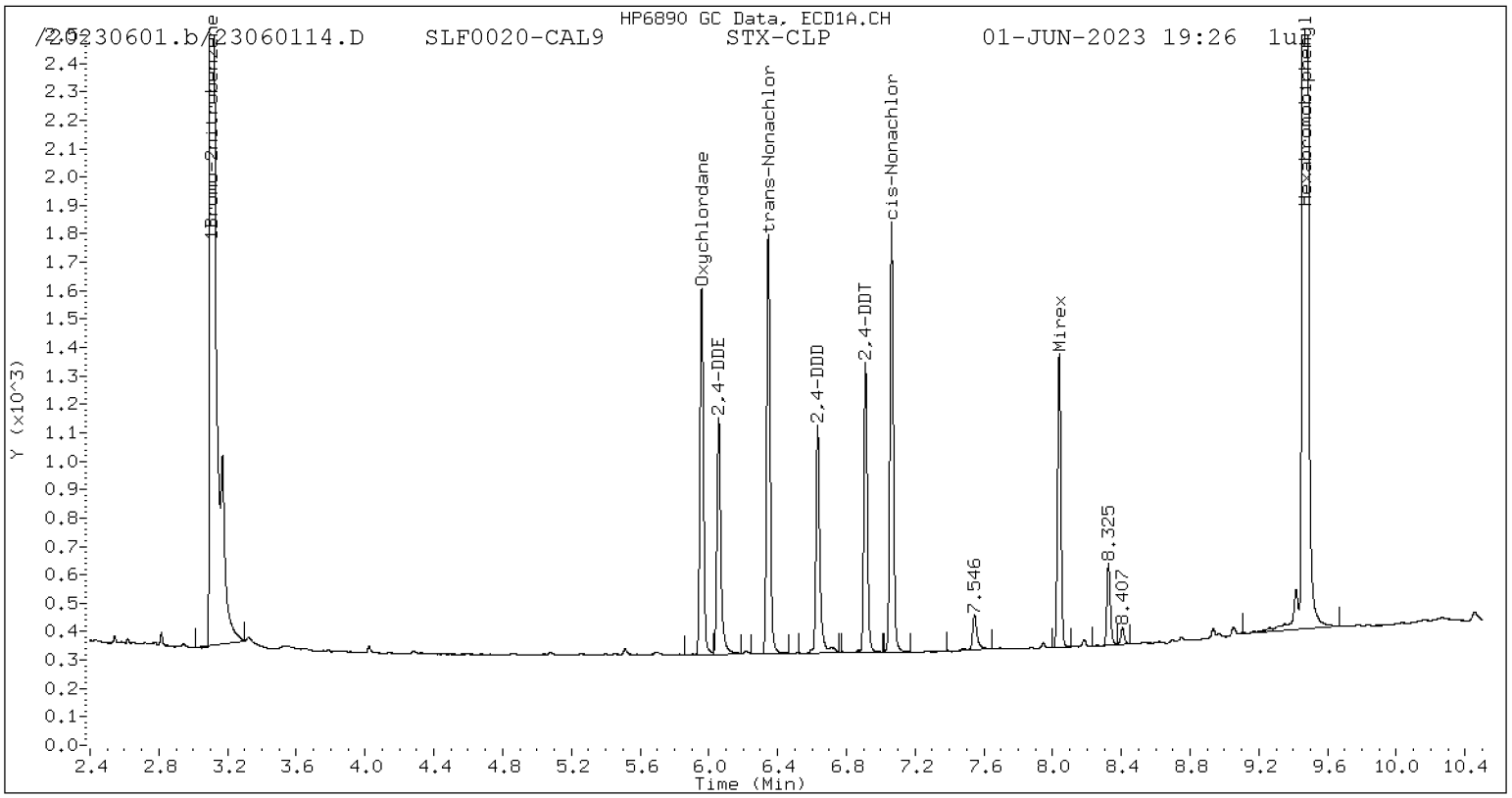
/20230601.b/23060114.D SLF0020-CAL9 STX-CLP 01-JUN-2023 19:26 1ul



/20230601.b/B20230601.b/23060114.D SLF0020-CAL9 CLP2 01-JUN-2023 19:26 1ul

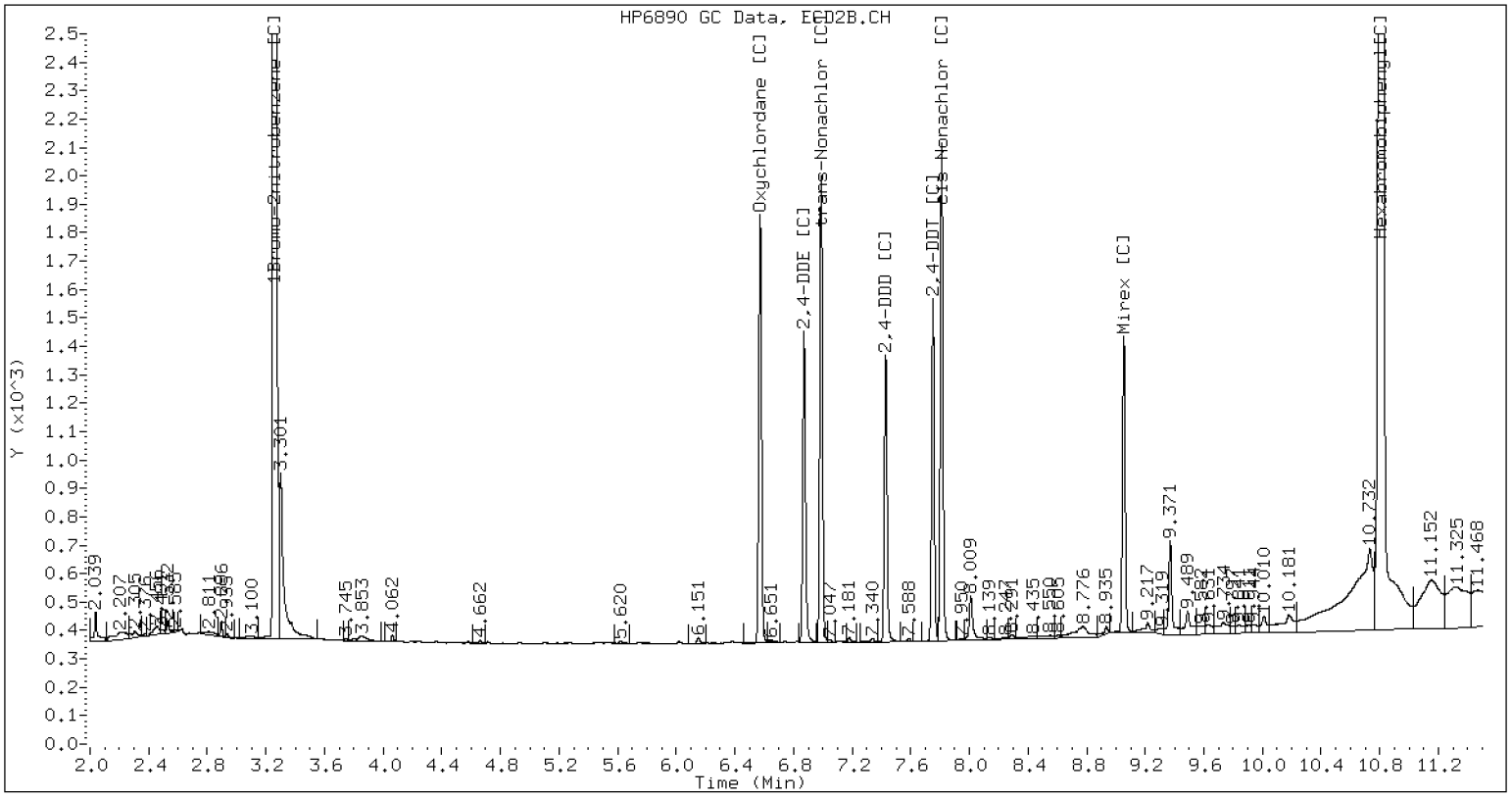


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

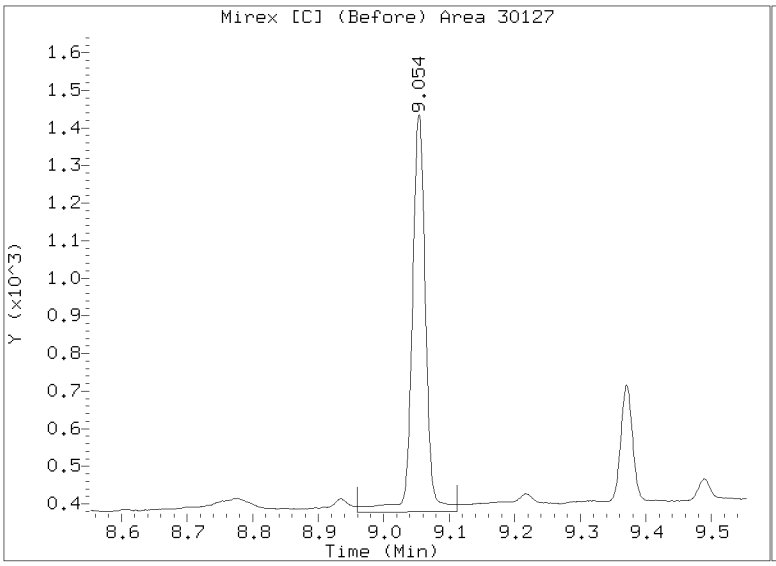
/20230601.b/B20230601.b/23060114.D SLF0020-CAL9 CLP2

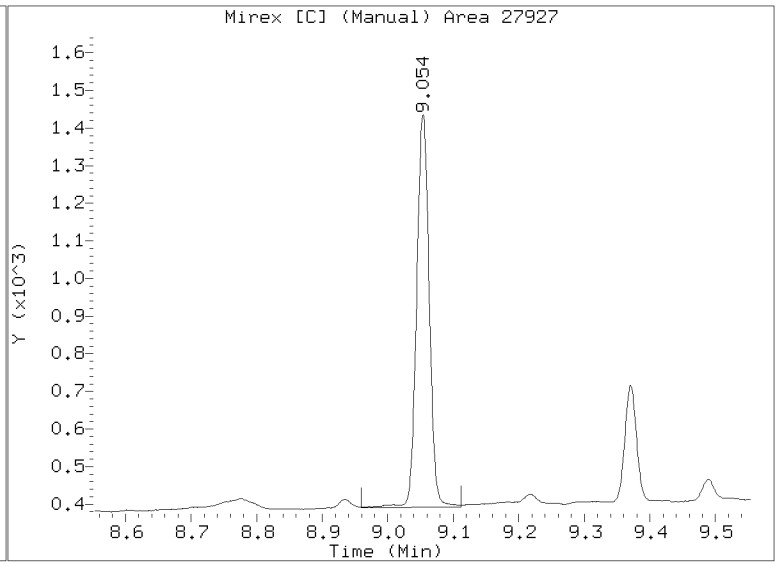


CLP-2 Manual Integration: YES

Manual Peak Adjustment Report, CLP-2

Datafile: /20230601.b/B20230601.b/23060114.D
Injection Date: 01-JUN-2023 19:26
Lab ID:SLF0020-CAL9 Client ID:





Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060115.D
Data file 2: /20230601.b/B20230601.b/23060115.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALA
Client ID:
Injection Date: 01-JUN-2023 19:45
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.958	0.001	72027	6.573	0.001	79660	10.17	10.34	1.7	Oxychlordane
6.057	0.001	54019	6.872	0.001	58328	10.49	10.43	0.6	2,4-DDE
6.346	0.001	84603	6.988	0.000	84647	10.29	10.00	2.9	trans-Nonachlor
6.634	0.001	46706	7.429	0.001	53090	9.73	10.33	6.0	2,4-DDD
6.912	0.001	57922	7.751	0.000	59952	10.30	10.30	0.0	2,4-DDT
7.064	0.001	86024	7.811	0.001	90328	10.20	10.24	0.3	cis-Nonachlor
8.038	0.001	54206	9.054	0.000	52926	10.12	10.27	1.5	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

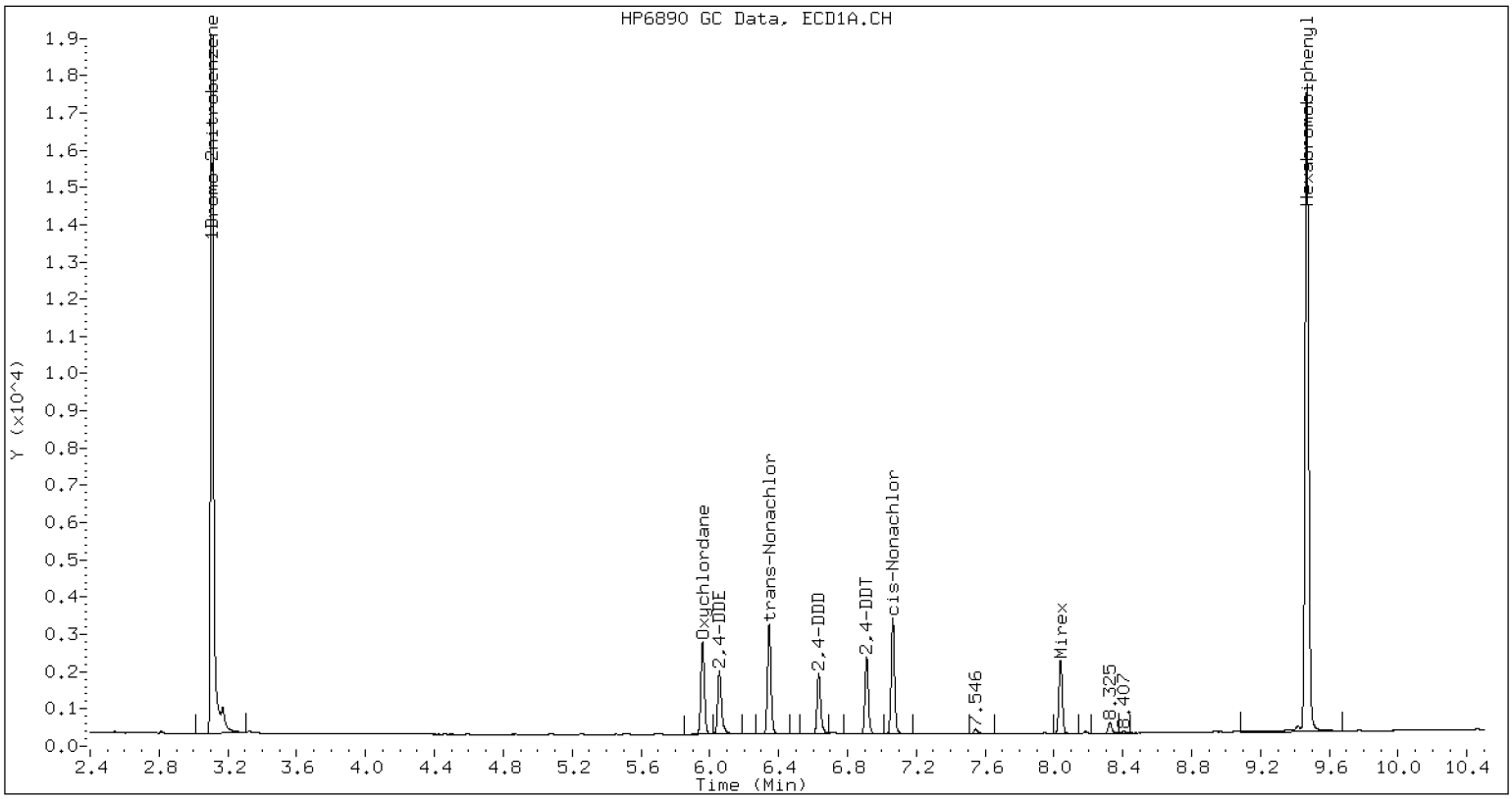
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	642491	3.8
Hexabromobiphenyl	493109	512316	3.9

Column 2

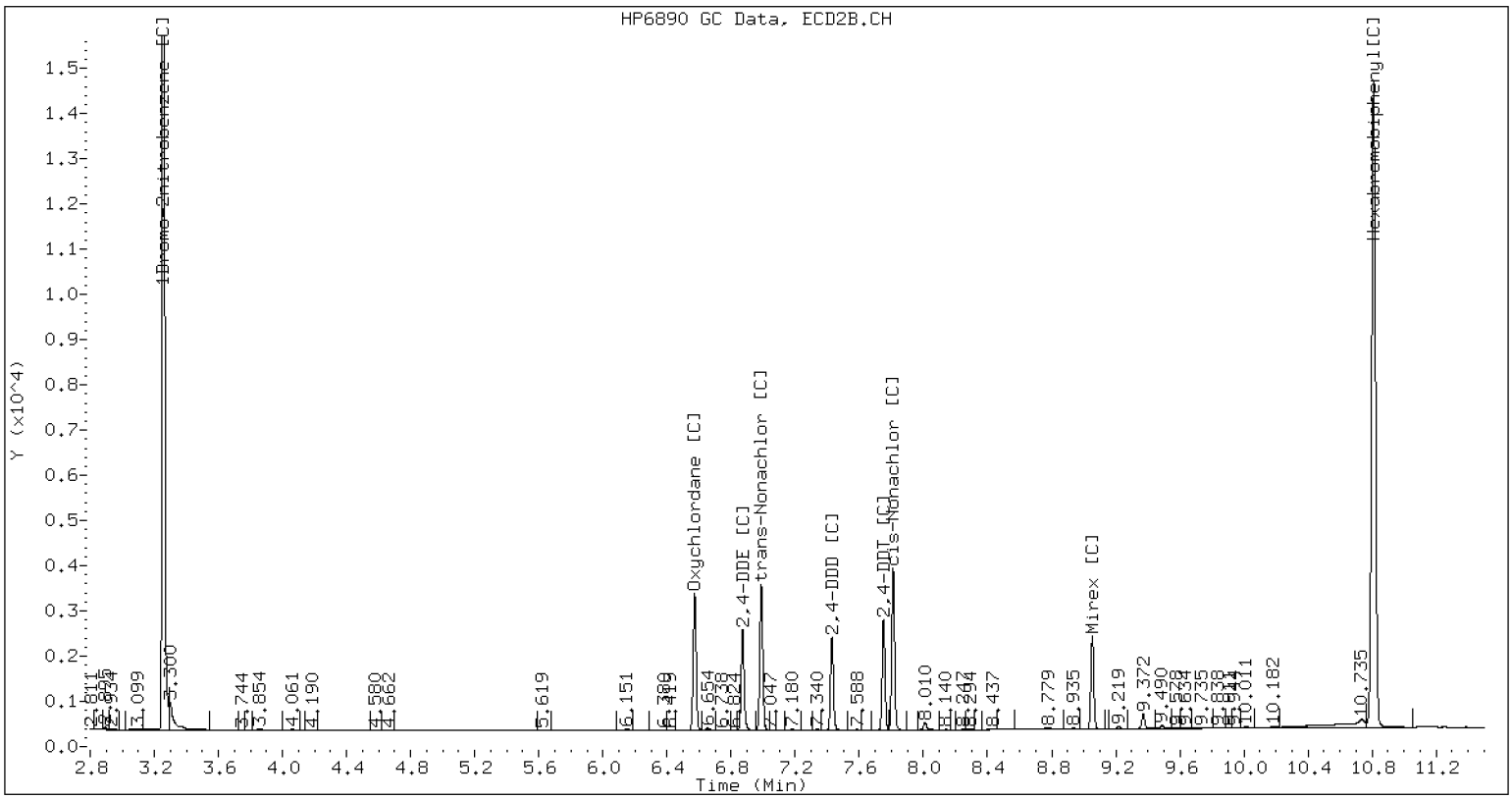
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	730207	4.9
Hexabromobiphenyl	461581	479530	3.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

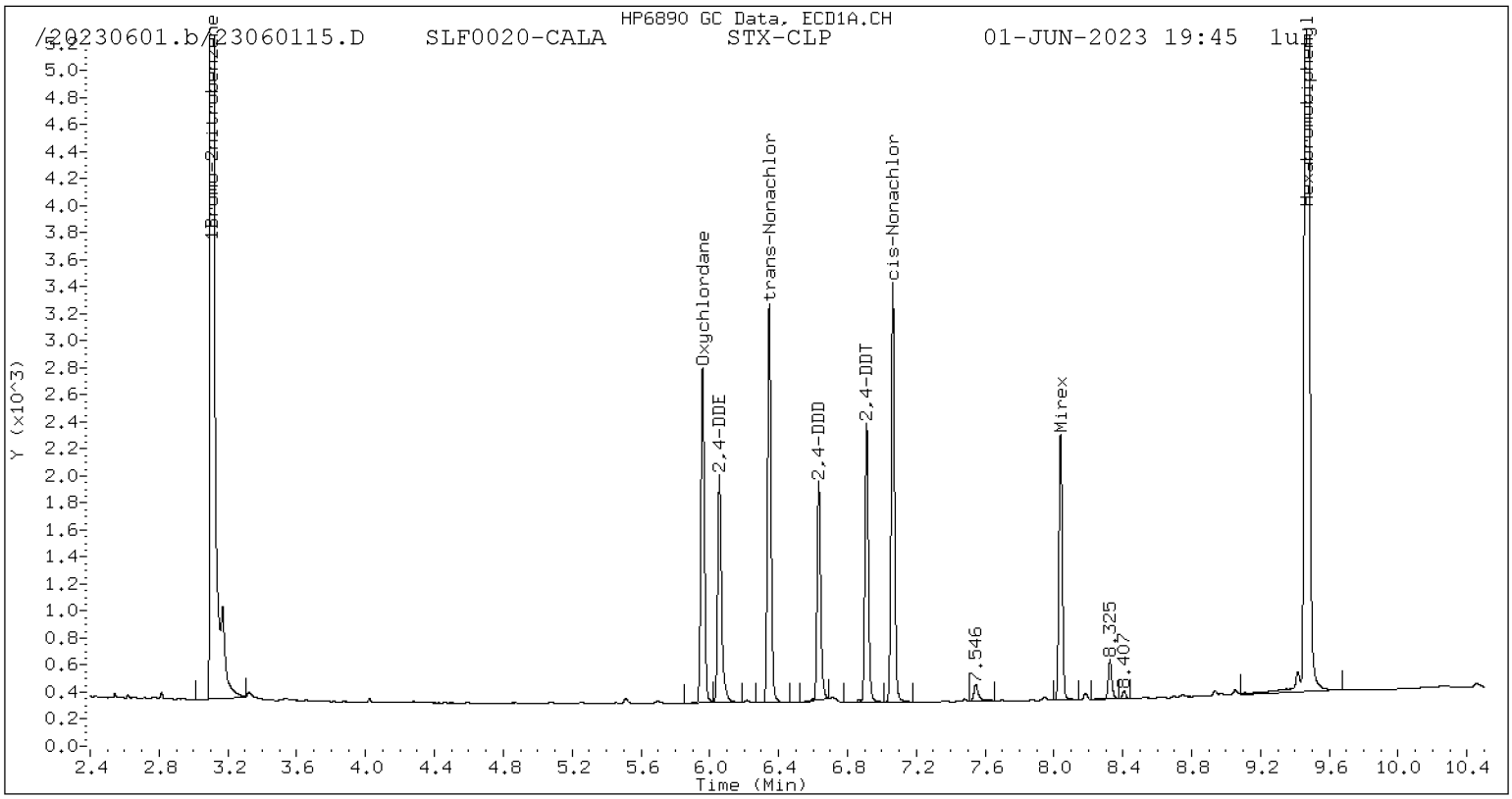
/20230601.b/23060115.D SLF0020-CALA STX-CLP 01-JUN-2023 19:45 1ul



/20230601.b/B20230601.b/23060115.D SLF0020-CALA CLP2 01-JUN-2023 19:45 1ul

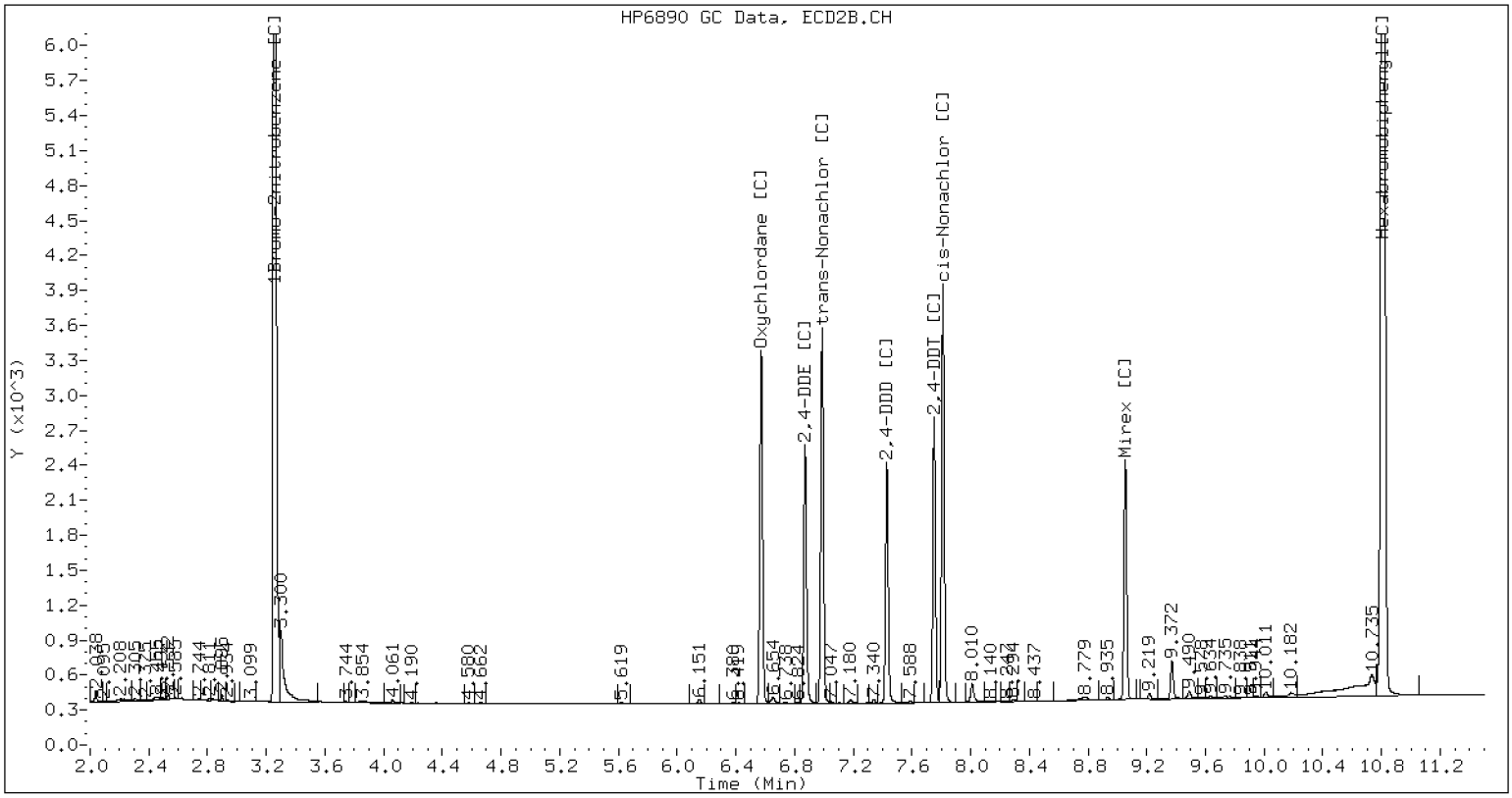


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060115.D SLF0020-CALA CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060116.D
Data file 2: /20230601.b/B20230601.b/23060116.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALB
Client ID:
Injection Date: 01-JUN-2023 20:04
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.958	0.001	138239	6.573	0.001	153649	19.99	19.40	3.0	Oxychlordane
6.057	0.001	102059	6.872	0.001	112367	20.30	19.54	3.8	2,4-DDE
6.346	0.001	160996	6.989	0.001	167880	20.07	20.01	0.3	trans-Nonachlor
6.634	0.002	94640	7.429	0.001	102021	20.20	20.03	0.9	2,4-DDD
6.912	0.001	111000	7.751	0.000	115483	20.23	20.01	1.1	2,4-DDT
7.064	0.001	164632	7.811	0.001	176238	20.01	20.15	0.7	cis-Nonachlor
8.038	0.001	101890	9.054	0.000	100544	19.50	19.69	1.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			10.252	0.001	1140	0.00	0.23	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

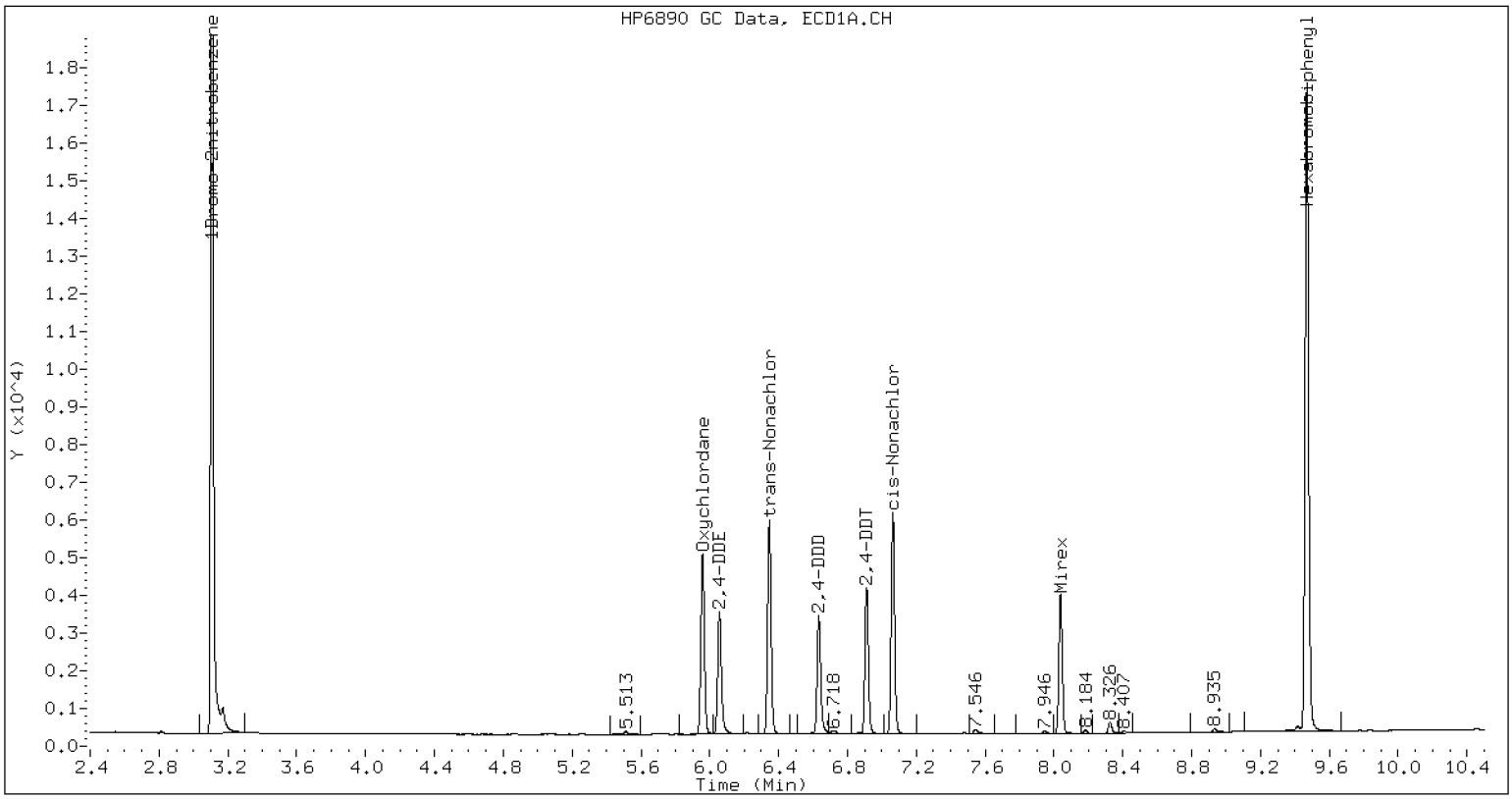
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	632761	2.2
Hexabromobiphenyl	493109	499988	1.4

Column 2

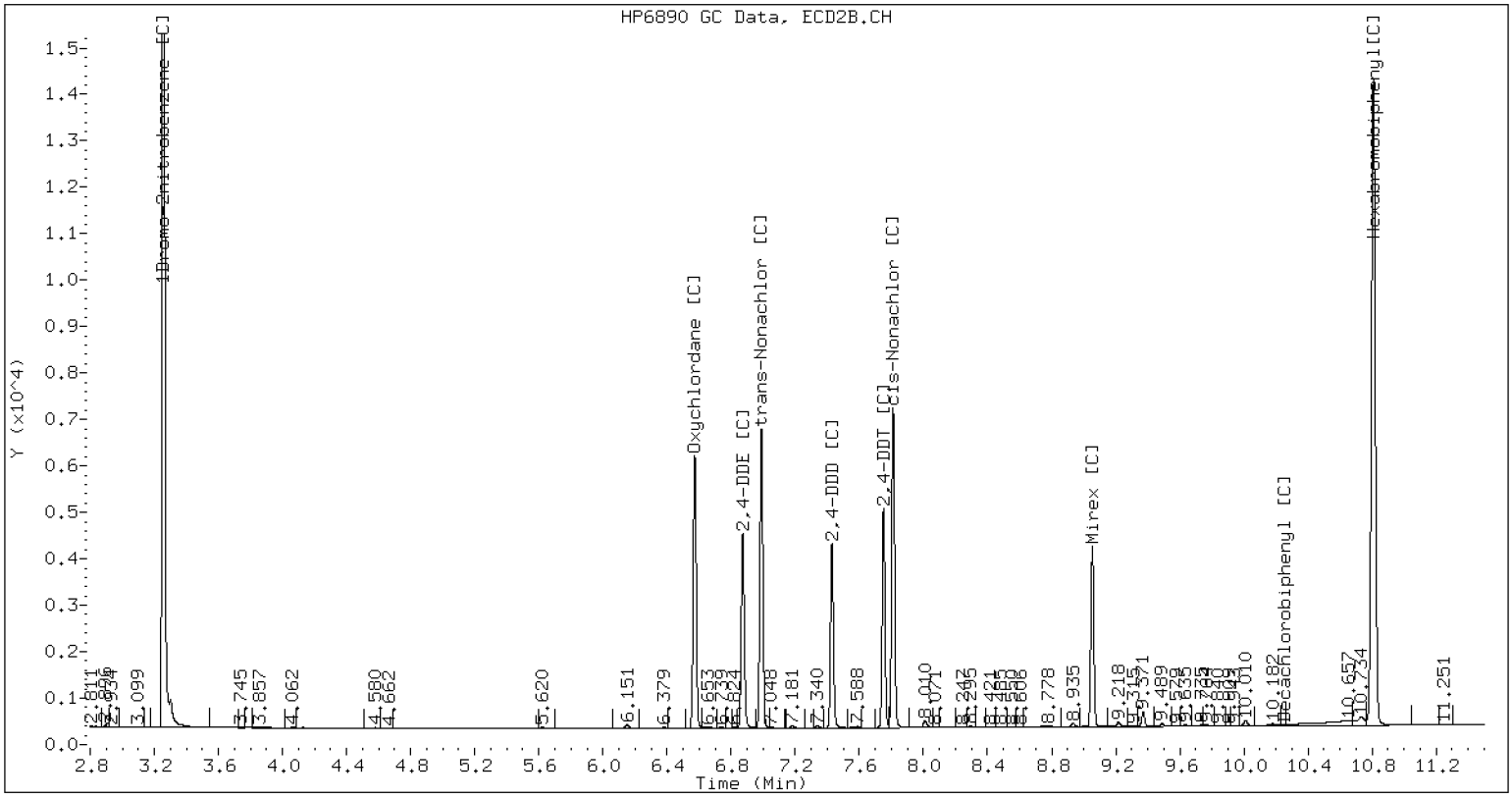
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	750356	7.8
Hexabromobiphenyl	461581	475338	3.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

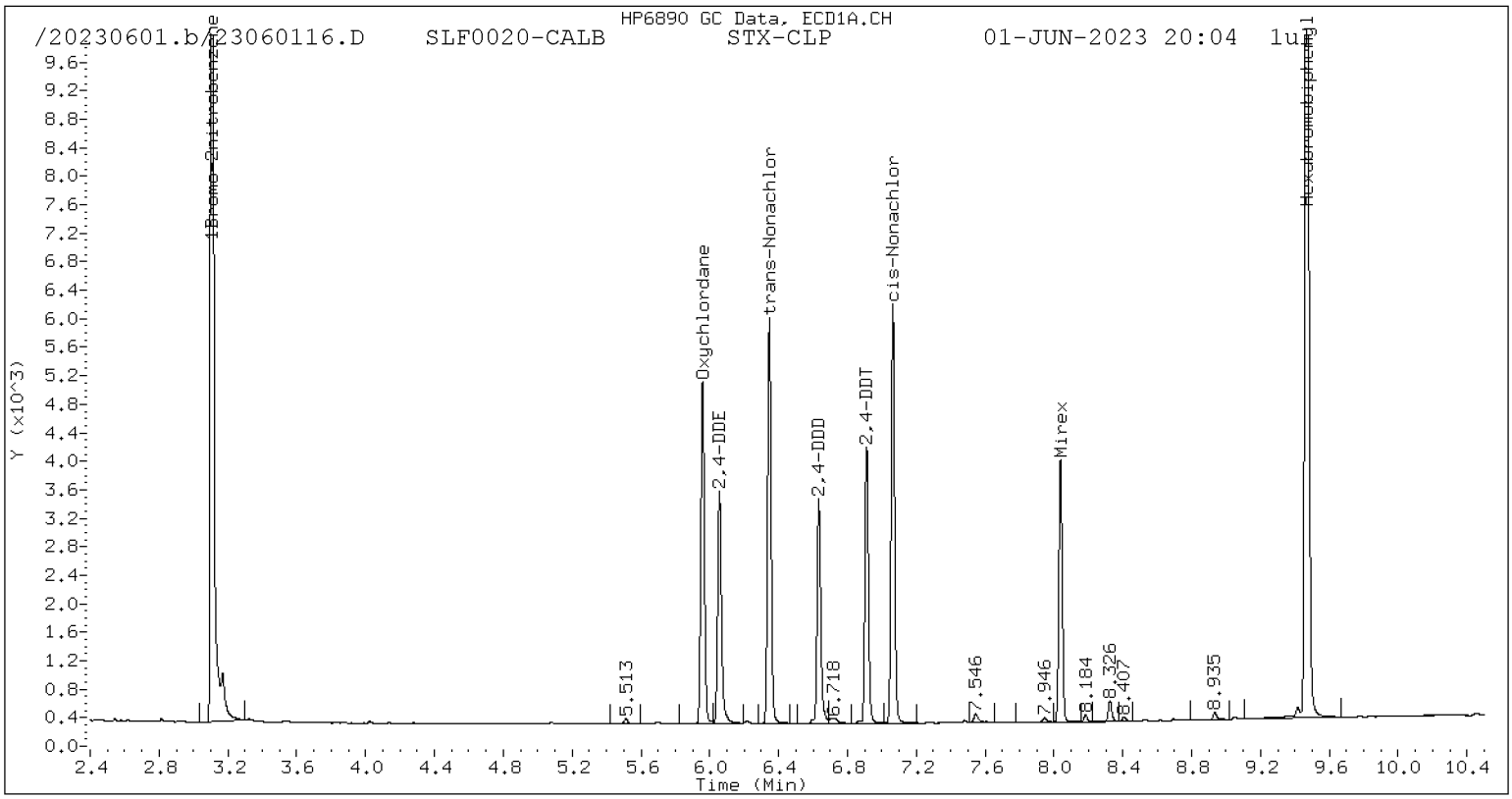
/20230601.b/23060116.D SLF0020-CALB STX-CLP 01-JUN-2023 20:04 1ul



/20230601.b/B20230601.b/23060116.D SLF0020-CALB CLP2 01-JUN-2023 20:04 1ul

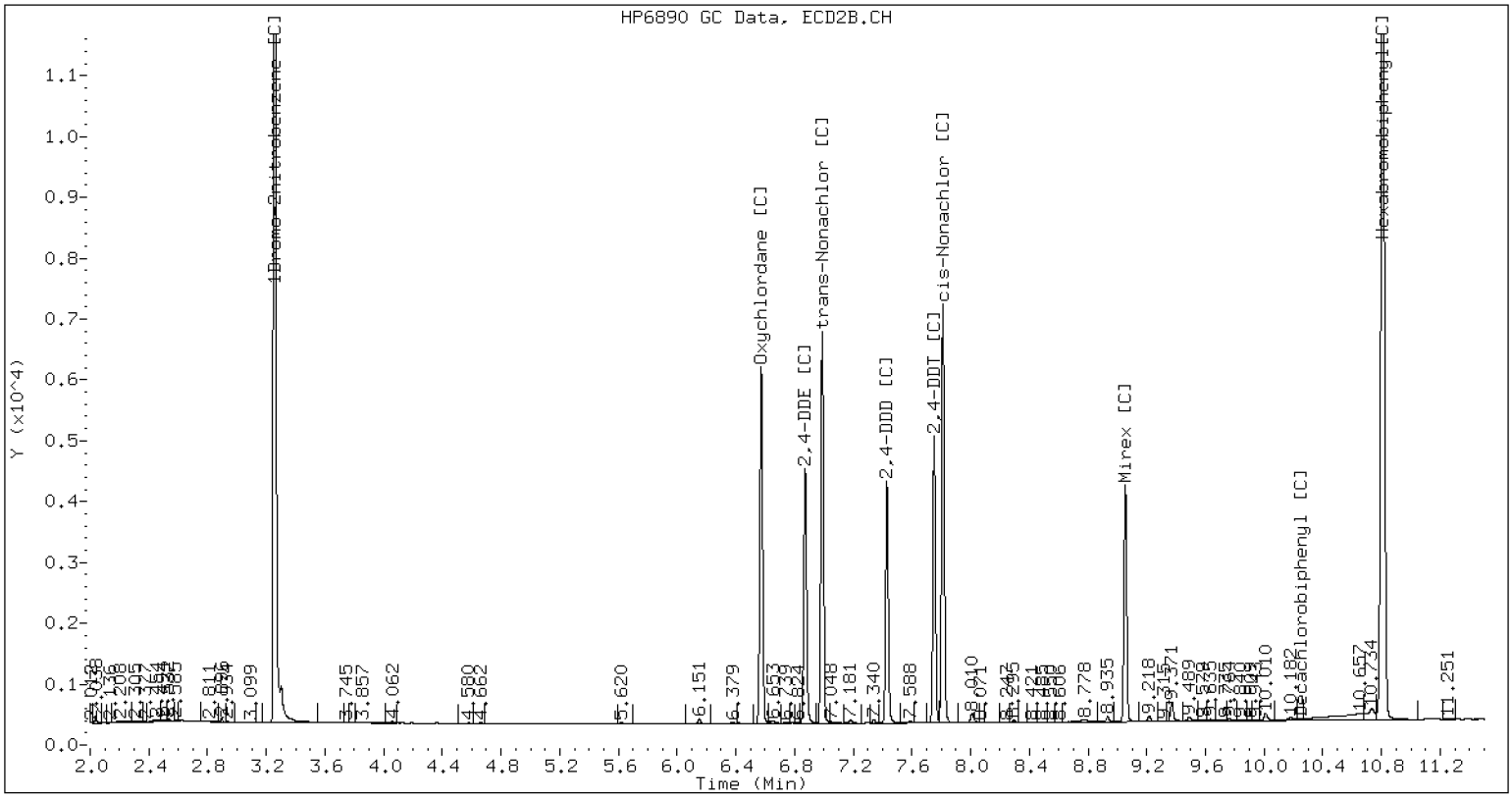


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060116.D SLF0020-CALB CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060117.D
Data file 2: /20230601.b/B20230601.b/23060117.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALC
Client ID:
Injection Date: 01-JUN-2023 20:22
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.959	0.001	264114	6.572	0.000	298687	38.95	39.34	1.0	Oxychlordane
6.056	0.001	193734	6.872	0.001	216582	39.30	39.28	0.0	2,4-DDE
6.346	0.001	309063	6.988	0.000	331771	39.28	40.12	2.1	trans-Nonachlor
6.633	0.001	179565	7.429	0.001	197561	39.07	39.35	0.7	2,4-DDD
6.912	0.001	211377	7.751	0.000	225011	39.28	39.57	0.7	2,4-DDT
7.064	0.001	317411	7.811	0.000	346258	39.33	40.17	2.1	cis-Nonachlor
8.038	0.000	191749	9.054	-0.000	191227	37.41	38.00	1.6	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			10.254	0.003	1621	0.00	0.33	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

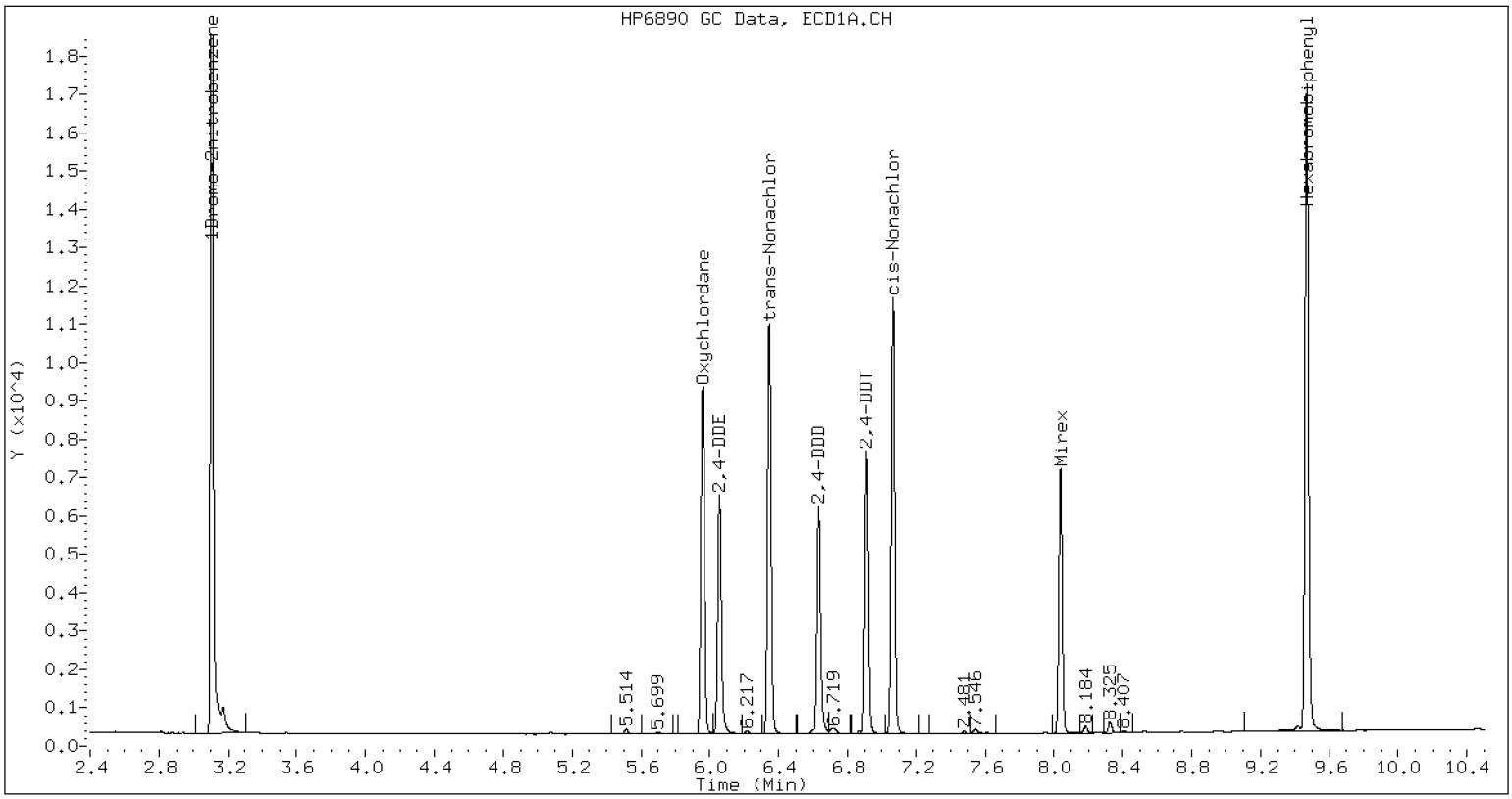
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	621346	0.4
Hexabromobiphenyl	493109	490371	-0.6

Column 2

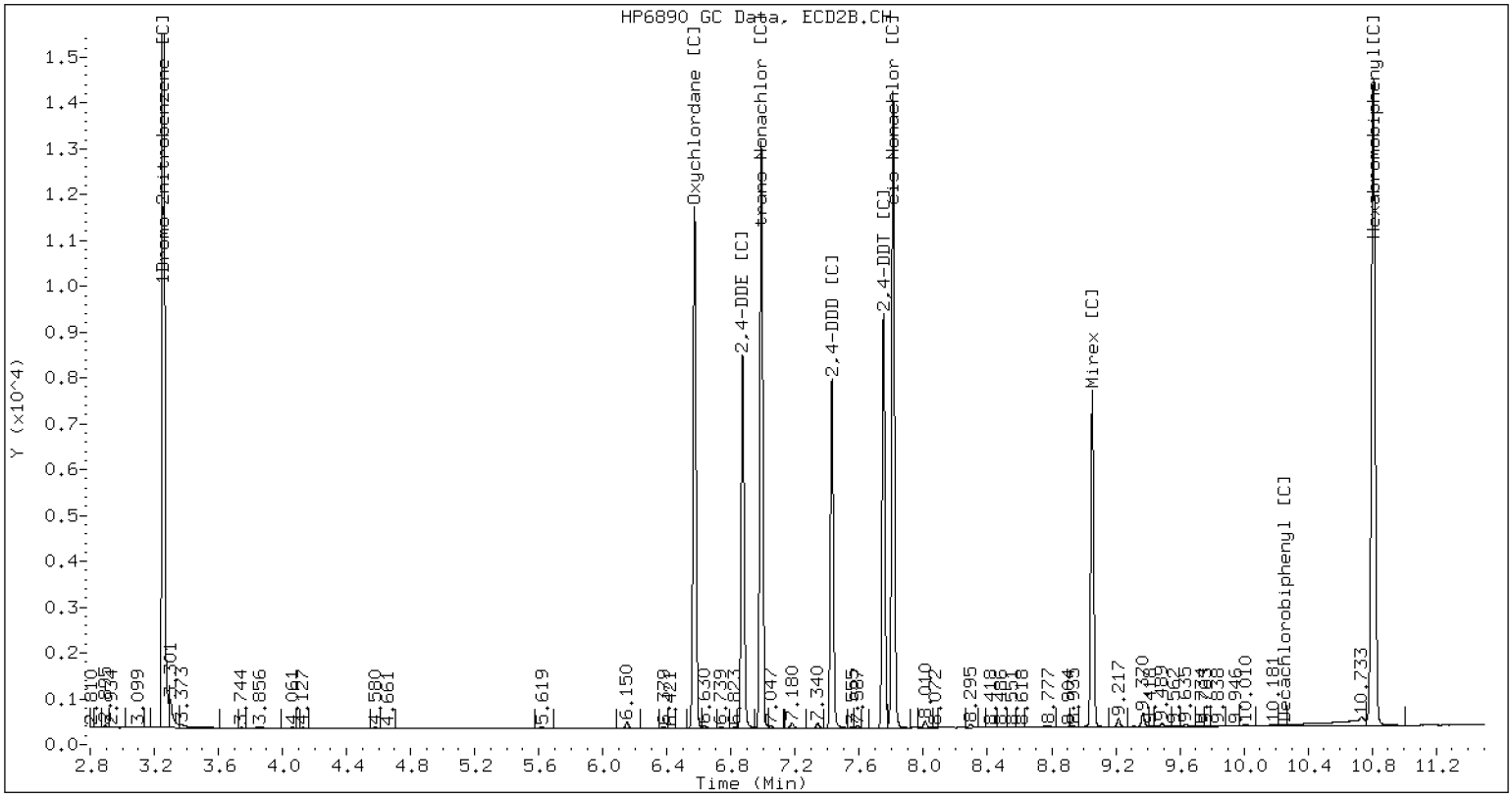
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	719557	3.4
Hexabromobiphenyl	461581	468461	1.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

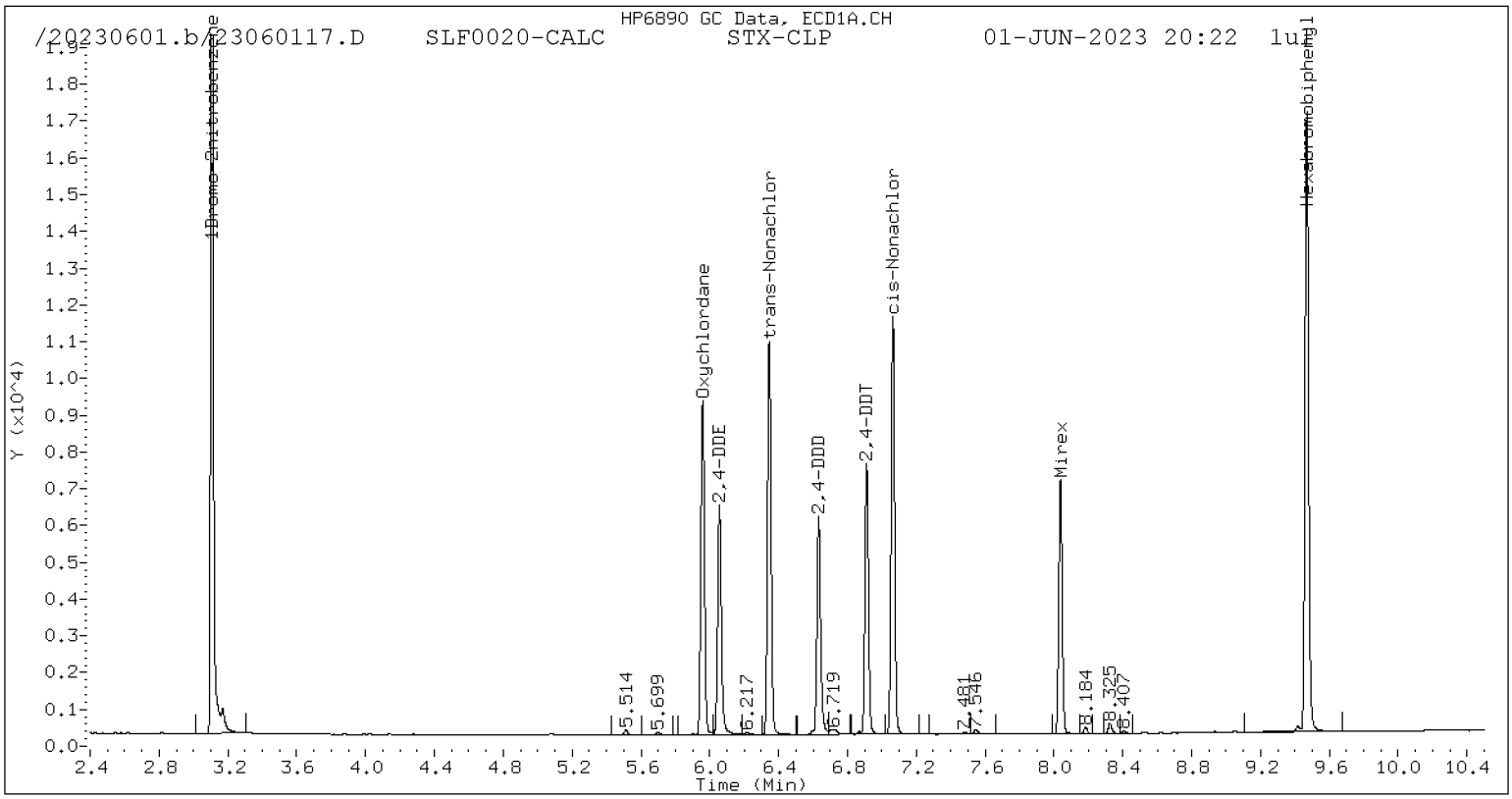
/20230601.b/23060117.D SLF0020-CALC STX-CLP 01-JUN-2023 20:22 1ul



/20230601.b/B20230601.b/23060117.D SLF0020-CALC CLP2 01-JUN-2023 20:22 1ul

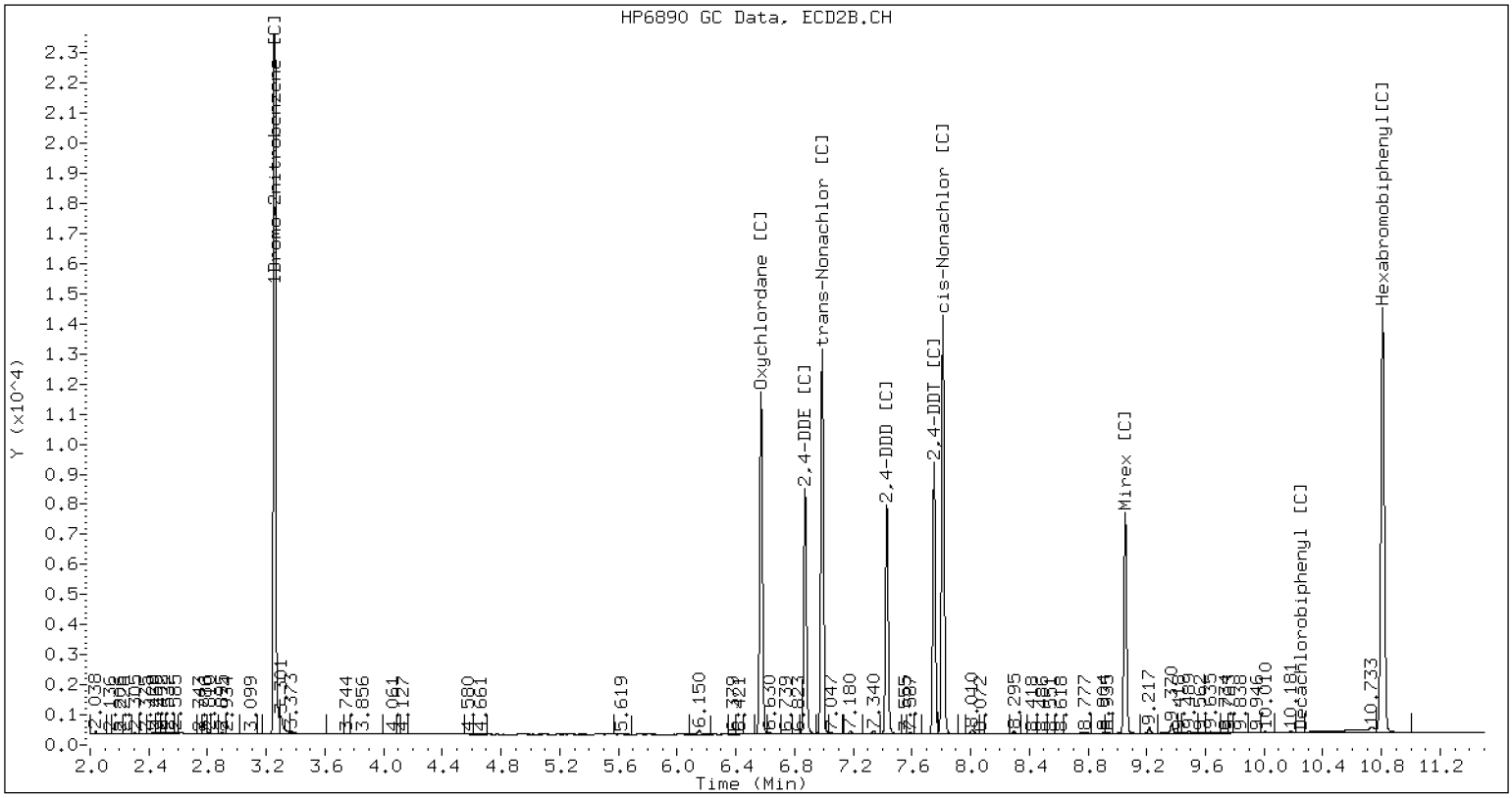


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060117.D SLF0020-CALC CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060118.D
Data file 2: /20230601.b/B20230601.b/23060118.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALD
Client ID:
Injection Date: 01-JUN-2023 20:41
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.958	0.001	501277	6.572	0.000	573257	74.35	76.38	2.7	Oxychlordane
6.056	0.001	362239	6.872	0.001	409474	73.90	75.14	1.7	2,4-DDE
6.346	0.000	590413	6.988	0.000	650059	75.47	78.80	4.3	trans-Nonachlor
6.633	0.001	337990	7.429	0.001	382044	73.97	76.27	3.1	2,4-DDD
6.911	0.001	401674	7.752	0.001	434727	75.07	76.63	2.1	2,4-DDT
7.063	0.001	611782	7.811	0.001	672351	76.25	78.19	2.5	cis-Nonachlor
8.038	0.001	367722	9.054	0.000	368034	72.16	73.30	1.6	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			10.253	0.002	1270	0.00	0.26	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

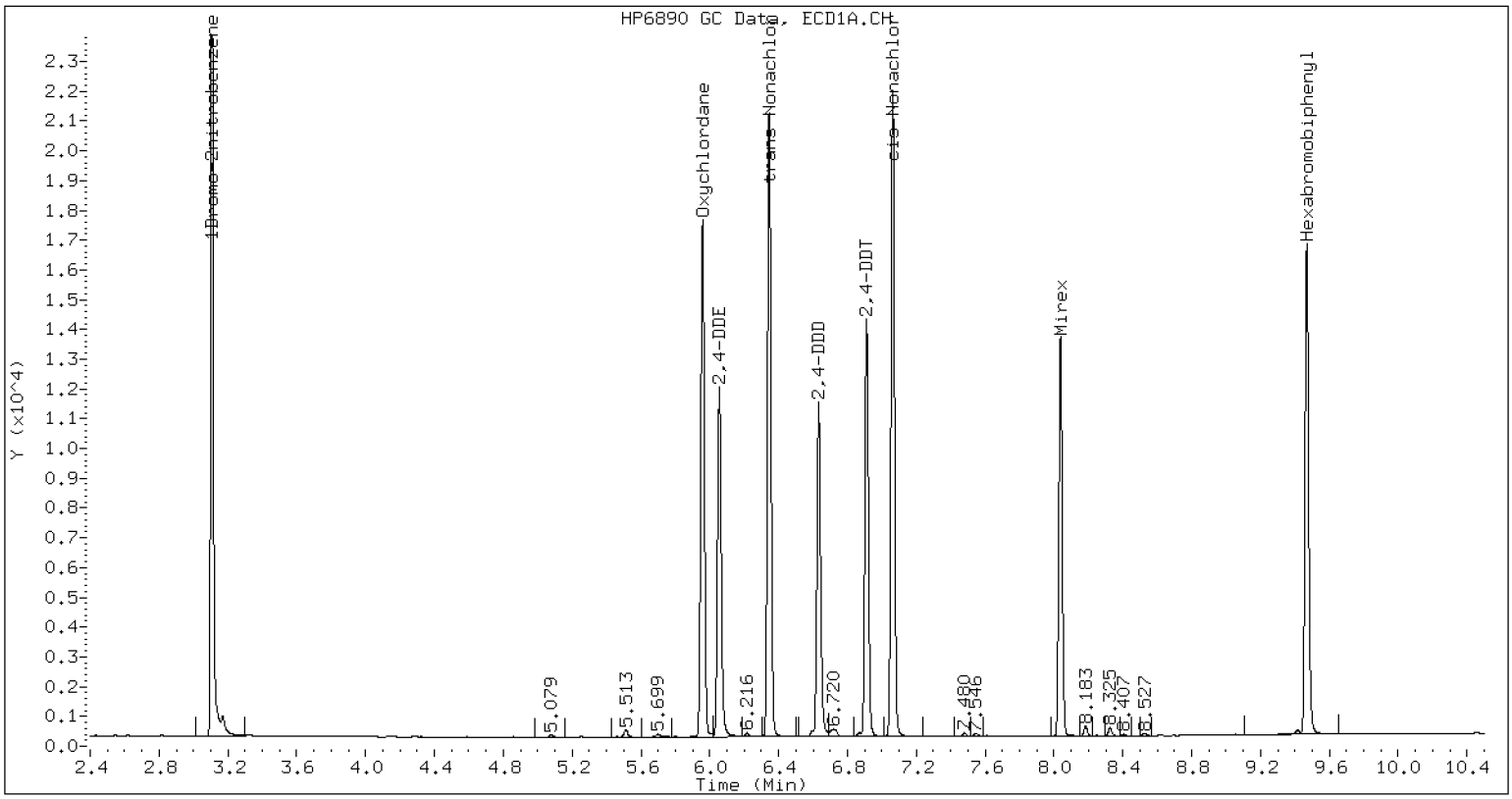
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	611877	-1.1
Hexabromobiphenyl	493109	487560	-1.1

Column 2

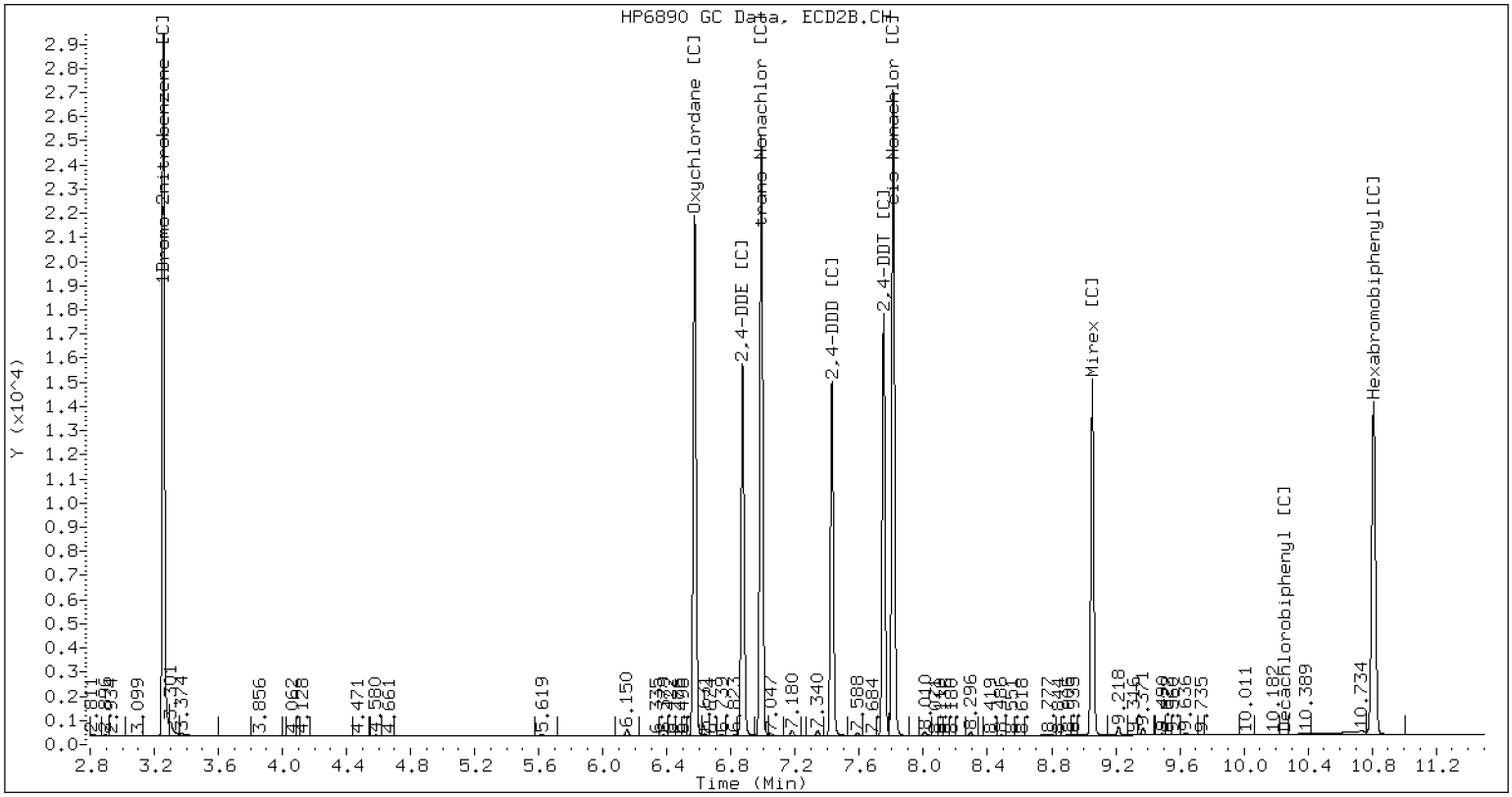
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	711213	2.2
Hexabromobiphenyl	461581	467339	1.2

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

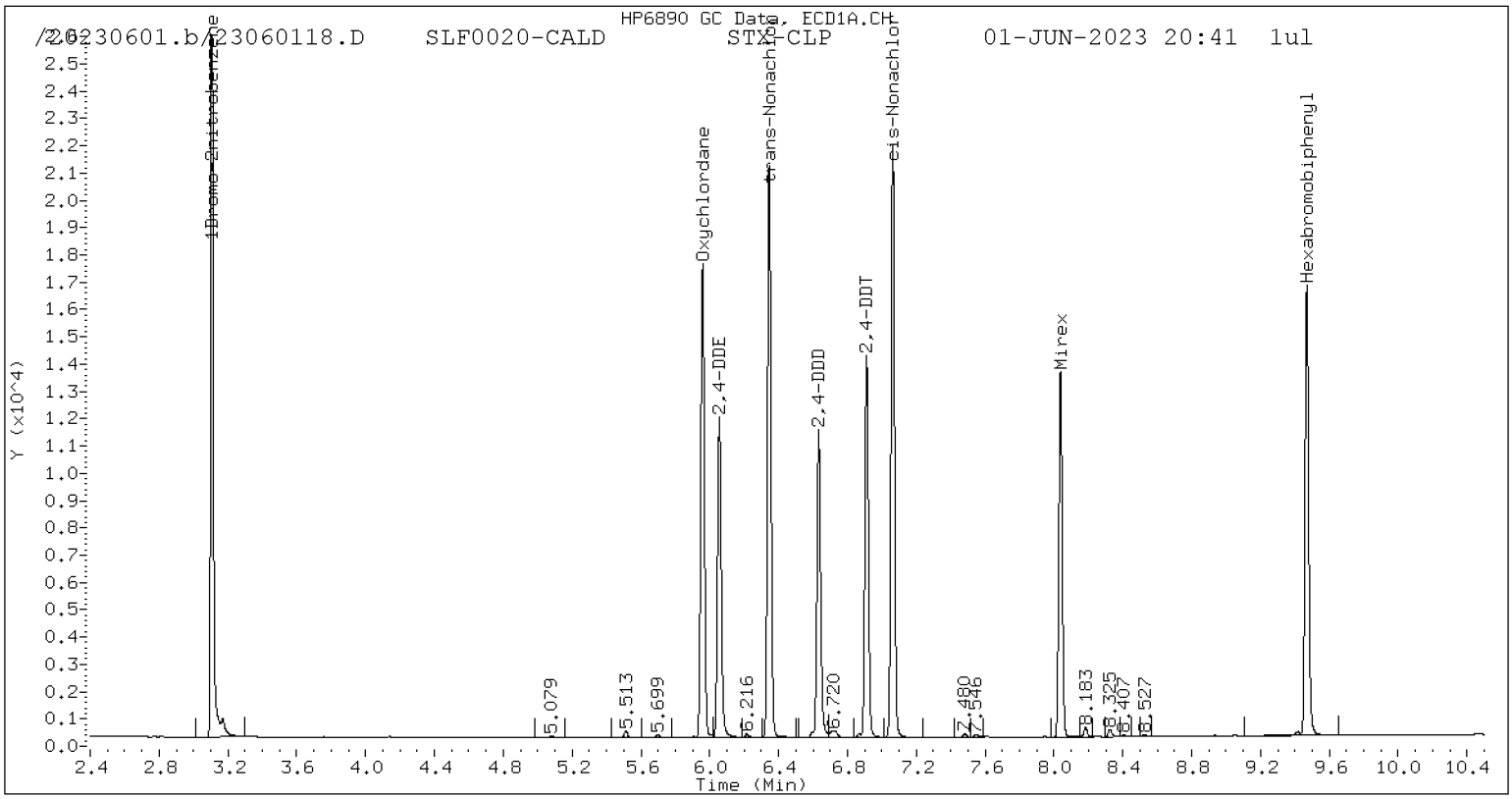
/20230601.b/23060118.D SLF0020-CALD STX-CLP 01-JUN-2023 20:41 1ul



/20230601.b/B20230601.b/23060118.D SLF0020-CALD CLP2 01-JUN-2023 20:41 1ul

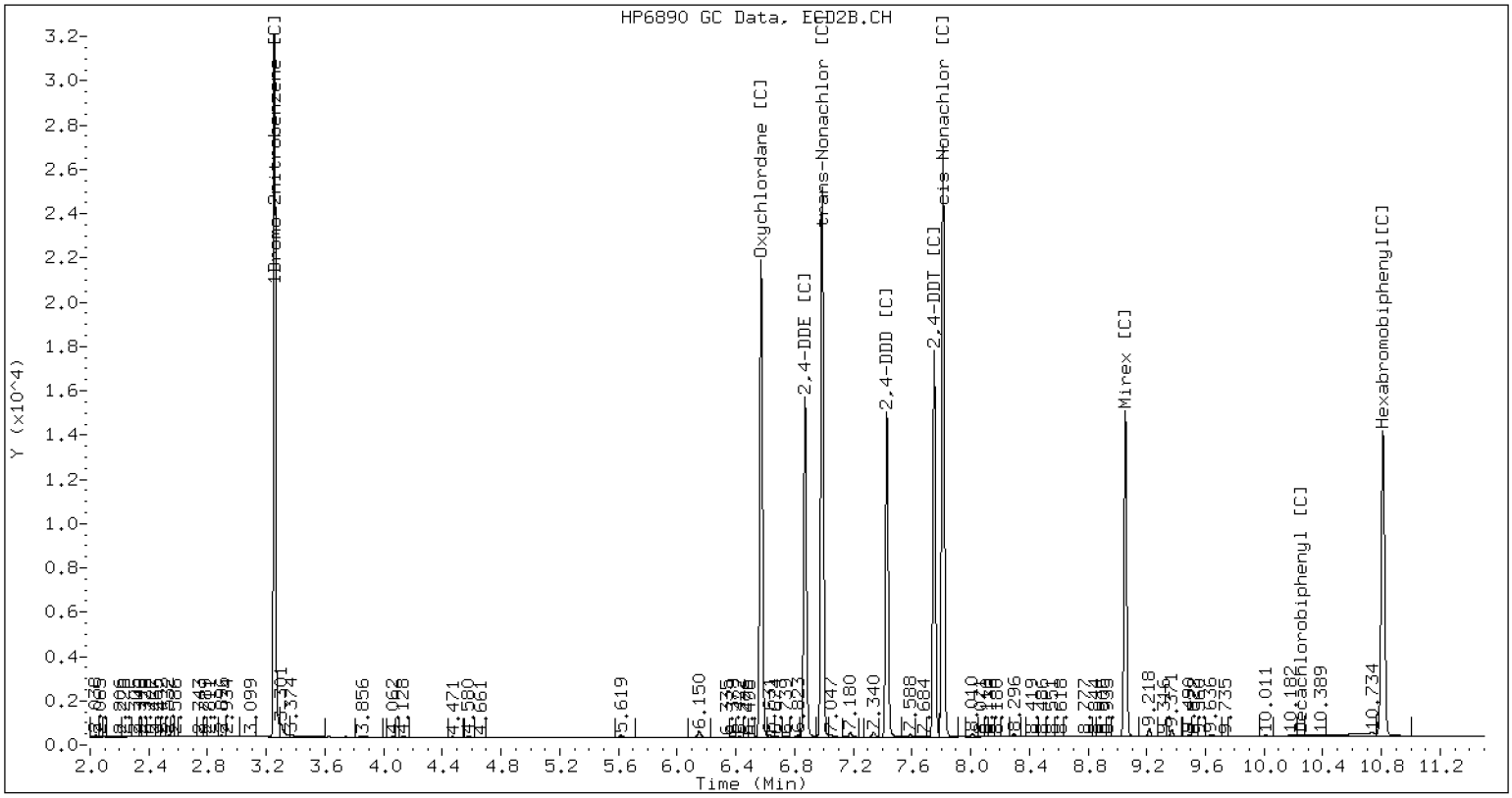


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060118.D SLF0020-CALD CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060119.D
Data file 2: /20230601.b/B20230601.b/23060119.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALE
Client ID:
Injection Date: 01-JUN-2023 20:59
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.958	0.000	923665	6.572	0.000	1069538	138.18	144.63	4.6	Oxychlordane
6.055	0.000	658834	6.871	0.000	746186	135.56	138.97	2.5	2,4-DDE
6.345	0.000	1106846	6.988	0.000	1224451	142.71	148.21	3.8	trans-Nonachlor
6.632	0.000	623638	7.428	0.000	718288	137.66	143.20	3.9	2,4-DDD
6.911	0.000	744569	7.751	0.000	818452	140.35	144.07	2.6	2,4-DDT
7.063	0.000	1159100	7.810	0.000	1277882	145.71	148.40	1.8	cis-Nonachlor
8.037	0.000	696829	9.054	0.000	709465	137.92	141.11	2.3	Mirex
----			4.097	0.000	232	0.00	0.03	---	Tetrachloro-m-xylene
----			10.251	-0.000	2071	0.00	0.42	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

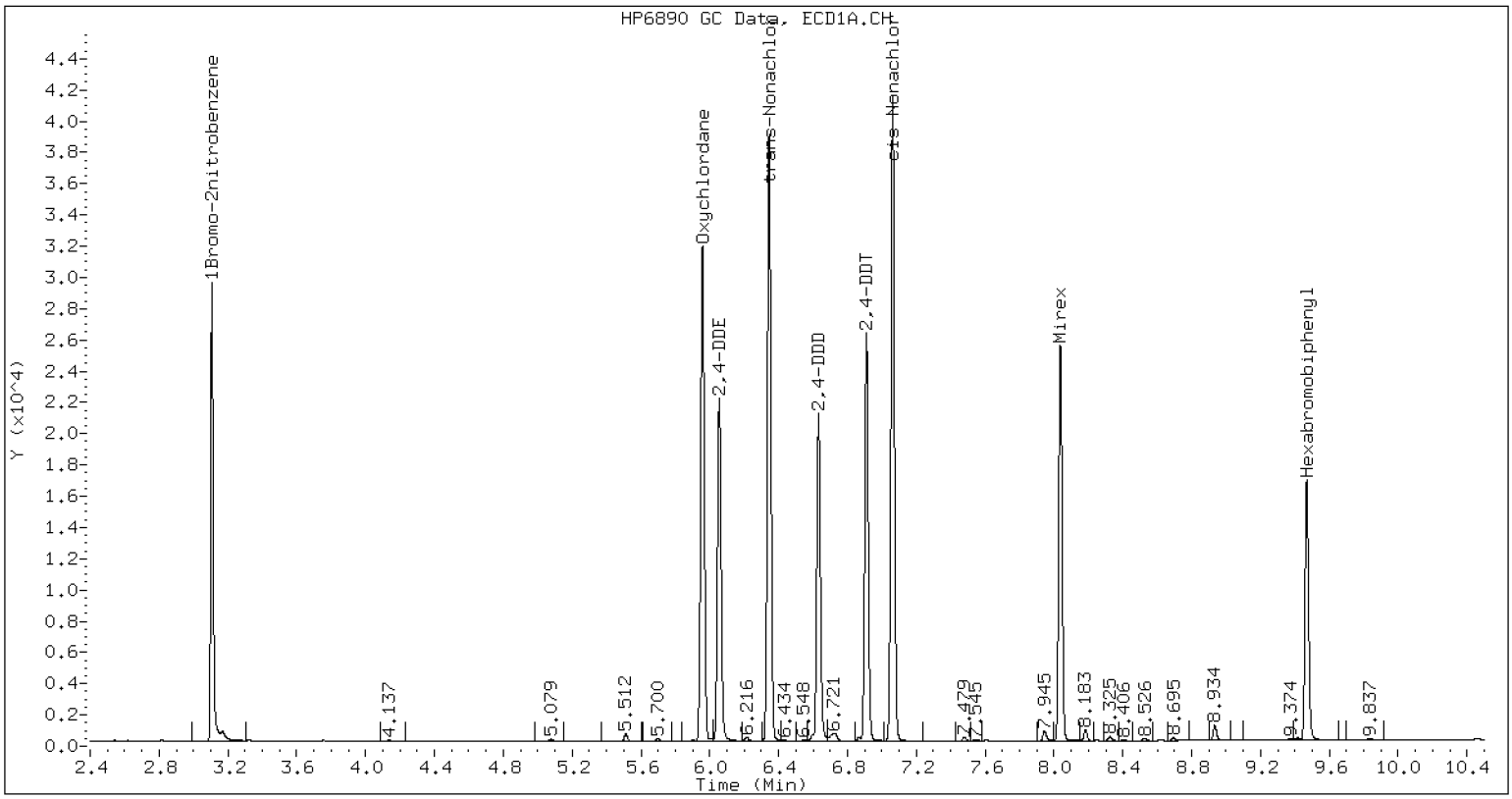
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	603542	-2.5
Hexabromobiphenyl	493109	483391	-2.0

Column 2

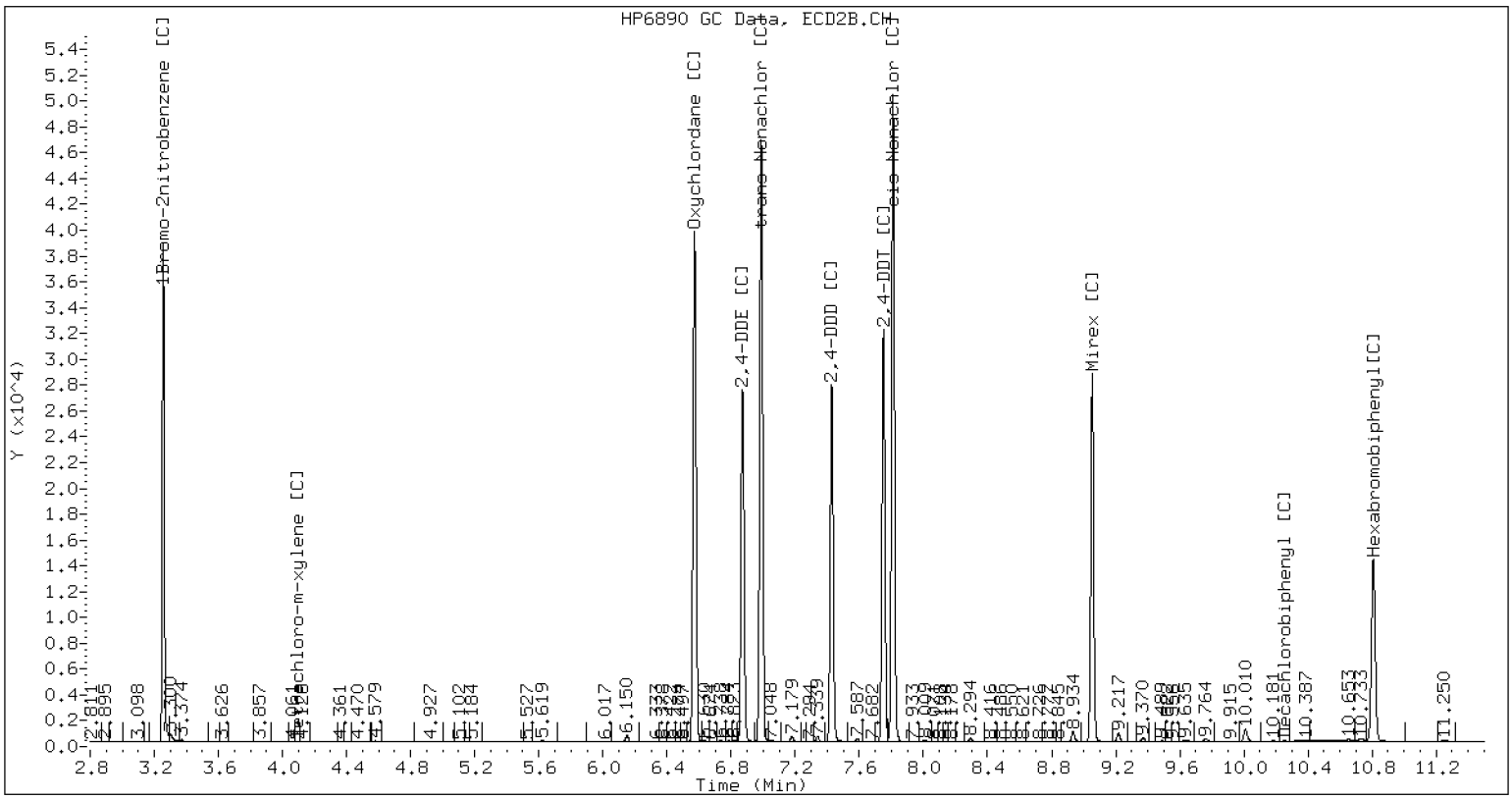
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	700794	0.7
Hexabromobiphenyl	461581	467996	1.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

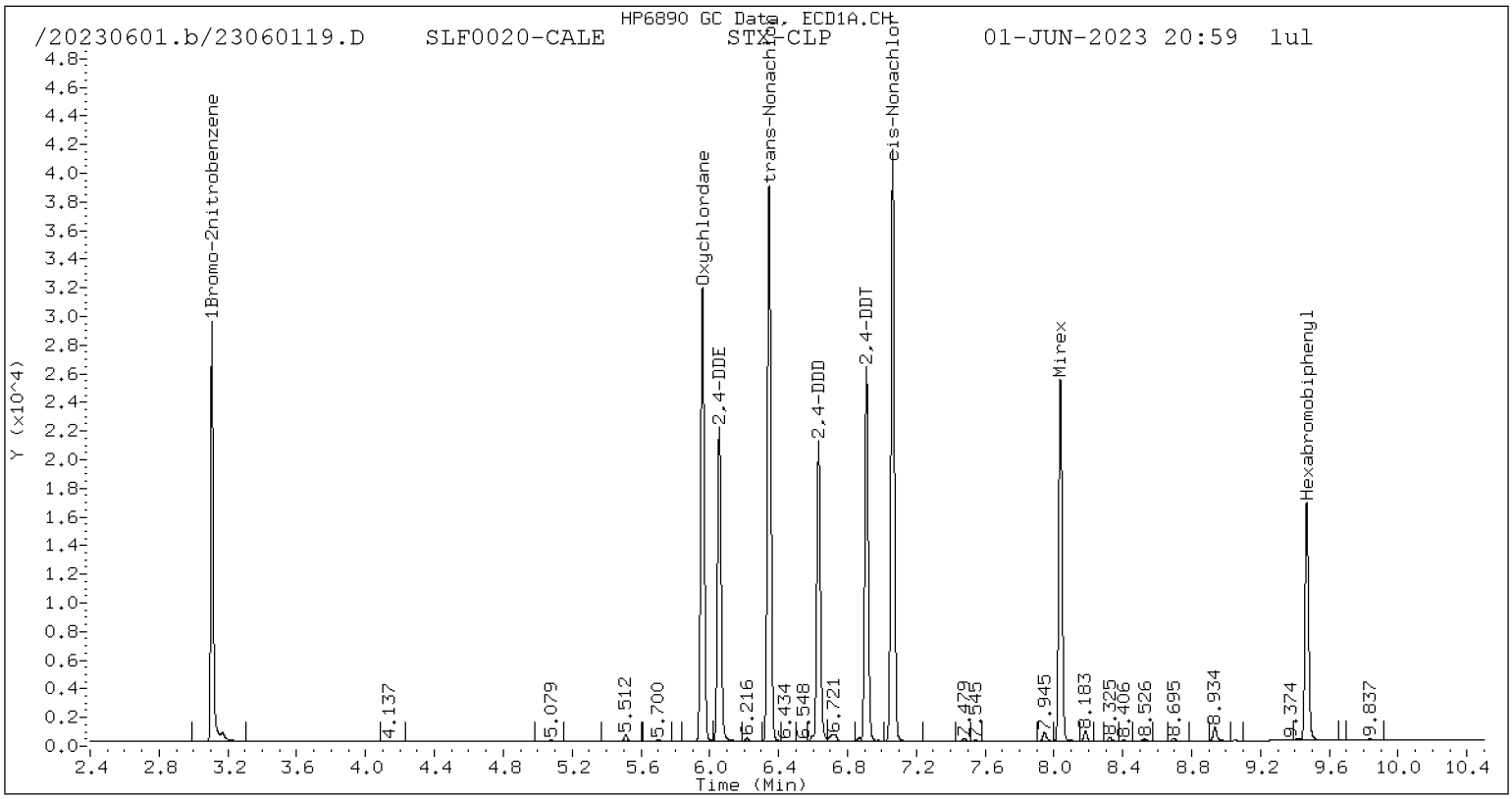
/20230601.b/23060119.D SLF0020-CALE STX-CLP 01-JUN-2023 20:59 1ul



/20230601.b/B20230601.b/23060119.D SLF0020-CALE CLP2 01-JUN-2023 20:59 1ul

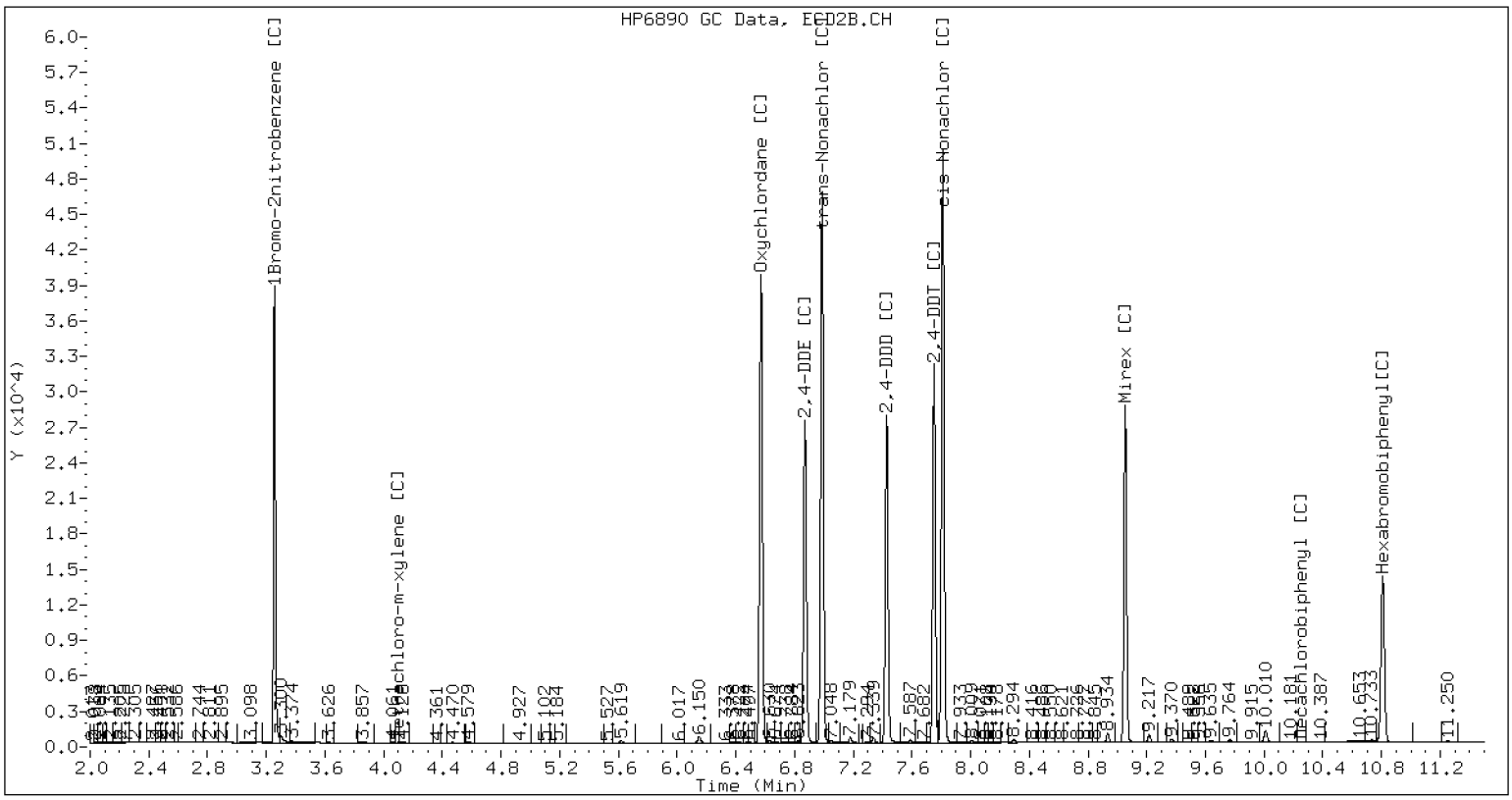


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060119.D SLF0020-CALE CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060120.D
Data file 2: /20230601.b/B20230601.b/23060120.D
Method: \20230601.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALF
Client ID:
Injection Date: 01-JUN-2023 21:18
Report Date: 06/08/2023 12:32
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	481695	-22.2
Hexabromobiphenyl	493109	600441	21.8

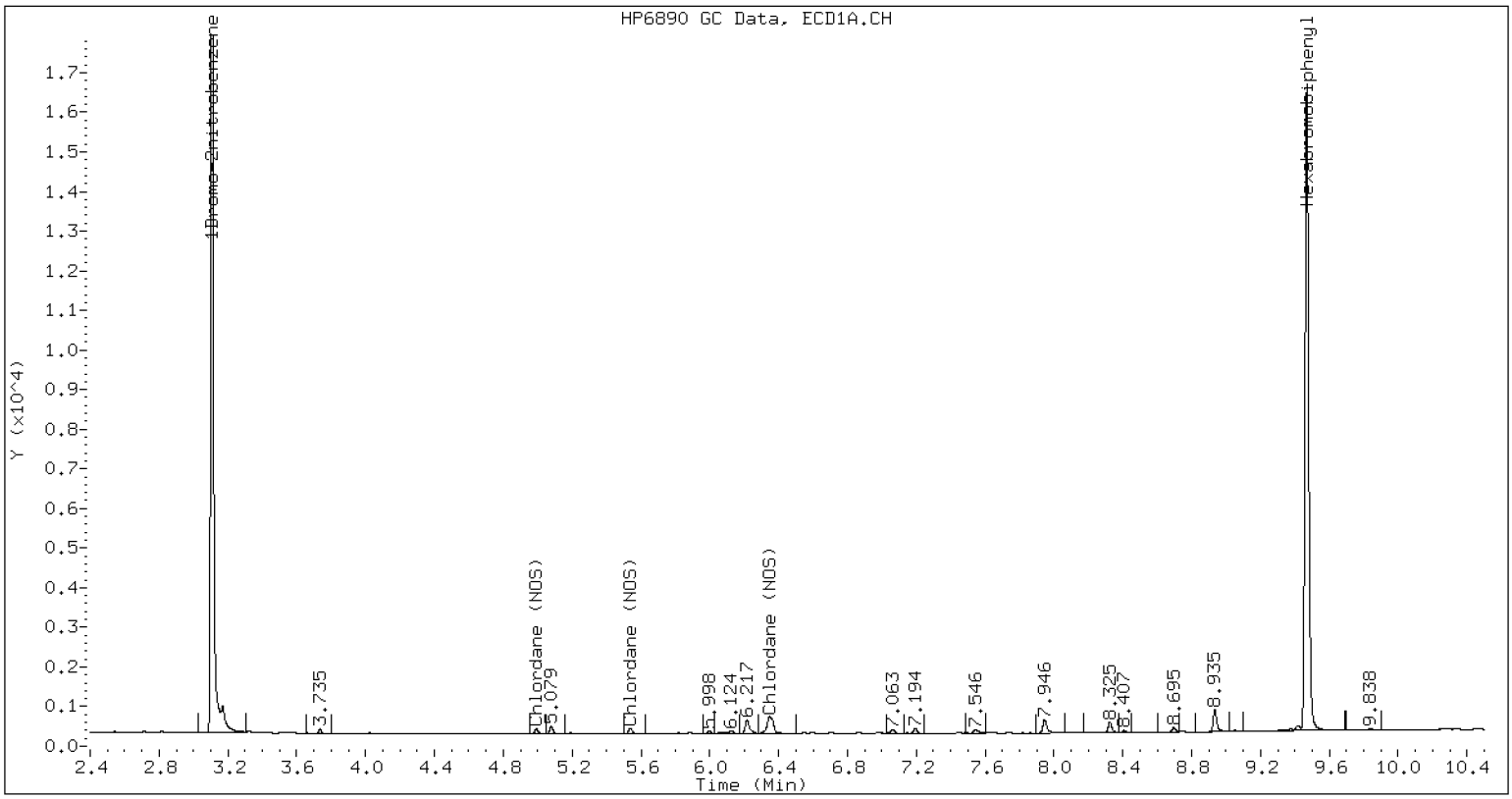
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	463080	-33.5
Hexabromobiphenyl	461581	696277	50.8

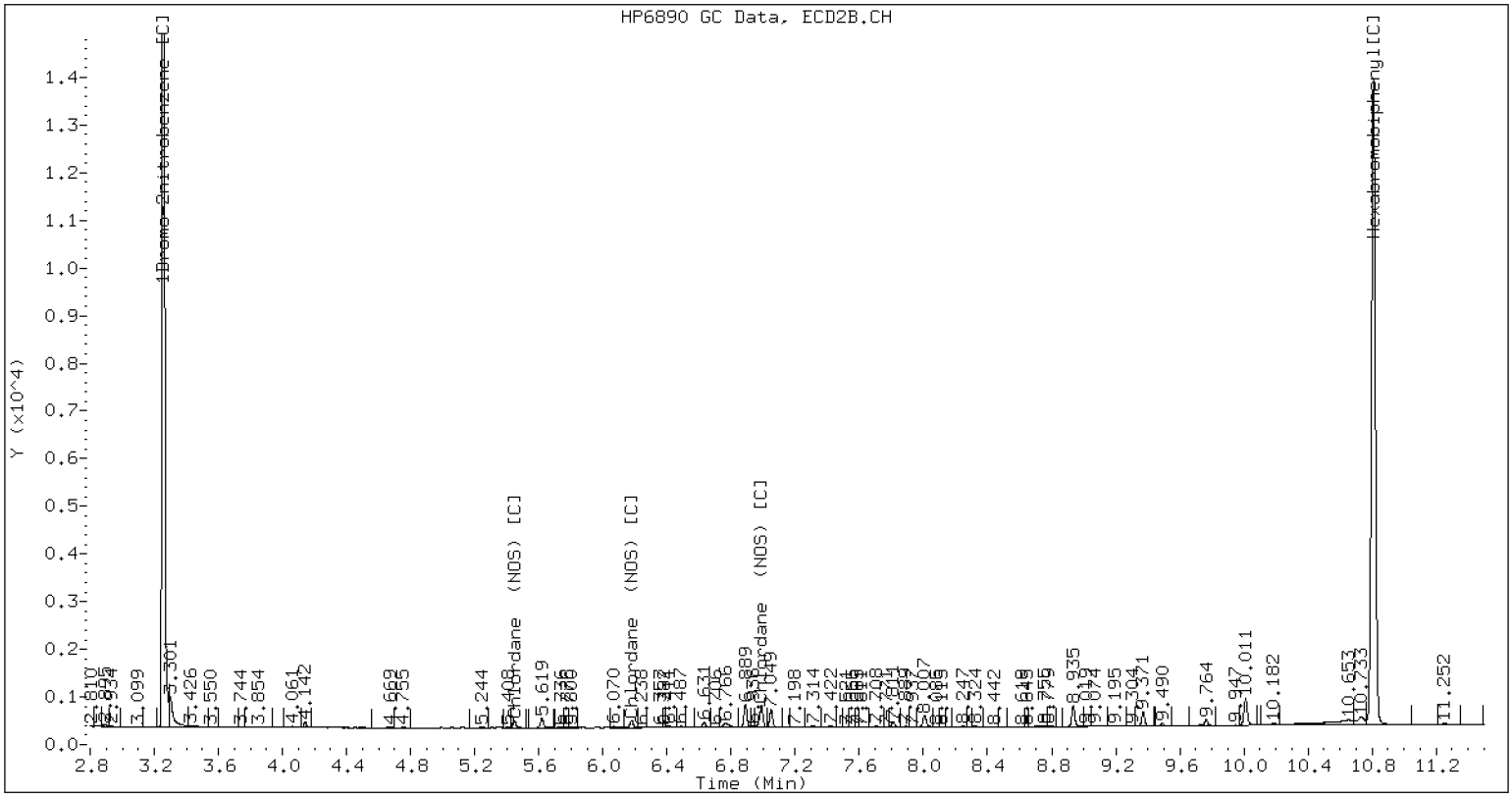
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	4.993	-0.000	3216	13.3	1	5.448	0.000	3640	13.4	
Chlordane (NOS)	2	5.539	0.001	4442	14.4	2	6.179	0.001	4447	14.1	
Chlordane (NOS)	3	6.349	0.001	23271	13.7	3	6.989	0.001	13688	13.1	
Total STX-CLPAve (3 peaks): 13.799						Total CLP2Ave (3 peaks): 13.538				RPD = 2	
Corrected Ave (3 peaks): 13.799						Corrected Ave (3 peaks): 13.538				RPD = 2	

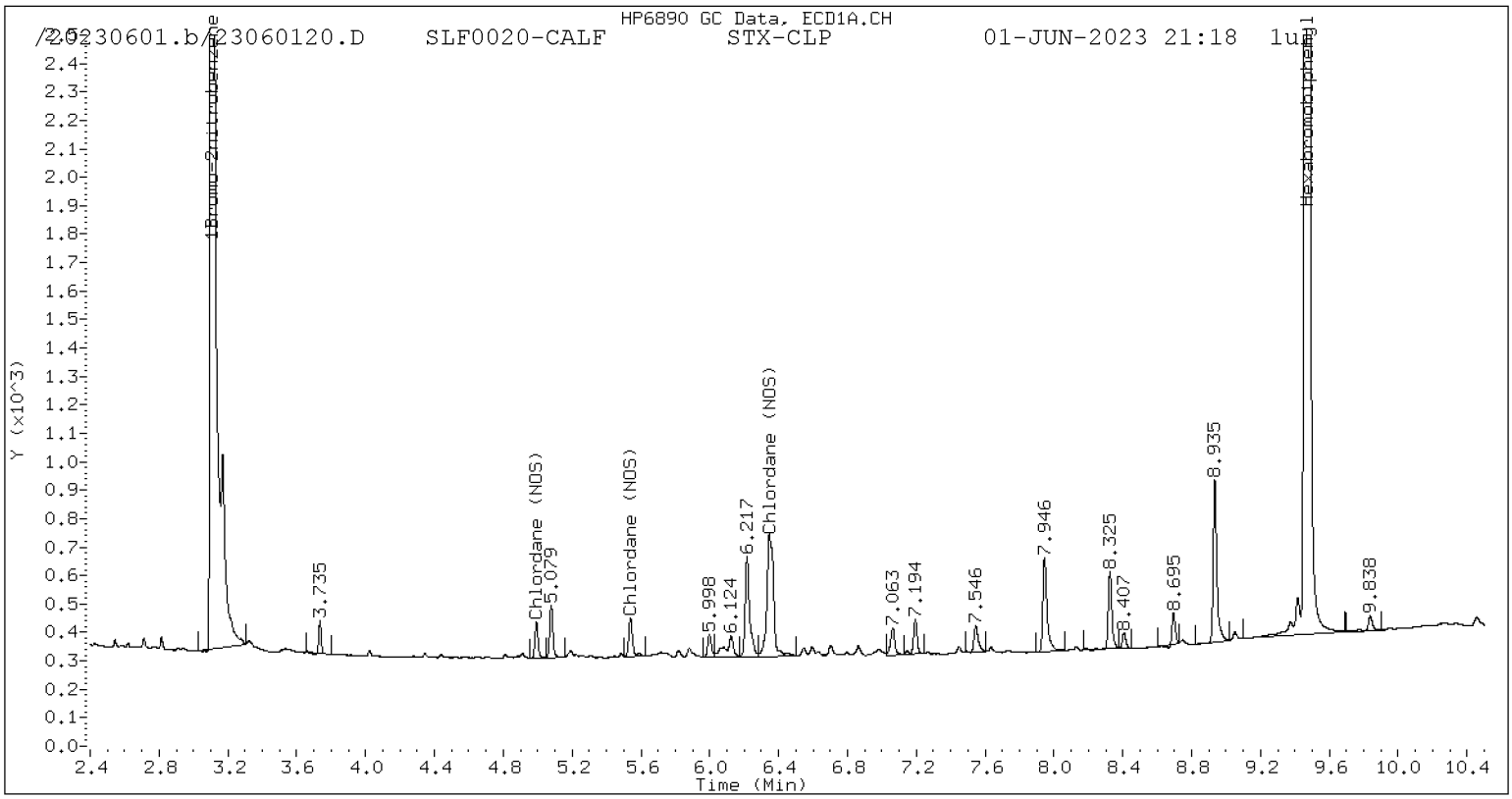
/20230601.b/23060120.D SLF0020-CALF STX-CLP 01-JUN-2023 21:18 1ul



/20230601.b/B20230601.b/23060120.D SLF0020-CALF CLP2 01-JUN-2023 21:18 1ul

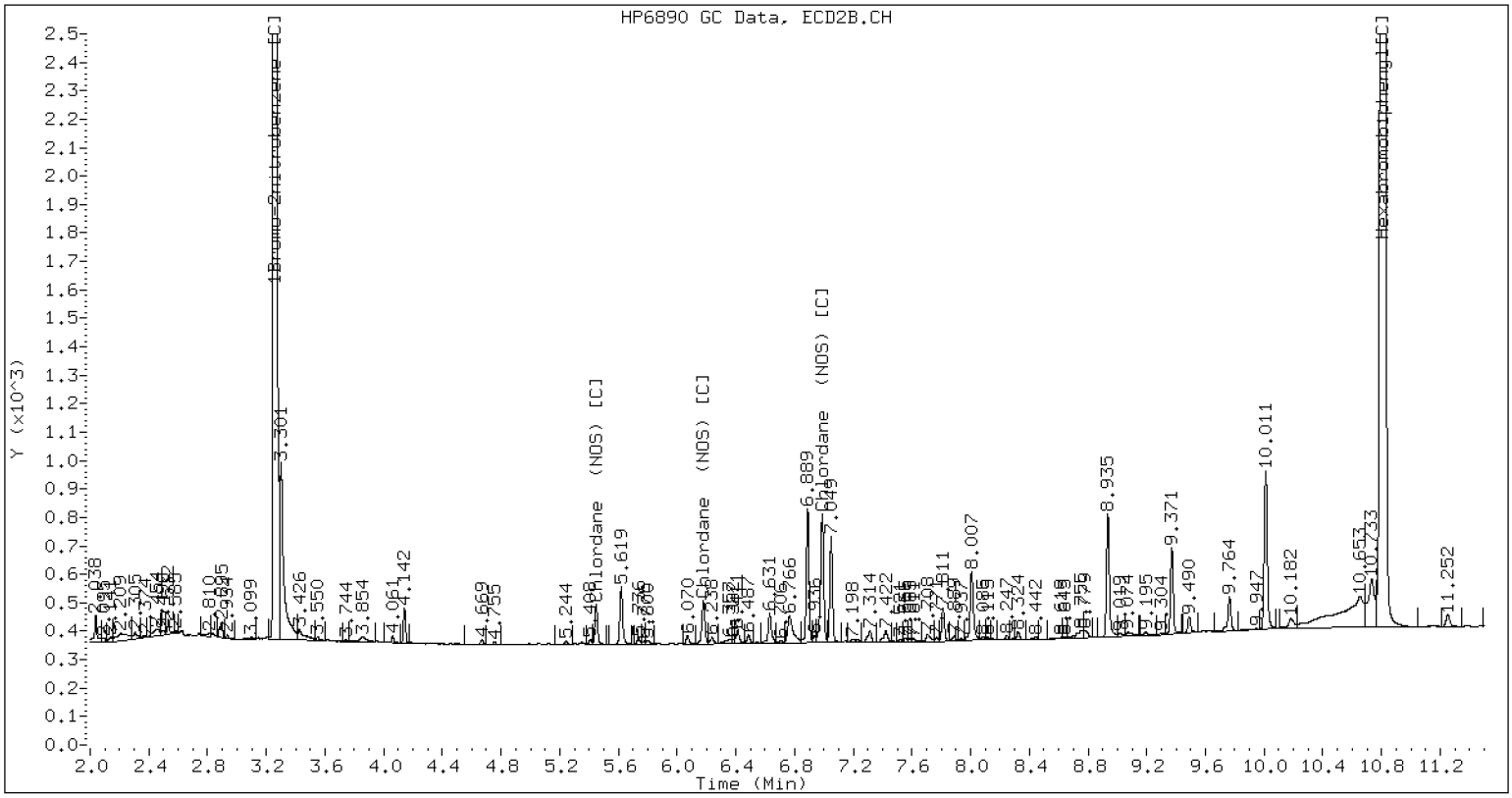


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060120.D SLF0020-CALF CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060121.D
Data file 2: /20230601.b/B20230601.b/23060121.D
Method: \20230601.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALG
Client ID:
Injection Date: 01-JUN-2023 21:36
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	501429	-19.0
Hexabromobiphenyl	493109	627195	27.2

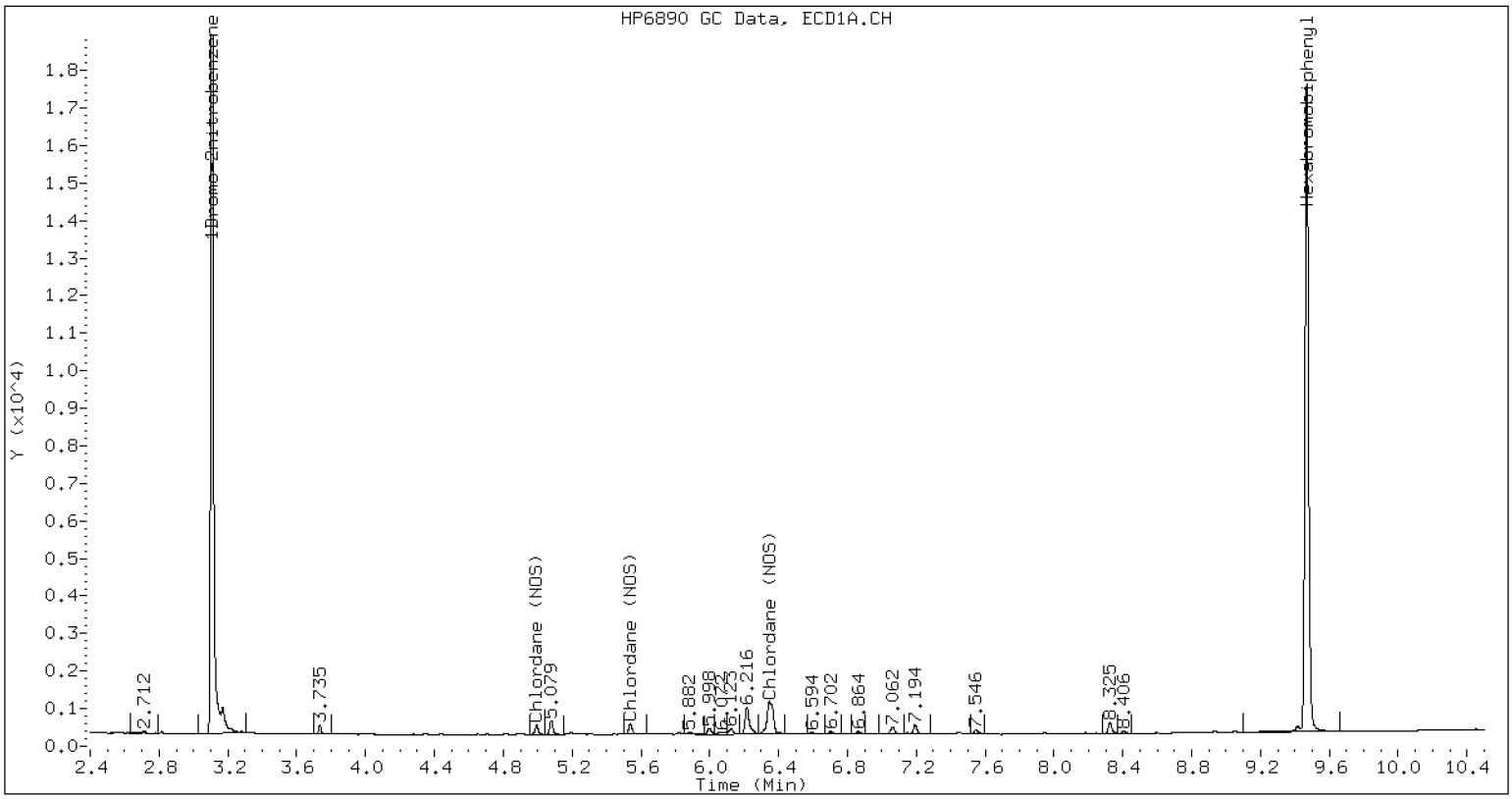
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	482879	-30.6
Hexabromobiphenyl	461581	728454	57.8

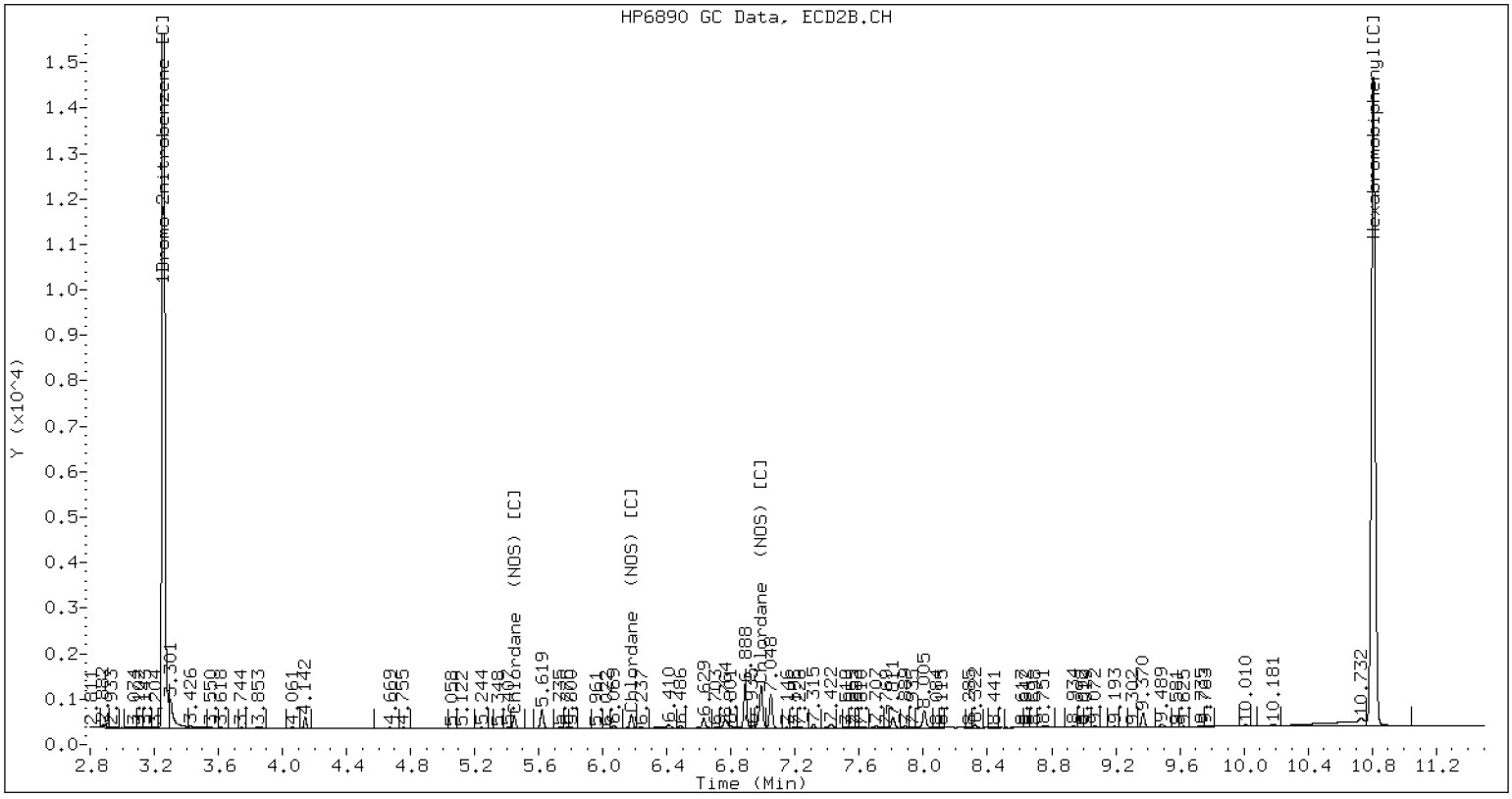
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	4.993	-0.000	6454	25.6	1	5.447	-0.001	7199	25.3	
Chlordane (NOS)	2	5.539	0.000	8626	26.8	2	6.177	-0.001	8835	26.9	
Chlordane (NOS)	3	6.349	0.001	45920	25.9	3	6.988	-0.001	27771	25.4	
Total STX-CLPAve (3 peaks): 26.066						Total CLP2Ave (3 peaks): 25.846				RPD = 1	
Corrected Ave (3 peaks): 26.066						Corrected Ave (3 peaks): 25.846				RPD = 1	

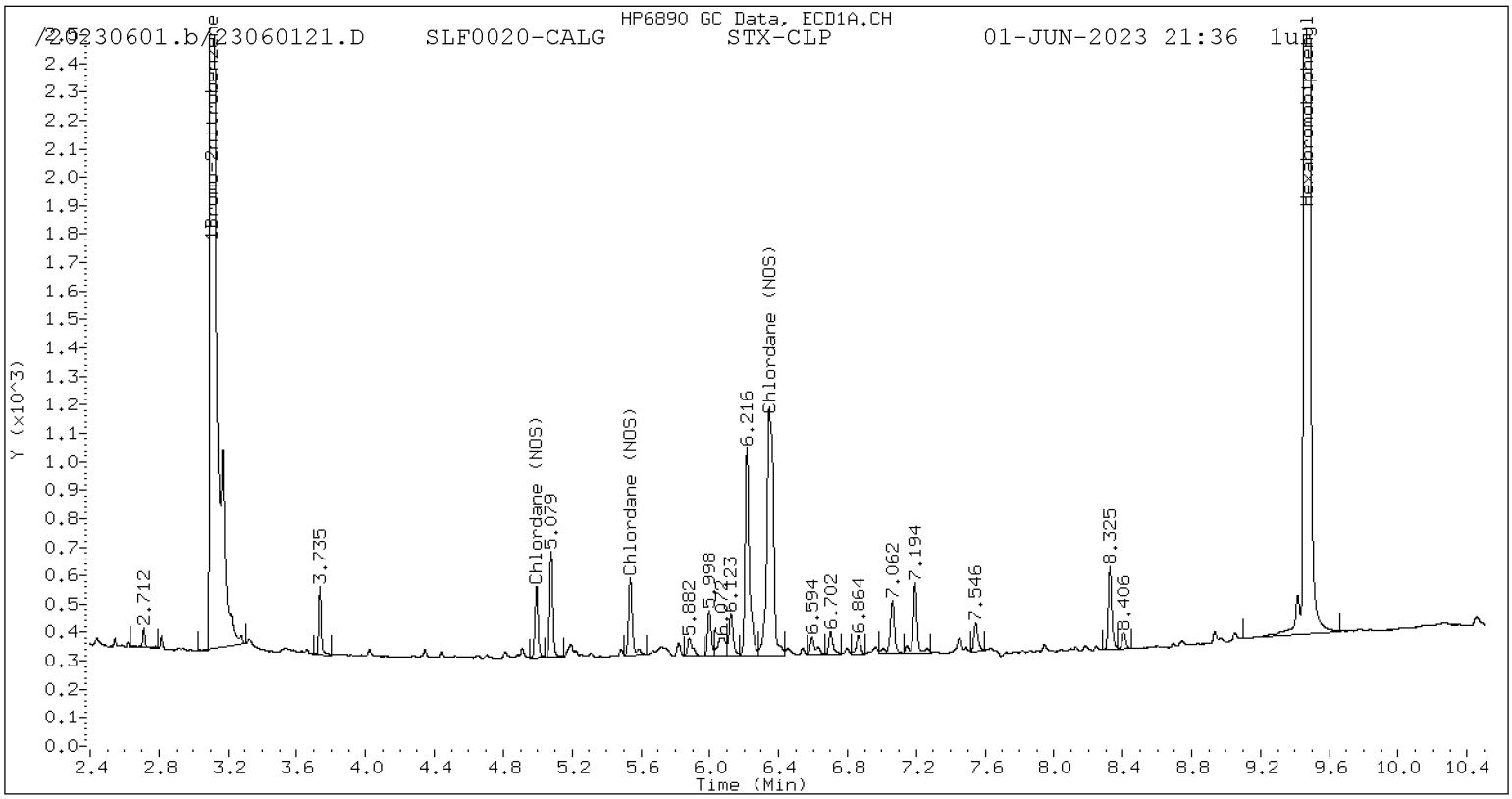
/20230601.b/23060121.D SLF0020-CALG STX-CLP 01-JUN-2023 21:36 1ul



/20230601.b/B20230601.b/23060121.D SLF0020-CALG CLP2 01-JUN-2023 21:36 1ul

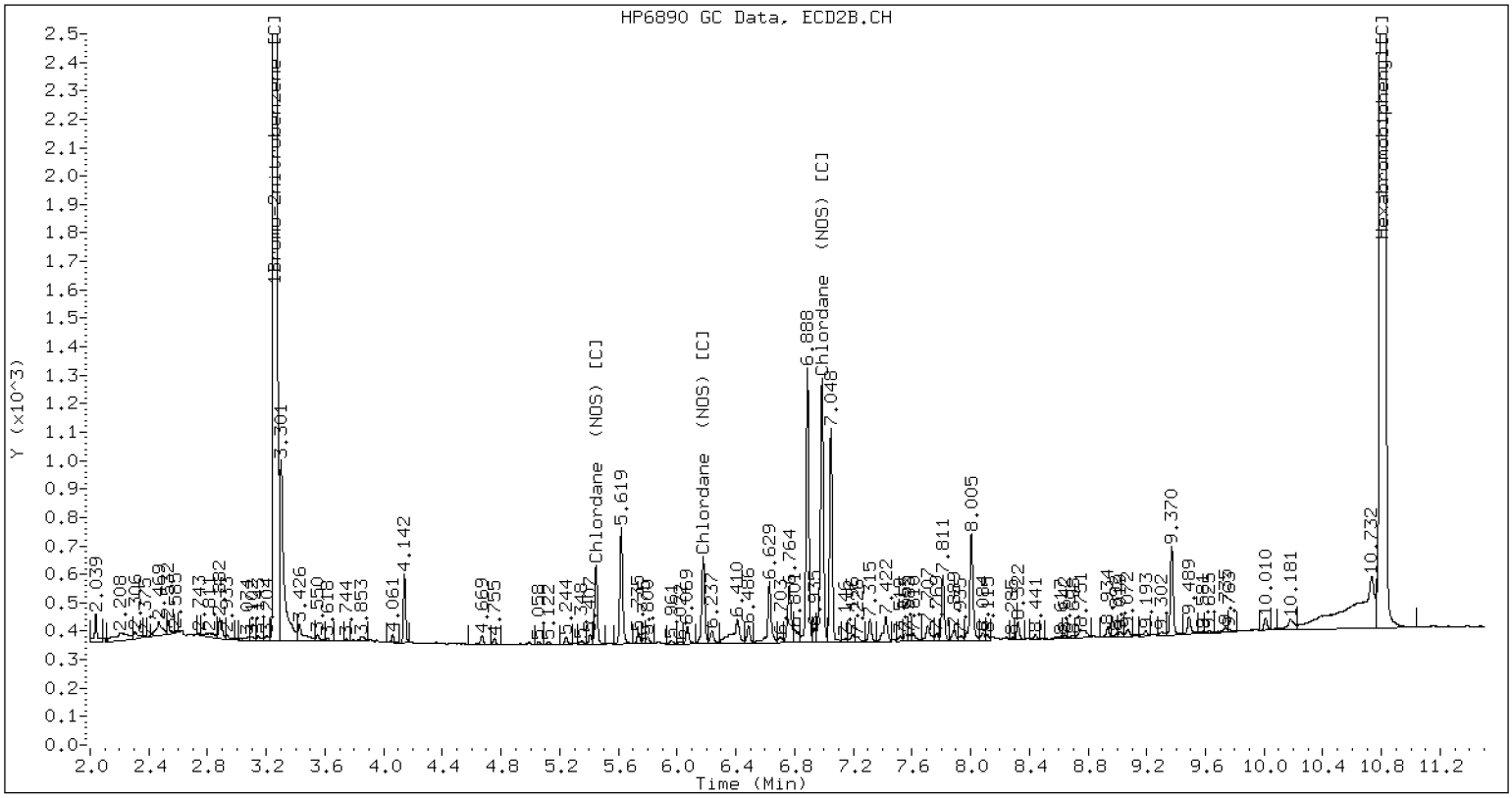


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060121.D SLF0020-CALG CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060122.D
Data file 2: /20230601.b/B20230601.b/23060122.D
Method: \20230601.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALH
Client ID:
Injection Date: 01-JUN-2023 21:55
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	499059	-19.4
Hexabromobiphenyl	493109	626405	27.0

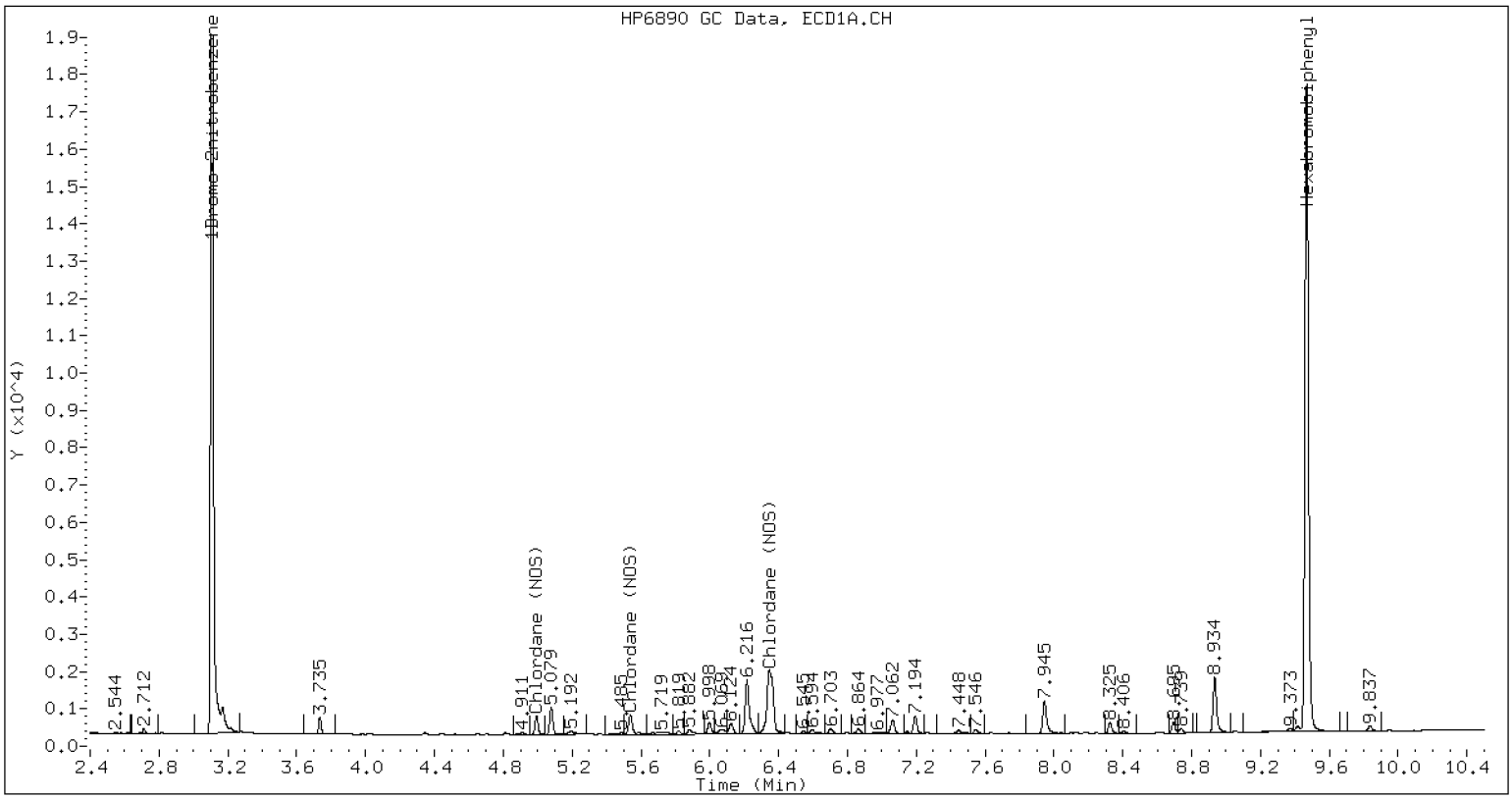
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	486092	-30.2
Hexabromobiphenyl	461581	724419	56.9

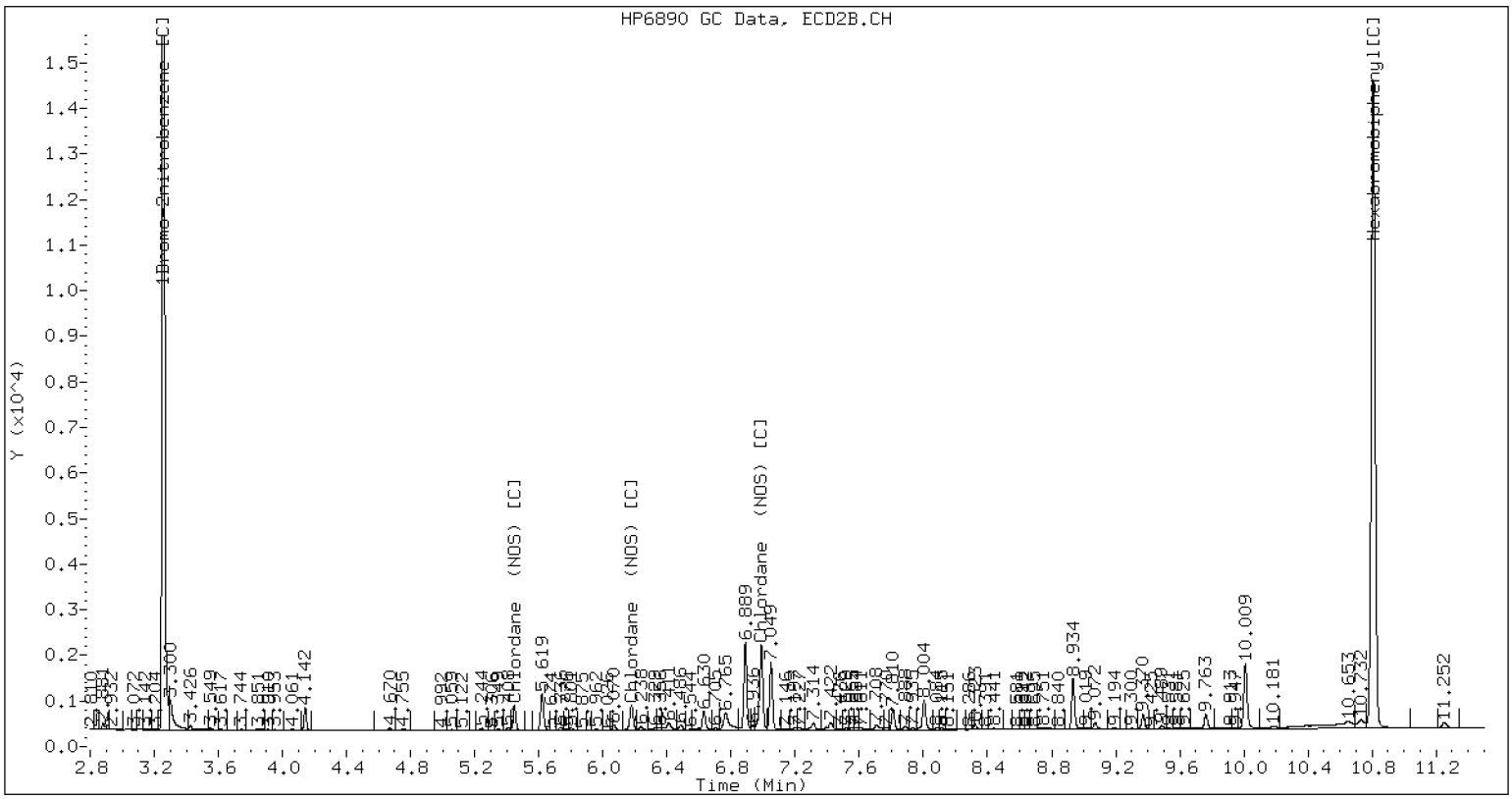
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	4.993	-0.000	12455	49.4	1	5.448	-0.000	13626	48.1
Chlordane (NOS)	2	5.539	0.000	18314	56.9	2	6.178	-0.000	16862	51.6
Chlordane (NOS)	3	6.349	0.001	89947	50.7	3	6.989	0.000	55210	50.8
Total STX-CLPAve (3 peaks): 52.343						Total CLP2Ave (3 peaks): 50.147				RPD = 4
Corrected Ave (3 peaks): 52.343						Corrected Ave (3 peaks): 50.147				RPD = 4

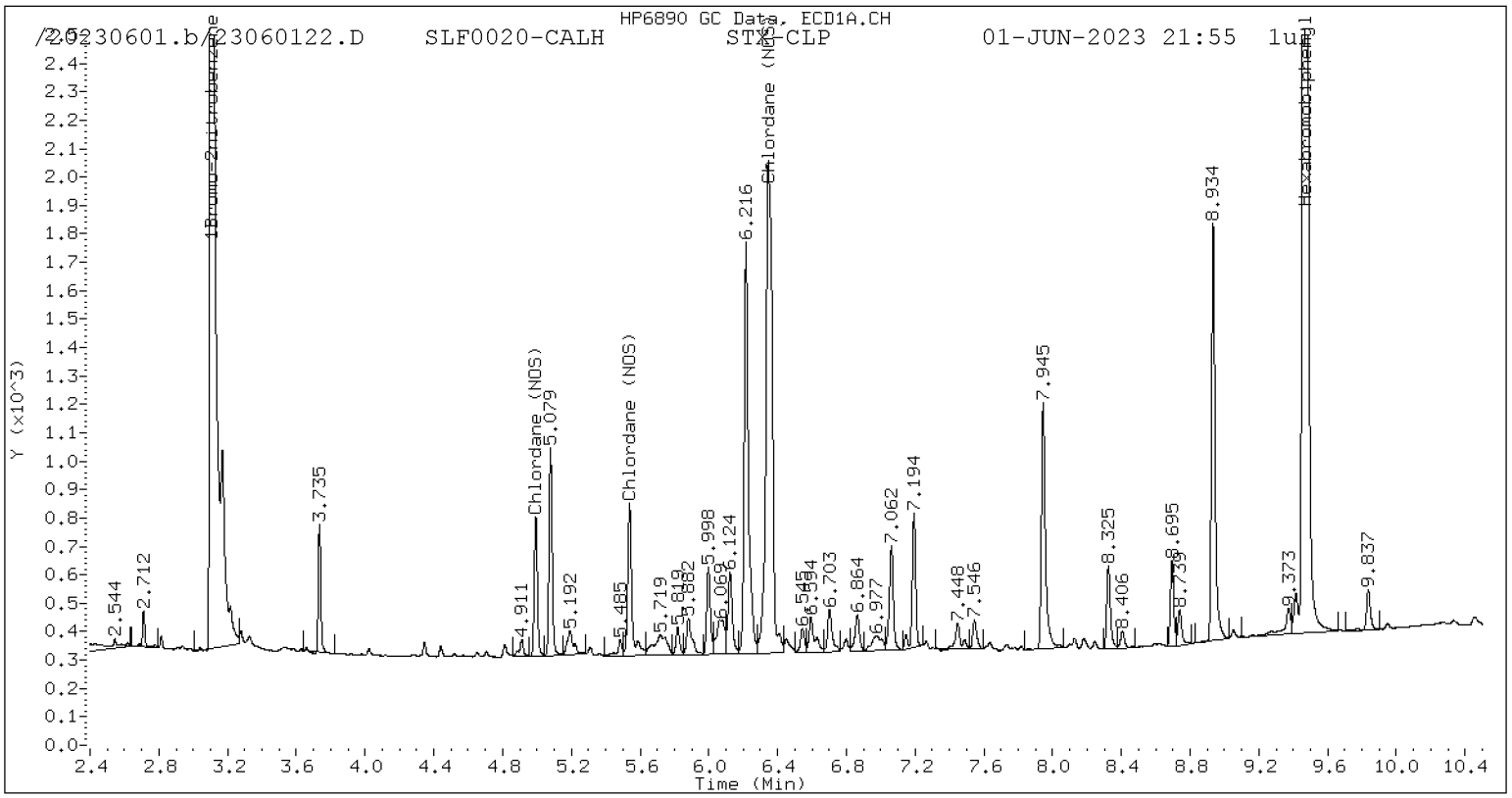
/20230601.b/23060122.D SLF0020-CALH STX-CLP 01-JUN-2023 21:55 1ul



/20230601.b/B20230601.b/23060122.D SLF0020-CALH CLP2 01-JUN-2023 21:55 1ul

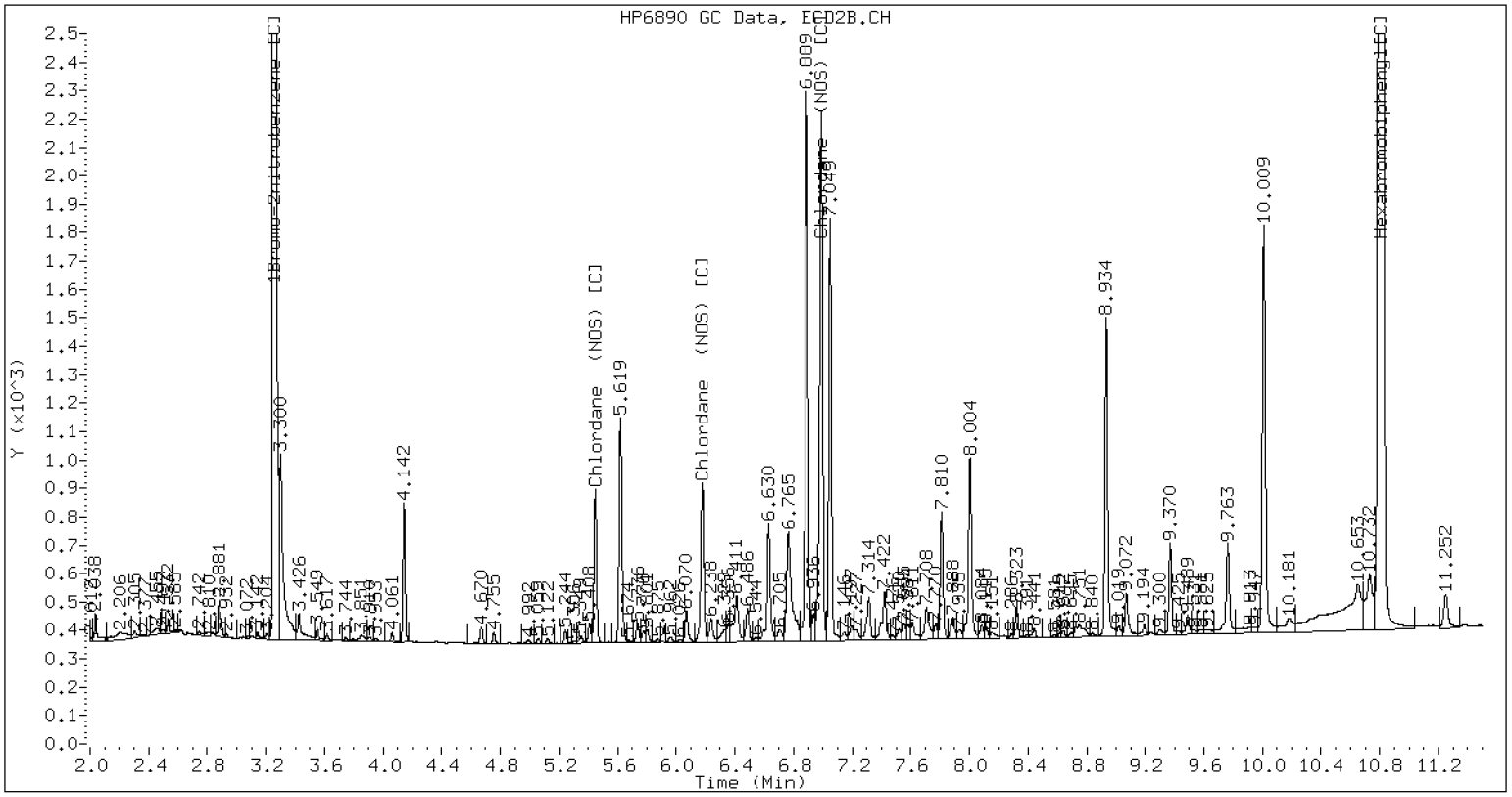


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060122.D SLF0020-CALH CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060123.D
Data file 2: /20230601.b/B20230601.b/23060123.D
Method: \20230601.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALI
Client ID:
Injection Date: 01-JUN-2023 22:14
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP on col	CLP2 on col	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response				
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	487102	-21.3
Hexabromobiphenyl	493109	615097	24.7

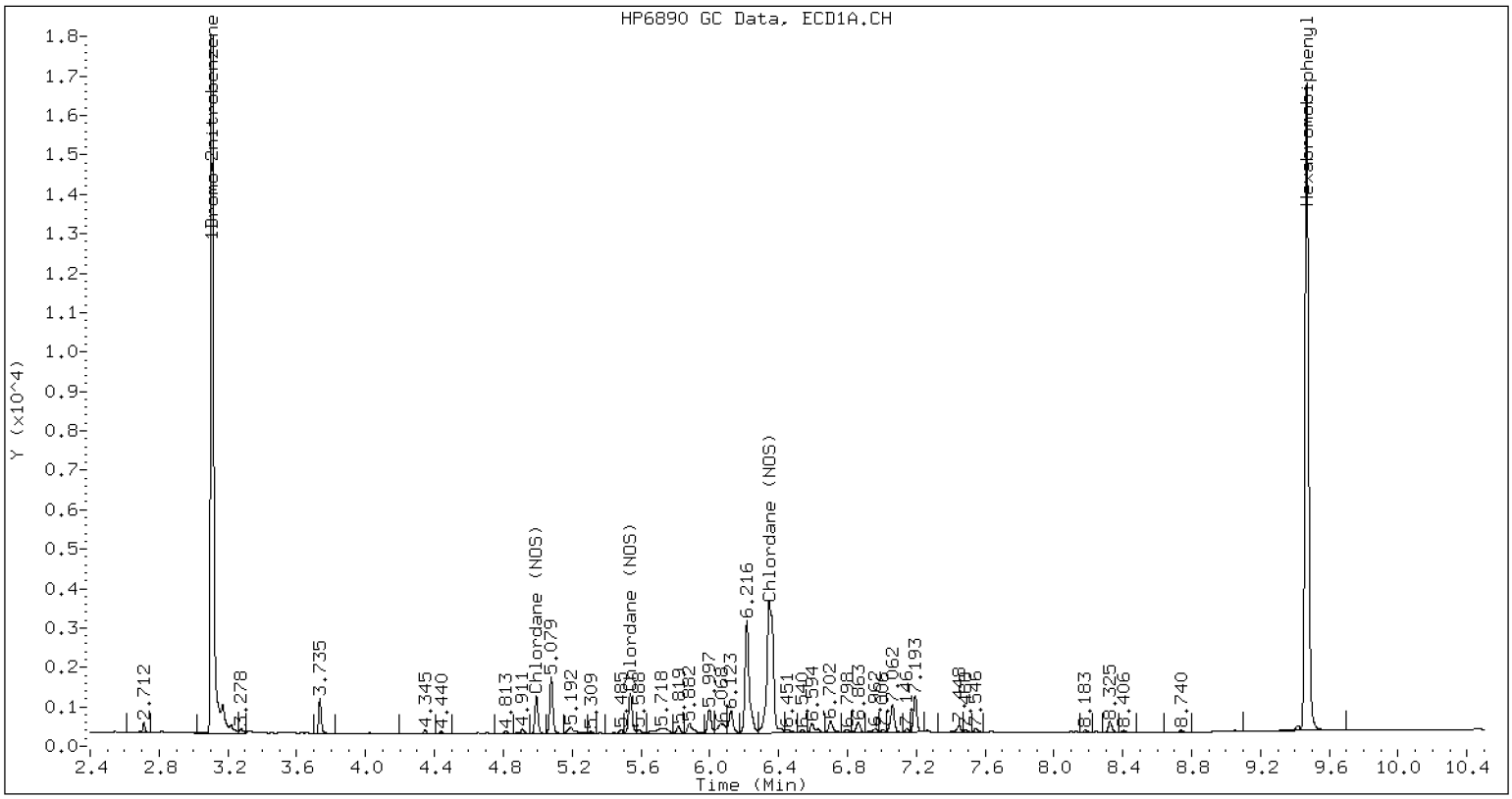
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	468250	-32.7
Hexabromobiphenyl	461581	709251	53.7

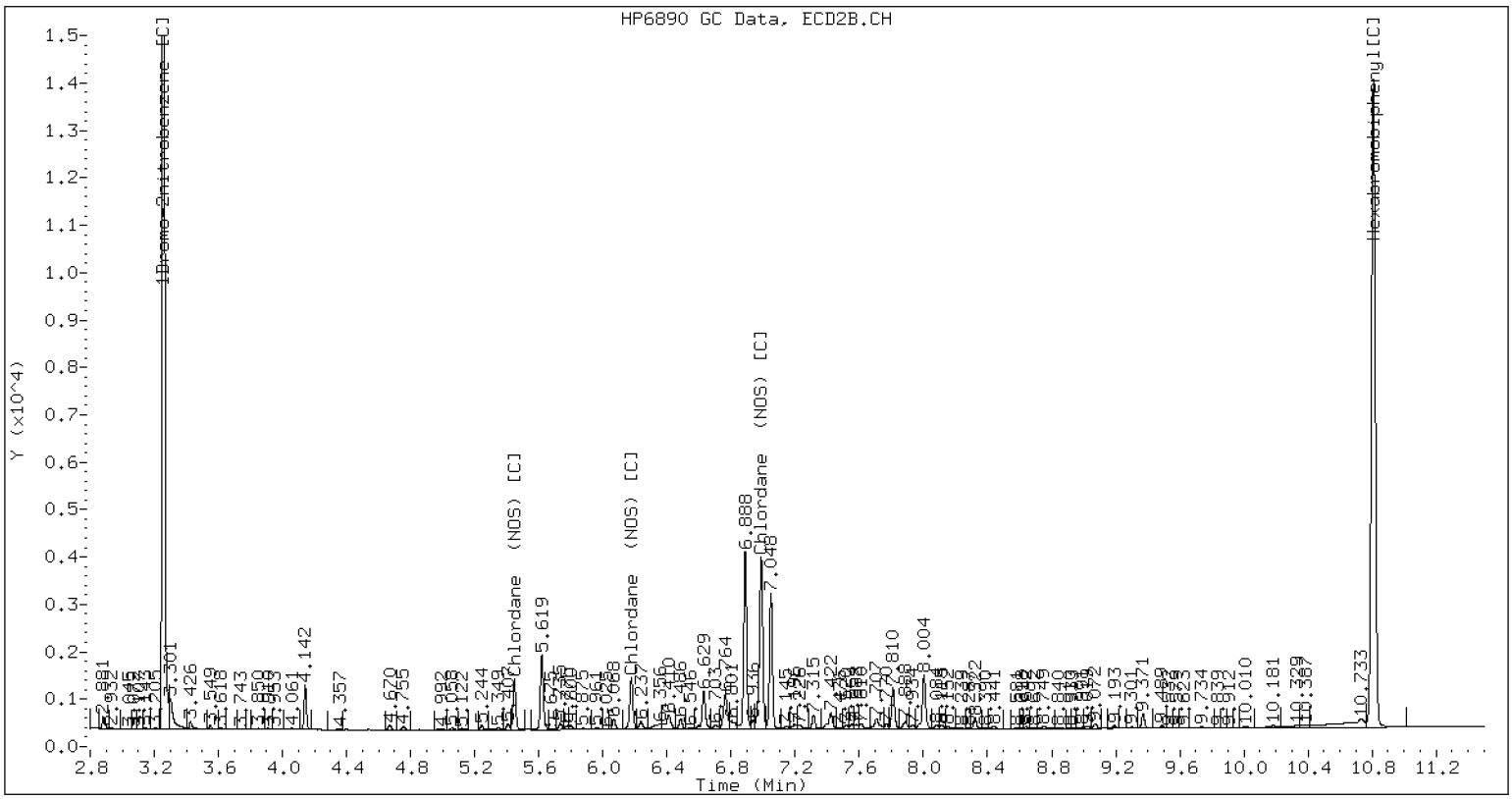
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	4.993	-0.000	24408	98.6	1	5.447	-0.001	26920	97.0
Chlordane (NOS)	2	5.538	-0.000	30213	95.6	2	6.177	-0.001	31979	99.9
Chlordane (NOS)	3	6.349	0.001	175049	100.5	3	6.988	-0.000	108685	102.2
Total STX-CLPAve (3 peaks): 98.241						Total CLP2Ave (3 peaks): 99.681			RPD = 1	
Corrected Ave (3 peaks): 98.241						Corrected Ave (3 peaks): 99.681			RPD = 1	

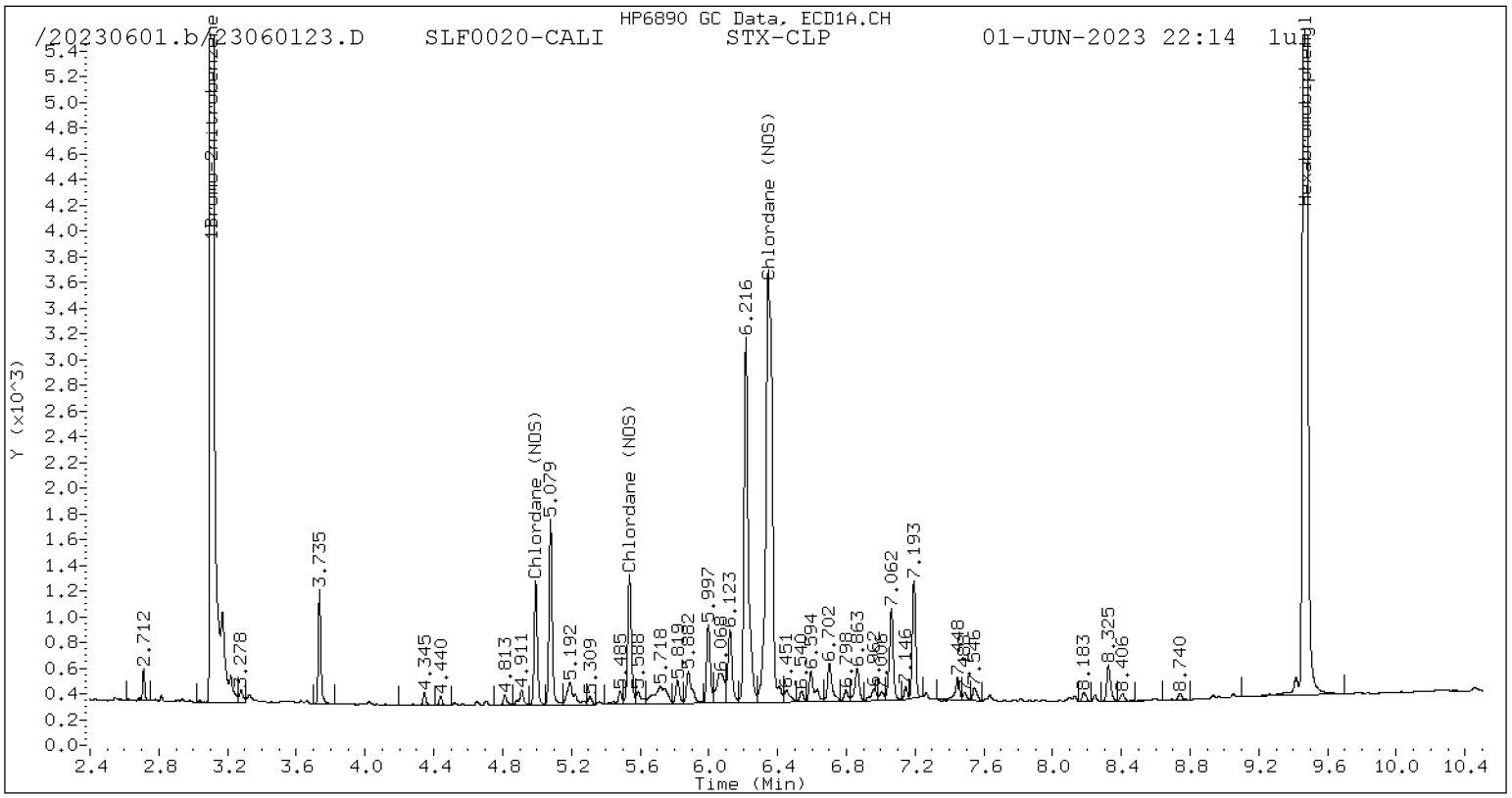
/20230601.b/23060123.D SLF0020-CALI STX-CLP 01-JUN-2023 22:14 1ul



/20230601.b/B20230601.b/23060123.D SLF0020-CALI CLP2 01-JUN-2023 22:14 1ul

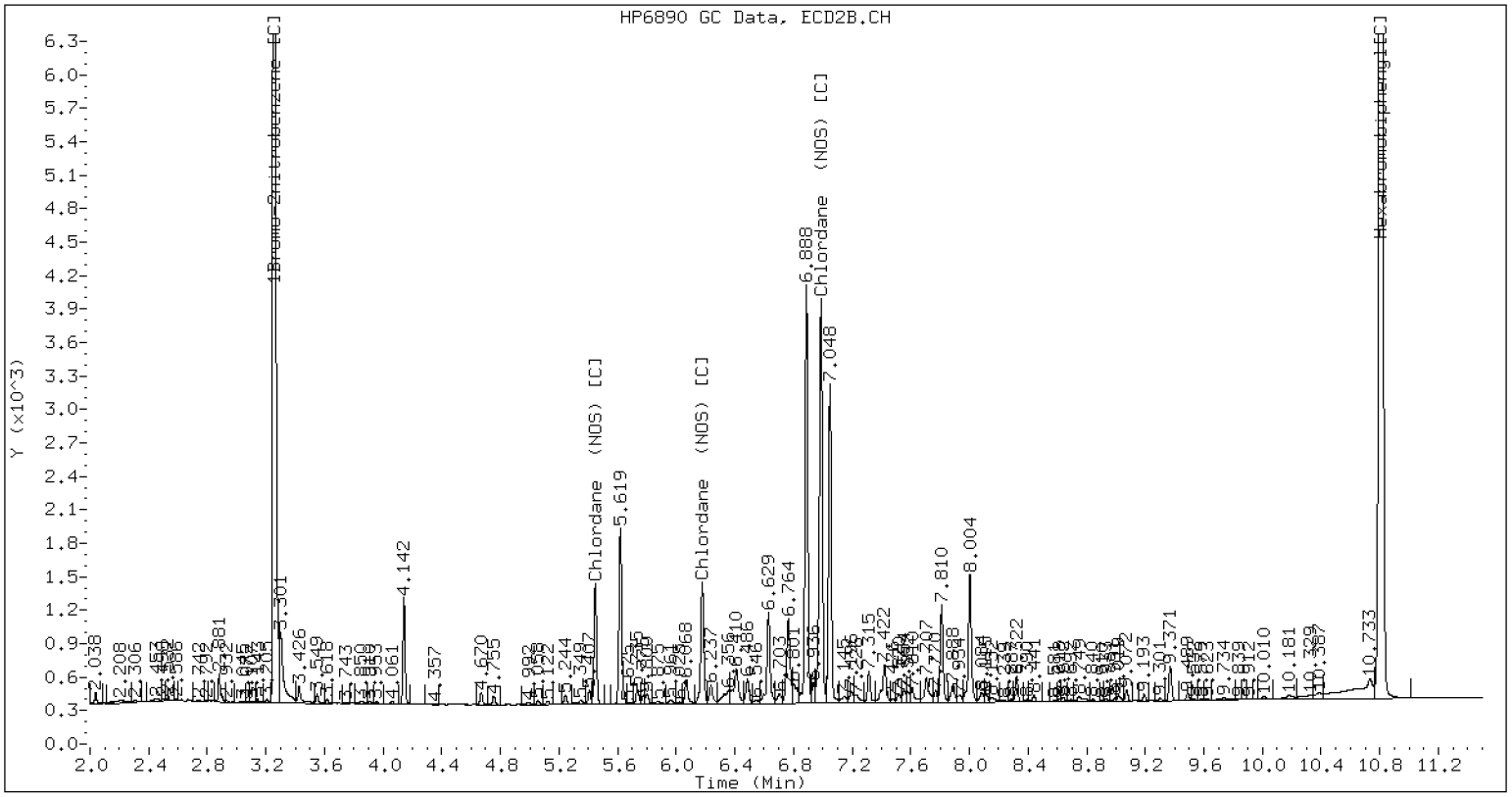


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060123.D SLF0020-CALI CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060125.D
Data file 2: /20230601.b/B20230601.b/23060125.D
Method: \20230601.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALK
Client ID:
Injection Date: 01-JUN-2023 22:51
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	492910	-20.4
Hexabromobiphenyl	493109	611734	24.1

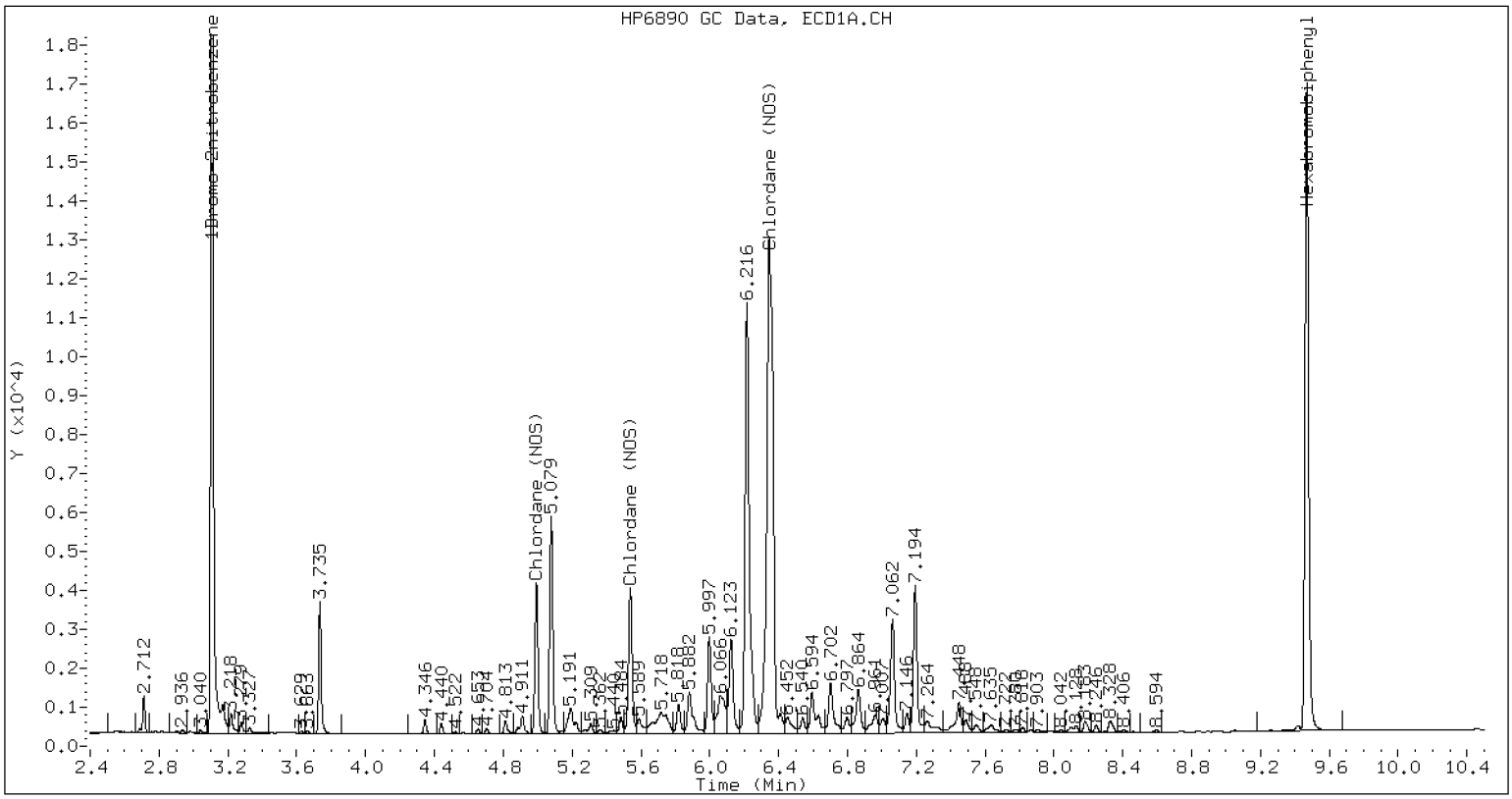
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	475103	-31.7
Hexabromobiphenyl	461581	715739	55.1

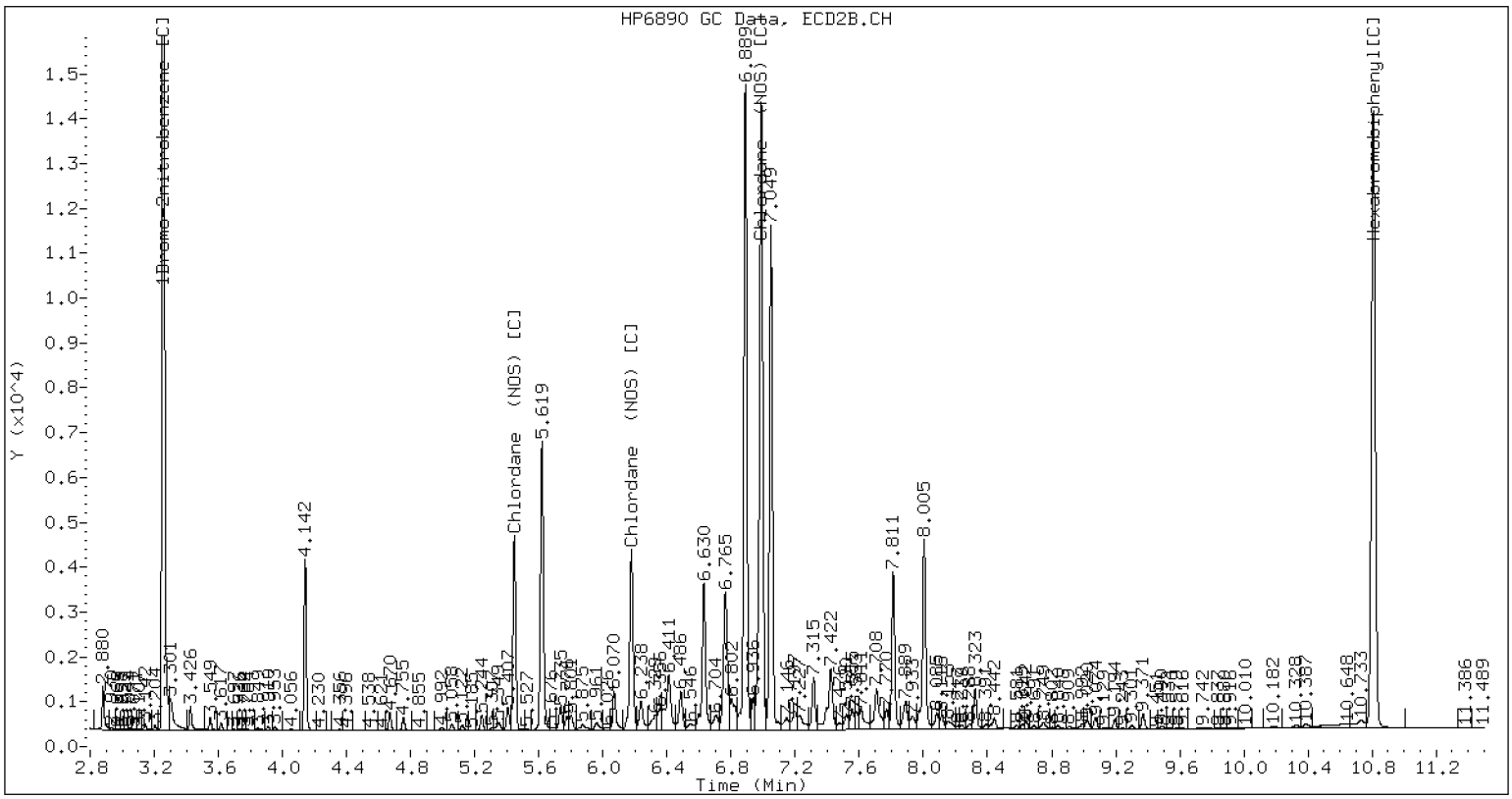
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	4.993	-0.000	97028	394.1	1	5.447	-0.001	109117	389.6	
Chlordane (NOS)	2	5.538	-0.000	113583	361.4	2	6.178	-0.001	120641	373.4	
Chlordane (NOS)	3	6.348	-0.000	664468	383.7	3	6.988	-0.000	422079	393.2	
Total STX-CLPAve (3 peaks): 379.723						Total CLP2Ave (3 peaks): 385.382				RPD = 1	
Corrected Ave (3 peaks): 379.723						Corrected Ave (3 peaks): 385.382				RPD = 1	

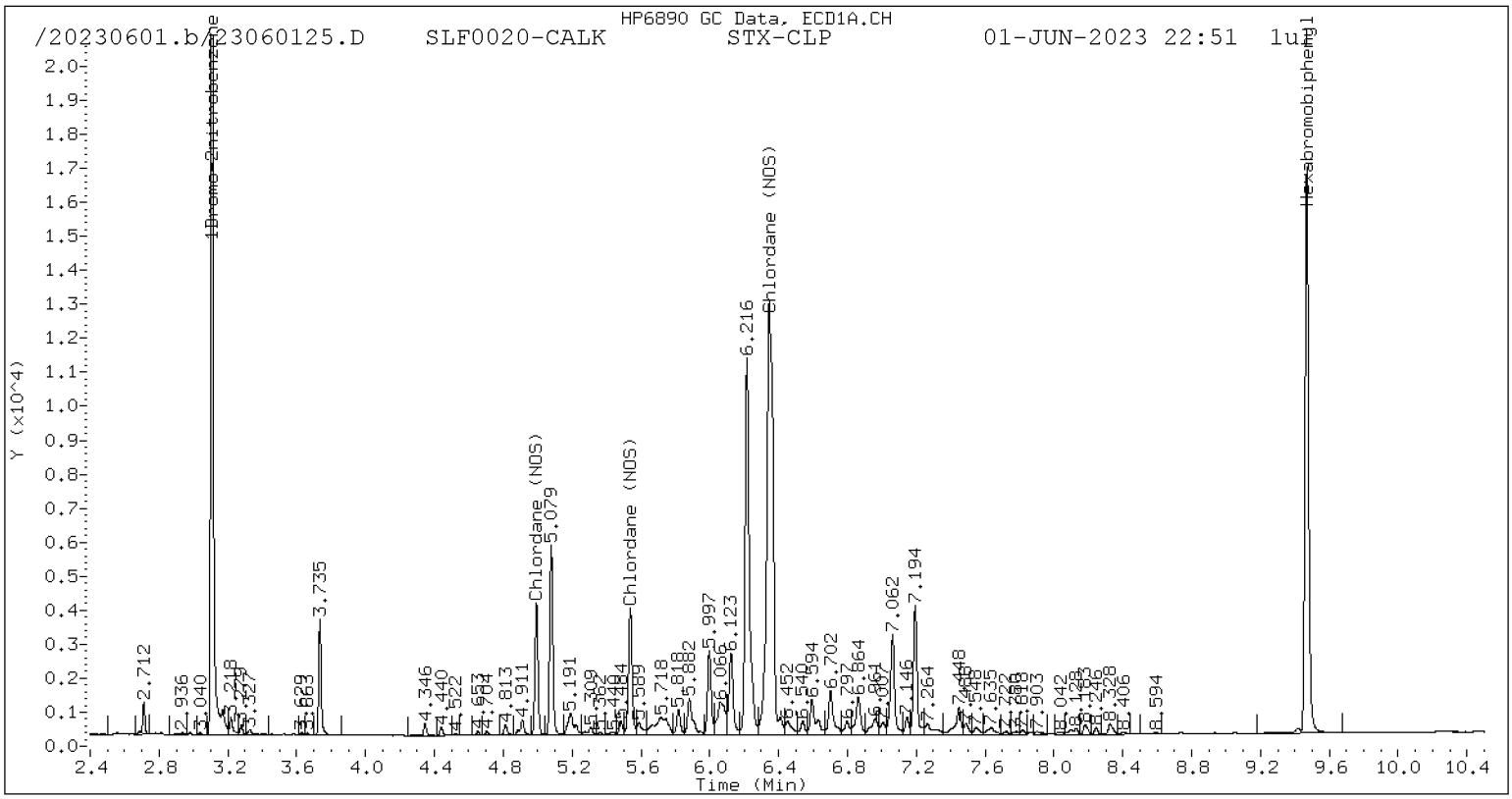
/20230601.b/23060125.D SLF0020-CALK STX-CLP 01-JUN-2023 22:51 1ul



/20230601.b/B20230601.b/23060125.D SLF0020-CALK CLP2 01-JUN-2023 22:51 1ul

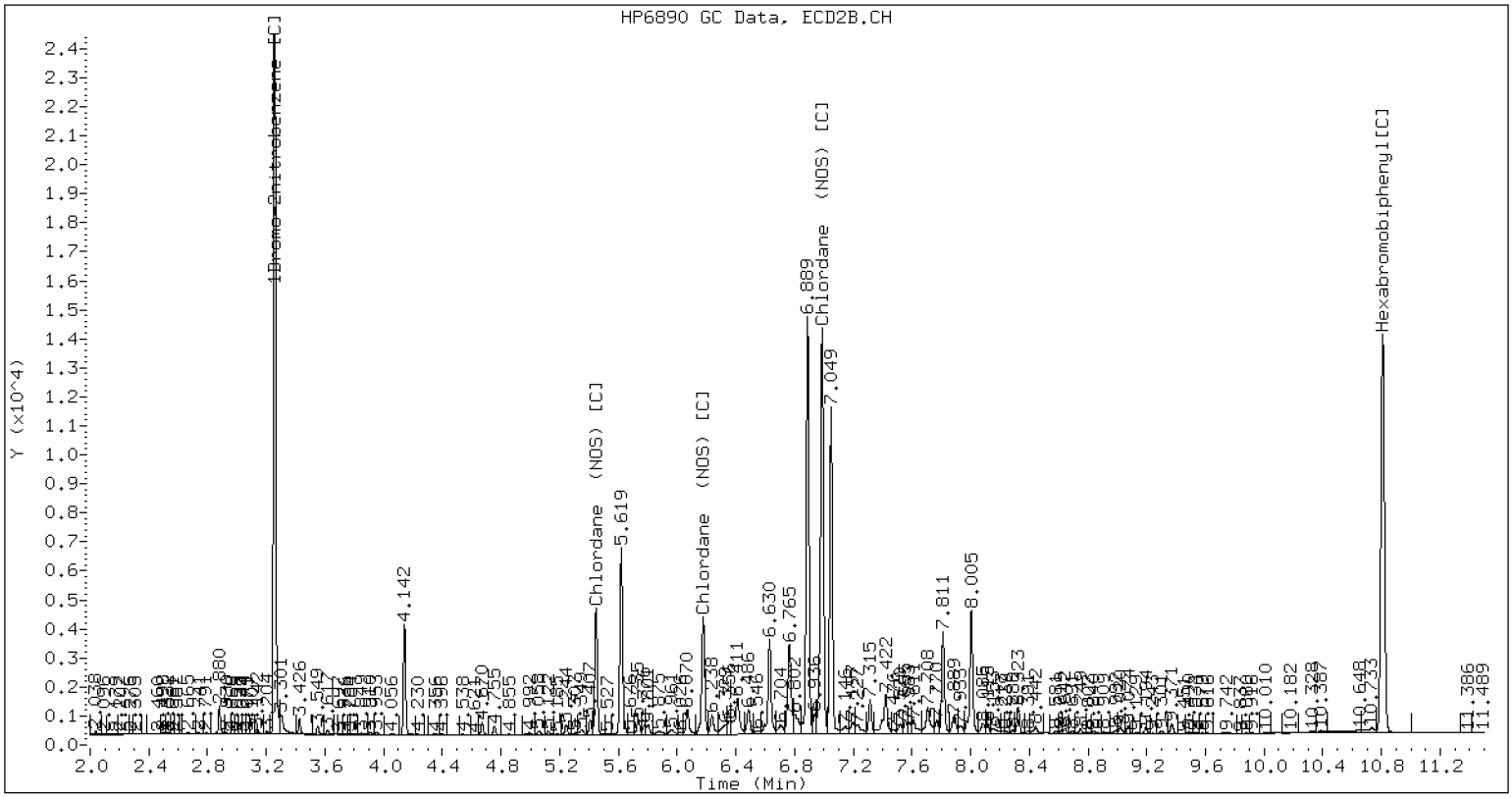


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060125.D SLF0020-CALK CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060124.D
Data file 2: /20230601.b/B20230601.b/23060124.D
Method: \20230601.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALJ
Client ID:
Injection Date: 01-JUN-2023 22:32
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	498922	-19.4
Hexabromobiphenyl	493109	620221	25.8

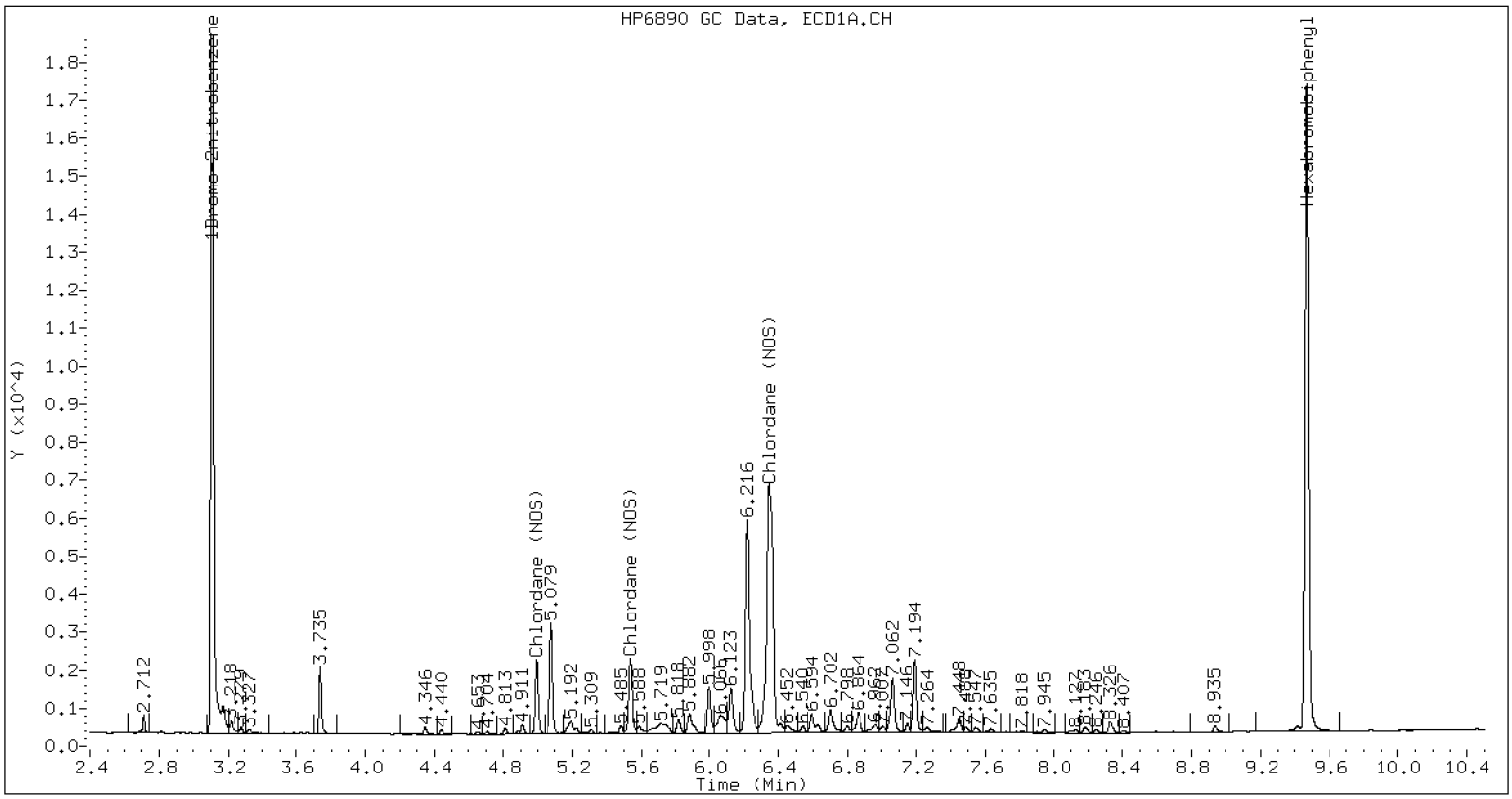
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	481059	-30.9
Hexabromobiphenyl	461581	721777	56.4

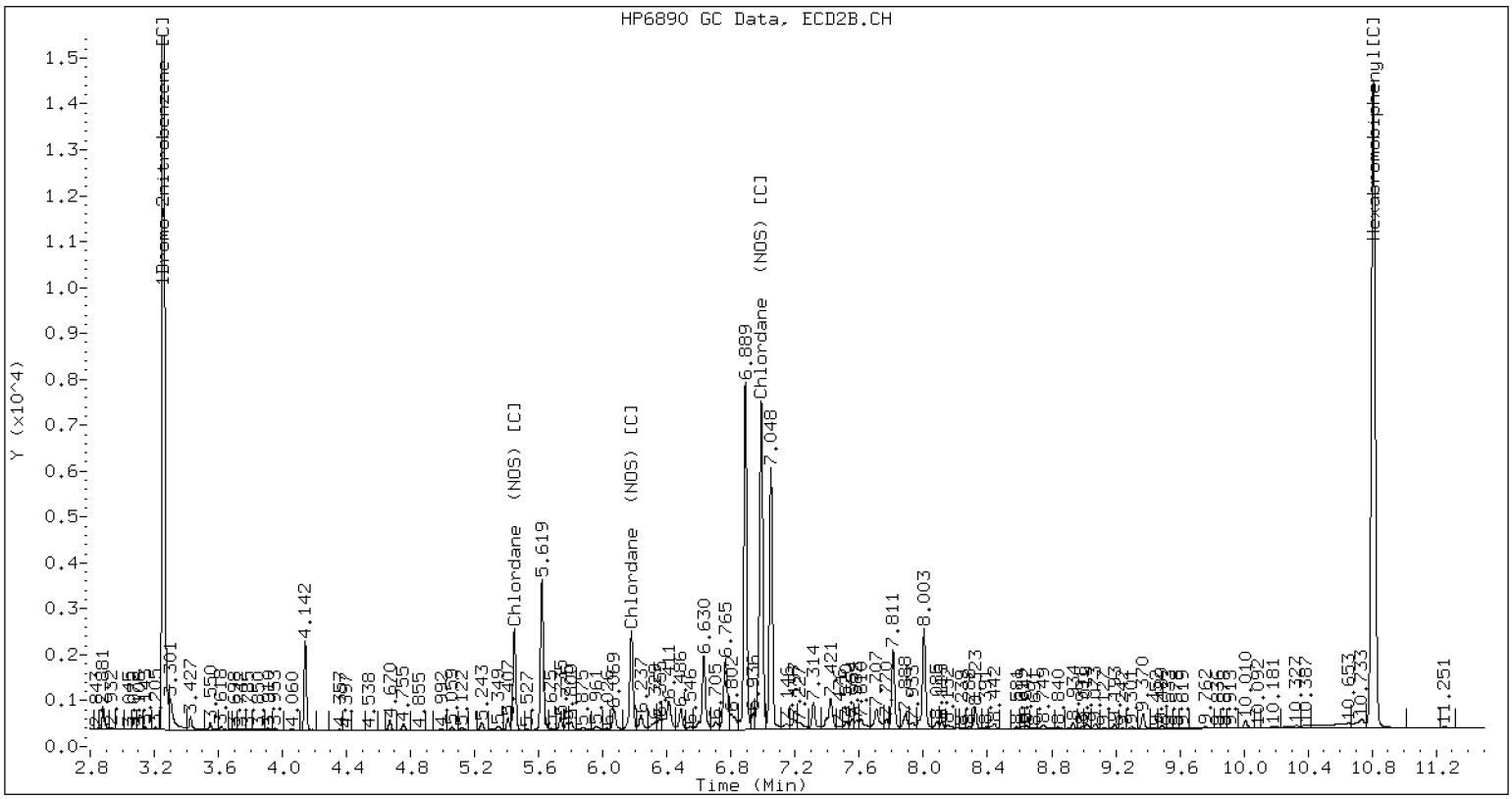
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	4.993	-0.000	49020	196.4	1	5.447	-0.000	54484	192.9	
Chlordane (NOS)	2	5.539	0.000	58763	184.4	2	6.178	-0.001	62562	192.0	
Chlordane (NOS)	3	6.349	0.001	342882	195.3	3	6.988	0.000	216181	199.7	
Total STX-CLPAve (3 peaks): 192.023						Total CLP2Ave (3 peaks): 194.867					RPD = 1
Corrected Ave (3 peaks): 192.023						Corrected Ave (3 peaks): 194.867					RPD = 1

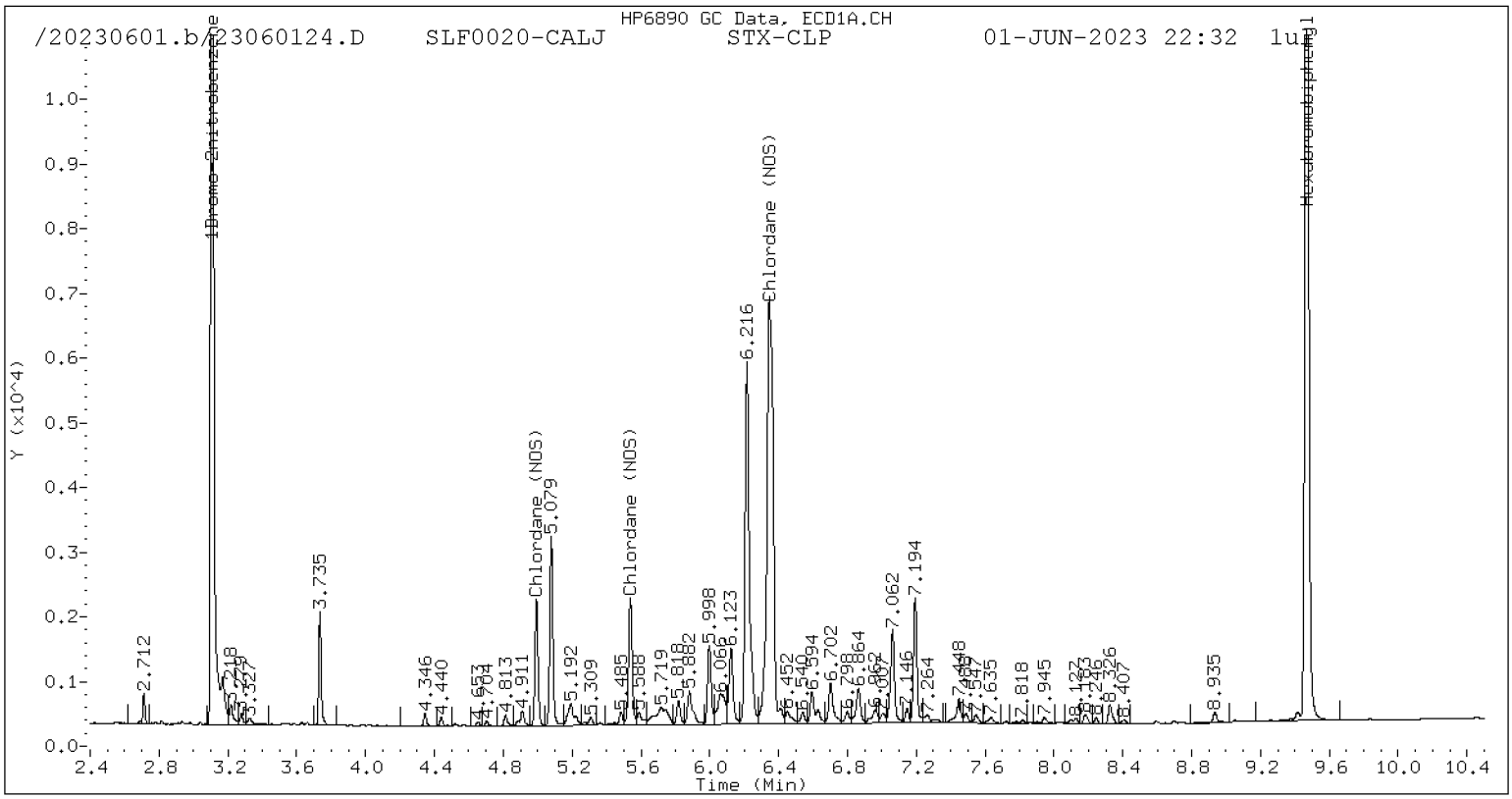
/20230601.b/23060124.D SLF0020-CALJ STX-CLP 01-JUN-2023 22:32 1ul



/20230601.b/B20230601.b/23060124.D SLF0020-CALJ CLP2 01-JUN-2023 22:32 1ul

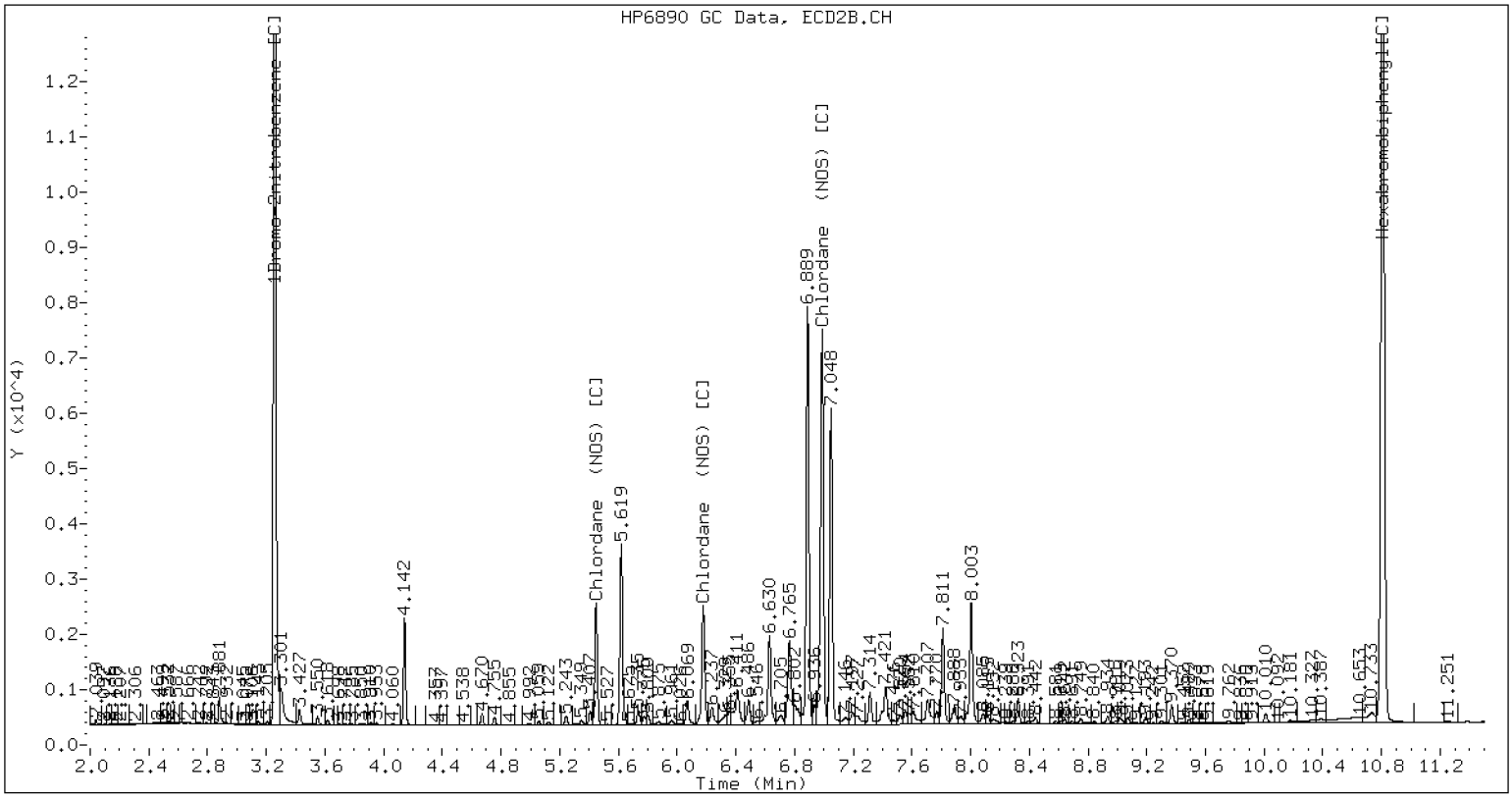


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060124.D SLF0020-CALJ CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060126.D
Data file 2: /20230601.b/B20230601.b/23060126.D
Method: \20230601.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALL
Client ID:
Injection Date: 01-JUN-2023 23:09
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	483053	-22.0
Hexabromobiphenyl	493109	607141	23.1

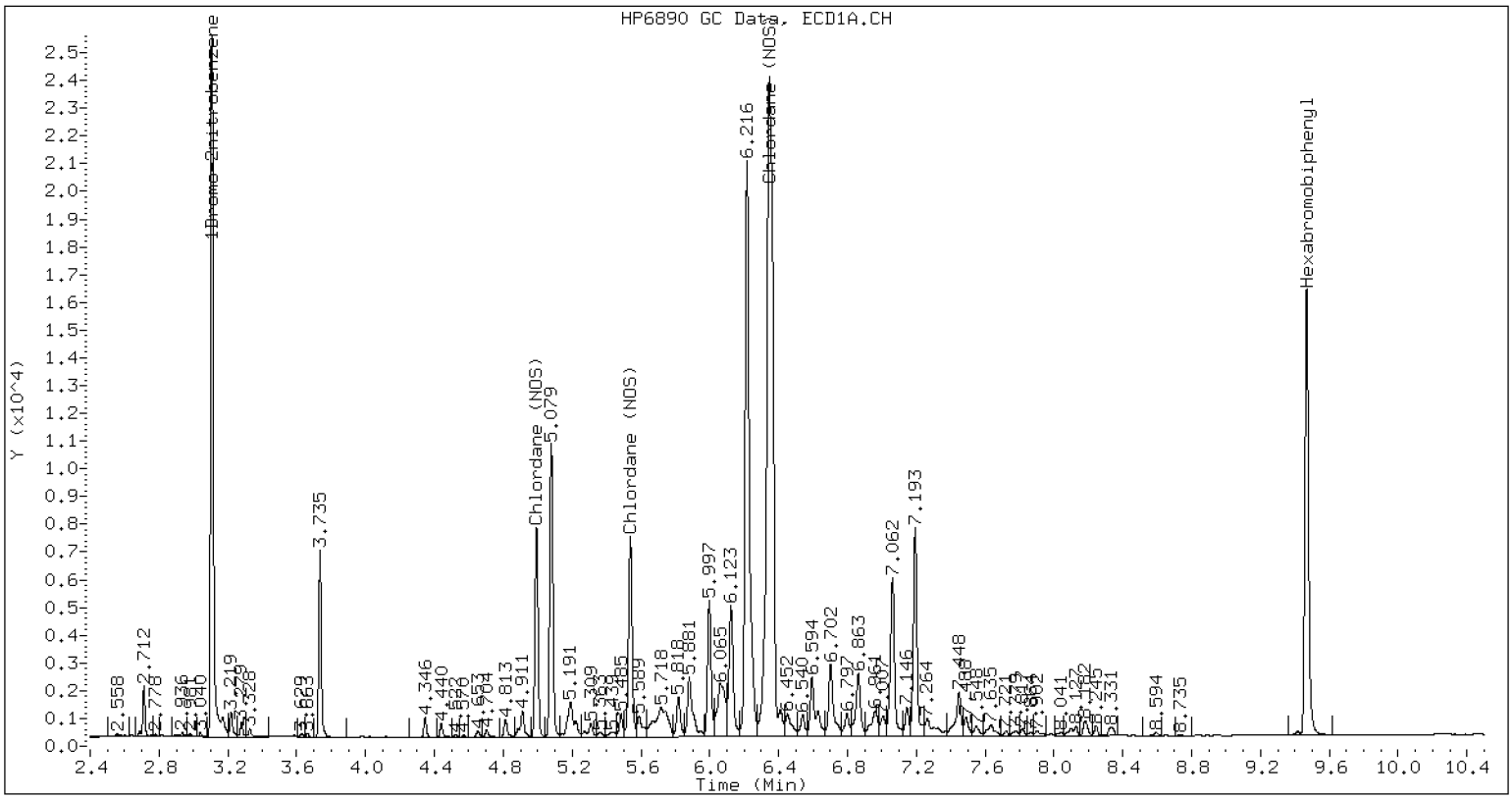
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	468086	-32.7
Hexabromobiphenyl	461581	734088	59.0

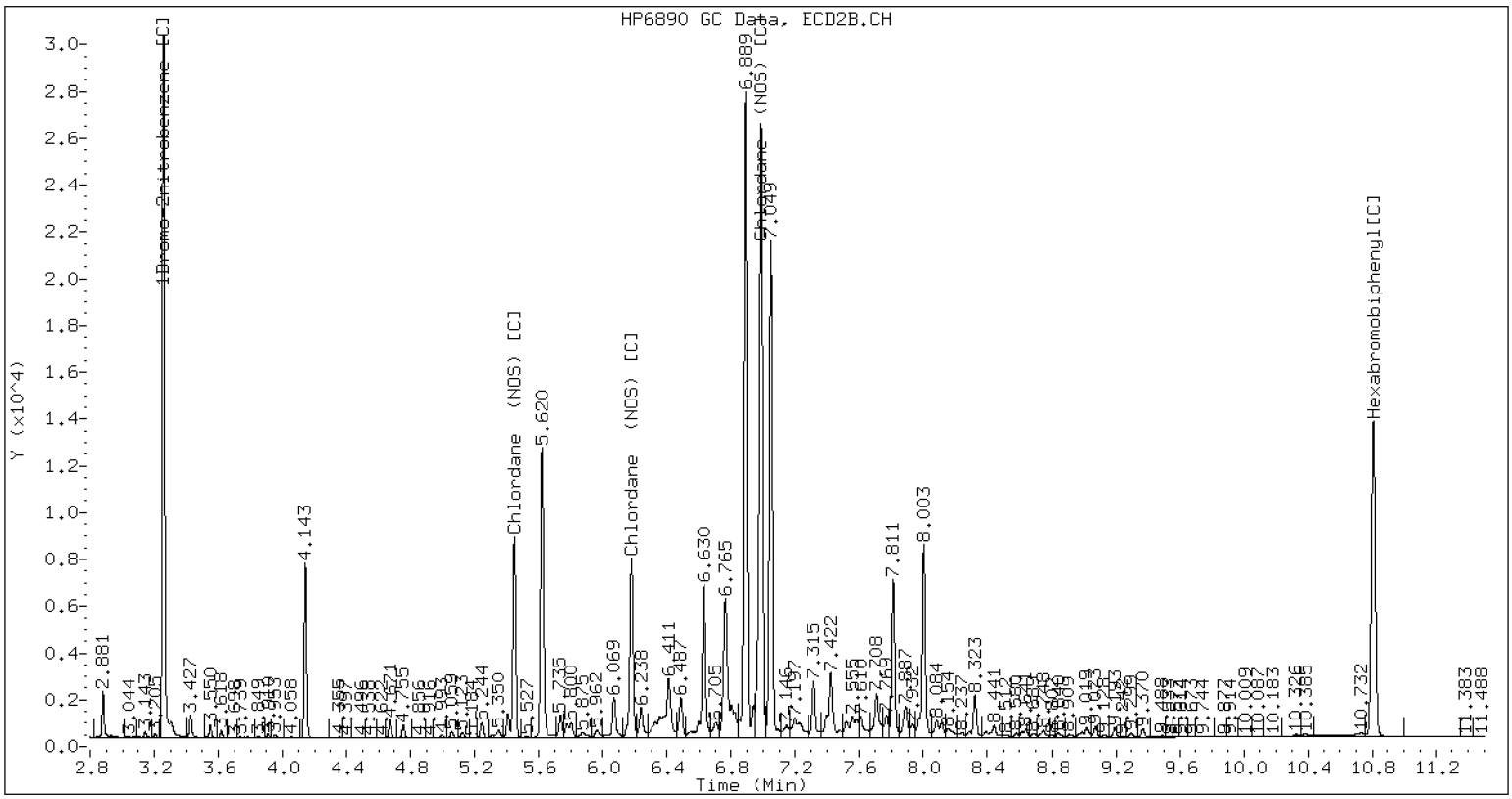
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	4.993	0.000	189750	776.6	1	5.448	0.000	241570	841.0	
Chlordane (NOS)	2	5.539	0.000	214207	686.6	2	6.178	0.000	230667	696.1	
Chlordane (NOS)	3	6.348	0.000	1258418	732.1	3	6.988	0.000	806306	732.3	
Total STX-CLPAve (3 peaks): 731.795						Total CLP2Ave (3 peaks): 756.440				RPD = 3	
Corrected Ave (3 peaks): 731.795						Corrected Ave (3 peaks): 756.440				RPD = 3	

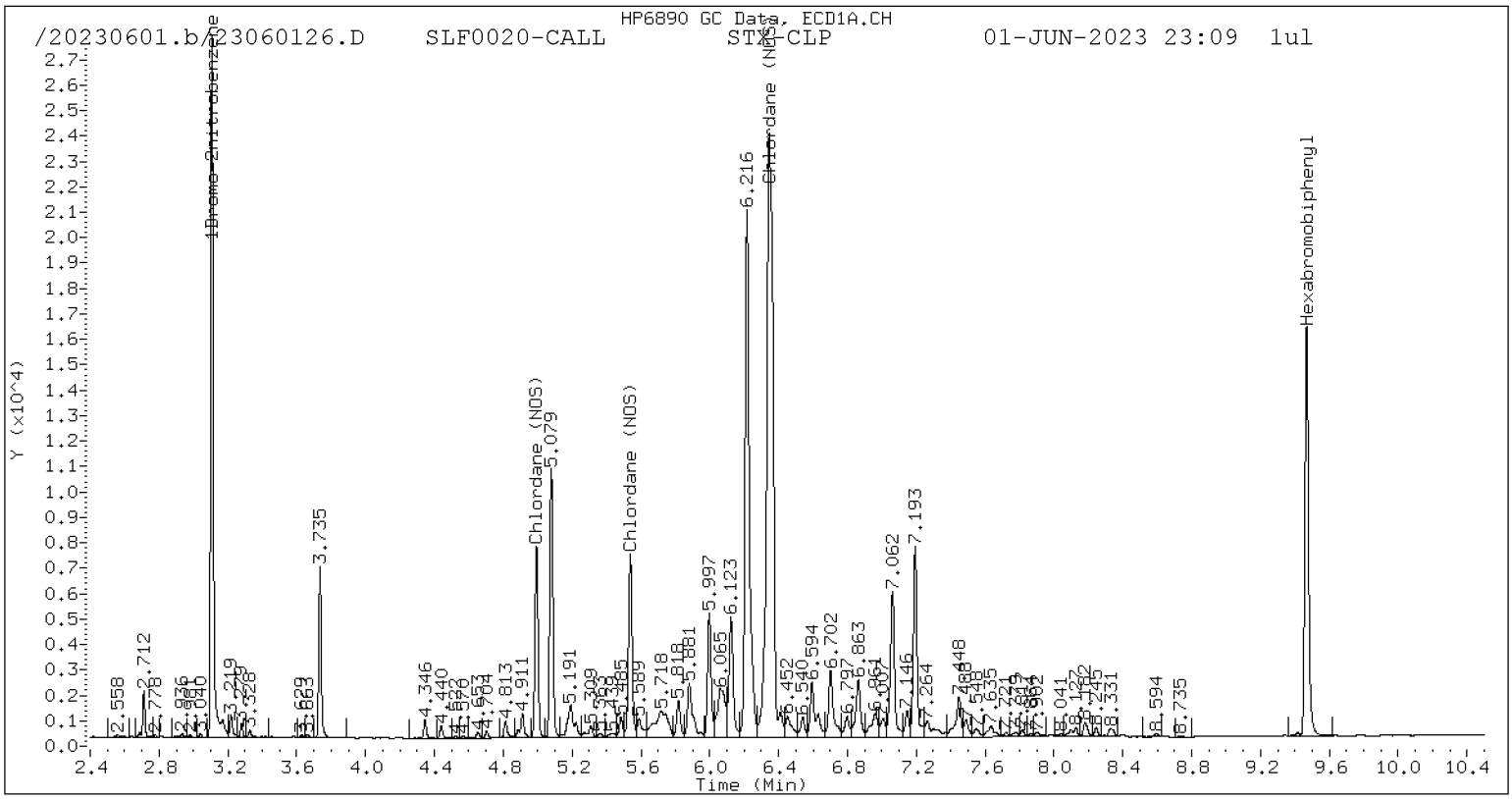
/20230601.b/23060126.D SLF0020-CALL STX-CLP 01-JUN-2023 23:09 1ul



/20230601.b/B20230601.b/23060126.D SLF0020-CALL CLP2 01-JUN-2023 23:09 1ul

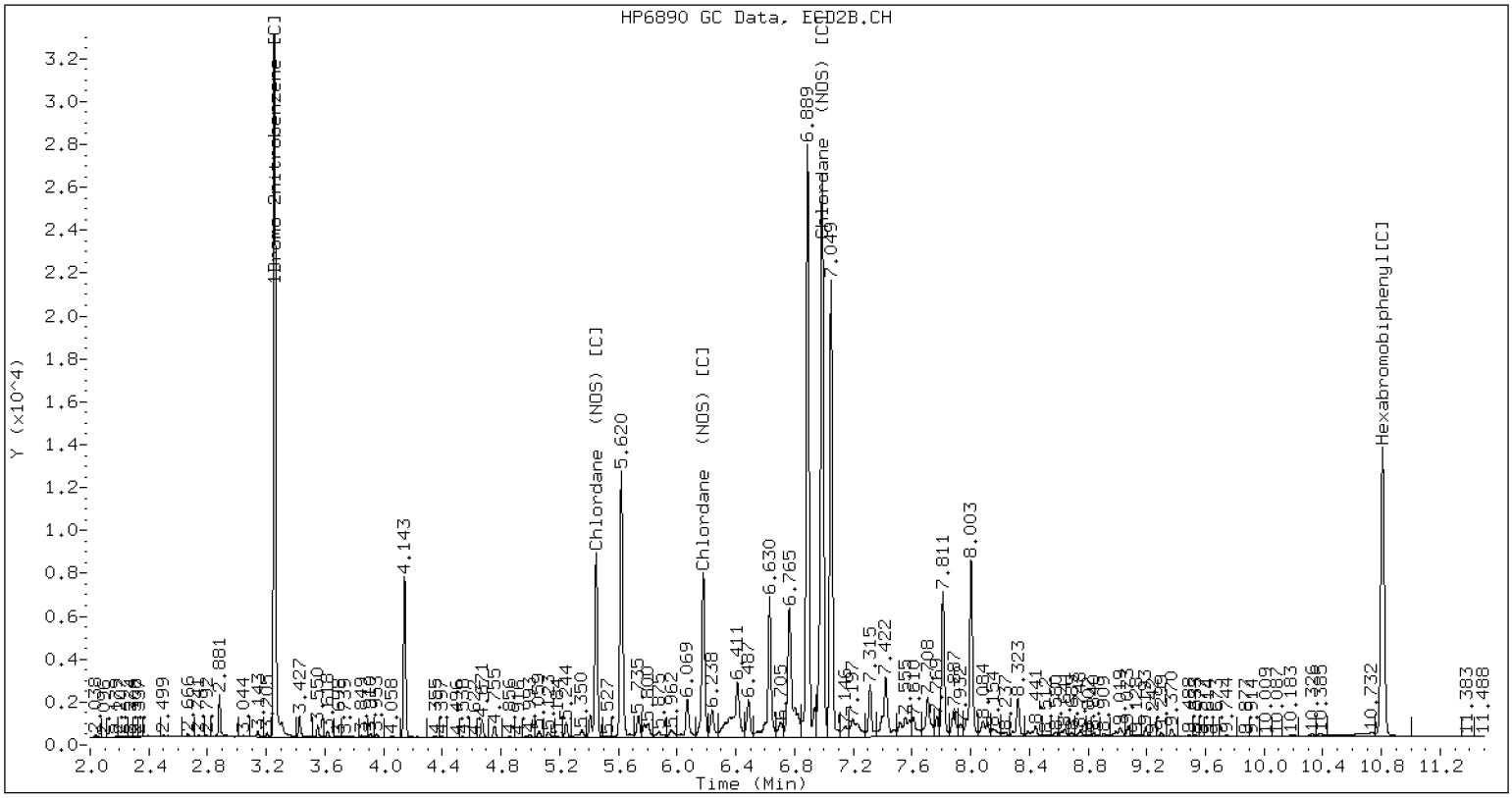


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060126.D SLF0020-CALL CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060127.D
Data file 2: /20230601.b/B20230601.b/23060127.D
Method: \20230601.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALM
Client ID:
Injection Date: 01-JUN-2023 23:28
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.784	0.001	7885	4.097	-0.000	9391	1.03	1.07	3.8	Tetrachloro-m-xylene
9.320	-0.000	14250	10.250	-0.001	15383	2.94	3.16	7.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	604017	-2.4
Hexabromobiphenyl	493109	474650	-3.7

Column 2

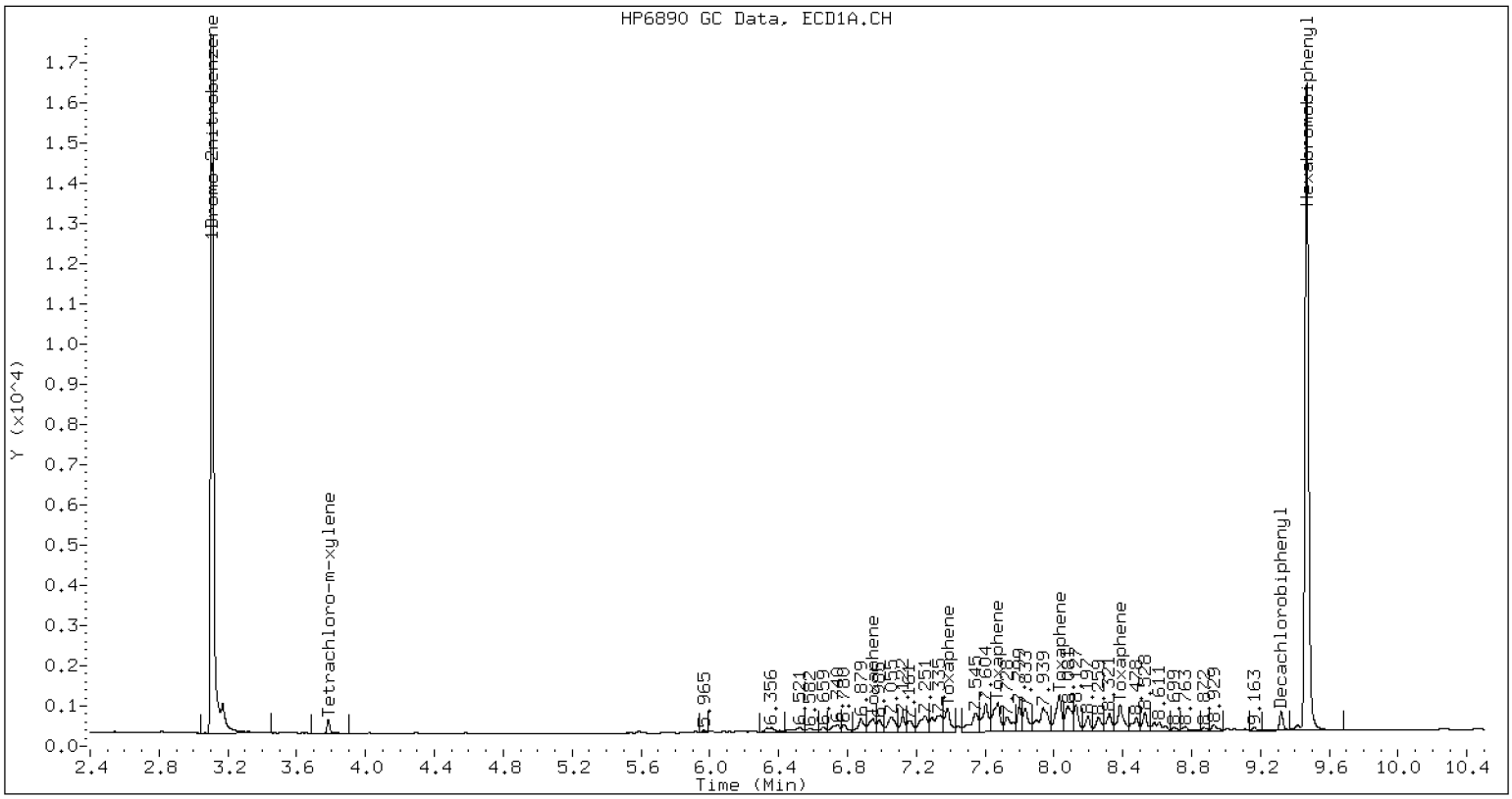
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	695106	-0.1
Hexabromobiphenyl	461581	462145	0.1

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

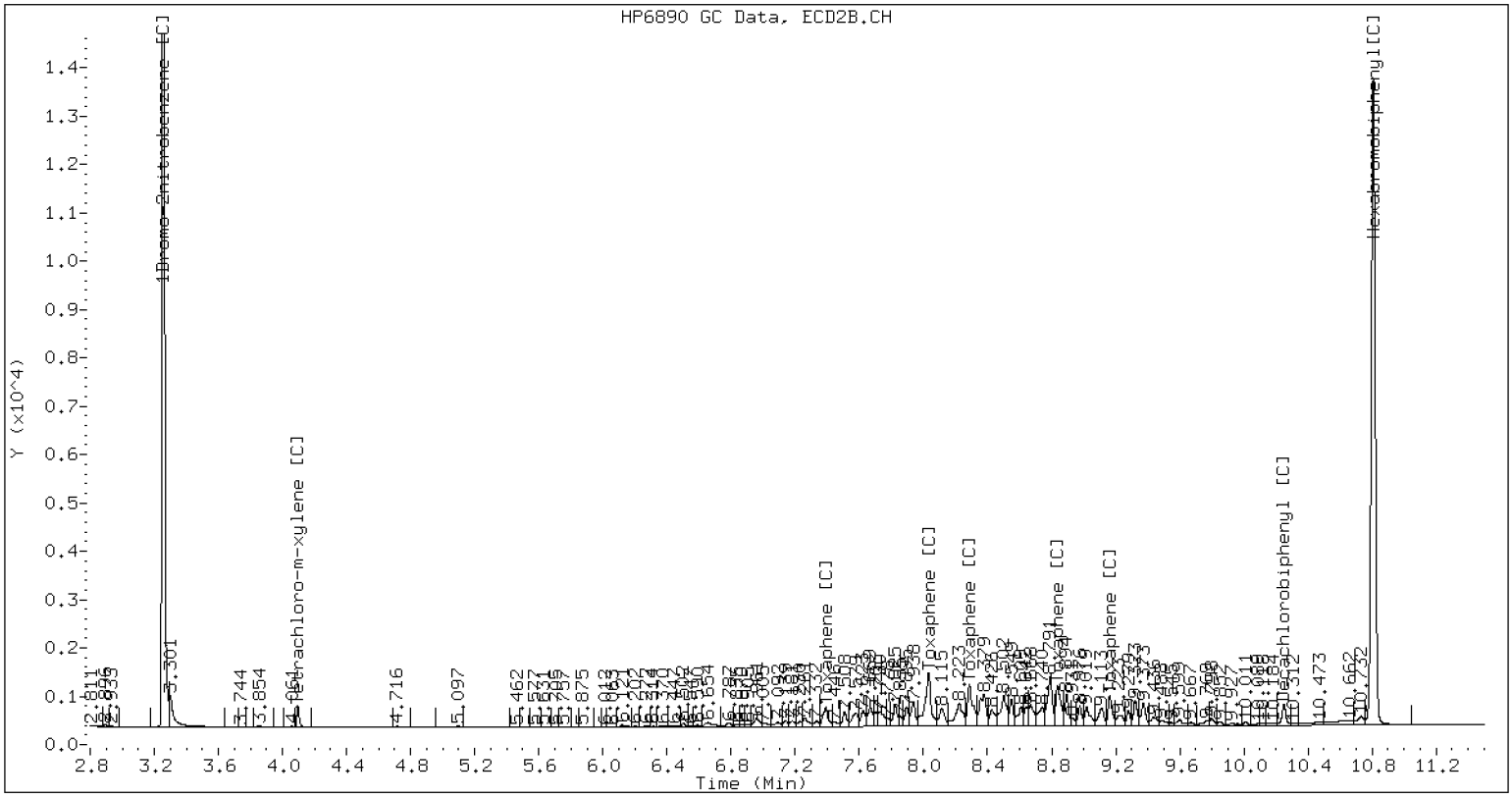
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.947	0.001	17204	138.3	1	7.390	-0.000	18291	140.4
Toxaphene	2	7.381	0.001	25690	141.8	2	8.033	-0.001	59284	150.0
Toxaphene	3	7.671	0.000	41444	139.1	3	8.287	-0.001	41694	140.0
Toxaphene	4	8.031	0.001	42539	141.4	4	8.837	-0.000	37601	134.2
Toxaphene	5	8.384	0.001	31517	133.3	5	9.163	-0.000	22588	135.7

Total STX-CLPAve (5 peaks): 138.788 Total CLP2Ave (5 peaks): 140.044 RPD = 1
Corrected Ave (5 peaks): 138.788 Corrected Ave (5 peaks): 140.044 RPD = 1

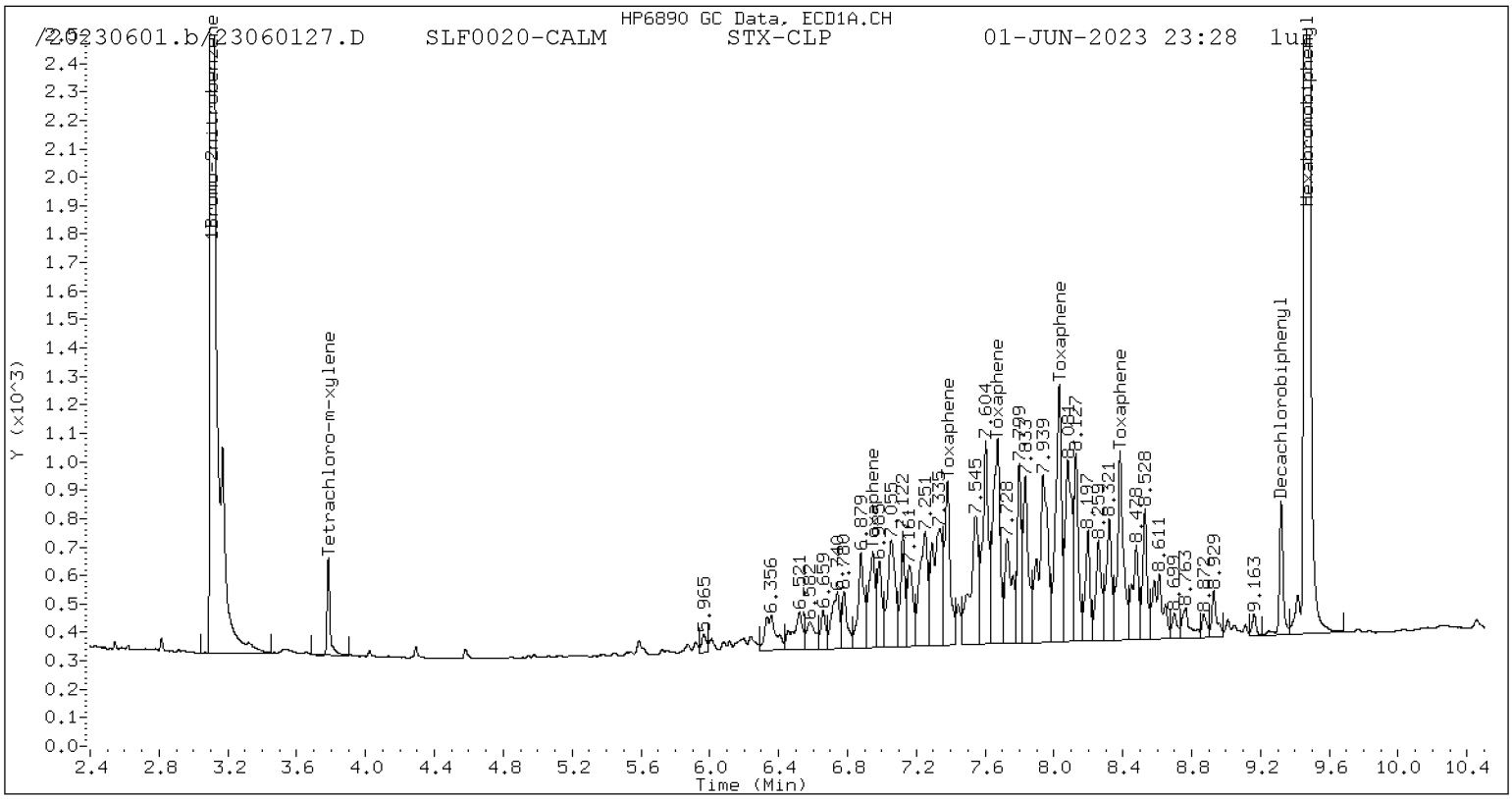
/20230601.b/23060127.D SLF0020-CALM STX-CLP 01-JUN-2023 23:28 1ul



/20230601.b/B20230601.b/23060127.D SLF0020-CALM CLP2 01-JUN-2023 23:28 1ul

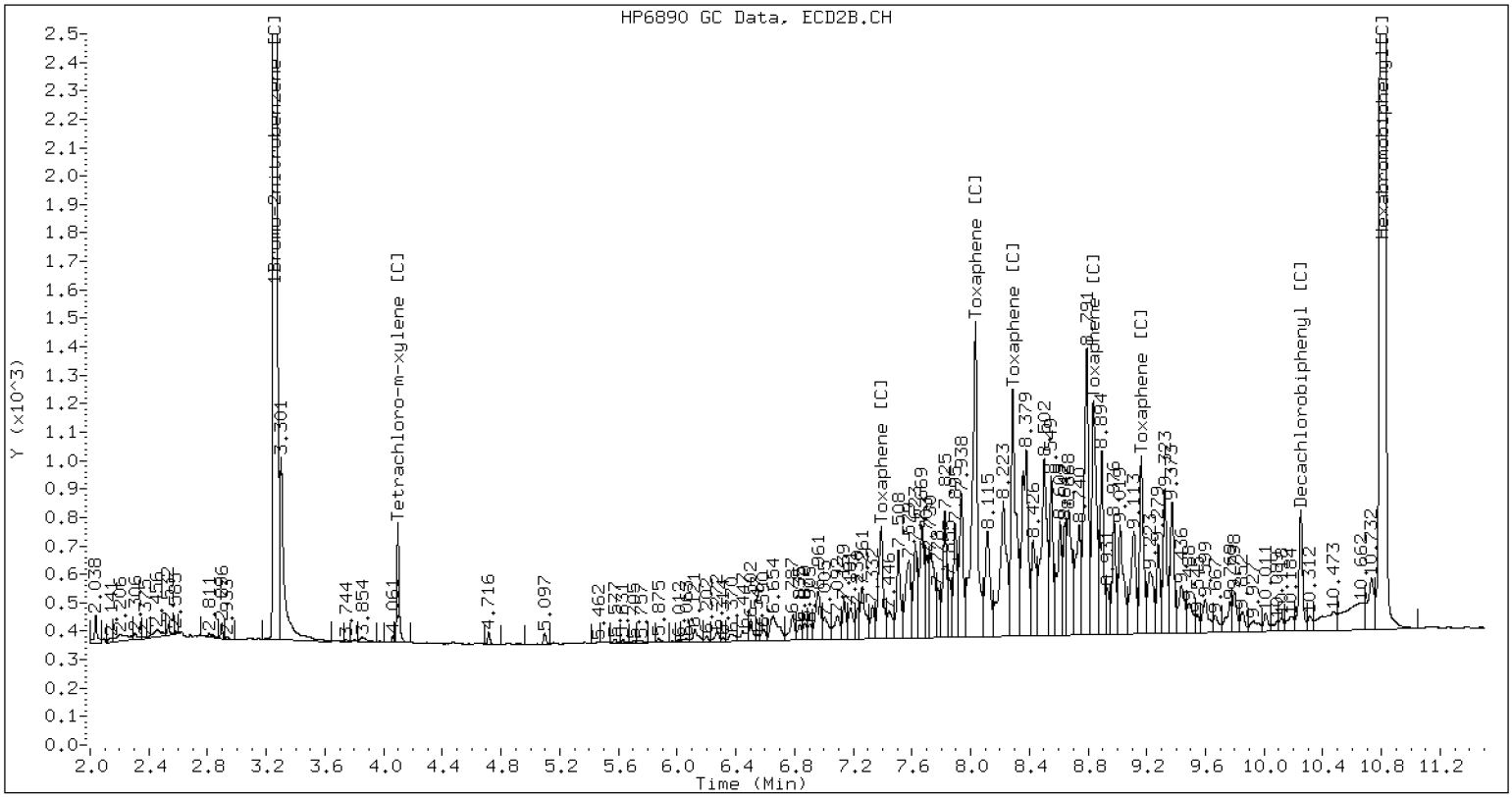


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060127.D SLF0020-CALM CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060128.D
Data file 2: /20230601.b/B20230601.b/23060128.D
Method: \20230601.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALN
Client ID:
Injection Date: 01-JUN-2023 23:46
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.784	0.000	16893	4.097	0.001	18924	2.22	2.14	3.7	Tetrachloro-m-xylene
9.321	0.000	25589	10.251	-0.000	28810	5.21	5.86	11.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	600824	-2.9
Hexabromobiphenyl	493109	480687	-2.5

Column 2

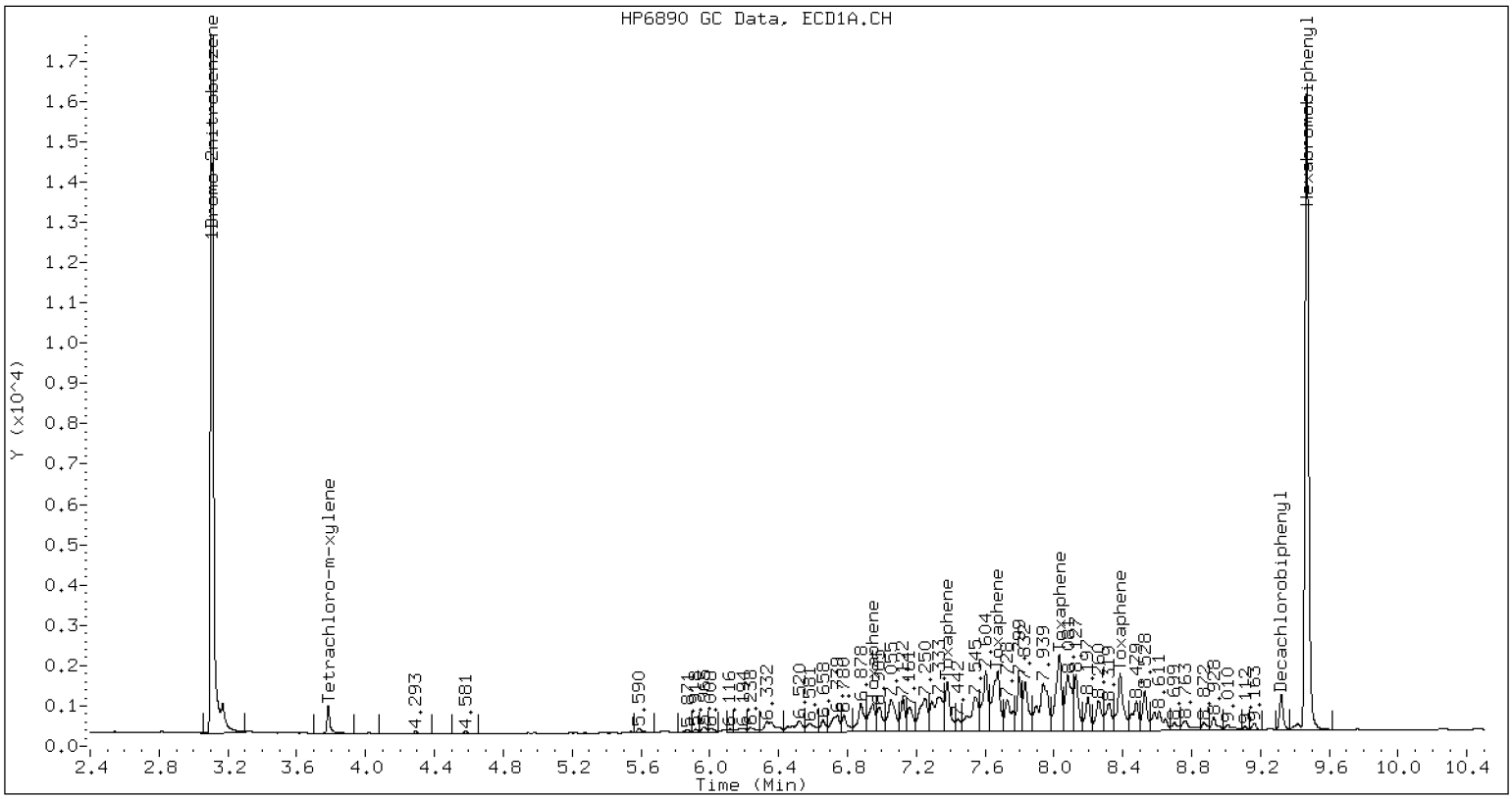
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	700907	0.7
Hexabromobiphenyl	461581	467151	1.2

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

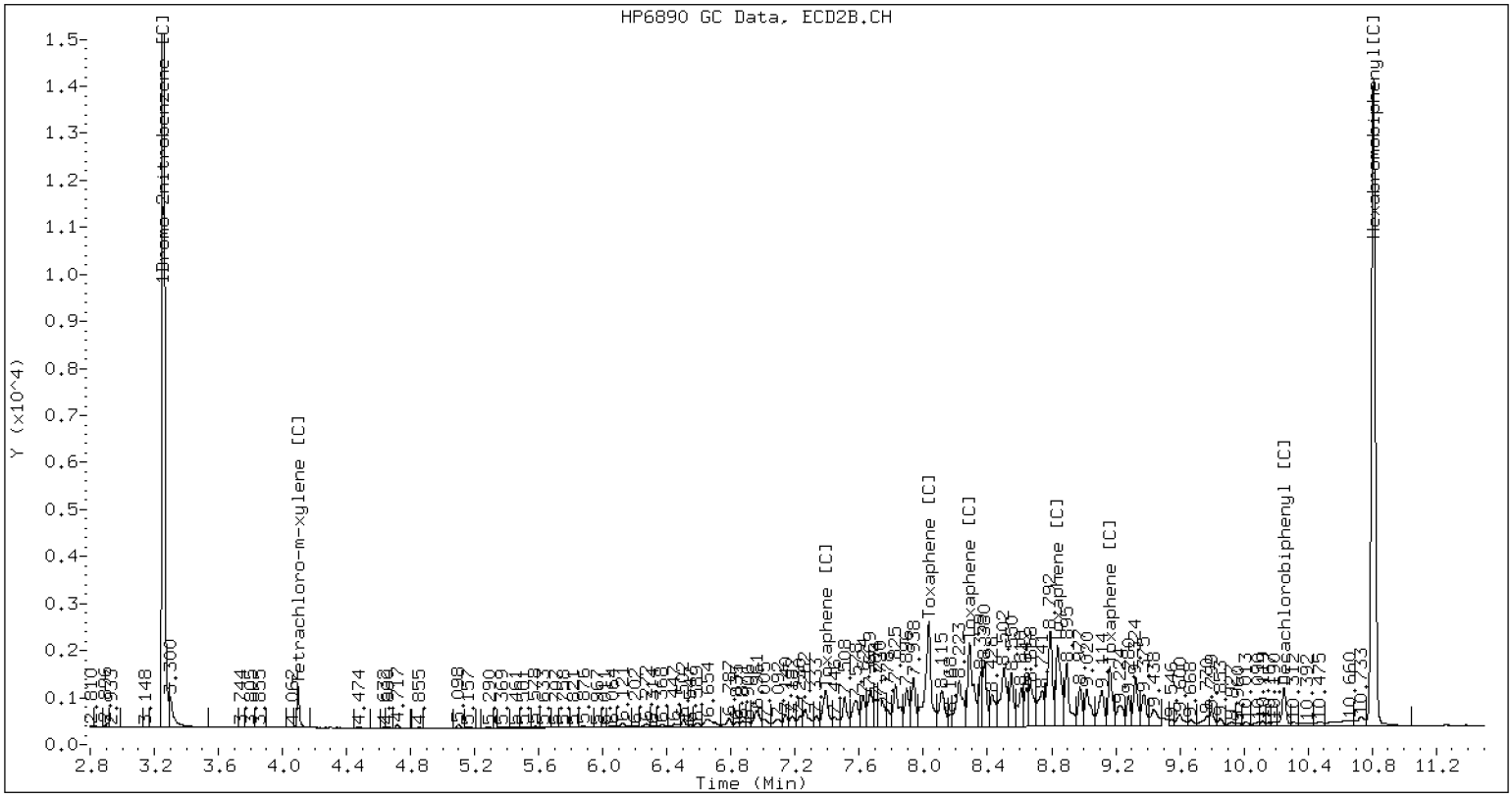
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.946	0.001	35558	282.3	1	7.391	0.000	37414	284.1
Toxaphene	2	7.380	0.000	49917	272.1	2	8.034	0.000	116325	291.2
Toxaphene	3	7.671	-0.000	87484	289.9	3	8.288	0.001	84766	281.5
Toxaphene	4	8.031	0.001	88266	289.8	4	8.838	0.001	77899	275.0
Toxaphene	5	8.385	0.001	66203	276.4	5	9.164	0.001	46334	275.4

Total STX-CLPAve (5 peaks): 282.106 Total CLP2Ave (5 peaks): 281.423 RPD = 0
Corrected Ave (5 peaks): 282.106 Corrected Ave (5 peaks): 281.423 RPD = 0

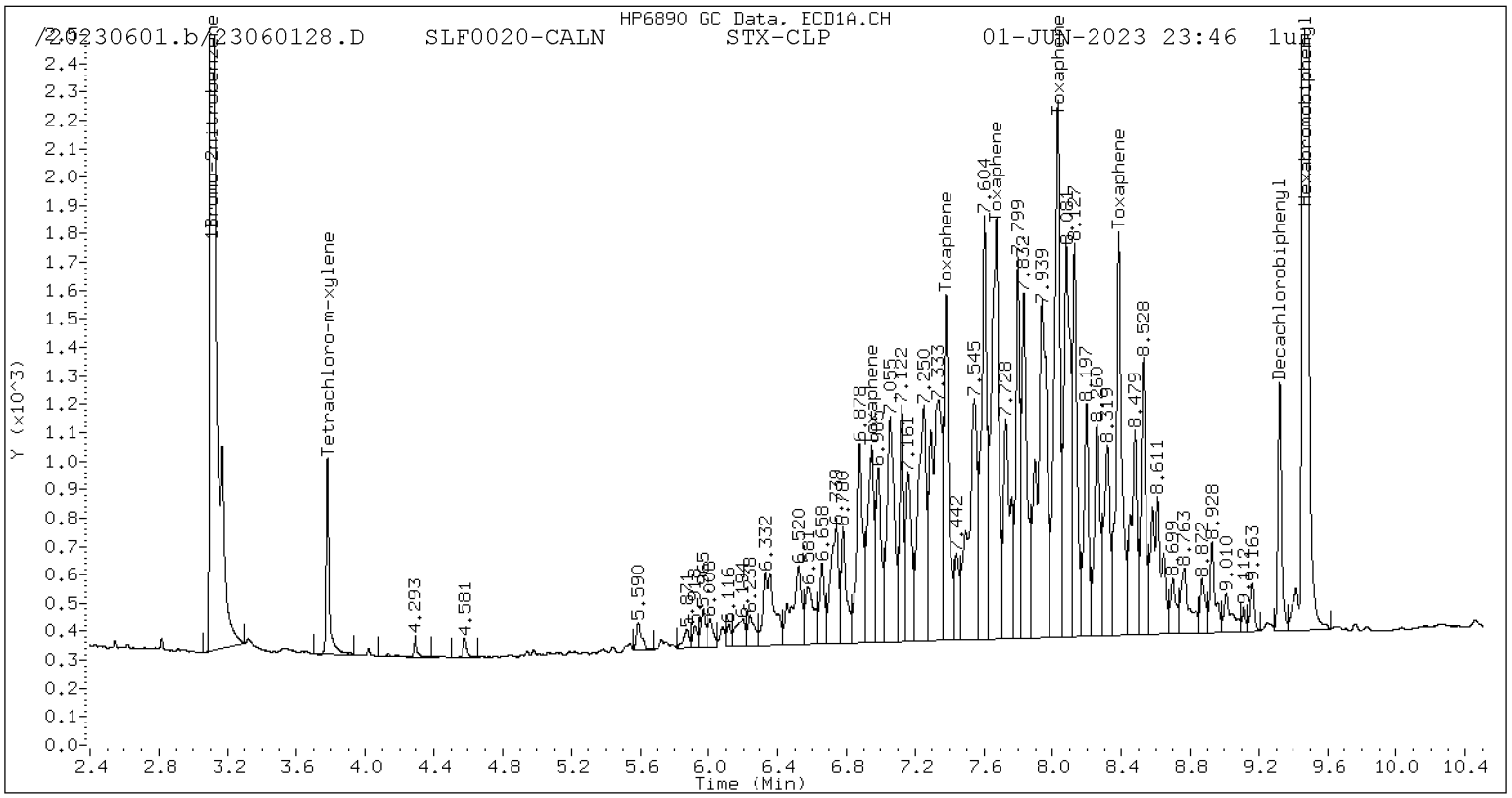
/20230601.b/23060128.D SLF0020-CALN STX-CLP 01-JUN-2023 23:46 1ul



/20230601.b/B20230601.b/23060128.D SLF0020-CALN CLP2 01-JUN-2023 23:46 1ul

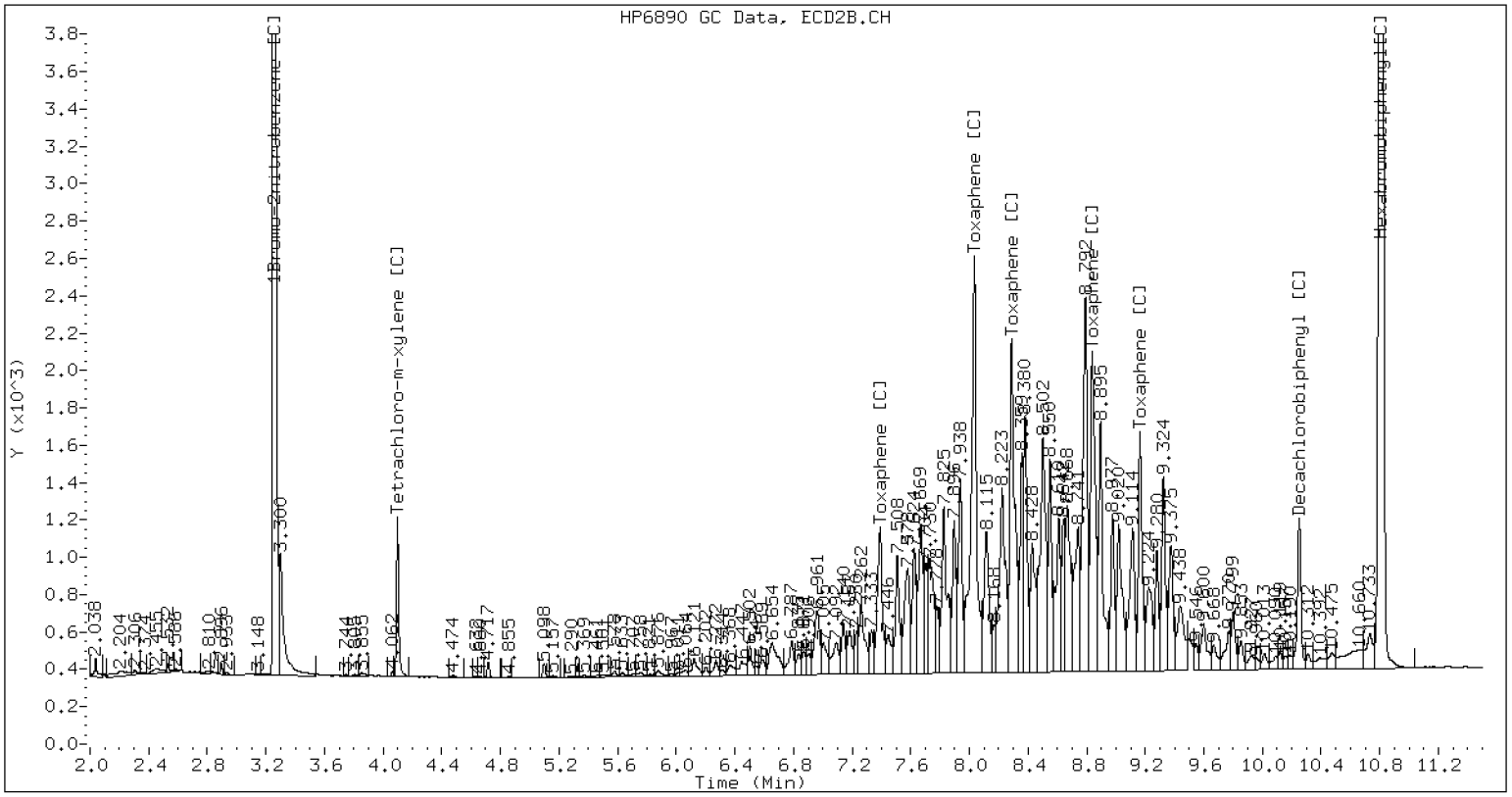


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060128.D SLF0020-CALN CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060129.D
Data file 2: /20230601.b/B20230601.b/23060129.D
Method: \20230601.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALO
Client ID:
Injection Date: 02-JUN-2023 00:05
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.784	0.000	32837	0.000	-4.097	0	4.28	0.00	---	Tetrachloro-m-xylene
9.320	0.000	49671	0.000	-10.251	0	10.01	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	604054	-2.4
Hexabromobiphenyl	493109	485595	-1.5

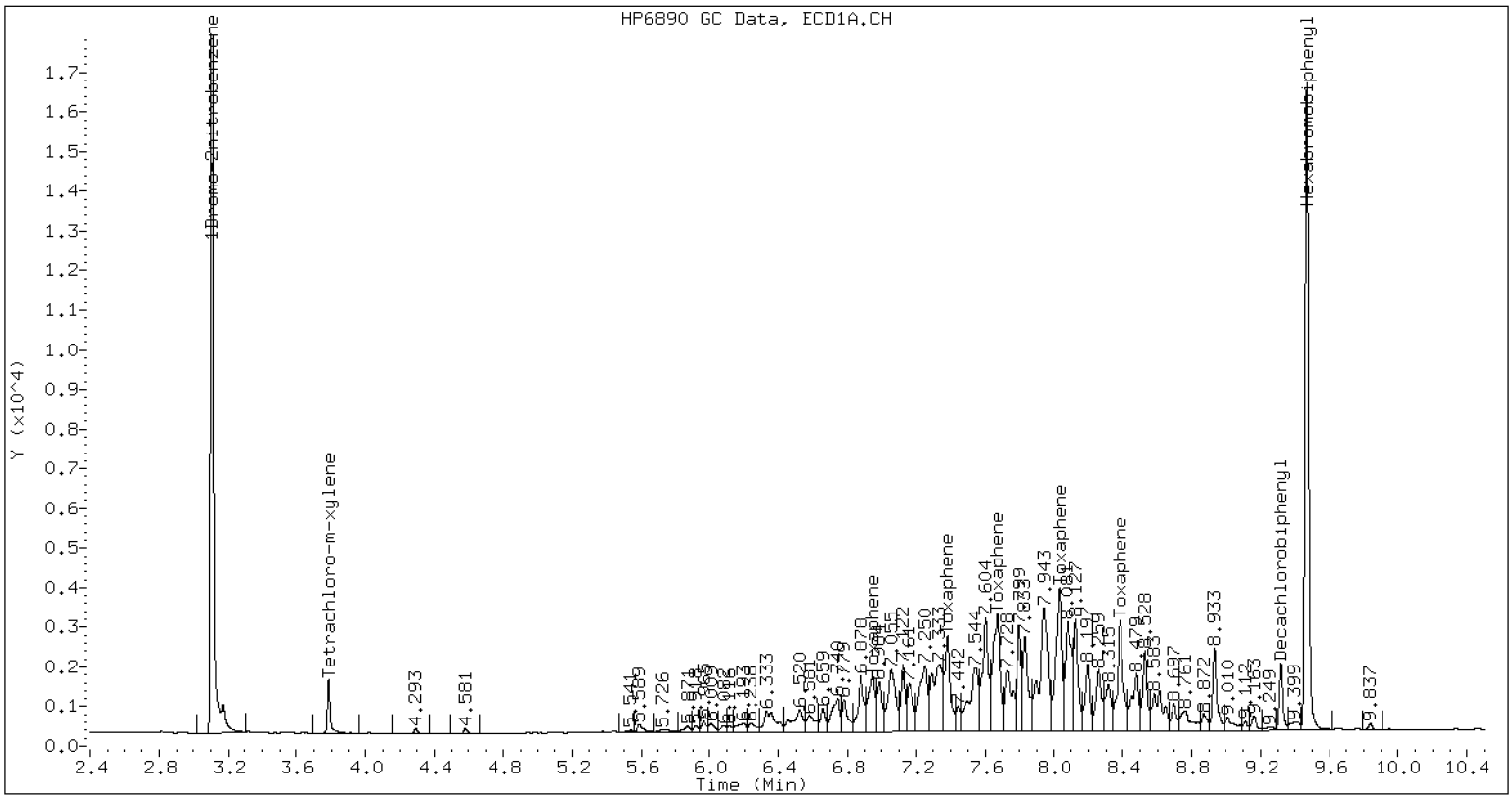
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	0	-100.0 <-
Hexabromobiphenyl	461581	0	-100.0 <-

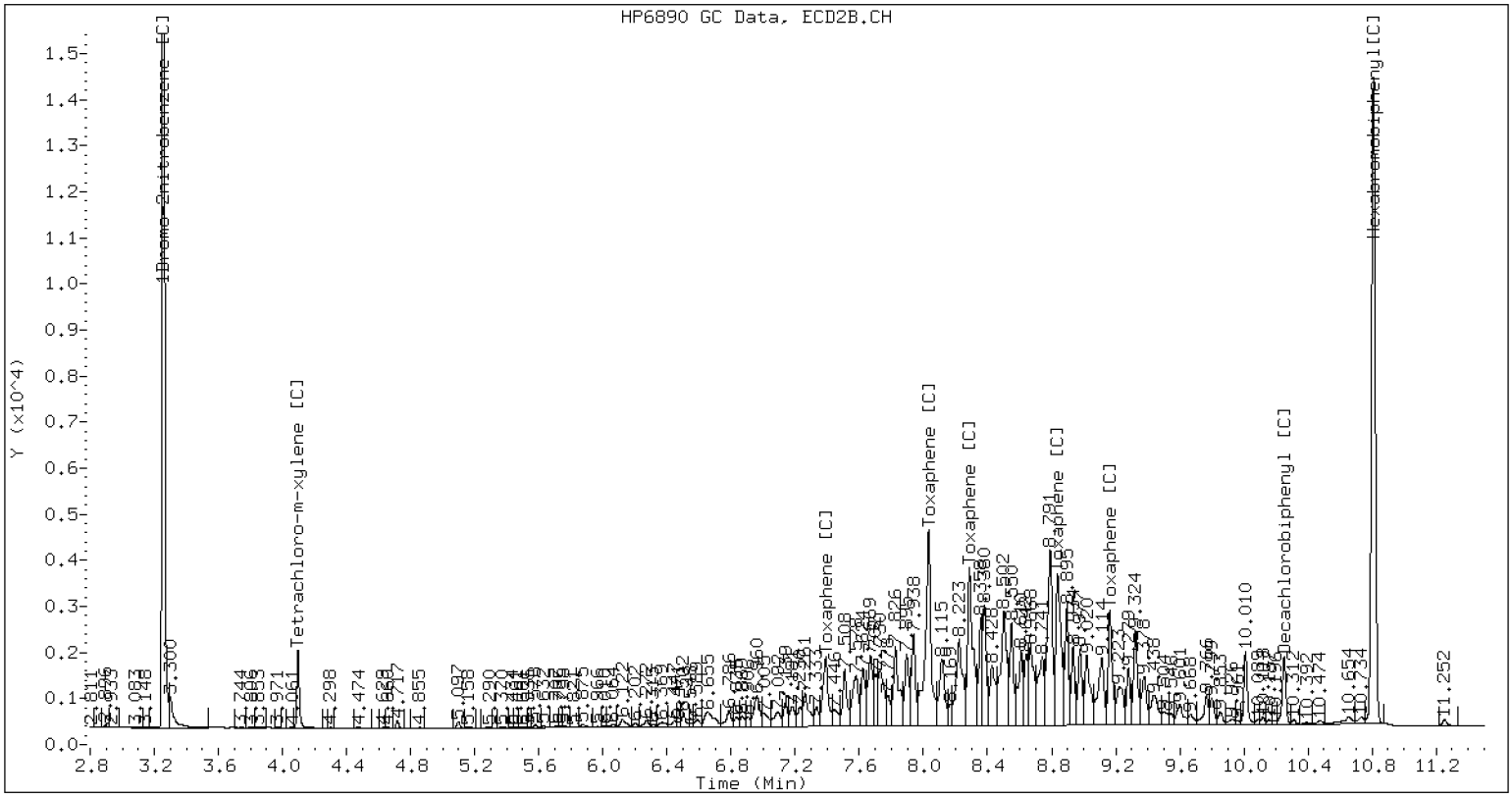
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.946	0.000	72070	566.4	1	---			0.0
Toxaphene	2	7.380	0.000	108441	585.2	2	---			0.0
Toxaphene	3	7.671	-0.000	172582	566.0	3	---			0.0
Toxaphene	4	8.031	0.001	175182	569.3	4	---			0.0
Toxaphene	5	8.384	0.001	133957	553.7	5	---			0.0
Total STX-CLPAve (5 peaks): 568.138						CLP2Ave: <3 Quant Peaks				

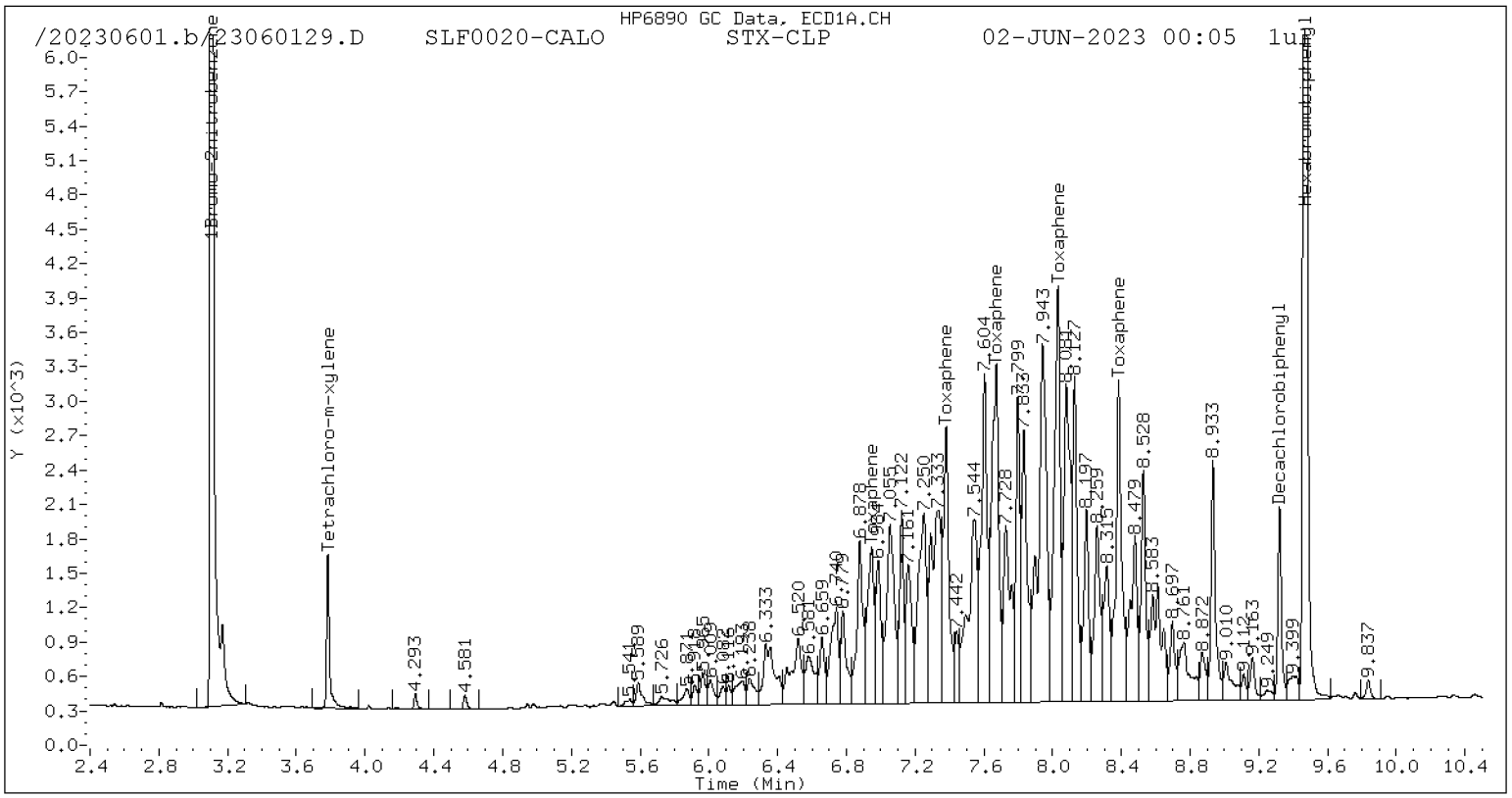
/20230601.b/23060129.D SLF0020-CALO STX-CLP 02-JUN-2023 00:05 1ul



/20230601.b/B20230601.b/23060129.D SLF0020-CALO CLP2 02-JUN-2023 00:05 1ul

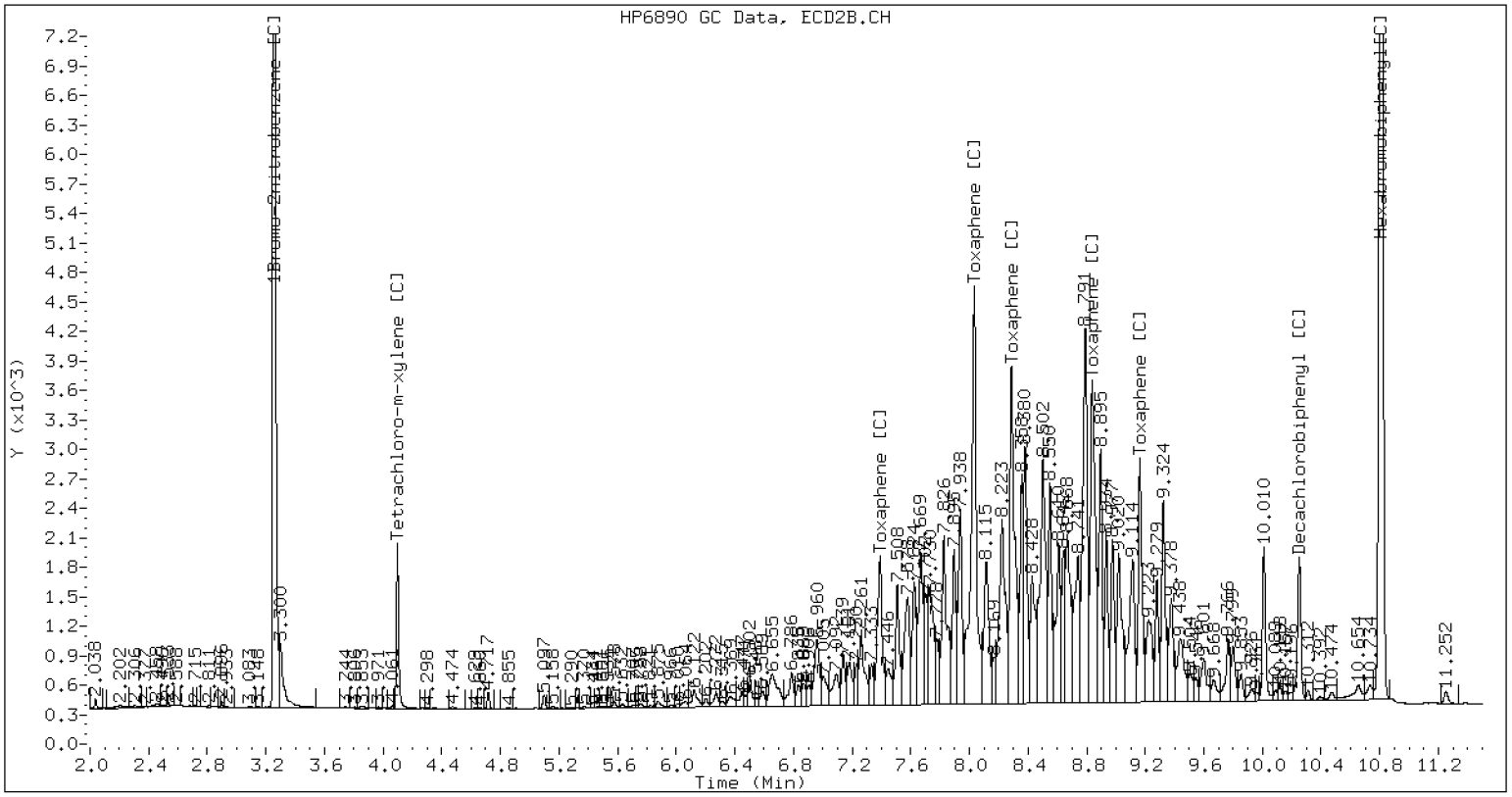


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060129.D SLF0020-CALO CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060130.D
Data file 2: /20230601.b/B20230601.b/23060130.D
Method: \20230601.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALP
Client ID:
Injection Date: 02-JUN-2023 00:23
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.784	0.000	64726	4.097	0.001	75086	8.34	8.42	0.9	Tetrachloro-m-xylene
9.320	-0.000	98171	10.250	-0.002	107186	19.37	21.41	10.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	611397	-1.2
Hexabromobiphenyl	493109	495932	0.6

Column 2

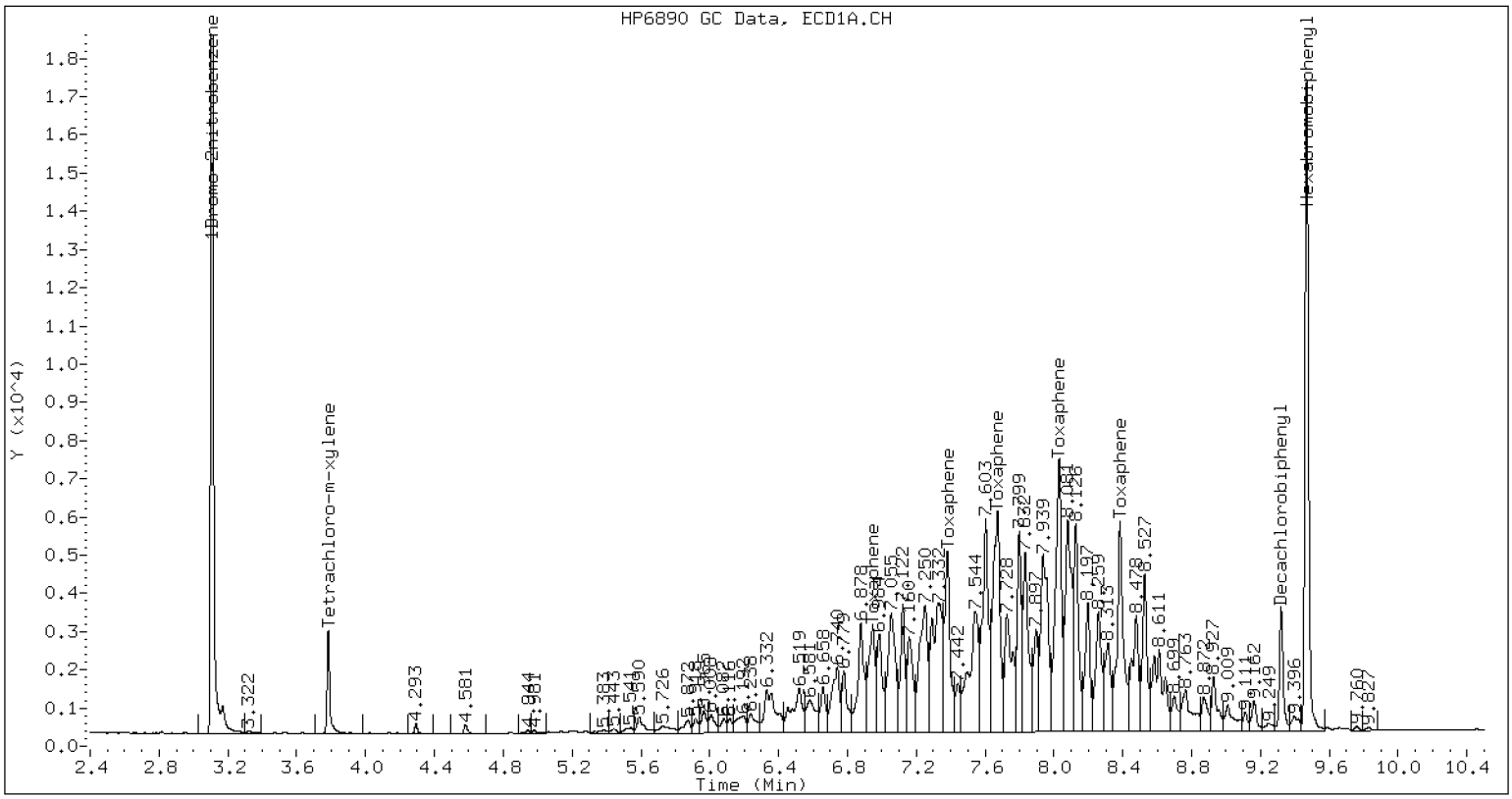
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	705467	1.4
Hexabromobiphenyl	461581	475570	3.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

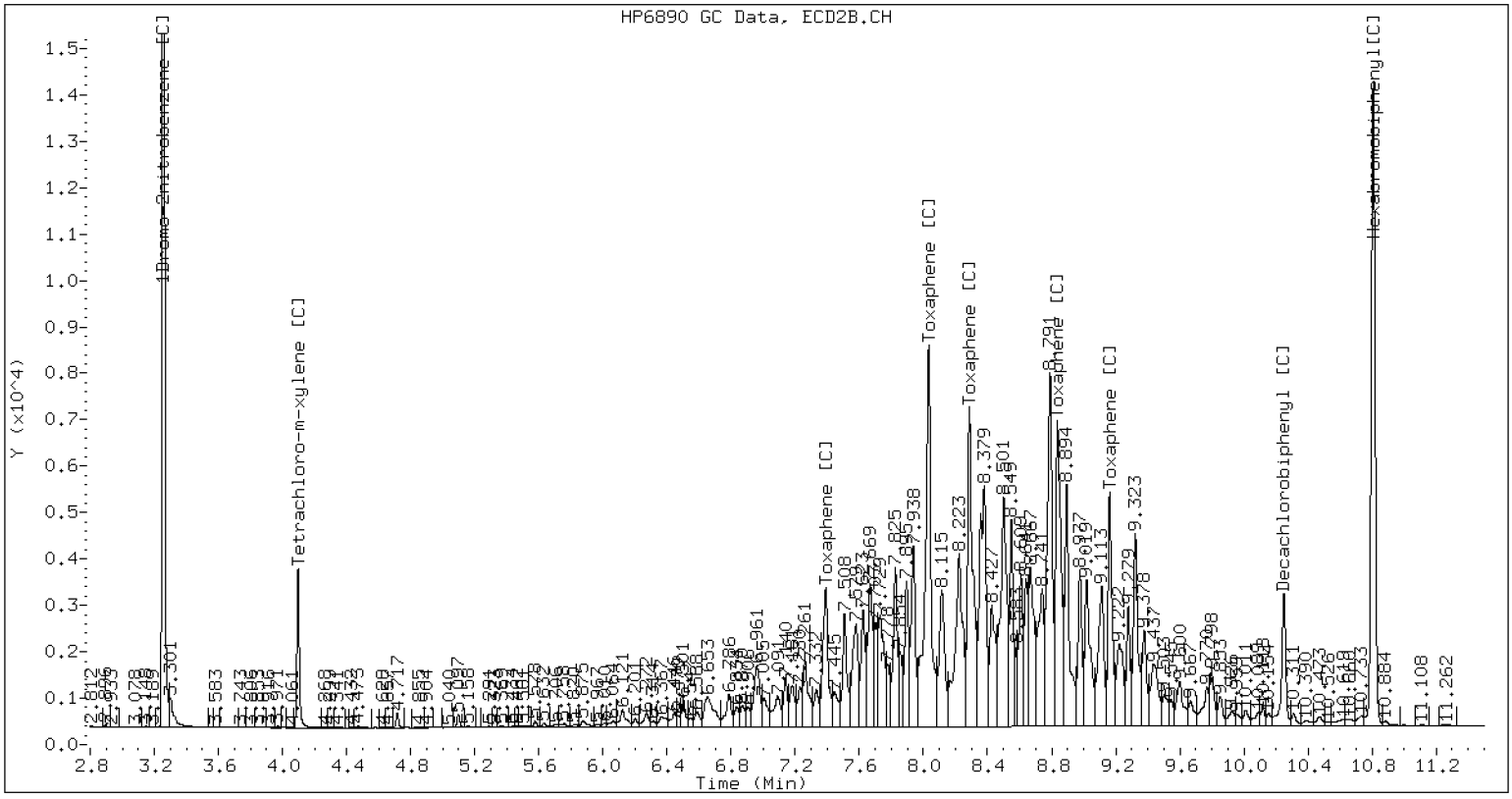
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.946	0.000	144159	1109.4	1	7.390	-0.000	141626	1056.2
Toxaphene	2	7.380	0.000	213924	1130.4	2	8.033	-0.001	423850	1042.1
Toxaphene	3	7.671	-0.000	342457	1099.8	3	8.287	-0.001	324776	1059.5
Toxaphene	4	8.029	-0.000	347024	1104.2	4	8.837	-0.000	304363	1055.4
Toxaphene	5	8.384	0.000	274193	1109.7	5	9.162	-0.001	179906	1050.3

Total STX-CLPAve (5 peaks): 1110.713 Total CLP2Ave (5 peaks): 1052.724 RPD = 5
Corrected Ave (5 peaks): 1110.713 Corrected Ave (5 peaks): 1052.724 RPD = 5

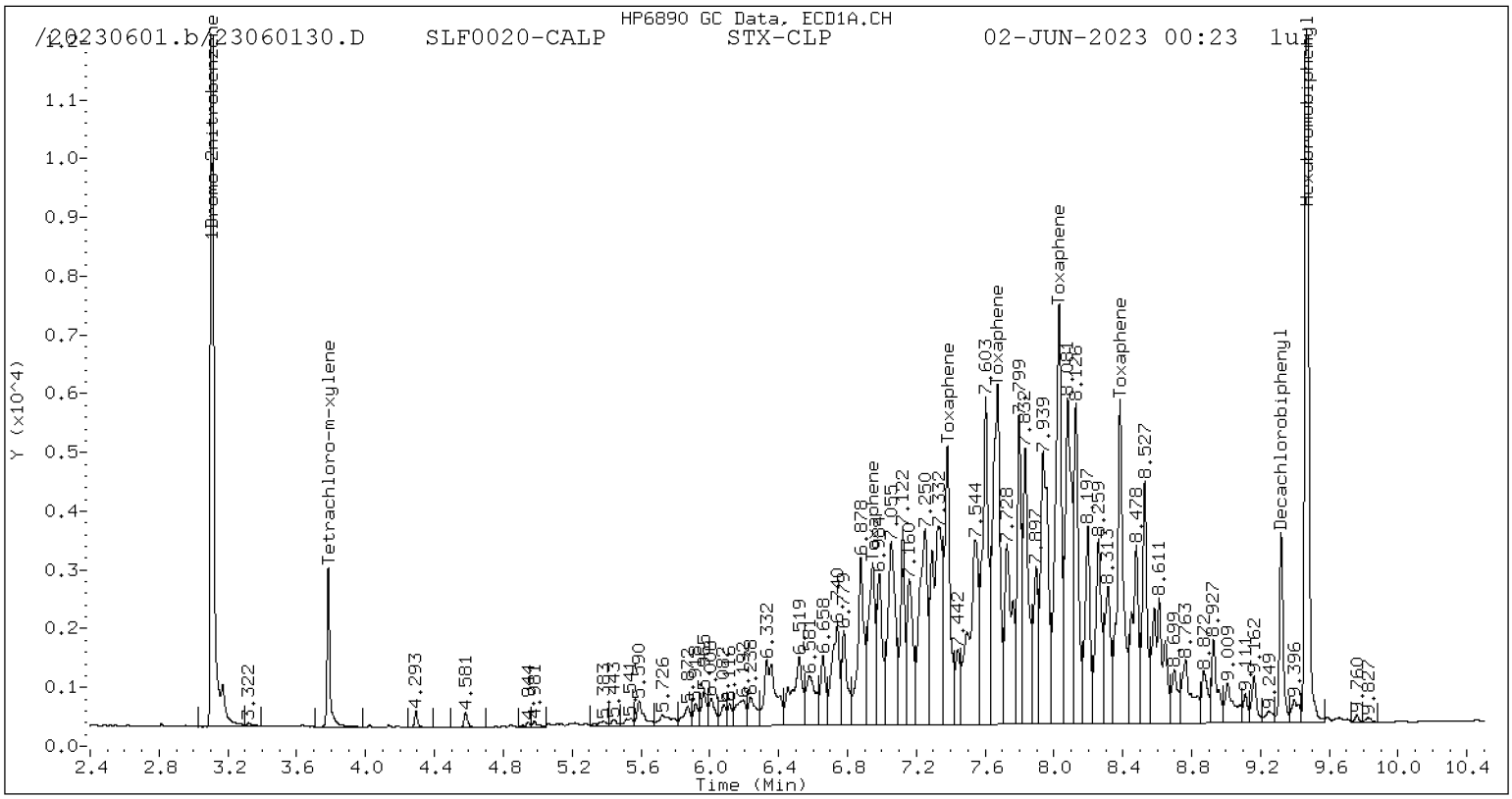
/20230601.b/23060130.D SLF0020-CALP STX-CLP 02-JUN-2023 00:23 1ul



/20230601.b/B20230601.b/23060130.D SLF0020-CALP CLP2 02-JUN-2023 00:23 1ul

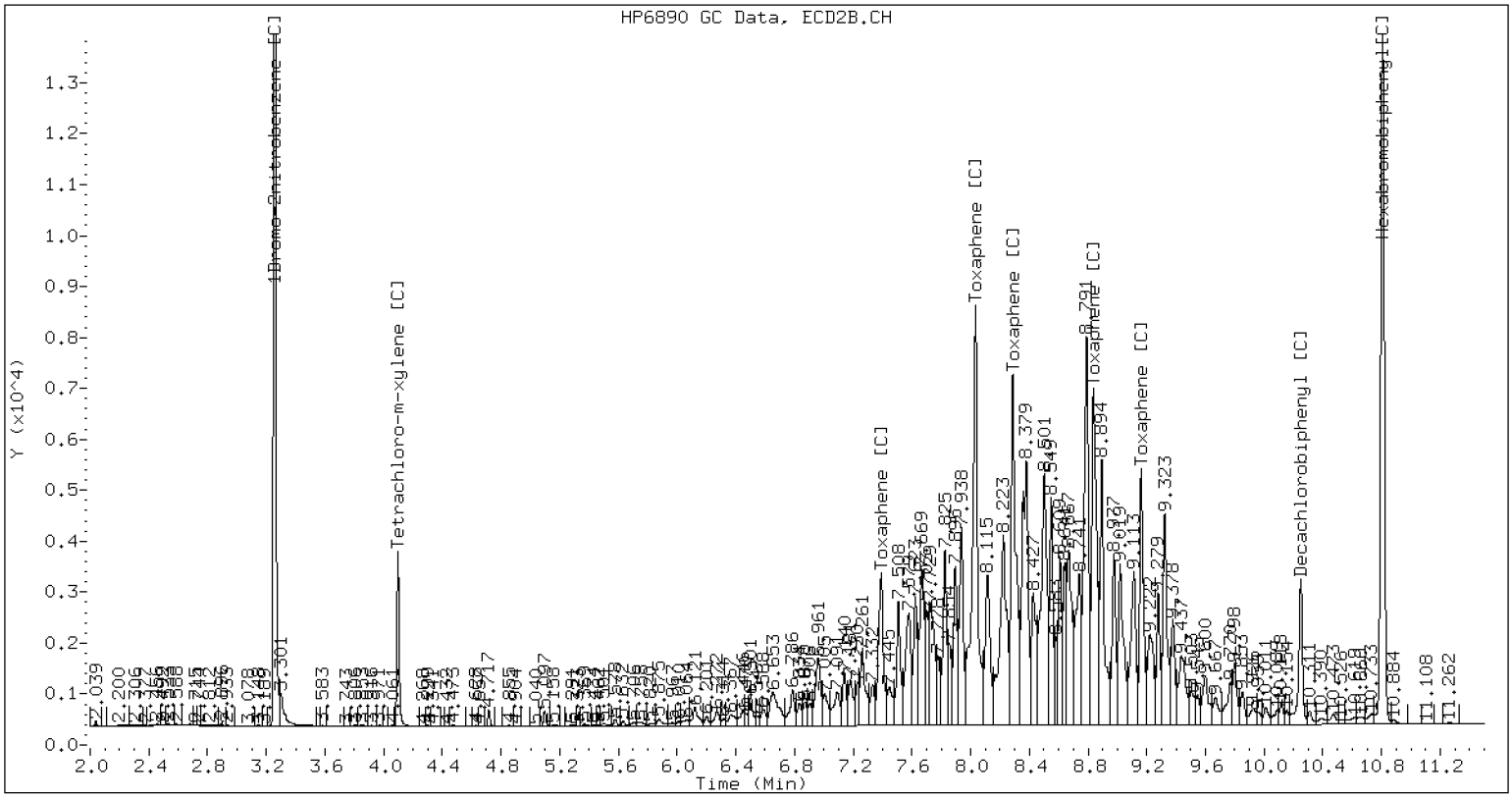


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060130.D SLF0020-CALP CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060131.D
Data file 2: /20230601.b/B20230601.b/23060131.D
Method: \20230601.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALQ
Client ID:
Injection Date: 02-JUN-2023 00:42
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.783	-0.000	146578	4.096	-0.000	178551	19.01	20.25	6.3	Tetrachloro-m-xylene
9.320	-0.001	224837	10.251	-0.001	241429	42.84	47.00	9.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	607811	-1.8
Hexabromobiphenyl	493109	513578	4.2

Column 2

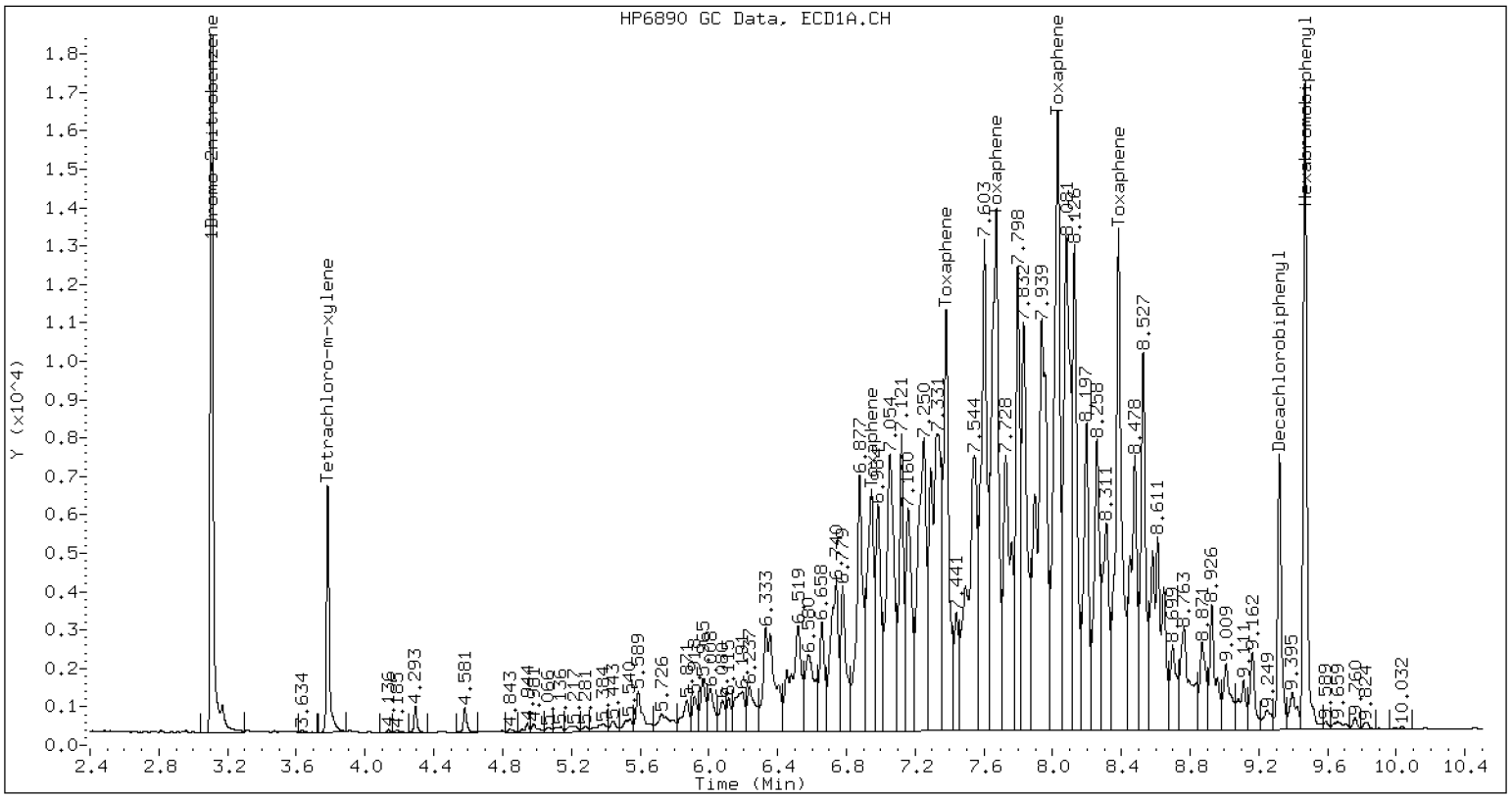
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	697386	0.2
Hexabromobiphenyl	461581	487834	5.7

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

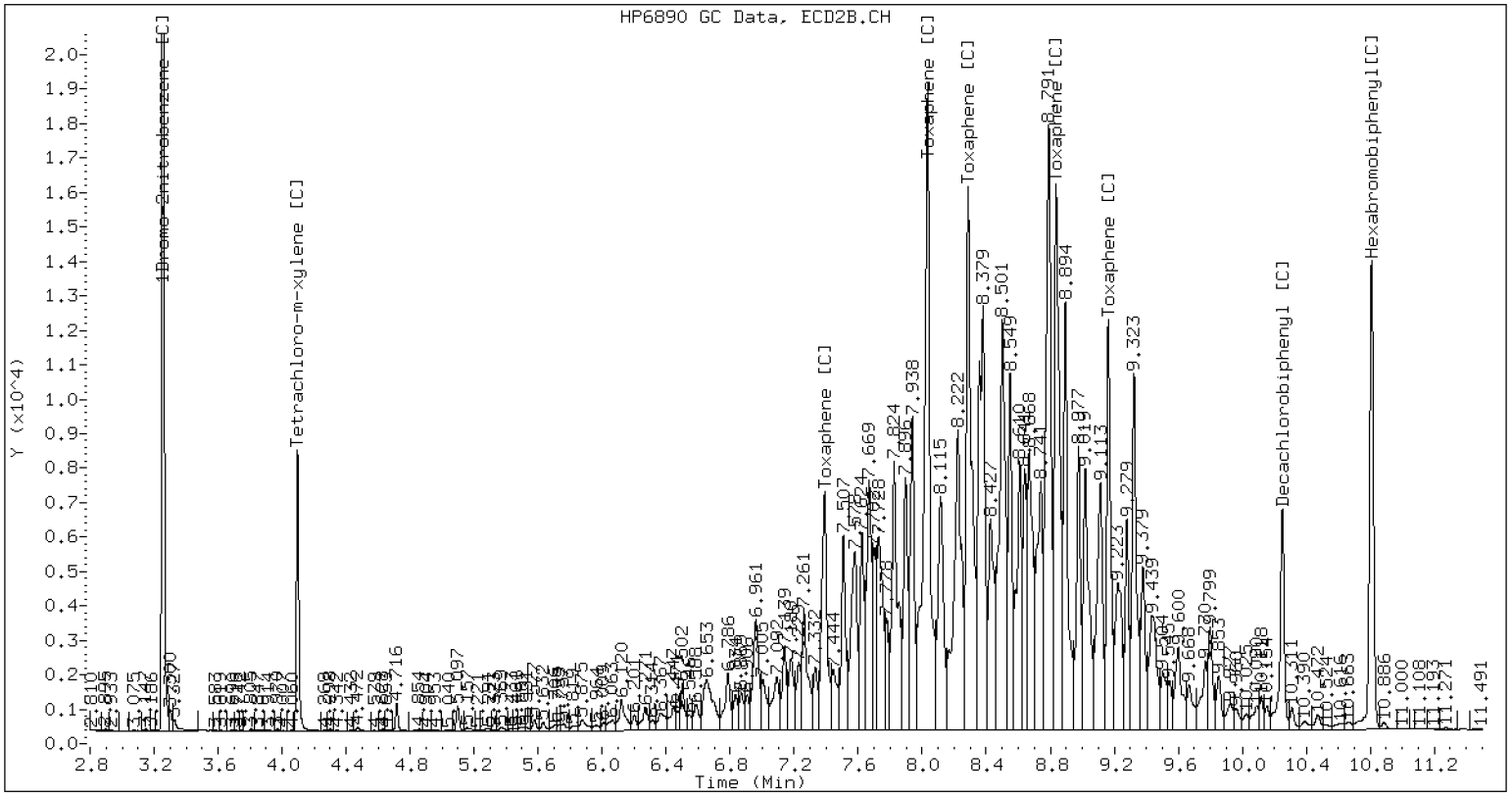
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.945	-0.000	335126	2490.4	1	7.390	-0.000	329136	2392.9
Toxaphene	2	7.380	0.000	491239	2506.6	2	8.034	-0.000	970251	2325.6
Toxaphene	3	7.671	-0.000	796624	2470.5	3	8.287	-0.001	762914	2426.3
Toxaphene	4	8.030	0.000	787442	2419.6	4	8.837	0.000	720682	2436.3
Toxaphene	5	8.383	-0.000	648802	2535.6	5	9.163	-0.000	426593	2427.9

Total STX-CLPAve (5 peaks): 2484.527 Total CLP2Ave (5 peaks): 2401.798 RPD = 3
Corrected Ave (5 peaks): 2484.527 Corrected Ave (5 peaks): 2401.798 RPD = 3

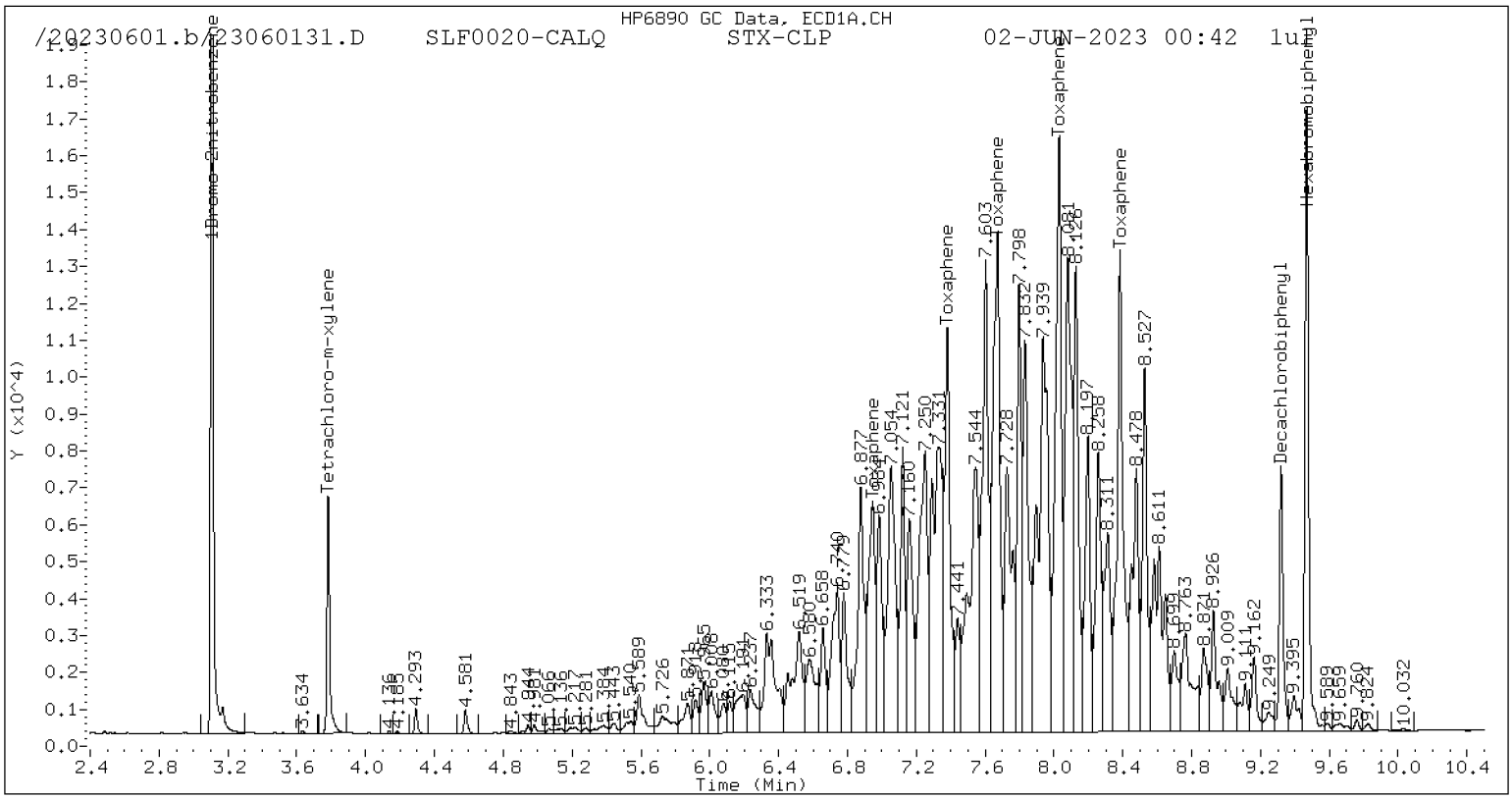
/20230601.b/23060131.D SLF0020-CALQ STX-CLP 02-JUN-2023 00:42 1ul



/20230601.b/B20230601.b/23060131.D SLF0020-CALQ CLP2 02-JUN-2023 00:42 1ul

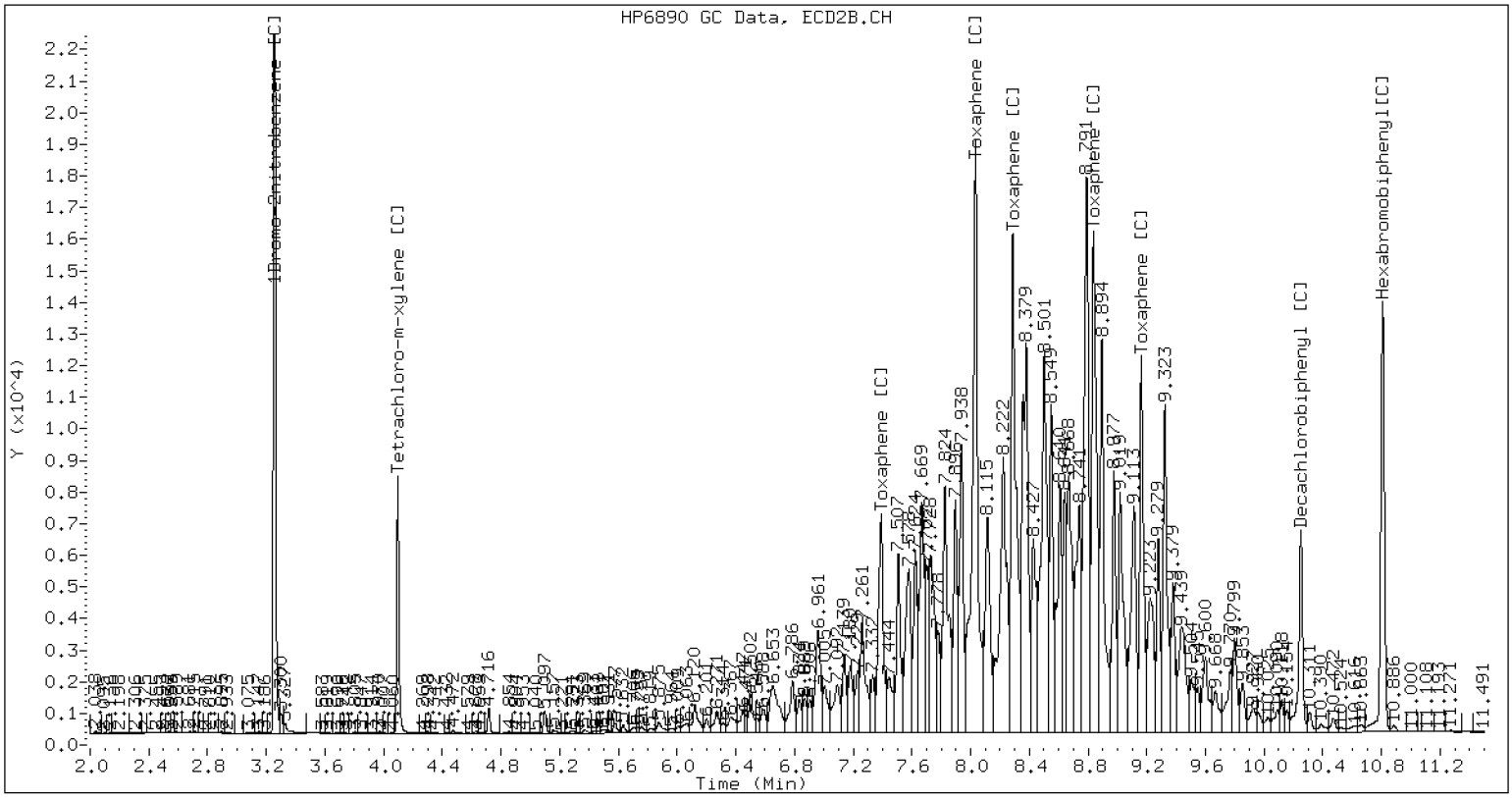


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060131.D SLF0020-CALQ CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060132.D
Data file 2: /20230601.b/B20230601.b/23060132.D
Method: \20230601.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALR
Client ID:
Injection Date: 02-JUN-2023 01:00
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.783	-0.000	291539	4.097	0.000	349851	36.16	38.16	5.4	Tetrachloro-m-xylene
9.320	-0.000	436143	10.251	-0.000	473754	72.90	84.45	14.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	635495	2.7
Hexabromobiphenyl	493109	585507	18.7

Column 2

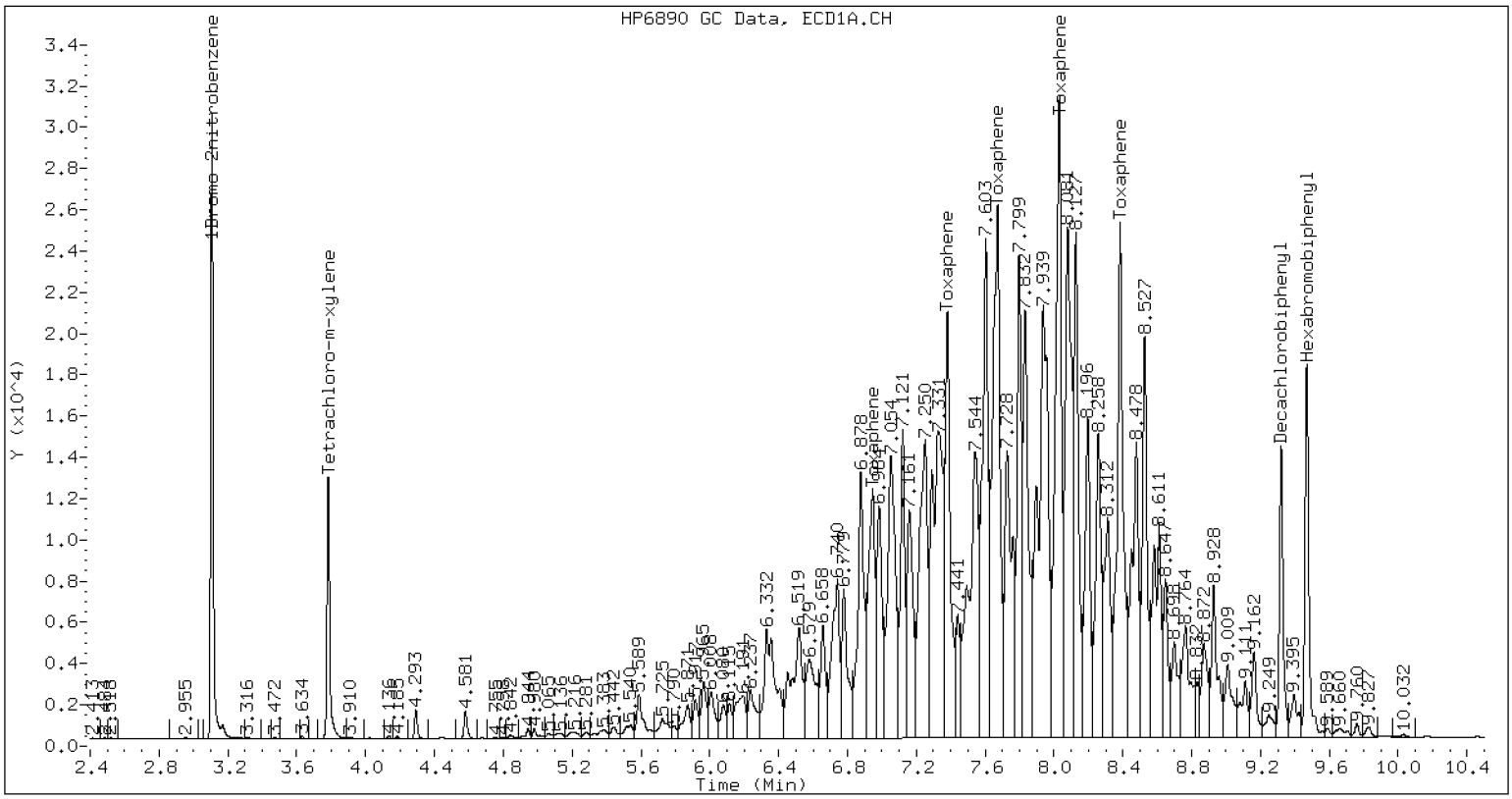
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	725193	4.2
Hexabromobiphenyl	461581	532775	15.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

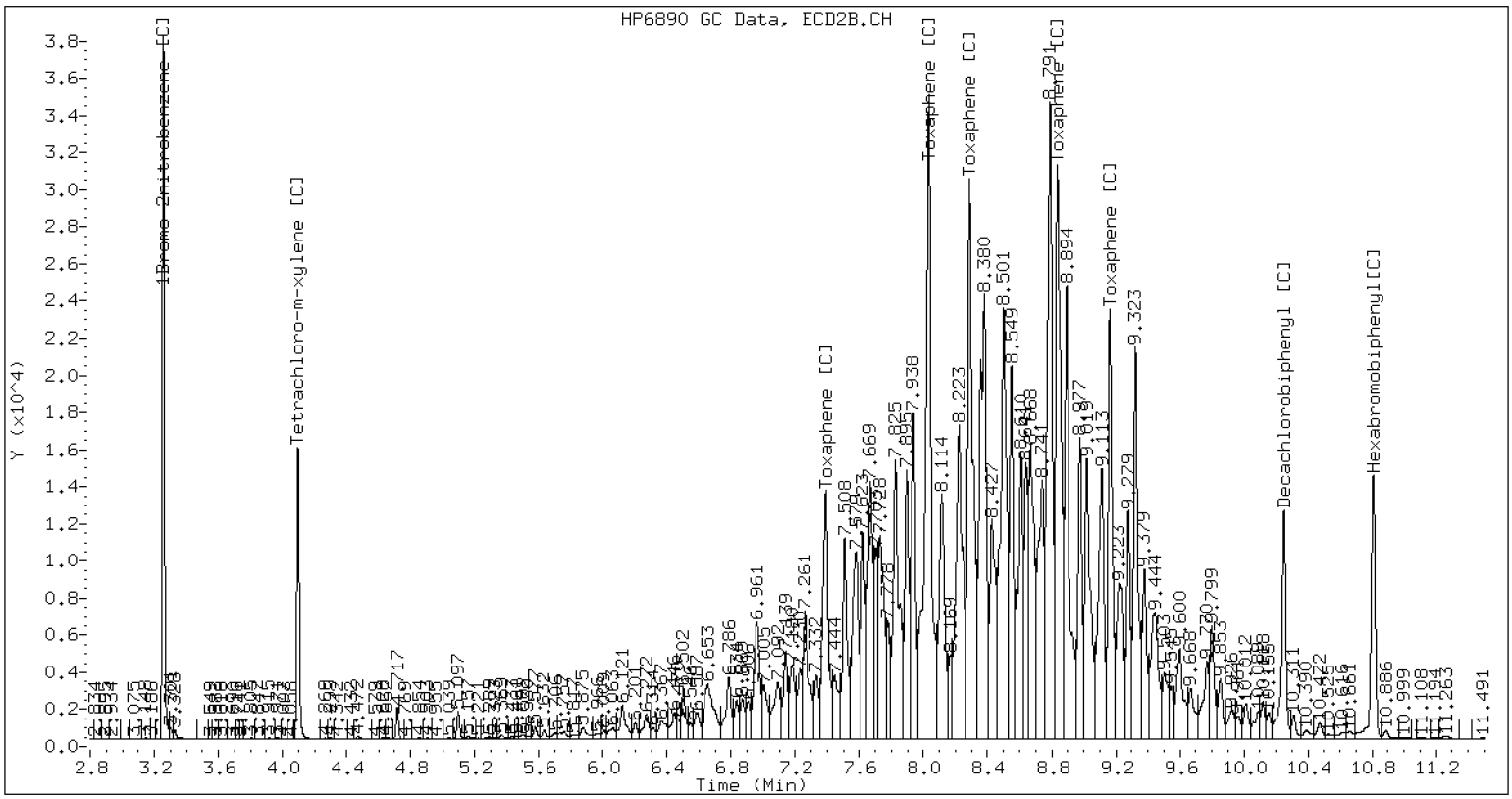
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.945	-0.000	640311	4173.8	1	7.391	-0.000	639321	4256.0
Toxaphene	2	7.380	0.000	876970	3925.1	2	8.034	-0.000	1854784	4070.7
Toxaphene	3	7.671	-0.000	1527128	4154.1	3	8.287	0.000	1447208	4214.3
Toxaphene	4	8.030	0.000	1516911	4088.4	4	8.837	-0.000	1425880	4413.6
Toxaphene	5	8.384	0.000	1264181	4333.6	5	9.163	-0.000	847091	4414.5

Total STX-CLPAve (5 peaks): 4134.995 Total CLP2Ave (5 peaks): 4273.816 RPD = 3
Corrected Ave (5 peaks): 4134.995 Corrected Ave (5 peaks): 4273.816 RPD = 3

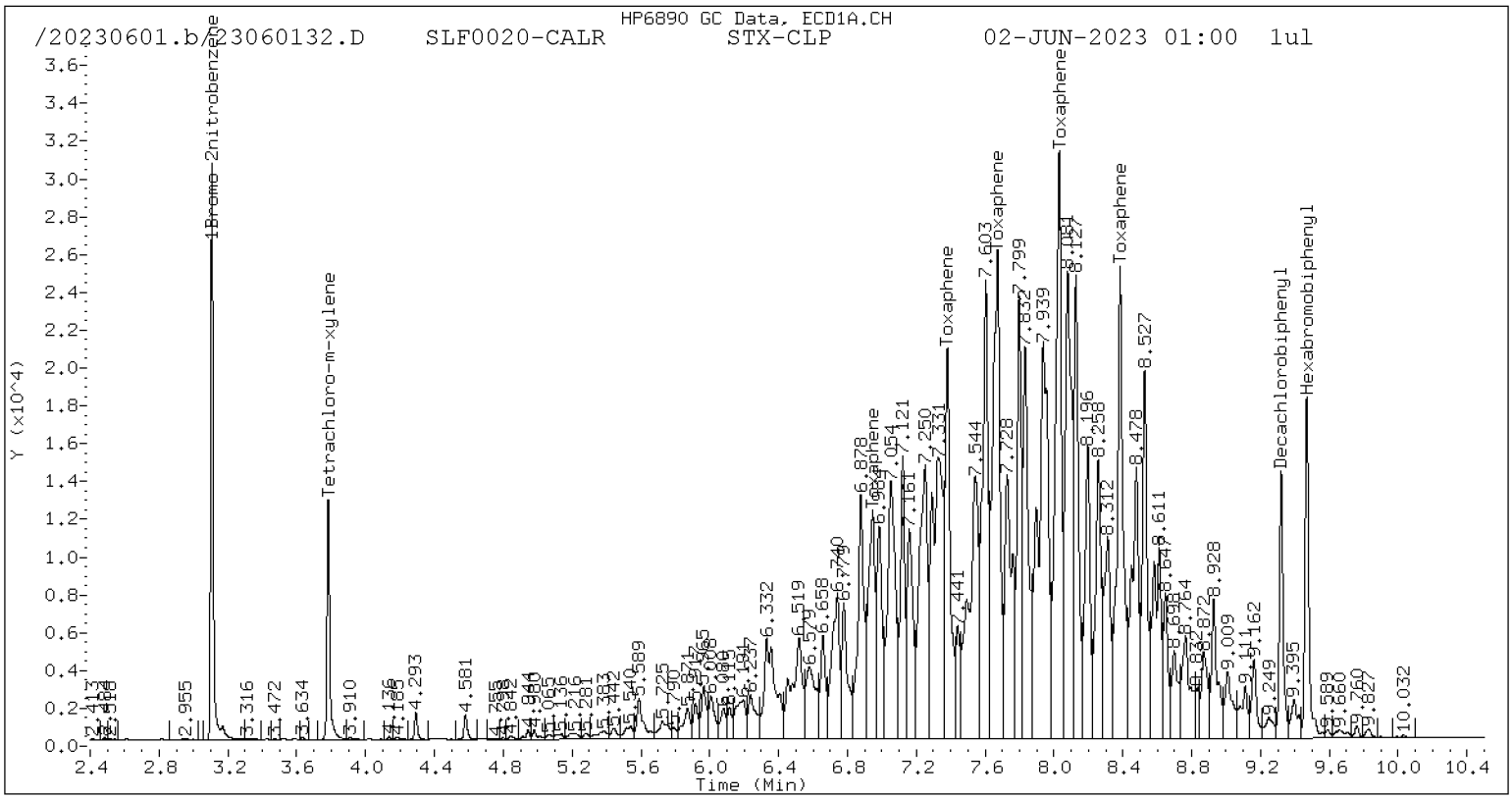
/20230601.b/23060132.D SLF0020-CALR STX-CLP 02-JUN-2023 01:00 1ul



/20230601.b/B20230601.b/23060132.D SLF0020-CALR CLP2 02-JUN-2023 01:00 1ul

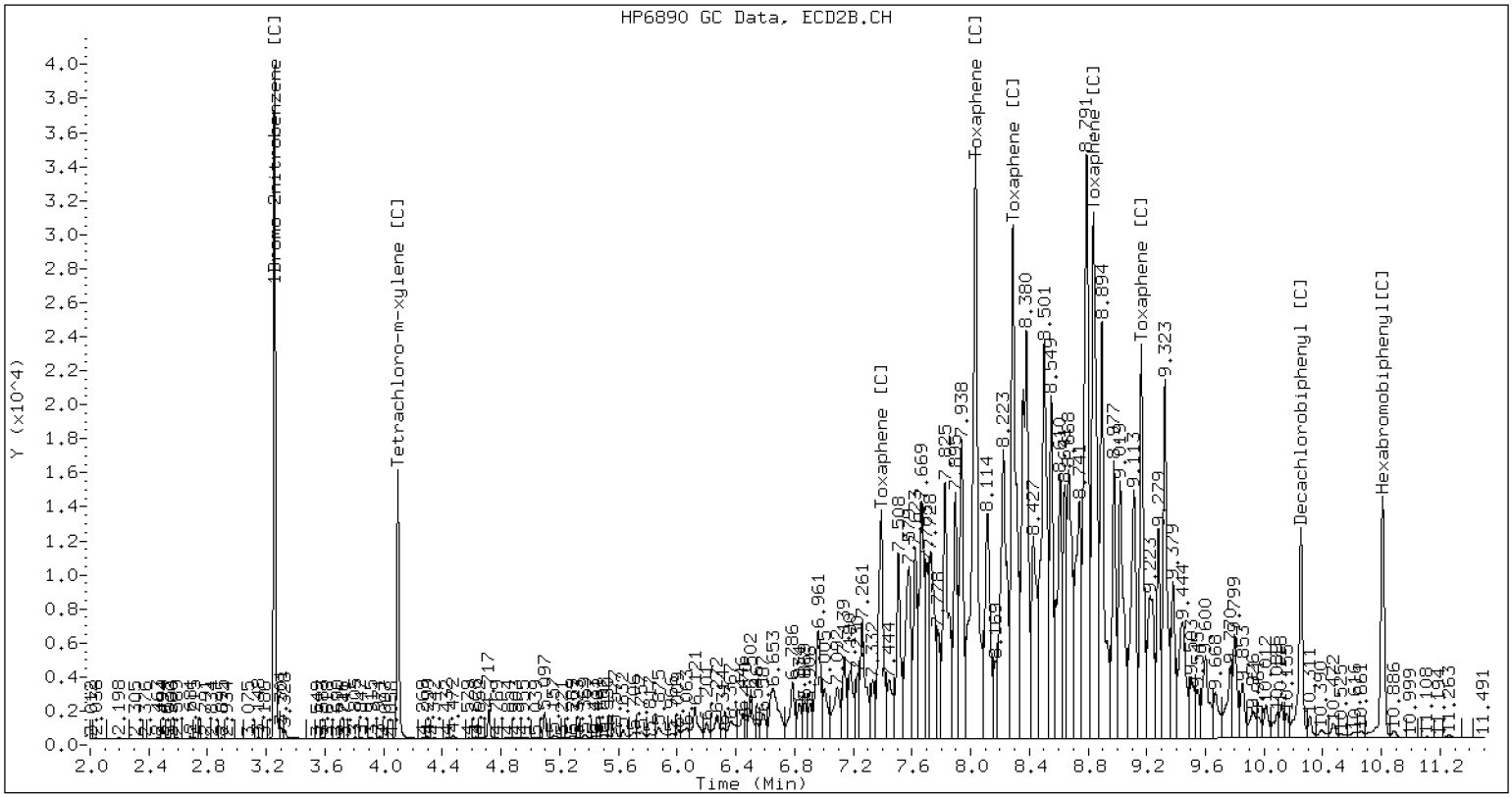


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060132.D SLF0020-CALR CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060133.D
Data file 2: /20230601.b/B20230601.b/23060133.D
Method: \20230601.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-CALS
Client ID:
Injection Date: 02-JUN-2023 01:19
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.784	0.000	555886	4.096	-0.000	663163	70.18	74.01	5.3	Tetrachloro-m-xylene
9.320	-0.001	840604	10.251	-0.000	910660	124.55	163.30	26.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	624313	0.9
Hexabromobiphenyl	493109	660493	33.9

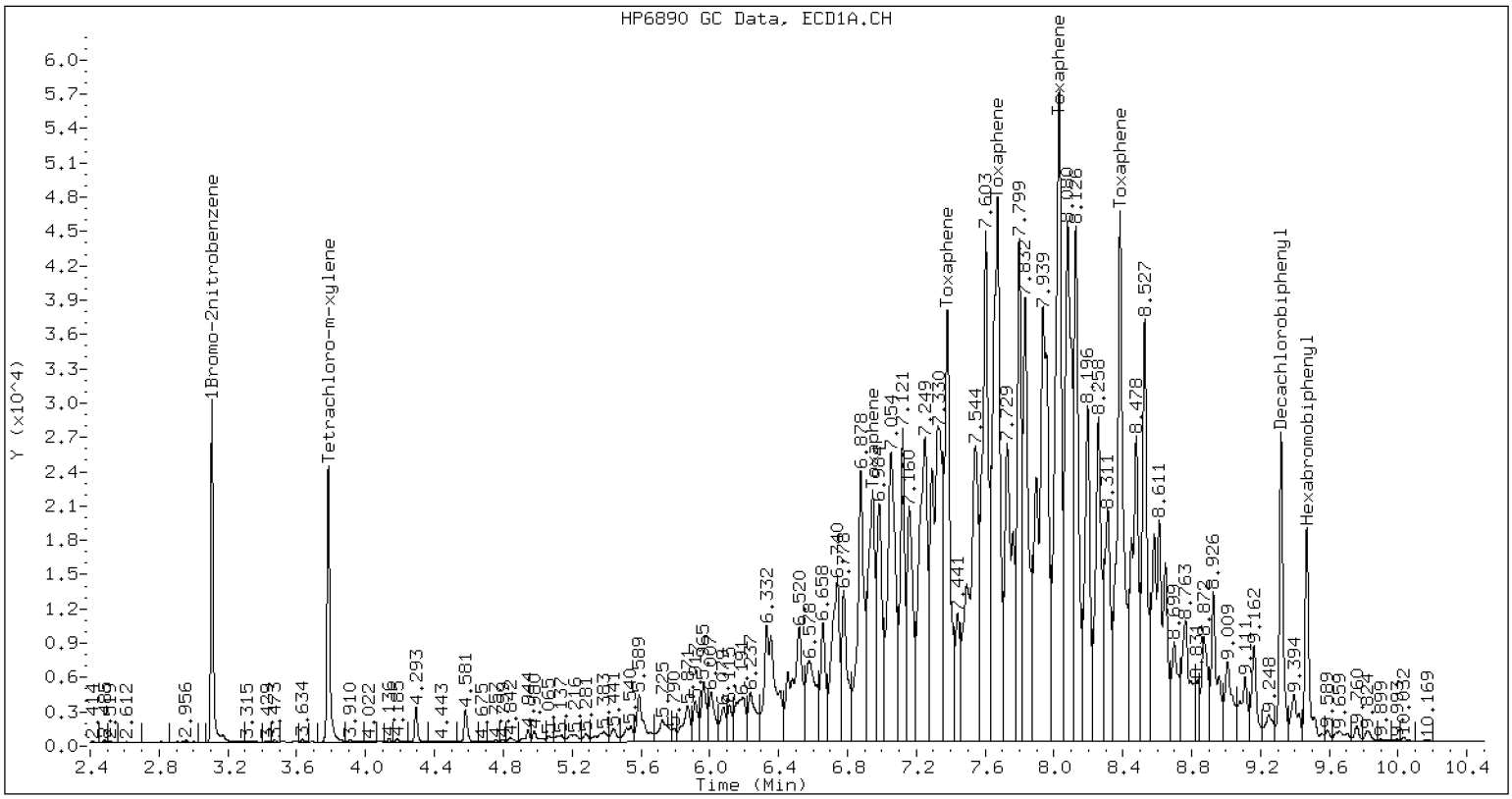
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	708725	1.8
Hexabromobiphenyl	461581	529623	14.7

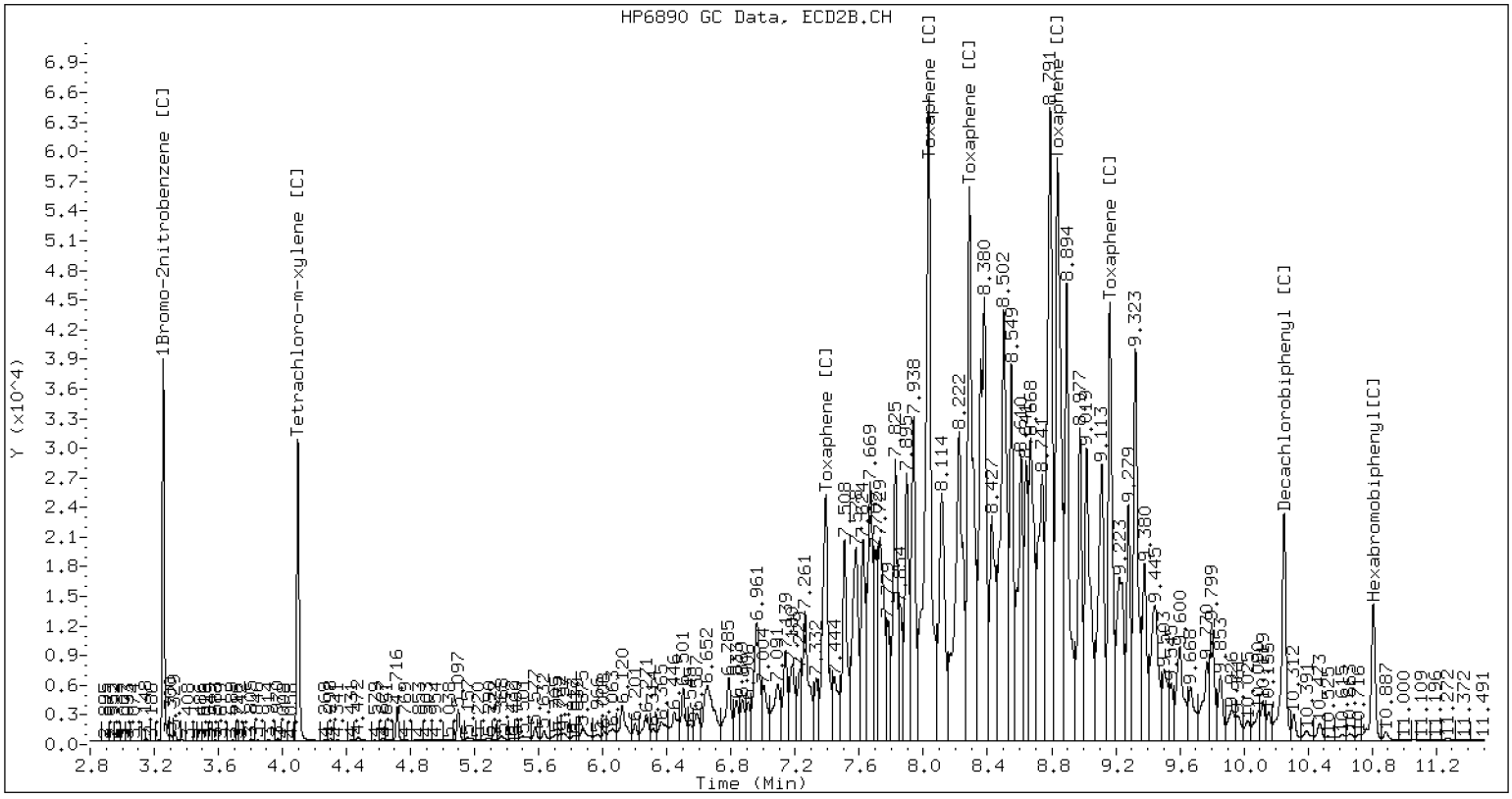
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.945	0.000	1195568	6908.4	1	7.391	0.000	1197950	8022.3	
Toxaphene	2	7.380	0.000	1734524	6882.0	2	8.034	0.000	3437950	7590.2	
Toxaphene	3	7.671	0.000	2807927	6771.0	3	8.287	0.000	2704953	7923.7	
Toxaphene	4	8.030	0.000	2850794	6811.2	4	8.837	0.000	2730583	8502.4	
Toxaphene	5	8.384	0.000	2402715	7301.3	5	9.163	0.000	1634378	8568.0	
Total STX-CLPAve (5 peaks): 6934.774						Total CLP2Ave (5 peaks): 8121.327				RPD = 16	
Corrected Ave (5 peaks): 6934.774						Corrected Ave (5 peaks): 8121.327				RPD = 16	

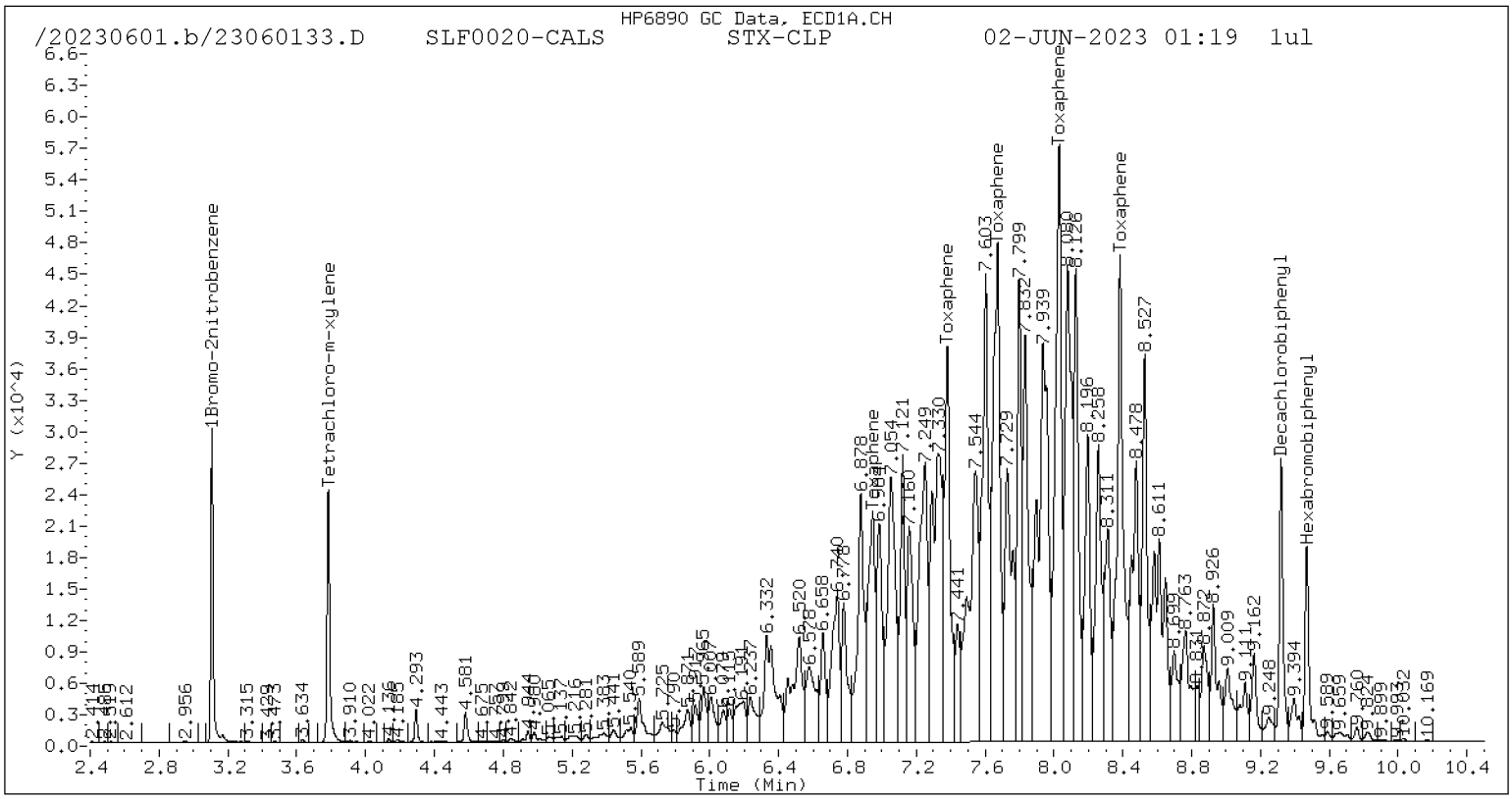
/20230601.b/23060133.D SLF0020-CALS STX-CLP 02-JUN-2023 01:19 1ul



/20230601.b/B20230601.b/23060133.D SLF0020-CALS CLP2 02-JUN-2023 01:19 1ul

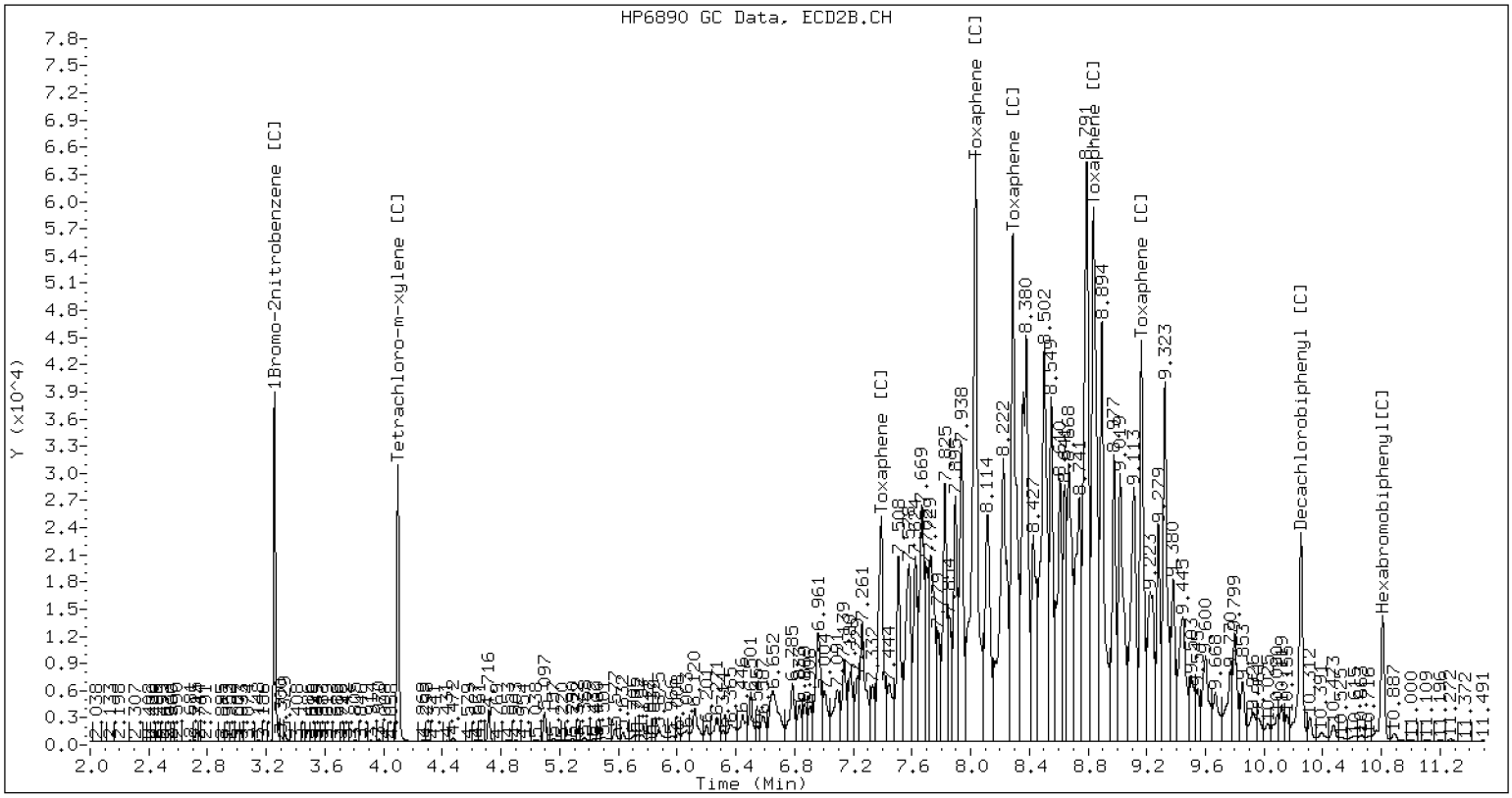


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060133.D SLF0020-CALS CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060134.D
Data file 2: /20230601.b/B20230601.b/23060134.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-SCV1
Client ID:
Injection Date: 02-JUN-2023 01:38
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	-0.000	556206	4.717	-0.001	665818	49.34	51.55	4.4	alpha-BHC
4.674	-0.000	219427	5.181	-0.000	255379	47.17	48.29	2.3	beta-BHC
4.857	0.000	501341	5.526	-0.000	574620	52.82	54.00	2.2	delta-BHC
4.594	0.000	499497	5.104	0.000	598215	50.82	52.47	3.2	gamma-BHC (Lindane)
5.079	-0.000	447640	5.619	-0.000	526885	48.22	50.79	5.2	Heptachlor
5.400	-0.000	429009	6.015	-0.000	502423	46.30	47.91	3.4	Aldrin
6.073	-0.000	383620	6.677	0.000	441187	46.79	48.69	4.0	Heptachlor epoxide b
6.517	-0.000	354745	7.120	-0.001	385035	46.56	48.89	4.9	Endosulfan I
6.777	-0.000	392896	7.415	-0.001	441519	49.35	50.98	3.2	Dieldrin
6.441	0.000	369232	7.208	-0.001	424313	50.06	51.18	2.2	4,4'-DDE
7.028	-0.001	356583	7.739	-0.001	386455	49.10	49.12	0.0	Endrin
7.265	-0.000	325346	7.951	-0.001	357868	49.10	48.16	1.9	Endosulfan II
7.090	0.000	306466	7.815	-0.000	341691	47.69	48.08	0.8	4,4'-DDD
8.128	-0.001	296205	8.550	-0.001	321395	49.12	49.44	0.7	Endosulfan sulfate
7.384	-0.000	332680	8.134	-0.001	353651	50.12	50.92	1.6	4,4'-DDT
7.874	-0.000	157729	8.776	-0.001	167356	53.31	52.87	0.8	Methoxychlor
8.403	-0.001	333792	9.072	-0.001	353020	47.66	46.78	1.9	Endrin ketone
7.693	-0.001	252524	8.283	-0.001	275655	51.19	54.28	5.9	Endrin aldehyde
6.216	-0.000	404803	6.888	-0.000	452347	49.70	51.14	2.9	trans-Chlordane
6.363	-0.000	389340	7.048	-0.000	426279	47.55	48.87	2.7	cis-Chlordane
----			2.428	0.000	780	0.00	0.06	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
----			4.100	0.003	480	0.00	0.05	---	Tetrachloro-m-xylene
----			10.253	0.002	1005	0.00	0.21	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

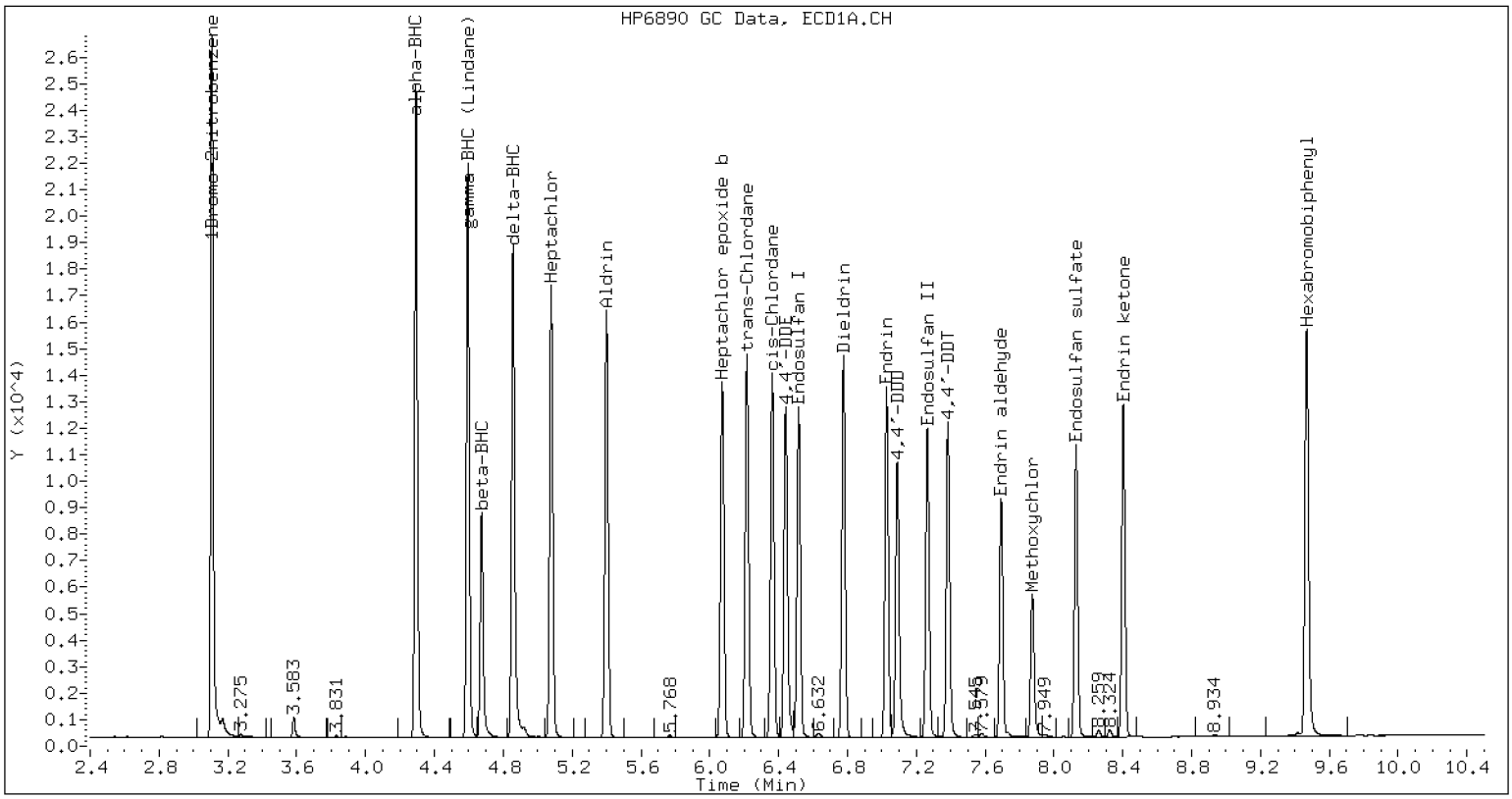
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	598769	-3.3
Hexabromobiphenyl	493109	476418	-3.4

Column 2

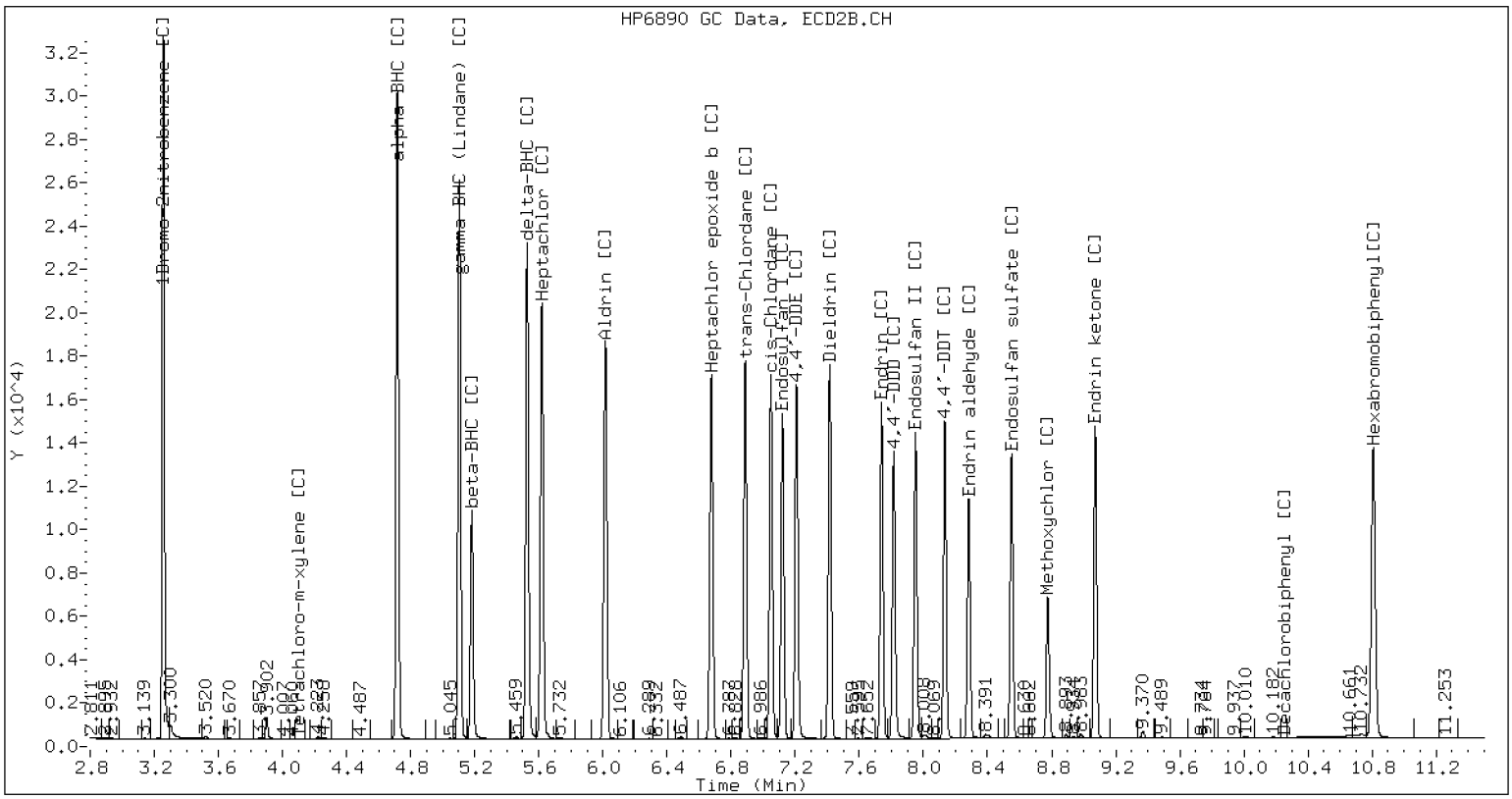
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	692071	-0.6
Hexabromobiphenyl	461581	463858	0.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

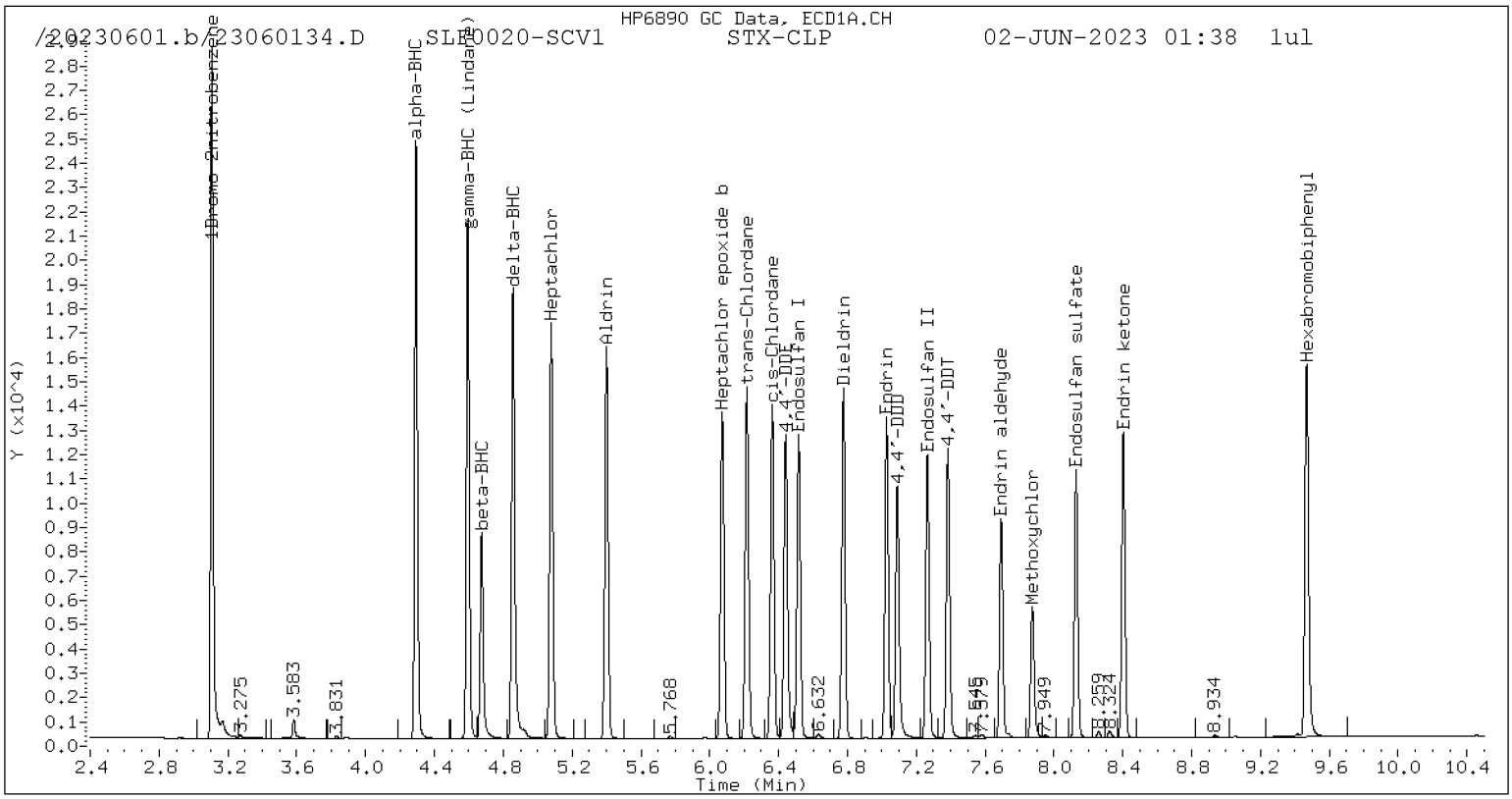
/20230601.b/23060134.D SLF0020-SCV1 STX-CLP 02-JUN-2023 01:38 1ul



/20230601.b/B20230601.b/23060134.D SLF0020-SCV1 CLP2 02-JUN-2023 01:38 1ul

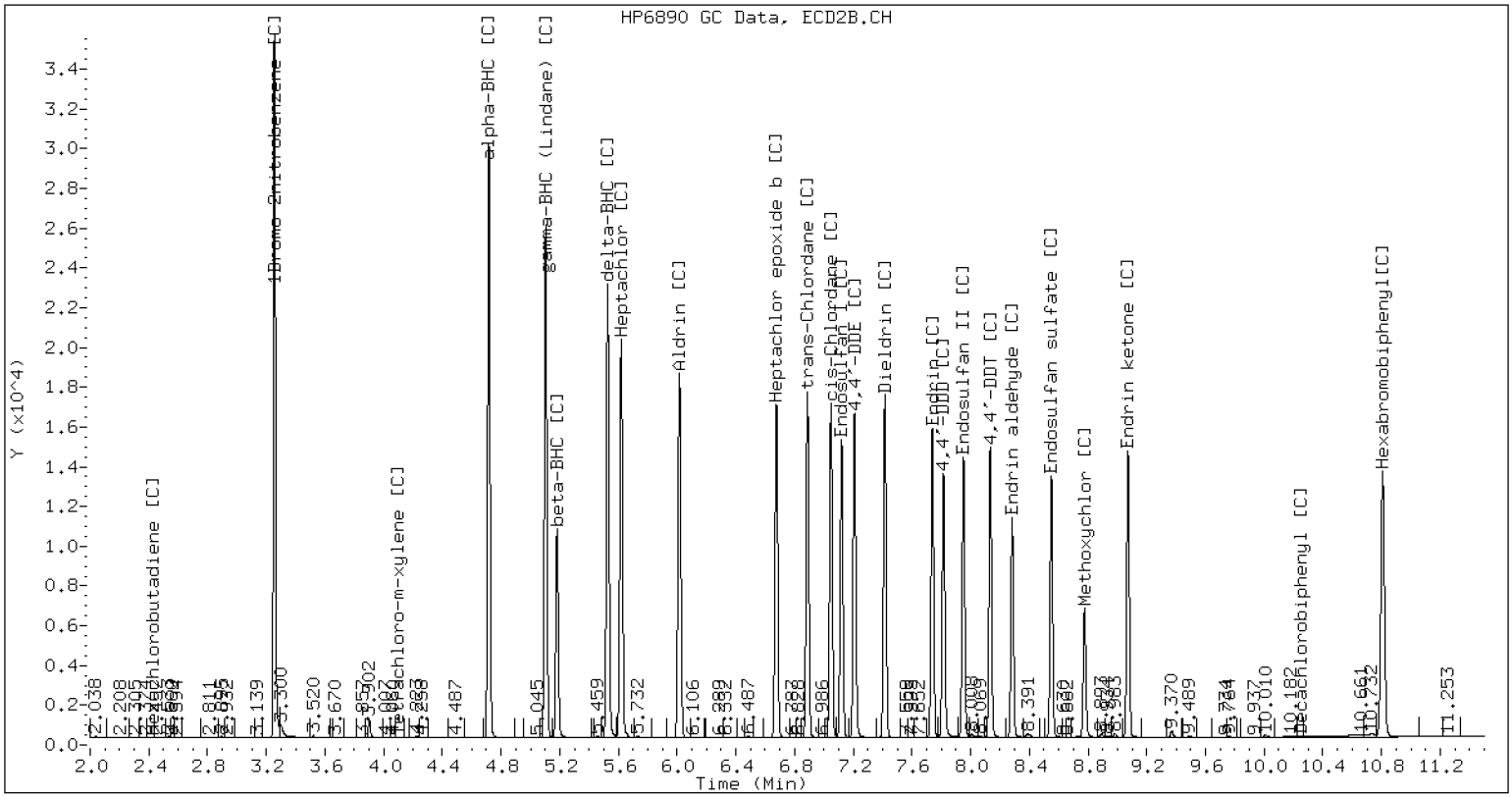


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060134.D SLF0020-SCV1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060135.D
Data file 2: /20230601.b/B20230601.b/23060135.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-SCV2
Client ID:
Injection Date: 02-JUN-2023 01:56
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.957	-0.000	2726	6.571	-0.001	1869	0.41	0.24	51.6*	Oxychlordane
6.055	-0.001	211571	6.870	-0.001	240465	43.55	42.65	2.1	2,4-DDE
6.345	-0.001	307861	6.988	-0.000	337535	39.70	40.35	1.6	trans-Nonachlor
6.632	-0.000	179396	7.428	-0.000	205116	39.61	40.38	1.9	2,4-DDD
6.910	-0.000	217606	7.750	-0.001	239317	41.03	41.60	1.4	2,4-DDT
7.062	-0.001	304370	7.810	-0.000	332894	38.27	38.18	0.3	cis-Nonachlor
8.037	-0.000	188392	9.053	-0.001	189113	37.30	37.14	0.4	Mirex
3.783	-0.000	4990	4.087	-0.010	5344	0.64	0.57	11.2	Tetrachloro-m-xylene
9.320	-0.000	2145	10.250	-0.001	2589	0.43	0.52	17.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

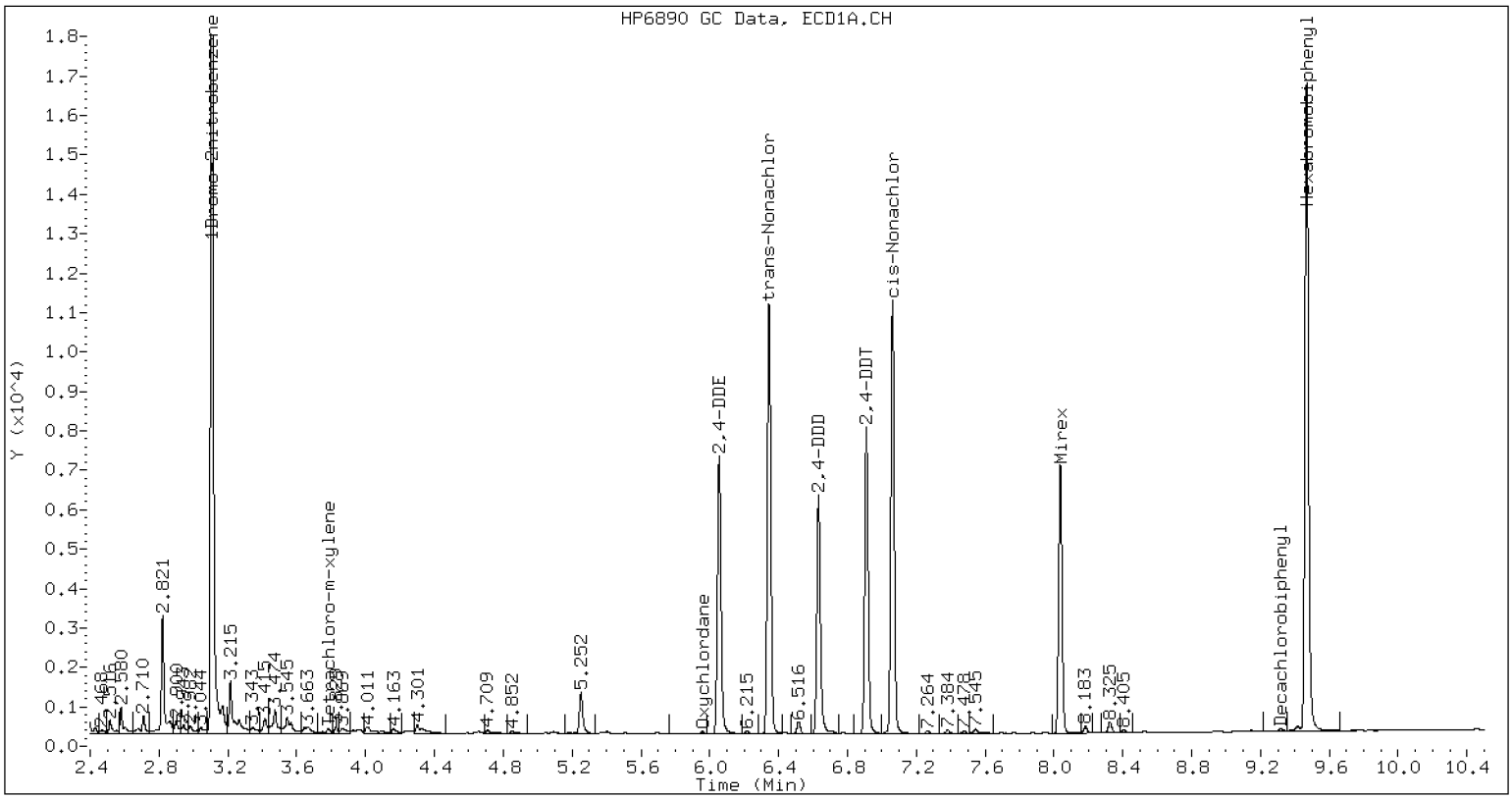
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	611793	-1.1
Hexabromobiphenyl	493109	483251	-2.0

Column 2

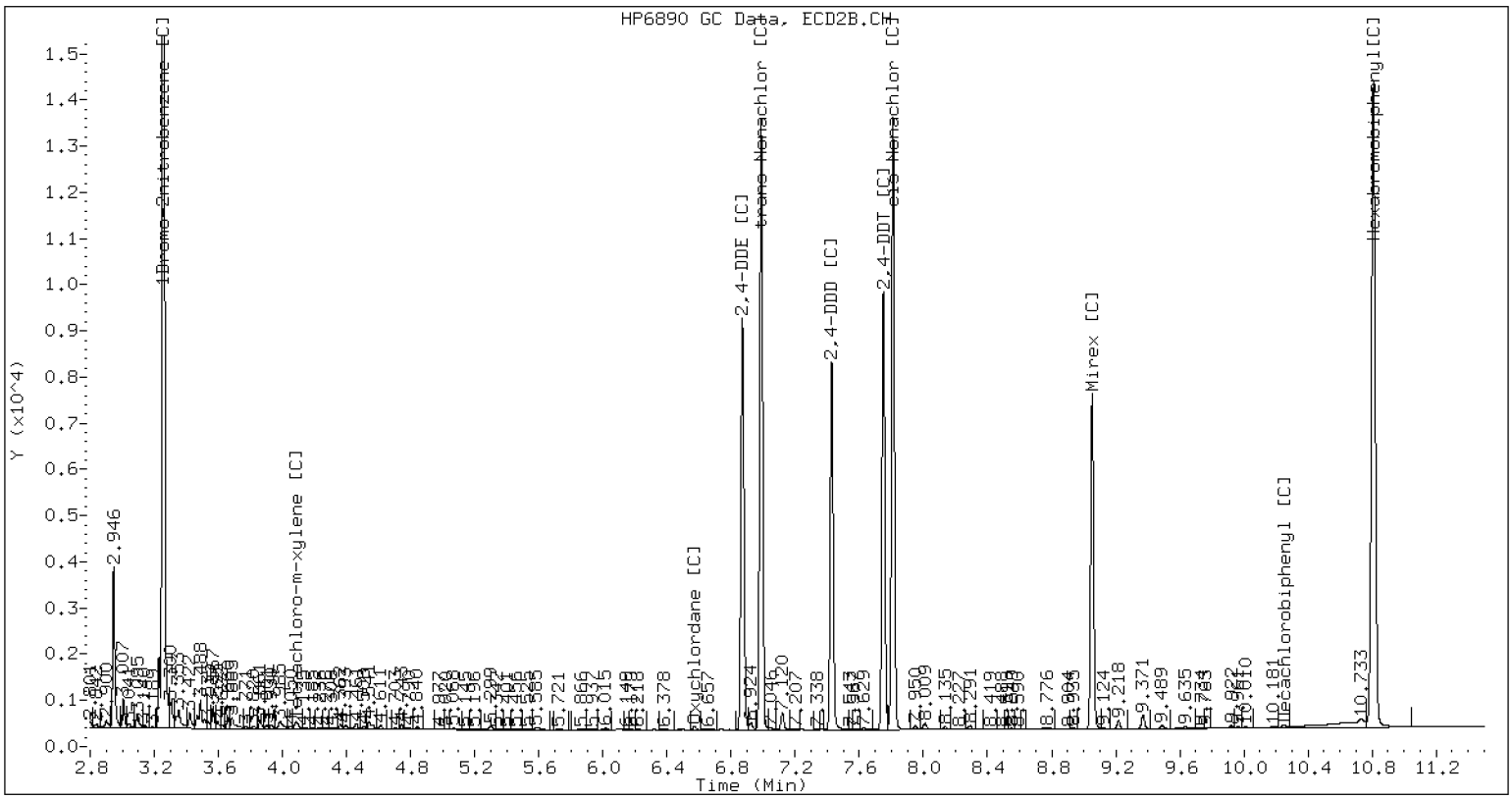
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	735895	5.7
Hexabromobiphenyl	461581	473919	2.7

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

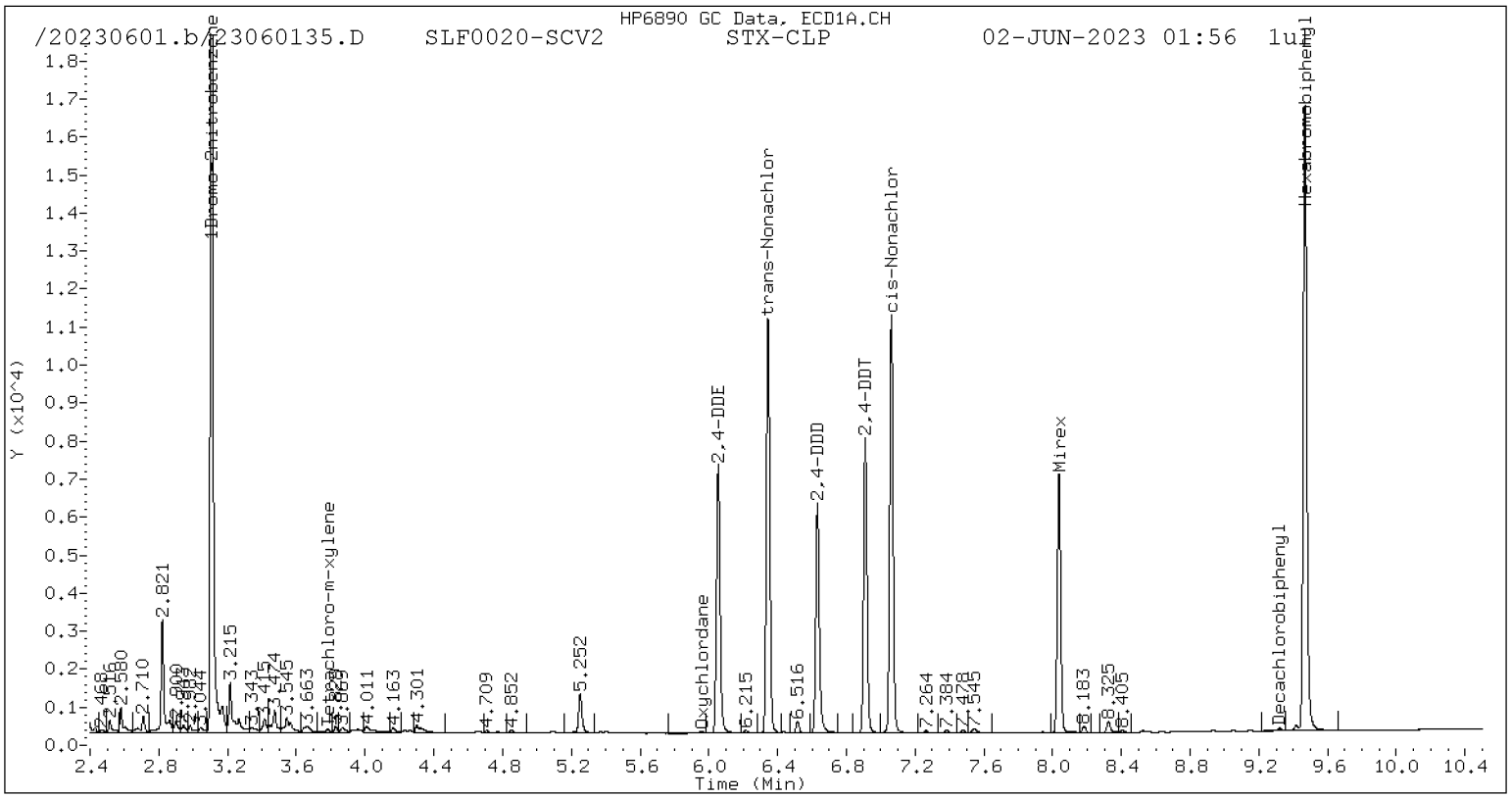
/20230601.b/23060135.D SLF0020-SCV2 STX-CLP 02-JUN-2023 01:56 1ul



/20230601.b/B20230601.b/23060135.D SLF0020-SCV2 CLP2 02-JUN-2023 01:56 1ul

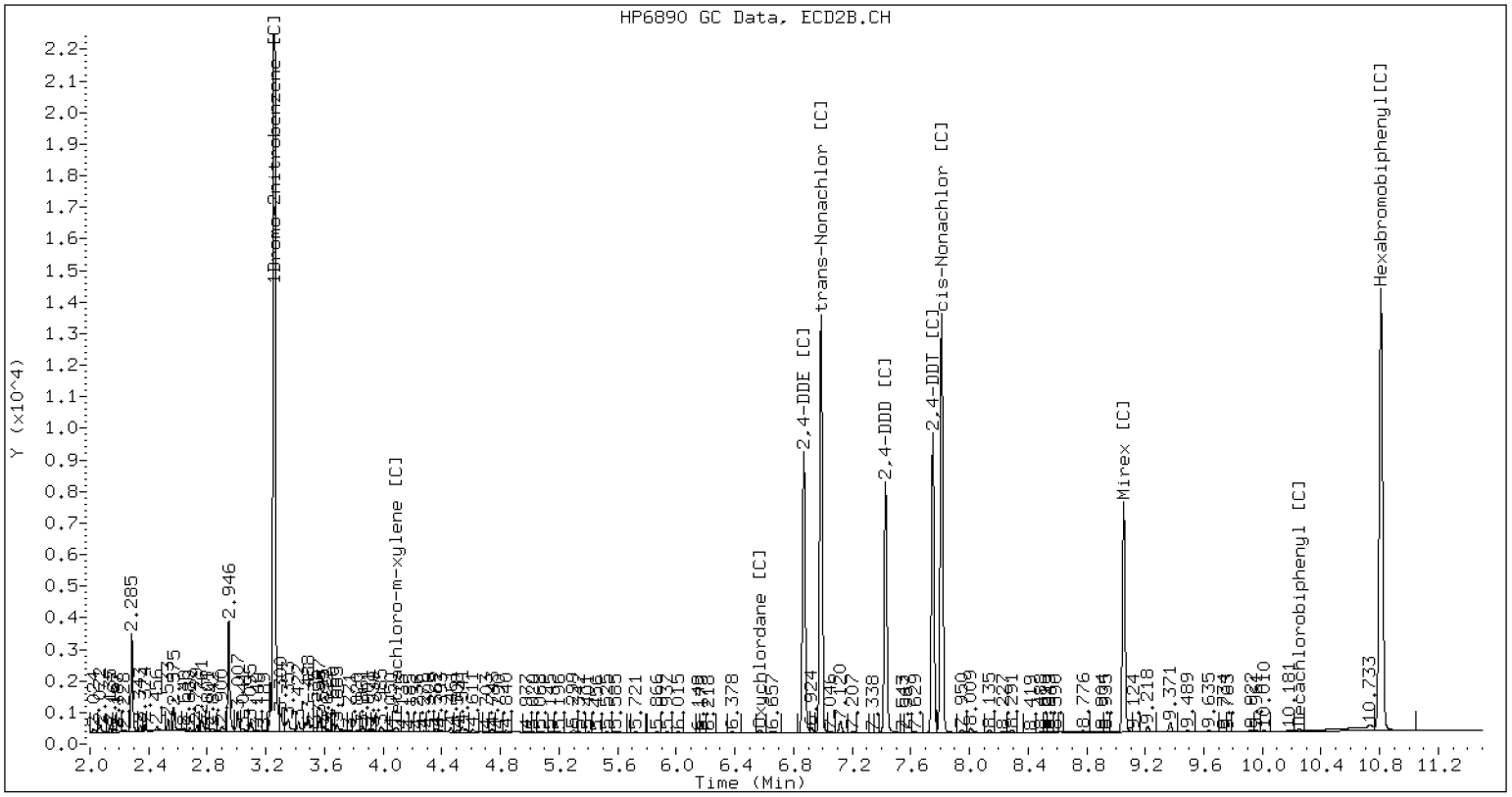


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060135.D SLF0020-SCV2 CLP2



CLP-2 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GF00024
Laboratory ID: SLF0020-SCV1
Sequence: SLF0020
Sequence Name: INDAESCV
Standard ID: L003155

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
alpha-BHC	50.000	49.3	-1.3	20.00
alpha-BHC [2C]	50.000	51.6	3.1	20.00
beta-BHC	50.000	47.2	-5.7	20.00
beta-BHC [2C]	50.000	48.3	-3.4	20.00
gamma-BHC (Lindane)	50.000	50.8	1.6	20.00
gamma-BHC (Lindane) [2C]	50.000	52.5	4.9	20.00
delta-BHC	50.000	52.8	5.6	20.00
delta-BHC [2C]	50.000	54.0	8.0	20.00
Heptachlor	50.000	48.2	-3.6	20.00
Heptachlor [2C]	50.000	50.8	1.6	20.00
Aldrin	50.000	46.3	-7.4	20.00
Aldrin [2C]	50.000	47.9	-4.2	20.00
Heptachlor Epoxide	50.000	46.8	-6.4	20.00
Heptachlor Epoxide [2C]	50.000	48.7	-2.6	20.00
trans-Chlordane (beta-Chlordane)	50.000	49.7	-0.6	20.00
trans-Chlordane (beta-Chlordane) [2C]	50.000	51.1	2.3	20.00
cis-Chlordane (alpha-chlordane)	50.000	47.5	-4.9	20.00
cis-Chlordane (alpha-chlordane) [2C]	50.000	48.9	-2.3	20.00
Endosulfan I	50.000	46.6	-6.9	20.00
Endosulfan I [2C]	50.000	48.9	-2.2	20.00
4,4'-DDE	50.000	50.1	0.1	20.00
4,4'-DDE [2C]	50.000	51.2	2.4	20.00
Dieldrin	50.000	49.4	-1.3	20.00
Dieldrin [2C]	50.000	51.0	2.0	20.00
Endrin	50.000	49.1	-1.8	20.00
Endrin [2C]	50.000	49.1	-1.8	20.00
Endosulfan II	50.000	49.1	-1.8	20.00
Endosulfan II [2C]	50.000	48.2	-3.7	20.00
4,4'-DDD	50.000	47.7	-4.6	20.00
4,4'-DDD [2C]	50.000	48.1	-3.8	20.00
Endrin Aldehyde	50.000	51.2	2.4	20.00
Endrin Aldehyde [2C]	50.000	54.3	8.6	20.00
4,4'-DDT	50.000	50.1	0.2	20.00
4,4'-DDT [2C]	50.000	50.9	1.8	20.00

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GF00024
Laboratory ID: SLF0020-SCV1
Sequence: SLF0020
Sequence Name: INDAESCV
Standard ID: L003155

Endosulfan Sulfate	50.000	49.1	-1.8	20.00
Endosulfan Sulfate [2C]	50.000	49.4	-1.1	20.00
Endrin Ketone	50.000	47.7	-4.7	20.00
Endrin Ketone [2C]	50.000	46.8	-6.4	20.00
Methoxychlor	50.000	53.3	6.6	20.00
Methoxychlor [2C]	50.000	52.9	5.7	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060134.D
Data file 2: /20230601.b/B20230601.b/23060134.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-SCV1
Client ID:
Injection Date: 02-JUN-2023 01:38
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	-0.000	556206	4.717	-0.001	665818	49.34	51.55	4.4	alpha-BHC
4.674	-0.000	219427	5.181	-0.000	255379	47.17	48.29	2.3	beta-BHC
4.857	0.000	501341	5.526	-0.000	574620	52.82	54.00	2.2	delta-BHC
4.594	0.000	499497	5.104	0.000	598215	50.82	52.47	3.2	gamma-BHC (Lindane)
5.079	-0.000	447640	5.619	-0.000	526885	48.22	50.79	5.2	Heptachlor
5.400	-0.000	429009	6.015	-0.000	502423	46.30	47.91	3.4	Aldrin
6.073	-0.000	383620	6.677	0.000	441187	46.79	48.69	4.0	Heptachlor epoxide b
6.517	-0.000	354745	7.120	-0.001	385035	46.56	48.89	4.9	Endosulfan I
6.777	-0.000	392896	7.415	-0.001	441519	49.35	50.98	3.2	Dieldrin
6.441	0.000	369232	7.208	-0.001	424313	50.06	51.18	2.2	4,4'-DDE
7.028	-0.001	356583	7.739	-0.001	386455	49.10	49.12	0.0	Endrin
7.265	-0.000	325346	7.951	-0.001	357868	49.10	48.16	1.9	Endosulfan II
7.090	0.000	306466	7.815	-0.000	341691	47.69	48.08	0.8	4,4'-DDD
8.128	-0.001	296205	8.550	-0.001	321395	49.12	49.44	0.7	Endosulfan sulfate
7.384	-0.000	332680	8.134	-0.001	353651	50.12	50.92	1.6	4,4'-DDT
7.874	-0.000	157729	8.776	-0.001	167356	53.31	52.87	0.8	Methoxychlor
8.403	-0.001	333792	9.072	-0.001	353020	47.66	46.78	1.9	Endrin ketone
7.693	-0.001	252524	8.283	-0.001	275655	51.19	54.28	5.9	Endrin aldehyde
6.216	-0.000	404803	6.888	-0.000	452347	49.70	51.14	2.9	trans-Chlordane
6.363	-0.000	389340	7.048	-0.000	426279	47.55	48.87	2.7	cis-Chlordane
----			2.428	0.000	780	0.00	0.06	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
----			4.100	0.003	480	0.00	0.05	---	Tetrachloro-m-xylene
----			10.253	0.002	1005	0.00	0.21	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

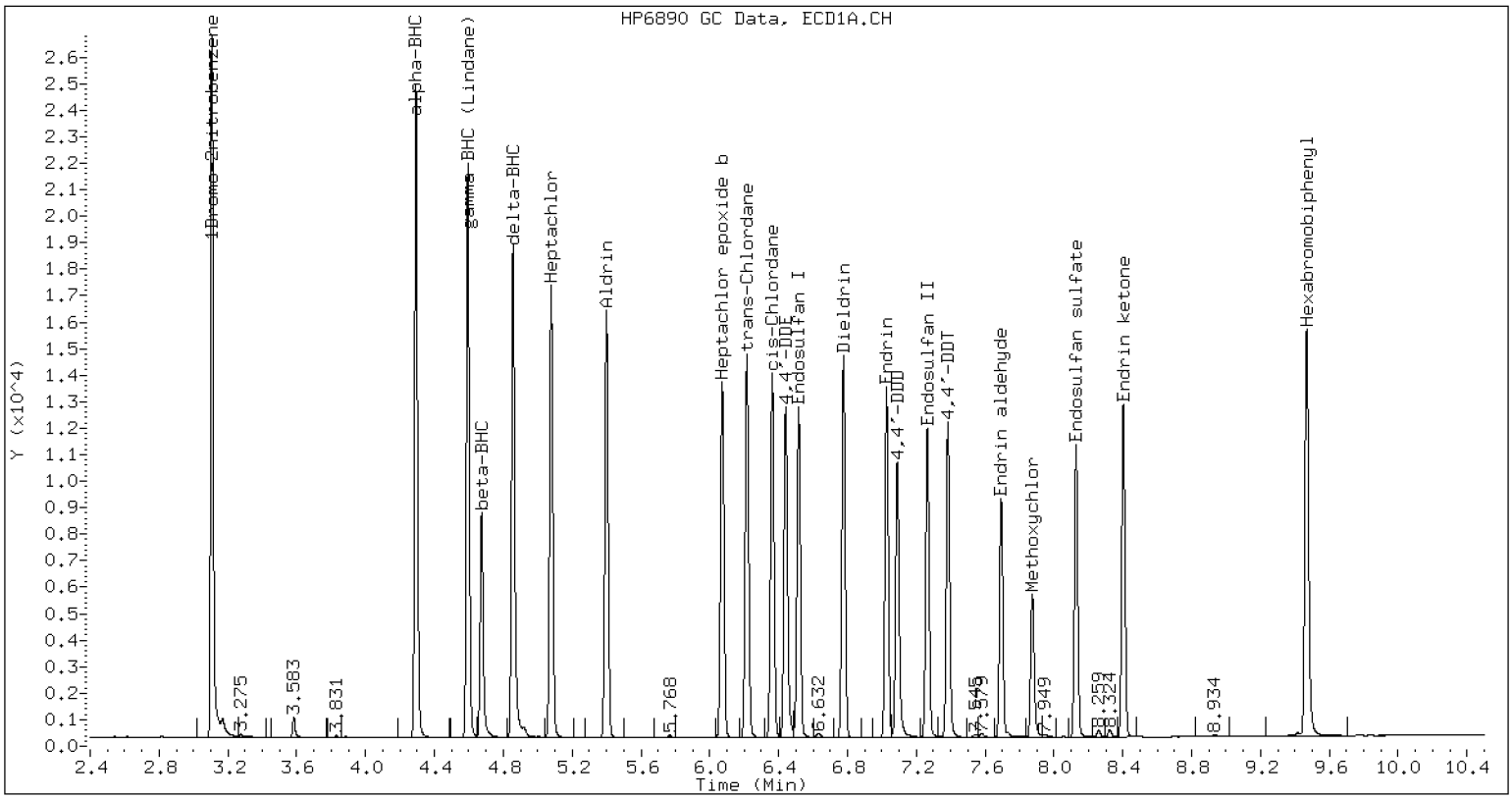
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	598769	-3.3
Hexabromobiphenyl	493109	476418	-3.4

Column 2

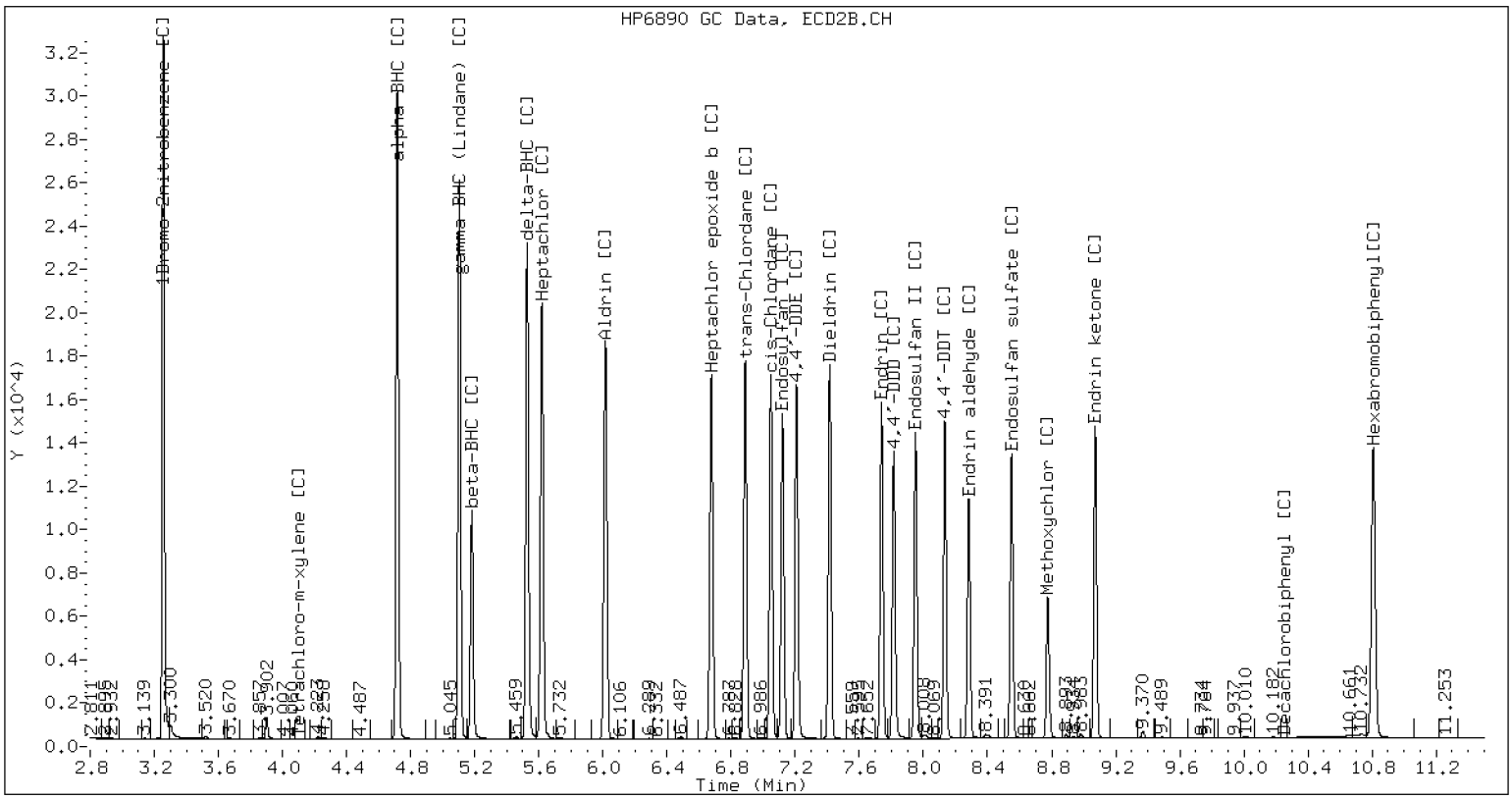
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	692071	-0.6
Hexabromobiphenyl	461581	463858	0.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

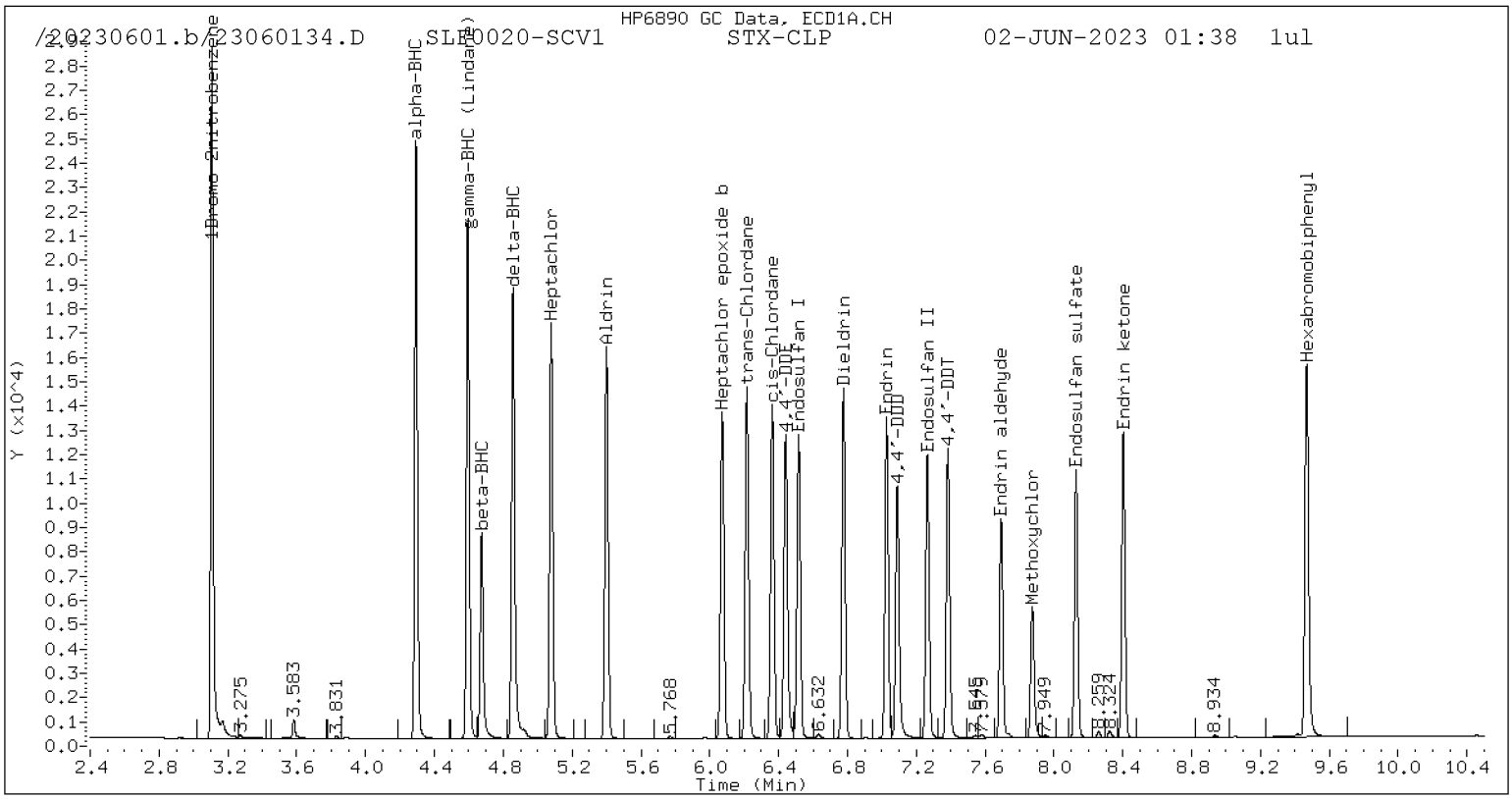
/20230601.b/23060134.D SLF0020-SCV1 STX-CLP 02-JUN-2023 01:38 1ul



/20230601.b/B20230601.b/23060134.D SLF0020-SCV1 CLP2 02-JUN-2023 01:38 1ul

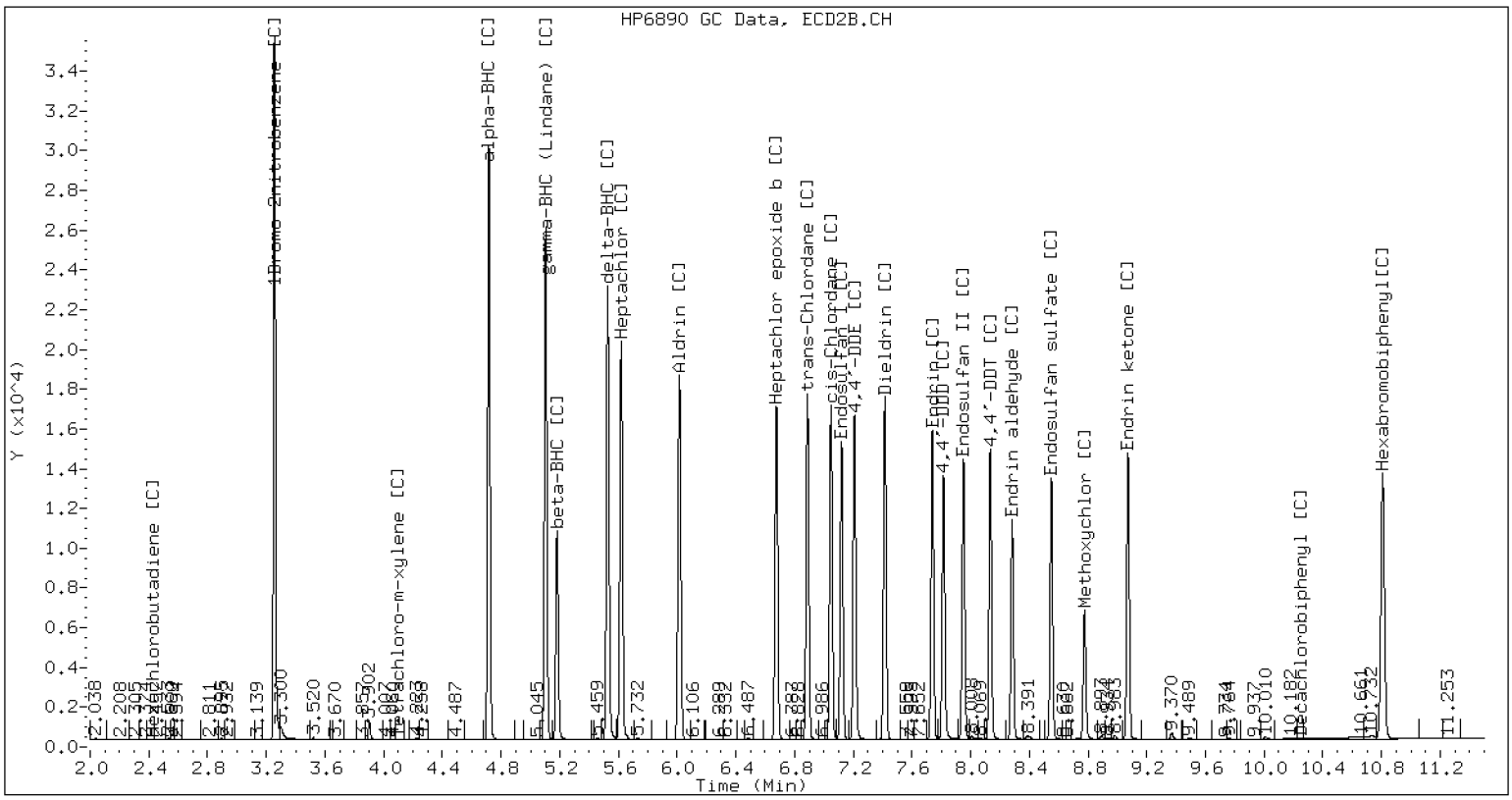


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060134.D SLF0020-SCV1 CLP2



CLP-2 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GF00024
Laboratory ID: SLF0020-SCV2
Sequence: SLF0020
Sequence Name: WNDSCV
Standard ID: L003156

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
2,4'-DDE	40.000	43.5	8.9	20.00
2,4'-DDE [2C]	40.000	42.6	6.6	20.00
2,4'-DDD	40.000	39.6	-1.0	20.00
2,4'-DDD [2C]	40.000	40.4	1.0	20.00
2,4'-DDT	40.000	41.0	2.6	20.00
2,4'-DDT [2C]	40.000	41.6	4.0	20.00
cis-Nonachlor	40.000	38.3	-4.3	20.00
cis-Nonachlor [2C]	40.000	38.2	-4.6	20.00
trans-Nonachlor	40.000	39.7	-0.7	20.00
trans-Nonachlor [2C]	40.000	40.3	0.9	20.00
Mirex	40.000	37.3	-6.8	20.00
Mirex [2C]	40.000	37.1	-7.1	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060135.D
Data file 2: /20230601.b/B20230601.b/23060135.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-SCV2
Client ID:
Injection Date: 02-JUN-2023 01:56
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.957	-0.000	2726	6.571	-0.001	1869	0.41	0.24	51.6*	Oxychlordane
6.055	-0.001	211571	6.870	-0.001	240465	43.55	42.65	2.1	2,4-DDE
6.345	-0.001	307861	6.988	-0.000	337535	39.70	40.35	1.6	trans-Nonachlor
6.632	-0.000	179396	7.428	-0.000	205116	39.61	40.38	1.9	2,4-DDD
6.910	-0.000	217606	7.750	-0.001	239317	41.03	41.60	1.4	2,4-DDT
7.062	-0.001	304370	7.810	-0.000	332894	38.27	38.18	0.3	cis-Nonachlor
8.037	-0.000	188392	9.053	-0.001	189113	37.30	37.14	0.4	Mirex
3.783	-0.000	4990	4.087	-0.010	5344	0.64	0.57	11.2	Tetrachloro-m-xylene
9.320	-0.000	2145	10.250	-0.001	2589	0.43	0.52	17.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

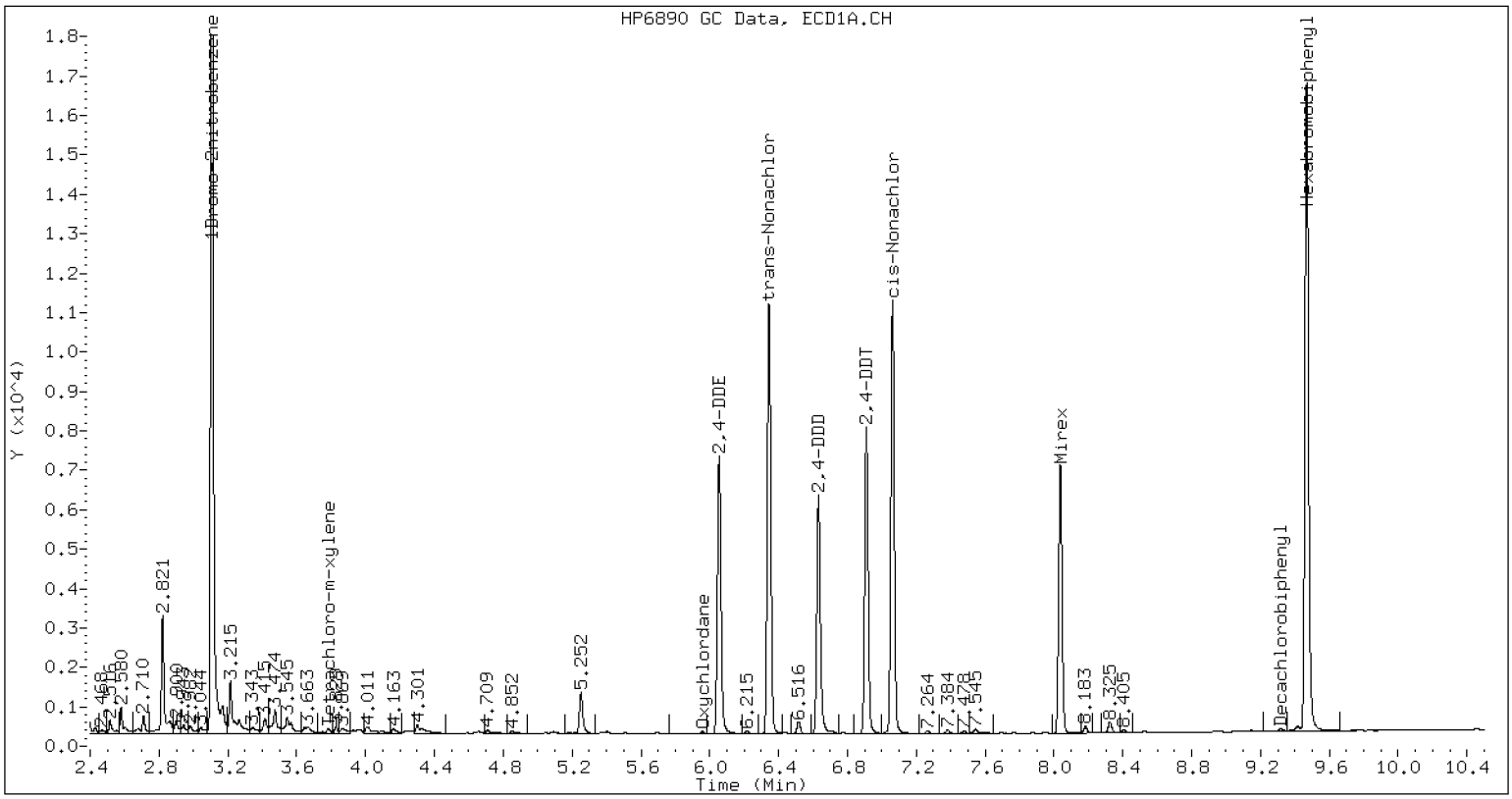
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	611793	-1.1
Hexabromobiphenyl	493109	483251	-2.0

Column 2

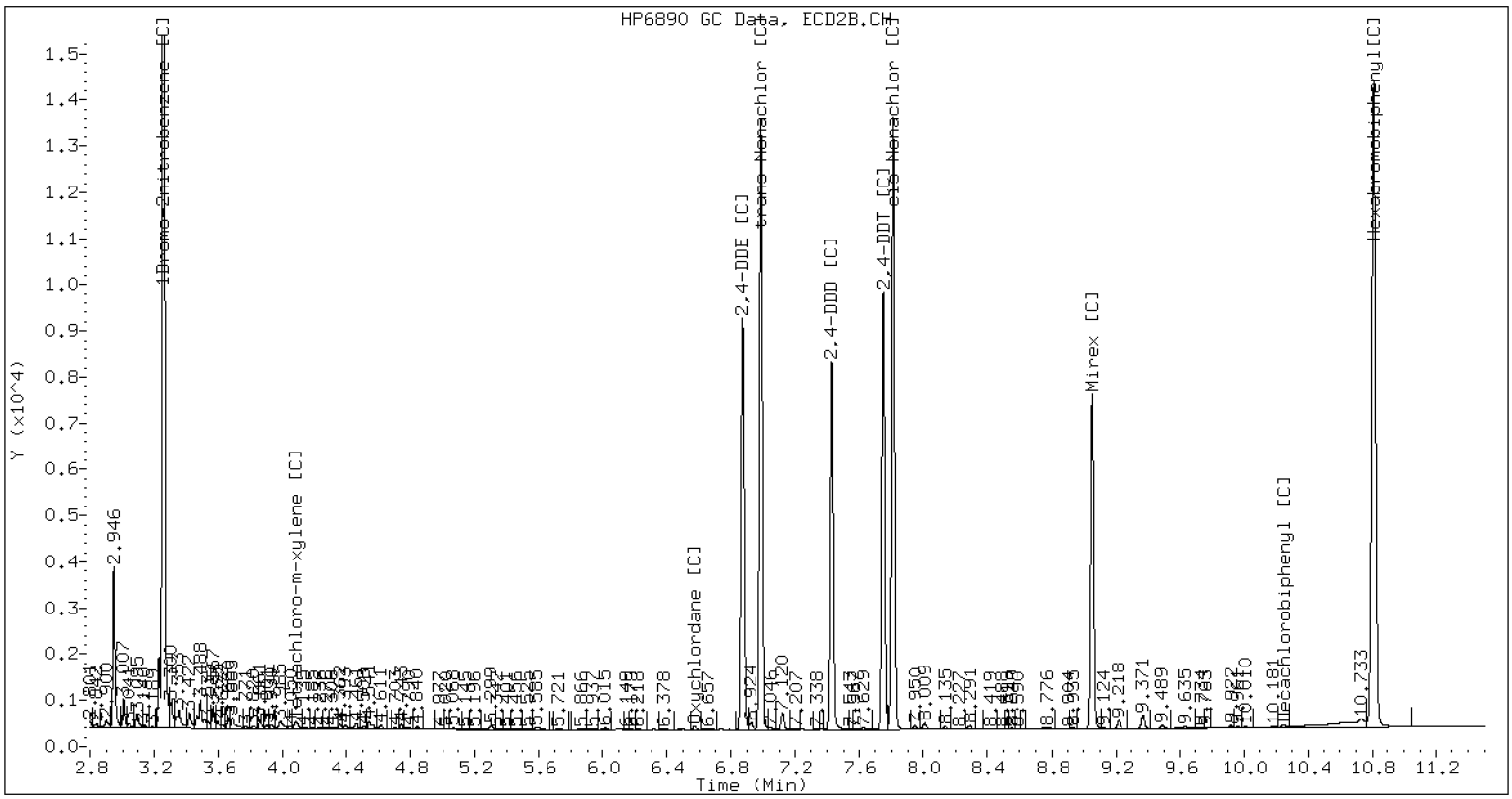
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	735895	5.7
Hexabromobiphenyl	461581	473919	2.7

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

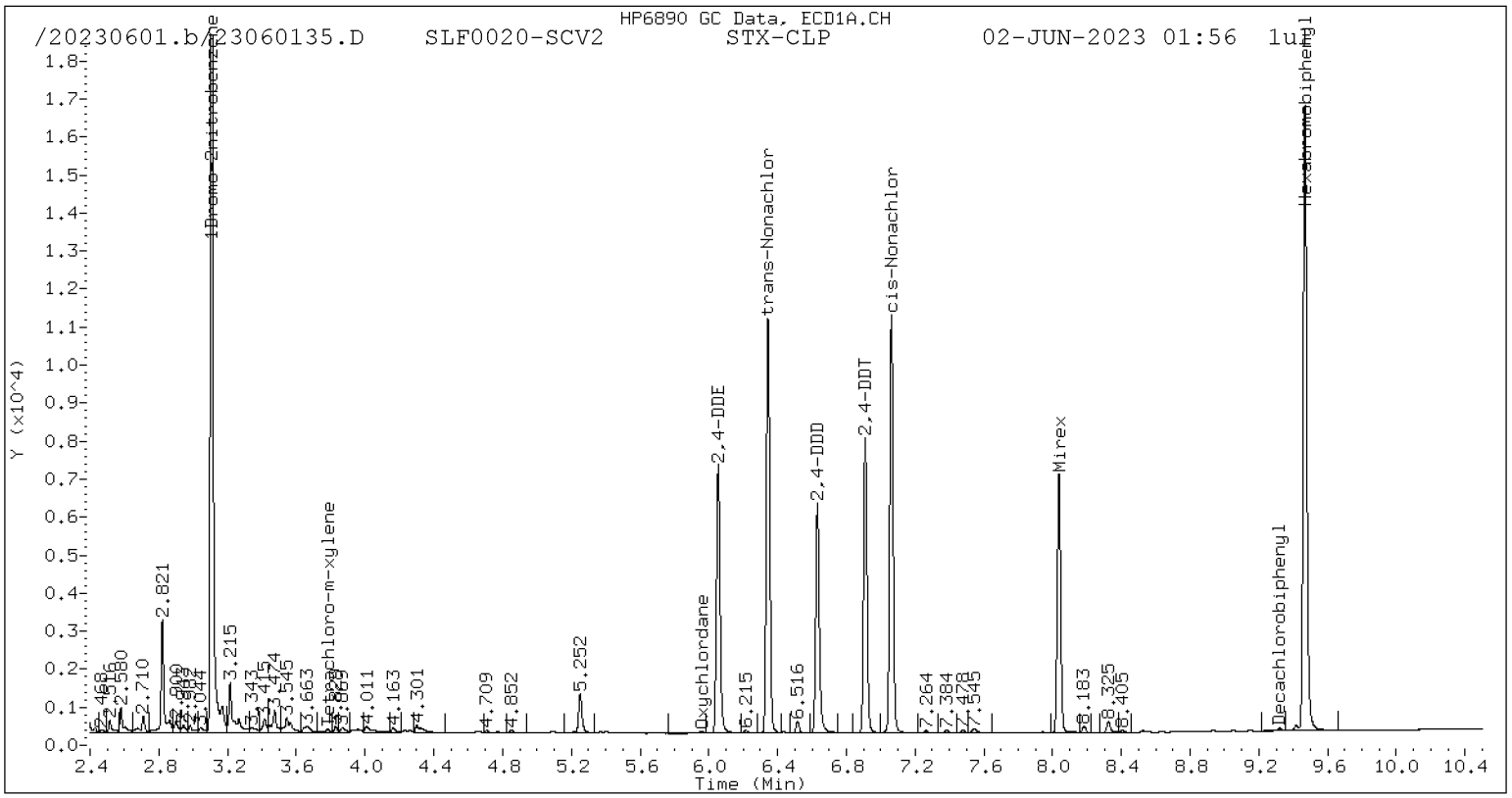
/20230601.b/23060135.D SLF0020-SCV2 STX-CLP 02-JUN-2023 01:56 1ul



/20230601.b/B20230601.b/23060135.D SLF0020-SCV2 CLP2 02-JUN-2023 01:56 1ul

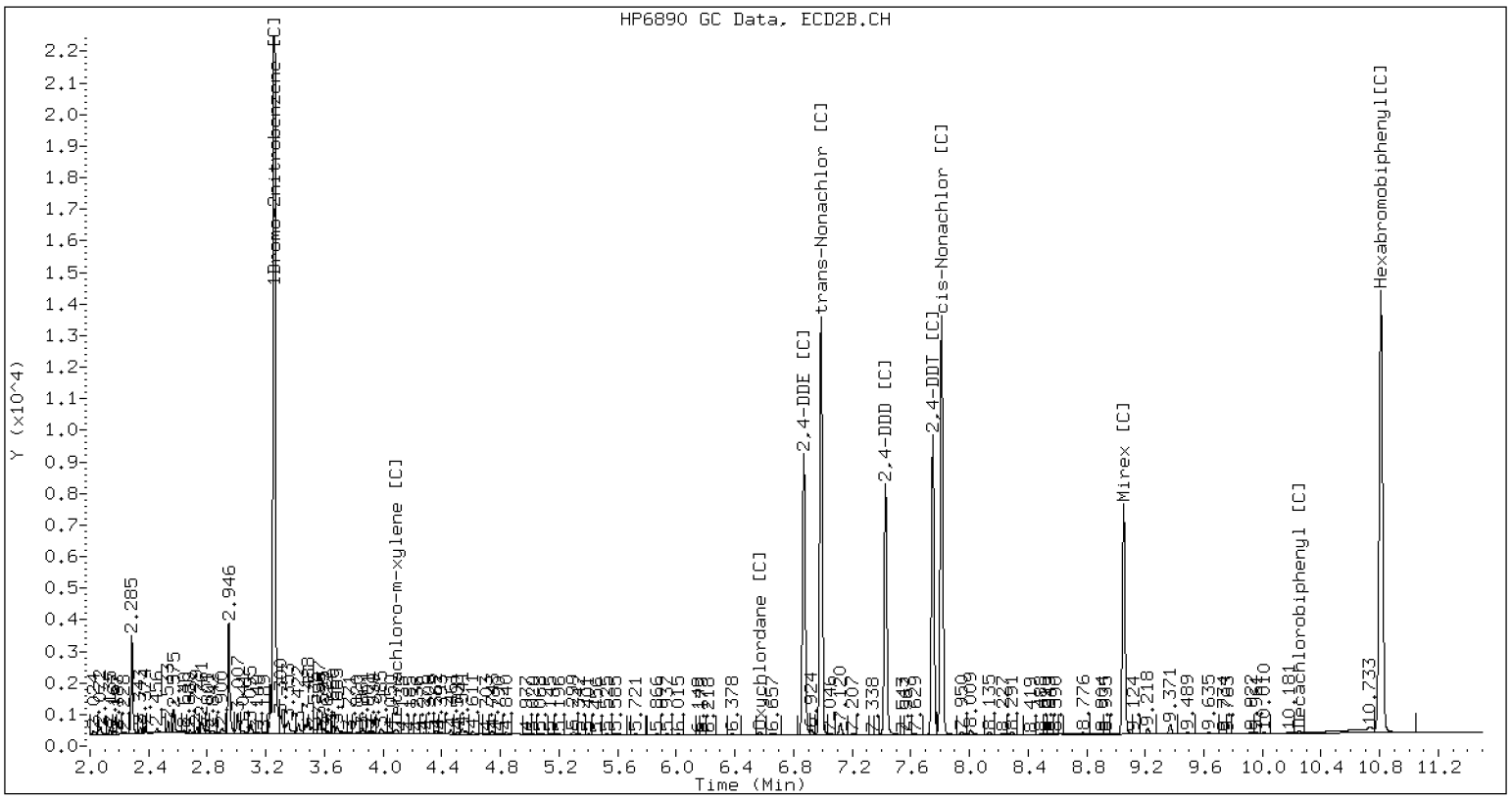


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060135.D SLF0020-SCV2 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	GF00024
Lab File ID:	23060204.D	Calibration Date:	06/02/2023
Sequence:	SLF0091	Injection Date:	06/02/23
Lab Sample ID:	SLF0091-ICV1	Injection Time:	12:57
Sequence Name:	INDA		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Hexachlorobenzene	A	20.000	18.9	1.4044210	1.3261620		-5.6	+/-20
Hexachlorobenzene [2C]	A	20.000	19.5	1.3643390	1.3309620		-2.4	+/-20
Decachlorobiphenyl	A	40.000	36.0	0.8174929	0.7359068		-10.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.9	0.8423415	0.7976613		-5.3	+/-20
Tetrachlorometaxylene	A	40.000	38.6	1.0150200	0.9793328		-3.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.9	1.0113980	1.0092200		-0.2	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060204.D
Data file 2: /20230602.b/B20230602.b/23060204.D
Method: \20230602.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0091-ICV1
Client ID:
Injection Date: 02-JUN-2023 12:57
Report Date: 06/08/2023 11:22
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	0.000	227445	4.717	0.000	259968	20.23	20.71	2.3	alpha-BHC
4.675	-0.000	91493	5.182	-0.000	100168	19.73	19.49	1.2	beta-BHC
4.858	0.001	198199	5.527	0.000	206053	20.94	19.92	5.0	delta-BHC
4.594	-0.000	198724	5.103	-0.000	226946	20.28	20.48	1.0	gamma-BHC (Lindane)
5.079	-0.000	183747	5.619	-0.000	199099	19.85	19.75	0.5	Heptachlor
5.400	-0.000	185853	6.016	0.000	207165	20.12	20.33	1.0	Aldrin
6.073	-0.000	162632	6.676	-0.000	177253	19.90	20.13	1.2	Heptachlor epoxide b
6.516	-0.001	151028	7.121	-0.000	153915	19.88	20.11	1.2	Endosulfan I
6.777	-0.000	317593	7.416	0.000	339974	40.01	40.40	1.0	Dieldrin
6.441	0.000	296623	7.209	0.000	328277	40.33	40.75	1.0	4,4'-DDE
7.028	-0.000	284061	7.740	-0.000	296607	38.93	39.49	1.4	Endrin
7.265	0.000	260697	7.952	0.000	276667	39.16	39.00	0.4	Endosulfan II
7.090	0.000	254842	7.816	0.000	269664	39.47	39.75	0.7	4,4'-DDD
8.129	-0.001	236780	8.551	-0.000	248826	39.08	40.10	2.6	Endosulfan sulfate
7.384	-0.000	266465	8.134	-0.000	263556	39.96	39.75	0.5	4,4'-DDT
7.874	-0.000	539196	8.776	-0.001	549174	181.40	181.72	0.2	Methoxychlor
8.404	-0.000	266962	9.073	-0.001	270615	37.94	37.56	1.0	Endrin ketone
7.694	-0.000	190151	8.284	0.001	192975	38.37	39.81	3.7	Endrin aldehyde
6.216	0.000	161926	6.888	0.000	172420	19.94	20.06	0.6	trans-Chlordane
6.363	-0.001	161747	7.049	0.001	169003	19.81	19.94	0.6	cis-Chlordane
2.283	-0.001	232582	2.427	-0.001	181734	18.79	14.84	23.5	Hexachlorobutadiene
4.136	-0.000	197925	4.578	-0.000	223779	18.89	19.51	3.3	Hexachlorobenzene
3.783	-0.000	292324	4.097	-0.000	339367	38.59	39.91	3.4	Tetrachloro-m-xylene
9.320	-0.000	176122	10.251	0.000	176607	36.01	37.88	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

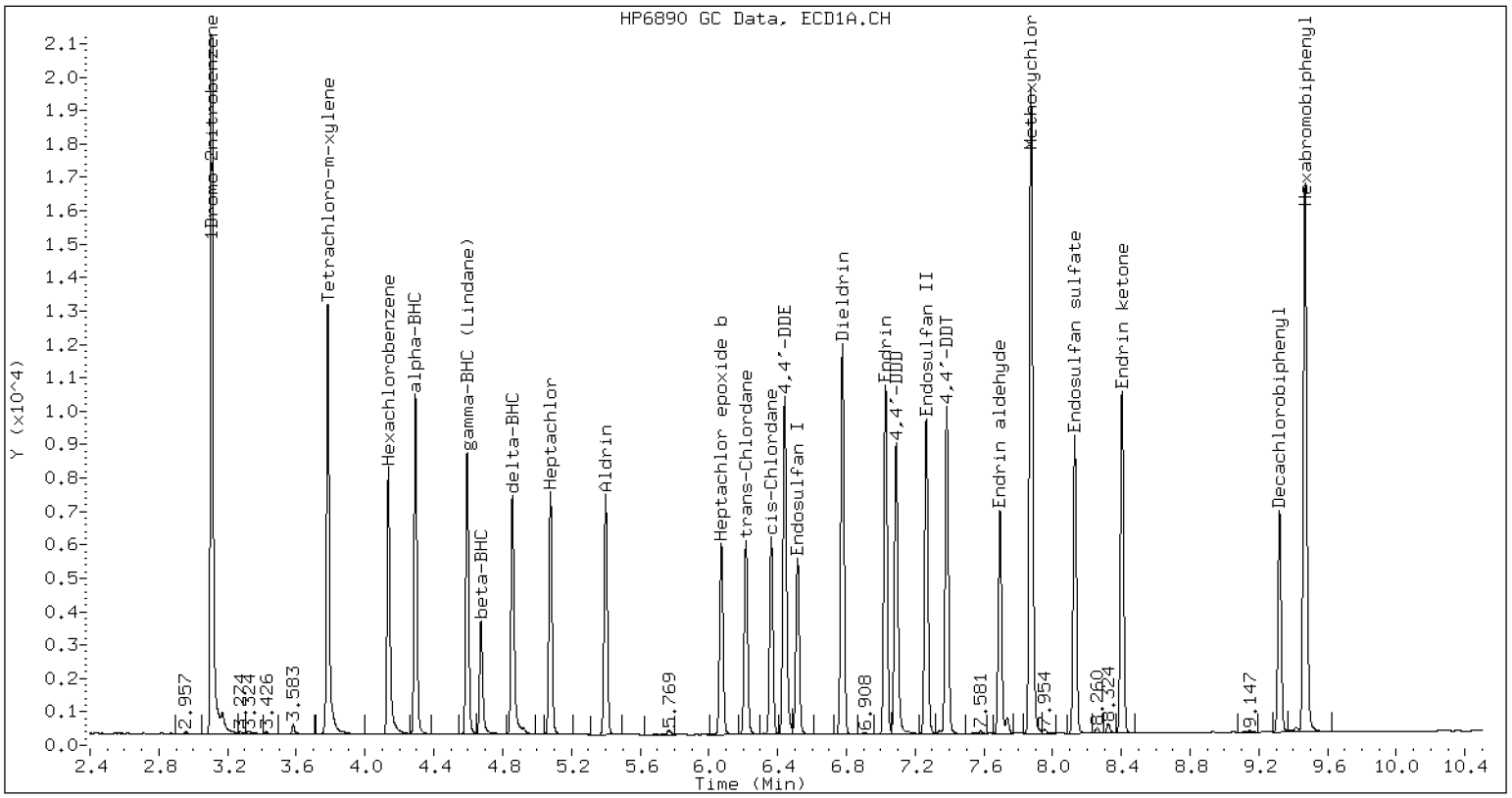
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	596986	-3.5
Hexabromobiphenyl	493109	478653	-2.9

Column 2

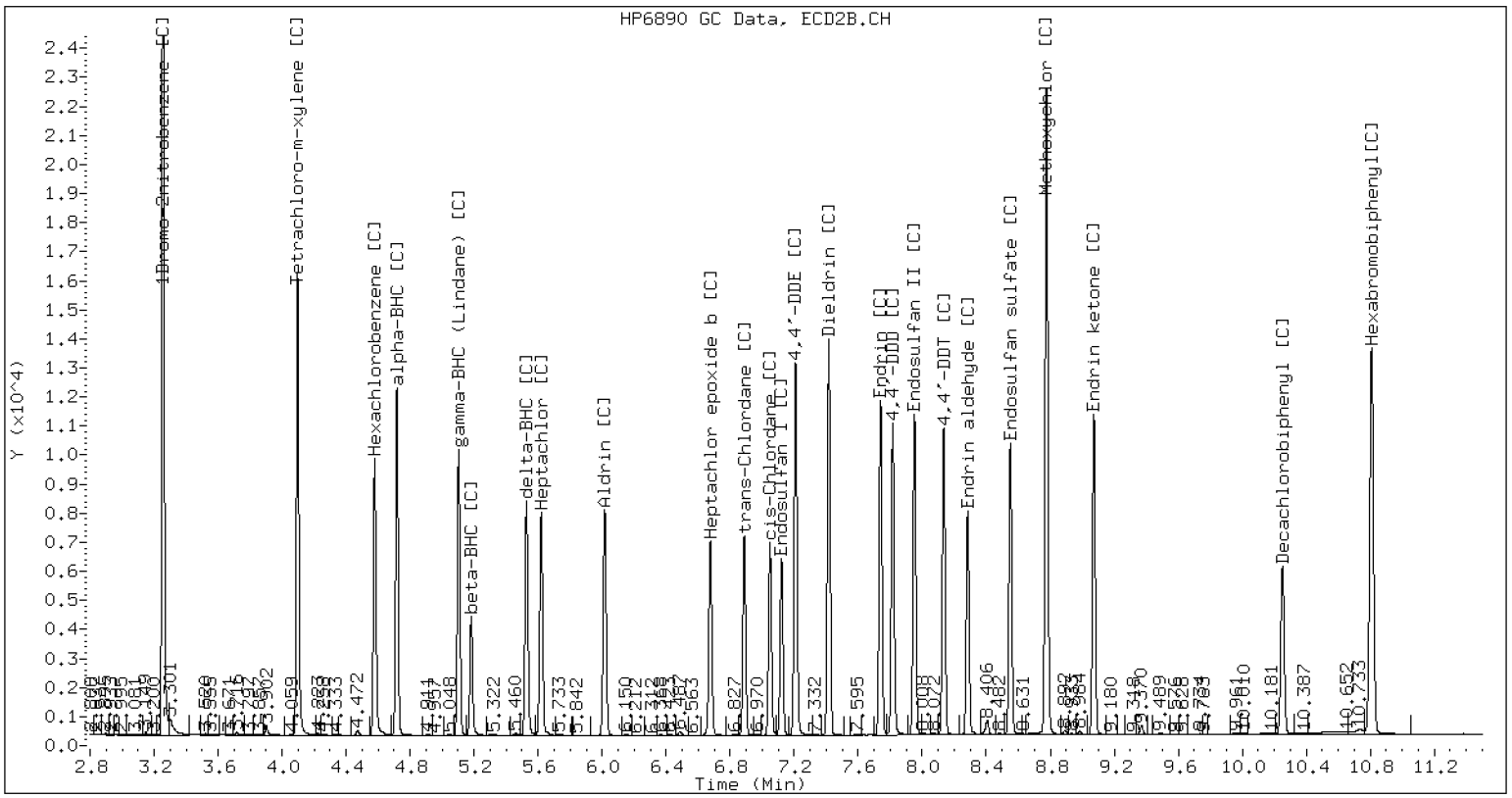
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	672533	-3.4
Hexabromobiphenyl	461581	442812	-4.1

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

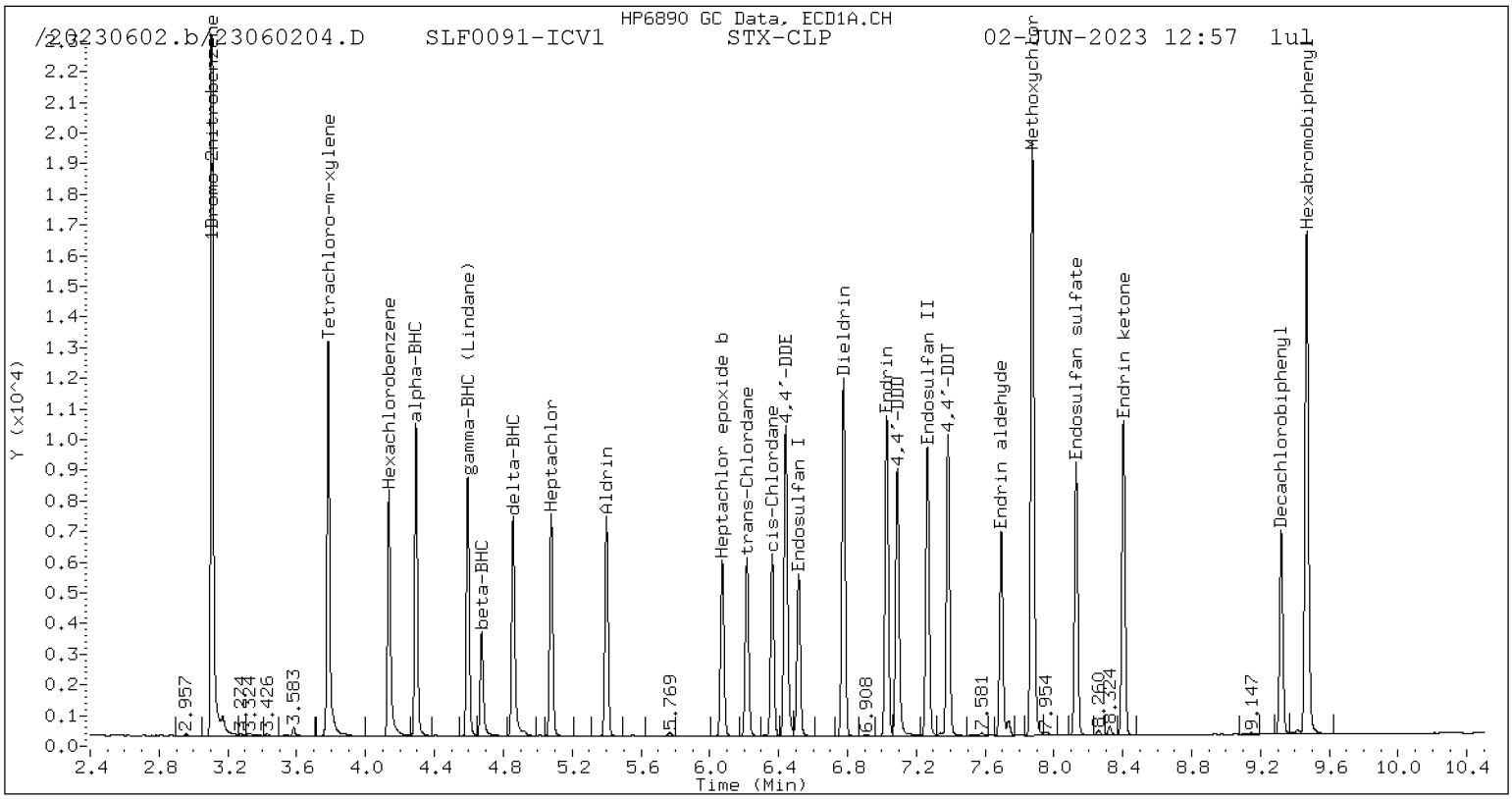
/20230602.b/23060204.D SLF0091-ICV1 STX-CLP 02-JUN-2023 12:57 1ul



/20230602.b/B20230602.b/23060204.D SLF0091-ICV1 CLP2 02-JUN-2023 12:57 1ul

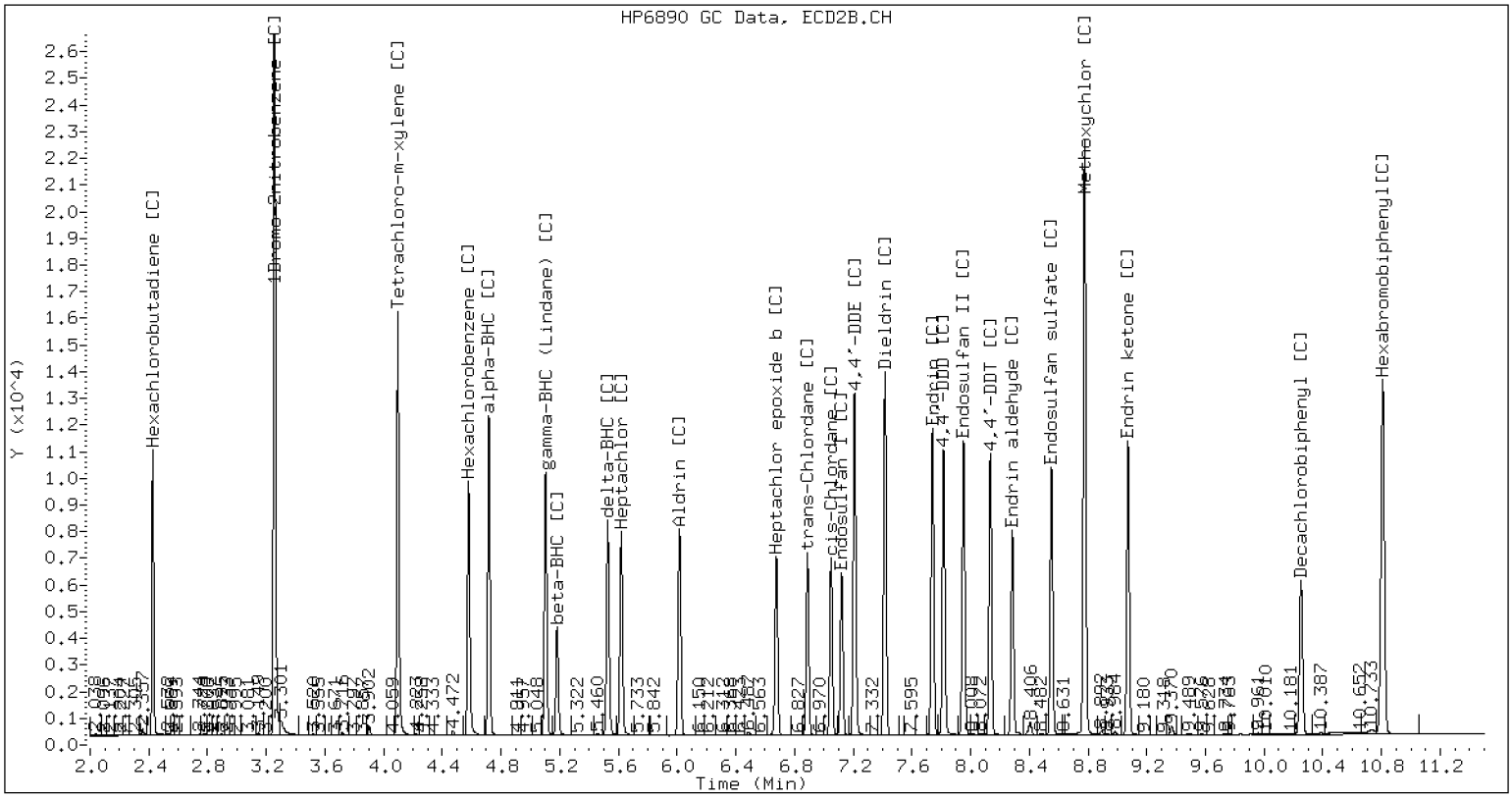


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230602.b/B20230602.b/23060204.D SLF0091-ICV1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	GF00024
Lab File ID:	23060134.D	Calibration Date:	06/02/2023
Sequence:	SLF0020	Injection Date:	06/02/23
Lab Sample ID:	SLF0020-SCV1	Injection Time:	01:38
Sequence Name:	INDAESCV		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
alpha-BHC	A	50.000	49.3	1.5062820	1.4862650		-1.3	+/-20
alpha-BHC [2C]	A	50.000	51.6	1.4929250	1.5393060		3.1	+/-20
beta-BHC	A	50.000	47.2	0.6214839	0.5863416		-5.7	+/-20
beta-BHC [2C]	A	50.000	48.3	0.6113421	0.5904111		-3.4	+/-20
gamma-BHC (Lindane)	A	50.000	50.8	1.3133180	1.3347300		1.6	+/-20
gamma-BHC (Lindane) [2C]	A	50.000	52.5	1.3178880	1.3830140		4.9	+/-20
delta-BHC	A	50.000	52.8	1.2681800	1.3396580		5.6	+/-20
delta-BHC [2C]	A	50.000	54.0	1.2301560	1.3284650		8.0	+/-20
Heptachlor	A	50.000	48.2	1.2402450	1.1961610		-3.6	+/-20
Heptachlor [2C]	A	50.000	50.8	1.1992440	1.2181060		1.6	+/-20
Aldrin	A	50.000	46.3	1.2380220	1.1463760		-7.4	+/-20
Aldrin [2C]	A	50.000	47.9	1.2123390	1.1615520		-4.2	+/-20
Heptachlor Epoxide	A	50.000	46.8	1.0953490	1.0250900		-6.4	+/-20
Heptachlor Epoxide [2C]	A	50.000	48.7	1.0473340	1.0199810		-2.6	+/-20
trans-Chlordane (beta-Chlordane)	A	50.000	49.7	1.0882370	1.0816940		-0.6	+/-20
trans-Chlordane (beta-Chlordane) [2C]	A	50.000	51.1	1.0225030	1.0457820		2.3	+/-20
cis-Chlordane (alpha-chlordane)	A	50.000	47.5	1.0940810	1.0403750		-4.9	+/-20
cis-Chlordane (alpha-chlordane) [2C]	A	50.000	48.9	1.0083960	0.9855151		-2.3	+/-20
Endosulfan I	A	50.000	46.6	1.0180690	0.9479315		-6.9	+/-20
Endosulfan I [2C]	A	50.000	48.9	0.9103398	0.8901630		-2.2	+/-20
4,4'-DDE	A	50.000	50.1	0.9855563	0.9866429		0.1	+/-20
4,4'-DDE [2C]	A	50.000	51.2	0.9583027	0.9809699		2.4	+/-20
Dieldrin	A	50.000	49.4	1.0637030	1.0498770		-1.3	+/-20
Dieldrin [2C]	A	50.000	51.0	1.0011390	1.0207480		2.0	+/-20
Endrin	A	50.000	49.1	1.2195430	1.1975470		-1.8	+/-20
Endrin [2C]	A	50.000	49.1	1.3569400	1.3330110		-1.8	+/-20
Endosulfan II	A	50.000	49.1	1.1127790	1.0926400		-1.8	+/-20
Endosulfan II [2C]	A	50.000	48.2	1.2816430	1.2344050		-3.7	+/-20
4,4'-DDD	A	50.000	47.7	1.0791940	1.0292340		-4.6	+/-20
4,4'-DDD [2C]	A	50.000	48.1	1.2255510	1.1786060		-3.8	+/-20
Endrin Aldehyde	A	50.000	51.2	0.8282882	0.8480754		2.4	+/-20
Endrin Aldehyde [2C]	A	50.000	54.3	0.8757944	0.9508255		8.6	+/-20
4,4'-DDT	A	50.000	50.1	1.1145940	1.1172710		0.2	+/-20

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	GF00024
Lab File ID:	23060134.D	Calibration Date:	06/02/2023
Sequence:	SLF0020	Injection Date:	06/02/23
Lab Sample ID:	SLF0020-SCV1	Injection Time:	01:38
Sequence Name:	INDAESCV		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
4,4'-DDT [2C]	A	50.000	50.9	1.1978040	1.2198600		1.8	+/-20
Endosulfan Sulfate	A	50.000	49.1	1.0126580	0.9947735		-1.8	+/-20
Endosulfan Sulfate [2C]	A	50.000	49.4	1.1210530	1.1085980		-1.1	+/-20
Endrin Ketone	A	50.000	47.7	1.1759800	1.1210060		-4.7	+/-20
Endrin Ketone [2C]	A	50.000	46.8	1.3016210	1.2176830		-6.4	+/-20
Methoxychlor	A	50.000	53.3	0.4967934	0.5297163		6.6	+/-20
Methoxychlor [2C]	A	50.000	52.9	0.5459728	0.5772663		5.7	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060134.D
Data file 2: /20230601.b/B20230601.b/23060134.D
Method: \20230601.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-SCV1
Client ID:
Injection Date: 02-JUN-2023 01:38
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	-0.000	556206	4.717	-0.001	665818	49.34	51.55	4.4	alpha-BHC
4.674	-0.000	219427	5.181	-0.000	255379	47.17	48.29	2.3	beta-BHC
4.857	0.000	501341	5.526	-0.000	574620	52.82	54.00	2.2	delta-BHC
4.594	0.000	499497	5.104	0.000	598215	50.82	52.47	3.2	gamma-BHC (Lindane)
5.079	-0.000	447640	5.619	-0.000	526885	48.22	50.79	5.2	Heptachlor
5.400	-0.000	429009	6.015	-0.000	502423	46.30	47.91	3.4	Aldrin
6.073	-0.000	383620	6.677	0.000	441187	46.79	48.69	4.0	Heptachlor epoxide b
6.517	-0.000	354745	7.120	-0.001	385035	46.56	48.89	4.9	Endosulfan I
6.777	-0.000	392896	7.415	-0.001	441519	49.35	50.98	3.2	Dieldrin
6.441	0.000	369232	7.208	-0.001	424313	50.06	51.18	2.2	4,4'-DDE
7.028	-0.001	356583	7.739	-0.001	386455	49.10	49.12	0.0	Endrin
7.265	-0.000	325346	7.951	-0.001	357868	49.10	48.16	1.9	Endosulfan II
7.090	0.000	306466	7.815	-0.000	341691	47.69	48.08	0.8	4,4'-DDD
8.128	-0.001	296205	8.550	-0.001	321395	49.12	49.44	0.7	Endosulfan sulfate
7.384	-0.000	332680	8.134	-0.001	353651	50.12	50.92	1.6	4,4'-DDT
7.874	-0.000	157729	8.776	-0.001	167356	53.31	52.87	0.8	Methoxychlor
8.403	-0.001	333792	9.072	-0.001	353020	47.66	46.78	1.9	Endrin ketone
7.693	-0.001	252524	8.283	-0.001	275655	51.19	54.28	5.9	Endrin aldehyde
6.216	-0.000	404803	6.888	-0.000	452347	49.70	51.14	2.9	trans-Chlordane
6.363	-0.000	389340	7.048	-0.000	426279	47.55	48.87	2.7	cis-Chlordane
----			2.428	0.000	780	0.00	0.06	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
----			4.100	0.003	480	0.00	0.05	---	Tetrachloro-m-xylene
----			10.253	0.002	1005	0.00	0.21	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

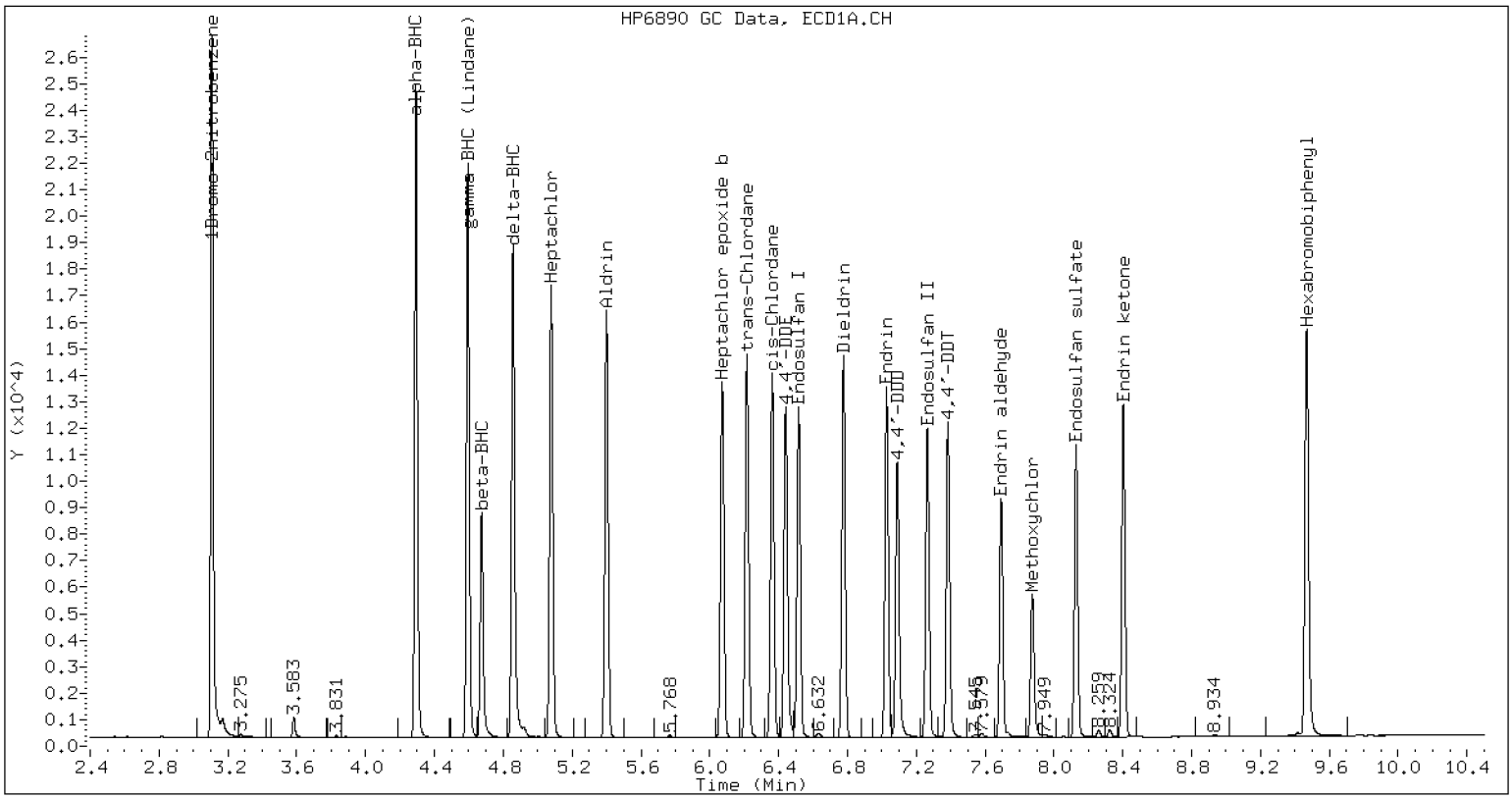
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	598769	-3.3
Hexabromobiphenyl	493109	476418	-3.4

Column 2

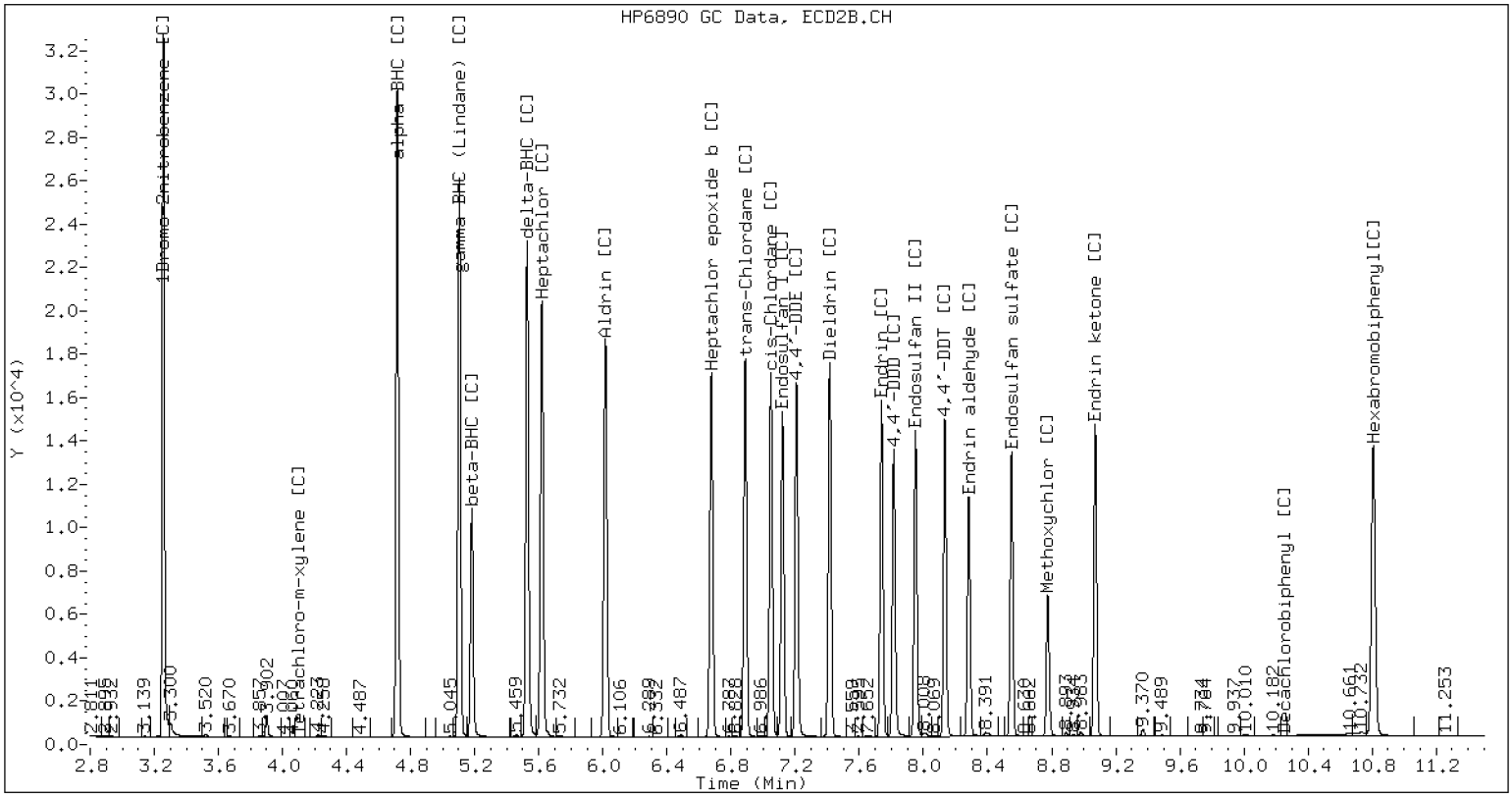
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	692071	-0.6
Hexabromobiphenyl	461581	463858	0.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

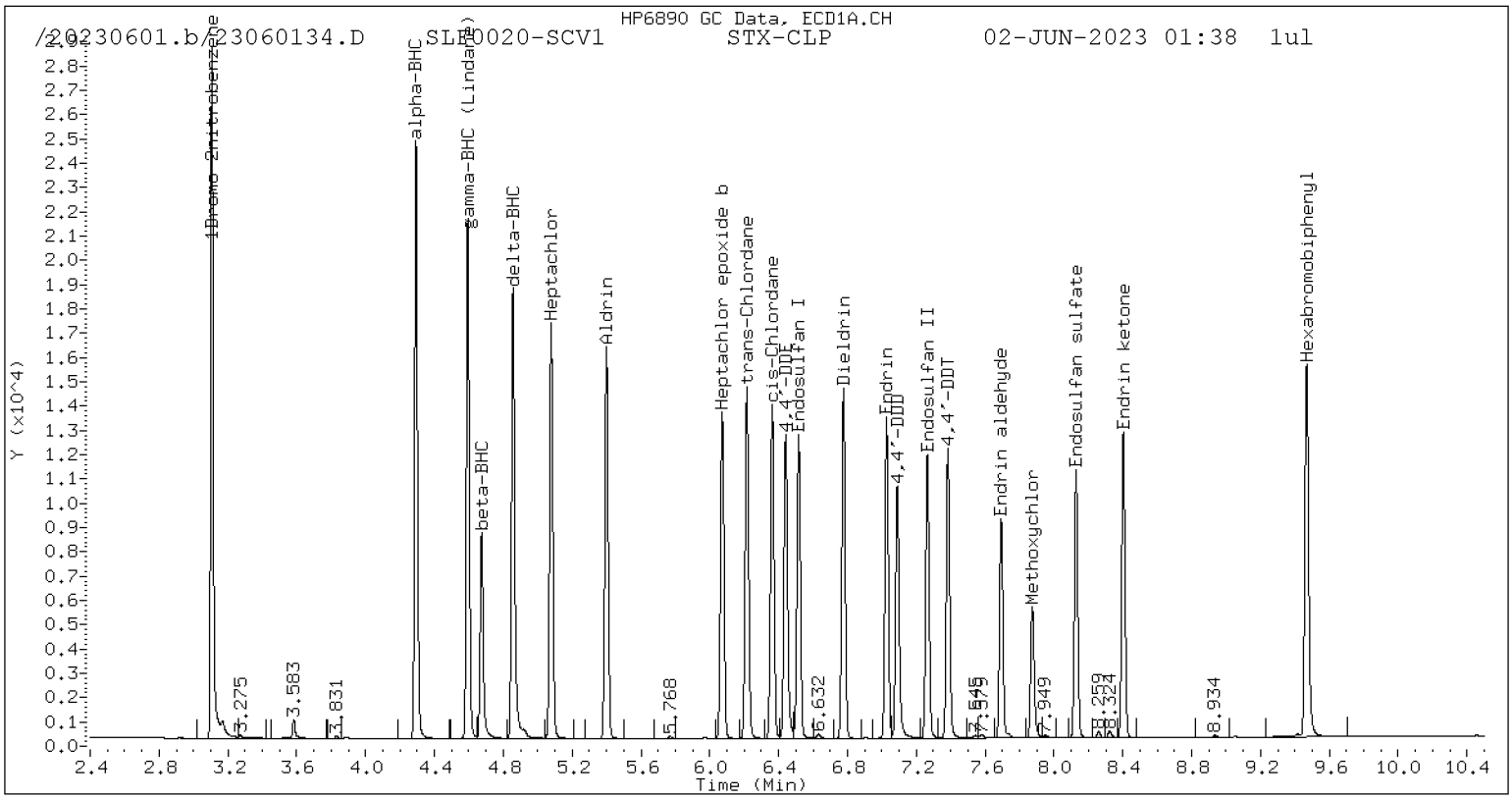
/20230601.b/23060134.D SLF0020-SCV1 STX-CLP 02-JUN-2023 01:38 1ul



/20230601.b/B20230601.b/23060134.D SLF0020-SCV1 CLP2 02-JUN-2023 01:38 1ul

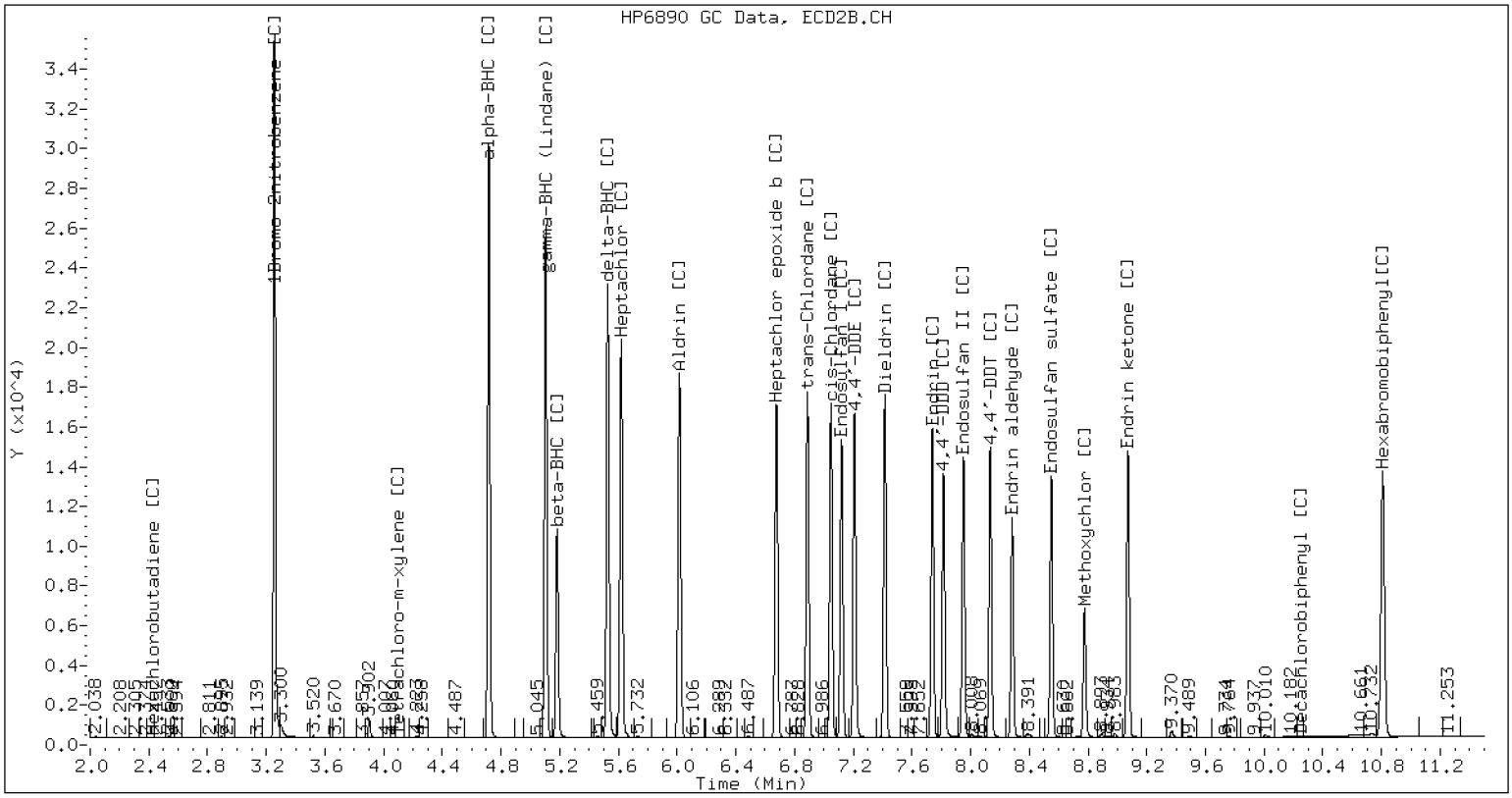


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060134.D SLF0020-SCV1 CLP2



CLP-2 Manual Integration: NO

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	GF00024
Lab File ID:	23060135.D	Calibration Date:	06/02/2023
Sequence:	SLF0020	Injection Date:	06/02/23
Lab Sample ID:	SLF0020-SCV2	Injection Time:	01:56
Sequence Name:	WNDSCV		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,4'-DDE	A	40.000	43.5	0.8043097	0.8756154		8.9	+/-20
2,4'-DDE [2C]	A	40.000	42.6	0.6129683	0.6535307		6.6	+/-20
2,4'-DDD	A	40.000	39.6	0.7497360	0.7424547		-1.0	+/-20
2,4'-DDD [2C]	A	40.000	40.4	0.8574414	0.8656163		1.0	+/-20
2,4'-DDT	A	40.000	41.0	0.8780012	0.9005920		2.6	+/-20
2,4'-DDT [2C]	A	40.000	41.6	0.9711030	1.0099490		4.0	+/-20
cis-Nonachlor	A	40.000	38.3	1.3164630	1.2596770		-4.3	+/-20
cis-Nonachlor [2C]	A	40.000	38.2	1.4719500	1.4048560		-4.6	+/-20
trans-Nonachlor	A	40.000	39.7	1.2836180	1.2741250		-0.7	+/-20
trans-Nonachlor [2C]	A	40.000	40.3	1.4122090	1.4244420		0.9	+/-20
Mirex	A	40.000	37.3	0.8361428	0.7796859		-6.8	+/-20
Mirex [2C]	A	40.000	37.1	0.8594397	0.7980815		-7.1	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230601.b/23060135.D
Data file 2: /20230601.b/B20230601.b/23060135.D
Method: \20230601.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0020-SCV2
Client ID:
Injection Date: 02-JUN-2023 01:56
Report Date: 06/08/2023 12:33
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.957	-0.000	2726	6.571	-0.001	1869	0.41	0.24	51.6*	Oxychlordane
6.055	-0.001	211571	6.870	-0.001	240465	43.55	42.65	2.1	2,4-DDE
6.345	-0.001	307861	6.988	-0.000	337535	39.70	40.35	1.6	trans-Nonachlor
6.632	-0.000	179396	7.428	-0.000	205116	39.61	40.38	1.9	2,4-DDD
6.910	-0.000	217606	7.750	-0.001	239317	41.03	41.60	1.4	2,4-DDT
7.062	-0.001	304370	7.810	-0.000	332894	38.27	38.18	0.3	cis-Nonachlor
8.037	-0.000	188392	9.053	-0.001	189113	37.30	37.14	0.4	Mirex
3.783	-0.000	4990	4.087	-0.010	5344	0.64	0.57	11.2	Tetrachloro-m-xylene
9.320	-0.000	2145	10.250	-0.001	2589	0.43	0.52	17.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

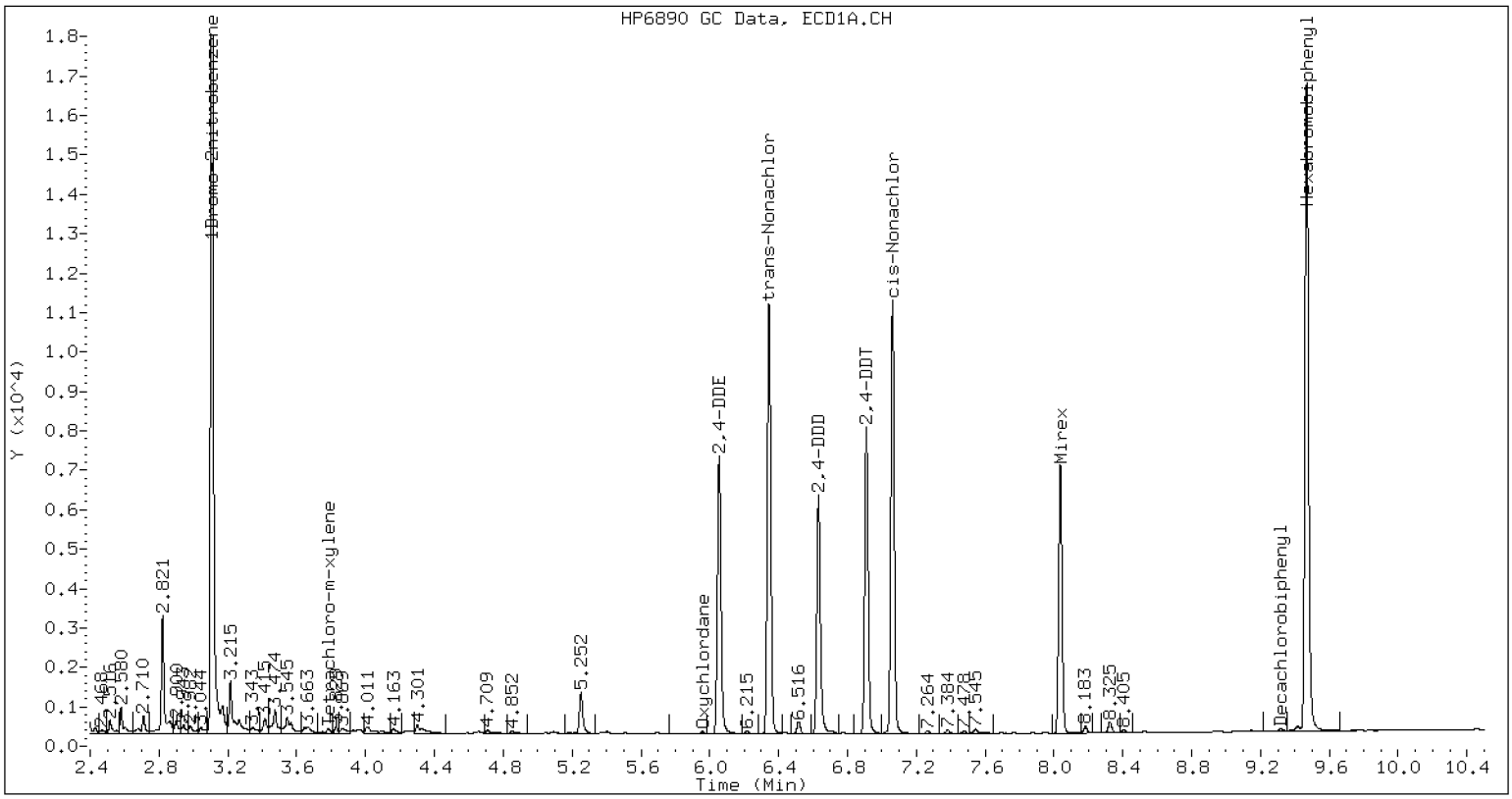
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	611793	-1.1
Hexabromobiphenyl	493109	483251	-2.0

Column 2

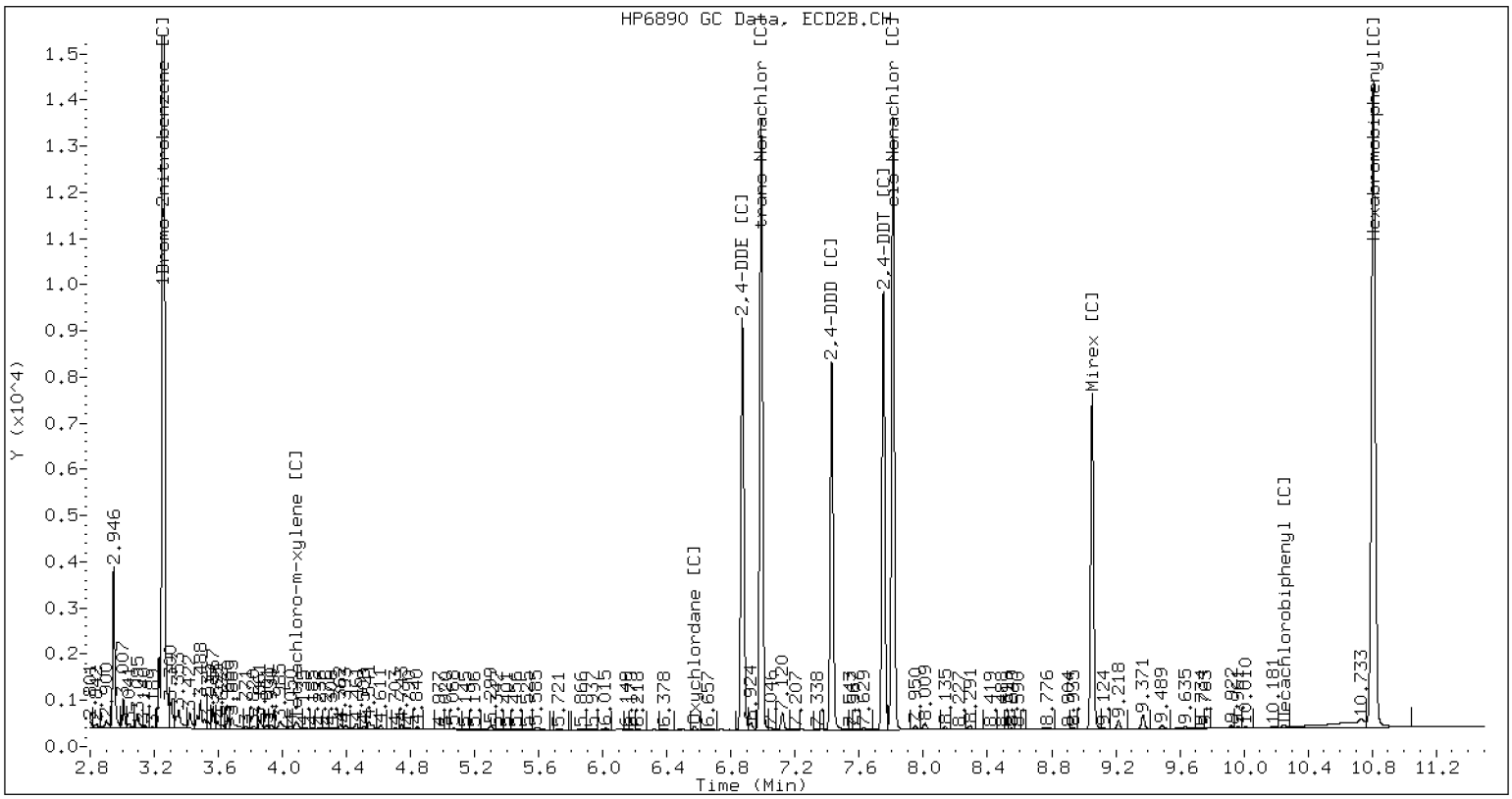
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	735895	5.7
Hexabromobiphenyl	461581	473919	2.7

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

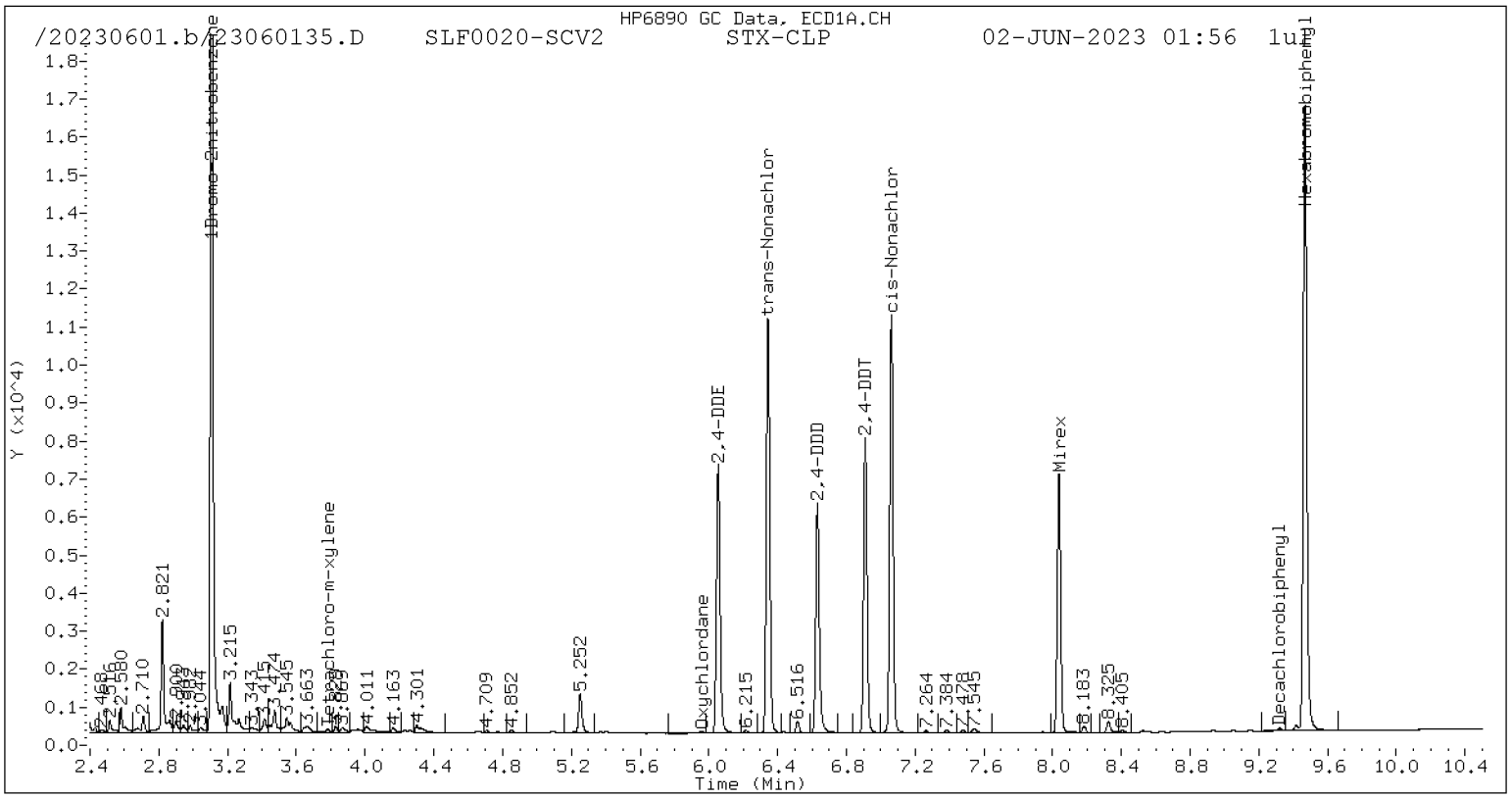
/20230601.b/23060135.D SLF0020-SCV2 STX-CLP 02-JUN-2023 01:56 1ul



/20230601.b/B20230601.b/23060135.D SLF0020-SCV2 CLP2 02-JUN-2023 01:56 1ul

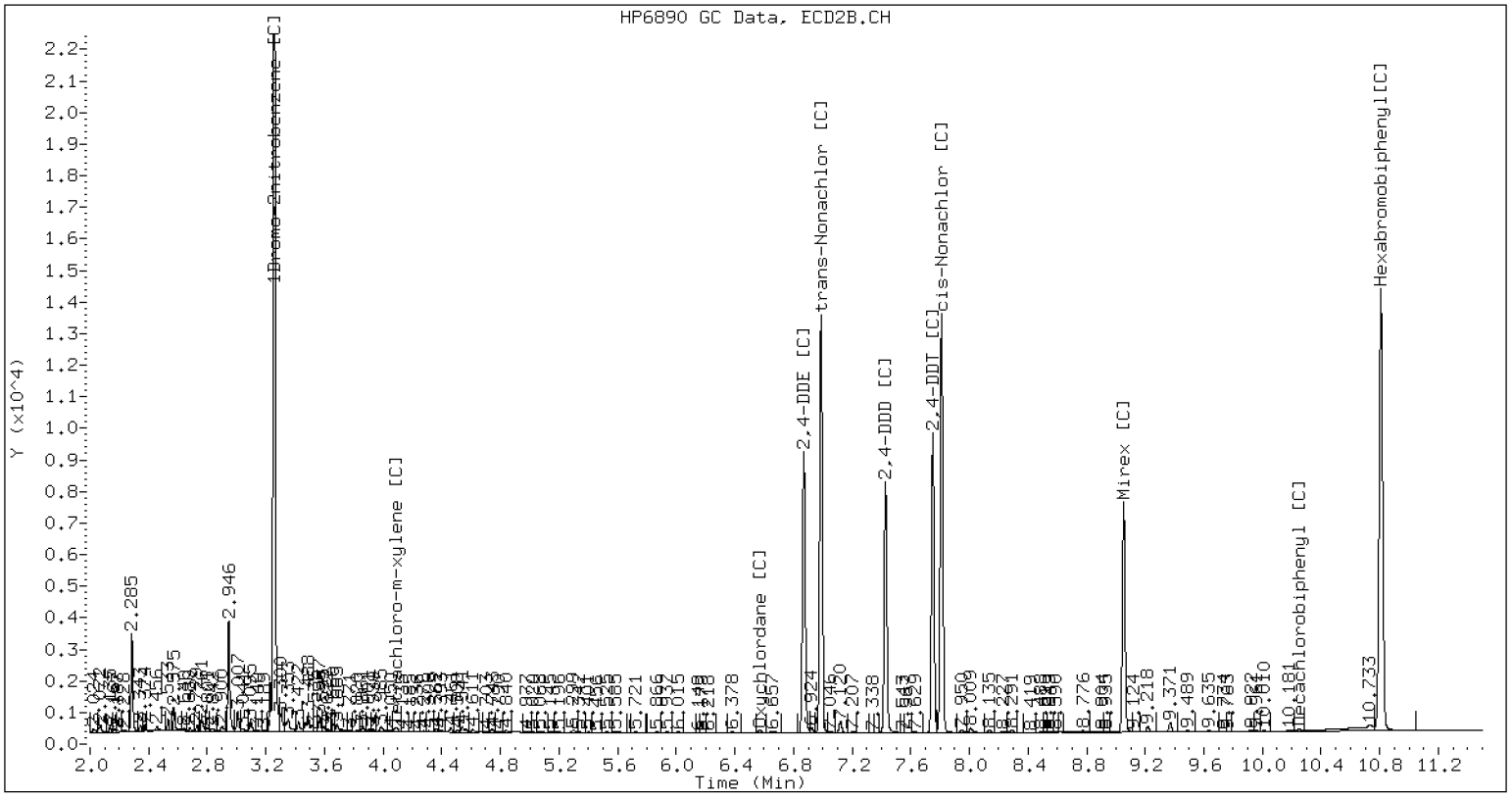


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230601.b/B20230601.b/23060135.D SLF0020-SCV2 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	GF00024
Lab File ID:	23060220.D	Calibration Date:	06/02/2023
Sequence:	SLF0091	Injection Date:	06/02/23
Lab Sample ID:	SLF0091-CCV1	Injection Time:	17:56
Sequence Name:	INDA		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	18.8	1.4044210	1.3170680		-6.2	+/-20
Hexachlorobenzene [2C]	A	20.000	19.1	1.3643390	1.3032580		-4.5	+/-20
Decachlorobiphenyl	A	40.000	35.4	0.8174929	0.7225352		-11.6	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	0.8423415	0.8342821		-1.0	+/-20
Tetrachlorometaxylene	A	40.000	38.5	1.0150200	0.9759154		-3.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.4	1.0113980	0.9949944		-1.6	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230602.b/23060220.D
Data file 2: /20230602.b/B20230602.b/23060220.D
Method: \20230602.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SLF0091-CCV1
Client ID:
Injection Date: 02-JUN-2023 17:56
Report Date: 06/08/2023 11:23
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.293	0.000	221615	4.717	0.000	252910	19.96	20.20	1.2	alpha-BHC
4.675	0.001	88877	5.183	0.001	97797	19.40	19.08	1.7	beta-BHC
4.858	0.001	193861	5.528	0.001	207477	20.73	20.11	3.0	delta-BHC
4.595	0.001	194040	5.104	0.001	221582	20.04	20.05	0.0	gamma-BHC (Lindane)
5.079	0.000	179510	5.620	0.000	200815	19.63	19.97	1.7	Heptachlor
5.401	0.001	178920	6.016	0.001	199313	19.60	19.61	0.0	Aldrin
6.073	0.000	153584	6.677	0.001	164954	19.02	18.78	1.3	Heptachlor epoxide b
6.517	-0.000	142185	7.121	0.000	140595	18.94	18.42	2.8	Endosulfan I
6.778	0.000	299067	7.417	0.001	300313	38.14	35.77	6.4	Dieldrin
6.442	0.001	280963	7.209	0.001	294192	38.67	36.61	5.5	4,4'-DDE
7.028	-0.000	264139	7.741	0.000	255858	41.84	38.45	8.4	Endrin
7.265	0.001	238804	7.952	0.000	239829	41.46	38.16	8.3	Endosulfan II
7.090	0.001	236868	7.816	0.001	231710	42.40	38.56	9.5	4,4'-DDD
8.129	-0.000	221754	8.551	0.000	215687	42.30	39.24	7.5	Endosulfan sulfate
7.384	0.000	246235	8.135	0.001	239831	42.68	40.83	4.4	4,4'-DDT
7.875	0.000	510108	8.777	-0.000	512605	198.37	191.47	3.5	Methoxychlor
8.404	-0.000	275340	9.073	-0.000	238981	45.23	37.44	18.8	Endrin ketone M
7.694	0.000	176233	8.284	0.001	171234	41.10	39.87	3.0	Endrin aldehyde
6.216	0.001	154169	6.889	0.001	161098	19.22	18.79	2.3	trans-Chlordane
6.364	0.000	153188	7.049	0.001	156337	18.99	18.49	2.7	cis-Chlordane
2.283	-0.000	229511	2.427	-0.001	184320	18.77	15.09	21.7	Hexachlorobutadiene
4.136	0.000	194200	4.579	0.001	218574	18.76	19.10	1.8	Hexachlorobenzene
3.784	0.000	287795	4.097	0.000	333748	38.46	39.35	2.3	Tetrachloro-m-xylene
9.321	0.000	149602	10.252	0.001	163634	35.35	39.62	11.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

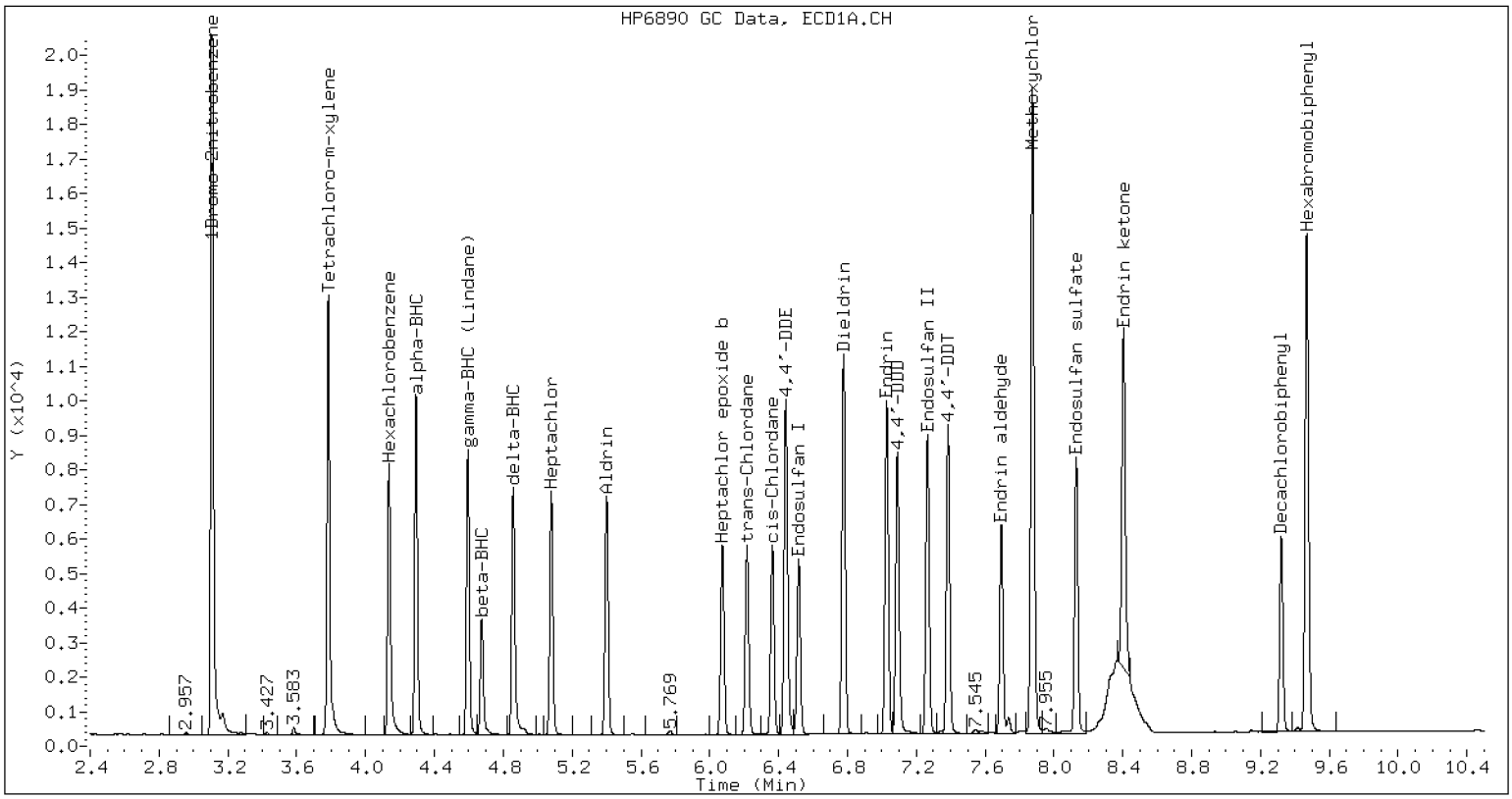
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	618906	589795	-4.7
Hexabromobiphenyl	493109	414103	-16.0

Column 2

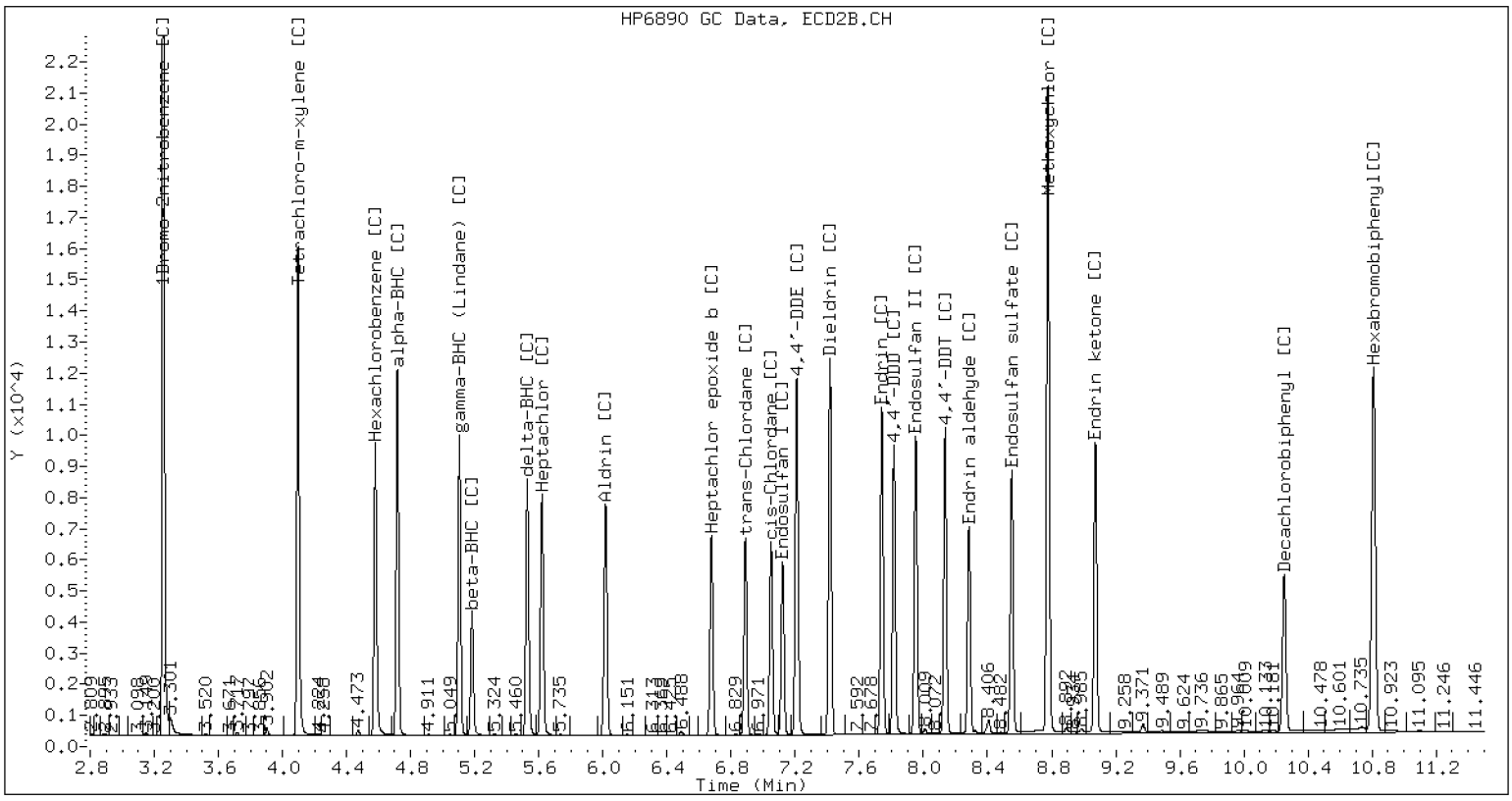
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	695935	670854	-3.6
Hexabromobiphenyl	461581	392275	-15.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 01-JUN-2023
<- Indicates standard response outside Limits (-50 to +100%)

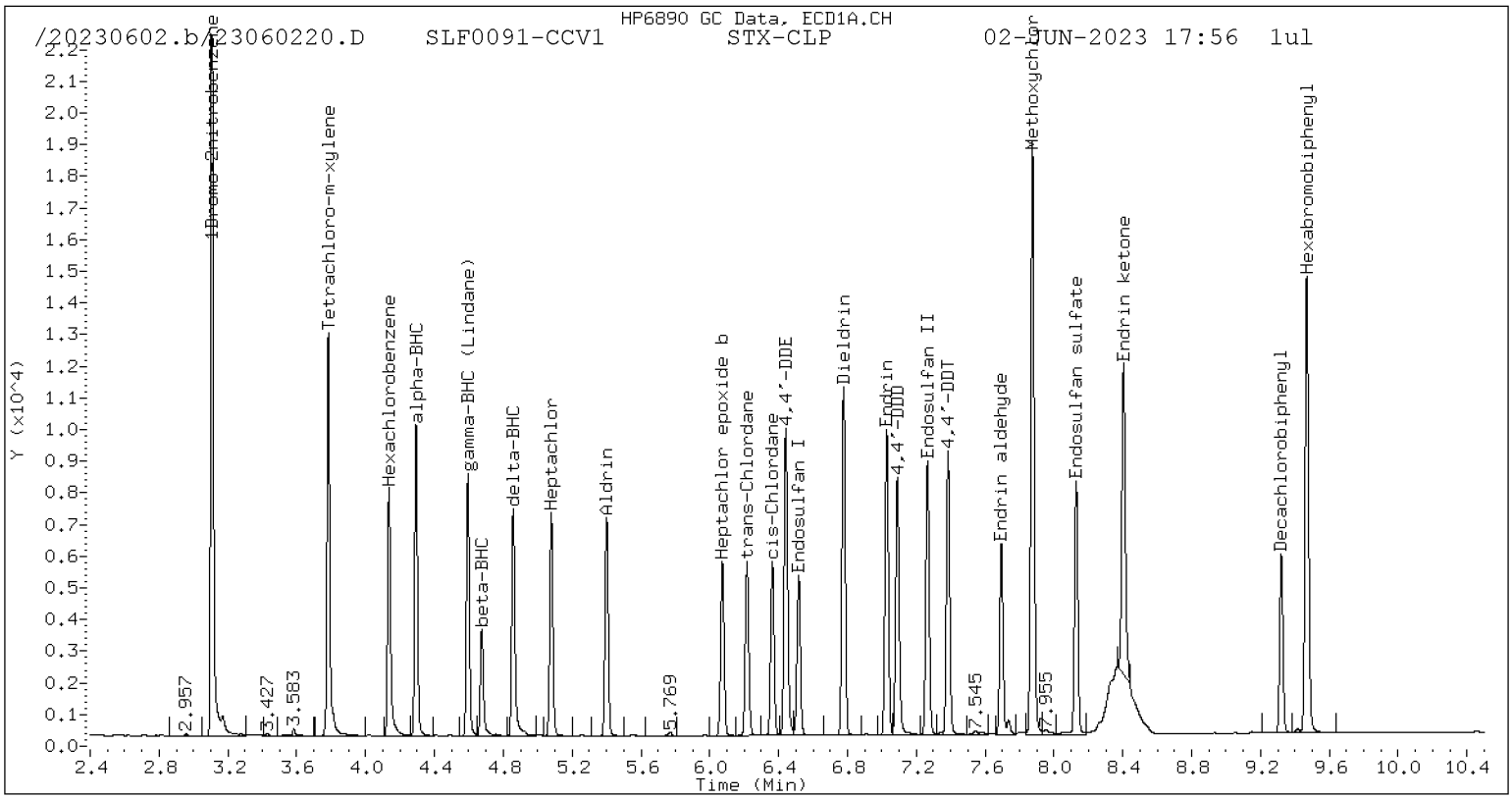
/20230602.b/23060220.D SLF0091-CCV1 STX-CLP 02-JUN-2023 17:56 1ul



/20230602.b/B20230602.b/23060220.D SLF0091-CCV1 CLP2 02-JUN-2023 17:56 1ul

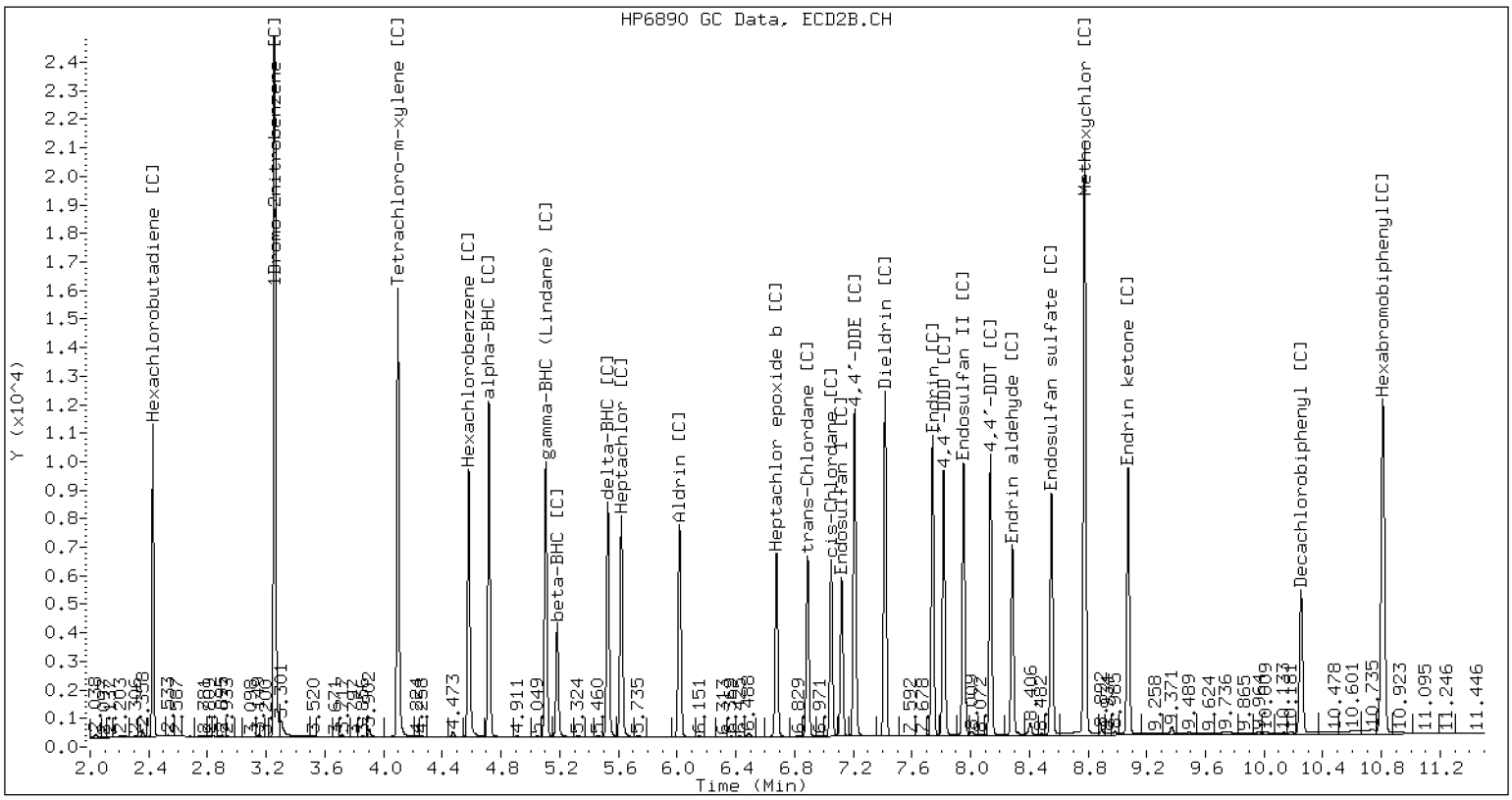


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

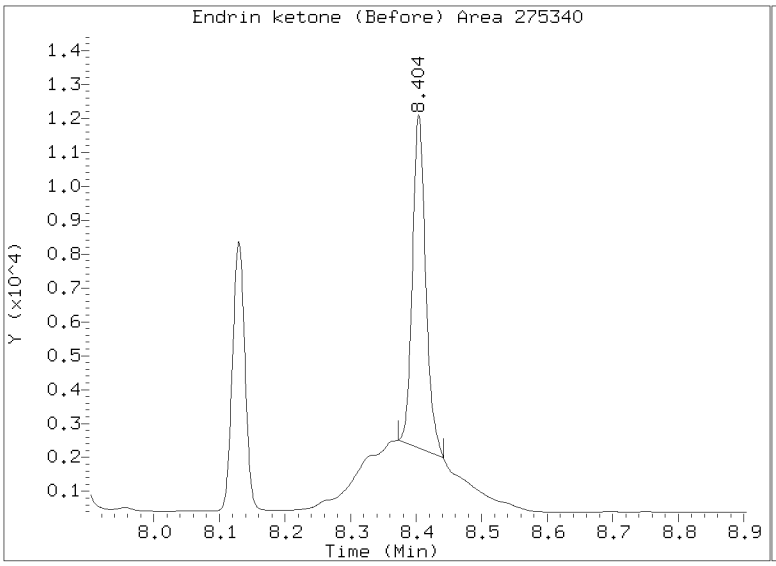
/20230602.b/B20230602.b/23060220.D SLF0091-CCV1 CLP2

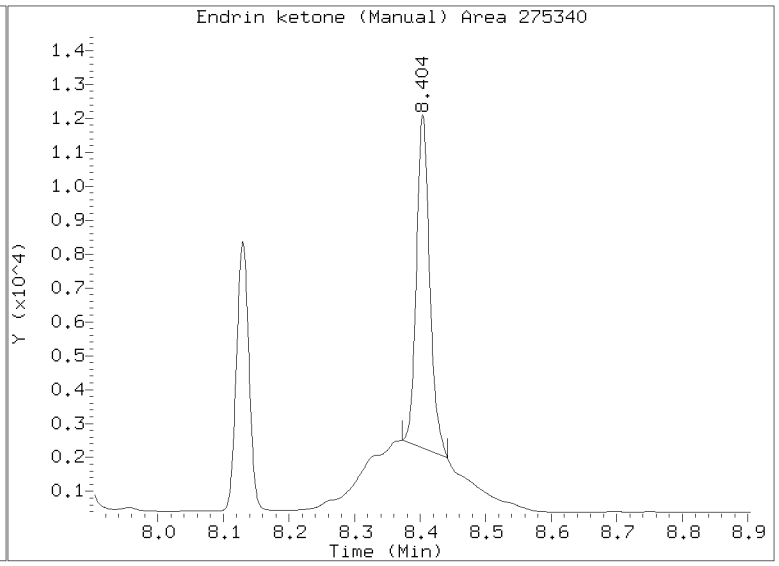


CLP-2 Manual Integration: NO

Manual Peak Adjustment Report, STX-CLP

Datafile: /20230602.b/23060220.D
Injection Date: 02-JUN-2023 17:56
Lab ID:SLF0091-CCV1 Client ID:
Report Date: 06/08/2023 11:23





Analytical Resources, LLC
Analytical Chemists and Consultants

PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SLF0020-PEM1	File ID:	23060105.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	06/01/2023	Sequence:	SLF0020
SDG:	23E0009	Calibration:	GF00024	Column:	1

PEM COMPOUND	RT	Response
4,4'-DDE	6.44	8510
Endrin	7.03	658070
4,4'-DDD	7.09	10205
Endrin Aldehyde	7.70	5057
4,4'-DDT	7.38	603579
Endrin Ketone	8.40	10517

4,4'-DDT %Breakdown (1): 3.0

Endrin %Breakdown (1): 2.3

Analytical Resources, LLC
Analytical Chemists and Consultants

PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory: Analytical Resources, LLC | Laboratory ID: SLF0020-PEM1 | File ID: 23060105.D

Client: Anchor QEA, LLC | Matrix: Water | Instrument: ECD6

Project: AOC5 MR Phase 1 | Analyzed: 06/01/2023 | Sequence: SLF0020

SDG: 23E0009 | Calibration: GF00024 | Column: 2

PEM COMPOUND	RT	Response
4,4'-DDE	7.21	8903
Endrin	7.74	698048
4,4'-DDD	7.81	16977
Endrin Aldehyde	8.28	4762
4,4'-DDT	8.13	615598
Endrin Ketone	9.07	7755

4,4'-DDT %Breakdown (1): 4.0

Endrin %Breakdown (1): 1.8

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SLF0020-PEM1 InstID,Data File: ecd6.i, 23060105.D

Analysis Date: 01-JUN-2023 16:39 Init. Calib. Date: 01-JUN-2023

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.107	630131
4,4'-DDE	6.443	8510
Endrin	7.029	658070
4,4'-DDD	7.090	10205
4,4'-DDT	7.385	603579
Endrin ketone	8.405	10517
Endrin aldehyde	7.695	5057
Hexabromobiphenyl	9.468	502889
Tetrachloro-m-xylene	3.784	302699
Decachlorobiphenyl	9.320	178461

DDT Percent Breakdown = 3.0 %
((8510+10205) * 100)/(8510+10205+603579)

Endrin Percent Breakdown = 2.3 %
((5057+10517) * 100)/(5057+10517+658070)

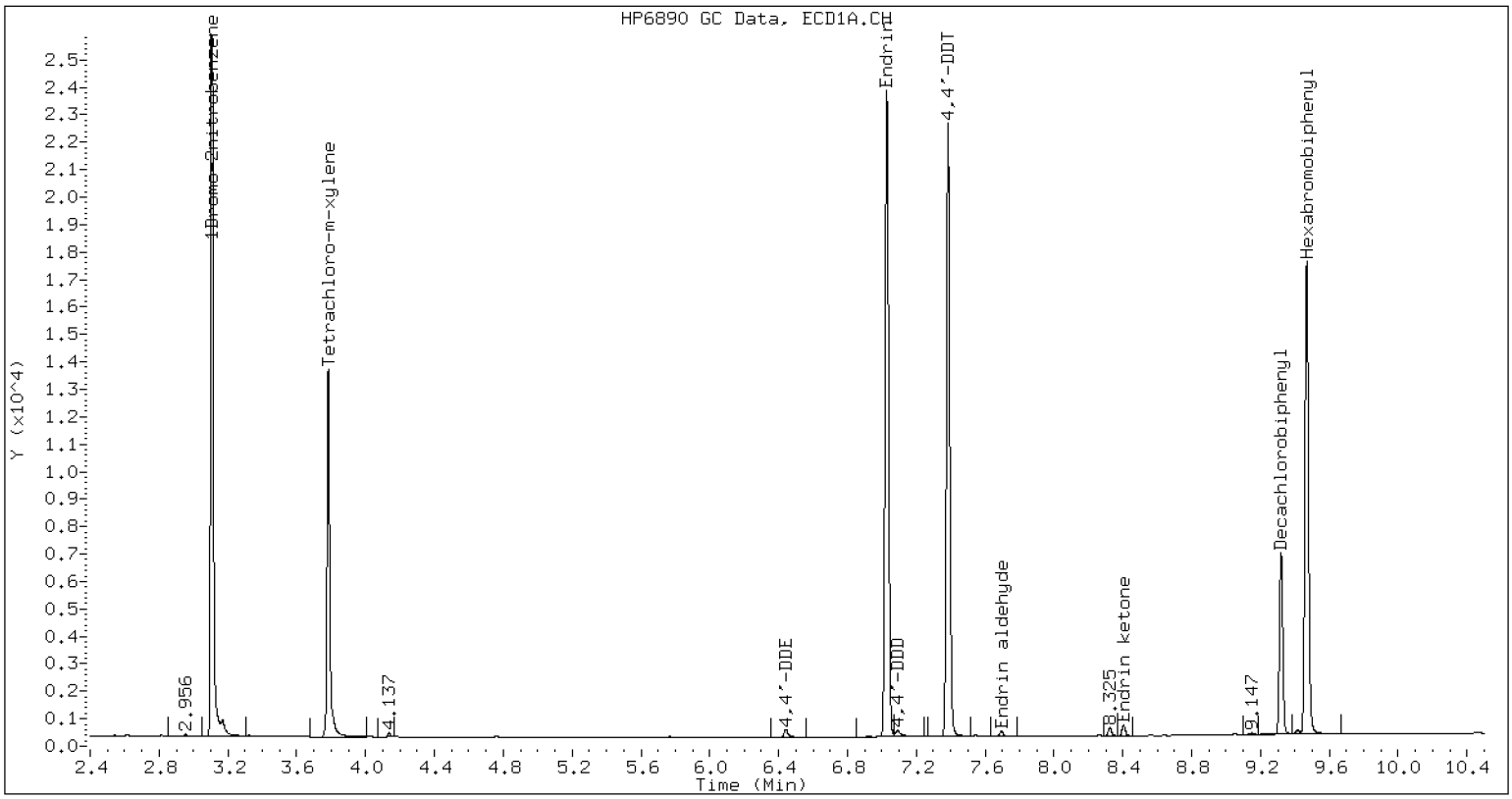
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.256	708404
4,4'-DDE [C]	7.208	8903
Endrin [C]	7.740	698048
4,4'-DDD [C]	7.815	16977
4,4'-DDT [C]	8.134	615598
Endrin ketone [C]	9.071	7755
Endrin aldehyde [C]	8.283	4762
Hexabromobiphenyl[C]	10.807	454283
Tetrachloro-m-xylene [C]	4.097	348283
Decachlorobiphenyl [C]	10.250	173553

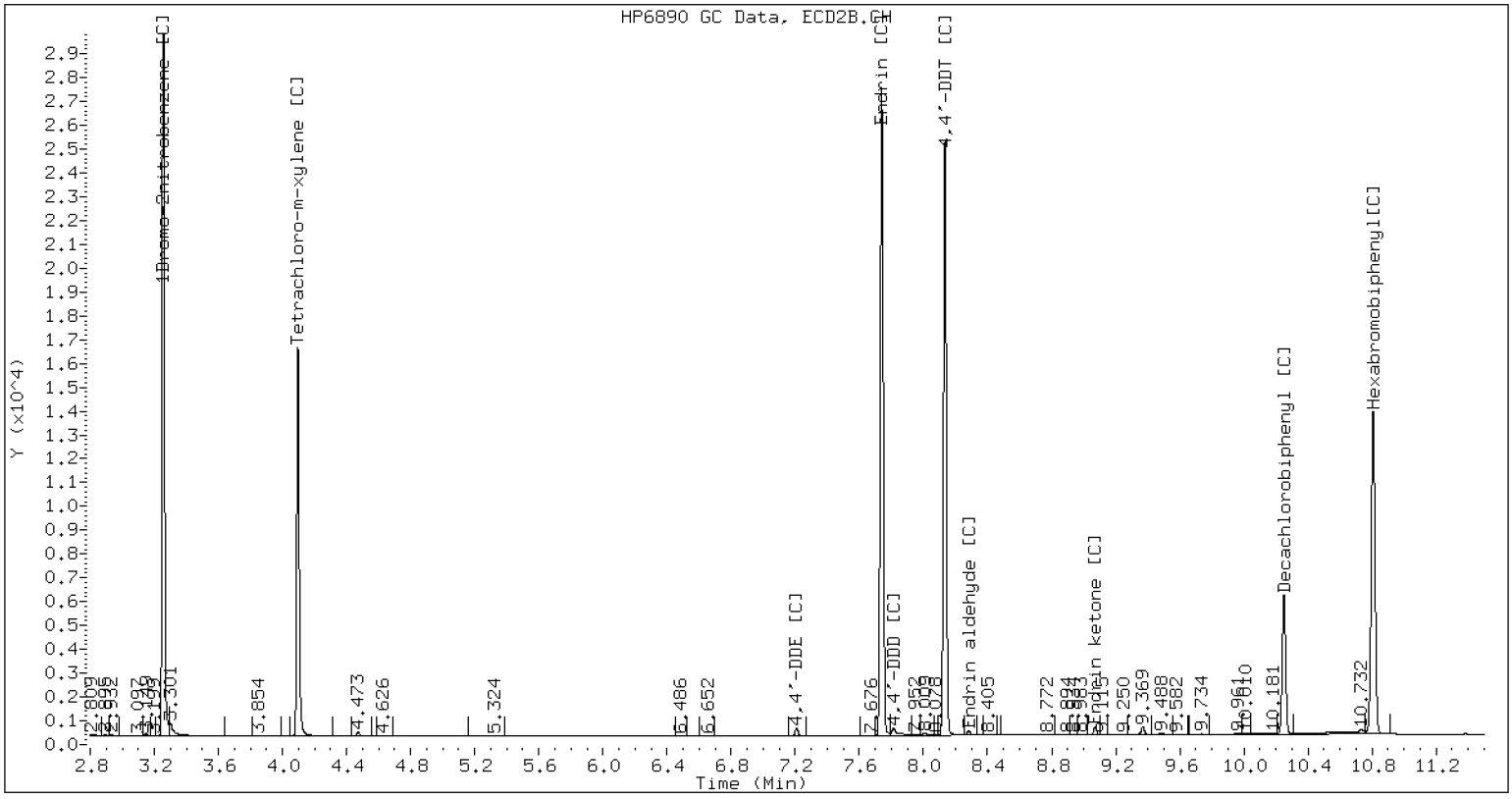
DDT Percent Breakdown = 4.0 %
((8903+16977) * 100)/(8903+16977+615598)

Endrin Percent Breakdown = 1.8 %
((4762+7755) * 100)/(4762+7755+698048)

/20230601.b/23060105.D SLF0020-PEM1 STX-CLP 01-JUN-2023 16:39 1ul



/20230601.b/B20230601.b/23060105.D SLF0020-PEM1 CLP2 01-JUN-2023



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0020
Instrument: ECD6
Calibration: GF00024

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Performance Mix	SLF0020-PEM1	23060105.D	23060105.D	NA	06/01/23 16:39
Cal Standard	SLF0020-CAL1	23060106.D	23060106.D	NA	06/01/23 16:58
Cal Standard	SLF0020-CAL2	23060107.D	23060107.D	NA	06/01/23 17:16
Cal Standard	SLF0020-CAL3	23060108.D	23060108.D	NA	06/01/23 17:35
Cal Standard	SLF0020-CAL4	23060109.D	23060109.D	NA	06/01/23 17:54
Cal Standard	SLF0020-CAL5	23060110.D	23060110.D	NA	06/01/23 18:12
Cal Standard	SLF0020-CAL6	23060111.D	23060111.D	NA	06/01/23 18:31
Cal Standard	SLF0020-CAL7	23060112.D	23060112.D	NA	06/01/23 18:49
Cal Standard	SLF0020-CAL8	23060113.D	23060113.D	NA	06/01/23 19:08
Cal Standard	SLF0020-CAL9	23060114.D	23060114.D	NA	06/01/23 19:26
Cal Standard	SLF0020-CALA	23060115.D	23060115.D	NA	06/01/23 19:45
Cal Standard	SLF0020-CALB	23060116.D	23060116.D	NA	06/01/23 20:04
Cal Standard	SLF0020-CALC	23060117.D	23060117.D	NA	06/01/23 20:22
Cal Standard	SLF0020-CALD	23060118.D	23060118.D	NA	06/01/23 20:41
Cal Standard	SLF0020-CALE	23060119.D	23060119.D	NA	06/01/23 20:59
Secondary Cal Check	SLF0020-SCV1	23060134.D	23060134.D	NA	06/02/23 01:38
Secondary Cal Check	SLF0020-SCV2	23060135.D	23060135.D	NA	06/02/23 01:56

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLF0020

Instrument: ECD6
Calibration ID: GF00024

Printed: 6/8/2023 3:06:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLF0020-PEM1	QC		1		L002116	L000844		
SLF0020-CAL1	QC		2		L003348	L000844		
SLF0020-CAL2	QC		3		L003347	L000844		
SLF0020-CAL3	QC		4		L003346	L000844		
SLF0020-CAL4	QC		5		L003345	L000844		
SLF0020-CAL5	QC		6		L003344	L000844		
SLF0020-CAL6	QC		7		L003343	L000844		
SLF0020-CAL7	QC		8		L000560	L000844		
SLF0020-CAL8	QC		9		L003342	L000844		
SLF0020-CAL9	QC		10		L003341	L000844		
SLF0020-CALA	QC		11		L003340	L000844		
SLF0020-CALB	QC		12		L003339	L000844		
SLF0020-CALC	QC		13		L003338	L000844		
SLF0020-CALD	QC		14		L003337	L000844		
SLF0020-CALE	QC		15		L000377	L000844		
SLF0020-CALF	QC		16		L004742	L000844		
SLF0020-CALG	QC		17		L004741	L000844		
SLF0020-CALH	QC		18		L004740	L000844		
SLF0020-CALI	QC		19		L004739	L000844		
SLF0020-CALJ	QC		20		L004738	L000844		
SLF0020-CALK	QC		21		L004737	L000844		

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLF0020

Instrument: ECD6
Calibration ID: GF00024

Printed: 6/8/2023 3:06:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLF0020-CALL	QC		22		L004439	L000844		
SLF0020-CALM	QC		23		L003398	L000844		
SLF0020-CALN	QC		24		L003397	L000844		
SLF0020-CALO	QC		25		L003396	L000844		
SLF0020-CALP	QC		26		L003395	L000844		
SLF0020-CALQ	QC		27		L003394	L000844		
SLF0020-CALR	QC		28		L003393	L000844		
SLF0020-CALS	QC		29		L000559	L000844		
SLF0020-SCV1	QC		30		L003155	L000844		
SLF0020-SCV2	QC		31		L003156	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230601.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	01-JUN-2023 16:02	23060103.D	1	RINSE3	
2	01-JUN-2023 16:21	23060104.D	1	SEQ-IBL1	
3	01-JUN-2023 16:39	23060105.D	1	SLF0020-PEM1	
4	01-JUN-2023 16:58	23060106.D	1	SLF0020-CAL1	
5	01-JUN-2023 17:16	23060107.D	1	SLF0020-CAL2	
6	01-JUN-2023 17:35	23060108.D	1	SLF0020-CAL3	
7	01-JUN-2023 17:54	23060109.D	1	SLF0020-CAL4	
8	01-JUN-2023 18:12	23060110.D	1	SLF0020-CAL5	
9	01-JUN-2023 18:31	23060111.D	1	SLF0020-CAL6	
10	01-JUN-2023 18:49	23060112.D	1	SLF0020-CAL7	
11	01-JUN-2023 19:08	23060113.D	1	SLF0020-CAL8	
12	01-JUN-2023 19:26	23060114.D	1	SLF0020-CAL9	
13	01-JUN-2023 19:45	23060115.D	1	SLF0020-CALA	
14	01-JUN-2023 20:04	23060116.D	1	SLF0020-CALB	
15	01-JUN-2023 20:22	23060117.D	1	SLF0020-CALC	
16	01-JUN-2023 20:41	23060118.D	1	SLF0020-CALD	
17	01-JUN-2023 20:59	23060119.D	1	SLF0020-CALE	
18	01-JUN-2023 21:18	23060120.D	1	SLF0020-CALF	
19	01-JUN-2023 21:36	23060121.D	1	SLF0020-CALG	
20	01-JUN-2023 21:55	23060122.D	1	SLF0020-CALH	
21	01-JUN-2023 22:14	23060123.D	1	SLF0020-CALI	
22	01-JUN-2023 22:32	23060124.D	1	SLF0020-CALJ	
23	01-JUN-2023 22:51	23060125.D	1	SLF0020-CALK	
24	01-JUN-2023 23:09	23060126.D	1	SLF0020-CALL	
25	01-JUN-2023 23:28	23060127.D	1	SLF0020-CALM	
26	01-JUN-2023 23:46	23060128.D	1	SLF0020-CALN	
27	02-JUN-2023 00:05	23060129.D	1	SLF0020-CALO	
28	02-JUN-2023 00:23	23060130.D	1	SLF0020-CALP	
29	02-JUN-2023 00:42	23060131.D	1	SLF0020-CALQ	
30	02-JUN-2023 01:00	23060132.D	1	SLF0020-CALR	
31	02-JUN-2023 01:19	23060133.D	1	SLF0020-CALS	
32	02-JUN-2023 01:38	23060134.D	1	SLF0020-SCV1	
33	02-JUN-2023 01:56	23060135.D	1	SLF0020-SCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230601.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 01-JUN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1602	23060103.D	RINSE3		1	NO MANUAL INTEGRATION
1621	23060104.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
1639	23060105.D	SLF0020-PEM1		1	NO MANUAL INTEGRATION
1658	23060106.D	SLF0020-CAL1		1	Decachlorobiphenyl,
1716	23060107.D	SLF0020-CAL2		1	Decachlorobiphenyl,
1735	23060108.D	SLF0020-CAL3		1	NO MANUAL INTEGRATION
1754	23060109.D	SLF0020-CAL4		1	NO MANUAL INTEGRATION
1812	23060110.D	SLF0020-CAL5		1	NO MANUAL INTEGRATION
1831	23060111.D	SLF0020-CAL6		1	NO MANUAL INTEGRATION
1849	23060112.D	SLF0020-CAL7		1	NO MANUAL INTEGRATION
1908	23060113.D	SLF0020-CAL8		1	NO MANUAL INTEGRATION
1926	23060114.D	SLF0020-CAL9		1	NO MANUAL INTEGRATION
1945	23060115.D	SLF0020-CALA		1	NO MANUAL INTEGRATION
2004	23060116.D	SLF0020-CALB		1	NO MANUAL INTEGRATION
2022	23060117.D	SLF0020-CALC		1	NO MANUAL INTEGRATION
2041	23060118.D	SLF0020-CALD		1	NO MANUAL INTEGRATION
2059	23060119.D	SLF0020-CALE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230601.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2118	23060120.D	SLF0020-CALF		1	NO MANUAL INTEGRATION
2136	23060121.D	SLF0020-CALG		1	NO MANUAL INTEGRATION
2155	23060122.D	SLF0020-CALH		1	NO MANUAL INTEGRATION
2214	23060123.D	SLF0020-CALI		1	NO MANUAL INTEGRATION
2232	23060124.D	SLF0020-CALJ		1	NO MANUAL INTEGRATION
2251	23060125.D	SLF0020-CALK		1	NO MANUAL INTEGRATION
2309	23060126.D	SLF0020-CALL		1	NO MANUAL INTEGRATION
2328	23060127.D	SLF0020-CALM		1	NO MANUAL INTEGRATION
2346	23060128.D	SLF0020-CALN		1	NO MANUAL INTEGRATION
0005	23060129.D	SLF0020-CALO		1	NO MANUAL INTEGRATION
0023	23060130.D	SLF0020-CALP		1	NO MANUAL INTEGRATION
0042	23060131.D	SLF0020-CALQ		1	NO MANUAL INTEGRATION
0100	23060132.D	SLF0020-CALR		1	NO MANUAL INTEGRATION
0119	23060133.D	SLF0020-CALS		1	NO MANUAL INTEGRATION
0138	23060134.D	SLF0020-SCV1		1	NO MANUAL INTEGRATION
0156	23060135.D	SLF0020-SCV2		1	NO MANUAL INTEGRATION

Security Status Report

Date: 08-Jun-2023 14:54

23060103.D	Data Locked	yev, 08-
23060104.D	Data Locked	yev, 08-
23060105.D	Data Locked	yev, 08-
23060106.D	Data Locked	yev, 08-
23060107.D	Data Locked	yev, 08-
23060108.D	Data Locked	yev, 08-
23060109.D	Data Locked	yev, 08-
23060110.D	Data Locked	yev, 08-
23060111.D	Data Locked	yev, 08-
23060112.D	Data Locked	yev, 08-
23060113.D	Data Locked	yev, 08-
23060114.D	Data Locked	yev, 08-
23060115.D	Data Locked	yev, 08-
23060116.D	Data Locked	yev, 08-
23060117.D	Data Locked	yev, 08-
23060118.D	Data Locked	yev, 08-
23060119.D	Data Locked	yev, 08-
23060120.D	Data Locked	yev, 08-
23060121.D	Data Locked	yev, 08-
23060122.D	Data Locked	yev, 08-
23060123.D	Data Locked	yev, 08-
23060124.D	Data Locked	yev, 08-
23060125.D	Data Locked	yev, 08-
23060126.D	Data Locked	yev, 08-
23060127.D	Data Locked	yev, 08-
23060128.D	Data Locked	yev, 08-
23060129.D	Data Locked	yev, 08-
23060130.D	Data Locked	yev, 08-
23060131.D	Data Locked	yev, 08-
23060132.D	Data Locked	yev, 08-
23060133.D	Data Locked	yev, 08-
23060134.D	Data Locked	yev, 08-
23060135.D	Data Locked	yev, 08-

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0091	Instrument:	ECD6
		Calibration:	GF00024

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLF0091-ICV1	23060204.D	23060204.D	NA	06/02/23 12:57
Blank	BLE0150-BLK1	23060208.D	23060208.D	Solid	06/02/23 14:12
LCS	BLE0150-BS1	23060209.D	23060209.D	Solid	06/02/23 14:30
LCS Dup	BLE0150-BSD1	23060210.D	23060210.D	Solid	06/02/23 14:49
LDW23-SS1800	BLE0150-MS1	23060211.D	23060211.D	Solid	06/02/23 15:08
LDW23-SS1800	BLE0150-MSD1	23060212.D	23060212.D	Solid	06/02/23 15:26
LDW23-SS1811	23E0009-01	23060215.D	23060215.D	Solid	06/02/23 16:22
LDW23-SS1805	23E0009-03	23060216.D	23060216.D	Solid	06/02/23 16:41
LDW23-SS1800	23E0009-05	23060217.D	23060217.D	Solid	06/02/23 17:00
LDW23-SS1820	23E0009-07	23060218.D	23060218.D	Solid	06/02/23 17:18
Calibration Check	SLF0091-CCV1	23060220.D	23060220.D	NA	06/02/23 17:56

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLF0091

Instrument: ECD6
Calibration ID: GF00024

Printed: 6/8/2023 1:06:29PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLF0091-PEM1	QC		1		L002116	L000844		
SLF0091-ICV1	QC		2		L003344	L000844		
BLE0150-BLK1	QC		3			L000844		
BLE0150-BS1	QC		4			L000844		
BLE0150-BSD1	QC		5			L000844		
BLE0150-MS1	QC		6			L000844		
BLE0150-MSD1	QC		7			L000844		
23D0394-07	8081B Pest (PSDDA)	A 03	8			L000844	Anchor QEA, LLC	
23D0394-13	8081B Pest (PSDDA)	A 03	9			L000844	Anchor QEA, LLC	
23E0009-01	8081B Pest (PSDDA)	A 02	10			L000844	Anchor QEA, LLC	
23E0009-03	8081B Pest (PSDDA)	A 02	11			L000844	Anchor QEA, LLC	
23E0009-05	8081B Pest (PSDDA)	A 02	12			L000844	Anchor QEA, LLC	
23E0009-07	8081B Pest (PSDDA)	A 02	13			L000844	Anchor QEA, LLC	
SLF0091-PEM2	QC		14		L002116	L000844		
SLF0091-CCV1	QC		15		L003344	L000844		

Samples Loaded By Date

Data Processed By Date

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230602.b

ARI Job No.: SLF0 Method: PEST.m Instrument: ecd6.i Date: 02-JUN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1239	23060203.D	SLF0091-PEM1		1	NO MANUAL INTEGRATION
1257	23060204.D	SLF0091-ICV1		1	NO MANUAL INTEGRATION
1316	23060205.D	SLF0091-ICV2		1	NO MANUAL INTEGRATION
1334	23060206.D	SLF0091-ICV3		1	NO MANUAL INTEGRATION
1353	23060207.D	SLF0091-ICV4		1	NO MANUAL INTEGRATION
1412	23060208.D	BLE0150-BLK1		1	NO MANUAL INTEGRATION
1430	23060209.D	BLE0150-BS1		1	NO MANUAL INTEGRATION
1449	23060210.D	BLE0150-BSD1		1	NO MANUAL INTEGRATION
1508	23060211.D	BLE0150-MS1		1	NO MANUAL INTEGRATION
1526	23060212.D	BLE0150-MSD1		1	gamma-BHC (Lindane), Endrin, 4,4'-DDD, 4,4'-DDT, Endrin ketone, Hexachlorobenzene,
1545	23060213.D	23D0394-07		1	NO MANUAL INTEGRATION
1604	23060214.D	23D0394-13		1	Aldrin, Dieldrin, 4,4'-DDD, 4,4'-DDT, cis-Nonachlor,
1622	23060215.D	23E0009-01		1	delta-BHC, Aldrin, 4,4'-DDD, 4,4'-DDT, cis-Nonachlor,
1641	23060216.D	23E0009-03		1	delta-BHC, Aldrin, Heptachlor epoxide b, 4,4'-DDD, 4,4'-DDT, Toxaphene, cis-Nonachlor, Mirex,
1700	23060217.D	23E0009-05		1	delta-BHC, Aldrin, 4,4'-DDT,
1718	23060218.D	23E0009-07		1	4,4'-DDD, 4,4'-DDT, Endrin ketone, Hexachlorobenzene, cis-Nonachlor,
1737	23060219.D	SLF0091-PEM2		1	Endrin ketone,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230602.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1756	23060220.D	SLF0091-CCV1		1	Endrin ketone,
1814	23060221.D	SLF0091-CCV2		1	NO MANUAL INTEGRATION
1833	23060222.D	SLF0091-CCV3		1	NO MANUAL INTEGRATION
1852	23060223.D	SLF0091-CCV4		1	NO MANUAL INTEGRATION

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230602.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-JUN-2023 12:39	23060203.D	1	SLF0091-PEM1	
2	02-JUN-2023 12:57	23060204.D	1	SLF0091-ICV1	
3	02-JUN-2023 13:16	23060205.D	1	SLF0091-ICV2	
4	02-JUN-2023 13:34	23060206.D	1	SLF0091-ICV3	
5	02-JUN-2023 13:53	23060207.D	1	SLF0091-ICV4	
6	02-JUN-2023 14:12	23060208.D	1	BLE0150-BLK1	
7	02-JUN-2023 14:30	23060209.D	1	BLE0150-BS1	
8	02-JUN-2023 14:49	23060210.D	1	BLE0150-BSD1	
9	02-JUN-2023 15:08	23060211.D	1	BLE0150-MS1	
10	02-JUN-2023 15:26	23060212.D	1	BLE0150-MSD1	
11	02-JUN-2023 15:45	23060213.D	1	23D0394-07	
12	02-JUN-2023 16:04	23060214.D	1	23D0394-13	
13	02-JUN-2023 16:22	23060215.D	1	23E0009-01	
14	02-JUN-2023 16:41	23060216.D	1	23E0009-03	
15	02-JUN-2023 17:00	23060217.D	1	23E0009-05	
16	02-JUN-2023 17:18	23060218.D	1	23E0009-07	
17	02-JUN-2023 17:37	23060219.D	1	SLF0091-PEM2	
18	02-JUN-2023 17:56	23060220.D	1	SLF0091-CCV1	
19	02-JUN-2023 18:14	23060221.D	1	SLF0091-CCV2	
20	02-JUN-2023 18:33	23060222.D	1	SLF0091-CCV3	
21	02-JUN-2023 18:52	23060223.D	1	SLF0091-CCV4	

Security Status Report

Date: 08-Jun-2023 11:28

23060203.D	Data Locked	yev, 08-
23060204.D	Data Locked	yev, 08-
23060205.D	Data Locked	yev, 08-
23060206.D	Data Locked	yev, 08-
23060207.D	Data Locked	yev, 08-
23060208.D	Data Locked	yev, 08-
23060209.D	Data Locked	yev, 08-
23060210.D	Data Locked	yev, 08-
23060211.D	Data Locked	yev, 08-
23060212.D	Data Locked	yev, 08-
23060213.D	Data Locked	yev, 08-
23060214.D	Data Locked	yev, 08-
23060215.D	Data Locked	yev, 08-
23060216.D	Data Locked	yev, 08-
23060217.D	Data Locked	yev, 08-
23060218.D	Data Locked	yev, 08-
23060219.D	Data Locked	yev, 08-
23060220.D	Data Locked	yev, 08-
23060221.D	Data Locked	yev, 08-
23060222.D	Data Locked	yev, 08-
23060223.D	Data Locked	yev, 08-

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0020	Instrument:	ECD6
Calibration:	GF00024	Calibration Date:	06/01/2023

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLF0020-PEM1 (Water)				Lab File ID: 23060105.D			Analyzed: 06/01/23 16:39	
Decachlorobiphenyl	40.000	86.8	0 - 200	9.319	9.319857	-0.0009	+/-0.1	
Decachlorobiphenyl [2C]	40.000	90.7	0 - 200	10.25	10.25029	-0.0003	+/-0.1	
Tetrachlorometaxylene	40.000	94.7	0 - 200	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	97.2	0 - 200	4.096	4.096286	-0.0003	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0091
Instrument: ECD6
Calibration: GF00024
Calibration Date: 06/01/2023

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLF0091-ICV1 (Solid)				Lab File ID: 23060204.D			Analyzed: 06/02/23 12:57	
Decachlorobiphenyl	40.000	90.0	80 - 120	9.32	9.319857	0.0001	+/-0.1	
Decachlorobiphenyl [2C]	40.000	94.7	80 - 120	10.251	10.25029	0.0007	+/-0.1	
Tetrachlorometaxylene	40.000	96.5	80 - 120	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	99.8	80 - 120	4.096	4.096286	-0.0003	+/-0.1	
BLE0150-BLK1 (Solid)				Lab File ID: 23060208.D			Analyzed: 06/02/23 14:12	
Decachlorobiphenyl	8.0000	78.2	30 - 160	9.32	9.319857	0.0001	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	81.8	30 - 160	10.251	10.25029	0.0007	+/-0.1	
Tetrachlorometaxylene	8.0000	68.2	30 - 160	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	68.6	30 - 160	4.097	4.096286	0.0007	+/-0.1	
BLE0150-BS1 (Solid)				Lab File ID: 23060209.D			Analyzed: 06/02/23 14:30	
Decachlorobiphenyl	8.0000	79.9	30 - 160	9.32	9.319857	0.0001	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	82.4	30 - 160	10.25	10.25029	-0.0003	+/-0.1	
Tetrachlorometaxylene	8.0000	70.7	30 - 160	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	69.9	30 - 160	4.096	4.096286	-0.0003	+/-0.1	
BLE0150-BSD1 (Solid)				Lab File ID: 23060210.D			Analyzed: 06/02/23 14:49	
Decachlorobiphenyl	8.0000	82.1	30 - 160	9.319	9.319857	-0.0009	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	85.7	30 - 160	10.251	10.25029	0.0007	+/-0.1	
Tetrachlorometaxylene	8.0000	72.6	30 - 160	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	72.4	30 - 160	4.096	4.096286	-0.0003	+/-0.1	
BLE0150-MS1 (Solid)				Lab File ID: 23060211.D			Analyzed: 06/02/23 15:08	
Decachlorobiphenyl	8.0011	81.0	30 - 160	9.321	9.319857	0.0011	+/-0.1	
Decachlorobiphenyl [2C]	8.0011	83.6	30 - 160	10.252	10.25029	0.0017	+/-0.1	
Tetrachlorometaxylene	8.0011	58.8	30 - 160	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	8.0011	66.2	30 - 160	4.097	4.096286	0.0007	+/-0.1	
BLE0150-MSD1 (Solid)				Lab File ID: 23060212.D			Analyzed: 06/02/23 15:26	
Decachlorobiphenyl	8.0011	87.2	30 - 160	9.322	9.319857	0.0021	+/-0.1	
Decachlorobiphenyl [2C]	8.0011	91.3	30 - 160	10.254	10.25029	0.0037	+/-0.1	
Tetrachlorometaxylene	8.0011	62.2	30 - 160	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	8.0011	67.8	30 - 160	4.097	4.096286	0.0007	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0091
Instrument: ECD6
Calibration: GF00024
Calibration Date: 06/01/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23E0009-01 (Solid)				Lab File ID: 23060215.D			Analyzed: 06/02/23 16:22	
Decachlorobiphenyl	7.9956	80.0	30 - 160	9.32	9.319857	0.0001	+/-0.1	
Decachlorobiphenyl [2C]	7.9956	85.6	30 - 160	10.252	10.25029	0.0017	+/-0.1	
Tetrachlorometaxylene	7.9956	68.5	30 - 160	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	7.9956	71.0	30 - 160	4.097	4.096286	0.0007	+/-0.1	
23E0009-03 (Solid)				Lab File ID: 23060216.D			Analyzed: 06/02/23 16:41	
Decachlorobiphenyl	7.9971	80.2	30 - 160	9.322	9.319857	0.0021	+/-0.1	
Decachlorobiphenyl [2C]	7.9971	81.3	30 - 160	10.253	10.25029	0.0027	+/-0.1	
Tetrachlorometaxylene	7.9971	60.0	30 - 160	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	7.9971	64.4	30 - 160	4.097	4.096286	0.0007	+/-0.1	
23E0009-05 (Solid)				Lab File ID: 23060217.D			Analyzed: 06/02/23 17:00	
Decachlorobiphenyl	7.9920	90.0	30 - 160	9.323	9.319857	0.0031	+/-0.1	
Decachlorobiphenyl [2C]	7.9920	92.8	30 - 160	10.254	10.25029	0.0037	+/-0.1	
Tetrachlorometaxylene	7.9920	60.1	30 - 160	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	7.9920	66.9	30 - 160	4.098	4.096286	0.0017	+/-0.1	
23E0009-07 (Solid)				Lab File ID: 23060218.D			Analyzed: 06/02/23 17:18	
Decachlorobiphenyl	7.9712	83.8	30 - 160	9.321	9.319857	0.0011	+/-0.1	
Decachlorobiphenyl [2C]	7.9712	81.9	30 - 160	10.253	10.25029	0.0027	+/-0.1	
Tetrachlorometaxylene	7.9712	64.8	30 - 160	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	7.9712	65.4	30 - 160	4.097	4.096286	0.0007	+/-0.1	
SLF0091-CCV1 (Solid)				Lab File ID: 23060220.D			Analyzed: 06/02/23 17:56	
Decachlorobiphenyl	40.000	88.4	80 - 120	9.32	9.319857	0.0001	+/-0.1	
Decachlorobiphenyl [2C]	40.000	99.0	80 - 120	10.251	10.25029	0.0007	+/-0.1	
Tetrachlorometaxylene	40.000	96.1	80 - 120	3.783	3.783	0.0000	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	98.4	80 - 120	4.097	4.096286	0.0007	+/-0.1	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLF0020	Instrument:	ECD6
		Calibration:	GF00024

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Performance Mix (SLF0020-PEM1)		(Water)		Lab File ID: 23060105.D			Analyzed: 06/01/23 16:39		
1-Bromo-2-Nitrobenzene	630131	3.107	603542	3.107	104	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	502889	9.468	483391	9.468	104	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	708404	3.256	700794	3.255	101	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	454283	10.806	467996	10.807	97	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLF0020-SCV1)		(Water)		Lab File ID: 23060134.D			Analyzed: 06/02/23 01:38		
1-Bromo-2-Nitrobenzene	598769	3.107	603542	3.107	99	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	476418	9.468	483391	9.468	99	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	692071	3.255	700794	3.255	99	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	463858	10.807	467996	10.807	99	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SLF0020-SCV2)		(Water)		Lab File ID: 23060135.D			Analyzed: 06/02/23 01:56		
1-Bromo-2-Nitrobenzene	611793	3.107	603542	3.107	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	483251	9.468	483391	9.468	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	735895	3.255	700794	3.255	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	473919	10.807	467996	10.807	101	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0091
Instrument: ECD6
Calibration: GF00024

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLF0091-ICV1)		(Solid)		Lab File ID: 23060204.D			Analyzed: 06/02/23 12:57		
1-Bromo-2-Nitrobenzene	596986	3.107	596986	3.107	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	478653	9.468	478653	9.468	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	672533	3.255	672533	3.255	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	442812	10.807	442812	10.807	100	50 - 200	0.000	+/-0.50	
Blank (BLE0150-BLK1)		(Solid)		Lab File ID: 23060208.D			Analyzed: 06/02/23 14:12		
1-Bromo-2-Nitrobenzene	602901	3.107	596986	3.107	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	478442	9.468	478653	9.468	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	682155	3.256	672533	3.255	101	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	437280	10.808	442812	10.807	99	50 - 200	0.001	+/-0.50	
LCS (BLE0150-BS1)		(Solid)		Lab File ID: 23060209.D			Analyzed: 06/02/23 14:30		
1-Bromo-2-Nitrobenzene	627765	3.106	596986	3.107	105	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	502296	9.468	478653	9.468	105	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	714295	3.255	672533	3.255	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	461902	10.807	442812	10.807	104	50 - 200	0.000	+/-0.50	
LCS Dup (BLE0150-BSD1)		(Solid)		Lab File ID: 23060210.D			Analyzed: 06/02/23 14:49		
1-Bromo-2-Nitrobenzene	632899	3.107	596986	3.107	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	501396	9.467	478653	9.468	105	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	727529	3.255	672533	3.255	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	463617	10.807	442812	10.807	105	50 - 200	0.000	+/-0.50	
Matrix Spike (BLE0150-MS1)		(Solid)		Lab File ID: 23060211.D			Analyzed: 06/02/23 15:08		
1-Bromo-2-Nitrobenzene	677880	3.107	596986	3.107	114	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	402920	9.47	478653	9.468	84	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	687095	3.256	672533	3.255	102	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	373947	10.809	442812	10.807	84	50 - 200	0.002	+/-0.50	
Matrix Spike Dup (BLE0150-MSD1)		(Solid)		Lab File ID: 23060212.D			Analyzed: 06/02/23 15:26		
1-Bromo-2-Nitrobenzene	690617	3.107	596986	3.107	116	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	387022	9.471	478653	9.468	81	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	649981	3.256	672533	3.255	97	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	356523	10.811	442812	10.807	81	50 - 200	0.004	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0091
Instrument: ECD6
Calibration: GF00024

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1811 (23E0009-01)		(Solid)		Lab File ID: 23060215.D				Analyzed: 06/02/23 16:22	
1-Bromo-2-Nitrobenzene	596282	3.107	596986	3.107	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	392603	9.468	478653	9.468	82	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	622851	3.256	672533	3.255	93	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	380040	10.809	442812	10.807	86	50 - 200	0.002	+/-0.50	
LDW23-SS1805 (23E0009-03)		(Solid)		Lab File ID: 23060216.D				Analyzed: 06/02/23 16:41	
1-Bromo-2-Nitrobenzene	632460	3.107	596986	3.107	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	382159	9.47	478653	9.468	80	50 - 200	0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	676222	3.256	672533	3.255	101	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	358532	10.811	442812	10.807	81	50 - 200	0.004	+/-0.50	
LDW23-SS1800 (23E0009-05)		(Solid)		Lab File ID: 23060217.D				Analyzed: 06/02/23 17:00	
1-Bromo-2-Nitrobenzene	642794	3.107	596986	3.107	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	369165	9.471	478653	9.468	77	50 - 200	0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	633428	3.256	672533	3.255	94	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	345295	10.812	442812	10.807	78	50 - 200	0.005	+/-0.50	
LDW23-SS1820 (23E0009-07)		(Solid)		Lab File ID: 23060218.D				Analyzed: 06/02/23 17:18	
1-Bromo-2-Nitrobenzene	604697	3.107	596986	3.107	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	364551	9.469	478653	9.468	76	50 - 200	0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	659190	3.256	672533	3.255	98	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	350887	10.811	442812	10.807	79	50 - 200	0.004	+/-0.50	

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23E0009-07	File ID:	23060218.D
Sampled:	04/29/23 14:00	Prepared:	05/05/23 17:03	Analyzed:	06/02/23 17:18
Solids:	53.18	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD6
Batch:	BLE0150	Sequence:	SLF0091		
GC Column(1):	STX-CLP			GC Column(2):	STX-CLPII

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Hexachlorobenzene	* 1	4.136	4.135857	0.000143	25137	0.47	2.1
	2	4.579	4.578429	0.000571	26994	0.48	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8081B

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1811 23E0009-01	04/28/23 10:38	05/01/23 09:42	05/05/23 17:03	7	14	06/02/23 16:22	28	40	
LDW23-SS1805 23E0009-03	04/28/23 16:15	05/01/23 09:42	05/05/23 17:03	7	14	06/02/23 16:41	28	40	
LDW23-SS1800 23E0009-05	04/29/23 10:10	05/01/23 09:42	05/05/23 17:03	6	14	06/02/23 17:00	28	40	
LDW23-SS1820 23E0009-07	04/29/23 14:00	05/01/23 09:42	05/05/23 17:03	6	14	06/02/23 17:18	28	40	
Matrix Spike BLE0150-MS1	04/29/23 10:10	05/01/23 09:42	05/05/23 17:03	6	14	06/02/23 15:08	28	40	
Matrix Spike Dup BLE0150-MSD1	04/29/23 10:10	05/01/23 09:42	05/05/23 17:03	6	14	06/02/23 15:26	28	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD6

Analyte	MDL	RL	Units
Hexachlorobenzene	0.15	0.50	ug/kg
Hexachlorobenzene [2C]	0.15	0.50	ug/kg

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

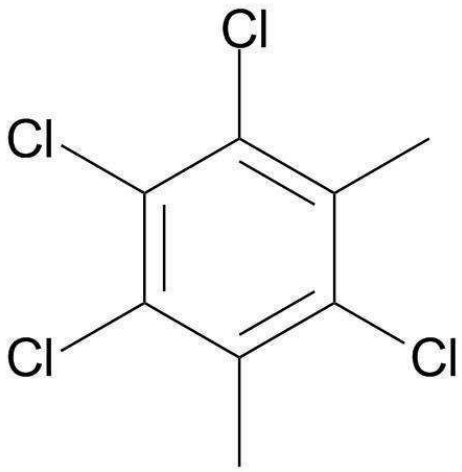
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: APP-9-112-D-20X
Description: Hexachlorobenzene in Dichloromethane
Lot: 219051389
Solvent: Dichloromethane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: May 13, 2019
Expiration: May 13, 2029
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobenzene	118-74-1	99.0	2002	1982

J006504
Hexachlorobenzene
Solvent / Lot: Dichloromethane
Prep: 6/21/2021 by YZ
Exp: 5/13/2029
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this .

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7 **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-297S
Description: cis-Nonachlor
Lot: 221041461
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Apr 22, 2021
Expiration: Apr 22, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
cis-Nonachlor	5103-73-1	98.6	101.1	99.7

K 000450

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8081-DS
Description: 4,4'-DDT & Endrin
Lot: 221031488-04
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Apr 8, 2022
Expiration: May 8, 2023
Sample Size: 1 mL
Components: 2
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
4,4'-DDT	50-29-3	100.0	200.9	200.9
Endrin	72-20-8	99.8	200.0	199.6

K7002

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

K 007789

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name:	trans-Nonachlor Standard	**Lot Number:**	0006678079
Product Number:	PP-500-1	**Lot Issue Date:**	26-Apr-2022
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	31-May-2026

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
trans-nonachlor	100.0 ±	0.5 µg/mL	039765-80-5	RM03191

Matrix: methanol (methyl alcohol)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

K 007789

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32200 **Lot No.:** A0185010

Description : 2,4'-DDT Standard

2,4'-DDT Standard 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4'-DDT	1,007.4 µg/mL	+/- 10.1487 µg/mL	Gravimetric
	CAS # 789-02-6 (Lot 12271800)		+/- 46.6236 µg/mL	Unstressed
	Purity 98%		+/- 66.7677 µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

K007190

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32099 **Lot No.:** A0186104

Description : 2,4'-DDE Standard

2, 4'-DDE Standard 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4'-DDE	1,008.0 µg/mL	+/- 10.1543 µg/mL	Gravimetric
	CAS # 3424-82-6 (Lot 13206700)		+/- 46.6495 µg/mL	Unstressed
	Purity 99%		+/- 66.8048 µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

K007791

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32098 **Lot No.:** A0187649

Description : 2,4'-DDD Standard

2, 4'-DDD 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4'-DDD	1,004.0 µg/mL	+/- 10.1140	µg/mL	Gravimetric
	CAS # 53-19-0 (Lot BCCF3012)		+/- 46.4644	µg/mL	Unstressed
	Purity 99%		+/- 66.5397	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 221121451
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Dec 27, 2021
Expiration: Dec 27, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.0	98.2

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

K 007793

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: Organochlorine Pesticides Standard
Product Number: PPM-808C-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006626043
Lot Issue Date: 11-Aug-2021
Expiration Date: 30-Sep-2023

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
aldrin	1003 ±	5 µg/mL	000309-00-2	RM00635
alpha-BHC	1002 ±	5 µg/mL	000319-84-6	RM18316
beta-BHC	1004 ±	5 µg/mL	000319-85-7	RM18870
delta-BHC	1000 ±	5 µg/mL	000319-86-8	RM17937
gamma-BHC	1001 ±	5 µg/mL	000058-89-9	RM02694
cis-chlordane	1001 ±	5 µg/mL	005103-71-9	RM07243
trans-chlordane	1001 ±	5 µg/mL	005103-74-2	RM02726
4,4'-DDD	1000 ±	5 µg/mL	000072-54-8	RM03682
4,4'-DDE	1003 ±	5 µg/mL	000072-55-9	RM02892
4,4'-DDT	1003 ±	5 µg/mL	000050-29-3	RM00618
dieldrin	1004 ±	5 µg/mL	000060-57-1	RM18693
endosulfan I	1003 ±	5 µg/mL	000959-98-8	RM18438
endosulfan II	1003 ±	5 µg/mL	033213-65-9	RM18226
endosulfan sulfate	1004 ±	5 µg/mL	001031-07-8	RM15389
endrin	1003 ±	5 µg/mL	000072-20-8	RM14459
endrin aldehyde	1000 ±	5 µg/mL	007421-93-4	RM12540
endrin ketone	1001 ±	5 µg/mL	053494-70-5	NT00720
heptachlor	1004 ±	5 µg/mL	000076-44-8	RM03111
heptachlor epoxide - isomer B	1002 ±	5 µg/mL	001024-57-3	RM18369
methoxychlor	1002 ±	5 µg/mL	000072-43-5	RM14186

Matrix: hexane/toluene (1:1)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32292 **Lot No.:** A0185477

Description : Organochlorine Pesticide Mix AB # 2

Organochlorine Pesticide Mix AB # 2 8-80 µg/mL, Hexane/Toluene(1:1), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2026 **Storage:** 10°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-84-6 (Lot 12307600)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
2	gamma-BHC (Lindane)	8.0 µg/mL	+/- 0.0654 µg/mL	Gravimetric
	CAS # 58-89-9 (Lot 13087200)		+/- 0.3672 µg/mL	Unstressed
	Purity 99%		+/- 0.5281 µg/mL	Stressed
3	beta-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-85-7 (Lot 0588007-4)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
4	delta-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-86-8 (Lot 13112400)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
5	Heptachlor	8.0 µg/mL	+/- 0.0654 µg/mL	Gravimetric
	CAS # 76-44-8 (Lot 803759)		+/- 0.3672 µg/mL	Unstressed
	Purity 99%		+/- 0.5281 µg/mL	Stressed
6	Aldrin	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 309-00-2 (Lot 12983100)		+/- 0.3702 µg/mL	Unstressed
	Purity 96%		+/- 0.5323 µg/mL	Stressed
7	Heptachlor epoxide (isomer B)	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 1024-57-3 (Lot 13168200)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed

8	trans-Chlordane		8.0	µg/mL	+/-	0.0657	µg/mL	Gravimetric
	CAS # 5103-74-2	(Lot 32943)			+/-	0.3689	µg/mL	Unstressed
	Purity 98%				+/-	0.5305	µg/mL	Stressed
9	cis-Chlordane		8.0	µg/mL	+/-	0.0657	µg/mL	Gravimetric
	CAS # 5103-71-9	(Lot 31766)			+/-	0.3689	µg/mL	Unstressed
	Purity 98%				+/-	0.5305	µg/mL	Stressed
10	Endosulfan I		8.0	µg/mL	+/-	0.0654	µg/mL	Gravimetric
	CAS # 959-98-8	(Lot BCCF4060)			+/-	0.3672	µg/mL	Unstressed
	Purity 99%				+/-	0.5281	µg/mL	Stressed
11	4,4'-DDE		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 72-55-9	(Lot GHYQG)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed
12	Dieldrin		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 60-57-1	(Lot 11129900)			+/-	0.7408	µg/mL	Unstressed
	Purity 98%				+/-	1.0653	µg/mL	Stressed
13	Endrin		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot 13157400)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
14	4,4'-DDD		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 72-54-8	(Lot HAN02)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
15	Endosulfan II		16.0	µg/mL	+/-	0.1309	µg/mL	Gravimetric
	CAS # 33213-65-9	(Lot 12448900)			+/-	0.7345	µg/mL	Unstressed
	Purity 99%				+/-	1.0562	µg/mL	Stressed
16	4,4'-DDT		16.1	µg/mL	+/-	0.1315	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot 220428JLM)			+/-	0.7378	µg/mL	Unstressed
	Purity 98%				+/-	1.0610	µg/mL	Stressed
17	Endrin aldehyde		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 7421-93-4	(Lot 30720)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed
18	Endosulfan sulfate		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 1031-07-8	(Lot BCCB0424)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
19	Methoxychlor		80.2	µg/mL	+/-	0.5781	µg/mL	Gravimetric
	CAS # 72-43-5	(Lot 13027000)			+/-	3.6697	µg/mL	Unstressed
	Purity 98%				+/-	5.2871	µg/mL	Stressed
20	Endrin ketone		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 53494-70-5	(Lot 13026800)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

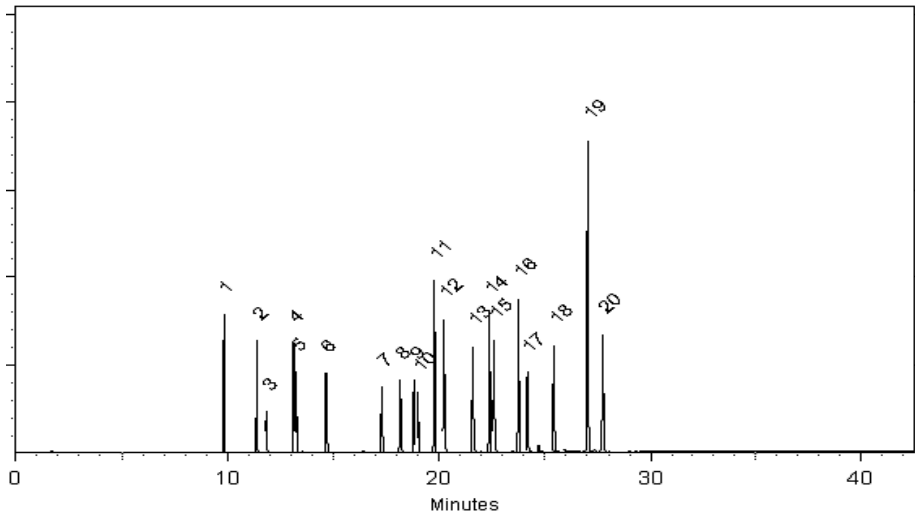
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Morgan Craighead - Mix Technician

Date Mixed: 19-May-2022 **Balance:** B442140311

Fang-Yun Lo - QC Analyst

Date Passed: 26-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-502-36-10X
Description: Hexachlorobutadiene
Lot: 222031188
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 11, 2022
Expiration: Apr 11, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-502-36-10X
Description: Hexachlorobutadiene
Lot: 222031188
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 11, 2022
Expiration: Apr 11, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

K011468

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 221121451
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Dec 27, 2021
Expiration: Dec 27, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
Mirex	2385-85-5	98.2	100.0	98.2

L000343

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 7/20

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-184S
Description: trans-Nonachlor
Lot: 222031383
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 29, 2022
Expiration: Mar 29, 2032
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
trans-Nonachlor	39765-80-5	100.0	100.3	100.3

L000344

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-331S
Description: Oxychlordane Isomer
Lot: 221051706-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 29, 2022
Expiration: Jul 29, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
Oxychlordane Isomer	27304-13-8	99.2	100.1	99.3

L000345

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-297S
Description: cis-Nonachlor
Lot: 222061106
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 8, 2022
Expiration: Jun 8, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity[3] %	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
cis-Nonachlor	5103-73-1	98.6	100.6	99.2

L 000346

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-024S
Description: o,p'-DDD
Lot: 220051307-02
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Aug 10, 2022
Expiration: Sep 10, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
o,p'-DDD	53-19-0	100.0	100.2	100.2

L000747

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-026S
Description: o,p'-DDE
Lot: 221081298
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Aug 19, 2021
Expiration: Aug 19, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
o,p'-DDE	3424-82-6	98.9	100.2	99.1

L 000 348

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 7/20

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-028S
Description: o,p'-DDT
Lot: 221071322-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Sep 26, 2022
Expiration: Oct 26, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
o,p'-DDT	789-02-6	99.9	100.1	100.0

L000349

This Certified Reference Material was verified in accordance with ISO/IEC 17025 (AT-1339) and ISO 17034 (AR-1463)

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[3] Purity/Identity determined by one or more of the following methods: GC/MS, LC/MS, NMR, FTIR, Melting Point.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1811

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-01 A	File ID:	05192308ECD7.D
Sampled:	04/28/23 10:38	Prepared:	05/10/23 11:15	Analyzed:	05/19/23 16:33
% Solids:	69.29	Preparation:	EPA 3546 (Microwave)	Initial/Final:	18.08 g Wet / 2.5 mL
Batch:	BLE0151	Sequence:	SLE0328	Calibration:	GE00022
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	62.0	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	69.7	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	42.8	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9824*	*7.18*	*89.9*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9824*	*5.28*	*66.1*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9824*	*7.02*	*88.0*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9824*	*6.23*	*78.0*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192308ECD7.D
Data file 2: /230519.b/230519.b/05192308ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23E0009-01
Client ID:
Injection Date: 19-MAY-2023 16:33
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.002	229718	5.624	-0.004	146538	26.5	31.2	16.5	Tetrachloro-m-xylene
13.831	-0.009	173549	14.061	-0.009	187880	36.0	35.2	2.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	576616	-4.1
Hexabromobiphenyl	876625	483196	-44.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	341375	-2.3
Hexabromobiphenyl	652984	375978	-42.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.392	-0.008	36777	249.9	1	8.249	-0.010	58106	357.8
Aroclor-1248	2	8.510	-0.015	64809	169.5	2	8.656	-0.011	53473	311.7
Aroclor-1248	3	8.930	-0.014	141614	192.5	3	9.091	-0.028	52732	262.2
Aroclor-1248	4	9.233	-0.008	141590	377.6	4	9.484	-0.059	72327	300.0
		Total Col1Ave (4 peaks):			247.4		Total Col2Ave (4 peaks):			307.9 RPD = 22
		Corrected Ave (3 peaks):			204.0		Corrected Ave (3 peaks):			291.3 RPD = 35
Aroclor-1254	1	9.233	-0.014	141590	238.9	1	9.389	-0.012	80453	310.2
Aroclor-1254	2	9.309	-0.015	69372	260.5	2	9.484	-0.011	72327	469.4
Aroclor-1254	3	9.615	-0.000	202619	529.6	3	9.907	-0.014	34058	162.0
Aroclor-1254	4	9.734	-0.019	197734	263.9	4	10.056	-0.018	140601	306.5
Aroclor-1254	5	10.068	-0.049	204703	452.3	5	10.302	-0.022	153707	337.7
		Total Col1Ave (5 peaks):			349.0		Total Col2Ave (5 peaks):			317.2 RPD = 10
		Corrected Ave (4 peaks):			303.9		Corrected Ave (4 peaks):			279.1 RPD = 9
Aroclor-1260	1	10.979	-0.015	50411	197.3	1	11.593	-0.013	53396	267.4
Aroclor-1260	2	11.296	-0.015	40961	162.4	2	11.855	-0.017	93429	178.9
Aroclor-1260	3	11.666	-0.019	104612	165.6	3	12.373	-0.015	30486	235.5
Aroclor-1260	4	12.066	-0.023	55614	179.8	4	12.437	-0.018	61513	176.3
Aroclor-1260	5	12.180	-0.012	24207	179.5	NS	---			----
		Total Col1Ave (5 peaks):			176.9		Total Col2Ave (4 peaks):			214.5 RPD = 19
		Corrected Ave (4 peaks):			171.8		Corrected Ave (3 peaks):			196.9 RPD = 14
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

310.57

Total PCB Area Col1 (5.842 - 13.740) = 3326276 Col1 Total PCB = 0.5 ppm*

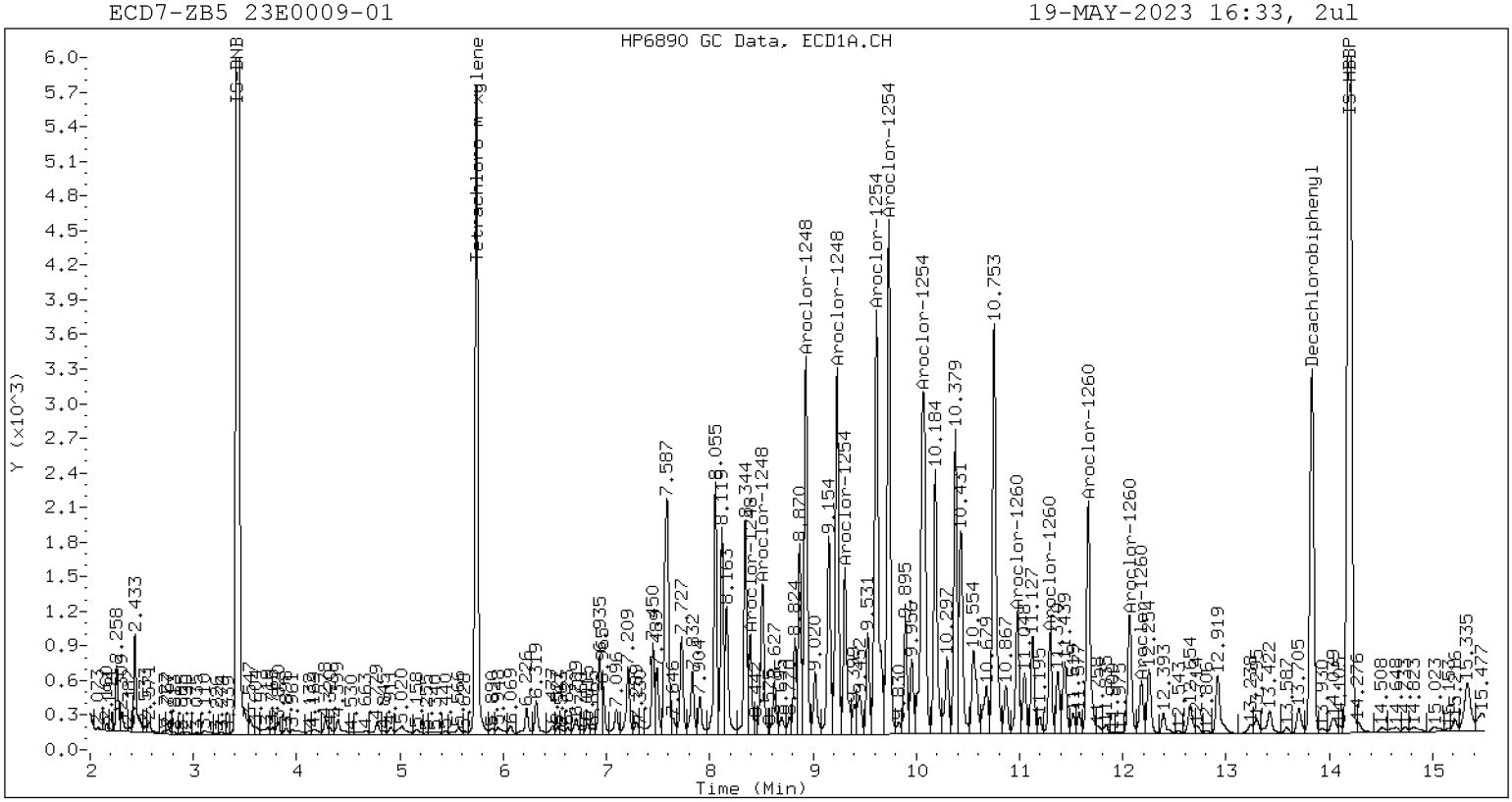
Total PCB Area Col2 (5.728 - 13.969) = 2360340 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

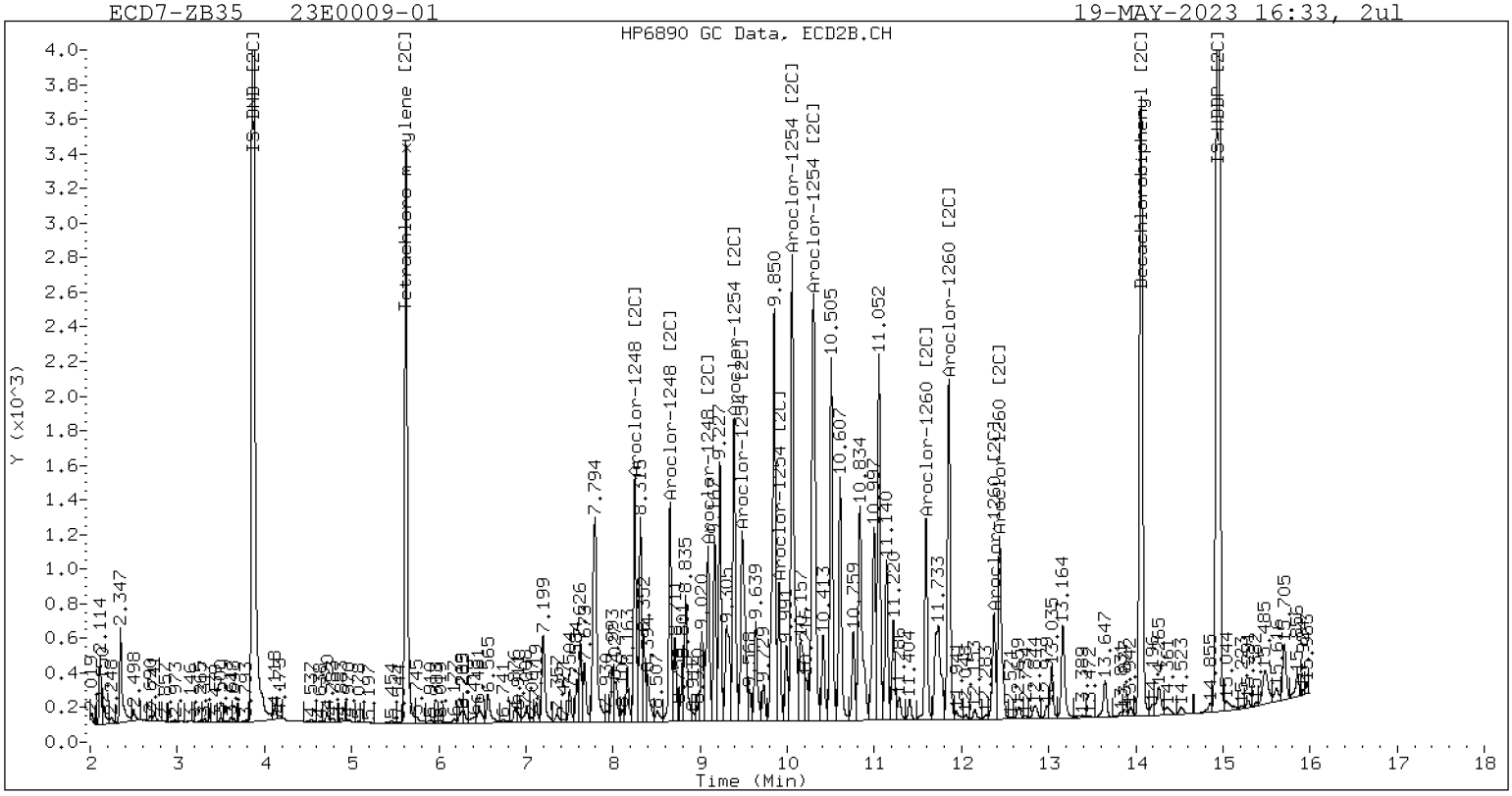
PCB Dual Column Chromatograms

ECD7-ZB5 23E0009-01 19-MAY-2023 16:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23E0009-01 19-MAY-2023 16:33, 2ul

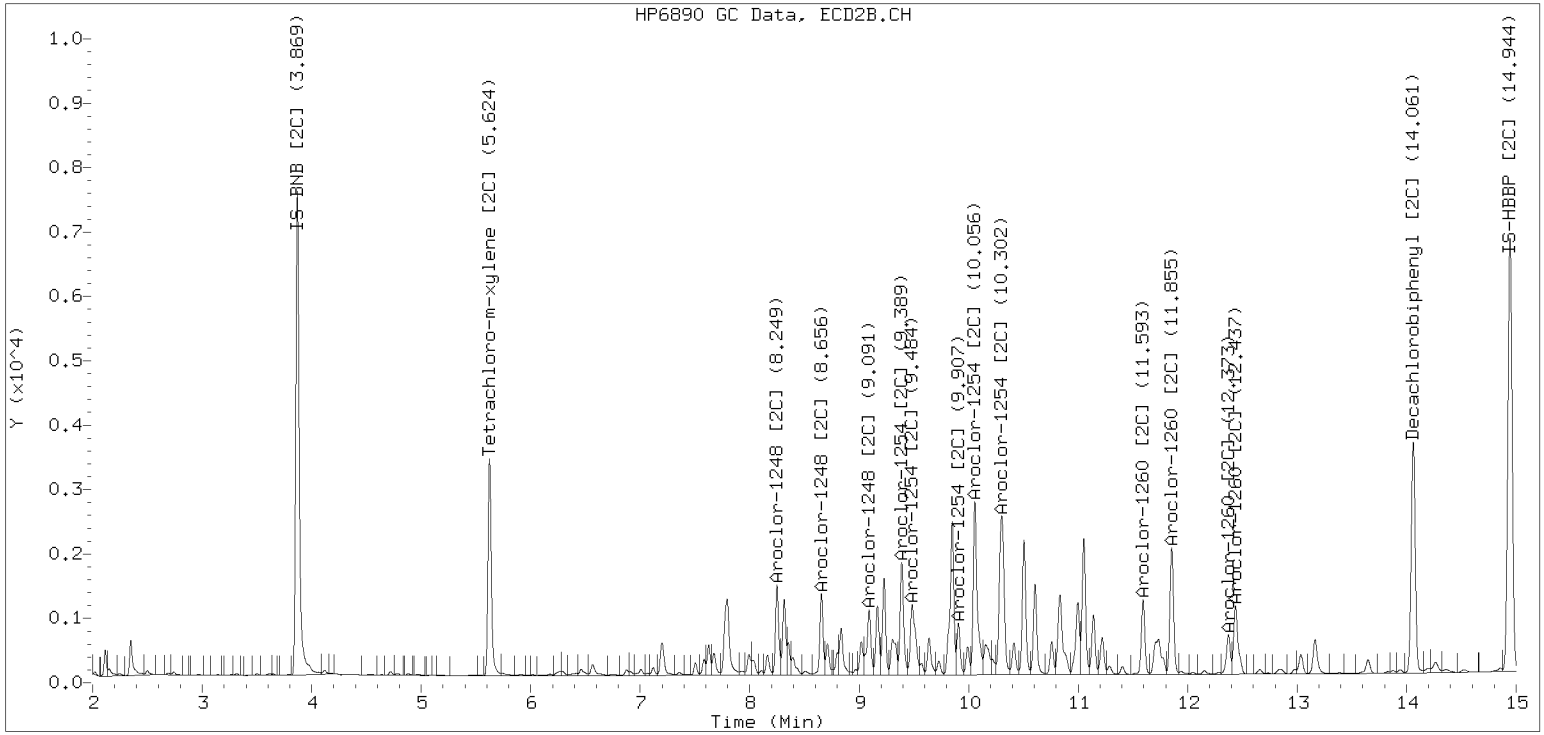


ZB-35 Manual Integration: YES

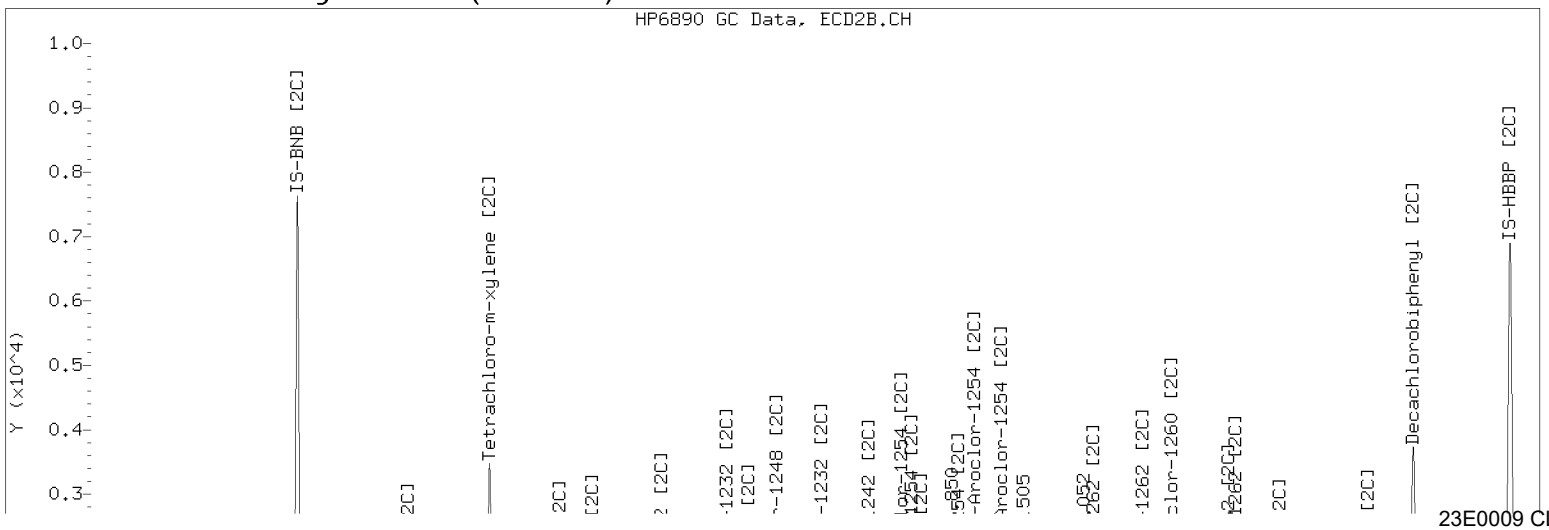
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230519.b/230519.b/05192308ECD7.D Injection Date: 19-MAY-2023 16:33

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1811

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-02 A	File ID:	05192311ECD7.D
Sampled:	04/28/23 12:30	Prepared:	05/10/23 11:15	Analyzed:	05/19/23 17:35
% Solids:	70.92	Preparation:	EPA 3546 (Microwave)	Initial/Final:	17.71 g Wet / 2.5 mL
Batch:	BLE0151	Sequence:	SLE0328	Calibration:	GE00022
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	44.7	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	51.6	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	45.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9618*	*6.64*	*83.4*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9618*	*5.21*	*65.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9618*	*6.60*	*82.9*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9618*	*5.83*	*73.2*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192311ECD7.D
Data file 2: /230519.b/230519.b/05192311ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23E0009-02
Client ID:
Injection Date: 19-MAY-2023 17:35
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.002	223152	5.625	-0.003	141215	26.2	29.3	11.2	Tetrachloro-m-xylene
13.831	-0.009	152639	14.061	-0.008	168710	33.3	33.2	0.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	566220	-5.9
Hexabromobiphenyl	876625	458264	-47.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	350703	0.4
Hexabromobiphenyl	652984	358154	-45.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.393	-0.007	32865	227.4	1	8.249	-0.010	40032	239.9
Aroclor-1248	2	8.510	-0.015	52420	139.6	2	8.655	-0.011	39094	221.8
Aroclor-1248	3	8.930	-0.014	110931	153.6	3	9.090	-0.029	43707	211.6
Aroclor-1248	4	9.232	-0.009	105107	285.5	4	9.485	-0.059	66454	268.3
		Total Col1Ave (4 peaks):			201.5		Total Col2Ave (4 peaks):			235.4 RPD = 16
		Corrected Ave (3 peaks):			173.5		Corrected Ave (3 peaks):			224.5 RPD = 26
Aroclor-1254	1	9.232	-0.015	105107	180.6	1	9.388	-0.013	62585	234.9
Aroclor-1254	2	9.308	-0.015	41772	159.8	2	9.485	-0.011	66454	419.8
Aroclor-1254	3	9.612	-0.003	118776	316.2	3	9.906	-0.015	30304	140.3
Aroclor-1254	4	9.733	-0.020	144569	196.5	4	10.055	-0.019	110086	233.6
Aroclor-1254	5	10.065	-0.052	160359	360.8	5	10.304	-0.019	125428	268.2
		Total Col1Ave (5 peaks):			242.8		Total Col2Ave (5 peaks):			259.4 RPD = 7
		Corrected Ave (4 peaks):			213.2		Corrected Ave (4 peaks):			219.2 RPD = 3
Aroclor-1260	1	10.979	-0.015	47349	195.4	1	11.592	-0.013	50467	265.3
Aroclor-1260	2	11.295	-0.016	40473	169.2	2	11.854	-0.018	97998	197.0
Aroclor-1260	3	11.665	-0.020	108144	180.6	3	12.372	-0.016	32557	264.1
Aroclor-1260	4	12.065	-0.024	57100	194.6	4	12.437	-0.019	65037	195.7
Aroclor-1260	5	12.180	-0.013	23837	186.3	NS	---			----
		Total Col1Ave (5 peaks):			185.2		Total Col2Ave (4 peaks):			230.5 RPD = 22
		Corrected Ave (4 peaks):			182.7		Corrected Ave (3 peaks):			218.9 RPD = 18
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.842 - 13.740) = 2642833 Col1 Total PCB = 0.4 ppm*

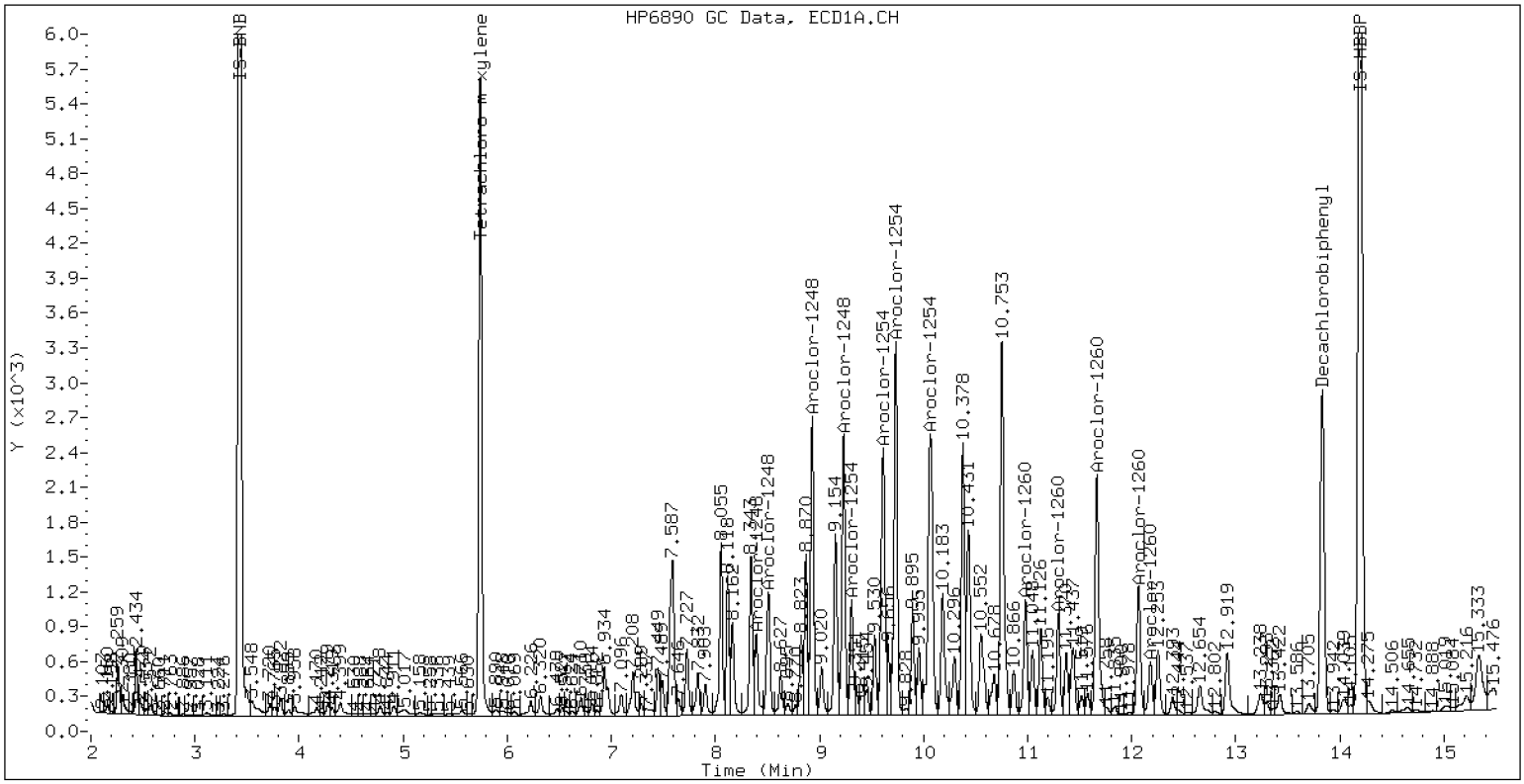
Total PCB Area Col2 (5.728 - 13.969) = 1934155 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

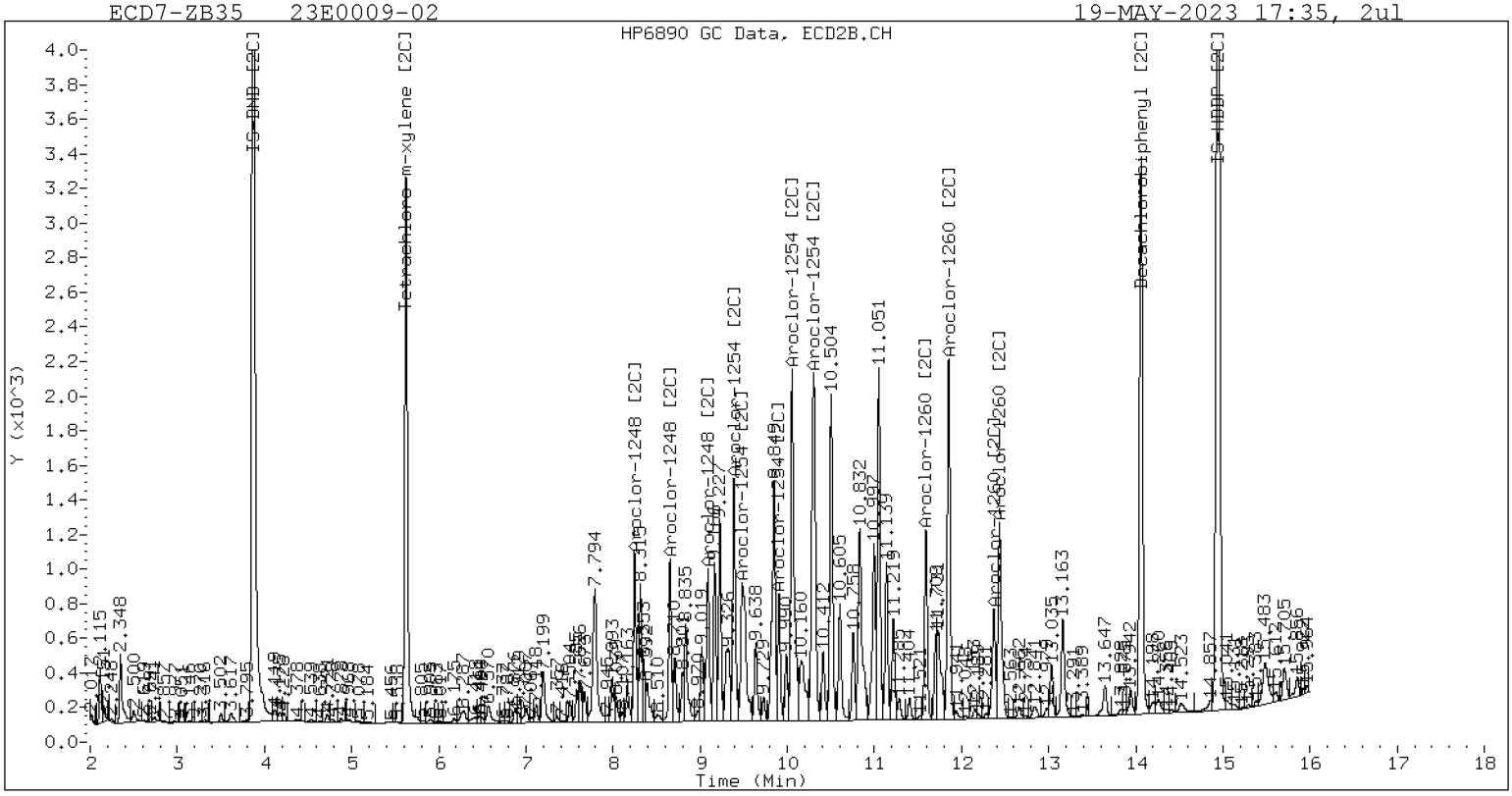
PCB Dual Column Chromatograms

ECD7-ZB5 23E0009-02 19-MAY-2023 17:35, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23E0009-02 19-MAY-2023 17:35, 2ul

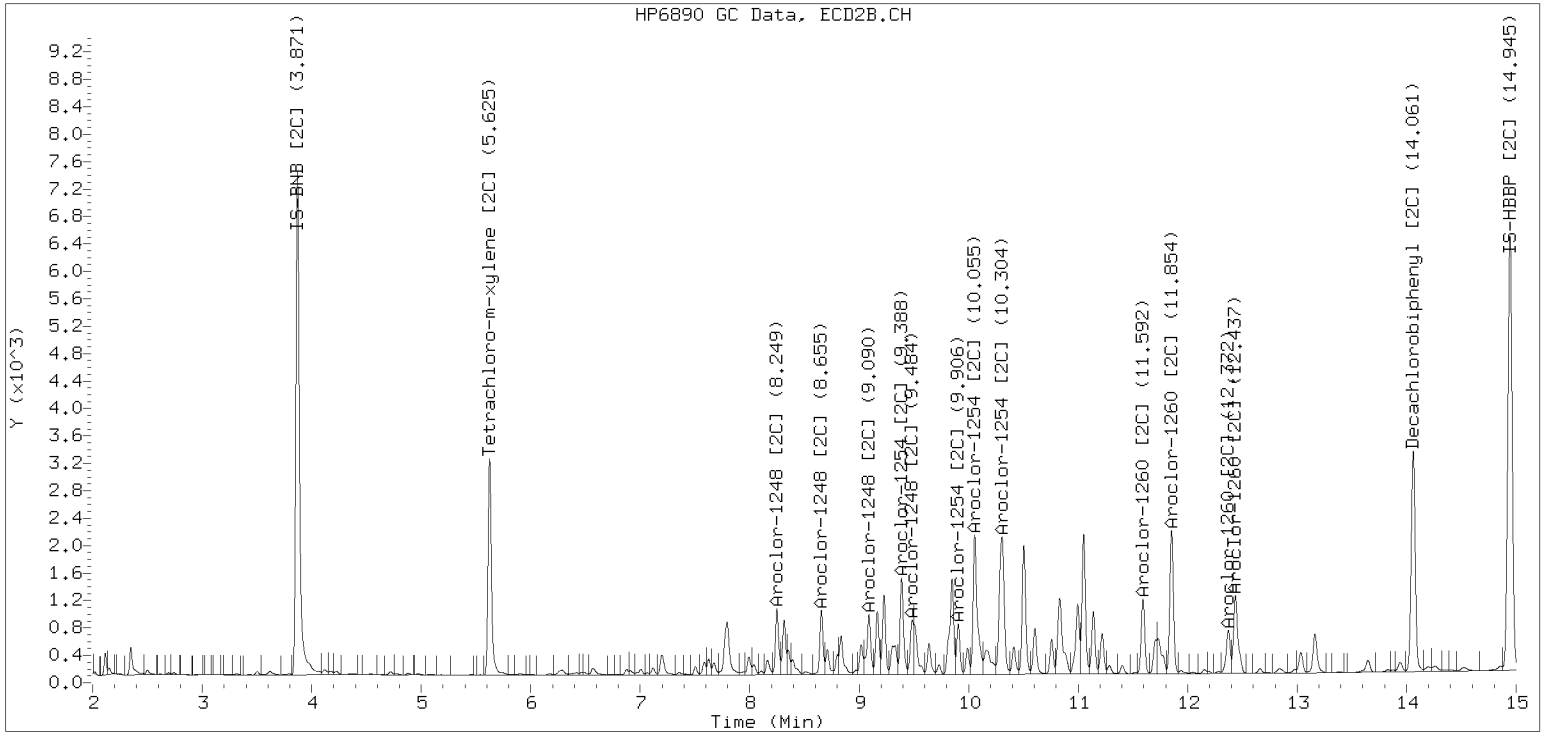


ZB-35 Manual Integration: NO

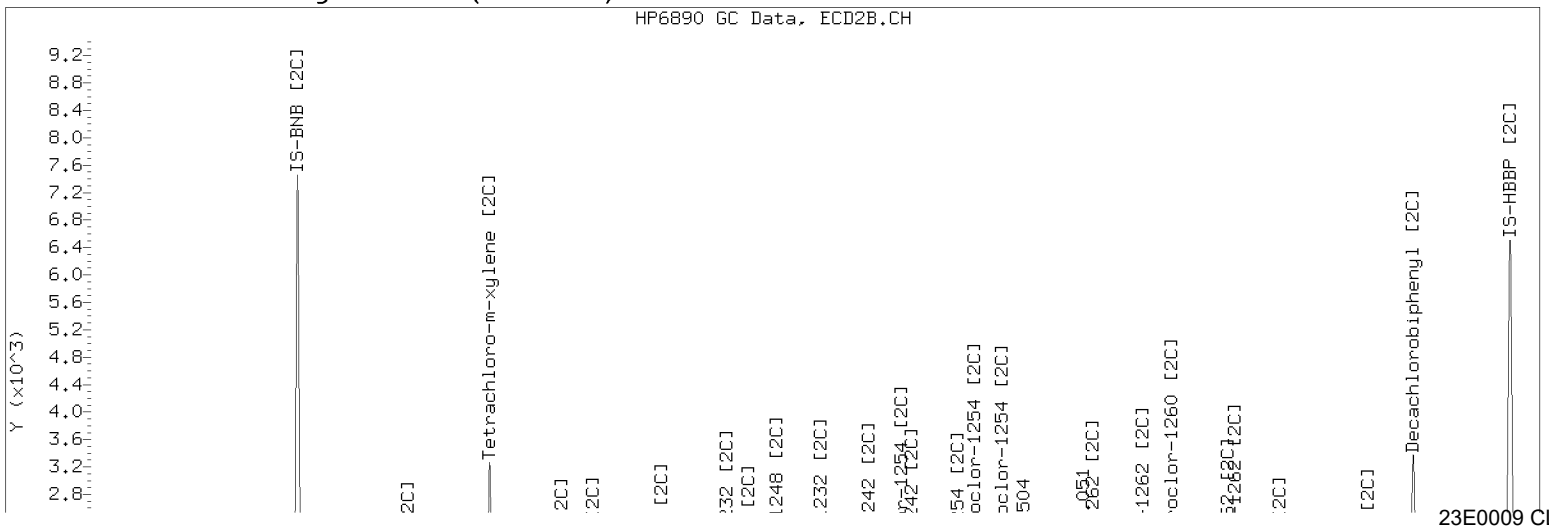
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230519.b/230519.b/05192311ECD7.D Injection Date: 19-MAY-2023 17:35

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1805

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-03 A	File ID:	05232304ECD7.D
Sampled:	04/28/23 16:15	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 12:00
% Solids:	50.79	Preparation:	EPA 3546 (Microwave)	Initial/Final:	24.63 g Wet / 2.5 mL
Batch:	BLE0151	Sequence:	SLE0373	Calibration:	GE00022
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	34.4	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	43.0	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	55.8	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9939*	*6.89*	*86.2*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9939*	*4.92*	*61.6*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9939*	*7.05*	*88.2*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9939*	*5.75*	*71.9*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232304ECD7.D
Data file 2: /230523.b/230523.b/05232304ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23E0009-03
Client ID:
Injection Date: 23-MAY-2023 12:00
Report Date: 05/24/2023 09:32
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	-0.003	194774	5.625	-0.003	129346	24.6	28.8	15.4	Tetrachloro-m-xylene
13.832	-0.010	133588	14.061	-0.008	163897	34.5	35.3	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	524879	-12.7
Hexabromobiphenyl	876625	387824	-55.8 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	326914	-6.4
Hexabromobiphenyl	652984	327256	-49.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.394	-0.006	21630	161.5	1	8.249	-0.010	25786	165.8
Aroclor-1248	2	8.510	-0.015	32730	94.0	2	8.655	-0.010	25144	153.1
Aroclor-1248	3	8.929	-0.016	82734	123.6	3	9.089	-0.028	38150	198.1
Aroclor-1248	4	9.232	-0.007	87752	257.1	4	9.485	-0.057	63336	274.3
		Total Col1Ave (4 peaks):			159.0		Total Col2Ave (4 peaks):			197.8 RPD = 22
		Corrected Ave (3 peaks):			126.3		Corrected Ave (3 peaks):			172.3 RPD = 31
Aroclor-1254	1	9.232	-0.018	87752	162.7	1	9.388	-0.013	58316	234.8
Aroclor-1254	2	9.308	-0.015	34297	141.5	2	9.485	-0.010	63336	429.3
Aroclor-1254	3	9.605	-0.008	78606	225.7	3	9.907	-0.014	36192	179.8
Aroclor-1254	4	9.732	-0.018	124629	182.7	4	10.055	-0.018	104963	238.9
Aroclor-1254	5	10.069	0.002	149808	363.6	5	10.296	-0.026	141699	325.1
		Total Col1Ave (5 peaks):			215.2		Total Col2Ave (5 peaks):			281.6 RPD = 27
		Corrected Ave (4 peaks):			178.1		Corrected Ave (4 peaks):			244.6 RPD = 31
Aroclor-1260	1	10.980	-0.013	42193	205.7	1	11.592	-0.013	53390	307.2
Aroclor-1260	2	11.294	-0.016	35741	176.6	2	11.854	-0.018	95518	210.1
Aroclor-1260	3	11.665	-0.020	104712	206.6	3	12.371	-0.018	41120	365.0
Aroclor-1260	4	12.065	-0.025	53391	215.1	4	12.437	-0.019	71482	235.4
Aroclor-1260	5	12.184	-0.010	36306	335.4	NS	---			----
		Total Col1Ave (5 peaks):			227.9		Total Col2Ave (4 peaks):			279.4 RPD = 20
		Corrected Ave (4 peaks):			201.0		Corrected Ave (3 peaks):			250.9 RPD = 22
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.846 - 13.741) = 2389812 Col1 Total PCB = 0.4 ppm*

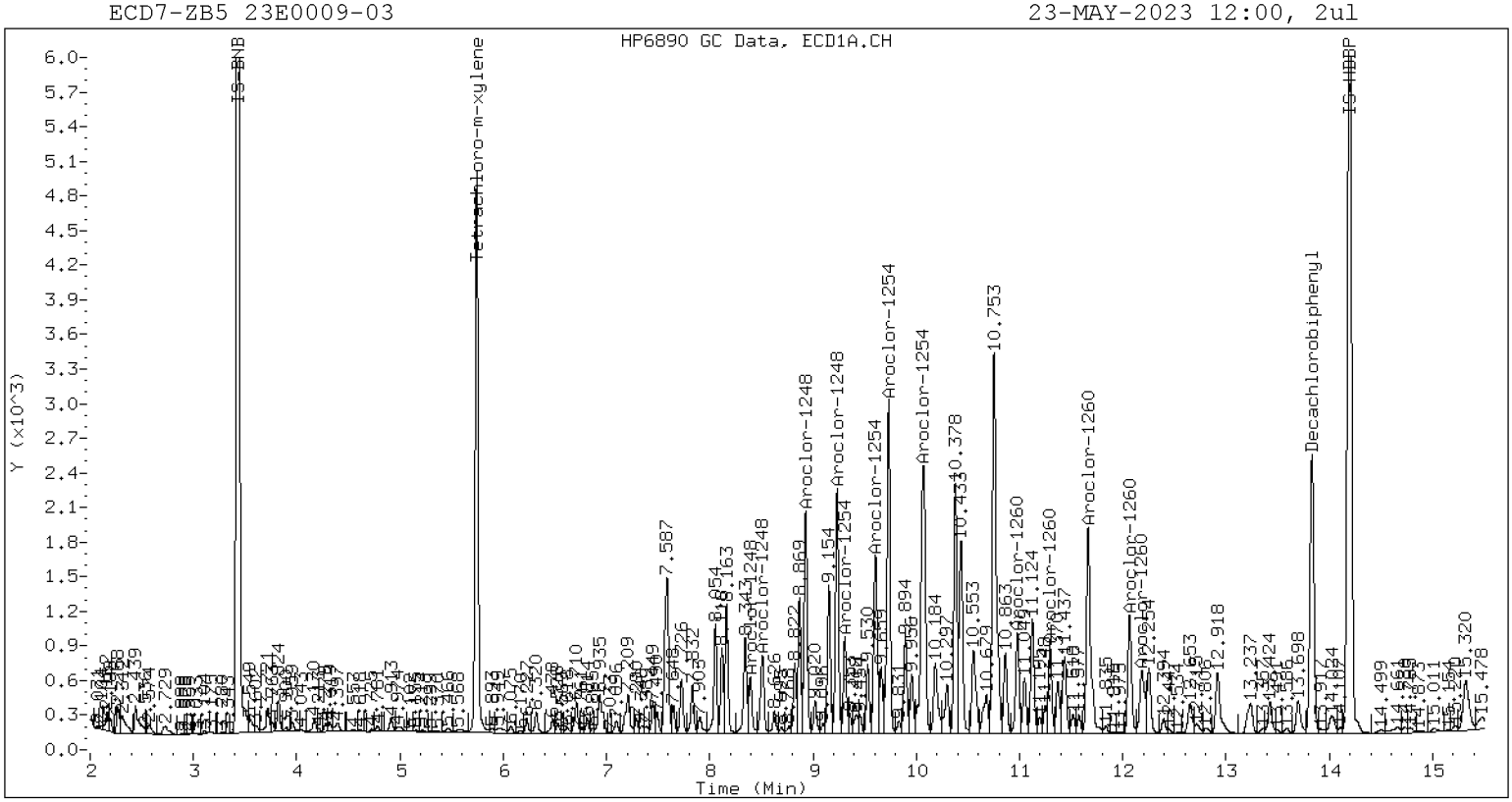
Total PCB Area Col2 (5.728 - 13.969) = 1945199 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

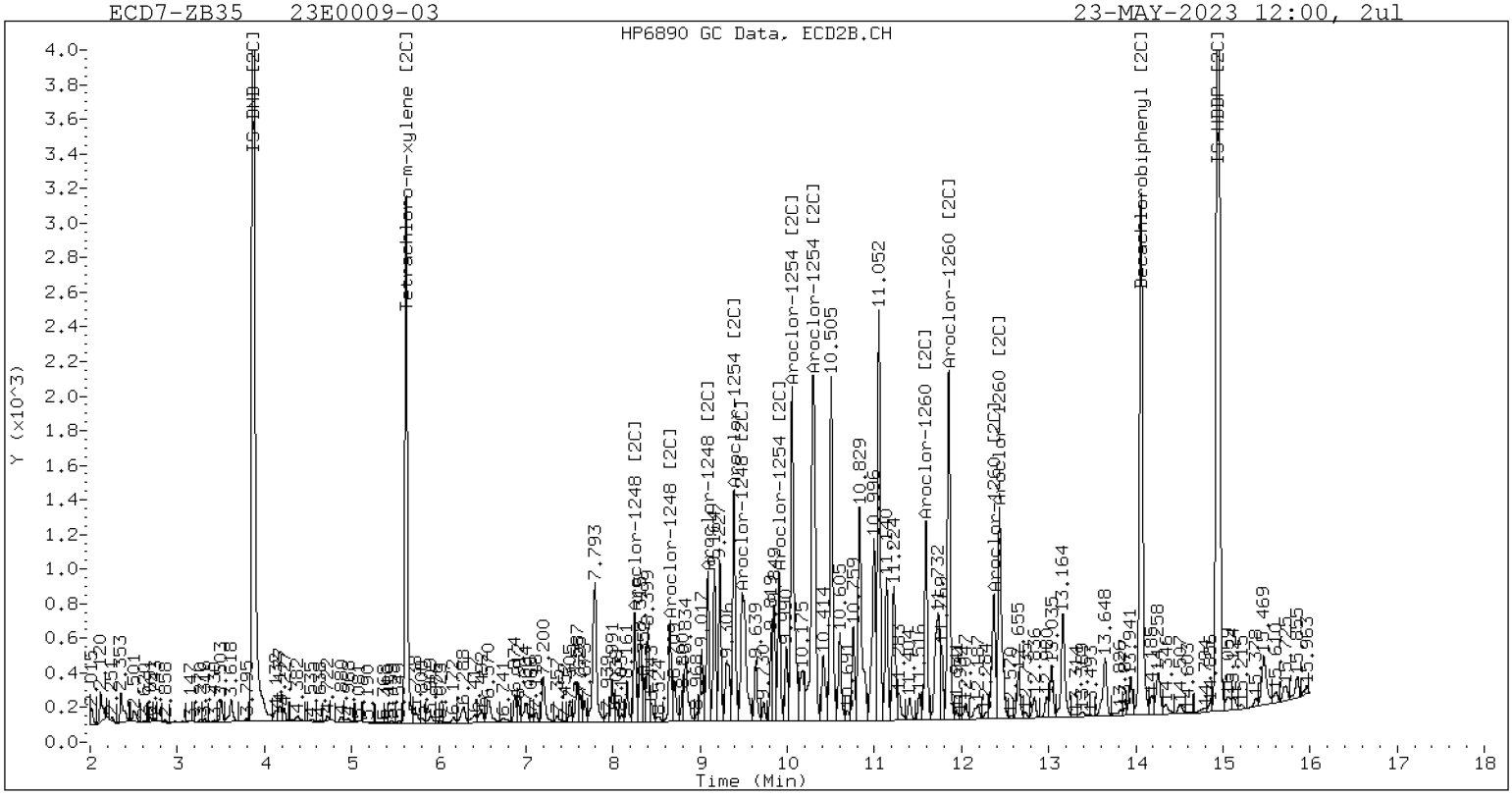
PCB Dual Column Chromatograms

ECD7-ZB5 23E0009-03 23-MAY-2023 12:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23E0009-03 23-MAY-2023 12:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1805

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-04 A	File ID:	05232313ECD7.D
Sampled:	04/28/23 16:25	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 15:07
% Solids:	50.77	Preparation:	EPA 3546 (Microwave)	Initial/Final:	24.69 g Wet / 2.5 mL
Batch:	BLE0151	Sequence:	SLE0373	Calibration:	GE00022
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	5	19.9	7.8	19.9	U
11104-28-2	Aroclor 1221	1	5	19.9	7.8	19.9	U
11141-16-5	Aroclor 1232	1	5	19.9	7.8	19.9	U
53469-21-9	Aroclor 1242	1	5	19.9	7.8	19.9	U
12672-29-6	Aroclor 1248	1	5	54.9	7.8	19.9	D
11097-69-1	Aroclor 1254	1	5	77.2	7.8	19.9	D
11096-82-5	Aroclor 1260	2	5	78.6	2.9	19.9	D

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9776*	*8.25*	*103*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9776*	*6.79*	*85.1*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9776*	*7.74*	*97.1*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9776*	*7.00*	*87.8*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232313ECD7.D
Data file 2: /230523.b/230523.b/05232313ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23E0009-04RE1
Client ID:
Injection Date: 23-MAY-2023 15:07
Report Date: 05/24/2023 09:33
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.740	-0.005	56599	5.626	-0.002	33030	6.8	7.0	3.1	Tetrachloro-m-xylene
13.832	-0.009	41600	14.061	-0.008	42313	8.3	7.8	6.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	551762	-8.3
Hexabromobiphenyl	876625	503641	-42.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	341835	-2.1
Hexabromobiphenyl	652984	383679	-41.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.396	-0.005	7742	55.0	1	8.251	-0.008	8456	52.0
Aroclor-1248	2	8.512	-0.013	11928	32.6	2	8.657	-0.008	7679	44.7
Aroclor-1248	3	8.932	-0.013	29325	41.7	3	9.095	-0.023	11517	57.2
Aroclor-1248	4	9.234	-0.006	32593	90.8	4	9.487	-0.055	19441	80.5
		Total Col1Ave (4 peaks):			55.0		Total Col2Ave (4 peaks):			58.6 RPD = 6
		Corrected Ave (3 peaks):			43.1		Corrected Ave (3 peaks):			51.3 RPD = 17
Aroclor-1254	1	9.234	-0.017	32593	57.5	1	9.391	-0.010	19883	76.6
Aroclor-1254	2	9.311	-0.013	15296	60.0	2	9.487	-0.008	19441	126.0
Aroclor-1254	3	9.606	-0.007	27067	73.9	3	9.908	-0.013	11118	52.8
Aroclor-1254	4	9.735	-0.016	46176	64.4	4	10.058	-0.015	35006	76.2
Aroclor-1254	5	10.065	-0.001	56737	131.0	5	10.305	-0.017	43733	95.9
		Total Col1Ave (5 peaks):			77.4		Total Col2Ave (5 peaks):			85.5 RPD = 10
		Corrected Ave (4 peaks):			64.0		Corrected Ave (4 peaks):			75.4 RPD = 16
Aroclor-1260	1	10.980	-0.014	16327	61.3	1	11.594	-0.011	18241	89.5
Aroclor-1260	2	11.296	-0.015	13997	53.3	2	11.856	-0.017	31518	59.1
Aroclor-1260	3	11.666	-0.019	38985	59.2	3	12.373	-0.016	13245	100.3
Aroclor-1260	4	12.068	-0.023	20459	63.5	4	12.439	-0.016	23634	66.4
Aroclor-1260	5	12.182	-0.011	9525	67.8	NS	---			----
		Total Col1Ave (5 peaks):			61.0		Total Col2Ave (4 peaks):			78.8 RPD = 26
		Corrected Ave (4 peaks):			59.3		Corrected Ave (3 peaks):			71.7 RPD = 19
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.846 - 13.741) = 867973 Col1 Total PCB = 0.1 ppm*

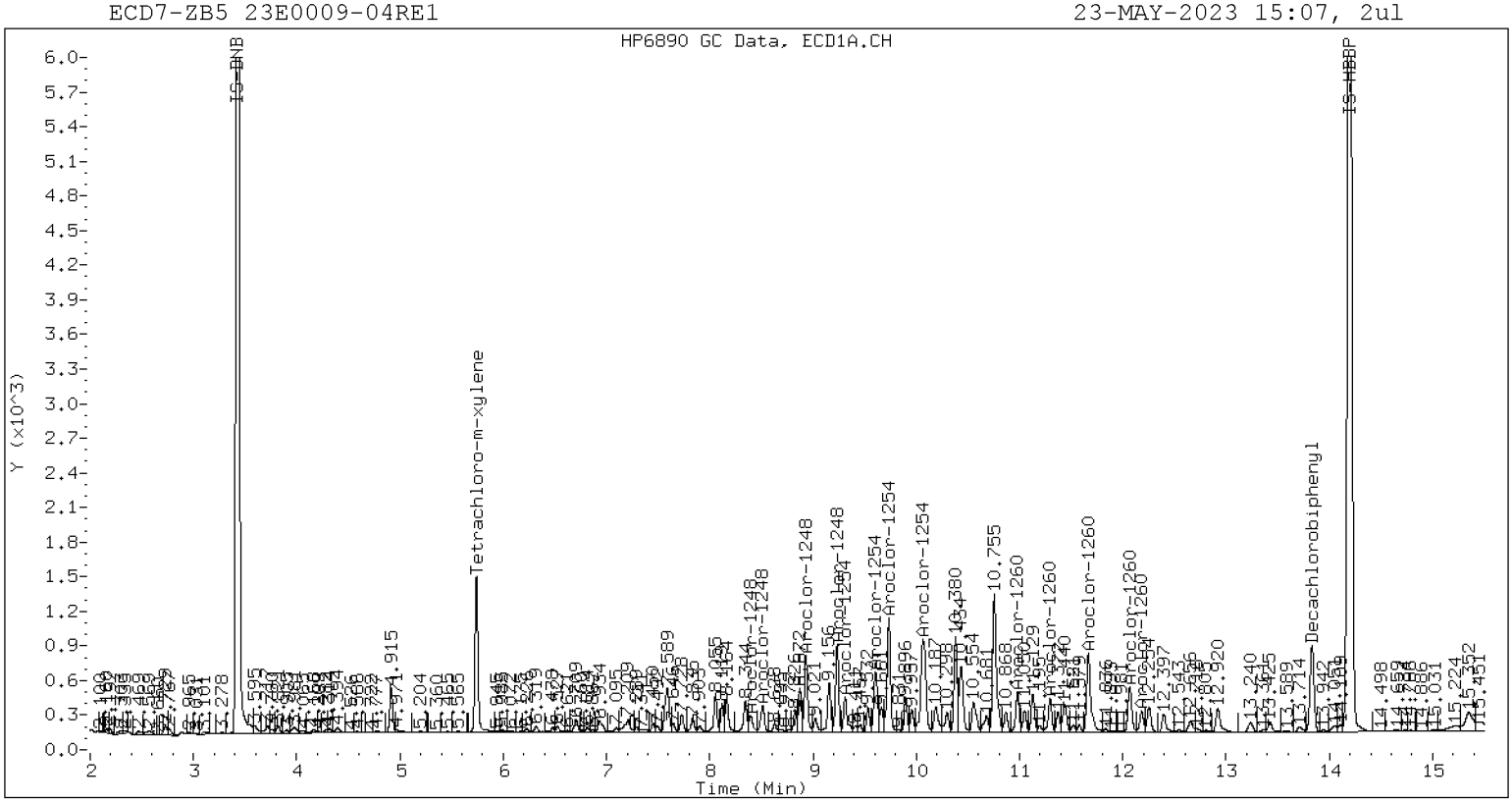
Total PCB Area Col2 (5.728 - 13.969) = 630022 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

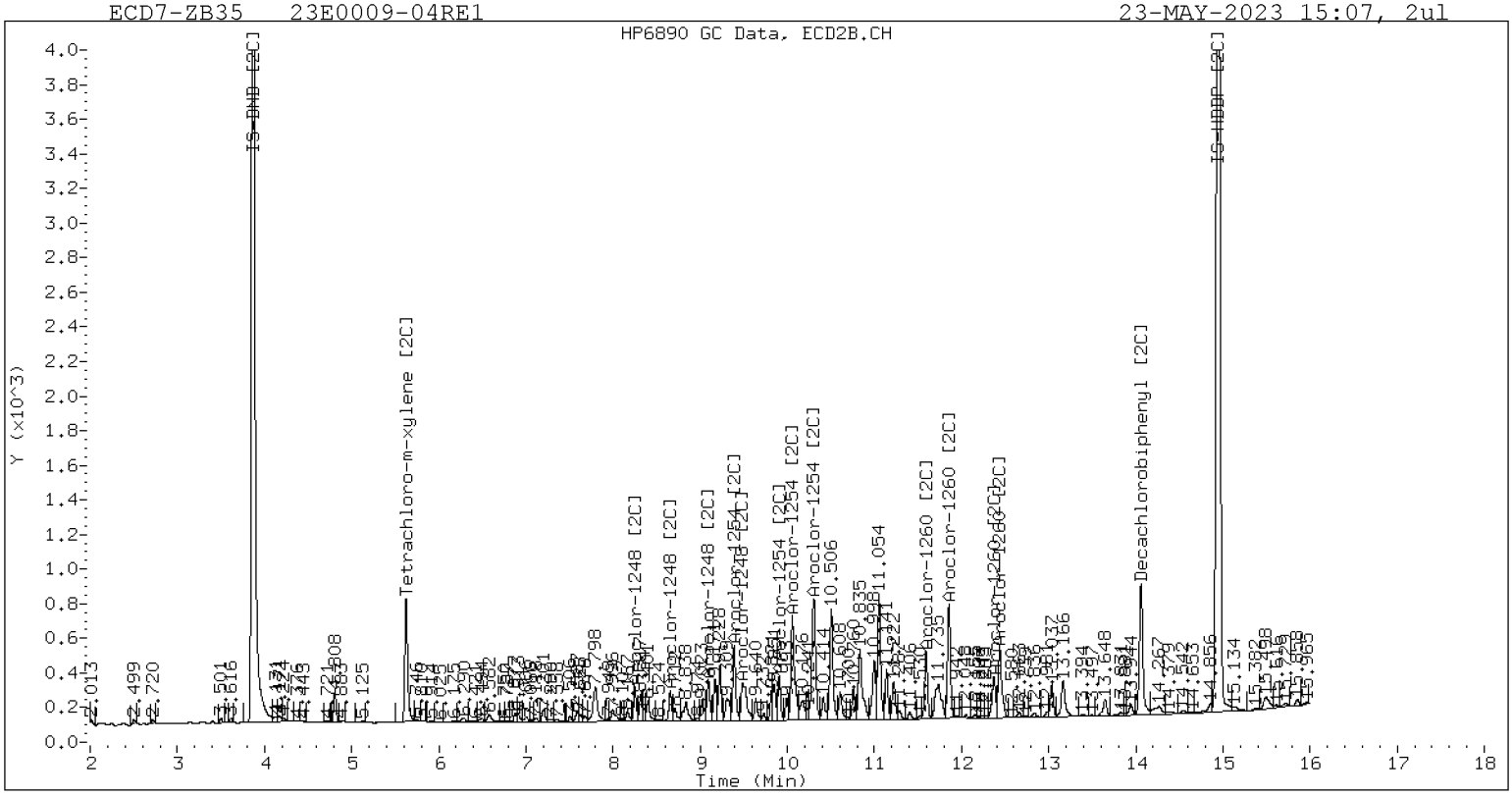
PCB Dual Column Chromatograms

ECD7-ZB5 23E0009-04RE1 23-MAY-2023 15:07, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23E0009-04RE1 23-MAY-2023 15:07, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1800

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-05 A	File ID:	05232307ECD7.D
Sampled:	04/29/23 10:10	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 13:02
% Solids:	47.45	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.34 g Wet / 2.5 mL
Batch:	BLE0151	Sequence:	SLE0373	Calibration:	GE00022
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	5	20.0	7.8	20.0	U
11104-28-2	Aroclor 1221	1	5	20.0	7.8	20.0	U
11141-16-5	Aroclor 1232	1	5	20.0	7.8	20.0	U
53469-21-9	Aroclor 1242	1	5	20.0	7.8	20.0	U
12672-29-6	Aroclor 1248	1	5	64.9	7.8	20.0	D
11097-69-1	Aroclor 1254	1	5	90.5	7.8	20.0	D
11096-82-5	Aroclor 1260	2	5	98.0	2.9	20.0	D

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.0011*	*8.12*	*102*	*40 - 126*	
Tetrachlorometaxylene	*1*	*8.0011*	*6.29*	*78.6*	*44 - 120*	
Decachlorobiphenyl	*2*	*8.0011*	*7.65*	*95.6*	*40 - 126*	
Tetrachlorometaxylene	*2*	*8.0011*	*6.84*	*85.5*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232307ECD7.D
Data file 2: /230523.b/230523.b/05232307ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23E0009-05RE1
Client ID:
Injection Date: 23-MAY-2023 13:02
Report Date: 05/24/2023 09:33
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	-0.003	51332	5.627	-0.001	32866	6.3	6.8	8.3	Tetrachloro-m-xylene
13.830	-0.011	37708	14.061	-0.008	39459	8.1	7.6	6.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	541760	-9.9
Hexabromobiphenyl	876625	464698	-47.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	349352	0.0
Hexabromobiphenyl	652984	363244	-44.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.397	-0.003	8833	63.9	1	8.252	-0.007	10136	61.0
Aroclor-1248	2	8.513	-0.012	13669	38.0	2	8.658	-0.008	9196	52.4
Aroclor-1248	3	8.933	-0.012	33158	48.0	3	9.095	-0.023	14227	69.1
Aroclor-1248	4	9.235	-0.005	38608	109.6	4	9.513	-0.029	13786	55.9
		Total Col1Ave (4 peaks):			64.9		Total Col2Ave (4 peaks):			59.6 RPD = 8
		Corrected Ave (3 peaks):			50.0		Corrected Ave (3 peaks):			56.4 RPD = 12
Aroclor-1254	1	9.235	-0.016	38608	69.3	1	9.391	-0.010	24272	91.4
Aroclor-1254	2	9.311	-0.012	15516	62.0	2	9.488	-0.007	10016	63.5
Aroclor-1254	3	9.607	-0.007	32859	91.4	3	9.909	-0.012	14714	68.4
Aroclor-1254	4	9.735	-0.016	52978	75.2	4	10.058	-0.015	41363	88.1
Aroclor-1254	5	10.069	0.002	65609	154.3	5	10.304	-0.018	55712	119.6
		Total Col1Ave (5 peaks):			90.5		Total Col2Ave (5 peaks):			86.2 RPD = 5
		Corrected Ave (4 peaks):			74.5		Corrected Ave (4 peaks):			77.9 RPD = 4
Aroclor-1260	1	10.981	-0.013	19223	78.2	1	11.594	-0.012	22176	115.0
Aroclor-1260	2	11.296	-0.015	17003	70.1	2	11.856	-0.016	36566	72.5
Aroclor-1260	3	11.666	-0.019	44278	72.9	3	12.373	-0.015	15677	125.4
Aroclor-1260	4	12.067	-0.024	21695	72.9	4	12.439	-0.017	26683	79.2
Aroclor-1260	5	12.182	-0.011	11443	88.2	NS	---			----
		Total Col1Ave (5 peaks):			76.5		Total Col2Ave (4 peaks):			98.0 RPD = 25
		Corrected Ave (4 peaks):			73.5		Corrected Ave (3 peaks):			88.9 RPD = 19
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.846 - 13.741) = 1004007 Col1 Total PCB = 0.2 ppm*

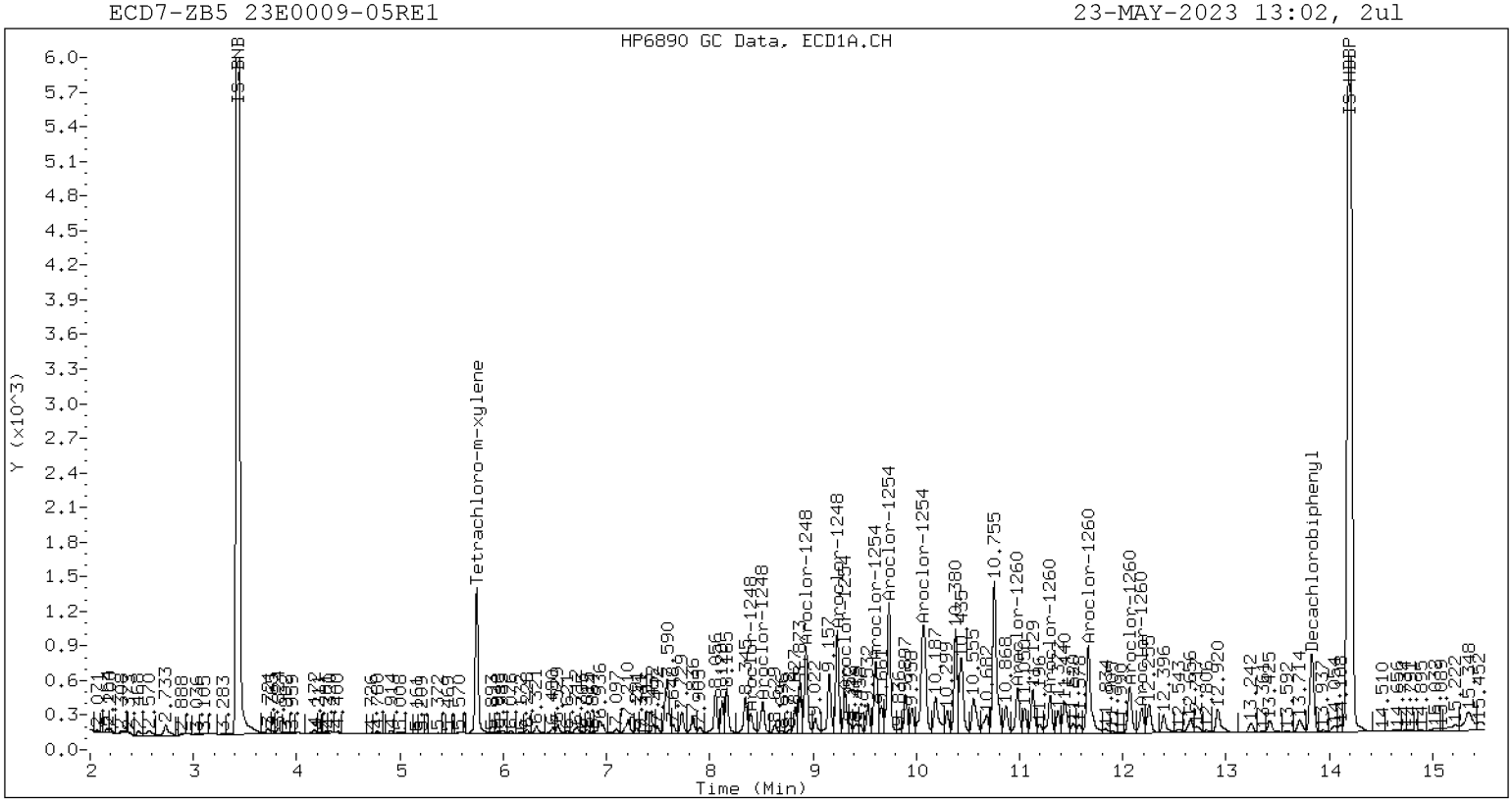
Total PCB Area Col2 (5.728 - 13.969) = 748216 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

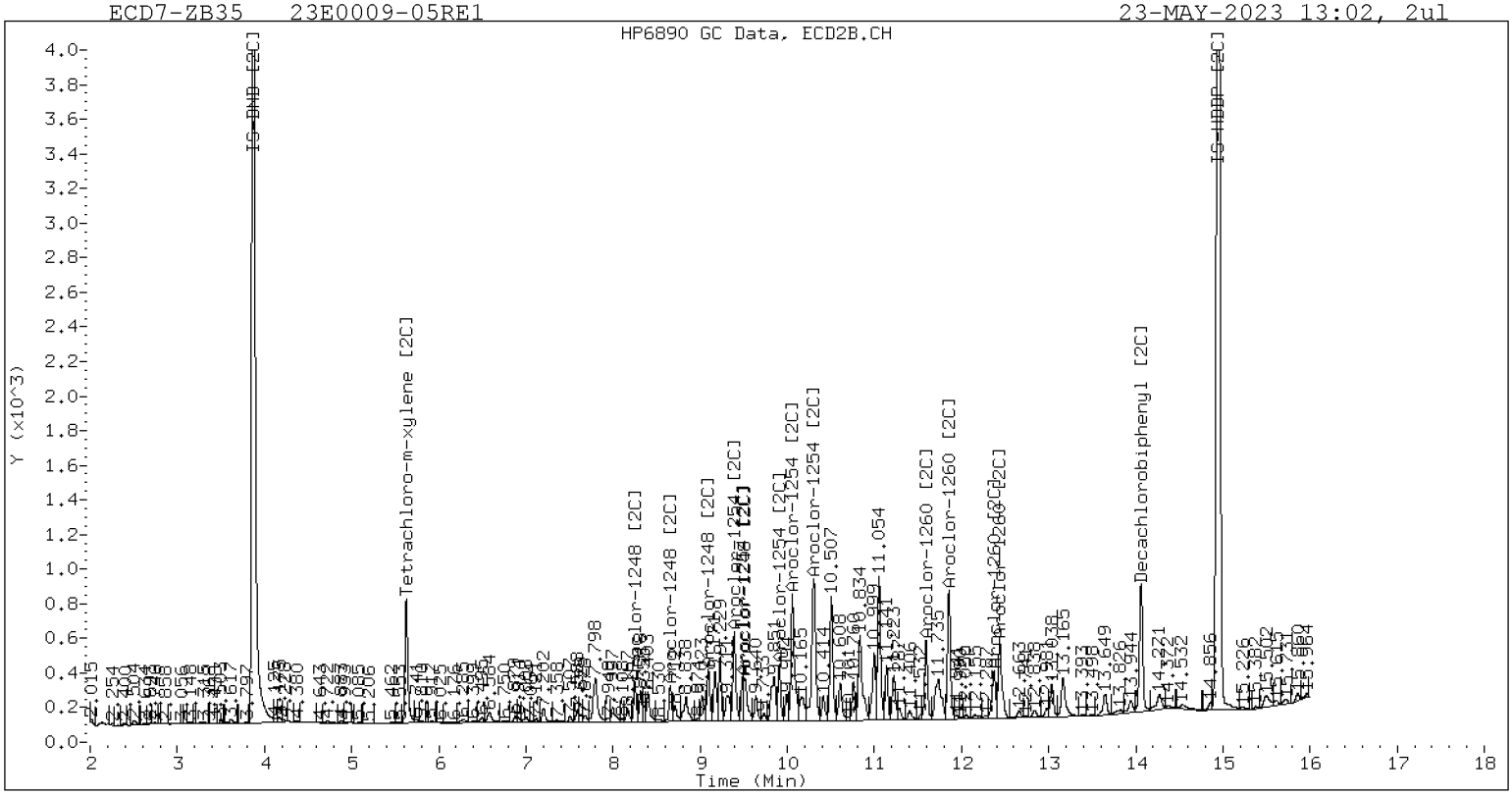
PCB Dual Column Chromatograms

ECD7-ZB5 23E0009-05RE1 23-MAY-2023 13:02, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23E0009-05RE1 23-MAY-2023 13:02, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1800

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-06 A	File ID:	05232309ECD7.D
Sampled:	04/29/23 10:15	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 13:44
% Solids:	49.29	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.41 g Wet / 2.5 mL
Batch:	BLE0151	Sequence:	SLE0373	Calibration:	GE00022
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	5	20.0	7.8	20.0	U
11104-28-2	Aroclor 1221	1	5	20.0	7.8	20.0	U
11141-16-5	Aroclor 1232	1	5	20.0	7.8	20.0	U
53469-21-9	Aroclor 1242	1	5	20.0	7.8	20.0	U
12672-29-6	Aroclor 1248	1	5	56.3	7.8	20.0	D
11097-69-1	Aroclor 1254	1	5	81.6	7.8	20.0	D
11096-82-5	Aroclor 1260	2	5	105	2.9	20.0	D

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9843*	*7.63*	*95.6*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9843*	*6.06*	*76.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9843*	*7.53*	*94.3*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9843*	*6.43*	*80.5*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232309ECD7.D
Data file 2: /230523.b/230523.b/05232309ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23E0009-06RE1
Client ID:
Injection Date: 23-MAY-2023 13:44
Report Date: 05/24/2023 09:33
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.740	-0.006	51437	5.625	-0.003	31924	6.1	6.4	5.8	Tetrachloro-m-xylene
13.831	-0.010	36642	14.062	-0.008	40140	7.6	7.5	1.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	562053	-6.6
Hexabromobiphenyl	876625	479863	-45.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	360190	3.1
Hexabromobiphenyl	652984	374831	-42.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.396	-0.004	7717	53.8	1	8.251	-0.008	9370	54.7
Aroclor-1248	2	8.512	-0.013	11995	32.2	2	8.657	-0.008	8365	46.2
Aroclor-1248	3	8.932	-0.013	31122	43.4	3	9.094	-0.023	12803	60.3
Aroclor-1248	4	9.234	-0.006	35249	96.4	4	9.511	-0.031	11938	46.9
	Total Col1Ave (4 peaks):				56.5	Total Col2Ave (4 peaks):				52.0 RPD = 8
	Corrected Ave (3 peaks):				43.1	Corrected Ave (3 peaks):				49.3 RPD = 13
Aroclor-1254	1	9.234	-0.016	35249	61.0	1	9.391	-0.010	21882	80.0
Aroclor-1254	2	9.310	-0.013	16958	65.3	2	9.487	-0.008	9980	61.4
Aroclor-1254	3	9.606	-0.007	28493	76.4	3	9.909	-0.012	12656	57.1
Aroclor-1254	4	9.734	-0.016	48301	66.1	4	10.059	-0.014	38193	78.9
Aroclor-1254	5	10.069	0.002	61713	139.9	5	10.305	-0.017	47791	99.5
	Total Col1Ave (5 peaks):				81.8	Total Col2Ave (5 peaks):				75.4 RPD = 8
	Corrected Ave (4 peaks):				67.2	Corrected Ave (4 peaks):				69.3 RPD = 3
Aroclor-1260	1	10.981	-0.013	21272	83.8	1	11.594	-0.012	22233	111.7
Aroclor-1260	2	11.295	-0.015	17045	68.1	2	11.856	-0.016	45009	86.4
Aroclor-1260	3	11.666	-0.019	50666	80.8	3	12.373	-0.016	16686	129.3
Aroclor-1260	4	12.067	-0.024	26605	86.6	4	12.438	-0.018	32549	93.6
Aroclor-1260	5	12.182	-0.011	12040	89.9	NS	---			----
	Total Col1Ave (5 peaks):				81.8	Total Col2Ave (4 peaks):				105.3 RPD = 25
	Corrected Ave (4 peaks):				79.8	Corrected Ave (3 peaks):				97.2 RPD = 20
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.846 - 13.741) = 954465 Col1 Total PCB = 0.2 ppm*

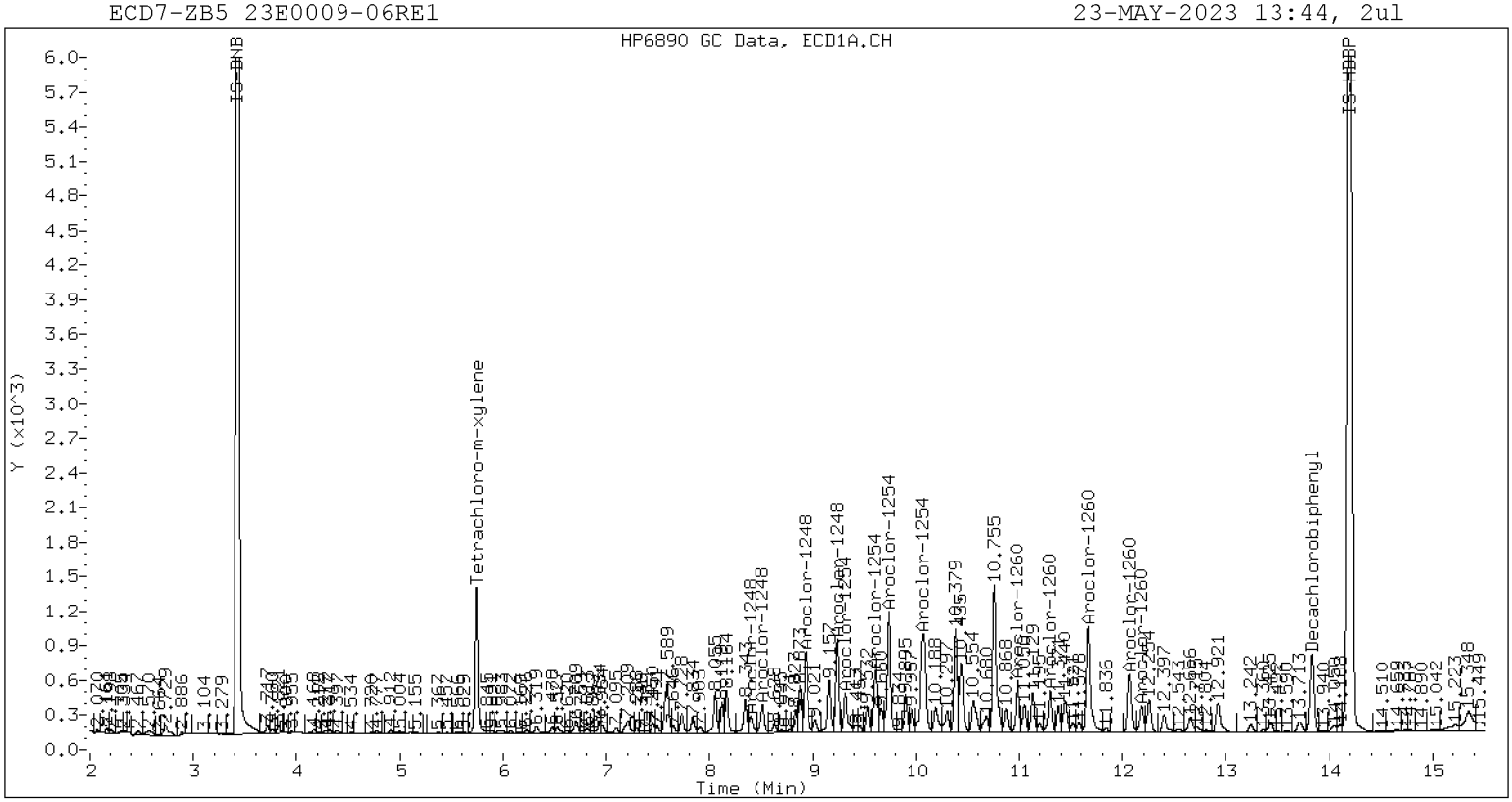
Total PCB Area Col2 (5.728 - 13.969) = 724173 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

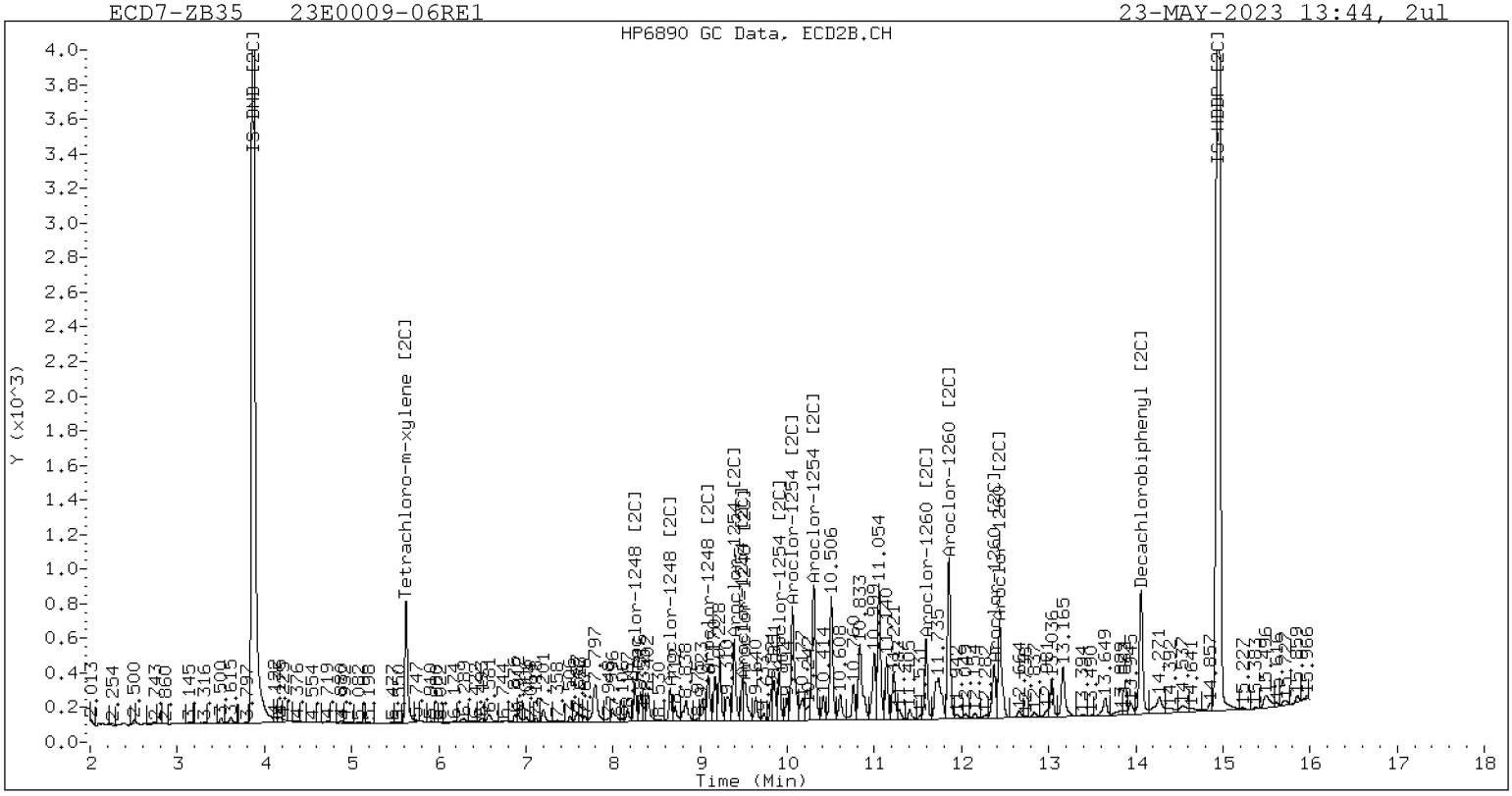
PCB Dual Column Chromatograms

ECD7-ZB5 23E0009-06RE1 23-MAY-2023 13:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23E0009-06RE1 23-MAY-2023 13:44, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1820

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-07 A	File ID:	05232310ECD7.D
Sampled:	04/29/23 14:00	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 14:05
% Solids:	53.18	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.57 g Wet / 2.5 mL
Batch:	BLE0151	Sequence:	SLE0373	Calibration:	GE00022
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	14.4	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	22.2	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	25.6	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9780*	*6.64*	*83.2*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9780*	*5.16*	*64.7*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9780*	*6.62*	*82.9*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9780*	*5.64*	*70.7*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232310ECD7.D
Data file 2: /230523.b/230523.b/05232310ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23E0009-07
Client ID:
Injection Date: 23-MAY-2023 14:05
Report Date: 05/24/2023 09:33
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.740	-0.005	201275	5.623	-0.005	132524	25.9	28.3	8.8	Tetrachloro-m-xylene
13.832	-0.010	141961	14.060	-0.009	163189	33.3	33.2	0.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	516684	-14.1
Hexabromobiphenyl	876625	426868	-51.3 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	340869	-2.4
Hexabromobiphenyl	652984	346408	-47.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.395	-0.005	9920	75.2	1	8.248	-0.011	11433	70.5
Aroclor-1248	2	8.508	-0.017	12564	36.7	2	8.655	-0.011	9928	58.0
Aroclor-1248	3	8.930	-0.015	35671	54.1	3	9.089	-0.028	13964	69.5
Aroclor-1248	4	9.232	-0.008	41391	123.2	4	9.483	-0.059	29473	122.4
		Total Col1Ave (4 peaks):			72.3		Total Col2Ave (4 peaks):			80.1 RPD = 10
		Corrected Ave (3 peaks):			55.3		Corrected Ave (3 peaks):			66.0 RPD = 18
Aroclor-1254	1	9.232	-0.018	41391	77.9	1	9.389	-0.012	29955	115.7
Aroclor-1254	2	9.307	-0.016	16333	68.5	2	9.483	-0.012	29473	191.6
Aroclor-1254	3	9.609	-0.005	43446	126.7	3	9.905	-0.015	15788	75.2
Aroclor-1254	4	9.732	-0.018	65840	98.1	4	10.054	-0.019	51143	111.6
Aroclor-1254	5	10.063	-0.004	75054	185.1	5	10.302	-0.020	70376	154.8
		Total Col1Ave (5 peaks):			111.3		Total Col2Ave (5 peaks):			129.8 RPD = 15
		Corrected Ave (4 peaks):			92.8		Corrected Ave (4 peaks):			114.3 RPD = 21
Aroclor-1260	1	10.978	-0.016	26484	117.3	1	11.591	-0.014	29191	158.7
Aroclor-1260	2	11.294	-0.017	20628	92.6	2	11.853	-0.020	51701	107.4
Aroclor-1260	3	11.703	0.017	20922	37.5	3	12.364	-0.025	37935	318.1
Aroclor-1260	4	12.064	-0.026	28745	105.2	4	12.436	-0.019	38062	118.4
Aroclor-1260	5	12.180	-0.013	19920	167.2	NS	---			----
		Total Col1Ave (5 peaks):			104.0		Total Col2Ave (4 peaks):			175.7 RPD = 51*
		Corrected Ave (4 peaks):			88.2		Corrected Ave (3 peaks):			128.2 RPD = 37
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.846 - 13.741) = 1329213 Col1 Total PCB = 0.2 ppm*

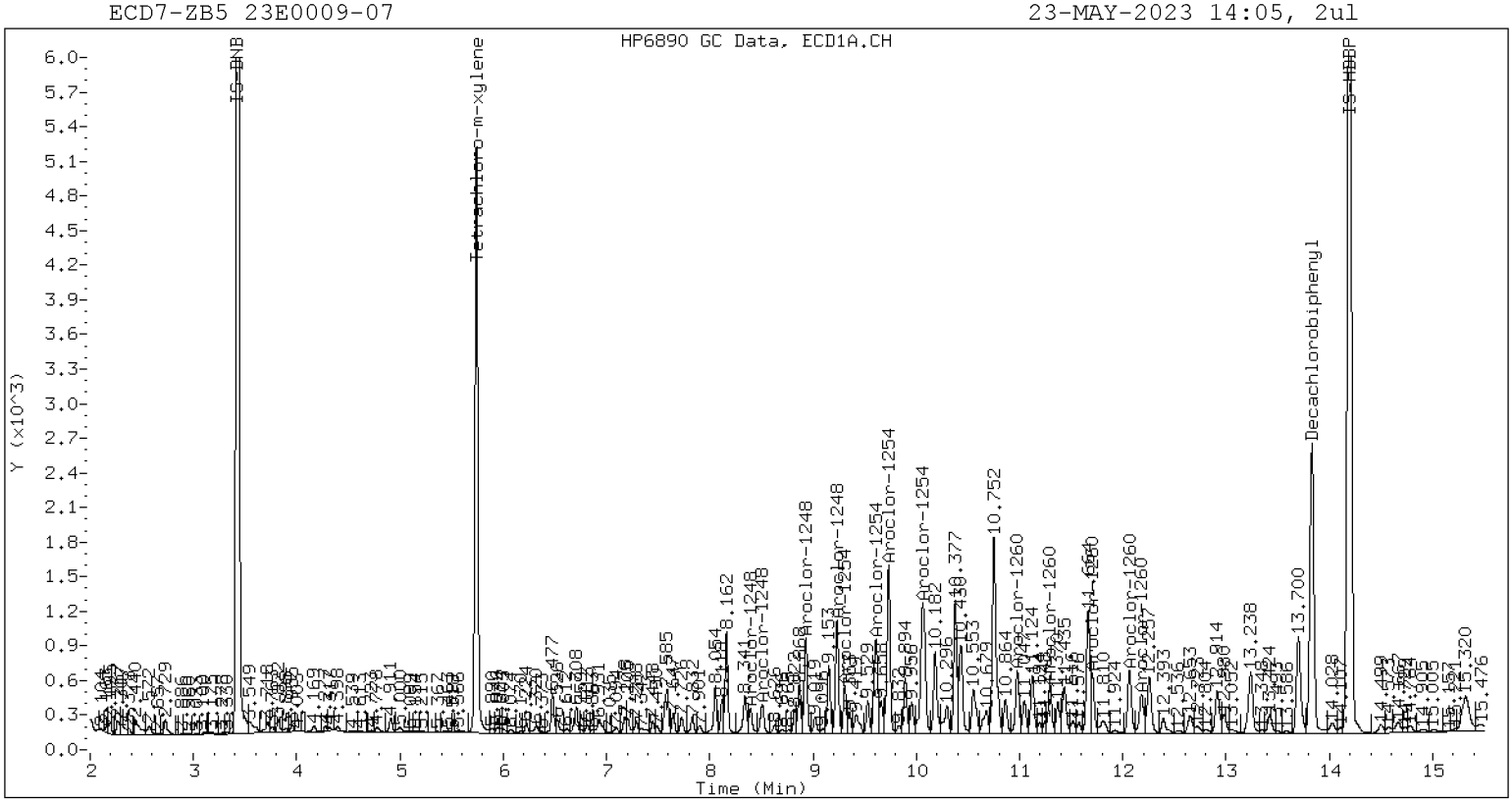
Total PCB Area Col2 (5.728 - 13.969) = 1044123 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

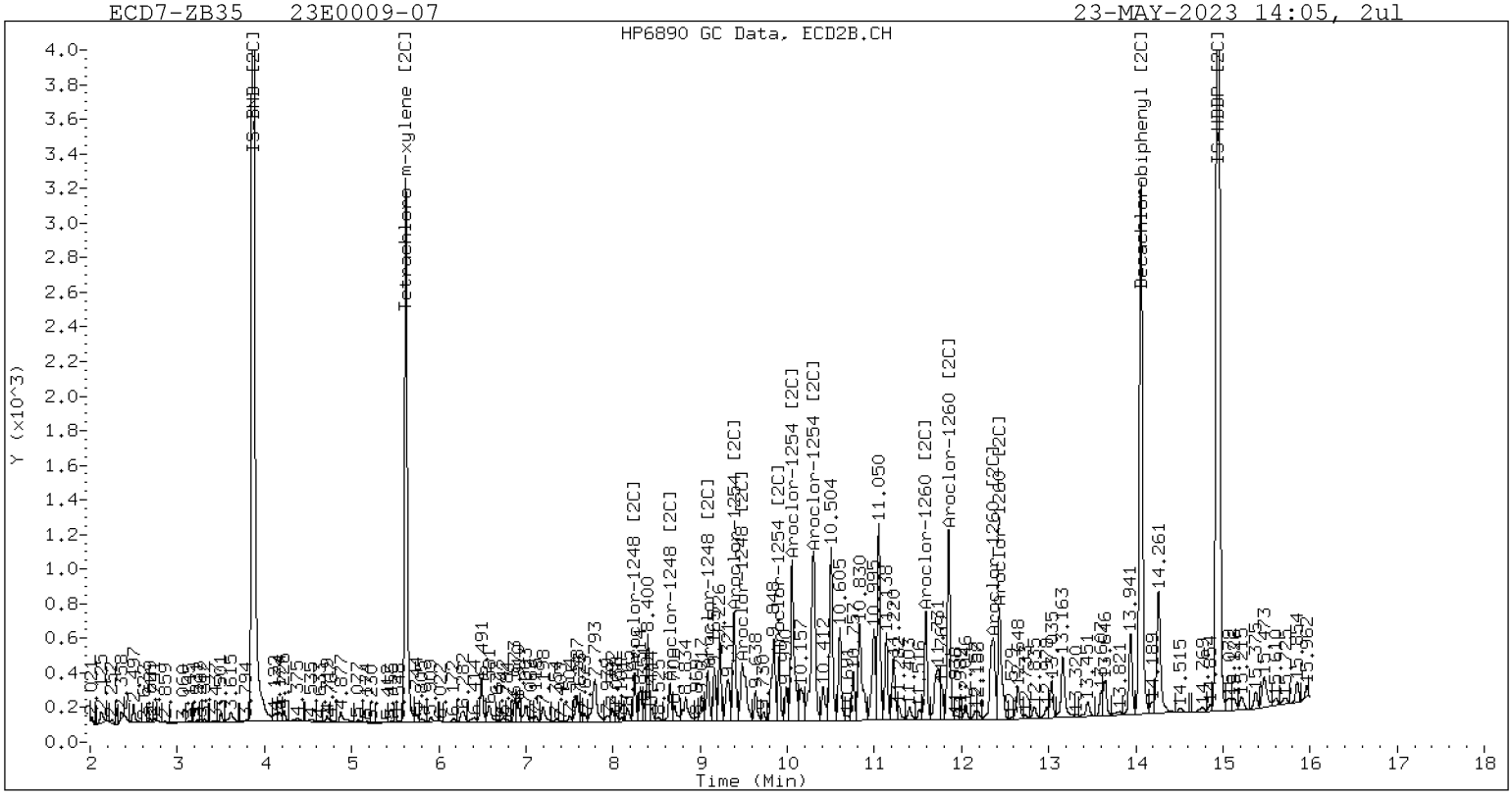
PCB Dual Column Chromatograms

ECD7-ZB5 23E0009-07 23-MAY-2023 14:05, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23E0009-07 23-MAY-2023 14:05, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1820

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23E0009-08 A	File ID:	05232312ECD7.D
Sampled:	04/29/23 14:10	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 14:46
% Solids:	54.29	Preparation:	EPA 3546 (Microwave)	Initial/Final:	23.02 g Wet / 2.5 mL
Batch:	BLE0151	Sequence:	SLE0373	Calibration:	GE00022
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	5	20.0	7.8	20.0	U
11104-28-2	Aroclor 1221	1	5	20.0	7.8	20.0	U
11141-16-5	Aroclor 1232	1	5	20.0	7.8	20.0	U
53469-21-9	Aroclor 1242	1	5	20.0	7.8	20.0	U
12672-29-6	Aroclor 1248	1	5	18.3	7.8	20.0	J, D
11097-69-1	Aroclor 1254	1	5	29.9	7.8	20.0	D
11096-82-5	Aroclor 1260	2	5	45.1	2.9	20.0	D

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.0016*	*8.23*	*103*	*40 - 126*	
Tetrachlorometaxylene	*1*	*8.0016*	*6.07*	*75.9*	*44 - 120*	
Decachlorobiphenyl	*2*	*8.0016*	*7.33*	*91.6*	*40 - 126*	
Tetrachlorometaxylene	*2*	*8.0016*	*6.40*	*80.0*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232312ECD7.D
Data file 2: /230523.b/230523.b/05232312ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23E0009-08RE1
Client ID:
Injection Date: 23-MAY-2023 14:46
Report Date: 05/24/2023 09:33
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.740	-0.006	52762	5.625	-0.004	31958	6.1	6.4	5.3	Tetrachloro-m-xylene
13.833	-0.009	40703	14.061	-0.008	40036	8.2	7.3	11.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	577315	-4.0
Hexabromobiphenyl	876625	495445	-43.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	363149	4.0
Hexabromobiphenyl	652984	384633	-41.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.395	-0.005	2161	14.7	1	8.250	-0.009	3505	20.3
Aroclor-1248	2	8.510	-0.015	3525	9.2	2	8.656	-0.009	2576	14.1
Aroclor-1248	3	8.932	-0.014	11077	15.0	3	9.093	-0.024	3186	14.9
Aroclor-1248	4	9.233	-0.007	12857	34.2	4	9.518	-0.024	3365	13.1
		Total Col1Ave (4 peaks):			18.3		Total Col2Ave (4 peaks):			15.6 RPD = 16
		Corrected Ave (3 peaks):			13.0		Corrected Ave (3 peaks):			14.0 RPD = 8
Aroclor-1254	1	9.233	-0.017	12857	21.7	1	9.390	-0.011	9024	32.7
Aroclor-1254	2	9.309	-0.014	5075	19.0	2	9.483	-0.012	4425	27.0
Aroclor-1254	3	9.608	-0.005	11224	29.3	3	9.908	-0.013	4391	19.6
Aroclor-1254	4	9.734	-0.017	18731	25.0	4	10.057	-0.016	16235	33.3
Aroclor-1254	5	10.060	-0.006	24583	54.3	5	10.306	-0.016	19800	40.9
		Total Col1Ave (5 peaks):			29.8		Total Col2Ave (5 peaks):			30.7 RPD = 3
		Corrected Ave (4 peaks):			23.7		Corrected Ave (4 peaks):			28.2 RPD = 17
Aroclor-1260	1	10.980	-0.013	9846	37.6	1	11.594	-0.012	10799	52.9
Aroclor-1260	2	11.296	-0.015	8632	33.4	2	11.855	-0.017	20460	38.3
Aroclor-1260	3	11.668	-0.017	16740	25.9	3	12.346	-0.043	47080	~~355~~.6
Aroclor-1260	4	12.067	-0.024	11616	36.6	4	12.438	-0.018	15758	44.2
Aroclor-1260	5	12.182	-0.012	6292	45.5	NS	---			----
		Total Col1Ave (5 peaks):			35.8		Total Col2Ave (4 peaks):			1~~22.~~7 RPD = 110*
		Corrected Ave (4 peaks):			33.4		Corrected Ave (3 peaks):			45.1 RPD = 30
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.846 - 13.741) = 554962 Col1 Total PCB = 0.1 ppm*

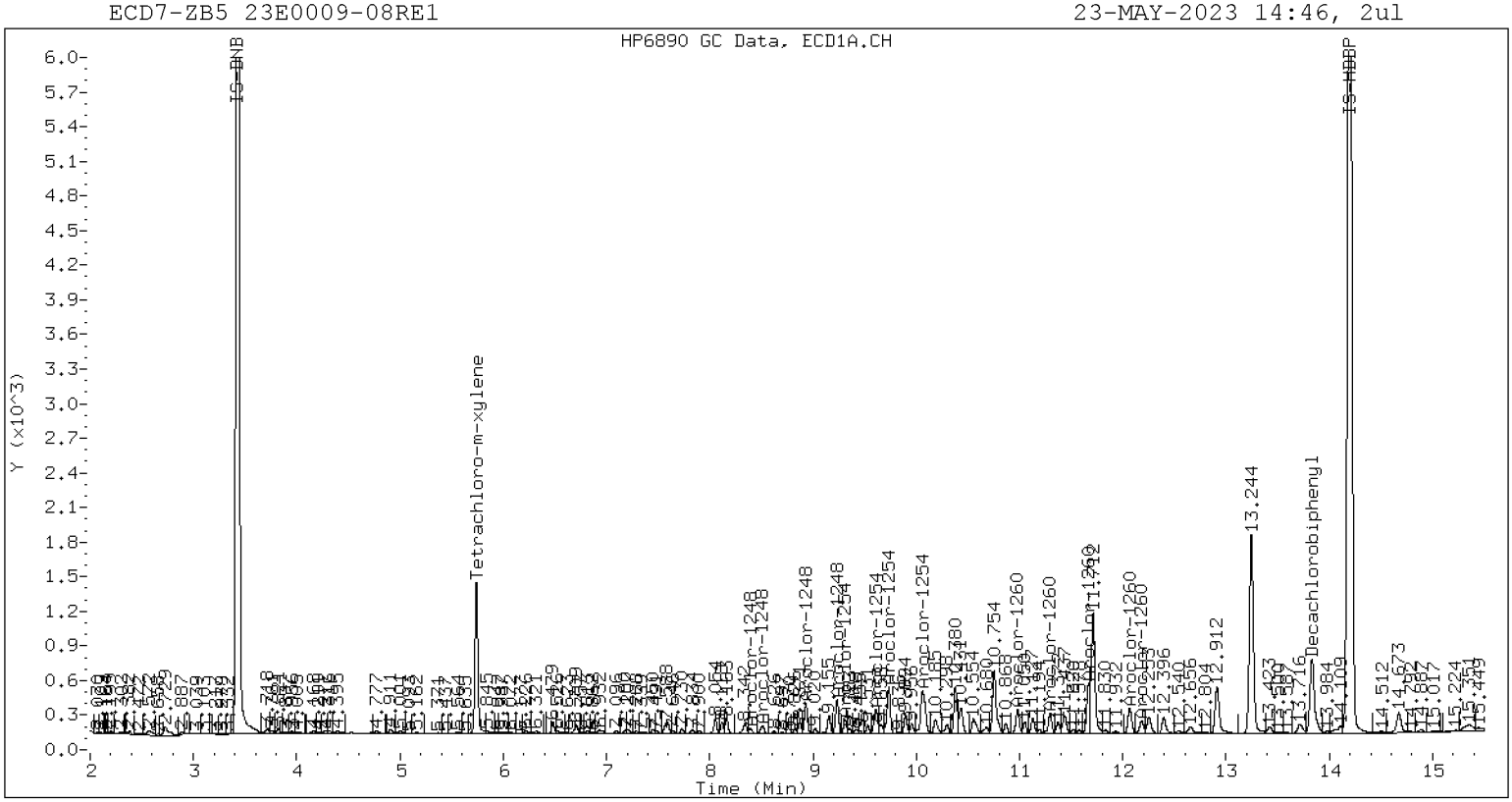
Total PCB Area Col2 (5.728 - 13.969) = 372416 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

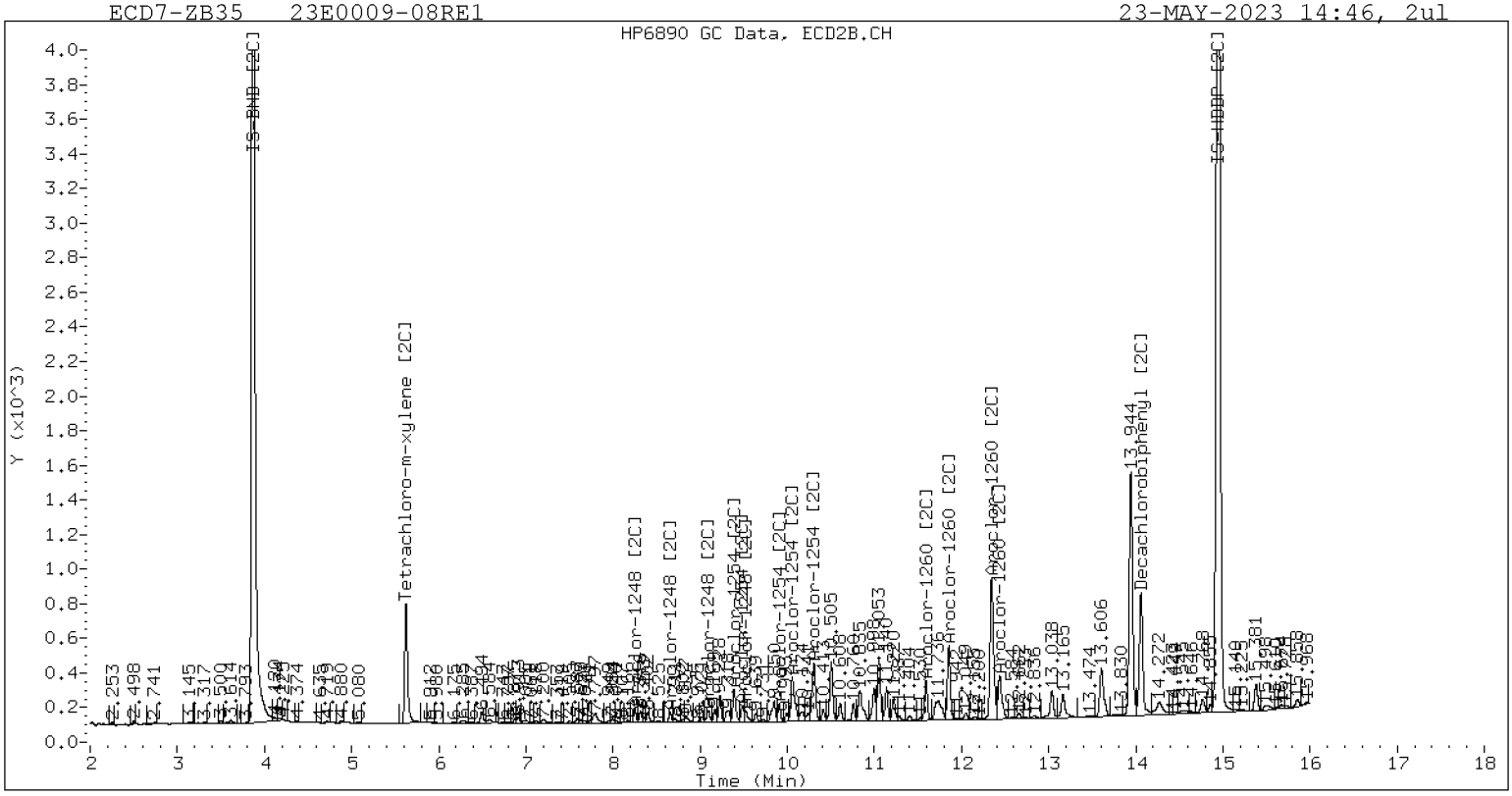
PCB Dual Column Chromatograms

ECD7-ZB5 23E0009-08RE1 23-MAY-2023 14:46, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23E0009-08RE1 23-MAY-2023 14:46, 2ul



ZB-35 Manual Integration: NO

PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0151 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01	05192308ECD7.D	05/10/23 11:15	
LDW23-SC1811	23E0009-02	05192311ECD7.D	05/10/23 11:15	
LDW23-SS1805	23E0009-03	05232304ECD7.D	05/10/23 11:15	
LDW23-SC1805	23E0009-04	05232313ECD7.D	05/10/23 11:15	
LDW23-SS1800	23E0009-05	05232307ECD7.D	05/10/23 11:15	
LDW23-SC1800	23E0009-06	05232309ECD7.D	05/10/23 11:15	
LDW23-SS1820	23E0009-07	05232310ECD7.D	05/10/23 11:15	
LDW23-IT1820	23E0009-08	05232312ECD7.D	05/10/23 11:15	
Blank	BLE0151-BLK1	05192304ECD7.D	05/10/23 11:15	
LCS	BLE0151-BS1	05192305ECD7.D	05/10/23 11:15	
LCS Dup	BLE0151-BSD1	05192306ECD7.D	05/10/23 11:15	
LDW23-SS1811	BLE0151-MS1	05192309ECD7.D	05/10/23 11:15	
LDW23-SS1811	BLE0151-MSD1	05192310ECD7.D	05/10/23 11:15	
Reference	BLE0151-SRM1	05192307ECD7.D	05/10/23 11:15	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0151

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

Matrix: Solid **Date Prepared:** 05/10/23 **Balance ID:** B146462614 **Set Up By:** GTO 5/4/23

WO Comments

23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
QLS 5	QLS Spike

Analysis: 8082A PCB Solid 4

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Initial (g) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23E0009-01 A	69.3	(18.04)	18.05	5mL	5mL	2mL	2.5	1.0	
23E0009-02 A	70.9	(17.63)	17.71	5mL	5mL	2mL	2.5	1.0	
23E0009-03 A	50.8	(24.61)	24.63	5mL	5mL	2mL	2.5	1.0	
23E0009-04 A	50.8	(24.62)	24.69	5mL	5mL	2mL	2.5	1.0	
23E0009-05 A	47.5	(26.34)	26.34	5mL	5mL	2mL	2.5	1.0	
23E0009-06 A	49.3	(25.36)	25.44	5mL	5mL	2mL	2.5	1.0	
23E0009-07 A	53.2	(23.51)	23.57	5mL	5mL	2mL	2.5	1.0	
23E0009-08 A	54.3	(23.02)	23.02	5mL	5mL	2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Initial (g) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLE0151-BLK1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLE0151-BS1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLE0151-BSD1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLE0151-MS1	69.3	(18.04)	18.04	5mL	5mL	2mL	2.5	1.0	Use 23E0009-01
BLE0151-MSD1	69.3	(18.04)	18.04	5mL	5mL	2mL	2.5	1.0	Use 23E0009-01
BLE0151-SRM1	100.0	~~(12.50)~~ (2.50)	2.50	5mL	5mL	2mL	2.5	1.0	Use K003635

+1g DI WATER

05/10/23 — Client ID Verified By — Date

5/19/23 — Preparation Reviewed By — Date

05/10/23 11:15 — Extraction Date and Time

Printed: 5/4/2023 2:20:10PM

3099F
Page 1 of 2

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0151

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 2 3
GJ 5/18/23
Analyst/Date

KD
100°C
Hexane Exchange
(2 X 20 mL)
1 2 3 4 5 6
GJ 5/18/23
Analyst/Date

TurboVap
Pre Cleanups
1 2 3 4 5
GJ 5/18/23
Analyst/Date

TurboVap
Post Cleanups
1 2 3 4 5
ZH 5/19/23
Analyst/Date

Vialing
ZH 5/19/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave MJC7 **Analyst:** GJ 5/18/23 **Date:** GJ 05/18/23 ZH 05/19/23	
Neutral Glass Wool	L003992
1:1 Hexane/Acetone	L004534
Hexane	L003564
Anhydrous Sodium Sulfate	L004631
KD **Analyst:** GJ **Date:** 5/18/23	
Anhydrous Sodium Sulfate	
Hexane	L003500
Vialing **Analyst:** GJ/ZH **Date:** 5/19/23	
Hexane	L003500
Concentrated Sulfuric Acid	L005399
Silica Gel (SPE) Darts	L003133
Sodium Sulfite	L002437
Tetrabutylammonium hydrogensulfate (TBAS)	L003024

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N L003667 Exp Date: 7/21/2023	50µL	GJ	GJ
Spike 20µg/mL	1 L001587 Exp Date: 8/13/2023	63µL	GJ	GJ

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0151

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23E0009: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L001273-1275, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in R-05 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into Erlenmeyer flask with sodium sulfate in bottom and funnel with neutral glasswool plug. 8. Re-homogenize and rinse with 1:1 Hexane/Acetone. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 10. KD on 100° bath. 11. Exchange (2 X with 20mL) Hexane. 12. TurboVap. 13. Clean-ups. 14. TurboVap. 15. Vial with Hexane. A. Need Total Solids Y / N B. Archive/Freeze Y / N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

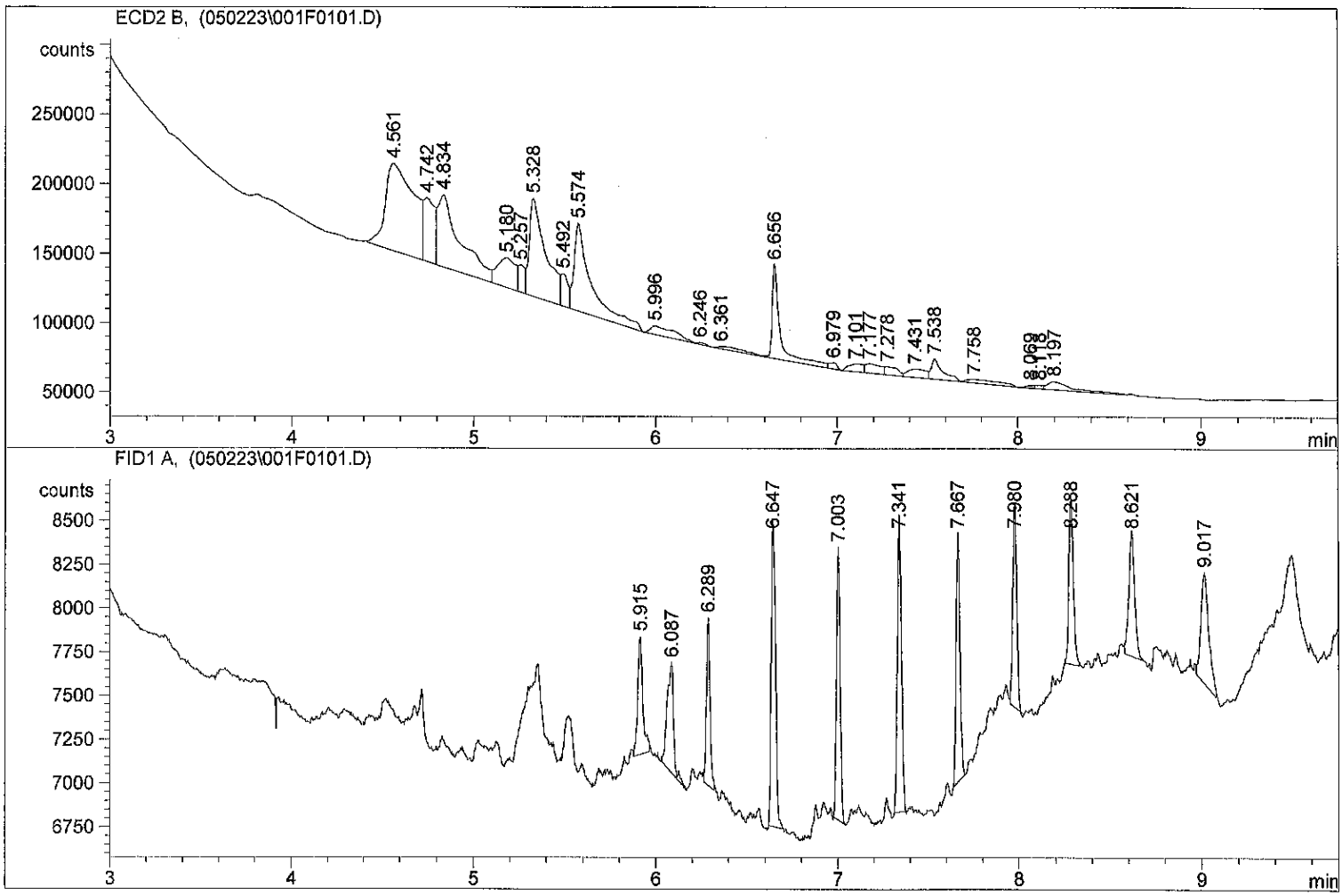
Extraction Parameter: PCB Extraction Batch: BLE0151

Total Solids Batch: BLE0048 Work Order(s): 23E0009

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= ϕ1, ϕ3 – ϕ8.	ϕ5/ϕ2/23
☒ Standing Water Decanted (Not shared)= ϕ1, ϕ2 – ϕ8.	ϕ5/ϕ2/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☒ Rocks (%+size)? 1/411 5.0% = ϕ2.	ϕ5/ϕ2/23
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	ϕ5/ϕ2/23
☒ Multiple Jars Y / N	ϕ5/ϕ2/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

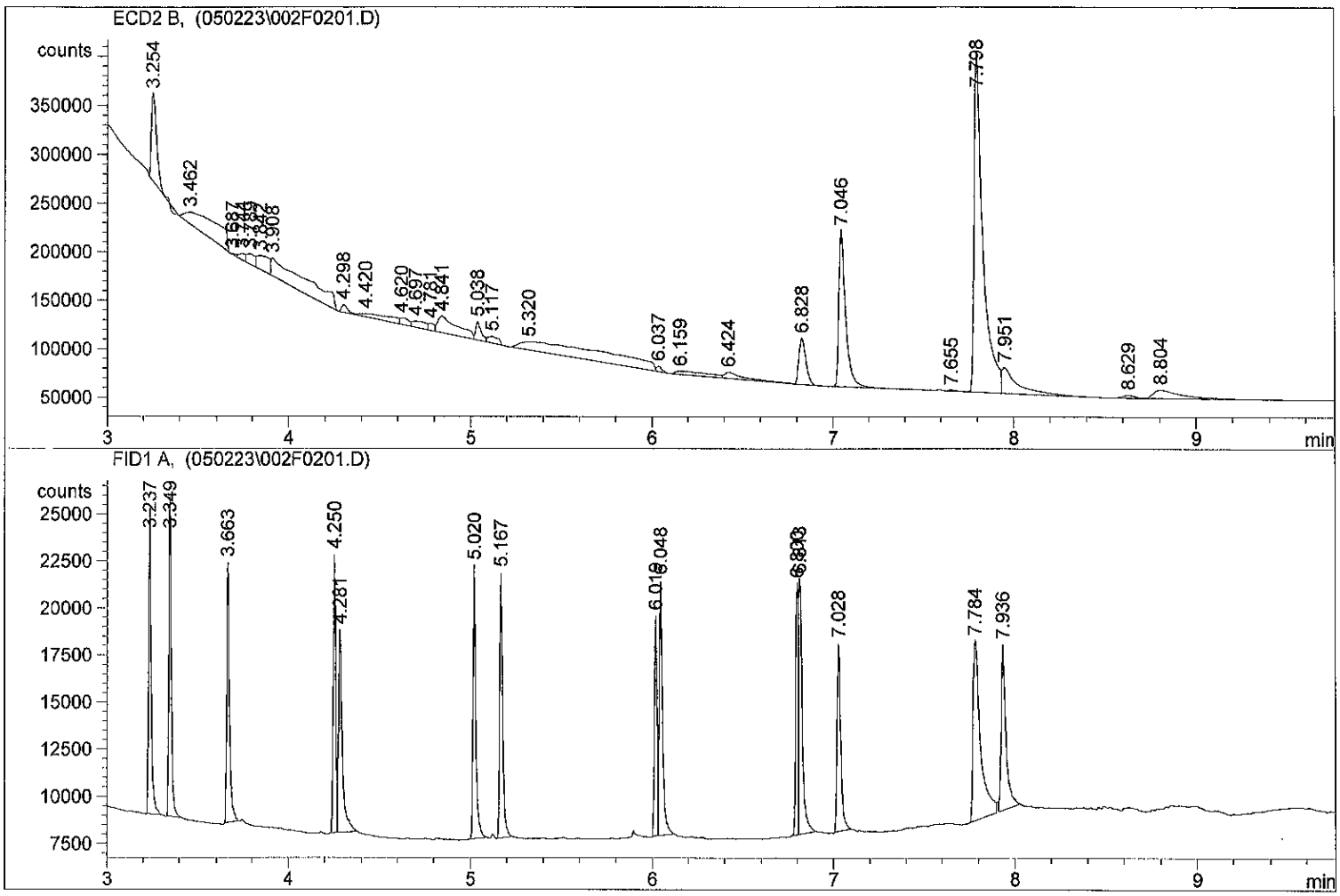
Data File C:\HPCHEM\1\DATA\050223\001F0101.D Sample Name: DCM RINSE

Injection Date	: 5/2/2023 5:14:50 PM	Seq. Line :	1
Sample Name	: DCM RINSE	Location :	Vial 1
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\050223.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

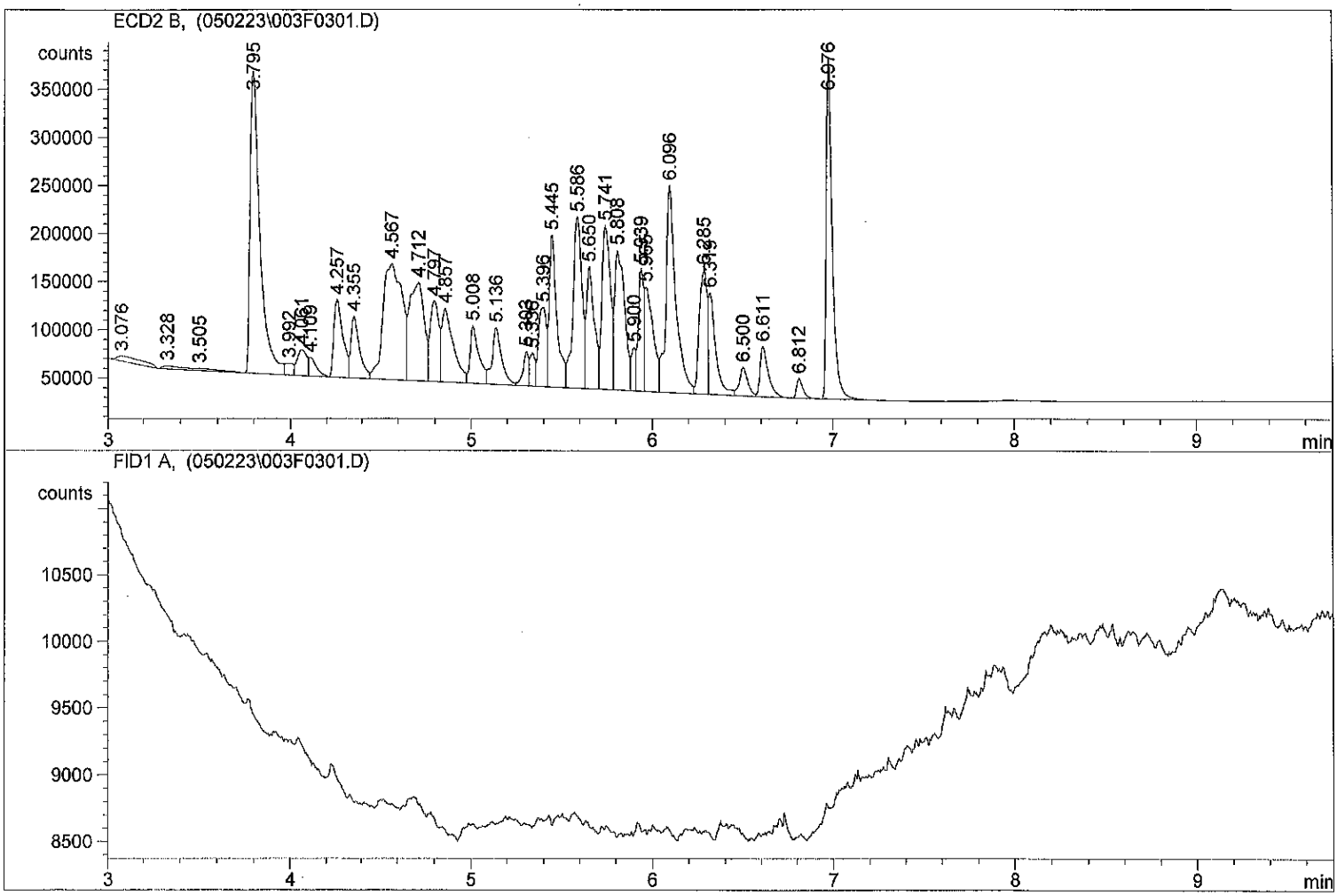
Injection Date	: 5/2/2023 5:29:22 PM	Seq. Line :	2
Sample Name	: PNA STD 10PPM	Location :	Vial 2
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\050223.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

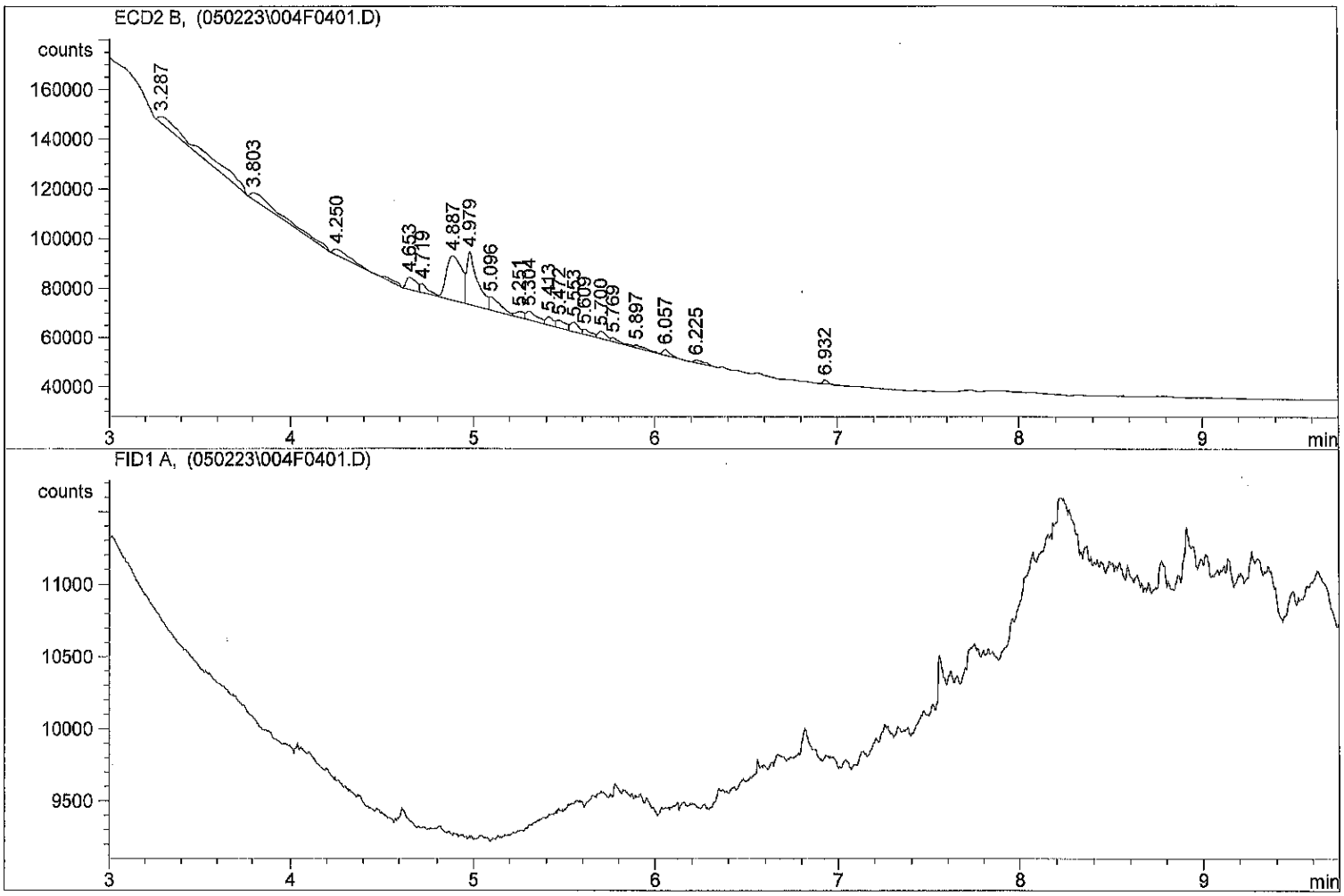
```
==========================================================================
Injection Date  : 5/2/2023 5:44:14 PM          Seq. Line :   3
Sample Name     : AR1660 1PPM                   Location : Vial 3
Acq. Operator   : YL                               Inj :   1
                                              Inj Volume : 1 µl

Sequence File   : C:\HPCHEM\1\SEQUENCE\050223.S
Method          : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
==========================================================================
```



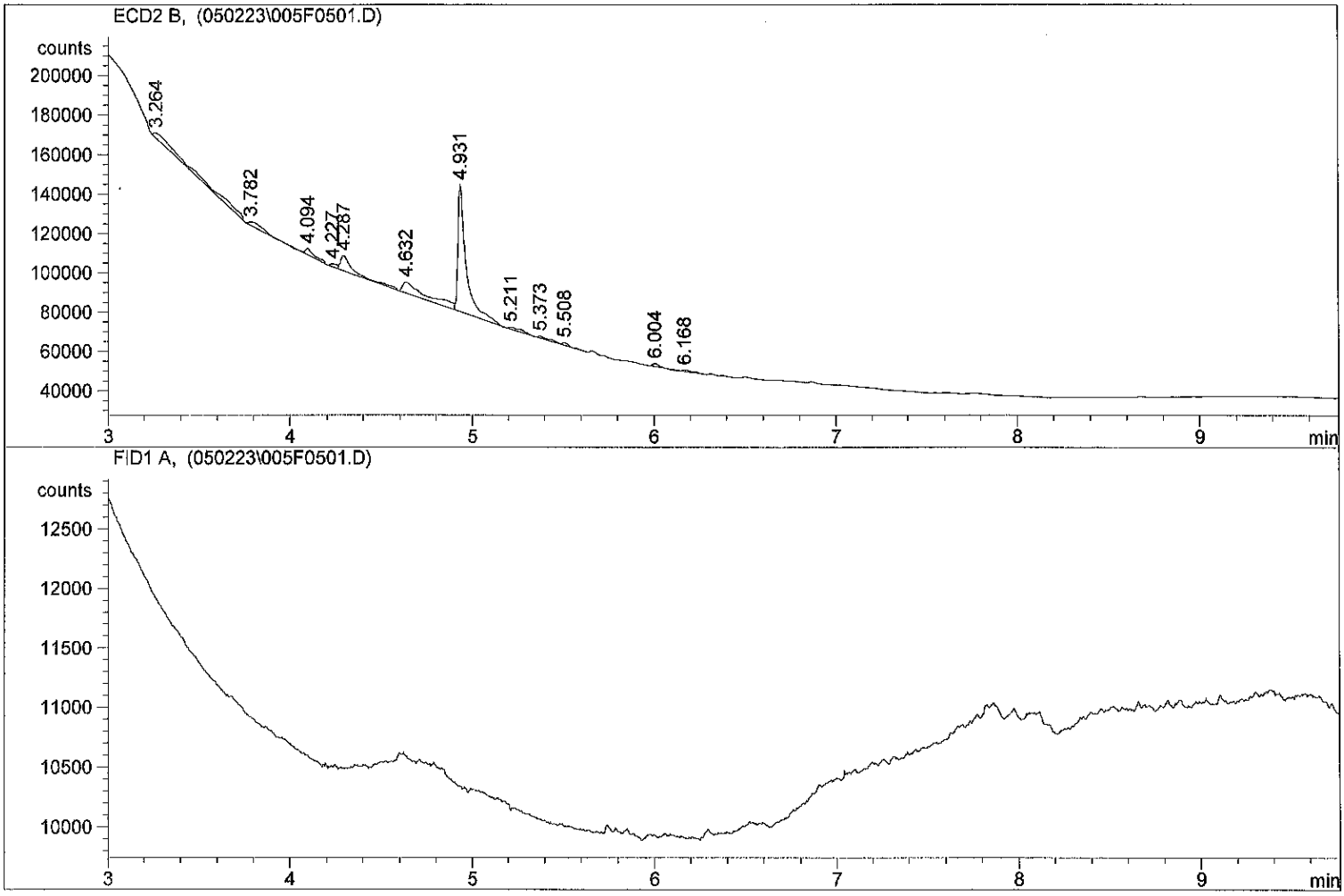
*** End of Report ***

Injection Date	: 5/2/2023 5:59:08 PM	Seq. Line :	4
Sample Name	: 23E0009 01	Location :	Vial 4
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\050223.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

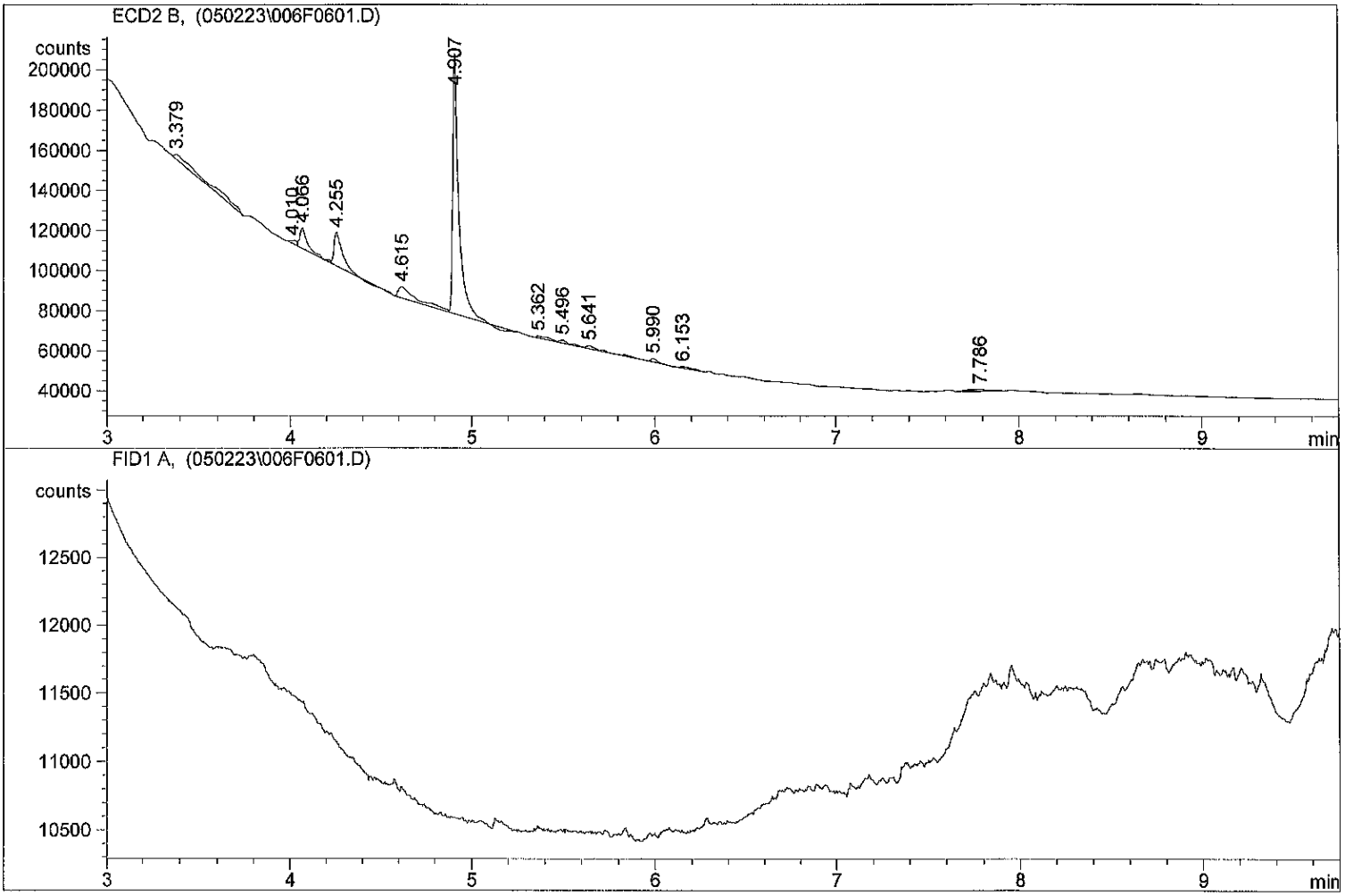
Injection Date	: 5/2/2023 6:13:03 PM	Seq. Line	: 5
Sample Name	: 23E0009 02	Location	: Vial 5
Acq. Operator	: YL	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\050223.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

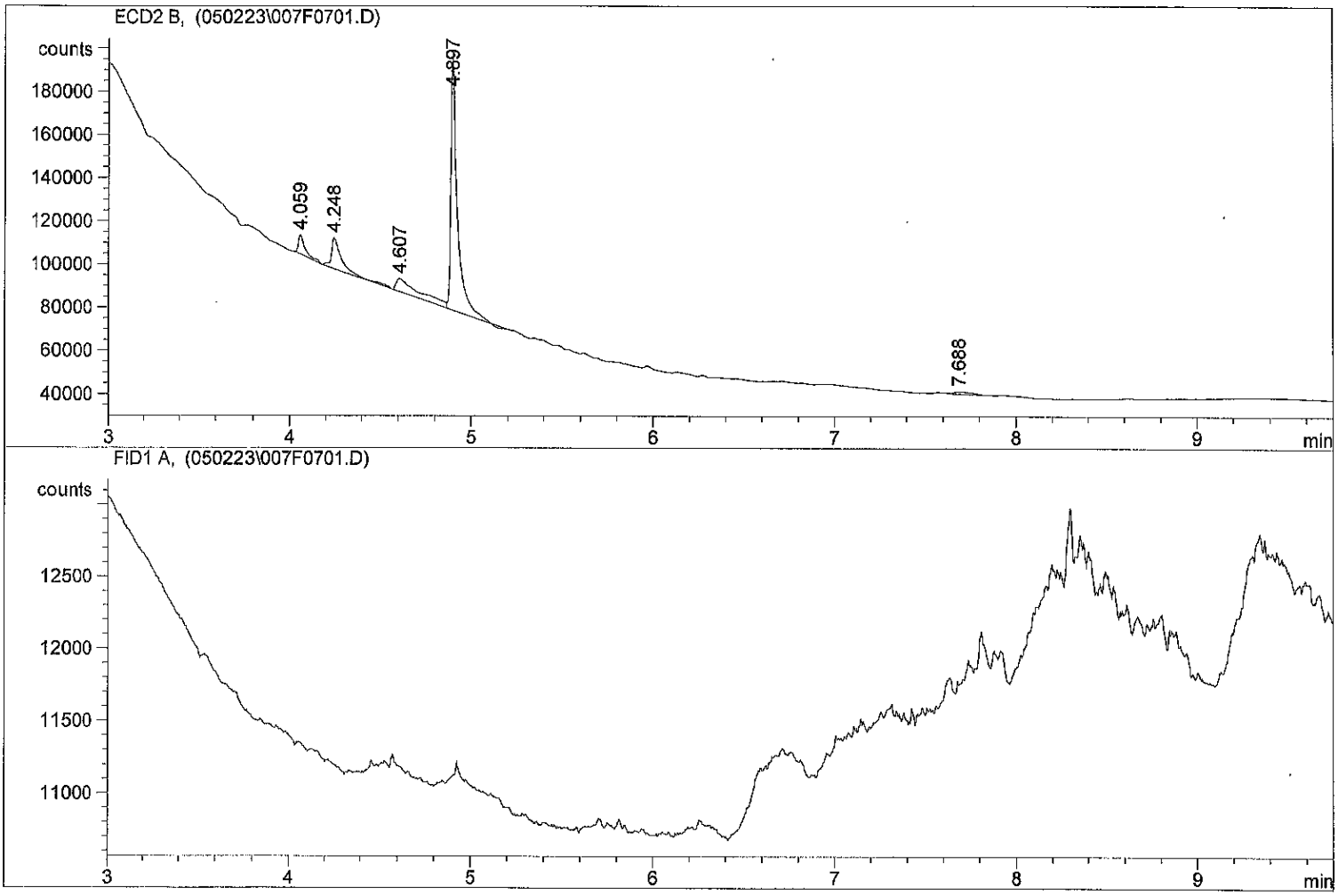
Data File C:\HPCHEM\1\DATA\050223\006F0601.D Sample Name: 23E0009 03

Injection Date	: 5/2/2023 6:27:19 PM	Seq. Line :	6
Sample Name	: 23E0009 03	Location :	Vial 6
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\050223.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

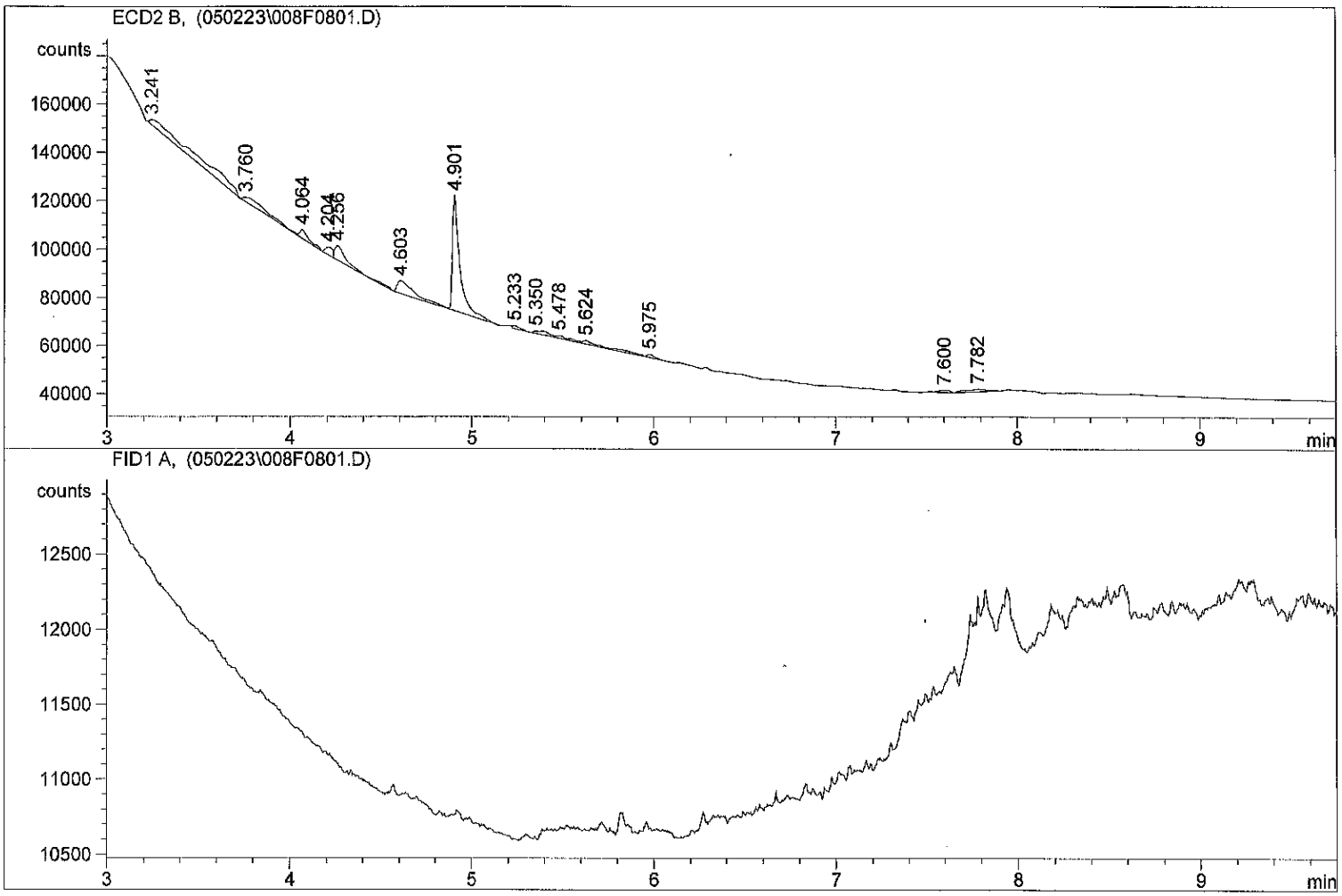
```
Injection Date  : 5/2/2023 6:41:18 PM          Seq. Line :   7
Sample Name     : 23E0009 04                   Location : Vial 7
Acq. Operator   : YL                              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\050223.S
Method          : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
```



*** End of Report ***

Injection Date : 5/2/2023 6:55:33 PM Seq. Line : 8
Sample Name : 23E0009 05 Location : Vial 8
Acq. Operator : YL Inj : 1
Inj Volume : 1 µl

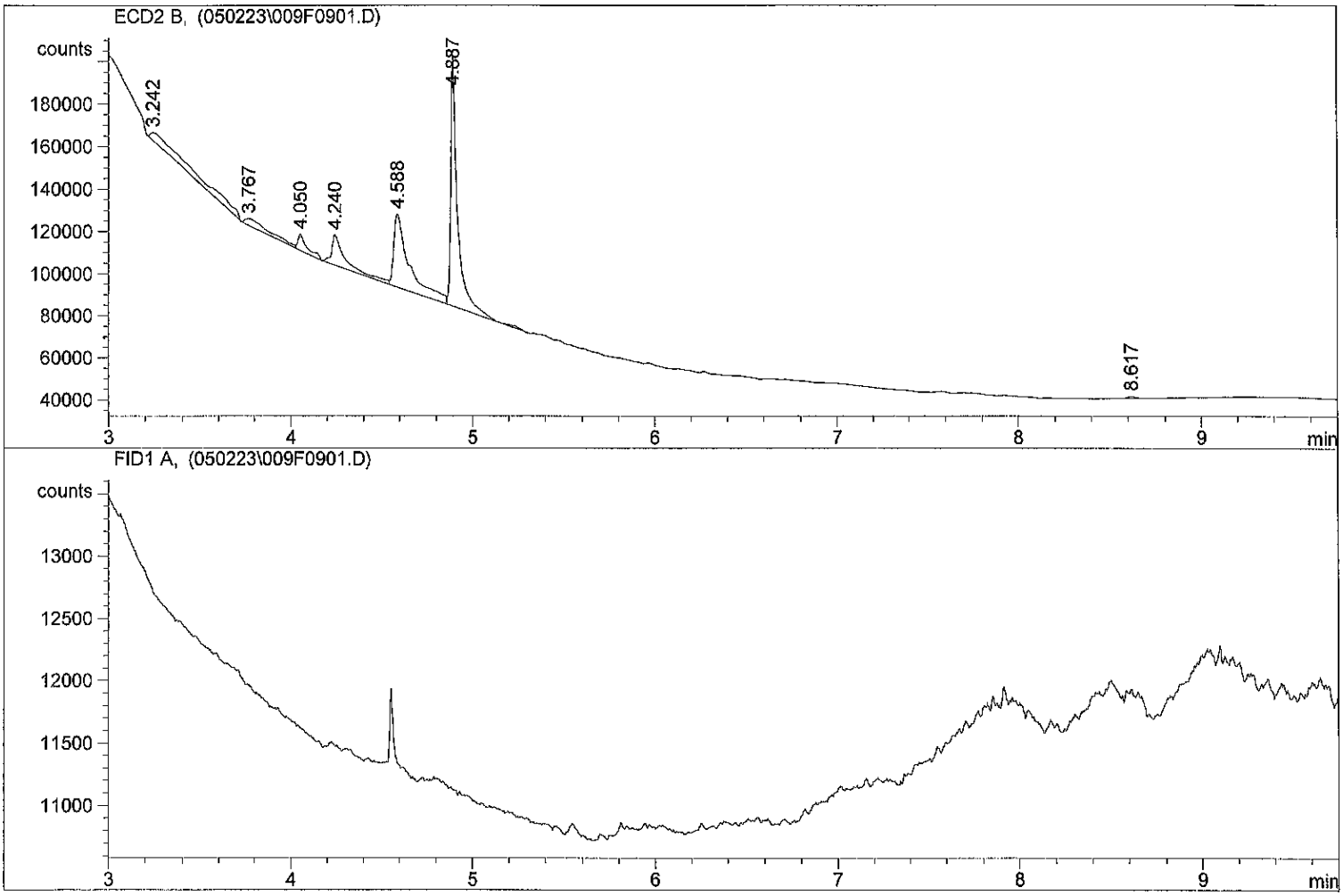
Sequence File : C:\HPCHEM\1\SEQUENCE\050223.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

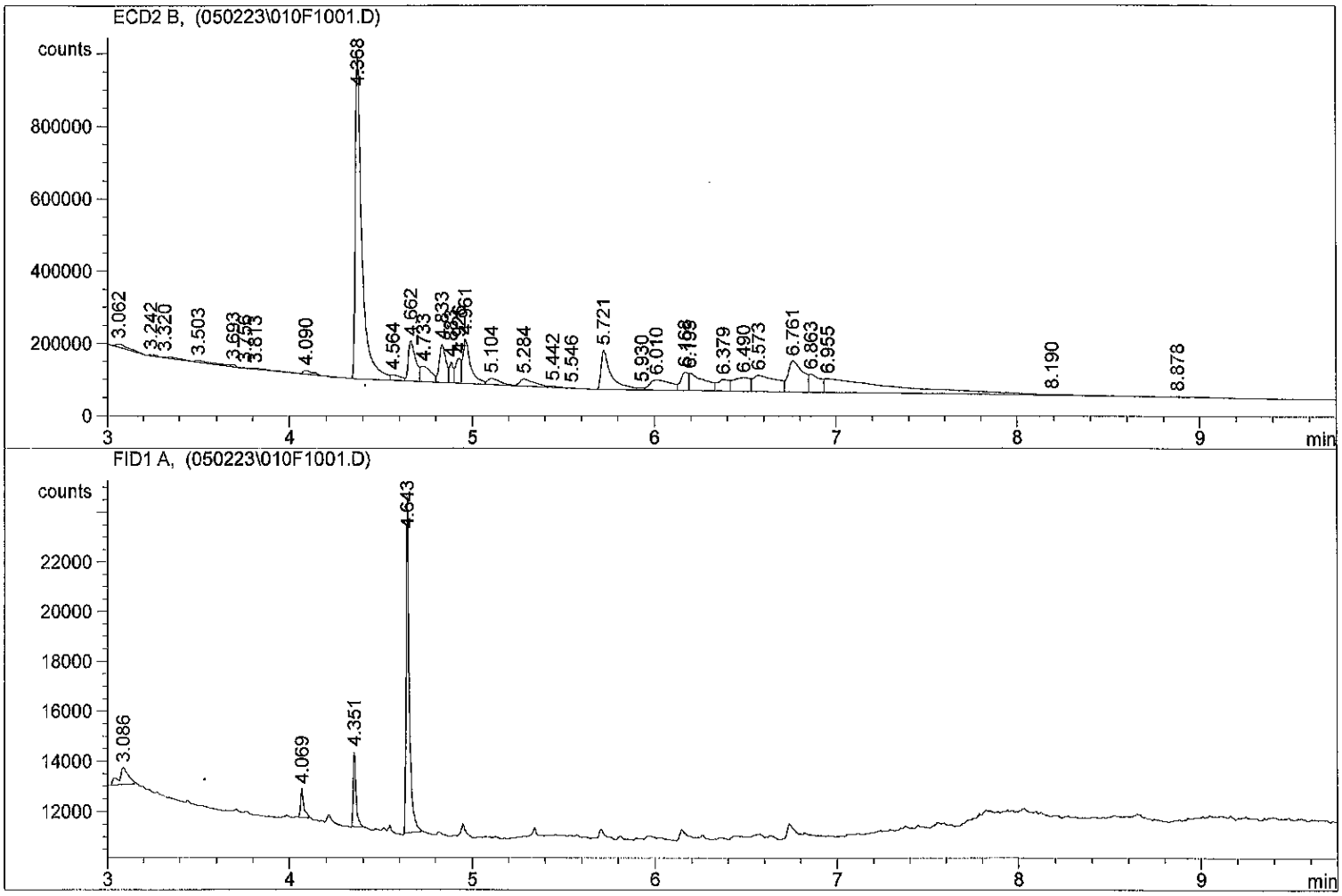
Data File C:\HPCHEM\1\DATA\050223\009F0901.D Sample Name: 23E0009 06

Injection Date	: 5/2/2023 7:09:33 PM	Seq. Line :	9
Sample Name	: 23E0009 06	Location :	Vial 9
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\050223.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

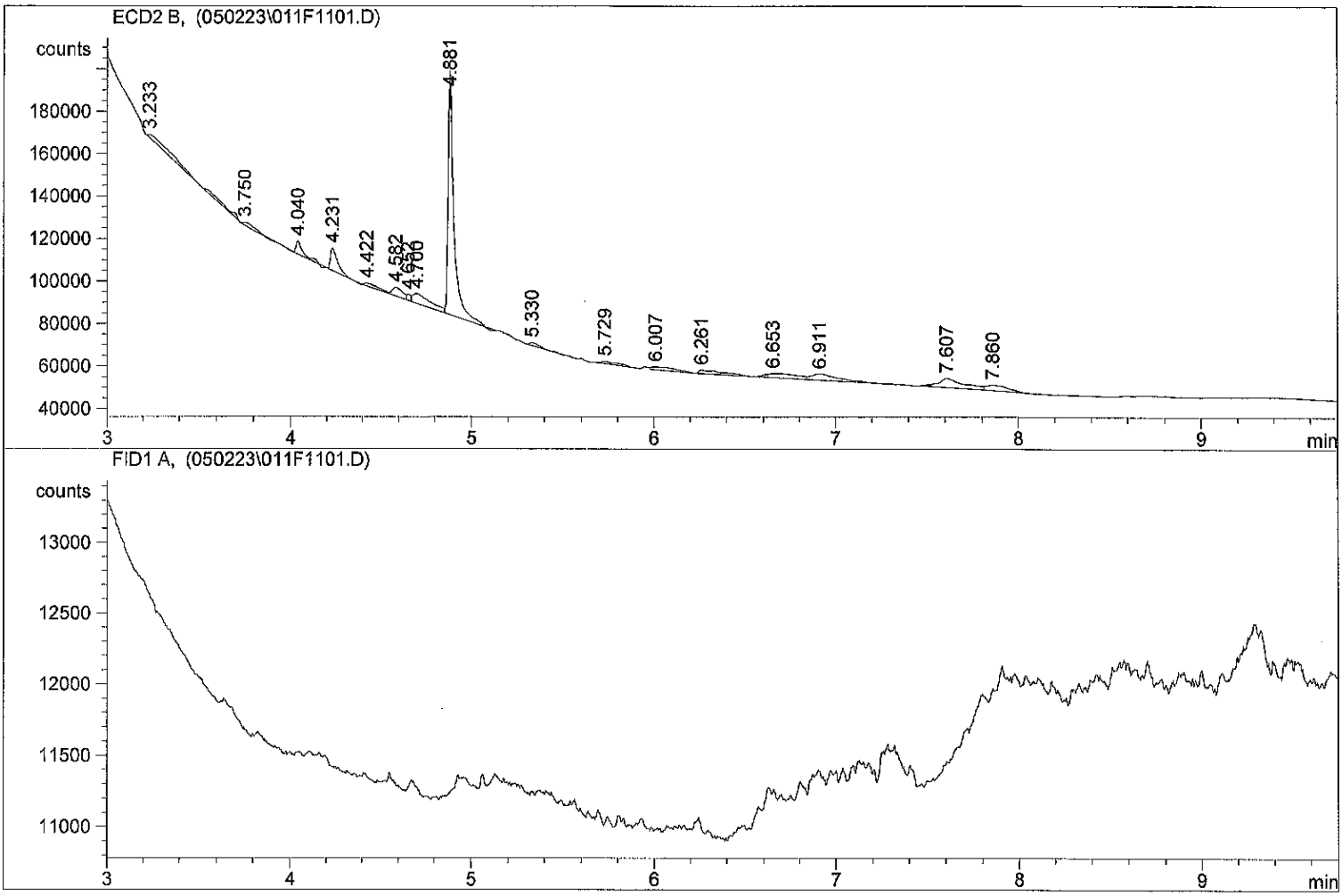
Injection Date	: 5/2/2023 7:23:46 PM	Seq. Line	: 10
Sample Name	: 23E0009 07	Location	: Vial 10
Acq. Operator	: YL	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\050223.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

```
Injection Date   : 5/2/2023 7:37:39 PM          Seq. Line :  11
Sample Name      : 23E0009 08                   Location : Vial 11
Acq. Operator    : YL                               Inj :   1
                                              Inj Volume : 1 µl

Sequence File    : C:\HPCHEM\1\SEQUENCE\050223.S
Method           : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed     : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
```



*** End of Report ***

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0170	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Matrix Spike Dup	BLE0151-MSD1	05192310ECD7.D	05/19/2023	
LDW23-IT1820	23E0009-08	05232312ECD7.D	05/19/2023	
Matrix Spike	BLE0151-MS1	05192309ECD7.D	05/19/2023	
LCS Dup	BLE0151-BSD1	05192306ECD7.D	05/19/2023	
LCS	BLE0151-BS1	05192305ECD7.D	05/19/2023	
Blank	BLE0151-BLK1	05192304ECD7.D	05/19/2023	
LDW23-SS1820	23E0009-07	05232310ECD7.D	05/19/2023	
LDW23-SS1811	23E0009-01	05192308ECD7.D	05/19/2023	
LDW23-SS1805	23E0009-03	05232304ECD7.D	05/19/2023	
LDW23-SS1800	23E0009-05	05232307ECD7.D	05/19/2023	
LDW23-SC1811	23E0009-02	05192311ECD7.D	05/19/2023	
LDW23-SC1805	23E0009-04	05232313ECD7.D	05/19/2023	
LDW23-SC1800	23E0009-06	05232309ECD7.D	05/19/2023	
Reference	BLE0151-SRM1	05192307ECD7.D	05/19/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0170

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 5/19/2023 1:27:04PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23E0009-01	A	LDW23-SS1811	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-02	A	LDW23-SC1811	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-03	A	LDW23-SS1805	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-04	A	LDW23-SC1805	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-05	A	LDW23-SS1800	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-06	A	LDW23-SC1800	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-07	A	LDW23-SS1820	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-08	A	LDW23-IT1820	A 02	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
BLE0151-BLK1	-	Blank	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-BS1	-	LCS	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-BSD1	-	LCS Dup	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-MS1	-	Matrix Spike	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-SRM1	-	Reference	-	2.5	2.5	-	5/19/2023	ZH	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0171	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Reference	BLE0151-SRM1	05192307ECD7.D	05/19/2023	
Matrix Spike Dup	BLE0151-MSD1	05192310ECD7.D	05/19/2023	
Matrix Spike	BLE0151-MS1	05192309ECD7.D	05/19/2023	
LCS	BLE0151-BS1	05192305ECD7.D	05/19/2023	
LDW23-IT1820	23E0009-08	05232312ECD7.D	05/19/2023	
LDW23-SC1800	23E0009-06	05232309ECD7.D	05/19/2023	
LDW23-SC1805	23E0009-04	05232313ECD7.D	05/19/2023	
LDW23-SC1811	23E0009-02	05192311ECD7.D	05/19/2023	
Blank	BLE0151-BLK1	05192304ECD7.D	05/19/2023	
LDW23-SS1800	23E0009-05	05232307ECD7.D	05/19/2023	
LDW23-SS1805	23E0009-03	05232304ECD7.D	05/19/2023	
LDW23-SS1811	23E0009-01	05192308ECD7.D	05/19/2023	
LDW23-SS1820	23E0009-07	05232310ECD7.D	05/19/2023	
LCS Dup	BLE0151-BSD1	05192306ECD7.D	05/19/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0171

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 5/19/2023 1:27:43PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23E0009-01	A	LDW23-SS1811	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-02	A	LDW23-SC1811	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-03	A	LDW23-SS1805	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-04	A	LDW23-SC1805	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-05	A	LDW23-SS1800	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-06	A	LDW23-SC1800	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-07	A	LDW23-SS1820	A 03	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
23E0009-08	A	LDW23-IT1820	A 02	2.5	2.5	8082A PCB Solid 4	5/19/2023	ZH	
BLE0151-BLK1	-	Blank	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-BS1	-	LCS	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-BSD1	-	LCS Dup	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-MS1	-	Matrix Spike	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	5/19/2023	ZH	
BLE0151-SRM1	-	Reference	-	2.5	2.5	-	5/19/2023	ZH	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0172	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	BLE0151-BLK1	05192304ECD7.D	05/19/2023	
Reference	BLE0151-SRM1	05192307ECD7.D	05/19/2023	
Matrix Spike Dup	BLE0151-MSD1	05192310ECD7.D	05/19/2023	
Matrix Spike	BLE0151-MS1	05192309ECD7.D	05/19/2023	
LDW23-SC1805	23E0009-04	05232313ECD7.D	05/19/2023	
LCS	BLE0151-BS1	05192305ECD7.D	05/19/2023	
LDW23-SC1800	23E0009-06	05232309ECD7.D	05/19/2023	
LDW23-SC1811	23E0009-02	05192311ECD7.D	05/19/2023	
LDW23-SS1800	23E0009-05	05232307ECD7.D	05/19/2023	
LDW23-SS1805	23E0009-03	05232304ECD7.D	05/19/2023	
LDW23-IT1820	23E0009-08	05232312ECD7.D	05/19/2023	
LDW23-SS1811	23E0009-01	05192308ECD7.D	05/19/2023	
LDW23-SS1820	23E0009-07	05232310ECD7.D	05/19/2023	
LCS Dup	BLE0151-BSD1	05192306ECD7.D	05/19/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8082A

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLE0151-BLK1	File ID:	05192304ECD7.D
Sampled:	N/A	Prepared:	05/10/23 11:15	Analyzed:	05/19/23 15:10
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLE0151	Sequence:	SLE0328	Calibration:	GE00022
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	4.0	U	1.6	4.0
11104-28-2	Aroclor 1221	1	4.0	U	1.6	4.0
11141-16-5	Aroclor 1232	1	4.0	U	1.6	4.0
53469-21-9	Aroclor 1242	1	4.0	U	1.6	4.0
12672-29-6	Aroclor 1248	1	4.0	U	1.6	4.0
11097-69-1	Aroclor 1254	1	4.0	U	1.6	4.0
11096-82-5	Aroclor 1260	1	4.0	U	0.6	4.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	6.92	86.5	40 - 126	
Tetrachlorometaxylene	8.0000	6.12	76.5	44 - 120	
Decachlorobiphenyl [2C]	8.0000	7.19	89.9	40 - 126	
Tetrachlorometaxylene [2C]	8.0000	5.90	73.7	44 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192304ECD7.D
Data file 2: /230519.b/230519.b/05192304ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLE0151-BLK1
Client ID:
Injection Date: 19-MAY-2023 15:10
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	283158	5.629	0.001	159204	30.6	29.5	3.6	Tetrachloro-m-xylene
13.839	-0.002	361655	14.066	-0.003	352064	34.6	36.0	3.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	614754	2.2
Hexabromobiphenyl	876625	1046743	19.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	392334	12.3
Hexabromobiphenyl	652984	689450	5.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.842 - 13.740) = 62806 Col1 Total PCB = 0.0 ppm*

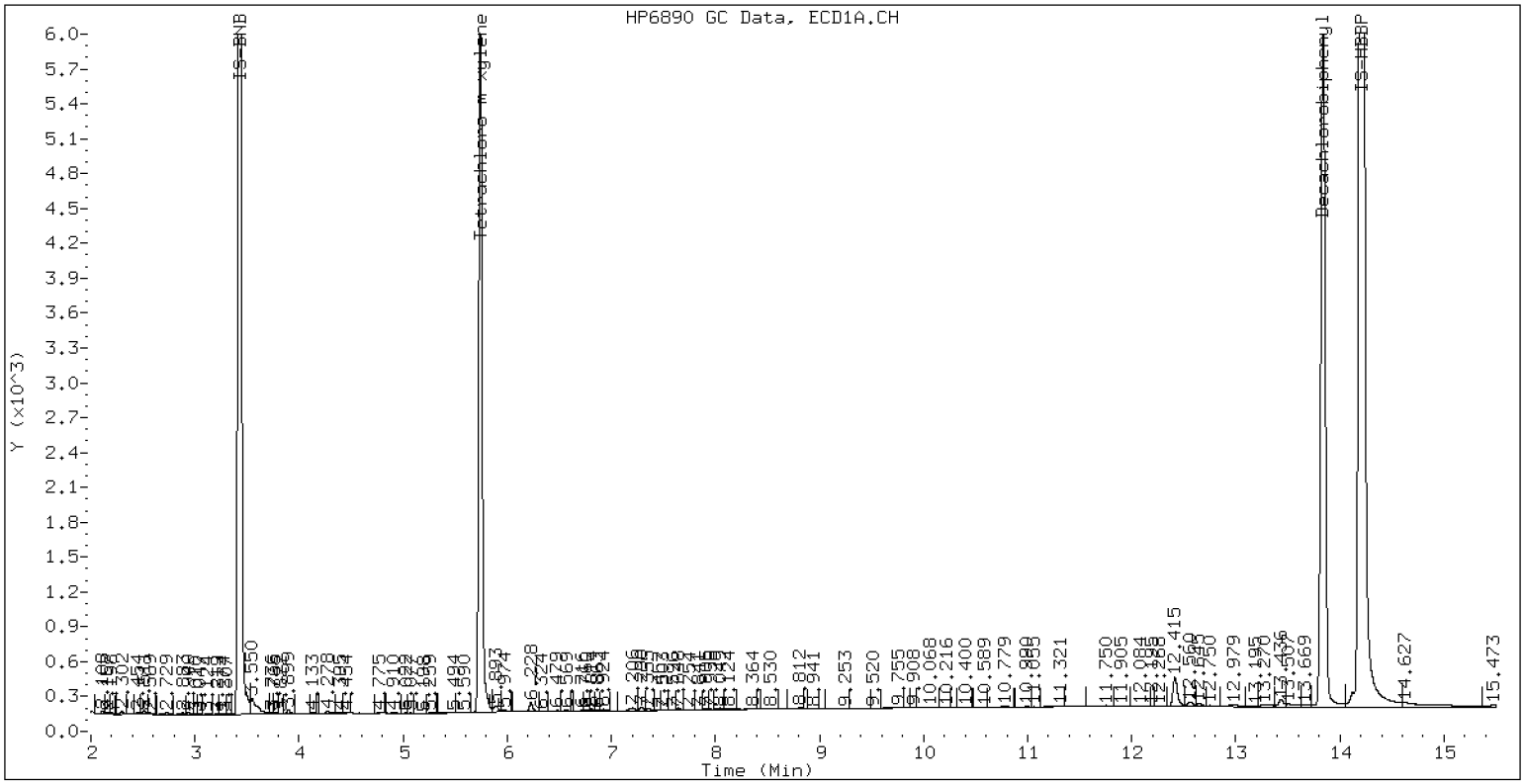
Total PCB Area Col2 (5.728 - 13.969) = 24939 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

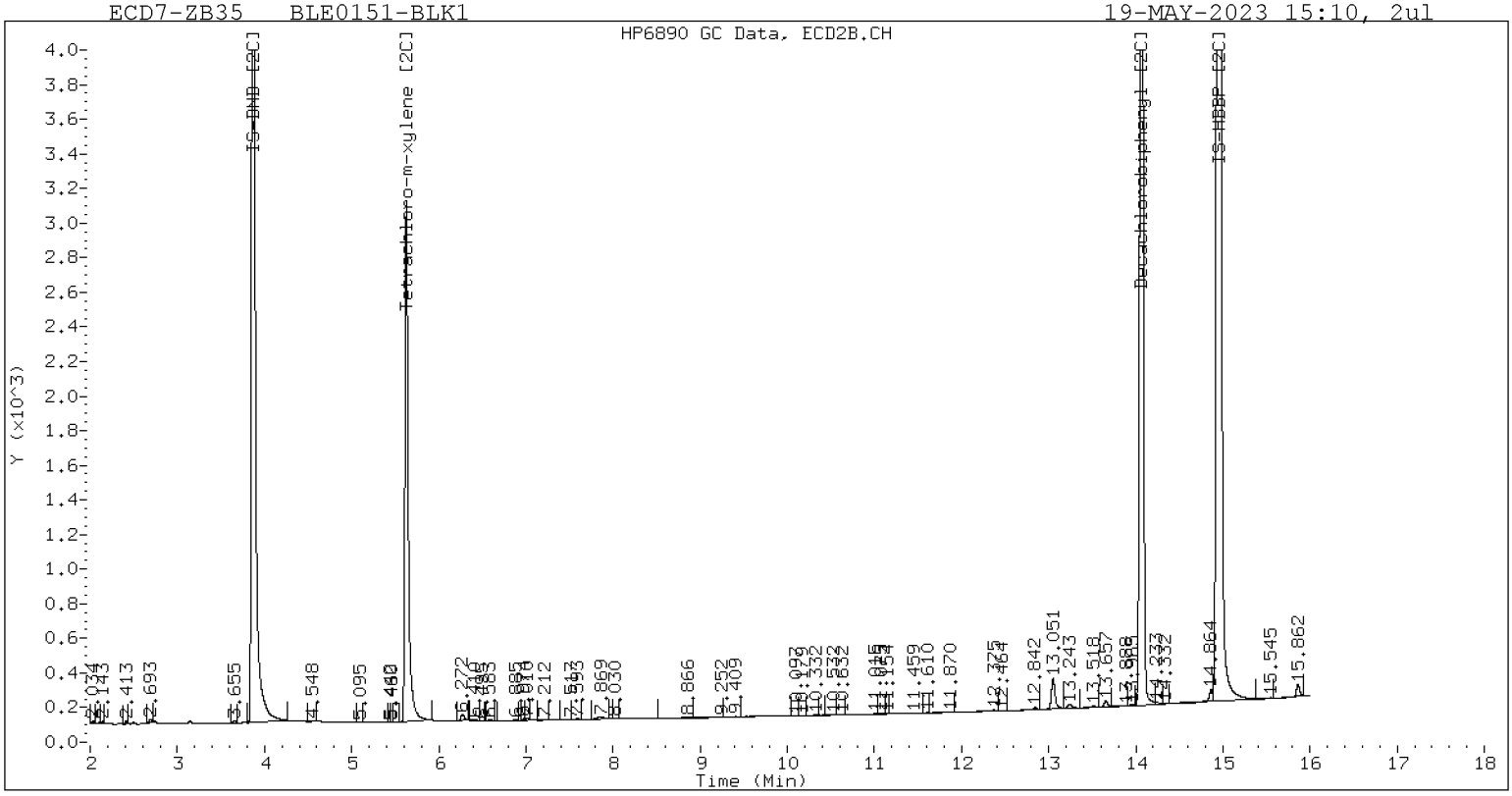
PCB Dual Column Chromatograms

ECD7-ZB5 BLE0151-BLK1 19-MAY-2023 15:10, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLE0151-BLK1 19-MAY-2023 15:10, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 15:30
Batch:	BLE0151	Laboratory ID:	BLE0151-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016	101	83.2		82.6	56 - 120
Aroclor 1260 [2C]	101	92.9		92.1	58 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016	101	88.4		87.7	5.97	30	56 - 120
Aroclor 1260 [2C]	101	97.7		96.9	5.04	30	58 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192305ECD7.D
Data file 2: /230519.b/230519.b/05192305ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLE0151-BS1
Client ID:
Injection Date: 19-MAY-2023 15:30
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	304938	5.628	-0.000	167196	32.3	30.7	5.1	Tetrachloro-m-xylene
13.838	-0.002	375222	14.068	-0.002	376798	35.6	37.9	6.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	626178	4.1
Hexabromobiphenyl	876625	1056277	20.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	395692	13.3
Hexabromobiphenyl	652984	700347	7.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	-0.001	97839	403.5	1	7.203	-0.001	81494	363.8
Aroclor-1016	2	7.592	-0.003	337116	444.7	2	7.804	-0.007	193385	405.1
Aroclor-1016	3	7.732	-0.003	140691	401.4	3	8.003	-0.005	79863	379.3
Aroclor-1016	4	8.396	-0.003	60003	414.9	4	8.256	-0.003	61068	365.1
Total Col1Ave (4 peaks):					416.1	Total Col2Ave (4 peaks):				378.4 RPD = 10
Corrected Ave (3 peaks):					406.6	Corrected Ave (3 peaks):				369.4 RPD = 10
Aroclor-1221	1	4.664	0.001	761	17.3	1	4.893	-0.001	357	12.2
Aroclor-1221	2	6.067	-0.002	11981	135.6	2	6.244	-0.001	8164	135.0
Aroclor-1221	3	6.320	-0.001	60816	289.8	3	6.569	-0.003	36153	380.0
Total Col1Ave (3 peaks):					147.6	Total Col2Ave (3 peaks):				175.7 RPD = 17
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.664	0.001	761	25.9	1	4.893	-0.001	357	23.3
Aroclor-1232	2	6.067	-0.002	11981	196.3	2	7.203	-0.002	81494	927.6
Aroclor-1232	3	7.592	-0.003	337116	1159.3	3	7.804	-0.011	193385	1095.8
Aroclor-1232	4	8.520	-0.007	133115	1069.5	4	8.663	-0.006	61470	1202.7
Total Col1Ave (4 peaks):					612.7	Total Col2Ave (4 peaks):				812.3 RPD = 28
Corrected Ave (3 peaks):					430.6	Corrected Ave (3 peaks):				682.2 RPD = 45*
Aroclor-1242	1	7.212	-0.001	97839	495.9	1	7.203	-0.002	81494	460.8
Aroclor-1242	2	7.592	-0.002	337116	539.2	2	7.804	-0.005	193385	514.0
Aroclor-1242	3	8.396	-0.002	60003	496.2	3	9.110	-0.009	11198	92.8
Aroclor-1242	4	8.520	-0.005	133115	475.6	4	9.534	-0.015	4483	30.8
Total Col1Ave (4 peaks):					501.7	Total Col2Ave (4 peaks):				274.6 RPD = 58*
Corrected Ave (3 peaks):					489.2	Corrected Ave (3 peaks):				194.8 RPD = 86*
Aroclor-1248	1	8.396	-0.004	60003	375.4	1	8.256	-0.003	61068	324.4
Aroclor-1248	2	8.520	-0.005	133115	320.5	2	8.663	-0.003	61470	309.1
Aroclor-1248	3	8.938	-0.006	134639	168.6	3	9.110	-0.009	11198	48.0
Aroclor-1248	4	9.243	0.002	113157	277.9	4	9.534	-0.009	4483	16.0
Total Col1Ave (4 peaks):					285.6	Total Col2Ave (4 peaks):				174.4 RPD = 48*
Corrected Ave (3 peaks):					255.7	Corrected Ave (3 peaks):				124.4 RPD = 69*
Aroclor-1254	1	9.243	-0.004	113157	175.8	1	9.399	-0.002	56998	189.6
Aroclor-1254	2	---			0.0	2	9.534	0.039	4483	25.1
Aroclor-1254	3	9.610	-0.005	22316	53.7	3	9.920	-0.001	12590	51.7
Aroclor-1254	4	9.747	-0.006	63786	78.4	4	10.096	0.022	126184	237.3
Aroclor-1254	5	10.065	-0.052	297757	605.8	5	10.320	-0.004	162959	308.9
Total Col1Ave (4 peaks):					228.4	Total Col2Ave (5 peaks):				162.5 RPD = 34
Corrected Ave (3 peaks):					102.6	Corrected Ave (4 peaks):				125.9 RPD = 20
Aroclor-1260	1	10.990	-0.004	234230	419.4	1	11.602	-0.004	169383	455.4
Aroclor-1260	2	11.306	-0.005	240517	436.3	2	11.867	-0.005	437638	449.8
Aroclor-1260	3	11.679	-0.006	603998	437.5	3	12.385	-0.003	120129	498.3
Aroclor-1260	4	12.083	-0.006	310610	459.4	4	12.451	-0.004	294956	453.9
Aroclor-1260	5	12.190	-0.003	125465	425.5	NS	---			----
Total Col1Ave (5 peaks):					435.6	Total Col2Ave (4 peaks):				464.4 RPD = 6
Corrected Ave (4 peaks):					429.7	Corrected Ave (3 peaks):				453.0 RPD = 5
Aroclor-1262	1	10.768	-0.010	469691	982.9	1	11.149	-0.004	160478	282.8
Aroclor-1262	2	12.190	-0.005	125465	186.7	2	11.602	-0.003	169383	353.9
Aroclor-1262	3	12.264	-0.005	150093	207.8	3	12.385	-0.001	120129	229.7
Aroclor-1262	4	12.932	-0.007	134636	228.7	4	12.451	-0.005	294956	346.0
Total Col1Ave (4 peaks):					401.5	Total Col2Ave (4 peaks):				303.1 RPD = 28
Corrected Ave (3 peaks):					207.7	Corrected Ave (3 peaks):				286.2 RPD = 32
Aroclor-1268	1	12.190	-0.006	125465	74.5	1	12.385	-0.000	120129	90.6
Aroclor-1268	2	12.264	-0.004	150093	89.7	2	12.451	-0.001	294956	207.0
Aroclor-1268	3	12.669	0.020	66694	49.6	3	12.840	-0.003	7963	6.5
Aroclor-1268	4	13.433	-0.004	42674	11.1	4	13.657	-0.006	35559	9.1
Total Col1Ave (4 peaks):					56.2	Total Col2Ave (4 peaks):				78.3 RPD = 33

Corrected Ave (3 peaks): 45.0 Corrected Ave (3 peaks): 35.4 RPD = 24

Total PCB Area Col1 (5.842 - 13.740) = 6442303 Col1 Total PCB = 0.9 ppm*

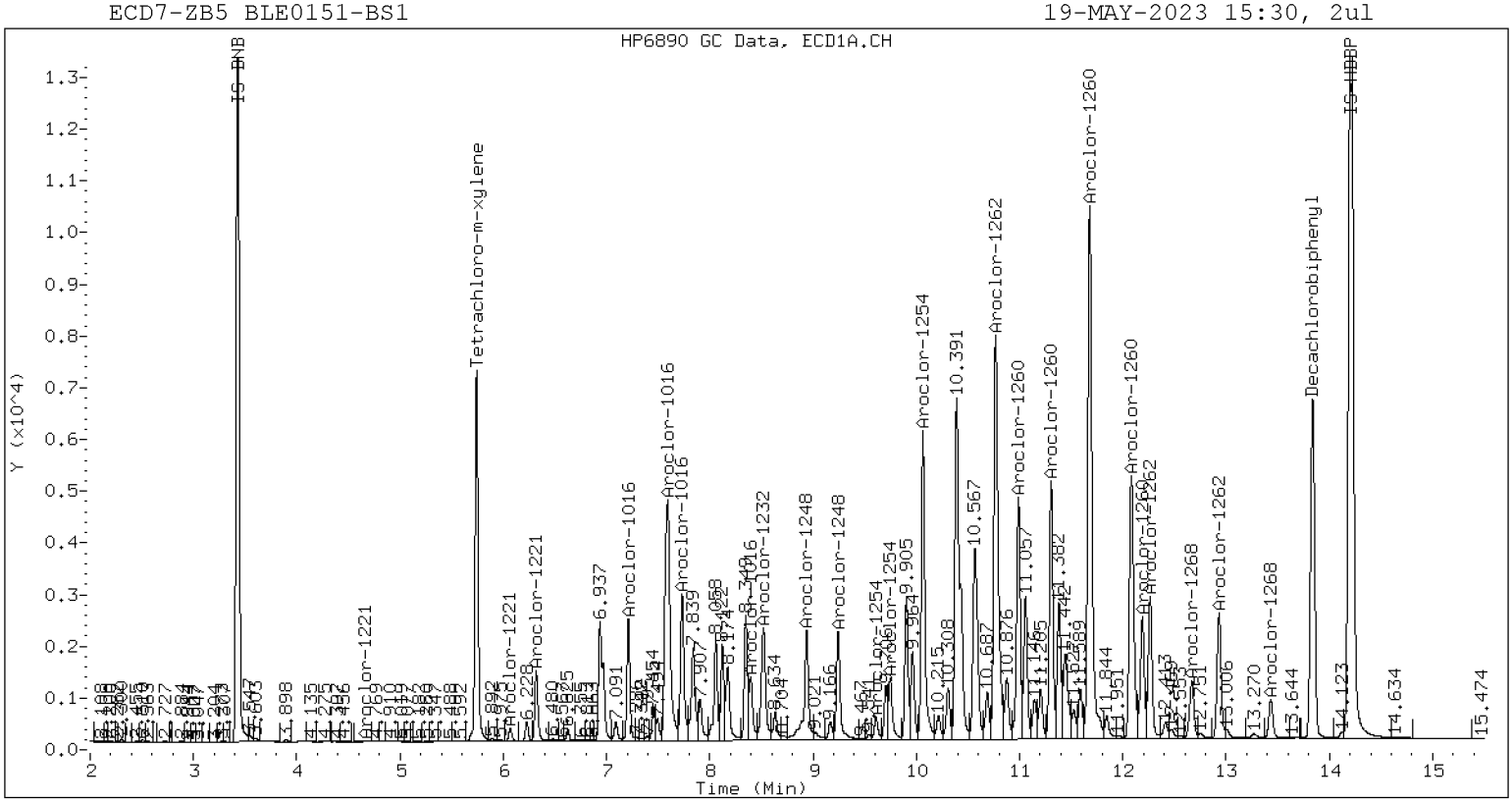
Total PCB Area Col2 (5.728 - 13.969) = 3933158 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

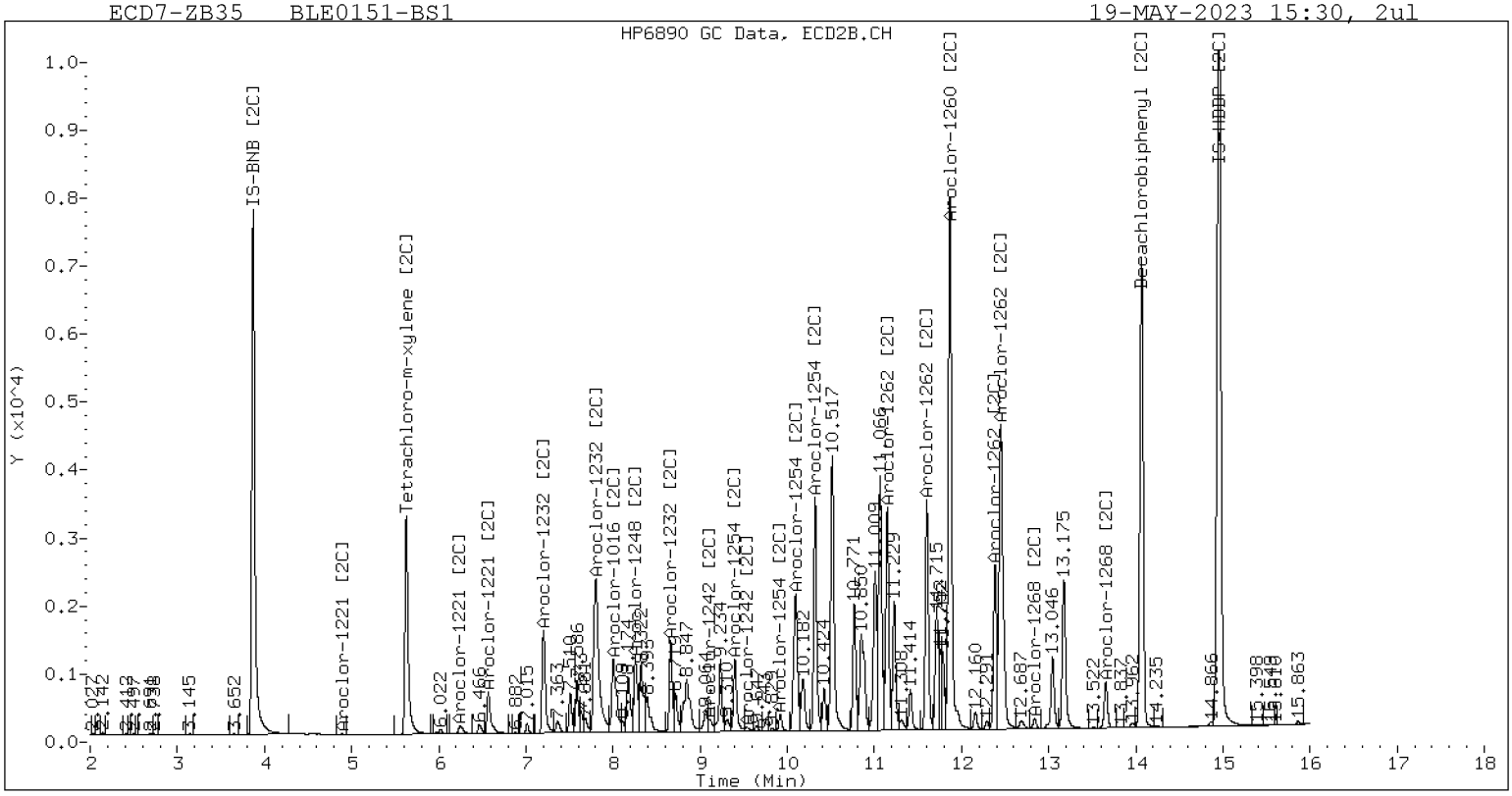
PCB Dual Column Chromatograms

ECD7-ZB5 BLE0151-BS1 19-MAY-2023 15:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLE0151-BS1 19-MAY-2023 15:30, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192306ECD7.D
Data file 2: /230519.b/230519.b/05192306ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLE0151-BSD1
Client ID:
Injection Date: 19-MAY-2023 15:51
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.001	319571	5.628	-0.000	169348	34.2	32.0	6.5	Tetrachloro-m-xylene
13.839	-0.001	389148	14.068	-0.001	391288	37.1	39.6	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	620302	3.1
Hexabromobiphenyl	876625	1048830	19.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	384150	10.0
Hexabromobiphenyl	652984	696097	6.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	-0.001	103516	431.0	1	7.202	-0.001	88098	405.1
Aroclor-1016	2	7.593	-0.002	359702	478.9	2	7.804	-0.007	203202	438.5
Aroclor-1016	3	7.732	-0.003	148668	428.2	3	8.002	-0.006	85139	416.5
Aroclor-1016	4	8.396	-0.003	61444	428.9	4	8.256	-0.003	64975	400.2
Total Col1Ave (4 peaks):					441.8	Total Col2Ave (4 peaks):				415.1 RPD = 6
Corrected Ave (3 peaks):					429.4	Corrected Ave (3 peaks):				407.3 RPD = 5
Aroclor-1221	1	4.663	-0.000	618	14.2	1	---			0.0
Aroclor-1221	2	6.067	-0.002	12415	141.8	2	6.244	-0.002	8558	145.7
Aroclor-1221	3	6.320	-0.001	64641	310.9	3	6.568	-0.003	38597	417.9
Total Col1Ave (3 peaks):					155.7	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.663	-0.000	618	21.3	1	---			0.0
Aroclor-1232	2	6.067	-0.002	12415	205.3	2	7.202	-0.002	88098	1032.9
Aroclor-1232	3	7.593	-0.002	359702	1248.7	3	7.804	-0.011	203202	1186.0
Aroclor-1232	4	8.521	-0.006	138884	1126.4	4	8.663	-0.006	64660	1303.1
Total Col1Ave (4 peaks):					650.4	Total Col2Ave (3 peaks):				1174.0 RPD = 57*
Corrected Ave (3 peaks):					451.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.212	-0.000	103516	529.6	1	7.202	-0.002	88098	513.2
Aroclor-1242	2	7.593	-0.002	359702	580.8	2	7.804	-0.005	203202	556.4
Aroclor-1242	3	8.396	-0.002	61444	512.9	3	9.110	-0.009	11856	101.3
Aroclor-1242	4	8.521	-0.004	138884	500.9	4	9.534	-0.016	5118	36.3
Total Col1Ave (4 peaks):					531.0	Total Col2Ave (4 peaks):				301.8 RPD = 55*
Corrected Ave (3 peaks):					514.5	Corrected Ave (3 peaks):				216.9 RPD = 81*
Aroclor-1248	1	8.396	-0.004	61444	388.1	1	8.256	-0.003	64975	355.5
Aroclor-1248	2	8.521	-0.004	138884	337.6	2	8.663	-0.003	64660	335.0
Aroclor-1248	3	8.938	-0.006	110306	139.4	3	9.110	-0.009	11856	52.4
Aroclor-1248	4	9.243	0.002	118439	293.6	4	9.534	-0.010	5118	18.9
Total Col1Ave (4 peaks):					289.7	Total Col2Ave (4 peaks):				190.4 RPD = 41*
Corrected Ave (3 peaks):					256.9	Corrected Ave (3 peaks):				135.4 RPD = 62*
Aroclor-1254	1	9.243	-0.004	118439	185.8	1	9.399	-0.002	59936	205.4
Aroclor-1254	2	---			0.0	2	9.534	0.038	5118	29.5
Aroclor-1254	3	9.610	-0.005	23365	56.8	3	9.919	-0.002	12832	54.2
Aroclor-1254	4	9.746	-0.007	68243	84.7	4	10.095	0.021	133110	257.8
Aroclor-1254	5	10.064	-0.053	313333	643.6	5	10.320	-0.004	171105	334.0
Total Col1Ave (4 peaks):					242.7	Total Col2Ave (5 peaks):				176.2 RPD = 32
Corrected Ave (3 peaks):					109.1	Corrected Ave (4 peaks):				136.7 RPD = 23
Aroclor-1260	1	10.990	-0.004	247879	446.9	1	11.602	-0.004	178168	481.9
Aroclor-1260	2	11.307	-0.004	255147	466.2	2	11.865	-0.007	441594	456.7
Aroclor-1260	3	11.679	-0.006	639829	466.8	3	12.384	-0.004	127890	533.7
Aroclor-1260	4	12.082	-0.007	329538	490.8	4	12.449	-0.006	310746	481.1
Aroclor-1260	5	12.190	-0.003	132659	453.1	NS	---			----
Total Col1Ave (5 peaks):					464.8	Total Col2Ave (4 peaks):				488.4 RPD = 5
Corrected Ave (4 peaks):					458.2	Corrected Ave (3 peaks):				473.2 RPD = 3
Aroclor-1262	1	10.769	-0.009	495368	1044.0	1	11.148	-0.005	168589	298.9
Aroclor-1262	2	12.190	-0.004	132659	198.8	2	11.602	-0.003	178168	374.5
Aroclor-1262	3	12.265	-0.004	159961	223.0	3	12.384	-0.002	127890	246.0
Aroclor-1262	4	12.932	-0.007	143564	245.6	4	12.449	-0.007	310746	366.8
Total Col1Ave (4 peaks):					427.9	Total Col2Ave (4 peaks):				321.6 RPD = 28
Corrected Ave (3 peaks):					222.5	Corrected Ave (3 peaks):				303.9 RPD = 31
Aroclor-1268	1	12.190	-0.005	132659	79.3	1	12.384	-0.001	127890	97.1
Aroclor-1268	2	12.265	-0.003	159961	96.3	2	12.449	-0.003	310746	219.4
Aroclor-1268	3	12.668	0.019	71305	53.4	3	12.840	-0.003	8527	7.0
Aroclor-1268	4	13.434	-0.003	45649	12.0	4	13.657	-0.006	37912	9.8
Total Col1Ave (4 peaks):					60.2	Total Col2Ave (4 peaks):				83.3 RPD = 32
Corrected Ave (3 peaks):					48.2	Corrected Ave (3 peaks):				38.0 RPD = 24

Total PCB Area Col1 (5.842 - 13.740) = 6780749 Col1 Total PCB = 1.0 ppm*

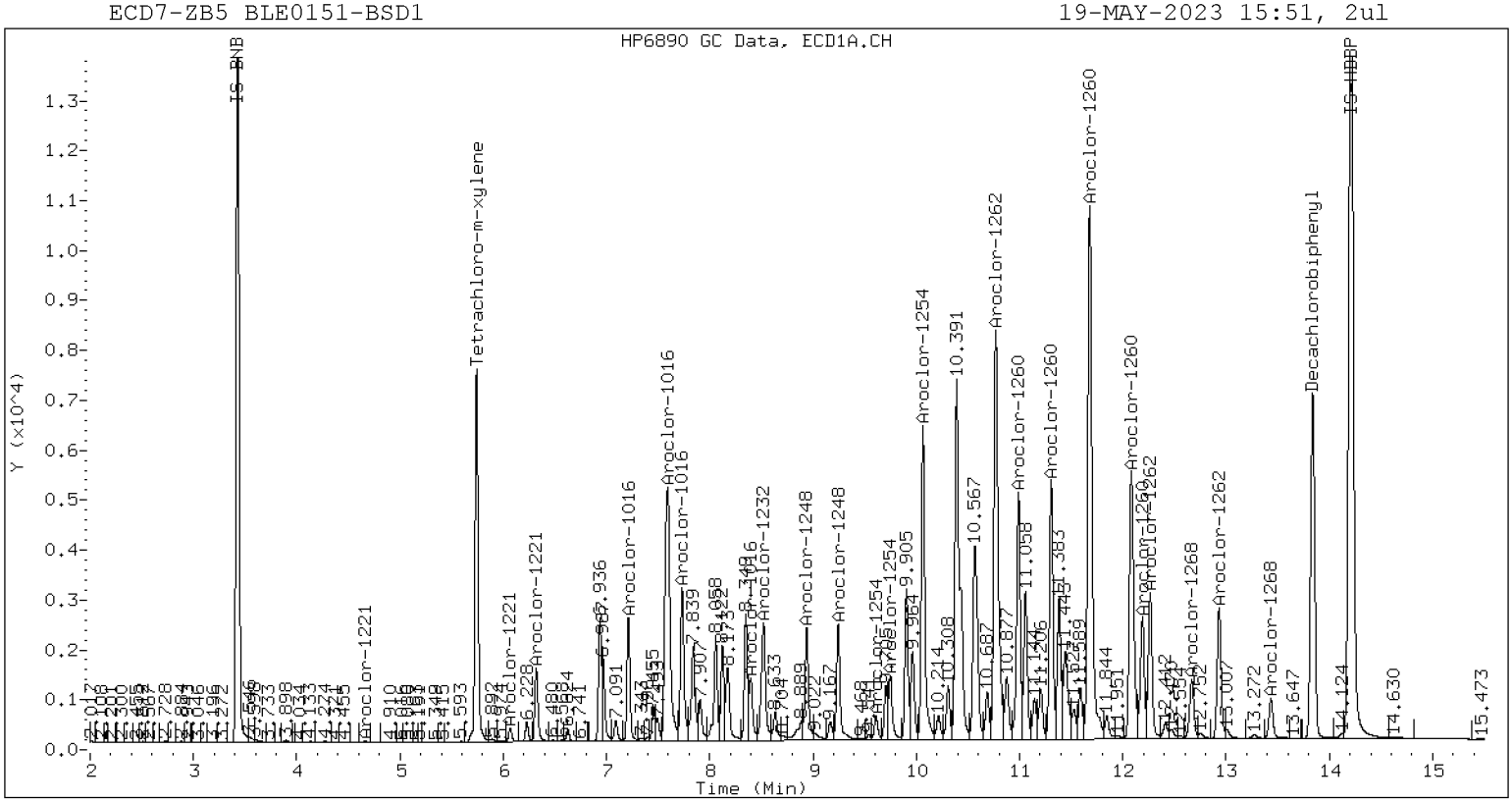
Total PCB Area Col2 (5.728 - 13.969) = 4164177 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

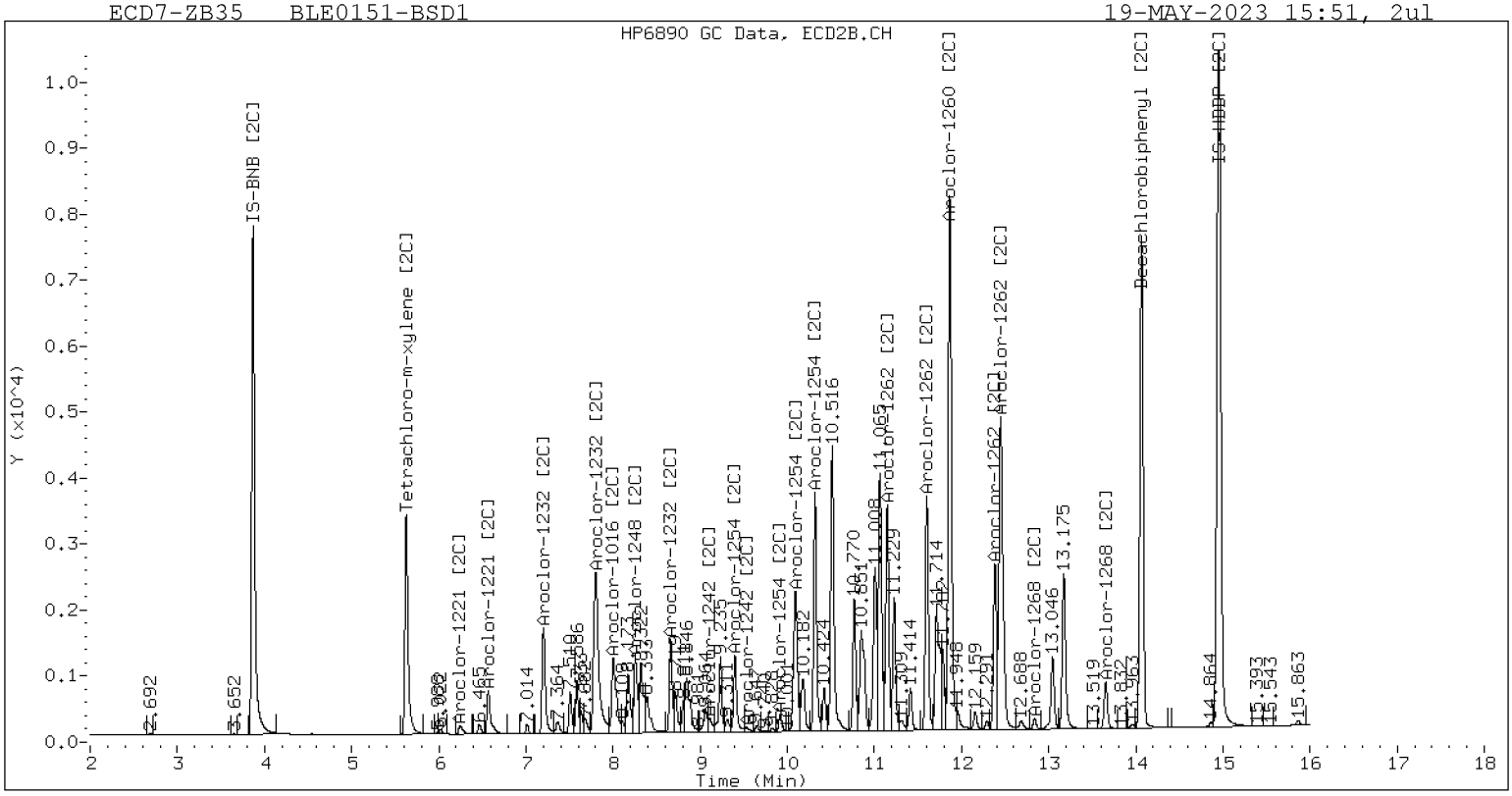
PCB Dual Column Chromatograms

ECD7-ZB5 BLE0151-BSD1 19-MAY-2023 15:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLE0151-BSD1 19-MAY-2023 15:51, 2ul



ZB-35 Manual Integration: NO

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 16:54
Batch:	BLE0151	Laboratory ID:	BLE0151-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	18.04 g / 2.5 mL	Source Sample:	LDW23-SS1811

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	101	ND	U	102		101	56 - 120
Aroclor 1260 [2C]	101	42.8		144		100	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 17:15
Batch:	BLE0151	Laboratory ID:	BLE0151-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	18.04 g / 2.5 mL	Source Sample:	LDW23-SS1811

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1016	101	97.4		96.7	4.29	30	56 - 120
Aroclor 1260 [2C]	101	174		130 *	19.0	30	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192309ECD7.D
Data file 2: /230519.b/230519.b/05192309ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLE0151-MS1
Client ID:
Injection Date: 19-MAY-2023 16:54
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.002	220114	5.624	-0.004	140397	26.5	30.8	15.3	Tetrachloro-m-xylene
13.831	-0.009	170599	14.061	-0.008	185592	35.0	34.4	1.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	552412	-8.2
Hexabromobiphenyl	876625	487713	-44.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	331013	-5.2
Hexabromobiphenyl	652984	379661	-41.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.210	-0.003	97219	454.5	1	7.199	-0.005	99917	533.2
Aroclor-1016	2	7.587	-0.008	371742	555.8	2	7.792	-0.018	249285	624.3
Aroclor-1016	3	7.726	-0.009	126308	408.5	3	7.992	-0.016	87097	494.5
Aroclor-1016	4	8.392	-0.007	78527	615.6	4	8.250	-0.010	106649	762.3
Total Col1Ave (4 peaks):					508.6	Total Col2Ave (4 peaks):				603.6 RPD = 17
Corrected Ave (3 peaks):					472.9	Corrected Ave (3 peaks):				550.7 RPD = 15
Aroclor-1221	1	4.663	0.000	1860	47.9	1	4.884	-0.011	1685	69.0
Aroclor-1221	2	6.067	-0.002	11553	148.2	2	6.239	-0.006	8509	168.2
Aroclor-1221	3	6.319	-0.002	59813	323.1	3	6.564	-0.008	37375	469.6
Total Col1Ave (3 peaks):					173.1	Total Col2Ave (3 peaks):				235.6 RPD = 31
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.663	-0.000	1860	71.9	1	4.884	-0.010	1685	131.3
Aroclor-1232	2	6.067	-0.002	11553	214.5	2	7.199	-0.006	99917	1359.5
Aroclor-1232	3	7.587	-0.008	371742	1449.1	3	7.792	-0.023	249285	1688.5
Aroclor-1232	4	8.512	-0.015	135100	1230.4	4	8.655	-0.014	103145	2412.4
Total Col1Ave (4 peaks):					741.5	Total Col2Ave (4 peaks):				1397.9 RPD = 61*
Corrected Ave (3 peaks):					505.6	Corrected Ave (3 peaks):				1059.8 RPD = 71*
Aroclor-1242	1	7.210	-0.003	97219	558.5	1	7.199	-0.006	99917	675.4
Aroclor-1242	2	7.587	-0.007	371742	674.0	2	7.792	-0.017	249285	792.1
Aroclor-1242	3	8.392	-0.007	78527	736.1	3	9.090	-0.029	76752	760.7
Aroclor-1242	4	8.512	-0.013	135100	547.2	4	9.567	0.018	7957	65.4
Total Col1Ave (4 peaks):					628.9	Total Col2Ave (4 peaks):				573.4 RPD = 9
Corrected Ave (3 peaks):					593.2	Corrected Ave (3 peaks):				500.5 RPD = 17
Aroclor-1248	1	8.392	-0.008	78527	556.9	1	8.250	-0.009	106649	677.3
Aroclor-1248	2	8.512	-0.013	135100	368.7	2	8.655	-0.011	103145	620.1
Aroclor-1248	3	8.931	-0.013	206155	292.6	3	9.090	-0.029	76752	393.6
Aroclor-1248	4	9.234	-0.007	203653	567.0	4	9.567	0.024	7957	34.0
Total Col1Ave (4 peaks):					446.3	Total Col2Ave (4 peaks):				431.3 RPD = 3
Corrected Ave (3 peaks):					406.1	Corrected Ave (3 peaks):				349.3 RPD = 15
Aroclor-1254	1	9.234	-0.013	203653	358.7	1	9.388	-0.012	124620	495.5
Aroclor-1254	2	9.309	-0.014	76119	298.4	2	9.484	-0.012	83651	559.9
Aroclor-1254	3	9.609	-0.005	143905	392.6	3	9.907	-0.015	45945	225.4
Aroclor-1254	4	9.734	-0.019	268603	374.1	4	10.056	-0.018	232415	522.4
Aroclor-1254	5	10.060	-0.057	356110	821.3	5	10.308	-0.015	274486	621.9
Total Col1Ave (5 peaks):					449.0	Total Col2Ave (5 peaks):				485.0 RPD = 8
Corrected Ave (4 peaks):					356.0	Corrected Ave (4 peaks):				450.8 RPD = 24
Aroclor-1260	1	10.980	-0.014	147223	570.9	1	11.593	-0.013	147131	729.7
Aroclor-1260	2	11.296	-0.015	140449	551.8	2	11.854	-0.018	337077	639.1
Aroclor-1260	3	11.666	-0.020	383989	602.4	3	12.373	-0.015	117025	895.4
Aroclor-1260	4	12.066	-0.023	189905	608.3	4	12.437	-0.018	216248	613.8
Aroclor-1260	5	12.180	-0.013	72759	534.5	NS	---			----
Total Col1Ave (5 peaks):					573.6	Total Col2Ave (4 peaks):				719.5 RPD = 23
Corrected Ave (4 peaks):					564.9	Corrected Ave (3 peaks):				660.9 RPD = 16
Aroclor-1262	1	10.755	-0.024	402811	1825.7	1	11.140	-0.014	126959	412.7
Aroclor-1262	2	12.180	-0.015	72759	234.5	2	11.593	-0.012	147131	567.1
Aroclor-1262	3	12.254	-0.015	87859	263.4	3	12.373	-0.013	117025	412.8
Aroclor-1262	4	12.919	-0.020	90214	331.9	4	12.437	-0.019	216248	468.0
Total Col1Ave (4 peaks):					663.9	Total Col2Ave (4 peaks):				465.1 RPD = 35
Corrected Ave (3 peaks):					276.6	Corrected Ave (3 peaks):				431.1 RPD = 44*
Aroclor-1268	1	12.180	-0.016	72759	93.5	1	12.373	-0.012	117025	162.9
Aroclor-1268	2	12.254	-0.014	87859	113.7	2	12.437	-0.015	216248	280.0
Aroclor-1268	3	12.655	0.007	43347	69.8	3	12.836	-0.007	9816	14.8
Aroclor-1268	4	13.423	-0.014	30374	17.1	4	13.648	-0.016	34926	16.5
Total Col1Ave (4 peaks):					73.5	Total Col2Ave (4 peaks):				118.5 RPD = 47*

Corrected Ave (3 peaks): 60.1 Corrected Ave (3 peaks): 64.7 RPD = 7

Total PCB Area Col1 (5.842 - 13.740) = 6552687 Col1 Total PCB = 1.1 ppm*

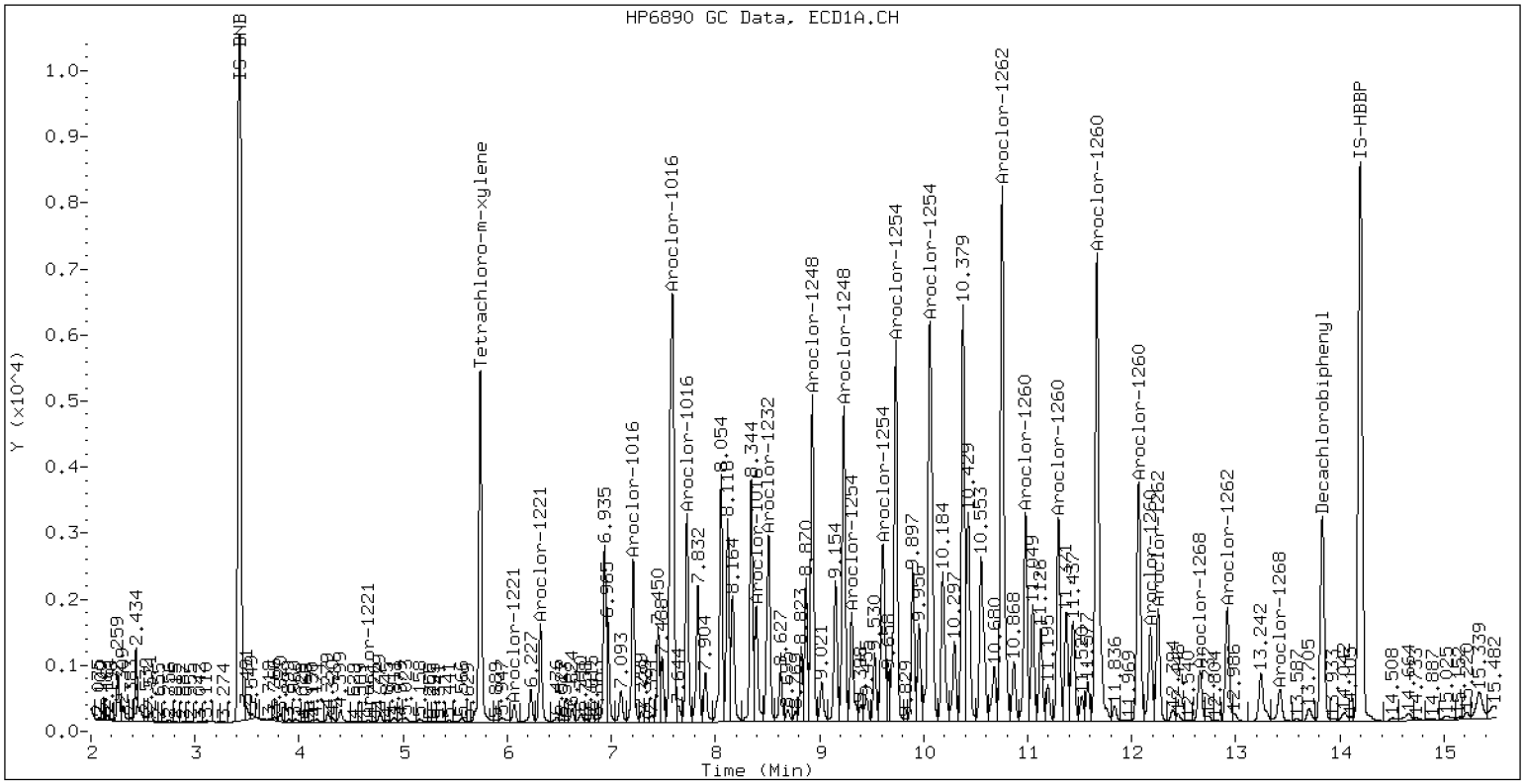
Total PCB Area Col2 (5.728 - 13.969) = 4940229 Col2 Total PCB = 1.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

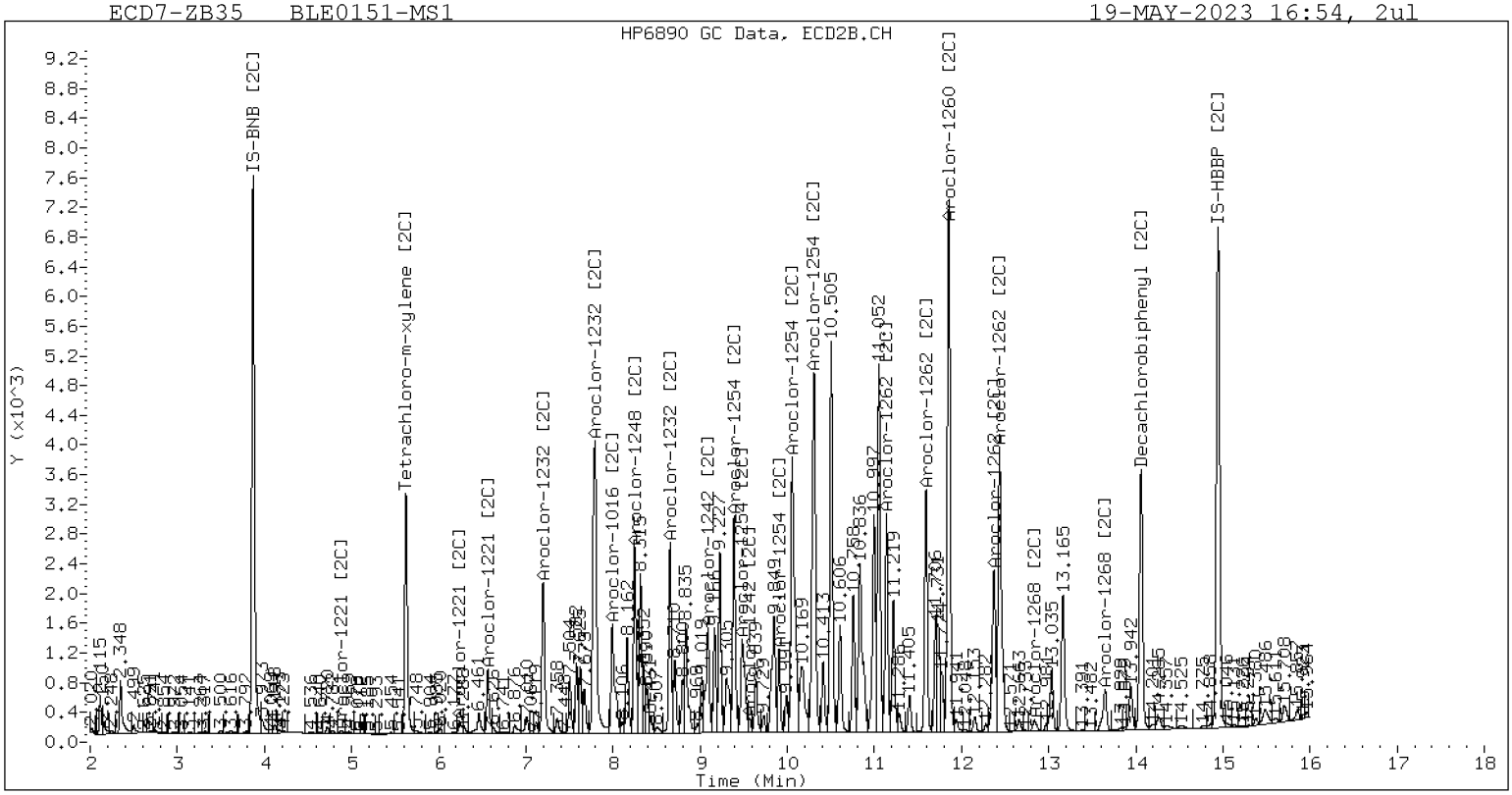
PCB Dual Column Chromatograms

ECD7-ZB5 BLE0151-MS1 19-MAY-2023 16:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLE0151-MS1 19-MAY-2023 16:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192310ECD7.D
Data file 2: /230519.b/230519.b/05192310ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLE0151-MSD1
Client ID:
Injection Date: 19-MAY-2023 17:15
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	209612	5.624	-0.004	137148	25.1	29.2	14.9	Tetrachloro-m-xylene
13.832	-0.009	156039	14.061	-0.009	176262	32.2	33.3	3.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	554123	-7.9
Hexabromobiphenyl	876625	485832	-44.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	341946	-2.1
Hexabromobiphenyl	652984	372405	-43.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.210	-0.003	80267	374.1	1	7.198	-0.006	81856	422.9
Aroclor-1016	2	7.587	-0.008	314247	468.4	2	7.792	-0.018	203817	494.1
Aroclor-1016	3	7.726	-0.008	107286	345.9	3	7.993	-0.015	73758	405.4
Aroclor-1016	4	8.389	-0.010	97321	760.5	4	8.250	-0.009	166980	1155.3
Total Col1Ave (4 peaks):		487.2				Total Col2Ave (4 peaks):		619.4	RPD = 24	
Corrected Ave (3 peaks):		396.1				Corrected Ave (3 peaks):		440.8	RPD = 11	
Aroclor-1221	1	4.664	0.001	1233	31.6	1	4.884	-0.010	1460	57.9
Aroclor-1221	2	6.067	-0.002	10267	131.3	2	6.239	-0.006	9438	180.5
Aroclor-1221	3	6.319	-0.002	51970	279.8	3	6.564	-0.007	35166	427.7
Total Col1Ave (3 peaks):		147.6				Total Col2Ave (3 peaks):		222.0	RPD = 40*	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.664	0.001	1233	47.5	1	4.884	-0.010	1460	110.1
Aroclor-1232	2	6.067	-0.002	10267	190.1	2	7.198	-0.007	81856	1078.1
Aroclor-1232	3	7.587	-0.008	314247	1221.2	3	7.792	-0.023	203817	1336.4
Aroclor-1232	4	8.511	-0.016	149429	1356.7	4	8.655	-0.014	135946	3077.9
Total Col1Ave (4 peaks):		703.8				Total Col2Ave (4 peaks):		1400.6	RPD = 66*	
Corrected Ave (3 peaks):		486.2				Corrected Ave (3 peaks):		841.5	RPD = 54*	
Aroclor-1242	1	7.210	-0.003	80267	459.7	1	7.198	-0.007	81856	535.6
Aroclor-1242	2	7.587	-0.007	314247	568.0	2	7.792	-0.017	203817	626.9
Aroclor-1242	3	8.389	-0.010	97321	909.4	3	9.091	-0.029	79881	766.4
Aroclor-1242	4	8.511	-0.014	149429	603.3	4	9.569	0.019	21121	168.1
Total Col1Ave (4 peaks):		635.1				Total Col2Ave (4 peaks):		524.3	RPD = 19	
Corrected Ave (3 peaks):		543.7				Corrected Ave (3 peaks):		443.6	RPD = 20	
Aroclor-1248	1	8.389	-0.011	97321	688.1	1	8.250	-0.009	166980	1026.5
Aroclor-1248	2	8.511	-0.015	149429	406.6	2	8.655	-0.011	135946	791.2
Aroclor-1248	3	8.933	-0.011	397962	563.0	3	9.091	-0.028	79881	396.6
Aroclor-1248	4	9.233	-0.007	438299	1216.4	4	9.569	0.026	21121	87.4
Total Col1Ave (4 peaks):		718.5				Total Col2Ave (4 peaks):		575.4	RPD = 22	
Corrected Ave (3 peaks):		552.6				Corrected Ave (3 peaks):		425.1	RPD = 26	
Aroclor-1254	1	9.233	-0.014	438299	769.6	1	9.389	-0.012	243165	936.0
Aroclor-1254	2	9.309	-0.014	194217	759.0	2	9.482	-0.014	154944	1003.9
Aroclor-1254	3	9.602	-0.012	213860	581.7	3	9.907	-0.014	91844	436.1
Aroclor-1254	4	9.734	-0.019	681816	946.8	4	10.057	-0.017	529936	1153.2
Aroclor-1254	5	10.069	-0.048	829216	1906.6	5	10.301	-0.022	616669	1352.5
Total Col1Ave (5 peaks):		992.7				Total Col2Ave (5 peaks):		976.4	RPD = 2	
Corrected Ave (4 peaks):		764.3				Corrected Ave (4 peaks):		882.3	RPD = 14	
Aroclor-1260	1	10.980	-0.014	165488	644.2	1	11.594	-0.012	229457	1160.2
Aroclor-1260	2	11.295	-0.015	156496	617.2	2	11.856	-0.016	395425	764.4
Aroclor-1260	3	11.666	-0.019	388180	611.3	3	12.374	-0.014	105491	822.9
Aroclor-1260	4	12.067	-0.023	241630	777.0	4	12.439	-0.016	253931	734.8
Aroclor-1260	5	12.181	-0.012	72946	537.9	NS	---			----
Total Col1Ave (5 peaks):		637.5				Total Col2Ave (4 peaks):		870.6	RPD = 31	
Corrected Ave (4 peaks):		602.7				Corrected Ave (3 peaks):		774.0	RPD = 25	
Aroclor-1262	1	10.756	-0.022	870327	3959.9	1	11.140	-0.013	138861	460.2
Aroclor-1262	2	12.181	-0.014	72946	236.0	2	11.594	-0.011	229457	901.6
Aroclor-1262	3	12.253	-0.016	88342	265.9	3	12.374	-0.012	105491	379.3
Aroclor-1262	4	12.921	-0.018	84421	311.8	4	12.439	-0.017	253931	560.2
Total Col1Ave (4 peaks):		1193.4				Total Col2Ave (4 peaks):		575.3	RPD = 70*	
Corrected Ave (3 peaks):		271.2				Corrected Ave (3 peaks):		466.6	RPD = 53*	
Aroclor-1268	1	12.181	-0.015	72946	94.1	1	12.374	-0.011	105491	149.7
Aroclor-1268	2	12.253	-0.015	88342	114.8	2	12.439	-0.014	253931	335.1
Aroclor-1268	3	12.656	0.008	43147	69.7	3	12.837	-0.006	9533	14.7
Aroclor-1268	4	13.423	-0.014	27758	15.7	4	13.648	-0.015	28145	13.5
Total Col1Ave (4 peaks):		73.6				Total Col2Ave (4 peaks):		128.3	RPD = 54*	

Corrected Ave (3 peaks): 59.9 Corrected Ave (3 peaks): 59.3 RPD = 1

Total PCB Area Col1 (5.842 - 13.740) = 9949008 Col1 Total PCB = 1.6 ppm*

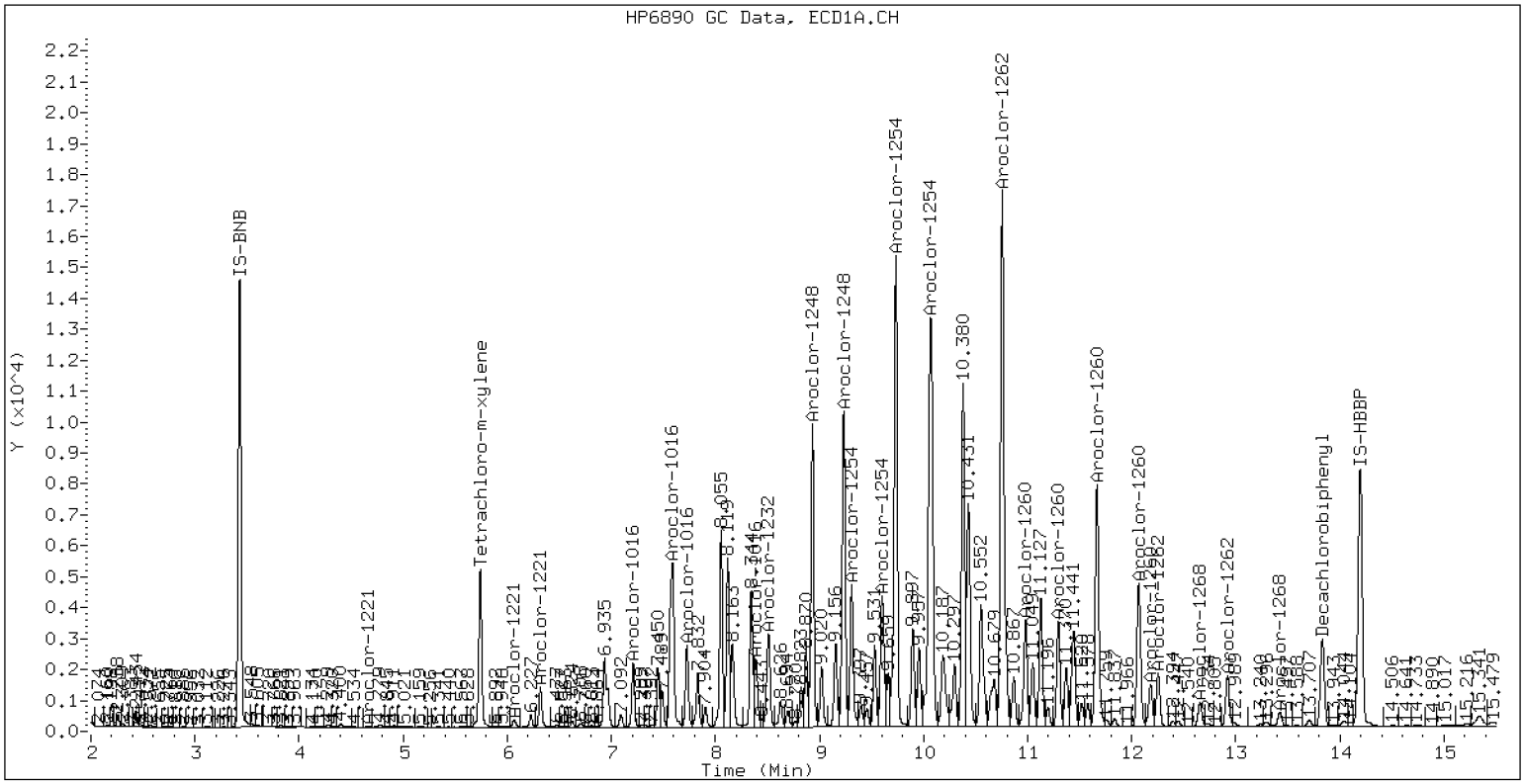
Total PCB Area Col2 (5.728 - 13.969) = 7362386 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

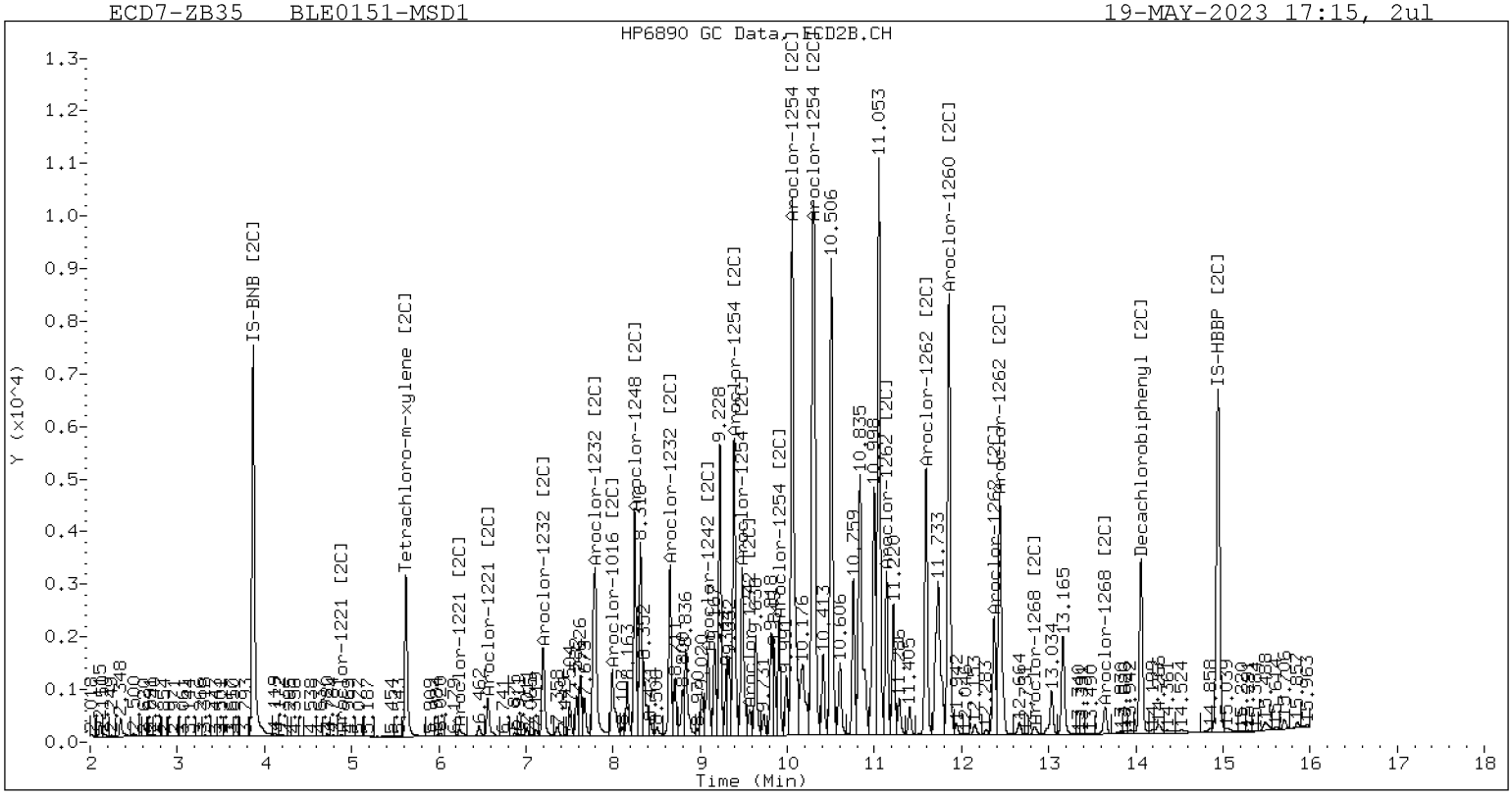
PCB Dual Column Chromatograms

ECD7-ZB5 BLE0151-MSD1 19-MAY-2023 17:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLE0151-MSD1 19-MAY-2023 17:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0151-SRM1
Batch: BLE0151
Initial/Final: 2.5 g / 2.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 05/19/2023 16:12
Standard ID: K003635
Expires: 10/15/2022
Standard Lot#: PSRM0152
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Aroclor 1260	108.00	97.8	2.9	20.0		90.5	38 - 167
Aroclor 1260 [2C]	108.00	119	2.9	20.0		110	38 - 167

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192307ECD7.D
Data file 2: /230519.b/230519.b/05192307ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLE0151-SRM1
Client ID:
Injection Date: 19-MAY-2023 16:12
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.001	289533	5.627	-0.001	167263	31.5	32.0	1.4	Tetrachloro-m-xylene
13.833	-0.007	276910	14.064	-0.006	262097	34.7	33.1	4.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	609944	1.4
Hexabromobiphenyl	876625	798566	-8.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	380503	8.9
Hexabromobiphenyl	652984	557532	-14.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.206	-0.007	4056	17.2	1	7.205	0.002	3985	18.5
Aroclor-1016	2	7.591	-0.004	10491	14.2	2	7.803	-0.008	9382	20.4
Aroclor-1016	3	7.732	-0.002	4697	13.8	3	7.998	-0.010	1587	7.8
Aroclor-1016	4	8.395	-0.004	4567	32.4	4	8.253	-0.006	7016	43.6
Total Col1Ave (4 peaks):					19.4	Total Col2Ave (4 peaks):				22.6 RPD = 15
Corrected Ave (3 peaks):					15.0	Corrected Ave (3 peaks):				15.6 RPD = 4
Aroclor-1221	1	4.625	-0.039	179	4.2	1	4.881	-0.013	451	16.1
Aroclor-1221	2	6.065	-0.004	781	9.1	2	6.284	0.038	4702	80.8
Aroclor-1221	3	6.325	0.004	2499	12.2	3	6.584	0.012	1775	19.4
Total Col1Ave (3 peaks):					8.5	Total Col2Ave (3 peaks):				38.8 RPD = 128*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.625	-0.039	179	6.3	1	4.881	-0.013	451	30.6
Aroclor-1232	2	6.065	-0.004	781	13.1	2	7.205	0.001	3985	47.2
Aroclor-1232	3	7.591	-0.004	10491	37.0	3	7.803	-0.012	9382	55.3
Aroclor-1232	4	8.514	-0.012	8301	68.5	4	8.659	-0.010	4848	98.6
Total Col1Ave (4 peaks):					31.2	Total Col2Ave (4 peaks):				57.9 RPD = 60*
Corrected Ave (3 peaks):					18.8	Corrected Ave (3 peaks):				44.3 RPD = 81*
Aroclor-1242	1	7.206	-0.007	4056	21.1	1	7.205	0.001	3985	23.4
Aroclor-1242	2	7.591	-0.004	10491	17.2	2	7.803	-0.007	9382	25.9
Aroclor-1242	3	8.395	-0.004	4567	38.8	3	9.099	-0.021	7036	60.7
Aroclor-1242	4	8.514	-0.010	8301	30.4	4	9.487	-0.062	12004	85.9
Total Col1Ave (4 peaks):					26.9	Total Col2Ave (4 peaks):				49.0 RPD = 58*
Corrected Ave (3 peaks):					22.9	Corrected Ave (3 peaks):				36.7 RPD = 46*
Aroclor-1248	1	8.395	-0.006	4567	29.3	1	8.253	-0.006	7016	38.8
Aroclor-1248	2	8.514	-0.011	8301	20.5	2	8.659	-0.007	4848	25.4
Aroclor-1248	3	8.936	-0.009	25597	32.9	3	9.099	-0.020	7036	31.4
Aroclor-1248	4	9.236	-0.005	37693	95.0	4	9.487	-0.056	12004	44.7
Total Col1Ave (4 peaks):					44.4	Total Col2Ave (4 peaks):				35.0 RPD = 24
Corrected Ave (3 peaks):					27.6	Corrected Ave (3 peaks):				31.8 RPD = 14
Aroclor-1254	1	9.236	-0.011	37693	60.1	1	9.393	-0.008	20729	71.7
Aroclor-1254	2	9.311	-0.012	13599	48.3	2	9.487	-0.008	12004	69.9
Aroclor-1254	3	9.606	-0.009	22602	55.8	3	9.911	-0.010	10401	44.4
Aroclor-1254	4	9.737	-0.016	50930	64.2	4	10.063	-0.011	40121	78.5
Aroclor-1254	5	10.060	-0.057	79391	165.8	5	10.312	-0.012	52264	103.0
Total Col1Ave (5 peaks):					78.9	Total Col2Ave (5 peaks):				73.5 RPD = 7
Corrected Ave (4 peaks):					57.1	Corrected Ave (4 peaks):				66.1 RPD = 15
Aroclor-1260	1	10.982	-0.012	42804	101.4	1	11.596	-0.010	36940	124.8
Aroclor-1260	2	11.296	-0.015	34263	82.2	2	11.857	-0.015	82393	106.4
Aroclor-1260	3	11.668	-0.017	104520	100.1	3	12.375	-0.013	26888	140.1
Aroclor-1260	4	12.069	-0.020	55088	107.8	4	12.441	-0.014	53191	102.8
Aroclor-1260	5	12.184	-0.009	21684	97.3	NS	---			----
Total Col1Ave (5 peaks):					97.8	Total Col2Ave (4 peaks):				118.5 RPD = 19
Corrected Ave (4 peaks):					95.3	Corrected Ave (3 peaks):				111.3 RPD = 16
Aroclor-1262	1	10.758	-0.021	102359	283.3	1	11.142	-0.011	32565	72.1
Aroclor-1262	2	12.184	-0.011	21684	42.7	2	11.596	-0.009	36940	97.0
Aroclor-1262	3	12.256	-0.013	27205	49.8	3	12.375	-0.011	26888	64.6
Aroclor-1262	4	12.921	-0.017	28973	65.1	4	12.441	-0.015	53191	78.4
Total Col1Ave (4 peaks):					110.2	Total Col2Ave (4 peaks):				78.0 RPD = 34
Corrected Ave (3 peaks):					52.5	Corrected Ave (3 peaks):				71.7 RPD = 31
Aroclor-1268	1	12.184	-0.012	21684	17.0	1	12.375	-0.010	26888	25.5
Aroclor-1268	2	12.256	-0.012	27205	21.5	2	12.441	-0.011	53191	46.9
Aroclor-1268	3	12.658	0.010	13470	13.2	3	12.837	-0.006	2139	2.2
Aroclor-1268	4	13.426	-0.011	6938	2.4	4	13.651	-0.013	8326	2.7
Total Col1Ave (4 peaks):					13.5	Total Col2Ave (4 peaks):				19.3 RPD = 35

Corrected Ave (3 peaks): 10.9 Corrected Ave (3 peaks): 10.1 RPD = 7

Total PCB Area Col1 (5.842 - 13.740) = 1258884 Col1 Total PCB = 0.2 ppm*

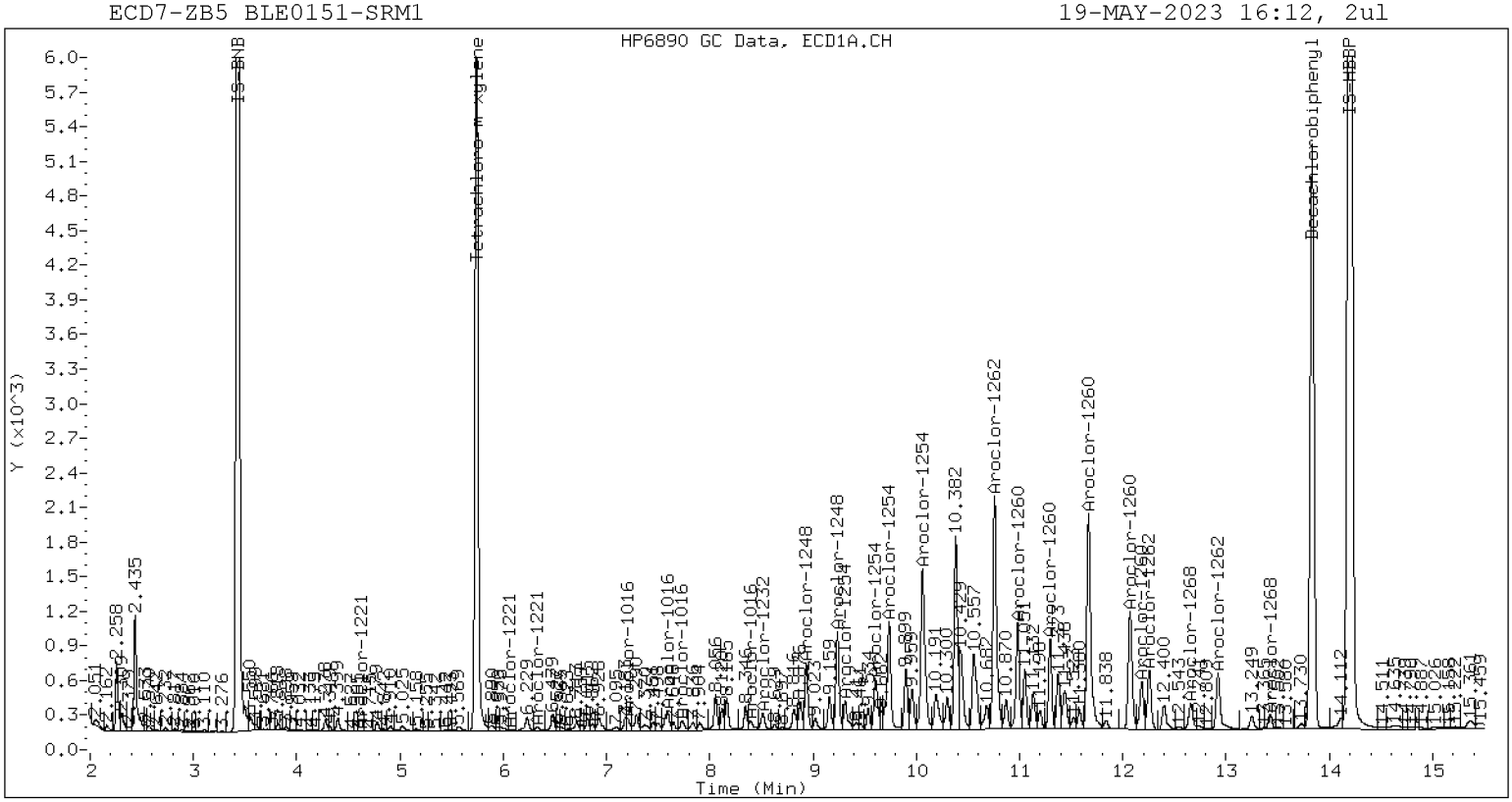
Total PCB Area Col2 (5.728 - 13.969) = 875266 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

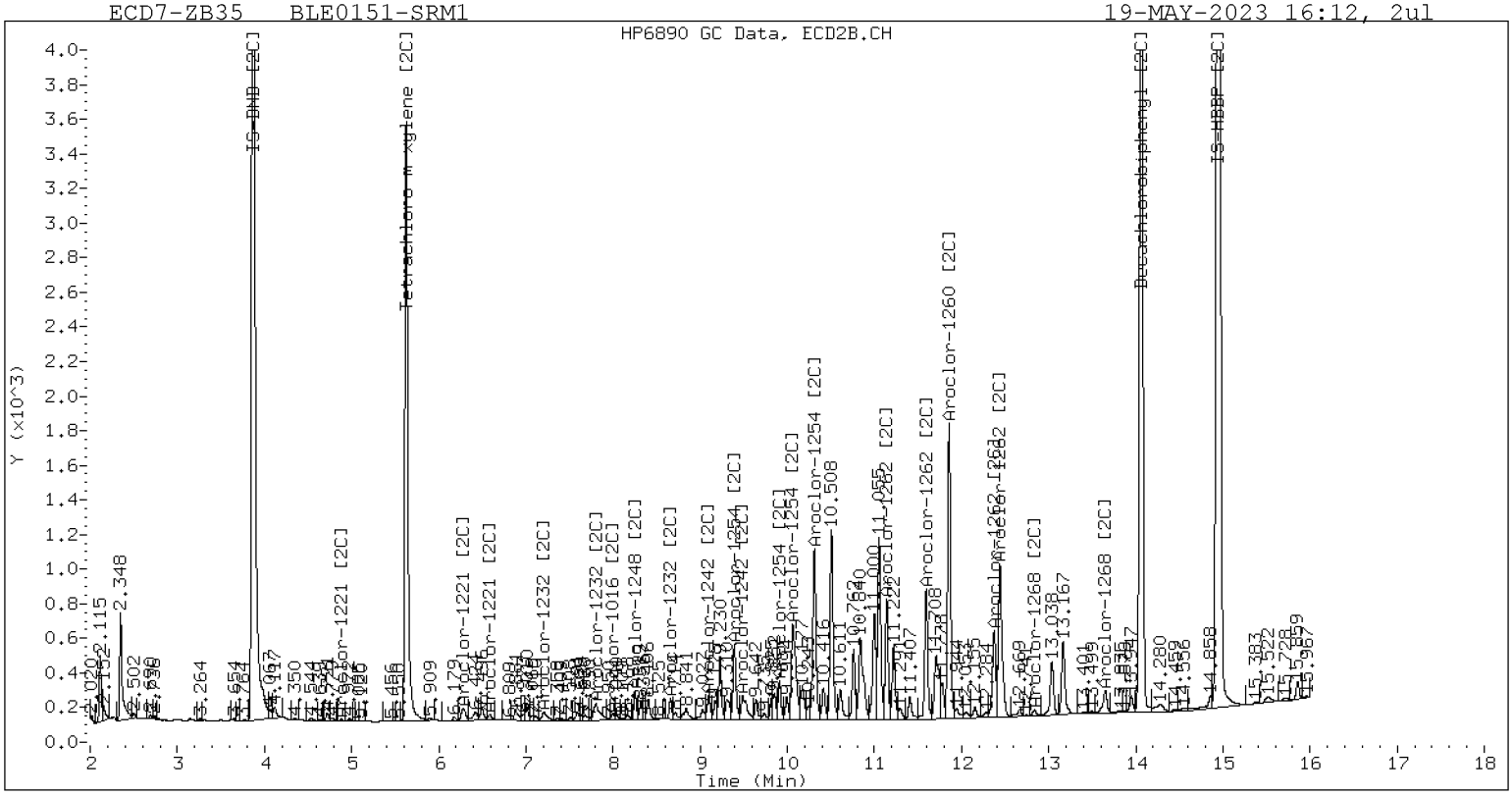
PCB Dual Column Chromatograms

ECD7-ZB5 BLE0151-SRM1 19-MAY-2023 16:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLE0151-SRM1 19-MAY-2023 16:12, 2ul



ZB-35 Manual Integration: NO

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016	250	0.0494162	20	4.532998E-02	50	4.853547E-02	1000	0.0432727	100	5.300612E-02	500	4.707631E-02
Aroclor-1016 (1)	250	3.137838E-02	20	3.258869E-02	50	3.226345E-02	1000	2.592113E-02	100	3.461726E-02	500	2.908922E-02
Aroclor-1016 (2)	250	0.1020916	20	8.781887E-02	50	0.0941758	1000	0.0925401	100	0.1052028	500	9.933727E-02
Aroclor-1016 (3)	250	4.518712E-02	20	0.0437516	50	4.849089E-02	1000	3.826082E-02	100	5.093761E-02	500	4.204761E-02
Aroclor-1016 (4)	250	0.0190077	20	1.716078E-02	50	1.921174E-02	1000	1.636875E-02	100	2.126675E-02	500	1.783115E-02
Aroclor 1260	250	5.260043E-02	20	5.628385E-02	50	5.196241E-02	1000	4.766185E-02	100	5.558896E-02	500	0.0504862
Aroclor-1260 (1)	250	4.229749E-02	20	4.580229E-02	50	0.0418668	1000	0.0383433	100	4.489466E-02	500	4.061411E-02
Aroclor-1260 (2)	250	4.189449E-02	20	4.433945E-02	50	4.114713E-02	1000	3.831045E-02	100	4.437556E-02	500	4.042893E-02
Aroclor-1260 (3)	250	0.1051013	20	0.1116982	50	0.1043382	1000	9.463532E-02	100	0.1111587	500	0.1004267
Aroclor-1260 (4)	250	0.0516917	20	5.459749E-02	50	4.999767E-02	1000	0.0472006	100	5.381565E-02	500	0.0499592
Aroclor-1260 (5)	250	2.201717E-02	20	2.498183E-02	50	2.246226E-02	1000	1.981958E-02	100	2.370029E-02	500	2.100203E-02
Decachlorobiphenyl	40	0.7794462	3.2	0.8975218	8	0.8371499	160	0.7050808	16	0.8485148	80	0.7271303
Tetrachlorometaxylene	40	1.226686	3.2	1.21049	8	1.182524	160	1.140526	16	1.29993	80	1.168782

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221							250	1.457516E-02				
Aroclor-1221 (1)							250	5.626378E-03				
Aroclor-1221 (2)							250	1.128806E-02				
Aroclor-1221 (3)							250	2.681103E-02				
Aroclor 1232									250	1.614998E-02		
Aroclor-1232 (1)									250	3.747872E-03		
Aroclor-1232 (2)									250	7.798392E-03		
Aroclor-1232 (3)									250	3.715176E-02		
Aroclor-1232 (4)									250	1.590191E-02		
Aroclor 1242	250	3.907373E-02										
Aroclor-1242 (1)	250	2.520807E-02										
Aroclor-1242 (2)	250	7.988013E-02										
Aroclor-1242 (3)	250	1.545019E-02										
Aroclor-1242 (4)	250	3.575655E-02										
Aroclor 1248			250	5.688792E-02								
Aroclor-1248 (1)			250	2.041932E-02								
Aroclor-1248 (2)			250	5.306328E-02								
Aroclor-1248 (3)			250	0.1020488								
Aroclor-1248 (4)			250	5.202029E-02								
Aroclor 1254					250	6.780072E-02						
Aroclor-1254 (1)					250	8.222188E-02						
Aroclor-1254 (2)					250	3.694251E-02						
Aroclor-1254 (3)					250	5.307929E-02						
Aroclor-1254 (4)					250	0.1039691						
Aroclor-1254 (5)					250	6.279077E-02						
Aroclor 1262							250	4.659643E-02				
Aroclor-1262 (1)							250	3.619126E-02				
Aroclor-1262 (2)							250	5.089701E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (3)							250	5.471234E-02				
Aroclor-1262 (4)							250	4.458506E-02				
Aroclor 1268									250	0.161799		
Aroclor-1268 (1)									250	0.1275909		
Aroclor-1268 (2)									250	0.1267143		
Aroclor-1268 (3)									250	0.1019109		
Aroclor-1268 (4)									250	0.2909801		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.0477728	7.1			RSD (20)	
Aroclor-1016 (1)	3.097636E-02	9.9			RSD (20)	
Aroclor-1016 (2)	9.686107E-02	6.7			RSD (20)	
Aroclor-1016 (3)	4.477928E-02	10.1			RSD (20)	
Aroclor-1016 (4)	1.847448E-02	9.4			RSD (20)	
Aroclor 1221		0.0			RSD (20)	
Aroclor-1221 (1)		0.0			RSD (20)	
Aroclor-1221 (2)		0.0			RSD (20)	
Aroclor-1221 (3)		0.0			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor-1232 (1)		0.0			RSD (20)	
Aroclor-1232 (2)		0.0			RSD (20)	
Aroclor-1232 (3)		0.0			RSD (20)	
Aroclor-1232 (4)		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor-1242 (1)		0.0			RSD (20)	
Aroclor-1242 (2)		0.0			RSD (20)	
Aroclor-1242 (3)		0.0			RSD (20)	
Aroclor-1242 (4)		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor-1248 (1)		0.0			RSD (20)	
Aroclor-1248 (2)		0.0			RSD (20)	
Aroclor-1248 (3)		0.0			RSD (20)	
Aroclor-1248 (4)		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor-1254 (1)		0.0			RSD (20)	
Aroclor-1254 (2)		0.0			RSD (20)	
Aroclor-1254 (3)		0.0			RSD (20)	
Aroclor-1254 (4)		0.0			RSD (20)	
Aroclor-1254 (5)		0.0			RSD (20)	
Aroclor 1260	5.243062E-02	6.1			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1)	4.230311E-02	6.5			RSD (20)	
Aroclor-1260 (2)	4.174934E-02	5.6			RSD (20)	
Aroclor-1260 (3)	0.1045597	6.2			RSD (20)	
Aroclor-1260 (4)	5.121039E-02	5.4			RSD (20)	
Aroclor-1260 (5)	2.233053E-02	8.3			RSD (20)	
Aroclor 1262		0.0			RSD (20)	
Aroclor-1262 (1)		0.0			RSD (20)	
Aroclor-1262 (2)		0.0			RSD (20)	
Aroclor-1262 (3)		0.0			RSD (20)	
Aroclor-1262 (4)		0.0			RSD (20)	
Aroclor 1268		0.0			RSD (20)	
Aroclor-1268 (1)		0.0			RSD (20)	
Aroclor-1268 (2)		0.0			RSD (20)	
Aroclor-1268 (3)		0.0			RSD (20)	
Aroclor-1268 (4)		0.0			RSD (20)	
Decachlorobiphenyl	0.7991406	9.4			RSD (20)	
Tetrachlorometaxylene	1.204823	4.6			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Aroclor 1016 [2C]	250	5.431445E-02	20	5.755321E-02	50	5.623255E-02	1000	4.860069E-02	100	5.851589E-02	500	5.204411E-02
Aroclor-1016 (1) [2C]	250	4.442671E-02	20	5.158091E-02	50	4.743051E-02	1000	3.802133E-02	100	4.866225E-02	500	4.159498E-02
Aroclor-1016 (2) [2C]	250	9.745237E-02	20	9.849733E-02	50	9.560411E-02	1000	9.038411E-02	100	0.1018298	500	9.528017E-02
Aroclor-1016 (3) [2C]	250	4.229758E-02	20	4.378709E-02	50	4.462224E-02	1000	3.801497E-02	100	4.621674E-02	500	0.0404581
Aroclor-1016 (4) [2C]	250	3.308114E-02	20	3.634753E-02	50	3.727334E-02	1000	2.798232E-02	100	3.735476E-02	500	3.084311E-02
Aroclor 1260 [2C]	250	6.505764E-02	20	6.569768E-02	50	6.337683E-02	1000	5.893668E-02	100	6.768726E-02	500	6.232632E-02
Aroclor-1260 (1) [2C]	250	4.278892E-02	20	4.543978E-02	50	4.273243E-02	1000	3.816214E-02	100	4.503751E-02	500	4.075974E-02
Aroclor-1260 (2) [2C]	250	0.1137836	20	0.1128173	50	0.1108523	1000	0.1019853	100	0.1191905	500	0.1081464
Aroclor-1260 (3) [2C]	250	2.779854E-02	20	2.783171E-02	50	2.651547E-02	1000	2.742971E-02	100	2.791113E-02	500	2.774857E-02
Aroclor-1260 (4) [2C]	250	0.0758595	20	7.670195E-02	50	7.340713E-02	1000	6.816956E-02	100	7.860987E-02	500	7.265057E-02
Decachlorobiphenyl [2C]	40	1.183432	3.2	1.044344	8	1.074026	160	1.130044	16	1.220049	80	1.164189
Tetrachlorometaxylene [2C]	40	1.130537	3.2	1.090766	8	1.076407	160	1.045589	16	1.181288	80	1.078696

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221 [2C]							250	1.245566E-02				
Aroclor-1221 (1) [2C]							250	5.90099E-03				
Aroclor-1221 (2) [2C]							250	1.222989E-02				
Aroclor-1221 (3) [2C]							250	1.923608E-02				
Aroclor 1232 [2C]									250	1.671987E-02		
Aroclor-1232 (1) [2C]									250	3.102529E-03		
Aroclor-1232 (2) [2C]									250	0.0177626		
Aroclor-1232 (3) [2C]									250	3.568085E-02		
Aroclor-1232 (4) [2C]									250	1.033351E-02		
Aroclor 1242 [2C]	250	4.139652E-02										
Aroclor-1242 (1) [2C]	250	0.0357524										
Aroclor-1242 (2) [2C]	250	0.0760619										
Aroclor-1242 (3) [2C]	250	2.438456E-02										
Aroclor-1242 (4) [2C]	250	2.938723E-02										
Aroclor 1248 [2C]			250	4.547256E-02								
Aroclor-1248 (1) [2C]			250	3.805793E-02								
Aroclor-1248 (2) [2C]			250	4.020106E-02								
Aroclor-1248 (3) [2C]			250	4.712363E-02								
Aroclor-1248 (4) [2C]			250	5.650761E-02								
Aroclor 1254 [2C]					250	0.0720677						
Aroclor-1254 (1) [2C]					250	6.078104E-02						
Aroclor-1254 (2) [2C]					250	3.610738E-02						
Aroclor-1254 (3) [2C]					250	4.926631E-02						
Aroclor-1254 (4) [2C]					250	0.1075138						
Aroclor-1254 (5) [2C]					250	0.1066699						
Aroclor 1262 [2C]							250	6.915026E-02				
Aroclor-1262 (1) [2C]							250	0.0648231				
Aroclor-1262 (2) [2C]							250	5.467008E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (3) [2C]							250	5.974148E-02				
Aroclor-1262 (4) [2C]							250	9.736639E-02				
Aroclor 1268 [2C]									250	0.2250713		
Aroclor-1268 (1) [2C]									250	0.1513931		
Aroclor-1268 (2) [2C]									250	0.1627614		
Aroclor-1268 (3) [2C]									250	0.1393777		
Aroclor-1268 (4) [2C]									250	0.4467531		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	5.454348E-02	6.8			RSD (20)	
Aroclor-1016 (1) [2C]	4.528611E-02	10.9			RSD (20)	
Aroclor-1016 (2) [2C]	9.650798E-02	4.0			RSD (20)	
Aroclor-1016 (3) [2C]	4.256612E-02	7.0			RSD (20)	
Aroclor-1016 (4) [2C]	0.0338137	11.4			RSD (20)	
Aroclor 1221 [2C]		0.0			RSD (20)	
Aroclor-1221 (1) [2C]		0.0			RSD (20)	
Aroclor-1221 (2) [2C]		0.0			RSD (20)	
Aroclor-1221 (3) [2C]		0.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor-1232 (1) [2C]		0.0			RSD (20)	
Aroclor-1232 (2) [2C]		0.0			RSD (20)	
Aroclor-1232 (3) [2C]		0.0			RSD (20)	
Aroclor-1232 (4) [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor-1242 (1) [2C]		0.0			RSD (20)	
Aroclor-1242 (2) [2C]		0.0			RSD (20)	
Aroclor-1242 (3) [2C]		0.0			RSD (20)	
Aroclor-1242 (4) [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor-1248 (1) [2C]		0.0			RSD (20)	
Aroclor-1248 (2) [2C]		0.0			RSD (20)	
Aroclor-1248 (3) [2C]		0.0			RSD (20)	
Aroclor-1248 (4) [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor-1254 (1) [2C]		0.0			RSD (20)	
Aroclor-1254 (2) [2C]		0.0			RSD (20)	
Aroclor-1254 (3) [2C]		0.0			RSD (20)	
Aroclor-1254 (4) [2C]		0.0			RSD (20)	
Aroclor-1254 (5) [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	6.384707E-02	4.8			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00022	Instrument:	ECD7
Calibration Date:	05/05/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1) [2C]	4.248675E-02	6.4			RSD (20)	
Aroclor-1260 (2) [2C]	0.1111292	5.2			RSD (20)	
Aroclor-1260 (3) [2C]	2.753919E-02	1.9			RSD (20)	
Aroclor-1260 (4) [2C]	7.423309E-02	5.0			RSD (20)	
Aroclor 1262 [2C]		0.0			RSD (20)	
Aroclor-1262 (1) [2C]		0.0			RSD (20)	
Aroclor-1262 (2) [2C]		0.0			RSD (20)	
Aroclor-1262 (3) [2C]		0.0			RSD (20)	
Aroclor-1262 (4) [2C]		0.0			RSD (20)	
Aroclor 1268 [2C]		0.0			RSD (20)	
Aroclor-1268 (1) [2C]		0.0			RSD (20)	
Aroclor-1268 (2) [2C]		0.0			RSD (20)	
Aroclor-1268 (3) [2C]		0.0			RSD (20)	
Aroclor-1268 (4) [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.136014	5.9			RSD (20)	
Tetrachlorometaxylene [2C]	1.100547	4.4			RSD (20)	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLE0079

Instrument: ECD7
Calibration ID: GE00022

Printed: 5/6/2023 11:44:56AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLE0079-CAL1	QC		1		L000856	L000844		
SLE0079-CAL2	QC		2		L000859	L000844		
SLE0079-CAL3	QC		3		L000858	L000844		
SLE0079-CAL4	QC		4		L000731	L000844		
SLE0079-CAL5	QC		5		L000857	L000844		
SLE0079-CAL6	QC		6		L000855	L000844		
SLE0079-CAL7	QC		7		L000860	L000844		
SLE0079-CAL8	QC		8		L000861	L000844		
SLE0079-CAL9	QC		9		L000862	L000844		
SLE0079-CALA	QC		10		L004996	L000844		
SLE0079-CALB	QC		11		L004997	L000844		
SLE0079-SCV1	QC		12		L002065	L000844		
SLE0079-SCV2	QC		13		L003970	L000844		
SLE0079-SCV3	QC		14		L002066	L000844		
SLE0079-SCV4	QC		15		L002067	L000844		
SLE0079-SCV5	QC		16		L002068	L000844		
SLE0079-SCV6	QC		17		L002069	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	05-MAY-2023 23:06	05052320ECD7.D	1	IB	
2	05-MAY-2023 23:26	05052321ECD7.D	1	0.25PPMAR1660	
3	05-MAY-2023 23:47	05052322ECD7.D	1	0.02PPMAR1660	
4	06-MAY-2023 00:08	05052323ECD7.D	1	0.05PPMAR1660	
5	06-MAY-2023 00:29	05052324ECD7.D	1	1.0PPMAR1660	
6	06-MAY-2023 00:50	05052325ECD7.D	1	0.1PPMAR1660	
7	06-MAY-2023 01:11	05052326ECD7.D	1	0.5PPMAR1660	
8	06-MAY-2023 01:31	05052327ECD7.D	1	0.25PPMAR1242	
9	06-MAY-2023 01:52	05052328ECD7.D	1	0.25PPMAR1248	
10	06-MAY-2023 02:13	05052329ECD7.D	1	0.25PPMAR1254	
11	06-MAY-2023 02:34	05052330ECD7.D	1	0.25PPMAR2162	
12	06-MAY-2023 02:55	05052331ECD7.D	1	0.25PPMAR3268	
13	06-MAY-2023 03:16	05052332ECD7.D	1	AR1660SCV	
14	06-MAY-2023 03:36	05052333ECD7.D	1	AR1242SCV	
15	06-MAY-2023 03:57	05052334ECD7.D	1	AR1248SCV	
16	06-MAY-2023 04:18	05052335ECD7.D	1	AR1254SCV	
17	06-MAY-2023 04:39	05052336ECD7.D	1	AR2162SCV	
18	06-MAY-2023 05:00	05052337ECD7.D	1	AR3268SCV	
19	06-MAY-2023 05:21	05052338ECD7.D	1	DDTS	
20	06-MAY-2023 05:41	05052339ECD7.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

ARI Job No.: Method: PCB.m Instrument: ecd7.i Date: 05-MAY-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1548	05052301ECD7.D			1	NO MANUAL INTEGRATION
1609	05052302ECD7.D			1	NO MANUAL INTEGRATION
1711	05052303ECD7.D			1	NO MANUAL INTEGRATION
1732	05052304ECD7.D			1	NO MANUAL INTEGRATION
1753	05052305ECD7.D			1	NO MANUAL INTEGRATION
1814	05052306ECD7.D			1	NO MANUAL INTEGRATION
1835	05052307ECD7.D			1	NO MANUAL INTEGRATION
1856	05052308ECD7.D			1	NO MANUAL INTEGRATION
1916	05052309ECD7.D			1	NO MANUAL INTEGRATION
1937	05052310ECD7.D			1	NO MANUAL INTEGRATION
1958	05052311ECD7.D			1	NO MANUAL INTEGRATION
2019	05052312ECD7.D			1	NO MANUAL INTEGRATION
2040	05052313ECD7.D			1	NO MANUAL INTEGRATION
2101	05052314ECD7.D			1	NO MANUAL INTEGRATION
2121	05052315ECD7.D			1	NO MANUAL INTEGRATION
2142	05052316ECD7.D			1	NO MANUAL INTEGRATION
2203	05052317ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2224	05052318ECD7.D			1	NO MANUAL INTEGRATION
2245	05052319ECD7.D			1	NO MANUAL INTEGRATION
2306	05052320ECD7.D	IB		1	NO MANUAL INTEGRATION
2326	05052321ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2347	05052322ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
0008	05052323ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
0029	05052324ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
0050	05052325ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
0111	05052326ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0131	05052327ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
0152	05052328ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
0213	05052329ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
0234	05052330ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
0255	05052331ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
0316	05052332ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
0336	05052333ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
0357	05052334ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
0418	05052335ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0439	05052336ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
0500	05052337ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
0521	05052338ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0541	05052339ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1548	05052301ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1609	05052302ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1711	05052303ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1732	05052304ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1753	05052305ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1814	05052306ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1835	05052307ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1856	05052308ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1916	05052309ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1937	05052310ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1958	05052311ECD7.D	RINSE		1	NO MANUAL INTEGRATION
2019	05052312ECD7.D	RINSE		1	NO MANUAL INTEGRATION
2040	05052313ECD7.D	RINSE		1	NO MANUAL INTEGRATION
2101	05052314ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2121	05052315ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2142	05052316ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2203	05052317ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2224	05052318ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2245	05052319ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2306	05052320ECD7.D	IB		1	NO MANUAL INTEGRATION
2326	05052321ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2347	05052322ECD7.D	0.02PPMAR1660		1	Aroclor-1016 [2C],
0008	05052323ECD7.D	0.05PPMAR1660		1	Aroclor-1016 [2C],
0029	05052324ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
0050	05052325ECD7.D	0.1PPMAR1660		1	Aroclor-1016 [2C],
0111	05052326ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0132	05052327ECD7.D	0.25PPMAR1242		1	Aroclor-1242 [2C],
0152	05052328ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
0213	05052329ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
0234	05052330ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
0255	05052331ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
0316	05052332ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0336	05052333ECD7.D	AR1242SCV		1	Aroclor-1242 [2C],
0357	05052334ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
0418	05052335ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
0439	05052336ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
0500	05052337ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
0521	05052338ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0541	05052339ECD7.D	DDT BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 06-May-2023 09:12

05052320ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052321ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052322ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052323ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052324ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052325ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052326ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052327ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052328ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052329ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052330ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052331ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052332ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052333ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052334ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052335ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052336ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052337ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052338ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052339ECD7.D	Data Locked	richardl, 06-May-2023 09:12

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230505.b\05052322ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230505.b\05052323ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230505.b\05052325ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230505.b\05052321ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230505.b\05052326ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230505.b\05052324ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230505.b\05052331ECD7.D
Level 8: \\target\share\chem4\ecd7.i\230505.b\05052338ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00563	+++++	0.00563	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01129	+++++	0.01129	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02681	+++++	0.02681	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02521	+++++	0.02521	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07988	+++++	0.07988	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01545	+++++	0.01545	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.03576	+++++	0.03576	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00375	+++++	0.00375	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.00780	+++++							0.00780	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.03715	+++++							0.03715	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.01590	+++++							0.01590	0.000
7 Aroclor-1016(1)	0.03259	0.03226	0.03462	0.03138	0.02909	0.02592				
	+++++	+++++							0.03098	9.876
(2)	0.08782	0.09418	0.10520	0.10209	0.09934	0.09254				
	+++++	+++++							0.09686	6.702
(3)	0.04375	0.04849	0.05094	0.04519	0.04205	0.03826				
	+++++	+++++							0.04478	10.130
(4)	0.01716	0.01921	0.02127	0.01901	0.01783	0.01637				
	+++++	+++++							0.01847	9.437
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.02042	+++++							0.02042	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05306	+++++							0.05306	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.10205	+++++							0.10205	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05202	+++++							0.05202	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.08222	+++++	0.08222	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03694	+++++	0.03694	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05308	+++++	0.05308	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10397	+++++	0.10397	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.06279	+++++	0.06279	0.000
9 Aroclor-1260(1)	0.04580	0.04187	0.04489	0.04230	0.04061	0.03834	+++++	+++++	0.04230	6.490
(2)	0.04434	0.04115	0.04438	0.04189	0.04043	0.03831	+++++	+++++	0.04175	5.623
(3)	0.11170	0.10434	0.11116	0.10510	0.10043	0.09464	+++++	+++++	0.10456	6.204
(4)	0.05460	0.05000	0.05382	0.05169	0.04996	0.04720	+++++	+++++	0.05121	5.355
(5)	0.02498	0.02246	0.02370	0.02202	0.02100	0.01982	+++++	+++++	0.02233	8.279
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03619	+++++	0.03619	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05090	+++++							0.05090	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05471	+++++							0.05471	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.04459	+++++							0.04459	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.12759	+++++							0.12759	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.12671	+++++							0.12671	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.10191	+++++							0.10191	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.29098	+++++							0.29098	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++				
	+++++	636							636	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++				
	+++++	1208							1208	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++				
	+++++	+++++							+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++				
	+++++	1492							1492	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	708					708	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	630					630	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 1 Tetrachloro-m-xylene	1.21049	1.18252	1.29993	1.22669	1.16878	1.14053		
	+++++	+++++					1.20482	4.619
$ 13 Decachlorobiphenyl	0.89752	0.83715	0.84851	0.77945	0.72713	0.70508		
	+++++	+++++					0.79914	9.361

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052322ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052323ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052325ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052321ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052326ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052324ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052331ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00590	0.00590	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01223	0.01223	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01924	0.01924	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00310	0.00310	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01776	0.01776	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03568	0.03568	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01033	0.01033	0.000
3 Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03575	0.03575	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****	0.07606	0.07606	0.000
(3)	*****	*****	*****	*****	*****	*****	0.02438	0.02438	0.000
(4)	*****	*****	*****	*****	*****	*****	0.02939	0.02939	0.000
6 Aroclor-1248 [2C](1)	*****	*****	*****	*****	*****	*****	0.03806	0.03806	0.000
(2)	*****	*****	*****	*****	*****	*****	0.04020	0.04020	0.000
(3)	*****	*****	*****	*****	*****	*****	0.04712	0.04712	0.000
(4)	*****	*****	*****	*****	*****	*****	0.05651	0.05651	0.000
7 Aroclor-1016 [2C](1)	0.05158	0.04743	0.04866	0.04443	0.04159	0.03802	*****	0.04529	10.942
(2)	0.09850	0.09560	0.10183	0.09745	0.09528	0.09038	*****	0.09651	3.959
(3)	0.04379	0.04462	0.04622	0.04230	0.04046	0.03801	*****	0.04257	6.991
(4)	0.03635	0.03727	0.03735	0.03308	0.03084	0.02798	*****	0.03381	11.400

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
8 Aroclor-1254 [2C](1)	*****	*****	*****	*****	*****	*****		
	0.06078						0.06078	0.000
(2)	*****	*****	*****	*****	*****	*****		
	0.03611						0.03611	0.000
(3)	*****	*****	*****	*****	*****	*****		
	0.04927						0.04927	0.000
(4)	*****	*****	*****	*****	*****	*****		
	0.10751						0.10751	0.000
(5)	*****	*****	*****	*****	*****	*****		
	0.10667						0.10667	0.000
10 Aroclor-1262 [2C](1)	*****	*****	*****	*****	*****	*****		
	0.06482						0.06482	0.000
(2)	*****	*****	*****	*****	*****	*****		
	0.05467						0.05467	0.000
(3)	*****	*****	*****	*****	*****	*****		
	0.05974						0.05974	0.000
(4)	*****	*****	*****	*****	*****	*****		
	0.09737						0.09737	0.000
9 Aroclor-1260 [2C](1)	0.04544	0.04273	0.04504	0.04279	0.04076	0.03816		
	*****						0.04249	6.408
(2)	0.11282	0.11085	0.11919	0.11378	0.10815	0.10199		
	*****						0.11113	5.208

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
(3)	0.02783 / +++++	0.02652	0.02791	0.02780	0.02775	0.02743	0.02754	1.918
(4)	0.07670 / +++++	0.07341	0.07861	0.07586	0.07265	0.06817	0.07423	4.962
11 Aroclor-1268 [2C](1)	+++++ / 0.15139	+++++	+++++	+++++	+++++	+++++	0.15139	0.000
(2)	+++++ / 0.16276	+++++	+++++	+++++	+++++	+++++	0.16276	0.000
(3)	+++++ / 0.13938	+++++	+++++	+++++	+++++	+++++	0.13938	0.000
(4)	+++++ / 0.44675	+++++	+++++	+++++	+++++	+++++	0.44675	0.000
41 2,4-DDE [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
42 2,4-DDD [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 4,4-DDE [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 4,4-DDT [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	1.09077	1.07641	1.18129	1.13054	1.07870	1.04559	+++++	1.10055	4.376
$ 13 Decachlorobiphenyl [2C]	1.04434	1.07403	1.22005	1.18343	1.16419	1.13004	+++++	1.13601	5.890

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230505.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	05052321ECD7	05052322ECD7	05052323ECD7	05052324ECD7	05052325ECD7	05052326ECD7
INJ.DATE:	05-MAY-2023	05-MAY-2023	06-MAY-2023	06-MAY-2023	06-MAY-2023	06-MAY-2023
INJ.TIME:	23:26	23:47	00:08	00:29	00:50	01:11

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3.429	3.429	3.428	3.429	3.428	3.428	3.428	3.328-3.528	3.429	0.000
$ 1 Tetrachloro-m-xylene	5.743	5.742	5.741	5.746	5.741	5.743	5.742	5.642-5.842	5.743	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.663	4.563-4.763	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.212	7.112-7.312	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	4.664	4.564-4.764	+++++	+++++
7 Aroclor-1016	7.213	7.213	7.214	7.213	7.212	7.212	7.212	7.112-7.312	7.213	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.399	8.299-8.499	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	9.246	9.146-9.346	+++++	+++++
9 Aroclor-1260	10.995	10.998	10.998	10.992	10.995	10.993	10.993	10.893-11.093	10.995	0.003
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.779	10.679-10.879	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	12.196	12.096-12.296	+++++	+++++
$ 13 Decachlorobiphenyl	13.841	13.843	13.843	13.842	13.841	13.842	13.840	13.740-13.940	13.842	0.001
* 12 IS-HBBP	14.215	14.216	14.217	14.215	14.214	14.215	14.214	14.114-14.314	14.215	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.206	9.156-9.256	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.753	9.703-9.803	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.293	10.243-10.343	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.635	9.535-9.735	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230505.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.243	10.143-10.343	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.706	10.606-10.806	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230505.b\230505.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	05052320ECD7	05052321ECD7	05052322ECD7	05052323ECD7	05052324ECD7	05052325ECD7	05052326ECD7
INJ.DATE:	05-MAY-2023	05-MAY-2023	05-MAY-2023	06-MAY-2023	06-MAY-2023	06-MAY-2023	06-MAY-2023
INJ.TIME:	23:06	23:26	23:47	00:08	00:29	00:50	01:11

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.869	3.869	3.869	3.869	3.869	3.869	3.869	3.868	3.768-3.968	3.869	0.000
$ 2 Tetrachloro-m-xylene [	5.629	5.629	5.630	5.630	5.627	5.629	5.629	5.628	5.528-5.728	5.629	0.001
1 Aroclor-1221 [2C]	0.000	+++++	+++++	+++++	+++++	+++++	+++++	4.894	4.794-4.994	0.000	0.000
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.894	4.794-4.994	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.203	7.103-7.303	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.260	8.160-8.360	+++++	+++++
7 Aroclor-1016 [2C]	+++++	7.204	7.206	7.205	7.203	7.204	7.204	7.204	7.104-7.304	7.204	0.001
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.404	9.304-9.504	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.153	11.053-11.253	+++++	+++++
9 Aroclor-1260 [2C]	+++++	11.605	11.610	11.609	11.604	11.608	11.606	11.606	11.506-11.706	11.607	0.002
11 Aroclor-1268 [2C]	0.000	+++++	+++++	+++++	+++++	+++++	+++++	12.385	12.285-12.485	0.000	0.000
$ 13 Decachlorobiphenyl [2C	14.070	14.070	14.071	14.070	14.071	14.069	14.070	14.068	13.968-14.168	14.070	0.000
* 12 IS-HBBP [2C]	14.958	14.957	14.959	14.959	14.956	14.957	14.958	14.957	14.857-15.057	14.958	0.001
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.867	9.817-9.917	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.492	9.442-9.542	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.165	10.065-10.265	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.625	10.525-10.725	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230505.b\230505.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.046	10.946-11.146	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052320ECD7.D
Data file 2: /230505.b/230505.b/05052320ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 05-MAY-2023 23:06
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	296285	5.629	0.001	163258	35.5	37.4	5.3	Tetrachloro-m-xylene
13.841	0.001	288612	14.070	0.002	318424	35.7	37.3	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	554412	-7.8
Hexabromobiphenyl	876625	809662	-7.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	317324	-9.2
Hexabromobiphenyl	652984	600612	-8.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.272	0.027	1585	32.7
Aroclor-1221	3	---			0.0	3	6.588	0.017	408	5.3
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	10.995	0.002	1624	3.8	1	---			0.0
Aroclor-1260	2	11.305	-0.005	1450	3.4	2	---			0.0
Aroclor-1260	3	11.770	0.084	3781	3.6	3	---			0.0
Aroclor-1260	4	12.138	0.048	1272	2.5	4	---			0.0
Aroclor-1260	5	12.271	0.078	413	1.8	NS	---			----
	Total Col1Ave (5 peaks):				3.0	Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.800	0.021	2445	6.7	1	---			0.0
Aroclor-1262	2	12.271	0.077	413	0.8	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	12.989	0.050	944	2.1	4	---			0.0
	Total Col1Ave (3 peaks):				3.2	Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	12.271	0.076	413	0.3	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.649	0.001	2092	2.0	3	12.847	0.004	632	0.6
Aroclor-1268	4	13.443	0.006	5651	1.9	4	13.663	-0.001	2018	0.6
	Total Col1Ave (3 peaks):				1.4	Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.842 - 13.740) = 65805 Col1 Total PCB = 0.0 ppm*

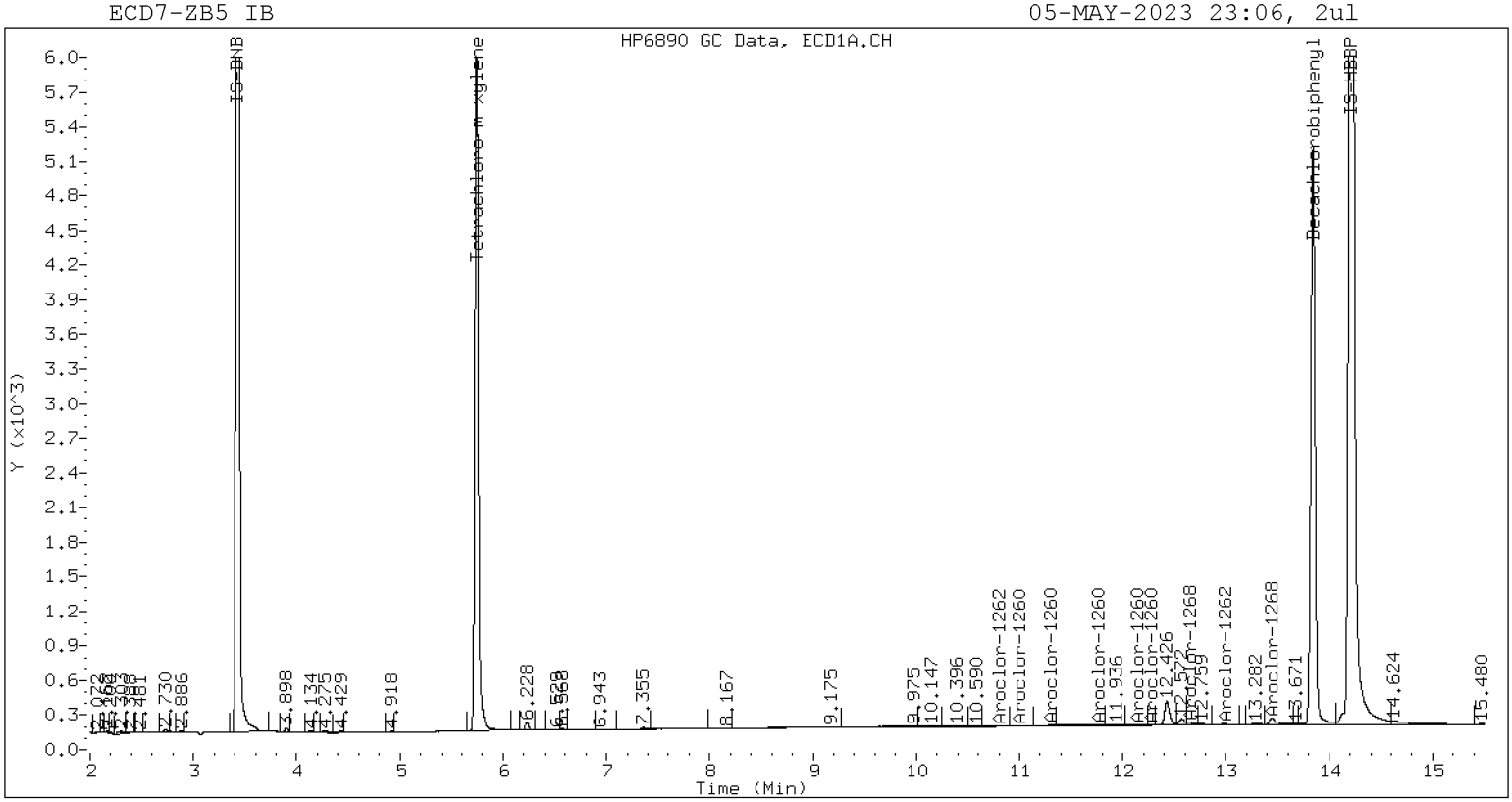
Total PCB Area Col2 (5.728 - 13.968) = 16664 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

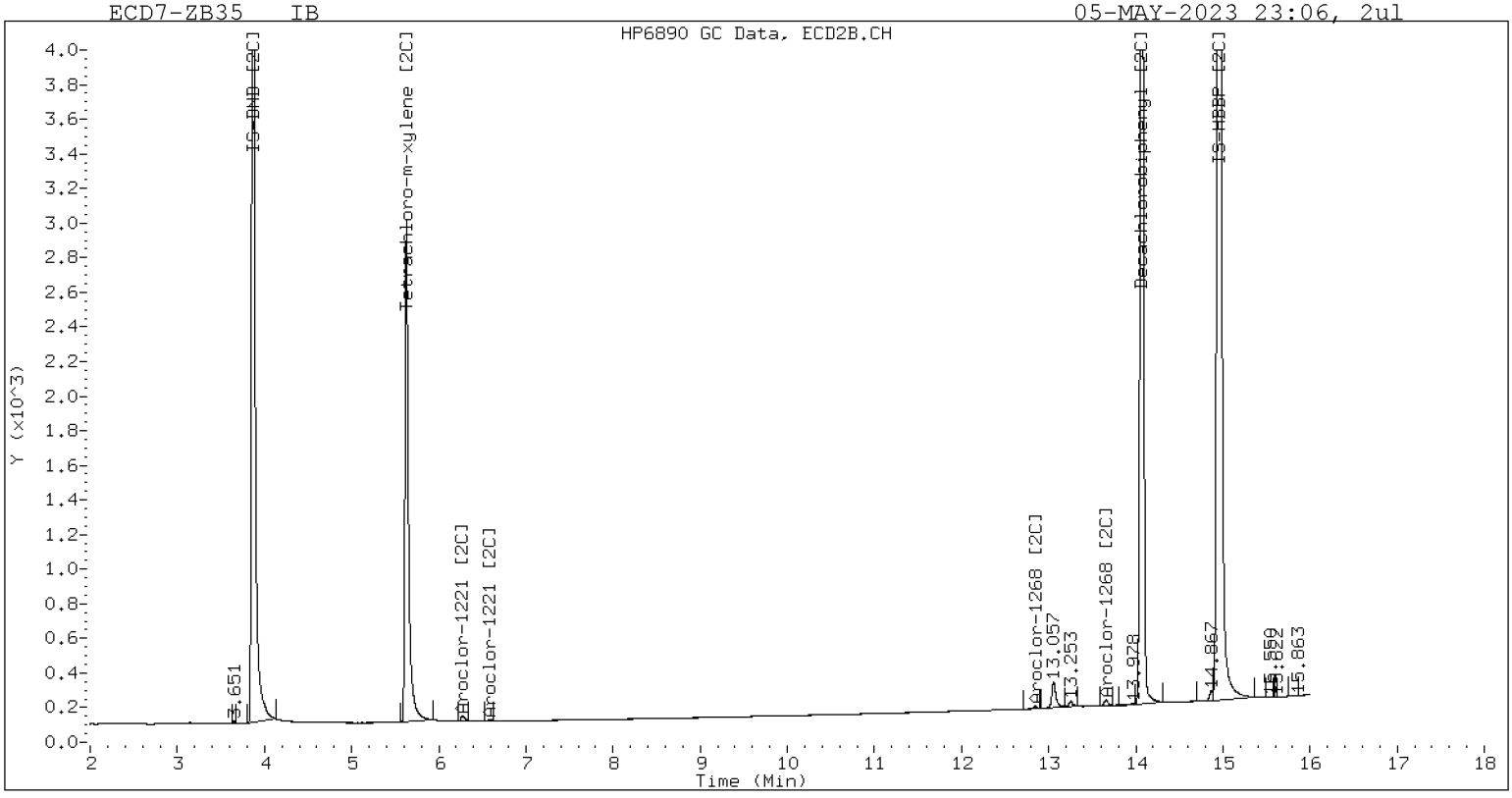
PCB Dual Column Chromatograms

ECD7-ZB5 IB 05-MAY-2023 23:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 05-MAY-2023 23:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052321ECD7.D
Data file 2: /230505.b/230505.b/05052321ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 05-MAY-2023 23:26
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	368910	5.629	0.000	197442	40.7	41.1	0.9	Tetrachloro-m-xylene
13.841	0.001	341641	14.070	0.002	386381	39.0	41.7	6.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	601474	0.0
Hexabromobiphenyl	876625	876625	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	349289	0.0
Hexabromobiphenyl	652984	652984	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.001	58979	253.2	1	7.204	-0.000	48493	245.3
Aroclor-1016	2	7.595	0.001	191892	263.5	2	7.811	0.003	106372	252.4
Aroclor-1016	3	7.735	0.002	84934	252.3	3	8.010	0.004	46169	248.4
Aroclor-1016	4	8.399	0.001	35727	257.2	4	8.260	0.001	36109	244.6
Total Col1Ave (4 peaks):					256.6	Total Col2Ave (4 peaks):				247.7 RPD = 4
Corrected Ave (3 peaks):					254.2	Corrected Ave (3 peaks):				246.1 RPD = 3
CalAmt %D:					2.6	CalAmt %D:				-0.9
Aroclor-1260	1	10.995	0.002	115872	250.0	1	11.605	-0.000	87314	251.8
Aroclor-1260	2	11.312	0.002	114768	250.9	2	11.872	-0.000	232184	256.0
Aroclor-1260	3	11.687	0.001	287920	251.3	3	12.389	0.001	56725	252.4
Aroclor-1260	4	12.091	0.002	141607	252.3	4	12.456	0.000	154797	255.5
Aroclor-1260	5	12.195	0.002	60315	246.5	NS	---			----
Total Col1Ave (5 peaks):					250.2	Total Col2Ave (4 peaks):				253.9 RPD = 1
Corrected Ave (4 peaks):					249.7	Corrected Ave (3 peaks):				253.2 RPD = 1
CalAmt %D:					0.1	CalAmt %D:				1.6

Total PCB Area Col1 (5.842 - 13.740) = 3355836 Col1 Total PCB = 0.5 ppm*

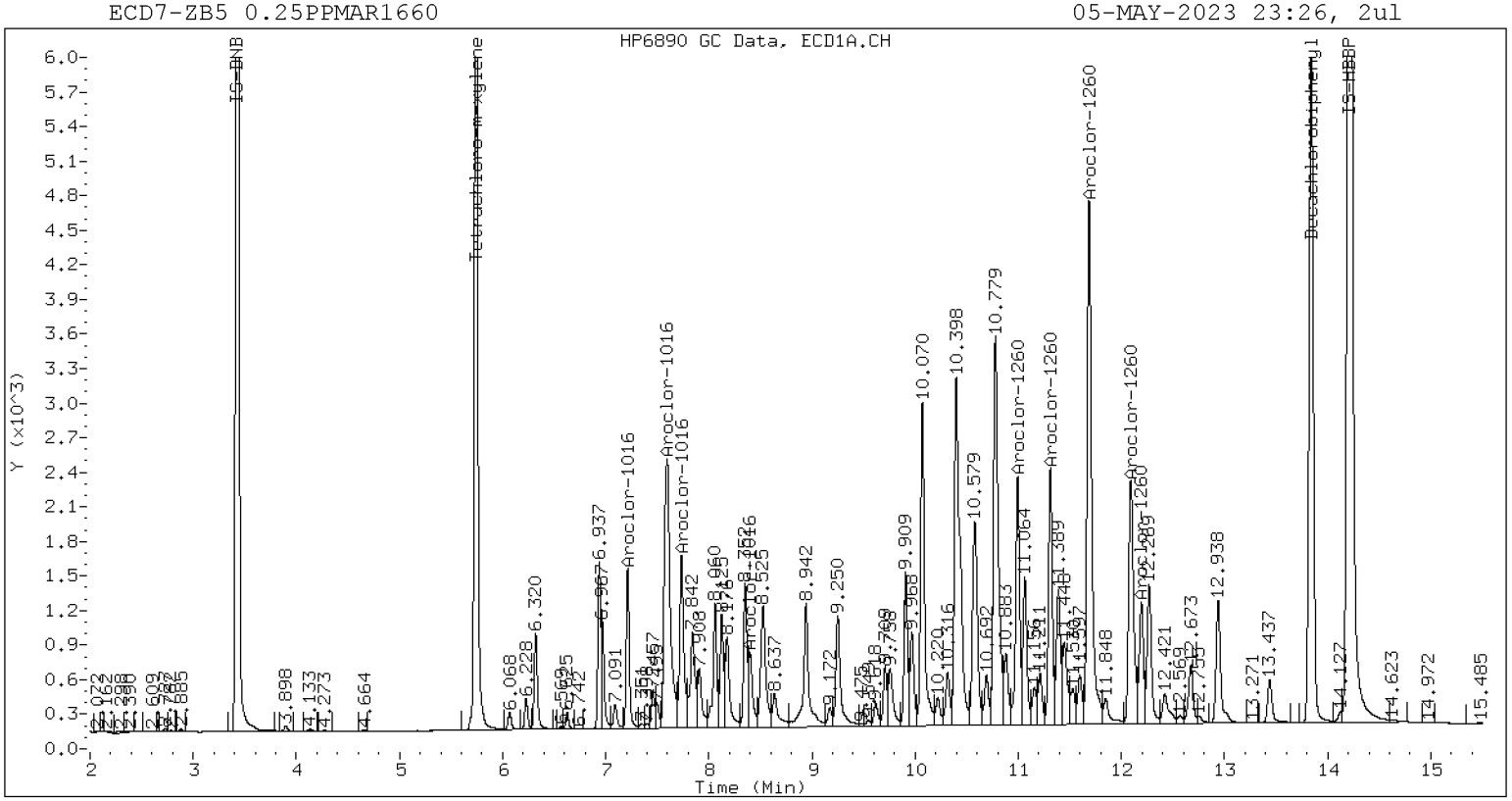
Total PCB Area Col2 (5.728 - 13.968) = 2087295 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

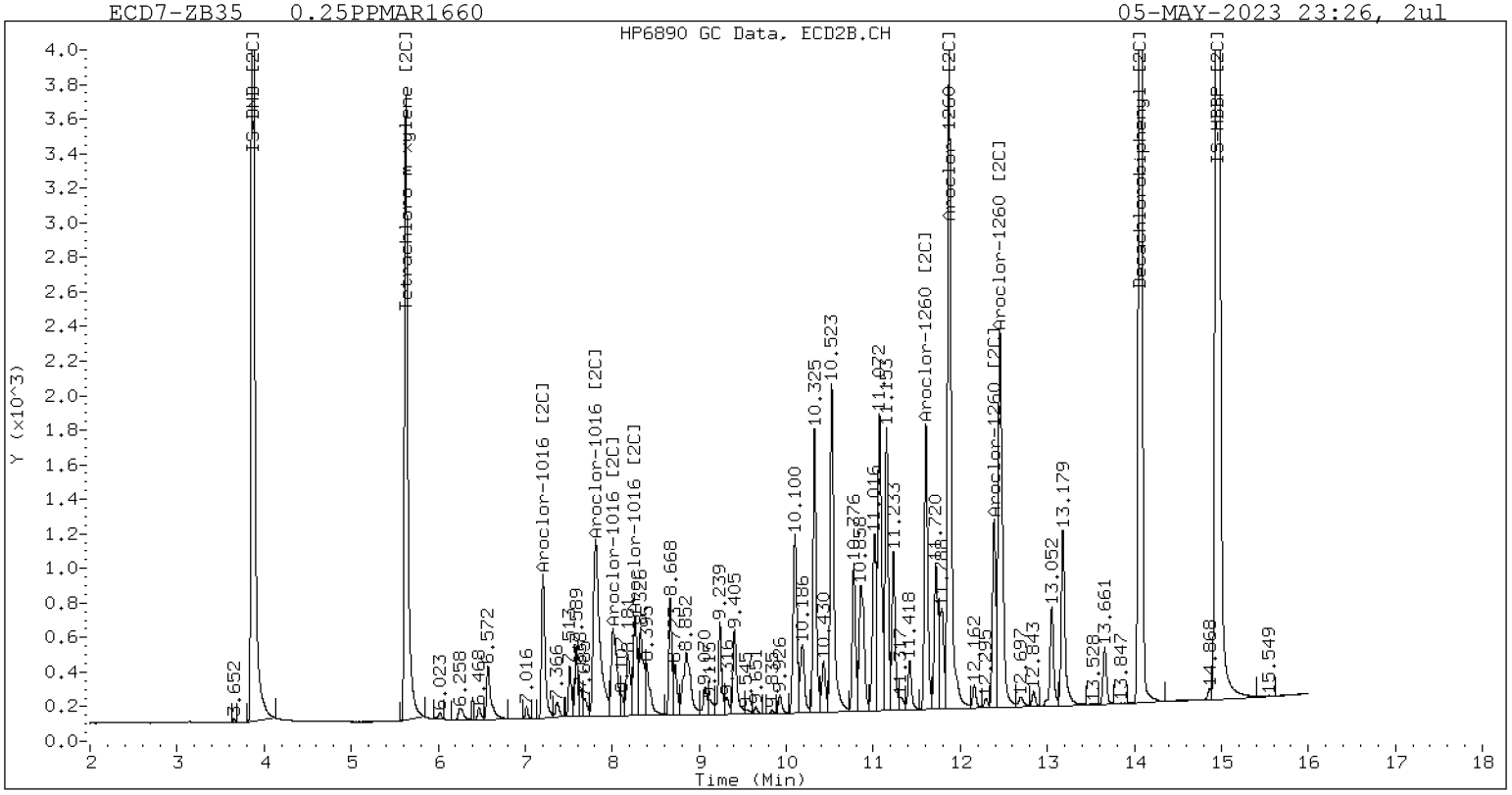
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1660 05-MAY-2023 23:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1660 05-MAY-2023 23:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052322ECD7.D
Data file 2: /230505.b/230505.b/05052322ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 05-MAY-2023 23:47
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	28836	5.630	0.002	14779	3.2	3.2	1.4	Tetrachloro-m-xylene
13.843	0.002	31610	14.071	0.002	27131	3.6	2.9	20.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	595544	-1.0
Hexabromobiphenyl	876625	880480	0.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	338730	-3.0
Hexabromobiphenyl	652984	649475	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.001	4852	21.0	1	7.206	0.002	4368	22.8
Aroclor-1016	2	7.595	0.001	13075	18.1	2	7.819	0.012	8341	20.4
Aroclor-1016	3	7.737	0.004	6514	19.5	3	8.043	0.038	3708	20.6
Aroclor-1016	4	8.400	0.002	2555	18.6	4	8.261	0.002	3078	21.5
Total Col1Ave (4 peaks):					19.3	Total Col2Ave (4 peaks):				21.3 RPD = 10
Corrected Ave (3 peaks):					18.8	Corrected Ave (3 peaks):				20.8 RPD = 10
CalAmt %D:					-3.4	CalAmt %D:				6.6
Aroclor-1260	1	10.998	0.005	10082	21.7	1	11.610	0.004	7378	21.4
Aroclor-1260	2	11.316	0.006	9760	21.2	2	11.878	0.006	18318	20.3
Aroclor-1260	3	11.694	0.008	24587	21.4	3	12.392	0.004	4519	20.2
Aroclor-1260	4	12.098	0.008	12018	21.3	4	12.461	0.006	12454	20.7
Aroclor-1260	5	12.198	0.005	5499	22.4	NS	---			----
Total Col1Ave (5 peaks):					21.6	Total Col2Ave (4 peaks):				20.6 RPD = 4
Corrected Ave (4 peaks):					21.4	Corrected Ave (3 peaks):				20.4 RPD = 5
CalAmt %D:					8.0	CalAmt %D:				3.2

Total PCB Area Col1 (5.842 - 13.740) = 294199 Col1 Total PCB = 0.0 ppm*

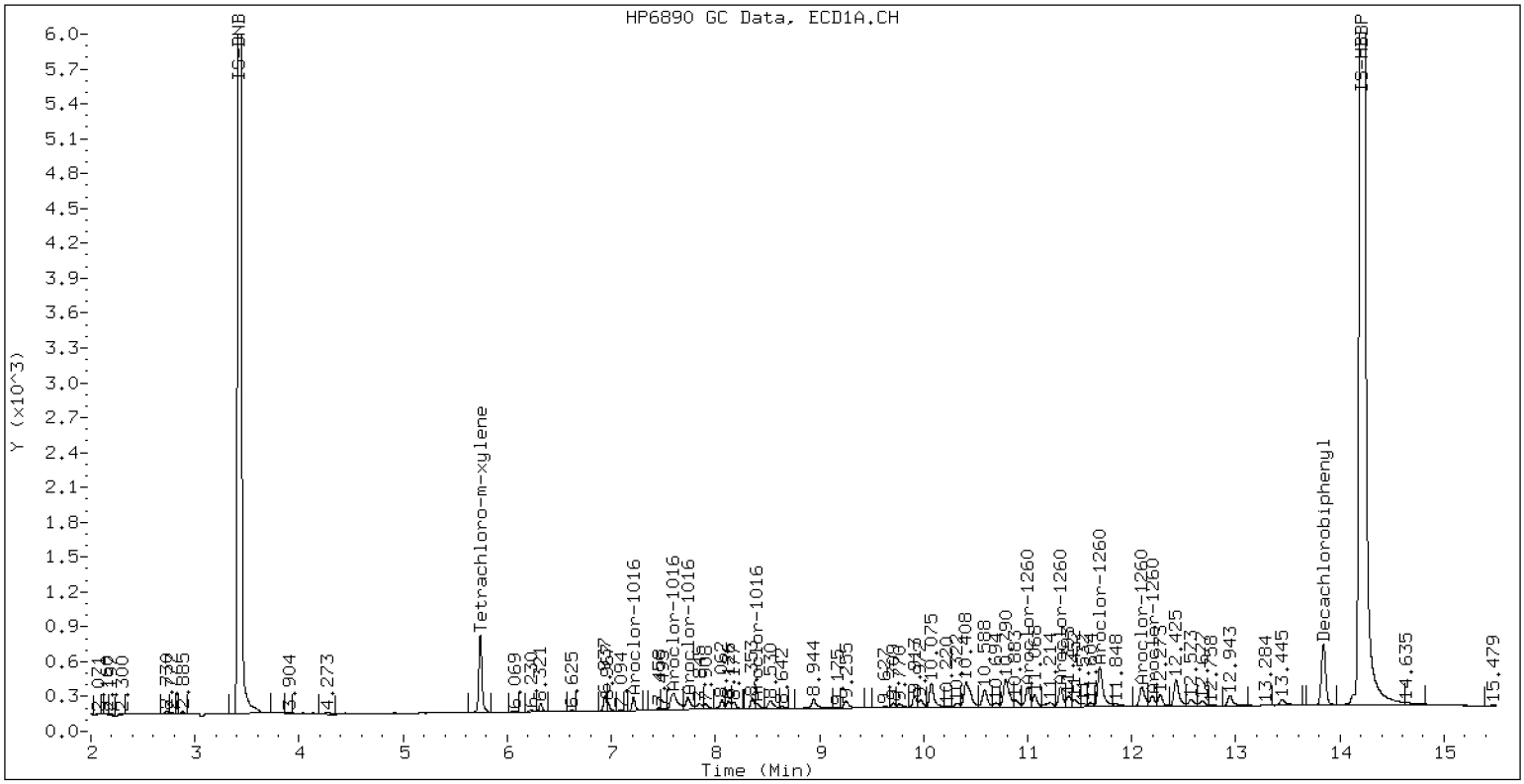
Total PCB Area Col2 (5.728 - 13.968) = 173796 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

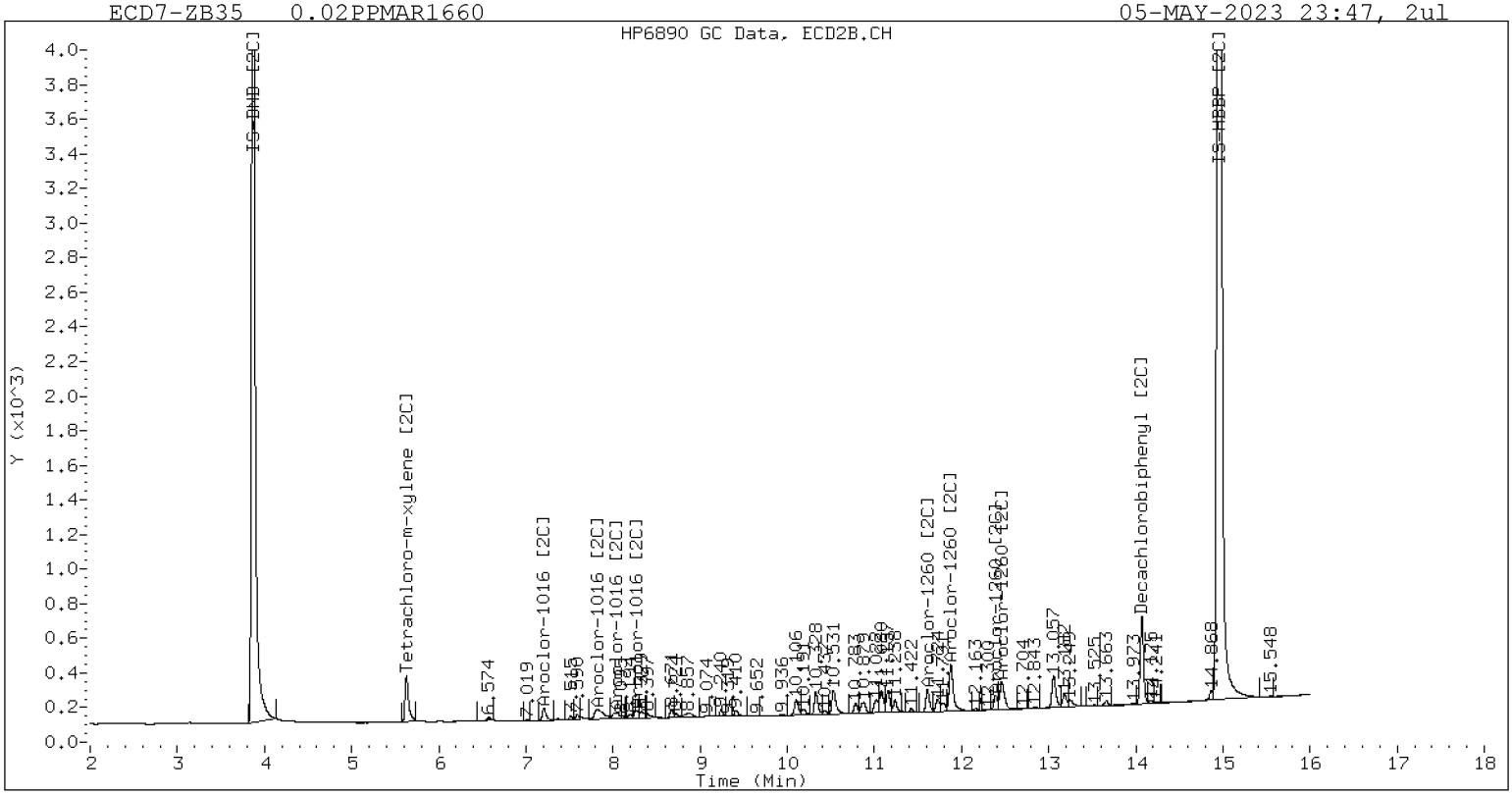
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPMAR1660 05-MAY-2023 23:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPMAR1660 05-MAY-2023 23:47, 2ul

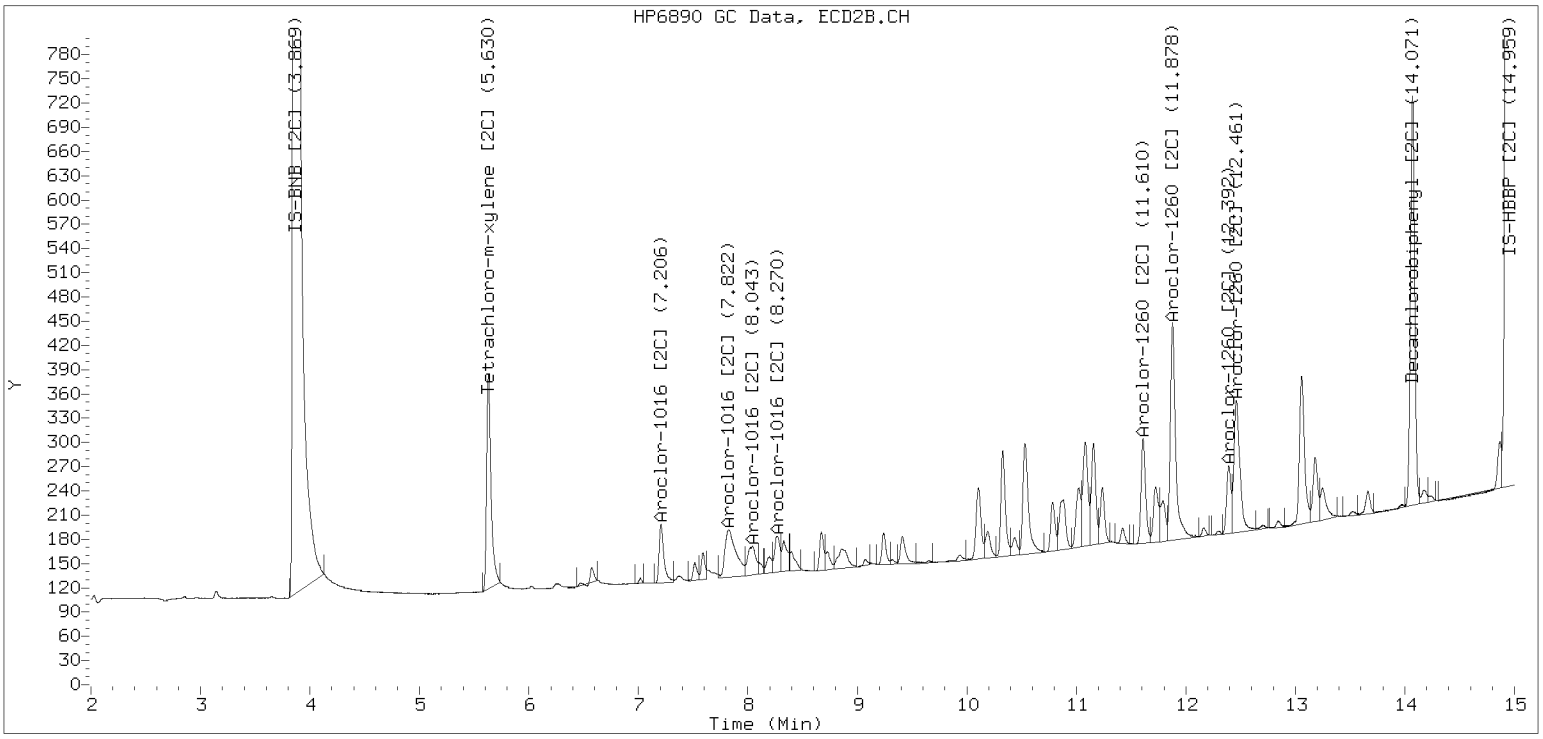


ZB-35 Manual Integration: YES

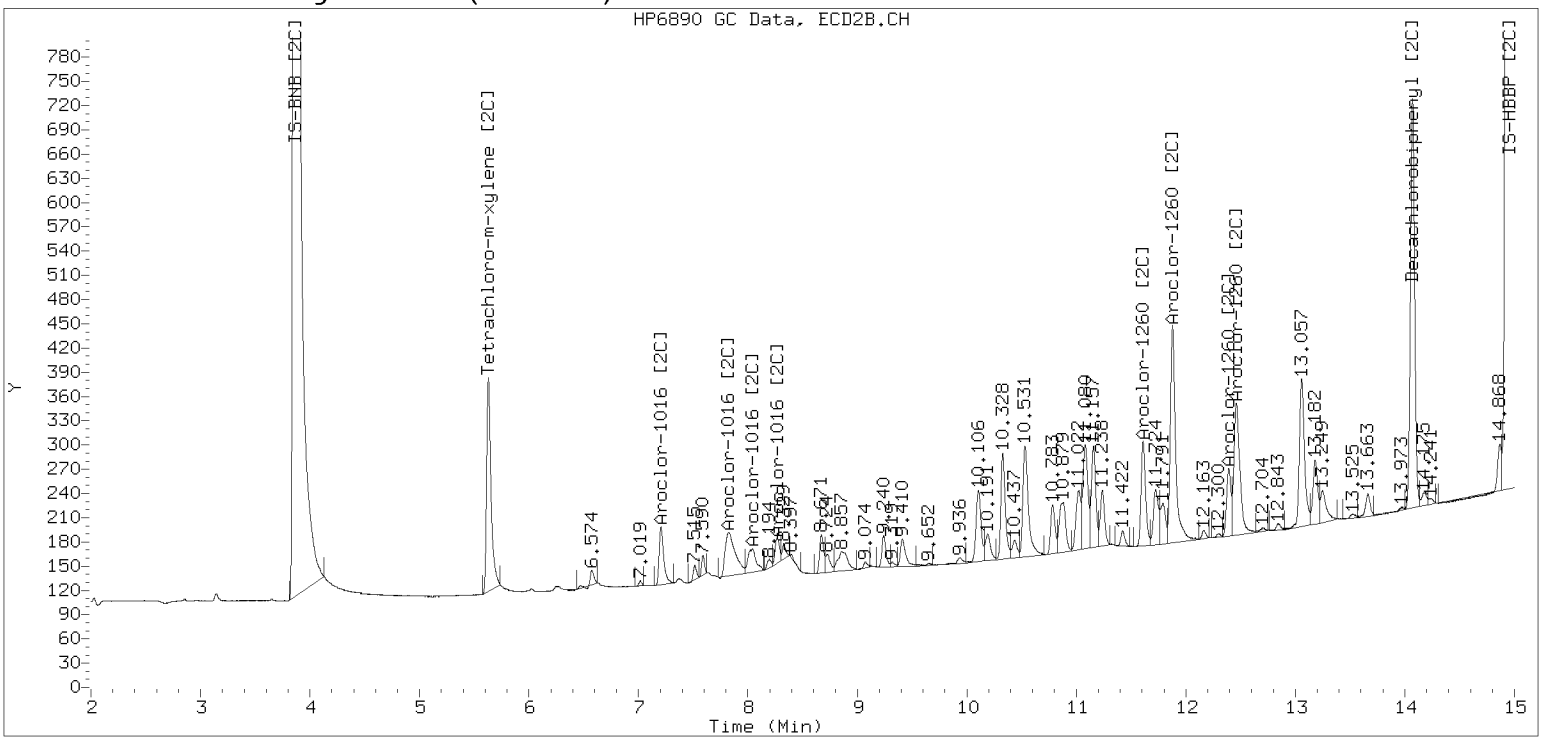
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052322ECD7.D Injection Date: 05-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052323ECD7.D
Data file 2: /230505.b/230505.b/05052323ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 06-MAY-2023 00:08
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	72149	5.630	0.001	37778	7.9	7.8	0.3	Tetrachloro-m-xylene
13.843	0.002	75564	14.070	0.002	71601	8.4	7.6	10.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	610127	1.4
Hexabromobiphenyl	876625	902634	3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	350964	0.5
Hexabromobiphenyl	652984	666660	2.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.001	12303	52.1	1	7.205	0.001	10404	52.4
Aroclor-1016	2	7.595	0.000	35912	48.6	2	7.821	0.013	20971	49.5
Aroclor-1016	3	7.736	0.003	18491	54.1	3	8.016	0.010	9788	52.4
Aroclor-1016	4	8.400	0.002	7326	52.0	4	8.264	0.005	8176	55.1
Total Col1Ave (4 peaks):					51.7	Total Col2Ave (4 peaks):				52.4 RPD = 1
Corrected Ave (3 peaks):					50.9	Corrected Ave (3 peaks):				51.4 RPD = 1
CalAmt %D:					3.4	CalAmt %D:				4.7
Aroclor-1260	1	10.998	0.005	23619	49.5	1	11.609	0.003	17805	50.3
Aroclor-1260	2	11.316	0.006	23213	49.3	2	11.876	0.004	46188	49.9
Aroclor-1260	3	11.693	0.007	58862	49.9	3	12.391	0.003	11048	48.1
Aroclor-1260	4	12.096	0.006	28206	48.8	4	12.460	0.004	30586	49.4
Aroclor-1260	5	12.197	0.004	12672	50.3	NS	---			----
Total Col1Ave (5 peaks):					49.6	Total Col2Ave (4 peaks):				49.4 RPD = 0
Corrected Ave (4 peaks):					49.4	Corrected Ave (3 peaks):				49.2 RPD = 0
CalAmt %D:					-0.9	CalAmt %D:				-1.1

Total PCB Area Col1 (5.842 - 13.740) = 697433 Col1 Total PCB = 0.1 ppm*

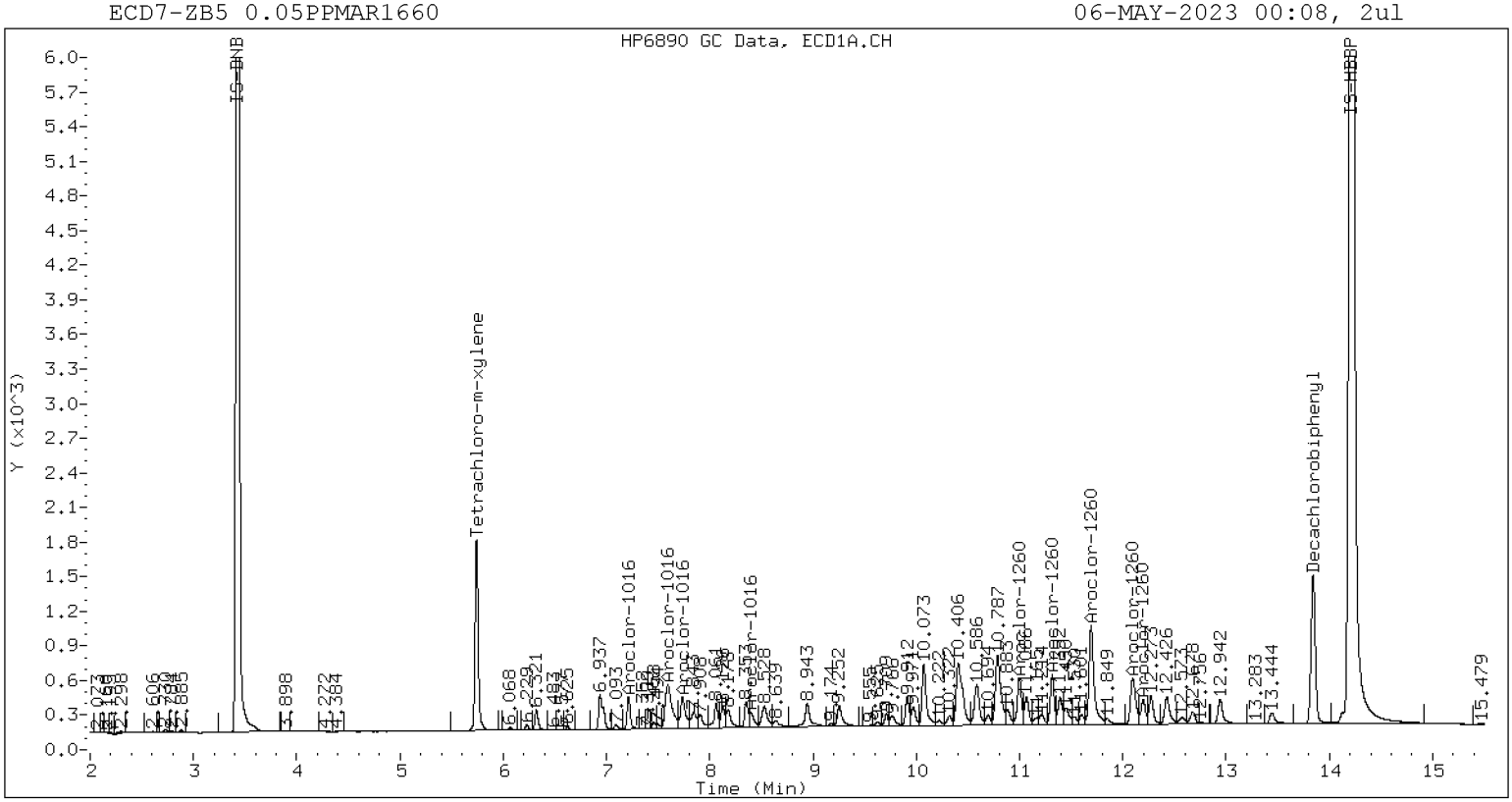
Total PCB Area Col2 (5.728 - 13.968) = 429325 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

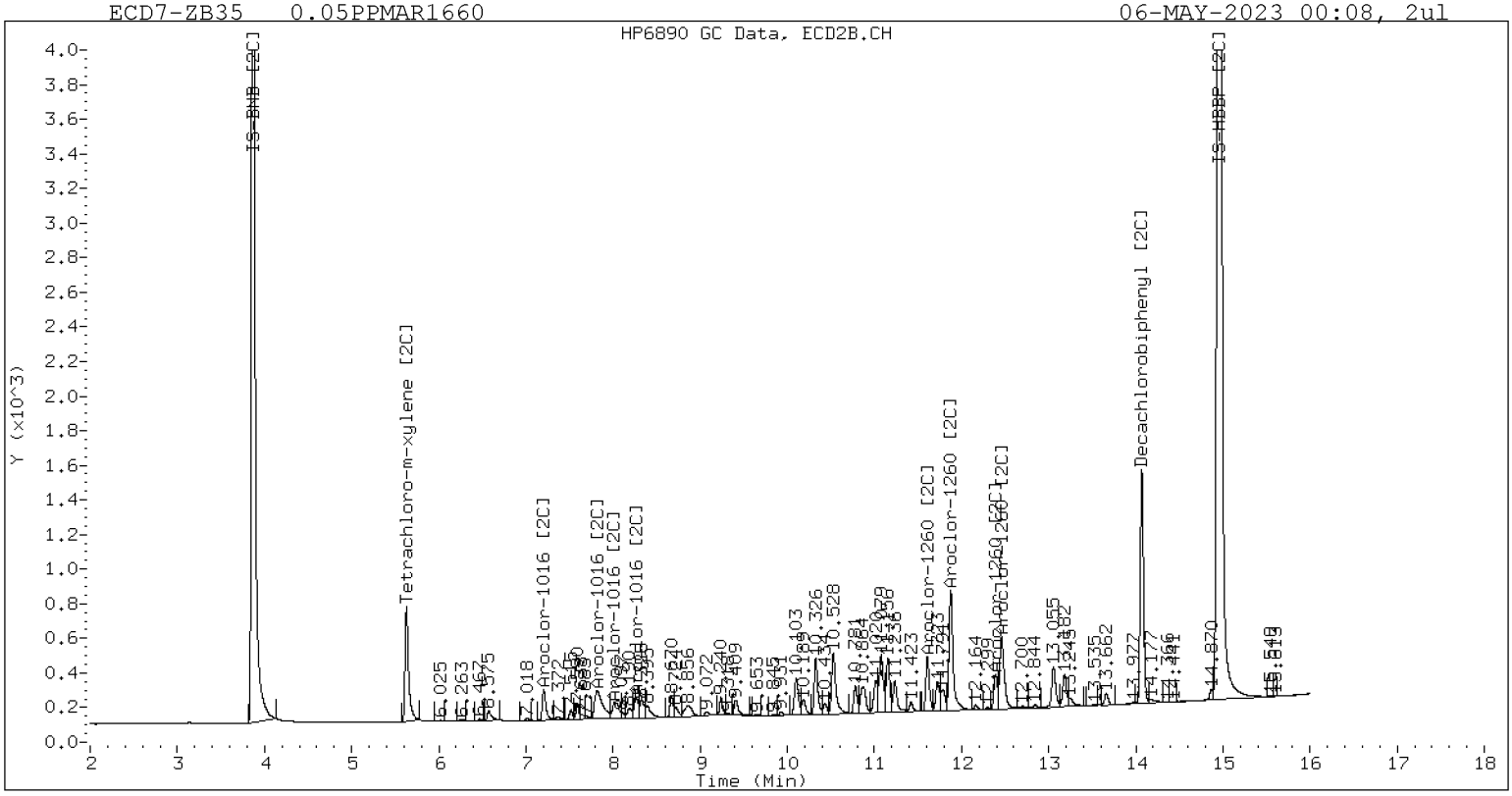
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPMAR1660 06-MAY-2023 00:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPMAR1660 06-MAY-2023 00:08, 2ul

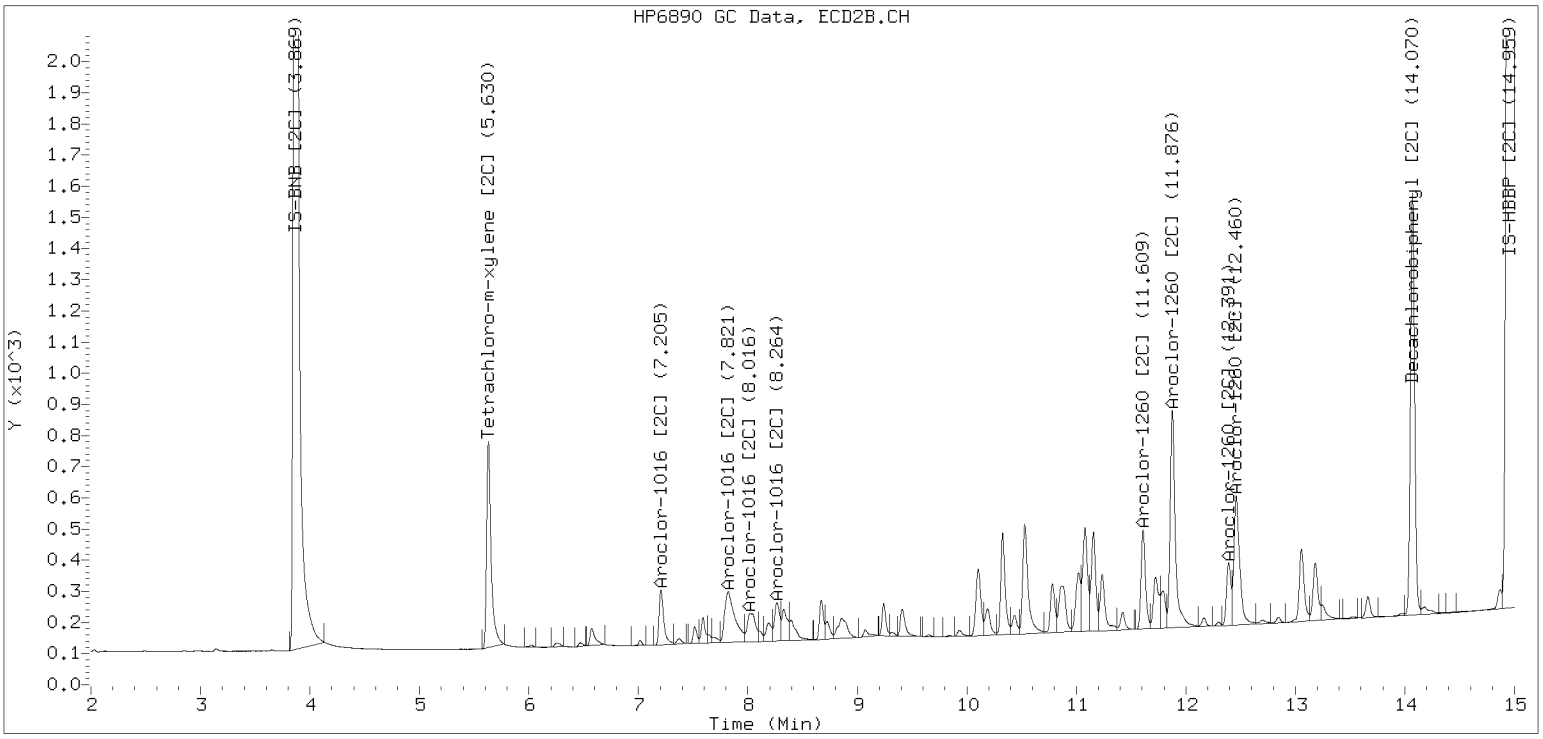


ZB-35 Manual Integration: YES

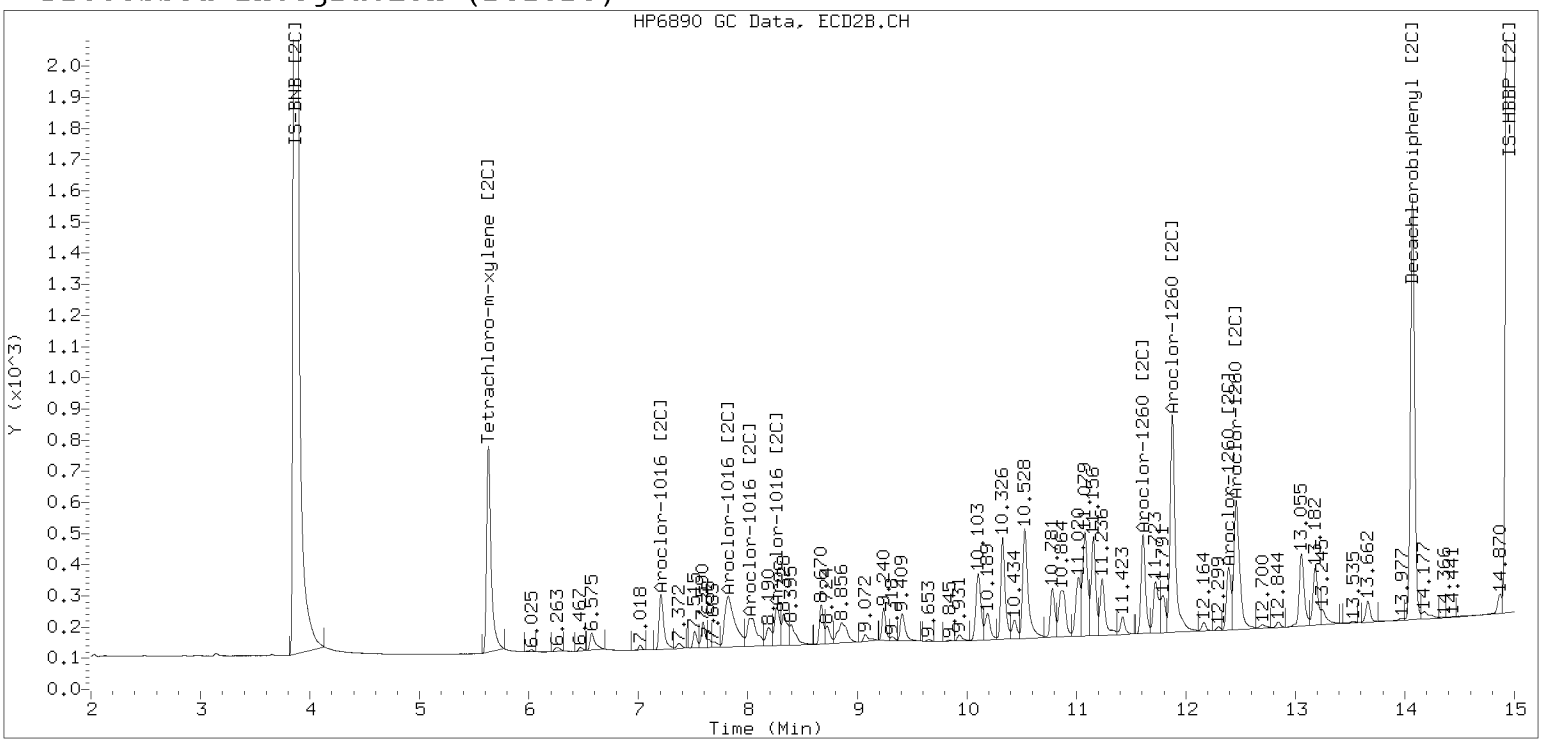
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052323ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052324ECD7.D
Data file 2: /230505.b/230505.b/05052324ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1.0PPMAR1660
Client ID:
Injection Date: 06-MAY-2023 00:29
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.746	0.004	1354956	5.627	-0.001	709704	151.5	152.0	0.4	Tetrachloro-m-xylene
13.842	0.002	1208957	14.071	0.002	1442827	141.2	159.2	12.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	594005	-1.2
Hexabromobiphenyl	876625	857318	-2.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	339380	-2.8
Hexabromobiphenyl	652984	638394	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	192466	836.8	1	7.203	-0.001	161296	839.6
Aroclor-1016	2	7.595	0.000	687116	955.4	2	7.804	-0.003	383432	936.5
Aroclor-1016	3	7.732	-0.000	284089	854.4	3	8.002	-0.003	161269	893.1
Aroclor-1016	4	8.397	-0.001	121539	886.0	4	8.257	-0.002	118708	827.5
Total Col1Ave (4 peaks):					883.2	Total Col2Ave (4 peaks):				874.2 RPD = 1
Corrected Ave (3 peaks):					859.1	Corrected Ave (3 peaks):				853.4 RPD = 1
CalAmt %D:					-11.7	CalAmt %D:				-12.6
Aroclor-1260	1	10.992	-0.001	410905	906.4	1	11.604	-0.002	304531	898.2
Aroclor-1260	2	11.309	-0.001	410553	917.6	2	11.869	-0.003	813835	917.7
Aroclor-1260	3	11.683	-0.003	1014157	905.1	3	12.387	-0.001	218887	996.0
Aroclor-1260	4	12.087	-0.003	505824	921.7	4	12.453	-0.003	543988	918.3
Aroclor-1260	5	12.193	-0.001	212396	887.6	NS	---			----
Total Col1Ave (5 peaks):					907.7	Total Col2Ave (4 peaks):				932.6 RPD = 3
Corrected Ave (4 peaks):					904.2	Corrected Ave (3 peaks):				911.4 RPD = 1
CalAmt %D:					-9.2	CalAmt %D:				-6.7

Total PCB Area Col1 (5.842 - 13.740) = 11665793 Col1 Total PCB = 1.8 ppm*

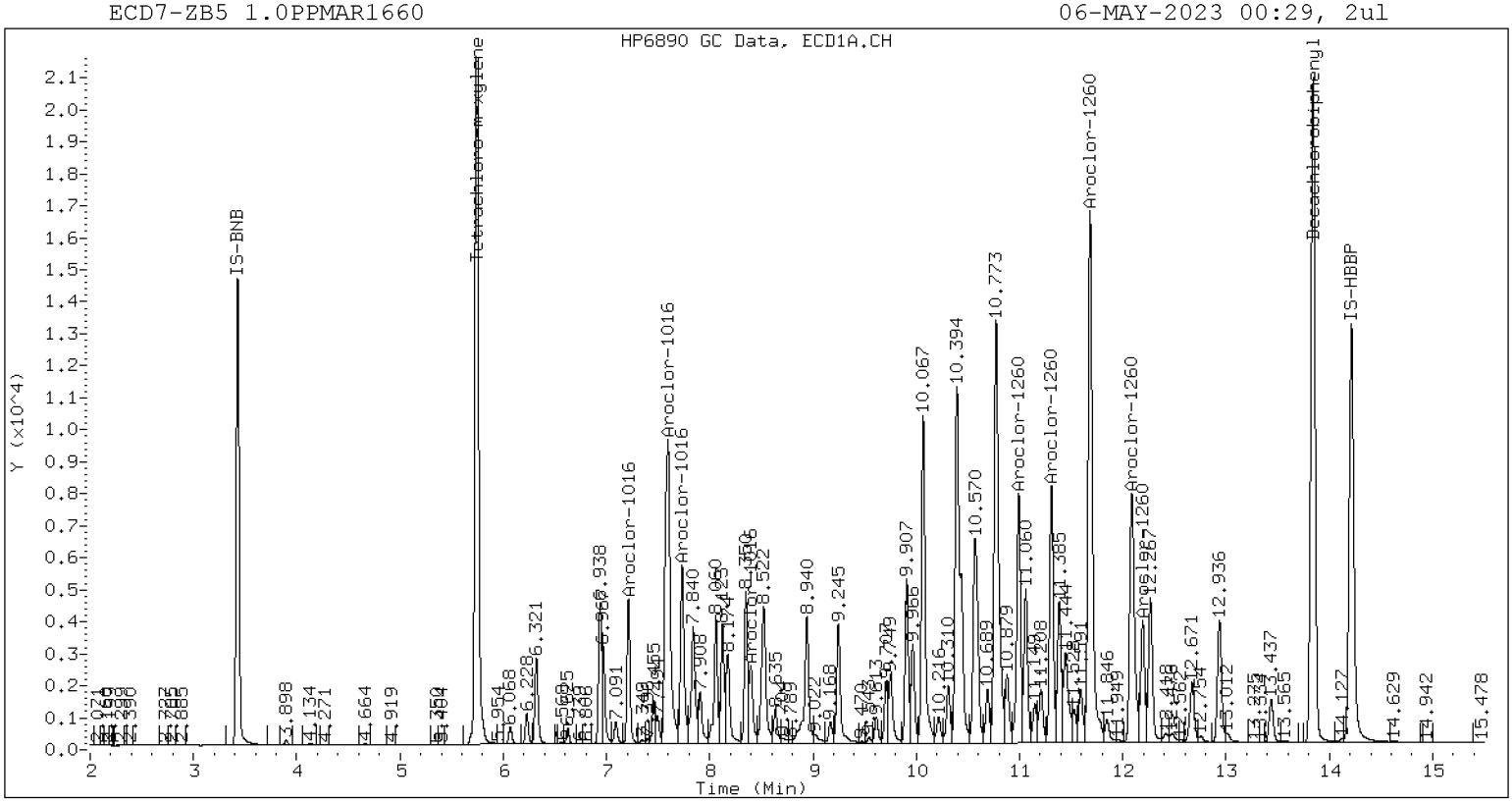
Total PCB Area Col2 (5.728 - 13.968) = 7382788 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

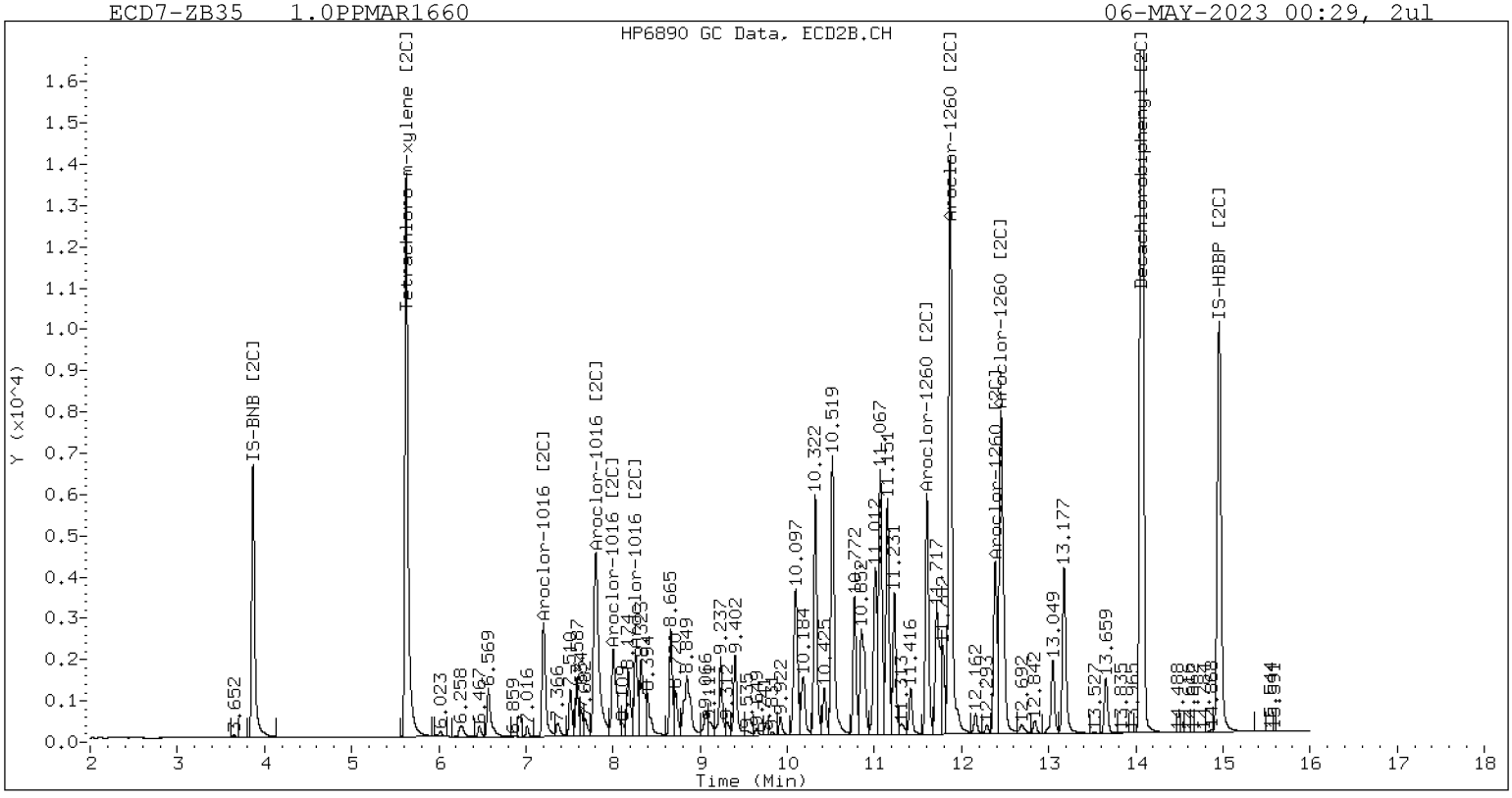
PCB Dual Column Chromatograms

ECD7-ZB5 1.0PPMAR1660 06-MAY-2023 00:29, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1.0PPMAR1660 06-MAY-2023 00:29, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052325ECD7.D
Data file 2: /230505.b/230505.b/05052325ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 06-MAY-2023 00:50
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	166260	5.629	0.000	87721	17.3	17.2	0.5	Tetrachloro-m-xylene
13.841	0.000	162151	14.069	0.001	170994	17.0	17.2	1.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	639496	6.3
Hexabromobiphenyl	876625	955499	9.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	371294	6.3
Hexabromobiphenyl	652984	700767	7.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	-0.000	27672	111.8	1	7.204	0.000	22585	107.5
Aroclor-1016	2	7.595	0.000	84096	108.6	2	7.815	0.008	47261	105.5
Aroclor-1016	3	7.735	0.002	40718	113.8	3	8.012	0.007	21450	108.6
Aroclor-1016	4	8.399	0.001	17000	115.1	4	8.262	0.003	17337	110.5
Total Col1Ave (4 peaks):					112.3	Total Col2Ave (4 peaks):				108.0 RPD = 4
Corrected Ave (3 peaks):					111.4	Corrected Ave (3 peaks):				107.2 RPD = 4
CalAmt %D:					12.3	CalAmt %D:				8.0
Aroclor-1260	1	10.995	0.002	53621	106.1	1	11.608	0.002	39451	106.0
Aroclor-1260	2	11.313	0.003	53001	106.3	2	11.874	0.002	104406	107.3
Aroclor-1260	3	11.690	0.004	132765	106.3	3	12.391	0.003	24449	101.4
Aroclor-1260	4	12.093	0.003	64276	105.1	4	12.457	0.002	68859	105.9
Aroclor-1260	5	12.196	0.003	28307	106.1	NS	---			----
Total Col1Ave (5 peaks):					106.0	Total Col2Ave (4 peaks):				105.1 RPD = 1
Corrected Ave (4 peaks):					105.9	Corrected Ave (3 peaks):				104.4 RPD = 1
CalAmt %D:					6.0	CalAmt %D:				5.1

Total PCB Area Col1 (5.842 - 13.740) = 1580756 Col1 Total PCB = 0.2 ppm*

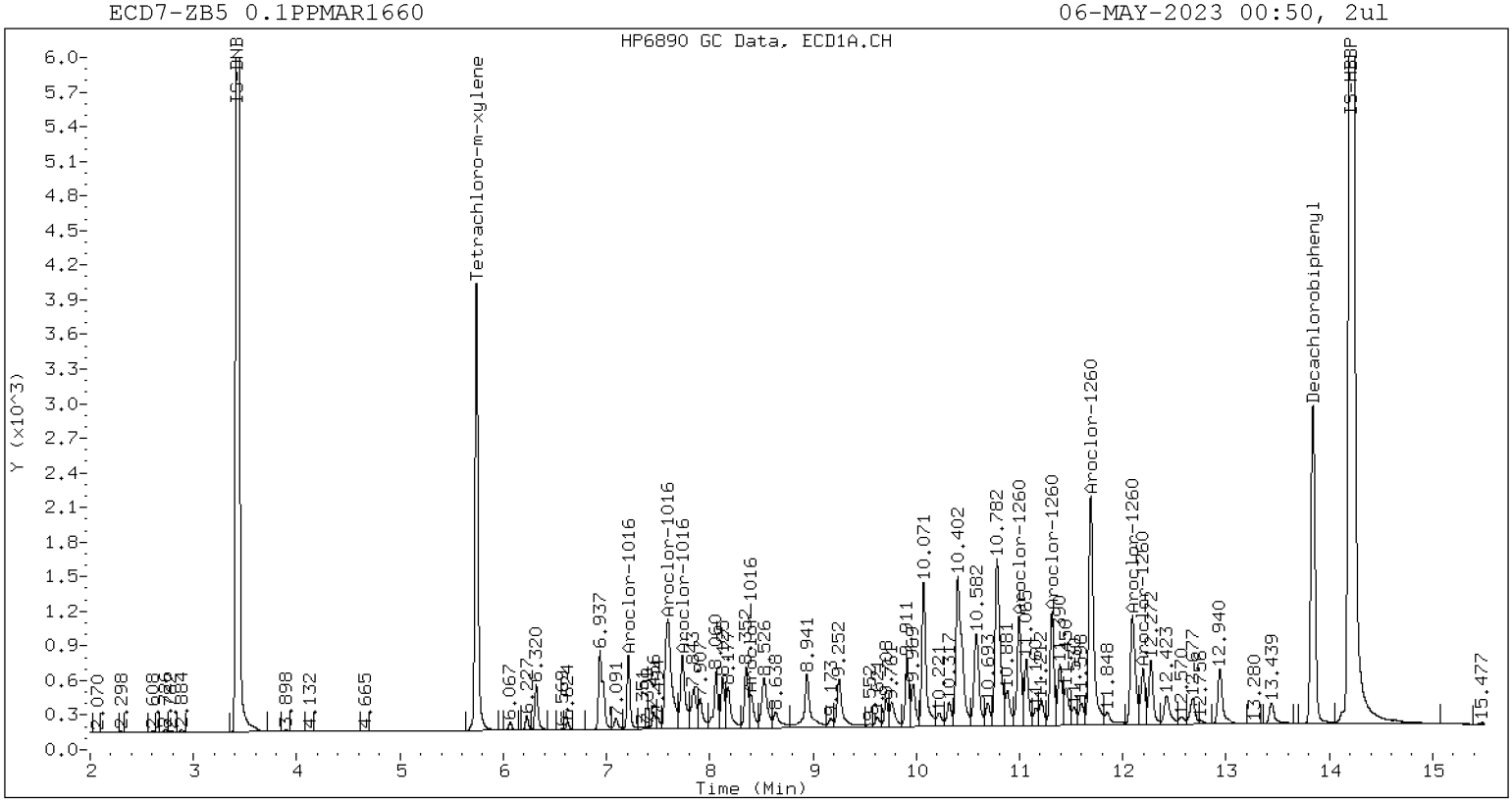
Total PCB Area Col2 (5.728 - 13.968) = 950746 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

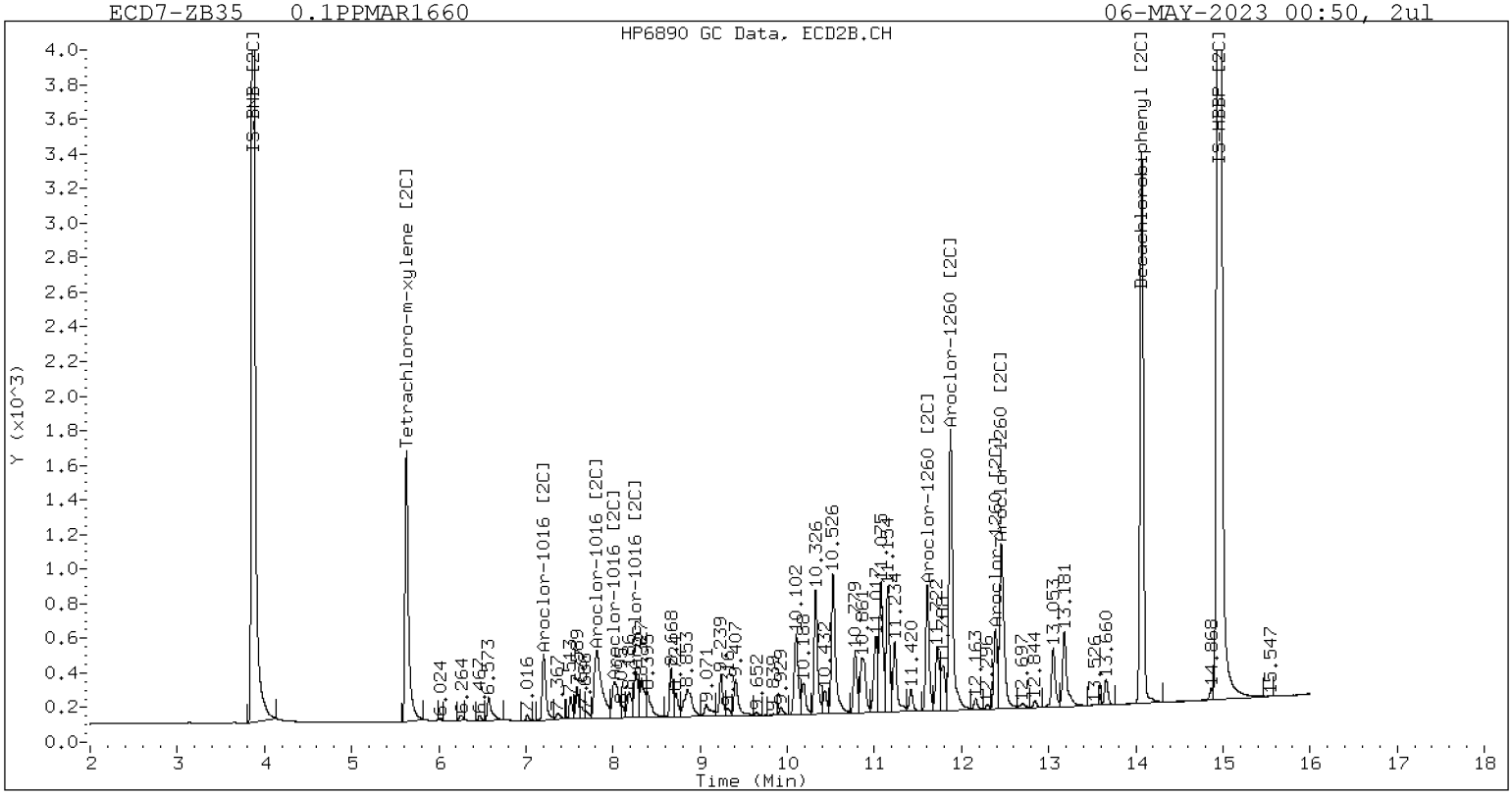
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 06-MAY-2023 00:50, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 06-MAY-2023 00:50, 2ul

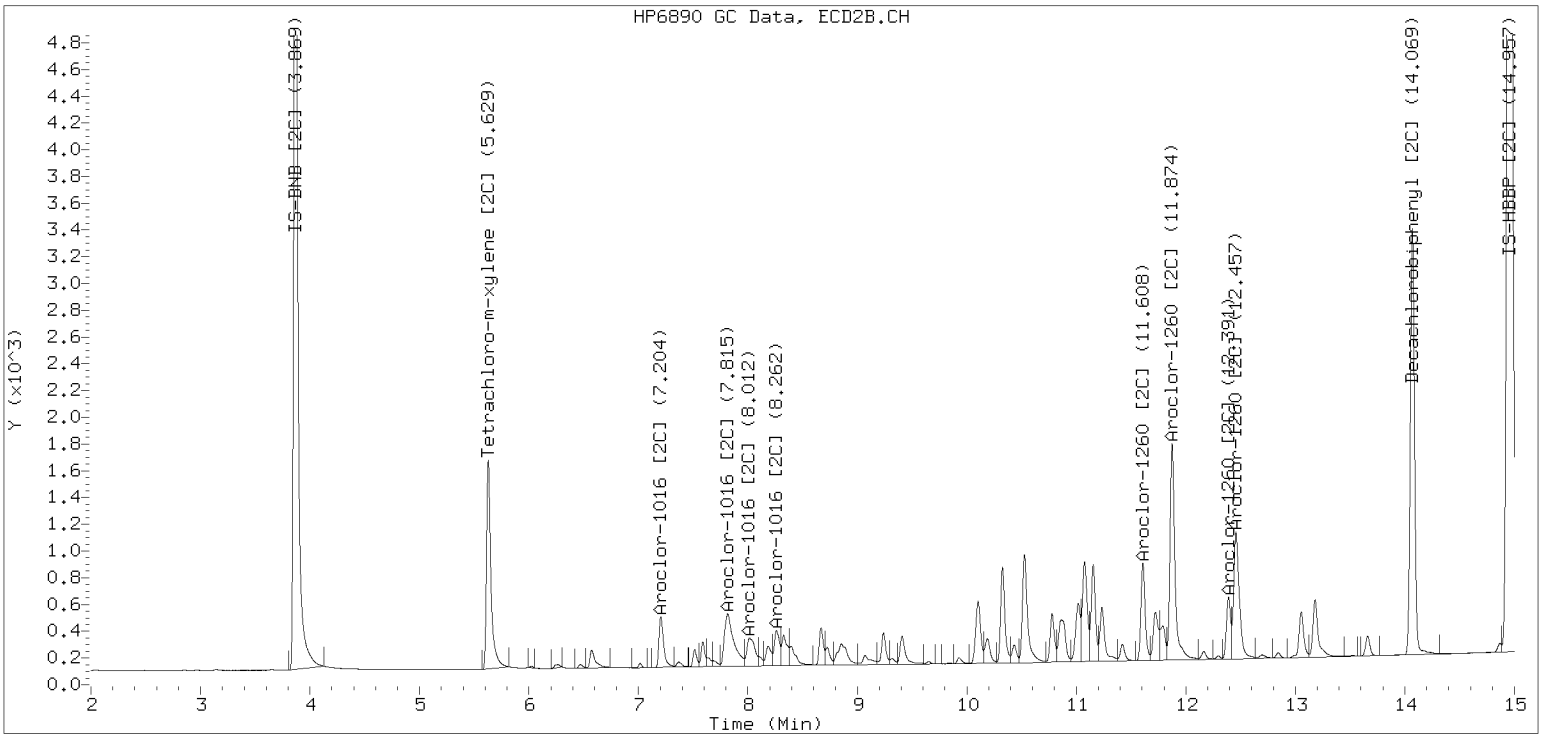


ZB-35 Manual Integration: YES

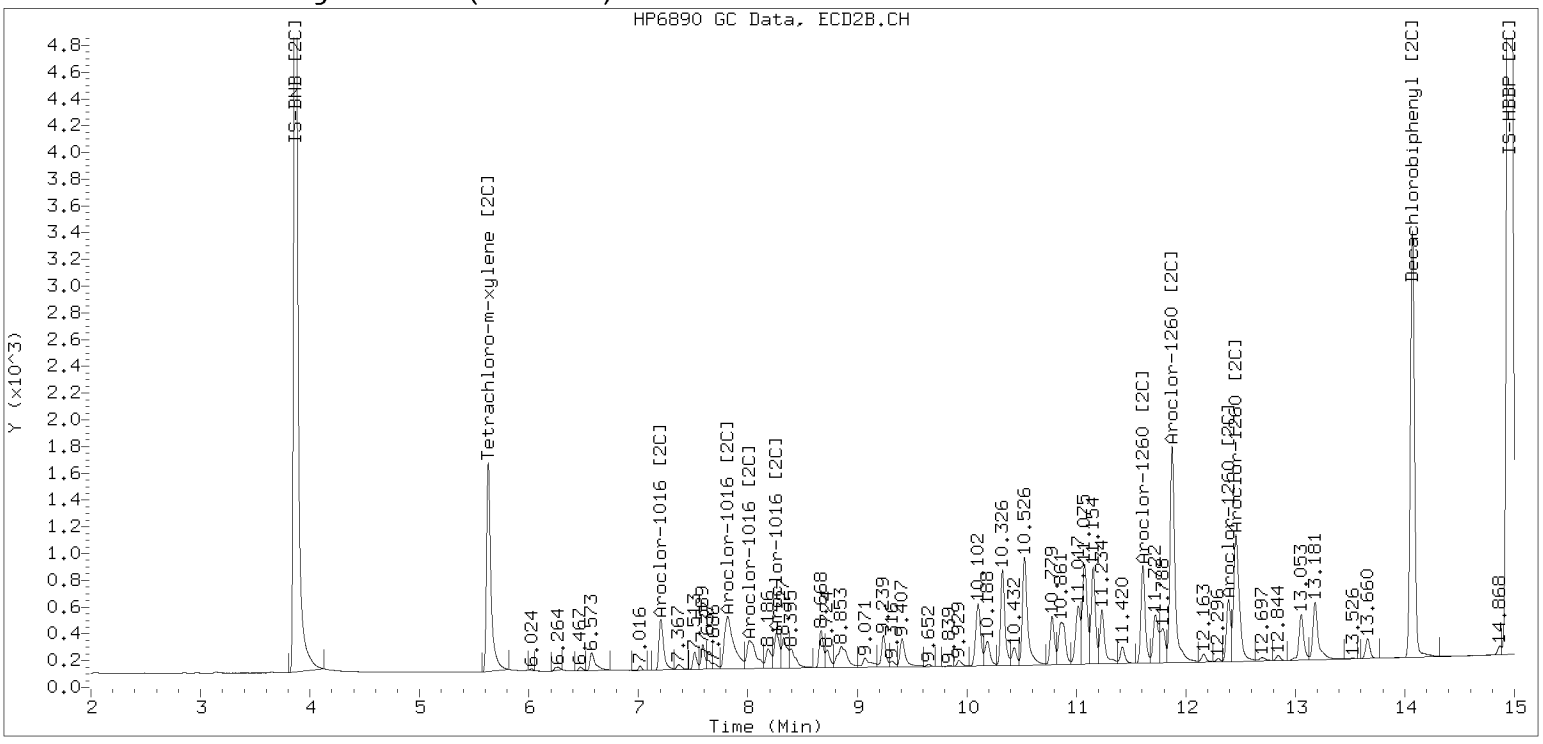
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052325ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052326ECD7.D
Data file 2: /230505.b/230505.b/05052326ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 06-MAY-2023 01:11
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	726106	5.629	0.000	386361	77.6	78.4	1.0	Tetrachloro-m-xylene
13.842	0.002	662159	14.070	0.002	782852	72.8	82.0	11.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	621250	3.3
Hexabromobiphenyl	876625	910647	3.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	358174	2.5
Hexabromobiphenyl	652984	672444	3.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	0.000	112948	469.5	1	7.204	0.000	93114	459.2
Aroclor-1016	2	7.594	0.000	385708	512.8	2	7.808	0.000	213293	493.6
Aroclor-1016	3	7.733	0.000	163263	469.5	3	8.006	0.000	90569	475.2
Aroclor-1016	4	8.398	0.000	69235	482.6	4	8.259	0.000	69045	456.1
Total Col1Ave (4 peaks):					483.6	Total Col2Ave (4 peaks):				471.0 RPD = 3
Corrected Ave (3 peaks):					473.9	Corrected Ave (3 peaks):				463.5 RPD = 2
CalAmt %D:					-3.3	CalAmt %D:				-5.8
Aroclor-1260	1	10.993	0.000	231157	480.0	1	11.606	0.000	171304	479.7
Aroclor-1260	2	11.310	0.000	230103	484.2	2	11.872	0.000	454515	486.6
Aroclor-1260	3	11.686	0.000	571583	480.2	3	12.388	0.000	116621	503.8
Aroclor-1260	4	12.090	0.000	284345	487.8	4	12.455	0.000	305334	489.3
Aroclor-1260	5	12.193	0.000	119534	470.3	NS	---			----
Total Col1Ave (5 peaks):					480.5	Total Col2Ave (4 peaks):				489.8 RPD = 2
Corrected Ave (4 peaks):					478.7	Corrected Ave (3 peaks):				485.2 RPD = 1
CalAmt %D:					-3.9	CalAmt %D:				-2.0

Total PCB Area Col1 (5.842 - 13.740) = 6615607 Col1 Total PCB = 1.0 ppm*

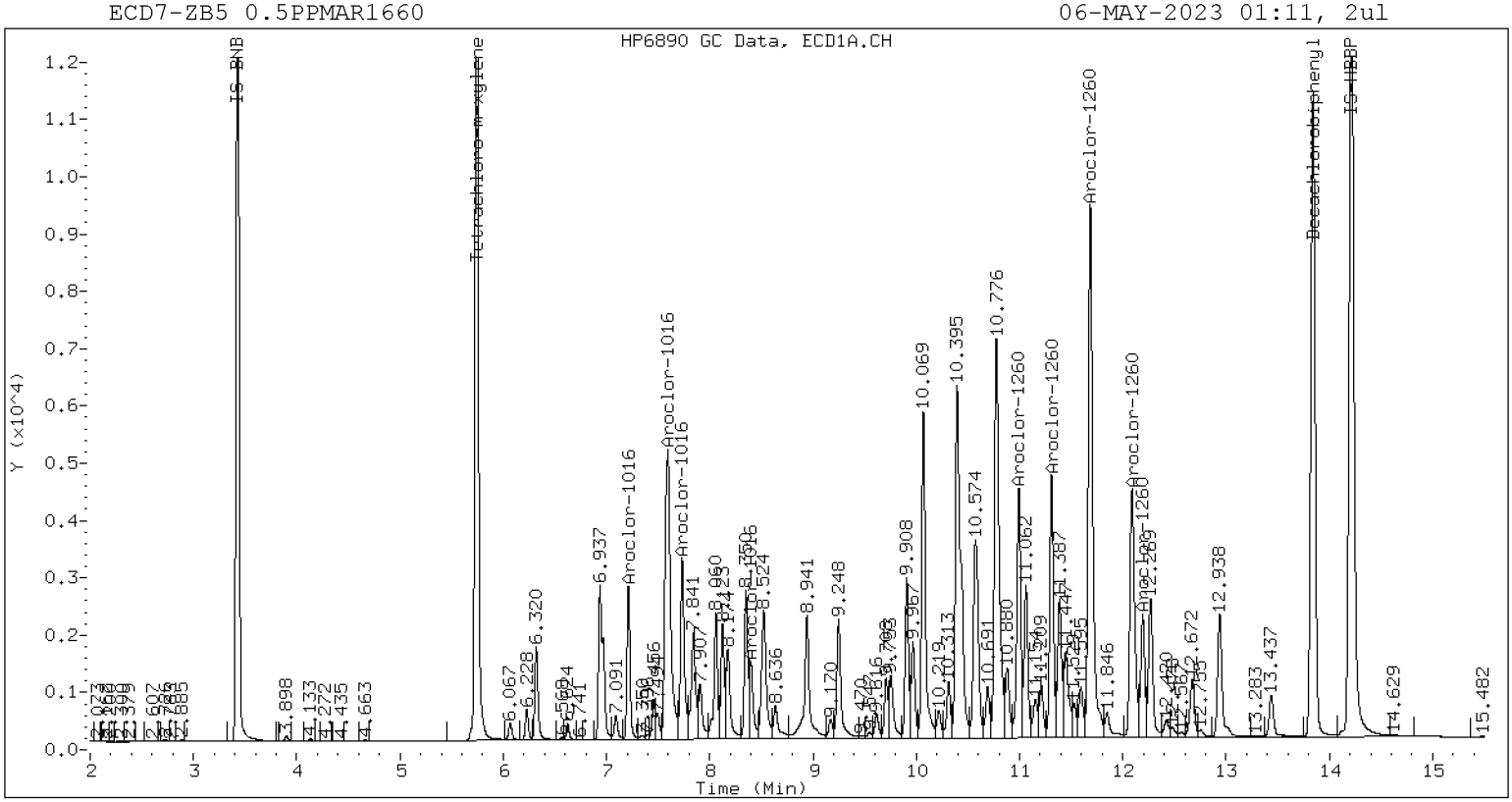
Total PCB Area Col2 (5.728 - 13.968) = 4121423 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

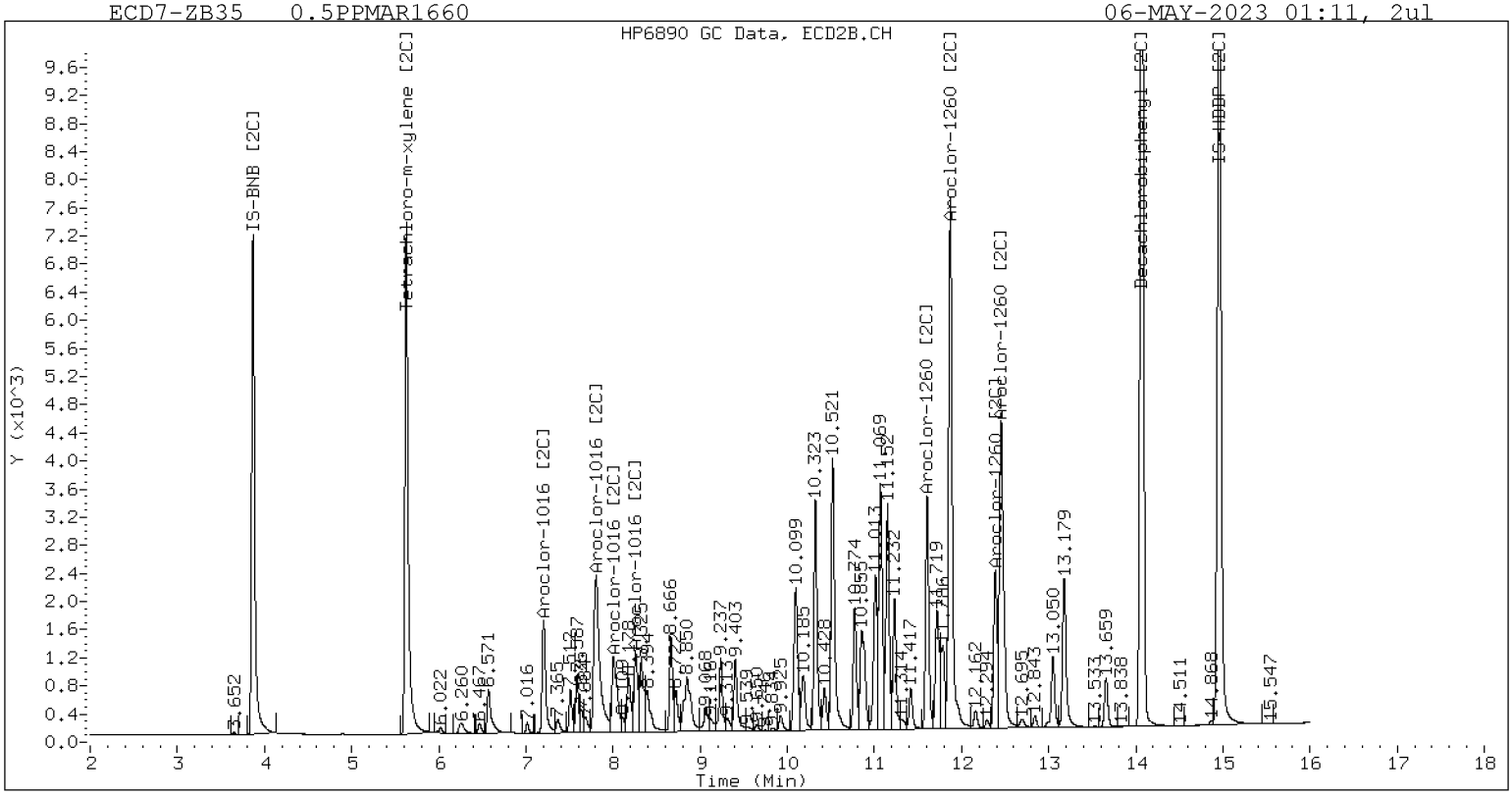
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 06-MAY-2023 01:11, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 06-MAY-2023 01:11, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052327ECD7.D
Data file 2: /230505.b/230505.b/05052327ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1242
Client ID:
Injection Date: 06-MAY-2023 01:31
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	447397	5.627	-0.001	235808	47.5	47.6	0.3	Tetrachloro-m-xylene
13.842	0.001	336070	14.068	0.000	375985	36.4	38.8	6.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	625349	4.0
Hexabromobiphenyl	876625	923197	5.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	359808	3.0
Hexabromobiphenyl	652984	683116	4.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.212	0.000	49262	250.0	1	7.203	0.000	40200	250.0
Aroclor-1242	2	7.595	0.000	156103	250.0	2	7.812	0.000	85524	250.0
Aroclor-1242	3	8.398	0.000	30193	250.0	3	9.123	0.000	27418	250.0
Aroclor-1242	4	8.525	0.000	69876	250.0	4	9.550	0.000	33043	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 1203666 Col1 Total PCB = 0.2 ppm*

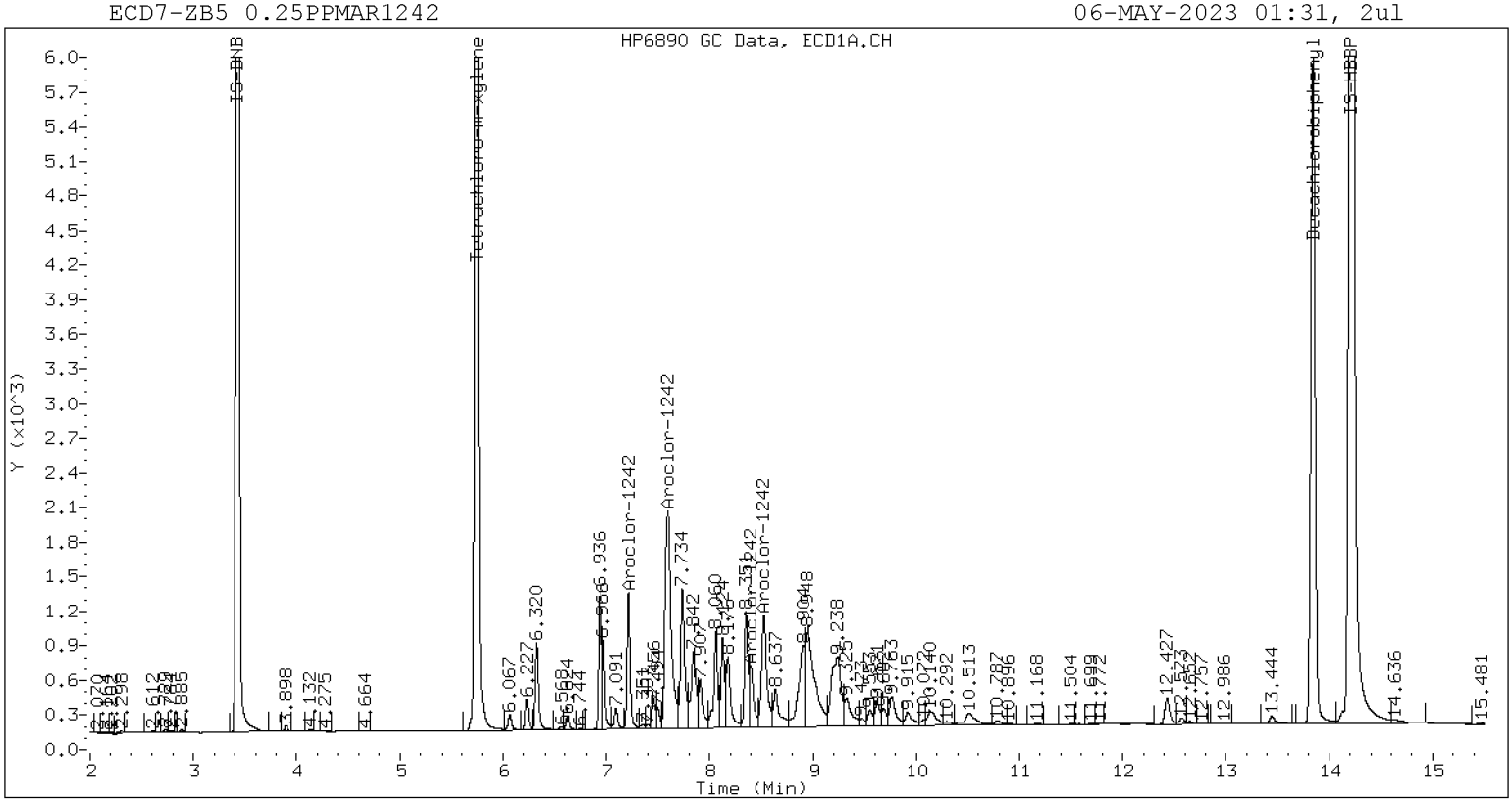
Total PCB Area Col2 (5.728 - 13.968) = 643088 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

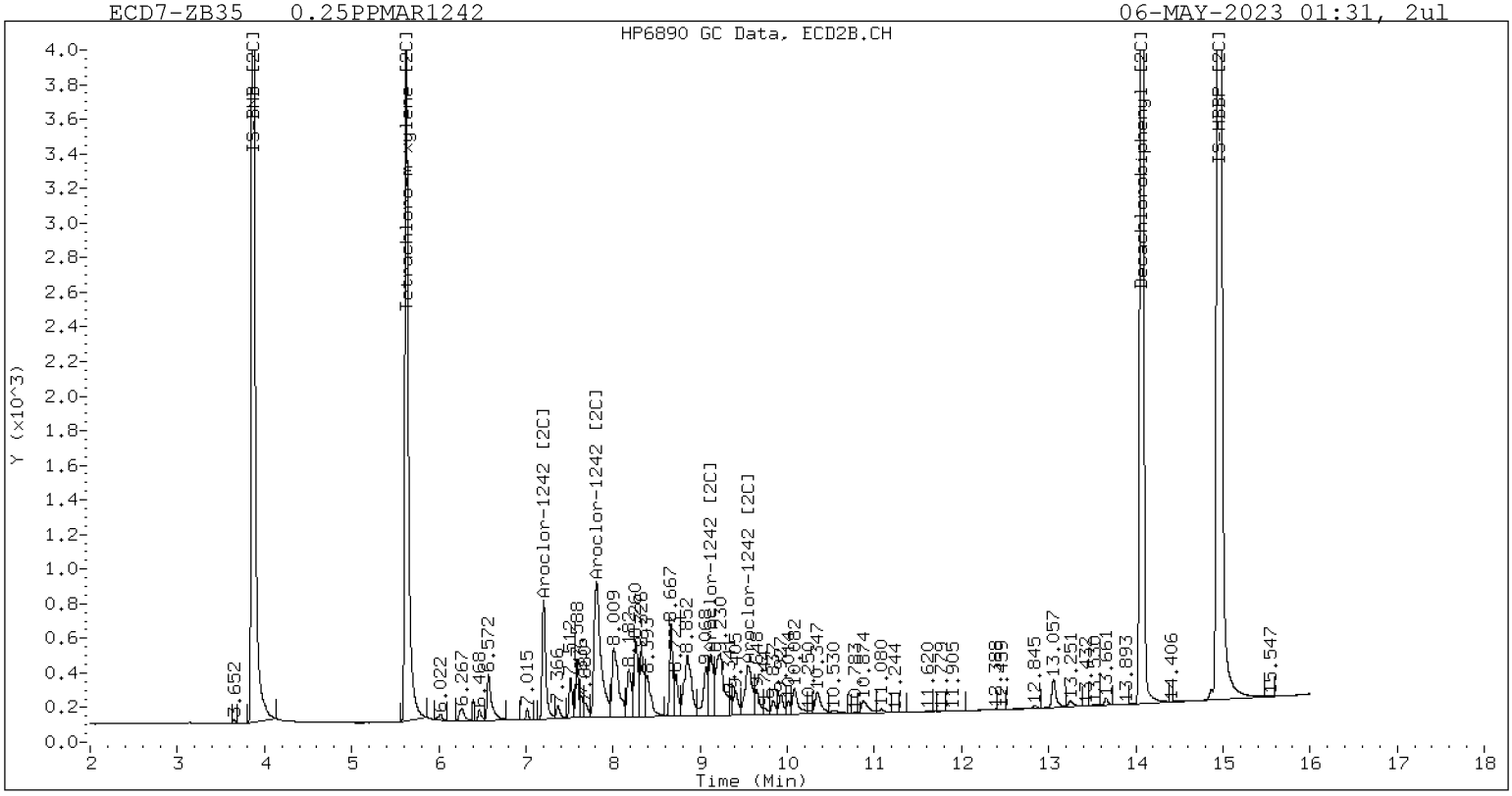
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1242 06-MAY-2023 01:31, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1242 06-MAY-2023 01:31, 2ul

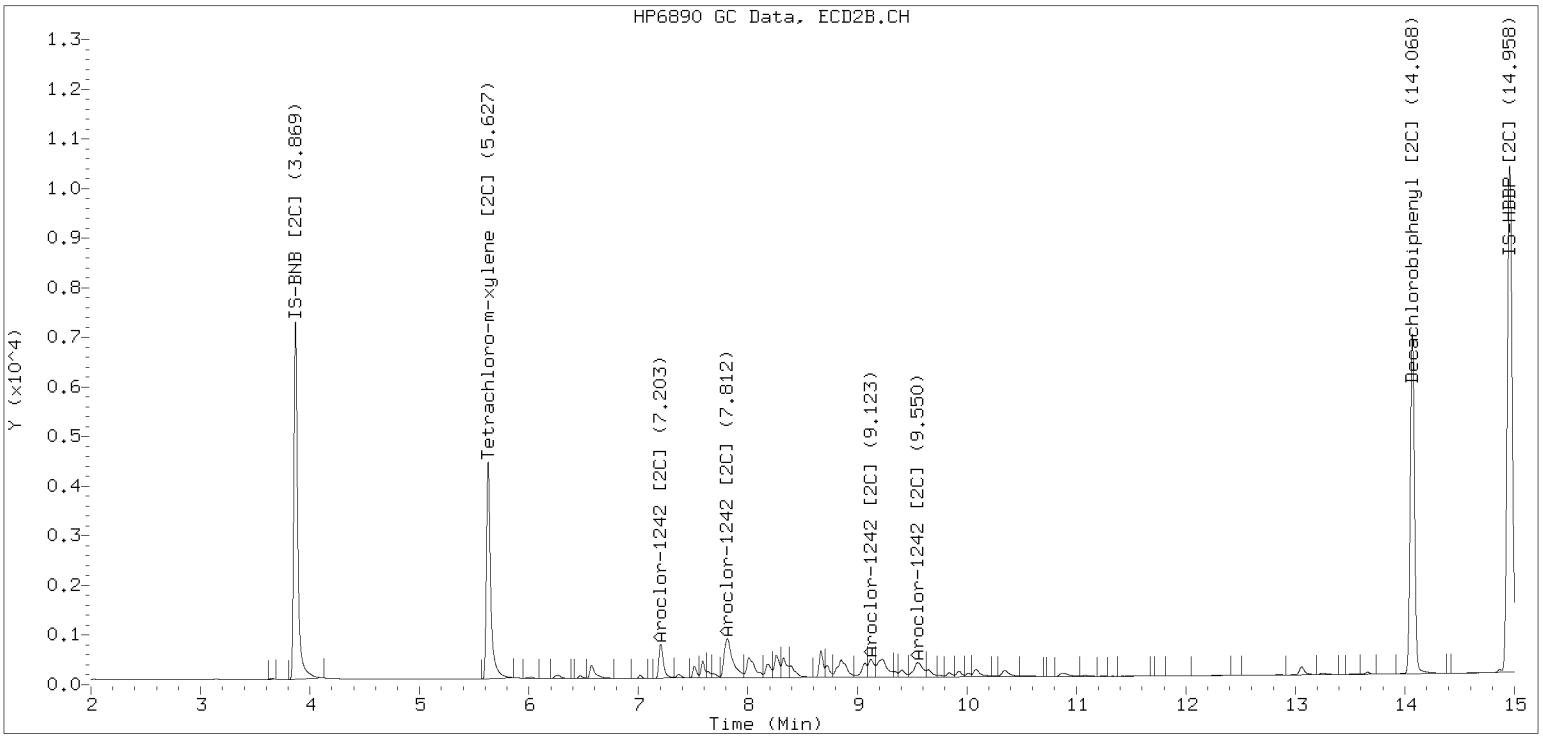


ZB-35 Manual Integration: YES

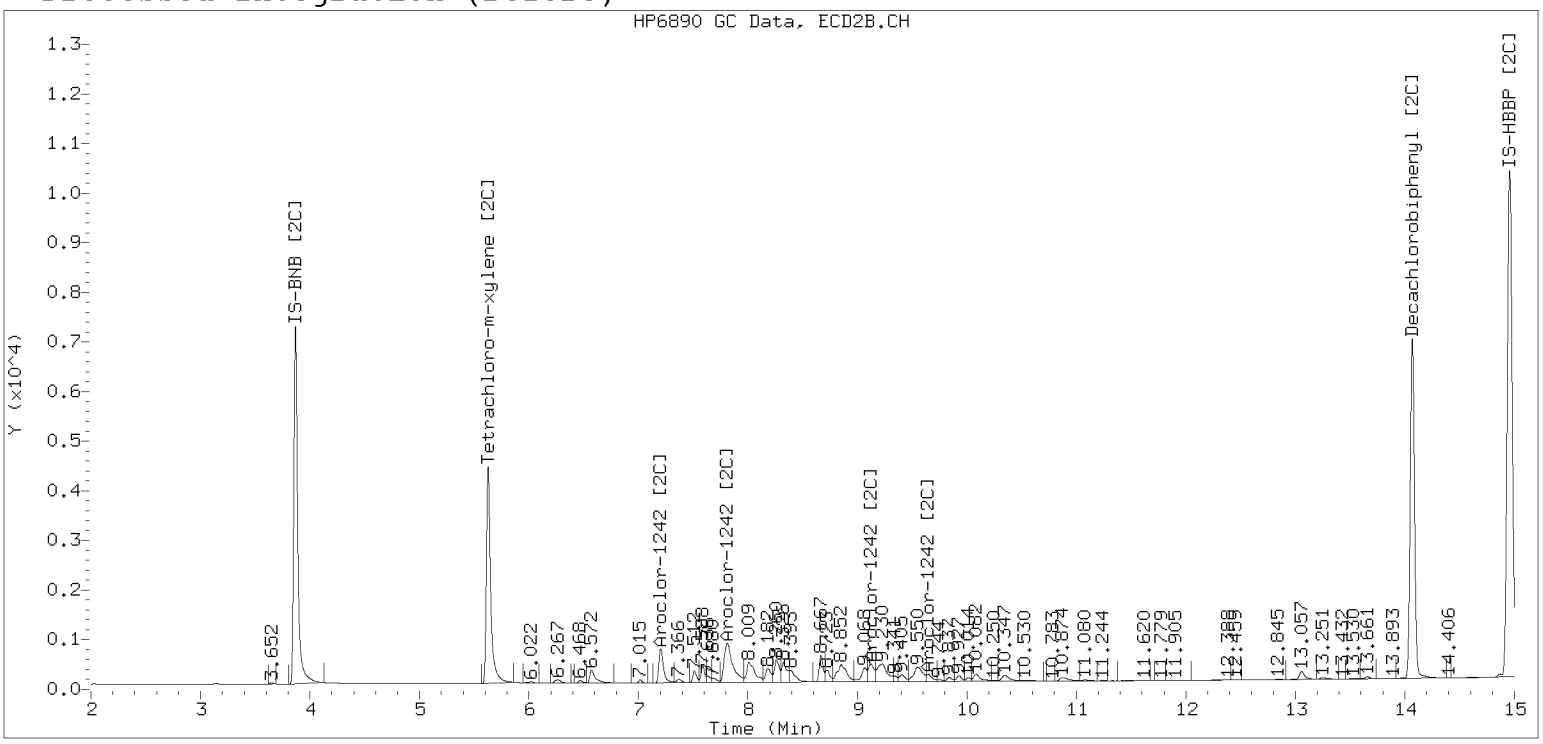
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052327ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052328ECD7.D
Data file 2: /230505.b/230505.b/05052328ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1248
Client ID:
Injection Date: 06-MAY-2023 01:52
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	363354	5.628	-0.000	193087	38.8	39.5	1.9	Tetrachloro-m-xylene
13.843	0.003	347513	14.070	0.002	386262	38.0	40.3	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	621905	3.4
Hexabromobiphenyl	876625	915805	4.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	354920	1.6
Hexabromobiphenyl	652984	674778	3.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.399	0.000	39684	250.0	1	8.260	0.000	42211	250.0
Aroclor-1248	2	8.524	0.000	103126	250.0	2	8.667	0.000	44588	250.0
Aroclor-1248	3	8.944	0.000	198327	250.0	3	9.120	0.000	52266	250.0
Aroclor-1248	4	9.243	0.000	101099	250.0	4	9.546	0.000	62674	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 1607435 Col1 Total PCB = 0.2 ppm*

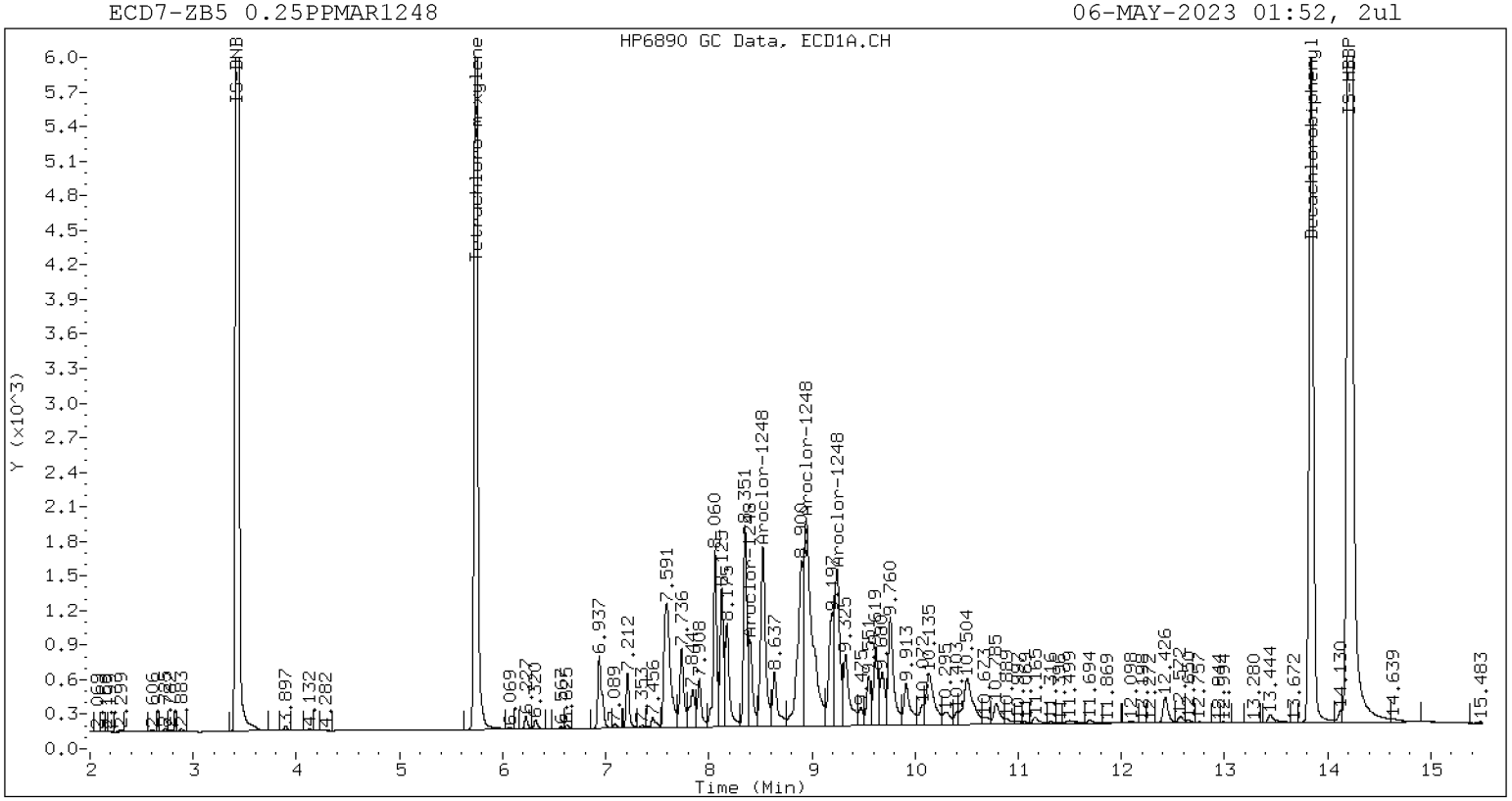
Total PCB Area Col2 (5.728 - 13.968) = 866525 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

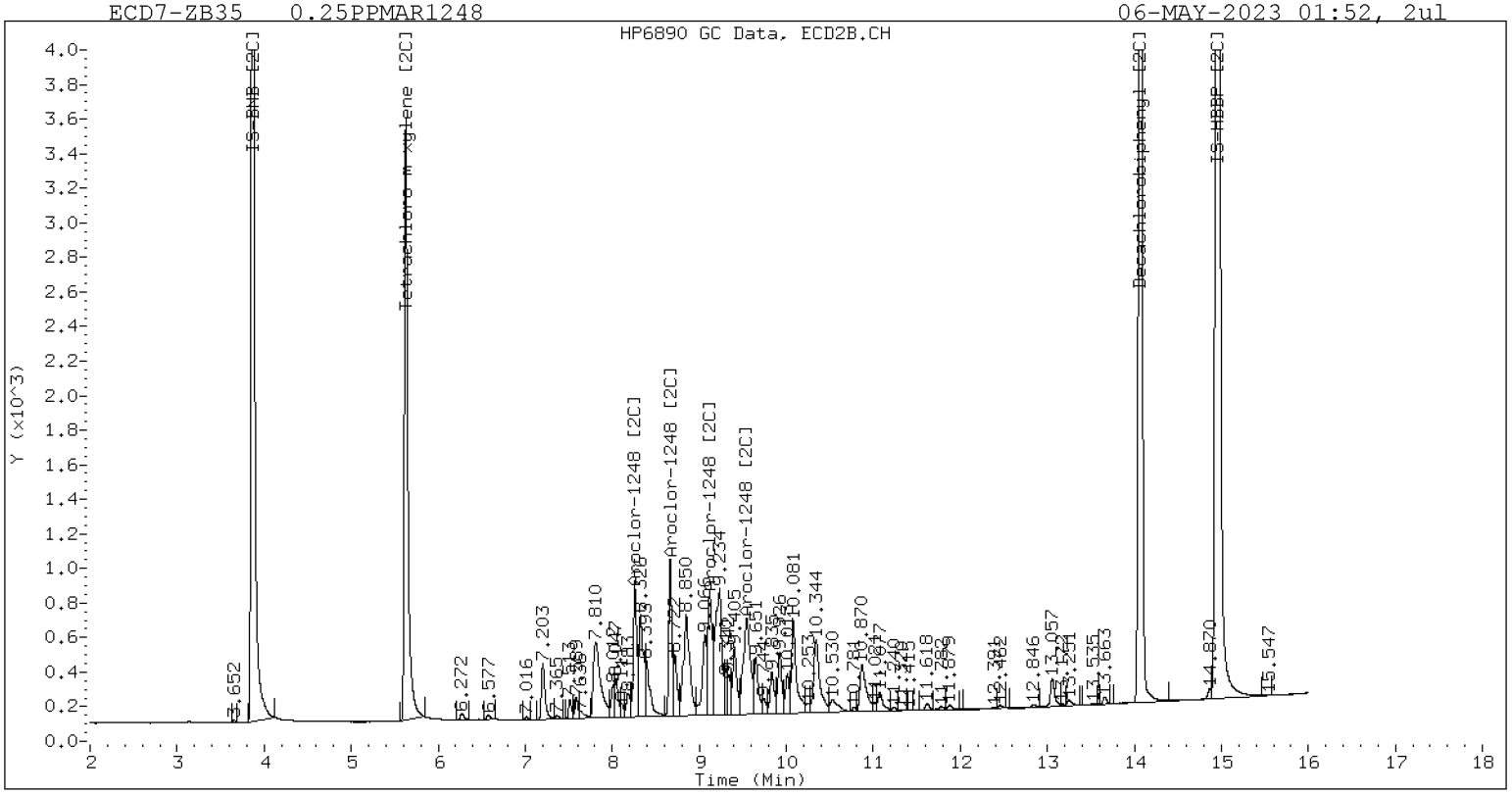
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1248 06-MAY-2023 01:52, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1248 06-MAY-2023 01:52, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052329ECD7.D
Data file 2: /230505.b/230505.b/05052329ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1254
Client ID:
Injection Date: 06-MAY-2023 02:13
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	357984	5.629	0.001	190255	37.8	38.5	1.8	Tetrachloro-m-xylene
13.842	0.002	347079	14.071	0.002	385540	37.4	39.8	6.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	628765	4.5
Hexabromobiphenyl	876625	929076	6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	359470	2.9
Hexabromobiphenyl	652984	682882	4.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.246	0.000	161557	250.0	1	9.404	0.000	68278	250.0
Aroclor-1254	2	9.325	0.000	72588	250.0	2	9.499	0.000	40561	250.0
Aroclor-1254	3	9.618	0.000	104295	250.0	3	9.924	0.000	55343	250.0
Aroclor-1254	4	9.756	0.000	204288	250.0	4	10.078	0.000	120775	250.0
Aroclor-1254	5	10.126	0.000	123377	250.0	5	10.328	0.000	119827	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 2115446 Col1 Total PCB = 0.3 ppm*

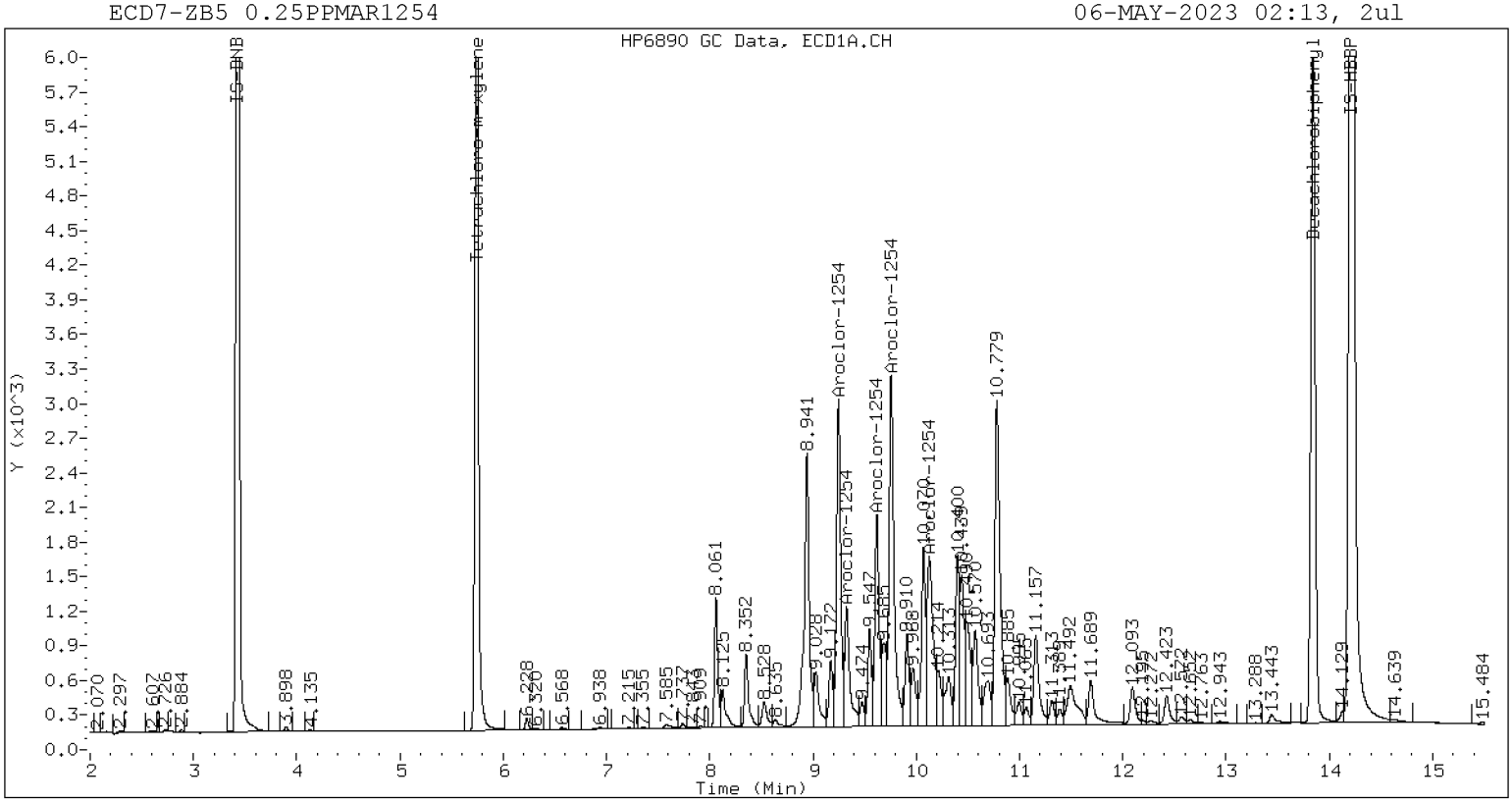
Total PCB Area Col2 (5.728 - 13.968) = 1173654 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

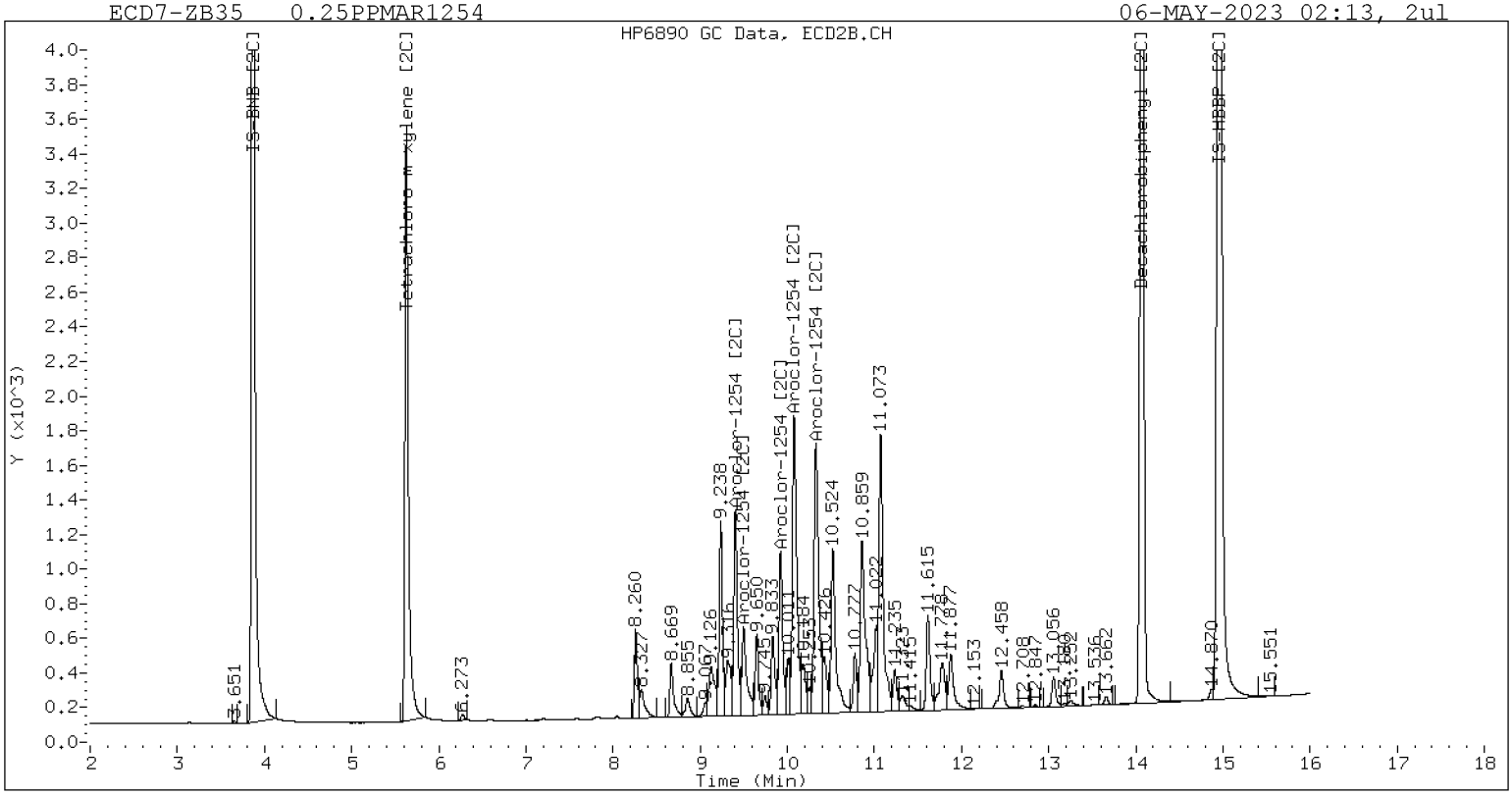
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1254 06-MAY-2023 02:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1254 06-MAY-2023 02:13, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052330ECD7.D
Data file 2: /230505.b/230505.b/05052330ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR2162
Client ID:
Injection Date: 06-MAY-2023 02:34
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	379099	5.628	0.000	200082	39.7	40.8	2.7	Tetrachloro-m-xylene
13.842	0.001	358012	14.071	0.003	396142	38.1	40.5	6.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	634497	5.5
Hexabromobiphenyl	876625	940541	7.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	356713	2.1
Hexabromobiphenyl	652984	688599	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1221	1	4.663	0.000	11156	250.0	1	4.894	0.000	6578	250.0
Aroclor-1221	2	6.069	0.000	22382	250.0	2	6.245	0.000	13633	250.0
Aroclor-1221	3	6.321	0.000	53161	250.0	3	6.572	0.000	21443	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.779	0.000	106373	250.0	1	11.153	0.000	139491	250.0
Aroclor-1262	2	12.195	0.000	149596	250.0	2	11.605	0.000	117643	250.0
Aroclor-1262	3	12.269	0.000	160810	250.0	3	12.386	0.000	128556	250.0
Aroclor-1262	4	12.939	0.000	131044	250.0	4	12.456	0.000	209520	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 2742242 Col1 Total PCB = 0.4 ppm*

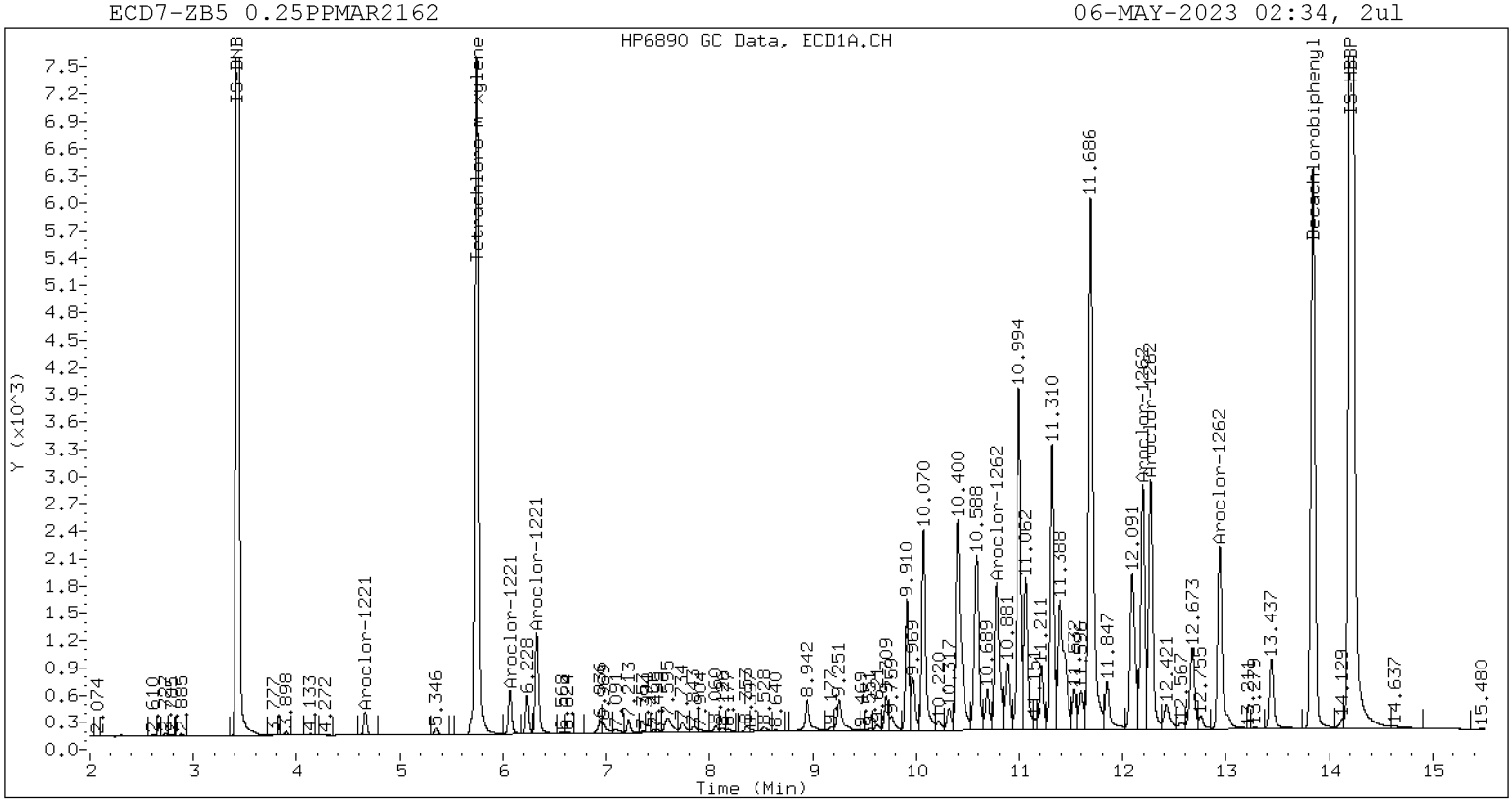
Total PCB Area Col2 (5.728 - 13.968) = 1852573 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

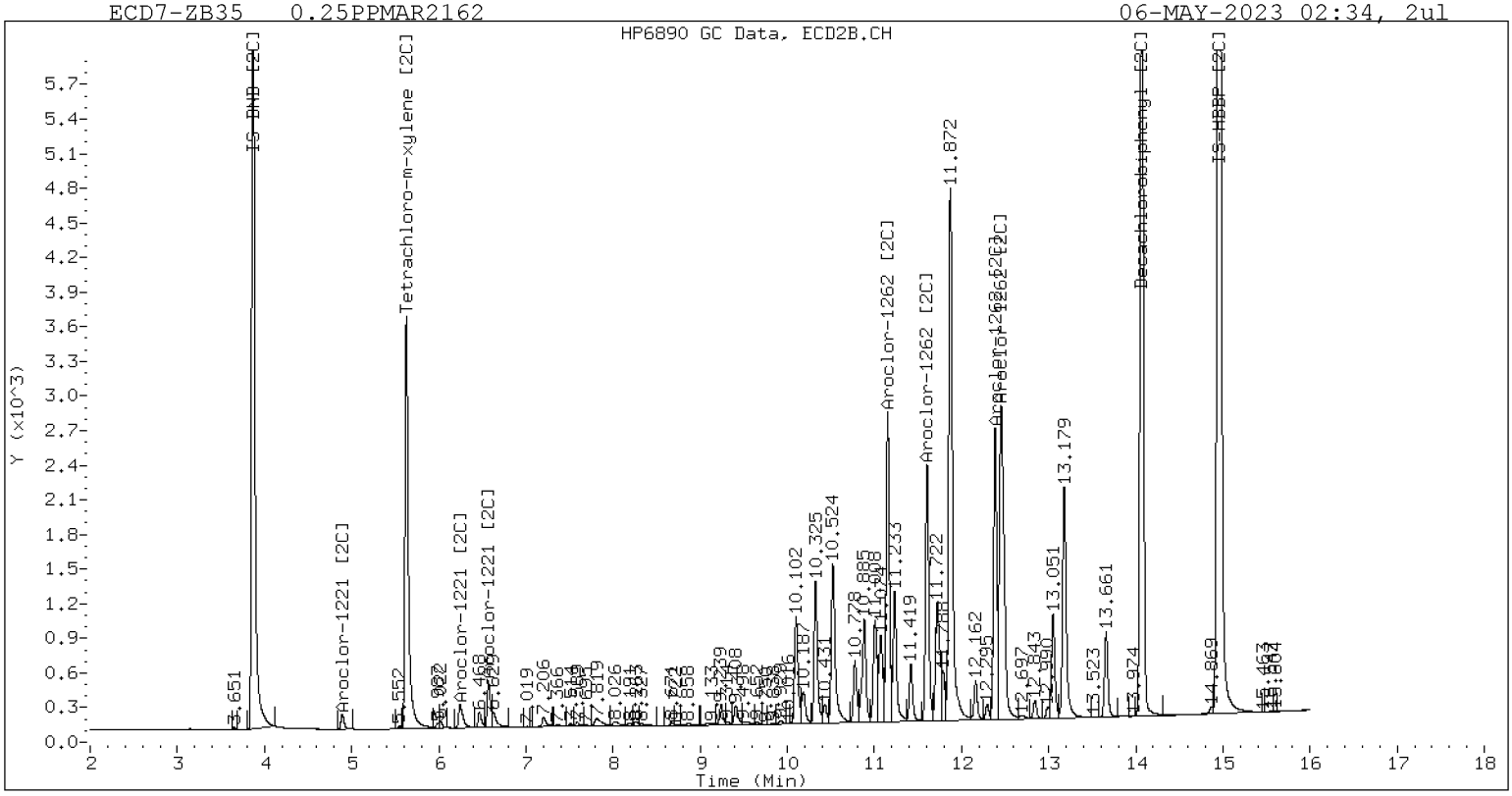
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR2162 06-MAY-2023 02:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR2162 06-MAY-2023 02:34, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052331ECD7.D
Data file 2: /230505.b/230505.b/05052331ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR3268
Client ID:
Injection Date: 06-MAY-2023 02:55
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	378314	5.628	0.000	200538	38.9	40.3	3.4	Tetrachloro-m-xylene
13.840	0.000	502472	14.068	0.000	573501	52.2	57.3	9.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	644974	7.2
Hexabromobiphenyl	876625	963091	9.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	361821	3.6
Hexabromobiphenyl	652984	704753	7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.664	0.000	7554	250.0	1	4.894	0.000	3508	250.0
Aroclor-1232	2	6.069	0.000	15718	250.0	2	7.205	0.000	20084	250.0
Aroclor-1232	3	7.595	0.000	74881	250.0	3	7.815	0.000	40344	250.0
Aroclor-1232	4	8.527	0.000	32051	250.0	4	8.669	0.000	11684	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.196	0.000	384005	250.0	1	12.385	0.000	333421	250.0
Aroclor-1268	2	12.268	0.000	381367	250.0	2	12.452	0.000	358458	250.0
Aroclor-1268	3	12.648	0.000	306717	250.0	3	12.843	0.000	306959	250.0
Aroclor-1268	4	13.437	0.000	875751	250.0	4	13.663	0.000	983908	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 3124318 Col1 Total PCB = 0.4 ppm*

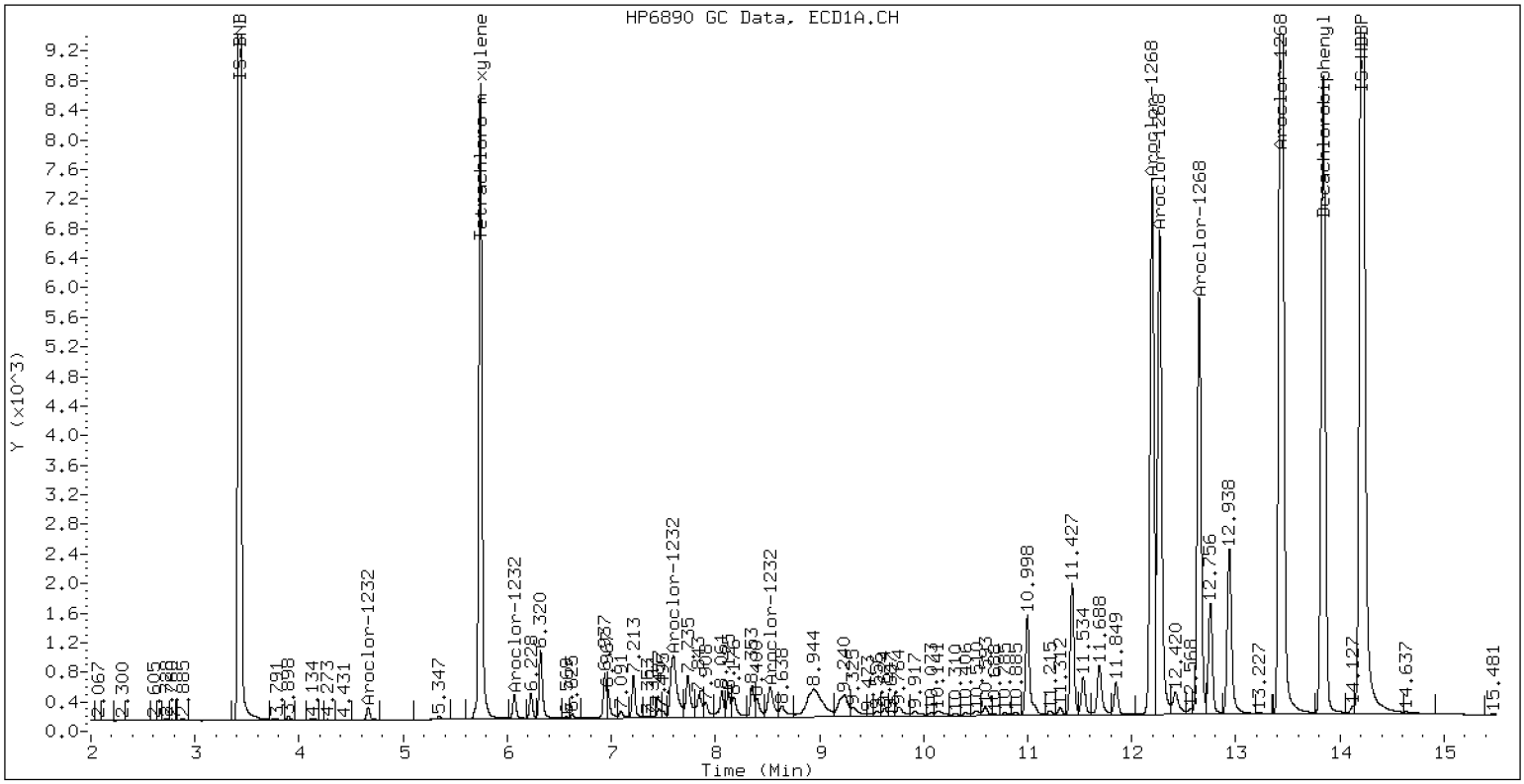
Total PCB Area Col2 (5.728 - 13.968) = 2731202 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

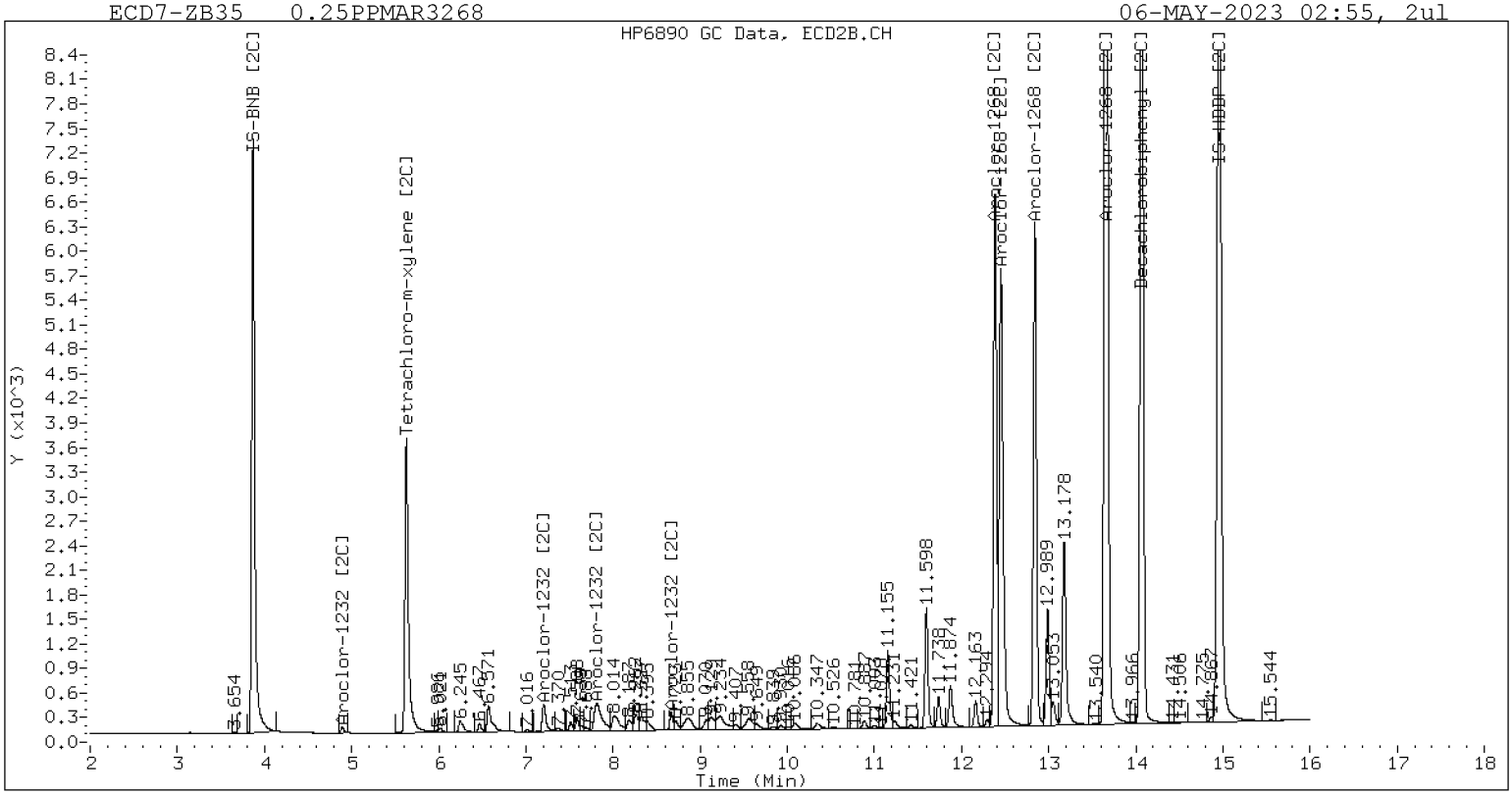
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR3268 06-MAY-2023 02:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR3268 06-MAY-2023 02:55, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052332ECD7.D
Data file 2: /230505.b/230505.b/05052332ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV
Client ID:
Injection Date: 06-MAY-2023 03:16
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	356595	9.840	-0.028	300	36.9	0.0	----	Tetrachloro-m-xylene
13.842	0.002	347188	9.537	0.045	1824	36.9	0.0	----	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	642284	6.8
Hexabromobiphenyl	876625	941356	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	361711	3.6
Hexabromobiphenyl	652984	690563	5.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	61654	247.9	1	7.205	0.001	50106	244.7
Aroclor-1016	2	7.594	-0.001	199228	256.2	2	7.811	0.003	109839	251.7
Aroclor-1016	3	7.734	0.001	89643	249.3	3	8.009	0.004	48594	252.5
Aroclor-1016	4	8.399	0.001	38714	261.0	4	8.260	0.001	36878	241.2
Total Col1Ave (4 peaks):					253.6	Total Col2Ave (4 peaks):				247.5 RPD = 2
Corrected Ave (3 peaks):					251.1	Corrected Ave (3 peaks):				245.9 RPD = 2
Aroclor-1221	1	4.663	-0.000	436	9.7	1	---			0.0
Aroclor-1221	2	6.068	-0.001	8521	94.0	2	6.251	0.005	5766	104.3
Aroclor-1221	3	6.320	-0.001	41973	195.0	3	6.572	0.000	23212	266.9
Total Col1Ave (3 peaks):					99.6	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.663	-0.000	436	14.5	1	---			0.0
Aroclor-1232	2	6.068	-0.002	8521	136.1	2	7.205	0.000	50106	623.9
Aroclor-1232	3	7.594	-0.001	199228	667.9	3	7.811	-0.004	109839	680.8
Aroclor-1232	4	8.526	-0.001	85985	673.5	4	8.667	-0.003	34670	742.1
Total Col1Ave (4 peaks):					373.0	Total Col2Ave (3 peaks):				682.3 RPD = 59*
Corrected Ave (3 peaks):					272.8	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.213	0.001	61654	304.6	1	7.205	0.001	50106	310.0
Aroclor-1242	2	7.594	-0.001	199228	310.7	2	7.811	-0.002	109839	319.4
Aroclor-1242	3	8.399	0.000	38714	312.1	3	9.069	-0.054	21513	195.1
Aroclor-1242	4	8.526	0.001	85985	299.5	4	9.650	0.100	1501	11.3
Total Col1Ave (4 peaks):					306.7	Total Col2Ave (4 peaks):				208.9 RPD = 38
Corrected Ave (3 peaks):					304.9	Corrected Ave (3 peaks):				172.1 RPD = 56*
Aroclor-1248	1	8.399	-0.000	38714	236.2	1	8.260	0.000	36878	214.3
Aroclor-1248	2	8.526	0.001	85985	201.8	2	8.667	-0.001	34670	190.7
Aroclor-1248	3	8.941	-0.003	81615	99.6	3	9.069	-0.051	21513	101.0
Aroclor-1248	4	9.249	0.006	52526	125.8	4	9.537	-0.008	1824	7.1
Total Col1Ave (4 peaks):					165.8	Total Col2Ave (4 peaks):				128.3 RPD = 26
Corrected Ave (3 peaks):					142.4	Corrected Ave (3 peaks):				99.6 RPD = 35
Aroclor-1254	1	9.249	0.003	52526	79.6	1	9.405	0.001	24726	90.0
Aroclor-1254	2	---			0.0	2	9.537	0.038	1824	11.2
Aroclor-1254	3	9.619	0.001	7081	16.6	3	9.926	0.002	3128	14.0
Aroclor-1254	4	9.756	0.001	21856	26.2	4	10.101	0.023	62581	128.7
Aroclor-1254	5	10.069	-0.057	159796	317.0	5	10.324	-0.004	85433	177.1
Total Col1Ave (4 peaks):					109.8	Total Col2Ave (5 peaks):				84.2 RPD = 26
Corrected Ave (3 peaks):					40.8	Corrected Ave (4 peaks):				61.0 RPD = 40
Aroclor-1260	1	10.995	0.001	145767	292.8	1	11.605	-0.000	99761	272.0
Aroclor-1260	2	11.311	0.001	142028	289.1	2	11.872	0.000	273505	285.1
Aroclor-1260	3	11.686	0.000	354468	288.1	3	12.389	0.001	70545	296.8
Aroclor-1260	4	12.092	0.002	161281	267.6	4	12.455	-0.000	180783	282.1
Aroclor-1260	5	12.194	0.001	76105	289.6	NS	---			----
Total Col1Ave (5 peaks):					285.5	Total Col2Ave (4 peaks):				284.0 RPD = 1
Corrected Ave (4 peaks):					283.6	Corrected Ave (3 peaks):				279.8 RPD = 1
Aroclor-1262	1	10.777	-0.001	215850	506.9	1	11.153	-0.001	104059	186.0
Aroclor-1262	2	12.194	-0.000	76105	127.1	2	11.605	0.001	99761	211.4
Aroclor-1262	3	12.271	0.001	94628	147.0	3	12.389	0.003	70545	136.8
Aroclor-1262	4	12.939	-0.000	78852	150.3	4	12.455	-0.001	180783	215.1
Total Col1Ave (4 peaks):					232.8	Total Col2Ave (4 peaks):				187.3 RPD = 22
Corrected Ave (3 peaks):					141.5	Corrected Ave (3 peaks):				178.1 RPD = 23
Aroclor-1268	1	12.194	-0.001	76105	50.7	1	12.389	0.004	70545	54.0
Aroclor-1268	2	12.271	0.003	94628	63.5	2	12.455	0.003	180783	128.7
Aroclor-1268	3	12.675	0.026	38830	32.4	3	12.844	0.001	3082	2.6
Aroclor-1268	4	13.440	0.003	19986	5.8	4	13.661	-0.002	14882	3.9
Total Col1Ave (4 peaks):					38.1	Total Col2Ave (4 peaks):				47.3 RPD = 21
Corrected Ave (3 peaks):					29.6	Corrected Ave (3 peaks):				20.1 RPD = 38

Total PCB Area Col1 (5.842 - 13.740) = 3657118 Col1 Total PCB = 0.5 ppm*

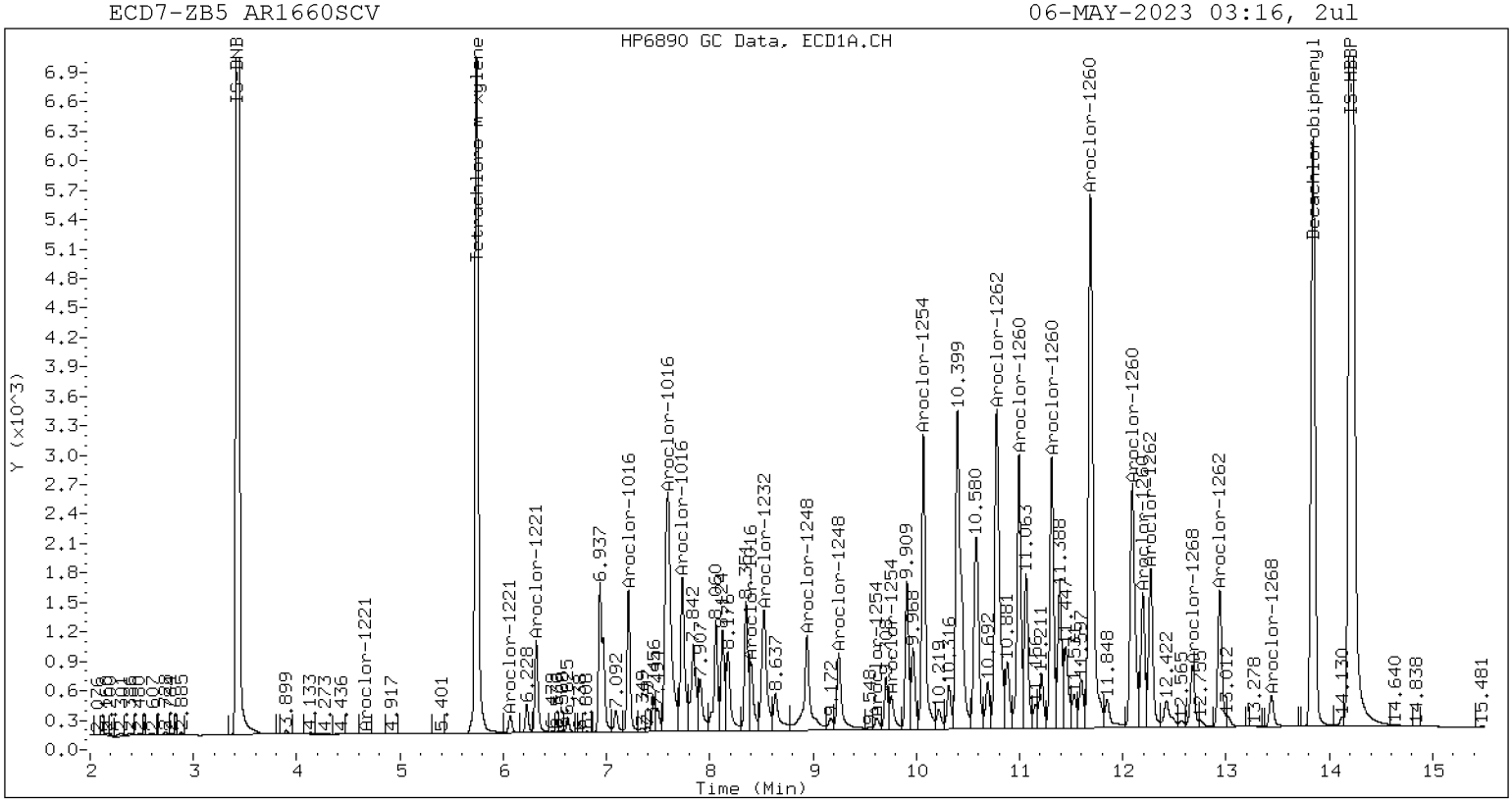
Total PCB Area Col2 (5.842 - 13.740) = 2240312 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

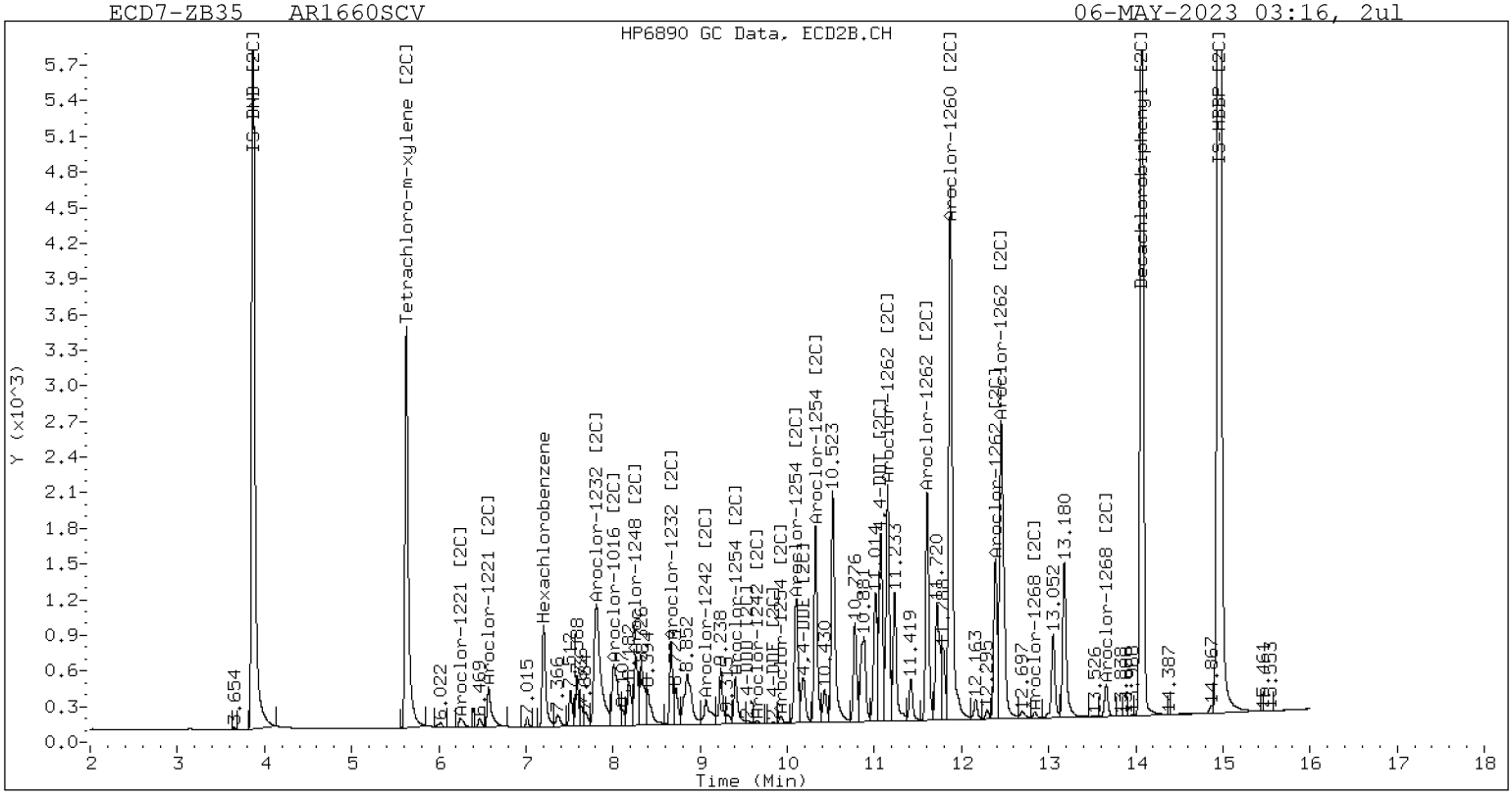
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV 06-MAY-2023 03:16, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV 06-MAY-2023 03:16, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052333ECD7.D
Data file 2: /230505.b/230505.b/05052333ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV
Client ID:
Injection Date: 06-MAY-2023 03:36
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.744	0.002	319899	9.837	-0.030	6399	32.8	0.0	----	Tetrachloro-m-xylene
13.842	0.002	398699	----			40.9	0.0	----	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	648004	7.7
Hexabromobiphenyl	876625	976327	11.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	365379	4.6
Hexabromobiphenyl	652984	695394	6.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.001	47446	189.1	1	7.205	0.001	36469	176.3
Aroclor-1016	2	7.594	-0.000	147684	188.2	2	7.814	0.007	77885	176.7
Aroclor-1016	3	7.735	0.002	67175	185.2	3	8.012	0.006	38400	197.5
Aroclor-1016	4	8.398	0.000	30565	204.3	4	8.261	0.002	27551	178.4
Total Col1Ave (4 peaks): 191.7						Total Col2Ave (4 peaks): 182.2			RPD = 5	
Corrected Ave (3 peaks): 187.5						Corrected Ave (3 peaks): 177.1			RPD = 6	
Aroclor-1221	1	4.666	0.002	870	19.1	1	---			0.0
Aroclor-1221	2	6.069	0.000	7118	77.8	2	6.257	0.011	4359	78.0
Aroclor-1221	3	6.322	0.001	32969	151.8	3	6.573	0.001	16609	189.0
Total Col1Ave (3 peaks): 82.9						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.666	0.002	870	28.7	1	---			0.0
Aroclor-1232	2	6.069	0.000	7118	112.7	2	7.205	-0.000	36469	449.5
Aroclor-1232	3	7.594	-0.001	147684	490.8	3	7.814	-0.001	77885	477.9
Aroclor-1232	4	8.526	-0.000	70601	548.1	4	8.668	-0.001	25417	538.5
Total Col1Ave (4 peaks): 295.1						Total Col2Ave (3 peaks): 488.7			RPD = 49*	
Corrected Ave (3 peaks): 210.7						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.213	0.001	47446	232.4	1	7.205	0.001	36469	223.3
Aroclor-1242	2	7.594	-0.000	147684	228.2	2	7.814	0.002	77885	224.2
Aroclor-1242	3	8.398	0.000	30565	244.2	3	9.124	0.001	25864	232.2
Aroclor-1242	4	8.526	0.002	70601	243.8	4	9.552	0.001	32437	241.7
Total Col1Ave (4 peaks): 237.2						Total Col2Ave (4 peaks): 230.4			RPD = 3	
Corrected Ave (3 peaks): 234.8						Corrected Ave (3 peaks): 226.6			RPD = 4	
Aroclor-1248	1	8.398	-0.001	30565	184.8	1	8.261	0.001	27551	158.5
Aroclor-1248	2	8.526	0.002	70601	164.3	2	8.668	0.001	25417	138.4
Aroclor-1248	3	8.946	0.002	172847	209.1	3	9.124	0.004	25864	120.2
Aroclor-1248	4	9.243	-0.001	87363	207.3	4	9.552	0.006	32437	125.7
Total Col1Ave (4 peaks): 191.4						Total Col2Ave (4 peaks): 135.7			RPD = 34	
Corrected Ave (3 peaks): 185.5						Corrected Ave (3 peaks): 128.1			RPD = 37	
Aroclor-1254	1	9.243	-0.004	87363	131.2	1	9.406	0.002	13247	47.7
Aroclor-1254	2	9.326	0.001	28949	96.7	2	9.552	0.053	32437	196.7
Aroclor-1254	3	9.622	0.004	20780	48.3	3	9.927	0.003	10002	44.5
Aroclor-1254	4	9.762	0.006	35470	42.1	4	10.082	0.005	19933	40.6
Aroclor-1254	5	10.140	0.015	28075	55.2	5	10.341	0.013	19432	39.9
Total Col1Ave (5 peaks): 74.7						Total Col2Ave (5 peaks): 73.9			RPD = 1	
Corrected Ave (4 peaks): 60.6						Corrected Ave (4 peaks): 43.2			RPD = 34	
Aroclor-1260	1	10.998	0.005	3609	7.0	1	11.618	0.012	2137	5.8
Aroclor-1260	2	11.317	0.007	3837	7.5	2	11.879	0.007	1437	1.5
Aroclor-1260	3	11.765	0.080	33905	26.6	3	12.382	-0.006	12460	52.1
Aroclor-1260	4	12.097	0.007	9099	14.6	4	---			0.0
Aroclor-1260	5	12.272	0.079	2060	7.6	NS	---			----
Total Col1Ave (5 peaks): 12.6						Total Col2Ave (3 peaks): 19.8			RPD = 44*	
Corrected Ave (4 peaks): 9.2						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.787	0.009	24040	54.4	1	11.078	-0.075	7864	14.0
Aroclor-1262	2	12.272	0.077	2060	3.3	2	11.618	0.013	2137	4.5
Aroclor-1262	3	---			0.0	3	12.382	-0.004	12460	24.0
Aroclor-1262	4	12.937	-0.002	16041	29.5	4	---			0.0
Total Col1Ave (3 peaks): 29.1						Total Col2Ave (3 peaks): 14.1			RPD = 69*	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.272	0.076	2060	1.3	1	12.382	-0.003	12460	9.5
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.649	0.001	4324	3.5	3	12.845	0.002	951	0.8
Aroclor-1268	4	13.442	0.005	15801	4.4	4	13.628	-0.035	6512	1.7
Total Col1Ave (3 peaks): 3.1						Total Col2Ave (3 peaks): 4.0			RPD = 25	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.842 - 13.740) = 1489022 Col1 Total PCB = 0.2 ppm*

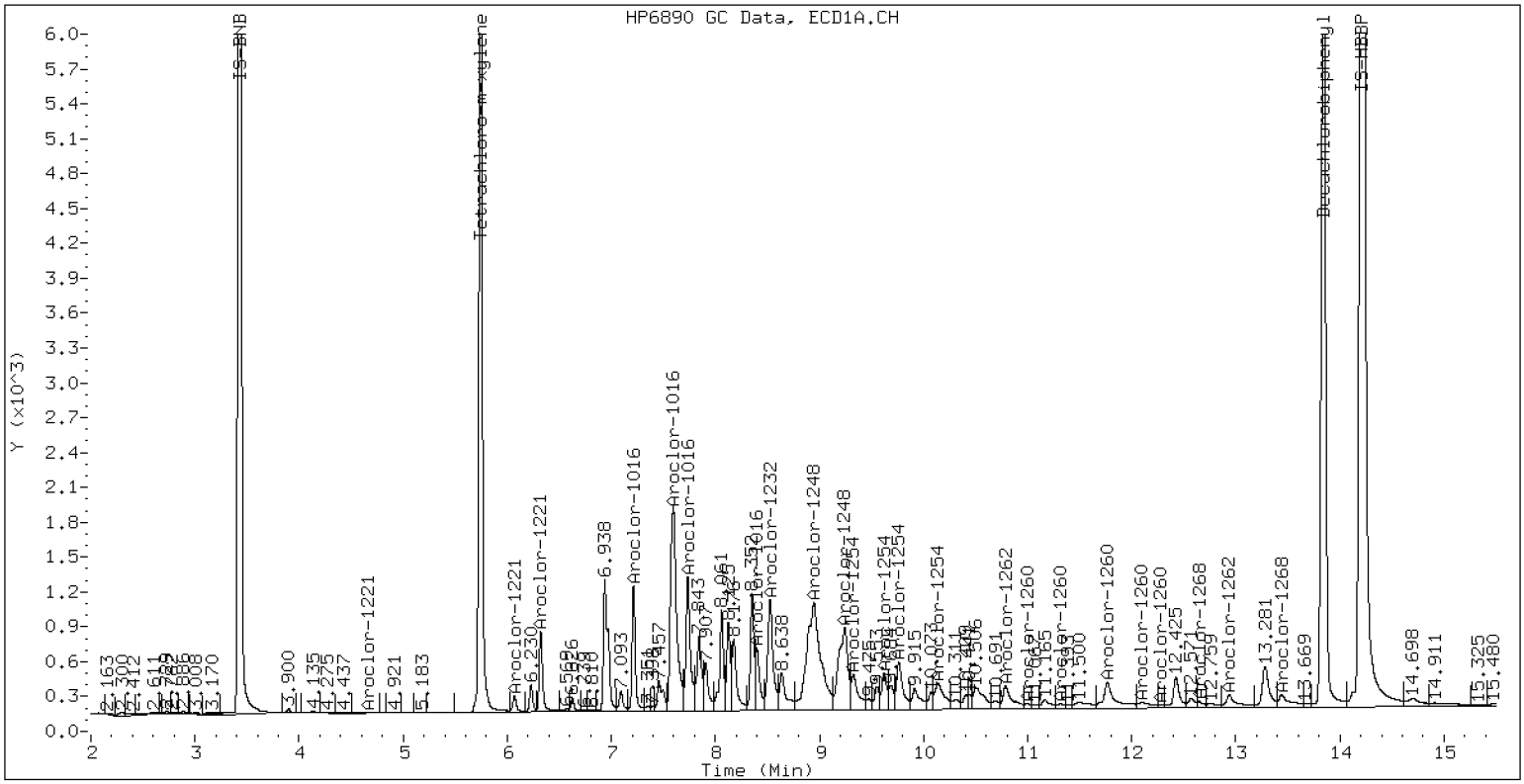
Total PCB Area Col2 (5.842 - 13.740) = 667658 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

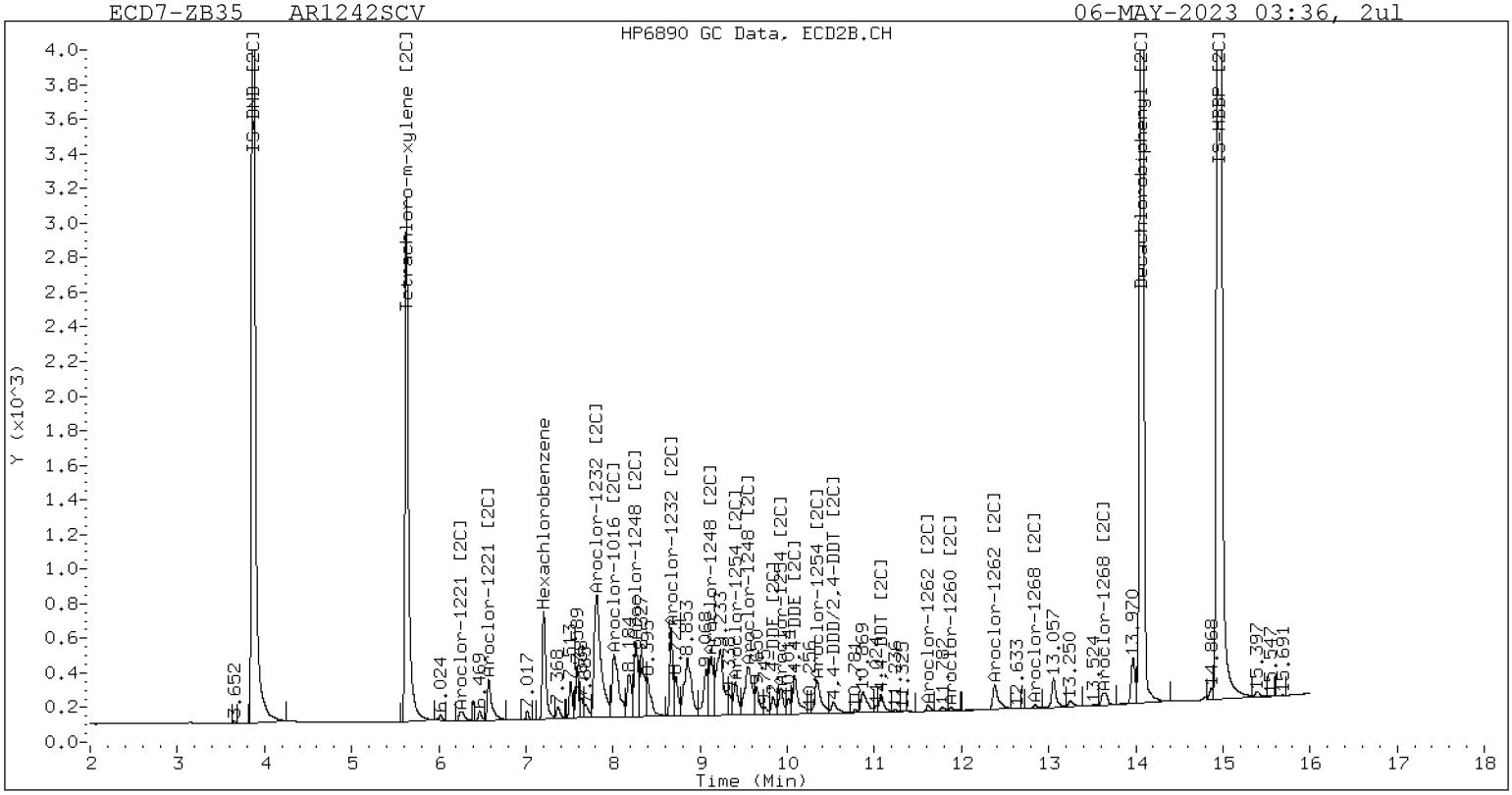
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV 06-MAY-2023 03:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV 06-MAY-2023 03:36, 2ul

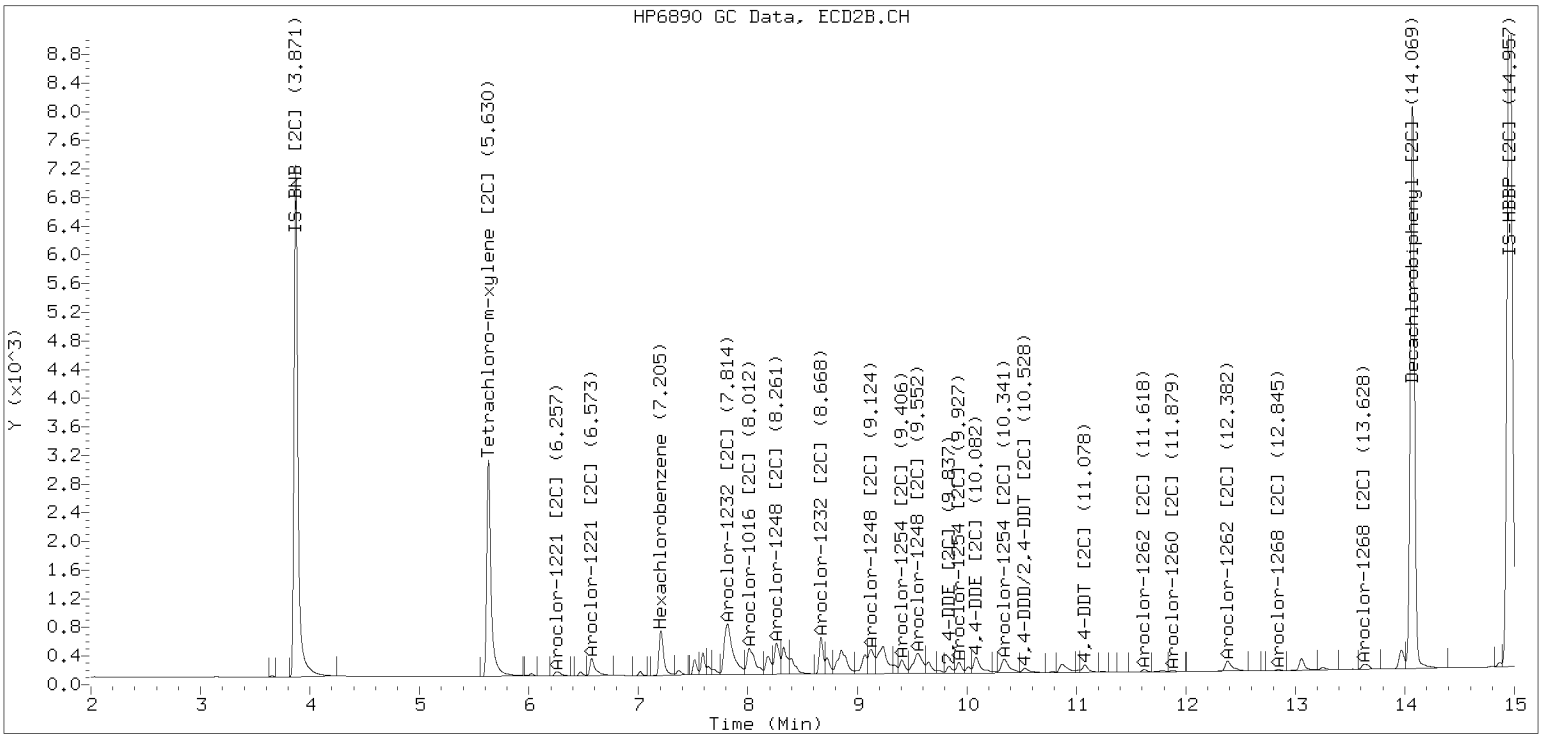


ZB-35 Manual Integration: YES

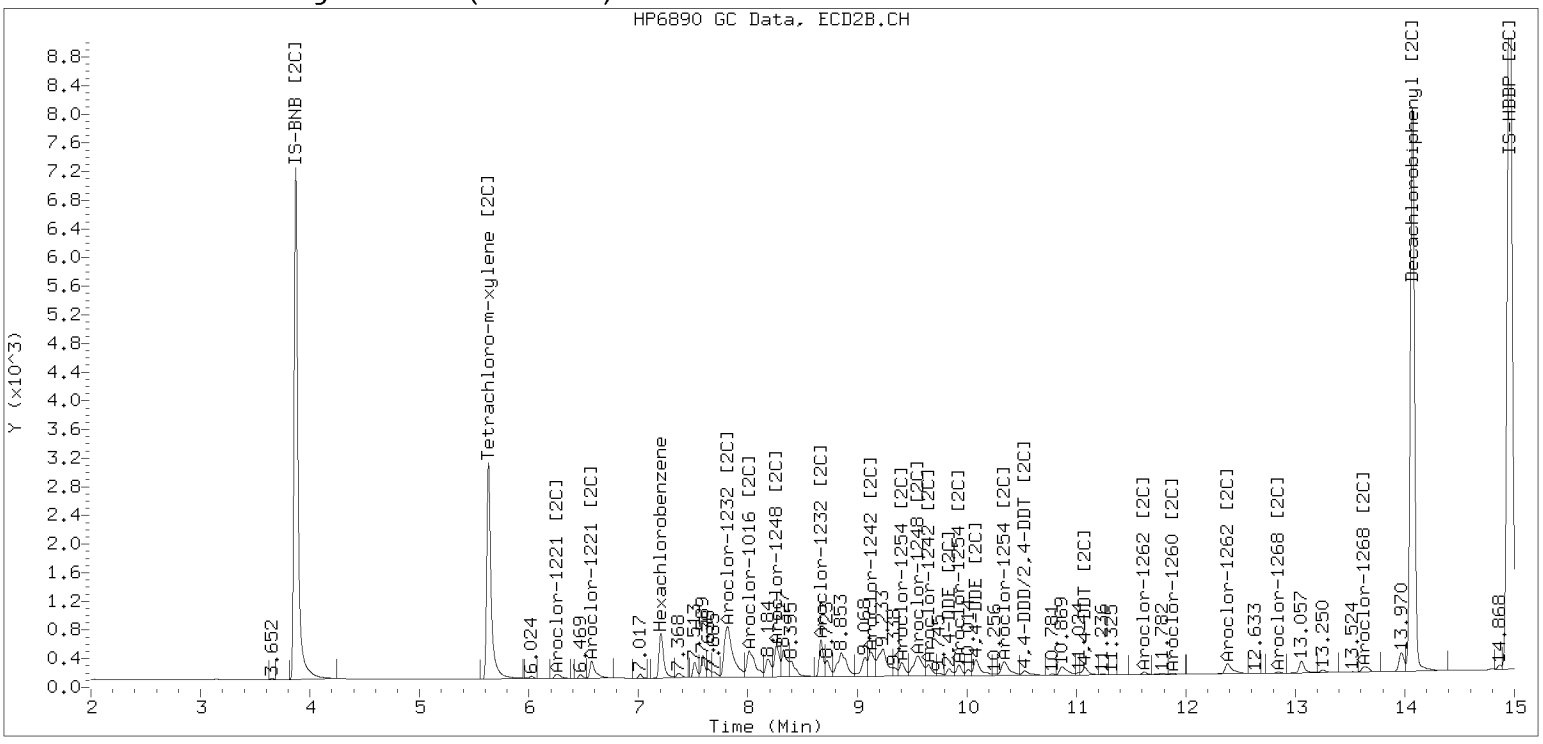
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052333ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052334ECD7.D
Data file 2: /230505.b/230505.b/05052334ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV
Client ID:
Injection Date: 06-MAY-2023 03:57
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	356328	9.834	-0.033	15805	36.8	0.0	----	Tetrachloro-m-xylene
13.842	0.001	339452	----			35.7	0.0	----	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	643038	6.9
Hexabromobiphenyl	876625	952051	8.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	359604	3.0
Hexabromobiphenyl	652984	692982	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	0.000	19871	79.8	1	7.203	-0.001	18843	92.6
Aroclor-1016	2	7.589	-0.006	95111	122.2	2	7.812	0.005	52352	120.7
Aroclor-1016	3	7.736	0.003	37565	104.4	3	8.012	0.006	8263	43.2
Aroclor-1016	4	8.399	0.002	41542	279.7	4	8.260	0.001	42833	281.8
Total Col1Ave (4 peaks):					146.5	Total Col2Ave (4 peaks):				134.6 RPD = 9
Corrected Ave (3 peaks):					102.1	Corrected Ave (3 peaks):				85.5 RPD = 18
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.066	-0.003	351	3.9	2	6.275	0.029	1573	28.6
Aroclor-1221	3	6.320	-0.001	3509	16.3	3	6.576	0.004	967	11.2
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.066	-0.003	351	5.6	2	7.203	-0.001	18843	236.0
Aroclor-1232	3	7.589	-0.006	95111	318.5	3	7.812	-0.002	52352	326.4
Aroclor-1232	4	8.524	-0.002	105782	827.6	4	8.667	-0.002	44962	968.0
Total Col1Ave (3 peaks):					383.9	Total Col2Ave (3 peaks):				510.1 RPD = 28
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.212	0.000	19871	98.1	1	7.203	-0.000	18843	117.2
Aroclor-1242	2	7.589	-0.006	95111	148.1	2	7.812	-0.000	52352	153.1
Aroclor-1242	3	8.399	0.001	41542	334.5	3	9.120	-0.003	52681	480.6
Aroclor-1242	4	8.524	-0.000	105782	368.1	4	9.650	0.100	23342	176.7
Total Col1Ave (4 peaks):					237.2	Total Col2Ave (4 peaks):				231.9 RPD = 2
Corrected Ave (3 peaks):					193.6	Corrected Ave (3 peaks):				149.0 RPD = 26
Aroclor-1248	1	8.399	0.001	41542	253.1	1	8.260	-0.001	42833	250.4
Aroclor-1248	2	8.524	-0.000	105782	248.0	2	8.667	0.000	44962	248.8
Aroclor-1248	3	8.944	-0.000	206928	252.3	3	9.120	-0.000	52681	248.7
Aroclor-1248	4	9.242	-0.001	105227	251.7	4	9.548	0.002	63343	249.4
Total Col1Ave (4 peaks):					251.3	Total Col2Ave (4 peaks):				249.3 RPD = 1
Corrected Ave (3 peaks):					250.6	Corrected Ave (3 peaks):				249.0 RPD = 1
Aroclor-1254	1	9.242	-0.004	105227	159.2	1	9.404	0.000	25835	94.6
Aroclor-1254	2	9.324	-0.001	51326	172.8	2	9.548	0.049	63343	390.3
Aroclor-1254	3	9.619	0.001	41394	97.0	3	9.925	0.001	22609	102.1
Aroclor-1254	4	9.759	0.003	72223	86.4	4	10.079	0.001	43816	90.7
Aroclor-1254	5	10.135	0.010	49936	98.9	5	10.345	0.016	42513	88.7
Total Col1Ave (5 peaks):					122.9	Total Col2Ave (5 peaks):				153.3 RPD = 22
Corrected Ave (4 peaks):					110.4	Corrected Ave (4 peaks):				94.0 RPD = 16
Aroclor-1260	1	10.998	0.005	1863	3.7	1	11.617	0.011	2599	7.1
Aroclor-1260	2	11.314	0.004	1152	2.3	2	11.877	0.005	1951	2.0
Aroclor-1260	3	11.695	0.009	1829	1.5	3	12.389	0.001	857	3.6
Aroclor-1260	4	12.097	0.007	1266	2.1	4	12.458	0.003	1302	2.0
Aroclor-1260	5	12.195	0.002	464	1.7	NS	---			----
Total Col1Ave (5 peaks):					2.3	Total Col2Ave (4 peaks):				3.7 RPD = 48*
Corrected Ave (4 peaks):					1.9	Corrected Ave (3 peaks):				2.5 RPD = 29
Aroclor-1262	1	10.784	0.005	15405	35.8	1	11.077	-0.077	9003	16.0
Aroclor-1262	2	12.195	0.000	464	0.8	2	11.617	0.012	2599	5.5
Aroclor-1262	3	12.271	0.002	489	0.8	3	12.389	0.003	857	1.7
Aroclor-1262	4	12.940	0.001	1638	3.1	4	12.458	0.002	1302	1.5
Total Col1Ave (4 peaks):					10.1	Total Col2Ave (4 peaks):				6.2 RPD = 48*
Corrected Ave (3 peaks):					1.5	Corrected Ave (3 peaks):				2.9 RPD = 61*
Aroclor-1268	1	12.195	-0.001	464	0.3	1	12.389	0.004	857	0.7
Aroclor-1268	2	12.271	0.003	489	0.3	2	12.458	0.006	1302	0.9
Aroclor-1268	3	12.649	0.001	1831	1.5	3	12.845	0.002	676	0.6
Aroclor-1268	4	13.443	0.006	5387	1.6	4	13.661	-0.003	2707	0.7
Total Col1Ave (4 peaks):					0.9	Total Col2Ave (4 peaks):				0.7 RPD = 26
Corrected Ave (3 peaks):					0.7	Corrected Ave (3 peaks):				0.6 RPD = 11

Total PCB Area Col1 (5.842 - 13.740) = 1634238 Col1 Total PCB = 0.2 ppm*

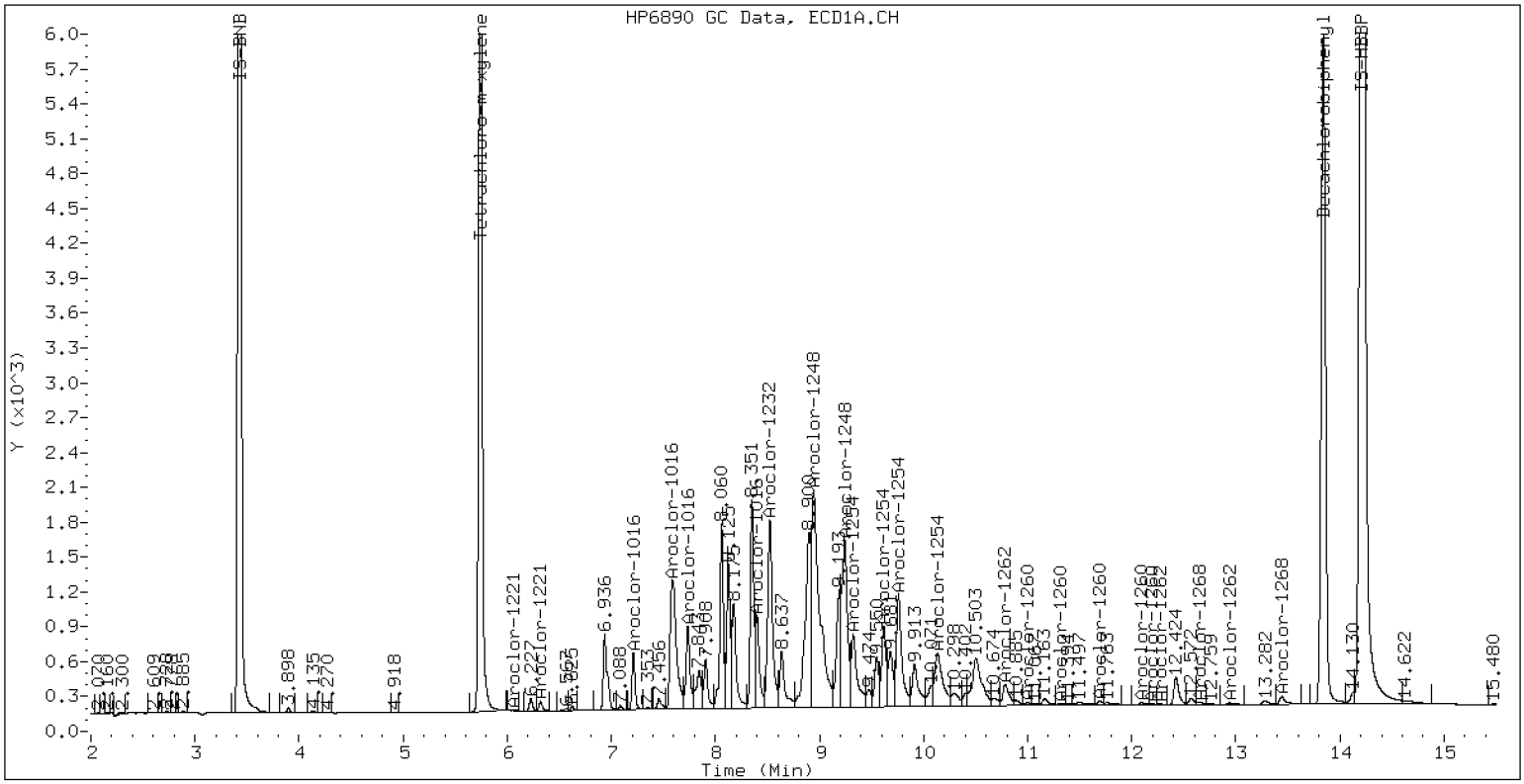
Total PCB Area Col2 (5.842 - 13.740) = 874053 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

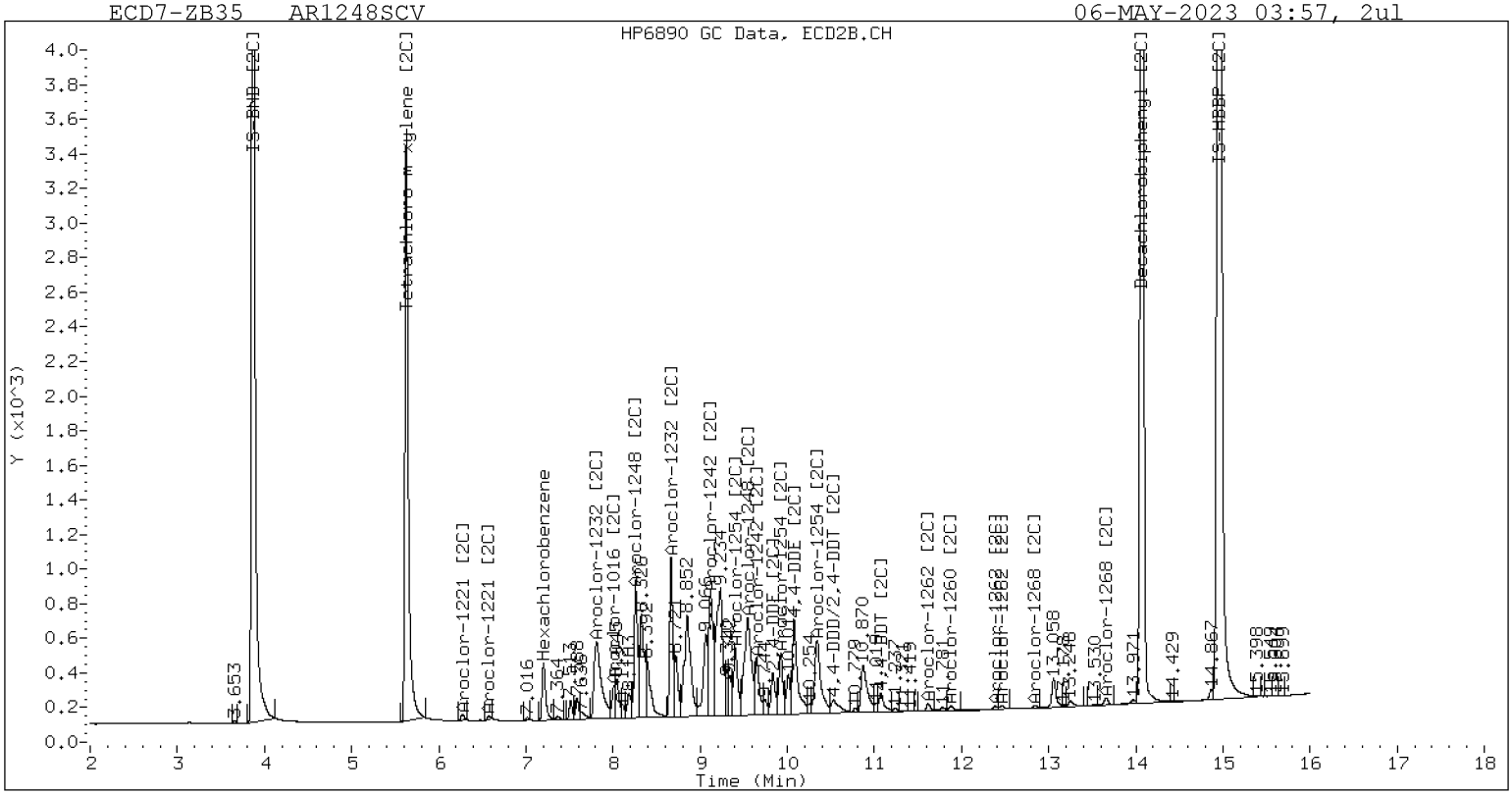
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV 06-MAY-2023 03:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV 06-MAY-2023 03:57, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052335ECD7.D
Data file 2: /230505.b/230505.b/05052335ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV
Client ID:
Injection Date: 06-MAY-2023 04:18
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	368022	5.631	0.002	192033	37.6	38.3	2.0	Tetrachloro-m-xylene
13.843	0.002	352066	14.070	0.002	385384	36.0	38.5	6.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	650234	8.1
Hexabromobiphenyl	876625	980276	11.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	364142	4.3
Hexabromobiphenyl	652984	705291	8.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.002	635	2.5	1	---			0.0
Aroclor-1016	2	7.590	-0.004	2512	3.2	2	---			0.0
Aroclor-1016	3	7.738	0.005	1594	4.4	3	---			0.0
Aroclor-1016	4	8.351	-0.047	31774	211.6	4	---			0.0
Total Col1Ave (4 peaks):					55.4	Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.052	-0.018	242	2.6	2	---			0.0
Aroclor-1221	3	6.322	0.001	427	2.0	3	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.052	-0.018	242	3.8	2	---			0.0
Aroclor-1232	3	7.590	-0.005	2512	8.3	3	---			0.0
Aroclor-1232	4	8.528	0.001	13950	107.9	4	---			0.0
Total Col1Ave (3 peaks):					40.0	Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.214	0.002	635	3.1	1	---			0.0
Aroclor-1242	2	7.590	-0.005	2512	3.9	2	---			0.0
Aroclor-1242	3	8.351	-0.047	31774	253.0	3	9.125	0.002	23963	215.9
Aroclor-1242	4	8.528	0.004	13950	48.0	4	9.649	0.099	23982	179.3
Total Col1Ave (4 peaks):					77.0	Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.351	-0.048	31774	191.4	1	8.260	-0.000	23490	135.6
Aroclor-1248	2	8.528	0.004	13950	32.3	2	8.669	0.002	16693	91.2
Aroclor-1248	3	8.941	-0.003	154338	186.1	3	9.125	0.005	23963	111.7
Aroclor-1248	4	9.246	0.003	158369	374.6	4	9.499	-0.047	38716	150.5
Total Col1Ave (4 peaks):					196.1	Total Col2Ave (4 peaks):			122.3	RPD = 46*
Corrected Ave (3 peaks):					136.6	Corrected Ave (3 peaks):			112.8	RPD = 19
Aroclor-1254	1	9.246	-0.001	158369	237.0	1	9.404	0.000	67493	244.0
Aroclor-1254	2	9.325	-0.000	72386	241.1	2	9.499	-0.000	38716	235.6
Aroclor-1254	3	9.617	-0.001	103602	240.1	3	9.925	0.001	53972	240.7
Aroclor-1254	4	9.756	0.000	201259	238.2	4	10.079	0.001	116950	239.0
Aroclor-1254	5	10.127	0.001	122207	239.5	5	10.327	-0.001	118439	243.9
Total Col1Ave (5 peaks):					239.2	Total Col2Ave (5 peaks):			240.6	RPD = 1
Corrected Ave (4 peaks):					238.7	Corrected Ave (4 peaks):			239.8	RPD = 0
Aroclor-1260	1	10.994	0.001	13538	26.1	1	11.615	0.009	33465	89.3
Aroclor-1260	2	11.313	0.003	13900	27.2	2	11.876	0.004	25534	26.1
Aroclor-1260	3	11.689	0.004	32548	25.4	3	12.404	0.016	1811	7.5
Aroclor-1260	4	12.093	0.003	25285	40.3	4	12.458	0.002	14842	22.7
Aroclor-1260	5	12.273	0.079	2534	9.3	NS	---			----
Total Col1Ave (5 peaks):					25.6	Total Col2Ave (4 peaks):			36.4	RPD = 35
Corrected Ave (4 peaks):					22.0	Corrected Ave (3 peaks):			18.7	RPD = 16
Aroclor-1262	1	10.779	0.000	210018	473.6	1	11.073	-0.081	114323	200.0
Aroclor-1262	2	12.273	0.078	2534	4.1	2	11.615	0.010	33465	69.4
Aroclor-1262	3	---			0.0	3	12.404	0.018	1811	3.4
Aroclor-1262	4	12.939	0.001	1830	3.3	4	12.458	0.002	14842	17.3
Total Col1Ave (3 peaks):					160.3	Total Col2Ave (4 peaks):			72.6	RPD = 75*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			30.1	
Aroclor-1268	1	12.273	0.077	2534	1.6	1	12.404	0.019	1811	1.4
Aroclor-1268	2	---			0.0	2	12.458	0.005	14842	10.3
Aroclor-1268	3	12.654	0.006	2669	2.1	3	12.847	0.004	835	0.7
Aroclor-1268	4	13.442	0.004	6266	1.8	4	13.662	-0.001	2350	0.6
Total Col1Ave (3 peaks):					1.8	Total Col2Ave (4 peaks):			3.2	RPD = 55*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			0.9	

Total PCB Area Col1 (5.842 - 13.740) = 2123119 Col1 Total PCB = 0.3 ppm*

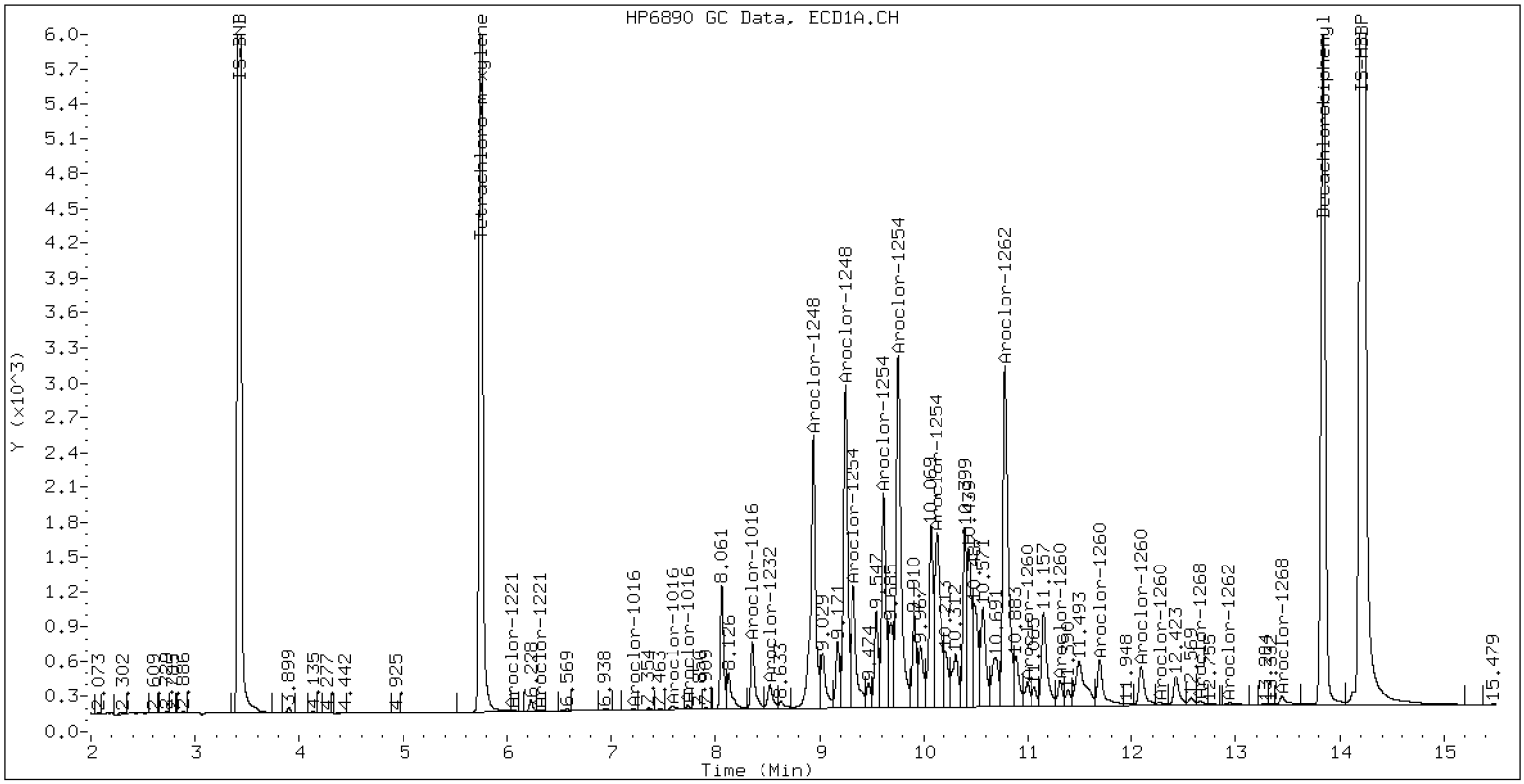
Total PCB Area Col2 (5.728 - 13.968) = 1146487 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

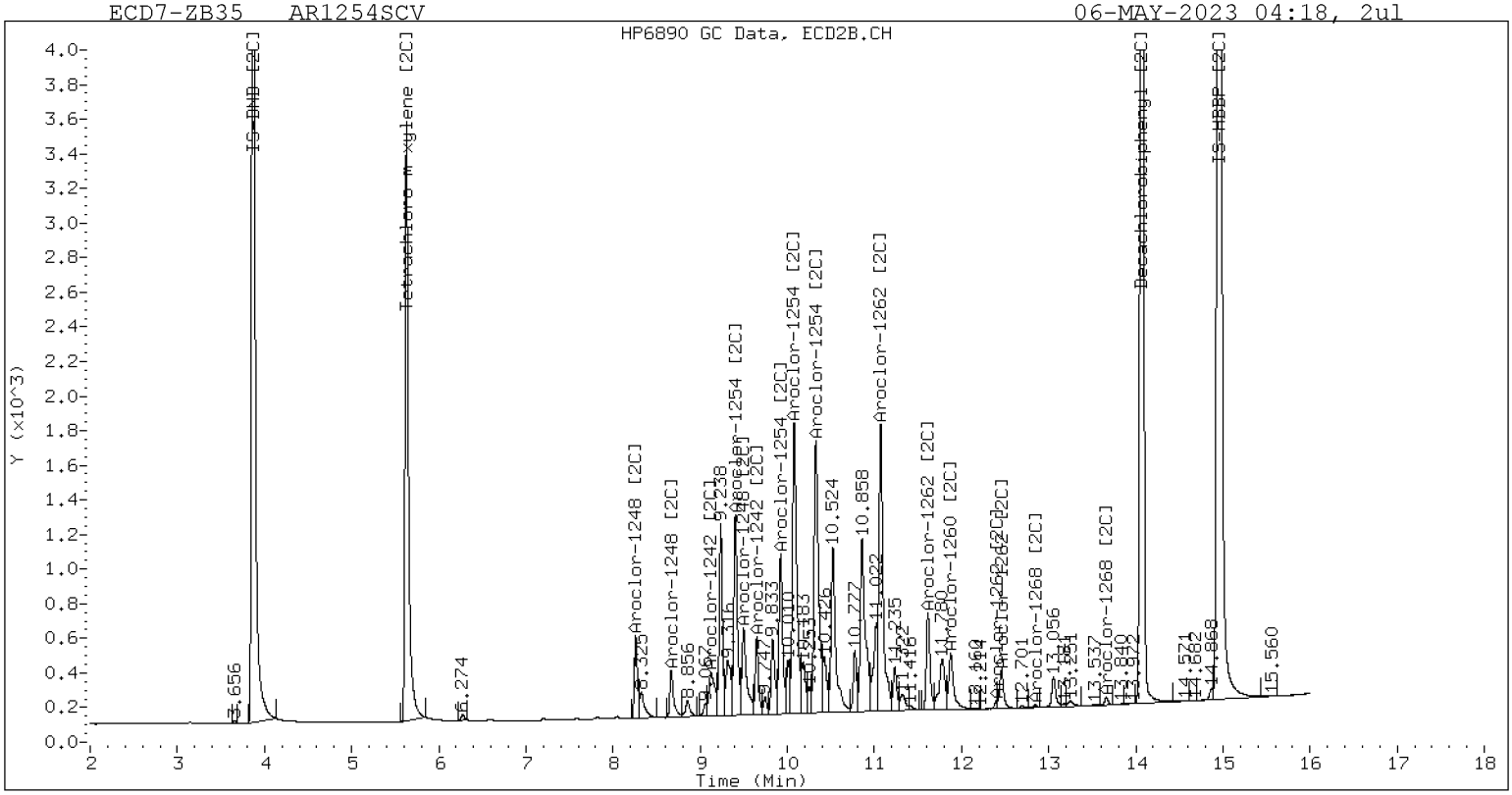
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV 06-MAY-2023 04:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV 06-MAY-2023 04:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052336ECD7.D
Data file 2: /230505.b/230505.b/05052336ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV
Client ID:
Injection Date: 06-MAY-2023 04:39
Report Date: 05/06/2023 11:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	358254	5.628	-0.000	183759	37.8	39.1	3.3	Tetrachloro-m-xylene
13.842	0.002	344347	14.070	0.002	373300	37.1	38.8	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	629547	4.7
Hexabromobiphenyl	876625	929713	6.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	341980	-2.1
Hexabromobiphenyl	652984	678097	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	6601	27.1	1	7.207	0.003	3935	20.3
Aroclor-1016	2	7.595	0.000	13419	17.6	2	7.821	0.013	6146	14.9
Aroclor-1016	3	7.735	0.003	7114	20.2	3	8.027	0.021	3201	17.6
Aroclor-1016	4	8.353	-0.045	3916	26.9	4	8.262	0.003	2131	14.7
Total Col1Ave (4 peaks):					23.0	Total Col2Ave (4 peaks):				16.9 RPD = 30
Corrected Ave (3 peaks):					21.6	Corrected Ave (3 peaks):				15.7 RPD = 31
Aroclor-1221	1	4.663	-0.001	13184	297.8	1	4.893	-0.001	7253	287.5
Aroclor-1221	2	6.070	0.000	25527	287.4	2	6.244	-0.001	14853	284.1
Aroclor-1221	3	6.321	0.000	59985	284.3	3	6.571	-0.001	24083	292.9
Total Col1Ave (3 peaks):					289.8	Total Col2Ave (3 peaks):				288.2 RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.663	-0.001	13184	447.0	1	4.893	-0.001	7253	546.9
Aroclor-1232	2	6.070	0.000	25527	416.0	2	7.207	0.002	3935	51.8
Aroclor-1232	3	7.595	-0.000	13419	45.9	3	7.821	0.006	6146	40.3
Aroclor-1232	4	8.528	0.001	2679	21.4	4	8.671	0.002	1120	25.4
Total Col1Ave (4 peaks):					232.6	Total Col2Ave (4 peaks):				166.1 RPD = 33
Corrected Ave (3 peaks):					161.1	Corrected Ave (3 peaks):				39.2 RPD = 122*
Aroclor-1242	1	7.213	0.001	6601	33.3	1	7.207	0.004	3935	25.7
Aroclor-1242	2	7.595	-0.000	13419	21.3	2	7.821	0.008	6146	18.9
Aroclor-1242	3	8.353	-0.045	3916	32.2	3	9.133	0.010	881	8.5
Aroclor-1242	4	8.528	0.003	2679	9.5	4	9.651	0.101	516	4.1
Total Col1Ave (4 peaks):					24.1	Total Col2Ave (4 peaks):				14.3 RPD = 51*
Corrected Ave (3 peaks):					21.0	Corrected Ave (3 peaks):				10.5 RPD = 67*
Aroclor-1248	1	8.353	-0.046	3916	24.4	1	8.262	0.002	2131	13.1
Aroclor-1248	2	8.528	0.003	2679	6.4	2	8.671	0.004	1120	6.5
Aroclor-1248	3	8.942	-0.002	25144	31.3	3	9.133	0.013	881	4.4
Aroclor-1248	4	9.251	0.008	25583	62.5	4	9.500	-0.045	335	1.4
Total Col1Ave (4 peaks):					31.1	Total Col2Ave (4 peaks):				6.3 RPD = 132*
Corrected Ave (3 peaks):					20.7	Corrected Ave (3 peaks):				4.1 RPD = 134*
Aroclor-1254	1	9.251	0.005	25583	39.5	1	9.408	0.004	9719	37.4
Aroclor-1254	2	---			0.0	2	9.500	0.001	335	2.2
Aroclor-1254	3	9.620	0.002	4245	10.2	3	9.928	0.004	2055	9.8
Aroclor-1254	4	9.758	0.003	11050	13.5	4	10.100	0.022	55162	120.0
Aroclor-1254	5	10.071	-0.055	129151	261.4	5	10.325	-0.004	68421	150.1
Total Col1Ave (4 peaks):					81.1	Total Col2Ave (5 peaks):				63.9 RPD = 24
Corrected Ave (3 peaks):					21.1	Corrected Ave (4 peaks):				42.3 RPD = 67*
Aroclor-1260	1	10.995	0.002	206643	420.3	1	11.605	-0.001	119902	332.9
Aroclor-1260	2	11.311	0.001	167443	345.1	2	11.872	0.000	293746	311.8
Aroclor-1260	3	11.687	0.001	390491	321.4	3	12.386	-0.002	131462	563.2
Aroclor-1260	4	12.091	0.001	120118	201.8	4	12.456	0.000	212898	338.4
Aroclor-1260	5	12.195	0.002	155588	599.5	NS	---			----
Total Col1Ave (5 peaks):					377.6	Total Col2Ave (4 peaks):				386.6 RPD = 2
Corrected Ave (4 peaks):					322.2	Corrected Ave (3 peaks):				327.7 RPD = 2
Aroclor-1262	1	10.777	-0.001	114050	271.2	1	11.153	0.000	141861	258.2
Aroclor-1262	2	12.195	0.001	155588	263.0	2	11.605	0.000	119902	258.7
Aroclor-1262	3	12.269	0.000	167998	264.2	3	12.386	-0.000	131462	259.6
Aroclor-1262	4	12.938	-0.001	136019	262.5	4	12.456	0.000	212898	258.0
Total Col1Ave (4 peaks):					265.2	Total Col2Ave (4 peaks):				258.6 RPD = 3
Corrected Ave (3 peaks):					263.3	Corrected Ave (3 peaks):				258.3 RPD = 2
Aroclor-1268	1	12.195	-0.000	155588	104.9	1	12.386	0.001	131462	102.4
Aroclor-1268	2	12.269	0.001	167998	114.1	2	12.456	0.003	212898	154.3
Aroclor-1268	3	12.675	0.027	60611	51.2	3	12.843	-0.000	8393	7.1
Aroclor-1268	4	13.439	0.001	49821	14.7	4	13.661	-0.002	39480	10.4
Total Col1Ave (4 peaks):					71.2	Total Col2Ave (4 peaks):				68.6 RPD = 4

Corrected Ave (3 peaks): 56.9 Corrected Ave (3 peaks): 40.0 RPD = 35

Total PCB Area Col1 (5.842 - 13.740) = 2870829 Col1 Total PCB = 0.4 ppm*

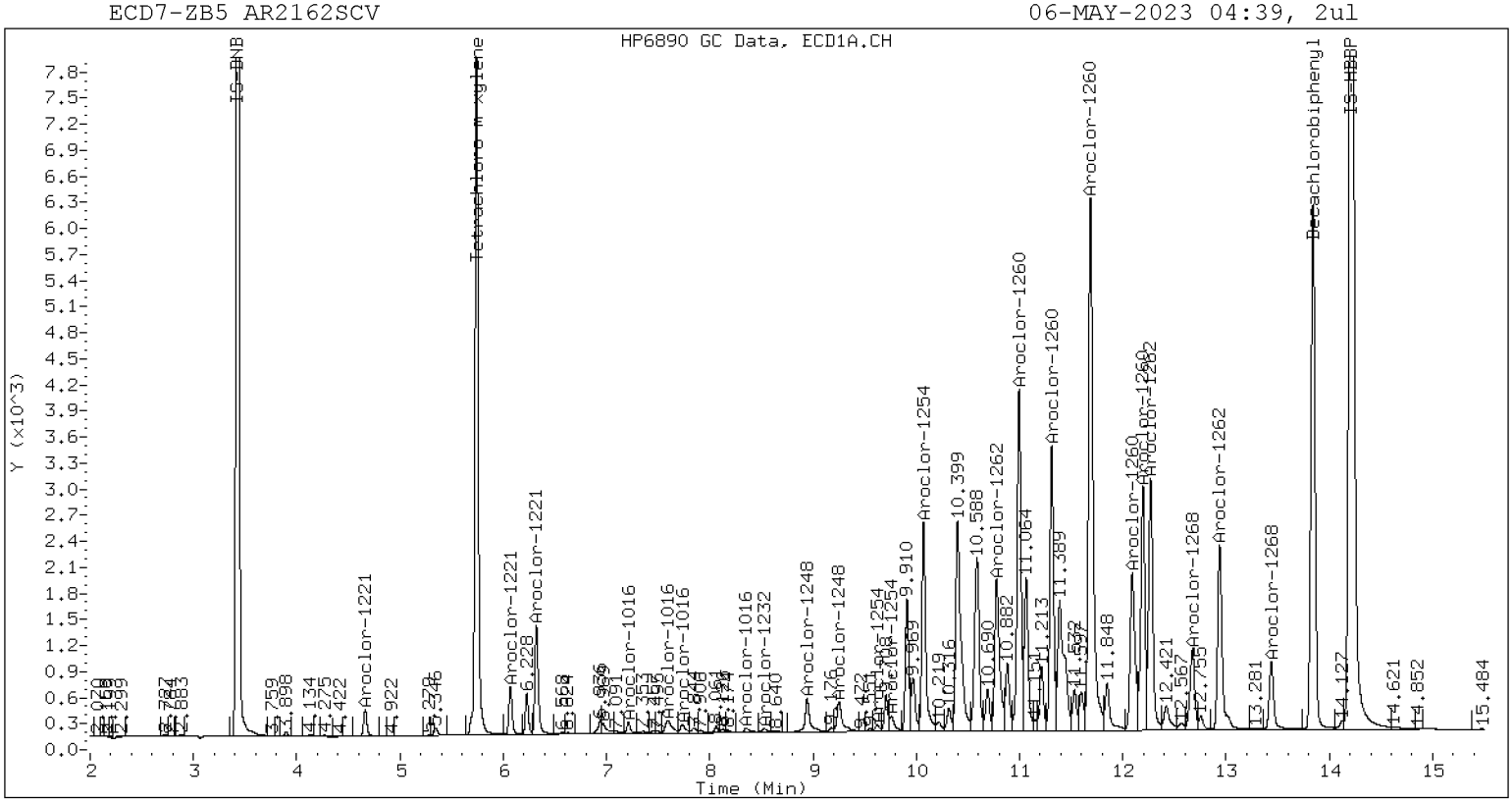
Total PCB Area Col2 (5.728 - 13.968) = 1885829 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

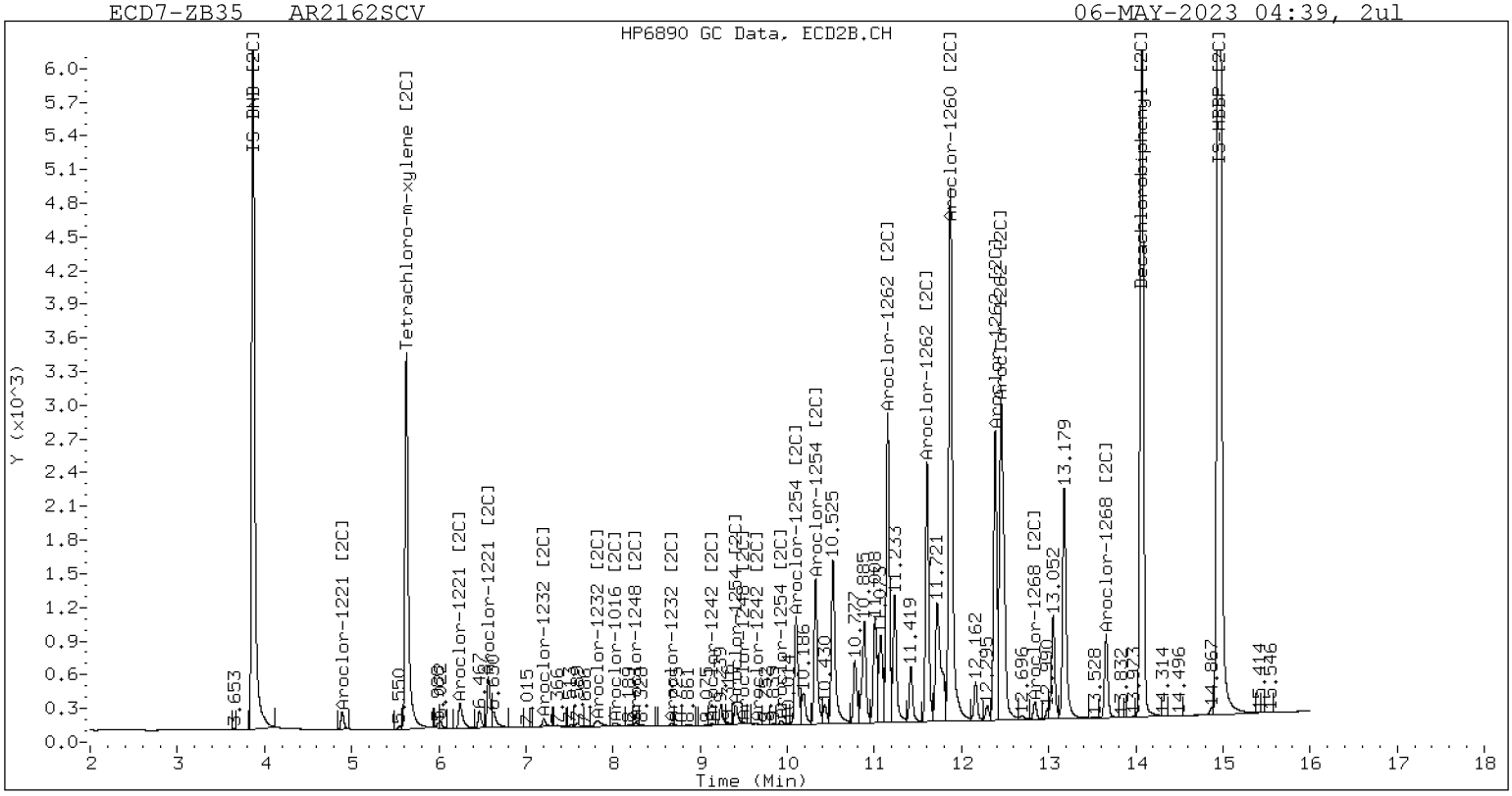
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV 06-MAY-2023 04:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV 06-MAY-2023 04:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052337ECD7.D
Data file 2: /230505.b/230505.b/05052337ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV
Client ID:
Injection Date: 06-MAY-2023 05:00
Report Date: 05/06/2023 11:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	373749	5.629	0.001	196946	38.4	40.4	5.2	Tetrachloro-m-xylene
13.842	0.002	525409	14.069	0.001	586548	55.1	59.3	7.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	646456	7.5
Hexabromobiphenyl	876625	954969	8.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	354120	1.4
Hexabromobiphenyl	652984	696139	6.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.001	28623	114.3	1	7.205	0.002	23124	115.4
Aroclor-1016	2	7.597	0.002	85721	109.5	2	7.815	0.007	47496	111.2
Aroclor-1016	3	7.735	0.002	41343	114.3	3	8.014	0.008	24029	127.5
Aroclor-1016	4	8.400	0.002	16653	111.6	4	8.262	0.003	15421	103.0
Total Col1Ave (4 peaks):		112.4				Total Col2Ave (4 peaks):		114.3	RPD = 2	
Corrected Ave (3 peaks):		111.8				Corrected Ave (3 peaks):		109.9	RPD = 2	
Aroclor-1221	1	4.664	0.001	7272	159.9	1	4.895	0.000	4045	154.9
Aroclor-1221	2	6.070	0.001	13478	147.8	2	6.246	0.000	9235	170.6
Aroclor-1221	3	6.321	0.001	43831	202.3	3	6.572	0.000	24300	285.4
Total Col1Ave (3 peaks):		170.0				Total Col2Ave (3 peaks):		203.6	RPD = 18	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.664	0.001	7272	240.1	1	4.895	0.001	4045	294.5
Aroclor-1232	2	6.070	0.001	13478	213.9	2	7.205	0.001	23124	294.1
Aroclor-1232	3	7.597	0.002	85721	285.5	3	7.815	0.000	47496	300.7
Aroclor-1232	4	8.527	0.000	36809	286.5	4	8.669	-0.000	14324	313.2
Total Col1Ave (4 peaks):		256.5				Total Col2Ave (4 peaks):		300.6	RPD = 16	
Corrected Ave (3 peaks):		246.5				Corrected Ave (3 peaks):		296.5	RPD = 18	
Aroclor-1242	1	7.214	0.002	28623	140.5	1	7.205	0.002	23124	146.1
Aroclor-1242	2	7.597	0.002	85721	132.8	2	7.815	0.002	47496	141.1
Aroclor-1242	3	8.400	0.002	16653	133.4	3	9.128	0.005	14403	133.4
Aroclor-1242	4	8.527	0.003	36809	127.4	4	9.648	0.098	5512	42.4
Total Col1Ave (4 peaks):		133.5				Total Col2Ave (4 peaks):		115.7	RPD = 14	
Corrected Ave (3 peaks):		131.2				Corrected Ave (3 peaks):		105.6	RPD = 22	
Aroclor-1248	1	8.400	0.001	16653	100.9	1	8.262	0.002	15421	91.5
Aroclor-1248	2	8.527	0.003	36809	85.8	2	8.669	0.002	14324	80.5
Aroclor-1248	3	8.944	0.000	89377	108.4	3	9.128	0.008	14403	69.0
Aroclor-1248	4	9.238	-0.005	41570	98.9	4	9.560	0.015	17331	69.3
Total Col1Ave (4 peaks):		98.5				Total Col2Ave (4 peaks):		77.6	RPD = 24	
Corrected Ave (3 peaks):		95.2				Corrected Ave (3 peaks):		72.9	RPD = 26	
Aroclor-1254	1	9.238	-0.008	41570	62.6	1	9.407	0.003	5487	20.4
Aroclor-1254	2	9.326	0.001	12640	42.3	2	9.560	0.061	17331	108.4
Aroclor-1254	3	9.624	0.006	7232	16.9	3	9.929	0.005	3481	16.0
Aroclor-1254	4	9.764	0.008	11671	13.9	4	10.086	0.009	7259	15.3
Aroclor-1254	5	10.139	0.014	7544	14.9	5	10.345	0.017	6610	14.0
Total Col1Ave (5 peaks):		30.1				Total Col2Ave (5 peaks):		34.8	RPD = 14	
Corrected Ave (4 peaks):		22.0				Corrected Ave (4 peaks):		16.4	RPD = 29	
Aroclor-1260	1	10.998	0.005	85093	168.5	1	11.598	-0.008	75237	203.5
Aroclor-1260	2	11.313	0.003	6363	12.8	2	11.873	0.001	33655	34.8
Aroclor-1260	3	11.688	0.002	47857	38.3	3	12.384	-0.004	346138	1444.4
Aroclor-1260	4	12.094	0.004	1291	2.1	4	12.453	-0.002	373218	577.8
Aroclor-1260	5	12.195	0.001	406211	1523.9	NS	---			----
Total Col1Ave (5 peaks):		349.1				Total Col2Ave (4 peaks):		565.1	RPD = 47*	
Corrected Ave (4 peaks):		55.4				Corrected Ave (3 peaks):		272.0	RPD = 132*	
Aroclor-1262	1	10.785	0.006	4006	9.3	1	11.156	0.002	52531	93.1
Aroclor-1262	2	12.195	0.000	406211	668.6	2	11.598	-0.007	75237	158.2
Aroclor-1262	3	12.268	-0.002	403730	618.2	3	12.384	-0.002	346138	665.8
Aroclor-1262	4	12.937	-0.002	145536	273.5	4	12.453	-0.002	373218	440.5
Total Col1Ave (4 peaks):		392.4				Total Col2Ave (4 peaks):		339.4	RPD = 14	
Corrected Ave (3 peaks):		300.3				Corrected Ave (3 peaks):		230.6	RPD = 26	
Aroclor-1268	1	12.195	-0.001	406211	266.7	1	12.384	-0.001	346138	262.7
Aroclor-1268	2	12.268	-0.000	403730	266.9	2	12.453	0.001	373218	263.5
Aroclor-1268	3	12.648	-0.000	323568	266.0	3	12.844	0.001	316122	260.6
Aroclor-1268	4	13.439	0.002	920777	265.1	4	13.663	0.000	1029335	264.8
Total Col1Ave (4 peaks):		266.2				Total Col2Ave (4 peaks):		262.9	RPD = 1	

Corrected Ave (3 peaks): 265.9 Corrected Ave (3 peaks): 262.3 RPD = 1

Total PCB Area Col1 (5.842 - 13.740) = 3325332 Col1 Total PCB = 0.5 ppm*

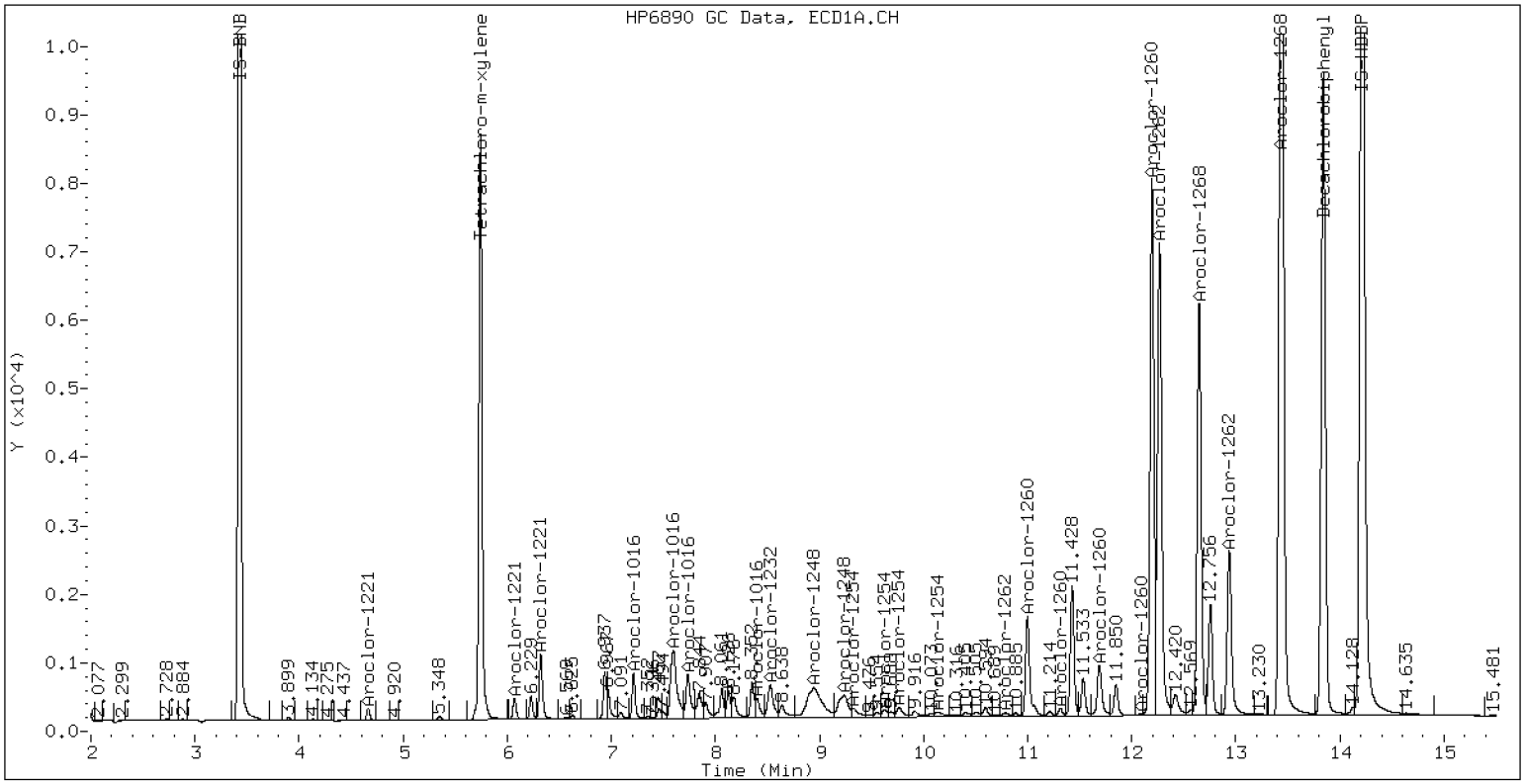
Total PCB Area Col2 (5.728 - 13.968) = 2876097 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

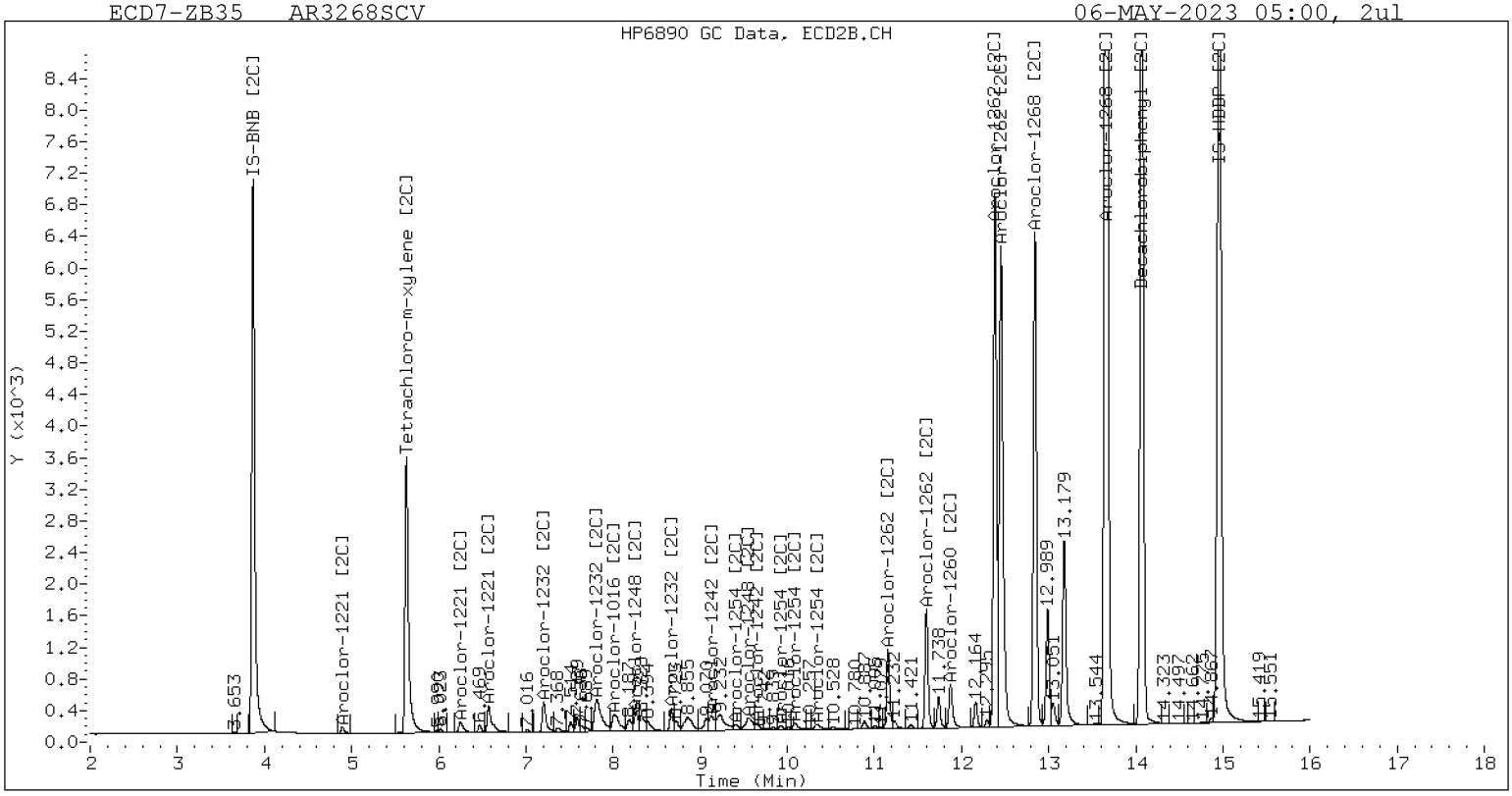
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV 06-MAY-2023 05:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV 06-MAY-2023 05:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230505.b/05052338ECD7.D ARI ID: DDTS

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.206	0.000	428189	9.867	0.000	428008	0.100	0.000	----	2,4-DDE
0.000	-10.293	0	10.625	0.000	621468	0.000	0.000#	----	2,4-DDT
9.635	0.000	1004111	10.165	0.000	369270	0.100	0.000	----	4,4-DDE
10.243	0.000	476377	10.625	0.000	621468	0.100	0.000#	----	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230505.b/05052339ECD7.D ARI ID: DDT BD

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
9.158	-0.049	12021	9.884	0.017	17091	0.002	0.000	----	2,4-DDE
0.000	-10.293	0	10.633	0.008	326807	0.000	0.000#	----	2,4-DDT
9.644	0.009	16770	10.190	0.025	488	0.001	0.000	----	4,4-DDE
10.216	-0.028	403865	10.633	0.008	326807	0.068	0.000#	----	4,4-DDD

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLE0079

Instrument: ECD7
Calibration ID: GE00022

Printed: 5/6/2023 11:44:56AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLE0079-CAL1	QC		1		L000856	L000844		
SLE0079-CAL2	QC		2		L000859	L000844		
SLE0079-CAL3	QC		3		L000858	L000844		
SLE0079-CAL4	QC		4		L000731	L000844		
SLE0079-CAL5	QC		5		L000857	L000844		
SLE0079-CAL6	QC		6		L000855	L000844		
SLE0079-CAL7	QC		7		L000860	L000844		
SLE0079-CAL8	QC		8		L000861	L000844		
SLE0079-CAL9	QC		9		L000862	L000844		
SLE0079-CALA	QC		10		L004996	L000844		
SLE0079-CALB	QC		11		L004997	L000844		
SLE0079-SCV1	QC		12		L002065	L000844		
SLE0079-SCV2	QC		13		L003970	L000844		
SLE0079-SCV3	QC		14		L002066	L000844		
SLE0079-SCV4	QC		15		L002067	L000844		
SLE0079-SCV5	QC		16		L002068	L000844		
SLE0079-SCV6	QC		17		L002069	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	05-MAY-2023 23:06	05052320ECD7.D	1	IB	
2	05-MAY-2023 23:26	05052321ECD7.D	1	0.25PPMAR1660	
3	05-MAY-2023 23:47	05052322ECD7.D	1	0.02PPMAR1660	
4	06-MAY-2023 00:08	05052323ECD7.D	1	0.05PPMAR1660	
5	06-MAY-2023 00:29	05052324ECD7.D	1	1.0PPMAR1660	
6	06-MAY-2023 00:50	05052325ECD7.D	1	0.1PPMAR1660	
7	06-MAY-2023 01:11	05052326ECD7.D	1	0.5PPMAR1660	
8	06-MAY-2023 01:31	05052327ECD7.D	1	0.25PPMAR1242	
9	06-MAY-2023 01:52	05052328ECD7.D	1	0.25PPMAR1248	
10	06-MAY-2023 02:13	05052329ECD7.D	1	0.25PPMAR1254	
11	06-MAY-2023 02:34	05052330ECD7.D	1	0.25PPMAR2162	
12	06-MAY-2023 02:55	05052331ECD7.D	1	0.25PPMAR3268	
13	06-MAY-2023 03:16	05052332ECD7.D	1	AR1660SCV	
14	06-MAY-2023 03:36	05052333ECD7.D	1	AR1242SCV	
15	06-MAY-2023 03:57	05052334ECD7.D	1	AR1248SCV	
16	06-MAY-2023 04:18	05052335ECD7.D	1	AR1254SCV	
17	06-MAY-2023 04:39	05052336ECD7.D	1	AR2162SCV	
18	06-MAY-2023 05:00	05052337ECD7.D	1	AR3268SCV	
19	06-MAY-2023 05:21	05052338ECD7.D	1	DDTS	
20	06-MAY-2023 05:41	05052339ECD7.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

ARI Job No.: Method: PCB.m Instrument: ecd7.i Date: 05-MAY-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1548	05052301ECD7.D			1	NO MANUAL INTEGRATION
1609	05052302ECD7.D			1	NO MANUAL INTEGRATION
1711	05052303ECD7.D			1	NO MANUAL INTEGRATION
1732	05052304ECD7.D			1	NO MANUAL INTEGRATION
1753	05052305ECD7.D			1	NO MANUAL INTEGRATION
1814	05052306ECD7.D			1	NO MANUAL INTEGRATION
1835	05052307ECD7.D			1	NO MANUAL INTEGRATION
1856	05052308ECD7.D			1	NO MANUAL INTEGRATION
1916	05052309ECD7.D			1	NO MANUAL INTEGRATION
1937	05052310ECD7.D			1	NO MANUAL INTEGRATION
1958	05052311ECD7.D			1	NO MANUAL INTEGRATION
2019	05052312ECD7.D			1	NO MANUAL INTEGRATION
2040	05052313ECD7.D			1	NO MANUAL INTEGRATION
2101	05052314ECD7.D			1	NO MANUAL INTEGRATION
2121	05052315ECD7.D			1	NO MANUAL INTEGRATION
2142	05052316ECD7.D			1	NO MANUAL INTEGRATION
2203	05052317ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2224	05052318ECD7.D			1	NO MANUAL INTEGRATION
2245	05052319ECD7.D			1	NO MANUAL INTEGRATION
2306	05052320ECD7.D	IB		1	NO MANUAL INTEGRATION
2326	05052321ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2347	05052322ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
0008	05052323ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
0029	05052324ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
0050	05052325ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
0111	05052326ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0131	05052327ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
0152	05052328ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
0213	05052329ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
0234	05052330ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
0255	05052331ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
0316	05052332ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
0336	05052333ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
0357	05052334ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
0418	05052335ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0439	05052336ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
0500	05052337ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
0521	05052338ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0541	05052339ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1548	05052301ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1609	05052302ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1711	05052303ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1732	05052304ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1753	05052305ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1814	05052306ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1835	05052307ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1856	05052308ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1916	05052309ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1937	05052310ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1958	05052311ECD7.D	RINSE		1	NO MANUAL INTEGRATION
2019	05052312ECD7.D	RINSE		1	NO MANUAL INTEGRATION
2040	05052313ECD7.D	RINSE		1	NO MANUAL INTEGRATION
2101	05052314ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2121	05052315ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2142	05052316ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2203	05052317ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2224	05052318ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2245	05052319ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2306	05052320ECD7.D	IB		1	NO MANUAL INTEGRATION
2326	05052321ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2347	05052322ECD7.D	0.02PPMAR1660		1	Aroclor-1016 [2C],
0008	05052323ECD7.D	0.05PPMAR1660		1	Aroclor-1016 [2C],
0029	05052324ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
0050	05052325ECD7.D	0.1PPMAR1660		1	Aroclor-1016 [2C],
0111	05052326ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0132	05052327ECD7.D	0.25PPMAR1242		1	Aroclor-1242 [2C],
0152	05052328ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
0213	05052329ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
0234	05052330ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
0255	05052331ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
0316	05052332ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0336	05052333ECD7.D	AR1242SCV		1	Aroclor-1242 [2C],
0357	05052334ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
0418	05052335ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
0439	05052336ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
0500	05052337ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
0521	05052338ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0541	05052339ECD7.D	DDT BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 06-May-2023 09:12

05052320ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052321ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052322ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052323ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052324ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052325ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052326ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052327ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052328ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052329ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052330ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052331ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052332ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052333ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052334ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052335ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052336ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052337ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052338ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052339ECD7.D	Data Locked	richardl, 06-May-2023 09:12

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230505.b\05052322ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230505.b\05052323ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230505.b\05052325ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230505.b\05052321ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230505.b\05052326ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230505.b\05052324ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230505.b\05052331ECD7.D
Level 8: \\target\share\chem4\ecd7.i\230505.b\05052338ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00563	+++++	0.00563	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01129	+++++	0.01129	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02681	+++++	0.02681	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02521	+++++	0.02521	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07988	+++++	0.07988	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01545	+++++	0.01545	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.03576	+++++	0.03576	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00375	+++++	0.00375	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.00780	+++++							0.00780	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.03715	+++++							0.03715	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.01590	+++++							0.01590	0.000
7 Aroclor-1016(1)	0.03259	0.03226	0.03462	0.03138	0.02909	0.02592				
	+++++	+++++							0.03098	9.876
(2)	0.08782	0.09418	0.10520	0.10209	0.09934	0.09254				
	+++++	+++++							0.09686	6.702
(3)	0.04375	0.04849	0.05094	0.04519	0.04205	0.03826				
	+++++	+++++							0.04478	10.130
(4)	0.01716	0.01921	0.02127	0.01901	0.01783	0.01637				
	+++++	+++++							0.01847	9.437
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.02042	+++++							0.02042	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05306	+++++							0.05306	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.10205	+++++							0.10205	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05202	+++++							0.05202	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.08222	+++++	0.08222	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03694	+++++	0.03694	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05308	+++++	0.05308	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10397	+++++	0.10397	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.06279	+++++	0.06279	0.000
9 Aroclor-1260(1)	0.04580	0.04187	0.04489	0.04230	0.04061	0.03834	+++++	+++++	0.04230	6.490
(2)	0.04434	0.04115	0.04438	0.04189	0.04043	0.03831	+++++	+++++	0.04175	5.623
(3)	0.11170	0.10434	0.11116	0.10510	0.10043	0.09464	+++++	+++++	0.10456	6.204
(4)	0.05460	0.05000	0.05382	0.05169	0.04996	0.04720	+++++	+++++	0.05121	5.355
(5)	0.02498	0.02246	0.02370	0.02202	0.02100	0.01982	+++++	+++++	0.02233	8.279
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03619	+++++	0.03619	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****				
	0.05090	*****							0.05090	0.000
(3)	*****	*****	*****	*****	*****	*****				
	0.05471	*****							0.05471	0.000
(4)	*****	*****	*****	*****	*****	*****				
	0.04459	*****							0.04459	0.000
11 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****				
	0.12759	*****							0.12759	0.000
(2)	*****	*****	*****	*****	*****	*****				
	0.12671	*****							0.12671	0.000
(3)	*****	*****	*****	*****	*****	*****				
	0.10191	*****							0.10191	0.000
(4)	*****	*****	*****	*****	*****	*****				
	0.29098	*****							0.29098	0.000
42 2,4-DDE	*****	*****	*****	*****	*****	*****				
	*****	636							636	0.000
43 2,4-DDD	*****	*****	*****	*****	*****	*****				
	*****	1208							1208	0.000
44 2,4-DDT	*****	*****	*****	*****	*****	*****				
	*****	*****							*****	*****
46 4,4-DDE	*****	*****	*****	*****	*****	*****				
	*****	1492							1492	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 05:21
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m
Last Edit : 06-May-2023 09:04 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	708	708	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	630	630	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.21049	1.18252	1.29993	1.22669	1.16878	1.14053	+++++	+++++	1.20482	4.619
$ 13 Decachlorobiphenyl	0.89752	0.83715	0.84851	0.77945	0.72713	0.70508	+++++	+++++	0.79914	9.361

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052322ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052323ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052325ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052321ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052326ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052324ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230505.b\230505.b\05052331ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00590	0.00590	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01223	0.01223	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01924	0.01924	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00310	0.00310	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01776	0.01776	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03568	0.03568	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01033	0.01033	0.000
3 Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03575	0.03575	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****	0.07606	0.07606	0.000
(3)	*****	*****	*****	*****	*****	*****	0.02438	0.02438	0.000
(4)	*****	*****	*****	*****	*****	*****	0.02939	0.02939	0.000
6 Aroclor-1248 [2C](1)	*****	*****	*****	*****	*****	*****	0.03806	0.03806	0.000
(2)	*****	*****	*****	*****	*****	*****	0.04020	0.04020	0.000
(3)	*****	*****	*****	*****	*****	*****	0.04712	0.04712	0.000
(4)	*****	*****	*****	*****	*****	*****	0.05651	0.05651	0.000
7 Aroclor-1016 [2C](1)	0.05158	0.04743	0.04866	0.04443	0.04159	0.03802	*****	0.04529	10.942
(2)	0.09850	0.09560	0.10183	0.09745	0.09528	0.09038	*****	0.09651	3.959
(3)	0.04379	0.04462	0.04622	0.04230	0.04046	0.03801	*****	0.04257	6.991
(4)	0.03635	0.03727	0.03735	0.03308	0.03084	0.02798	*****	0.03381	11.400

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
8 Aroclor-1254 [2C](1)	*****	*****	*****	*****	*****	*****	0.06078	0.06078	0.000
(2)	*****	*****	*****	*****	*****	*****	0.03611	0.03611	0.000
(3)	*****	*****	*****	*****	*****	*****	0.04927	0.04927	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10751	0.10751	0.000
(5)	*****	*****	*****	*****	*****	*****	0.10667	0.10667	0.000
10 Aroclor-1262 [2C](1)	*****	*****	*****	*****	*****	*****	0.06482	0.06482	0.000
(2)	*****	*****	*****	*****	*****	*****	0.05467	0.05467	0.000
(3)	*****	*****	*****	*****	*****	*****	0.05974	0.05974	0.000
(4)	*****	*****	*****	*****	*****	*****	0.09737	0.09737	0.000
9 Aroclor-1260 [2C](1)	0.04544	0.04273	0.04504	0.04279	0.04076	0.03816	*****	0.04249	6.408
(2)	0.11282	0.11085	0.11919	0.11378	0.10815	0.10199	*****	0.11113	5.208

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
(3)	0.02783	0.02652	0.02791	0.02780	0.02775	0.02743	#####	0.02754	1.918
(4)	0.07670	0.07341	0.07861	0.07586	0.07265	0.06817	#####	0.07423	4.962
11 Aroclor-1268 [2C](1)	#####	#####	#####	#####	#####	#####	0.15139	0.15139	0.000
(2)	#####	#####	#####	#####	#####	#####	0.16276	0.16276	0.000
(3)	#####	#####	#####	#####	#####	#####	0.13938	0.13938	0.000
(4)	#####	#####	#####	#####	#####	#####	0.44675	0.44675	0.000
41 2,4-DDE [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
42 2,4-DDD [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
44 4,4-DDE [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
45 4,4-DDD/2,4-DDT [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
46 4,4-DDT [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 23:26
End Cal Date : 06-MAY-2023 02:55
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Last Edit : 06-May-2023 11:14 ecd7.i
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	1.09077	1.07641	1.18129	1.13054	1.07870	1.04559	+++++	1.10055	4.376
$ 13 Decachlorobiphenyl [2C]	1.04434	1.07403	1.22005	1.18343	1.16419	1.13004	+++++	1.13601	5.890

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230505.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	05052321ECD7	05052322ECD7	05052323ECD7	05052324ECD7	05052325ECD7	05052326ECD7
INJ.DATE:	05-MAY-2023	05-MAY-2023	06-MAY-2023	06-MAY-2023	06-MAY-2023	06-MAY-2023
INJ.TIME:	23:26	23:47	00:08	00:29	00:50	01:11

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3.429	3.429	3.428	3.429	3.428	3.428	3.428	3.328-3.528	3.429	0.000
$ 1 Tetrachloro-m-xylene	5.743	5.742	5.741	5.746	5.741	5.743	5.742	5.642-5.842	5.743	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.663	4.563-4.763	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.212	7.112-7.312	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	4.664	4.564-4.764	+++++	+++++
7 Aroclor-1016	7.213	7.213	7.214	7.213	7.212	7.212	7.212	7.112-7.312	7.213	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.399	8.299-8.499	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	9.246	9.146-9.346	+++++	+++++
9 Aroclor-1260	10.995	10.998	10.998	10.992	10.995	10.993	10.993	10.893-11.093	10.995	0.003
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.779	10.679-10.879	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	12.196	12.096-12.296	+++++	+++++
$ 13 Decachlorobiphenyl	13.841	13.843	13.843	13.842	13.841	13.842	13.840	13.740-13.940	13.842	0.001
* 12 IS-HBBP	14.215	14.216	14.217	14.215	14.214	14.215	14.214	14.114-14.314	14.215	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.206	9.156-9.256	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.753	9.703-9.803	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.293	10.243-10.343	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.635	9.535-9.735	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230505.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.243	10.143-10.343	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.706	10.606-10.806	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230505.b\230505.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	05052320ECD7	05052321ECD7	05052322ECD7	05052323ECD7	05052324ECD7	05052325ECD7	05052326ECD7
INJ.DATE:	05-MAY-2023	05-MAY-2023	05-MAY-2023	06-MAY-2023	06-MAY-2023	06-MAY-2023	06-MAY-2023
INJ.TIME:	23:06	23:26	23:47	00:08	00:29	00:50	01:11

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.869	3.869	3.869	3.869	3.869	3.869	3.869	3.868	3.768-3.968	3.869	0.000
$ 2 Tetrachloro-m-xylene [	5.629	5.629	5.630	5.630	5.627	5.629	5.629	5.628	5.528-5.728	5.629	0.001
1 Aroclor-1221 [2C]	0.000	+++++	+++++	+++++	+++++	+++++	+++++	4.894	4.794-4.994	0.000	0.000
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.894	4.794-4.994	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.203	7.103-7.303	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.260	8.160-8.360	+++++	+++++
7 Aroclor-1016 [2C]	+++++	7.204	7.206	7.205	7.203	7.204	7.204	7.204	7.104-7.304	7.204	0.001
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.404	9.304-9.504	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.153	11.053-11.253	+++++	+++++
9 Aroclor-1260 [2C]	+++++	11.605	11.610	11.609	11.604	11.608	11.606	11.606	11.506-11.706	11.607	0.002
11 Aroclor-1268 [2C]	0.000	+++++	+++++	+++++	+++++	+++++	+++++	12.385	12.285-12.485	0.000	0.000
$ 13 Decachlorobiphenyl [2C	14.070	14.070	14.071	14.070	14.071	14.069	14.070	14.068	13.968-14.168	14.070	0.000
* 12 IS-HBBP [2C]	14.958	14.957	14.959	14.959	14.956	14.957	14.958	14.957	14.857-15.057	14.958	0.001
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.867	9.817-9.917	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.492	9.442-9.542	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.165	10.065-10.265	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.625	10.525-10.725	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230505.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230505.b\230505.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.046	10.946-11.146	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052320ECD7.D
Data file 2: /230505.b/230505.b/05052320ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 05-MAY-2023 23:06
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	296285	5.629	0.001	163258	35.5	37.4	5.3	Tetrachloro-m-xylene
13.841	0.001	288612	14.070	0.002	318424	35.7	37.3	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	554412	-7.8
Hexabromobiphenyl	876625	809662	-7.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	317324	-9.2
Hexabromobiphenyl	652984	600612	-8.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.272	0.027	1585	32.7
Aroclor-1221	3	---			0.0	3	6.588	0.017	408	5.3
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	10.995	0.002	1624	3.8	1	---			0.0
Aroclor-1260	2	11.305	-0.005	1450	3.4	2	---			0.0
Aroclor-1260	3	11.770	0.084	3781	3.6	3	---			0.0
Aroclor-1260	4	12.138	0.048	1272	2.5	4	---			0.0
Aroclor-1260	5	12.271	0.078	413	1.8	NS	---			----
	Total Col1Ave (5 peaks):				3.0	Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.800	0.021	2445	6.7	1	---			0.0
Aroclor-1262	2	12.271	0.077	413	0.8	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	12.989	0.050	944	2.1	4	---			0.0
	Total Col1Ave (3 peaks):				3.2	Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	12.271	0.076	413	0.3	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.649	0.001	2092	2.0	3	12.847	0.004	632	0.6
Aroclor-1268	4	13.443	0.006	5651	1.9	4	13.663	-0.001	2018	0.6
	Total Col1Ave (3 peaks):				1.4	Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.842 - 13.740) = 65805 Col1 Total PCB = 0.0 ppm*

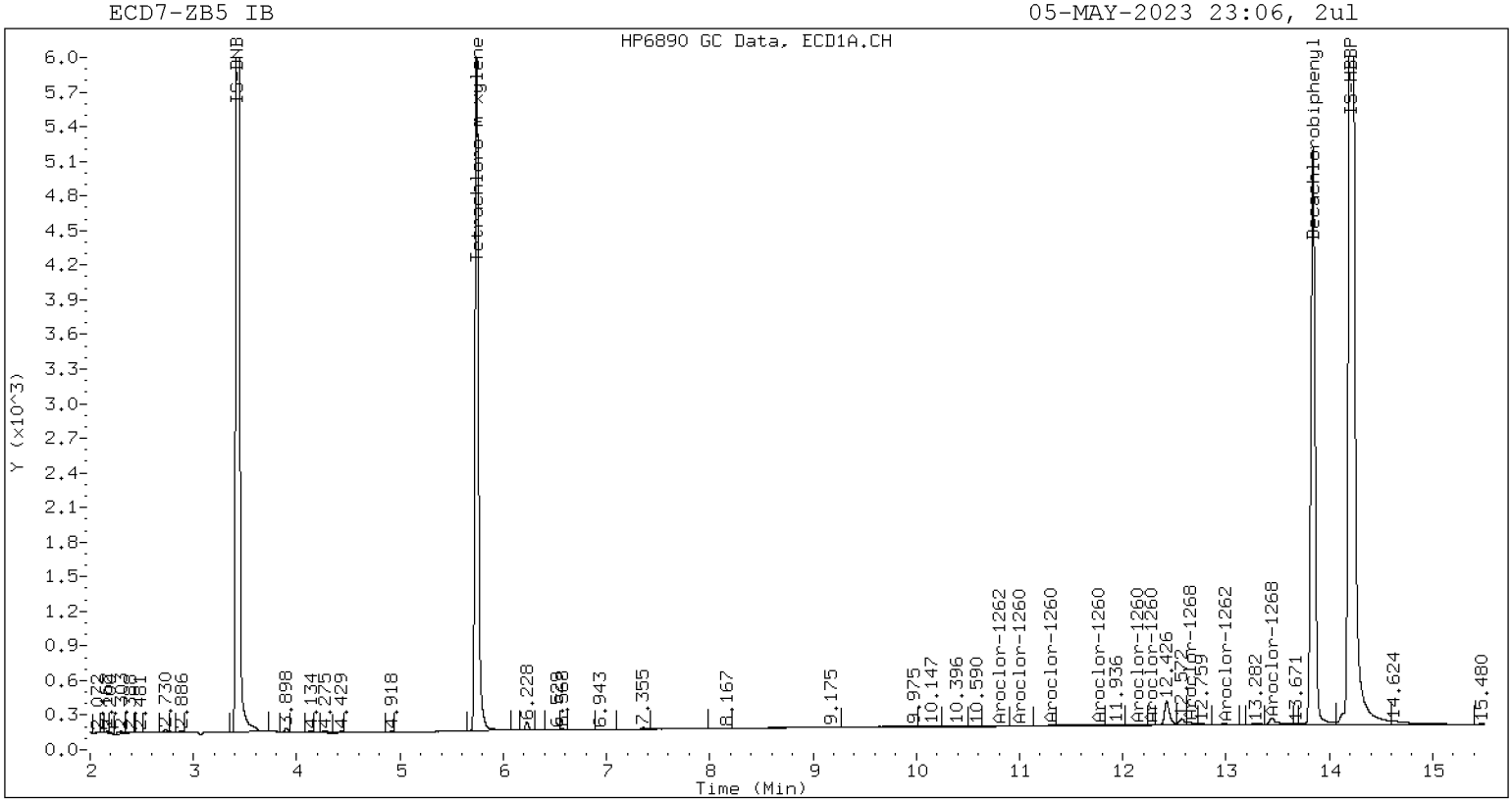
Total PCB Area Col2 (5.728 - 13.968) = 16664 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

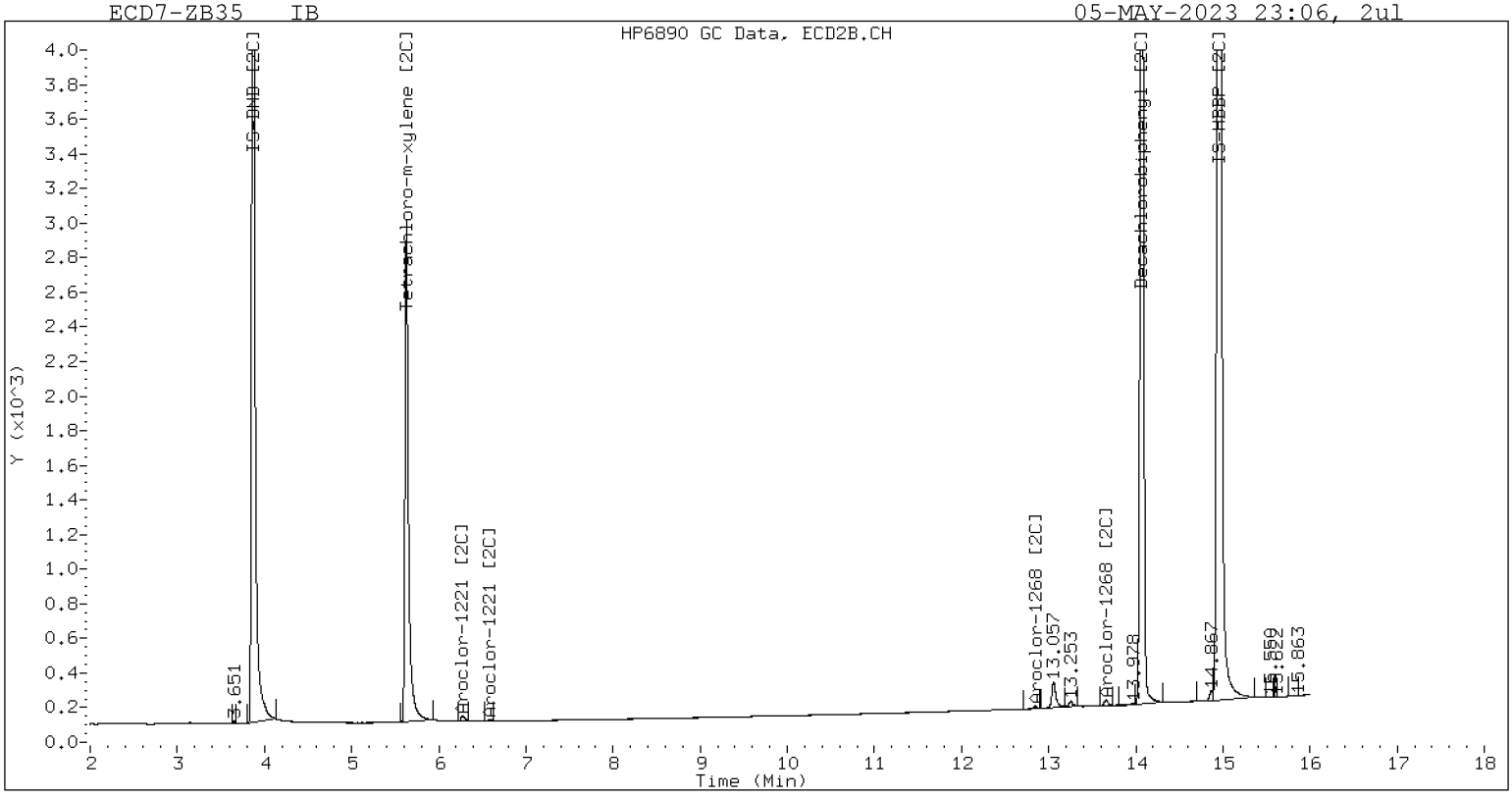
PCB Dual Column Chromatograms

ECD7-ZB5 IB 05-MAY-2023 23:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 05-MAY-2023 23:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052321ECD7.D
Data file 2: /230505.b/230505.b/05052321ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 05-MAY-2023 23:26
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	368910	5.629	0.000	197442	40.7	41.1	0.9	Tetrachloro-m-xylene
13.841	0.001	341641	14.070	0.002	386381	39.0	41.7	6.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	601474	0.0
Hexabromobiphenyl	876625	876625	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	349289	0.0
Hexabromobiphenyl	652984	652984	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.001	58979	253.2	1	7.204	-0.000	48493	245.3
Aroclor-1016	2	7.595	0.001	191892	263.5	2	7.811	0.003	106372	252.4
Aroclor-1016	3	7.735	0.002	84934	252.3	3	8.010	0.004	46169	248.4
Aroclor-1016	4	8.399	0.001	35727	257.2	4	8.260	0.001	36109	244.6
Total Col1Ave (4 peaks):					256.6	Total Col2Ave (4 peaks):				247.7 RPD = 4
Corrected Ave (3 peaks):					254.2	Corrected Ave (3 peaks):				246.1 RPD = 3
CalAmt %D:					2.6	CalAmt %D:				-0.9
Aroclor-1260	1	10.995	0.002	115872	250.0	1	11.605	-0.000	87314	251.8
Aroclor-1260	2	11.312	0.002	114768	250.9	2	11.872	-0.000	232184	256.0
Aroclor-1260	3	11.687	0.001	287920	251.3	3	12.389	0.001	56725	252.4
Aroclor-1260	4	12.091	0.002	141607	252.3	4	12.456	0.000	154797	255.5
Aroclor-1260	5	12.195	0.002	60315	246.5	NS	---			----
Total Col1Ave (5 peaks):					250.2	Total Col2Ave (4 peaks):				253.9 RPD = 1
Corrected Ave (4 peaks):					249.7	Corrected Ave (3 peaks):				253.2 RPD = 1
CalAmt %D:					0.1	CalAmt %D:				1.6

Total PCB Area Col1 (5.842 - 13.740) = 3355836 Col1 Total PCB = 0.5 ppm*

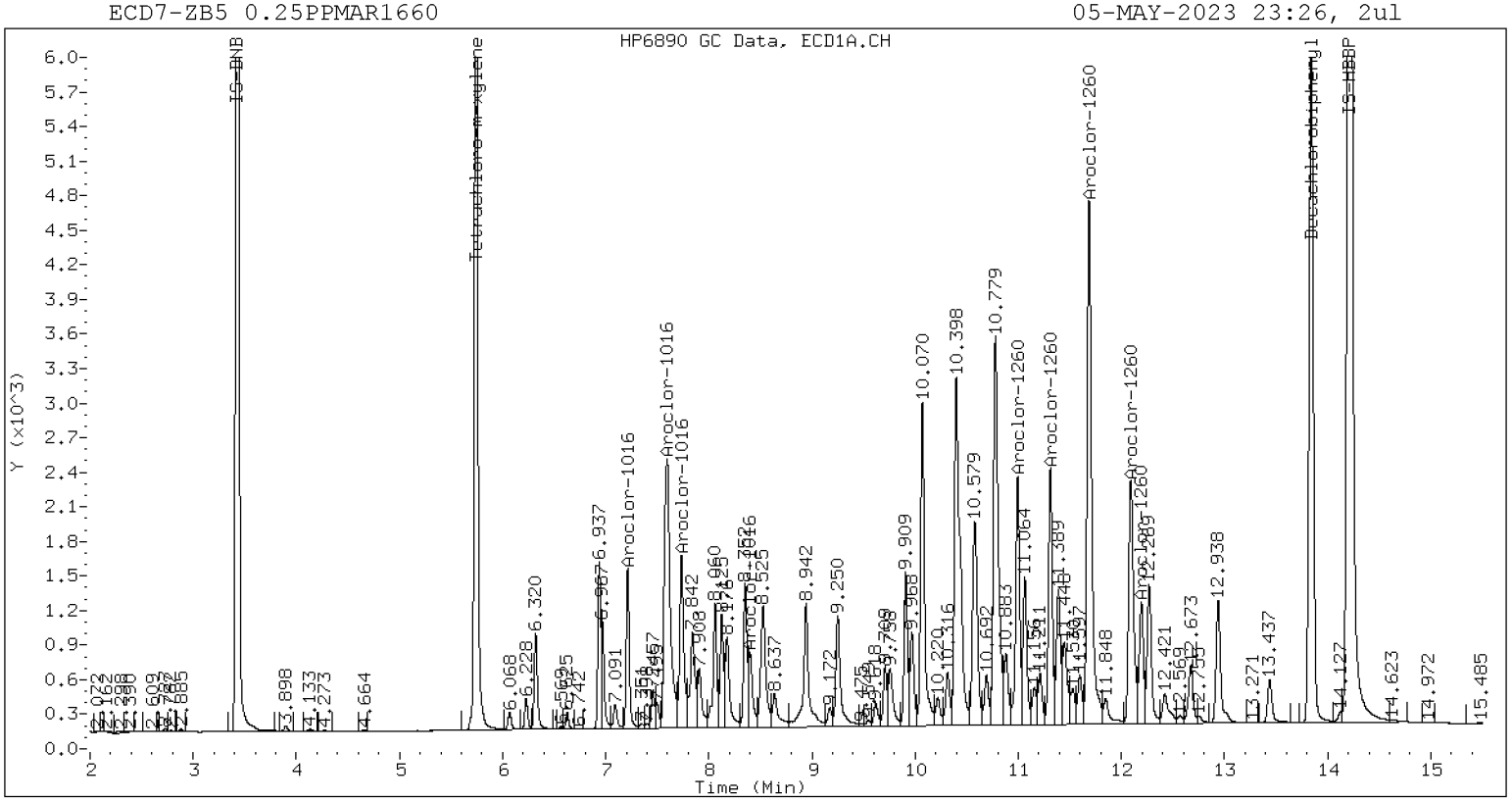
Total PCB Area Col2 (5.728 - 13.968) = 2087295 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

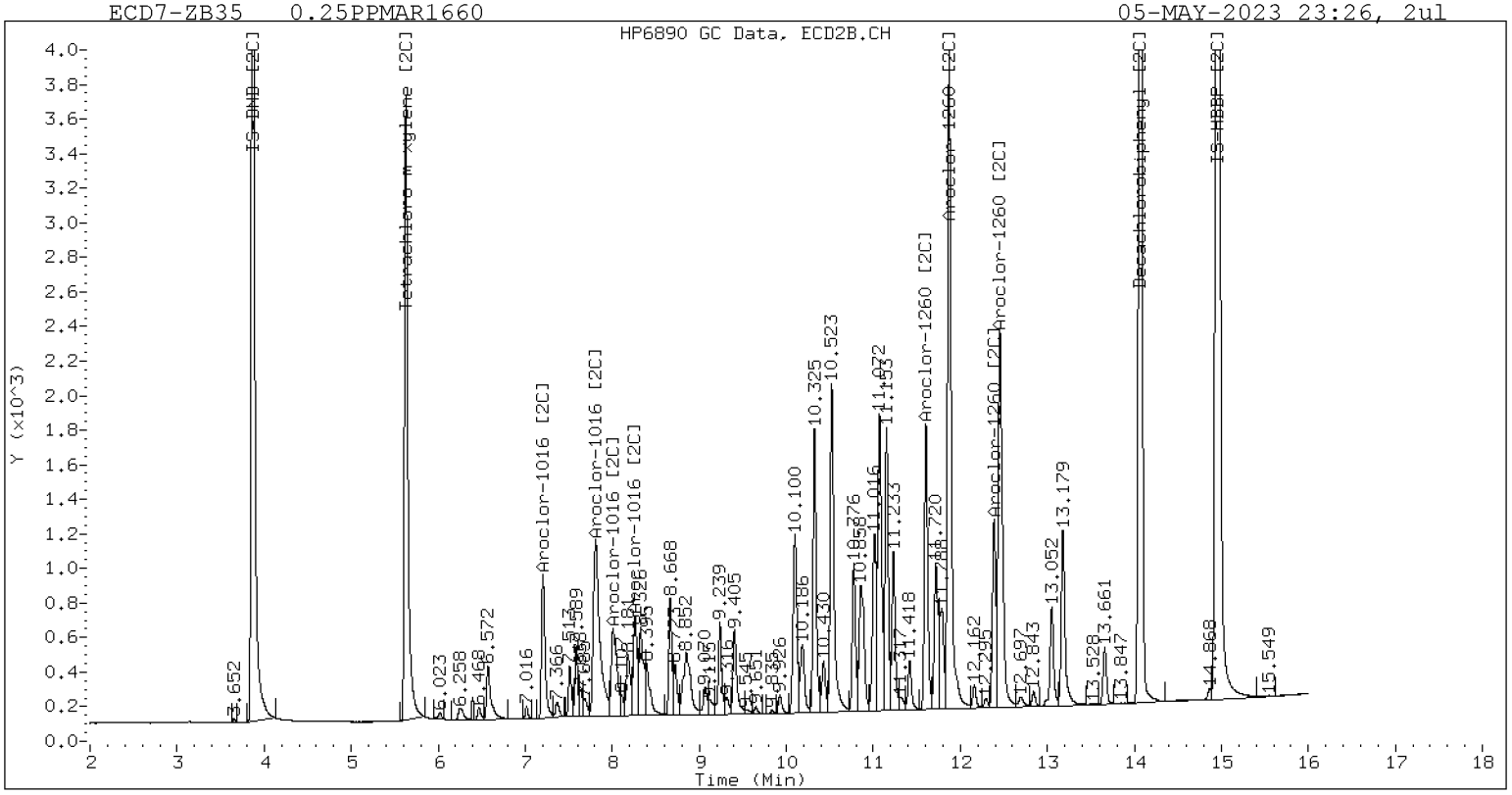
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1660 05-MAY-2023 23:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1660 05-MAY-2023 23:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052322ECD7.D
Data file 2: /230505.b/230505.b/05052322ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 05-MAY-2023 23:47
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	28836	5.630	0.002	14779	3.2	3.2	1.4	Tetrachloro-m-xylene
13.843	0.002	31610	14.071	0.002	27131	3.6	2.9	20.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	595544	-1.0
Hexabromobiphenyl	876625	880480	0.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	338730	-3.0
Hexabromobiphenyl	652984	649475	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.001	4852	21.0	1	7.206	0.002	4368	22.8
Aroclor-1016	2	7.595	0.001	13075	18.1	2	7.819	0.012	8341	20.4
Aroclor-1016	3	7.737	0.004	6514	19.5	3	8.043	0.038	3708	20.6
Aroclor-1016	4	8.400	0.002	2555	18.6	4	8.261	0.002	3078	21.5
Total Col1Ave (4 peaks):					19.3	Total Col2Ave (4 peaks):				21.3 RPD = 10
Corrected Ave (3 peaks):					18.8	Corrected Ave (3 peaks):				20.8 RPD = 10
CalAmt %D:					-3.4	CalAmt %D:				6.6
Aroclor-1260	1	10.998	0.005	10082	21.7	1	11.610	0.004	7378	21.4
Aroclor-1260	2	11.316	0.006	9760	21.2	2	11.878	0.006	18318	20.3
Aroclor-1260	3	11.694	0.008	24587	21.4	3	12.392	0.004	4519	20.2
Aroclor-1260	4	12.098	0.008	12018	21.3	4	12.461	0.006	12454	20.7
Aroclor-1260	5	12.198	0.005	5499	22.4	NS	---			----
Total Col1Ave (5 peaks):					21.6	Total Col2Ave (4 peaks):				20.6 RPD = 4
Corrected Ave (4 peaks):					21.4	Corrected Ave (3 peaks):				20.4 RPD = 5
CalAmt %D:					8.0	CalAmt %D:				3.2

Total PCB Area Col1 (5.842 - 13.740) = 294199 Col1 Total PCB = 0.0 ppm*

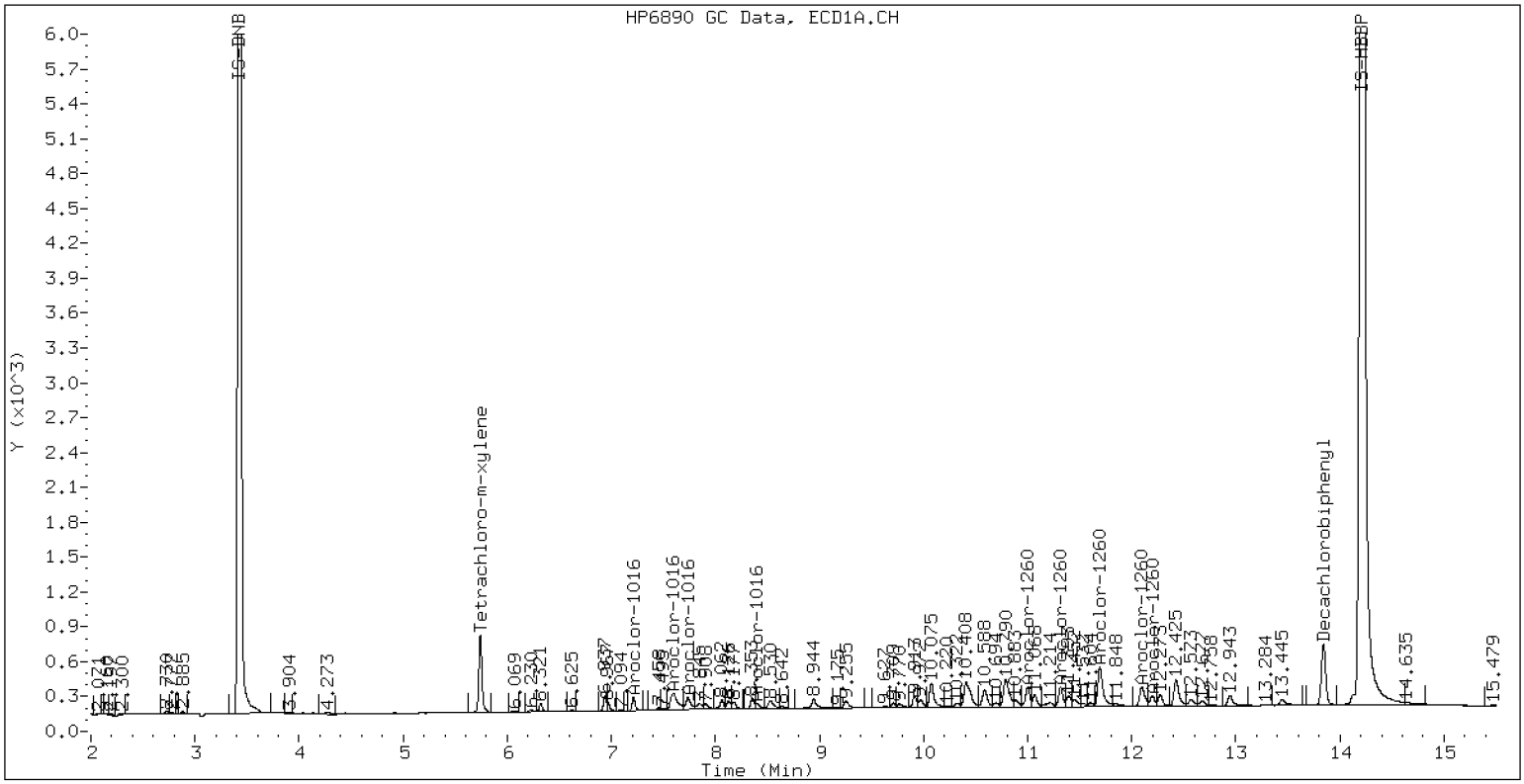
Total PCB Area Col2 (5.728 - 13.968) = 173796 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

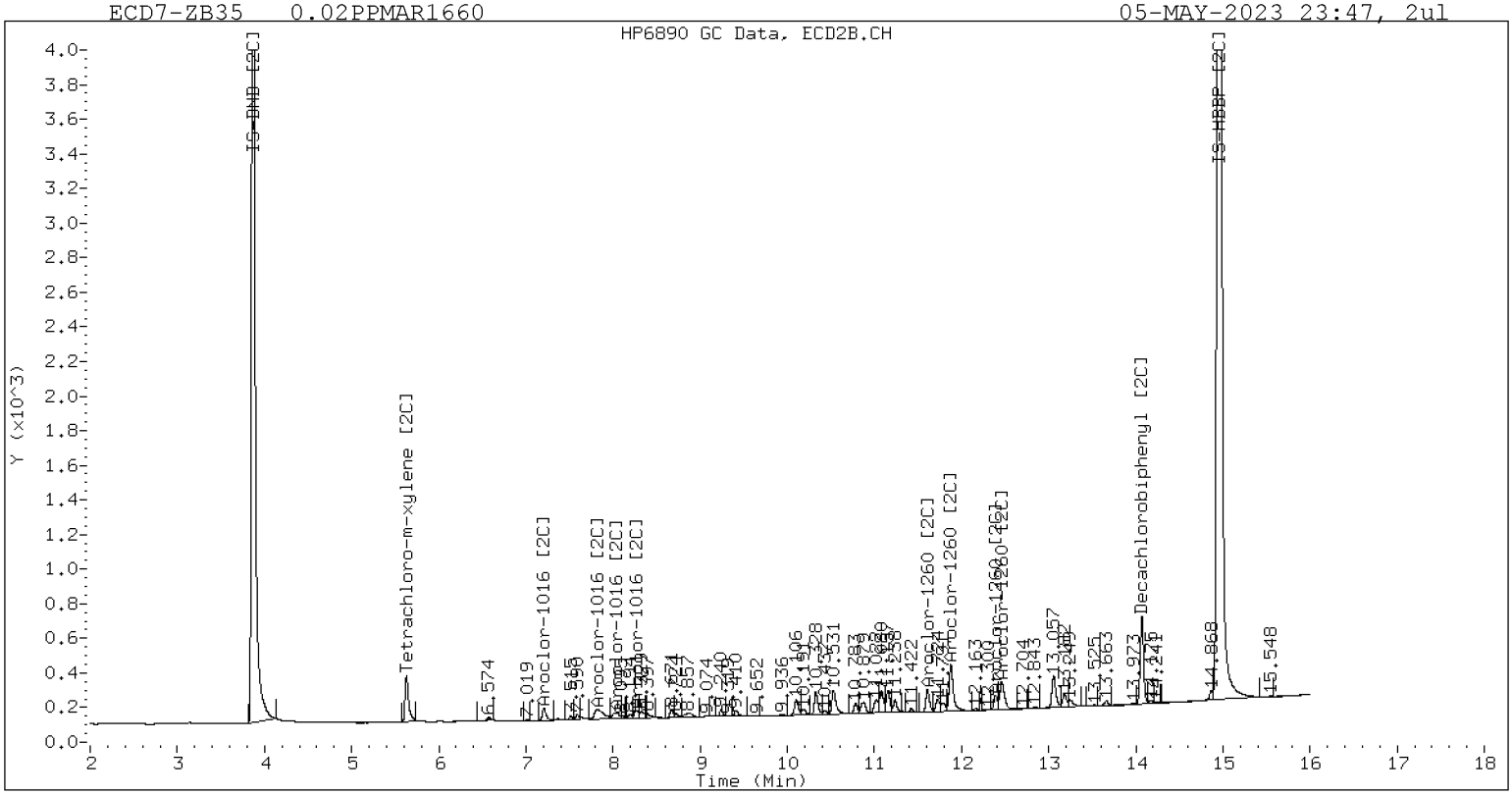
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPMAR1660 05-MAY-2023 23:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPMAR1660 05-MAY-2023 23:47, 2ul

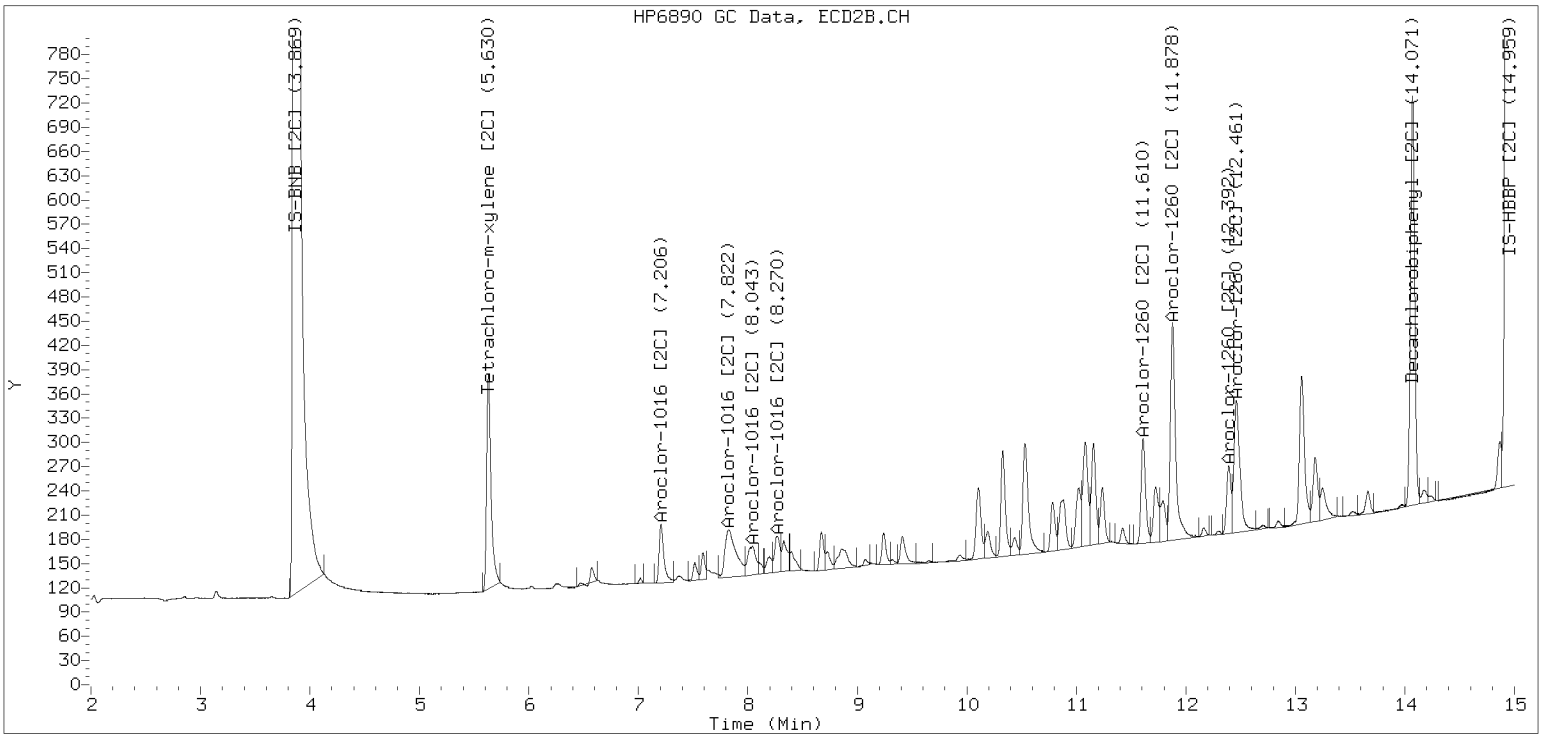


ZB-35 Manual Integration: YES

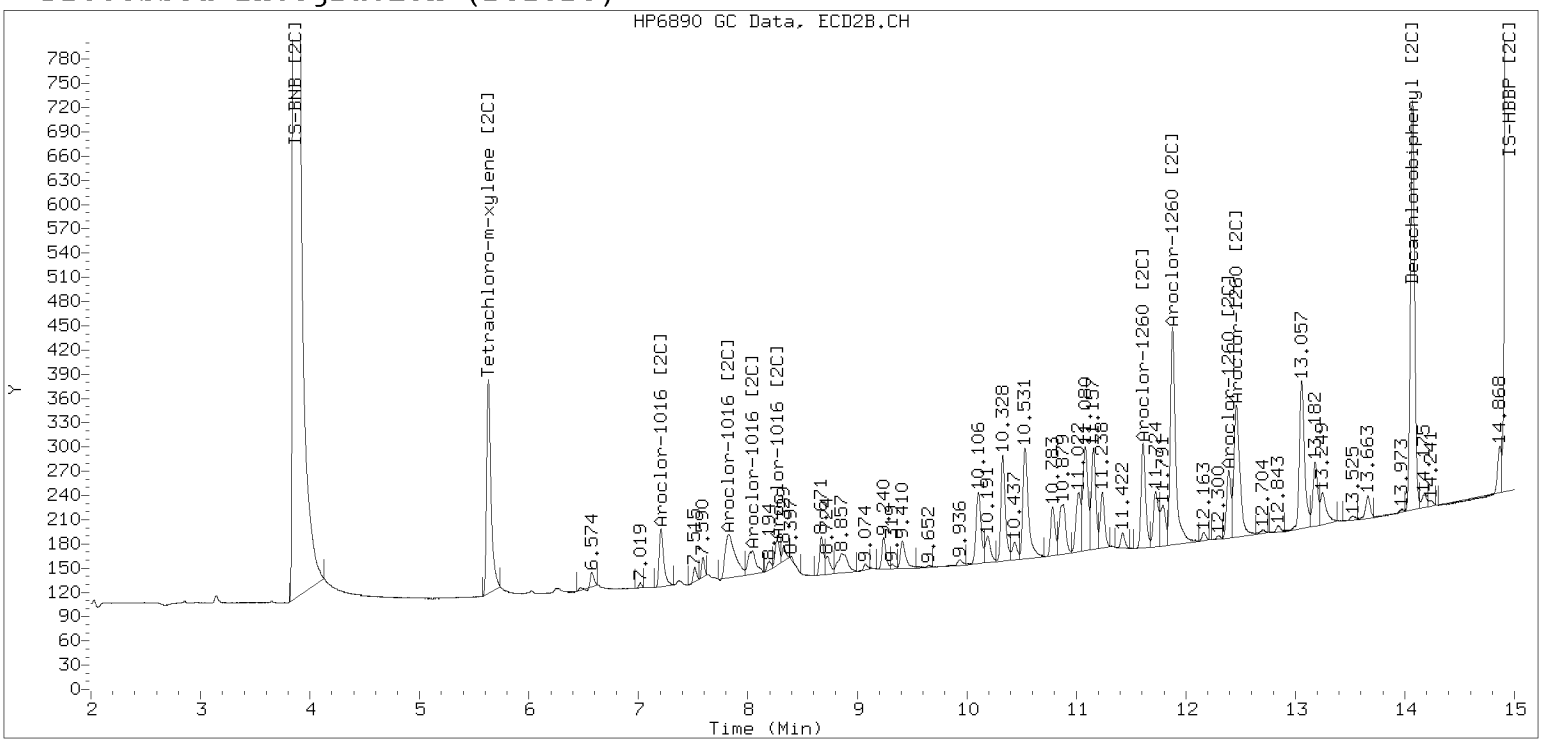
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052322ECD7.D Injection Date: 05-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052323ECD7.D
Data file 2: /230505.b/230505.b/05052323ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 06-MAY-2023 00:08
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	72149	5.630	0.001	37778	7.9	7.8	0.3	Tetrachloro-m-xylene
13.843	0.002	75564	14.070	0.002	71601	8.4	7.6	10.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	610127	1.4
Hexabromobiphenyl	876625	902634	3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	350964	0.5
Hexabromobiphenyl	652984	666660	2.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.001	12303	52.1	1	7.205	0.001	10404	52.4
Aroclor-1016	2	7.595	0.000	35912	48.6	2	7.821	0.013	20971	49.5
Aroclor-1016	3	7.736	0.003	18491	54.1	3	8.016	0.010	9788	52.4
Aroclor-1016	4	8.400	0.002	7326	52.0	4	8.264	0.005	8176	55.1
Total Col1Ave (4 peaks):					51.7	Total Col2Ave (4 peaks):				52.4 RPD = 1
Corrected Ave (3 peaks):					50.9	Corrected Ave (3 peaks):				51.4 RPD = 1
CalAmt %D:					3.4	CalAmt %D:				4.7
Aroclor-1260	1	10.998	0.005	23619	49.5	1	11.609	0.003	17805	50.3
Aroclor-1260	2	11.316	0.006	23213	49.3	2	11.876	0.004	46188	49.9
Aroclor-1260	3	11.693	0.007	58862	49.9	3	12.391	0.003	11048	48.1
Aroclor-1260	4	12.096	0.006	28206	48.8	4	12.460	0.004	30586	49.4
Aroclor-1260	5	12.197	0.004	12672	50.3	NS	---			----
Total Col1Ave (5 peaks):					49.6	Total Col2Ave (4 peaks):				49.4 RPD = 0
Corrected Ave (4 peaks):					49.4	Corrected Ave (3 peaks):				49.2 RPD = 0
CalAmt %D:					-0.9	CalAmt %D:				-1.1

Total PCB Area Col1 (5.842 - 13.740) = 697433 Col1 Total PCB = 0.1 ppm*

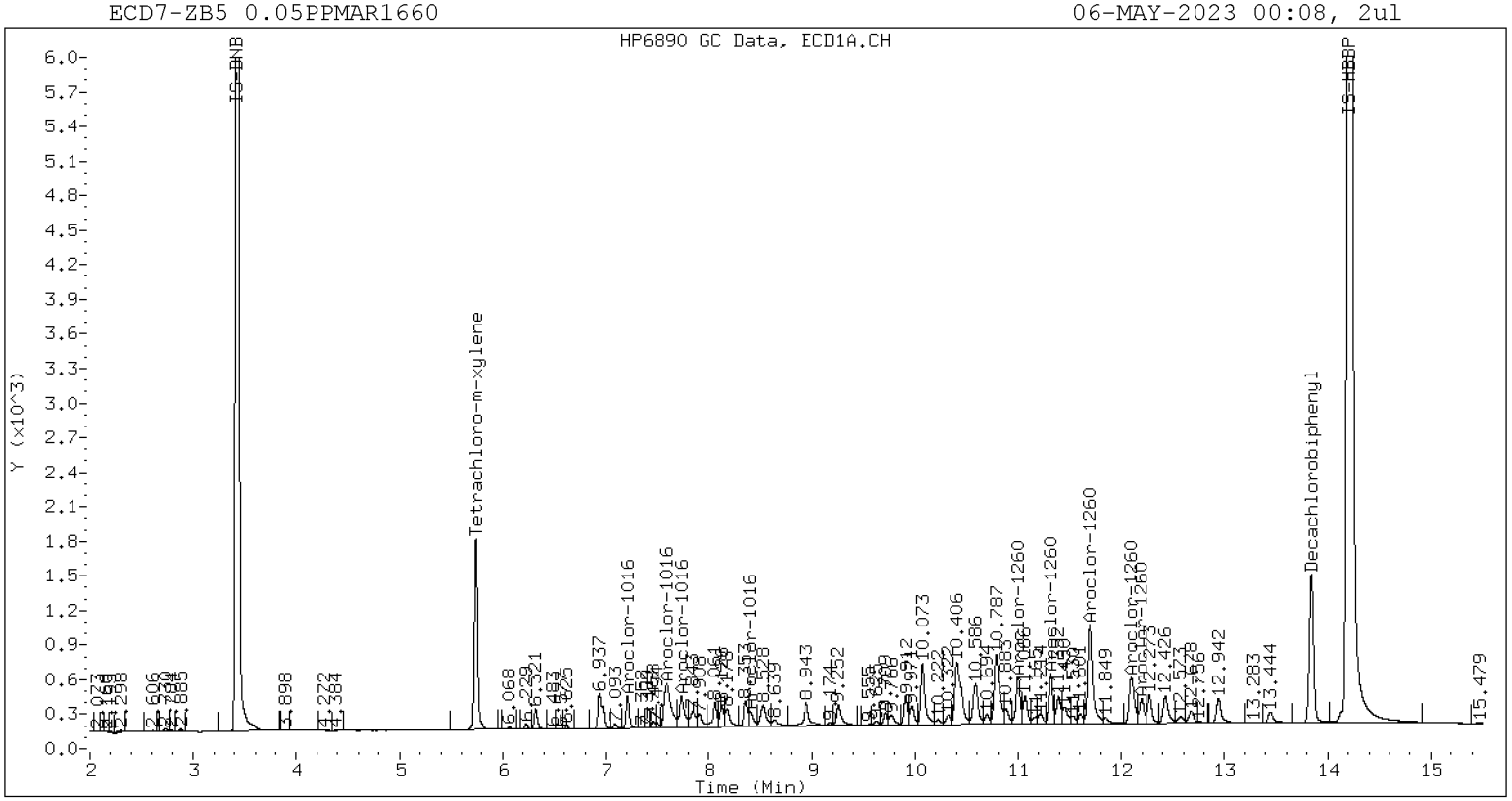
Total PCB Area Col2 (5.728 - 13.968) = 429325 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

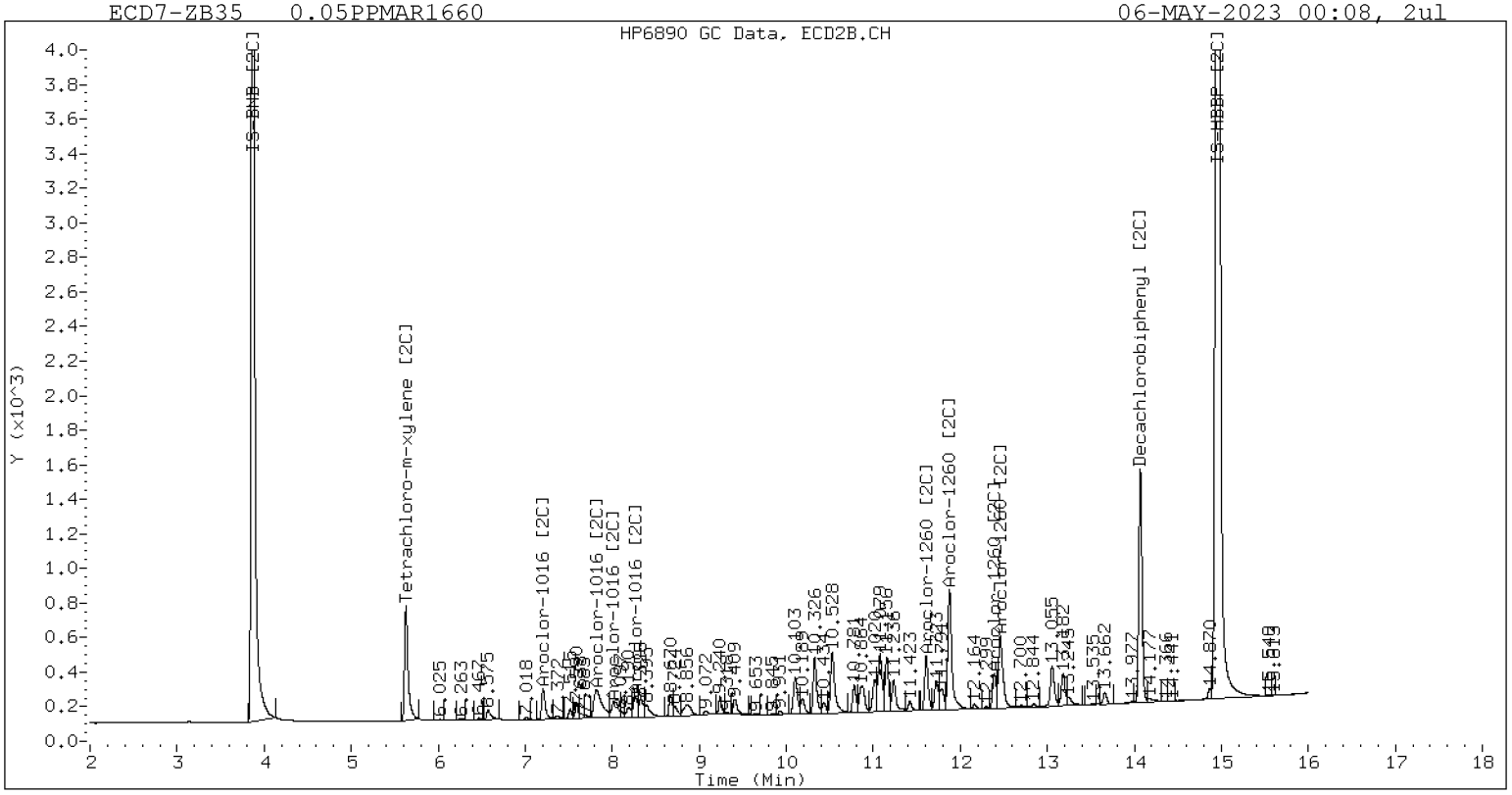
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPMAR1660 06-MAY-2023 00:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPMAR1660 06-MAY-2023 00:08, 2ul

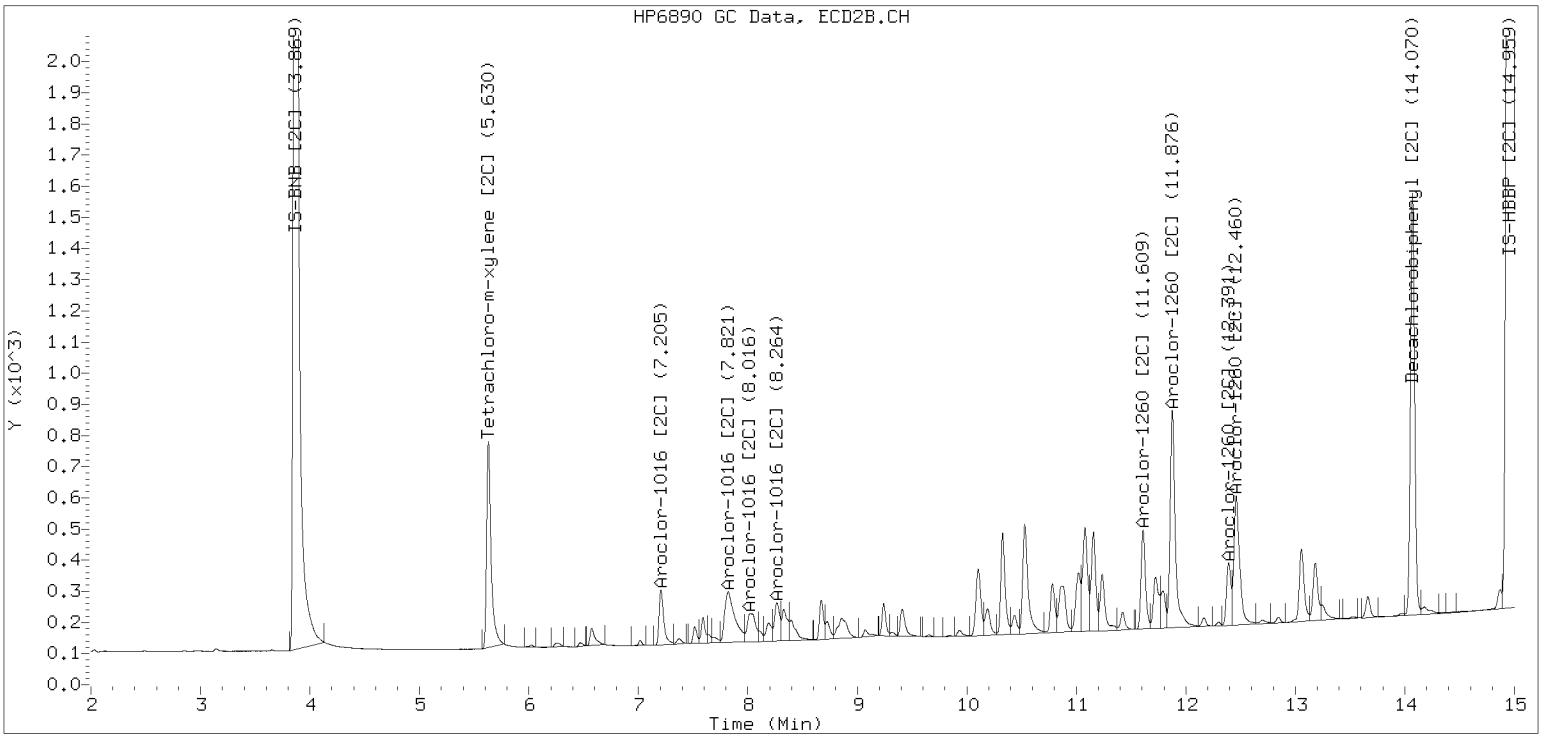


ZB-35 Manual Integration: YES

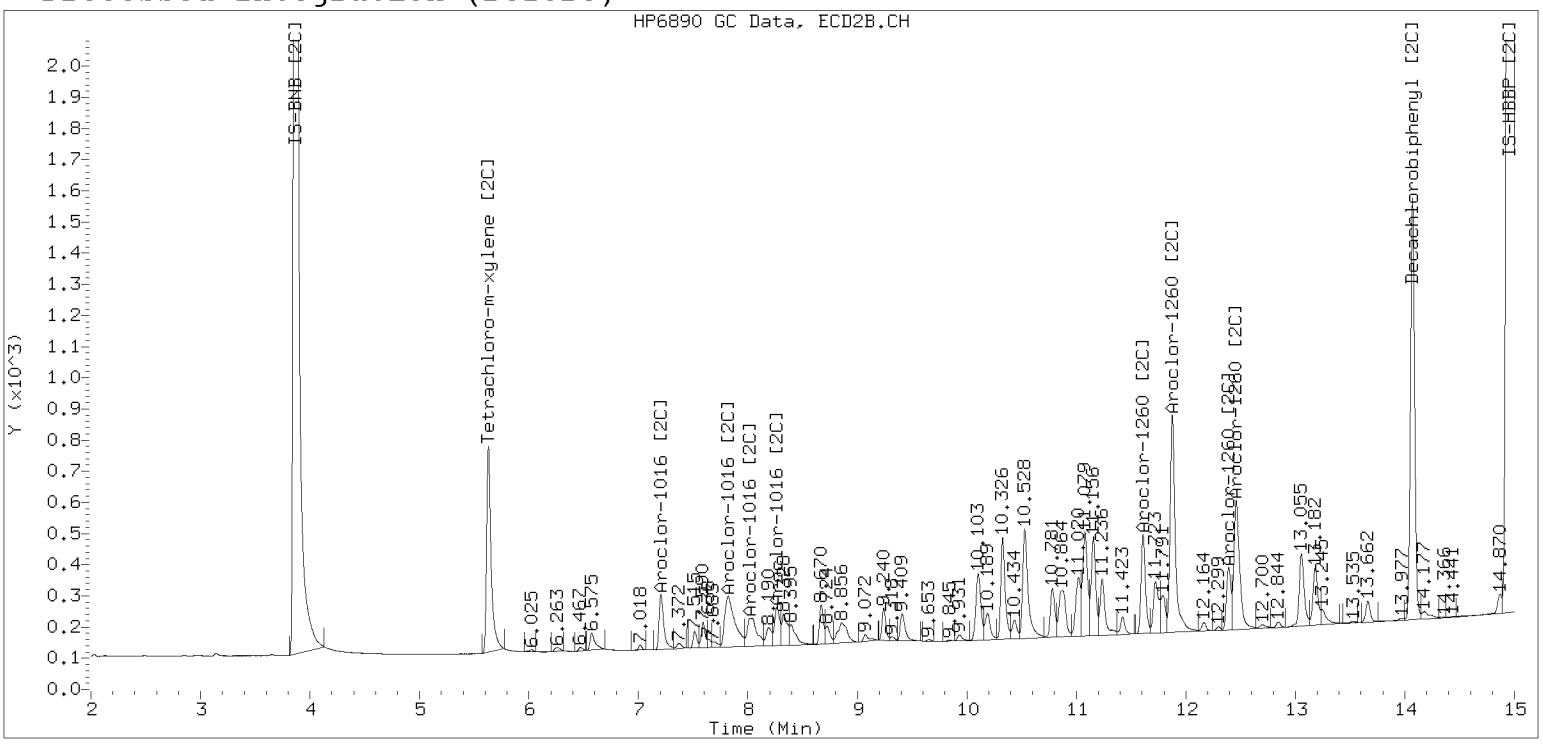
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052323ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052324ECD7.D
Data file 2: /230505.b/230505.b/05052324ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1.0PPMAR1660
Client ID:
Injection Date: 06-MAY-2023 00:29
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.746	0.004	1354956	5.627	-0.001	709704	151.5	152.0	0.4	Tetrachloro-m-xylene
13.842	0.002	1208957	14.071	0.002	1442827	141.2	159.2	12.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	594005	-1.2
Hexabromobiphenyl	876625	857318	-2.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	339380	-2.8
Hexabromobiphenyl	652984	638394	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	192466	836.8	1	7.203	-0.001	161296	839.6
Aroclor-1016	2	7.595	0.000	687116	955.4	2	7.804	-0.003	383432	936.5
Aroclor-1016	3	7.732	-0.000	284089	854.4	3	8.002	-0.003	161269	893.1
Aroclor-1016	4	8.397	-0.001	121539	886.0	4	8.257	-0.002	118708	827.5
Total Col1Ave (4 peaks):					883.2	Total Col2Ave (4 peaks):				874.2 RPD = 1
Corrected Ave (3 peaks):					859.1	Corrected Ave (3 peaks):				853.4 RPD = 1
CalAmt %D:					-11.7	CalAmt %D:				-12.6
Aroclor-1260	1	10.992	-0.001	410905	906.4	1	11.604	-0.002	304531	898.2
Aroclor-1260	2	11.309	-0.001	410553	917.6	2	11.869	-0.003	813835	917.7
Aroclor-1260	3	11.683	-0.003	1014157	905.1	3	12.387	-0.001	218887	996.0
Aroclor-1260	4	12.087	-0.003	505824	921.7	4	12.453	-0.003	543988	918.3
Aroclor-1260	5	12.193	-0.001	212396	887.6	NS	---			----
Total Col1Ave (5 peaks):					907.7	Total Col2Ave (4 peaks):				932.6 RPD = 3
Corrected Ave (4 peaks):					904.2	Corrected Ave (3 peaks):				911.4 RPD = 1
CalAmt %D:					-9.2	CalAmt %D:				-6.7

Total PCB Area Col1 (5.842 - 13.740) = 11665793 Col1 Total PCB = 1.8 ppm*

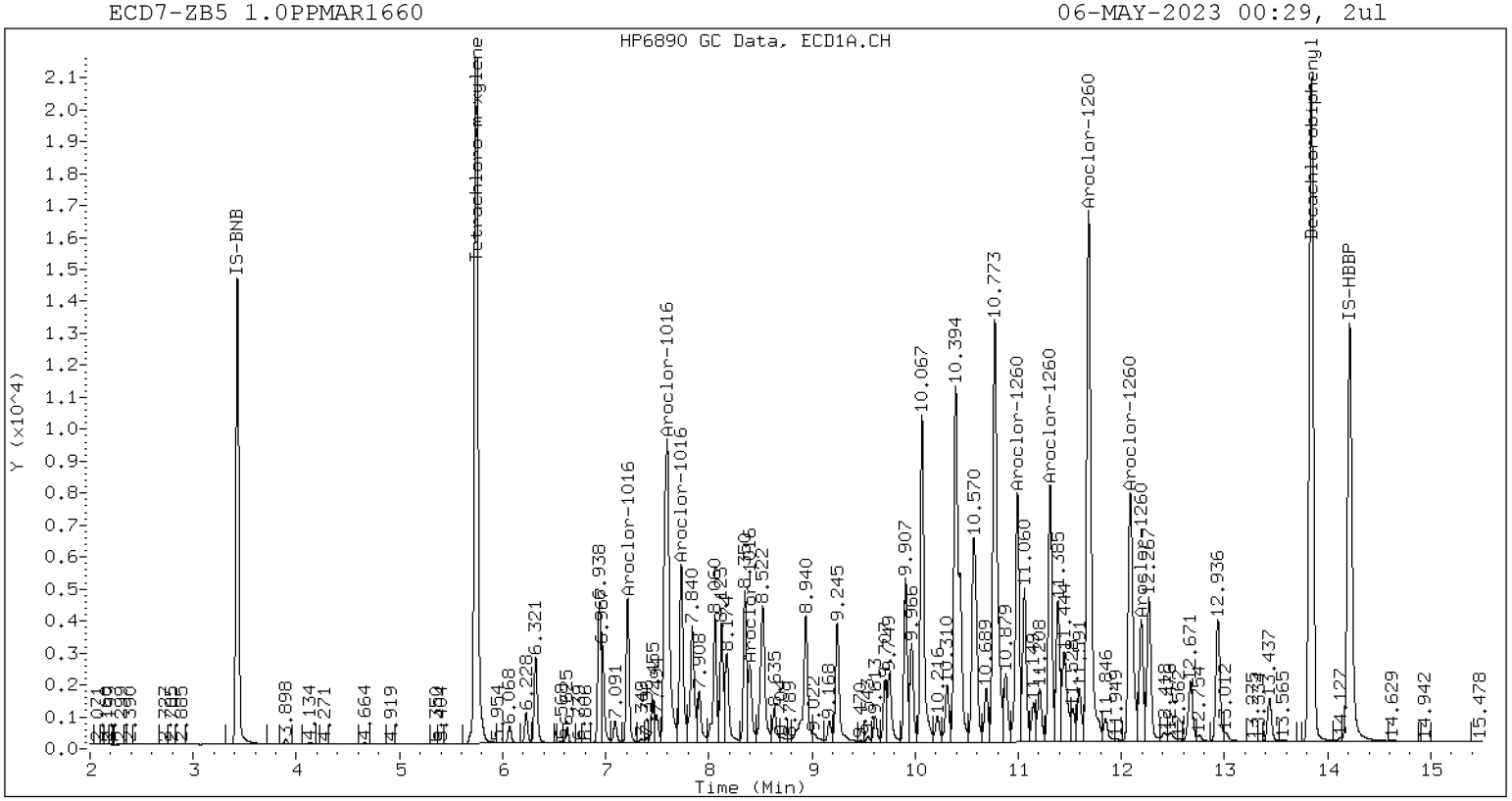
Total PCB Area Col2 (5.728 - 13.968) = 7382788 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

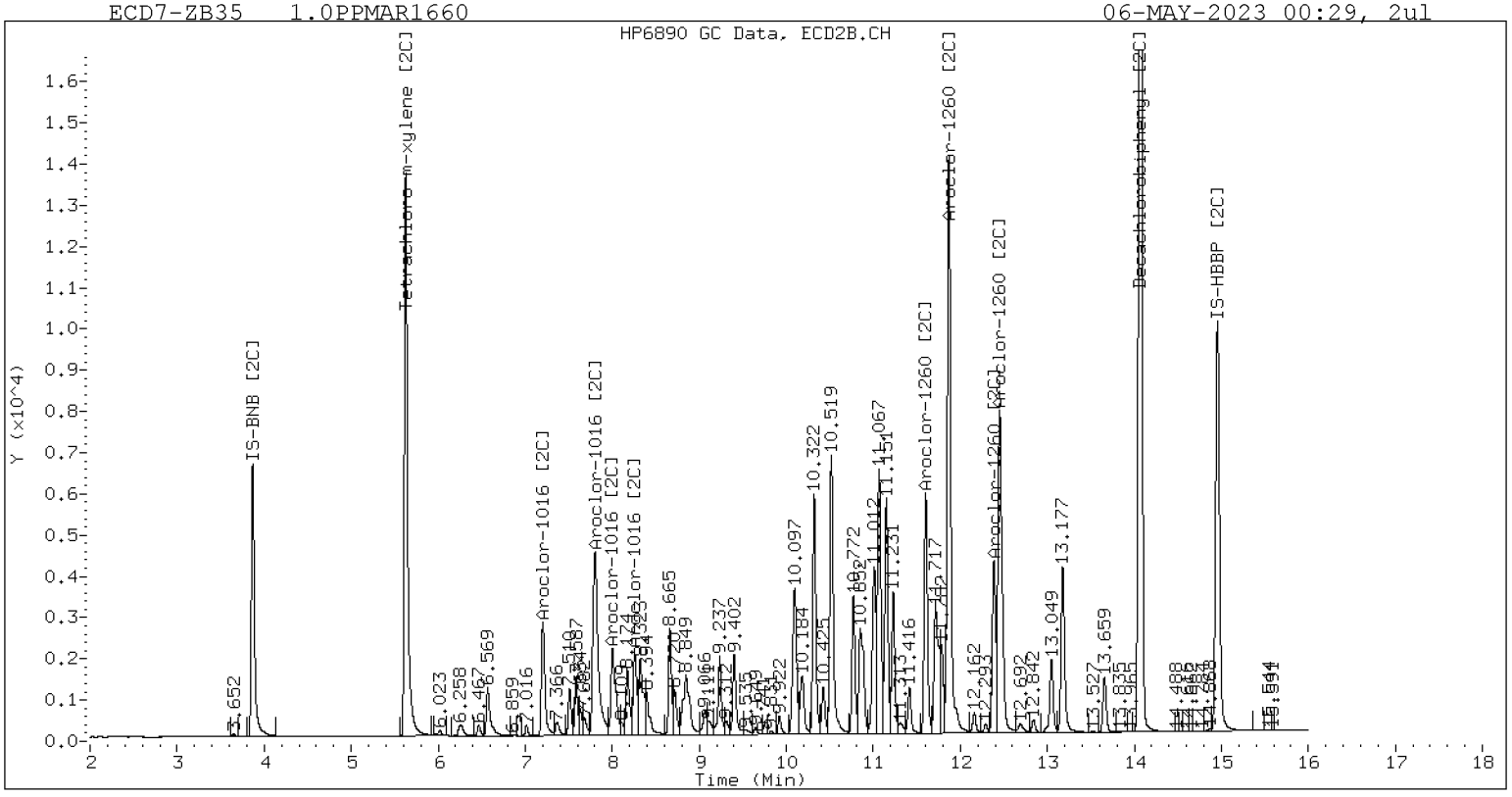
PCB Dual Column Chromatograms

ECD7-ZB5 1.0PPMAR1660 06-MAY-2023 00:29, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1.0PPMAR1660 06-MAY-2023 00:29, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052325ECD7.D
Data file 2: /230505.b/230505.b/05052325ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 06-MAY-2023 00:50
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	166260	5.629	0.000	87721	17.3	17.2	0.5	Tetrachloro-m-xylene
13.841	0.000	162151	14.069	0.001	170994	17.0	17.2	1.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	639496	6.3
Hexabromobiphenyl	876625	955499	9.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	371294	6.3
Hexabromobiphenyl	652984	700767	7.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	-0.000	27672	111.8	1	7.204	0.000	22585	107.5
Aroclor-1016	2	7.595	0.000	84096	108.6	2	7.815	0.008	47261	105.5
Aroclor-1016	3	7.735	0.002	40718	113.8	3	8.012	0.007	21450	108.6
Aroclor-1016	4	8.399	0.001	17000	115.1	4	8.262	0.003	17337	110.5
Total Col1Ave (4 peaks):					112.3	Total Col2Ave (4 peaks):				108.0 RPD = 4
Corrected Ave (3 peaks):					111.4	Corrected Ave (3 peaks):				107.2 RPD = 4
CalAmt %D:					12.3	CalAmt %D:				8.0
Aroclor-1260	1	10.995	0.002	53621	106.1	1	11.608	0.002	39451	106.0
Aroclor-1260	2	11.313	0.003	53001	106.3	2	11.874	0.002	104406	107.3
Aroclor-1260	3	11.690	0.004	132765	106.3	3	12.391	0.003	24449	101.4
Aroclor-1260	4	12.093	0.003	64276	105.1	4	12.457	0.002	68859	105.9
Aroclor-1260	5	12.196	0.003	28307	106.1	NS	---			----
Total Col1Ave (5 peaks):					106.0	Total Col2Ave (4 peaks):				105.1 RPD = 1
Corrected Ave (4 peaks):					105.9	Corrected Ave (3 peaks):				104.4 RPD = 1
CalAmt %D:					6.0	CalAmt %D:				5.1

Total PCB Area Col1 (5.842 - 13.740) = 1580756 Col1 Total PCB = 0.2 ppm*

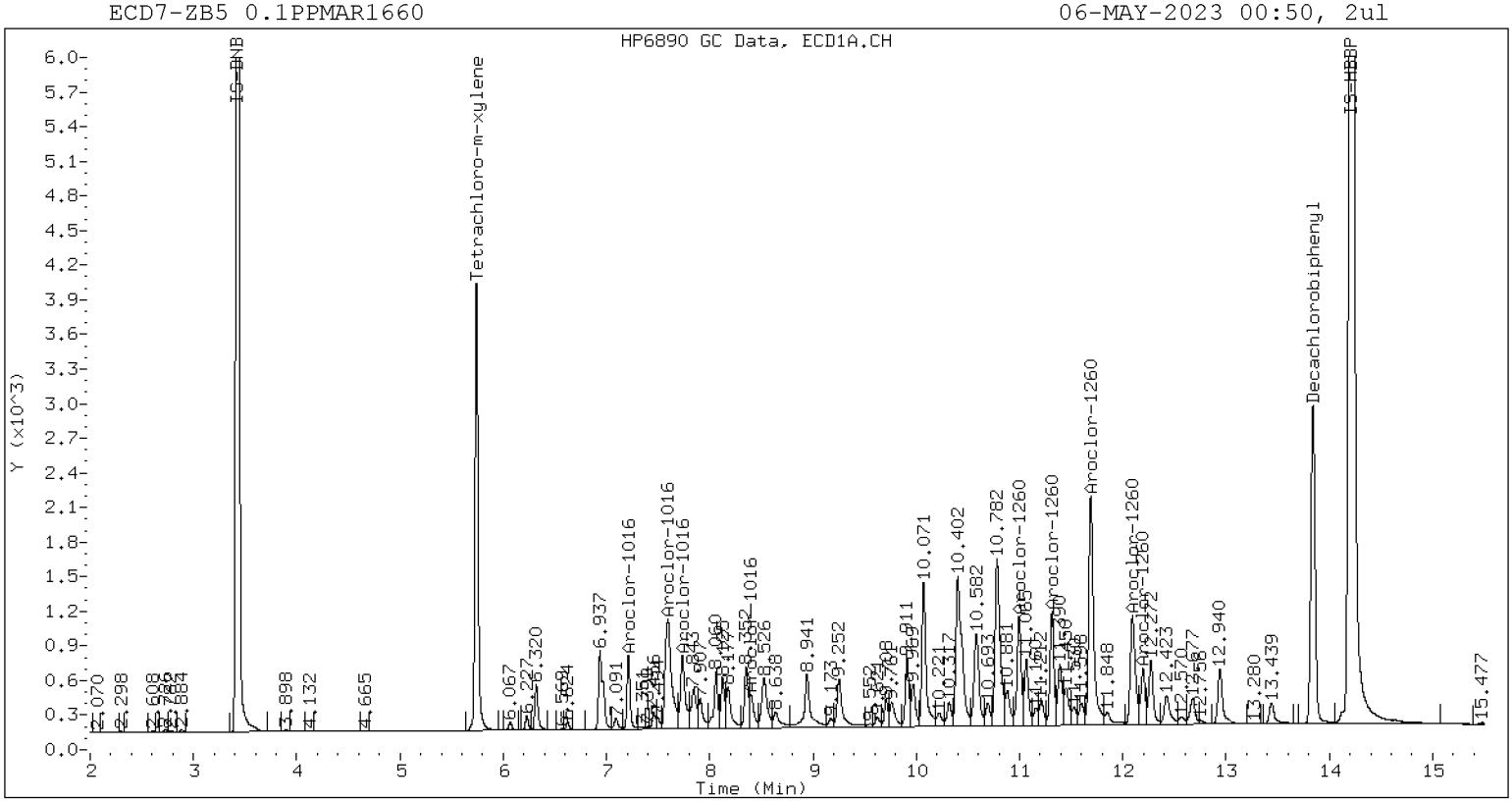
Total PCB Area Col2 (5.728 - 13.968) = 950746 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

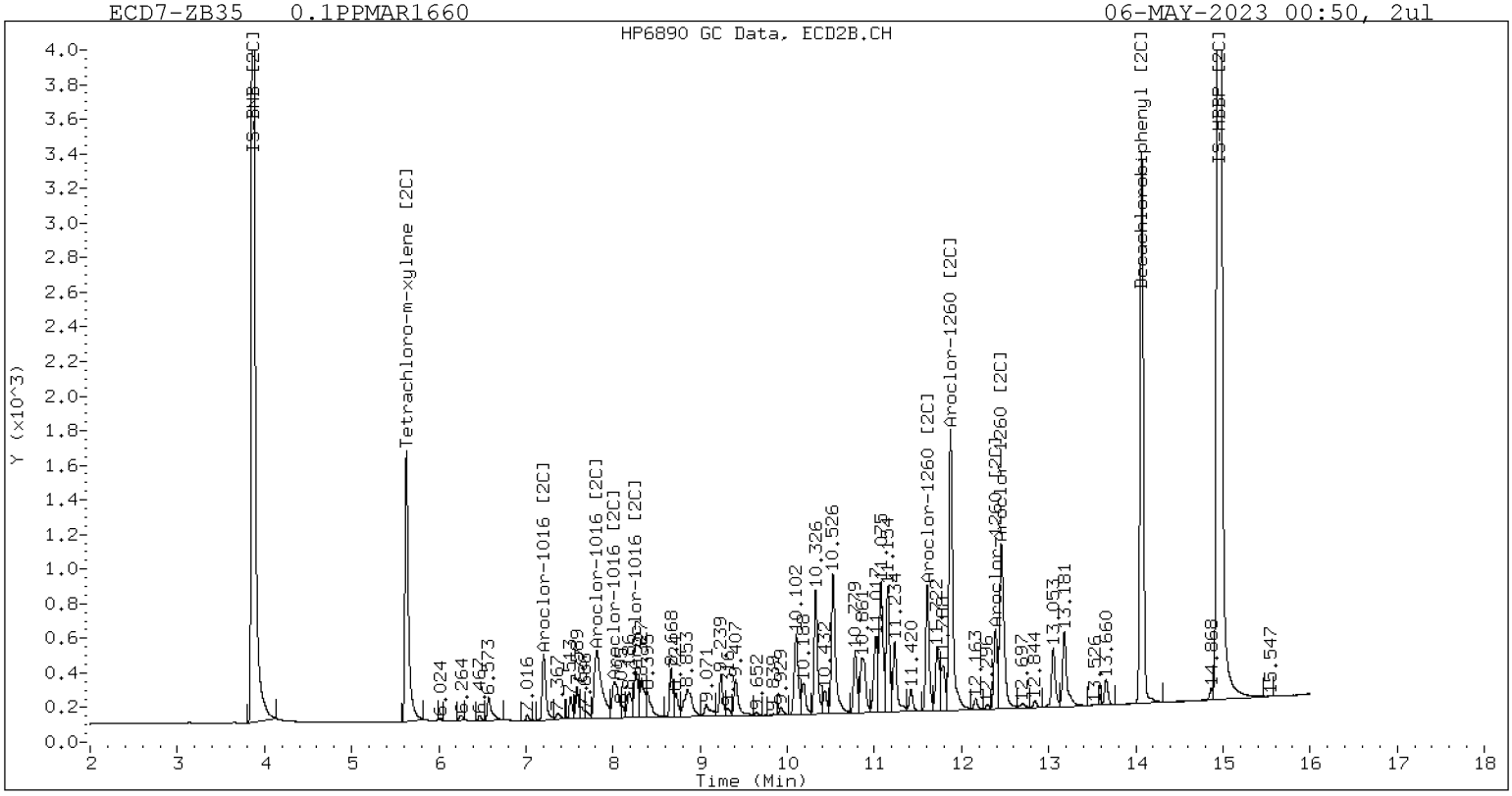
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 06-MAY-2023 00:50, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 06-MAY-2023 00:50, 2ul

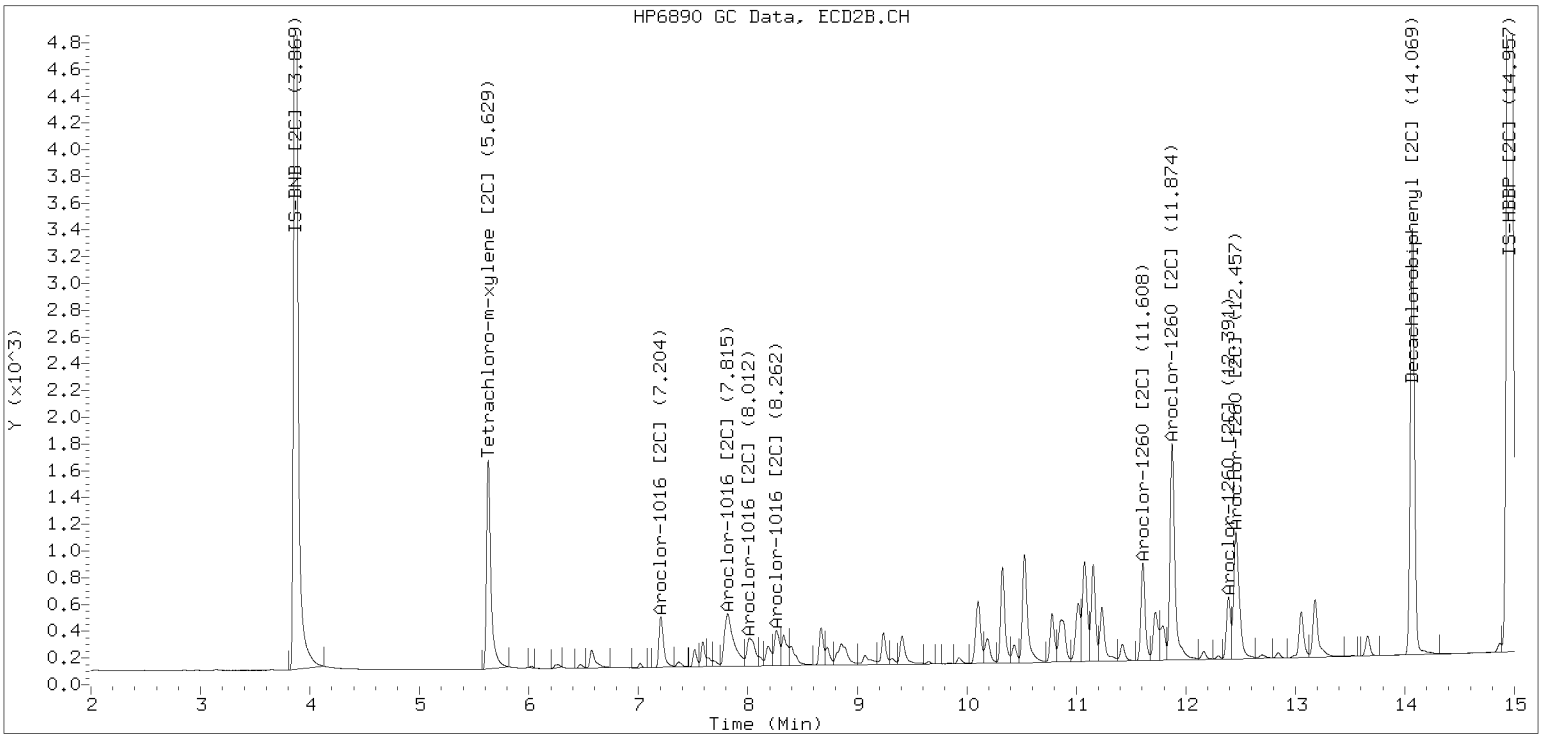


ZB-35 Manual Integration: YES

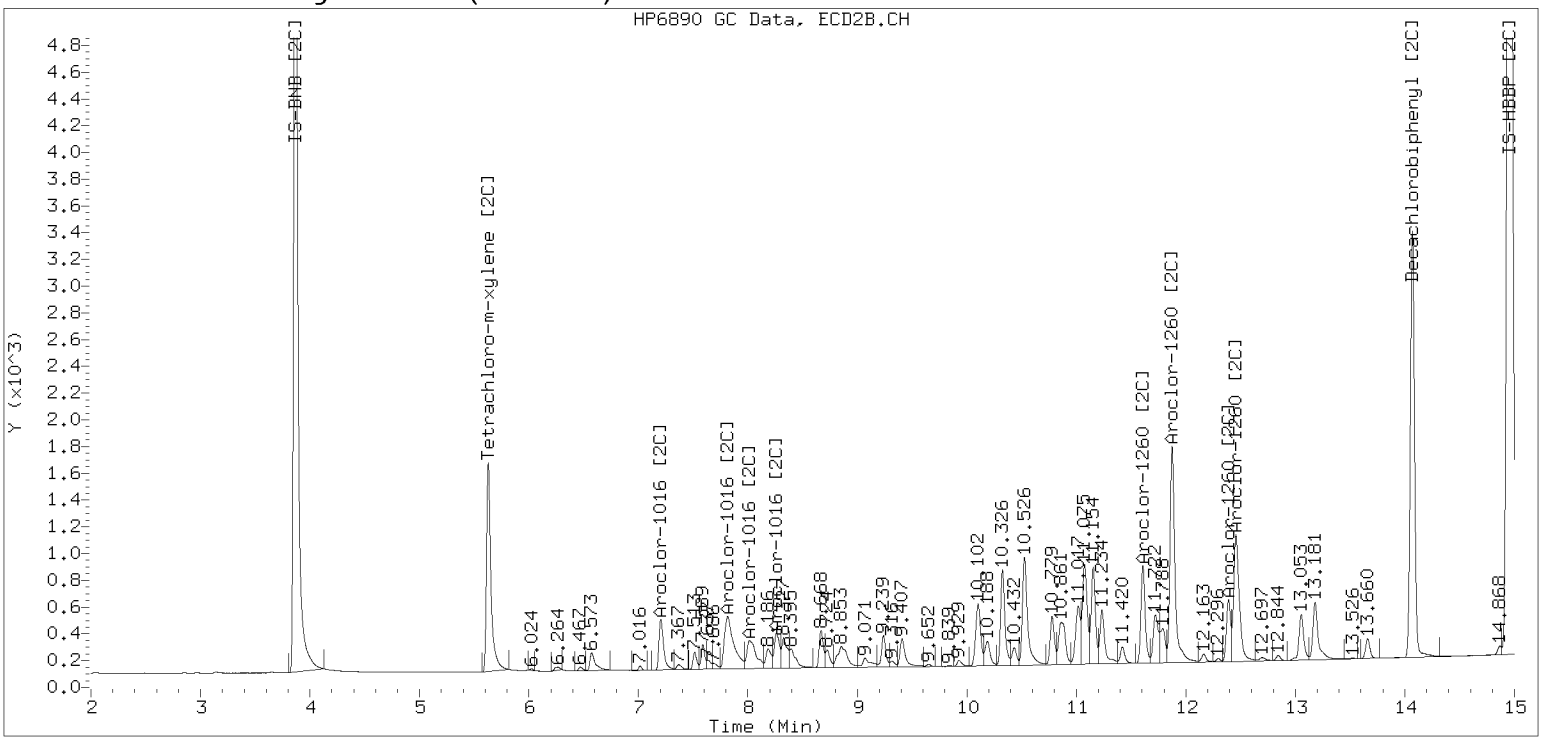
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052325ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052326ECD7.D
Data file 2: /230505.b/230505.b/05052326ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 06-MAY-2023 01:11
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	726106	5.629	0.000	386361	77.6	78.4	1.0	Tetrachloro-m-xylene
13.842	0.002	662159	14.070	0.002	782852	72.8	82.0	11.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	621250	3.3
Hexabromobiphenyl	876625	910647	3.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	358174	2.5
Hexabromobiphenyl	652984	672444	3.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	0.000	112948	469.5	1	7.204	0.000	93114	459.2
Aroclor-1016	2	7.594	0.000	385708	512.8	2	7.808	0.000	213293	493.6
Aroclor-1016	3	7.733	0.000	163263	469.5	3	8.006	0.000	90569	475.2
Aroclor-1016	4	8.398	0.000	69235	482.6	4	8.259	0.000	69045	456.1
Total Col1Ave (4 peaks):					483.6	Total Col2Ave (4 peaks):				471.0 RPD = 3
Corrected Ave (3 peaks):					473.9	Corrected Ave (3 peaks):				463.5 RPD = 2
CalAmt %D:					-3.3	CalAmt %D:				-5.8
Aroclor-1260	1	10.993	0.000	231157	480.0	1	11.606	0.000	171304	479.7
Aroclor-1260	2	11.310	0.000	230103	484.2	2	11.872	0.000	454515	486.6
Aroclor-1260	3	11.686	0.000	571583	480.2	3	12.388	0.000	116621	503.8
Aroclor-1260	4	12.090	0.000	284345	487.8	4	12.455	0.000	305334	489.3
Aroclor-1260	5	12.193	0.000	119534	470.3	NS	---			----
Total Col1Ave (5 peaks):					480.5	Total Col2Ave (4 peaks):				489.8 RPD = 2
Corrected Ave (4 peaks):					478.7	Corrected Ave (3 peaks):				485.2 RPD = 1
CalAmt %D:					-3.9	CalAmt %D:				-2.0

Total PCB Area Col1 (5.842 - 13.740) = 6615607 Col1 Total PCB = 1.0 ppm*

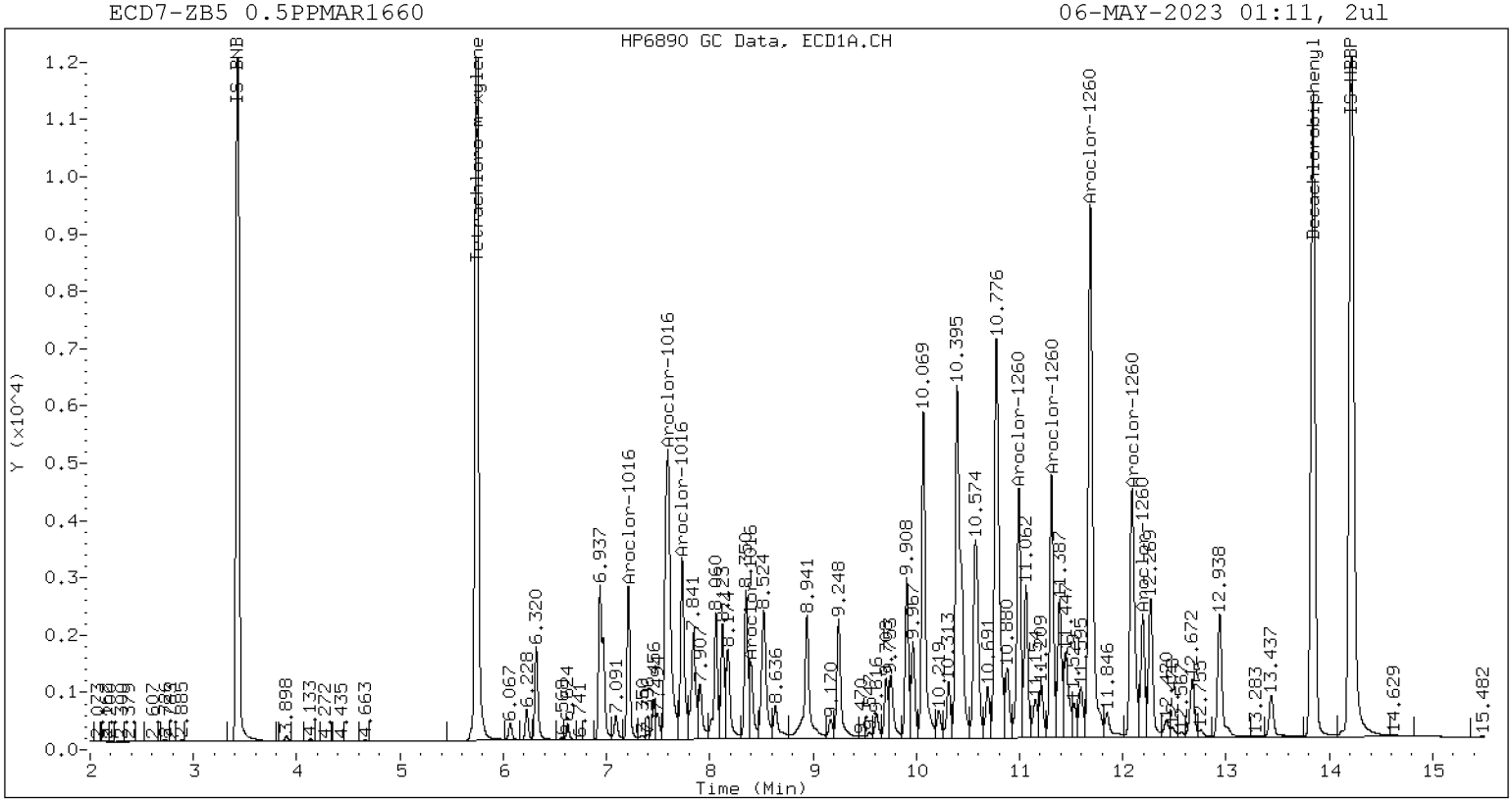
Total PCB Area Col2 (5.728 - 13.968) = 4121423 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

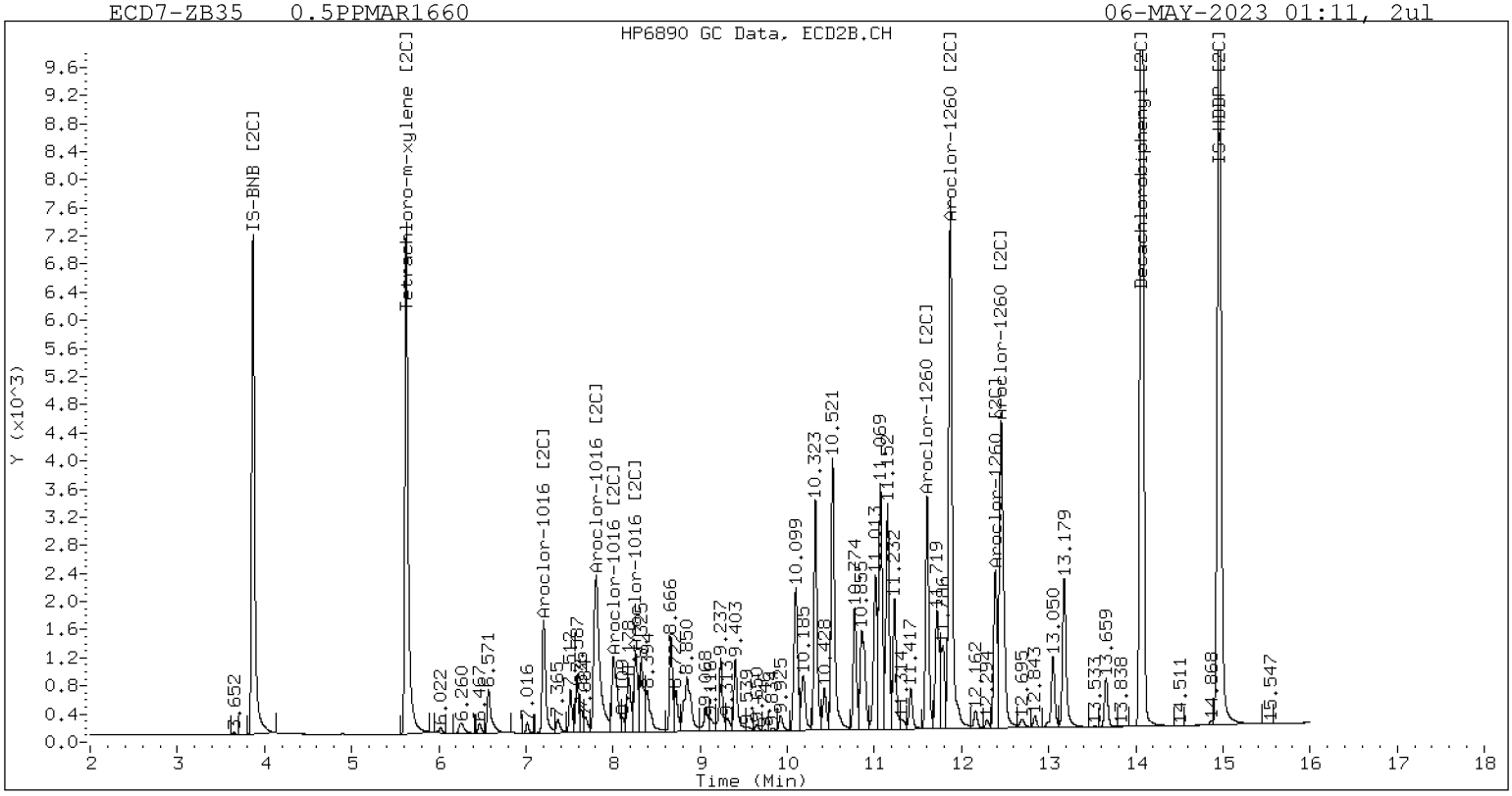
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 06-MAY-2023 01:11, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 06-MAY-2023 01:11, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052327ECD7.D
Data file 2: /230505.b/230505.b/05052327ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1242
Client ID:
Injection Date: 06-MAY-2023 01:31
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	447397	5.627	-0.001	235808	47.5	47.6	0.3	Tetrachloro-m-xylene
13.842	0.001	336070	14.068	0.000	375985	36.4	38.8	6.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	625349	4.0
Hexabromobiphenyl	876625	923197	5.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	359808	3.0
Hexabromobiphenyl	652984	683116	4.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.212	0.000	49262	250.0	1	7.203	0.000	40200	250.0
Aroclor-1242	2	7.595	0.000	156103	250.0	2	7.812	0.000	85524	250.0
Aroclor-1242	3	8.398	0.000	30193	250.0	3	9.123	0.000	27418	250.0
Aroclor-1242	4	8.525	0.000	69876	250.0	4	9.550	0.000	33043	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 1203666 Col1 Total PCB = 0.2 ppm*

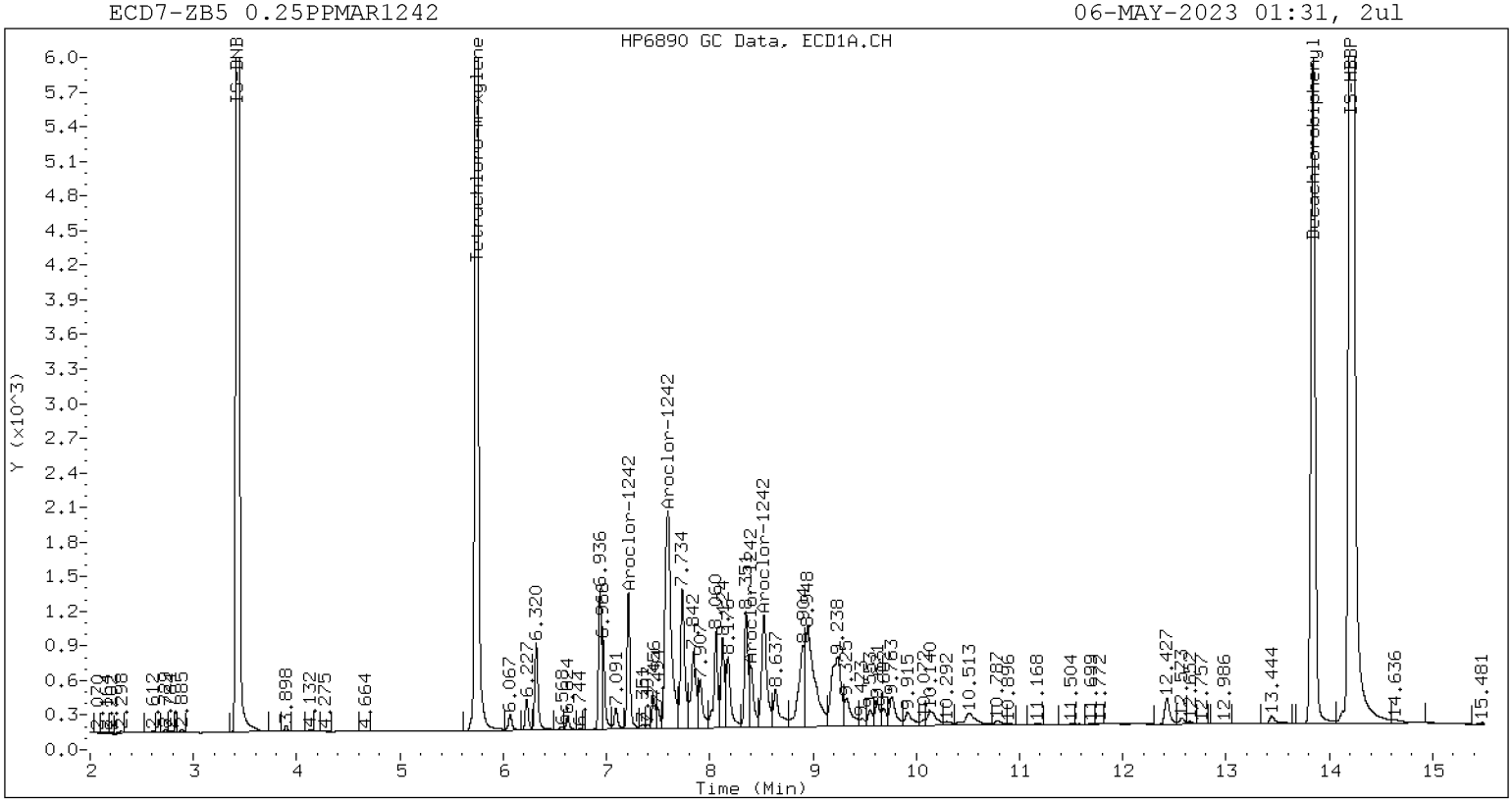
Total PCB Area Col2 (5.728 - 13.968) = 643088 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

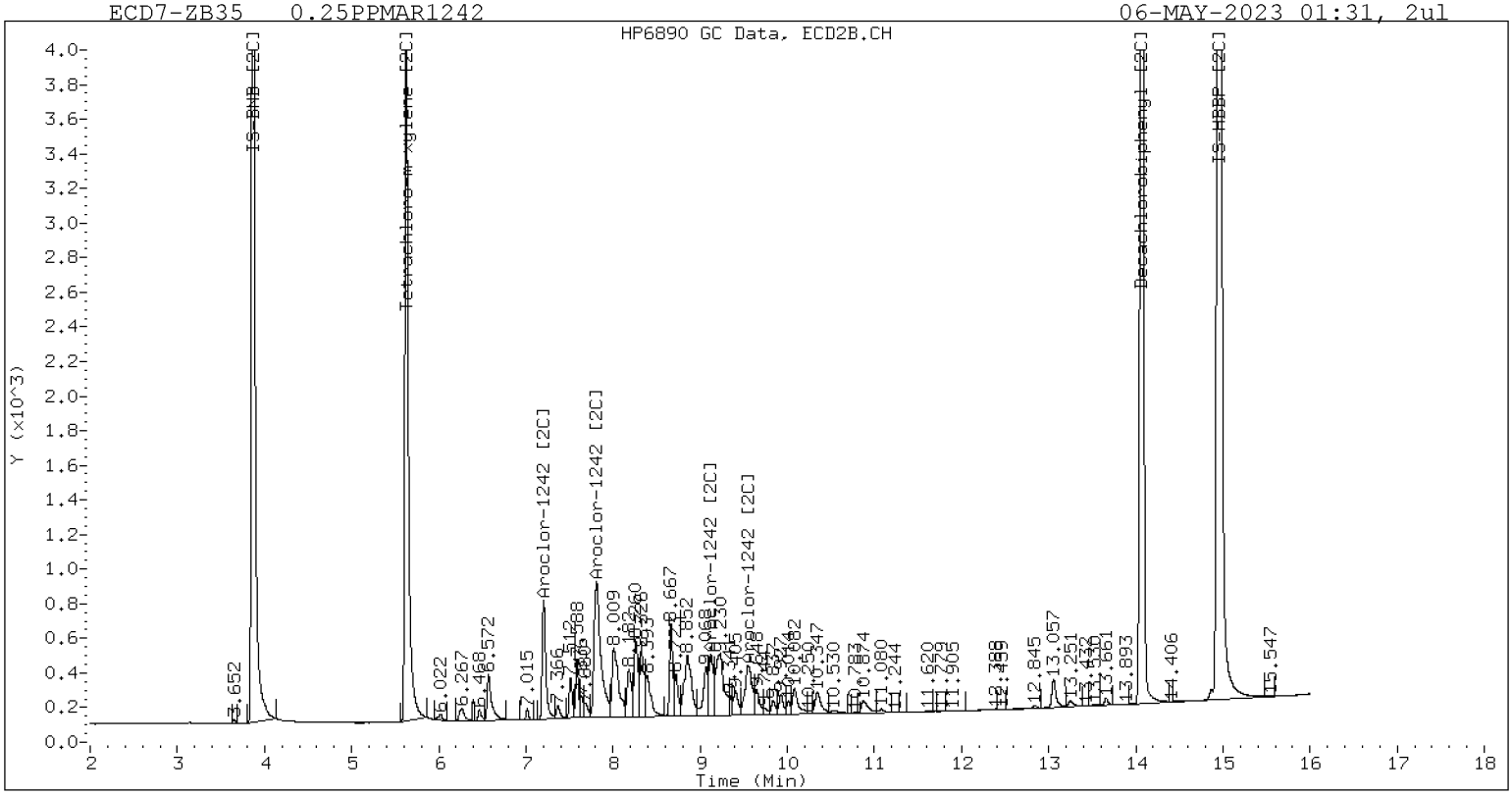
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1242 06-MAY-2023 01:31, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1242 06-MAY-2023 01:31, 2ul

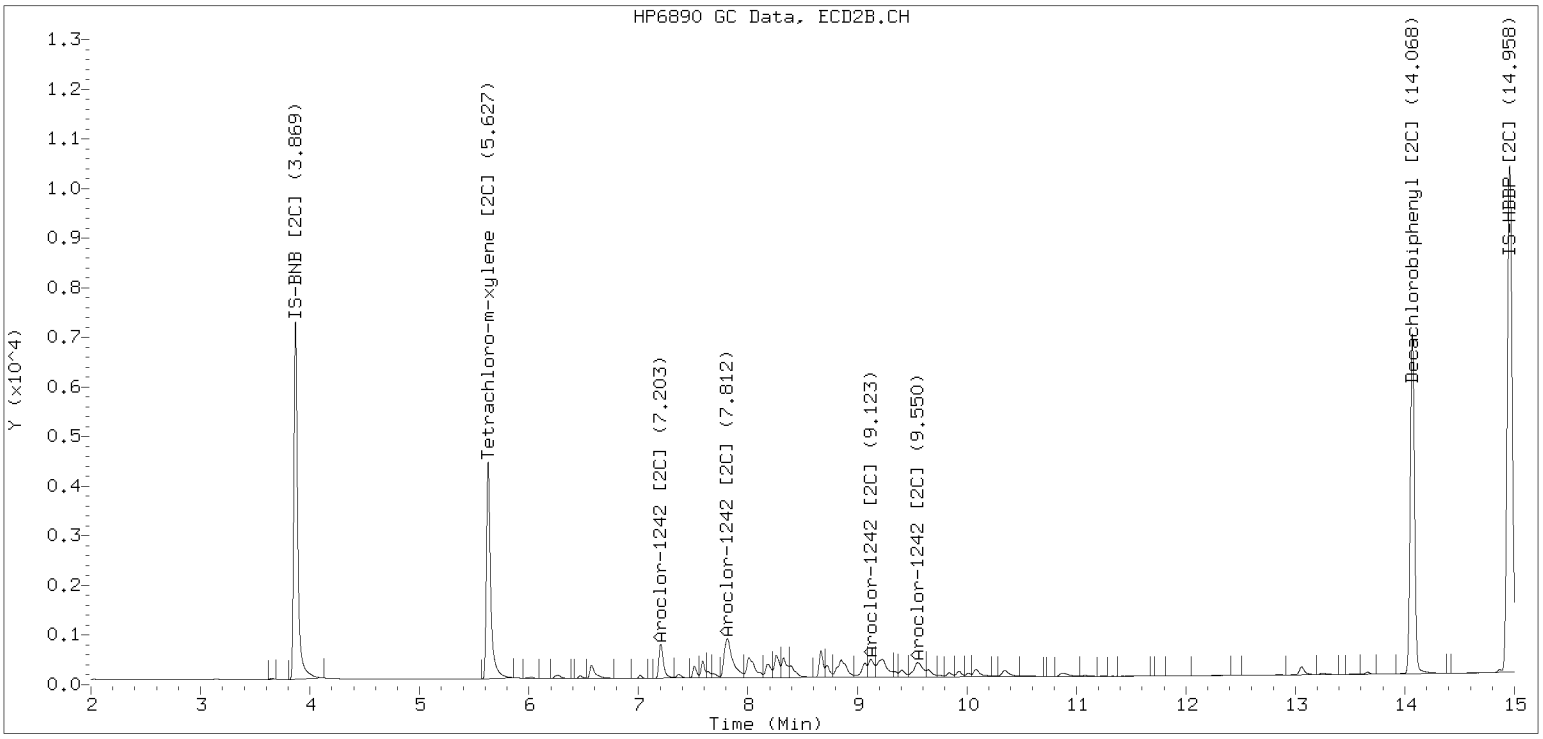


ZB-35 Manual Integration: YES

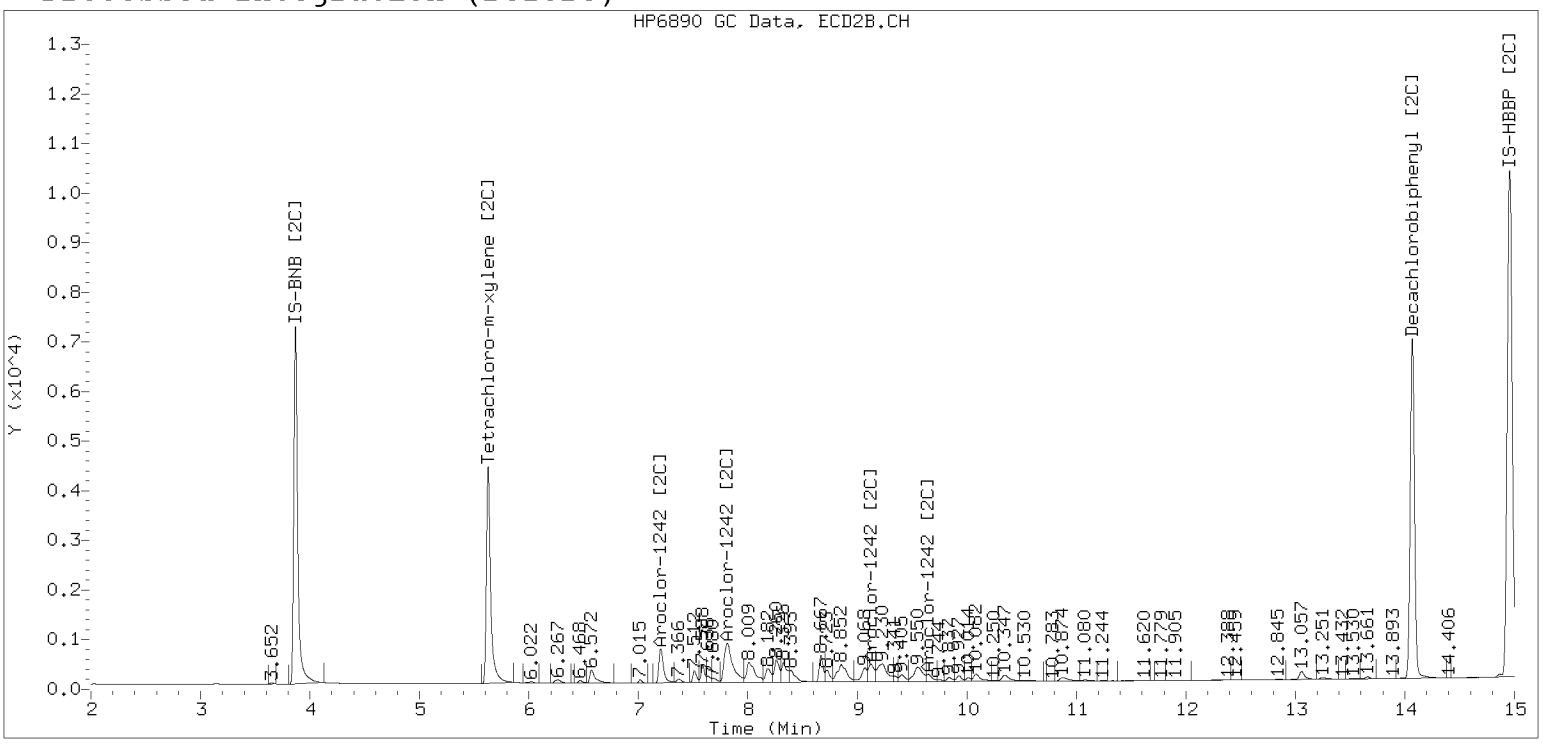
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052327ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052328ECD7.D
Data file 2: /230505.b/230505.b/05052328ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1248
Client ID:
Injection Date: 06-MAY-2023 01:52
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	363354	5.628	-0.000	193087	38.8	39.5	1.9	Tetrachloro-m-xylene
13.843	0.003	347513	14.070	0.002	386262	38.0	40.3	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	621905	3.4
Hexabromobiphenyl	876625	915805	4.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	354920	1.6
Hexabromobiphenyl	652984	674778	3.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.399	0.000	39684	250.0	1	8.260	0.000	42211	250.0
Aroclor-1248	2	8.524	0.000	103126	250.0	2	8.667	0.000	44588	250.0
Aroclor-1248	3	8.944	0.000	198327	250.0	3	9.120	0.000	52266	250.0
Aroclor-1248	4	9.243	0.000	101099	250.0	4	9.546	0.000	62674	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 1607435 Col1 Total PCB = 0.2 ppm*

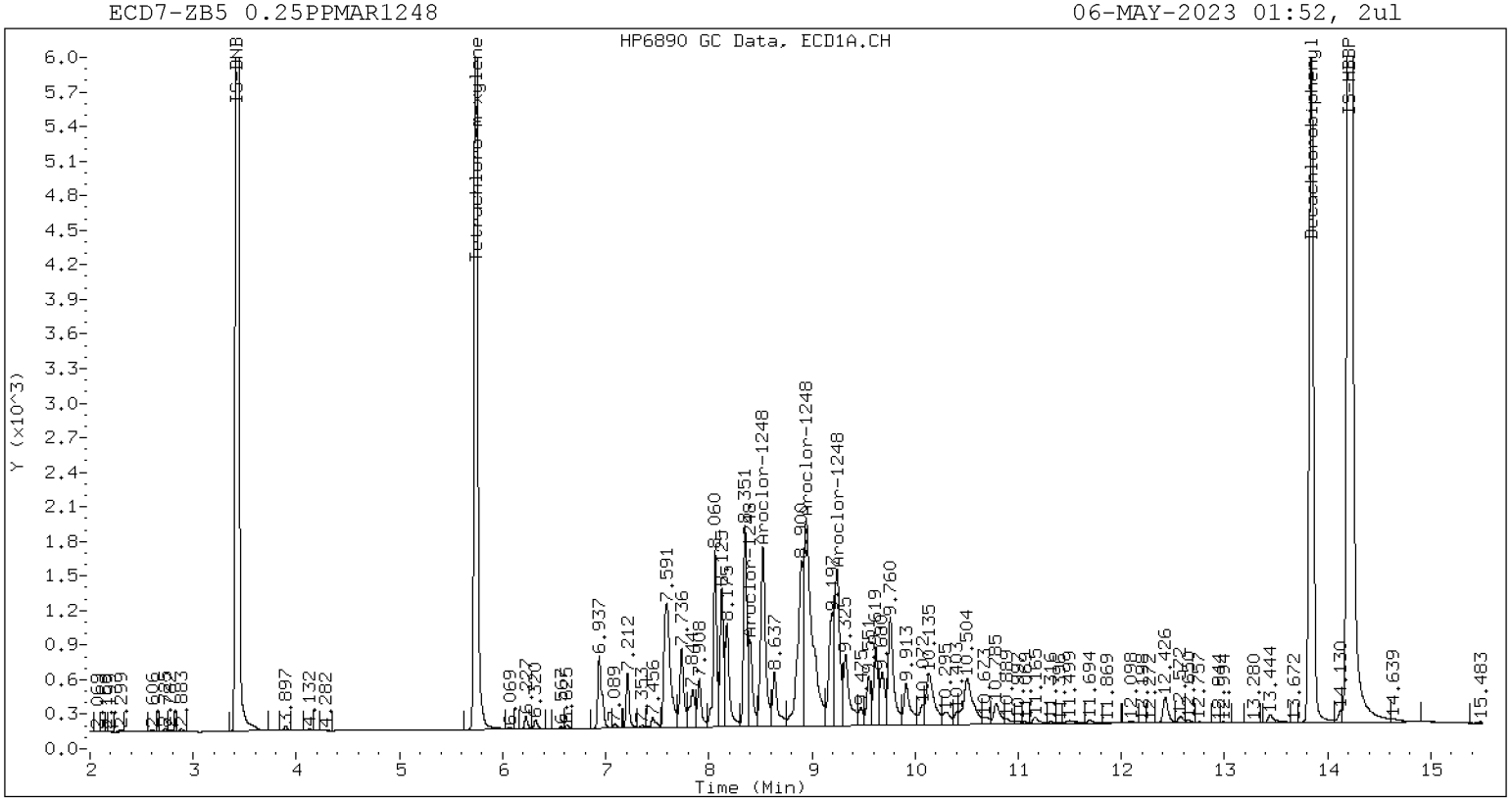
Total PCB Area Col2 (5.728 - 13.968) = 866525 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

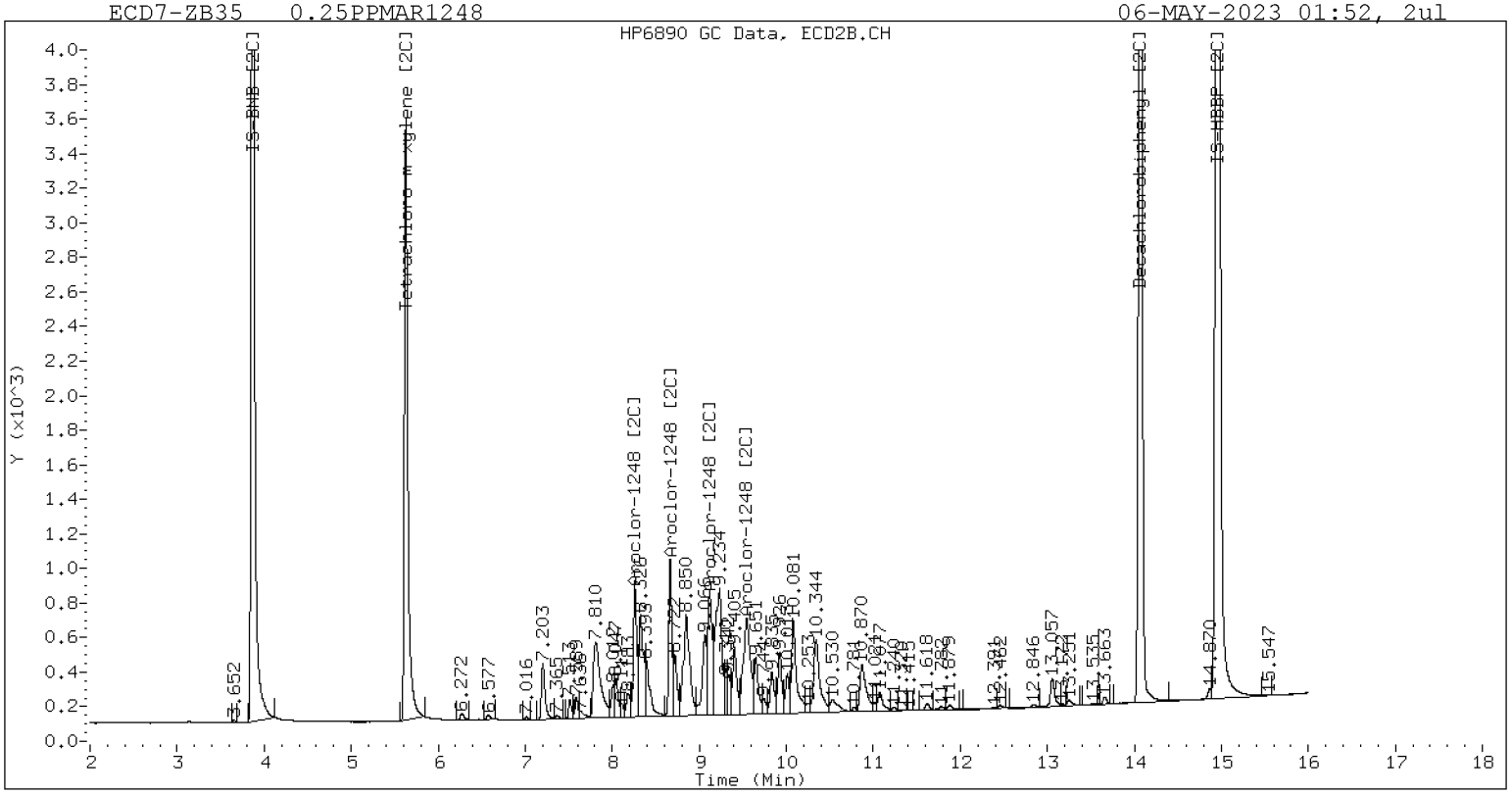
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1248 06-MAY-2023 01:52, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1248 06-MAY-2023 01:52, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052329ECD7.D
Data file 2: /230505.b/230505.b/05052329ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1254
Client ID:
Injection Date: 06-MAY-2023 02:13
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	357984	5.629	0.001	190255	37.8	38.5	1.8	Tetrachloro-m-xylene
13.842	0.002	347079	14.071	0.002	385540	37.4	39.8	6.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	628765	4.5
Hexabromobiphenyl	876625	929076	6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	359470	2.9
Hexabromobiphenyl	652984	682882	4.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.246	0.000	161557	250.0	1	9.404	0.000	68278	250.0
Aroclor-1254	2	9.325	0.000	72588	250.0	2	9.499	0.000	40561	250.0
Aroclor-1254	3	9.618	0.000	104295	250.0	3	9.924	0.000	55343	250.0
Aroclor-1254	4	9.756	0.000	204288	250.0	4	10.078	0.000	120775	250.0
Aroclor-1254	5	10.126	0.000	123377	250.0	5	10.328	0.000	119827	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 2115446 Col1 Total PCB = 0.3 ppm*

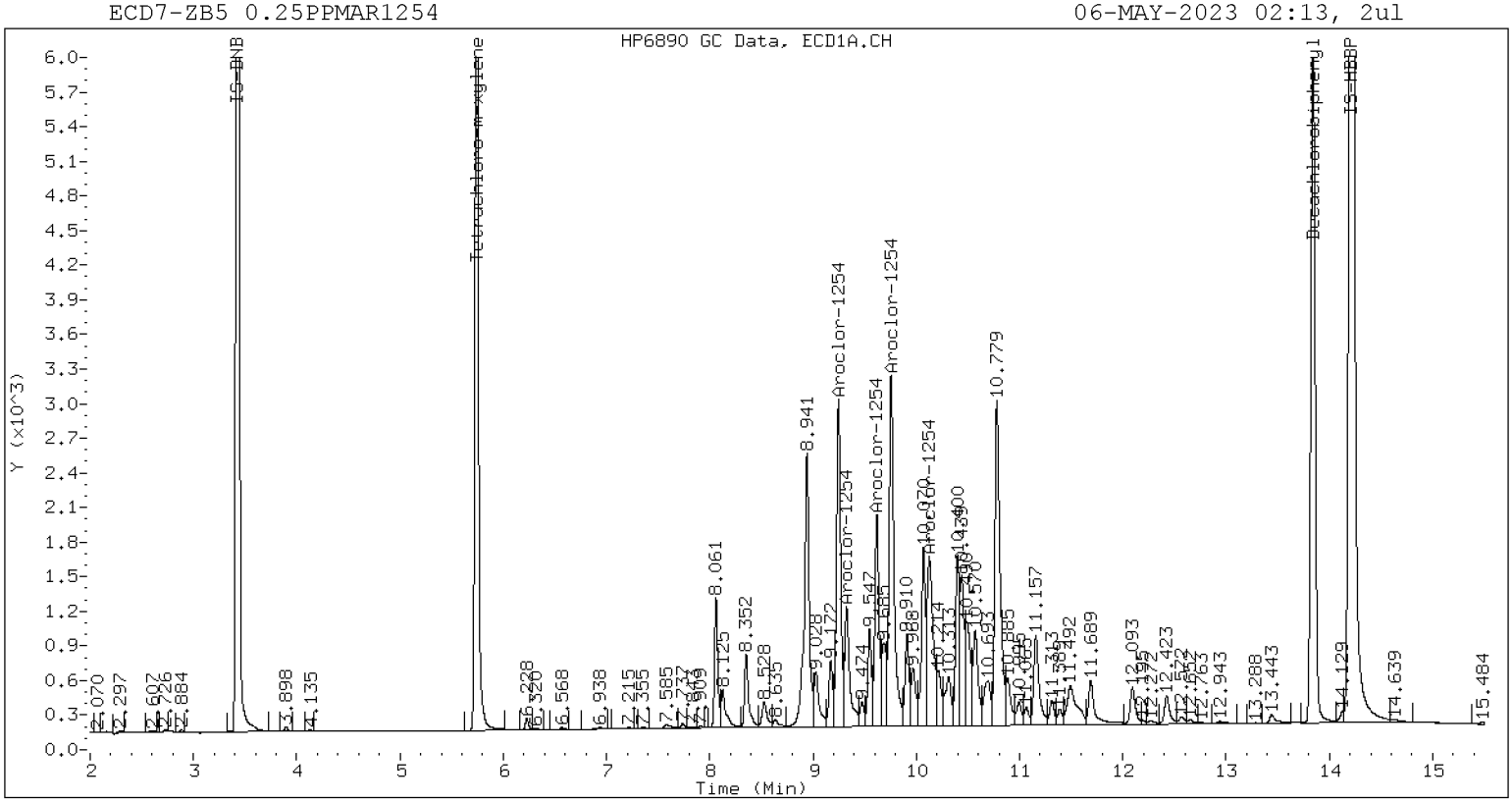
Total PCB Area Col2 (5.728 - 13.968) = 1173654 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

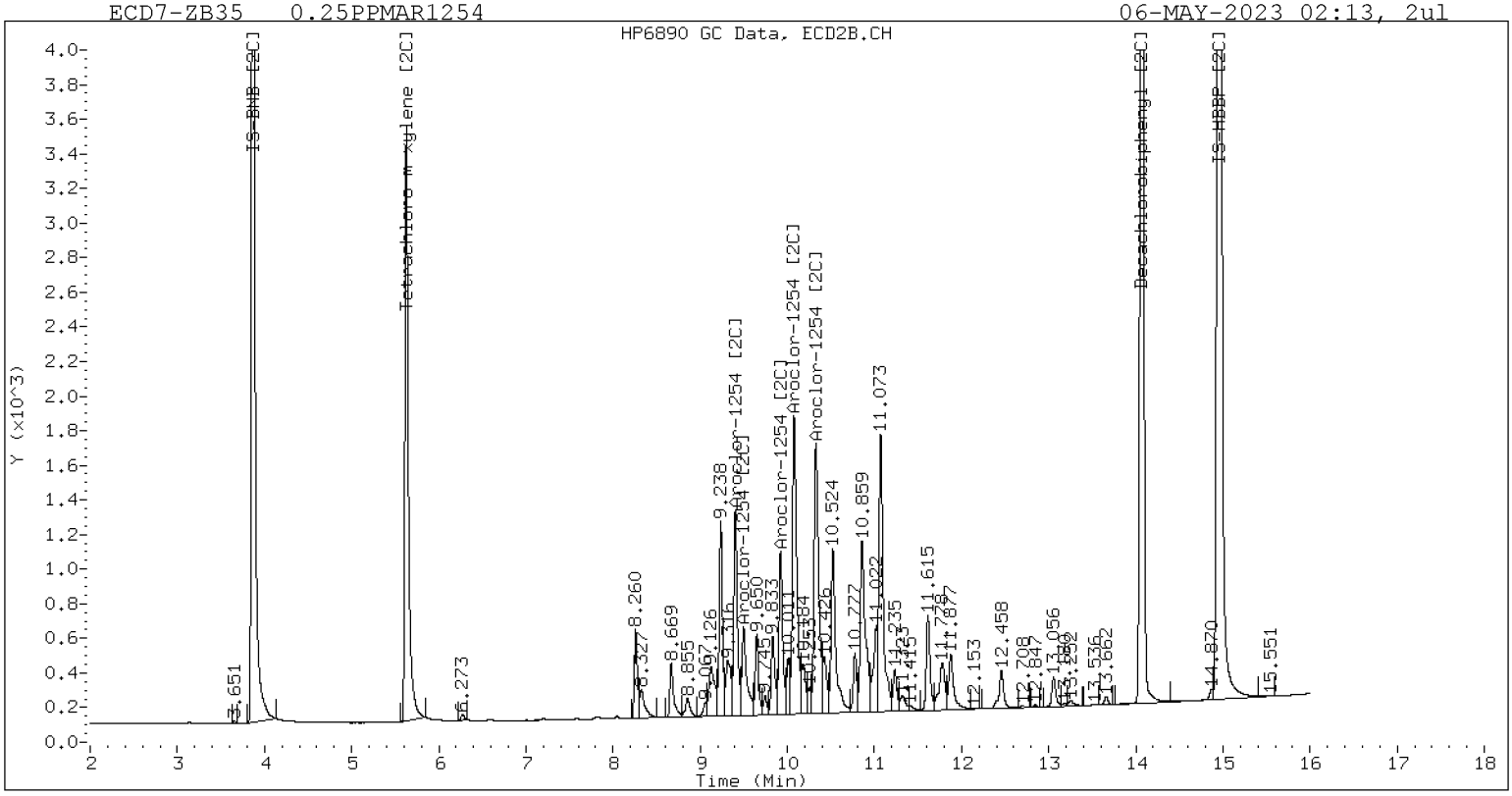
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1254 06-MAY-2023 02:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1254 06-MAY-2023 02:13, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052330ECD7.D
Data file 2: /230505.b/230505.b/05052330ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR2162
Client ID:
Injection Date: 06-MAY-2023 02:34
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	379099	5.628	0.000	200082	39.7	40.8	2.7	Tetrachloro-m-xylene
13.842	0.001	358012	14.071	0.003	396142	38.1	40.5	6.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	634497	5.5
Hexabromobiphenyl	876625	940541	7.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	356713	2.1
Hexabromobiphenyl	652984	688599	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1221	1	4.663	0.000	11156	250.0	1	4.894	0.000	6578	250.0
Aroclor-1221	2	6.069	0.000	22382	250.0	2	6.245	0.000	13633	250.0
Aroclor-1221	3	6.321	0.000	53161	250.0	3	6.572	0.000	21443	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.779	0.000	106373	250.0	1	11.153	0.000	139491	250.0
Aroclor-1262	2	12.195	0.000	149596	250.0	2	11.605	0.000	117643	250.0
Aroclor-1262	3	12.269	0.000	160810	250.0	3	12.386	0.000	128556	250.0
Aroclor-1262	4	12.939	0.000	131044	250.0	4	12.456	0.000	209520	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 2742242 Col1 Total PCB = 0.4 ppm*

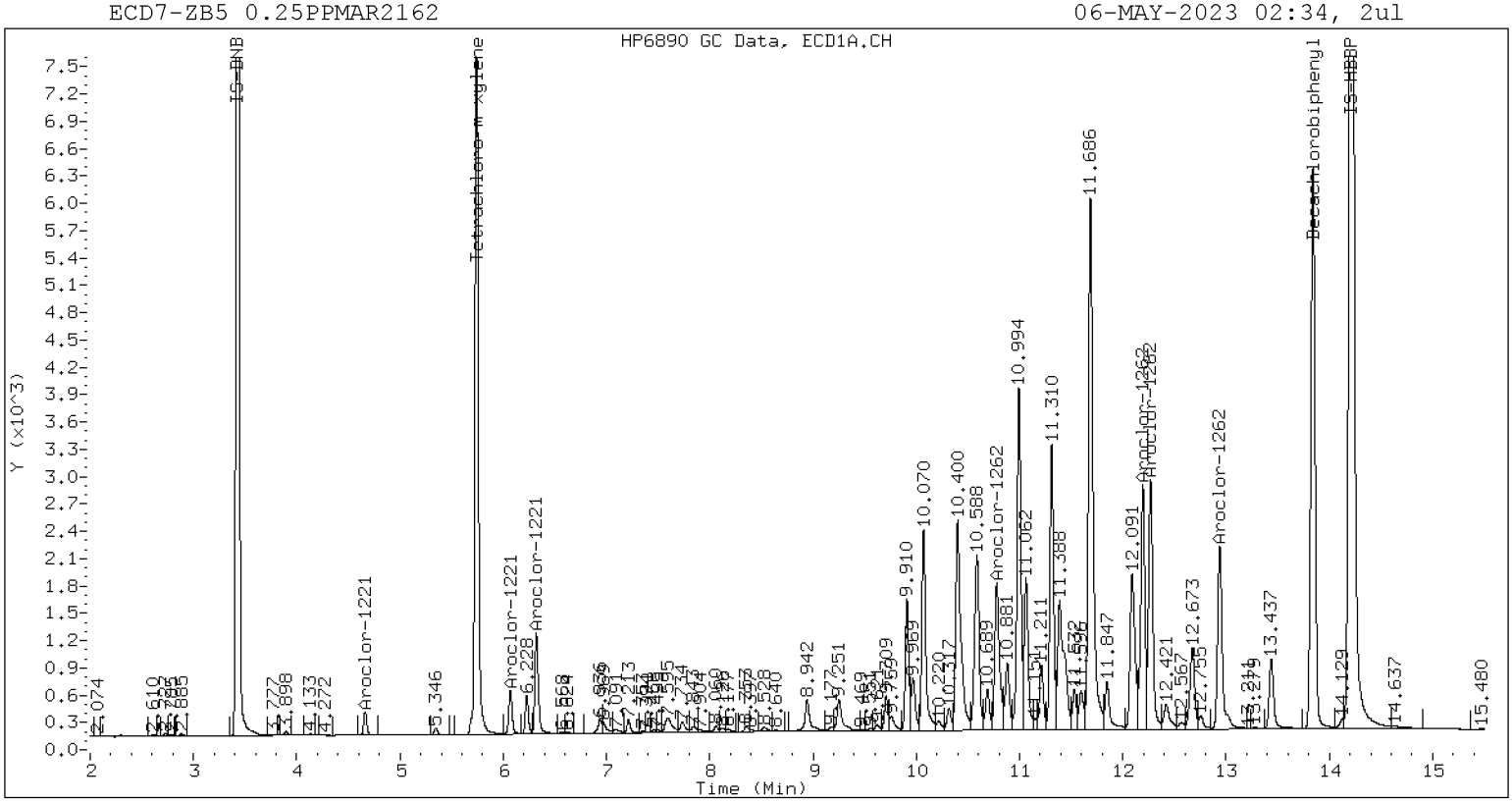
Total PCB Area Col2 (5.728 - 13.968) = 1852573 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

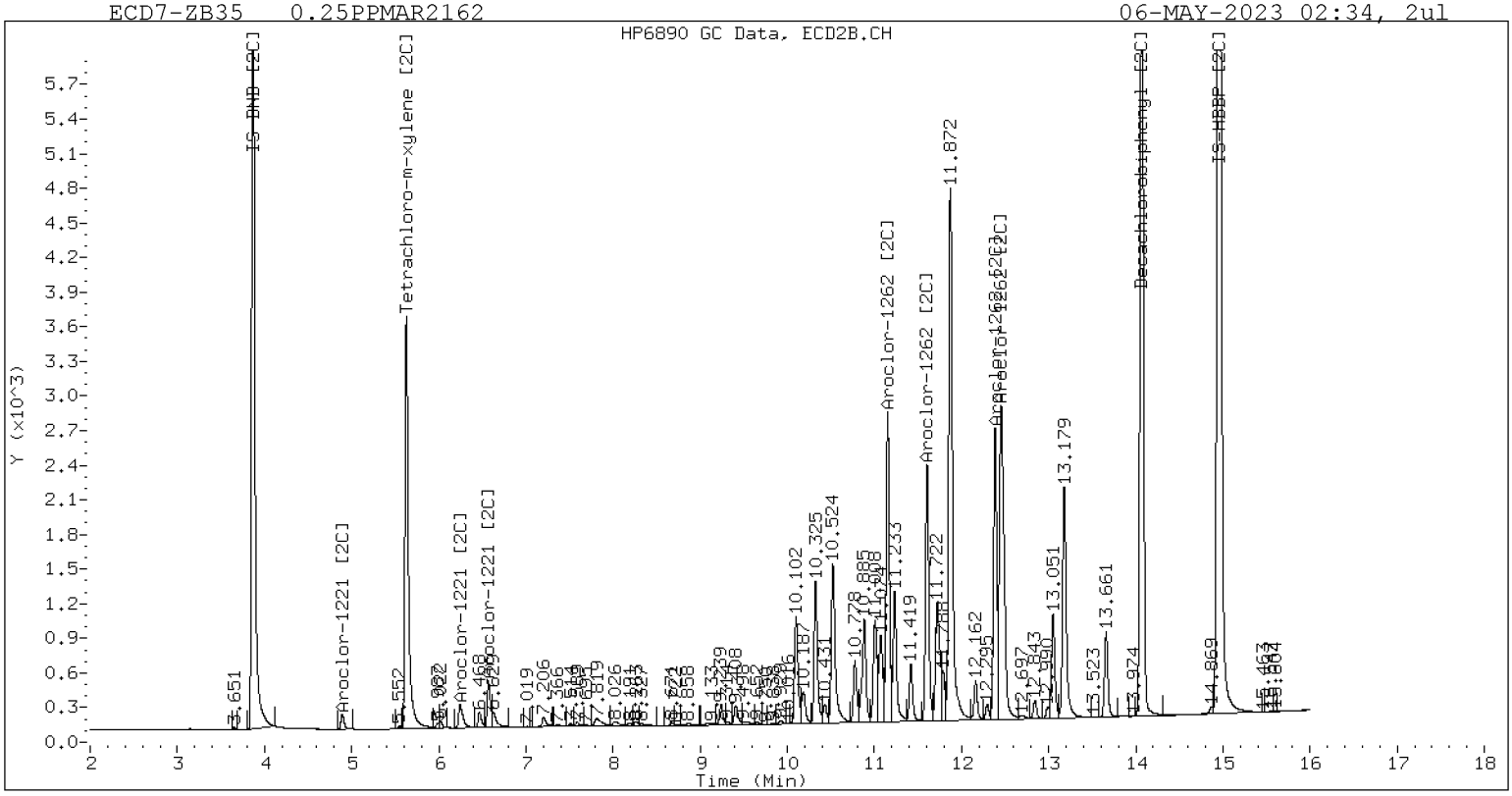
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR2162 06-MAY-2023 02:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR2162 06-MAY-2023 02:34, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052331ECD7.D
Data file 2: /230505.b/230505.b/05052331ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR3268
Client ID:
Injection Date: 06-MAY-2023 02:55
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	378314	5.628	0.000	200538	38.9	40.3	3.4	Tetrachloro-m-xylene
13.840	0.000	502472	14.068	0.000	573501	52.2	57.3	9.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	644974	7.2
Hexabromobiphenyl	876625	963091	9.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	361821	3.6
Hexabromobiphenyl	652984	704753	7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.664	0.000	7554	250.0	1	4.894	0.000	3508	250.0
Aroclor-1232	2	6.069	0.000	15718	250.0	2	7.205	0.000	20084	250.0
Aroclor-1232	3	7.595	0.000	74881	250.0	3	7.815	0.000	40344	250.0
Aroclor-1232	4	8.527	0.000	32051	250.0	4	8.669	0.000	11684	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.196	0.000	384005	250.0	1	12.385	0.000	333421	250.0
Aroclor-1268	2	12.268	0.000	381367	250.0	2	12.452	0.000	358458	250.0
Aroclor-1268	3	12.648	0.000	306717	250.0	3	12.843	0.000	306959	250.0
Aroclor-1268	4	13.437	0.000	875751	250.0	4	13.663	0.000	983908	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.842 - 13.740) = 3124318 Col1 Total PCB = 0.4 ppm*

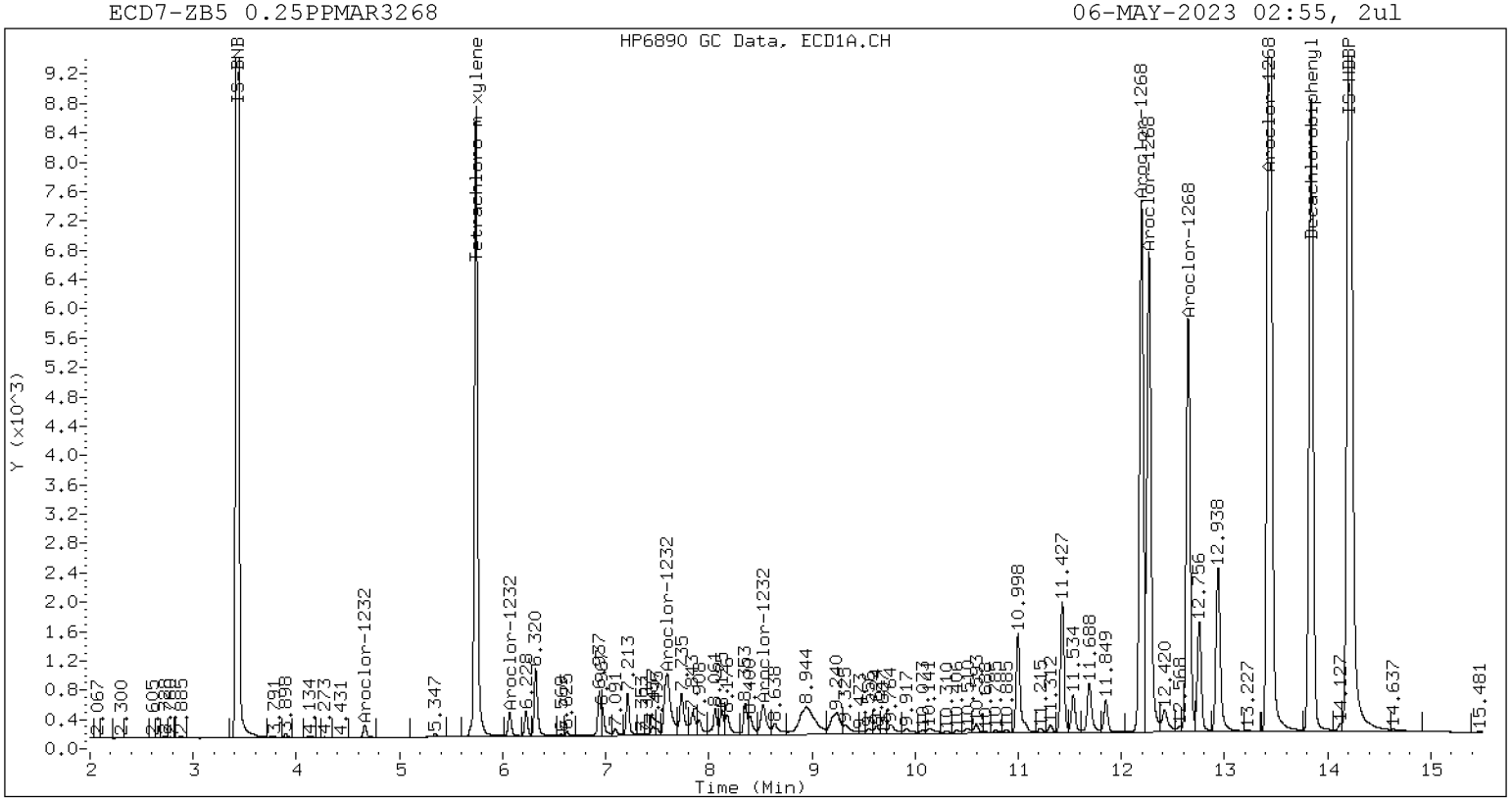
Total PCB Area Col2 (5.728 - 13.968) = 2731202 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

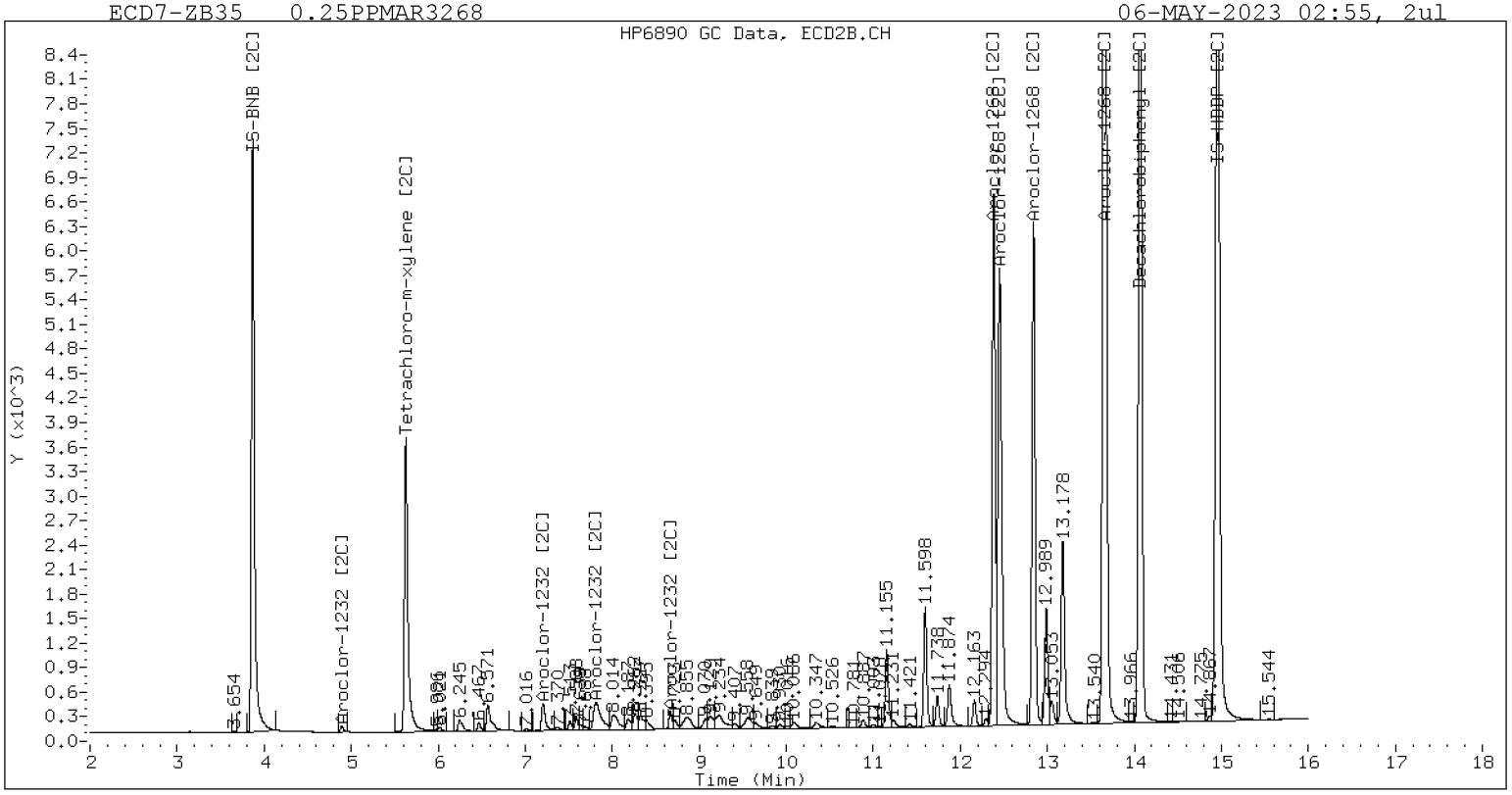
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR3268 06-MAY-2023 02:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR3268 06-MAY-2023 02:55, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052332ECD7.D
Data file 2: /230505.b/230505.b/05052332ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV
Client ID:
Injection Date: 06-MAY-2023 03:16
Report Date: 05/06/2023 12:06
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	356595	5.629	0.000	185340	36.9	37.2	1.0	Tetrachloro-m-xylene
13.842	0.002	347188	14.070	0.002	384711	36.9	39.2	6.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	642284	6.8
Hexabromobiphenyl	876625	941356	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	361711	3.6
Hexabromobiphenyl	652984	690563	5.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	61654	247.9	1	7.205	0.001	50106	244.7
Aroclor-1016	2	7.594	-0.001	199228	256.2	2	7.811	0.003	109839	251.7
Aroclor-1016	3	7.734	0.001	89643	249.3	3	8.009	0.004	48594	252.5
Aroclor-1016	4	8.399	0.001	38714	261.0	4	8.260	0.001	36878	241.2
Total Col1Ave (4 peaks):					253.6	Total Col2Ave (4 peaks):				247.5 RPD = 2
Corrected Ave (3 peaks):					251.1	Corrected Ave (3 peaks):				245.9 RPD = 2
Aroclor-1221	1	4.663	-0.000	436	9.7	1	---			0.0
Aroclor-1221	2	6.068	-0.001	8521	94.0	2	6.251	0.005	5766	104.3
Aroclor-1221	3	6.320	-0.001	41973	195.0	3	6.572	0.000	23212	266.9
Total Col1Ave (3 peaks):					99.6	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.663	-0.000	436	14.5	1	---			0.0
Aroclor-1232	2	6.068	-0.002	8521	136.1	2	7.205	0.000	50106	623.9
Aroclor-1232	3	7.594	-0.001	199228	667.9	3	7.811	-0.004	109839	680.8
Aroclor-1232	4	8.526	-0.001	85985	673.5	4	8.667	-0.003	34670	742.1
Total Col1Ave (4 peaks):					373.0	Total Col2Ave (3 peaks):				682.3 RPD = 59*
Corrected Ave (3 peaks):					272.8	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.213	0.001	61654	304.6	1	7.205	0.001	50106	310.0
Aroclor-1242	2	7.594	-0.001	199228	310.7	2	7.811	-0.002	109839	319.4
Aroclor-1242	3	8.399	0.000	38714	312.1	3	9.069	-0.054	21513	195.1
Aroclor-1242	4	8.526	0.001	85985	299.5	4	9.537	-0.013	1824	13.7
Total Col1Ave (4 peaks):					306.7	Total Col2Ave (4 peaks):				209.6 RPD = 38
Corrected Ave (3 peaks):					304.9	Corrected Ave (3 peaks):				172.9 RPD = 55*
Aroclor-1248	1	8.399	-0.000	38714	236.2	1	8.260	0.000	36878	214.3
Aroclor-1248	2	8.526	0.001	85985	201.8	2	8.667	-0.001	34670	190.7
Aroclor-1248	3	8.941	-0.003	81615	99.6	3	9.069	-0.051	21513	101.0
Aroclor-1248	4	9.249	0.006	52526	125.8	4	9.537	-0.008	1824	7.1
Total Col1Ave (4 peaks):					165.8	Total Col2Ave (4 peaks):				128.3 RPD = 26
Corrected Ave (3 peaks):					142.4	Corrected Ave (3 peaks):				99.6 RPD = 35
Aroclor-1254	1	9.249	0.003	52526	79.6	1	9.405	0.001	24726	90.0
Aroclor-1254	2	---			0.0	2	9.537	0.038	1824	11.2
Aroclor-1254	3	9.619	0.001	7081	16.6	3	9.926	0.002	3128	14.0
Aroclor-1254	4	9.756	0.001	21856	26.2	4	10.101	0.023	62581	128.7
Aroclor-1254	5	10.069	-0.057	159796	317.0	5	10.324	-0.004	85433	177.1
Total Col1Ave (4 peaks):					109.8	Total Col2Ave (5 peaks):				84.2 RPD = 26
Corrected Ave (3 peaks):					40.8	Corrected Ave (4 peaks):				61.0 RPD = 40
Aroclor-1260	1	10.995	0.001	145767	292.8	1	11.605	-0.000	99761	272.0
Aroclor-1260	2	11.311	0.001	142028	289.1	2	11.872	0.000	273505	285.1
Aroclor-1260	3	11.686	0.000	354468	288.1	3	12.389	0.001	70545	296.8
Aroclor-1260	4	12.092	0.002	161281	267.6	4	12.455	-0.000	180783	282.1
Aroclor-1260	5	12.194	0.001	76105	289.6	NS	---			----
Total Col1Ave (5 peaks):					285.5	Total Col2Ave (4 peaks):				284.0 RPD = 1
Corrected Ave (4 peaks):					283.6	Corrected Ave (3 peaks):				279.8 RPD = 1
Aroclor-1262	1	10.777	-0.001	215850	506.9	1	11.153	-0.001	104059	186.0
Aroclor-1262	2	12.194	-0.000	76105	127.1	2	11.605	0.001	99761	211.4
Aroclor-1262	3	12.271	0.001	94628	147.0	3	12.389	0.003	70545	136.8
Aroclor-1262	4	12.939	-0.000	78852	150.3	4	12.455	-0.001	180783	215.1
Total Col1Ave (4 peaks):					232.8	Total Col2Ave (4 peaks):				187.3 RPD = 22
Corrected Ave (3 peaks):					141.5	Corrected Ave (3 peaks):				178.1 RPD = 23
Aroclor-1268	1	12.194	-0.001	76105	50.7	1	12.389	0.004	70545	54.0
Aroclor-1268	2	12.271	0.003	94628	63.5	2	12.455	0.003	180783	128.7
Aroclor-1268	3	12.675	0.026	38830	32.4	3	12.844	0.001	3082	2.6
Aroclor-1268	4	13.440	0.003	19986	5.8	4	13.661	-0.002	14882	3.9
Total Col1Ave (4 peaks):					38.1	Total Col2Ave (4 peaks):				47.3 RPD = 21
Corrected Ave (3 peaks):					29.6	Corrected Ave (3 peaks):				20.1 RPD = 38

Total PCB Area Col1 (5.842 - 13.740) = 3657118 Col1 Total PCB = 0.5 ppm*

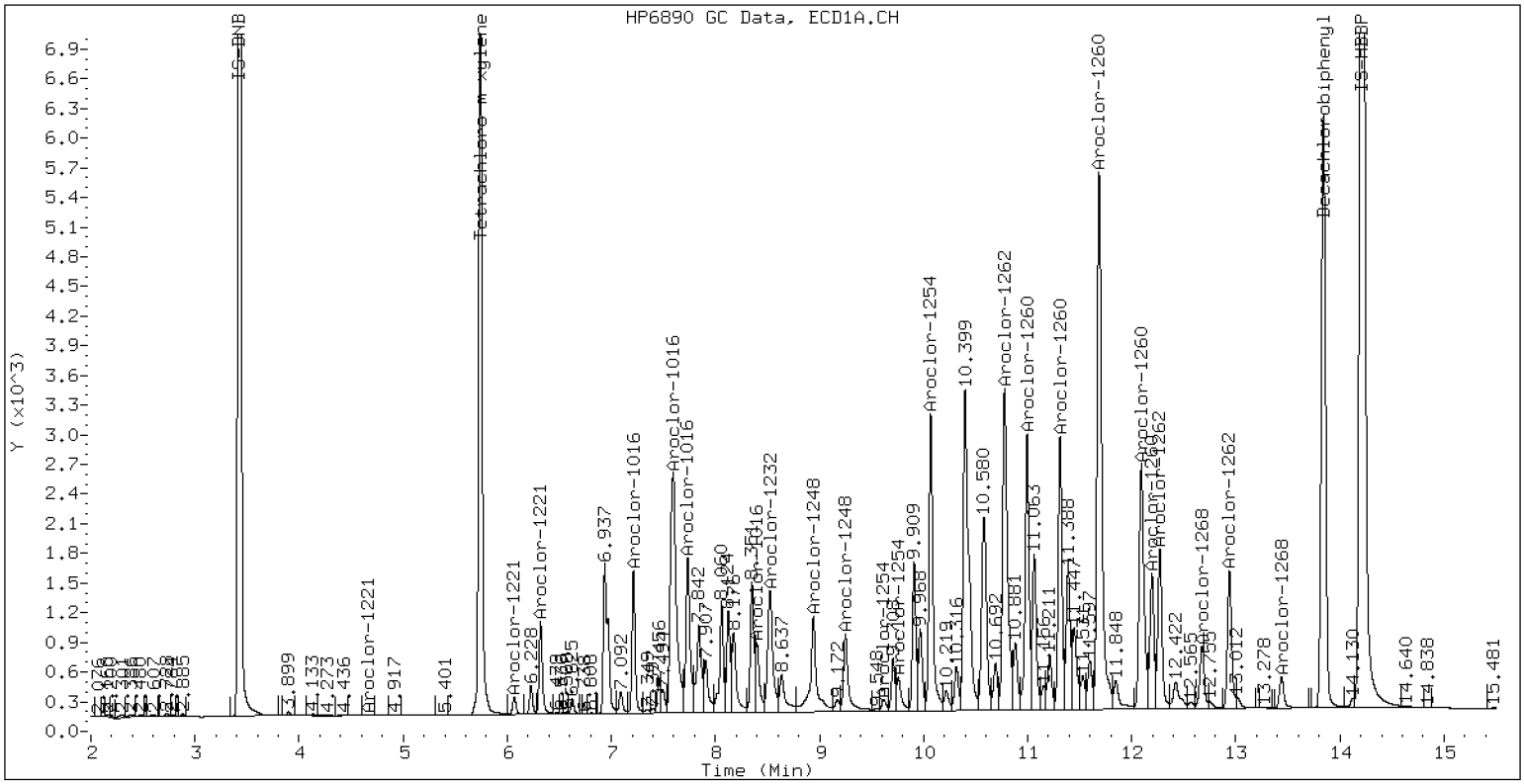
Total PCB Area Col2 (5.728 - 13.968) = 2255286 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

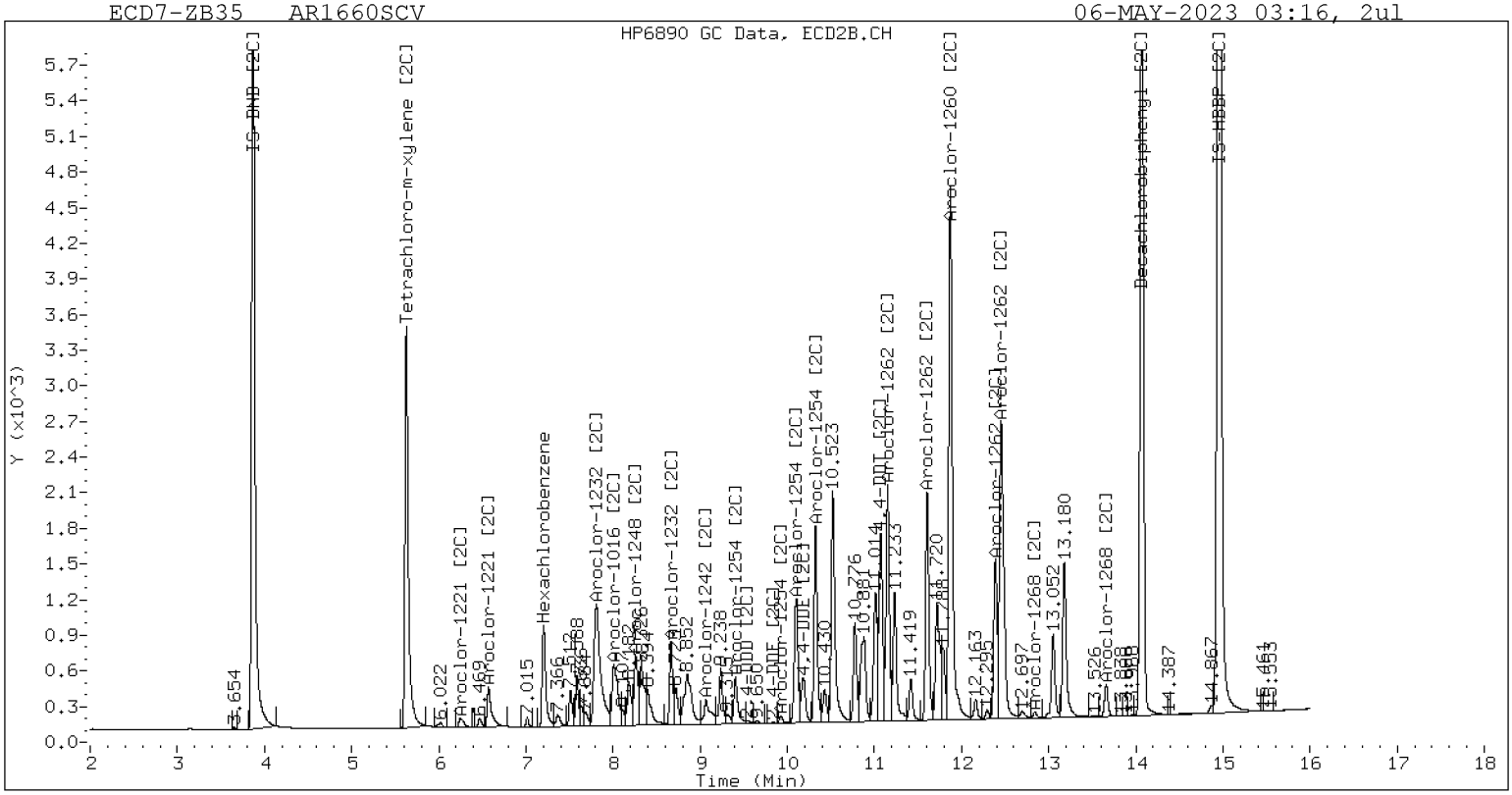
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV 06-MAY-2023 03:16, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV 06-MAY-2023 03:16, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052333ECD7.D
Data file 2: /230505.b/230505.b/05052333ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV
Client ID:
Injection Date: 06-MAY-2023 03:36
Report Date: 05/06/2023 12:06
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.744	0.002	319899	5.630	0.002	167866	32.8	33.4	1.9	Tetrachloro-m-xylene
13.842	0.002	398699	14.069	0.001	434332	40.9	44.0	7.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	648004	7.7
Hexabromobiphenyl	876625	976327	11.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	365379	4.6
Hexabromobiphenyl	652984	695394	6.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.001	47446	189.1	1	7.205	0.001	36469	176.3
Aroclor-1016	2	7.594	-0.000	147684	188.2	2	7.814	0.007	77885	176.7
Aroclor-1016	3	7.735	0.002	67175	185.2	3	8.012	0.006	38400	197.5
Aroclor-1016	4	8.398	0.000	30565	204.3	4	8.261	0.002	27551	178.4
Total Col1Ave (4 peaks): 191.7						Total Col2Ave (4 peaks): 182.2			RPD = 5	
Corrected Ave (3 peaks): 187.5						Corrected Ave (3 peaks): 177.1			RPD = 6	
Aroclor-1221	1	4.666	0.002	870	19.1	1	---			0.0
Aroclor-1221	2	6.069	0.000	7118	77.8	2	6.257	0.011	4359	78.0
Aroclor-1221	3	6.322	0.001	32969	151.8	3	6.573	0.001	16609	189.0
Total Col1Ave (3 peaks): 82.9						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.666	0.002	870	28.7	1	---			0.0
Aroclor-1232	2	6.069	0.000	7118	112.7	2	7.205	-0.000	36469	449.5
Aroclor-1232	3	7.594	-0.001	147684	490.8	3	7.814	-0.001	77885	477.9
Aroclor-1232	4	8.526	-0.000	70601	548.1	4	8.668	-0.001	25417	538.5
Total Col1Ave (4 peaks): 295.1						Total Col2Ave (3 peaks): 488.7			RPD = 49*	
Corrected Ave (3 peaks): 210.7						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.213	0.001	47446	232.4	1	7.205	0.001	36469	223.3
Aroclor-1242	2	7.594	-0.000	147684	228.2	2	7.814	0.002	77885	224.2
Aroclor-1242	3	8.398	0.000	30565	244.2	3	9.124	0.001	25864	232.2
Aroclor-1242	4	8.526	0.002	70601	243.8	4	9.552	0.001	32437	241.7
Total Col1Ave (4 peaks): 237.2						Total Col2Ave (4 peaks): 230.4			RPD = 3	
Corrected Ave (3 peaks): 234.8						Corrected Ave (3 peaks): 226.6			RPD = 4	
Aroclor-1248	1	8.398	-0.001	30565	184.8	1	8.261	0.001	27551	158.5
Aroclor-1248	2	8.526	0.002	70601	164.3	2	8.668	0.001	25417	138.4
Aroclor-1248	3	8.946	0.002	172847	209.1	3	9.124	0.004	25864	120.2
Aroclor-1248	4	9.243	-0.001	87363	207.3	4	9.552	0.006	32437	125.7
Total Col1Ave (4 peaks): 191.4						Total Col2Ave (4 peaks): 135.7			RPD = 34	
Corrected Ave (3 peaks): 185.5						Corrected Ave (3 peaks): 128.1			RPD = 37	
Aroclor-1254	1	9.243	-0.004	87363	131.2	1	9.406	0.002	13247	47.7
Aroclor-1254	2	9.326	0.001	28949	96.7	2	9.552	0.053	32437	196.7
Aroclor-1254	3	9.622	0.004	20780	48.3	3	9.927	0.003	10002	44.5
Aroclor-1254	4	9.762	0.006	35470	42.1	4	10.082	0.005	19933	40.6
Aroclor-1254	5	10.140	0.015	28075	55.2	5	10.341	0.013	19432	39.9
Total Col1Ave (5 peaks): 74.7						Total Col2Ave (5 peaks): 73.9			RPD = 1	
Corrected Ave (4 peaks): 60.6						Corrected Ave (4 peaks): 43.2			RPD = 34	
Aroclor-1260	1	10.998	0.005	3609	7.0	1	11.618	0.012	2137	5.8
Aroclor-1260	2	11.317	0.007	3837	7.5	2	11.879	0.007	1437	1.5
Aroclor-1260	3	11.765	0.080	33905	26.6	3	12.382	-0.006	12460	52.1
Aroclor-1260	4	12.097	0.007	9099	14.6	4	---			0.0
Aroclor-1260	5	12.272	0.079	2060	7.6	NS	---			----
Total Col1Ave (5 peaks): 12.6						Total Col2Ave (3 peaks): 19.8			RPD = 44*	
Corrected Ave (4 peaks): 9.2						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.787	0.009	24040	54.4	1	11.078	-0.075	7864	14.0
Aroclor-1262	2	12.272	0.077	2060	3.3	2	11.618	0.013	2137	4.5
Aroclor-1262	3	---			0.0	3	12.382	-0.004	12460	24.0
Aroclor-1262	4	12.937	-0.002	16041	29.5	4	---			0.0
Total Col1Ave (3 peaks): 29.1						Total Col2Ave (3 peaks): 14.1			RPD = 69*	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.272	0.076	2060	1.3	1	12.382	-0.003	12460	9.5
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.649	0.001	4324	3.5	3	12.845	0.002	951	0.8
Aroclor-1268	4	13.442	0.005	15801	4.4	4	13.628	-0.035	6512	1.7
Total Col1Ave (3 peaks): 3.1						Total Col2Ave (3 peaks): 4.0			RPD = 25	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.842 - 13.740) = 1489022 Col1 Total PCB = 0.2 ppm*

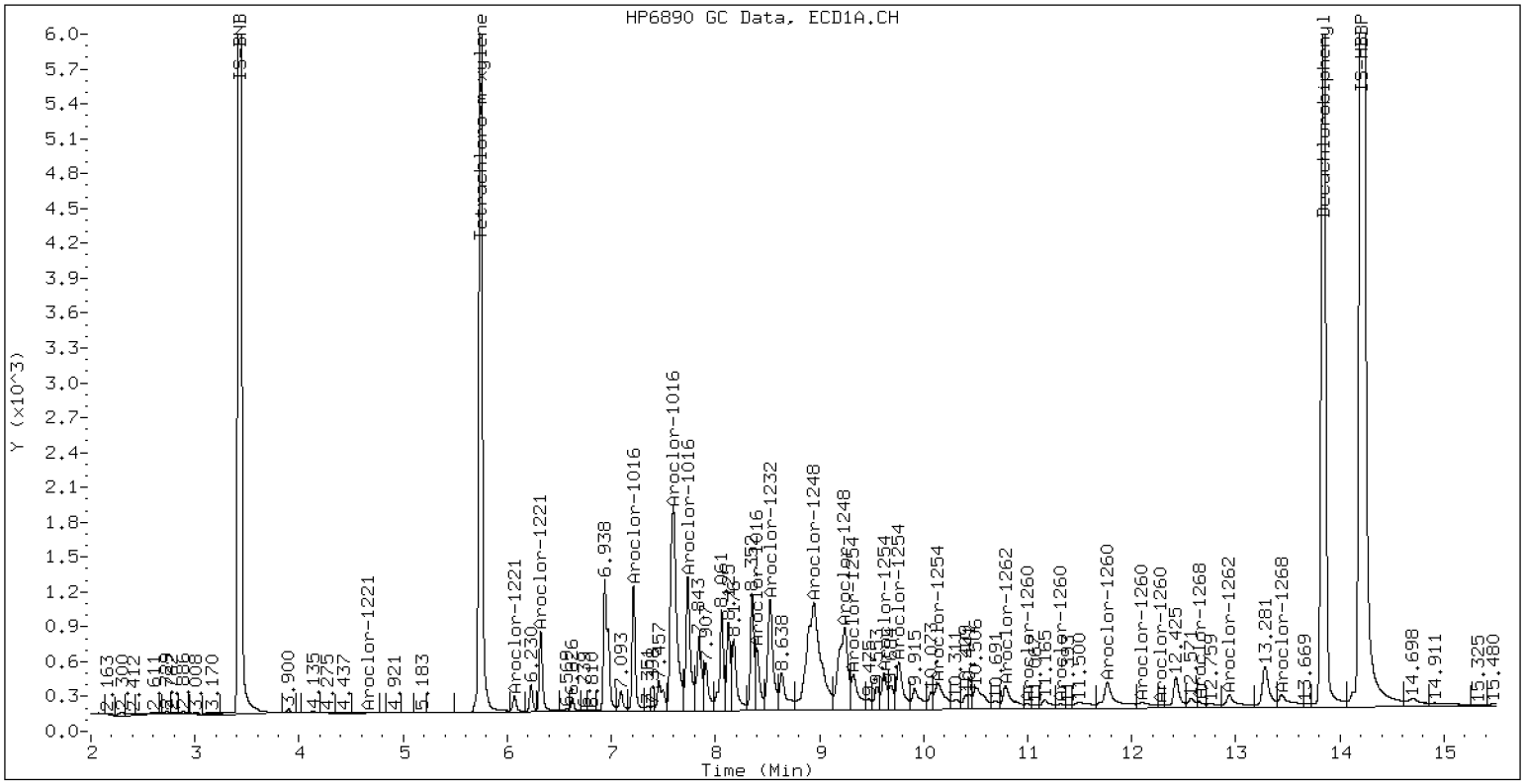
Total PCB Area Col2 (5.728 - 13.968) = 667658 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

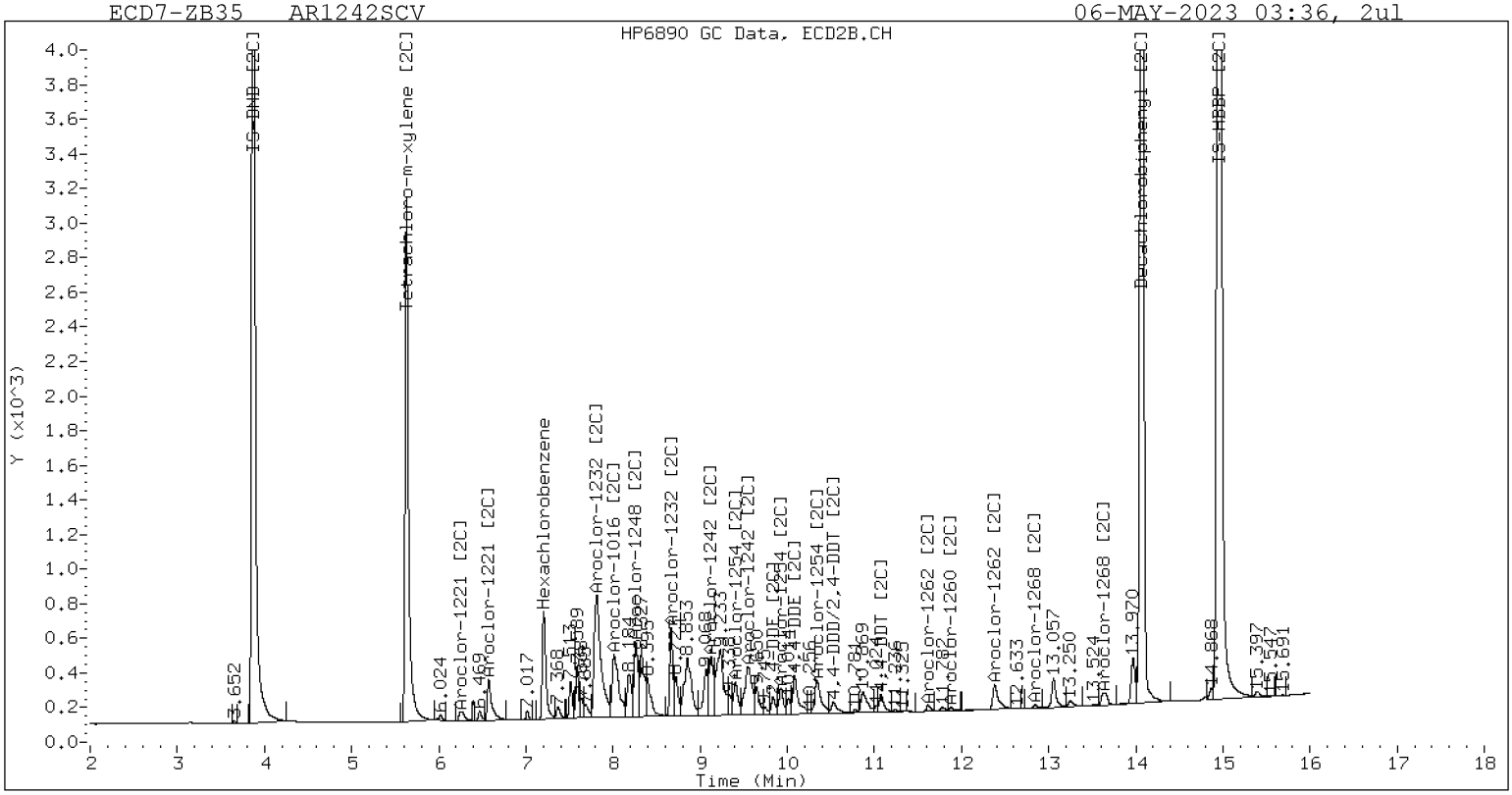
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV 06-MAY-2023 03:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV 06-MAY-2023 03:36, 2ul

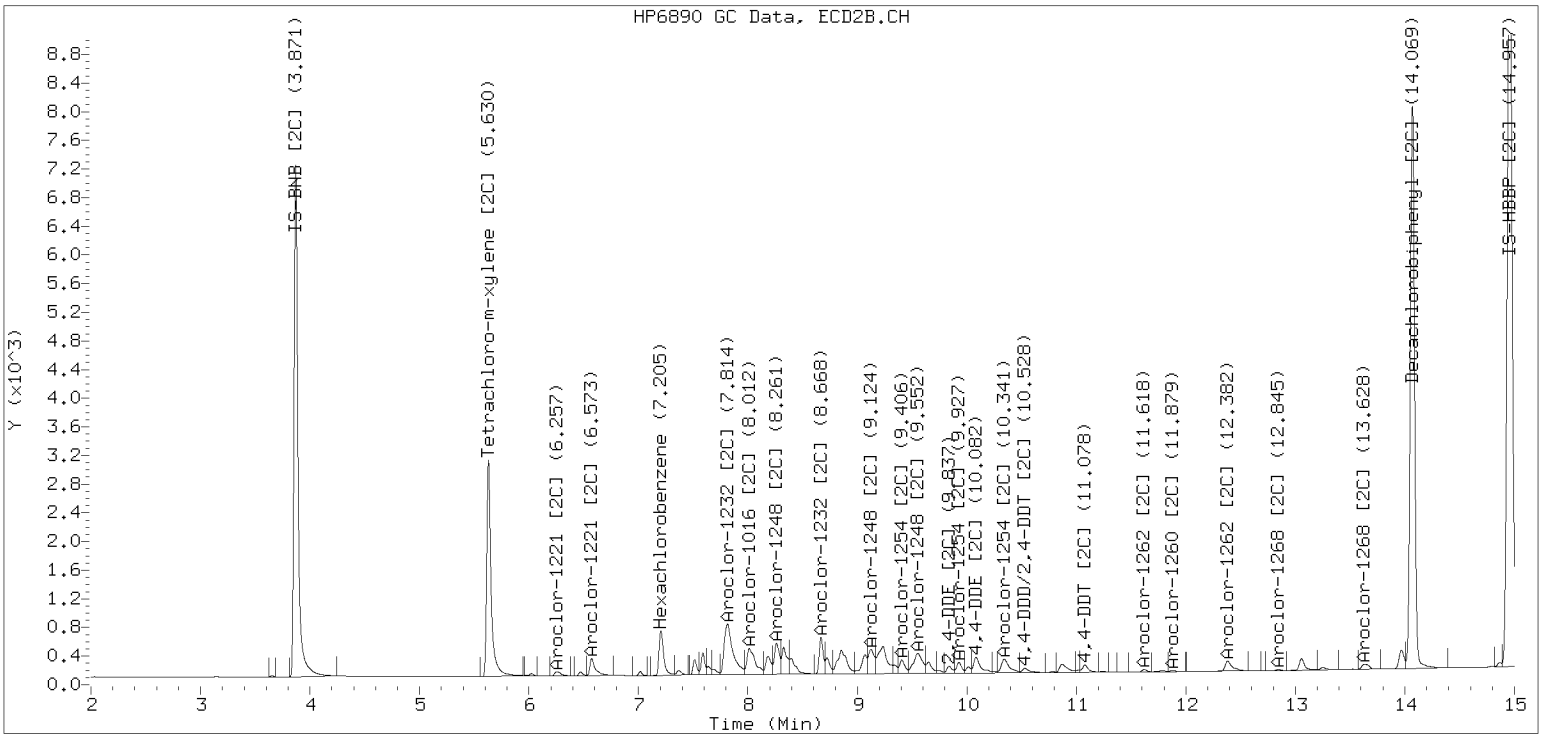


ZB-35 Manual Integration: NO

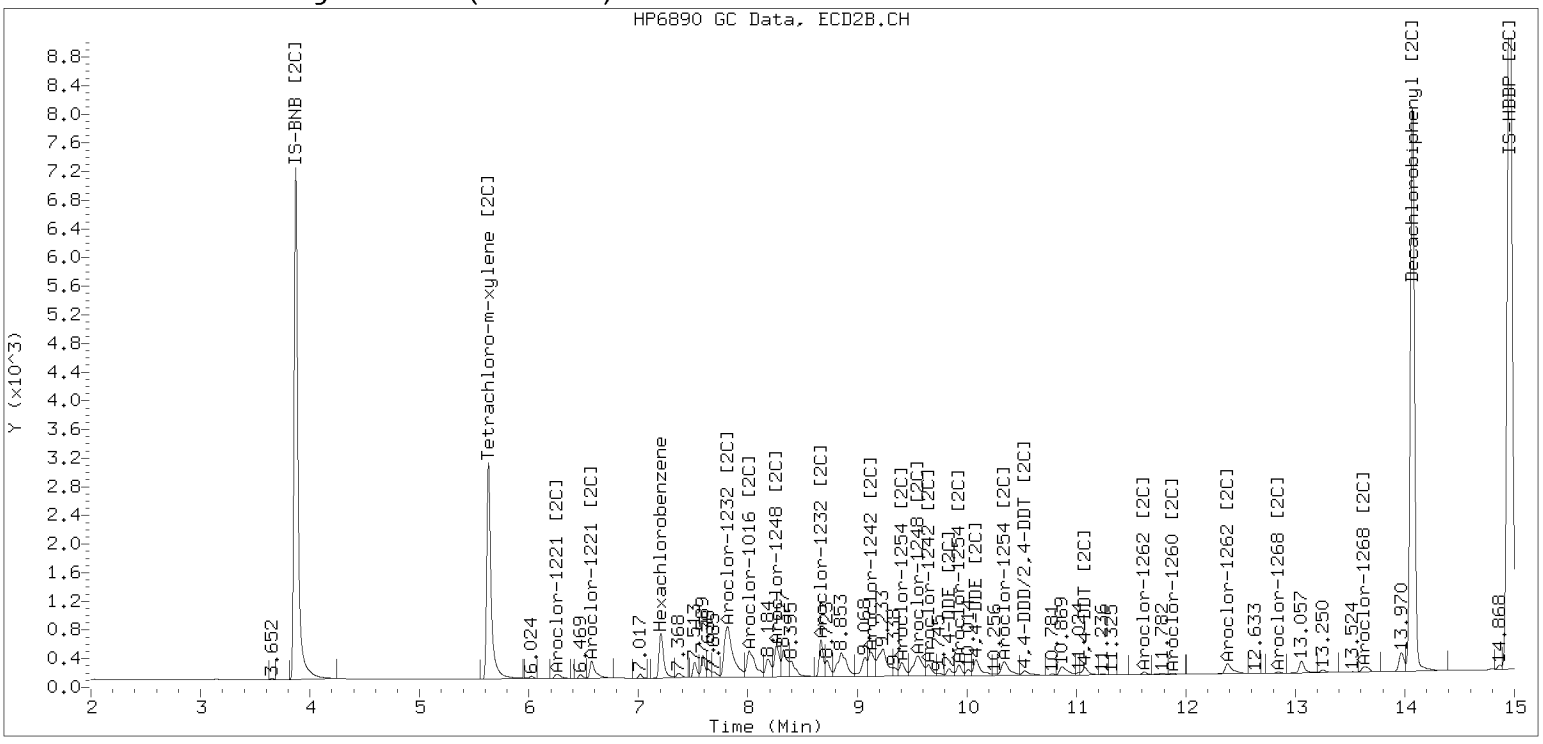
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052333ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052334ECD7.D
Data file 2: /230505.b/230505.b/05052334ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV
Client ID:
Injection Date: 06-MAY-2023 03:57
Report Date: 05/06/2023 12:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	356328	5.629	0.000	186552	36.8	37.7	2.5	Tetrachloro-m-xylene
13.842	0.001	339452	14.070	0.002	373861	35.7	38.0	6.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	643038	6.9
Hexabromobiphenyl	876625	952051	8.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	359604	3.0
Hexabromobiphenyl	652984	692982	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	0.000	19871	79.8	1	7.203	-0.001	18843	92.6
Aroclor-1016	2	7.589	-0.006	95111	122.2	2	7.812	0.005	52352	120.7
Aroclor-1016	3	7.736	0.003	37565	104.4	3	8.012	0.006	8263	43.2
Aroclor-1016	4	8.399	0.002	41542	279.7	4	8.260	0.001	42833	281.8
Total Col1Ave (4 peaks):					146.5	Total Col2Ave (4 peaks):				134.6 RPD = 9
Corrected Ave (3 peaks):					102.1	Corrected Ave (3 peaks):				85.5 RPD = 18
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.066	-0.003	351	3.9	2	6.275	0.029	1573	28.6
Aroclor-1221	3	6.320	-0.001	3509	16.3	3	6.576	0.004	967	11.2
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.066	-0.003	351	5.6	2	7.203	-0.001	18843	236.0
Aroclor-1232	3	7.589	-0.006	95111	318.5	3	7.812	-0.002	52352	326.4
Aroclor-1232	4	8.524	-0.002	105782	827.6	4	8.667	-0.002	44962	968.0
Total Col1Ave (3 peaks):					383.9	Total Col2Ave (3 peaks):				510.1 RPD = 28
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.212	0.000	19871	98.1	1	7.203	-0.000	18843	117.2
Aroclor-1242	2	7.589	-0.006	95111	148.1	2	7.812	-0.000	52352	153.1
Aroclor-1242	3	8.399	0.001	41542	334.5	3	9.120	-0.003	52681	480.6
Aroclor-1242	4	8.524	-0.000	105782	368.1	4	9.548	-0.002	63343	479.5
Total Col1Ave (4 peaks):					237.2	Total Col2Ave (4 peaks):				307.6 RPD = 26
Corrected Ave (3 peaks):					193.6	Corrected Ave (3 peaks):				250.0 RPD = 25
Aroclor-1248	1	8.399	0.001	41542	253.1	1	8.260	-0.001	42833	250.4
Aroclor-1248	2	8.524	-0.000	105782	248.0	2	8.667	0.000	44962	248.8
Aroclor-1248	3	8.944	-0.000	206928	252.3	3	9.120	-0.000	52681	248.7
Aroclor-1248	4	9.242	-0.001	105227	251.7	4	9.548	0.002	63343	249.4
Total Col1Ave (4 peaks):					251.3	Total Col2Ave (4 peaks):				249.3 RPD = 1
Corrected Ave (3 peaks):					250.6	Corrected Ave (3 peaks):				249.0 RPD = 1
Aroclor-1254	1	9.242	-0.004	105227	159.2	1	9.404	0.000	25835	94.6
Aroclor-1254	2	9.324	-0.001	51326	172.8	2	9.548	0.049	63343	390.3
Aroclor-1254	3	9.619	0.001	41394	97.0	3	9.925	0.001	22609	102.1
Aroclor-1254	4	9.759	0.003	72223	86.4	4	10.079	0.001	43816	90.7
Aroclor-1254	5	10.135	0.010	49936	98.9	5	10.345	0.016	42513	88.7
Total Col1Ave (5 peaks):					122.9	Total Col2Ave (5 peaks):				153.3 RPD = 22
Corrected Ave (4 peaks):					110.4	Corrected Ave (4 peaks):				94.0 RPD = 16
Aroclor-1260	1	10.998	0.005	1863	3.7	1	11.617	0.011	2599	7.1
Aroclor-1260	2	11.314	0.004	1152	2.3	2	11.877	0.005	1951	2.0
Aroclor-1260	3	11.695	0.009	1829	1.5	3	12.389	0.001	857	3.6
Aroclor-1260	4	12.097	0.007	1266	2.1	4	12.458	0.003	1302	2.0
Aroclor-1260	5	12.195	0.002	464	1.7	NS	---			----
Total Col1Ave (5 peaks):					2.3	Total Col2Ave (4 peaks):				3.7 RPD = 48*
Corrected Ave (4 peaks):					1.9	Corrected Ave (3 peaks):				2.5 RPD = 29
Aroclor-1262	1	10.784	0.005	15405	35.8	1	11.077	-0.077	9003	16.0
Aroclor-1262	2	12.195	0.000	464	0.8	2	11.617	0.012	2599	5.5
Aroclor-1262	3	12.271	0.002	489	0.8	3	12.389	0.003	857	1.7
Aroclor-1262	4	12.940	0.001	1638	3.1	4	12.458	0.002	1302	1.5
Total Col1Ave (4 peaks):					10.1	Total Col2Ave (4 peaks):				6.2 RPD = 48*
Corrected Ave (3 peaks):					1.5	Corrected Ave (3 peaks):				2.9 RPD = 61*
Aroclor-1268	1	12.195	-0.001	464	0.3	1	12.389	0.004	857	0.7
Aroclor-1268	2	12.271	0.003	489	0.3	2	12.458	0.006	1302	0.9
Aroclor-1268	3	12.649	0.001	1831	1.5	3	12.845	0.002	676	0.6
Aroclor-1268	4	13.443	0.006	5387	1.6	4	13.661	-0.003	2707	0.7
Total Col1Ave (4 peaks):					0.9	Total Col2Ave (4 peaks):				0.7 RPD = 26
Corrected Ave (3 peaks):					0.7	Corrected Ave (3 peaks):				0.6 RPD = 11

Total PCB Area Col1 (5.842 - 13.740) = 1634238 Col1 Total PCB = 0.2 ppm*

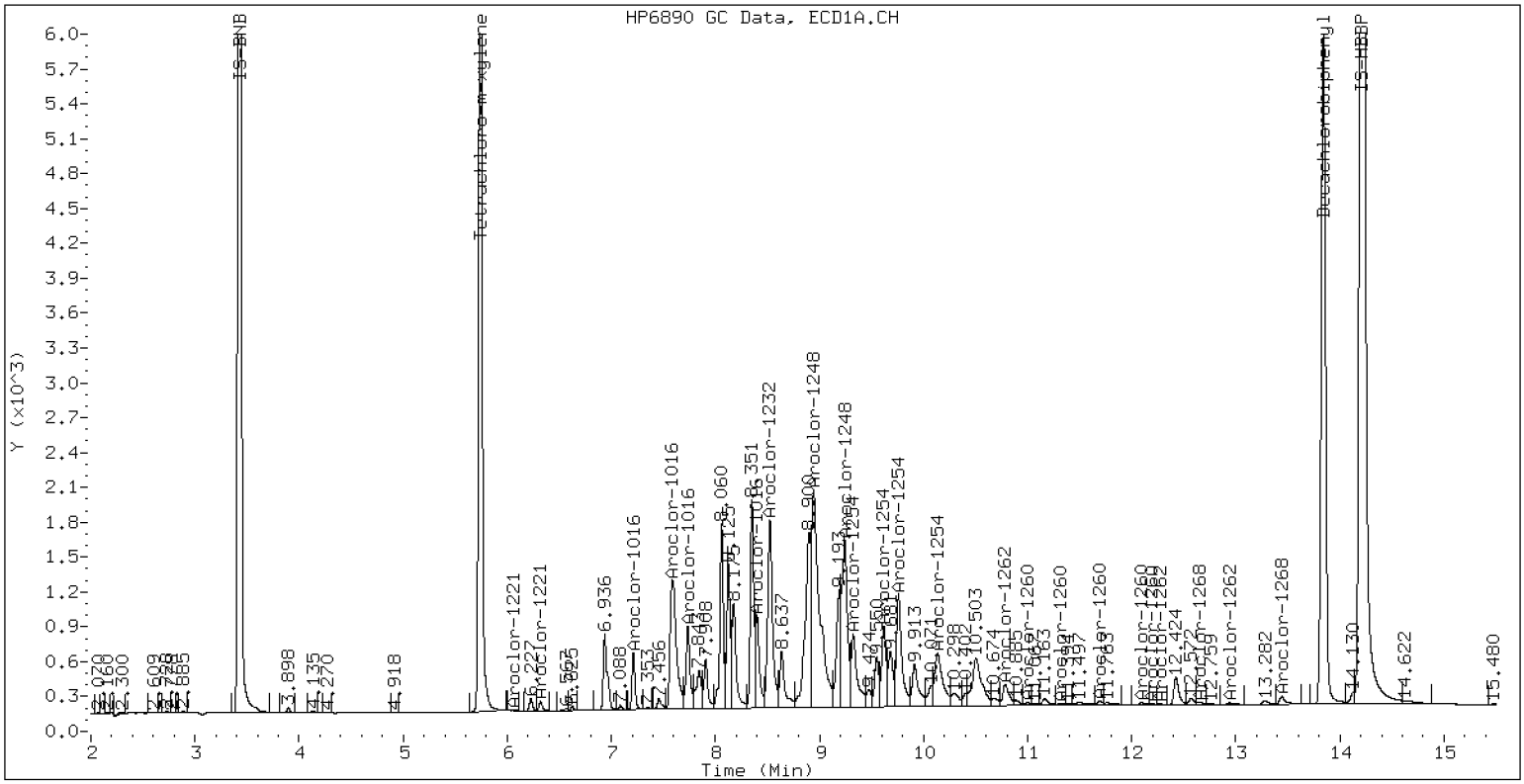
Total PCB Area Col2 (5.728 - 13.968) = 876760 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

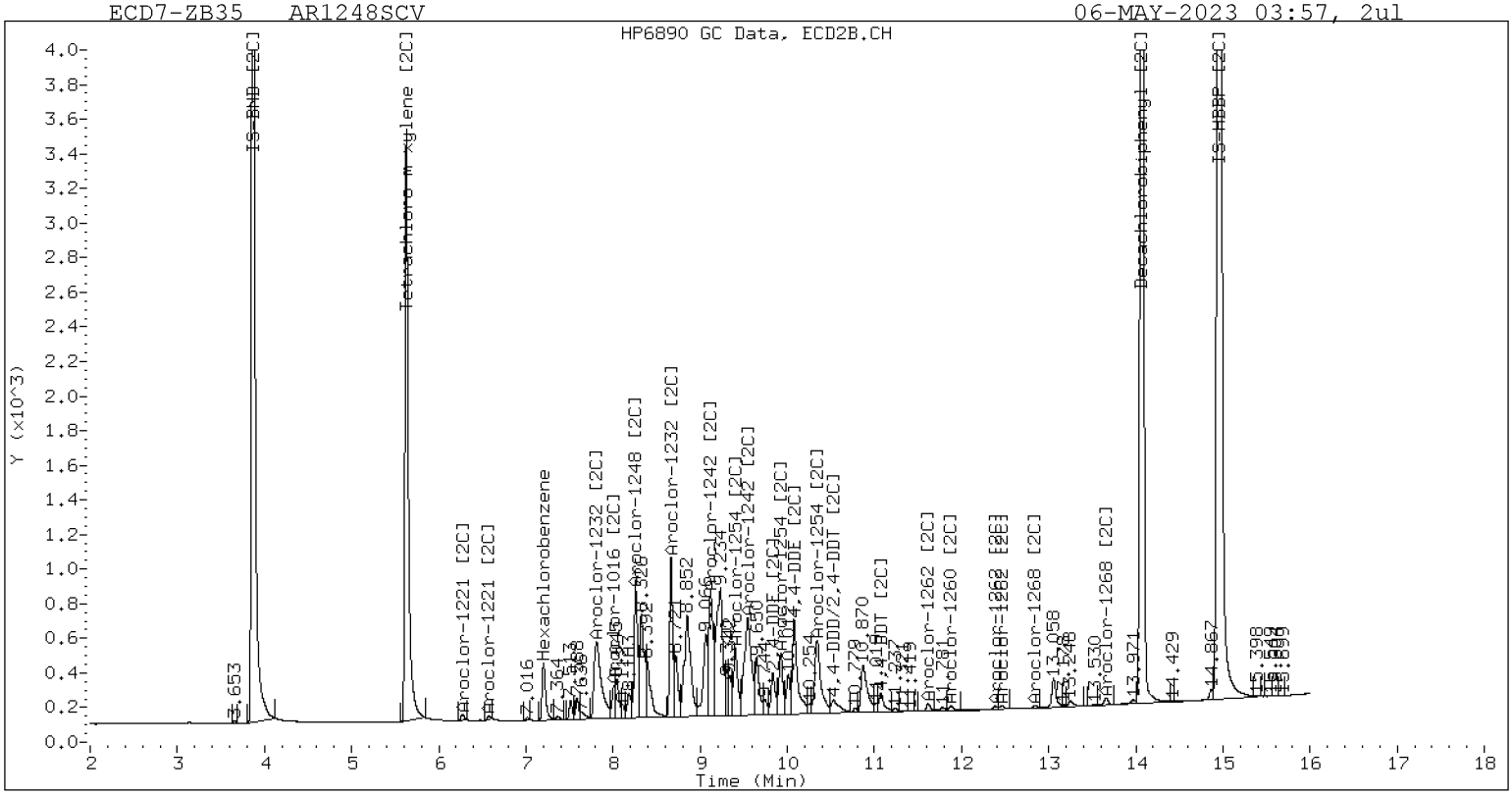
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV 06-MAY-2023 03:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV 06-MAY-2023 03:57, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052335ECD7.D
Data file 2: /230505.b/230505.b/05052335ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV
Client ID:
Injection Date: 06-MAY-2023 04:18
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	368022	5.631	0.002	192033	37.6	38.3	2.0	Tetrachloro-m-xylene
13.843	0.002	352066	14.070	0.002	385384	36.0	38.5	6.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	650234	8.1
Hexabromobiphenyl	876625	980276	11.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	364142	4.3
Hexabromobiphenyl	652984	705291	8.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.002	635	2.5	1	---			0.0
Aroclor-1016	2	7.590	-0.004	2512	3.2	2	---			0.0
Aroclor-1016	3	7.738	0.005	1594	4.4	3	---			0.0
Aroclor-1016	4	8.351	-0.047	31774	211.6	4	---			0.0
Total Col1Ave (4 peaks):					55.4	Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.052	-0.018	242	2.6	2	---			0.0
Aroclor-1221	3	6.322	0.001	427	2.0	3	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.052	-0.018	242	3.8	2	---			0.0
Aroclor-1232	3	7.590	-0.005	2512	8.3	3	---			0.0
Aroclor-1232	4	8.528	0.001	13950	107.9	4	---			0.0
Total Col1Ave (3 peaks):					40.0	Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.214	0.002	635	3.1	1	---			0.0
Aroclor-1242	2	7.590	-0.005	2512	3.9	2	---			0.0
Aroclor-1242	3	8.351	-0.047	31774	253.0	3	9.125	0.002	23963	215.9
Aroclor-1242	4	8.528	0.004	13950	48.0	4	9.649	0.099	23982	179.3
Total Col1Ave (4 peaks):					77.0	Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.351	-0.048	31774	191.4	1	8.260	-0.000	23490	135.6
Aroclor-1248	2	8.528	0.004	13950	32.3	2	8.669	0.002	16693	91.2
Aroclor-1248	3	8.941	-0.003	154338	186.1	3	9.125	0.005	23963	111.7
Aroclor-1248	4	9.246	0.003	158369	374.6	4	9.499	-0.047	38716	150.5
Total Col1Ave (4 peaks):					196.1	Total Col2Ave (4 peaks):			122.3	RPD = 46*
Corrected Ave (3 peaks):					136.6	Corrected Ave (3 peaks):			112.8	RPD = 19
Aroclor-1254	1	9.246	-0.001	158369	237.0	1	9.404	0.000	67493	244.0
Aroclor-1254	2	9.325	-0.000	72386	241.1	2	9.499	-0.000	38716	235.6
Aroclor-1254	3	9.617	-0.001	103602	240.1	3	9.925	0.001	53972	240.7
Aroclor-1254	4	9.756	0.000	201259	238.2	4	10.079	0.001	116950	239.0
Aroclor-1254	5	10.127	0.001	122207	239.5	5	10.327	-0.001	118439	243.9
Total Col1Ave (5 peaks):					239.2	Total Col2Ave (5 peaks):			240.6	RPD = 1
Corrected Ave (4 peaks):					238.7	Corrected Ave (4 peaks):			239.8	RPD = 0
Aroclor-1260	1	10.994	0.001	13538	26.1	1	11.615	0.009	33465	89.3
Aroclor-1260	2	11.313	0.003	13900	27.2	2	11.876	0.004	25534	26.1
Aroclor-1260	3	11.689	0.004	32548	25.4	3	12.404	0.016	1811	7.5
Aroclor-1260	4	12.093	0.003	25285	40.3	4	12.458	0.002	14842	22.7
Aroclor-1260	5	12.273	0.079	2534	9.3	NS	---			----
Total Col1Ave (5 peaks):					25.6	Total Col2Ave (4 peaks):			36.4	RPD = 35
Corrected Ave (4 peaks):					22.0	Corrected Ave (3 peaks):			18.7	RPD = 16
Aroclor-1262	1	10.779	0.000	210018	473.6	1	11.073	-0.081	114323	200.0
Aroclor-1262	2	12.273	0.078	2534	4.1	2	11.615	0.010	33465	69.4
Aroclor-1262	3	---			0.0	3	12.404	0.018	1811	3.4
Aroclor-1262	4	12.939	0.001	1830	3.3	4	12.458	0.002	14842	17.3
Total Col1Ave (3 peaks):					160.3	Total Col2Ave (4 peaks):			72.6	RPD = 75*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			30.1	
Aroclor-1268	1	12.273	0.077	2534	1.6	1	12.404	0.019	1811	1.4
Aroclor-1268	2	---			0.0	2	12.458	0.005	14842	10.3
Aroclor-1268	3	12.654	0.006	2669	2.1	3	12.847	0.004	835	0.7
Aroclor-1268	4	13.442	0.004	6266	1.8	4	13.662	-0.001	2350	0.6
Total Col1Ave (3 peaks):					1.8	Total Col2Ave (4 peaks):			3.2	RPD = 55*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			0.9	

Total PCB Area Col1 (5.842 - 13.740) = 2123119 Col1 Total PCB = 0.3 ppm*

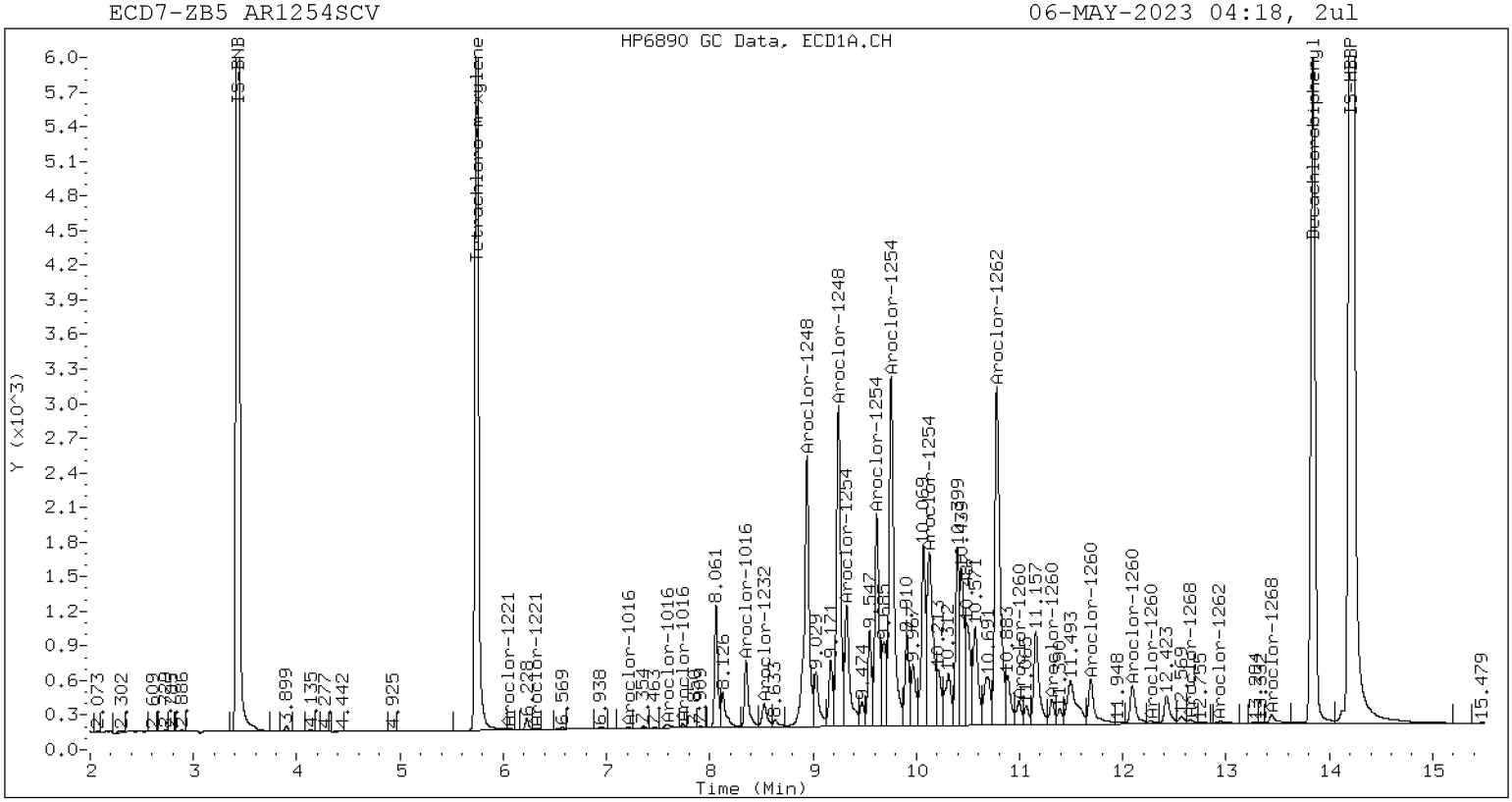
Total PCB Area Col2 (5.728 - 13.968) = 1146487 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

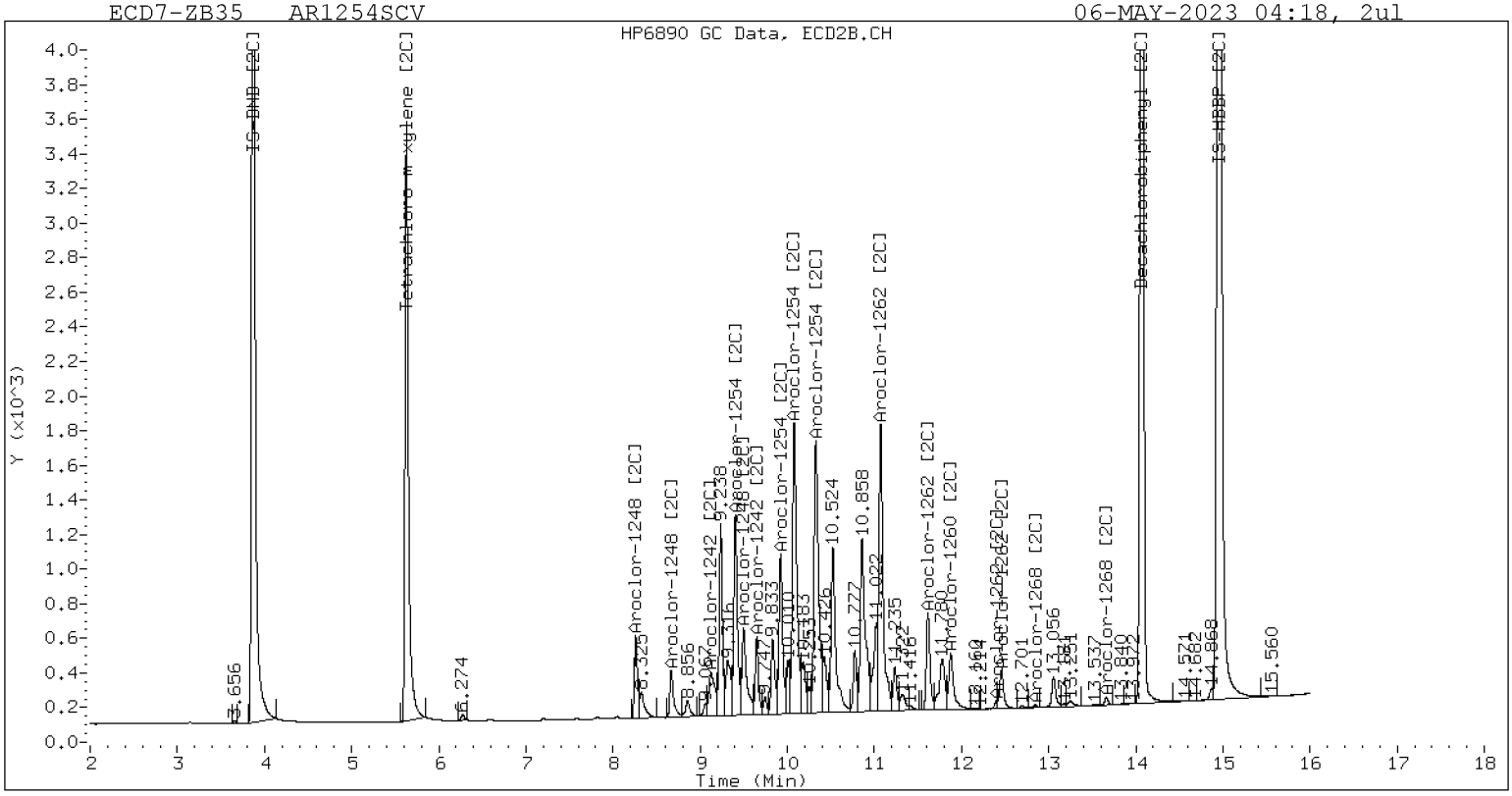
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV 06-MAY-2023 04:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV 06-MAY-2023 04:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052336ECD7.D
Data file 2: /230505.b/230505.b/05052336ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV
Client ID:
Injection Date: 06-MAY-2023 04:39
Report Date: 05/06/2023 11:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	358254	5.628	-0.000	183759	37.8	39.1	3.3	Tetrachloro-m-xylene
13.842	0.002	344347	14.070	0.002	373300	37.1	38.8	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	629547	4.7
Hexabromobiphenyl	876625	929713	6.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	341980	-2.1
Hexabromobiphenyl	652984	678097	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	6601	27.1	1	7.207	0.003	3935	20.3
Aroclor-1016	2	7.595	0.000	13419	17.6	2	7.821	0.013	6146	14.9
Aroclor-1016	3	7.735	0.003	7114	20.2	3	8.027	0.021	3201	17.6
Aroclor-1016	4	8.353	-0.045	3916	26.9	4	8.262	0.003	2131	14.7
Total Col1Ave (4 peaks):					23.0	Total Col2Ave (4 peaks):				16.9 RPD = 30
Corrected Ave (3 peaks):					21.6	Corrected Ave (3 peaks):				15.7 RPD = 31
Aroclor-1221	1	4.663	-0.001	13184	297.8	1	4.893	-0.001	7253	287.5
Aroclor-1221	2	6.070	0.000	25527	287.4	2	6.244	-0.001	14853	284.1
Aroclor-1221	3	6.321	0.000	59985	284.3	3	6.571	-0.001	24083	292.9
Total Col1Ave (3 peaks):					289.8	Total Col2Ave (3 peaks):				288.2 RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.663	-0.001	13184	447.0	1	4.893	-0.001	7253	546.9
Aroclor-1232	2	6.070	0.000	25527	416.0	2	7.207	0.002	3935	51.8
Aroclor-1232	3	7.595	-0.000	13419	45.9	3	7.821	0.006	6146	40.3
Aroclor-1232	4	8.528	0.001	2679	21.4	4	8.671	0.002	1120	25.4
Total Col1Ave (4 peaks):					232.6	Total Col2Ave (4 peaks):				166.1 RPD = 33
Corrected Ave (3 peaks):					161.1	Corrected Ave (3 peaks):				39.2 RPD = 122*
Aroclor-1242	1	7.213	0.001	6601	33.3	1	7.207	0.004	3935	25.7
Aroclor-1242	2	7.595	-0.000	13419	21.3	2	7.821	0.008	6146	18.9
Aroclor-1242	3	8.353	-0.045	3916	32.2	3	9.133	0.010	881	8.5
Aroclor-1242	4	8.528	0.003	2679	9.5	4	9.651	0.101	516	4.1
Total Col1Ave (4 peaks):					24.1	Total Col2Ave (4 peaks):				14.3 RPD = 51*
Corrected Ave (3 peaks):					21.0	Corrected Ave (3 peaks):				10.5 RPD = 67*
Aroclor-1248	1	8.353	-0.046	3916	24.4	1	8.262	0.002	2131	13.1
Aroclor-1248	2	8.528	0.003	2679	6.4	2	8.671	0.004	1120	6.5
Aroclor-1248	3	8.942	-0.002	25144	31.3	3	9.133	0.013	881	4.4
Aroclor-1248	4	9.251	0.008	25583	62.5	4	9.500	-0.045	335	1.4
Total Col1Ave (4 peaks):					31.1	Total Col2Ave (4 peaks):				6.3 RPD = 132*
Corrected Ave (3 peaks):					20.7	Corrected Ave (3 peaks):				4.1 RPD = 134*
Aroclor-1254	1	9.251	0.005	25583	39.5	1	9.408	0.004	9719	37.4
Aroclor-1254	2	---			0.0	2	9.500	0.001	335	2.2
Aroclor-1254	3	9.620	0.002	4245	10.2	3	9.928	0.004	2055	9.8
Aroclor-1254	4	9.758	0.003	11050	13.5	4	10.100	0.022	55162	120.0
Aroclor-1254	5	10.071	-0.055	129151	261.4	5	10.325	-0.004	68421	150.1
Total Col1Ave (4 peaks):					81.1	Total Col2Ave (5 peaks):				63.9 RPD = 24
Corrected Ave (3 peaks):					21.1	Corrected Ave (4 peaks):				42.3 RPD = 67*
Aroclor-1260	1	10.995	0.002	206643	420.3	1	11.605	-0.001	119902	332.9
Aroclor-1260	2	11.311	0.001	167443	345.1	2	11.872	0.000	293746	311.8
Aroclor-1260	3	11.687	0.001	390491	321.4	3	12.386	-0.002	131462	563.2
Aroclor-1260	4	12.091	0.001	120118	201.8	4	12.456	0.000	212898	338.4
Aroclor-1260	5	12.195	0.002	155588	599.5	NS	---			----
Total Col1Ave (5 peaks):					377.6	Total Col2Ave (4 peaks):				386.6 RPD = 2
Corrected Ave (4 peaks):					322.2	Corrected Ave (3 peaks):				327.7 RPD = 2
Aroclor-1262	1	10.777	-0.001	114050	271.2	1	11.153	0.000	141861	258.2
Aroclor-1262	2	12.195	0.001	155588	263.0	2	11.605	0.000	119902	258.7
Aroclor-1262	3	12.269	0.000	167998	264.2	3	12.386	-0.000	131462	259.6
Aroclor-1262	4	12.938	-0.001	136019	262.5	4	12.456	0.000	212898	258.0
Total Col1Ave (4 peaks):					265.2	Total Col2Ave (4 peaks):				258.6 RPD = 3
Corrected Ave (3 peaks):					263.3	Corrected Ave (3 peaks):				258.3 RPD = 2
Aroclor-1268	1	12.195	-0.000	155588	104.9	1	12.386	0.001	131462	102.4
Aroclor-1268	2	12.269	0.001	167998	114.1	2	12.456	0.003	212898	154.3
Aroclor-1268	3	12.675	0.027	60611	51.2	3	12.843	-0.000	8393	7.1
Aroclor-1268	4	13.439	0.001	49821	14.7	4	13.661	-0.002	39480	10.4
Total Col1Ave (4 peaks):					71.2	Total Col2Ave (4 peaks):				68.6 RPD = 4

Corrected Ave (3 peaks): 56.9 Corrected Ave (3 peaks): 40.0 RPD = 35

Total PCB Area Col1 (5.842 - 13.740) = 2870829 Col1 Total PCB = 0.4 ppm*

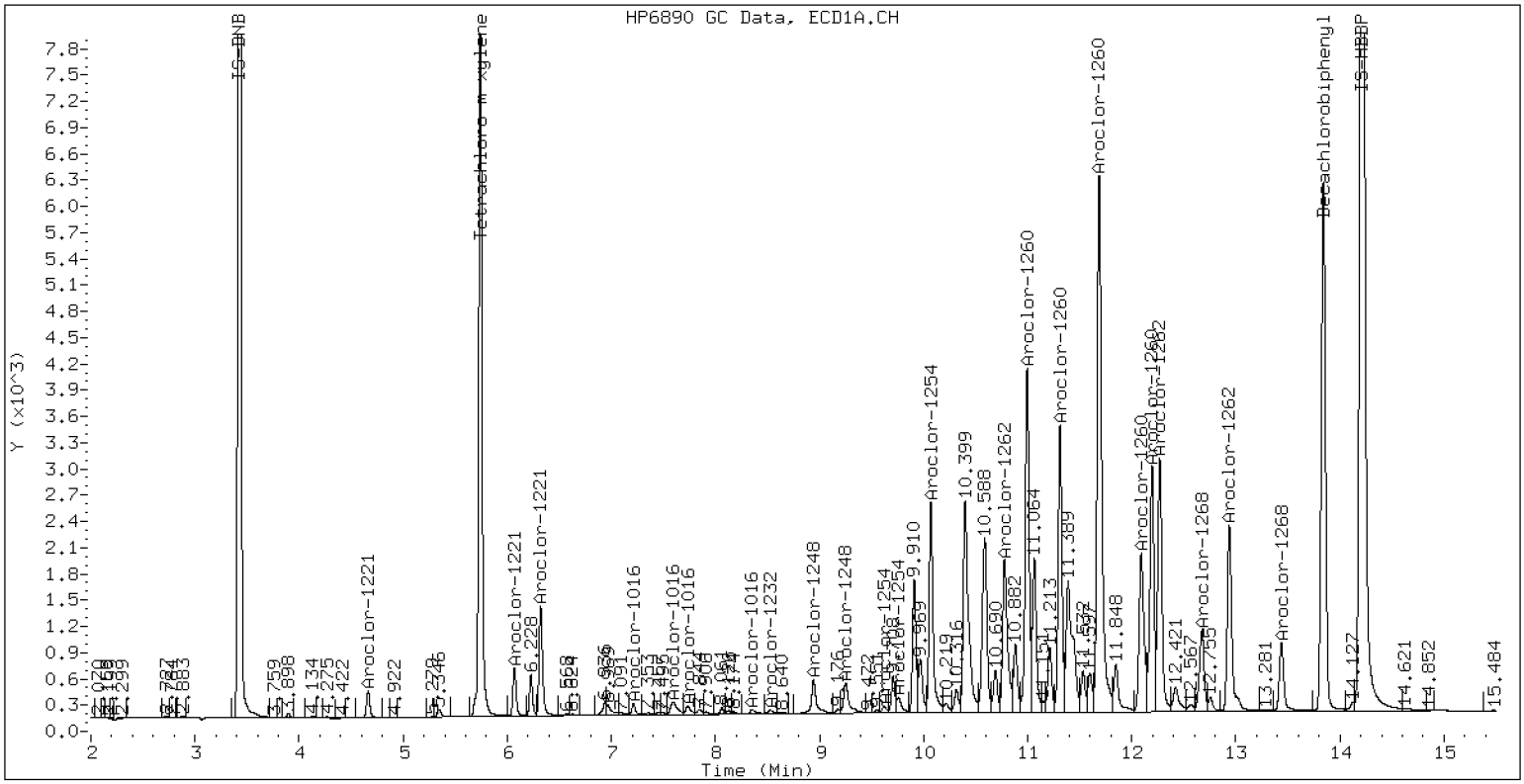
Total PCB Area Col2 (5.728 - 13.968) = 1885829 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

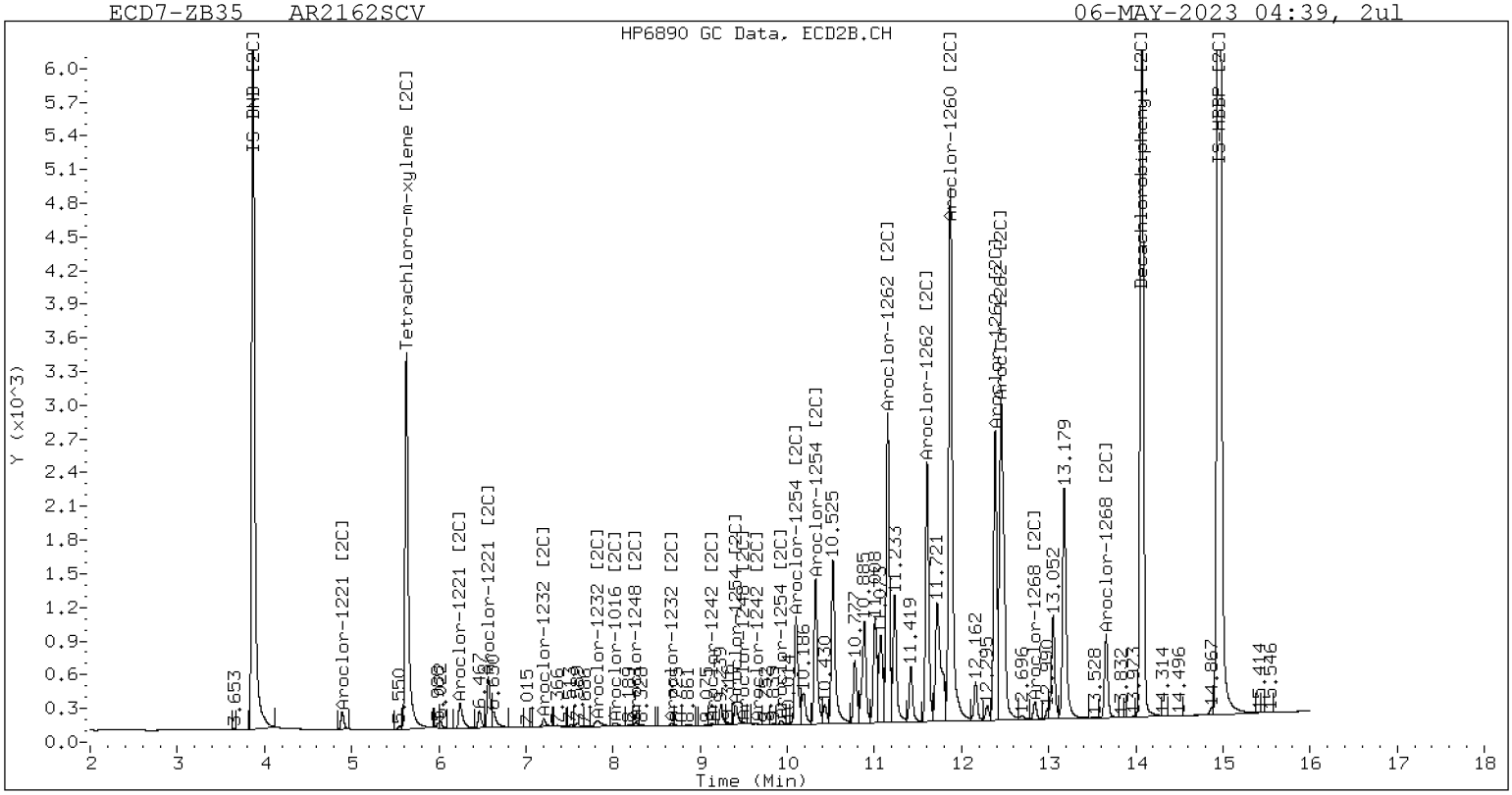
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV 06-MAY-2023 04:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV 06-MAY-2023 04:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052337ECD7.D
Data file 2: /230505.b/230505.b/05052337ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV
Client ID:
Injection Date: 06-MAY-2023 05:00
Report Date: 05/06/2023 11:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	373749	5.629	0.001	196946	38.4	40.4	5.2	Tetrachloro-m-xylene
13.842	0.002	525409	14.069	0.001	586548	55.1	59.3	7.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	646456	7.5
Hexabromobiphenyl	876625	954969	8.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	354120	1.4
Hexabromobiphenyl	652984	696139	6.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.001	28623	114.3	1	7.205	0.002	23124	115.4
Aroclor-1016	2	7.597	0.002	85721	109.5	2	7.815	0.007	47496	111.2
Aroclor-1016	3	7.735	0.002	41343	114.3	3	8.014	0.008	24029	127.5
Aroclor-1016	4	8.400	0.002	16653	111.6	4	8.262	0.003	15421	103.0
Total Col1Ave (4 peaks):		112.4				Total Col2Ave (4 peaks):			114.3	RPD = 2
Corrected Ave (3 peaks):		111.8				Corrected Ave (3 peaks):			109.9	RPD = 2
Aroclor-1221	1	4.664	0.001	7272	159.9	1	4.895	0.000	4045	154.9
Aroclor-1221	2	6.070	0.001	13478	147.8	2	6.246	0.000	9235	170.6
Aroclor-1221	3	6.321	0.001	43831	202.3	3	6.572	0.000	24300	285.4
Total Col1Ave (3 peaks):		170.0				Total Col2Ave (3 peaks):			203.6	RPD = 18
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.664	0.001	7272	240.1	1	4.895	0.001	4045	294.5
Aroclor-1232	2	6.070	0.001	13478	213.9	2	7.205	0.001	23124	294.1
Aroclor-1232	3	7.597	0.002	85721	285.5	3	7.815	0.000	47496	300.7
Aroclor-1232	4	8.527	0.000	36809	286.5	4	8.669	-0.000	14324	313.2
Total Col1Ave (4 peaks):		256.5				Total Col2Ave (4 peaks):			300.6	RPD = 16
Corrected Ave (3 peaks):		246.5				Corrected Ave (3 peaks):			296.5	RPD = 18
Aroclor-1242	1	7.214	0.002	28623	140.5	1	7.205	0.002	23124	146.1
Aroclor-1242	2	7.597	0.002	85721	132.8	2	7.815	0.002	47496	141.1
Aroclor-1242	3	8.400	0.002	16653	133.4	3	9.128	0.005	14403	133.4
Aroclor-1242	4	8.527	0.003	36809	127.4	4	9.648	0.098	5512	42.4
Total Col1Ave (4 peaks):		133.5				Total Col2Ave (4 peaks):			115.7	RPD = 14
Corrected Ave (3 peaks):		131.2				Corrected Ave (3 peaks):			105.6	RPD = 22
Aroclor-1248	1	8.400	0.001	16653	100.9	1	8.262	0.002	15421	91.5
Aroclor-1248	2	8.527	0.003	36809	85.8	2	8.669	0.002	14324	80.5
Aroclor-1248	3	8.944	0.000	89377	108.4	3	9.128	0.008	14403	69.0
Aroclor-1248	4	9.238	-0.005	41570	98.9	4	9.560	0.015	17331	69.3
Total Col1Ave (4 peaks):		98.5				Total Col2Ave (4 peaks):			77.6	RPD = 24
Corrected Ave (3 peaks):		95.2				Corrected Ave (3 peaks):			72.9	RPD = 26
Aroclor-1254	1	9.238	-0.008	41570	62.6	1	9.407	0.003	5487	20.4
Aroclor-1254	2	9.326	0.001	12640	42.3	2	9.560	0.061	17331	108.4
Aroclor-1254	3	9.624	0.006	7232	16.9	3	9.929	0.005	3481	16.0
Aroclor-1254	4	9.764	0.008	11671	13.9	4	10.086	0.009	7259	15.3
Aroclor-1254	5	10.139	0.014	7544	14.9	5	10.345	0.017	6610	14.0
Total Col1Ave (5 peaks):		30.1				Total Col2Ave (5 peaks):			34.8	RPD = 14
Corrected Ave (4 peaks):		22.0				Corrected Ave (4 peaks):			16.4	RPD = 29
Aroclor-1260	1	10.998	0.005	85093	168.5	1	11.598	-0.008	75237	203.5
Aroclor-1260	2	11.313	0.003	6363	12.8	2	11.873	0.001	33655	34.8
Aroclor-1260	3	11.688	0.002	47857	38.3	3	12.384	-0.004	346138	1444.4
Aroclor-1260	4	12.094	0.004	1291	2.1	4	12.453	-0.002	373218	577.8
Aroclor-1260	5	12.195	0.001	406211	1523.9	NS	---			----
Total Col1Ave (5 peaks):		349.1				Total Col2Ave (4 peaks):			565.1	RPD = 47*
Corrected Ave (4 peaks):		55.4				Corrected Ave (3 peaks):			272.0	RPD = 132*
Aroclor-1262	1	10.785	0.006	4006	9.3	1	11.156	0.002	52531	93.1
Aroclor-1262	2	12.195	0.000	406211	668.6	2	11.598	-0.007	75237	158.2
Aroclor-1262	3	12.268	-0.002	403730	618.2	3	12.384	-0.002	346138	665.8
Aroclor-1262	4	12.937	-0.002	145536	273.5	4	12.453	-0.002	373218	440.5
Total Col1Ave (4 peaks):		392.4				Total Col2Ave (4 peaks):			339.4	RPD = 14
Corrected Ave (3 peaks):		300.3				Corrected Ave (3 peaks):			230.6	RPD = 26
Aroclor-1268	1	12.195	-0.001	406211	266.7	1	12.384	-0.001	346138	262.7
Aroclor-1268	2	12.268	-0.000	403730	266.9	2	12.453	0.001	373218	263.5
Aroclor-1268	3	12.648	-0.000	323568	266.0	3	12.844	0.001	316122	260.6
Aroclor-1268	4	13.439	0.002	920777	265.1	4	13.663	0.000	1029335	264.8
Total Col1Ave (4 peaks):		266.2				Total Col2Ave (4 peaks):			262.9	RPD = 1

Corrected Ave (3 peaks): 265.9 Corrected Ave (3 peaks): 262.3 RPD = 1

Total PCB Area Col1 (5.842 - 13.740) = 3325332 Col1 Total PCB = 0.5 ppm*

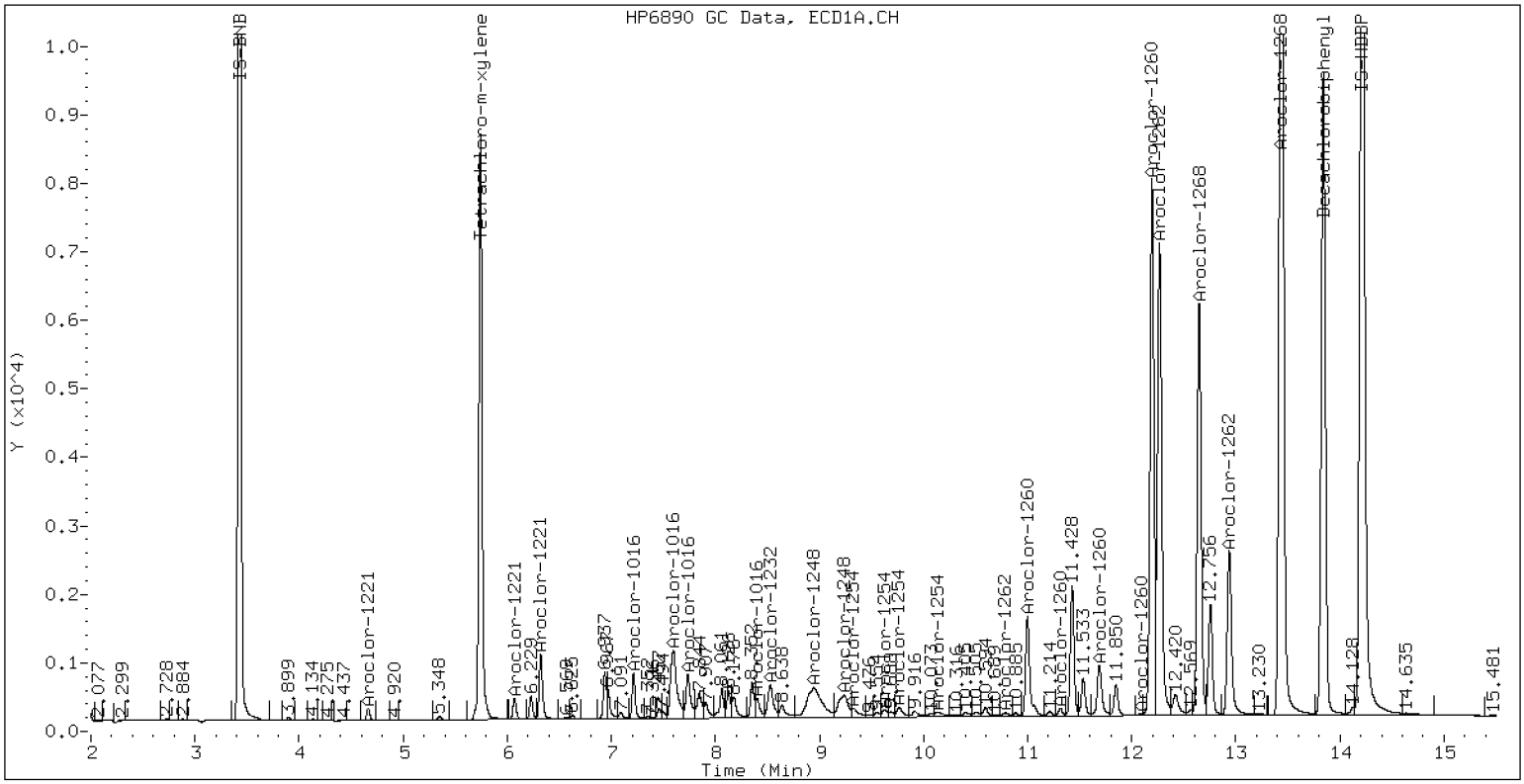
Total PCB Area Col2 (5.728 - 13.968) = 2876097 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

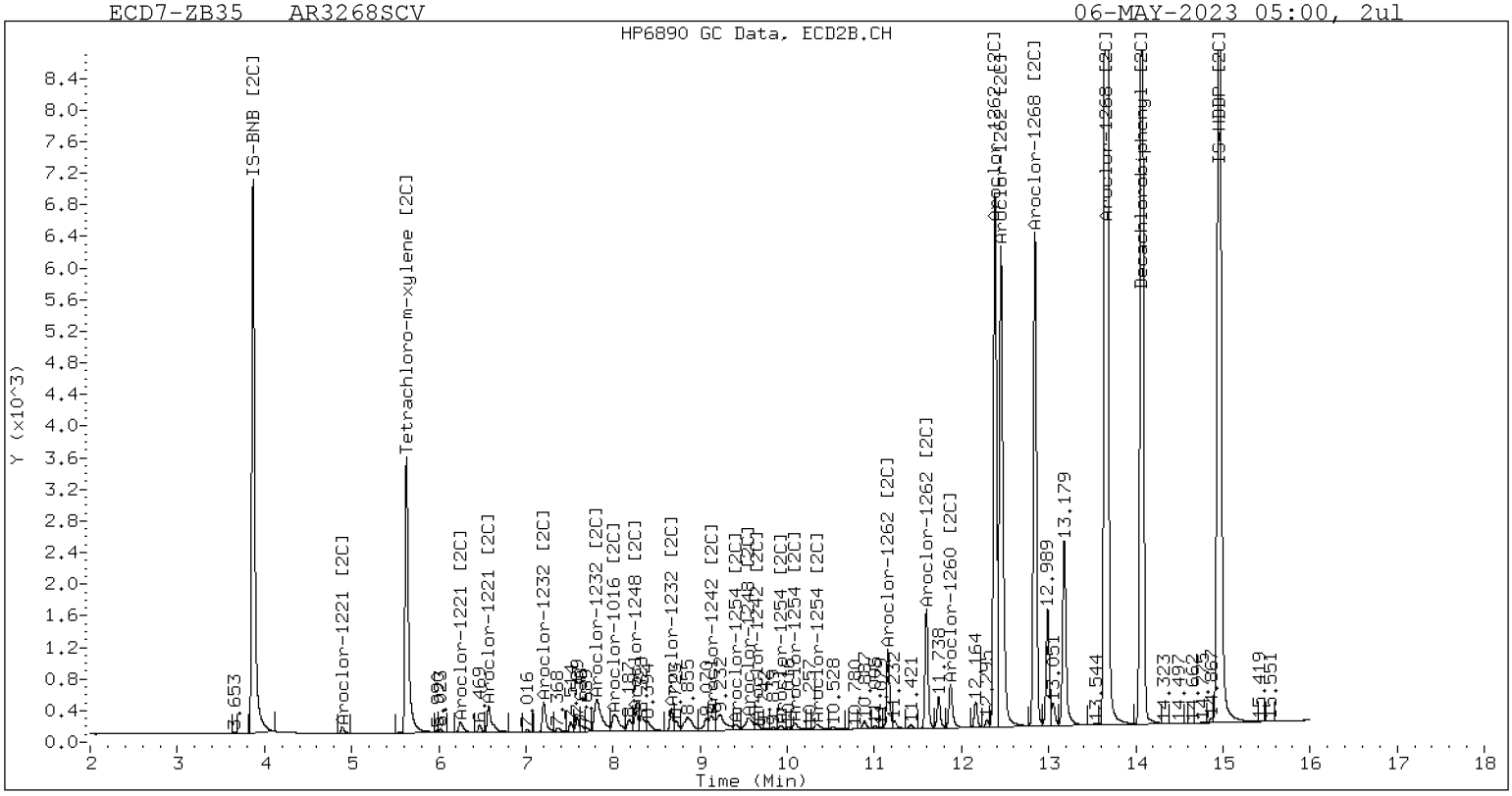
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV 06-MAY-2023 05:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV 06-MAY-2023 05:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230505.b/05052338ECD7.D ARI ID: DDTS

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.206	0.000	428189	9.867	0.000	428008	0.100	0.000	----	2,4-DDE
0.000	-10.293	0	10.625	0.000	621468	0.000	0.000#	----	2,4-DDT
9.635	0.000	1004111	10.165	0.000	369270	0.100	0.000	----	4,4-DDE
10.243	0.000	476377	10.625	0.000	621468	0.100	0.000#	----	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230505.b/05052339ECD7.D ARI ID: DDT BD

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
9.158	-0.049	12021	9.884	0.017	17091	0.002	0.000	----	2,4-DDE
0.000	-10.293	0	10.633	0.008	326807	0.000	0.000#	----	2,4-DDT
9.644	0.009	16770	10.190	0.025	488	0.001	0.000	----	4,4-DDE
10.216	-0.028	403865	10.633	0.008	326807	0.068	0.000#	----	4,4-DDD

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00022
Laboratory ID: SLE0079-SCV1
Sequence: SLE0079
Sequence Name: AR1660SCV1
Standard ID: L002065

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	254	1.4	20.00
Aroclor 1016 [2C]	250.00	248	-1.0	20.00
Aroclor 1260	250.00	285	14.2	20.00
Aroclor 1260 [2C]	250.00	284	13.6	20.00
Decachlorobiphenyl	40.000	36.9	-7.7	20.00
Tetrachlorometaxylene	40.000	36.9	-7.8	20.00
Decachlorobiphenyl [2C]	40.000	39.2	-1.9	20.00
Tetrachlorometaxylene [2C]	40.000	37.2	-6.9	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052332ECD7.D
Data file 2: /230505.b/230505.b/05052332ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV
Client ID:
Injection Date: 06-MAY-2023 03:16
Report Date: 05/06/2023 12:06
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	356595	5.629	0.000	185340	36.9	37.2	1.0	Tetrachloro-m-xylene
13.842	0.002	347188	14.070	0.002	384711	36.9	39.2	6.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	642284	6.8
Hexabromobiphenyl	876625	941356	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	361711	3.6
Hexabromobiphenyl	652984	690563	5.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	61654	247.9	1	7.205	0.001	50106	244.7
Aroclor-1016	2	7.594	-0.001	199228	256.2	2	7.811	0.003	109839	251.7
Aroclor-1016	3	7.734	0.001	89643	249.3	3	8.009	0.004	48594	252.5
Aroclor-1016	4	8.399	0.001	38714	261.0	4	8.260	0.001	36878	241.2
Total Col1Ave (4 peaks):					253.6	Total Col2Ave (4 peaks):				247.5 RPD = 2
Corrected Ave (3 peaks):					251.1	Corrected Ave (3 peaks):				245.9 RPD = 2
Aroclor-1221	1	4.663	-0.000	436	9.7	1	---			0.0
Aroclor-1221	2	6.068	-0.001	8521	94.0	2	6.251	0.005	5766	104.3
Aroclor-1221	3	6.320	-0.001	41973	195.0	3	6.572	0.000	23212	266.9
Total Col1Ave (3 peaks):					99.6	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.663	-0.000	436	14.5	1	---			0.0
Aroclor-1232	2	6.068	-0.002	8521	136.1	2	7.205	0.000	50106	623.9
Aroclor-1232	3	7.594	-0.001	199228	667.9	3	7.811	-0.004	109839	680.8
Aroclor-1232	4	8.526	-0.001	85985	673.5	4	8.667	-0.003	34670	742.1
Total Col1Ave (4 peaks):					373.0	Total Col2Ave (3 peaks):				682.3 RPD = 59*
Corrected Ave (3 peaks):					272.8	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.213	0.001	61654	304.6	1	7.205	0.001	50106	310.0
Aroclor-1242	2	7.594	-0.001	199228	310.7	2	7.811	-0.002	109839	319.4
Aroclor-1242	3	8.399	0.000	38714	312.1	3	9.069	-0.054	21513	195.1
Aroclor-1242	4	8.526	0.001	85985	299.5	4	9.537	-0.013	1824	13.7
Total Col1Ave (4 peaks):					306.7	Total Col2Ave (4 peaks):				209.6 RPD = 38
Corrected Ave (3 peaks):					304.9	Corrected Ave (3 peaks):				172.9 RPD = 55*
Aroclor-1248	1	8.399	-0.000	38714	236.2	1	8.260	0.000	36878	214.3
Aroclor-1248	2	8.526	0.001	85985	201.8	2	8.667	-0.001	34670	190.7
Aroclor-1248	3	8.941	-0.003	81615	99.6	3	9.069	-0.051	21513	101.0
Aroclor-1248	4	9.249	0.006	52526	125.8	4	9.537	-0.008	1824	7.1
Total Col1Ave (4 peaks):					165.8	Total Col2Ave (4 peaks):				128.3 RPD = 26
Corrected Ave (3 peaks):					142.4	Corrected Ave (3 peaks):				99.6 RPD = 35
Aroclor-1254	1	9.249	0.003	52526	79.6	1	9.405	0.001	24726	90.0
Aroclor-1254	2	---			0.0	2	9.537	0.038	1824	11.2
Aroclor-1254	3	9.619	0.001	7081	16.6	3	9.926	0.002	3128	14.0
Aroclor-1254	4	9.756	0.001	21856	26.2	4	10.101	0.023	62581	128.7
Aroclor-1254	5	10.069	-0.057	159796	317.0	5	10.324	-0.004	85433	177.1
Total Col1Ave (4 peaks):					109.8	Total Col2Ave (5 peaks):				84.2 RPD = 26
Corrected Ave (3 peaks):					40.8	Corrected Ave (4 peaks):				61.0 RPD = 40
Aroclor-1260	1	10.995	0.001	145767	292.8	1	11.605	-0.000	99761	272.0
Aroclor-1260	2	11.311	0.001	142028	289.1	2	11.872	0.000	273505	285.1
Aroclor-1260	3	11.686	0.000	354468	288.1	3	12.389	0.001	70545	296.8
Aroclor-1260	4	12.092	0.002	161281	267.6	4	12.455	-0.000	180783	282.1
Aroclor-1260	5	12.194	0.001	76105	289.6	NS	---			----
Total Col1Ave (5 peaks):					285.5	Total Col2Ave (4 peaks):				284.0 RPD = 1
Corrected Ave (4 peaks):					283.6	Corrected Ave (3 peaks):				279.8 RPD = 1
Aroclor-1262	1	10.777	-0.001	215850	506.9	1	11.153	-0.001	104059	186.0
Aroclor-1262	2	12.194	-0.000	76105	127.1	2	11.605	0.001	99761	211.4
Aroclor-1262	3	12.271	0.001	94628	147.0	3	12.389	0.003	70545	136.8
Aroclor-1262	4	12.939	-0.000	78852	150.3	4	12.455	-0.001	180783	215.1
Total Col1Ave (4 peaks):					232.8	Total Col2Ave (4 peaks):				187.3 RPD = 22
Corrected Ave (3 peaks):					141.5	Corrected Ave (3 peaks):				178.1 RPD = 23
Aroclor-1268	1	12.194	-0.001	76105	50.7	1	12.389	0.004	70545	54.0
Aroclor-1268	2	12.271	0.003	94628	63.5	2	12.455	0.003	180783	128.7
Aroclor-1268	3	12.675	0.026	38830	32.4	3	12.844	0.001	3082	2.6
Aroclor-1268	4	13.440	0.003	19986	5.8	4	13.661	-0.002	14882	3.9
Total Col1Ave (4 peaks):					38.1	Total Col2Ave (4 peaks):				47.3 RPD = 21
Corrected Ave (3 peaks):					29.6	Corrected Ave (3 peaks):				20.1 RPD = 38

Total PCB Area Col1 (5.842 - 13.740) = 3657118 Col1 Total PCB = 0.5 ppm*

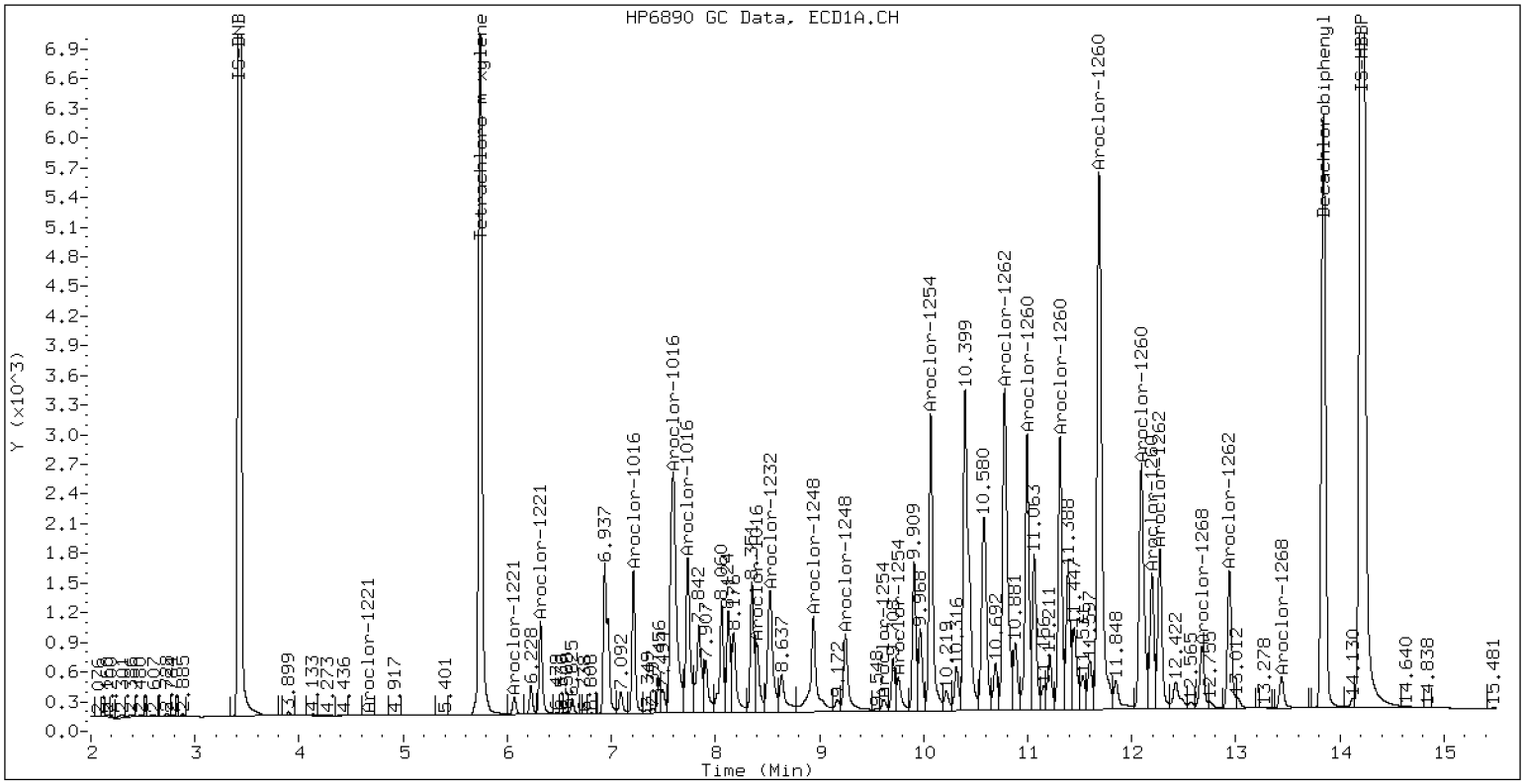
Total PCB Area Col2 (5.728 - 13.968) = 2255286 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

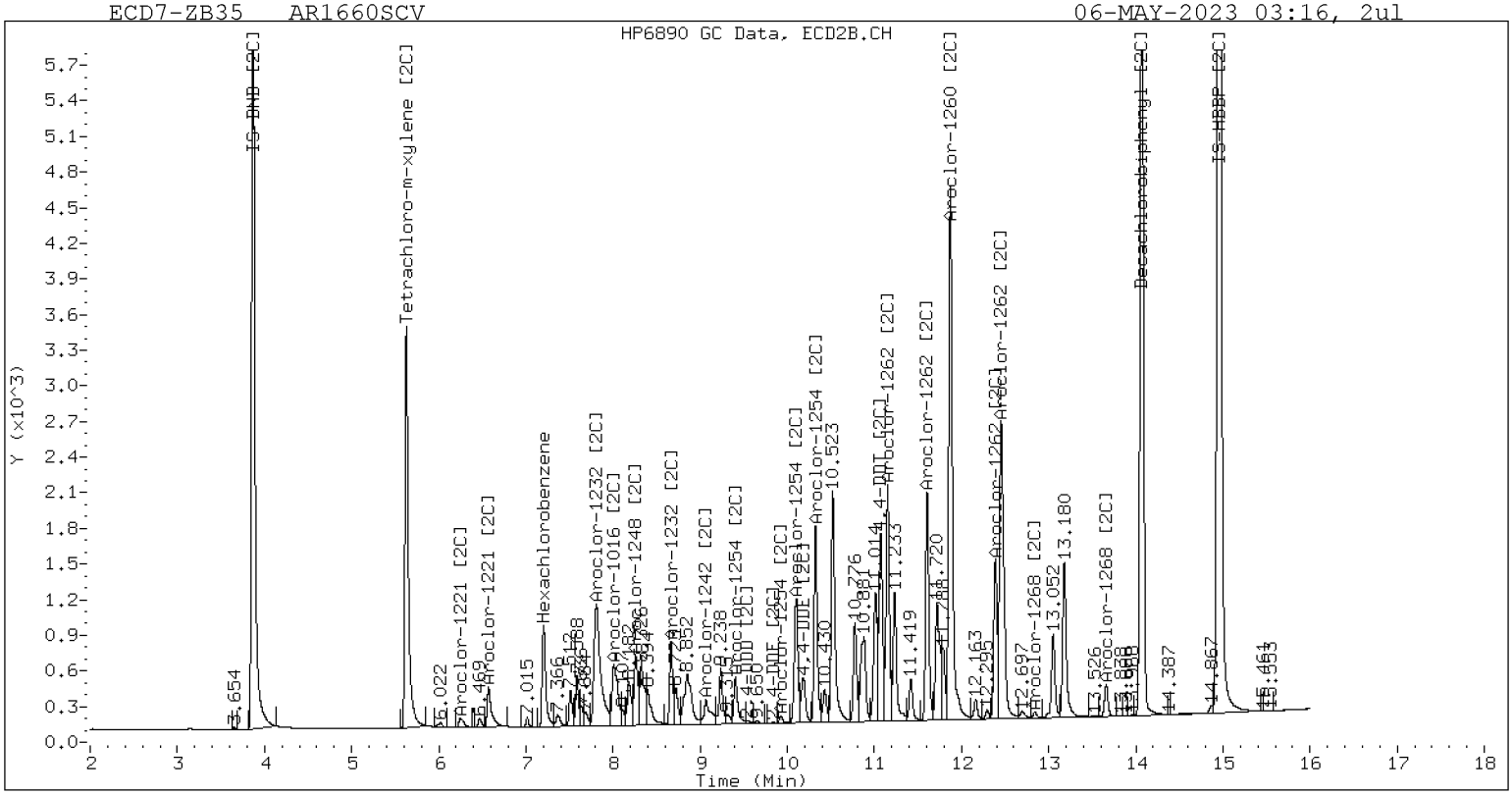
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV 06-MAY-2023 03:16, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV 06-MAY-2023 03:16, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00022
Laboratory ID: SLE0079-SCV2
Sequence: SLE0079
Sequence Name: AR1242SCV2
Standard ID: L003970

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	237	-5.1	20.00
Aroclor 1242 [2C]	250.00	230	-7.9	20.00
Decachlorobiphenyl	40.000	40.9	2.2	20.00
Tetrachlorometaxylene	40.000	32.8	-18.1	20.00
Decachlorobiphenyl [2C]	40.000	44.0	10.0	20.00
Tetrachlorometaxylene [2C]	40.000	33.4	-16.5	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052333ECD7.D
Data file 2: /230505.b/230505.b/05052333ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV
Client ID:
Injection Date: 06-MAY-2023 03:36
Report Date: 05/06/2023 12:06
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.744	0.002	319899	5.630	0.002	167866	32.8	33.4	1.9	Tetrachloro-m-xylene
13.842	0.002	398699	14.069	0.001	434332	40.9	44.0	7.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	648004	7.7
Hexabromobiphenyl	876625	976327	11.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	365379	4.6
Hexabromobiphenyl	652984	695394	6.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.001	47446	189.1	1	7.205	0.001	36469	176.3
Aroclor-1016	2	7.594	-0.000	147684	188.2	2	7.814	0.007	77885	176.7
Aroclor-1016	3	7.735	0.002	67175	185.2	3	8.012	0.006	38400	197.5
Aroclor-1016	4	8.398	0.000	30565	204.3	4	8.261	0.002	27551	178.4
Total Col1Ave (4 peaks):		191.7				Total Col2Ave (4 peaks):		182.2	RPD = 5	
Corrected Ave (3 peaks):		187.5				Corrected Ave (3 peaks):		177.1	RPD = 6	
Aroclor-1221	1	4.666	0.002	870	19.1	1	---			0.0
Aroclor-1221	2	6.069	0.000	7118	77.8	2	6.257	0.011	4359	78.0
Aroclor-1221	3	6.322	0.001	32969	151.8	3	6.573	0.001	16609	189.0
Total Col1Ave (3 peaks):		82.9				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.666	0.002	870	28.7	1	---			0.0
Aroclor-1232	2	6.069	0.000	7118	112.7	2	7.205	-0.000	36469	449.5
Aroclor-1232	3	7.594	-0.001	147684	490.8	3	7.814	-0.001	77885	477.9
Aroclor-1232	4	8.526	-0.000	70601	548.1	4	8.668	-0.001	25417	538.5
Total Col1Ave (4 peaks):		295.1				Total Col2Ave (3 peaks):		488.7	RPD = 49*	
Corrected Ave (3 peaks):		210.7				Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.213	0.001	47446	232.4	1	7.205	0.001	36469	223.3
Aroclor-1242	2	7.594	-0.000	147684	228.2	2	7.814	0.002	77885	224.2
Aroclor-1242	3	8.398	0.000	30565	244.2	3	9.124	0.001	25864	232.2
Aroclor-1242	4	8.526	0.002	70601	243.8	4	9.552	0.001	32437	241.7
Total Col1Ave (4 peaks):		237.2				Total Col2Ave (4 peaks):		230.4	RPD = 3	
Corrected Ave (3 peaks):		234.8				Corrected Ave (3 peaks):		226.6	RPD = 4	
Aroclor-1248	1	8.398	-0.001	30565	184.8	1	8.261	0.001	27551	158.5
Aroclor-1248	2	8.526	0.002	70601	164.3	2	8.668	0.001	25417	138.4
Aroclor-1248	3	8.946	0.002	172847	209.1	3	9.124	0.004	25864	120.2
Aroclor-1248	4	9.243	-0.001	87363	207.3	4	9.552	0.006	32437	125.7
Total Col1Ave (4 peaks):		191.4				Total Col2Ave (4 peaks):		135.7	RPD = 34	
Corrected Ave (3 peaks):		185.5				Corrected Ave (3 peaks):		128.1	RPD = 37	
Aroclor-1254	1	9.243	-0.004	87363	131.2	1	9.406	0.002	13247	47.7
Aroclor-1254	2	9.326	0.001	28949	96.7	2	9.552	0.053	32437	196.7
Aroclor-1254	3	9.622	0.004	20780	48.3	3	9.927	0.003	10002	44.5
Aroclor-1254	4	9.762	0.006	35470	42.1	4	10.082	0.005	19933	40.6
Aroclor-1254	5	10.140	0.015	28075	55.2	5	10.341	0.013	19432	39.9
Total Col1Ave (5 peaks):		74.7				Total Col2Ave (5 peaks):		73.9	RPD = 1	
Corrected Ave (4 peaks):		60.6				Corrected Ave (4 peaks):		43.2	RPD = 34	
Aroclor-1260	1	10.998	0.005	3609	7.0	1	11.618	0.012	2137	5.8
Aroclor-1260	2	11.317	0.007	3837	7.5	2	11.879	0.007	1437	1.5
Aroclor-1260	3	11.765	0.080	33905	26.6	3	12.382	-0.006	12460	52.1
Aroclor-1260	4	12.097	0.007	9099	14.6	4	---			0.0
Aroclor-1260	5	12.272	0.079	2060	7.6	NS	---			----
Total Col1Ave (5 peaks):		12.6				Total Col2Ave (3 peaks):		19.8	RPD = 44*	
Corrected Ave (4 peaks):		9.2				Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.787	0.009	24040	54.4	1	11.078	-0.075	7864	14.0
Aroclor-1262	2	12.272	0.077	2060	3.3	2	11.618	0.013	2137	4.5
Aroclor-1262	3	---			0.0	3	12.382	-0.004	12460	24.0
Aroclor-1262	4	12.937	-0.002	16041	29.5	4	---			0.0
Total Col1Ave (3 peaks):		29.1				Total Col2Ave (3 peaks):		14.1	RPD = 69*	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.272	0.076	2060	1.3	1	12.382	-0.003	12460	9.5
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.649	0.001	4324	3.5	3	12.845	0.002	951	0.8
Aroclor-1268	4	13.442	0.005	15801	4.4	4	13.628	-0.035	6512	1.7
Total Col1Ave (3 peaks):		3.1				Total Col2Ave (3 peaks):		4.0	RPD = 25	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.842 - 13.740) = 1489022 Col1 Total PCB = 0.2 ppm*

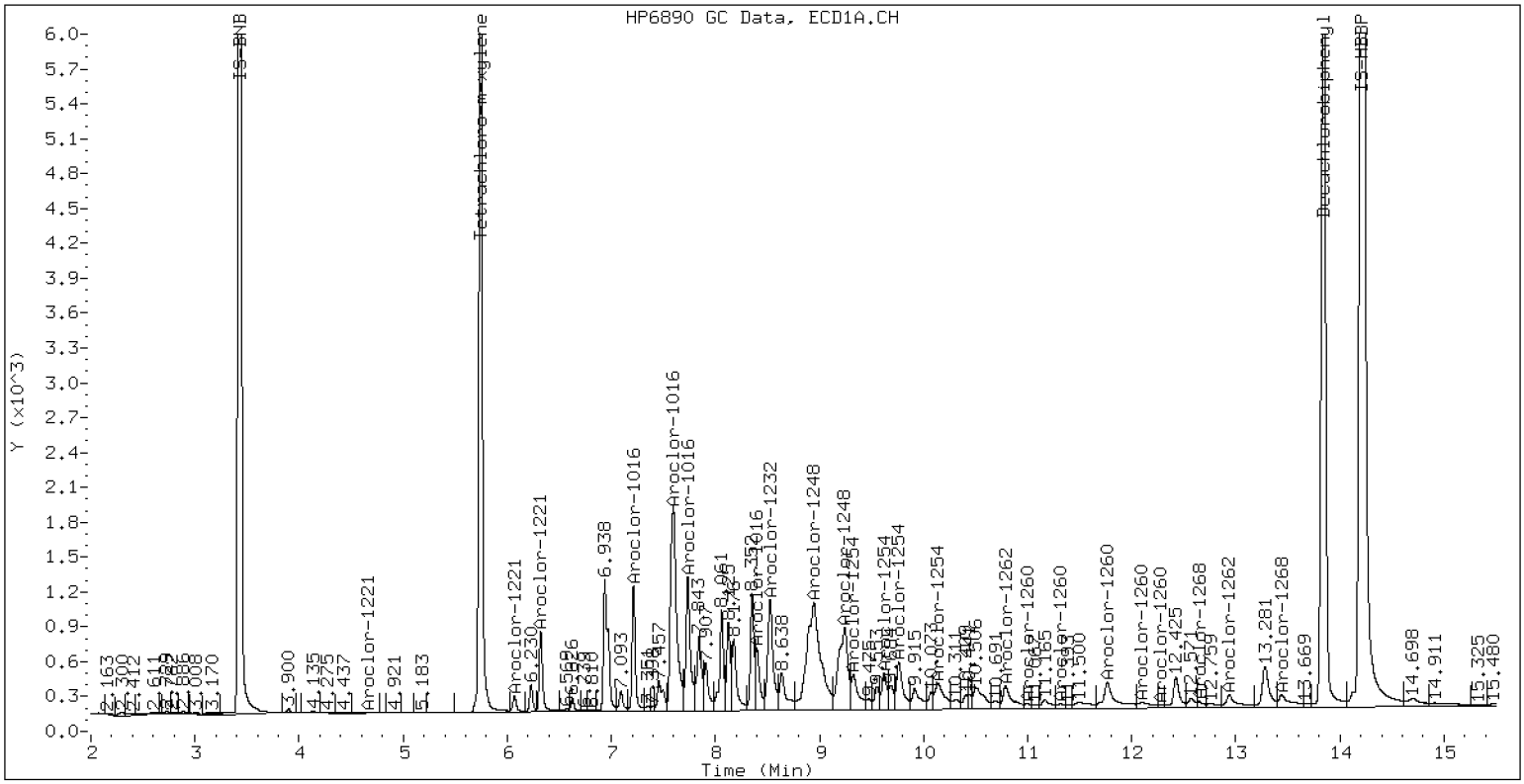
Total PCB Area Col2 (5.728 - 13.968) = 667658 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

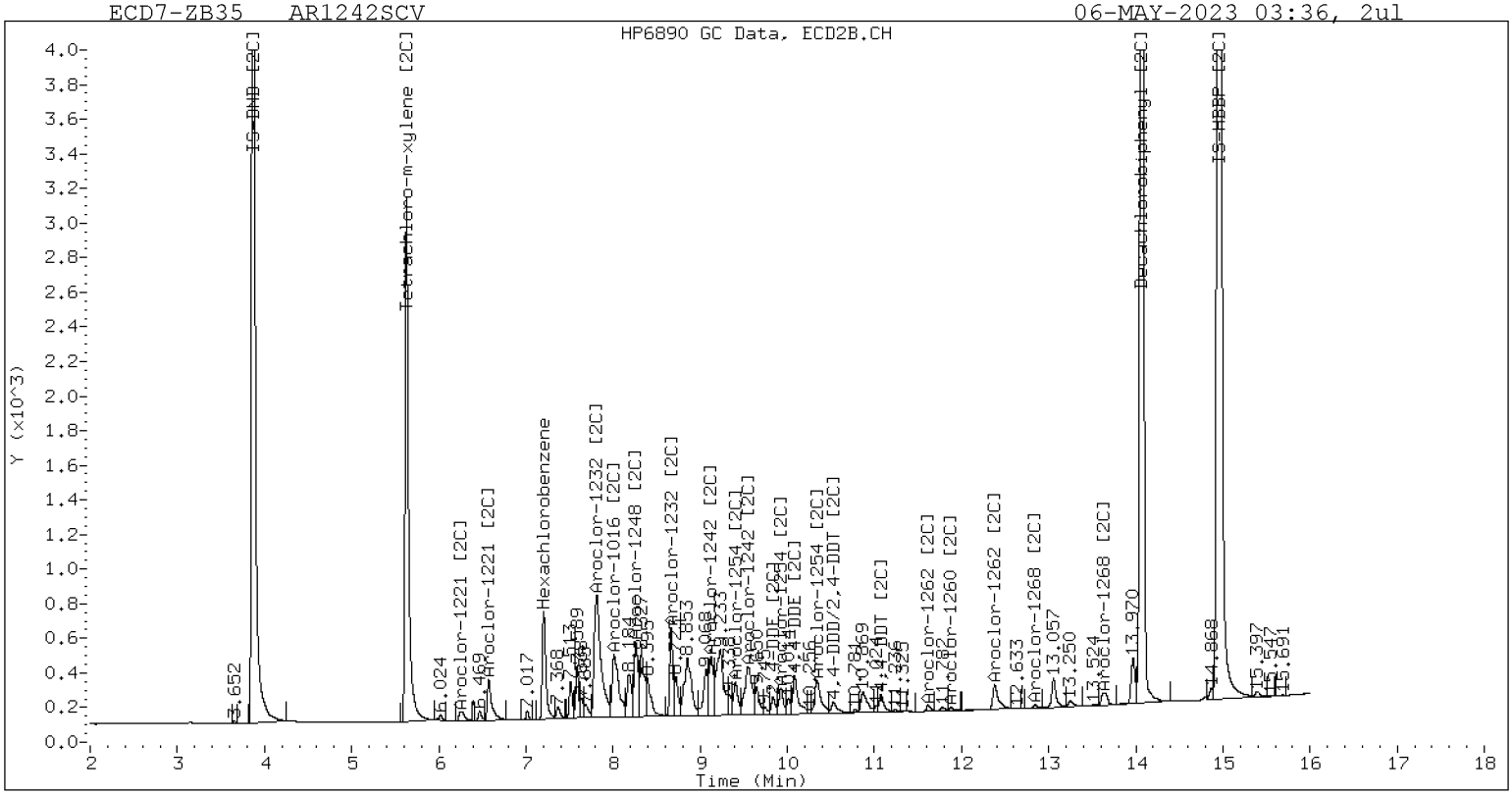
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV 06-MAY-2023 03:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV 06-MAY-2023 03:36, 2ul

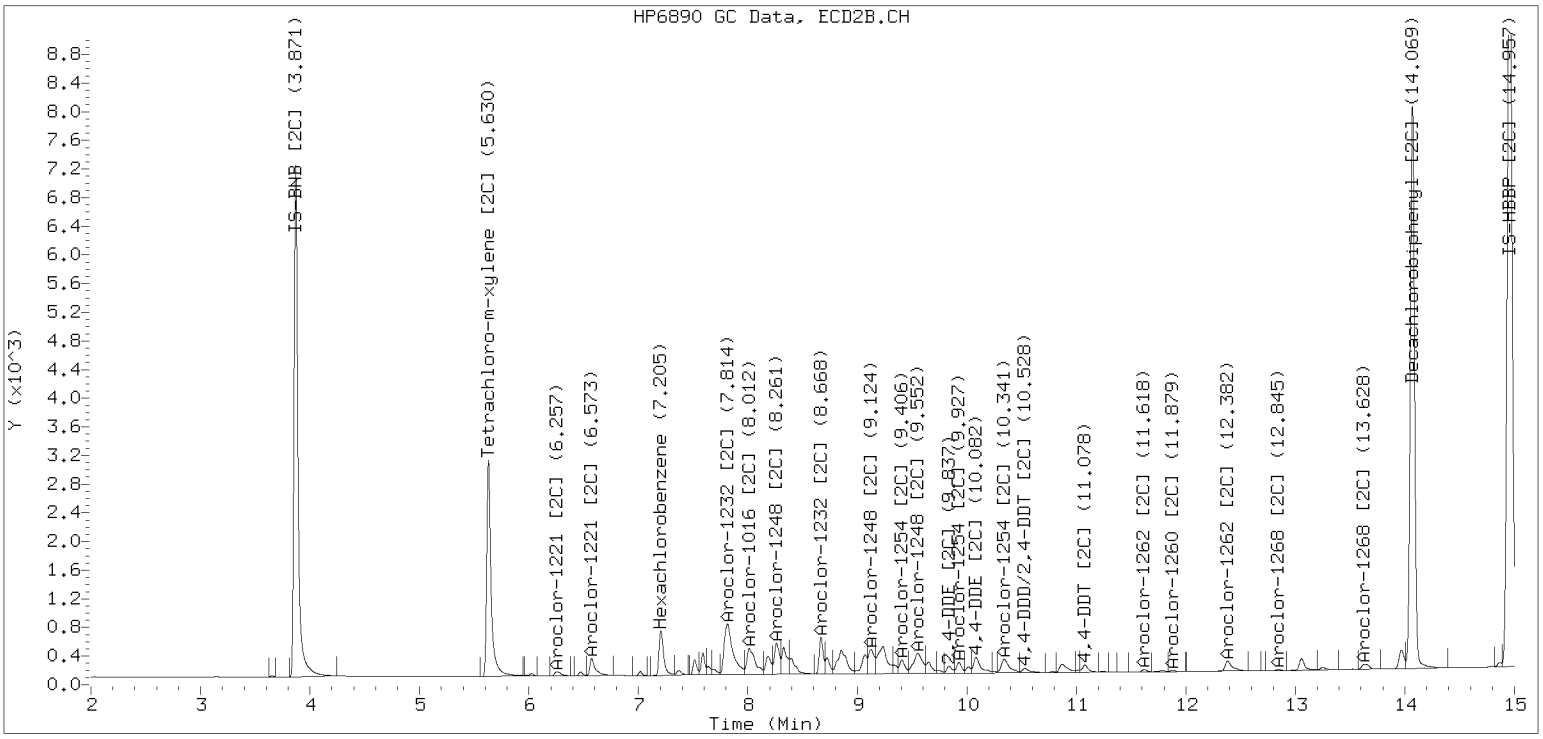


ZB-35 Manual Integration: NO

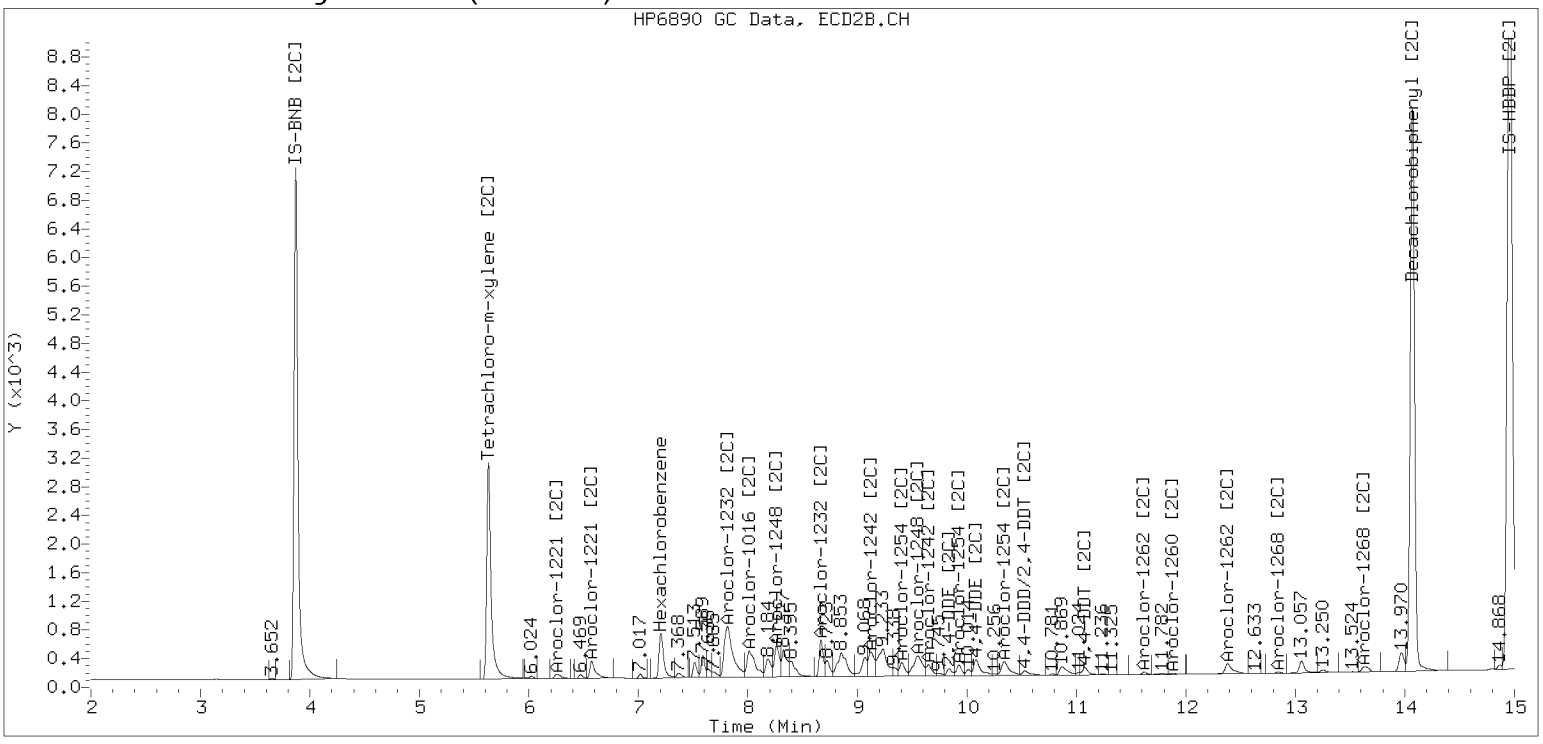
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052333ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00022
Laboratory ID: SLE0079-SCV3
Sequence: SLE0079
Sequence Name: AR1248SCV3
Standard ID: L002066

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	251	0.5	20.00
Aroclor 1248 [2C]	250.00	249	-0.3	20.00
Decachlorobiphenyl	40.000	35.7	-10.8	20.00
Tetrachlorometaxylene	40.000	36.8	-8.0	20.00
Decachlorobiphenyl [2C]	40.000	38.0	-5.0	20.00
Tetrachlorometaxylene [2C]	40.000	37.7	-5.7	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052334ECD7.D
Data file 2: /230505.b/230505.b/05052334ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV
Client ID:
Injection Date: 06-MAY-2023 03:57
Report Date: 05/06/2023 12:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	356328	5.629	0.000	186552	36.8	37.7	2.5	Tetrachloro-m-xylene
13.842	0.001	339452	14.070	0.002	373861	35.7	38.0	6.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	643038	6.9
Hexabromobiphenyl	876625	952051	8.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	359604	3.0
Hexabromobiphenyl	652984	692982	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	0.000	19871	79.8	1	7.203	-0.001	18843	92.6
Aroclor-1016	2	7.589	-0.006	95111	122.2	2	7.812	0.005	52352	120.7
Aroclor-1016	3	7.736	0.003	37565	104.4	3	8.012	0.006	8263	43.2
Aroclor-1016	4	8.399	0.002	41542	279.7	4	8.260	0.001	42833	281.8
Total Col1Ave (4 peaks):					146.5	Total Col2Ave (4 peaks):				134.6 RPD = 9
Corrected Ave (3 peaks):					102.1	Corrected Ave (3 peaks):				85.5 RPD = 18
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.066	-0.003	351	3.9	2	6.275	0.029	1573	28.6
Aroclor-1221	3	6.320	-0.001	3509	16.3	3	6.576	0.004	967	11.2
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.066	-0.003	351	5.6	2	7.203	-0.001	18843	236.0
Aroclor-1232	3	7.589	-0.006	95111	318.5	3	7.812	-0.002	52352	326.4
Aroclor-1232	4	8.524	-0.002	105782	827.6	4	8.667	-0.002	44962	968.0
Total Col1Ave (3 peaks):					383.9	Total Col2Ave (3 peaks):				510.1 RPD = 28
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.212	0.000	19871	98.1	1	7.203	-0.000	18843	117.2
Aroclor-1242	2	7.589	-0.006	95111	148.1	2	7.812	-0.000	52352	153.1
Aroclor-1242	3	8.399	0.001	41542	334.5	3	9.120	-0.003	52681	480.6
Aroclor-1242	4	8.524	-0.000	105782	368.1	4	9.548	-0.002	63343	479.5
Total Col1Ave (4 peaks):					237.2	Total Col2Ave (4 peaks):				307.6 RPD = 26
Corrected Ave (3 peaks):					193.6	Corrected Ave (3 peaks):				250.0 RPD = 25
Aroclor-1248	1	8.399	0.001	41542	253.1	1	8.260	-0.001	42833	250.4
Aroclor-1248	2	8.524	-0.000	105782	248.0	2	8.667	0.000	44962	248.8
Aroclor-1248	3	8.944	-0.000	206928	252.3	3	9.120	-0.000	52681	248.7
Aroclor-1248	4	9.242	-0.001	105227	251.7	4	9.548	0.002	63343	249.4
Total Col1Ave (4 peaks):					251.3	Total Col2Ave (4 peaks):				249.3 RPD = 1
Corrected Ave (3 peaks):					250.6	Corrected Ave (3 peaks):				249.0 RPD = 1
Aroclor-1254	1	9.242	-0.004	105227	159.2	1	9.404	0.000	25835	94.6
Aroclor-1254	2	9.324	-0.001	51326	172.8	2	9.548	0.049	63343	390.3
Aroclor-1254	3	9.619	0.001	41394	97.0	3	9.925	0.001	22609	102.1
Aroclor-1254	4	9.759	0.003	72223	86.4	4	10.079	0.001	43816	90.7
Aroclor-1254	5	10.135	0.010	49936	98.9	5	10.345	0.016	42513	88.7
Total Col1Ave (5 peaks):					122.9	Total Col2Ave (5 peaks):				153.3 RPD = 22
Corrected Ave (4 peaks):					110.4	Corrected Ave (4 peaks):				94.0 RPD = 16
Aroclor-1260	1	10.998	0.005	1863	3.7	1	11.617	0.011	2599	7.1
Aroclor-1260	2	11.314	0.004	1152	2.3	2	11.877	0.005	1951	2.0
Aroclor-1260	3	11.695	0.009	1829	1.5	3	12.389	0.001	857	3.6
Aroclor-1260	4	12.097	0.007	1266	2.1	4	12.458	0.003	1302	2.0
Aroclor-1260	5	12.195	0.002	464	1.7	NS	---			----
Total Col1Ave (5 peaks):					2.3	Total Col2Ave (4 peaks):				3.7 RPD = 48*
Corrected Ave (4 peaks):					1.9	Corrected Ave (3 peaks):				2.5 RPD = 29
Aroclor-1262	1	10.784	0.005	15405	35.8	1	11.077	-0.077	9003	16.0
Aroclor-1262	2	12.195	0.000	464	0.8	2	11.617	0.012	2599	5.5
Aroclor-1262	3	12.271	0.002	489	0.8	3	12.389	0.003	857	1.7
Aroclor-1262	4	12.940	0.001	1638	3.1	4	12.458	0.002	1302	1.5
Total Col1Ave (4 peaks):					10.1	Total Col2Ave (4 peaks):				6.2 RPD = 48*
Corrected Ave (3 peaks):					1.5	Corrected Ave (3 peaks):				2.9 RPD = 61*
Aroclor-1268	1	12.195	-0.001	464	0.3	1	12.389	0.004	857	0.7
Aroclor-1268	2	12.271	0.003	489	0.3	2	12.458	0.006	1302	0.9
Aroclor-1268	3	12.649	0.001	1831	1.5	3	12.845	0.002	676	0.6
Aroclor-1268	4	13.443	0.006	5387	1.6	4	13.661	-0.003	2707	0.7
Total Col1Ave (4 peaks):					0.9	Total Col2Ave (4 peaks):				0.7 RPD = 26
Corrected Ave (3 peaks):					0.7	Corrected Ave (3 peaks):				0.6 RPD = 11

Total PCB Area Col1 (5.842 - 13.740) = 1634238 Col1 Total PCB = 0.2 ppm*

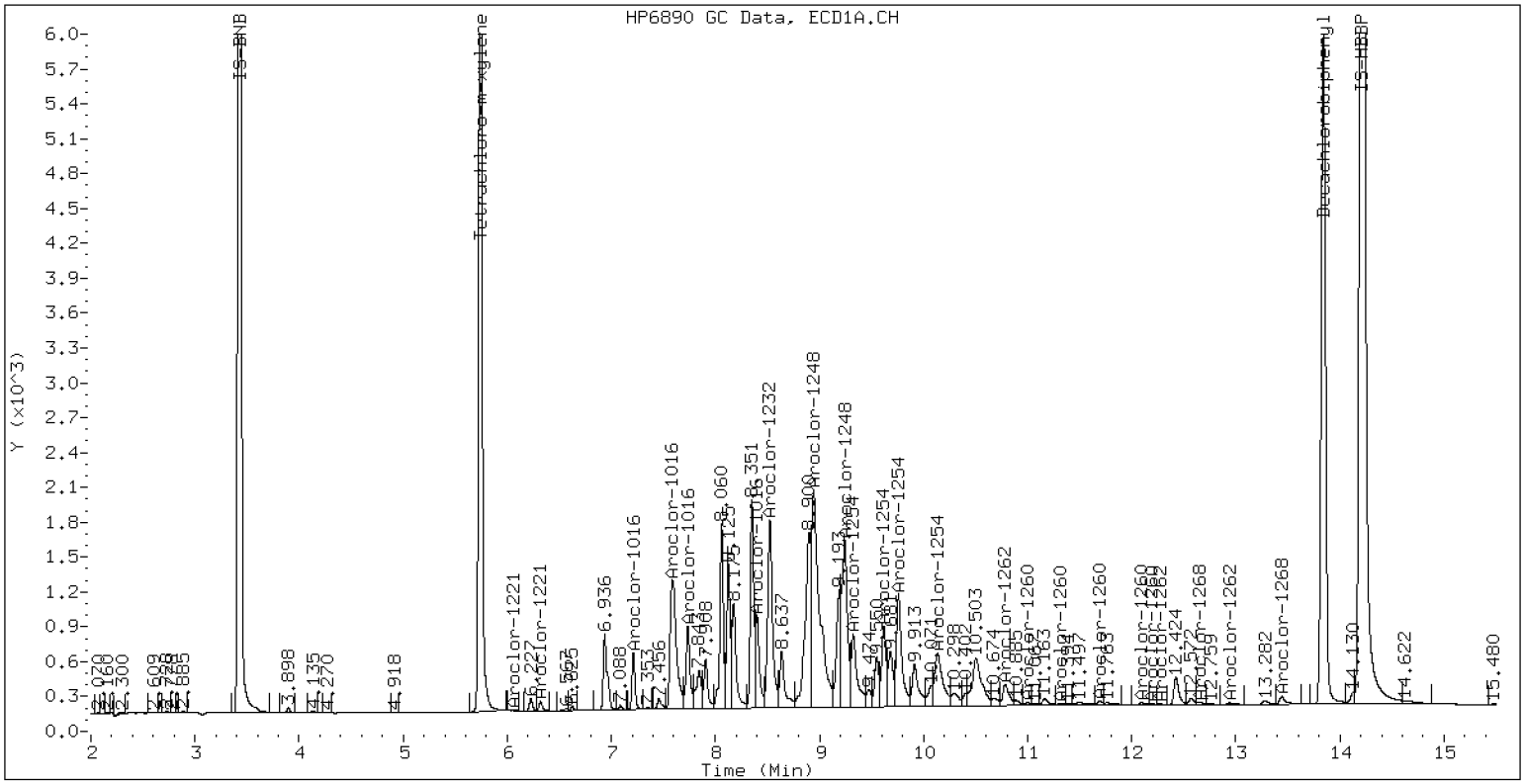
Total PCB Area Col2 (5.728 - 13.968) = 876760 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

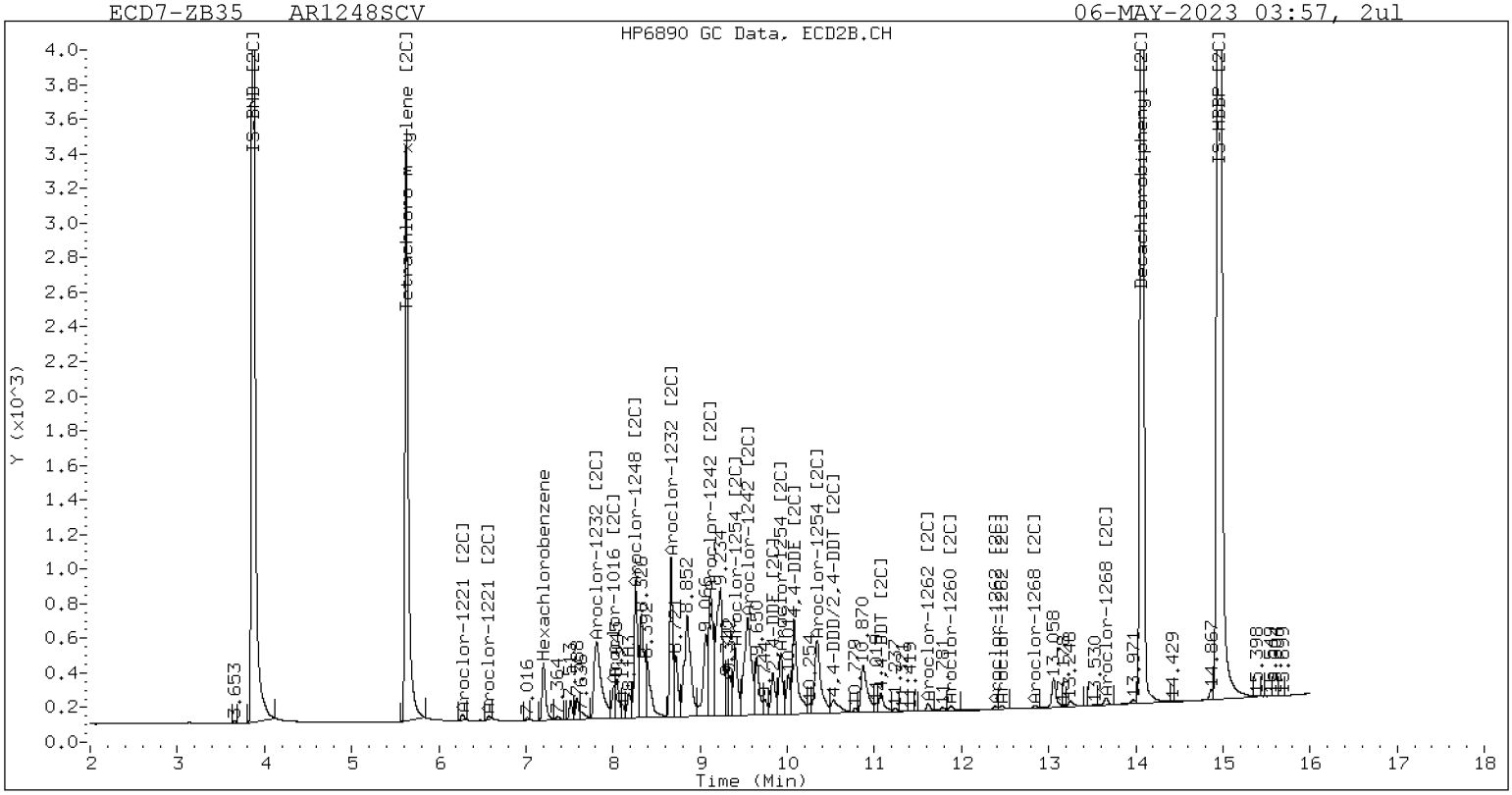
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV 06-MAY-2023 03:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV 06-MAY-2023 03:57, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00022
Laboratory ID: SLE0079-SCV4
Sequence: SLE0079
Sequence Name: AR1254SCV4
Standard ID: L002067

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	239	-4.3	20.00
Aroclor 1254 [2C]	250.00	241	-3.8	20.00
Decachlorobiphenyl	40.000	36.0	-10.1	20.00
Tetrachlorometaxylene	40.000	37.6	-6.0	20.00
Decachlorobiphenyl [2C]	40.000	38.5	-3.8	20.00
Tetrachlorometaxylene [2C]	40.000	38.3	-4.2	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052335ECD7.D
Data file 2: /230505.b/230505.b/05052335ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV
Client ID:
Injection Date: 06-MAY-2023 04:18
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	368022	5.631	0.002	192033	37.6	38.3	2.0	Tetrachloro-m-xylene
13.843	0.002	352066	14.070	0.002	385384	36.0	38.5	6.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	650234	8.1
Hexabromobiphenyl	876625	980276	11.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	364142	4.3
Hexabromobiphenyl	652984	705291	8.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.002	635	2.5	1	---			0.0
Aroclor-1016	2	7.590	-0.004	2512	3.2	2	---			0.0
Aroclor-1016	3	7.738	0.005	1594	4.4	3	---			0.0
Aroclor-1016	4	8.351	-0.047	31774	211.6	4	---			0.0
Total Col1Ave (4 peaks):					55.4	Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.052	-0.018	242	2.6	2	---			0.0
Aroclor-1221	3	6.322	0.001	427	2.0	3	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.052	-0.018	242	3.8	2	---			0.0
Aroclor-1232	3	7.590	-0.005	2512	8.3	3	---			0.0
Aroclor-1232	4	8.528	0.001	13950	107.9	4	---			0.0
Total Col1Ave (3 peaks):					40.0	Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.214	0.002	635	3.1	1	---			0.0
Aroclor-1242	2	7.590	-0.005	2512	3.9	2	---			0.0
Aroclor-1242	3	8.351	-0.047	31774	253.0	3	9.125	0.002	23963	215.9
Aroclor-1242	4	8.528	0.004	13950	48.0	4	9.649	0.099	23982	179.3
Total Col1Ave (4 peaks):					77.0	Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.351	-0.048	31774	191.4	1	8.260	-0.000	23490	135.6
Aroclor-1248	2	8.528	0.004	13950	32.3	2	8.669	0.002	16693	91.2
Aroclor-1248	3	8.941	-0.003	154338	186.1	3	9.125	0.005	23963	111.7
Aroclor-1248	4	9.246	0.003	158369	374.6	4	9.499	-0.047	38716	150.5
Total Col1Ave (4 peaks):					196.1	Total Col2Ave (4 peaks):			122.3	RPD = 46*
Corrected Ave (3 peaks):					136.6	Corrected Ave (3 peaks):			112.8	RPD = 19
Aroclor-1254	1	9.246	-0.001	158369	237.0	1	9.404	0.000	67493	244.0
Aroclor-1254	2	9.325	-0.000	72386	241.1	2	9.499	-0.000	38716	235.6
Aroclor-1254	3	9.617	-0.001	103602	240.1	3	9.925	0.001	53972	240.7
Aroclor-1254	4	9.756	0.000	201259	238.2	4	10.079	0.001	116950	239.0
Aroclor-1254	5	10.127	0.001	122207	239.5	5	10.327	-0.001	118439	243.9
Total Col1Ave (5 peaks):					239.2	Total Col2Ave (5 peaks):			240.6	RPD = 1
Corrected Ave (4 peaks):					238.7	Corrected Ave (4 peaks):			239.8	RPD = 0
Aroclor-1260	1	10.994	0.001	13538	26.1	1	11.615	0.009	33465	89.3
Aroclor-1260	2	11.313	0.003	13900	27.2	2	11.876	0.004	25534	26.1
Aroclor-1260	3	11.689	0.004	32548	25.4	3	12.404	0.016	1811	7.5
Aroclor-1260	4	12.093	0.003	25285	40.3	4	12.458	0.002	14842	22.7
Aroclor-1260	5	12.273	0.079	2534	9.3	NS	---			----
Total Col1Ave (5 peaks):					25.6	Total Col2Ave (4 peaks):			36.4	RPD = 35
Corrected Ave (4 peaks):					22.0	Corrected Ave (3 peaks):			18.7	RPD = 16
Aroclor-1262	1	10.779	0.000	210018	473.6	1	11.073	-0.081	114323	200.0
Aroclor-1262	2	12.273	0.078	2534	4.1	2	11.615	0.010	33465	69.4
Aroclor-1262	3	---			0.0	3	12.404	0.018	1811	3.4
Aroclor-1262	4	12.939	0.001	1830	3.3	4	12.458	0.002	14842	17.3
Total Col1Ave (3 peaks):					160.3	Total Col2Ave (4 peaks):			72.6	RPD = 75*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			30.1	
Aroclor-1268	1	12.273	0.077	2534	1.6	1	12.404	0.019	1811	1.4
Aroclor-1268	2	---			0.0	2	12.458	0.005	14842	10.3
Aroclor-1268	3	12.654	0.006	2669	2.1	3	12.847	0.004	835	0.7
Aroclor-1268	4	13.442	0.004	6266	1.8	4	13.662	-0.001	2350	0.6
Total Col1Ave (3 peaks):					1.8	Total Col2Ave (4 peaks):			3.2	RPD = 55*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			0.9	

Total PCB Area Col1 (5.842 - 13.740) = 2123119 Col1 Total PCB = 0.3 ppm*

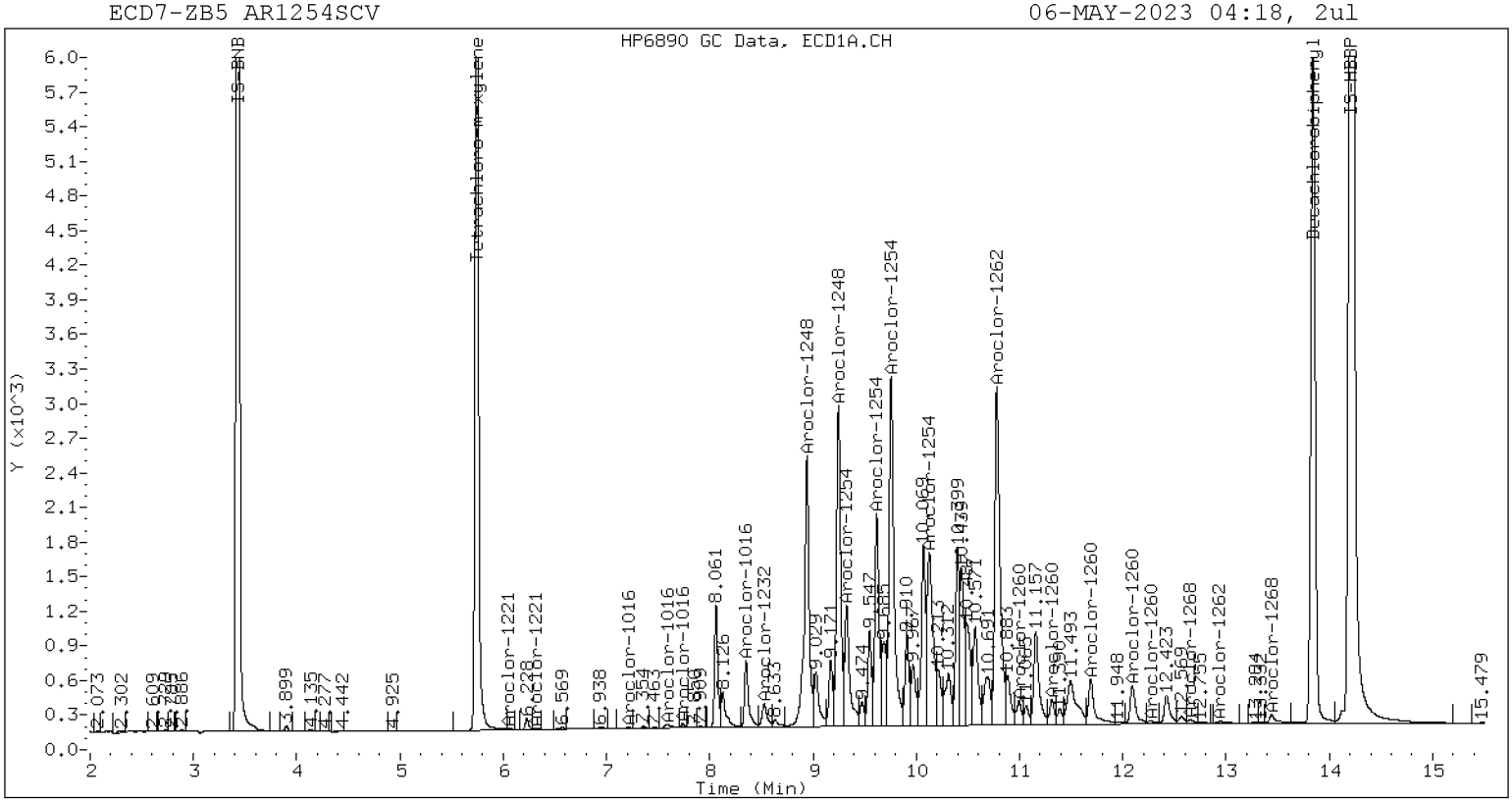
Total PCB Area Col2 (5.728 - 13.968) = 1146487 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

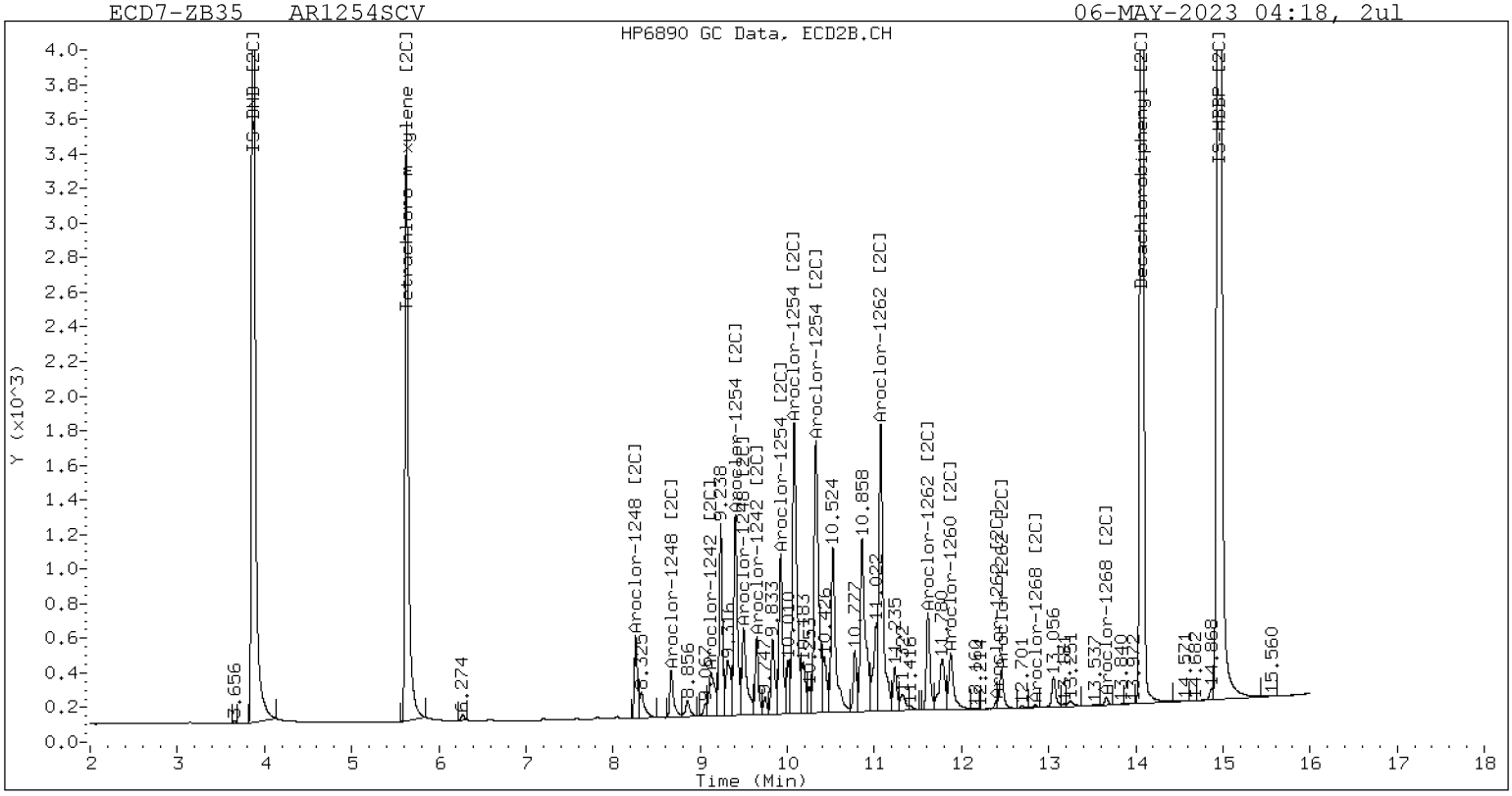
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV 06-MAY-2023 04:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV 06-MAY-2023 04:18, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00022
Laboratory ID: SLE0079-SCV5
Sequence: SLE0079
Sequence Name: AR2162SCV5
Standard ID: L002068

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1221	250.00	290	15.9	20.00
Aroclor 1221 [2C]	250.00	288	15.3	20.00
Aroclor 1262	250.00	265	6.1	20.00
Aroclor 1262 [2C]	250.00	259	3.5	20.00
Decachlorobiphenyl	40.000	37.1	-7.3	20.00
Tetrachlorometaxylene	40.000	37.8	-5.5	20.00
Decachlorobiphenyl [2C]	40.000	38.8	-3.1	20.00
Tetrachlorometaxylene [2C]	40.000	39.1	-2.4	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052336ECD7.D
Data file 2: /230505.b/230505.b/05052336ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV
Client ID:
Injection Date: 06-MAY-2023 04:39
Report Date: 05/06/2023 11:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	358254	5.628	-0.000	183759	37.8	39.1	3.3	Tetrachloro-m-xylene
13.842	0.002	344347	14.070	0.002	373300	37.1	38.8	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	629547	4.7
Hexabromobiphenyl	876625	929713	6.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	341980	-2.1
Hexabromobiphenyl	652984	678097	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	6601	27.1	1	7.207	0.003	3935	20.3
Aroclor-1016	2	7.595	0.000	13419	17.6	2	7.821	0.013	6146	14.9
Aroclor-1016	3	7.735	0.003	7114	20.2	3	8.027	0.021	3201	17.6
Aroclor-1016	4	8.353	-0.045	3916	26.9	4	8.262	0.003	2131	14.7
Total Col1Ave (4 peaks):					23.0	Total Col2Ave (4 peaks):				16.9 RPD = 30
Corrected Ave (3 peaks):					21.6	Corrected Ave (3 peaks):				15.7 RPD = 31
Aroclor-1221	1	4.663	-0.001	13184	297.8	1	4.893	-0.001	7253	287.5
Aroclor-1221	2	6.070	0.000	25527	287.4	2	6.244	-0.001	14853	284.1
Aroclor-1221	3	6.321	0.000	59985	284.3	3	6.571	-0.001	24083	292.9
Total Col1Ave (3 peaks):					289.8	Total Col2Ave (3 peaks):				288.2 RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.663	-0.001	13184	447.0	1	4.893	-0.001	7253	546.9
Aroclor-1232	2	6.070	0.000	25527	416.0	2	7.207	0.002	3935	51.8
Aroclor-1232	3	7.595	-0.000	13419	45.9	3	7.821	0.006	6146	40.3
Aroclor-1232	4	8.528	0.001	2679	21.4	4	8.671	0.002	1120	25.4
Total Col1Ave (4 peaks):					232.6	Total Col2Ave (4 peaks):				166.1 RPD = 33
Corrected Ave (3 peaks):					161.1	Corrected Ave (3 peaks):				39.2 RPD = 122*
Aroclor-1242	1	7.213	0.001	6601	33.3	1	7.207	0.004	3935	25.7
Aroclor-1242	2	7.595	-0.000	13419	21.3	2	7.821	0.008	6146	18.9
Aroclor-1242	3	8.353	-0.045	3916	32.2	3	9.133	0.010	881	8.5
Aroclor-1242	4	8.528	0.003	2679	9.5	4	9.651	0.101	516	4.1
Total Col1Ave (4 peaks):					24.1	Total Col2Ave (4 peaks):				14.3 RPD = 51*
Corrected Ave (3 peaks):					21.0	Corrected Ave (3 peaks):				10.5 RPD = 67*
Aroclor-1248	1	8.353	-0.046	3916	24.4	1	8.262	0.002	2131	13.1
Aroclor-1248	2	8.528	0.003	2679	6.4	2	8.671	0.004	1120	6.5
Aroclor-1248	3	8.942	-0.002	25144	31.3	3	9.133	0.013	881	4.4
Aroclor-1248	4	9.251	0.008	25583	62.5	4	9.500	-0.045	335	1.4
Total Col1Ave (4 peaks):					31.1	Total Col2Ave (4 peaks):				6.3 RPD = 132*
Corrected Ave (3 peaks):					20.7	Corrected Ave (3 peaks):				4.1 RPD = 134*
Aroclor-1254	1	9.251	0.005	25583	39.5	1	9.408	0.004	9719	37.4
Aroclor-1254	2	---			0.0	2	9.500	0.001	335	2.2
Aroclor-1254	3	9.620	0.002	4245	10.2	3	9.928	0.004	2055	9.8
Aroclor-1254	4	9.758	0.003	11050	13.5	4	10.100	0.022	55162	120.0
Aroclor-1254	5	10.071	-0.055	129151	261.4	5	10.325	-0.004	68421	150.1
Total Col1Ave (4 peaks):					81.1	Total Col2Ave (5 peaks):				63.9 RPD = 24
Corrected Ave (3 peaks):					21.1	Corrected Ave (4 peaks):				42.3 RPD = 67*
Aroclor-1260	1	10.995	0.002	206643	420.3	1	11.605	-0.001	119902	332.9
Aroclor-1260	2	11.311	0.001	167443	345.1	2	11.872	0.000	293746	311.8
Aroclor-1260	3	11.687	0.001	390491	321.4	3	12.386	-0.002	131462	563.2
Aroclor-1260	4	12.091	0.001	120118	201.8	4	12.456	0.000	212898	338.4
Aroclor-1260	5	12.195	0.002	155588	599.5	NS	---			----
Total Col1Ave (5 peaks):					377.6	Total Col2Ave (4 peaks):				386.6 RPD = 2
Corrected Ave (4 peaks):					322.2	Corrected Ave (3 peaks):				327.7 RPD = 2
Aroclor-1262	1	10.777	-0.001	114050	271.2	1	11.153	0.000	141861	258.2
Aroclor-1262	2	12.195	0.001	155588	263.0	2	11.605	0.000	119902	258.7
Aroclor-1262	3	12.269	0.000	167998	264.2	3	12.386	-0.000	131462	259.6
Aroclor-1262	4	12.938	-0.001	136019	262.5	4	12.456	0.000	212898	258.0
Total Col1Ave (4 peaks):					265.2	Total Col2Ave (4 peaks):				258.6 RPD = 3
Corrected Ave (3 peaks):					263.3	Corrected Ave (3 peaks):				258.3 RPD = 2
Aroclor-1268	1	12.195	-0.000	155588	104.9	1	12.386	0.001	131462	102.4
Aroclor-1268	2	12.269	0.001	167998	114.1	2	12.456	0.003	212898	154.3
Aroclor-1268	3	12.675	0.027	60611	51.2	3	12.843	-0.000	8393	7.1
Aroclor-1268	4	13.439	0.001	49821	14.7	4	13.661	-0.002	39480	10.4
Total Col1Ave (4 peaks):					71.2	Total Col2Ave (4 peaks):				68.6 RPD = 4

Corrected Ave (3 peaks): 56.9 Corrected Ave (3 peaks): 40.0 RPD = 35

Total PCB Area Col1 (5.842 - 13.740) = 2870829 Col1 Total PCB = 0.4 ppm*

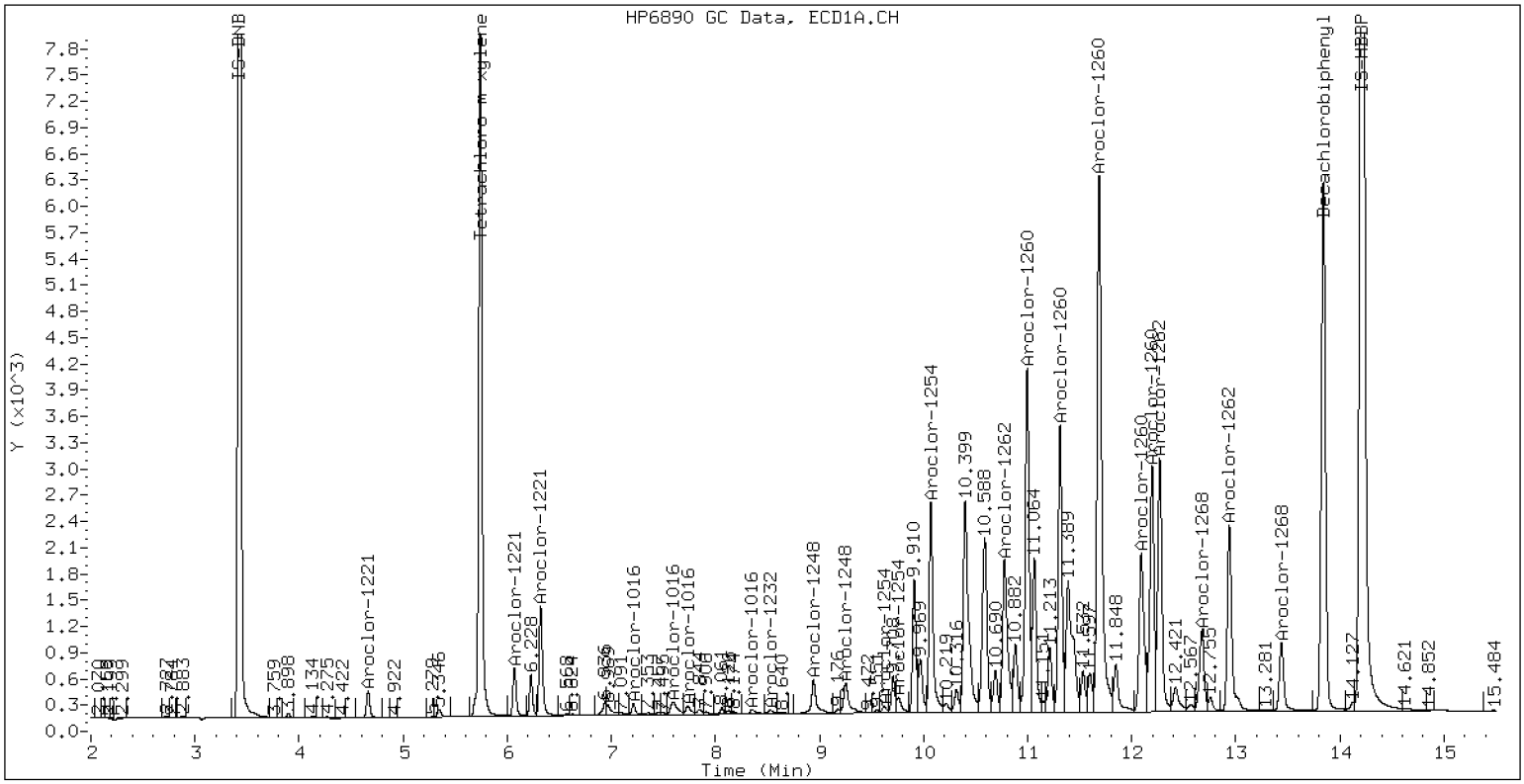
Total PCB Area Col2 (5.728 - 13.968) = 1885829 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

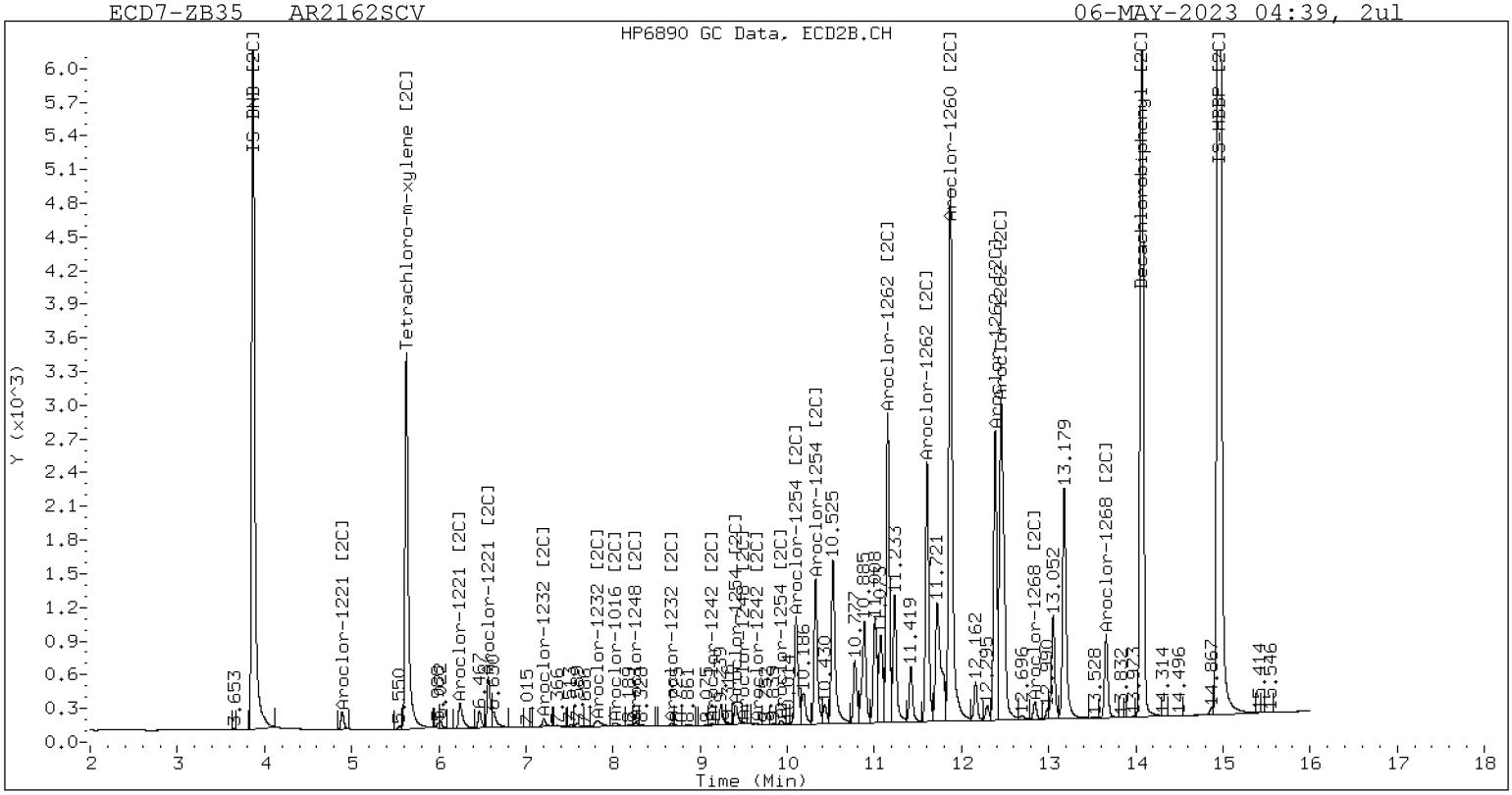
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV 06-MAY-2023 04:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV 06-MAY-2023 04:39, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00022
Laboratory ID: SLE0079-SCV6
Sequence: SLE0079
Sequence Name: AR3268SCV6
Standard ID: L002069

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	256	2.6	20.00
Aroclor 1232 [2C]	250.00	301	20.3	20.00
Aroclor 1268	250.00	266	6.5	20.00
Aroclor 1268 [2C]	250.00	263	5.2	20.00
Decachlorobiphenyl	40.000	55.1	37.7	20.00
Tetrachlorometaxylene	40.000	38.4	-4.0	20.00
Decachlorobiphenyl [2C]	40.000	59.3	48.3	20.00
Tetrachlorometaxylene [2C]	40.000	40.4	1.1	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052337ECD7.D
Data file 2: /230505.b/230505.b/05052337ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV
Client ID:
Injection Date: 06-MAY-2023 05:00
Report Date: 05/06/2023 11:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	373749	5.629	0.001	196946	38.4	40.4	5.2	Tetrachloro-m-xylene
13.842	0.002	525409	14.069	0.001	586548	55.1	59.3	7.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	646456	7.5
Hexabromobiphenyl	876625	954969	8.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	354120	1.4
Hexabromobiphenyl	652984	696139	6.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.214	0.001	28623	114.3	1	7.205	0.002	23124	115.4
Aroclor-1016	2	7.597	0.002	85721	109.5	2	7.815	0.007	47496	111.2
Aroclor-1016	3	7.735	0.002	41343	114.3	3	8.014	0.008	24029	127.5
Aroclor-1016	4	8.400	0.002	16653	111.6	4	8.262	0.003	15421	103.0
Total Col1Ave (4 peaks):		112.4				Total Col2Ave (4 peaks):		114.3	RPD = 2	
Corrected Ave (3 peaks):		111.8				Corrected Ave (3 peaks):		109.9	RPD = 2	
Aroclor-1221	1	4.664	0.001	7272	159.9	1	4.895	0.000	4045	154.9
Aroclor-1221	2	6.070	0.001	13478	147.8	2	6.246	0.000	9235	170.6
Aroclor-1221	3	6.321	0.001	43831	202.3	3	6.572	0.000	24300	285.4
Total Col1Ave (3 peaks):		170.0				Total Col2Ave (3 peaks):		203.6	RPD = 18	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.664	0.001	7272	240.1	1	4.895	0.001	4045	294.5
Aroclor-1232	2	6.070	0.001	13478	213.9	2	7.205	0.001	23124	294.1
Aroclor-1232	3	7.597	0.002	85721	285.5	3	7.815	0.000	47496	300.7
Aroclor-1232	4	8.527	0.000	36809	286.5	4	8.669	-0.000	14324	313.2
Total Col1Ave (4 peaks):		256.5				Total Col2Ave (4 peaks):		300.6	RPD = 16	
Corrected Ave (3 peaks):		246.5				Corrected Ave (3 peaks):		296.5	RPD = 18	
Aroclor-1242	1	7.214	0.002	28623	140.5	1	7.205	0.002	23124	146.1
Aroclor-1242	2	7.597	0.002	85721	132.8	2	7.815	0.002	47496	141.1
Aroclor-1242	3	8.400	0.002	16653	133.4	3	9.128	0.005	14403	133.4
Aroclor-1242	4	8.527	0.003	36809	127.4	4	9.648	0.098	5512	42.4
Total Col1Ave (4 peaks):		133.5				Total Col2Ave (4 peaks):		115.7	RPD = 14	
Corrected Ave (3 peaks):		131.2				Corrected Ave (3 peaks):		105.6	RPD = 22	
Aroclor-1248	1	8.400	0.001	16653	100.9	1	8.262	0.002	15421	91.5
Aroclor-1248	2	8.527	0.003	36809	85.8	2	8.669	0.002	14324	80.5
Aroclor-1248	3	8.944	0.000	89377	108.4	3	9.128	0.008	14403	69.0
Aroclor-1248	4	9.238	-0.005	41570	98.9	4	9.560	0.015	17331	69.3
Total Col1Ave (4 peaks):		98.5				Total Col2Ave (4 peaks):		77.6	RPD = 24	
Corrected Ave (3 peaks):		95.2				Corrected Ave (3 peaks):		72.9	RPD = 26	
Aroclor-1254	1	9.238	-0.008	41570	62.6	1	9.407	0.003	5487	20.4
Aroclor-1254	2	9.326	0.001	12640	42.3	2	9.560	0.061	17331	108.4
Aroclor-1254	3	9.624	0.006	7232	16.9	3	9.929	0.005	3481	16.0
Aroclor-1254	4	9.764	0.008	11671	13.9	4	10.086	0.009	7259	15.3
Aroclor-1254	5	10.139	0.014	7544	14.9	5	10.345	0.017	6610	14.0
Total Col1Ave (5 peaks):		30.1				Total Col2Ave (5 peaks):		34.8	RPD = 14	
Corrected Ave (4 peaks):		22.0				Corrected Ave (4 peaks):		16.4	RPD = 29	
Aroclor-1260	1	10.998	0.005	85093	168.5	1	11.598	-0.008	75237	203.5
Aroclor-1260	2	11.313	0.003	6363	12.8	2	11.873	0.001	33655	34.8
Aroclor-1260	3	11.688	0.002	47857	38.3	3	12.384	-0.004	346138	1444.4
Aroclor-1260	4	12.094	0.004	1291	2.1	4	12.453	-0.002	373218	577.8
Aroclor-1260	5	12.195	0.001	406211	1523.9	NS	---			----
Total Col1Ave (5 peaks):		349.1				Total Col2Ave (4 peaks):		565.1	RPD = 47*	
Corrected Ave (4 peaks):		55.4				Corrected Ave (3 peaks):		272.0	RPD = 132*	
Aroclor-1262	1	10.785	0.006	4006	9.3	1	11.156	0.002	52531	93.1
Aroclor-1262	2	12.195	0.000	406211	668.6	2	11.598	-0.007	75237	158.2
Aroclor-1262	3	12.268	-0.002	403730	618.2	3	12.384	-0.002	346138	665.8
Aroclor-1262	4	12.937	-0.002	145536	273.5	4	12.453	-0.002	373218	440.5
Total Col1Ave (4 peaks):		392.4				Total Col2Ave (4 peaks):		339.4	RPD = 14	
Corrected Ave (3 peaks):		300.3				Corrected Ave (3 peaks):		230.6	RPD = 26	
Aroclor-1268	1	12.195	-0.001	406211	266.7	1	12.384	-0.001	346138	262.7
Aroclor-1268	2	12.268	-0.000	403730	266.9	2	12.453	0.001	373218	263.5
Aroclor-1268	3	12.648	-0.000	323568	266.0	3	12.844	0.001	316122	260.6
Aroclor-1268	4	13.439	0.002	920777	265.1	4	13.663	0.000	1029335	264.8
Total Col1Ave (4 peaks):		266.2				Total Col2Ave (4 peaks):		262.9	RPD = 1	

Corrected Ave (3 peaks): 265.9 Corrected Ave (3 peaks): 262.3 RPD = 1

Total PCB Area Col1 (5.842 - 13.740) = 3325332 Col1 Total PCB = 0.5 ppm*

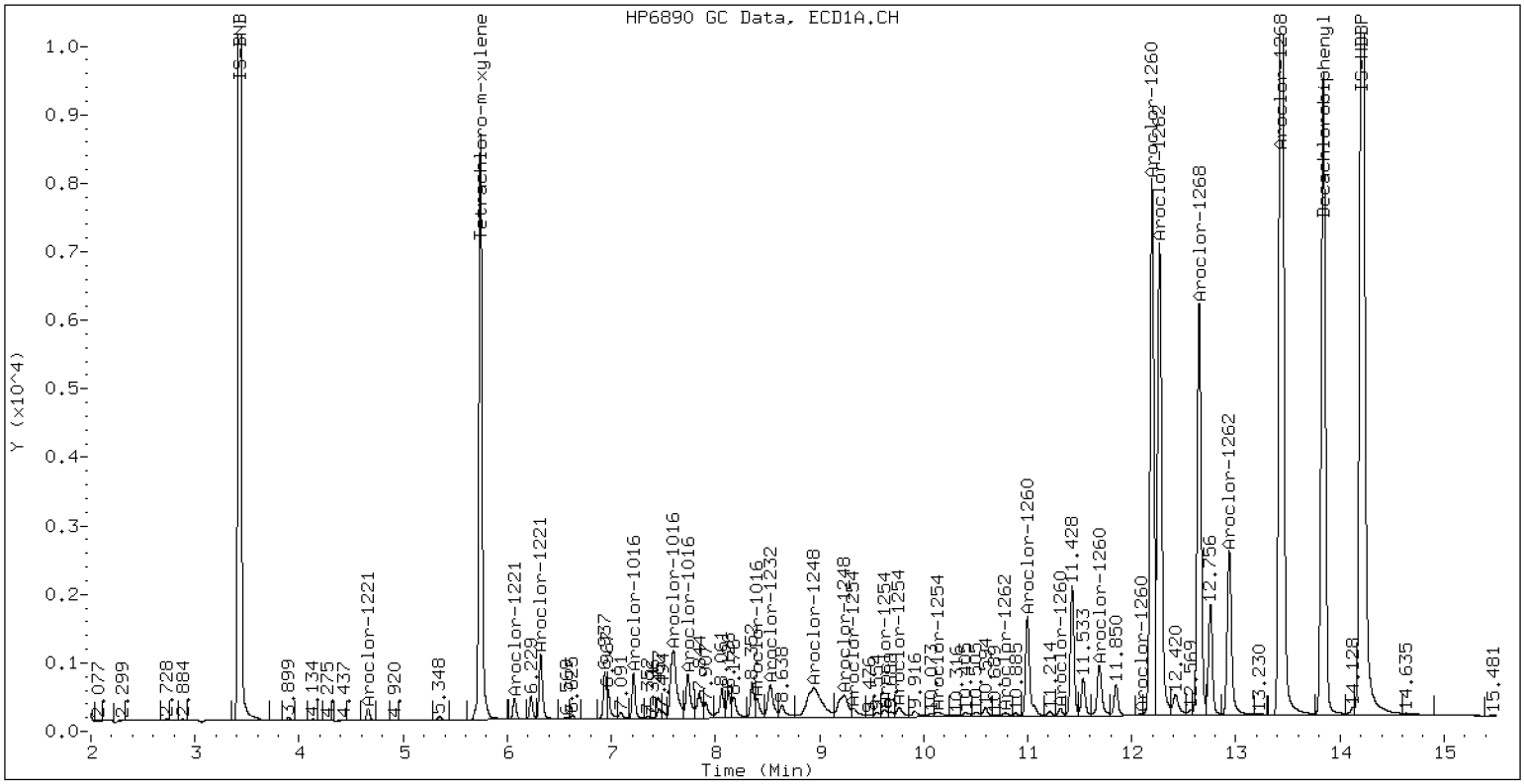
Total PCB Area Col2 (5.728 - 13.968) = 2876097 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

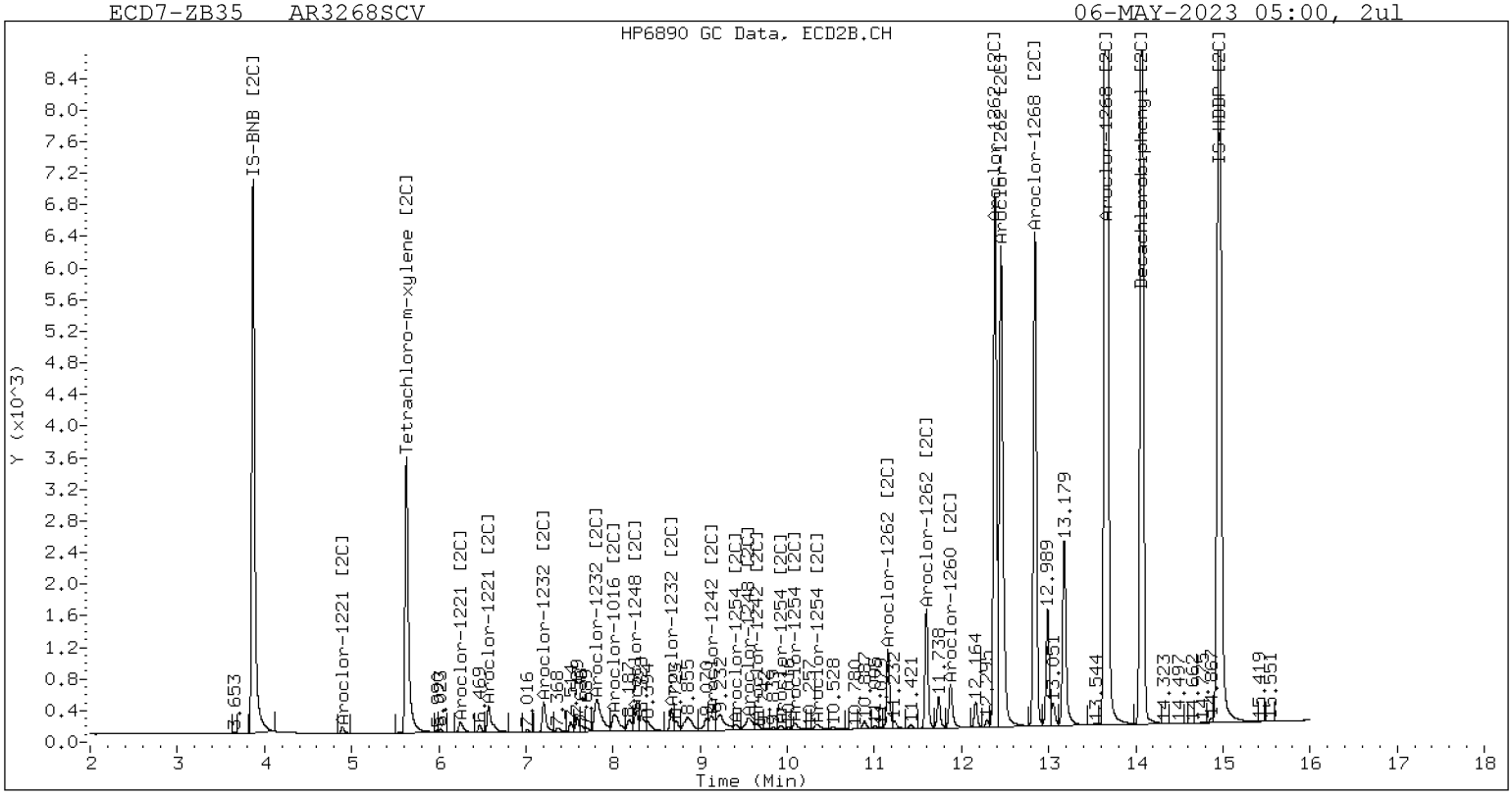
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV 06-MAY-2023 05:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV 06-MAY-2023 05:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05192302ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0328	Injection Date:	05/19/23
Lab Sample ID:	SLE0328-ICV1	Injection Time:	14:28
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	244	0.0678007	0.0660096		-2.6	+/-20
Aroclor-1254 (1)	A	250.00	172	0.0822219	0.0566846			
Aroclor-1254 (2)	A	250.00	237	0.0369425	0.0350308			
Aroclor-1254 (3)	A	250.00	271	0.0530793	0.0575741			
Aroclor-1254 (4)	A	250.00	278	0.1039691	0.1155543			
Aroclor-1254 (5)	A	250.00	260	0.0627908	0.0652043			
Aroclor 1254 [2C]	A	250.00	241	0.0720677	0.0693428		-3.5	+/-20
Aroclor-1254 (1) [2C]	A	250.00	244	0.0607810	0.0592811			
Aroclor-1254 (2) [2C]	A	250.00	221	0.0361074	0.0319485			
Aroclor-1254 (3) [2C]	A	250.00	267	0.0492663	0.0525736			
Aroclor-1254 (4) [2C]	A	250.00	248	0.1075138	0.1066462			
Aroclor-1254 (5) [2C]	A	250.00	226	0.1066699	0.0962646			
Decachlorobiphenyl	A	40.000	41.1	0.7991406	0.8204463		2.8	+/-20
Tetrachlorometaxylene	A	40.000	39.6	1.2048230	1.1920960		-1.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.8	1.1360140	1.1595120		2.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	41.8	1.1005470	1.1498770		4.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192302ECD7.D
Data file 2: /230519.b/230519.b/05192302ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 19-MAY-2023 14:28
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	343316	5.628	-0.000	191838	39.6	41.8	5.4	Tetrachloro-m-xylene
13.841	0.001	383902	14.068	-0.001	334910	41.1	40.8	0.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	575987	-4.2
Hexabromobiphenyl	876625	935837	6.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	333667	-4.5
Hexabromobiphenyl	652984	577674	-11.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.247	0.000	102030	172.4	1	9.401	0.000	61813	243.8
Aroclor-1254	2	9.323	0.000	63054	237.1	2	9.496	0.000	33313	221.2
Aroclor-1254	3	9.615	0.000	103631	271.2	3	9.921	0.000	54819	266.8
Aroclor-1254	4	9.753	0.000	207993	277.9	4	10.074	0.000	111201	248.0
Aroclor-1254	5	10.117	0.000	117365	259.6	5	10.324	0.000	100376	225.6

Total Col1Ave (5 peaks): 243.6 Total Col2Ave (5 peaks): 241.1 RPD = 1

Corrected Ave (4 peaks): 235.0 Corrected Ave (4 peaks): 234.7 RPD = 0

CalAmt %D: -2.6 CalAmt %D: -3.6

Total PCB Area Col1 (5.842 - 13.740) = 2117530 Col1 Total PCB = 0.3 ppm*

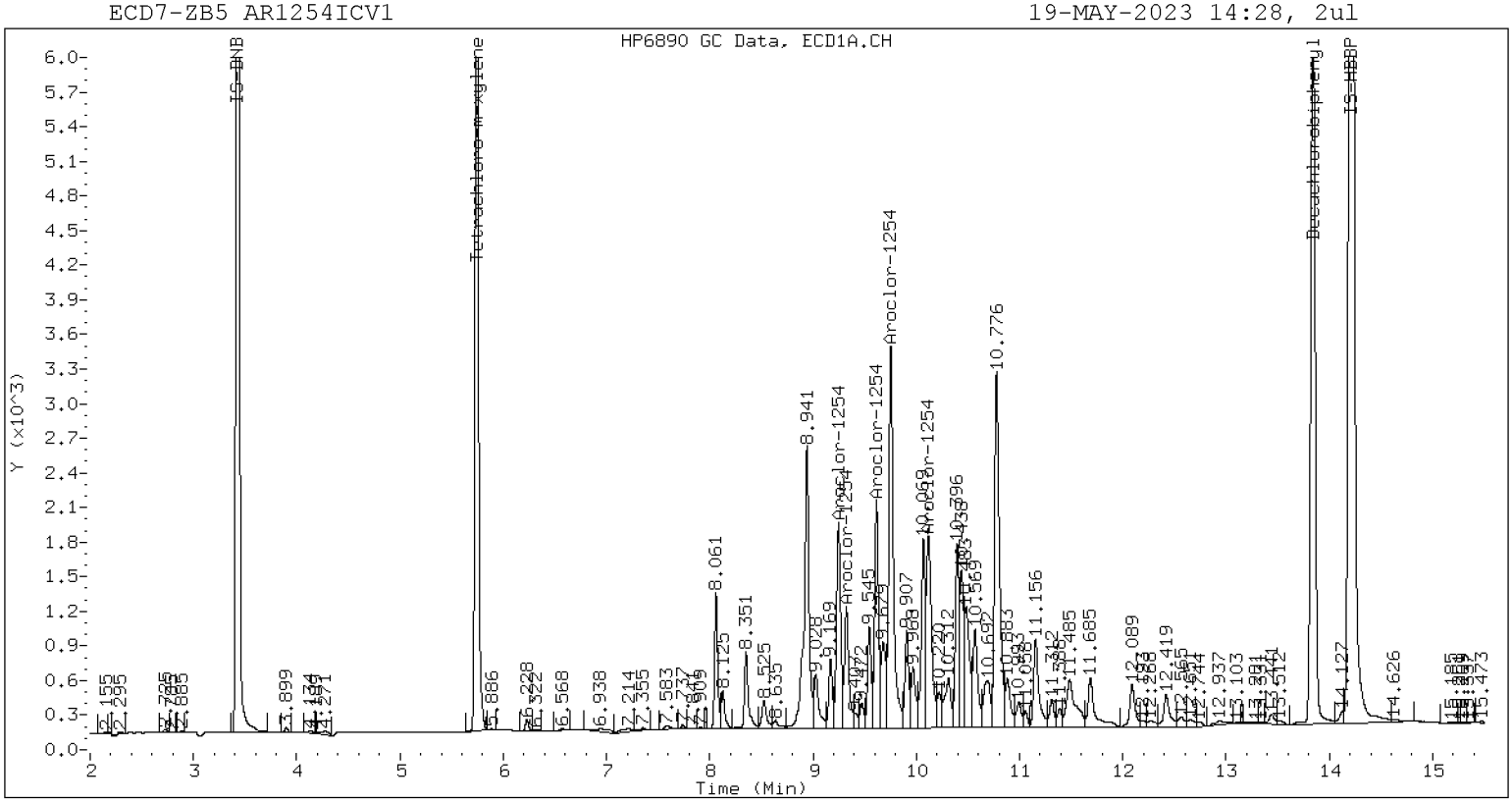
Total PCB Area Col2 (5.728 - 13.969) = 1068074 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

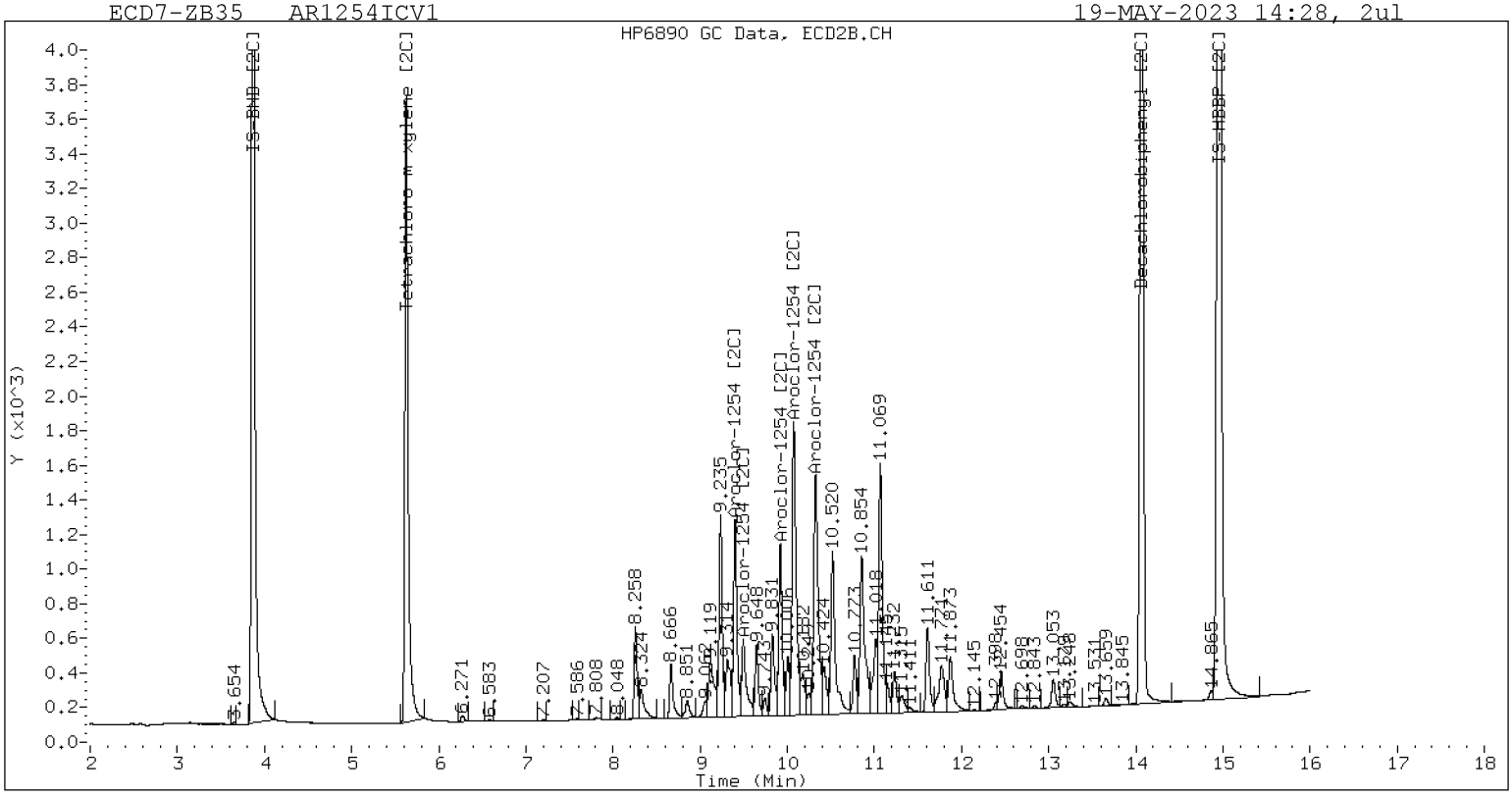
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 19-MAY-2023 14:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 19-MAY-2023 14:28, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05192303ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0328	Injection Date:	05/19/23
Lab Sample ID:	SLE0328-ICV2	Injection Time:	14:49
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1016	A	250.00	263	0.0477728	0.0508449		5.1	+/-20
Aroclor-1016 (1)	A	250.00	256	0.0309764	0.0317310		2.4	
Aroclor-1016 (2)	A	250.00	273	0.0968611	0.1058093		9.2	
Aroclor-1016 (3)	A	250.00	260	0.0447793	0.0465016		4.0	
Aroclor-1016 (4)	A	250.00	262	0.0184745	0.0193374		4.8	
Aroclor 1016 [2C]	A	250.00	247	0.0545435	0.0549948		-1.1	+/-20
Aroclor-1016 (1) [2C]	A	250.00	235	0.0452861	0.0425677		-6.0	
Aroclor-1016 (2) [2C]	A	250.00	268	0.0965080	0.1032688		7.2	
Aroclor-1016 (3) [2C]	A	250.00	238	0.0425661	0.0405442		-4.8	
Aroclor-1016 (4) [2C]	A	250.00	248	0.0338137	0.0335985		-0.8	
Aroclor 1260	A	250.00	261	0.0524306	0.0549524		4.4	+/-20
Aroclor-1260 (1)	A	250.00	256	0.0423031	0.0433291		2.4	
Aroclor-1260 (2)	A	250.00	260	0.0417493	0.0433394		4.0	
Aroclor-1260 (3)	A	250.00	264	0.1045597	0.1105668		5.6	
Aroclor-1260 (4)	A	250.00	265	0.0512104	0.0543063		6.0	
Aroclor-1260 (5)	A	250.00	260	0.0223305	0.0232202		4.0	
Aroclor 1260 [2C]	A	250.00	255	0.0638471	0.0655525		1.9	+/-20
Aroclor-1260 (1) [2C]	A	250.00	246	0.0424868	0.0417610		-1.6	
Aroclor-1260 (2) [2C]	A	250.00	261	0.1111292	0.1158645		4.4	
Aroclor-1260 (3) [2C]	A	250.00	255	0.0275392	0.0281366		2.0	
Aroclor-1260 (4) [2C]	A	250.00	257	0.0742331	0.0764480		2.8	
Decachlorobiphenyl	A	40.000	41.9	0.7991406	0.8373662		4.8	+/-20
Tetrachlorometaxylene	A	40.000	40.7	1.2048230	1.2264960		1.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.0	1.1360140	1.1916870		5.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	42.8	1.1005470	1.1763500		7.0	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192303ECD7.D
Data file 2: /230519.b/230519.b/05192303ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 19-MAY-2023 14:49
Report Date: 05/23/2023 09:41
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.000	344023	5.628	0.000	195053	40.7	42.8	4.9	Tetrachloro-m-xylene
13.841	0.001	376394	14.068	-0.001	352877	41.9	42.0	0.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	560985	-6.7
Hexabromobiphenyl	876625	898995	2.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	331624	-5.1
Hexabromobiphenyl	652984	592231	-9.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	-0.000	55627	256.1	1	7.203	-0.001	44114	235.0
Aroclor-1016	2	7.594	-0.001	185492	273.1	2	7.809	-0.001	107020	267.5
Aroclor-1016	3	7.734	-0.001	81521	259.6	3	8.007	-0.001	42017	238.1
Aroclor-1016	4	8.399	-0.000	33900	261.7	4	8.259	-0.000	34819	248.4
	Total Col1Ave (4 peaks):				262.6	Total Col2Ave (4 peaks):				247.3 RPD = 6
	Corrected Ave (3 peaks):				259.1	Corrected Ave (3 peaks):				240.5 RPD = 7
			CalAmt %D:		5.0			CalAmt %D:		-1.1
Aroclor-1260	1	10.993	-0.001	121727	256.1	1	11.604	-0.001	77288	245.7
Aroclor-1260	2	11.310	-0.001	121756	259.5	2	11.870	-0.002	214433	260.7
Aroclor-1260	3	11.684	-0.001	310622	264.4	3	12.387	-0.002	52073	255.4
Aroclor-1260	4	12.088	-0.001	152566	265.1	4	12.453	-0.002	141484	257.5
Aroclor-1260	5	12.193	0.000	65234	260.0	NS	---			----
	Total Col1Ave (5 peaks):				261.0	Total Col2Ave (4 peaks):				254.8 RPD = 2
	Corrected Ave (4 peaks):				260.0	Corrected Ave (3 peaks):				252.9 RPD = 3
			CalAmt %D:		4.4			CalAmt %D:		1.9

Total PCB Area Col1 (5.842 - 13.740) = 3380283 Col1 Total PCB = 0.5 ppm*

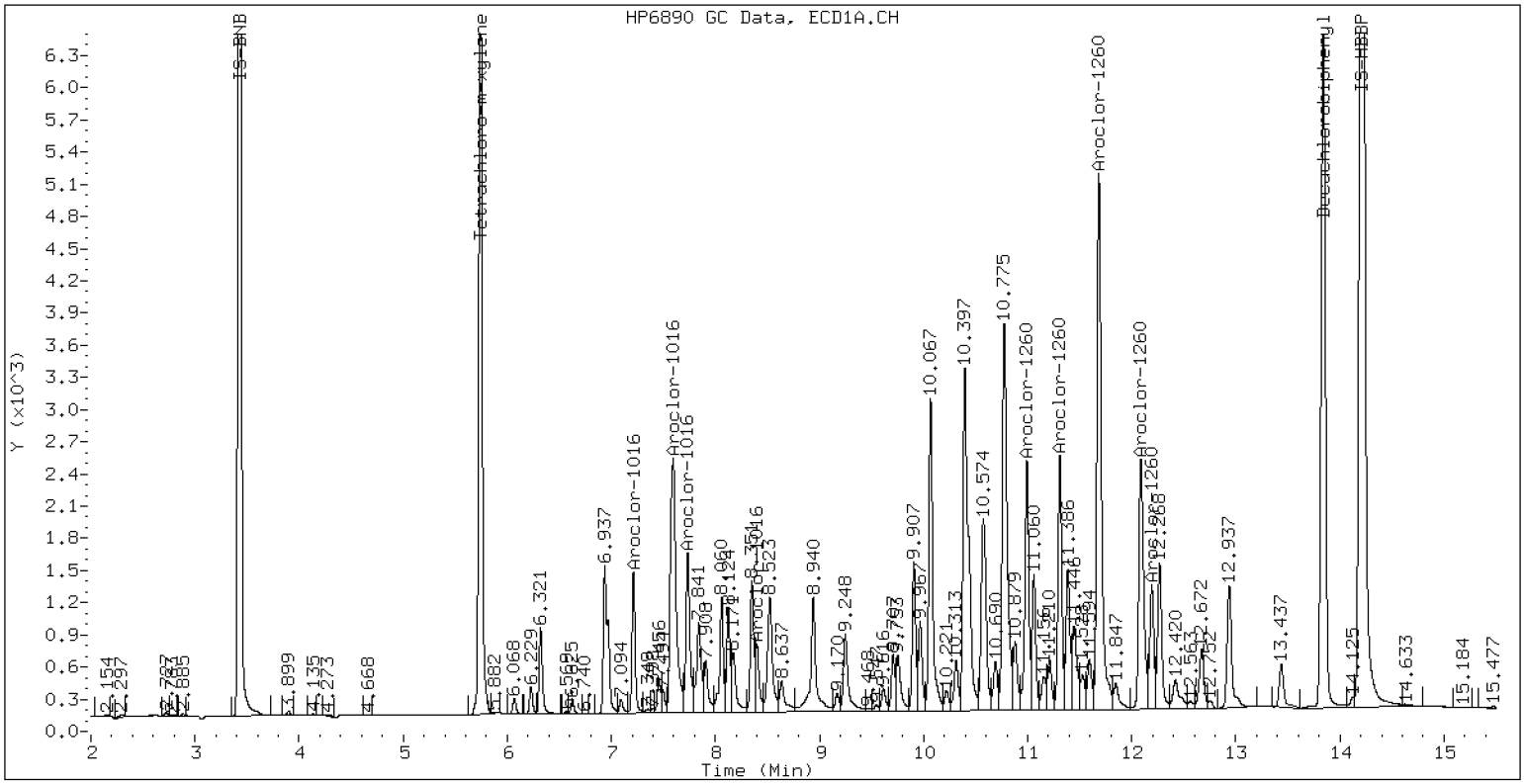
Total PCB Area Col2 (5.728 - 13.969) = 1949584 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

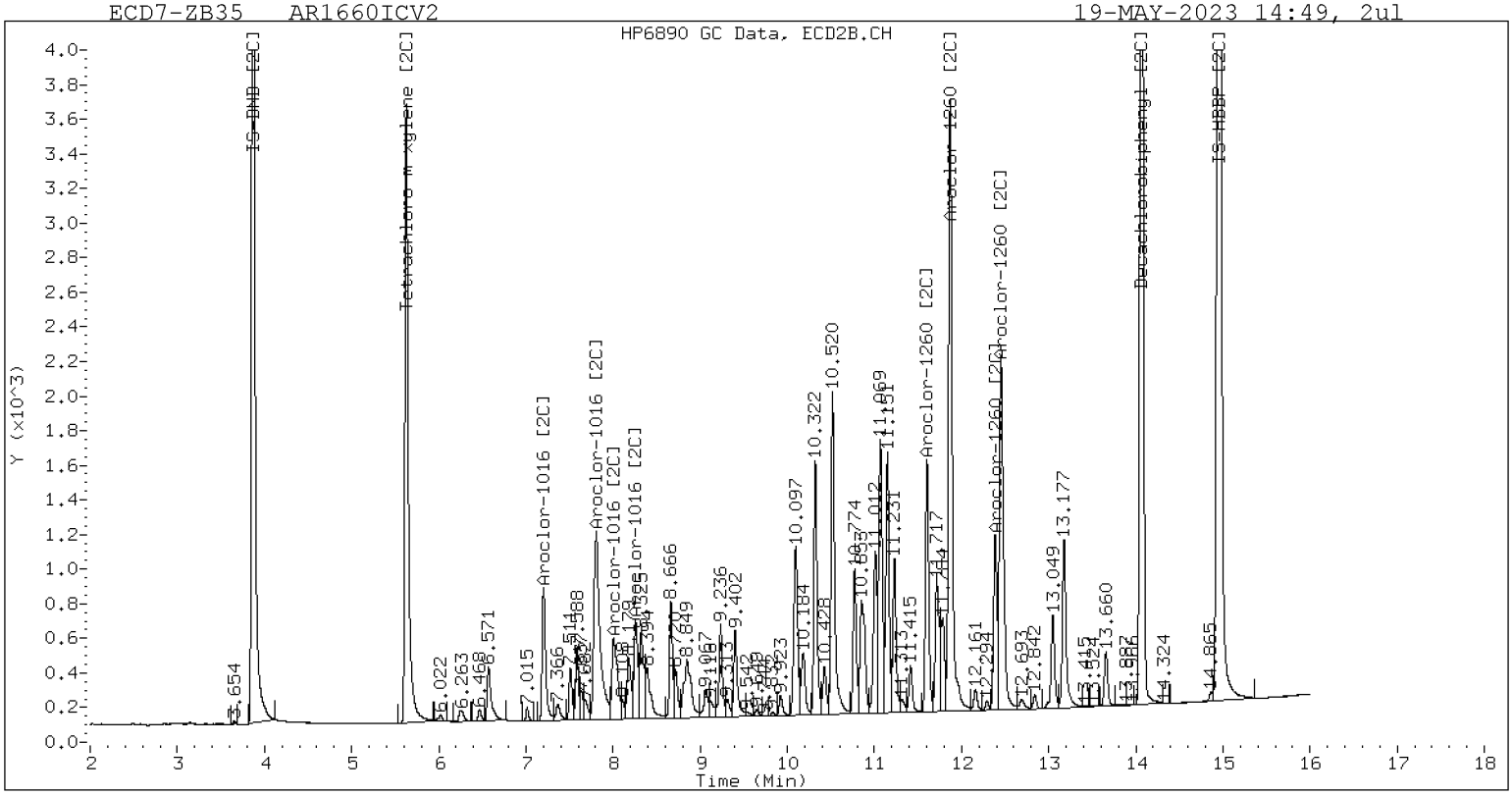
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 19-MAY-2023 14:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 19-MAY-2023 14:49, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05232302ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0373	Injection Date:	05/23/23
Lab Sample ID:	SLE0373-ICV1	Injection Time:	11:18
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	227	0.0678007	0.0620583		-9.4	+/-20
Aroclor-1254 (1)	A	250.00	140	0.0822219	0.0461272			
Aroclor-1254 (2)	A	250.00	219	0.0369425	0.0323839			
Aroclor-1254 (3)	A	250.00	269	0.0530793	0.0570710			
Aroclor-1254 (4)	A	250.00	291	0.1039691	0.1210161			
Aroclor-1254 (5)	A	250.00	214	0.0627908	0.0536934			
Aroclor 1254 [2C]	A	250.00	194	0.0720677	0.0562949		-22.6	+/-20 *
Aroclor-1254 (1) [2C]	A	250.00	171	0.0607810	0.0415482			
Aroclor-1254 (2) [2C]	A	250.00	215	0.0361074	0.0310405			
Aroclor-1254 (3) [2C]	A	250.00	174	0.0492663	0.0342183			
Aroclor-1254 (4) [2C]	A	250.00	161	0.1075138	0.0691071			
Aroclor-1254 (5) [2C]	A	250.00	247	0.1066699	0.1055605			
Decachlorobiphenyl	A	40.000	42.4	0.7991406	0.8461835		6.0	+/-20
Tetrachlorometaxylene	A	40.000	45.6	1.2048230	1.3737210		14.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	47.4	1.1360140	1.3473890		18.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.7	1.1005470	1.2303800		11.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232302ECD7.D
Data file 2: /230523.b/230523.b/05232302ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 23-MAY-2023 11:18
Report Date: 05/24/2023 09:32
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.746	0.000	321665	5.630	0.001	166460	45.6	44.7	2.0	Tetrachloro-m-xylene
13.841	0.000	369178	14.067	-0.002	244964	42.4	47.4	11.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	468312	-22.1
Hexabromobiphenyl	876625	872572	-0.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	270583	-22.5
Hexabromobiphenyl	652984	363613	-44.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.250	0.000	67506	140.3	1	9.401	0.000	35132	170.9
Aroclor-1254	2	9.323	0.000	47393	219.2	2	9.495	0.000	26247	214.9
Aroclor-1254	3	9.614	0.000	83522	268.8	3	9.921	0.000	28934	173.6
Aroclor-1254	4	9.751	0.000	177104	291.0	4	10.073	0.000	58435	160.7
Aroclor-1254	5	10.066	0.000	78579	213.8	5	10.322	0.000	89259	247.4

Total Col1Ave (5 peaks): 226.6 Total Col2Ave (5 peaks): 193.5 RPD = 16

Corrected Ave (4 peaks): 210.5 Corrected Ave (4 peaks): 180.0 RPD = 16

CalAmt %D: -9.4 CalAmt %D: -22.6

Total PCB Area Col1 (5.846 - 13.741) = 1824264 Col1 Total PCB = 0.3 ppm*

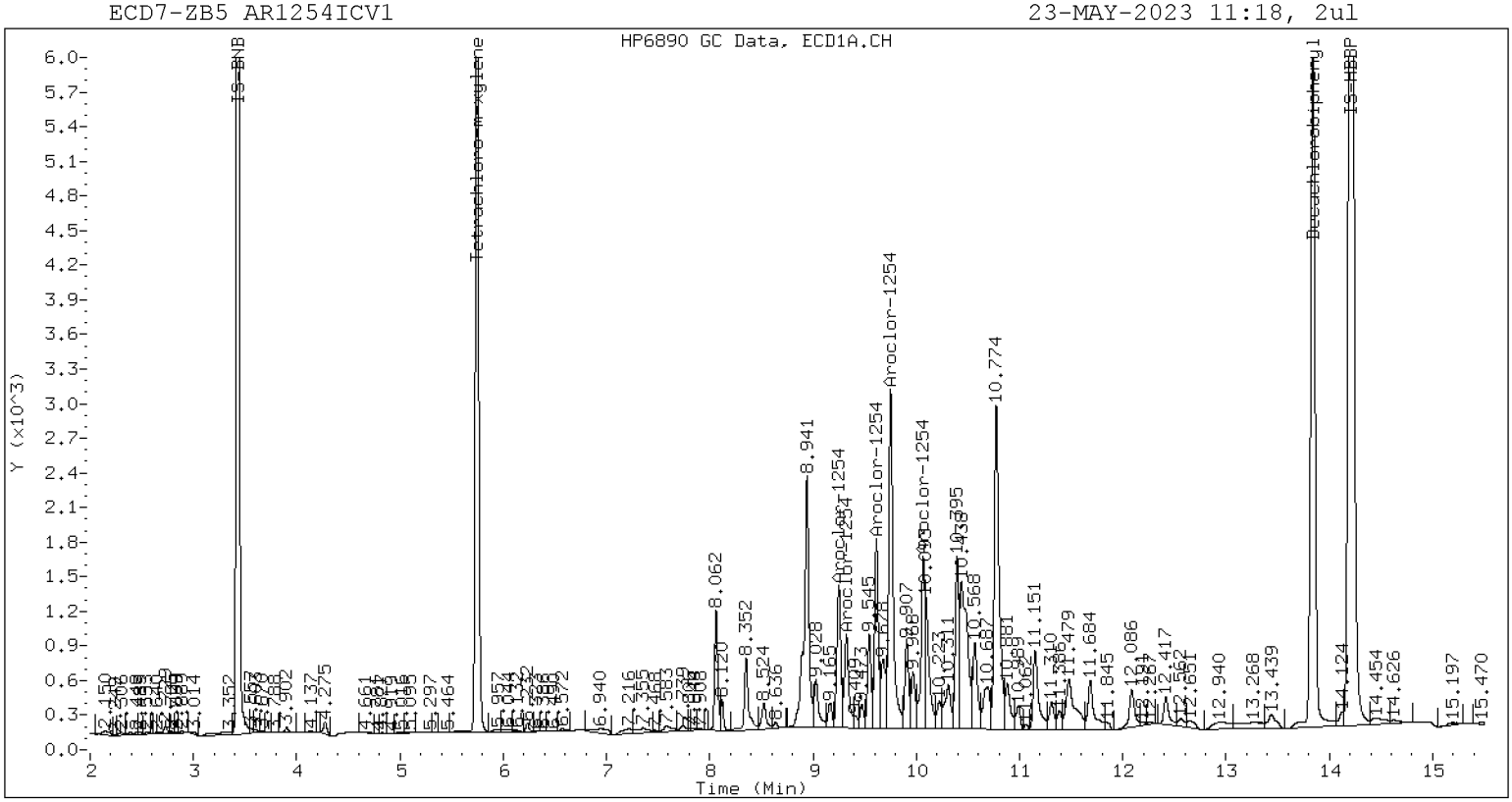
Total PCB Area Col2 (5.728 - 13.969) = 904673 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

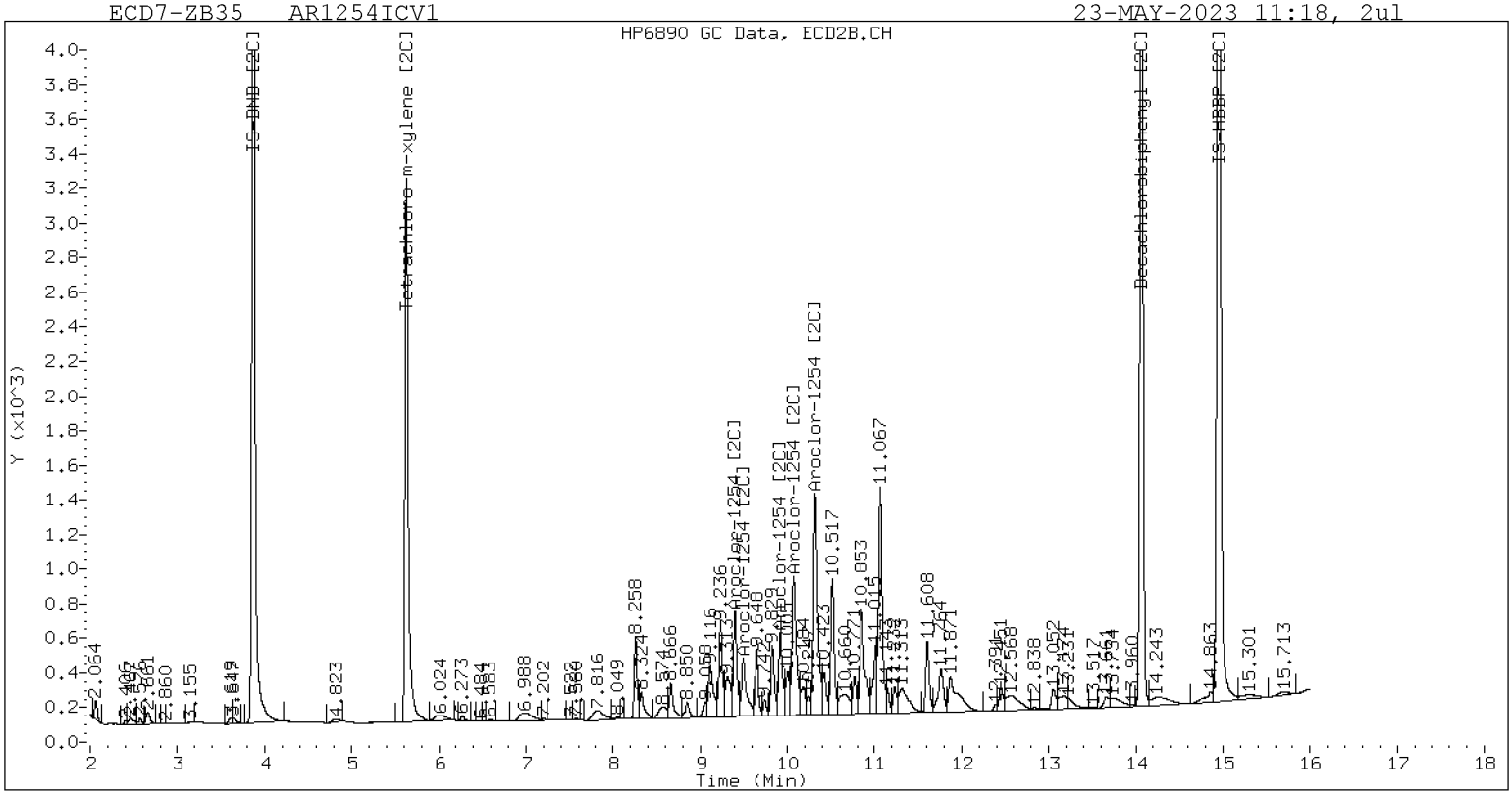
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 23-MAY-2023 11:18, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1254ICV1 23-MAY-2023 11:18, 2ul

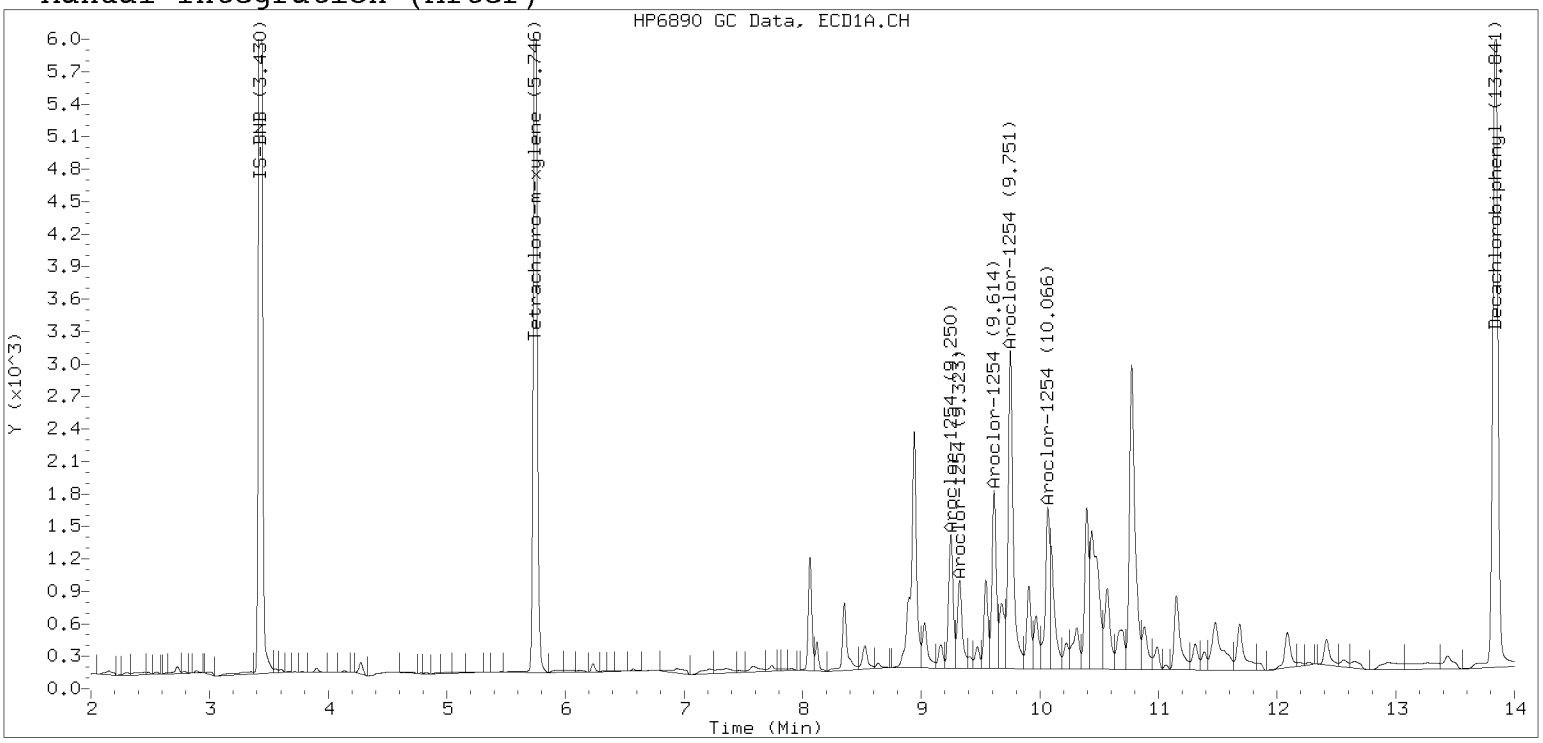


ZB-35 Manual Integration: NO

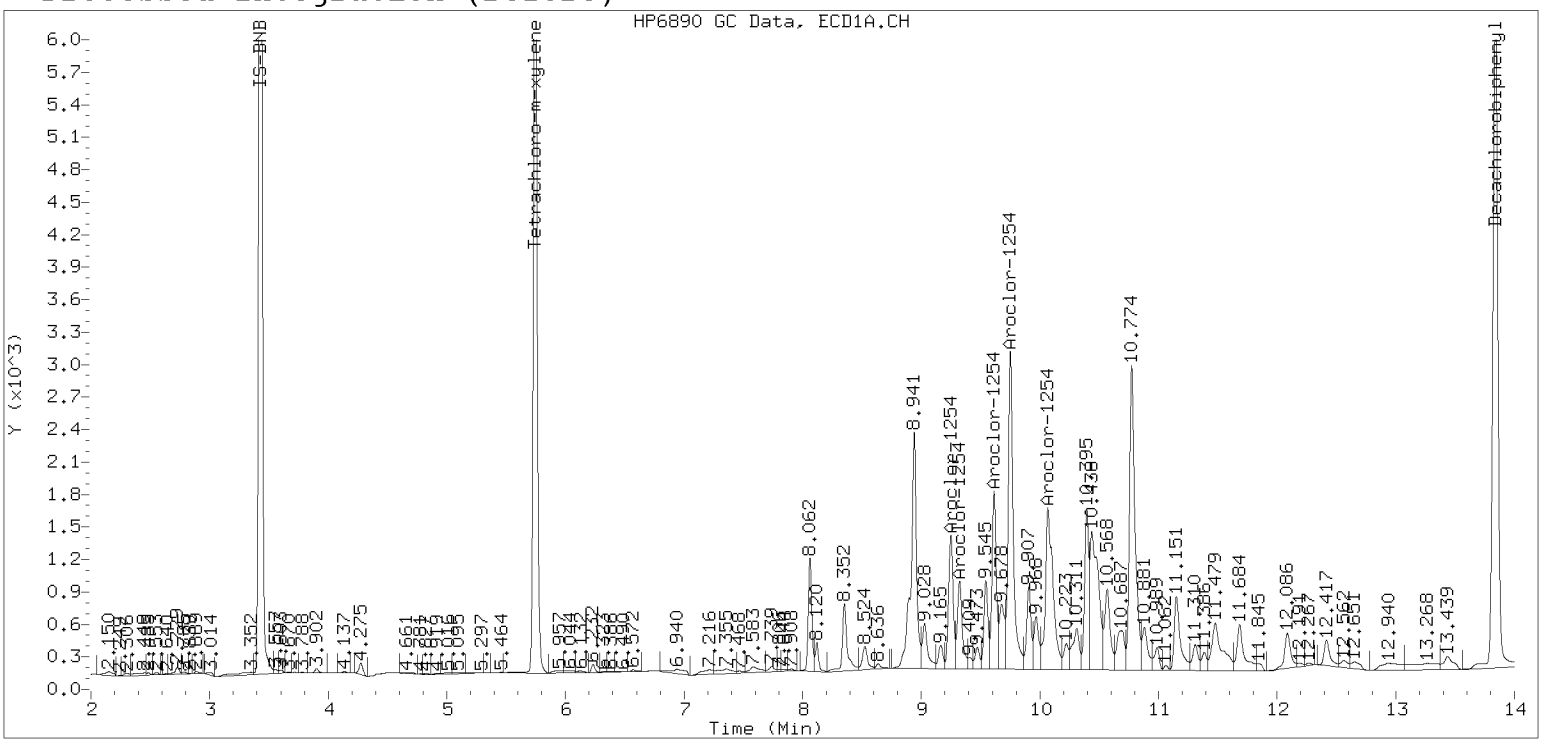
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230523.b/05232302ECD7.D Injection Date: 23-MAY-2023 11:18

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05232303ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0373	Injection Date:	05/23/23
Lab Sample ID:	SLE0373-ICV2	Injection Time:	11:39
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Aroclor 1016	A	250.00	265	0.0477728	0.0513131		6.1	+/-20	
Aroclor-1016 (1)	A	250.00	258	0.0309764	0.0320388		3.2		
Aroclor-1016 (2)	A	250.00	276	0.0968611	0.1069323		10.4		
Aroclor-1016 (3)	A	250.00	260	0.0447793	0.0465199		4.0		
Aroclor-1016 (4)	A	250.00	267	0.0184745	0.0197614		6.8		
Aroclor 1016 [2C]	A	250.00	231	0.0545435	0.0516400		-7.6	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	219	0.0452861	0.0396855		-12.4		
Aroclor-1016 (2) [2C]	A	250.00	257	0.0965080	0.0990807		2.8		
Aroclor-1016 (3) [2C]	A	250.00	206	0.0425661	0.0351100		-17.6		
Aroclor-1016 (4) [2C]	A	250.00	242	0.0338137	0.0326838		-3.2		
Aroclor 1260	A	250.00	422	0.0524306	0.0890183		69.0	+/-20	*
Aroclor-1260 (1)	A	250.00	423	0.0423031	0.0716424		69.2		
Aroclor-1260 (2)	A	250.00	423	0.0417493	0.0707173		69.2		
Aroclor-1260 (3)	A	250.00	429	0.1045597	0.1794266		71.6		
Aroclor-1260 (4)	A	250.00	421	0.0512104	0.0861647		68.4		
Aroclor-1260 (5)	A	250.00	416	0.0223305	0.0371406		66.4		
Aroclor 1260 [2C]	A	250.00	284	0.0638471	0.0737681		13.4	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	258	0.0424868	0.0438603		3.2		
Aroclor-1260 (2) [2C]	A	250.00	302	0.1111292	0.1341140		20.8		
Aroclor-1260 (3) [2C]	A	250.00	286	0.0275392	0.0314653		14.4		
Aroclor-1260 (4) [2C]	A	250.00	288	0.0742331	0.0856329		15.2		
Decachlorobiphenyl	A	40.000	43.6	0.7991406	0.8708004		9.0	+/-20	
Tetrachlorometaxylene	A	40.000	40.8	1.2048230	1.2299710		2.0	+/-20	
Decachlorobiphenyl [2C]	A	40.000	42.4	1.1360140	1.2043090		6.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	42.4	1.1005470	1.1662790		6.0	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232303ECD7.D
Data file 2: /230523.b/230523.b/05232303ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 23-MAY-2023 11:39
Report Date: 05/24/2023 09:32
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.744	-0.001	343999	5.630	0.002	190745	40.8	42.4	3.7	Tetrachloro-m-xylene
13.839	-0.002	241877	14.069	-0.001	284099	43.6	42.4	2.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	559361	-7.0
Hexabromobiphenyl	876625	555528	-36.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	327100	-6.4
Hexabromobiphenyl	652984	471804	-27.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.001	56004	258.6	1	7.205	0.002	40566	219.1
Aroclor-1016	2	7.595	-0.000	186918	276.0	2	7.807	-0.003	101279	256.7
Aroclor-1016	3	7.734	-0.000	81317	259.7	3	8.009	0.001	35889	206.2
Aroclor-1016	4	8.399	0.000	34543	267.4	4	8.259	-0.001	33409	241.6
Total Col1Ave (4 peaks):					265.4	Total Col2Ave (4 peaks):				230.9 RPD = 14
Corrected Ave (3 peaks):					261.9	Corrected Ave (3 peaks):				222.3 RPD = 16
CalAmt %D:					6.2	CalAmt %D:				-7.6
Aroclor-1260	1	10.993	-0.000	124373	423.4	1	11.605	-0.001	64667	258.1
Aroclor-1260	2	11.310	-0.001	122767	423.5	2	11.869	-0.003	197736	301.7
Aroclor-1260	3	11.685	-0.000	311489	429.0	3	12.387	-0.001	46392	285.6
Aroclor-1260	4	12.088	-0.003	149584	420.6	4	12.454	-0.002	126256	288.4
Aroclor-1260	5	12.193	-0.000	64477	415.8	NS	---			----
Total Col1Ave (5 peaks):					422.5	Total Col2Ave (4 peaks):				283.5 RPD = 39
Corrected Ave (4 peaks):					420.8	Corrected Ave (3 peaks):				277.4 RPD = 41*
CalAmt %D:					69.0	CalAmt %D:				13.4

Total PCB Area Col1 (5.846 - 13.741) = 3412770 Col1 Total PCB = 0.5 ppm*

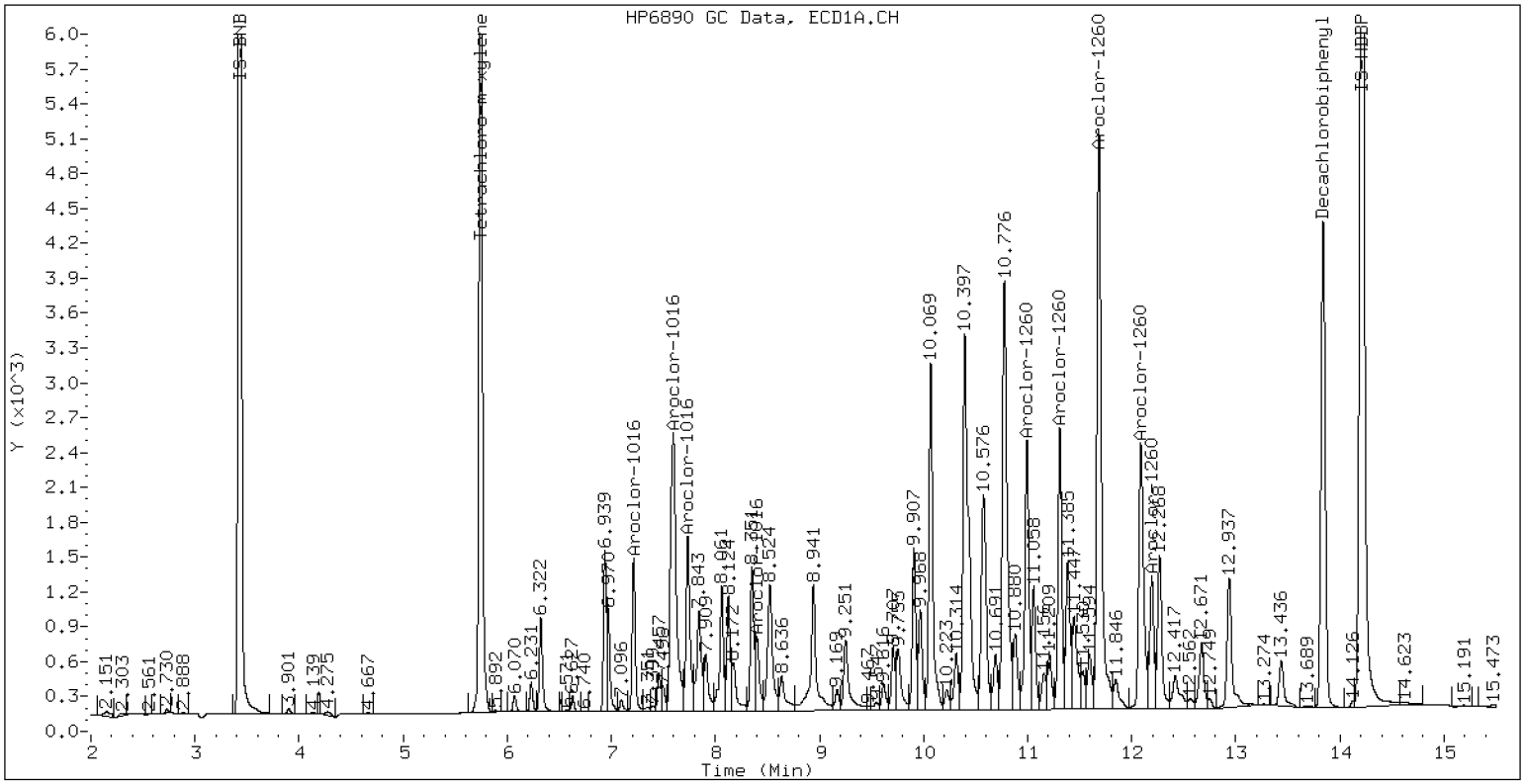
Total PCB Area Col2 (5.728 - 13.969) = 1756203 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

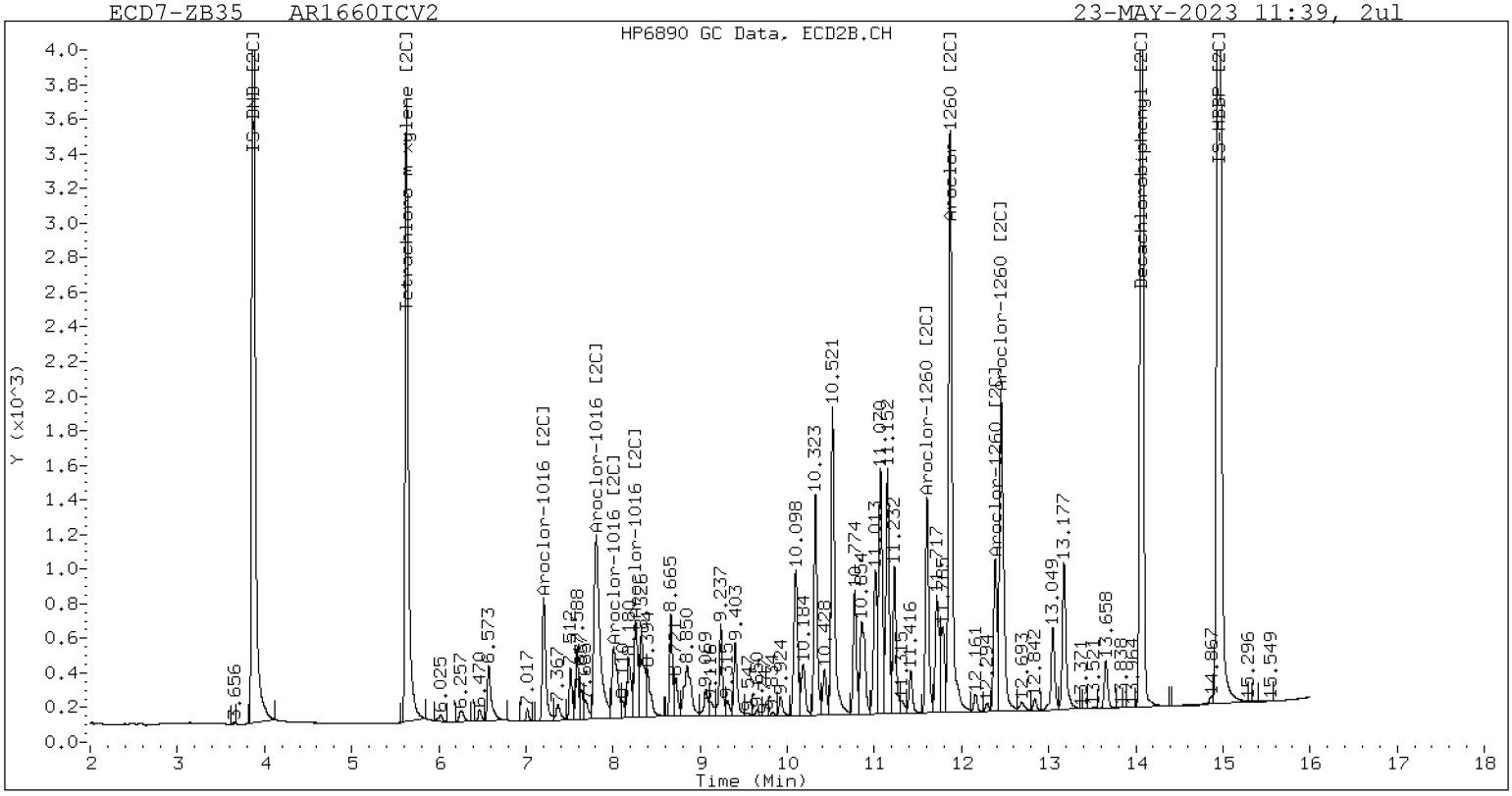
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 23-MAY-2023 11:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 23-MAY-2023 11:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05052332ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0079	Injection Date:	05/06/23
Lab Sample ID:	SLE0079-SCV1	Injection Time:	03:16
Sequence Name:	AR1660SCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	254	0.0477728	0.0484819		1.4	+/-20
Aroclor 1016 [2C]	A	250.00	248	0.0545435	0.0542791		-1.0	+/-20
Aroclor 1260	A	250.00	285	0.0524306	0.0598047		14.2	+/-20
Aroclor 1260 [2C]	A	250.00	284	0.0638471	0.0723577		13.6	+/-20
Decachlorobiphenyl	A	40.000	36.9	0.7991406	0.7376338		-7.7	+/-20
Tetrachlorometaxylene	A	40.000	36.9	1.2048230	1.1103970		-7.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.2	1.1360140	1.1141950		-1.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.2	1.1005470	1.0247960		-6.9	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052332ECD7.D
Data file 2: /230505.b/230505.b/05052332ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV
Client ID:
Injection Date: 06-MAY-2023 03:16
Report Date: 05/06/2023 12:06
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.000	356595	5.629	0.000	185340	36.9	37.2	1.0	Tetrachloro-m-xylene
13.842	0.002	347188	14.070	0.002	384711	36.9	39.2	6.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	642284	6.8
Hexabromobiphenyl	876625	941356	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	361711	3.6
Hexabromobiphenyl	652984	690563	5.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	61654	247.9	1	7.205	0.001	50106	244.7
Aroclor-1016	2	7.594	-0.001	199228	256.2	2	7.811	0.003	109839	251.7
Aroclor-1016	3	7.734	0.001	89643	249.3	3	8.009	0.004	48594	252.5
Aroclor-1016	4	8.399	0.001	38714	261.0	4	8.260	0.001	36878	241.2
Total Col1Ave (4 peaks):					253.6	Total Col2Ave (4 peaks):				247.5 RPD = 2
Corrected Ave (3 peaks):					251.1	Corrected Ave (3 peaks):				245.9 RPD = 2
Aroclor-1221	1	4.663	-0.000	436	9.7	1	---			0.0
Aroclor-1221	2	6.068	-0.001	8521	94.0	2	6.251	0.005	5766	104.3
Aroclor-1221	3	6.320	-0.001	41973	195.0	3	6.572	0.000	23212	266.9
Total Col1Ave (3 peaks):					99.6	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.663	-0.000	436	14.5	1	---			0.0
Aroclor-1232	2	6.068	-0.002	8521	136.1	2	7.205	0.000	50106	623.9
Aroclor-1232	3	7.594	-0.001	199228	667.9	3	7.811	-0.004	109839	680.8
Aroclor-1232	4	8.526	-0.001	85985	673.5	4	8.667	-0.003	34670	742.1
Total Col1Ave (4 peaks):					373.0	Total Col2Ave (3 peaks):				682.3 RPD = 59*
Corrected Ave (3 peaks):					272.8	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.213	0.001	61654	304.6	1	7.205	0.001	50106	310.0
Aroclor-1242	2	7.594	-0.001	199228	310.7	2	7.811	-0.002	109839	319.4
Aroclor-1242	3	8.399	0.000	38714	312.1	3	9.069	-0.054	21513	195.1
Aroclor-1242	4	8.526	0.001	85985	299.5	4	9.537	-0.013	1824	13.7
Total Col1Ave (4 peaks):					306.7	Total Col2Ave (4 peaks):				209.6 RPD = 38
Corrected Ave (3 peaks):					304.9	Corrected Ave (3 peaks):				172.9 RPD = 55*
Aroclor-1248	1	8.399	-0.000	38714	236.2	1	8.260	0.000	36878	214.3
Aroclor-1248	2	8.526	0.001	85985	201.8	2	8.667	-0.001	34670	190.7
Aroclor-1248	3	8.941	-0.003	81615	99.6	3	9.069	-0.051	21513	101.0
Aroclor-1248	4	9.249	0.006	52526	125.8	4	9.537	-0.008	1824	7.1
Total Col1Ave (4 peaks):					165.8	Total Col2Ave (4 peaks):				128.3 RPD = 26
Corrected Ave (3 peaks):					142.4	Corrected Ave (3 peaks):				99.6 RPD = 35
Aroclor-1254	1	9.249	0.003	52526	79.6	1	9.405	0.001	24726	90.0
Aroclor-1254	2	---			0.0	2	9.537	0.038	1824	11.2
Aroclor-1254	3	9.619	0.001	7081	16.6	3	9.926	0.002	3128	14.0
Aroclor-1254	4	9.756	0.001	21856	26.2	4	10.101	0.023	62581	128.7
Aroclor-1254	5	10.069	-0.057	159796	317.0	5	10.324	-0.004	85433	177.1
Total Col1Ave (4 peaks):					109.8	Total Col2Ave (5 peaks):				84.2 RPD = 26
Corrected Ave (3 peaks):					40.8	Corrected Ave (4 peaks):				61.0 RPD = 40
Aroclor-1260	1	10.995	0.001	145767	292.8	1	11.605	-0.000	99761	272.0
Aroclor-1260	2	11.311	0.001	142028	289.1	2	11.872	0.000	273505	285.1
Aroclor-1260	3	11.686	0.000	354468	288.1	3	12.389	0.001	70545	296.8
Aroclor-1260	4	12.092	0.002	161281	267.6	4	12.455	-0.000	180783	282.1
Aroclor-1260	5	12.194	0.001	76105	289.6	NS	---			----
Total Col1Ave (5 peaks):					285.5	Total Col2Ave (4 peaks):				284.0 RPD = 1
Corrected Ave (4 peaks):					283.6	Corrected Ave (3 peaks):				279.8 RPD = 1
Aroclor-1262	1	10.777	-0.001	215850	506.9	1	11.153	-0.001	104059	186.0
Aroclor-1262	2	12.194	-0.000	76105	127.1	2	11.605	0.001	99761	211.4
Aroclor-1262	3	12.271	0.001	94628	147.0	3	12.389	0.003	70545	136.8
Aroclor-1262	4	12.939	-0.000	78852	150.3	4	12.455	-0.001	180783	215.1
Total Col1Ave (4 peaks):					232.8	Total Col2Ave (4 peaks):				187.3 RPD = 22
Corrected Ave (3 peaks):					141.5	Corrected Ave (3 peaks):				178.1 RPD = 23
Aroclor-1268	1	12.194	-0.001	76105	50.7	1	12.389	0.004	70545	54.0
Aroclor-1268	2	12.271	0.003	94628	63.5	2	12.455	0.003	180783	128.7
Aroclor-1268	3	12.675	0.026	38830	32.4	3	12.844	0.001	3082	2.6
Aroclor-1268	4	13.440	0.003	19986	5.8	4	13.661	-0.002	14882	3.9
Total Col1Ave (4 peaks):					38.1	Total Col2Ave (4 peaks):				47.3 RPD = 21
Corrected Ave (3 peaks):					29.6	Corrected Ave (3 peaks):				20.1 RPD = 38

Total PCB Area Col1 (5.842 - 13.740) = 3657118 Col1 Total PCB = 0.5 ppm*

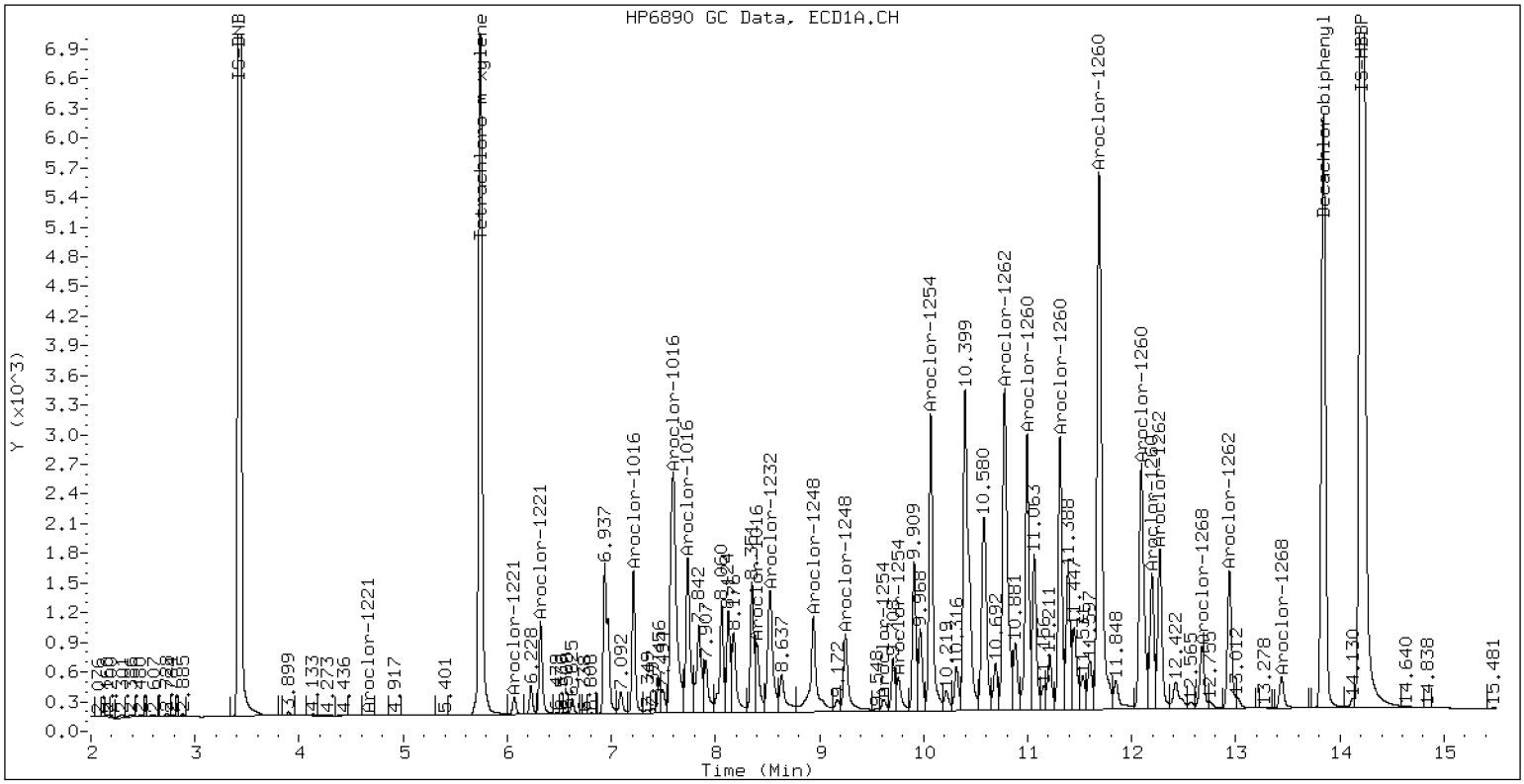
Total PCB Area Col2 (5.728 - 13.968) = 2255286 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

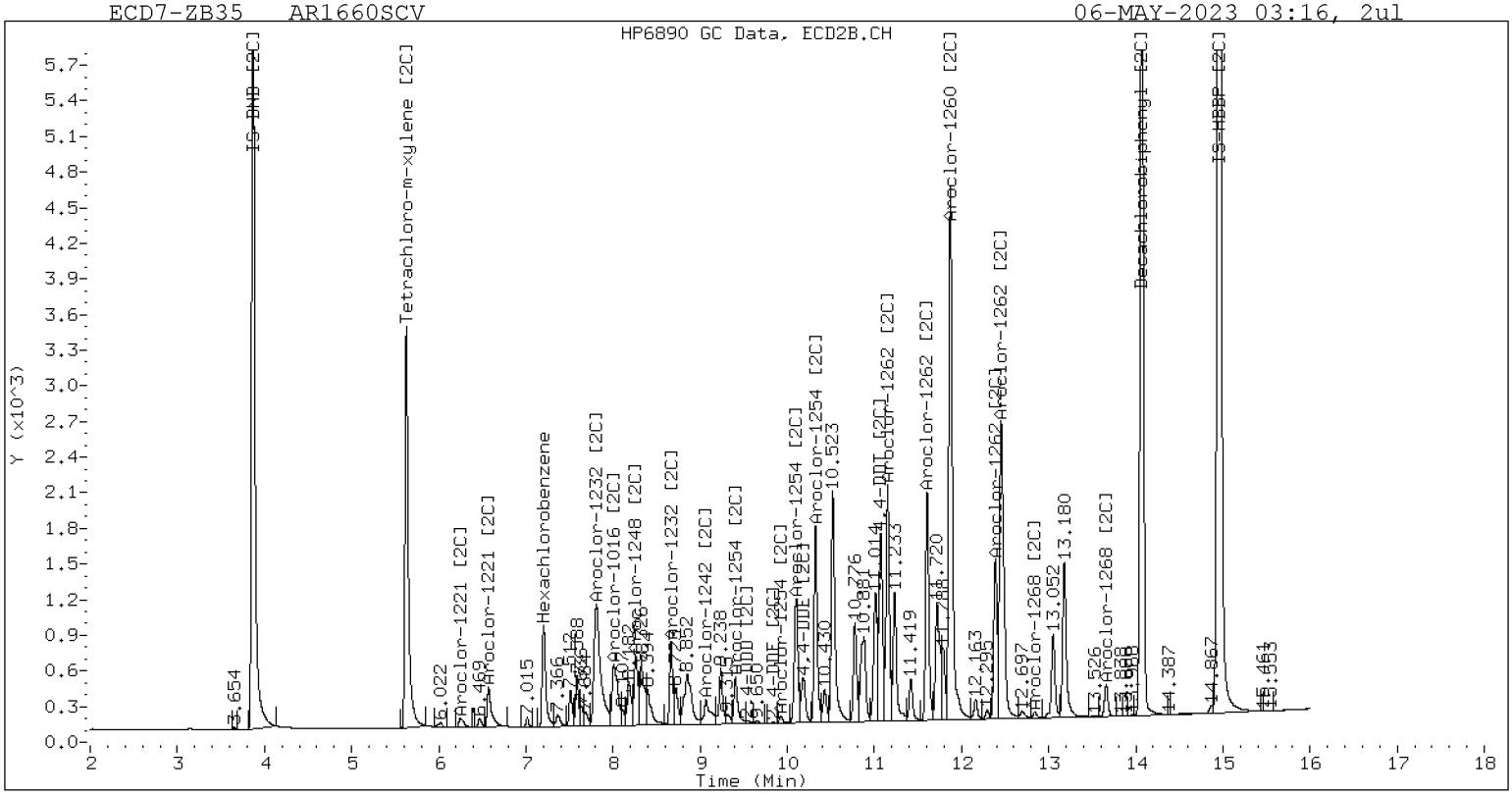
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV 06-MAY-2023 03:16, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV 06-MAY-2023 03:16, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05052333ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0079	Injection Date:	05/06/23
Lab Sample ID:	SLE0079-SCV2	Injection Time:	03:36
Sequence Name:	AR1242SCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	237	0.0390737	0.0365795		-5.1	+/-20
Aroclor 1242 [2C]	A	250.00	230	0.0413965	0.0378029		-7.9	+/-20
Decachlorobiphenyl	A	40.000	40.9	0.7991406	0.8167325		2.2	+/-20
Tetrachlorometaxylene	A	40.000	32.8	1.2048230	0.9873365		-18.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	44.0	1.1360140	1.2491680		10.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	33.4	1.1005470	0.9188596		-16.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052333ECD7.D
Data file 2: /230505.b/230505.b/05052333ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV
Client ID:
Injection Date: 06-MAY-2023 03:36
Report Date: 05/06/2023 12:06
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.744	0.002	319899	5.630	0.002	167866	32.8	33.4	1.9	Tetrachloro-m-xylene
13.842	0.002	398699	14.069	0.001	434332	40.9	44.0	7.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	648004	7.7
Hexabromobiphenyl	876625	976327	11.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	365379	4.6
Hexabromobiphenyl	652984	695394	6.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.001	47446	189.1	1	7.205	0.001	36469	176.3
Aroclor-1016	2	7.594	-0.000	147684	188.2	2	7.814	0.007	77885	176.7
Aroclor-1016	3	7.735	0.002	67175	185.2	3	8.012	0.006	38400	197.5
Aroclor-1016	4	8.398	0.000	30565	204.3	4	8.261	0.002	27551	178.4
Total Col1Ave (4 peaks): 191.7						Total Col2Ave (4 peaks): 182.2			RPD = 5	
Corrected Ave (3 peaks): 187.5						Corrected Ave (3 peaks): 177.1			RPD = 6	
Aroclor-1221	1	4.666	0.002	870	19.1	1	---			0.0
Aroclor-1221	2	6.069	0.000	7118	77.8	2	6.257	0.011	4359	78.0
Aroclor-1221	3	6.322	0.001	32969	151.8	3	6.573	0.001	16609	189.0
Total Col1Ave (3 peaks): 82.9						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.666	0.002	870	28.7	1	---			0.0
Aroclor-1232	2	6.069	0.000	7118	112.7	2	7.205	-0.000	36469	449.5
Aroclor-1232	3	7.594	-0.001	147684	490.8	3	7.814	-0.001	77885	477.9
Aroclor-1232	4	8.526	-0.000	70601	548.1	4	8.668	-0.001	25417	538.5
Total Col1Ave (4 peaks): 295.1						Total Col2Ave (3 peaks): 488.7			RPD = 49*	
Corrected Ave (3 peaks): 210.7						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.213	0.001	47446	232.4	1	7.205	0.001	36469	223.3
Aroclor-1242	2	7.594	-0.000	147684	228.2	2	7.814	0.002	77885	224.2
Aroclor-1242	3	8.398	0.000	30565	244.2	3	9.124	0.001	25864	232.2
Aroclor-1242	4	8.526	0.002	70601	243.8	4	9.552	0.001	32437	241.7
Total Col1Ave (4 peaks): 237.2						Total Col2Ave (4 peaks): 230.4			RPD = 3	
Corrected Ave (3 peaks): 234.8						Corrected Ave (3 peaks): 226.6			RPD = 4	
Aroclor-1248	1	8.398	-0.001	30565	184.8	1	8.261	0.001	27551	158.5
Aroclor-1248	2	8.526	0.002	70601	164.3	2	8.668	0.001	25417	138.4
Aroclor-1248	3	8.946	0.002	172847	209.1	3	9.124	0.004	25864	120.2
Aroclor-1248	4	9.243	-0.001	87363	207.3	4	9.552	0.006	32437	125.7
Total Col1Ave (4 peaks): 191.4						Total Col2Ave (4 peaks): 135.7			RPD = 34	
Corrected Ave (3 peaks): 185.5						Corrected Ave (3 peaks): 128.1			RPD = 37	
Aroclor-1254	1	9.243	-0.004	87363	131.2	1	9.406	0.002	13247	47.7
Aroclor-1254	2	9.326	0.001	28949	96.7	2	9.552	0.053	32437	196.7
Aroclor-1254	3	9.622	0.004	20780	48.3	3	9.927	0.003	10002	44.5
Aroclor-1254	4	9.762	0.006	35470	42.1	4	10.082	0.005	19933	40.6
Aroclor-1254	5	10.140	0.015	28075	55.2	5	10.341	0.013	19432	39.9
Total Col1Ave (5 peaks): 74.7						Total Col2Ave (5 peaks): 73.9			RPD = 1	
Corrected Ave (4 peaks): 60.6						Corrected Ave (4 peaks): 43.2			RPD = 34	
Aroclor-1260	1	10.998	0.005	3609	7.0	1	11.618	0.012	2137	5.8
Aroclor-1260	2	11.317	0.007	3837	7.5	2	11.879	0.007	1437	1.5
Aroclor-1260	3	11.765	0.080	33905	26.6	3	12.382	-0.006	12460	52.1
Aroclor-1260	4	12.097	0.007	9099	14.6	4	---			0.0
Aroclor-1260	5	12.272	0.079	2060	7.6	NS	---			----
Total Col1Ave (5 peaks): 12.6						Total Col2Ave (3 peaks): 19.8			RPD = 44*	
Corrected Ave (4 peaks): 9.2						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.787	0.009	24040	54.4	1	11.078	-0.075	7864	14.0
Aroclor-1262	2	12.272	0.077	2060	3.3	2	11.618	0.013	2137	4.5
Aroclor-1262	3	---			0.0	3	12.382	-0.004	12460	24.0
Aroclor-1262	4	12.937	-0.002	16041	29.5	4	---			0.0
Total Col1Ave (3 peaks): 29.1						Total Col2Ave (3 peaks): 14.1			RPD = 69*	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.272	0.076	2060	1.3	1	12.382	-0.003	12460	9.5
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.649	0.001	4324	3.5	3	12.845	0.002	951	0.8
Aroclor-1268	4	13.442	0.005	15801	4.4	4	13.628	-0.035	6512	1.7
Total Col1Ave (3 peaks): 3.1						Total Col2Ave (3 peaks): 4.0			RPD = 25	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.842 - 13.740) = 1489022 Col1 Total PCB = 0.2 ppm*

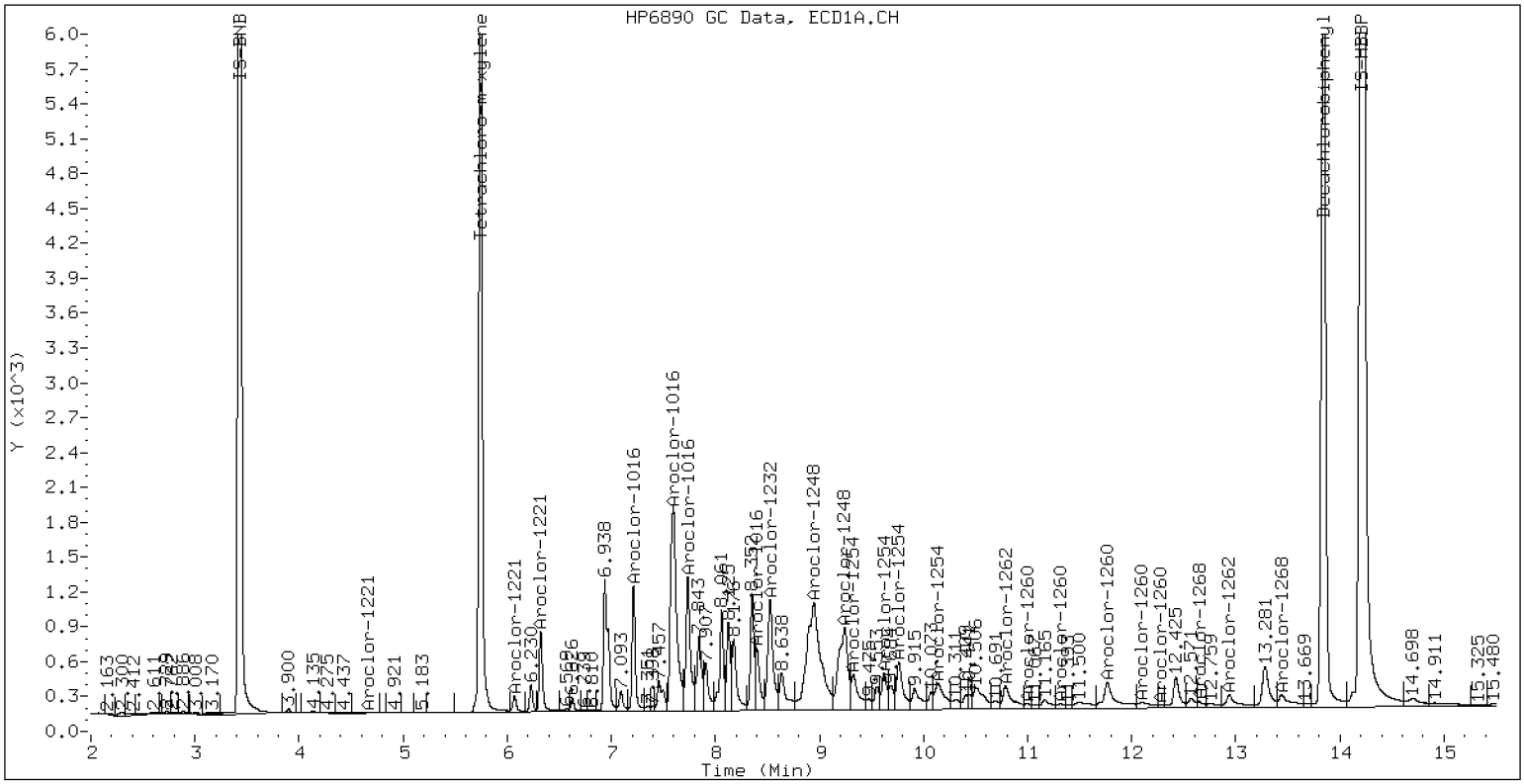
Total PCB Area Col2 (5.728 - 13.968) = 667658 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

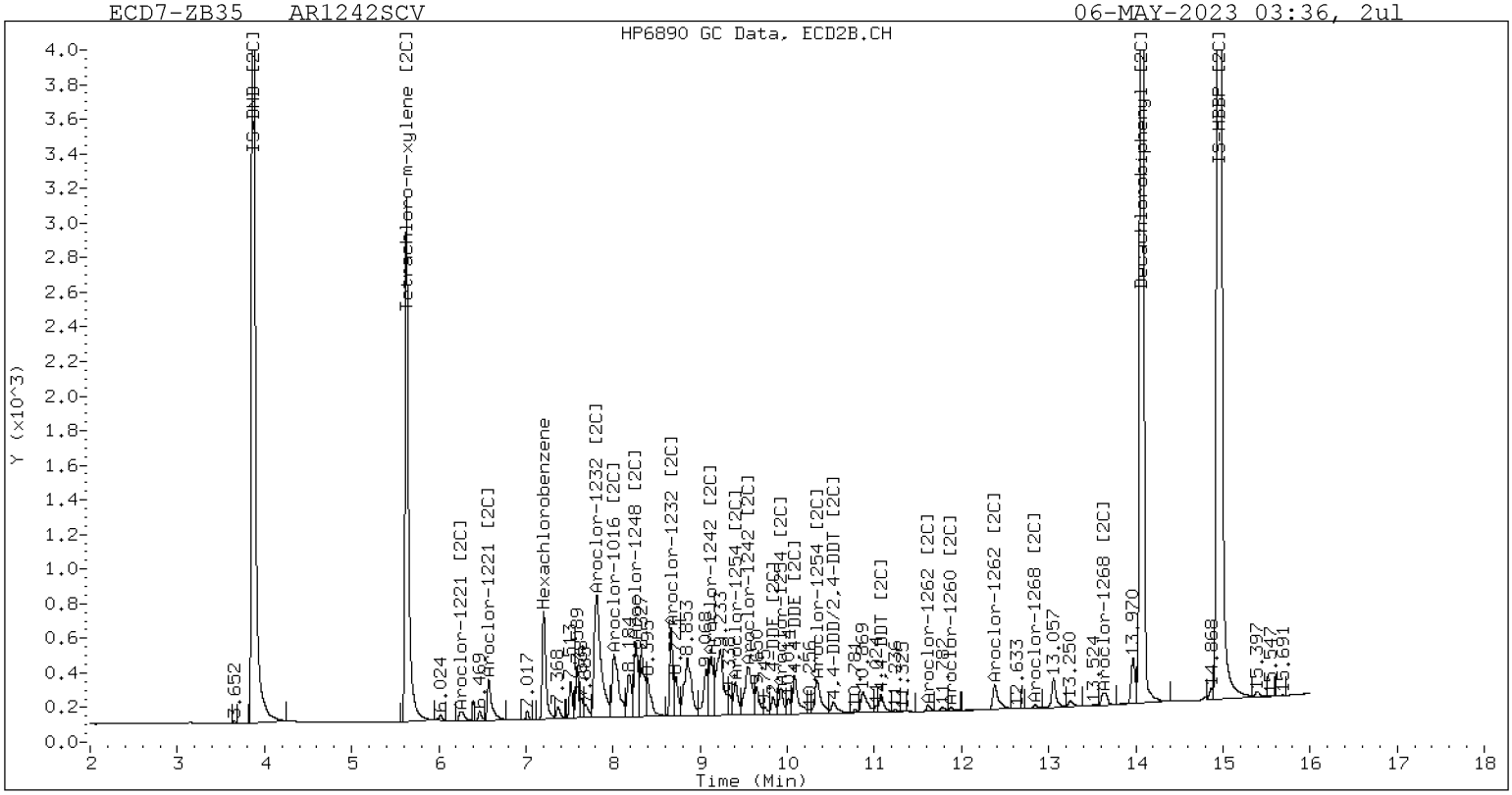
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV 06-MAY-2023 03:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV 06-MAY-2023 03:36, 2ul

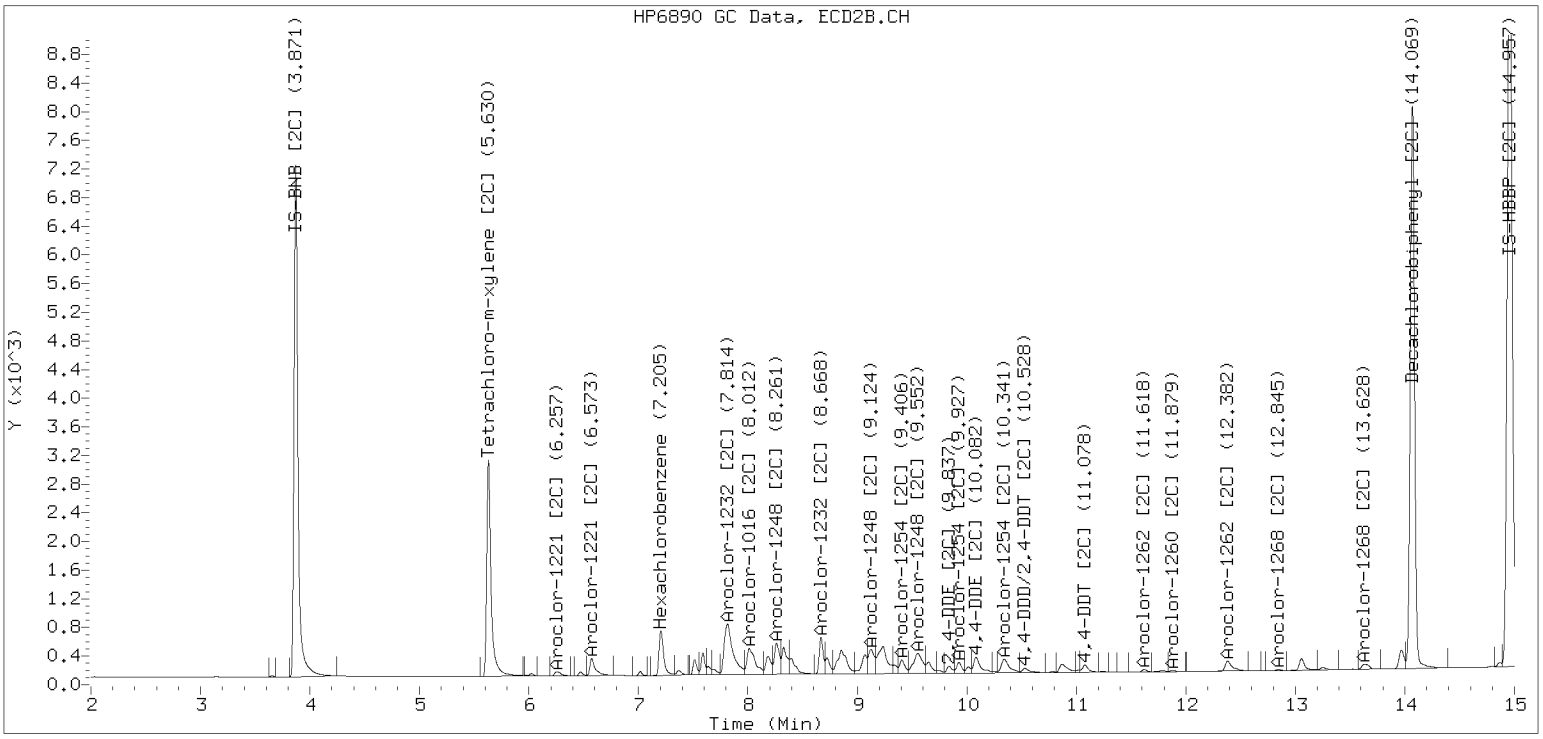


ZB-35 Manual Integration: NO

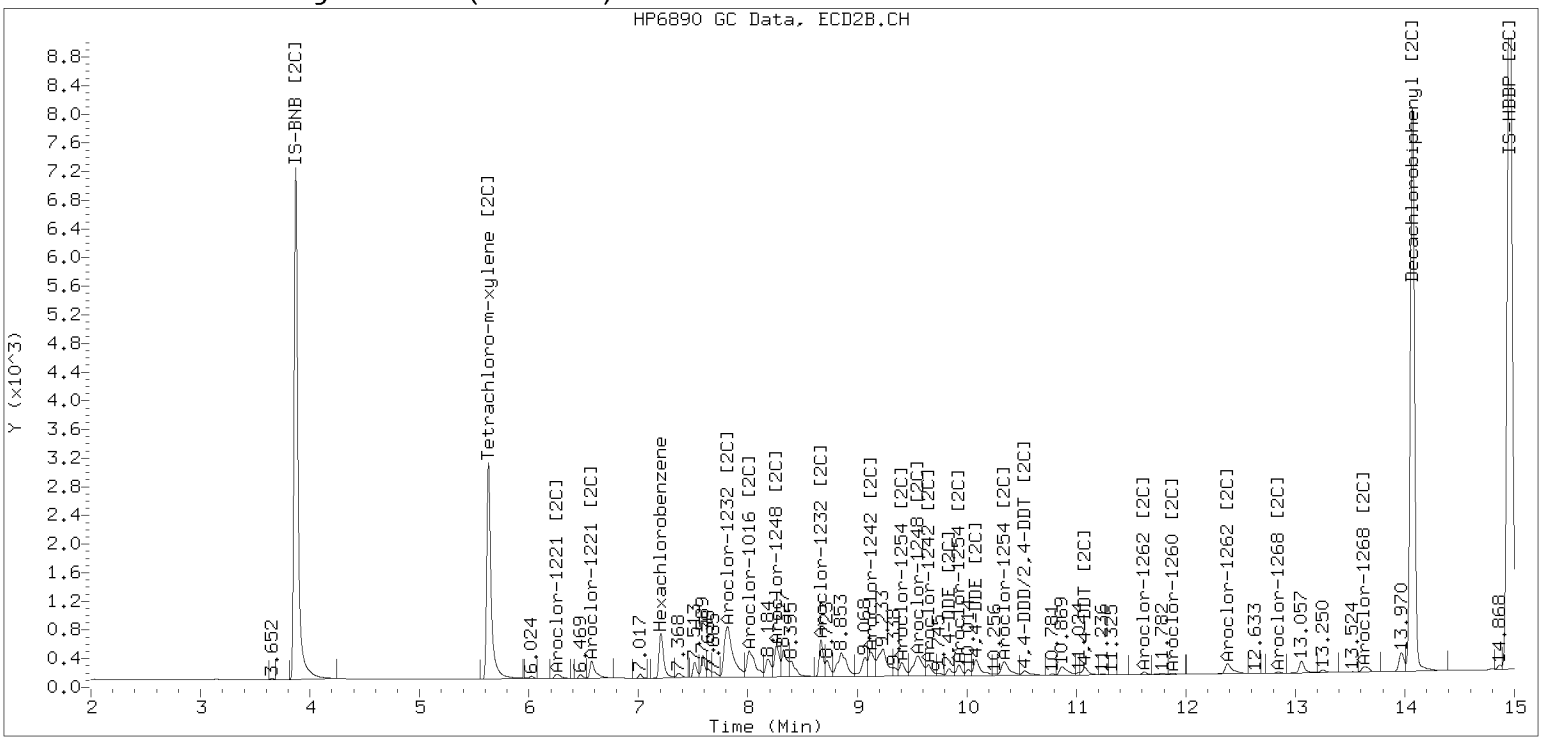
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230505.b/230505.b/05052333ECD7.D Injection Date: 06-MAY-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05052334ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0079	Injection Date:	05/06/23
Lab Sample ID:	SLE0079-SCV3	Injection Time:	03:57
Sequence Name:	AR1248SCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	251	0.0568879	0.0571636		0.5	+/-20
Aroclor 1248 [2C]	A	250.00	249	0.0454726	0.0453430		-0.3	+/-20
Decachlorobiphenyl	A	40.000	35.7	0.7991406	0.7130963		-10.8	+/-20
Tetrachlorometaxylene	A	40.000	36.8	1.2048230	1.1082640		-8.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.0	1.1360140	1.0789920		-5.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.7	1.1005470	1.0375410		-5.7	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052334ECD7.D
Data file 2: /230505.b/230505.b/05052334ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV
Client ID:
Injection Date: 06-MAY-2023 03:57
Report Date: 05/06/2023 12:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.741	-0.001	356328	5.629	0.000	186552	36.8	37.7	2.5	Tetrachloro-m-xylene
13.842	0.001	339452	14.070	0.002	373861	35.7	38.0	6.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	643038	6.9
Hexabromobiphenyl	876625	952051	8.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	359604	3.0
Hexabromobiphenyl	652984	692982	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	0.000	19871	79.8	1	7.203	-0.001	18843	92.6
Aroclor-1016	2	7.589	-0.006	95111	122.2	2	7.812	0.005	52352	120.7
Aroclor-1016	3	7.736	0.003	37565	104.4	3	8.012	0.006	8263	43.2
Aroclor-1016	4	8.399	0.002	41542	279.7	4	8.260	0.001	42833	281.8
Total Col1Ave (4 peaks):					146.5	Total Col2Ave (4 peaks):				134.6 RPD = 9
Corrected Ave (3 peaks):					102.1	Corrected Ave (3 peaks):				85.5 RPD = 18
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.066	-0.003	351	3.9	2	6.275	0.029	1573	28.6
Aroclor-1221	3	6.320	-0.001	3509	16.3	3	6.576	0.004	967	11.2
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.066	-0.003	351	5.6	2	7.203	-0.001	18843	236.0
Aroclor-1232	3	7.589	-0.006	95111	318.5	3	7.812	-0.002	52352	326.4
Aroclor-1232	4	8.524	-0.002	105782	827.6	4	8.667	-0.002	44962	968.0
Total Col1Ave (3 peaks):					383.9	Total Col2Ave (3 peaks):				510.1 RPD = 28
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.212	0.000	19871	98.1	1	7.203	-0.000	18843	117.2
Aroclor-1242	2	7.589	-0.006	95111	148.1	2	7.812	-0.000	52352	153.1
Aroclor-1242	3	8.399	0.001	41542	334.5	3	9.120	-0.003	52681	480.6
Aroclor-1242	4	8.524	-0.000	105782	368.1	4	9.548	-0.002	63343	479.5
Total Col1Ave (4 peaks):					237.2	Total Col2Ave (4 peaks):				307.6 RPD = 26
Corrected Ave (3 peaks):					193.6	Corrected Ave (3 peaks):				250.0 RPD = 25
Aroclor-1248	1	8.399	0.001	41542	253.1	1	8.260	-0.001	42833	250.4
Aroclor-1248	2	8.524	-0.000	105782	248.0	2	8.667	0.000	44962	248.8
Aroclor-1248	3	8.944	-0.000	206928	252.3	3	9.120	-0.000	52681	248.7
Aroclor-1248	4	9.242	-0.001	105227	251.7	4	9.548	0.002	63343	249.4
Total Col1Ave (4 peaks):					251.3	Total Col2Ave (4 peaks):				249.3 RPD = 1
Corrected Ave (3 peaks):					250.6	Corrected Ave (3 peaks):				249.0 RPD = 1
Aroclor-1254	1	9.242	-0.004	105227	159.2	1	9.404	0.000	25835	94.6
Aroclor-1254	2	9.324	-0.001	51326	172.8	2	9.548	0.049	63343	390.3
Aroclor-1254	3	9.619	0.001	41394	97.0	3	9.925	0.001	22609	102.1
Aroclor-1254	4	9.759	0.003	72223	86.4	4	10.079	0.001	43816	90.7
Aroclor-1254	5	10.135	0.010	49936	98.9	5	10.345	0.016	42513	88.7
Total Col1Ave (5 peaks):					122.9	Total Col2Ave (5 peaks):				153.3 RPD = 22
Corrected Ave (4 peaks):					110.4	Corrected Ave (4 peaks):				94.0 RPD = 16
Aroclor-1260	1	10.998	0.005	1863	3.7	1	11.617	0.011	2599	7.1
Aroclor-1260	2	11.314	0.004	1152	2.3	2	11.877	0.005	1951	2.0
Aroclor-1260	3	11.695	0.009	1829	1.5	3	12.389	0.001	857	3.6
Aroclor-1260	4	12.097	0.007	1266	2.1	4	12.458	0.003	1302	2.0
Aroclor-1260	5	12.195	0.002	464	1.7	NS	---			----
Total Col1Ave (5 peaks):					2.3	Total Col2Ave (4 peaks):				3.7 RPD = 48*
Corrected Ave (4 peaks):					1.9	Corrected Ave (3 peaks):				2.5 RPD = 29
Aroclor-1262	1	10.784	0.005	15405	35.8	1	11.077	-0.077	9003	16.0
Aroclor-1262	2	12.195	0.000	464	0.8	2	11.617	0.012	2599	5.5
Aroclor-1262	3	12.271	0.002	489	0.8	3	12.389	0.003	857	1.7
Aroclor-1262	4	12.940	0.001	1638	3.1	4	12.458	0.002	1302	1.5
Total Col1Ave (4 peaks):					10.1	Total Col2Ave (4 peaks):				6.2 RPD = 48*
Corrected Ave (3 peaks):					1.5	Corrected Ave (3 peaks):				2.9 RPD = 61*
Aroclor-1268	1	12.195	-0.001	464	0.3	1	12.389	0.004	857	0.7
Aroclor-1268	2	12.271	0.003	489	0.3	2	12.458	0.006	1302	0.9
Aroclor-1268	3	12.649	0.001	1831	1.5	3	12.845	0.002	676	0.6
Aroclor-1268	4	13.443	0.006	5387	1.6	4	13.661	-0.003	2707	0.7
Total Col1Ave (4 peaks):					0.9	Total Col2Ave (4 peaks):				0.7 RPD = 26
Corrected Ave (3 peaks):					0.7	Corrected Ave (3 peaks):				0.6 RPD = 11

Total PCB Area Col1 (5.842 - 13.740) = 1634238 Col1 Total PCB = 0.2 ppm*

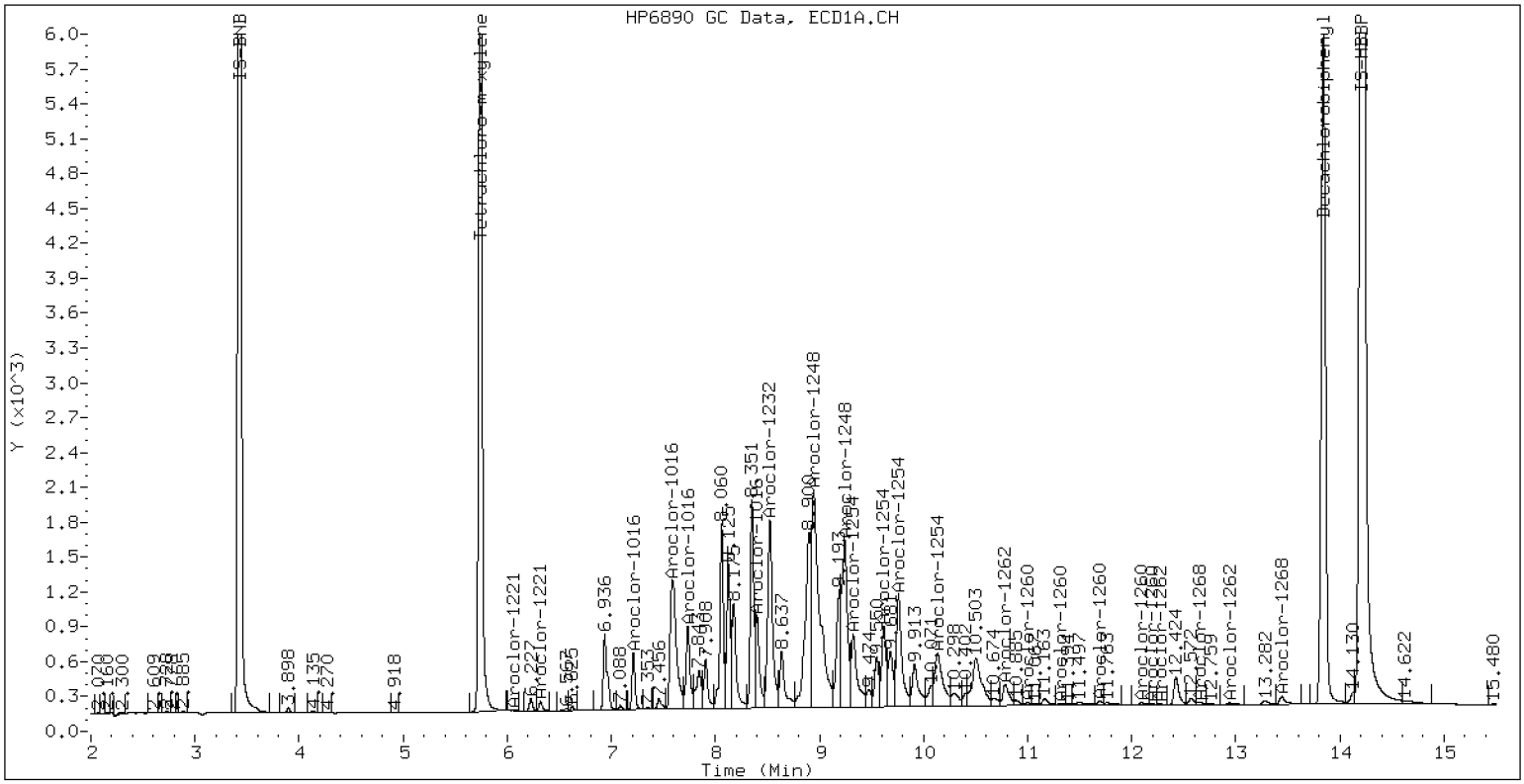
Total PCB Area Col2 (5.728 - 13.968) = 876760 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

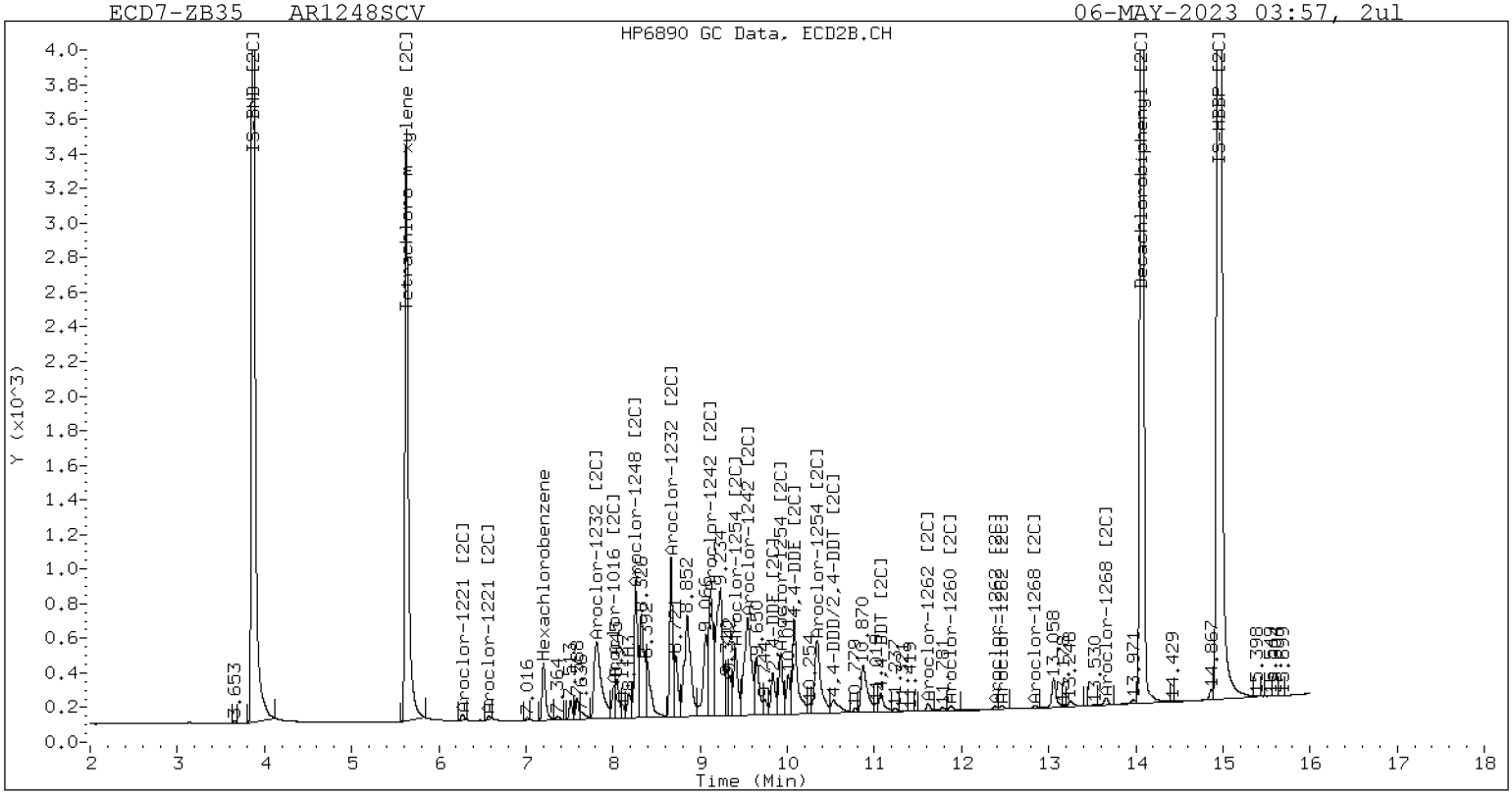
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV 06-MAY-2023 03:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV 06-MAY-2023 03:57, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05052335ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0079	Injection Date:	05/06/23
Lab Sample ID:	SLE0079-SCV4	Injection Time:	04:18
Sequence Name:	AR1254SCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	239	0.0678007	0.0647470		-4.3	+/-20
Aroclor 1254 [2C]	A	250.00	241	0.0720677	0.0695237		-3.8	+/-20
Decachlorobiphenyl	A	40.000	36.0	0.7991406	0.7182997		-10.1	+/-20
Tetrachlorometaxylene	A	40.000	37.6	1.2048230	1.1319680		-6.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.5	1.1360140	1.0928370		-3.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.3	1.1005470	1.0547150		-4.2	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052335ECD7.D
Data file 2: /230505.b/230505.b/05052335ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV
Client ID:
Injection Date: 06-MAY-2023 04:18
Report Date: 05/06/2023 11:30
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	368022	5.631	0.002	192033	37.6	38.3	2.0	Tetrachloro-m-xylene
13.843	0.002	352066	14.070	0.002	385384	36.0	38.5	6.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	650234	8.1
Hexabromobiphenyl	876625	980276	11.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	364142	4.3
Hexabromobiphenyl	652984	705291	8.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.002	635	2.5	1	---			0.0
Aroclor-1016	2	7.590	-0.004	2512	3.2	2	---			0.0
Aroclor-1016	3	7.738	0.005	1594	4.4	3	---			0.0
Aroclor-1016	4	8.351	-0.047	31774	211.6	4	---			0.0
Total Col1Ave (4 peaks):					55.4	Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.052	-0.018	242	2.6	2	---			0.0
Aroclor-1221	3	6.322	0.001	427	2.0	3	---			0.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.052	-0.018	242	3.8	2	---			0.0
Aroclor-1232	3	7.590	-0.005	2512	8.3	3	---			0.0
Aroclor-1232	4	8.528	0.001	13950	107.9	4	---			0.0
Total Col1Ave (3 peaks):					40.0	Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.214	0.002	635	3.1	1	---			0.0
Aroclor-1242	2	7.590	-0.005	2512	3.9	2	---			0.0
Aroclor-1242	3	8.351	-0.047	31774	253.0	3	9.125	0.002	23963	215.9
Aroclor-1242	4	8.528	0.004	13950	48.0	4	9.649	0.099	23982	179.3
Total Col1Ave (4 peaks):					77.0	Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.351	-0.048	31774	191.4	1	8.260	-0.000	23490	135.6
Aroclor-1248	2	8.528	0.004	13950	32.3	2	8.669	0.002	16693	91.2
Aroclor-1248	3	8.941	-0.003	154338	186.1	3	9.125	0.005	23963	111.7
Aroclor-1248	4	9.246	0.003	158369	374.6	4	9.499	-0.047	38716	150.5
Total Col1Ave (4 peaks):					196.1	Total Col2Ave (4 peaks):			122.3	RPD = 46*
Corrected Ave (3 peaks):					136.6	Corrected Ave (3 peaks):			112.8	RPD = 19
Aroclor-1254	1	9.246	-0.001	158369	237.0	1	9.404	0.000	67493	244.0
Aroclor-1254	2	9.325	-0.000	72386	241.1	2	9.499	-0.000	38716	235.6
Aroclor-1254	3	9.617	-0.001	103602	240.1	3	9.925	0.001	53972	240.7
Aroclor-1254	4	9.756	0.000	201259	238.2	4	10.079	0.001	116950	239.0
Aroclor-1254	5	10.127	0.001	122207	239.5	5	10.327	-0.001	118439	243.9
Total Col1Ave (5 peaks):					239.2	Total Col2Ave (5 peaks):			240.6	RPD = 1
Corrected Ave (4 peaks):					238.7	Corrected Ave (4 peaks):			239.8	RPD = 0
Aroclor-1260	1	10.994	0.001	13538	26.1	1	11.615	0.009	33465	89.3
Aroclor-1260	2	11.313	0.003	13900	27.2	2	11.876	0.004	25534	26.1
Aroclor-1260	3	11.689	0.004	32548	25.4	3	12.404	0.016	1811	7.5
Aroclor-1260	4	12.093	0.003	25285	40.3	4	12.458	0.002	14842	22.7
Aroclor-1260	5	12.273	0.079	2534	9.3	NS	---			----
Total Col1Ave (5 peaks):					25.6	Total Col2Ave (4 peaks):			36.4	RPD = 35
Corrected Ave (4 peaks):					22.0	Corrected Ave (3 peaks):			18.7	RPD = 16
Aroclor-1262	1	10.779	0.000	210018	473.6	1	11.073	-0.081	114323	200.0
Aroclor-1262	2	12.273	0.078	2534	4.1	2	11.615	0.010	33465	69.4
Aroclor-1262	3	---			0.0	3	12.404	0.018	1811	3.4
Aroclor-1262	4	12.939	0.001	1830	3.3	4	12.458	0.002	14842	17.3
Total Col1Ave (3 peaks):					160.3	Total Col2Ave (4 peaks):			72.6	RPD = 75*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			30.1	
Aroclor-1268	1	12.273	0.077	2534	1.6	1	12.404	0.019	1811	1.4
Aroclor-1268	2	---			0.0	2	12.458	0.005	14842	10.3
Aroclor-1268	3	12.654	0.006	2669	2.1	3	12.847	0.004	835	0.7
Aroclor-1268	4	13.442	0.004	6266	1.8	4	13.662	-0.001	2350	0.6
Total Col1Ave (3 peaks):					1.8	Total Col2Ave (4 peaks):			3.2	RPD = 55*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			0.9	

Total PCB Area Col1 (5.842 - 13.740) = 2123119 Col1 Total PCB = 0.3 ppm*

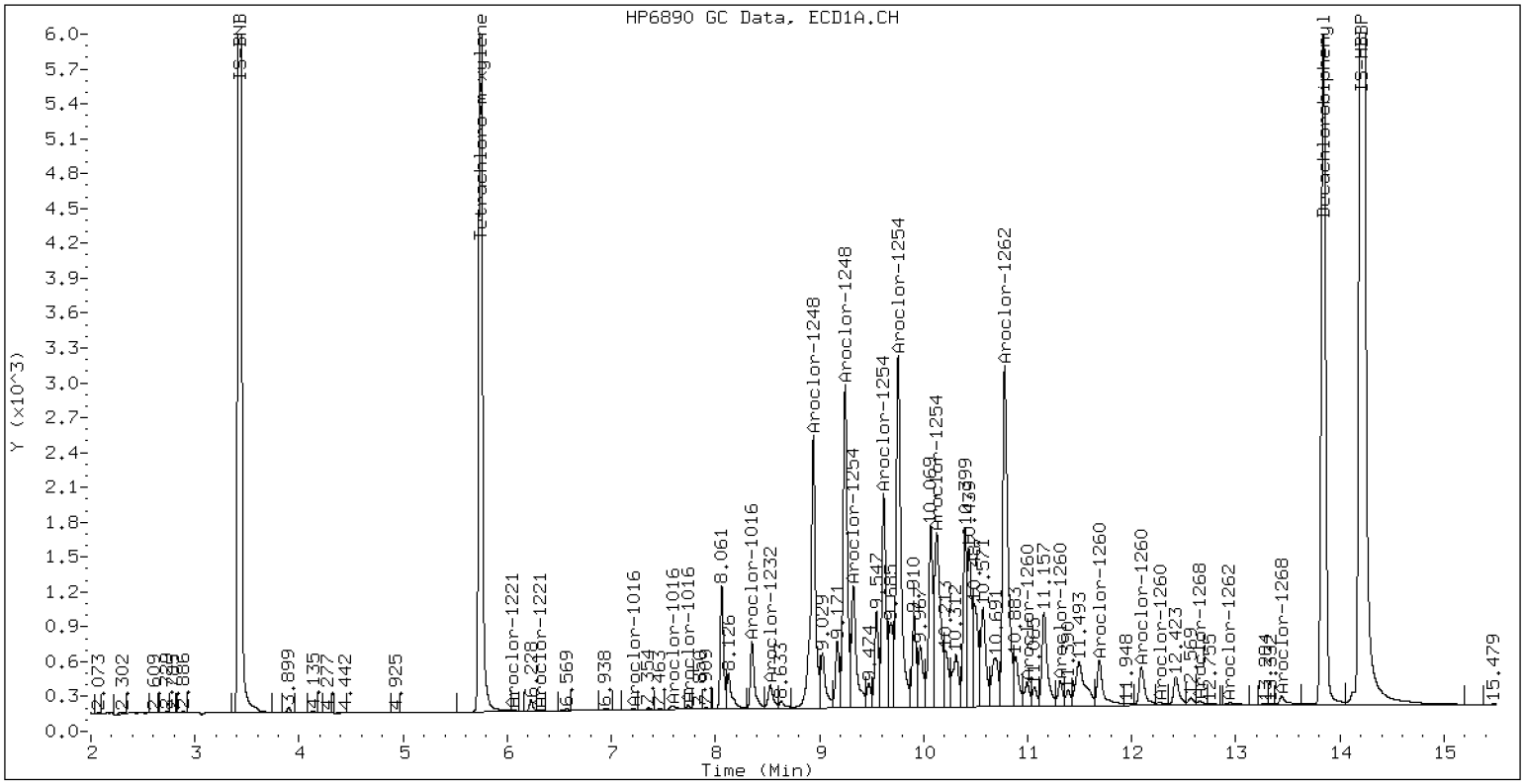
Total PCB Area Col2 (5.728 - 13.968) = 1146487 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

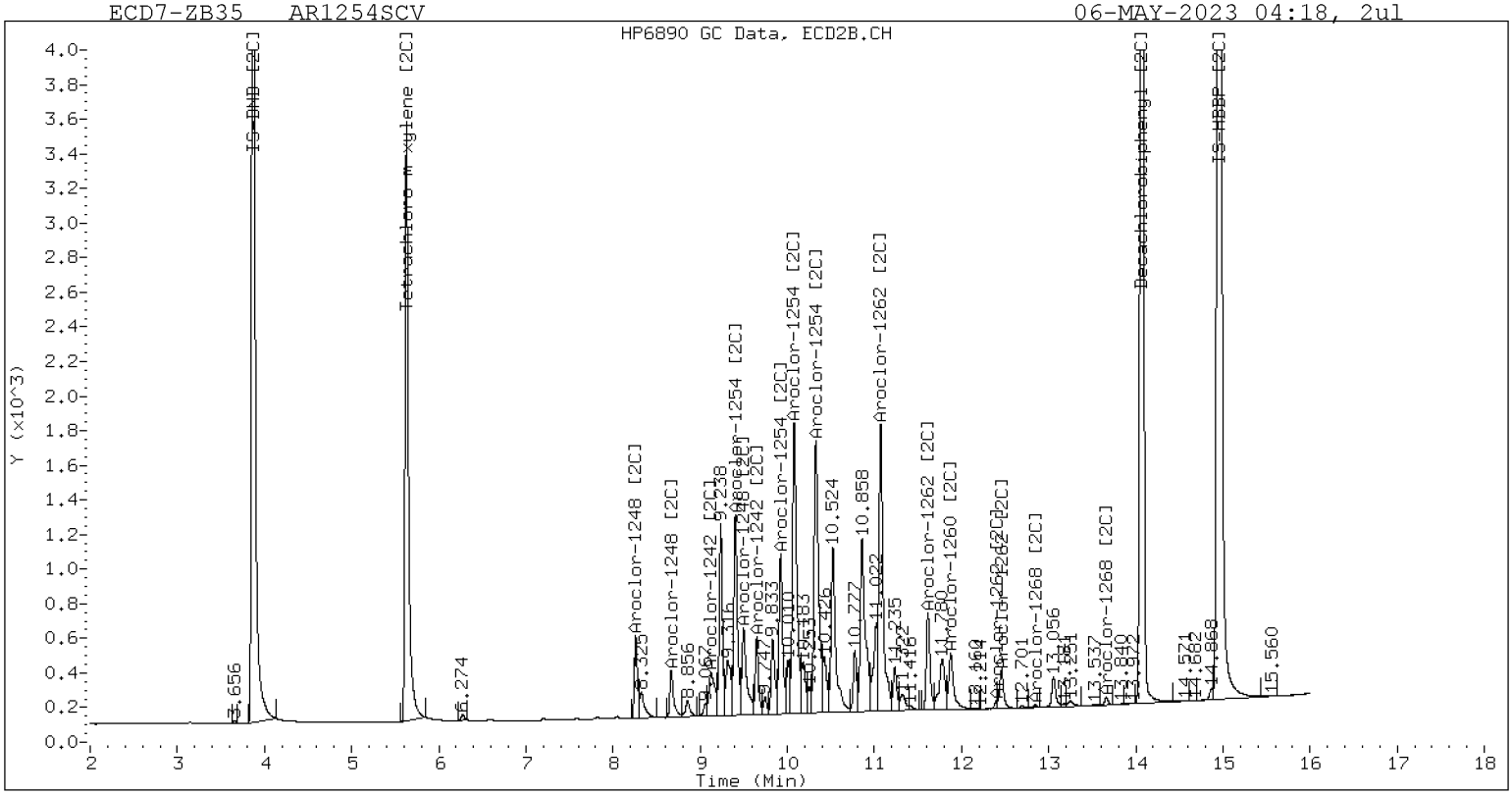
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV 06-MAY-2023 04:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV 06-MAY-2023 04:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05052336ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0079	Injection Date:	05/06/23
Lab Sample ID:	SLE0079-SCV5	Injection Time:	04:39
Sequence Name:	AR2162SCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1221	A	250.00	290	0.0145752	0.0167225		15.9	+/-20
Aroclor 1221 [2C]	A	250.00	288	0.0124557	0.0144068		15.3	+/-20
Aroclor 1262	A	250.00	265	0.0465964	0.0493619		6.1	+/-20
Aroclor 1262 [2C]	A	250.00	259	0.0691503	0.0715087		3.5	+/-20
Decachlorobiphenyl	A	40.000	37.1	0.7991406	0.7407598		-7.3	+/-20
Tetrachlorometaxylene	A	40.000	37.8	1.2048230	1.1381330		-5.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.8	1.1360140	1.1010220		-3.1	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.1	1.1005470	1.0746770		-2.4	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052336ECD7.D
Data file 2: /230505.b/230505.b/05052336ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV
Client ID:
Injection Date: 06-MAY-2023 04:39
Report Date: 05/06/2023 11:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	358254	5.628	-0.000	183759	37.8	39.1	3.3	Tetrachloro-m-xylene
13.842	0.002	344347	14.070	0.002	373300	37.1	38.8	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	629547	4.7
Hexabromobiphenyl	876625	929713	6.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	341980	-2.1
Hexabromobiphenyl	652984	678097	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	6601	27.1	1	7.207	0.003	3935	20.3
Aroclor-1016	2	7.595	0.000	13419	17.6	2	7.821	0.013	6146	14.9
Aroclor-1016	3	7.735	0.003	7114	20.2	3	8.027	0.021	3201	17.6
Aroclor-1016	4	8.353	-0.045	3916	26.9	4	8.262	0.003	2131	14.7
Total Col1Ave (4 peaks):					23.0	Total Col2Ave (4 peaks):				16.9 RPD = 30
Corrected Ave (3 peaks):					21.6	Corrected Ave (3 peaks):				15.7 RPD = 31
Aroclor-1221	1	4.663	-0.001	13184	297.8	1	4.893	-0.001	7253	287.5
Aroclor-1221	2	6.070	0.000	25527	287.4	2	6.244	-0.001	14853	284.1
Aroclor-1221	3	6.321	0.000	59985	284.3	3	6.571	-0.001	24083	292.9
Total Col1Ave (3 peaks):					289.8	Total Col2Ave (3 peaks):				288.2 RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.663	-0.001	13184	447.0	1	4.893	-0.001	7253	546.9
Aroclor-1232	2	6.070	0.000	25527	416.0	2	7.207	0.002	3935	51.8
Aroclor-1232	3	7.595	-0.000	13419	45.9	3	7.821	0.006	6146	40.3
Aroclor-1232	4	8.528	0.001	2679	21.4	4	8.671	0.002	1120	25.4
Total Col1Ave (4 peaks):					232.6	Total Col2Ave (4 peaks):				166.1 RPD = 33
Corrected Ave (3 peaks):					161.1	Corrected Ave (3 peaks):				39.2 RPD = 122*
Aroclor-1242	1	7.213	0.001	6601	33.3	1	7.207	0.004	3935	25.7
Aroclor-1242	2	7.595	-0.000	13419	21.3	2	7.821	0.008	6146	18.9
Aroclor-1242	3	8.353	-0.045	3916	32.2	3	9.133	0.010	881	8.5
Aroclor-1242	4	8.528	0.003	2679	9.5	4	9.651	0.101	516	4.1
Total Col1Ave (4 peaks):					24.1	Total Col2Ave (4 peaks):				14.3 RPD = 51*
Corrected Ave (3 peaks):					21.0	Corrected Ave (3 peaks):				10.5 RPD = 67*
Aroclor-1248	1	8.353	-0.046	3916	24.4	1	8.262	0.002	2131	13.1
Aroclor-1248	2	8.528	0.003	2679	6.4	2	8.671	0.004	1120	6.5
Aroclor-1248	3	8.942	-0.002	25144	31.3	3	9.133	0.013	881	4.4
Aroclor-1248	4	9.251	0.008	25583	62.5	4	9.500	-0.045	335	1.4
Total Col1Ave (4 peaks):					31.1	Total Col2Ave (4 peaks):				6.3 RPD = 132*
Corrected Ave (3 peaks):					20.7	Corrected Ave (3 peaks):				4.1 RPD = 134*
Aroclor-1254	1	9.251	0.005	25583	39.5	1	9.408	0.004	9719	37.4
Aroclor-1254	2	---			0.0	2	9.500	0.001	335	2.2
Aroclor-1254	3	9.620	0.002	4245	10.2	3	9.928	0.004	2055	9.8
Aroclor-1254	4	9.758	0.003	11050	13.5	4	10.100	0.022	55162	120.0
Aroclor-1254	5	10.071	-0.055	129151	261.4	5	10.325	-0.004	68421	150.1
Total Col1Ave (4 peaks):					81.1	Total Col2Ave (5 peaks):				63.9 RPD = 24
Corrected Ave (3 peaks):					21.1	Corrected Ave (4 peaks):				42.3 RPD = 67*
Aroclor-1260	1	10.995	0.002	206643	420.3	1	11.605	-0.001	119902	332.9
Aroclor-1260	2	11.311	0.001	167443	345.1	2	11.872	0.000	293746	311.8
Aroclor-1260	3	11.687	0.001	390491	321.4	3	12.386	-0.002	131462	563.2
Aroclor-1260	4	12.091	0.001	120118	201.8	4	12.456	0.000	212898	338.4
Aroclor-1260	5	12.195	0.002	155588	599.5	NS	---			----
Total Col1Ave (5 peaks):					377.6	Total Col2Ave (4 peaks):				386.6 RPD = 2
Corrected Ave (4 peaks):					322.2	Corrected Ave (3 peaks):				327.7 RPD = 2
Aroclor-1262	1	10.777	-0.001	114050	271.2	1	11.153	0.000	141861	258.2
Aroclor-1262	2	12.195	0.001	155588	263.0	2	11.605	0.000	119902	258.7
Aroclor-1262	3	12.269	0.000	167998	264.2	3	12.386	-0.000	131462	259.6
Aroclor-1262	4	12.938	-0.001	136019	262.5	4	12.456	0.000	212898	258.0
Total Col1Ave (4 peaks):					265.2	Total Col2Ave (4 peaks):				258.6 RPD = 3
Corrected Ave (3 peaks):					263.3	Corrected Ave (3 peaks):				258.3 RPD = 2
Aroclor-1268	1	12.195	-0.000	155588	104.9	1	12.386	0.001	131462	102.4
Aroclor-1268	2	12.269	0.001	167998	114.1	2	12.456	0.003	212898	154.3
Aroclor-1268	3	12.675	0.027	60611	51.2	3	12.843	-0.000	8393	7.1
Aroclor-1268	4	13.439	0.001	49821	14.7	4	13.661	-0.002	39480	10.4
Total Col1Ave (4 peaks):					71.2	Total Col2Ave (4 peaks):				68.6 RPD = 4

Corrected Ave (3 peaks): 56.9 Corrected Ave (3 peaks): 40.0 RPD = 35

Total PCB Area Col1 (5.842 - 13.740) = 2870829 Col1 Total PCB = 0.4 ppm*

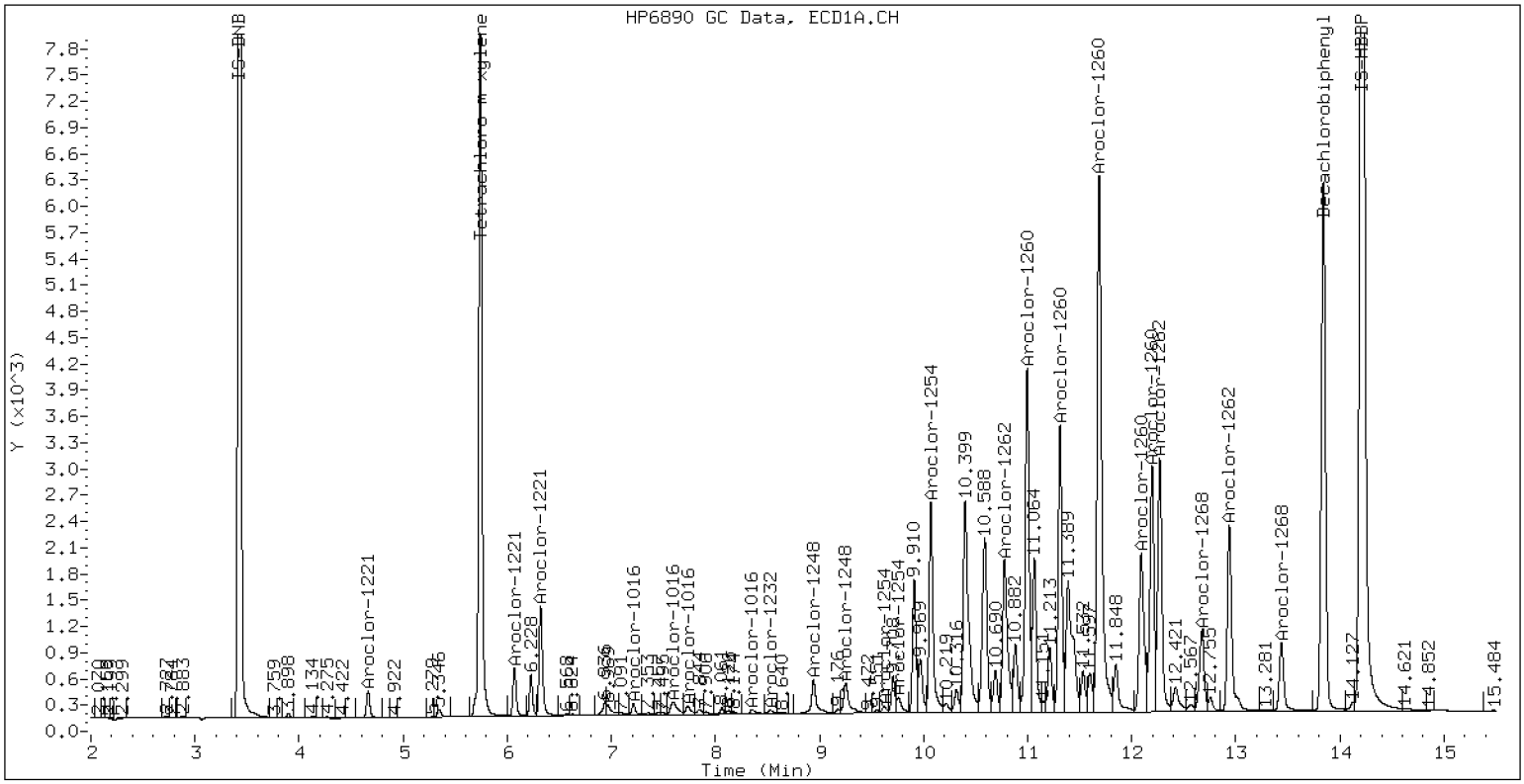
Total PCB Area Col2 (5.728 - 13.968) = 1885829 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

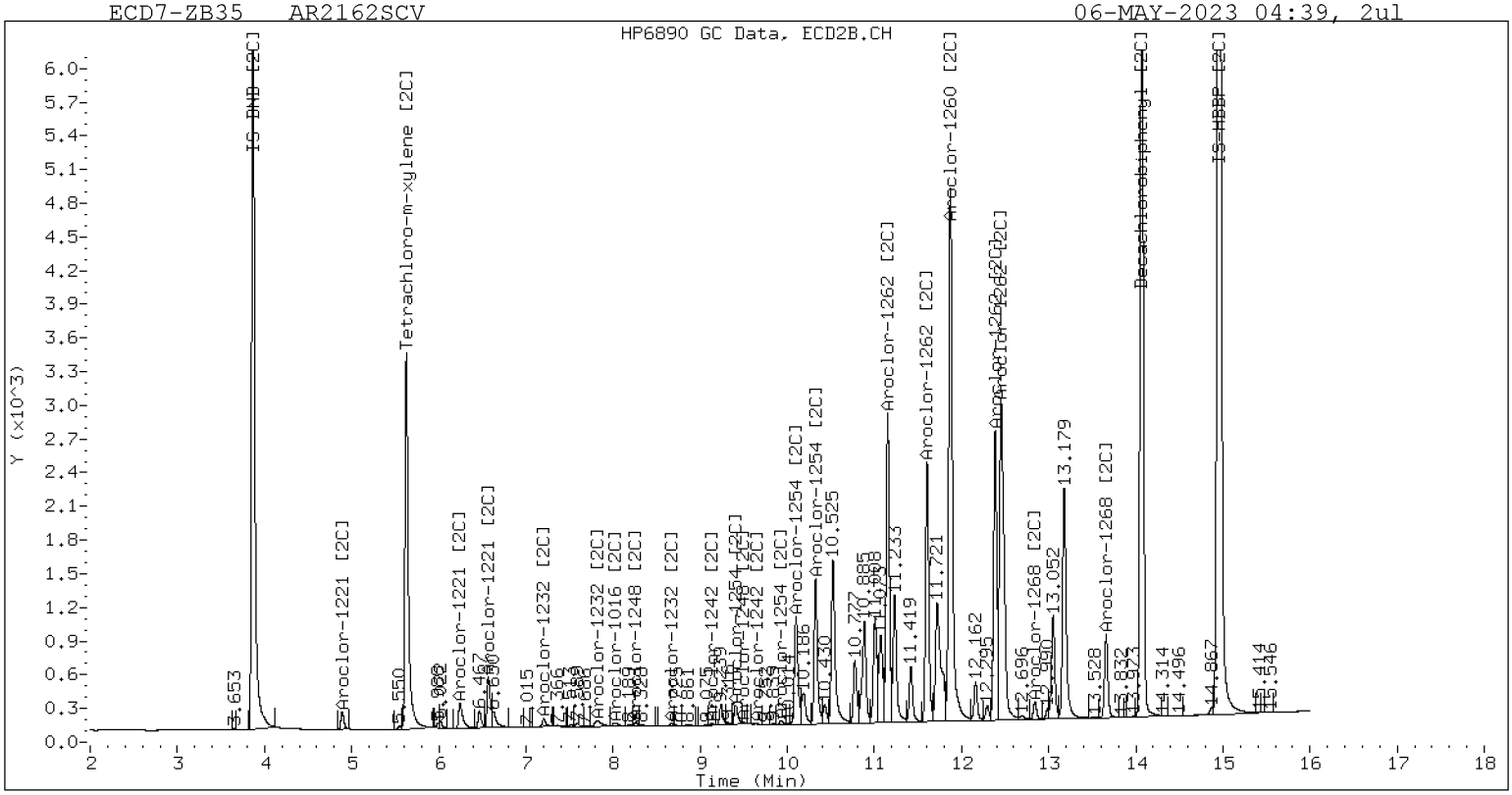
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV 06-MAY-2023 04:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV 06-MAY-2023 04:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05052337ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0079	Injection Date:	05/06/23
Lab Sample ID:	SLE0079-SCV6	Injection Time:	05:00
Sequence Name:	AR3268SCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1232	A	250.00	256	0.0161500	0.0177311		2.6	+/-20
Aroclor 1232 [2C]	A	250.00	301	0.0167199	0.0201037		20.3	+/-20
Aroclor 1268	A	250.00	266	0.1617990	0.1720924		6.5	+/-20
Aroclor 1268 [2C]	A	250.00	263	0.2250713	0.2372875		5.2	+/-20
Decachlorobiphenyl	A	40.000	55.1	0.7991406	1.1003690		37.7	+/-20
Tetrachlorometaxylene	A	40.000	38.4	1.2048230	1.1563010		-4.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	59.3	1.1360140	1.6851460		48.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.4	1.1005470	1.1123120		1.1	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230505.b/05052337ECD7.D
Data file 2: /230505.b/230505.b/05052337ECD7.D
Method: \\target\share\chem4\ecd7.i\230505.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV
Client ID:
Injection Date: 06-MAY-2023 05:00
Report Date: 05/06/2023 11:31
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.001	373749	5.629	0.001	196946	38.4	40.4	5.2	Tetrachloro-m-xylene
13.842	0.002	525409	14.069	0.001	586548	55.1	59.3	7.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	646456	7.5
Hexabromobiphenyl	876625	954969	8.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	354120	1.4
Hexabromobiphenyl	652984	696139	6.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.214	0.001	28623	114.3	1	7.205	0.002	23124	115.4
Aroclor-1016	2	7.597	0.002	85721	109.5	2	7.815	0.007	47496	111.2
Aroclor-1016	3	7.735	0.002	41343	114.3	3	8.014	0.008	24029	127.5
Aroclor-1016	4	8.400	0.002	16653	111.6	4	8.262	0.003	15421	103.0
Total Col1Ave (4 peaks):		112.4				Total Col2Ave (4 peaks):			114.3	RPD = 2
Corrected Ave (3 peaks):		111.8				Corrected Ave (3 peaks):			109.9	RPD = 2
Aroclor-1221	1	4.664	0.001	7272	159.9	1	4.895	0.000	4045	154.9
Aroclor-1221	2	6.070	0.001	13478	147.8	2	6.246	0.000	9235	170.6
Aroclor-1221	3	6.321	0.001	43831	202.3	3	6.572	0.000	24300	285.4
Total Col1Ave (3 peaks):		170.0				Total Col2Ave (3 peaks):			203.6	RPD = 18
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.664	0.001	7272	240.1	1	4.895	0.001	4045	294.5
Aroclor-1232	2	6.070	0.001	13478	213.9	2	7.205	0.001	23124	294.1
Aroclor-1232	3	7.597	0.002	85721	285.5	3	7.815	0.000	47496	300.7
Aroclor-1232	4	8.527	0.000	36809	286.5	4	8.669	-0.000	14324	313.2
Total Col1Ave (4 peaks):		256.5				Total Col2Ave (4 peaks):			300.6	RPD = 16
Corrected Ave (3 peaks):		246.5				Corrected Ave (3 peaks):			296.5	RPD = 18
Aroclor-1242	1	7.214	0.002	28623	140.5	1	7.205	0.002	23124	146.1
Aroclor-1242	2	7.597	0.002	85721	132.8	2	7.815	0.002	47496	141.1
Aroclor-1242	3	8.400	0.002	16653	133.4	3	9.128	0.005	14403	133.4
Aroclor-1242	4	8.527	0.003	36809	127.4	4	9.648	0.098	5512	42.4
Total Col1Ave (4 peaks):		133.5				Total Col2Ave (4 peaks):			115.7	RPD = 14
Corrected Ave (3 peaks):		131.2				Corrected Ave (3 peaks):			105.6	RPD = 22
Aroclor-1248	1	8.400	0.001	16653	100.9	1	8.262	0.002	15421	91.5
Aroclor-1248	2	8.527	0.003	36809	85.8	2	8.669	0.002	14324	80.5
Aroclor-1248	3	8.944	0.000	89377	108.4	3	9.128	0.008	14403	69.0
Aroclor-1248	4	9.238	-0.005	41570	98.9	4	9.560	0.015	17331	69.3
Total Col1Ave (4 peaks):		98.5				Total Col2Ave (4 peaks):			77.6	RPD = 24
Corrected Ave (3 peaks):		95.2				Corrected Ave (3 peaks):			72.9	RPD = 26
Aroclor-1254	1	9.238	-0.008	41570	62.6	1	9.407	0.003	5487	20.4
Aroclor-1254	2	9.326	0.001	12640	42.3	2	9.560	0.061	17331	108.4
Aroclor-1254	3	9.624	0.006	7232	16.9	3	9.929	0.005	3481	16.0
Aroclor-1254	4	9.764	0.008	11671	13.9	4	10.086	0.009	7259	15.3
Aroclor-1254	5	10.139	0.014	7544	14.9	5	10.345	0.017	6610	14.0
Total Col1Ave (5 peaks):		30.1				Total Col2Ave (5 peaks):			34.8	RPD = 14
Corrected Ave (4 peaks):		22.0				Corrected Ave (4 peaks):			16.4	RPD = 29
Aroclor-1260	1	10.998	0.005	85093	168.5	1	11.598	-0.008	75237	203.5
Aroclor-1260	2	11.313	0.003	6363	12.8	2	11.873	0.001	33655	34.8
Aroclor-1260	3	11.688	0.002	47857	38.3	3	12.384	-0.004	346138	1444.4
Aroclor-1260	4	12.094	0.004	1291	2.1	4	12.453	-0.002	373218	577.8
Aroclor-1260	5	12.195	0.001	406211	1523.9	NS	---			----
Total Col1Ave (5 peaks):		349.1				Total Col2Ave (4 peaks):			565.1	RPD = 47*
Corrected Ave (4 peaks):		55.4				Corrected Ave (3 peaks):			272.0	RPD = 132*
Aroclor-1262	1	10.785	0.006	4006	9.3	1	11.156	0.002	52531	93.1
Aroclor-1262	2	12.195	0.000	406211	668.6	2	11.598	-0.007	75237	158.2
Aroclor-1262	3	12.268	-0.002	403730	618.2	3	12.384	-0.002	346138	665.8
Aroclor-1262	4	12.937	-0.002	145536	273.5	4	12.453	-0.002	373218	440.5
Total Col1Ave (4 peaks):		392.4				Total Col2Ave (4 peaks):			339.4	RPD = 14
Corrected Ave (3 peaks):		300.3				Corrected Ave (3 peaks):			230.6	RPD = 26
Aroclor-1268	1	12.195	-0.001	406211	266.7	1	12.384	-0.001	346138	262.7
Aroclor-1268	2	12.268	-0.000	403730	266.9	2	12.453	0.001	373218	263.5
Aroclor-1268	3	12.648	-0.000	323568	266.0	3	12.844	0.001	316122	260.6
Aroclor-1268	4	13.439	0.002	920777	265.1	4	13.663	0.000	1029335	264.8
Total Col1Ave (4 peaks):		266.2				Total Col2Ave (4 peaks):			262.9	RPD = 1

Corrected Ave (3 peaks): 265.9 Corrected Ave (3 peaks): 262.3 RPD = 1

Total PCB Area Col1 (5.842 - 13.740) = 3325332 Col1 Total PCB = 0.5 ppm*

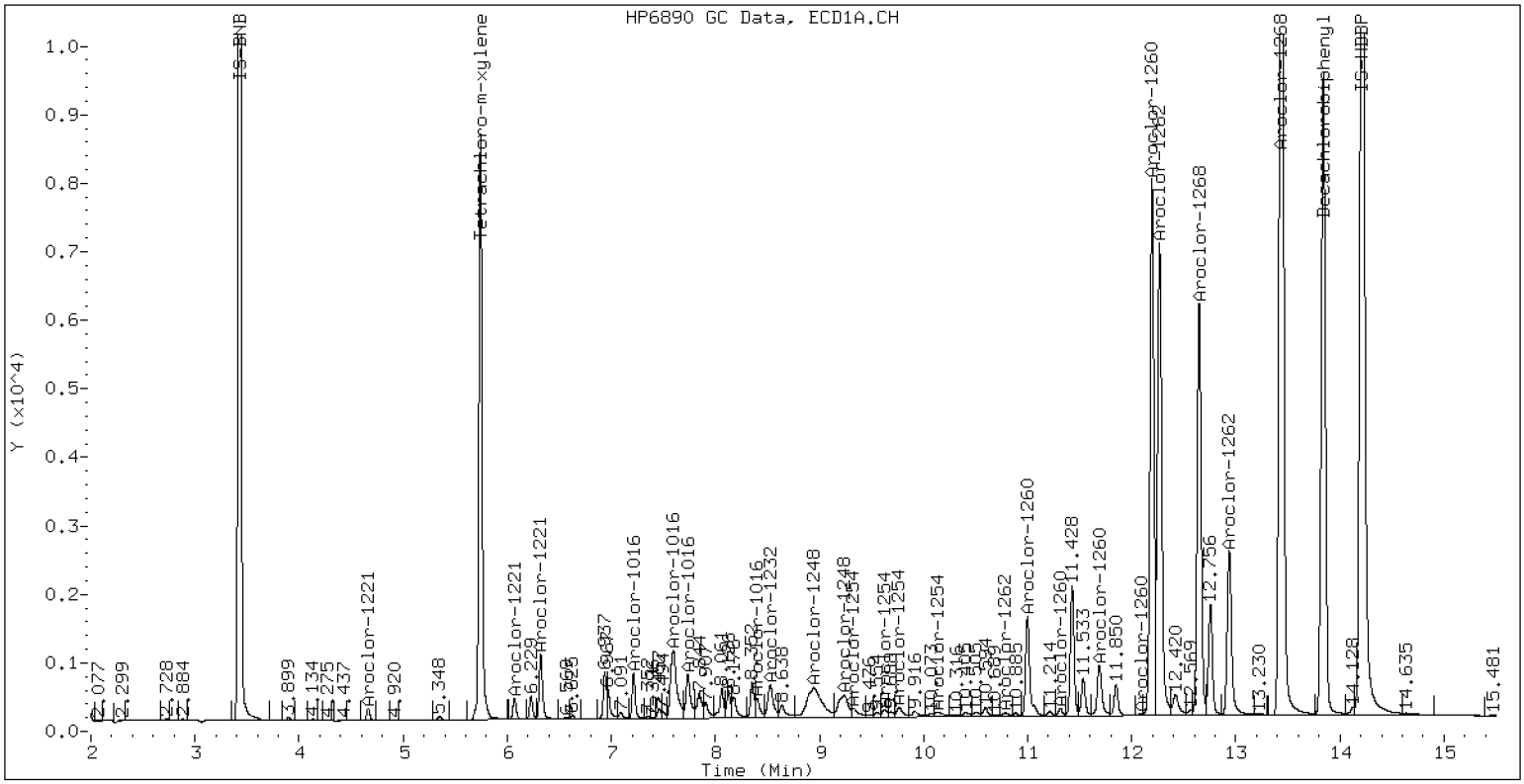
Total PCB Area Col2 (5.728 - 13.968) = 2876097 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

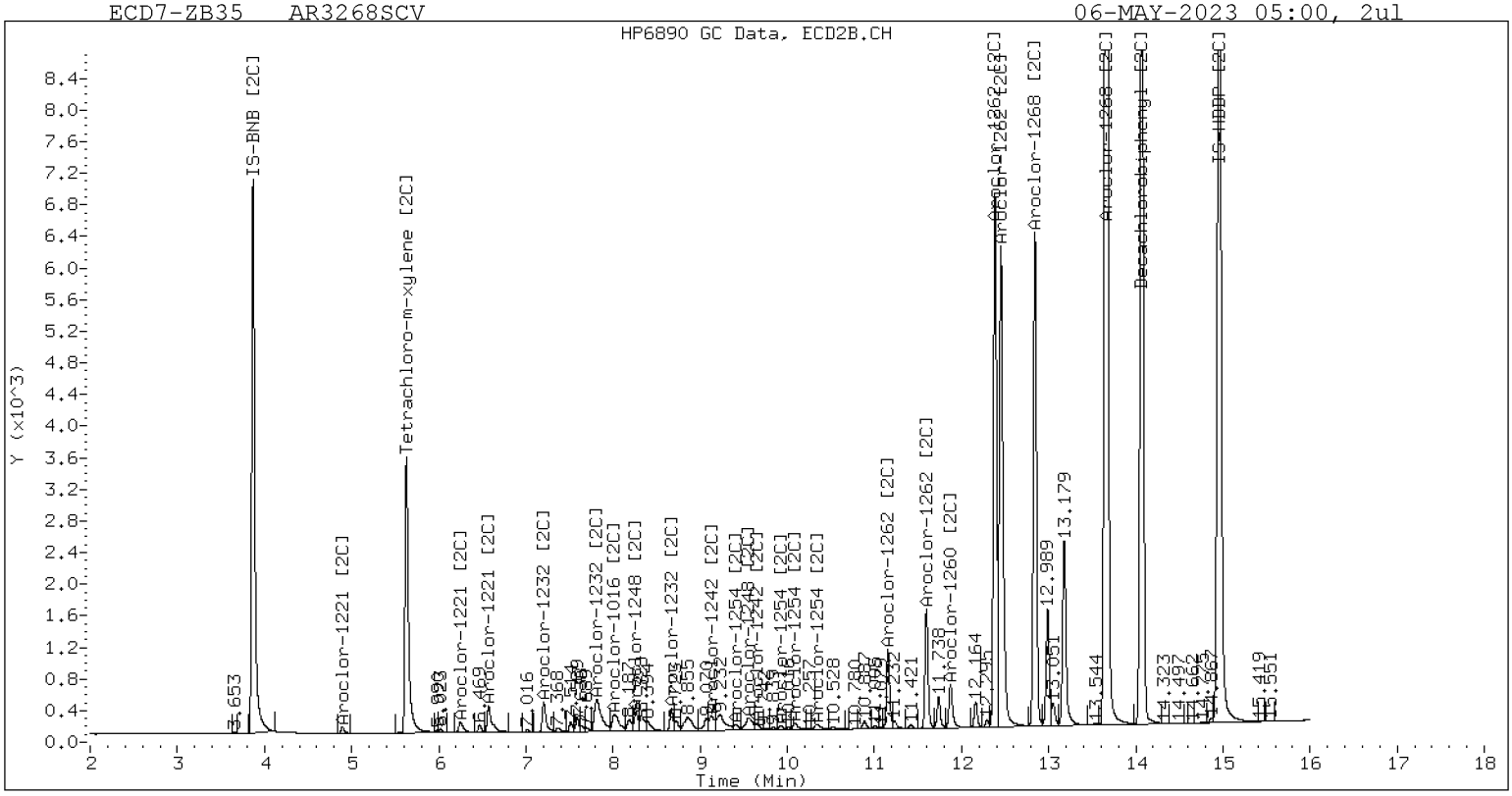
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV 06-MAY-2023 05:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV 06-MAY-2023 05:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05192318ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0328	Injection Date:	05/19/23
Lab Sample ID:	SLE0328-CCV1	Injection Time:	20:02
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	224	0.0568879	0.0508585		-10.6	+/-20
Aroclor-1248 (1)	A	250.00	234		0.0190963			
Aroclor-1248 (2)	A	250.00	236		0.0501593			
Aroclor-1248 (3)	A	250.00	230		0.0938877			
Aroclor-1248 (4)	A	250.00	194		0.0402906			
Aroclor 1248 [2C]	A	250.00	240	0.0454726	0.0435779		-4.1	+/-20
Aroclor-1248 (1) [2C]	A	250.00	241		0.0367029			
Aroclor-1248 (2) [2C]	A	250.00	241		0.0387914			
Aroclor-1248 (3) [2C]	A	250.00	241		0.0455067			
Aroclor-1248 (4) [2C]	A	250.00	236		0.0533107			
Decachlorobiphenyl	A	40.000	39.1	0.7991406	0.7811091		-2.3	+/-20
Tetrachlorometaxylene	A	40.000	38.9	1.2048230	1.1711690		-2.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.0	1.1360140	1.1649590		2.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.9	1.1005470	1.0981620		-0.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192318ECD7.D
Data file 2: /230519.b/230519.b/05192318ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 19-MAY-2023 20:02
Report Date: 05/23/2023 09:42
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.743	0.000	325362	5.629	0.001	187526	38.9	39.9	2.6	Tetrachloro-m-xylene
13.840	-0.000	215624	14.068	-0.001	225514	39.1	41.0	4.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	555619	-7.6
Hexabromobiphenyl	876625	552097	-37.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	341527	-2.2
Hexabromobiphenyl	652984	387162	-40.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.400	0.000	33157	233.8	1	8.259	0.000	39172	241.1
Aroclor-1248	2	8.525	0.000	87092	236.3	2	8.666	0.000	41401	241.2
Aroclor-1248	3	8.944	0.000	163018	230.0	3	9.119	0.000	48568	241.4
Aroclor-1248	4	9.241	0.000	69957	193.6	4	9.543	0.000	56897	235.9
Total Col1Ave (4 peaks):					223.4	Total Col2Ave (4 peaks):				239.9 RPD = 7
Corrected Ave (3 peaks):					219.1	Corrected Ave (3 peaks):				239.4 RPD = 9
CalAmt %D:					-10.6	CalAmt %D:				-4.0

Total PCB Area Col1 (5.842 - 13.740) = 1308707 Col1 Total PCB = 0.2 ppm*

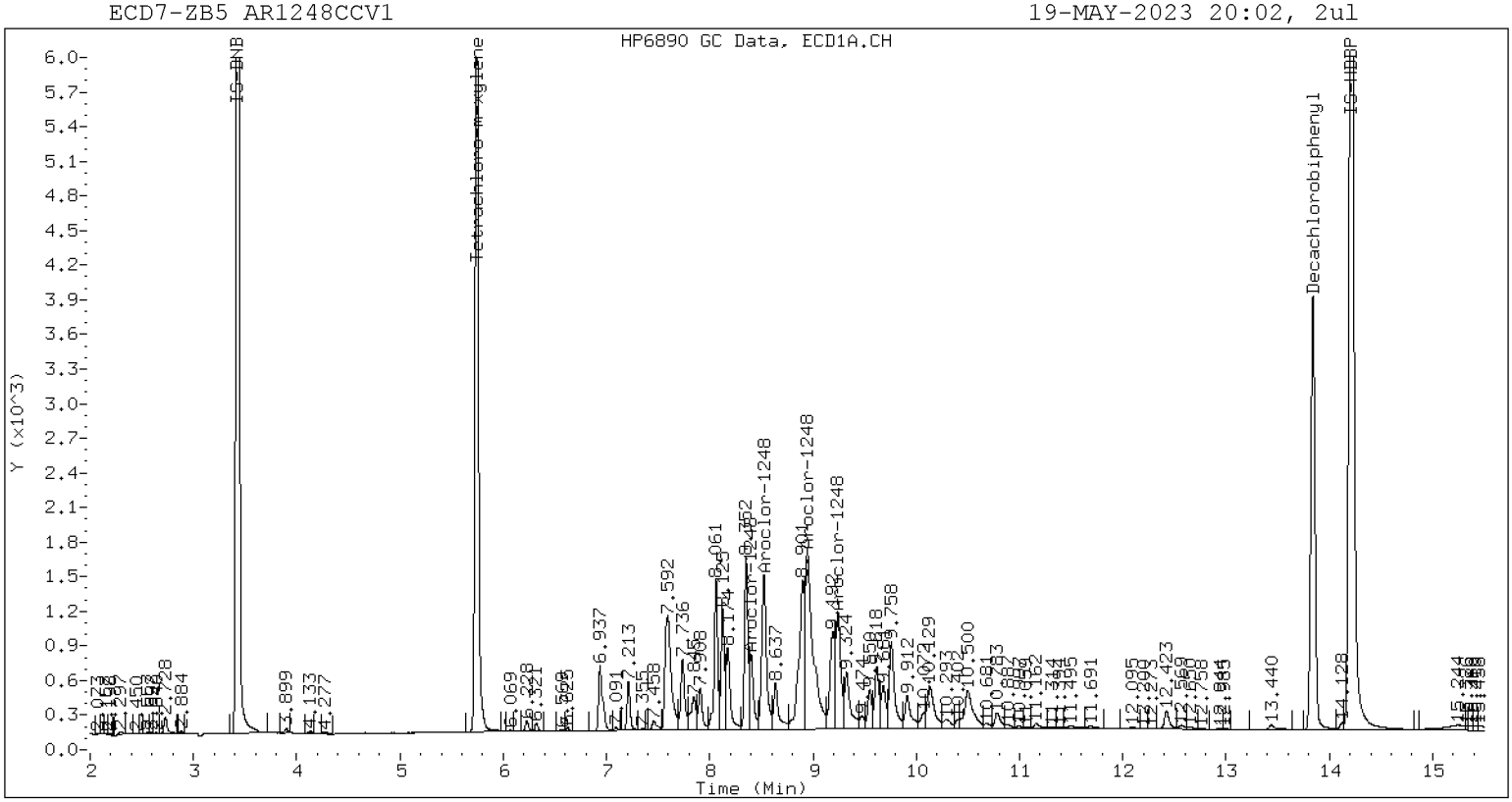
Total PCB Area Col2 (5.728 - 13.969) = 785480 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

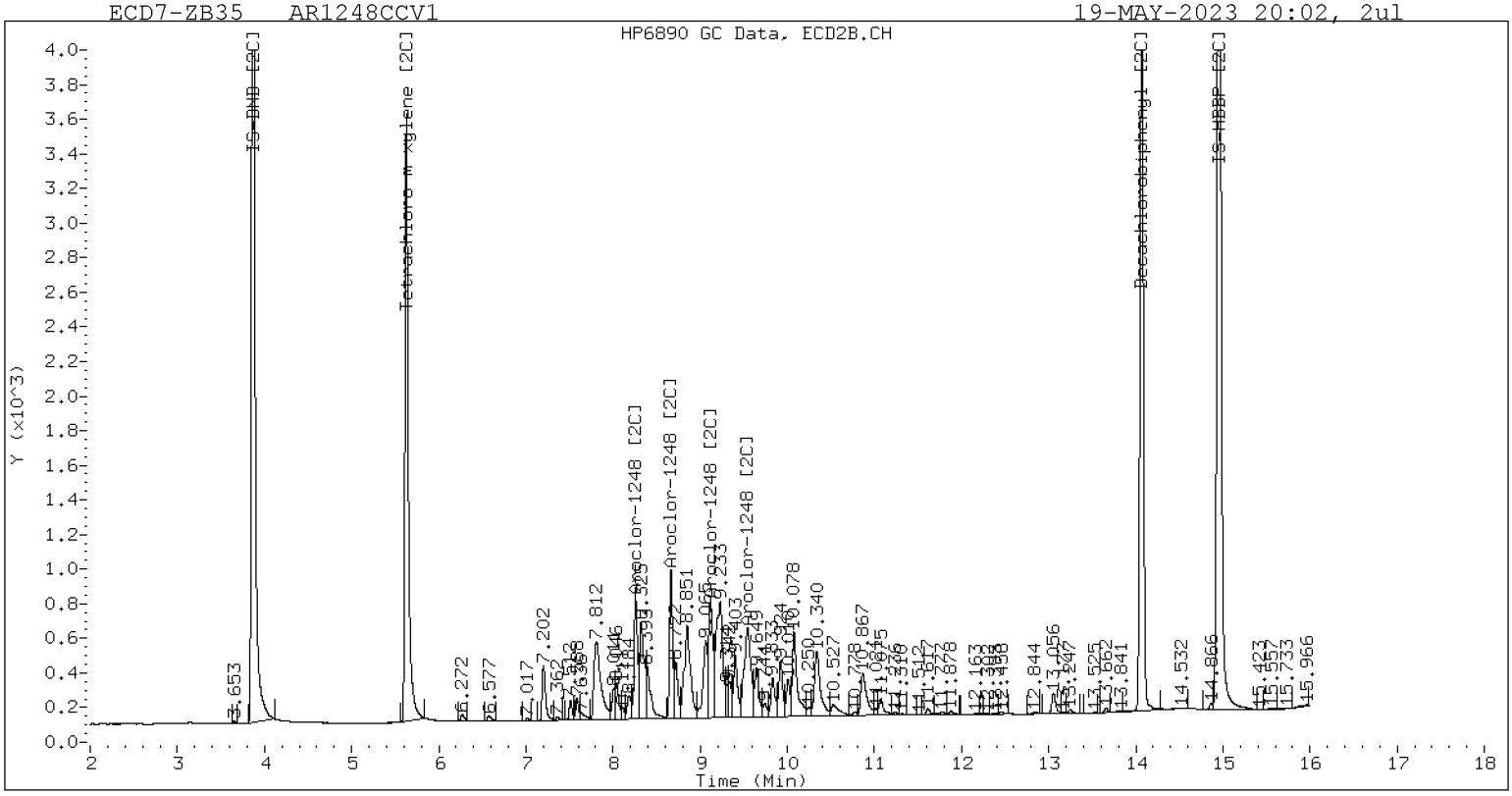
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 19-MAY-2023 20:02, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 19-MAY-2023 20:02, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05192319ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0328	Injection Date:	05/19/23
Lab Sample ID:	SLE0328-CCV2	Injection Time:	20:22
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	261	0.0477728	0.0505037		4.3	+/-20	
Aroclor-1016 (1)	A	250.00	255	0.0309764	0.0316007		2.0		
Aroclor-1016 (2)	A	250.00	270	0.0968611	0.1047875		8.0		
Aroclor-1016 (3)	A	250.00	260	0.0447793	0.0465583		4.0		
Aroclor-1016 (4)	A	250.00	258	0.0184745	0.0190683		3.2		
Aroclor 1016 [2C]	A	250.00	251	0.0545435	0.0559625		0.4	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	238	0.0452861	0.0431834		-4.8		
Aroclor-1016 (2) [2C]	A	250.00	272	0.0965080	0.1051443		8.8		
Aroclor-1016 (3) [2C]	A	250.00	246	0.0425661	0.0419195		-1.6		
Aroclor-1016 (4) [2C]	A	250.00	248	0.0338137	0.0336028		-0.8		
Aroclor 1260	A	250.00	294	0.0524306	0.0620599		17.7	+/-20	
Aroclor-1260 (1)	A	250.00	302	0.0423031	0.0511258		20.8		
Aroclor-1260 (2)	A	250.00	300	0.0417493	0.0501702		20.0		
Aroclor-1260 (3)	A	250.00	298	0.1045597	0.1247146		19.2		
Aroclor-1260 (4)	A	250.00	288	0.0512104	0.0589732		15.2		
Aroclor-1260 (5)	A	250.00	283	0.0223305	0.0253155		13.2		
Aroclor 1260 [2C]	A	250.00	305	0.0638471	0.0780523		22.0	+/-20	*
Aroclor-1260 (1) [2C]	A	250.00	311	0.0424868	0.0528302		24.4		
Aroclor-1260 (2) [2C]	A	250.00	309	0.1111292	0.1375099		23.6		
Aroclor-1260 (3) [2C]	A	250.00	302	0.0275392	0.0332863		20.8		
Aroclor-1260 (4) [2C]	A	250.00	298	0.0742331	0.0885828		19.2		
Decachlorobiphenyl	A	40.000	41.6	0.7991406	0.8307366		4.0	+/-20	
Tetrachlorometaxylene	A	40.000	40.7	1.2048230	1.2251450		1.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	43.6	1.1360140	1.2397590		9.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	43.5	1.1005470	1.1975190		8.8	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230519.b/05192319ECD7.D
Data file 2: /230519.b/230519.b/05192319ECD7.D
Method: \\target\share\chem4\ecd7.i\230519.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 19-MAY-2023 20:22
Report Date: 05/23/2023 09:42
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	0.000	341761	5.628	0.000	195710	40.7	43.5	6.8	Tetrachloro-m-xylene
13.840	0.000	277476	14.069	0.000	271033	41.6	43.7	4.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	557911	-7.2
Hexabromobiphenyl	876625	668024	-23.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	326859	-6.4
Hexabromobiphenyl	652984	437235	-33.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	0.000	55095	255.0	1	7.204	0.000	44109	238.4
Aroclor-1016	2	7.595	0.000	182694	270.5	2	7.811	0.000	107398	272.4
Aroclor-1016	3	7.734	0.000	81173	259.9	3	8.009	0.000	42818	246.2
Aroclor-1016	4	8.399	0.000	33245	258.0	4	8.259	0.000	34323	248.4
Total Col1Ave (4 peaks):					260.9	Total Col2Ave (4 peaks):				251.4 RPD = 4
Corrected Ave (3 peaks):					257.7	Corrected Ave (3 peaks):				244.3 RPD = 5
CalAmt %D:					4.3	CalAmt %D:				0.5
Aroclor-1260	1	10.994	0.000	106729	302.1	1	11.606	0.000	72185	310.9
Aroclor-1260	2	11.311	0.000	104734	300.4	2	11.872	0.000	187888	309.3
Aroclor-1260	3	11.685	0.000	260351	298.2	3	12.388	0.000	45481	302.2
Aroclor-1260	4	12.089	0.000	123111	287.9	4	12.455	0.000	121036	298.3
Aroclor-1260	5	12.193	0.000	52848	283.4	NS	---			----
Total Col1Ave (5 peaks):					294.4	Total Col2Ave (4 peaks):				305.2 RPD = 4
Corrected Ave (4 peaks):					292.5	Corrected Ave (3 peaks):				303.3 RPD = 4
CalAmt %D:					17.8	CalAmt %D:				22.1

Total PCB Area Col1 (5.842 - 13.740) = 3072171 Col1 Total PCB = 0.5 ppm*

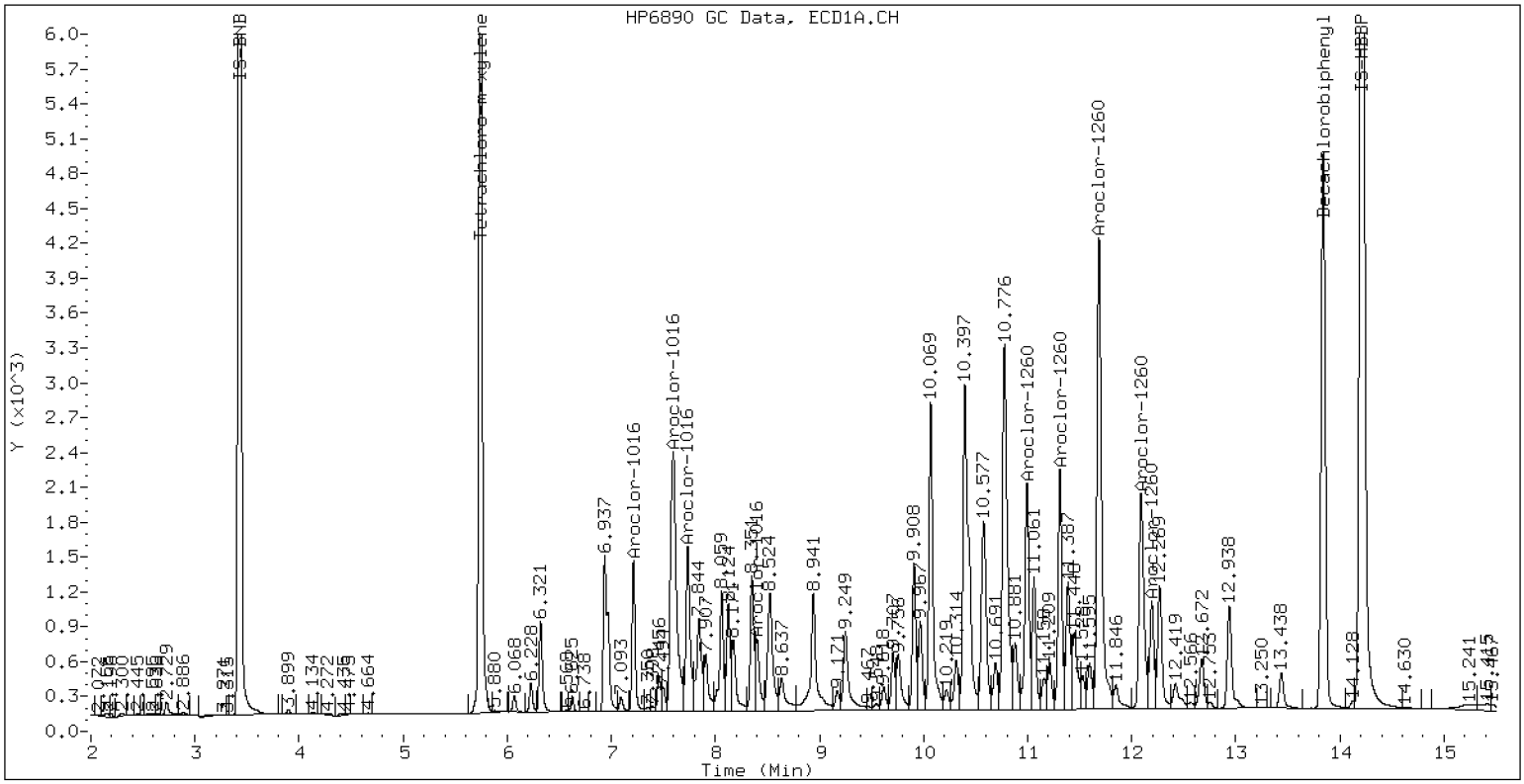
Total PCB Area Col2 (5.728 - 13.969) = 1831247 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

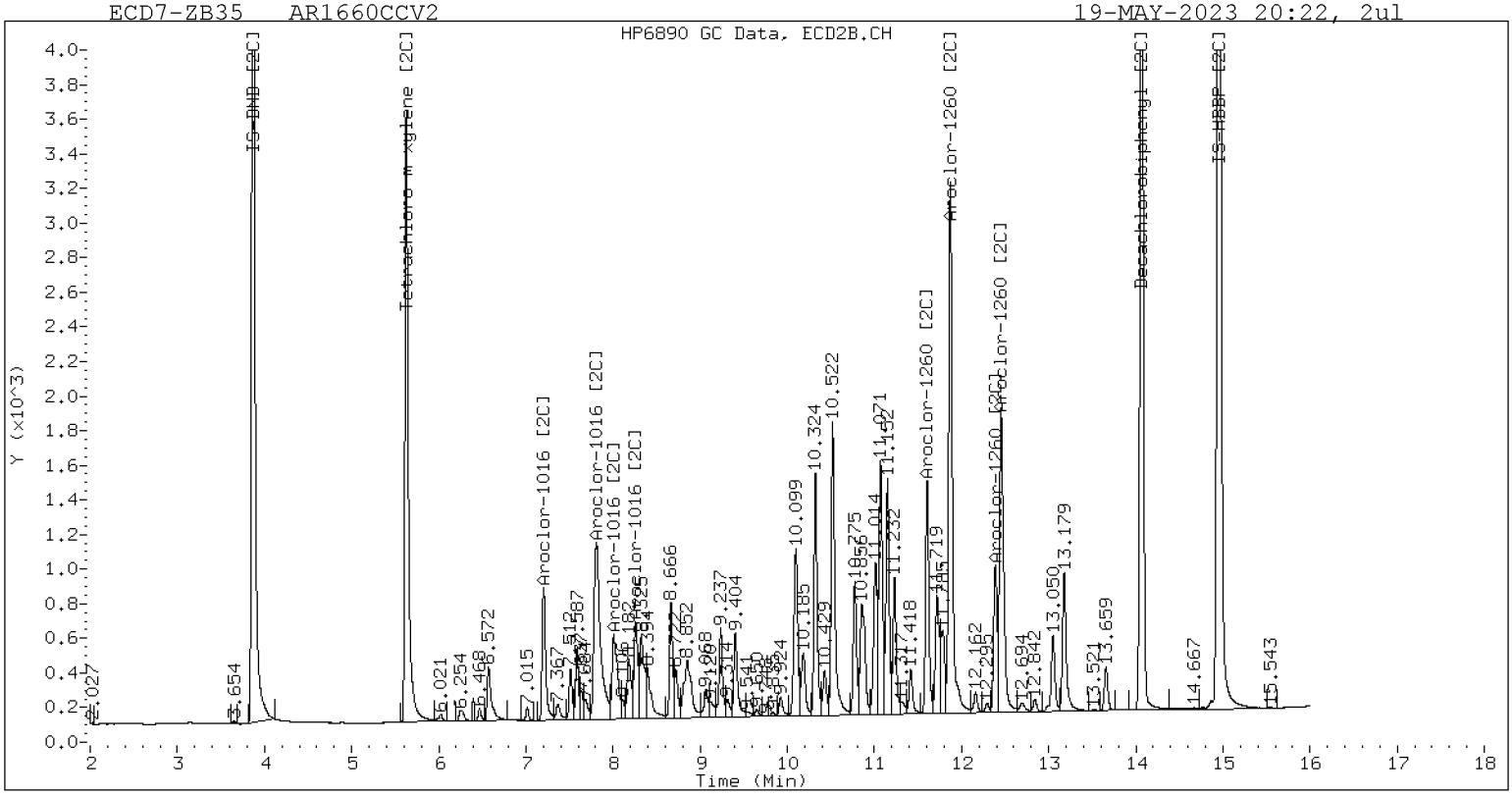
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 19-MAY-2023 20:22, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 19-MAY-2023 20:22, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05232314ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0373	Injection Date:	05/23/23
Lab Sample ID:	SLE0373-CCV1	Injection Time:	15:28
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	240	0.0568879	0.0547235		-4.1	+/-20
Aroclor-1248 (1)	A	250.00	255		0.0208485			
Aroclor-1248 (2)	A	250.00	256		0.0543159			
Aroclor-1248 (3)	A	250.00	251		0.1026523			
Aroclor-1248 (4)	A	250.00	197		0.0410773			
Aroclor 1248 [2C]	A	250.00	249	0.0454726	0.0452415		-0.3	+/-20
Aroclor-1248 (1) [2C]	A	250.00	250		0.0380378			
Aroclor-1248 (2) [2C]	A	250.00	251		0.0403492			
Aroclor-1248 (3) [2C]	A	250.00	254		0.0478164			
Aroclor-1248 (4) [2C]	A	250.00	242		0.0547624			
Decachlorobiphenyl	A	40.000	38.8	0.7991406	0.7744263		-3.0	+/-20
Tetrachlorometaxylene	A	40.000	39.1	1.2048230	1.1775020		-2.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.9	1.1360140	1.1908510		4.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.6	1.1005470	1.0904860		-1.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232314ECD7.D
Data file 2: /230523.b/230523.b/05232314ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 23-MAY-2023 15:28
Report Date: 05/24/2023 09:33
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.004	343239	5.629	0.001	193166	39.1	39.6	1.4	Tetrachloro-m-xylene
13.842	0.000	278572	14.068	-0.002	278808	38.8	41.9	7.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	582995	-3.1
Hexabromobiphenyl	876625	719428	-17.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	354275	1.4
Hexabromobiphenyl	652984	468250	-28.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.399	-0.001	37983	255.3	1	8.259	0.000	42112	249.9
Aroclor-1248	2	8.524	-0.001	98956	255.9	2	8.666	0.000	44671	250.9
Aroclor-1248	3	8.944	-0.001	187018	251.5	3	9.117	0.000	52938	253.7
Aroclor-1248	4	9.240	0.000	74837	197.4	4	9.542	0.000	60628	242.3
Total Col1Ave (4 peaks):					240.0	Total Col2Ave (4 peaks):				249.2 RPD = 4
Corrected Ave (3 peaks):					234.7	Corrected Ave (3 peaks):				247.7 RPD = 5
CalAmt %D:					-4.0	CalAmt %D:				-0.3

Total PCB Area Col1 (5.846 - 13.741) = 1500865 Col1 Total PCB = 0.2 ppm*

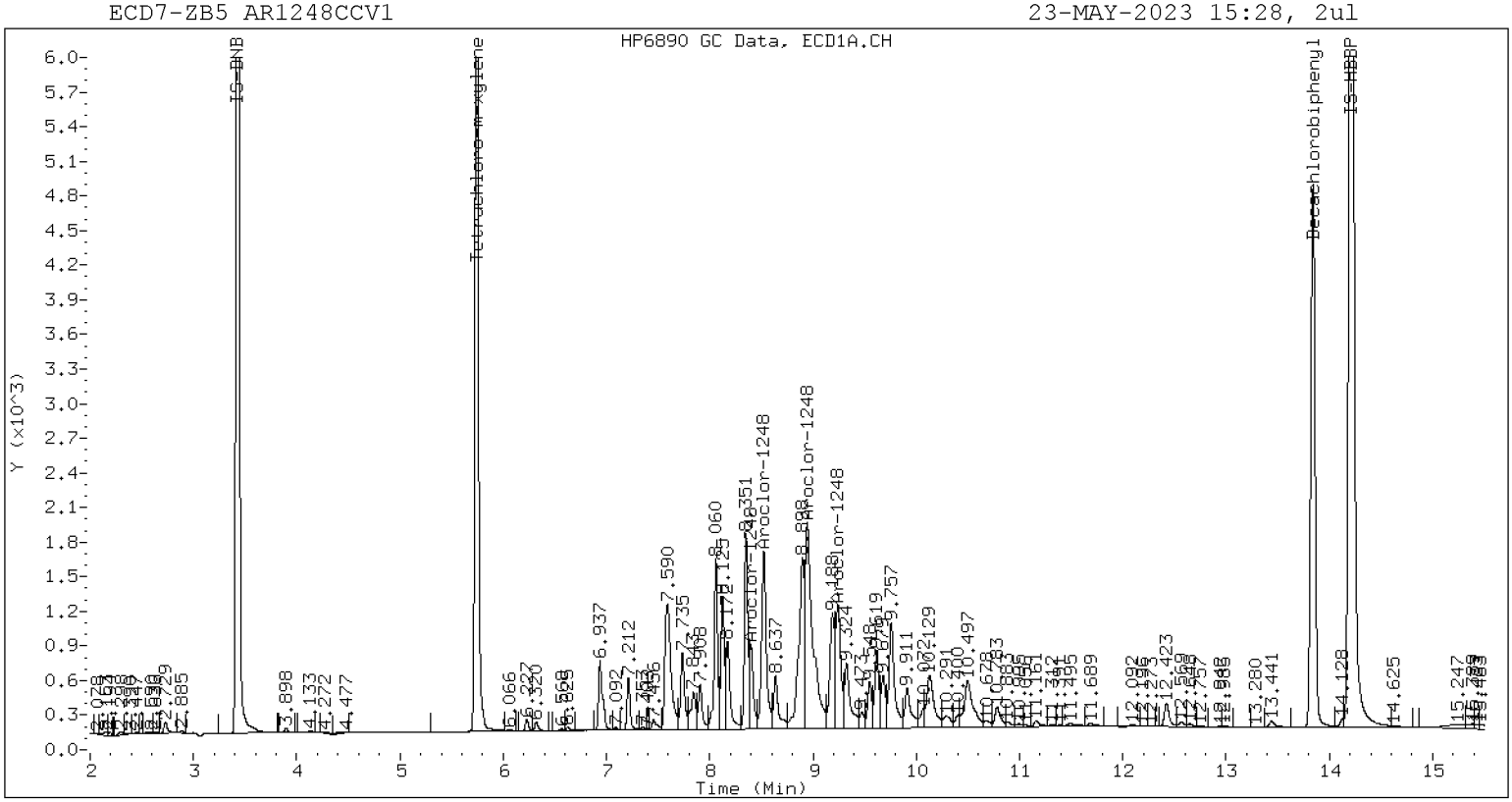
Total PCB Area Col2 (5.728 - 13.969) = 842925 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

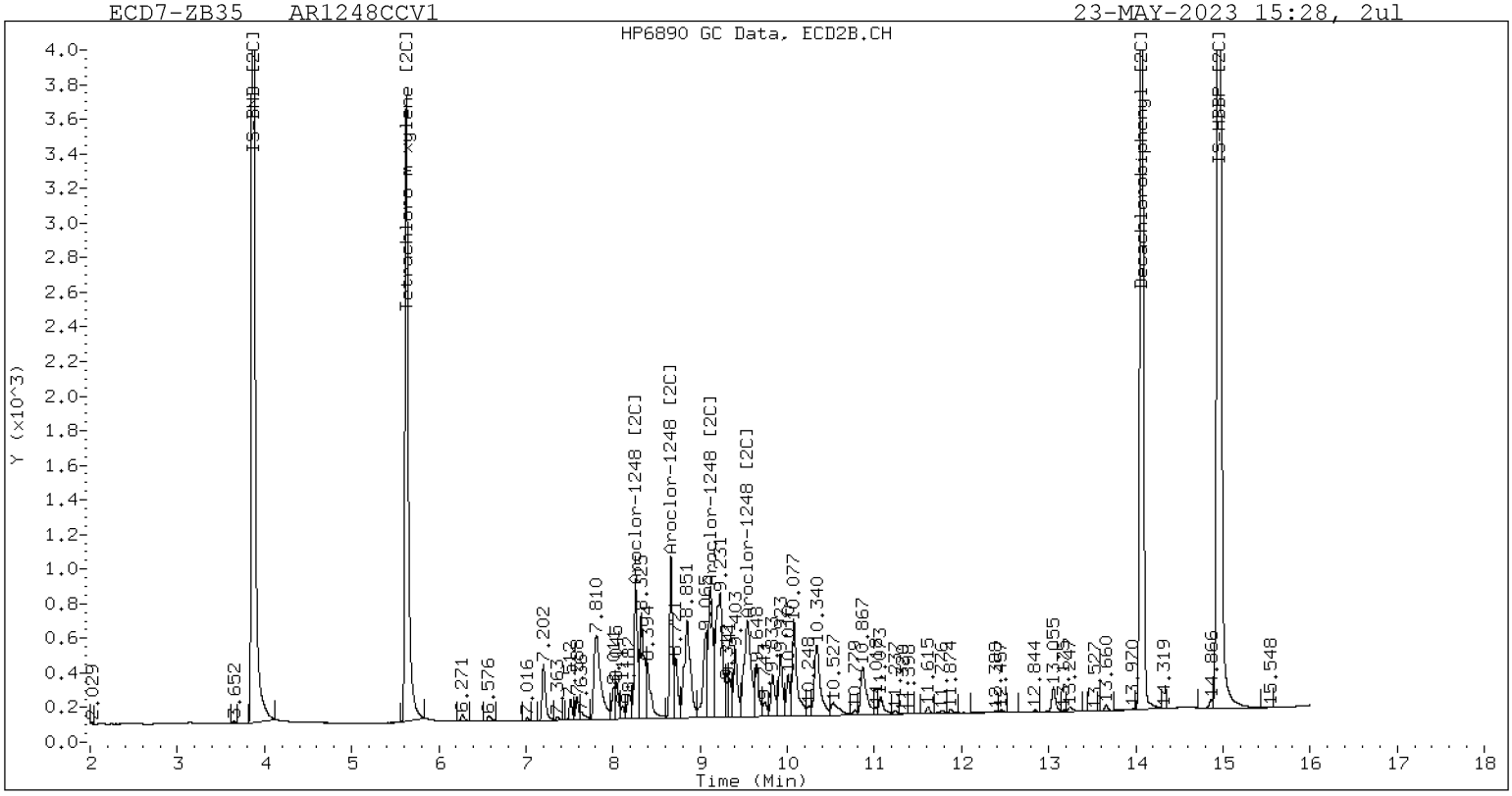
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 23-MAY-2023 15:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 23-MAY-2023 15:28, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05232315ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0373	Injection Date:	05/23/23
Lab Sample ID:	SLE0373-CCV2	Injection Time:	15:49
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	265	0.0477728	0.0512971		6.0	+/-20
Aroclor-1016 (1)	A	250.00	255	0.0309764	0.0316020		2.0	
Aroclor-1016 (2)	A	250.00	275	0.0968611	0.1067233		10.0	
Aroclor-1016 (3)	A	250.00	263	0.0447793	0.0471005		5.2	
Aroclor-1016 (4)	A	250.00	267	0.0184745	0.0197626		6.8	
Aroclor 1016 [2C]	A	250.00	240	0.0545435	0.0539855		-4.1	+/-20
Aroclor-1016 (1) [2C]	A	250.00	220	0.0452861	0.0398122		-12.0	
Aroclor-1016 (2) [2C]	A	250.00	273	0.0965080	0.1054509		9.2	
Aroclor-1016 (3) [2C]	A	250.00	219	0.0425661	0.0372723		-12.4	
Aroclor-1016 (4) [2C]	A	250.00	247	0.0338137	0.0334065		-1.2	
Aroclor 1260	A	250.00	286	0.0524306	0.0602819		14.3	+/-20
Aroclor-1260 (1)	A	250.00	288	0.0423031	0.0488021		15.2	
Aroclor-1260 (2)	A	250.00	286	0.0417493	0.0478545		14.4	
Aroclor-1260 (3)	A	250.00	291	0.1045597	0.1216276		16.4	
Aroclor-1260 (4)	A	250.00	283	0.0512104	0.0580186		13.2	
Aroclor-1260 (5)	A	250.00	281	0.0223305	0.0251065		12.4	
Aroclor 1260 [2C]	A	250.00	277	0.0638471	0.0718703		10.9	+/-20
Aroclor-1260 (1) [2C]	A	250.00	260	0.0424868	0.0441221		4.0	
Aroclor-1260 (2) [2C]	A	250.00	292	0.1111292	0.1296192		16.8	
Aroclor-1260 (3) [2C]	A	250.00	276	0.0275392	0.0303518		10.4	
Aroclor-1260 (4) [2C]	A	250.00	281	0.0742331	0.0833880		12.4	
Decachlorobiphenyl	A	40.000	41.4	0.7991406	0.8273855		3.5	+/-20
Tetrachlorometaxylene	A	40.000	40.5	1.2048230	1.2209670		1.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.9	1.1360140	1.1905240		4.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.0	1.1005470	1.1824040		7.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232315ECD7.D
Data file 2: /230523.b/230523.b/05232315ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 23-MAY-2023 15:49
Report Date: 05/24/2023 09:33
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.004	343555	5.628	0.000	189488	40.5	43.0	5.8	Tetrachloro-m-xylene
13.840	-0.001	316585	14.068	-0.001	279163	41.4	41.9	1.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	562759	-6.4
Hexabromobiphenyl	876625	765266	-12.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	320513	-8.2
Hexabromobiphenyl	652984	468975	-28.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.212	-0.001	55576	255.0	1	7.203	-0.000	39876	219.8
Aroclor-1016	2	7.595	-0.000	187686	275.5	2	7.809	-0.001	105620	273.2
Aroclor-1016	3	7.734	-0.001	82832	263.0	3	8.008	-0.000	37332	218.9
Aroclor-1016	4	8.398	-0.000	34755	267.4	4	8.259	-0.002	33460	247.0
Total Col1Ave (4 peaks):					265.2	Total Col2Ave (4 peaks):				239.7 RPD = 10
Corrected Ave (3 peaks):					261.8	Corrected Ave (3 peaks):				228.6 RPD = 14
CalAmt %D:					6.1	CalAmt %D:				-4.1
Aroclor-1260	1	10.993	-0.001	116708	288.4	1	11.605	-0.000	64663	259.6
Aroclor-1260	2	11.310	-0.001	114442	286.6	2	11.870	-0.002	189963	291.6
Aroclor-1260	3	11.685	0.000	290867	290.8	3	12.386	-0.003	44482	275.5
Aroclor-1260	4	12.089	-0.002	138749	283.2	4	12.453	-0.003	122209	280.8
Aroclor-1260	5	12.192	-0.001	60041	281.1	NS	---			----
Total Col1Ave (5 peaks):					286.0	Total Col2Ave (4 peaks):				276.9 RPD = 3
Corrected Ave (4 peaks):					284.8	Corrected Ave (3 peaks):				272.0 RPD = 5
CalAmt %D:					14.4	CalAmt %D:				10.8

Total PCB Area Col1 (5.846 - 13.741) = 3279722 Col1 Total PCB = 0.5 ppm*

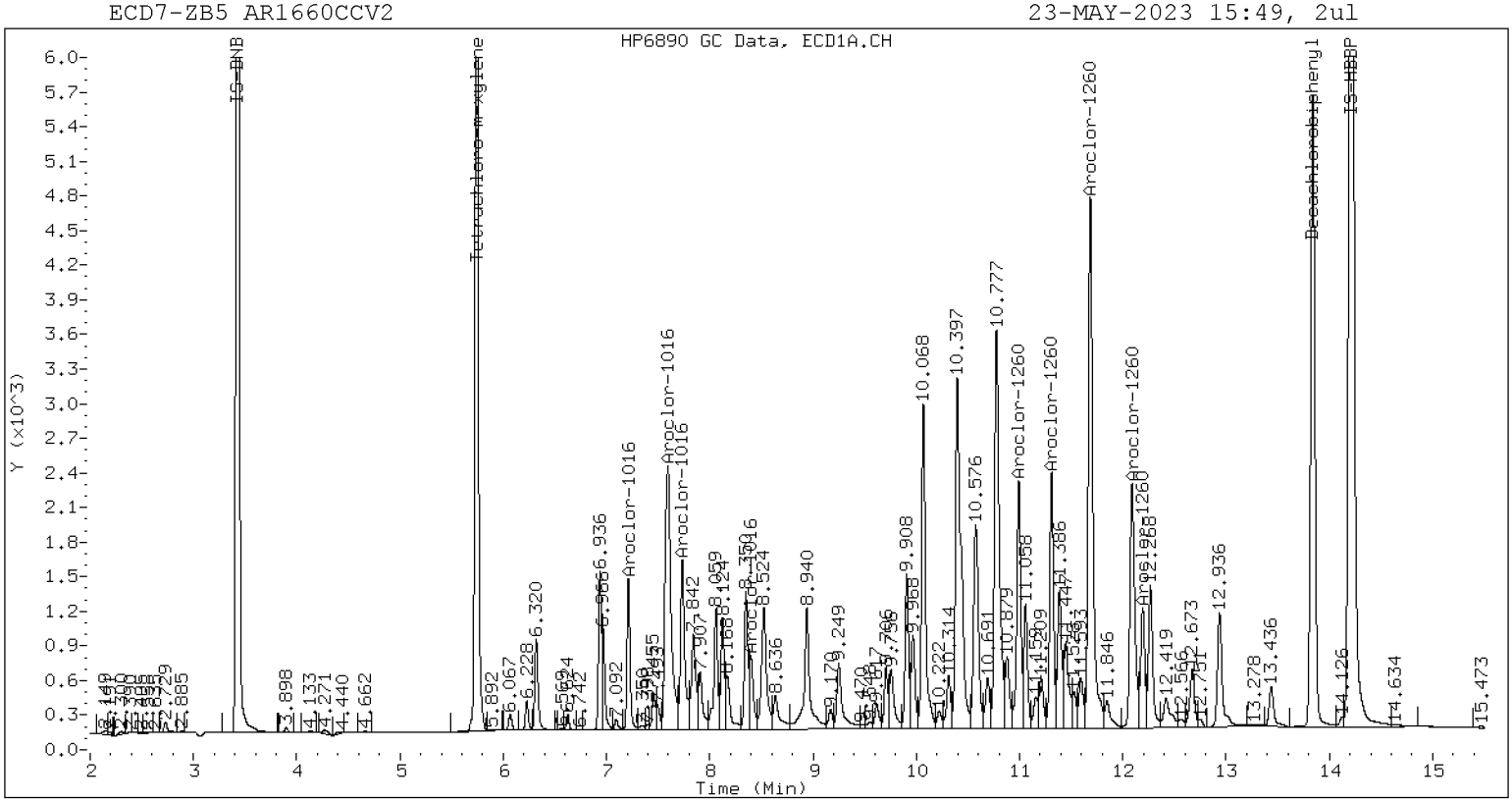
Total PCB Area Col2 (5.728 - 13.969) = 1762069 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

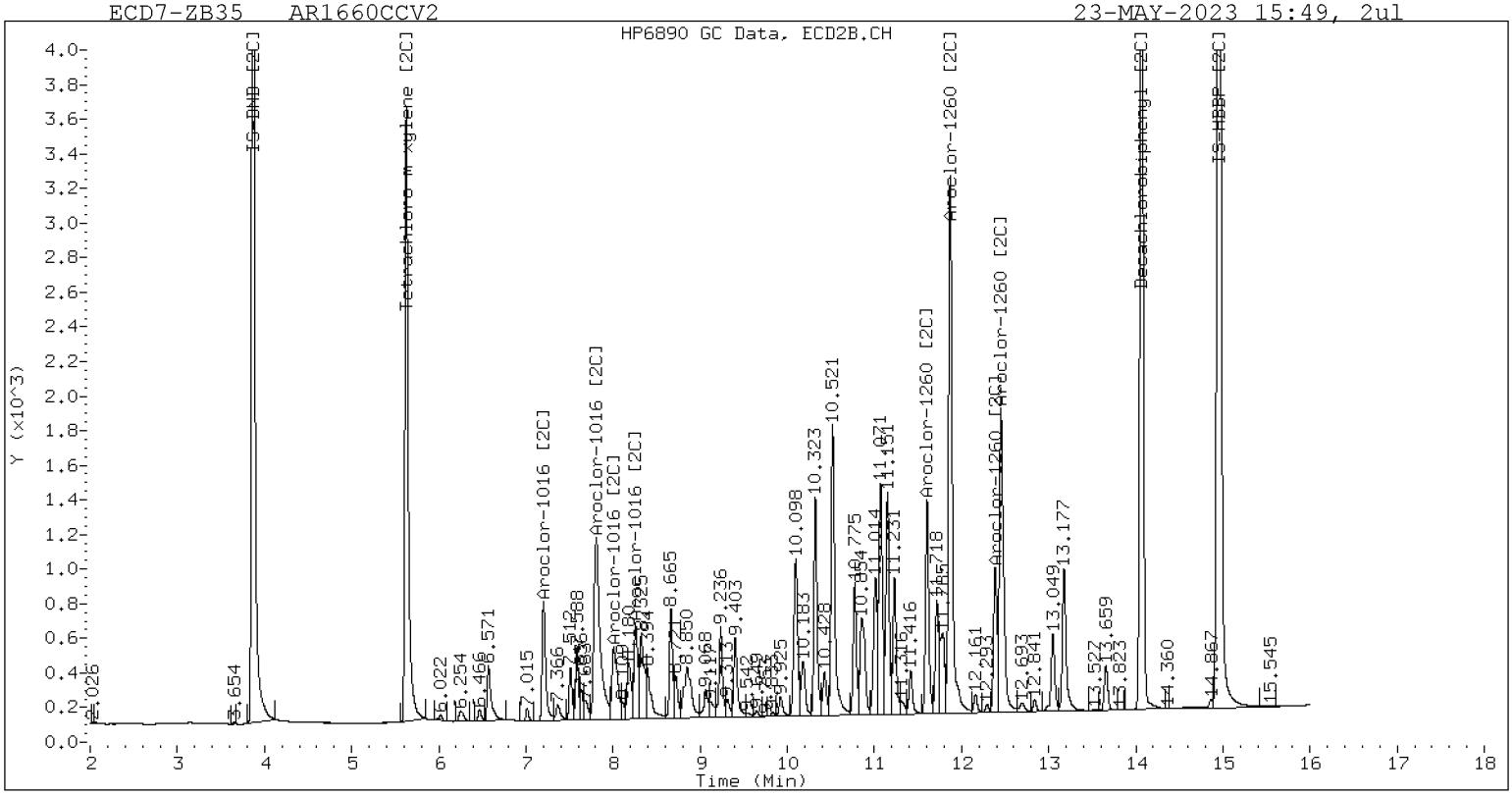
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 23-MAY-2023 15:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 23-MAY-2023 15:49, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05232323ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0373	Injection Date:	05/23/23
Lab Sample ID:	SLE0373-CCV3	Injection Time:	18:35
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1242	A	250.00	263	0.0390737	0.0409087		5.1	+/-20	
Aroclor-1242 (1)	A	250.00	258		0.0259683				
Aroclor-1242 (2)	A	250.00	260		0.0829524				
Aroclor-1242 (3)	A	250.00	266		0.0164662				
Aroclor-1242 (4)	A	250.00	267		0.0382478				
Aroclor 1242 [2C]	A	250.00	256	0.0413965	0.0427496		2.2	+/-20	
Aroclor-1242 (1) [2C]	A	250.00	247		0.0353697				
Aroclor-1242 (2) [2C]	A	250.00	266		0.0810227				
Aroclor-1242 (3) [2C]	A	250.00	262		0.0256045				
Aroclor-1242 (4) [2C]	A	250.00	247		0.0290013				
Decachlorobiphenyl	A	40.000	38.0	0.7991406	0.7599284		-5.0	+/-20	
Tetrachlorometaxylene	A	40.000	47.6	1.2048230	1.4325940		19.0	+/-20	
Decachlorobiphenyl [2C]	A	40.000	38.8	1.1360140	1.1030080		-3.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	48.7	1.1005470	1.3396760		21.8	+/-20	*

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232323ECD7.D
Data file 2: /230523.b/230523.b/05232323ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 23-MAY-2023 18:35
Report Date: 05/24/2023 09:33
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.003	449210	5.629	0.001	235373	47.6	48.7	2.3	Tetrachloro-m-xylene
13.841	-0.000	386139	14.069	-0.000	340815	38.0	38.8	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	627128	4.3
Hexabromobiphenyl	876625	1016251	15.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	351388	0.6
Hexabromobiphenyl	652984	617974	-5.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.213	0.000	50892	257.5	1	7.204	0.000	38839	247.3
Aroclor-1242	2	7.595	0.001	162568	259.6	2	7.813	0.000	88970	266.3
Aroclor-1242	3	8.398	-0.000	32270	266.4	3	9.123	0.000	28116	262.5
Aroclor-1242	4	8.526	0.001	74957	267.4	4	9.551	0.000	31846	246.7
Total Col1Ave (4 peaks):					262.8	Total Col2Ave (4 peaks):				255.7 RPD = 3
Corrected Ave (3 peaks):					261.2	Corrected Ave (3 peaks):				252.2 RPD = 4
CalAmt %D:					5.1	CalAmt %D:				2.3

Total PCB Area Col1 (5.846 - 13.741) = 1336293 Col1 Total PCB = 0.2 ppm*

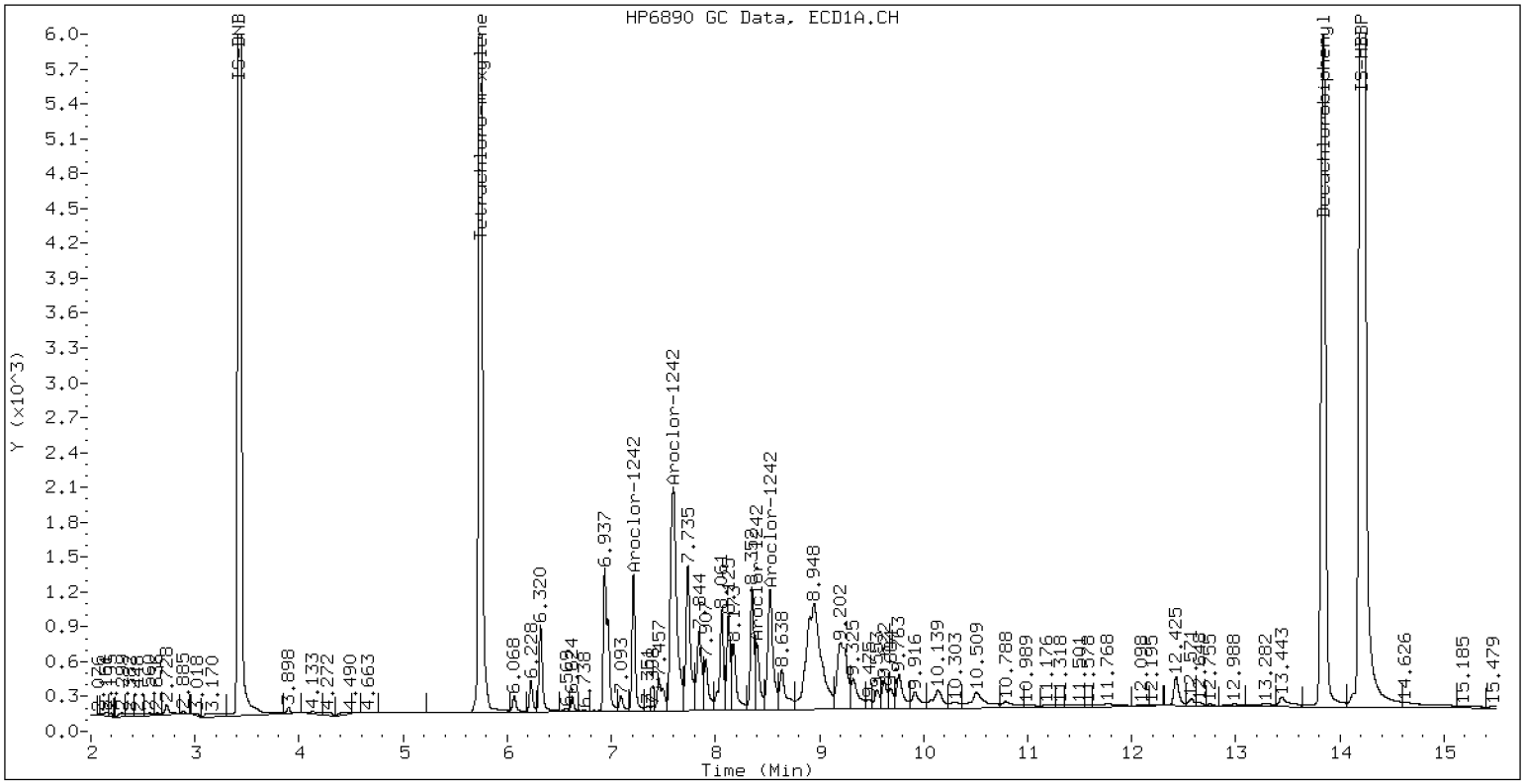
Total PCB Area Col2 (5.728 - 13.969) = 632310 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

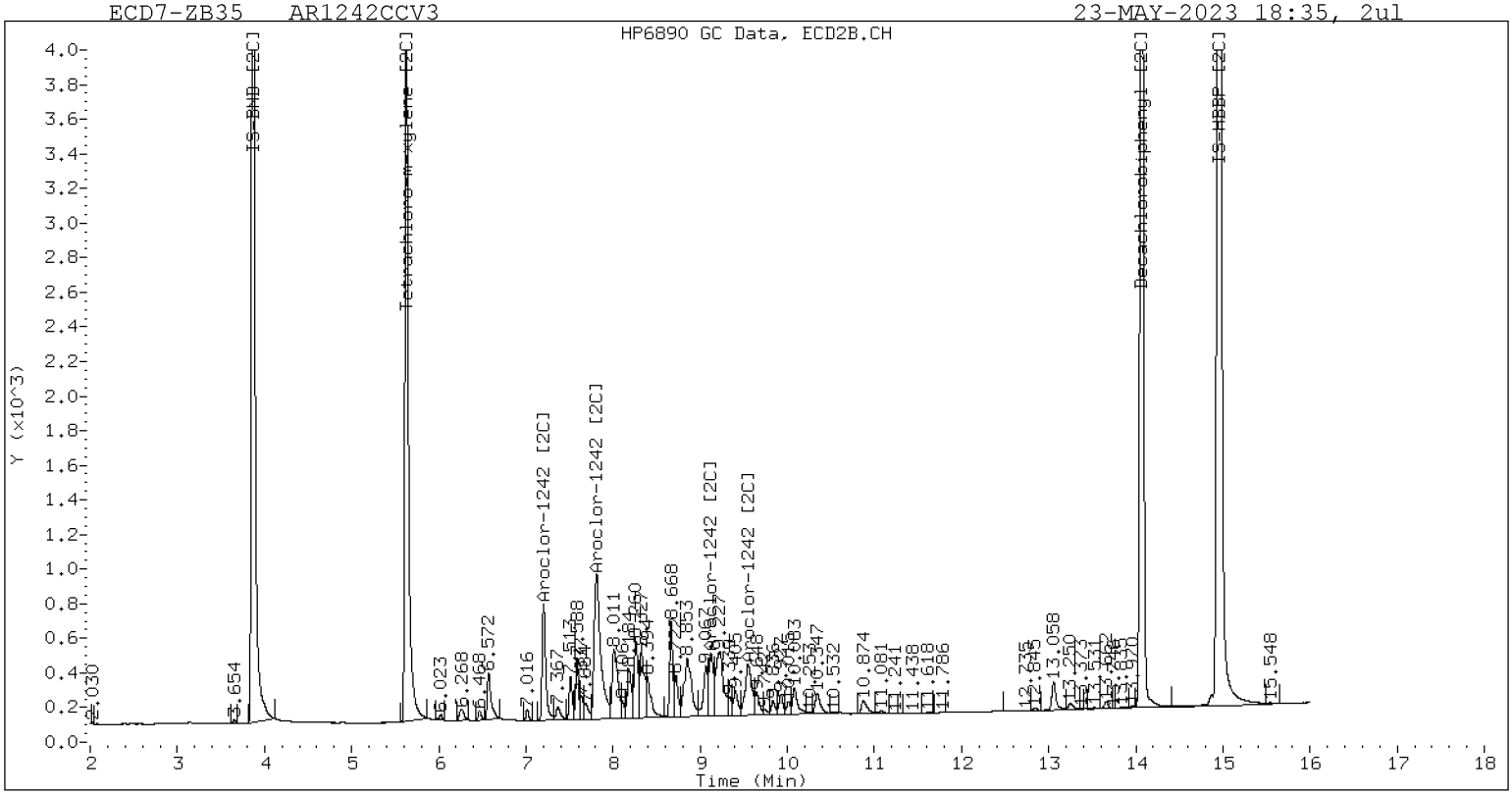
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 23-MAY-2023 18:35, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 23-MAY-2023 18:35, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GE00022
Lab File ID:	05232324ECD7.D	Calibration Date:	05/05/2023
Sequence:	SLE0373	Injection Date:	05/23/23
Lab Sample ID:	SLE0373-CCV4	Injection Time:	18:56
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	266	0.0477728	0.0512790		6.2	+/-20
Aroclor-1016 (1)	A	250.00	256	0.0309764	0.0317253		2.4	
Aroclor-1016 (2)	A	250.00	274	0.0968611	0.1062690		9.6	
Aroclor-1016 (3)	A	250.00	265	0.0447793	0.0474086		6.0	
Aroclor-1016 (4)	A	250.00	267	0.0184745	0.0197131		6.8	
Aroclor 1016 [2C]	A	250.00	236	0.0545435	0.0532076		-5.6	+/-20
Aroclor-1016 (1) [2C]	A	250.00	216	0.0452861	0.0390763		-13.6	
Aroclor-1016 (2) [2C]	A	250.00	270	0.0965080	0.1041158		8.0	
Aroclor-1016 (3) [2C]	A	250.00	216	0.0425661	0.0368435		-13.6	
Aroclor-1016 (4) [2C]	A	250.00	242	0.0338137	0.0327948		-3.2	
Aroclor 1260	A	250.00	258	0.0524306	0.0545327		3.3	+/-20
Aroclor-1260 (1)	A	250.00	260	0.0423031	0.0440812		4.0	
Aroclor-1260 (2)	A	250.00	259	0.0417493	0.0432297		3.6	
Aroclor-1260 (3)	A	250.00	265	0.1045597	0.1108550		6.0	
Aroclor-1260 (4)	A	250.00	252	0.0512104	0.0516861		0.8	
Aroclor-1260 (5)	A	250.00	255	0.0223305	0.0228116		2.0	
Aroclor 1260 [2C]	A	250.00	248	0.0638471	0.0643087		-0.8	+/-20
Aroclor-1260 (1) [2C]	A	250.00	235	0.0424868	0.0398966		-6.0	
Aroclor-1260 (2) [2C]	A	250.00	259	0.1111292	0.1150527		3.6	
Aroclor-1260 (3) [2C]	A	250.00	245	0.0275392	0.0270147		-2.0	
Aroclor-1260 (4) [2C]	A	250.00	253	0.0742331	0.0752706		1.2	
Decachlorobiphenyl	A	40.000	41.2	0.7991406	0.8236518		3.0	+/-20
Tetrachlorometaxylene	A	40.000	40.5	1.2048230	1.2210090		1.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.4	1.1360140	1.1487760		1.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	43.3	1.1005470	1.1917240		8.3	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230523.b/05232324ECD7.D
Data file 2: /230523.b/230523.b/05232324ECD7.D
Method: \\target\share\chem4\ecd7.i\230523.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 23-MAY-2023 18:56
Report Date: 05/24/2023 09:33
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.742	-0.004	361605	5.628	0.000	190689	40.5	43.3	6.6	Tetrachloro-m-xylene
13.841	-0.001	397746	14.069	0.000	316516	41.2	40.4	1.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	601474	592305	-1.5
Hexabromobiphenyl	876625	965811	10.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	349289	320022	-8.4
Hexabromobiphenyl	652984	551049	-15.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 05-MAY-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.213	-0.000	58722	256.0	1	7.203	0.000	39079	215.7
Aroclor-1016	2	7.595	-0.000	196699	274.3	2	7.810	0.000	104123	269.7
Aroclor-1016	3	7.735	0.000	87751	264.7	3	8.008	0.000	36846	216.4
Aroclor-1016	4	8.398	-0.000	36488	266.8	4	8.261	0.000	32797	242.5
Total Col1Ave (4 peaks):					265.4	Total Col2Ave (4 peaks):				236.1 RPD = 12
Corrected Ave (3 peaks):					262.5	Corrected Ave (3 peaks):				224.9 RPD = 15
CalAmt %D:					6.2	CalAmt %D:				-5.6
Aroclor-1260	1	10.995	0.001	133044	260.5	1	11.606	0.000	68703	234.8
Aroclor-1260	2	11.312	0.001	130474	258.9	2	11.872	0.000	198124	258.8
Aroclor-1260	3	11.686	0.001	334578	265.1	3	12.389	0.000	46520	245.2
Aroclor-1260	4	12.091	0.001	155997	252.3	4	12.455	0.000	129618	253.5
Aroclor-1260	5	12.195	0.001	68849	255.4	NS	---			----
Total Col1Ave (5 peaks):					258.4	Total Col2Ave (4 peaks):				248.1 RPD = 4
Corrected Ave (4 peaks):					256.8	Corrected Ave (3 peaks):				244.5 RPD = 5
CalAmt %D:					3.4	CalAmt %D:				-0.8

Total PCB Area Col1 (5.846 - 13.741) = 3643018 Col1 Total PCB = 0.6 ppm*

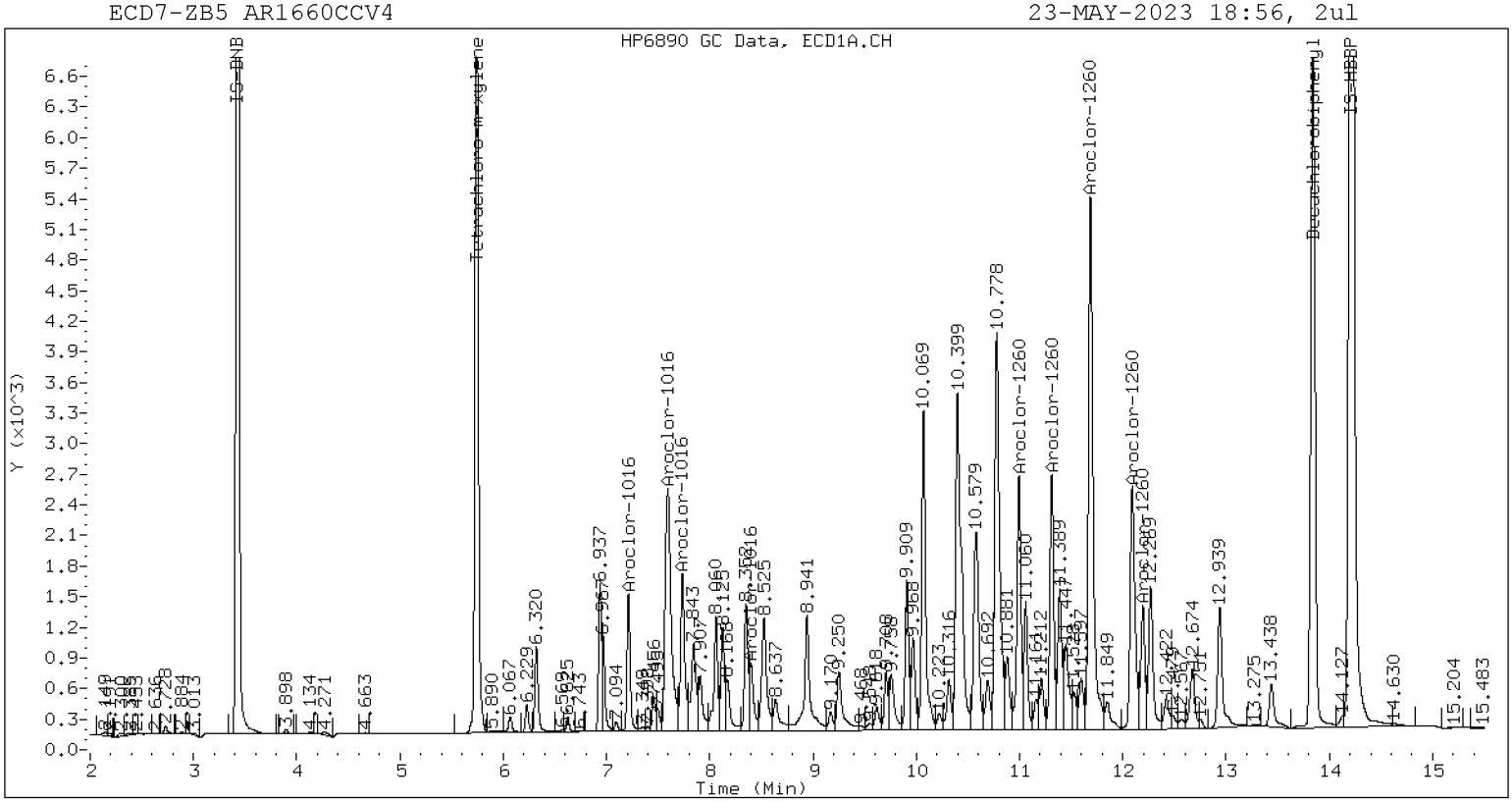
Total PCB Area Col2 (5.728 - 13.969) = 1797192 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

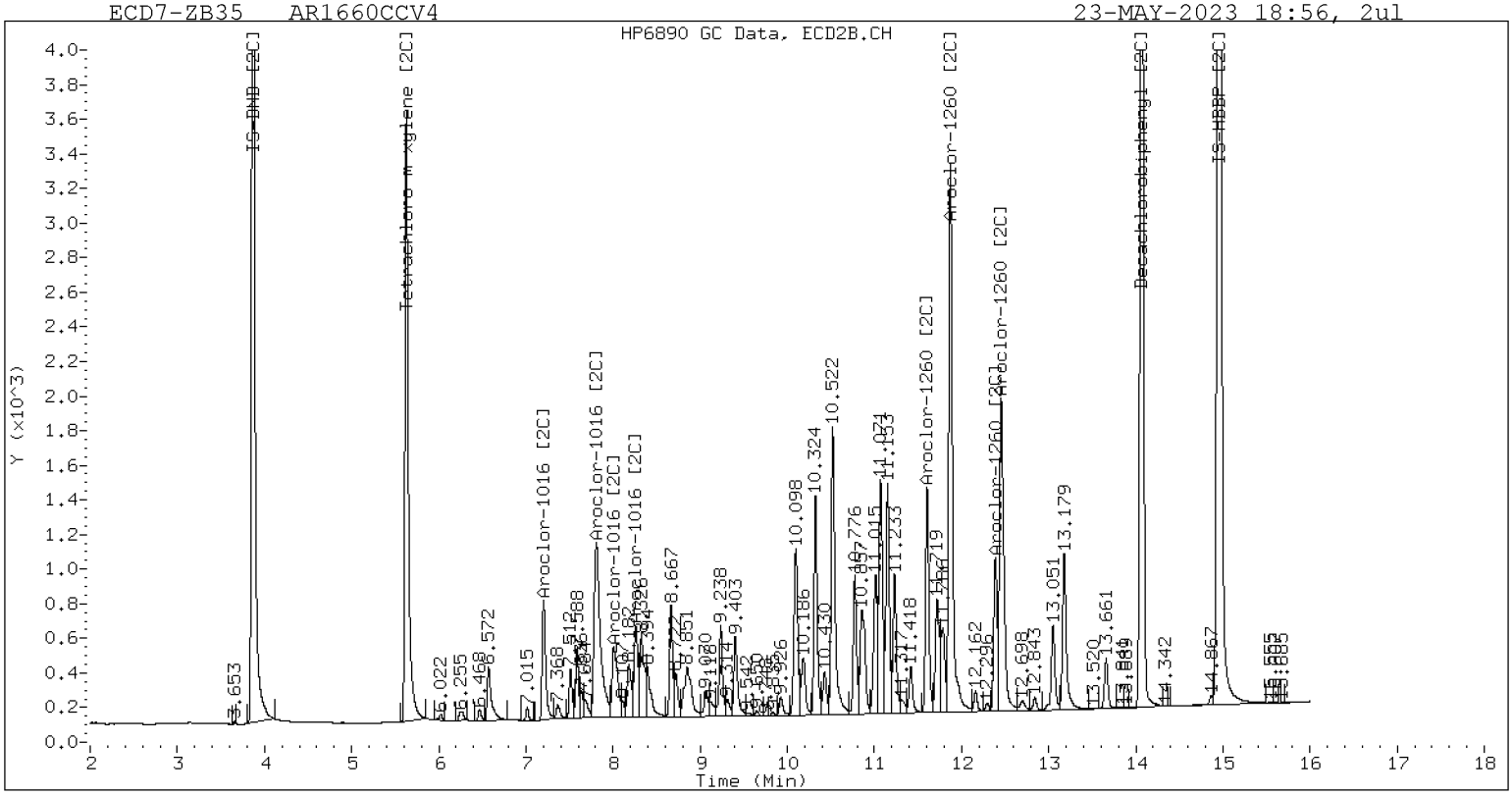
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 23-MAY-2023 18:56, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 23-MAY-2023 18:56, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0079	Instrument:	ECD7
		Calibration:	GE00022

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SLE0079-CAL1	05052321ECD7.D	05052321ECD7.D	NA	05/05/23 23:26
Cal Standard	SLE0079-CAL2	05052322ECD7.D	05052322ECD7.D	NA	05/05/23 23:47
Cal Standard	SLE0079-CAL3	05052323ECD7.D	05052323ECD7.D	NA	05/06/23 00:08
Cal Standard	SLE0079-CAL4	05052324ECD7.D	05052324ECD7.D	NA	05/06/23 00:29
Cal Standard	SLE0079-CAL5	05052325ECD7.D	05052325ECD7.D	NA	05/06/23 00:50
Cal Standard	SLE0079-CAL6	05052326ECD7.D	05052326ECD7.D	NA	05/06/23 01:11
Cal Standard	SLE0079-CAL7	05052327ECD7.D	05052327ECD7.D	NA	05/06/23 01:31
Cal Standard	SLE0079-CAL8	05052328ECD7.D	05052328ECD7.D	NA	05/06/23 01:52
Cal Standard	SLE0079-CAL9	05052329ECD7.D	05052329ECD7.D	NA	05/06/23 02:13
Cal Standard	SLE0079-CALA	05052330ECD7.D	05052330ECD7.D	NA	05/06/23 02:34
Cal Standard	SLE0079-CALB	05052331ECD7.D	05052331ECD7.D	NA	05/06/23 02:55
Secondary Cal Check	SLE0079-SCV1	05052332ECD7.D	05052332ECD7.D	NA	05/06/23 03:16
Secondary Cal Check	SLE0079-SCV2	05052333ECD7.D	05052333ECD7.D	NA	05/06/23 03:36
Secondary Cal Check	SLE0079-SCV3	05052334ECD7.D	05052334ECD7.D	NA	05/06/23 03:57
Secondary Cal Check	SLE0079-SCV4	05052335ECD7.D	05052335ECD7.D	NA	05/06/23 04:18
Secondary Cal Check	SLE0079-SCV5	05052336ECD7.D	05052336ECD7.D	NA	05/06/23 04:39
Secondary Cal Check	SLE0079-SCV6	05052337ECD7.D	05052337ECD7.D	NA	05/06/23 05:00

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLE0079

Instrument: ECD7
Calibration ID: GE00022

Printed: 5/6/2023 11:44:56AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLE0079-CAL1	QC		1		L000856	L000844		
SLE0079-CAL2	QC		2		L000859	L000844		
SLE0079-CAL3	QC		3		L000858	L000844		
SLE0079-CAL4	QC		4		L000731	L000844		
SLE0079-CAL5	QC		5		L000857	L000844		
SLE0079-CAL6	QC		6		L000855	L000844		
SLE0079-CAL7	QC		7		L000860	L000844		
SLE0079-CAL8	QC		8		L000861	L000844		
SLE0079-CAL9	QC		9		L000862	L000844		
SLE0079-CALA	QC		10		L004996	L000844		
SLE0079-CALB	QC		11		L004997	L000844		
SLE0079-SCV1	QC		12		L002065	L000844		
SLE0079-SCV2	QC		13		L003970	L000844		
SLE0079-SCV3	QC		14		L002066	L000844		
SLE0079-SCV4	QC		15		L002067	L000844		
SLE0079-SCV5	QC		16		L002068	L000844		
SLE0079-SCV6	QC		17		L002069	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	05-MAY-2023 23:06	05052320ECD7.D	1	IB	
2	05-MAY-2023 23:26	05052321ECD7.D	1	0.25PPMAR1660	
3	05-MAY-2023 23:47	05052322ECD7.D	1	0.02PPMAR1660	
4	06-MAY-2023 00:08	05052323ECD7.D	1	0.05PPMAR1660	
5	06-MAY-2023 00:29	05052324ECD7.D	1	1.0PPMAR1660	
6	06-MAY-2023 00:50	05052325ECD7.D	1	0.1PPMAR1660	
7	06-MAY-2023 01:11	05052326ECD7.D	1	0.5PPMAR1660	
8	06-MAY-2023 01:31	05052327ECD7.D	1	0.25PPMAR1242	
9	06-MAY-2023 01:52	05052328ECD7.D	1	0.25PPMAR1248	
10	06-MAY-2023 02:13	05052329ECD7.D	1	0.25PPMAR1254	
11	06-MAY-2023 02:34	05052330ECD7.D	1	0.25PPMAR2162	
12	06-MAY-2023 02:55	05052331ECD7.D	1	0.25PPMAR3268	
13	06-MAY-2023 03:16	05052332ECD7.D	1	AR1660SCV	
14	06-MAY-2023 03:36	05052333ECD7.D	1	AR1242SCV	
15	06-MAY-2023 03:57	05052334ECD7.D	1	AR1248SCV	
16	06-MAY-2023 04:18	05052335ECD7.D	1	AR1254SCV	
17	06-MAY-2023 04:39	05052336ECD7.D	1	AR2162SCV	
18	06-MAY-2023 05:00	05052337ECD7.D	1	AR3268SCV	
19	06-MAY-2023 05:21	05052338ECD7.D	1	DDTS	
20	06-MAY-2023 05:41	05052339ECD7.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

ARI Job No.: Method: PCB.m Instrument: ecd7.i Date: 05-MAY-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1548	05052301ECD7.D			1	NO MANUAL INTEGRATION
1609	05052302ECD7.D			1	NO MANUAL INTEGRATION
1711	05052303ECD7.D			1	NO MANUAL INTEGRATION
1732	05052304ECD7.D			1	NO MANUAL INTEGRATION
1753	05052305ECD7.D			1	NO MANUAL INTEGRATION
1814	05052306ECD7.D			1	NO MANUAL INTEGRATION
1835	05052307ECD7.D			1	NO MANUAL INTEGRATION
1856	05052308ECD7.D			1	NO MANUAL INTEGRATION
1916	05052309ECD7.D			1	NO MANUAL INTEGRATION
1937	05052310ECD7.D			1	NO MANUAL INTEGRATION
1958	05052311ECD7.D			1	NO MANUAL INTEGRATION
2019	05052312ECD7.D			1	NO MANUAL INTEGRATION
2040	05052313ECD7.D			1	NO MANUAL INTEGRATION
2101	05052314ECD7.D			1	NO MANUAL INTEGRATION
2121	05052315ECD7.D			1	NO MANUAL INTEGRATION
2142	05052316ECD7.D			1	NO MANUAL INTEGRATION
2203	05052317ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2224	05052318ECD7.D			1	NO MANUAL INTEGRATION
2245	05052319ECD7.D			1	NO MANUAL INTEGRATION
2306	05052320ECD7.D	IB		1	NO MANUAL INTEGRATION
2326	05052321ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2347	05052322ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
0008	05052323ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
0029	05052324ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
0050	05052325ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
0111	05052326ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0131	05052327ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
0152	05052328ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
0213	05052329ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
0234	05052330ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
0255	05052331ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
0316	05052332ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
0336	05052333ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
0357	05052334ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
0418	05052335ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0439	05052336ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
0500	05052337ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
0521	05052338ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0541	05052339ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1548	05052301ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1609	05052302ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1711	05052303ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1732	05052304ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1753	05052305ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1814	05052306ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1835	05052307ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1856	05052308ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
1916	05052309ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1937	05052310ECD7.D	RINSE		1	NO MANUAL INTEGRATION
1958	05052311ECD7.D	RINSE		1	NO MANUAL INTEGRATION
2019	05052312ECD7.D	RINSE		1	NO MANUAL INTEGRATION
2040	05052313ECD7.D	RINSE		1	NO MANUAL INTEGRATION
2101	05052314ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2121	05052315ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2142	05052316ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2203	05052317ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2224	05052318ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2245	05052319ECD7.D	HEX RINSE		1	NO MANUAL INTEGRATION
2306	05052320ECD7.D	IB		1	NO MANUAL INTEGRATION
2326	05052321ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
2347	05052322ECD7.D	0.02PPMAR1660		1	Aroclor-1016 [2C],
0008	05052323ECD7.D	0.05PPMAR1660		1	Aroclor-1016 [2C],
0029	05052324ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
0050	05052325ECD7.D	0.1PPMAR1660		1	Aroclor-1016 [2C],
0111	05052326ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
0132	05052327ECD7.D	0.25PPMAR1242		1	Aroclor-1242 [2C],
0152	05052328ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
0213	05052329ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
0234	05052330ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
0255	05052331ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
0316	05052332ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230505.b\230505.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0336	05052333ECD7.D	AR1242SCV		1	Aroclor-1242 [2C],
0357	05052334ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
0418	05052335ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
0439	05052336ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
0500	05052337ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
0521	05052338ECD7.D	DDTS		1	NO MANUAL INTEGRATION
0541	05052339ECD7.D	DDT BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 06-May-2023 09:12

05052320ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052321ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052322ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052323ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052324ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052325ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052326ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052327ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052328ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052329ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052330ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052331ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052332ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052333ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052334ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052335ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052336ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052337ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052338ECD7.D	Data Locked	richardl, 06-May-2023 09:12
05052339ECD7.D	Data Locked	richardl, 06-May-2023 09:12

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0328	Instrument:	ECD7
		Calibration:	GE00022

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLE0328-ICV1	05192302ECD7.D	05192302ECD7.D	NA	05/19/23 14:28
Initial Cal Check	SLE0328-ICV2	05192303ECD7.D	05192303ECD7.D	NA	05/19/23 14:49
Blank	BLE0151-BLK1	05192304ECD7.D	05192304ECD7.D	Solid	05/19/23 15:10
LCS	BLE0151-BS1	05192305ECD7.D	05192305ECD7.D	Solid	05/19/23 15:30
LCS Dup	BLE0151-BSD1	05192306ECD7.D	05192306ECD7.D	Solid	05/19/23 15:51
Reference	BLE0151-SRM1	05192307ECD7.D	05192307ECD7.D	Solid	05/19/23 16:12
LDW23-SS1811	23E0009-01	05192308ECD7.D	05192308ECD7.D	Solid	05/19/23 16:33
LDW23-SS1811	BLE0151-MS1	05192309ECD7.D	05192309ECD7.D	Solid	05/19/23 16:54
LDW23-SS1811	BLE0151-MSD1	05192310ECD7.D	05192310ECD7.D	Solid	05/19/23 17:15
LDW23-SC1811	23E0009-02	05192311ECD7.D	05192311ECD7.D	Solid	05/19/23 17:35
Calibration Check	SLE0328-CCV1	05192318ECD7.D	05192318ECD7.D	NA	05/19/23 20:02
Calibration Check	SLE0328-CCV2	05192319ECD7.D	05192319ECD7.D	NA	05/19/23 20:22

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLE0328

Instrument: ECD7
Calibration ID: GE00022

Printed: 5/23/2023 9:54:08AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLE0328-ICV1	QC		1		L000862	L000844		
SLE0328-ICV2	QC		2		L000856	L000844		
BLE0151-BLK1	QC		3			L000844		
BLE0151-BS1	QC		4			L000844		
BLE0151-BSD1	QC		5			L000844		
BLE0151-SRM1	QC		6			L000844		
23E0009-01	8082A PCB Solid 4	A 03	7			L000844	Anchor QEA, LLC	
BLE0151-MS1	QC		8			L000844		
BLE0151-MSD1	QC		9			L000844		
23E0009-02	8082A PCB Solid 4	A 03	10			L000844	Anchor QEA, LLC	
SLE0328-CCV1	QC		11		L000861	L000844		
SLE0328-CCV2	QC		12		L000856	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230519.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	19-MAY-2023 14:07	05192301ECD7.D	1	DDTS	
2	19-MAY-2023 14:28	05192302ECD7.D	1	AR1254ICV1	
3	19-MAY-2023 14:49	05192303ECD7.D	1	AR1660ICV2	
4	19-MAY-2023 15:10	05192304ECD7.D	1	BLE0151-BLK1	
5	19-MAY-2023 15:30	05192305ECD7.D	1	BLE0151-BS1	
6	19-MAY-2023 15:51	05192306ECD7.D	1	BLE0151-BSD1	
7	19-MAY-2023 16:12	05192307ECD7.D	1	BLE0151-SRM1	
8	19-MAY-2023 16:33	05192308ECD7.D	1	23E0009-01	
9	19-MAY-2023 16:54	05192309ECD7.D	1	BLE0151-MS1	
10	19-MAY-2023 17:15	05192310ECD7.D	1	BLE0151-MSD1	
11	19-MAY-2023 17:35	05192311ECD7.D	1	23E0009-02	
12	19-MAY-2023 17:56	05192312ECD7.D	1	23E0009-03	
13	19-MAY-2023 18:17	05192313ECD7.D	1	23E0009-04	
14	19-MAY-2023 18:38	05192314ECD7.D	1	23E0009-05	
15	19-MAY-2023 18:59	05192315ECD7.D	1	23E0009-06	
16	19-MAY-2023 19:20	05192316ECD7.D	1	23E0009-07	
17	19-MAY-2023 19:41	05192317ECD7.D	1	23E0009-08	
18	19-MAY-2023 20:02	05192318ECD7.D	1	AR1248CCV1	
19	19-MAY-2023 20:22	05192319ECD7.D	1	AR1660CCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230519.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 19-MAY-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1407	05192301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1428	05192302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1449	05192303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1510	05192304ECD7.D	BLE0151-BLK1		1	NO MANUAL INTEGRATION
1530	05192305ECD7.D	BLE0151-BS1		1	NO MANUAL INTEGRATION
1551	05192306ECD7.D	BLE0151-BSD1		1	NO MANUAL INTEGRATION
1612	05192307ECD7.D	BLE0151-SRM1		1	NO MANUAL INTEGRATION
1633	05192308ECD7.D	23E0009-01		1	NO MANUAL INTEGRATION
1654	05192309ECD7.D	BLE0151-MS1		1	NO MANUAL INTEGRATION
1715	05192310ECD7.D	BLE0151-MSD1		1	NO MANUAL INTEGRATION
1735	05192311ECD7.D	23E0009-02		1	NO MANUAL INTEGRATION
1756	05192312ECD7.D	23E0009-03		1	NO MANUAL INTEGRATION
1817	05192313ECD7.D	23E0009-04		1	NO MANUAL INTEGRATION
1838	05192314ECD7.D	23E0009-05		1	NO MANUAL INTEGRATION
1859	05192315ECD7.D	23E0009-06		1	NO MANUAL INTEGRATION
1920	05192316ECD7.D	23E0009-07		1	NO MANUAL INTEGRATION
1941	05192317ECD7.D	23E0009-08		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230519.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2002	05192318ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2022	05192319ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1407	05192301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1428	05192302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1449	05192303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1510	05192304ECD7.D	BLE0151-BLK1		1	NO MANUAL INTEGRATION
1530	05192305ECD7.D	BLE0151-BS1		1	NO MANUAL INTEGRATION
1551	05192306ECD7.D	BLE0151-BSD1		1	NO MANUAL INTEGRATION
1612	05192307ECD7.D	BLE0151-SRM1		1	NO MANUAL INTEGRATION
1633	05192308ECD7.D	23E0009-01		1	Aroclor-1248 [2C],
1654	05192309ECD7.D	BLE0151-MS1		1	NO MANUAL INTEGRATION
1715	05192310ECD7.D	BLE0151-MSD1		1	NO MANUAL INTEGRATION
1735	05192311ECD7.D	23E0009-02		1	NO MANUAL INTEGRATION
1756	05192312ECD7.D	23E0009-03		1	NO MANUAL INTEGRATION
1817	05192313ECD7.D	23E0009-04		1	NO MANUAL INTEGRATION
1838	05192314ECD7.D	23E0009-05		1	NO MANUAL INTEGRATION
1859	05192315ECD7.D	23E0009-06		1	NO MANUAL INTEGRATION
1920	05192316ECD7.D	23E0009-07		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230519.b\230519.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1941	05192317ECD7.D	23E0009-08		1	NO MANUAL INTEGRATION
2002	05192318ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2022	05192319ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION

Security Status Report

Date: 23-May-2023 09:42

05192301ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192302ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192303ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192304ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192305ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192306ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192307ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192308ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192309ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192310ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192311ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192312ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192313ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192314ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192315ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192316ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192317ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192318ECD7.D	Data Locked	richardl, 23-May-2023 09:42
05192319ECD7.D	Data Locked	richardl, 23-May-2023 09:42

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0373	Instrument:	ECD7
		Calibration:	GE00022

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLE0373-ICV1	05232302ECD7.D	05232302ECD7.D	NA	05/23/23 11:18
Initial Cal Check	SLE0373-ICV2	05232303ECD7.D	05232303ECD7.D	NA	05/23/23 11:39
LDW23-SS1805	23E0009-03	05232304ECD7.D	05232304ECD7.D	Solid	05/23/23 12:00
LDW23-SS1800	23E0009-05	05232307ECD7.D	05232307ECD7.D	Solid	05/23/23 13:02
LDW23-SC1800	23E0009-06	05232309ECD7.D	05232309ECD7.D	Solid	05/23/23 13:44
LDW23-SS1820	23E0009-07	05232310ECD7.D	05232310ECD7.D	Solid	05/23/23 14:05
LDW23-IT1820	23E0009-08	05232312ECD7.D	05232312ECD7.D	Solid	05/23/23 14:46
LDW23-SC1805	23E0009-04	05232313ECD7.D	05232313ECD7.D	Solid	05/23/23 15:07
Calibration Check	SLE0373-CCV1	05232314ECD7.D	05232314ECD7.D	NA	05/23/23 15:28
Calibration Check	SLE0373-CCV2	05232315ECD7.D	05232315ECD7.D	NA	05/23/23 15:49
Calibration Check	SLE0373-CCV3	05232323ECD7.D	05232323ECD7.D	NA	05/23/23 18:35
Calibration Check	SLE0373-CCV4	05232324ECD7.D	05232324ECD7.D	NA	05/23/23 18:56

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLE0373

Instrument: ECD7
Calibration ID: GE00022

Printed: 5/24/2023 9:52:07AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLE0373-ICV1	QC		1		L000862	L000844		
SLE0373-ICV2	QC		2		L000856	L000844		
23E0009-03	8082A PCB Solid 4	A 03	3			L000844	Anchor QEA, LLC	
23E0009-05	8082A PCB Solid 4	A 03	4			L000844	Anchor QEA, LLC	
23E0009-06	8082A PCB Solid 4	A 03	5			L000844	Anchor QEA, LLC	
23E0009-07	8082A PCB Solid 4	A 03	6			L000844	Anchor QEA, LLC	
23E0009-08	8082A PCB Solid 4	A 02	7			L000844	Anchor QEA, LLC	
23E0009-04	8082A PCB Solid 4	A 03	8			L000844	Anchor QEA, LLC	
SLE0373-CCV1	QC		9		L000861	L000844		
SLE0373-CCV2	QC		10		L000856	L000844		
BLE0611-BLK1	QC		11			L000844		
BLE0611-BS1	QC		12			L000844		
BLE0611-BSD1	QC		13			L000844		
23E0427-01	8.3 PCBs 0.01 ug/L or 20 ug/	A 01	14			L000844	Spectra Laboratories	Version
23E0429-01	8.3 PCBs 0.01 ug/L or 20 ug/	A 01	15			L000844	Nucor Steel Corporation	
23E0453-03	8.3 PCBs 0.01 ug/L or 20 ug/	B 01	16			L000844	Spectra Laboratories	Version
23E0472-01	8.3 PCBs 0.01 ug/L or 20 ug/	A 01	17			L000844	Nucor Steel Corporation	
SLE0373-CCV3	QC		18		L000860	L000844		
SLE0373-CCV4	QC		19		L000856	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230523.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	23-MAY-2023 10:57	05232301ECD7.D	1	DDTS	
2	23-MAY-2023 11:18	05232302ECD7.D	1	AR1254ICV1	
3	23-MAY-2023 11:39	05232303ECD7.D	1	AR1660ICV2	
4	23-MAY-2023 12:00	05232304ECD7.D	1	23E0009-03	
5	23-MAY-2023 12:20	05232305ECD7.D	1	23E0009-04	
6	23-MAY-2023 12:41	05232306ECD7.D	1	23E0009-05	
7	23-MAY-2023 13:02	05232307ECD7.D	5	23E0009-05RE1	
8	23-MAY-2023 13:23	05232308ECD7.D	1	23E0009-06	
9	23-MAY-2023 13:44	05232309ECD7.D	5	23E0009-06RE1	
10	23-MAY-2023 14:05	05232310ECD7.D	1	23E0009-07	
11	23-MAY-2023 14:25	05232311ECD7.D	1	23E0009-08	
12	23-MAY-2023 14:46	05232312ECD7.D	5	23E0009-08RE1	
13	23-MAY-2023 15:07	05232313ECD7.D	5	23E0009-04RE1	
14	23-MAY-2023 15:28	05232314ECD7.D	1	AR1248CCV1	
15	23-MAY-2023 15:49	05232315ECD7.D	1	AR1660CCV2	
16	23-MAY-2023 16:09	05232316ECD7.D	1	BLE0611-BLK1	
17	23-MAY-2023 16:30	05232317ECD7.D	1	BLE0611-BS1	
18	23-MAY-2023 16:51	05232318ECD7.D	1	BLE0611-BSD1	
19	23-MAY-2023 17:12	05232319ECD7.D	1	23E0427-01	
20	23-MAY-2023 17:33	05232320ECD7.D	1	23E0429-01	
21	23-MAY-2023 17:54	05232321ECD7.D	1	23E0453-03	
22	23-MAY-2023 18:14	05232322ECD7.D	1	23E0472-01	
23	23-MAY-2023 18:35	05232323ECD7.D	1	AR1242CCV3	
24	23-MAY-2023 18:56	05232324ECD7.D	1	AR1660CCV4	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230523.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 23-MAY-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1057	05232301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1118	05232302ECD7.D	AR1254ICV1		1	Aroclor-1254,
1139	05232303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1200	05232304ECD7.D	23E0009-03		1	NO MANUAL INTEGRATION
1220	05232305ECD7.D	23E0009-04		1	NO MANUAL INTEGRATION
1241	05232306ECD7.D	23E0009-05		1	NO MANUAL INTEGRATION
1302	05232307ECD7.D	23E0009-05RE1		5	NO MANUAL INTEGRATION
1323	05232308ECD7.D	23E0009-06		1	NO MANUAL INTEGRATION
1344	05232309ECD7.D	23E0009-06RE1		5	NO MANUAL INTEGRATION
1405	05232310ECD7.D	23E0009-07		1	NO MANUAL INTEGRATION
1425	05232311ECD7.D	23E0009-08		1	NO MANUAL INTEGRATION
1446	05232312ECD7.D	23E0009-08RE1		5	NO MANUAL INTEGRATION
1507	05232313ECD7.D	23E0009-04RE1		5	NO MANUAL INTEGRATION
1528	05232314ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1549	05232315ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1609	05232316ECD7.D	BLE0611-BLK1		1	NO MANUAL INTEGRATION
1630	05232317ECD7.D	BLE0611-BS1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230523.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1651	05232318ECD7.D	BLE0611-BSD1		1	NO MANUAL INTEGRATION
1712	05232319ECD7.D	23E0427-01		1	NO MANUAL INTEGRATION
1733	05232320ECD7.D	23E0429-01		1	NO MANUAL INTEGRATION
1754	05232321ECD7.D	23E0453-03		1	NO MANUAL INTEGRATION
1814	05232322ECD7.D	23E0472-01		1	NO MANUAL INTEGRATION
1835	05232323ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1856	05232324ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
1057	05232301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1118	05232302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1139	05232303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1200	05232304ECD7.D	23E0009-03		1	NO MANUAL INTEGRATION
1220	05232305ECD7.D	23E0009-04		1	NO MANUAL INTEGRATION
1241	05232306ECD7.D	23E0009-05		1	NO MANUAL INTEGRATION
1302	05232307ECD7.D	23E0009-05RE1		5	NO MANUAL INTEGRATION
1323	05232308ECD7.D	23E0009-06		1	NO MANUAL INTEGRATION
1344	05232309ECD7.D	23E0009-06RE1		5	NO MANUAL INTEGRATION
1405	05232310ECD7.D	23E0009-07		1	NO MANUAL INTEGRATION
1425	05232311ECD7.D	23E0009-08		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230523.b\230523.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1446	05232312ECD7.D	23E0009-08RE1		5	NO MANUAL INTEGRATION
1507	05232313ECD7.D	23E0009-04RE1		5	NO MANUAL INTEGRATION
1528	05232314ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1549	05232315ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1609	05232316ECD7.D	BLE0611-BLK1		1	NO MANUAL INTEGRATION
1630	05232317ECD7.D	BLE0611-BS1		1	NO MANUAL INTEGRATION
1651	05232318ECD7.D	BLE0611-BSD1		1	NO MANUAL INTEGRATION
1712	05232319ECD7.D	23E0427-01		1	NO MANUAL INTEGRATION
1733	05232320ECD7.D	23E0429-01		1	NO MANUAL INTEGRATION
1754	05232321ECD7.D	23E0453-03		1	NO MANUAL INTEGRATION
1814	05232322ECD7.D	23E0472-01		1	NO MANUAL INTEGRATION
1835	05232323ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
1856	05232324ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION

Security Status Report

Date: 24-May-2023 09:33

05232301ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232302ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232303ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232304ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232305ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232306ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232307ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232308ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232309ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232310ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232311ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232312ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232313ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232314ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232315ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232316ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232317ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232318ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232319ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232320ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232321ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232322ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232323ECD7.D	Data Locked	richardl, 24-May-2023 09:33
05232324ECD7.D	Data Locked	richardl, 24-May-2023 09:33

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0079
Instrument: ECD7
Calibration: GE00022
Calibration Date: 05/06/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLE0079-SCV1 (Water)			Lab File ID: 05052332ECD7.D			Analyzed: 05/06/23 03:16		
Decachlorobiphenyl	40.000	92.3	80 - 120	13.842	13.8415	0.0005	N/A	
Tetrachlorometaxylene	40.000	92.2	80 - 120	5.741	5.742	-0.0010	N/A	
Decachlorobiphenyl [2C]	40.000	98.1	80 - 120	14.069	14.06967	-0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	93.1	80 - 120	5.628	5.628167	-0.0002	N/A	
SLE0079-SCV2 (Water)			Lab File ID: 05052333ECD7.D			Analyzed: 05/06/23 03:36		
Decachlorobiphenyl	40.000	102	80 - 120	13.842	13.8415	0.0005	N/A	
Tetrachlorometaxylene	40.000	81.9	80 - 120	5.743	5.742	0.0010	N/A	
Decachlorobiphenyl [2C]	40.000	110	80 - 120	14.069	14.06967	-0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	83.5	80 - 120	5.63	5.628167	0.0018	N/A	
SLE0079-SCV3 (Water)			Lab File ID: 05052334ECD7.D			Analyzed: 05/06/23 03:57		
Decachlorobiphenyl	40.000	89.2	80 - 120	13.841	13.8415	-0.0005	N/A	
Tetrachlorometaxylene	40.000	92.0	80 - 120	5.741	5.742	-0.0010	N/A	
Decachlorobiphenyl [2C]	40.000	95.0	80 - 120	14.07	14.06967	0.0003	N/A	
Tetrachlorometaxylene [2C]	40.000	94.3	80 - 120	5.628	5.628167	-0.0002	N/A	
SLE0079-SCV4 (Water)			Lab File ID: 05052335ECD7.D			Analyzed: 05/06/23 04:18		
Decachlorobiphenyl	40.000	89.9	80 - 120	13.842	13.8415	0.0005	N/A	
Tetrachlorometaxylene	40.000	94.0	80 - 120	5.743	5.742	0.0010	N/A	
Decachlorobiphenyl [2C]	40.000	96.2	80 - 120	14.07	14.06967	0.0003	N/A	
Tetrachlorometaxylene [2C]	40.000	95.8	80 - 120	5.63	5.628167	0.0018	N/A	
SLE0079-SCV5 (Water)			Lab File ID: 05052336ECD7.D			Analyzed: 05/06/23 04:39		
Decachlorobiphenyl	40.000	92.7	80 - 120	13.841	13.8415	-0.0005	N/A	
Tetrachlorometaxylene	40.000	94.5	80 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	40.000	96.9	80 - 120	14.069	14.06967	-0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	97.6	80 - 120	5.628	5.628167	-0.0002	N/A	
SLE0079-SCV6 (Water)			Lab File ID: 05052337ECD7.D			Analyzed: 05/06/23 05:00		
Decachlorobiphenyl	40.000	138	80 - 120	13.841	13.8415	-0.0005	N/A	
Tetrachlorometaxylene	40.000	96.0	80 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	40.000	148	80 - 120	14.068	14.06967	-0.0017	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.629	5.628167	0.0008	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0328
Instrument: ECD7
Calibration: GE00022
Calibration Date: 05/06/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLE0328-ICV1 (Solid)			Lab File ID: 05192302ECD7.D			Analyzed: 05/19/23 14:28		
Decachlorobiphenyl	40.000	103	80 - 120	13.841	13.8415	-0.0005	N/A	
Tetrachlorometaxylene	40.000	99.0	80 - 120	5.743	5.742	0.0010	N/A	
Decachlorobiphenyl [2C]	40.000	102	80 - 120	14.068	14.06967	-0.0017	N/A	
Tetrachlorometaxylene [2C]	40.000	105	80 - 120	5.627	5.628167	-0.0012	N/A	
SLE0328-ICV2 (Solid)			Lab File ID: 05192303ECD7.D			Analyzed: 05/19/23 14:49		
Decachlorobiphenyl	40.000	105	80 - 120	13.841	13.8415	-0.0005	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	14.068	14.06967	-0.0017	N/A	
Tetrachlorometaxylene [2C]	40.000	107	80 - 120	5.628	5.628167	-0.0002	N/A	
BLE0151-BLK1 (Solid)			Lab File ID: 05192304ECD7.D			Analyzed: 05/19/23 15:10		
Decachlorobiphenyl	8.0000	86.5	40 - 126	13.838	13.8415	-0.0035	N/A	
Tetrachlorometaxylene	8.0000	76.5	44 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	8.0000	89.9	40 - 126	14.066	14.06967	-0.0037	N/A	
Tetrachlorometaxylene [2C]	8.0000	73.7	44 - 120	5.628	5.628167	-0.0002	N/A	
BLE0151-BS1 (Solid)			Lab File ID: 05192305ECD7.D			Analyzed: 05/19/23 15:30		
Decachlorobiphenyl	8.0000	88.9	40 - 126	13.838	13.8415	-0.0035	N/A	
Tetrachlorometaxylene	8.0000	80.8	44 - 120	5.741	5.742	-0.0010	N/A	
Decachlorobiphenyl [2C]	8.0000	94.7	40 - 126	14.067	14.06967	-0.0027	N/A	
Tetrachlorometaxylene [2C]	8.0000	76.8	44 - 120	5.627	5.628167	-0.0012	N/A	
BLE0151-BSD1 (Solid)			Lab File ID: 05192306ECD7.D			Analyzed: 05/19/23 15:51		
Decachlorobiphenyl	8.0000	92.9	40 - 126	13.838	13.8415	-0.0035	N/A	
Tetrachlorometaxylene	8.0000	85.5	44 - 120	5.741	5.742	-0.0010	N/A	
Decachlorobiphenyl [2C]	8.0000	99.0	40 - 126	14.068	14.06967	-0.0017	N/A	
Tetrachlorometaxylene [2C]	8.0000	80.1	44 - 120	5.627	5.628167	-0.0012	N/A	
BLE0151-SRM1 (Solid)			Lab File ID: 05192307ECD7.D			Analyzed: 05/19/23 16:12		
Decachlorobiphenyl	40.000	86.8	40 - 126	13.833	13.8415	-0.0085	N/A	
Tetrachlorometaxylene	40.000	78.8	44 - 120	5.741	5.742	-0.0010	N/A	
Decachlorobiphenyl [2C]	40.000	82.8	40 - 126	14.063	14.06967	-0.0067	N/A	
Tetrachlorometaxylene [2C]	40.000	79.9	44 - 120	5.626	5.628167	-0.0022	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0328
Instrument: ECD7
Calibration: GE00022
Calibration Date: 05/06/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23E0009-01 (Solid)			Lab File ID: 05192308ECD7.D			Analyzed: 05/19/23 16:33		
Decachlorobiphenyl	7.9824	89.9	40 - 126	13.831	13.8415	-0.0105	N/A	
Tetrachlorometaxylene	7.9824	66.1	44 - 120	5.74	5.742	-0.0020	N/A	
Decachlorobiphenyl [2C]	7.9824	88.0	40 - 126	14.06	14.06967	-0.0097	N/A	
Tetrachlorometaxylene [2C]	7.9824	78.0	44 - 120	5.623	5.628167	-0.0052	N/A	
BLE0151-MS1 (Solid)			Lab File ID: 05192309ECD7.D			Analyzed: 05/19/23 16:54		
Decachlorobiphenyl	8.0001	87.5	40 - 126	13.831	13.8415	-0.0105	N/A	
Tetrachlorometaxylene	8.0001	66.1	44 - 120	5.74	5.742	-0.0020	N/A	
Decachlorobiphenyl [2C]	8.0001	86.1	40 - 126	14.061	14.06967	-0.0087	N/A	
Tetrachlorometaxylene [2C]	8.0001	77.1	44 - 120	5.624	5.628167	-0.0042	N/A	
BLE0151-MSD1 (Solid)			Lab File ID: 05192310ECD7.D			Analyzed: 05/19/23 17:15		
Decachlorobiphenyl	8.0001	80.4	40 - 126	13.831	13.8415	-0.0105	N/A	
Tetrachlorometaxylene	8.0001	62.8	44 - 120	5.741	5.742	-0.0010	N/A	
Decachlorobiphenyl [2C]	8.0001	83.3	40 - 126	14.06	14.06967	-0.0097	N/A	
Tetrachlorometaxylene [2C]	8.0001	72.9	44 - 120	5.623	5.628167	-0.0052	N/A	
23E0009-02 (Solid)			Lab File ID: 05192311ECD7.D			Analyzed: 05/19/23 17:35		
Decachlorobiphenyl	7.9618	83.4	40 - 126	13.831	13.8415	-0.0105	N/A	
Tetrachlorometaxylene	7.9618	65.4	44 - 120	5.74	5.742	-0.0020	N/A	
Decachlorobiphenyl [2C]	7.9618	82.9	40 - 126	14.061	14.06967	-0.0087	N/A	
Tetrachlorometaxylene [2C]	7.9618	73.2	44 - 120	5.624	5.628167	-0.0042	N/A	
SLE0328-CCV1 (Solid)			Lab File ID: 05192318ECD7.D			Analyzed: 05/19/23 20:02		
Decachlorobiphenyl	40.000	97.8	80 - 120	13.84	13.8415	-0.0015	N/A	
Tetrachlorometaxylene	40.000	97.3	80 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	40.000	103	80 - 120	14.068	14.06967	-0.0017	N/A	
Tetrachlorometaxylene [2C]	40.000	99.8	80 - 120	5.629	5.628167	0.0008	N/A	
SLE0328-CCV2 (Solid)			Lab File ID: 05192319ECD7.D			Analyzed: 05/19/23 20:22		
Decachlorobiphenyl	40.000	104	80 - 120	13.84	13.8415	-0.0015	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	40.000	109	80 - 120	14.069	14.06967	-0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	109	80 - 120	5.627	5.628167	-0.0012	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0373	Instrument:	ECD7
Calibration:	GE00022	Calibration Date:	05/06/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLE0373-ICV1 (Solid)				Lab File ID: 05232302ECD7.D			Analyzed: 05/23/23 11:18	
Decachlorobiphenyl	40.000	106	80 - 120	13.841	13.8415	-0.0005	N/A	
Tetrachlorometaxylene	40.000	114	80 - 120	5.745	5.742	0.0030	N/A	
Decachlorobiphenyl [2C]	40.000	119	80 - 120	14.066	14.06967	-0.0037	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.629	5.628167	0.0008	N/A	
SLE0373-ICV2 (Solid)				Lab File ID: 05232303ECD7.D			Analyzed: 05/23/23 11:39	
Decachlorobiphenyl	40.000	109	80 - 120	13.839	13.8415	-0.0025	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.744	5.742	0.0020	N/A	
Decachlorobiphenyl [2C]	40.000	106	80 - 120	14.068	14.06967	-0.0017	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.63	5.628167	0.0018	N/A	
23E0009-03 (Solid)				Lab File ID: 05232304ECD7.D			Analyzed: 05/23/23 12:00	
Decachlorobiphenyl	7.9939	86.2	40 - 126	13.831	13.8415	-0.0105	N/A	
Tetrachlorometaxylene	7.9939	61.6	44 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	7.9939	88.2	40 - 126	14.061	14.06967	-0.0087	N/A	
Tetrachlorometaxylene [2C]	7.9939	71.9	44 - 120	5.625	5.628167	-0.0032	N/A	
23E0009-05 (Solid)				Lab File ID: 05232307ECD7.D			Analyzed: 05/23/23 13:02	
Decachlorobiphenyl	8.0011	102	40 - 126	13.83	13.8415	-0.0115	N/A	
Tetrachlorometaxylene	8.0011	78.6	44 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	8.0011	95.6	40 - 126	14.061	14.06967	-0.0087	N/A	
Tetrachlorometaxylene [2C]	8.0011	85.5	44 - 120	5.627	5.628167	-0.0012	N/A	
23E0009-06 (Solid)				Lab File ID: 05232309ECD7.D			Analyzed: 05/23/23 13:44	
Decachlorobiphenyl	7.9843	95.6	40 - 126	13.831	13.8415	-0.0105	N/A	
Tetrachlorometaxylene	7.9843	76.0	44 - 120	5.74	5.742	-0.0020	N/A	
Decachlorobiphenyl [2C]	7.9843	94.3	40 - 126	14.061	14.06967	-0.0087	N/A	
Tetrachlorometaxylene [2C]	7.9843	80.5	44 - 120	5.625	5.628167	-0.0032	N/A	
23E0009-07 (Solid)				Lab File ID: 05232310ECD7.D			Analyzed: 05/23/23 14:05	
Decachlorobiphenyl	7.9780	83.2	40 - 126	13.831	13.8415	-0.0105	N/A	
Tetrachlorometaxylene	7.9780	64.7	44 - 120	5.74	5.742	-0.0020	N/A	
Decachlorobiphenyl [2C]	7.9780	82.9	40 - 126	14.06	14.06967	-0.0097	N/A	
Tetrachlorometaxylene [2C]	7.9780	70.7	44 - 120	5.623	5.628167	-0.0052	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0373
Instrument: ECD7
Calibration: GE00022
Calibration Date: 05/06/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23E0009-08 (Solid)			Lab File ID: 05232312ECD7.D			Analyzed: 05/23/23 14:46		
Decachlorobiphenyl	8.0016	103	40 - 126	13.832	13.8415	-0.0095	N/A	
Tetrachlorometaxylene	8.0016	75.9	44 - 120	5.74	5.742	-0.0020	N/A	
Decachlorobiphenyl [2C]	8.0016	91.6	40 - 126	14.06	14.06967	-0.0097	N/A	
Tetrachlorometaxylene [2C]	8.0016	80.0	44 - 120	5.624	5.628167	-0.0042	N/A	
23E0009-04 (Solid)			Lab File ID: 05232313ECD7.D			Analyzed: 05/23/23 15:07		
Decachlorobiphenyl	7.9776	103	40 - 126	13.832	13.8415	-0.0095	N/A	
Tetrachlorometaxylene	7.9776	85.1	44 - 120	5.74	5.742	-0.0020	N/A	
Decachlorobiphenyl [2C]	7.9776	97.1	40 - 126	14.061	14.06967	-0.0087	N/A	
Tetrachlorometaxylene [2C]	7.9776	87.8	44 - 120	5.625	5.628167	-0.0032	N/A	
SLE0373-CCV1 (Solid)			Lab File ID: 05232314ECD7.D			Analyzed: 05/23/23 15:28		
Decachlorobiphenyl	40.000	97.0	80 - 120	13.841	13.8415	-0.0005	N/A	
Tetrachlorometaxylene	40.000	97.8	80 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	14.067	14.06967	-0.0027	N/A	
Tetrachlorometaxylene [2C]	40.000	99.0	80 - 120	5.628	5.628167	-0.0002	N/A	
SLE0373-CCV2 (Solid)			Lab File ID: 05232315ECD7.D			Analyzed: 05/23/23 15:49		
Decachlorobiphenyl	40.000	104	80 - 120	13.839	13.8415	-0.0025	N/A	
Tetrachlorometaxylene	40.000	101	80 - 120	5.741	5.742	-0.0010	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	14.068	14.06967	-0.0017	N/A	
Tetrachlorometaxylene [2C]	40.000	108	80 - 120	5.628	5.628167	-0.0002	N/A	
SLE0373-CCV3 (Solid)			Lab File ID: 05232323ECD7.D			Analyzed: 05/23/23 18:35		
Decachlorobiphenyl	40.000	95.0	80 - 120	13.84	13.8415	-0.0015	N/A	
Tetrachlorometaxylene	40.000	119	80 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	40.000	97.0	80 - 120	14.068	14.06967	-0.0017	N/A	
Tetrachlorometaxylene [2C]	40.000	122	80 - 120	5.629	5.628167	0.0008	N/A	*
SLE0373-CCV4 (Solid)			Lab File ID: 05232324ECD7.D			Analyzed: 05/23/23 18:56		
Decachlorobiphenyl	40.000	103	80 - 120	13.84	13.8415	-0.0015	N/A	
Tetrachlorometaxylene	40.000	101	80 - 120	5.742	5.742	0.0000	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.069	14.06967	-0.0007	N/A	
Tetrachlorometaxylene [2C]	40.000	108	80 - 120	5.628	5.628167	-0.0002	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0079	Instrument:	ECD7
		Calibration:	GE00022

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLE0079-SCV1)		(Water)		Lab File ID: 05052332ECD7.D				Analyzed: 05/06/23 03:16	
1-Bromo-2-Nitrobenzene	642284	3.428	601474	3.428	107	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	941356	14.215	876625	14.215	107	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	361711	3.868	349289	3.869	104	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	690563	14.957	652984	14.956	106	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SLE0079-SCV2)		(Water)		Lab File ID: 05052333ECD7.D				Analyzed: 05/06/23 03:36	
1-Bromo-2-Nitrobenzene	648004	3.43	601474	3.428	108	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	976327	14.214	876625	14.215	111	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	365379	3.87	349289	3.869	105	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	695394	14.957	652984	14.956	106	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SLE0079-SCV3)		(Water)		Lab File ID: 05052334ECD7.D				Analyzed: 05/06/23 03:57	
1-Bromo-2-Nitrobenzene	643038	3.428	601474	3.428	107	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	952051	14.215	876625	14.215	109	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	359604	3.868	349289	3.869	103	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	692982	14.957	652984	14.956	106	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SLE0079-SCV4)		(Water)		Lab File ID: 05052335ECD7.D				Analyzed: 05/06/23 04:18	
1-Bromo-2-Nitrobenzene	650234	3.43	601474	3.428	108	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	980276	14.214	876625	14.215	112	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	364142	3.87	349289	3.869	104	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	705291	14.957	652984	14.956	108	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SLE0079-SCV5)		(Water)		Lab File ID: 05052336ECD7.D				Analyzed: 05/06/23 04:39	
1-Bromo-2-Nitrobenzene	629547	3.428	601474	3.428	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	929713	14.214	876625	14.215	106	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341980	3.868	349289	3.869	98	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	678097	14.957	652984	14.956	104	50 - 200	0.001	+/-0.50	
Secondary Cal Check (SLE0079-SCV6)		(Water)		Lab File ID: 05052337ECD7.D				Analyzed: 05/06/23 05:00	
1-Bromo-2-Nitrobenzene	646456	3.429	601474	3.428	107	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	954969	14.213	876625	14.215	109	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	354120	3.869	349289	3.869	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	696139	14.957	652984	14.956	107	50 - 200	0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0328
Instrument: ECD7
Calibration: GE00022

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLE0328-ICV1)		(Solid)	Lab File ID: 05192302ECD7.D				Analyzed: 05/19/23 14:28		
1-Bromo-2-Nitrobenzene	575987	3.428	575987	3.428	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	935837	14.211	935837	14.211	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	333667	3.867	333667	3.867	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	577674	14.956	577674	14.956	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLE0328-ICV2)		(Solid)	Lab File ID: 05192303ECD7.D				Analyzed: 05/19/23 14:49		
1-Bromo-2-Nitrobenzene	560985	3.429	560985	3.429	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	898995	14.212	898995	14.212	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	331624	3.869	331624	3.869	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	592231	14.955	592231	14.955	100	50 - 200	0.000	+/-0.50	
Blank (BLE0151-BLK1)		(Solid)	Lab File ID: 05192304ECD7.D				Analyzed: 05/19/23 15:10		
1-Bromo-2-Nitrobenzene	614754	3.429	560985	3.429	110	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1046743	14.208	898995	14.212	116	50 - 200	-0.004	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	392334	3.87	331624	3.869	118	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	689450	14.954	592231	14.955	116	50 - 200	-0.001	+/-0.50	
LCS (BLE0151-BS1)		(Solid)	Lab File ID: 05192305ECD7.D				Analyzed: 05/19/23 15:30		
1-Bromo-2-Nitrobenzene	626178	3.429	560985	3.429	112	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1056277	14.209	898995	14.212	117	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	395692	3.87	331624	3.869	119	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	700347	14.954	592231	14.955	118	50 - 200	-0.001	+/-0.50	
LCS Dup (BLE0151-BSD1)		(Solid)	Lab File ID: 05192306ECD7.D				Analyzed: 05/19/23 15:51		
1-Bromo-2-Nitrobenzene	620302	3.428	560985	3.429	111	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1048830	14.209	898995	14.212	117	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	384150	3.869	331624	3.869	116	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	696097	14.953	592231	14.955	118	50 - 200	-0.002	+/-0.50	
Reference (BLE0151-SRM1)		(Solid)	Lab File ID: 05192307ECD7.D				Analyzed: 05/19/23 16:12		
1-Bromo-2-Nitrobenzene	609944	3.429	560985	3.429	109	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	798566	14.199	898995	14.212	89	50 - 200	-0.013	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	380503	3.87	331624	3.869	115	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	557532	14.949	592231	14.955	94	50 - 200	-0.006	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0328	Instrument:	ECD7
		Calibration:	GE00022

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1811 (23E0009-01)		(Solid)		Lab File ID: 05192308ECD7.D				Analyzed: 05/19/23 16:33	
1-Bromo-2-Nitrobenzene	576616	3.428	560985	3.429	103	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	483196	14.195	898995	14.212	54	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341375	3.869	331624	3.869	103	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	375978	14.944	592231	14.955	63	50 - 200	-0.011	+/-0.50	
Matrix Spike (BLE0151-MS1)		(Solid)		Lab File ID: 05192309ECD7.D				Analyzed: 05/19/23 16:54	
1-Bromo-2-Nitrobenzene	552412	3.428	560985	3.429	98	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	487713	14.195	898995	14.212	54	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	331013	3.869	331624	3.869	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	379661	14.945	592231	14.955	64	50 - 200	-0.010	+/-0.50	
Matrix Spike Dup (BLE0151-MSD1)		(Solid)		Lab File ID: 05192310ECD7.D				Analyzed: 05/19/23 17:15	
1-Bromo-2-Nitrobenzene	554123	3.429	560985	3.429	99	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	485832	14.194	898995	14.212	54	50 - 200	-0.018	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341946	3.87	331624	3.869	103	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	372405	14.944	592231	14.955	63	50 - 200	-0.011	+/-0.50	
LDW23-SC1811 (23E0009-02)		(Solid)		Lab File ID: 05192311ECD7.D				Analyzed: 05/19/23 17:35	
1-Bromo-2-Nitrobenzene	566220	3.429	560985	3.429	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	458264	14.195	898995	14.212	51	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	350703	3.87	331624	3.869	106	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	358154	14.944	592231	14.955	60	50 - 200	-0.011	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0373	Instrument:	ECD7
		Calibration:	GE00022

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLE0373-ICV1)		(Solid)	Lab File ID: 05232302ECD7.D				Analyzed: 05/23/23 11:18		
1-Bromo-2-Nitrobenzene	468312	3.43	468312	3.43	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	872572	14.209	872572	14.209	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	270583	3.87	270583	3.87	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	363613	14.952	363613	14.952	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLE0373-ICV2)		(Solid)	Lab File ID: 05232303ECD7.D				Analyzed: 05/23/23 11:39		
1-Bromo-2-Nitrobenzene	559361	3.431	559361	3.431	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	555528	14.21	555528	14.21	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	327100	3.87	327100	3.87	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	471804	14.955	471804	14.955	100	50 - 200	0.000	+/-0.50	
LDW23-SS1805 (23E0009-03)		(Solid)	Lab File ID: 05232304ECD7.D				Analyzed: 05/23/23 12:00		
1-Bromo-2-Nitrobenzene	524879	3.43	559361	3.431	94	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	387824	14.195	555528	14.21	70	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	326914	3.87	327100	3.87	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	327256	14.944	471804	14.955	69	50 - 200	-0.011	+/-0.50	
LDW23-SS1800 (23E0009-05)		(Solid)	Lab File ID: 05232307ECD7.D				Analyzed: 05/23/23 13:02		
1-Bromo-2-Nitrobenzene	541760	3.431	559361	3.431	97	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	464698	14.196	555528	14.21	84	50 - 200	-0.014	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	349352	3.871	327100	3.87	107	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	363244	14.946	471804	14.955	77	50 - 200	-0.009	+/-0.50	
LDW23-SC1800 (23E0009-06)		(Solid)	Lab File ID: 05232309ECD7.D				Analyzed: 05/23/23 13:44		
1-Bromo-2-Nitrobenzene	562053	3.428	559361	3.431	100	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	479863	14.195	555528	14.21	86	50 - 200	-0.015	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	360190	3.869	327100	3.87	110	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	374831	14.945	471804	14.955	79	50 - 200	-0.010	+/-0.50	
LDW23-SS1820 (23E0009-07)		(Solid)	Lab File ID: 05232310ECD7.D				Analyzed: 05/23/23 14:05		
1-Bromo-2-Nitrobenzene	516684	3.428	559361	3.431	92	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	426868	14.193	555528	14.21	77	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	340869	3.868	327100	3.87	104	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	346408	14.943	471804	14.955	73	50 - 200	-0.012	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0373	Instrument:	ECD7
		Calibration:	GE00022

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1820 (23E0009-08)		(Solid)		Lab File ID: 05232312ECD7.D				Analyzed: 05/23/23 14:46	
1-Bromo-2-Nitrobenzene	577315	3.428	559361	3.431	103	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	495445	14.197	555528	14.21	89	50 - 200	-0.013	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	363149	3.869	327100	3.87	111	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	384633	14.945	471804	14.955	82	50 - 200	-0.010	+/-0.50	
LDW23-SC1805 (23E0009-04)		(Solid)		Lab File ID: 05232313ECD7.D				Analyzed: 05/23/23 15:07	
1-Bromo-2-Nitrobenzene	551762	3.428	559361	3.431	99	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	503641	14.197	555528	14.21	91	50 - 200	-0.013	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341835	3.868	327100	3.87	105	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	383679	14.945	471804	14.955	81	50 - 200	-0.010	+/-0.50	

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23E0009-01	File ID:	05192308ECD7.D
Sampled:	04/28/23 10:38	Prepared:	05/10/23 11:15	Analyzed:	05/19/23 16:33
Solids:	69.29	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLE0151	Sequence:	SLE0328		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.392	8.398	0.006	96197.5	49.4	22.6
	* 2	8.249	8.26	0.011	59159.5	62.0	
Aroclor 1254	* 1	9.232	9.246	0.014	163203.6	69.7	9.6
	2	9.388	9.403	0.015	96229.2	63.3	
Aroclor 1260	1	10.979	10.99483	0.0158	55161	35.3	19.2
	* 2	11.593	11.60617	0.0132	59706	42.8	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23E0009-02	File ID:	05192311ECD7.D
Sampled:	04/28/23 12:30	Prepared:	05/10/23 11:15	Analyzed:	05/19/23 17:35
Solids:	70.92	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLE0151	Sequence:	SLE0328		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.392	8.398	0.006	75330.75	40.1	10.8
	* 2	8.248	8.26	0.012	47321.75	44.7	
Aroclor 1254	1	9.231	9.246	0.015	114116.6	42.4	19.6
	* 2	9.388	9.403	0.015	78971.4	51.6	
Aroclor 1260	1	10.979	10.99483	0.0158	55380.6	36.9	21.7
	* 2	11.592	11.60617	0.0142	61514.75	45.9	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23E0009-03	File ID:	05232304ECD7.D
Sampled:	04/28/23 16:15	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 12:00
Solids:	50.79	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLE0151	Sequence:	SLE0373		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.393	8.398	0.005	56211.5	31.8	7.9
	* 2	8.249	8.26	0.011	38104	34.4	
Aroclor 1254	* 1	9.232	9.246	0.014	95018.4	43.0	26.8
	2	9.388	9.403	0.015	80901.2	56.3	
Aroclor 1260	1	10.98	10.99483	0.0148	54468.6	45.5	20.3
	* 2	11.592	11.60617	0.0142	65377.5	55.8	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23E0009-04	File ID:	05232313ECD7.D
Sampled:	04/28/23 16:25	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 15:07
Solids:	50.77	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLE0151	Sequence:	SLE0373		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.395	8.398	0.003	20397	54.9	7.
	2	8.25	8.26	0.01	11773.25	51.2	
Aroclor 1254	* 1	9.233	9.246	0.013	35573.8	77.2	10.
	2	9.39	9.403	0.013	25836.2	85.3	
Aroclor 1260	1	10.979	10.99483	0.0158	19858.6	60.8	25.5
	* 2	11.594	11.60617	0.0122	21659.5	78.6	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23E0009-05	File ID:	05232307ECD7.D
Sampled:	04/29/23 10:10	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 13:02
Solids:	47.45	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLE0151	Sequence:	SLE0373		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.396	8.398	0.002	23567	64.9	8.5
	2	8.251	8.26	0.009	11836.25	59.6	
Aroclor 1254	* 1	9.234	9.246	0.012	41114	90.5	4.9
	2	9.391	9.403	0.012	29215.4	86.2	
Aroclor 1260	1	10.98	10.99483	0.0148	22728.4	76.5	24.6
	* 2	11.594	11.60617	0.0122	25275.5	98.0	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23E0009-06	File ID:	05232309ECD7.D
Sampled:	04/29/23 10:15	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 13:44
Solids:	49.29	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLE0151	Sequence:	SLE0373		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.395	8.398	0.003	21520.75	56.3	8.1
	2	8.25	8.26	0.01	10619	51.9	
Aroclor 1254	* 1	9.234	9.246	0.012	38142.8	81.6	8.2
	2	9.39	9.403	0.013	26100.4	75.2	
Aroclor 1260	1	10.98	10.99483	0.0148	25525.6	81.7	25.
	* 2	11.594	11.60617	0.0122	29119.25	105	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23E0009-07	File ID:	05232310ECD7.D
Sampled:	04/29/23 14:00	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 14:05
Solids:	53.18	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLE0151	Sequence:	SLE0373		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.394	8.398	0.004	24886.5	14.4	8.7
	2	8.248	8.26	0.012	16199.5	13.2	
Aroclor 1254	* 1	9.232	9.246	0.014	48412.8	22.2	15.4
	2	9.388	9.403	0.015	39347	25.9	
Aroclor 1260	1	10.978	10.99483	0.0168	23339.8	20.7	21.2
	* 2	11.591	11.60617	0.0152	39222.25	25.6	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23E0009
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23E0009-08	File ID:	05232312ECD7.D
Sampled:	04/29/23 14:10	Prepared:	05/10/23 11:15	Analyzed:	05/23/23 14:46
Solids:	54.29	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLE0151	Sequence:	SLE0373		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.394	8.398	0.004	7405	18.3	15.9
	2	8.249	8.26	0.011	3158	15.6	
Aroclor 1254	* 1	9.233	9.246	0.013	14494	29.9	2.6
	2	9.39	9.403	0.013	10775	30.7	
Aroclor 1260	1	10.98	10.99483	0.0148	10625.2	35.8	23.
	* 2	11.593	11.60617	0.0132	23524.25	45.1	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1811 23E0009-01	04/28/23 10:38	05/01/23 09:42	05/10/23 11:15	12	14	05/19/23 16:33	9	40	
LDW23-SC1811 23E0009-02	04/28/23 12:30	05/01/23 09:42	05/10/23 11:15	11	14	05/19/23 17:35	9	40	
LDW23-SS1805 23E0009-03	04/28/23 16:15	05/01/23 09:42	05/10/23 11:15	11	14	05/23/23 12:00	13	40	
LDW23-SC1805 23E0009-04	04/28/23 16:25	05/01/23 09:42	05/10/23 11:15	11	14	05/23/23 15:07	13	40	
LDW23-SS1800 23E0009-05	04/29/23 10:10	05/01/23 09:42	05/10/23 11:15	11	14	05/23/23 13:02	13	40	
LDW23-SC1800 23E0009-06	04/29/23 10:15	05/01/23 09:42	05/10/23 11:15	11	14	05/23/23 13:44	13	40	
LDW23-SS1820 23E0009-07	04/29/23 14:00	05/01/23 09:42	05/10/23 11:15	10	14	05/23/23 14:05	13	40	
LDW23-IT1820 23E0009-08	04/29/23 14:10	05/01/23 09:42	05/10/23 11:15	10	14	05/23/23 14:46	13	40	
Matrix Spike BLE0151-MS1	04/28/23 10:38	05/01/23 09:42	05/10/23 11:15	12	14	05/19/23 16:54	9	40	
Matrix Spike Dup BLE0151-MSD1	04/28/23 10:38	05/01/23 09:42	05/10/23 11:15	12	14	05/19/23 17:15	9	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	1.6	4.0	ug/kg
Aroclor 1016 [2C]	1.6	4.0	ug/kg
Aroclor 1221	1.6	4.0	ug/kg
Aroclor 1221 [2C]	1.6	4.0	ug/kg
Aroclor 1232	1.6	4.0	ug/kg
Aroclor 1232 [2C]	1.6	4.0	ug/kg
Aroclor 1242	1.6	4.0	ug/kg
Aroclor 1242 [2C]	1.6	4.0	ug/kg
Aroclor 1248	1.6	4.0	ug/kg
Aroclor 1248 [2C]	1.6	4.0	ug/kg
Aroclor 1254	1.6	4.0	ug/kg
Aroclor 1254 [2C]	1.6	4.0	ug/kg
Aroclor 1260	0.6	4.0	ug/kg
Aroclor 1260 [2C]	0.6	4.0	ug/kg

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

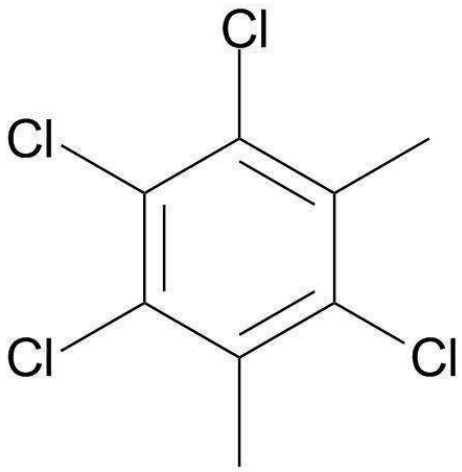
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ■ Tel: 310-212-0555 ■ Fax: 310-328-7768 ■ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101461
Description: Aroclor 1254
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL13053
Certification Date: November 29, 2018
Expiration Date: November 30, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1254	11097-69-1	1000	± 0.246%

I09808
Recd. JP
02/24/20

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111110613_us

Certificate of Analysis

phenova | A Phenomenex Company
Certified Reference Materials

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101468
Description: Aroclor 1221
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14017
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1221	11104-28-2	1000	± 0.553%

J004466
Rec'd JK
06/18/21

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova | A Phenomenex Company
Certified Reference Materials

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101469
Description: Aroclor 1232
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14914
Certification Date: January 31, 2020
Expiration Date: January 31, 2028

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1232	11141-16-5	1000	± 0.738%

J006467 JR
read
06/18/21

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_US

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101470
Description: Aroclor 1242
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14018
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1242	53469-21-9	1000	± 0.553%

J006468
Read JR
06/18/21

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101471	**Lot Number:**	CL15384
Description:	Aroclor 1248	**Certification Date:**	June 19, 2020
Storage:	4 °C	**Expiration Date:**	June 30, 2028
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1248	12672-29-6	1000	± 0.520%

JJ06469
Reed, JR
06/18/21

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018 us

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Agilent

Aroclor 1016 Solution

Product Number: PP-282 **Page:** 1 of 1

Lot Number: CR-0761 **Lot Issue Date:** 28-Feb-2017 **Expiration Date:** 31-Mar-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1016	012674-11-2	NT01016	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1254 Reed 02/05/22 JR

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

Agilent

Certificate of Analysis

Product Name: Aroclor 1260 Standard

Product Number: PP-362-1 **Lot Issue Date:** 20-Jan-2021

Lot Number: 0006582048 **Expiration Date:** 28-Feb-2025

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1260	011096-82-5	NT01023	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K 1255

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

MJBourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name:	Aroclor 1248 Standard	**Lot Number:**	0006626997
Product Number:	PP-342-1	**Lot Issue Date:**	17-Aug-2021
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	30-Sep-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
Aroclor 1248	100.3	±	0.5 µg/mL	012672-29-6	NT01582

Matrix: isooctane (2,2,4-trimethylpentane)

K1257

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Certificate of Analysis

Agilent

Aroclor 1254 Solution

Product Number: PP-352 **Page:** 1 of 1

Lot Number: CS-2321 **Lot Issue Date:** 04-May-2018 **Expiration Date:** 31-May-2026

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1258

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

Agilent

Certificate of Analysis

Product Name: Aroclor 1221 Standard

Product Number: PP-292-1 **Lot Issue Date:** 28-Apr-2020

Lot Number: 0006535333 **Expiration Date:** 31-May-2024

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1221	011104-28-2	RM04278	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1259

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1262 Standard

Product Number: PP-372-1 **Page:** 1 of 1

Lot Number: 0006499800 **Lot Issue Date:** 04-Nov-2019 **Expiration Date:** 30-Nov-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1262	037324-23-5	RM14263	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1260

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1232 Standard

Product Number: PP-302-1 **Page:** 1 of 1

Lot Number: CF-2197A **Lot Issue Date:** 05-Jul-2016 **Expiration Date:** 31-Aug-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01717	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1261

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

Agilent

Certificate of Analysis

Product Name: Aroclor 1268 Standard

Product Number: PP-382-1 **Lot Issue Date:** 09-Feb-2021

Lot Number: 0006587800 **Expiration Date:** 31-Mar-2029

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1268	011100-14-4	RM00937	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1262

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15355

Order Number: CB014770

Date Shipped: 4/14/2022

AirBill No(s): 519204140499

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: Kelly Bottem
Analytical Resources, Inc.
4611 S. 134th Place SUITE 100
Tukwila WA 98168
206-695-6211

K003635
K003636

Sample ID	Sigma ID	Qty	Description/Remarks	→ Catalogue Number
PSRM0152	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0153	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM

ANACORTES OUTFALL

04/14/2022

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time 1400 04/14/2022	Received by: (Signature)	Date/Time 04/15/22 10:25
Custody Seal(s): Present/Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Report No. 00, 9/11/2014

SMP Version 3.3

APTIM

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Catalog Number: PS-SRM
Marine Sediment: CDD/CDF/CB Congeners/Aroclors

PUGET SOUND SEDIMENT REFERENCE MATERIAL
QATS LABORATORY INSTRUCTIONS FOR
HRGC/HRMS CDD/CDF/CB CONGENER AND GC/ECD AROCLOR ANALYSIS

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocols or your contract, disregard these instructions.

APPLICATION: For the analysis of CDD/CDF and CB Congener analytes using project-specified HRGC/HRMS methods, and Aroclors using project-specified GC/ECD methods.

CAUTION: Read instructions carefully before opening bottles and proceeding with the analyses.

Contains CDD/CDF, CB Congener, and/or Aroclors
HAZARDOUS MATERIAL
Safety Data Sheets
Available Upon Request

(A) SAMPLE DESCRIPTION

Enclosed is a Puget Sound (Washington State) Sediment Reference Material (SRM) set for chlorinated dibenzo-p-dioxins/chlorinated dibenzofurans (CDD/CDF), and/or chlorinated biphenyl (CB) congener analysis using project-specified high resolution gas chromatography/ high resolution mass spectrometry (HRGC/HRMS) methods. This SRM is also suitable for Aroclors analysis using project-specified gas chromatography/electron capture detection (GC/ECD) methods. This set consists of one (1) or more bottles, each with approximately 30 grams of Puget Sound SRM containing CDD/CDF, CB Congener, and/or Aroclor analytes. Check the chain-of-custody record to determine the number of bottles provided for CDD/CDF, CB Congener, and/or Aroclor analysis. None of the bottles are to be opened until SRM preparation/analysis is to occur.

CAUTION: The SRM could contain compounds that are light sensitive and should be protected from light during storage. Store the SRM at ≤ 6° C, preferably at < 0° C, until SRM preparation and analysis is to occur. Allow the bottle(s) to reach ambient temperature before opening.

(B) BREAKAGE OR MISSING ITEMS

Check the contents of the shipment carefully for any broken, leaking, or missing items. Refer to the enclosed chain-of-custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL12975
Certification Date: November 19, 2018
Expiration Date: October 31, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.553%

K5829

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

ILT1116613_US

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL18021
Certification Date: February 14, 2022
Expiration Date: February 28, 2030

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

K005830

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis
ISO Guide 34

Aroclor 1242 Solution

Product Number: PP-312 **Page:** 1 of 1

Lot Number: CS-6293 **Lot Issue Date:** 04-Jan-2019 **Expiration Date:** 31-Jan-2023

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

ISO Guide 34 Cert No.
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026
registered ISO 9001 Quality Management System

ISO17025 Cert No.
AT-1937

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101283
Description: Aroclor 1268 Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL18942
Certification Date: September 7, 2022
Expiration Date: August 31, 2030

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1268	11100-14-4	100	± 0.561%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101282
Description: Aroclor 1262 Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL19082
Certification Date: October 18, 2022
Expiration Date: September 30, 2030

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1262	37324-23-5	100	± 0.665%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SS1811

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-01 D	SDG:	23E0009
Sampled:	04/28/23 10:38	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-067
% Solids:	67.30	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 19:31
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.016 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	15.3	20	0.38	0.73	
7439-92-1	Lead	16.3	20	0.08	0.15	
7440-22-4	Silver	0.16	20	0.03	0.29	J

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B
Total Metals

LDW23-SS1805

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-03 D	SDG:	23E0009
Sampled:	04/28/23 16:15	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-064
% Solids:	52.38	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 19:17
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.049 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	26.6	20	0.47	0.91	
7439-92-1	Lead	28.5	20	0.09	0.18	
7440-22-4	Silver	0.32	20	0.04	0.36	J

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SS1800

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-05 D	SDG:	23E0009
Sampled:	04/29/23 10:10	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-065
% Solids:	46.29	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 19:22
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.017 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	28.9	20	0.55	1.06	
7439-92-1	Lead	30.8	20	0.11	0.21	
7440-22-4	Silver	0.37	20	0.05	0.42	J

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SS1820

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-07 D	SDG:	23E0009
Sampled:	04/29/23 14:00	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-066
% Solids:	51.74	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 19:26
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.027 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	24.1	20	0.49	0.94	
7439-92-1	Lead	42.3	20	0.10	0.19	
7440-22-4	Silver	0.21	20	0.04	0.38	J

PREPARATION BATCH SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Batch: BLE0306 Batch Matrix: Solid Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01	XDT_m1230519-067	05/18/23 15:58	
LDW23-SS1805	23E0009-03	XDT_m1230519-064	05/18/23 15:58	
LDW23-SS1800	23E0009-05	XDT_m1230519-065	05/18/23 15:58	
LDW23-SS1820	23E0009-07	XDT_m1230519-066	05/18/23 15:58	
Blank	BLE0306-BLK1	XDT_m1230519-051	05/18/23 15:58	
LCS	BLE0306-BS1	XDT_m1230519-052	05/18/23 15:58	
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	05/18/23 15:58	
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	05/18/23 15:58	
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	05/18/23 15:58	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: AB Date: 05/18/23 Time: 1040-1558 Balance ID: BAL10

Matrix: Soil Block ID: 3 Block Temp: 92C Thermometer: 20-2

ARI Sample ID	Btl #	pH<2	Prep Code: SWN Initial Wt (g) Vol (mL)	Prep Code: SWN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A0207-10	D		1.029	50			
23E0009-01			1.016				
-03			1.049				
-05			1.017				
-07			1.027				
-09			1.006				
BLE0306-BLK	—		—				
-BS	—		—				
-DUP	—		1.017				23E0009-01
-MS	—		1.016				
-MSD	—		1.015				

MJ 05/19/23

Chemical/Reagent ID:

HNO_3: L4188 1:1 HNO_3: L4200 HCl: — H_2O_2: K11056

Tube Lot#: 221104 Boiling Chip Lot#: — (DoD Only)

Form I

METHOD BLANK DATA SHEET

EPA 6020B

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23E0009

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

Batch: BLE0306 | Laboratory ID: BLE0306-BLK1 | Prepared: 05/18/23 15:58

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 05/19/23 18:13

Sequence: SLE0358 | Calibration: GE00066 | Instrument: ICPMS1

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium-52	ND	20	0.26	0.50	U
7439-92-1	Lead-208	ND	20	0.05	0.10	U
7440-22-4	Silver-107	ND	20	0.02	0.20	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 18:18
Batch:	BLE0306	Laboratory ID:	BLE0306-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Chromium-52	25.0	25.3		101	80 - 120
Lead-208	25.0	24.2		97.0	80 - 120
Silver-107	25.0	27.3		109	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 6020B

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0306-DUP1
Batch: BLE0306
Lab Source ID: 23E0009-01
Preparation: SWN EPA 3050B
Initial/Final: 1.017 g / 50 mL
Source Sample Name: LDW23-SS1811
% Solids: 67.30

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Chromium-52	20	15.3	16.2	6.10	
Lead-208	20	16.3	15.9	2.48	
Silver-107	20	0.16	0.14	11.0	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 19:40
Batch:	BLE0306	Laboratory ID:	BLE0306-MS1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.016 g / 50 mL	Source Sample:	LDW23-SS1811

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Chromium-52	36.6	15.3		45.8		83.6	75 - 125
Lead-208	36.6	16.3		45.3		79.3	75 - 125
Silver-107	36.6	0.16	J	38.3		104	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 19:45
Batch:	BLE0306	Laboratory ID:	BLE0306-MSD1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.015 g / 50 mL	Source Sample:	LDW23-SS1811

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Chromium-52	36.6	47.6		88.4	3.81	20	75 - 125
Lead-208	36.6	48.8		88.7	7.36	20	75 - 125
Silver-107	36.6	38.5		105	0.419	20	75 - 125

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Control Limt: +/- 10.00%
Sequence: SLE0358

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0358-ICV1	Chromium-52	50.000	51.0	102	ug/L	EPA 6020B
	Chromium-53	50.000	50.4	101	ug/L	EPA 6020B
	Lead-208	50.000	49.7	99.5	ug/L	EPA 6020B
	Silver-107	50.000	52.4	105	ug/L	EPA 6020B
SLE0358-CCV1	Chromium-52	50.000	48.6	97.1	ug/L	EPA 6020B
	Chromium-53	50.000	48.7	97.5	ug/L	EPA 6020B
	Lead-208	50.000	49.3	98.6	ug/L	EPA 6020B
	Silver-107	50.000	50.9	102	ug/L	EPA 6020B
SLE0358-CCV2	Chromium-52	50.000	48.5	97.0	ug/L	EPA 6020B
	Chromium-53	50.000	48.4	96.8	ug/L	EPA 6020B
	Lead-208	50.000	47.5	95.0	ug/L	EPA 6020B
	Silver-107	50.000	51.2	102	ug/L	EPA 6020B
SLE0358-CCV3	Chromium-52	50.000	48.9	97.8	ug/L	EPA 6020B
	Chromium-53	50.000	48.3	96.7	ug/L	EPA 6020B
	Lead-208	50.000	48.0	95.9	ug/L	EPA 6020B
	Silver-107	50.000	51.5	103	ug/L	EPA 6020B
SLE0358-CCV4	Chromium-52	50.000	47.9	95.9	ug/L	EPA 6020B
	Chromium-53	50.000	48.1	96.3	ug/L	EPA 6020B
	Lead-208	50.000	47.3	94.6	ug/L	EPA 6020B
	Silver-107	50.000	53.5	107	ug/L	EPA 6020B
SLE0358-CCV5	Chromium-52	50.000	48.9	97.9	ug/L	EPA 6020B
	Chromium-53	50.000	48.9	97.8	ug/L	EPA 6020B
	Lead-208	50.000	47.0	94.1	ug/L	EPA 6020B
	Silver-107	50.000	52.2	104	ug/L	EPA 6020B
SLE0358-CCV6	Chromium-52	50.000	50.0	100	ug/L	EPA 6020B
	Chromium-53	50.000	48.5	97.0	ug/L	EPA 6020B
	Lead-208	50.000	47.1	94.3	ug/L	EPA 6020B
	Silver-107	50.000	51.1	102	ug/L	EPA 6020B
SLE0358-CCV7	Chromium-52	50.000	49.6	99.2	ug/L	EPA 6020B
	Chromium-53	50.000	48.8	97.6	ug/L	EPA 6020B
	Lead-208	50.000	48.0	96.0	ug/L	EPA 6020B
	Silver-107	50.000	52.3	105	ug/L	EPA 6020B
SLE0358-CCV8	Chromium-52	50.000	49.4	98.8	ug/L	EPA 6020B
	Chromium-53	50.000	47.9	95.8	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Control Limt: +/- 10.00%

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Sequence: SLE0358

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0358-CCV8	Lead-208	50.000	47.3	94.6	ug/L	EPA 6020B
	Silver-107	50.000	51.1	102	ug/L	EPA 6020B
SLE0358-CCV9	Chromium-52	50.000	48.4	96.9	ug/L	EPA 6020B
	Chromium-53	50.000	48.1	96.3	ug/L	EPA 6020B
	Lead-208	50.000	48.8	97.5	ug/L	EPA 6020B
	Silver-107	50.000	54.5	109	ug/L	EPA 6020B
SLE0358-CCVA	Chromium-52	50.000	48.7	97.4	ug/L	EPA 6020B
	Chromium-53	50.000	48.2	96.3	ug/L	EPA 6020B
	Lead-208	50.000	47.8	95.7	ug/L	EPA 6020B
	Silver-107	50.000	53.2	106	ug/L	EPA 6020B
SLE0358-CCVB	Chromium-52	50.000	48.2	96.5	ug/L	EPA 6020B
	Chromium-53	50.000	48.6	97.1	ug/L	EPA 6020B
	Lead-208	50.000	46.7	93.3	ug/L	EPA 6020B
	Silver-107	50.000	51.6	103	ug/L	EPA 6020B
SLE0358-CCVC	Chromium-52	50.000	48.5	97.0	ug/L	EPA 6020B
	Chromium-53	50.000	47.4	94.8	ug/L	EPA 6020B
	Lead-208	50.000	47.6	95.2	ug/L	EPA 6020B
	Silver-107	50.000	52.2	104	ug/L	EPA 6020B
SLE0358-CCVD	Chromium-52	50.000	48.9	97.8	ug/L	EPA 6020B
	Chromium-53	50.000	47.6	95.2	ug/L	EPA 6020B
	Lead-208	50.000	49.8	99.6	ug/L	EPA 6020B
	Silver-107	50.000	52.7	105	ug/L	EPA 6020B
SLE0358-CCVE	Chromium-52	50.000	47.8	95.6	ug/L	EPA 6020B
	Chromium-53	50.000	47.8	95.6	ug/L	EPA 6020B
	Lead-208	50.000	47.1	94.2	ug/L	EPA 6020B
	Silver-107	50.000	53.5	107	ug/L	EPA 6020B
SLE0358-CCVF	Chromium-52	50.000	49.9	99.8	ug/L	EPA 6020B
	Chromium-53	50.000	48.9	97.8	ug/L	EPA 6020B
	Lead-208	50.000	46.8	93.6	ug/L	EPA 6020B
	Silver-107	50.000	53.4	107	ug/L	EPA 6020B
SLE0358-CCVG	Chromium-52	50.000	48.8	97.6	ug/L	EPA 6020B
	Chromium-53	50.000	47.9	95.9	ug/L	EPA 6020B
	Lead-208	50.000	47.1	94.2	ug/L	EPA 6020B
	Silver-107	50.000	53.3	107	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Control Limt: +/- 10.00%
Sequence: SLE0358

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0358-CCVH	Chromium-52	50.000	48.2	96.4	ug/L	EPA 6020B
	Chromium-53	50.000	48.1	96.2	ug/L	EPA 6020B
	Lead-208	50.000	47.5	95.0	ug/L	EPA 6020B
	Silver-107	50.000	53.5	107	ug/L	EPA 6020B

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/19/23 14:52

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-IBL1	Chromium-52	0.0140	0.26	0.500	ug/L	
SLE0358-IBL1	Chromium-53	0.0130	0.239	0.500	ug/L	
SLE0358-IBL1	Lead-208	0.0110	0.0513	0.100	ug/L	
SLE0358-IBL1	Silver-107	0.0130	0.022	0.200	ug/L	
SLE0358-ICB1	Chromium-52	0.0280	0.26	0.500	ug/L	
SLE0358-ICB1	Chromium-53	0.00	0.239	0.500	ug/L	
SLE0358-ICB1	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-ICB1	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0358-CCB1	Chromium-52	0.0670	0.26	0.500	ug/L	
SLE0358-CCB1	Chromium-53	0.0150	0.239	0.500	ug/L	
SLE0358-CCB1	Lead-208	0.0230	0.0513	0.100	ug/L	
SLE0358-CCB1	Silver-107	0.0220	0.022	0.200	ug/L	
SLE0358-IBL2	Chromium-52	0.0830	0.26	0.500	ug/L	
SLE0358-IBL2	Chromium-53	0.0250	0.239	0.500	ug/L	
SLE0358-IBL2	Lead-208	0.0100	0.0513	0.100	ug/L	
SLE0358-IBL2	Silver-107	0.00800	0.022	0.200	ug/L	
SLE0358-IBL3	Chromium-52	0.0640	0.26	0.500	ug/L	
SLE0358-IBL3	Chromium-53	0.0160	0.239	0.500	ug/L	
SLE0358-IBL3	Lead-208	0.00800	0.0513	0.100	ug/L	
SLE0358-IBL3	Silver-107	0.00300	0.022	0.200	ug/L	
SLE0358-CCB2	Chromium-52	-0.00400	0.26	0.500	ug/L	
SLE0358-CCB2	Chromium-53	0.00600	0.239	0.500	ug/L	
SLE0358-CCB2	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-CCB2	Silver-107	0.00300	0.022	0.200	ug/L	
SLE0358-CCB3	Chromium-52	0.0300	0.26	0.500	ug/L	
SLE0358-CCB3	Chromium-53	-0.00700	0.239	0.500	ug/L	
SLE0358-CCB3	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0358-CCB3	Silver-107	0.00	0.022	0.200	ug/L	
SLE0358-IBL4	Chromium-52	0.0600	0.26	0.500	ug/L	
SLE0358-IBL4	Chromium-53	-0.00800	0.239	0.500	ug/L	
SLE0358-IBL4	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-IBL4	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0358-CCB4	Chromium-52	-0.00300	0.26	0.500	ug/L	
SLE0358-CCB4	Chromium-53	-0.0120	0.239	0.500	ug/L	
SLE0358-CCB4	Lead-208	0.00	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/19/23 17:44

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-CCB4	Silver-107	0.00	0.022	0.200	ug/L	
SLE0358-CCB5	Chromium-52	0.0370	0.26	0.500	ug/L	
SLE0358-CCB5	Chromium-53	-0.00100	0.239	0.500	ug/L	
SLE0358-CCB5	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0358-CCB5	Silver-107	0.00800	0.022	0.200	ug/L	
SLE0358-IBL5	Chromium-52	0.114	0.26	0.500	ug/L	
SLE0358-IBL5	Chromium-53	-0.00600	0.239	0.500	ug/L	
SLE0358-IBL5	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0358-IBL5	Silver-107	0.00	0.022	0.200	ug/L	
SLE0358-CCB6	Chromium-52	0.0310	0.26	0.500	ug/L	
SLE0358-CCB6	Chromium-53	-0.00700	0.239	0.500	ug/L	
SLE0358-CCB6	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-CCB6	Silver-107	0.00900	0.022	0.200	ug/L	
SLE0358-IBL6	Chromium-52	0.0240	0.26	0.500	ug/L	
SLE0358-IBL6	Chromium-53	-0.00800	0.239	0.500	ug/L	
SLE0358-IBL6	Lead-208	0.00200	0.0513	0.100	ug/L	
SLE0358-IBL6	Silver-107	0.00800	0.022	0.200	ug/L	
SLE0358-CCB7	Chromium-52	0.0490	0.26	0.500	ug/L	
SLE0358-CCB7	Chromium-53	-0.0130	0.239	0.500	ug/L	
SLE0358-CCB7	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-CCB7	Silver-107	0.00900	0.022	0.200	ug/L	
SLE0358-IBL7	Chromium-52	0.0480	0.26	0.500	ug/L	
SLE0358-IBL7	Chromium-53	-0.00900	0.239	0.500	ug/L	
SLE0358-IBL7	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-IBL7	Silver-107	0.00500	0.022	0.200	ug/L	
SLE0358-CCB8	Chromium-52	0.0330	0.26	0.500	ug/L	
SLE0358-CCB8	Chromium-53	-0.0150	0.239	0.500	ug/L	
SLE0358-CCB8	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-CCB8	Silver-107	0.0100	0.022	0.200	ug/L	
SLE0358-IBL8	Chromium-52	-0.0190	0.26	0.500	ug/L	
SLE0358-IBL8	Chromium-53	-0.0120	0.239	0.500	ug/L	
SLE0358-IBL8	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0358-IBL8	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0358-CCB9	Chromium-52	0.00900	0.26	0.500	ug/L	
SLE0358-CCB9	Chromium-53	-0.00500	0.239	0.500	ug/L	
SLE0358-CCB9	Lead-208	0.00	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/19/23 22:06

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-CCB9	Silver-107	0.00700	0.022	0.200	ug/L	
SLE0358-CCBA	Chromium-52	-0.00700	0.26	0.500	ug/L	
SLE0358-CCBA	Chromium-53	-0.00100	0.239	0.500	ug/L	
SLE0358-CCBA	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0358-CCBA	Silver-107	0.00600	0.022	0.200	ug/L	
SLE0358-IBL9	Chromium-52	0.134	0.26	0.500	ug/L	
SLE0358-IBL9	Chromium-53	0.0260	0.239	0.500	ug/L	
SLE0358-IBL9	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0358-IBL9	Silver-107	-0.00400	0.022	0.200	ug/L	
SLE0358-IBLA	Chromium-52	0.0310	0.26	0.500	ug/L	
SLE0358-IBLA	Chromium-53	0.00100	0.239	0.500	ug/L	
SLE0358-IBLA	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0358-IBLA	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0358-CCBB	Chromium-52	0.00	0.26	0.500	ug/L	
SLE0358-CCBB	Chromium-53	0.00	0.239	0.500	ug/L	
SLE0358-CCBB	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0358-CCBB	Silver-107	0.00600	0.022	0.200	ug/L	
SLE0358-IBLB	Chromium-52	0.00900	0.26	0.500	ug/L	
SLE0358-IBLB	Chromium-53	0.0180	0.239	0.500	ug/L	
SLE0358-IBLB	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0358-IBLB	Silver-107	-0.00400	0.022	0.200	ug/L	
SLE0358-CCBC	Chromium-52	-0.00900	0.26	0.500	ug/L	
SLE0358-CCBC	Chromium-53	0.00	0.239	0.500	ug/L	
SLE0358-CCBC	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-CCBC	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0358-IBLC	Chromium-52	0.0190	0.26	0.500	ug/L	
SLE0358-IBLC	Chromium-53	0.0430	0.239	0.500	ug/L	
SLE0358-IBLC	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0358-IBLC	Silver-107	-0.00400	0.022	0.200	ug/L	
SLE0358-CCBD	Chromium-52	0.00500	0.26	0.500	ug/L	
SLE0358-CCBD	Chromium-53	0.0120	0.239	0.500	ug/L	
SLE0358-CCBD	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-CCBD	Silver-107	0.00300	0.022	0.200	ug/L	
SLE0358-CCBE	Chromium-52	0.0130	0.26	0.500	ug/L	
SLE0358-CCBE	Chromium-53	-0.0100	0.239	0.500	ug/L	
SLE0358-CCBE	Lead-208	0.00200	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/20/23 01:17

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-CCBE	Silver-107	0.00600	0.022	0.200	ug/L	
SLE0358-IBLD	Chromium-52	0.0460	0.26	0.500	ug/L	
SLE0358-IBLD	Chromium-53	0.0180	0.239	0.500	ug/L	
SLE0358-IBLD	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0358-IBLD	Silver-107	-0.00200	0.022	0.200	ug/L	
SLE0358-CCBF	Chromium-52	-0.0160	0.26	0.500	ug/L	
SLE0358-CCBF	Chromium-53	-0.0100	0.239	0.500	ug/L	
SLE0358-CCBF	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-CCBF	Silver-107	0.00600	0.022	0.200	ug/L	
SLE0358-IBLE	Chromium-52	0.0570	0.26	0.500	ug/L	
SLE0358-IBLE	Chromium-53	0.0580	0.239	0.500	ug/L	
SLE0358-IBLE	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0358-IBLE	Silver-107	0.00	0.022	0.200	ug/L	
SLE0358-CCBG	Chromium-52	0.0300	0.26	0.500	ug/L	
SLE0358-CCBG	Chromium-53	0.00600	0.239	0.500	ug/L	
SLE0358-CCBG	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0358-CCBG	Silver-107	0.00600	0.022	0.200	ug/L	
SLE0358-IBLF	Chromium-52	0.0270	0.26	0.500	ug/L	
SLE0358-IBLF	Chromium-53	0.131	0.239	0.500	ug/L	
SLE0358-IBLF	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0358-IBLF	Silver-107	-0.00200	0.022	0.200	ug/L	
SLE0358-CCBH	Chromium-52	-0.0330	0.26	0.500	ug/L	
SLE0358-CCBH	Chromium-53	0.0140	0.239	0.500	ug/L	
SLE0358-CCBH	Lead-208	0.00200	0.0513	0.100	ug/L	
SLE0358-CCBH	Silver-107	0.00500	0.022	0.200	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0358	Instrument:	ICPMS1
		Calibration:	GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0358-CAL1	XDT_m1230519-012	NA	05/19/23 14:18
CAL 1 - LOW CHECK	SLE0358-CAL2	XDT_m1230519-013	NA	05/19/23 14:23
CAL 2	SLE0358-CAL3	XDT_m1230519-014	NA	05/19/23 14:28
CAL 3	SLE0358-CAL4	XDT_m1230519-015	NA	05/19/23 14:33
CAL 4	SLE0358-CAL5	XDT_m1230519-016	NA	05/19/23 14:38
CAL 5	SLE0358-CAL6	XDT_m1230519-017	NA	05/19/23 14:45
RINSE	SLE0358-IBL1	XDT_m1230519-018	NA	05/19/23 14:52
Initial Cal Check	SLE0358-ICV1	XDT_m1230519-020	NA	05/19/23 14:59
Initial Cal Blank	SLE0358-ICB1	XDT_m1230519-021	NA	05/19/23 15:06
Calibration Check	SLE0358-CCV1	XDT_m1230519-022	NA	05/19/23 15:11
Calibration Blank	SLE0358-CCB1	XDT_m1230519-023	NA	05/19/23 15:18
Instrument RL Check	SLE0358-CRL1	XDT_m1230519-024	NA	05/19/23 15:25
Interference Check A	SLE0358-IFA1	XDT_m1230519-025	NA	05/19/23 15:33
Interference Check B	SLE0358-IFB1	XDT_m1230519-026	NA	05/19/23 15:38
LR200	SLE0358-HCV1	XDT_m1230519-027	NA	05/19/23 15:43
LR300	SLE0358-HCV2	XDT_m1230519-028	NA	05/19/23 15:48
Instrument Blank	SLE0358-IBL2	XDT_m1230519-029	NA	05/19/23 15:55
Instrument Blank	SLE0358-IBL3	XDT_m1230519-030	NA	05/19/23 16:03
Calibration Check	SLE0358-CCV2	XDT_m1230519-031	NA	05/19/23 16:09
Calibration Blank	SLE0358-CCB2	XDT_m1230519-032	NA	05/19/23 16:16
Calibration Check	SLE0358-CCV3	XDT_m1230519-034	NA	05/19/23 16:29
Calibration Blank	SLE0358-CCB3	XDT_m1230519-035	NA	05/19/23 16:36
Instrument Blank	SLE0358-IBL4	XDT_m1230519-045	NA	05/19/23 17:32
Calibration Check	SLE0358-CCV4	XDT_m1230519-046	NA	05/19/23 17:37
Calibration Blank	SLE0358-CCB4	XDT_m1230519-047	NA	05/19/23 17:44
Calibration Check	SLE0358-CCV5	XDT_m1230519-049	NA	05/19/23 17:57
Calibration Blank	SLE0358-CCB5	XDT_m1230519-050	NA	05/19/23 18:05
Blank	BLE0306-BLK1	XDT_m1230519-051	Solid	05/19/23 18:13
LCS	BLE0306-BS1	XDT_m1230519-052	Solid	05/19/23 18:18

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0358	Instrument:	ICPMS1
		Calibration:	GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLE0442-BLK1	XDT_m1230519-053	Solid	05/19/23 18:22
ZZZZZ	BLE0442-BS1	XDT_m1230519-054	Solid	05/19/23 18:27
Instrument Blank	SLE0358-IBL5	XDT_m1230519-060	NA	05/19/23 18:55
Calibration Check	SLE0358-CCV6	XDT_m1230519-061	NA	05/19/23 19:00
Calibration Blank	SLE0358-CCB6	XDT_m1230519-062	NA	05/19/23 19:07
LDW23-SS1805	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
LDW23-SS1805	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
LDW23-SS1805	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
LDW23-SS1800	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
LDW23-SS1800	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
LDW23-SS1800	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
LDW23-SS1820	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
LDW23-SS1820	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
LDW23-SS1820	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
LDW23-SS1811	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
LDW23-SS1811	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
LDW23-SS1811	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0358	Instrument:	ICPMS1
		Calibration:	GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
Instrument Blank	SLE0358-IBL6	XDT_m1230519-072	NA	05/19/23 19:55
Calibration Check	SLE0358-CCV7	XDT_m1230519-073	NA	05/19/23 19:59
Calibration Blank	SLE0358-CCB7	XDT_m1230519-074	NA	05/19/23 20:07
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	BLE0442-DUP1	XDT_m1230519-080	Solid	05/19/23 20:35
ZZZZZ	BLE0442-MS1	XDT_m1230519-081	Solid	05/19/23 20:40

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLE0442-MSD1	XDT_m1230519-082	Solid	05/19/23 20:45
ZZZZZ	BLE0442-PS1	XDT_m1230519-083	Solid	05/19/23 20:49
Instrument Blank	SLE0358-IBL7	XDT_m1230519-084	NA	05/19/23 20:54
Calibration Check	SLE0358-CCV8	XDT_m1230519-085	NA	05/19/23 20:59
Calibration Blank	SLE0358-CCB8	XDT_m1230519-086	NA	05/19/23 21:06
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25
Instrument Blank	SLE0358-IBL8	XDT_m1230519-096	NA	05/19/23 21:53
Calibration Check	SLE0358-CCV9	XDT_m1230519-097	NA	05/19/23 21:58
Calibration Blank	SLE0358-CCB9	XDT_m1230519-098	NA	05/19/23 22:06
Calibration Check	SLE0358-CCVA	XDT_m1230519-100	NA	05/19/23 22:15
Calibration Blank	SLE0358-CCBA	XDT_m1230519-101	NA	05/19/23 22:23
Instrument Blank	SLE0358-IBL9	XDT_m1230519-106	NA	05/19/23 22:48
Instrument Blank	SLE0358-IBLA	XDT_m1230519-111	NA	05/19/23 23:12
Calibration Check	SLE0358-CCVB	XDT_m1230519-112	NA	05/19/23 23:17
Calibration Blank	SLE0358-CCBB	XDT_m1230519-113	NA	05/19/23 23:24
Instrument Blank	SLE0358-IBLB	XDT_m1230519-123	NA	05/20/23 00:04
Calibration Check	SLE0358-CCVC	XDT_m1230519-124	NA	05/20/23 00:07
Calibration Blank	SLE0358-CCBC	XDT_m1230519-125	NA	05/20/23 00:14
Instrument Blank	SLE0358-IBLC	XDT_m1230519-135	NA	05/20/23 00:53
Calibration Check	SLE0358-CCVD	XDT_m1230519-136	NA	05/20/23 00:57
Calibration Blank	SLE0358-CCBD	XDT_m1230519-137	NA	05/20/23 01:03
Calibration Check	SLE0358-CCVE	XDT_m1230519-139	NA	05/20/23 01:11
Calibration Blank	SLE0358-CCBE	XDT_m1230519-140	NA	05/20/23 01:17
Instrument Blank	SLE0358-IBLD	XDT_m1230519-150	NA	05/20/23 01:56
Calibration Check	SLE0358-CCVF	XDT_m1230519-151	NA	05/20/23 02:00

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLE0358-CCBF	XDT_m1230519-152	NA	05/20/23 02:06
Instrument Blank	SLE0358-IBLE	XDT_m1230519-162	NA	05/20/23 02:43
Calibration Check	SLE0358-CCVG	XDT_m1230519-163	NA	05/20/23 02:47
Calibration Blank	SLE0358-CCBG	XDT_m1230519-164	NA	05/20/23 02:54
Instrument Blank	SLE0358-IBLF	XDT_m1230519-174	NA	05/20/23 03:30
Calibration Check	SLE0358-CCVH	XDT_m1230519-175	NA	05/20/23 03:34
Calibration Blank	SLE0358-CCBH	XDT_m1230519-176	NA	05/20/23 03:40

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Sequence: SLE0358
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0358-IFA1	Chromium-52	0	0.8460		ug/L
	Chromium-53	0	2.6060		ug/L
	Lead-208	0	0.0190		ug/L
	Silver-107	0	0.0050		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Sequence: SLE0358
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0358-IFB1	Chromium-52	20.000	20.261	101	ug/L
	Chromium-53	20.000	22.014	110	ug/L
	Lead-208	0	0.0180		ug/L
	Silver-107	20.000	16.915	84.6	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Sequence: SLE0358
Lab Sample ID: SLE0358-CRL1

Analyte	True	Found	%R	Units	QC Limts
Chromium-52	0.50000	0.580	116	ug/L	50 - 150
Chromium-53	0.50000	0.497	99.4	ug/L	50 - 150
Lead-208	0.10000	0.111	111	ug/L	50 - 150
Silver-107	0.20000	0.204	102	ug/L	50 - 150

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00066
Laboratory ID: SLE0358-HCV1
Sequence: SLE0358
Standard ID: L005468

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	200.00	212	6.0	10.00
Chromium-53	200.00	199	-0.6	10.00
Lead-208	200.00	205	2.4	10.00
Silver-107	200.00	214	7.0	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00066
Laboratory ID: SLE0358-HCV2
Sequence: SLE0358
Standard ID: L005469

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	300.00	317	5.5	10.00
Chromium-53	300.00	294	-2.0	10.00
Lead-208	300.00	324	7.9	10.00
Silver-107	300.00	329	9.7	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1811 23E0009-01	04/28/23 10:38	05/01/23 09:42	05/18/23 15:58	20	180	05/19/23 19:31	21	180	
LDW23-SS1805 23E0009-03	04/28/23 16:15	05/01/23 09:42	05/18/23 15:58	19	180	05/19/23 19:17	21	180	
LDW23-SS1800 23E0009-05	04/29/23 10:10	05/01/23 09:42	05/18/23 15:58	19	180	05/19/23 19:22	20	180	
LDW23-SS1820 23E0009-07	04/29/23 14:00	05/01/23 09:42	05/18/23 15:58	19	180	05/19/23 19:26	20	180	
Duplicate BLE0306-DUP1	04/28/23 10:38	05/01/23 09:42	05/18/23 15:58	20	180	05/19/23 19:36	21	180	
Matrix Spike BLE0306-MS1	04/28/23 10:38	05/01/23 09:42	05/18/23 15:58	20	180	05/19/23 19:40	21	180	
Matrix Spike Dup BLE0306-MSD1	04/28/23 10:38	05/01/23 09:42	05/18/23 15:58	20	180	05/19/23 19:45	21	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS1

Analyte	MDL	RL	Units
Chromium-52	0.26	0.50	mg/kg
Chromium-53	0.24	0.50	mg/kg
Lead-208	0.05	0.10	mg/kg
Silver-107	0.02	0.20	mg/kg

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	S2-PB713228
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2343
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10042 ± 31 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	M	Na		0.001470	M	Se	<	0.009100	O	Zn	0.006155
O	Al		0.017098	O	Fe		0.002496	M	Nb	<	0.000310	O	Si		0.003761	O	Zr	< 0.001700
M	As	<	0.003100	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310			
M	Au	<	0.000910	M	Gd	<	0.000310	O	Ni		0.001709	M	Sn	<	0.001300			
O	B	<	0.005600	M	Ge	<	0.002200	M	Os	<	0.000310	O	Sr		0.000444			
O	Ba		0.007865	M	Hf	<	0.000310	O	P	<	0.038000	M	Ta	<	0.000310			
O	Be	<	0.000320	M	Hg	<	0.002200	s	Pb	<		M	Tb	<	0.000610			
M	Bi	<	0.028000	M	Ho	<	0.000310	M	Pd	<	0.000610	M	Te	<	0.000310			
O	Ca		0.019834	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310			
O	Cd	<	0.000630	M	Ir	<	0.000310	M	Pt	<	0.000910	O	Ti		0.005129			
M	Ce		0.004787	O	K		0.008207	M	Rb	<	0.006700	M	Tl	<	0.016000			
M	Co	<	0.000610	M	La	<	0.001900	M	Re	<	0.000310	M	Tm	<	0.000310			
O	Cr	<	0.001500	O	Li	<	0.000110	O	Rh	<	0.007700	M	U	<	0.000310			
M	Cs	<	0.006100	M	Lu	<	0.000310	M	Ru	<	0.001300	M	V	<	0.001600			
M	Cu	<	0.001600	O	Mg		0.003317	O	S	<	0.052000	M	W	<	0.000910			
M	Dy	<	0.000310	O	Mn	<	0.001600	O	Sb	<	0.015000	M	Y	<	0.000310			
M	Er	<	0.000310	M	Mo	<	0.000610	O	Sc	<	0.000630	M	Yb	<	0.000310			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

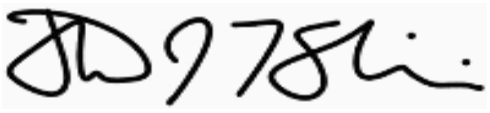
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	S2-ZN711249
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zinc Metal
Starting Material Lot#:	2349
Starting Material Purity:	99.9988%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 56 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **9987 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10002 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002000	M	Eu	<	0.000500	O	Na		0.008713	M	Se	<	0.048000	s	Zn	<	
O	Al	<	0.011000	O	Fe		0.015467	M	Nb	<	0.000500	O	Si		0.007842	M	Zr	<	0.000500
O	As	<	0.012000	M	Ga	<	0.004900	M	Nd	<	0.000500	M	Sm	<	0.000500				
M	Au	<	0.006500	M	Gd	<	0.000500	O	Ni		0.003049	M	Sn		0.002614				
O	B	<	0.019000	M	Ge	<	0.009100	M	Os	<	0.000500	M	Sr	<	0.000500				
M	Ba	<	0.000500	M	Hf	<	0.000500	O	P	<	0.059000	M	Ta	<	0.000500				
O	Be	<	0.000230	O	Hg	<	0.003800	M	Pb		0.016774	M	Tb	<	0.000500				
M	Bi	<	0.002400	M	Ho	<	0.000500	M	Pd	<	0.001000	M	Te	<	0.017000				
O	Ca		0.052283	M	In	<	0.003500	M	Pr	<	0.000500	M	Th	<	0.000500				
O	Cd		0.000588	M	Ir	<	0.001000	M	Pt	<	0.000500	M	Ti	<	0.002000				
M	Ce	<	0.000500	O	K		0.017209	M	Rb	<	0.002500	M	Tl	<	0.000500				
M	Co		0.000653	M	La	<	0.000500	M	Re	<	0.000500	M	Tm	<	0.000500				
O	Cr		0.001089	O	Li	<	0.000230	M	Rh	<	0.000500	M	U	<	0.000500				
M	Cs	<	0.000500	M	Lu	<	0.000500	M	Ru	<	0.005000	M	V	<	0.000500				
O	Cu		0.001938	O	Mg		0.000871	O	S	<	0.048000	M	W	<	0.001000				
M	Dy	<	0.000500	O	Mn		0.000172	M	Sb	<	0.004300	M	Y	<	0.000500				
M	Er	<	0.000500	M	Mo	<	0.001500	O	Sc	<	0.000900	M	Yb	<	0.000500				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

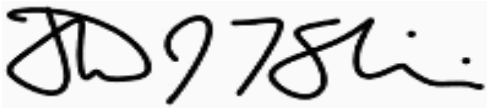
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	S2-SE711004
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9955 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013654	s	Se	<		O	Zn		0.002374
M	Al		0.004450	M	Fe		0.008478	O	Nb	<	0.002975	O	Si		0.006249	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001843	M	Sn		0.000847				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006358	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006530	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001165	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.001999	M	Rb	<	0.001868	M	Tl		0.008584				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002861	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001156	O	S		0.024591	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	S2-MO706255
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 47 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10020 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.008739	M	Se	<	0.008000	M	Zn		0.005942
M	Al		0.005592	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.001747				
M	Ba		0.016778	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.062920	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		1.293372	M	Rb		0.045442	M	Tl		0.012584				
M	Co		0.005942	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005243	O	Li		0.000594	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.005243	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.022371	M	Mg		0.005592	i	S	<		M	W		0.873900				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.015031	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	T2-TL714687
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 42 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10010 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL(

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002489	M	Se	<	0.011019	O	Zn		0.002298
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003760	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001724	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000811	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002436	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001318	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006175	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000529	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+
Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Tl Containing Samples)Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

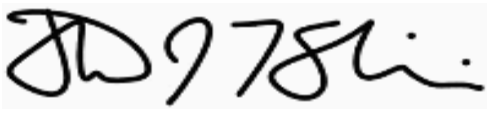
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	S2-CD710508
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Metal
Starting Material Lot#:	1953
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10008 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **10003 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003200	O	Eu	<	0.002500	O	Na		0.005499	M	Se	<	0.005700	O	Zn	<	0.001100
O	Al		0.008903	O	Fe		0.000602	M	Nb	<	0.000400	O	Si		0.016758	O	Zr	<	0.002600
M	As	<	0.003600	M	Ga	<	0.001200	M	Nd	<	0.000800	M	Sm	<	0.000400				
M	Au	<	0.000810	M	Gd	<	0.000400	M	Ni	<	0.003600	M	Sn	<	0.003200				
O	B		0.004189	O	Ge	<	0.012000	M	Os	<	0.000810	O	Sr	<	0.000330				
M	Ba	<	0.002400	M	Hf	<	0.000400	O	P	<	0.022000	M	Ta	<	0.000800				
M	Be	<	0.000400	M	Hg	<	0.001700	M	Pb	<	0.002400	M	Tb	<	0.000400				
M	Bi	<	0.000400	M	Ho	<	0.000400	M	Pd	<	0.001200	M	Te	<	0.008000				
O	Ca		0.011259	O	In	<	0.013000	M	Pr	<	0.000400	M	Th	<	0.000400				
s	Cd	<		M	Ir	<	0.000410	M	Pt	<	0.000400	O	Ti		0.000602				
M	Ce	<	0.000400	O	K		0.005237	M	Rb	<	0.004400	M	Tl		0.000523				
M	Co	<	0.000400	M	La	<	0.000400	M	Re	<	0.000400	M	Tm	<	0.000400				
O	Cr	<	0.005100	O	Li	<	0.000054	M	Rh	<	0.000400	M	U	<	0.000400				
M	Cs	<	0.002400	M	Lu	<	0.000400	M	Ru	<	0.002500	M	V	<	0.002000				
O	Cu	<	0.004800	O	Mg		0.000288	O	S	<	0.022000	M	W	<	0.000400				
M	Dy	<	0.000400	O	Mn	<	0.000860	O	Sb	<	0.018000	M	Y	<	0.000400				
M	Er	<	0.000400	M	Mo	<	0.001600	O	Sc	<	0.000430	M	Yb	<	0.000400				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	S2-MN704240
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10024 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176097	M	Se	<	0.006600	M	Zn		0.009925
O	Al		0.004322	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097654	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004322	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024013	M	Sn	<	0.002200				
M	B		0.068838	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000928				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007364	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062434	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006403	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014728	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.272151	O	Li		0.000416	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007684	O	Mg		0.320177	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001360				
M	Er	<	0.001500	M	Mo		0.010245	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn	0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	< 0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100			
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800			
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750			
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300			
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100			
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600			
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100			
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800			
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100			
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100			
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100			
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800			
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200			
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100			
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	T2-AS718260
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	2208
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10060 ± 40 µg/mL

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

Assay Method #2 **10055 ± 76 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.003200	M	Eu	< 0.000530	O	Na	0.032544	M	Se	< 0.006300	O	Zn	0.001952			
M	Al	0.007593	O	Fe	0.001475	O	Nb	< 0.012000	O	Si	0.238658	O	Zr	< 0.004100			
s	As	<	M	Ga	< 0.000530	M	Nd	< 0.000530	M	Sm	< 0.000530						
M	Au	< 0.003100	M	Gd	< 0.000530	M	Ni	< 0.002100	M	Sn	< 0.000530						
M	B	0.026035	M	Ge	< 0.001600	M	Os	< 0.000520	M	Sr	< 0.000530						
M	Ba	< 0.000530	M	Hf	< 0.000530	O	P	< 0.043000	M	Ta	< 0.000530						
O	Be	< 0.000360	M	Hg	< 0.001600	M	Pb	< 0.002100	M	Tb	< 0.000530						
M	Bi	< 0.000530	M	Ho	< 0.000530	M	Pd	< 0.001100	M	Te	< 0.004700						
O	Ca	0.004339	M	In	< 0.023000	M	Pr	< 0.005300	M	Th	< 0.000530						
M	Cd	< 0.001100	M	Ir	< 0.000520	M	Pt	< 0.000530	O	Ti	< 0.002300						
M	Ce	< 0.000530	O	K	0.002061	M	Rb	< 0.000530	M	Tl	< 0.000530						
M	Co	< 0.000530	M	La	< 0.001100	M	Re	< 0.000530	M	Tm	< 0.000530						
O	Cr	< 0.001800	O	Li	< 0.000120	M	Rh	< 0.000530	M	U	< 0.000530						
M	Cs	< 0.005300	M	Lu	< 0.000530	M	Ru	< 0.000520	M	V	< 0.002700						
M	Cu	< 0.001600	O	Mg	0.000154	O	S	0.028205	M	W	< 0.012000						
M	Dy	< 0.000530	O	Mn	0.000154	M	Sb	< 0.000530	M	Y	< 0.000530						
M	Er	< 0.000530	M	Mo	< 0.000530	O	Sc	< 0.001700	M	Yb	< 0.000530						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	R2-BA692576
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Barium Nitrate
Starting Material Lot#:	1969
Starting Material Purity:	99.9982%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10018 ± 50 µg/mL** ICP Assay NIST SRM 3104a Lot Number: 140909
Assay Method #2	**10023 ± 31 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	**10023 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	O	Eu	<	0.005200	O	Na		0.004610	M	Se	<	0.003700	O	Zn		0.000658
M	Al	<	0.003100	O	Fe		0.015707	M	Nb	<	0.000210	O	Si		0.005573	M	Zr	<	0.001300
M	As	<	0.001300	M	Ga	<	0.000210	M	Nd	<	0.000210	O	Sm	<	0.021000				
M	Au	<	0.001300	M	Gd	<	0.000210	M	Ni	<	0.000810	M	Sn	<	0.000410				
O	B	<	0.005200	M	Ge	<	0.002500	M	Os	<	0.000410	O	Sr		0.003850				
s	Ba	<		M	Hf	<	0.000810	O	P	<	0.026000	M	Ta	<	0.000410				
O	Be	<	0.000320	M	Hg	<	0.000210	M	Pb	<	0.002300	M	Tb	<	0.000210				
M	Bi	<	0.000210	M	Ho	<	0.000210	M	Pd	<	0.000210	M	Te	<	0.001900				
O	Ca		0.007093	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	M	Ti	<	0.002100				
M	Ce	<	0.001300	O	K		0.035467	M	Rb	<	0.002100	M	Tl	<	0.000210				
M	Co	<	0.000410	O	La	<	0.005200	M	Re	<	0.000210	M	Tm	<	0.000410				
M	Cr	<	0.001700	O	Li	<	0.000630	M	Rh	<	0.000210	M	U	<	0.000210				
M	Cs	<	0.003300	M	Lu	<	0.001700	M	Ru	<	0.000210	O	V	<	0.005200				
M	Cu	<	0.001300	O	Mg		0.000861	O	S		0.268539	M	W	<	0.000410				
M	Dy	<	0.000210	M	Mn	<	0.000410	M	Sb	<	0.001300	O	Y	<	0.005200				
M	Er	<	0.001300	M	Mo	<	0.000410	M	Sc	<	0.000410	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	R2-BE692992
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium Acetate
Starting Material Lot#:	2281
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10032 ± 41 µg/mL

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10025 ± 51 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001100	M	Eu	<	0.000270	O	Na		0.040962	M	Se	<	0.005000	M	Zn		0.013054
O	Al		0.016205	O	Fe		0.015754	M	Nb	<	0.000270	O	Si		0.024307	O	Zr	<	0.001900
M	As	<	0.002900	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270				
M	Au	<	0.000520	M	Gd	<	0.000270	M	Ni	<	0.003700	M	Sn	<	0.000790				
M	B	<	0.091000	M	Ge	<	0.000270	M	Os	<	0.000260	M	Sr		0.000630				
M	Ba		0.002700	M	Hf	<	0.000270	O	P	<	0.066000	M	Ta	<	0.000270				
s	Be	<		M	Hg	<	0.000520	M	Pb	<	0.000270	M	Tb	<	0.000270				
M	Bi	<	0.000530	M	Ho	<	0.000270	M	Pd	<	0.000520	M	Te	<	0.003700				
O	Ca		0.072022	M	In	<	0.000790	M	Pr	<	0.000270	M	Th	<	0.000270				
M	Cd	<	0.000790	M	Ir	<	0.000260	M	Pt	<	0.000270	O	Ti	<	0.000400				
M	Ce	<	0.000270	O	K		0.045014	M	Rb	<	0.000270	M	Tl	<	0.000790				
O	Co	<	0.003200	M	La	<	0.000270	M	Re	<	0.000270	M	Tm	<	0.000270				
O	Cr	<	0.001800	O	Li	<	0.000660	M	Rh	<	0.001100	M	U	<	0.000270				
M	Cs		0.001440	M	Lu	<	0.000270	M	Ru	<	0.000260	M	V	<	0.000790				
M	Cu	<	0.002100	O	Mg		0.016205	i	S	<		M	W	<	0.000530				
M	Dy	<	0.000270	M	Mn		0.001215	M	Sb	<	0.000270	M	Y	<	0.000270				
M	Er	<	0.000270	M	Mo	<	0.000530	O	Sc	<	0.000930	M	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO4 fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	R2-CO695285
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	Co Metal
Starting Material Lot#:	2326
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 31 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

Assay Method #2 **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10000 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.014660	M	Eu	<	0.000590	O	Na	0.007534	M	Se	<	0.019000	M	Zn	0.003461	
M	Al	< 0.024000	M	Fe	0.050905	M	Nb	<	0.000590	O	Si	0.075340	M	Zr	<	0.001200	
i	As	<	M	Ga	<	0.000590	M	Nd	<	0.000590	M	Sm	<	0.000590			
M	Au	< 0.004100	M	Gd	<	0.000590	O	Ni	0.427608	M	Sn	<	0.001200				
M	B	< 0.031000	M	Ge	<	0.003000	M	Os	<	0.000590	O	Sr	<	0.000260			
M	Ba	< 0.000590	M	Hf	<	0.000590	n	P	<		M	Ta	<	0.001200			
O	Be	< 0.001300	M	Hg	<	0.001800	M	Pb	0.003257	M	Tb	<	0.000590				
M	Bi	< 0.003000	M	Ho	<	0.000590	M	Pd	<	0.000590	M	Te	<	0.005300			
O	Ca	0.010588	M	In	<	0.001200	M	Pr	<	0.000590	M	Th	<	0.000590			
M	Cd	< 0.004700	M	Ir	<	0.001200	M	Pt	<	0.002400	M	Ti	<	0.014000			
M	Ce	< 0.000590	O	K	0.008144	M	Rb	<	0.000590	M	Tl	0.002647					
s	Co	<	M	La	<	0.000590	M	Re	<	0.000590	M	Tm	<	0.000590			
M	Cr	< 0.021000	O	Li	<	0.000130	M	Rh	<	0.000590	M	U	<	0.000590			
M	Cs	< 0.002400	M	Lu	<	0.000590	M	Ru	<	0.007100	O	V	<	0.000880			
M	Cu	0.189369	O	Mg	0.001893	n	S	<		M	W	<	0.000590				
M	Dy	< 0.000590	M	Mn	<	0.001800	M	Sb	<	0.003600	M	Y	<	0.000590			
M	Er	< 0.000590	M	Mo	<	0.002400	O	Sc	<	0.001600	M	Yb	<	0.000590			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	S2-AG712977
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2289
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10051 ± 30 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

Assay Method #2 **10051 ± 19 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

Assay Method #3 **10049 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000260	O	Na		0.003811	M	Se	<	0.003900	O	Zn		0.048146
M	Al		0.002688	O	Fe		0.006419	M	Nb	<	0.000260	O	Si		0.005215	M	Zr	<	0.000260
M	As	<	0.001100	M	Ga	<	0.000260	M	Nd	<	0.000260	M	Sm	<	0.000260				
M	Au	<	0.000260	M	Gd	<	0.000260	O	Ni		0.001765	M	Sn		0.020060				
O	B	<	0.004300	M	Ge	<	0.002300	M	Os	<	0.001100	O	Sr	<	0.000110				
M	Ba	<	0.000520	M	Hf	<	0.000260	O	P	<	0.017000	M	Ta	<	0.000260				
O	Be	<	0.001100	M	Hg	<	0.000770	M	Pb	<	0.003600	M	Tb	<	0.000260				
M	Bi		0.004814	M	Ho	<	0.000260	M	Pd		0.044134	M	Te	<	0.009000				
O	Ca		0.005215	M	In		0.003691	M	Pr	<	0.000260	M	Th	<	0.000260				
M	Cd	<	0.000260	M	Ir	<	0.000520	M	Pt	<	0.001100	O	Ti	<	0.000440				
M	Ce	<	0.002100	O	K	<	0.008700	M	Rb	<	0.001100	M	Tl	<	0.004100				
O	Co	<	0.000330	M	La	<	0.000260	M	Re	<	0.000260	M	Tm	<	0.000260				
O	Cr	<	0.002500	O	Li	<	0.000110	M	Rh	<	0.000520	M	U	<	0.000260				
M	Cs	<	0.002600	M	Lu	<	0.000260	M	Ru	<	0.000260	M	V	<	0.000260				
O	Cu		0.357085	O	Mg		0.001203	O	S	<	0.017000	M	W	<	0.000260				
M	Dy	<	0.000260	O	Mn	<	0.000220	M	Sb	<	0.014000	M	Y	<	0.000260				
M	Er	<	0.000260	M	Mo	<	0.000260	O	Sc	<	0.000220	M	Yb	<	0.000260				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	S2-CR709784
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr Metal
Starting Material Lot#:	2328
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10027 ± 41 µg/mL

Density: 1.072 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001700	M	Eu	<	0.003400	O	Na		0.090372	M	Se	<	0.012000	O	Zn	<	0.006100
M	Al		0.034916	O	Fe		0.246471	M	Nb	<	0.017000	n	Si	<		M	Zr	<	0.007800
M	As	<	0.028000	O	Ga	<	0.013000	M	Nd	<	0.013000	M	Sm	<	0.006900				
M	Au	<	0.001700	M	Gd	<	0.000560	M	Ni		0.016020	M	Sn		0.006983				
O	B	<	0.025000	O	Ge	<	0.014000	M	Os	<	0.000560	M	Sr		0.006367				
M	Ba	<	0.008900	M	Hf	<	0.000560	i	P	<		M	Ta	<	0.000560				
M	Be	<	0.013000	M	Hg	<	0.001700	M	Pb		0.010064	M	Tb	<	0.000560				
M	Bi	<	0.002300	M	Ho	<	0.000560	M	Pd	<	0.021000	M	Te	<	0.010000				
O	Ca		0.075995	M	In	<	0.000560	M	Pr	<	0.001700	M	Th	<	0.000560				
M	Cd	<	0.000560	M	Ir	<	0.000560	M	Pt	<	0.001200	O	Ti		0.013555				
M	Ce	<	0.001200	O	K		0.043132	i	Rb	<		M	Tl	<	0.000560				
M	Co	<	0.002600	M	La	<	0.001200	M	Re	<	0.001200	O	Tm	<	0.013000				
s	Cr	<		O	Li		0.000390	M	Rh	<	0.095000	M	U	<	0.000560				
M	Cs	<	0.007800	M	Lu	<	0.000560	M	Ru	<	0.087000	O	V		0.014993				
O	Cu		0.007599	O	Mg		0.000883	i	S	<		M	W	<	0.049000				
M	Dy	<	0.000560	M	Mn		0.008626	M	Sb	<	0.003400	M	Y	<	0.001700				
M	Er	<	0.019000	M	Mo	<	0.032000	M	Sc		0.003080	M	Yb	<	0.000560				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	S2-V711005
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium Pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9877%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.104 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.120000	M	Se	<	0.009400	M	Zn	0.009400
O	Al		0.120000	O	Fe		0.460000	M	Nb	<	0.001300	O	Si		0.270000	M	Zr	< 0.002900
M	As	<	0.000210	M	Ga	<	0.009300	M	Nd	<	0.000610	M	Sm	<	0.000110			
M	Au	<	0.004700	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn		0.003900			
M	B		0.051000	M	Ge	<	0.000410	M	Os	<	0.000110	O	Sr		0.007100			
M	Ba		0.003600	M	Hf	<	0.000110	O	P	<	0.034000	M	Ta	<	0.000110			
O	Be	<	0.000560	M	Hg	<	0.000410	M	Pb		0.001400	M	Tb	<	0.000110			
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000410	M	Te	<	0.000110			
O	Ca		0.730000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210			
M	Cd	<	0.000610	M	Ir	<	0.000110	M	Pt	<	0.000110	M	Ti		0.017000			
M	Ce	<	0.000610	M	K		0.052000	M	Rb	<	0.000310	M	Tl	<	0.000110			
M	Co	<	0.001300	M	La	<	0.000410	M	Re		0.001700	M	Tm	<	0.000110			
O	Cr		0.170000	M	Li	<	0.000810	M	Rh	<	0.000110	M	U	<	0.000410			
M	Cs		0.005600	M	Lu	<	0.000110	M	Ru	<	0.000110	s	V	<				
M	Cu	<	0.001300	M	Mg		0.053000	i	S	<		M	W		0.002000			
M	Dy	<	0.000110	M	Mn		0.007900	M	Sb		0.078000	M	Y	<	0.000110			
M	Er	<	0.000110	M	Mo		0.094000	M	Sc	<	0.000410	M	Yb	<	0.000110			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 H2V10O284-

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4, HF, H3PO4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na2CO3 / KNO3); Oxides (V2O3 - use HCl, V2O4 - use HCl or HNO3, V2O5 - use concentrated acids); Ores (Na2CO3 / KNO3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V2O5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

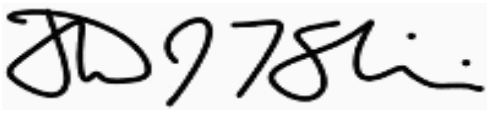
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	T2-AL716102
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Aluminum Nitrate Nonahydrate
Starting Material Lot#:	2460
Starting Material Purity:	99.9938%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10049 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10059 ± 40 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10044 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10049 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002100	M	Eu	<	0.002100	O	Na		0.352819	M	Se	<	0.005200	M	Zn	0.006018
s	Al	<		O	Fe		0.074714	M	Nb	<	0.000520	O	Si		0.017848	O	Zr	0.004358
M	As		0.008716	O	Ga		0.112072	M	Nd	<	0.000520	M	Sm	<	0.000520			
M	Au	<	0.008400	M	Gd	<	0.001100	O	Ni	<	0.006000	M	Sn		0.000747			
O	B	<	0.014000	M	Ge	<	0.005200	M	Os	<	0.000650	O	Sr		0.000518			
O	Ba		0.012867	M	Hf	<	0.004100	n	P	<		M	Ta	<	0.000520			
O	Be	<	0.000270	M	Hg	<	0.002000	M	Pb		0.002282	M	Tb	<	0.000520			
M	Bi		0.001930	M	Ho	<	0.000520	M	Pd	<	0.000520	M	Te	<	0.001100			
O	Ca		0.076790	M	In	<	0.002100	M	Pr	<	0.000520	M	Th	<	0.000520			
M	Cd	<	0.000520	M	Ir	<	0.000650	M	Pt	<	0.000520	O	Ti		0.001930			
M	Ce	<	0.001100	O	K		0.043583	M	Rb	<	0.000520	M	Tl	<	0.000520			
O	Co	<	0.005400	M	La	<	0.002100	M	Re	<	0.000520	M	Tm	<	0.000520			
O	Cr		0.006018	O	Li		0.000112	M	Rh	<	0.000520	M	U	<	0.000520			
M	Cs		0.000643	M	Lu	<	0.000520	M	Ru	<	0.002000	M	V		0.001286			
O	Cu	<	0.008300	O	Mg		0.068488	i	S	<		M	W	<	0.009800			
M	Dy	<	0.002100	O	Mn		0.000913	M	Sb	<	0.003100	M	Y	<	0.001100			
M	Er	<	0.000520	M	Mo		0.005396	O	Sc	<	0.000950	M	Yb	<	0.000520			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

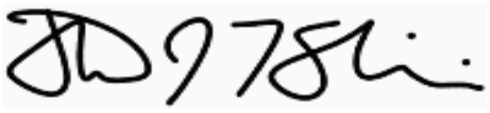
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K711973
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**9987 ± 24 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #2	**10004 ± 84 µg/mL** ICP Assay NIST SRM 3141a Lot Number: 140813
Assay Method #3	**10007 ± 45 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.246220	M	Se	<	0.007900	O	Zn	0.018056
O	Al		0.001592	O	Fe		0.005909	M	Nb	<	0.000660	O	Si		0.011490	O	Zr	< 0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660			
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660			
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055			
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660			
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660			
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000			
O	Ca		0.031187	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660			
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660			
M	Ce	<	0.000660	s	K	<		M	Rb		0.476026	M	Tl	<	0.000660			
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660			
O	Cr		0.000541	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660			
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100			
M	Cu	<	0.002700	O	Mg		0.006237	O	S		0.027905	M	W	<	0.000660			
M	Dy	<	0.000660	O	Mn		0.000476	M	Sb	<	0.000660	M	Y	<	0.000660			
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

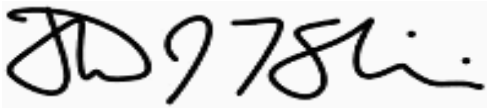
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	S2-MG704239
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10033 ± 26 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002106	M	Eu	<	0.000910	O	Na		0.071075	O	Se	<	0.048000	O	Zn		0.003299
M	Al		0.003553	M	Fe		0.002538	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006853	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000279				
O	Ba		0.000964	M	Hf	<	0.000460	O	P		0.015230	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053306	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048229	M	Rb		0.002411	M	Tl		0.003046				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027922	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001040	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015230	M	Sb		0.020814	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 Mg(H2O)6+2

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4 avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.

Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	T2-CA716103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	CaCO3
Starting Material Lot#:	2472
Starting Material Purity:	99.9950%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10005 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10005 ± 45 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

Assay Method #2 **10005 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10005 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001200	M	Eu	<	0.001200	O	Na		0.006112	M	Se	<	0.024000	M	Zn		0.005362
M	Al		0.065419	O	Fe		0.009115	M	Nb	<	0.001200	O	Si		0.139417	O	Zr	<	0.006700
O	As	<	0.013000	M	Ga	<	0.015000	M	Nd	<	0.020000	M	Sm	<	0.001200				
M	Au	<	0.017000	M	Gd	<	0.004800	O	Ni		0.000793	M	Sn	<	0.003600				
O	B		0.001179	M	Ge	<	0.003600	M	Os	<	0.001200	M	Sr		0.081505				
O	Ba		0.002788	M	Hf	<	0.001200	O	P	<	0.041000	M	Ta	<	0.001200				
O	Be	<	0.000410	M	Hg	<	0.004800	M	Pb		0.001608	M	Tb	<	0.001200				
M	Bi		0.001608	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.003600				
s	Ca	<		M	In	<	0.001200	M	Pr		0.000257	M	Th	<	0.001200				
O	Cd	<	0.001300	M	Ir	<	0.001200	M	Pt	<	0.003600	O	Ti	<	0.001900				
M	Ce		0.001029	O	K		0.009759	M	Rb	<	0.001200	M	Tl	<	0.001200				
O	Co		0.000418	M	La		0.001823	M	Re	<	0.001200	M	Tm	<	0.001200				
O	Cr		0.003324	O	Li	<	0.007300	M	Rh	<	0.001200	M	U		0.002144				
M	Cs		0.007399	M	Lu		0.000128	M	Ru	<	0.001200	M	V		0.001286				
O	Cu	<	0.011000	M	Mg		1.286934	O	S		0.055767	O	W	<	0.024000				
M	Dy	<	0.002400	O	Mn		0.004611	M	Sb	<	0.009600	O	Y		0.000536				
M	Er	<	0.002400	M	Mo		0.003539	O	Sc	<	0.001400	M	Yb	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, vF, v3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples)Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

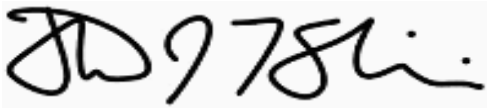
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	T2-NA717221
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2358 and 2453
Starting Material Purity:	99.9977%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9977 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

Assay Method #3 **9987 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.003800	O	Zn		0.000138
M	Al		0.004409	O	Fe		0.002393	M	Nb	<	0.000930	O	Si		0.056696	O	Zr	<	0.003200
O	As	<	0.023000	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930				
O	Au	<	0.004100	M	Gd	<	0.000930	O	Ni	<	0.003000	M	Sn	<	0.002800				
O	B		0.001385	M	Ge	<	0.004700	M	Os	<	0.000930	O	Sr		0.000251				
M	Ba		0.004031	M	Hf	<	0.000930	O	P		0.010205	M	Ta	<	0.000930				
O	Be	<	0.000130	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930				
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.001900				
O	Ca		0.176388	M	In	<	0.000930	M	Pr	<	0.000930	M	Th		0.000352				
O	Cd	<	0.000860	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti		0.000592				
M	Ce	<	0.001900	O	K		0.302380	M	Rb	<	0.000930	M	Tl	<	0.000930				
O	Co	<	0.001800	O	La	<	0.002100	M	Re	<	0.000930	M	Tm	<	0.000930				
M	Cr	<	0.002800	O	Li		0.000031	M	Rh	<	0.000930	M	U	<	0.000930				
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	O	V	<	0.001600				
O	Cu	<	0.003900	O	Mg		0.026458	O	S		0.040317	O	W	<	0.028000				
M	Dy	<	0.000930	O	Mn	<	0.000740	M	Sb	<	0.000930	O	Y	<	0.000860				
M	Er	<	0.000930	O	Mo	<	0.003600	O	Sc	<	0.000610	O	Yb	<	0.000250				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

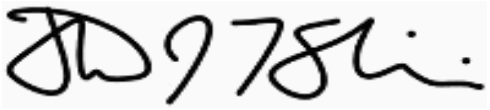
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	S2-U707914
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate Hexahydrate
Starting Material Lot#:	P2-2322
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1001 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000270	M	Eu	<	0.000270	M	Na	<	0.011000	M	Se	<	0.009300	M	Zn	0.002358
M	Al	<	0.011000	M	Fe		0.003222	M	Nb	<	0.000270	M	Si	<	0.160000	M	Zr	< 0.001100
M	As	<	0.002400	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270			
M	Au	<	0.000270	M	Gd	<	0.000270	M	Ni	<	0.020000	M	Sn	<	0.011000			
M	B	<	0.000270	M	Ge	<	0.000800	M	Os	<	0.001900	M	Sr	<	0.000270			
M	Ba	<	0.003800	M	Hf	<	0.000270	i	P	<		M	Ta	<	0.000270			
M	Be	<	0.000270	M	Hg	<	0.000540	M	Pb	<	0.002200	M	Tb	<	0.000270			
M	Bi	<	0.000270	M	Ho	<	0.000270	M	Pd	<	0.000540	M	Te	<	0.003800			
M	Ca	<	0.140000	M	In	<	0.000270	M	Pr	<	0.000270	M	Th		0.000129			
M	Cd	<	0.000270	M	Ir	<	0.000270	M	Pt	<	0.000270	M	Ti	<	0.002700			
M	Ce	<	0.000540	O	K	<	0.250000	M	Rb	<	0.000800	M	Tl	<	0.000270			
M	Co	<	0.000800	M	La		0.000117	M	Re	<	0.064000	M	Tm	<	0.000270			
M	Cr		0.000943	M	Li	<	0.003000	M	Rh	<	0.000270	s	U	<				
M	Cs		0.000106	M	Lu	<	0.000270	M	Ru	<	0.000540	M	V	<	0.000540			
M	Cu	<	0.001100	M	Mg	<	0.003000	i	S	<		M	W	<	0.000540			
M	Dy	<	0.000270	M	Mn	<	0.006900	M	Sb	<	0.000270	M	Y	<	0.000270			
M	Er	<	0.000270	M	Mo	<	0.006400	M	Sc	<	0.000540	M	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO_2^{2+}(uranyl)
Chemical Compatibility - Soluble in HCl and HNO_3. Avoid H_3PO_4. H_2SO_4 and HF matrices should not be a problem depending upon [U]. Although the UO_2^{2+} ion is distinctly basic, any U^{+4} will precipitate in basic media. UO_2^{2+}salts are generally soluble in water and UO_2^{2+} is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF_4 and UF_6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO_3); Oxide (Soluble in HNO_3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO_3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H_2SO_4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	T2-MEB719895
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.499 ± 0.015 µg/mL**	**Molybdenum, Mo**	**2.500 ± 0.017 µg/mL**

Density: 1.014 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

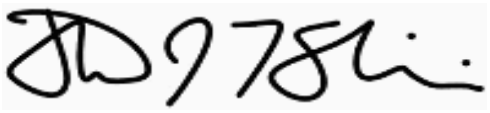
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	T2-MEB719896
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:

Thorium,	Thallium,
Uranium,	Vanadium,
Zinc,	Manganese,
Cadmium,	Cobalt,
Chromium,	Copper,
Arsenic,	Barium,
Beryllium,	Nickel,
Lead,	Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

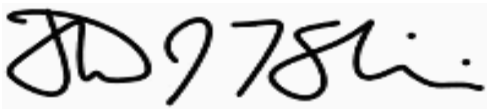
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-6020ICS-0A10
Lot Number:	T2-MEB719898
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Chloride,
	200 µg/mL ea: Carbon,
	100 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	2 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.4 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.014 µg/mL**	**Phosphorus, P**	**100.0 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.015 µg/mL**

Density: 1.009 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

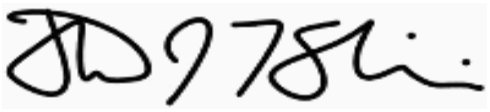
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1811

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-01 D	SDG:	23E0009
Sampled:	04/28/23 10:38	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-067
% Solids:	67.30	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 19:31
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.016 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	5.48	20	0.06	0.29	
7440-43-9	Cadmium	0.18	20	0.04	0.15	
7440-50-8	Copper	23.9	20	0.25	0.73	
7440-66-6	Zinc	55.6	20	4.3	8.8	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1805

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-03 D	SDG:	23E0009
Sampled:	04/28/23 16:15	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-064
% Solids:	52.38	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 19:17
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.049 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	13.6	20	0.07	0.36	
7440-43-9	Cadmium	0.37	20	0.05	0.18	
7440-50-8	Copper	61.0	20	0.32	0.91	
7440-66-6	Zinc	129	20	5.3	10.9	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1800

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-05 D	SDG:	23E0009
Sampled:	04/29/23 10:10	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-065
% Solids:	46.29	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 19:22
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.017 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	16.3	20	0.08	0.42	
7440-43-9	Cadmium	0.47	20	0.06	0.21	
7440-50-8	Copper	66.7	20	0.37	1.06	
7440-66-6	Zinc	126	20	6.2	12.7	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1820

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-07 D	SDG:	23E0009
Sampled:	04/29/23 14:00	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-066
% Solids:	51.74	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 19:26
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.027 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	14.1	20	0.07	0.38	
7440-43-9	Cadmium	0.24	20	0.06	0.19	
7440-50-8	Copper	58.9	20	0.33	0.94	
7440-66-6	Zinc	159	20	1.8	11.3	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-IT1820

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-08 D	SDG:	23E0009
Sampled:	04/29/23 14:10	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-063
% Solids:	50.30	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 19:12
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.006 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	11.4	20	0.08	0.40	

PREPARATION BATCH SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Batch: BLE0306 Batch Matrix: Solid Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01	XDT_m1230519-067	05/18/23 15:58	
LDW23-SS1805	23E0009-03	XDT_m1230519-064	05/18/23 15:58	
LDW23-SS1800	23E0009-05	XDT_m1230519-065	05/18/23 15:58	
LDW23-SS1820	23E0009-07	XDT_m1230519-066	05/18/23 15:58	
LDW23-IT1820	23E0009-08	XDT_m1230519-063	05/18/23 15:58	
Blank	BLE0306-BLK1	XDT_m1230519-051	05/18/23 15:58	
LCS	BLE0306-BS1	XDT_m1230519-052	05/18/23 15:58	
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	05/18/23 15:58	
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	05/18/23 15:58	
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	05/18/23 15:58	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: AB Date: 05/18/23 Time: 1040-1558 Balance ID: BAL10

Matrix: Soil Block ID: 3 Block Temp: 92C Thermometer: 20-2

ARI Sample ID	Btl #	pH<2	Prep Code: SWN Initial Wt (g) Vol (mL)	Prep Code: SWN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A0207-10	D		1.029	50			
23E0009-01			1.016				
-03			1.049				
-05			1.017				
-07			1.027				
-09			1.006				
BLE0306-BLK	—		—				
-BS	—		—				
-DUP	—		1.017				23E0009-01
-MS	—		1.016				↓
-MSD	—		1.015				

MJ 05/19/23

Chemical/Reagent ID:

HNO_3: L4188 1:1 HNO_3: L4200 HCl: — H_2O_2: K11056

Tube Lot#: 221104 Boiling Chip Lot#: — (DoD Only)

Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23E0009

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

Batch: BLE0306 | Laboratory ID: BLE0306-BLK1 | Prepared: 05/18/23 15:58

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 05/19/23 18:13

Sequence: SLE0358 | Calibration: GE00066 | Instrument: ICPMS1

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	20	0.04	0.20	U
7440-43-9	Cadmium-111	ND	20	0.03	0.10	U
7440-50-8	Copper-63	ND	20	0.17	0.50	U
7440-66-6	Zinc-66	ND	20	2.9	6.0	U
7440-66-6	Zinc-67	ND	20	0.9	6.0	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 18:18
Batch:	BLE0306	Laboratory ID:	BLE0306-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a	25.0	23.5		94.2	80 - 120
Cadmium-111	25.0	24.1		96.3	80 - 120
Copper-63	25.0	24.9		99.5	80 - 120
Zinc-66	80.0	76.5		95.6	80 - 120
Zinc-67	80.0	69.6		87.0	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 6020B UCT-KED

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0306-DUP1
Batch: BLE0306
Lab Source ID: 23E0009-01
Preparation: SWN EPA 3050B
Initial/Final: 1.017 g / 50 mL
Source Sample Name: LDW23-SS1811
% Solids: 67.30

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Arsenic-75a	20	5.48	4.90	11.2	
Cadmium-111	20	0.18	0.15	15.9	
Copper-63	20	23.9	22.0	8.34	
Zinc-66	20	55.6	55.0	1.11	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY
EPA 6020B UCT-KED
Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 19:40
Batch:	BLE0306	Laboratory ID:	BLE0306-MS1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.016 g / 50 mL	Source Sample:	LDW23-SS1811

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a	36.6	5.48		39.4		92.7	75 - 125
Cadmium-111	36.6	0.18		34.6		94.0	75 - 125
Copper-63	36.6	23.9		56.6		89.4	75 - 125
Zinc-66	117	55.6		163		91.9	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 19:45
Batch:	BLE0306	Laboratory ID:	BLE0306-MSD1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.015 g / 50 mL	Source Sample:	LDW23-SS1811

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic-75a	36.6	40.2		94.8	1.98	20	75 - 125
Cadmium-111	36.6	34.5		93.8	0.109	20	75 - 125
Copper-63	36.6	57.4		91.4	1.33	20	75 - 125
Zinc-66	117	169		96.8	3.49	20	75 - 125

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00066	Instrument:	ICPMS1
Calibration Date:	05/19/2023 14:18		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Silver-107	0	0	0.2	17430	10	17226.1	20	16736.85	50	16160.64	100	15950.09
Chromium-52	0	0	0.5	48644	10	16314.4	20	15495.3	50	14961.64	100	14873.89
Chromium-53	0	0	0.5	2008	10	1720.4	20	1706.2	50	1643.44	100	1724.92
Lead-208	0	0	0.1	70950	10	65982.3	20	65729.7	50	61886.14	100	61512.31

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory: Analytical Resources, LLC
Instrument: ICPMS1
Calibration: GE00066
Calibration Date: 5/19/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Silver-107	13917.28	49.2	0.9999		0.998	
Chromium-52	18381.54	87.4	1.0000		0.998	
Chromium-53	1467.16	49.7	0.9994		0.998	
Lead-208	54343.41	49.4	0.9998		0.998	

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00066	Instrument:	ICPMS1
Calibration Date:	05/19/2023 14:18		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a	0	0	0.2	270	10	267.6	20	266.1	50	260.72	100	266.77
Cadmium-111	0	0	0.1	270	10	248.7	20	254.8	50	240.04	100	249.34
Cadmium-114	0	0	0.1	690	10	656.3	20	652.4	50	619.38	100	641.69
Copper-63	0	0	0.5	4868	10	4578.6	20	4494.05	50	4364.88	100	4374.36
Copper-65	0	0	0.5	2482	10	2303.8	20	2336	50	2192.58	100	2187.28
Zinc-66	0	0	6	588	10	528.1	20	520	50	501.1	100	509.69
Zinc-67	0	0	6	93	10	89.8	20	88.15	50	87.68	100	85.32

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Instrument: ICPMS1
Calibration: GE00066
Calibration Date: 5/19/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	221.865	49.0	0.9999		0.998	
Cadmium-111	210.48	49.2	0.9996		0.998	
Cadmium-114	543.295	49.2	0.9996		0.998	
Copper-63	3779.982	49.2	1.0000		0.998	
Copper-65	1916.943	49.3	0.9998		0.998	
Zinc-66	441.1483	49.5	0.9998		0.998	
Zinc-67	73.99167	49.1	0.9998		0.998	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** MB **Sequence:** SLEØ358 **Cal:** GEØØØ66

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	SEQ-CAL1			
		-CAL2			
		-CAL3			
		-CAL4			
		-CAL5			In-1 noisy
		Rinse			
		SEQ-CAL1	L5617		
		-CAL2	L547Ø		
		-CAL3	L5471		
		-CAL4	L5472		
		-CAL5	L5618		
		-CAL6	L5473		
		-IBL1	—		Mn R-Value poor
		-ICV1	L3575		
		-ICB1	L5617		
		-CCV1	L5618		
		-CCB1	L5617		
		-CRL1	L547Ø		
		-IFA1	L5318		Ca 53↑
		-IFB1	L5319		
		-HCV1	L5468		
		-HCV2	L5469		
		-IBL2	—		(56?)
		-IBL3	—		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** MB/SP **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCV2			Mn↓ - No Mn all run
		-CCB2			
	✓	-CAL1			
		-CCV3			
		-CCB3			
		BLEΦ572-BLK1	REN		
		↓ -BS1			
		230Φ617-Φ2		5	As, Pb, Sb only
		-Φ4			↓
		-Φ6			Pb, Sb only
		-Φ1			
		-Φ3			
		↓ -Φ5			
		230Φ171-Φ8		10	As only
		SEQ-IBL4			
		-CCV4			
		-CCB4			
	✓	-CAL1			Sb Removed
		-CCV5			
		↓ -CCB5			
		BLE0306-BLK1	SVN	20	
		↓ -BS1			
		BLE0442-BLK1			
		↓ -BS1			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 5/19/23 / MS 5/19/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23A04207-10	SWN	20	
		23E0018-01	REN	50	Ag/Pb ONLY
#2→#3		BLE0405-DUP3	↓	↓	↓
↓		↓ -MS3			
↓		↓ -MSD3			
		SEQ-IBL5			(sl. noisy)
		↓ -CCV6			
		↓ -CCB6			
		23E0009-08	SWN	20	
		↓ -03	↓	↓	
		-05			
		-07			
		↓ -01			
		BLE0306-DUP1			
		↓ -MS1			
		-MSD1			
		↓ -PS1			60 mL K7409
		SEQ-IBL6			
		↓ -CCV7			
		↓ -CCB7			
		23E0219-03	SWN	20	
		↓ -05	↓	↓	
		-07			
		↓ -09			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23E0219-02	SWN	20	
		BLE0442-DUP1	↓	↓	
		-MS1			Ag %R↓
		-MSD1			Ag, Cr %R↓
		-PS1	↓	↓	60 mL K7409
		SEQ-IBL7			
		-CCV8			
		-CCB8			
		BLE0574-BLK1	REN		
		-BS1	↓		
		23E0219-10	SWN	20	
		-13			SC↑ No Cr
		-04			
		-06			
		-08			
		-11			
		-12	↓	↓	
		SEQ-IBL8			
		-CCV9			
		-CCB9			
	✓	-CAL1			
		-CCVA			
		-CCBA			
		23E0185-01	REN	2	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 5/19/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23E0307-01	REN	2	
		↓ -02	↓	↓	
		↓ -03			
		SEQ-IBL9			
		23E0164-03	REN		
		↓ -01	↓		
		BLE0572-DUP1			
		↓ -MS1			
		SEQ-IBLA			
		↓ -CCVB			
		↓ -CCBB			
		23E0195-01	REN	20	
		23D0171-05	↓	↓	Ag, Cd, Cr, Cu, Ni, Pb, Se, Zn only
		BLD0643-DUP3			↓
		↓ -MS3			Zn %R ↓
		↓ -MSD3			
		23D0171-06			Cu, Zn only
		BLD0643 561-DUP3			↓
		↓ -MS3			Zn %R ↑
		↓ -MSD3	↓	↓	↓ ↓
		SEQ-IBLB			
		↓ -CCVC			
		↓ -CCBC			
		23E0169-01	REN		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 5/19/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23E0169-03	REN		
		↓ -05			
		23E0202-01			
		23E0166-01		50	
		23D0281-09			Ag, Cd, Cr, Cu, Ni, Pb, Se, Zn only
		BLD0755-DUP3			
		-MS3			Zn spike 0.1ug/L out / Cr, Cu %R↑
		-MSD3			↓ / Cu %R↑
		SEQ-IBLC			
		-CCVD			
		-CCBD			
	✓	-CALI			
		-CCVE			
		-CCBE			
		23E0167-01	REN		
		-04			
		-05			
		-06			
		-07			
		-08			
		-09			Qe sl. noisy — No As, Cu, Se, Zn
		-10			
		23E0174-01			
		SEQ-IBLD			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. MS 5/19/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCVF			
		↓ -CCBF			
23D→23E		23E0167-02	REN		
↓		↓ -03	↓		
		23E0178-01			
		↓ -03			
		23E0184-01			
		23E0172-03			
↓		↓ -01		2	
		BLE0574-DUP1		↓	
		↓ -MS1	↓		
		SEQ-IBLE			
		↓ -CCVG			MnV
		↓ -CCBG			
		23E0187-01	REN		
		23E0188-01	↓	10	
		23E0191-01			
		23E0193-01			
		↓ -02		5	
		23E0194-01			
		23E0196-01			
		↓ -02		2	
		23E0200-01	↓		
		SEQ-IBLF			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCVH			
		↓ -CCBH			
	✓	23E0203-01	REN		
	✓	23E0205-01	↓		
	✓	↓ -02	↓		
					AS Error - End of Run
			MS 5/19/23		

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Friday, May 19, 2023 12:57:38
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.221
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4787.3	4787.269	57.937	1.2	Standard
	In	114.9	70017.8	70017.845	1666.650	2.4	Standard
	U	238.1	66898.0	66897.972	1117.389	1.7	Standard
⌈	CeO	155.9	2581.5	0.023	0.000	1.8	Standard
| >	Ce	139.9	109963.8	109963.758	974.166	0.9	Standard
⌊	Ce++	70.0	740.6	0.007	0.000	1.2	Standard
	Bkgd	220.0	3.1	3.067	0.796	26.0	Standard

Current Conditions File Data

Current Value	Description
0.93	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1600.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-10.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-5.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.93	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Friday, May 19, 2023 13:06:23
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.227
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4448.4	4448.426	58.521	1.3	Standard
	In	114.9	72376.4	72376.418	461.887	0.6	Standard
	U	238.1	72857.3	72857.327	679.831	0.9	Standard
⌈	CeO	155.9	2751.4	0.024	0.001	2.4	Standard
| >	Ce	139.9	115354.2	115354.208	782.762	0.7	Standard
⌊	Ce++	70.0	775.9	0.007	0.000	3.5	Standard
	Bkgd	220.0	3.4	3.367	0.946	28.1	Standard

Current Conditions File Data

Current Value	Description
0.93	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1600.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-10.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-5.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.93	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 5/19/2023 12:57:36 PM
End Time: 5/19/2023 1:08:27 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 4787.27
Obtained Intensity (In 115): 70017.85
Obtained Intensity (U 238): 66897.97
Obtained Intensity (Bkgd 220): 3.07
Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=740.62 / 109963.76)
Obtained Formula (CeO 156 / Ce 140): 0.023 (=2581.50 / 109963.76)
Obtained RSD (Be 9): 0.0121
Obtained RSD (In 115): 0.0238
Obtained RSD (U 238): 0.0167

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.97 mm	0.83 mm	83809.12

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.93
Obtained Intensity (In 115): 68607.35
Obtained Formula (CeO 156 / Ce 140): 0.0204 (=2201.17 / 108128.67)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.680)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.675)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.704)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -17.74

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.999; Intercept = -15.30

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 4448.43
Obtained Intensity (In 115): 72376.42
Obtained Intensity (U 238): 72857.33
Obtained Intensity (Bkgd 220): 3.37
Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=775.89 / 115354.21)
Obtained Formula (CeO 156 / Ce 140): 0.024 (=2751.40 / 115354.21)
Obtained RSD (Be 9): 0.0132
Obtained RSD (In 115): 0.0064
Obtained RSD (U 238): 0.0093

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 5/19/2023 12:57:36 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 5
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 4787.27
		Obtained Intensity (In 115): 70017.85
		Obtained Intensity (U 238): 66897.97
		Obtained Intensity (Bkgd 220): 3.07
		Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=740.62 / 109963.76)
		Obtained Formula (CeO 156 / Ce 140): 0.023 (=2581.50 / 109963.76)
		Obtained RSD (Be 9): 0.0121
		Obtained RSD (In 115): 0.0238
		Obtained RSD (U 238): 0.0167

[Passed] Optimum value(s): N/A

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	0.97 mm	0.83 mm	83809.12

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 0.92/0.95/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 68607.35
		Obtained Formula (CeO 156 / Ce 140): 0.0204 (=2201.17 / 108128.67)
[Passed] Optimum value(s): 0.93

Mass Calibration and Resolution
	Optimization Settings:
		Method: Tuning.mth.
		MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
		Iterations: 6
		Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
		Peak height (%) for Res. Opt.: 10

	Optimization Results:
	Initial Try
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.680)
		Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.675)
		Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.698)
		Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.704)
[Passed] Optimum value(s): N/A

QID STD/DRC
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 1.000; Intercept = -17.74

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-17	32617.2
		Mg	24	41	-15.5	32484.9
		In	115	41	-12	77381
		Ce	140	41	-12	122382
		Pb	208	41	-12	47009.2
		U	238	41	-11.5	73850.4

KED Mode QID
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.999; Intercept = -15.30

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-15	25194.2
		Mg	24	41	-14.5	52082.8
		In	115	41	-12	115574
		Ce	140	41	-11.5	106032
		Pb	208	41	-10	42434.9
		U	238	41	-10.5	95325

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000

```
            Intensity Criterion: U 238 > 30000
            Intensity Criterion: Bkgd 220 <= 5
            Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
            Formula Criterion: CeO 156 / Ce 140 <= 0.025
            RSD Criterion: Be 9.0122 < 0.05
            RSD Criterion: In 114.904 < 0.05
            RSD Criterion: U 238.05 < 0.05

       Optimization Results:
       Initial Try
            Obtained Intensity (Be 9): 4448.43
            Obtained Intensity (In 115): 72376.42
            Obtained Intensity (U 238): 72857.33
            Obtained Intensity (Bkgd 220): 3.37
            Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=775.89 / 115354.21)
            Obtained Formula (CeO 156 / Ce 140): 0.024 (=2751.40 / 115354.21)
            Obtained RSD (Be 9): 0.0132
            Obtained RSD (In 115): 0.0064
            Obtained RSD (U 238): 0.0093

[Passed]  Optimum value(s): N/A

End Time: 5/19/2023 1:08:27 PM
```

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 13:43:49

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				17839	3	Standard
⌈>	**Sc**	**45**		ug/L				559345	1	Standard
|	**Cr**	**52**		ug/L				16889	4	Standard
|	**Cr**	**53**		ug/L				146	5	Standard
⌊	**Mn**	**55**		ug/L				267	5	Standard
⌈>	**Ge**	**72**		ug/L				32630	1	KED
|	**Ni**	**60**		ug/L				41	25	KED
|	**Ni**	**62**		ug/L				6	34	KED
|	**Cu**	**63**		ug/L				43	28	KED
|	**Cu**	**65**		ug/L				22	17	KED
|	**Zn**	**66**		ug/L				27	19	KED
|	**Zn**	**67**		ug/L				8	81	KED
|	**As**	**75**		ug/L				3	18	KED
⌊	**Se**	**78**		ug/L				9	18	KED
	Kr	**83**		ug/L				46	8	Standard
⌈>	**In-1**	**115**		ug/L				7021	4	KED
|	**Cd**	**111**		ug/L				1	86	KED
⌊	**Cd**	**114**		ug/L				2	47	KED
⌈>	**In**	**115**		ug/L				437695	3	Standard
|	**Ag**	**107**		ug/L				48	35	Standard
|	**Sb**	**121**		ug/L				366	5	Standard
|	**Sb**	**123**		ug/L				258	5	Standard
|	**Ba**	**135**		ug/L				15	48	Standard
⌊	**Ba**	**137**		ug/L				29	22	Standard
⌈>	**Tb**	**159**		ug/L				185058	1	Standard
⌊	**Pb**	**208**		ug/L				115	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Friday, May 19, 2023 13:48:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			17839	19505	5	Standard
⌈>	**Sc**	**45**		ug/L			559345	549223	4	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.016	3	16889	24147	3	Standard
|	**Cr**	**53**	**0.500**	ug/L	0.014	2	146	951	3	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.006	1	267	10738	3	Standard
⌈>	**Ge**	**72**		ug/L			32630	31916	3	KED
|	**Ni**	**60**	**0.500**	ug/L	0.037	7	41	826	4	KED
|	**Ni**	**62**	**0.500**	ug/L	0.118	23	6	135	25	KED
|	**Cu**	**63**	**0.500**	ug/L	0.015	3	43	2431	4	KED
|	**Cu**	**65**	**0.500**	ug/L	0.024	4	22	1275	0	KED
|	**Zn**	**66**	**6.000**	ug/L	0.037	0	27	3106	4	KED
|	**Zn**	**67**	**6.000**	ug/L	0.254	4	8	499	7	KED
|	**As**	**75**	**0.200**	ug/L	0.014	6	3	55	3	KED
⌊	**Se**	**78**	**0.500**	ug/L	0.256	51	9	20	28	KED
	Kr	**83**		ug/L			46	40	8	Standard
⌈>	**In-1**	**115**		ug/L			7021	6861	2	KED
|	**Cd**	**111**	**0.100**	ug/L	0.013	13	1	27	13	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.022	21	2	67	22	KED
⌈>	**In**	**115**		ug/L			437695	440211	5	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.015	7	48	3397	2	Standard
|	**Sb**	**121**	**0.200**	ug/L	0.019	9	366	2632	2	Standard
|	**Sb**	**123**	**0.200**	ug/L	0.012	6	258	2004	2	Standard
|	**Ba**	**135**	**0.500**	ug/L	0.023	4	15	2980	1	Standard
⌊	**Ba**	**137**	**0.500**	ug/L	0.038	7	29	5345	2	Standard
⌈>	**Tb**	**159**		ug/L			185058	187779	1	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.002	1	115	7071	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments: DEL
Sample Date/Time: Friday, May 19, 2023 13:53:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			17839	23862	6	Standard
⌈>	**Sc**	**45**		ug/L			559345	541851	3	Standard
|	**Cr**	**52**	**9.999**	ug/L	0.230	2	16889	161556	5	Standard
|	**Cr**	**53**	**10.001**	ug/L	0.061	0	146	16766	3	Standard
⌊	**Mn**	**55**	**10.001**	ug/L	0.145	1	267	211574	2	Standard
⌈>	**Ge**	**72**		ug/L			32630	32746	0	KED
|	**Ni**	**60**	**9.998**	ug/L	0.148	1	41	15087	1	KED
|	**Ni**	**62**	**9.998**	ug/L	0.334	3	6	2428	3	KED
|	**Cu**	**63**	**9.998**	ug/L	0.235	2	43	45225	2	KED
|	**Cu**	**65**	**9.997**	ug/L	0.103	1	22	22972	1	KED
|	**Zn**	**66**	**9.903**	ug/L	0.239	2	27	5105	2	KED
|	**Zn**	**67**	**10.084**	ug/L	0.354	3	8	873	3	KED
|	**As**	**75**	**10.000**	ug/L	0.048	0	3	2574	0	KED
⌊	**Se**	**78**	**10.001**	ug/L	0.404	4	9	242	3	KED
	Kr	**83**		ug/L			46	43	18	Standard
⌈>	**In-1**	**115**		ug/L			7021	6971	2	KED
|	**Cd**	**111**	**10.000**	ug/L	0.151	1	1	2452	1	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.199	1	2	6271	1	KED
⌈>	**In**	**115**		ug/L			437695	431863	1	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.194	1	48	170185	1	Standard
|	**Sb**	**121**	**10.001**	ug/L	0.311	3	366	129592	2	Standard
|	**Sb**	**123**	**10.001**	ug/L	0.166	1	258	102301	0	Standard
|	**Ba**	**135**	**10.000**	ug/L	0.317	3	15	57172	2	Standard
⌊	**Ba**	**137**	**9.999**	ug/L	0.389	3	29	101825	2	Standard
⌈>	**Tb**	**159**		ug/L			185058	186172	2	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.248	2	115	681511	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Friday, May 19, 2023 13:58:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			17839	23597	2	Standard
⌈>	**Sc**	**45**		ug/L			559345	556012	3	Standard
|	**Cr**	**52**	**19.955**	ug/L	0.351	1	16889	311390	3	Standard
|	**Cr**	**53**	**19.948**	ug/L	0.202	1	146	33818	2	Standard
⌊	**Mn**	**55**	**19.903**	ug/L	0.158	0	267	423741	3	Standard
⌈>	**Ge**	**72**		ug/L			32630	32175	1	KED
|	**Ni**	**60**	**20.173**	ug/L	0.113	0	41	30935	0	KED
|	**Ni**	**62**	**20.166**	ug/L	0.445	2	6	4970	2	KED
|	**Cu**	**63**	**19.984**	ug/L	0.275	1	43	88491	0	KED
|	**Cu**	**65**	**19.961**	ug/L	0.378	1	22	44694	0	KED
|	**Zn**	**66**	**20.138**	ug/L	0.272	1	27	10383	2	KED
|	**Zn**	**67**	**20.118**	ug/L	0.930	4	8	1733	3	KED
|	**As**	**75**	**20.134**	ug/L	0.139	0	3	5228	1	KED
⌊	**Se**	**78**	**19.739**	ug/L	0.729	3	9	438	2	KED
	Kr	**83**		ug/L			46	55	13	Standard
⌈>	**In-1**	**115**		ug/L			7021	7104	1	KED
|	**Cd**	**111**	**20.060**	ug/L	1.121	5	1	5070	3	KED
⌊	**Cd**	**114**	**20.015**	ug/L	0.587	2	2	12828	2	KED
⌈>	**In**	**115**		ug/L			437695	423934	3	Standard
|	**Ag**	**107**	**19.934**	ug/L	0.208	1	48	328602	2	Standard
|	**Sb**	**121**	**19.971**	ug/L	0.794	3	366	252074	1	Standard
|	**Sb**	**123**	**19.997**	ug/L	1.306	6	258	200201	3	Standard
|	**Ba**	**135**	**19.902**	ug/L	1.099	5	15	109424	2	Standard
⌊	**Ba**	**137**	**20.093**	ug/L	0.952	4	29	204489	1	Standard
⌈>	**Tb**	**159**		ug/L			185058	187575	2	Standard
⌊	**Pb**	**208**	**19.861**	ug/L	0.620	3	115	1326582	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Friday, May 19, 2023 14:03:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			17839	16917	1	Standard
⌈>	Sc	45		ug/L			559345	559207	3	Standard
|	Cr	52	49.630	ug/L	0.972	1	16889	727437	3	Standard
|	Cr	53	49.711	ug/L	1.476	2	146	82137	0	Standard
⌊	Mn	55	49.708	ug/L	0.668	1	267	1033548	2	Standard
⌈>	Ge	72		ug/L			32630	32524	0	KED
|	Ni	60	49.655	ug/L	1.863	3	41	74344	3	KED
|	Ni	62	49.699	ug/L	1.541	3	6	12013	3	KED
|	Cu	63	49.742	ug/L	0.590	1	43	216998	1	KED
|	Cu	65	49.802	ug/L	0.545	1	22	110521	1	KED
|	Zn	66	49.655	ug/L	1.909	3	27	25030	3	KED
|	Zn	67	49.488	ug/L	2.080	4	8	4103	4	KED
|	As	75	49.774	ug/L	0.200	0	3	12773	0	KED
⌊	Se	78	50.133	ug/L	0.915	1	9	1125	1	KED
	Kr	83		ug/L			46	53	14	Standard
⌈>	In-1	115		ug/L			7021	6088	10	KED
|	Cd	111	50.535	ug/L	4.006	7	1	11507	2	KED
⌊	Cd	114	50.538	ug/L	3.548	7	2	29200	3	KED
⌈>	In	115		ug/L			437695	408025	1	Standard
|	Ag	107	50.077	ug/L	0.282	0	48	800743	0	Standard
|	Sb	121	50.091	ug/L	0.866	1	366	614129	2	Standard
|	Sb	123	49.807	ug/L	1.469	2	258	471017	1	Standard
|	Ba	135	49.760	ug/L	0.523	1	15	257414	0	Standard
⌊	Ba	137	49.844	ug/L	1.344	2	29	481115	2	Standard
⌈>	Tb	159		ug/L			185058	176437	1	Standard
⌊	Pb	208	49.987	ug/L	0.179	0	115	3138060	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:13:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			0	20088	7	Standard
⎡>	**Sc**	**45**		ug/L			0	567265	2	Standard
⎢	**Cr**	**52**		ug/L			0	17737	6	Standard
⎢	**Cr**	**53**		ug/L			0	129	5	Standard
⎣	**Mn**	**55**		ug/L			0	304	7	Standard
⎡>	**Ge**	**72**		ug/L			0	34443	3	KED
⎢	**Ni**	**60**		ug/L			0	19	103	KED
⎢	**Ni**	**62**		ug/L			0	5	57	KED
⎢	**Cu**	**63**		ug/L			0	87	73	KED
⎢	**Cu**	**65**		ug/L			0	38	65	KED
⎢	**Zn**	**66**		ug/L			0	45	27	KED
⎢	**Zn**	**67**		ug/L			0	10	44	KED
⎢	**As**	**75**		ug/L			0	5	48	KED
⎣	**Se**	**78**		ug/L			0	13	24	KED
	Kr	**83**		ug/L			0	50	12	Standard
⎡>	**In-1**	**115**		ug/L			0	7450	1	KED
⎢	**Cd**	**111**		ug/L			0	3	68	KED
⎣	**Cd**	**114**		ug/L			0	4	88	KED
⎡>	**In**	**115**		ug/L			0	421069	1	Standard
⎢	**Ag**	**107**		ug/L			0	34	17	Standard
⎢	**Sb**	**121**		ug/L			0	422	2	Standard
⎢	**Sb**	**123**		ug/L			0	313	3	Standard
⎢	**Ba**	**135**		ug/L			0	20	48	Standard
⎣	**Ba**	**137**		ug/L			0	29	24	Standard
⎡>	**Tb**	**159**		ug/L			0	181251	2	Standard
⎣	**Pb**	**208**		ug/L			0	208	16	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:18:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				18596	5	Standard
⎡>	**Sc**	**45**		ug/L				572689	3	Standard
⎢	**Cr**	**52**		ug/L				17437	4	Standard
⎢	**Cr**	**53**		ug/L				140	13	Standard
⎣	**Mn**	**55**		ug/L				280	5	Standard
⎡>	**Ge**	**72**		ug/L				33867	3	KED
⎢	**Ni**	**60**		ug/L				17	6	KED
⎢	**Ni**	**62**		ug/L				4	98	KED
⎢	**Cu**	**63**		ug/L				49	20	KED
⎢	**Cu**	**65**		ug/L				10	26	KED
⎢	**Zn**	**66**		ug/L				20	48	KED
⎢	**Zn**	**67**		ug/L				6	15	KED
⎢	**As**	**75**		ug/L				1	17	KED
⎣	**Se**	**78**		ug/L				11	15	KED
	Kr	**83**		ug/L				43	30	Standard
⎡>	**In-1**	**115**		ug/L				7349	1	KED
⎢	**Cd**	**111**		ug/L				3	56	KED
⎣	**Cd**	**114**		ug/L				6	46	KED
⎡>	**In**	**115**		ug/L				429903	0	Standard
⎢	**Ag**	**107**		ug/L				25	18	Standard
⎢	**Sb**	**121**		ug/L				233	10	Standard
⎢	**Sb**	**123**		ug/L				162	8	Standard
⎢	**Ba**	**135**		ug/L				14	32	Standard
⎣	**Ba**	**137**		ug/L				22	27	Standard
⎡>	**Tb**	**159**		ug/L				185011	1	Standard
⎣	**Pb**	**208**		ug/L				121	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:23:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19774	6	Standard
⌈>	**Sc**	**45**		ug/L			572689	566746	3	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.029	5	17437	24322	4	Standard
|	**Cr**	**53**	**0.500**	ug/L	0.003	0	140	1004	3	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.026	5	280	10995	5	Standard
⌈>	**Ge**	**72**		ug/L			33867	33450	2	KED
|	**Ni**	**60**	**0.500**	ug/L	0.032	6	17	785	8	KED
|	**Ni**	**62**	**0.500**	ug/L	0.014	2	4	139	4	KED
|	**Cu**	**63**	**0.500**	ug/L	0.014	2	49	2434	1	KED
|	**Cu**	**65**	**0.500**	ug/L	0.025	5	10	1241	6	KED
|	**Zn**	**66**	**6.000**	ug/L	0.205	3	20	3528	2	KED
|	**Zn**	**67**	**6.000**	ug/L	0.112	1	6	558	2	KED
|	**As**	**75**	**0.200**	ug/L	0.006	3	1	54	1	KED
⌊	**Se**	**78**	**0.500**	ug/L	0.148	29	11	22	17	KED
	Kr	**83**		ug/L			43	43	5	Standard
⌈>	**In-1**	**115**		ug/L			7349	7233	0	KED
|	**Cd**	**111**	**0.100**	ug/L	0.018	17	3	27	15	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.014	14	6	69	13	KED
⌈>	**In**	**115**		ug/L			429903	436006	3	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.007	3	25	3486	2	Standard
|	**Sb**	**121**	**0.200**	ug/L	0.017	8	233	2605	3	Standard
|	**Sb**	**123**	**0.200**	ug/L	0.007	3	162	2068	2	Standard
|	**Ba**	**135**	**0.500**	ug/L	0.021	4	14	2814	2	Standard
⌊	**Ba**	**137**	**0.500**	ug/L	0.035	6	22	5185	2	Standard
⌈>	**Tb**	**159**		ug/L			185011	185056	0	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.005	4	121	7095	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:28:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	24676	4	Standard
⌈>	**Sc**	**45**		ug/L			572689	563225	5	Standard
|	**Cr**	**52**	**10.001**	ug/L	0.406	4	17437	163144	3	Standard
|	**Cr**	**53**	**10.000**	ug/L	0.342	3	140	17204	4	Standard
⌊	**Mn**	**55**	**10.000**	ug/L	0.329	3	280	213650	1	Standard
⌈>	**Ge**	**72**		ug/L			33867	33332	1	KED
|	**Ni**	**60**	**10.001**	ug/L	0.220	2	17	15964	1	KED
|	**Ni**	**62**	**9.999**	ug/L	0.145	1	4	2613	0	KED
|	**Cu**	**63**	**9.999**	ug/L	0.189	1	49	45786	0	KED
|	**Cu**	**65**	**9.998**	ug/L	0.332	3	10	23038	1	KED
|	**Zn**	**66**	**9.723**	ug/L	0.183	1	20	5281	1	KED
|	**Zn**	**67**	**9.930**	ug/L	0.143	1	6	898	0	KED
|	**As**	**75**	**10.000**	ug/L	0.224	2	1	2676	1	KED
⌊	**Se**	**78**	**10.001**	ug/L	0.466	4	11	246	2	KED
	Kr	**83**		ug/L			43	47	31	Standard
⌈>	**In-1**	**115**		ug/L			7349	7274	2	KED
|	**Cd**	**111**	**10.000**	ug/L	0.697	6	3	2487	4	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.127	1	6	6563	1	KED
⌈>	**In**	**115**		ug/L			429903	418558	1	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.432	4	25	172261	3	Standard
|	**Sb**	**121**	**10.000**	ug/L	0.284	2	233	129530	1	Standard
|	**Sb**	**123**	**10.000**	ug/L	0.339	3	162	99371	3	Standard
|	**Ba**	**135**	**10.001**	ug/L	0.261	2	14	56971	1	Standard
⌊	**Ba**	**137**	**10.001**	ug/L	0.239	2	22	104992	1	Standard
⌈>	**Tb**	**159**		ug/L			185011	185120	1	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.078	0	121	659823	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:33:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	23673	6	Standard
⌈>	**Sc**	**45**		ug/L			572689	564817	2	Standard
|	**Cr**	**52**	**19.995**	ug/L	0.387	1	17437	309906	2	Standard
|	**Cr**	**53**	**19.969**	ug/L	0.237	1	140	34124	3	Standard
⌊	**Mn**	**55**	**19.999**	ug/L	0.259	1	280	428636	3	Standard
⌈>	**Ge**	**72**		ug/L			33867	33756	1	KED
|	**Ni**	**60**	**19.829**	ug/L	0.261	1	17	30985	0	KED
|	**Ni**	**62**	**19.750**	ug/L	0.820	4	4	4974	2	KED
|	**Cu**	**63**	**19.875**	ug/L	0.575	2	49	89881	1	KED
|	**Cu**	**65**	**20.005**	ug/L	0.690	3	10	46720	2	KED
|	**Zn**	**66**	**19.720**	ug/L	0.180	0	20	10400	2	KED
|	**Zn**	**67**	**19.825**	ug/L	1.554	7	6	1763	6	KED
|	**As**	**75**	**19.926**	ug/L	0.124	0	1	5322	0	KED
⌊	**Se**	**78**	**19.925**	ug/L	0.602	3	11	479	3	KED
	Kr	**83**		ug/L			43	50	13	Standard
⌈>	**In-1**	**115**		ug/L			7349	7192	2	KED
|	**Cd**	**111**	**20.139**	ug/L	0.782	3	3	5096	2	KED
⌊	**Cd**	**114**	**20.025**	ug/L	0.834	4	6	13048	1	KED
⌈>	**In**	**115**		ug/L			429903	420633	1	Standard
|	**Ag**	**107**	**19.863**	ug/L	0.545	2	25	334737	2	Standard
|	**Sb**	**121**	**19.847**	ug/L	0.291	1	233	250545	2	Standard
|	**Sb**	**123**	**19.872**	ug/L	0.604	3	162	193326	2	Standard
|	**Ba**	**135**	**19.841**	ug/L	0.328	1	14	110105	0	Standard
⌊	**Ba**	**137**	**19.821**	ug/L	0.182	0	22	201920	1	Standard
⌈>	**Tb**	**159**		ug/L			185011	184496	1	Standard
⌊	**Pb**	**208**	**19.999**	ug/L	0.501	2	121	1314594	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:38:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	17237	3	Standard
⌈>	**Sc**	**45**		ug/L			572689	574437	4	Standard
|	**Cr**	**52**	**49.845**	ug/L	1.137	2	17437	748082	3	Standard
|	**Cr**	**53**	**49.545**	ug/L	0.848	1	140	82172	4	Standard
⌊	**Mn**	**55**	**49.588**	ug/L	0.925	1	280	1037256	3	Standard
⌈>	**Ge**	**72**		ug/L			33867	32834	0	KED
|	**Ni**	**60**	**50.015**	ug/L	0.923	1	17	76117	1	KED
|	**Ni**	**62**	**50.067**	ug/L	0.705	1	4	12346	1	KED
|	**Cu**	**63**	**49.936**	ug/L	1.358	2	49	218244	2	KED
|	**Cu**	**65**	**49.700**	ug/L	1.290	2	10	109629	2	KED
|	**Zn**	**66**	**49.802**	ug/L	0.642	1	20	25055	1	KED
|	**Zn**	**67**	**50.133**	ug/L	1.494	2	6	4384	2	KED
|	**As**	**75**	**50.030**	ug/L	0.355	0	1	13036	0	KED
⌊	**Se**	**78**	**49.947**	ug/L	1.197	2	11	1145	2	KED
	Kr	**83**		ug/L			43	55	12	Standard
⌈>	**In-1**	**115**		ug/L			7349	6890	3	KED
|	**Cd**	**111**	**49.924**	ug/L	2.009	4	3	12002	1	KED
⌊	**Cd**	**114**	**49.935**	ug/L	1.952	3	6	30969	3	KED
⌈>	**In**	**115**		ug/L			429903	410440	0	Standard
|	**Ag**	**107**	**49.854**	ug/L	0.376	0	25	808032	0	Standard
|	**Sb**	**121**	**49.881**	ug/L	0.223	0	233	606866	0	Standard
|	**Sb**	**123**	**49.791**	ug/L	0.834	1	162	462864	1	Standard
|	**Ba**	**135**	**49.468**	ug/L	1.833	3	14	254342	3	Standard
⌊	**Ba**	**137**	**49.822**	ug/L	0.467	0	22	486564	0	Standard
⌈>	**Tb**	**159**		ug/L			185011	177212	2	Standard
⌊	**Pb**	**208**	**49.833**	ug/L	0.899	1	121	3094307	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:45:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	22327	10	Standard
⌈>	**Sc**	**45**		ug/L			572689	570052	4	Standard
|	**Cr**	**52**	**100.241**	ug/L	0.948	0	17437	1487389	3	Standard
|	**Cr**	**53**	**101.102**	ug/L	1.787	1	140	172492	2	Standard
⌊	**Mn**	**55**	**102.277**	ug/L	1.404	1	280	2297193	3	Standard
⌈>	**Ge**	**72**		ug/L			33867	33465	1	KED
|	**Ni**	**60**	**99.717**	ug/L	2.302	2	17	153211	2	KED
|	**Ni**	**62**	**99.047**	ug/L	0.194	0	4	24125	1	KED
|	**Cu**	**63**	**99.582**	ug/L	0.817	0	49	437436	2	KED
|	**Cu**	**65**	**99.366**	ug/L	2.633	2	10	218728	2	KED
|	**Zn**	**66**	**99.862**	ug/L	3.829	3	20	50969	5	KED
|	**Zn**	**67**	**98.989**	ug/L	0.975	0	6	8532	1	KED
|	**As**	**75**	**100.110**	ug/L	1.683	1	1	26677	0	KED
⌊	**Se**	**78**	**100.360**	ug/L	3.937	3	11	2361	4	KED
	Kr	**83**		ug/L			43	64	11	Standard
⌈>	**In-1**	**115**		ug/L			7349	7204	1	KED
|	**Cd**	**111**	**99.799**	ug/L	1.626	1	3	24934	0	KED
⌊	**Cd**	**114**	**99.752**	ug/L	1.852	1	6	64169	1	KED
⌈>	**In**	**115**		ug/L			429903	388495	1	Standard
|	**Ag**	**107**	**100.886**	ug/L	2.692	2	25	1595009	3	Standard
|	**Sb**	**121**	**100.565**	ug/L	3.110	3	233	1179894	2	Standard
|	**Sb**	**123**	**100.524**	ug/L	1.215	1	162	900163	2	Standard
|	**Ba**	**135**	**99.327**	ug/L	2.429	2	14	472840	3	Standard
⌊	**Ba**	**137**	**99.210**	ug/L	2.406	2	22	893715	3	Standard
⌈>	**Tb**	**159**		ug/L			185011	174710	1	Standard
⌊	**Pb**	**208**	**100.113**	ug/L	2.447	2	121	6151231	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:52:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19570	7	Standard
⌈>	**Sc**	**45**		ug/L			572689	603475	3	Standard
|	**Cr**	**52**	**0.014**	ug/L	0.028	200	17437	18594	4	Standard
|	**Cr**	**53**	**0.013**	ug/L	0.009	70	140	171	11	Standard
⌊	**Mn**	**55**	**0.011**	ug/L	0.009	79	280	558	39	Standard
⌈>	**Ge**	**72**		ug/L			33867	35210	2	KED
|	**Ni**	**60**	**0.001**	ug/L	0.002	135	17	20	14	KED
|	**Ni**	**62**	**-0.003**	ug/L	0.013	384	4	3	86	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.001	41	49	37	17	KED
|	**Cu**	**65**	**0.007**	ug/L	0.001	9	10	27	3	KED
|	**Zn**	**66**	**0.007**	ug/L	0.017	247	20	25	33	KED
|	**Zn**	**67**	**-0.003**	ug/L	0.013	458	6	6	15	KED
|	**As**	**75**	**0.005**	ug/L	0.004	74	1	3	34	KED
⌊	**Se**	**78**	**0.018**	ug/L	0.034	184	11	12	8	KED
	Kr	**83**		ug/L			43	45	31	Standard
⌈>	**In-1**	**115**		ug/L			7349	7492	2	KED
|	**Cd**	**111**	**0.008**	ug/L	0.013	155	3	5	60	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	294	6	6	16	KED
⌈>	**In**	**115**		ug/L			429903	417249	1	Standard
|	**Ag**	**107**	**0.013**	ug/L	0.009	66	25	252	60	Standard
|	**Sb**	**121**	**0.106**	ug/L	0.009	8	233	1560	7	Standard
|	**Sb**	**123**	**0.112**	ug/L	0.014	12	162	1235	11	Standard
|	**Ba**	**135**	**0.009**	ug/L	0.006	70	14	60	54	Standard
⌊	**Ba**	**137**	**0.011**	ug/L	0.008	73	22	131	61	Standard
⌈>	**Tb**	**159**		ug/L			185011	180195	2	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.009	81	121	829	70	Standard

Sample Information

Sample Date/Time: Friday, May 19, 2023 14:45:22
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.m
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Sc	45							
Cr	52	**1.0000**	0.026	0.50	10	20	50	100
Cr	53	**0.9998**	0.003	0.50	10	20	50	100
Mn	55	**0.9991**	0.039	0.50	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.046	0.50	10	20	50	100
Ni	62	**0.9998**	0.007	0.50	10	20	50	100
Cu	63	**1.0000**	0.131	0.50	10	20	50	100
Cu	65	**0.9999**	0.066	0.50	10	20	50	100
Zn	66	**1.0000**	0.015	6.00	10	20	50	100
Zn	67	**0.9998**	0.003	6.00	10	20	50	100
As	75	**1.0000**	0.008	0.20	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Kr	83							
In-1	115							
Cd	111	**1.0000**	0.035	0.10	10	20	50	100
Cd	114	**1.0000**	0.089	0.10	10	20	50	100
In	115							
Ag	107	**0.9999**	0.041	0.20	10	20	50	100
Sb	121	**0.9999**	0.030	0.20	10	20	50	100
Sb	123	**0.9999**	0.023	0.20	10	20	50	100
Ba	135	**0.9999**	0.012	0.50	10	20	50	100
Ba	137	**0.9999**	0.023	0.50	10	20	50	100
Tb	159							
Pb	208	**1.0000**	0.352	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:59:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	22346	3	Standard
⌈>	**Sc**	**45**		ug/L			572689	586432	3	Standard
|	**Cr**	**52**	**50.986**	ug/L	0.606	1	17437	787049	2	Standard
|	**Cr**	**53**	**50.393**	ug/L	1.119	2	140	88593	5	Standard
⌊	**Mn**	**55**	**48.804**	ug/L	1.384	2	280	1128444	5	Standard
⌈>	**Ge**	**72**		ug/L			33867	34193	1	KED
|	**Ni**	**60**	**51.320**	ug/L	1.628	3	17	80557	2	KED
|	**Ni**	**62**	**52.641**	ug/L	1.414	2	4	13105	3	KED
|	**Cu**	**63**	**51.902**	ug/L	1.932	3	49	232916	2	KED
|	**Cu**	**65**	**51.803**	ug/L	1.183	2	10	116522	1	KED
|	**Zn**	**66**	**49.342**	ug/L	1.311	2	20	25734	2	KED
|	**Zn**	**67**	**49.483**	ug/L	1.744	3	6	4360	2	KED
|	**As**	**75**	**47.947**	ug/L	0.511	1	1	13057	0	KED
⌊	**Se**	**78**	**77.027**	ug/L	1.135	1	11	1854	1	KED
	Kr	**83**		ug/L			43	66	22	Standard
⌈>	**In-1**	**115**		ug/L			7349	7453	1	KED
|	**Cd**	**111**	**49.096**	ug/L	0.559	1	3	12692	1	KED
⌊	**Cd**	**114**	**48.705**	ug/L	0.730	1	6	32418	0	KED
⌈>	**In**	**115**		ug/L			429903	398548	4	Standard
|	**Ag**	**107**	**52.393**	ug/L	0.876	1	25	849269	2	Standard
|	**Sb**	**121**	**50.796**	ug/L	3.135	6	233	610591	2	Standard
|	**Sb**	**123**	**51.282**	ug/L	3.118	6	162	470395	2	Standard
|	**Ba**	**135**	**52.928**	ug/L	2.694	5	14	258089	1	Standard
⌊	**Ba**	**137**	**52.516**	ug/L	2.381	4	22	484692	2	Standard
⌈>	**Tb**	**159**		ug/L			185011	179253	1	Standard
⌊	**Pb**	**208**	**49.726**	ug/L	0.807	1	121	3135309	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:06:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	18589	5	Standard
⌈>	**Sc**	**45**		ug/L			572689	605979	4	Standard
|	**Cr**	**52**	**0.028**	ug/L	0.020	72	17437	18884	4	Standard
|	**Cr**	**53**	**0.000**	ug/L	0.003	938	140	149	7	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.000	22	280	322	5	Standard
⌈>	**Ge**	**72**		ug/L			33867	35683	3	KED
|	**Ni**	**60**	**-0.003**	ug/L	0.002	65	17	13	24	KED
|	**Ni**	**62**	**0.004**	ug/L	0.013	319	4	5	57	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.002	53	49	34	29	KED
|	**Cu**	**65**	**0.005**	ug/L	0.002	44	10	23	24	KED
|	**Zn**	**66**	**0.002**	ug/L	0.010	625	20	22	22	KED
|	**Zn**	**67**	**-0.025**	ug/L	0.044	178	6	5	78	KED
|	**As**	**75**	**0.010**	ug/L	0.004	36	1	4	22	KED
⌊	**Se**	**78**	**0.050**	ug/L	0.084	168	11	13	15	KED
	Kr	**83**		ug/L			43	45	2	Standard
⌈>	**In-1**	**115**		ug/L			7349	7914	0	KED
|	**Cd**	**111**	**0.002**	ug/L	0.005	211	3	4	32	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.003	90	6	4	50	KED
⌈>	**In**	**115**		ug/L			429903	427508	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.000	15	25	54	8	Standard
|	**Sb**	**121**	**0.021**	ug/L	0.003	14	233	507	8	Standard
|	**Sb**	**123**	**0.021**	ug/L	0.001	6	162	368	4	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.002	255	14	19	60	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	109	22	33	35	Standard
⌈>	**Tb**	**159**		ug/L			185011	186223	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	25	121	160	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:11:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	18418	4	Standard
⌈>	**Sc**	**45**		ug/L			572689	614501	4	Standard
|	**Cr**	**52**	**48.559**	ug/L	0.206	0	17437	786618	4	Standard
|	**Cr**	**53**	**48.741**	ug/L	0.469	0	140	89774	4	Standard
⌊	**Mn**	**55**	**45.390**	ug/L	0.722	1	280	1098972	2	Standard
⌈>	**Ge**	**72**		ug/L			33867	35342	1	KED
|	**Ni**	**60**	**50.182**	ug/L	0.776	1	17	81440	2	KED
|	**Ni**	**62**	**50.853**	ug/L	1.027	2	4	13082	1	KED
|	**Cu**	**63**	**50.120**	ug/L	1.175	2	49	232496	1	KED
|	**Cu**	**65**	**50.179**	ug/L	0.631	1	10	116676	1	KED
|	**Zn**	**66**	**50.118**	ug/L	0.936	1	20	27015	1	KED
|	**Zn**	**67**	**49.534**	ug/L	0.763	1	6	4512	1	KED
|	**As**	**75**	**49.961**	ug/L	1.194	2	1	14061	1	KED
⌊	**Se**	**78**	**49.895**	ug/L	1.926	3	11	1245	2	KED
	Kr	**83**		ug/L			43	41	16	Standard
⌈>	**In-1**	**115**		ug/L			7349	7674	1	KED
|	**Cd**	**111**	**49.405**	ug/L	1.070	2	3	13149	1	KED
⌊	**Cd**	**114**	**48.071**	ug/L	0.933	1	6	32943	1	KED
⌈>	**In**	**115**		ug/L			429903	410333	2	Standard
|	**Ag**	**107**	**50.855**	ug/L	0.444	0	25	849057	2	Standard
|	**Sb**	**121**	**49.186**	ug/L	1.021	2	233	609558	0	Standard
|	**Sb**	**123**	**49.197**	ug/L	1.222	2	162	465431	4	Standard
|	**Ba**	**135**	**50.371**	ug/L	1.042	2	14	253312	4	Standard
⌊	**Ba**	**137**	**50.441**	ug/L	1.959	3	22	479633	2	Standard
⌈>	**Tb**	**159**		ug/L			185011	183453	4	Standard
⌊	**Pb**	**208**	**49.290**	ug/L	1.803	3	121	3177638	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:18:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	18844	4	Standard
⌈>	**Sc**	**45**		ug/L			572689	609815	4	Standard
|	**Cr**	**52**	**0.067**	ug/L	0.036	53	17437	19621	4	Standard
|	**Cr**	**53**	**0.015**	ug/L	0.029	198	140	176	29	Standard
⌊	**Mn**	**55**	**0.021**	ug/L	0.026	119	280	810	74	Standard
⌈>	**Ge**	**72**		ug/L			33867	36371	0	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.001	36	17	15	6	KED
|	**Ni**	**62**	**0.008**	ug/L	0.011	131	4	6	41	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.002	148	49	47	17	KED
|	**Cu**	**65**	**0.006**	ug/L	0.001	8	10	25	4	KED
|	**Zn**	**66**	**0.027**	ug/L	0.024	87	20	37	34	KED
|	**Zn**	**67**	**-0.012**	ug/L	0.043	350	6	6	62	KED
|	**As**	**75**	**0.009**	ug/L	0.003	36	1	4	22	KED
⌊	**Se**	**78**	**-0.023**	ug/L	0.095	406	11	11	20	KED
	Kr	**83**		ug/L			43	43	14	Standard
⌈>	**In-1**	**115**		ug/L			7349	7952	0	KED
|	**Cd**	**111**	**0.007**	ug/L	0.010	147	3	5	50	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.004	77	6	3	96	KED
⌈>	**In**	**115**		ug/L			429903	430191	3	Standard
|	**Ag**	**107**	**0.022**	ug/L	0.025	113	25	408	105	Standard
|	**Sb**	**121**	**0.084**	ug/L	0.035	41	233	1315	31	Standard
|	**Sb**	**123**	**0.084**	ug/L	0.030	36	162	987	27	Standard
|	**Ba**	**135**	**0.026**	ug/L	0.034	130	14	149	116	Standard
⌊	**Ba**	**137**	**0.020**	ug/L	0.027	133	22	215	119	Standard
⌈>	**Tb**	**159**		ug/L			185011	183219	2	Standard
⌊	**Pb**	**208**	**0.023**	ug/L	0.031	135	121	1537	122	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:25:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	21975	6	Standard
⌈>	**Sc**	**45**		ug/L			572689	611503	3	Standard
|	**Cr**	**52**	**0.580**	ug/L	0.053	9	17437	27752	4	Standard
|	**Cr**	**53**	**0.497**	ug/L	0.013	2	140	1059	3	Standard
⌊	**Mn**	**55**	**0.479**	ug/L	0.019	3	280	11840	3	Standard
⌈>	**Ge**	**72**		ug/L			33867	36151	1	KED
|	**Ni**	**60**	**0.491**	ug/L	0.014	2	17	833	2	KED
|	**Ni**	**62**	**0.571**	ug/L	0.035	6	4	154	6	KED
|	**Cu**	**63**	**0.541**	ug/L	0.031	5	49	2621	5	KED
|	**Cu**	**65**	**0.580**	ug/L	0.008	1	10	1391	0	KED
|	**Zn**	**66**	**6.378**	ug/L	0.219	3	20	3535	1	KED
|	**Zn**	**67**	**5.428**	ug/L	0.448	8	6	513	10	KED
|	**As**	**75**	**0.201**	ug/L	0.025	12	1	59	10	KED
⌊	**Se**	**78**	**0.699**	ug/L	0.235	33	11	30	18	KED
	Kr	**83**		ug/L			43	41	25	Standard
⌈>	**In-1**	**115**		ug/L			7349	7873	1	KED
|	**Cd**	**111**	**0.099**	ug/L	0.027	26	3	30	21	KED
⌊	**Cd**	**114**	**0.099**	ug/L	0.012	12	6	76	10	KED
⌈>	**In**	**115**		ug/L			429903	433276	1	Standard
|	**Ag**	**107**	**0.204**	ug/L	0.007	3	25	3613	1	Standard
|	**Sb**	**121**	**0.203**	ug/L	0.008	4	233	2892	5	Standard
|	**Sb**	**123**	**0.208**	ug/L	0.004	2	162	2240	0	Standard
|	**Ba**	**135**	**0.520**	ug/L	0.017	3	14	2772	3	Standard
⌊	**Ba**	**137**	**0.509**	ug/L	0.009	1	22	5133	2	Standard
⌈>	**Tb**	**159**		ug/L			185011	183395	2	Standard
⌊	**Pb**	**208**	**0.111**	ug/L	0.000	0	121	7257	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:33:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18596	55951	7	Standard
>	Sc	45		ug/L			572689	489744	3	Standard
	Cr	52	0.846	ug/L	0.036	4	17437	25569	3	Standard
	Cr	53	2.606	ug/L	0.130	4	140	3941	7	Standard
	Mn	55	0.076	ug/L	0.007	9	280	1708	6	Standard
>	Ge	72		ug/L			33867	30272	1	KED
	Ni	60	0.097	ug/L	0.016	16	17	150	15	KED
	Ni	62	0.129	ug/L	0.062	48	4	32	42	KED
	Cu	63	0.026	ug/L	0.004	13	49	149	8	KED
	Cu	65	0.034	ug/L	0.001	3	10	78	4	KED
	Zn	66	0.234	ug/L	0.037	15	20	126	12	KED
	Zn	67	0.132	ug/L	0.064	48	6	16	29	KED
	As	75	0.041	ug/L	0.007	16	1	11	15	KED
	Se	78	0.208	ug/L	0.101	48	11	14	13	KED
	Kr	83		ug/L			43	73	12	Standard
>	In-1	115		ug/L			7349	6677	1	KED
	Cd	111	0.062	ug/L	0.017	28	3	17	22	KED
	Cd	114	0.044	ug/L	0.012	26	6	32	21	KED
>	In	115		ug/L			429903	374851	0	Standard
	Ag	107	0.005	ug/L	0.000	8	25	91	6	Standard
	Sb	121	0.035	ug/L	0.001	3	233	596	2	Standard
	Sb	123	0.034	ug/L	0.003	8	162	435	6	Standard
	Ba	135	0.126	ug/L	0.013	9	14	590	10	Standard
	Ba	137	0.105	ug/L	0.000	0	22	928	0	Standard
>	Tb	159		ug/L			185011	161931	1	Standard
	Pb	208	0.019	ug/L	0.001	4	121	1170	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:38:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	60786	7	Standard
⌈>	**Sc**	**45**		ug/L			572689	518191	4	Standard
|	**Cr**	**52**	**20.261**	ug/L	0.222	1	17437	285848	3	Standard
|	**Cr**	**53**	**22.014**	ug/L	0.160	0	140	34250	3	Standard
⌊	**Mn**	**55**	**18.723**	ug/L	0.417	2	280	382353	2	Standard
⌈>	**Ge**	**72**		ug/L			33867	30213	0	KED
|	**Ni**	**60**	**19.427**	ug/L	0.214	1	17	26960	1	KED
|	**Ni**	**62**	**20.004**	ug/L	0.993	4	4	4401	4	KED
|	**Cu**	**63**	**19.852**	ug/L	0.558	2	49	78769	3	KED
|	**Cu**	**65**	**19.817**	ug/L	0.549	2	10	39400	3	KED
|	**Zn**	**66**	**18.296**	ug/L	0.176	0	20	8443	0	KED
|	**Zn**	**67**	**16.789**	ug/L	0.570	3	6	1311	3	KED
|	**As**	**75**	**19.519**	ug/L	0.254	1	1	4698	1	KED
⌊	**Se**	**78**	**0.130**	ug/L	0.020	15	11	13	3	KED
	Kr	**83**		ug/L			43	78	21	Standard
⌈>	**In-1**	**115**		ug/L			7349	6631	3	KED
|	**Cd**	**111**	**18.800**	ug/L	0.691	3	3	4322	0	KED
⌊	**Cd**	**114**	**18.485**	ug/L	0.217	1	6	10949	3	KED
⌈>	**In**	**115**		ug/L			429903	377748	2	Standard
|	**Ag**	**107**	**16.915**	ug/L	0.339	2	25	259939	0	Standard
|	**Sb**	**121**	**0.021**	ug/L	0.003	14	233	443	8	Standard
|	**Sb**	**123**	**0.028**	ug/L	0.002	8	162	383	6	Standard
|	**Ba**	**135**	**0.126**	ug/L	0.010	7	14	594	6	Standard
⌊	**Ba**	**137**	**0.104**	ug/L	0.008	8	22	927	5	Standard
⌈>	**Tb**	**159**		ug/L			185011	165679	2	Standard
⌊	**Pb**	**208**	**0.018**	ug/L	0.001	8	121	1158	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:43:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19500	4	Standard
⎡>	**Sc**	**45**		ug/L			572689	541523	5	Standard
|	**Cr**	**52**	**212.099**	ug/L	1.787	0	17437	2971421	4	Standard
|	**Cr**	**53**	**198.801**	ug/L	2.387	1	140	322108	3	Standard
⎣	**Mn**	**55**	**199.945**	ug/L	4.685	2	280	4264035	2	Standard
⎡>	**Ge**	**72**		ug/L			33867	31455	1	KED
|	**Ni**	**60**	**195.931**	ug/L	5.545	2	17	282885	1	KED
|	**Ni**	**62**	**194.272**	ug/L	1.271	0	4	44472	1	KED
|	**Cu**	**63**	**188.329**	ug/L	2.938	1	49	777468	0	KED
|	**Cu**	**65**	**191.218**	ug/L	1.749	0	10	395673	0	KED
|	**Zn**	**66**	**188.767**	ug/L	3.786	2	20	90515	2	KED
|	**Zn**	**67**	**185.945**	ug/L	3.918	2	6	15056	0	KED
|	**As**	**75**	**199.996**	ug/L	3.579	1	1	50097	1	KED
⎣	**Se**	**78**	**192.755**	ug/L	4.440	2	11	4252	1	KED
	Kr	**83**		ug/L			43	74	21	Standard
⎡>	**In-1**	**115**		ug/L			7349	7117	1	KED
|	**Cd**	**111**	**188.608**	ug/L	3.123	1	3	46549	0	KED
⎣	**Cd**	**114**	**186.588**	ug/L	3.821	2	6	118572	1	KED
⎡>	**In**	**115**		ug/L			429903	361899	1	Standard
|	**Ag**	**107**	**213.921**	ug/L	1.488	0	25	3150334	2	Standard
|	**Sb**	**121**	**214.435**	ug/L	7.916	3	233	2343016	2	Standard
|	**Sb**	**123**	**201.544**	ug/L	2.607	1	162	1680692	0	Standard
|	**Ba**	**135**	**187.953**	ug/L	2.565	1	14	833226	0	Standard
⎣	**Ba**	**137**	**180.313**	ug/L	5.080	2	22	1512420	1	Standard
⎡>	**Tb**	**159**		ug/L			185011	161591	1	Standard
⎣	**Pb**	**208**	**204.856**	ug/L	1.808	0	121	11644018	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:48:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18596	20128	5	Standard
>	Sc	45		ug/L			572689	554530	4	Standard
	Cr	52	316.510	ug/L	7.974	2	17437	4530964	3	Standard
	Cr	53	294.005	ug/L	2.911	0	140	487817	3	Standard
	Mn	55	291.784	ug/L	4.264	1	280	6374441	3	Standard
>	Ge	72		ug/L			33867	31687	1	KED
	Ni	60	288.697	ug/L	5.411	1	17	419883	0	KED
	Ni	62	287.471	ug/L	10.985	3	4	66261	2	KED
	Cu	63	277.370	ug/L	7.801	2	49	1153234	1	KED
	Cu	65	280.458	ug/L	3.743	1	10	584571	0	KED
	Zn	66	277.870	ug/L	2.036	0	20	134202	1	KED
	Zn	67	276.574	ug/L	4.308	1	6	22558	1	KED
	As	75	302.313	ug/L	4.891	1	1	76276	0	KED
	Se	78	288.981	ug/L	8.618	2	11	6415	1	KED
	Kr	83		ug/L			43	149	11	Standard
>	In-1	115		ug/L			7349	6898	2	KED
	Cd	111	284.282	ug/L	7.860	2	3	67980	1	KED
	Cd	114	280.011	ug/L	7.737	2	6	172404	1	KED
>	In	115		ug/L			429903	345046	2	Standard
	Ag	107	328.951	ug/L	11.092	3	25	4615744	1	Standard
	Sb	121	317.135	ug/L	7.698	2	233	3303393	0	Standard
	Sb	123	328.924	ug/L	10.350	3	162	2614003	0	Standard
	Ba	135	270.473	ug/L	15.737	5	14	1142339	3	Standard
	Ba	137	274.156	ug/L	5.944	2	22	2192202	0	Standard
>	Tb	159		ug/L			185011	142873	2	Standard
	Pb	208	323.757	ug/L	6.845	2	121	16268399	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:55:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	20672	3	Standard
>	**Sc**	**45**		ug/L			572689	634662	3	Standard
	Cr	**52**	**0.083**	ug/L	0.024	29	17437	20671	2	Standard
	Cr	**53**	**0.025**	ug/L	0.005	18	140	203	7	Standard
	Mn	**55**	**0.017**	ug/L	0.001	5	280	739	6	Standard
>	**Ge**	**72**		ug/L			33867	36450	2	KED
	Ni	**60**	**0.015**	ug/L	0.006	38	17	44	23	KED
	Ni	**62**	**0.033**	ug/L	0.038	117	4	13	74	KED
	Cu	**63**	**0.029**	ug/L	0.002	5	49	191	5	KED
	Cu	**65**	**0.033**	ug/L	0.009	28	10	90	27	KED
	Zn	**66**	**0.287**	ug/L	0.049	17	20	182	15	KED
	Zn	**67**	**0.232**	ug/L	0.069	29	6	29	20	KED
	As	**75**	**0.019**	ug/L	0.006	31	1	7	24	KED
	Se	**78**	**0.043**	ug/L	0.107	246	11	13	19	KED
	Kr	**83**		ug/L			43	46	19	Standard
>	**In-1**	**115**		ug/L			7349	8077	3	KED
	Cd	**111**	**0.016**	ug/L	0.020	126	3	8	65	KED
	Cd	**114**	**0.005**	ug/L	0.013	248	6	10	84	KED
>	**In**	**115**		ug/L			429903	406967	2	Standard
	Ag	**107**	**0.008**	ug/L	0.001	8	25	158	9	Standard
	Sb	**121**	**0.269**	ug/L	0.014	5	233	3528	6	Standard
	Sb	**123**	**0.274**	ug/L	0.017	6	162	2720	5	Standard
	Ba	**135**	**0.046**	ug/L	0.007	14	14	244	10	Standard
	Ba	**137**	**0.049**	ug/L	0.002	3	22	481	1	Standard
>	**Tb**	**159**		ug/L			185011	181165	0	Standard
	Pb	**208**	**0.010**	ug/L	0.001	7	121	724	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:03:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	21589	4	Standard
⌈>	**Sc**	**45**		ug/L			572689	648065	3	Standard
|	**Cr**	**52**	**0.064**	ug/L	0.029	45	17437	20784	2	Standard
|	**Cr**	**53**	**0.016**	ug/L	0.002	12	140	190	4	Standard
⌊	**Mn**	**55**	**0.015**	ug/L	0.001	4	280	693	1	Standard
⌈>	**Ge**	**72**		ug/L			33867	38995	0	KED
|	**Ni**	**60**	**0.017**	ug/L	0.007	41	17	50	24	KED
|	**Ni**	**62**	**0.034**	ug/L	0.022	65	4	14	41	KED
|	**Cu**	**63**	**0.028**	ug/L	0.003	12	49	198	8	KED
|	**Cu**	**65**	**0.026**	ug/L	0.003	10	10	80	8	KED
|	**Zn**	**66**	**0.432**	ug/L	0.099	22	20	281	21	KED
|	**Zn**	**67**	**0.382**	ug/L	0.095	24	6	46	20	KED
|	**As**	**75**	**0.013**	ug/L	0.004	32	1	5	22	KED
⌊	**Se**	**78**	**0.010**	ug/L	0.042	408	11	13	9	KED
	Kr	**83**		ug/L			43	51	3	Standard
⌈>	**In-1**	**115**		ug/L			7349	8582	3	KED
|	**Cd**	**111**	**0.004**	ug/L	0.009	246	3	5	47	KED
⌊	**Cd**	**114**	**-0.006**	ug/L	0.001	21	6	2	36	KED
⌈>	**In**	**115**		ug/L			429903	404031	1	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	37	25	71	25	Standard
|	**Sb**	**121**	**0.089**	ug/L	0.006	6	233	1299	4	Standard
|	**Sb**	**123**	**0.091**	ug/L	0.007	7	162	997	5	Standard
|	**Ba**	**135**	**0.052**	ug/L	0.001	1	14	273	2	Standard
⌊	**Ba**	**137**	**0.052**	ug/L	0.006	11	22	511	10	Standard
⌈>	**Tb**	**159**		ug/L			185011	187989	1	Standard
⌊	**Pb**	**208**	**0.008**	ug/L	0.000	5	121	684	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:09:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19491	4	Standard
⌈>	**Sc**	**45**		ug/L			572689	644788	5	Standard
|	**Cr**	**52**	**48.513**	ug/L	0.718	1	17437	824266	4	Standard
|	**Cr**	**53**	**48.375**	ug/L	1.031	2	140	93409	3	Standard
⌊	**Mn**	**55**	**44.806**	ug/L	0.823	1	280	1138162	4	Standard
⌈>	**Ge**	**72**		ug/L			33867	38738	0	KED
|	**Ni**	**60**	**48.028**	ug/L	1.495	3	17	85431	3	KED
|	**Ni**	**62**	**48.250**	ug/L	1.256	2	4	13607	2	KED
|	**Cu**	**63**	**48.128**	ug/L	0.810	1	49	244758	1	KED
|	**Cu**	**65**	**48.476**	ug/L	0.609	1	10	123552	1	KED
|	**Zn**	**66**	**48.737**	ug/L	0.311	0	20	28798	0	KED
|	**Zn**	**67**	**48.666**	ug/L	0.773	1	6	4859	1	KED
|	**As**	**75**	**49.484**	ug/L	0.285	0	1	15267	0	KED
⌊	**Se**	**78**	**50.075**	ug/L	0.904	1	11	1370	1	KED
	Kr	**83**		ug/L			43	50	9	Standard
⌈>	**In-1**	**115**		ug/L			7349	8308	2	KED
|	**Cd**	**111**	**46.323**	ug/L	1.118	2	3	13345	0	KED
⌊	**Cd**	**114**	**47.675**	ug/L	1.563	3	6	35355	0	KED
⌈>	**In**	**115**		ug/L			429903	409167	2	Standard
|	**Ag**	**107**	**51.215**	ug/L	2.105	4	25	852040	1	Standard
|	**Sb**	**121**	**47.425**	ug/L	1.273	2	233	585960	1	Standard
|	**Sb**	**123**	**48.584**	ug/L	0.893	1	162	458097	1	Standard
|	**Ba**	**135**	**49.387**	ug/L	0.954	1	14	247511	2	Standard
⌊	**Ba**	**137**	**48.884**	ug/L	0.647	1	22	463811	4	Standard
⌈>	**Tb**	**159**		ug/L			185011	179856	2	Standard
⌊	**Pb**	**208**	**47.512**	ug/L	1.089	2	121	3005099	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:16:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19721	8	Standard
⌈>	**Sc**	**45**		ug/L			572689	674240	0	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.055	1290	17437	20452	4	Standard
|	**Cr**	**53**	**0.006**	ug/L	0.007	121	140	177	7	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	293	280	335	4	Standard
⌈>	**Ge**	**72**		ug/L			33867	40769	1	KED
|	**Ni**	**60**	**-0.004**	ug/L	0.001	30	17	14	15	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.007	820	4	5	43	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.000	28	49	50	4	KED
|	**Cu**	**65**	**0.002**	ug/L	0.004	155	10	19	53	KED
|	**Zn**	**66**	**0.008**	ug/L	0.008	94	20	30	16	KED
|	**Zn**	**67**	**-0.044**	ug/L	0.032	72	6	3	86	KED
|	**As**	**75**	**0.009**	ug/L	0.007	71	1	4	43	KED
⌊	**Se**	**78**	**0.132**	ug/L	0.154	116	11	17	23	KED
	Kr	**83**		ug/L			43	41	23	Standard
⌈>	**In-1**	**115**		ug/L			7349	8569	2	KED
|	**Cd**	**111**	**0.002**	ug/L	0.011	514	3	4	72	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.004	158	6	9	34	KED
⌈>	**In**	**115**		ug/L			429903	415220	3	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.000	12	25	67	10	Standard
|	**Sb**	**121**	**0.089**	ug/L	0.006	6	233	1341	2	Standard
|	**Sb**	**123**	**0.094**	ug/L	0.008	8	162	1055	4	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.000	223	14	13	14	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	106	22	27	21	Standard
⌈>	**Tb**	**159**		ug/L			185011	189644	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	59	121	191	19	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:24:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				18600	1	Standard
⎡>	**Sc**	**45**		ug/L				666809	3	Standard
⎢	**Cr**	**52**		ug/L				20488	1	Standard
⎢	**Cr**	**53**		ug/L				165	8	Standard
⎣	**Mn**	**55**		ug/L				366	3	Standard
⎡>	**Ge**	**72**		ug/L				39632	1	KED
⎢	**Ni**	**60**		ug/L				20	59	KED
⎢	**Ni**	**62**		ug/L				5	100	KED
⎢	**Cu**	**63**		ug/L				52	52	KED
⎢	**Cu**	**65**		ug/L				33	28	KED
⎢	**Zn**	**66**		ug/L				27	33	KED
⎢	**Zn**	**67**		ug/L				4	65	KED
⎢	**As**	**75**		ug/L				4	10	KED
⎣	**Se**	**78**		ug/L				13	12	KED
	Kr	**83**		ug/L				57	14	Standard
⎡>	**In-1**	**115**		ug/L				8321	0	KED
⎢	**Cd**	**111**		ug/L				5	10	KED
⎣	**Cd**	**114**		ug/L				3	87	KED
⎡>	**In**	**115**		ug/L				411513	0	Standard
⎢	**Ag**	**107**		ug/L				48	2	Standard
⎢	**Sb**	**121**		ug/L				601	6	Standard
⎢	**Sb**	**123**		ug/L				476	9	Standard
⎢	**Ba**	**135**		ug/L				12	39	Standard
⎣	**Ba**	**137**		ug/L				19	5	Standard
⎡>	**Tb**	**159**		ug/L				183140	2	Standard
⎣	**Pb**	**208**		ug/L				177	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:29:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	18966	6	Standard
⌈>	**Sc**	**45**		ug/L			666809	656065	4	Standard
|	**Cr**	**52**	**48.877**	ug/L	1.036	2	20488	844821	2	Standard
|	**Cr**	**53**	**48.337**	ug/L	0.993	2	165	95033	4	Standard
⌊	**Mn**	**55**	**46.083**	ug/L	1.596	3	366	1190714	1	Standard
⌈>	**Ge**	**72**		ug/L			39632	38442	0	KED
|	**Ni**	**60**	**49.050**	ug/L	1.226	2	20	86579	2	KED
|	**Ni**	**62**	**49.317**	ug/L	0.615	1	5	13802	1	KED
|	**Cu**	**63**	**49.394**	ug/L	1.646	3	52	249277	3	KED
|	**Cu**	**65**	**49.169**	ug/L	0.542	1	33	124384	1	KED
|	**Zn**	**66**	**50.016**	ug/L	0.492	0	27	29330	0	KED
|	**Zn**	**67**	**48.393**	ug/L	1.363	2	4	4791	2	KED
|	**As**	**75**	**50.002**	ug/L	0.828	1	4	15312	1	KED
⌊	**Se**	**78**	**48.882**	ug/L	1.322	2	13	1327	2	KED
	Kr	**83**		ug/L			57	43	13	Standard
⌈>	**In-1**	**115**		ug/L			8321	8350	1	KED
|	**Cd**	**111**	**47.297**	ug/L	1.732	3	5	13695	2	KED
⌊	**Cd**	**114**	**46.951**	ug/L	0.902	1	3	35004	0	KED
⌈>	**In**	**115**		ug/L			411513	410483	1	Standard
|	**Ag**	**107**	**51.499**	ug/L	1.562	3	48	859887	1	Standard
|	**Sb**	**121**	**48.099**	ug/L	1.611	3	601	596649	1	Standard
|	**Sb**	**123**	**48.823**	ug/L	0.680	1	476	462224	0	Standard
|	**Ba**	**135**	**49.439**	ug/L	1.555	3	12	248550	1	Standard
⌊	**Ba**	**137**	**48.674**	ug/L	0.685	1	19	463144	0	Standard
⌈>	**Tb**	**159**		ug/L			183140	183699	4	Standard
⌊	**Pb**	**208**	**47.966**	ug/L	2.028	4	177	3096075	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:36:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	18429	7	Standard
⌈>	**Sc**	**45**		ug/L			666809	665445	2	Standard
|	**Cr**	**52**	**0.030**	ug/L	0.013	41	20488	20962	2	Standard
|	**Cr**	**53**	**-0.007**	ug/L	0.005	68	165	150	9	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.000	131	366	367	2	Standard
⌈>	**Ge**	**72**		ug/L			39632	38682	0	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.002	110	20	17	22	KED
|	**Ni**	**62**	**-0.009**	ug/L	0.010	121	5	3	91	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	235	52	53	14	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.004	218	33	27	40	KED
|	**Zn**	**66**	**0.001**	ug/L	0.003	295	27	27	7	KED
|	**Zn**	**67**	**-0.018**	ug/L	0.022	123	4	2	86	KED
|	**As**	**75**	**-0.002**	ug/L	0.001	59	4	4	6	KED
⌊	**Se**	**78**	**0.147**	ug/L	0.075	51	13	17	11	KED
	Kr	**83**		ug/L			57	53	14	Standard
⌈>	**In-1**	**115**		ug/L			8321	8640	1	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.018	304	5	3	150	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	187	3	5	59	KED
⌈>	**In**	**115**		ug/L			411513	422776	2	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	233	48	55	22	Standard
|	**Sb**	**121**	**0.044**	ug/L	0.006	12	601	1178	4	Standard
|	**Sb**	**123**	**0.038**	ug/L	0.004	11	476	860	4	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.002	192	12	16	48	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	125	19	27	34	Standard
⌈>	**Tb**	**159**		ug/L			183140	189917	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	79	177	206	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0572-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:42:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	30895	3	Standard
>	Sc	45		ug/L			666809	675760	2	Standard
	Cr	52	0.136	ug/L	0.013	9	20488	23130	1	Standard
	Cr	53	0.070	ug/L	0.010	14	165	307	4	Standard
	Mn	55	0.054	ug/L	0.005	8	366	1810	8	Standard
>	Ge	72		ug/L			39632	40713	1	KED
	Ni	60	0.012	ug/L	0.005	38	20	43	19	KED
	Ni	62	-0.003	ug/L	0.008	289	5	5	43	KED
	Cu	63	0.035	ug/L	0.009	25	52	239	19	KED
	Cu	65	0.025	ug/L	0.002	7	33	99	6	KED
	Zn	66	0.700	ug/L	0.078	11	27	462	9	KED
	Zn	67	0.610	ug/L	0.095	15	4	68	15	KED
	As	75	-0.006	ug/L	0.003	53	4	3	32	KED
	Se	78	-0.047	ug/L	0.073	155	13	12	15	KED
	Kr	83		ug/L			57	49	23	Standard
>	In-1	115		ug/L			8321	8665	1	KED
	Cd	111	-0.003	ug/L	0.008	271	5	4	53	KED
	Cd	114	0.001	ug/L	0.003	516	3	4	55	KED
>	In	115		ug/L			411513	428612	1	Standard
	Ag	107	0.000	ug/L	0.001	448	48	54	30	Standard
	Sb	121	0.004	ug/L	0.003	64	601	683	3	Standard
	Sb	123	0.003	ug/L	0.005	167	476	525	10	Standard
	Ba	135	0.096	ug/L	0.006	5	12	514	4	Standard
	Ba	137	0.090	ug/L	0.003	3	19	918	4	Standard
>	Tb	159		ug/L			183140	189629	2	Standard
	Pb	208	0.007	ug/L	0.001	14	177	680	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0572-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:47:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	31180	6	Standard
>	Sc	45		ug/L			666809	662615	2	Standard
	Cr	52	23.820	ug/L	0.771	3	20488	426696	5	Standard
	Cr	53	23.597	ug/L	0.572	2	165	46942	3	Standard
	Mn	55	22.239	ug/L	0.665	2	366	581167	4	Standard
>	Ge	72		ug/L			39632	39545	1	KED
	Ni	60	23.329	ug/L	0.969	4	20	42361	3	KED
	Ni	62	23.907	ug/L	0.694	2	5	6883	1	KED
	Cu	63	23.189	ug/L	0.826	3	52	120366	2	KED
	Cu	65	23.994	ug/L	0.276	1	33	62447	1	KED
	Zn	66	75.975	ug/L	1.898	2	27	45805	1	KED
	Zn	67	72.677	ug/L	1.042	1	4	7400	0	KED
	As	75	23.669	ug/L	0.045	0	4	7458	1	KED
	Se	78	75.693	ug/L	0.888	1	13	2108	2	KED
	Kr	83		ug/L			57	61	6	Standard
>	In-1	115		ug/L			8321	8197	0	KED
	Cd	111	23.844	ug/L	0.435	1	5	6782	1	KED
	Cd	114	23.694	ug/L	0.321	1	3	17347	1	KED
>	In	115		ug/L			411513	402028	2	Standard
	Ag	107	25.502	ug/L	0.515	2	48	417219	2	Standard
	Sb	121	-0.023	ug/L	0.004	16	601	308	16	Standard
	Sb	123	-0.023	ug/L	0.001	3	476	255	1	Standard
	Ba	135	24.084	ug/L	0.841	3	12	118646	4	Standard
	Ba	137	24.055	ug/L	1.705	7	19	223996	5	Standard
>	Tb	159		ug/L			183140	187791	1	Standard
	Pb	208	22.600	ug/L	0.268	1	177	1493002	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-02
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 16:56:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	25263	1	Standard
>	Sc	45		ug/L			666809	605693	5	Standard
	Cr	52	0.784	ug/L	0.010	1	20488	30832	5	Standard
	Cr	53	0.682	ug/L	0.042	6	165	1384	3	Standard
	Mn	55	0.273	ug/L	0.011	4	366	6834	3	Standard
>	Ge	72		ug/L			39632	35336	1	KED
	Ni	60	0.755	ug/L	0.043	5	20	1243	4	KED
	Ni	62	0.750	ug/L	0.074	9	5	198	9	KED
	Cu	63	1.210	ug/L	0.027	2	52	5658	0	KED
	Cu	65	1.235	ug/L	0.053	4	33	2899	3	KED
	Zn	66	0.563	ug/L	0.090	16	27	328	15	KED
	Zn	67	2.849	ug/L	0.327	11	4	262	10	KED
	As	75	0.556	ug/L	0.041	7	4	160	7	KED
	Se	78	0.739	ug/L	0.070	9	13	30	4	KED
	Kr	83		ug/L			57	48	12	Standard
>	In-1	115		ug/L			8321	7726	2	KED
	Cd	111	0.012	ug/L	0.015	126	5	7	49	KED
	Cd	114	0.012	ug/L	0.003	25	3	11	18	KED
>	In	115		ug/L			411513	355501	1	Standard
	Ag	107	-0.000	ug/L	0.001	544	48	40	29	Standard
	Sb	121	2.684	ug/L	0.051	1	601	29331	0	Standard
	Sb	123	2.747	ug/L	0.087	3	476	22906	2	Standard
	Ba	135	25.507	ug/L	0.337	1	12	111090	0	Standard
	Ba	137	24.371	ug/L	0.948	3	19	200825	3	Standard
>	Tb	159		ug/L			183140	157268	2	Standard
	Pb	208	10.028	ug/L	0.175	1	177	554802	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-04
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:01:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	24325	4	Standard
>	Sc	45		ug/L			666809	600024	2	Standard
	Cr	52	0.755	ug/L	0.005	0	20488	30091	3	Standard
	Cr	53	0.641	ug/L	0.026	4	165	1299	6	Standard
	Mn	55	0.648	ug/L	0.002	0	366	15657	2	Standard
>	Ge	72		ug/L			39632	34618	2	KED
	Ni	60	0.675	ug/L	0.036	5	20	1090	4	KED
	Ni	62	0.694	ug/L	0.066	9	5	179	7	KED
	Cu	63	0.886	ug/L	0.044	4	52	4067	3	KED
	Cu	65	0.877	ug/L	0.033	3	33	2024	1	KED
	Zn	66	0.516	ug/L	0.025	4	27	296	3	KED
	Zn	67	1.631	ug/L	0.072	4	4	149	5	KED
	As	75	5.087	ug/L	0.158	3	4	1405	1	KED
	Se	78	0.607	ug/L	0.080	13	13	26	6	KED
	Kr	83		ug/L			57	48	22	Standard
>	In-1	115		ug/L			8321	7325	2	KED
	Cd	111	0.026	ug/L	0.009	35	5	11	19	KED
	Cd	114	0.005	ug/L	0.004	83	3	6	44	KED
>	In	115		ug/L			411513	339317	0	Standard
	Ag	107	0.001	ug/L	0.000	37	48	55	10	Standard
	Sb	121	2.832	ug/L	0.042	1	601	29521	2	Standard
	Sb	123	2.835	ug/L	0.053	1	476	22556	1	Standard
	Ba	135	14.337	ug/L	0.246	1	12	59614	2	Standard
	Ba	137	14.234	ug/L	0.068	0	19	111989	1	Standard
>	Tb	159		ug/L			183140	158000	1	Standard
	Pb	208	0.299	ug/L	0.003	0	177	16790	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-06
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:06:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	25514	4	Standard
>	Sc	45		ug/L			666809	618210	3	Standard
	Cr	52	0.467	ug/L	0.030	6	20488	26422	4	Standard
	Cr	53	0.371	ug/L	0.018	4	165	838	5	Standard
	Mn	55	0.414	ug/L	0.010	2	366	10435	5	Standard
>	Ge	72		ug/L			39632	34790	1	KED
	Ni	60	0.458	ug/L	0.027	5	20	749	6	KED
	Ni	62	0.429	ug/L	0.020	4	5	113	3	KED
	Cu	63	0.444	ug/L	0.018	4	52	2070	3	KED
	Cu	65	0.455	ug/L	0.009	2	33	1069	1	KED
	Zn	66	0.475	ug/L	0.023	4	27	276	3	KED
	Zn	67	0.836	ug/L	0.048	5	4	78	5	KED
	As	75	0.428	ug/L	0.020	4	4	122	4	KED
	Se	78	0.596	ug/L	0.227	37	13	26	19	KED
	Kr	83		ug/L			57	59	25	Standard
>	In-1	115		ug/L			8321	7733	2	KED
	Cd	111	-0.001	ug/L	0.011	896	5	4	68	KED
	Cd	114	0.002	ug/L	0.003	192	3	4	51	KED
>	In	115		ug/L			411513	351080	4	Standard
	Ag	107	-0.000	ug/L	0.001	180	48	37	17	Standard
	Sb	121	1.088	ug/L	0.050	4	601	12031	0	Standard
	Sb	123	1.130	ug/L	0.062	5	476	9535	1	Standard
	Ba	135	4.865	ug/L	0.022	0	12	20937	5	Standard
	Ba	137	4.777	ug/L	0.244	5	19	38835	1	Standard
>	Tb	159		ug/L			183140	160313	2	Standard
	Pb	208	0.130	ug/L	0.004	2	177	7508	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-01
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:11:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	25510	3	Standard
>	Sc	45		ug/L			666809	620412	2	Standard
	Cr	52	0.761	ug/L	0.018	2	20488	31203	1	Standard
	Cr	53	0.711	ug/L	0.005	0	165	1473	2	Standard
	Mn	55	3.119	ug/L	0.035	1	366	76583	1	Standard
>	Ge	72		ug/L			39632	34370	3	KED
	Ni	60	1.030	ug/L	0.072	7	20	1640	3	KED
	Ni	62	1.028	ug/L	0.119	11	5	261	9	KED
	Cu	63	2.764	ug/L	0.108	3	52	12502	0	KED
	Cu	65	2.838	ug/L	0.049	1	33	6447	5	KED
	Zn	66	2.106	ug/L	0.075	3	27	1127	3	KED
	Zn	67	5.110	ug/L	0.279	5	4	455	1	KED
	As	75	5.783	ug/L	0.167	2	4	1586	0	KED
	Se	78	0.664	ug/L	0.231	34	13	27	21	KED
	Kr	83		ug/L			57	52	19	Standard
>	In-1	115		ug/L			8321	7583	3	KED
	Cd	111	0.012	ug/L	0.012	94	5	7	42	KED
	Cd	114	0.014	ug/L	0.007	47	3	12	38	KED
>	In	115		ug/L			411513	338142	2	Standard
	Ag	107	0.003	ug/L	0.000	9	48	80	5	Standard
	Sb	121	2.884	ug/L	0.134	4	601	29918	1	Standard
	Sb	123	2.930	ug/L	0.086	2	476	23213	0	Standard
	Ba	135	32.532	ug/L	1.709	5	12	134651	2	Standard
	Ba	137	31.474	ug/L	1.485	4	19	246524	1	Standard
>	Tb	159		ug/L			183140	158851	0	Standard
	Pb	208	17.778	ug/L	0.174	0	177	993564	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-03
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:15:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	25843	1	Standard
⌈>	**Sc**	**45**		ug/L			666809	632415	1	Standard
|	**Cr**	**52**	**0.698**	ug/L	0.054	7	20488	30786	3	Standard
|	**Cr**	**53**	**0.649**	ug/L	0.020	3	165	1385	4	Standard
⌊	**Mn**	**55**	**1.219**	ug/L	0.022	1	366	30728	2	Standard
⌈>	**Ge**	**72**		ug/L			39632	35582	2	KED
|	**Ni**	**60**	**0.840**	ug/L	0.013	1	20	1391	2	KED
|	**Ni**	**62**	**0.870**	ug/L	0.048	5	5	230	7	KED
|	**Cu**	**63**	**1.383**	ug/L	0.066	4	52	6500	2	KED
|	**Cu**	**65**	**1.405**	ug/L	0.045	3	33	3316	1	KED
|	**Zn**	**66**	**1.101**	ug/L	0.096	8	27	621	6	KED
|	**Zn**	**67**	**2.978**	ug/L	0.140	4	4	276	6	KED
|	**As**	**75**	**5.290**	ug/L	0.132	2	4	1503	4	KED
⌊	**Se**	**78**	**0.514**	ug/L	0.058	11	13	24	7	KED
	Kr	**83**		ug/L			57	56	25	Standard
⌈>	**In-1**	**115**		ug/L			8321	7744	1	KED
|	**Cd**	**111**	**0.015**	ug/L	0.004	25	5	8	12	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.006	92	3	7	53	KED
⌈>	**In**	**115**		ug/L			411513	351738	2	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	35	48	66	14	Standard
|	**Sb**	**121**	**2.812**	ug/L	0.016	0	601	30385	2	Standard
|	**Sb**	**123**	**2.828**	ug/L	0.053	1	476	23333	4	Standard
|	**Ba**	**135**	**22.375**	ug/L	1.140	5	12	96350	2	Standard
⌊	**Ba**	**137**	**22.335**	ug/L	0.599	2	19	182055	0	Standard
⌈>	**Tb**	**159**		ug/L			183140	166197	2	Standard
⌊	**Pb**	**208**	**9.479**	ug/L	0.286	3	177	554086	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-05
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:20:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	25441	4	Standard
>	Sc	45		ug/L			666809	632545	2	Standard
	Cr	52	0.483	ug/L	0.050	10	20488	27286	2	Standard
	Cr	53	0.428	ug/L	0.020	4	165	965	2	Standard
	Mn	55	0.930	ug/L	0.004	0	366	23535	2	Standard
>	Ge	72		ug/L			39632	36235	1	KED
	Ni	60	0.583	ug/L	0.013	2	20	989	2	KED
	Ni	62	0.545	ug/L	0.103	18	5	149	19	KED
	Cu	63	0.736	ug/L	0.017	2	52	3549	2	KED
	Cu	65	0.753	ug/L	0.008	1	33	1826	0	KED
	Zn	66	0.746	ug/L	0.045	6	27	437	6	KED
	Zn	67	1.775	ug/L	0.240	13	4	169	12	KED
	As	75	0.579	ug/L	0.021	3	4	171	2	KED
	Se	78	0.577	ug/L	0.069	12	13	26	6	KED
	Kr	83		ug/L			57	66	14	Standard
>	In-1	115		ug/L			8321	7354	12	KED
	Cd	111	0.022	ug/L	0.006	24	5	10	19	KED
	Cd	114	0.003	ug/L	0.007	243	3	5	94	KED
>	In	115		ug/L			411513	358033	0	Standard
	Ag	107	0.001	ug/L	0.001	209	48	52	40	Standard
	Sb	121	1.066	ug/L	0.007	0	601	12050	0	Standard
	Sb	123	1.056	ug/L	0.011	1	476	9125	0	Standard
	Ba	135	10.615	ug/L	0.137	1	12	46572	1	Standard
	Ba	137	10.245	ug/L	0.258	2	19	85045	1	Standard
>	Tb	159		ug/L			183140	162165	4	Standard
	Pb	208	6.013	ug/L	0.261	4	177	342707	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-08
Sample Dil Factor: 10
Comments:
Sample Date/Time: Friday, May 19, 2023 17:27:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	21578	3	Standard
⌈>	**Sc**	**45**		ug/L			666809	719011	3	Standard
|	**Cr**	**52**	**0.951**	ug/L	0.016	1	20488	39681	3	Standard
|	**Cr**	**53**	**1.201**	ug/L	0.007	0	165	2760	2	Standard
⌊	**Mn**	**55**	**225.953**	ug/L	2.408	1	366	6401455	2	Standard
⌈>	**Ge**	**72**		ug/L			39632	41351	1	KED
|	**Ni**	**60**	**5.002**	ug/L	0.088	1	20	9514	0	KED
|	**Ni**	**62**	**5.181**	ug/L	0.332	6	5	1563	4	KED
|	**Cu**	**63**	**1.186**	ug/L	0.016	1	52	6490	0	KED
|	**Cu**	**65**	**1.204**	ug/L	0.056	4	33	3307	3	KED
|	**Zn**	**66**	**4.396**	ug/L	0.041	0	27	2799	1	KED
|	**Zn**	**67**	**6.836**	ug/L	0.023	0	4	732	1	KED
|	**As**	**75**	**0.446**	ug/L	0.025	5	4	151	5	KED
⌊	**Se**	**78**	**0.448**	ug/L	0.084	18	13	27	8	KED
	Kr	**83**		ug/L			57	81	12	Standard
⌈>	**In-1**	**115**		ug/L			8321	9251	3	KED
|	**Cd**	**111**	**0.009**	ug/L	0.011	119	5	8	38	KED
⌊	**Cd**	**114**	**0.016**	ug/L	0.004	24	3	17	22	KED
⌈>	**In**	**115**		ug/L			411513	422596	1	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.001	9	48	170	7	Standard
|	**Sb**	**121**	**-0.015**	ug/L	0.003	20	601	426	8	Standard
|	**Sb**	**123**	**-0.018**	ug/L	0.003	17	476	318	9	Standard
|	**Ba**	**135**	**30.544**	ug/L	0.677	2	12	158145	2	Standard
⌊	**Ba**	**137**	**30.079**	ug/L	1.076	3	19	294717	3	Standard
⌈>	**Tb**	**159**		ug/L			183140	190559	1	Standard
⌊	**Pb**	**208**	**0.313**	ug/L	0.001	0	177	21160	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:32:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	19387	1	Standard
⌈>	**Sc**	**45**		ug/L			666809	672297	3	Standard
|	**Cr**	**52**	**0.060**	ug/L	0.014	24	20488	21681	2	Standard
|	**Cr**	**53**	**-0.008**	ug/L	0.006	73	165	150	11	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.001	26	366	458	8	Standard
⌈>	**Ge**	**72**		ug/L			39632	41635	1	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.003	150	20	17	34	KED
|	**Ni**	**62**	**0.001**	ug/L	0.027	2074	5	6	124	KED
|	**Cu**	**63**	**0.000**	ug/L	0.001	355	52	56	10	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.002	56	33	22	30	KED
|	**Zn**	**66**	**0.020**	ug/L	0.012	62	27	41	19	KED
|	**Zn**	**67**	**0.022**	ug/L	0.021	95	4	6	31	KED
|	**As**	**75**	**-0.005**	ug/L	0.005	98	4	3	49	KED
⌊	**Se**	**78**	**-0.002**	ug/L	0.087	4391	13	14	18	KED
	Kr	**83**		ug/L			57	41	20	Standard
⌈>	**In-1**	**115**		ug/L			8321	8739	1	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.002	40	5	4	13	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.004	1827	3	3	88	KED
⌈>	**In**	**115**		ug/L			411513	420896	2	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.001	43	48	26	36	Standard
|	**Sb**	**121**	**-0.042**	ug/L	0.002	3	601	80	23	Standard
|	**Sb**	**123**	**-0.044**	ug/L	0.000	0	476	64	7	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.002	50	12	30	31	Standard
⌊	**Ba**	**137**	**0.002**	ug/L	0.001	58	19	36	27	Standard
⌈>	**Tb**	**159**		ug/L			183140	184649	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	10	177	236	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:37:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	19751	4	Standard
>	**Sc**	**45**		ug/L			666809	685790	3	Standard
	Cr	**52**	**47.934**	ug/L	1.221	2	20488	866564	1	Standard
	Cr	**53**	**48.139**	ug/L	0.604	1	165	98937	3	Standard
	Mn	**55**	**46.546**	ug/L	0.444	0	366	1258154	2	Standard
>	**Ge**	**72**		ug/L			39632	40721	1	KED
	Ni	**60**	**45.802**	ug/L	1.293	2	20	85628	1	KED
	Ni	**62**	**47.048**	ug/L	1.195	2	5	13945	1	KED
	Cu	**63**	**46.330**	ug/L	0.773	1	52	247647	1	KED
	Cu	**65**	**47.964**	ug/L	1.990	4	33	128479	2	KED
	Zn	**66**	**49.537**	ug/L	1.019	2	27	30767	0	KED
	Zn	**67**	**48.691**	ug/L	1.556	3	4	5107	3	KED
	As	**75**	**49.136**	ug/L	0.547	1	4	15938	0	KED
	Se	**78**	**49.785**	ug/L	0.714	1	13	1432	0	KED
	Kr	**83**		ug/L			57	48	26	Standard
>	**In-1**	**115**		ug/L			8321	8567	2	KED
	Cd	**111**	**48.217**	ug/L	1.888	3	5	14322	2	KED
	Cd	**114**	**48.827**	ug/L	1.905	3	3	37345	3	KED
>	**In**	**115**		ug/L			411513	411859	0	Standard
	Ag	**107**	**53.514**	ug/L	1.268	2	48	896831	2	Standard
	Sb	**121**	**49.390**	ug/L	1.442	2	601	614978	3	Standard
	Sb	**123**	**49.659**	ug/L	0.711	1	476	471789	1	Standard
	Ba	**135**	**47.685**	ug/L	0.089	0	12	240624	0	Standard
	Ba	**137**	**48.291**	ug/L	1.035	2	19	461133	2	Standard
>	**Tb**	**159**		ug/L			183140	185564	1	Standard
	Pb	**208**	**47.300**	ug/L	1.315	2	177	3086676	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:44:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	19139	3	Standard
⌈>	**Sc**	**45**		ug/L			666809	692114	3	Standard
|	**Cr**	**52**	**-0.003**	ug/L	0.044	1395	20488	21203	4	Standard
|	**Cr**	**53**	**-0.012**	ug/L	0.010	82	165	146	11	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.002	208	366	406	16	Standard
⌈>	**Ge**	**72**		ug/L			39632	42943	1	KED
|	**Ni**	**60**	**0.003**	ug/L	0.002	88	20	27	17	KED
|	**Ni**	**62**	**0.006**	ug/L	0.018	284	5	8	70	KED
|	**Cu**	**63**	**0.003**	ug/L	0.005	143	52	74	35	KED
|	**Cu**	**65**	**0.001**	ug/L	0.001	76	33	40	9	KED
|	**Zn**	**66**	**0.002**	ug/L	0.012	582	27	31	27	KED
|	**Zn**	**67**	**0.020**	ug/L	0.037	185	4	6	56	KED
|	**As**	**75**	**0.000**	ug/L	0.005	2621	4	5	32	KED
⌊	**Se**	**78**	**0.016**	ug/L	0.020	128	13	15	2	KED
	Kr	**83**		ug/L			57	60	8	Standard
⌈>	**In-1**	**115**		ug/L			8321	9261	0	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.010	1241	5	5	56	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.005	251	3	5	67	KED
⌈>	**In**	**115**		ug/L			411513	424207	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	97	48	53	7	Standard
|	**Sb**	**121**	**0.022**	ug/L	0.001	4	601	903	1	Standard
|	**Sb**	**123**	**0.023**	ug/L	0.004	17	476	713	5	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.001	73	12	17	19	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.000	20	19	26	4	Standard
⌈>	**Tb**	**159**		ug/L			183140	191658	2	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	86	177	159	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:52:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				19019	1	Standard
>	**Sc**	**45**		ug/L				699560	2	Standard
	Cr	**52**		ug/L				21056	1	Standard
	Cr	**53**		ug/L				160	8	Standard
	Mn	**55**		ug/L				394	4	Standard
>	**Ge**	**72**		ug/L				43630	0	KED
	Ni	**60**		ug/L				50	11	KED
	Ni	**62**		ug/L				6	83	KED
	Cu	**63**		ug/L				60	21	KED
	Cu	**65**		ug/L				36	32	KED
	Zn	**66**		ug/L				66	20	KED
	Zn	**67**		ug/L				11	28	KED
	As	**75**		ug/L				3	30	KED
	Se	**78**		ug/L				13	21	KED
	Kr	**83**		ug/L				49	21	Standard
>	**In-1**	**115**		ug/L				9463	0	KED
	Cd	**111**		ug/L				3	41	KED
	Cd	**114**		ug/L				1	112	KED
>	**In**	**115**		ug/L				431494	1	Standard
	Ag	**107**		ug/L				47	10	Standard
	Ba	**135**		ug/L				56	11	Standard
	Ba	**137**		ug/L				82	18	Standard
>	**Tb**	**159**		ug/L				190968	0	Standard
	Pb	**208**		ug/L				196	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:57:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	19295	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	684515	2	Standard
|	**Cr**	**52**	**48.946**	ug/L	0.876	1	21056	882647	2	Standard
|	**Cr**	**53**	**48.920**	ug/L	0.277	0	160	100339	2	Standard
⌊	**Mn**	**55**	**47.148**	ug/L	0.557	1	394	1272253	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	41204	2	KED
|	**Ni**	**60**	**48.618**	ug/L	0.760	1	50	91994	0	KED
|	**Ni**	**62**	**48.099**	ug/L	1.393	2	6	14426	2	KED
|	**Cu**	**63**	**47.727**	ug/L	1.268	2	60	258072	0	KED
|	**Cu**	**65**	**48.518**	ug/L	1.651	3	36	131488	1	KED
|	**Zn**	**66**	**49.637**	ug/L	1.171	2	66	31225	1	KED
|	**Zn**	**67**	**48.701**	ug/L	1.543	3	11	5174	2	KED
|	**As**	**75**	**49.733**	ug/L	1.327	2	3	16317	1	KED
⌊	**Se**	**78**	**50.524**	ug/L	0.781	1	13	1469	3	KED
	Kr	**83**		ug/L			49	54	13	Standard
⌈>	**In-1**	**115**		ug/L			9463	8963	2	KED
|	**Cd**	**111**	**47.238**	ug/L	0.887	1	3	14682	0	KED
⌊	**Cd**	**114**	**48.261**	ug/L	0.628	1	1	38620	1	KED
⌈>	**In**	**115**		ug/L			431494	421848	1	Standard
|	**Ag**	**107**	**52.230**	ug/L	0.581	1	47	896463	1	Standard
|	**Ba**	**135**	**47.593**	ug/L	0.984	2	56	245988	1	Standard
⌊	**Ba**	**137**	**47.636**	ug/L	0.643	1	82	465910	1	Standard
⌈>	**Tb**	**159**		ug/L			190968	189782	2	Standard
⌊	**Pb**	**208**	**47.038**	ug/L	0.637	1	196	3139984	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 18:05:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	18753	3	Standard
⌈>	**Sc**	**45**		ug/L			699560	699900	4	Standard
|	**Cr**	**52**	**0.037**	ug/L	0.052	140	21056	21703	1	Standard
|	**Cr**	**53**	**-0.001**	ug/L	0.006	468	160	156	4	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	94	394	361	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	41945	1	KED
|	**Ni**	**60**	**-0.013**	ug/L	0.003	26	50	24	27	KED
|	**Ni**	**62**	**0.005**	ug/L	0.018	362	6	8	66	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.001	131	60	52	14	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.001	34	36	24	15	KED
|	**Zn**	**66**	**-0.037**	ug/L	0.003	7	66	40	4	KED
|	**Zn**	**67**	**-0.043**	ug/L	0.021	48	11	6	34	KED
|	**As**	**75**	**0.012**	ug/L	0.004	37	3	7	19	KED
⌊	**Se**	**78**	**0.062**	ug/L	0.188	304	13	14	37	KED
	Kr	**83**		ug/L			49	41	27	Standard
⌈>	**In-1**	**115**		ug/L			9463	9142	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	138	3	4	32	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.001	22	1	6	16	KED
⌈>	**In**	**115**		ug/L			431494	434455	0	Standard
|	**Ag**	**107**	**0.008**	ug/L	0.002	19	47	189	14	Standard
|	**Ba**	**135**	**-0.007**	ug/L	0.002	28	56	22	43	Standard
⌊	**Ba**	**137**	**-0.005**	ug/L	0.001	18	82	34	24	Standard
⌈>	**Tb**	**159**		ug/L			190968	190634	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	281	196	201	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:13:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	26044	5	Standard
>	Sc	45		ug/L			699560	720854	2	Standard
	Cr	52	0.041	ug/L	0.015	37	21056	22462	3	Standard
	Cr	53	0.002	ug/L	0.009	353	160	170	13	Standard
	Mn	55	0.007	ug/L	0.000	4	394	594	3	Standard
>	Ge	72		ug/L			43630	42611	0	KED
	Ni	60	-0.010	ug/L	0.004	39	50	29	26	KED
	Ni	62	0.011	ug/L	0.015	143	6	10	47	KED
	Cu	63	0.005	ug/L	0.001	23	60	87	7	KED
	Cu	65	0.002	ug/L	0.002	90	36	41	11	KED
	Zn	66	0.064	ug/L	0.017	26	66	106	10	KED
	Zn	67	0.066	ug/L	0.061	91	11	18	36	KED
	As	75	-0.000	ug/L	0.007	4005	3	3	66	KED
	Se	78	0.235	ug/L	0.097	41	13	20	14	KED
	Kr	83		ug/L			49	48	18	Standard
>	In-1	115		ug/L			9463	9400	3	KED
	Cd	111	0.013	ug/L	0.015	121	3	7	66	KED
	Cd	114	0.002	ug/L	0.002	95	1	3	52	KED
>	In	115		ug/L			431494	439072	0	Standard
	Ag	107	0.003	ug/L	0.000	15	47	95	6	Standard
	Ba	135	-0.007	ug/L	0.002	25	56	19	50	Standard
	Ba	137	-0.003	ug/L	0.001	35	82	52	22	Standard
>	Tb	159		ug/L			190968	195662	2	Standard
	Pb	208	0.001	ug/L	0.000	30	196	248	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:18:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	25739	2	Standard
>	Sc	45		ug/L			699560	745220	2	Standard
	Cr	52	25.277	ug/L	0.500	1	21056	507056	2	Standard
	Cr	53	24.962	ug/L	0.514	2	160	55818	2	Standard
	Mn	55	23.689	ug/L	0.394	1	394	696280	4	Standard
>	Ge	72		ug/L			43630	41465	1	KED
	Ni	60	24.248	ug/L	1.089	4	50	46231	6	KED
	Ni	62	24.150	ug/L	0.907	3	6	7296	5	KED
	Cu	63	24.878	ug/L	0.294	1	60	135465	2	KED
	Cu	65	24.795	ug/L	0.681	2	36	67696	4	KED
	Zn	66	76.506	ug/L	1.225	1	66	48419	3	KED
	Zn	67	69.604	ug/L	2.005	2	11	7441	4	KED
	As	75	23.545	ug/L	0.280	1	3	7779	2	KED
	Se	78	75.323	ug/L	2.366	3	13	2198	3	KED
	Kr	83		ug/L			49	59	29	Standard
>	In-1	115		ug/L			9463	9206	0	KED
	Cd	111	24.071	ug/L	0.261	1	3	7688	1	KED
	Cd	114	23.355	ug/L	0.132	0	1	19201	1	KED
>	In	115		ug/L			431494	453581	1	Standard
	Ag	107	27.326	ug/L	0.571	2	47	504273	0	Standard
	Ba	135	24.906	ug/L	1.185	4	56	138393	3	Standard
	Ba	137	25.174	ug/L	1.516	6	82	264650	4	Standard
>	Tb	159		ug/L			190968	200894	1	Standard
	Pb	208	24.246	ug/L	0.869	3	196	1713138	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:22:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	34548	2	Standard
>	Sc	45		ug/L			699560	739019	2	Standard
	Cr	52	0.082	ug/L	0.013	15	21056	23811	3	Standard
	Cr	53	0.019	ug/L	0.005	28	160	211	8	Standard
	Mn	55	0.041	ug/L	0.004	9	394	1624	9	Standard
>	Ge	72		ug/L			43630	44029	1	KED
	Ni	60	-0.004	ug/L	0.002	55	50	42	11	KED
	Ni	62	-0.000	ug/L	0.003	1629	6	6	15	KED
	Cu	63	0.057	ug/L	0.009	15	60	389	11	KED
	Cu	65	0.049	ug/L	0.005	10	36	179	7	KED
	Zn	66	0.836	ug/L	0.035	4	66	627	4	KED
	Zn	67	0.700	ug/L	0.059	8	11	90	6	KED
	As	75	0.004	ug/L	0.005	140	3	5	32	KED
	Se	78	0.103	ug/L	0.063	61	13	16	9	KED
	Kr	83		ug/L			49	63	21	Standard
>	In-1	115		ug/L			9463	9545	3	KED
	Cd	111	0.019	ug/L	0.021	109	3	9	70	KED
	Cd	114	0.010	ug/L	0.008	85	1	9	68	KED
>	In	115		ug/L			431494	451521	2	Standard
	Ag	107	0.008	ug/L	0.001	11	47	193	7	Standard
	Ba	135	0.012	ug/L	0.003	28	56	125	15	Standard
	Ba	137	0.014	ug/L	0.002	14	82	229	10	Standard
>	Tb	159		ug/L			190968	202149	1	Standard
	Pb	208	0.012	ug/L	0.001	9	196	1038	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:27:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	33692	6	Standard
>	Sc	45		ug/L			699560	720038	4	Standard
	Cr	52	25.493	ug/L	0.748	2	21056	493631	3	Standard
	Cr	53	25.016	ug/L	0.492	1	160	54022	3	Standard
	Mn	55	24.226	ug/L	0.394	1	394	687605	4	Standard
>	Ge	72		ug/L			43630	42657	2	KED
	Ni	60	24.835	ug/L	1.378	5	50	48656	4	KED
	Ni	62	24.631	ug/L	0.901	3	6	7654	5	KED
	Cu	63	25.137	ug/L	0.258	1	60	140776	1	KED
	Cu	65	25.750	ug/L	0.579	2	36	72273	0	KED
	Zn	66	79.651	ug/L	2.101	2	66	51831	1	KED
	Zn	67	72.987	ug/L	2.745	3	11	8020	2	KED
	As	75	23.757	ug/L	0.370	1	3	8072	1	KED
	Se	78	77.361	ug/L	0.286	0	13	2322	2	KED
	Kr	83		ug/L			49	67	21	Standard
>	In-1	115		ug/L			9463	9174	4	KED
	Cd	111	23.750	ug/L	1.281	5	3	7548	1	KED
	Cd	114	23.657	ug/L	0.242	1	1	19378	3	KED
>	In	115		ug/L			431494	444567	4	Standard
	Ag	107	27.106	ug/L	1.036	3	47	489848	1	Standard
	Ba	135	25.011	ug/L	1.252	5	56	136099	2	Standard
	Ba	137	24.871	ug/L	1.118	4	82	256102	1	Standard
>	Tb	159		ug/L			190968	194312	2	Standard
	Pb	208	24.907	ug/L	0.595	2	196	1702247	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-10
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:32:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	31830	3	Standard
⌈>	**Sc**	**45**		ug/L			699560	775453	3	Standard
|	**Cr**	**52**	**16.429**	ug/L	0.379	2	21056	351089	2	Standard
|	**Cr**	**53**	**16.171**	ug/L	0.066	0	160	37697	3	Standard
⌊	**Mn**	**55**	**174.742**	ug/L	3.054	1	394	5340429	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	41496	1	KED
|	**Ni**	**60**	**21.647**	ug/L	0.763	3	50	41270	2	KED
|	**Ni**	**62**	**21.873**	ug/L	0.821	3	6	6609	2	KED
|	**Cu**	**63**	**42.098**	ug/L	0.393	0	60	229324	1	KED
|	**Cu**	**65**	**42.257**	ug/L	0.327	0	36	115390	1	KED
|	**Zn**	**66**	**85.690**	ug/L	1.594	1	66	54249	1	KED
|	**Zn**	**67**	**84.008**	ug/L	3.428	4	11	8979	2	KED
|	**As**	**75**	**6.618**	ug/L	0.058	0	3	2190	0	KED
⌊	**Se**	**78**	**1.230**	ug/L	0.236	19	13	48	14	KED
	Kr	**83**		ug/L			49	97	11	Standard
⌈>	**In-1**	**115**		ug/L			9463	8929	0	KED
|	**Cd**	**111**	**0.299**	ug/L	0.029	9	3	95	8	KED
⌊	**Cd**	**114**	**0.291**	ug/L	0.014	4	1	233	5	KED
⌈>	**In**	**115**		ug/L			431494	429126	2	Standard
|	**Ag**	**107**	**0.121**	ug/L	0.004	3	47	2165	2	Standard
|	**Ba**	**135**	**94.216**	ug/L	1.108	1	56	495344	1	Standard
⌊	**Ba**	**137**	**89.108**	ug/L	2.942	3	82	886169	1	Standard
⌈>	**Tb**	**159**		ug/L			190968	212251	4	Standard
⌊	**Pb**	**208**	**105.770**	ug/L	3.507	3	196	7889407	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0018-01
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 19, 2023 18:36:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	22126	3	Standard
>	Sc	45		ug/L			699560	685754	2	Standard
	Cr	52	0.109	ug/L	0.027	24	21056	22575	4	Standard
	Cr	53	0.051	ug/L	0.012	23	160	260	9	Standard
	Mn	55	27.428	ug/L	0.210	0	394	741684	3	Standard
>	Ge	72		ug/L			43630	40397	3	KED
	Ni	60	0.013	ug/L	0.002	19	50	70	7	KED
	Ni	62	0.023	ug/L	0.005	20	6	13	14	KED
	Cu	63	0.014	ug/L	0.003	23	60	131	16	KED
	Cu	65	0.013	ug/L	0.002	14	36	69	6	KED
	Zn	66	0.524	ug/L	0.053	10	66	384	12	KED
	Zn	67	0.453	ug/L	0.043	9	11	57	11	KED
	As	75	0.014	ug/L	0.002	11	3	8	5	KED
	Se	78	0.076	ug/L	0.074	96	13	14	12	KED
	Kr	83		ug/L			49	56	19	Standard
>	In-1	115		ug/L			9463	8947	1	KED
	Cd	111	0.004	ug/L	0.009	252	3	4	65	KED
	Cd	114	0.006	ug/L	0.004	59	1	6	44	KED
>	In	115		ug/L			431494	432808	2	Standard
	Ag	107	0.002	ug/L	0.001	38	47	76	15	Standard
	Ba	135	0.397	ug/L	0.008	2	56	2162	0	Standard
	Ba	137	0.398	ug/L	0.001	0	82	4072	3	Standard
>	Tb	159		ug/L			190968	192434	1	Standard
	Pb	208	0.011	ug/L	0.001	8	196	974	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0405-~~DUP2~~ DUP3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 19, 2023 18:41:37

MB 5/19/23

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	22403	2	Standard
>	Sc	45		ug/L			699560	732680	3	Standard
	Cr	52	0.071	ug/L	0.025	35	21056	23386	2	Standard
	Cr	53	0.053	ug/L	0.010	19	160	282	6	Standard
	Mn	55	26.619	ug/L	0.353	1	394	768747	2	Standard
>	Ge	72		ug/L			43630	42335	0	KED
	Ni	60	0.010	ug/L	0.012	119	50	67	32	KED
	Ni	62	0.013	ug/L	0.003	26	6	10	10	KED
	Cu	63	0.019	ug/L	0.002	12	60	165	8	KED
	Cu	65	0.020	ug/L	0.004	21	36	90	12	KED
	Zn	66	1.163	ug/L	0.070	5	66	813	5	KED
	Zn	67	1.314	ug/L	0.092	6	11	154	6	KED
	As	75	0.012	ug/L	0.009	80	3	7	40	KED
	Se	78	0.100	ug/L	0.196	195	13	15	36	KED
	Kr	83		ug/L			49	62	6	Standard
>	In-1	115		ug/L			9463	9218	1	KED
	Cd	111	0.004	ug/L	0.008	184	3	4	52	KED
	Cd	114	0.003	ug/L	0.004	113	1	4	70	KED
>	In	115		ug/L			431494	443823	2	Standard
	Ag	107	0.000	ug/L	0.001	253	47	55	27	Standard
	Ba	135	0.414	ug/L	0.025	6	56	2311	8	Standard
	Ba	137	0.413	ug/L	0.012	2	82	4331	0	Standard
>	Tb	159		ug/L			190968	199629	1	Standard
	Pb	208	0.020	ug/L	0.022	111	196	1600	96	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0405-~~MS2~~ MS3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 19, 2023 18:46:20

MB 5/19/23

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	22749	5	Standard
>	Sc	45		ug/L			699560	731039	3	Standard
	Cr	52	0.617	ug/L	0.016	2	21056	33616	4	Standard
	Cr	53	0.534	ug/L	0.035	6	160	1334	5	Standard
	Mn	55	28.287	ug/L	0.487	1	394	815072	2	Standard
>	Ge	72		ug/L			43630	43342	1	KED
	Ni	60	0.489	ug/L	0.040	8	50	1022	5	KED
	Ni	62	0.532	ug/L	0.064	12	6	174	10	KED
	Cu	63	0.500	ug/L	0.024	4	60	2907	6	KED
	Cu	65	0.506	ug/L	0.010	1	36	1478	0	KED
	Zn	66	2.081	ug/L	0.125	6	66	1439	3	KED
	Zn	67	1.898	ug/L	0.217	11	11	222	9	KED
	As	75	0.523	ug/L	0.033	6	3	184	4	KED
	Se	78	1.789	ug/L	0.050	2	13	67	1	KED
	Kr	83		ug/L			49	55	10	Standard
>	In-1	115		ug/L			9463	9429	1	KED
	Cd	111	0.532	ug/L	0.023	4	3	177	4	KED
	Cd	114	0.508	ug/L	0.020	3	1	429	5	KED
>	In	115		ug/L			431494	442633	1	Standard
	Ag	107	0.542	ug/L	0.014	2	47	9809	2	Standard
	Ba	135	0.971	ug/L	0.028	2	56	5325	2	Standard
	Ba	137	0.932	ug/L	0.019	2	82	9649	0	Standard
>	Tb	159		ug/L			190968	200081	1	Standard
	Pb	208	0.484	ug/L	0.010	2	196	34252	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0405-~~MSD2~~ MSD3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 19, 2023 18:51:03
MB 5/19/23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	21575	3	Standard
>	Sc	45		ug/L			699560	726773	1	Standard
	Cr	52	0.626	ug/L	0.028	4	21056	33576	2	Standard
	Cr	53	0.535	ug/L	0.017	3	160	1329	3	Standard
	Mn	55	27.885	ug/L	0.350	1	394	799112	2	Standard
>	Ge	72		ug/L			43630	43374	3	KED
	Ni	60	0.472	ug/L	0.043	9	50	987	5	KED
	Ni	62	0.503	ug/L	0.012	2	6	165	4	KED
	Cu	63	0.516	ug/L	0.019	3	60	2997	0	KED
	Cu	65	0.504	ug/L	0.054	10	36	1470	7	KED
	Zn	66	2.132	ug/L	0.085	3	66	1473	2	KED
	Zn	67	1.724	ug/L	0.117	6	11	203	7	KED
	As	75	0.498	ug/L	0.020	4	3	176	7	KED
	Se	78	1.735	ug/L	0.291	16	13	65	10	KED
	Kr	83		ug/L			49	47	4	Standard
>	In-1	115		ug/L			9463	9246	1	KED
	Cd	111	0.444	ug/L	0.032	7	3	145	6	KED
	Cd	114	0.501	ug/L	0.022	4	1	414	3	KED
>	In	115		ug/L			431494	441472	5	Standard
	Ag	107	0.546	ug/L	0.021	3	47	9837	2	Standard
	Ba	135	0.940	ug/L	0.080	8	56	5125	3	Standard
	Ba	137	0.906	ug/L	0.024	2	82	9350	3	Standard
>	Tb	159		ug/L			190968	197203	1	Standard
	Pb	208	0.484	ug/L	0.005	1	196	33758	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 18:55:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21487	6	Standard
⌈>	**Sc**	**45**		ug/L			699560	698485	7	Standard
|	**Cr**	**52**	**0.114**	ug/L	0.054	47	21056	23023	3	Standard
|	**Cr**	**53**	**-0.006**	ug/L	0.005	78	160	146	8	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	157	394	373	0	Standard
⌈>	**Ge**	**72**		ug/L			43630	41323	6	KED
|	**Ni**	**60**	**-0.016**	ug/L	0.004	22	50	17	40	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.007	87	6	4	49	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.003	66	60	36	32	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.002	82	36	29	16	KED
|	**Zn**	**66**	**-0.043**	ug/L	0.009	21	66	35	13	KED
|	**Zn**	**67**	**-0.041**	ug/L	0.015	36	11	6	17	KED
|	**As**	**75**	**0.003**	ug/L	0.005	184	3	4	33	KED
⌊	**Se**	**78**	**0.087**	ug/L	0.073	84	13	15	15	KED
	Kr	**83**		ug/L			49	56	21	Standard
⌈>	**In-1**	**115**		ug/L			9463	8944	3	KED
|	**Cd**	**111**	**0.007**	ug/L	0.011	168	3	5	66	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.003	38	1	8	31	KED
⌈>	**In**	**115**		ug/L			431494	430944	6	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	600	47	48	14	Standard
|	**Ba**	**135**	**-0.008**	ug/L	0.000	4	56	13	14	Standard
⌊	**Ba**	**137**	**-0.005**	ug/L	0.001	10	82	30	12	Standard
⌈>	**Tb**	**159**		ug/L			190968	187155	9	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	70	196	172	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 19:00:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21433	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	724175	5	Standard
|	**Cr**	**52**	**50.003**	ug/L	1.159	2	21056	952889	3	Standard
|	**Cr**	**53**	**48.508**	ug/L	1.123	2	160	105188	2	Standard
⌊	**Mn**	**55**	**47.758**	ug/L	1.368	2	394	1362250	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	42778	0	KED
|	**Ni**	**60**	**47.971**	ug/L	0.532	1	50	94258	1	KED
|	**Ni**	**62**	**47.570**	ug/L	1.012	2	6	14815	2	KED
|	**Cu**	**63**	**47.673**	ug/L	1.187	2	60	267719	2	KED
|	**Cu**	**65**	**48.598**	ug/L	1.142	2	36	136811	2	KED
|	**Zn**	**66**	**49.344**	ug/L	0.198	0	66	32235	0	KED
|	**Zn**	**67**	**49.243**	ug/L	1.837	3	11	5432	3	KED
|	**As**	**75**	**49.019**	ug/L	0.503	1	3	16703	1	KED
⌊	**Se**	**78**	**50.418**	ug/L	0.788	1	13	1522	1	KED
	Kr	**83**		ug/L			49	58	13	Standard
⌈>	**In-1**	**115**		ug/L			9463	9235	1	KED
|	**Cd**	**111**	**47.157**	ug/L	0.240	0	3	15104	0	KED
⌊	**Cd**	**114**	**47.096**	ug/L	0.918	1	1	38836	2	KED
⌈>	**In**	**115**		ug/L			431494	449333	3	Standard
|	**Ag**	**107**	**51.050**	ug/L	2.236	4	47	932606	2	Standard
|	**Ba**	**135**	**46.916**	ug/L	0.538	1	56	258271	2	Standard
⌊	**Ba**	**137**	**47.325**	ug/L	0.711	1	82	492904	2	Standard
⌈>	**Tb**	**159**		ug/L			190968	194303	1	Standard
⌊	**Pb**	**208**	**47.130**	ug/L	0.739	1	196	3221335	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 19:07:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	20177	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	746575	3	Standard
|	**Cr**	**52**	**0.031**	ug/L	0.001	4	21056	23063	3	Standard
|	**Cr**	**53**	**-0.007**	ug/L	0.002	25	160	155	5	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	254	394	429	8	Standard
⌈>	**Ge**	**72**		ug/L			43630	45450	1	KED
|	**Ni**	**60**	**-0.018**	ug/L	0.003	17	50	14	45	KED
|	**Ni**	**62**	**-0.014**	ug/L	0.009	60	6	2	114	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.003	279	60	56	33	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.002	79	36	29	22	KED
|	**Zn**	**66**	**-0.044**	ug/L	0.015	33	66	38	27	KED
|	**Zn**	**67**	**-0.026**	ug/L	0.033	127	11	8	44	KED
|	**As**	**75**	**0.004**	ug/L	0.005	131	3	5	32	KED
⌊	**Se**	**78**	**0.048**	ug/L	0.046	95	13	15	8	KED
	Kr	**83**		ug/L			49	55	5	Standard
⌈>	**In-1**	**115**		ug/L			9463	9707	1	KED
|	**Cd**	**111**	**0.019**	ug/L	0.008	45	3	9	29	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.007	92	1	7	73	KED
⌈>	**In**	**115**		ug/L			431494	439197	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.001	13	47	210	11	Standard
|	**Ba**	**135**	**-0.004**	ug/L	0.001	15	56	34	11	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.001	16	82	43	15	Standard
⌈>	**Tb**	**159**		ug/L			190968	200727	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	47	196	254	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:12:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	30799	7	Standard
⌈>	**Sc**	**45**		ug/L			699560	829499	4	Standard
|	**Cr**	**52**	**13.096**	ug/L	0.184	1	21056	304367	3	Standard
|	**Cr**	**53**	**12.984**	ug/L	0.545	4	160	32370	1	Standard
⌊	**Mn**	**55**	**122.542**	ug/L	4.841	3	394	4001888	2	Standard
⌈>	**Ge**	**72**		ug/L			43630	43288	2	KED
|	**Ni**	**60**	**10.864**	ug/L	0.203	1	50	21635	1	KED
|	**Ni**	**62**	**10.851**	ug/L	0.342	3	6	3424	2	KED
|	**Cu**	**63**	**58.550**	ug/L	3.334	5	60	332534	4	KED
|	**Cu**	**65**	**59.805**	ug/L	2.024	3	36	170368	4	KED
|	**Zn**	**66**	**92.441**	ug/L	2.177	2	66	61056	3	KED
|	**Zn**	**67**	**84.842**	ug/L	3.357	3	11	9460	3	KED
|	**As**	**75**	**5.791**	ug/L	0.185	3	3	2000	3	KED
⌊	**Se**	**78**	**0.969**	ug/L	0.053	5	13	42	1	KED
	Kr	**83**		ug/L			49	88	16	Standard
⌈>	**In-1**	**115**		ug/L			9463	9361	1	KED
|	**Cd**	**111**	**0.133**	ug/L	0.019	14	3	46	12	KED
⌊	**Cd**	**114**	**0.136**	ug/L	0.030	22	1	115	23	KED
⌈>	**In**	**115**		ug/L			431494	440680	1	Standard
|	**Ag**	**107**	**0.107**	ug/L	0.004	3	47	1960	2	Standard
|	**Ba**	**135**	**25.892**	ug/L	0.435	1	56	139827	1	Standard
⌊	**Ba**	**137**	**25.428**	ug/L	0.832	3	82	259779	1	Standard
⌈>	**Tb**	**159**		ug/L			190968	212063	4	Standard
⌊	**Pb**	**208**	**20.819**	ug/L	1.099	5	196	1551019	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:17:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	31628	6	Standard
>	Sc	45		ug/L			699560	841370	2	Standard
	Cr	52	14.592	ug/L	0.112	0	21056	341234	2	Standard
	Cr	53	14.362	ug/L	0.199	1	160	36352	3	Standard
	Mn	55	157.599	ug/L	3.151	1	394	5225581	2	Standard
>	Ge	72		ug/L			43630	42186	2	KED
	Ni	60	12.233	ug/L	0.451	3	50	23739	4	KED
	Ni	62	12.417	ug/L	0.221	1	6	3818	2	KED
	Cu	63	33.505	ug/L	0.878	2	60	185515	1	KED
	Cu	65	34.173	ug/L	0.999	2	36	94838	1	KED
	Zn	66	70.727	ug/L	1.242	1	66	45528	1	KED
	Zn	67	71.117	ug/L	1.413	1	11	7732	2	KED
	As	75	7.459	ug/L	0.124	1	3	2509	1	KED
	Se	78	1.320	ug/L	0.070	5	13	51	2	KED
	Kr	83		ug/L			49	91	13	Standard
>	In-1	115		ug/L			9463	9025	4	KED
	Cd	111	0.201	ug/L	0.043	21	3	66	16	KED
	Cd	114	0.201	ug/L	0.019	9	1	164	12	KED
>	In	115		ug/L			431494	443958	2	Standard
	Ag	107	0.176	ug/L	0.001	0	47	3219	2	Standard
	Ba	135	85.564	ug/L	0.403	0	56	465450	2	Standard
	Ba	137	85.617	ug/L	1.306	1	82	881292	2	Standard
>	Tb	159		ug/L			190968	212867	1	Standard
	Pb	208	15.650	ug/L	0.093	0	196	1172087	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:22:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	32274	7	Standard
>	Sc	45		ug/L			699560	822177	4	Standard
	Cr	52	13.603	ug/L	0.090	0	21056	312473	3	Standard
	Cr	53	13.652	ug/L	0.338	2	160	33745	1	Standard
	Mn	55	136.181	ug/L	5.898	4	394	4407344	0	Standard
>	Ge	72		ug/L			43630	42263	0	KED
	Ni	60	11.017	ug/L	0.288	2	50	21421	1	KED
	Ni	62	11.096	ug/L	0.231	2	6	3419	2	KED
	Cu	63	31.388	ug/L	0.695	2	60	174151	1	KED
	Cu	65	32.358	ug/L	0.464	1	36	89997	1	KED
	Zn	66	59.251	ug/L	1.180	1	66	38225	1	KED
	Zn	67	58.713	ug/L	0.525	0	11	6396	0	KED
	As	75	7.669	ug/L	0.080	1	3	2584	0	KED
	Se	78	1.047	ug/L	0.161	15	13	43	10	KED
	Kr	83		ug/L			49	75	10	Standard
>	In-1	115		ug/L			9463	9126	0	KED
	Cd	111	0.221	ug/L	0.020	9	3	73	8	KED
	Cd	114	0.224	ug/L	0.040	17	1	184	18	KED
>	In	115		ug/L			431494	435379	5	Standard
	Ag	107	0.174	ug/L	0.013	7	47	3129	2	Standard
	Ba	135	37.333	ug/L	3.126	8	56	198551	2	Standard
	Ba	137	35.841	ug/L	1.997	5	82	361065	0	Standard
>	Tb	159		ug/L			190968	212547	1	Standard
	Pb	208	14.506	ug/L	0.396	2	196	1084592	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:26:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	30896	2	Standard
>	Sc	45		ug/L			699560	812913	3	Standard
	Cr	52	12.793	ug/L	0.118	0	21056	292128	4	Standard
	Cr	53	13.136	ug/L	0.245	1	160	32144	4	Standard
	Mn	55	128.426	ug/L	2.230	1	394	4113198	1	Standard
>	Ge	72		ug/L			43630	42803	3	KED
	Ni	60	9.916	ug/L	0.412	4	50	19518	1	KED
	Ni	62	10.067	ug/L	0.656	6	6	3138	3	KED
	Cu	63	31.288	ug/L	1.346	4	60	175671	1	KED
	Cu	65	32.393	ug/L	1.312	4	36	91178	1	KED
	Zn	66	90.262	ug/L	3.365	3	66	58898	0	KED
	Zn	67	84.249	ug/L	3.502	4	11	9283	0	KED
	As	75	7.476	ug/L	0.218	2	3	2551	2	KED
	Se	78	0.909	ug/L	0.061	6	13	40	3	KED
	Kr	83		ug/L			49	81	17	Standard
>	In-1	115		ug/L			9463	9272	2	KED
	Cd	111	0.126	ug/L	0.014	11	3	43	7	KED
	Cd	114	0.110	ug/L	0.010	8	1	92	10	KED
>	In	115		ug/L			431494	437525	1	Standard
	Ag	107	0.110	ug/L	0.005	4	47	2003	2	Standard
	Ba	135	27.770	ug/L	0.659	2	56	148871	0	Standard
	Ba	137	27.510	ug/L	0.843	3	82	279025	1	Standard
>	Tb	159		ug/L			190968	210774	1	Standard
	Pb	208	22.485	ug/L	0.352	1	196	1667577	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:31:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	29330	2	Standard
>	Sc	45		ug/L			699560	831944	3	Standard
	Cr	52	10.435	ug/L	0.107	1	21056	248417	3	Standard
	Cr	53	10.229	ug/L	0.211	2	160	25642	2	Standard
	Mn	55	92.731	ug/L	2.623	2	394	3038817	0	Standard
>	Ge	72		ug/L			43630	42528	1	KED
	Ni	60	8.339	ug/L	0.143	1	50	16326	0	KED
	Ni	62	8.758	ug/L	0.301	3	6	2717	3	KED
	Cu	63	16.368	ug/L	0.221	1	60	91415	1	KED
	Cu	65	16.816	ug/L	0.394	2	36	47071	1	KED
	Zn	66	38.013	ug/L	0.366	0	66	24701	1	KED
	Zn	67	35.156	ug/L	0.580	1	11	3858	2	KED
	As	75	3.744	ug/L	0.051	1	3	1271	0	KED
	Se	78	0.854	ug/L	0.187	21	13	38	15	KED
	Kr	83		ug/L			49	87	13	Standard
>	In-1	115		ug/L			9463	9346	1	KED
	Cd	111	0.123	ug/L	0.024	19	3	43	16	KED
	Cd	114	0.109	ug/L	0.013	12	1	92	10	KED
>	In	115		ug/L			431494	451253	2	Standard
	Ag	107	0.106	ug/L	0.003	2	47	2000	3	Standard
	Ba	135	18.003	ug/L	1.235	6	56	99507	5	Standard
	Ba	137	17.627	ug/L	0.622	3	82	184403	1	Standard
>	Tb	159		ug/L			190968	218194	2	Standard
	Pb	208	11.174	ug/L	0.349	3	196	857404	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:36:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	28312	4	Standard
>	Sc	45		ug/L			699560	816415	2	Standard
	Cr	52	11.102	ug/L	0.426	3	21056	257845	4	Standard
	Cr	53	10.864	ug/L	0.336	3	160	26714	2	Standard
	Mn	55	88.730	ug/L	1.901	2	394	2854622	1	Standard
>	Ge	72		ug/L			43630	43460	2	KED
	Ni	60	8.458	ug/L	0.306	3	50	16926	4	KED
	Ni	62	8.726	ug/L	0.349	4	6	2767	5	KED
	Cu	63	15.073	ug/L	0.539	3	60	86002	1	KED
	Cu	65	15.409	ug/L	0.253	1	36	44086	1	KED
	Zn	66	37.630	ug/L	0.176	0	66	24990	2	KED
	Zn	67	37.110	ug/L	1.055	2	11	4163	4	KED
	As	75	3.351	ug/L	0.121	3	3	1163	3	KED
	Se	78	0.753	ug/L	0.114	15	13	36	7	KED
	Kr	83		ug/L			49	74	23	Standard
>	In-1	115		ug/L			9463	9456	0	KED
	Cd	111	0.105	ug/L	0.004	3	3	37	3	KED
	Cd	114	0.105	ug/L	0.010	9	1	90	9	KED
>	In	115		ug/L			431494	451033	0	Standard
	Ag	107	0.095	ug/L	0.004	4	47	1795	3	Standard
	Ba	135	29.351	ug/L	0.635	2	56	162230	1	Standard
	Ba	137	29.499	ug/L	1.327	4	82	308526	4	Standard
>	Tb	159		ug/L			190968	216596	1	Standard
	Pb	208	10.911	ug/L	0.099	0	196	831559	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:40:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	28232	7	Standard
>	Sc	45		ug/L			699560	819923	3	Standard
	Cr	52	31.346	ug/L	0.627	2	21056	686079	4	Standard
	Cr	53	30.819	ug/L	0.573	1	160	75754	2	Standard
	Mn	55	110.911	ug/L	4.281	3	394	3583733	5	Standard
>	Ge	72		ug/L			43630	43076	1	KED
	Ni	60	31.655	ug/L	0.531	1	50	62637	0	KED
	Ni	62	32.176	ug/L	1.663	5	6	10088	3	KED
	Cu	63	38.730	ug/L	0.828	2	60	218981	0	KED
	Cu	65	38.709	ug/L	0.712	1	36	109711	0	KED
	Zn	66	111.555	ug/L	2.171	1	66	73288	0	KED
	Zn	67	104.518	ug/L	3.197	3	11	11596	2	KED
	As	75	26.918	ug/L	0.263	0	3	9237	0	KED
	Se	78	75.634	ug/L	1.046	1	13	2293	2	KED
	Kr	83		ug/L			49	84	2	Standard
>	In-1	115		ug/L			9463	9226	2	KED
	Cd	111	23.629	ug/L	1.103	4	3	7556	2	KED
	Cd	114	23.630	ug/L	0.424	1	1	19463	1	KED
>	In	115		ug/L			431494	440764	1	Standard
	Ag	107	26.186	ug/L	0.595	2	47	469607	1	Standard
	Ba	135	45.958	ug/L	2.047	4	56	248191	4	Standard
	Ba	137	44.942	ug/L	1.164	2	82	459341	3	Standard
>	Tb	159		ug/L			190968	218906	2	Standard
	Pb	208	31.008	ug/L	1.303	4	196	2386600	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:45:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	27335	2	Standard
>	Sc	45		ug/L			699560	817655	2	Standard
	Cr	52	32.530	ug/L	1.570	4	21056	708823	4	Standard
	Cr	53	31.960	ug/L	0.698	2	160	78385	3	Standard
	Mn	55	109.501	ug/L	4.254	3	394	3528744	4	Standard
>	Ge	72		ug/L			43630	42575	1	KED
	Ni	60	32.184	ug/L	0.595	1	50	62944	0	KED
	Ni	62	33.243	ug/L	0.596	1	6	10305	1	KED
	Cu	63	39.211	ug/L	0.958	2	60	219138	1	KED
	Cu	65	40.473	ug/L	1.097	2	36	113375	1	KED
	Zn	66	115.402	ug/L	2.423	2	66	74937	1	KED
	Zn	67	111.886	ug/L	0.406	0	11	12270	0	KED
	As	75	27.430	ug/L	0.447	1	3	9303	0	KED
	Se	78	78.703	ug/L	1.927	2	13	2357	1	KED
	Kr	83		ug/L			49	80	9	Standard
>	In-1	115		ug/L			9463	9183	0	KED
	Cd	111	23.580	ug/L	0.493	2	3	7511	1	KED
	Cd	114	23.847	ug/L	0.603	2	1	19552	1	KED
>	In	115		ug/L			431494	446461	3	Standard
	Ag	107	26.270	ug/L	0.853	3	47	476880	0	Standard
	Ba	135	43.919	ug/L	1.339	3	56	240123	2	Standard
	Ba	137	42.726	ug/L	3.040	7	82	441511	3	Standard
>	Tb	159		ug/L			190968	222031	1	Standard
	Pb	208	33.346	ug/L	0.352	1	196	2604549	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:50:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	30865	7	Standard
⌈>	**Sc**	**45**		ug/L			699560	821398	4	Standard
|	**Cr**	**52**	**33.063**	ug/L	0.251	0	21056	723395	3	Standard
|	**Cr**	**53**	**32.500**	ug/L	0.940	2	160	79992	1	Standard
⌊	**Mn**	**55**	**112.899**	ug/L	3.046	2	394	3653432	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	42789	0	KED
|	**Ni**	**60**	**33.514**	ug/L	0.601	1	50	65874	0	KED
|	**Ni**	**62**	**34.192**	ug/L	1.127	3	6	10653	3	KED
|	**Cu**	**63**	**41.654**	ug/L	0.856	2	60	233964	1	KED
|	**Cu**	**65**	**42.667**	ug/L	0.829	1	36	120132	1	KED
|	**Zn**	**66**	**117.352**	ug/L	2.238	1	66	76585	1	KED
|	**Zn**	**67**	**111.382**	ug/L	2.785	2	11	12275	1	KED
|	**As**	**75**	**29.567**	ug/L	0.371	1	3	10078	0	KED
⌊	**Se**	**78**	**82.538**	ug/L	2.184	2	13	2484	1	KED
	Kr	**83**		ug/L			49	93	14	Standard
⌈>	**In-1**	**115**		ug/L			9463	8926	1	KED
|	**Cd**	**111**	**26.089**	ug/L	0.646	2	3	8077	1	KED
⌊	**Cd**	**114**	**25.832**	ug/L	0.062	0	1	20589	1	KED
⌈>	**In**	**115**		ug/L			431494	453457	3	Standard
|	**Ag**	**107**	**27.062**	ug/L	0.890	3	47	499143	2	Standard
|	**Ba**	**135**	**42.558**	ug/L	1.422	3	56	236379	2	Standard
⌊	**Ba**	**137**	**41.424**	ug/L	0.901	2	82	435492	3	Standard
⌈>	**Tb**	**159**		ug/L			190968	220662	2	Standard
⌊	**Pb**	**208**	**33.197**	ug/L	1.007	3	196	2575937	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 19:55:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	23055	0	Standard
⌈>	**Sc**	**45**		ug/L			699560	743341	3	Standard
|	**Cr**	**52**	**0.024**	ug/L	0.031	130	21056	22818	3	Standard
|	**Cr**	**53**	**-0.008**	ug/L	0.005	68	160	152	7	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.001	35	394	475	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	44095	1	KED
|	**Ni**	**60**	**-0.015**	ug/L	0.004	28	50	21	39	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.007	85	6	4	49	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.002	151	60	54	21	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.002	707	36	36	18	KED
|	**Zn**	**66**	**-0.050**	ug/L	0.014	27	66	33	29	KED
|	**Zn**	**67**	**-0.057**	ug/L	0.034	60	11	5	78	KED
|	**As**	**75**	**0.004**	ug/L	0.008	214	3	5	50	KED
⌊	**Se**	**78**	**0.182**	ug/L	0.031	16	13	19	4	KED
	Kr	**83**		ug/L			49	43	18	Standard
⌈>	**In-1**	**115**		ug/L			9463	9193	1	KED
|	**Cd**	**111**	**0.022**	ug/L	0.015	69	3	10	47	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.007	98	1	7	76	KED
⌈>	**In**	**115**		ug/L			431494	451975	1	Standard
|	**Ag**	**107**	**0.008**	ug/L	0.001	9	47	191	8	Standard
|	**Ba**	**135**	**-0.005**	ug/L	0.001	13	56	29	13	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.001	31	82	46	26	Standard
⌈>	**Tb**	**159**		ug/L			190968	199729	3	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	28	196	316	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 19:59:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21389	2	Standard
⌈>	**Sc**	**45**		ug/L			699560	726212	2	Standard
|	**Cr**	**52**	**49.577**	ug/L	1.360	2	21056	947868	0	Standard
|	**Cr**	**53**	**48.802**	ug/L	0.640	1	160	106188	2	Standard
⌊	**Mn**	**55**	**47.814**	ug/L	0.692	1	394	1368446	1	Standard
⌈>	**Ge**	**72**		ug/L			43630	43324	1	KED
|	**Ni**	**60**	**47.744**	ug/L	2.826	5	50	94936	4	KED
|	**Ni**	**62**	**48.350**	ug/L	2.027	4	6	15242	2	KED
|	**Cu**	**63**	**46.607**	ug/L	1.341	2	60	264981	1	KED
|	**Cu**	**65**	**48.799**	ug/L	2.067	4	36	139055	2	KED
|	**Zn**	**66**	**51.021**	ug/L	0.605	1	66	33757	2	KED
|	**Zn**	**67**	**49.488**	ug/L	1.345	2	11	5528	2	KED
|	**As**	**75**	**49.245**	ug/L	1.172	2	3	16990	1	KED
⌊	**Se**	**78**	**49.987**	ug/L	1.556	3	13	1528	1	KED
	Kr	**83**		ug/L			49	71	11	Standard
⌈>	**In-1**	**115**		ug/L			9463	9175	1	KED
|	**Cd**	**111**	**48.190**	ug/L	0.377	0	3	15335	1	KED
⌊	**Cd**	**114**	**47.066**	ug/L	0.778	1	1	38557	1	KED
⌈>	**In**	**115**		ug/L			431494	445057	2	Standard
|	**Ag**	**107**	**52.269**	ug/L	1.115	2	47	946229	1	Standard
|	**Ba**	**135**	**48.716**	ug/L	2.295	4	56	265438	1	Standard
⌊	**Ba**	**137**	**48.957**	ug/L	2.780	5	82	504677	3	Standard
⌈>	**Tb**	**159**		ug/L			190968	197526	2	Standard
⌊	**Pb**	**208**	**48.018**	ug/L	1.412	2	196	3335683	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 20:07:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	20888	3	Standard
⌈>	**Sc**	**45**		ug/L			699560	733072	1	Standard
|	**Cr**	**52**	**0.049**	ug/L	0.037	74	21056	22990	2	Standard
|	**Cr**	**53**	**-0.013**	ug/L	0.007	57	160	139	9	Standard
⌊	**Mn**	**55**	**-0.000**	ug/L	0.002	504	394	403	9	Standard
⌈>	**Ge**	**72**		ug/L			43630	45330	2	KED
|	**Ni**	**60**	**-0.016**	ug/L	0.004	23	50	20	37	KED
|	**Ni**	**62**	**-0.010**	ug/L	0.006	53	6	3	50	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.000	4	60	50	2	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.002	186	36	34	19	KED
|	**Zn**	**66**	**-0.049**	ug/L	0.023	47	66	34	44	KED
|	**Zn**	**67**	**-0.053**	ug/L	0.017	32	11	5	33	KED
|	**As**	**75**	**0.004**	ug/L	0.003	66	3	5	16	KED
⌊	**Se**	**78**	**0.017**	ug/L	0.092	539	13	14	22	KED
	Kr	**83**		ug/L			49	50	9	Standard
⌈>	**In-1**	**115**		ug/L			9463	9540	1	KED
|	**Cd**	**111**	**0.007**	ug/L	0.008	114	3	5	44	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.007	121	1	6	91	KED
⌈>	**In**	**115**		ug/L			431494	464135	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.001	9	47	222	8	Standard
|	**Ba**	**135**	**-0.006**	ug/L	0.002	29	56	27	33	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.001	29	82	49	23	Standard
⌈>	**Tb**	**159**		ug/L			190968	201581	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	37	196	276	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:12:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	39609	10	Standard
>	Sc	45		ug/L			699560	821071	3	Standard
	Cr	52	11.439	ug/L	0.339	2	21056	266249	2	Standard
	Cr	53	11.357	ug/L	0.247	2	160	28090	4	Standard
	Mn	55	111.122	ug/L	3.342	3	394	3593519	1	Standard
>	Ge	72		ug/L			43630	44386	0	KED
	Ni	60	7.509	ug/L	0.115	1	50	15352	1	KED
	Ni	62	7.578	ug/L	0.006	0	6	2454	0	KED
	Cu	63	25.365	ug/L	0.255	1	60	147830	0	KED
	Cu	65	25.760	ug/L	0.272	1	36	75257	0	KED
	Zn	66	160.273	ug/L	4.346	2	66	108489	2	KED
	Zn	67	147.887	ug/L	2.253	1	11	16904	0	KED
	As	75	3.702	ug/L	0.036	0	3	1312	0	KED
	Se	78	0.909	ug/L	0.096	10	13	41	6	KED
	Kr	83		ug/L			49	80	17	Standard
>	In-1	115		ug/L			9463	9386	1	KED
	Cd	111	0.215	ug/L	0.030	13	3	73	15	KED
	Cd	114	0.231	ug/L	0.029	12	1	195	14	KED
>	In	115		ug/L			431494	447248	3	Standard
	Ag	107	0.087	ug/L	0.003	3	47	1640	1	Standard
	Ba	135	27.974	ug/L	1.199	4	56	153253	3	Standard
	Ba	137	27.040	ug/L	0.119	0	82	280428	2	Standard
>	Tb	159		ug/L			190968	214903	2	Standard
	Pb	208	34.065	ug/L	0.190	0	196	2575410	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:16:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	36149	8	Standard
>	Sc	45		ug/L			699560	819991	3	Standard
	Cr	52	12.751	ug/L	0.337	2	21056	293618	2	Standard
	Cr	53	12.621	ug/L	0.236	1	160	31158	4	Standard
	Mn	55	352.977	ug/L	6.797	1	394	11402344	1	Standard
>	Ge	72		ug/L			43630	44165	0	KED
	Ni	60	12.621	ug/L	0.336	2	50	25637	1	KED
	Ni	62	12.445	ug/L	0.525	4	6	4007	4	KED
	Cu	63	30.862	ug/L	0.304	0	60	178966	1	KED
	Cu	65	32.009	ug/L	0.721	2	36	93029	1	KED
	Zn	66	64.875	ug/L	1.415	2	66	43734	2	KED
	Zn	67	61.413	ug/L	1.467	2	11	6992	3	KED
	As	75	5.316	ug/L	0.262	4	3	1873	4	KED
	Se	78	0.935	ug/L	0.144	15	13	42	10	KED
	Kr	83		ug/L			49	95	12	Standard
>	In-1	115		ug/L			9463	9341	1	KED
	Cd	111	0.076	ug/L	0.010	13	3	27	12	KED
	Cd	114	0.061	ug/L	0.002	2	1	52	3	KED
>	In	115		ug/L			431494	461606	2	Standard
	Ag	107	0.084	ug/L	0.006	7	47	1633	5	Standard
	Ba	135	12.983	ug/L	0.615	4	56	73422	2	Standard
	Ba	137	12.114	ug/L	0.951	7	82	129564	5	Standard
>	Tb	159		ug/L			190968	215748	2	Standard
	Pb	208	17.109	ug/L	0.522	3	196	1298214	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:21:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	40820	2	Standard
>	Sc	45		ug/L			699560	837063	4	Standard
	Cr	52	15.550	ug/L	0.500	3	21056	359848	2	Standard
	Cr	53	15.157	ug/L	0.346	2	160	38127	2	Standard
	Mn	55	158.602	ug/L	4.861	3	394	5228149	2	Standard
>	Ge	72		ug/L			43630	43863	2	KED
	Ni	60	12.866	ug/L	0.243	1	50	25965	3	KED
	Ni	62	13.141	ug/L	0.484	3	6	4199	1	KED
	Cu	63	90.624	ug/L	3.224	3	60	521545	1	KED
	Cu	65	93.639	ug/L	2.365	2	36	270150	0	KED
	Zn	66	99.061	ug/L	2.182	2	66	66270	0	KED
	Zn	67	93.769	ug/L	1.548	1	11	10596	2	KED
	As	75	11.134	ug/L	0.382	3	3	3891	1	KED
	Se	78	0.947	ug/L	0.148	15	13	42	8	KED
	Kr	83		ug/L			49	88	14	Standard
>	In-1	115		ug/L			9463	9425	5	KED
	Cd	111	0.367	ug/L	0.054	14	3	122	9	KED
	Cd	114	0.337	ug/L	0.064	19	1	283	14	KED
>	In	115		ug/L			431494	441213	2	Standard
	Ag	107	0.265	ug/L	0.004	1	47	4810	2	Standard
	Ba	135	25.421	ug/L	0.382	1	56	137442	0	Standard
	Ba	137	24.608	ug/L	0.781	3	82	251767	3	Standard
>	Tb	159		ug/L			190968	216292	2	Standard
	Pb	208	22.187	ug/L	0.501	2	196	1687900	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:26:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	38042	9	Standard
>	Sc	45		ug/L			699560	830400	2	Standard
	Cr	52	16.717	ug/L	0.185	1	21056	382161	1	Standard
	Cr	53	16.527	ug/L	0.275	1	160	41240	0	Standard
	Mn	55	379.747	ug/L	14.770	3	394	12424731	3	Standard
>	Ge	72		ug/L			43630	43215	1	KED
	Ni	60	16.584	ug/L	0.626	3	50	32941	2	KED
	Ni	62	17.038	ug/L	0.722	4	6	5366	5	KED
	Cu	63	36.945	ug/L	0.797	2	60	209595	1	KED
	Cu	65	37.387	ug/L	0.574	1	36	106336	2	KED
	Zn	66	94.323	ug/L	3.853	4	66	62174	3	KED
	Zn	67	89.266	ug/L	2.230	2	11	9939	2	KED
	As	75	8.363	ug/L	0.207	2	3	2881	1	KED
	Se	78	1.036	ug/L	0.137	13	13	44	10	KED
	Kr	83		ug/L			49	112	19	Standard
>	In-1	115		ug/L			9463	9368	3	KED
	Cd	111	0.106	ug/L	0.010	9	3	37	10	KED
	Cd	114	0.088	ug/L	0.004	4	1	75	7	KED
>	In	115		ug/L			431494	452848	2	Standard
	Ag	107	0.096	ug/L	0.004	4	47	1810	3	Standard
	Ba	135	24.468	ug/L	0.414	1	56	135780	1	Standard
	Ba	137	23.015	ug/L	1.184	5	82	241605	4	Standard
>	Tb	159		ug/L			190968	212323	3	Standard
	Pb	208	11.720	ug/L	0.476	4	196	874656	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:30:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	39956	7	Standard
>	Sc	45		ug/L			699560	838920	2	Standard
	Cr	52	14.598	ug/L	0.249	1	21056	340316	1	Standard
	Cr	53	14.479	ug/L	0.061	0	160	36537	2	Standard
	Mn	55	143.833	ug/L	2.037	1	394	4754534	1	Standard
>	Ge	72		ug/L			43630	43127	1	KED
	Ni	60	12.591	ug/L	0.251	1	50	24973	1	KED
	Ni	62	12.842	ug/L	0.444	3	6	4036	2	KED
	Cu	63	34.279	ug/L	0.445	1	60	194081	1	KED
	Cu	65	34.485	ug/L	0.190	0	36	97880	1	KED
	Zn	66	70.277	ug/L	1.439	2	66	46258	2	KED
	Zn	67	67.789	ug/L	2.002	2	11	7534	2	KED
	As	75	6.081	ug/L	0.040	0	3	2092	1	KED
	Se	78	1.242	ug/L	0.187	15	13	50	10	KED
	Kr	83		ug/L			49	98	26	Standard
>	In-1	115		ug/L			9463	9081	1	KED
	Cd	111	0.174	ug/L	0.023	13	3	58	11	KED
	Cd	114	0.183	ug/L	0.014	7	1	149	6	KED
>	In	115		ug/L			431494	433058	3	Standard
	Ag	107	0.196	ug/L	0.020	10	47	3488	7	Standard
	Ba	135	69.342	ug/L	2.235	3	56	367707	0	Standard
	Ba	137	65.995	ug/L	1.643	2	82	662392	2	Standard
>	Tb	159		ug/L			190968	213419	1	Standard
	Pb	208	16.380	ug/L	0.514	3	196	1229526	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:35:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	37966	4	Standard
>	Sc	45		ug/L			699560	837961	2	Standard
	Cr	52	14.546	ug/L	0.074	0	21056	338875	2	Standard
	Cr	53	14.330	ug/L	0.230	1	160	36125	3	Standard
	Mn	55	137.435	ug/L	1.530	1	394	4538084	1	Standard
>	Ge	72		ug/L			43630	42202	1	KED
	Ni	60	12.368	ug/L	0.131	1	50	24011	1	KED
	Ni	62	12.870	ug/L	0.115	0	6	3959	1	KED
	Cu	63	34.109	ug/L	0.460	1	60	188971	0	KED
	Cu	65	35.038	ug/L	0.570	1	36	97306	0	KED
	Zn	66	68.425	ug/L	1.793	2	66	44068	2	KED
	Zn	67	68.555	ug/L	1.046	1	11	7457	2	KED
	As	75	6.038	ug/L	0.128	2	3	2033	1	KED
	Se	78	1.275	ug/L	0.204	16	13	50	12	KED
	Kr	83		ug/L			49	86	4	Standard
>	In-1	115		ug/L			9463	9033	1	KED
	Cd	111	0.197	ug/L	0.013	6	3	65	6	KED
	Cd	114	0.220	ug/L	0.002	0	1	178	1	KED
>	In	115		ug/L			431494	435030	1	Standard
	Ag	107	0.186	ug/L	0.002	1	47	3338	0	Standard
	Ba	135	60.986	ug/L	1.708	2	56	325152	3	Standard
	Ba	137	59.970	ug/L	0.943	1	82	604830	1	Standard
>	Tb	159		ug/L			190968	219747	2	Standard
	Pb	208	16.210	ug/L	0.450	2	196	1252732	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:40:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	36880	3	Standard
⌈>	Sc	45		ug/L			699560	837078	4	Standard
|	Cr	52	32.103	ug/L	0.636	1	21056	716500	3	Standard
|	Cr	53	32.176	ug/L	1.171	3	160	80691	1	Standard
⌊	Mn	55	150.085	ug/L	4.695	3	394	4946961	1	Standard
⌈>	Ge	72		ug/L			43630	42296	0	KED
|	Ni	60	33.157	ug/L	0.272	0	50	64431	1	KED
|	Ni	62	33.608	ug/L	1.015	3	6	10352	3	KED
|	Cu	63	54.798	ug/L	0.729	1	60	304241	0	KED
|	Cu	65	54.756	ug/L	1.382	2	36	152389	2	KED
|	Zn	66	130.789	ug/L	1.511	1	66	84377	1	KED
|	Zn	67	123.723	ug/L	2.771	2	11	13479	2	KED
|	As	75	26.785	ug/L	0.476	1	3	9025	1	KED
⌊	Se	78	70.390	ug/L	0.937	1	13	2096	0	KED
	Kr	83		ug/L			49	101	9	Standard
⌈>	In-1	115		ug/L			9463	9173	0	KED
|	Cd	111	20.719	ug/L	0.171	0	3	6594	0	KED
⌊	Cd	114	20.862	ug/L	0.397	1	1	17088	1	KED
⌈>	In	115		ug/L			431494	439821	0	Standard
|	Ag	107	9.656	ug/L	0.136	1	47	172850	1	Standard
|	Ba	135	80.079	ug/L	1.412	1	56	431559	2	Standard
⌊	Ba	137	76.265	ug/L	0.253	0	82	777725	1	Standard
⌈>	Tb	159		ug/L			190968	210791	1	Standard
⌊	Pb	208	35.913	ug/L	0.836	2	196	2662694	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:45:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	35225	4	Standard
>	Sc	45		ug/L			699560	837132	2	Standard
	Cr	52	34.307	ug/L	1.142	3	21056	764053	3	Standard
	Cr	53	34.085	ug/L	0.796	2	160	85531	0	Standard
	Mn	55	156.547	ug/L	1.233	0	394	5164589	2	Standard
>	Ge	72		ug/L			43630	41621	1	KED
	Ni	60	34.936	ug/L	0.167	0	50	66797	1	KED
	Ni	62	35.258	ug/L	0.184	0	6	10685	1	KED
	Cu	63	57.041	ug/L	0.456	0	60	311667	2	KED
	Cu	65	59.267	ug/L	2.572	4	36	162224	2	KED
	Zn	66	136.759	ug/L	6.305	4	66	86764	2	KED
	Zn	67	134.357	ug/L	1.962	1	11	14400	0	KED
	As	75	27.816	ug/L	0.566	2	3	9221	0	KED
	Se	78	72.726	ug/L	2.265	3	13	2129	1	KED
	Kr	83		ug/L			49	97	12	Standard
>	In-1	115		ug/L			9463	8857	2	KED
	Cd	111	22.054	ug/L	0.663	3	3	6773	0	KED
	Cd	114	21.874	ug/L	0.953	4	1	17286	1	KED
>	In	115		ug/L			431494	439388	0	Standard
	Ag	107	13.259	ug/L	0.291	2	47	237088	1	Standard
	Ba	135	88.258	ug/L	1.803	2	56	475172	2	Standard
	Ba	137	85.837	ug/L	2.007	2	82	874398	2	Standard
>	Tb	159		ug/L			190968	218435	0	Standard
	Pb	208	36.313	ug/L	0.662	1	196	2790464	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:49:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	40350	7	Standard
>	Sc	45		ug/L			699560	837376	2	Standard
	Cr	52	36.379	ug/L	0.738	2	21056	809335	4	Standard
	Cr	53	35.862	ug/L	0.843	2	160	90048	4	Standard
	Mn	55	164.579	ug/L	0.515	0	394	5431737	2	Standard
>	Ge	72		ug/L			43630	42558	0	KED
	Ni	60	37.195	ug/L	0.223	0	50	72718	0	KED
	Ni	62	39.051	ug/L	1.180	3	6	12100	2	KED
	Cu	63	58.569	ug/L	1.122	1	60	327200	1	KED
	Cu	65	59.607	ug/L	0.327	0	36	166923	0	KED
	Zn	66	146.024	ug/L	1.777	1	66	94776	0	KED
	Zn	67	140.877	ug/L	6.277	4	11	15440	4	KED
	As	75	30.954	ug/L	0.414	1	3	10495	1	KED
	Se	78	78.992	ug/L	1.116	1	13	2365	1	KED
	Kr	83		ug/L			49	111	10	Standard
>	In-1	115		ug/L			9463	8723	3	KED
	Cd	111	25.627	ug/L	1.036	4	3	7748	0	KED
	Cd	114	25.341	ug/L	0.674	2	1	19727	0	KED
>	In	115		ug/L			431494	442687	4	Standard
	Ag	107	27.779	ug/L	1.535	5	47	499620	1	Standard
	Ba	135	81.461	ug/L	5.305	6	56	441182	4	Standard
	Ba	137	81.485	ug/L	4.958	6	82	834939	2	Standard
>	Tb	159		ug/L			190968	215675	1	Standard
	Pb	208	39.122	ug/L	1.011	2	196	2967750	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 20:54:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21559	2	Standard
⌈>	**Sc**	**45**		ug/L			699560	709397	1	Standard
|	**Cr**	**52**	**0.048**	ug/L	0.027	56	21056	22218	1	Standard
|	**Cr**	**53**	**-0.009**	ug/L	0.001	16	160	143	2	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	66	394	433	4	Standard
⌈>	**Ge**	**72**		ug/L			43630	42607	1	KED
|	**Ni**	**60**	**-0.016**	ug/L	0.001	4	50	18	5	KED
|	**Ni**	**62**	**-0.022**	ug/L	0.000	0	6	0		KED
|	**Cu**	**63**	**0.001**	ug/L	0.002	120	60	66	12	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.003	86	36	27	28	KED
|	**Zn**	**66**	**-0.048**	ug/L	0.012	24	66	33	23	KED
|	**Zn**	**67**	**-0.026**	ug/L	0.011	43	11	8	13	KED
|	**As**	**75**	**0.001**	ug/L	0.002	187	3	4	19	KED
⌊	**Se**	**78**	**0.113**	ug/L	0.115	102	13	16	21	KED
	Kr	**83**		ug/L			49	53	16	Standard
⌈>	**In-1**	**115**		ug/L			9463	9136	3	KED
|	**Cd**	**111**	**0.000**	ug/L	0.010	5412	3	3	95	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.001	7	1	7	2	KED
⌈>	**In**	**115**		ug/L			431494	442638	0	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.001	14	47	137	8	Standard
|	**Ba**	**135**	**-0.006**	ug/L	0.001	9	56	22	14	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.000	4	82	40	5	Standard
⌈>	**Tb**	**159**		ug/L			190968	196898	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	30	196	280	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 20:59:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21059	6	Standard
⌈>	**Sc**	**45**		ug/L			699560	732963	5	Standard
|	**Cr**	**52**	**49.417**	ug/L	1.178	2	21056	953292	3	Standard
|	**Cr**	**53**	**47.922**	ug/L	1.571	3	160	105149	3	Standard
⌊	**Mn**	**55**	**46.302**	ug/L	1.361	2	394	1336543	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	42664	1	KED
|	**Ni**	**60**	**47.999**	ug/L	0.477	0	50	94052	0	KED
|	**Ni**	**62**	**49.044**	ug/L	0.499	1	6	15234	2	KED
|	**Cu**	**63**	**47.578**	ug/L	1.369	2	60	266422	2	KED
|	**Cu**	**65**	**48.878**	ug/L	0.765	1	36	137203	0	KED
|	**Zn**	**66**	**48.849**	ug/L	1.680	3	66	31816	1	KED
|	**Zn**	**67**	**49.734**	ug/L	2.512	5	11	5470	4	KED
|	**As**	**75**	**48.766**	ug/L	0.558	1	3	16572	0	KED
⌊	**Se**	**78**	**49.750**	ug/L	0.427	0	13	1498	2	KED
	Kr	**83**		ug/L			49	64	37	Standard
⌈>	**In-1**	**115**		ug/L			9463	8899	2	KED
|	**Cd**	**111**	**50.118**	ug/L	1.458	2	3	15462	1	KED
⌊	**Cd**	**114**	**48.513**	ug/L	0.796	1	1	38538	0	KED
⌈>	**In**	**115**		ug/L			431494	453118	1	Standard
|	**Ag**	**107**	**51.071**	ug/L	1.209	2	47	941435	1	Standard
|	**Ba**	**135**	**49.336**	ug/L	2.930	5	56	273794	4	Standard
⌊	**Ba**	**137**	**49.367**	ug/L	2.172	4	82	518461	3	Standard
⌈>	**Tb**	**159**		ug/L			190968	200732	2	Standard
⌊	**Pb**	**208**	**47.298**	ug/L	2.045	4	196	3337391	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:06:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21098	1	Standard
⌈>	**Sc**	**45**		ug/L			699560	754626	2	Standard
|	**Cr**	**52**	**0.033**	ug/L	0.014	43	21056	23350	1	Standard
|	**Cr**	**53**	**-0.015**	ug/L	0.006	41	160	138	12	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.000	15	394	454	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	44264	1	KED
|	**Ni**	**60**	**-0.011**	ug/L	0.004	35	50	28	29	KED
|	**Ni**	**62**	**-0.006**	ug/L	0.012	194	6	5	78	KED
|	**Cu**	**63**	**0.000**	ug/L	0.002	984	60	62	16	KED
|	**Cu**	**65**	**0.000**	ug/L	0.003	5514	36	37	22	KED
|	**Zn**	**66**	**-0.029**	ug/L	0.010	33	66	47	14	KED
|	**Zn**	**67**	**-0.029**	ug/L	0.027	91	11	8	35	KED
|	**As**	**75**	**0.002**	ug/L	0.001	65	3	4	10	KED
⌊	**Se**	**78**	**0.127**	ug/L	0.072	56	13	17	13	KED
	Kr	**83**		ug/L			49	57	9	Standard
⌈>	**In-1**	**115**		ug/L			9463	9512	3	KED
|	**Cd**	**111**	**0.005**	ug/L	0.012	240	3	5	75	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.004	84	1	5	59	KED
⌈>	**In**	**115**		ug/L			431494	454533	4	Standard
|	**Ag**	**107**	**0.010**	ug/L	0.003	28	47	231	18	Standard
|	**Ba**	**135**	**-0.006**	ug/L	0.001	19	56	25	24	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.002	43	82	42	41	Standard
⌈>	**Tb**	**159**		ug/L			190968	201262	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	39	196	273	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0574-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:11:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	31412	5	Standard
>	Sc	45		ug/L			699560	764632	4	Standard
	Cr	52	0.080	ug/L	0.044	54	21056	24575	4	Standard
	Cr	53	0.035	ug/L	0.013	37	160	254	12	Standard
	Mn	55	0.111	ug/L	0.006	5	394	3768	1	Standard
>	Ge	72		ug/L			43630	44965	1	KED
	Ni	60	0.010	ug/L	0.005	50	50	73	13	KED
	Ni	62	0.023	ug/L	0.015	65	6	14	32	KED
	Cu	63	0.057	ug/L	0.002	3	60	396	1	KED
	Cu	65	0.059	ug/L	0.012	20	36	211	17	KED
	Zn	66	0.670	ug/L	0.049	7	66	527	7	KED
	Zn	67	0.607	ug/L	0.151	24	11	81	20	KED
	As	75	0.006	ug/L	0.003	58	3	6	20	KED
	Se	78	0.165	ug/L	0.190	115	13	19	31	KED
	Kr	83		ug/L			49	46	29	Standard
>	In-1	115		ug/L			9463	9487	2	KED
	Cd	111	0.017	ug/L	0.020	114	3	9	72	KED
	Cd	114	0.005	ug/L	0.005	111	1	5	80	KED
>	In	115		ug/L			431494	477515	1	Standard
	Ag	107	0.003	ug/L	0.001	24	47	113	12	Standard
	Ba	135	0.075	ug/L	0.006	8	56	502	6	Standard
	Ba	137	0.079	ug/L	0.003	3	82	970	3	Standard
>	Tb	159		ug/L			190968	207155	1	Standard
	Pb	208	0.009	ug/L	0.001	11	196	875	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0574-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:16:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	31724	1	Standard
>	Sc	45		ug/L			699560	762314	3	Standard
	Cr	52	24.373	ug/L	0.332	1	21056	500915	3	Standard
	Cr	53	24.313	ug/L	0.239	0	160	55618	3	Standard
	Mn	55	23.189	ug/L	0.682	2	394	696529	1	Standard
>	Ge	72		ug/L			43630	44239	1	KED
	Ni	60	23.923	ug/L	0.364	1	50	48641	2	KED
	Ni	62	24.697	ug/L	1.121	4	6	7956	4	KED
	Cu	63	23.521	ug/L	0.750	3	60	136598	2	KED
	Cu	65	24.163	ug/L	0.527	2	36	70350	1	KED
	Zn	66	78.231	ug/L	1.031	1	66	52813	1	KED
	Zn	67	75.726	ug/L	2.488	3	11	8631	2	KED
	As	75	24.298	ug/L	0.148	0	3	8563	0	KED
	Se	78	79.565	ug/L	1.376	1	13	2476	0	KED
	Kr	83		ug/L			49	57	14	Standard
>	In-1	115		ug/L			9463	9457	1	KED
	Cd	111	23.578	ug/L	0.490	2	3	7735	1	KED
	Cd	114	23.696	ug/L	0.238	1	1	20009	0	KED
>	In	115		ug/L			431494	445463	0	Standard
	Ag	107	26.534	ug/L	0.230	0	47	481000	1	Standard
	Ba	135	25.231	ug/L	0.484	1	56	137765	2	Standard
	Ba	137	24.365	ug/L	0.967	3	82	251686	3	Standard
>	Tb	159		ug/L			190968	204816	2	Standard
	Pb	208	23.719	ug/L	0.606	2	196	1708610	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-10
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:20:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	34202	3	Standard
⌈>	Sc	45		ug/L			699560	825004	3	Standard
|	Cr	52	16.449	ug/L	0.325	1	21056	373936	2	Standard
|	Cr	53	15.777	ug/L	0.323	2	160	39117	2	Standard
⌊	Mn	55	490.616	ug/L	16.335	3	394	15945052	3	Standard
⌈>	Ge	72		ug/L			43630	44269	2	KED
|	Ni	60	12.985	ug/L	0.351	2	50	26428	0	KED
|	Ni	62	13.027	ug/L	0.806	6	6	4199	3	KED
|	Cu	63	21.384	ug/L	0.682	3	60	124245	1	KED
|	Cu	65	21.625	ug/L	0.540	2	36	62994	1	KED
|	Zn	66	38.713	ug/L	0.910	2	66	26175	0	KED
|	Zn	67	37.645	ug/L	1.909	5	11	4297	2	KED
|	As	75	3.192	ug/L	0.068	2	3	1129	2	KED
⌊	Se	78	0.704	ug/L	0.133	18	13	35	10	KED
	Kr	83		ug/L			49	95	4	Standard
⌈>	In-1	115		ug/L			9463	9180	1	KED
|	Cd	111	0.036	ug/L	0.011	31	3	14	25	KED
⌊	Cd	114	0.046	ug/L	0.012	25	1	39	23	KED
⌈>	In	115		ug/L			431494	445598	3	Standard
|	Ag	107	0.043	ug/L	0.001	3	47	833	3	Standard
|	Ba	135	14.930	ug/L	0.525	3	56	81500	0	Standard
⌊	Ba	137	14.601	ug/L	0.383	2	82	150827	1	Standard
⌈>	Tb	159		ug/L			190968	208187	1	Standard
⌊	Pb	208	2.502	ug/L	0.026	1	196	183420	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-13
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:25:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			19019	35393	2	Standard
> Sc	45		ug/L			699560	875686	3	Standard
Cr	52	9.688	ug/L	0.243	2	21056	244558	1	Standard
Cr	53	9.725	ug/L	0.059	0	160	25679	2	Standard
Mn	55	440.766	ug/L	11.514	2	394	15206518	2	Standard
> Ge	72		ug/L			43630	43885	1	KED
Ni	60	12.934	ug/L	0.138	1	50	26111	2	KED
Ni	62	13.820	ug/L	0.715	5	6	4419	4	KED
Cu	63	107.877	ug/L	1.000	0	60	621381	0	KED
Cu	65	110.353	ug/L	2.339	2	36	318586	1	KED
Zn	66	121.526	ug/L	3.899	3	66	81328	2	KED
Zn	67	115.548	ug/L	5.453	4	11	13057	3	KED
As	75	35.170	ug/L	0.334	0	3	12295	0	KED
Se	78	1.928	ug/L	0.330	17	13	72	13	KED
Kr	83		ug/L			49	140	10	Standard
> In-1	115		ug/L			9463	9505	2	KED
Cd	111	0.153	ug/L	0.011	7	3	53	8	KED
Cd	114	0.124	ug/L	0.015	11	1	107	13	KED
> In	115		ug/L			431494	458456	2	Standard
Ag	107	0.121	ug/L	0.001	0	47	2314	3	Standard
Ba	135	22.630	ug/L	1.108	4	56	127041	1	Standard
Ba	137	21.864	ug/L	0.412	1	82	232381	1	Standard
> Tb	159		ug/L			190968	233827	2	Standard
Pb	208	17.096	ug/L	0.448	2	196	1405808	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:30:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	40443	5	Standard
⌈>	**Sc**	**45**		ug/L			699560	826520	1	Standard
|	**Cr**	**52**	**9.448**	ug/L	0.355	3	21056	225772	2	Standard
|	**Cr**	**53**	**9.228**	ug/L	0.307	3	160	23004	2	Standard
⌊	**Mn**	**55**	**94.658**	ug/L	3.076	3	394	3082858	2	Standard
⌈>	**Ge**	**72**		ug/L			43630	44405	0	KED
|	**Ni**	**60**	**5.824**	ug/L	0.213	3	50	11924	3	KED
|	**Ni**	**62**	**5.855**	ug/L	0.093	1	6	1899	1	KED
|	**Cu**	**63**	**13.071**	ug/L	0.315	2	60	76241	2	KED
|	**Cu**	**65**	**13.560**	ug/L	0.513	3	36	39648	3	KED
|	**Zn**	**66**	**28.846**	ug/L	0.616	2	66	19588	1	KED
|	**Zn**	**67**	**28.030**	ug/L	0.876	3	11	3214	3	KED
|	**As**	**75**	**3.309**	ug/L	0.186	5	3	1174	5	KED
⌊	**Se**	**78**	**1.012**	ug/L	0.129	12	13	45	8	KED
	Kr	**83**		ug/L			49	76	12	Standard
⌈>	**In-1**	**115**		ug/L			9463	9426	2	KED
|	**Cd**	**111**	**0.028**	ug/L	0.013	45	3	12	34	KED
⌊	**Cd**	**114**	**0.033**	ug/L	0.010	30	1	29	30	KED
⌈>	**In**	**115**		ug/L			431494	459768	0	Standard
|	**Ag**	**107**	**0.050**	ug/L	0.005	9	47	991	8	Standard
|	**Ba**	**135**	**21.127**	ug/L	0.610	2	56	119061	2	Standard
⌊	**Ba**	**137**	**20.374**	ug/L	0.727	3	82	217231	3	Standard
⌈>	**Tb**	**159**		ug/L			190968	225743	0	Standard
⌊	**Pb**	**208**	**4.768**	ug/L	0.030	0	196	378884	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:35:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	38069	5	Standard
⌈>	Sc	45		ug/L			699560	816569	4	Standard
|	Cr	52	10.935	ug/L	0.342	3	21056	254145	1	Standard
|	Cr	53	10.969	ug/L	0.326	2	160	26973	3	Standard
⌊	Mn	55	303.797	ug/L	6.808	2	394	9770997	2	Standard
⌈>	Ge	72		ug/L			43630	44852	1	KED
|	Ni	60	6.471	ug/L	0.171	2	50	13373	1	KED
|	Ni	62	6.656	ug/L	0.216	3	6	2179	2	KED
|	Cu	63	10.916	ug/L	0.188	1	60	64314	0	KED
|	Cu	65	11.038	ug/L	0.112	1	36	32608	1	KED
|	Zn	66	30.030	ug/L	0.504	1	66	20597	2	KED
|	Zn	67	28.468	ug/L	1.112	3	11	3296	2	KED
|	As	75	2.306	ug/L	0.075	3	3	827	2	KED
⌊	Se	78	0.721	ug/L	0.117	16	13	36	8	KED
	Kr	83		ug/L			49	107	29	Standard
⌈>	In-1	115		ug/L			9463	9565	2	KED
|	Cd	111	0.039	ug/L	0.007	17	3	16	14	KED
⌊	Cd	114	0.026	ug/L	0.006	21	1	23	17	KED
⌈>	In	115		ug/L			431494	461623	3	Standard
|	Ag	107	0.047	ug/L	0.003	5	47	935	3	Standard
|	Ba	135	12.383	ug/L	0.278	2	56	70074	3	Standard
⌊	Ba	137	11.887	ug/L	0.831	6	82	127108	4	Standard
⌈>	Tb	159		ug/L			190968	219292	1	Standard
⌊	Pb	208	5.827	ug/L	0.145	2	196	449607	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:39:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	39632	3	Standard
⌈>	Sc	45		ug/L			699560	851730	3	Standard
|	Cr	52	15.638	ug/L	0.559	3	21056	368109	2	Standard
|	Cr	53	15.480	ug/L	0.382	2	160	39621	2	Standard
⌊	Mn	55	127.278	ug/L	4.390	3	394	4268812	0	Standard
⌈>	Ge	72		ug/L			43630	45090	0	KED
|	Ni	60	11.589	ug/L	0.194	1	50	24041	1	KED
|	Ni	62	11.873	ug/L	0.360	3	6	3902	2	KED
|	Cu	63	29.766	ug/L	0.851	2	60	176216	2	KED
|	Cu	65	30.172	ug/L	0.987	3	36	89533	2	KED
|	Zn	66	66.030	ug/L	0.296	0	66	45444	0	KED
|	Zn	67	62.844	ug/L	1.974	3	11	7304	2	KED
|	As	75	6.743	ug/L	0.161	2	3	2425	2	KED
⌊	Se	78	0.940	ug/L	0.076	8	13	43	5	KED
	Kr	83		ug/L			49	96	4	Standard
⌈>	In-1	115		ug/L			9463	9225	1	KED
|	Cd	111	0.245	ug/L	0.032	12	3	81	11	KED
⌊	Cd	114	0.248	ug/L	0.033	13	1	205	14	KED
⌈>	In	115		ug/L			431494	458813	0	Standard
|	Ag	107	0.267	ug/L	0.017	6	47	5030	6	Standard
|	Ba	135	31.160	ug/L	1.007	3	56	175216	3	Standard
⌊	Ba	137	30.092	ug/L	0.930	3	82	320175	3	Standard
⌈>	Tb	159		ug/L			190968	225421	0	Standard
⌊	Pb	208	21.014	ug/L	0.226	1	196	1666615	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-11
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:44:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	33723	6	Standard
>	Sc	45		ug/L			699560	819867	2	Standard
	Cr	52	8.893	ug/L	0.284	3	21056	212390	5	Standard
	Cr	53	18.004	ug/L	15.850	88	160	44161	87	Standard
	Mn	55	232.737	ug/L	2.194	0	394	7518966	1	Standard
>	Ge	72		ug/L			43630	43327	0	KED
	Ni	60	11.894	ug/L	0.190	1	50	23709	1	KED
	Ni	62	12.028	ug/L	0.355	2	6	3799	3	KED
	Cu	63	27.084	ug/L	0.734	2	60	154052	1	KED
	Cu	65	27.557	ug/L	0.678	2	36	78574	1	KED
	Zn	66	51.631	ug/L	0.118	0	66	34158	0	KED
	Zn	67	54.219	ug/L	1.246	2	11	6056	1	KED
	As	75	2.996	ug/L	0.099	3	3	1037	3	KED
	Se	78	0.907	ug/L	0.252	27	13	40	19	KED
	Kr	83		ug/L			49	155	82	Standard
>	In-1	115		ug/L			9463	9121	0	KED
	Cd	111	0.073	ug/L	0.013	18	3	26	16	KED
	Cd	114	0.056	ug/L	0.006	11	1	47	11	KED
>	In	115		ug/L			431494	446332	5	Standard
	Ag	107	0.050	ug/L	0.008	15	47	953	11	Standard
	Ba	135	70.560	ug/L	2.324	3	56	385453	2	Standard
	Ba	137	68.667	ug/L	3.770	5	82	709426	2	Standard
>	Tb	159		ug/L			190968	206041	3	Standard
	Pb	208	4.583	ug/L	0.089	1	196	332224	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-12
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:49:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	36401	3	Standard
⌈>	**Sc**	**45**		ug/L			699560	818725	2	Standard
|	**Cr**	**52**	**11.611**	ug/L	0.318	2	21056	269283	3	Standard
|	**Cr**	**53**	**11.863**	ug/L	0.421	3	160	29251	4	Standard
⌊	**Mn**	**55**	**128.329**	ug/L	3.741	2	394	4140816	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	44363	1	KED
|	**Ni**	**60**	**9.797**	ug/L	0.209	2	50	19999	0	KED
|	**Ni**	**62**	**9.850**	ug/L	0.450	4	6	3187	4	KED
|	**Cu**	**63**	**12.809**	ug/L	0.644	5	60	74605	3	KED
|	**Cu**	**65**	**12.945**	ug/L	0.089	0	36	37816	1	KED
|	**Zn**	**66**	**38.283**	ug/L	0.894	2	66	25947	2	KED
|	**Zn**	**67**	**36.884**	ug/L	1.115	3	11	4221	1	KED
|	**As**	**75**	**3.557**	ug/L	0.112	3	3	1260	1	KED
⌊	**Se**	**78**	**0.937**	ug/L	0.089	9	13	42	6	KED
	Kr	**83**		ug/L			49	84	7	Standard
⌈>	**In-1**	**115**		ug/L			9463	9279	2	KED
|	**Cd**	**111**	**0.074**	ug/L	0.005	6	3	27	5	KED
⌊	**Cd**	**114**	**0.080**	ug/L	0.004	5	1	68	7	KED
⌈>	**In**	**115**		ug/L			431494	460826	1	Standard
|	**Ag**	**107**	**0.079**	ug/L	0.004	4	47	1537	3	Standard
|	**Ba**	**135**	**18.055**	ug/L	0.470	2	56	101970	1	Standard
⌊	**Ba**	**137**	**17.713**	ug/L	0.637	3	82	189252	2	Standard
⌈>	**Tb**	**159**		ug/L			190968	216693	2	Standard
⌊	**Pb**	**208**	**6.607**	ug/L	0.073	1	196	503812	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:53:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21821	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	756187	2	Standard
|	**Cr**	**52**	**-0.019**	ug/L	0.011	55	21056	22383	2	Standard
|	**Cr**	**53**	**-0.012**	ug/L	0.007	59	160	146	13	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.000	53	394	436	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	43528	1	KED
|	**Ni**	**60**	**-0.019**	ug/L	0.002	10	50	12	32	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.014	179	6	4	98	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.002	96	60	51	16	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.002	77	36	28	23	KED
|	**Zn**	**66**	**0.014**	ug/L	0.018	130	66	74	14	KED
|	**Zn**	**67**	**-0.028**	ug/L	0.010	37	11	8	13	KED
|	**As**	**75**	**-0.001**	ug/L	0.006	408	3	3	55	KED
⌊	**Se**	**78**	**0.096**	ug/L	0.102	106	13	16	20	KED
	Kr	**83**		ug/L			49	48	18	Standard
⌈>	**In-1**	**115**		ug/L			9463	8939	7	KED
|	**Cd**	**111**	**0.003**	ug/L	0.006	197	3	4	35	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.004	4448	1	1	188	KED
⌈>	**In**	**115**		ug/L			431494	458378	3	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.000	59	47	37	19	Standard
|	**Ba**	**135**	**-0.005**	ug/L	0.001	21	56	32	15	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.000	12	82	46	9	Standard
⌈>	**Tb**	**159**		ug/L			190968	199394	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	68	196	195	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:58:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	22266	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	750652	3	Standard
|	**Cr**	**52**	**48.449**	ug/L	1.141	2	21056	957965	1	Standard
|	**Cr**	**53**	**48.145**	ug/L	0.827	1	160	108266	2	Standard
⌊	**Mn**	**55**	**46.075**	ug/L	0.857	1	394	1362906	1	Standard
⌈>	**Ge**	**72**		ug/L			43630	42264	2	KED
|	**Ni**	**60**	**49.151**	ug/L	2.199	4	50	95353	2	KED
|	**Ni**	**62**	**49.728**	ug/L	1.034	2	6	15296	0	KED
|	**Cu**	**63**	**48.036**	ug/L	0.725	1	60	266495	1	KED
|	**Cu**	**65**	**49.178**	ug/L	0.557	1	36	136751	1	KED
|	**Zn**	**66**	**50.203**	ug/L	1.242	2	66	32394	1	KED
|	**Zn**	**67**	**48.803**	ug/L	0.721	1	11	5318	0	KED
|	**As**	**75**	**50.666**	ug/L	1.088	2	3	17052	0	KED
⌊	**Se**	**78**	**51.878**	ug/L	0.156	0	13	1547	2	KED
	Kr	**83**		ug/L			49	53	36	Standard
⌈>	**In-1**	**115**		ug/L			9463	9030	2	KED
|	**Cd**	**111**	**48.626**	ug/L	0.925	1	3	15226	1	KED
⌊	**Cd**	**114**	**49.327**	ug/L	1.495	3	1	39757	1	KED
⌈>	**In**	**115**		ug/L			431494	432803	0	Standard
|	**Ag**	**107**	**54.498**	ug/L	0.416	0	47	959780	1	Standard
|	**Ba**	**135**	**52.188**	ug/L	1.144	2	56	276745	1	Standard
⌊	**Ba**	**137**	**51.271**	ug/L	0.441	0	82	514497	0	Standard
⌈>	**Tb**	**159**		ug/L			190968	195035	2	Standard
⌊	**Pb**	**208**	**48.753**	ug/L	1.792	3	196	3343302	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:06:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	20846	6	Standard
⌈>	**Sc**	**45**		ug/L			699560	764966	1	Standard
|	**Cr**	**52**	**0.009**	ug/L	0.037	393	21056	23212	3	Standard
|	**Cr**	**53**	**-0.005**	ug/L	0.006	116	160	163	9	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.000	27	394	441	1	Standard
⌈>	**Ge**	**72**		ug/L			43630	44904	0	KED
|	**Ni**	**60**	**-0.016**	ug/L	0.002	14	50	19	24	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.009	108	6	4	65	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.001	69	60	55	8	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.002	110	36	33	14	KED
|	**Zn**	**66**	**-0.037**	ug/L	0.012	32	66	42	20	KED
|	**Zn**	**67**	**-0.008**	ug/L	0.035	417	11	10	36	KED
|	**As**	**75**	**-0.001**	ug/L	0.003	354	3	3	25	KED
⌊	**Se**	**78**	**0.110**	ug/L	0.006	5	13	17	1	KED
	Kr	**83**		ug/L			49	62	16	Standard
⌈>	**In-1**	**115**		ug/L			9463	9606	3	KED
|	**Cd**	**111**	**0.002**	ug/L	0.002	115	3	4	13	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	94	1	3	49	KED
⌈>	**In**	**115**		ug/L			431494	463259	3	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.002	21	47	186	11	Standard
|	**Ba**	**135**	**-0.006**	ug/L	0.002	26	56	24	35	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.001	16	82	40	15	Standard
⌈>	**Tb**	**159**		ug/L			190968	203509	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	14	196	237	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments: DEL
Sample Date/Time: Friday, May 19, 2023 22:10:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L				21163	5	Standard
> Sc	45		ug/L				765035	3	Standard
Cr	52		ug/L				23495	4	Standard
Cr	53		ug/L				145	11	Standard
Mn	55		ug/L				409	3	Standard
> Ge	72		ug/L				44602	2	KED
Ni	60		ug/L				19	20	KED
Ni	62		ug/L				4	24	KED
Cu	63		ug/L				53	21	KED
Cu	65		ug/L				26	18	KED
Zn	66		ug/L				37	12	KED
Zn	67		ug/L				7	108	KED
As	75		ug/L				3	33	KED
Se	78		ug/L				17	20	KED
Kr	83		ug/L				60	14	Standard
> In-1	115		ug/L				9591	2	KED
Cd	111		ug/L				4	20	KED
Cd	114		ug/L				2	46	KED
> In	115		ug/L				453983	3	Standard
Ag	107		ug/L				104	14	Standard
Ba	135		ug/L				29	43	Standard
Ba	137		ug/L				49	17	Standard
> Tb	159		ug/L				201225	2	Standard
Pb	208		ug/L				233	22	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:15:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21915	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	756719	2	Standard
|	**Cr**	**52**	**48.714**	ug/L	0.434	0	23495	971749	1	Standard
|	**Cr**	**53**	**48.164**	ug/L	0.891	1	145	109161	0	Standard
⌊	**Mn**	**55**	**46.076**	ug/L	1.178	2	409	1374913	4	Standard
⌈>	**Ge**	**72**		ug/L			44602	44025	1	KED
|	**Ni**	**60**	**47.562**	ug/L	0.910	1	19	96129	0	KED
|	**Ni**	**62**	**47.404**	ug/L	1.005	2	4	15188	0	KED
|	**Cu**	**63**	**46.672**	ug/L	0.664	1	53	269752	2	KED
|	**Cu**	**65**	**47.769**	ug/L	0.869	1	26	138358	1	KED
|	**Zn**	**66**	**50.201**	ug/L	1.934	3	37	33708	2	KED
|	**Zn**	**67**	**49.346**	ug/L	2.203	4	7	5596	3	KED
|	**As**	**75**	**48.516**	ug/L	0.827	1	3	17011	0	KED
⌊	**Se**	**78**	**49.749**	ug/L	1.092	2	17	1549	0	KED
	Kr	**83**		ug/L			60	54	12	Standard
⌈>	**In-1**	**115**		ug/L			9591	9336	3	KED
|	**Cd**	**111**	**47.659**	ug/L	1.801	3	4	15422	1	KED
⌊	**Cd**	**114**	**46.947**	ug/L	2.437	5	2	39096	2	KED
⌈>	**In**	**115**		ug/L			453983	448936	2	Standard
|	**Ag**	**107**	**53.206**	ug/L	2.335	4	104	971337	2	Standard
|	**Ba**	**135**	**49.388**	ug/L	0.834	1	29	271666	3	Standard
⌊	**Ba**	**137**	**48.556**	ug/L	0.768	1	49	505357	2	Standard
⌈>	**Tb**	**159**		ug/L			201225	200259	2	Standard
⌊	**Pb**	**208**	**47.827**	ug/L	2.117	4	233	3366854	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:23:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21374	2	Standard
⌈>	**Sc**	**45**		ug/L			765035	774530	3	Standard
|	**Cr**	**52**	**-0.007**	ug/L	0.013	195	23495	23652	2	Standard
|	**Cr**	**53**	**-0.001**	ug/L	0.004	531	145	145	8	Standard
⌊	**Mn**	**55**	**-0.000**	ug/L	0.001	1189	409	412	7	Standard
⌈>	**Ge**	**72**		ug/L			44602	44864	2	KED
|	**Ni**	**60**	**0.000**	ug/L	0.002	569	19	20	14	KED
|	**Ni**	**62**	**0.006**	ug/L	0.015	254	4	6	75	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	122	53	57	8	KED
|	**Cu**	**65**	**0.000**	ug/L	0.002	541	26	27	21	KED
|	**Zn**	**66**	**0.015**	ug/L	0.007	50	37	47	10	KED
|	**Zn**	**67**	**0.033**	ug/L	0.017	52	7	11	16	KED
|	**As**	**75**	**0.010**	ug/L	0.006	58	3	7	30	KED
⌊	**Se**	**78**	**0.125**	ug/L	0.109	87	17	21	15	KED
	Kr	**83**		ug/L			60	62	14	Standard
⌈>	**In-1**	**115**		ug/L			9591	9738	2	KED
|	**Cd**	**111**	**0.005**	ug/L	0.007	129	4	6	37	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	64	2	4	25	KED
⌈>	**In**	**115**		ug/L			453983	451457	2	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.002	40	104	214	20	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.001	137	29	24	20	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.001	323	49	46	16	Standard
⌈>	**Tb**	**159**		ug/L			201225	206281	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	543	233	243	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0185-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 19, 2023 22:27:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	29140	6	Standard
>	Sc	45		ug/L			765035	753013	3	Standard
	Cr	52	54.999	ug/L	2.182	3	23495	1088829	5	Standard
	Cr	53	55.495	ug/L	1.631	2	145	125099	2	Standard
	Mn	55	2.829	ug/L	0.075	2	409	84336	3	Standard
>	Ge	72		ug/L			44602	42701	1	KED
	Ni	60	2.406	ug/L	0.085	3	19	4734	2	KED
	Ni	62	2.470	ug/L	0.094	3	4	772	4	KED
	Cu	63	7.277	ug/L	0.109	1	53	40830	0	KED
	Cu	65	7.417	ug/L	0.269	3	26	20855	2	KED
	Zn	66	12.942	ug/L	0.272	2	37	8457	1	KED
	Zn	67	12.428	ug/L	0.389	3	7	1373	4	KED
	As	75	0.132	ug/L	0.008	6	3	48	5	KED
	Se	78	0.035	ug/L	0.114	322	17	17	18	KED
	Kr	83		ug/L			60	63	16	Standard
>	In-1	115		ug/L			9591	8893	0	KED
	Cd	111	0.289	ug/L	0.015	5	4	93	4	KED
	Cd	114	0.296	ug/L	0.048	16	2	237	16	KED
>	In	115		ug/L			453983	416922	1	Standard
	Ag	107	0.018	ug/L	0.003	15	104	394	10	Standard
	Ba	135	2.075	ug/L	0.074	3	29	10622	2	Standard
	Ba	137	2.035	ug/L	0.108	5	49	19709	4	Standard
>	Tb	159		ug/L			201225	192744	0	Standard
	Pb	208	0.160	ug/L	0.003	2	233	11064	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0307-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 19, 2023 22:32:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24907	7	Standard
>	Sc	45		ug/L			765035	634073	2	Standard
	Cr	52	5.864	ug/L	0.129	2	23495	115173	3	Standard
	Cr	53	5.889	ug/L	0.113	1	145	11294	3	Standard
	Mn	55	11.559	ug/L	0.374	3	409	289252	4	Standard
>	Ge	72		ug/L			44602	36200	1	KED
	Ni	60	1.613	ug/L	0.057	3	19	2696	2	KED
	Ni	62	1.589	ug/L	0.142	8	4	422	8	KED
	Cu	63	3.615	ug/L	0.118	3	53	17216	2	KED
	Cu	65	3.681	ug/L	0.028	0	26	8788	1	KED
	Zn	66	5.169	ug/L	0.252	4	37	2880	3	KED
	Zn	67	4.716	ug/L	0.364	7	7	445	8	KED
	As	75	0.052	ug/L	0.013	24	3	18	18	KED
	Se	78	0.130	ug/L	0.064	49	17	17	7	KED
	Kr	83		ug/L			60	56	7	Standard
>	In-1	115		ug/L			9591	7854	0	KED
	Cd	111	0.004	ug/L	0.005	125	4	5	28	KED
	Cd	114	0.004	ug/L	0.003	63	2	5	38	KED
>	In	115		ug/L			453983	392832	3	Standard
	Ag	107	-0.001	ug/L	0.001	44	104	69	11	Standard
	Ba	135	0.649	ug/L	0.045	6	29	3141	3	Standard
	Ba	137	0.632	ug/L	0.011	1	49	5796	2	Standard
>	Tb	159		ug/L			201225	189064	2	Standard
	Pb	208	0.017	ug/L	0.001	3	233	1325	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0307-02
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 19, 2023 22:37:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	25118	3	Standard
>	Sc	45		ug/L			765035	594068	3	Standard
	Cr	52	11.376	ug/L	0.285	2	23495	192109	3	Standard
	Cr	53	11.414	ug/L	0.092	0	145	20403	4	Standard
	Mn	55	11.235	ug/L	0.214	1	409	263270	3	Standard
>	Ge	72		ug/L			44602	34328	1	KED
	Ni	60	2.528	ug/L	0.089	3	19	3997	2	KED
	Ni	62	2.549	ug/L	0.257	10	4	639	8	KED
	Cu	63	3.432	ug/L	0.032	0	53	15504	1	KED
	Cu	65	3.567	ug/L	0.109	3	26	8073	1	KED
	Zn	66	6.681	ug/L	0.234	3	37	3523	2	KED
	Zn	67	6.535	ug/L	0.539	8	7	582	7	KED
	As	75	0.066	ug/L	0.003	3	3	20	4	KED
	Se	78	0.030	ug/L	0.061	205	17	14	12	KED
	Kr	83		ug/L			60	64	16	Standard
>	In-1	115		ug/L			9591	7290	0	KED
	Cd	111	0.006	ug/L	0.012	210	4	5	60	KED
	Cd	114	0.008	ug/L	0.003	32	2	7	23	KED
>	In	115		ug/L			453983	380669	0	Standard
	Ag	107	0.001	ug/L	0.000	43	104	101	6	Standard
	Ba	135	0.709	ug/L	0.030	4	29	3332	4	Standard
	Ba	137	0.687	ug/L	0.027	3	49	6101	4	Standard
>	Tb	159		ug/L			201225	183079	1	Standard
	Pb	208	0.058	ug/L	0.001	1	233	3942	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0307-03
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 19, 2023 22:43:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	26693	3	Standard
>	Sc	45		ug/L			765035	583173	3	Standard
	Cr	52	4.055	ug/L	0.039	0	23495	78774	3	Standard
	Cr	53	4.059	ug/L	0.098	2	145	7191	2	Standard
	Mn	55	10.356	ug/L	0.128	1	409	238272	2	Standard
>	Ge	72		ug/L			44602	33781	1	KED
	Ni	60	3.949	ug/L	0.061	1	19	6139	2	KED
	Ni	62	3.765	ug/L	0.141	3	4	928	4	KED
	Cu	63	3.495	ug/L	0.055	1	53	15536	1	KED
	Cu	65	3.528	ug/L	0.028	0	26	7860	0	KED
	Zn	66	1.803	ug/L	0.194	10	37	956	11	KED
	Zn	67	1.679	ug/L	0.138	8	7	151	8	KED
	As	75	0.055	ug/L	0.002	3	3	17	4	KED
	Se	78	0.044	ug/L	0.095	215	17	14	17	KED
	Kr	83		ug/L			60	52	2	Standard
>	In-1	115		ug/L			9591	7415	2	KED
	Cd	111	0.003	ug/L	0.011	357	4	4	61	KED
	Cd	114	0.006	ug/L	0.004	66	2	5	47	KED
>	In	115		ug/L			453983	371591	1	Standard
	Ag	107	-0.002	ug/L	0.000	20	104	51	14	Standard
	Ba	135	0.641	ug/L	0.010	1	29	2944	2	Standard
	Ba	137	0.636	ug/L	0.024	3	49	5514	2	Standard
>	Tb	159		ug/L			201225	179520	0	Standard
	Pb	208	0.007	ug/L	0.001	9	233	670	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:48:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20869	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	667324	2	Standard
|	**Cr**	**52**	**0.134**	ug/L	0.027	20	23495	22801	4	Standard
|	**Cr**	**53**	**0.026**	ug/L	0.008	31	145	178	7	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	242	409	368	8	Standard
⌈>	**Ge**	**72**		ug/L			44602	38043	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.003	229	19	14	32	KED
|	**Ni**	**62**	**-0.002**	ug/L	0.008	348	4	3	69	KED
|	**Cu**	**63**	**0.000**	ug/L	0.002	4667	53	46	27	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.002	698	26	22	17	KED
|	**Zn**	**66**	**0.031**	ug/L	0.004	13	37	50	4	KED
|	**Zn**	**67**	**-0.008**	ug/L	0.019	241	7	5	33	KED
|	**As**	**75**	**-0.002**	ug/L	0.006	320	3	2	66	KED
⌊	**Se**	**78**	**0.073**	ug/L	0.139	191	17	16	22	KED
	Kr	**83**		ug/L			60	55	21	Standard
⌈>	**In-1**	**115**		ug/L			9591	8270	2	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.008	146	4	2	86	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.003	197	2	1	202	KED
⌈>	**In**	**115**		ug/L			453983	424417	2	Standard
|	**Ag**	**107**	**-0.004**	ug/L	0.000	10	104	27	27	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.000	30	29	20	10	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.000	2134	49	46	2	Standard
⌈>	**Tb**	**159**		ug/L			201225	198061	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	25	233	170	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0164-03
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:53:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	28262	4	Standard
>	Sc	45		ug/L			765035	653499	3	Standard
	Cr	52	5.578	ug/L	0.139	2	23495	113870	4	Standard
	Cr	53	5.640	ug/L	0.110	1	145	11149	3	Standard
	Mn	55	46.087	ug/L	1.418	3	409	1187083	4	Standard
>	Ge	72		ug/L			44602	38941	1	KED
	Ni	60	3.910	ug/L	0.049	1	19	7006	0	KED
	Ni	62	4.119	ug/L	0.115	2	4	1170	2	KED
	Cu	63	126.730	ug/L	2.873	2	53	647590	0	KED
	Cu	65	129.763	ug/L	2.022	1	26	332391	0	KED
	Zn	66	101.542	ug/L	2.291	2	37	60285	1	KED
	Zn	67	91.526	ug/L	3.052	3	7	9175	1	KED
	As	75	0.893	ug/L	0.026	2	3	280	1	KED
	Se	78	-0.036	ug/L	0.152	422	17	14	29	KED
	Kr	83		ug/L			60	53	11	Standard
>	In-1	115		ug/L			9591	8523	0	KED
	Cd	111	0.413	ug/L	0.069	16	4	126	15	KED
	Cd	114	0.403	ug/L	0.056	13	2	308	13	KED
>	In	115		ug/L			453983	424082	2	Standard
	Ag	107	0.042	ug/L	0.002	5	104	815	3	Standard
	Ba	135	21.008	ug/L	0.207	0	29	109166	2	Standard
	Ba	137	21.200	ug/L	0.273	1	49	208424	1	Standard
>	Tb	159		ug/L			201225	196788	1	Standard
	Pb	208	1.463	ug/L	0.032	2	233	101481	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0164-01
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:58:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	28546	5	Standard
>	Sc	45		ug/L			765035	644214	1	Standard
	Cr	52	2.471	ug/L	0.215	8	23495	60727	5	Standard
	Cr	53	2.344	ug/L	0.132	5	145	4640	5	Standard
	Mn	55	13.543	ug/L	0.312	2	409	344132	2	Standard
>	Ge	72		ug/L			44602	38496	2	KED
	Ni	60	1.408	ug/L	0.038	2	19	2504	1	KED
	Ni	62	1.399	ug/L	0.082	5	4	395	4	KED
	Cu	63	53.150	ug/L	1.121	2	53	268526	1	KED
	Cu	65	54.715	ug/L	1.220	2	26	138551	0	KED
	Zn	66	47.953	ug/L	1.179	2	37	28159	1	KED
	Zn	67	44.217	ug/L	1.001	2	7	4388	4	KED
	As	75	0.319	ug/L	0.016	4	3	100	4	KED
	Se	78	0.089	ug/L	0.023	26	17	17	5	KED
	Kr	83		ug/L			60	48	14	Standard
>	In-1	115		ug/L			9591	8553	3	KED
	Cd	111	0.011	ug/L	0.003	28	4	7	12	KED
	Cd	114	0.012	ug/L	0.002	15	2	11	15	KED
>	In	115		ug/L			453983	421425	0	Standard
	Ag	107	0.003	ug/L	0.001	37	104	153	13	Standard
	Ba	135	10.488	ug/L	0.055	0	29	54175	0	Standard
	Ba	137	10.603	ug/L	0.028	0	49	103631	0	Standard
>	Tb	159		ug/L			201225	190462	1	Standard
	Pb	208	0.712	ug/L	0.024	3	233	47930	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0572-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:02:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	28557	6	Standard
>	Sc	45		ug/L			765035	663965	3	Standard
	Cr	52	2.395	ug/L	0.088	3	23495	61285	1	Standard
	Cr	53	2.415	ug/L	0.041	1	145	4924	4	Standard
	Mn	55	12.976	ug/L	0.081	0	409	339889	3	Standard
>	Ge	72		ug/L			44602	39307	1	KED
	Ni	60	1.307	ug/L	0.018	1	19	2376	0	KED
	Ni	62	1.380	ug/L	0.152	11	4	398	9	KED
	Cu	63	52.060	ug/L	1.134	2	53	268556	0	KED
	Cu	65	52.781	ug/L	1.372	2	26	136468	0	KED
	Zn	66	47.144	ug/L	0.614	1	37	28271	0	KED
	Zn	67	43.376	ug/L	1.042	2	7	4394	3	KED
	As	75	0.325	ug/L	0.010	2	3	105	4	KED
	Se	78	0.010	ug/L	0.068	684	17	15	10	KED
	Kr	83		ug/L			60	46	11	Standard
>	In-1	115		ug/L			9591	8583	1	KED
	Cd	111	0.007	ug/L	0.005	72	4	6	22	KED
	Cd	114	0.009	ug/L	0.004	43	2	8	32	KED
>	In	115		ug/L			453983	423677	2	Standard
	Ag	107	0.002	ug/L	0.001	24	104	135	5	Standard
	Ba	135	10.434	ug/L	0.359	3	29	54158	1	Standard
	Ba	137	10.227	ug/L	0.365	3	49	100446	1	Standard
>	Tb	159		ug/L			201225	195358	0	Standard
	Pb	208	0.770	ug/L	0.014	1	233	53111	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0572-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:07:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	27963	5	Standard
>	Sc	45		ug/L			765035	686099	3	Standard
	Cr	52	25.892	ug/L	0.395	1	23495	478062	3	Standard
	Cr	53	26.125	ug/L	0.723	2	145	53734	3	Standard
	Mn	55	35.151	ug/L	0.577	1	409	950488	2	Standard
>	Ge	72		ug/L			44602	39036	2	KED
	Ni	60	24.573	ug/L	0.593	2	19	44036	0	KED
	Ni	62	25.148	ug/L	0.781	3	4	7144	1	KED
	Cu	63	74.036	ug/L	1.377	1	53	379255	0	KED
	Cu	65	73.595	ug/L	2.494	3	26	188922	1	KED
	Zn	66	120.491	ug/L	3.228	2	37	71687	0	KED
	Zn	67	114.888	ug/L	2.972	2	7	11544	0	KED
	As	75	24.366	ug/L	0.378	1	3	7576	0	KED
	Se	78	76.888	ug/L	2.179	2	17	2114	0	KED
	Kr	83		ug/L			60	55	19	Standard
>	In-1	115		ug/L			9591	8463	0	KED
	Cd	111	23.577	ug/L	0.730	3	4	6922	2	KED
	Cd	114	23.551	ug/L	0.458	1	2	17798	1	KED
>	In	115		ug/L			453983	424059	2	Standard
	Ag	107	25.150	ug/L	0.391	1	104	433972	0	Standard
	Ba	135	36.150	ug/L	0.153	0	29	187834	1	Standard
	Ba	137	34.820	ug/L	0.437	1	49	342306	0	Standard
>	Tb	159		ug/L			201225	189060	1	Standard
	Pb	208	24.938	ug/L	0.513	2	233	1658565	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:12:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	19479	3	Standard
⌈>	**Sc**	**45**		ug/L			765035	697901	3	Standard
|	**Cr**	**52**	**0.031**	ug/L	0.021	66	23495	21988	2	Standard
|	**Cr**	**53**	**0.001**	ug/L	0.007	766	145	134	12	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	79	409	405	4	Standard
⌈>	**Ge**	**72**		ug/L			44602	39896	1	KED
|	**Ni**	**60**	**0.000**	ug/L	0.001	1262	19	17	12	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.013	1922	4	3	100	KED
|	**Cu**	**63**	**0.005**	ug/L	0.000	3	53	76	2	KED
|	**Cu**	**65**	**0.006**	ug/L	0.004	65	26	39	24	KED
|	**Zn**	**66**	**0.046**	ug/L	0.013	27	37	61	10	KED
|	**Zn**	**67**	**0.020**	ug/L	0.029	143	7	8	32	KED
|	**As**	**75**	**0.001**	ug/L	0.004	316	3	3	33	KED
⌊	**Se**	**78**	**-0.045**	ug/L	0.069	152	17	14	12	KED
	Kr	**83**		ug/L			60	53	16	Standard
⌈>	**In-1**	**115**		ug/L			9591	8388	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.004	172	4	3	31	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	1058	2	2	92	KED
⌈>	**In**	**115**		ug/L			453983	438055	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	54	104	121	7	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.003	405	29	31	45	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.001	3134	49	47	17	Standard
⌈>	**Tb**	**159**		ug/L			201225	195846	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	24	233	241	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:17:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21271	1	Standard
⌈>	**Sc**	**45**		ug/L			765035	727461	4	Standard
|	**Cr**	**52**	**48.233**	ug/L	0.756	1	23495	924795	2	Standard
|	**Cr**	**53**	**48.562**	ug/L	0.459	0	145	105804	3	Standard
⌊	**Mn**	**55**	**46.686**	ug/L	1.172	2	409	1337774	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	41460	1	KED
|	**Ni**	**60**	**47.703**	ug/L	0.526	1	19	90804	0	KED
|	**Ni**	**62**	**47.695**	ug/L	1.320	2	4	14392	2	KED
|	**Cu**	**63**	**47.689**	ug/L	0.999	2	53	259512	1	KED
|	**Cu**	**65**	**47.926**	ug/L	0.450	0	26	130738	0	KED
|	**Zn**	**66**	**49.550**	ug/L	0.909	1	37	31341	1	KED
|	**Zn**	**67**	**49.150**	ug/L	0.729	1	7	5251	1	KED
|	**As**	**75**	**49.537**	ug/L	0.335	0	3	16359	0	KED
⌊	**Se**	**78**	**50.005**	ug/L	1.030	2	17	1466	1	KED
	Kr	**83**		ug/L			60	50	9	Standard
⌈>	**In-1**	**115**		ug/L			9591	9003	2	KED
|	**Cd**	**111**	**49.029**	ug/L	1.022	2	4	15307	1	KED
⌊	**Cd**	**114**	**49.118**	ug/L	1.412	2	2	39471	1	KED
⌈>	**In**	**115**		ug/L			453983	444751	2	Standard
|	**Ag**	**107**	**51.642**	ug/L	0.794	1	104	934430	1	Standard
|	**Ba**	**135**	**50.847**	ug/L	1.812	3	29	276929	1	Standard
⌊	**Ba**	**137**	**50.274**	ug/L	1.742	3	49	518465	4	Standard
⌈>	**Tb**	**159**		ug/L			201225	205463	1	Standard
⌊	**Pb**	**208**	**46.670**	ug/L	0.646	1	233	3373145	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:24:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20530	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	738099	2	Standard
|	**Cr**	**52**	**0.000**	ug/L	0.045	13295	23495	22675	4	Standard
|	**Cr**	**53**	**-0.000**	ug/L	0.008	6391	145	140	15	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	254	409	406	9	Standard
⌈>	**Ge**	**72**		ug/L			44602	43324	1	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.003	189	19	15	36	KED
|	**Ni**	**62**	**-0.002**	ug/L	0.000	12	4	3	0	KED
|	**Cu**	**63**	**0.003**	ug/L	0.002	60	53	69	15	KED
|	**Cu**	**65**	**0.001**	ug/L	0.002	209	26	29	22	KED
|	**Zn**	**66**	**0.006**	ug/L	0.018	284	37	40	30	KED
|	**Zn**	**67**	**0.001**	ug/L	0.057	4408	7	7	86	KED
|	**As**	**75**	**0.008**	ug/L	0.001	13	3	6	4	KED
⌊	**Se**	**78**	**-0.023**	ug/L	0.067	291	17	16	13	KED
	Kr	**83**		ug/L			60	54	16	Standard
⌈>	**In-1**	**115**		ug/L			9591	9517	3	KED
|	**Cd**	**111**	**0.004**	ug/L	0.008	192	4	6	39	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.002	26	2	8	15	KED
⌈>	**In**	**115**		ug/L			453983	437739	1	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	15	104	213	6	Standard
|	**Ba**	**135**	**0.000**	ug/L	0.000	68	29	29	3	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.001	874	49	46	11	Standard
⌈>	**Tb**	**159**		ug/L			201225	199618	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	10370	233	231	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0195-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:29:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	39597	2	Standard
>	Sc	45		ug/L			765035	724904	0	Standard
	Cr	52	71.635	ug/L	2.870	4	23495	1358596	4	Standard
	Cr	53	70.007	ug/L	0.226	0	145	151973	1	Standard
	Mn	55	42.426	ug/L	1.071	2	409	1212435	2	Standard
>	Ge	72		ug/L			44602	38447	1	KED
	Ni	60	0.923	ug/L	0.006	0	19	1645	1	KED
	Ni	62	0.915	ug/L	0.107	11	4	259	10	KED
	Cu	63	1.038	ug/L	0.024	2	53	5284	0	KED
	Cu	65	1.089	ug/L	0.032	2	26	2775	1	KED
	Zn	66	47.936	ug/L	1.131	2	37	28117	1	KED
	Zn	67	43.035	ug/L	1.538	3	7	4263	2	KED
	As	75	0.090	ug/L	0.003	3	3	30	4	KED
	Se	78	0.032	ug/L	0.054	167	17	15	7	KED
	Kr	83		ug/L			60	55	8	Standard
>	In-1	115		ug/L			9591	8916	2	KED
	Cd	111	0.416	ug/L	0.011	2	4	133	0	KED
	Cd	114	0.412	ug/L	0.025	6	2	330	6	KED
>	In	115		ug/L			453983	453670	1	Standard
	Ag	107	0.063	ug/L	0.002	3	104	1259	2	Standard
	Ba	135	1.674	ug/L	0.026	1	29	9334	2	Standard
	Ba	137	1.607	ug/L	0.053	3	49	16940	1	Standard
>	Tb	159		ug/L			201225	200257	2	Standard
	Pb	208	0.066	ug/L	0.005	7	233	4857	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:32:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24180	4	Standard
>	Sc	45		ug/L			765035	734268	2	Standard
	Cr	52	0.593	ug/L	0.077	13	23495	33751	4	Standard
	Cr	53	0.828	ug/L	0.035	4	145	1957	3	Standard
	Mn	55	150.944	ug/L	3.132	2	409	4367043	0	Standard
>	Ge	72		ug/L			44602	38461	2	KED
	Ni	60	2.213	ug/L	0.054	2	19	3922	2	KED
	Ni	62	2.353	ug/L	0.207	8	4	663	11	KED
	Cu	63	0.572	ug/L	0.014	2	53	2931	0	KED
	Cu	65	0.563	ug/L	0.030	5	26	1445	4	KED
	Zn	66	3.409	ug/L	0.093	2	37	2031	4	KED
	Zn	67	3.897	ug/L	0.659	16	7	393	18	KED
	As	75	0.132	ug/L	0.004	3	3	43	3	KED
	Se	78	-0.063	ug/L	0.168	266	17	13	31	KED
	Kr	83		ug/L			60	55	27	Standard
>	In-1	115		ug/L			9591	8806	3	KED
	Cd	111	0.009	ug/L	0.009	105	4	6	39	KED
	Cd	114	0.009	ug/L	0.009	105	2	9	82	KED
>	In	115		ug/L			453983	443931	2	Standard
	Ag	107	-0.001	ug/L	0.000	36	104	81	8	Standard
	Ba	135	11.087	ug/L	0.696	6	29	60267	3	Standard
	Ba	137	11.180	ug/L	0.332	2	49	115060	1	Standard
>	Tb	159		ug/L			201225	203868	1	Standard
	Pb	208	0.040	ug/L	0.000	0	233	3129	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0643-DUP3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:36:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	22099	1	Standard
>	Sc	45		ug/L			765035	736233	2	Standard
	Cr	52	0.559	ug/L	0.039	6	23495	33202	3	Standard
	Cr	53	0.814	ug/L	0.005	0	145	1932	3	Standard
	Mn	55	147.782	ug/L	1.372	0	409	4287430	2	Standard
>	Ge	72		ug/L			44602	37044	4	KED
	Ni	60	2.291	ug/L	0.059	2	19	3909	1	KED
	Ni	62	2.324	ug/L	0.187	8	4	628	3	KED
	Cu	63	0.590	ug/L	0.006	0	53	2915	5	KED
	Cu	65	0.563	ug/L	0.009	1	26	1393	5	KED
	Zn	66	2.380	ug/L	0.132	5	37	1372	0	KED
	Zn	67	3.044	ug/L	0.339	11	7	296	12	KED
	As	75	0.146	ug/L	0.018	12	3	46	15	KED
	Se	78	-0.050	ug/L	0.119	239	17	13	27	KED
	Kr	83		ug/L			60	52	24	Standard
>	In-1	115		ug/L			9591	8600	0	KED
	Cd	111	0.005	ug/L	0.006	114	4	5	28	KED
	Cd	114	0.003	ug/L	0.003	102	2	4	49	KED
>	In	115		ug/L			453983	443460	1	Standard
	Ag	107	-0.002	ug/L	0.001	63	104	60	41	Standard
	Ba	135	10.890	ug/L	0.147	1	29	59197	2	Standard
	Ba	137	10.735	ug/L	0.286	2	49	110377	0	Standard
>	Tb	159		ug/L			201225	203852	2	Standard
	Pb	208	0.040	ug/L	0.001	3	233	3086	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0643-MS3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:40:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24575	6	Standard
>	Sc	45		ug/L			765035	756522	3	Standard
	Cr	52	1.706	ug/L	0.054	3	23495	56455	5	Standard
	Cr	53	1.972	ug/L	0.037	1	145	4609	5	Standard
	Mn	55	141.024	ug/L	1.231	0	409	4204182	3	Standard
>	Ge	72		ug/L			44602	37624	2	KED
	Ni	60	3.465	ug/L	0.119	3	19	5999	2	KED
	Ni	62	3.536	ug/L	0.156	4	4	971	3	KED
	Cu	63	1.881	ug/L	0.032	1	53	9333	0	KED
	Cu	65	1.876	ug/L	0.048	2	26	4665	3	KED
	Zn	66	6.319	ug/L	0.245	3	37	3653	2	KED
	Zn	67	7.171	ug/L	0.638	8	7	700	7	KED
	As	75	1.481	ug/L	0.037	2	3	446	2	KED
	Se	78	4.248	ug/L	0.191	4	17	126	3	KED
	Kr	83		ug/L			60	56	13	Standard
>	In-1	115		ug/L			9591	8711	3	KED
	Cd	111	1.286	ug/L	0.094	7	4	392	4	KED
	Cd	114	1.247	ug/L	0.106	8	2	970	5	KED
>	In	115		ug/L			453983	459653	4	Standard
	Ag	107	1.309	ug/L	0.067	5	104	24563	1	Standard
	Ba	135	11.802	ug/L	0.595	5	29	66401	1	Standard
	Ba	137	11.499	ug/L	0.613	5	49	122421	2	Standard
>	Tb	159		ug/L			201225	204540	1	Standard
	Pb	208	1.307	ug/L	0.032	2	233	94284	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0643-MSD3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:43:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	25298	3	Standard
>	Sc	45		ug/L			765035	736164	2	Standard
	Cr	52	1.791	ug/L	0.062	3	23495	56529	2	Standard
	Cr	53	2.086	ug/L	0.080	3	145	4735	5	Standard
	Mn	55	146.105	ug/L	3.497	2	409	4237736	1	Standard
>	Ge	72		ug/L			44602	37926	0	KED
	Ni	60	3.522	ug/L	0.017	0	19	6148	0	KED
	Ni	62	3.619	ug/L	0.313	8	4	1002	8	KED
	Cu	63	1.881	ug/L	0.039	2	53	9408	2	KED
	Cu	65	1.890	ug/L	0.027	1	26	4737	1	KED
	Zn	66	6.590	ug/L	0.150	2	37	3841	2	KED
	Zn	67	6.868	ug/L	0.322	4	7	676	4	KED
	As	75	1.487	ug/L	0.009	0	3	452	0	KED
	Se	78	4.263	ug/L	0.198	4	17	127	4	KED
	Kr	83		ug/L			60	69	5	Standard
>	In-1	115		ug/L			9591	8531	0	KED
	Cd	111	1.295	ug/L	0.130	10	4	387	9	KED
	Cd	114	1.308	ug/L	0.144	10	2	998	10	KED
>	In	115		ug/L			453983	446914	1	Standard
	Ag	107	1.391	ug/L	0.032	2	104	25399	2	Standard
	Ba	135	12.185	ug/L	0.192	1	29	66739	1	Standard
	Ba	137	12.075	ug/L	0.400	3	49	125133	2	Standard
>	Tb	159		ug/L			201225	206594	1	Standard
	Pb	208	1.342	ug/L	0.029	2	233	97770	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:49:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	25451	6	Standard
⌈>	**Sc**	**45**		ug/L			765035	732106	1	Standard
|	**Cr**	**52**	**0.113**	ug/L	0.034	30	23495	24622	4	Standard
|	**Cr**	**53**	**0.344**	ug/L	0.014	3	145	893	5	Standard
⌊	**Mn**	**55**	**146.363**	ug/L	2.244	1	409	4222301	0	Standard
⌈>	**Ge**	**72**		ug/L			44602	37746	1	KED
|	**Ni**	**60**	**1.858**	ug/L	0.041	2	19	3235	1	KED
|	**Ni**	**62**	**1.816**	ug/L	0.269	14	4	502	14	KED
|	**Cu**	**63**	**0.269**	ug/L	0.019	7	53	1375	6	KED
|	**Cu**	**65**	**0.273**	ug/L	0.006	2	26	701	2	KED
|	**Zn**	**66**	**1.016**	ug/L	0.095	9	37	615	8	KED
|	**Zn**	**67**	**1.510**	ug/L	0.169	11	7	153	9	KED
|	**As**	**75**	**0.078**	ug/L	0.009	11	3	26	10	KED
⌊	**Se**	**78**	**-0.084**	ug/L	0.039	46	17	12	9	KED
	Kr	**83**		ug/L			60	53	18	Standard
⌈>	**In-1**	**115**		ug/L			9591	9084	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.013	426	4	5	71	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.005	168	2	4	85	KED
⌈>	**In**	**115**		ug/L			453983	441917	0	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	10	104	57	8	Standard
|	**Ba**	**135**	**9.701**	ug/L	0.121	1	29	52547	1	Standard
⌊	**Ba**	**137**	**9.256**	ug/L	0.378	4	49	94855	3	Standard
⌈>	**Tb**	**159**		ug/L			201225	202661	1	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.000	6	233	679	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0561-DUP3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:52:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	25444	5	Standard
>	Sc	45		ug/L			765035	725435	5	Standard
	Cr	52	0.105	ug/L	0.011	10	23495	24240	4	Standard
	Cr	53	0.371	ug/L	0.021	5	145	942	4	Standard
	Mn	55	148.251	ug/L	4.405	2	409	4234144	2	Standard
>	Ge	72		ug/L			44602	37725	1	KED
	Ni	60	1.893	ug/L	0.098	5	19	3294	4	KED
	Ni	62	2.002	ug/L	0.265	13	4	554	15	KED
	Cu	63	0.254	ug/L	0.009	3	53	1304	5	KED
	Cu	65	0.251	ug/L	0.017	6	26	645	6	KED
	Zn	66	0.912	ug/L	0.081	8	37	555	7	KED
	Zn	67	1.455	ug/L	0.209	14	7	147	15	KED
	As	75	0.088	ug/L	0.021	23	3	29	21	KED
	Se	78	-0.083	ug/L	0.106	127	17	12	23	KED
	Kr	83		ug/L			60	50	15	Standard
>	In-1	115		ug/L			9591	8652	2	KED
	Cd	111	-0.002	ug/L	0.003	177	4	3	25	KED
	Cd	114	0.003	ug/L	0.003	88	2	4	47	KED
>	In	115		ug/L			453983	442836	2	Standard
	Ag	107	-0.004	ug/L	0.000	5	104	33	13	Standard
	Ba	135	9.311	ug/L	0.133	1	29	50543	2	Standard
	Ba	137	9.263	ug/L	0.021	0	49	95139	2	Standard
>	Tb	159		ug/L			201225	205736	0	Standard
	Pb	208	0.006	ug/L	0.000	7	233	668	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0561-MS3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:56:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	25718	6	Standard
⌈>	Sc	45		ug/L			765035	736290	3	Standard
|	Cr	52	1.374	ug/L	0.028	2	23495	48661	4	Standard
|	Cr	53	1.691	ug/L	0.002	0	145	3864	3	Standard
⌊	Mn	55	149.055	ug/L	2.687	1	409	4323337	2	Standard
⌈>	Ge	72		ug/L			44602	38321	0	KED
|	Ni	60	3.173	ug/L	0.084	2	19	5598	1	KED
|	Ni	62	3.087	ug/L	0.186	6	4	864	6	KED
|	Cu	63	1.581	ug/L	0.054	3	53	7996	2	KED
|	Cu	65	1.615	ug/L	0.036	2	26	4093	1	KED
|	Zn	66	5.272	ug/L	0.170	3	37	3110	2	KED
|	Zn	67	5.790	ug/L	0.791	13	7	577	13	KED
|	As	75	1.437	ug/L	0.094	6	3	441	6	KED
⌊	Se	78	4.001	ug/L	0.126	3	17	122	1	KED
	Kr	83		ug/L			60	45	19	Standard
⌈>	In-1	115		ug/L			9591	8471	1	KED
|	Cd	111	1.289	ug/L	0.083	6	4	382	5	KED
⌊	Cd	114	1.416	ug/L	0.040	2	2	1073	4	KED
⌈>	In	115		ug/L			453983	443666	3	Standard
|	Ag	107	1.387	ug/L	0.024	1	104	25139	2	Standard
|	Ba	135	10.891	ug/L	0.536	4	29	59182	3	Standard
⌊	Ba	137	11.010	ug/L	0.413	3	49	113201	0	Standard
⌈>	Tb	159		ug/L			201225	203268	0	Standard
⌊	Pb	208	1.315	ug/L	0.023	1	233	94243	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0561-MSD3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:00:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24627	5	Standard
>	Sc	45		ug/L			765035	722688	2	Standard
	Cr	52	1.398	ug/L	0.049	3	23495	48199	3	Standard
	Cr	53	1.662	ug/L	0.070	4	145	3730	4	Standard
	Mn	55	156.297	ug/L	0.150	0	409	4451716	2	Standard
>	Ge	72		ug/L			44602	37682	1	KED
	Ni	60	3.299	ug/L	0.138	4	19	5720	2	KED
	Ni	62	3.378	ug/L	0.204	6	4	930	6	KED
	Cu	63	1.652	ug/L	0.024	1	53	8215	1	KED
	Cu	65	1.655	ug/L	0.006	0	26	4125	0	KED
	Zn	66	5.379	ug/L	0.185	3	37	3120	2	KED
	Zn	67	5.741	ug/L	0.068	1	7	563	0	KED
	As	75	1.526	ug/L	0.030	1	3	461	1	KED
	Se	78	4.137	ug/L	0.333	8	17	123	6	KED
	Kr	83		ug/L			60	62	18	Standard
>	In-1	115		ug/L			9591	8793	1	KED
	Cd	111	1.273	ug/L	0.053	4	4	392	4	KED
	Cd	114	1.381	ug/L	0.042	3	2	1086	2	KED
>	In	115		ug/L			453983	435961	1	Standard
	Ag	107	1.384	ug/L	0.022	1	104	24644	1	Standard
	Ba	135	11.590	ug/L	0.503	4	29	61904	3	Standard
	Ba	137	11.547	ug/L	0.302	2	49	116721	1	Standard
>	Tb	159		ug/L			201225	202210	2	Standard
	Pb	208	1.356	ug/L	0.036	2	233	96642	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLB
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:04:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21126	5	Standard
⌈>	**Sc**	**45**		ug/L			765035	731858	4	Standard
|	**Cr**	**52**	**0.009**	ug/L	0.045	509	23495	22620	2	Standard
|	**Cr**	**53**	**0.018**	ug/L	0.003	15	145	178	6	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.001	17	409	554	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	37949	2	KED
|	**Ni**	**60**	**0.003**	ug/L	0.007	231	19	22	57	KED
|	**Ni**	**62**	**0.000**	ug/L	0.007	49149	4	3	50	KED
|	**Cu**	**63**	**-0.000**	ug/L	0.002	361	53	43	19	KED
|	**Cu**	**65**	**0.001**	ug/L	0.001	107	26	25	11	KED
|	**Zn**	**66**	**0.047**	ug/L	0.003	7	37	59	3	KED
|	**Zn**	**67**	**0.050**	ug/L	0.076	152	7	11	66	KED
|	**As**	**75**	**-0.000**	ug/L	0.002	975	3	3	22	KED
⌊	**Se**	**78**	**-0.050**	ug/L	0.110	222	17	13	23	KED
	Kr	**83**		ug/L			60	54	14	Standard
⌈>	**In-1**	**115**		ug/L			9591	8763	0	KED
|	**Cd**	**111**	**0.008**	ug/L	0.014	178	4	6	62	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	55	2	5	33	KED
⌈>	**In**	**115**		ug/L			453983	461801	2	Standard
|	**Ag**	**107**	**-0.004**	ug/L	0.001	15	104	36	27	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.001	702	29	28	26	Standard
⌊	**Ba**	**137**	**-0.001**	ug/L	0.002	218	49	42	37	Standard
⌈>	**Tb**	**159**		ug/L			201225	205242	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.001	75	233	175	24	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:07:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20614	1	Standard
⌈>	**Sc**	**45**		ug/L			765035	728669	4	Standard
|	**Cr**	**52**	**48.477**	ug/L	0.967	1	23495	930877	2	Standard
|	**Cr**	**53**	**47.422**	ug/L	0.966	2	145	103528	4	Standard
⌊	**Mn**	**55**	**46.433**	ug/L	0.774	1	409	1333141	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	37398	1	KED
|	**Ni**	**60**	**49.764**	ug/L	1.168	2	19	85438	1	KED
|	**Ni**	**62**	**50.317**	ug/L	2.234	4	4	13693	3	KED
|	**Cu**	**63**	**48.815**	ug/L	0.317	0	53	239639	0	KED
|	**Cu**	**65**	**50.782**	ug/L	1.619	3	26	124932	2	KED
|	**Zn**	**66**	**49.860**	ug/L	1.739	3	37	28444	2	KED
|	**Zn**	**67**	**50.147**	ug/L	0.749	1	7	4833	2	KED
|	**As**	**75**	**49.607**	ug/L	0.558	1	3	14776	0	KED
⌊	**Se**	**78**	**48.412**	ug/L	0.309	0	17	1281	1	KED
	Kr	**83**		ug/L			60	69	12	Standard
⌈>	**In-1**	**115**		ug/L			9591	8816	3	KED
|	**Cd**	**111**	**47.635**	ug/L	1.004	2	4	14561	0	KED
⌊	**Cd**	**114**	**46.702**	ug/L	1.576	3	2	36749	2	KED
⌈>	**In**	**115**		ug/L			453983	431978	2	Standard
|	**Ag**	**107**	**52.210**	ug/L	0.992	1	104	917544	0	Standard
|	**Ba**	**135**	**52.053**	ug/L	1.399	2	29	275405	0	Standard
⌊	**Ba**	**137**	**50.181**	ug/L	0.893	1	49	502618	3	Standard
⌈>	**Tb**	**159**		ug/L			201225	203607	1	Standard
⌊	**Pb**	**208**	**47.595**	ug/L	0.915	1	233	3408664	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:14:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20320	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	728411	1	Standard
|	**Cr**	**52**	**-0.009**	ug/L	0.036	416	23495	22217	4	Standard
|	**Cr**	**53**	**0.000**	ug/L	0.001	61799	145	138	1	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	82	409	414	3	Standard
⌈>	**Ge**	**72**		ug/L			44602	39276	0	KED
|	**Ni**	**60**	**0.002**	ug/L	0.005	228	19	20	39	KED
|	**Ni**	**62**	**0.002**	ug/L	0.004	211	4	4	24	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.001	94	53	40	17	KED
|	**Cu**	**65**	**0.001**	ug/L	0.001	151	26	25	11	KED
|	**Zn**	**66**	**0.018**	ug/L	0.008	45	37	43	11	KED
|	**Zn**	**67**	**-0.023**	ug/L	0.022	95	7	4	49	KED
|	**As**	**75**	**0.004**	ug/L	0.005	120	3	4	36	KED
⌊	**Se**	**78**	**-0.027**	ug/L	0.135	501	17	14	25	KED
	Kr	**83**		ug/L			60	50	24	Standard
⌈>	**In-1**	**115**		ug/L			9591	8843	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.007	150	4	5	33	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.007	222	2	4	117	KED
⌈>	**In**	**115**		ug/L			453983	448870	3	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	53	104	146	12	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.001	812	29	27	21	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.000	476	49	48	9	Standard
⌈>	**Tb**	**159**		ug/L			201225	204737	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	19	233	306	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0169-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:18:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	38980	5	Standard
⌈>	**Sc**	**45**		ug/L			765035	756084	3	Standard
|	**Cr**	**52**	**6.619**	ug/L	0.164	2	23495	151924	1	Standard
|	**Cr**	**53**	**8.135**	ug/L	0.239	2	145	18550	4	Standard
⌊	**Mn**	**55**	**99.302**	ug/L	1.108	1	409	2959900	4	Standard
⌈>	**Ge**	**72**		ug/L			44602	36335	2	KED
|	**Ni**	**60**	**5.124**	ug/L	0.244	4	19	8556	2	KED
|	**Ni**	**62**	**5.418**	ug/L	0.059	1	4	1436	2	KED
|	**Cu**	**63**	**24.884**	ug/L	0.409	1	53	118694	1	KED
|	**Cu**	**65**	**24.933**	ug/L	0.284	1	26	59618	2	KED
|	**Zn**	**66**	**89.157**	ug/L	2.707	3	37	49385	2	KED
|	**Zn**	**67**	**86.649**	ug/L	4.527	5	7	8102	3	KED
|	**As**	**75**	**2.859**	ug/L	0.057	1	3	830	4	KED
⌊	**Se**	**78**	**0.198**	ug/L	0.143	72	17	19	21	KED
	Kr	**83**		ug/L			60	62	8	Standard
⌈>	**In-1**	**115**		ug/L			9591	8231	2	KED
|	**Cd**	**111**	**0.088**	ug/L	0.018	20	4	29	15	KED
⌊	**Cd**	**114**	**0.102**	ug/L	0.016	15	2	76	12	KED
⌈>	**In**	**115**		ug/L			453983	420608	6	Standard
|	**Ag**	**107**	**0.033**	ug/L	0.001	4	104	665	3	Standard
|	**Ba**	**135**	**61.395**	ug/L	5.288	8	29	315170	2	Standard
⌊	**Ba**	**137**	**59.433**	ug/L	6.132	10	49	576889	3	Standard
⌈>	**Tb**	**159**		ug/L			201225	195592	0	Standard
⌊	**Pb**	**208**	**7.157**	ug/L	0.120	1	233	492682	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0169-03
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:21:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	38351	5	Standard
⌈>	**Sc**	**45**		ug/L			765035	752472	5	Standard
|	**Cr**	**52**	**3.835**	ug/L	0.245	6	23495	97201	0	Standard
|	**Cr**	**53**	**5.869**	ug/L	0.080	1	145	13349	4	Standard
⌊	**Mn**	**55**	**15.823**	ug/L	0.354	2	409	469228	3	Standard
⌈>	**Ge**	**72**		ug/L			44602	36056	0	KED
|	**Ni**	**60**	**5.201**	ug/L	0.158	3	19	8624	2	KED
|	**Ni**	**62**	**5.369**	ug/L	0.155	2	4	1412	2	KED
|	**Cu**	**63**	**13.878**	ug/L	0.164	1	53	65712	0	KED
|	**Cu**	**65**	**14.276**	ug/L	0.305	2	26	33884	2	KED
|	**Zn**	**66**	**23.919**	ug/L	0.347	1	37	13174	1	KED
|	**Zn**	**67**	**24.065**	ug/L	0.647	2	7	2239	3	KED
|	**As**	**75**	**1.245**	ug/L	0.032	2	3	360	2	KED
⌊	**Se**	**78**	**-0.018**	ug/L	0.058	321	17	13	10	KED
	Kr	**83**		ug/L			60	56	8	Standard
⌈>	**In-1**	**115**		ug/L			9591	8212	2	KED
|	**Cd**	**111**	**0.033**	ug/L	0.025	74	4	13	50	KED
⌊	**Cd**	**114**	**0.046**	ug/L	0.016	35	2	35	31	KED
⌈>	**In**	**115**		ug/L			453983	414802	0	Standard
|	**Ag**	**107**	**0.014**	ug/L	0.002	14	104	327	10	Standard
|	**Ba**	**135**	**42.158**	ug/L	2.435	5	29	214225	5	Standard
⌊	**Ba**	**137**	**41.429**	ug/L	0.685	1	49	398451	1	Standard
⌈>	**Tb**	**159**		ug/L			201225	196356	0	Standard
⌊	**Pb**	**208**	**2.690**	ug/L	0.047	1	233	186009	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0169-05
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:25:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	39411	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	739214	3	Standard
|	**Cr**	**52**	**6.407**	ug/L	0.198	3	23495	144491	1	Standard
|	**Cr**	**53**	**8.045**	ug/L	0.335	4	145	17925	4	Standard
⌊	**Mn**	**55**	**93.328**	ug/L	3.841	4	409	2717280	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	34778	0	KED
|	**Ni**	**60**	**4.831**	ug/L	0.103	2	19	7729	2	KED
|	**Ni**	**62**	**4.868**	ug/L	0.390	8	4	1234	7	KED
|	**Cu**	**63**	**24.377**	ug/L	0.064	0	53	111315	0	KED
|	**Cu**	**65**	**24.167**	ug/L	0.734	3	26	55306	2	KED
|	**Zn**	**66**	**81.017**	ug/L	2.873	3	37	42969	3	KED
|	**Zn**	**67**	**81.503**	ug/L	2.615	3	7	7299	2	KED
|	**As**	**75**	**2.814**	ug/L	0.057	2	3	782	1	KED
⌊	**Se**	**78**	**0.216**	ug/L	0.088	40	17	18	11	KED
	Kr	**83**		ug/L			60	45	17	Standard
⌈>	**In-1**	**115**		ug/L			9591	8069	3	KED
|	**Cd**	**111**	**0.086**	ug/L	0.040	46	4	27	37	KED
⌊	**Cd**	**114**	**0.098**	ug/L	0.013	13	2	72	10	KED
⌈>	**In**	**115**		ug/L			453983	417754	3	Standard
|	**Ag**	**107**	**0.033**	ug/L	0.000	1	104	652	2	Standard
|	**Ba**	**135**	**56.621**	ug/L	1.364	2	29	289674	1	Standard
⌊	**Ba**	**137**	**54.229**	ug/L	2.173	4	49	524894	2	Standard
⌈>	**Tb**	**159**		ug/L			201225	194001	1	Standard
⌊	**Pb**	**208**	**6.650**	ug/L	0.125	1	233	453973	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0202-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:29:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	33423	5	Standard
>	Sc	45		ug/L			765035	765925	2	Standard
	Cr	52	0.471	ug/L	0.055	11	23495	32803	2	Standard
	Cr	53	0.794	ug/L	0.027	3	145	1966	4	Standard
	Mn	55	37.230	ug/L	0.788	2	409	1123784	0	Standard
>	Ge	72		ug/L			44602	36143	2	KED
	Ni	60	0.186	ug/L	0.023	12	19	323	9	KED
	Ni	62	0.190	ug/L	0.031	16	4	53	12	KED
	Cu	63	7.874	ug/L	0.209	2	53	37379	1	KED
	Cu	65	8.039	ug/L	0.199	2	26	19127	0	KED
	Zn	66	250.165	ug/L	6.815	2	37	137763	0	KED
	Zn	67	231.142	ug/L	8.570	3	7	21492	1	KED
	As	75	5.828	ug/L	0.151	2	3	1679	1	KED
	Se	78	0.011	ug/L	0.035	307	17	14	4	KED
	Kr	83		ug/L			60	59	17	Standard
>	In-1	115		ug/L			9591	8168	1	KED
	Cd	111	0.034	ug/L	0.014	41	4	13	28	KED
	Cd	114	0.029	ug/L	0.010	36	2	22	33	KED
>	In	115		ug/L			453983	434044	3	Standard
	Ag	107	-0.001	ug/L	0.000	44	104	86	8	Standard
	Ba	135	5.230	ug/L	0.302	5	29	27807	3	Standard
	Ba	137	5.286	ug/L	0.250	4	49	53181	1	Standard
>	Tb	159		ug/L			201225	196874	3	Standard
	Pb	208	0.308	ug/L	0.011	3	233	21544	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0166-01
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:34:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	48792	4	Standard
>	Sc	45		ug/L			765035	714352	4	Standard
	Cr	52	2.128	ug/L	0.112	5	23495	61046	5	Standard
	Cr	53	2.097	ug/L	0.056	2	145	4615	2	Standard
	Mn	55	13.417	ug/L	0.503	3	409	377823	3	Standard
>	Ge	72		ug/L			44602	38942	0	KED
	Ni	60	0.533	ug/L	0.028	5	19	970	5	KED
	Ni	62	0.542	ug/L	0.069	12	4	157	12	KED
	Cu	63	0.700	ug/L	0.031	4	53	3624	4	KED
	Cu	65	0.701	ug/L	0.046	6	26	1819	6	KED
	Zn	66	136.275	ug/L	0.931	0	37	80911	0	KED
	Zn	67	119.565	ug/L	1.899	1	7	11989	1	KED
	As	75	0.013	ug/L	0.004	29	3	7	16	KED
	Se	78	-0.104	ug/L	0.135	129	17	12	29	KED
	Kr	83		ug/L			60	39	29	Standard
>	In-1	115		ug/L			9591	8556	0	KED
	Cd	111	0.262	ug/L	0.033	12	4	81	11	KED
	Cd	114	0.226	ug/L	0.022	9	2	174	9	KED
>	In	115		ug/L			453983	444722	1	Standard
	Ag	107	-0.002	ug/L	0.000	8	104	59	4	Standard
	Ba	135	2.045	ug/L	0.086	4	29	11164	3	Standard
	Ba	137	2.093	ug/L	0.062	2	49	21618	1	Standard
>	Tb	159		ug/L			201225	196256	2	Standard
	Pb	208	0.047	ug/L	0.002	5	233	3450	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0281-09
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:38:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24024	6	Standard
>	Sc	45		ug/L			765035	727583	3	Standard
	Cr	52	0.060	ug/L	0.007	11	23495	23465	3	Standard
	Cr	53	0.297	ug/L	0.006	2	145	785	4	Standard
	Mn	55	188.594	ug/L	5.067	2	409	5405127	1	Standard
>	Ge	72		ug/L			44602	37911	1	KED
	Ni	60	2.077	ug/L	0.056	2	19	3632	4	KED
	Ni	62	2.039	ug/L	0.011	0	4	566	1	KED
	Cu	63	0.157	ug/L	0.010	6	53	824	4	KED
	Cu	65	0.159	ug/L	0.005	2	26	419	2	KED
	Zn	66	0.730	ug/L	0.043	5	37	453	5	KED
	Zn	67	2.380	ug/L	0.074	3	7	238	4	KED
	As	75	0.126	ug/L	0.014	11	3	41	12	KED
	Se	78	-0.060	ug/L	0.081	134	17	13	18	KED
	Kr	83		ug/L			60	66	11	Standard
>	In-1	115		ug/L			9591	8618	2	KED
	Cd	111	0.025	ug/L	0.029	112	4	11	68	KED
	Cd	114	0.006	ug/L	0.005	86	2	6	57	KED
>	In	115		ug/L			453983	435576	0	Standard
	Ag	107	-0.003	ug/L	0.001	22	104	40	33	Standard
	Ba	135	18.743	ug/L	0.316	1	29	100051	2	Standard
	Ba	137	19.222	ug/L	0.670	3	49	194180	4	Standard
>	Tb	159		ug/L			201225	196477	3	Standard
	Pb	208	0.018	ug/L	0.001	6	233	1463	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0755-DUP3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:42:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	23605	1	Standard
⌈>	Sc	45		ug/L			765035	717795	2	Standard
|	Cr	52	0.087	ug/L	0.024	27	23495	23639	2	Standard
|	Cr	53	0.280	ug/L	0.023	8	145	739	9	Standard
⌊	Mn	55	184.213	ug/L	0.709	0	409	5211297	2	Standard
⌈>	Ge	72		ug/L			44602	38479	0	KED
|	Ni	60	1.979	ug/L	0.014	0	19	3512	0	KED
|	Ni	62	2.030	ug/L	0.306	15	4	572	14	KED
|	Cu	63	0.154	ug/L	0.013	8	53	824	7	KED
|	Cu	65	0.163	ug/L	0.004	2	26	436	2	KED
|	Zn	66	0.717	ug/L	0.033	4	37	452	4	KED
|	Zn	67	2.146	ug/L	0.391	18	7	219	17	KED
|	As	75	0.110	ug/L	0.021	19	3	37	17	KED
⌊	Se	78	-0.148	ug/L	0.081	54	17	11	20	KED
	Kr	83		ug/L			60	57	31	Standard
⌈>	In-1	115		ug/L			9591	8538	2	KED
|	Cd	111	0.003	ug/L	0.009	333	4	5	54	KED
⌊	Cd	114	0.006	ug/L	0.009	133	2	6	92	KED
⌈>	In	115		ug/L			453983	433504	1	Standard
|	Ag	107	-0.003	ug/L	0.000	14	104	45	18	Standard
|	Ba	135	18.364	ug/L	0.275	1	29	97558	2	Standard
⌊	Ba	137	18.240	ug/L	0.195	1	49	183335	0	Standard
⌈>	Tb	159		ug/L			201225	192099	4	Standard
⌊	Pb	208	0.019	ug/L	0.000	2	233	1483	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0755-MS3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:45:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	23575	3	Standard
>	Sc	45		ug/L			765035	722415	1	Standard
	Cr	52	0.638	ug/L	0.003	0	23495	34052	1	Standard
	Cr	53	0.801	ug/L	0.032	3	145	1869	4	Standard
	Mn	55	184.773	ug/L	1.707	0	409	5260729	1	Standard
>	Ge	72		ug/L			44602	37854	2	KED
	Ni	60	2.601	ug/L	0.029	1	19	4536	1	KED
	Ni	62	2.679	ug/L	0.046	1	4	741	2	KED
	Cu	63	0.690	ug/L	0.030	4	53	3474	2	KED
	Cu	65	0.714	ug/L	0.023	3	26	1799	1	KED
	Zn	66	2.474	ug/L	0.042	1	37	1459	2	KED
	Zn	67	3.427	ug/L	0.061	1	7	340	1	KED
	As	75	0.640	ug/L	0.015	2	3	196	0	KED
	Se	78	1.460	ug/L	0.015	1	17	53	2	KED
	Kr	83		ug/L			60	55	21	Standard
>	In-1	115		ug/L			9591	8430	4	KED
	Cd	111	0.529	ug/L	0.012	2	4	158	4	KED
	Cd	114	0.536	ug/L	0.064	11	2	404	8	KED
>	In	115		ug/L			453983	426985	3	Standard
	Ag	107	0.582	ug/L	0.048	8	104	10197	5	Standard
	Ba	135	19.154	ug/L	0.621	3	29	100161	1	Standard
	Ba	137	19.327	ug/L	1.136	5	49	191123	2	Standard
>	Tb	159		ug/L			201225	196451	1	Standard
	Pb	208	0.534	ug/L	0.008	1	233	37109	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0755-MSD3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:49:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	23916	9	Standard
>	Sc	45		ug/L			765035	742961	3	Standard
	Cr	52	0.570	ug/L	0.026	4	23495	33707	1	Standard
	Cr	53	0.757	ug/L	0.014	1	145	1822	3	Standard
	Mn	55	183.105	ug/L	1.719	0	409	5360404	2	Standard
>	Ge	72		ug/L			44602	38407	1	KED
	Ni	60	2.676	ug/L	0.076	2	19	4736	3	KED
	Ni	62	2.533	ug/L	0.168	6	4	711	6	KED
	Cu	63	0.689	ug/L	0.013	1	53	3517	2	KED
	Cu	65	0.704	ug/L	0.027	3	26	1800	2	KED
	Zn	66	2.495	ug/L	0.046	1	37	1492	1	KED
	Zn	67	3.911	ug/L	0.323	8	7	393	7	KED
	As	75	0.707	ug/L	0.045	6	3	219	7	KED
	Se	78	1.597	ug/L	0.221	13	17	57	10	KED
	Kr	83		ug/L			60	57	29	Standard
>	In-1	115		ug/L			9591	8916	0	KED
	Cd	111	0.482	ug/L	0.020	4	4	153	3	KED
	Cd	114	0.499	ug/L	0.053	10	2	399	11	KED
>	In	115		ug/L			453983	438229	2	Standard
	Ag	107	0.553	ug/L	0.020	3	104	9962	1	Standard
	Ba	135	18.760	ug/L	0.900	4	29	100682	3	Standard
	Ba	137	19.102	ug/L	0.437	2	49	194030	0	Standard
>	Tb	159		ug/L			201225	195789	0	Standard
	Pb	208	0.541	ug/L	0.005	0	233	37523	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:53:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21792	6	Standard
⌈>	**Sc**	**45**		ug/L			765035	737020	4	Standard
|	**Cr**	**52**	**0.019**	ug/L	0.040	209	23495	22973	1	Standard
|	**Cr**	**53**	**0.043**	ug/L	0.009	20	145	236	11	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.002	35	409	580	7	Standard
⌈>	**Ge**	**72**		ug/L			44602	39400	4	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.004	184	19	13	47	KED
|	**Ni**	**62**	**0.004**	ug/L	0.004	101	4	5	21	KED
|	**Cu**	**63**	**0.001**	ug/L	0.000	33	53	54	7	KED
|	**Cu**	**65**	**0.001**	ug/L	0.003	672	26	24	35	KED
|	**Zn**	**66**	**0.037**	ug/L	0.010	26	37	55	12	KED
|	**Zn**	**67**	**0.040**	ug/L	0.054	137	7	10	53	KED
|	**As**	**75**	**0.001**	ug/L	0.006	1104	3	3	51	KED
⌊	**Se**	**78**	**0.004**	ug/L	0.043	1210	17	15	11	KED
	Kr	**83**		ug/L			60	49	13	Standard
⌈>	**In-1**	**115**		ug/L			9591	8852	1	KED
|	**Cd**	**111**	**0.008**	ug/L	0.010	125	4	6	47	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.005	150	2	4	79	KED
⌈>	**In**	**115**		ug/L			453983	445257	1	Standard
|	**Ag**	**107**	**-0.004**	ug/L	0.001	13	104	35	27	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.002	947	29	27	40	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	117	49	55	15	Standard
⌈>	**Tb**	**159**		ug/L			201225	200937	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	30	233	185	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:57:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21673	3	Standard
⌈>	**Sc**	**45**		ug/L			765035	753634	4	Standard
|	**Cr**	**52**	**48.894**	ug/L	0.827	1	23495	971108	3	Standard
|	**Cr**	**53**	**47.591**	ug/L	1.371	2	145	107364	1	Standard
⌊	**Mn**	**55**	**45.438**	ug/L	0.813	1	409	1349190	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	36970	0	KED
|	**Ni**	**60**	**50.736**	ug/L	0.028	0	19	86126	0	KED
|	**Ni**	**62**	**51.673**	ug/L	1.281	2	4	13907	3	KED
|	**Cu**	**63**	**51.386**	ug/L	1.459	2	53	249385	2	KED
|	**Cu**	**65**	**52.021**	ug/L	0.754	1	26	126535	0	KED
|	**Zn**	**66**	**51.371**	ug/L	0.796	1	37	28974	1	KED
|	**Zn**	**67**	**50.201**	ug/L	1.752	3	7	4783	3	KED
|	**As**	**75**	**51.820**	ug/L	0.565	1	3	15261	2	KED
⌊	**Se**	**78**	**50.615**	ug/L	1.405	2	17	1323	2	KED
	Kr	**83**		ug/L			60	55	11	Standard
⌈>	**In-1**	**115**		ug/L			9591	8709	1	KED
|	**Cd**	**111**	**48.459**	ug/L	0.937	1	4	14636	0	KED
⌊	**Cd**	**114**	**48.798**	ug/L	0.575	1	2	37944	0	KED
⌈>	**In**	**115**		ug/L			453983	441208	2	Standard
|	**Ag**	**107**	**52.664**	ug/L	1.417	2	104	945044	0	Standard
|	**Ba**	**135**	**49.617**	ug/L	1.378	2	29	268188	3	Standard
⌊	**Ba**	**137**	**48.069**	ug/L	2.055	4	49	491343	1	Standard
⌈>	**Tb**	**159**		ug/L			201225	190096	2	Standard
⌊	**Pb**	**208**	**49.808**	ug/L	1.440	2	233	3329338	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:03:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20331	2	Standard
⌈>	**Sc**	**45**		ug/L			765035	746555	2	Standard
|	**Cr**	**52**	**0.005**	ug/L	0.024	452	23495	23023	0	Standard
|	**Cr**	**53**	**0.012**	ug/L	0.002	15	145	168	4	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	282	409	410	6	Standard
⌈>	**Ge**	**72**		ug/L			44602	39444	2	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.001	76	19	15	6	KED
|	**Ni**	**62**	**0.002**	ug/L	0.010	576	4	4	65	KED
|	**Cu**	**63**	**0.002**	ug/L	0.001	69	53	57	10	KED
|	**Cu**	**65**	**0.003**	ug/L	0.002	87	26	30	18	KED
|	**Zn**	**66**	**0.016**	ug/L	0.031	196	37	42	43	KED
|	**Zn**	**67**	**-0.023**	ug/L	0.010	43	7	4	24	KED
|	**As**	**75**	**0.007**	ug/L	0.004	49	3	5	22	KED
⌊	**Se**	**78**	**-0.045**	ug/L	0.023	51	17	14	3	KED
	Kr	**83**		ug/L			60	47	21	Standard
⌈>	**In-1**	**115**		ug/L			9591	8962	2	KED
|	**Cd**	**111**	**0.017**	ug/L	0.009	53	4	9	31	KED
⌊	**Cd**	**114**	**0.016**	ug/L	0.012	73	2	15	63	KED
⌈>	**In**	**115**		ug/L			453983	441336	2	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	20	104	161	6	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.001	157	29	26	11	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.001	3456	49	47	20	Standard
⌈>	**Tb**	**159**		ug/L			201225	196119	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	38	233	296	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Saturday, May 20, 2023 01:07:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				21176	5	Standard
>	**Sc**	**45**		ug/L				726273	4	Standard
	Cr	**52**		ug/L				22358	2	Standard
	Cr	**53**		ug/L				167	3	Standard
	Mn	**55**		ug/L				417	6	Standard
>	**Ge**	**72**		ug/L				37795	1	KED
	Ni	**60**		ug/L				24	20	KED
	Ni	**62**		ug/L				6	45	KED
	Cu	**63**		ug/L				46	2	KED
	Cu	**65**		ug/L				20	9	KED
	Zn	**66**		ug/L				37	10	KED
	Zn	**67**		ug/L				6	91	KED
	As	**75**		ug/L				3	37	KED
	Se	**78**		ug/L				13	27	KED
	Kr	**83**		ug/L				45	21	Standard
>	**In-1**	**115**		ug/L				9034	2	KED
	Cd	**111**		ug/L				5	65	KED
	Cd	**114**		ug/L				2	132	KED
>	**In**	**115**		ug/L				445066	0	Standard
	Ag	**107**		ug/L				62	14	Standard
	Ba	**135**		ug/L				20	63	Standard
	Ba	**137**		ug/L				42	25	Standard
>	**Tb**	**159**		ug/L				196002	1	Standard
	Pb	**208**		ug/L				206	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:11:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20802	1	Standard
⌈>	**Sc**	**45**		ug/L			726273	747832	3	Standard
|	**Cr**	**52**	**47.818**	ug/L	0.818	1	22358	942984	2	Standard
|	**Cr**	**53**	**47.795**	ug/L	0.483	1	167	107095	2	Standard
⌊	**Mn**	**55**	**45.517**	ug/L	0.426	0	417	1341629	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	38376	3	KED
|	**Ni**	**60**	**48.309**	ug/L	2.415	4	24	85049	2	KED
|	**Ni**	**62**	**50.264**	ug/L	2.547	5	6	14031	3	KED
|	**Cu**	**63**	**49.008**	ug/L	1.511	3	46	246732	0	KED
|	**Cu**	**65**	**49.576**	ug/L	2.069	4	20	125071	0	KED
|	**Zn**	**66**	**50.186**	ug/L	2.734	5	37	29356	2	KED
|	**Zn**	**67**	**48.942**	ug/L	1.302	2	6	4837	0	KED
|	**As**	**75**	**49.717**	ug/L	1.720	3	3	15186	1	KED
⌊	**Se**	**78**	**48.523**	ug/L	1.706	3	13	1316	3	KED
	Kr	**83**		ug/L			45	54	2	Standard
⌈>	**In-1**	**115**		ug/L			9034	8885	1	KED
|	**Cd**	**111**	**47.344**	ug/L	0.935	1	5	14589	0	KED
⌊	**Cd**	**114**	**47.710**	ug/L	0.215	0	2	37852	1	KED
⌈>	**In**	**115**		ug/L			445066	434094	1	Standard
|	**Ag**	**107**	**53.496**	ug/L	1.370	2	62	944657	0	Standard
|	**Ba**	**135**	**50.054**	ug/L	2.477	4	20	266157	4	Standard
⌊	**Ba**	**137**	**47.488**	ug/L	2.330	4	42	477629	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	197967	0	Standard
⌊	**Pb**	**208**	**47.113**	ug/L	0.557	1	206	3281251	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:17:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	21255	3	Standard
⌈>	**Sc**	**45**		ug/L			726273	729944	3	Standard
|	**Cr**	**52**	**0.013**	ug/L	0.042	311	22358	22711	2	Standard
|	**Cr**	**53**	**-0.010**	ug/L	0.004	43	167	147	9	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	49	417	386	1	Standard
⌈>	**Ge**	**72**		ug/L			37795	40366	2	KED
|	**Ni**	**60**	**-0.005**	ug/L	0.002	34	24	16	24	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.010	126	6	4	65	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	71	46	55	9	KED
|	**Cu**	**65**	**0.004**	ug/L	0.007	167	20	33	53	KED
|	**Zn**	**66**	**0.011**	ug/L	0.032	307	37	46	41	KED
|	**Zn**	**67**	**0.008**	ug/L	0.016	209	6	7	25	KED
|	**As**	**75**	**0.013**	ug/L	0.005	40	3	7	19	KED
⌊	**Se**	**78**	**-0.004**	ug/L	0.026	733	13	14	7	KED
	Kr	**83**		ug/L			45	46	24	Standard
⌈>	**In-1**	**115**		ug/L			9034	8848	3	KED
|	**Cd**	**111**	**0.004**	ug/L	0.006	154	5	6	24	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.006	113	2	6	64	KED
⌈>	**In**	**115**		ug/L			445066	429649	0	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.000	5	62	165	2	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.001	145	20	24	22	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.000	21	42	46	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	199955	0	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	30	206	318	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:21:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35151	4	Standard
>	Sc	45		ug/L			726273	751425	4	Standard
	Cr	52	5.384	ug/L	0.171	3	22358	127140	2	Standard
	Cr	53	5.337	ug/L	0.034	0	167	12174	4	Standard
	Mn	55	41.806	ug/L	1.129	2	417	1237679	3	Standard
>	Ge	72		ug/L			37795	39881	3	KED
	Ni	60	1.553	ug/L	0.035	2	24	2870	5	KED
	Ni	62	1.596	ug/L	0.193	12	6	469	10	KED
	Cu	63	11.545	ug/L	0.335	2	46	60462	3	KED
	Cu	65	11.899	ug/L	0.086	0	20	31245	3	KED
	Zn	66	84.957	ug/L	2.733	3	37	51643	0	KED
	Zn	67	79.793	ug/L	1.665	2	6	8196	3	KED
	As	75	0.877	ug/L	0.064	7	3	281	4	KED
	Se	78	0.175	ug/L	0.055	31	13	19	5	KED
	Kr	83		ug/L			45	57	12	Standard
>	In-1	115		ug/L			9034	8918	1	KED
	Cd	111	0.092	ug/L	0.022	23	5	33	18	KED
	Cd	114	0.076	ug/L	0.023	29	2	63	26	KED
>	In	115		ug/L			445066	432539	2	Standard
	Ag	107	0.016	ug/L	0.000	2	62	339	3	Standard
	Ba	135	25.694	ug/L	0.520	2	20	136148	1	Standard
	Ba	137	25.325	ug/L	0.750	2	42	253893	1	Standard
>	Tb	159		ug/L			196002	201904	0	Standard
	Pb	208	1.805	ug/L	0.027	1	206	128405	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-04
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:25:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	36721	3	Standard
⌈>	Sc	45		ug/L			726273	752248	0	Standard
|	Cr	52	1.926	ug/L	0.052	2	22358	60453	2	Standard
|	Cr	53	2.024	ug/L	0.053	2	167	4729	3	Standard
⌊	Mn	55	96.402	ug/L	2.958	3	417	2858615	3	Standard
⌈>	Ge	72		ug/L			37795	38459	0	KED
|	Ni	60	0.916	ug/L	0.028	3	24	1642	2	KED
|	Ni	62	0.897	ug/L	0.096	10	6	257	11	KED
|	Cu	63	3.611	ug/L	0.067	1	46	18277	2	KED
|	Cu	65	3.682	ug/L	0.093	2	20	9337	2	KED
|	Zn	66	56.400	ug/L	1.016	1	37	33093	1	KED
|	Zn	67	53.935	ug/L	1.375	2	6	5345	3	KED
|	As	75	0.909	ug/L	0.081	8	3	281	8	KED
⌊	Se	78	0.150	ug/L	0.082	54	13	17	12	KED
	Kr	83		ug/L			45	43	18	Standard
⌈>	In-1	115		ug/L			9034	8934	1	KED
|	Cd	111	0.069	ug/L	0.022	31	5	26	27	KED
⌊	Cd	114	0.082	ug/L	0.008	9	2	68	10	KED
⌈>	In	115		ug/L			445066	445484	4	Standard
|	Ag	107	0.005	ug/L	0.001	24	62	150	14	Standard
|	Ba	135	20.389	ug/L	1.104	5	20	111129	1	Standard
⌊	Ba	137	21.245	ug/L	0.603	2	42	219375	4	Standard
⌈>	Tb	159		ug/L			196002	196066	0	Standard
⌊	Pb	208	0.555	ug/L	0.013	2	206	38458	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-05
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:28:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35716	5	Standard
>	Sc	45		ug/L			726273	749194	3	Standard
	Cr	52	2.215	ug/L	0.119	5	22358	65721	0	Standard
	Cr	53	2.302	ug/L	0.100	4	167	5330	2	Standard
	Mn	55	122.768	ug/L	0.859	0	417	3624573	2	Standard
>	Ge	72		ug/L			37795	38808	0	KED
	Ni	60	1.048	ug/L	0.040	3	24	1893	4	KED
	Ni	62	1.052	ug/L	0.077	7	6	303	6	KED
	Cu	63	4.175	ug/L	0.137	3	46	21307	2	KED
	Cu	65	4.195	ug/L	0.002	0	20	10731	0	KED
	Zn	66	64.980	ug/L	1.009	1	37	38472	1	KED
	Zn	67	62.082	ug/L	0.807	1	6	6207	1	KED
	As	75	1.012	ug/L	0.057	5	3	316	5	KED
	Se	78	0.248	ug/L	0.038	15	13	20	4	KED
	Kr	83		ug/L			45	59	16	Standard
>	In-1	115		ug/L			9034	8824	0	KED
	Cd	111	0.121	ug/L	0.015	12	5	41	11	KED
	Cd	114	0.085	ug/L	0.005	5	2	70	6	KED
>	In	115		ug/L			445066	450993	2	Standard
	Ag	107	0.006	ug/L	0.001	16	62	163	8	Standard
	Ba	135	21.812	ug/L	0.472	2	20	120504	0	Standard
	Ba	137	21.691	ug/L	0.438	2	42	226771	0	Standard
>	Tb	159		ug/L			196002	197731	2	Standard
	Pb	208	0.676	ug/L	0.010	1	206	47248	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-06
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:32:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35022	4	Standard
>	Sc	45		ug/L			726273	746159	2	Standard
	Cr	52	0.550	ug/L	0.026	4	22358	33519	1	Standard
	Cr	53	1.307	ug/L	0.032	2	167	3091	4	Standard
	Mn	55	92.475	ug/L	0.945	1	417	2719996	3	Standard
>	Ge	72		ug/L			37795	38215	1	KED
	Ni	60	1.414	ug/L	0.046	3	24	2504	2	KED
	Ni	62	1.425	ug/L	0.059	4	6	402	3	KED
	Cu	63	2.089	ug/L	0.107	5	46	10521	4	KED
	Cu	65	2.173	ug/L	0.046	2	20	5484	2	KED
	Zn	66	52.952	ug/L	1.545	2	37	30872	1	KED
	Zn	67	49.984	ug/L	1.364	2	6	4923	3	KED
	As	75	0.346	ug/L	0.006	1	3	108	1	KED
	Se	78	-0.041	ug/L	0.167	407	13	12	36	KED
	Kr	83		ug/L			45	42	21	Standard
>	In-1	115		ug/L			9034	8470	2	KED
	Cd	111	0.022	ug/L	0.016	75	5	11	42	KED
	Cd	114	0.031	ug/L	0.011	35	2	26	28	KED
>	In	115		ug/L			445066	432236	3	Standard
	Ag	107	0.005	ug/L	0.000	9	62	153	6	Standard
	Ba	135	12.734	ug/L	0.595	4	20	67442	5	Standard
	Ba	137	12.698	ug/L	0.399	3	42	127183	0	Standard
>	Tb	159		ug/L			196002	198366	1	Standard
	Pb	208	0.135	ug/L	0.003	2	206	9608	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-07
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:36:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	37164	1	Standard
>	Sc	45		ug/L			726273	747367	3	Standard
	Cr	52	3.413	ug/L	0.152	4	22358	88576	1	Standard
	Cr	53	3.476	ug/L	0.108	3	167	7941	3	Standard
	Mn	55	9.310	ug/L	0.200	2	417	274477	1	Standard
>	Ge	72		ug/L			37795	38302	1	KED
	Ni	60	0.441	ug/L	0.027	6	24	800	4	KED
	Ni	62	0.421	ug/L	0.045	10	6	123	10	KED
	Cu	63	2.814	ug/L	0.034	1	46	14192	0	KED
	Cu	65	2.754	ug/L	0.091	3	20	6957	1	KED
	Zn	66	45.193	ug/L	0.232	0	37	26418	1	KED
	Zn	67	42.751	ug/L	1.242	2	6	4219	1	KED
	As	75	1.162	ug/L	0.019	1	3	357	2	KED
	Se	78	0.029	ug/L	0.177	605	13	14	33	KED
	Kr	83		ug/L			45	49	17	Standard
>	In-1	115		ug/L			9034	8846	1	KED
	Cd	111	0.107	ug/L	0.014	13	5	37	10	KED
	Cd	114	0.106	ug/L	0.019	17	2	87	18	KED
>	In	115		ug/L			445066	455309	3	Standard
	Ag	107	0.003	ug/L	0.001	20	62	124	13	Standard
	Ba	135	10.754	ug/L	0.602	5	20	59944	3	Standard
	Ba	137	10.997	ug/L	0.398	3	42	116032	0	Standard
>	Tb	159		ug/L			196002	196161	1	Standard
	Pb	208	0.452	ug/L	0.001	0	206	31386	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-08
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:40:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35714	4	Standard
>	Sc	45		ug/L			726273	735771	4	Standard
	Cr	52	1.277	ug/L	0.045	3	22358	46819	3	Standard
	Cr	53	1.239	ug/L	0.034	2	167	2896	1	Standard
	Mn	55	21.947	ug/L	0.211	0	417	636707	3	Standard
>	Ge	72		ug/L			37795	38353	2	KED
	Ni	60	0.399	ug/L	0.004	1	24	727	3	KED
	Ni	62	0.445	ug/L	0.026	5	6	130	8	KED
	Cu	63	2.007	ug/L	0.081	4	46	10142	1	KED
	Cu	65	2.027	ug/L	0.077	3	20	5132	1	KED
	Zn	66	32.937	ug/L	0.991	3	37	19280	1	KED
	Zn	67	31.161	ug/L	1.438	4	6	3080	3	KED
	As	75	2.004	ug/L	0.055	2	3	615	2	KED
	Se	78	-0.020	ug/L	0.050	254	13	13	9	KED
	Kr	83		ug/L			45	45	2	Standard
>	In-1	115		ug/L			9034	8833	3	KED
	Cd	111	0.094	ug/L	0.015	16	5	33	10	KED
	Cd	114	0.081	ug/L	0.006	7	2	66	10	KED
>	In	115		ug/L			445066	448499	1	Standard
	Ag	107	0.005	ug/L	0.002	38	62	147	22	Standard
	Ba	135	8.009	ug/L	0.246	3	20	44020	2	Standard
	Ba	137	7.935	ug/L	0.287	3	42	82539	3	Standard
>	Tb	159		ug/L			196002	205163	0	Standard
	Pb	208	0.365	ug/L	0.007	1	206	26541	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-09
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:43:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	32166	4	Standard
>	Sc	45		ug/L			726273	737837	3	Standard
	Cr	52	1.017	ug/L	0.050	4	22358	42006	1	Standard
	Cr	53	0.979	ug/L	0.062	6	167	2330	4	Standard
	Mn	55	13.430	ug/L	0.155	1	417	390802	2	Standard
>	Ge	72		ug/L			37795	36543	6	KED
	Ni	60	0.472	ug/L	0.007	1	24	816	6	KED
	Ni	62	0.486	ug/L	0.074	15	6	134	9	KED
	Cu	63	2.385	ug/L	0.111	4	46	11464	1	KED
	Cu	65	2.516	ug/L	0.159	6	20	6055	2	KED
	Zn	66	47.578	ug/L	3.036	6	37	26471	2	KED
	Zn	67	43.349	ug/L	1.829	4	6	4076	2	KED
	As	75	1.037	ug/L	0.051	4	3	304	3	KED
	Se	78	0.098	ug/L	0.058	59	13	15	15	KED
	Kr	83		ug/L			45	53	18	Standard
>	In-1	115		ug/L			9034	8499	2	KED
	Cd	111	0.172	ug/L	0.043	24	5	55	20	KED
	Cd	114	0.139	ug/L	0.009	6	2	107	4	KED
>	In	115		ug/L			445066	437931	1	Standard
	Ag	107	0.002	ug/L	0.000	26	62	92	7	Standard
	Ba	135	11.745	ug/L	0.272	2	20	63027	1	Standard
	Ba	137	11.501	ug/L	0.243	2	42	116779	0	Standard
>	Tb	159		ug/L			196002	196994	0	Standard
	Pb	208	0.258	ug/L	0.002	0	206	18109	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-10
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:47:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	34763	7	Standard
⌈>	Sc	45		ug/L			726273	735878	1	Standard
|	Cr	52	3.231	ug/L	0.112	3	22358	83843	3	Standard
|	Cr	53	3.290	ug/L	0.015	0	167	7413	2	Standard
⌊	Mn	55	43.773	ug/L	0.902	2	417	1269719	2	Standard
⌈>	Ge	72		ug/L			37795	37741	2	KED
|	Ni	60	6.098	ug/L	0.045	0	24	10589	2	KED
|	Ni	62	6.398	ug/L	0.135	2	6	1763	2	KED
|	Cu	63	16.428	ug/L	0.284	1	46	81432	3	KED
|	Cu	65	16.293	ug/L	0.233	1	20	40466	0	KED
|	Zn	66	45.385	ug/L	0.831	1	37	26137	1	KED
|	Zn	67	45.354	ug/L	1.625	3	6	4409	1	KED
|	As	75	0.951	ug/L	0.042	4	3	288	2	KED
⌊	Se	78	0.256	ug/L	0.161	63	13	20	22	KED
	Kr	83		ug/L			45	57	26	Standard
⌈>	In-1	115		ug/L			9034	8337	1	KED
|	Cd	111	0.081	ug/L	0.028	34	5	28	30	KED
⌊	Cd	114	0.086	ug/L	0.027	30	2	66	29	KED
⌈>	In	115		ug/L			445066	441121	1	Standard
|	Ag	107	0.026	ug/L	0.002	7	62	527	6	Standard
|	Ba	135	30.251	ug/L	1.556	5	20	163489	4	Standard
⌊	Ba	137	30.354	ug/L	0.997	3	42	310398	2	Standard
⌈>	Tb	159		ug/L			196002	195301	1	Standard
⌊	Pb	208	4.039	ug/L	0.090	2	206	277655	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0174-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:52:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	32791	2	Standard
>	Sc	45		ug/L			726273	728044	4	Standard
	Cr	52	0.198	ug/L	0.049	25	22358	26084	1	Standard
	Cr	53	0.275	ug/L	0.014	5	167	767	8	Standard
	Mn	55	17.076	ug/L	0.463	2	417	489917	2	Standard
>	Ge	72		ug/L			37795	37785	1	KED
	Ni	60	0.450	ug/L	0.021	4	24	805	3	KED
	Ni	62	0.434	ug/L	0.035	8	6	125	8	KED
	Cu	63	22.389	ug/L	0.451	2	46	111077	2	KED
	Cu	65	23.083	ug/L	0.948	4	20	57386	3	KED
	Zn	66	55.110	ug/L	1.509	2	37	31773	2	KED
	Zn	67	52.941	ug/L	0.601	1	6	5155	2	KED
	As	75	0.142	ug/L	0.007	4	3	45	3	KED
	Se	78	-0.051	ug/L	0.188	368	13	12	40	KED
	Kr	83		ug/L			45	53	22	Standard
>	In-1	115		ug/L			9034	8645	2	KED
	Cd	111	-0.001	ug/L	0.008	542	5	4	53	KED
	Cd	114	0.014	ug/L	0.007	49	2	13	36	KED
>	In	115		ug/L			445066	435439	4	Standard
	Ag	107	0.000	ug/L	0.000	76	62	65	9	Standard
	Ba	135	16.291	ug/L	0.789	4	20	86821	2	Standard
	Ba	137	16.088	ug/L	0.966	6	42	162183	2	Standard
>	Tb	159		ug/L			196002	203493	0	Standard
	Pb	208	0.092	ug/L	0.001	1	206	6770	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:56:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	21404	3	Standard
⌈>	**Sc**	**45**		ug/L			726273	710622	2	Standard
|	**Cr**	**52**	**0.046**	ug/L	0.046	98	22358	22712	3	Standard
|	**Cr**	**53**	**0.018**	ug/L	0.012	66	167	203	14	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	152	417	429	9	Standard
⌈>	**Ge**	**72**		ug/L			37795	39255	4	KED
|	**Ni**	**60**	**-0.007**	ug/L	0.002	33	24	12	37	KED
|	**Ni**	**62**	**0.008**	ug/L	0.021	258	6	8	65	KED
|	**Cu**	**63**	**0.006**	ug/L	0.002	43	46	77	19	KED
|	**Cu**	**65**	**0.008**	ug/L	0.004	48	20	42	24	KED
|	**Zn**	**66**	**0.015**	ug/L	0.016	108	37	47	17	KED
|	**Zn**	**67**	**0.028**	ug/L	0.048	169	6	9	52	KED
|	**As**	**75**	**-0.001**	ug/L	0.005	376	3	2	50	KED
⌊	**Se**	**78**	**-0.120**	ug/L	0.085	71	13	10	18	KED
	Kr	**83**		ug/L			45	50	24	Standard
⌈>	**In-1**	**115**		ug/L			9034	8686	2	KED
|	**Cd**	**111**	**0.005**	ug/L	0.005	105	5	6	22	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.003	60	2	6	33	KED
⌈>	**In**	**115**		ug/L			445066	436690	2	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.001	28	62	27	37	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.001	80	20	27	21	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.002	190	42	53	42	Standard
⌈>	**Tb**	**159**		ug/L			196002	194398	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	74	206	167	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVF
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:00:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20943	7	Standard
⌈>	**Sc**	**45**		ug/L			726273	727155	3	Standard
|	**Cr**	**52**	**49.875**	ug/L	1.385	2	22358	954982	0	Standard
|	**Cr**	**53**	**48.887**	ug/L	1.617	3	167	106447	1	Standard
⌊	**Mn**	**55**	**46.646**	ug/L	0.735	1	417	1336881	3	Standard
⌈>	**Ge**	**72**		ug/L			37795	38680	2	KED
|	**Ni**	**60**	**47.890**	ug/L	0.936	1	24	85041	0	KED
|	**Ni**	**62**	**47.636**	ug/L	0.591	1	6	13417	3	KED
|	**Cu**	**63**	**47.748**	ug/L	1.411	2	46	242349	0	KED
|	**Cu**	**65**	**48.758**	ug/L	0.758	1	20	124069	0	KED
|	**Zn**	**66**	**49.588**	ug/L	1.525	3	37	29259	1	KED
|	**Zn**	**67**	**47.852**	ug/L	2.071	4	6	4767	2	KED
|	**As**	**75**	**49.101**	ug/L	0.902	1	3	15125	1	KED
⌊	**Se**	**78**	**47.497**	ug/L	0.950	1	13	1299	2	KED
	Kr	**83**		ug/L			45	52	2	Standard
⌈>	**In-1**	**115**		ug/L			9034	8690	0	KED
|	**Cd**	**111**	**48.057**	ug/L	1.123	2	5	14485	2	KED
⌊	**Cd**	**114**	**48.540**	ug/L	0.789	1	2	37669	2	KED
⌈>	**In**	**115**		ug/L			445066	432654	2	Standard
|	**Ag**	**107**	**53.373**	ug/L	0.413	0	62	939536	1	Standard
|	**Ba**	**135**	**48.970**	ug/L	1.268	2	20	259530	2	Standard
⌊	**Ba**	**137**	**48.421**	ug/L	1.685	3	42	485483	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	197582	1	Standard
⌊	**Pb**	**208**	**46.794**	ug/L	1.136	2	206	3251858	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBF
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:06:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20738	4	Standard
⌈>	**Sc**	**45**		ug/L			726273	744414	3	Standard
|	**Cr**	**52**	**-0.016**	ug/L	0.042	265	22358	22611	4	Standard
|	**Cr**	**53**	**-0.010**	ug/L	0.006	59	167	149	11	Standard
⌊	**Mn**	**55**	**-0.002**	ug/L	0.000	31	417	382	1	Standard
⌈>	**Ge**	**72**		ug/L			37795	39573	1	KED
|	**Ni**	**60**	**-0.007**	ug/L	0.001	18	24	12	17	KED
|	**Ni**	**62**	**-0.014**	ug/L	0.004	26	6	2	43	KED
|	**Cu**	**63**	**0.000**	ug/L	0.001	674	46	50	13	KED
|	**Cu**	**65**	**0.002**	ug/L	0.004	212	20	26	37	KED
|	**Zn**	**66**	**0.011**	ug/L	0.010	97	37	45	15	KED
|	**Zn**	**67**	**0.022**	ug/L	0.053	243	6	8	61	KED
|	**As**	**75**	**0.006**	ug/L	0.005	83	3	5	31	KED
⌊	**Se**	**78**	**0.044**	ug/L	0.155	352	13	15	27	KED
	Kr	**83**		ug/L			45	50	41	Standard
⌈>	**In-1**	**115**		ug/L			9034	8954	1	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.003	81	5	3	25	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	483	2	3	60	KED
⌈>	**In**	**115**		ug/L			445066	433220	1	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	18	62	172	9	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.001	58	20	30	18	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	46	42	55	10	Standard
⌈>	**Tb**	**159**		ug/L			196002	199553	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	27	206	284	5	Standard

23E

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23D~~0167-02
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:10:15
Number of Replicates: 3

MB 5/19/23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35093	2	Standard
>	Sc	45		ug/L			726273	748066	2	Standard
	Cr	52	2.269	ug/L	0.067	2	22358	66690	1	Standard
	Cr	53	2.358	ug/L	0.017	0	167	5450	2	Standard
	Mn	55	96.235	ug/L	0.722	0	417	2837267	2	Standard
>	Ge	72		ug/L			37795	39062	2	KED
	Ni	60	1.053	ug/L	0.023	2	24	1912	0	KED
	Ni	62	1.086	ug/L	0.166	15	6	314	12	KED
	Cu	63	5.888	ug/L	0.084	1	46	30242	4	KED
	Cu	65	5.854	ug/L	0.122	2	20	15059	0	KED
	Zn	66	85.167	ug/L	2.124	2	37	50718	0	KED
	Zn	67	80.477	ug/L	6.257	7	6	8087	5	KED
	As	75	0.954	ug/L	0.026	2	3	300	2	KED
	Se	78	0.344	ug/L	0.171	49	13	23	19	KED
	Kr	83		ug/L			45	57	8	Standard
>	In-1	115		ug/L			9034	8656	4	KED
	Cd	111	0.116	ug/L	0.011	9	5	39	3	KED
	Cd	114	0.106	ug/L	0.010	9	2	84	6	KED
>	In	115		ug/L			445066	438887	2	Standard
	Ag	107	0.009	ug/L	0.001	8	62	213	7	Standard
	Ba	135	17.110	ug/L	0.344	2	20	92042	3	Standard
	Ba	137	16.174	ug/L	0.186	1	42	164630	3	Standard
>	Tb	159		ug/L			196002	198612	0	Standard
	Pb	208	0.754	ug/L	0.002	0	206	52904	0	Standard

23E

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23D~~0167-03
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:13:58

MB 5/19/23

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	33894	1	Standard
>	Sc	45		ug/L			726273	758098	3	Standard
	Cr	52	2.007	ug/L	0.043	2	22358	62481	1	Standard
	Cr	53	2.116	ug/L	0.089	4	167	4971	1	Standard
	Mn	55	84.516	ug/L	0.650	0	417	2525068	2	Standard
>	Ge	72		ug/L			37795	38691	2	KED
	Ni	60	0.976	ug/L	0.025	2	24	1759	4	KED
	Ni	62	0.954	ug/L	0.071	7	6	274	6	KED
	Cu	63	4.012	ug/L	0.049	1	46	20423	3	KED
	Cu	65	4.137	ug/L	0.097	2	20	10549	0	KED
	Zn	66	75.827	ug/L	0.673	0	37	44749	2	KED
	Zn	67	70.356	ug/L	1.259	1	6	7011	2	KED
	As	75	0.802	ug/L	0.020	2	3	250	2	KED
	Se	78	0.290	ug/L	0.249	85	13	21	29	KED
	Kr	83		ug/L			45	51	22	Standard
>	In-1	115		ug/L			9034	8572	6	KED
	Cd	111	0.111	ug/L	0.018	16	5	37	7	KED
	Cd	114	0.101	ug/L	0.023	23	2	79	24	KED
>	In	115		ug/L			445066	450270	2	Standard
	Ag	107	0.006	ug/L	0.000	8	62	166	2	Standard
	Ba	135	14.564	ug/L	0.386	2	20	80318	0	Standard
	Ba	137	14.187	ug/L	0.276	1	42	148088	1	Standard
>	Tb	159		ug/L			196002	203183	2	Standard
	Pb	208	0.625	ug/L	0.007	1	206	44873	1	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~**0178-01**

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:17:35

MB 5/19/23

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	39172	4	Standard
>	**Sc**	**45**		ug/L			726273	737851	1	Standard
	Cr	**52**	**1.157**	ug/L	0.057	4	22358	44686	3	Standard
	Cr	**53**	**1.814**	ug/L	0.025	1	167	4175	0	Standard
	Mn	**55**	**38.707**	ug/L	1.148	2	417	1126208	4	Standard
>	**Ge**	**72**		ug/L			37795	36973	3	KED
	Ni	**60**	**1.235**	ug/L	0.060	4	24	2118	1	KED
	Ni	**62**	**1.181**	ug/L	0.072	6	6	323	6	KED
	Cu	**63**	**11.843**	ug/L	0.295	2	46	57493	2	KED
	Cu	**65**	**11.872**	ug/L	0.248	2	20	28893	3	KED
	Zn	**66**	**69.645**	ug/L	2.211	3	37	39253	0	KED
	Zn	**67**	**64.586**	ug/L	3.179	4	6	6146	3	KED
	As	**75**	**0.932**	ug/L	0.037	4	3	277	3	KED
	Se	**78**	**0.195**	ug/L	0.114	58	13	18	13	KED
	Kr	**83**		ug/L			45	48	11	Standard
>	**In-1**	**115**		ug/L			9034	8273	3	KED
	Cd	**111**	**0.107**	ug/L	0.023	21	5	35	17	KED
	Cd	**114**	**0.083**	ug/L	0.006	7	2	64	10	KED
>	**In**	**115**		ug/L			445066	430728	2	Standard
	Ag	**107**	**0.010**	ug/L	0.001	8	62	235	8	Standard
	Ba	**135**	**14.019**	ug/L	0.472	3	20	73961	1	Standard
	Ba	**137**	**13.996**	ug/L	0.316	2	42	139752	1	Standard
>	**Tb**	**159**		ug/L			196002	203492	1	Standard
	Pb	**208**	**0.678**	ug/L	0.015	2	206	48769	1	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~**0178-03**

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:21:19

Number of Replicates: 3

MB 5/19/23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	31908	4	Standard
>	**Sc**	**45**		ug/L			726273	757240	2	Standard
	Cr	**52**	**0.426**	ug/L	0.071	16	22358	31611	4	Standard
	Cr	**53**	**4.400**	ug/L	0.199	4	167	10142	5	Standard
	Mn	**55**	**3.422**	ug/L	0.085	2	417	102497	0	Standard
>	**Ge**	**72**		ug/L			37795	35501	2	KED
	Ni	**60**	**0.550**	ug/L	0.030	5	24	918	3	KED
	Ni	**62**	**0.560**	ug/L	0.041	7	6	150	5	KED
	Cu	**63**	**2.588**	ug/L	0.119	4	46	12095	2	KED
	Cu	**65**	**2.639**	ug/L	0.071	2	20	6181	0	KED
	Zn	**66**	**2.342**	ug/L	0.162	6	37	1301	4	KED
	Zn	**67**	**2.944**	ug/L	0.162	5	6	274	6	KED
	As	**75**	**1.378**	ug/L	0.059	4	3	392	1	KED
	Se	**78**	**0.025**	ug/L	0.189	745	13	13	37	KED
	Kr	**83**		ug/L			45	46	13	Standard
>	**In-1**	**115**		ug/L			9034	8192	1	KED
	Cd	**111**	**0.012**	ug/L	0.005	43	5	7	18	KED
	Cd	**114**	**0.013**	ug/L	0.005	39	2	12	31	KED
>	**In**	**115**		ug/L			445066	408772	2	Standard
	Ag	**107**	**0.007**	ug/L	0.002	25	62	172	15	Standard
	Ba	**135**	**9.121**	ug/L	0.416	4	20	45675	3	Standard
	Ba	**137**	**9.151**	ug/L	0.402	4	42	86728	3	Standard
>	**Tb**	**159**		ug/L			196002	196098	1	Standard
	Pb	**208**	**0.163**	ug/L	0.005	2	206	11425	1	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~**0184-01**

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:24:56

MB 5/19/23

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	42455	4	Standard
>	Sc	45		ug/L			726273	759897	0	Standard
	Cr	52	0.719	ug/L	0.062	8	22358	37453	3	Standard
	Cr	53	0.862	ug/L	0.018	2	167	2136	2	Standard
	Mn	55	14.981	ug/L	0.125	0	417	449094	1	Standard
>	Ge	72		ug/L			37795	37296	2	KED
	Ni	60	9.035	ug/L	0.048	0	24	15494	1	KED
	Ni	62	9.130	ug/L	0.220	2	6	2484	2	KED
	Cu	63	6.391	ug/L	0.166	2	46	31318	0	KED
	Cu	65	6.565	ug/L	0.196	2	20	16122	1	KED
	Zn	66	14.720	ug/L	0.530	3	37	8401	2	KED
	Zn	67	18.860	ug/L	0.085	0	6	1816	2	KED
	As	75	0.504	ug/L	0.047	9	3	153	10	KED
	Se	78	0.110	ug/L	0.037	33	13	16	6	KED
	Kr	83		ug/L			45	48	9	Standard
>	In-1	115		ug/L			9034	8435	2	KED
	Cd	111	0.037	ug/L	0.004	10	5	15	9	KED
	Cd	114	0.043	ug/L	0.009	21	2	34	21	KED
>	In	115		ug/L			445066	451325	1	Standard
	Ag	107	0.004	ug/L	0.001	17	62	140	9	Standard
	Ba	135	69.838	ug/L	2.061	2	20	386223	3	Standard
	Ba	137	68.189	ug/L	0.771	1	42	713498	1	Standard
>	Tb	159		ug/L			196002	205005	4	Standard
	Pb	208	0.133	ug/L	0.006	4	206	9776	0	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~0172-03

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:28:33

Number of Replicates: 3

MB 5/19/23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	36263	8	Standard
>	Sc	45		ug/L			726273	728744	2	Standard
	Cr	52	5.434	ug/L	0.145	2	22358	124359	4	Standard
	Cr	53	6.785	ug/L	0.079	1	167	14961	2	Standard
	Mn	55	18.240	ug/L	0.235	1	417	524230	2	Standard
>	Ge	72		ug/L			37795	36206	2	KED
	Ni	60	2.416	ug/L	0.095	3	24	4036	2	KED
	Ni	62	2.498	ug/L	0.193	7	6	663	5	KED
	Cu	63	16.376	ug/L	0.588	3	46	77817	1	KED
	Cu	65	16.782	ug/L	0.076	0	20	39991	2	KED
	Zn	66	49.631	ug/L	1.274	2	37	27411	0	KED
	Zn	67	46.286	ug/L	0.880	1	6	4320	4	KED
	As	75	1.749	ug/L	0.117	6	3	506	4	KED
	Se	78	0.012	ug/L	0.131	1078	13	13	24	KED
	Kr	83		ug/L			45	40	13	Standard
>	In-1	115		ug/L			9034	8050	3	KED
	Cd	111	0.045	ug/L	0.007	15	5	17	14	KED
	Cd	114	0.051	ug/L	0.011	21	2	39	20	KED
>	In	115		ug/L			445066	418151	0	Standard
	Ag	107	0.008	ug/L	0.002	19	62	198	13	Standard
	Ba	135	24.737	ug/L	0.703	2	20	126733	2	Standard
	Ba	137	24.903	ug/L	0.229	0	42	241451	1	Standard
>	Tb	159		ug/L			196002	197679	1	Standard
	Pb	208	2.504	ug/L	0.037	1	206	174342	0	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~0172-01

Sample Dil Factor: 2

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:32:16

MB 5/19/23

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	29416	4	Standard
>	Sc	45		ug/L			726273	715882	1	Standard
	Cr	52	4.757	ug/L	0.209	4	22358	109717	5	Standard
	Cr	53	5.628	ug/L	0.032	0	167	12218	1	Standard
	Mn	55	78.219	ug/L	0.498	0	417	2207126	1	Standard
>	Ge	72		ug/L			37795	36483	1	KED
	Ni	60	2.531	ug/L	0.065	2	24	4263	3	KED
	Ni	62	2.555	ug/L	0.050	1	6	684	2	KED
	Cu	63	16.709	ug/L	0.732	4	46	80028	3	KED
	Cu	65	16.999	ug/L	0.174	1	20	40815	0	KED
	Zn	66	65.635	ug/L	0.832	1	37	36526	0	KED
	Zn	67	61.401	ug/L	1.002	1	6	5770	1	KED
	As	75	1.369	ug/L	0.110	7	3	400	8	KED
	Se	78	0.531	ug/L	0.454	85	13	26	45	KED
	Kr	83		ug/L			45	52	12	Standard
>	In-1	115		ug/L			9034	8153	0	KED
	Cd	111	0.074	ug/L	0.020	27	5	25	22	KED
	Cd	114	0.074	ug/L	0.010	13	2	56	12	KED
>	In	115		ug/L			445066	421747	3	Standard
	Ag	107	0.018	ug/L	0.001	5	62	375	5	Standard
	Ba	135	32.725	ug/L	1.491	4	20	168913	0	Standard
	Ba	137	32.965	ug/L	0.682	2	42	322421	5	Standard
>	Tb	159		ug/L			196002	197017	3	Standard
	Pb	208	5.535	ug/L	0.203	3	206	383574	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0574-DUP1
Sample Dil Factor: 2
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:35:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	32051	4	Standard
>	Sc	45		ug/L			726273	715481	2	Standard
	Cr	52	4.704	ug/L	0.062	1	22358	108633	2	Standard
	Cr	53	5.414	ug/L	0.078	1	167	11754	2	Standard
	Mn	55	77.704	ug/L	4.658	5	417	2193201	8	Standard
>	Ge	72		ug/L			37795	36840	0	KED
	Ni	60	2.578	ug/L	0.038	1	24	4384	0	KED
	Ni	62	2.582	ug/L	0.014	0	6	698	0	KED
	Cu	63	16.929	ug/L	0.190	1	46	81897	0	KED
	Cu	65	17.129	ug/L	0.190	1	20	41532	0	KED
	Zn	66	65.311	ug/L	0.440	0	37	36705	0	KED
	Zn	67	61.760	ug/L	2.088	3	6	5860	2	KED
	As	75	1.365	ug/L	0.048	3	3	403	3	KED
	Se	78	0.032	ug/L	0.058	177	13	13	9	KED
	Kr	83		ug/L			45	40	16	Standard
>	In-1	115		ug/L			9034	8142	1	KED
	Cd	111	0.102	ug/L	0.011	10	5	33	8	KED
	Cd	114	0.086	ug/L	0.029	33	2	65	31	KED
>	In	115		ug/L			445066	424507	0	Standard
	Ag	107	0.018	ug/L	0.000	1	62	376	1	Standard
	Ba	135	33.126	ug/L	1.351	4	20	172270	3	Standard
	Ba	137	33.059	ug/L	0.850	2	42	325379	2	Standard
>	Tb	159		ug/L			196002	193756	2	Standard
	Pb	208	5.354	ug/L	0.178	3	206	364992	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0574-MS1
Sample Dil Factor: 2
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:40:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	29563	6	Standard
>	Sc	45		ug/L			726273	727897	3	Standard
	Cr	52	15.923	ug/L	0.365	2	22358	320513	1	Standard
	Cr	53	16.057	ug/L	0.329	2	167	35124	1	Standard
	Mn	55	88.760	ug/L	2.854	3	417	2545171	2	Standard
>	Ge	72		ug/L			37795	37029	1	KED
	Ni	60	14.500	ug/L	0.118	0	24	24676	2	KED
	Ni	62	14.120	ug/L	0.214	1	6	3811	2	KED
	Cu	63	28.206	ug/L	0.589	2	46	137134	3	KED
	Cu	65	28.079	ug/L	0.785	2	20	68420	3	KED
	Zn	66	101.891	ug/L	2.683	2	37	57520	1	KED
	Zn	67	93.743	ug/L	2.062	2	6	8938	1	KED
	As	75	13.273	ug/L	0.285	2	3	3916	2	KED
	Se	78	37.345	ug/L	1.096	2	13	980	1	KED
	Kr	83		ug/L			45	55	28	Standard
>	In-1	115		ug/L			9034	8412	3	KED
	Cd	111	11.596	ug/L	0.218	1	5	3386	1	KED
	Cd	114	11.559	ug/L	0.530	4	2	8679	3	KED
>	In	115		ug/L			445066	408615	1	Standard
	Ag	107	12.740	ug/L	0.262	2	62	211817	0	Standard
	Ba	135	45.800	ug/L	0.345	0	20	229277	1	Standard
	Ba	137	45.510	ug/L	1.041	2	42	431081	2	Standard
>	Tb	159		ug/L			196002	189378	1	Standard
	Pb	208	17.467	ug/L	0.197	1	206	1163751	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:43:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20358	2	Standard
⌈>	**Sc**	**45**		ug/L			726273	708294	2	Standard
|	**Cr**	**52**	**0.057**	ug/L	0.060	104	22358	22845	5	Standard
|	**Cr**	**53**	**0.058**	ug/L	0.008	14	167	286	3	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.000	6	417	487	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	35690	5	KED
|	**Ni**	**60**	**-0.005**	ug/L	0.004	86	24	15	50	KED
|	**Ni**	**62**	**0.012**	ug/L	0.013	110	6	8	32	KED
|	**Cu**	**63**	**0.008**	ug/L	0.003	41	46	80	21	KED
|	**Cu**	**65**	**0.011**	ug/L	0.002	15	20	46	9	KED
|	**Zn**	**66**	**0.030**	ug/L	0.006	20	37	51	6	KED
|	**Zn**	**67**	**0.024**	ug/L	0.009	38	6	8	13	KED
|	**As**	**75**	**0.007**	ug/L	0.003	51	3	4	24	KED
⌊	**Se**	**78**	**0.113**	ug/L	0.192	170	13	15	25	KED
	Kr	**83**		ug/L			45	41	2	Standard
⌈>	**In-1**	**115**		ug/L			9034	8432	3	KED
|	**Cd**	**111**	**0.012**	ug/L	0.014	112	5	8	48	KED
⌊	**Cd**	**114**	**0.013**	ug/L	0.003	26	2	12	17	KED
⌈>	**In**	**115**		ug/L			445066	446232	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	65	62	66	2	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.002	96	20	34	37	Standard
⌊	**Ba**	**137**	**0.002**	ug/L	0.002	86	42	66	30	Standard
⌈>	**Tb**	**159**		ug/L			196002	194779	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	132	206	235	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVG
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:47:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20586	5	Standard
⌈>	**Sc**	**45**		ug/L			726273	726010	3	Standard
|	**Cr**	**52**	**48.792**	ug/L	1.357	2	22358	933227	1	Standard
|	**Cr**	**53**	**47.942**	ug/L	0.854	1	167	104323	4	Standard
⌊	**Mn**	**55**	**44.739**	ug/L	1.098	2	417	1279760	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	37083	0	KED
|	**Ni**	**60**	**49.575**	ug/L	0.679	1	24	84420	1	KED
|	**Ni**	**62**	**50.370**	ug/L	1.054	2	6	13598	2	KED
|	**Cu**	**63**	**49.781**	ug/L	0.765	1	46	242342	1	KED
|	**Cu**	**65**	**50.209**	ug/L	0.966	1	20	122511	1	KED
|	**Zn**	**66**	**50.567**	ug/L	0.748	1	37	28615	1	KED
|	**Zn**	**67**	**48.902**	ug/L	1.741	3	6	4673	3	KED
|	**As**	**75**	**50.688**	ug/L	0.972	1	3	14972	1	KED
⌊	**Se**	**78**	**48.799**	ug/L	0.954	1	13	1279	1	KED
	Kr	**83**		ug/L			45	58	21	Standard
⌈>	**In-1**	**115**		ug/L			9034	8381	1	KED
|	**Cd**	**111**	**49.360**	ug/L	0.931	1	5	14351	2	KED
⌊	**Cd**	**114**	**49.002**	ug/L	0.571	1	2	36670	1	KED
⌈>	**In**	**115**		ug/L			445066	426654	2	Standard
|	**Ag**	**107**	**53.305**	ug/L	0.766	1	62	925192	1	Standard
|	**Ba**	**135**	**50.953**	ug/L	1.935	3	20	266153	0	Standard
⌊	**Ba**	**137**	**48.688**	ug/L	1.860	3	42	481675	5	Standard
⌈>	**Tb**	**159**		ug/L			196002	193204	2	Standard
⌊	**Pb**	**208**	**47.092**	ug/L	1.306	2	206	3199592	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBG
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:54:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20033	1	Standard
⌈>	**Sc**	**45**		ug/L			726273	737195	3	Standard
|	**Cr**	**52**	**0.030**	ug/L	0.016	52	22358	23276	5	Standard
|	**Cr**	**53**	**0.006**	ug/L	0.006	106	167	184	11	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.000	26	417	388	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	38471	0	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.003	52	24	14	37	KED
|	**Ni**	**62**	**0.002**	ug/L	0.014	758	6	6	56	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	93	46	54	12	KED
|	**Cu**	**65**	**0.002**	ug/L	0.003	197	20	25	31	KED
|	**Zn**	**66**	**-0.004**	ug/L	0.009	198	37	35	13	KED
|	**Zn**	**67**	**0.050**	ug/L	0.018	36	6	11	16	KED
|	**As**	**75**	**0.005**	ug/L	0.010	193	3	4	62	KED
⌊	**Se**	**78**	**0.081**	ug/L	0.056	69	13	15	9	KED
	Kr	**83**		ug/L			45	39	10	Standard
⌈>	**In-1**	**115**		ug/L			9034	8917	2	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.010	596	5	4	65	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.007	208	2	5	95	KED
⌈>	**In**	**115**		ug/L			445066	435682	5	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.000	5	62	174	2	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.000	21	20	23	4	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	291	42	44	21	Standard
⌈>	**Tb**	**159**		ug/L			196002	197230	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	9	206	302	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0187-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:57:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	37286	2	Standard
⌈>	**Sc**	**45**		ug/L			726273	745527	2	Standard
|	**Cr**	**52**	**1.297**	ug/L	0.092	7	22358	47844	4	Standard
|	**Cr**	**53**	**1.221**	ug/L	0.017	1	167	2895	2	Standard
⌊	**Mn**	**55**	**16.377**	ug/L	0.164	1	417	481592	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	39117	1	KED
|	**Ni**	**60**	**1.924**	ug/L	0.072	3	24	3480	3	KED
|	**Ni**	**62**	**1.937**	ug/L	0.065	3	6	558	4	KED
|	**Cu**	**63**	**19.855**	ug/L	0.681	3	46	102016	4	KED
|	**Cu**	**65**	**19.658**	ug/L	0.573	2	20	50620	4	KED
|	**Zn**	**66**	**34.165**	ug/L	0.516	1	37	20406	1	KED
|	**Zn**	**67**	**32.313**	ug/L	0.536	1	6	3260	2	KED
|	**As**	**75**	**0.378**	ug/L	0.048	12	3	121	13	KED
⌊	**Se**	**78**	**0.086**	ug/L	0.163	188	13	16	28	KED
	Kr	**83**		ug/L			45	55	13	Standard
⌈>	**In-1**	**115**		ug/L			9034	8649	1	KED
|	**Cd**	**111**	**0.151**	ug/L	0.010	6	5	50	3	KED
⌊	**Cd**	**114**	**0.177**	ug/L	0.022	12	2	139	13	KED
⌈>	**In**	**115**		ug/L			445066	448435	1	Standard
|	**Ag**	**107**	**0.017**	ug/L	0.002	10	62	377	8	Standard
|	**Ba**	**135**	**9.034**	ug/L	0.229	2	20	49642	1	Standard
⌊	**Ba**	**137**	**8.580**	ug/L	0.218	2	42	89230	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	200706	1	Standard
⌊	**Pb**	**208**	**1.828**	ug/L	0.061	3	206	129215	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0188-01
Sample Dil Factor: 10
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:01:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	26069	4	Standard
⌈>	**Sc**	**45**		ug/L			726273	728757	1	Standard
|	**Cr**	**52**	**0.906**	ug/L	0.084	9	22358	39439	4	Standard
|	**Cr**	**53**	**1.069**	ug/L	0.039	3	167	2499	3	Standard
⌊	**Mn**	**55**	**12.487**	ug/L	0.309	2	417	359077	3	Standard
⌈>	**Ge**	**72**		ug/L			37795	38278	0	KED
|	**Ni**	**60**	**0.819**	ug/L	0.027	3	24	1464	3	KED
|	**Ni**	**62**	**0.818**	ug/L	0.026	3	6	234	3	KED
|	**Cu**	**63**	**2.350**	ug/L	0.033	1	46	11856	1	KED
|	**Cu**	**65**	**2.367**	ug/L	0.098	4	20	5982	4	KED
|	**Zn**	**66**	**8.879**	ug/L	0.192	2	37	5218	2	KED
|	**Zn**	**67**	**9.107**	ug/L	0.132	1	6	903	0	KED
|	**As**	**75**	**0.399**	ug/L	0.015	3	3	124	3	KED
⌊	**Se**	**78**	**0.110**	ug/L	0.083	74	13	16	13	KED
	Kr	**83**		ug/L			45	64	20	Standard
⌈>	**In-1**	**115**		ug/L			9034	8768	1	KED
|	**Cd**	**111**	**0.013**	ug/L	0.009	70	5	8	32	KED
⌊	**Cd**	**114**	**0.019**	ug/L	0.001	6	2	17	6	KED
⌈>	**In**	**115**		ug/L			445066	427580	1	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.001	20	62	180	14	Standard
|	**Ba**	**135**	**6.258**	ug/L	0.182	2	20	32812	4	Standard
⌊	**Ba**	**137**	**6.060**	ug/L	0.157	2	42	60088	0	Standard
⌈>	**Tb**	**159**		ug/L			196002	193966	0	Standard
⌊	**Pb**	**208**	**0.738**	ug/L	0.006	0	206	50593	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0191-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:05:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	36514	2	Standard
>	Sc	45		ug/L			726273	795433	5	Standard
	Cr	52	0.246	ug/L	0.010	4	22358	29524	4	Standard
	Cr	53	1.495	ug/L	0.017	1	167	3742	4	Standard
	Mn	55	55.212	ug/L	1.881	3	417	1729214	2	Standard
>	Ge	72		ug/L			37795	36025	2	KED
	Ni	60	0.316	ug/L	0.025	8	24	544	4	KED
	Ni	62	0.297	ug/L	0.030	10	6	83	7	KED
	Cu	63	4.241	ug/L	0.077	1	46	20092	1	KED
	Cu	65	4.293	ug/L	0.179	4	20	10187	1	KED
	Zn	66	7.032	ug/L	0.218	3	37	3894	0	KED
	Zn	67	7.007	ug/L	0.273	3	6	655	1	KED
	As	75	0.237	ug/L	0.037	15	3	71	16	KED
	Se	78	-0.025	ug/L	0.092	365	13	12	17	KED
	Kr	83		ug/L			45	52	11	Standard
>	In-1	115		ug/L			9034	8053	3	KED
	Cd	111	0.028	ug/L	0.009	32	5	12	23	KED
	Cd	114	0.022	ug/L	0.006	27	2	18	20	KED
>	In	115		ug/L			445066	394308	2	Standard
	Ag	107	0.004	ug/L	0.001	18	62	114	8	Standard
	Ba	135	2.656	ug/L	0.069	2	20	12843	0	Standard
	Ba	137	2.588	ug/L	0.138	5	42	23681	3	Standard
>	Tb	159		ug/L			196002	190716	1	Standard
	Pb	208	0.331	ug/L	0.010	2	206	22401	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0193-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:08:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	35354	2	Standard
⌈>	**Sc**	**45**		ug/L			726273	755002	1	Standard
|	**Cr**	**52**	**1.307**	ug/L	0.039	2	22358	48635	3	Standard
|	**Cr**	**53**	**1.707**	ug/L	0.045	2	167	4029	3	Standard
⌊	**Mn**	**55**	**133.783**	ug/L	4.653	3	417	3981572	4	Standard
⌈>	**Ge**	**72**		ug/L			37795	37033	1	KED
|	**Ni**	**60**	**1.858**	ug/L	0.105	5	24	3182	5	KED
|	**Ni**	**62**	**1.816**	ug/L	0.157	8	6	495	7	KED
|	**Cu**	**63**	**4.235**	ug/L	0.140	3	46	20625	2	KED
|	**Cu**	**65**	**4.280**	ug/L	0.031	0	20	10446	1	KED
|	**Zn**	**66**	**31.422**	ug/L	0.771	2	37	17767	0	KED
|	**Zn**	**67**	**30.886**	ug/L	1.208	3	6	2948	2	KED
|	**As**	**75**	**1.376**	ug/L	0.040	2	3	408	2	KED
⌊	**Se**	**78**	**0.307**	ug/L	0.073	23	13	21	7	KED
	Kr	**83**		ug/L			45	55	6	Standard
⌈>	**In-1**	**115**		ug/L			9034	8154	3	KED
|	**Cd**	**111**	**0.023**	ug/L	0.006	24	5	11	13	KED
⌊	**Cd**	**114**	**0.036**	ug/L	0.006	17	2	29	18	KED
⌈>	**In**	**115**		ug/L			445066	418824	2	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	19	62	165	11	Standard
|	**Ba**	**135**	**20.081**	ug/L	0.419	2	20	103020	0	Standard
⌊	**Ba**	**137**	**19.386**	ug/L	0.529	2	42	188179	0	Standard
⌈>	**Tb**	**159**		ug/L			196002	193176	1	Standard
⌊	**Pb**	**208**	**0.762**	ug/L	0.003	0	206	52014	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0193-02
Sample Dil Factor: 5
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:12:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	27248	3	Standard
⌈>	**Sc**	**45**		ug/L			726273	710566	2	Standard
|	**Cr**	**52**	**1.074**	ug/L	0.028	2	22358	41511	2	Standard
|	**Cr**	**53**	**1.046**	ug/L	0.050	4	167	2390	6	Standard
⌊	**Mn**	**55**	**23.821**	ug/L	0.101	0	417	667453	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	36682	3	KED
|	**Ni**	**60**	**0.858**	ug/L	0.060	6	24	1467	4	KED
|	**Ni**	**62**	**0.783**	ug/L	0.029	3	6	215	5	KED
|	**Cu**	**63**	**3.840**	ug/L	0.098	2	46	18526	2	KED
|	**Cu**	**65**	**3.846**	ug/L	0.098	2	20	9297	0	KED
|	**Zn**	**66**	**21.041**	ug/L	0.457	2	37	11794	0	KED
|	**Zn**	**67**	**19.416**	ug/L	1.533	7	6	1836	4	KED
|	**As**	**75**	**0.305**	ug/L	0.027	8	3	91	6	KED
⌊	**Se**	**78**	**0.054**	ug/L	0.107	198	13	14	21	KED
	Kr	**83**		ug/L			45	50	10	Standard
⌈>	**In-1**	**115**		ug/L			9034	8536	1	KED
|	**Cd**	**111**	**0.027**	ug/L	0.009	32	5	12	18	KED
⌊	**Cd**	**114**	**0.034**	ug/L	0.017	49	2	29	45	KED
⌈>	**In**	**115**		ug/L			445066	427792	0	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.000	0	62	130	0	Standard
|	**Ba**	**135**	**5.686**	ug/L	0.151	2	20	29822	3	Standard
⌊	**Ba**	**137**	**5.655**	ug/L	0.067	1	42	56116	0	Standard
⌈>	**Tb**	**159**		ug/L			196002	189724	0	Standard
⌊	**Pb**	**208**	**1.415**	ug/L	0.007	0	206	94645	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0194-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:15:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	38162	3	Standard
⌈>	Sc	45		ug/L			726273	680390	2	Standard
|	Cr	52	0.724	ug/L	0.057	7	22358	33630	4	Standard
|	Cr	53	0.687	ug/L	0.021	3	167	1555	5	Standard
⌊	Mn	55	1.117	ug/L	0.022	2	417	30353	4	Standard
⌈>	Ge	72		ug/L			37795	36063	1	KED
|	Ni	60	1.832	ug/L	0.061	3	24	3056	1	KED
|	Ni	62	2.064	ug/L	0.112	5	6	547	6	KED
|	Cu	63	125.316	ug/L	1.920	1	46	593144	1	KED
|	Cu	65	126.640	ug/L	2.412	1	20	300422	1	KED
|	Zn	66	167.346	ug/L	6.983	4	37	91970	2	KED
|	Zn	67	153.965	ug/L	2.390	1	6	14293	0	KED
|	As	75	1.055	ug/L	0.116	11	3	305	9	KED
⌊	Se	78	0.164	ug/L	0.037	22	13	16	5	KED
	Kr	83		ug/L			45	49	19	Standard
⌈>	In-1	115		ug/L			9034	8260	3	KED
|	Cd	111	0.271	ug/L	0.064	23	5	81	19	KED
⌊	Cd	114	0.300	ug/L	0.031	10	2	224	10	KED
⌈>	In	115		ug/L			445066	413496	3	Standard
|	Ag	107	0.014	ug/L	0.001	7	62	299	9	Standard
|	Ba	135	16.699	ug/L	0.190	1	20	84630	4	Standard
⌊	Ba	137	17.059	ug/L	0.572	3	42	163451	1	Standard
⌈>	Tb	159		ug/L			196002	188855	3	Standard
⌊	Pb	208	0.161	ug/L	0.001	0	206	10924	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0196-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:19:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	39674	2	Standard
⌈>	Sc	45		ug/L			726273	708390	2	Standard
|	Cr	52	0.970	ug/L	0.017	1	22358	39498	2	Standard
|	Cr	53	0.886	ug/L	0.038	4	167	2043	5	Standard
⌊	Mn	55	25.084	ug/L	0.630	2	417	700649	3	Standard
⌈>	Ge	72		ug/L			37795	37720	1	KED
|	Ni	60	0.792	ug/L	0.028	3	24	1394	2	KED
|	Ni	62	0.708	ug/L	0.138	19	6	200	18	KED
|	Cu	63	4.275	ug/L	0.068	1	46	21210	1	KED
|	Cu	65	4.247	ug/L	0.112	2	20	10557	1	KED
|	Zn	66	44.861	ug/L	0.980	2	37	25821	0	KED
|	Zn	67	41.567	ug/L	0.515	1	6	4041	2	KED
|	As	75	0.303	ug/L	0.011	3	3	94	3	KED
⌊	Se	78	0.051	ug/L	0.109	212	13	14	18	KED
	Kr	83		ug/L			45	53	3	Standard
⌈>	In-1	115		ug/L			9034	8384	2	KED
|	Cd	111	0.033	ug/L	0.006	18	5	14	13	KED
⌊	Cd	114	0.018	ug/L	0.010	52	2	16	44	KED
⌈>	In	115		ug/L			445066	420838	3	Standard
|	Ag	107	0.005	ug/L	0.001	9	62	149	4	Standard
|	Ba	135	11.186	ug/L	0.310	2	20	57667	2	Standard
⌊	Ba	137	11.396	ug/L	0.187	1	42	111177	2	Standard
⌈>	Tb	159		ug/L			196002	193170	1	Standard
⌊	Pb	208	1.060	ug/L	0.020	1	206	72200	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0196-02
Sample Dil Factor: 2
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:23:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	31913	5	Standard
>	Sc	45		ug/L			726273	726511	2	Standard
	Cr	52	0.685	ug/L	0.015	2	22358	35170	3	Standard
	Cr	53	0.649	ug/L	0.013	1	167	1579	4	Standard
	Mn	55	10.149	ug/L	0.091	0	417	291026	3	Standard
>	Ge	72		ug/L			37795	36892	1	KED
	Ni	60	0.791	ug/L	0.055	6	24	1364	7	KED
	Ni	62	0.828	ug/L	0.020	2	6	228	3	KED
	Cu	63	3.304	ug/L	0.049	1	46	16041	0	KED
	Cu	65	3.438	ug/L	0.091	2	20	8366	4	KED
	Zn	66	36.292	ug/L	1.089	3	37	20439	3	KED
	Zn	67	33.457	ug/L	0.830	2	6	3181	1	KED
	As	75	0.188	ug/L	0.018	9	3	58	9	KED
	Se	78	0.088	ug/L	0.150	171	13	15	24	KED
	Kr	83		ug/L			45	37	21	Standard
>	In-1	115		ug/L			9034	8589	1	KED
	Cd	111	0.020	ug/L	0.005	24	5	10	13	KED
	Cd	114	0.017	ug/L	0.005	29	2	15	23	KED
>	In	115		ug/L			445066	436028	1	Standard
	Ag	107	0.004	ug/L	0.001	12	62	136	7	Standard
	Ba	135	14.436	ug/L	0.786	5	20	77129	5	Standard
	Ba	137	14.001	ug/L	0.399	2	42	141544	2	Standard
>	Tb	159		ug/L			196002	200014	3	Standard
	Pb	208	0.779	ug/L	0.025	3	206	54949	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0200-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:26:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	40737	6	Standard
>	Sc	45		ug/L			726273	730586	3	Standard
	Cr	52	0.544	ug/L	0.081	14	22358	32689	2	Standard
	Cr	53	3.828	ug/L	0.067	1	167	8534	2	Standard
	Mn	55	315.422	ug/L	3.194	1	417	9079525	2	Standard
>	Ge	72		ug/L			37795	34666	2	KED
	Ni	60	1.041	ug/L	0.032	3	24	1678	2	KED
	Ni	62	1.113	ug/L	0.134	12	6	286	11	KED
	Cu	63	1.409	ug/L	0.022	1	46	6453	3	KED
	Cu	65	1.379	ug/L	0.017	1	20	3163	2	KED
	Zn	66	4.044	ug/L	0.199	4	37	2169	2	KED
	Zn	67	5.270	ug/L	0.195	3	6	476	5	KED
	As	75	0.424	ug/L	0.031	7	3	120	9	KED
	Se	78	0.131	ug/L	0.035	26	13	15	8	KED
	Kr	83		ug/L			45	92	17	Standard
>	In-1	115		ug/L			9034	7811	2	KED
	Cd	111	0.000	ug/L	0.009	10442	5	4	53	KED
	Cd	114	0.015	ug/L	0.015	99	2	12	81	KED
>	In	115		ug/L			445066	394591	1	Standard
	Ag	107	0.002	ug/L	0.001	54	62	81	19	Standard
	Ba	135	18.963	ug/L	0.482	2	20	91665	1	Standard
	Ba	137	18.443	ug/L	0.901	4	42	168684	3	Standard
>	Tb	159		ug/L			196002	186697	1	Standard
	Pb	208	0.057	ug/L	0.001	1	206	3911	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLF
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:30:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	21001	5	Standard
⌈>	**Sc**	**45**		ug/L			726273	755393	1	Standard
|	**Cr**	**52**	**0.027**	ug/L	0.047	171	22358	23792	4	Standard
|	**Cr**	**53**	**0.131**	ug/L	0.009	6	167	469	4	Standard
⌊	**Mn**	**55**	**0.014**	ug/L	0.017	120	417	840	57	Standard
⌈>	**Ge**	**72**		ug/L			37795	39036	2	KED
|	**Ni**	**60**	**-0.005**	ug/L	0.002	39	24	17	22	KED
|	**Ni**	**62**	**0.004**	ug/L	0.007	192	6	7	25	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	157	46	56	23	KED
|	**Cu**	**65**	**0.004**	ug/L	0.002	40	20	32	10	KED
|	**Zn**	**66**	**0.011**	ug/L	0.009	81	37	45	10	KED
|	**Zn**	**67**	**0.049**	ug/L	0.051	104	6	11	44	KED
|	**As**	**75**	**0.004**	ug/L	0.006	151	3	4	37	KED
⌊	**Se**	**78**	**0.039**	ug/L	0.190	490	13	14	32	KED
	Kr	**83**		ug/L			45	50	22	Standard
⌈>	**In-1**	**115**		ug/L			9034	8840	2	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.002	17	5	2	24	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.001	565	2	3	35	KED
⌈>	**In**	**115**		ug/L			445066	459082	3	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	15	62	24	26	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.003	157	20	33	54	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	180	42	46	10	Standard
⌈>	**Tb**	**159**		ug/L			196002	201918	3	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.001	187	206	191	18	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVH
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:34:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20592	6	Standard
⌈>	**Sc**	**45**		ug/L			726273	745570	0	Standard
|	**Cr**	**52**	**48.200**	ug/L	1.382	2	22358	947633	2	Standard
|	**Cr**	**53**	**48.092**	ug/L	1.134	2	167	107445	2	Standard
⌊	**Mn**	**55**	**46.433**	ug/L	0.904	1	417	1364674	1	Standard
⌈>	**Ge**	**72**		ug/L			37795	39029	0	KED
|	**Ni**	**60**	**49.305**	ug/L	1.153	2	24	88360	1	KED
|	**Ni**	**62**	**49.589**	ug/L	1.298	2	6	14092	3	KED
|	**Cu**	**63**	**49.369**	ug/L	0.563	1	46	252954	1	KED
|	**Cu**	**65**	**50.087**	ug/L	0.828	1	20	128621	1	KED
|	**Zn**	**66**	**48.942**	ug/L	0.719	1	37	29150	1	KED
|	**Zn**	**67**	**49.949**	ug/L	2.090	4	6	5024	4	KED
|	**As**	**75**	**49.630**	ug/L	0.706	1	3	15429	1	KED
⌊	**Se**	**78**	**46.869**	ug/L	0.122	0	13	1293	0	KED
	Kr	**83**		ug/L			45	50	5	Standard
⌈>	**In-1**	**115**		ug/L			9034	8659	0	KED
|	**Cd**	**111**	**48.872**	ug/L	0.491	1	5	14680	1	KED
⌊	**Cd**	**114**	**48.832**	ug/L	0.721	1	2	37759	1	KED
⌈>	**In**	**115**		ug/L			445066	429929	0	Standard
|	**Ag**	**107**	**53.533**	ug/L	0.574	1	62	936531	1	Standard
|	**Ba**	**135**	**48.683**	ug/L	0.795	1	20	256456	2	Standard
⌊	**Ba**	**137**	**48.787**	ug/L	0.376	0	42	486282	0	Standard
⌈>	**Tb**	**159**		ug/L			196002	193230	3	Standard
⌊	**Pb**	**208**	**47.515**	ug/L	0.992	2	206	3228486	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBH
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:40:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20624	5	Standard
⌈>	**Sc**	**45**		ug/L			726273	768431	2	Standard
|	**Cr**	**52**	**-0.033**	ug/L	0.013	38	22358	22996	1	Standard
|	**Cr**	**53**	**0.014**	ug/L	0.005	33	167	209	6	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	67	417	418	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	40447	0	KED
|	**Ni**	**60**	**-0.004**	ug/L	0.003	67	24	19	26	KED
|	**Ni**	**62**	**-0.004**	ug/L	0.007	178	6	5	33	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	109	46	61	19	KED
|	**Cu**	**65**	**0.002**	ug/L	0.001	87	20	26	14	KED
|	**Zn**	**66**	**-0.002**	ug/L	0.013	580	37	38	19	KED
|	**Zn**	**67**	**0.014**	ug/L	0.010	74	6	8	13	KED
|	**As**	**75**	**0.002**	ug/L	0.002	74	3	4	13	KED
⌊	**Se**	**78**	**0.146**	ug/L	0.026	17	13	18	4	KED
	Kr	**83**		ug/L			45	47	36	Standard
⌈>	**In-1**	**115**		ug/L			9034	9038	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	153	5	6	24	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.006	212	2	5	94	KED
⌈>	**In**	**115**		ug/L			445066	459012	0	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.001	25	62	162	15	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.001	41	20	33	14	Standard
⌊	**Ba**	**137**	**0.002**	ug/L	0.001	54	42	64	17	Standard
⌈>	**Tb**	**159**		ug/L			196002	197696	2	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.001	34	206	337	14	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0203-01
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Saturday, May 20, 2023 03:44:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	35044	4	Standard
⌈>	**Sc**	**45**		ug/L			726273	751903	2	Standard
|	**Cr**	**52**	**0.540**	ug/L	0.040	7	22358	33580	0	Standard
|	**Cr**	**53**	**0.473**	ug/L	0.021	4	167	1238	3	Standard
⌊	**Mn**	**55**	**19.169**	ug/L	0.565	2	417	568262	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	40202	2	KED
|	**Ni**	**60**	**0.534**	ug/L	0.012	2	24	1012	4	KED
|	**Ni**	**62**	**0.559**	ug/L	0.063	11	6	170	9	KED
|	**Cu**	**63**	**1.990**	ug/L	0.016	0	46	10547	2	KED
|	**Cu**	**65**	**2.024**	ug/L	0.095	4	20	5371	2	KED
|	**Zn**	**66**	**34.958**	ug/L	0.978	2	37	21447	0	KED
|	**Zn**	**67**	**32.070**	ug/L	0.429	1	6	3325	3	KED
|	**As**	**75**	**0.208**	ug/L	0.008	3	3	69	5	KED
⌊	**Se**	**78**	**-0.056**	ug/L	0.043	75	13	12	7	KED
	Kr	**83**		ug/L			45	41	13	Standard
⌈>	**In-1**	**115**		ug/L			9034	8772	3	KED
|	**Cd**	**111**	**0.022**	ug/L	0.004	19	5	11	12	KED
⌊	**Cd**	**114**	**0.037**	ug/L	0.006	16	2	31	18	KED
⌈>	**In**	**115**		ug/L			445066	452709	1	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	14	62	132	6	Standard
|	**Ba**	**135**	**6.025**	ug/L	0.293	4	20	33416	3	Standard
⌊	**Ba**	**137**	**6.156**	ug/L	0.219	3	42	64652	3	Standard
⌈>	**Tb**	**159**		ug/L			196002	204039	3	Standard
⌊	**Pb**	**208**	**0.207**	ug/L	0.005	2	206	15091	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0205-01
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Saturday, May 20, 2023 03:48:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	34247	0	Standard
⌈>	**Sc**	**45**		ug/L			726273	756166	1	Standard
|	**Cr**	**52**	**0.458**	ug/L	0.032	6	22358	32204	3	Standard
|	**Cr**	**53**	**1.127**	ug/L	0.025	2	167	2724	1	Standard
⌊	**Mn**	**55**	**11.757**	ug/L	0.284	2	417	350798	3	Standard
⌈>	**Ge**	**72**		ug/L			37795	34792	6	KED
|	**Ni**	**60**	**0.194**	ug/L	0.018	9	24	331	4	KED
|	**Ni**	**62**	**0.201**	ug/L	0.060	30	6	57	31	KED
|	**Cu**	**63**	**0.980**	ug/L	0.089	9	46	4499	2	KED
|	**Cu**	**65**	**0.938**	ug/L	0.012	1	20	2165	5	KED
|	**Zn**	**66**	**4.254**	ug/L	0.152	3	37	2286	3	KED
|	**Zn**	**67**	**4.365**	ug/L	0.304	6	6	395	1	KED
|	**As**	**75**	**18.971**	ug/L	1.136	5	3	5245	0	KED
⌊	**Se**	**78**	**0.405**	ug/L	0.101	25	13	22	12	KED
	Kr	**83**		ug/L			45	51	12	Standard
⌈>	**In-1**	**115**		ug/L			9034	8042	1	KED
|	**Cd**	**111**	**0.011**	ug/L	0.009	78	5	7	33	KED
⌊	**Cd**	**114**	**0.010**	ug/L	0.010	103	2	9	74	KED
⌈>	**In**	**115**		ug/L			445066	406469	0	Standard
|	**Ag**	**107**	**7.090**	ug/L	0.106	1	62	117308	0	Standard
|	**Ba**	**135**	**4.323**	ug/L	0.126	2	20	21547	2	Standard
⌊	**Ba**	**137**	**4.233**	ug/L	0.118	2	42	39923	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	190309	1	Standard
⌊	**Pb**	**208**	**0.137**	ug/L	0.006	4	206	9363	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0205-02
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Saturday, May 20, 2023 03:51:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	46924	3	Standard
⌈>	**Sc**	**45**		ug/L			726273	726620	5	Standard
|	**Cr**	**52**	**0.785**	ug/L	0.073	9	22358	37012	3	Standard
|	**Cr**	**53**	**0.670**	ug/L	0.044	6	167	1621	1	Standard
⌊	**Mn**	**55**	**7.902**	ug/L	0.341	4	417	226328	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	38932	1	KED
|	**Ni**	**60**	**0.903**	ug/L	0.029	3	24	1639	2	KED
|	**Ni**	**62**	**0.858**	ug/L	0.045	5	6	249	3	KED
|	**Cu**	**63**	**3.987**	ug/L	0.110	2	46	20418	1	KED
|	**Cu**	**65**	**4.036**	ug/L	0.059	1	20	10358	0	KED
|	**Zn**	**66**	**112.937**	ug/L	2.999	2	37	67034	1	KED
|	**Zn**	**67**	**104.666**	ug/L	1.795	1	6	10492	0	KED
|	**As**	**75**	**0.452**	ug/L	0.044	9	3	143	10	KED
⌊	**Se**	**78**	**0.119**	ug/L	0.106	88	13	17	18	KED
	Kr	**83**		ug/L			45	52	5	Standard
⌈>	**In-1**	**115**		ug/L			9034	8493	1	KED
|	**Cd**	**111**	**0.044**	ug/L	0.023	52	5	17	38	KED
⌊	**Cd**	**114**	**0.034**	ug/L	0.015	43	2	28	37	KED
⌈>	**In**	**115**		ug/L			445066	425033	3	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	32	62	132	17	Standard
|	**Ba**	**135**	**2.822**	ug/L	0.167	5	20	14693	2	Standard
⌊	**Ba**	**137**	**2.843**	ug/L	0.118	4	42	28034	1	Standard
⌈>	**Tb**	**159**		ug/L			196002	192063	1	Standard
⌊	**Pb**	**208**	**0.563**	ug/L	0.015	2	206	38217	1	Standard

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Control Limt: +/- 10.00%

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Sequence: SLE0358

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0358-ICV1	Arsenic-75a	50.000	47.9	95.9	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.7	97.4	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	51.9	104	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	51.8	104	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
SLE0358-CCV1	Arsenic-75a	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.1	96.1	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE
SLE0358-CCV2	Arsenic-75a	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	46.3	92.6	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.7	95.4	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.1	96.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.7	97.5	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.7	97.3	ug/L	PA 6020B UCT-KE
SLE0358-CCV3	Arsenic-75a	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	47.3	94.6	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.0	93.9	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.4	96.8	ug/L	PA 6020B UCT-KE
SLE0358-CCV4	Arsenic-75a	50.000	49.1	98.3	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.8	97.7	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.3	92.7	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.0	95.9	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Control Limt: +/- 10.00%
Sequence: SLE0358

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0358-CCV4	Zinc-67	50.000	48.7	97.4	ug/L	PA 6020B UCT-KE
SLE0358-CCV5	Arsenic-75a	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	47.2	94.5	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.3	96.5	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.7	95.5	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.7	97.4	ug/L	PA 6020B UCT-KE
SLE0358-CCV6	Arsenic-75a	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	47.2	94.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.1	94.2	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.7	95.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.6	97.2	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.2	98.5	ug/L	PA 6020B UCT-KE
SLE0358-CCV7	Arsenic-75a	50.000	49.2	98.5	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.1	94.1	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.6	93.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.8	97.6	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.0	102	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
SLE0358-CCV8	Arsenic-75a	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.6	95.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.8	97.7	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
SLE0358-CCV9	Arsenic-75a	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.6	97.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.0	96.1	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Control Limt: +/- 10.00%
Sequence: SLE0358

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0358-CCV9	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.8	97.6	ug/L	PA 6020B UCT-KE
SLE0358-CCVA	Arsenic-75a	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	47.7	95.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	46.9	93.9	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.7	93.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.8	95.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
SLE0358-CCVB	Arsenic-75a	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.0	98.1	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.7	95.4	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.9	95.9	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE
SLE0358-CCVC	Arsenic-75a	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	47.6	95.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	46.7	93.4	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.8	97.6	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.8	102	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.9	99.7	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.1	100	ug/L	PA 6020B UCT-KE
SLE0358-CCVD	Arsenic-75a	50.000	51.8	104	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.5	96.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.8	97.6	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	51.4	103	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	52.0	104	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.4	103	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.2	100	ug/L	PA 6020B UCT-KE
SLE0358-CCVE	Arsenic-75a	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	47.3	94.7	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	47.7	95.4	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Control Limt: +/- 10.00%
Sequence: SLE0358

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0358-CCVE	Copper-65	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.9	97.9	ug/L	PA 6020B UCT-KE
SLE0358-CCVF	Arsenic-75a	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.1	96.1	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.5	97.1	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.7	95.5	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	47.9	95.7	ug/L	PA 6020B UCT-KE
SLE0358-CCVG	Arsenic-75a	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.4	98.7	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
SLE0358-CCVH	Arsenic-75a	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.9	97.7	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.8	97.7	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.4	98.7	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.9	97.9	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.9	99.9	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/19/23 14:52

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-IBL1	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLE0358-IBL1	Cadmium-111	0.00800	0.03	0.100	ug/L	
SLE0358-IBL1	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLE0358-IBL1	Copper-63	-0.00300	0.173	0.500	ug/L	
SLE0358-IBL1	Copper-65	0.00700	0.35	0.500	ug/L	
SLE0358-IBL1	Zinc-66	0.0070	2.92	6.00	ug/L	
SLE0358-IBL1	Zinc-67	-0.0030	0.94	6.00	ug/L	
SLE0358-ICB1	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLE0358-ICB1	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLE0358-ICB1	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLE0358-ICB1	Copper-63	-0.00400	0.173	0.500	ug/L	
SLE0358-ICB1	Copper-65	0.00500	0.35	0.500	ug/L	
SLE0358-ICB1	Zinc-66	0.0020	2.92	6.00	ug/L	
SLE0358-ICB1	Zinc-67	-0.0250	0.94	6.00	ug/L	
SLE0358-CCB1	Arsenic-75a	0.00900	0.0373	0.200	ug/L	
SLE0358-CCB1	Cadmium-111	0.00700	0.03	0.100	ug/L	
SLE0358-CCB1	Cadmium-114	-0.00500	0.04	0.100	ug/L	
SLE0358-CCB1	Copper-63	-0.00100	0.173	0.500	ug/L	
SLE0358-CCB1	Copper-65	0.00600	0.35	0.500	ug/L	
SLE0358-CCB1	Zinc-66	0.0270	2.92	6.00	ug/L	
SLE0358-CCB1	Zinc-67	-0.0120	0.94	6.00	ug/L	
SLE0358-IBL2	Arsenic-75a	0.0190	0.0373	0.200	ug/L	
SLE0358-IBL2	Cadmium-111	0.0160	0.03	0.100	ug/L	
SLE0358-IBL2	Cadmium-114	0.00500	0.04	0.100	ug/L	
SLE0358-IBL2	Copper-63	0.0290	0.173	0.500	ug/L	
SLE0358-IBL2	Copper-65	0.0330	0.35	0.500	ug/L	
SLE0358-IBL2	Zinc-66	0.287	2.92	6.00	ug/L	
SLE0358-IBL2	Zinc-67	0.232	0.94	6.00	ug/L	
SLE0358-IBL3	Arsenic-75a	0.0130	0.0373	0.200	ug/L	
SLE0358-IBL3	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLE0358-IBL3	Cadmium-114	-0.00600	0.04	0.100	ug/L	
SLE0358-IBL3	Copper-63	0.0280	0.173	0.500	ug/L	
SLE0358-IBL3	Copper-65	0.0260	0.35	0.500	ug/L	
SLE0358-IBL3	Zinc-66	0.432	2.92	6.00	ug/L	
SLE0358-IBL3	Zinc-67	0.382	0.94	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/19/23 16:16

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-CCB2	Arsenic-75a	0.00900	0.0373	0.200	ug/L	
SLE0358-CCB2	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLE0358-CCB2	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLE0358-CCB2	Copper-63	-0.00200	0.173	0.500	ug/L	
SLE0358-CCB2	Copper-65	0.00200	0.35	0.500	ug/L	
SLE0358-CCB2	Zinc-66	0.0080	2.92	6.00	ug/L	
SLE0358-CCB2	Zinc-67	-0.0440	0.94	6.00	ug/L	
SLE0358-CCB3	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLE0358-CCB3	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLE0358-CCB3	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0358-CCB3	Copper-63	0.00100	0.173	0.500	ug/L	
SLE0358-CCB3	Copper-65	-0.00200	0.35	0.500	ug/L	
SLE0358-CCB3	Zinc-66	0.0010	2.92	6.00	ug/L	
SLE0358-CCB3	Zinc-67	-0.0180	0.94	6.00	ug/L	
SLE0358-IBL4	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SLE0358-IBL4	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLE0358-IBL4	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0358-IBL4	Copper-63	0.00	0.173	0.500	ug/L	
SLE0358-IBL4	Copper-65	-0.00400	0.35	0.500	ug/L	
SLE0358-IBL4	Zinc-66	0.0200	2.92	6.00	ug/L	
SLE0358-IBL4	Zinc-67	0.0220	0.94	6.00	ug/L	
SLE0358-CCB4	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLE0358-CCB4	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLE0358-CCB4	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0358-CCB4	Copper-63	0.00300	0.173	0.500	ug/L	
SLE0358-CCB4	Copper-65	0.00100	0.35	0.500	ug/L	
SLE0358-CCB4	Zinc-66	0.0020	2.92	6.00	ug/L	
SLE0358-CCB4	Zinc-67	0.0200	0.94	6.00	ug/L	
SLE0358-CCB5	Arsenic-75a	0.0120	0.0373	0.200	ug/L	
SLE0358-CCB5	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLE0358-CCB5	Cadmium-114	0.00600	0.04	0.100	ug/L	
SLE0358-CCB5	Copper-63	-0.00100	0.173	0.500	ug/L	
SLE0358-CCB5	Copper-65	-0.00400	0.35	0.500	ug/L	
SLE0358-CCB5	Zinc-66	-0.0370	2.92	6.00	ug/L	
SLE0358-CCB5	Zinc-67	-0.0430	0.94	6.00	ug/L	
SLE0358-IBL5	Arsenic-75a	0.00300	0.0373	0.200	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/19/23 18:55

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-IBL5	Cadmium-111	0.00700	0.03	0.100	ug/L	
SLE0358-IBL5	Cadmium-114	0.00900	0.04	0.100	ug/L	
SLE0358-IBL5	Copper-63	-0.00400	0.173	0.500	ug/L	
SLE0358-IBL5	Copper-65	-0.00200	0.35	0.500	ug/L	
SLE0358-IBL5	Zinc-66	-0.0430	2.92	6.00	ug/L	
SLE0358-IBL5	Zinc-67	-0.0410	0.94	6.00	ug/L	
SLE0358-CCB6	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-CCB6	Cadmium-111	0.0190	0.03	0.100	ug/L	
SLE0358-CCB6	Cadmium-114	0.00700	0.04	0.100	ug/L	
SLE0358-CCB6	Copper-63	-0.00100	0.173	0.500	ug/L	
SLE0358-CCB6	Copper-65	-0.00300	0.35	0.500	ug/L	
SLE0358-CCB6	Zinc-66	-0.0440	2.92	6.00	ug/L	
SLE0358-CCB6	Zinc-67	-0.0260	0.94	6.00	ug/L	
SLE0358-IBL6	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-IBL6	Cadmium-111	0.0220	0.03	0.100	ug/L	
SLE0358-IBL6	Cadmium-114	0.00700	0.04	0.100	ug/L	
SLE0358-IBL6	Copper-63	-0.00100	0.173	0.500	ug/L	
SLE0358-IBL6	Copper-65	0.00	0.35	0.500	ug/L	
SLE0358-IBL6	Zinc-66	-0.0500	2.92	6.00	ug/L	
SLE0358-IBL6	Zinc-67	-0.0570	0.94	6.00	ug/L	
SLE0358-CCB7	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-CCB7	Cadmium-111	0.00700	0.03	0.100	ug/L	
SLE0358-CCB7	Cadmium-114	0.00600	0.04	0.100	ug/L	
SLE0358-CCB7	Copper-63	-0.00200	0.173	0.500	ug/L	
SLE0358-CCB7	Copper-65	-0.00100	0.35	0.500	ug/L	
SLE0358-CCB7	Zinc-66	-0.0490	2.92	6.00	ug/L	
SLE0358-CCB7	Zinc-67	-0.0530	0.94	6.00	ug/L	
SLE0358-IBL7	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLE0358-IBL7	Cadmium-111	0.00	0.03	0.100	ug/L	
SLE0358-IBL7	Cadmium-114	0.00700	0.04	0.100	ug/L	
SLE0358-IBL7	Copper-63	0.00100	0.173	0.500	ug/L	
SLE0358-IBL7	Copper-65	-0.00300	0.35	0.500	ug/L	
SLE0358-IBL7	Zinc-66	-0.0480	2.92	6.00	ug/L	
SLE0358-IBL7	Zinc-67	-0.0260	0.94	6.00	ug/L	
SLE0358-CCB8	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SLE0358-CCB8	Cadmium-111	0.00500	0.03	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/19/23 21:06

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-CCB8	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLE0358-CCB8	Copper-63	0.00	0.173	0.500	ug/L	
SLE0358-CCB8	Copper-65	0.00	0.35	0.500	ug/L	
SLE0358-CCB8	Zinc-66	-0.0290	2.92	6.00	ug/L	
SLE0358-CCB8	Zinc-67	-0.0290	0.94	6.00	ug/L	
SLE0358-IBL8	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLE0358-IBL8	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLE0358-IBL8	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0358-IBL8	Copper-63	-0.00200	0.173	0.500	ug/L	
SLE0358-IBL8	Copper-65	-0.00300	0.35	0.500	ug/L	
SLE0358-IBL8	Zinc-66	0.0140	2.92	6.00	ug/L	
SLE0358-IBL8	Zinc-67	-0.0280	0.94	6.00	ug/L	
SLE0358-CCB9	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLE0358-CCB9	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLE0358-CCB9	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0358-CCB9	Copper-63	-0.00100	0.173	0.500	ug/L	
SLE0358-CCB9	Copper-65	-0.00100	0.35	0.500	ug/L	
SLE0358-CCB9	Zinc-66	-0.0370	2.92	6.00	ug/L	
SLE0358-CCB9	Zinc-67	-0.0080	0.94	6.00	ug/L	
SLE0358-CCBA	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLE0358-CCBA	Cadmium-111	0.00500	0.03	0.100	ug/L	
SLE0358-CCBA	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0358-CCBA	Copper-63	0.00100	0.173	0.500	ug/L	
SLE0358-CCBA	Copper-65	0.00	0.35	0.500	ug/L	
SLE0358-CCBA	Zinc-66	0.0150	2.92	6.00	ug/L	
SLE0358-CCBA	Zinc-67	0.0330	0.94	6.00	ug/L	
SLE0358-IBL9	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLE0358-IBL9	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLE0358-IBL9	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLE0358-IBL9	Copper-63	0.00	0.173	0.500	ug/L	
SLE0358-IBL9	Copper-65	0.00	0.35	0.500	ug/L	
SLE0358-IBL9	Zinc-66	0.0310	2.92	6.00	ug/L	
SLE0358-IBL9	Zinc-67	-0.0080	0.94	6.00	ug/L	
SLE0358-IBLA	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLE0358-IBLA	Cadmium-111	-0.00200	0.03	0.100	ug/L	
SLE0358-IBLA	Cadmium-114	0.00	0.04	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/19/23 23:12

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-IBLA	Copper-63	0.00500	0.173	0.500	ug/L	
SLE0358-IBLA	Copper-65	0.00600	0.35	0.500	ug/L	
SLE0358-IBLA	Zinc-66	0.0460	2.92	6.00	ug/L	
SLE0358-IBLA	Zinc-67	0.0200	0.94	6.00	ug/L	
SLE0358-CCBB	Arsenic-75a	0.00800	0.0373	0.200	ug/L	
SLE0358-CCBB	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLE0358-CCBB	Cadmium-114	0.00700	0.04	0.100	ug/L	
SLE0358-CCBB	Copper-63	0.00300	0.173	0.500	ug/L	
SLE0358-CCBB	Copper-65	0.00100	0.35	0.500	ug/L	
SLE0358-CCBB	Zinc-66	0.0060	2.92	6.00	ug/L	
SLE0358-CCBB	Zinc-67	0.0010	0.94	6.00	ug/L	
SLE0358-IBLB	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLE0358-IBLB	Cadmium-111	0.00800	0.03	0.100	ug/L	
SLE0358-IBLB	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLE0358-IBLB	Copper-63	0.00	0.173	0.500	ug/L	
SLE0358-IBLB	Copper-65	0.00100	0.35	0.500	ug/L	
SLE0358-IBLB	Zinc-66	0.0470	2.92	6.00	ug/L	
SLE0358-IBLB	Zinc-67	0.0500	0.94	6.00	ug/L	
SLE0358-CCBC	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-CCBC	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLE0358-CCBC	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLE0358-CCBC	Copper-63	-0.00100	0.173	0.500	ug/L	
SLE0358-CCBC	Copper-65	0.00100	0.35	0.500	ug/L	
SLE0358-CCBC	Zinc-66	0.0180	2.92	6.00	ug/L	
SLE0358-CCBC	Zinc-67	-0.0230	0.94	6.00	ug/L	
SLE0358-IBLC	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLE0358-IBLC	Cadmium-111	0.00800	0.03	0.100	ug/L	
SLE0358-IBLC	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLE0358-IBLC	Copper-63	0.00100	0.173	0.500	ug/L	
SLE0358-IBLC	Copper-65	0.00100	0.35	0.500	ug/L	
SLE0358-IBLC	Zinc-66	0.0370	2.92	6.00	ug/L	
SLE0358-IBLC	Zinc-67	0.0400	0.94	6.00	ug/L	
SLE0358-CCBD	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLE0358-CCBD	Cadmium-111	0.0170	0.03	0.100	ug/L	
SLE0358-CCBD	Cadmium-114	0.0160	0.04	0.100	ug/L	
SLE0358-CCBD	Copper-63	0.00200	0.173	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/20/23 01:03

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-CCBD	Copper-65	0.00300	0.35	0.500	ug/L	
SLE0358-CCBD	Zinc-66	0.0160	2.92	6.00	ug/L	
SLE0358-CCBD	Zinc-67	-0.0230	0.94	6.00	ug/L	
SLE0358-CCBE	Arsenic-75a	0.0130	0.0373	0.200	ug/L	
SLE0358-CCBE	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLE0358-CCBE	Cadmium-114	0.00500	0.04	0.100	ug/L	
SLE0358-CCBE	Copper-63	0.00100	0.173	0.500	ug/L	
SLE0358-CCBE	Copper-65	0.00400	0.35	0.500	ug/L	
SLE0358-CCBE	Zinc-66	0.0110	2.92	6.00	ug/L	
SLE0358-CCBE	Zinc-67	0.0080	0.94	6.00	ug/L	
SLE0358-IBLD	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLE0358-IBLD	Cadmium-111	0.00500	0.03	0.100	ug/L	
SLE0358-IBLD	Cadmium-114	0.00500	0.04	0.100	ug/L	
SLE0358-IBLD	Copper-63	0.00600	0.173	0.500	ug/L	
SLE0358-IBLD	Copper-65	0.00800	0.35	0.500	ug/L	
SLE0358-IBLD	Zinc-66	0.0150	2.92	6.00	ug/L	
SLE0358-IBLD	Zinc-67	0.0280	0.94	6.00	ug/L	
SLE0358-CCBF	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SLE0358-CCBF	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLE0358-CCBF	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLE0358-CCBF	Copper-63	0.00	0.173	0.500	ug/L	
SLE0358-CCBF	Copper-65	0.00200	0.35	0.500	ug/L	
SLE0358-CCBF	Zinc-66	0.0110	2.92	6.00	ug/L	
SLE0358-CCBF	Zinc-67	0.0220	0.94	6.00	ug/L	
SLE0358-IBLE	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLE0358-IBLE	Cadmium-111	0.0120	0.03	0.100	ug/L	
SLE0358-IBLE	Cadmium-114	0.0130	0.04	0.100	ug/L	
SLE0358-IBLE	Copper-63	0.00800	0.173	0.500	ug/L	
SLE0358-IBLE	Copper-65	0.0110	0.35	0.500	ug/L	
SLE0358-IBLE	Zinc-66	0.0300	2.92	6.00	ug/L	
SLE0358-IBLE	Zinc-67	0.0240	0.94	6.00	ug/L	
SLE0358-CCBG	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLE0358-CCBG	Cadmium-111	-0.00200	0.03	0.100	ug/L	
SLE0358-CCBG	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLE0358-CCBG	Copper-63	0.00100	0.173	0.500	ug/L	
SLE0358-CCBG	Copper-65	0.00200	0.35	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/20/23 02:54

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-CCBG	Zinc-66	-0.0040	2.92	6.00	ug/L	
SLE0358-CCBG	Zinc-67	0.0500	0.94	6.00	ug/L	
SLE0358-IBLF	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-IBLF	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLE0358-IBLF	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0358-IBLF	Copper-63	0.00200	0.173	0.500	ug/L	
SLE0358-IBLF	Copper-65	0.00400	0.35	0.500	ug/L	
SLE0358-IBLF	Zinc-66	0.0110	2.92	6.00	ug/L	
SLE0358-IBLF	Zinc-67	0.0490	0.94	6.00	ug/L	
SLE0358-CCBH	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SLE0358-CCBH	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLE0358-CCBH	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLE0358-CCBH	Copper-63	0.00200	0.173	0.500	ug/L	
SLE0358-CCBH	Copper-65	0.00200	0.35	0.500	ug/L	
SLE0358-CCBH	Zinc-66	-0.0020	2.92	6.00	ug/L	
SLE0358-CCBH	Zinc-67	0.0140	0.94	6.00	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0358	Instrument:	ICPMS1
		Calibration:	GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0358-CAL1	XDT_m1230519-012	NA	05/19/23 14:18
CAL 1 - LOW CHECK	SLE0358-CAL2	XDT_m1230519-013	NA	05/19/23 14:23
CAL 2	SLE0358-CAL3	XDT_m1230519-014	NA	05/19/23 14:28
CAL 3	SLE0358-CAL4	XDT_m1230519-015	NA	05/19/23 14:33
CAL 4	SLE0358-CAL5	XDT_m1230519-016	NA	05/19/23 14:38
CAL 5	SLE0358-CAL6	XDT_m1230519-017	NA	05/19/23 14:45
RINSE	SLE0358-IBL1	XDT_m1230519-018	NA	05/19/23 14:52
Initial Cal Check	SLE0358-ICV1	XDT_m1230519-020	NA	05/19/23 14:59
Initial Cal Blank	SLE0358-ICB1	XDT_m1230519-021	NA	05/19/23 15:06
Calibration Check	SLE0358-CCV1	XDT_m1230519-022	NA	05/19/23 15:11
Calibration Blank	SLE0358-CCB1	XDT_m1230519-023	NA	05/19/23 15:18
Instrument RL Check	SLE0358-CRL1	XDT_m1230519-024	NA	05/19/23 15:25
Interference Check A	SLE0358-IFA1	XDT_m1230519-025	NA	05/19/23 15:33
Interference Check B	SLE0358-IFB1	XDT_m1230519-026	NA	05/19/23 15:38
LR200	SLE0358-HCV1	XDT_m1230519-027	NA	05/19/23 15:43
LR300	SLE0358-HCV2	XDT_m1230519-028	NA	05/19/23 15:48
Instrument Blank	SLE0358-IBL2	XDT_m1230519-029	NA	05/19/23 15:55
Instrument Blank	SLE0358-IBL3	XDT_m1230519-030	NA	05/19/23 16:03
Calibration Check	SLE0358-CCV2	XDT_m1230519-031	NA	05/19/23 16:09
Calibration Blank	SLE0358-CCB2	XDT_m1230519-032	NA	05/19/23 16:16
Calibration Check	SLE0358-CCV3	XDT_m1230519-034	NA	05/19/23 16:29
Calibration Blank	SLE0358-CCB3	XDT_m1230519-035	NA	05/19/23 16:36
Instrument Blank	SLE0358-IBL4	XDT_m1230519-045	NA	05/19/23 17:32
Calibration Check	SLE0358-CCV4	XDT_m1230519-046	NA	05/19/23 17:37
Calibration Blank	SLE0358-CCB4	XDT_m1230519-047	NA	05/19/23 17:44
Calibration Check	SLE0358-CCV5	XDT_m1230519-049	NA	05/19/23 17:57
Calibration Blank	SLE0358-CCB5	XDT_m1230519-050	NA	05/19/23 18:05
Blank	BLE0306-BLK1	XDT_m1230519-051	Solid	05/19/23 18:13
LCS	BLE0306-BS1	XDT_m1230519-052	Solid	05/19/23 18:18

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0358	Instrument:	ICPMS1
		Calibration:	GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLE0442-BLK1	XDT_m1230519-053	Solid	05/19/23 18:22
ZZZZZ	BLE0442-BS1	XDT_m1230519-054	Solid	05/19/23 18:27
ZZZZZ	23A0207-10	XDT_m1230519-055	Solid	05/19/23 18:32
Instrument Blank	SLE0358-IBL5	XDT_m1230519-060	NA	05/19/23 18:55
Calibration Check	SLE0358-CCV6	XDT_m1230519-061	NA	05/19/23 19:00
Calibration Blank	SLE0358-CCB6	XDT_m1230519-062	NA	05/19/23 19:07
LDW23-IT1820	23E0009-08	XDT_m1230519-063	Solid	05/19/23 19:12
LDW23-SS1805	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
LDW23-SS1805	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
LDW23-SS1805	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
LDW23-SS1805	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
LDW23-SS1800	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
LDW23-SS1800	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
LDW23-SS1800	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
LDW23-SS1800	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
LDW23-SS1820	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
LDW23-SS1820	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
LDW23-SS1820	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
LDW23-SS1820	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
LDW23-SS1811	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
LDW23-SS1811	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
LDW23-SS1811	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
LDW23-SS1811	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0358	Instrument:	ICPMS1
		Calibration:	GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1811	BLE0306-DUP1	XDT_m1230519-068	Solid	05/19/23 19:36
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MS1	XDT_m1230519-069	Solid	05/19/23 19:40
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
LDW23-SS1811	BLE0306-MSD1	XDT_m1230519-070	Solid	05/19/23 19:45
Instrument Blank	SLE0358-IBL6	XDT_m1230519-072	NA	05/19/23 19:55
Calibration Check	SLE0358-CCV7	XDT_m1230519-073	NA	05/19/23 19:59
Calibration Blank	SLE0358-CCB7	XDT_m1230519-074	NA	05/19/23 20:07
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0358
Instrument: ICPMS1
Calibration: GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	BLE0442-DUP1	XDT_m1230519-080	Solid	05/19/23 20:35
ZZZZZ	BLE0442-MS1	XDT_m1230519-081	Solid	05/19/23 20:40
ZZZZZ	BLE0442-MSD1	XDT_m1230519-082	Solid	05/19/23 20:45
Instrument Blank	SLE0358-IBL7	XDT_m1230519-084	NA	05/19/23 20:54
Calibration Check	SLE0358-CCV8	XDT_m1230519-085	NA	05/19/23 20:59
Calibration Blank	SLE0358-CCB8	XDT_m1230519-086	NA	05/19/23 21:06
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25
ZZZZZ	23E0219-04	XDT_m1230519-091	Solid	05/19/23 21:30
ZZZZZ	23E0219-06	XDT_m1230519-092	Solid	05/19/23 21:35
ZZZZZ	23E0219-08	XDT_m1230519-093	Solid	05/19/23 21:39
ZZZZZ	23E0219-11	XDT_m1230519-094	Solid	05/19/23 21:44
ZZZZZ	23E0219-12	XDT_m1230519-095	Solid	05/19/23 21:49
Instrument Blank	SLE0358-IBL8	XDT_m1230519-096	NA	05/19/23 21:53

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0358

SDG: 23E0009
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLE0358-CCV9	XDT_m1230519-097	NA	05/19/23 21:58
Calibration Blank	SLE0358-CCB9	XDT_m1230519-098	NA	05/19/23 22:06
Calibration Check	SLE0358-CCVA	XDT_m1230519-100	NA	05/19/23 22:15
Calibration Blank	SLE0358-CCBA	XDT_m1230519-101	NA	05/19/23 22:23
Instrument Blank	SLE0358-IBL9	XDT_m1230519-106	NA	05/19/23 22:48
Instrument Blank	SLE0358-IBLA	XDT_m1230519-111	NA	05/19/23 23:12
Calibration Check	SLE0358-CCVB	XDT_m1230519-112	NA	05/19/23 23:17
Calibration Blank	SLE0358-CCBB	XDT_m1230519-113	NA	05/19/23 23:24
Instrument Blank	SLE0358-IBLB	XDT_m1230519-123	NA	05/20/23 00:04
Calibration Check	SLE0358-CCVC	XDT_m1230519-124	NA	05/20/23 00:07
Calibration Blank	SLE0358-CCBC	XDT_m1230519-125	NA	05/20/23 00:14
Instrument Blank	SLE0358-IBLC	XDT_m1230519-135	NA	05/20/23 00:53
Calibration Check	SLE0358-CCVD	XDT_m1230519-136	NA	05/20/23 00:57
Calibration Blank	SLE0358-CCBD	XDT_m1230519-137	NA	05/20/23 01:03
Calibration Check	SLE0358-CCVE	XDT_m1230519-139	NA	05/20/23 01:11
Calibration Blank	SLE0358-CCBE	XDT_m1230519-140	NA	05/20/23 01:17
Instrument Blank	SLE0358-IBLD	XDT_m1230519-150	NA	05/20/23 01:56
Calibration Check	SLE0358-CCVF	XDT_m1230519-151	NA	05/20/23 02:00
Calibration Blank	SLE0358-CCBF	XDT_m1230519-152	NA	05/20/23 02:06
Instrument Blank	SLE0358-IBLE	XDT_m1230519-162	NA	05/20/23 02:43
Calibration Check	SLE0358-CCVG	XDT_m1230519-163	NA	05/20/23 02:47
Calibration Blank	SLE0358-CCBG	XDT_m1230519-164	NA	05/20/23 02:54
Instrument Blank	SLE0358-IBLF	XDT_m1230519-174	NA	05/20/23 03:30
Calibration Check	SLE0358-CCVH	XDT_m1230519-175	NA	05/20/23 03:34
Calibration Blank	SLE0358-CCBH	XDT_m1230519-176	NA	05/20/23 03:40

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Sequence: SLE0358
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0358-IFA1	Arsenic-75a	0	0.0410		ug/L
	Cadmium-111	0	0.0620		ug/L
	Cadmium-114	0	0.0440		ug/L
	Copper-63	0	0.0260		ug/L
	Copper-65	0	0.0340		ug/L
	Zinc-66	0	0.2340		ug/L
	Zinc-67	0	0.1320		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Sequence: SLE0358
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0358-IFB1	Arsenic-75a	20.000	19.519	97.6	ug/L
	Cadmium-111	20.000	18.800	94.0	ug/L
	Cadmium-114	20.000	18.485	92.4	ug/L
	Copper-63	20.000	19.852	99.3	ug/L
	Copper-65	20.000	19.817	99.1	ug/L
	Zinc-66	20.000	18.296	91.5	ug/L
	Zinc-67	20.000	16.789	83.9	ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Sequence: SLE0358
Lab Sample ID: SLE0358-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.201	101	ug/L	50 - 150
Cadmium-111	0.10000	0.0990	99.0	ug/L	50 - 150
Cadmium-114	0.10000	0.0990	99.0	ug/L	50 - 150
Copper-63	0.50000	0.541	108	ug/L	50 - 150
Copper-65	0.50000	0.580	116	ug/L	50 - 150
Zinc-66	6.0000	6.38	106	ug/L	50 - 150
Zinc-67	6.0000	5.43	90.5	ug/L	50 - 150

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00066
Laboratory ID: SLE0358-HCV1
Sequence: SLE0358
Standard ID: L005468

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	200	-0.002	10.00
Cadmium-111	200.00	189	-5.7	10.00
Cadmium-114	200.00	187	-6.7	10.00
Copper-63	200.00	188	-5.8	10.00
Copper-65	200.00	191	-4.4	10.00
Zinc-66	200.00	189	-5.6	10.00
Zinc-67	200.00	186	-7.0	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00066
Laboratory ID: SLE0358-HCV2
Sequence: SLE0358
Standard ID: L005469

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	302	0.8	10.00
Cadmium-111	300.00	284	-5.2	10.00
Cadmium-114	300.00	280	-6.7	10.00
Copper-63	300.00	277	-7.5	10.00
Copper-65	300.00	280	-6.5	10.00
Zinc-66	300.00	278	-7.4	10.00
Zinc-67	300.00	277	-7.8	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1811 23E0009-01	04/28/23 10:38	05/01/23 09:42	05/18/23 15:58	20	180	05/19/23 19:31	21	180	
LDW23-SS1805 23E0009-03	04/28/23 16:15	05/01/23 09:42	05/18/23 15:58	19	180	05/19/23 19:17	21	180	
LDW23-SS1800 23E0009-05	04/29/23 10:10	05/01/23 09:42	05/18/23 15:58	19	180	05/19/23 19:22	20	180	
LDW23-SS1820 23E0009-07	04/29/23 14:00	05/01/23 09:42	05/18/23 15:58	19	180	05/19/23 19:26	20	180	
LDW23-IT1820 23E0009-08	04/29/23 14:10	05/01/23 09:42	05/18/23 15:58	19	180	05/19/23 19:12	20	180	
Duplicate BLE0306-DUP1	04/28/23 10:38	05/01/23 09:42	05/18/23 15:58	20	180	05/19/23 19:36	21	180	
Matrix Spike BLE0306-MS1	04/28/23 10:38	05/01/23 09:42	05/18/23 15:58	20	180	05/19/23 19:40	21	180	
Matrix Spike Dup BLE0306-MSD1	04/28/23 10:38	05/01/23 09:42	05/18/23 15:58	20	180	05/19/23 19:45	21	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS1

Analyte	MDL	RL	Units
Arsenic-75a	0.04	0.20	mg/kg
Cadmium-111	0.03	0.10	mg/kg
Cadmium-114	0.04	0.10	mg/kg
Copper-63	0.17	0.50	mg/kg
Copper-65	0.35	0.50	mg/kg
Zinc-66	2.9	6.0	mg/kg
Zinc-67	0.9	6.0	mg/kg

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	S2-PB713228
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2343
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10042 ± 31 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	M	Na		0.001470	M	Se	<	0.009100	O	Zn		0.006155
O	Al		0.017098	O	Fe		0.002496	M	Nb	<	0.000310	O	Si		0.003761	O	Zr	<	0.001700
M	As	<	0.003100	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	O	Ni		0.001709	M	Sn	<	0.001300				
O	B	<	0.005600	M	Ge	<	0.002200	M	Os	<	0.000310	O	Sr		0.000444				
O	Ba		0.007865	M	Hf	<	0.000310	O	P	<	0.038000	M	Ta	<	0.000310				
O	Be	<	0.000320	M	Hg	<	0.002200	s	Pb	<		M	Tb	<	0.000610				
M	Bi	<	0.028000	M	Ho	<	0.000310	M	Pd	<	0.000610	M	Te	<	0.000310				
O	Ca		0.019834	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310				
O	Cd	<	0.000630	M	Ir	<	0.000310	M	Pt	<	0.000910	O	Ti		0.005129				
M	Ce		0.004787	O	K		0.008207	M	Rb	<	0.006700	M	Tl	<	0.016000				
M	Co	<	0.000610	M	La	<	0.001900	M	Re	<	0.000310	M	Tm	<	0.000310				
O	Cr	<	0.001500	O	Li	<	0.000110	O	Rh	<	0.007700	M	U	<	0.000310				
M	Cs	<	0.006100	M	Lu	<	0.000310	M	Ru	<	0.001300	M	V	<	0.001600				
M	Cu	<	0.001600	O	Mg		0.003317	O	S	<	0.052000	M	W	<	0.000910				
M	Dy	<	0.000310	O	Mn	<	0.001600	O	Sb	<	0.015000	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000610	O	Sc	<	0.000630	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

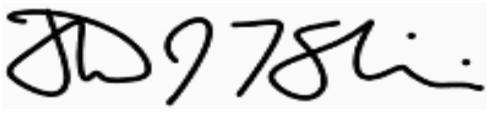
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	S2-ZN711249
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zinc Metal
Starting Material Lot#:	2349
Starting Material Purity:	99.9988%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 56 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **9987 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10002 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002000	M	Eu	<	0.000500	O	Na		0.008713	M	Se	<	0.048000	s	Zn	<
O	Al	<	0.011000	O	Fe		0.015467	M	Nb	<	0.000500	O	Si		0.007842	M	Zr	< 0.000500
O	As	<	0.012000	M	Ga	<	0.004900	M	Nd	<	0.000500	M	Sm	<	0.000500			
M	Au	<	0.006500	M	Gd	<	0.000500	O	Ni		0.003049	M	Sn		0.002614			
O	B	<	0.019000	M	Ge	<	0.009100	M	Os	<	0.000500	M	Sr	<	0.000500			
M	Ba	<	0.000500	M	Hf	<	0.000500	O	P	<	0.059000	M	Ta	<	0.000500			
O	Be	<	0.000230	O	Hg	<	0.003800	M	Pb		0.016774	M	Tb	<	0.000500			
M	Bi	<	0.002400	M	Ho	<	0.000500	M	Pd	<	0.001000	M	Te	<	0.017000			
O	Ca		0.052283	M	In	<	0.003500	M	Pr	<	0.000500	M	Th	<	0.000500			
O	Cd		0.000588	M	Ir	<	0.001000	M	Pt	<	0.000500	M	Ti	<	0.002000			
M	Ce	<	0.000500	O	K		0.017209	M	Rb	<	0.002500	M	Tl	<	0.000500			
M	Co		0.000653	M	La	<	0.000500	M	Re	<	0.000500	M	Tm	<	0.000500			
O	Cr		0.001089	O	Li	<	0.000230	M	Rh	<	0.000500	M	U	<	0.000500			
M	Cs	<	0.000500	M	Lu	<	0.000500	M	Ru	<	0.005000	M	V	<	0.000500			
O	Cu		0.001938	O	Mg		0.000871	O	S	<	0.048000	M	W	<	0.001000			
M	Dy	<	0.000500	O	Mn		0.000172	M	Sb	<	0.004300	M	Y	<	0.000500			
M	Er	<	0.000500	M	Mo	<	0.001500	O	Sc	<	0.000900	M	Yb	<	0.000500			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

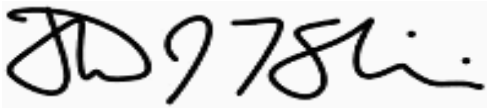
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	S2-SE711004
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9955 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013654	s	Se	<		O	Zn		0.002374
M	Al		0.004450	M	Fe		0.008478	O	Nb	<	0.002975	O	Si		0.006249	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001843	M	Sn		0.000847				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006358	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006530	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001165	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.001999	M	Rb	<	0.001868	M	Tl		0.008584				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002861	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001156	O	S		0.024591	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	S2-MO706255
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 47 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10020 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.008739	M	Se	<	0.008000	M	Zn		0.005942
M	Al		0.005592	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.001747				
M	Ba		0.016778	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.062920	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		1.293372	M	Rb		0.045442	M	Tl		0.012584				
M	Co		0.005942	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005243	O	Li		0.000594	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.005243	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.022371	M	Mg		0.005592	i	S	<		M	W		0.873900				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.015031	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	T2-TL714687
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 42 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10010 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL(

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002489	M	Se	<	0.011019	O	Zn		0.002298
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003760	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001724	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000811	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002436	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001318	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006175	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000529	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+
Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Tl Containing Samples)Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

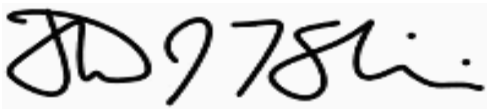
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	S2-CD710508
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Metal
Starting Material Lot#:	1953
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10008 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **10003 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003200	O	Eu	<	0.002500	O	Na		0.005499	M	Se	<	0.005700	O	Zn	<	0.001100
O	Al		0.008903	O	Fe		0.000602	M	Nb	<	0.000400	O	Si		0.016758	O	Zr	<	0.002600
M	As	<	0.003600	M	Ga	<	0.001200	M	Nd	<	0.000800	M	Sm	<	0.000400				
M	Au	<	0.000810	M	Gd	<	0.000400	M	Ni	<	0.003600	M	Sn	<	0.003200				
O	B		0.004189	O	Ge	<	0.012000	M	Os	<	0.000810	O	Sr	<	0.000330				
M	Ba	<	0.002400	M	Hf	<	0.000400	O	P	<	0.022000	M	Ta	<	0.000800				
M	Be	<	0.000400	M	Hg	<	0.001700	M	Pb	<	0.002400	M	Tb	<	0.000400				
M	Bi	<	0.000400	M	Ho	<	0.000400	M	Pd	<	0.001200	M	Te	<	0.008000				
O	Ca		0.011259	O	In	<	0.013000	M	Pr	<	0.000400	M	Th	<	0.000400				
s	Cd	<		M	Ir	<	0.000410	M	Pt	<	0.000400	O	Ti		0.000602				
M	Ce	<	0.000400	O	K		0.005237	M	Rb	<	0.004400	M	Tl		0.000523				
M	Co	<	0.000400	M	La	<	0.000400	M	Re	<	0.000400	M	Tm	<	0.000400				
O	Cr	<	0.005100	O	Li	<	0.000054	M	Rh	<	0.000400	M	U	<	0.000400				
M	Cs	<	0.002400	M	Lu	<	0.000400	M	Ru	<	0.002500	M	V	<	0.002000				
O	Cu	<	0.004800	O	Mg		0.000288	O	S	<	0.022000	M	W	<	0.000400				
M	Dy	<	0.000400	O	Mn	<	0.000860	O	Sb	<	0.018000	M	Y	<	0.000400				
M	Er	<	0.000400	M	Mo	<	0.001600	O	Sc	<	0.000430	M	Yb	<	0.000400				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	S2-MN704240
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10024 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176097	M	Se	<	0.006600	M	Zn		0.009925
O	Al		0.004322	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097654	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004322	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024013	M	Sn	<	0.002200				
M	B		0.068838	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000928				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007364	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062434	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006403	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014728	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.272151	O	Li		0.000416	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007684	O	Mg		0.320177	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001360				
M	Er	<	0.001500	M	Mo		0.010245	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn		0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	<	0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800				
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750				
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300				
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100				
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600				
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100				
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800				
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100				
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100				
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800				
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200				
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	T2-AS718260
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	2208
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10060 ± 40 µg/mL

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

Assay Method #2 **10055 ± 76 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.003200	M	Eu	< 0.000530	O	Na	0.032544	M	Se	< 0.006300	O	Zn	0.001952			
M	Al	0.007593	O	Fe	0.001475	O	Nb	< 0.012000	O	Si	0.238658	O	Zr	< 0.004100			
s	As	<	M	Ga	< 0.000530	M	Nd	< 0.000530	M	Sm	< 0.000530						
M	Au	< 0.003100	M	Gd	< 0.000530	M	Ni	< 0.002100	M	Sn	< 0.000530						
M	B	0.026035	M	Ge	< 0.001600	M	Os	< 0.000520	M	Sr	< 0.000530						
M	Ba	< 0.000530	M	Hf	< 0.000530	O	P	< 0.043000	M	Ta	< 0.000530						
O	Be	< 0.000360	M	Hg	< 0.001600	M	Pb	< 0.002100	M	Tb	< 0.000530						
M	Bi	< 0.000530	M	Ho	< 0.000530	M	Pd	< 0.001100	M	Te	< 0.004700						
O	Ca	0.004339	M	In	< 0.023000	M	Pr	< 0.005300	M	Th	< 0.000530						
M	Cd	< 0.001100	M	Ir	< 0.000520	M	Pt	< 0.000530	O	Ti	< 0.002300						
M	Ce	< 0.000530	O	K	0.002061	M	Rb	< 0.000530	M	Tl	< 0.000530						
M	Co	< 0.000530	M	La	< 0.001100	M	Re	< 0.000530	M	Tm	< 0.000530						
O	Cr	< 0.001800	O	Li	< 0.000120	M	Rh	< 0.000530	M	U	< 0.000530						
M	Cs	< 0.005300	M	Lu	< 0.000530	M	Ru	< 0.000520	M	V	< 0.002700						
M	Cu	< 0.001600	O	Mg	0.000154	O	S	0.028205	M	W	< 0.012000						
M	Dy	< 0.000530	O	Mn	0.000154	M	Sb	< 0.000530	M	Y	< 0.000530						
M	Er	< 0.000530	M	Mo	< 0.000530	O	Sc	< 0.001700	M	Yb	< 0.000530						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	R2-BA692576
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Barium Nitrate
Starting Material Lot#:	1969
Starting Material Purity:	99.9982%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10018 ± 50 µg/mL** ICP Assay NIST SRM 3104a Lot Number: 140909
Assay Method #2	**10023 ± 31 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	**10023 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	O	Eu	<	0.005200	O	Na		0.004610	M	Se	<	0.003700	O	Zn		0.000658
M	Al	<	0.003100	O	Fe		0.015707	M	Nb	<	0.000210	O	Si		0.005573	M	Zr	<	0.001300
M	As	<	0.001300	M	Ga	<	0.000210	M	Nd	<	0.000210	O	Sm	<	0.021000				
M	Au	<	0.001300	M	Gd	<	0.000210	M	Ni	<	0.000810	M	Sn	<	0.000410				
O	B	<	0.005200	M	Ge	<	0.002500	M	Os	<	0.000410	O	Sr		0.003850				
s	Ba	<		M	Hf	<	0.000810	O	P	<	0.026000	M	Ta	<	0.000410				
O	Be	<	0.000320	M	Hg	<	0.000210	M	Pb	<	0.002300	M	Tb	<	0.000210				
M	Bi	<	0.000210	M	Ho	<	0.000210	M	Pd	<	0.000210	M	Te	<	0.001900				
O	Ca		0.007093	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	M	Ti	<	0.002100				
M	Ce	<	0.001300	O	K		0.035467	M	Rb	<	0.002100	M	Tl	<	0.000210				
M	Co	<	0.000410	O	La	<	0.005200	M	Re	<	0.000210	M	Tm	<	0.000410				
M	Cr	<	0.001700	O	Li	<	0.000630	M	Rh	<	0.000210	M	U	<	0.000210				
M	Cs	<	0.003300	M	Lu	<	0.001700	M	Ru	<	0.000210	O	V	<	0.005200				
M	Cu	<	0.001300	O	Mg		0.000861	O	S		0.268539	M	W	<	0.000410				
M	Dy	<	0.000210	M	Mn	<	0.000410	M	Sb	<	0.001300	O	Y	<	0.005200				
M	Er	<	0.001300	M	Mo	<	0.000410	M	Sc	<	0.000410	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	R2-BE692992
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium Acetate
Starting Material Lot#:	2281
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10032 ± 41 µg/mL

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10025 ± 51 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001100	M	Eu	<	0.000270	O	Na		0.040962	M	Se	<	0.005000	M	Zn		0.013054
O	Al		0.016205	O	Fe		0.015754	M	Nb	<	0.000270	O	Si		0.024307	O	Zr	<	0.001900
M	As	<	0.002900	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270				
M	Au	<	0.000520	M	Gd	<	0.000270	M	Ni	<	0.003700	M	Sn	<	0.000790				
M	B	<	0.091000	M	Ge	<	0.000270	M	Os	<	0.000260	M	Sr		0.000630				
M	Ba		0.002700	M	Hf	<	0.000270	O	P	<	0.066000	M	Ta	<	0.000270				
s	Be	<		M	Hg	<	0.000520	M	Pb	<	0.000270	M	Tb	<	0.000270				
M	Bi	<	0.000530	M	Ho	<	0.000270	M	Pd	<	0.000520	M	Te	<	0.003700				
O	Ca		0.072022	M	In	<	0.000790	M	Pr	<	0.000270	M	Th	<	0.000270				
M	Cd	<	0.000790	M	Ir	<	0.000260	M	Pt	<	0.000270	O	Ti	<	0.000400				
M	Ce	<	0.000270	O	K		0.045014	M	Rb	<	0.000270	M	Tl	<	0.000790				
O	Co	<	0.003200	M	La	<	0.000270	M	Re	<	0.000270	M	Tm	<	0.000270				
O	Cr	<	0.001800	O	Li	<	0.000660	M	Rh	<	0.001100	M	U	<	0.000270				
M	Cs		0.001440	M	Lu	<	0.000270	M	Ru	<	0.000260	M	V	<	0.000790				
M	Cu	<	0.002100	O	Mg		0.016205	i	S	<		M	W	<	0.000530				
M	Dy	<	0.000270	M	Mn		0.001215	M	Sb	<	0.000270	M	Y	<	0.000270				
M	Er	<	0.000270	M	Mo	<	0.000530	O	Sc	<	0.000930	M	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or $KHSO_4$ fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	R2-CO695285
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	Co Metal
Starting Material Lot#:	2326
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 31 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

Assay Method #2 **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10000 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.014660	M	Eu	< 0.000590	O	Na	0.007534	M	Se	< 0.019000	M	Zn	0.003461			
M	Al	< 0.024000	M	Fe	0.050905	M	Nb	< 0.000590	O	Si	0.075340	M	Zr	< 0.001200			
i	As	<	M	Ga	< 0.000590	M	Nd	< 0.000590	M	Sm	< 0.000590						
M	Au	< 0.004100	M	Gd	< 0.000590	O	Ni	0.427608	M	Sn	< 0.001200						
M	B	< 0.031000	M	Ge	< 0.003000	M	Os	< 0.000590	O	Sr	< 0.000260						
M	Ba	< 0.000590	M	Hf	< 0.000590	n	P	<	M	Ta	< 0.001200						
O	Be	< 0.001300	M	Hg	< 0.001800	M	Pb	0.003257	M	Tb	< 0.000590						
M	Bi	< 0.003000	M	Ho	< 0.000590	M	Pd	< 0.000590	M	Te	< 0.005300						
O	Ca	0.010588	M	In	< 0.001200	M	Pr	< 0.000590	M	Th	< 0.000590						
M	Cd	< 0.004700	M	Ir	< 0.001200	M	Pt	< 0.002400	M	Ti	< 0.014000						
M	Ce	< 0.000590	O	K	0.008144	M	Rb	< 0.000590	M	Tl	0.002647						
s	Co	<	M	La	< 0.000590	M	Re	< 0.000590	M	Tm	< 0.000590						
M	Cr	< 0.021000	O	Li	< 0.000130	M	Rh	< 0.000590	M	U	< 0.000590						
M	Cs	< 0.002400	M	Lu	< 0.000590	M	Ru	< 0.007100	O	V	< 0.000880						
M	Cu	0.189369	O	Mg	0.001893	n	S	<	M	W	< 0.000590						
M	Dy	< 0.000590	M	Mn	< 0.001800	M	Sb	< 0.003600	M	Y	< 0.000590						
M	Er	< 0.000590	M	Mo	< 0.002400	O	Sc	< 0.001600	M	Yb	< 0.000590						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	S2-AG712977
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2289
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10051 ± 30 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

Assay Method #2 **10051 ± 19 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

Assay Method #3 **10049 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000260	O	Na		0.003811	M	Se	<	0.003900	O	Zn		0.048146
M	Al		0.002688	O	Fe		0.006419	M	Nb	<	0.000260	O	Si		0.005215	M	Zr	<	0.000260
M	As	<	0.001100	M	Ga	<	0.000260	M	Nd	<	0.000260	M	Sm	<	0.000260				
M	Au	<	0.000260	M	Gd	<	0.000260	O	Ni		0.001765	M	Sn		0.020060				
O	B	<	0.004300	M	Ge	<	0.002300	M	Os	<	0.001100	O	Sr	<	0.000110				
M	Ba	<	0.000520	M	Hf	<	0.000260	O	P	<	0.017000	M	Ta	<	0.000260				
O	Be	<	0.001100	M	Hg	<	0.000770	M	Pb	<	0.003600	M	Tb	<	0.000260				
M	Bi		0.004814	M	Ho	<	0.000260	M	Pd		0.044134	M	Te	<	0.009000				
O	Ca		0.005215	M	In		0.003691	M	Pr	<	0.000260	M	Th	<	0.000260				
M	Cd	<	0.000260	M	Ir	<	0.000520	M	Pt	<	0.001100	O	Ti	<	0.000440				
M	Ce	<	0.002100	O	K	<	0.008700	M	Rb	<	0.001100	M	Tl	<	0.004100				
O	Co	<	0.000330	M	La	<	0.000260	M	Re	<	0.000260	M	Tm	<	0.000260				
O	Cr	<	0.002500	O	Li	<	0.000110	M	Rh	<	0.000520	M	U	<	0.000260				
M	Cs	<	0.002600	M	Lu	<	0.000260	M	Ru	<	0.000260	M	V	<	0.000260				
O	Cu		0.357085	O	Mg		0.001203	O	S	<	0.017000	M	W	<	0.000260				
M	Dy	<	0.000260	O	Mn	<	0.000220	M	Sb	<	0.014000	M	Y	<	0.000260				
M	Er	<	0.000260	M	Mo	<	0.000260	O	Sc	<	0.000220	M	Yb	<	0.000260				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	S2-CR709784
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr Metal
Starting Material Lot#:	2328
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10027 ± 41 µg/mL

Density: 1.072 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001700	M	Eu	<	0.003400	O	Na		0.090372	M	Se	<	0.012000	O	Zn	<	0.006100
M	Al		0.034916	O	Fe		0.246471	M	Nb	<	0.017000	n	Si	<		M	Zr	<	0.007800
M	As	<	0.028000	O	Ga	<	0.013000	M	Nd	<	0.013000	M	Sm	<	0.006900				
M	Au	<	0.001700	M	Gd	<	0.000560	M	Ni		0.016020	M	Sn		0.006983				
O	B	<	0.025000	O	Ge	<	0.014000	M	Os	<	0.000560	M	Sr		0.006367				
M	Ba	<	0.008900	M	Hf	<	0.000560	i	P	<		M	Ta	<	0.000560				
M	Be	<	0.013000	M	Hg	<	0.001700	M	Pb		0.010064	M	Tb	<	0.000560				
M	Bi	<	0.002300	M	Ho	<	0.000560	M	Pd	<	0.021000	M	Te	<	0.010000				
O	Ca		0.075995	M	In	<	0.000560	M	Pr	<	0.001700	M	Th	<	0.000560				
M	Cd	<	0.000560	M	Ir	<	0.000560	M	Pt	<	0.001200	O	Ti		0.013555				
M	Ce	<	0.001200	O	K		0.043132	i	Rb	<		M	Tl	<	0.000560				
M	Co	<	0.002600	M	La	<	0.001200	M	Re	<	0.001200	O	Tm	<	0.013000				
s	Cr	<		O	Li		0.000390	M	Rh	<	0.095000	M	U	<	0.000560				
M	Cs	<	0.007800	M	Lu	<	0.000560	M	Ru	<	0.087000	O	V		0.014993				
O	Cu		0.007599	O	Mg		0.000883	i	S	<		M	W	<	0.049000				
M	Dy	<	0.000560	M	Mn		0.008626	M	Sb	<	0.003400	M	Y	<	0.001700				
M	Er	<	0.019000	M	Mo	<	0.032000	M	Sc		0.003080	M	Yb	<	0.000560				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	S2-V711005
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium Pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9877%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.104 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.120000	M	Se	<	0.009400	M	Zn		0.009400
O	Al		0.120000	O	Fe		0.460000	M	Nb	<	0.001300	O	Si		0.270000	M	Zr	<	0.002900
M	As	<	0.000210	M	Ga	<	0.009300	M	Nd	<	0.000610	M	Sm	<	0.000110				
M	Au	<	0.004700	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn		0.003900				
M	B		0.051000	M	Ge	<	0.000410	M	Os	<	0.000110	O	Sr		0.007100				
M	Ba		0.003600	M	Hf	<	0.000110	O	P	<	0.034000	M	Ta	<	0.000110				
O	Be	<	0.000560	M	Hg	<	0.000410	M	Pb		0.001400	M	Tb	<	0.000110				
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000410	M	Te	<	0.000110				
O	Ca		0.730000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd	<	0.000610	M	Ir	<	0.000110	M	Pt	<	0.000110	M	Ti		0.017000				
M	Ce	<	0.000610	M	K		0.052000	M	Rb	<	0.000310	M	Tl	<	0.000110				
M	Co	<	0.001300	M	La	<	0.000410	M	Re		0.001700	M	Tm	<	0.000110				
O	Cr		0.170000	M	Li	<	0.000810	M	Rh	<	0.000110	M	U	<	0.000410				
M	Cs		0.005600	M	Lu	<	0.000110	M	Ru	<	0.000110	s	V	<					
M	Cu	<	0.001300	M	Mg		0.053000	i	S	<		M	W		0.002000				
M	Dy	<	0.000110	M	Mn		0.007900	M	Sb		0.078000	M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo		0.094000	M	Sc	<	0.000410	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 H2V10O284-

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4, HF, H3PO4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na2CO3 / KNO3); Oxides (V2O3 - use HCl, V2O4 - use HCl or HNO3, V2O5 - use concentrated acids); Ores (Na2CO3 / KNO3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V2O5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

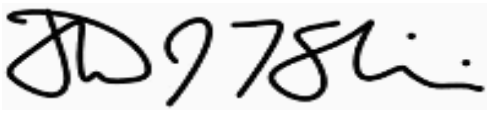
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	T2-AL716102
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Aluminum Nitrate Nonahydrate
Starting Material Lot#:	2460
Starting Material Purity:	99.9938%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10049 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10059 ± 40 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10044 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10049 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002100	M	Eu	<	0.002100	O	Na		0.352819	M	Se	<	0.005200	M	Zn	0.006018
s	Al	<		O	Fe		0.074714	M	Nb	<	0.000520	O	Si		0.017848	O	Zr	0.004358
M	As		0.008716	O	Ga		0.112072	M	Nd	<	0.000520	M	Sm	<	0.000520			
M	Au	<	0.008400	M	Gd	<	0.001100	O	Ni	<	0.006000	M	Sn		0.000747			
O	B	<	0.014000	M	Ge	<	0.005200	M	Os	<	0.000650	O	Sr		0.000518			
O	Ba		0.012867	M	Hf	<	0.004100	n	P	<		M	Ta	<	0.000520			
O	Be	<	0.000270	M	Hg	<	0.002000	M	Pb		0.002282	M	Tb	<	0.000520			
M	Bi		0.001930	M	Ho	<	0.000520	M	Pd	<	0.000520	M	Te	<	0.001100			
O	Ca		0.076790	M	In	<	0.002100	M	Pr	<	0.000520	M	Th	<	0.000520			
M	Cd	<	0.000520	M	Ir	<	0.000650	M	Pt	<	0.000520	O	Ti		0.001930			
M	Ce	<	0.001100	O	K		0.043583	M	Rb	<	0.000520	M	Tl	<	0.000520			
O	Co	<	0.005400	M	La	<	0.002100	M	Re	<	0.000520	M	Tm	<	0.000520			
O	Cr		0.006018	O	Li		0.000112	M	Rh	<	0.000520	M	U	<	0.000520			
M	Cs		0.000643	M	Lu	<	0.000520	M	Ru	<	0.002000	M	V		0.001286			
O	Cu	<	0.008300	O	Mg		0.068488	i	S	<		M	W	<	0.009800			
M	Dy	<	0.002100	O	Mn		0.000913	M	Sb	<	0.003100	M	Y	<	0.001100			
M	Er	<	0.000520	M	Mo		0.005396	O	Sc	<	0.000950	M	Yb	<	0.000520			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

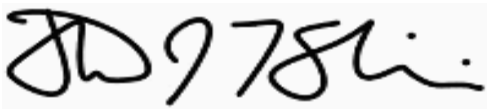
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K711973
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**9987 ± 24 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #2	**10004 ± 84 µg/mL** ICP Assay NIST SRM 3141a Lot Number: 140813
Assay Method #3	**10007 ± 45 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.246220	M	Se	<	0.007900	O	Zn		0.018056
O	Al		0.001592	O	Fe		0.005909	M	Nb	<	0.000660	O	Si		0.011490	O	Zr	<	0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660				
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660				
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055				
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660				
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660				
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000				
O	Ca		0.031187	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660				
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660				
M	Ce	<	0.000660	s	K	<		M	Rb		0.476026	M	Tl	<	0.000660				
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660				
O	Cr		0.000541	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660				
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100				
M	Cu	<	0.002700	O	Mg		0.006237	O	S		0.027905	M	W	<	0.000660				
M	Dy	<	0.000660	O	Mn		0.000476	M	Sb	<	0.000660	M	Y	<	0.000660				
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

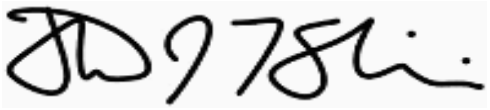
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	S2-MG704239
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10033 ± 26 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002106	M	Eu	<	0.000910	O	Na		0.071075	O	Se	<	0.048000	O	Zn		0.003299
M	Al		0.003553	M	Fe		0.002538	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006853	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000279				
O	Ba		0.000964	M	Hf	<	0.000460	O	P		0.015230	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053306	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048229	M	Rb		0.002411	M	Tl		0.003046				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027922	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001040	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015230	M	Sb		0.020814	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 $Mg(H_2O)_6^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, and H_2SO_4 avoid HF, H_3PO_4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO_3 / LDPE container.

Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	T2-CA716103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	CaCO3
Starting Material Lot#:	2472
Starting Material Purity:	99.9950%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10005 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10005 ± 45 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

Assay Method #2 **10005 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10005 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001200	M	Eu	<	0.001200	O	Na		0.006112	M	Se	<	0.024000	M	Zn		0.005362
M	Al		0.065419	O	Fe		0.009115	M	Nb	<	0.001200	O	Si		0.139417	O	Zr	<	0.006700
O	As	<	0.013000	M	Ga	<	0.015000	M	Nd	<	0.020000	M	Sm	<	0.001200				
M	Au	<	0.017000	M	Gd	<	0.004800	O	Ni		0.000793	M	Sn	<	0.003600				
O	B		0.001179	M	Ge	<	0.003600	M	Os	<	0.001200	M	Sr		0.081505				
O	Ba		0.002788	M	Hf	<	0.001200	O	P	<	0.041000	M	Ta	<	0.001200				
O	Be	<	0.000410	M	Hg	<	0.004800	M	Pb		0.001608	M	Tb	<	0.001200				
M	Bi		0.001608	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.003600				
s	Ca	<		M	In	<	0.001200	M	Pr		0.000257	M	Th	<	0.001200				
O	Cd	<	0.001300	M	Ir	<	0.001200	M	Pt	<	0.003600	O	Ti	<	0.001900				
M	Ce		0.001029	O	K		0.009759	M	Rb	<	0.001200	M	Tl	<	0.001200				
O	Co		0.000418	M	La		0.001823	M	Re	<	0.001200	M	Tm	<	0.001200				
O	Cr		0.003324	O	Li	<	0.007300	M	Rh	<	0.001200	M	U		0.002144				
M	Cs		0.007399	M	Lu		0.000128	M	Ru	<	0.001200	M	V		0.001286				
O	Cu	<	0.011000	M	Mg		1.286934	O	S		0.055767	O	W	<	0.024000				
M	Dy	<	0.002400	O	Mn		0.004611	M	Sb	<	0.009600	O	Y		0.000536				
M	Er	<	0.002400	M	Mo		0.003539	O	Sc	<	0.001400	M	Yb	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, vF, v3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples)Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

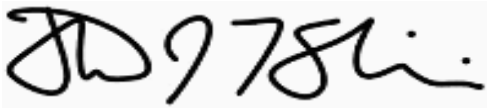
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	T2-NA717221
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2358 and 2453
Starting Material Purity:	99.9977%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9977 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

Assay Method #3 **9987 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.003800	O	Zn	0.000138
M	Al		0.004409	O	Fe		0.002393	M	Nb	<	0.000930	O	Si		0.056696	O	Zr	< 0.003200
O	As	<	0.023000	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930			
O	Au	<	0.004100	M	Gd	<	0.000930	O	Ni	<	0.003000	M	Sn	<	0.002800			
O	B		0.001385	M	Ge	<	0.004700	M	Os	<	0.000930	O	Sr		0.000251			
M	Ba		0.004031	M	Hf	<	0.000930	O	P		0.010205	M	Ta	<	0.000930			
O	Be	<	0.000130	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930			
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.001900			
O	Ca		0.176388	M	In	<	0.000930	M	Pr	<	0.000930	M	Th		0.000352			
O	Cd	<	0.000860	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti		0.000592			
M	Ce	<	0.001900	O	K		0.302380	M	Rb	<	0.000930	M	Tl	<	0.000930			
O	Co	<	0.001800	O	La	<	0.002100	M	Re	<	0.000930	M	Tm	<	0.000930			
M	Cr	<	0.002800	O	Li		0.000031	M	Rh	<	0.000930	M	U	<	0.000930			
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	O	V	<	0.001600			
O	Cu	<	0.003900	O	Mg		0.026458	O	S		0.040317	O	W	<	0.028000			
M	Dy	<	0.000930	O	Mn	<	0.000740	M	Sb	<	0.000930	O	Y	<	0.000860			
M	Er	<	0.000930	O	Mo	<	0.003600	O	Sc	<	0.000610	O	Yb	<	0.000250			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

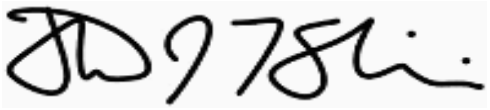
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	S2-U707914
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate Hexahydrate
Starting Material Lot#:	P2-2322
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1001 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000270	M	Eu	<	0.000270	M	Na	<	0.011000	M	Se	<	0.009300	M	Zn	0.002358
M	Al	<	0.011000	M	Fe		0.003222	M	Nb	<	0.000270	M	Si	<	0.160000	M	Zr	< 0.001100
M	As	<	0.002400	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270			
M	Au	<	0.000270	M	Gd	<	0.000270	M	Ni	<	0.020000	M	Sn	<	0.011000			
M	B	<	0.000270	M	Ge	<	0.000800	M	Os	<	0.001900	M	Sr	<	0.000270			
M	Ba	<	0.003800	M	Hf	<	0.000270	i	P	<		M	Ta	<	0.000270			
M	Be	<	0.000270	M	Hg	<	0.000540	M	Pb	<	0.002200	M	Tb	<	0.000270			
M	Bi	<	0.000270	M	Ho	<	0.000270	M	Pd	<	0.000540	M	Te	<	0.003800			
M	Ca	<	0.140000	M	In	<	0.000270	M	Pr	<	0.000270	M	Th		0.000129			
M	Cd	<	0.000270	M	Ir	<	0.000270	M	Pt	<	0.000270	M	Ti	<	0.002700			
M	Ce	<	0.000540	O	K	<	0.250000	M	Rb	<	0.000800	M	Tl	<	0.000270			
M	Co	<	0.000800	M	La		0.000117	M	Re	<	0.064000	M	Tm	<	0.000270			
M	Cr		0.000943	M	Li	<	0.003000	M	Rh	<	0.000270	s	U	<				
M	Cs		0.000106	M	Lu	<	0.000270	M	Ru	<	0.000540	M	V	<	0.000540			
M	Cu	<	0.001100	M	Mg	<	0.003000	i	S	<		M	W	<	0.000540			
M	Dy	<	0.000270	M	Mn	<	0.006900	M	Sb	<	0.000270	M	Y	<	0.000270			
M	Er	<	0.000270	M	Mo	<	0.006400	M	Sc	<	0.000540	M	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO22+(uranyl)
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H3PO4. H2SO4 and HF matrices should not be a problem depending upon [U]. Although the UO22+ ion is distinctly basic, any U+4 will precipitate in basic media. UO22+salts are generally soluble in water and UO22+ is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF4 and UF6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO3); Oxide (Soluble in HNO3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H2SO4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	T2-MEB719895
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.499 ± 0.015 µg/mL**	**Molybdenum, Mo**	**2.500 ± 0.017 µg/mL**

Density: 1.014 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

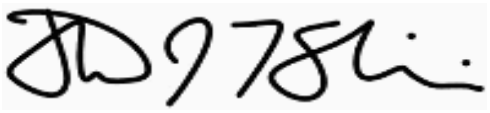
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	T2-MEB719896
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:
	Aluminum, Calcium,
	Iron, Potassium,
	Magnesium, Sodium,
	4 µg/mL ea:
	Selenium,
	2.5 µg/mL ea:
	Thorium, Thallium,
	Uranium, Vanadium,
	Zinc, Manganese,
	Cadmium, Cobalt,
	Chromium, Copper,
	Arsenic, Barium,
	Beryllium, Nickel,
	Lead, Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

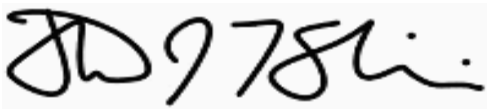
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-6020ICS-0A10
Lot Number:	T2-MEB719898
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Chloride,
	200 µg/mL ea: Carbon,
	100 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	2 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.4 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.014 µg/mL**	**Phosphorus, P**	**100.0 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.015 µg/mL**

Density: 1.009 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

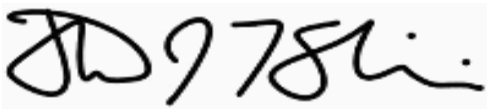
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1811

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-01 D	SDG:	23E0009
Sampled:	04/28/23 10:38	Prepared:	05/18/23 15:25	File ID:	SMM 05-19-23-025
% Solids:	67.30	Preparation:	SMM EPA 7471B	Analyzed:	05/19/23 13:07
Batch:	BLE0441	Sequence:	SLE0332	Initial/Final:	0.247 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GE00064

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.181	1	0.00632	0.0301	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1805

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-03 D	SDG:	23E0009
Sampled:	04/28/23 16:15	Prepared:	05/18/23 15:25	File ID:	SMM 05-19-23-029
% Solids:	52.38	Preparation:	SMM EPA 7471B	Analyzed:	05/19/23 13:17
Batch:	BLE0441	Sequence:	SLE0332	Initial/Final:	0.232 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GE00064

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.206	1	0.00864	0.0411	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1800

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-05 D	SDG:	23E0009
Sampled:	04/29/23 10:10	Prepared:	05/18/23 15:25	File ID:	SMM 05-19-23-030
% Solids:	46.29	Preparation:	SMM EPA 7471B	Analyzed:	05/19/23 13:19
Batch:	BLE0441	Sequence:	SLE0332	Initial/Final:	0.249 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GE00064

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.242	1	0.00911	0.0434	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1820

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-07 D	SDG:	23E0009
Sampled:	04/29/23 14:00	Prepared:	05/18/23 15:25	File ID:	SMM 05-19-23-031
% Solids:	51.74	Preparation:	SMM EPA 7471B	Analyzed:	05/19/23 13:21
Batch:	BLE0441	Sequence:	SLE0332	Initial/Final:	0.226 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GE00064

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.100	1	0.00898	0.0428	

PREPARATION BATCH SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0441 Batch Matrix: Solid
Preparation: SMM EPA 7471B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01	SMM 05-19-23-025	05/18/23 15:25	Store frozen
LDW23-SS1805	23E0009-03	SMM 05-19-23-029	05/18/23 15:25	Store frozen
LDW23-SS1800	23E0009-05	SMM 05-19-23-030	05/18/23 15:25	Store frozen
LDW23-SS1820	23E0009-07	SMM 05-19-23-031	05/18/23 15:25	Store frozen
Blank	BLE0441-BLK1	SMM 05-19-23-012	05/18/23 15:25	
LCS	BLE0441-BS1	SMM 05-19-23-013	05/18/23 15:25	
LDW23-SS1811	BLE0441-DUP1	SMM 05-19-23-026	05/18/23 15:25	
LDW23-SS1811	BLE0441-MS1	SMM 05-19-23-027	05/18/23 15:25	
LDW23-SS1811	BLE0441-MSD1	SMM 05-19-23-028	05/18/23 15:25	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM | Balance ID: BALIO 9 | Matrix: Soil
Analyst: AR | Block ID: | Date: 5/18/23
Bath Temp: 99C | Start Time: 1430 | End Time: 1525

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
23E9-01	D		0.247	50	1		
-03			0.232				
-05			0.249				
-07			0.226				
23E29-02	A		0.227				
-03			0.203				
-05			0.222				
-07			0.274				
-09			0.243				
-10			0.277				
-13			0.245				
BLE441-blk	—		—				23E9-01
-bs	—		—				
-dup	—		0.245				
-MS	—		0.246				
-MD	—		0.248				

MM 05/19/23

Chemical/Reagent ID:

HNO_3: L4188 | H_2SO_4: L923 | HCl: —
5% $K_2S_2O_8$: L3350 | 5% $KMnO_4$: L4187 | Digest Tube Lot: 221017

Form I

METHOD BLANK DATA SHEET

EPA 7471B

Total Metals

Blank

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0441
Laboratory ID: BLE0441-BLK1
Prepared: 05/18/23 15:25
Matrix: Solid
Preparation: SMM EPA 7471B
Analyzed: 05/19/23 11:11
Sequence: SLE0332
Calibration: GE00064
Instrument: HYDRA

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	ND	1	0.00525	0.0250	U

LCS / LCS DUPLICATE RECOVERY

EPA 7471B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 11:13
Batch:	BLE0441	Laboratory ID:	BLE0441-BS1
Preparation:	SMM EPA 7471B	Sequence Name:	LCS
Initial/Final:	0.2 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Mercury	0.500	0.432		86.3	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 7471B

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0441-DUP1
Batch: BLE0441
Lab Source ID: 23E0009-01
Preparation: SMM EPA 7471B
Initial/Final: 0.245 g / 50 mL
Source Sample Name: LDW23-SS1811
% Solids: 67.30

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Mercury	20	0.181	0.178	1.79	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY
EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 13:12
Batch:	BLE0441	Laboratory ID:	BLE0441-MS1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike
Initial/Final:	0.246 g / 50 mL	Source Sample:	LDW23-SS1811

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Mercury	0.302	0.181		0.438		85.0	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 13:14
Batch:	BLE0441	Laboratory ID:	BLE0441-MSD1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike Dup
Initial/Final:	0.248 g / 50 mL	Source Sample:	LDW23-SS1811

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Mercury	0.300	0.462		93.7	5.34	20	75 - 125

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00064	Instrument:	HYDRA
Calibration Date:	05/19/2023 15:21		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Mercury	0	0	0.0001	8340000	0.0005	6890000	0.001	6280000	0.002	6333000	0.005	6091600

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00064	Instrument:	HYDRA
Calibration Date:	05/19/2023 15:21		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Mercury	5655767	51.1	0.9998		0.99	

SMM 05-19-23 SLE0332 GE00064

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 19 May 2023 10:38:20

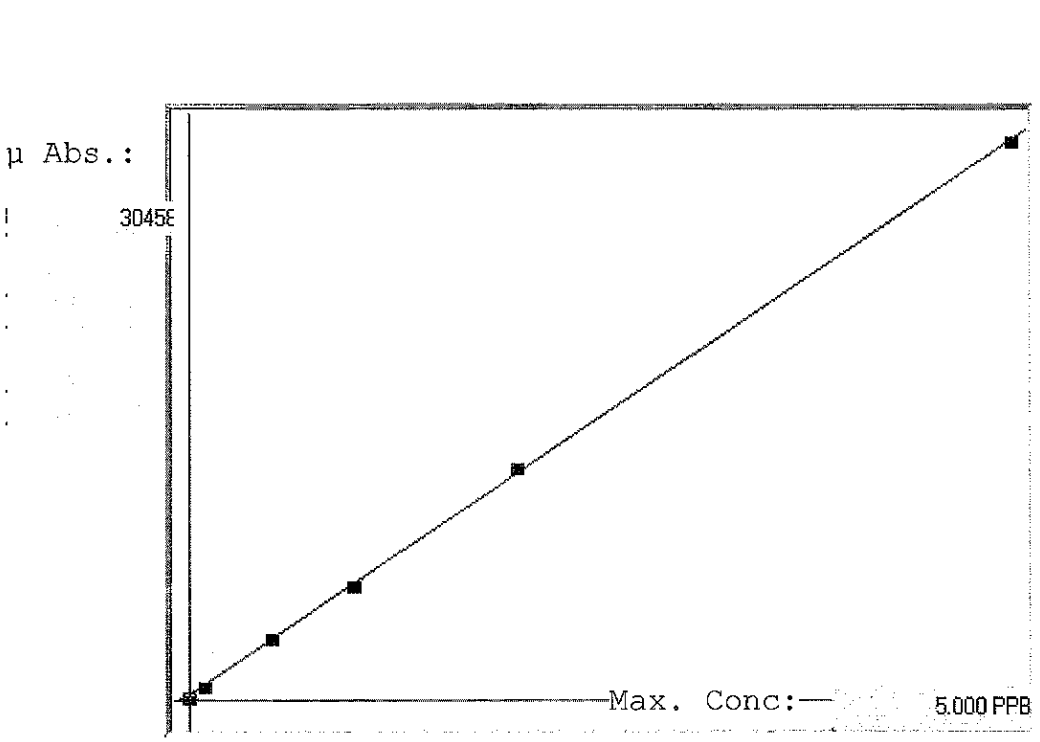
Sample ID	Mean	Units	Date	Method
SEQ-CAL1	192	PPB	19 May 2023 10:38:33	ARI 5 ppb (NO 0.05)
SEQ-CAL2	834	PPB	19 May 2023 10:40:55	ARI 5 ppb (NO 0.05)
SEQ-CAL3	3445	PPB	19 May 2023 10:43:16	ARI 5 ppb (NO 0.05)
SEQ-CAL4	6280	PPB	19 May 2023 10:45:37	ARI 5 ppb (NO 0.05)
SEQ-CAL5	12666	PPB	19 May 2023 10:47:57	ARI 5 ppb (NO 0.05)
SEQ-CAL6	30458	PPB	19 May 2023 10:50:17	ARI 5 ppb (NO 0.05)
SEQ-ICV	101.1% 4.0448	PPB	19 May 2023 10:59:55	ARI 5 ppb (NO 0.05)
SEQ-ICB	-0.0173	PPB	19 May 2023 11:02:13	ARI 5 ppb (NO 0.05)
SEQ-CRL	89.2% 0.0892	PPB	19 May 2023 11:04:35	ARI 5 ppb (NO 0.05)
SEQ-CCV	102.3% 4.0927	PPB	19 May 2023 11:06:57	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0152	PPB	19 May 2023 11:09:16	ARI 5 ppb (NO 0.05)
BLE0441-BLK1	0.0076	PPB	19 May 2023 11:11:38	ARI 5 ppb (NO 0.05)
BLE0441-BS1	1.7263	PPB	19 May 2023 11:13:56	ARI 5 ppb (NO 0.05)
BLE0478-BLK1	-0.0149	PPB	19 May 2023 11:16:16	ARI 5 ppb (NO 0.05)
BLE0478-BS1	1.6847	PPB	19 May 2023 11:18:35	ARI 5 ppb (NO 0.05)
~~BLE0521-BLK1~~	~~-0.0123~~	~~PPB~~	19 May 2023 11:20:54	ARI 5 ppb (NO 0.05)
~~BLE0521-BS1~~	~~-0.0110~~	~~PPB~~	19 May 2023 11:23:13	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.9% 4.0756	PPB	19 May 2023 11:25:33	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0165	PPB	19 May 2023 11:27:51	ARI 5 ppb (NO 0.05)
~~23D0663-01~~	~~0.0954~~	~~PPB~~	19 May 2023 11:31:19	ARI 5 ppb (NO 0.05)
~~BLE0521-MS1~~	~~0.0951~~	~~PPB~~	19 May 2023 11:33:39	ARI 5 ppb (NO 0.05)
~~SEQ-CCV~~	~~(L)-1.3% 0.0507~~	~~PPB~~	19 May 2023 11:35:59	ARI 5 ppb (NO 0.05)
SEQ-CCV	99.4% 3.9753	PPB	19 May 2023 13:03:09	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0154	PPB	19 May 2023 13:05:27	ARI 5 ppb (NO 0.05)
23E0009-01	0.6028	PPB	19 May 2023 13:07:49	ARI 5 ppb (NO 0.05)
BLE0441-DUP1	0.5873	PPB	19 May 2023 13:10:07	ARI 5 ppb (NO 0.05)
BLE0441-MS1	1.4504	PPB	19 May 2023 13:12:26	ARI 5 ppb (NO 0.05)
BLE0441-MSD1	1.5424	PPB	19 May 2023 13:14:45	ARI 5 ppb (NO 0.05)
23E0009-03	0.5012	PPB	19 May 2023 13:17:04	ARI 5 ppb (NO 0.05)
23E0009-05	0.5590	PPB	19 May 2023 13:19:23	ARI 5 ppb (NO 0.05)
23E0009-07	0.2347	PPB	19 May 2023 13:21:43	ARI 5 ppb (NO 0.05)
23E0219-02	0.4943	PPB	19 May 2023 13:24:02	ARI 5 ppb (NO 0.05)
23E0219-05	0.1551	PPB	19 May 2023 13:26:23	ARI 5 ppb (NO 0.05)
23E0219-07	0.0770	PPB	19 May 2023 13:28:43	ARI 5 ppb (NO 0.05)
SEQ-CCV	100.5% 4.0215	PPB	19 May 2023 13:31:04	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0161	PPB	19 May 2023 13:33:22	ARI 5 ppb (NO 0.05)
23E0219-07	0.5782	PPB	19 May 2023 13:35:43	ARI 5 ppb (NO 0.05)
23E0219-09	0.2356	PPB	19 May 2023 13:38:04	ARI 5 ppb (NO 0.05)
23E0219-10	0.0660	PPB	19 May 2023 13:40:25	ARI 5 ppb (NO 0.05)
23E0219-13	0.1125	PPB	19 May 2023 13:42:44	ARI 5 ppb (NO 0.05)
~~23E0033-01~~	~~0.0874~~	~~PPB~~	19 May 2023 13:45:03	ARI 5 ppb (NO 0.05)
~~BLE0478-DUP1~~	~~0.1853~~	~~PPB~~	19 May 2023 13:47:22	ARI 5 ppb (NO 0.05)
~~BLE0478-MS1~~	~~0.1416~~	~~PPB~~	19 May 2023 13:49:41	ARI 5 ppb (NO 0.05)
23E0033-02	0.0761	PPB	19 May 2023 13:52:00	ARI 5 ppb (NO 0.05)
23E0033-03	0.2071	PPB	19 May 2023 13:54:19	ARI 5 ppb (NO 0.05)
23E0033-04	0.1648	PPB	19 May 2023 13:56:39	ARI 5 ppb (NO 0.05)
SEQ-CCV	99.4% 3.9742	PPB	19 May 2023 13:58:59	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0150	PPB	19 May 2023 14:01:17	ARI 5 ppb (NO 0.05)
23E0033-05	0.2022	PPB	19 May 2023 14:03:39	ARI 5 ppb (NO 0.05)
23E0033-06	0.0625	PPB	19 May 2023 14:05:59	ARI 5 ppb (NO 0.05)
23E0033-07	0.0419	PPB	19 May 2023 14:08:20	ARI 5 ppb (NO 0.05)
23E0033-08	0.1131	PPB	19 May 2023 14:10:41	ARI 5 ppb (NO 0.05)
23E0033-09	0.1479	PPB	19 May 2023 14:13:03	ARI 5 ppb (NO 0.05)
23E0033-10	0.0968	PPB	19 May 2023 14:15:22	ARI 5 ppb (NO 0.05)
23E0033-11	0.1449	PPB	19 May 2023 14:17:41	ARI 5 ppb (NO 0.05)
23E0033-12	0.0370	PPB	19 May 2023 14:20:00	ARI 5 ppb (NO 0.05)
23E0131-01	0.0615	PPB	19 May 2023 14:22:20	ARI 5 ppb (NO 0.05)
23E0131-02	0.0965	PPB	19 May 2023 14:24:39	ARI 5 ppb (NO 0.05)
SEQ-CCV	99.4% 3.9765	PPB	19 May 2023 14:26:59	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0159	PPB	19 May 2023 14:29:17	ARI 5 ppb (NO 0.05)
23E0168-01	0.2253	PPB	19 May 2023 14:31:39	ARI 5 ppb (NO 0.05)
23E0168-02	0.1458	PPB	19 May 2023 14:33:58	ARI 5 ppb (NO 0.05)
23E0241-01	0.0230	PPB	19 May 2023 14:36:18	ARI 5 ppb (NO 0.05)
23E0033-01	0.0889	PPB	19 May 2023 14:38:38	ARI 5 ppb (NO 0.05)
BLE0478-DUP1	0.1844	PPB	19 May 2023 14:40:58	ARI 5 ppb (NO 0.05)
BLE0478-MS1	0.8547	PPB	19 May 2023 14:43:19	ARI 5 ppb (NO 0.05)
~~BLE0478-PS1~~	~~1.0335~~	~~PPB~~	19 May 2023 14:45:40	ARI 5 ppb (NO 0.05)

SMM 05-19-23

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 19 May 2023 10:38:20

Sample ID	Mean	Units	Date	Method
SEQ-CCV	98.6% 3.9422	PPB	19 May 2023 14:47:59	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0161	PPB	19 May 2023 14:50:18	ARI 5 ppb (NO 0.05)

ARI 5 ppb (NO 0.05)



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
SEQ-CAL1 - Blank	0.000	-0.019	-0.019	191	0.471	192	191	192		
SEQ-CAL2 - 0.1 PPB	0.100	0.087	-0.013	834	1.5 %	817	837	848		
SEQ-CAL3 - 0.5 PPB	0.500	0.519	0.019	3445	0.5 %	3437	3431	3467		
SEQ-CAL4 - 1.0 PPB	1.000	0.987	-0.013	6280	0.9 %	6202	6298	6341		
SEQ-CAL5 - 2.0 PPB	2.000	2.043	0.043	12666	0.8 %	12535	12778	12686		
SEQ-CAL6 - 5.0 PPB	5.000	4.983	-0.017	30458	1.2 %	30020	30454	30901		

Mercury Analysis Log

Analyst: ML
Instrument: HYDRA

Date: 05/19/23
Page: 1 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ – CAL1	SMM	1X		
– CAL2				
– CAL3				
– CAL4				
– CAL5				
– CAL6				
– ICV			√4.04	
– ICB			√-0.017	
– CRL			√0.089	
– CCV			√4.09	
– CCB			√-0.05	
BLE0441 – BLK1				
– BS1			√1.726	86.3 %R
BLE0478 – BLK1				
– BS1			√1.684	84.2 %R
BLE0521 – BLK1				no spikes in batch; Del
– BS1			X-0.01	no spike
SEQ – CCV			√4.07	
– CCB			√-0.010	
23D663 – 01				
BLE0521 – MS1				no spike
SEQ – CCV				no read
– CCV			√3.97	
– CCB			√-0.05	
23E0009 – 01				
BLE0441 – DUP1				no RPD
– MS1			√1.45	84.7 %R
– MSD1			√1.542	93.9 %R
23E0009 – 03				
– 05				

Chemical/Reagent ID:
10% $SnCl_2$: L5533

14% NH_2OH/NaCl: L5581

Standard ID:
Standard: L5578-L5583

ICV/CCV: L5585

Mercury Analysis Log

Analyst: —

Instrument: —

Date: —

Page: 2 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
↓ -07				
23E0219 -02				
-03				
↓ -05				
23E0219 SEQ -CCV			√4.02	
↓ -CCB			√-0.016	
23E0219 -07				
-09				
-10				
↓ -13				
23E0033 -01				
BLE0478 -DUP				no RPD — Del ↓
↓ -MS			X 0.14	re-run ↓
23E0033 -02				
-03				
↓ -04				
SEQ -CCV			√3.97	
↓ -CCB			√-0.015	
23E0033 -05				
-06				
-07				
-08				
-09				
-10				
-11				
↓ -12				
23E0131 -01				
-02				
SEQ -CCV			√3.97	
↓ -CCB			√-0.015	

Chemical/Reagent ID:

10% $SnCl_2$: —

14% NH_2OH/NaCl: —

Standard ID: —

Standard: —

ICV/CCV: —

Mercury Analysis Log

Analyst: —

Instrument: —

Date: —

Page: 3 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
23E0168 -01				
↓ -02				
23E0241 -01				
23E0339 -01				
BLE0478 -DUP1				RPD = 67.75
↓ -MS1			√0.854	76.5 %R
↓ -PS1			√1.03	94 %R ; Del
SEQ -CCV				
↓ -CCB	↓	↓		

M1 05/19/23

Chemical/Reagent ID:

10% $SnCl_2$: —

14% NH_2OH/NaCl: —

Standard ID:

Standard: —

ICV/CCV: —

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: HYDRA
Calibration: GE00064
Control Limt: +/- 20.00%
Sequence: SLE0332

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0332-ICV1	Mercury	0.0040000	0.00404	101	mg/L	EPA 7471B
SLE0332-CCV1	Mercury	0.0040000	0.00409	102	mg/L	EPA 7471B
SLE0332-CCV2	Mercury	0.0040000	0.00408	102	mg/L	EPA 7471B
SLE0332-CCV3	Mercury	0.0040000	0.00398	99.4	mg/L	EPA 7471B
SLE0332-CCV4	Mercury	0.0040000	0.00402	101	mg/L	EPA 7471B
SLE0332-CCV5	Mercury	0.0040000	0.00397	99.4	mg/L	EPA 7471B
SLE0332-CCV6	Mercury	0.0040000	0.00398	99.4	mg/L	EPA 7471B
SLE0332-CCV7	Mercury	0.0040000	0.00394	98.6	mg/L	EPA 7471B

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 7471B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: HYDRA
Sequence: SLE0332

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00064
Date Analyzed: 05/19/23 11:02

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0332-ICB1	Mercury	-0.000017	0.000021	0.000100	mg/L	
SLE0332-CCB1	Mercury	-0.000015	0.000021	0.000100	mg/L	
SLE0332-CCB2	Mercury	-0.000017	0.000021	0.000100	mg/L	
SLE0332-CCB3	Mercury	-0.000015	0.000021	0.000100	mg/L	
SLE0332-CCB4	Mercury	-0.000016	0.000021	0.000100	mg/L	
SLE0332-CCB5	Mercury	-0.000015	0.000021	0.000100	mg/L	
SLE0332-CCB6	Mercury	-0.000016	0.000021	0.000100	mg/L	
SLE0332-CCB7	Mercury	-0.000016	0.000021	0.000100	mg/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0332
Instrument: HYDRA
Calibration: GE00064

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SLE0332-CAL1	SMM 05-19-23-001	NA	05/19/23 10:38
Cal Standard	SLE0332-CAL2	SMM 05-19-23-002	NA	05/19/23 10:40
Cal Standard	SLE0332-CAL3	SMM 05-19-23-003	NA	05/19/23 10:43
Cal Standard	SLE0332-CAL4	SMM 05-19-23-004	NA	05/19/23 10:45
Cal Standard	SLE0332-CAL5	SMM 05-19-23-005	NA	05/19/23 10:47
Cal Standard	SLE0332-CAL6	SMM 05-19-23-006	NA	05/19/23 10:50
Initial Cal Check	SLE0332-ICV1	SMM 05-19-23-007	NA	05/19/23 10:59
Initial Cal Blank	SLE0332-ICB1	SMM 05-19-23-008	NA	05/19/23 11:02
Instrument RL Check	SLE0332-CRL1	SMM 05-19-23-009	NA	05/19/23 11:04
Calibration Check	SLE0332-CCV1	SMM 05-19-23-010	NA	05/19/23 11:06
Calibration Blank	SLE0332-CCB1	SMM 05-19-23-011	NA	05/19/23 11:09
Blank	BLE0441-BLK1	SMM 05-19-23-012	Solid	05/19/23 11:11
LCS	BLE0441-BS1	SMM 05-19-23-013	Solid	05/19/23 11:13
Calibration Check	SLE0332-CCV2	SMM 05-19-23-018	NA	05/19/23 11:25
Calibration Blank	SLE0332-CCB2	SMM 05-19-23-019	NA	05/19/23 11:27
Calibration Check	SLE0332-CCV3	SMM 05-19-23-023	NA	05/19/23 13:03
Calibration Blank	SLE0332-CCB3	SMM 05-19-23-024	NA	05/19/23 13:05
LDW23-SS1811	23E0009-01	SMM 05-19-23-025	Solid	05/19/23 13:07
LDW23-SS1811	BLE0441-DUP1	SMM 05-19-23-026	Solid	05/19/23 13:10
LDW23-SS1811	BLE0441-MS1	SMM 05-19-23-027	Solid	05/19/23 13:12
LDW23-SS1811	BLE0441-MSD1	SMM 05-19-23-028	Solid	05/19/23 13:14
LDW23-SS1805	23E0009-03	SMM 05-19-23-029	Solid	05/19/23 13:17
LDW23-SS1800	23E0009-05	SMM 05-19-23-030	Solid	05/19/23 13:19
LDW23-SS1820	23E0009-07	SMM 05-19-23-031	Solid	05/19/23 13:21
Calibration Check	SLE0332-CCV4	SMM 05-19-23-035	NA	05/19/23 13:31
Calibration Blank	SLE0332-CCB4	SMM 05-19-23-036	NA	05/19/23 13:33
Calibration Check	SLE0332-CCV5	SMM 05-19-23-047	NA	05/19/23 13:58
Calibration Blank	SLE0332-CCB5	SMM 05-19-23-048	NA	05/19/23 14:01
Calibration Check	SLE0332-CCV6	SMM 05-19-23-059	NA	05/19/23 14:26

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0332

SDG: 23E0009
Project: AOC5 MR Phase 1
Instrument: HYDRA
Calibration: GE00064

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLE0332-CCB6	SMM 05-19-23-060	NA	05/19/23 14:29
Calibration Check	SLE0332-CCV7	SMM 05-19-23-068	NA	05/19/23 14:47
Calibration Blank	SLE0332-CCB7	SMM 05-19-23-069	NA	05/19/23 14:50

DETECTION LEVEL STANDARD
EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: HYDRA
Calibration: GE00064
Sequence: SLE0332
Lab Sample ID: SLE0332-CRL1

Analyte	True	Found	%R	Units	QC Limts
Mercury	0.000100	0.000089	89.2	mg/L	70 - 130

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 7471B

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1811 23E0009-01	04/28/23 10:38	05/01/23 09:42	05/18/23 15:25	20	28	05/19/23 13:07	21	28	
LDW23-SS1805 23E0009-03	04/28/23 16:15	05/01/23 09:42	05/18/23 15:25	19	28	05/19/23 13:17	21	28	
LDW23-SS1800 23E0009-05	04/29/23 10:10	05/01/23 09:42	05/18/23 15:25	19	28	05/19/23 13:19	20	28	
LDW23-SS1820 23E0009-07	04/29/23 14:00	05/01/23 09:42	05/18/23 15:25	19	28	05/19/23 13:21	20	28	
Duplicate BLE0441-DUP1	04/28/23 10:38	05/01/23 09:42	05/18/23 15:25	20	28	05/19/23 13:10	21	28	
Matrix Spike BLE0441-MS1	04/28/23 10:38	05/01/23 09:42	05/18/23 15:25	20	28	05/19/23 13:12	21	28	
Matrix Spike Dup BLE0441-MSD1	04/28/23 10:38	05/01/23 09:42	05/18/23 15:25	20	28	05/19/23 13:14	21	28	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: HYDRA

Analyte	MDL	RL	Units
Mercury	0.00525	0.0250	mg/kg

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGHG1
Lot Number:	S2-HG711246
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Mercury
Starting Material:	Hg Metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 3 µg/mL

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **1004 ± 6 µg/mL**
ICP Assay NIST SRM 3133 Lot Number: 160921

Assay Method #2 **998 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 3 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000210	M	Eu	<	0.000210	O	Na		0.000626	M	Se	<	0.008100	M	Zn	<	0.000810
M	Al		0.000161	O	Fe	<	0.001600	M	Nb	<	0.000410	O	Si		0.000626	M	Zr	<	0.000410
M	As	<	0.002500	M	Ga	<	0.000210	M	Nd	<	0.000210	M	Sm	<	0.000210				
O	Au	<	0.001700	M	Gd	<	0.000210	O	Ni	<	0.001400	M	Sn	<	0.000410				
M	B	<	0.008500	M	Ge	<	0.000410	M	Os	<	0.003900	O	Sr	<	0.000110				
M	Ba	<	0.000210	M	Hf	<	0.000210	O	P	<	0.029000	M	Ta	<	0.000210				
O	Be	<	0.000110	s	Hg	<		M	Pb	<	0.000210	M	Tb	<	0.000210				
M	Bi	<	0.001100	M	Ho	<	0.000210	M	Pd	<	0.003500	M	Te	<	0.005700				
O	Ca		0.004754	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	O	Ti	<	0.000430				
M	Ce	<	0.000210	O	K		0.000731	M	Rb	<	0.000210	O	Tl	<	0.005400				
M	Co	<	0.000210	M	La	<	0.000210	M	Re	<	0.000210	M	Tm	<	0.000210				
O	Cr	<	0.003300	O	Li	<	0.000110	M	Rh	<	0.001100	M	U	<	0.000410				
M	Cs	<	0.000410	M	Lu	<	0.000210	M	Ru	<	0.000810	M	V	<	0.000210				
M	Cu	<	0.000810	O	Mg		0.000104	O	S	<	0.022000	M	W	<	0.001100				
M	Dy	<	0.000210	O	Mn	<	0.000430	M	Sb	<	0.000210	M	Y	<	0.000210				
M	Er	<	0.000210	M	Mo	<	0.000210	M	Sc	<	0.000210	M	Yb	<	0.000210				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 18, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 18, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-QCS-4
Lot Number:	R2-MEB695951
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	5 µg/mL ea: Mercury

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Mercury, Hg	**5.011 ± 0.023 µg/mL**		

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The follow ing equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 20, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 20, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1811

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-01 D	SDG:	23E0009
Sampled:	04/28/23 10:38	Prepared:	05/02/23 14:23	File ID:	
% Solids:	67.30	Preparation:	No Prep Wet Chem	Analyzed:	05/02/23 14:25
Batch:	BLE0070	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	67.30	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SC1811

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-02 D	SDG:	23E0009
Sampled:	04/28/23 12:30	Prepared:	05/02/23 14:23	File ID:	
% Solids:	69.56	Preparation:	No Prep Wet Chem	Analyzed:	05/02/23 14:25
Batch:	BLE0070	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	69.56	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1805

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-03 D	SDG:	23E0009
Sampled:	04/28/23 16:15	Prepared:	05/02/23 14:23	File ID:	
% Solids:	52.38	Preparation:	No Prep Wet Chem	Analyzed:	05/02/23 14:25
Batch:	BLE0070	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	52.38	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SC1805

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-04 D	SDG:	23E0009
Sampled:	04/28/23 16:25	Prepared:	05/02/23 14:23	File ID:	
% Solids:	50.51	Preparation:	No Prep Wet Chem	Analyzed:	05/02/23 14:25
Batch:	BLE0070	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	50.51	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1800

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-05 D	SDG:	23E0009
Sampled:	04/29/23 10:10	Prepared:	05/02/23 14:23	File ID:	
% Solids:	46.29	Preparation:	No Prep Wet Chem	Analyzed:	05/02/23 14:25
Batch:	BLE0070	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	46.29	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SC1800

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-06 D	SDG:	23E0009
Sampled:	04/29/23 10:15	Prepared:	05/02/23 14:23	File ID:	
% Solids:	50.06	Preparation:	No Prep Wet Chem	Analyzed:	05/02/23 14:25
Batch:	BLE0070	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	50.06	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1820

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-07 D	SDG:	23E0009
Sampled:	04/29/23 14:00	Prepared:	05/02/23 14:23	File ID:	
% Solids:	51.74	Preparation:	No Prep Wet Chem	Analyzed:	05/02/23 14:25
Batch:	BLE0070	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	51.74	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-IT1820

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-08 D	SDG:	23E0009
Sampled:	04/29/23 14:10	Prepared:	05/02/23 14:23	File ID:	
% Solids:	50.30	Preparation:	No Prep Wet Chem	Analyzed:	05/02/23 14:25
Batch:	BLE0070	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	50.30	1	0.04	0.04	

PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0070 Batch Matrix: Solid
Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01		05/02/23 14:23	
LDW23-SC1811	23E0009-02		05/02/23 14:23	
LDW23-SS1805	23E0009-03		05/02/23 14:23	
LDW23-SC1805	23E0009-04		05/02/23 14:23	
LDW23-SS1800	23E0009-05		05/02/23 14:23	
LDW23-SC1800	23E0009-06		05/02/23 14:23	
LDW23-SS1820	23E0009-07		05/02/23 14:23	
LDW23-IT1820	23E0009-08		05/02/23 14:23	
Blank	BLE0070-BLK1		05/02/23 14:23	
LDW23-SS1811	BLE0070-DUP1		05/02/23 14:23	
LDW23-SS1811	BLE0070-DUP2		05/02/23 14:23	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET for Solid samples

Method: PSEP 1986, SM2540, EPA 160.1

(dry at 104 (12-24 hr) then combust at 550 (30 min))

Batch:	BLE0070
Date:	5/2/2023 14:25
Analyst:	UW

Instrumentation

Drying Ovens:	12	**Analytical Balance:**	BAL2
Muffle Furnace:	2		

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven:	5/2/2023 15:12	
date/time out:	5/3/2023 9:00	
elapsed hrs =	17.8	OK

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Oven Temps, °C	
Start Temp	106
Dry Cycle 1	106
Dry Cycle 2	
Dry Cycle 3	

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000
if ash wt > dry wt, "Chk for Err"
if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000

Balance Calibration Check

Record weights to 4 places

Cal Weight ID:	CV-02	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02	CV-02	
Date & Time:	5/2/23 14:40	5/2/23 14:50	5/3/23 10:25							
Cal Wt (g): 10.0000	10.0000	10.0000	10.0000							
	Cal OK!	Cal OK!	Cal OK!							

Sample ID	Dish #	Tare Wt. (g)	Dish & Sample (g)	Dry Wt 104C (grams) 1	2	3	dry Wt (g)	TS (%)	Notes	ASH WT 550C (grams) 1	2	3	Ash Wt (g)	TVS (mg/kg)	(%)	Notes
BLE0070-BLK1	18	0.7927	0.0000	0.7925			-0.0002	0.03%								
23D0678-01	19	0.7981	5.6295	2.0560			1.2579	26.04%								
23D0682-01	20	0.8113	8.1335	6.7204			5.9091	80.70%								
23D0682-02	21	0.8471	6.9959	5.7049			4.8578	79.00%								
23D0682-03	22	0.8387	5.7614	4.8108			3.9721	80.69%								
23D0682-04	23	0.8137	8.8526	6.6094			5.7957	72.10%								
23D0682-05	24	0.8362	7.8097	5.8016			4.9654	71.20%								
23D0682-06	25	0.8470	9.0252	7.1633			6.3163	77.23%								
23D0682-07	26	0.8337	9.2268	6.9991			6.1654	73.46%								
23D0682-08	27	0.8338	7.9429	6.3743			5.5405	77.94%								
23E0009-01	28	0.7864	7.1284	5.0548			4.2684	67.30%								
BLE0070-DUP1	29	0.8219	7.1195	5.0704			4.2485	67.46%	RPD=0.2							
BLE0070-DUP2	30	0.8160	6.9314	4.9084			4.0924	66.92%	RSD=0.4							
23E0009-02	31	0.8042	7.7906	5.6642			4.8600	69.56%								
23E0009-03	32	0.8174	8.6548	4.9230			4.1056	52.38%								
23E0009-04	33	0.8157	8.0660	4.4777			3.6620	50.51%								
23E0009-05	34	0.7994	7.3309	3.8230			3.0236	46.29%								
23E0009-06	35	0.8018	7.1022	3.9556			3.1538	50.06%								
23E0009-07	36	0.8006	9.5134	5.3084			4.5078	51.74%								
23E0009-08	37	0.8062	9.9621	5.4117			4.6055	50.30%								
23E0013-02	38	0.8196	8.2490	3.4122			2.5926	34.90%								
23E0013-03	39	0.8395	5.5206	4.9671			4.1276	88.18%								

NOTE: Do not enter data in blue shaded cells as they are calculated fields. Green shaded cells MAY be altered if a rewigh is called for.

TOTAL SOLIDS (TS) BENCHSHEET for Solid samples

Method: Total Solids, Metals Correction

dry at 104°C (12-24 hr)

Batch:	BLE0378
Date:	5/11/2023 16:32
Analyst:	ML

Instrumentation

Drying Oven:	OVEN07	**Analytical Balance:**	BAL10

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven:	5/11/2023 17:02	Temp in:	104 °C	TS (%) calculated as:
date/time out:	5/12/2023 14:30	Temp out:	105 °C	Final dry wt (g) = (Dry Wt - Tare Wt)
elapsed hrs =	21.5 OK			TS = (Final Dry Wt)/ (grams Sample-Tare)

Sample ID	Tare Weight (g)	Tare + Sample Weight (g)	Tare + Sample Dry Weight @ 104°C (g) 1	2	3	dry Wt (g)	TS (%)	Notes
23D0682-01	1.0080	10.0620	8.5350			7.5270	83.13%	
23D0682-02	1.0190	10.0270	8.0360			7.0170	77.90%	
23D0682-03	1.0240	10.0420	8.2020			7.1780	79.60%	
23D0682-04	1.0080	10.0920	6.7850			5.7770	63.60%	
23D0682-05	1.0240	10.0180	7.0960			6.0720	67.51%	
23D0682-06	0.9910	10.0300	7.3530			6.3620	70.38%	
23D0682-07	1.0150	10.0540	7.4560			6.4410	71.26%	
23D0682-08	1.0080	10.0790	7.5850			6.5770	72.51%	
23E0009-01	1.0210	10.0470	7.0860			6.0650	67.19%	
23E0009-03	1.0310	10.0660	5.7090			4.6780	51.78%	
23E0009-05	1.0270	10.0730	5.1820			4.1550	45.93%	
23E0009-07	1.0230	10.0420	5.6380			4.6150	51.17%	
23E0009-08	1.0350	10.0190	5.5360			4.5010	50.10%	
23E0238-01	0.9940	10.0230	10.0170			9.0230	99.93%	

Form I

METHOD BLANK DATA SHEET

SM 2540 G-97

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0070
Laboratory ID: BLE0070-BLK1
Prepared: 05/02/23 14:23
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 05/02/23 14:25
Sequence:
Calibration:
Instrument: BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0070-DUP1
Batch: BLE0070
Lab Source ID: 23E0009-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-SS1811
% Solids: 67.30

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	67.30	67.46	0.235	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0070-DUP2
Batch: BLE0070
Lab Source ID: 23E0009-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-SS1811
% Solids: 67.30

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	67.30	66.92	0.572	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1811 23E0009-01	04/28/23 10:38	05/01/23 09:42	05/02/23 14:23	4	28	05/02/23 14:25	4	28	
LDW23-SC1811 23E0009-02	04/28/23 12:30	05/01/23 09:42	05/02/23 14:23	4	28	05/02/23 14:25	4	28	
LDW23-SS1805 23E0009-03	04/28/23 16:15	05/01/23 09:42	05/02/23 14:23	3	28	05/02/23 14:25	4	28	
LDW23-SC1805 23E0009-04	04/28/23 16:25	05/01/23 09:42	05/02/23 14:23	3	28	05/02/23 14:25	4	28	
LDW23-SS1800 23E0009-05	04/29/23 10:10	05/01/23 09:42	05/02/23 14:23	3	28	05/02/23 14:25	3	28	
LDW23-SC1800 23E0009-06	04/29/23 10:15	05/01/23 09:42	05/02/23 14:23	3	28	05/02/23 14:25	3	28	
LDW23-SS1820 23E0009-07	04/29/23 14:00	05/01/23 09:42	05/02/23 14:23	3	28	05/02/23 14:25	3	28	
LDW23-IT1820 23E0009-08	04/29/23 14:10	05/01/23 09:42	05/02/23 14:23	3	28	05/02/23 14:25	3	28	
Duplicate BLE0070-DUP1	04/28/23 10:38	05/01/23 09:42	05/02/23 14:23	4	28	05/02/23 14:25	4	28	
Duplicate BLE0070-DUP2	04/28/23 10:38	05/01/23 09:42	05/02/23 14:23	4	28	05/02/23 14:25	4	28	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids	0.04	0.04	%

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1811

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-01 C	SDG:	23E0009
Sampled:	04/28/23 10:38	Prepared:	06/19/23 13:26	File ID:	CubeData_06232023@1311-055
% Solids:	67.30	Preparation:	No Prep Wet Chem	Analyzed:	06/21/23 20:01
Batch:	BLF0522	Sequence:	SLF0283	Initial/Final:	0.7246 g Wet / 0.7246 g
Instrument:	TOC Cube			Calibration:	GE00052

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.20	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SC1811

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-02 B	SDG:	23E0009
Sampled:	04/28/23 12:30	Prepared:	06/19/23 13:26	File ID:	CubeData_06232023@1311-056
% Solids:	69.56	Preparation:	No Prep Wet Chem	Analyzed:	06/21/23 20:32
Batch:	BLF0522	Sequence:	SLF0283	Initial/Final:	0.5438 g Wet / 0.5438 g
Instrument:	TOC Cube			Calibration:	GE00052

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.73	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1805

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-03 C	SDG:	23E0009
Sampled:	04/28/23 16:15	Prepared:	06/19/23 13:26	File ID:	CubeData_06232023@1311-057
% Solids:	52.38	Preparation:	No Prep Wet Chem	Analyzed:	06/21/23 21:02
Batch:	BLF0522	Sequence:	SLF0283	Initial/Final:	0.2686 g Wet / 0.2686 g
Instrument:	TOC Cube			Calibration:	GE00052

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.04	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SC1805

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-04 B	SDG:	23E0009
Sampled:	04/28/23 16:25	Prepared:	06/19/23 13:26	File ID:	CubeData_06232023@1311-058
% Solids:	50.51	Preparation:	No Prep Wet Chem	Analyzed:	06/21/23 21:32
Batch:	BLF0522	Sequence:	SLF0283	Initial/Final:	0.2393 g Wet / 0.2393 g
Instrument:	TOC Cube			Calibration:	GE00052

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.20	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1800

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-05 B	SDG:	23E0009
Sampled:	04/29/23 10:10	Prepared:	06/19/23 13:26	File ID:	CubeData_06232023@1311-059
% Solids:	46.29	Preparation:	No Prep Wet Chem	Analyzed:	06/21/23 22:02
Batch:	BLF0522	Sequence:	SLF0283	Initial/Final:	0.6663 g Wet / 0.6663 g
Instrument:	TOC Cube			Calibration:	GE00052

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.64	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SC1800

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-06 B	SDG:	23E0009
Sampled:	04/29/23 10:15	Prepared:	06/19/23 13:26	File ID:	CubeData_06232023@1311-060
% Solids:	50.06	Preparation:	No Prep Wet Chem	Analyzed:	06/21/23 22:32
Batch:	BLF0522	Sequence:	SLF0283	Initial/Final:	0.1896 g Wet / 0.1896 g
Instrument:	TOC Cube			Calibration:	GE00052

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.45	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1820

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-07 B	SDG:	23E0009
Sampled:	04/29/23 14:00	Prepared:	06/19/23 13:26	File ID:	CubeData_06232023@1311-061
% Solids:	51.74	Preparation:	No Prep Wet Chem	Analyzed:	06/21/23 23:02
Batch:	BLF0522	Sequence:	SLF0283	Initial/Final:	0.5713 g Wet / 0.5713 g
Instrument:	TOC Cube			Calibration:	GE00052

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.91	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1820

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23E0009-08 C	SDG:	23E0009
Sampled:	04/29/23 14:10	Prepared:	06/24/23 18:32	File ID:	CubeData_06262023@1011-010
% Solids:	50.30	Preparation:	No Prep Wet Chem	Analyzed:	06/24/23 18:32
Batch:	BLF0523	Sequence:	SLF0370	Initial/Final:	0.156 g Wet / 0.156 g
Instrument:	TOC Cube			Calibration:	GE00052

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.86	1	0.02	0.02	

PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLF0522
Batch Matrix: Solid
Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1811	23E0009-01	eData_06232023@1311-	06/19/23 13:26	
LDW23-SC1811	23E0009-02	eData_06232023@1311-	06/19/23 13:26	
LDW23-SS1805	23E0009-03	eData_06232023@1311-	06/19/23 13:26	
LDW23-SC1805	23E0009-04	eData_06232023@1311-	06/19/23 13:26	
LDW23-SS1800	23E0009-05	eData_06232023@1311-	06/19/23 13:26	
LDW23-SC1800	23E0009-06	eData_06232023@1311-	06/19/23 13:26	
LDW23-SS1820	23E0009-07	eData_06232023@1311-	06/19/23 13:26	
Blank	BLF0522-BLK1	eData_06232023@1311-	06/19/23 13:26	
LCS	BLF0522-BS1	eData_06232023@1311-	06/19/23 13:26	
MRL Check	BLF0522-MRL1	eData_06232023@1311-	06/19/23 13:26	
Reference	BLF0522-SRM2	eData_06262023@1011-	06/19/23 13:26	

PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC SDG: 23E0009

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

Batch: BLF0523 Batch Matrix: Solid Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1820	23E0009-08	eData_06262023@1011-	06/24/23 18:32	
Blank	BLF0523-BLK1	eData_06232023@1311-	06/19/23 13:27	
LCS	BLF0523-BS1	eData_06232023@1311-	06/19/23 13:27	
MRL Check	BLF0523-MRL1	eData_06232023@1311-	06/19/23 13:27	
Reference	BLF0523-SRM2	eData_06262023@1011-	06/19/23 13:27	

Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLF0522
Laboratory ID: BLF0522-BLK1
Prepared: 06/19/23 13:26
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 06/20/23 20:23
Sequence: SLF0283
Calibration: GE00052
Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC | SDG: 23E0009

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

Batch: BLF0523 | Laboratory ID: BLF0523-BLK1 | Prepared: 06/19/23 13:27

Matrix: Solid | Preparation: No Prep Wet Chem | Analyzed: 06/20/23 20:53

Sequence: SLF0283 | Calibration: GE00052 | Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/20/23 22:23
Batch:	BLF0522	Laboratory ID:	BLF0522-BS1
Preparation:	No Prep Wet Chem	Sequence Name:	LCS
Initial/Final:	0.0237 g / 0.0237 g		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	45.6		103	80 - 120

* Indicates values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	06/20/23 22:53
Batch:	BLF0523	Laboratory ID:	BLF0523-BS1
Preparation:	No Prep Wet Chem	Sequence Name:	LCS
Initial/Final:	0.0208 g / 0.0208 g		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	44.9		101	80 - 120

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

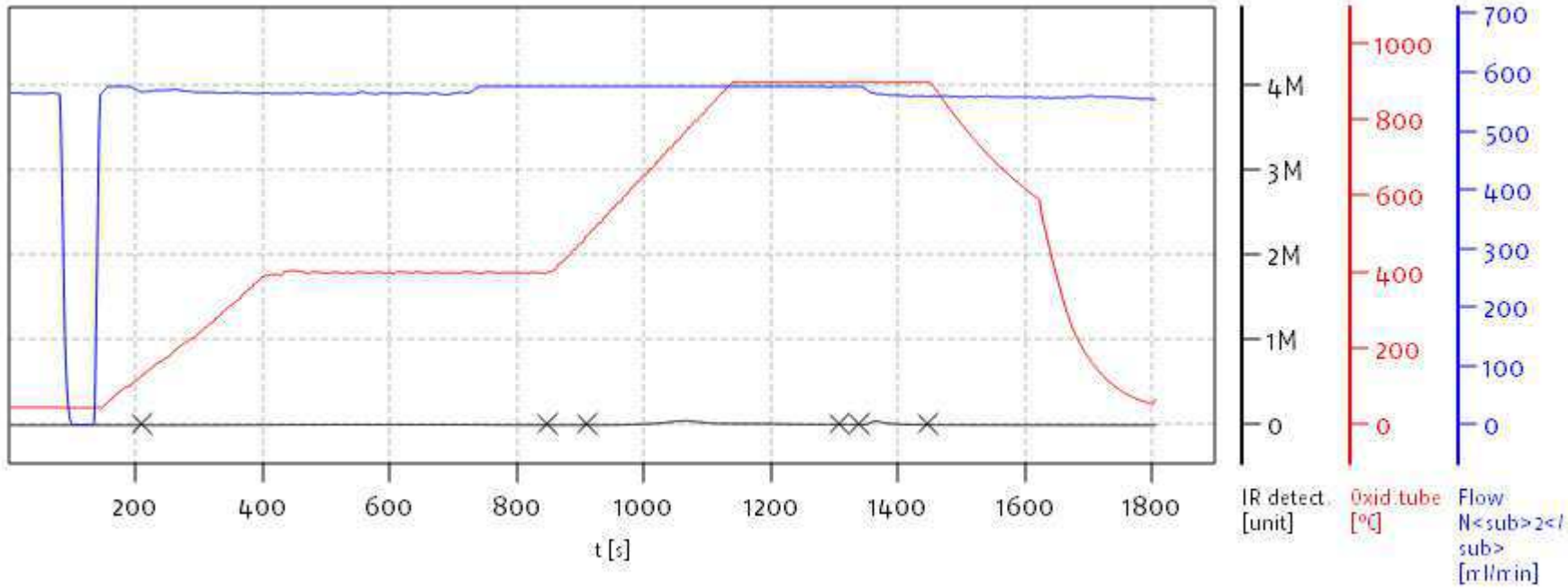
Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0270	Instrument:	TOC Cube
		Calibration:	GE00052

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SLE0270-CAL1	CubeData_05182023@1024b-101	NA	05/17/23 12:46
Cal Standard	SLE0270-CAL2	CubeData_05182023@1024b-102	NA	05/17/23 13:16
Cal Standard	SLE0270-CAL3	CubeData_05182023@1024b-103	NA	05/17/23 13:46
Cal Standard	SLE0270-CAL4	CubeData_05182023@1024b-104	NA	05/17/23 14:16
Cal Standard	SLE0270-CAL5	CubeData_05182023@1024b-105	NA	05/17/23 14:47
Cal Standard	SLE0270-CAL6	CubeData_05182023@1024b-106	NA	05/17/23 15:17
Cal Standard	SLE0270-CAL7	CubeData_05182023@1024b-107	NA	05/17/23 15:47
Cal Standard	SLE0270-CAL8	CubeData_05182023@1024b-108	NA	05/17/23 16:17
Cal Standard	SLE0270-CAL9	CubeData_05182023@1024b-109	NA	05/17/23 16:47
Cal Standard	SLE0270-CALA	CubeData_05182023@1024b-110	NA	05/17/23 17:17
Cal Standard	SLE0270-CALB	CubeData_05182023@1024b-111	NA	05/17/23 17:47
Cal Standard	SLE0270-CALC	CubeData_05182023@1024b-112	NA	05/17/23 18:18
Cal Standard	SLE0270-CALD	CubeData_05182023@1024b-113	NA	05/17/23 18:48
Cal Standard	SLE0270-CALE	CubeData_05182023@1024b-114	NA	05/17/23 19:18
Cal Standard	SLE0270-CALF	CubeData_05182023@1024b-115	NA	05/17/23 19:48
Cal Standard	SLE0270-CALG	CubeData_05182023@1024b-116	NA	05/17/23 20:18
Cal Standard	SLE0270-CALH	CubeData_05182023@1024b-117	NA	05/17/23 20:48
Cal Standard	SLE0270-CALI	CubeData_05182023@1024b-118	NA	05/17/23 21:19
Cal Standard	SLE0270-CALJ	CubeData_05182023@1024b-119	NA	05/17/23 21:49
Cal Standard	SLE0270-CALK	CubeData_05182023@1024b-120	NA	05/17/23 22:19
Initial Cal Check	SLE0270-ICV1	CubeData_05182023@1024b-128	NA	05/18/23 02:21
Initial Cal Blank	SLE0270-ICB1	CubeData_05182023@1024b-127	NA	05/18/23 02:51
Calibration Check	SLE0270-CCV1	CubeData_05182023@1024b-126	NA	05/18/23 04:21
Calibration Blank	SLE0270-CCB1	CubeData_05182023@1024b-125	NA	05/18/23 04:52
Cal Standard	SLE0270-CALL	CubeData_05182023@1024b-121	NA	05/18/23 09:47
Cal Standard	SLE0270-CALM	CubeData_05182023@1024b-122	NA	05/18/23 09:48
Cal Standard	SLE0270-CALN	CubeData_05182023@1024b-123	NA	05/18/23 09:49
Cal Standard	SLE0270-CALO	CubeData_05182023@1024b-124	NA	05/18/23 09:49

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	5/ 17/2023 11:46 AM	bl	0.000	83 718	0.000	0.000	65 731	251 400	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

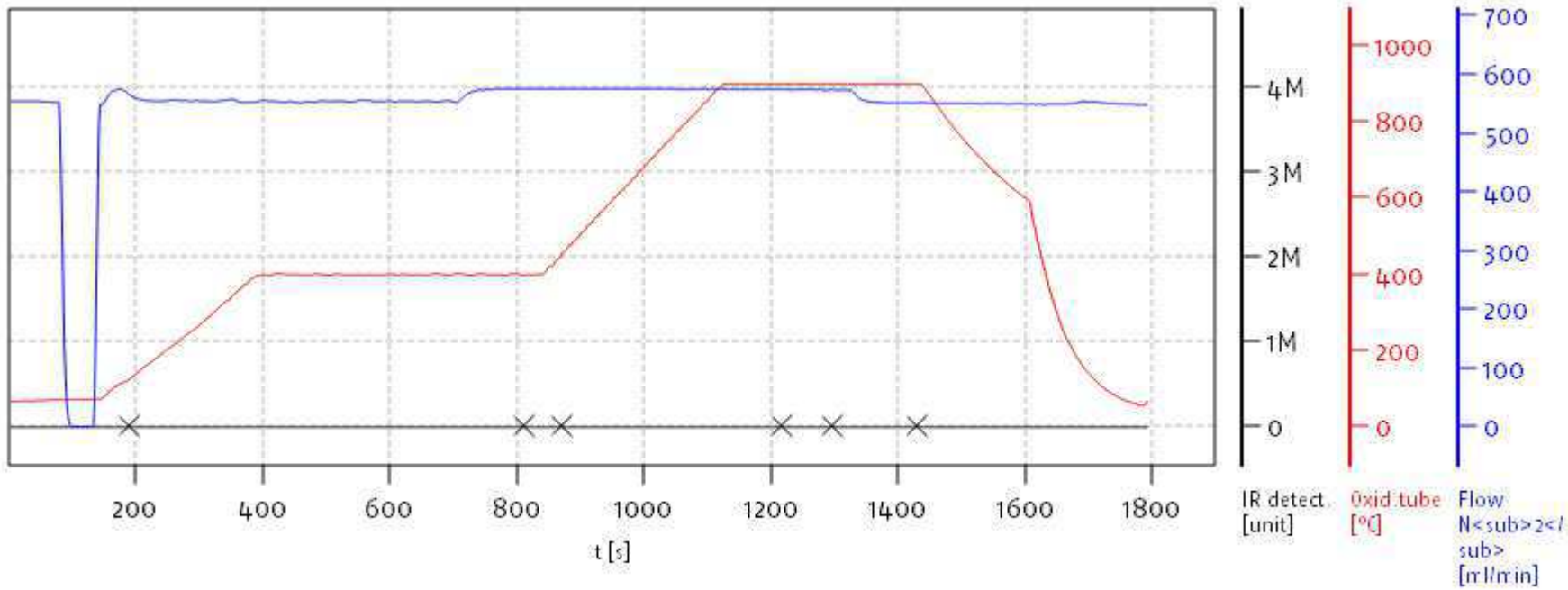
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	BLANK	1.00		CARBON	5/ 17/2023 12:16 PM	bl	0.000	3 043	0.000	0.000	273	1	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

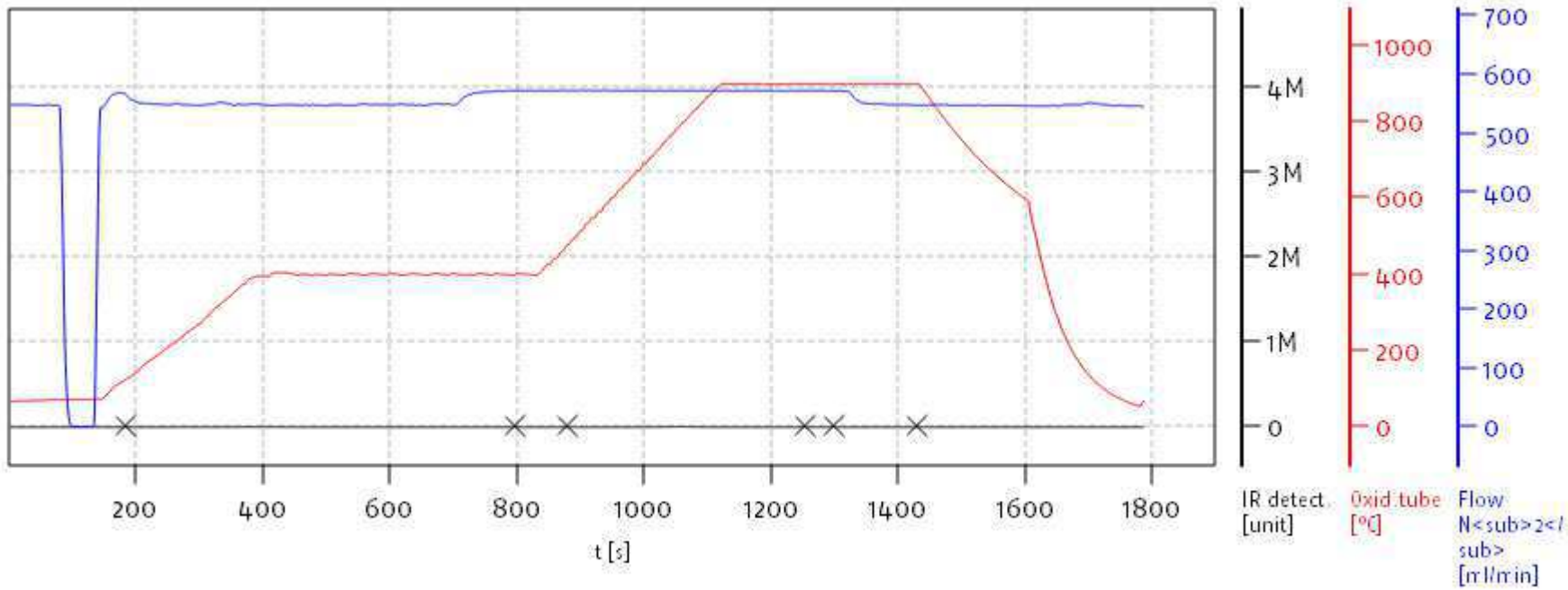
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	SLE0270-CAL1	200.00	0.0025	CARBON	5/17/2023 12:46 PM	bl,C2u	0.014	12 167	0.024	0.002	431	10 396	0.012	0.010	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

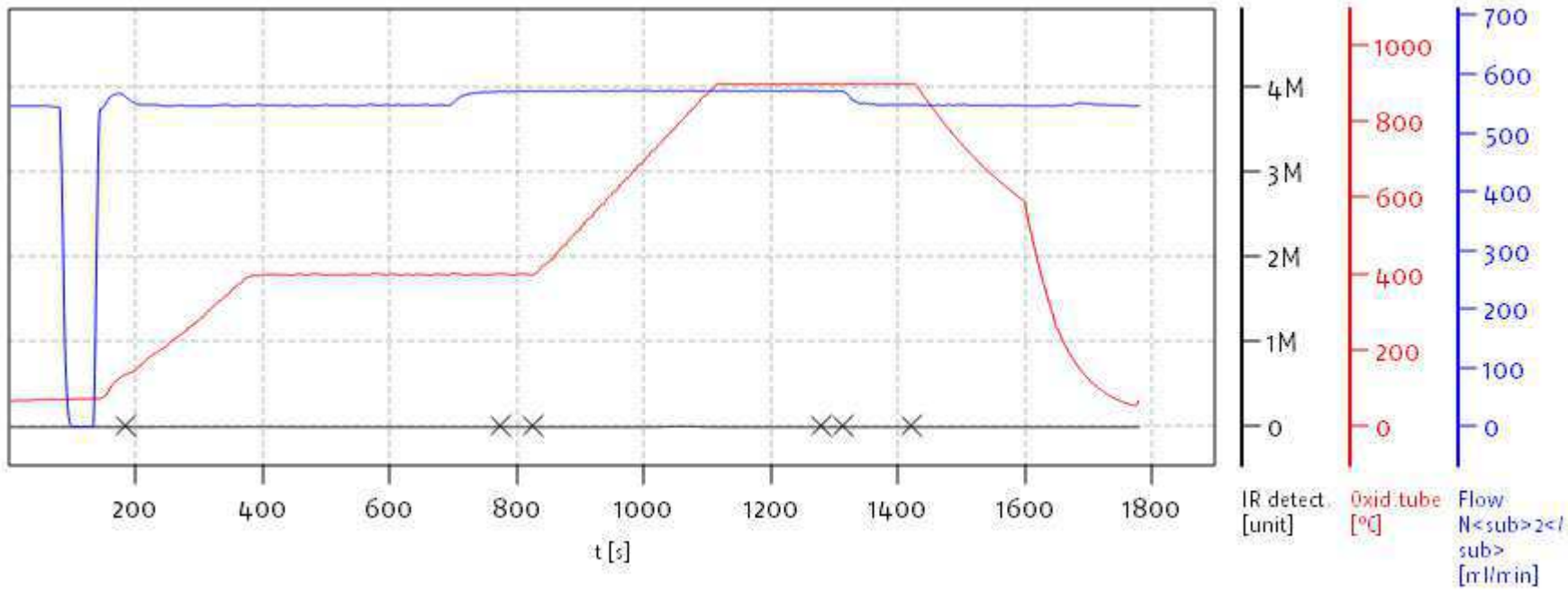
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SLE0270-CAL2	200.00	0.0050	CARBON	5/17/2023 1:16 PM	bl,C2u	0.013	10 893	0.029	0.002	141	18 320	0.011	0.017	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

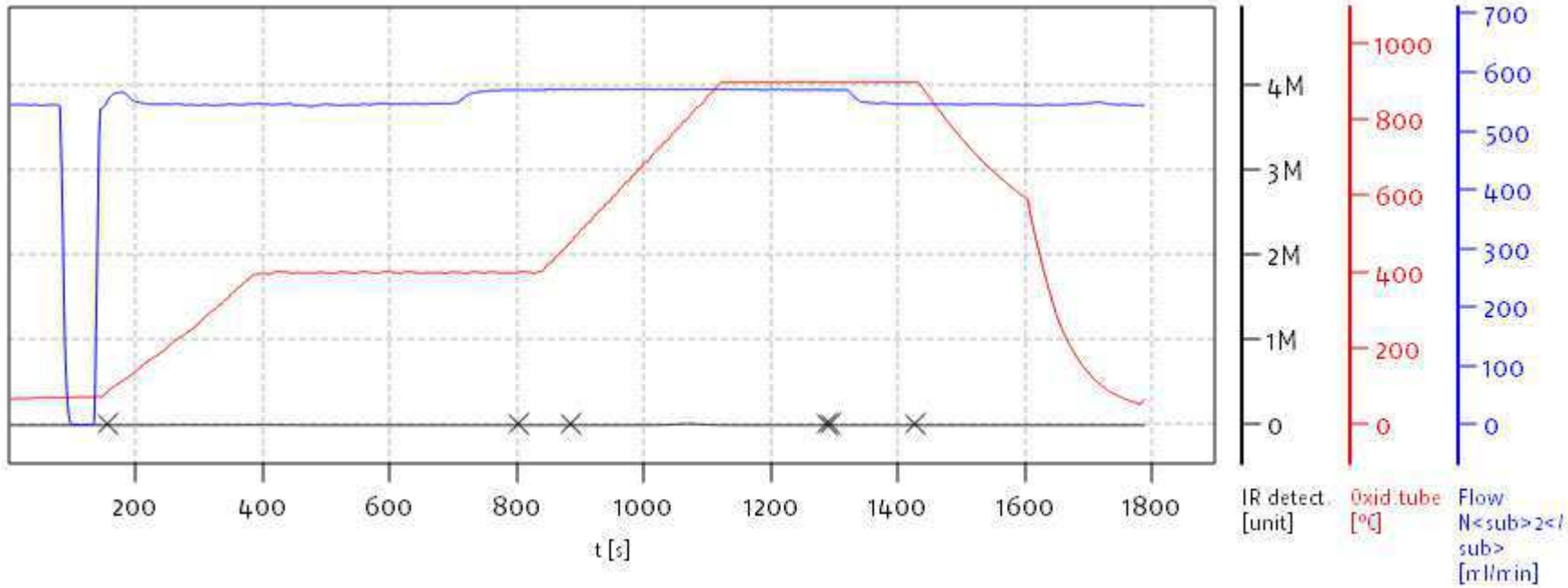
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SLE0270-CAL3	200.00	0.0070	CARBON	5/17/2023 1:46 PM	bl,C2u	0.018	16 667	0.043	0.002	387	29 873	0.015	0.026	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

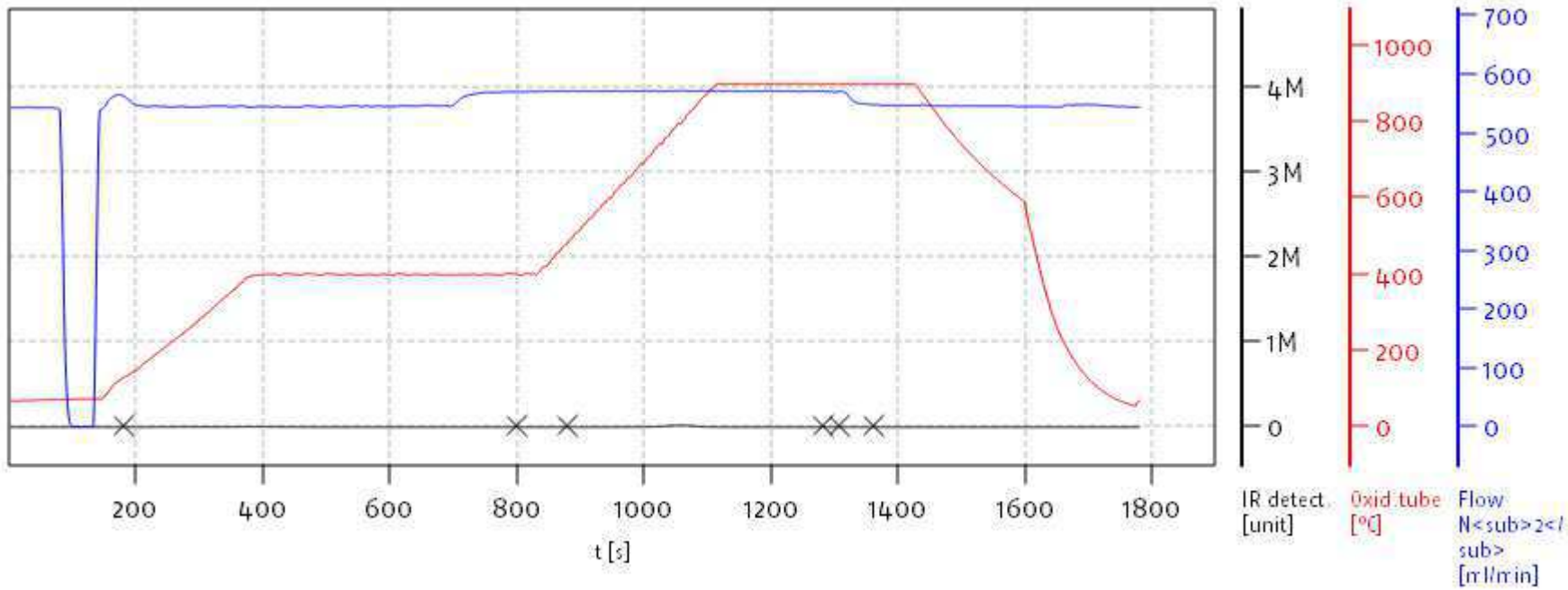
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	SLE0270-CAL4	200.00	0.0100	CARBON	5/17/2023 2:16 PM	bl,C2u	0.024	24 980	0.062	0.002	130	45 873	0.022	0.038	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

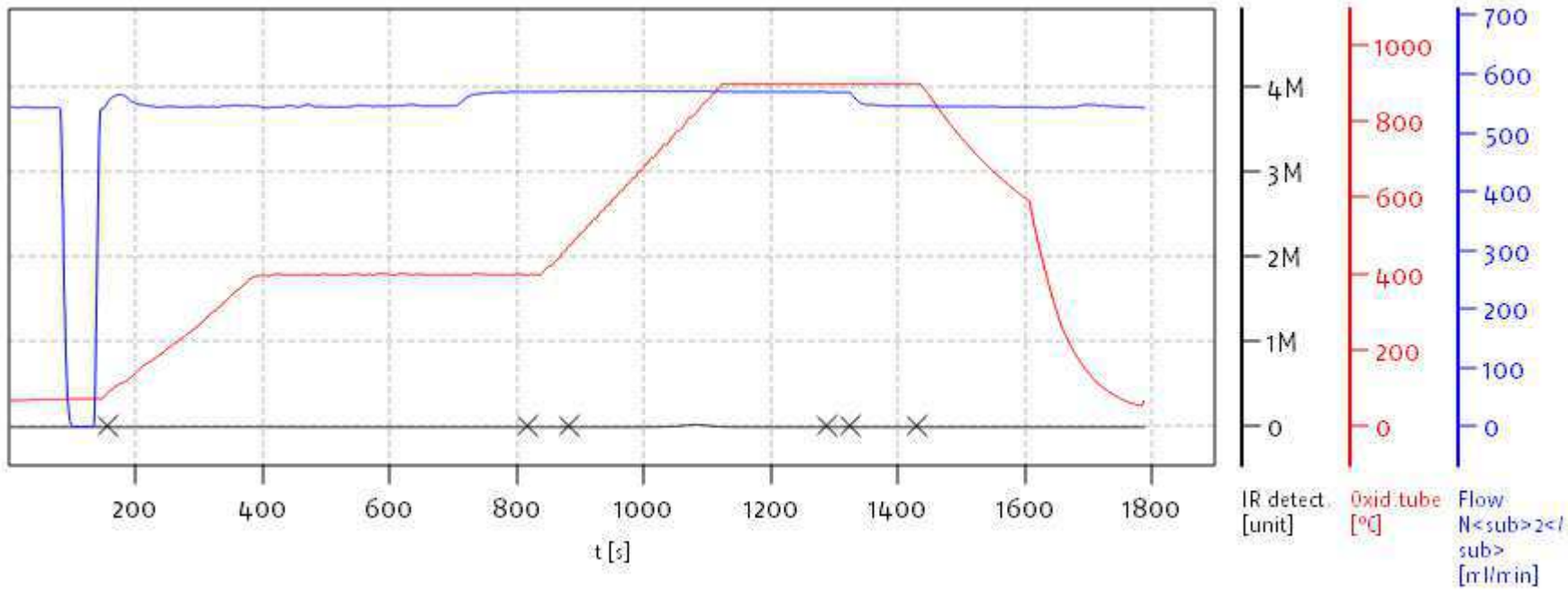
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	SLE0270-CAL5	200.00	0.0150	CARBON	5/17/2023 2:47 PM	bl,C2u	0.014	12 413	0.065	0.002	539	61 573	0.012	0.051	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

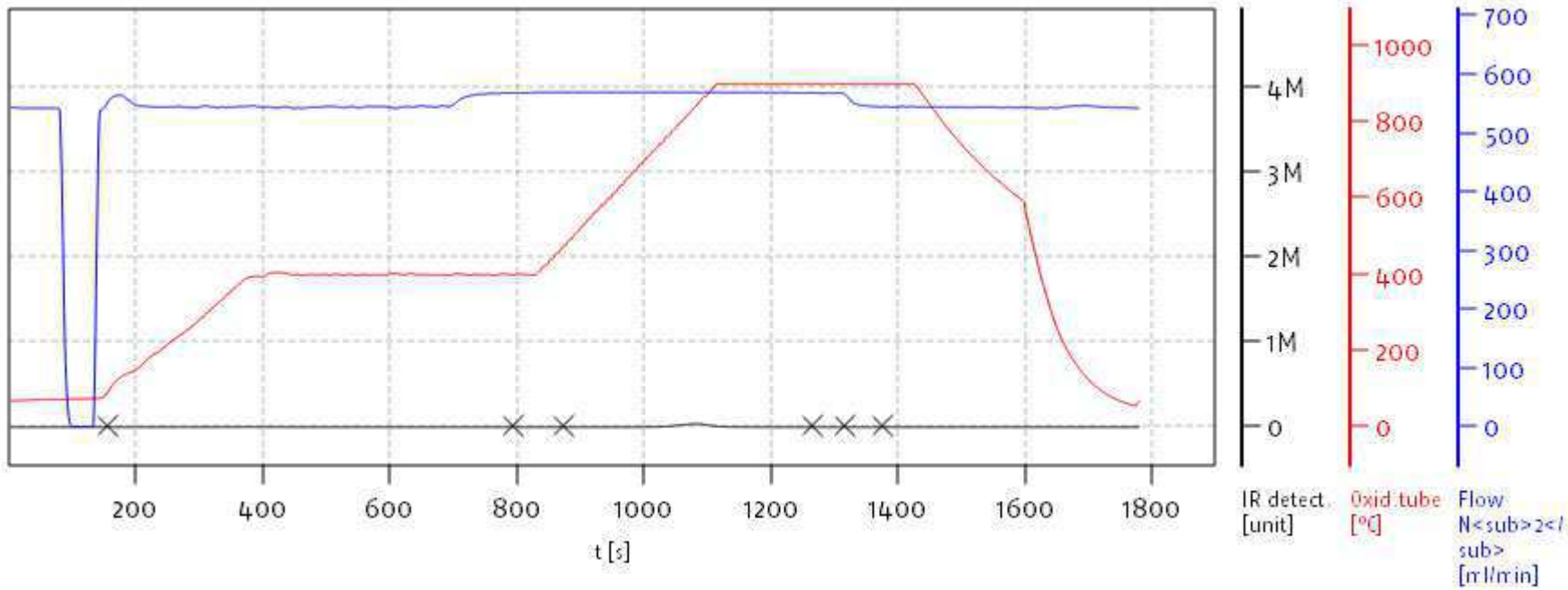
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	SLE0270-CAL6	200.00	0.0200	CARBON	5/17/2023 3:17 PM	bl,C1u,C2u	0.011	7 999	0.079	0.002	170	84 086	0.008	0.068	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

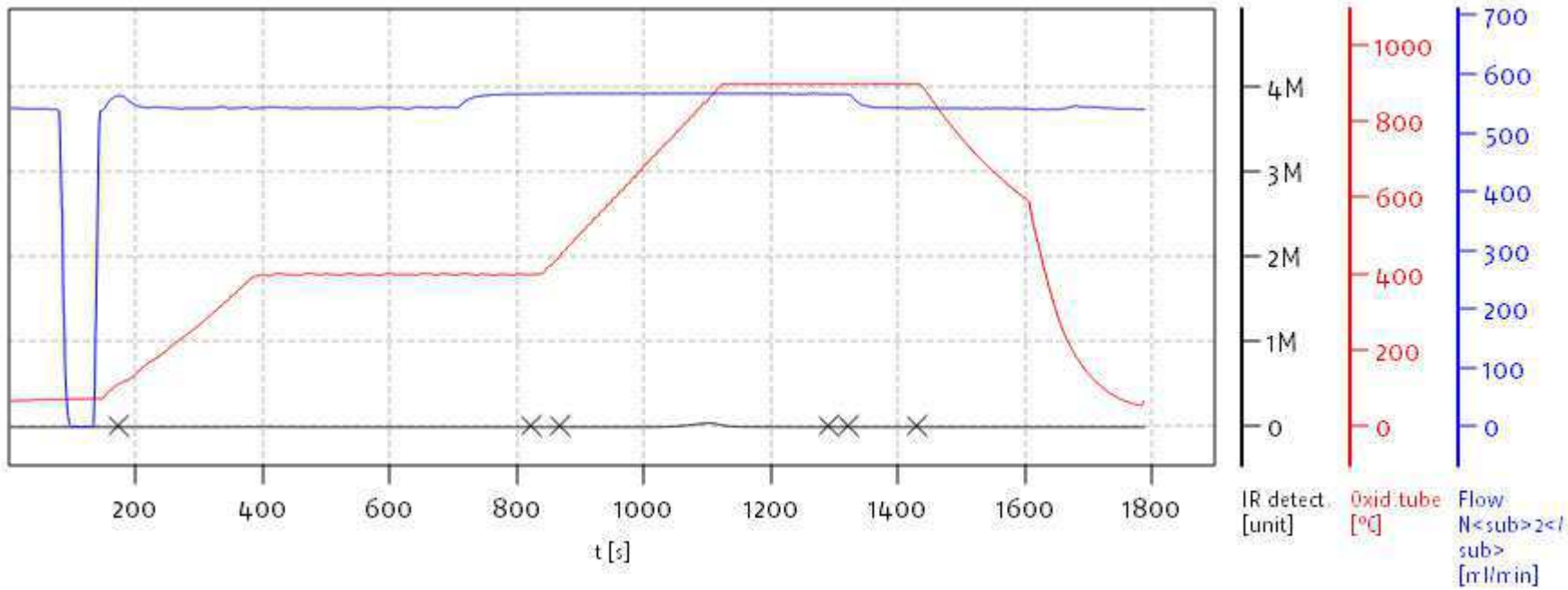
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	SLE0270-CAL7	200.00	0.0250	CARBON	5/17/2023 3:47 PM	bl,C1u,C2u	0.011	7 612	0.097	0.003	1 386	105 588	0.008	0.085	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

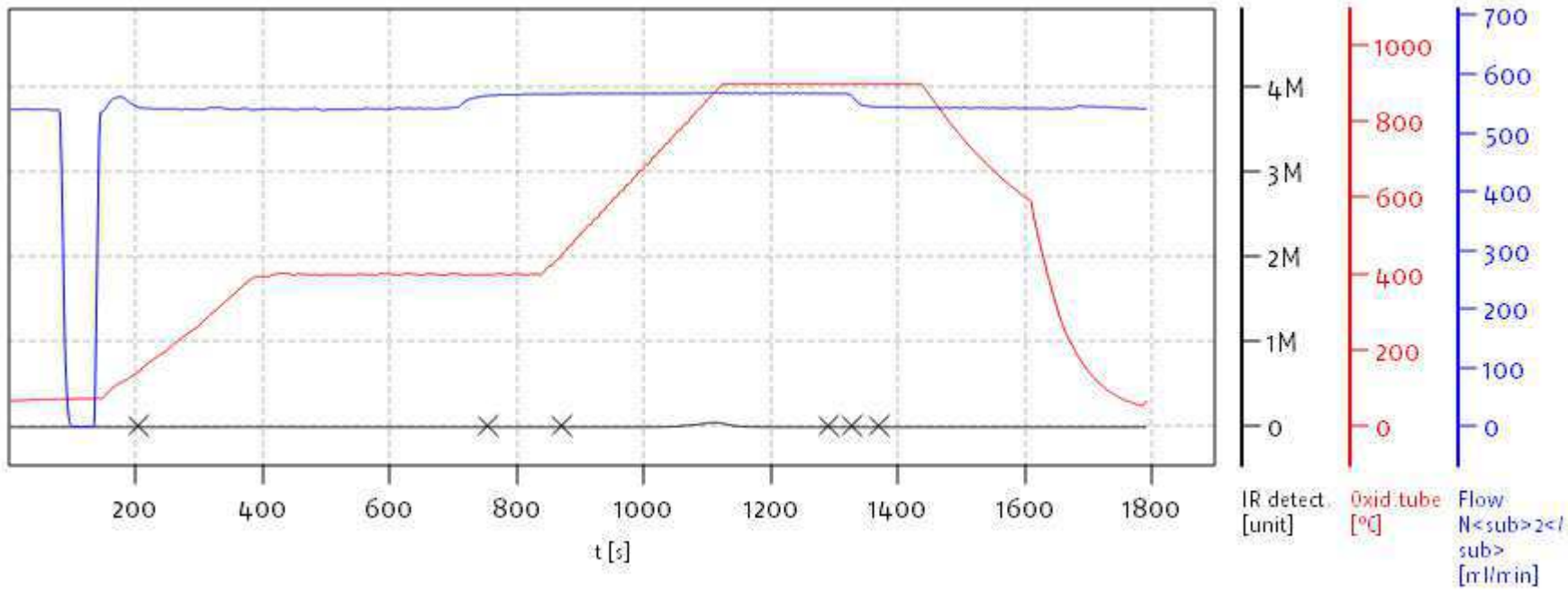
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	SLE0270-CAL8	200.00	0.0300	CARBON	5/17/2023 4:17 PM	bl,C1u,C2u	0.008	5 428	0.109	0.002	61	124 731	0.006	0.100	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

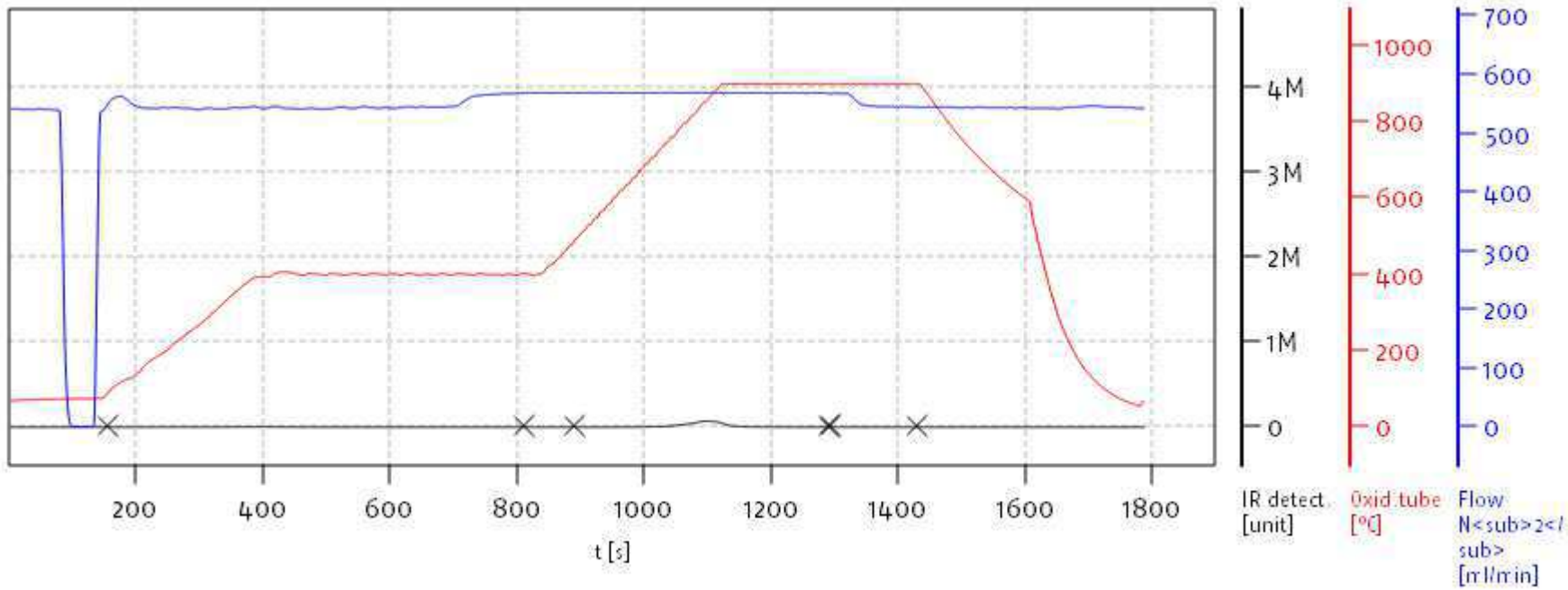
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	SLE0270-CAL9	200.00	0.0400	CARBON	5/17/2023 4:47 PM	bl,C2u	0.019	17 233	0.167	0.003	1 274	185 567	0.016	0.148	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

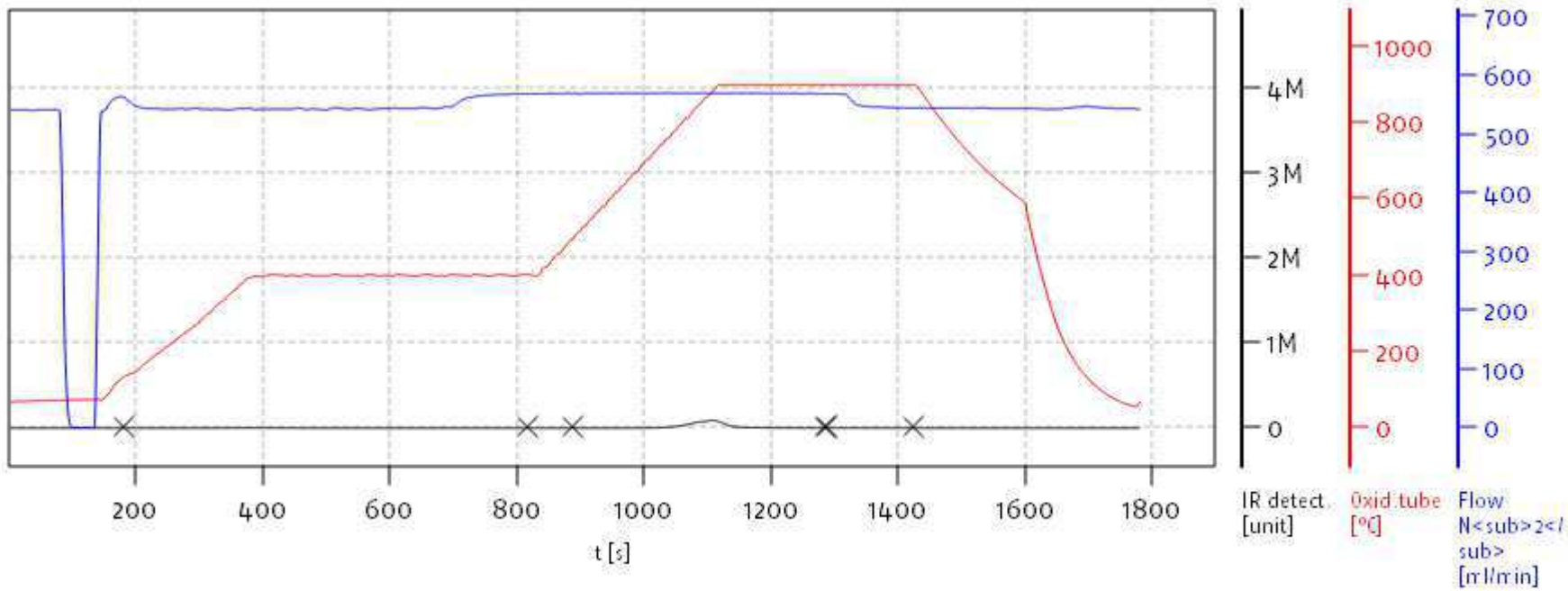
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	SLE0270-CALA	200.00	0.0500	CARBON	5/17/2023 5:17 PM	bl,C2u	0.018	11 766	0.202	0.007	6 123	230 855	0.011	0.184	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

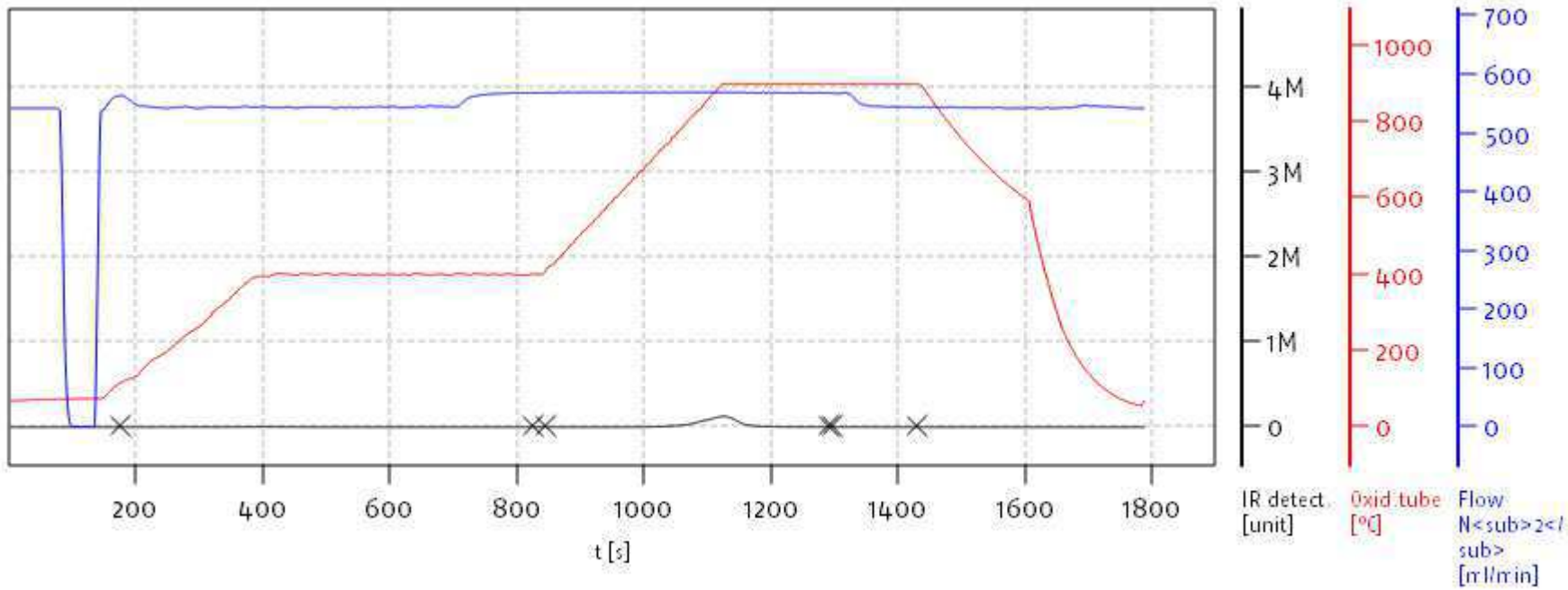
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	SLE0270-CALB	200.00	0.0040	CARBON	5/17/2023 5:47 PM	bl,C2u	0.022	18 635	0.291	0.005	3 969	339 170	0.017	0.269	1.0000	1.0000



Name:

Access: soliTOC superuser

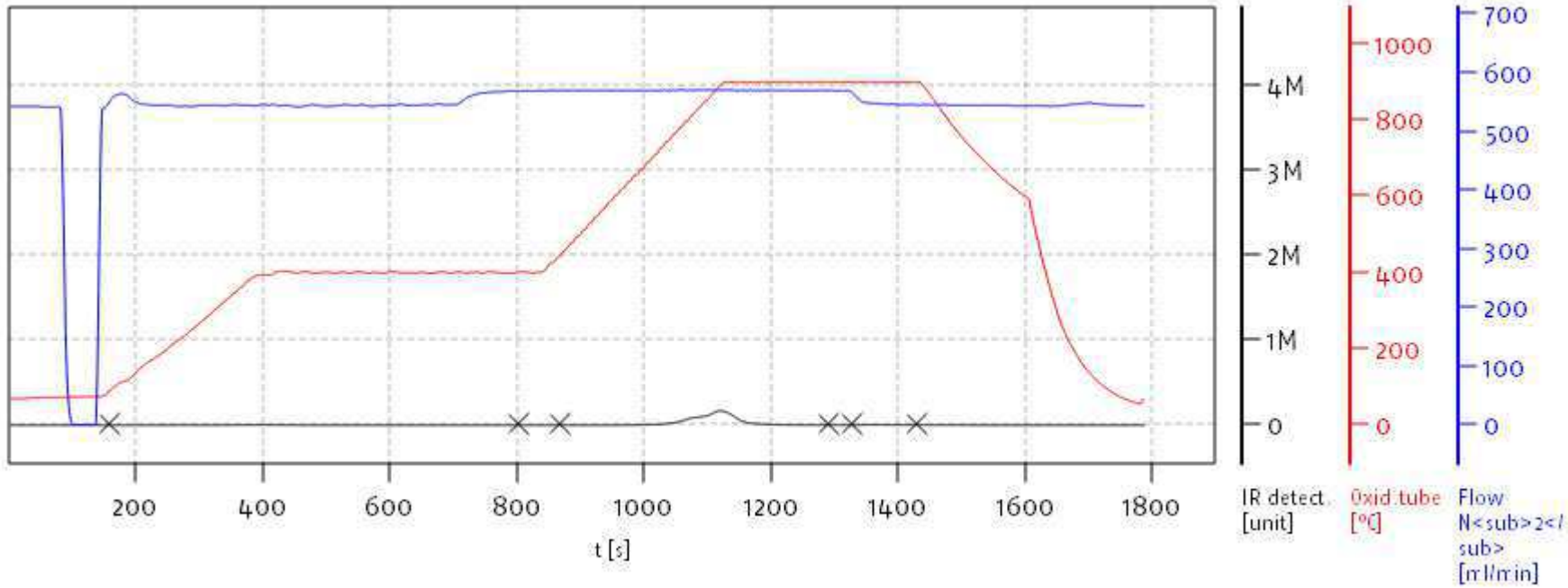
Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	SLE0270-CALC	200.00	0.0050	CARBON	5/17/2023 6:18 PM	bl	0.026	14 893	0.405	0.012	12 639	478 044	0.014	0.379	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

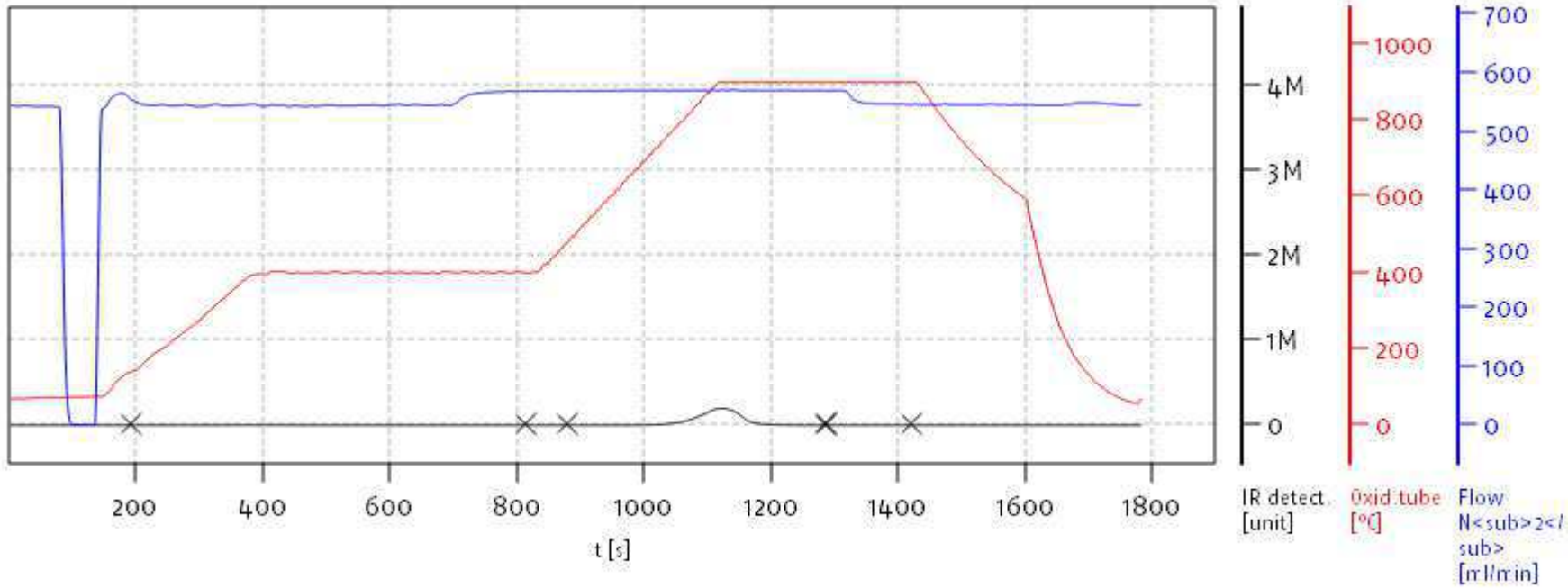
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	SLE0270-CALD	200.00	0.0070	CARBON	5/17/2023 6:48 PM	bl,C1u,C2u	0.010	6 787	0.465	0.002	420	574 876	0.007	0.455	1.0000	1.0000



Name:

Access: soliTOC superuser

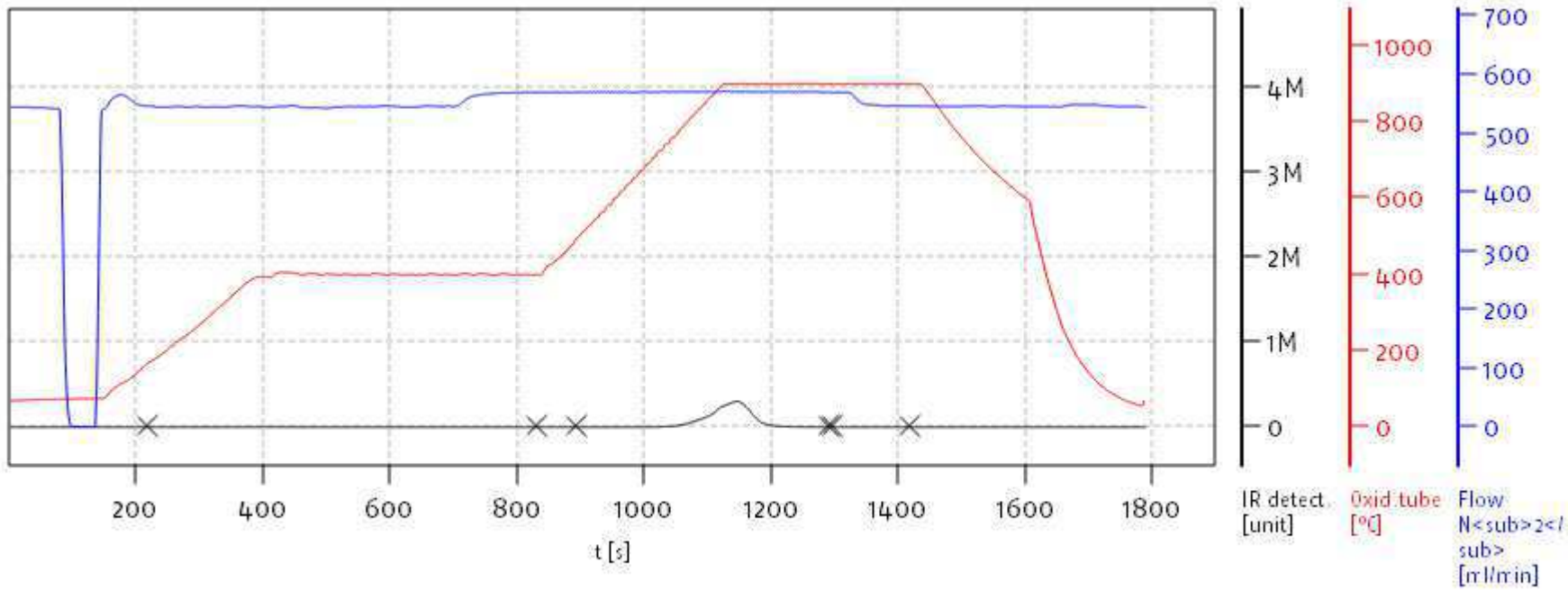
Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SLE0270-CALE	200.00	0.0100	CARBON	5/17/2023 7:18 PM	bl,C1u,C2u	0.008	4 408	0.667	0.003	771	832 670	0.006	0.658	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

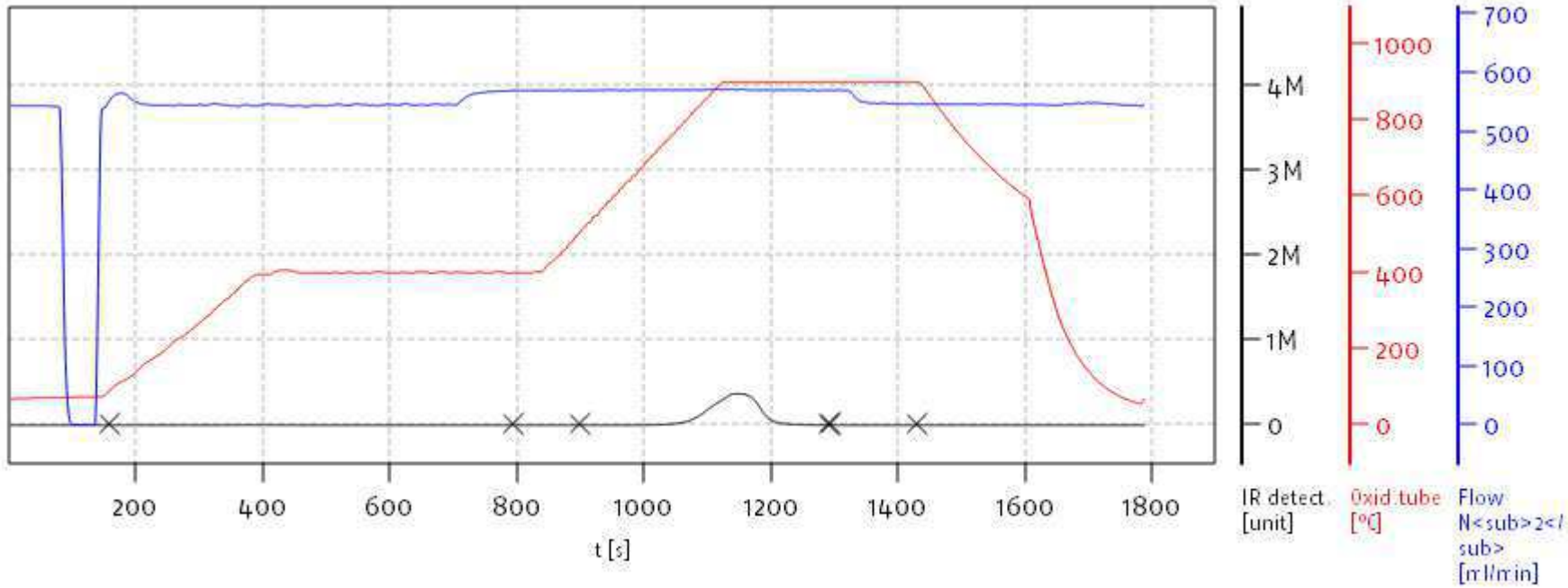
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SLE0270-CALF	200.00	0.0150	CARBON	5/17/2023 7:48 PM	bl,C1u,C2u	0.012	8 494	0.984	0.003	1 464	1 230 304	0.009	0.972	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

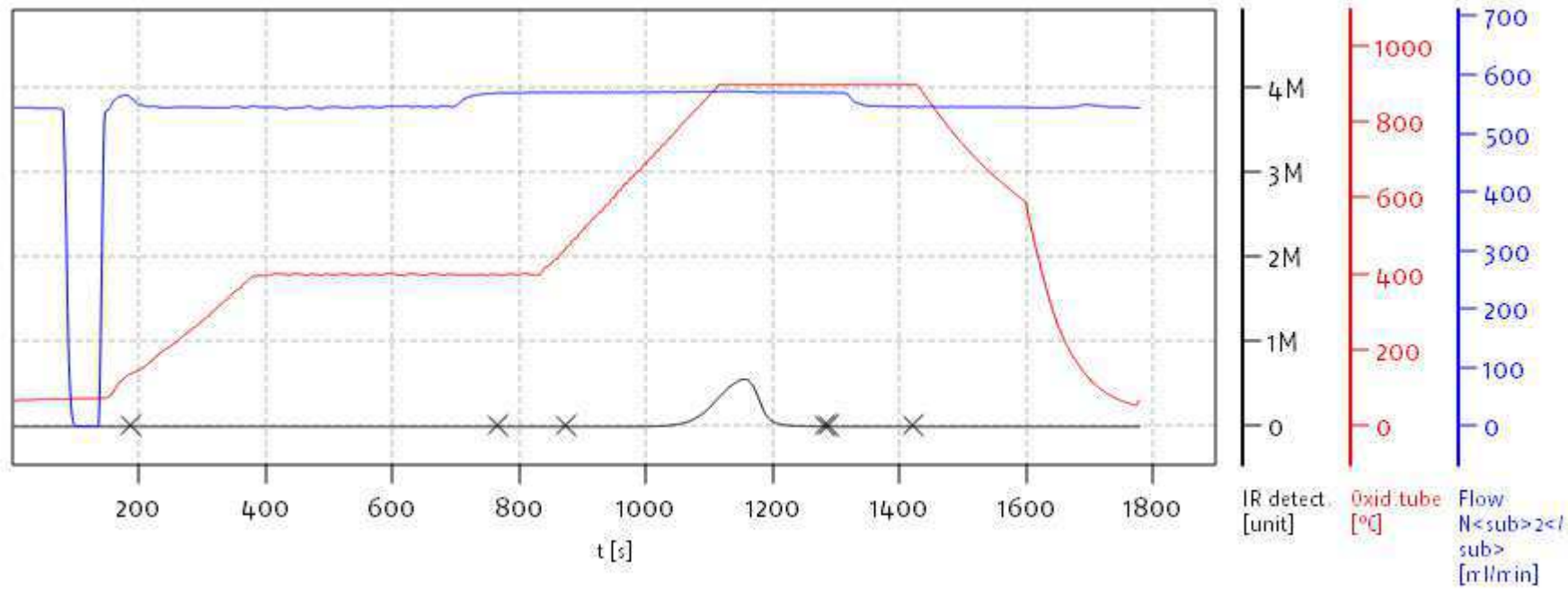
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	SLE0270-CALG	200.00	0.0200	CARBON	5/17/2023 8:18 PM	bl,C1u,C2u	0.010	5 359	1.331	0.004	1 864	1 673 425	0.006	1.321	1.0000	1.0000



Name:

Access: soliTOC superuser

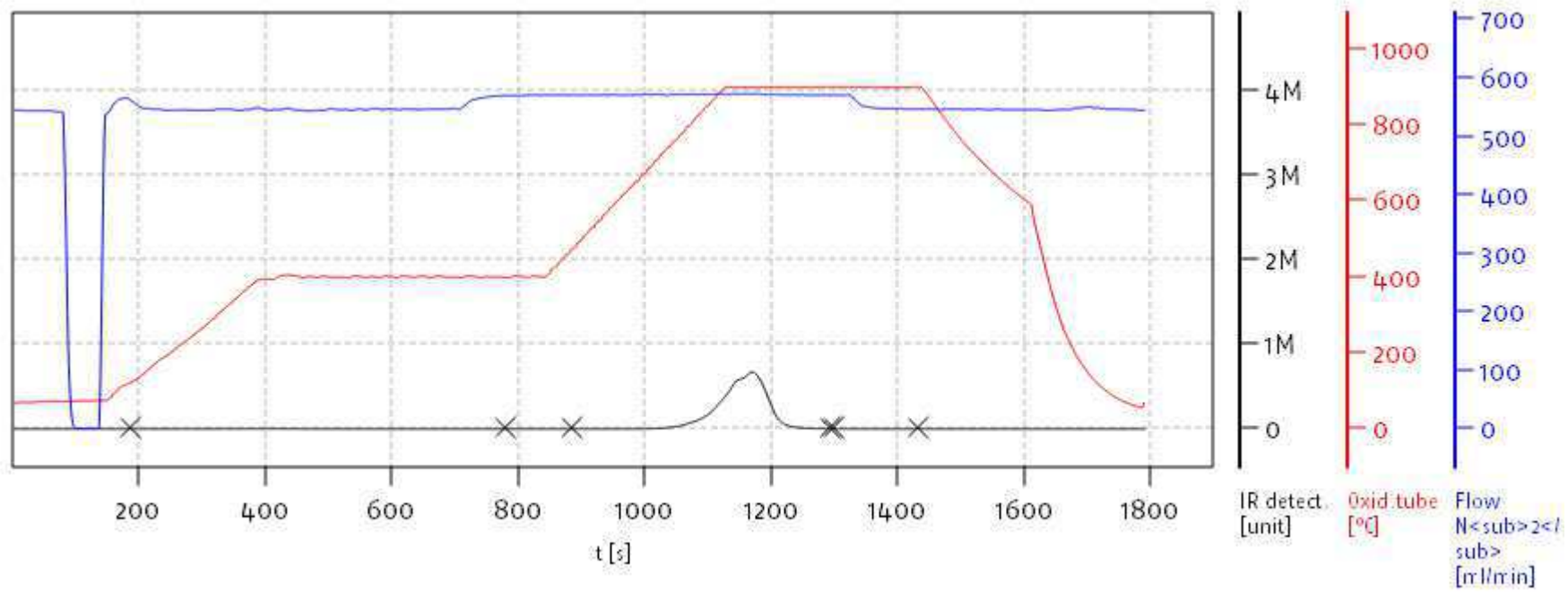
Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	SLE0270-CALH	200.00	0.0250	CARBON	5/17/2023 8:48 PM	bl,C2u	0.015	11 407	1.659	0.004	2 280	2 083 004	0.011	1.644	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

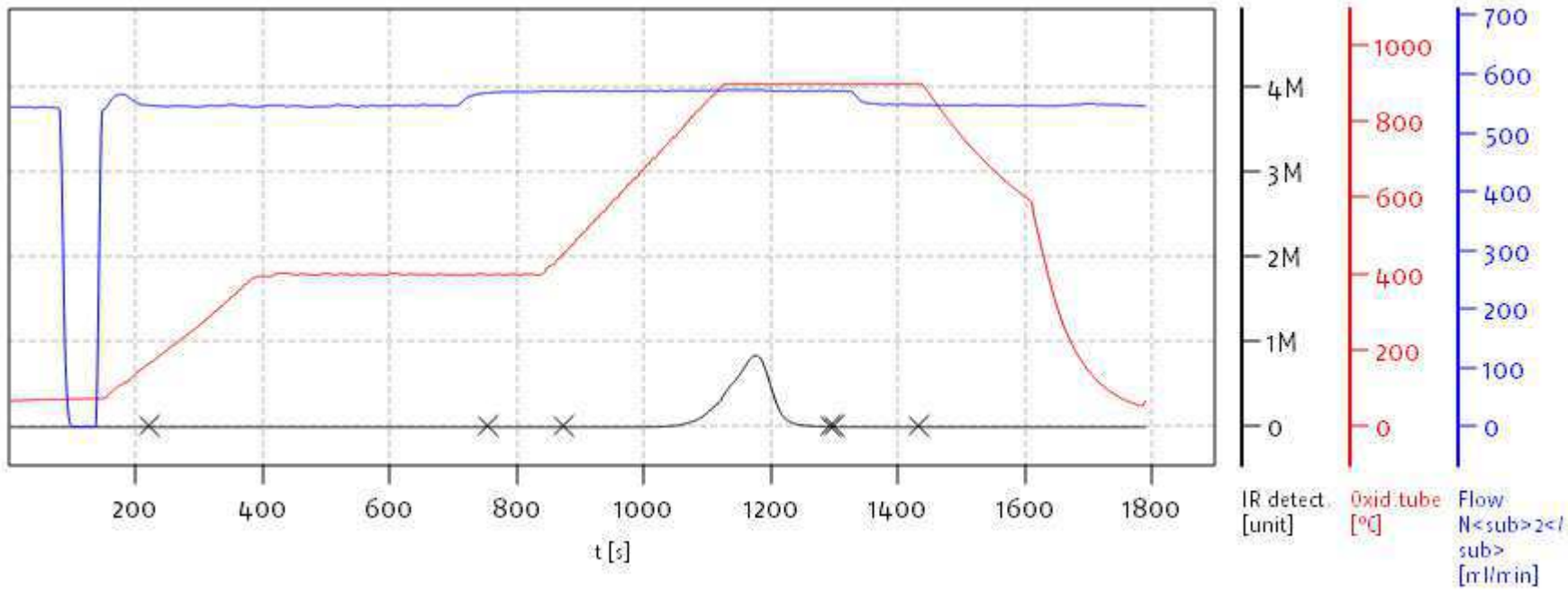
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	SLE0270-CALI	200.00	0.0300	CARBON	5/17/2023 9:19 PM	bl,C1u,C2u	0.009	2 781	1.981	0.005	3 895	2 498 427	0.004	1.971	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

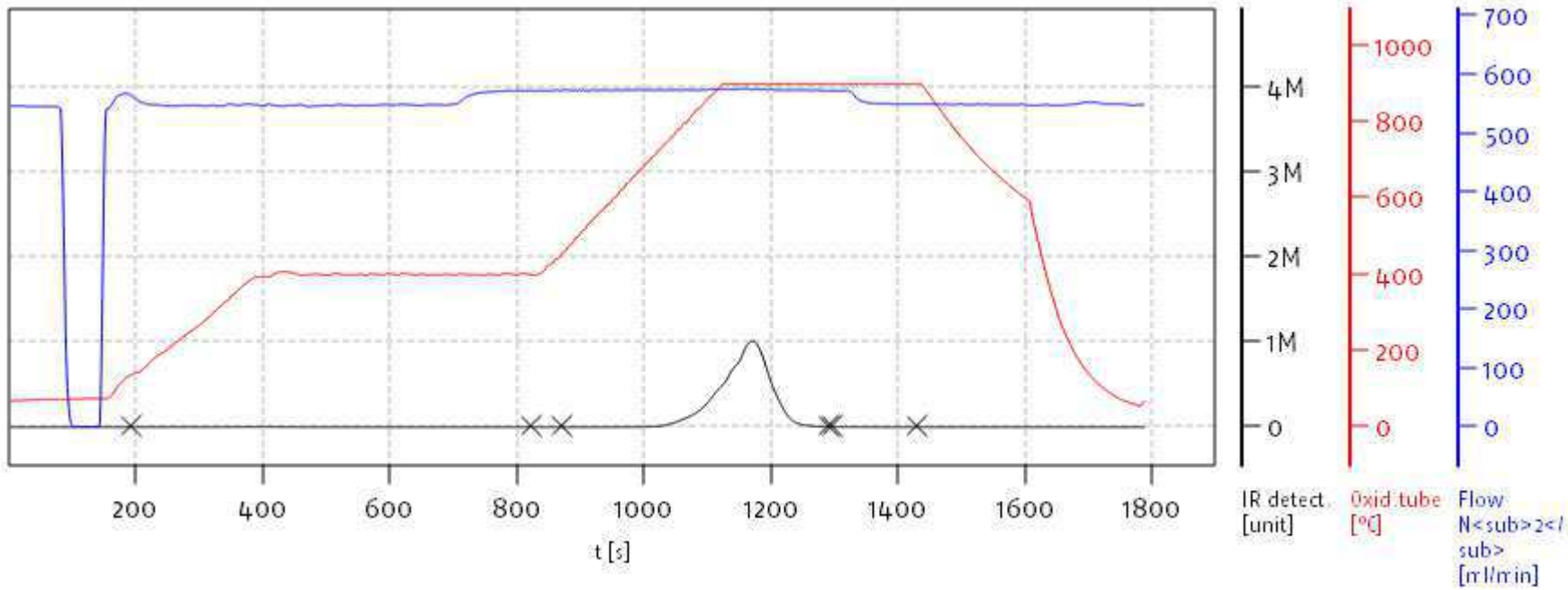
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	SLE0270-CALJ	200.00	0.0400	CARBON	5/17/2023 9:49 PM	bl,C2u	0.018	13 295	2.629	0.006	4 807	3 309 588	0.013	2.611	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

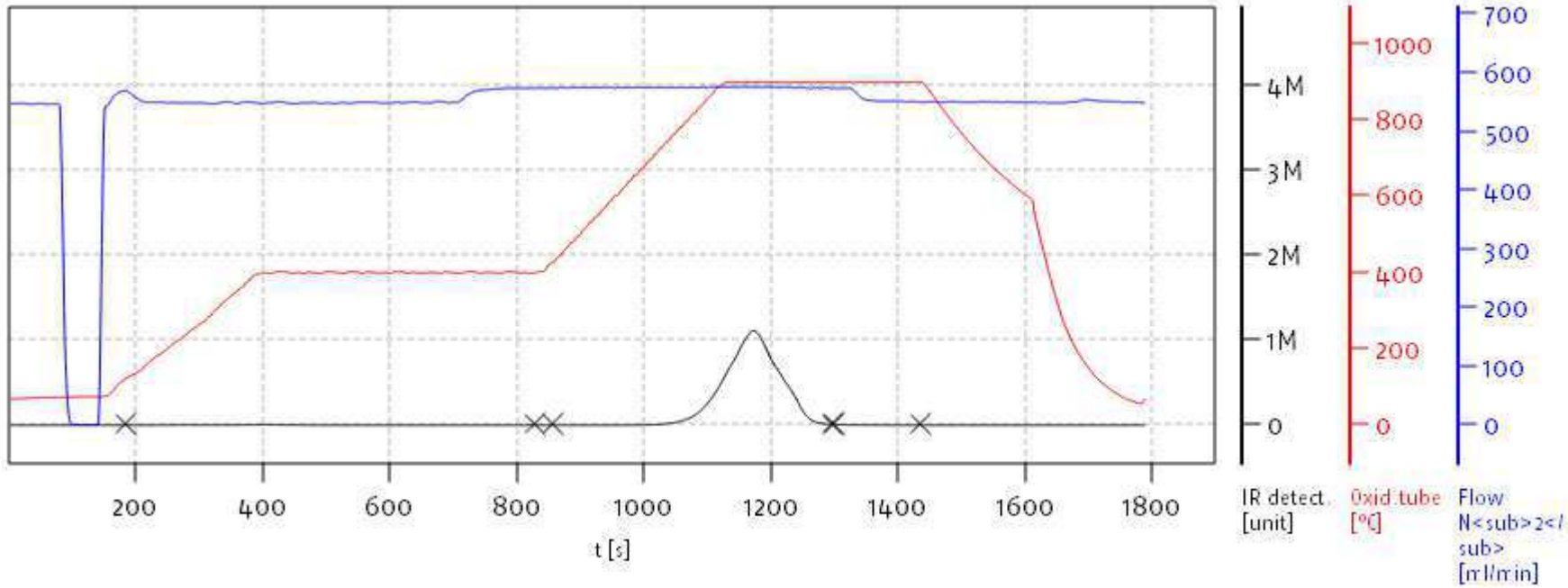
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	SLE0270-CALK	200.00	0.0500	CARBON	5/17/2023 10:19 PM	bl	0.031	25 022	3.285	0.009	9 148	4 126 050	0.022	3.254	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

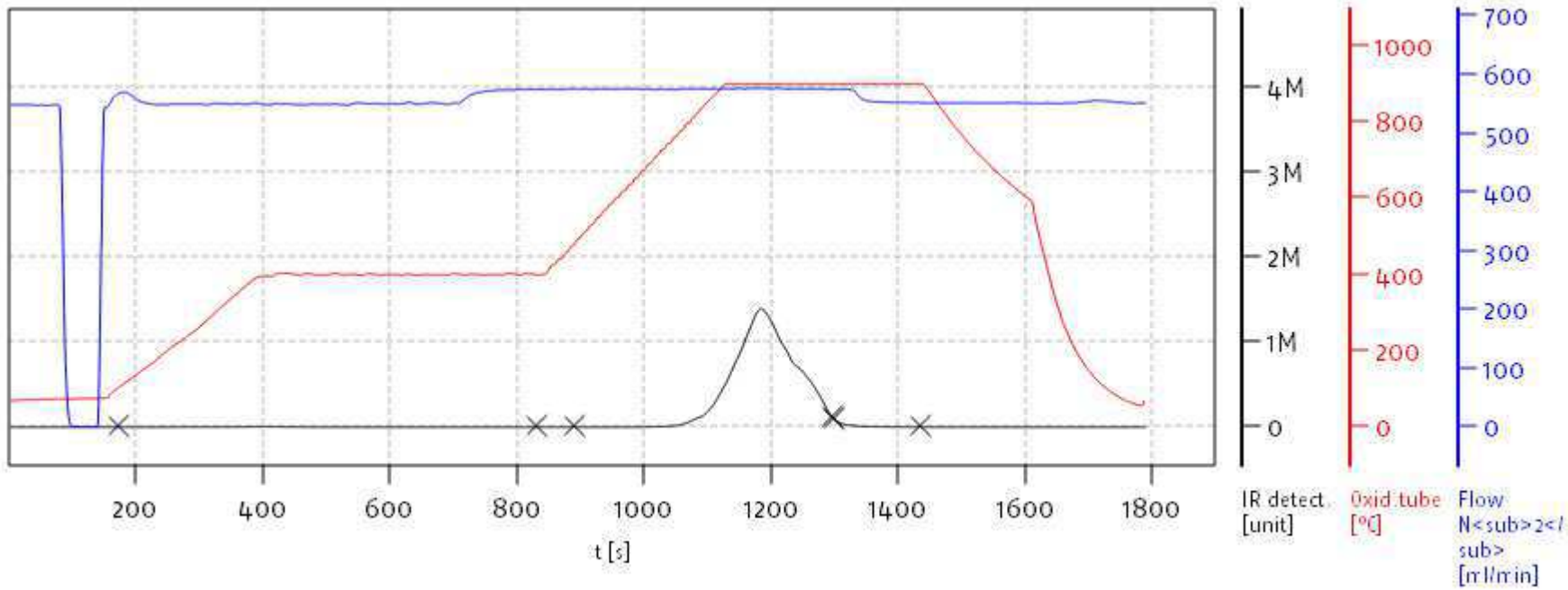
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	SLE0270-CALL	200.00	0.0700	CARBON	5/17/2023 10:49 PM	bl	0.069	21 598	4.597	0.050	60 794	5 741 652	0.019	4.528	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

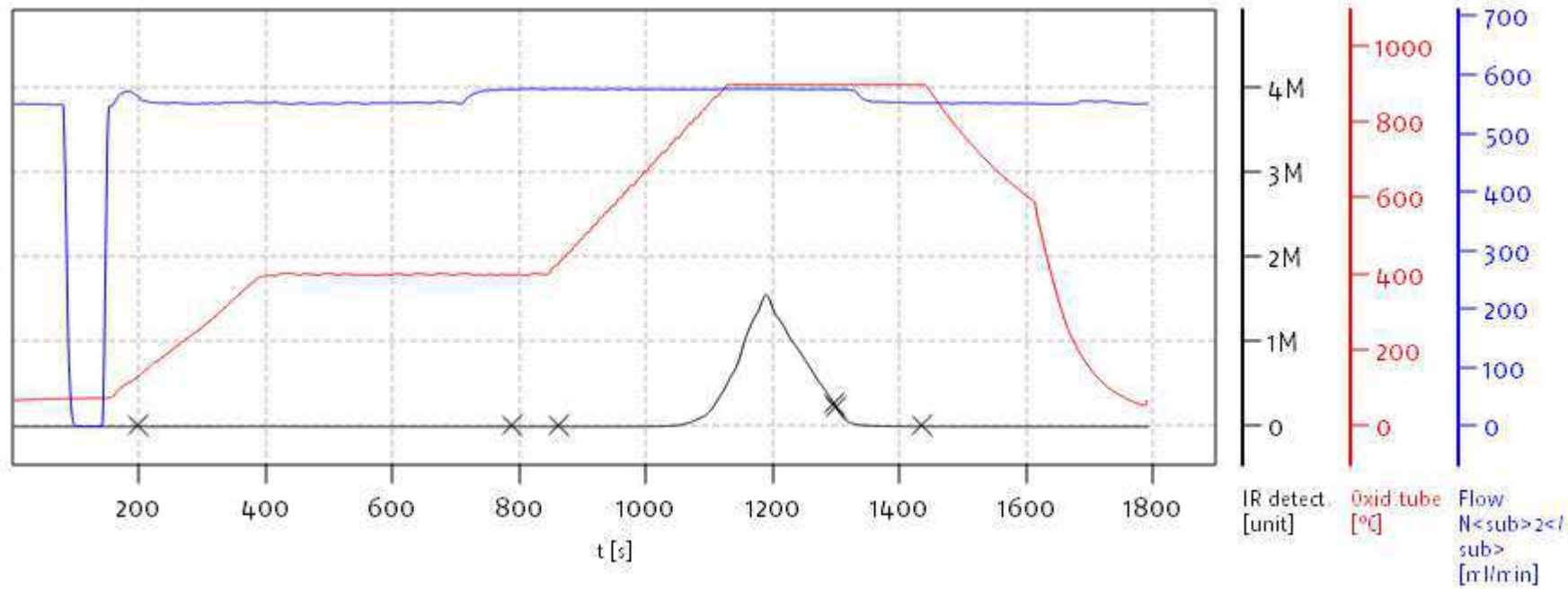
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	SLE0270-CALM	200.00	0.0800	CARBON	5/17/2023 11:19 PM	bl,C1u	0.112	5 408	5.212	0.106	131 494	6 467 914	0.006	5.100	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

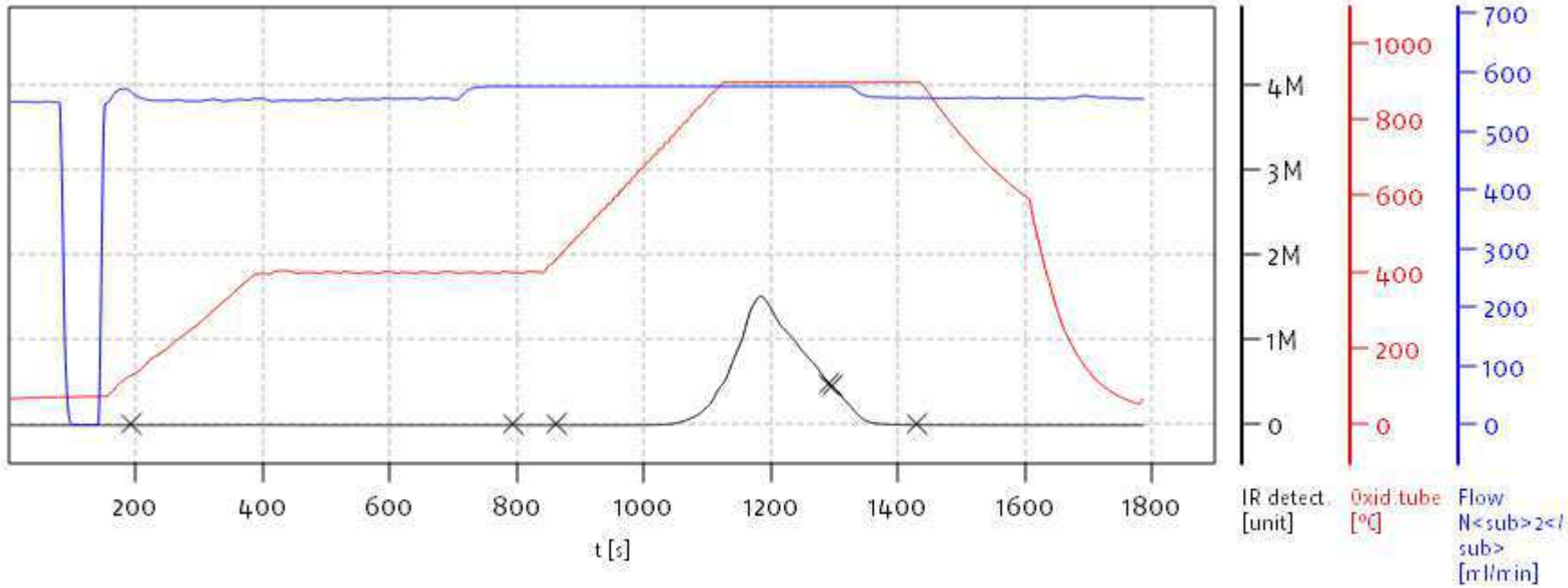
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	SLE0270-CALN	200.00	0.0900	CARBON	5/17/2023 11:50 PM	bl	0.408	8 745	5.832	0.399	503 842	6 879 212	0.009	5.424	1.0000	1.0000



Name:

Access: soliTOC superuser

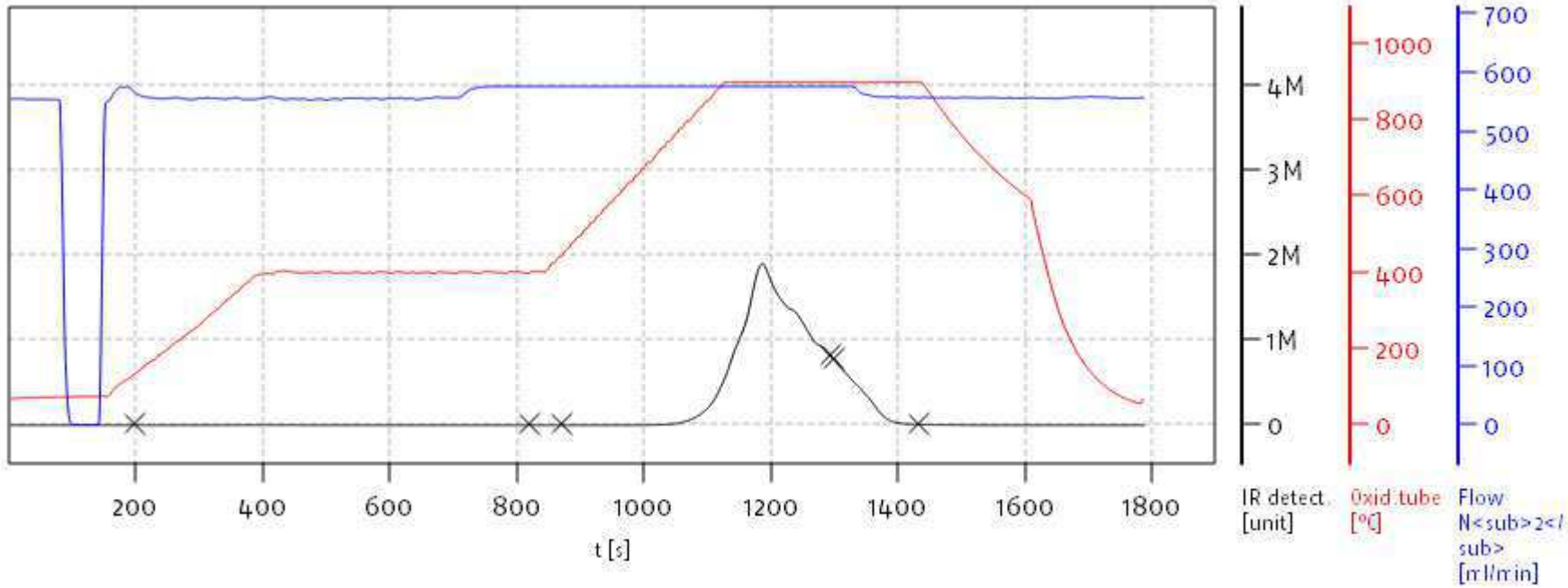
Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	SLE0270-CALO	200.00	0.1200	CARBON	5/18/2023 12:20 AM	bl,C1u	1.074	6 993	7.759	1.066	1 350 231	8 478 912	0.008	6.685	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

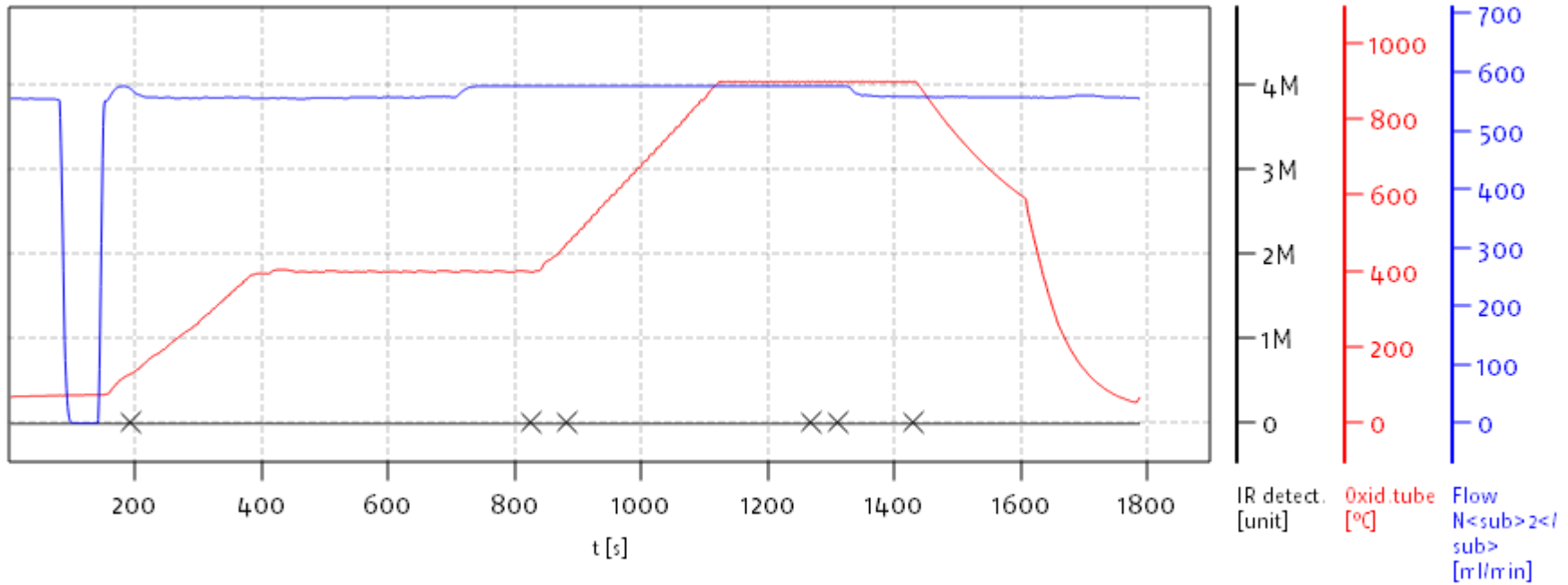
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		CARBON	5/ 18/2023 12:50 AM	bl	0.000	5 379	0.000	0.000	0	959	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

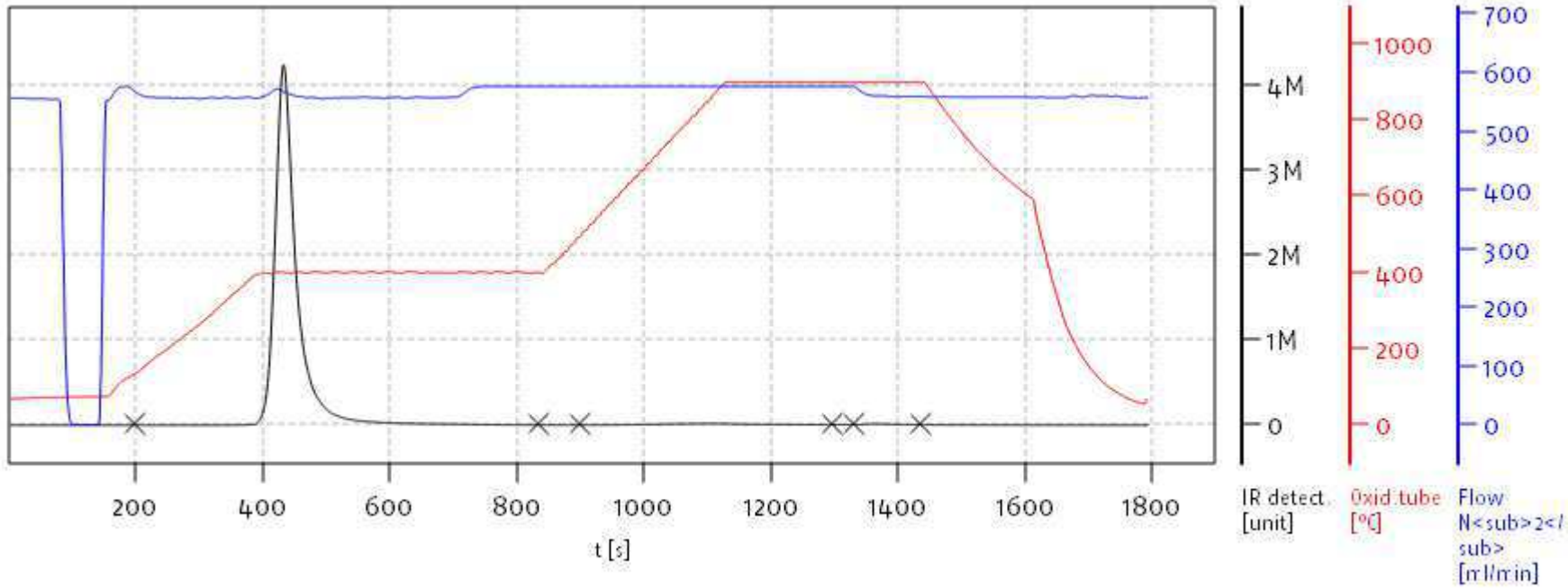
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
28	28	Dfactor	21.70		CARBON	5/18/2023 1:20 AM	bl	44.736	6 218 209	45.755	0.291	37 376	137 647	44.446	1.019	0.9835	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

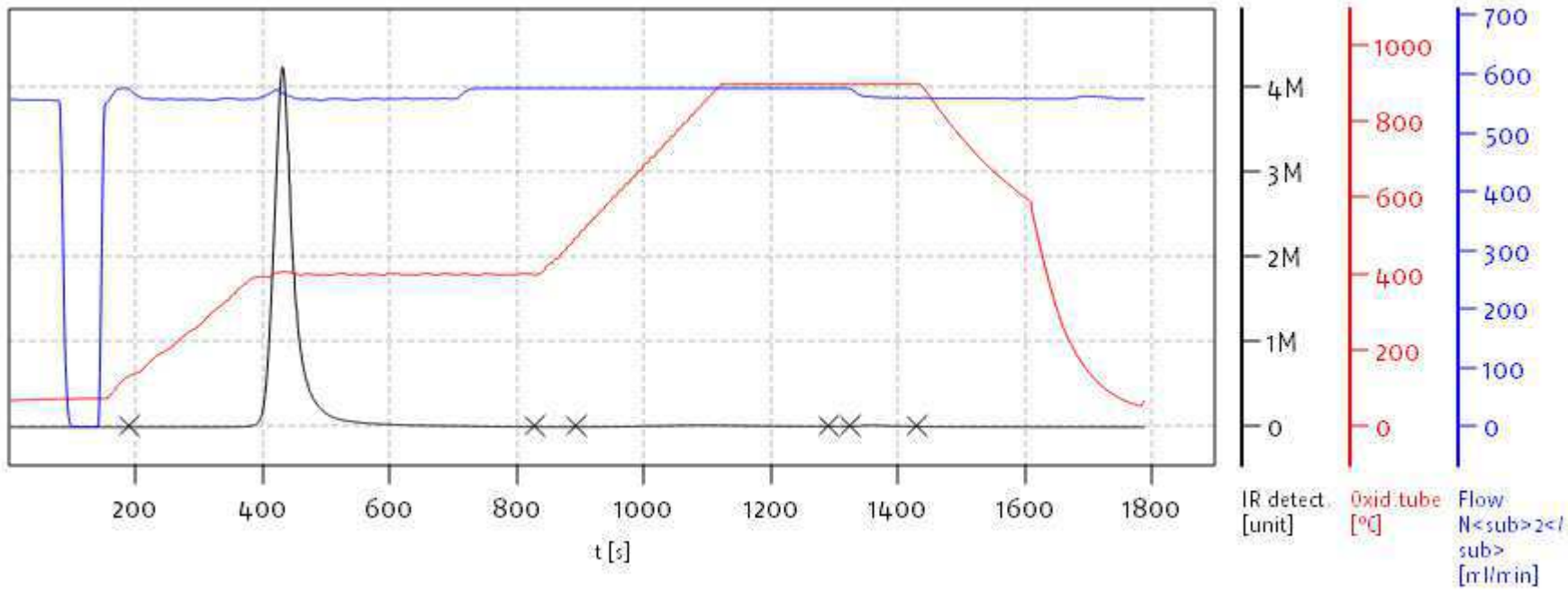
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	Dfactor	21.20		CARBON	5/18/2023 1:50 AM	bl	44.824	6 030 884	46.116	0.378	48 254	171 095	44.446	1.292	0.9907	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

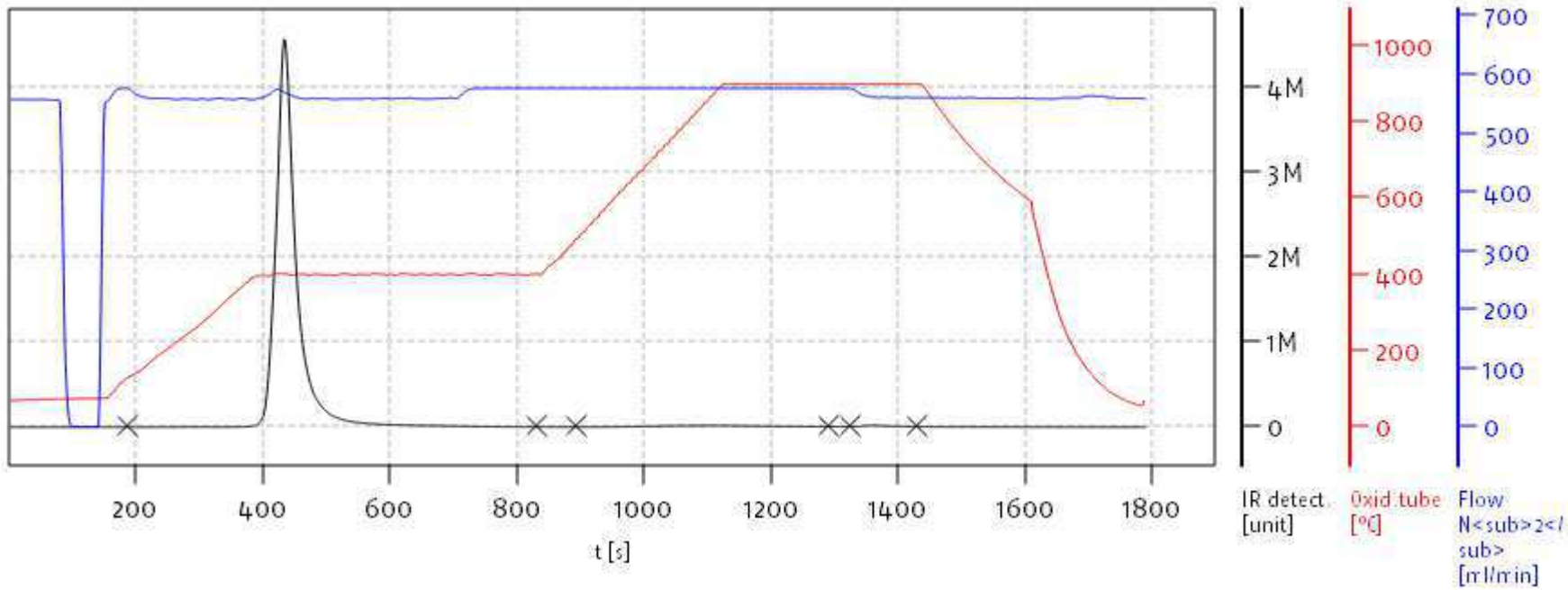
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	SLE0270-ICV1	22.30		CARBON	5/18/2023 2:21 AM	bl	44.949	6 392 325	46.022	0.327	43 597	149 127	44.622	1.073	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

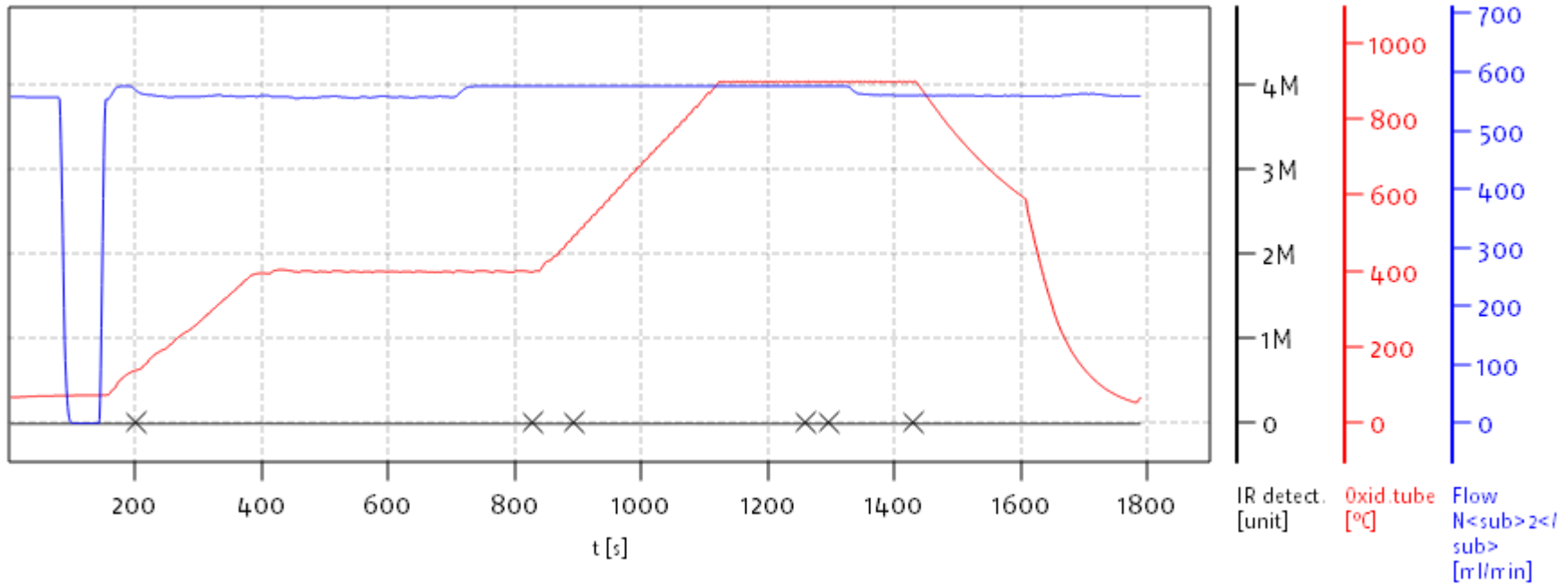
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	SLE0270-ICB1	530.50		CARBON	5/18/2023 2:51 AM	bl,C1u,C3u,C2u	0.003	6 198	0.005	0.001	198	1 900	0.003	0.001	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

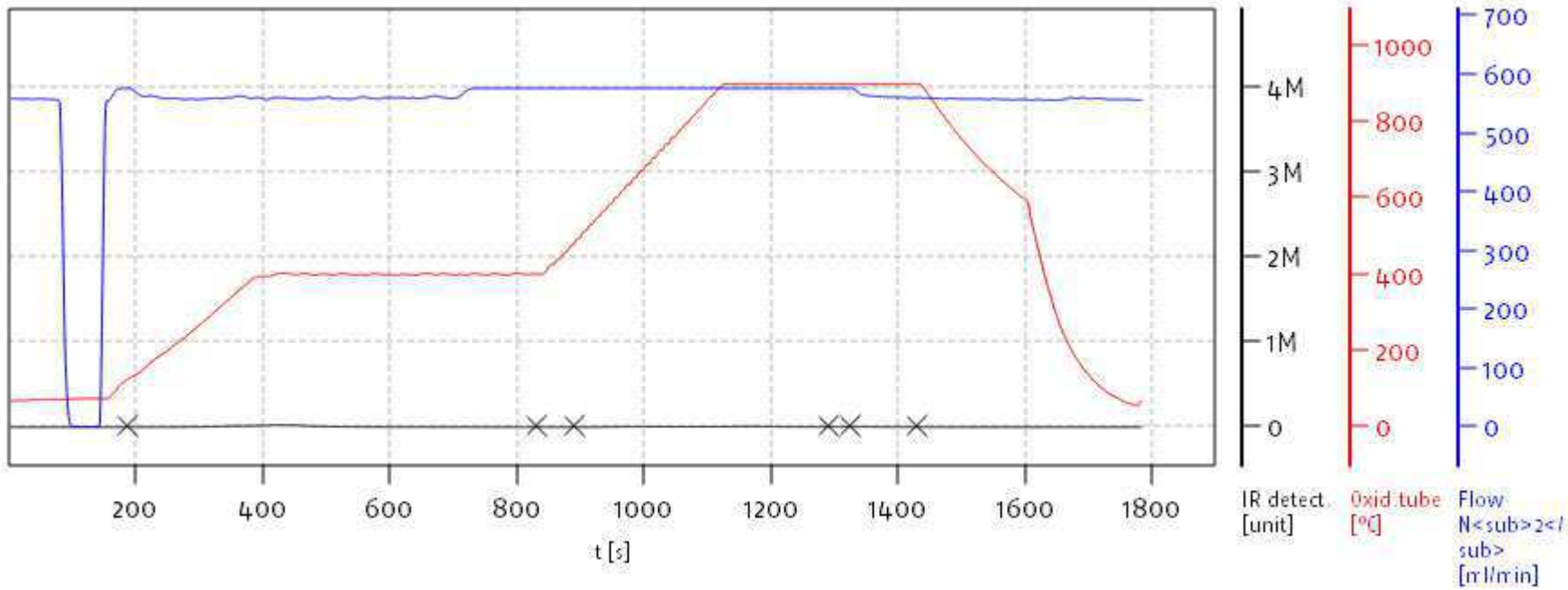
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	23D0491-10	42.50		CARBON	5/18/2023 3:21 AM	bl	0.560	138 129	0.841	0.044	9 353	73 148	0.515	0.281	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

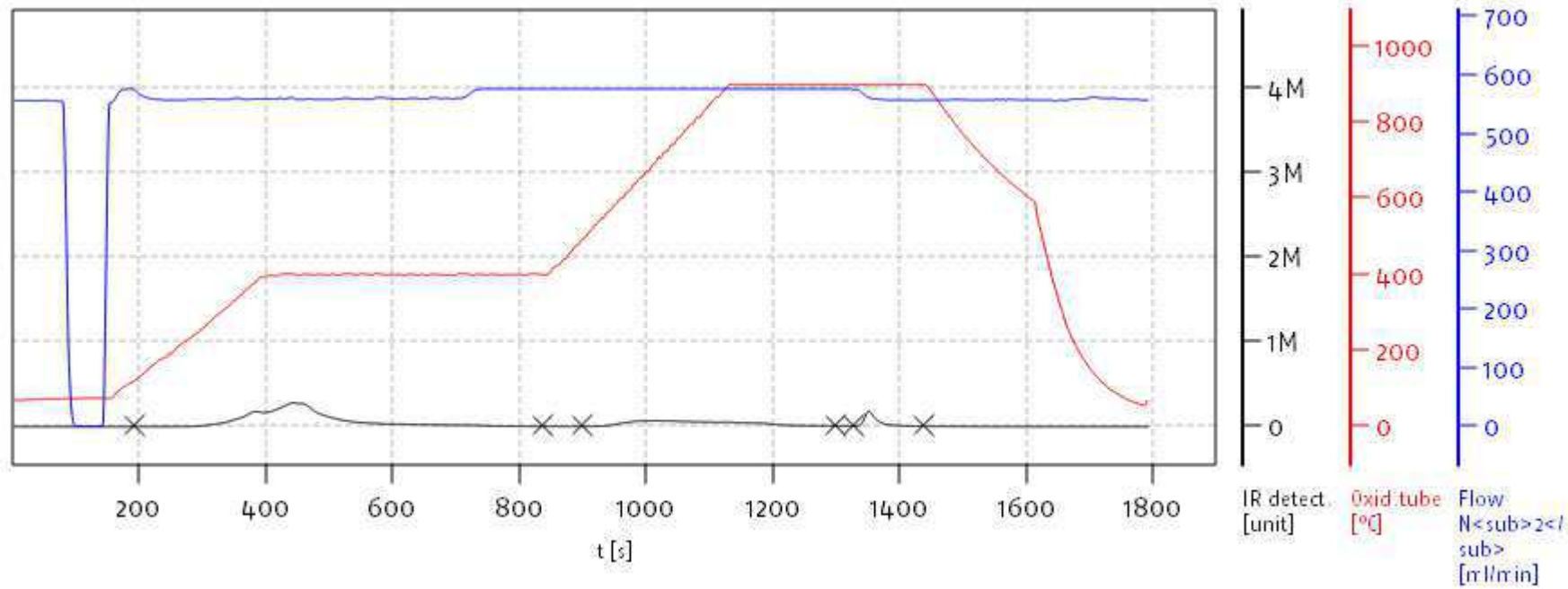
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	23D0491-10RE1	505.50		CARBON	5/18/2023 3:51 AM	bl	0.513	1 489 627	0.692	0.054	169 645	569 728	0.459	0.178	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

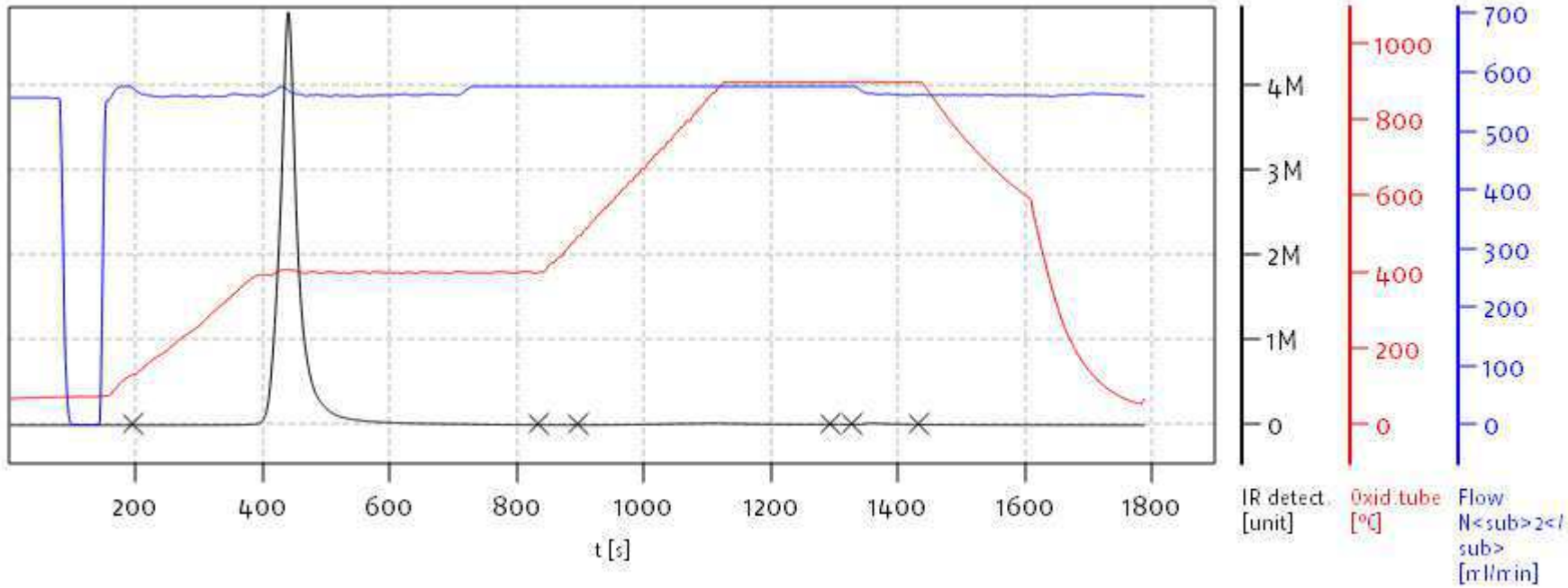
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	SLE0270-CCV1	22.20		CARBON	5/18/2023 4:21 AM	bl	44.616	6 309 271	45.769	0.375	50 146	159 806	44.241	1.153	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

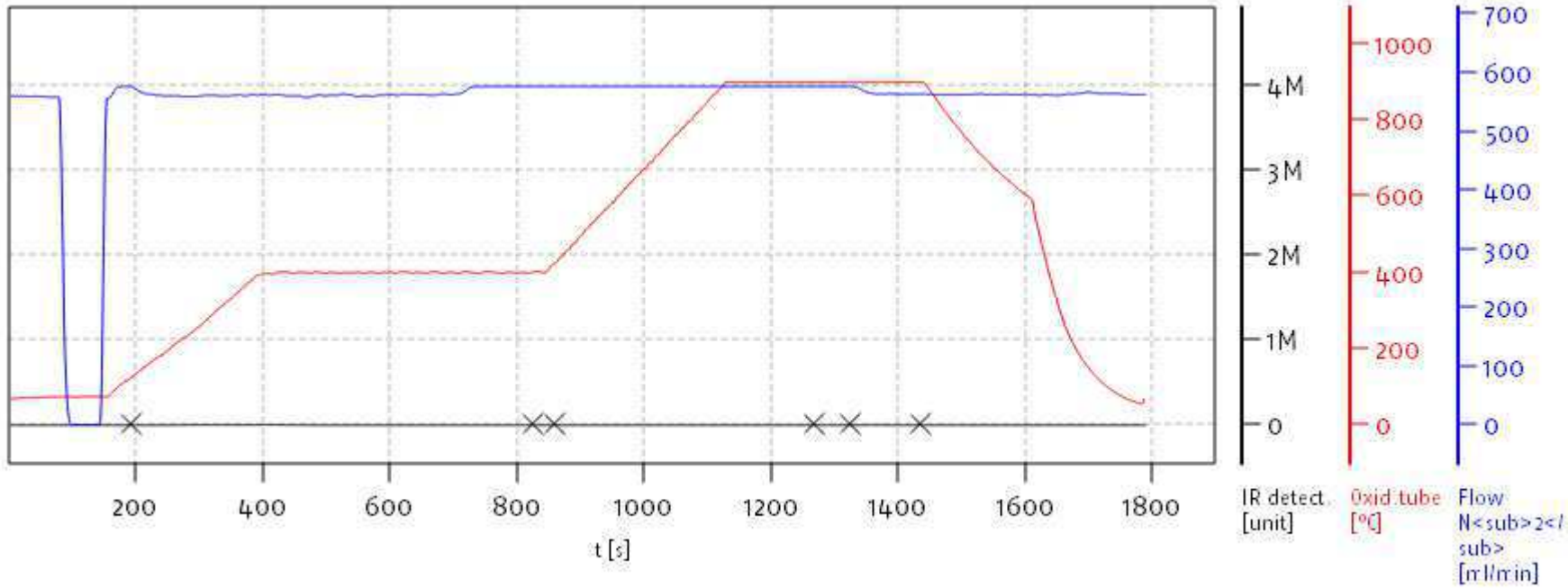
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	SLE0270-CCB1	523.30		CARBON	5/18/2023 4:52 AM	bl,C3u,C2u	0.009	22 128	0.010	0.001	2 335	2 184	0.007	0.001	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

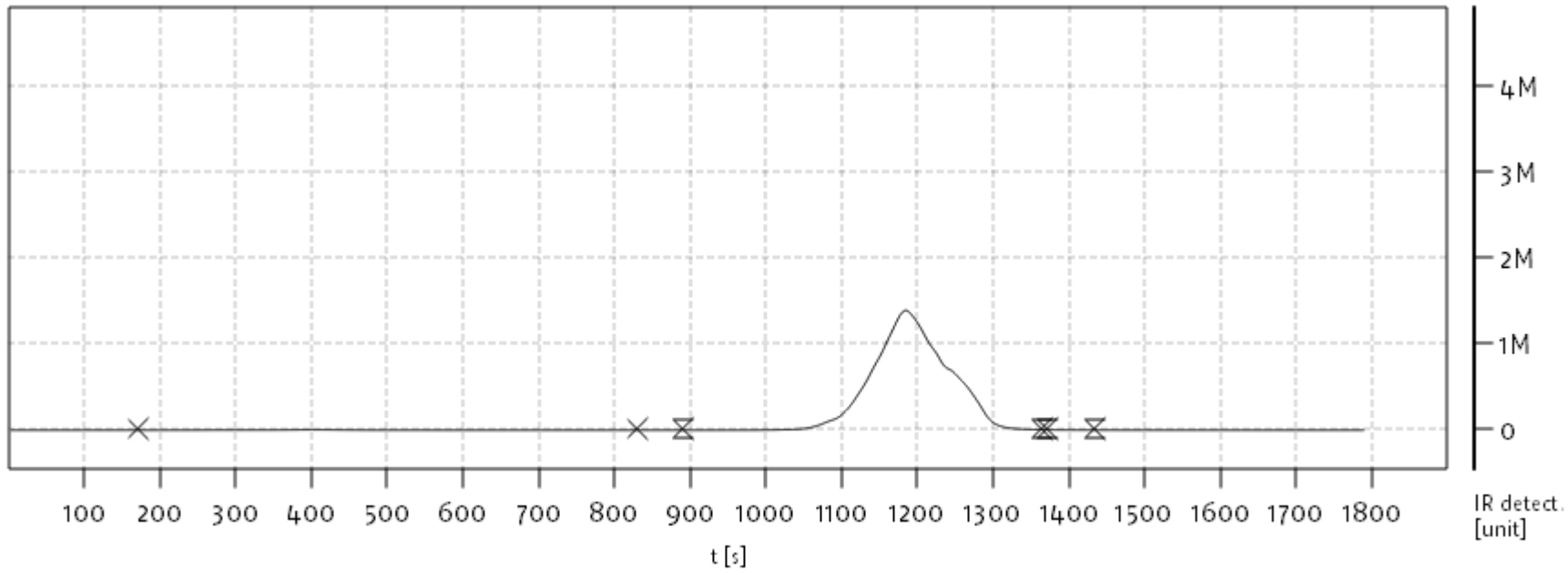
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	SLE0270-CALL	200.00	0.0700	CARBON	5/18/2023 9:47 AM	bl	0.019	21 598	4.386	0.000	**0**	**5 538 028**	0.019	4.367	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:50:12 2023

elementar
EXCELLENCE IN ELEMENTS

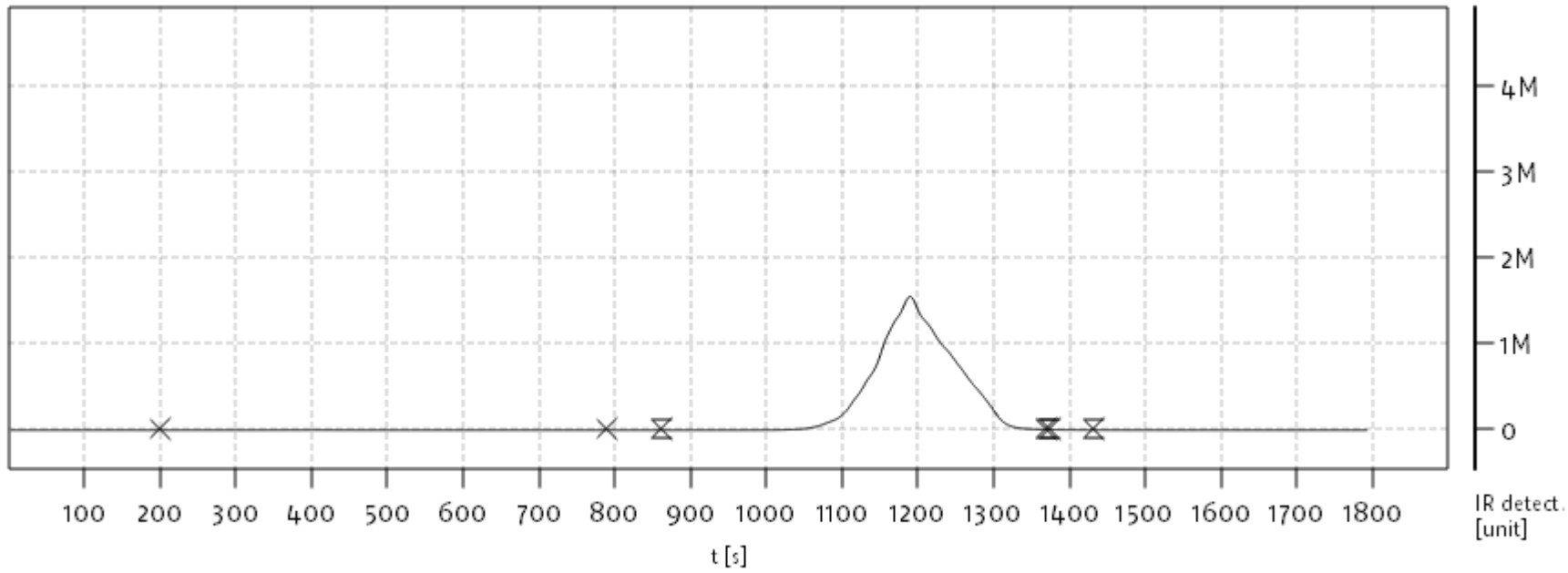
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	SLE0270-CALM	200.00	0.0800	CARBON	5/18/2023 9:48 AM	bl,C1u	0.006	5 408	4.784	0.000	**0**	**6 058 878**	0.006	4.778	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:50:12 2023

elementar
EXCELLENCE IN ELEMENTS

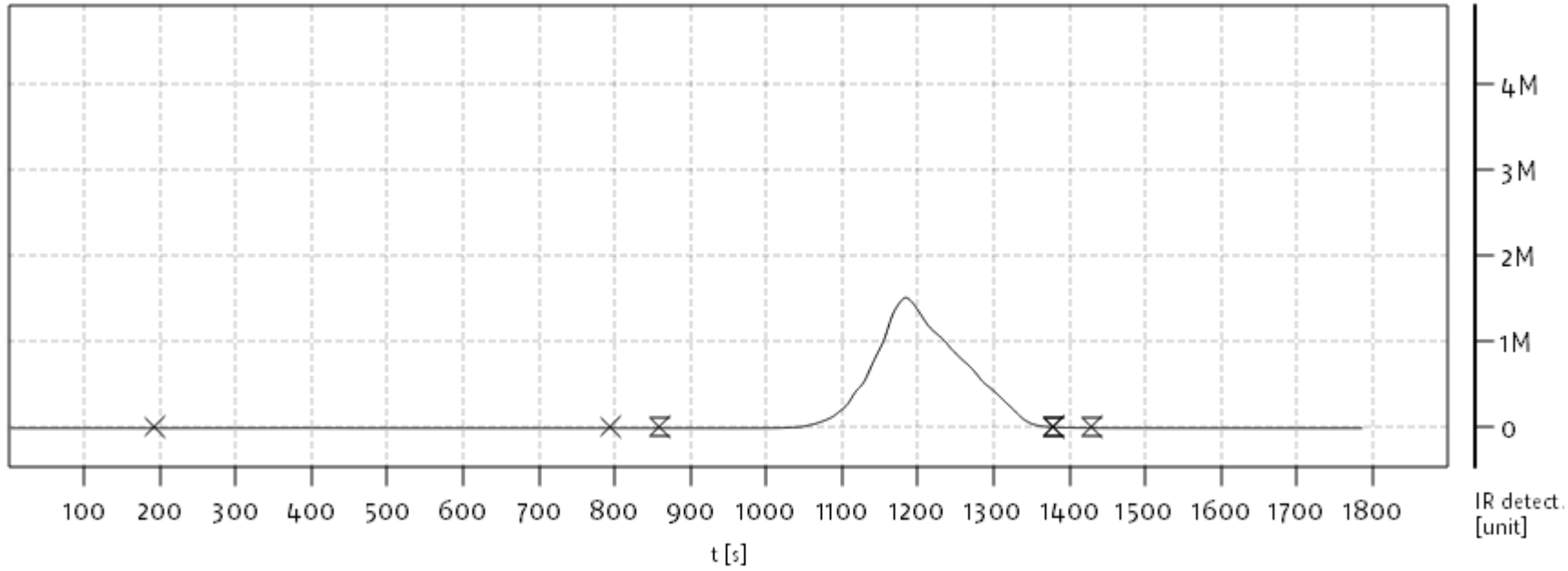
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	SLE0270-CALN	200.00	0.0900	CARBON	5/18/2023 9:49 AM	bl	0.009	8 745	5.379	0.000	**0**	**6 810 985**	0.009	5.370	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:50:12 2023

elementar
EXCELLENCE IN ELEMENTS

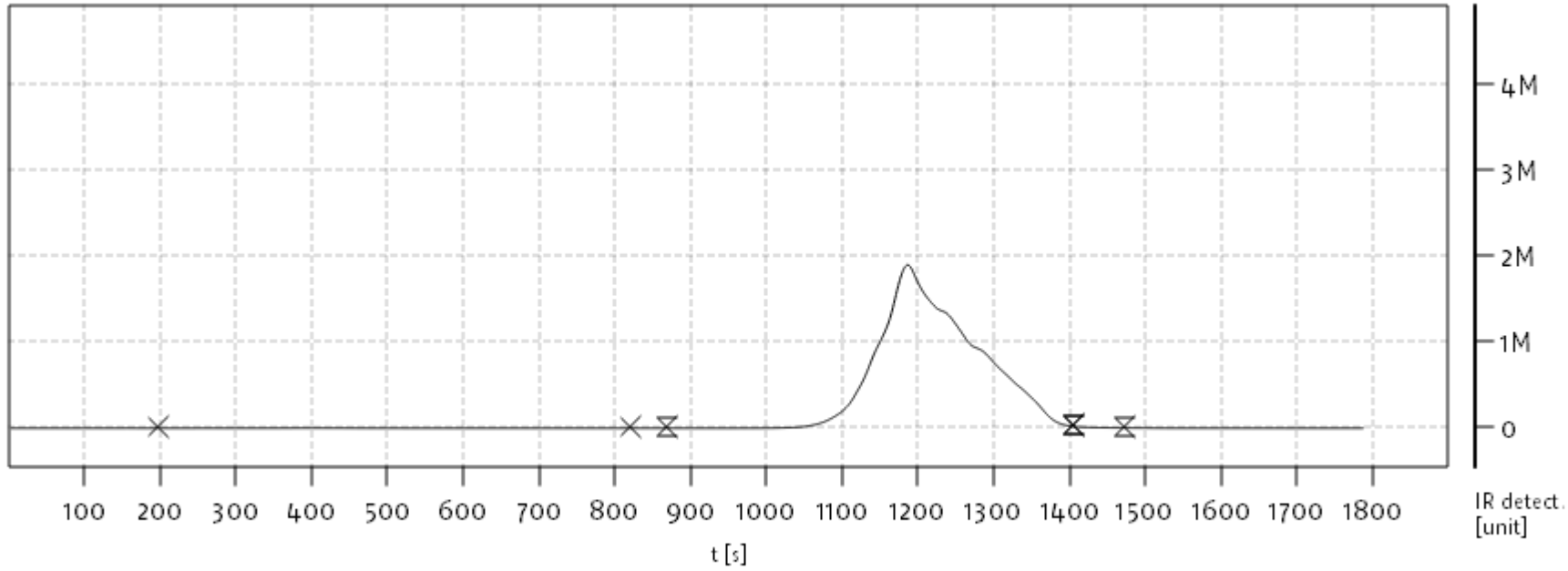
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	SLE0270-CALO	200.00	0.1200	CARBON	5/18/2023 9:49 AM	bl,C1u,C3o	0.008	6 993	7.291	0.000	0	9 238 066	0.008	7.283	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:50:12 2023

elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

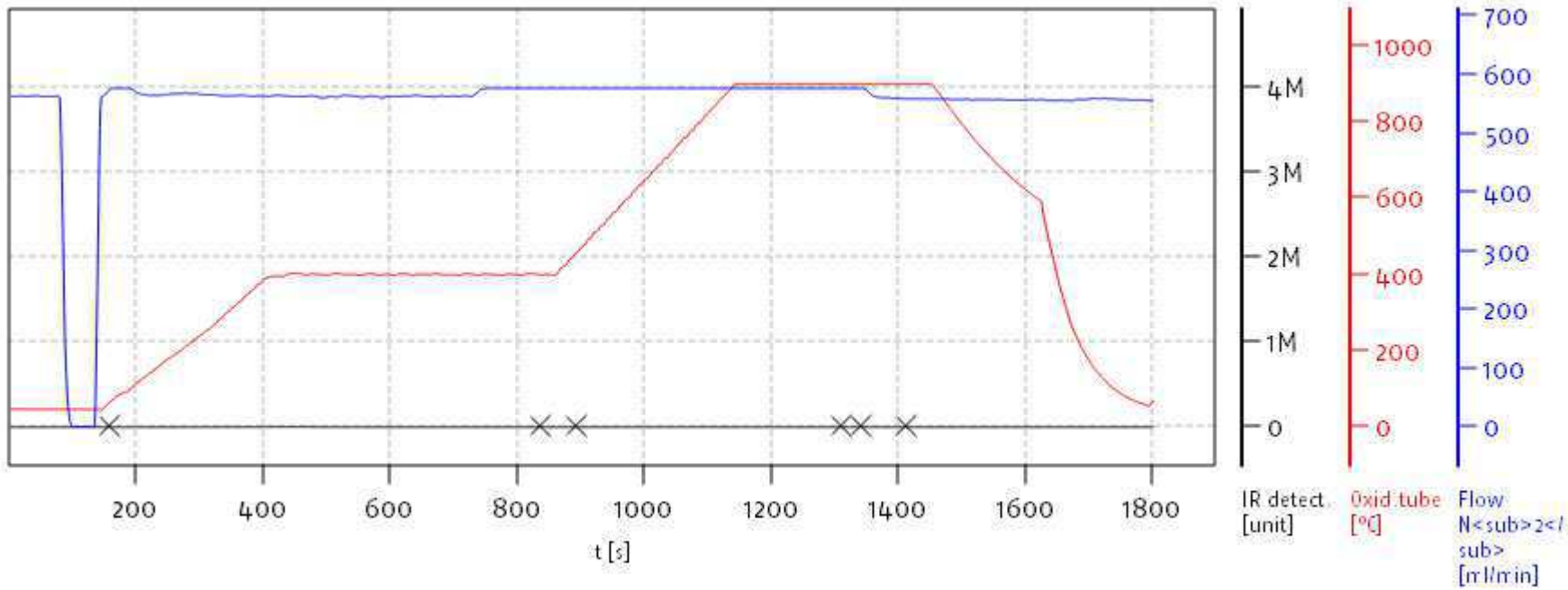
Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0283
Instrument: TOC Cube
Calibration: GE00052

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLF0283-ICV1	CubeData_06232023@1311-003	NA	06/20/23 17:22
Initial Cal Blank	SLF0283-ICB1	CubeData_06232023@1311-004	NA	06/20/23 17:53
MRL Check	BLF0522-MRL1	CubeData_06232023@1311-005	Solid	06/20/23 18:23
MRL Check	BLF0523-MRL1	CubeData_06232023@1311-006	Solid	06/20/23 18:53
Blank	BLF0522-BLK1	CubeData_06232023@1311-009	Solid	06/20/23 20:23
Blank	BLF0523-BLK1	CubeData_06232023@1311-010	Solid	06/20/23 20:53
LCS	BLF0522-BS1	CubeData_06232023@1311-013	Solid	06/20/23 22:23
LCS	BLF0523-BS1	CubeData_06232023@1311-014	Solid	06/20/23 22:53
Calibration Check	SLF0283-CCV1	CubeData_06232023@1311-015	NA	06/20/23 23:23
Calibration Blank	SLF0283-CCB1	CubeData_06232023@1311-016	NA	06/20/23 23:53
Calibration Check	SLF0283-CCV2	CubeData_06232023@1311-027	NA	06/21/23 05:25
Calibration Blank	SLF0283-CCB2	CubeData_06232023@1311-028	NA	06/21/23 05:55
Calibration Check	SLF0283-CCV3	CubeData_06232023@1311-039	NA	06/21/23 11:27
Calibration Blank	SLF0283-CCB3	CubeData_06232023@1311-040	NA	06/21/23 11:57
Calibration Check	SLF0283-CCV4	CubeData_06232023@1311-050	NA	06/21/23 17:30
Calibration Blank	SLF0283-CCB4	CubeData_06232023@1311-051	NA	06/21/23 18:00
LDW23-SS1811	23E0009-01	CubeData_06232023@1311-055	Solid	06/21/23 20:01
LDW23-SC1811	23E0009-02	CubeData_06232023@1311-056	Solid	06/21/23 20:32
LDW23-SS1805	23E0009-03	CubeData_06232023@1311-057	Solid	06/21/23 21:02
LDW23-SC1805	23E0009-04	CubeData_06232023@1311-058	Solid	06/21/23 21:32
LDW23-SS1800	23E0009-05	CubeData_06232023@1311-059	Solid	06/21/23 22:02
LDW23-SC1800	23E0009-06	CubeData_06232023@1311-060	Solid	06/21/23 22:32
LDW23-SS1820	23E0009-07	CubeData_06232023@1311-061	Solid	06/21/23 23:02
Calibration Check	SLF0283-CCV5	CubeData_06232023@1311-062	NA	06/21/23 23:32
Calibration Blank	SLF0283-CCB5	CubeData_06232023@1311-063	NA	06/22/23 00:02

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	6/ 20/2023 3:52 PM	bl	0.000	20 374	0.000	0.000	1 054	9 234	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

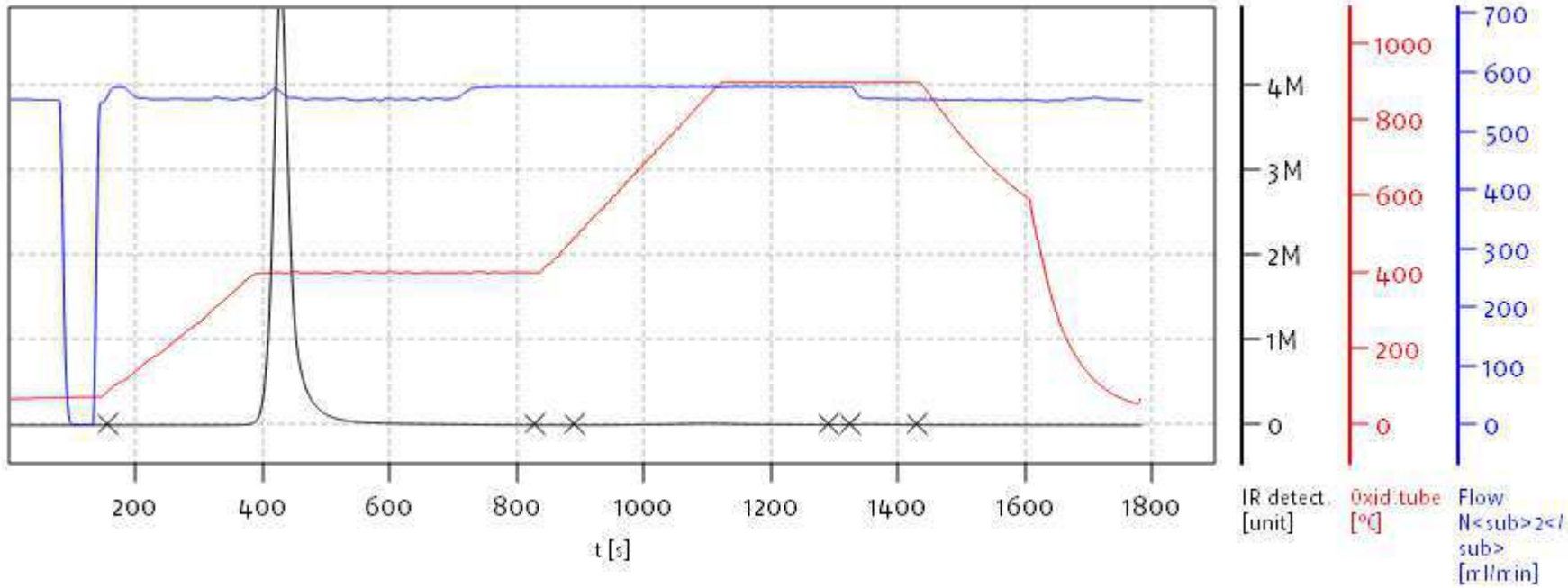
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	Dfactor	22.10		CARBON	6/20/2023 4:22 PM	bl	44.446	6 377 258	45.203	0.000	26 354	134 395	44.446	0.757	0.9755	1.0000



Name:

Access: soliTOC superuser

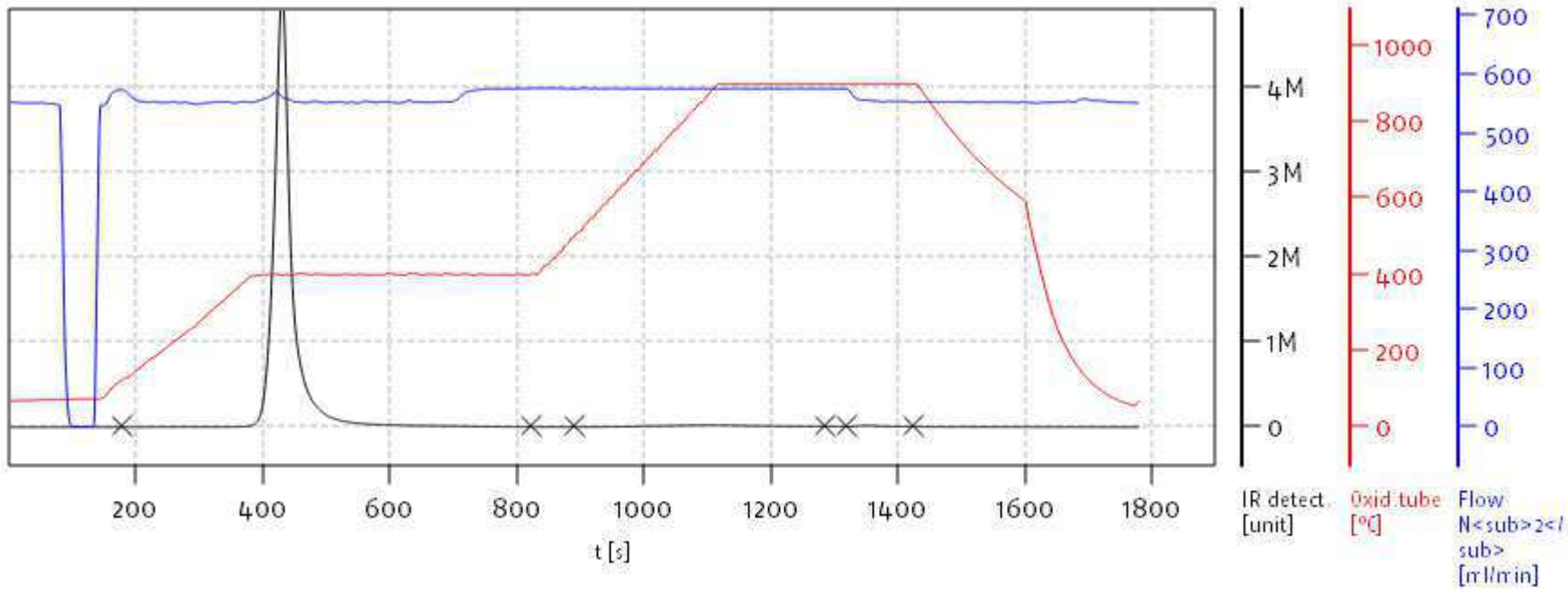
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	Dfactor	21.70		CARBON	6/20/2023 4:52 PM	bl	44.531	6 189 415	45.626	0.085	40 486	178 748	44.446	1.096	0.9870	1.0000



Name:

Access: soliTOC superuser

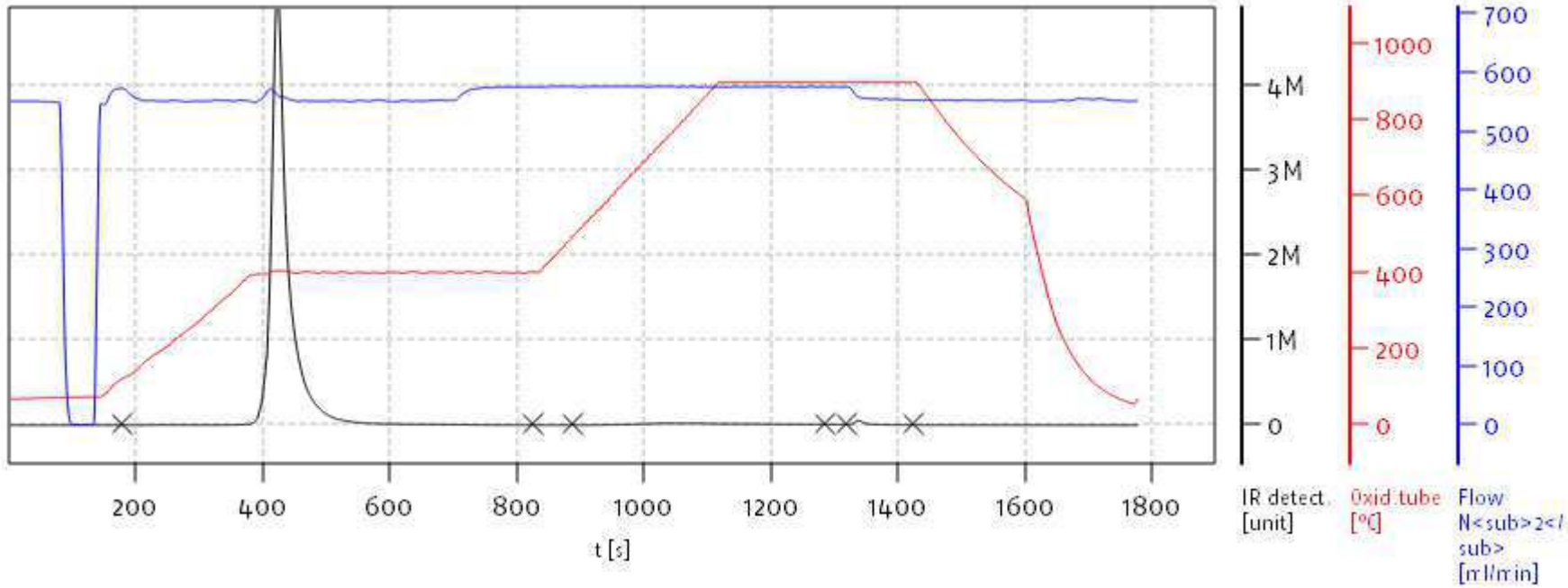
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SLF0283-ICV1	20.60		CARBON	6/20/2023 5:22 PM	bl	44.324	5 876 929	45.471	0.140	47 003	177 907	44.184	1.148	0.9813	1.0000



Name:

Access: soliTOC superuser

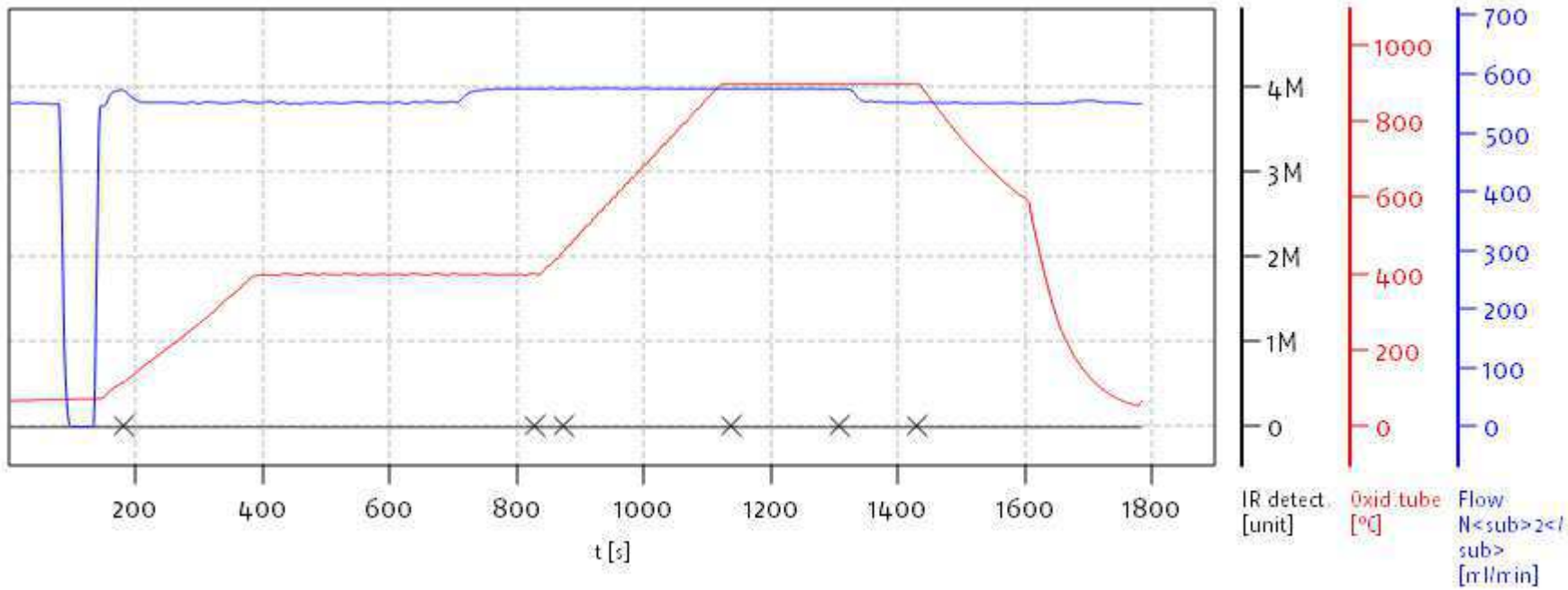
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SLF0283-ICB1	546.00		CARBON	6/20/2023 5:53 PM	bl,C1u,C3u,C2u	0.000	10 019	0.000	0.000	485	830	0.000	0.000	0.9813	1.0000



Name:

Access: soliTOC superuser

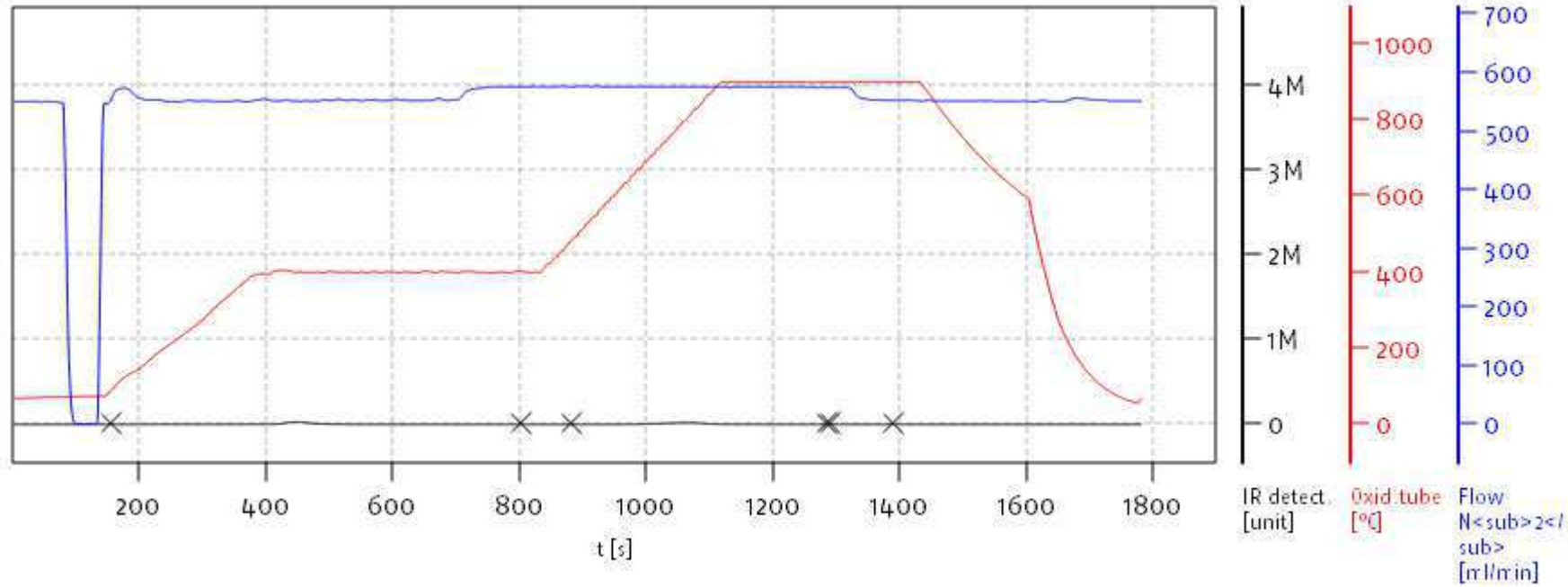
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	BLF0522-MRL1	518.00		CARBON	6/20/2023 6:23 PM	bl,C2u	0.011	66 529	0.022	0.000	1 286	63 200	0.011	0.011	0.9813	1.0000



Name:

Access: soliTOC superuser

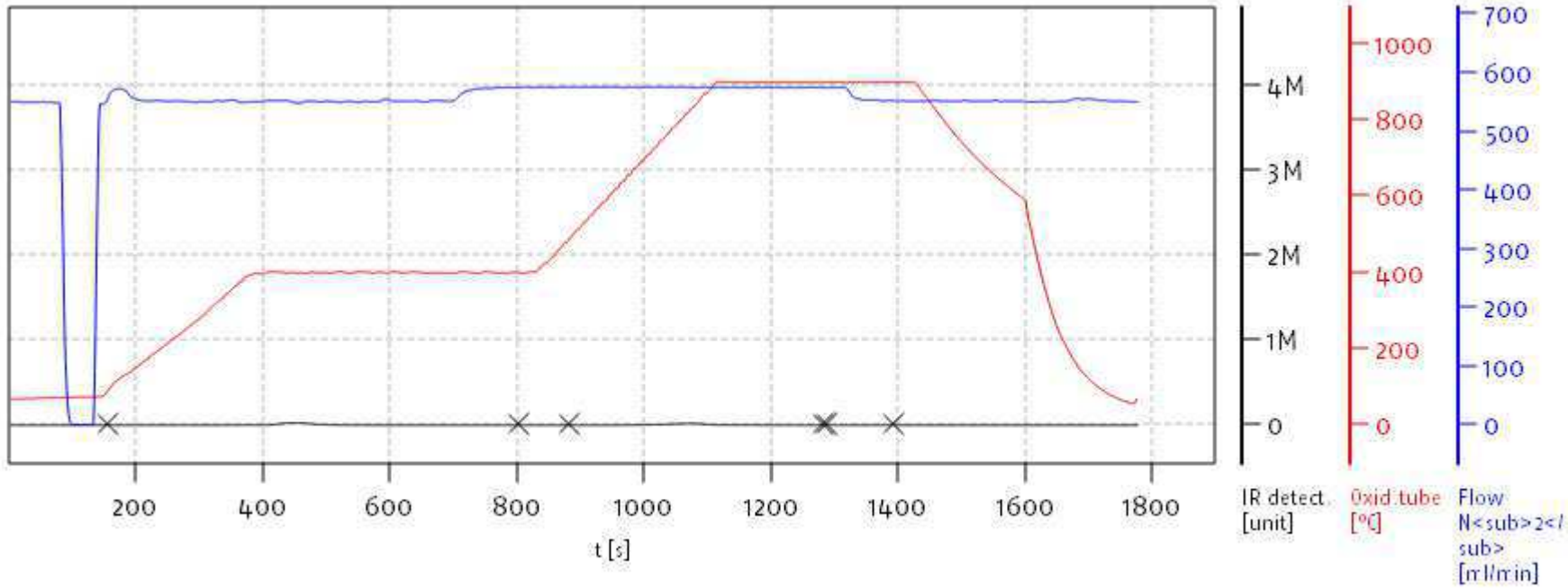
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	BLF0523-MRL1	521.40		CARBON	6/20/2023 6:53 PM	bl,C2u	0.012	67 940	0.021	0.000	1 217	59 838	0.012	0.009	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

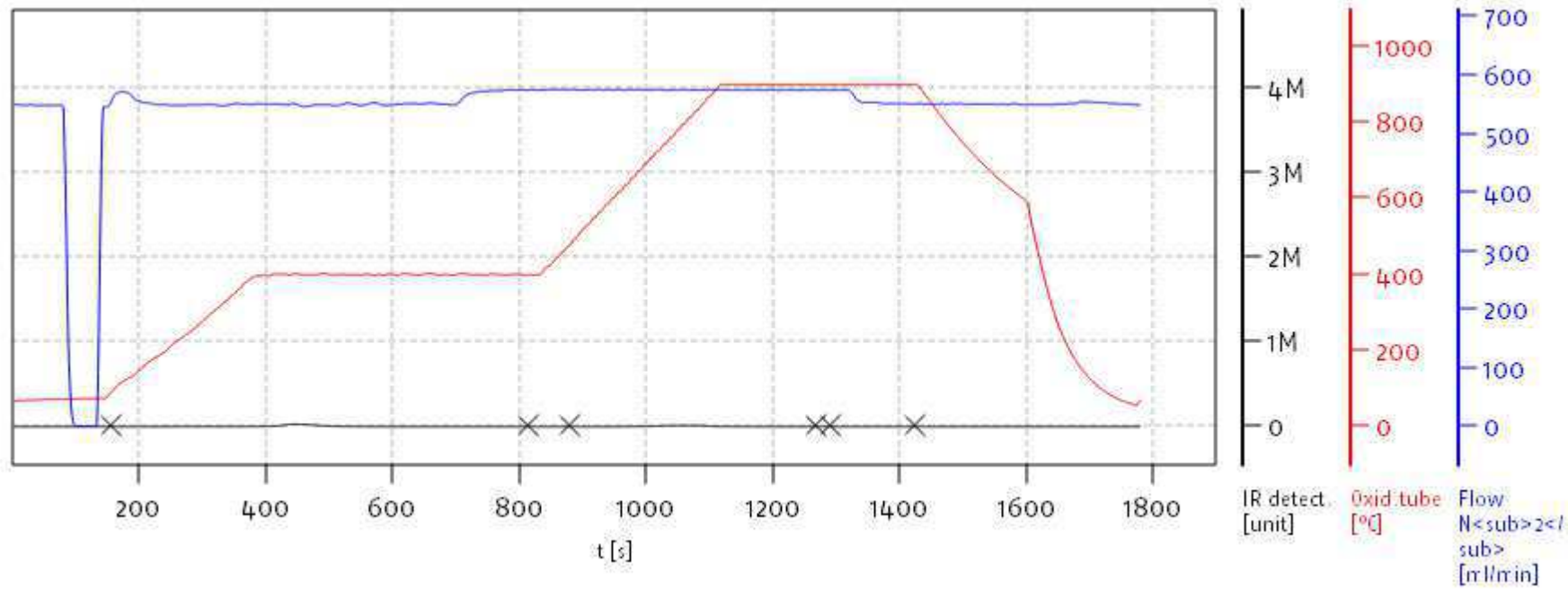
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062023 CDE from: 6/23/2023 12:51 PM

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	BLF0524-MRL1	513.20		CARBON	6/20/2023 7:23 PM	bl,C2u	0.015	78 452	0.020	0.000	446	44 765	0.015	0.005	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

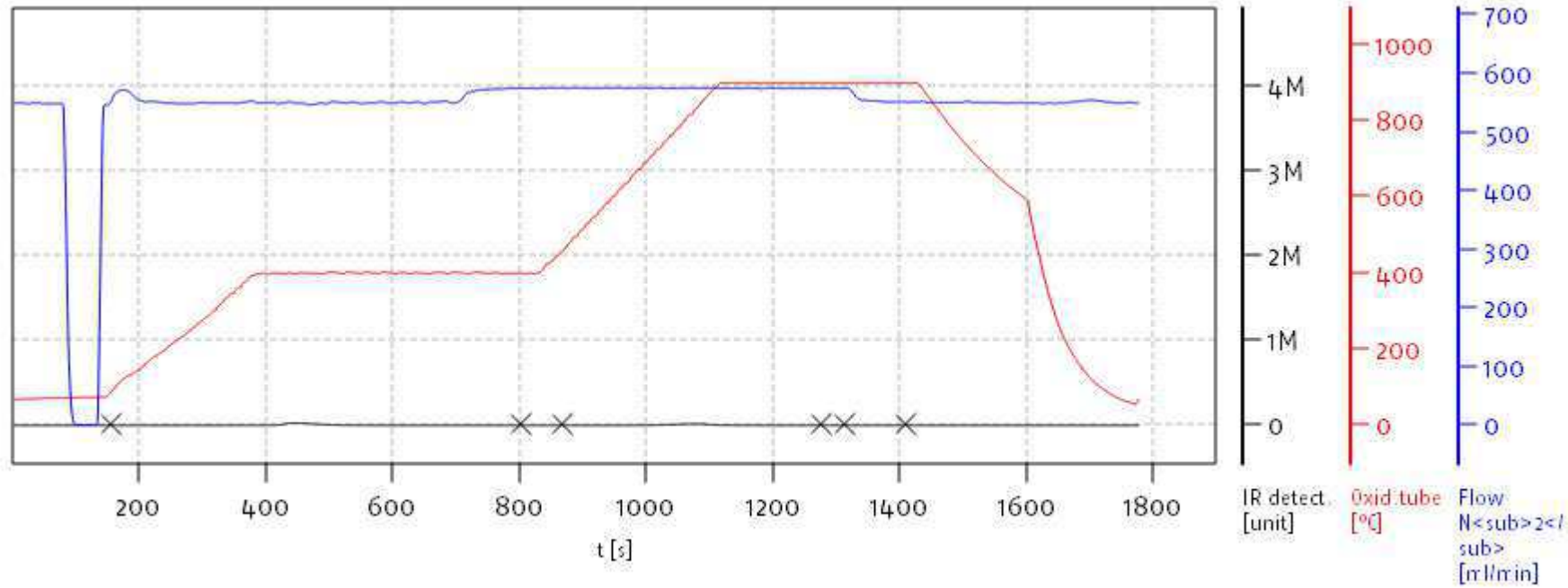
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062023 CDE from: 6/23/2023 12:51 PM

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	BLF0525-MRL1	513.80		CARBON	6/20/2023 7:53 PM	bl,C2u	0.013	70 332	0.019	0.000	908	48 640	0.013	0.006	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

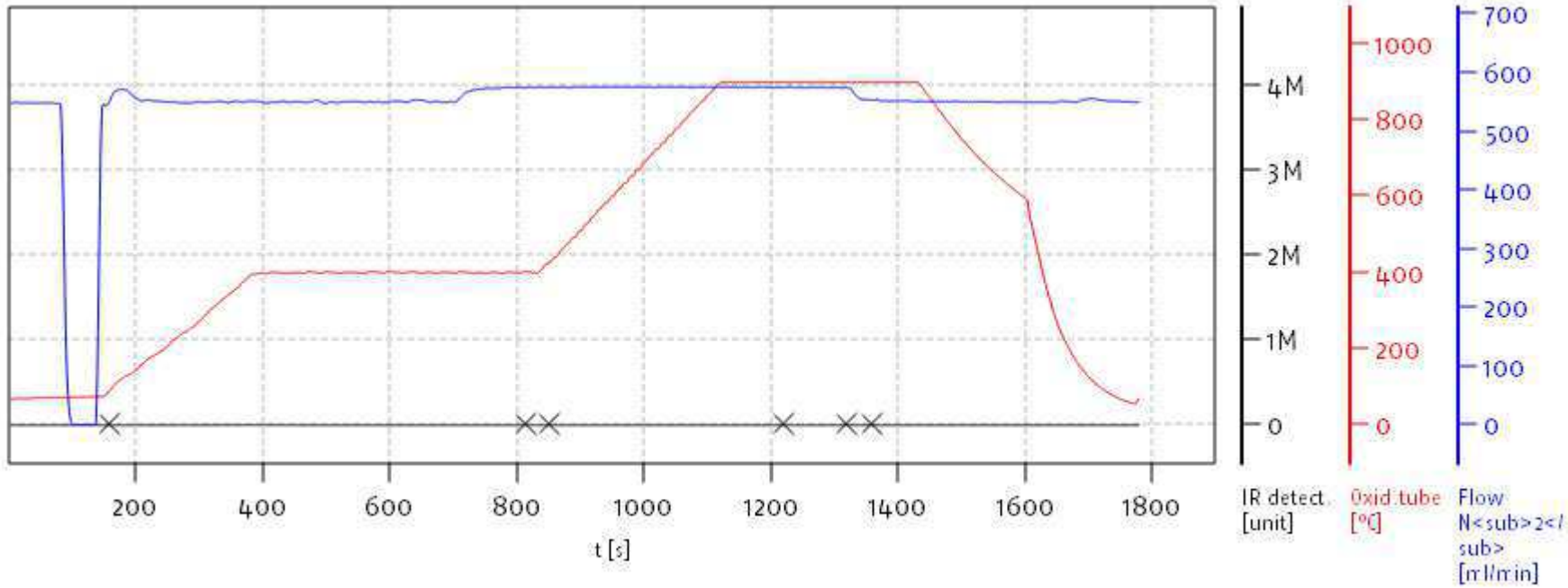
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	BLF0522-BLK1	513.70		CARBON	6/20/2023 8:23 PM	bl,C1u,C3u,C2u	0.000	9 002	0.000	0.000	112	1 308	0.000	0.000	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

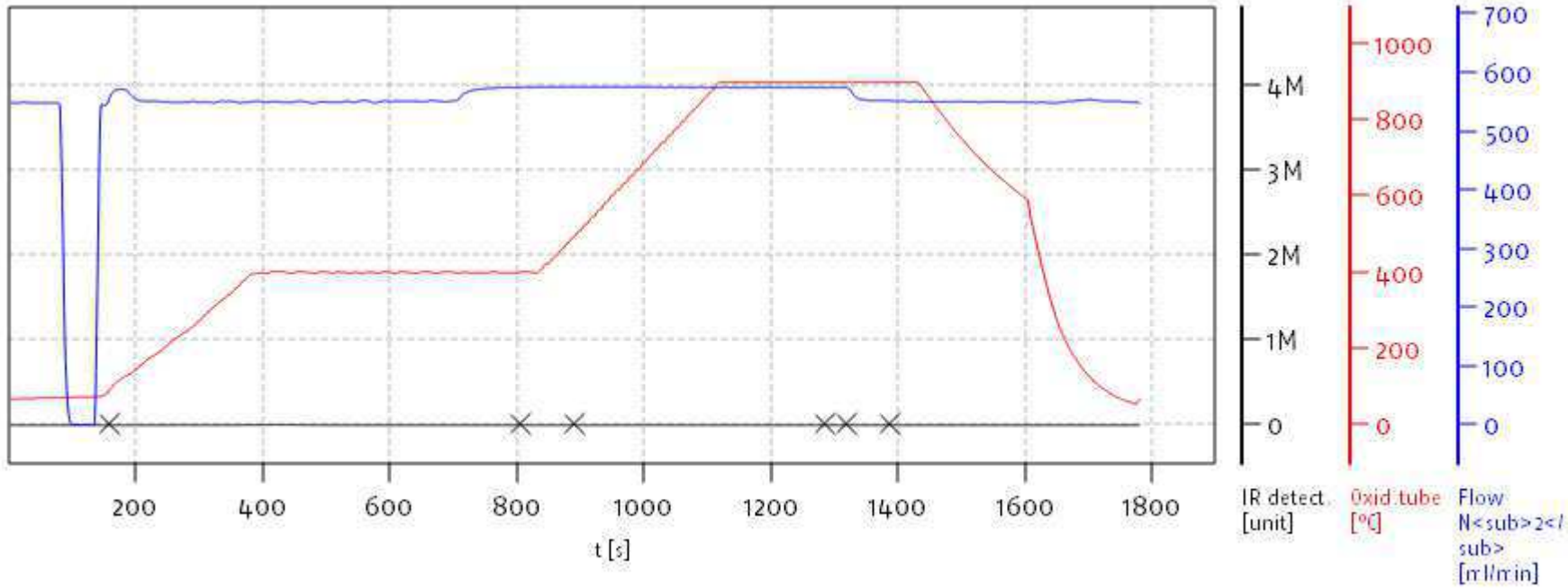
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 062023 CDE from: 6/23/2023 12:51 PM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	BLF0523-BLK1	530.80		CARBON	6/20/2023 8:53 PM	bl,C1u,C3u,C2u	0.000	20 782	0.000	0.000	298	7 483	0.000	0.000	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

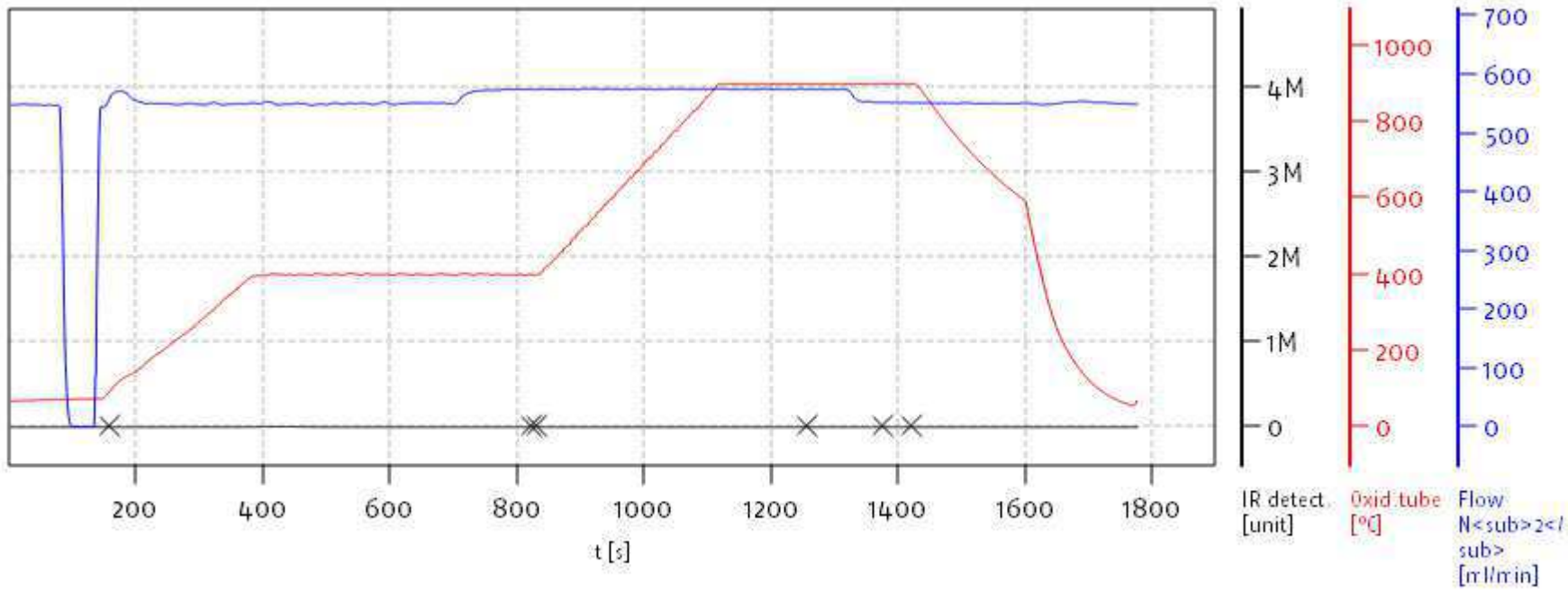
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	BLF0524-BLK1	533.00		CARBON	6/20/2023 9:23 PM	bl,C3u,C2u	0.000	23 475	0.000	0.000	133	1 801	0.000	0.000	0.9813	1.0000



Name:

Access: soliTOC superuser

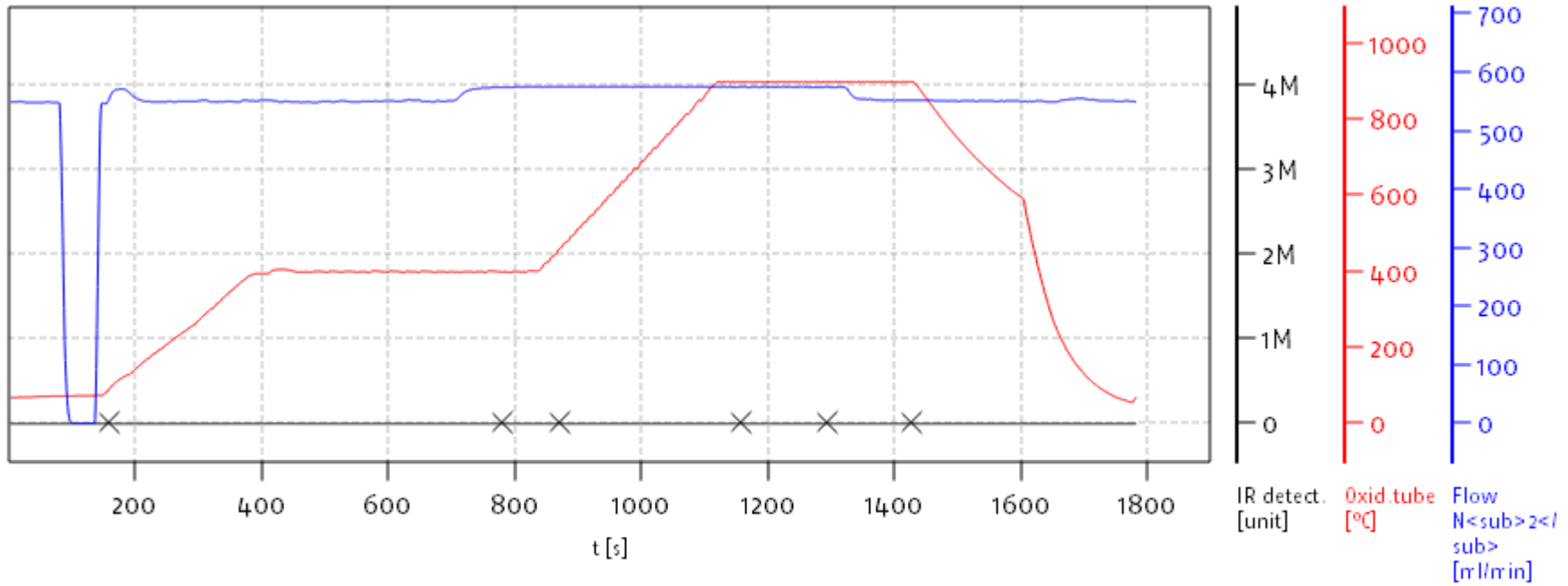
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	BLF0525-BLK1	524.80		CARBON	6/20/2023 9:53 PM	bl,C1u,C3u,C2u	0.000	5 083	0.000	0.000	250	705	0.000	0.000	0.9813	1.0000



Name:

Access: soliTOC superuser

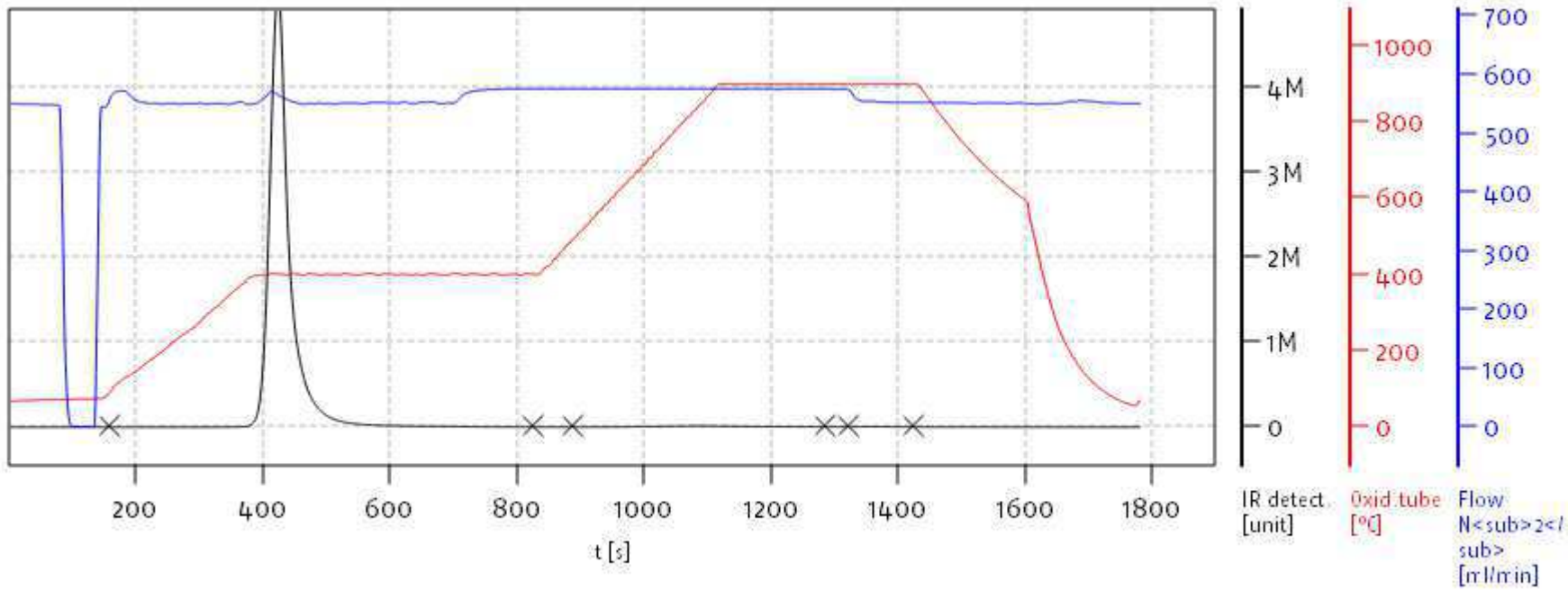
Date: Fri Jun 23 12:52:31 2023

elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	BLF0522-BS1	23.70		CARBON	6/20/2023 10:23 PM	bl,C2u	45.647	6 979 738	46.112	0.000	16 870	98 325	45.647	0.465	0.9813	1.0000



Name:

Access: soliTOC superuser

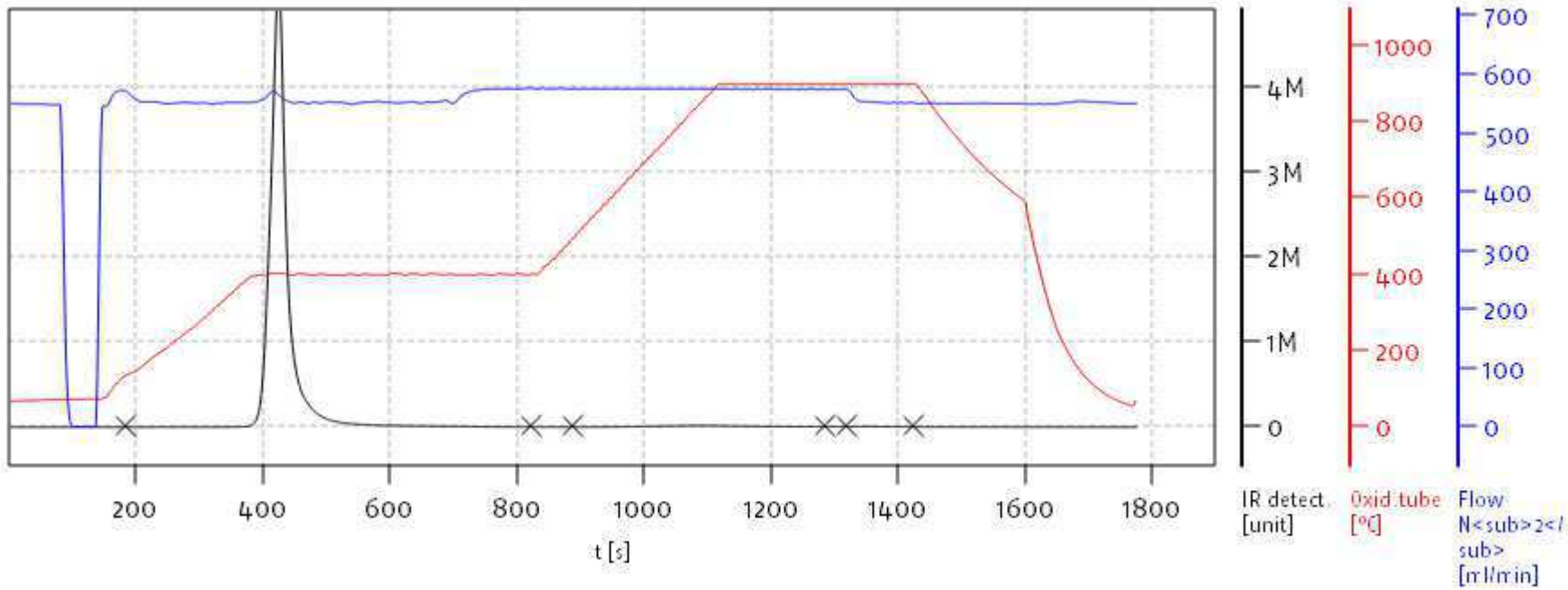
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	BLF0523-BS1	20.80		CARBON	6/20/2023 10:53 PM	bl	44.863	6 024 470	45.618	0.000	21 879	127 846	44.863	0.755	0.9813	1.0000



Name:

Access: soliTOC superuser

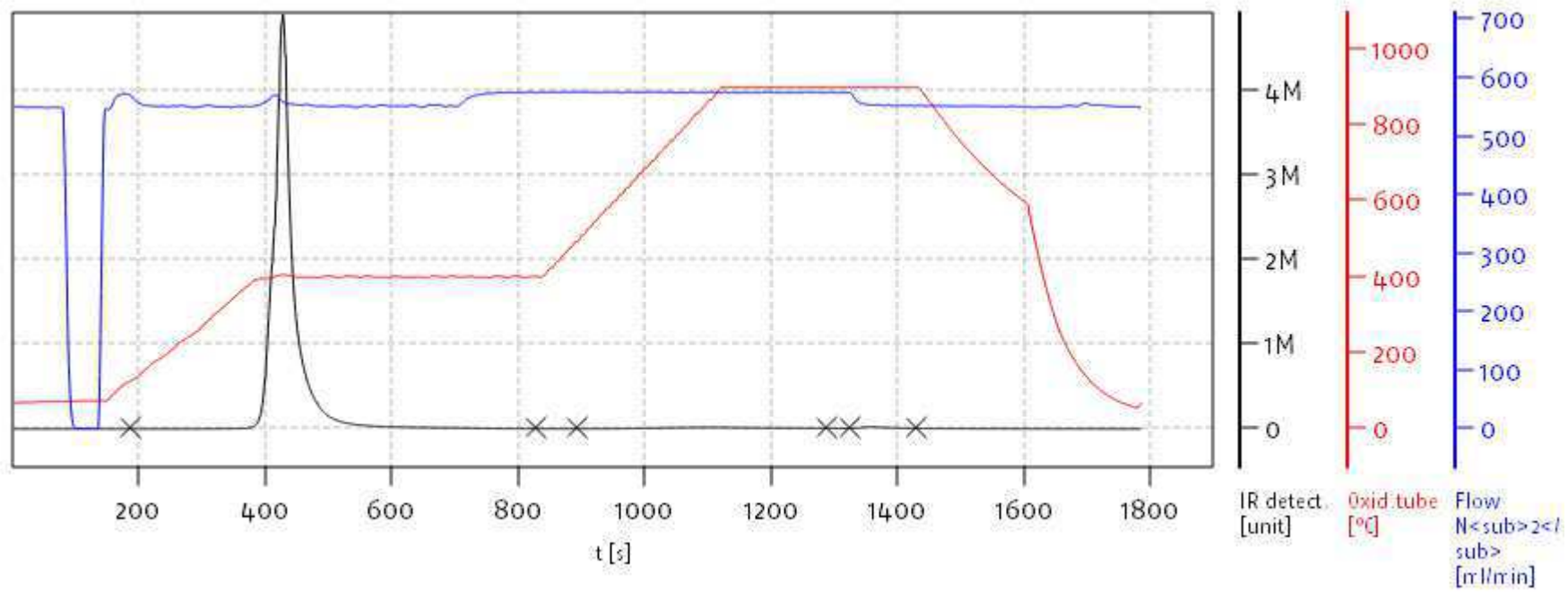
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SLF0283-CCV1	22.80		CARBON	6/20/2023 11:23 PM	bl	43.777	6 419 804	44.589	0.151	50 523	145 593	43.627	0.812	0.9813	1.0000



Name:

Access: soliTOC superuser

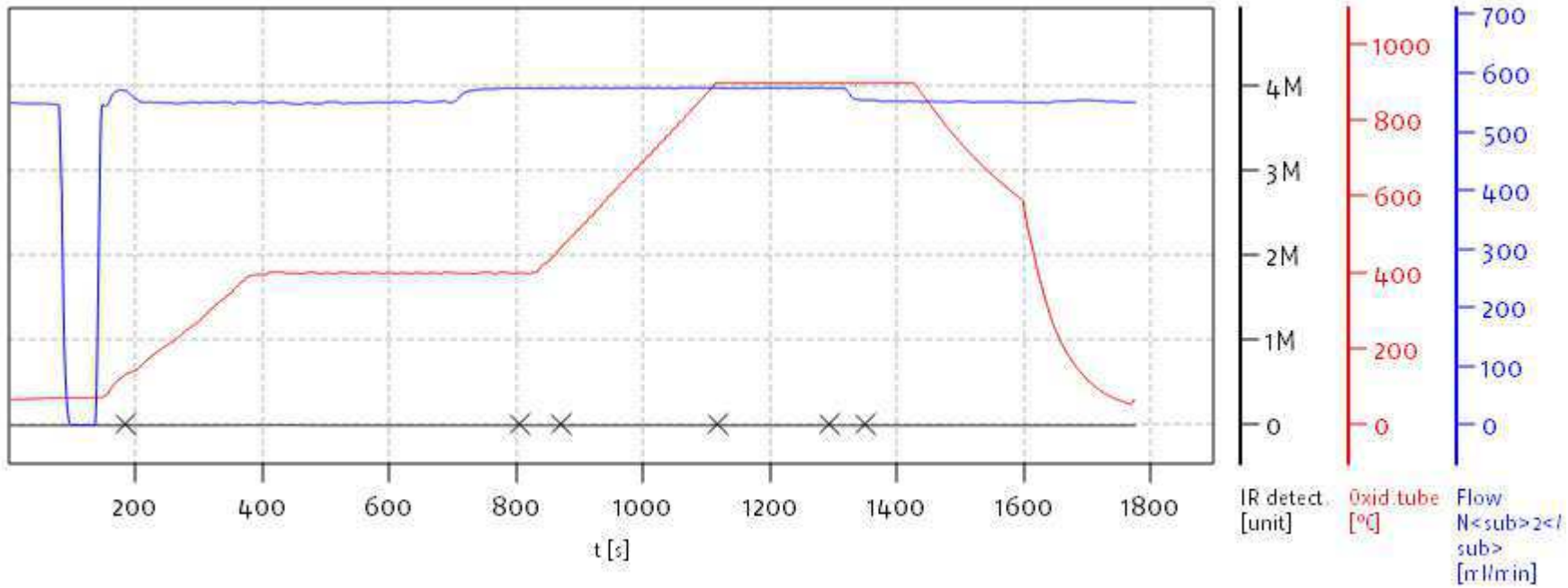
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SLF0283-CCB1	530.30		CARBON	6/20/2023 11:53 PM	bl,C1u,C3u,C2u	0.000	12 023	0.000	0.000	449	2 939	0.000	0.000	0.9813	1.0000



Name:

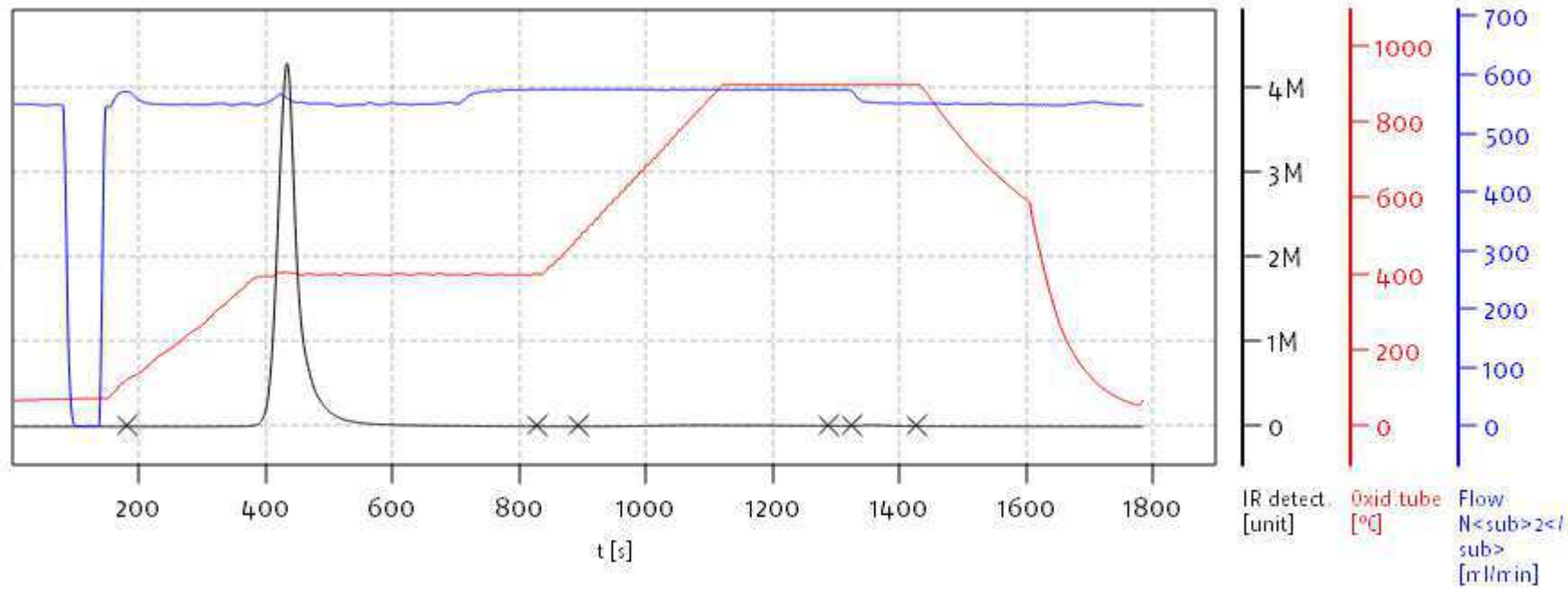
Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	BLF0524-BS1	21.50		CARBON	6/21/2023 12:23 AM	bl	44.595	6 178 704	45.529	0.076	39 183	155 509	44.519	0.934	0.9813	1.0000



Name:

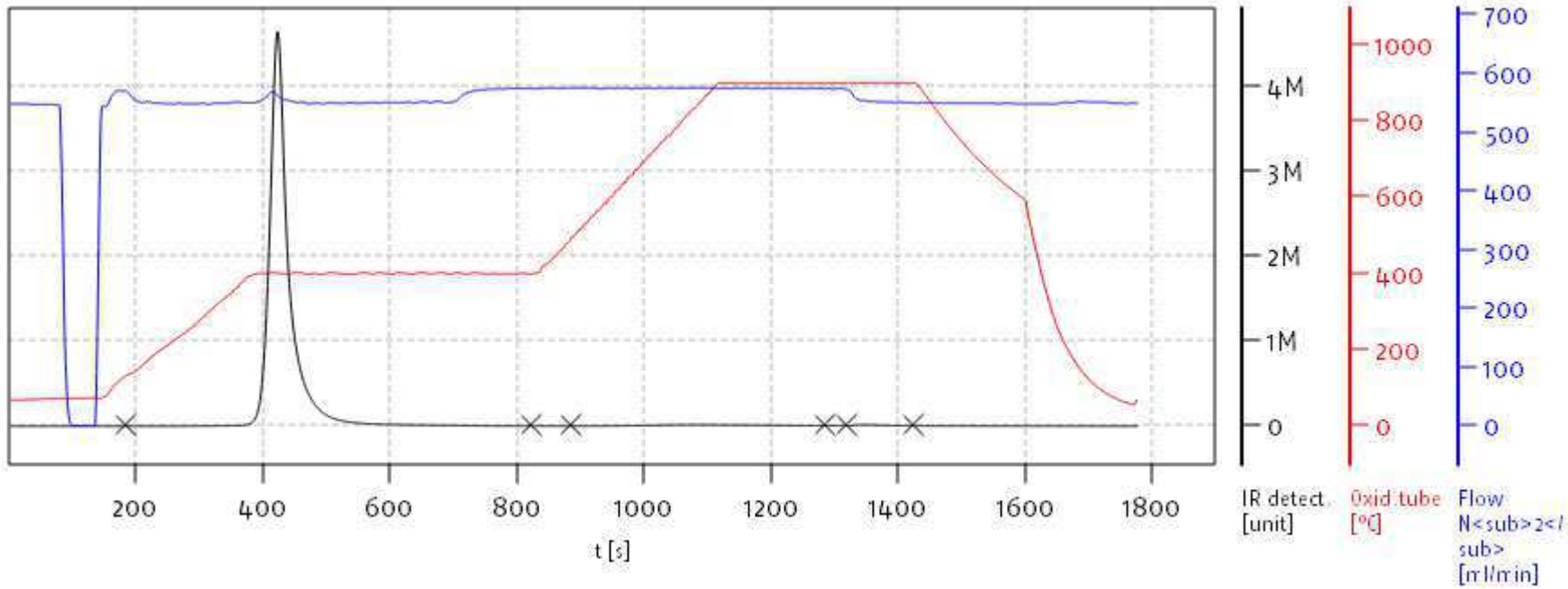
Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	BLF0525-BS1	21.20		CARBON	6/21/2023 12:53 AM	bl	44.691	6 109 807	45.432	0.048	35 217	127 999	44.643	0.742	0.9813	1.0000



Name:

Access: soliTOC superuser

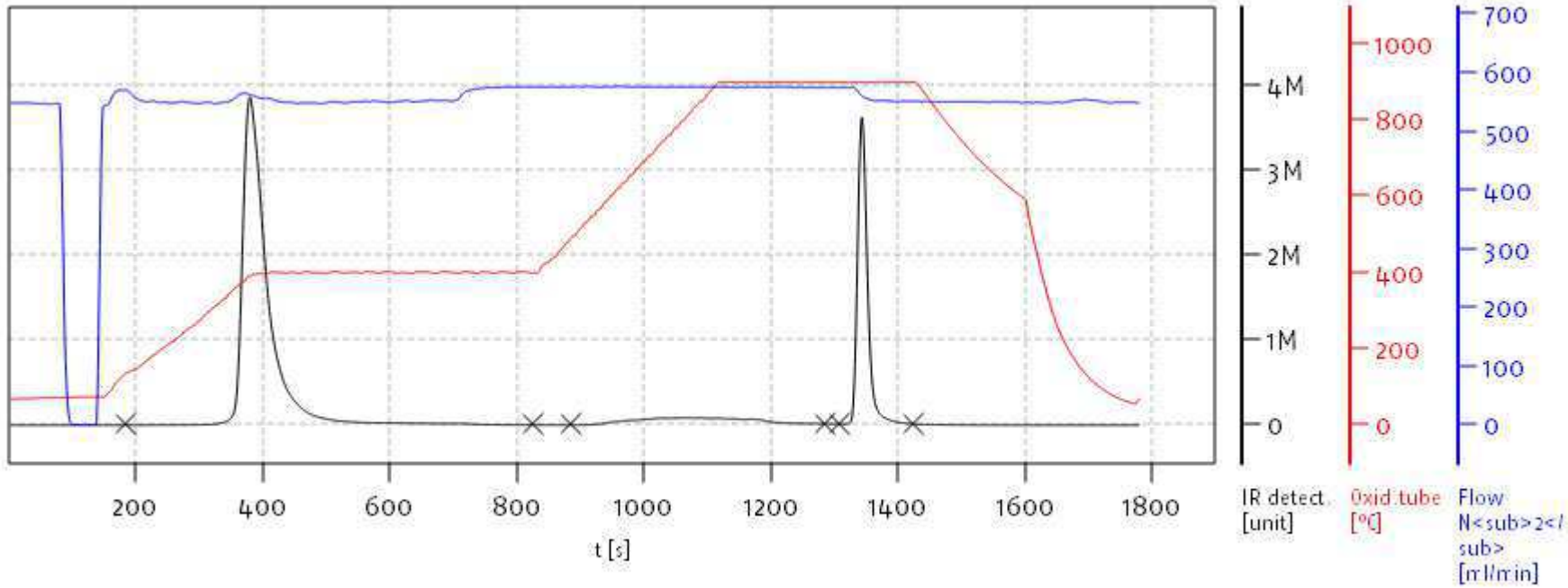
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	BLF0522-SRM1	316.50		CARBON	6/21/2023 1:23 AM	bl	4.451	6 549 920	4.820	1.244	2 510 959	766 574	3.207	0.370	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

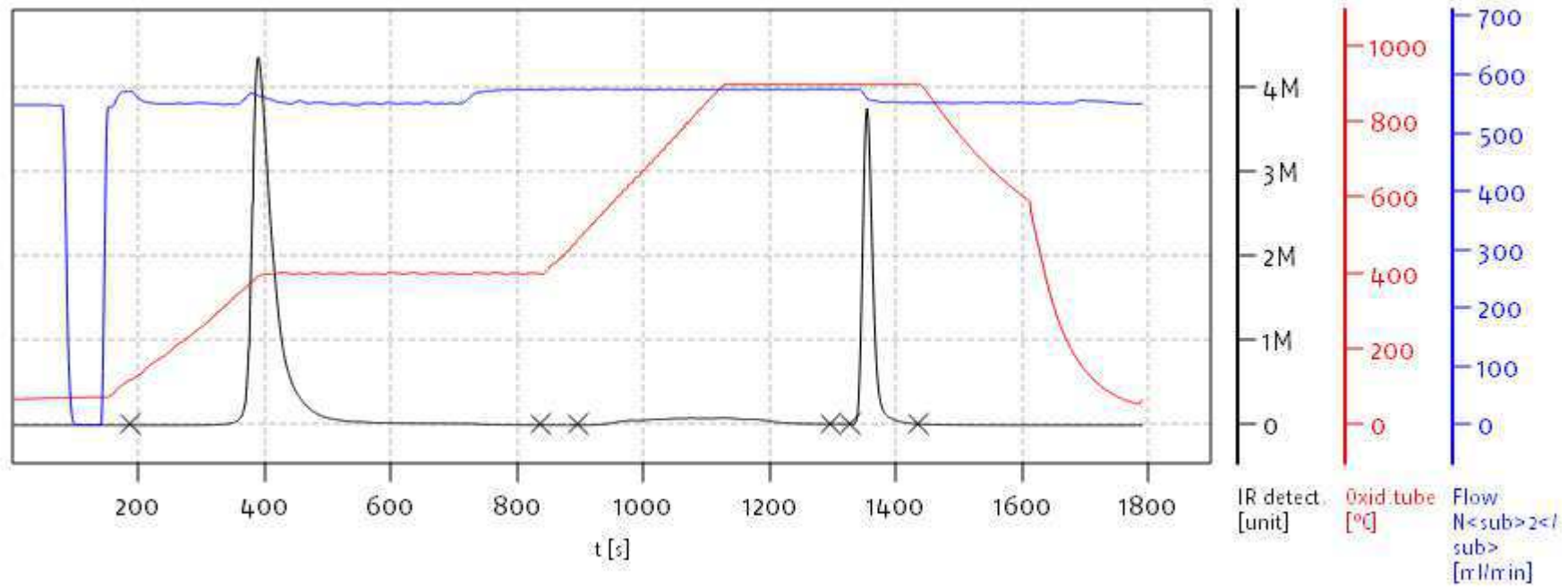
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 062023 CDE from: 6/23/2023 12:51 PM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	BLF0523-SRM1	330.20		CARBON	6/21/2023 1:53 AM	bl	4.412	6 703 460	4.757	1.266	2 664 731	745 759	3.146	0.344	0.9813	1.0000



Name:

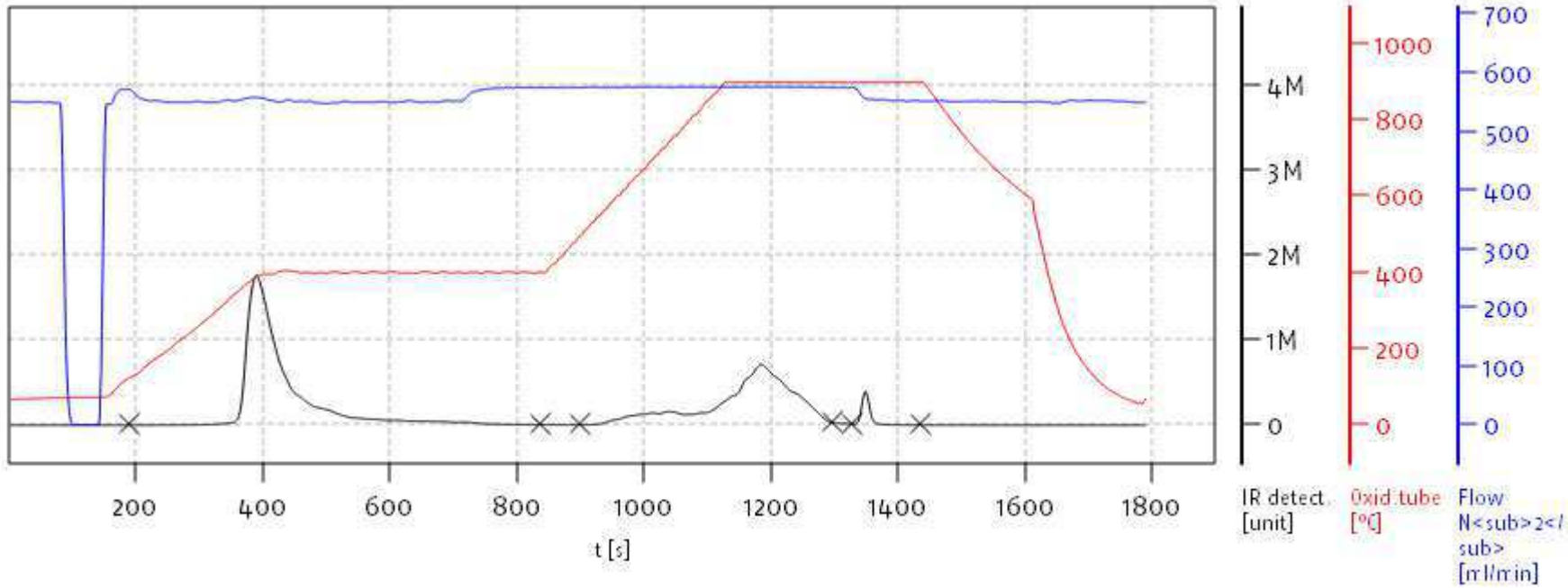
Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	23D0136-01	530.40		CARBON	6/21/2023 2:24 AM	bl	1.358	4 456 740	2.400	0.059	226 779	3 510 415	1.299	1.041	0.9813	1.0000



Name:

Access: soliTOC superuser

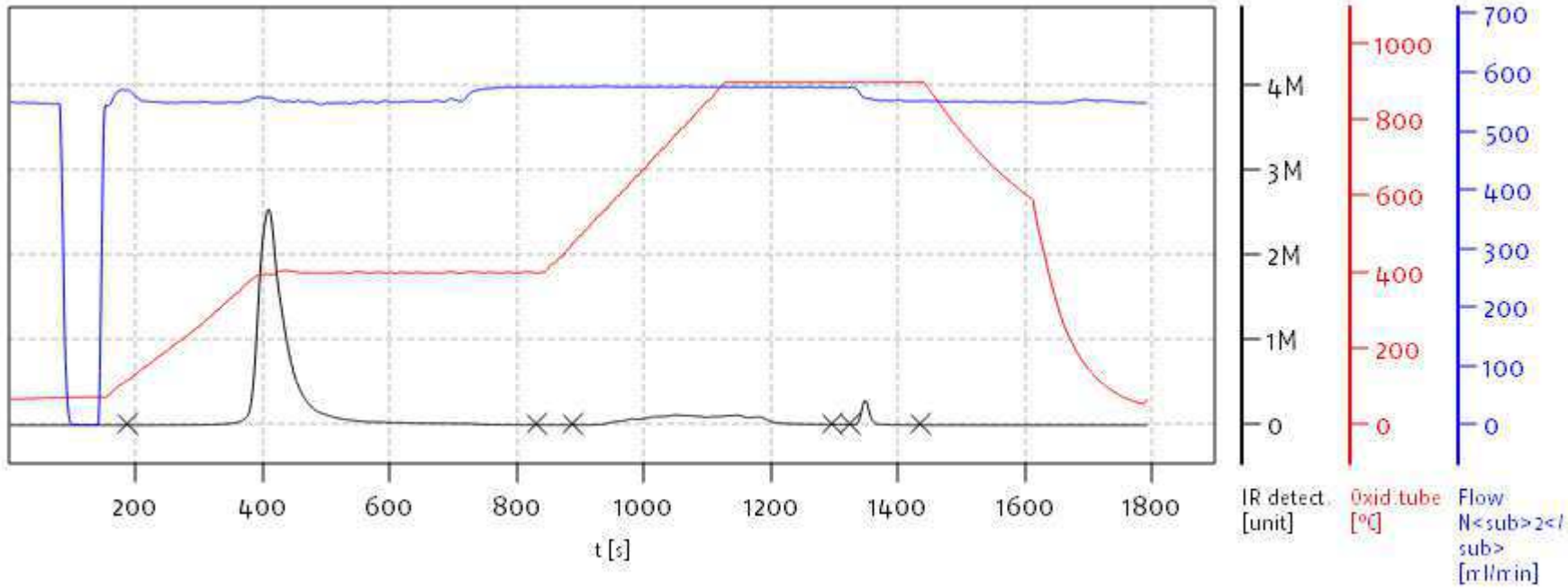
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	BLF0522-DUP1	525.70		CARBON	6/21/2023 2:54 AM	bl	1.464	4 830 708	1.740	0.042	169 638	944 450	1.422	0.276	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

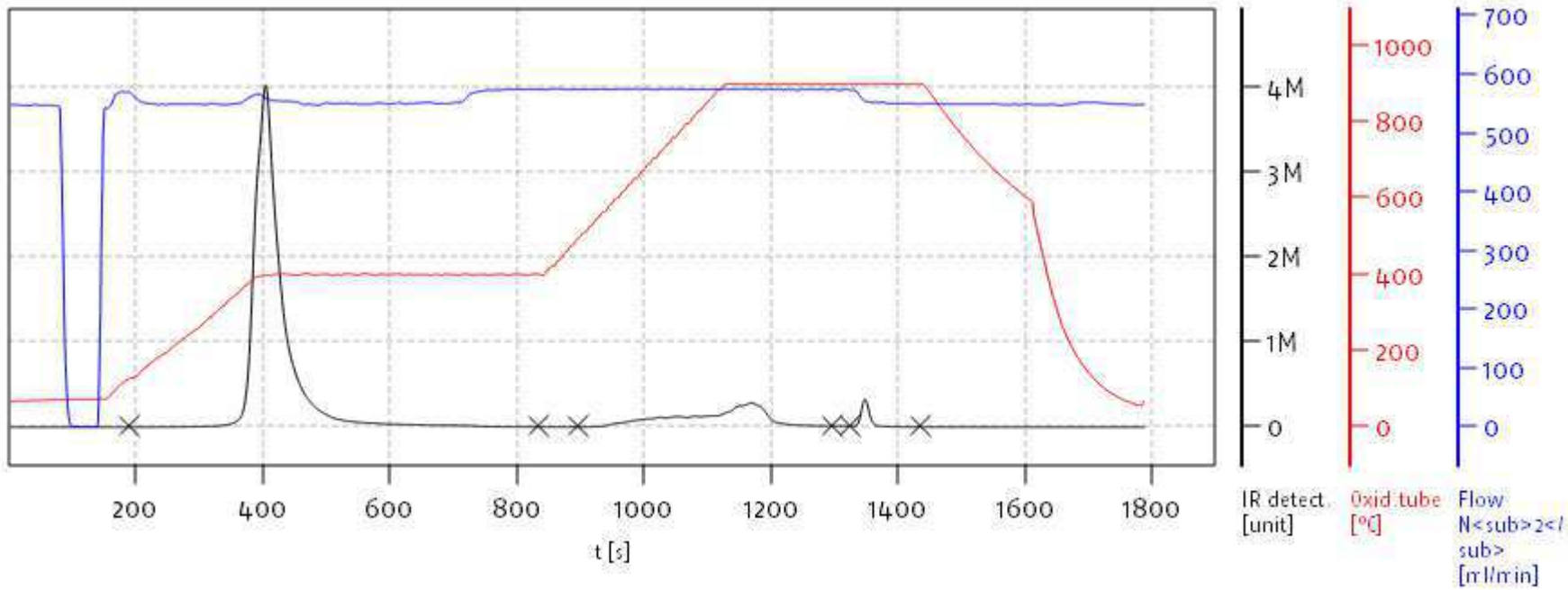
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062023 CDE from: 6/23/2023 12:51 PM

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	BLF0522-MS1	552.50	0.0077	CARBON	6/21/2023 3:24 AM	bl	2.108	7 347 329	2.510	0.047	191 725	1 426 598	2.062	0.401	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

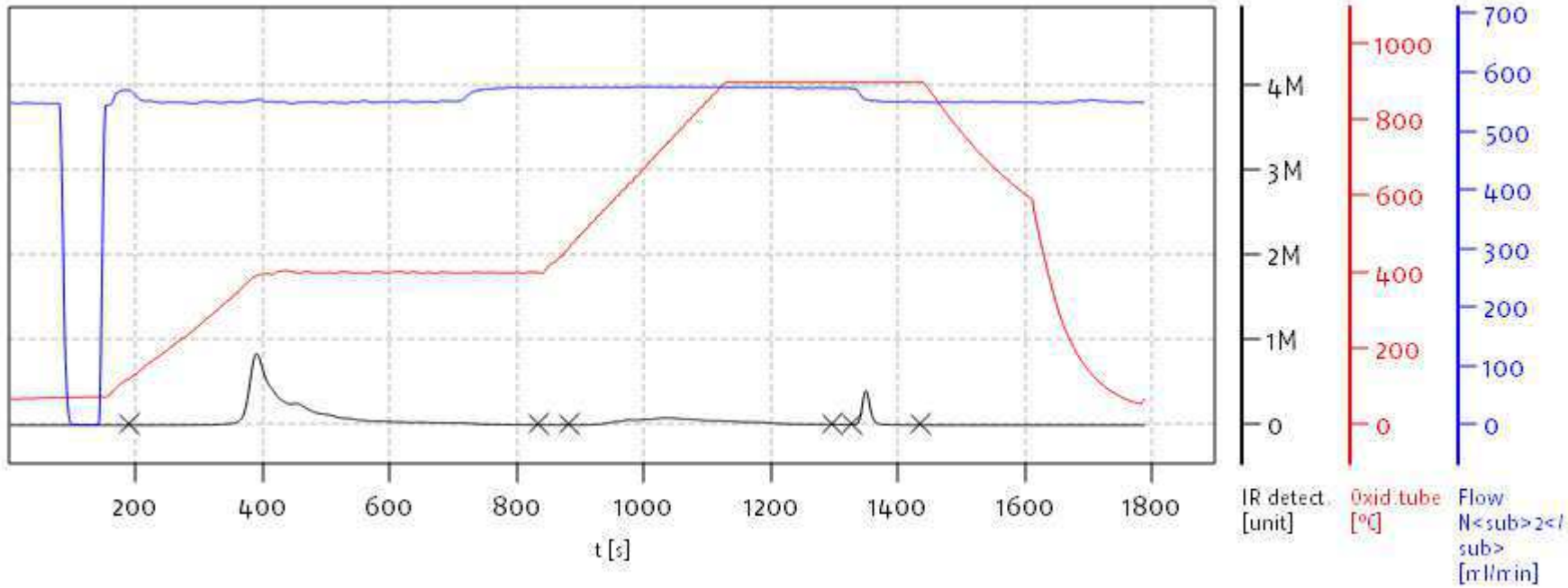
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	23E0219-01	337.00		CARBON	6/21/2023 3:54 AM	bl	1.087	2 177 571	1.354	0.095	230 152	596 074	0.992	0.267	0.9813	1.0000



Name:

Access: soliTOC superuser

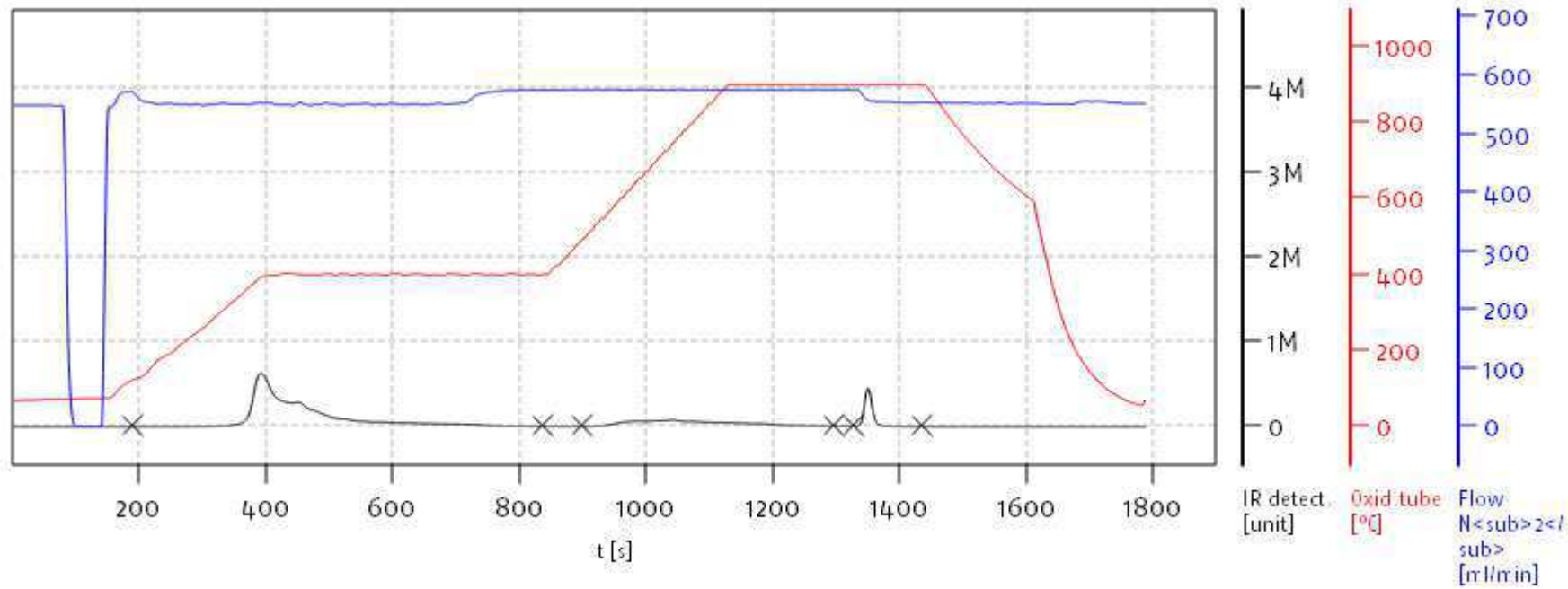
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	BLF0523-DUP1	325.50		CARBON	6/21/2023 4:24 AM	bl	1.066	2 031 179	1.330	0.109	251 846	569 739	0.957	0.264	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

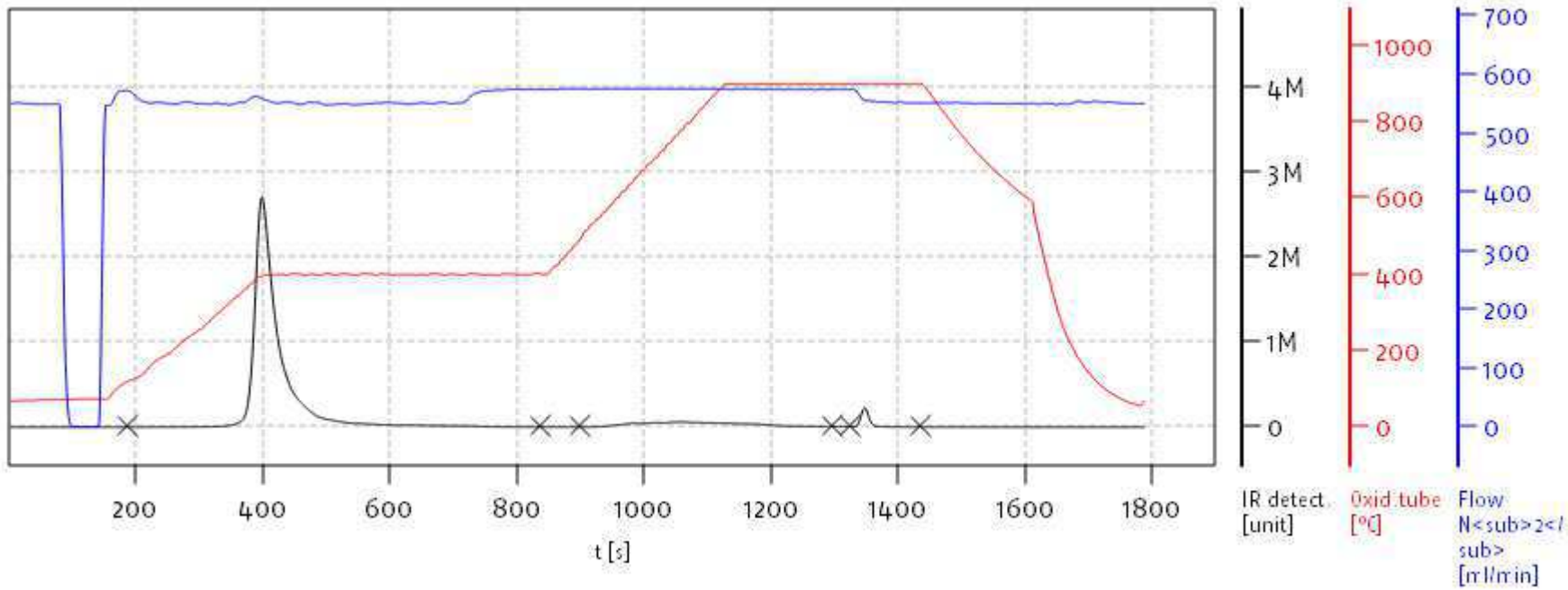
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
27	27	BLF0523-MS1	292.10	0.0073	CARBON	6/21/2023 4:55 AM	bl	2.381	4 396 032	2.621	0.055	129 278	469 036	2.327	0.239	0.9813	1.0000



Name:

Access: soliTOC superuser

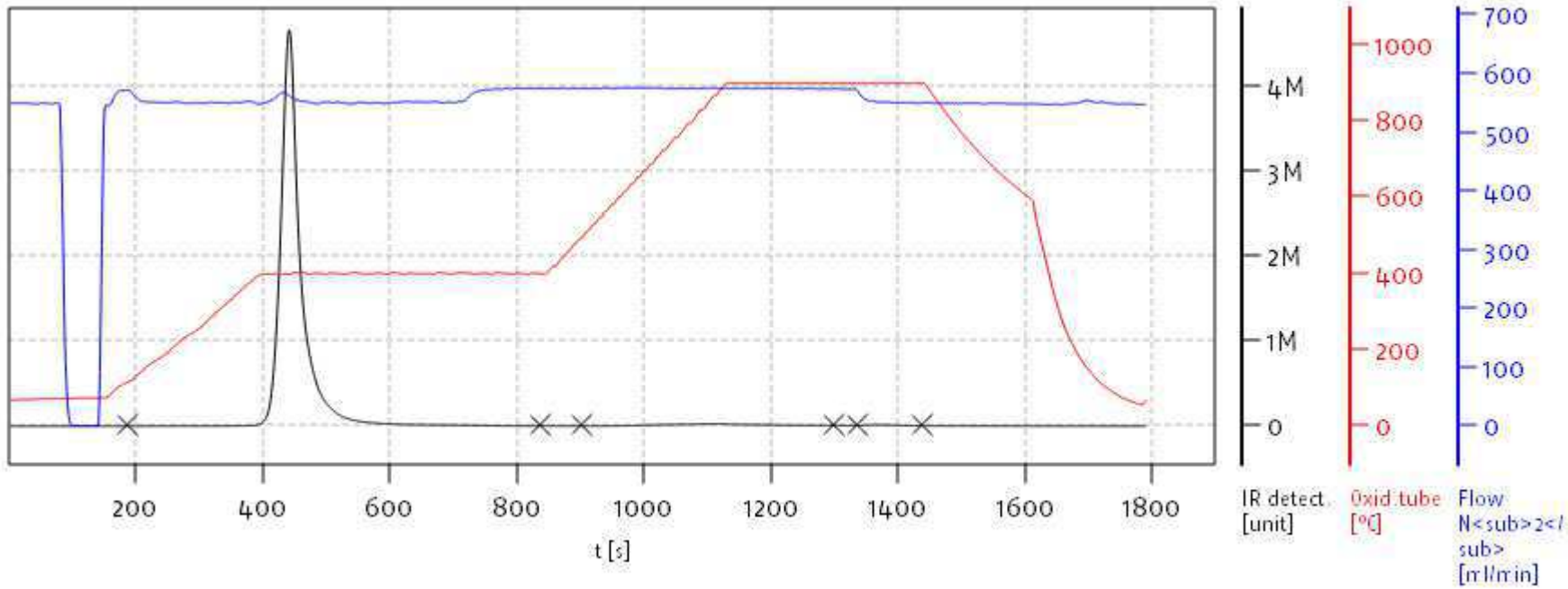
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
28	28	SLF0283-CCV2	22.40		CARBON	6/21/2023 5:25 AM	bl	44.449	6 418 594	45.634	0.052	36 213	196 187	44.397	1.185	0.9813	1.0000



Name:

Access: soliTOC superuser

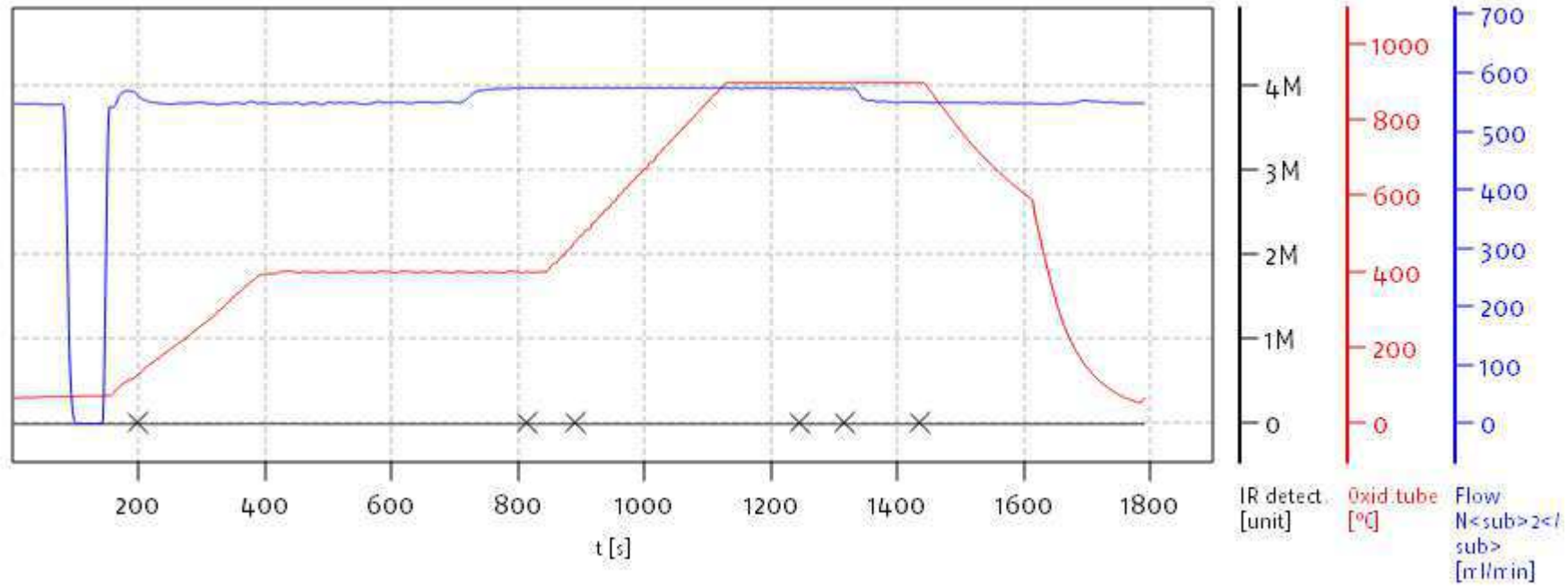
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	SLF0283-CCB2	529.80		CARBON	6/21/2023 5:55 AM	bl,C1u,C3u,C2u	0.000	5 891	0.000	0.000	186	998	0.000	0.000	0.9813	1.0000



Name:

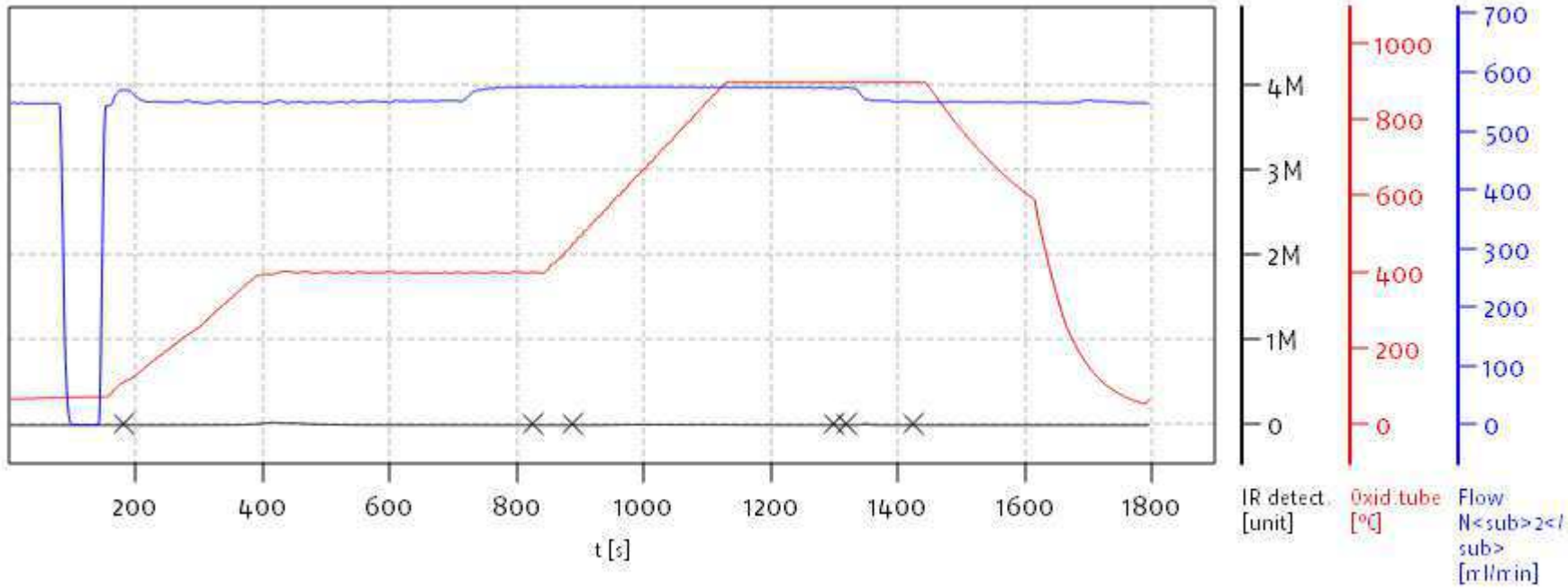
Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	23D0663-01	72.20		CARBON	6/21/2023 6:25 AM	bl,C2u	0.187	115 731	0.224	0.000	8 585	45 764	0.187	0.037	0.9813	1.0000



Name:

Access: soliTOC superuser

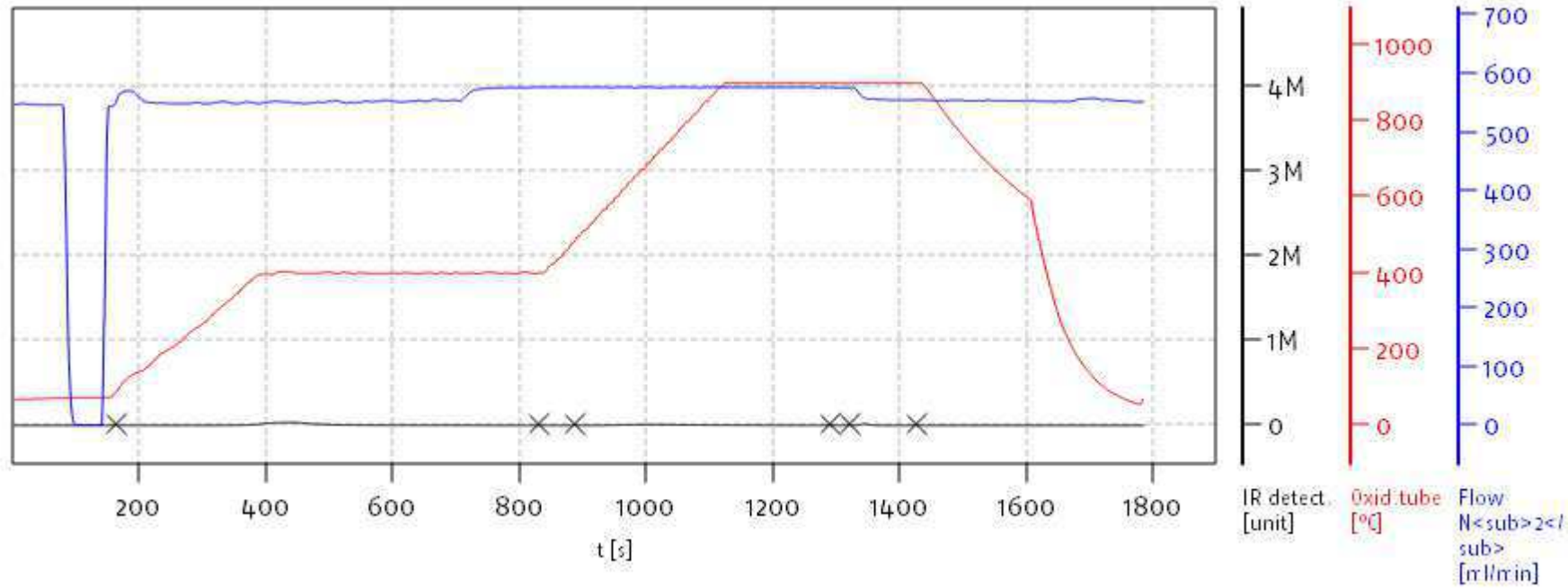
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	BLF0524-DUP1	101.20		CARBON	6/21/2023 6:55 AM	bl,C2u	0.171	139 983	0.216	0.000	10 845	57 713	0.171	0.045	0.9813	1.0000



Name:

Access: soliTOC superuser

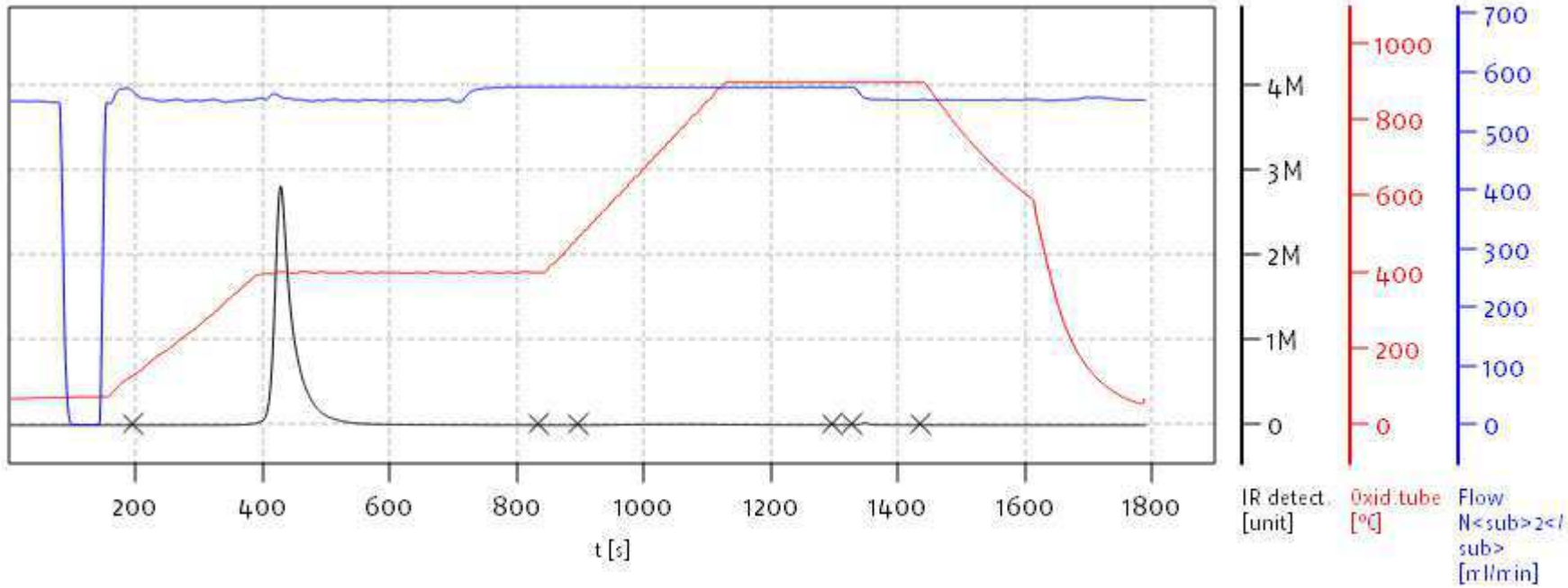
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	BLF0524-MS1	66.20	0.0119	CARBON	6/21/2023 7:26 AM	bl,C2u	8.259	3 541 830	8.376	0.000	19 490	77 747	8.259	0.117	0.9813	1.0000



Name:

Access: soliTOC superuser

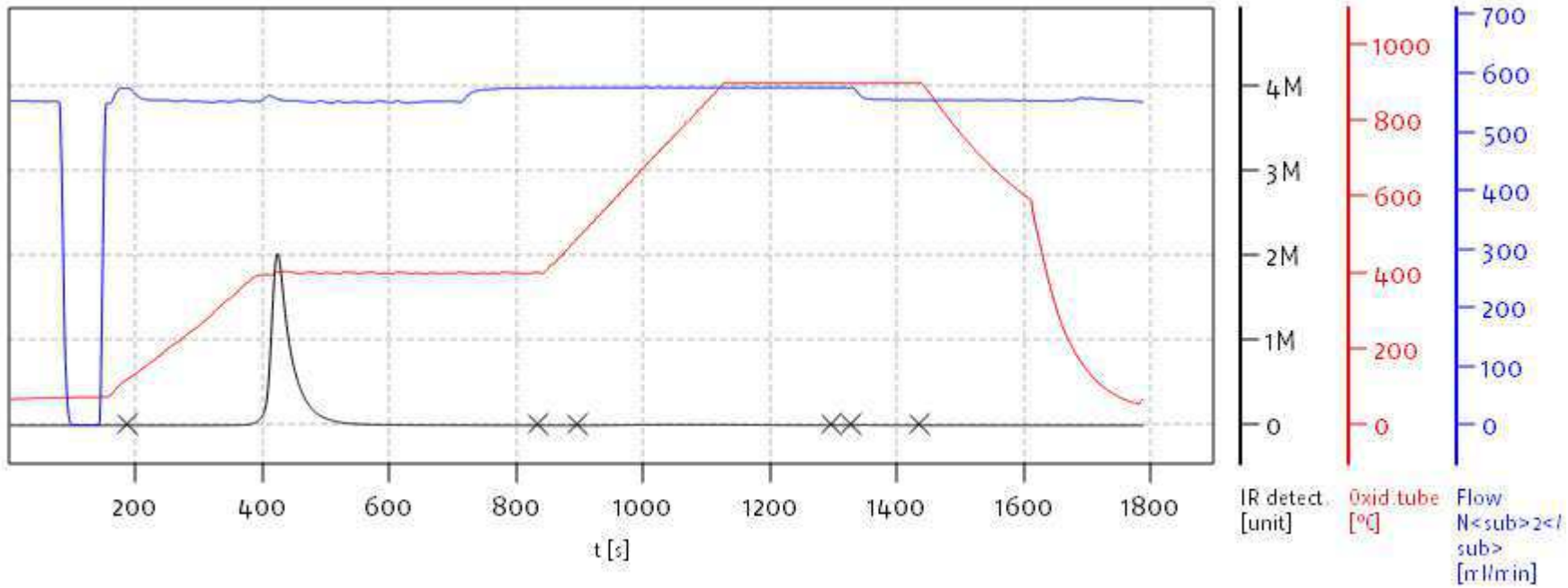
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	BLF0524-MSD1	67.30	0.0093	CARBON	6/21/2023 7:56 AM	bl,C2u	6.390	2 792 146	6.491	0.000	8 196	71 741	6.390	0.101	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

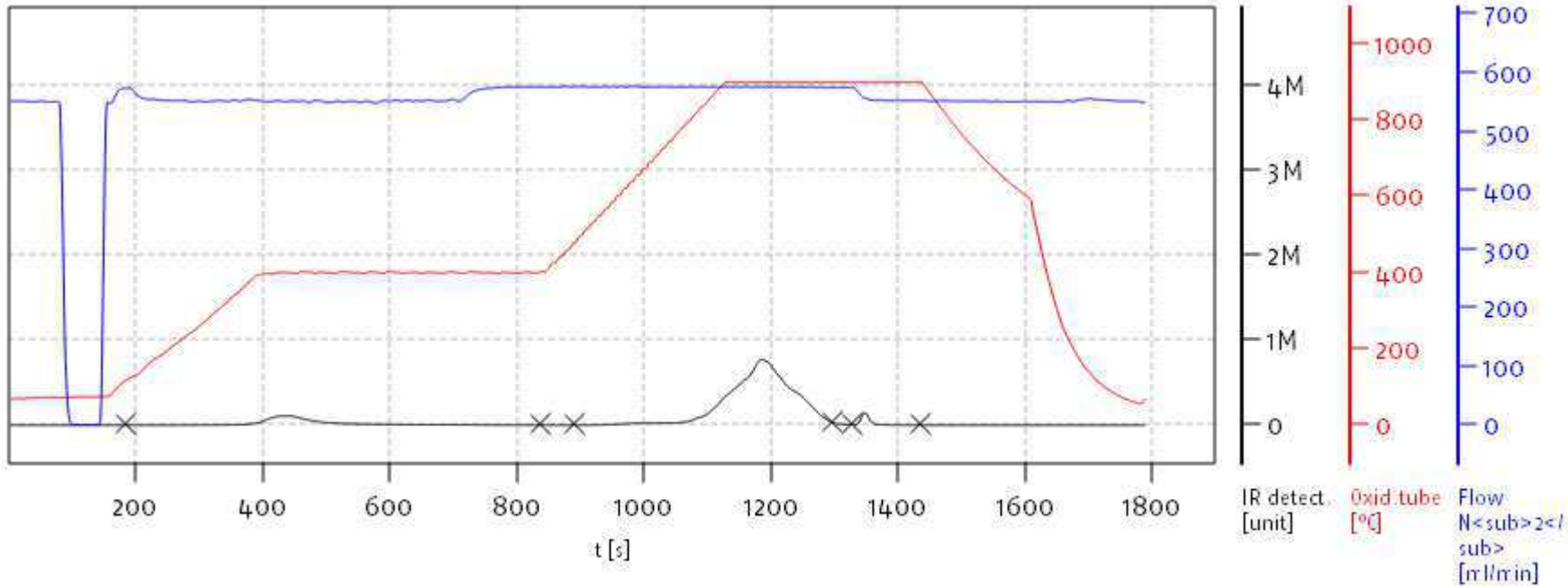
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	23D0682-04	125.20		CARBON	6/21/2023 8:26 AM	bl	0.559	417 678	4.590	0.075	88 218	3 211 030	0.483	4.031	0.9813	1.0000



Name:

Access: soliTOC superuser

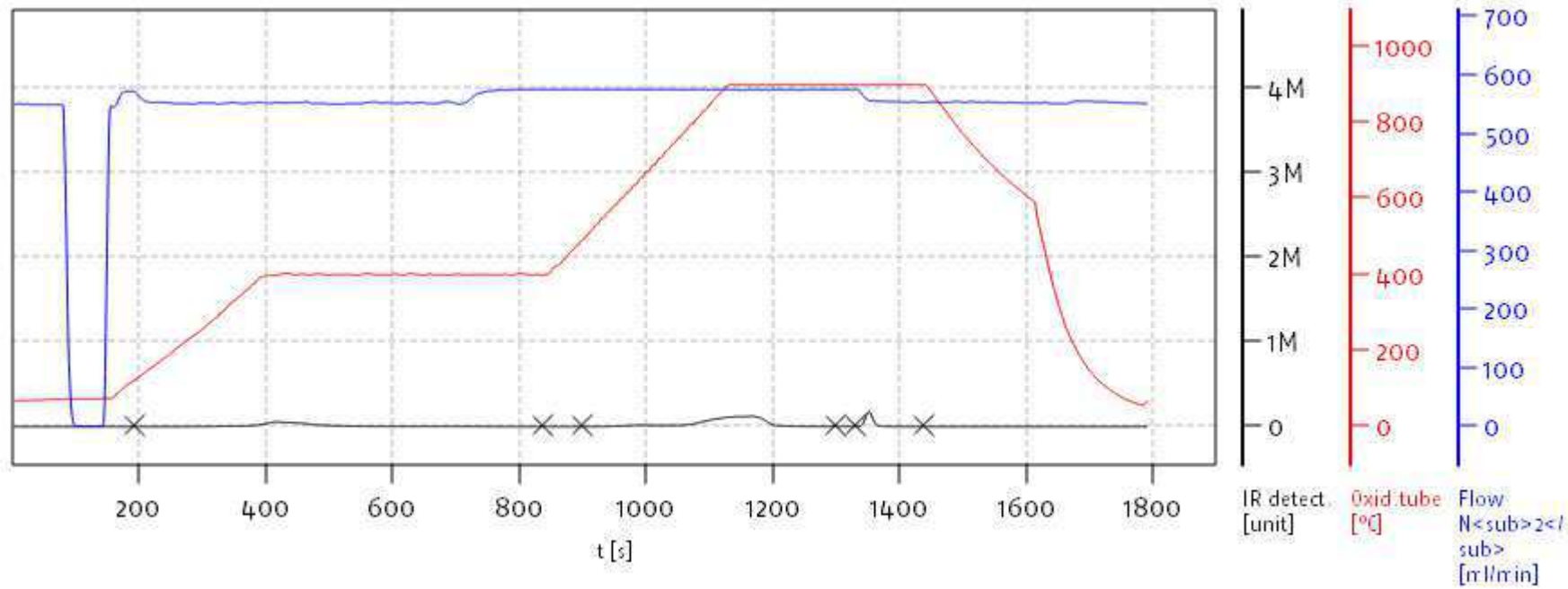
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

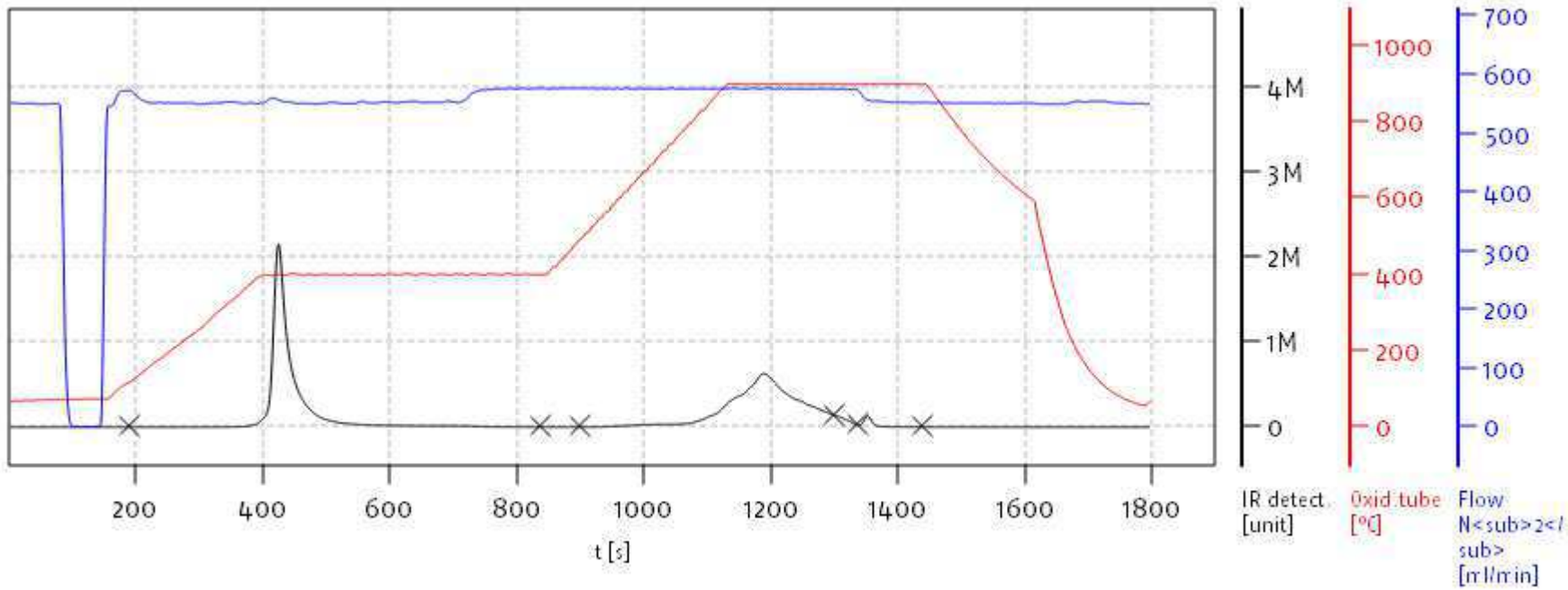
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	BLF0525-DUP1	62.20		CARBON	6/21/2023 8:56 AM	bl	0.646	218 619	1.896	0.171	95 878	519 196	0.475	1.250	0.9813	1.0000



Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
36	36	BLF0525-MS1	117.30	0.0079	CARBON	6/21/2023 9:27 AM	bl	3.519	2 627 841	7.242	0.070	80 950	2 782 299	3.448	3.723	0.9813	1.0000



Name:

Access: soliTOC superuser

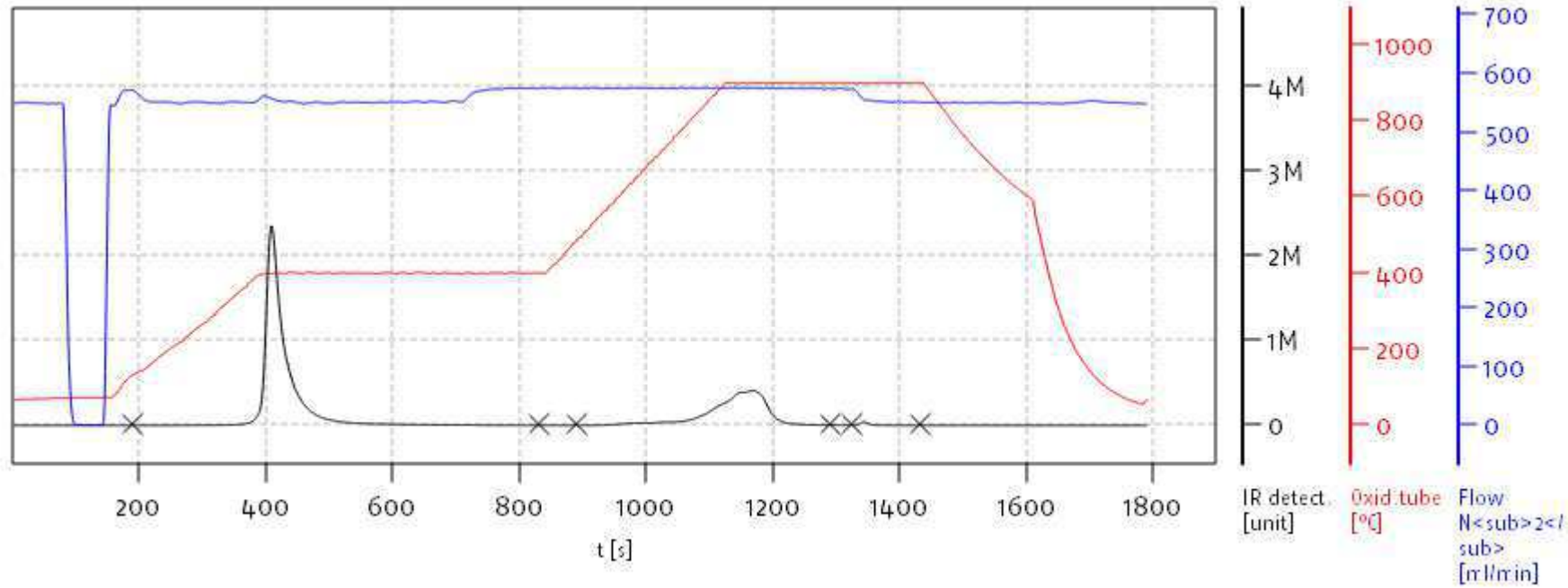
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
37	37	BLF0525-MSD1	128.10	0.0088	CARBON	6/21/2023 9:57 AM	bl	3.698	3 072 182	5.520	0.000	25 319	1 500 381	3.698	1.822	0.9813	1.0000



Name:

Access: soliTOC superuser

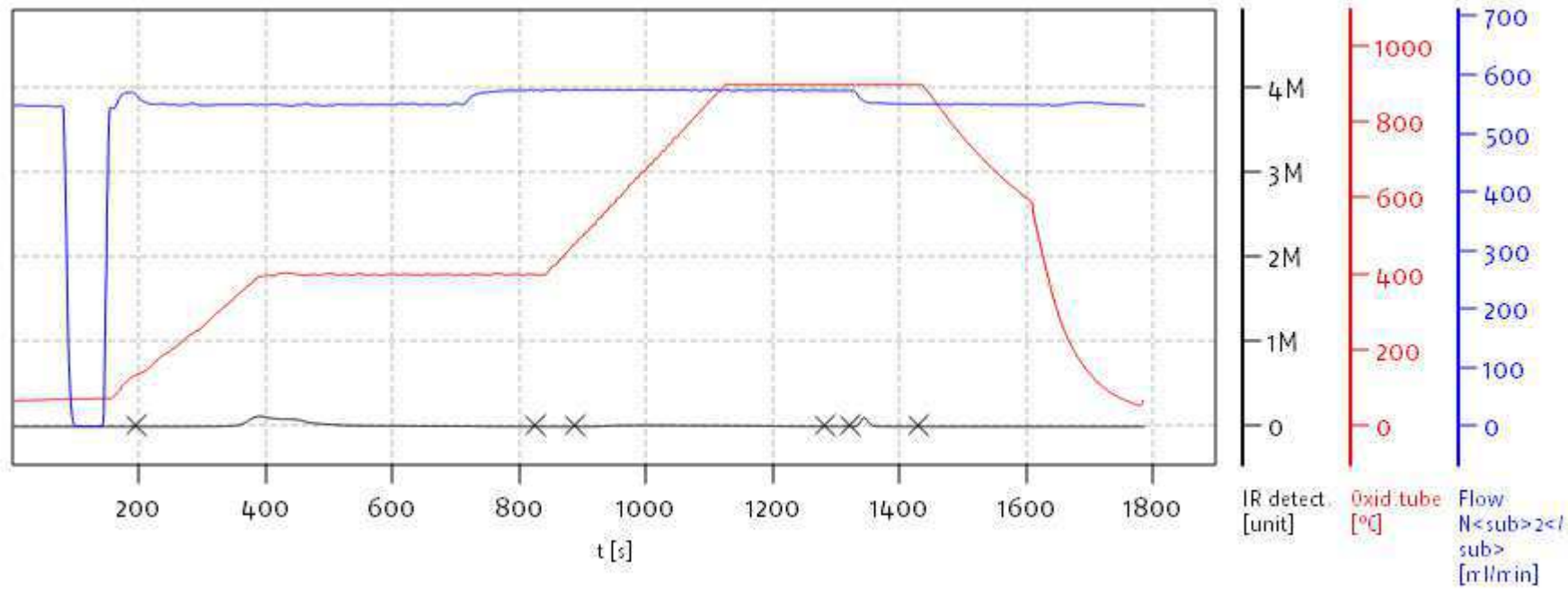
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
38	38	23D0136-02	70.20		CARBON	6/21/2023 10:27 AM	bl	1.106	497 205	1.327	0.068	58 777	126 835	1.038	0.221	0.9813	1.0000



Name:

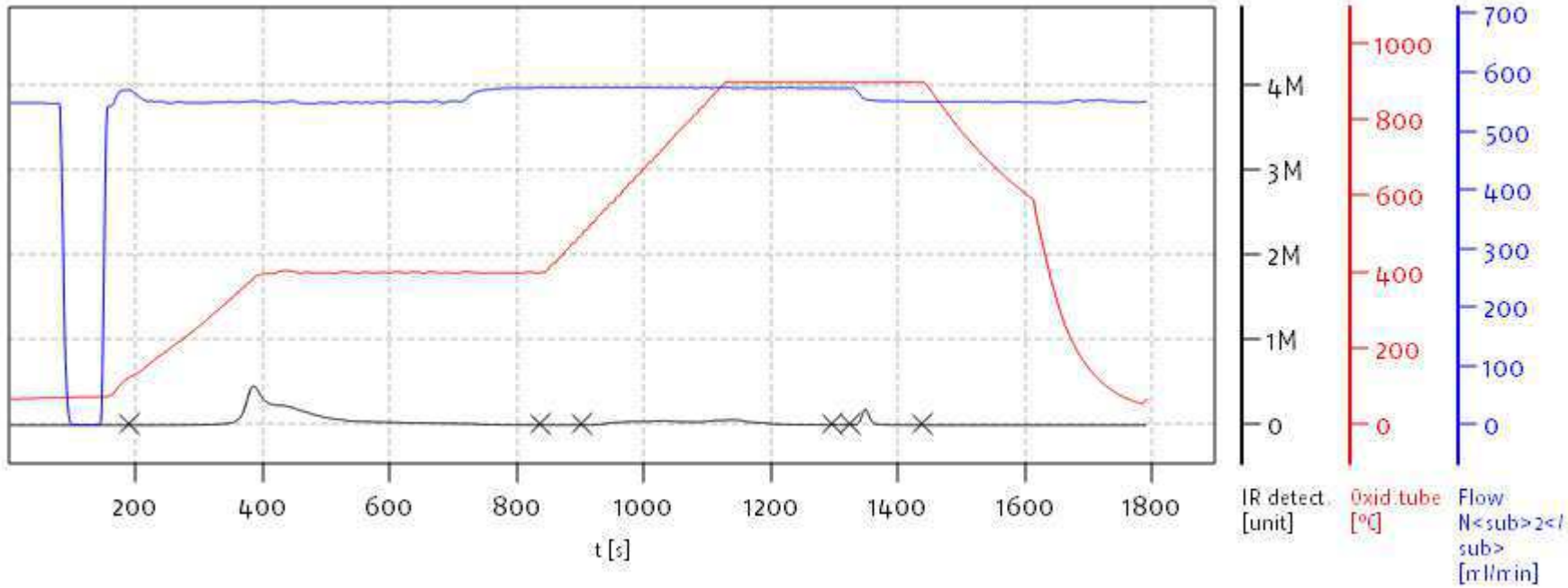
Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
39	39	23D0136-03	192.60		CARBON	6/21/2023 10:57 AM	bl	1.277	1 529 359	1.617	0.065	107 423	441 679	1.213	0.340	0.9813	1.0000



Name:

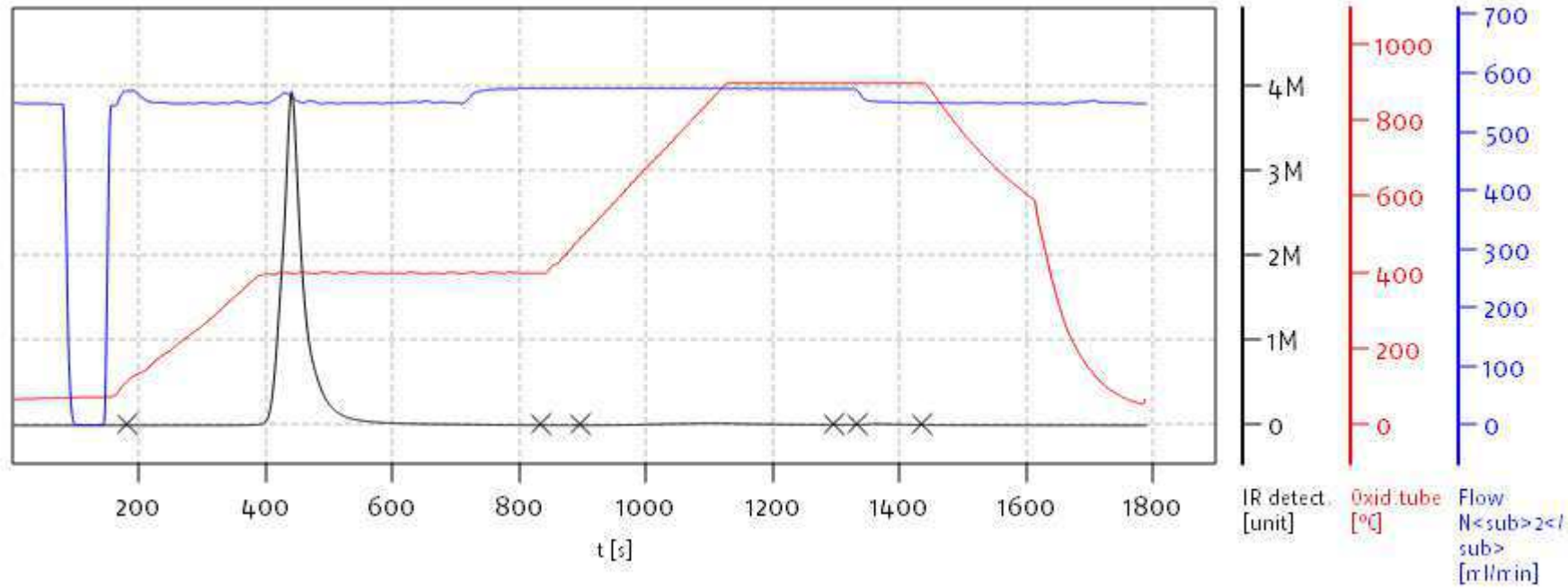
Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
40	40	SLF0283-CCV3	20.90		CARBON	6/21/2023 11:27 AM	bl	43.183	5 815 577	44.371	0.091	40 793	185 387	43.093	1.188	0.9813	1.0000



Name:

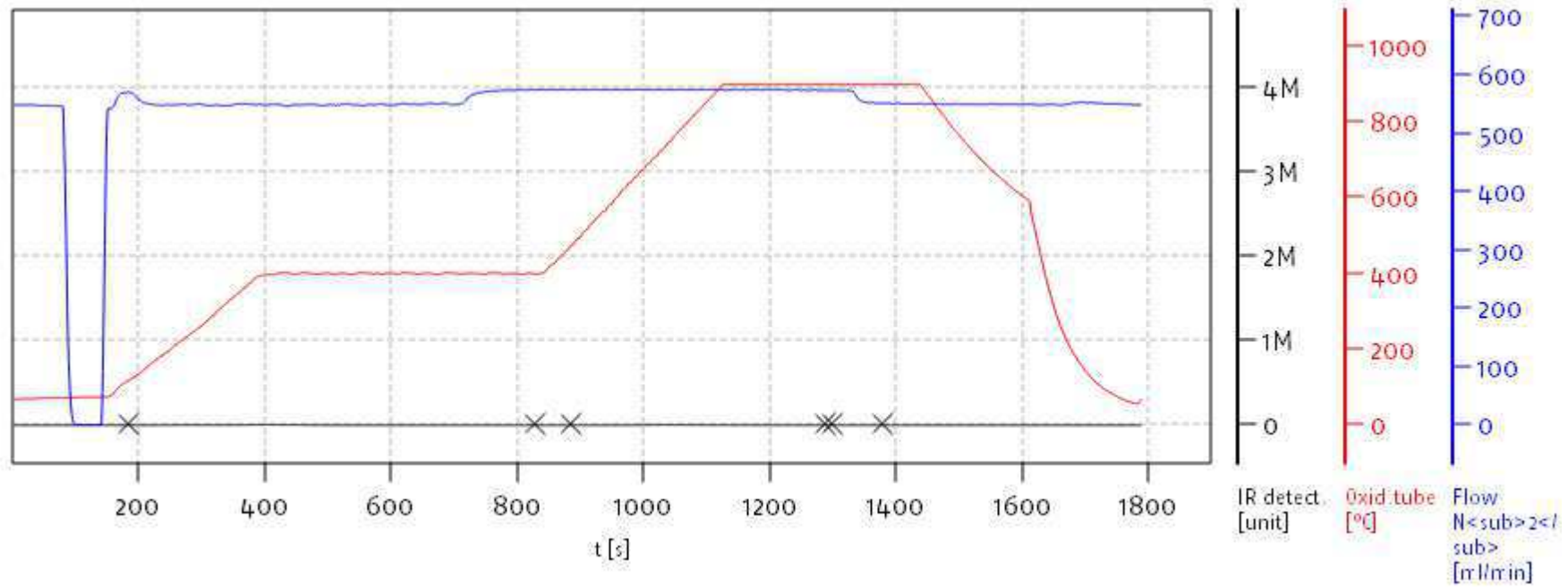
Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
41	41	SLF0283-CCB3	505.10		CARBON	6/21/2023 11:57 AM	bl,C3u,C2u	0.000	25 184	0.000	0.000	601	18 437	0.000	0.000	0.9813	1.0000



Name:

Access: soliTOC superuser

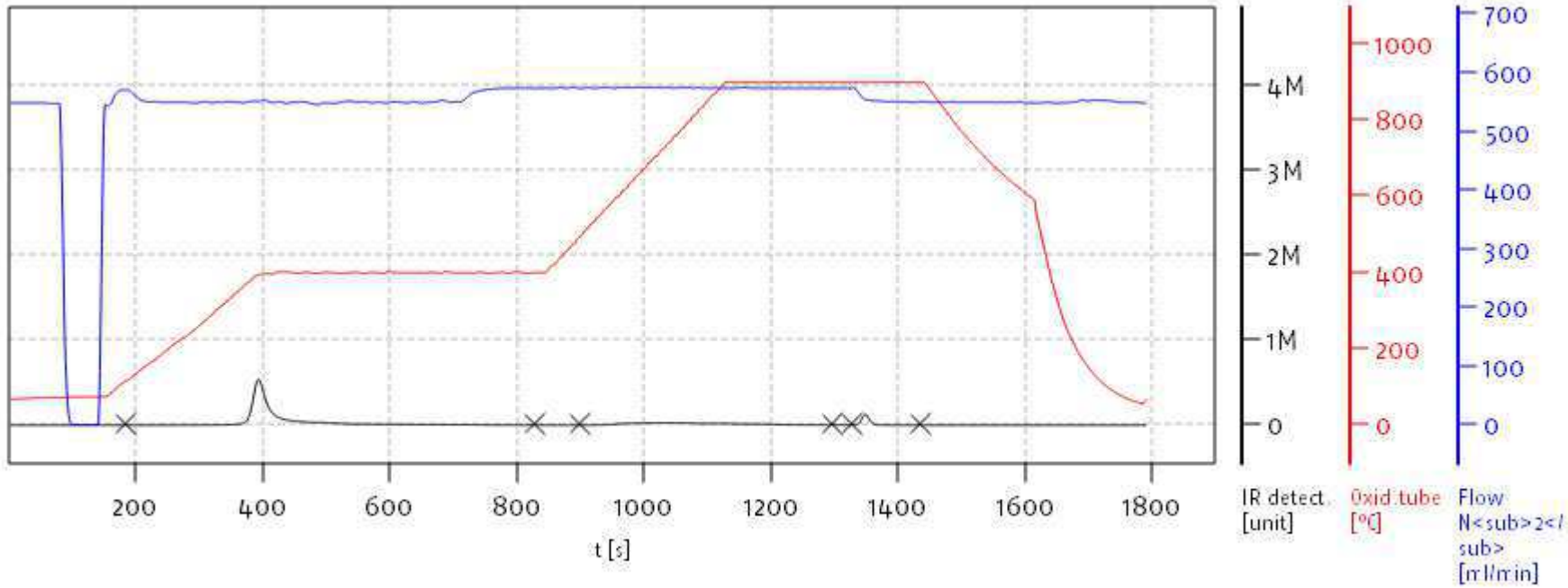
Date: Fri Jun 23 12:52:31 2023

elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
42	42	23D0136-04	105.70		CARBON	6/21/2023 12:28 PM	bl	1.136	760 171	1.404	0.060	68 615	207 197	1.077	0.268	0.9813	1.0000



Name:

Access: soliTOC superuser

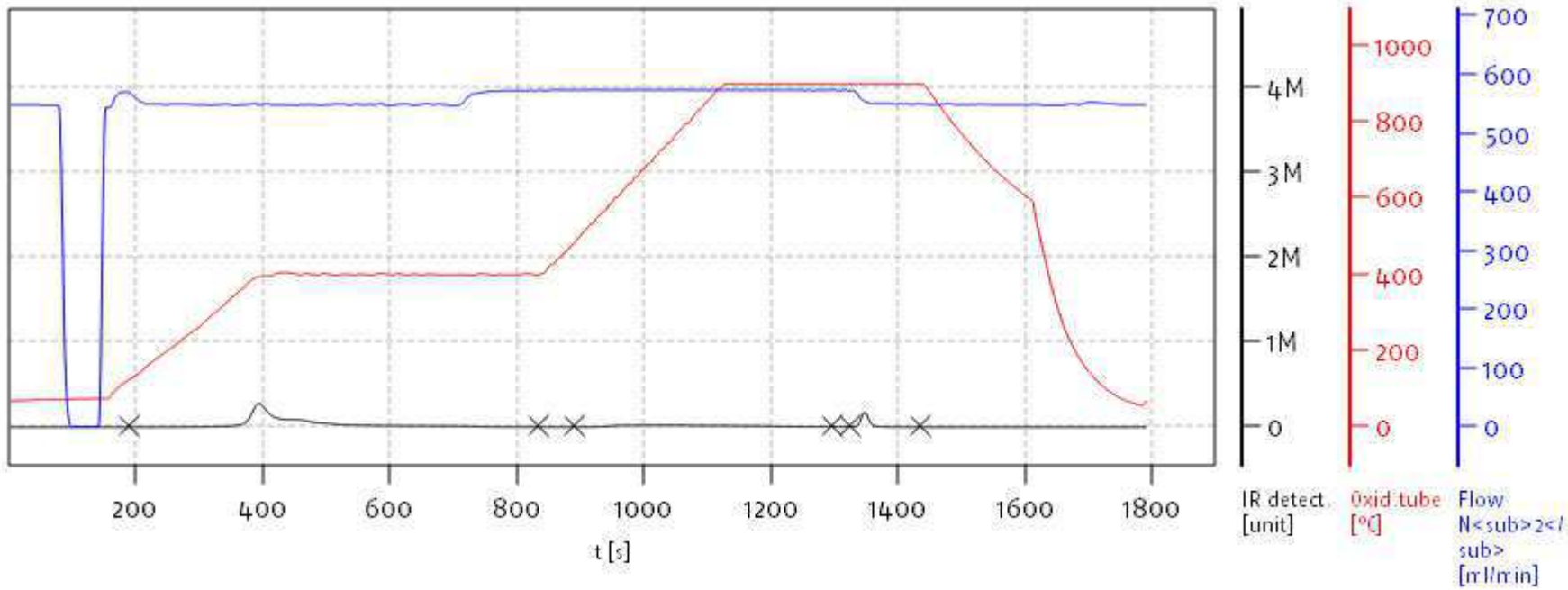
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
43	43	23D0577-01	103.10		CARBON	6/21/2023 12:58 PM	bl	1.197	750 787	1.448	0.107	98 551	191 710	1.090	0.251	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

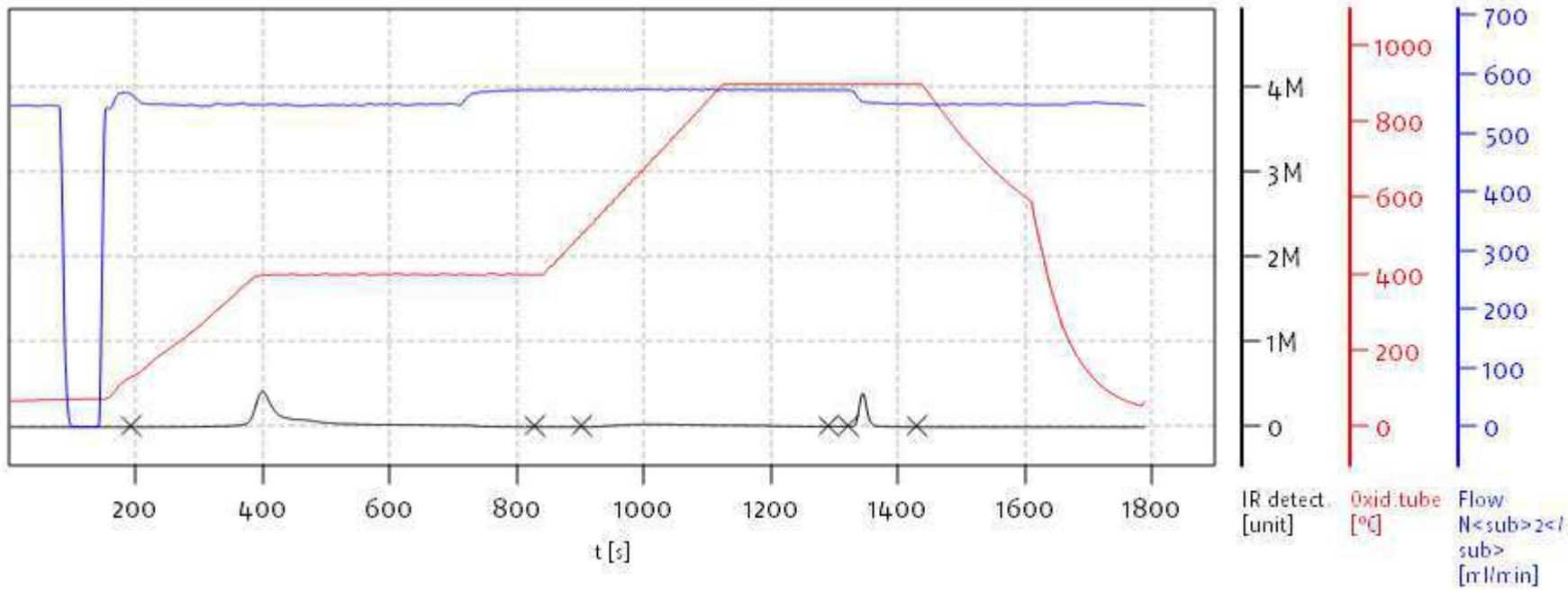
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
44	44	23D0577-02	144.20		CARBON	6/21/2023 1:28 PM	bl	1.280	1 016 932	1.547	0.214	223 320	271 194	1.066	0.267	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

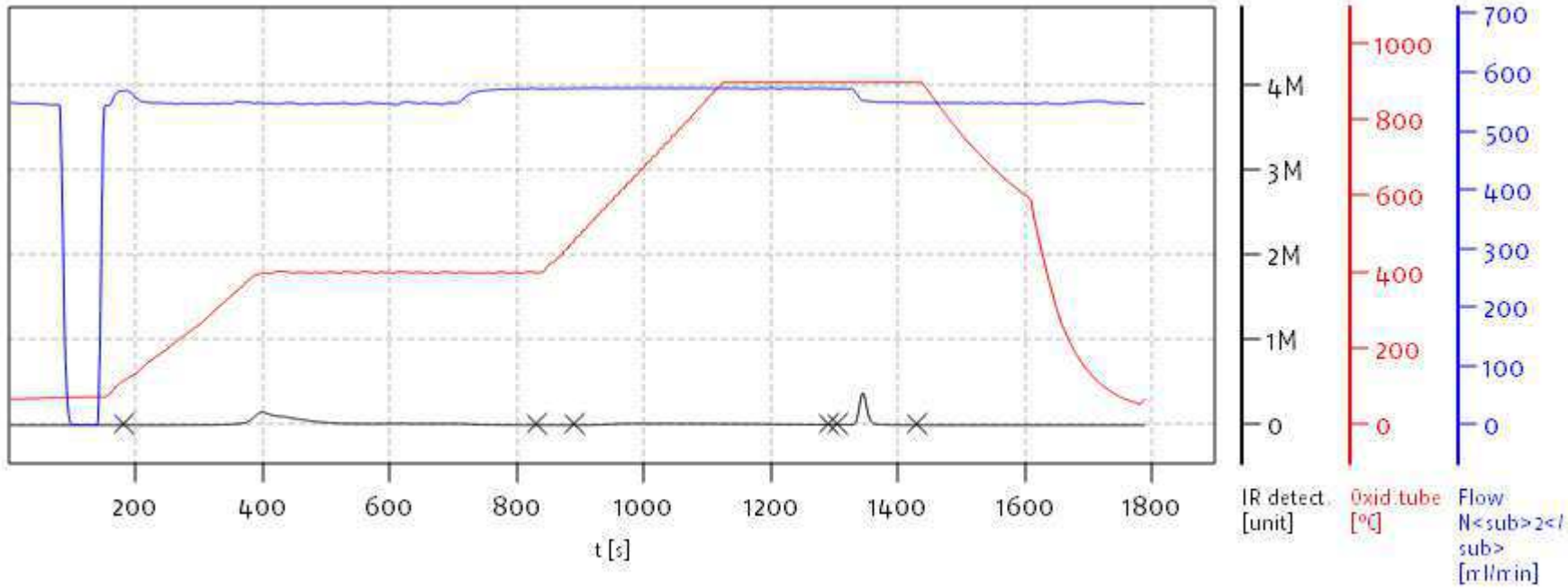
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
45	45	23D0577-03	84.10		CARBON	6/21/2023 1:58 PM	bl	1.384	590 828	1.678	0.344	211 280	184 734	1.040	0.294	0.9813	1.0000



Name:

Access: soliTOC superuser

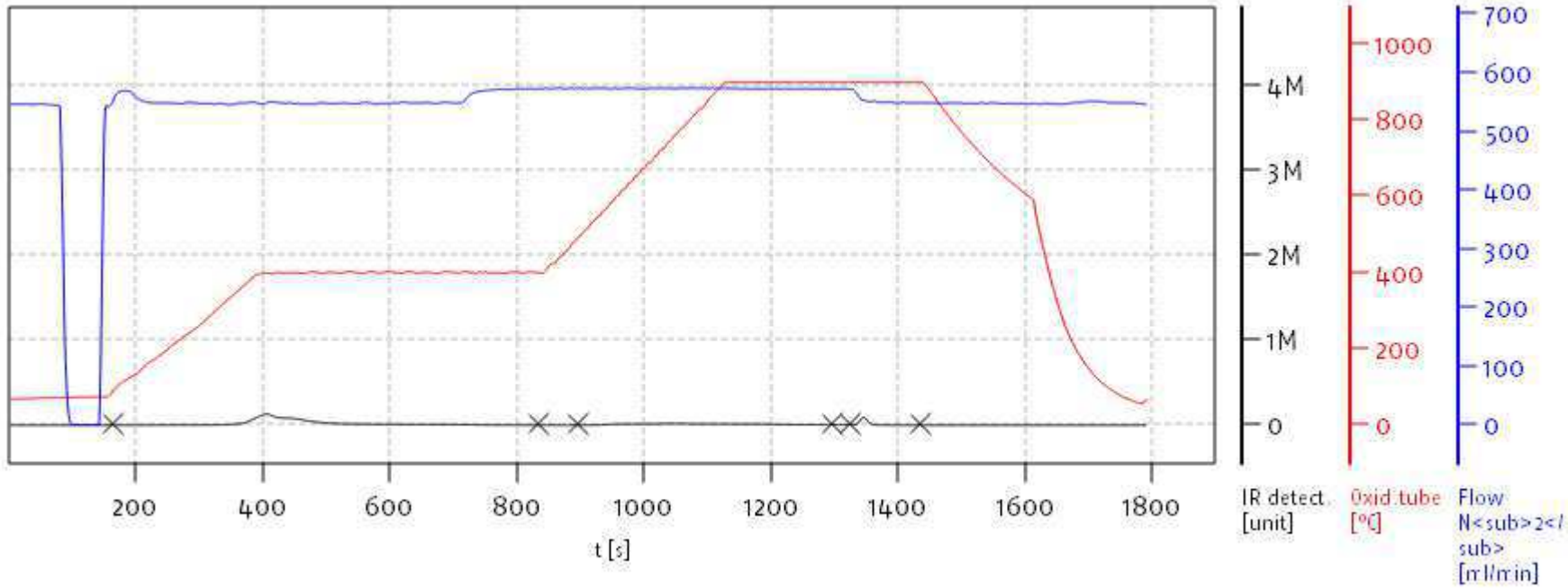
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
46	46	23D0577-04	76.40		CARBON	6/21/2023 2:29 PM	bl	0.971	479 886	1.255	0.052	53 830	165 879	0.919	0.284	0.9813	1.0000



Name:

Access: soliTOC superuser

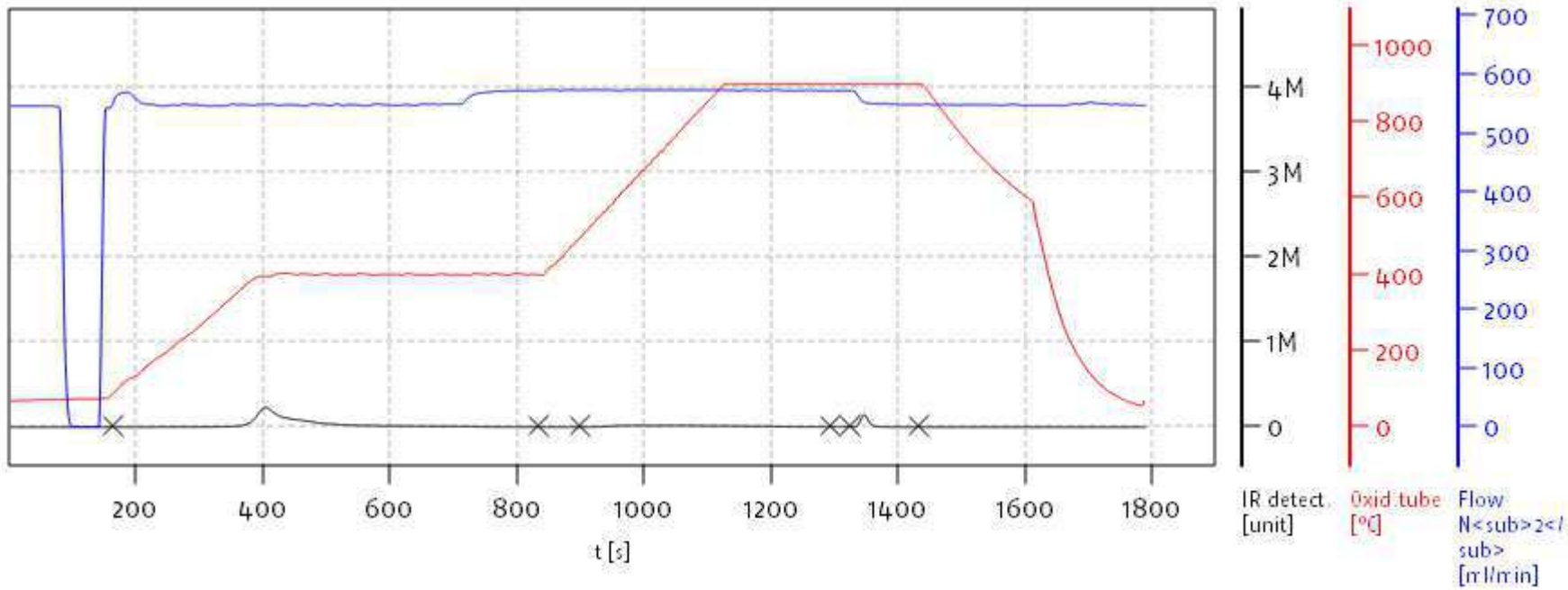
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
47	47	23D0577-05	132.50		CARBON	6/21/2023 2:59 PM	bl	0.833	684 325	0.996	0.063	81 722	164 548	0.770	0.162	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

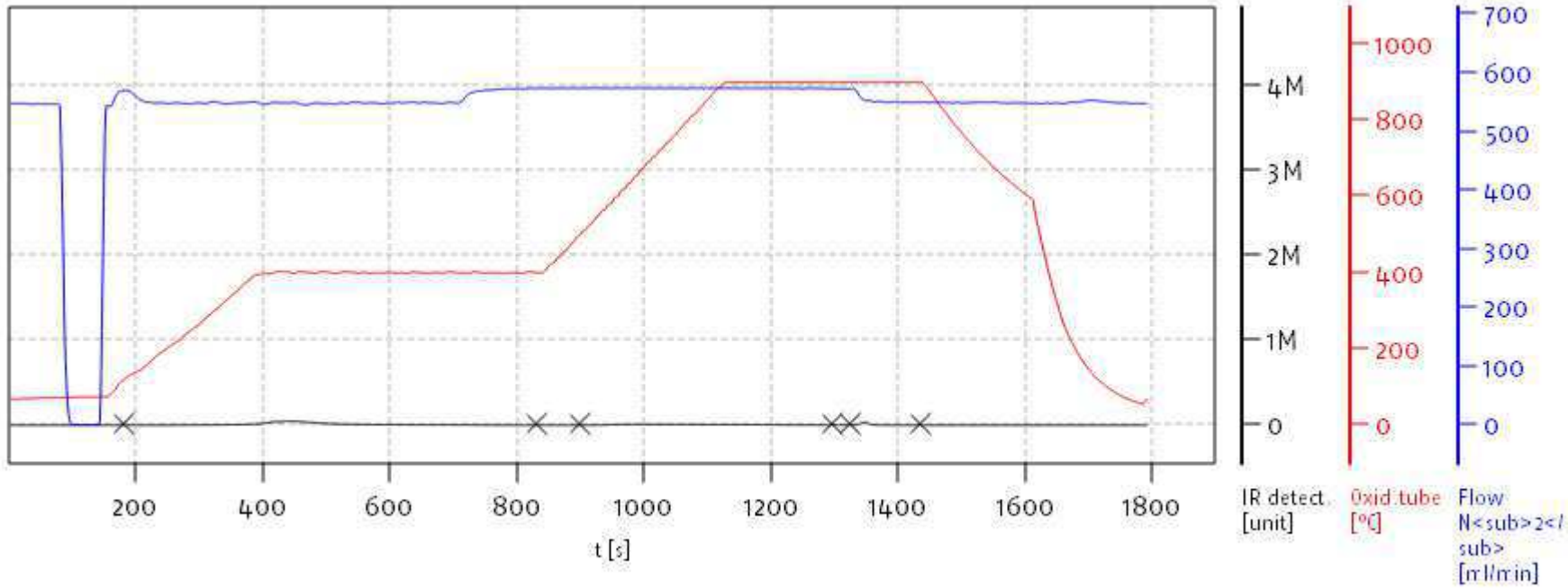
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
48	48	23D0577-06	533.50		CARBON	6/21/2023 3:29 PM	bl,C2u	0.056	221 462	0.072	0.000	20 655	83 667	0.056	0.016	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

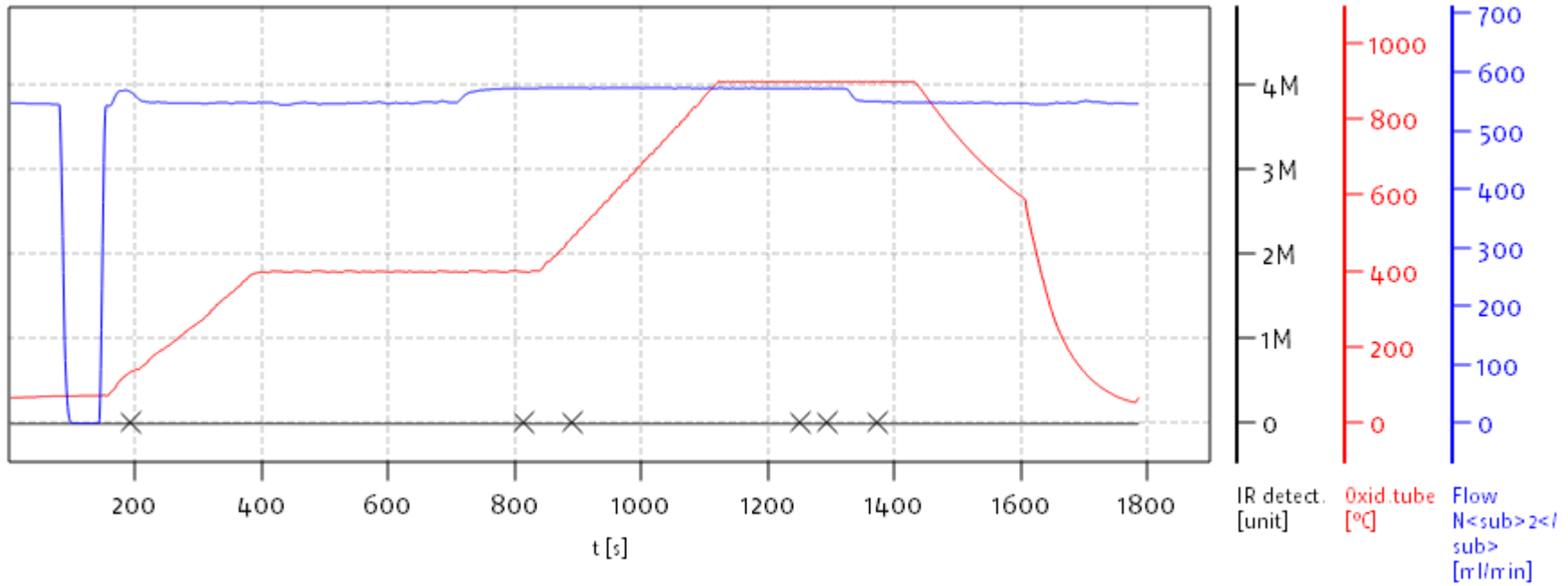
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
49	49	BLANK	1.00		CARBON	6/ 21/2023 3:59 PM	bl	0.000	7 977	0.000	0.000	172	1 587	0.000	0.000	0.9813	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

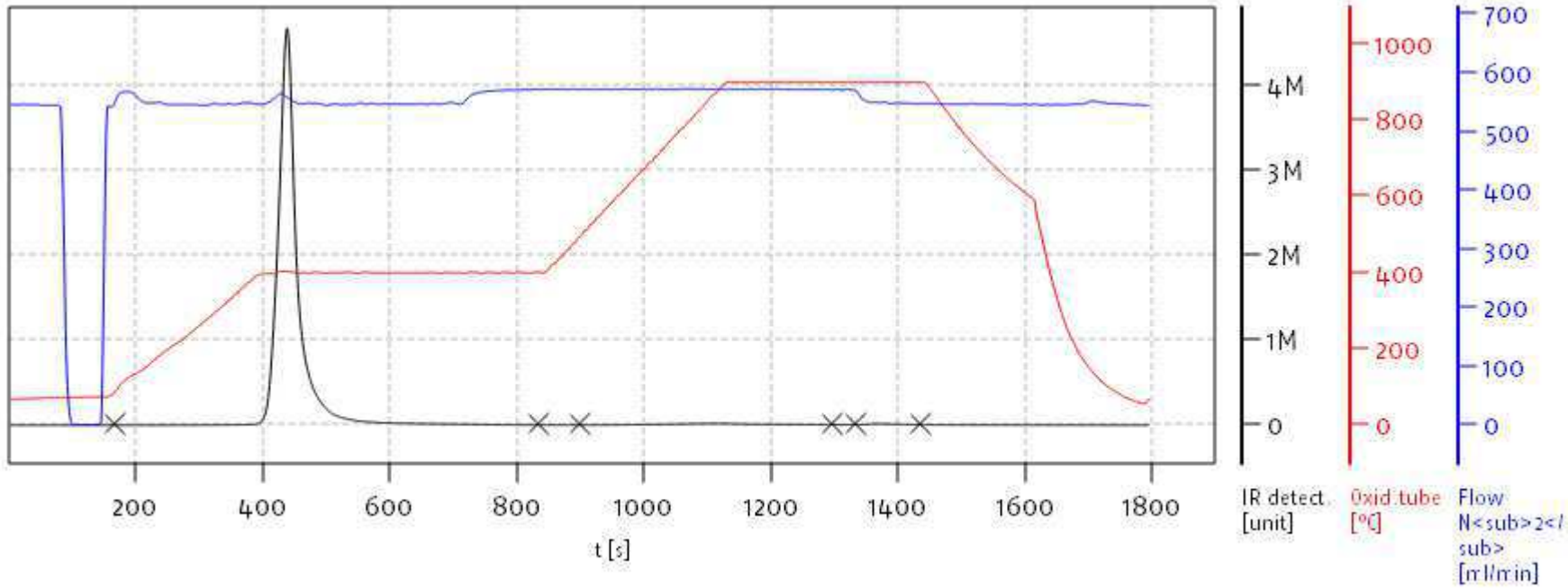
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
50	50	Dfactor	21.50		CARBON	6/21/2023 4:29 PM	bl	44.516	6 127 346	45.329	0.071	38 435	139 033	44.446	0.813	0.9879	1.0000



Name:

Access: soliTOC superuser

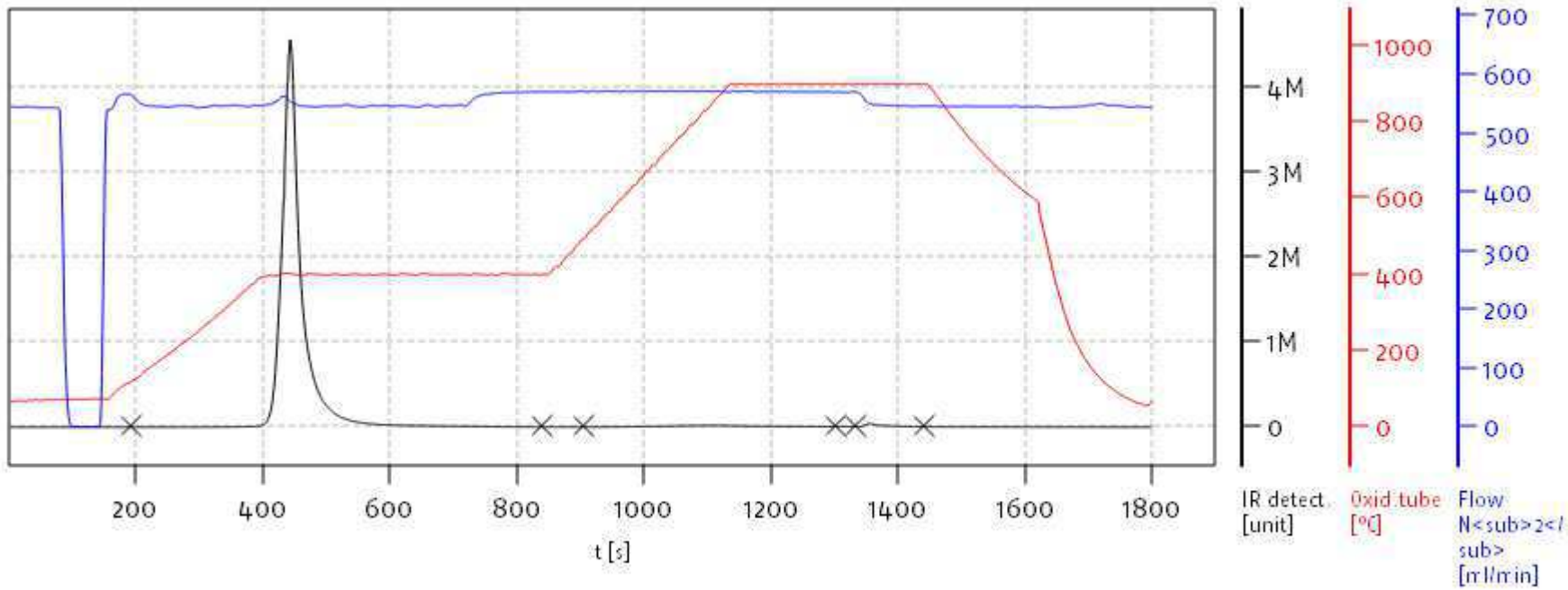
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
51	51	Dfactor	20.80		CARBON	6/21/2023 5:00 PM	bl	44.651	5 858 369	45.505	0.206	55 824	140 858	44.446	0.854	0.9998	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

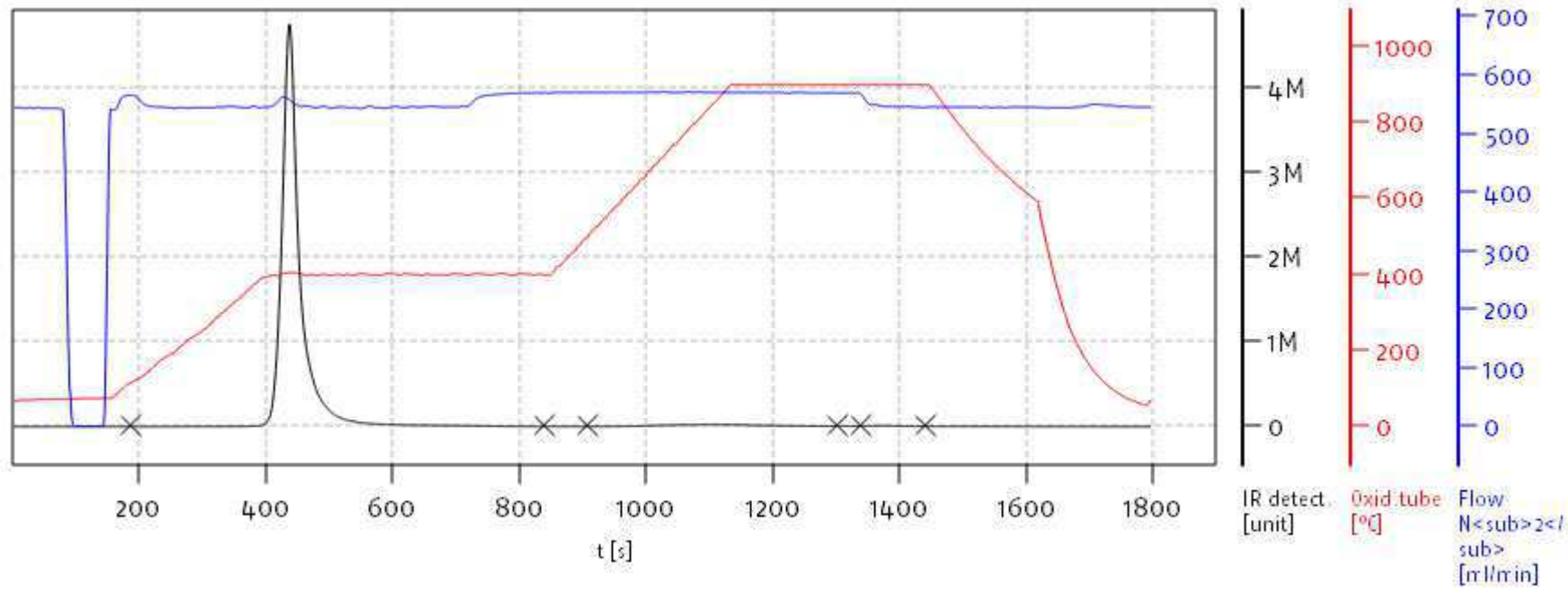
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
52	52	SLF0283-CCV4	20.40		CARBON	6/21/2023 5:30 PM	bl	45.080	5 862 689	46.280	0.000	26 555	183 169	45.080	1.200	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

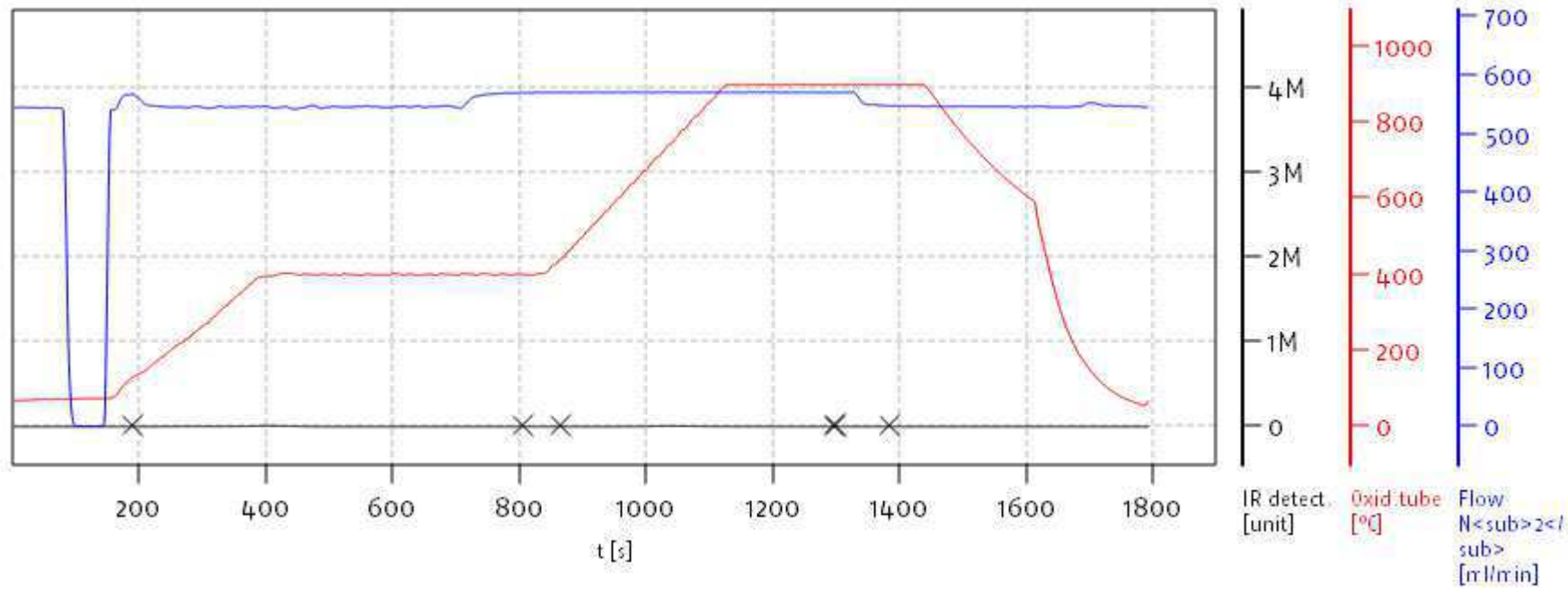
elementar
EXCELLENCE IN ELEMENTS

Document: 062023 CDE from: 6/23/2023 12:51 PM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
53	53	SLF0283-CCB4	527.10		CARBON	6/21/2023 6:00 PM	bl,C2u	0.003	38 859	0.003	0.000	887	29 853	0.003	0.000	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

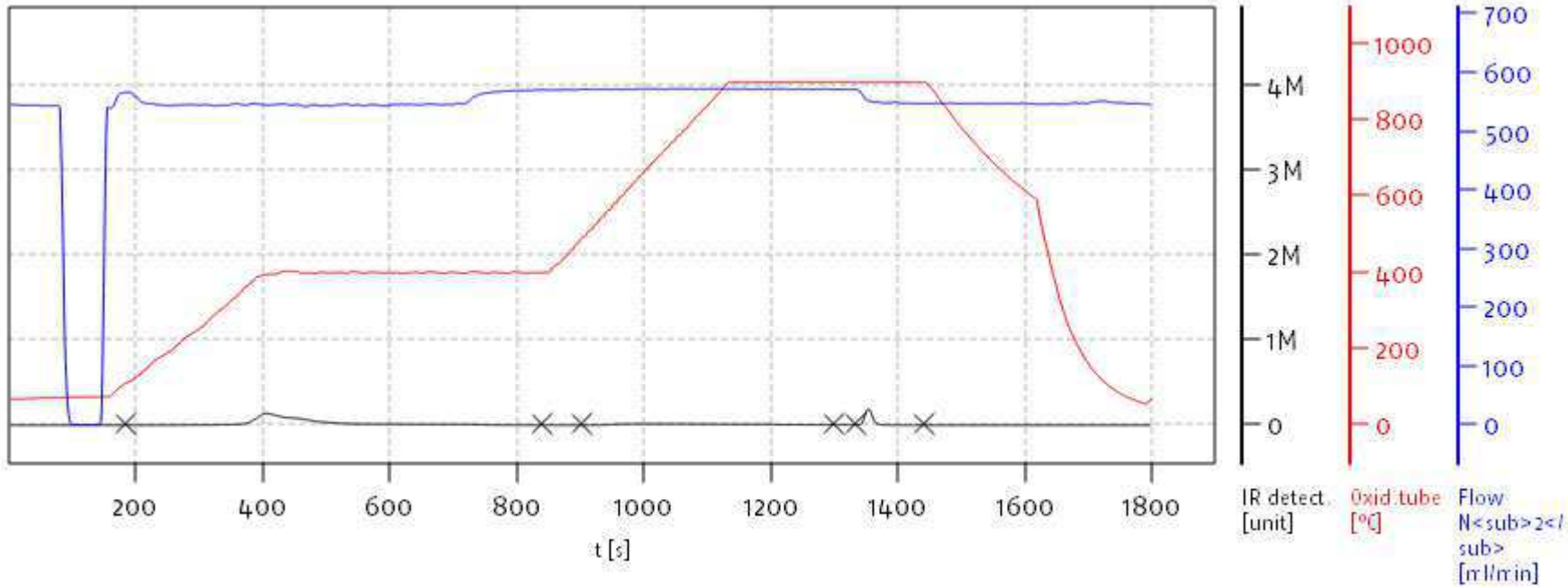
elementar
EXCELLENCE IN ELEMENTS

Document: 062023 CDE from: 6/23/2023 12:51 PM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
54	54	23D0577-07	90.00		CARBON	6/21/2023 6:31 PM	bl	1.004	527 758	1.207	0.131	102 976	143 830	0.874	0.203	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

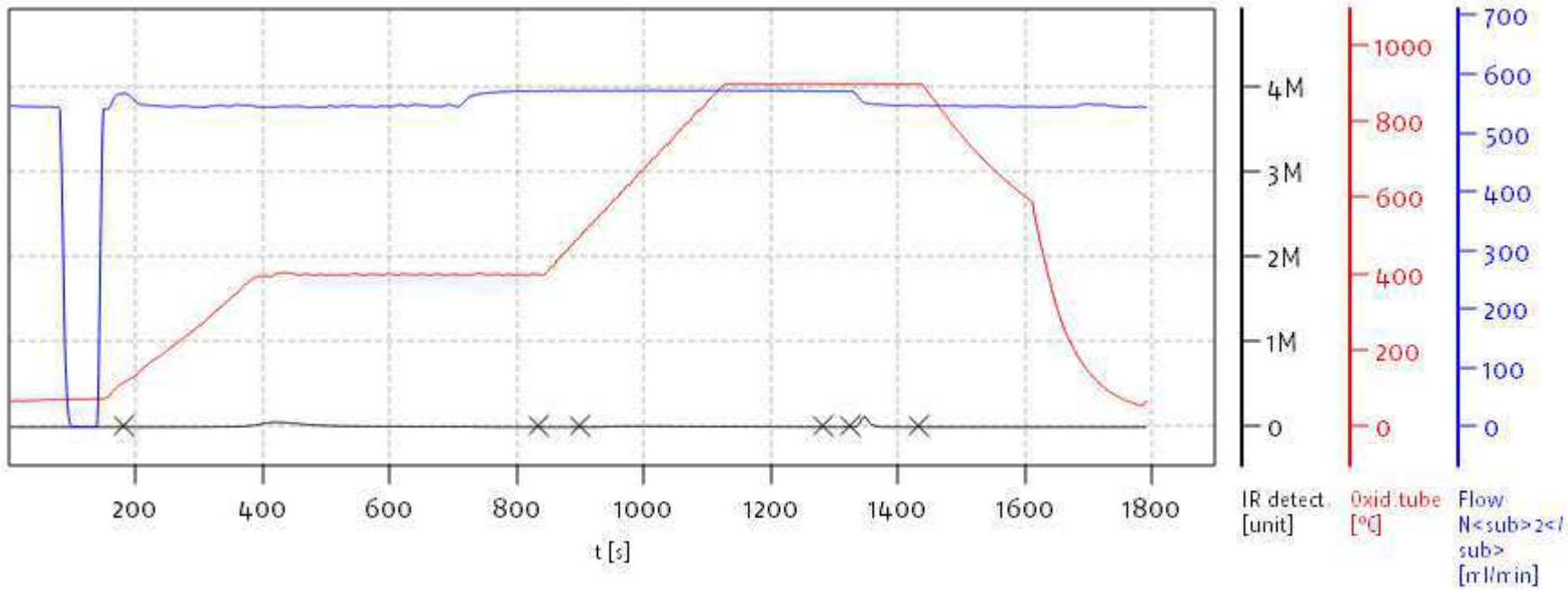
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062023 CDE from: 6/23/2023 12:51 PM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
55	55	23D0577-08	96.00		CARBON	6/21/2023 7:01 PM	bl	0.445	255 123	0.523	0.074	73 613	75 590	0.372	0.077	0.9939	1.0000



Name:

Access: soliTOC superuser

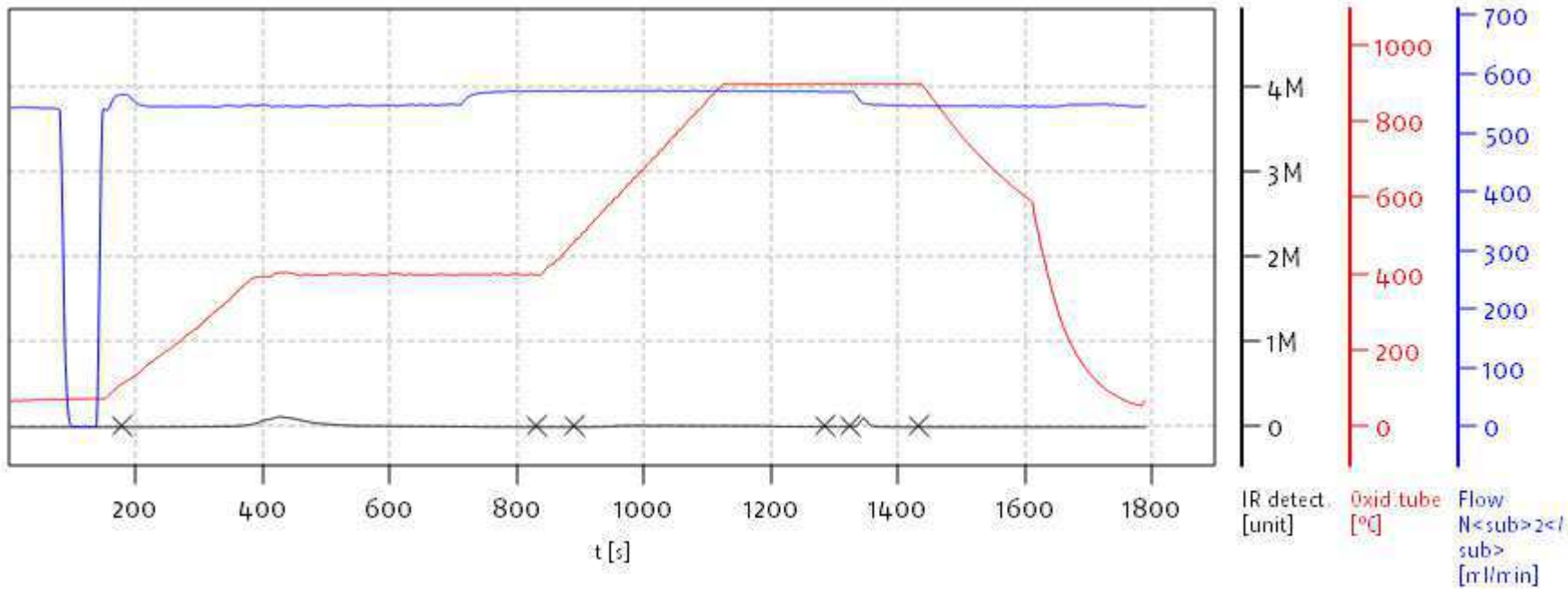
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
56	56	23D0577-09	174.00		CARBON	6/21/2023 7:31 PM	bl	0.452	496 207	0.568	0.029	60 539	156 241	0.423	0.116	0.9939	1.0000



Name:

Access: soliTOC superuser

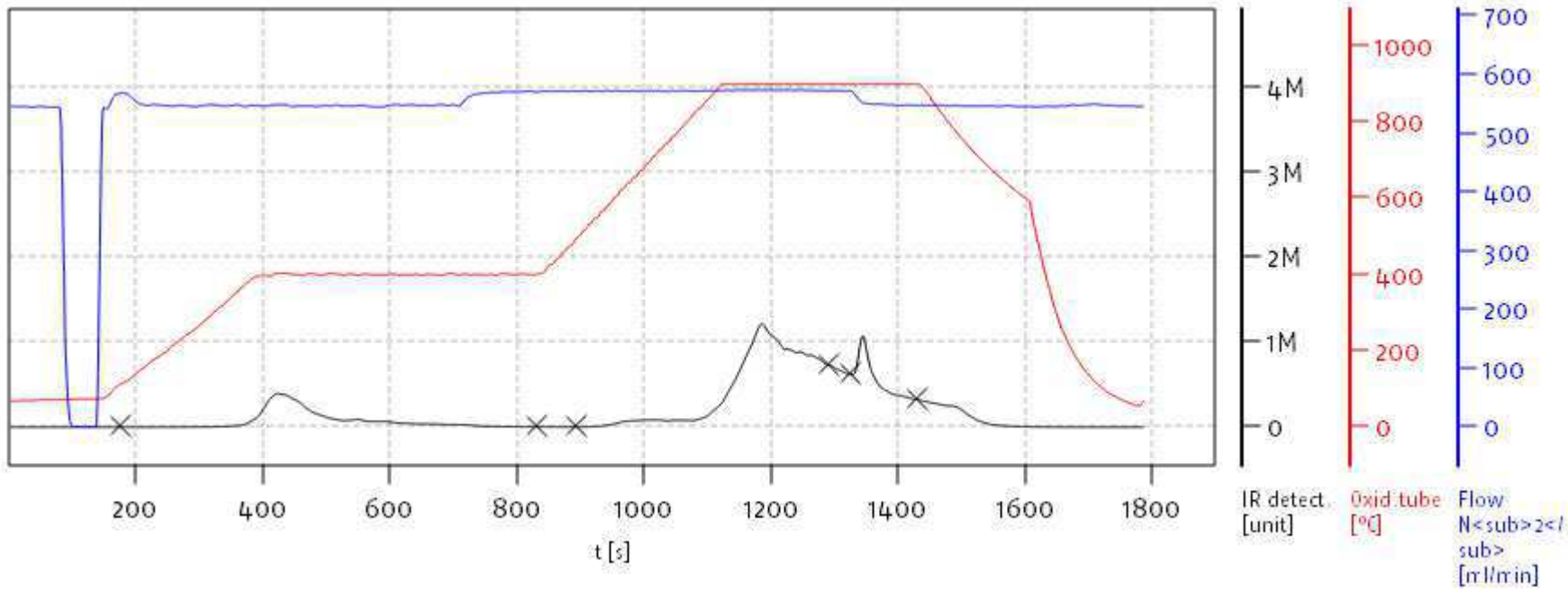
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
57	57	23E0009-01	724.60		CARBON	6/21/2023 8:01 PM	bl	0.807	1 672 381	2.120	0.449	2 080 811	6 030 228	0.358	1.314	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

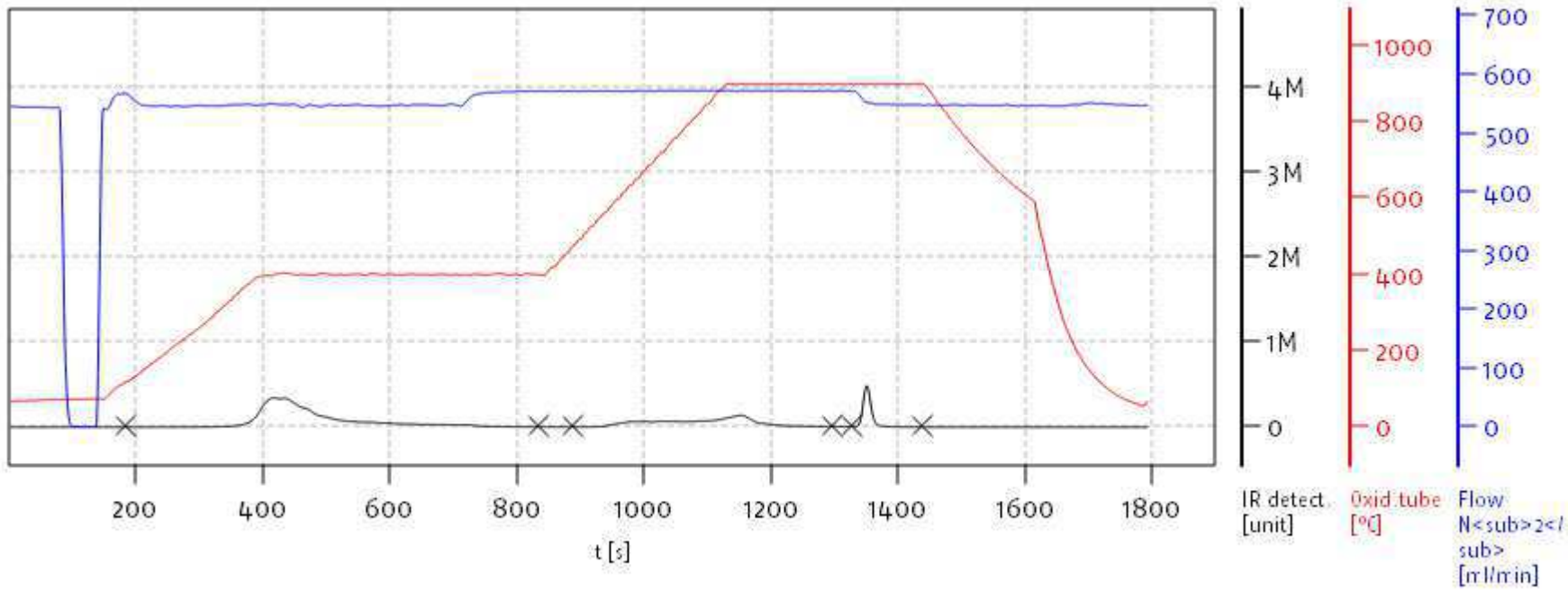
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
58	58	23E0009-02	543.80		CARBON	6/21/2023 8:32 PM	bl	0.509	1 537 580	0.717	0.071	273 542	742 518	0.437	0.208	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

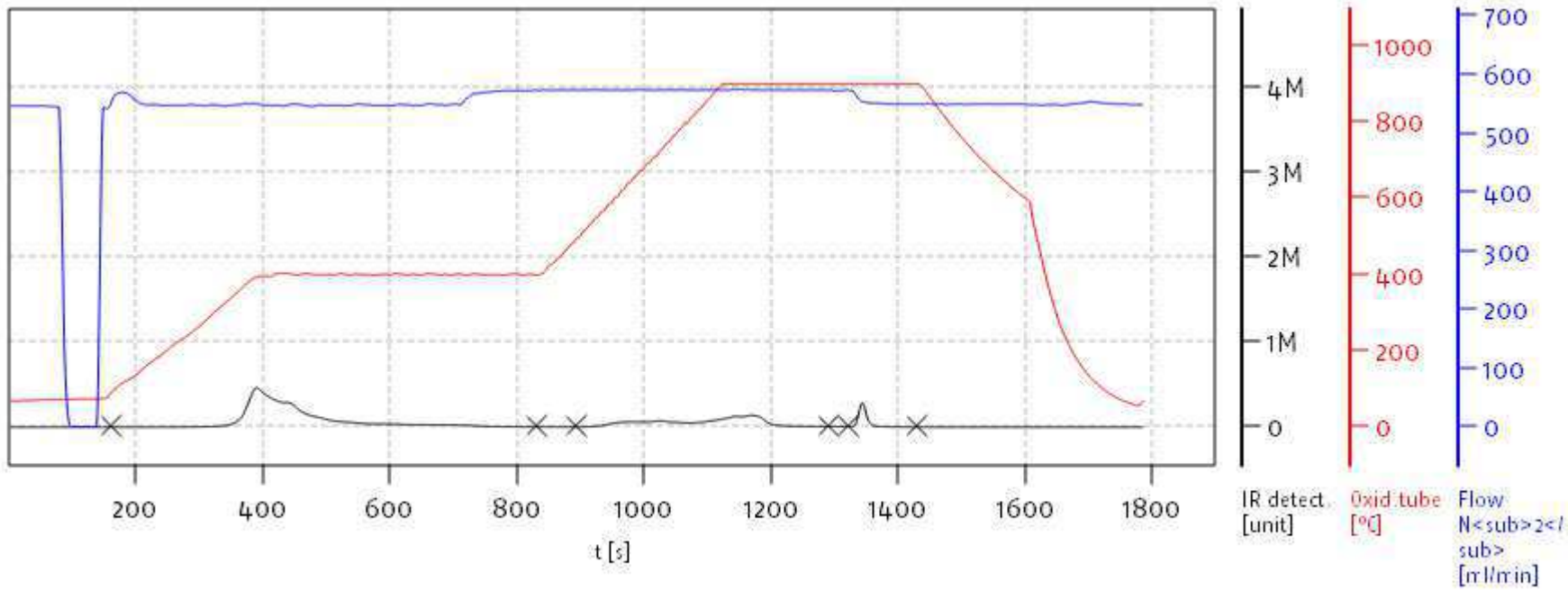
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
59	59	23E0009-03	268.60		CARBON	6/21/2023 9:02 PM	bl	1.071	1 720 560	1.524	0.079	162 007	795 012	0.993	0.452	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

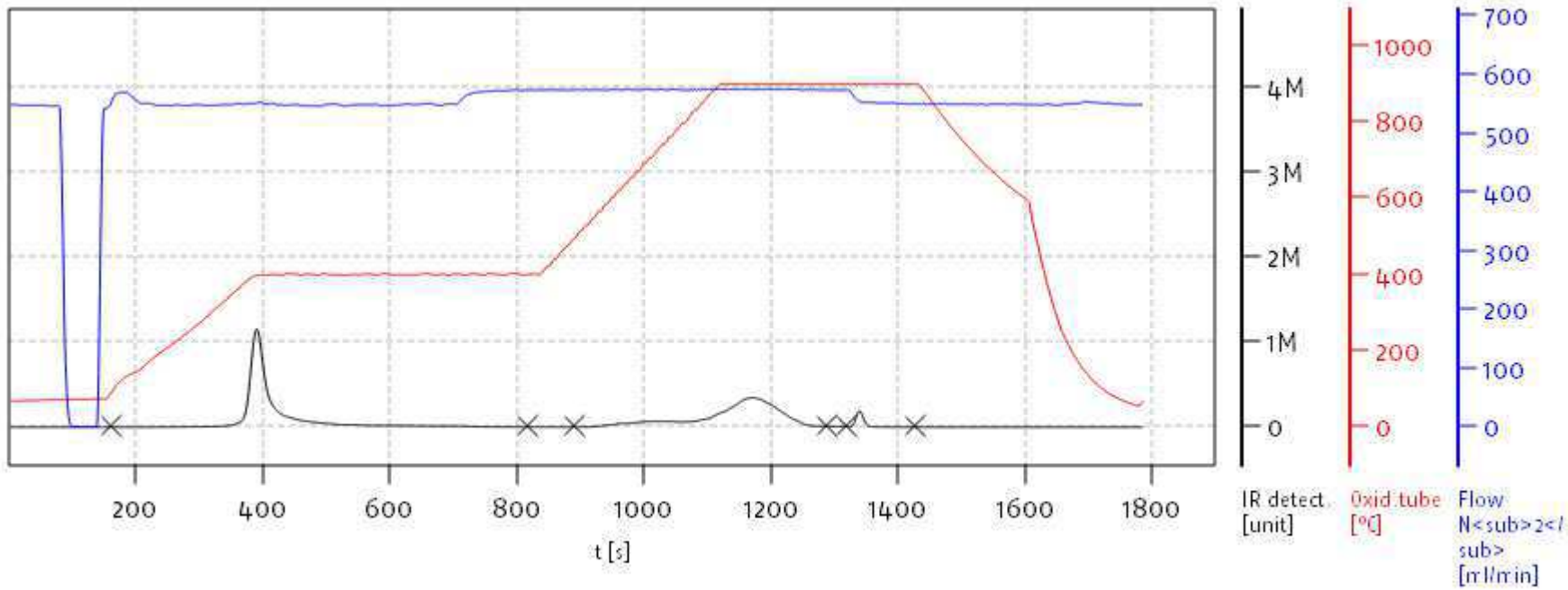
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062023 CDE from: 6/23/2023 12:51 PM

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
60	60	23E0009-04	239.30		CARBON	6/21/2023 9:32 PM	bl	1.110	1 638 318	2.153	0.050	103 685	1 602 256	1.060	1.043	0.9939	1.0000



Name:

Access: soliTOC superuser

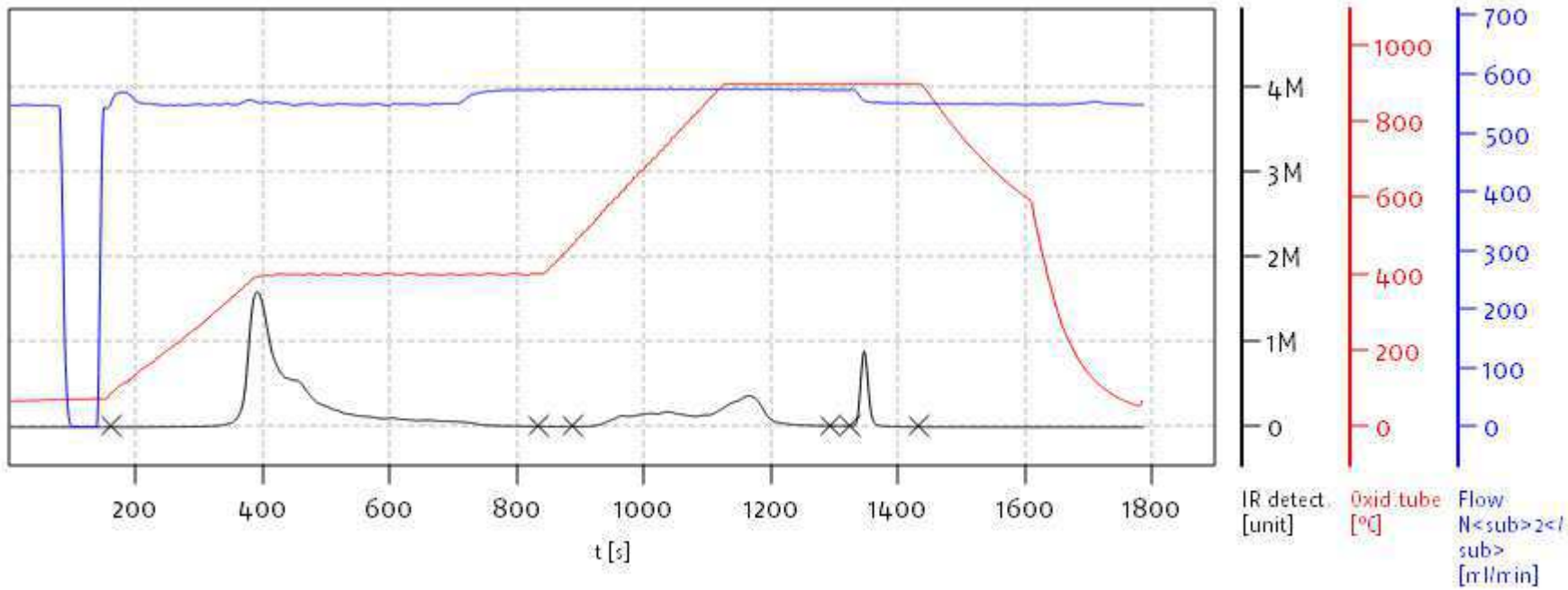
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
61	61	23E0009-05	666.30		CARBON	6/21/2023 10:02 PM	bl	1.222	4 726 835	1.675	0.110	492 606	1 930 945	1.111	0.453	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

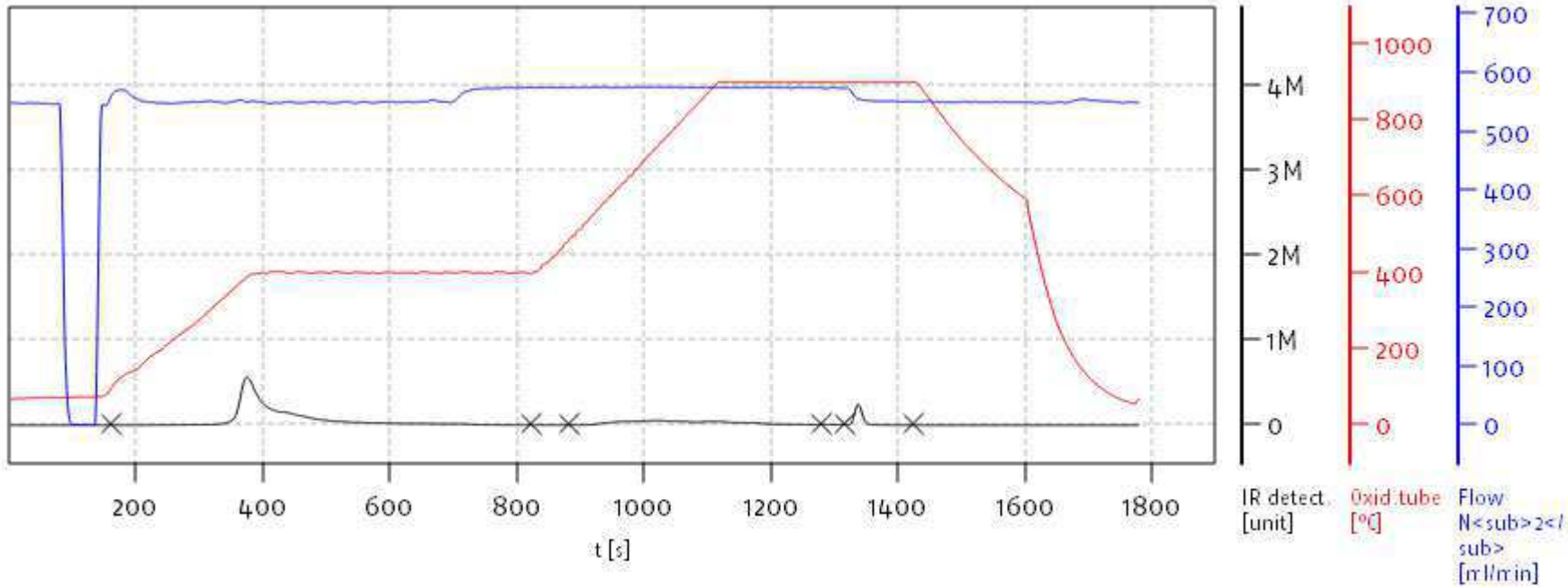
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
62	62	23E0009-06	189.60		CARBON	6/21/2023 10:32 PM	bl	1.228	1 397 473	1.554	0.090	136 053	418 898	1.138	0.326	0.9939	1.0000



Name:

Access: soliTOC superuser

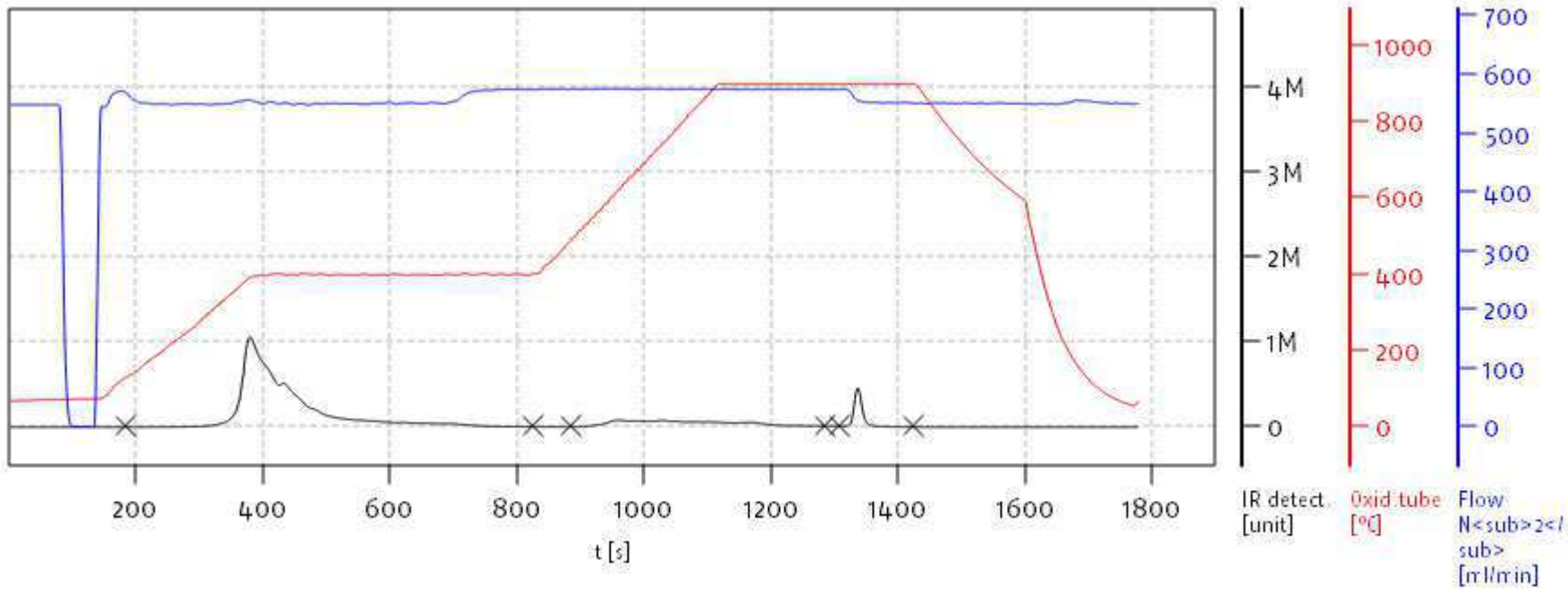
Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
63	63	23E0009-07	571.30		CARBON	6/21/2023 11:02 PM	bl	0.988	3 366 739	1.169	0.067	268 476	681 751	0.921	0.181	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

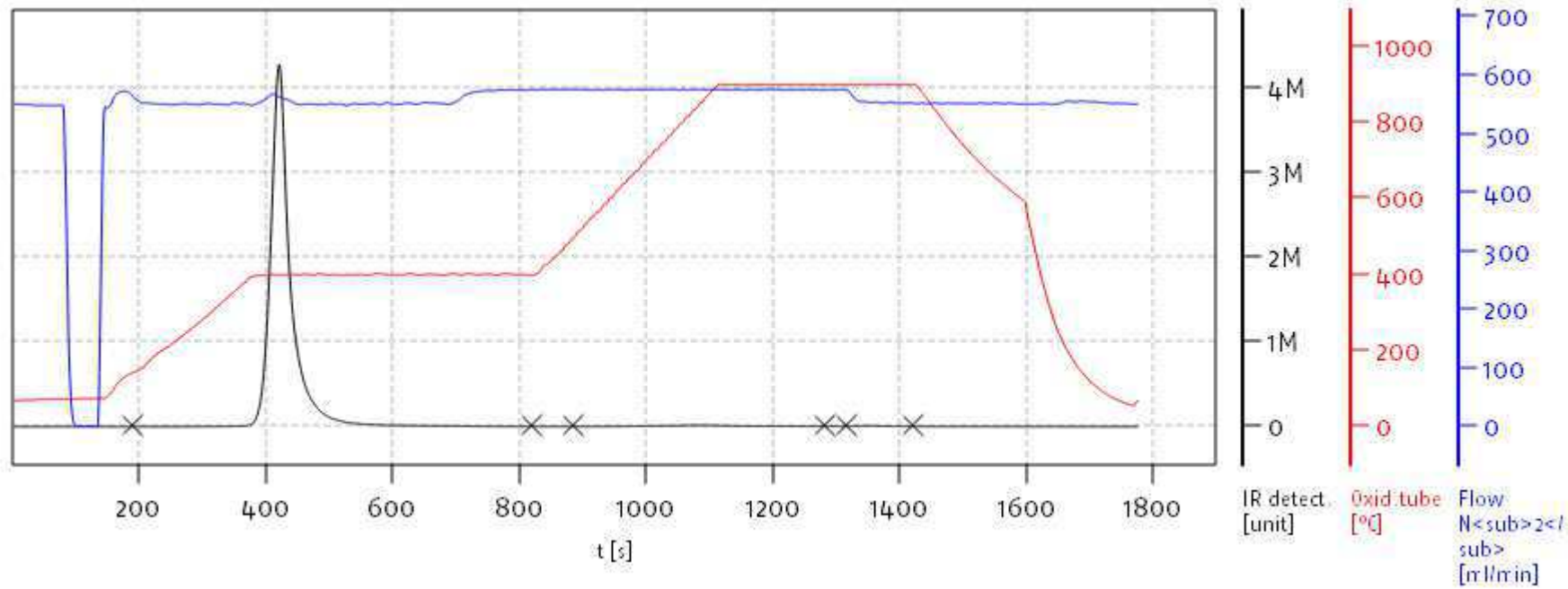
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
64	64	SLF0283-CCV5	20.30		CARBON	6/21/2023 11:32 PM	bl	45.138	5 841 523	45.717	0.000	23 570	102 950	45.138	0.579	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

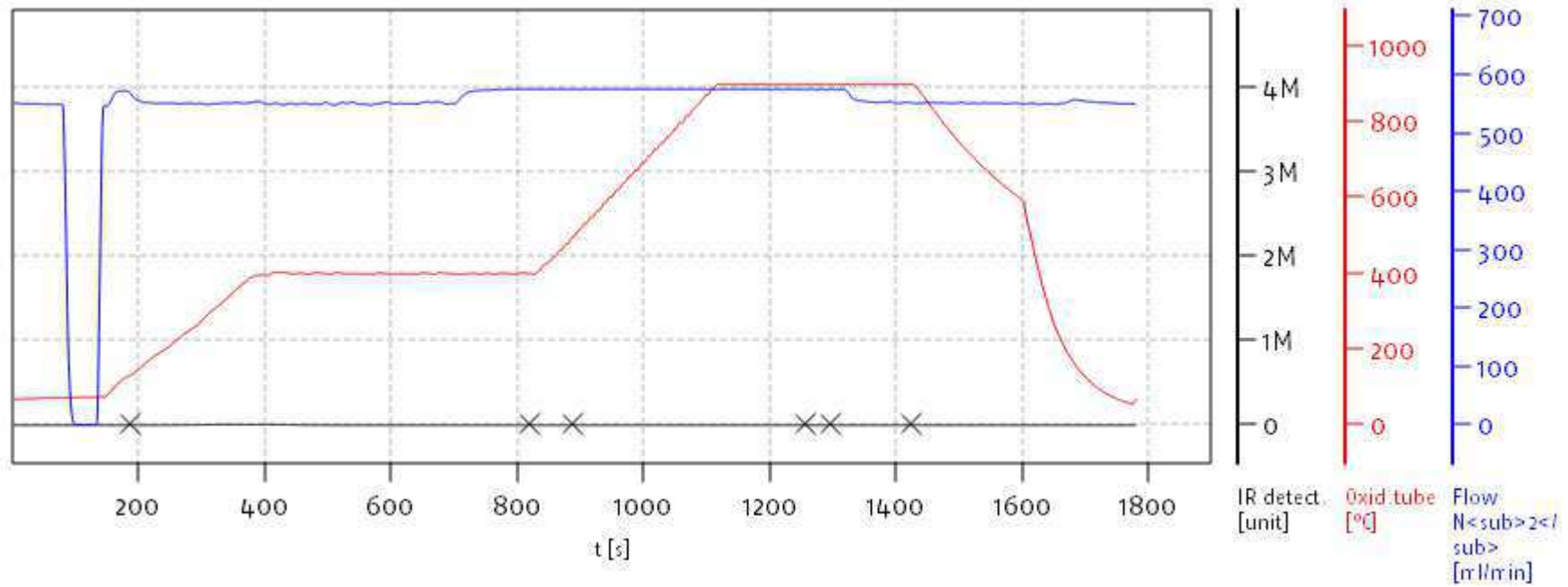
elementar
EXCELLENCE IN ELEMENTS

Document: 062023 CDE from: 6/23/2023 12:51 PM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
65	65	SLF0283-CCB5	508.90		CARBON	6/22/2023 12:02 AM	bl,C3u,C2u	0.005	46 322	0.005	0.000	370	3 044	0.005	0.000	0.9939	1.0000



Name:

Access: soliTOC superuser

Date: Fri Jun 23 12:52:31 2023

elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 062023 CDE from: 6/23/2023 12:51 PM

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

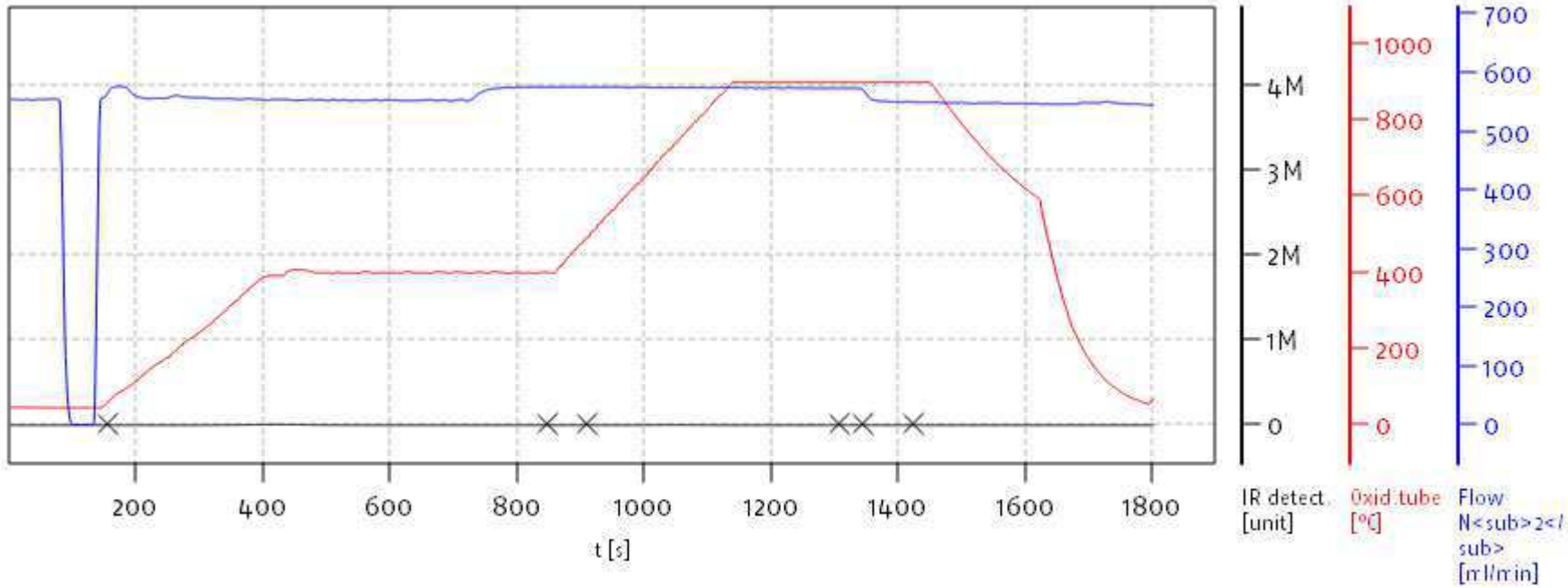
Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLF0370
Instrument: TOC Cube
Calibration: GE00052

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLF0370-ICV1	CubeData_06262023@1011-003	NA	06/24/23 15:01
Initial Cal Blank	SLF0370-ICB1	CubeData_06262023@1011-004	NA	06/24/23 15:31
Reference	BLF0522-SRM2	CubeData_06262023@1011-008	Solid	06/24/23 17:32
Reference	BLF0523-SRM2	CubeData_06262023@1011-009	Solid	06/24/23 18:02
LDW23-IT1820	23E0009-08	CubeData_06262023@1011-010	Solid	06/24/23 18:32
Calibration Check	SLF0370-CCV1	CubeData_06262023@1011-015	NA	06/24/23 21:02
Calibration Blank	SLF0370-CCB1	CubeData_06262023@1011-016	NA	06/24/23 21:32
Calibration Check	SLF0370-CCV2	CubeData_06262023@1011-027	NA	06/25/23 03:04
Calibration Blank	SLF0370-CCB2	CubeData_06262023@1011-028	NA	06/25/23 03:35
Calibration Check	SLF0370-CCV3	CubeData_06262023@1011-039	NA	06/25/23 09:07
Calibration Blank	SLF0370-CCB3	CubeData_06262023@1011-040	NA	06/25/23 09:37
Calibration Check	SLF0370-CCV4	CubeData_06262023@1011-050	NA	06/25/23 15:10
Calibration Blank	SLF0370-CCB4	CubeData_06262023@1011-051	NA	06/25/23 15:40
Calibration Check	SLF0370-CCV5	CubeData_06262023@1011-062	NA	06/25/23 21:12
Calibration Blank	SLF0370-CCB5	CubeData_06262023@1011-063	NA	06/25/23 21:43
Calibration Check	SLF0370-CCV6	CubeData_06262023@1011-074	NA	06/26/23 03:15
Calibration Blank	SLF0370-CCB6	CubeData_06262023@1011-075	NA	06/26/23 03:45
Calibration Check	SLF0370-CCV7	CubeData_06262023@1011-079	NA	06/26/23 05:46
Calibration Blank	SLF0370-CCB7	CubeData_06262023@1011-080	NA	06/26/23 06:16

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	6/ 24/2023 1:31 PM	bl	0.000	40 265	0.000	0.000	981	12 884	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

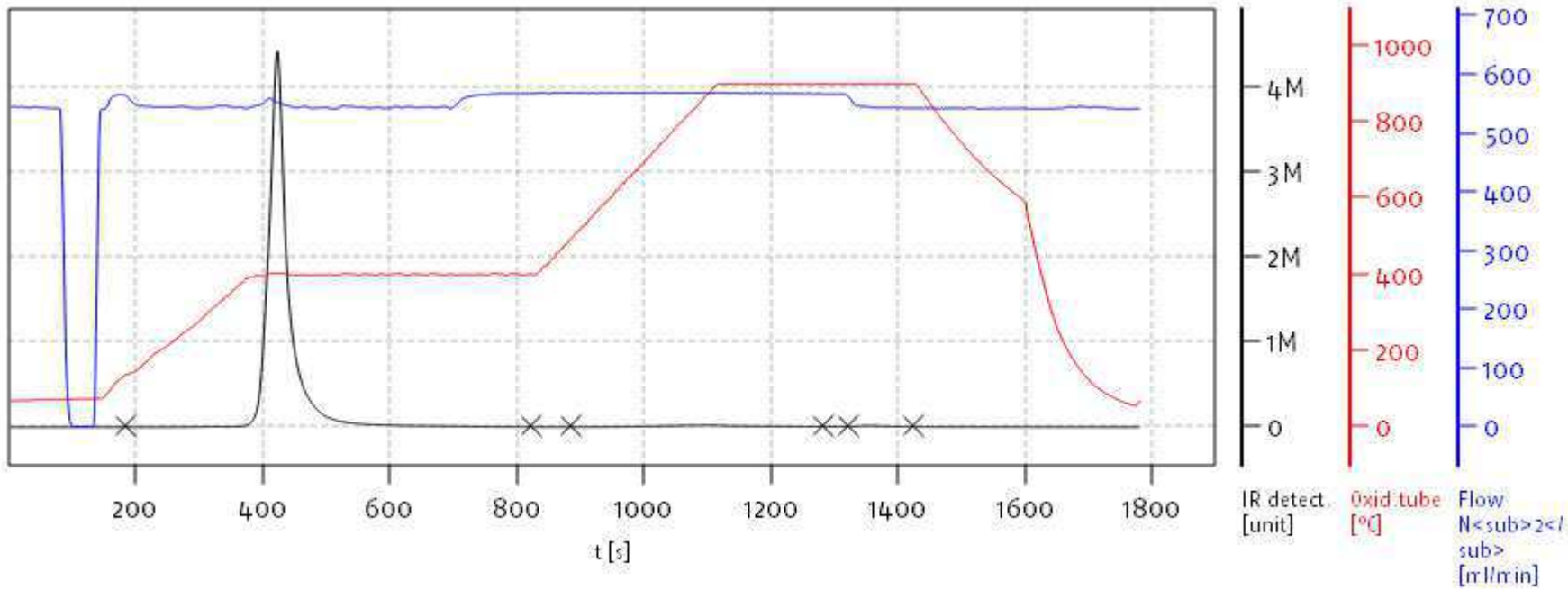
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	Dfactor	20.30		CARBON	6/24/2023 2:01 PM	bl	44.491	5 881 680	45.372	0.045	34 642	141 680	44.446	0.881	0.9719	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

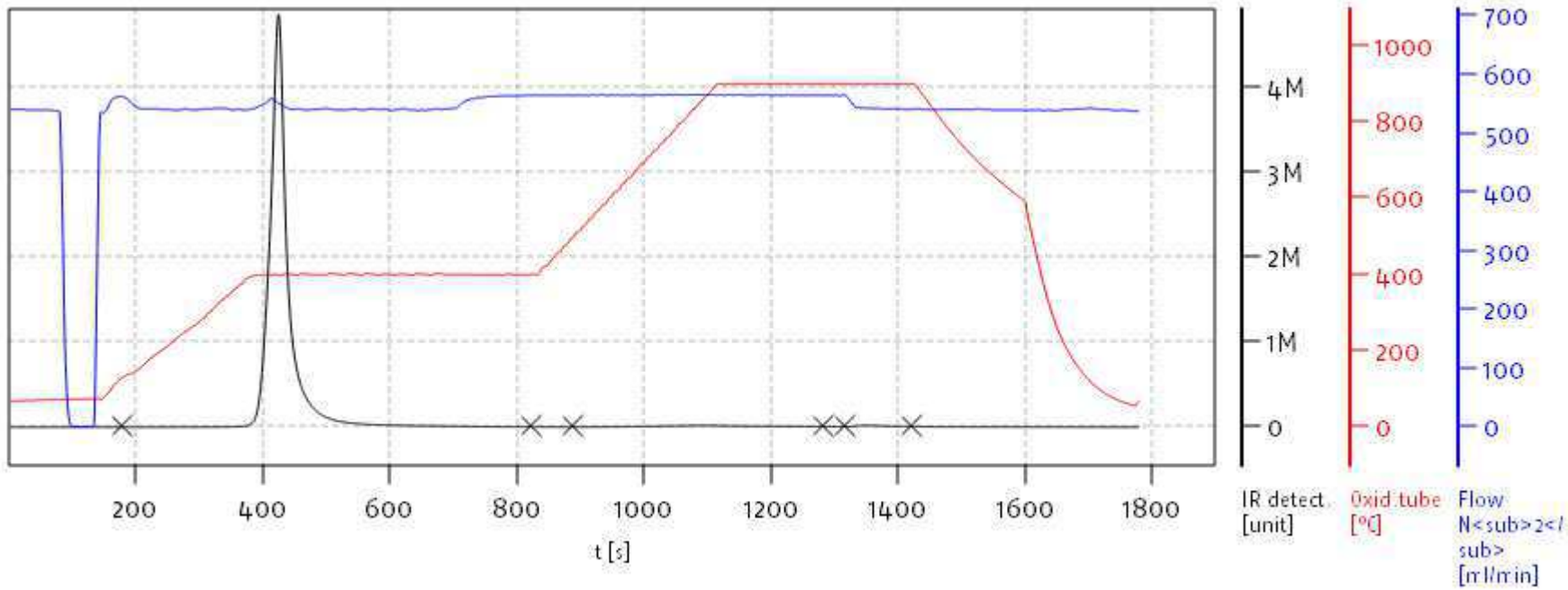
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	Dfactor	21.30		CARBON	6/24/2023 2:31 PM	bl	44.566	5 922 210	45.384	0.120	44 968	138 724	44.446	0.818	1.0128	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

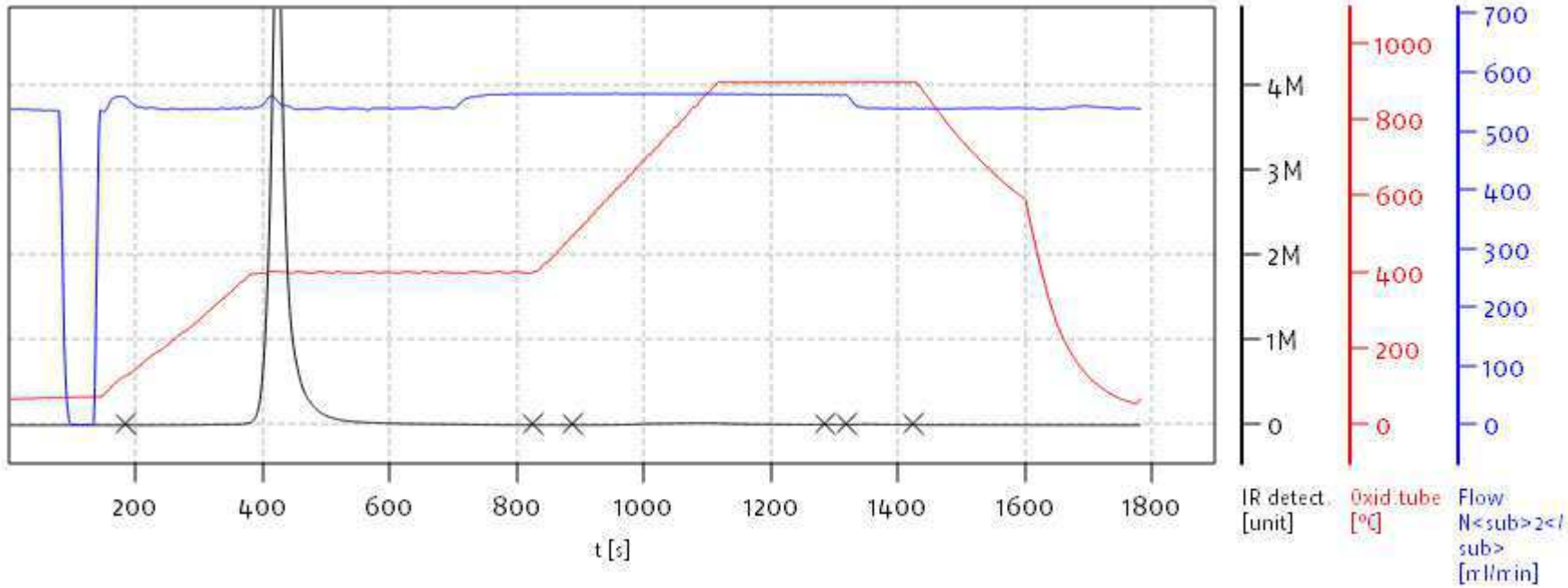
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SLF0370-ICV1	22.10		CARBON	6/24/2023 3:01 PM	bl	46.641	6 577 696	47.635	0.000	25 743	167 363	46.641	0.994	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

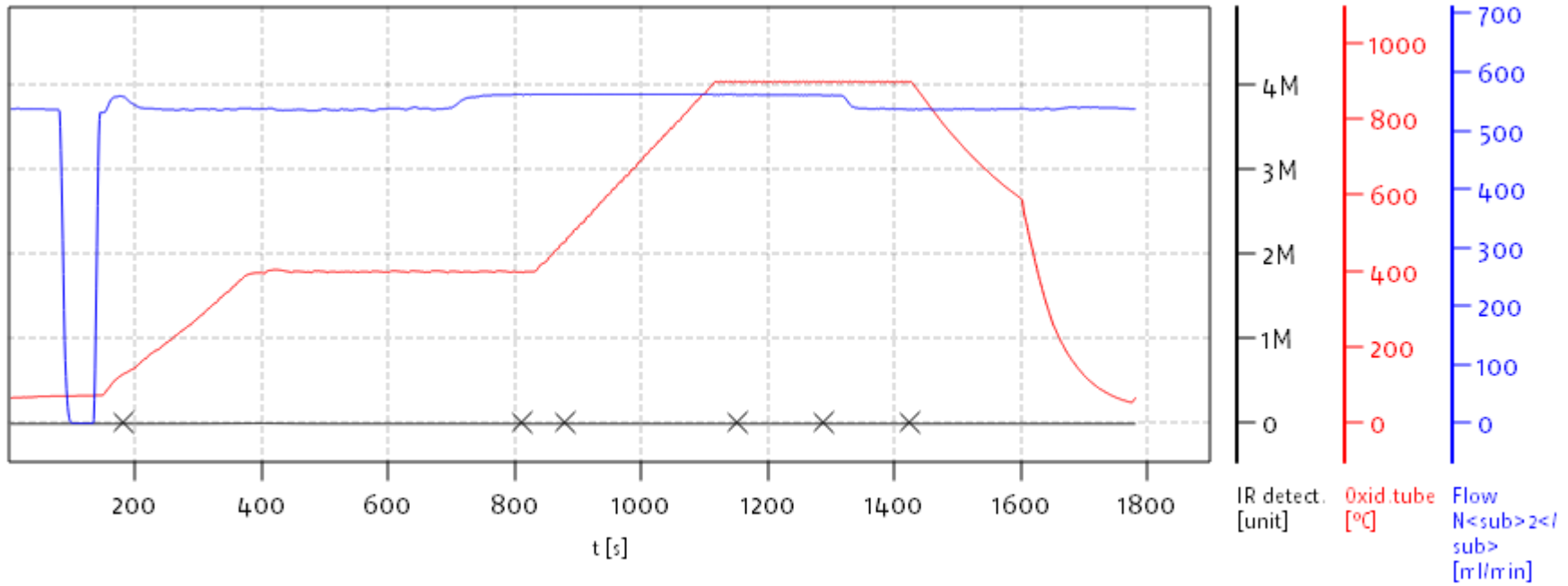
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SLF0370-ICB1	514.50		CARBON	6/24/2023 3:31 PM	bl,C1u,C3u,C2u	0.000	20 579	0.000	0.000	633	353	0.000	0.000	0.9923	1.0000



Name:

Access: soliTOC superuser

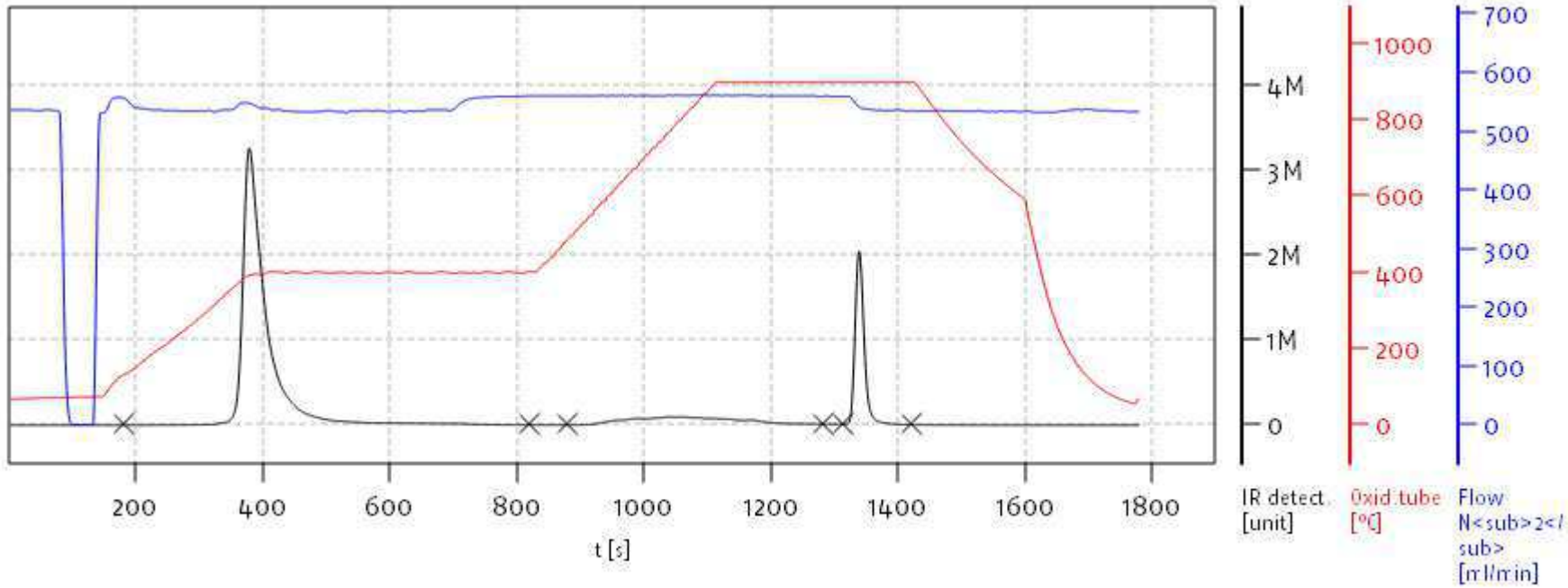
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

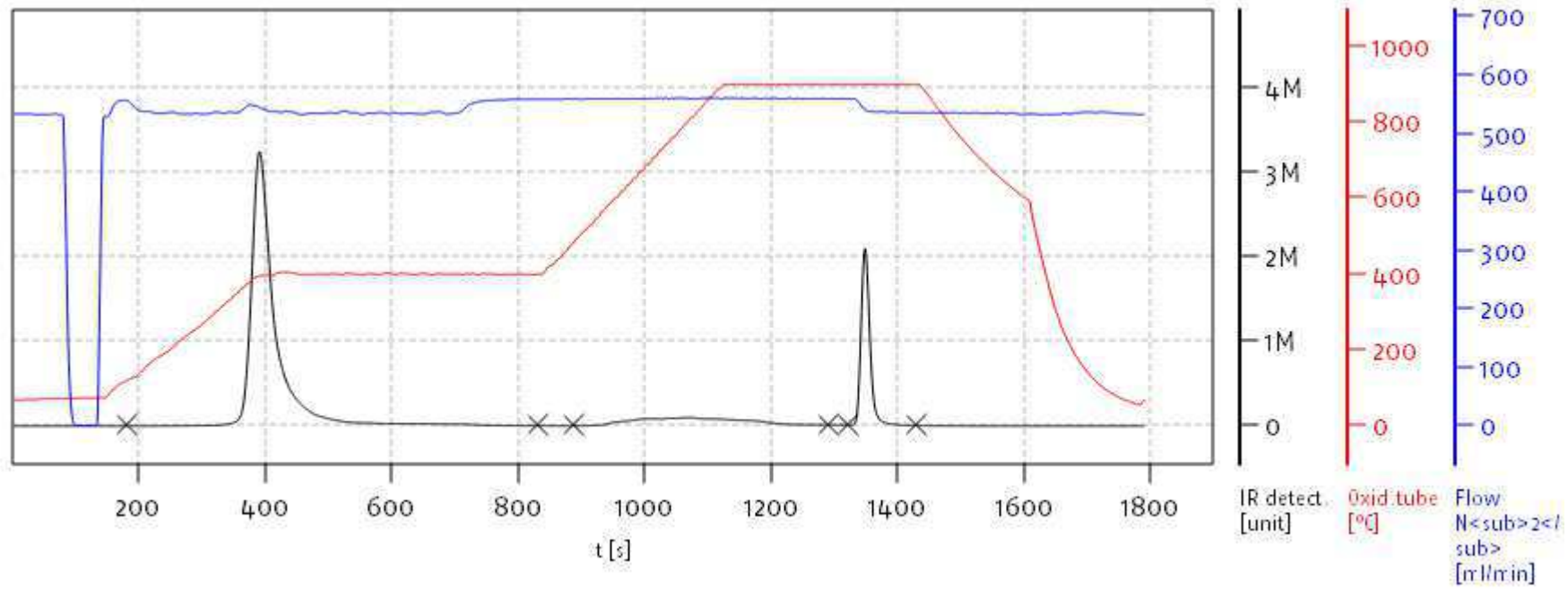
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	BLF0414-SRM2	314.40	314.4	CARBON	6/24/2023 4:01 PM	bl	3.191	5 130 338	3.570	0.637	1 292 170	780 507	2.554	0.379	0.9923	1.0000



Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	BLF0415-SRM2	322.90	322.9	CARBON	6/24/2023 4:32 PM	bl	3.153	5 216 918	3.531	0.624	1 299 955	798 724	2.529	0.378	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

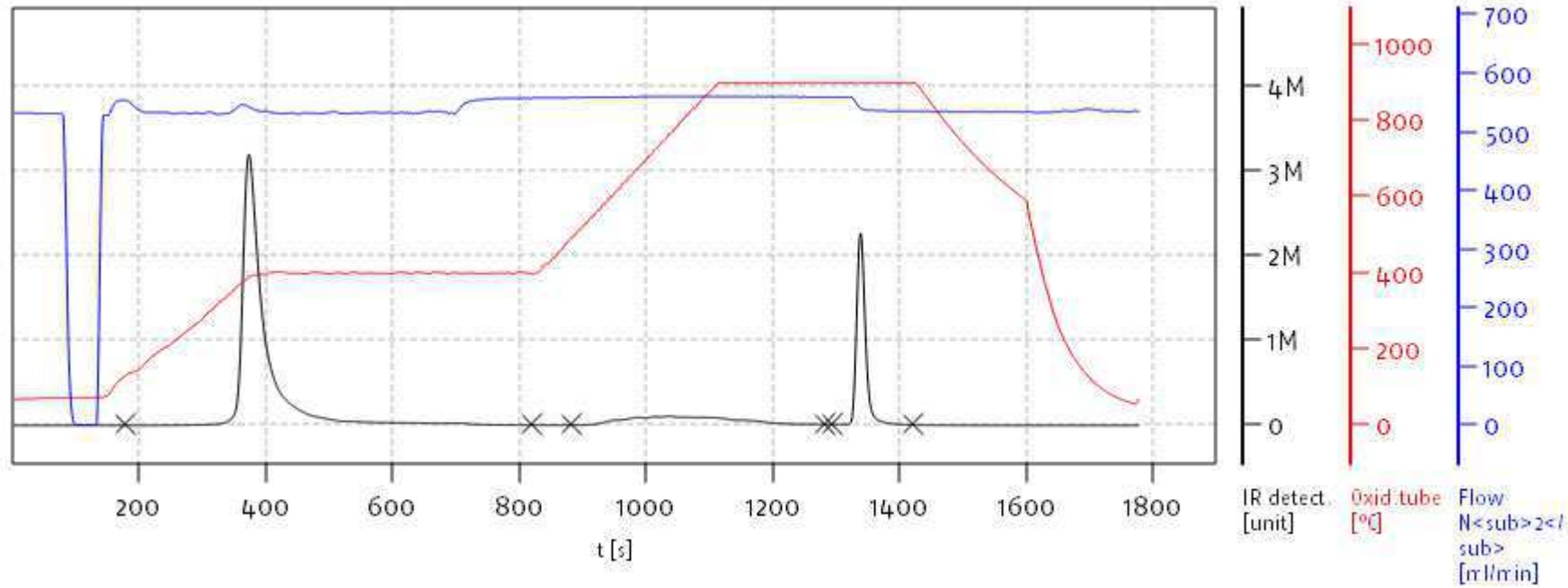
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	BLF0416-SRM2	308.90	308.9	CARBON	6/24/2023 5:02 PM	bl	3.106	4 740 310	3.530	0.705	1 401 922	855 412	2.401	0.424	0.9923	1.0000



Name:

Access: soliTOC superuser

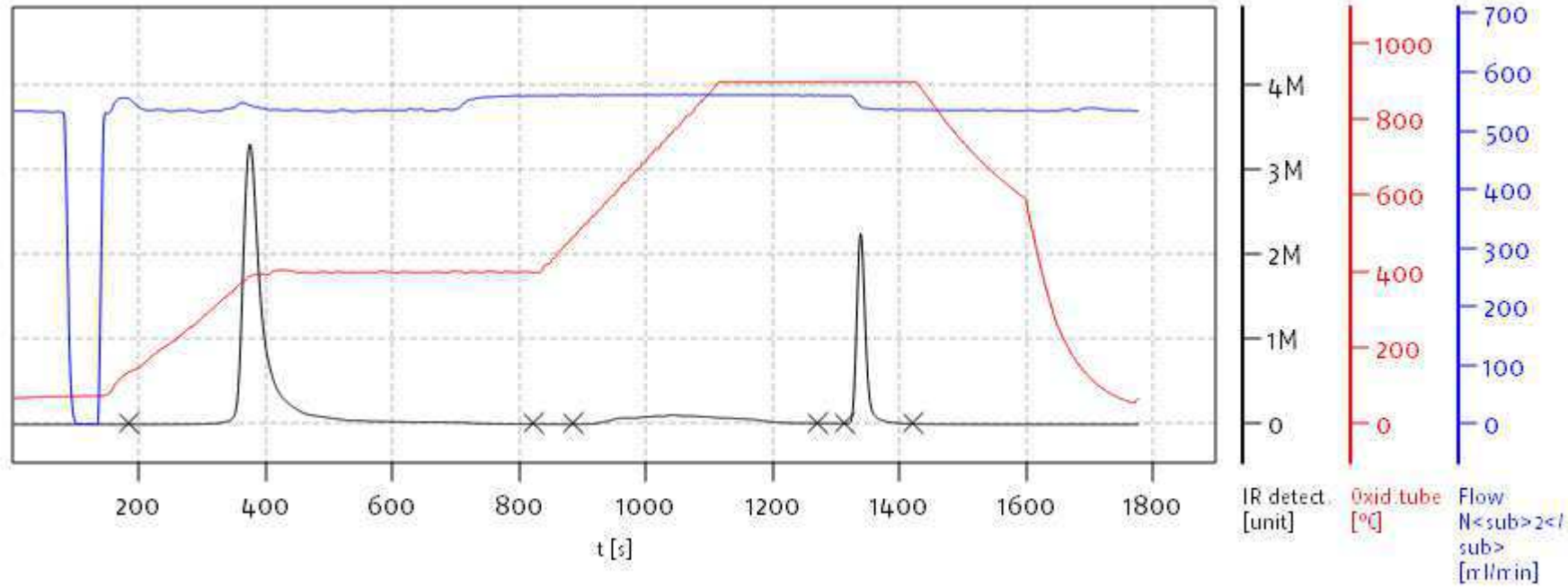
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	BLF0522-SRM2	307.70	307.7	CARBON	6/24/2023 5:32 PM	bl	3.116	4 744 635	3.534	0.703	1 393 585	840 283	2.412	0.418	0.9923	1.0000



Name:

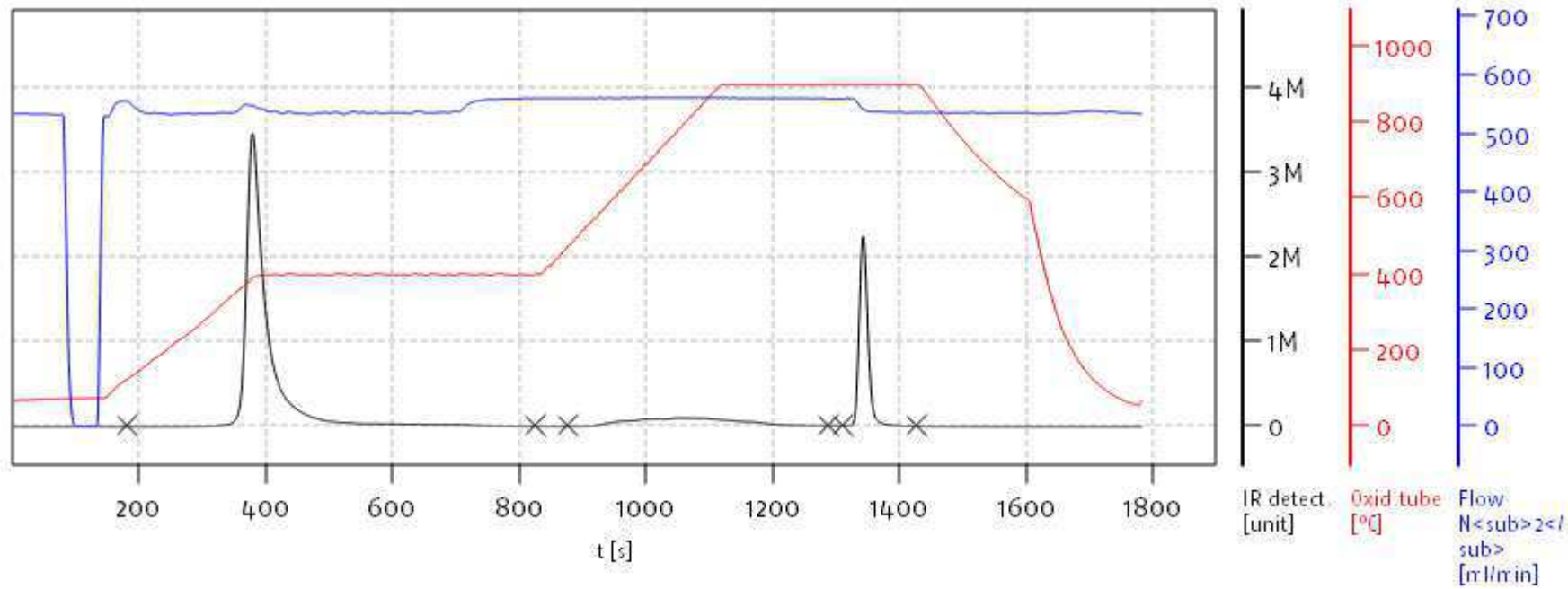
Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	BLF0523-SRM2	315.60	315.6	CARBON	6/24/2023 6:02 PM	bl	3.062	4 823 523	3.457	0.671	1 364 122	814 759	2.391	0.395	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

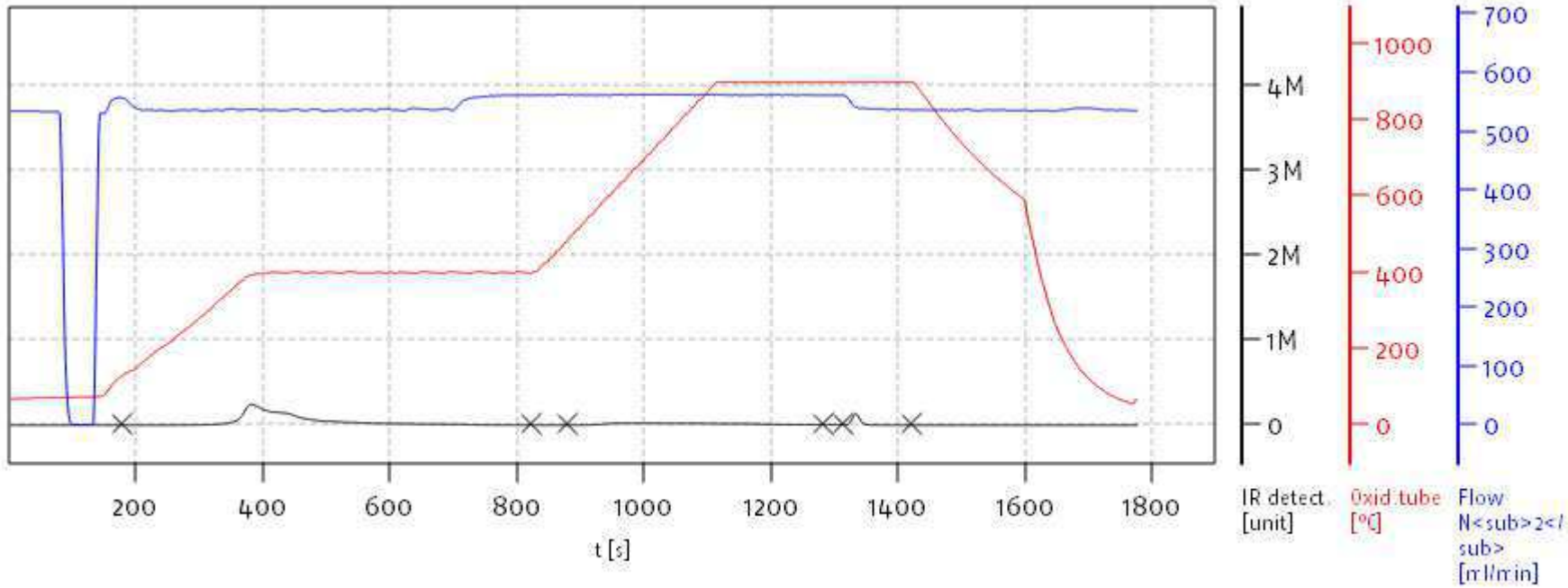
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	23E0009-08	156.00		CARBON	6/24/2023 6:32 PM	bl	0.935	910 734	1.126	0.045	73 180	216 697	0.890	0.191	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

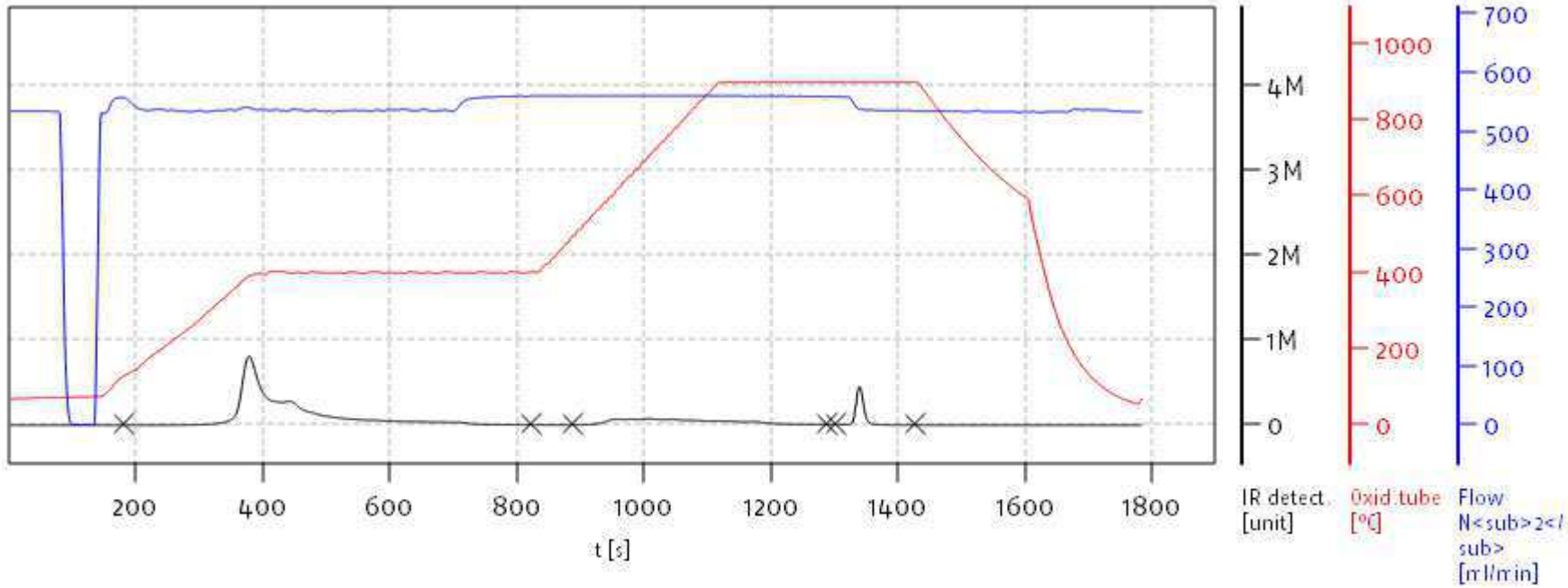
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	23E0219-02	334.20		CARBON	6/24/2023 7:02 PM	bl	1.148	2 245 098	1.417	0.104	248 686	595 064	1.044	0.269	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

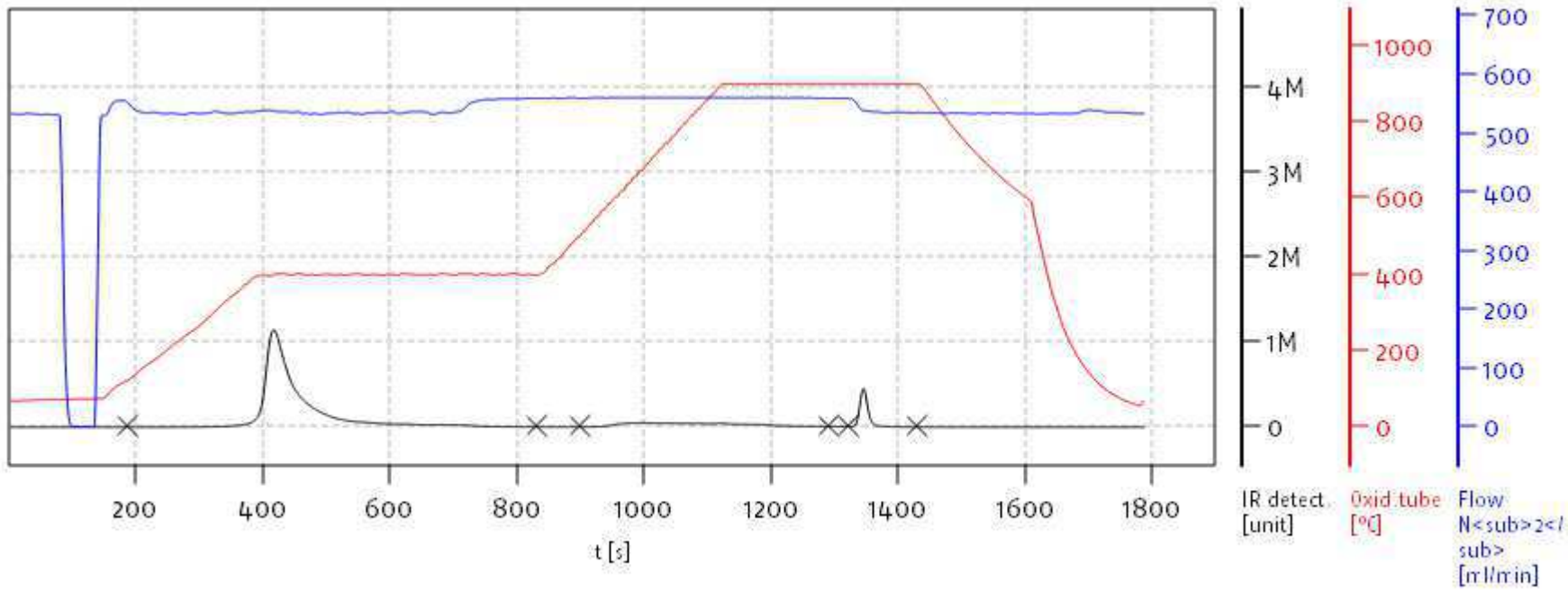
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	23E0219-03	593.60		CARBON	6/24/2023 7:32 PM	bl	0.732	2 557 434	0.838	0.061	258 950	427 092	0.670	0.106	0.9923	1.0000



Name:

Access: soliTOC superuser

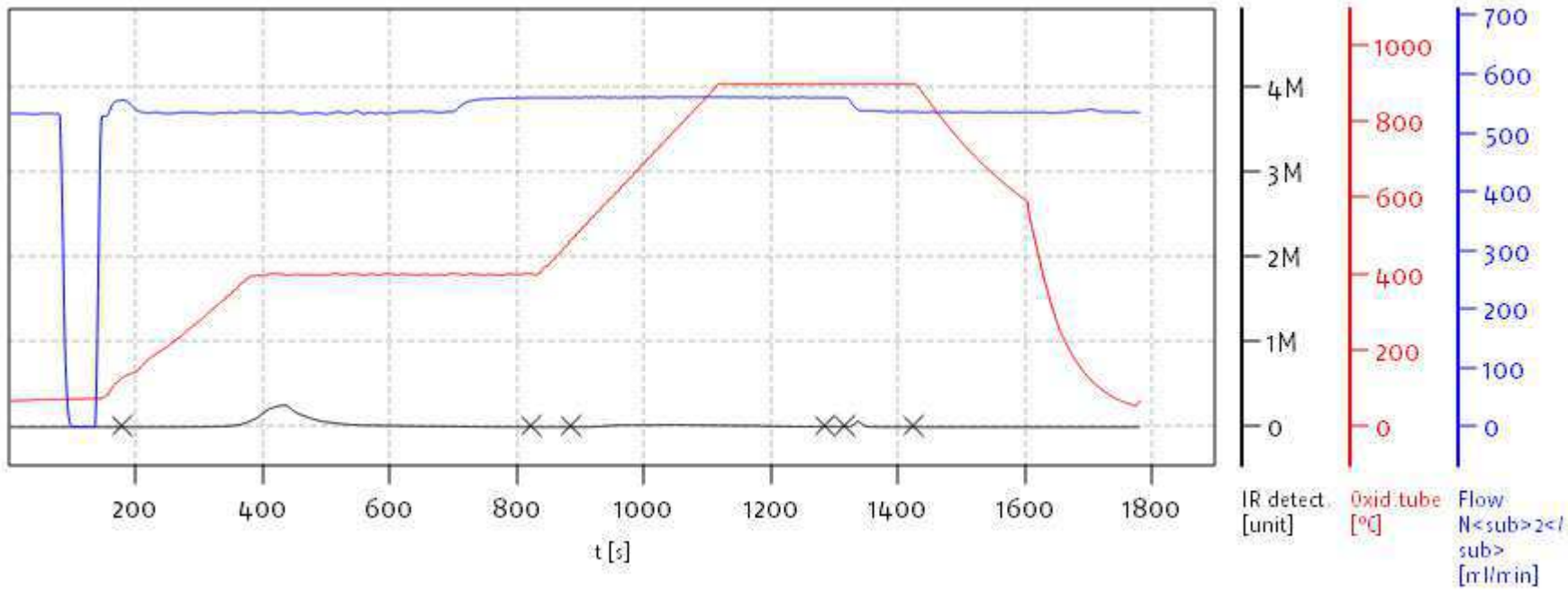
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	23E0219-04	531.80		CARBON	6/24/2023 8:02 PM	bl	0.272	936 876	0.332	0.003	39 745	229 018	0.269	0.060	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

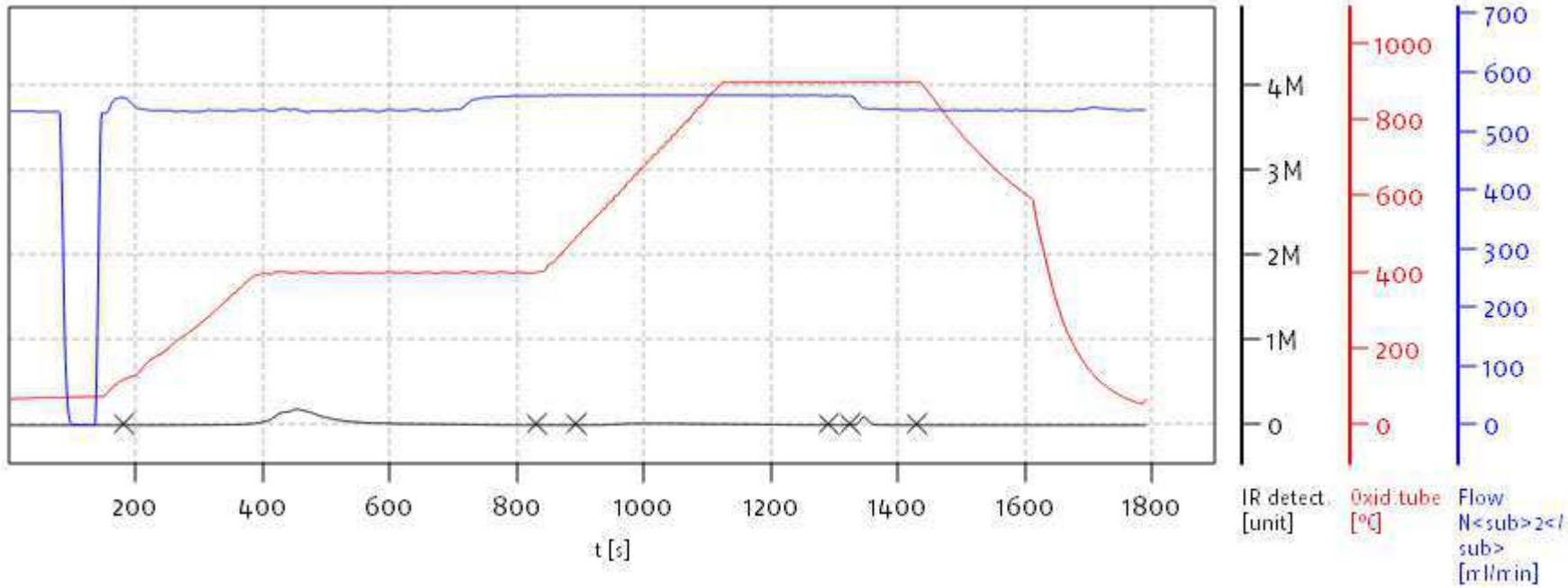
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	23E0219-05	641.90		CARBON	6/24/2023 8:32 PM	bl	0.186	757 604	0.216	0.007	58 418	151 633	0.179	0.030	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

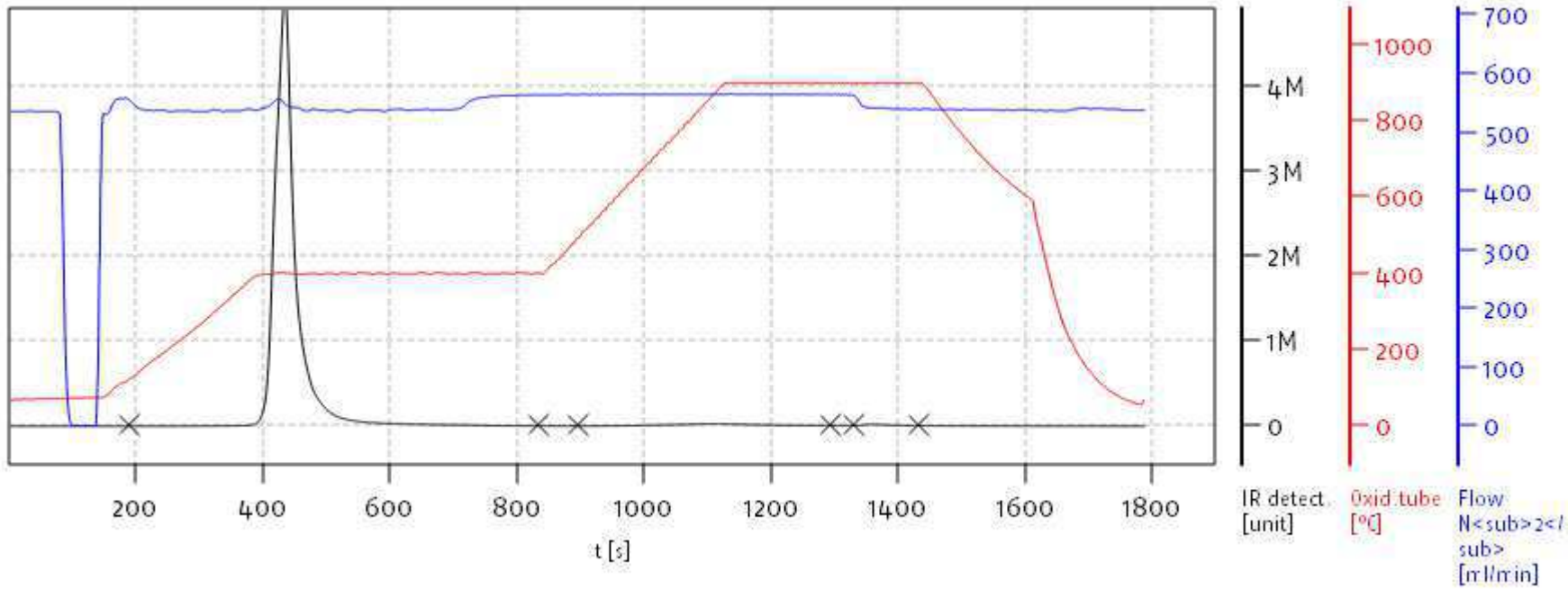
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SLF0370-CCV1	24.50		CARBON	6/24/2023 9:02 PM	bl	45.230	7 053 157	46.290	0.104	44 903	192 585	45.127	1.060	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

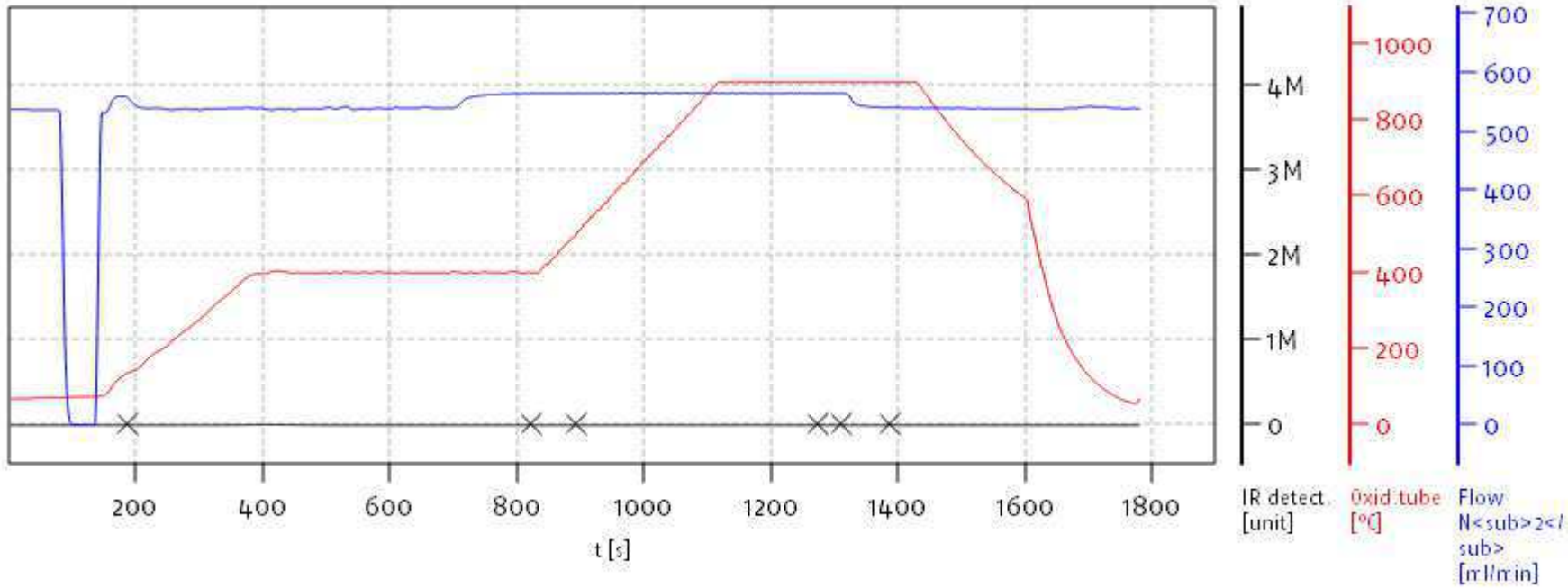
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SLF0370-CCB1	518.70		CARBON	6/24/2023 9:32 PM	bl,C3u,C2u	0.000	22 269	0.000	0.000	666	6 550	0.000	0.000	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

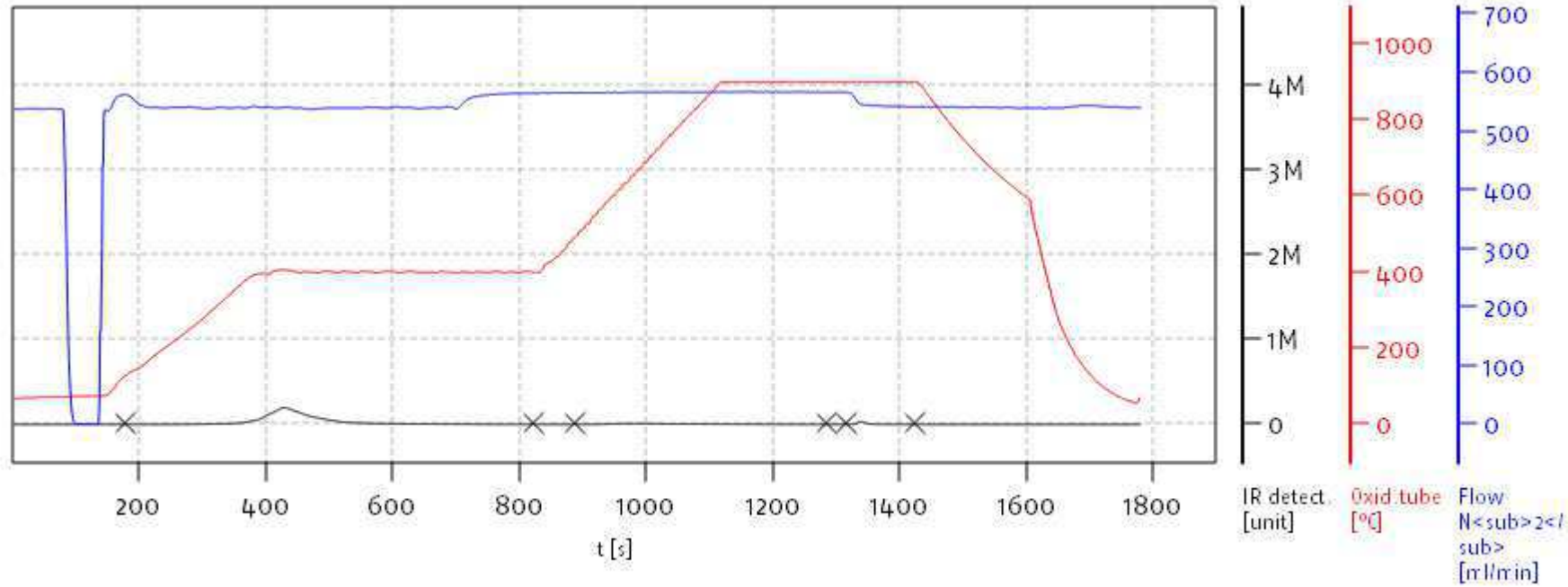
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	23E0219-06	581.90		CARBON	6/24/2023 10:03 PM	bl,C2u	0.176	677 783	0.184	0.000	19 963	61 066	0.176	0.009	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

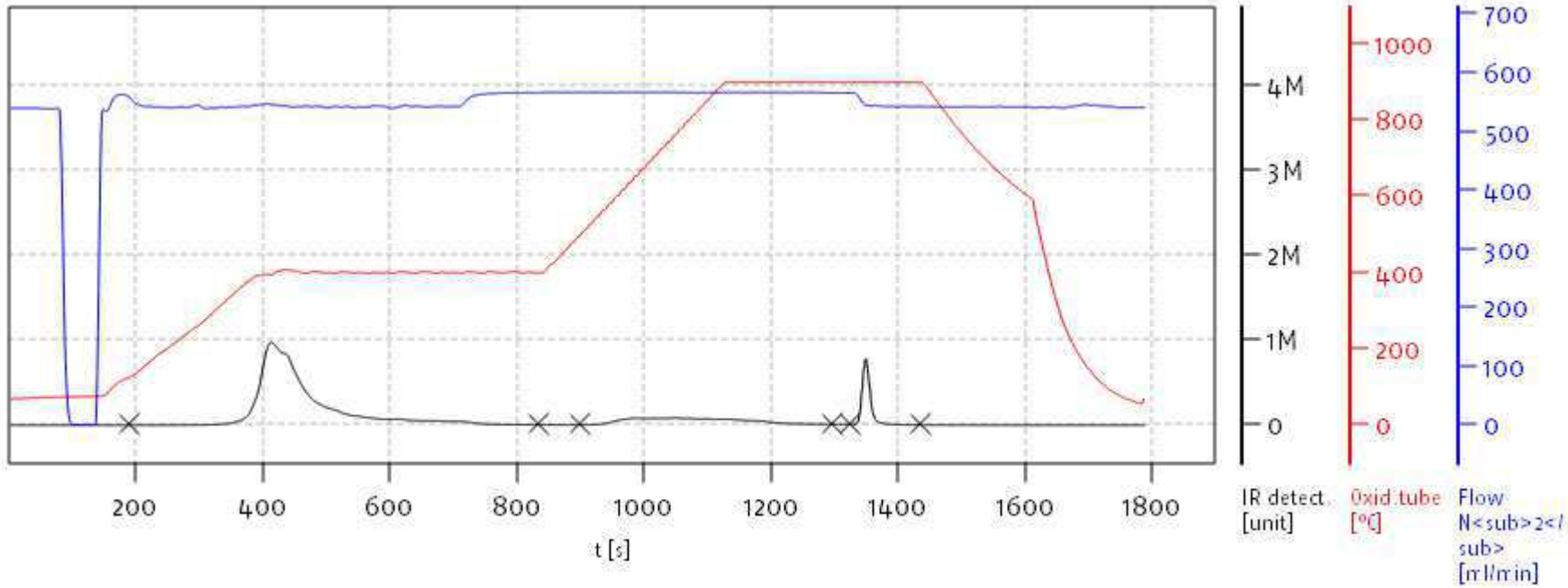
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	23E0219-07	603.70		CARBON	6/24/2023 10:33 PM	bl	0.977	3 366 681	1.163	0.107	436 874	735 009	0.870	0.186	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

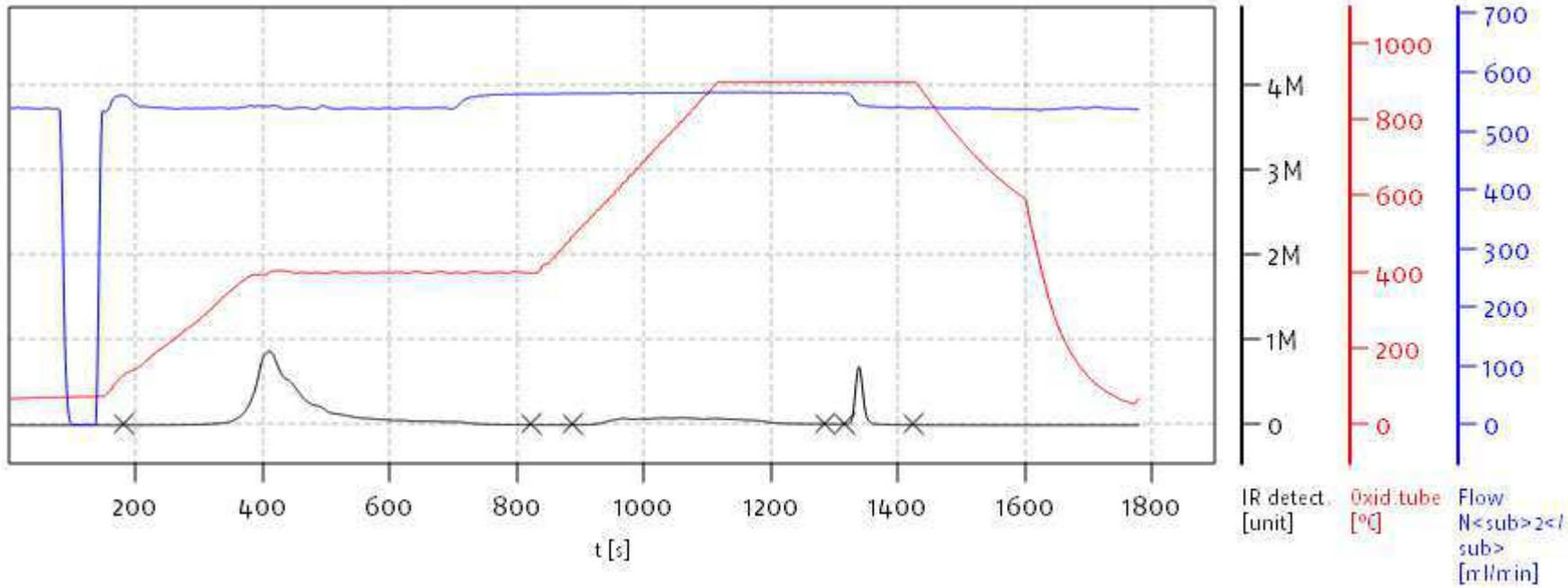
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	23E0219-08	611.20		CARBON	6/24/2023 11:03 PM	bl	0.851	2 973 726	1.042	0.093	386 875	764 868	0.758	0.191	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

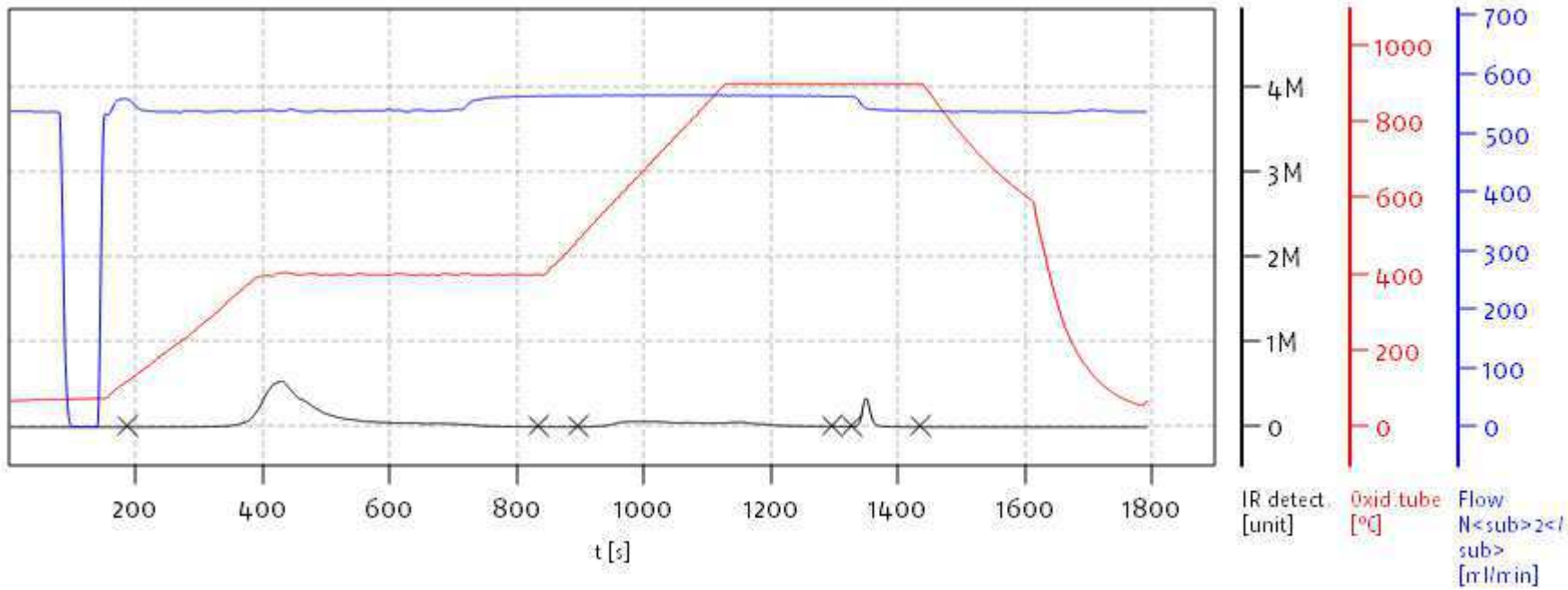
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	23E0219-09	569.00		CARBON	6/24/2023 11:33 PM	bl	0.629	2 132 241	0.773	0.047	197 254	546 867	0.582	0.144	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

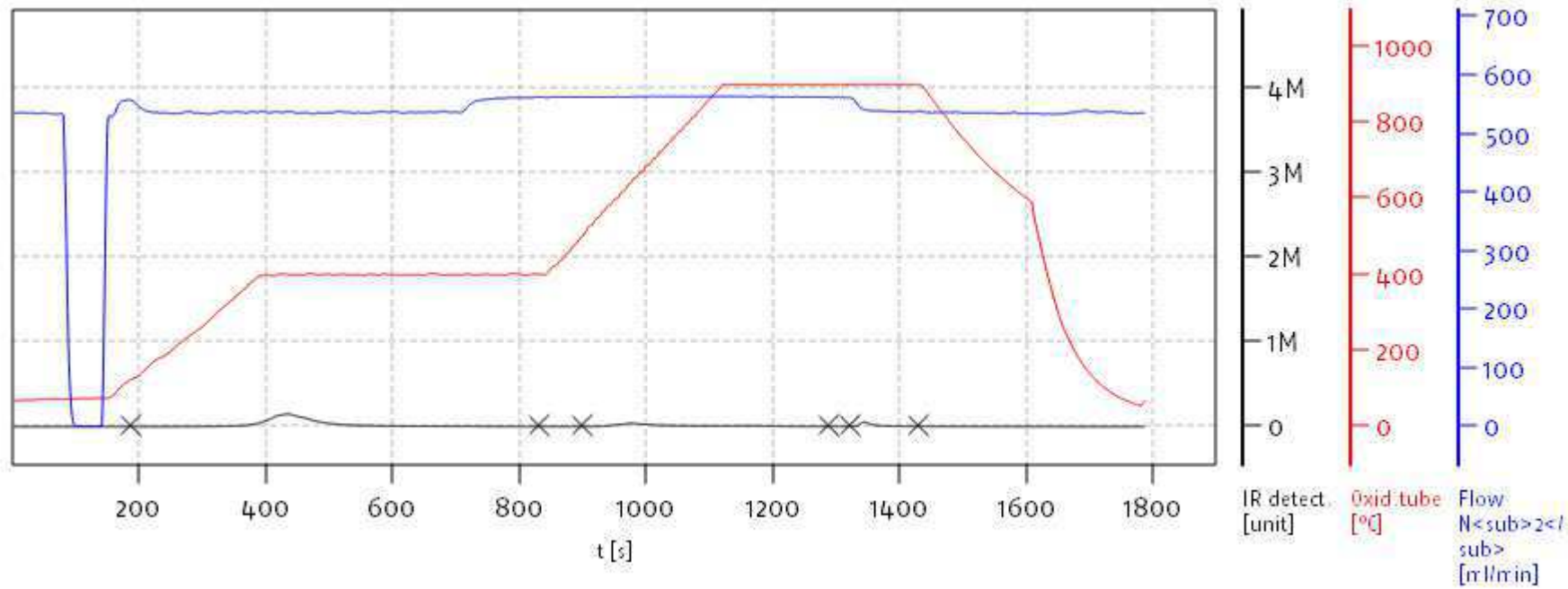
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	23E0219-10	570.50		CARBON	6/25/2023 12:03 AM	bl	0.146	531 744	0.181	0.007	53 428	157 912	0.139	0.036	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

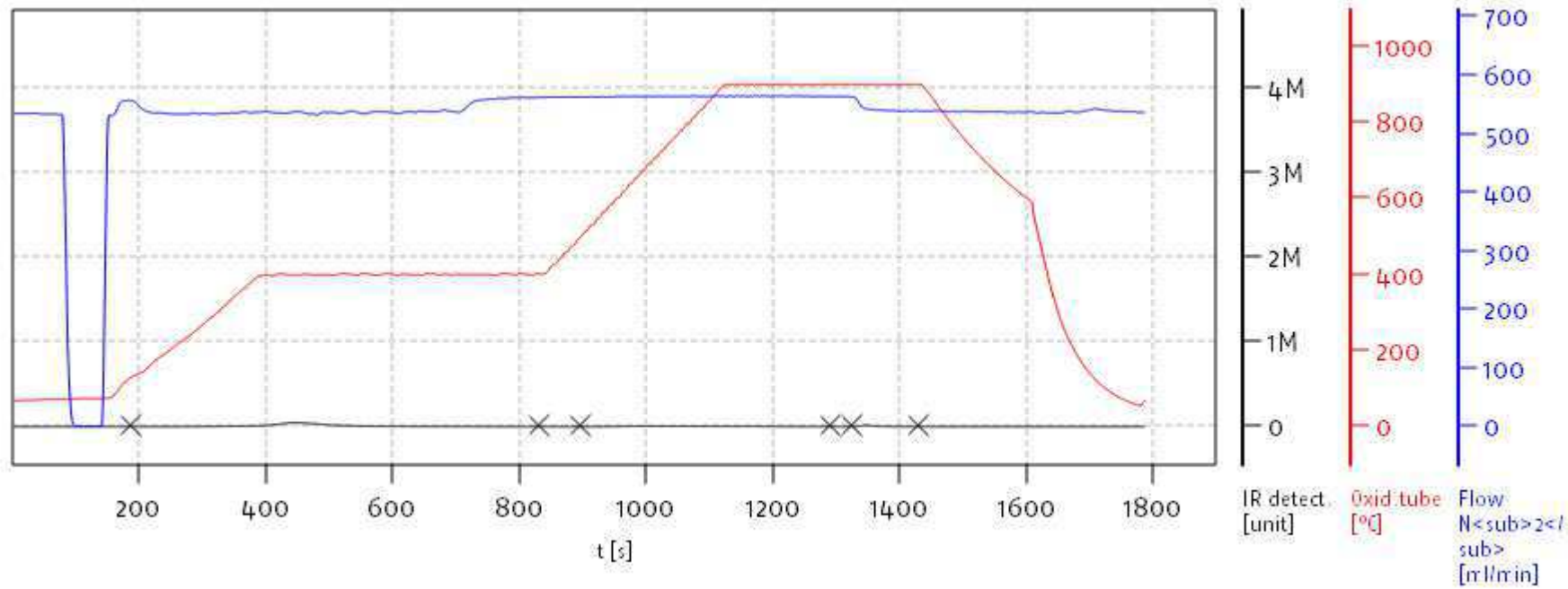
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	23E0219-11	544.70		CARBON	6/25/2023 12:33 AM	bl,C2u	0.049	197 375	0.054	0.000	15 626	48 784	0.049	0.006	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

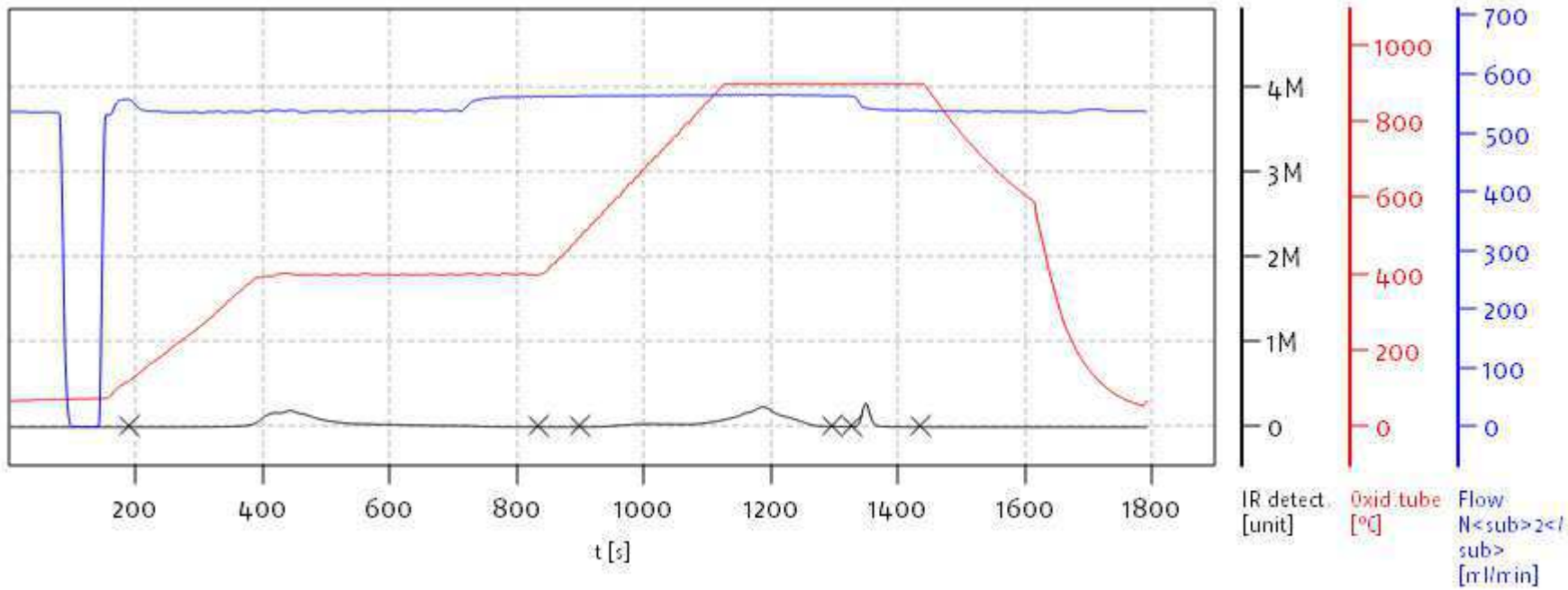
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	23E0219-12	572.90		CARBON	6/25/2023 1:04 AM	bl	0.273	885 667	0.537	0.037	163 573	984 114	0.235	0.264	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

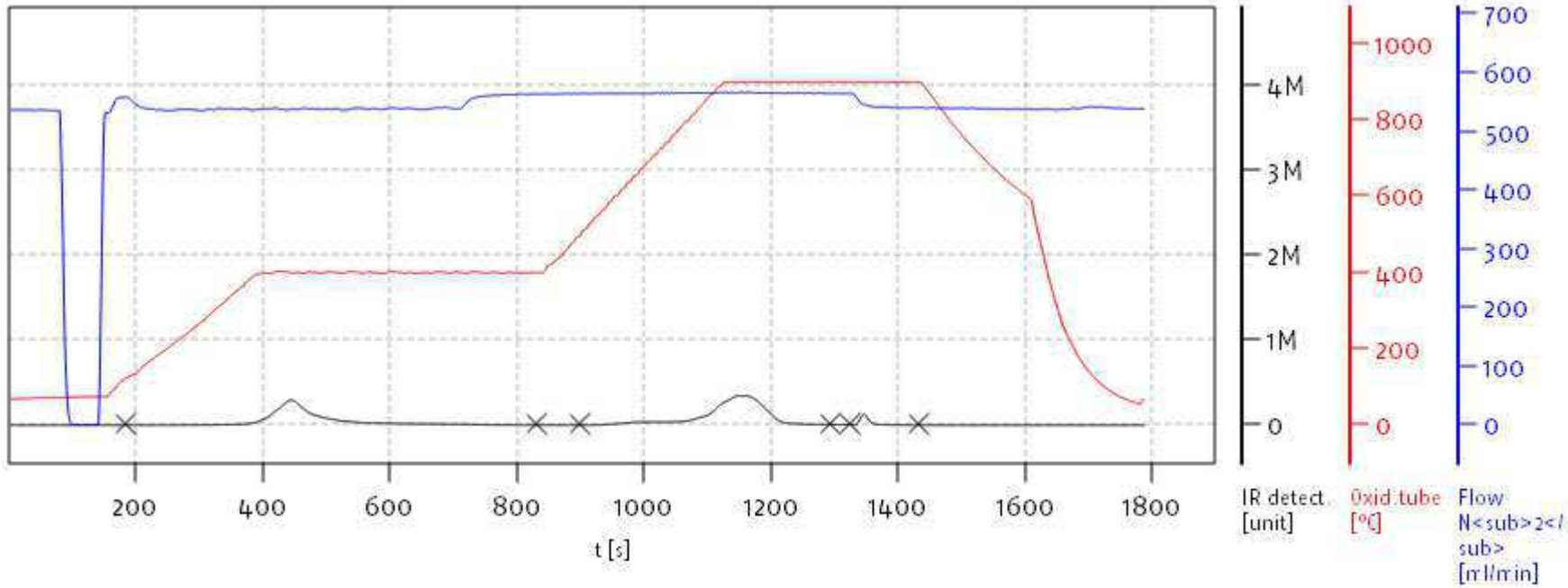
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	23E0219-13	530.70		CARBON	6/25/2023 1:34 AM	bl	0.284	932 086	0.675	0.016	82 892	1 335 404	0.268	0.390	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

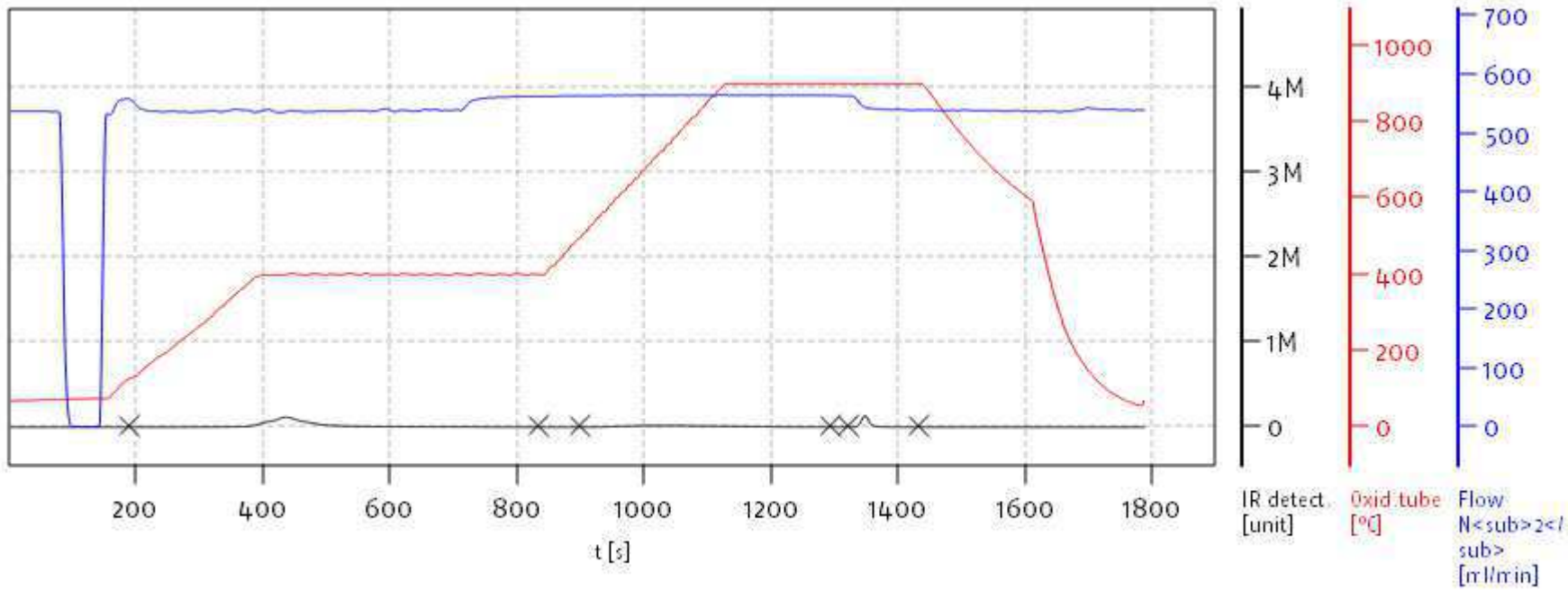
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	23E0241-01	184.60		CARBON	6/25/2023 2:04 AM	bl	0.326	365 238	0.407	0.039	74 515	122 542	0.287	0.080	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

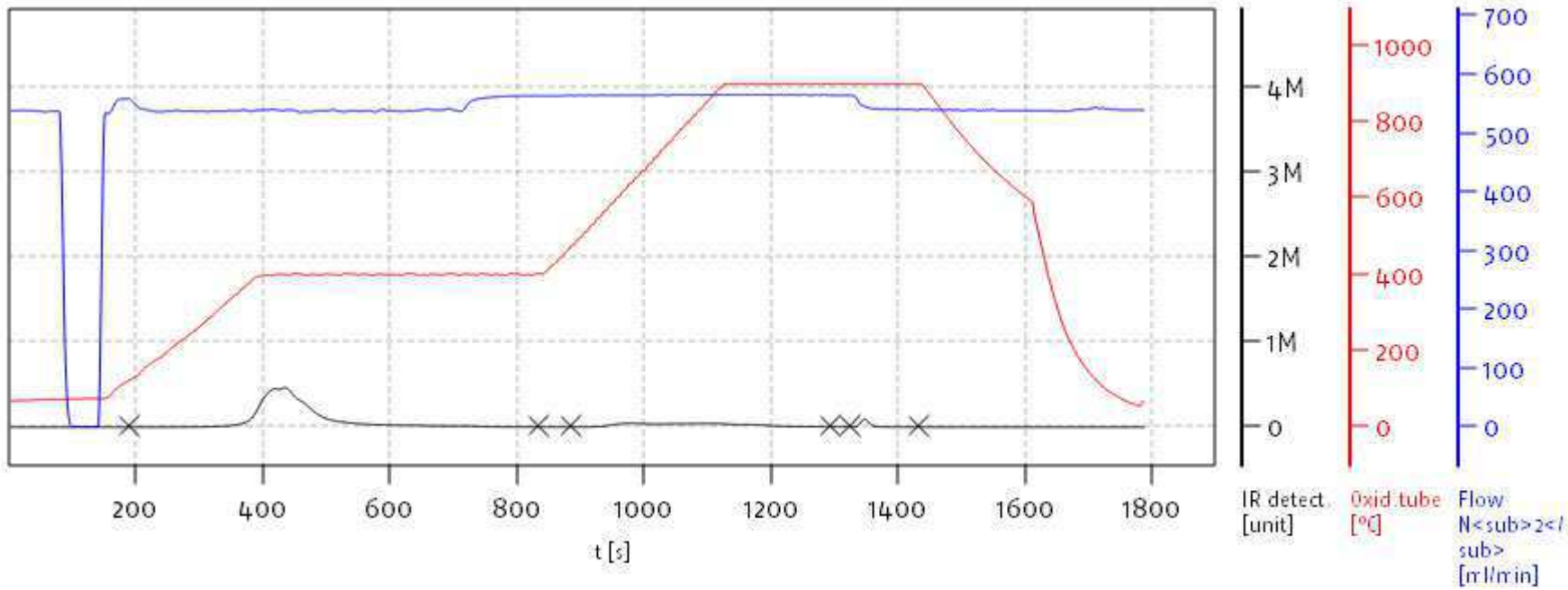
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
27	27	23E0295-01	544.80		CARBON	6/25/2023 2:34 AM	bl	0.490	1 696 247	0.593	0.008	57 702	383 620	0.482	0.103	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

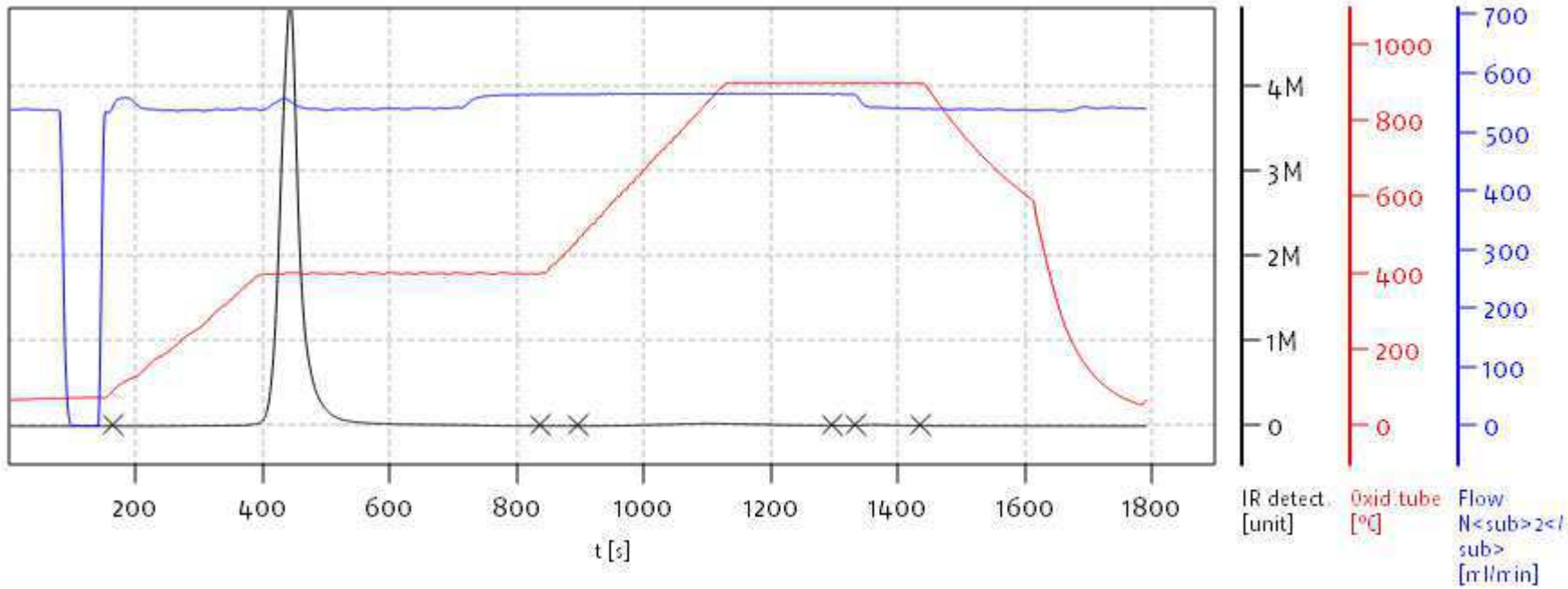
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
28	28	SLF0370-CCV2	24.60		CARBON	6/25/2023 3:04 AM	bl	43.618	6 840 180	44.909	0.038	34 684	229 149	43.580	1.291	0.9923	1.0000



Name:

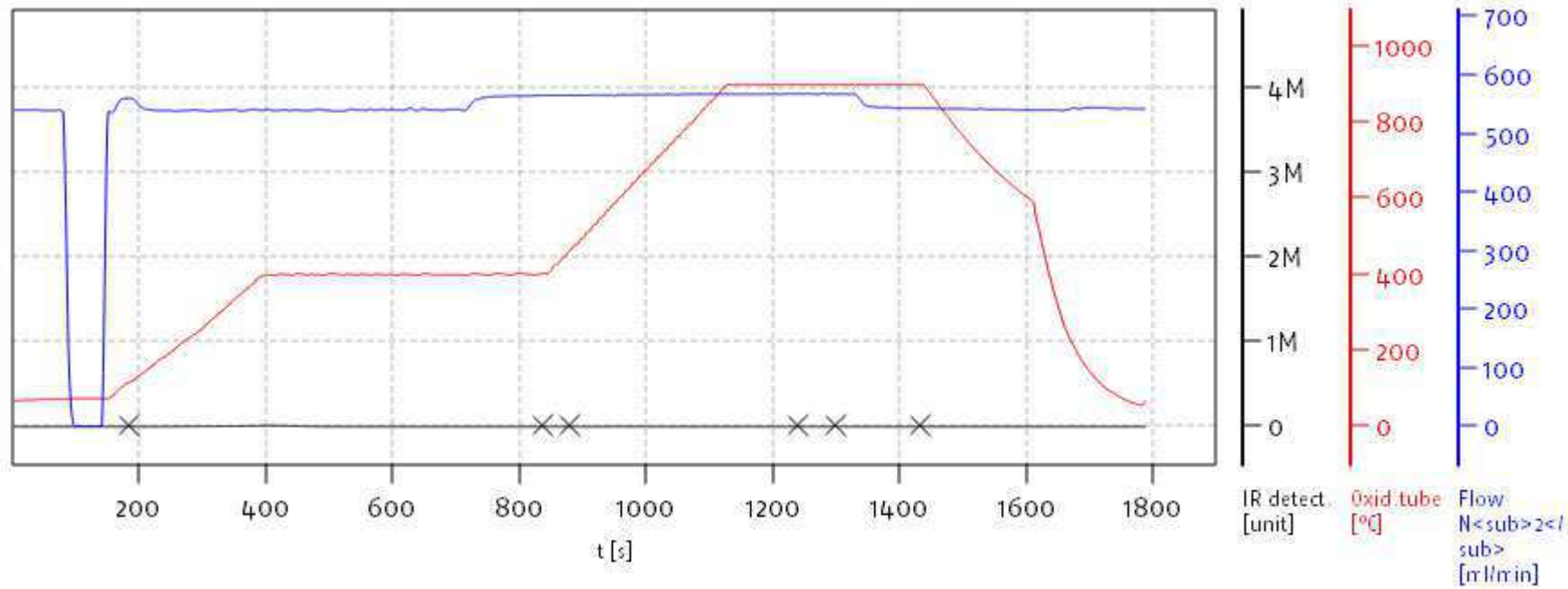
Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	SLF0370-CCB2	553.80		CARBON	6/25/2023 3:35 AM	bl,C3u,C2u	0.007	53 823	0.007	0.000	160	3 260	0.007	0.000	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

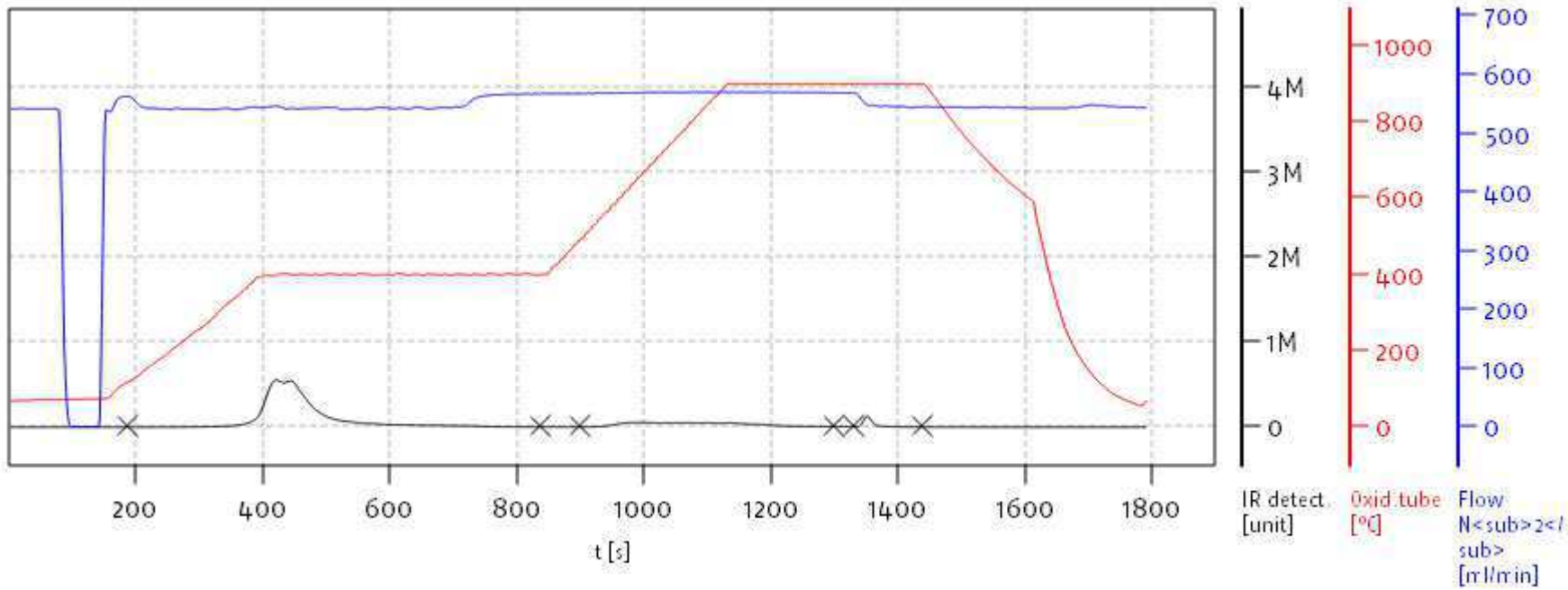
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	23E0295-02	501.90		CARBON	6/25/2023 4:05 AM	bl	0.619	1 942 554	0.760	0.019	87 632	476 516	0.600	0.141	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

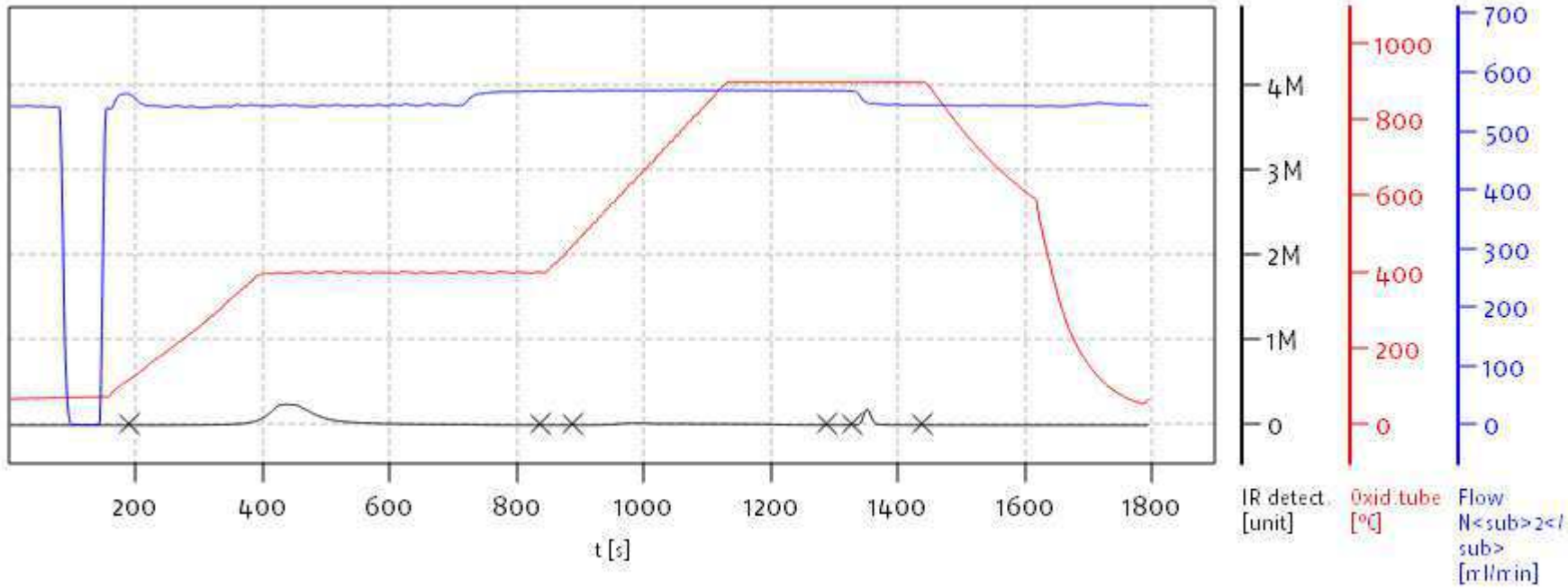
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	23E0295-03	558.60		CARBON	6/25/2023 4:35 AM	bl	0.276	930 179	0.314	0.022	105 058	163 426	0.254	0.038	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

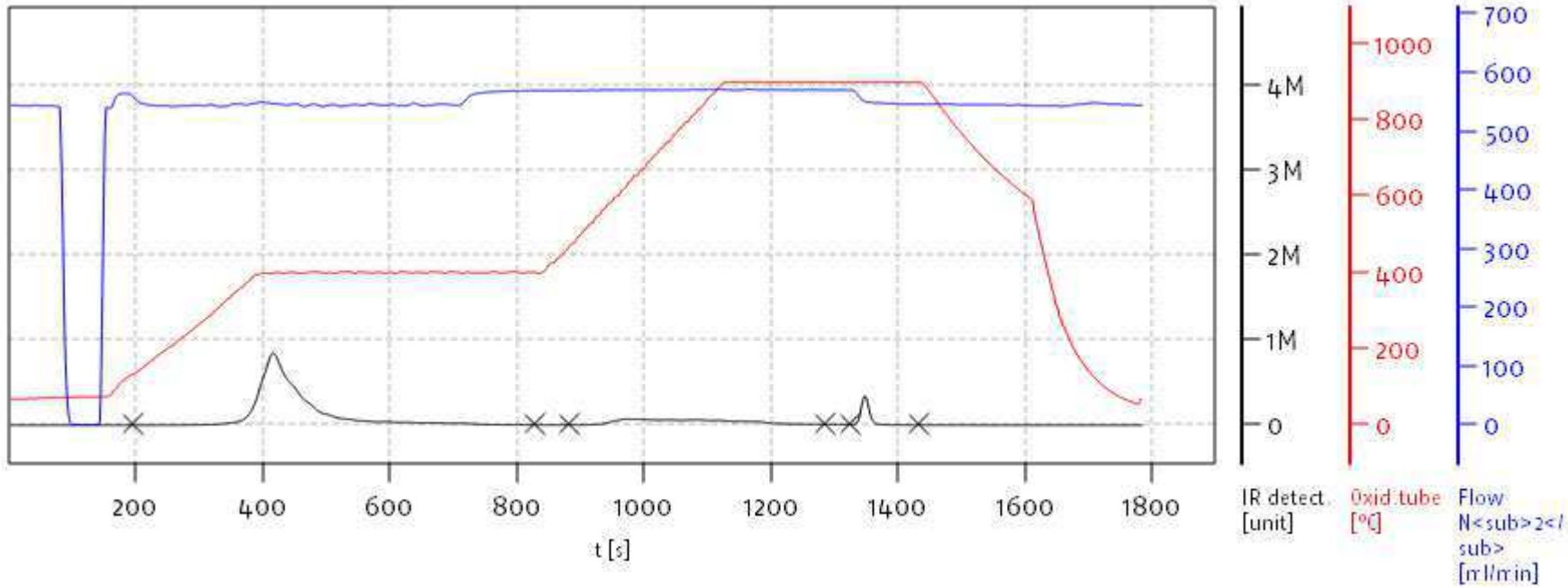
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	23E0295-04	544.00		CARBON	6/25/2023 5:05 AM	bl	0.746	2 433 971	0.909	0.050	199 908	590 380	0.696	0.164	0.9923	1.0000



Name:

Access: soliTOC superuser

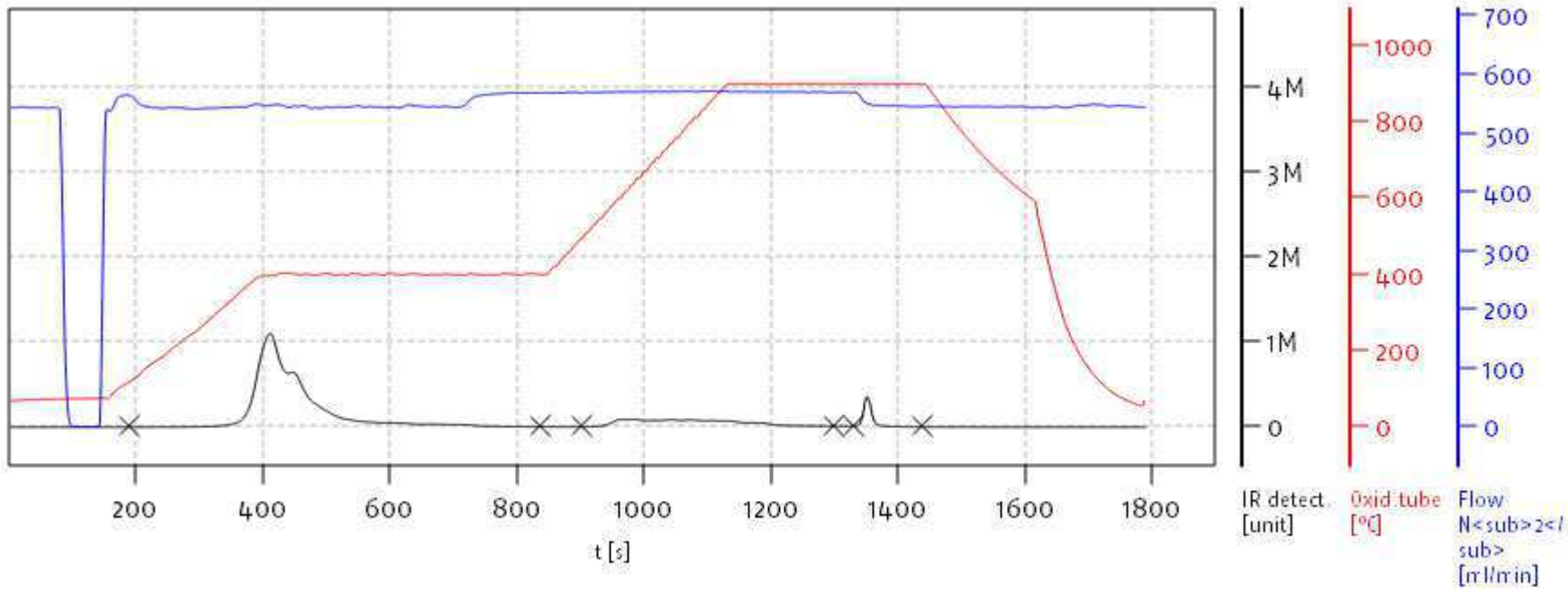
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	23E0295-05	621.40		CARBON	6/25/2023 5:35 AM	bl	0.891	3 357 821	1.081	0.048	215 432	772 947	0.843	0.190	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

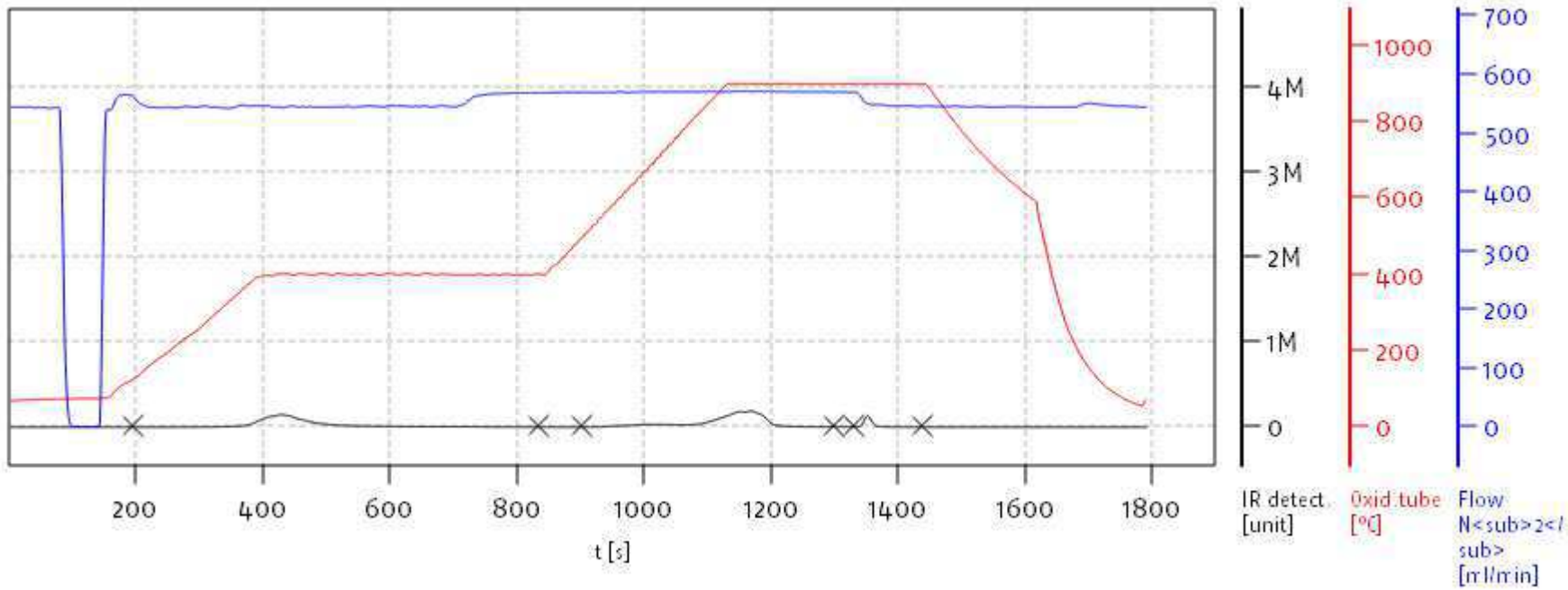
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	23D0663-02	166.70		CARBON	6/25/2023 6:06 AM	bl	0.522	535 698	1.160	0.044	74 812	698 717	0.479	0.637	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

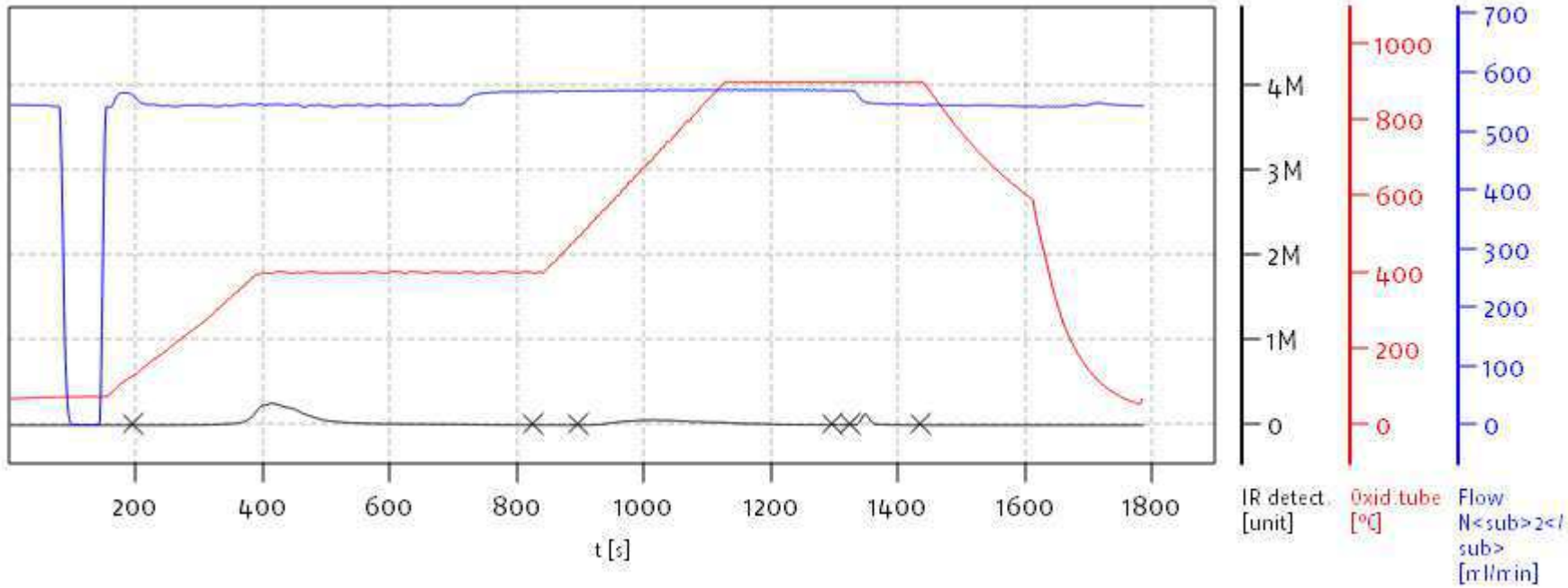
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	23D0663-03	288.60		CARBON	6/25/2023 6:36 AM	bl	0.552	986 831	0.752	0.030	82 593	392 927	0.522	0.200	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

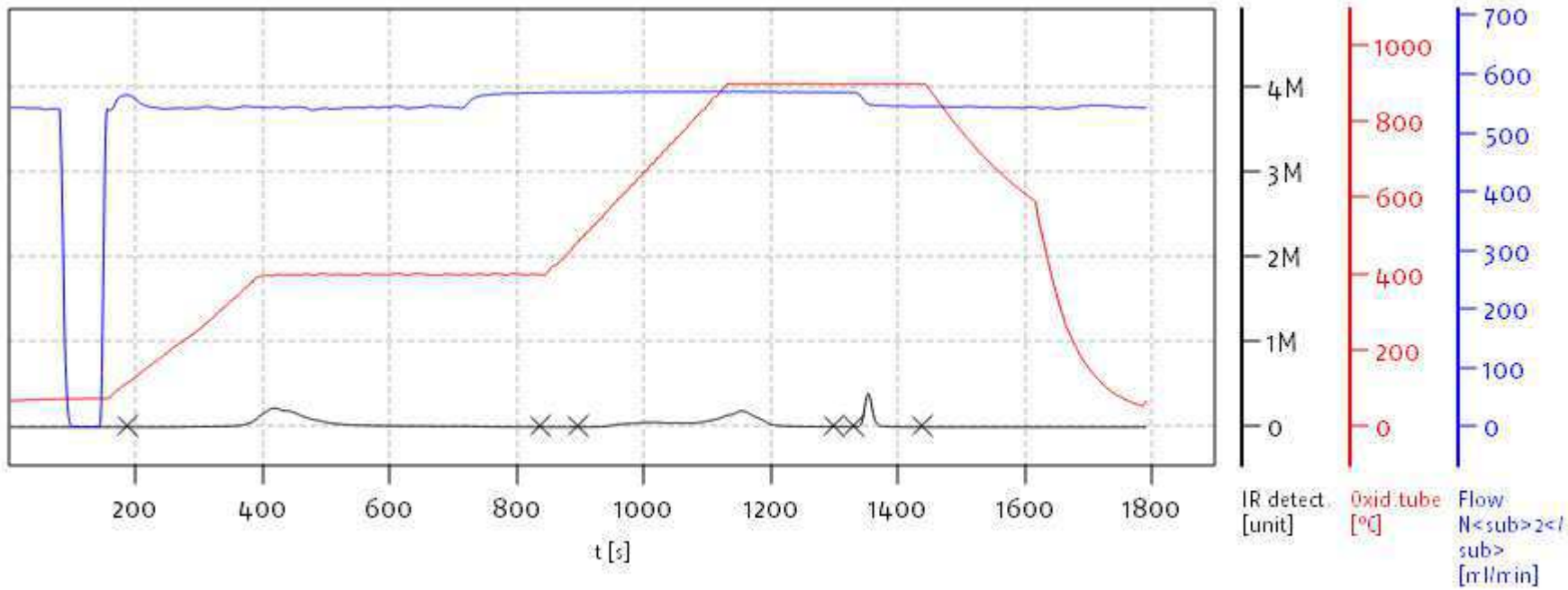
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
36	36	23D0663-04	187.00		CARBON	6/25/2023 7:06 AM	bl	0.851	851 489	1.481	0.159	216 333	771 091	0.692	0.630	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

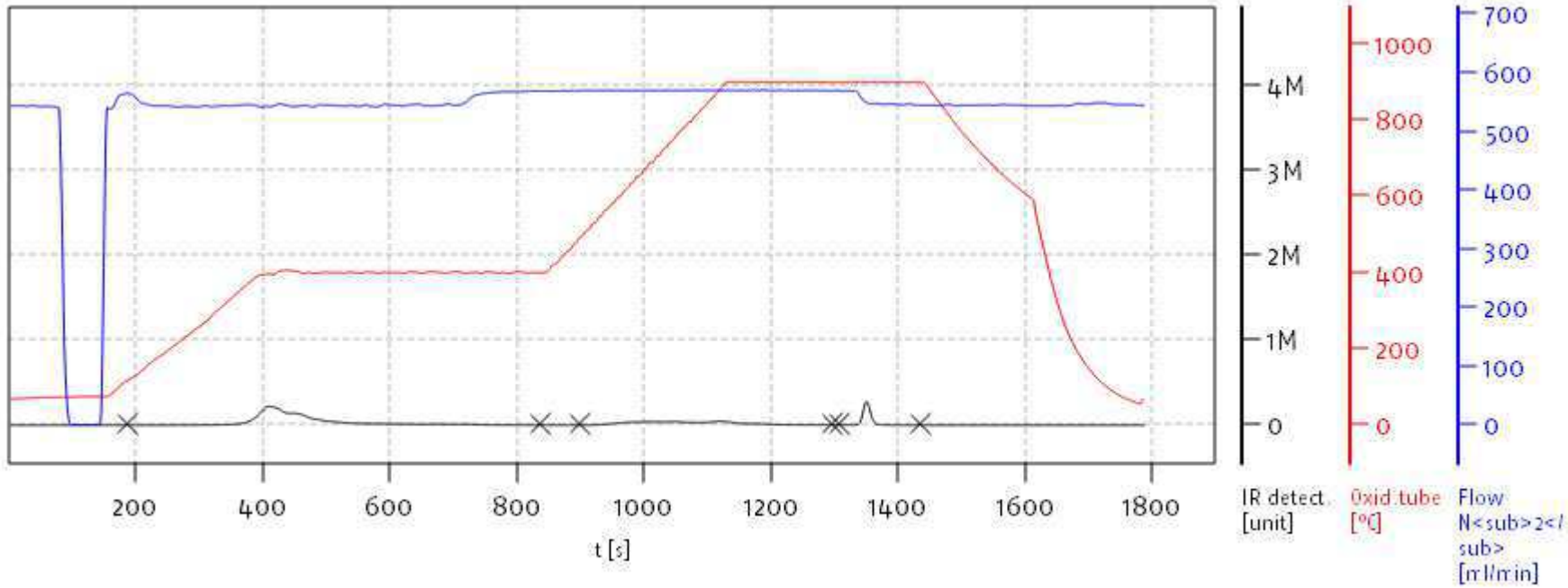
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
37	37	23D0663-05	180.70		CARBON	6/25/2023 7:36 AM	bl	0.762	782 972	1.019	0.105	148 861	321 508	0.657	0.257	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

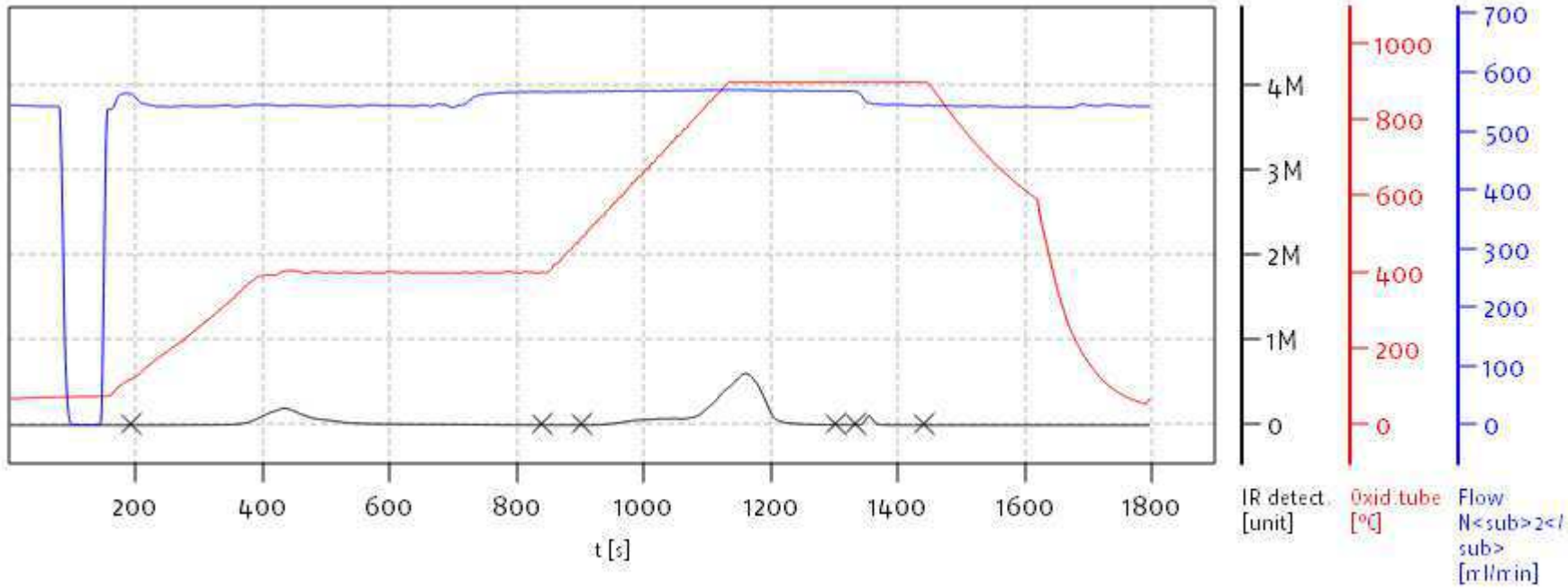
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
38	38	23D0663-06	293.60		CARBON	6/25/2023 8:06 AM	bl	0.401	744 323	1.518	0.017	61 250	2 096 536	0.384	1.117	0.9923	1.0000



Name:

Access: soliTOC superuser

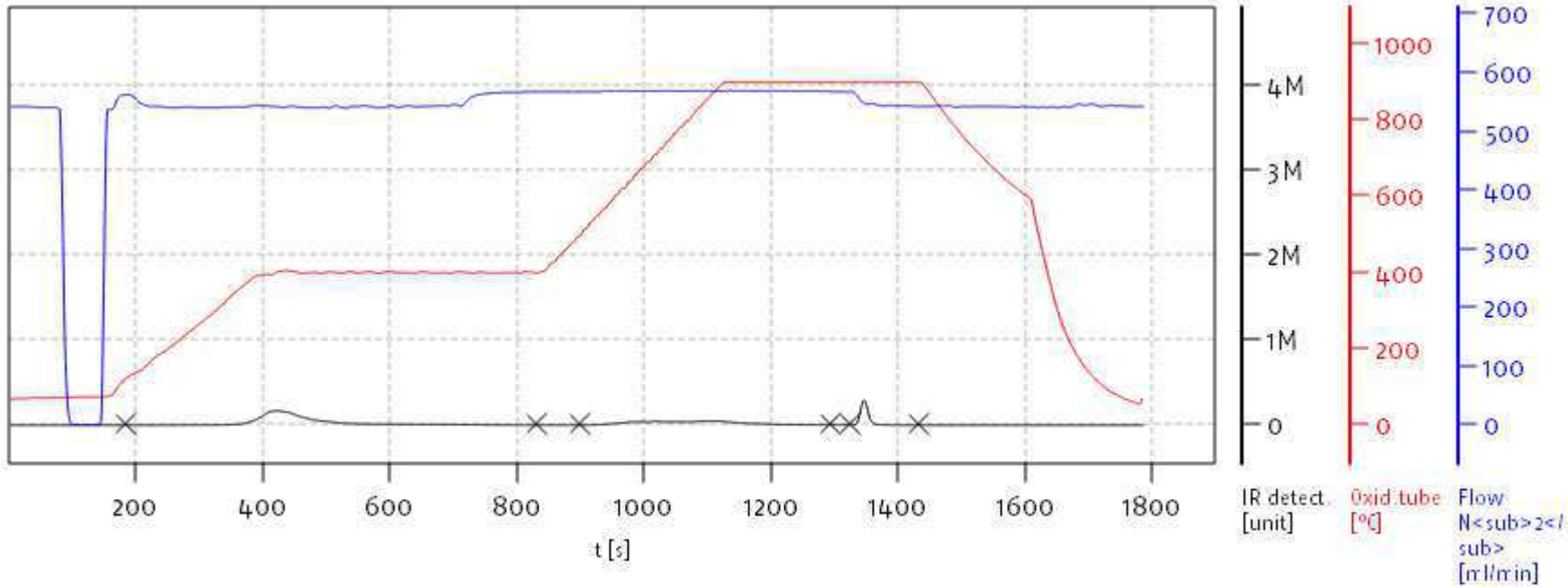
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
39	39	23D0663-07	239.10		CARBON	6/25/2023 8:37 AM	bl	0.482	628 939	0.697	0.087	159 830	353 824	0.395	0.216	0.9923	1.0000



Name:

Access: soliTOC superuser

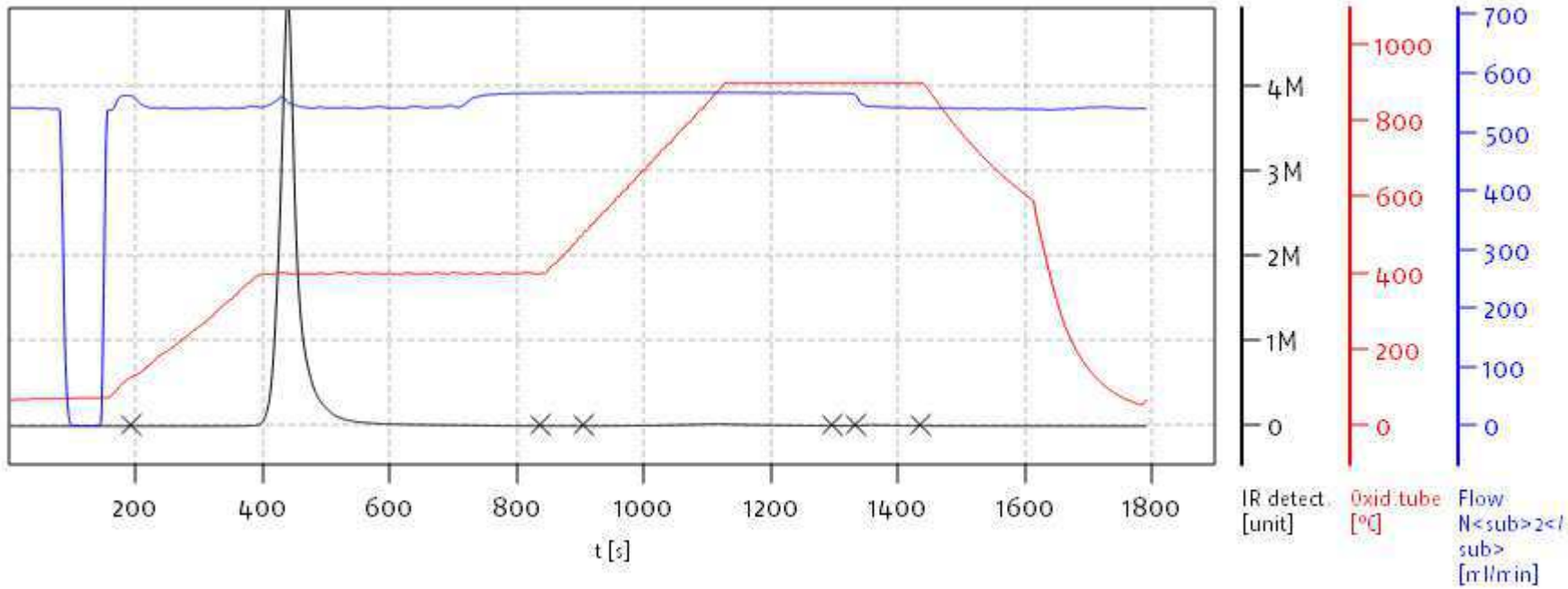
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
40	40	SLF0370-CCV3	21.50		CARBON	6/25/2023 9:07 AM	bl	44.874	6 158 553	45.796	0.000	27 263	153 878	44.874	0.922	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

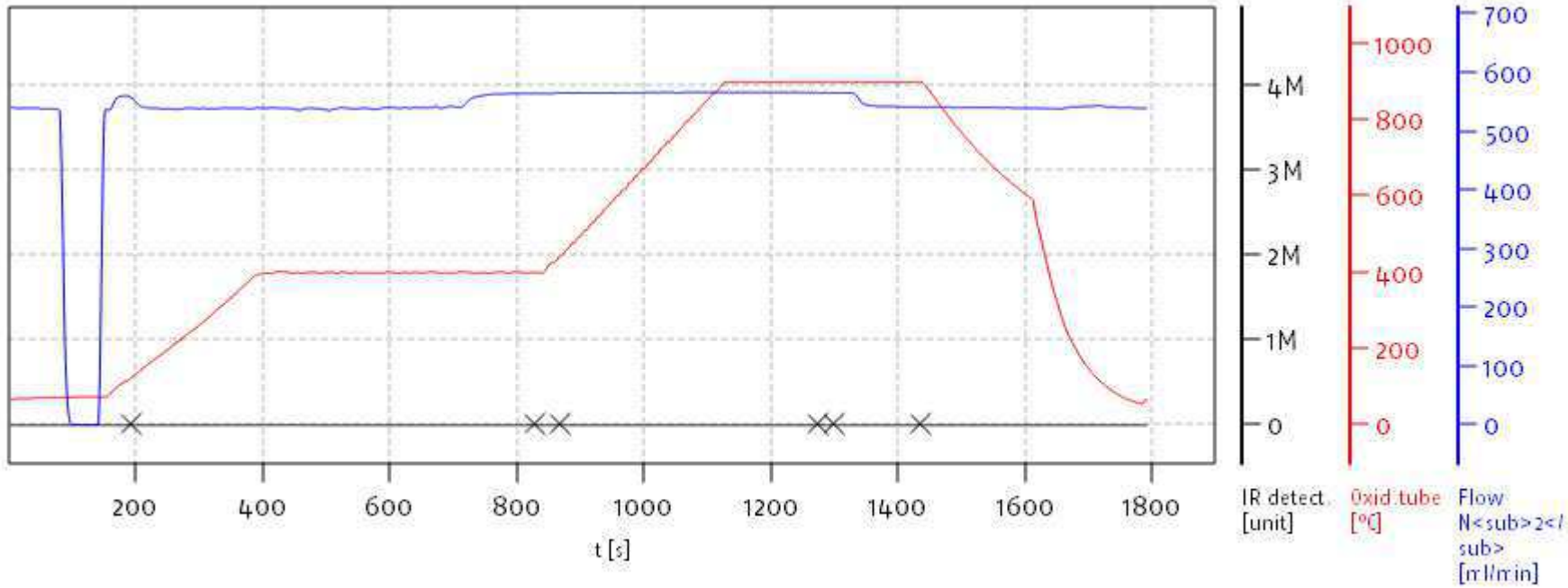
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
41	41	SLF0370-CCB3	539.90		CARBON	6/25/2023 9:37 AM	bl,C1u,C3u,C2u	0.000	4 780	0.000	0.000	214	137	0.000	0.000	0.9923	1.0000



Name:

Access: soliTOC superuser

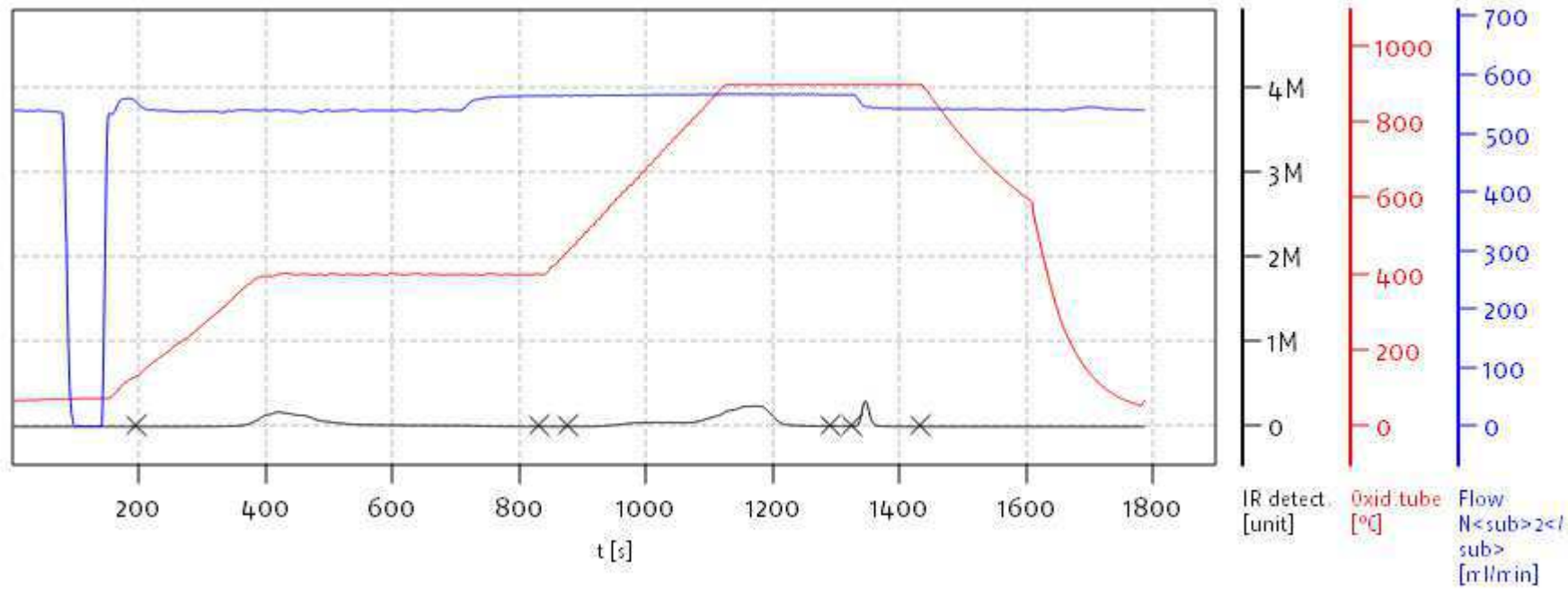
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
42	42	23D0665-01	236.90		CARBON	6/25/2023 10:07 AM	bl	0.572	753 980	1.279	0.090	163 284	1 084 446	0.482	0.707	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

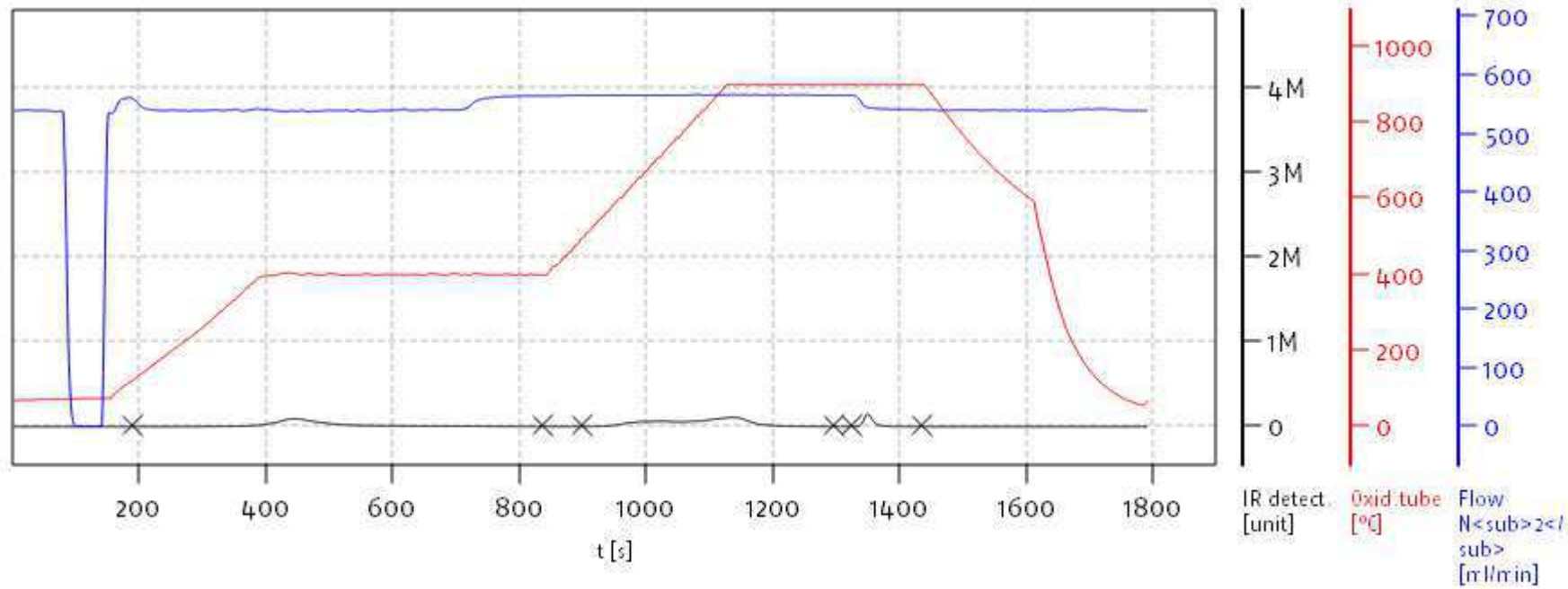
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
43	43	23D0665-02	317.60		CARBON	6/25/2023 10:37 AM	bl	0.210	383 442	0.498	0.034	96 536	606 379	0.176	0.288	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

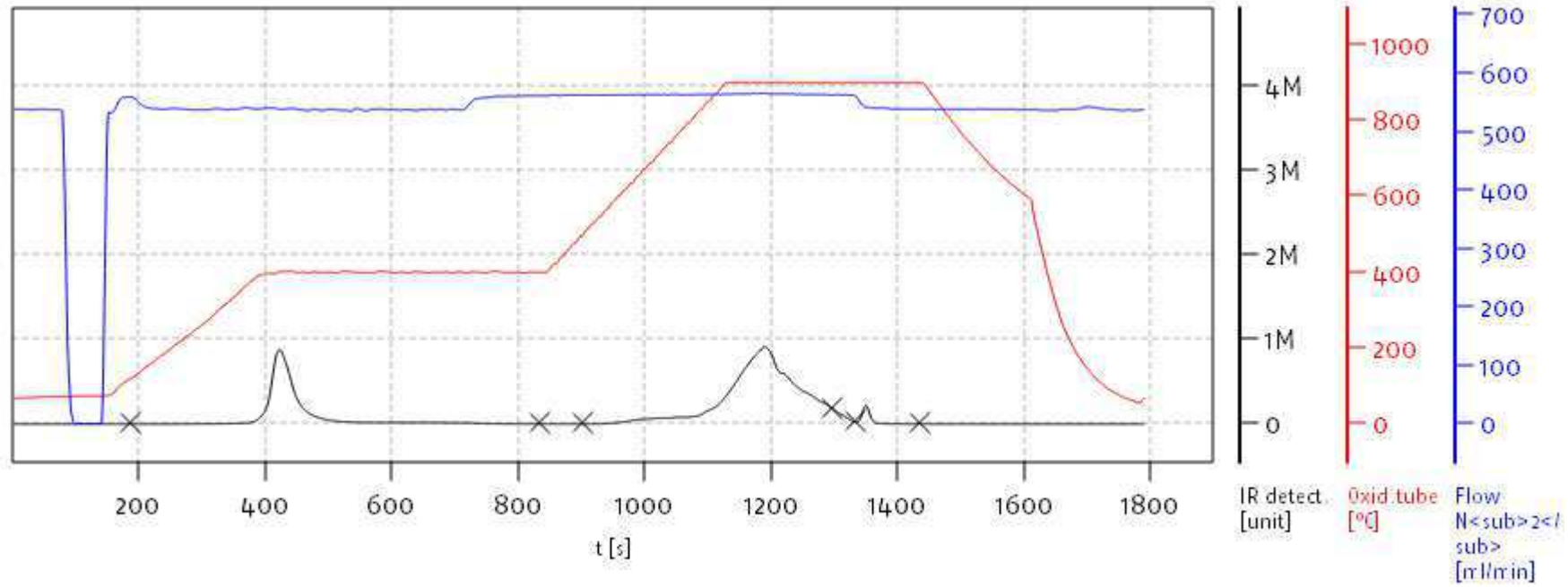
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
44	44	23D0665-03	218.70		CARBON	6/25/2023 11:08 AM	bl	1.190	1 583 751	4.089	0.071	127 011	4 026 216	1.119	2.899	0.9923	1.0000



Name:

Access: soliTOC superuser

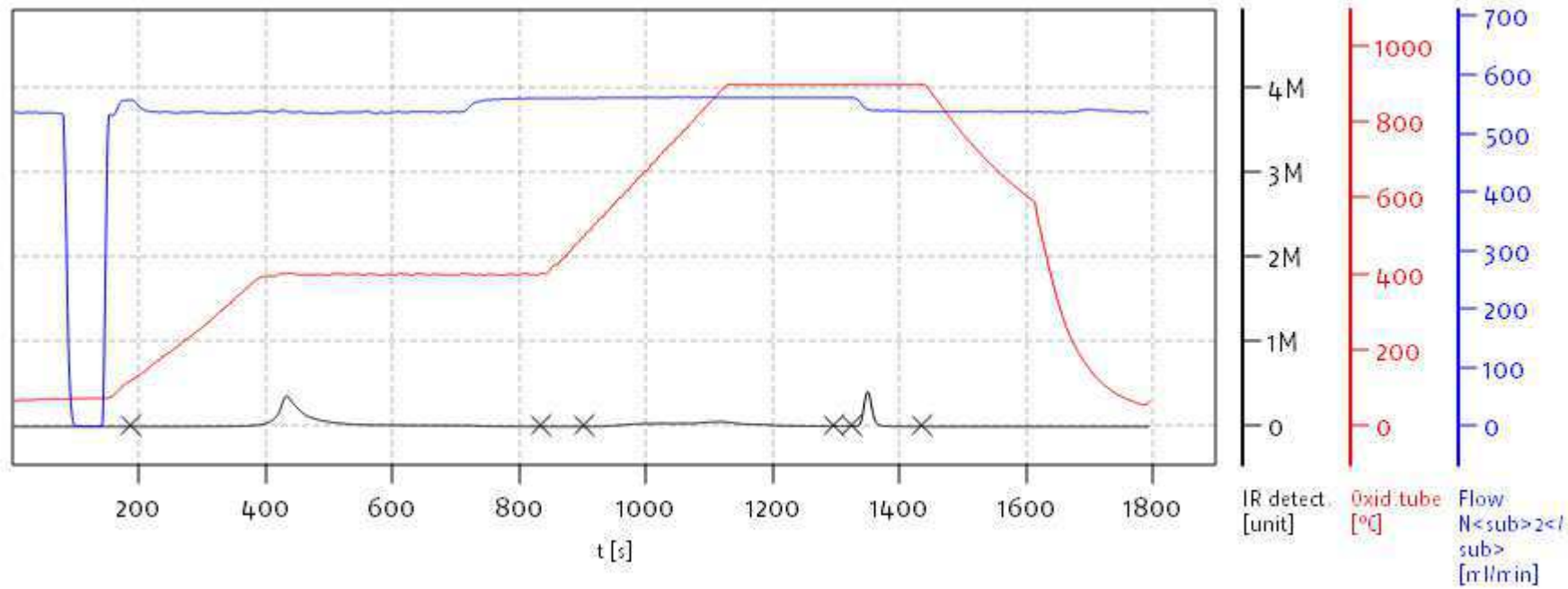
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
45	45	23D0665-04	223.80		CARBON	6/25/2023 11:38 AM	bl	0.688	799 969	0.932	0.146	234 591	372 885	0.542	0.244	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

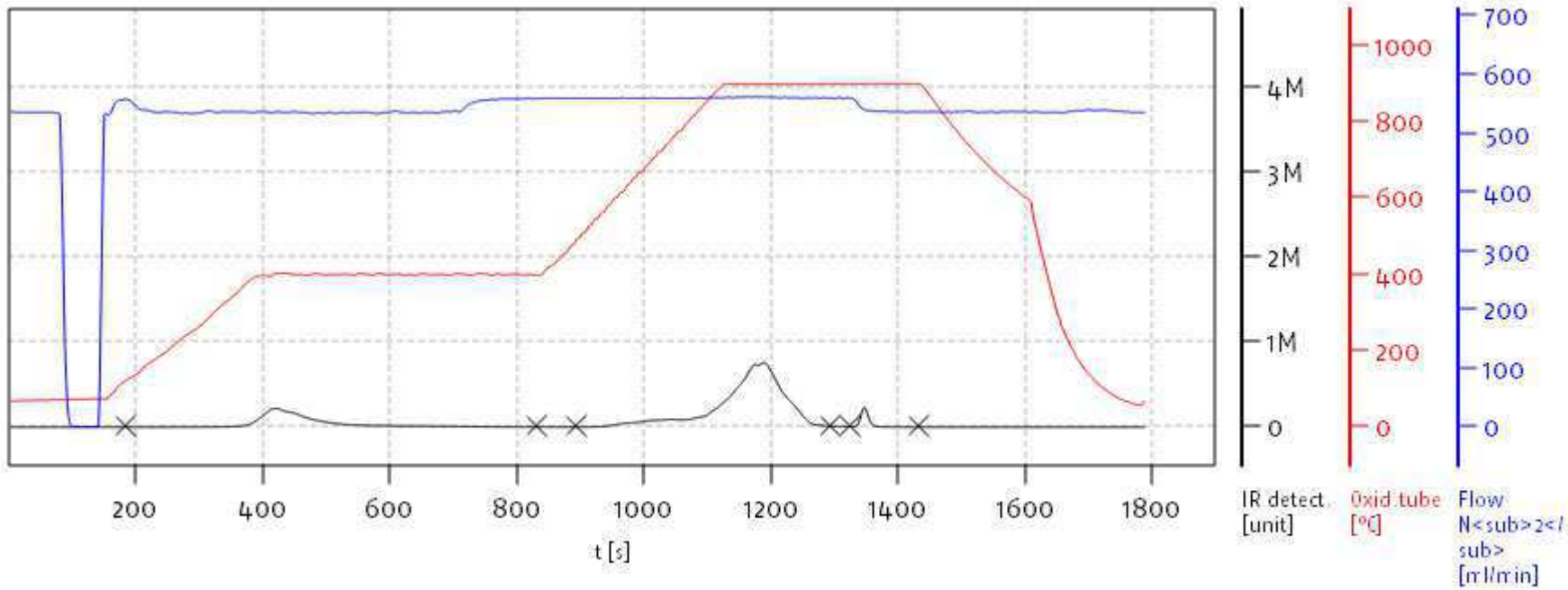
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
46	46	23D0665-06	244.40		CARBON	6/25/2023 12:08 PM	bl	0.560	798 479	2.506	0.064	127 596	3 027 687	0.496	1.946	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

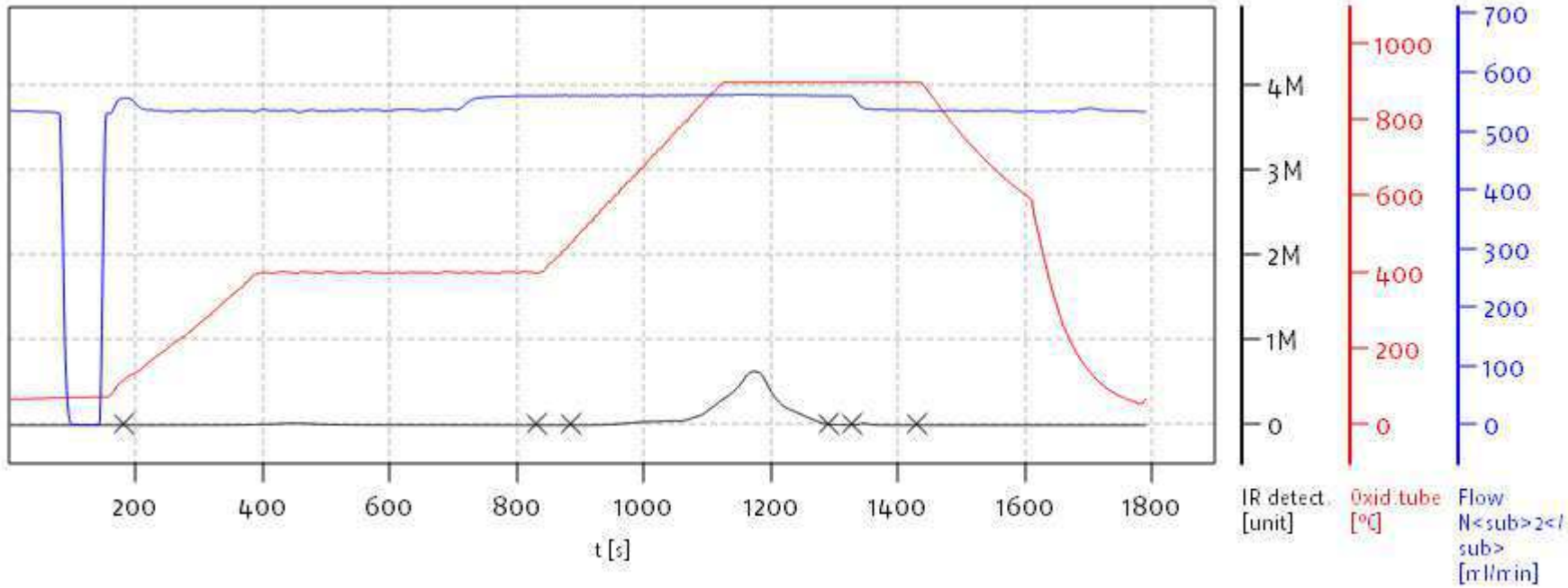
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
47	47	23D0665-07	210.30		CARBON	6/25/2023 12:38 PM	bl,C2u	0.053	100 316	1.865	0.000	14 658	2 430 925	0.053	1.812	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

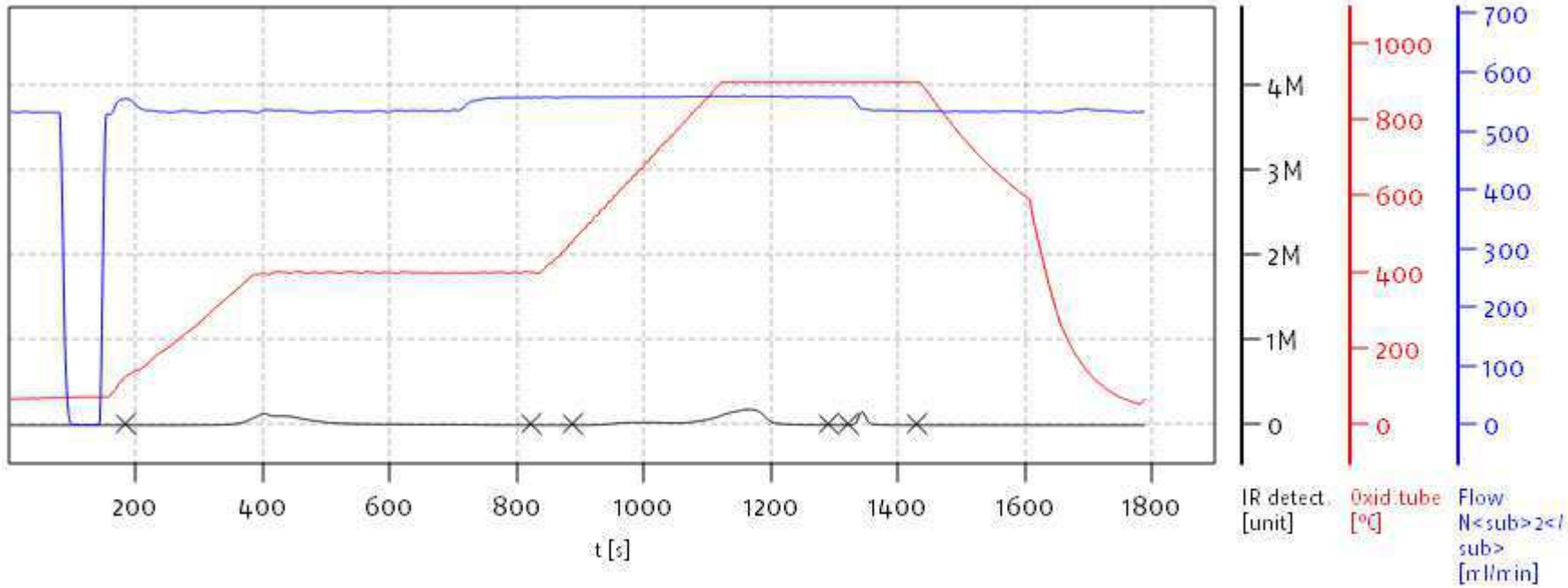
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
48	48	23D0665-08	190.00		CARBON	6/25/2023 1:09 PM	bl	0.473	539 531	1.052	0.050	88 304	723 297	0.423	0.580	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

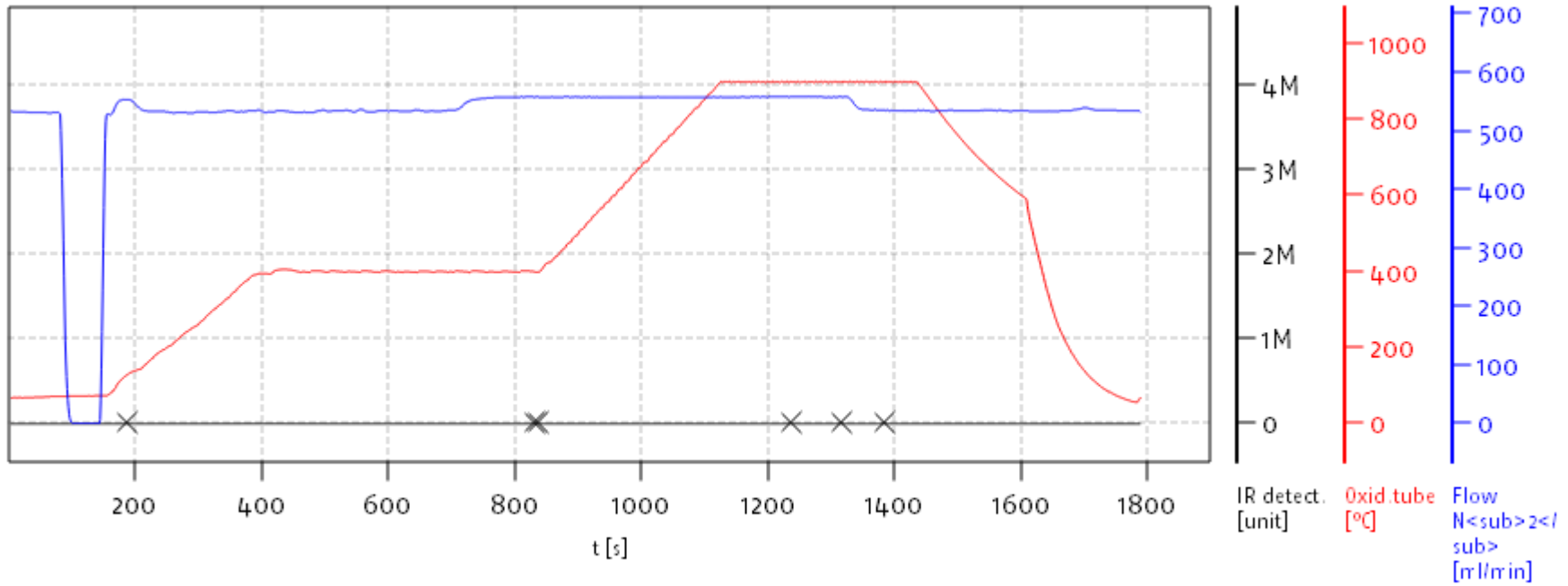
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
49	49	BLANK	1.00		CARBON	6/ 25/2023 1:39 PM	bl	0.000	6 031	0.000	0.000	126	1 018	0.000	0.000	0.9923	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

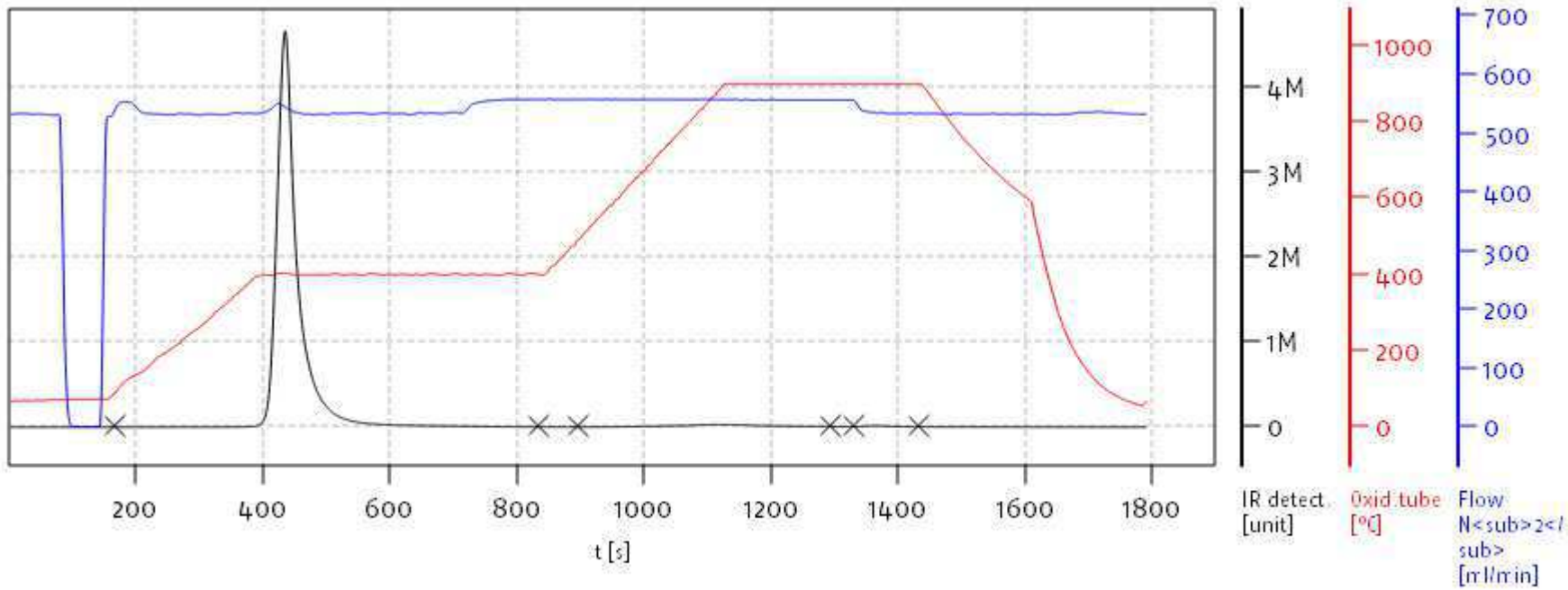
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
50	50	Dfactor	22.90		CARBON	6/25/2023 2:09 PM	bl	44.483	6 565 386	45.662	0.038	34 332	199 074	44.446	1.179	0.9817	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

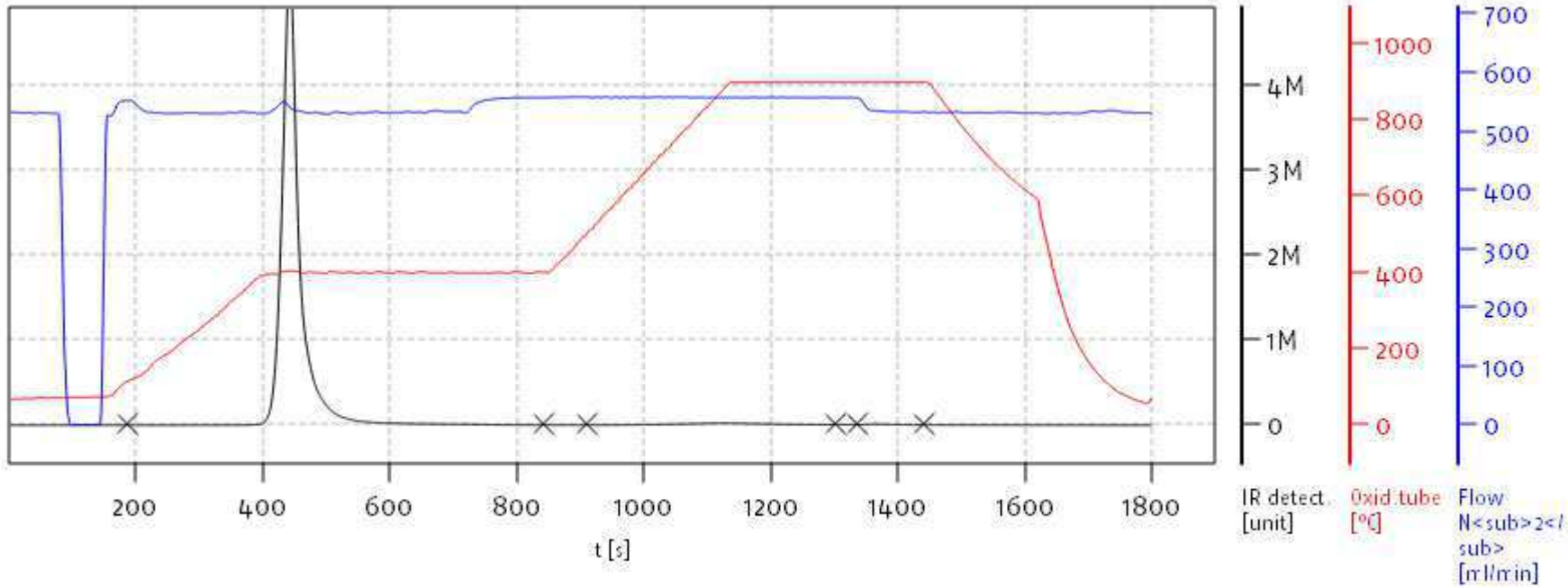
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
51	51	Dfactor	22.00		CARBON	6/25/2023 2:39 PM	bl	44.446	6 391 852	45.367	0.000	27 714	156 662	44.446	0.921	0.9688	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

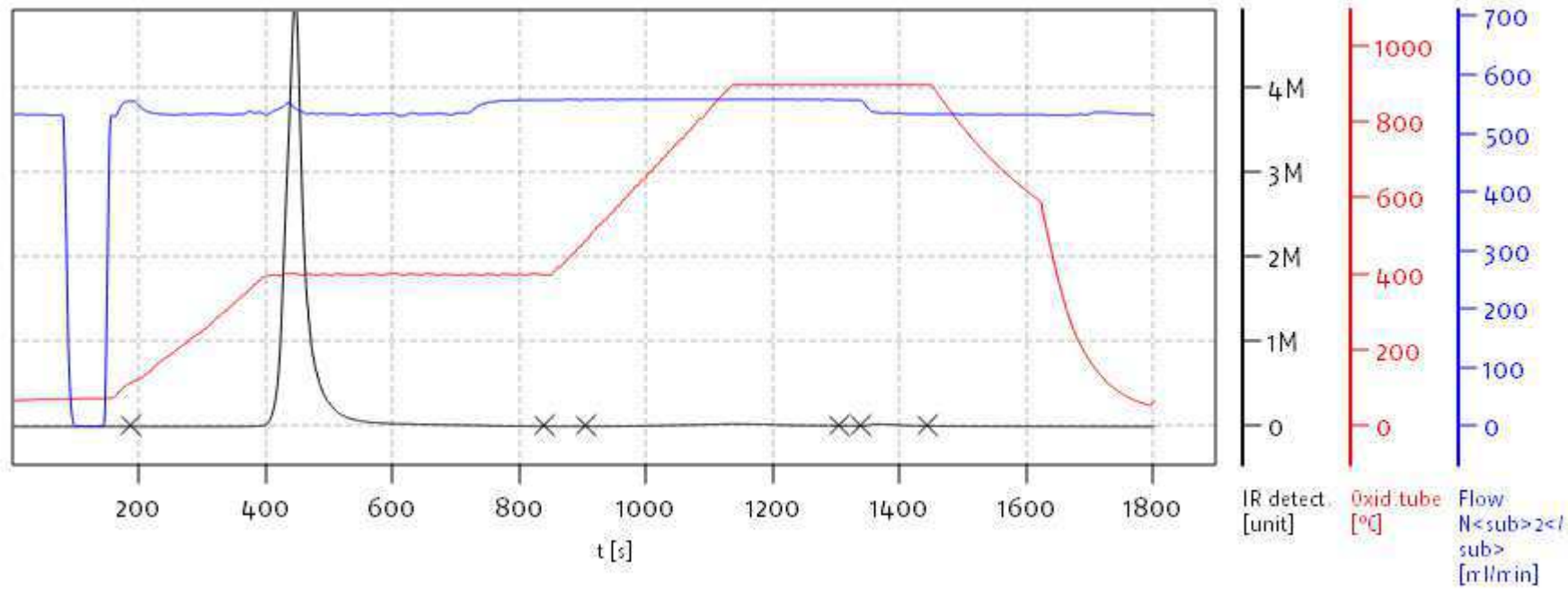
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
52	52	SLF0370-CCV4	23.70		CARBON	6/25/2023 3:10 PM	bl	43.660	6 677 133	45.104	0.267	68 687	244 609	43.393	1.444	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

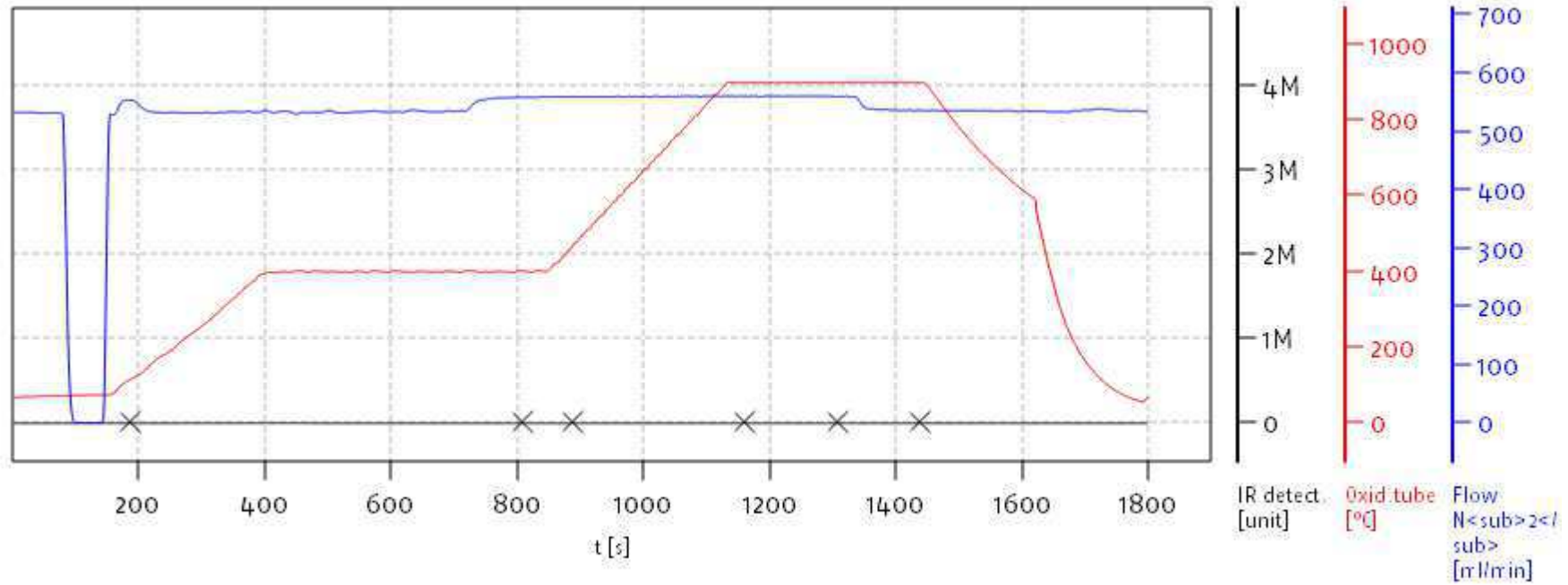
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
53	53	SLF0370-CCB4	524.80		CARBON	6/25/2023 3:40 PM	bl,C1u,C3u,C2u	0.000	10 185	0.000	0.000	237	3	0.000	0.000	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

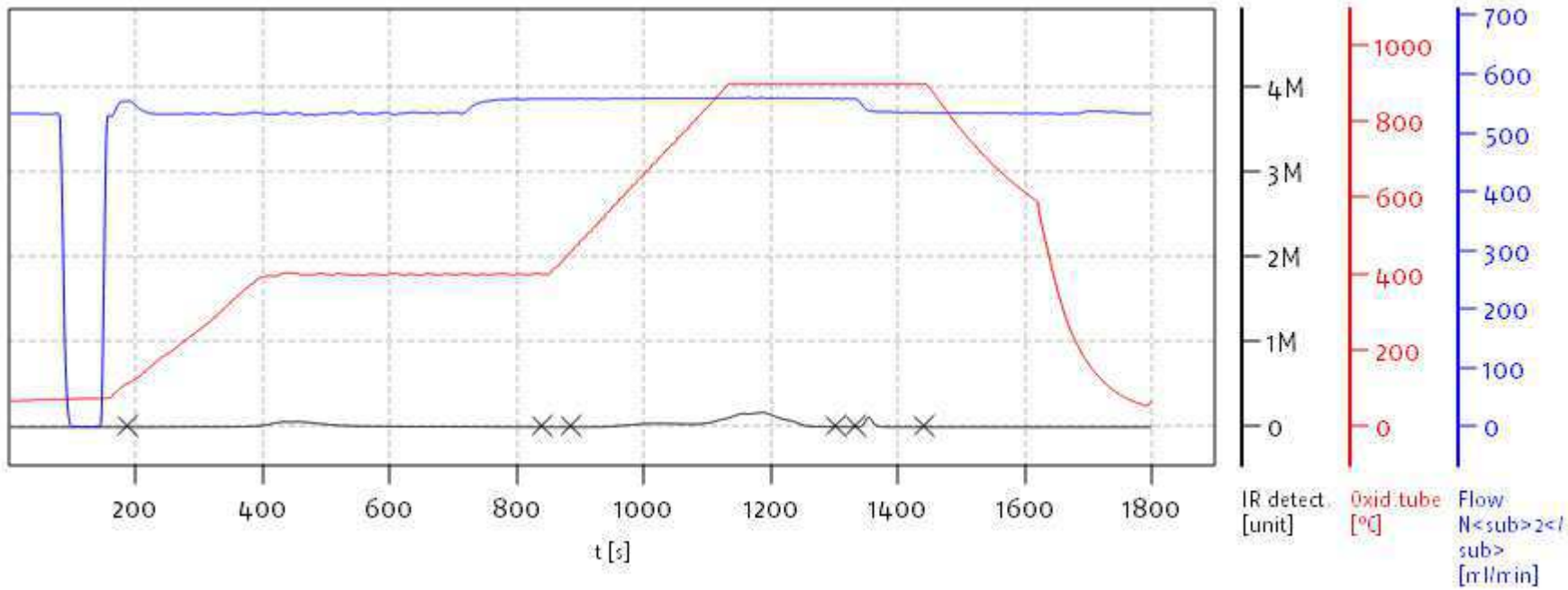
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
54	54	23D0665-09	249.80		CARBON	6/25/2023 4:10 PM	bl	0.195	304 854	0.716	0.024	66 166	850 182	0.171	0.522	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

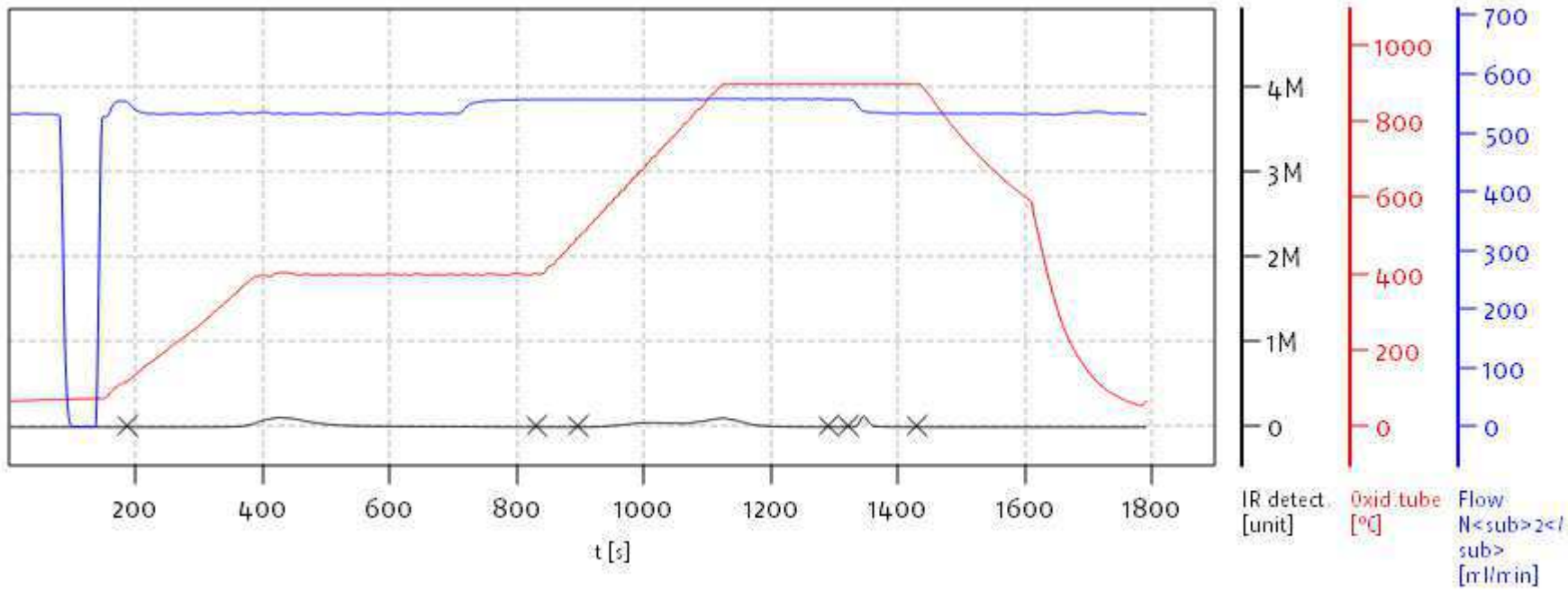
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
55	55	23D0665-13	250.80		CARBON	6/25/2023 4:41 PM	bl	0.302	470 114	0.605	0.030	76 649	507 535	0.272	0.303	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

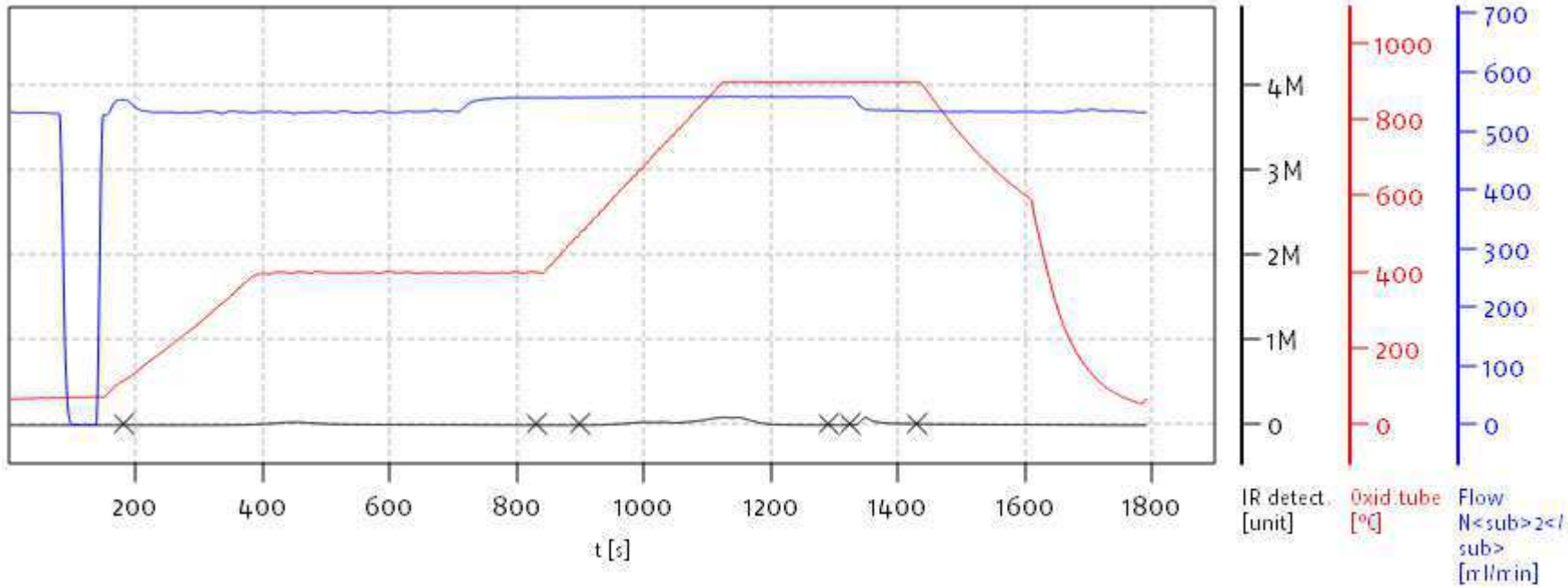
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
56	56	23D0665-14	207.70		CARBON	6/25/2023 5:11 PM	bl	0.169	163 601	0.485	0.069	119 245	442 332	0.100	0.316	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

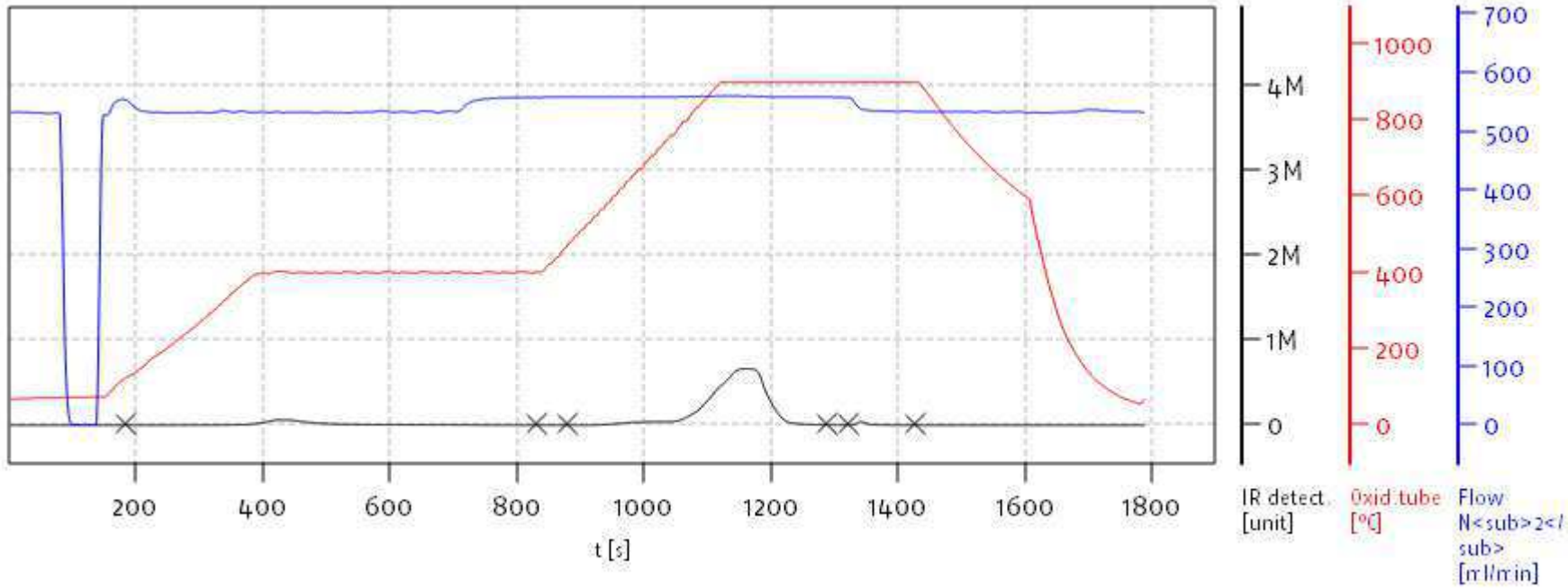
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
57	57	23D0682-01	182.70		CARBON	6/25/2023 5:41 PM	bl	0.183	245 059	2.356	0.000	27 744	2 531 460	0.183	2.173	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

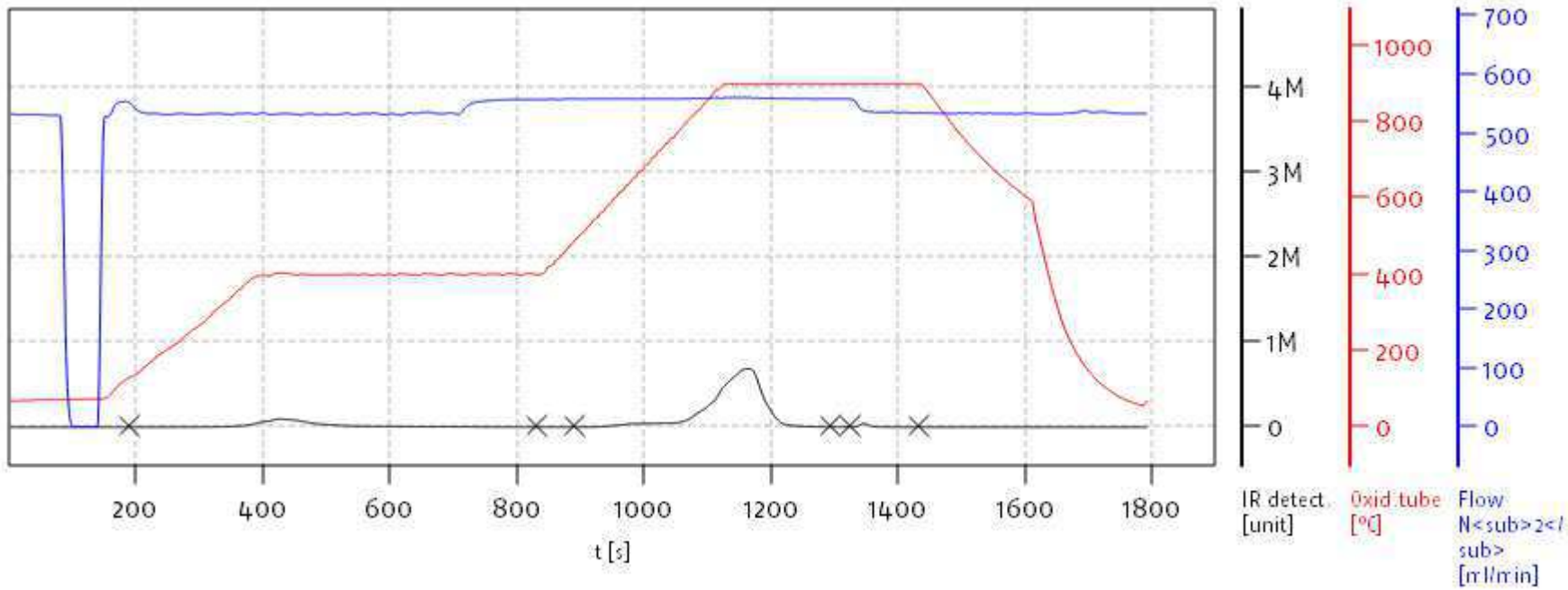
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
58	58	23D0682-02	378.60		CARBON	6/25/2023 6:11 PM	bl	0.152	401 266	1.115	0.000	28 281	2 327 725	0.152	0.963	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

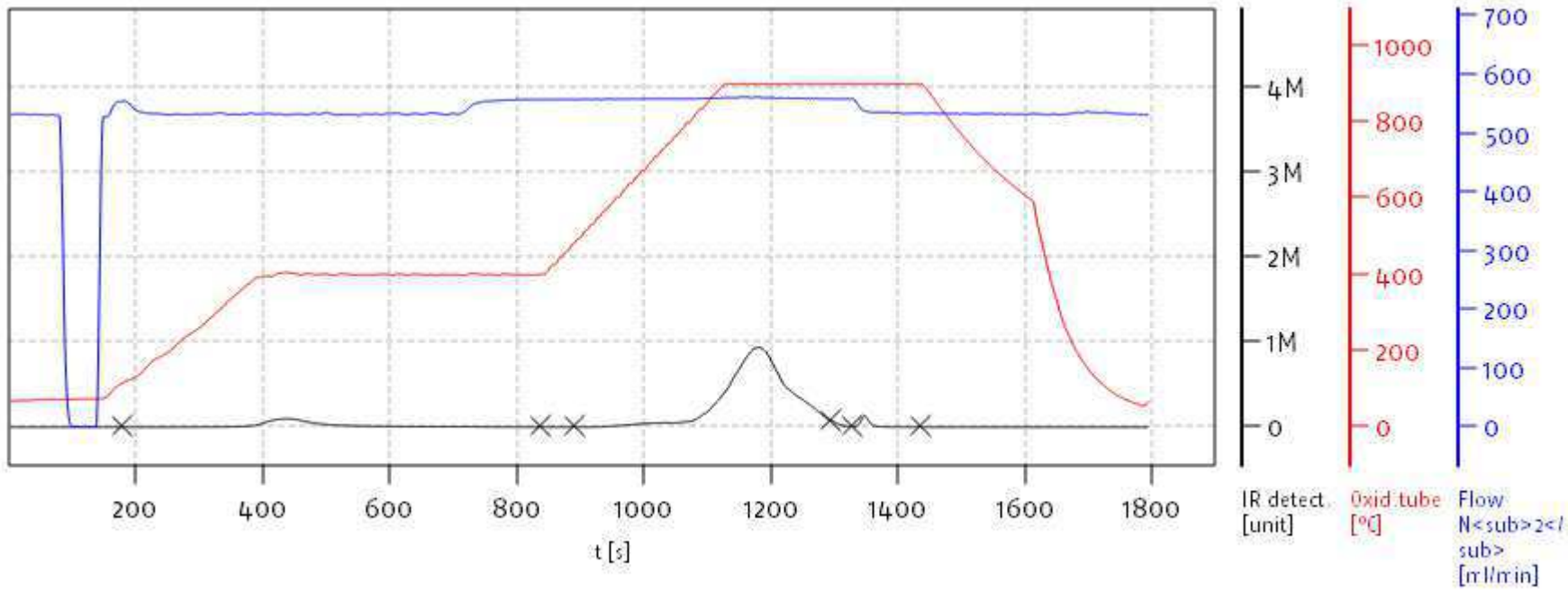
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
59	59	23D0682-03	309.00		CARBON	6/25/2023 6:42 PM	bl	0.210	396 564	2.229	0.026	79 812	3 962 312	0.184	2.019	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

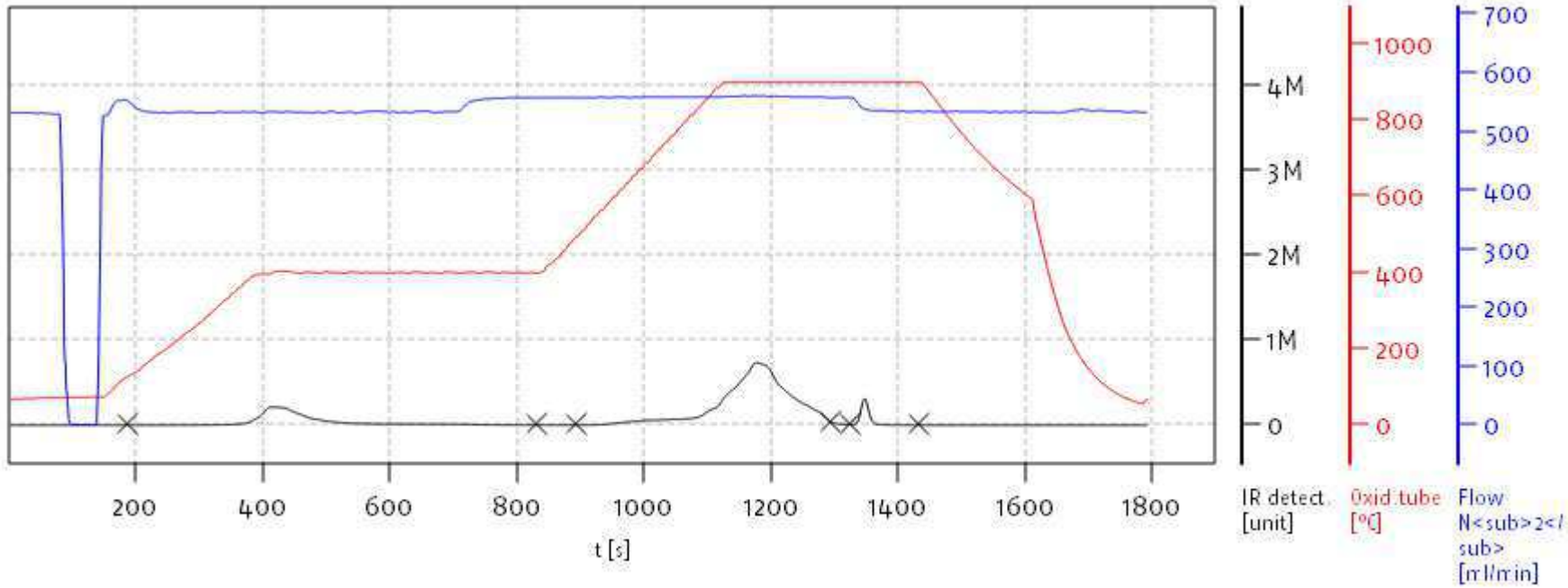
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
60	60	23D0682-05	222.50		CARBON	6/25/2023 7:12 PM	bl	0.626	777 269	2.893	0.105	176 513	3 209 970	0.520	2.268	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

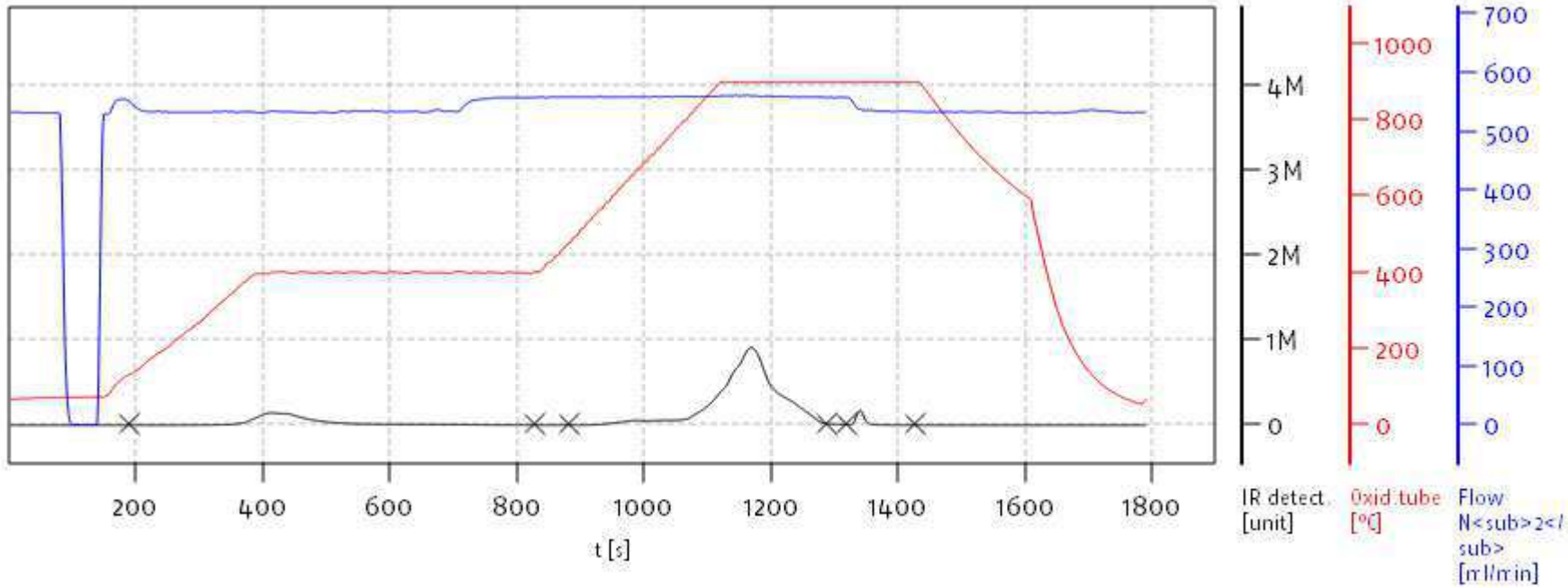
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

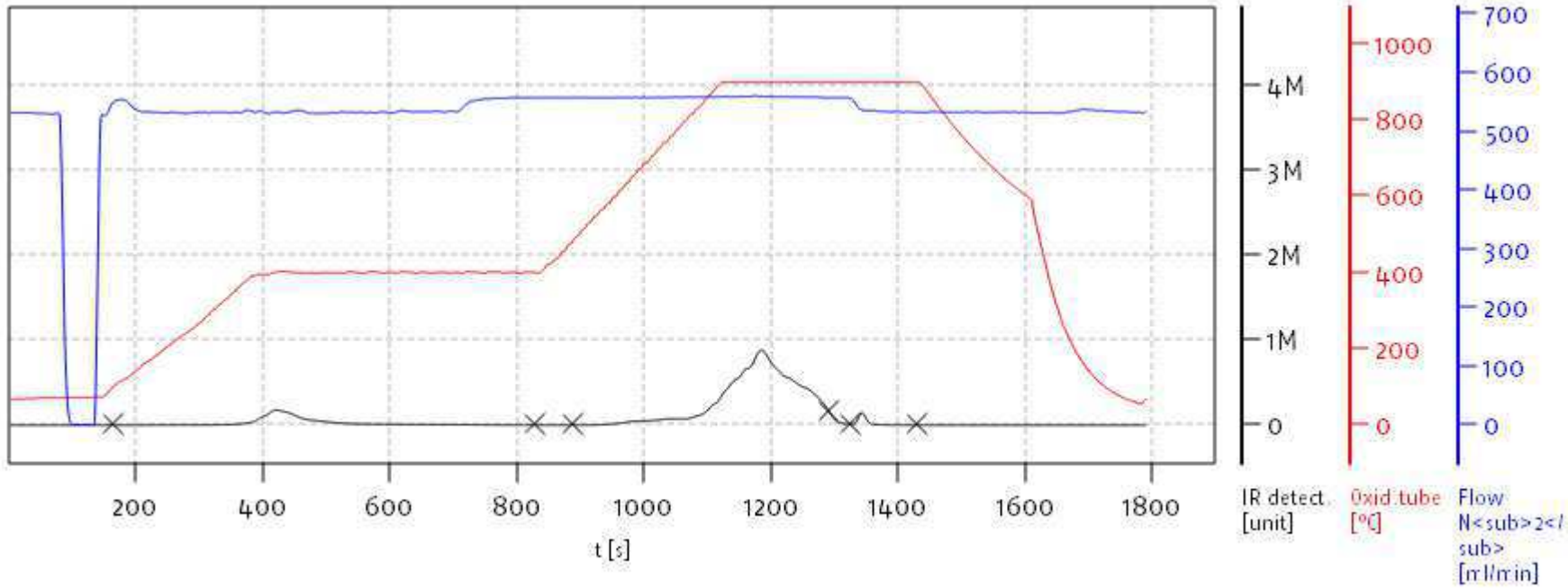
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
61	61	23D0682-06	279.50		CARBON	6/25/2023 7:42 PM	bl	0.363	611 320	2.273	0.041	101 077	3 393 674	0.322	1.909	0.9753	1.0000



Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
62	62	23D0682-07	206.90		CARBON	6/25/2023 8:12 PM	bl	0.470	596 441	3.581	0.046	88 622	4 086 899	0.424	3.111	0.9753	1.0000



Name:

Access: soliTOC superuser

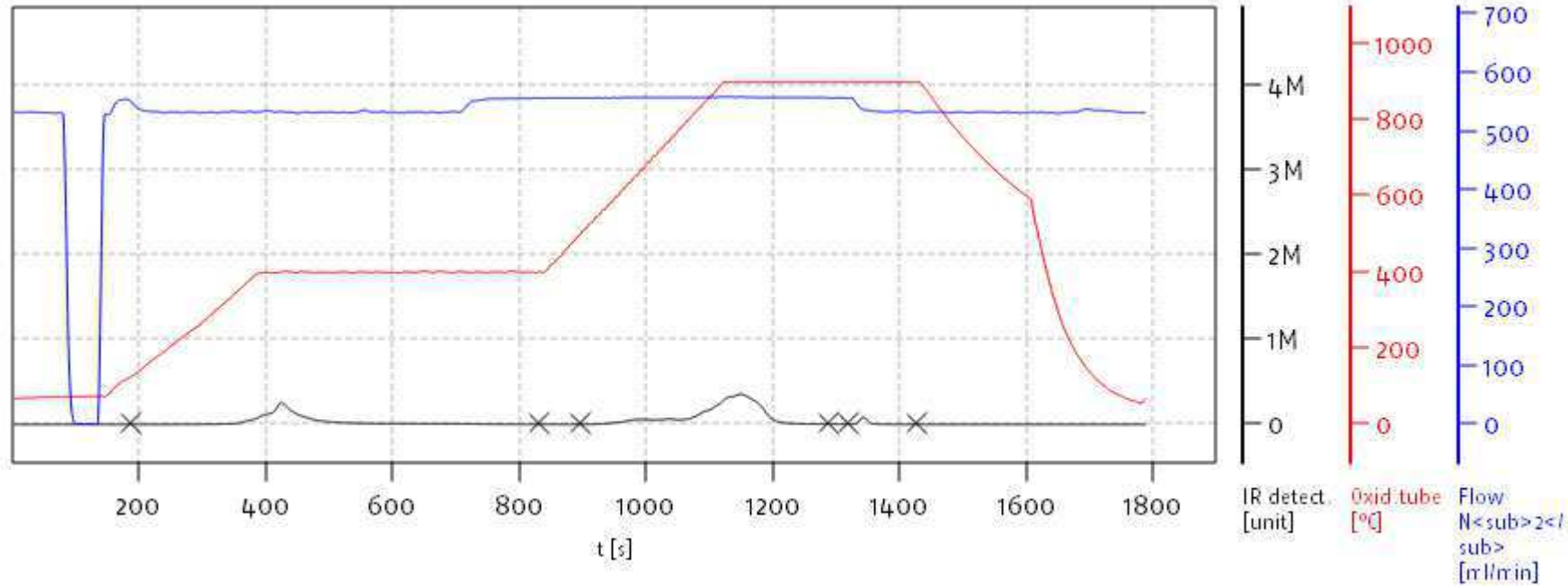
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
63	63	23D0682-08	257.30		CARBON	6/25/2023 8:42 PM	bl	0.400	673 232	1.249	0.013	49 654	1 405 602	0.387	0.849	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

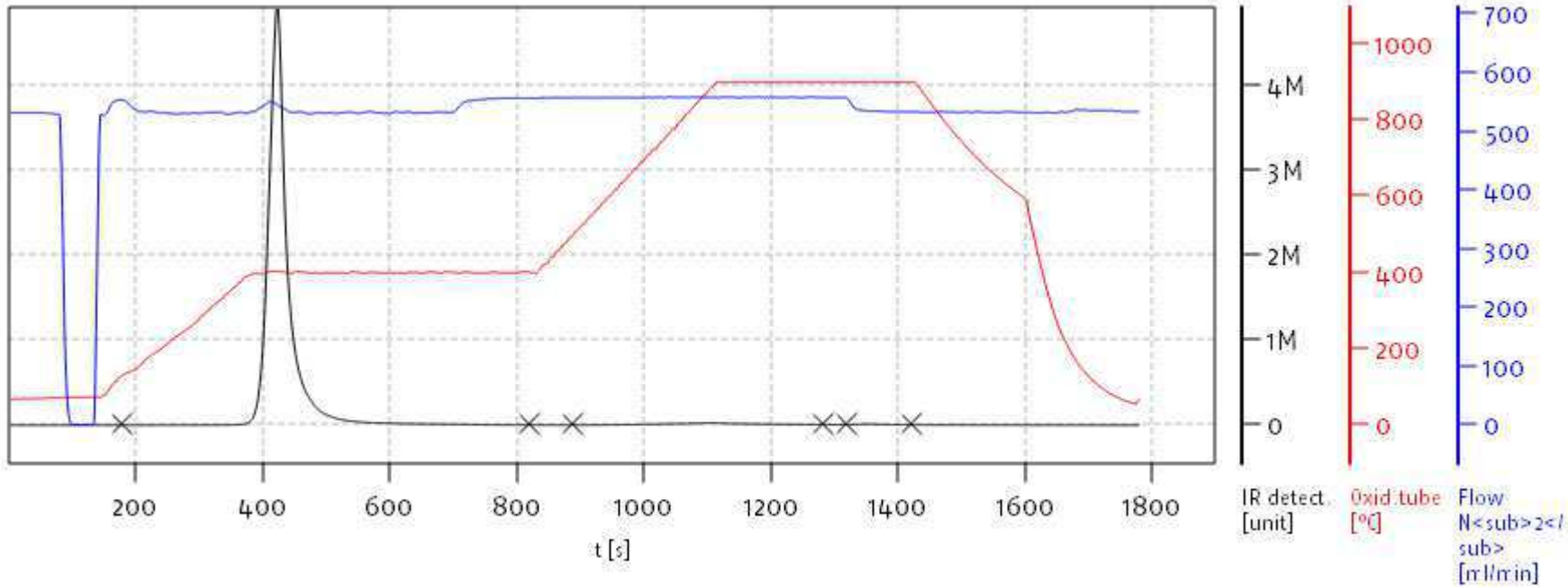
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
64	64	SLF0370-CCV5	22.00		CARBON	6/25/2023 9:12 PM	bl	45.058	6 435 720	46.071	0.009	30 104	169 344	45.049	1.013	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

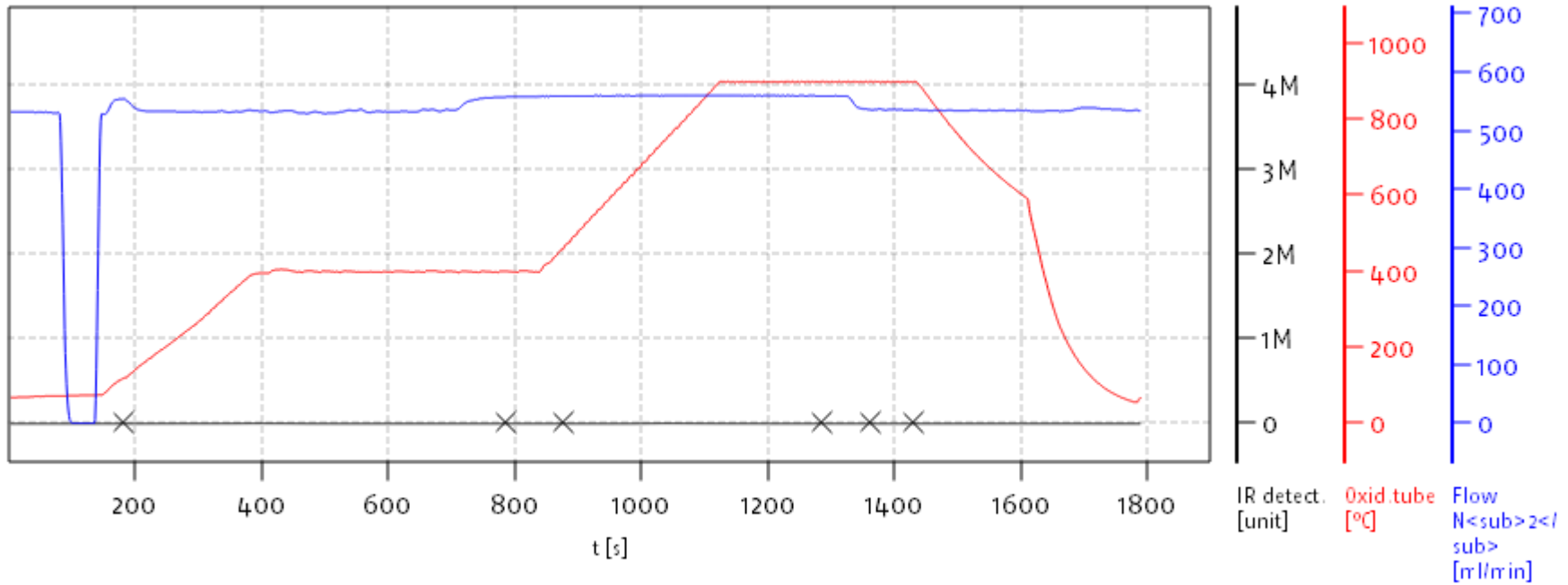
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

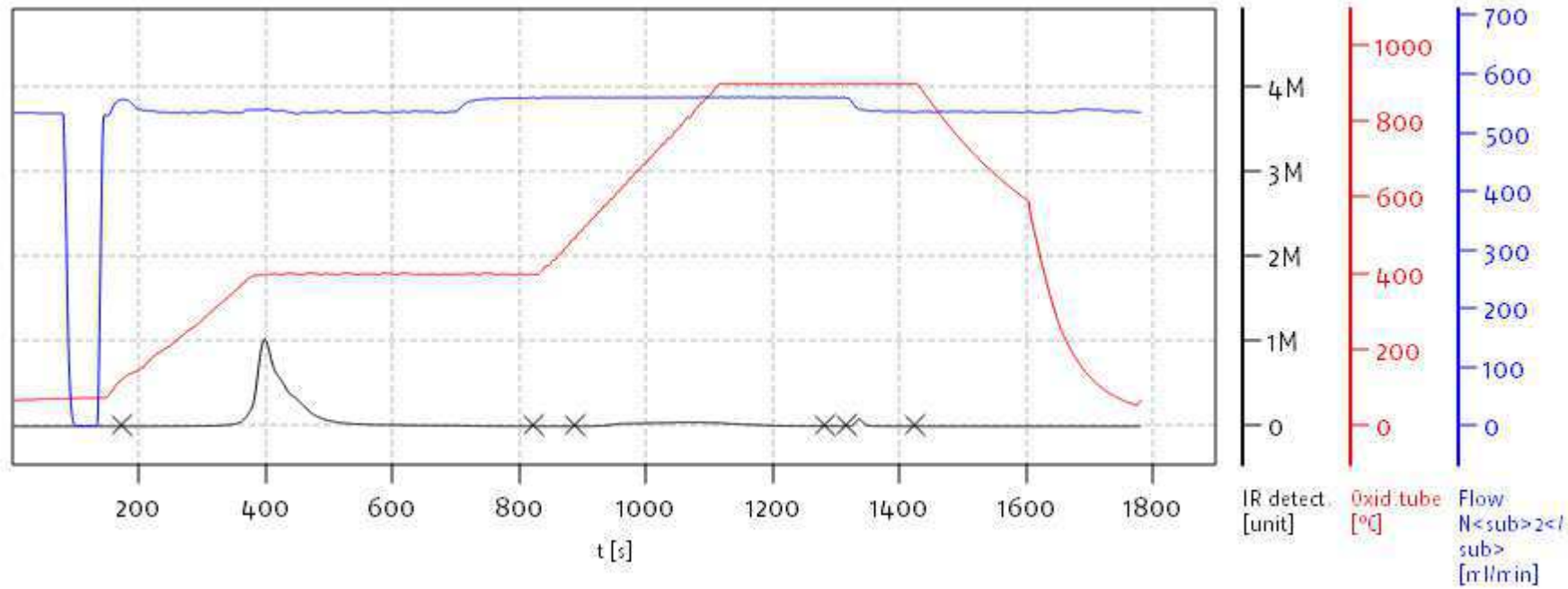
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
65	65	SLF0370-CCB5	505.10		CARBON	6/25/2023 9:43 PM	bl,C1u,C3u,C2u	0.000	15 455	0.000	0.000	211	14 502	0.000	0.000	0.9753	1.0000



Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
66	66	23E0295-06	304.70		CARBON	6/25/2023 10:13 PM	bl	1.131	2 234 868	1.300	0.011	50 287	353 383	1.120	0.169	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

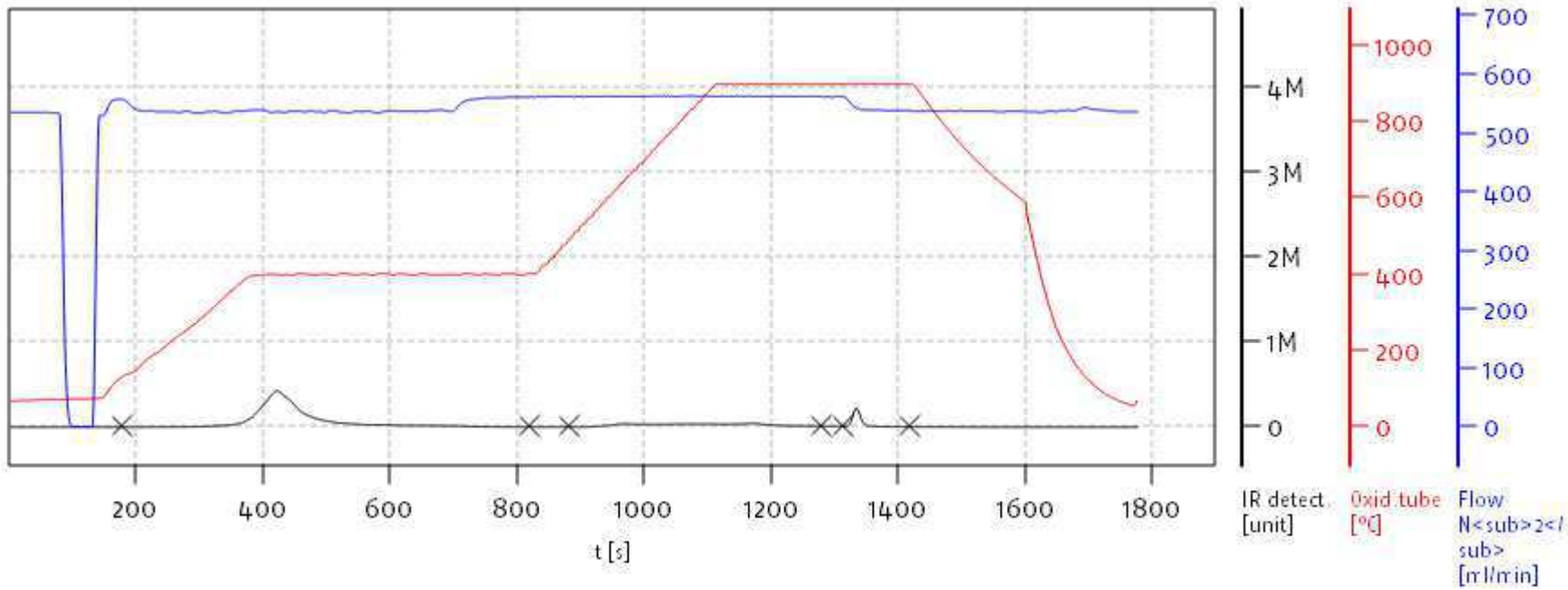
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
67	67	23E0295-07	395.20		CARBON	6/25/2023 10:43 PM	bl	0.572	1 372 902	0.718	0.046	142 302	393 824	0.526	0.146	0.9753	1.0000



Name:

Access: soliTOC superuser

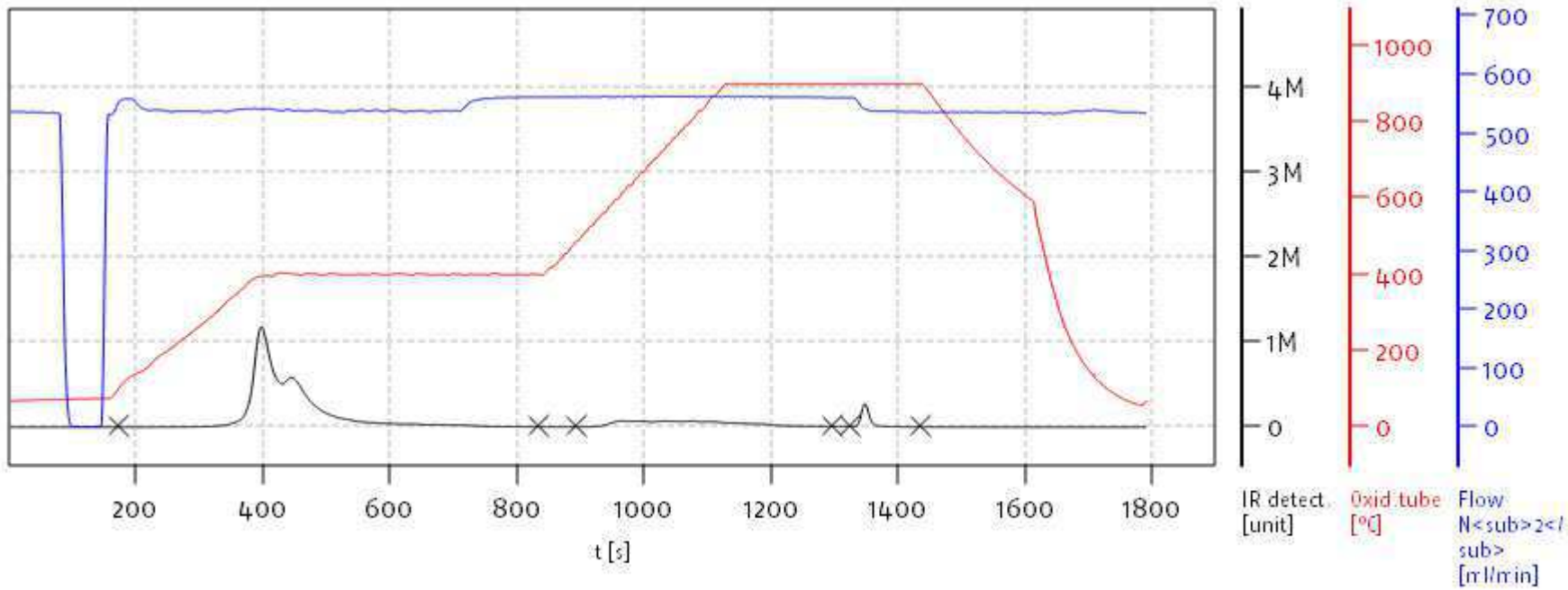
Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
68	68	23E0295-08	529.60		CARBON	6/25/2023 11:13 PM	bl	0.953	3 153 944	1.131	0.040	163 133	624 024	0.913	0.178	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

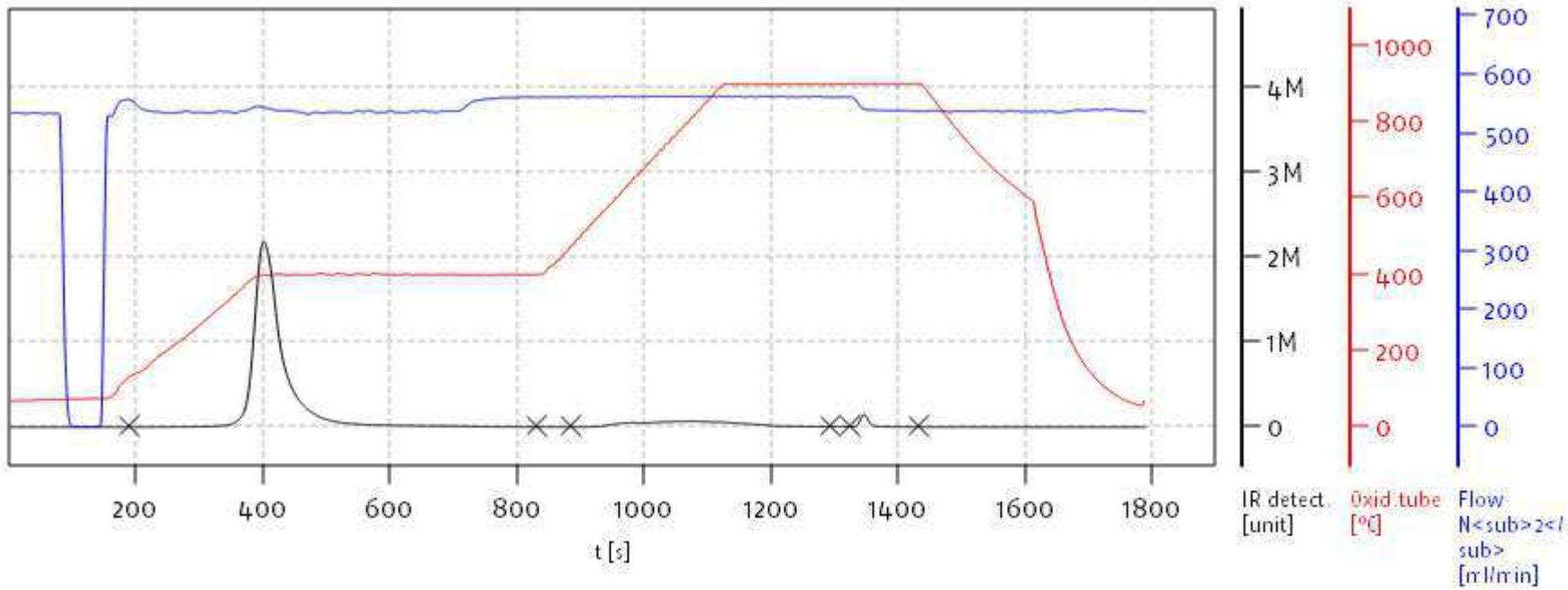
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
69	69	23E0295-10	515.30		CARBON	6/25/2023 11:43 PM	bl	1.280	4 228 600	1.434	0.019	91 326	528 439	1.261	0.154	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

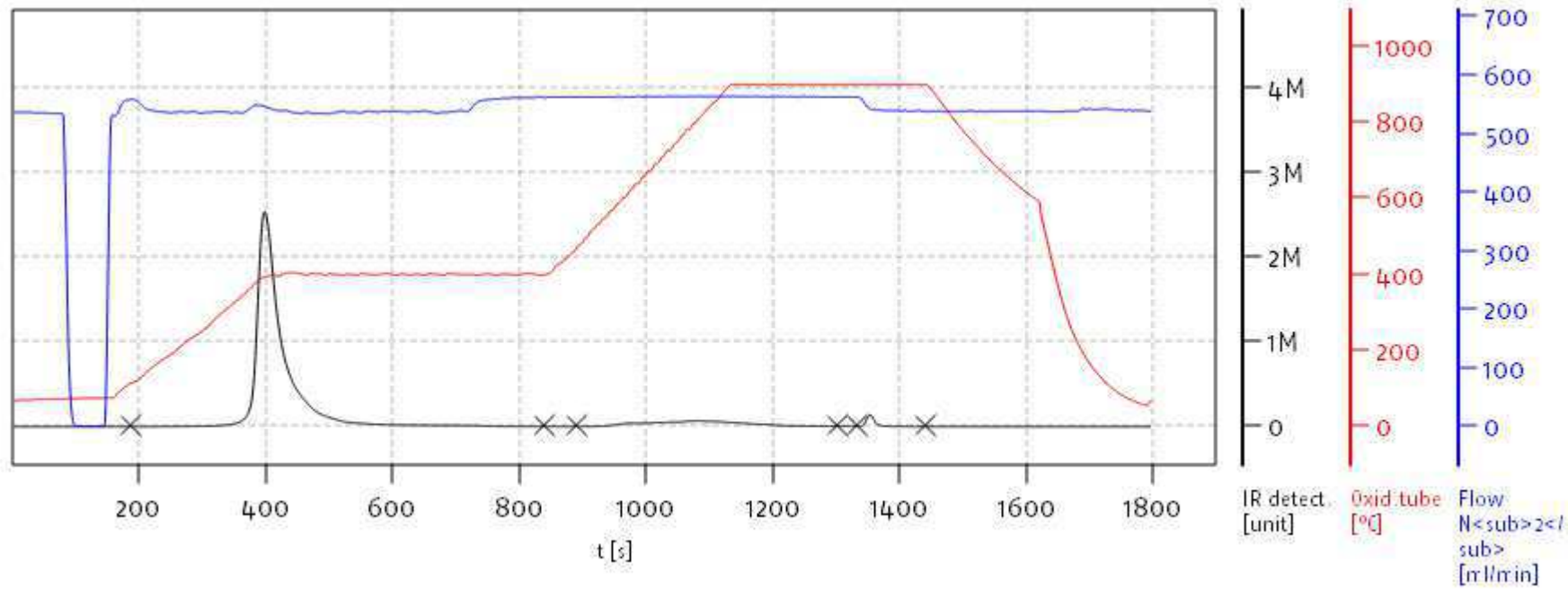
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
70	70	23E0295-11	503.60		CARBON	6/26/2023 12:14 AM	bl	1.355	4 384 475	1.496	0.017	82 082	476 902	1.338	0.141	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

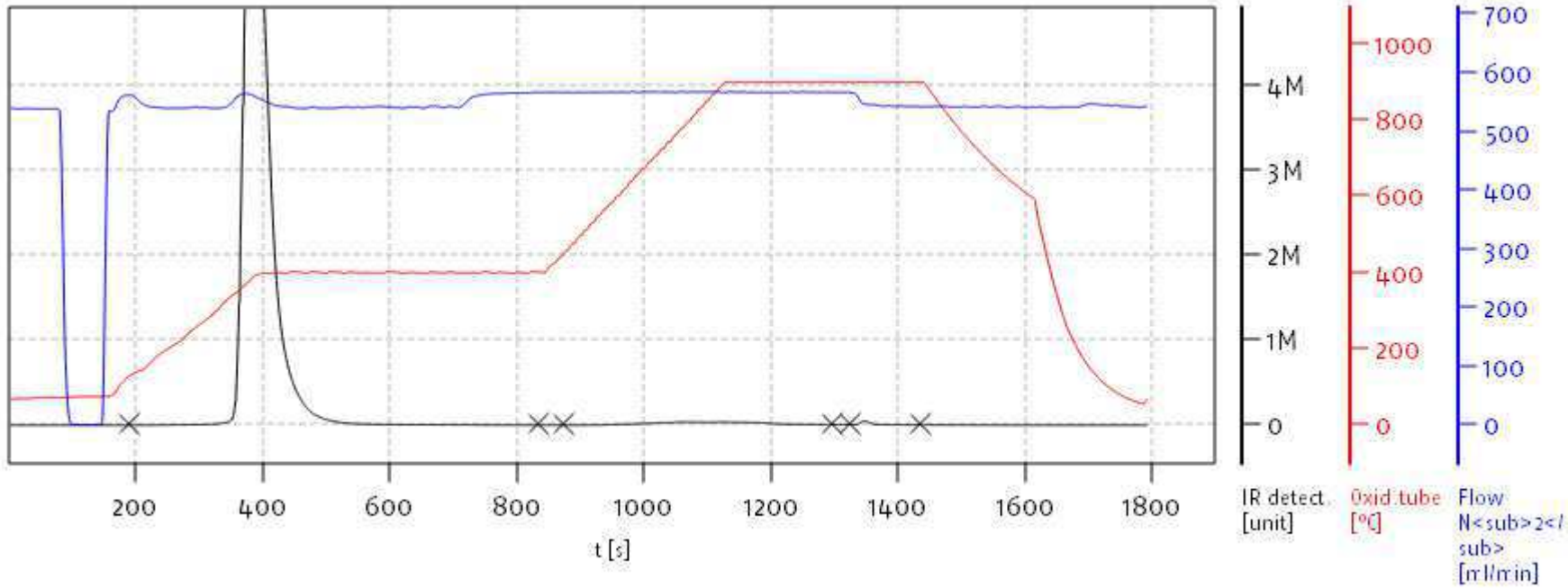
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
71	71	23E0295-12	529.50		CARBON	6/26/2023 12:44 AM	bl,C1o	3.452	11 825 340	3.533	0.005	46 962	299 550	3.446	0.081	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

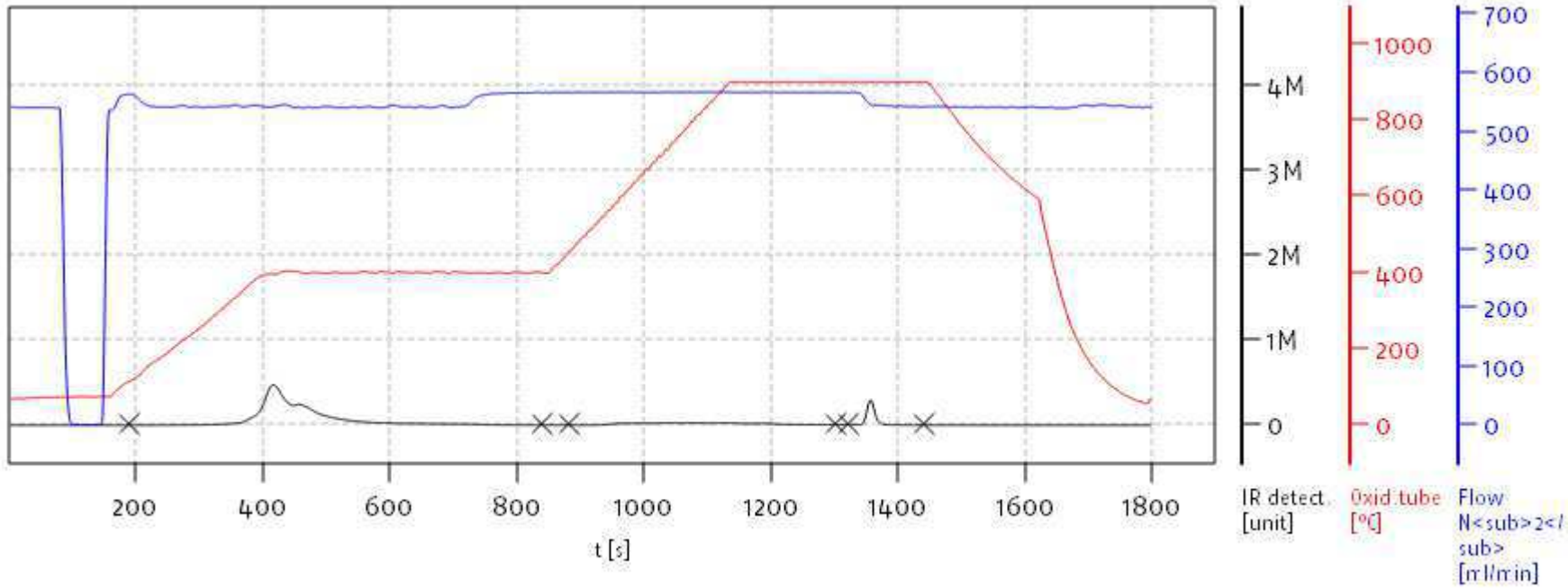
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
72	72	23E0295-13	183.80		CARBON	6/26/2023 1:14 AM	bl	1.316	1 448 155	1.505	0.121	169 447	247 641	1.195	0.189	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

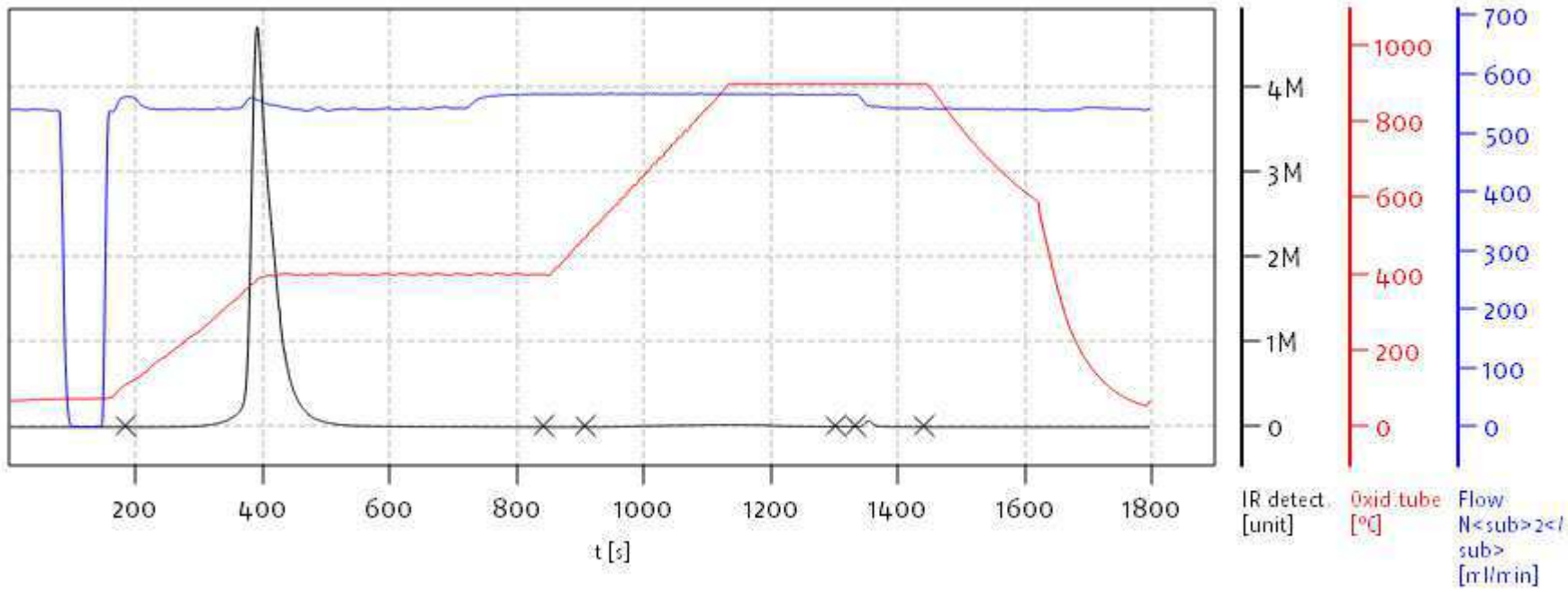
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
73	73	23E0295-14	210.70		CARBON	6/26/2023 1:44 AM	bl	5.105	6 959 561	5.238	0.016	50 635	205 908	5.088	0.133	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

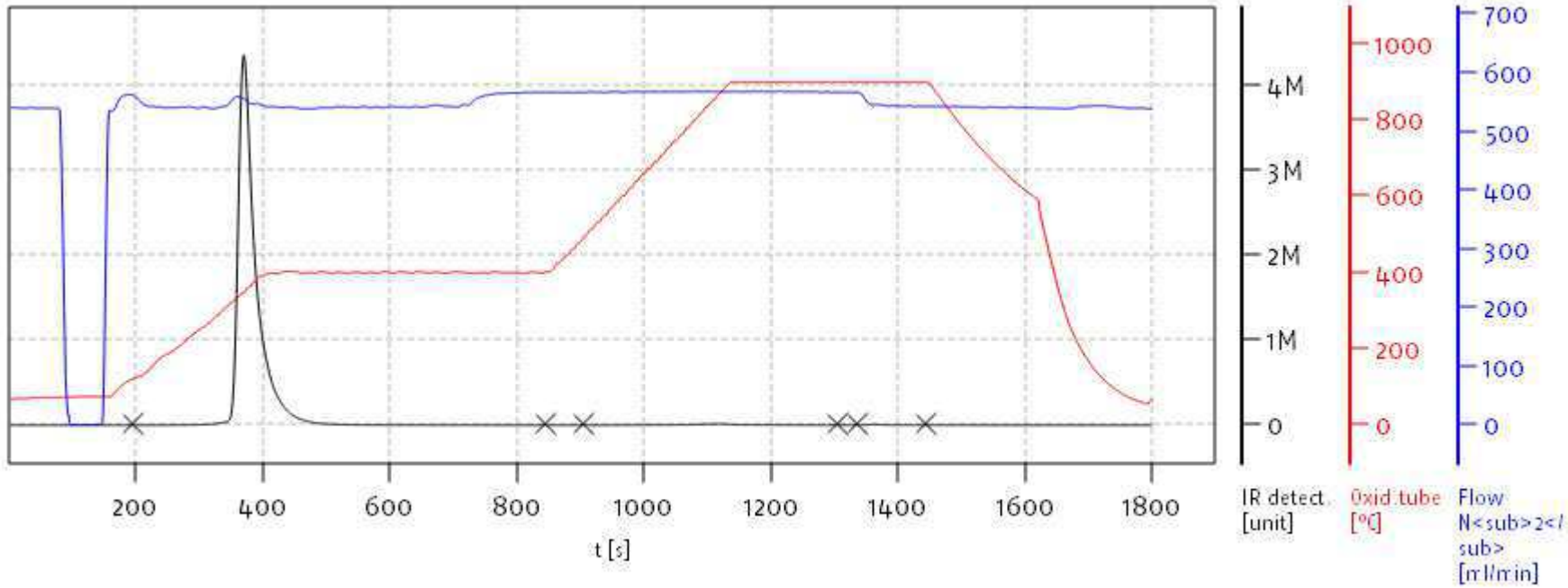
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
74	74	23E0253-01	147.40		CARBON	6/26/2023 2:15 AM	bl,C2u	5.502	5 272 022	5.529	0.000	11 112	53 885	5.502	0.027	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

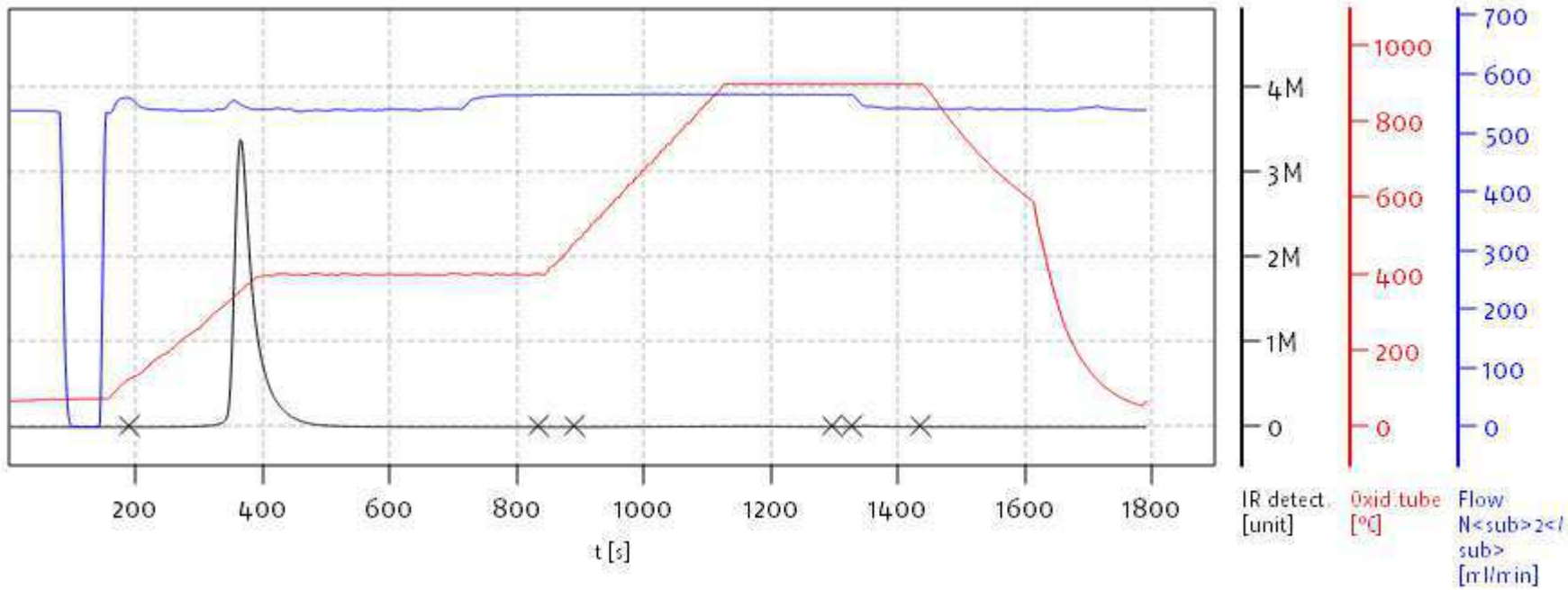
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
75	75	23E0253-02	153.30		CARBON	6/26/2023 2:45 AM	bl,C2u	4.607	4 594 303	4.649	0.000	19 045	69 581	4.607	0.042	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

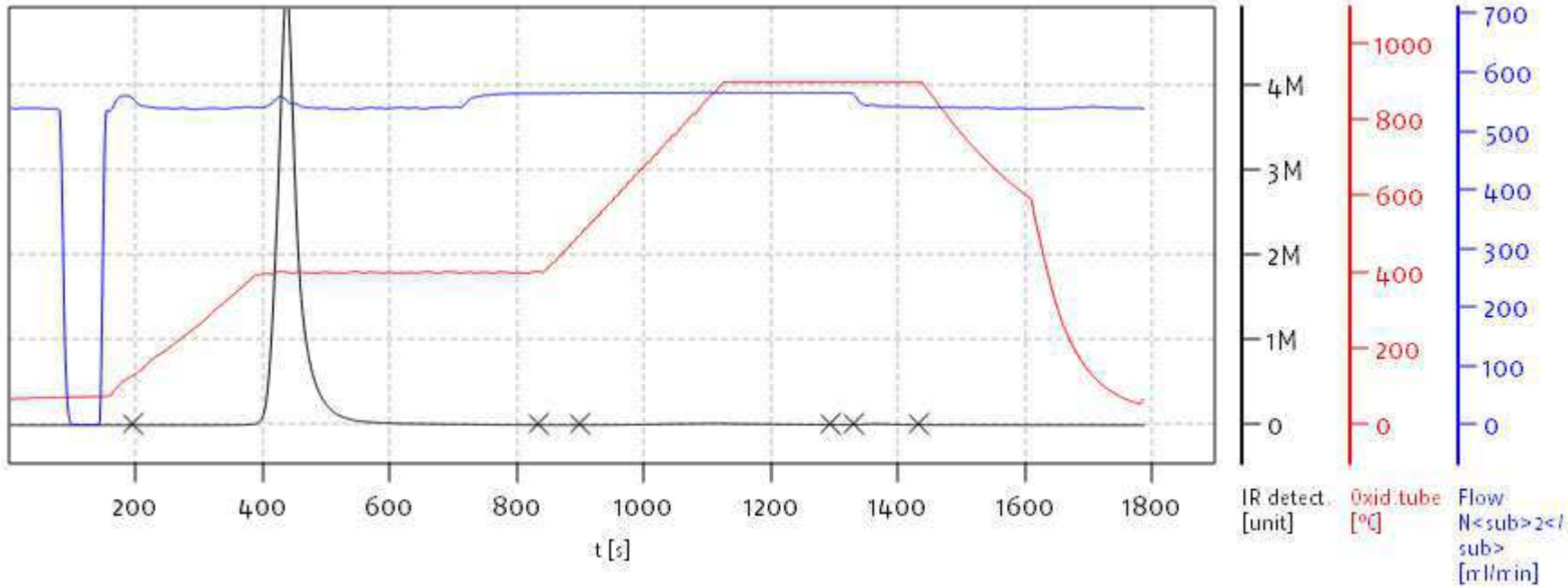
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
76	76	SLF0370-CCV6	24.70		CARBON	6/26/2023 3:15 AM	bl	45.373	7 270 734	46.133	0.019	31 845	147 116	45.354	0.759	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

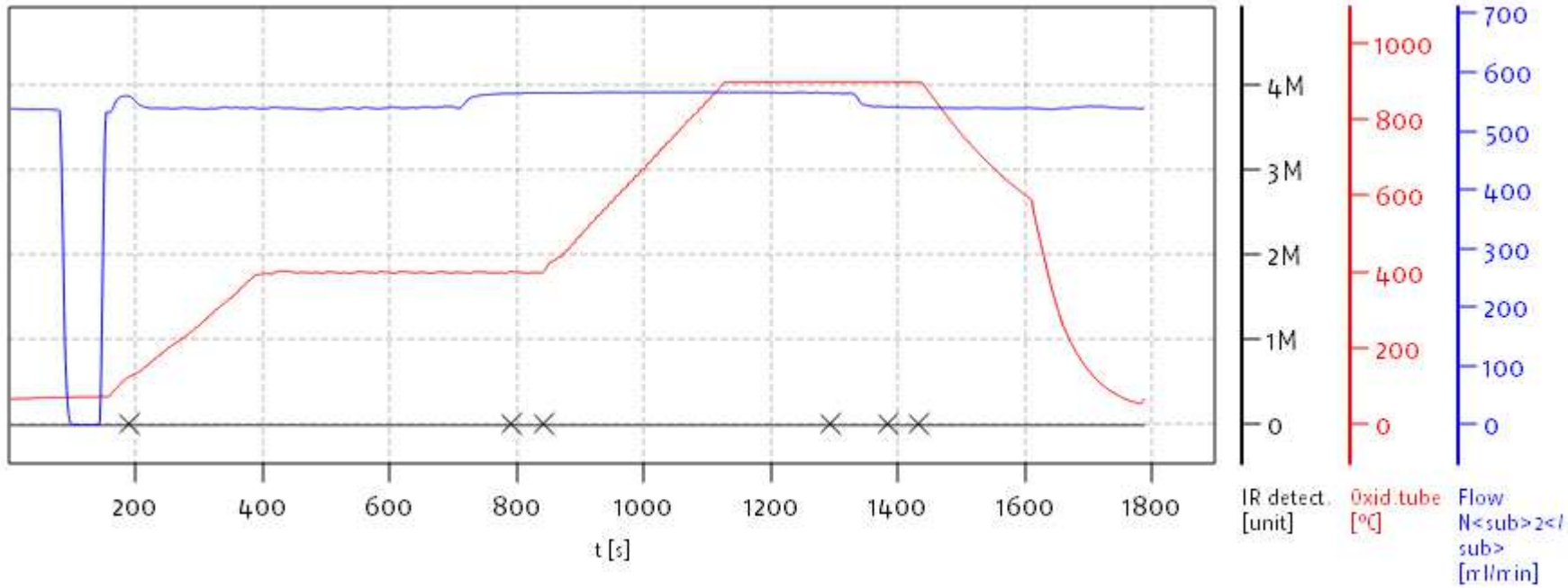
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
77	77	SLF0370-CCB6	536.20		CARBON	6/26/2023 3:45 AM	bl,C1u,C3u,C2u	0.000	7 603	0.000	0.000	231	2 195	0.000	0.000	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

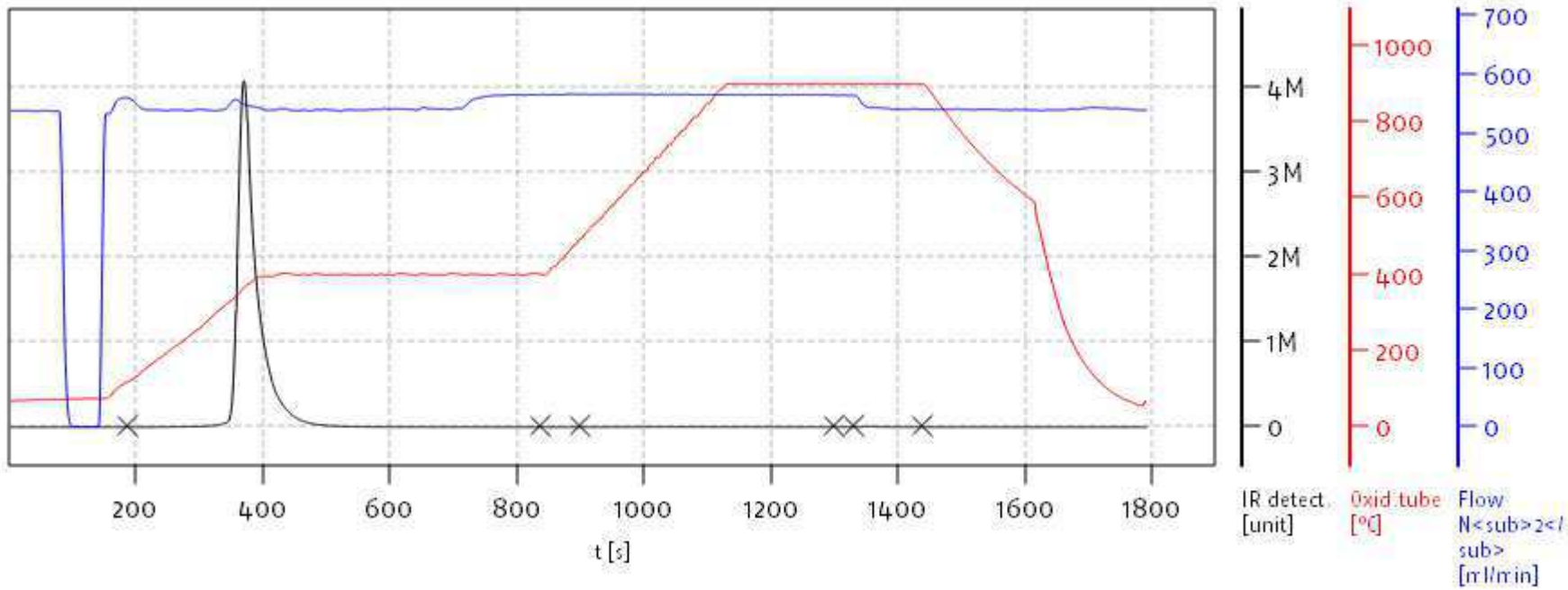
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
78	78	23E0253-03	108.50		CARBON	6/26/2023 4:16 AM	bl,C2u	7.484	5 278 340	7.484	0.000	10 153	25 913	7.484	0.000	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

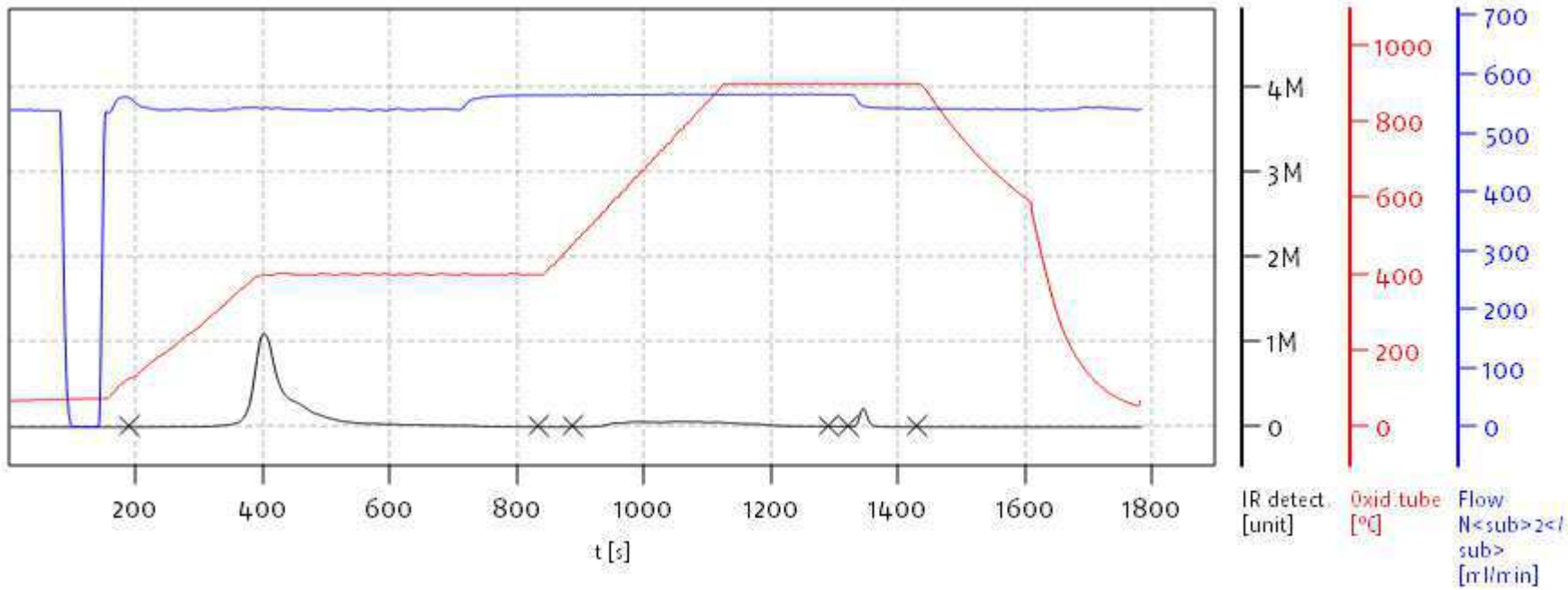
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
79	79	23E0295-09	439.30		CARBON	6/26/2023 4:46 AM	bl	0.938	2 593 163	1.125	0.035	127 094	546 147	0.903	0.187	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

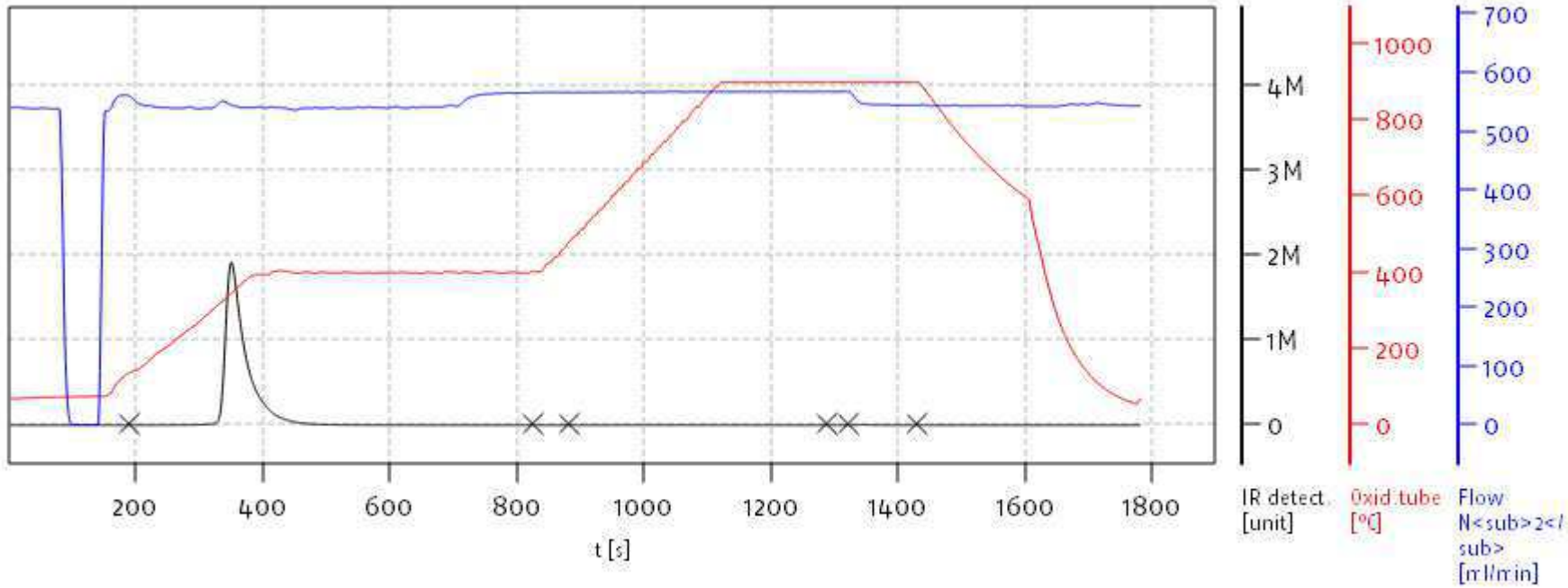
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
80	80	23F0027-03RE1	52.30		CARBON	6/26/2023 5:16 AM	bl,C3u,C2u	7.837	2 678 346	7.837	0.000	5 326	11 035	7.837	0.000	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

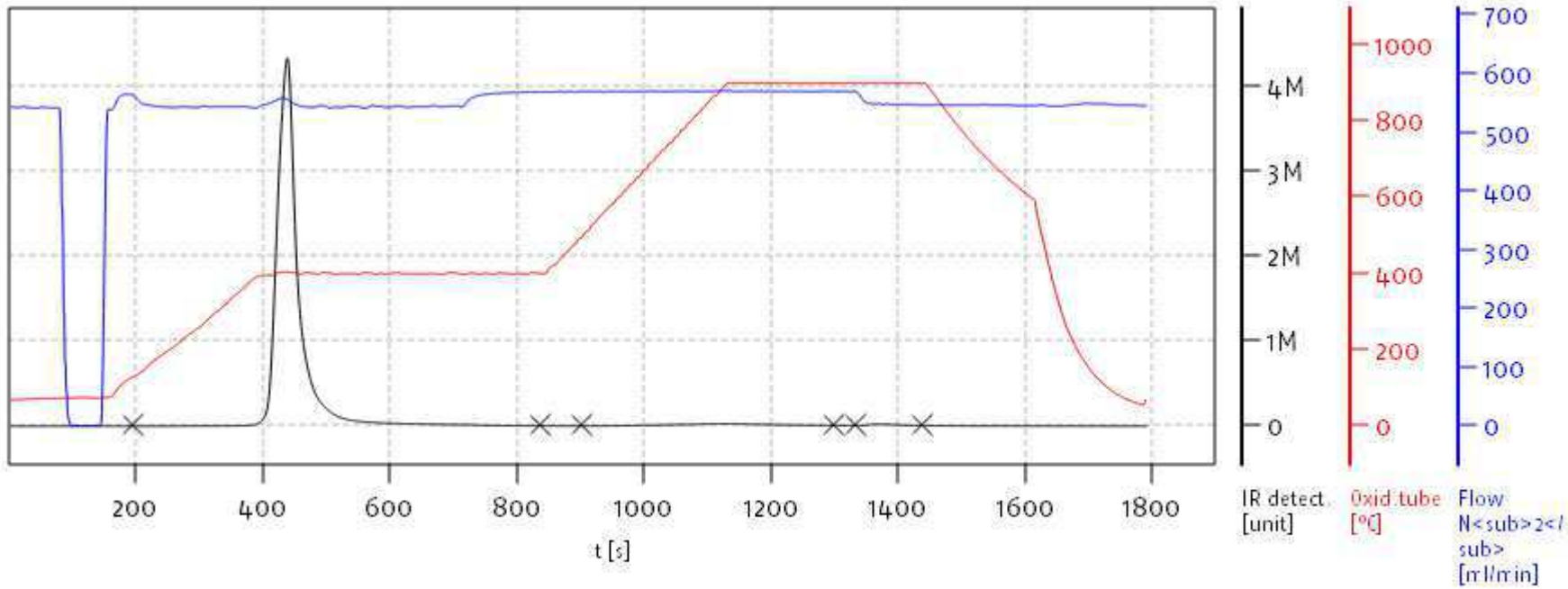
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
81	81	SLF0370-CCV7	21.90		CARBON	6/26/2023 5:46 AM	bl	44.293	6 274 575	45.635	0.176	53 210	214 124	44.117	1.342	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

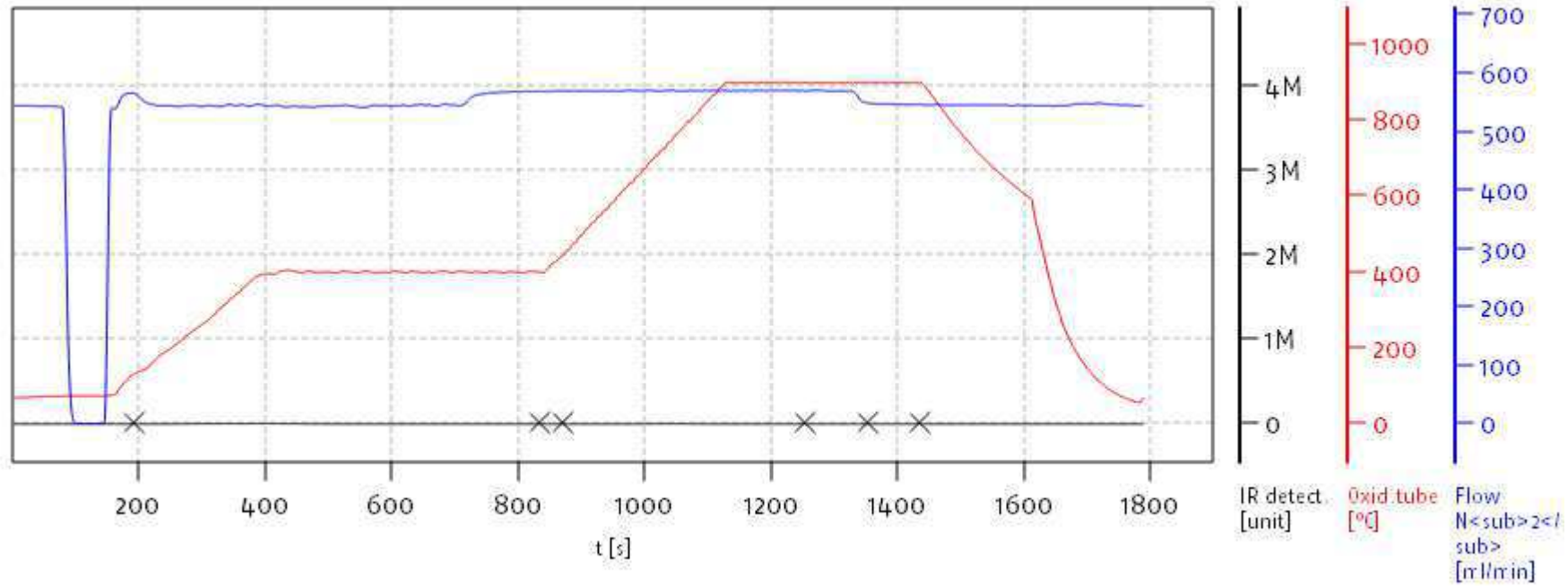
elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
82	82	SLF0370-CCB7	542.80		CARBON	6/26/2023 6:16 AM	bl,C3u,C2u	0.000	28 886	0.000	0.000	54	8 350	0.000	0.000	0.9753	1.0000



Name:

Access: soliTOC superuser

Date: Mon Jun 26 10:08:08 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 062423 CDE from: --.--.-- (modified)

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00052	Instrument:	TOC Cube
Calibration Date:	05/17/2023 10:07		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.0081413	2824365	0.015378	1908831	0.02171	2161539	0.030153	2354094	0.04523	1647690	0.060306	1529782
Total Carbon	0.0081413	2824365	0.015378	1908831	0.02171	2161539	0.030153	2354094	0.04523	1647690	0.060306	1529782
Total Inorganic Carbon	0.0081413	2824365	0.015378	1908831	0.02171	2161539	0.030153	2354094	0.04523	1647690	0.060306	1529782
% Soot	0.0081413	2824365	0.015378	1908831	0.02171	2161539	0.030153	2354094	0.04523	1647690	0.060306	1529782

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00052	Instrument:	TOC Cube
Calibration Date:	05/17/2023 10:07		

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.075081	1526165	0.092268	1411324	0.12031	1696235	0.15107	1646548	0.24	1507392	0.306	1652209
Total Carbon	0.075081	1526165	0.092268	1411324	0.12031	1696235	0.15107	1646548	0.24	1507392	0.306	1652209
Total Inorganic Carbon	0.075081	1526165	0.092268	1411324	0.12031	1696235	0.15107	1646548	0.24	1507392	0.306	1652209
% Soot	0.075081	1526165	0.092268	1411324	0.12031	1696235	0.15107	1646548	0.24	1507392	0.306	1652209

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00052
Instrument: TOC Cube
Calibration Date: 05/17/2023 10:07

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.426	1366392	0.606	1382589	0.894	1387318	1.206	1393572	1.506	1392225	1.806	1387100
Total Carbon	0.426	1366392	0.606	1382589	0.894	1387318	1.206	1393572	1.506	1392225	1.806	1387100
Total Inorganic Carbon	0.426	1366392	0.606	1382589	0.894	1387318	1.206	1393572	1.506	1392225	1.806	1387100
% Soot	0.426	1366392	0.606	1382589	0.894	1387318	1.206	1393572	1.506	1392225	1.806	1387100

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00052	Instrument:	TOC Cube
Calibration Date:	05/17/2023 10:07		

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	2.406	1383080	2.988	1392309	4.206	1321832	4.788	1266559	5.394	1264318	7.152	1292654
Total Carbon	2.406	1383080	2.988	1392309	4.206	1321832	4.788	1266559	5.394	1264318	7.152	1292654
Total Inorganic Carbon	2.406	1383080	2.988	1392309	4.206	1321832	4.788	1266559	5.394	1264318	7.152	1292654
% Soot	2.406	1383080	2.988	1392309	4.206	1321832	4.788	1266559	5.394	1264318	7.152	1292654

INITIAL CALIBRATION DATA

EPA 9060A m

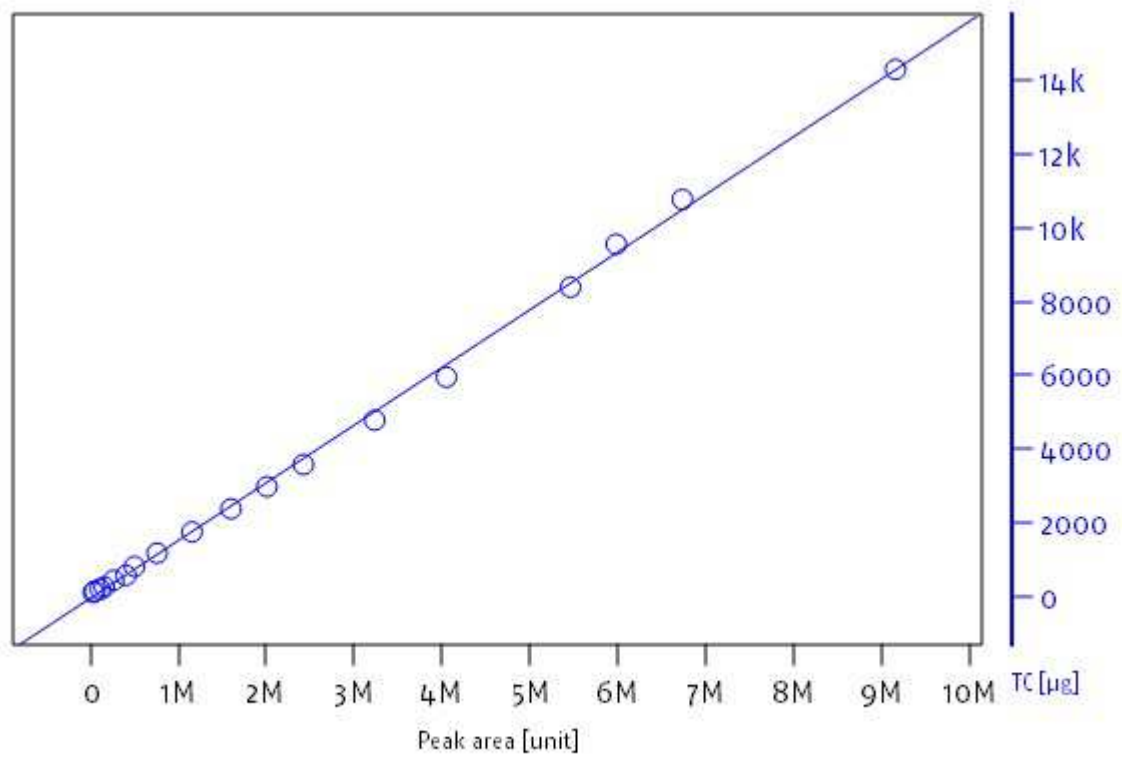
Laboratory:	Analytical Resources, LLC	SDG:	23E0009
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00052	Instrument:	TOC Cube
Calibration Date:	05/17/2023 10:07		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1587338	23.9	0.9987			
Total Carbon	1587338	23.9	0.9987			
Total Inorganic Carbon	1587338	23.9	0.9987			
% Soot	1587338	23.9	0.9987			

Calibration parameters TC, Whole range

a	+9.122373e-03
b	+1.560792e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.998690
r_old	0.998690
Proc.-SD	155.562438 µg

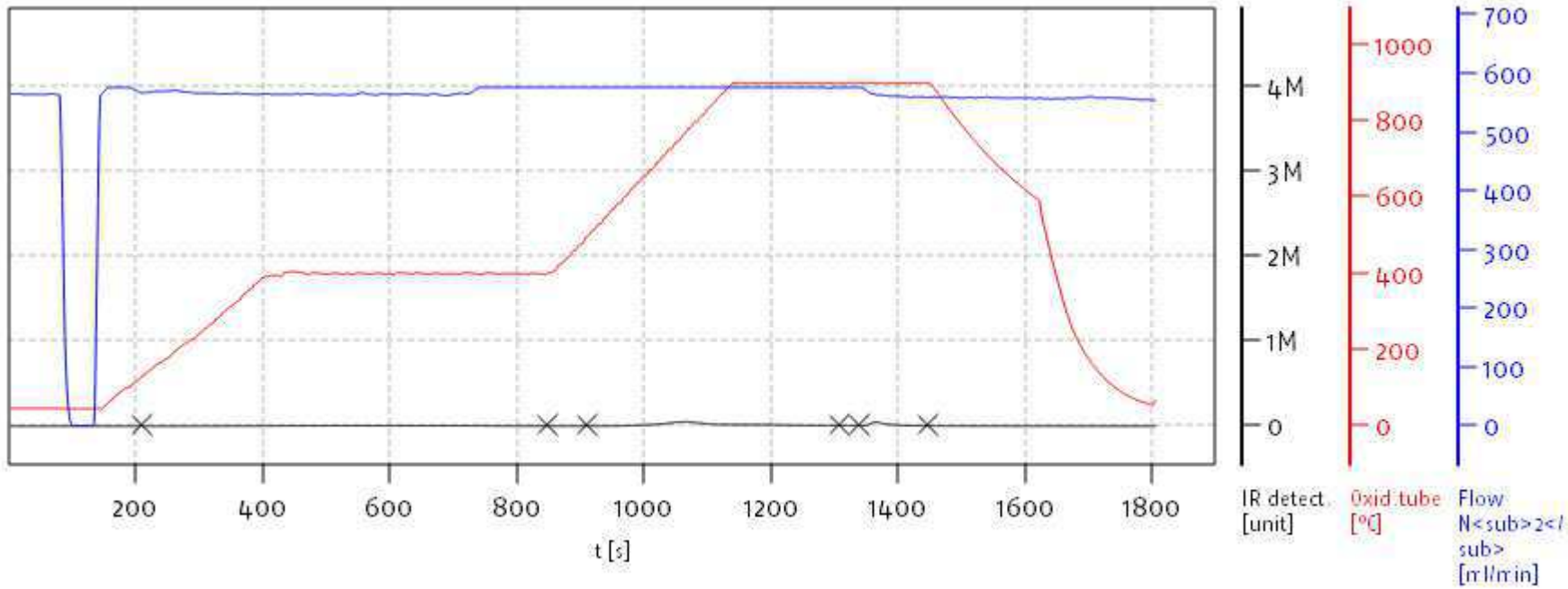
Calibration graph TC, Whole range



Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	5/ 17/2023 11:46 AM	bl	0.000	83 718	0.000	0.000	65 731	251 400	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

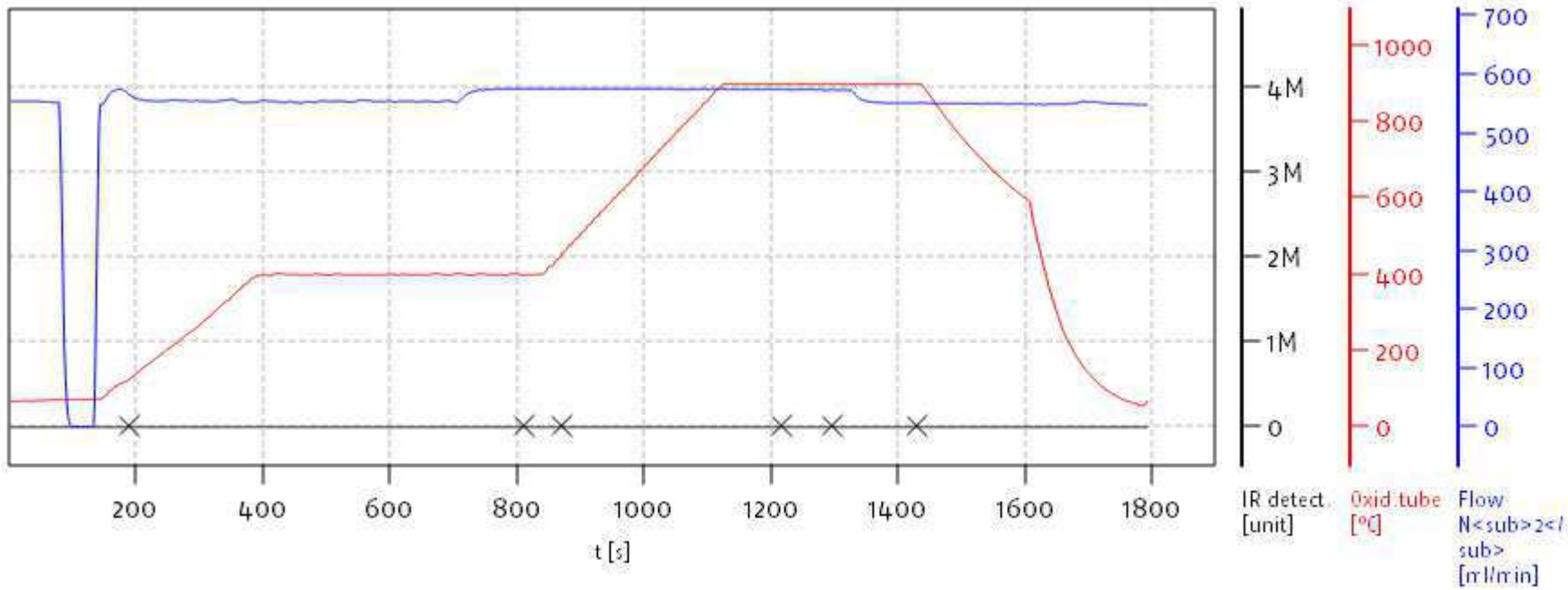
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	BLANK	1.00		CARBON	5/ 17/2023 12:16 PM	bl	0.000	3 043	0.000	0.000	273	1	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

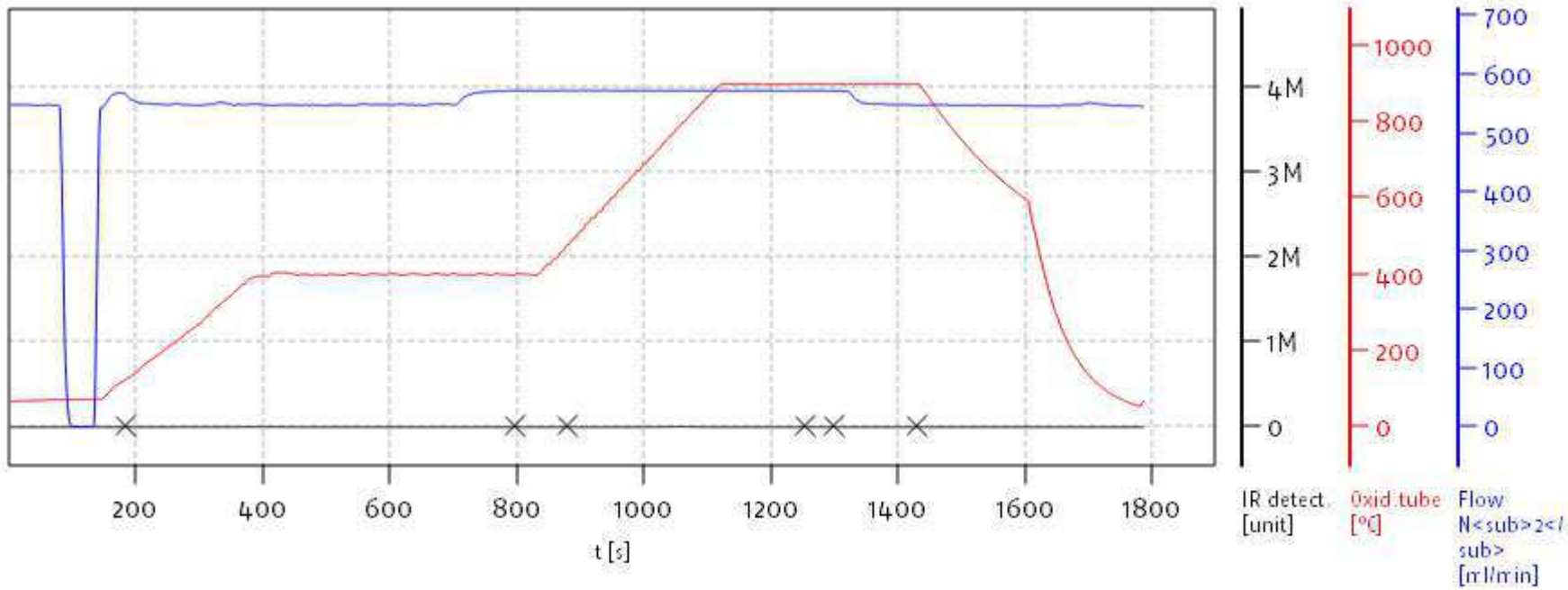
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	SLE0270-CAL1	200.00	0.0025	CARBON	5/17/2023 12:46 PM	bl,C2u	0.014	12 167	0.024	0.002	431	10 396	0.012	0.010	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

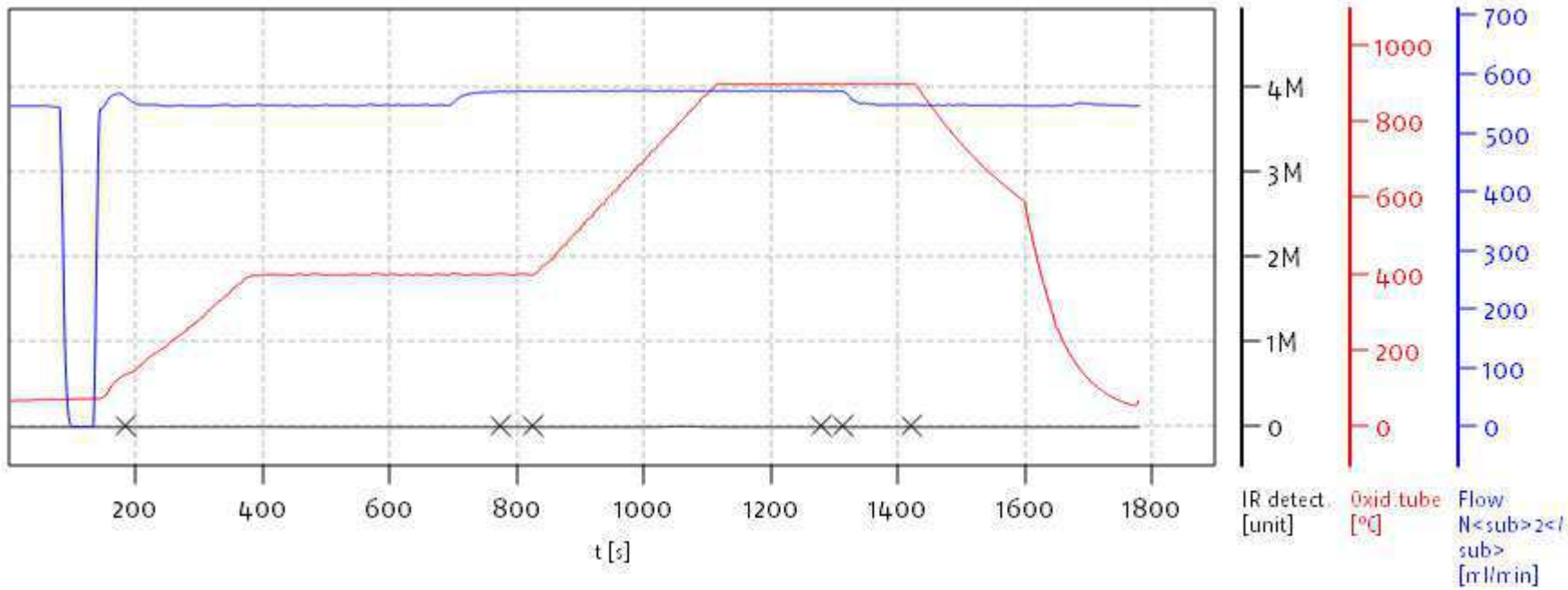
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SLE0270-CAL2	200.00	0.0050	CARBON	5/17/2023 1:16 PM	bl,C2u	0.013	10 893	0.029	0.002	141	18 320	0.011	0.017	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

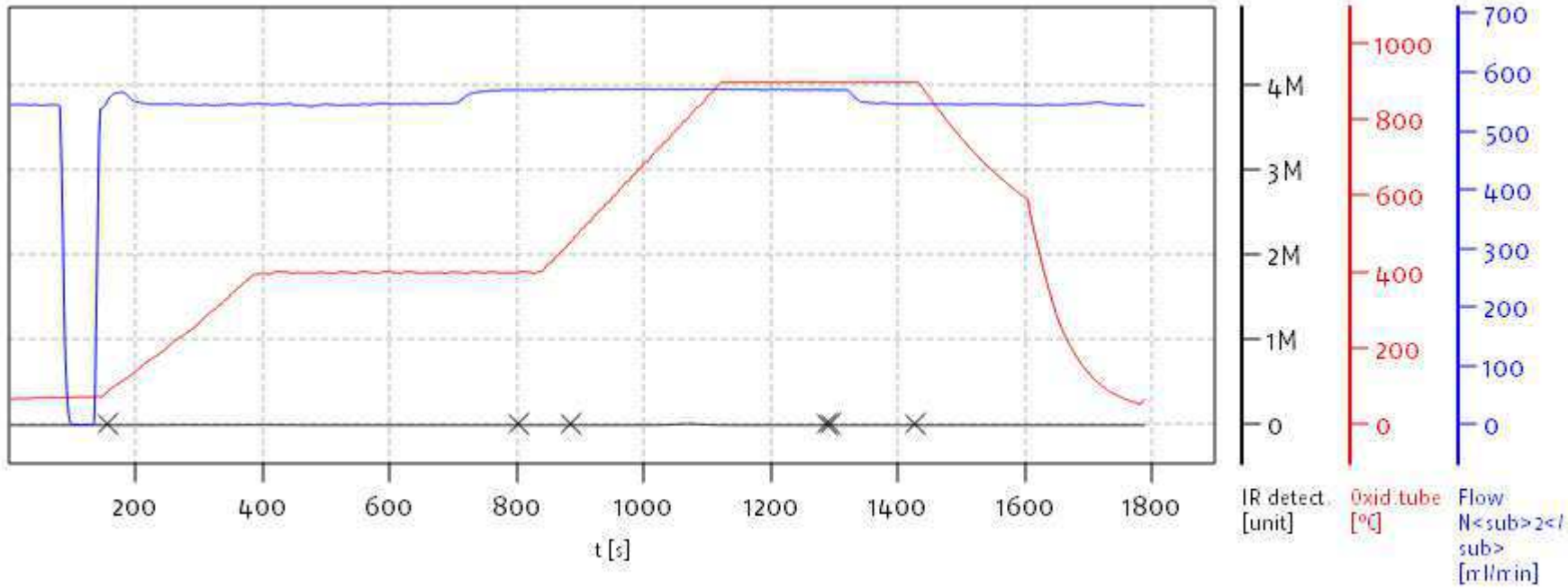
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SLE0270-CAL3	200.00	0.0070	CARBON	5/17/2023 1:46 PM	bl,C2u	0.018	16 667	0.043	0.002	387	29 873	0.015	0.026	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

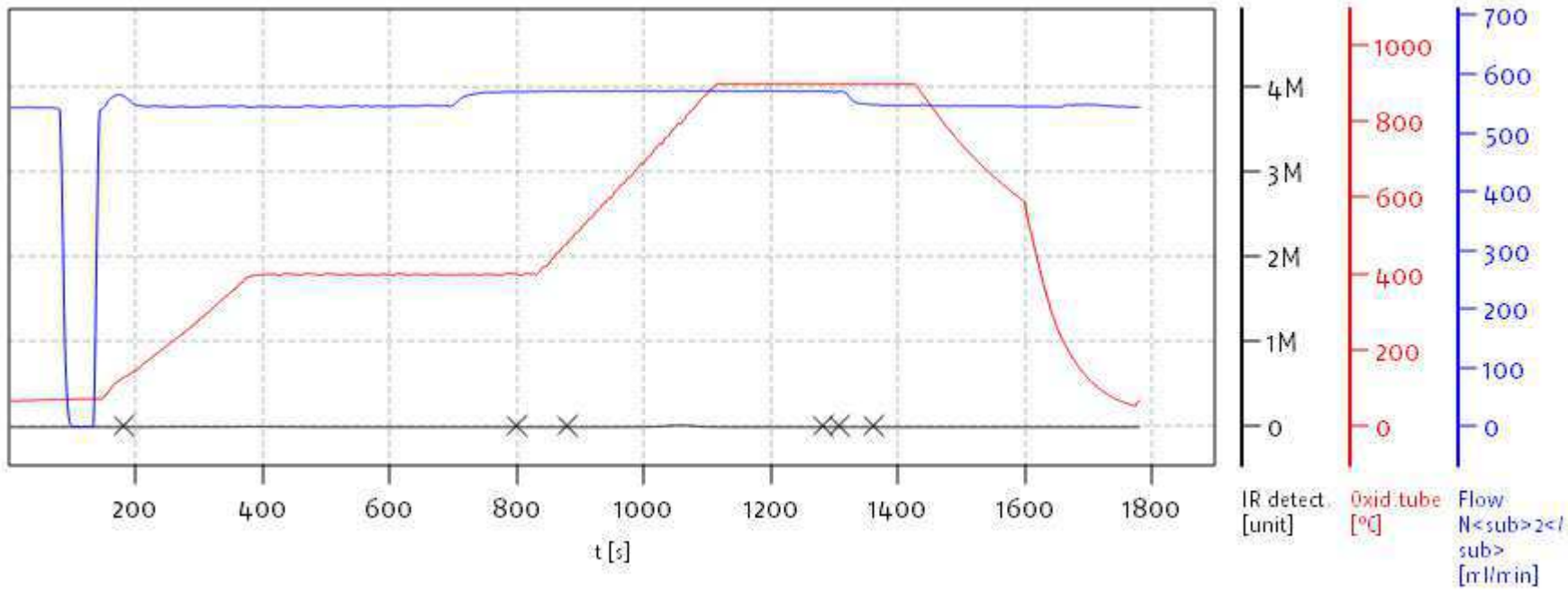
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	SLE0270-CAL4	200.00	0.0100	CARBON	5/17/2023 2:16 PM	bl,C2u	0.024	24 980	0.062	0.002	130	45 873	0.022	0.038	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

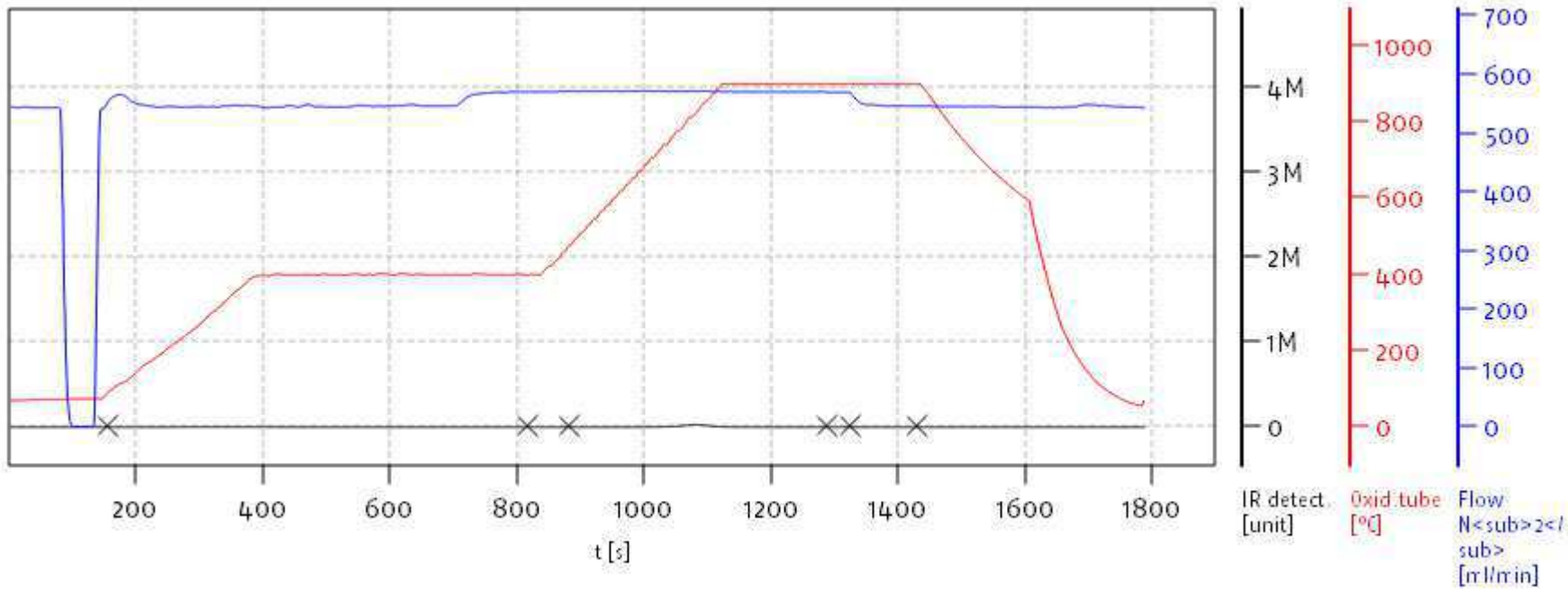
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	SLE0270-CAL5	200.00	0.0150	CARBON	5/17/2023 2:47 PM	bl,C2u	0.014	12 413	0.065	0.002	539	61 573	0.012	0.051	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

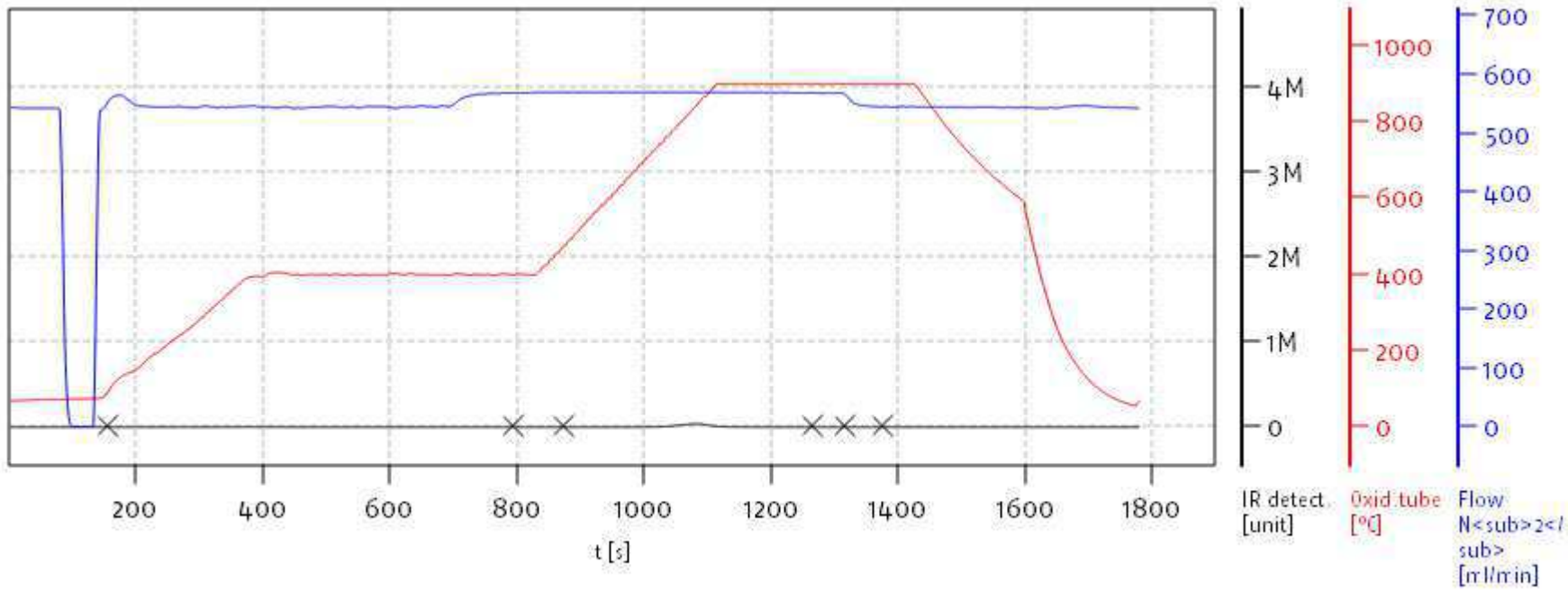
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	SLE0270-CAL6	200.00	0.0200	CARBON	5/17/2023 3:17 PM	bl,C1u,C2u	0.011	7 999	0.079	0.002	170	84 086	0.008	0.068	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

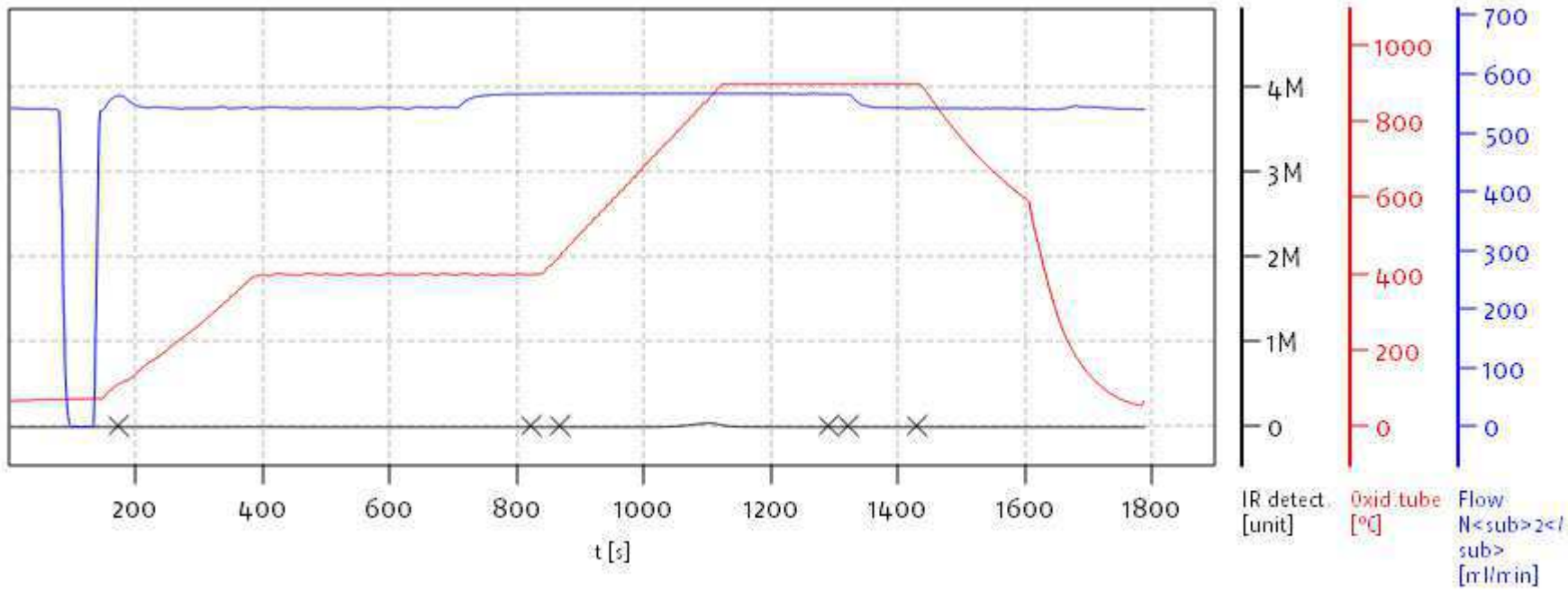
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	SLE0270-CAL7	200.00	0.0250	CARBON	5/17/2023 3:47 PM	bl,C1u,C2u	0.011	7 612	0.097	0.003	1 386	105 588	0.008	0.085	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

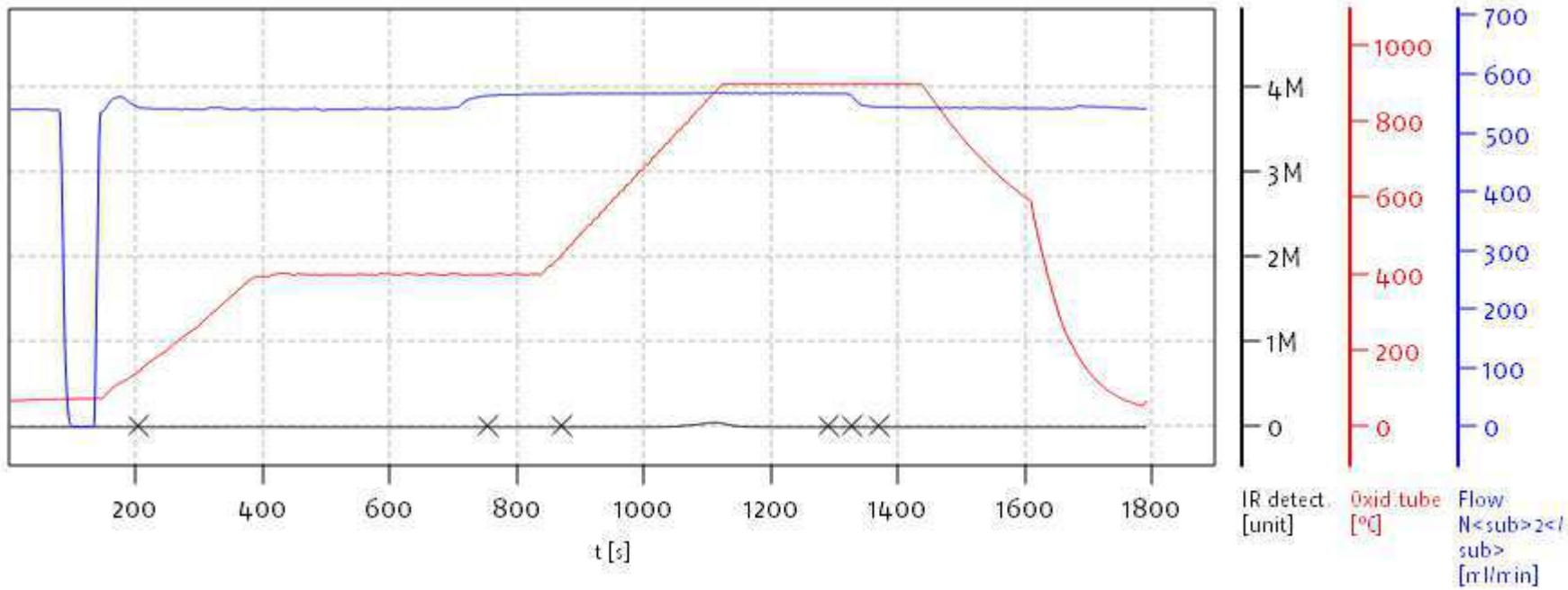
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	SLE0270-CAL8	200.00	0.0300	CARBON	5/17/2023 4:17 PM	bl,C1u,C2u	0.008	5 428	0.109	0.002	61	124 731	0.006	0.100	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

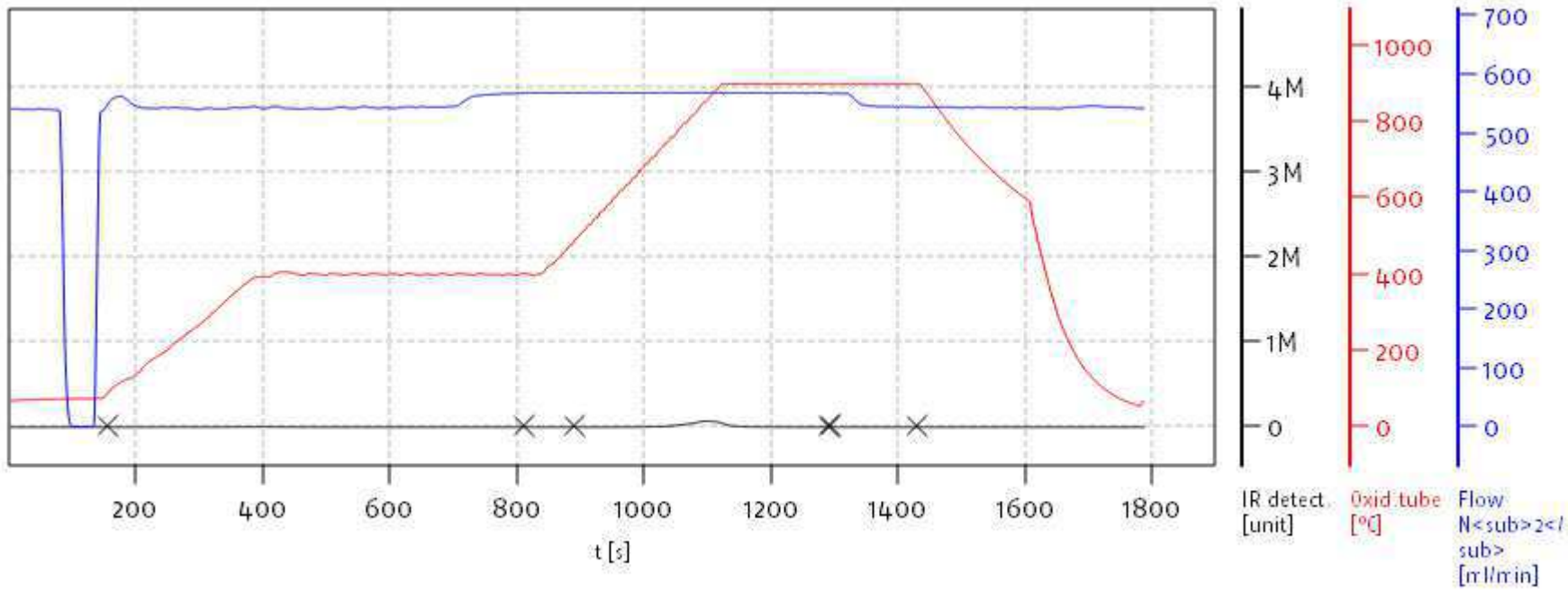
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	SLE0270-CAL9	200.00	0.0400	CARBON	5/17/2023 4:47 PM	bl,C2u	0.019	17 233	0.167	0.003	1 274	185 567	0.016	0.148	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

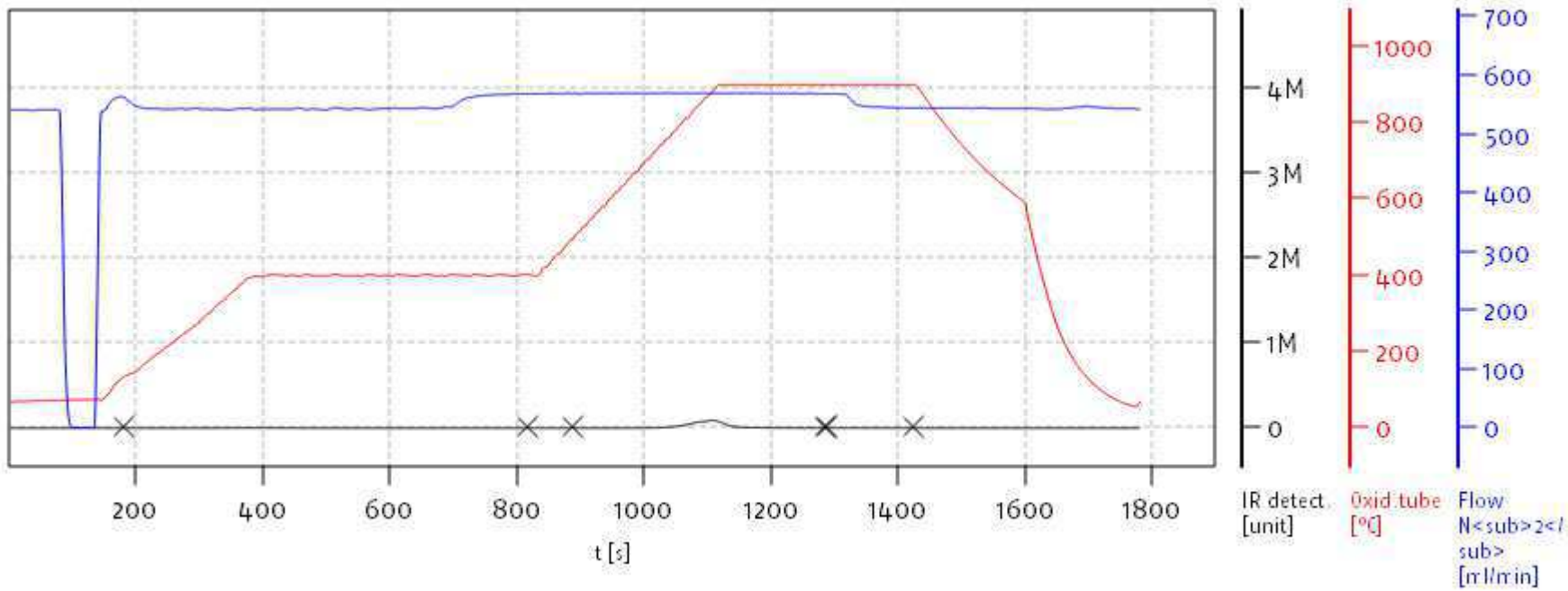
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	SLE0270-CALA	200.00	0.0500	CARBON	5/17/2023 5:17 PM	bl,C2u	0.018	11 766	0.202	0.007	6 123	230 855	0.011	0.184	1.0000	1.0000



Name:

Access: soliTOC superuser

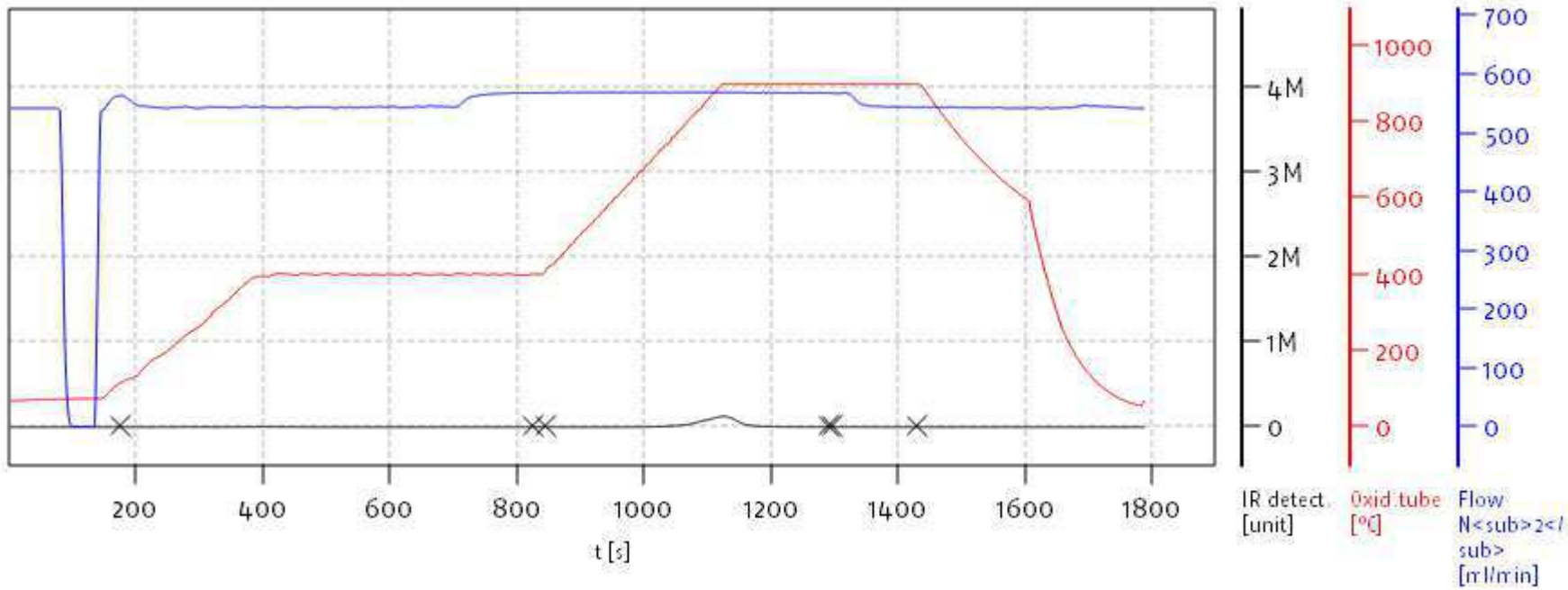
Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	SLE0270-CALB	200.00	0.0040	CARBON	5/17/2023 5:47 PM	bl,C2u	0.022	18 635	0.291	0.005	3 969	339 170	0.017	0.269	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

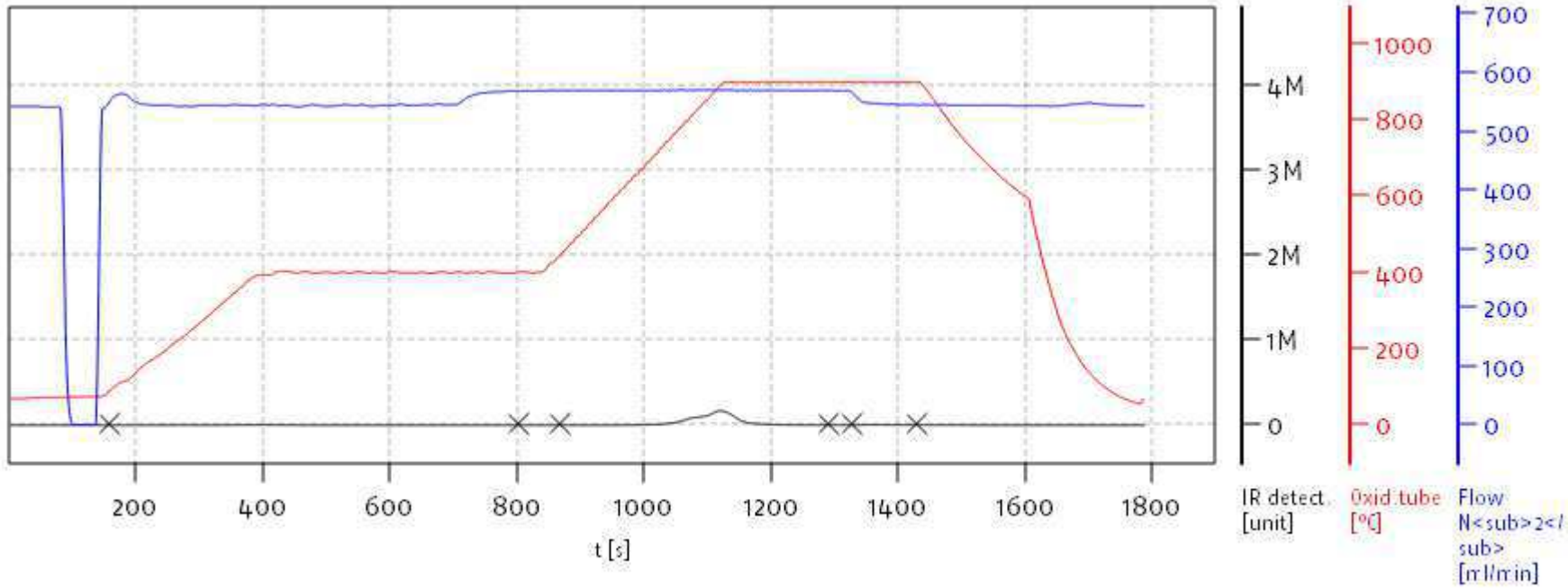
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	SLE0270-CALC	200.00	0.0050	CARBON	5/17/2023 6:18 PM	bl	0.026	14 893	0.405	0.012	12 639	478 044	0.014	0.379	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

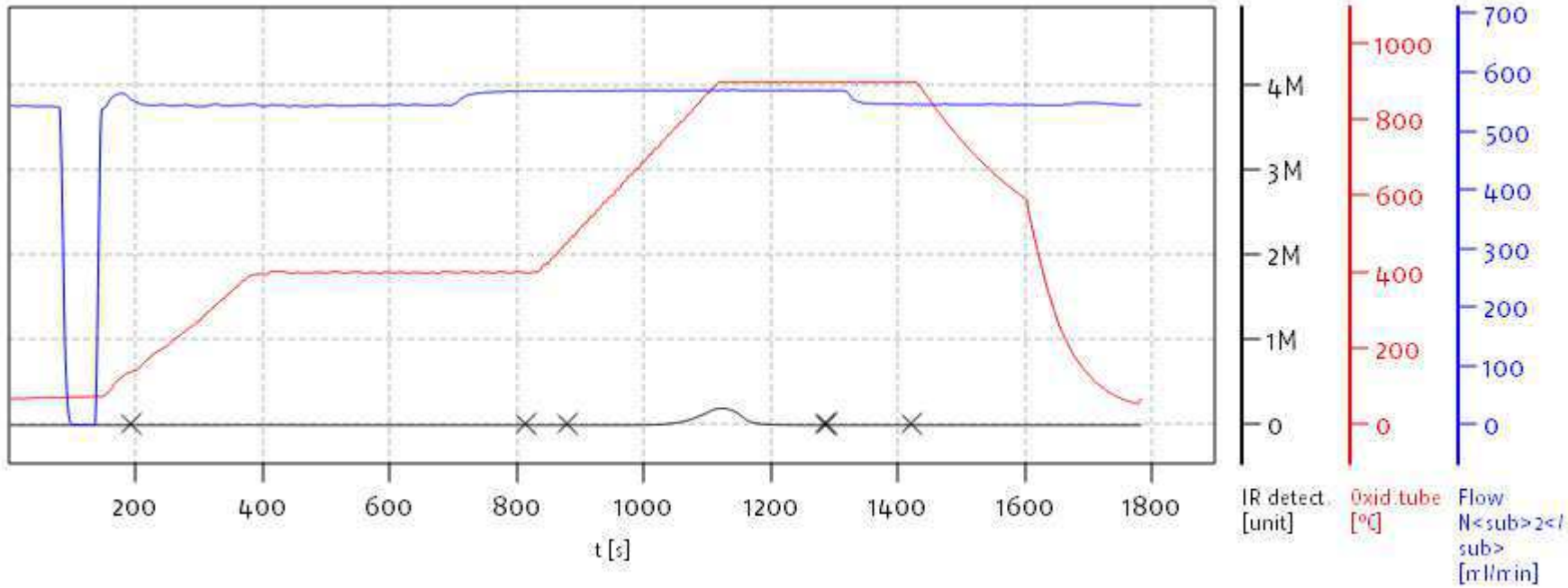
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	SLE0270-CALD	200.00	0.0070	CARBON	5/17/2023 6:48 PM	bl,C1u,C2u	0.010	6 787	0.465	0.002	420	574 876	0.007	0.455	1.0000	1.0000



Name:

Access: soliTOC superuser

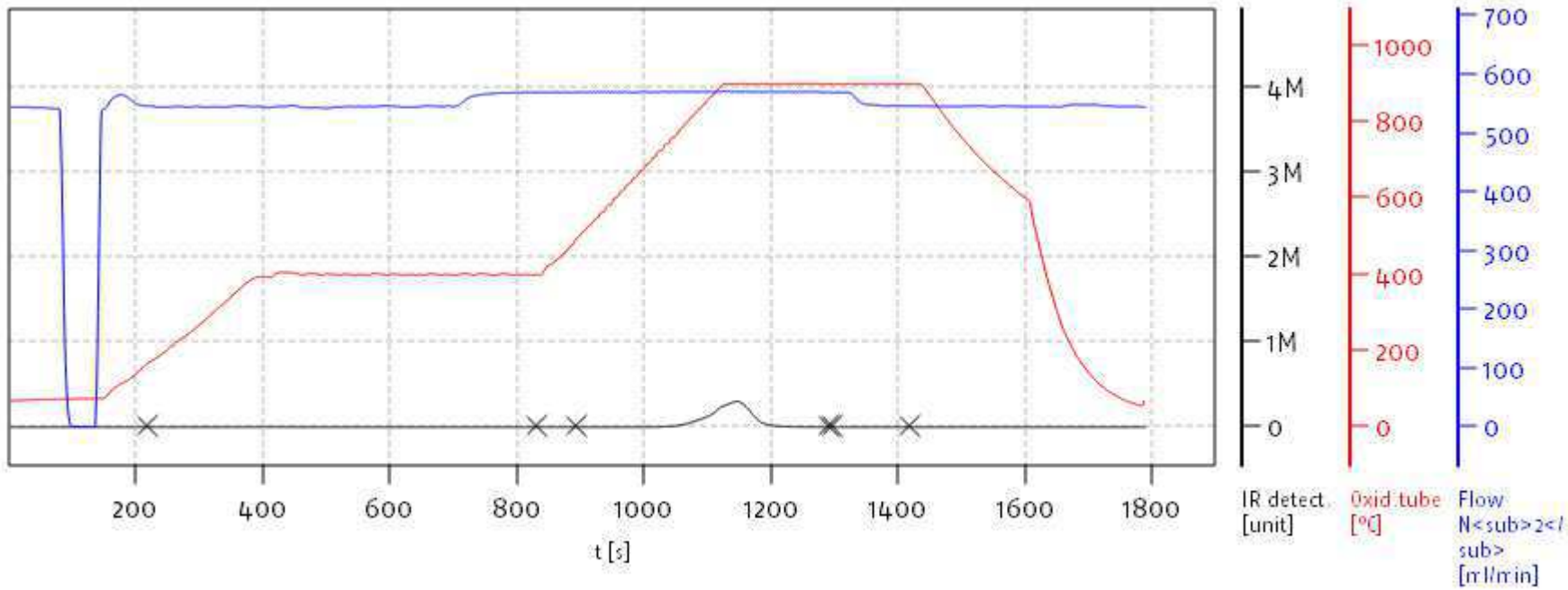
Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SLE0270-CALE	200.00	0.0100	CARBON	5/17/2023 7:18 PM	bl,C1u,C2u	0.008	4 408	0.667	0.003	771	832 670	0.006	0.658	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

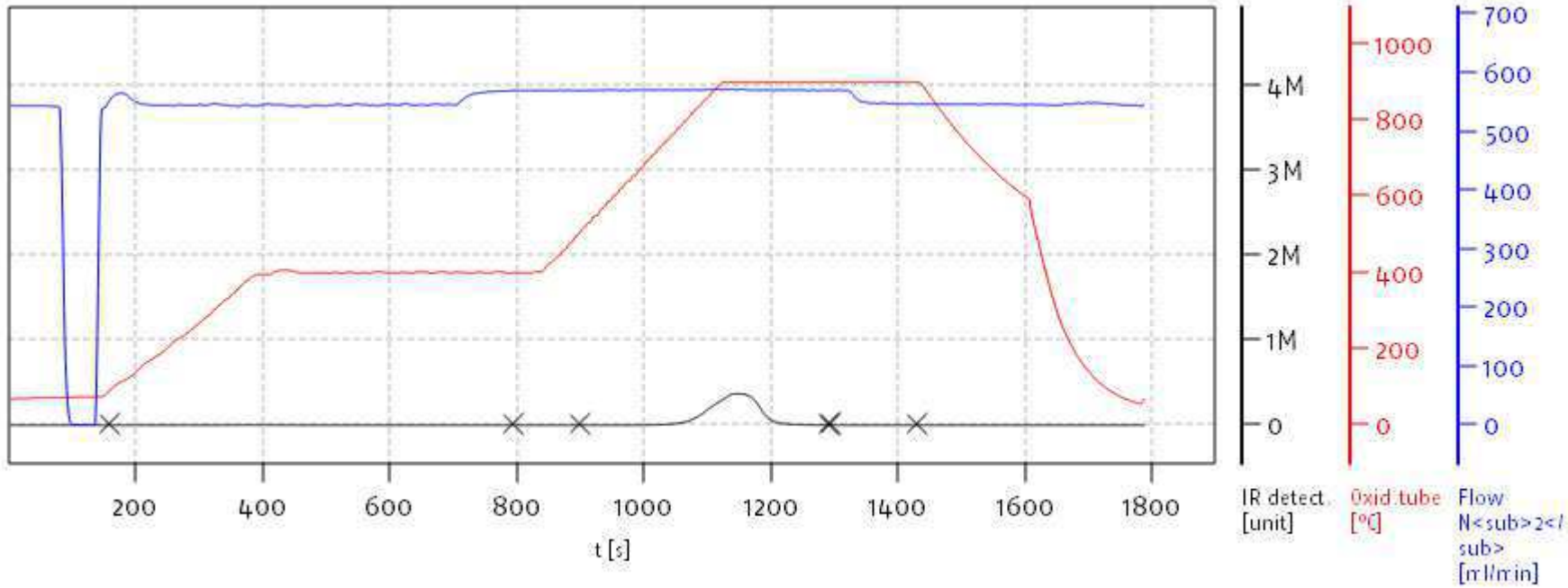
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SLE0270-CALF	200.00	0.0150	CARBON	5/17/2023 7:48 PM	bl,C1u,C2u	0.012	8 494	0.984	0.003	1 464	1 230 304	0.009	0.972	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

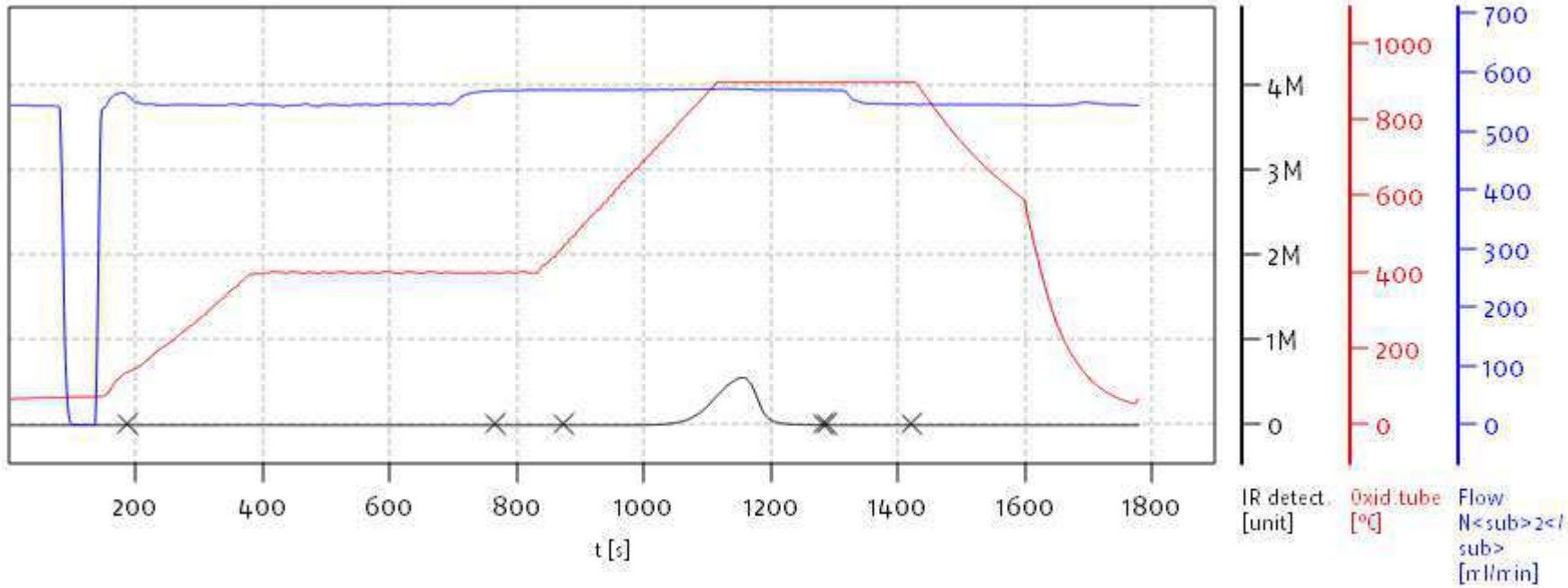
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	SLE0270-CALG	200.00	0.0200	CARBON	5/17/2023 8:18 PM	bl,C1u,C2u	0.010	5 359	1.331	0.004	1 864	1 673 425	0.006	1.321	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

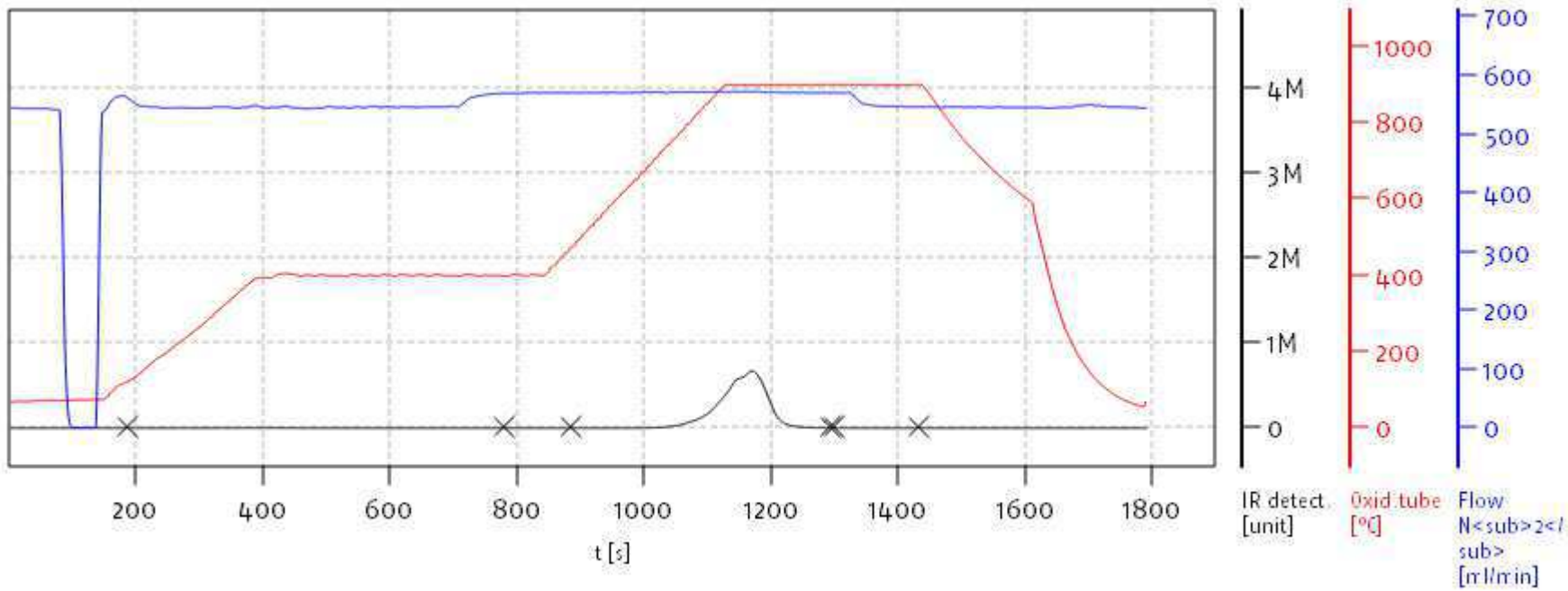
elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	SLE0270-CALH	200.00	0.0250	CARBON	5/17/2023 8:48 PM	bl,C2u	0.015	11 407	1.659	0.004	2 280	2 083 004	0.011	1.644	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

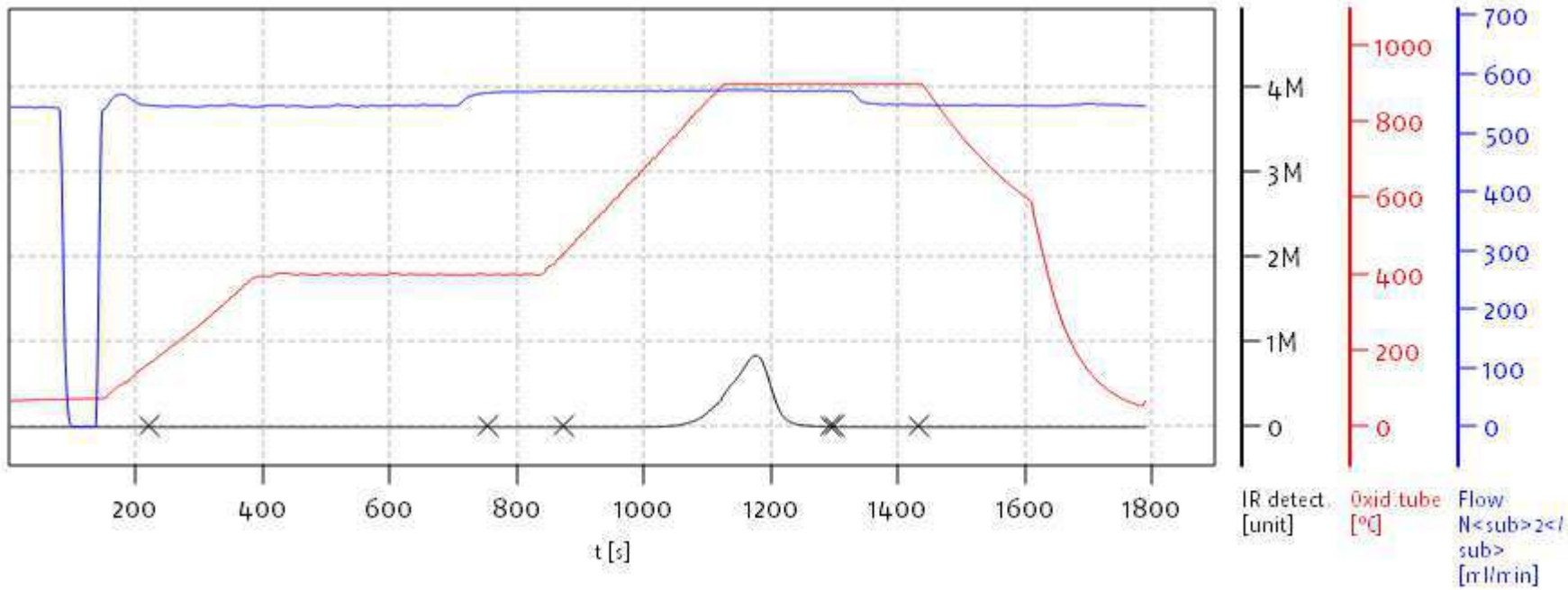
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	SLE0270-CALI	200.00	0.0300	CARBON	5/17/2023 9:19 PM	bl,C1u,C2u	0.009	2 781	1.981	0.005	3 895	2 498 427	0.004	1.971	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

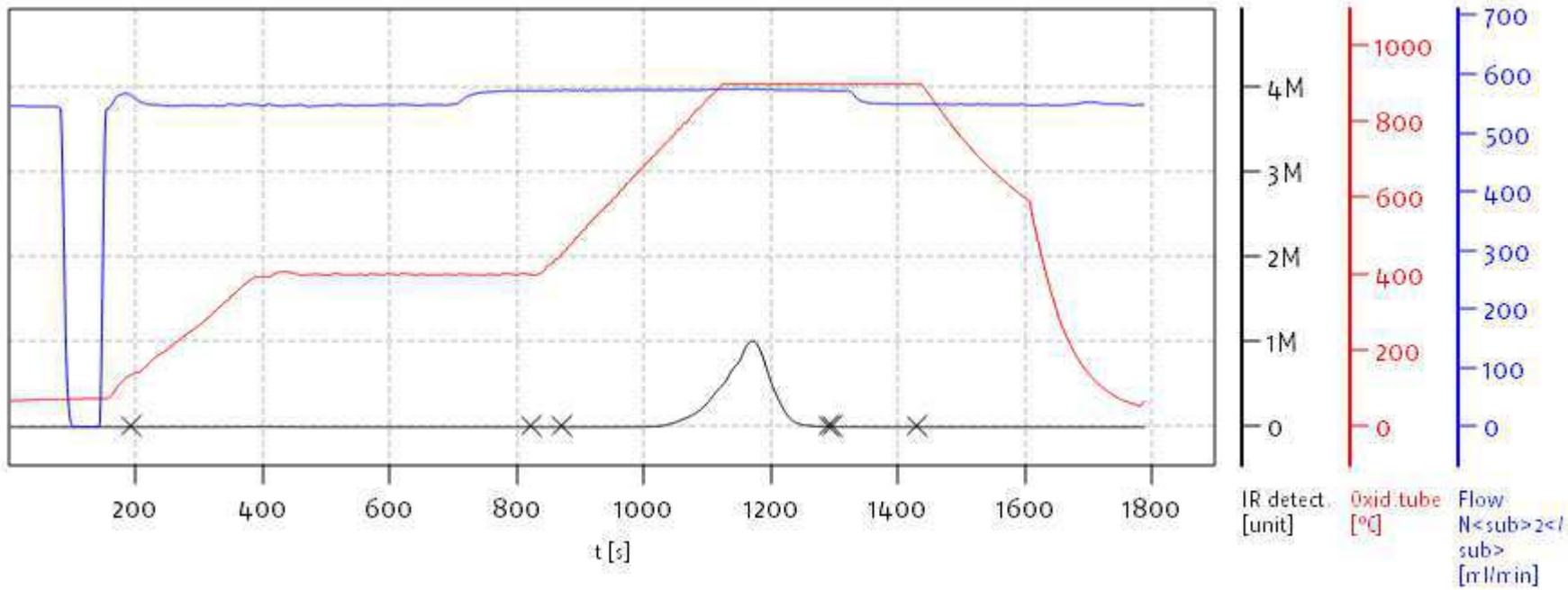
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	SLE0270-CALJ	200.00	0.0400	CARBON	5/17/2023 9:49 PM	bl,C2u	0.018	13 295	2.629	0.006	4 807	3 309 588	0.013	2.611	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

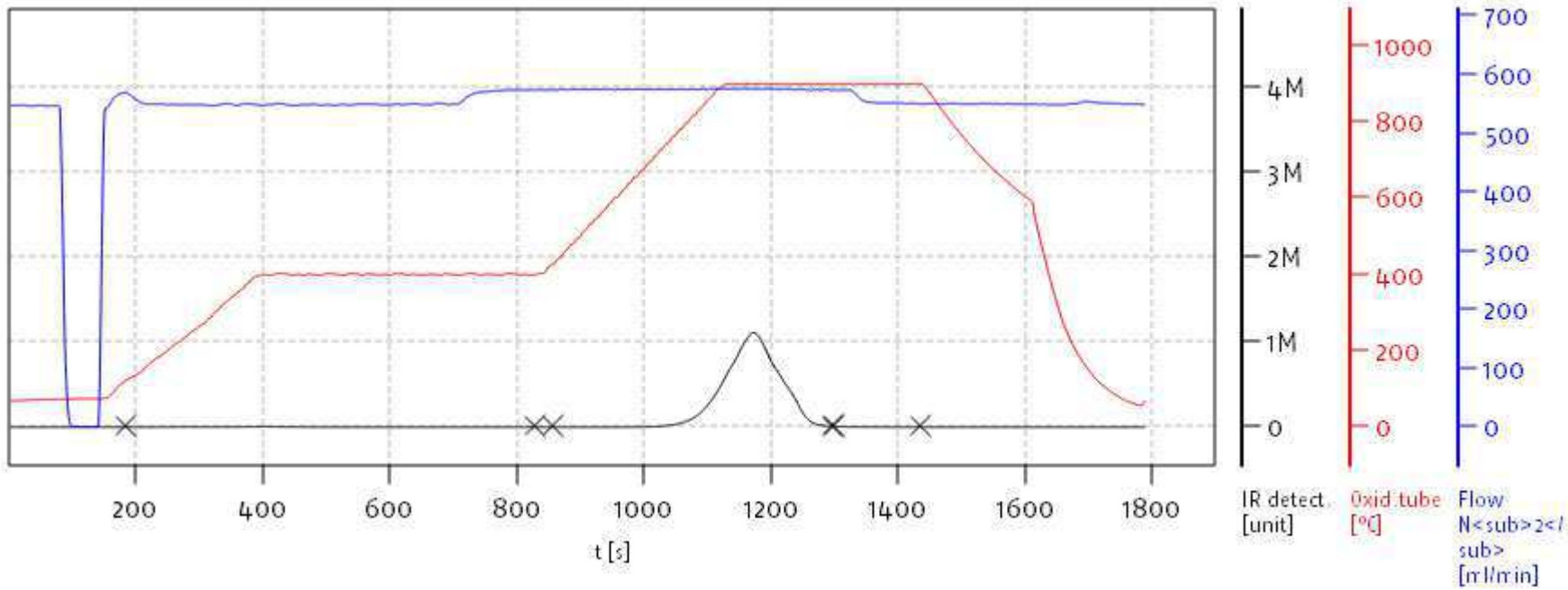
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	SLE0270-CALK	200.00	0.0500	CARBON	5/17/2023 10:19 PM	bl	0.031	25 022	3.285	0.009	9 148	4 126 050	0.022	3.254	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

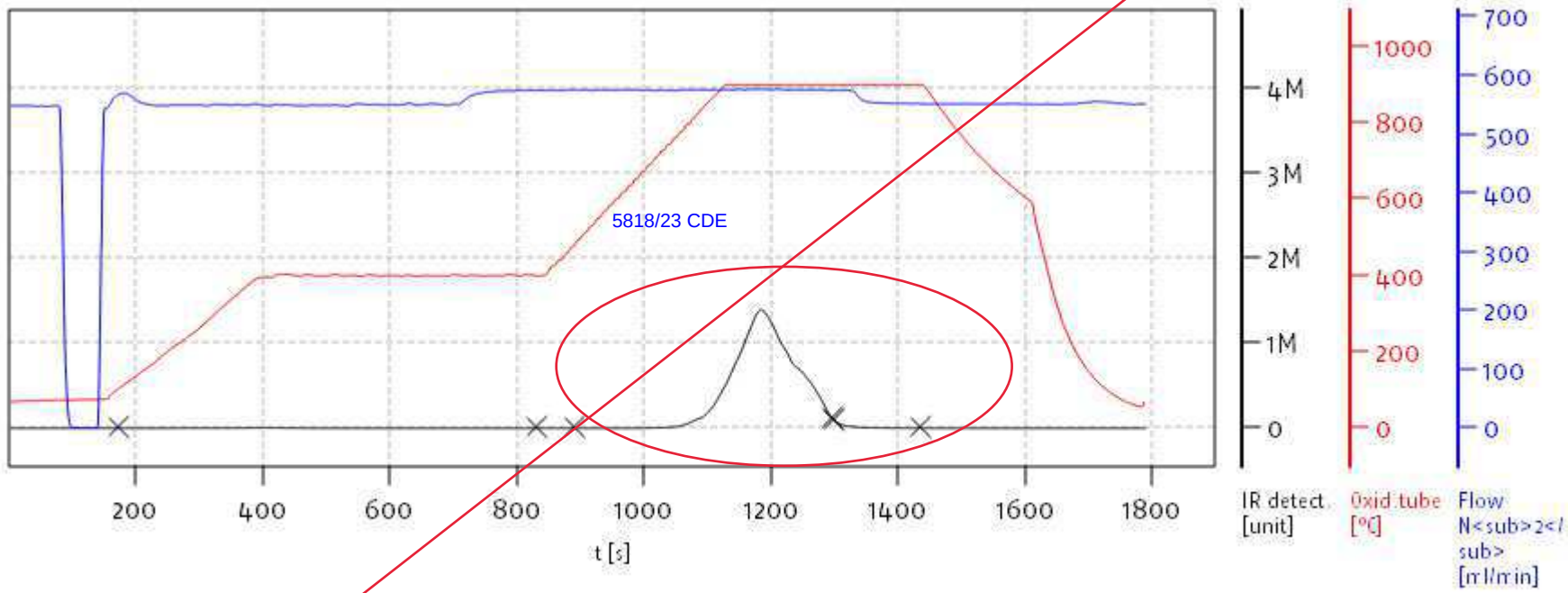
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	SLE0270-CALL	200.00	0.0700	CARBON	5/17/2023 10:49 PM	bl	0.069	21 598	4.597	0.050	60 794	5 741 652	0.019	4.528	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

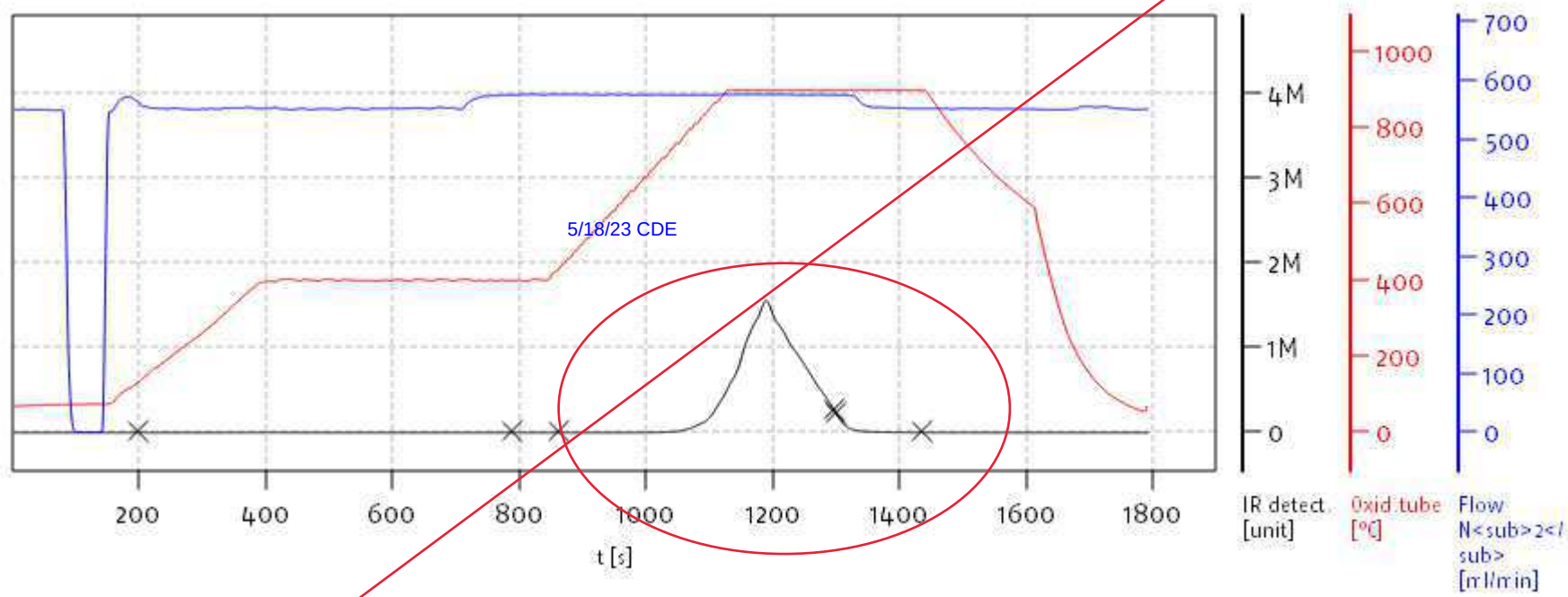
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	SLE0270-CALM	200.00	0.0800	CARBON	5/17/2023 11:19 PM	bl,C1u	0.112	5 408	5.212	0.106	131 494	6 467 914	0.006	5.100	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

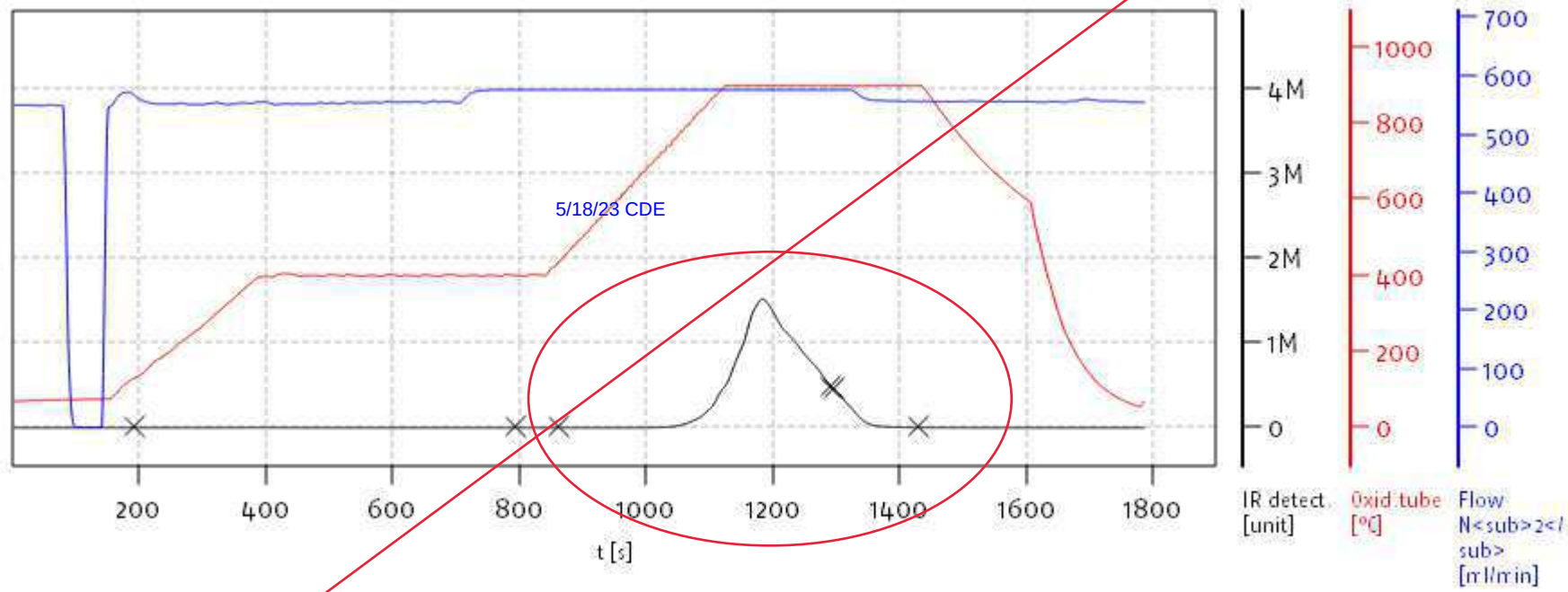
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	SLE0270-CALN	200.00	0.0900	CARBON	5/17/2023 11:50 PM	bl	0.408	8 745	5.832	0.399	503 842	6 879 212	0.009	5.424	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

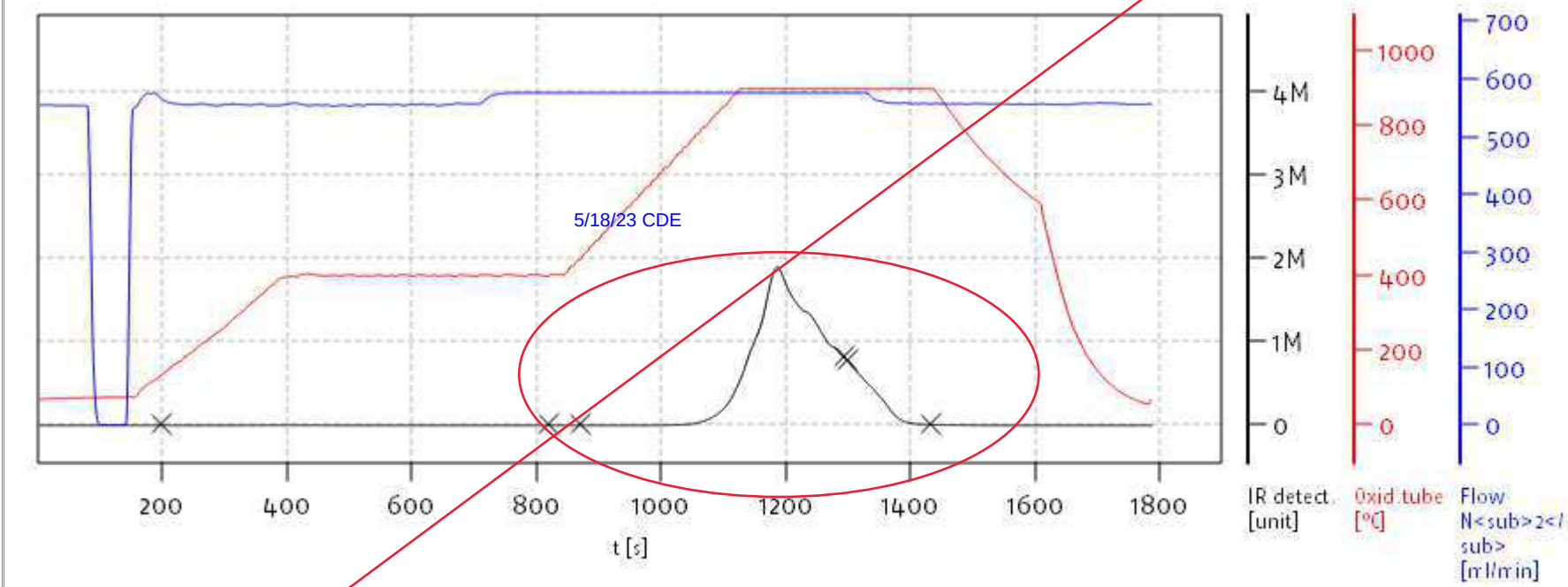
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	SLE0270-CALO	200.00	0.1200	CARBON	5/18/2023 12:20 AM	bl,C1u	1.074	6 993	7.759	1.066	1 350 231	8 478 912	0.008	6.685	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

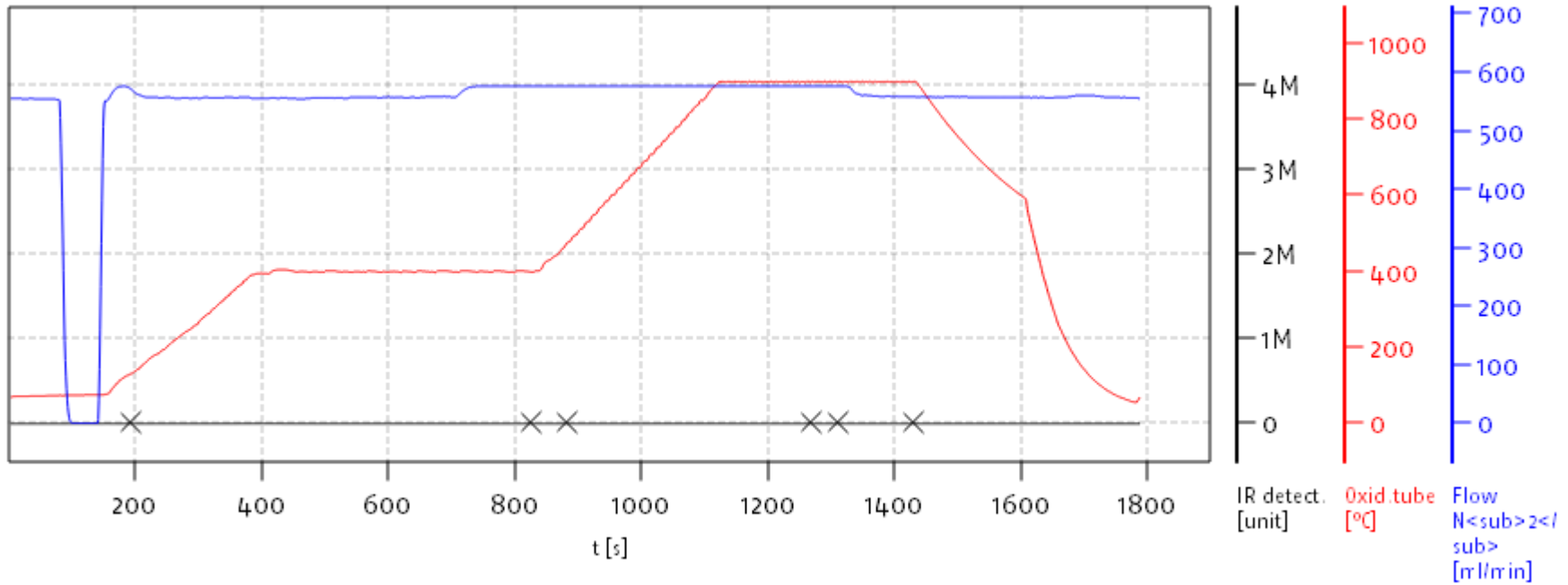
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		CARBON	5/ 18/2023 12:50 AM	bl	0.000	5 379	0.000	0.000	0	959	0.000	0.000	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

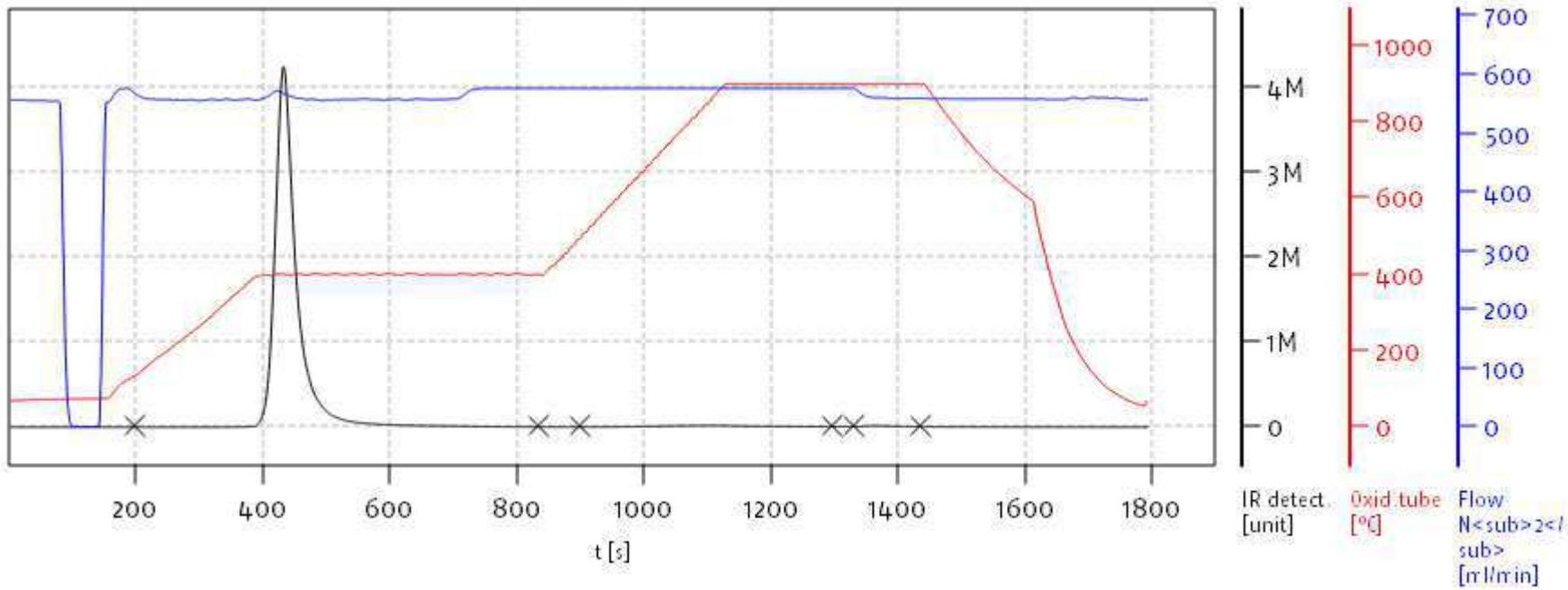
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
28	28	Dfactor	21.70		CARBON	5/18/2023 1:20 AM	bl	44.736	6 218 209	45.755	0.291	37 376	137 647	44.446	1.019	0.9835	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

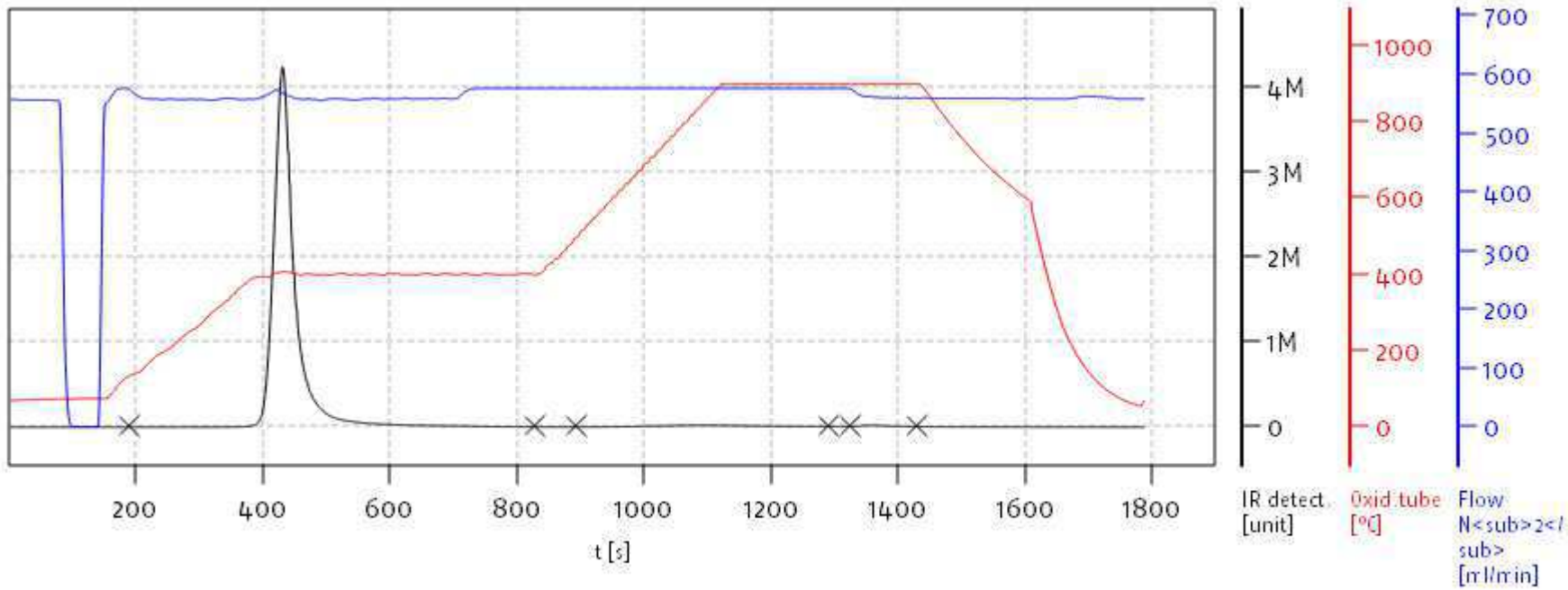
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	Dfactor	21.20		CARBON	5/18/2023 1:50 AM	bl	44.824	6 030 884	46.116	0.378	48 254	171 095	44.446	1.292	0.9907	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

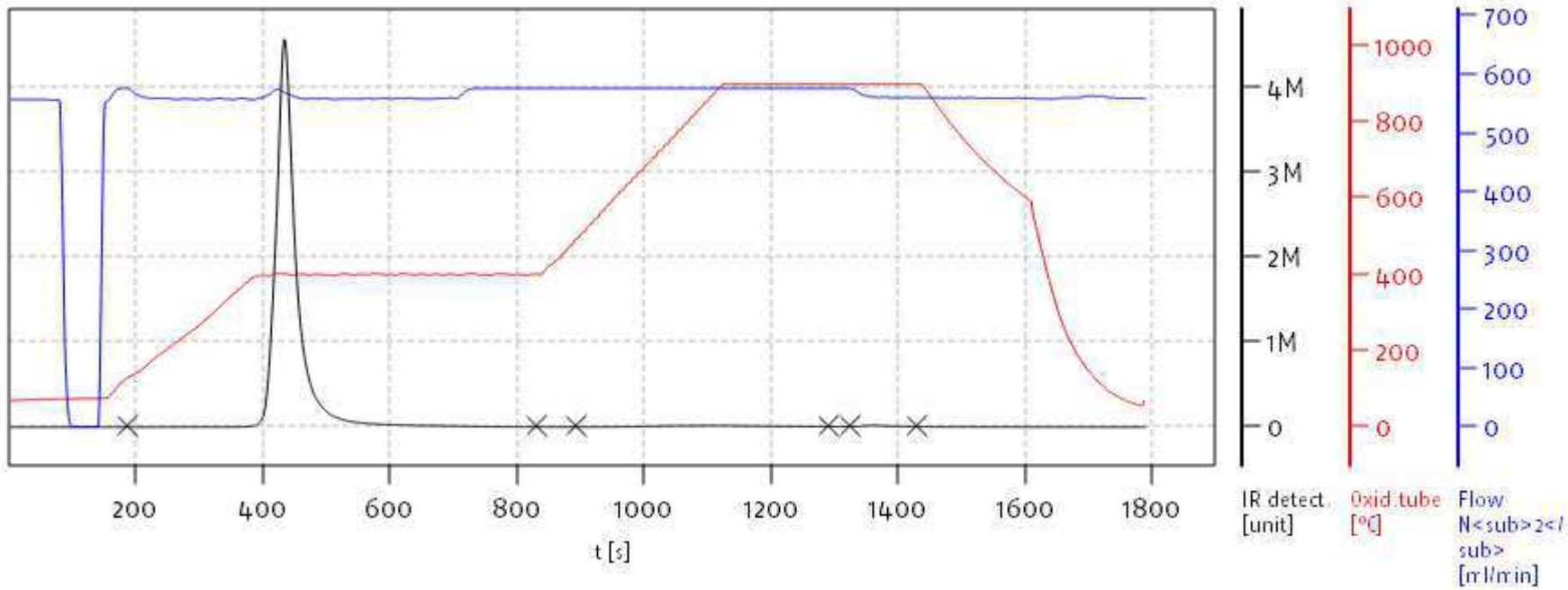
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	SLE0270-ICV1	22.30		CARBON	5/18/2023 2:21 AM	bl	44.949	6 392 325	46.022	0.327	43 597	149 127	44.622	1.073	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

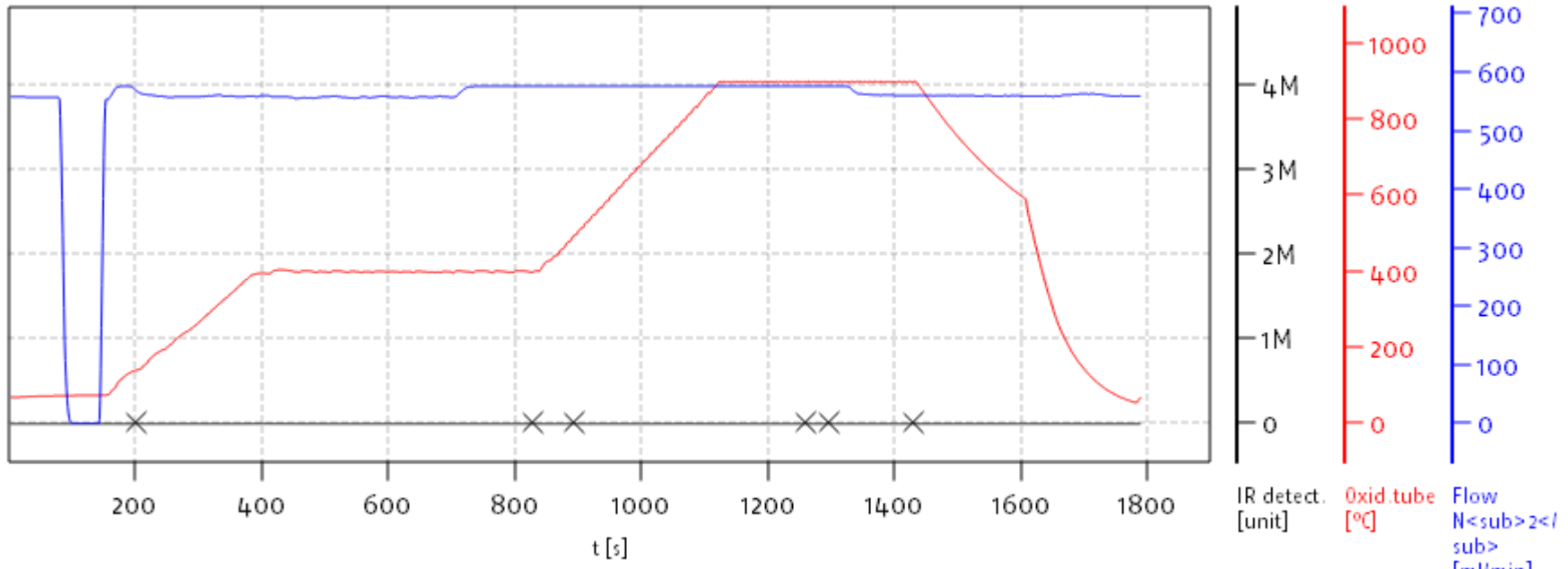
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	SLE0270-ICB1	530.50		CARBON	5/18/2023 2:51 AM	bl,C1u,C3u,C2u	0.003	6 198	0.005	0.001	198	1 900	0.003	0.001	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

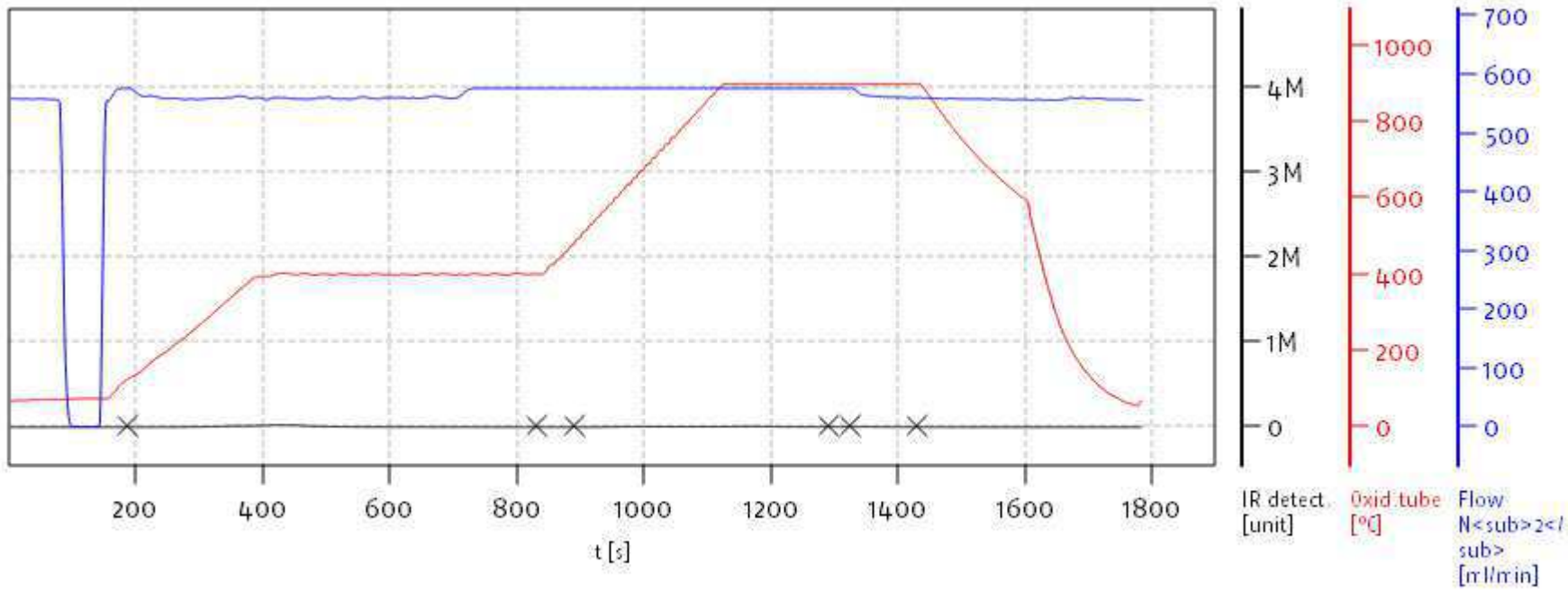
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	23D0491-10	42.50		CARBON	5/18/2023 3:21 AM	bl	0.560	138 129	0.841	0.044	9 353	73 148	0.515	0.281	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

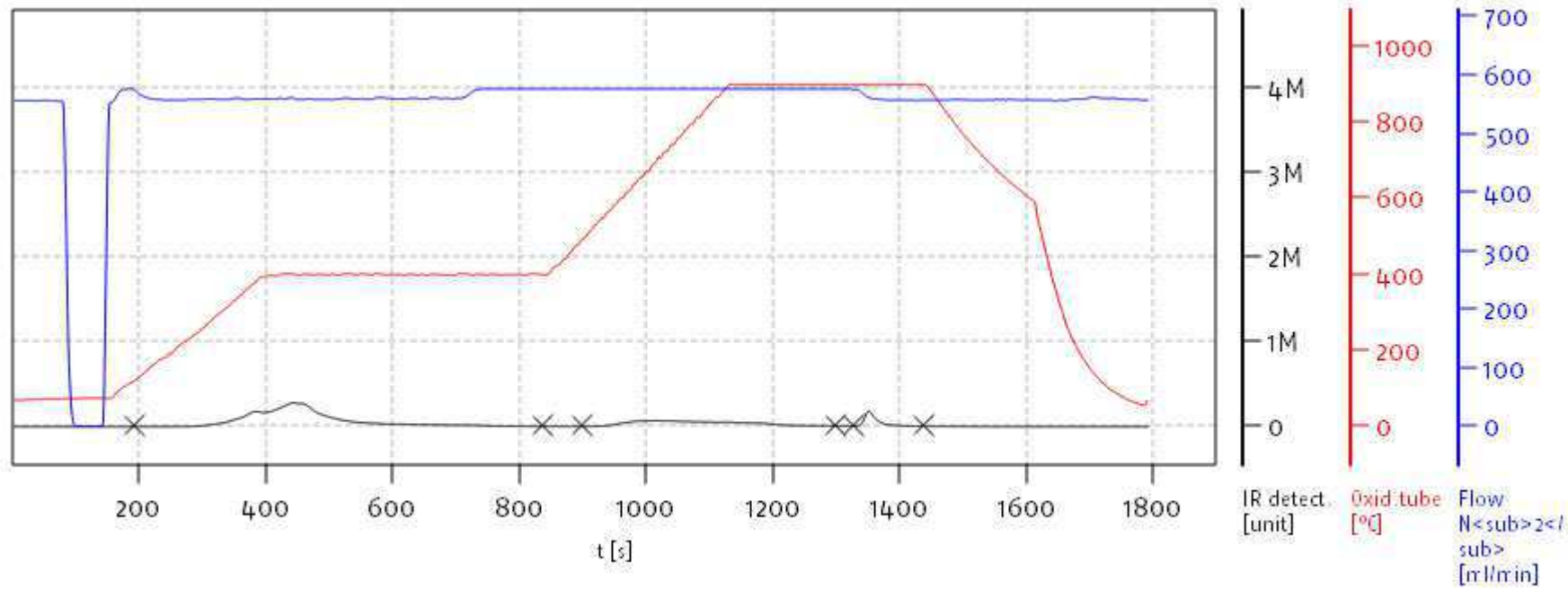
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	23D0491-10RE1	505.50		CARBON	5/18/2023 3:51 AM	bl	0.513	1 489 627	0.692	0.054	169 645	569 728	0.459	0.178	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

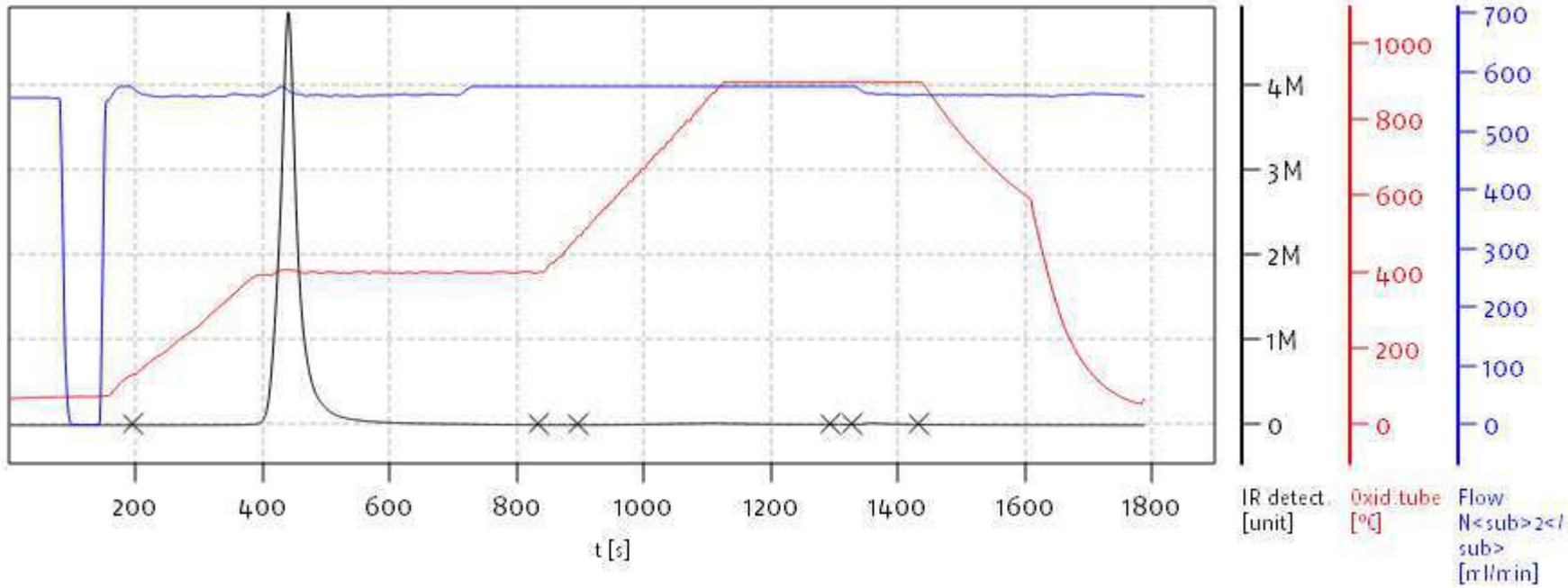
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	SLE0270-CCV1	22.20		CARBON	5/18/2023 4:21 AM	bl	44.616	6 309 271	45.769	0.375	50 146	159 806	44.241	1.153	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

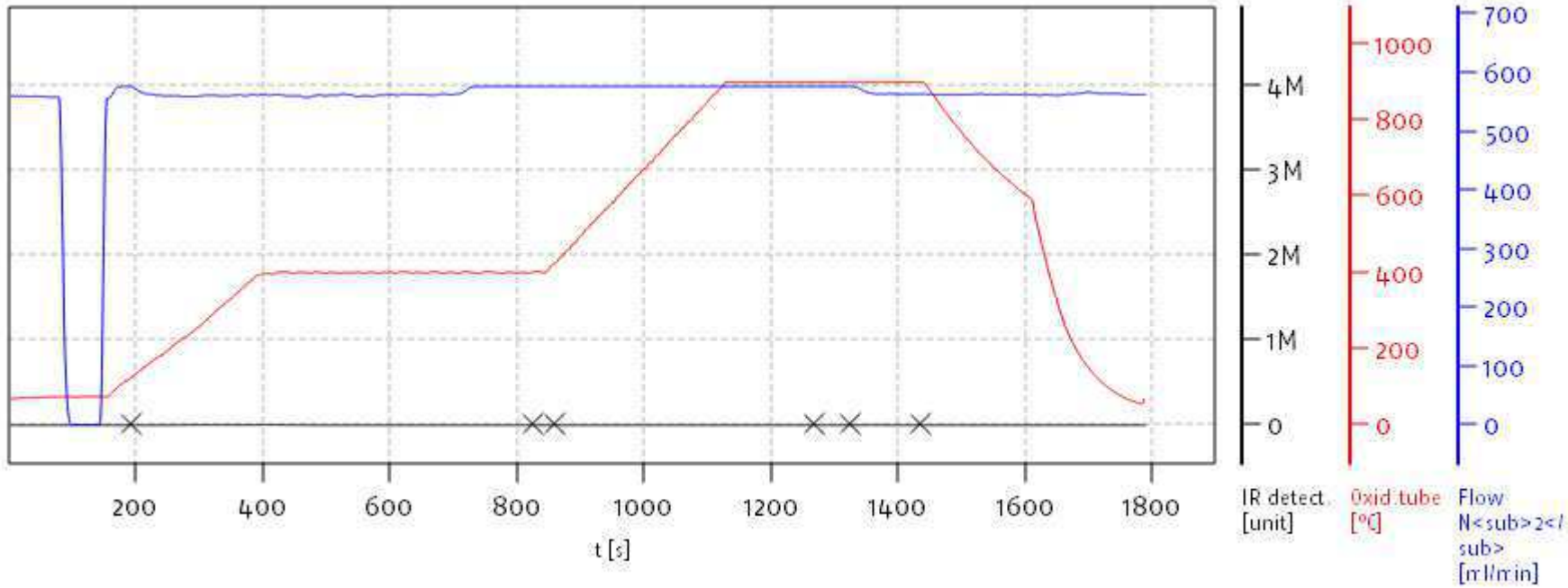
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	SLE0270-CCB1	523.30		CARBON	5/18/2023 4:52 AM	bl,C3u,C2u	0.009	22 128	0.010	0.001	2 335	2 184	0.007	0.001	0.9871	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:43:39 2023

elementar
EXCELLENCE IN ELEMENTS

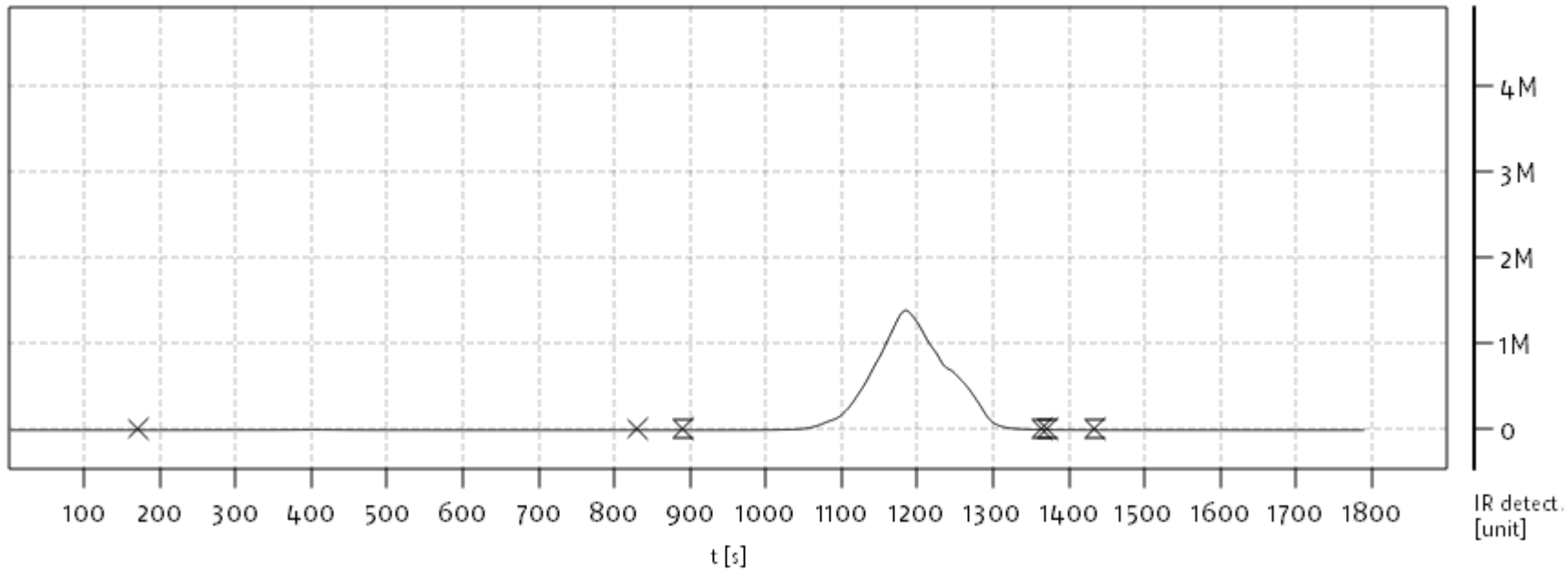
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	SLE0270-CALL	200.00	0.0700	CARBON	5/18/2023 9:47 AM	bl	0.019	21 598	4.386	0.000	**0**	**5 538 028**	0.019	4.367	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:50:12 2023

elementar
EXCELLENCE IN ELEMENTS

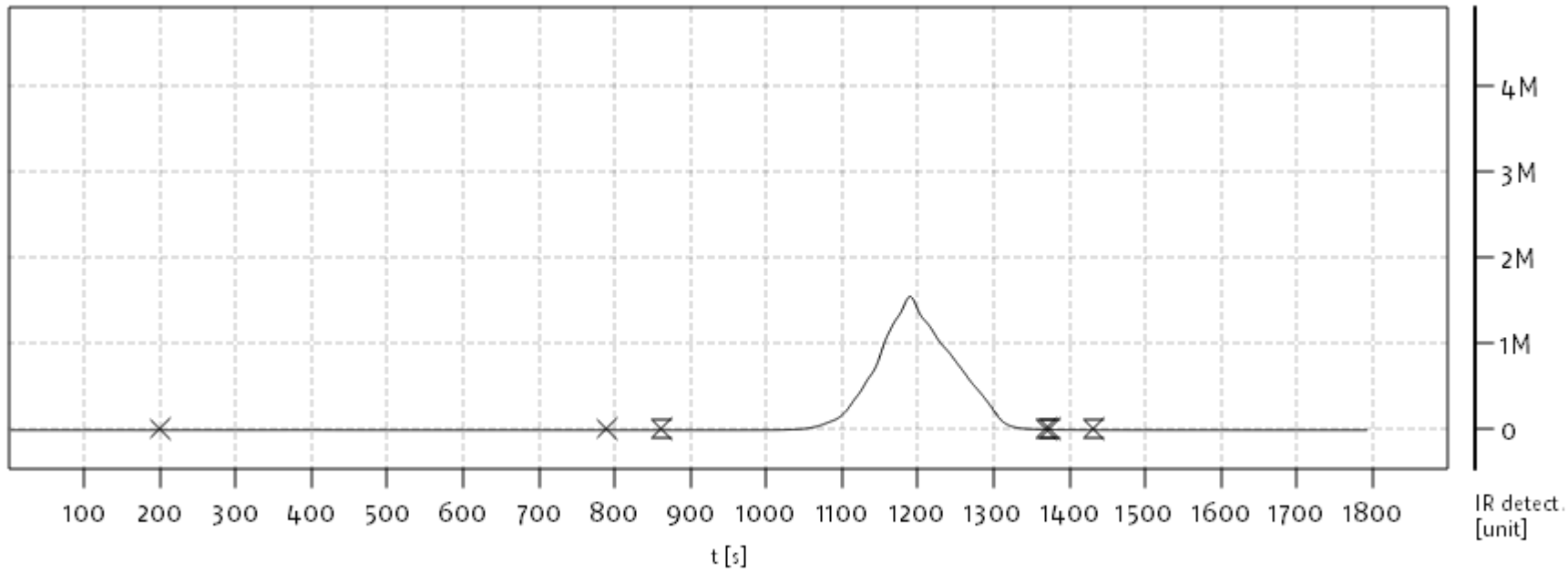
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	SLE0270-CALM	200.00	0.0800	CARBON	5/18/2023 9:48 AM	bl,C1u	0.006	5 408	4.784	0.000	**0**	**6 058 878**	0.006	4.778	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:50:12 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

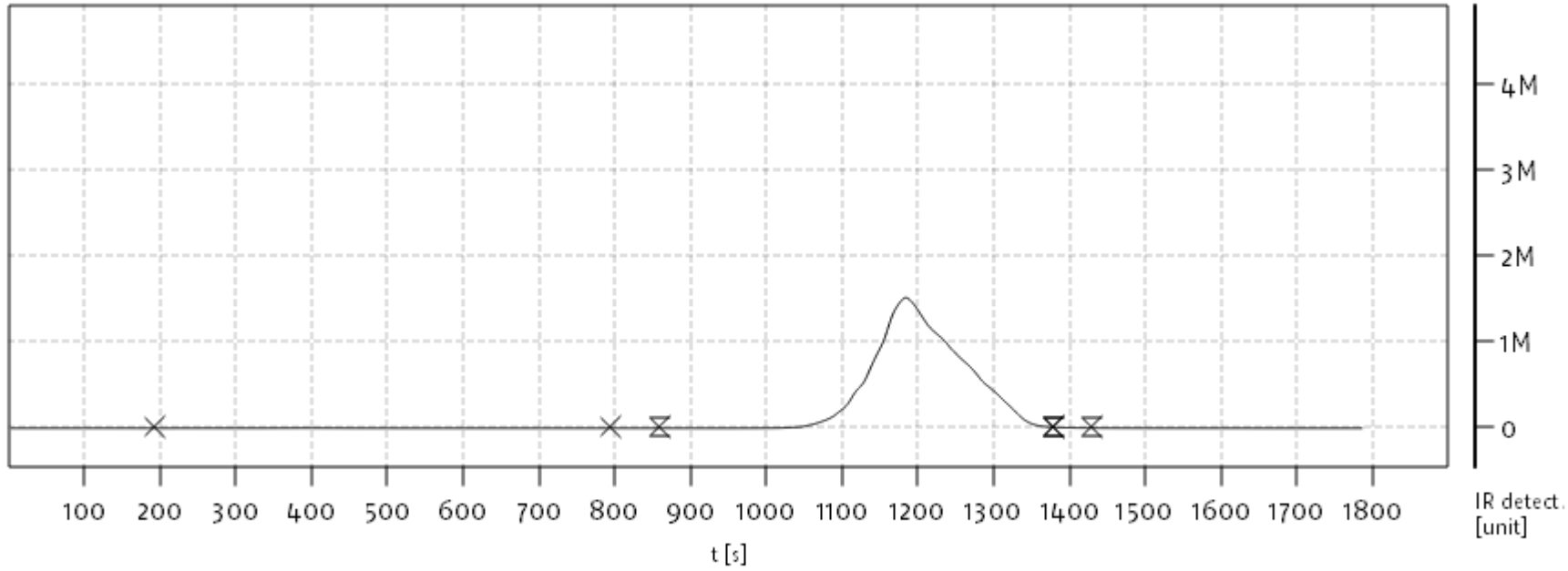
elementar
EXCELLENCE IN ELEMENTS

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	SLE0270-CALN	200.00	0.0900	CARBON	5/18/2023 9:49 AM	bl	0.009	8 745	5.379	0.000	**0**	**6 810 985**	0.009	5.370	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:50:12 2023

elementar
EXCELLENCE IN ELEMENTS

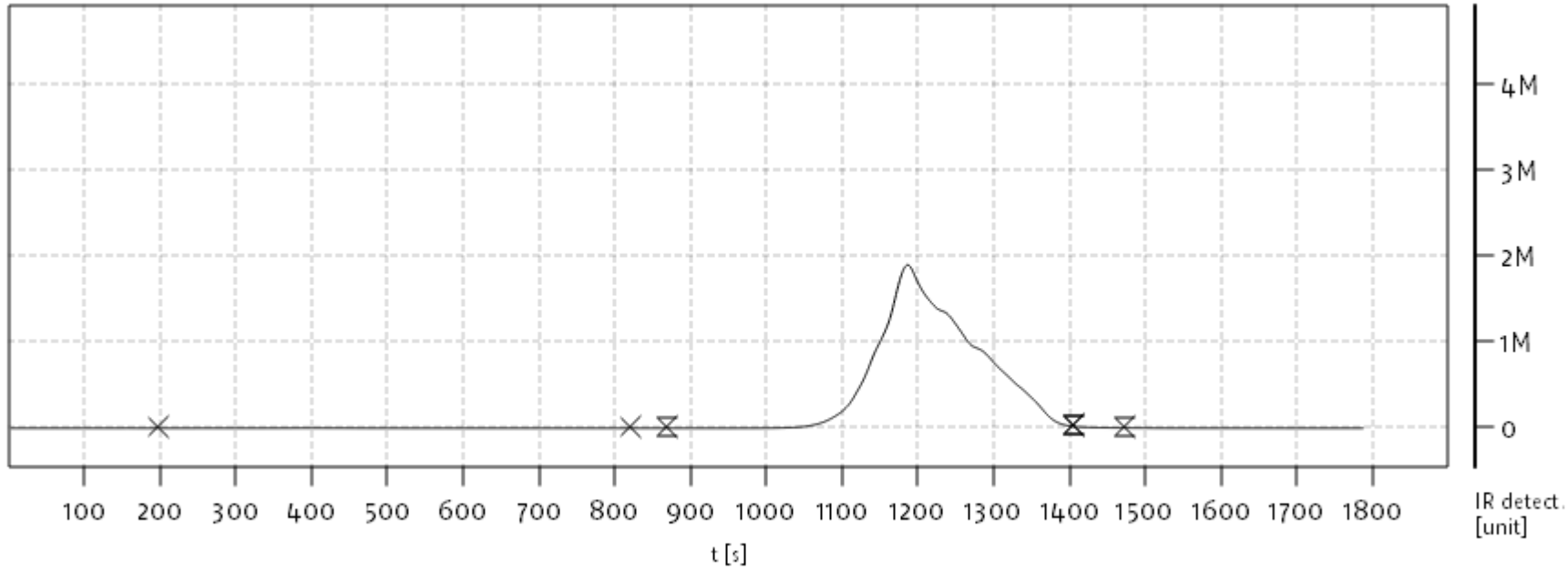
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

Analytical Resources, LLC
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	SLE0270-CALO	200.00	0.1200	CARBON	5/18/2023 9:49 AM	bl,C1u,C3o	0.008	6 993	7.291	0.000	0	9 238 066	0.008	7.283	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Thu May 18 09:50:12 2023

elementar
EXCELLENCE IN ELEMENTS

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 051723CDE GE00052 Calibration from: --.--.-- (modified)

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: GE00052
Sequence: SLE0270
Date Analyzed: 05/18/23 02:51

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0270-ICB1	Total Organic Carbon	0.003	0.02	0.02	%	
SLE0270-CCB1	Total Organic Carbon	0.009	0.02	0.02	%	

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: TOC Cube
Sequence: SLF0283

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00052
Date Analyzed: 06/20/23 17:53

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLF0283-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0283-CCB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0283-CCB2	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0283-CCB3	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0283-CCB4	Total Organic Carbon	0.003	0.02	0.02	%	
SLF0283-CCB5	Total Organic Carbon	0.005	0.02	0.02	%	

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: TOC Cube
Sequence: SLF0370

SDG: 23E0009
Project: AOC5 MR Phase 1
Calibration: GE00052
Date Analyzed: 06/24/23 15:31

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLF0370-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0370-CCB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0370-CCB2	Total Organic Carbon	0.007	0.02	0.02	%	
SLF0370-CCB3	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0370-CCB4	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0370-CCB5	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0370-CCB6	Total Organic Carbon	0.00	0.02	0.02	%	
SLF0370-CCB7	Total Organic Carbon	0.00	0.02	0.02	%	

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: GE00052
Control Limt: +/- 10.00%
Sequence: SLE0270

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0270-ICV1	Total Organic Carbon	44.446	45.4	102	%	EPA 9060A m
	Total Carbon	44.446	45.4	102	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	45.4		%	EPA 9060A m
	% Soot	0.0000	45.4		%	EPA 9060A m
SLE0270-CCV1	Total Organic Carbon	44.446	45.2	102	%	EPA 9060A m
	Total Carbon	44.446	45.2	102	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	45.2		%	EPA 9060A m
	% Soot	0.0000	45.2		%	EPA 9060A m

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: GE00052
Control Limt: +/- 10.00%
Sequence: SLF0283

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLF0283-ICV1	Total Organic Carbon	44.446	44.3	99.7	%	EPA 9060A m
SLF0283-CCV1	Total Organic Carbon	44.446	43.8	98.5	%	EPA 9060A m
SLF0283-CCV2	Total Organic Carbon	44.446	44.4	100	%	EPA 9060A m
SLF0283-CCV3	Total Organic Carbon	44.446	43.2	97.2	%	EPA 9060A m
SLF0283-CCV4	Total Organic Carbon	44.446	45.1	101	%	EPA 9060A m
SLF0283-CCV5	Total Organic Carbon	44.446	45.1	102	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: GE00052
Control Limt: +/- 10.00%
Sequence: SLF0370

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLF0370-ICV1	Total Organic Carbon	44.446	46.6	105	%	EPA 9060A m
SLF0370-CCV1	Total Organic Carbon	44.446	45.2	102	%	EPA 9060A m
SLF0370-CCV2	Total Organic Carbon	44.446	43.6	98.1	%	EPA 9060A m
SLF0370-CCV3	Total Organic Carbon	44.446	44.9	101	%	EPA 9060A m
SLF0370-CCV4	Total Organic Carbon	44.446	43.7	98.2	%	EPA 9060A m
SLF0370-CCV5	Total Organic Carbon	44.446	45.1	101	%	EPA 9060A m
SLF0370-CCV6	Total Organic Carbon	44.446	45.4	102	%	EPA 9060A m
SLF0370-CCV7	Total Organic Carbon	44.446	44.3	99.7	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLF0522-SRM2
Batch: BLF0522
Initial/Final: 0.3077 g / 0.3077 g
Preparation: No Prep Wet Chem
Analyzed: 06/24/2023 17:32
Standard ID: L005590
Expires: 04/14/2032
Standard Lot#: 1941 B
Description: 1941B- Organics in Marine Sediment

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	3.12	0.02	0.02		104	80 - 120

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLF0523-SRM2
Batch: BLF0523
Initial/Final: 0.3156 g / 0.3156 g
Preparation: No Prep Wet Chem
Analyzed: 06/24/2023 18:02
Standard ID: L005590
Expires: 04/14/2032
Standard Lot#: 1941 B
Description: 1941B- Organics in Marine Sediment

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	3.06	0.02	0.02		102	80 - 120

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1811 23E0009-01	04/28/23 10:38	05/01/23 09:42	06/19/23 13:26	52	180	06/21/23 20:01			
LDW23-SC1811 23E0009-02	04/28/23 12:30	05/01/23 09:42	06/19/23 13:26	52	180	06/21/23 20:32			
LDW23-SS1805 23E0009-03	04/28/23 16:15	05/01/23 09:42	06/19/23 13:26	51	180	06/21/23 21:02			
LDW23-SC1805 23E0009-04	04/28/23 16:25	05/01/23 09:42	06/19/23 13:26	51	180	06/21/23 21:32			
LDW23-SS1800 23E0009-05	04/29/23 10:10	05/01/23 09:42	06/19/23 13:26	51	180	06/21/23 22:02			
LDW23-SC1800 23E0009-06	04/29/23 10:15	05/01/23 09:42	06/19/23 13:26	51	180	06/21/23 22:32			
LDW23-SS1820 23E0009-07	04/29/23 14:00	05/01/23 09:42	06/19/23 13:26	50	180	06/21/23 23:02			
LDW23-IT1820 23E0009-08	04/29/23 14:10	05/01/23 09:42	06/24/23 18:32	56	180	06/24/23 18:32			

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23E0009
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: TOC Cube

Analyte	MDL	RL	Units
Total Organic Carbon	0.02	0.02	%

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Standard Record

Standard ID: B000871

Printed: 5/25/2023 9:17:22AM

Description:	Calcium Carbonate 99.9% for Calibration	Expires:	31-Oct-2030
Standard Type:	Reagent	Prepared:	28-Jun-2013
Solvent:	NA/I2605	Prepared By:	Susan Dunnihoo
Final Volume (mls):	500	Department:	Conventionals
Vials:	1	Last Edit:	08-Jul-2019 12:16 by CDE
Vendor:	Mallinckrodt	Lot #:	4072 KDHD
Vendor Catalog #:	4072-03		

Comments

Analyte	CAS Number	Concentration	Units
Total Organic Carbon		120000	ppm
Total Inorganic Carbon		120000	ppm
Total Carbon		120000	ppm
Calcium carbonate	471-34-1	1000000	ppm
% Soot		120000	ppm

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

Identification A & B: Passes
Bulk Density: 0.29 g/ml
Bulk Density (graduated cylinder): 0.31 g/ml
Conductivity: 18 µS/cm
Starch: Negative
Ether Soluble Substances: 0.01%
Total Aerobic microbial Count: 100 cfu/g
Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
Pseudomonas aeruginosa: Absent/1 g
E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

- 450 mesh: 77%
- d10: 37 um
- d50: 139 um
- d90: 271 um

TUP: <9/600 cm^2
Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

Identification A & B: Passes
Bulk Density: 0.29 g/ml
Bulk Density (graduated cylinder): 0.31 g/ml
Conductivity: 18 µS/cm
Starch: Negative
Ether Soluble Substances: 0.01%
Total Aerobic microbial Count: 100 cfu/g
Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
Pseudomonas aeruginosa: Absent/1 g
E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

- 450 mesh: 77%
- d10: 37 um
- d50: 139 um
- d90: 271 um

TUP: <9/600 cm^2
Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

National Institute of Standards and Technology
U.S. Department of Commerce

Date of Issue:
25 April 2022

Standard Reference Material® 1941b

Organics in Marine Sediment

CERTIFICATE OF ANALYSIS

Purpose: This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. Non-certified values are also provided for total organic carbon (TOC), total carbon, hydrogen, and nitrogen. All of the constituents for which certified and non-certified values are provided in SRM 1941b were naturally present in the sediment before processing.

Description: A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Certified Values: Certified mass fraction values for PAHs, PCB congeners, and chlorinated pesticides are provided in Table 1 through Table 3. The certified values for the PAHs, PCB congeners, and chlorinated pesticides are based on the agreement of results obtained at NIST from two or more chemically independent analytical techniques along with results from an interlaboratory comparison study [1]. A NIST certified value is a value for which NIST has the highest confidence in its accuracy in that all known or suspected sources of bias have been investigated or taken into account [1].

Non-Certified Values: Non-certified values are provided in the Appendix A.

Additional Information: Additional information is provided in Appendices B-D.

Period of Validity: The certified values delivered by **SRM 1941b** are valid within the measurement uncertainty specified until **14 April 2032**. The certified values are nullified if the material is stored or used improperly, damaged, contaminated, or otherwise modified.

Maintenance of Certified Values: NIST will monitor this SRM over the period of its validity. If substantive technical changes occur that affect the certification, NIST will issue an amended certificate through the NIST SRM website (https://www.nist.gov/srm) and notify registered users. SRM users can register online from a link available on the NIST SRM website or fill out the user registration form that is supplied with the SRM. Registration will facilitate notification. Before making use of any of the values delivered by this material, users should verify they have the most recent version of this documentation, available through the NIST SRM website (https://www.nist.gov/srm).

Carlos A. Gonzalez, Chief
Chemical Sciences Division
Certificate Revision History on Page 5

Steven J. Choquette, Director
Office of Reference Materials

Table 1. Certified Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
Naphthalene[b,c,d,e,f,g]	848	±	95[h]
Fluorene[b,c,d,e,f,g]	85	±	15[h]
Phenanthrene[b,c,d,e,f,g]	406	±	44[h]
Anthracene[b,c,d,e,f,g]	184	±	18[h]
3-Methylphenanthrene[b,c,d]	105	±	13[h]
2-Methylphenathrene[b,c,d]	128	±	14[h]
1-Methylphenanthrene[b,c,d,g]	73.2	±	5.9[h]
Fluoranthene[b,c,d,e,f,g]	651	±	50[h]
Pyrene[b,c,d,e,f,g]	581	±	39[h]
Benz[*a*]anthracene[b,c,d,e,f,g]	335	±	25[h]
Chrysene[d,f]	291	±	31[h]
Triphenylene[d,f]	108	±	5[i]
Benzo[*b*]fluoranthene[c,e]	453	±	21[h]
Benzo[*k*]fluoranthene[b,c,d,e]	225	±	18[h]
Benzo[*e*]pyrene[b,c,d,g]	325	±	25[h]
Benzo[*a*]pyrene[b,c,d,f,g]	358	±	17[h]
Perylene[b,c,d,f,g]	397	±	45[h]
Benzo[*ghi*]perylene[b,c,d,f,g]	307	±	45[h]
Indeno[1,2,3-*cd*]pyrene[b,c,d,f,g]	341	±	57[h]
Dibenz[*a,j*]anthracene[b,c,d,f]	48.9	±	4.6[h]
Dibenz[*a,c*]anthracene[c,f]	36.7	±	5.2[h]
Dibenz[*a,h*]anthracene[c,f]	53	±	10[h]
Benzo[*b*]chrysene[b,c,d,f]	53	±	12[h]
Picene[b,c,d]	46.6	±	4.7[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] LC-FL (total) of total PAH fraction after PFE with DCM.
[f] LC-FL (isomer) of isomeric PAH fractions after PFE with DCM.
[g] 1999 Interlaboratory Comparison Study [2] with 21 to 29 laboratories submitting data for each PAH.
[h] Certified values are weighted means of the results from two to six analytical methods [3]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [4,5]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[i] The certified value is an unweighted mean of the results from two analytical methods. The uncertainty listed with the value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [6] with a pooled, within-method variance following the ISO/JCGM Guide [4,5]. The measurand is the total mass fraction of the constituent listed and the value is metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 2. Certified Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b] (µg/kg)		
PCB	8	(2,4'-Dichlorobiphenyl)[c,d,e,f,g]	1.65	±	0.19[h]
PCB	18	(2,2',5-Trichlorobiphenyl)[c,d,e,f,g]	2.39	±	0.29[h]
PCB	28	(2,4,4'-Trichlorobiphenyl)[c,d,e,f,g]	4.52	±	0.57[h]
PCB	31	(2,4',5-Trichlorobiphenyl)[c,e,f]	3.18	±	0.41[h]
PCB	44	(2,2'3,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	3.85	±	0.20[i]
PCB	49	(2,2'4,5'-Tetrachlorobiphenyl)[c,d,e,f]	4.34	±	0.28[i]
PCB	52	(2,2',5,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	5.24	±	0.28[i]
PCB	66	(2,3',4,4'-Tetrachlorobiphenyl)[c,e,f,g,j]	4.96	±	0.53[i]
PCB	87	(2,2',3,4,5'-Pentachlorobiphenyl)[c,d,f,j]	1.14	±	0.16[h]
PCB	95	(2,2',3,5',6-Pentachlorobiphenyl)[c,e,f,g]	3.93	±	0.62[i]
PCB	99	(2,2',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g]	2.90	±	0.36[i]
PCB	101	(2,2',4,5,5'-Pentachlorobiphenyl)[c,e,f,g,j]	5.11	±	0.34[i]
PCB	105	(2,3,3',4,4'-Pentachlorobiphenyl)[c,d,e,f,g,j]	1.43	±	0.10[i]
PCB	110	(2,3,3',4',6-Pentachlorobiphenyl)[c,e,f,j]	4.62	±	0.36[i]
PCB	118	(2,3',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g,j]	4.23	±	0.19[i]
PCB	128	(2,2',3,3',4,4'-Hexachlorobiphenyl)[c,d,e,f,g,j]	0.696	±	0.044[i]
PCB	138	(2,2',3,4,4',5'-Hexachlorobiphenyl)[c,e,f,j]	3.60	±	0.28[i]
PCB	149	(2,2',3,4',5',6-Hexachlorobiphenyl)[c,d,e,j]	4.35	±	0.26[h]
PCB	153	(2,2',4,4',5,5'-Hexachlorobiphenyl)[c,d,e,f,g,j]	5.47	±	0.32[i]
PCB	156	(2,3,3',4,4',5-Hexachlorobiphenyl)[c,d,e,f,j]	0.507	±	0.090[h]
PCB	170	(2,2',3,3',4,4',5-Heptachlorobiphenyl)[c,d,e,f,g,j]	1.35	±	0.09[i]
PCB	180	(2,2',3,4,4',5,5'-Heptachlorobiphenyl)[c,d,e,f,g,j]	3.24	±	0.51[i]
PCB	183	(2,2',3,4,4',5',6-Heptachlorobiphenyl)[c,d,e,j]	0.979	±	0.087[h]
PCB	187	(2,2',3,4',5,5',6-Heptachlorobiphenyl)[c,d,e,f,g,j]	2.17	±	0.22[i]
PCB	194	(2,2',3,3',4,4',5,5'-Octachlorobiphenyl)[c,d,e,j]	1.04	±	0.06[h]
PCB	195	(2,2',3,3',4,4',5,6-Octachlorbiphenyl)[c,e,g,j]	0.645	±	0.060[i]
PCB	201	(2,2',3,3',4,5',6,6'-Octachlorobiphenyl)[c,e,j]	0.777	±	0.034[h]
PCB	206	(2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)[c,e,f,g,j]	2.42	±	0.19[i]
PCB	209	Decachlorobiphenyl[c,d,e,f,g,j]	4.86	±	0.45[i]

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [7] and later revised by Schulte and Malisch [8] to conform to IUPAC rules, except PCB 201. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 201 is listed as PCB 200.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

[g] 1999 Interlaboratory Comparison Study [2] with 13 to 31 laboratories submitting data for each PCB congener.

[h] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [6] with a pooled, within method variance following the ISO/JCGM Guide [4,5]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[i] Certified values are weighted means of the results from three to six analytical methods [3]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [4,5]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[j] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

Table 3. Certified Mass Fraction Values for Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a] (µg/kg)
Hexachlorobenzene[b,c,d,e]	5.83 ± 0.38[f]
cis-Chlordane[b,c,d,e,g]	0.85 ± 0.11[h]
trans-Chlordane[b,c,e]	0.566 ± 0.093[f]
cis-Nonachlor[b,e,g]	0.378 ± 0.053[h]
trans-Nonachlor[b,c,d,e,g]	0.438 ± 0.073[f]
4,4'-DDE[b,d,e,g]	3.22 ± 0.28[h]
4,4'-DDD[b,d,e,g]	4.66 ± 0.46[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[e] 1999 Interlaboratory Comparison Study [2] with 13 to 31 laboratories submitting data for each pesticide.
[f] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [6] with a pooled, within-method variance following the ISO/JCGM Guide [4,5]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.
[h] Certified values are weighted means of the results from three to five analytical methods [3]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [4,5]. The measurand is the total mass fraction of the chlorinated pesticides listed and the values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Safety: This material is naturally occurring marine sediment from an urban area and may contain constituents of unknown toxicities; therefore, caution and care should be exercised during its handling and use.

Storage: SRM 1941b must be stored in its original bottle at temperatures less than 30 °C and away from direct sunlight.

Use: Prior to removal of subsamples for analysis, the contents of the bottle should be mixed. The mass fractions of constituents in SRM 1941b are reported on a dry-mass basis. The SRM, as received, contains a mass fraction of approximately 2.4 % moisture (see "Conversion to Dry-Mass Basis"). The sediment sample should be dried to a constant mass before weighing for analysis; or a separate subsample of the sediment should be removed from the bottle at the time of analysis and dried to determine the mass fraction on a dry-mass basis. If the constituents of interest are volatile, then the moisture must be determined with a separate subsample.

REFERENCES

[1] Beauchamp, C.R.; Camara, J.E.; Carney, J.; Choquette, S.J.; Cole, K.D.; DeRose, P.C.; Duewer, D.L.; Epstein, M.S.; Kline, M.C.; Lippa, K.A.; Lucon, E.; Molloy, J.; Nelson, M.A.; Phinney, K.W.; Polakoski, M.; Possolo, A.; Sander, L.C.; Schiel, J.E.; Sharpless, K.E.; Toman, B.; Winchester, M.R.; Windover, D.; *Metrological Tools for the Reference Materials and Reference Instruments of the NIST Material Measurement Laboratory*; NIST Special Publication (NIST SP) 260-136, 2021 edition; U.S. Government Printing Office: Washington, DC (2021); available at https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.260-136-2021.pdf (accessed Apr 2022).

[2] Schantz, M.M.; Parris, R.M.; Wise, S.A.; *NIST/NOAA Intercomparison Exercise Program for Organic Contaminants in the Marine Environment: Description and Results of 1999 Organic Intercomparison Exercises*; NOAA Technical Memorandum NOS NCCOS CCMA 146, Silver Spring, MD (2000).

[3] Ruhkin, A.L.; Vangel, M.G.; *Estimation of a Common Mean and Weighted Means Statistics*; J. Am. Statist. Assoc., Vol. 93, pp. 303–308 (1998).

[4] JCGM 100:2008; *Evaluation of Measurement Data — Guide to the Expression of Uncertainty in Measurement* (GUM 1995 with Minor Corrections); Joint Committee for Guides in Metrology (2008); available at https://www.bipm.org/en/publications/guides (accessed Apr 2022); see also Taylor, B.N.; Kuyatt, C.E.; *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*; NIST Technical

Note 1297; U.S. Government Printing Office: Washington, DC (1994); available at https://www.nist.gov/pml/nist-technical-note-1297 (accessed Apr 2022).
[5] JCGM 101:2008; *Evaluation of measurement data – Supplement 1 to the "Guide to the expression of uncertainty in measurement" - Propagation of distributions using a Monte Carlo method*; JCGM (2008); available at https://www.bipm.org/en/publications/guides (accessed Apr 2022).
[6] Levenson, M.S.; Banks, D.L.; Eberhardt, K.R.; Gill, L.M.; Guthrie, W.F.; Liu, H.-K.; Vangel, M.G.; Yen, J.H.; Zhang, N.F.; *An Approach to Combining Results from Multiple Methods Motivated by the ISO GUM*; J. Res. Natl. Inst. Stand. Technol., Vol. 105, pp. 571–579 (2000).
[7] Ballschmiter, K.; Zell, M.; *Analysis of Polychlorinated Biphenyls (PCB) by Glass Capillary Gas Chromatography - Composition of Technical Aroclor- and Clophen-PCB Mixtures*; Fresenius' Z. Anal. Chem., Vol. 302, pp. 20–31 (1980).
[8] Schulte, E.; Malisch, R.; *Calculation of the Real PCB Content in Environmental Samples. I. Investigation of the Composition of Two Technical PCB Mixtures*; Fresenius' Z. Anal. Chem., Vol. 314, pp. 545–551 (1983).
[9] Schubert, P.; Schantz, M.M.; Sander, L.C.; Wise, S.A.; *Determination of Polycyclic Aromatic Hydrocarbons with Molecular Mass 300 and 302 in Environmental-Matrix Standard Reference Materials by Gas Chromatography-Mass Spectrometry*; Anal. Chem., Vol. 75, pp. 234–246 (2003).
[10] Schantz, M.M.; Kucklick, J.R..; *NIST Interlaboratory Analytical Comparison Study to Support Deepwater Horizon Natural Resource Damage Assessment: Description and Results for Crude Oil QA10OIL01*; NISTIR 7793 (2011).
[11] Wise, S.A.; Poster, D.L.; Schantz, M.M.; Kucklick, J.R.; Sander, L.C.; Lopez de Alda, M.; Schubert, P.; Parris, R.M.; Porter, B.J.; *Two New Marine Sediment Standard Reference Materials (SRMs) for the Determination of Organic Contaminants*; Anal. Bioanal. Chem., Vol. 378, pp. 1251–1264 (2004).
[12] Wise, S.A.; Chesler, S.N.; Hertz, H.S.; Hilpert, L.R.; May, W.E.; *Chemically-Bonded Aminosilane Stationary Phase for the High Performance Liquid Chromatographic Separation of Polynuclear Aromatic Hydrocarbons*; Anal. Chem., Vol. 49, pp. 2306–2310 (1977).
[13] May, W.E.; Wise, S.A.; *Liquid Chromatographic Determination of Polycyclic Aromatic Hydrocarbons in Air Particulate Extracts*; Anal. Chem., Vol. 56, pp. 225–232 (1984).
[14] Wise, S.A.; Benner, B.A.; Byrd, G.D.; Chesler, S.N.; Rebbert, R.E.; Schantz, M.M.; *Determination of Polycyclic Aromatic Hydrocarbons in a Coal Tar Standard Reference Material*; Anal. Chem., Vol. 60, pp. 887-894 (1988).
[15] Wise, S.A.; Deissler, A.; Sander, L.C.; *Liquid Chromatographic Determination of Polycyclic Aromatic Hydrocarbon Isomers of Molecular Weight 278 and 302 in Environmental Standard Reference Materials*; Polycyclic Aromat. Compd., Vol. 3, pp. 169–184 (1993).
[16] Brubaker, W.W., Jr.; Schantz, M.M.; Wise, S.A.; *Determination of Non-ortho Polychlorinated Biphenyls in Environmental Standard Reference Materials*; Fresenius' J. Anal. Chem., Vol. 367, pp. 401–406 (2000).

Certificate Revision History: 25 April 2022 (Change of period of validity; updated format; editorial changes); 16 January 2015 (Corrected IUPAC name for PCB-56 and PCB-107; editorial changes); 10 June 2014 (Units corrected from mg/kg to µg/kg in Tables 8 and 9; editorial changes); 10 April 2012 (Reference value added for alkylated PAH groups, hopanes, and steranes; extension of certification period; editorial changes); 01 December 2011 (Extension of certification period; editorial changes); 16 August 2004 (Reference values for the butyl tins removed; editorial changes); 15 July 2002 (Original certificate date).

Certain commercial equipment, instruments, or materials may be identified in this Certificate of Analysis to adequately specify the experimental procedure. Such identification does not imply recommendation or endorsement by the National Institute of Standards and Technology, nor does it imply that the materials or equipment identified are necessarily the best available for the purpose.

Users of this SRM should ensure that the Certificate of Analysis in their possession is current. This can be accomplished by contacting the Office of Reference Materials 100 Bureau Drive, Stop 2300, Gaithersburg, MD 20899-2300; telephone (301) 975-2200; e-mail srminfo@nist.gov; or the Internet at https://www.nist.gov/srm.

* * * * * * End of Certificate of Analysis* * * * * *

APPENDIX A

Non-Certified Values: Non-certified mass fraction values for additional PAHs (some in combination), additional PCB congeners, and additional chlorinated pesticides are provided in Table A1 through Table A4. Non-certified values for alkylated PAH groups are provided in Table A5 and for selected hopanes and steranes in Table A6. A non-certified value for total organic carbon is provided in Table A7. Non-certified values are values that are the best estimate of the true value; however, the values do not meet the NIST criteria for certification and are provided with associated uncertainties that may reflect only measurement precision, may not include all sources of uncertainty, or may reflect a lack of sufficient statistical agreement among multiple analytical methods [1].

Additional Non-Certified Mass Fraction Values: Non-certified mass fraction values are provided in Table A8 for carbon, hydrogen, and nitrogen.

Table A1. Non-certified Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
1-Methylnaphthalene[b,c,d,e]	127	±	14[f]
2-Methylnaphthalene[b,c,d,e]	276	±	53[f]
2,6-Dimethylnaphthalene[b,c,d,e]	75.9	±	4.5[f]
2,3,5-Trimethylnaphthalene[b,c,d,e]	25.5	±	5.1[f]
Biphenyl[b,c,d,e]	74.0	±	8.0[f]
Acenaphthylene[b,c,d,e]	53.3	±	6.4[f]
Acenaphthene[b,c,d,e]	38.4	±	5.2[f]
9-Methylphenanthrene[c]	63.5	±	2.5[g]
4-Methylphenanthrene and 9-Methylphenanthrene[b,d]	80.1	±	4.8[f]
2-Methylanthracene[c,d]	36	±	15[f]
8-Methylfluoranthene[b]	49.5	±	2.7[g]
7-Methylfluoranthene[b]	45.4	±	1.5[g]
1-Methylfluoranthene[b]	42.4	±	2.1[g]
3-Methylfluoranthene[b]	28.8	±	1.3[g]
2-Methylpyrene[b]	78.7	±	4.0[g]
4-Methylpyrene[b]	66.4	±	2.6[g]
1-Methylpyrene[b]	52.5	±	2.3[g]
Acephenanthrene[d]	30.5	±	1.9[g]
Benzo[*c*]phenanthrene[b,c,d]	58	±	15[f]
Benzo[*a*]fluoranthene[b,c,d]	73	±	18[f]
Benzo[*j*]fluoranthene[c]	217	±	5[g]
Indeno[1,2,3-*cd*]fluoranthene[d]	9.63	±	0.34[g]
Pentaphene[d]	25.3	±	1.0[g]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] 1999 Interlaboratory Comparison Study [2] with 14 to 26 laboratories submitting data for each PAH.
[f] Non-certified values are weighted means of the results from two to four analytical methods [3]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [4,5]. The measurand is the total mass fraction of PAHs listed as determined by the methods indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] Non-certified values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for the associated degrees of freedom (19 for footnote b and 5 for footnotes c and d) and 95 % confidence level for each analyte. The measurand is the total mass fraction of the PAHs listed as determined by the method indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table A2. Non-certified Mass Fraction Values for PAHs of Molecular Mass 300 and 302 in SRM 1941b

PAHs of Molecular Mass 300 and 302	Mass Fractions[a,b,c] (µg/kg)		
Coronene	72.6	±	4.7
Dibenzo[*b,e*]fluoranthene	10.3	±	0.3
Naphtho[1,2-*b*]fluoranthene	91.0	±	3.1
Naphtho[1,2-*k*]fluoranthene and Naphtho[2,3-*j*]fluoranthene	79.8	±	2.5
Naphtho[2,3-*b*]fluoranthene	23.5	±	0.3
Dibenzo[*b,k*]fluoranthene	95.6	±	3.1
Dibenzo[*a,k*]fluoranthene	26.6	±	0.4
Dibenzo[*j,l*]fluoranthene	63.8	±	1.8
Dibenzo[*a,l*]pyrene	11.1	±	1.0
Naphtho[2,3-*k*]fluoranthene	10.7	±	0.6
Naphtho[1,2-*a*]pyrene	16.7	±	1.4
Naphtho[2,3-*e*]pyrene	33.2	±	2.3
Dibenzo[*a,e*]pyrene	76.1	±	3.6
Naphtho[2,1-*a*]pyrene	59.2	±	1.8
Dibenzo[*e,i*]pyrene	35.0	±	2.4
Naphtho[2,3-*a*]pyrene	16.5	±	0.6
Benzo[*b*]perylene	38.2	±	1.2
Dibenzo[*a,i*]pyrene	25.5	±	1.0
Dibenzo[*a,h*]pyrene	6.94	±	0.29

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] Non-certified values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for two degrees of freedom and 95 % confidence level for each analyte. The measurand is the total mass fraction of the constituent listed as determined by the method indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[c] GC/MS on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM [9].

Table A3. Non-certified Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b,c] (µg/kg)		
PCB	45	(2,2',3,6-Tetrachlorobiphenyl)[d,e]	0.73	±	0.12
PCB	56	(2,3,3',4'-Tetrachlorobiphenyl)[d,f,g]	1.21	±	0.11
PCB	63	(2,3,4',5-Tetrachlorobiphenyl)[e,f,g]	0.213	±	0.040
PCB	70	(2,3',4',5-Tetrachlorobiphenyl)[e,f,g]	4.99	±	0.29
PCB	74	(2,4,4',5-Tetrachlorobiphenyl)[e,f,g]	2.04	±	0.15
PCB	77	(3,3',4,4'-Tetrachlorobiphenyl)[h]	0.31	±	0.03
PCB	107	(2,3,3',4',5-Pentachlorobiphenyl)[d,e,f,g]	0.628	±	0.028
PCB	132	(2,2',3,3',4,6'-Hexachlorobiphenyl)[d,f,g]	1.28	±	0.27
PCB	146	(2,2',3,4',5,5'-Hexachlorobiphenyl)[e,f,g]	1.22	±	0.12
PCB	158	(2,3,3',4,4',6-Hexachlorobiphenyl)[d,e,f,g]	0.65	±	0.15
PCB	163	(2,3,3',4',5,6-Hexachlorobiphenyl)[e,f,g]	1.28	±	0.06
PCB	174	(2,2',3,3',4,5,6'-Heptachlorobiphenyl)[d,e,f,g]	1.51	±	0.39
PCB	193	(2,3,3',4',5,5',6-Heptachlorobiphenyl)[d,e,f,g]	0.292	±	0.075

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [7] and later revised by Schulte and Malisch [8] to conform with IUPAC rules, except PCB 107. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 107 is listed as PCB 108.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] For these PCB congeners except PCB 77, the non-certified values are unweighted means of the results from two to four analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [6] with a pooled within-method variance following the ISO/JCGM Guide [4,5]. For PCB 77, the non-certified value is the mean of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to two degrees of freedom and 95 % confidence level for PCB 77. The measurand is the total mass fraction of the PCB Congeners listed as determined by the method or methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as microgram per kilogram on a dry-mass basis.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[g] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

[h] GC/MS NICI on a 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC-ECD (I) fractionated using a PYE column.

Table A4. Non-certified Mass Fraction Values for Selected Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a,b] (µg/kg)		
2,4'-DDE[c,d]	0.38	±	0.12
4,4'-DDT[e,f]	1.12	±	0.42

[a] Mass Fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] The non-certified values are unweighted means of the results from two analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [6] with a pooled, within-method variance following the ISO/JCGM Guide [4,5]. The measurand is the total mass fraction of the chlorinated pesticides listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

[d] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[e] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

[f] 1999 Interlaboratory Comparison Study [2] with 10 laboratories submitting data for 4,4'-DDT.

Table A5. Non-certified Mass Fraction Values for Alkylated PAH Groups in SRM 1941b

Alkylated PAH Group	Mass Fraction[a,b] (µg/kg)
C2-decalins	18 ± 5
C4-decalins	41 ± 4
C2-naphthalenes	187 ± 53
C3-naphthalenes	158 ± 42
C1-benzothiophenes	25 ± 14
C2-benzothiophenes	20 ± 11
C3-benzothiophenes	22 ± 13
C4-benzothiophenes	18 ± 5
C1-fluorenes	57 ± 18
C2-fluorenes	122 ± 43
C3-fluorenes	128 ± 31
C1-phenanthrenes/anthracenes	313 ± 99
C2-phenanthrenes/anthracenes	247 ± 62
C3-phenanthrenes/anthracenes	165 ± 46
C4-phenanthrenes/anthracenes	87 ± 36
C1-dibenzothiophenes	54 ± 13
C2-dibenzothiophenes	91 ± 18
C3-dibenzothiophenes	84 ± 15
C4-dibenzothiophenes	57 ± 13
C1-fluoranthenes/pyrenes	252 ± 48
C2-fluoranthenes/pyrenes	205 ± 38
C3-fluoranthenes/pyrenes	102 ± 22
C4-fluoranthenes/pyrenes	121 ± 59
C1-benzanthraces/chrysenes/triphenylenes	208 ± 43
C2-benzanthraces/chrysenes/triphenylenes	120 ± 24
C3-benzanthraces/chrysenes/triphenylenes	73 ± 31
C4-benzanthraces/chrysenes/triphenylenes	41 ± 11

[a] The non-certified mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the alkylated PAH groups listed as determined by the interlaboratory study methods. The values listed are metrologically traceable to the SI unit of mass fraction, expressed as micrograms per kilogram on a dry-mass basis.

[b] Data from the interlaboratory study [10].

Table A6. Non-certified Mass Fraction Values for Hopanes and Steranes in SRM 1941b

Hopane or Sterane	Mass Fraction[a,b] (µg/kg)
17α(H)-22,29,30-Trisnorhopane	54 ± 18
17α(H)-21β(H)-30-Norhopane	137 ± 21
17α(H)-21β(H)-30-Hopane	215 ± 44
17α(H)-21β(H)-22R-Homohopane	44 ± 10
17α(H)-21β(H)-22S-Homohopane	48 ± 13
5α(H)-14α(H),17α(H)-Cholestane 20R	41 ± 11
5α(H)-14β(H),17β(H)-Cholestane 20R	27 ± 6
5α(H)-14β(H),17β(H)-24-Methylcholestane 20R	21 ± 8
5α(H)-14α(H),17α(H)-24-Ethylcholestane 20R	19 ± 5
5α(H)-14β(H),17β(H)-24-Ethylcholestane 20R	41 ± 9

[a] The non-certified mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the constituent listed as determined by the methods used during the interlaboratory study. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[b] Data from the interlaboratory study [10].

Table A7. Non-certified Mass Fraction Value for Total Organic Carbon in SRM 1941b

Total Organic Carbon (TOC)	2.99 % ± 0.24 %[a,b]

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] The non-certified value for total organic carbon is a weighted mean value from routine measurements made by two laboratories [1]. The uncertainty listed is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance. The reporting follows the ISO/JCGM Guides [11]. The measurand is the total mass fraction of TOC listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as a percent on a dry-mass basis.

Table A8. Additional Non-Certified Mass Fraction Values for SRM 1941b

Elements	Mass Fractions[a] (%)
Carbon	3.3
Hydrogen	1.2
Nitrogen	<0.5

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.

Maintenance of Non-Certified Values: NIST will monitor this material to the end of its period of validity. If substantive technical changes occur that affect the non-certified values during this period, NIST will update this Appendix and notify registered users. SRM users can register online from a link available on the NIST SRM website or fill out the user registration form that is supplied with the SRM. Registration will facilitate notification. Before making use of any of the values delivered by this material, users should verify they have the most recent version of this documentation, available through the NIST SRM website (https://www.nist.gov/srm).

* * * * * * * * * * * End of Appendix A * * * * * * * * * * *

APPENDIX B

Coordination of the technical measurements leading to the certification of this material was under the leadership of S.A. Wise of the NIST Chemical Sciences Division and M.M. Schantz, formerly of NIST

Analytical measurements for the certification of SRM 1941b were performed at NIST by J.R. Kucklick, D.L. Poster, and L.L. Yu of the NIST Chemical Sciences Division and B.J. Porter, M.M. Schantz, P. Schubert, and S. Tutschku, formerly of NIST.

Measurements for TOC were provided by a commercial laboratory and T.L. Wade of the Geochemical and Environmental Research Group, Texas A&M University (College Station, TX). The carbon, hydrogen, and nitrogen data were provided by a commercial laboratory. Results for the PAHs, PCBs, and chlorinated pesticides from 38 laboratories (see Appendix C) that participated in an interlaboratory comparison exercise coordinated by NIST were used. Results for the alkylated PAH groups, hopanes, and steranes from 33 laboratories (see Appendix D) that participated in another interlaboratory comparison exercise coordinated by NIST were also used.

Collection and preparation of SRM 1941b were performed by M.P. Cronise and C.N. Fales of the NIST Office of Reference Materials and B.J. Porter and M.M. Schantz, formerly of the NIST Chemical Sciences Division. The sediment material was collected with the assistance of G.G. Lauenstein, J. Collier, and J. Lewis (National Oceanic and Atmospheric Administration, Silver Spring, MD).

Consultation on the statistical design of the experimental work and evaluation of the data were provided by S.D. Leigh and J.H. Yen of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Office of Reference Materials.

Sample Collection and Preparation: The sediment used to prepare this SRM was collected from the Chesapeake Bay at the mouth of the Baltimore (MD) Harbor near the Francis Scott Key Bridge (39°12.3'N and 76°31.4'W). This location is very near the site where SRM 1941 and SRM 1941a were collected. The sediment was collected using a Kynar-coated modified Van Veen-type grab sampler. A total of approximately 3300 kg of wet sediment was collected from the site. The sediment was freeze-dried, sieved at 150 μm (100 % passing), homogenized in a cone blender, radiation sterilized (^{60}Co), and then packaged in screw-capped amber glass bottles each containing approximately 50 g.

Conversion to Dry-Mass Basis: The results for the constituents in SRM 1941b are reported on a dry-mass basis; however, the material "as received" contains residual moisture. The amount of moisture in SRM 1941b was determined by measuring the mass loss after freeze-drying subsamples of 1.1 g to 1.3 g for four days at 1 Pa with a −10 °C shelf temperature and a −50 °C condenser temperature. The moisture content in SRM 1941b at the time of the certification analyses was 2.39 % ± 0.08 % (95 % confidence level). Analytical results for the organic constituents were determined on an as-received basis and then converted to a dry-mass basis by dividing by the conversion factor of 0.9761 (gram dry mass per gram as-received mass).

Polycyclic Aromatic Hydrocarbons: The general approach used for the value assignment of the PAHs in SRM 1941b was similar to that reported in detail elsewhere [11]. The approach consisted of combining results from analyses using various combinations of different extraction techniques and solvents, clean-up/isolation procedures, and chromatographic separation and detection techniques: Soxhlet extraction and pressurized-fluid extraction (PFE) using dichloromethane (DCM) or a hexane/acetone mixture, cleanup of the extracts using solid-phase extraction (SPE) or normal-phase liquid chromatography (LC), followed by analysis using the following techniques: (1) reversed-phase liquid chromatography with fluorescence detection (LC-FL) analysis of the total PAH fraction, (2) reversed-phase LC-FL analysis of isomeric PAH fractions isolated by normal-phase LC (i.e., multidimensional LC), (3) gas chromatography/mass spectrometry (GC/MS) analysis of the PAH fraction on three stationary phases of different selectivity, i.e., a 5 % (all column compositions are given as mole fractions in %) phenyl-substituted methylpolysiloxane phase, a 50 % phenyl-substituted methylpolysiloxane phase, and a relatively non-polar proprietary phase.

Three sets of GC/MS results, designated as GC/MS (I), GC/MS (II), and GC/MS (III), were obtained using three columns with different selectivities for the separation of PAHs. For GC/MS (I) analyses, duplicate subsamples of approximately 1 g from ten bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added

to the extract to remove elemental sulfur. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 2 % DCM in hexane (all solvent concentrations are given as volume fractions in %). The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5 MS, J&W Scientific, Folsom, CA). The GC/MS (II) analyses were performed using 5 g subsamples from six bottles of SRM 1941b. These samples were extracted using PFE with DCM. The high molecular mass compounds were removed from the extracts using size exclusion chromatography (SEC) with a preparative-scale divinylbenzene-polystyrene column (10 μm particle size with 10 nm diameter pores), and the sulfur was removed from the extracts by adding copper powder. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The analysis was by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17 MS, J&W Scientific). For the GC/MS (III), 9 g subsamples from six bottles of SRM 1941b were Soxhlet-extracted for 18 h with 250 mL of a mixture of 50 % hexane/50 % acetone. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific).

Two sets of LC-FL results, designated as LC-FL (total) and LC-FL (isomer), were used in the certification process. For the LC-FL (total), subsamples of approximately 1 g from six bottles of SRM 1941b were extracted using PFE with a mixture of 50 % hexane/50 % acetone. The extracts were concentrated and then processed through an aminopropylsilane SPE cartridge using 2 % DCM in hexane to obtain the total PAH fraction. For the LC-FL (isomer), a 5 g subsample from the six bottles was extracted using PFE with DCM and processed through an aminopropylsilane SPE cartridge using 10 % DCM in hexane; the PAH fraction was then fractionated further on a semi-preparative aminopropylsilane column (μBondapak NH_2, 9 mm i.d. × 30 cm, Waters Associates, Milford, MA) to isolate isomeric PAH fractions as described previously [12–15]. The total PAH fraction and the isomeric PAH fractions were analyzed using a 5 μm particle-size polymeric octadecylsilane (C_{18}) column (4.6 mm i.d. × 25 cm, Hypersil-PAH, Keystone Scientific, Inc., Bellefonte, PA) with wavelength-programmed fluorescence detection [13,14].

For the GC/MS and LC-FL measurements described above, selected perdeuterated PAHs were added to the sediment prior to solvent extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [2]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PAHs in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

Homogeneity Assessment for PAHs: The homogeneity of SRM 1941b was assessed by analyzing duplicate samples of approximately 1 g from ten bottles selected by stratified random sampling. Samples were extracted, processed, and analyzed as described above for GC/MS (I). No statistically significant differences among bottles were observed for the PAHs at this sample size.

PAH Isomers of Molecular Mass 300 and 302: For the determination of the molecular mass 300 and 302 isomers, three subsamples of approximately 5 g each were extracted using PFE with DCM. The extracts were then concentrated with a solvent change to hexane and passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17MS, J&W Scientific). Perdeuterated dibenzo[*a,i*]pyrene was added to the sediment prior to extraction for use as an internal standard [9].

PCBs and Chlorinated Pesticides: The general approach used for the determination of PCBs and chlorinated pesticides in SRM 1941b consisted of combining results from analyses using various combinations of different extraction techniques and solvents, cleanup/isolation procedures, and chromatographic separation and detection techniques. Techniques and solvents included Soxhlet extraction and PFE using DCM or a hexane/acetone mixture, clean-up/isolation using SPE or LC, followed by analysis using GC/MS and gas chromatography with electron capture detection (GC-ECD) on two columns with different selectivity for the separation of PCBs and chlorinated pesticides. The analytical methods are described in detail elsewhere [11].

Six sets of results were obtained and designated as GC-ECD (I) A and B, GC/MS (I) A and B, GC/MS (II), and Interlaboratory Comparison Exercise. For the GC-ECD (I) analyses, approximately 10 g subsamples from six bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur, and SEC, as described above, was used to remove the high molecular mass compounds. The concentrated extract was then fractionated on a semi-preparative aminopropylsilane column to isolate two fractions containing:

(1) the PCBs and lower-polarity pesticides and (2) the more polar pesticides. GC-ECD analyses of the two fractions were performed on two columns of different selectivities for PCB separations: 0.25 mm × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5, J&W Scientific), and a 0.25 mm × 60 m fused silica capillary column with a non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The results from the 5 % phenyl phase are designated as GC-ECD (IA) and the results from the proprietary phase are designated as GC-ECD (IB). For the GC-ECD analyses, two PCB congeners that are not significantly present in the sediment extract (PCB 103 and PCB 198 [7,8]) and endosulfan I-d_4, 4,4'-DDE-d_8, 4,4'-DD-d_8, and 4,4'-DDT-d_8 were added to the sediment prior to extraction for use as internal standards for quantification purposes.

Two sets of results were obtained by GC/MS. For GC/MS (I), approximately 9 g subsamples from six bottles were Soxhlet- extracted with a mixture of 50 % hexane/50 % acetone for approximately 18 h. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS with two ionization modes, electron impact (EI) and negative ion chemical ionization (NICI). The GC/MS EI method, GC/MS (IA), used a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The GC/MS NICI method, GC/MS (IB), used a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5MS, J&W Scientific). The GC/MS (II) results were obtained in the same manner as the GC/MS (IA) analyses except that three subsamples were Soxhlet-extracted with DCM for approximately 18 h. For the GC/MS analyses, selected carbon-13 labeled PCB congeners and chlorinated pesticides were added to the sediment prior to extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PCB congeners and chlorinated pesticides in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

The non-certified value for PCB 77 was determined from a separate fraction. The samples were extracted and processed as for GC-ECD (I) above. The first (PCB and lower-polarity pesticide) fraction from the semi-preparative aminopropylsilane column was further fractionated using a Cosmosil PYE (pyrenylethyl group bonded) column (5 μm particle size, 4.6 mm i.d. × 25 cm ; Phenomenex, Torrance, CA) [16]. Three fractions were collected: the first fraction contained the pesticides and multi-*ortho* PCBs, the second fraction contained the polychlorinated naphthalenes, non-*ortho* PCB congeners, and some mono-*ortho* PCB congeners, and the third fraction removed the residual planar compounds from the column. The second fraction was analyzed by GC/MS NICI using the same column as GC/MS (IB) above. Carbon-13 labeled PCB 77 was used as an internal standard for quantification purposes.

Alkylated PAH Groups, Hopanes, and Steranes: SRM 1941b was used in an interlaboratory comparison exercise in 2011 [10]. Results from 33 laboratories that participated in this exercise were used in the determination of the non-certified values for alkylated PAH groups, hopanes, and steranes in SRM 1941b. Note that not all laboratories returned data for each analyte. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest. For the alkylated PAHs, the majority of the laboratories (>90 %) used the parent PAH for determination of the response factor for the corresponding alkylated group.

Total Organic Carbon (TOC): Two laboratories provided results for TOC using similar procedures. Briefly, subsamples of approximately 200 mg were reacted with 6 mol/L hydrochloric acid and rinsed with deionized water prior to combustion in a gas fusion furnace. The carbon monoxide and carbon dioxide produced were measured and compared to a blank for calculation of the percent TOC. Each laboratory analyzed subsamples from three bottles of SRM 1941b. One of the laboratories also analyzed three subsamples from three bottles of SRM 1941b for carbon, hydrogen, and nitrogen.

* * * * * * * * * * * * End of Appendix B * * * * * * * * * * * * *

APPENDIX C

The laboratories listed below performed measurements that contributed to the certification of PAHs, PCBs, and chlorinated pesticides in SRM 1941b Organics in Marine Sediment.

Arthur D. Little, Inc (Cambridge, MA, USA)
Axys Analytical Services (Sidney, BC, Canada)
B & B Laboratories (College Station, TX, USA)
Battelle Ocean Sciences (Duxbury, MA, USA)
Bedford Institute of Oceanography (Dartmouth, NS, Canada)
California Department of Fish and Game (Rancho Cordova, CA, USA)
Central Contra Costa Sanitary District (Martinez, CA, USA)
Chesapeake Biological Laboratory (Solomons, MD, USA)
Centro de Investigacionies Energeticas Medioambientales y Tecnologicas (Madrid, Spain)
City of Los Angeles Environmental Monitoring Division (Playa del Rey, CA, USA)
City of San Jose Environmental Services Department (San Jose, CA, USA)
Columbia Analytical Services (Kelso, WA, USA)
East Bay Municipal Utility District (Oakland, CA, USA)
Florida Department of Environmental Protection (Tallahassee, FL, USA)
Manchester Environmental Laboratory (Port Orchard, WA, USA)
Murray State University (Murray, KY, USA)
Massachusetts Water Resources Authority Central Lab (Winthrop, MA, USA)
National Research Council of Canada (Ottawa, Ontario, Canada)
National Oceanic and Atmospheric Association (NOAA), National Marine Fisheries Service (NMFS), Auke Bay Laboratory (Juneau, AK, USA)
NOAA, National Ocean Service/Center for Coastal Environmental Health and Biomolecular Research (Charleston, SC, USA)
NOAA, NMFS, Sandy Hook Marine Laboratory (Highlands, NJ, USA)
NOAA, NMFS, Northwest Fisheries Science Center (Seattle, WA, USA)
Orange County Sanitation District (Fountain Valley, CA, USA)
Philip Analytical Services (Burlington, Ontario, Canada)
Serv de Hidrografia Naval (Buenos Aires, Argentina)
Skidaway Institute of Technology (Savannah, GA, USA)
Southwest Laboratory of Oklahoma (Broken Arrow, OK, USA)
Severn Trent Knoxville Laboratory (Knoxville, TN, USA)
Texas A&M University, Geochemical and Environmental Research Group (College Station, TX, USA)
Texas Parks and Wildlife Department (San Marcos, TX, USA)
University of California at Los Angeles, Institute of Geophysics and Planetary Physics (Los Angeles, CA, USA)
University of Connecticut, Environmental Research Institute (Storrs, CT, USA)
University of Rhode Island, Graduate School of Oceanography (Narragansett, RI, USA)
US Department of Agriculture, Environmental Chemistry Laboratory (Beltsville, MD, USA)
US Environmental Protection Agency, Atlantic Ecology Division (Narragansett, RI, USA)
US Geological Survey, National Water Quality Laboratory (Denver, CO, USA)
Woods Hole Group Environmental Lab (Raynham, MA, USA)
Wright State University (Dayton, OH, USA)

* * * * * * * * * * * End of Appendix C * * * * * * * * * * * *

APPENDIX D

The laboratories listed below performed measurements that contributed to the certification of alkylated PAH groups, hopanes, and steranes in SRM 1941b Organics in Marine Sediment.

Alpha Analytical, Inc.; Mansfield, MA
Analytical Resources, Inc.; Tukwila, WA
Axys Analytical Services; Sydney, BC, Canada
Battelle Analytical & Environmental Chemistry Laboratory; Duxbury, MA
Center for Laboratory Sciences; Pasco, WA
Columbia Analytical Services; Jacksonville, FL
Columbia Analytical Services; Rochester, NY
Columbia Analytical Services, Kelso, WA
Florida Department of Environmental Protection; Tallahassee, FL
Florida International University; North Miami, FL
Michigan Department of Natural Resources and Environment; Lansing, MI
Mississippi State Chemical Laboratory; Mississippi State, MS
NIST; Charleston, SC
NIST; Gaithersburg, MD
NOAA/NCCOS/NOS; Charleston, SC
NOAA/NMFS/Alaska Fisheries Science Center; Juneau, AK
NY State Department of Health; Albany, NY
Pace Analytical Services, Inc. Minneapolis; Minneapolis, MN
RJ Lee Group, Inc; Monroeville, PA
TDI/B&B Laboratories, Inc.; College Station, TX
TestAmerica Laboratories; Mobile, AL
TestAmerica Laboratories; West Sacramento, CA
TestAmerica Laboratories; University Park, IL
TestAmerica Laboratories; Schriever, LA
TestAmerica Laboratories; Edison, NJ
TestAmerica Laboratories; Knoxville, TN
TestAmerica Laboratories; Pittsburgh, PA
TestAmerica Laboratories; South Burlington, VT
TestAmerica Laboratories; Tacoma, WA
US Army Engineer Research and Development Center; Vicksburg, MS
USGS Columbia Environmental Research Center; Columbia, MO
University of Iowa, State Hygienic Laboratory; Iowa City, IO
Washington State Public Health Laboratories; Shoreline, WA

* * * * * * * * * * * * End of Appendix D * * * * * * * * * * * *

NIST

CUSTOMER REGISTRATION AND SATISFACTION REPORT CARD FOR NIST STANDARD REFERENCE MATERIALS

To be notified of any updates or developments of a product, please register your Standard Reference Material (SRM).

We also invite you to rate our services. Information provided by you is very valuable to our continued efforts to enhance our features and content of our measurement services.

You can complete and return this card.

Please Print

Instead, submit an online product survey, customer service survey and/or registration. Go to https://www.nist.gov/srm/registration-and-surveys.

Visit us at
http://www.nist.gov/srm

Thank you.

PURCHASE INFORMATION		
SRM/RM Number:	1941b	
Date Shipped:	May 18, 2023	
NIST Division:	646	
NIST Sales Order Number: Example (0800000)	O-0000049409	
Customer Purchase Order Number:		
Lot Number:	None	
Serial Number:	Not Serialized	
Purchased directly from NIST?	Yes ☐	No ☐
CUSTOMER INFORMATION		
User First Name:		
User Surname:		
Organization/Company:		
Address:		
Address (continued):		
City, State/Province:	City:	State/Province:
Country, Postal Code:	Country:	Postal Code:
E-mail:		
Phone:		
Fax:		

Best Method of Contact: ☐Email ☐Phone ☐Fax

Do NOT cut. Fold, staple, and mail. Do NOT cut.

Please rate your SRM purchasing experience and product by checking the appropriate box in the table below.

Category	Question	Excellent	Very Good	Good	Fair*	Poor*	N/A
Website	Navigation and usability of the SRM web site						
	Web presentation of SRM product information						
	Overall website experience						
Order Placement	SRM availability for purchase						
	Ease with getting in touch with SRM Sales and Customer Service						
	Response time with your request for a quote or order						
	Overall experience with order placement (via online, email, phone, or fax)						
Order Fulfillment	Once the order for available items was placed, timeliness of delivery						
	Carrier treatment of shipment						
	Packaging of SRM(s)						
Product	SRM Certificate or Report of Investigation information						
	Material Safety Data sheet or SRM Exemption Letter information						
	Overall SRM Quality						
	Overall SRM Value						

How could NIST serve you better in the future?

*Let us know why any score was Fair or Poor.

What is the intended use of this SRM to your work?

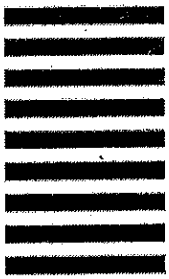
Other comments?

How did you hear about NIST Standard Reference Materials?

☐ Advertisement ☐ Catalog/Brochure ☐ Colleague ☐ Exhibit/Meeting ☐ Web ☐ Repeat Customer

Approved by Office of Management and Budget (OMB) for public information collection until 31 August 2024. OMB Control No.: 0693-0031

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



BUSINESS REPLY MAIL

FIRST CLASS MAIL PERMIT NO. 11 GAITHERSBURG, MD

POSTAGE WILL BE PAID BY THE ADDRESSEE

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
OFFICE OF REFERENCE MATERIALS, MS 2300
PO BOX 7139
GAITHERSBURG MD 20898-7139

NIST

Date of Issue:
21 April 2022

SAFETY DATA SHEET

1. Substance and Source Identification

Product Identifier

SRM Number: 1941b
SRM Name: Organics in Marine Sediment
Other Means of Identification: Not applicable.

Recommended Use of This Material and Restrictions of Use

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. All of the constituents for which certified and non-certified values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Company Information

National Institute of Standards and Technology
Standard Reference Materials Program
100 Bureau Drive, Stop 2300
Gaithersburg, Maryland 20899-2300

Telephone: 301-975-2200
E-mail: SRMMSDS@nist.gov
Website: https://www.nist.gov/srm

Emergency Telephone ChemTrec:
1-800-424-9300 (North America)
+1-703-527-3887 (International)

2. Hazards Identification

Classification

Physical Hazard: Not classified.
Health Hazard: Not classified.

Label Elements
Symbol
No Symbol/Pictogram

Signal Word
Not applicable.

Hazard Statement(s): Not applicable.

Precautionary Statement(s): Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients(s) with Unknown Acute Toxicity: Not applicable.

3. Composition and Information on Hazardous Ingredients

Substance: Marine sediment

Other Designations: Sediment.

This material is naturally occurring marine sediment from an urban area. The material contains trace amounts of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and should be handled with care. Components are listed in compliance with OSHA's 29 CFR 1910.1200; for the actual values see the Certificate of Analysis.

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
Marine Sediment	Not available	Not available	100

4. First Aid Measures

Description of First Aid Measures:

Inhalation: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

Skin Contact: Wash skin with soap and water.

Eye Contact: Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

Ingestion: If adverse effects occur after ingestion, seek medical treatment.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation.

Indication of any immediate medical attention and special treatment needed, if necessary: If any of the above symptoms are present, seek medical attention if needed.

5. Fire Fighting Measures

Fire and Explosion Hazards: Negligible fire hazard. Avoid generating dust. See Section 9, "Physical and Chemical Properties" for flammability properties.

Extinguishing Media:
Suitable: Use extinguishing media appropriate for surrounding fire.
Unsuitable: None listed.

Specific Hazards Arising from the Chemical: None listed.

Special Protective Equipment and Precautions for Fire-Fighters: Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

Methods and Materials for Containment and Clean up: Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

7. Handling and Storage

Safe Handling Precautions: Minimize dust generation and accumulation on surfaces. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. See Section 8, "Exposure Controls and Personal Protection".

Storage: Store and handling in accordance with all current regulations and standards.

8. Exposure Controls and Personal Protection

Exposure Limits: No occupational exposure limits have been established for marine sediment. This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. The exposure limits for Particulates Not Otherwise Regulated (PNOR) are applicable.

OSHA (PEL): 15 mg/m^3 (TWA, total particulates not otherwise regulated)
OSHA (PEL) 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

Engineering Controls: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection: In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

Respiratory Protection: If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

Eye/Face Protection: Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

Skin and Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Descriptive Properties:

Appearance (physical state, color, etc.):	amorphous powder
Molecular Formula:	not applicable
Molar Mass (g/mol):	not applicable
Odor:	not available
Odor threshold:	not available
pH:	not available
Evaporation rate:	not applicable
Melting point/freezing point (°C):	not available
Specific Gravity (water=1)	not available
Vapor Pressure (mmHg):	not applicable
Vapor Density (air = 1):	not applicable
Viscosity (cP):	not applicable
Solubility(ies):	not available
Partition coefficient (n-octanol/water):	not available
Particle Size:	<150 µm
Thermal Stability Properties:	
Autoignition Temperature (°C):	not available
Thermal Decomposition (°C):	not available
Initial boiling point and boiling range (°C):	not available
Explosive Limits, LEL (Volume %):	not available
Explosive Limits, UEL (Volume %):	not available
Flash Point (°C):	not available
Flammability (solid, gas):	not available

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Stability: _X_ Stable _____ Unstable

Possible Hazardous Reactions: None listed.

Conditions to Avoid: Avoid generating dust.

Incompatible Materials: None listed.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition will produce oxides of carbon.

Hazardous Polymerization: _____ Will Occur _X_ Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Exposure: _X_ Inhalation _X_ Skin _____ Ingestion

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Generated dust may cause irritation if inhaled.

Potential Health Effects (Acute, Chronic and Delayed):

Inhalation: Generated dust may cause irritation.

Skin Contact: May cause mechanical irritation.

Eye Contact: May cause mechanical irritation.

Ingestion: No data available.

Numerical Measures of Toxicity:

Acute Toxicity: Not classified; no data available.

Skin Corrosion/Irritation: Not classified; no data available.

Serious Eye damage/ Eye irritation: Not classified; no data available.

Respiratory Sensitization: Not classified; no data available.

Skin Sensitization: Not classified; no data available.

Germ Cell Mutagenicity: Not classified; no data available.

Carcinogenicity: Not classified.

Listed as a Carcinogen/Potential Carcinogen _____ Yes X No

Marine sediment is not listed by NTP, IARC or OSHA as a carcinogen.

Reproductive Toxicity: Not classified; no data available.

Specific Target Organ Toxicity, Single Exposure: Not classified; no data available.

Specific Target Organ Toxicity, Repeated Exposure: Not classified; no data available.

Aspiration Hazard: Not classified; no data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Data: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste in accordance with all applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT and IATA: Not regulated by DOT or IATA.

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Section 313 (40 CFR 372.65): Not regulated.

OSHA Process Safety (29 CFR 1910.119): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH:	No.
CHRONIC HEALTH:	No.
FIRE:	No.
REACTIVE:	No.
PRESSURE:	No.

State Regulations:
California Proposition 65: Not listed.

U.S. TSCA Inventory: Not listed.

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations:
WHMIS Information: Not provided for this material.

16. OTHER INFORMATION

Issue Date: 21 April 2022

Sources: 29 CFR Occupational Health and Safety Office (OSHA) 1910.1000, *Limits for Air Contaminants*, Table Z-1; available at https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1000TABLEZ1 (accessed Apr 2022).

Center for Disease Control (CDC) NIOSH Pocket Guide to Chemical Hazards, *Particulates not otherwise regulated*; available at https://www.cdc.gov/niosh/npg/npgd0480.html (accessed Apr 2022).

Key of Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists	NRC	Nuclear Regulatory Commission
ALI	Annual Limit on Intake	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	REL	Recommended Exposure Limit
EC50	Effective Concentration, 50 %	RM	Reference Material
EINECS	European Inventory of Existing Commercial Chemical Substances	RQ	Reportable Quantity
EPCRA	Emergency Planning and Community Right-to-Know Act	RTECS	Registry of Toxic Effects of Chemical Substances
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
IATA	International Air Transportation Agency	SCBA	Self-Contained Breathing Apparatus
IDLH	Immediately Dangerous to Life and Health	SRM	Standard Reference Material
LC50	Lethal Concentration, 50 %	STEL	Short Term Exposure Limit
LD50	Lethal Dose, 50 %	TLV	Threshold Limit Value
LEL	Lower Explosive Limit	TPQ	Threshold Planning Quantity
MSDS	Material Safety Data Sheet	TSCA	Toxic Substances Control Act
NIOSH	National Institute for Occupational Safety and Health	TWA	Time Weighted Average
NIST	National Institute of Standards and Technology	UEL	Upper Explosive Limit
		WHMIS	Workplace Hazardous Materials Information System

Disclaimer: The NIST SDS information is specific to the NIST product and is believed to be correct, based upon our current knowledge. The SDS may not necessarily be all inclusive and should be used only as a guide. NIST does not guarantee the accuracy or completeness of this information. The only official source for specific values and uncertainties is the certificate or report.

Users of this SRM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; e-mail srmmsds@nist.gov; or via the Internet at https://www.nist.gov/srm.

NIST-292A
(REV. 5-2002)
15 U.S.C. 275C
TREASURY APPROVED 1974

U.S. DEPARTMENT OF COMMERCE
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

STANDARD REFERENCE MATERIAL PACKING SLIP

Email: srminfo@nist.gov

100 BUREAU DRIVE STOP 2300 GAITHERSBURG, MD 20899 PHONE: (301) 975-2200

S.O. #	Order Date	Shipped Date	Order Type	PO Number	Payment Terms	Bill To Account	Ship To Account
0-0000049409	05/18/2023	05/18/2023	Order		PREPAY	172887	172888

Bill To Address:

Analytical Resources, LLC
4611 134th Place S.
#100
Tukwila, WA 98168-3240

Ship To Address:

Analytical Resources, LLC
4611 134th Place S.
#100
Tukwila, WA 98168-3240

Ship via	FedEx Priority Over Night	**Account #**		**VAT #**	
Sales Rep	srmauto	**Email**	bob.congleton@arilabs.com	**Customs / EORI #**	
Destination Contact	Bob Congleton	**Phone #**	206-695-6200	**Import License #**	

*** Please inspect your shipment upon receipt ***

Order Discrepancies: Order discrepancies must be reported within 30 days after receipt of shipment.
Return Requests: Return requests must be made within 30 days after receipt of shipment.
NIST SRMs/RMs are generally not returnable; however, return requests are considered on a case-by-case basis. Returns WILL NOT BE ACCEPTED without prior authorization. To report an order discrepancy or to request a return, please contact NIST Sales and Customer Service at srminfo@nist.gov or 301-975-2200.

SRM / RM #	Description	Order Qty	UOM	Shipped Qty
1941b	Organics in Marine Sediment	1	Each	1
	Shipping Charges			
	Please be sure to include shipping charges that are found on the last page of your quote/proforma with your payment.			

Rec'd
5/19/23

BC

Reprint Date: 05/18/2023

Packed by	perlson
Total # of Pieces	1